Hilcorp Energy Company

Farmington, NM
San Juan Basin
Southern Ute 705H

Lateral No.1
WP2.1

Anticollision Report

15 March, 2023

Halliburton

Anticollision Report

Company:	Hilcorp Energy Company	**Local Co-ordinate Reference:**	Well Southern Ute 705H
Project:	Farmington, NM	**TVD Reference:**	RKB to MSL= 6310 @ 6310.0usft
Reference Site:	San Juan Basin	**MD Reference:**	RKB to MSL= 6310 @ 6310.0usft
Site Error:	5.0 usft	**North Reference:**	Grid
Reference Well:	Southern Ute 705H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	1.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Lateral No.1	**Database:**	EDM 5000.1 Single User Db
Reference Design:	WP2.1	**Offset TVD Reference:**	Offset Datum

Reference	WP2.1		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	MD + Stations Interval 25.0usft	**Error Model:**	ISCWSA
Depth Range:	3,350.0 to 7,545.8usft	**Scan Method:**	Closest Approach 3D
Results Limited by:	Maximum centre distance of 10,000.0usft	**Error Surface:**	Pedal Curve
Warning Levels Evaluated at:	2.00 **Sigma**	**Casing Method:**	Through Borehole Radius

Survey Tool Program **Date** 3/14/2023

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.0	3,350.0	WP2.1 (Pilot Hole)	3_MWD+HRGM	B001Mb: HRGM declination correction only
3,350.0	7,545.7	WP2.1 (Lateral No.1)	3_MWD+HRGM	B001Mb: HRGM declination correction only

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
San Juan Basin						
SOUTHERN UTE 005 - ST00 - ST00	4,310.2	3,304.1	298.2	-2,052.9	0.127	Collision RiskProcedures Re
SOUTHERN UTE 005A - ST00 - ST00	7,545.8	2,922.0	1,263.7	-882.1	0.589	Collision RiskProcedures Re
Southern Ute 705H - Pilot Hole - WP2.1	3,650.0	3,637.8	71.6	64.4	9.969	CC, ES, SF

Offset Design: San Juan Basin - SOUTHERN UTE 005 - ST00 - ST00 — **Offset Site Error:** 5.0 usft

Survey Program: 8325-3_Blind — **Rule Assigned:** — **Offset Well Error:** 1.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset 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
3,350.0	2,823.1	3,240.1	3,240.1	27.7	2,264.0	49.42	-1,271.7	1,871.8	992.8	-1,289.5	2,282.27	0.435	Collision RiskProcedures Req'd
3,375.0	2,833.5	3,250.5	3,250.5	28.0	2,271.2	43.79	-1,271.7	1,871.8	972.0	-1,318.0	2,290.04	0.424	Collision RiskProcedures Req'd
3,393.0	2,840.8	3,257.8	3,257.8	28.3	2,276.3	39.43	-1,271.7	1,871.8	957.8	-1,337.7	2,295.51	0.417	Collision RiskProcedures Req'd
3,400.0	2,843.6	3,260.6	3,260.6	28.3	2,278.3	40.39	-1,271.7	1,871.8	951.7	-1,345.8	2,297.50	0.414	Collision RiskProcedures Req'd
3,425.0	2,852.9	3,269.9	3,269.9	28.5	2,284.8	44.12	-1,271.7	1,871.8	929.7	-1,374.5	2,304.17	0.403	Collision RiskProcedures Req'd
3,450.0	2,861.2	3,278.2	3,278.2	28.7	2,290.6	48.31	-1,271.7	1,871.8	907.4	-1,402.7	2,310.16	0.393	Collision RiskProcedures Req'd
3,475.0	2,868.5	3,285.5	3,285.5	28.9	2,295.7	52.97	-1,271.7	1,871.8	884.9	-1,430.6	2,315.46	0.382	Collision RiskProcedures Req'd
3,500.0	2,874.7	3,291.7	3,291.7	29.1	2,300.1	58.10	-1,271.7	1,871.8	862.2	-1,457.9	2,320.07	0.372	Collision RiskProcedures Req'd
3,525.0	2,880.0	3,297.0	3,297.0	29.3	2,303.7	63.63	-1,271.7	1,871.8	839.3	-1,484.7	2,323.97	0.361	Collision RiskProcedures Req'd
3,550.0	2,884.2	3,301.2	3,301.2	29.6	2,306.7	69.46	-1,271.7	1,871.8	816.3	-1,510.9	2,327.16	0.351	Collision RiskProcedures Req'd
3,575.0	2,887.4	3,304.4	3,304.4	29.8	2,308.9	75.45	-1,271.7	1,871.8	793.3	-1,536.4	2,329.65	0.341	Collision RiskProcedures Req'd
3,600.0	2,889.5	3,306.5	3,306.5	30.1	2,310.4	81.43	-1,271.7	1,871.8	770.3	-1,561.2	2,331.42	0.330	Collision RiskProcedures Req'd
3,625.0	2,890.5	3,307.5	3,307.5	30.3	2,311.1	87.23	-1,271.7	1,871.8	747.3	-1,585.2	2,332.47	0.320	Collision RiskProcedures Req'd
3,640.6	2,890.6	3,307.6	3,307.6	30.5	2,311.2	90.68	-1,271.7	1,871.8	733.1	-1,599.7	2,332.76	0.314	Collision RiskProcedures Req'd
3,650.0	2,890.6	3,307.6	3,307.6	30.6	2,311.1	90.67	-1,271.7	1,871.8	724.4	-1,608.4	2,332.86	0.311	Collision RiskProcedures Req'd
3,675.0	2,890.5	3,307.5	3,307.5	30.9	2,311.1	90.64	-1,271.7	1,871.8	701.7	-1,631.4	2,333.13	0.301	Collision RiskProcedures Req'd
3,700.0	2,890.3	3,307.3	3,307.3	31.2	2,311.0	90.62	-1,271.7	1,871.8	679.2	-1,654.2	2,333.43	0.291	Collision RiskProcedures Req'd
3,725.0	2,890.2	3,307.2	3,307.2	31.5	2,310.9	90.59	-1,271.7	1,871.8	656.8	-1,676.9	2,333.77	0.281	Collision RiskProcedures Req'd
3,750.0	2,890.1	3,307.1	3,307.1	31.8	2,310.8	90.57	-1,271.7	1,871.8	634.7	-1,699.5	2,334.14	0.272	Collision RiskProcedures Req'd
3,775.0	2,889.9	3,306.9	3,306.9	32.1	2,310.7	90.54	-1,271.7	1,871.8	612.7	-1,721.8	2,334.54	0.262	Collision RiskProcedures Req'd
3,800.0	2,889.8	3,306.8	3,306.8	32.4	2,310.6	90.52	-1,271.7	1,871.8	591.0	-1,744.0	2,334.98	0.253	Collision RiskProcedures Req'd
3,825.0	2,889.7	3,306.7	3,306.7	32.8	2,310.5	90.49	-1,271.7	1,871.8	569.5	-1,765.9	2,335.47	0.244	Collision RiskProcedures Req'd
3,850.0	2,889.5	3,306.5	3,306.5	33.1	2,310.4	90.47	-1,271.7	1,871.8	548.4	-1,787.6	2,336.01	0.235	Collision RiskProcedures Req'd

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

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3,875.0	2,889.4	3,306.4	3,306.4	33.5	2,310.3	90.44	-1,271.7	1,871.8	527.6	-1,809.0	2,336.59	0.226	Collision RiskProcedures Req'd
3,900.0	2,889.3	3,306.3	3,306.3	33.8	2,310.2	90.42	-1,271.7	1,871.8	507.2	-1,830.1	2,337.23	0.217	Collision RiskProcedures Req'd
3,925.0	2,889.1	3,306.1	3,306.1	34.2	2,310.1	90.39	-1,271.7	1,871.8	487.2	-1,850.8	2,337.93	0.208	Collision RiskProcedures Req'd
3,950.0	2,889.0	3,306.0	3,306.0	34.5	2,310.0	90.36	-1,271.7	1,871.8	467.6	-1,871.0	2,338.68	0.200	Collision RiskProcedures Req'd
3,975.0	2,888.9	3,305.9	3,305.9	34.9	2,309.9	90.34	-1,271.7	1,871.8	448.7	-1,890.8	2,339.50	0.192	Collision RiskProcedures Req'd
4,000.0	2,888.8	3,305.8	3,305.8	35.3	2,309.9	90.31	-1,271.7	1,871.8	430.3	-1,910.1	2,340.37	0.184	Collision RiskProcedures Req'd
4,025.0	2,888.6	3,305.6	3,305.6	35.7	2,309.8	90.29	-1,271.7	1,871.8	412.7	-1,928.7	2,341.31	0.176	Collision RiskProcedures Req'd
4,050.0	2,888.5	3,305.5	3,305.5	36.0	2,309.7	90.26	-1,271.7	1,871.8	395.8	-1,946.5	2,342.30	0.169	Collision RiskProcedures Req'd
4,075.0	2,888.4	3,305.4	3,305.4	36.4	2,309.6	90.24	-1,271.7	1,871.8	379.8	-1,963.5	2,343.34	0.162	Collision RiskProcedures Req'd
4,100.0	2,888.2	3,305.2	3,305.2	36.8	2,309.5	90.21	-1,271.7	1,871.8	364.9	-1,979.6	2,344.41	0.156	Collision RiskProcedures Req'd
4,125.0	2,888.1	3,305.1	3,305.1	37.2	2,309.4	90.19	-1,271.7	1,871.8	351.1	-1,994.5	2,345.52	0.150	Collision RiskProcedures Req'd
4,150.0	2,888.0	3,305.0	3,305.0	37.6	2,309.3	90.16	-1,271.7	1,871.8	338.5	-2,008.1	2,346.61	0.144	Collision RiskProcedures Req'd
4,175.0	2,887.8	3,304.8	3,304.8	38.0	2,309.2	90.14	-1,271.7	1,871.8	327.4	-2,020.2	2,347.67	0.139	Collision RiskProcedures Req'd
4,200.0	2,887.7	3,304.7	3,304.7	38.4	2,309.1	90.11	-1,271.7	1,871.8	317.9	-2,030.7	2,348.64	0.135	Collision RiskProcedures Req'd
4,225.0	2,887.6	3,304.6	3,304.6	38.9	2,309.0	90.09	-1,271.7	1,871.8	310.2	-2,039.4	2,349.52	0.132	Collision RiskProcedures Req'd
4,250.0	2,887.4	3,304.4	3,304.4	39.3	2,308.9	90.06	-1,271.7	1,871.8	304.2	-2,046.0	2,350.24	0.129	Collision RiskProcedures Req'd
4,275.0	2,887.3	3,304.3	3,304.3	39.7	2,308.8	90.04	-1,271.7	1,871.8	300.3	-2,050.5	2,350.76	0.128	Collision RiskProcedures Req'd
4,300.0	2,887.2	3,304.2	3,304.2	40.1	2,308.8	90.01	-1,271.7	1,871.8	298.4	-2,052.7	2,351.05	0.127	Collision RiskProcedures Req'd
4,310.2	2,887.1	3,304.1	3,304.1	40.3	2,308.7	90.00	-1,271.7	1,871.8	298.2	-2,052.9	2,351.10	0.127	Collision RiskProcedures Req'd, CC, E
4,325.0	2,887.0	3,304.0	3,304.0	40.6	2,308.7	89.99	-1,271.7	1,871.8	298.6	-2,052.5	2,351.11	0.127	Collision RiskProcedures Req'd
4,350.0	2,886.9	3,303.9	3,303.9	41.0	2,308.6	89.96	-1,271.7	1,871.8	300.9	-2,050.1	2,350.92	0.128	Collision RiskProcedures Req'd
4,375.0	2,886.8	3,303.8	3,303.8	41.5	2,308.5	89.93	-1,271.7	1,871.8	305.2	-2,045.3	2,350.49	0.130	Collision RiskProcedures Req'd
4,400.0	2,886.6	3,303.6	3,303.6	41.9	2,308.4	89.91	-1,271.7	1,871.8	311.4	-2,038.4	2,349.86	0.133	Collision RiskProcedures Req'd
4,425.0	2,886.5	3,303.5	3,303.5	42.4	2,308.3	89.88	-1,271.7	1,871.8	319.5	-2,029.5	2,349.07	0.136	Collision RiskProcedures Req'd
4,450.0	2,886.4	3,303.4	3,303.4	42.8	2,308.2	89.86	-1,271.7	1,871.8	329.3	-2,018.8	2,348.14	0.140	Collision RiskProcedures Req'd
4,475.0	2,886.2	3,303.2	3,303.2	43.3	2,308.1	89.83	-1,271.7	1,871.8	340.7	-2,006.4	2,347.12	0.145	Collision RiskProcedures Req'd
4,500.0	2,886.1	3,303.1	3,303.1	43.7	2,308.0	89.81	-1,271.7	1,871.8	353.5	-1,992.6	2,346.04	0.151	Collision RiskProcedures Req'd
4,525.0	2,886.0	3,303.0	3,303.0	44.2	2,307.9	89.78	-1,271.7	1,871.8	367.5	-1,977.4	2,344.94	0.157	Collision RiskProcedures Req'd
4,550.0	2,885.9	3,302.9	3,302.9	44.7	2,307.8	89.76	-1,271.7	1,871.8	382.6	-1,961.2	2,343.84	0.163	Collision RiskProcedures Req'd
4,575.0	2,885.7	3,302.7	3,302.7	45.1	2,307.7	89.73	-1,271.7	1,871.8	398.8	-1,944.0	2,342.76	0.170	Collision RiskProcedures Req'd
4,600.0	2,885.6	3,302.6	3,302.6	45.6	2,307.6	89.71	-1,271.7	1,871.8	415.8	-1,925.9	2,341.70	0.178	Collision RiskProcedures Req'd
4,625.0	2,885.5	3,302.5	3,302.5	46.1	2,307.6	89.68	-1,271.7	1,871.8	433.6	-1,907.1	2,340.69	0.185	Collision RiskProcedures Req'd
4,650.0	2,885.3	3,302.3	3,302.3	46.5	2,307.5	89.66	-1,271.7	1,871.8	452.1	-1,887.6	2,339.72	0.193	Collision RiskProcedures Req'd
4,675.0	2,885.2	3,302.2	3,302.2	47.0	2,307.4	89.63	-1,271.7	1,871.8	471.1	-1,867.6	2,338.80	0.201	Collision RiskProcedures Req'd
4,700.0	2,885.1	3,302.1	3,302.1	47.5	2,307.3	89.61	-1,271.7	1,871.8	490.8	-1,847.2	2,337.92	0.210	Collision RiskProcedures Req'd
4,725.0	2,884.9	3,301.9	3,301.9	48.0	2,307.2	89.58	-1,271.7	1,871.8	510.8	-1,826.3	2,337.10	0.219	Collision RiskProcedures Req'd
4,750.0	2,884.8	3,301.8	3,301.8	48.5	2,307.1	89.55	-1,271.7	1,871.8	531.3	-1,805.0	2,336.32	0.227	Collision RiskProcedures Req'd
4,775.0	2,884.7	3,301.7	3,301.7	48.9	2,307.0	89.53	-1,271.7	1,871.8	552.2	-1,783.4	2,335.59	0.236	Collision RiskProcedures Req'd
4,800.0	2,884.5	3,301.5	3,301.5	49.4	2,306.9	89.50	-1,271.7	1,871.8	573.4	-1,761.5	2,334.90	0.246	Collision RiskProcedures Req'd
4,825.0	2,884.4	3,301.4	3,301.4	49.9	2,306.8	89.48	-1,271.7	1,871.8	594.9	-1,739.4	2,334.26	0.255	Collision RiskProcedures Req'd
4,850.0	2,884.3	3,301.3	3,301.3	50.4	2,306.7	89.45	-1,271.7	1,871.8	616.7	-1,717.0	2,333.65	0.264	Collision RiskProcedures Req'd
4,875.0	2,884.1	3,301.1	3,301.1	50.9	2,306.6	89.43	-1,271.7	1,871.8	638.7	-1,694.4	2,333.07	0.274	Collision RiskProcedures Req'd
4,900.0	2,884.0	3,301.0	3,301.0	51.4	2,306.5	89.40	-1,271.7	1,871.8	660.9	-1,671.7	2,332.53	0.283	Collision RiskProcedures Req'd
4,925.0	2,883.9	3,300.9	3,300.9	51.9	2,306.5	89.38	-1,271.7	1,871.8	683.3	-1,648.8	2,332.02	0.293	Collision RiskProcedures Req'd
4,950.0	2,883.7	3,300.7	3,300.7	52.4	2,306.4	89.35	-1,271.7	1,871.8	705.8	-1,625.7	2,331.54	0.303	Collision RiskProcedures Req'd
4,975.0	2,883.6	3,300.6	3,300.6	52.9	2,306.3	89.33	-1,271.7	1,871.8	728.6	-1,602.5	2,331.08	0.313	Collision RiskProcedures Req'd
5,000.0	2,883.5	3,300.5	3,300.5	53.4	2,306.2	89.30	-1,271.7	1,871.8	751.5	-1,579.2	2,330.65	0.322	Collision RiskProcedures Req'd
5,025.0	2,883.4	3,300.4	3,300.4	53.9	2,306.1	89.28	-1,271.7	1,871.8	774.5	-1,555.8	2,330.24	0.332	Collision RiskProcedures Req'd
5,050.0	2,883.2	3,300.2	3,300.2	54.4	2,306.0	89.25	-1,271.7	1,871.8	797.6	-1,532.3	2,329.85	0.342	Collision RiskProcedures Req'd
5,075.0	2,883.1	3,300.1	3,300.1	54.9	2,305.9	89.23	-1,271.7	1,871.8	820.8	-1,508.6	2,329.48	0.352	Collision RiskProcedures Req'd
5,100.0	2,883.0	3,300.0	3,300.0	55.4	2,305.8	89.20	-1,271.7	1,871.8	844.2	-1,484.9	2,329.13	0.362	Collision RiskProcedures Req'd
5,117.3	2,882.9	3,299.9	3,299.9	55.8	2,305.7	89.18	-1,271.7	1,871.8	860.4	-1,468.5	2,328.90	0.369	Collision RiskProcedures Req'd

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Offset Design: San Juan Basin - SOUTHERN UTE 005 - ST00 - ST00 — **Offset Site Error:** 5.0 usft

Survey Program: 8325-3_Blind — **Rule Assigned:** — **Offset Well Error:** 1.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset 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
5,125.0	2,882.8	3,299.8	3,299.8	55.9	2,305.7	89.16	-1,271.7	1,871.8	867.6	-1,461.2	2,328.79	0.373	Collision RiskProcedures Req'd
5,150.0	2,882.7	3,299.7	3,299.7	56.5	2,305.6	89.09	-1,271.7	1,871.8	891.2	-1,437.2	2,328.48	0.383	Collision RiskProcedures Req'd
5,175.0	2,882.6	3,299.6	3,299.6	57.0	2,305.5	89.01	-1,271.7	1,871.8	915.1	-1,413.1	2,328.19	0.393	Collision RiskProcedures Req'd
5,200.0	2,882.4	3,299.4	3,299.4	57.5	2,305.4	88.92	-1,271.7	1,871.8	939.0	-1,388.9	2,327.93	0.403	Collision RiskProcedures Req'd
5,225.0	2,882.3	3,299.3	3,299.3	58.0	2,305.3	88.81	-1,271.7	1,871.8	963.2	-1,364.5	2,327.67	0.414	Collision RiskProcedures Req'd
5,250.0	2,882.2	3,299.2	3,299.2	58.5	2,305.3	88.69	-1,271.7	1,871.8	987.4	-1,340.0	2,327.44	0.424	Collision RiskProcedures Req'd
5,275.0	2,882.0	3,299.0	3,299.0	59.1	2,305.2	88.56	-1,271.7	1,871.8	1,011.8	-1,315.4	2,327.23	0.435	Collision RiskProcedures Req'd
5,300.0	2,881.9	3,298.9	3,298.9	59.6	2,305.1	88.40	-1,271.7	1,871.8	1,036.3	-1,290.7	2,327.04	0.445	Collision RiskProcedures Req'd
5,325.0	2,881.8	3,298.8	3,298.8	60.1	2,305.0	88.20	-1,271.7	1,871.8	1,060.9	-1,265.9	2,326.85	0.456	Collision RiskProcedures Req'd
5,350.0	2,881.6	3,298.6	3,298.6	60.6	2,304.9	87.97	-1,271.7	1,871.8	1,085.6	-1,241.1	2,326.67	0.467	Collision RiskProcedures Req'd
5,375.0	2,881.5	3,298.5	3,298.5	61.2	2,304.8	87.68	-1,271.7	1,871.8	1,110.3	-1,216.2	2,326.51	0.477	Collision RiskProcedures Req'd
5,400.0	2,881.3	3,298.3	3,298.3	61.7	2,304.7	87.31	-1,271.7	1,871.8	1,135.1	-1,191.2	2,326.38	0.488	Collision RiskProcedures Req'd
5,425.0	2,881.2	3,298.2	3,298.2	62.3	2,304.6	86.82	-1,271.7	1,871.8	1,160.0	-1,166.2	2,326.23	0.499	Collision RiskProcedures Req'd
5,450.0	2,881.1	3,298.1	3,298.1	62.8	2,304.5	86.14	-1,271.7	1,871.8	1,184.9	-1,141.2	2,326.10	0.509	Collision RiskProcedures Req'd
5,475.0	2,880.9	3,297.9	3,297.9	63.3	2,304.4	85.12	-1,271.7	1,871.8	1,209.8	-1,116.1	2,325.98	0.520	Collision RiskProcedures Req'd
5,500.0	2,880.8	3,297.8	3,297.8	63.9	2,304.3	83.44	-1,271.7	1,871.8	1,234.8	-1,091.1	2,325.88	0.531	Collision RiskProcedures Req'd
5,525.0	2,880.7	3,297.7	3,297.7	64.4	2,304.2	80.13	-1,271.7	1,871.8	1,259.8	-1,066.0	2,325.77	0.542	Collision RiskProcedures Req'd
5,550.0	2,880.5	3,297.5	3,297.5	64.9	2,304.1	70.78	-1,271.7	1,871.8	1,284.8	-1,040.9	2,325.67	0.552	Collision RiskProcedures Req'd
5,575.0	2,880.4	3,297.4	3,297.4	65.5	2,304.0	2.75	-1,271.7	1,871.8	1,309.8	-1,015.8	2,325.58	0.563	Collision RiskProcedures Req'd
5,600.0	2,880.3	3,297.3	3,297.3	66.0	2,303.9	-69.81	-1,271.7	1,871.8	1,334.8	-990.7	2,325.51	0.574	Collision RiskProcedures Req'd
5,625.0	2,880.1	3,297.1	3,297.1	66.6	2,303.8	-79.58	-1,271.7	1,871.8	1,359.8	-965.7	2,325.42	0.585	Collision RiskProcedures Req'd
5,650.0	2,880.0	3,297.0	3,297.0	67.1	2,303.7	-82.98	-1,271.7	1,871.8	1,384.7	-940.6	2,325.34	0.595	Collision RiskProcedures Req'd
5,675.0	2,879.8	3,296.8	3,296.8	67.6	2,303.6	-84.69	-1,271.7	1,871.8	1,409.7	-915.6	2,325.28	0.606	Collision RiskProcedures Req'd
5,700.0	2,879.7	3,296.7	3,296.7	68.2	2,303.5	-85.72	-1,271.7	1,871.8	1,434.7	-890.6	2,325.23	0.617	Collision RiskProcedures Req'd
5,725.0	2,879.6	3,296.6	3,296.6	68.7	2,303.4	-86.42	-1,271.7	1,871.8	1,459.6	-865.6	2,325.17	0.628	Collision RiskProcedures Req'd
5,750.0	2,879.4	3,296.4	3,296.4	69.2	2,303.3	-86.91	-1,271.7	1,871.8	1,484.5	-840.7	2,325.11	0.638	Collision RiskProcedures Req'd
5,775.0	2,879.3	3,296.3	3,296.3	69.8	2,303.3	-87.28	-1,271.7	1,871.8	1,509.3	-815.8	2,325.07	0.649	Collision RiskProcedures Req'd
5,800.0	2,879.2	3,296.2	3,296.2	70.3	2,303.2	-87.57	-1,271.7	1,871.8	1,534.1	-790.9	2,325.04	0.660	Collision RiskProcedures Req'd
5,825.0	2,879.0	3,296.0	3,296.0	70.8	2,303.1	-87.81	-1,271.7	1,871.8	1,558.9	-766.1	2,324.99	0.671	Collision RiskProcedures Req'd
5,850.0	2,878.9	3,295.9	3,295.9	71.3	2,303.0	-88.00	-1,271.7	1,871.8	1,583.6	-741.3	2,324.96	0.681	Collision RiskProcedures Req'd
5,875.0	2,878.8	3,295.8	3,295.8	71.9	2,302.9	-88.16	-1,271.7	1,871.8	1,608.3	-716.6	2,324.93	0.692	Collision RiskProcedures Req'd
5,900.0	2,878.6	3,295.6	3,295.6	72.4	2,302.8	-88.30	-1,271.7	1,871.8	1,633.0	-692.0	2,324.91	0.702	Collision RiskProcedures Req'd
5,925.0	2,878.5	3,295.5	3,295.5	72.9	2,302.7	-88.42	-1,271.7	1,871.8	1,657.5	-667.4	2,324.88	0.713	Collision RiskProcedures Req'd
5,950.0	2,878.4	3,295.4	3,295.4	73.4	2,302.6	-88.52	-1,271.7	1,871.8	1,682.0	-642.8	2,324.86	0.724	Collision RiskProcedures Req'd
5,975.0	2,878.2	3,295.2	3,295.2	73.9	2,302.5	-88.61	-1,271.7	1,871.8	1,706.5	-618.4	2,324.85	0.734	Collision RiskProcedures Req'd
6,000.0	2,878.1	3,295.1	3,295.1	74.5	2,302.4	-88.70	-1,271.7	1,871.8	1,730.9	-594.0	2,324.85	0.745	Collision RiskProcedures Req'd
6,025.0	2,878.0	3,295.0	3,295.0	75.0	2,302.3	-88.77	-1,271.7	1,871.8	1,755.2	-569.6	2,324.84	0.755	Collision RiskProcedures Req'd
6,045.8	2,877.9	3,294.9	3,294.9	75.4	2,302.2	-88.82	-1,271.7	1,871.8	1,775.4	-549.4	2,324.84	0.764	Collision RiskProcedures Req'd
6,050.0	2,877.8	3,294.8	3,294.8	75.5	2,302.2	-88.82	-1,271.7	1,871.8	1,779.5	-545.4	2,324.84	0.765	Collision RiskProcedures Req'd
6,075.0	2,877.7	3,294.7	3,294.7	76.0	2,302.1	-88.80	-1,271.7	1,871.8	1,803.7	-521.1	2,324.84	0.776	Collision RiskProcedures Req'd
6,100.0	2,877.6	3,294.6	3,294.6	76.5	2,302.0	-88.79	-1,271.7	1,871.8	1,828.0	-496.9	2,324.83	0.786	Collision RiskProcedures Req'd
6,125.0	2,877.4	3,294.4	3,294.4	77.0	2,302.0	-88.77	-1,271.7	1,871.8	1,852.2	-472.6	2,324.83	0.797	Collision RiskProcedures Req'd
6,150.0	2,877.3	3,294.3	3,294.3	77.5	2,301.9	-88.75	-1,271.7	1,871.8	1,876.5	-448.3	2,324.82	0.807	Collision RiskProcedures Req'd
6,175.0	2,877.2	3,294.2	3,294.2	78.0	2,301.8	-88.73	-1,271.7	1,871.8	1,900.8	-424.0	2,324.81	0.818	Collision RiskProcedures Req'd
6,200.0	2,877.0	3,294.0	3,294.0	78.5	2,301.7	-88.72	-1,271.7	1,871.8	1,925.2	-399.6	2,324.80	0.828	Collision RiskProcedures Req'd
6,225.0	2,876.9	3,293.9	3,293.9	79.0	2,301.6	-88.70	-1,271.7	1,871.8	1,949.5	-375.3	2,324.79	0.839	Collision RiskProcedures Req'd
6,250.0	2,876.8	3,293.8	3,293.8	79.5	2,301.5	-88.68	-1,271.7	1,871.8	1,973.9	-350.9	2,324.78	0.849	Collision RiskProcedures Req'd
6,275.0	2,876.7	3,293.7	3,293.7	80.0	2,301.4	-88.67	-1,271.7	1,871.8	1,998.3	-326.5	2,324.76	0.860	Collision RiskProcedures Req'd
6,300.0	2,876.5	3,293.5	3,293.5	80.6	2,301.3	-88.65	-1,271.7	1,871.8	2,022.7	-302.1	2,324.74	0.870	Collision RiskProcedures Req'd
6,325.0	2,876.4	3,293.4	3,293.4	81.1	2,301.2	-88.63	-1,271.7	1,871.8	2,047.1	-277.6	2,324.72	0.881	Collision RiskProcedures Req'd
6,350.0	2,876.3	3,293.3	3,293.3	81.6	2,301.1	-88.62	-1,271.7	1,871.8	2,071.5	-253.2	2,324.70	0.891	Collision RiskProcedures Req'd
6,375.0	2,876.1	3,293.1	3,293.1	82.1	2,301.0	-88.60	-1,271.7	1,871.8	2,096.0	-228.7	2,324.68	0.902	Collision RiskProcedures Req'd

Company:	Hilcorp Energy Company	**Local Co-ordinate Reference:**	Well Southern Ute 705H
Project:	Farmington, NM	**TVD Reference:**	RKB to MSL= 6310 @ 6310.0usft
Reference Site:	San Juan Basin	**MD Reference:**	RKB to MSL= 6310 @ 6310.0usft
Site Error:	5.0 usft	**North Reference:**	Grid
Reference Well:	Southern Ute 705H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	1.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Lateral No.1	**Database:**	EDM 5000.1 Single User Db
Reference Design:	WP2.1	**Offset TVD Reference:**	Offset Datum

Offset Design: San Juan Basin - SOUTHERN UTE 005 - ST00 - ST00 — **Offset Site Error:** 5.0 usft

Survey Program: 8325-3_Blind — **Rule Assigned:** — **Offset Well Error:** 1.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset 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
6,400.0	2,876.0	3,293.0	3,293.0	82.6	2,300.9	-88.58	-1,271.7	1,871.8	2,120.4	-204.2	2,324.66	0.912	Collision RiskProcedures Req'd
6,425.0	2,875.9	3,292.9	3,292.9	83.2	2,300.9	-88.56	-1,271.7	1,871.8	2,144.9	-179.8	2,324.63	0.923	Collision RiskProcedures Req'd
6,450.0	2,875.7	3,292.7	3,292.7	83.7	2,300.8	-88.55	-1,271.7	1,871.8	2,169.4	-155.3	2,324.61	0.933	Collision RiskProcedures Req'd
6,475.0	2,875.6	3,292.6	3,292.6	84.2	2,300.7	-88.53	-1,271.7	1,871.8	2,193.8	-130.7	2,324.58	0.944	Collision RiskProcedures Req'd
6,500.0	2,875.5	3,292.5	3,292.5	84.7	2,300.6	-88.51	-1,271.7	1,871.8	2,218.3	-106.2	2,324.55	0.954	Collision RiskProcedures Req'd
6,525.0	2,875.3	3,292.3	3,292.3	85.3	2,300.5	-88.50	-1,271.7	1,871.8	2,242.9	-81.7	2,324.53	0.965	Collision RiskProcedures Req'd
6,550.0	2,875.2	3,292.2	3,292.2	85.8	2,300.4	-88.48	-1,271.7	1,871.8	2,267.4	-57.1	2,324.50	0.975	Collision RiskProcedures Req'd
6,575.0	2,875.1	3,292.1	3,292.1	86.3	2,300.3	-88.46	-1,271.7	1,871.8	2,291.9	-32.6	2,324.47	0.986	Collision RiskProcedures Req'd
6,600.0	2,875.0	3,292.0	3,292.0	86.8	2,300.2	-88.44	-1,271.7	1,871.8	2,316.5	-8.0	2,324.43	0.997	Collision RiskProcedures Req'd
6,625.0	2,874.8	3,291.8	3,291.8	87.4	2,300.1	-88.43	-1,271.7	1,871.8	2,341.0	16.6	2,324.40	1.007	Collision RiskProcedures Req'd
6,650.0	2,874.7	3,291.7	3,291.7	87.9	2,300.0	-88.41	-1,271.7	1,871.8	2,365.6	41.2	2,324.37	1.018	Collision RiskProcedures Req'd
6,675.0	2,874.6	3,291.6	3,291.6	88.4	2,299.9	-88.39	-1,271.7	1,871.8	2,390.1	65.8	2,324.33	1.028	Collision RiskProcedures Req'd
6,700.0	2,874.4	3,291.4	3,291.4	89.0	2,299.8	-88.38	-1,271.7	1,871.8	2,414.7	90.4	2,324.30	1.039	Collision RiskProcedures Req'd
6,725.0	2,874.3	3,291.3	3,291.3	89.5	2,299.8	-88.36	-1,271.7	1,871.8	2,439.3	115.0	2,324.26	1.049	Collision RiskProcedures Req'd
6,750.0	2,874.2	3,291.2	3,291.2	90.0	2,299.7	-88.34	-1,271.7	1,871.8	2,463.9	139.7	2,324.22	1.060	Collision RiskProcedures Req'd
6,775.0	2,874.0	3,291.0	3,291.0	90.6	2,299.6	-88.32	-1,271.7	1,871.8	2,488.5	164.3	2,324.18	1.071	Collision RiskProcedures Req'd
6,800.0	2,873.9	3,290.9	3,290.9	91.1	2,299.5	-88.31	-1,271.7	1,871.8	2,513.1	189.0	2,324.14	1.081	Collision RiskProcedures Req'd
6,825.0	2,873.8	3,290.8	3,290.8	91.6	2,299.4	-88.29	-1,271.7	1,871.8	2,537.7	213.6	2,324.11	1.092	Collision RiskProcedures Req'd
6,850.0	2,873.6	3,290.6	3,290.6	92.2	2,299.3	-88.27	-1,271.7	1,871.8	2,562.4	238.3	2,324.07	1.103	Collision RiskProcedures Req'd
6,875.0	2,873.5	3,290.5	3,290.5	92.7	2,299.2	-88.26	-1,271.7	1,871.8	2,587.0	263.0	2,324.02	1.113	Collision RiskProcedures Req'd
6,900.0	2,873.4	3,290.4	3,290.4	93.3	2,299.1	-88.24	-1,271.7	1,871.8	2,611.6	287.7	2,323.98	1.124	Collision RiskProcedures Req'd
6,925.0	2,873.3	3,290.3	3,290.3	93.8	2,299.0	-88.22	-1,271.7	1,871.8	2,636.3	312.4	2,323.94	1.134	Collision RiskProcedures Req'd
6,950.0	2,873.1	3,290.1	3,290.1	94.3	2,298.9	-88.20	-1,271.7	1,871.8	2,660.9	337.1	2,323.90	1.145	Collision RiskProcedures Req'd
6,975.0	2,873.0	3,290.0	3,290.0	94.9	2,298.8	-88.19	-1,271.7	1,871.8	2,685.6	361.8	2,323.85	1.156	Collision RiskProcedures Req'd
7,000.0	2,872.9	3,289.9	3,289.9	95.4	2,298.8	-88.17	-1,271.7	1,871.8	2,710.3	386.5	2,323.80	1.166	Collision RiskProcedures Req'd
7,025.0	2,872.7	3,289.7	3,289.7	96.0	2,298.7	-88.15	-1,271.7	1,871.8	2,735.0	411.2	2,323.76	1.177	Collision RiskProcedures Req'd
7,050.0	2,872.6	3,289.6	3,289.6	96.5	2,298.6	-88.14	-1,271.7	1,871.8	2,759.6	435.9	2,323.71	1.188	Collision RiskProcedures Req'd
7,075.0	2,872.5	3,289.5	3,289.5	97.0	2,298.5	-88.12	-1,271.7	1,871.8	2,784.3	460.6	2,323.67	1.198	Collision RiskProcedures Req'd
7,100.0	2,872.3	3,289.3	3,289.3	97.6	2,298.4	-88.10	-1,271.7	1,871.8	2,809.0	485.4	2,323.62	1.209	Collision RiskProcedures Req'd
7,125.0	2,872.2	3,289.2	3,289.2	98.1	2,298.3	-88.09	-1,271.7	1,871.8	2,833.7	510.1	2,323.57	1.220	Collision RiskProcedures Req'd
7,150.0	2,872.1	3,289.1	3,289.1	98.7	2,298.2	-88.07	-1,271.7	1,871.8	2,858.4	534.9	2,323.52	1.230	Collision RiskProcedures Req'd
7,175.0	2,871.9	3,288.9	3,288.9	99.2	2,298.1	-88.05	-1,271.7	1,871.8	2,883.1	559.6	2,323.47	1.241	Collision RiskProcedures Req'd
7,200.0	2,871.8	3,288.8	3,288.8	99.8	2,298.0	-88.03	-1,271.7	1,871.8	2,907.8	584.4	2,323.42	1.252	Collision RiskProcedures Req'd
7,225.0	2,871.7	3,288.7	3,288.7	100.3	2,297.9	-88.02	-1,271.7	1,871.8	2,932.5	609.2	2,323.37	1.262	Collision RiskProcedures Req'd
7,250.0	2,871.5	3,288.5	3,288.5	100.9	2,297.8	-88.00	-1,271.7	1,871.8	2,957.3	633.9	2,323.32	1.273	Collision RiskProcedures Req'd
7,275.0	2,871.4	3,288.4	3,288.4	101.4	2,297.7	-87.98	-1,271.7	1,871.8	2,982.0	658.7	2,323.27	1.284	Collision RiskProcedures Req'd
7,300.0	2,871.3	3,288.3	3,288.3	102.0	2,297.7	-87.97	-1,271.7	1,871.8	3,006.7	683.5	2,323.22	1.294	Collision RiskProcedures Req'd
7,325.0	2,871.2	3,288.2	3,288.2	102.5	2,297.6	-87.95	-1,271.7	1,871.8	3,031.4	708.3	2,323.17	1.305	Collision RiskProcedures Req'd
7,350.0	2,871.0	3,288.0	3,288.0	103.1	2,297.5	-87.93	-1,271.7	1,871.8	3,056.2	733.1	2,323.12	1.316	Collision RiskProcedures Req'd
7,375.0	2,870.9	3,287.9	3,287.9	103.6	2,297.4	-87.91	-1,271.7	1,871.8	3,080.9	757.9	2,323.06	1.326	Collision RiskProcedures Req'd
7,400.0	2,870.8	3,287.8	3,287.8	104.2	2,297.3	-87.90	-1,271.7	1,871.8	3,105.7	782.7	2,323.01	1.337	Collision RiskProcedures Req'd
7,425.0	2,870.6	3,287.6	3,287.6	104.8	2,297.2	-87.88	-1,271.7	1,871.8	3,130.4	807.5	2,322.96	1.348	Collision RiskProcedures Req'd
7,450.0	2,870.5	3,287.5	3,287.5	105.3	2,297.1	-87.86	-1,271.7	1,871.8	3,155.2	832.3	2,322.90	1.358	Collision RiskProcedures Req'd
7,475.0	2,870.4	3,287.4	3,287.4	105.9	2,297.0	-87.85	-1,271.7	1,871.8	3,179.9	857.1	2,322.85	1.369	Collision RiskProcedures Req'd
7,500.0	2,870.2	3,287.2	3,287.2	106.4	2,296.9	-87.83	-1,271.7	1,871.8	3,204.7	881.9	2,322.79	1.380	Collision RiskProcedures Req'd
7,525.0	2,870.1	3,287.1	3,287.1	107.0	2,296.8	-87.81	-1,271.7	1,871.8	3,229.5	906.7	2,322.74	1.390	Collision RiskProcedures Req'd
7,545.8	2,870.0	3,287.0	3,287.0	107.4	2,296.8	-87.80	-1,271.7	1,871.8	3,250.1	927.4	2,322.69	1.399	Collision RiskProcedures Req'd

Company:	Hilcorp Energy Company	**Local Co-ordinate Reference:**	Well Southern Ute 705H
Project:	Farmington, NM	**TVD Reference:**	RKB to MSL= 6310 @ 6310.0usft
Reference Site:	San Juan Basin	**MD Reference:**	RKB to MSL= 6310 @ 6310.0usft
Site Error:	5.0 usft	**North Reference:**	Grid
Reference Well:	Southern Ute 705H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	1.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Lateral No.1	**Database:**	EDM 5000.1 Single User Db
Reference Design:	WP2.1	**Offset TVD Reference:**	Offset Datum

Offset Design: San Juan Basin - SOUTHERN UTE 005A - ST00 - ST00 — **Offset Site Error:** 5.0 usft

Survey Program: 5719-3_Blind — **Offset Well Error:** 1.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset 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
3,350.0	2,823.1	2,875.1	2,875.1	27.7	2,007.3	-46.93	-429.1	5,133.6	3,910.8	1,885.5	2,025.24	1.931	Collision RiskProcedures Req'd
3,375.0	2,833.5	2,885.5	2,885.5	28.0	2,014.6	-54.21	-429.1	5,133.6	3,890.5	1,857.7	2,032.87	1.914	Collision RiskProcedures Req'd
3,393.0	2,840.8	2,892.8	2,892.8	28.3	2,019.6	-58.78	-429.1	5,133.6	3,875.1	1,836.9	2,038.21	1.901	Collision RiskProcedures Req'd
3,400.0	2,843.6	2,895.6	2,895.6	28.3	2,021.6	-59.53	-429.1	5,133.6	3,869.8	1,829.6	2,040.17	1.897	Collision RiskProcedures Req'd
3,425.0	2,852.9	2,904.9	2,904.9	28.5	2,028.1	-62.30	-429.1	5,133.6	3,850.5	1,803.7	2,046.79	1.881	Collision RiskProcedures Req'd
3,450.0	2,861.2	2,913.2	2,913.2	28.7	2,033.9	-65.21	-429.1	5,133.6	3,830.9	1,778.2	2,052.73	1.866	Collision RiskProcedures Req'd
3,475.0	2,868.5	2,920.5	2,920.5	28.9	2,039.0	-68.27	-429.1	5,133.6	3,811.1	1,753.1	2,057.98	1.852	Collision RiskProcedures Req'd
3,500.0	2,874.7	2,926.7	2,926.7	29.1	2,043.3	-71.45	-429.1	5,133.6	3,791.1	1,728.6	2,062.52	1.838	Collision RiskProcedures Req'd
3,525.0	2,880.0	2,932.0	2,932.0	29.3	2,047.0	-74.73	-429.1	5,133.6	3,771.0	1,704.7	2,066.36	1.825	Collision RiskProcedures Req'd
3,550.0	2,884.2	2,936.2	2,936.2	29.6	2,049.9	-78.08	-429.1	5,133.6	3,750.8	1,681.3	2,069.47	1.812	Collision RiskProcedures Req'd
3,575.0	2,887.4	2,939.4	2,939.4	29.8	2,052.2	-81.49	-429.1	5,133.6	3,730.5	1,658.6	2,071.87	1.801	Collision RiskProcedures Req'd
3,600.0	2,889.5	2,941.5	2,941.5	30.1	2,053.6	-84.91	-429.1	5,133.6	3,710.2	1,636.6	2,073.54	1.789	Collision RiskProcedures Req'd
3,625.0	2,890.5	2,942.5	2,942.5	30.3	2,054.4	-88.32	-429.1	5,133.6	3,689.9	1,615.4	2,074.48	1.779	Collision RiskProcedures Req'd
3,640.6	2,890.6	2,942.6	2,942.6	30.5	2,054.4	-90.42	-429.1	5,133.6	3,677.2	1,602.5	2,074.70	1.772	Collision RiskProcedures Req'd
3,650.0	2,890.6	2,942.6	2,942.6	30.6	2,054.4	-90.42	-429.1	5,133.6	3,669.6	1,594.8	2,074.75	1.769	Collision RiskProcedures Req'd
3,675.0	2,890.5	2,942.5	2,942.5	30.9	2,054.3	-90.41	-429.1	5,133.6	3,649.4	1,574.5	2,074.88	1.759	Collision RiskProcedures Req'd
3,700.0	2,890.3	2,942.3	2,942.3	31.2	2,054.2	-90.41	-429.1	5,133.6	3,629.2	1,554.2	2,075.01	1.749	Collision RiskProcedures Req'd
3,725.0	2,890.2	2,942.2	2,942.2	31.5	2,054.1	-90.41	-429.1	5,133.6	3,609.1	1,533.9	2,075.17	1.739	Collision RiskProcedures Req'd
3,750.0	2,890.1	2,942.1	2,942.1	31.8	2,054.0	-90.40	-429.1	5,133.6	3,589.1	1,513.7	2,075.33	1.729	Collision RiskProcedures Req'd
3,775.0	2,889.9	2,941.9	2,941.9	32.1	2,054.0	-90.40	-429.1	5,133.6	3,569.1	1,493.6	2,075.49	1.720	Collision RiskProcedures Req'd
3,800.0	2,889.8	2,941.8	2,941.8	32.4	2,053.9	-90.40	-429.1	5,133.6	3,549.2	1,473.5	2,075.65	1.710	Collision RiskProcedures Req'd
3,825.0	2,889.7	2,941.7	2,941.7	32.8	2,053.8	-90.39	-429.1	5,133.6	3,529.3	1,453.5	2,075.84	1.700	Collision RiskProcedures Req'd
3,850.0	2,889.5	2,941.5	2,941.5	33.1	2,053.7	-90.39	-429.1	5,133.6	3,509.5	1,433.5	2,076.03	1.691	Collision RiskProcedures Req'd
3,875.0	2,889.4	2,941.4	2,941.4	33.5	2,053.6	-90.39	-429.1	5,133.6	3,489.8	1,413.6	2,076.23	1.681	Collision RiskProcedures Req'd
3,900.0	2,889.3	2,941.3	2,941.3	33.8	2,053.5	-90.38	-429.1	5,133.6	3,470.2	1,393.8	2,076.43	1.671	Collision RiskProcedures Req'd
3,925.0	2,889.1	2,941.1	2,941.1	34.2	2,053.4	-90.38	-429.1	5,133.6	3,450.6	1,374.0	2,076.65	1.662	Collision RiskProcedures Req'd
3,950.0	2,889.0	2,941.0	2,941.0	34.5	2,053.3	-90.37	-429.1	5,133.6	3,431.1	1,354.2	2,076.87	1.652	Collision RiskProcedures Req'd
3,975.0	2,888.9	2,940.9	2,940.9	34.9	2,053.2	-90.37	-429.1	5,133.6	3,411.7	1,334.6	2,077.10	1.643	Collision RiskProcedures Req'd
4,000.0	2,888.8	2,940.8	2,940.8	35.3	2,053.1	-90.37	-429.1	5,133.6	3,392.3	1,315.0	2,077.33	1.633	Collision RiskProcedures Req'd
4,025.0	2,888.6	2,940.6	2,940.6	35.7	2,053.0	-90.36	-429.1	5,133.6	3,373.0	1,295.4	2,077.59	1.624	Collision RiskProcedures Req'd
4,050.0	2,888.5	2,940.5	2,940.5	36.0	2,052.9	-90.36	-429.1	5,133.6	3,353.8	1,276.0	2,077.84	1.614	Collision RiskProcedures Req'd
4,075.0	2,888.4	2,940.4	2,940.4	36.4	2,052.9	-90.36	-429.1	5,133.6	3,334.7	1,256.6	2,078.10	1.605	Collision RiskProcedures Req'd
4,100.0	2,888.2	2,940.2	2,940.2	36.8	2,052.8	-90.35	-429.1	5,133.6	3,315.6	1,237.2	2,078.37	1.595	Collision RiskProcedures Req'd
4,125.0	2,888.1	2,940.1	2,940.1	37.2	2,052.7	-90.35	-429.1	5,133.6	3,296.6	1,218.0	2,078.66	1.586	Collision RiskProcedures Req'd
4,150.0	2,888.0	2,940.0	2,940.0	37.6	2,052.6	-90.35	-429.1	5,133.6	3,277.7	1,198.8	2,078.94	1.577	Collision RiskProcedures Req'd
4,175.0	2,887.8	2,939.8	2,939.8	38.0	2,052.5	-90.34	-429.1	5,133.6	3,258.9	1,179.7	2,079.24	1.567	Collision RiskProcedures Req'd
4,200.0	2,887.7	2,939.7	2,939.7	38.4	2,052.4	-90.34	-429.1	5,133.6	3,240.2	1,160.7	2,079.54	1.558	Collision RiskProcedures Req'd
4,225.0	2,887.6	2,939.6	2,939.6	38.9	2,052.3	-90.34	-429.1	5,133.6	3,221.5	1,141.7	2,079.85	1.549	Collision RiskProcedures Req'd
4,250.0	2,887.4	2,939.4	2,939.4	39.3	2,052.2	-90.33	-429.1	5,133.6	3,203.0	1,122.8	2,080.18	1.540	Collision RiskProcedures Req'd
4,275.0	2,887.3	2,939.3	2,939.3	39.7	2,052.1	-90.33	-429.1	5,133.6	3,184.5	1,104.0	2,080.50	1.531	Collision RiskProcedures Req'd
4,300.0	2,887.2	2,939.2	2,939.2	40.1	2,052.0	-90.33	-429.1	5,133.6	3,166.1	1,085.3	2,080.83	1.522	Collision RiskProcedures Req'd
4,325.0	2,887.0	2,939.0	2,939.0	40.6	2,051.9	-90.32	-429.1	5,133.6	3,147.8	1,066.7	2,081.18	1.513	Collision RiskProcedures Req'd
4,350.0	2,886.9	2,938.9	2,938.9	41.0	2,051.8	-90.32	-429.1	5,133.6	3,129.6	1,048.1	2,081.53	1.504	Collision RiskProcedures Req'd
4,375.0	2,886.8	2,938.8	2,938.8	41.5	2,051.7	-90.32	-429.1	5,133.6	3,111.5	1,029.6	2,081.89	1.495	Collision RiskProcedures Req'd
4,400.0	2,886.6	2,938.6	2,938.6	41.9	2,051.7	-90.31	-429.1	5,133.6	3,093.5	1,011.3	2,082.25	1.486	Collision RiskProcedures Req'd
4,425.0	2,886.5	2,938.5	2,938.5	42.4	2,051.6	-90.31	-429.1	5,133.6	3,075.6	993.0	2,082.63	1.477	Collision RiskProcedures Req'd
4,450.0	2,886.4	2,938.4	2,938.4	42.8	2,051.5	-90.30	-429.1	5,133.6	3,057.8	974.8	2,083.02	1.468	Collision RiskProcedures Req'd
4,475.0	2,886.2	2,938.2	2,938.2	43.3	2,051.4	-90.30	-429.1	5,133.6	3,040.1	956.7	2,083.40	1.459	Collision RiskProcedures Req'd
4,500.0	2,886.1	2,938.1	2,938.1	43.7	2,051.3	-90.30	-429.1	5,133.6	3,022.5	938.7	2,083.80	1.450	Collision RiskProcedures Req'd
4,525.0	2,886.0	2,938.0	2,938.0	44.2	2,051.2	-90.29	-429.1	5,133.6	3,005.0	920.8	2,084.21	1.442	Collision RiskProcedures Req'd
4,550.0	2,885.9	2,937.9	2,937.9	44.7	2,051.1	-90.29	-429.1	5,133.6	2,987.6	903.0	2,084.62	1.433	Collision RiskProcedures Req'd
4,575.0	2,885.7	2,937.7	2,937.7	45.1	2,051.0	-90.29	-429.1	5,133.6	2,970.3	885.3	2,085.04	1.425	Collision RiskProcedures Req'd

Company:	Hilcorp Energy Company	**Local Co-ordinate Reference:**	Well Southern Ute 705H
Project:	Farmington, NM	**TVD Reference:**	RKB to MSL= 6310 @ 6310.0usft
Reference Site:	San Juan Basin	**MD Reference:**	RKB to MSL= 6310 @ 6310.0usft
Site Error:	5.0 usft	**North Reference:**	Grid
Reference Well:	Southern Ute 705H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	1.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Lateral No.1	**Database:**	EDM 5000.1 Single User Db
Reference Design:	WP2.1	**Offset TVD Reference:**	Offset Datum

Offset Design: San Juan Basin - SOUTHERN UTE 005A - ST00 - ST00 — **Offset Site Error:** 5.0 usft

Survey Program: 5719-3_Blind — **Rule Assigned:** — **Offset Well Error:** 1.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset 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
4,600.0	2,885.6	2,937.6	2,937.6	45.6	2,050.9	-90.28	-429.1	5,133.6	2,953.1	867.7	2,085.47	1.416	Collision RiskProcedures Req'd
4,625.0	2,885.5	2,937.5	2,937.5	46.1	2,050.8	-90.28	-429.1	5,133.6	2,936.1	850.2	2,085.90	1.408	Collision RiskProcedures Req'd
4,650.0	2,885.3	2,937.3	2,937.3	46.5	2,050.7	-90.28	-429.1	5,133.6	2,919.1	832.8	2,086.35	1.399	Collision RiskProcedures Req'd
4,675.0	2,885.2	2,937.2	2,937.2	47.0	2,050.6	-90.27	-429.1	5,133.6	2,902.3	815.5	2,086.80	1.391	Collision RiskProcedures Req'd
4,700.0	2,885.1	2,937.1	2,937.1	47.5	2,050.6	-90.27	-429.1	5,133.6	2,885.6	798.3	2,087.25	1.382	Collision RiskProcedures Req'd
4,725.0	2,884.9	2,936.9	2,936.9	48.0	2,050.5	-90.27	-429.1	5,133.6	2,869.0	781.3	2,087.72	1.374	Collision RiskProcedures Req'd
4,750.0	2,884.8	2,936.8	2,936.8	48.5	2,050.4	-90.26	-429.1	5,133.6	2,852.5	764.3	2,088.19	1.366	Collision RiskProcedures Req'd
4,775.0	2,884.7	2,936.7	2,936.7	48.9	2,050.3	-90.26	-429.1	5,133.6	2,836.2	747.5	2,088.67	1.358	Collision RiskProcedures Req'd
4,800.0	2,884.5	2,936.5	2,936.5	49.4	2,050.2	-90.26	-429.1	5,133.6	2,820.0	730.8	2,089.16	1.350	Collision RiskProcedures Req'd
4,825.0	2,884.4	2,936.4	2,936.4	49.9	2,050.1	-90.25	-429.1	5,133.6	2,803.9	714.2	2,089.65	1.342	Collision RiskProcedures Req'd
4,850.0	2,884.3	2,936.3	2,936.3	50.4	2,050.0	-90.25	-429.1	5,133.6	2,787.9	697.7	2,090.16	1.334	Collision RiskProcedures Req'd
4,875.0	2,884.1	2,936.1	2,936.1	50.9	2,049.9	-90.25	-429.1	5,133.6	2,772.1	681.4	2,090.66	1.326	Collision RiskProcedures Req'd
4,900.0	2,884.0	2,936.0	2,936.0	51.4	2,049.8	-90.24	-429.1	5,133.6	2,756.4	665.2	2,091.18	1.318	Collision RiskProcedures Req'd
4,925.0	2,883.9	2,935.9	2,935.9	51.9	2,049.7	-90.24	-429.1	5,133.6	2,740.8	649.1	2,091.70	1.310	Collision RiskProcedures Req'd
4,950.0	2,883.7	2,935.7	2,935.7	52.4	2,049.6	-90.23	-429.1	5,133.6	2,725.4	633.2	2,092.23	1.303	Collision RiskProcedures Req'd
4,975.0	2,883.6	2,935.6	2,935.6	52.9	2,049.5	-90.23	-429.1	5,133.6	2,710.2	617.4	2,092.77	1.295	Collision RiskProcedures Req'd
5,000.0	2,883.5	2,935.5	2,935.5	53.4	2,049.4	-90.23	-429.1	5,133.6	2,695.0	601.7	2,093.31	1.287	Collision RiskProcedures Req'd
5,025.0	2,883.4	2,935.4	2,935.4	53.9	2,049.4	-90.22	-429.1	5,133.6	2,680.1	586.2	2,093.86	1.280	Collision RiskProcedures Req'd
5,050.0	2,883.2	2,935.2	2,935.2	54.4	2,049.3	-90.22	-429.1	5,133.6	2,665.2	570.8	2,094.42	1.273	Collision RiskProcedures Req'd
5,075.0	2,883.1	2,935.1	2,935.1	54.9	2,049.2	-90.22	-429.1	5,133.6	2,650.6	555.6	2,094.98	1.265	Collision RiskProcedures Req'd
5,100.0	2,883.0	2,935.0	2,935.0	55.4	2,049.1	-90.21	-429.1	5,133.6	2,636.1	540.5	2,095.55	1.258	Collision RiskProcedures Req'd
5,117.3	2,882.9	2,934.9	2,934.9	55.8	2,049.0	-90.21	-429.1	5,133.6	2,626.1	530.2	2,095.95	1.253	Collision RiskProcedures Req'd
5,125.0	2,882.8	2,934.8	2,934.8	55.9	2,049.0	-90.21	-429.1	5,133.6	2,621.7	525.6	2,096.12	1.251	Collision RiskProcedures Req'd
5,150.0	2,882.7	2,934.7	2,934.7	56.5	2,048.9	-90.22	-429.1	5,133.6	2,607.2	510.5	2,096.70	1.243	Collision RiskProcedures Req'd
5,175.0	2,882.6	2,934.6	2,934.6	57.0	2,048.8	-90.22	-429.1	5,133.6	2,592.6	495.4	2,097.27	1.236	Collision RiskProcedures Req'd
5,200.0	2,882.4	2,934.4	2,934.4	57.5	2,048.7	-90.23	-429.1	5,133.6	2,577.9	480.0	2,097.85	1.229	Collision RiskProcedures Req'd
5,225.0	2,882.3	2,934.3	2,934.3	58.0	2,048.6	-90.23	-429.1	5,133.6	2,563.0	464.5	2,098.43	1.221	Collision RiskProcedures Req'd
5,250.0	2,882.2	2,934.2	2,934.2	58.5	2,048.5	-90.23	-429.1	5,133.6	2,547.9	448.9	2,099.00	1.214	Collision RiskProcedures Req'd
5,275.0	2,882.0	2,934.0	2,934.0	59.1	2,048.4	-90.24	-429.1	5,133.6	2,532.7	433.1	2,099.58	1.206	Collision RiskProcedures Req'd
5,300.0	2,881.9	2,933.9	2,933.9	59.6	2,048.3	-90.24	-429.1	5,133.6	2,517.4	417.2	2,100.16	1.199	Collision RiskProcedures Req'd
5,325.0	2,881.8	2,933.8	2,933.8	60.1	2,048.2	-90.25	-429.1	5,133.6	2,501.9	401.2	2,100.72	1.191	Collision RiskProcedures Req'd
5,350.0	2,881.6	2,933.6	2,933.6	60.6	2,048.1	-90.25	-429.1	5,133.6	2,486.2	384.9	2,101.30	1.183	Collision RiskProcedures Req'd
5,375.0	2,881.5	2,933.5	2,933.5	61.2	2,048.1	-90.26	-429.1	5,133.6	2,470.4	368.6	2,101.87	1.175	Collision RiskProcedures Req'd
5,400.0	2,881.3	2,933.3	2,933.3	61.7	2,048.0	-90.26	-429.1	5,133.6	2,454.5	352.1	2,102.44	1.167	Collision RiskProcedures Req'd
5,425.0	2,881.2	2,933.2	2,933.2	62.3	2,047.9	-90.26	-429.1	5,133.6	2,438.4	335.4	2,103.01	1.160	Collision RiskProcedures Req'd
5,450.0	2,881.1	2,933.1	2,933.1	62.8	2,047.8	-90.27	-429.1	5,133.6	2,422.2	318.7	2,103.57	1.151	Collision RiskProcedures Req'd
5,475.0	2,880.9	2,932.9	2,932.9	63.3	2,047.7	-90.27	-429.1	5,133.6	2,405.9	301.7	2,104.14	1.143	Collision RiskProcedures Req'd
5,500.0	2,880.8	2,932.8	2,932.8	63.9	2,047.6	-90.28	-429.1	5,133.6	2,389.4	284.7	2,104.71	1.135	Collision RiskProcedures Req'd
5,525.0	2,880.7	2,932.7	2,932.7	64.4	2,047.5	-90.28	-429.1	5,133.6	2,372.7	267.5	2,105.27	1.127	Collision RiskProcedures Req'd
5,550.0	2,880.5	2,932.5	2,932.5	64.9	2,047.4	-90.29	-429.1	5,133.6	2,356.0	250.1	2,105.83	1.119	Collision RiskProcedures Req'd
5,575.0	2,880.4	2,932.4	2,932.4	65.5	2,047.3	-90.29	-429.1	5,133.6	2,339.1	232.7	2,106.39	1.110	Collision RiskProcedures Req'd
5,600.0	2,880.3	2,932.3	2,932.3	66.0	2,047.2	-90.29	-429.1	5,133.6	2,322.0	215.1	2,106.95	1.102	Collision RiskProcedures Req'd
5,625.0	2,880.1	2,932.1	2,932.1	66.6	2,047.1	-90.30	-429.1	5,133.6	2,304.8	197.3	2,107.50	1.094	Collision RiskProcedures Req'd
5,650.0	2,880.0	2,932.0	2,932.0	67.1	2,047.0	-90.30	-429.1	5,133.6	2,287.5	179.5	2,108.05	1.085	Collision RiskProcedures Req'd
5,675.0	2,879.8	2,931.8	2,931.8	67.6	2,046.9	-90.31	-429.1	5,133.6	2,270.1	161.5	2,108.60	1.077	Collision RiskProcedures Req'd
5,700.0	2,879.7	2,931.7	2,931.7	68.2	2,046.8	-90.31	-429.1	5,133.6	2,252.5	143.3	2,109.16	1.068	Collision RiskProcedures Req'd
5,725.0	2,879.6	2,931.6	2,931.6	68.7	2,046.7	-90.32	-429.1	5,133.6	2,234.8	125.1	2,109.69	1.059	Collision RiskProcedures Req'd
5,750.0	2,879.4	2,931.4	2,931.4	69.2	2,046.6	-90.32	-429.1	5,133.6	2,216.9	106.7	2,110.23	1.051	Collision RiskProcedures Req'd
5,775.0	2,879.3	2,931.3	2,931.3	69.8	2,046.5	-90.32	-429.1	5,133.6	2,198.9	88.2	2,110.78	1.042	Collision RiskProcedures Req'd
5,800.0	2,879.2	2,931.2	2,931.2	70.3	2,046.4	-90.33	-429.1	5,133.6	2,180.8	69.5	2,111.32	1.033	Collision RiskProcedures Req'd
5,825.0	2,879.0	2,931.0	2,931.0	70.8	2,046.3	-90.33	-429.1	5,133.6	2,162.6	50.8	2,111.85	1.024	Collision RiskProcedures Req'd
5,850.0	2,878.9	2,930.9	2,930.9	71.3	2,046.2	-90.34	-429.1	5,133.6	2,144.3	31.9	2,112.37	1.015	Collision RiskProcedures Req'd

Company:	Hilcorp Energy Company	**Local Co-ordinate Reference:**	Well Southern Ute 705H
Project:	Farmington, NM	**TVD Reference:**	RKB to MSL= 6310 @ 6310.0usft
Reference Site:	San Juan Basin	**MD Reference:**	RKB to MSL= 6310 @ 6310.0usft
Site Error:	5.0 usft	**North Reference:**	Grid
Reference Well:	Southern Ute 705H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	1.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Lateral No.1	**Database:**	EDM 5000.1 Single User Db
Reference Design:	WP2.1	**Offset TVD Reference:**	Offset Datum

Offset Design: San Juan Basin - SOUTHERN UTE 005A - ST00 - ST00 — **Offset Site Error:** 5.0 usft

Survey Program: 5719-3_Blind — **Rule Assigned:** — **Offset Well Error:** 1.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset 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
5,875.0	2,878.8	2,930.8	2,930.8	71.9	2,046.2	-90.34	-429.1	5,133.6	2,125.8	12.9	2,112.90	1.006	Collision RiskProcedures Req'd
5,900.0	2,878.6	2,930.6	2,930.6	72.4	2,046.1	-90.34	-429.1	5,133.6	2,107.2	-6.3	2,113.44	0.997	Collision RiskProcedures Req'd
5,925.0	2,878.5	2,930.5	2,930.5	72.9	2,046.0	-90.35	-429.1	5,133.6	2,088.4	-25.5	2,113.95	0.988	Collision RiskProcedures Req'd
5,950.0	2,878.4	2,930.4	2,930.4	73.4	2,045.9	-90.35	-429.1	5,133.6	2,069.6	-44.9	2,114.47	0.979	Collision RiskProcedures Req'd
5,975.0	2,878.2	2,930.2	2,930.2	73.9	2,045.8	-90.36	-429.1	5,133.6	2,050.6	-64.4	2,114.99	0.970	Collision RiskProcedures Req'd
6,000.0	2,878.1	2,930.1	2,930.1	74.5	2,045.7	-90.36	-429.1	5,133.6	2,031.5	-84.0	2,115.51	0.960	Collision RiskProcedures Req'd
6,025.0	2,878.0	2,930.0	2,930.0	75.0	2,045.6	-90.36	-429.1	5,133.6	2,012.3	-103.7	2,116.01	0.951	Collision RiskProcedures Req'd
6,045.8	2,877.9	2,929.9	2,929.9	75.4	2,045.5	-90.37	-429.1	5,133.6	1,996.2	-120.2	2,116.44	0.943	Collision RiskProcedures Req'd
6,050.0	2,877.8	2,929.8	2,929.8	75.5	2,045.5	-90.37	-429.1	5,133.6	1,993.0	-123.5	2,116.52	0.942	Collision RiskProcedures Req'd
6,075.0	2,877.7	2,929.7	2,929.7	76.0	2,045.4	-90.36	-429.1	5,133.6	1,973.7	-143.3	2,117.03	0.932	Collision RiskProcedures Req'd
6,100.0	2,877.6	2,929.6	2,929.6	76.5	2,045.3	-90.35	-429.1	5,133.6	1,954.6	-162.9	2,117.55	0.923	Collision RiskProcedures Req'd
6,125.0	2,877.4	2,929.4	2,929.4	77.0	2,045.2	-90.35	-429.1	5,133.6	1,935.6	-182.5	2,118.07	0.914	Collision RiskProcedures Req'd
6,150.0	2,877.3	2,929.3	2,929.3	77.5	2,045.1	-90.34	-429.1	5,133.6	1,916.7	-201.9	2,118.60	0.905	Collision RiskProcedures Req'd
6,175.0	2,877.2	2,929.2	2,929.2	78.0	2,045.0	-90.34	-429.1	5,133.6	1,898.0	-221.2	2,119.14	0.896	Collision RiskProcedures Req'd
6,200.0	2,877.0	2,929.0	2,929.0	78.5	2,045.0	-90.33	-429.1	5,133.6	1,879.4	-240.3	2,119.69	0.887	Collision RiskProcedures Req'd
6,225.0	2,876.9	2,928.9	2,928.9	79.0	2,044.9	-90.32	-429.1	5,133.6	1,860.9	-259.3	2,120.24	0.878	Collision RiskProcedures Req'd
6,250.0	2,876.8	2,928.8	2,928.8	79.5	2,044.8	-90.32	-429.1	5,133.6	1,842.7	-278.1	2,120.80	0.869	Collision RiskProcedures Req'd
6,275.0	2,876.7	2,928.7	2,928.7	80.0	2,044.7	-90.31	-429.1	5,133.6	1,824.5	-296.8	2,121.37	0.860	Collision RiskProcedures Req'd
6,300.0	2,876.5	2,928.5	2,928.5	80.6	2,044.6	-90.31	-429.1	5,133.6	1,806.6	-315.4	2,121.95	0.851	Collision RiskProcedures Req'd
6,325.0	2,876.4	2,928.4	2,928.4	81.1	2,044.5	-90.30	-429.1	5,133.6	1,788.8	-333.8	2,122.53	0.843	Collision RiskProcedures Req'd
6,350.0	2,876.3	2,928.3	2,928.3	81.6	2,044.4	-90.30	-429.1	5,133.6	1,771.2	-352.0	2,123.12	0.834	Collision RiskProcedures Req'd
6,375.0	2,876.1	2,928.1	2,928.1	82.1	2,044.3	-90.29	-429.1	5,133.6	1,753.7	-370.0	2,123.72	0.826	Collision RiskProcedures Req'd
6,400.0	2,876.0	2,928.0	2,928.0	82.6	2,044.2	-90.28	-429.1	5,133.6	1,736.5	-387.9	2,124.32	0.817	Collision RiskProcedures Req'd
6,425.0	2,875.9	2,927.9	2,927.9	83.2	2,044.1	-90.28	-429.1	5,133.6	1,719.4	-405.5	2,124.93	0.809	Collision RiskProcedures Req'd
6,450.0	2,875.7	2,927.7	2,927.7	83.7	2,044.0	-90.27	-429.1	5,133.6	1,702.5	-423.0	2,125.54	0.801	Collision RiskProcedures Req'd
6,475.0	2,875.6	2,927.6	2,927.6	84.2	2,043.9	-90.27	-429.1	5,133.6	1,685.9	-440.3	2,126.16	0.793	Collision RiskProcedures Req'd
6,500.0	2,875.5	2,927.5	2,927.5	84.7	2,043.9	-90.26	-429.1	5,133.6	1,669.4	-457.4	2,126.78	0.785	Collision RiskProcedures Req'd
6,525.0	2,875.3	2,927.3	2,927.3	85.3	2,043.8	-90.25	-429.1	5,133.6	1,653.2	-474.2	2,127.41	0.777	Collision RiskProcedures Req'd
6,550.0	2,875.2	2,927.2	2,927.2	85.8	2,043.7	-90.25	-429.1	5,133.6	1,637.2	-490.9	2,128.04	0.769	Collision RiskProcedures Req'd
6,575.0	2,875.1	2,927.1	2,927.1	86.3	2,043.6	-90.24	-429.1	5,133.6	1,621.4	-507.3	2,128.68	0.762	Collision RiskProcedures Req'd
6,600.0	2,875.0	2,927.0	2,927.0	86.8	2,043.5	-90.24	-429.1	5,133.6	1,605.8	-523.5	2,129.32	0.754	Collision RiskProcedures Req'd
6,625.0	2,874.8	2,926.8	2,926.8	87.4	2,043.4	-90.23	-429.1	5,133.6	1,590.5	-539.5	2,129.96	0.747	Collision RiskProcedures Req'd
6,650.0	2,874.7	2,926.7	2,926.7	87.9	2,043.3	-90.22	-429.1	5,133.6	1,575.4	-555.2	2,130.60	0.739	Collision RiskProcedures Req'd
6,675.0	2,874.6	2,926.6	2,926.6	88.4	2,043.2	-90.22	-429.1	5,133.6	1,560.6	-570.7	2,131.25	0.732	Collision RiskProcedures Req'd
6,700.0	2,874.4	2,926.4	2,926.4	89.0	2,043.1	-90.21	-429.1	5,133.6	1,546.0	-585.9	2,131.89	0.725	Collision RiskProcedures Req'd
6,725.0	2,874.3	2,926.3	2,926.3	89.5	2,043.0	-90.21	-429.1	5,133.6	1,531.7	-600.8	2,132.53	0.718	Collision RiskProcedures Req'd
6,750.0	2,874.2	2,926.2	2,926.2	90.0	2,042.9	-90.20	-429.1	5,133.6	1,517.7	-615.4	2,133.18	0.711	Collision RiskProcedures Req'd
6,775.0	2,874.0	2,926.0	2,926.0	90.6	2,042.9	-90.19	-429.1	5,133.6	1,504.0	-629.8	2,133.81	0.705	Collision RiskProcedures Req'd
6,800.0	2,873.9	2,925.9	2,925.9	91.1	2,042.8	-90.19	-429.1	5,133.6	1,490.6	-643.9	2,134.45	0.698	Collision RiskProcedures Req'd
6,825.0	2,873.8	2,925.8	2,925.8	91.6	2,042.7	-90.18	-429.1	5,133.6	1,477.4	-657.6	2,135.08	0.692	Collision RiskProcedures Req'd
6,850.0	2,873.6	2,925.6	2,925.6	92.2	2,042.6	-90.18	-429.1	5,133.6	1,464.6	-671.1	2,135.71	0.686	Collision RiskProcedures Req'd
6,875.0	2,873.5	2,925.5	2,925.5	92.7	2,042.5	-90.17	-429.1	5,133.6	1,452.1	-684.2	2,136.33	0.680	Collision RiskProcedures Req'd
6,900.0	2,873.4	2,925.4	2,925.4	93.3	2,042.4	-90.16	-429.1	5,133.6	1,439.9	-697.0	2,136.94	0.674	Collision RiskProcedures Req'd
6,925.0	2,873.3	2,925.3	2,925.3	93.8	2,042.3	-90.16	-429.1	5,133.6	1,428.1	-709.4	2,137.55	0.668	Collision RiskProcedures Req'd
6,950.0	2,873.1	2,925.1	2,925.1	94.3	2,042.2	-90.15	-429.1	5,133.6	1,416.6	-721.5	2,138.14	0.663	Collision RiskProcedures Req'd
6,975.0	2,873.0	2,925.0	2,925.0	94.9	2,042.1	-90.15	-429.1	5,133.6	1,405.4	-733.3	2,138.73	0.657	Collision RiskProcedures Req'd
7,000.0	2,872.9	2,924.9	2,924.9	95.4	2,042.0	-90.14	-429.1	5,133.6	1,394.7	-744.6	2,139.30	0.652	Collision RiskProcedures Req'd
7,025.0	2,872.7	2,924.7	2,924.7	96.0	2,041.9	-90.13	-429.1	5,133.6	1,384.2	-755.6	2,139.85	0.647	Collision RiskProcedures Req'd
7,050.0	2,872.6	2,924.6	2,924.6	96.5	2,041.8	-90.13	-429.1	5,133.6	1,374.2	-766.2	2,140.39	0.642	Collision RiskProcedures Req'd
7,075.0	2,872.5	2,924.5	2,924.5	97.0	2,041.8	-90.12	-429.1	5,133.6	1,364.5	-776.4	2,140.92	0.637	Collision RiskProcedures Req'd
7,100.0	2,872.3	2,924.3	2,924.3	97.6	2,041.7	-90.12	-429.1	5,133.6	1,355.2	-786.2	2,141.42	0.633	Collision RiskProcedures Req'd
7,125.0	2,872.2	2,924.2	2,924.2	98.1	2,041.6	-90.11	-429.1	5,133.6	1,346.4	-795.5	2,141.91	0.629	Collision RiskProcedures Req'd

Company:	Hilcorp Energy Company	**Local Co-ordinate Reference:**	Well Southern Ute 705H
Project:	Farmington, NM	**TVD Reference:**	RKB to MSL= 6310 @ 6310.0usft
Reference Site:	San Juan Basin	**MD Reference:**	RKB to MSL= 6310 @ 6310.0usft
Site Error:	5.0 usft	**North Reference:**	Grid
Reference Well:	Southern Ute 705H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	1.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Lateral No.1	**Database:**	EDM 5000.1 Single User Db
Reference Design:	WP2.1	**Offset TVD Reference:**	Offset Datum

Offset Design: San Juan Basin - SOUTHERN UTE 005A - ST00 - ST00 — **Offset Site Error:** 5.0 usft

Survey Program: 5719-3_Blind — **Rule Assigned:** — **Offset Well Error:** 1.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset 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
7,150.0	2,872.1	2,924.1	2,924.1	98.7	2,041.5	-90.10	-429.1	5,133.6	1,337.9	-804.5	2,142.37	0.624	Collision RiskProcedures Req'd
7,175.0	2,871.9	2,923.9	2,923.9	99.2	2,041.4	-90.10	-429.1	5,133.6	1,329.9	-813.0	2,142.81	0.621	Collision RiskProcedures Req'd
7,200.0	2,871.8	2,923.8	2,923.8	99.8	2,041.3	-90.09	-429.1	5,133.6	1,322.2	-821.0	2,143.23	0.617	Collision RiskProcedures Req'd
7,225.0	2,871.7	2,923.7	2,923.7	100.3	2,041.2	-90.09	-429.1	5,133.6	1,315.0	-828.6	2,143.62	0.613	Collision RiskProcedures Req'd
7,250.0	2,871.5	2,923.5	2,923.5	100.9	2,041.1	-90.08	-429.1	5,133.6	1,308.3	-835.7	2,143.98	0.610	Collision RiskProcedures Req'd
7,275.0	2,871.4	2,923.4	2,923.4	101.4	2,041.0	-90.08	-429.1	5,133.6	1,302.0	-842.3	2,144.32	0.607	Collision RiskProcedures Req'd
7,300.0	2,871.3	2,923.3	2,923.3	102.0	2,040.9	-90.07	-429.1	5,133.6	1,296.1	-848.5	2,144.62	0.604	Collision RiskProcedures Req'd
7,325.0	2,871.2	2,923.2	2,923.2	102.5	2,040.8	-90.06	-429.1	5,133.6	1,290.7	-854.2	2,144.90	0.602	Collision RiskProcedures Req'd
7,350.0	2,871.0	2,923.0	2,923.0	103.1	2,040.8	-90.06	-429.1	5,133.6	1,285.8	-859.4	2,145.14	0.599	Collision RiskProcedures Req'd
7,375.0	2,870.9	2,922.9	2,922.9	103.6	2,040.7	-90.05	-429.1	5,133.6	1,281.3	-864.0	2,145.34	0.597	Collision RiskProcedures Req'd
7,400.0	2,870.8	2,922.8	2,922.8	104.2	2,040.6	-90.05	-429.1	5,133.6	1,277.3	-868.2	2,145.52	0.595	Collision RiskProcedures Req'd
7,425.0	2,870.6	2,922.6	2,922.6	104.8	2,040.5	-90.04	-429.1	5,133.6	1,273.8	-871.9	2,145.65	0.594	Collision RiskProcedures Req'd
7,450.0	2,870.5	2,922.5	2,922.5	105.3	2,040.4	-90.03	-429.1	5,133.6	1,270.8	-875.0	2,145.75	0.592	Collision RiskProcedures Req'd
7,475.0	2,870.4	2,922.4	2,922.4	105.9	2,040.3	-90.03	-429.1	5,133.6	1,268.2	-877.6	2,145.82	0.591	Collision RiskProcedures Req'd
7,500.0	2,870.2	2,922.2	2,922.2	106.4	2,040.2	-90.02	-429.1	5,133.6	1,266.2	-879.7	2,145.84	0.590	Collision RiskProcedures Req'd
7,525.0	2,870.1	2,922.1	2,922.1	107.0	2,040.1	-90.02	-429.1	5,133.6	1,264.6	-881.2	2,145.82	0.589	Collision RiskProcedures Req'd
7,545.8	2,870.0	2,922.0	2,922.0	107.4	2,040.0	-90.01	-429.1	5,133.6	1,263.7	-882.1	2,145.78	0.589	Collision RiskProcedures Req'd, CC, E

Company:	Hilcorp Energy Company	**Local Co-ordinate Reference:**	Well Southern Ute 705H
Project:	Farmington, NM	**TVD Reference:**	RKB to MSL= 6310 @ 6310.0usft
Reference Site:	San Juan Basin	**MD Reference:**	RKB to MSL= 6310 @ 6310.0usft
Site Error:	5.0 usft	**North Reference:**	Grid
Reference Well:	Southern Ute 705H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	1.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Lateral No.1	**Database:**	EDM 5000.1 Single User Db
Reference Design:	WP2.1	**Offset TVD Reference:**	Offset Datum

Offset Design: San Juan Basin - Southern Ute 705H - Pilot Hole - WP2.1 — **Offset Site Error:** 5.0 usft

Survey Program: 0-3_MWD+HRGM — **Rule Assigned:** — **Offset Well Error:** 1.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset 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
3,352.5	2,824.1	3,352.5	2,824.1	0.0	0.0	-97.29	-520.4	1,226.0	0.0	-2.3	2.28	0.005	Collision RiskProcedures Req'd
3,375.0	2,833.5	3,375.0	2,833.6	0.3	0.5	-99.26	-528.4	1,244.7	1.1	-2.0	3.02	0.348	Collision RiskProcedures Req'd
3,393.0	2,840.8	3,393.0	2,841.2	0.6	0.8	176.21	-534.7	1,259.8	0.5	-2.3	2.78	0.174	Collision RiskProcedures Req'd
3,393.4	2,841.0	3,393.4	2,841.4	0.6	0.8	-176.40	-534.9	1,260.2	0.5	-2.3	2.81	0.177	Collision RiskProcedures Req'd
3,400.0	2,843.6	3,399.9	2,844.2	0.6	1.0	-126.75	-537.2	1,265.6	1.2	-2.4	3.58	0.334	Collision RiskProcedures Req'd
3,401.1	2,844.0	3,401.0	2,844.6	0.6	1.0	-124.21	-537.6	1,266.5	1.4	-2.3	3.64	0.372	Collision RiskProcedures Req'd
3,425.0	2,852.9	3,424.6	2,854.6	0.8	1.5	-115.88	-545.9	1,286.2	5.0	0.7	4.31	1.165	Collision RiskProcedures Req'd
3,426.1	2,853.3	3,425.7	2,855.1	0.8	1.5	-116.01	-546.3	1,287.1	5.2	0.9	4.34	1.201	Collision RiskProcedures Req'd
3,450.0	2,861.2	3,449.2	2,865.0	1.0	1.9	-120.06	-554.7	1,306.7	9.4	4.5	4.84	1.934	Collision RiskProcedures Req'd
3,451.1	2,861.5	3,450.3	2,865.5	1.0	2.0	-120.28	-555.1	1,307.6	9.6	4.7	4.86	1.968	Collision RiskProcedures Req'd
3,475.0	2,868.5	3,473.7	2,875.3	1.2	2.4	-124.97	-563.3	1,327.1	14.3	9.0	5.30	2.696	
3,476.1	2,868.8	3,474.8	2,875.8	1.2	2.4	-125.19	-563.7	1,328.0	14.5	9.2	5.32	2.731	
3,500.0	2,874.7	3,498.0	2,885.6	1.4	2.9	-129.56	-571.9	1,347.4	19.9	14.3	5.69	3.503	
3,501.1	2,875.0	3,499.1	2,886.1	1.4	2.9	-129.75	-572.3	1,348.3	20.2	14.5	5.71	3.541	
3,525.0	2,880.0	3,522.1	2,895.8	1.6	3.4	-133.62	-580.5	1,367.5	26.4	20.3	6.04	4.370	
3,526.1	2,880.2	3,523.2	2,896.3	1.7	3.4	-133.78	-580.9	1,368.4	26.7	20.6	6.05	4.410	
3,550.0	2,884.2	3,545.9	2,905.9	1.9	3.8	-137.13	-588.9	1,387.4	33.7	27.3	6.33	5.320	
3,551.1	2,884.4	3,547.0	2,906.3	1.9	3.9	-137.28	-589.3	1,388.3	34.0	27.7	6.34	5.364	
3,575.0	2,887.4	3,569.5	2,915.8	2.1	4.3	-140.15	-597.2	1,407.0	41.8	35.2	6.58	6.351	
3,576.1	2,887.5	3,570.5	2,916.3	2.2	4.3	-140.27	-597.6	1,407.9	42.2	35.6	6.60	6.399	
3,600.0	2,889.5	3,592.7	2,925.6	2.4	4.8	-142.73	-605.4	1,426.3	50.9	44.1	6.80	7.475	
3,601.1	2,889.5	3,593.7	2,926.0	2.4	4.8	-142.84	-605.8	1,427.2	51.3	44.5	6.81	7.528	
3,625.0	2,890.5	3,615.4	2,935.2	2.7	5.2	-144.93	-613.5	1,445.4	60.8	53.8	7.00	8.684	
3,625.7	2,890.5	3,616.1	2,935.5	2.7	5.2	-144.99	-613.7	1,445.9	61.1	54.1	7.01	8.719	
3,640.6	2,890.6	3,629.4	2,941.1	2.9	5.5	-146.13	-618.5	1,457.0	67.5	60.3	7.11	9.483	
3,641.0	2,890.6	3,629.8	2,941.3	2.9	5.5	-146.18	-618.6	1,457.3	67.7	60.5	7.12	9.506	
3,650.0	2,890.6	3,637.8	2,944.7	3.0	5.7	-147.02	-621.5	1,464.0	71.6	64.4	7.18	9.969	CC, ES, SF
3,651.1	2,890.6	3,638.8	2,945.1	3.0	5.7	-147.12	-621.8	1,464.9	72.1	64.9	7.19	10.027	
3,675.0	2,890.5	3,660.2	2,954.1	3.3	6.1	-148.94	-629.4	1,482.7	82.6	75.3	7.38	11.196	
3,676.1	2,890.5	3,661.2	2,954.6	3.3	6.1	-149.02	-629.7	1,483.5	83.1	75.8	7.39	11.249	
3,700.0	2,890.3	3,678.8	2,962.0	3.6	6.5	-150.19	-635.9	1,498.2	93.8	86.3	7.52	12.470	
3,701.1	2,890.3	3,678.8	2,962.0	3.6	6.5	-150.19	-635.9	1,498.2	94.4	86.8	7.51	12.561	
3,725.0	2,890.2	3,678.8	2,962.0	3.9	6.5	-150.19	-635.9	1,498.2	108.1	100.9	7.16	15.086	
3,726.1	2,890.2	3,678.8	2,962.0	3.9	6.5	-150.19	-635.9	1,498.2	108.8	101.6	7.14	15.231	
3,750.0	2,890.1	3,678.8	2,962.0	4.2	6.5	-150.19	-635.9	1,498.2	125.7	119.0	6.68	18.810	
3,775.0	2,889.9	3,678.8	2,962.0	4.5	6.5	-150.19	-635.9	1,498.2	145.5	139.4	6.17	23.599	
3,800.0	2,889.8	3,678.8	2,962.0	4.9	6.5	-150.19	-635.9	1,498.2	166.7	161.1	5.61	29.719	
3,825.0	2,889.7	3,678.8	2,962.0	5.2	6.5	-150.19	-635.9	1,498.2	188.9	184.1	4.74	39.864	
3,850.0	2,889.5	3,678.8	2,962.0	5.6	6.5	-150.19	-635.9	1,498.2	211.7	206.4	5.24	40.426	
3,875.0	2,889.4	3,678.8	2,962.0	5.9	6.5	-150.19	-635.9	1,498.2	234.9	229.5	5.40	43.513	
3,900.0	2,889.3	3,678.8	2,962.0	6.3	6.5	-150.19	-635.9	1,498.2	258.5	252.9	5.52	46.863	
3,925.0	2,889.1	3,678.8	2,962.0	6.6	6.5	-150.19	-635.9	1,498.2	282.3	276.6	5.62	50.251	
3,950.0	2,889.0	3,678.8	2,962.0	7.0	6.5	-150.19	-635.9	1,498.2	306.3	300.5	5.71	53.594	
3,975.0	2,888.9	3,678.8	2,962.0	7.4	6.5	-150.19	-635.9	1,498.2	330.4	324.6	5.81	56.857	
4,000.0	2,888.8	3,678.8	2,962.0	7.8	6.5	-150.19	-635.9	1,498.2	354.7	348.8	5.91	60.024	
4,025.0	2,888.6	3,678.8	2,962.0	8.2	6.5	-150.19	-635.9	1,498.2	379.0	373.0	6.01	63.087	
4,050.0	2,888.5	3,678.8	2,962.0	8.6	6.5	-150.19	-635.9	1,498.2	403.5	397.4	6.11	66.037	
4,075.0	2,888.4	3,678.8	2,962.0	9.0	6.5	-150.19	-635.9	1,498.2	428.0	421.8	6.21	68.876	
4,100.0	2,888.2	3,678.8	2,962.0	9.4	6.5	-150.19	-635.9	1,498.2	452.5	446.2	6.32	71.604	
4,125.0	2,888.1	3,678.8	2,962.0	9.8	6.5	-150.19	-635.9	1,498.2	477.1	470.7	6.43	74.236	
4,150.0	2,888.0	3,678.8	2,962.0	10.2	6.5	-150.19	-635.9	1,498.2	501.8	495.3	6.54	76.762	
4,175.0	2,887.8	3,678.8	2,962.0	10.6	6.5	-150.19	-635.9	1,498.2	526.5	519.8	6.65	79.187	

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

Company:	Hilcorp Energy Company	**Local Co-ordinate Reference:**	Well Southern Ute 705H
Project:	Farmington, NM	**TVD Reference:**	RKB to MSL= 6310 @ 6310.0usft
Reference Site:	San Juan Basin	**MD Reference:**	RKB to MSL= 6310 @ 6310.0usft
Site Error:	5.0 usft	**North Reference:**	Grid
Reference Well:	Southern Ute 705H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	1.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Lateral No.1	**Database:**	EDM 5000.1 Single User Db
Reference Design:	WP2.1	**Offset TVD Reference:**	Offset Datum

Offset Design: San Juan Basin - Southern Ute 705H - Pilot Hole - WP2.1

Offset Site Error: 5.0 usft

Survey Program: 0-3_MWD+HRGM

Offset Well Error: 1.0 usft

Rule Assigned:

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset 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
4,200.0	2,887.7	3,678.8	2,962.0	11.0	6.5	-150.19	-635.9	1,498.2	551.2	544.4	6.76	81.516	
4,225.0	2,887.6	3,678.8	2,962.0	11.5	6.5	-150.19	-635.9	1,498.2	575.9	569.0	6.87	83.770	
4,250.0	2,887.4	3,678.8	2,962.0	11.9	6.5	-150.19	-635.9	1,498.2	600.7	593.7	6.99	85.936	
4,275.0	2,887.3	3,678.8	2,962.0	12.3	6.5	-150.19	-635.9	1,498.2	625.4	618.3	7.11	88.018	
4,300.0	2,887.2	3,678.8	2,962.0	12.8	6.5	-150.19	-635.9	1,498.2	650.2	643.0	7.22	90.019	
4,325.0	2,887.0	3,678.8	2,962.0	13.2	6.5	-150.19	-635.9	1,498.2	675.0	667.7	7.34	91.968	
4,350.0	2,886.9	3,678.8	2,962.0	13.6	6.5	-150.19	-635.9	1,498.2	699.9	692.4	7.46	93.844	
4,375.0	2,886.8	3,678.8	2,962.0	14.1	6.5	-150.19	-635.9	1,498.2	724.7	717.1	7.58	95.652	
4,400.0	2,886.6	3,678.8	2,962.0	14.5	6.5	-150.19	-635.9	1,498.2	749.5	741.8	7.70	97.393	
4,425.0	2,886.5	3,678.8	2,962.0	15.0	6.5	-150.19	-635.9	1,498.2	774.4	766.6	7.81	99.100	
4,450.0	2,886.4	3,678.8	2,962.0	15.5	6.5	-150.19	-635.9	1,498.2	799.2	791.3	7.93	100.748	
4,475.0	2,886.2	3,678.8	2,962.0	15.9	6.5	-150.19	-635.9	1,498.2	824.1	816.1	8.05	102.339	
4,500.0	2,886.1	3,678.8	2,962.0	16.4	6.5	-150.19	-635.9	1,498.2	849.0	840.8	8.17	103.876	
4,525.0	2,886.0	3,678.8	2,962.0	16.9	6.5	-150.19	-635.9	1,498.2	873.9	865.6	8.29	105.393	
4,550.0	2,885.9	3,678.8	2,962.0	17.3	6.5	-150.19	-635.9	1,498.2	898.8	890.4	8.41	106.860	
4,575.0	2,885.7	3,678.8	2,962.0	17.8	6.5	-150.19	-635.9	1,498.2	923.7	915.1	8.53	108.281	
4,600.0	2,885.6	3,678.8	2,962.0	18.3	6.5	-150.19	-635.9	1,498.2	948.6	939.9	8.65	109.656	
4,625.0	2,885.5	3,678.8	2,962.0	18.7	6.5	-150.19	-635.9	1,498.2	973.5	964.7	8.77	111.022	
4,650.0	2,885.3	3,678.8	2,962.0	19.2	6.5	-150.19	-635.9	1,498.2	998.4	989.5	8.89	112.347	
4,675.0	2,885.2	3,678.8	2,962.0	19.7	6.5	-150.19	-635.9	1,498.2	1,023.3	1,014.3	9.01	113.633	
4,700.0	2,885.1	3,678.8	2,962.0	20.2	6.5	-150.19	-635.9	1,498.2	1,048.2	1,039.1	9.12	114.881	
4,725.0	2,884.9	3,678.8	2,962.0	20.7	6.5	-150.19	-635.9	1,498.2	1,073.2	1,063.9	9.24	116.126	
4,750.0	2,884.8	3,678.8	2,962.0	21.2	6.5	-150.19	-635.9	1,498.2	1,098.1	1,088.7	9.36	117.337	
4,775.0	2,884.7	3,678.8	2,962.0	21.7	6.5	-150.19	-635.9	1,498.2	1,123.0	1,113.5	9.48	118.515	
4,800.0	2,884.5	3,678.8	2,962.0	22.1	6.5	-150.19	-635.9	1,498.2	1,147.9	1,138.4	9.59	119.661	
4,825.0	2,884.4	3,678.8	2,962.0	22.6	6.5	-150.19	-635.9	1,498.2	1,172.9	1,163.2	9.71	120.810	
4,850.0	2,884.3	3,678.8	2,962.0	23.1	6.5	-150.19	-635.9	1,498.2	1,197.8	1,188.0	9.82	121.929	
4,875.0	2,884.1	3,678.8	2,962.0	23.6	6.5	-150.19	-635.9	1,498.2	1,222.8	1,212.8	9.94	123.021	
4,900.0	2,884.0	3,678.8	2,962.0	24.1	6.5	-150.19	-635.9	1,498.2	1,247.7	1,237.7	10.06	124.085	
4,925.0	2,883.9	3,678.8	2,962.0	24.6	6.5	-150.19	-635.9	1,498.2	1,272.7	1,262.5	10.17	125.156	
4,950.0	2,883.7	3,678.8	2,962.0	25.1	6.5	-150.19	-635.9	1,498.2	1,297.6	1,287.3	10.28	126.201	
4,975.0	2,883.6	3,678.8	2,962.0	25.6	6.5	-150.19	-635.9	1,498.2	1,322.6	1,312.2	10.40	127.222	
5,000.0	2,883.5	3,678.8	2,962.0	26.2	6.5	-150.19	-635.9	1,498.2	1,347.5	1,337.0	10.51	128.220	
5,025.0	2,883.4	3,678.8	2,962.0	26.7	6.5	-150.19	-635.9	1,498.2	1,372.5	1,361.8	10.62	129.227	
5,050.0	2,883.2	3,678.8	2,962.0	27.2	6.5	-150.19	-635.9	1,498.2	1,397.4	1,386.7	10.73	130.211	
5,075.0	2,883.1	3,678.8	2,962.0	27.7	6.5	-150.19	-635.9	1,498.2	1,422.4	1,411.5	10.84	131.176	
5,100.0	2,883.0	3,678.8	2,962.0	28.2	6.5	-150.19	-635.9	1,498.2	1,447.3	1,436.4	10.95	132.120	
5,117.3	2,882.9	3,678.8	2,962.0	28.5	6.5	-150.19	-635.9	1,498.2	1,464.6	1,453.6	11.03	132.775	
5,125.0	2,882.8	3,678.8	2,962.0	28.7	6.5	-146.20	-635.9	1,498.2	1,472.3	1,461.2	11.06	133.081	
5,150.0	2,882.7	3,678.8	2,962.0	29.2	6.5	-135.39	-635.9	1,498.2	1,497.2	1,486.1	11.17	134.094	
5,175.0	2,882.6	3,678.8	2,962.0	29.7	6.5	-127.38	-635.9	1,498.2	1,522.2	1,510.9	11.26	135.136	
5,200.0	2,882.4	3,678.8	2,962.0	30.3	6.5	-121.43	-635.9	1,498.2	1,547.1	1,535.7	11.36	136.211	
5,225.0	2,882.3	3,678.8	2,962.0	30.8	6.5	-116.92	-635.9	1,498.2	1,572.0	1,560.5	11.44	137.438	
5,250.0	2,882.2	3,678.8	2,962.0	31.3	6.5	-113.44	-635.9	1,498.2	1,596.8	1,585.3	11.51	138.713	
5,275.0	2,882.0	3,678.8	2,962.0	31.8	6.5	-110.68	-635.9	1,498.2	1,621.7	1,610.1	11.58	140.055	
5,300.0	2,881.9	3,678.8	2,962.0	32.3	6.5	-108.45	-635.9	1,498.2	1,646.5	1,634.8	11.64	141.498	
5,325.0	2,881.8	3,678.8	2,962.0	32.9	6.5	-106.63	-635.9	1,498.2	1,671.2	1,659.5	11.67	143.263	
5,350.0	2,881.6	3,678.8	2,962.0	33.4	6.5	-105.11	-635.9	1,498.2	1,695.9	1,684.2	11.65	145.597	
5,375.0	2,881.5	3,678.8	2,962.0	33.9	6.5	-103.82	-635.9	1,498.2	1,720.5	1,708.7	11.82	145.599	
5,400.0	2,881.3	3,678.8	2,962.0	34.5	6.5	-102.72	-635.9	1,498.2	1,745.1	1,733.1	12.00	145.417	
5,425.0	2,881.2	3,678.8	2,962.0	35.0	6.5	-101.77	-635.9	1,498.2	1,769.7	1,757.5	12.15	145.640	
5,450.0	2,881.1	3,678.8	2,962.0	35.5	6.5	-100.95	-635.9	1,498.2	1,794.1	1,781.9	12.29	145.970	

Company:	Hilcorp Energy Company	**Local Co-ordinate Reference:**	Well Southern Ute 705H
Project:	Farmington, NM	**TVD Reference:**	RKB to MSL= 6310 @ 6310.0usft
Reference Site:	San Juan Basin	**MD Reference:**	RKB to MSL= 6310 @ 6310.0usft
Site Error:	5.0 usft	**North Reference:**	Grid
Reference Well:	Southern Ute 705H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	1.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Lateral No.1	**Database:**	EDM 5000.1 Single User Db
Reference Design:	WP2.1	**Offset TVD Reference:**	Offset Datum

Offset Design: San Juan Basin - Southern Ute 705H - Pilot Hole - WP2.1

Offset Site Error: 5.0 usft

Survey Program: 0-3_MWD+HRGM

Rule Assigned:

Offset Well Error: 1.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset 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
5,475.0	2,880.9	3,678.8	2,962.0	36.0	6.5	-100.22	-635.9	1,498.2	1,818.6	1,806.1	12.43	146.360	
5,500.0	2,880.8	3,678.8	2,962.0	36.6	6.5	-99.58	-635.9	1,498.2	1,842.9	1,830.4	12.56	146.786	
5,525.0	2,880.7	3,678.8	2,962.0	37.1	6.5	-99.01	-635.9	1,498.2	1,867.2	1,854.5	12.67	147.393	
5,550.0	2,880.5	3,678.8	2,962.0	37.6	6.5	-98.50	-635.9	1,498.2	1,891.4	1,878.6	12.78	148.010	
5,575.0	2,880.4	3,678.8	2,962.0	38.2	6.5	-98.04	-635.9	1,498.2	1,915.5	1,902.6	12.89	148.634	
5,600.0	2,880.3	3,678.8	2,962.0	38.7	6.5	-97.62	-635.9	1,498.2	1,939.6	1,926.6	12.99	149.259	
5,625.0	2,880.1	3,678.8	2,962.0	39.2	6.5	-97.25	-635.9	1,498.2	1,963.5	1,950.5	13.09	150.057	
5,650.0	2,880.0	3,678.8	2,962.0	39.7	6.5	-96.90	-635.9	1,498.2	1,987.4	1,974.3	13.18	150.847	
5,675.0	2,879.8	3,678.8	2,962.0	40.3	6.5	-96.59	-635.9	1,498.2	2,011.2	1,998.0	13.26	151.630	
5,700.0	2,879.7	3,678.8	2,962.0	40.8	6.5	-96.30	-635.9	1,498.2	2,035.0	2,021.6	13.35	152.405	
5,725.0	2,879.6	3,678.8	2,962.0	41.3	6.5	-96.03	-635.9	1,498.2	2,058.6	2,045.2	13.42	153.360	
5,750.0	2,879.4	3,678.8	2,962.0	41.8	6.5	-95.79	-635.9	1,498.2	2,082.1	2,068.6	13.49	154.301	
5,775.0	2,879.3	3,678.8	2,962.0	42.4	6.5	-95.56	-635.9	1,498.2	2,105.6	2,092.0	13.56	155.227	
5,800.0	2,879.2	3,678.8	2,962.0	42.9	6.5	-95.35	-635.9	1,498.2	2,128.9	2,115.3	13.63	156.139	
5,825.0	2,879.0	3,678.8	2,962.0	43.4	6.5	-95.15	-635.9	1,498.2	2,152.1	2,138.5	13.69	157.246	
5,850.0	2,878.9	3,678.8	2,962.0	43.9	6.5	-94.97	-635.9	1,498.2	2,175.3	2,161.5	13.74	158.335	
5,875.0	2,878.8	3,678.8	2,962.0	44.4	6.5	-94.80	-635.9	1,498.2	2,198.3	2,184.5	13.79	159.403	
5,900.0	2,878.6	3,678.8	2,962.0	44.9	6.5	-94.64	-635.9	1,498.2	2,221.3	2,207.4	13.84	160.453	
5,925.0	2,878.5	3,678.8	2,962.0	45.4	6.5	-94.49	-635.9	1,498.2	2,244.1	2,230.2	13.88	161.718	
5,950.0	2,878.4	3,678.8	2,962.0	45.9	6.5	-94.35	-635.9	1,498.2	2,266.8	2,252.9	13.91	162.960	
5,975.0	2,878.2	3,678.8	2,962.0	46.4	6.5	-94.22	-635.9	1,498.2	2,289.4	2,275.5	13.94	164.179	
6,000.0	2,878.1	3,678.8	2,962.0	47.0	6.5	-94.10	-635.9	1,498.2	2,311.9	2,297.9	13.98	165.375	
6,025.0	2,878.0	3,678.8	2,962.0	47.5	6.5	-93.98	-635.9	1,498.2	2,334.3	2,320.3	14.00	166.717	
6,045.8	2,877.9	3,678.8	2,962.0	47.9	6.5	-93.89	-635.9	1,498.2	2,352.8	2,338.8	14.02	167.816	
6,050.0	2,877.8	3,678.8	2,962.0	47.9	6.5	-93.89	-635.9	1,498.2	2,356.5	2,342.5	14.02	168.055	
6,075.0	2,877.7	3,678.8	2,962.0	48.4	6.5	-93.89	-635.9	1,498.2	2,378.8	2,364.7	14.04	169.481	
6,100.0	2,877.6	3,678.8	2,962.0	48.9	6.5	-93.89	-635.9	1,498.2	2,401.1	2,387.0	14.05	170.895	
6,125.0	2,877.4	3,678.8	2,962.0	49.4	6.5	-93.89	-635.9	1,498.2	2,423.4	2,409.4	14.06	172.408	
6,150.0	2,877.3	3,678.8	2,962.0	49.9	6.5	-93.89	-635.9	1,498.2	2,445.9	2,431.8	14.06	173.909	
6,175.0	2,877.2	3,678.8	2,962.0	50.4	6.5	-93.89	-635.9	1,498.2	2,468.3	2,454.2	14.07	175.395	
6,200.0	2,877.0	3,678.8	2,962.0	51.0	6.5	-93.89	-635.9	1,498.2	2,490.8	2,476.7	14.08	176.868	
6,225.0	2,876.9	3,678.8	2,962.0	51.5	6.5	-93.89	-635.9	1,498.2	2,513.4	2,499.3	14.08	178.450	
6,250.0	2,876.8	3,678.8	2,962.0	52.0	6.5	-93.89	-635.9	1,498.2	2,536.0	2,521.9	14.09	180.018	
6,275.0	2,876.7	3,678.8	2,962.0	52.5	6.5	-93.89	-635.9	1,498.2	2,558.6	2,544.5	14.09	181.571	
6,300.0	2,876.5	3,678.8	2,962.0	53.0	6.5	-93.89	-635.9	1,498.2	2,581.3	2,567.2	14.10	183.108	
6,325.0	2,876.4	3,678.8	2,962.0	53.5	6.5	-93.89	-635.9	1,498.2	2,604.1	2,590.0	14.10	184.750	
6,350.0	2,876.3	3,678.8	2,962.0	54.0	6.5	-93.89	-635.9	1,498.2	2,626.8	2,612.7	14.09	186.377	
6,375.0	2,876.1	3,678.8	2,962.0	54.5	6.5	-93.89	-635.9	1,498.2	2,649.6	2,635.6	14.09	187.987	
6,400.0	2,876.0	3,678.8	2,962.0	55.1	6.5	-93.89	-635.9	1,498.2	2,672.5	2,658.4	14.10	189.581	
6,425.0	2,875.9	3,678.8	2,962.0	55.6	6.5	-93.89	-635.9	1,498.2	2,695.4	2,681.3	14.09	191.276	
6,450.0	2,875.7	3,678.8	2,962.0	56.1	6.5	-93.89	-635.9	1,498.2	2,718.3	2,704.2	14.09	192.955	
6,475.0	2,875.6	3,678.8	2,962.0	56.6	6.5	-93.89	-635.9	1,498.2	2,741.3	2,727.2	14.09	194.617	
6,500.0	2,875.5	3,678.8	2,962.0	57.1	6.5	-93.89	-635.9	1,498.2	2,764.3	2,750.2	14.08	196.262	
6,525.0	2,875.3	3,678.8	2,962.0	57.7	6.5	-93.89	-635.9	1,498.2	2,787.3	2,773.2	14.08	198.005	
6,550.0	2,875.2	3,678.8	2,962.0	58.2	6.5	-93.89	-635.9	1,498.2	2,810.4	2,796.3	14.07	199.731	
6,575.0	2,875.1	3,678.8	2,962.0	58.7	6.5	-93.89	-635.9	1,498.2	2,833.5	2,819.4	14.07	201.441	
6,600.0	2,875.0	3,678.8	2,962.0	59.2	6.5	-93.89	-635.9	1,498.2	2,856.6	2,842.6	14.06	203.134	
6,625.0	2,874.8	3,678.8	2,962.0	59.8	6.5	-93.89	-635.9	1,498.2	2,879.8	2,865.7	14.05	204.921	
6,650.0	2,874.7	3,678.8	2,962.0	60.3	6.5	-93.89	-635.9	1,498.2	2,903.0	2,888.9	14.04	206.692	
6,675.0	2,874.6	3,678.8	2,962.0	60.8	6.5	-93.89	-635.9	1,498.2	2,926.2	2,912.2	14.04	208.446	
6,700.0	2,874.4	3,678.8	2,962.0	61.4	6.5	-93.89	-635.9	1,498.2	2,949.5	2,935.4	14.03	210.182	
6,725.0	2,874.3	3,678.8	2,962.0	61.9	6.5	-93.89	-635.9	1,498.2	2,972.7	2,958.7	14.02	212.012	

Company:	Hilcorp Energy Company	**Local Co-ordinate Reference:**	Well Southern Ute 705H
Project:	Farmington, NM	**TVD Reference:**	RKB to MSL= 6310 @ 6310.0usft
Reference Site:	San Juan Basin	**MD Reference:**	RKB to MSL= 6310 @ 6310.0usft
Site Error:	5.0 usft	**North Reference:**	Grid
Reference Well:	Southern Ute 705H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	1.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Lateral No.1	**Database:**	EDM 5000.1 Single User Db
Reference Design:	WP2.1	**Offset TVD Reference:**	Offset Datum

Offset Design: San Juan Basin - Southern Ute 705H - Pilot Hole - WP2.1

Offset Site Error: 5.0 usft

Survey Program: 0-3_MWD+HRGM

Offset Well Error: 1.0 usft

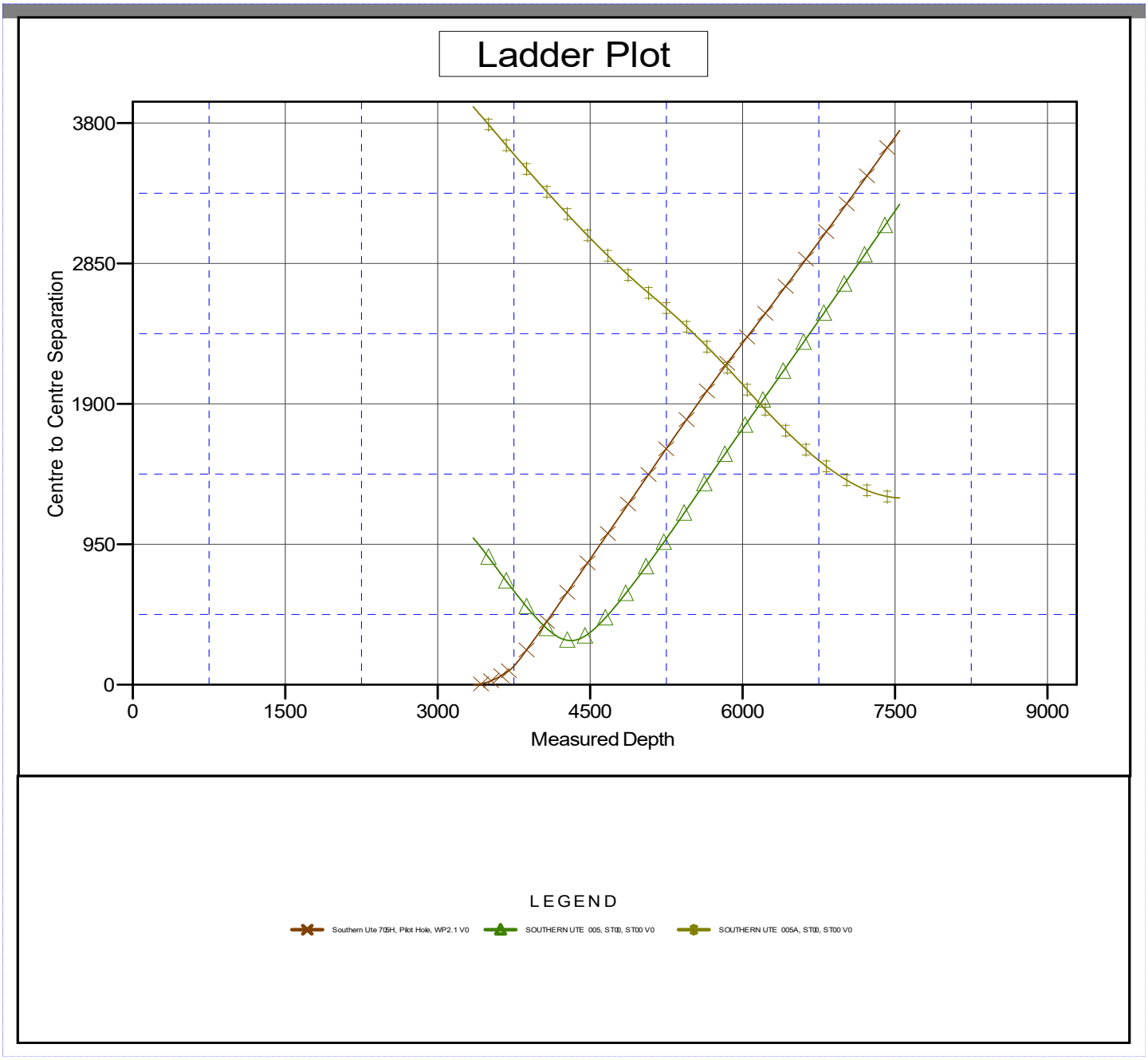
Rule Assigned:

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset 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
6,750.0	2,874.2	3,678.8	2,962.0	62.4	6.5	-93.89	-635.9	1,498.2	2,996.0	2,982.0	14.01	213.824	
6,775.0	2,874.0	3,678.8	2,962.0	63.0	6.5	-93.89	-635.9	1,498.2	3,019.4	3,005.4	14.00	215.621	
6,800.0	2,873.9	3,678.8	2,962.0	63.5	6.5	-93.89	-635.9	1,498.2	3,042.7	3,028.8	14.00	217.400	
6,825.0	2,873.8	3,678.8	2,962.0	64.1	6.5	-93.89	-635.9	1,498.2	3,066.1	3,052.2	13.98	219.269	
6,850.0	2,873.6	3,678.8	2,962.0	64.6	6.5	-93.89	-635.9	1,498.2	3,089.6	3,075.6	13.97	221.123	
6,875.0	2,873.5	3,678.8	2,962.0	65.1	6.5	-93.89	-635.9	1,498.2	3,113.0	3,099.0	13.96	222.960	
6,900.0	2,873.4	3,678.8	2,962.0	65.7	6.5	-93.89	-635.9	1,498.2	3,136.5	3,122.5	13.95	224.780	
6,925.0	2,873.3	3,678.8	2,962.0	66.2	6.5	-93.89	-635.9	1,498.2	3,159.9	3,146.0	13.94	226.689	
6,950.0	2,873.1	3,678.8	2,962.0	66.8	6.5	-93.89	-635.9	1,498.2	3,183.4	3,169.5	13.93	228.583	
6,975.0	2,873.0	3,678.8	2,962.0	67.3	6.5	-93.89	-635.9	1,498.2	3,207.0	3,193.1	13.92	230.460	
7,000.0	2,872.9	3,678.8	2,962.0	67.9	6.5	-93.89	-635.9	1,498.2	3,230.5	3,216.6	13.91	232.321	
7,025.0	2,872.7	3,678.8	2,962.0	68.4	6.5	-93.89	-635.9	1,498.2	3,254.1	3,240.2	13.89	234.269	
7,050.0	2,872.6	3,678.8	2,962.0	69.0	6.5	-93.89	-635.9	1,498.2	3,277.7	3,263.8	13.88	236.203	
7,075.0	2,872.5	3,678.8	2,962.0	69.5	6.5	-93.89	-635.9	1,498.2	3,301.3	3,287.5	13.86	238.120	
7,100.0	2,872.3	3,678.8	2,962.0	70.1	6.5	-93.89	-635.9	1,498.2	3,325.0	3,311.1	13.85	240.022	
7,125.0	2,872.2	3,678.8	2,962.0	70.6	6.5	-93.89	-635.9	1,498.2	3,348.6	3,334.8	13.84	242.011	
7,150.0	2,872.1	3,678.8	2,962.0	71.2	6.5	-93.89	-635.9	1,498.2	3,372.3	3,358.5	13.82	243.985	
7,175.0	2,871.9	3,678.8	2,962.0	71.7	6.5	-93.89	-635.9	1,498.2	3,396.0	3,382.2	13.81	245.943	
7,200.0	2,871.8	3,678.8	2,962.0	72.3	6.5	-93.89	-635.9	1,498.2	3,419.7	3,405.9	13.80	247.887	
7,225.0	2,871.7	3,678.8	2,962.0	72.8	6.5	-93.89	-635.9	1,498.2	3,443.4	3,429.7	13.78	249.917	
7,250.0	2,871.5	3,678.8	2,962.0	73.4	6.5	-93.89	-635.9	1,498.2	3,467.2	3,453.4	13.76	251.933	
7,275.0	2,871.4	3,678.8	2,962.0	73.9	6.5	-93.89	-635.9	1,498.2	3,491.0	3,477.2	13.75	253.935	
7,300.0	2,871.3	3,678.8	2,962.0	74.5	6.5	-93.89	-635.9	1,498.2	3,514.7	3,501.0	13.73	255.922	
7,325.0	2,871.2	3,678.8	2,962.0	75.1	6.5	-93.89	-635.9	1,498.2	3,538.5	3,524.8	13.72	257.996	
7,350.0	2,871.0	3,678.8	2,962.0	75.6	6.5	-93.89	-635.9	1,498.2	3,562.4	3,548.7	13.70	260.056	
7,375.0	2,870.9	3,678.8	2,962.0	76.2	6.5	-93.89	-635.9	1,498.2	3,586.2	3,572.5	13.68	262.104	
7,400.0	2,870.8	3,678.8	2,962.0	76.7	6.5	-93.89	-635.9	1,498.2	3,610.0	3,596.4	13.67	264.138	
7,425.0	2,870.6	3,678.8	2,962.0	77.3	6.5	-93.89	-635.9	1,498.2	3,633.9	3,620.3	13.65	266.259	
7,450.0	2,870.5	3,678.8	2,962.0	77.8	6.5	-93.89	-635.9	1,498.2	3,657.8	3,644.2	13.63	268.368	
7,475.0	2,870.4	3,678.8	2,962.0	78.4	6.5	-93.89	-635.9	1,498.2	3,681.7	3,668.1	13.61	270.465	
7,500.0	2,870.2	3,678.8	2,962.0	79.0	6.5	-93.89	-635.9	1,498.2	3,705.6	3,692.0	13.60	272.551	
7,525.0	2,870.1	3,678.8	2,962.0	79.5	6.5	-93.89	-635.9	1,498.2	3,729.5	3,715.9	13.58	274.695	
7,545.8	2,870.0	3,678.8	2,962.0	80.0	6.5	-93.89	-635.9	1,498.2	3,749.5	3,735.9	13.56	276.474	

Company:	Hilcorp Energy Company	**Local Co-ordinate Reference:**	Well Southern Ute 705H
Project:	Farmington, NM	**TVD Reference:**	RKB to MSL= 6310 @ 6310.0usft
Reference Site:	San Juan Basin	**MD Reference:**	RKB to MSL= 6310 @ 6310.0usft
Site Error:	5.0 usft	**North Reference:**	Grid
Reference Well:	Southern Ute 705H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	1.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Lateral No.1	**Database:**	EDM 5000.1 Single User Db
Reference Design:	WP2.1	**Offset TVD Reference:**	Offset Datum

Reference Depths are relative to RKB to MSL= 6310 @ 6310.0usft
Offset Depths are relative to Offset Datum
Central Meridian is 107° 50' 0.000 W

Coordinates are relative to: Southern Ute 705H
Coordinate System is US State Plane 1927 (Exact solution), New Mexico West 30
Grid Convergence at Surface is: 0.15°



Company:	Hilcorp Energy Company	**Local Co-ordinate Reference:**	Well Southern Ute 705H
Project:	Farmington, NM	**TVD Reference:**	RKB to MSL= 6310 @ 6310.0usft
Reference Site:	San Juan Basin	**MD Reference:**	RKB to MSL= 6310 @ 6310.0usft
Site Error:	5.0 usft	**North Reference:**	Grid
Reference Well:	Southern Ute 705H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	1.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Lateral No.1	**Database:**	EDM 5000.1 Single User Db
Reference Design:	WP2.1	**Offset TVD Reference:**	Offset Datum

Reference Depths are relative to RKB to MSL= 6310 @ 6310.0usft
Offset Depths are relative to Offset Datum
Central Meridian is 107° 50' 0.000 W

Coordinates are relative to: Southern Ute 705H
Coordinate System is US State Plane 1927 (Exact solution), New Mexico West 30
Grid Convergence at Surface is: 0.15°