

WCDSC Permian NM

Eddy County (NAD 83 NM Eastern)

Sec 27-T19S-R29E

Coral PWU 28-27 62H

30.015-44962

Wellbore #1

Permit Plan 2

**NM OIL CONSERVATION
ARTESIA DISTRICT**

JUN 27 2018

RECEIVED

Anticollision Report

25 June, 2018

Anticollision Report

Company:	WCDSC Permian NM	Local Co-ordinate Reference	Well Coral PWU 28-27 62H
Project:	Eddy County (NAD 83 NM Eastern)	TVD Reference:	RKB @ 3333.00ft
Reference Site:	Sec 27-T19S-R29E	MD Reference:	RKB @ 3333.00ft
Site Error:	5.00 ft	North Reference:	Grid
Reference Well:	Coral PWU 28-27 62H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.50 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM r5000.141_Prod US
Reference Design:	Permit Plan 2	Offset TVD Reference:	Offset Datum

Reference	Permit Plan 2		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method	MD Interval 50.00ft	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 1,500.00 ft	Error Surface:	Pedal Curve
Warning Levels Evaluated at:	2.00 Sigma	Casing Method:	Not applied

Survey Tool Program	Date 6/25/2018			
From	To	Survey (Wellbore)	Tool Name	Description
(ft)	(ft)			
0.00	17,001.97	Permit Plan 2 (Wellbore #1)	MWD+HDGM	OWSG MWD + HDGM

Summary						
Site Name	Reference Measure	Offset Measure	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation	Warning
Offset Well - Wellbore - Design						
Sec 27-T19S-R29E						
Coral PWU 28-27 11H - Wellbore #1 - Permit Plan 1	2,957.72	2,951.08	24.19	3.46	1.167	Major Risk, CC
Coral PWU 28-27 11H - Wellbore #1 - Permit Plan 1	3,000.00	2,993.21	24.44	3.41	1.162	Major Risk, ES, SF
Coral PWU 28-27 12H - Wellbore #1 - Permit Plan 1	3,065.64	3,066.56	53.07	31.69	2.482	Minor Risk, CC
Coral PWU 28-27 12H - Wellbore #1 - Permit Plan 1	3,100.00	3,100.73	53.19	31.57	2.461	Minor Risk, ES
Coral PWU 28-27 12H - Wellbore #1 - Permit Plan 1	3,150.00	3,150.38	53.82	31.86	2.451	Minor Risk, SF
Parkway West Unit #20 (Active) - Wellbore #1 - Wellbor	12,534.69	9,124.40	644.09	506.12	4.668	Alert, CC
Parkway West Unit #20 (Active) - Wellbore #1 - Wellbor	12,550.00	9,124.56	644.27	505.91	4.657	Alert, ES
Parkway West Unit #20 (Active) - Wellbore #1 - Wellbor	12,600.00	9,125.07	647.39	508.13	4.649	Alert, SF
Parkway West Unit 10 - Original Hole - Original Hole						Out of range
Parkway West Unit SWD - Wellbore #1 - Wellbore #1						Out of range
Turquoise PWU 27-10H - Wellbore #1 - Wellbore #1						Out of range
Turquoise PWU 27-4H - Wellbore #1 - Wellbore #1	16,500.00	12,017.52	1,069.17	941.50	8.374	SF
Turquoise PWU 27-4H - Wellbore #1 - Wellbore #1	16,643.13	12,120.69	1,066.72	939.61	8.392	ES
Turquoise PWU 27-4H - Wellbore #1 - Wellbore #1	16,879.88	12,360.00	1,064.98	939.94	8.517	CC
Turquoise PWU 27-5H - Wellbore #1 - Wellbore #1						Out of range
Turquoise PWU 27-1H - Pilot Wellbore - Pilot Wellbore						Out of range
Turquoise PWU 27-1H - Wellbore #1 - Wellbore #1						Out of range
Turquoise PWU 27-3H - Wellbore #1 - Wellbore #1	17,002.43	12,164.67	1,489.90	1,228.44	5.698	CC, ES, SF
Turquoise PWU 27-61H - Wellbore #1 - Design #1						Out of range
Turquoise PWU 27-7H - Wellbore #1 - Wellbore #1						Out of range
Turquoise PWU 27-8H - Wellbore #1 - Wellbore #1						Out of range
Turquoise PWU 27-9H - Wellbore #1 - Design #1						Out of range
Sec 29-19S-29E						
Onyx PWU 29-28 9H - Original Hole - Plan 4						Out of range

Offset Design Sec 27-T19S-R29E - Coral PWU 28-27 11H - Wellbore #1 - Permit Plan 1											
Survey Program: 0-MWD+HDGM											
Reference											
Offset		Semi Major Axis		Distance		Minimum Separation		Separation Factor		Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	
0.00	0.00	7.10	-7.10	0.50	0.50	90.00	0.00	30.00	30.00		
50.00	50.00	42.90	42.90	0.50	0.50	90.00	0.00	30.00	30.00	29.00	1.00 29.874
100.00	100.00	107.10	92.90	0.51	0.52	90.00	0.00	30.00	30.00	28.96	1.04 28.879

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

Anticollision Report

Company: WCDSC Permian NM
Project: Eddy County (NAD 83 NM Eastern)
Reference Site: Sec 27-T19S-R29E
Site Error: 5.00 ft
Reference Well: Coral PWU 28-27 62H
Well Error: 0.50 ft
Reference Wellbore: Wellbore #1
Reference Design: Permit Plan 2

Local Co-ordinate Reference: Well Coral PWU 28-27 62H
TVD Reference: RKB @ 3333.00ft
MD Reference: RKB @ 3333.00ft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM r5000.141_Prod US
Offset TVD Reference: Offset Datum

Offset Design Sec 27-T19S-R29E - Coral PWU 28-27 11H - Wellbore #1 - Permit Plan 1													Offset Site Error:	5.00 ft
Survey Program: 0-MWD+HDGM													Offset Well Error:	0.50 ft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)						
150.00	150.00	142.90	142.90	0.58	0.58	90.00	0.00	30.00	30.00	28.84	1.16	25.875		
200.00	200.00	207.10	192.90	0.69	0.72	90.00	0.00	30.00	30.00	28.59	1.41	21.252		
250.00	250.00	242.90	242.90	0.83	0.82	90.00	0.00	30.00	30.00	28.38	1.64	18.259		
300.00	300.00	307.10	292.90	0.98	1.01	90.00	0.00	30.00	30.00	28.02	1.98	15.124		
350.00	350.00	342.90	342.90	1.13	1.12	90.00	0.00	30.00	30.00	27.75	2.25	13.307		
400.00	400.00	407.10	392.90	1.30	1.33	90.00	0.00	30.00	30.00	27.37	2.63	11.417		
450.00	450.00	442.90	442.90	1.46	1.45	90.00	0.00	30.00	30.00	27.09	2.91	10.294		
500.00	500.00	507.10	492.90	1.63	1.67	90.00	0.00	30.00	30.00	26.70	3.30	9.086		
550.00	550.00	542.90	542.90	1.80	1.79	90.00	0.00	30.00	30.00	26.40	3.60	8.342		
600.00	600.00	607.10	592.90	1.98	2.01	90.00	0.00	30.00	30.00	26.01	3.99	7.517		
650.00	650.00	642.90	642.90	2.15	2.14	90.00	0.00	30.00	30.00	25.71	4.29	6.994		
700.00	700.00	707.10	692.90	2.33	2.36	90.00	0.00	30.00	30.00	25.31	4.69	6.398		
750.00	750.00	742.90	742.90	2.50	2.49	90.00	0.00	30.00	30.00	25.01	4.99	6.013		
800.00	800.00	807.10	792.90	2.68	2.71	90.00	0.00	30.00	30.00	24.61	5.39	5.565		
850.00	850.00	842.90	842.90	2.85	2.84	90.00	0.00	30.00	30.00	24.31	5.69	5.269		
900.00	900.00	907.10	892.90	3.03	3.07	90.00	0.00	30.00	30.00	23.90	6.10	4.920 Alert		
950.00	950.00	942.90	942.90	3.21	3.19	90.00	0.00	30.00	30.00	23.60	6.40	4.687 Alert		
1,000.00	1,000.00	1,007.10	992.90	3.38	3.42	90.00	0.00	30.00	30.00	23.19	6.81	4.408 Alert		
1,050.00	1,050.00	1,042.90	1,042.90	3.56	3.55	90.00	0.00	30.00	30.00	22.89	7.11	4.220 Alert		
1,100.00	1,100.00	1,107.10	1,092.90	3.74	3.78	90.00	0.00	30.00	30.00	22.48	7.52	3.992 Alert		
1,150.00	1,150.00	1,142.90	1,142.90	3.92	3.90	90.00	0.00	30.00	30.00	22.18	7.82	3.836 Alert		
1,200.00	1,200.00	1,207.10	1,192.90	4.09	4.13	90.00	0.00	30.00	30.00	21.77	8.23	3.647 Alert		
1,250.00	1,250.00	1,242.90	1,242.90	4.27	4.26	90.00	0.00	30.00	30.00	21.47	8.53	3.516 Alert		
1,300.00	1,300.00	1,307.10	1,292.90	4.45	4.49	90.00	0.00	30.00	30.00	21.06	8.94	3.356 Alert		
1,350.00	1,350.00	1,342.90	1,342.90	4.63	4.62	90.00	0.00	30.00	30.00	20.76	9.24	3.245 Alert		
1,400.00	1,400.00	1,407.10	1,392.90	4.81	4.84	90.00	0.00	30.00	30.00	20.35	9.65	3.108 Alert		
1,450.00	1,450.00	1,442.90	1,442.90	4.99	4.97	90.00	0.00	30.00	30.00	20.04	9.96	3.013 Alert		
1,500.00	1,500.00	1,507.10	1,492.90	5.16	5.20	90.00	0.00	30.00	30.00	19.64	10.36	2.894 Alert		
1,550.00	1,550.00	1,542.90	1,542.90	5.34	5.33	90.00	0.00	30.00	30.00	19.33	10.67	2.811 Alert		
1,600.00	1,600.00	1,607.10	1,592.90	5.52	5.56	90.00	0.00	30.00	30.00	18.92	11.08	2.708 Alert		
1,650.00	1,650.00	1,642.90	1,642.90	5.70	5.69	90.00	0.00	30.00	30.00	18.62	11.38	2.635 Alert		
1,700.00	1,700.00	1,707.10	1,692.90	5.88	5.91	90.00	0.00	30.00	30.00	18.21	11.79	2.544 Alert		
1,750.00	1,750.00	1,742.90	1,742.90	6.06	6.04	90.00	0.00	30.00	30.00	17.90	12.10	2.480 Minor Risk		
1,800.00	1,800.00	1,807.10	1,792.90	6.24	6.27	90.00	0.00	30.00	30.00	17.49	12.51	2.399 Minor Risk		
1,850.00	1,850.00	1,842.90	1,842.90	6.41	6.40	90.00	0.00	30.00	30.00	17.19	12.81	2.341 Minor Risk		
1,900.00	1,900.00	1,907.10	1,892.90	6.59	6.63	90.00	0.00	30.00	30.00	16.78	13.22	2.269 Minor Risk		
1,950.00	1,950.00	1,942.90	1,942.90	6.77	6.76	90.00	0.00	30.00	30.00	16.47	13.53	2.218 Minor Risk		
2,000.00	2,000.00	2,007.10	1,992.90	6.95	6.99	90.00	0.00	30.00	30.00	16.06	13.94	2.153 Minor Risk		
2,050.00	2,050.00	2,042.90	2,042.90	7.13	7.11	90.00	0.00	30.00	30.00	15.76	14.24	2.106 Minor Risk		
2,100.00	2,100.00	2,107.10	2,092.90	7.31	7.34	90.00	0.00	30.00	30.00	15.35	14.65	2.047 Minor Risk		
2,150.00	2,150.00	2,142.90	2,142.90	7.49	7.47	90.00	0.00	30.00	30.00	15.04	14.96	2.005 Minor Risk		
2,200.00	2,200.00	2,207.10	2,192.90	7.67	7.70	90.00	0.00	30.00	30.00	14.63	15.37	1.952 Minor Risk		
2,250.00	2,250.00	2,242.90	2,242.90	7.84	7.83	90.00	0.00	30.00	30.00	14.33	15.67	1.914 Minor Risk		
2,300.00	2,300.00	2,307.10	2,292.90	8.02	8.06	90.00	0.00	30.00	30.00	13.92	16.08	1.865 Minor Risk		
2,350.00	2,350.00	2,342.90	2,342.90	8.20	8.19	90.00	0.00	30.00	30.00	13.61	16.39	1.830 Minor Risk		
2,400.00	2,400.00	2,407.10	2,392.90	8.38	8.42	90.00	0.00	30.00	30.00	13.20	16.80	1.786 Minor Risk		
2,450.00	2,450.00	2,442.90	2,442.90	8.56	8.55	90.00	0.00	30.00	30.00	12.89	17.11	1.754 Minor Risk		
2,500.00	2,500.00	2,492.90	2,492.90	8.74	8.72	90.00	0.00	30.00	30.00	12.54	17.46	1.718 Minor Risk		
2,550.00	2,550.00	2,543.03	2,543.03	8.92	8.90	89.75	0.13	29.90	29.91	12.08	17.82	1.678 Minor Risk		
2,600.00	2,600.00	2,593.18	2,593.18	9.10	9.08	88.82	0.61	29.55	29.56	11.38	18.18	1.626 Minor Risk		
2,650.00	2,650.00	2,643.31	2,643.30	9.28	9.26	87.14	1.45	28.94	28.98	10.44	18.53	1.564 Minor Risk		

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

Anticollision Report

Company: WCDSC Permian NM
Project: Eddy County (NAD 83 NM Eastern)
Reference Site: Sec 27-T19S-R29E
Site Error: 5.00 ft
Reference Well: Coral PWU 28-27 62H
Well Error: 0.50 ft
Reference Wellbore: Wellbore #1
Reference Design: Permit Plan 2

Local Co-ordinate Reference: Well Coral PWU 28-27 62H
TVD Reference: RKB @ 3333.00ft
MD Reference: RKB @ 3333.00ft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM r5000.141_Prod US
Offset TVD Reference: Offset Datum

Offset Design Sec 27-T19S-R29E - Coral PWU 28-27 11H - Wellbore #1 - Permit Plan 1													Offset Site Error:	5.00 ft
Survey Program: 0-MWD+HDGM													Offset Well Error:	0.50 ft
Reference		Offset		Semi Major Axis		Highside Tooface (°)	Distance		Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)						
2,700.00	2,700.00	2,693.43	2,693.39	9.45	9.44	84.64	2.63	28.07	28.20	9.31	18.89	1.493	Major Risk	
2,750.00	2,750.00	2,743.51	2,743.43	9.63	9.62	81.20	4.17	26.94	27.27	8.02	19.24	1.417	Major Risk	
2,800.00	2,800.00	2,793.55	2,793.42	9.81	9.79	76.65	6.06	25.55	26.27	6.67	19.60	1.340	Major Risk	
2,850.00	2,850.00	2,843.55	2,843.35	9.99	9.97	70.85	8.30	23.91	25.31	5.35	19.96	1.268	Major Risk	
2,900.00	2,900.00	2,893.50	2,893.19	10.17	10.15	63.67	10.89	22.01	24.56	4.24	20.32	1.209	Major Risk	
2,950.00	2,950.00	2,943.39	2,942.95	10.35	10.33	55.15	13.83	19.86	24.19	3.52	20.67	1.170	Major Risk	
2,957.72	2,957.72	2,951.08	2,950.62	10.38	10.35	53.73	14.31	19.50	24.19	3.46	20.73	1.167	Major Risk, CC	
3,000.00	3,000.00	2,993.21	2,992.60	10.53	10.51	45.57	17.10	17.45	24.44	3.41	21.03	1.162	Major Risk, ES, SF	
3,050.00	3,050.00	3,042.96	3,042.14	10.71	10.68	35.52	20.73	14.79	25.47	4.09	21.38	1.191	Major Risk	
3,100.00	3,100.00	3,092.62	3,091.56	10.89	10.86	25.71	24.69	11.89	27.43	5.71	21.73	1.263	Major Risk	
3,150.00	3,150.00	3,142.19	3,140.85	11.07	11.04	16.76	28.99	8.73	30.34	8.28	22.06	1.375	Major Risk	
3,200.00	3,200.00	3,191.67	3,189.99	11.24	11.22	9.01	33.62	5.33	34.16	11.77	22.40	1.525	Minor Risk	
3,250.00	3,250.00	3,241.05	3,238.98	11.42	11.40	2.51	38.58	1.69	38.82	16.09	22.73	1.708	Minor Risk	
3,300.00	3,300.00	3,290.31	3,287.81	11.60	11.57	-2.86	43.88	-2.19	44.22	21.17	23.05	1.919	Minor Risk	
3,350.00	3,350.00	3,339.68	3,336.69	11.78	11.75	-7.25	49.46	-6.29	50.24	26.86	23.39	2.148	Minor Risk	
3,400.00	3,400.00	3,389.18	3,385.70	11.96	11.93	-10.71	55.09	-10.42	56.53	32.79	23.73	2.382	Minor Risk	
3,450.00	3,450.00	3,438.68	3,434.70	12.14	12.12	-13.48	60.72	-14.55	62.97	38.89	24.08	2.615	Alert	
3,500.00	3,500.00	3,488.18	3,483.71	12.32	12.30	-15.72	66.34	-18.68	69.53	45.10	24.43	2.846	Alert	
3,550.00	3,550.00	3,537.68	3,532.71	12.50	12.48	-17.58	71.97	-22.81	76.18	51.40	24.78	3.074	Alert	
3,600.00	3,600.00	3,587.18	3,581.72	12.68	12.66	-19.14	77.60	-26.94	82.90	57.77	25.13	3.298	Alert	
3,650.00	3,650.00	3,636.68	3,630.72	12.86	12.85	-20.47	83.23	-31.07	89.67	64.18	25.49	3.518	Alert	
3,700.00	3,700.00	3,686.18	3,679.73	13.04	13.03	-21.61	88.85	-35.20	96.47	70.63	25.84	3.734	Alert	
3,750.00	3,750.00	3,735.69	3,728.74	13.21	13.22	-22.60	94.48	-39.32	103.31	77.12	26.19	3.944	Alert	
3,800.00	3,800.00	3,785.19	3,777.74	13.39	13.40	-23.46	100.11	-43.45	110.18	83.63	26.55	4.150	Alert	
3,850.00	3,850.00	3,834.69	3,826.75	13.57	13.59	-24.23	105.74	-47.58	117.07	90.17	26.90	4.352	Alert	
3,900.00	3,900.00	3,884.19	3,875.75	13.75	13.77	-24.91	111.36	-51.71	123.98	96.72	27.26	4.548	Alert	
3,950.00	3,950.00	3,933.69	3,924.76	13.93	13.96	-25.52	116.99	-55.84	130.90	103.29	27.61	4.741	Alert	
4,000.00	4,000.00	3,983.19	3,973.77	14.11	14.15	-26.06	122.62	-59.97	137.83	109.87	27.97	4.928	Alert	
4,050.00	4,050.00	4,032.71	4,022.79	14.28	14.33	67.04	128.25	-64.10	144.88	116.36	28.32	5.109		
4,100.00	4,099.99	4,082.26	4,071.85	14.46	14.52	66.79	133.88	-68.24	151.31	122.64	28.67	5.277		
4,150.00	4,149.97	4,131.85	4,120.94	14.63	14.71	66.75	139.52	-72.37	157.73	128.71	29.02	5.435		
4,200.00	4,199.94	4,181.46	4,170.06	14.80	14.90	66.88	145.16	-76.51	163.94	134.57	29.37	5.582		
4,250.00	4,249.88	4,231.09	4,219.19	14.97	15.09	67.17	150.80	-80.65	169.94	140.22	29.72	5.718		
4,300.00	4,299.79	4,280.73	4,268.33	15.14	15.28	67.61	156.45	-84.79	175.74	145.67	30.07	5.844		
4,350.00	4,349.66	4,330.37	4,317.48	15.31	15.47	68.17	162.09	-88.93	181.35	150.92	30.43	5.960		
4,400.00	4,399.49	4,380.02	4,366.63	15.49	15.66	68.85	167.74	-93.07	186.79	156.01	30.78	6.068		
4,450.00	4,449.28	4,429.66	4,415.77	15.66	15.85	69.65	173.38	-97.22	192.07	160.93	31.14	6.168		
4,500.00	4,499.01	4,479.29	4,464.91	15.83	16.04	70.55	179.02	-101.38	197.20	165.71	31.50	6.261		
4,550.00	4,548.88	4,528.90	4,514.02	16.00	16.23	71.56	184.66	-105.49	202.22	170.37	31.86	6.348		
4,600.00	4,598.33	4,578.50	4,563.13	16.18	16.42	72.62	190.30	-109.63	207.24	175.03	32.22	6.433		
4,650.00	4,647.98	4,628.10	4,612.24	16.35	16.61	73.63	195.94	-113.77	212.33	179.76	32.58	6.518		
4,700.00	4,697.63	4,677.71	4,661.35	16.53	16.80	74.59	201.58	-117.91	217.49	184.55	32.94	6.603		
4,750.00	4,747.28	4,727.31	4,710.45	16.71	16.99	75.51	207.22	-122.05	222.70	189.39	33.30	6.687		
4,800.00	4,796.93	4,776.91	4,759.56	16.88	17.18	76.38	212.86	-126.18	227.96	194.29	33.67	6.771		
4,850.00	4,846.57	4,826.52	4,808.67	17.06	17.38	77.22	218.50	-130.32	233.28	199.25	34.03	6.855		
4,900.00	4,896.22	4,876.12	4,857.78	17.24	17.57	78.02	224.14	-134.46	238.64	204.24	34.39	6.938		
4,950.00	4,945.87	4,925.72	4,906.88	17.41	17.76	78.78	229.78	-138.60	244.04	209.28	34.76	7.021		
5,000.00	4,995.52	4,975.33	4,955.99	17.59	17.95	79.51	235.42	-142.73	249.49	214.36	35.13	7.103		
5,050.00	5,045.17	5,024.93	5,005.10	17.77	18.15	80.21	241.06	-146.87	254.98	219.48	35.49	7.184		
5,100.00	5,094.82	5,074.53	5,054.21	17.95	18.34	80.88	246.69	-151.01	260.50	224.64	35.86	7.264		
5,150.00	5,144.47	5,124.14	5,103.31	18.13	18.53	81.53	252.33	-155.15	266.06	229.83	36.23	7.344		

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

Anticollision Report

Company: WCDSC Permian NM
 Project: Eddy County (NAD 83 NM Eastern)
 Reference Site: Sec 27-T19S-R29E
 Site Error: 5.00 ft
 Reference Well: Coral PWU 28-27 62H
 Well Error: 0.50 ft
 Reference Wellbore: Wellbore #1
 Reference Design: Permit Plan 2

Local Co-ordinate Reference: Well Coral PWU 28-27 62H
 TVD Reference: RKB @ 3333.00ft
 MD Reference: RKB @ 3333.00ft
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Output errors are at: 2.00 sigma
 Database: EDM r5000.141_Prod US
 Offset TVD Reference: Offset Datum

Offset Design Sec 27-T19S-R29E - Coral PWU 28-27 11H - Wellbore #1 - Permit Plan 1													Offset Site Error: 5.00 ft
Survey Program: 0-MWD+HDGM													Offset Well Error: 0.50 ft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Tooface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
5,200.00	5,194.12	5,173.74	5,152.42	18.31	18.72	82.14	257.97	-159.29	271.64	235.05	36.60	7.423	
5,250.00	5,243.76	5,223.34	5,201.53	18.49	18.92	82.74	263.61	-163.42	277.26	240.30	36.97	7.500	
5,300.00	5,293.41	5,272.95	5,250.64	18.67	19.11	83.30	269.25	-167.56	282.91	245.57	37.34	7.577	
5,350.00	5,343.06	5,322.55	5,299.74	18.85	19.30	83.85	274.89	-171.70	288.58	250.87	37.71	7.654	
5,400.00	5,392.71	5,372.15	5,348.85	19.03	19.50	84.37	280.53	-175.84	294.28	256.20	38.08	7.729	
5,450.00	5,442.36	5,421.76	5,397.96	19.21	19.69	84.88	286.17	-179.98	300.00	261.55	38.45	7.803	
5,500.00	5,492.01	5,471.36	5,447.07	19.40	19.89	85.36	291.81	-184.11	305.74	266.92	38.82	7.876	
5,550.00	5,541.66	5,520.96	5,496.18	19.58	20.08	85.83	297.45	-188.25	311.51	272.32	39.19	7.949	
5,600.00	5,591.31	5,570.57	5,545.28	19.76	20.28	86.28	303.09	-192.39	317.29	277.73	39.56	8.020	
5,650.00	5,640.95	5,620.17	5,594.39	19.94	20.47	86.72	308.73	-196.53	323.09	283.16	39.93	8.091	
5,700.00	5,690.60	5,669.77	5,643.50	20.13	20.66	87.14	314.37	-200.66	328.91	288.61	40.31	8.160	
5,750.00	5,740.25	5,719.38	5,692.61	20.31	20.86	87.54	320.01	-204.80	334.75	294.07	40.68	8.229	
5,800.00	5,789.90	5,768.98	5,741.71	20.49	21.05	87.93	325.65	-208.94	340.60	299.55	41.05	8.297	
5,850.00	5,839.55	5,818.58	5,790.82	20.68	21.25	88.31	331.29	-213.08	346.47	305.04	41.43	8.364	
5,900.00	5,889.20	5,868.19	5,839.93	20.86	21.44	88.68	336.93	-217.22	352.35	310.55	41.80	8.429	
5,950.00	5,938.85	5,917.79	5,889.04	21.04	21.64	89.03	342.56	-221.35	358.25	316.08	42.17	8.494	
6,000.00	5,988.50	5,967.39	5,938.14	21.23	21.83	89.37	348.20	-225.49	364.16	321.61	42.55	8.559	
6,050.00	6,038.14	6,017.00	5,987.25	21.41	22.03	89.70	353.84	-229.63	370.08	327.16	42.92	8.622	
6,100.00	6,087.79	6,066.60	6,036.36	21.60	22.23	90.02	359.48	-233.77	376.02	332.72	43.30	8.684	
6,150.00	6,137.44	6,116.20	6,085.47	21.78	22.42	90.34	365.12	-237.91	381.96	338.29	43.68	8.746	
6,200.00	6,187.09	6,165.81	6,134.58	21.97	22.62	90.64	370.76	-242.04	387.92	343.87	44.05	8.806	
6,250.00	6,236.74	6,215.41	6,183.68	22.16	22.81	90.93	376.40	-246.18	393.88	349.46	44.43	8.866	
6,300.00	6,286.39	6,265.01	6,232.79	22.34	23.01	91.21	382.04	-250.32	399.86	355.05	44.80	8.925	
6,350.00	6,336.04	6,314.62	6,281.90	22.53	23.20	91.49	387.68	-254.46	405.84	360.66	45.18	8.983	
6,400.00	6,385.69	6,364.22	6,331.01	22.71	23.40	91.75	393.32	-258.60	411.84	366.28	45.56	9.040	
6,450.00	6,435.33	6,413.82	6,380.11	22.90	23.60	92.01	398.96	-262.73	417.84	371.91	45.93	9.097	
6,500.00	6,484.98	6,463.43	6,429.22	23.09	23.79	92.27	404.60	-266.87	423.85	377.54	46.31	9.152	
6,550.00	6,534.63	6,513.03	6,478.33	23.27	23.99	92.51	410.24	-271.01	429.87	383.18	46.69	9.207	
6,600.00	6,584.28	6,562.63	6,527.44	23.46	24.19	92.75	415.88	-275.15	435.90	388.83	47.07	9.261	
6,650.00	6,633.93	6,612.24	6,576.54	23.65	24.38	92.98	421.52	-279.28	441.93	394.49	47.44	9.315	
6,700.00	6,683.58	6,661.84	6,625.65	23.84	24.58	93.21	427.16	-283.42	447.97	400.15	47.82	9.367	
6,750.00	6,733.23	6,711.44	6,674.76	24.02	24.78	93.43	432.80	-287.56	454.02	405.82	48.20	9.419	
6,800.00	6,782.88	6,761.05	6,723.87	24.21	24.97	93.64	438.43	-291.70	460.07	411.49	48.58	9.471	
6,850.00	6,832.52	6,810.65	6,772.98	24.40	25.17	93.85	444.07	-295.84	466.13	417.17	48.96	9.521	
6,900.00	6,882.17	6,860.25	6,822.08	24.59	25.37	94.05	449.71	-299.97	472.20	422.86	49.34	9.571	
6,950.00	6,931.82	6,909.86	6,871.19	24.77	25.56	94.25	455.35	-304.11	478.27	428.55	49.72	9.620	
7,000.00	6,981.47	6,959.46	6,920.30	24.96	25.76	94.44	460.99	-308.25	484.34	434.25	50.09	9.669	
7,050.00	7,031.12	7,009.06	6,969.41	25.15	25.96	94.63	466.63	-312.39	490.43	439.95	50.47	9.716	
7,100.00	7,080.77	7,058.67	7,018.51	25.34	26.15	94.81	472.27	-316.53	496.51	445.66	50.85	9.764	
7,150.00	7,130.42	7,108.27	7,067.62	25.53	26.35	94.99	477.91	-320.66	502.60	451.37	51.23	9.810	
7,200.00	7,180.07	7,157.87	7,116.73	25.72	26.55	95.17	483.55	-324.80	508.70	457.09	51.61	9.856	
7,250.00	7,229.71	7,207.48	7,165.84	25.91	26.74	95.34	489.19	-328.94	514.80	462.81	51.99	9.901	
7,300.00	7,279.36	7,257.08	7,214.94	26.10	26.94	95.50	494.83	-333.08	520.91	468.53	52.37	9.946	
7,350.00	7,329.01	7,306.68	7,264.05	26.28	27.14	95.66	500.47	-337.21	527.02	474.26	52.75	9.990	
7,400.00	7,378.66	7,356.29	7,313.16	26.47	27.34	95.82	506.11	-341.35	533.13	480.00	53.13	10.034	
7,450.00	7,428.31	7,405.89	7,362.27	26.66	27.53	95.98	511.75	-345.49	539.25	485.73	53.51	10.077	
7,500.00	7,477.96	7,455.49	7,411.37	26.85	27.73	96.13	517.39	-349.63	545.37	491.48	53.90	10.119	
7,550.00	7,527.61	7,505.10	7,460.48	27.04	27.93	96.28	523.03	-353.77	551.50	497.22	54.28	10.161	
7,600.00	7,577.27	7,554.67	7,515.75	27.23	28.15	96.51	529.05	-358.19	557.34	502.63	54.71	10.187	
7,650.00	7,627.00	7,604.30	7,571.38	27.42	28.37	96.74	534.45	-362.15	562.57	507.42	55.14	10.202	
7,700.00	7,676.79	7,653.05	7,627.22	27.61	28.58	96.94	539.20	-365.63	567.15	511.59	55.57	10.207	

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

Anticollision Report

Company: WCDSC Permian NM
Project: Eddy County (NAD 83 NM Eastern)
Reference Site: Sec 27-T19S-R29E
Site Error: 5.00 ft
Reference Well: Coral PWU 28-27 62H
Well Error: 0.50 ft
Reference Wellbore: Wellbore #1
Reference Design: Permit Plan 2

Local Co-ordinate Reference: Well Coral PWU 28-27 62H
TVD Reference: RKB @ 3333.00ft
MD Reference: RKB @ 3333.00ft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM r5000.141_Prod US
Offset TVD Reference: Offset Datum

Offset Design Sec 27-T19S-R29E - Coral PWU 28-27 11H - Wellbore #1 - Permit Plan 1												Offset Site Error:	5.00 ft
Survey Program: O-MWD+HDGM												Offset Well Error:	0.50 ft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Tooface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
7,750.00	7,726.64	7,729.31	7,683.25	27.79	28.79	97.11	543.29	-368.64	571.10	515.13	55.98	10.203	
7,800.00	7,778.53	7,785.67	7,739.44	27.97	29.00	97.25	546.73	-371.16	574.41	518.03	56.38	10.188	
7,850.00	7,826.46	7,842.10	7,795.77	28.15	29.21	97.36	549.49	-373.19	577.07	520.30	56.77	10.165	
7,900.00	7,876.42	7,898.59	7,852.20	28.33	29.41	97.44	551.59	-374.73	579.08	521.93	57.16	10.131	
7,950.00	7,926.41	7,955.13	7,908.71	28.51	29.61	97.49	553.02	-375.77	580.45	522.92	57.53	10.090	
8,000.00	7,976.40	8,011.69	7,965.27	28.68	29.80	97.52	553.77	-376.33	581.16	523.27	57.89	10.038	
8,050.00	8,026.40	8,065.72	8,019.30	28.85	29.99	3.94	553.90	-376.42	581.28	523.03	58.25	9.980	
8,100.00	8,076.40	8,115.72	8,069.30	29.03	30.16	3.94	553.90	-376.42	581.28	522.68	58.59	9.921	
8,150.00	8,126.40	8,165.72	8,119.30	29.20	30.33	3.94	553.90	-376.42	581.28	522.34	58.94	9.862	
8,200.00	8,176.40	8,215.72	8,169.30	29.37	30.50	3.94	553.90	-376.42	581.28	521.99	59.28	9.805	
8,250.00	8,226.40	8,265.72	8,219.30	29.55	30.67	3.94	553.90	-376.42	581.28	521.64	59.63	9.748	
8,300.00	8,276.40	8,315.72	8,269.30	29.72	30.83	3.94	553.90	-376.42	581.28	521.30	59.98	9.692	
8,350.00	8,326.40	8,365.72	8,319.30	29.90	31.00	3.94	553.90	-376.42	581.28	520.95	60.32	9.636	
8,400.00	8,376.40	8,415.72	8,369.30	30.07	31.17	3.94	553.90	-376.42	581.28	520.60	60.67	9.581	
8,450.00	8,426.40	8,465.72	8,419.30	30.24	31.34	3.94	553.90	-376.42	581.28	520.26	61.02	9.526	
8,500.00	8,476.40	8,515.72	8,469.30	30.42	31.51	3.94	553.90	-376.42	581.28	519.91	61.37	9.472	
8,550.00	8,526.40	8,565.72	8,519.30	30.59	31.68	3.94	553.90	-376.42	581.28	519.56	61.71	9.419	
8,600.00	8,576.40	8,615.72	8,569.30	30.76	31.85	3.94	553.90	-376.42	581.28	519.22	62.06	9.366	
8,650.00	8,626.34	8,650.00	8,603.57	30.93	31.97	-86.10	554.34	-375.91	581.81	519.45	62.36	9.330	
8,700.00	8,675.90	8,675.36	8,628.85	31.08	32.05	-86.09	555.56	-374.46	583.88	521.33	62.55	9.334	
8,750.00	8,724.72	8,700.00	8,653.31	31.23	32.14	-86.02	557.51	-372.17	587.57	524.92	62.65	9.378	
8,800.00	8,772.40	8,731.06	8,683.89	31.38	32.24	-86.01	561.03	-368.04	592.81	530.06	62.76	9.446	
8,850.00	8,818.60	8,758.53	8,710.62	31.51	32.33	-85.90	565.11	-363.24	599.66	536.87	62.79	9.551	
8,900.00	8,862.97	8,785.66	8,736.66	31.65	32.41	-85.75	570.03	-357.46	608.08	545.29	62.79	9.685	
8,950.00	8,905.15	8,812.40	8,761.91	31.79	32.50	-85.52	575.72	-350.77	618.07	555.29	62.78	9.845	
9,000.00	8,944.84	8,838.68	8,786.27	31.93	32.58	-85.22	582.13	-343.24	629.61	566.82	62.79	10.028	
9,050.00	8,981.73	8,864.48	8,809.66	32.09	32.65	-84.82	589.18	-334.96	642.67	579.84	62.83	10.229	
9,100.00	9,015.54	8,899.76	8,832.03	32.26	32.73	-84.33	596.79	-326.00	657.21	594.29	62.92	10.446	
9,150.00	9,046.01	8,914.47	8,853.33	32.46	32.79	-83.73	604.91	-316.46	673.18	610.11	63.07	10.674	
9,200.00	9,072.92	8,938.61	8,873.54	32.69	32.86	-83.02	613.46	-306.41	690.51	627.22	63.29	10.910	
9,250.00	9,096.05	8,962.15	8,892.65	32.96	32.92	-82.19	622.37	-295.95	709.15	645.56	63.59	11.152	
9,300.00	9,115.23	8,985.07	8,910.65	33.27	32.97	-81.23	631.56	-285.13	729.00	665.04	63.96	11.398	
9,350.00	9,130.31	9,007.37	8,927.54	33.63	33.03	-80.16	640.99	-274.05	749.99	685.60	64.40	11.647	
9,400.00	9,141.18	9,029.03	8,943.34	34.04	33.07	-78.96	650.59	-262.77	772.02	707.13	64.88	11.898	
9,450.00	9,147.78	9,050.00	8,958.04	34.49	33.12	-77.64	660.28	-251.38	794.98	729.57	65.41	12.154	
9,500.00	9,150.00	9,070.41	8,971.77	34.98	33.16	-76.22	670.07	-239.88	818.78	752.82	65.96	12.414	
9,550.00	9,150.00	9,091.10	8,985.07	35.54	33.20	-77.40	680.33	-227.81	843.73	777.20	66.53	12.683	
9,600.00	9,150.00	9,113.19	8,998.57	36.09	33.24	-78.63	691.66	-214.50	870.11	803.05	67.06	12.975	
9,650.00	9,150.00	9,136.24	9,149.91	36.75	36.80	-90.46	854.61	305.93	880.58	807.70	72.88	12.082	
9,700.00	9,150.00	9,156.24	9,149.91	37.40	37.40	-90.46	854.61	355.93	880.58	806.44	74.14	11.877	
9,750.00	9,150.00	9,176.24	9,149.91	38.13	38.02	-90.46	854.61	405.93	880.57	805.08	75.50	11.663	
9,800.00	9,150.00	9,196.24	9,149.91	38.87	38.71	-90.46	854.61	455.93	880.57	803.64	76.93	11.446	
9,850.00	9,150.00	9,216.24	9,149.91	39.68	39.41	-90.46	854.61	505.93	880.57	802.12	78.45	11.224	
9,900.00	9,150.00	9,236.24	9,149.91	40.49	40.18	-90.46	854.61	555.93	880.56	800.53	80.04	11.002	
9,950.00	9,150.00	10,006.24	9,149.91	41.37	40.96	-90.46	854.61	605.93	880.56	798.86	81.70	10.778	
10,000.00	9,150.00	10,026.24	9,149.91	42.25	41.79	-90.46	854.61	655.93	880.56	797.14	83.42	10.556	
10,050.00	9,150.00	10,106.24	9,149.91	43.18	42.64	-90.46	854.61	705.93	880.55	795.34	85.21	10.334	
10,100.00	9,150.00	10,186.24	9,149.91	44.12	43.53	-90.46	854.61	755.93	880.55	793.50	87.05	10.115	
10,150.00	9,150.00	10,266.24	9,149.91	45.11	44.44	-90.46	854.61	805.93	880.54	791.59	88.95	9.899	
10,200.00	9,150.00	10,346.24	9,149.91	46.09	45.39	-90.46	854.61	855.93	880.54	789.64	90.90	9.687	
10,250.00	9,150.00	10,426.24	9,149.91	47.13	46.35	-90.46	854.61	905.93	880.54	787.64	92.90	9.478	

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

Anticollision Report

Company: WCDSC Permian NM
Project: Eddy County (NAD 83 NM Eastern)
Reference Site: Sec 27-T19S-R29E
Site Error: 5.00 ft
Reference Well: Coral PWU 28-27 62H
Well Error: 0.50 ft
Reference Wellbore: Wellbore #1
Reference Design: Permit Plan 2

Local Co-ordinate Reference: Well Coral PWU 28-27 62H
TVD Reference: RKB @ 3333.00ft
MD Reference: RKB @ 3333.00ft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM r5000.141_Prod US
Offset TVD Reference: Offset Datum

Offset Design Sec 27-T19S-R29E - Coral PWU 28-27 11H - Wellbore #1 - Permit Plan 1													Offset Site Error: 5.00 ft
Survey Program: 0-MWD+HDMG													Offset Well Error: 0.50 ft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
10,300.00	9,150.00	10,356.24	9,149.91	48.16	47.35	-90.46	854.61	955.93	880.53	785.59	94.94	9.275	
10,350.00	9,150.00	10,406.24	9,149.91	49.23	48.35	-90.46	854.61	1,005.93	880.53	783.50	97.03	9.075	
10,400.00	9,150.00	10,456.24	9,149.91	50.30	49.39	-90.46	854.61	1,055.93	880.53	781.38	99.15	8.881	
10,450.00	9,150.00	10,506.24	9,149.91	51.41	50.44	-90.46	854.62	1,105.93	880.52	779.21	101.31	8.692	
10,500.00	9,150.00	10,556.24	9,149.91	52.52	51.51	-90.46	854.62	1,155.93	880.52	777.02	103.50	8.507	
10,550.00	9,150.00	10,606.24	9,149.91	53.65	52.60	-90.46	854.62	1,205.93	880.51	774.79	105.73	8.328	
10,600.00	9,150.00	10,656.24	9,149.91	54.79	53.71	-90.46	854.62	1,255.93	880.51	772.53	107.99	8.154	
10,650.00	9,150.00	10,706.24	9,149.91	55.95	54.82	-90.46	854.62	1,305.93	880.51	770.23	110.27	7.985	
10,700.00	9,150.00	10,756.24	9,149.91	57.12	55.96	-90.46	854.62	1,355.93	880.50	767.92	112.58	7.821	
10,750.00	9,150.00	10,806.24	9,149.91	58.31	57.10	-90.46	854.62	1,405.93	880.50	765.58	114.92	7.662	
10,800.00	9,150.00	10,856.24	9,149.91	59.49	58.27	-90.46	854.62	1,455.93	880.50	763.21	117.28	7.507	
10,850.00	9,150.00	10,906.24	9,149.91	60.70	59.43	-90.46	854.62	1,505.93	880.49	760.83	119.67	7.358	
10,900.00	9,150.00	10,956.24	9,149.91	61.91	60.62	-90.46	854.62	1,555.93	880.49	758.42	122.07	7.213	
10,950.00	9,150.00	11,006.24	9,149.91	63.14	61.81	-90.46	854.62	1,605.93	880.48	755.99	124.49	7.073	
11,000.00	9,150.00	11,056.24	9,149.91	64.36	63.02	-90.46	854.62	1,655.93	880.48	753.54	126.94	6.936	
11,050.00	9,150.00	11,106.24	9,149.91	65.61	64.23	-90.46	854.62	1,705.93	880.48	751.08	129.40	6.804	
11,100.00	9,150.00	11,156.24	9,149.91	66.85	65.45	-90.46	854.62	1,755.93	880.47	748.60	131.87	6.677	
11,150.00	9,150.00	11,206.24	9,149.91	68.11	66.68	-90.46	854.62	1,805.93	880.47	746.10	134.37	6.553	
11,200.00	9,150.00	11,256.24	9,149.91	69.37	67.92	-90.46	854.62	1,855.93	880.47	743.59	136.87	6.433	
11,250.00	9,150.00	11,306.24	9,149.91	70.64	69.17	-90.46	854.62	1,905.93	880.46	741.07	139.40	6.316	
11,300.00	9,150.00	11,356.24	9,149.91	71.91	70.42	-90.46	854.62	1,955.93	880.46	738.53	141.93	6.204	
11,350.00	9,150.00	11,406.24	9,149.91	73.19	71.68	-90.46	854.62	2,005.93	880.45	735.98	144.48	6.094	
11,400.00	9,150.00	11,456.24	9,149.91	74.48	72.95	-90.46	854.62	2,055.93	880.45	733.42	147.03	5.988	
11,450.00	9,150.00	11,506.24	9,149.91	75.77	74.22	-90.46	854.62	2,105.93	880.45	730.84	149.60	5.885	
11,500.00	9,150.00	11,556.24	9,149.91	77.06	75.50	-90.46	854.62	2,155.93	880.44	728.26	152.19	5.785	
11,550.00	9,150.00	11,606.24	9,149.91	78.37	76.78	-90.46	854.62	2,205.93	880.44	725.66	154.78	5.688	
11,600.00	9,150.00	11,656.24	9,149.91	79.67	78.07	-90.46	854.62	2,255.93	880.44	723.06	157.38	5.594	
11,650.00	9,150.00	11,706.24	9,149.91	80.98	79.37	-90.46	854.62	2,305.93	880.43	720.45	159.99	5.503	
11,700.00	9,150.00	11,756.24	9,149.91	82.30	80.67	-90.46	854.62	2,355.93	880.43	717.82	162.60	5.415	
11,750.00	9,150.00	11,806.24	9,149.91	83.62	81.97	-90.46	854.62	2,405.93	880.42	715.19	165.23	5.328	
11,800.00	9,150.00	11,856.24	9,149.91	84.94	83.28	-90.46	854.62	2,455.93	880.42	712.55	167.87	5.245	
11,850.00	9,150.00	11,906.24	9,149.91	86.26	84.59	-90.46	854.62	2,505.93	880.42	709.91	170.51	5.163	
11,900.00	9,150.00	11,956.24	9,149.91	87.59	85.91	-90.46	854.62	2,555.93	880.41	707.26	173.16	5.084	
11,950.00	9,150.00	12,006.24	9,149.91	88.92	87.22	-90.46	854.62	2,605.93	880.41	704.60	175.81	5.008	
12,000.00	9,150.00	12,056.24	9,149.91	90.26	88.55	-90.46	854.62	2,655.93	880.41	701.93	178.48	4.933 Alert	
12,050.00	9,150.00	12,106.24	9,149.91	91.60	89.87	-90.46	854.62	2,705.93	880.40	699.26	181.15	4.860 Alert	
12,100.00	9,150.00	12,156.24	9,149.91	92.94	91.20	-90.46	854.62	2,755.93	880.40	696.58	183.82	4.789 Alert	
12,150.00	9,150.00	12,206.24	9,149.91	94.28	92.54	-90.46	854.62	2,805.93	880.39	693.89	186.50	4.721 Alert	
12,200.00	9,150.00	12,256.24	9,149.91	95.63	93.87	-90.46	854.62	2,855.93	880.39	691.20	189.19	4.653 Alert	
12,250.00	9,150.00	12,306.24	9,149.91	96.98	95.21	-90.46	854.62	2,905.93	880.39	688.51	191.88	4.588 Alert	
12,300.00	9,150.00	12,356.24	9,149.91	98.33	96.55	-90.46	854.62	2,955.93	880.38	685.81	194.58	4.525 Alert	
12,350.00	9,150.00	12,406.24	9,149.91	99.69	97.90	-90.46	854.62	3,005.93	880.38	683.10	197.28	4.463 Alert	
12,400.00	9,150.00	12,456.24	9,149.91	101.04	99.24	-90.46	854.62	3,055.93	880.38	680.39	199.99	4.402 Alert	
12,450.00	9,150.00	12,506.24	9,149.91	102.40	100.59	-90.46	854.62	3,105.93	880.37	677.67	202.70	4.343 Alert	
12,500.00	9,150.00	12,556.24	9,149.91	103.76	101.94	-90.46	854.62	3,155.93	880.37	674.96	205.41	4.286 Alert	
12,550.00	9,150.00	12,606.24	9,149.91	105.12	103.30	-90.46	854.62	3,205.93	880.36	672.23	208.13	4.230 Alert	
12,600.00	9,150.00	12,656.24	9,149.91	106.49	104.65	-90.46	854.62	3,255.93	880.36	669.51	210.85	4.175 Alert	
12,650.00	9,150.00	12,706.24	9,149.91	107.85	106.01	-90.46	854.62	3,305.93	880.36	666.77	213.58	4.122 Alert	
12,700.00	9,150.00	12,756.24	9,149.91	109.22	107.37	-90.46	854.62	3,355.93	880.35	664.04	216.31	4.070 Alert	
12,750.00	9,150.00	12,806.24	9,149.91	110.59	108.73	-90.46	854.62	3,405.93	880.35	661.30	219.05	4.019 Alert	
12,800.00	9,150.00	12,856.24	9,149.91	111.96	110.10	-90.46	854.62	3,455.93	880.35	658.56	221.78	3.969 Alert	

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

Anticollision Report

Company: WCDSC Permian NM
Project: Eddy County (NAD 83 NM Eastern)
Reference Site: Sec 27-T19S-R29E
Site Error: 5.00 ft
Reference Well: Coral PWU 28-27 62H
Well Error: 0.50 ft
Reference Wellbore: Wellbore #1
Reference Design: Permit Plan 2

Local Co-ordinate Reference: Well Coral PWU 28-27 62H
TVD Reference: RKB @ 3333.00ft
MD Reference: RKB @ 3333.00ft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM r5000.141_Prod US
Offset TVD Reference: Offset Datum

Offset Design Sec 27-T19S-R29E - Coral PWU 28-27 11H - Wellbore #1 - Permit Plan 1													Offset Site Error: 5.00 ft
Survey Program: 0-MWD+HDGM													Offset Well Error: 0.50 ft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)					
12,850.00	9,150.00	12,906.24	9,149.91	113.33	111.46	-90.46	854.62	3,505.93	880.34	655.82	224.53	3.921 Alert	
12,900.00	9,150.00	12,956.24	9,149.91	114.71	112.83	-90.46	854.63	3,555.93	880.34	653.07	227.27	3.874 Alert	
12,950.00	9,150.00	13,006.24	9,149.91	116.08	114.20	-90.46	854.63	3,605.93	880.33	650.32	230.02	3.827 Alert	
13,000.00	9,150.00	13,056.24	9,149.91	117.46	115.57	-90.46	854.63	3,655.93	880.33	647.56	232.77	3.782 Alert	
13,050.00	9,150.00	13,106.24	9,149.91	118.84	116.94	-90.46	854.63	3,705.93	880.33	644.81	235.52	3.738 Alert	
13,100.00	9,150.00	13,156.24	9,149.91	120.22	118.31	-90.46	854.63	3,755.93	880.32	642.05	238.28	3.695 Alert	
13,150.00	9,150.00	13,206.24	9,149.91	121.60	119.69	-90.46	854.63	3,805.93	880.32	639.28	241.03	3.652 Alert	
13,200.00	9,150.00	13,256.24	9,149.91	122.98	121.07	-90.46	854.63	3,855.93	880.32	636.52	243.80	3.611 Alert	
13,250.00	9,150.00	13,306.24	9,149.91	124.37	122.44	-90.46	854.63	3,905.93	880.31	633.75	246.56	3.570 Alert	
13,300.00	9,150.00	13,356.24	9,149.91	125.75	123.82	-90.46	854.63	3,955.93	880.31	630.98	249.32	3.531 Alert	
13,350.00	9,150.00	13,406.24	9,149.91	127.14	125.20	-90.46	854.63	4,005.93	880.30	628.21	252.09	3.492 Alert	
13,400.00	9,150.00	13,456.24	9,149.91	128.52	126.58	-90.46	854.63	4,055.93	880.30	625.44	254.86	3.454 Alert	
13,450.00	9,150.00	13,506.24	9,149.91	129.91	127.97	-90.46	854.63	4,105.93	880.30	622.66	257.64	3.417 Alert	
13,500.00	9,150.00	13,556.24	9,149.91	131.30	129.35	-90.46	854.63	4,155.93	880.29	619.88	260.41	3.380 Alert	
13,550.00	9,150.00	13,606.24	9,149.91	132.69	130.73	-90.46	854.63	4,205.93	880.29	617.10	263.19	3.345 Alert	
13,600.00	9,150.00	13,656.24	9,149.91	134.08	132.12	-90.46	854.63	4,255.93	880.29	614.32	265.97	3.310 Alert	
13,650.00	9,150.00	13,706.24	9,149.91	135.47	133.51	-90.46	854.63	4,305.93	880.28	611.54	268.75	3.276 Alert	
13,700.00	9,150.00	13,756.24	9,149.91	136.86	134.89	-90.46	854.63	4,355.93	880.28	608.75	271.53	3.242 Alert	
13,750.00	9,150.00	13,806.24	9,149.91	138.26	136.28	-90.46	854.63	4,405.93	880.27	605.96	274.31	3.209 Alert	
13,800.00	9,150.00	13,856.24	9,149.91	139.65	137.67	-90.46	854.63	4,455.93	880.27	603.17	277.10	3.177 Alert	
13,850.00	9,150.00	13,906.24	9,149.91	141.05	139.06	-90.46	854.63	4,505.93	880.27	600.38	279.89	3.145 Alert	
13,900.00	9,150.00	13,956.24	9,149.91	142.44	140.45	-90.46	854.63	4,555.93	880.26	597.59	282.67	3.114 Alert	
13,950.00	9,150.00	14,006.24	9,149.91	143.84	141.85	-90.46	854.63	4,605.93	880.26	594.79	285.47	3.084 Alert	
14,000.00	9,150.00	14,056.24	9,149.91	145.24	143.24	-90.46	854.63	4,655.93	880.26	592.00	288.26	3.054 Alert	
14,050.00	9,150.00	14,106.24	9,149.91	146.64	144.63	-90.46	854.63	4,705.93	880.25	589.20	291.05	3.024 Alert	
14,100.00	9,150.00	14,156.24	9,149.91	148.03	146.03	-90.46	854.63	4,755.93	880.25	586.40	293.85	2.996 Alert	
14,150.00	9,150.00	14,206.24	9,149.91	149.43	147.42	-90.46	854.63	4,805.93	880.24	583.60	296.64	2.967 Alert	
14,200.00	9,150.00	14,256.24	9,149.91	150.83	148.82	-90.46	854.63	4,855.93	880.24	580.80	299.44	2.940 Alert	
14,250.00	9,150.00	14,306.24	9,149.91	152.23	150.22	-90.46	854.63	4,905.93	880.24	578.00	302.24	2.912 Alert	
14,300.00	9,150.00	14,356.24	9,149.91	153.64	151.62	-90.46	854.63	4,955.93	880.23	575.19	305.04	2.886 Alert	
14,350.00	9,150.00	14,406.24	9,149.91	155.04	153.01	-90.46	854.63	5,005.93	880.23	572.39	307.84	2.859 Alert	
14,400.00	9,150.00	14,456.24	9,149.91	156.44	154.41	-90.46	854.63	5,055.93	880.23	569.58	310.65	2.834 Alert	
14,450.00	9,150.00	14,506.24	9,149.91	157.84	155.81	-90.46	854.63	5,105.93	880.22	566.77	313.45	2.808 Alert	
14,500.00	9,150.00	14,556.24	9,149.91	159.25	157.21	-90.46	854.63	5,155.93	880.22	563.96	316.26	2.783 Alert	
14,550.00	9,150.00	14,606.24	9,149.91	160.65	158.61	-90.46	854.63	5,205.93	880.21	561.15	319.06	2.759 Alert	
14,600.00	9,150.00	14,656.24	9,149.91	162.06	160.02	-90.46	854.63	5,255.93	880.21	558.34	321.87	2.735 Alert	
14,650.00	9,150.00	14,706.24	9,149.91	163.46	161.42	-90.46	854.63	5,305.93	880.21	555.53	324.68	2.711 Alert	
14,700.00	9,150.00	14,756.24	9,149.91	164.87	162.82	-90.46	854.63	5,355.93	880.20	552.71	327.49	2.688 Alert	
14,750.00	9,150.00	14,806.24	9,149.91	166.27	164.22	-90.46	854.63	5,405.93	880.20	549.90	330.30	2.665 Alert	
14,800.00	9,150.00	14,856.24	9,149.91	167.68	165.63	-90.46	854.63	5,455.93	880.20	547.08	333.11	2.642 Alert	
14,850.00	9,150.00	14,906.24	9,149.91	169.09	167.03	-90.46	854.63	5,505.93	880.19	544.27	335.92	2.620 Alert	
14,900.00	9,150.00	14,956.24	9,149.91	170.49	168.44	-90.46	854.63	5,555.93	880.19	541.45	338.74	2.598 Alert	
14,950.00	9,150.00	15,006.24	9,149.91	171.90	169.84	-90.46	854.63	5,605.93	880.18	538.63	341.55	2.577 Alert	
15,000.00	9,150.00	15,056.24	9,149.91	173.31	171.25	-90.46	854.63	5,655.93	880.18	535.81	344.37	2.556 Alert	
15,050.00	9,150.00	15,106.24	9,149.91	174.72	172.65	-90.46	854.63	5,705.93	880.18	532.99	347.18	2.535 Alert	
15,100.00	9,150.00	15,156.24	9,149.91	176.13	174.06	-90.46	854.63	5,755.93	880.17	530.17	350.00	2.515 Alert	
15,150.00	9,150.00	15,206.24	9,149.91	177.54	175.47	-90.46	854.63	5,805.93	880.17	527.35	352.82	2.495 Minor Risk	
15,200.00	9,150.00	15,256.24	9,149.91	178.95	176.87	-90.46	854.63	5,855.93	880.17	524.53	355.64	2.475 Minor Risk	
15,250.00	9,150.00	15,306.24	9,149.91	180.36	178.28	-90.46	854.63	5,905.93	880.16	521.70	358.46	2.455 Minor Risk	
15,300.00	9,150.00	15,356.24	9,149.91	181.77	179.69	-90.46	854.63	5,955.93	880.16	518.88	361.28	2.436 Minor Risk	
15,350.00	9,150.00	15,406.24	9,149.91	183.18	181.10	-90.46	854.63	6,005.93	880.15	516.05	364.10	2.417 Minor Risk	

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

Anticollision Report

Company: WCDSC Permian NM
Project: Eddy County (NAD 83 NM Eastern)
Reference Site: Sec 27-T19S-R29E
Site Error: 5.00 ft
Reference Well: Coral PWU 28-27 62H
Well Error: 0.50 ft
Reference Wellbore: Wellbore #1
Reference Design: Permit Plan 2

Local Co-ordinate Reference
TVD Reference: RKB @ 3333.00ft
MD Reference: RKB @ 3333.00ft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM r5000.141_Prod US
Offset TVD Reference: Offset Datum

Offset Design Sec 27-T19S-R29E - Coral PWU 28-27 11H - Wellbore #1 - Permit Plan 1													Offset Site Error:	5.00 ft
Survey Program: 0-MWD+HDGM													Offset Well Error:	0.50 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
15,400.00	9,150.00	15,456.24	9,149.91	184.59	182.51	-90.48	854.64	6,055.93	880.15	513.23	366.92	2.399	Minor Risk	
15,450.00	9,150.00	15,506.24	9,149.91	186.01	183.92	-90.48	854.64	6,105.93	880.15	510.40	369.75	2.380	Minor Risk	
15,500.00	9,150.00	15,556.24	9,149.91	187.42	185.33	-90.46	854.64	6,155.93	880.14	507.57	372.57	2.362	Minor Risk	
15,550.00	9,150.00	15,606.24	9,149.91	188.83	186.74	-90.46	854.64	6,205.93	880.14	504.75	375.39	2.345	Minor Risk	
15,600.00	9,150.00	15,656.24	9,149.91	190.24	188.15	-90.46	854.64	6,255.93	880.14	501.92	378.22	2.327	Minor Risk	
15,650.00	9,150.00	15,706.24	9,149.91	191.66	189.56	-90.46	854.64	6,305.93	880.13	499.09	381.04	2.310	Minor Risk	
15,700.00	9,150.00	15,756.24	9,149.91	193.07	190.97	-90.46	854.64	6,355.93	880.13	496.26	383.87	2.293	Minor Risk	
15,750.00	9,150.00	15,806.24	9,149.91	194.49	192.38	-90.46	854.64	6,405.93	880.12	493.43	386.70	2.276	Minor Risk	
15,800.00	9,150.00	15,856.24	9,149.91	195.90	193.80	-90.46	854.64	6,455.93	880.12	490.60	389.52	2.259	Minor Risk	
15,850.00	9,150.00	15,906.24	9,149.91	197.31	195.21	-90.46	854.64	6,505.93	880.12	487.77	392.35	2.243	Minor Risk	
15,900.00	9,150.00	15,956.24	9,149.91	198.73	196.62	-90.46	854.64	6,555.93	880.11	484.93	395.18	2.227	Minor Risk	
15,950.00	9,150.00	16,006.24	9,149.91	200.14	198.03	-90.46	854.64	6,605.93	880.11	482.10	398.01	2.211	Minor Risk	
16,000.00	9,150.00	16,056.24	9,149.91	201.56	199.45	-90.46	854.64	6,655.93	880.11	479.27	400.84	2.196	Minor Risk	
16,050.00	9,150.00	16,106.24	9,149.91	202.98	200.86	-90.46	854.64	6,705.93	880.10	476.43	403.67	2.180	Minor Risk	
16,100.00	9,150.00	16,156.24	9,149.91	204.39	202.28	-90.46	854.64	6,755.93	880.10	473.60	406.50	2.165	Minor Risk	
16,150.00	9,150.00	16,206.24	9,149.91	205.81	203.69	-90.46	854.64	6,805.93	880.09	470.76	409.33	2.150	Minor Risk	
16,200.00	9,150.00	16,256.24	9,149.91	207.22	205.10	-90.46	854.64	6,855.93	880.09	467.93	412.16	2.135	Minor Risk	
16,250.00	9,150.00	16,306.24	9,149.91	208.64	206.52	-90.46	854.64	6,905.93	880.09	465.09	414.99	2.121	Minor Risk	
16,300.00	9,150.00	16,356.24	9,149.91	210.06	207.93	-90.46	854.64	6,955.93	880.08	462.25	417.83	2.106	Minor Risk	
16,350.00	9,150.00	16,406.24	9,149.91	211.47	209.35	-90.46	854.64	7,005.93	880.08	459.42	420.66	2.092	Minor Risk	
16,400.00	9,150.00	16,456.24	9,149.91	212.89	210.77	-90.46	854.64	7,055.93	880.07	456.58	423.49	2.078	Minor Risk	
16,450.00	9,150.00	16,506.24	9,149.91	214.31	212.18	-90.46	854.64	7,105.93	880.07	453.74	426.33	2.064	Minor Risk	
16,500.00	9,150.00	16,556.24	9,149.91	215.73	213.60	-90.46	854.64	7,155.93	880.07	450.90	429.16	2.051	Minor Risk	
16,550.00	9,150.00	16,606.24	9,149.91	217.15	215.01	-90.46	854.64	7,205.93	880.06	448.06	432.00	2.037	Minor Risk	
16,600.00	9,150.00	16,656.24	9,149.91	218.56	216.43	-90.46	854.64	7,255.93	880.06	445.23	434.83	2.024	Minor Risk	
16,650.00	9,150.00	16,706.24	9,149.91	219.98	217.85	-90.46	854.64	7,305.93	880.06	442.39	437.67	2.011	Minor Risk	
16,700.00	9,150.00	16,756.24	9,149.91	221.40	219.26	-90.46	854.64	7,355.93	880.05	439.55	440.51	1.998	Minor Risk	
16,750.00	9,150.00	16,806.24	9,149.91	222.82	220.68	-90.46	854.64	7,405.93	880.05	436.70	443.34	1.985	Minor Risk	
16,800.00	9,150.00	16,856.24	9,149.91	224.24	222.10	-90.46	854.64	7,455.93	880.04	433.86	446.18	1.972	Minor Risk	
16,850.00	9,150.00	16,906.24	9,149.91	225.66	223.52	-90.46	854.64	7,505.93	880.04	431.02	449.02	1.960	Minor Risk	
16,900.00	9,150.00	16,956.24	9,149.91	227.08	224.94	-90.46	854.64	7,555.93	880.04	428.18	451.86	1.948	Minor Risk	
16,950.00	9,150.00	17,006.24	9,149.91	228.50	226.35	-90.46	854.64	7,605.93	880.03	425.34	454.70	1.935	Minor Risk	
17,000.00	9,150.00	17,056.24	9,149.91	229.92	227.77	-90.46	854.64	7,655.93	880.03	422.50	457.53	1.923	Minor Risk	
17,002.43	9,150.00	17,058.67	9,149.91	229.98	227.84	-90.46	854.64	7,658.37	880.03	422.36	457.67	1.923	Minor Risk	

Anticollision Report

Company: WCDSC Permian NM
 Project: Eddy County (NAD 83 NM Eastern)
 Reference Site: Sec 27-T19S-R29E
 Site Error: 5.00 ft
 Reference Well: Coral PWU 28-27 62H
 Well Error: 0.50 ft
 Reference Wellbore: Wellbore #1
 Reference Design: Permit Plan 2

Local Co-ordinate Reference
 TVD Reference: RKB @ 3333.00ft
 MD Reference: RKB @ 3333.00ft
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Output errors are at 2.00 sigma
 Database: EDM r5000.141_Prod US
 Offset TVD Reference: Offset Datum

Offset Design Sec 27-T19S-R29E - Coral PWU 28-27 12H - Wellbore #1 - Permit Plan 1												Offset Site Error: 5.00 ft
Survey Program: 0-MWD+IFR1+MS												Offset Well Error: 0.50 ft
Reference		Offset		Semi Major Axis		Highside Tooface (°)	Distance		Minimum Separation (ft)	Separation Factor	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)				
0.00	0.00	0.00	0.00	0.50	0.50	90.00	0.00	60.00	60.00			
50.00	50.00	50.00	50.00	0.50	0.50	90.00	0.00	60.00	60.00	58.00	1.00	59.711
100.00	100.00	100.00	100.00	0.51	0.52	90.00	0.00	60.00	60.00	58.97	1.03	58.269
150.00	150.00	150.00	150.00	0.58	0.59	90.00	0.00	60.00	60.00	58.83	1.17	51.358
200.00	200.00	200.00	200.00	0.69	0.70	90.00	0.00	60.00	60.00	58.61	1.39	43.229
250.00	250.00	250.00	250.00	0.83	0.83	90.00	0.00	60.00	60.00	58.34	1.66	36.215
300.00	300.00	300.00	300.00	0.98	0.98	90.00	0.00	60.00	60.00	58.05	1.95	30.697
350.00	350.00	350.00	350.00	1.13	1.14	90.00	0.00	60.00	60.00	57.73	2.27	26.431
400.00	400.00	400.00	400.00	1.30	1.30	90.00	0.00	60.00	60.00	57.40	2.60	23.107
450.00	450.00	450.00	450.00	1.46	1.47	90.00	0.00	60.00	60.00	57.07	2.93	20.473
500.00	500.00	500.00	500.00	1.63	1.64	90.00	0.00	60.00	60.00	56.73	3.27	18.349
550.00	550.00	550.00	550.00	1.80	1.81	90.00	0.00	60.00	60.00	56.39	3.61	16.607
600.00	600.00	600.00	600.00	1.98	1.98	90.00	0.00	60.00	60.00	56.04	3.96	15.157
650.00	650.00	650.00	650.00	2.15	2.15	90.00	0.00	60.00	60.00	55.69	4.31	13.933
700.00	700.00	700.00	700.00	2.33	2.33	90.00	0.00	60.00	60.00	55.34	4.66	12.887
750.00	750.00	750.00	750.00	2.50	2.51	90.00	0.00	60.00	60.00	54.99	5.01	11.984
800.00	800.00	800.00	800.00	2.68	2.68	90.00	0.00	60.00	60.00	54.64	5.36	11.198
850.00	850.00	850.00	850.00	2.85	2.86	90.00	0.00	60.00	60.00	54.29	5.71	10.506
900.00	900.00	900.00	900.00	3.03	3.03	90.00	0.00	60.00	60.00	53.94	6.06	9.894
950.00	950.00	950.00	950.00	3.21	3.21	90.00	0.00	60.00	60.00	53.58	6.42	9.349
1,000.00	1,000.00	1,000.00	1,000.00	3.38	3.39	90.00	0.00	60.00	60.00	53.23	6.77	8.860
1,050.00	1,050.00	1,050.00	1,050.00	3.56	3.57	90.00	0.00	60.00	60.00	52.87	7.13	8.419
1,100.00	1,100.00	1,100.00	1,100.00	3.74	3.74	90.00	0.00	60.00	60.00	52.52	7.48	8.019
1,150.00	1,150.00	1,150.00	1,150.00	3.92	3.92	90.00	0.00	60.00	60.00	52.16	7.84	7.656
1,200.00	1,200.00	1,200.00	1,200.00	4.09	4.10	90.00	0.00	60.00	60.00	51.81	8.19	7.323
1,250.00	1,250.00	1,250.00	1,250.00	4.27	4.28	90.00	0.00	60.00	60.00	51.45	8.55	7.018
1,300.00	1,300.00	1,300.00	1,300.00	4.45	4.45	90.00	0.00	60.00	60.00	51.09	8.91	6.738
1,350.00	1,350.00	1,350.00	1,350.00	4.63	4.63	90.00	0.00	60.00	60.00	50.74	9.26	6.478
1,400.00	1,400.00	1,400.00	1,400.00	4.81	4.81	90.00	0.00	60.00	60.00	50.38	9.62	6.238
1,450.00	1,450.00	1,450.00	1,450.00	4.99	4.99	90.00	0.00	60.00	60.00	50.03	9.97	6.015
1,500.00	1,500.00	1,500.00	1,500.00	5.16	5.17	90.00	0.00	60.00	60.00	49.67	10.33	5.808
1,550.00	1,550.00	1,550.00	1,550.00	5.34	5.35	90.00	0.00	60.00	60.00	49.31	10.69	5.614
1,600.00	1,600.00	1,600.00	1,600.00	5.52	5.52	90.00	0.00	60.00	60.00	48.96	11.05	5.432
1,650.00	1,650.00	1,650.00	1,650.00	5.70	5.70	90.00	0.00	60.00	60.00	48.60	11.40	5.262
1,700.00	1,700.00	1,700.00	1,700.00	5.88	5.88	90.00	0.00	60.00	60.00	48.24	11.76	5.102
1,750.00	1,750.00	1,750.00	1,750.00	6.06	6.06	90.00	0.00	60.00	60.00	47.88	12.12	4.952 Alert
1,800.00	1,800.00	1,800.00	1,800.00	6.24	6.24	90.00	0.00	60.00	60.00	47.53	12.47	4.810 Alert
1,850.00	1,850.00	1,850.00	1,850.00	6.41	6.42	90.00	0.00	60.00	60.00	47.17	12.83	4.676 Alert
1,900.00	1,900.00	1,900.00	1,900.00	6.59	6.60	90.00	0.00	60.00	60.00	46.81	13.19	4.549 Alert
1,950.00	1,950.00	1,950.00	1,950.00	6.77	6.77	90.00	0.00	60.00	60.00	46.45	13.55	4.429 Alert
2,000.00	2,000.00	2,000.00	2,000.00	6.95	6.95	90.00	0.00	60.00	60.00	46.10	13.90	4.315 Alert
2,050.00	2,050.00	2,050.00	2,050.00	7.13	7.13	90.00	0.00	60.00	60.00	45.74	14.26	4.207 Alert
2,100.00	2,100.00	2,100.00	2,100.00	7.31	7.31	90.00	0.00	60.00	60.00	45.38	14.62	4.104 Alert
2,150.00	2,150.00	2,150.00	2,150.00	7.49	7.49	90.00	0.00	60.00	60.00	45.02	14.98	4.006 Alert
2,200.00	2,200.00	2,200.00	2,200.00	7.67	7.67	90.00	0.00	60.00	60.00	44.67	15.33	3.913 Alert
2,250.00	2,250.00	2,250.00	2,250.00	7.84	7.85	90.00	0.00	60.00	60.00	44.31	15.69	3.824 Alert
2,300.00	2,300.00	2,300.00	2,300.00	8.02	8.03	90.00	0.00	60.00	60.00	43.95	16.05	3.738 Alert
2,350.00	2,350.00	2,350.00	2,350.00	8.20	8.21	90.00	0.00	60.00	60.00	43.59	16.41	3.657 Alert
2,400.00	2,400.00	2,400.00	2,400.00	8.38	8.38	90.00	0.00	60.00	60.00	43.24	16.77	3.579 Alert
2,450.00	2,450.00	2,450.00	2,450.00	8.56	8.56	90.00	0.00	60.00	60.00	42.88	17.12	3.504 Alert
2,500.00	2,500.00	2,500.00	2,500.00	8.74	8.74	90.00	0.00	60.00	60.00	42.52	17.48	3.432 Alert

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

Anticollision Report

Company: WCDSC Permian NM
Project: Eddy County (NAD 83 NM Eastern)
Reference Site: Sec 27-T19S-R29E
Site Error: 5.00 ft
Reference Well: Coral PWU 28-27 62H
Well Error: 0.50 ft
Reference Wellbore: Wellbore #1
Reference Design: Permit Plan 2

Local Co-ordinate Reference: Well Coral PWU 28-27 62H
TVD Reference: RKB @ 3333.00ft
MD Reference: RKB @ 3333.00ft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM r5000.141_Prod US
Offset TVD Reference: Offset Datum

Offset Design Sec 27-T19S-R29E - Coral PWU 28-27 12H - Wellbore #1 - Permit Plan 1													Offset Site Error:	5.00 ft
Survey Program: 0-MWD+IFR1+MS													Offset Well Error:	0.50 ft
Reference		Offset		Semi Major Axis		Highside Tooface (°)	Distance		Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)						
2,550.00	2,550.00	2,550.24	2,550.24	8.92	8.91	90.19	-0.19	59.90	59.90	42.07	17.83	3.359	Alert	
2,600.00	2,600.00	2,600.48	2,600.48	9.10	9.08	90.75	-0.78	59.59	59.60	41.42	18.18	3.278	Alert	
2,650.00	2,650.00	2,650.70	2,650.68	9.28	9.25	91.70	-1.75	59.08	59.11	40.58	18.52	3.191	Alert	
2,700.00	2,700.00	2,700.90	2,700.86	9.45	9.41	93.06	-3.12	58.36	58.45	39.58	18.86	3.098	Alert	
2,750.00	2,750.00	2,751.07	2,750.99	9.63	9.58	94.84	-4.86	57.43	57.65	38.44	19.21	3.002	Alert	
2,800.00	2,800.00	2,801.19	2,801.06	9.81	9.74	97.09	-7.00	56.31	56.75	37.20	19.55	2.903	Alert	
2,850.00	2,850.00	2,851.28	2,851.06	9.99	9.91	99.83	-9.52	54.98	55.81	35.92	19.89	2.806	Alert	
2,900.00	2,900.00	2,901.31	2,900.98	10.17	10.07	103.09	-12.43	53.45	54.88	34.65	20.24	2.712	Alert	
2,950.00	2,950.00	2,951.27	2,950.81	10.35	10.24	106.90	-15.71	51.71	54.05	33.47	20.58	2.626	Alert	
3,000.00	3,000.00	3,001.17	3,000.53	10.53	10.40	111.27	-19.38	49.78	53.42	32.50	20.93	2.553	Alert	
3,050.00	3,050.00	3,051.00	3,050.15	10.71	10.57	116.17	-23.42	47.65	53.09	31.82	21.27	2.496	Minor Risk	
3,065.64	3,065.64	3,066.56	3,065.64	10.76	10.62	117.81	-24.76	46.94	53.07	31.69	21.38	2.482	Minor Risk, CC	
3,100.00	3,100.00	3,100.73	3,099.63	10.89	10.73	121.55	-27.83	45.32	53.19	31.57	21.62	2.461	Minor Risk, ES	
3,150.00	3,150.00	3,150.38	3,148.99	11.07	10.90	127.31	-32.62	42.80	53.82	31.86	21.96	2.451	Minor Risk, SF	
3,200.00	3,200.00	3,199.93	3,198.19	11.24	11.07	133.30	-37.77	40.08	55.10	32.80	22.30	2.471	Minor Risk	
3,250.00	3,250.00	3,249.38	3,247.24	11.42	11.23	139.35	-43.29	37.17	57.12	34.49	22.63	2.524	Alert	
3,300.00	3,300.00	3,298.71	3,296.13	11.60	11.40	145.28	-49.16	34.07	59.94	36.98	22.96	2.610	Alert	
3,350.00	3,350.00	3,347.93	3,344.84	11.78	11.56	150.94	-55.40	30.79	63.59	40.30	23.29	2.731	Alert	
3,400.00	3,400.00	3,397.02	3,393.36	11.96	11.73	156.22	-61.98	27.31	68.06	44.45	23.60	2.883	Alert	
3,450.00	3,450.00	3,445.97	3,441.68	12.14	11.90	161.06	-68.92	23.65	73.34	49.42	23.92	3.066	Alert	
3,500.00	3,500.00	3,494.79	3,489.80	12.32	12.06	165.42	-76.20	19.82	79.39	55.16	24.23	3.277	Alert	
3,550.00	3,550.00	3,543.46	3,537.70	12.50	12.23	169.32	-83.81	15.80	86.17	61.63	24.54	3.512	Alert	
3,600.00	3,600.00	3,591.98	3,585.38	12.68	12.39	172.79	-91.77	11.61	93.64	68.80	24.84	3.770	Alert	
3,650.00	3,650.00	3,640.69	3,633.18	12.86	12.56	175.87	-100.07	7.23	101.73	76.57	25.16	4.044	Alert	
3,700.00	3,700.00	3,689.74	3,681.30	13.04	12.73	178.52	-108.47	2.79	110.11	84.62	25.49	4.320	Alert	
3,750.00	3,750.00	3,738.80	3,729.42	13.21	12.90	-179.20	-116.88	-1.64	118.69	92.87	25.82	4.596	Alert	
3,800.00	3,800.00	3,787.85	3,777.55	13.39	13.07	-177.22	-125.29	-6.08	127.43	101.27	26.16	4.871	Alert	
3,850.00	3,850.00	3,836.90	3,825.67	13.57	13.24	-175.51	-133.70	-10.51	136.30	109.80	26.50	5.144		
3,900.00	3,900.00	3,885.95	3,873.79	13.75	13.41	-174.00	-142.11	-14.95	145.28	118.44	26.84	5.413		
3,950.00	3,950.00	3,935.00	3,921.91	13.93	13.58	-172.66	-150.52	-19.38	154.34	127.16	27.18	5.678		
4,000.00	4,000.00	3,984.06	3,970.03	14.11	13.76	-171.48	-158.93	-23.81	163.47	135.95	27.53	5.939		
4,050.00	4,050.00	4,033.13	4,018.18	14.28	13.93	-76.82	-167.34	-28.25	172.61	144.74	27.87	6.194		
4,100.00	4,099.99	4,082.26	4,066.38	14.46	14.10	-76.00	-175.76	-32.69	181.65	153.44	28.21	6.440		
4,150.00	4,149.97	4,131.43	4,114.62	14.63	14.27	-75.42	-184.19	-37.14	190.59	162.04	28.55	6.676		
4,200.00	4,199.94	4,180.64	4,162.89	14.80	14.45	-75.03	-192.63	-41.59	199.40	170.51	28.89	6.902		
4,250.00	4,249.88	4,229.88	4,211.20	14.97	14.62	-74.81	-201.07	-46.04	208.07	178.84	29.23	7.118		
4,300.00	4,299.79	4,279.15	4,259.53	15.14	14.80	-74.75	-209.52	-50.49	216.61	187.03	29.58	7.324		
4,350.00	4,349.66	4,328.43	4,307.88	15.31	14.98	-74.82	-217.96	-54.95	225.00	195.08	29.92	7.520		
4,400.00	4,399.49	4,377.73	4,356.25	15.49	15.15	-75.01	-226.42	-59.41	233.25	202.98	30.27	7.706		
4,450.00	4,449.28	4,427.04	4,404.62	15.66	15.33	-75.31	-234.87	-63.88	241.38	210.76	30.62	7.884		
4,500.00	4,499.01	4,476.35	4,453.00	15.83	15.50	-75.71	-243.32	-68.32	249.38	218.41	30.97	8.053		
4,550.00	4,548.68	4,525.66	4,501.37	16.00	15.68	-76.21	-251.78	-72.78	257.28	225.96	31.32	8.215		
4,600.00	4,598.33	4,574.96	4,549.74	16.18	15.86	-76.80	-260.23	-77.24	265.15	233.48	31.67	8.372		
4,650.00	4,647.98	4,624.27	4,598.11	16.35	16.04	-77.35	-268.68	-81.69	273.04	241.02	32.02	8.526		
4,700.00	4,697.63	4,673.57	4,646.48	16.53	16.22	-77.88	-277.13	-86.15	280.96	248.59	32.38	8.678		
4,750.00	4,747.28	4,722.88	4,694.85	16.71	16.39	-78.38	-285.58	-90.61	288.91	256.17	32.73	8.826		
4,800.00	4,796.93	4,772.18	4,743.22	16.88	16.57	-78.85	-294.04	-95.07	296.87	263.78	33.09	8.972		
4,850.00	4,846.57	4,821.49	4,791.59	17.06	16.75	-79.30	-302.49	-99.52	304.85	271.41	33.44	9.116		
4,900.00	4,896.22	4,870.79	4,839.96	17.24	16.93	-79.72	-310.94	-103.98	312.85	279.05	33.80	9.256		
4,950.00	4,945.87	4,920.09	4,888.33	17.41	17.11	-80.12	-319.39	-108.44	320.86	286.71	34.16	9.394		
5,000.00	4,995.52	4,969.40	4,936.69	17.59	17.29	-80.51	-327.85	-112.90	328.89	294.38	34.51	9.530		

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

Anticollision Report

Company: WCDSC Permian NM
 Project: Eddy County (NAD 83 NM Eastern)
 Reference Site: Sec 27-T19S-R29E
 Site Error: 5.00 ft
 Reference Well: Coral PWU 28-27 62H
 Well Error: 0.50 ft
 Reference Wellbore: Wellbore #1
 Reference Design: Permit Plan 2

Local Co-ordinate Reference: Well Coral PWU 28-27 62H
 TVD Reference: RKB @ 3333.00ft
 MD Reference: RKB @ 3333.00ft
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Output errors are at: 2.00 sigma
 Database: EDM r5000.141_Prod US
 Offset TVD Reference: Offset Datum

Offset Design Sec 27-T19S-R29E - Coral PWU 28-27 12H - Wellbore #1 - Permit Plan 1													Offset Site Error: 5.00 ft
Survey Program: 0-MWD+IFR1+MS													Offset Well Error: 0.50 ft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Tooface (")	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
5,050.00	5,045.17	5,018.70	4,985.06	17.77	17.47	-80.87	-336.30	-117.35	336.94	302.07	34.87	9.662	
5,100.00	5,094.82	5,068.01	5,033.43	17.95	17.65	-81.22	-344.75	-121.81	344.99	309.76	35.23	9.793	
5,150.00	5,144.47	5,117.31	5,081.80	18.13	17.83	-81.55	-353.20	-126.27	353.06	317.47	35.59	9.921	
5,200.00	5,194.12	5,166.82	5,130.17	18.31	18.01	-81.87	-361.65	-130.73	361.14	325.19	35.95	10.046	
5,250.00	5,243.76	5,215.92	5,178.54	18.49	18.19	-82.17	-370.11	-135.18	369.23	332.92	36.31	10.169	
5,300.00	5,293.41	5,265.23	5,226.91	18.67	18.37	-82.46	-378.56	-139.64	377.33	340.66	36.67	10.290	
5,350.00	5,343.06	5,314.53	5,275.28	18.85	18.55	-82.74	-387.01	-144.10	385.43	348.40	37.03	10.409	
5,400.00	5,392.71	5,363.83	5,323.65	19.03	18.73	-83.01	-395.46	-148.56	393.55	356.16	37.39	10.525	
5,450.00	5,442.36	5,413.14	5,372.02	19.21	18.91	-83.26	-403.92	-153.01	401.67	363.92	37.75	10.640	
5,500.00	5,492.01	5,462.44	5,420.39	19.40	19.10	-83.51	-412.37	-157.47	409.81	371.69	38.11	10.752	
5,550.00	5,541.66	5,511.75	5,468.76	19.58	19.28	-83.74	-420.82	-161.93	417.94	379.47	38.48	10.862	
5,600.00	5,591.31	5,561.05	5,517.13	19.76	19.46	-83.97	-429.27	-166.39	426.09	387.25	38.84	10.970	
5,650.00	5,640.95	5,610.36	5,565.50	19.94	19.64	-84.19	-437.72	-170.84	434.24	395.04	39.20	11.076	
5,700.00	5,690.60	5,659.68	5,613.87	20.13	19.82	-84.40	-446.18	-175.30	442.40	402.83	39.57	11.181	
5,750.00	5,740.25	5,708.97	5,662.24	20.31	20.01	-84.60	-454.63	-179.76	450.56	410.63	39.93	11.283	
5,800.00	5,789.90	5,758.27	5,710.61	20.49	20.19	-84.80	-463.08	-184.22	458.73	418.43	40.30	11.384	
5,850.00	5,839.55	5,807.57	5,758.98	20.68	20.37	-84.99	-471.53	-188.67	466.90	426.24	40.66	11.483	
5,900.00	5,889.20	5,856.88	5,807.35	20.86	20.56	-85.17	-479.89	-193.13	475.08	434.05	41.03	11.580	
5,950.00	5,938.85	5,906.18	5,855.72	21.04	20.74	-85.35	-488.44	-197.59	483.26	441.87	41.39	11.675	
6,000.00	5,988.50	5,955.49	5,904.09	21.23	20.92	-85.52	-496.89	-202.05	491.45	449.69	41.76	11.769	
6,050.00	6,038.14	6,004.79	5,952.46	21.41	21.10	-85.68	-505.34	-206.50	499.64	457.52	42.13	11.861	
6,100.00	6,087.79	6,054.10	6,000.83	21.60	21.29	-85.84	-513.79	-210.96	507.84	465.35	42.49	11.951	
6,150.00	6,137.44	6,103.40	6,049.20	21.78	21.47	-86.00	-522.25	-215.42	516.04	473.18	42.86	12.040	
6,200.00	6,187.09	6,152.71	6,097.57	21.97	21.66	-86.15	-530.70	-219.88	524.24	481.01	43.23	12.128	
6,250.00	6,236.74	6,202.01	6,145.93	22.16	21.84	-86.29	-539.15	-224.33	532.44	488.85	43.59	12.214	
6,300.00	6,286.39	6,251.31	6,194.30	22.34	22.02	-86.43	-547.60	-228.79	540.65	496.69	43.96	12.298	
6,350.00	6,336.04	6,300.62	6,242.67	22.53	22.21	-86.57	-556.06	-233.25	548.87	504.54	44.33	12.381	
6,400.00	6,385.69	6,349.92	6,291.04	22.71	22.39	-86.70	-564.51	-237.71	557.08	512.38	44.70	12.463	
6,450.00	6,435.33	6,400.77	6,339.41	22.90	22.58	-86.83	-572.96	-242.16	565.30	520.22	45.07	12.542	
6,500.00	6,484.98	6,448.53	6,387.78	23.09	22.76	-86.95	-581.41	-246.62	573.52	528.08	45.44	12.622	
6,550.00	6,534.63	6,502.16	6,436.15	23.27	22.96	-87.08	-589.86	-251.08	581.74	535.92	45.82	12.696	
6,600.00	6,584.28	6,547.14	6,484.52	23.46	23.13	-87.19	-598.32	-255.54	589.97	543.79	46.18	12.777	
6,650.00	6,633.93	6,603.56	6,532.89	23.65	23.34	-87.31	-606.77	-259.99	598.19	551.62	46.57	12.845	
6,700.00	6,683.58	6,645.75	6,581.26	23.84	23.50	-87.42	-615.22	-264.45	606.42	559.51	46.92	12.926	
6,750.00	6,733.23	6,704.95	6,629.63	24.02	23.72	-87.53	-623.67	-268.91	614.66	567.33	47.32	12.989	
6,800.00	6,782.88	6,744.36	6,678.00	24.21	23.87	-87.63	-632.13	-273.37	622.89	575.24	47.66	13.071	
6,850.00	6,832.52	6,806.34	6,726.37	24.40	24.10	-87.74	-640.58	-277.82	631.13	583.05	48.07	13.128	
6,900.00	6,882.17	6,842.97	6,774.74	24.59	24.24	-87.84	-649.03	-282.28	639.37	590.97	48.40	13.211	
6,950.00	6,931.82	6,892.27	6,823.11	24.77	24.42	-87.93	-657.48	-286.74	647.61	598.84	48.77	13.279	
7,000.00	6,981.47	6,941.58	6,871.48	24.96	24.61	-88.03	-665.93	-291.20	655.85	606.71	49.14	13.346	
7,050.00	7,031.12	7,009.12	6,919.85	25.15	24.86	-88.12	-674.39	-295.65	664.09	614.51	49.58	13.394	
7,100.00	7,080.77	7,040.19	6,968.22	25.34	24.98	-88.21	-682.84	-300.11	672.34	622.45	49.88	13.478	
7,150.00	7,130.42	7,089.49	7,016.59	25.53	25.16	-88.30	-691.29	-304.57	680.58	630.33	50.26	13.542	
7,200.00	7,180.07	7,138.79	7,064.96	25.72	25.35	-88.39	-699.74	-309.03	688.83	638.20	50.63	13.606	
7,250.00	7,229.71	7,188.10	7,113.33	25.91	25.54	-88.47	-708.20	-313.48	697.08	646.08	51.00	13.668	
7,300.00	7,279.36	7,237.40	7,161.70	26.10	25.72	-88.56	-716.65	-317.94	705.33	653.96	51.37	13.730	
7,350.00	7,329.01	7,286.71	7,210.07	26.28	25.91	-88.64	-725.10	-322.40	713.59	661.84	51.75	13.790	
7,400.00	7,378.66	7,336.01	7,258.44	26.47	26.09	-88.71	-733.55	-326.86	721.84	669.72	52.12	13.850	
7,450.00	7,428.31	7,385.32	7,306.80	26.66	26.28	-88.79	-742.00	-331.31	730.10	677.60	52.49	13.909	
7,500.00	7,477.96	7,434.62	7,355.17	26.85	26.46	-88.87	-750.46	-335.77	738.35	685.49	52.87	13.967	
7,550.00	7,527.61	7,483.92	7,403.54	27.04	26.65	-88.94	-758.91	-340.23	746.61	693.37	53.24	14.024	

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

Anticollision Report

Company: WCDSC Permian NM
Project: Eddy County (NAD 83 NM Eastern)
Reference Site: Sec 27-T19S-R29E
Site Error: 5.00 ft
Reference Well: Coral PWU 28-27 62H
Well Error: 0.50 ft
Reference Wellbore: Wellbore #1
Reference Design: Permit Plan 2

Local Co-ordinate Reference: Well Coral PWU 28-27 62H
TVD Reference: RKB @ 3333.00ft
MD Reference: RKB @ 3333.00ft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM r5000.141_Prod US
Offset TVD Reference: Offset Datum

Offset Design Sec 27-T19S-R29E - Coral PWU 28-27 12H - Wellbore #1 - Permit Plan 1													Offset Site Error: 5.00 ft
Survey Program: 0-MWD+IFR1+MS													Offset Well Error: 0.50 ft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
7,600.00	7,577.27	7,533.23	7,451.91	27.23	26.84	-89.08	-767.36	-344.69	754.87	701.26	53.61	14.080	
7,850.00	7,827.00	7,582.54	7,500.29	27.42	27.02	-89.22	-775.81	-349.14	763.14	709.16	53.98	14.137	
7,700.00	7,676.79	7,634.83	7,551.59	27.61	27.22	-89.31	-784.74	-353.85	771.40	717.01	54.38	14.184	
7,750.00	7,726.64	7,694.62	7,610.39	27.79	27.45	-89.36	-794.35	-358.92	779.16	724.31	54.85	14.205	
7,800.00	7,776.53	7,754.65	7,669.58	27.97	27.67	-89.37	-803.18	-363.58	786.27	730.96	55.31	14.216	
7,850.00	7,826.46	7,814.91	7,729.15	28.15	27.89	-89.36	-811.21	-367.81	792.72	736.96	55.76	14.217	
7,900.00	7,876.42	7,875.38	7,789.07	28.33	28.12	-89.31	-818.44	-371.62	798.51	742.31	56.20	14.209	
7,950.00	7,926.41	7,936.03	7,849.28	28.51	28.34	-89.24	-824.84	-375.00	803.63	747.00	56.63	14.192	
8,000.00	7,976.40	7,996.85	7,909.77	28.68	28.56	-89.13	-830.41	-377.94	808.08	751.04	57.04	14.166	
8,050.00	8,026.40	8,057.81	7,970.51	28.85	28.78	177.46	-835.14	-380.43	811.86	754.41	57.45	14.131	
8,100.00	8,076.40	8,118.93	8,031.47	29.03	29.00	177.61	-839.02	-382.47	814.96	757.11	57.85	14.088	
8,150.00	8,126.40	8,180.18	8,092.82	29.20	29.22	177.73	-842.04	-384.07	817.37	759.14	58.24	14.035	
8,200.00	8,176.40	8,241.52	8,153.91	29.37	29.44	177.82	-844.19	-385.20	819.09	760.48	58.61	13.974	
8,250.00	8,226.40	8,302.92	8,215.29	29.55	29.65	177.87	-845.48	-385.88	820.12	761.14	58.98	13.904	
8,300.00	8,276.40	8,364.35	8,276.72	29.72	29.86	177.88	-845.89	-386.10	820.45	761.11	59.34	13.827	
8,308.74	8,285.14	8,375.09	8,287.46	29.75	29.90	177.88	-845.87	-386.09	820.43	761.04	59.40	13.812	
8,350.00	8,326.40	8,414.03	8,326.40	29.90	30.02	177.88	-845.89	-386.10	820.45	760.77	59.68	13.748	
8,400.00	8,376.40	8,464.03	8,376.40	30.07	30.19	177.88	-845.89	-386.10	820.45	760.43	60.01	13.671	
8,450.00	8,426.40	8,514.03	8,426.40	30.24	30.35	177.88	-845.89	-386.10	820.45	760.10	60.35	13.594	
8,500.00	8,476.40	8,564.03	8,476.40	30.42	30.51	177.88	-845.89	-386.10	820.45	759.76	60.69	13.518	
8,550.00	8,526.40	8,614.03	8,526.40	30.59	30.68	177.88	-845.89	-386.10	820.45	759.42	61.03	13.443	
8,600.00	8,576.40	8,664.03	8,576.40	30.76	30.84	177.88	-845.89	-386.10	820.45	759.08	61.37	13.368	
8,650.00	8,626.34	8,711.09	8,623.41	30.93	31.00	87.90	-845.90	-384.22	820.46	758.76	61.70	13.297	
8,700.00	8,675.90	8,758.13	8,670.09	31.08	31.15	87.92	-845.95	-378.49	820.49	758.48	62.01	13.231	
8,750.00	8,724.72	8,805.21	8,716.17	31.23	31.29	87.96	-846.02	-368.95	820.54	758.23	62.31	13.168	
8,800.00	8,772.40	8,852.34	8,761.37	31.38	31.43	88.01	-846.12	-355.64	820.62	758.02	62.60	13.109	
8,850.00	8,818.60	8,899.55	8,805.39	31.51	31.57	88.07	-846.24	-338.63	820.71	757.83	62.88	13.052	
8,900.00	8,862.97	8,946.85	8,847.95	31.65	31.69	88.15	-846.39	-318.01	820.83	757.68	63.15	12.998	
8,950.00	8,905.15	8,994.26	8,888.75	31.79	31.81	88.25	-846.57	-293.89	820.97	757.56	63.41	12.946	
9,000.00	8,944.84	9,041.79	8,927.52	31.93	31.92	88.35	-846.78	-266.41	821.13	757.45	63.68	12.895	
9,050.00	8,981.73	9,089.48	8,963.98	32.09	32.02	88.47	-847.00	-235.70	821.32	757.37	63.95	12.844	
9,100.00	9,015.54	9,137.33	8,997.88	32.26	32.12	88.60	-847.25	-201.96	821.52	757.29	64.23	12.791	
9,150.00	9,046.01	9,185.35	9,028.96	32.46	32.20	88.74	-847.52	-165.36	821.75	757.22	64.53	12.735	
9,200.00	9,072.92	9,233.57	9,056.96	32.69	32.28	88.89	-847.81	-128.13	822.00	757.15	64.85	12.674	
9,250.00	9,098.05	9,282.00	9,081.67	32.96	32.35	89.05	-848.12	-84.49	822.27	757.06	65.21	12.609	
9,300.00	9,115.23	9,330.65	9,102.87	33.27	32.42	89.21	-848.44	-40.72	822.57	756.95	65.61	12.537	
9,350.00	9,130.31	9,379.54	9,120.35	33.63	32.49	89.38	-848.78	4.92	822.88	756.83	66.05	12.458	
9,400.00	9,141.18	9,428.68	9,133.93	34.04	32.55	89.56	-849.13	52.12	823.21	756.68	66.53	12.373	
9,450.00	9,147.76	9,478.07	9,143.47	34.49	32.61	89.74	-849.49	100.57	823.56	756.51	67.05	12.282	
9,500.00	9,150.00	9,527.73	9,148.81	34.98	32.67	89.92	-849.85	149.92	823.92	756.31	67.61	12.187	
9,550.00	9,150.00	9,577.87	9,150.00	35.54	32.72	90.00	-850.22	199.84	824.29	756.06	68.23	12.080	
9,600.00	9,150.00	9,627.67	9,150.00	36.09	32.79	90.00	-850.59	249.84	824.67	755.79	68.87	11.974	
9,650.00	9,150.00	9,677.67	9,150.00	36.75	32.87	90.00	-850.96	299.84	825.04	755.43	69.61	11.852	
9,700.00	9,150.00	9,727.67	9,150.00	37.40	32.97	90.00	-851.33	349.84	825.41	755.05	70.36	11.731	
9,750.00	9,150.00	9,777.67	9,150.00	38.13	33.07	90.00	-851.70	399.83	825.79	754.59	71.20	11.598	
9,800.00	9,150.00	9,827.67	9,150.00	38.87	33.18	90.00	-852.07	449.83	826.16	754.11	72.05	11.466	
9,850.00	9,150.00	9,877.67	9,150.00	39.68	33.31	90.00	-852.44	499.83	826.54	753.55	72.99	11.324	
9,900.00	9,150.00	9,927.66	9,150.00	40.49	33.44	90.00	-852.81	549.83	826.91	752.98	73.93	11.185	
9,950.00	9,150.00	9,977.66	9,150.00	41.37	33.58	90.00	-853.18	599.82	827.28	752.33	74.95	11.038	
10,000.00	9,150.00	10,027.66	9,150.00	42.25	33.73	90.00	-853.55	649.82	827.66	751.68	75.98	10.893	
10,050.00	9,150.00	10,077.66	9,150.00	43.18	33.89	90.00	-853.92	699.82	828.03	750.96	77.07	10.744	

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

Anticollision Report

Company: WCDSC Permian NM
Project: Eddy County (NAD 83 NM Eastern)
Reference Site: Sec 27-T19S-R29E
Site Error: 5.00 ft
Reference Well: Coral PWU 28-27 62H
Well Error: 0.50 ft
Reference Wellbore: Wellbore #1
Reference Design: Permit Plan 2

Local Co-ordinate Reference
TVD Reference: RKB @ 3333.00ft
MD Reference: RKB @ 3333.00ft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM r5000.141_Prod US
Offset TVD Reference: Offset Datum

Offset Design Sec 27-T19S-R29E - Coral PWU 28-27 12H - Wellbore #1 - Permit Plan 1													Offset Site Error: 5.00 ft
Survey Program: 0-MWD+IFR1+MS													Offset Well Error: 0.50 ft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
10,100.00	9,150.00	10,127.66	9,150.00	44.12	34.06	90.00	-854.29	749.81	828.40	750.23	78.17	10.597	
10,150.00	9,150.00	10,177.66	9,150.00	45.11	34.24	90.00	-854.66	799.81	828.78	749.44	79.34	10.446	
10,200.00	9,150.00	10,227.66	9,150.00	46.09	34.43	90.00	-855.03	849.81	829.15	748.64	80.51	10.299	
10,250.00	9,150.00	10,277.65	9,150.00	47.13	34.62	90.00	-855.40	899.81	829.52	747.79	81.73	10.149	
10,300.00	9,150.00	10,327.65	9,150.00	48.16	34.82	90.00	-855.77	949.80	829.90	746.93	82.96	10.003	
10,350.00	9,150.00	10,377.65	9,150.00	49.23	35.03	90.00	-856.14	999.80	830.27	746.03	84.24	9.856	
10,400.00	9,150.00	10,427.65	9,150.00	50.30	35.25	90.00	-856.51	1,049.80	830.65	745.12	85.53	9.712	
10,450.00	9,150.00	10,477.65	9,150.00	51.41	35.47	90.00	-856.88	1,099.79	831.02	744.16	86.86	9.568	
10,500.00	9,150.00	10,527.65	9,150.00	52.52	35.70	90.00	-857.24	1,149.79	831.39	743.20	88.19	9.427	
10,550.00	9,150.00	10,577.65	9,150.00	53.65	35.94	90.00	-857.61	1,199.79	831.77	742.20	89.57	9.286	
10,600.00	9,150.00	10,627.64	9,150.00	54.79	36.19	90.00	-857.98	1,249.79	832.14	741.19	90.95	9.149	
10,650.00	9,150.00	10,677.64	9,150.00	55.95	36.44	90.00	-858.35	1,299.78	832.51	740.15	92.36	9.013	
10,700.00	9,150.00	10,727.64	9,150.00	57.12	36.70	90.00	-858.72	1,349.78	832.89	739.10	93.79	8.881	
10,750.00	9,150.00	10,777.64	9,150.00	58.31	36.96	90.00	-859.09	1,399.78	833.26	738.02	95.24	8.749	
10,800.00	9,150.00	10,827.64	9,150.00	59.49	37.24	90.00	-859.46	1,449.78	833.63	736.94	96.70	8.621	
10,850.00	9,150.00	10,877.64	9,150.00	60.70	37.52	90.00	-859.83	1,499.77	834.01	735.82	98.18	8.494	
10,900.00	9,150.00	10,927.64	9,150.00	61.91	37.80	90.00	-860.20	1,549.77	834.38	734.71	99.67	8.371	
10,950.00	9,150.00	10,977.64	9,150.00	63.14	38.09	90.00	-860.57	1,599.77	834.75	733.56	101.19	8.249	
11,000.00	9,150.00	11,027.63	9,150.00	64.36	38.39	90.00	-860.94	1,649.76	835.13	732.41	102.71	8.131	
11,050.00	9,150.00	11,077.63	9,150.00	65.61	38.69	90.00	-861.31	1,699.76	835.50	731.24	104.26	8.014	
11,100.00	9,150.00	11,127.63	9,150.00	66.85	39.00	90.00	-861.68	1,749.76	835.88	730.07	105.81	7.900	
11,150.00	9,150.00	11,177.63	9,150.00	68.11	39.31	90.00	-862.05	1,799.76	836.25	728.87	107.38	7.788	
11,200.00	9,150.00	11,227.63	9,150.00	69.37	39.63	90.00	-862.42	1,849.75	836.62	727.66	108.96	7.678	
11,250.00	9,150.00	11,277.63	9,150.00	70.64	39.96	90.00	-862.79	1,899.75	837.00	726.44	110.55	7.571	
11,300.00	9,150.00	11,327.63	9,150.00	71.91	40.28	90.00	-863.16	1,949.75	837.37	725.22	112.15	7.466	
11,350.00	9,150.00	11,377.62	9,150.00	73.19	40.62	90.00	-863.53	1,999.75	837.74	723.97	113.77	7.363	
11,400.00	9,150.00	11,427.62	9,150.00	74.48	40.96	90.00	-863.90	2,049.74	838.12	722.72	115.39	7.263	
11,450.00	9,150.00	11,477.62	9,150.00	75.77	41.30	90.00	-864.27	2,099.74	838.49	721.46	117.03	7.165	
11,500.00	9,150.00	11,527.62	9,150.00	77.06	41.65	90.00	-864.64	2,149.74	838.86	720.19	118.67	7.069	
11,550.00	9,150.00	11,577.62	9,150.00	78.37	42.00	90.00	-865.01	2,199.73	839.24	718.91	120.33	6.975	
11,600.00	9,150.00	11,627.62	9,150.00	79.67	42.36	90.00	-865.38	2,249.73	839.61	717.62	121.99	6.883	
11,650.00	9,150.00	11,677.62	9,150.00	80.98	42.72	90.00	-865.75	2,299.73	839.99	716.32	123.66	6.793	
11,700.00	9,150.00	11,727.61	9,150.00	82.30	43.09	90.00	-866.12	2,349.73	840.38	715.02	125.34	6.705	
11,750.00	9,150.00	11,777.61	9,150.00	83.62	43.46	90.00	-866.49	2,399.72	840.73	713.70	127.03	6.618	
11,800.00	9,150.00	11,827.61	9,150.00	84.94	43.83	90.00	-866.86	2,449.72	841.11	712.38	128.73	6.534	
11,850.00	9,150.00	11,877.61	9,150.00	86.26	44.21	90.00	-867.22	2,499.72	841.48	711.05	130.43	6.452	
11,900.00	9,150.00	11,927.61	9,150.00	87.59	44.59	90.00	-867.59	2,549.71	841.85	709.71	132.14	6.371	
11,950.00	9,150.00	11,977.61	9,150.00	88.92	44.98	90.00	-867.96	2,599.71	842.23	708.37	133.86	6.292	
12,000.00	9,150.00	12,027.61	9,150.00	90.26	45.37	90.00	-868.33	2,649.71	842.60	707.02	135.58	6.215	
12,050.00	9,150.00	12,077.60	9,150.00	91.60	45.76	90.00	-868.70	2,699.71	842.97	705.66	137.31	6.139	
12,100.00	9,150.00	12,127.60	9,150.00	92.94	46.16	90.00	-869.07	2,749.70	843.35	704.30	139.05	6.065	
12,150.00	9,150.00	12,177.60	9,150.00	94.28	46.56	90.00	-869.44	2,799.70	843.72	702.93	140.80	5.993	
12,200.00	9,150.00	12,227.60	9,150.00	95.63	46.96	90.00	-869.81	2,849.70	844.09	701.55	142.54	5.922	
12,250.00	9,150.00	12,277.60	9,150.00	96.98	47.37	90.00	-870.18	2,899.70	844.47	700.17	144.30	5.852	
12,300.00	9,150.00	12,327.60	9,150.00	98.33	47.77	90.00	-870.55	2,949.69	844.84	698.78	146.06	5.784	
12,350.00	9,150.00	12,377.60	9,150.00	99.69	48.19	90.00	-870.92	2,999.69	845.22	697.39	147.83	5.718	
12,400.00	9,150.00	12,427.59	9,150.00	101.04	48.60	90.00	-871.29	3,049.69	845.59	695.99	149.60	5.652	
12,450.00	9,150.00	12,477.59	9,150.00	102.40	49.02	90.00	-871.66	3,099.68	845.96	694.59	151.37	5.589	
12,500.00	9,150.00	12,527.59	9,150.00	103.76	49.44	90.00	-872.03	3,149.68	846.34	693.18	153.15	5.526	
12,550.00	9,150.00	12,577.59	9,150.00	105.12	49.86	90.00	-872.40	3,199.68	846.71	691.77	154.94	5.465	
12,600.00	9,150.00	12,627.59	9,150.00	106.49	50.29	90.00	-872.77	3,249.68	847.08	690.35	156.73	5.405	

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

Anticollision Report

Company: WCDSC Permian NM
 Project: Eddy County (NAD 83 NM Eastern)
 Reference Site: Sec 27-T19S-R29E
 Site Error: 5.00 ft
 Reference Well: Coral PWU 28-27 62H
 Well Error: 0.50 ft
 Reference Wellbore: Wellbore #1
 Reference Design: Permit Plan 2

Local Co-ordinate Reference: Well Coral PWU 28-27 62H
 TVD Reference: RKB @ 3333.00ft
 MD Reference: RKB @ 3333.00ft
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Output errors are at: 2.00 sigma
 Database: EDM r5000.141_Prod US
 Offset TVD Reference: Offset Datum

Offset Design											Offset Site Error: 5.00 ft	
Survey Program: 0-MWD+IFR1+MS											Offset Well Error: 0.50 ft	
Reference		Offset		Semi Major Axis		Highside Tooface (°)	Distance		Minimum Separation (ft)	Separation Factor	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		Offset Wellbore Centre +N-S (ft)	+E/W (ft)				Between Centres (ft)
12,650.00	9,150.00	12,677.59	9,150.00	107.85	50.72	90.00	-873.14	3,299.67	847.46	688.93	158.52	5.346
12,700.00	9,150.00	12,727.59	9,150.00	109.22	51.15	90.00	-873.51	3,349.67	847.83	687.51	160.32	5.288
12,750.00	9,150.00	12,777.58	9,150.00	110.59	51.58	90.00	-873.88	3,399.67	848.20	686.08	162.13	5.232
12,800.00	9,150.00	12,827.58	9,150.00	111.96	52.02	90.00	-874.25	3,449.67	848.58	684.64	163.93	5.176
12,850.00	9,150.00	12,877.58	9,150.00	113.33	52.46	90.00	-874.62	3,499.66	848.95	683.21	165.74	5.122
12,900.00	9,150.00	12,927.58	9,150.00	114.71	52.90	90.00	-874.99	3,549.66	849.32	681.77	167.56	5.069
12,950.00	9,150.00	12,977.58	9,150.00	116.08	53.34	90.00	-875.36	3,599.66	849.70	680.32	169.38	5.017
13,000.00	9,150.00	13,027.58	9,150.00	117.46	53.78	90.00	-875.73	3,649.65	850.07	678.87	171.20	4.965 Alert
13,050.00	9,150.00	13,077.58	9,150.00	118.84	54.23	90.00	-876.10	3,699.65	850.45	677.42	173.03	4.915 Alert
13,100.00	9,150.00	13,127.58	9,150.00	120.22	54.68	90.00	-876.47	3,749.65	850.82	675.97	174.85	4.866 Alert
13,150.00	9,150.00	13,177.57	9,150.00	121.60	55.13	90.00	-876.84	3,799.65	851.19	674.51	176.69	4.818 Alert
13,200.00	9,150.00	13,227.57	9,150.00	122.98	55.58	90.00	-877.20	3,849.64	851.57	673.05	178.52	4.770 Alert
13,250.00	9,150.00	13,277.57	9,150.00	124.37	56.04	90.00	-877.57	3,899.64	851.94	671.58	180.36	4.724 Alert
13,300.00	9,150.00	13,327.57	9,150.00	125.75	56.50	90.00	-877.94	3,949.64	852.31	670.11	182.20	4.678 Alert
13,350.00	9,150.00	13,377.57	9,150.00	127.14	56.95	90.00	-878.31	3,999.63	852.69	668.64	184.05	4.633 Alert
13,400.00	9,150.00	13,427.57	9,150.00	128.52	57.41	90.00	-878.68	4,049.63	853.06	667.17	185.89	4.589 Alert
13,450.00	9,150.00	13,477.57	9,150.00	129.91	57.88	90.00	-879.05	4,099.63	853.43	665.69	187.74	4.546 Alert
13,500.00	9,150.00	13,527.56	9,150.00	131.30	58.34	90.00	-879.42	4,149.63	853.81	664.21	189.60	4.503 Alert
13,550.00	9,150.00	13,577.56	9,150.00	132.69	58.81	90.00	-879.79	4,199.62	854.18	662.73	191.45	4.462 Alert
13,600.00	9,150.00	13,627.56	9,150.00	134.08	59.27	90.00	-880.16	4,249.62	854.56	661.25	193.31	4.421 Alert
13,650.00	9,150.00	13,677.56	9,150.00	135.47	59.74	90.00	-880.53	4,299.62	854.93	659.76	195.17	4.380 Alert
13,700.00	9,150.00	13,727.56	9,150.00	136.86	60.21	90.00	-880.90	4,349.62	855.30	658.27	197.03	4.341 Alert
13,750.00	9,150.00	13,777.56	9,150.00	138.26	60.68	90.00	-881.27	4,399.61	855.68	656.78	198.90	4.302 Alert
13,800.00	9,150.00	13,827.56	9,150.00	139.65	61.16	90.00	-881.64	4,449.61	856.05	655.28	200.77	4.264 Alert
13,850.00	9,150.00	13,877.55	9,150.00	141.05	61.63	90.00	-882.01	4,499.61	856.42	653.79	202.64	4.226 Alert
13,900.00	9,150.00	13,927.55	9,150.00	142.44	62.11	90.00	-882.38	4,549.60	856.80	652.29	204.51	4.190 Alert
13,950.00	9,150.00	13,977.55	9,150.00	143.84	62.59	90.00	-882.75	4,599.60	857.17	650.79	206.38	4.153 Alert
14,000.00	9,150.00	14,027.55	9,150.00	145.24	63.06	90.00	-883.12	4,649.60	857.54	649.29	208.26	4.118 Alert
14,050.00	9,150.00	14,077.55	9,150.00	146.64	63.54	90.00	-883.49	4,699.60	857.92	647.78	210.14	4.083 Alert
14,100.00	9,150.00	14,127.55	9,150.00	148.03	64.03	90.00	-883.86	4,749.59	858.29	646.27	212.02	4.048 Alert
14,150.00	9,150.00	14,177.55	9,150.00	149.43	64.51	90.00	-884.23	4,799.59	858.66	644.77	213.90	4.014 Alert
14,200.00	9,150.00	14,227.54	9,150.00	150.83	64.99	90.00	-884.60	4,849.59	859.04	643.26	215.78	3.981 Alert
14,250.00	9,150.00	14,277.54	9,150.00	152.23	65.48	90.00	-884.97	4,899.58	859.41	641.74	217.67	3.948 Alert
14,300.00	9,150.00	14,327.54	9,150.00	153.64	65.96	90.00	-885.34	4,949.58	859.79	640.23	219.56	3.916 Alert
14,350.00	9,150.00	14,377.54	9,150.00	155.04	66.45	90.00	-885.71	4,999.58	860.16	638.71	221.45	3.884 Alert
14,400.00	9,150.00	14,427.54	9,150.00	156.44	66.94	90.00	-886.08	5,049.58	860.53	637.20	223.34	3.853 Alert
14,450.00	9,150.00	14,477.54	9,150.00	157.84	67.43	90.00	-886.45	5,099.57	860.91	635.68	225.23	3.822 Alert
14,500.00	9,150.00	14,527.54	9,150.00	159.25	67.92	90.00	-886.81	5,149.57	861.28	634.16	227.12	3.792 Alert
14,550.00	9,150.00	14,577.53	9,150.00	160.65	68.41	90.00	-887.18	5,199.57	861.65	632.63	229.02	3.762 Alert
14,600.00	9,150.00	14,627.53	9,150.00	162.06	68.90	90.00	-887.55	5,249.57	862.03	631.11	230.92	3.733 Alert
14,650.00	9,150.00	14,677.53	9,150.00	163.46	69.40	90.00	-887.92	5,299.56	862.40	629.58	232.82	3.704 Alert
14,700.00	9,150.00	14,727.53	9,150.00	164.87	69.89	90.00	-888.29	5,349.56	862.77	628.06	234.72	3.676 Alert
14,750.00	9,150.00	14,777.53	9,150.00	166.27	70.39	90.00	-888.66	5,399.56	863.15	626.53	236.62	3.648 Alert
14,800.00	9,150.00	14,827.53	9,150.00	167.68	70.89	90.00	-889.03	5,449.55	863.52	625.00	238.52	3.620 Alert
14,850.00	9,150.00	14,877.53	9,150.00	169.09	71.38	90.00	-889.40	5,499.55	863.90	623.47	240.43	3.593 Alert
14,900.00	9,150.00	14,927.52	9,150.00	170.49	71.88	90.00	-889.77	5,549.55	864.27	621.93	242.34	3.566 Alert
14,950.00	9,150.00	14,977.52	9,150.00	171.90	72.38	90.00	-890.14	5,599.55	864.64	620.40	244.24	3.540 Alert
15,000.00	9,150.00	15,027.52	9,150.00	173.31	72.88	90.00	-890.51	5,649.54	865.02	618.86	246.15	3.514 Alert
15,050.00	9,150.00	15,077.52	9,150.00	174.72	73.38	90.00	-890.88	5,699.54	865.39	617.33	248.06	3.489 Alert
15,100.00	9,150.00	15,127.52	9,150.00	176.13	73.88	90.00	-891.25	5,749.54	865.76	615.79	249.97	3.463 Alert
15,150.00	9,150.00	15,177.52	9,150.00	177.54	74.39	90.00	-891.62	5,799.54	866.14	614.25	251.89	3.439 Alert

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

Anticollision Report

Company: WCDSC Permian NM
Project: Eddy County (NAD 83 NM Eastern)
Reference Site: Sec 27-T19S-R29E
Site Error: 5.00 ft
Reference Well: Coral PWU 28-27 62H
Well Error: 0.50 ft
Reference Wellbore: Wellbore #1
Reference Design: Permit Plan 2

Local Co-ordinate Reference: Well Coral PWU 28-27 62H
TVD Reference: RKB @ 3333.00ft
MD Reference: RKB @ 3333.00ft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM r5000.141_Prod US
Offset TVD Reference: Offset Datum

Offset Design Sec 27-T19S-R29E - Coral PWU 28-27 12H - Wellbore #1 - Permit Plan 1													Offset Site Error:	5.00 ft
Survey Program: 0-MWD+IFR1+MS													Offset Well Error:	0.50 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
15,200.00	9,150.00	15,227.52	9,150.00	178.95	74.89	90.00	-891.99	5,849.53	866.51	612.71	253.80	3.414	Alert	
15,250.00	9,150.00	15,277.52	9,150.00	180.36	75.39	90.00	-892.36	5,899.53	866.88	611.17	255.72	3.390	Alert	
15,300.00	9,150.00	15,327.51	9,150.00	181.77	75.90	90.00	-892.73	5,949.53	867.26	609.63	257.63	3.366	Alert	
15,350.00	9,150.00	15,377.51	9,150.00	183.18	76.41	90.00	-893.10	5,999.52	867.63	608.08	259.55	3.343	Alert	
15,400.00	9,150.00	15,427.51	9,150.00	184.59	76.91	90.00	-893.47	6,049.52	868.00	606.54	261.47	3.320	Alert	
15,450.00	9,150.00	15,477.51	9,150.00	186.01	77.42	90.00	-893.84	6,099.52	868.38	604.99	263.39	3.297	Alert	
15,500.00	9,150.00	15,527.51	9,150.00	187.42	77.93	90.00	-894.21	6,149.52	868.75	603.45	265.31	3.275	Alert	
15,550.00	9,150.00	15,577.51	9,150.00	188.83	78.44	90.00	-894.58	6,199.51	869.13	601.90	267.23	3.252	Alert	
15,600.00	9,150.00	15,627.51	9,150.00	190.24	78.95	90.00	-894.95	6,249.51	869.50	600.35	269.15	3.231	Alert	
15,650.00	9,150.00	15,677.50	9,150.00	191.66	79.46	90.00	-895.32	6,299.51	869.87	598.80	271.07	3.209	Alert	
15,700.00	9,150.00	15,727.50	9,150.00	193.07	79.97	90.00	-895.69	6,349.50	870.25	597.25	273.00	3.188	Alert	
15,750.00	9,150.00	15,777.50	9,150.00	194.49	80.48	90.00	-896.06	6,399.50	870.62	595.70	274.82	3.167	Alert	
15,800.00	9,150.00	15,827.50	9,150.00	195.90	80.99	90.00	-896.43	6,449.50	870.99	594.14	276.85	3.146	Alert	
15,850.00	9,150.00	15,877.50	9,150.00	197.31	81.50	90.00	-896.79	6,499.50	871.37	592.59	278.78	3.126	Alert	
15,900.00	9,150.00	15,927.50	9,150.00	198.73	82.02	90.00	-897.16	6,549.49	871.74	591.03	280.71	3.106	Alert	
15,950.00	9,150.00	15,977.50	9,150.00	200.14	82.53	90.00	-897.53	6,599.49	872.11	589.48	282.64	3.086	Alert	
16,000.00	9,150.00	16,027.49	9,150.00	201.56	83.04	90.00	-897.90	6,649.49	872.49	587.92	284.57	3.066	Alert	
16,050.00	9,150.00	16,077.49	9,150.00	202.98	83.56	90.00	-898.27	6,699.49	872.86	586.37	286.50	3.047	Alert	
16,100.00	9,150.00	16,127.49	9,150.00	204.39	84.07	90.00	-898.64	6,749.48	873.24	584.81	288.43	3.028	Alert	
16,150.00	9,150.00	16,177.49	9,150.00	205.81	84.59	90.00	-899.01	6,799.48	873.61	583.25	290.36	3.009	Alert	
16,200.00	9,150.00	16,227.49	9,150.00	207.22	85.11	90.00	-899.38	6,849.48	873.98	581.69	292.29	2.990	Alert	
16,250.00	9,150.00	16,277.49	9,150.00	208.64	85.62	90.00	-899.75	6,899.47	874.36	580.13	294.23	2.972	Alert	
16,300.00	9,150.00	16,327.49	9,150.00	210.06	86.14	90.00	-900.12	6,949.47	874.73	578.57	296.16	2.954	Alert	
16,350.00	9,150.00	16,377.48	9,150.00	211.47	86.66	90.00	-900.49	6,999.47	875.10	577.01	298.10	2.936	Alert	
16,400.00	9,150.00	16,427.48	9,150.00	212.89	87.18	90.00	-900.86	7,049.47	875.48	575.44	300.03	2.918	Alert	
16,450.00	9,150.00	16,477.48	9,150.00	214.31	87.70	90.00	-901.23	7,099.46	875.85	573.88	301.97	2.900	Alert	
16,500.00	9,150.00	16,527.48	9,150.00	215.73	88.22	90.00	-901.60	7,149.46	876.22	572.32	303.91	2.883	Alert	
16,550.00	9,150.00	16,577.48	9,150.00	217.15	88.74	90.00	-901.97	7,199.46	876.60	570.75	305.85	2.866	Alert	
16,600.00	9,150.00	16,627.48	9,150.00	218.56	89.26	90.00	-902.34	7,249.46	876.97	569.18	307.79	2.849	Alert	
16,650.00	9,150.00	16,677.48	9,150.00	219.98	89.78	90.00	-902.71	7,299.45	877.34	567.62	309.73	2.833	Alert	
16,700.00	9,150.00	16,727.47	9,150.00	221.40	90.30	90.00	-903.08	7,349.45	877.72	566.05	311.67	2.816	Alert	
16,750.00	9,150.00	16,777.47	9,150.00	222.82	90.82	90.00	-903.45	7,399.45	878.09	564.48	313.61	2.800	Alert	
16,800.00	9,150.00	16,827.47	9,150.00	224.24	91.35	90.00	-903.82	7,449.44	878.47	562.92	315.55	2.784	Alert	
16,850.00	9,150.00	16,877.47	9,150.00	225.66	91.87	90.00	-904.19	7,499.44	878.84	561.35	317.49	2.768	Alert	
16,900.00	9,150.00	16,927.47	9,150.00	227.08	92.39	90.00	-904.56	7,549.44	879.21	559.78	319.43	2.752	Alert	
16,950.00	9,150.00	16,977.47	9,150.00	228.50	92.92	90.00	-904.93	7,599.44	879.59	558.21	321.38	2.737	Alert	
17,000.00	9,150.00	17,027.47	9,150.00	229.92	93.44	90.00	-905.30	7,649.43	879.96	556.64	323.32	2.722	Alert	
17,002.43	9,150.00	17,029.90	9,150.00	229.98	93.47	90.00	-905.31	7,651.87	879.98	556.57	323.41	2.721	Alert	

Anticollision Report

Company: WCDSC Permian NM
Project: Eddy County (NAD 83 NM Eastern)
Reference Site: Sec 27-T19S-R29E
Site Error: 5.00 ft
Reference Well: Coral PWU 28-27 62H
Well Error: 0.50 ft
Reference Wellbore: Wellbore #1
Reference Design: Permit Plan 2

Local Co-ordinate Reference: Well Coral PWU 28-27 62H
TVD Reference: RKB @ 3333.00ft
MD Reference: RKB @ 3333.00ft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM r5000.141_Prod US
Offset TVD Reference: Offset Datum

Offset Design Sec 27-T19S-R29E - Parkway West Unit #20 (Active) - Wellbore #1 - Wellbore #1													Offset Site Error: 5.00 ft
Survey Program: 100-GYRO-NS-CT, 10110-INC-ONLY													Offset Well Error: 10.00 ft
Reference		Offset		Semi Major Axis		Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
11,200.00	9,150.00	9,111.26	9,107.61	69.37	33.35	87.56	-669.36	3,190.54	1,481.91	1,407.02	74.89	19.788	
11,250.00	9,150.00	9,111.74	9,108.08	70.64	33.35	87.61	-669.37	3,190.54	1,437.04	1,361.18	75.86	18.943	
11,300.00	9,150.00	9,112.21	9,108.56	71.91	33.35	87.65	-669.38	3,190.55	1,392.53	1,315.61	76.92	18.105	
11,350.00	9,150.00	9,112.69	9,109.03	73.19	33.35	87.69	-669.39	3,190.55	1,348.40	1,270.33	78.07	17.272	
11,400.00	9,150.00	9,113.17	9,109.51	74.48	33.36	87.73	-669.40	3,190.56	1,304.69	1,225.37	79.33	16.447	
11,450.00	9,150.00	9,113.65	9,109.99	75.77	33.36	87.78	-669.41	3,190.56	1,261.45	1,180.76	80.70	15.632	
11,500.00	9,150.00	9,114.13	9,110.47	77.06	33.36	87.82	-669.42	3,190.57	1,218.73	1,136.55	82.19	14.829	
11,550.00	9,150.00	9,114.61	9,110.95	78.37	33.36	87.86	-669.43	3,190.57	1,176.59	1,092.78	83.81	14.039	
11,600.00	9,150.00	9,115.09	9,111.44	79.67	33.36	87.90	-669.44	3,190.58	1,135.07	1,049.51	85.57	13.265	
11,650.00	9,150.00	9,115.58	9,111.92	80.98	33.36	87.95	-669.45	3,190.58	1,094.27	1,006.79	87.48	12.509	
11,700.00	9,150.00	9,116.06	9,112.41	82.30	33.37	87.99	-669.46	3,190.59	1,054.27	964.71	89.55	11.773	
11,750.00	9,150.00	9,116.55	9,112.89	83.62	33.37	88.03	-669.47	3,190.59	1,015.14	923.35	91.79	11.059	
11,800.00	9,150.00	9,117.04	9,113.38	84.94	33.37	88.08	-669.48	3,190.60	977.01	882.81	94.20	10.371	
11,850.00	9,150.00	9,117.53	9,113.87	86.26	33.37	88.12	-669.49	3,190.60	940.00	843.20	96.80	9.711	
11,900.00	9,150.00	9,118.02	9,114.37	87.59	33.37	88.16	-669.50	3,190.61	904.23	804.65	99.58	9.081	
11,950.00	9,150.00	9,118.52	9,114.86	88.92	33.37	88.21	-669.51	3,190.61	869.87	767.33	102.53	8.484	
12,000.00	9,150.00	9,119.01	9,115.36	90.26	33.37	88.25	-669.52	3,190.62	837.08	731.42	105.66	7.922	
12,050.00	9,150.00	9,119.51	9,115.85	91.60	33.38	88.30	-669.54	3,190.62	806.07	697.12	108.95	7.389	
12,100.00	9,150.00	9,120.01	9,116.35	92.94	33.38	88.34	-669.55	3,190.63	777.03	664.68	112.36	6.916	
12,150.00	9,150.00	9,120.51	9,116.85	94.28	33.38	88.39	-669.56	3,190.63	750.21	634.35	115.86	6.475	
12,200.00	9,150.00	9,121.01	9,117.35	95.63	33.38	88.43	-669.57	3,190.64	725.84	606.45	119.39	6.079	
12,250.00	9,150.00	9,121.51	9,117.85	96.98	33.38	88.47	-669.58	3,190.64	704.19	581.29	122.90	5.730	
12,300.00	9,150.00	9,122.01	9,118.36	98.33	33.38	88.52	-669.59	3,190.65	685.51	559.21	126.29	5.428	
12,350.00	9,150.00	9,122.52	9,118.86	99.69	33.39	88.56	-669.60	3,190.66	670.04	540.55	129.49	5.175	
12,400.00	9,150.00	9,123.03	9,119.37	101.04	33.39	88.61	-669.61	3,190.66	658.02	525.64	132.37	4.971 Alert	
12,450.00	9,150.00	9,123.54	9,119.88	102.40	33.39	88.65	-669.62	3,190.67	649.63	514.76	134.87	4.817 Alert	
12,500.00	9,150.00	9,124.05	9,120.39	103.76	33.39	88.70	-669.64	3,190.67	645.02	508.14	136.88	4.712 Alert	
12,534.69	9,150.00	9,124.40	9,120.75	104.71	33.39	88.73	-669.64	3,190.68	644.09	506.12	137.97	4.668 Alert, CC	
12,550.00	9,150.00	9,124.56	9,120.90	105.12	33.39	88.75	-669.65	3,190.68	644.27	505.91	138.36	4.657 Alert, ES	
12,600.00	9,150.00	9,125.07	9,121.42	106.49	33.40	88.79	-669.66	3,190.68	647.39	508.13	139.26	4.649 Alert, SF	
12,650.00	9,150.00	9,125.59	9,121.93	107.85	33.40	88.84	-669.67	3,190.69	654.33	514.73	139.59	4.687 Alert	
12,700.00	9,150.00	9,126.11	9,122.45	109.22	33.40	88.88	-669.68	3,190.69	664.96	525.58	139.38	4.771 Alert	
12,750.00	9,150.00	9,126.63	9,122.97	110.59	33.40	88.93	-669.69	3,190.70	679.12	540.44	138.67	4.897 Alert	
12,800.00	9,150.00	9,127.15	9,123.49	111.96	33.40	88.98	-669.70	3,190.70	696.59	559.03	137.55	5.064	
12,850.00	9,150.00	9,127.67	9,124.01	113.33	33.40	89.02	-669.72	3,190.71	717.12	581.03	136.09	5.270	
12,900.00	9,150.00	9,128.19	9,124.53	114.71	33.41	89.07	-669.73	3,190.72	740.46	606.10	134.36	5.511	
12,950.00	9,150.00	9,128.72	9,125.06	116.08	33.41	89.12	-669.74	3,190.72	766.36	633.91	132.45	5.786	
13,000.00	9,150.00	9,129.24	9,125.59	117.46	33.41	89.16	-669.75	3,190.73	794.57	664.15	130.42	6.092	
13,050.00	9,150.00	9,129.77	9,126.11	118.84	33.41	89.21	-669.76	3,190.73	824.84	696.52	128.32	6.428	
13,100.00	9,150.00	9,130.30	9,126.64	120.22	33.41	89.26	-669.77	3,190.74	856.97	730.76	126.20	6.790	
13,150.00	9,150.00	9,130.84	9,127.18	121.60	33.41	89.30	-669.79	3,190.74	890.74	766.64	124.10	7.178	
13,200.00	9,150.00	9,131.37	9,127.71	122.98	33.42	89.35	-669.80	3,190.75	925.98	803.95	122.03	7.588	
13,250.00	9,150.00	9,131.90	9,128.25	124.37	33.42	89.40	-669.81	3,190.75	962.53	842.51	120.03	8.019	
13,300.00	9,150.00	9,132.44	9,128.78	125.75	33.42	89.45	-669.82	3,190.76	1,000.24	882.16	118.09	8.470	
13,350.00	9,150.00	9,132.98	9,129.32	127.14	33.42	89.49	-669.83	3,190.77	1,039.00	922.77	116.23	8.939	
13,400.00	9,150.00	9,133.52	9,129.86	128.52	33.42	89.54	-669.85	3,190.77	1,078.87	964.22	114.45	9.425	
13,450.00	9,150.00	9,134.06	9,130.40	129.91	33.43	89.59	-669.86	3,190.78	1,119.18	1,006.41	112.76	9.925	
13,500.00	9,150.00	9,134.61	9,130.95	131.30	33.43	89.64	-669.87	3,190.78	1,160.42	1,049.26	111.16	10.439	
13,550.00	9,150.00	9,135.15	9,131.49	132.69	33.43	89.69	-669.88	3,190.79	1,202.33	1,092.69	109.63	10.967	
13,600.00	9,150.00	9,135.70	9,132.04	134.08	33.43	89.74	-669.90	3,190.80	1,244.84	1,136.64	108.19	11.506	
13,650.00	9,150.00	9,136.25	9,132.59	135.47	33.43	89.79	-669.91	3,190.80	1,287.88	1,181.05	106.83	12.055	

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

Anticollision Report

Company: WCDSC Permian NM
Project: Eddy County (NAD 83 NM Eastern)
Reference Site: Sec 27-T19S-R29E
Site Error: 5.00 ft
Reference Well: Coral PWU 28-27 62H
Well Error: 0.50 ft
Reference Wellbore: Wellbore #1
Reference Design: Permit Plan 2

Local Co-ordinate Reference: Well Coral PWU 28-27 62H
TVD Reference: RKB @ 3333.00ft
MD Reference: RKB @ 3333.00ft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM r5000.141_Prod US
Offset TVD Reference: Offset Datum

Offset Design												Offset Site Error:	5.00 ft
Sec 27-T19S-R29E - Parkway West Unit #20 (Active) - Wellbore #1 - Wellbore #1												Offset Well Error:	10.00 ft
Survey Program: 100-GYRO-NS-CT, 10110-INC-ONLY													
Reference		Offset		Semi Major Axis			Distance						
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre	Between Centres	Between Ellipses	Minimum Separation	Separation Factor	Warning	
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)		
13,700.00	9,150.00	9,136.80	9,133.14	136.86	33.43	89.83	-669.92	3,190.81	1,331.41	1,225.87	105.54	12.615	
13,750.00	9,150.00	9,137.35	9,133.69	138.28	33.44	89.88	-669.93	3,190.81	1,375.38	1,271.06	104.32	13.184	
13,800.00	9,150.00	9,137.91	9,134.25	139.65	33.44	89.93	-669.95	3,190.82	1,419.75	1,316.58	103.17	13.752	
13,850.00	9,150.00	9,138.47	9,134.80	141.05	33.44	89.98	-669.96	3,190.83	1,464.48	1,362.40	102.08	14.347	

Anticollision Report

Company: WCDSC Permian NM
Project: Eddy County (NAD 83 NM Eastern)
Reference Site: Sec 27-T19S-R29E
Site Error: 5.00 ft
Reference Well: Coral PWU 28-27 62H
Well Error: 0.50 ft
Reference Wellbore: Wellbore #1
Reference Design: Permit Plan 2

Local Co-ordinate Reference: Well Coral PWU 28-27 62H
TVD Reference: RKB @ 3333.00ft
MD Reference: RKB @ 3333.00ft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM r5000.141_Prod US
Offset TVD Reference: Offset Datum

Offset Design Sec 27-T19S-R29E - Turquoise PWU 27-4H - Wellbore #1 - Wellbore #1												Offset Site Error:	5.00 ft
Survey Program: 84-GYRO-NS-CT, 7413-MWD+IGRF												Offset Well Error:	0.50 ft
Reference		Offset		Semi Major Axis		Distance							
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
12,300.00	9,150.00	8,172.00	7,965.64	98.33	28.19	34.42	-832.23	3,396.80	1,493.25	1,415.11	78.14	19.111	
12,350.00	9,150.00	8,204.00	7,974.55	99.69	28.56	34.51	-828.78	3,427.33	1,478.70	1,399.38	79.33	18.840	
12,400.00	9,150.00	8,216.12	7,977.50	101.04	28.72	34.53	-827.34	3,439.00	1,465.11	1,384.64	80.47	18.207	
12,450.00	9,150.00	8,236.00	7,981.85	102.40	28.97	34.55	-824.87	3,458.24	1,452.54	1,370.93	81.61	17.798	
12,500.00	9,150.00	8,251.39	7,984.75	103.76	29.18	34.55	-822.85	3,473.22	1,441.00	1,358.26	82.74	17.416	
12,550.00	9,150.00	8,267.00	7,987.24	105.12	29.39	34.53	-820.67	3,488.47	1,430.53	1,346.69	83.85	17.061	
12,600.00	9,150.00	8,287.43	7,989.93	106.49	29.68	34.50	-817.77	3,508.52	1,421.12	1,336.19	84.94	16.732	
12,650.00	9,150.00	8,298.00	7,991.11	107.85	29.83	34.48	-816.30	3,518.92	1,412.83	1,326.81	86.02	16.425	
12,700.00	9,150.00	8,329.00	7,993.61	109.22	30.30	34.39	-811.96	3,549.51	1,405.57	1,318.52	87.05	16.147	
12,750.00	9,150.00	8,348.95	7,994.65	110.59	30.82	34.32	-809.22	3,569.24	1,399.33	1,311.25	88.08	15.887	
12,800.00	9,150.00	8,390.77	7,996.52	111.96	31.33	34.17	-803.67	3,610.65	1,393.72	1,304.63	89.09	15.644	
12,850.00	9,150.00	8,439.78	7,998.31	113.33	32.18	33.97	-796.69	3,659.12	1,388.19	1,298.14	90.04	15.417	
12,900.00	9,150.00	8,492.41	8,000.01	114.71	33.16	33.74	-788.81	3,711.13	1,382.65	1,291.66	90.99	15.196	
12,950.00	9,150.00	8,546.95	8,002.24	116.08	34.20	33.52	-781.00	3,765.07	1,376.95	1,284.99	91.96	14.973	
13,000.00	9,150.00	8,582.91	8,003.78	117.46	34.94	33.39	-776.09	3,800.65	1,371.40	1,278.40	93.00	14.746	
13,050.00	9,150.00	8,617.45	8,004.93	118.84	35.65	33.25	-771.59	3,834.88	1,366.41	1,272.37	94.04	14.530	
13,100.00	9,150.00	8,655.13	8,005.85	120.22	36.45	33.11	-766.91	3,872.25	1,361.96	1,266.89	95.07	14.326	
13,150.00	9,150.00	8,707.25	8,006.90	121.60	37.59	32.90	-760.32	3,923.94	1,357.66	1,261.56	96.10	14.127	
13,200.00	9,150.00	8,757.10	8,007.79	122.98	38.71	32.69	-753.71	3,973.35	1,353.29	1,256.19	97.10	13.937	
13,250.00	9,150.00	8,803.21	8,008.49	124.37	39.77	32.48	-747.54	4,019.04	1,348.03	1,250.93	98.10	13.751	
13,300.00	9,150.00	8,849.06	8,009.02	125.75	40.84	32.27	-741.36	4,064.47	1,344.91	1,245.83	99.08	13.574	
13,350.00	9,150.00	8,894.25	8,009.15	127.14	41.93	32.04	-734.92	4,109.20	1,340.97	1,240.95	100.02	13.407	
13,400.00	9,150.00	8,943.98	8,008.79	128.52	43.13	31.75	-727.30	4,158.34	1,337.20	1,236.32	100.88	13.256	
13,450.00	9,150.00	9,009.21	8,008.33	129.91	44.73	31.34	-716.43	4,222.65	1,333.10	1,231.48	101.61	13.119	
13,500.00	9,150.00	9,078.91	8,008.40	131.30	46.47	30.89	-703.97	4,291.23	1,328.39	1,226.12	102.27	12.990	
13,550.00	9,150.00	9,146.01	8,009.49	132.69	48.18	30.45	-691.67	4,357.18	1,322.94	1,220.03	102.92	12.854	
13,600.00	9,150.00	9,207.96	8,011.12	134.08	49.77	30.05	-680.02	4,418.00	1,317.01	1,213.44	103.57	12.716	
13,650.00	9,150.00	9,250.93	8,012.42	135.47	50.89	29.77	-671.95	4,460.19	1,310.96	1,206.63	104.33	12.565	
13,700.00	9,150.00	9,291.98	8,013.55	136.86	51.97	29.51	-664.56	4,500.56	1,305.25	1,200.14	105.11	12.418	
13,750.00	9,150.00	9,340.66	8,014.83	138.26	53.26	29.21	-656.11	4,548.48	1,299.80	1,193.95	105.85	12.280	
13,800.00	9,150.00	9,394.63	8,016.41	139.65	54.70	28.88	-646.73	4,601.61	1,294.25	1,187.71	106.54	12.148	
13,850.00	9,150.00	9,439.80	8,017.82	141.05	55.92	28.61	-638.94	4,646.07	1,288.69	1,181.41	107.28	12.013	
13,900.00	9,150.00	9,483.19	8,019.07	142.44	57.10	28.35	-631.67	4,688.83	1,283.38	1,175.37	108.01	11.882	
13,950.00	9,150.00	9,520.08	8,019.99	143.84	58.11	28.13	-625.68	4,725.22	1,278.42	1,169.64	108.78	11.753	
14,000.00	9,150.00	9,553.28	8,020.44	145.24	59.02	27.93	-620.45	4,758.01	1,274.08	1,164.55	109.53	11.632	
14,050.00	9,150.00	9,593.00	8,020.46	146.64	60.11	27.69	-614.40	4,797.26	1,270.43	1,160.21	110.22	11.526	
14,100.00	9,150.00	9,629.95	8,020.08	148.03	61.14	27.45	-608.70	4,833.77	1,267.24	1,156.36	110.88	11.429	
14,150.00	9,150.00	9,675.62	8,019.19	149.43	62.40	27.13	-601.13	4,878.80	1,264.27	1,152.87	111.39	11.349	
14,200.00	9,150.00	9,721.76	8,018.03	150.83	63.69	26.79	-593.24	4,924.23	1,261.48	1,149.64	111.84	11.279	
14,250.00	9,150.00	9,768.31	8,017.05	152.23	64.99	26.47	-585.88	4,970.19	1,258.85	1,146.52	112.34	11.206	
14,300.00	9,150.00	9,835.28	8,016.45	153.64	66.89	26.06	-576.32	5,036.48	1,256.10	1,143.26	112.84	11.132	
14,350.00	9,150.00	9,906.39	8,017.86	155.04	68.91	25.72	-567.37	5,106.99	1,252.43	1,138.91	113.52	11.033	
14,400.00	9,150.00	9,971.25	8,021.15	156.44	70.77	25.54	-561.26	5,171.48	1,248.10	1,133.58	114.52	10.898	
14,450.00	9,150.00	10,014.10	8,024.00	157.84	72.01	25.47	-558.31	5,214.13	1,243.61	1,127.98	115.63	10.755	
14,500.00	9,150.00	10,056.76	8,026.91	159.25	73.25	25.43	-556.07	5,256.63	1,239.40	1,122.59	116.81	10.610	
14,550.00	9,150.00	10,111.10	8,030.67	160.65	74.82	25.41	-553.60	5,310.79	1,235.31	1,117.16	118.15	10.456	
14,600.00	9,150.00	10,169.03	8,034.70	162.06	76.51	25.34	-550.18	5,368.47	1,230.90	1,111.49	119.41	10.308	
14,650.00	9,150.00	10,225.00	8,038.53	163.46	78.14	25.24	-546.00	5,424.16	1,226.21	1,105.67	120.54	10.172	
14,700.00	9,150.00	10,278.10	8,042.07	164.87	79.69	25.11	-541.26	5,478.93	1,221.29	1,099.74	121.55	10.048	
14,750.00	9,150.00	10,327.75	8,045.21	166.27	81.14	24.97	-536.40	5,526.24	1,216.35	1,093.87	122.47	9.932	
14,800.00	9,150.00	10,381.35	8,048.49	167.68	82.72	24.79	-530.80	5,579.44	1,211.36	1,088.03	123.33	9.822	

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

Anticollision Report

Company: WCDSC Permian NM
Project: Eddy County (NAD 83 NM Eastern)
Reference Site: Sec 27-T19S-R29E
Site Error: 5.00 ft
Reference Well: Coral PWU 28-27 62H
Well Error: 0.50 ft
Reference Wellbore: Wellbore #1
Reference Design: Permit Plan 2

Local Co-ordinate Reference: Well Coral PWU 28-27 62H
TVD Reference: RKB @ 3333.00ft
MD Reference: RKB @ 3333.00ft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM r5000.141_Prod US
Offset TVD Reference: Offset Datum

Offset Design Sec 27-T19S-R29E - Turquoise PWU 27-4H - Wellbore #1 - Wellbore #1													Offset Site Error: 5.00 ft
Survey Program: 84-GYRO-NS-CT, 7413-MWD+IGRF													Offset Well Error: 0.50 ft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
14,850.00	9,150.00	10,438.13	8,052.23	169.09	84.38	24.60	-524.73	5,635.78	1,206.12	1,081.96	124.17	9.714	
14,900.00	9,150.00	10,479.41	8,054.93	170.49	85.59	24.46	-520.21	5,676.72	1,200.88	1,075.89	124.99	9.607	
14,950.00	9,150.00	10,518.59	8,057.05	171.90	86.75	24.31	-515.80	5,715.59	1,196.08	1,070.31	125.76	9.511	
15,000.00	9,150.00	10,559.37	8,058.81	173.31	87.95	24.13	-511.06	5,756.06	1,191.70	1,065.25	126.46	9.424	
15,050.00	9,150.00	10,602.05	8,060.23	174.72	89.21	23.93	-505.79	5,798.38	1,187.66	1,060.60	127.06	9.347	
15,100.00	9,150.00	10,647.14	8,061.28	176.13	90.54	23.69	-499.88	5,843.07	1,183.91	1,056.36	127.55	9.282	
15,150.00	9,150.00	10,699.51	8,062.31	177.54	92.08	23.38	-492.54	5,894.91	1,180.19	1,052.30	127.89	9.228	
15,200.00	9,150.00	10,751.23	8,063.24	178.95	93.61	23.05	-484.80	5,946.05	1,176.38	1,048.25	128.13	9.181	
15,250.00	9,150.00	10,802.18	8,064.13	180.36	95.11	22.72	-476.93	5,996.37	1,172.54	1,044.23	128.31	9.138	
15,300.00	9,150.00	10,851.68	8,064.98	181.77	96.57	22.38	-469.14	6,045.24	1,168.69	1,040.23	128.46	9.098	
15,350.00	9,150.00	10,900.15	8,065.84	183.18	98.01	22.05	-461.62	6,093.13	1,164.91	1,036.30	128.61	9.058	
15,400.00	9,150.00	10,947.11	8,066.65	184.59	99.40	21.74	-454.47	6,139.53	1,161.23	1,032.46	128.77	9.018	
15,450.00	9,150.00	10,993.12	8,067.38	186.01	100.76	21.44	-447.61	6,185.01	1,157.72	1,028.79	128.94	8.979	
15,500.00	9,150.00	11,041.54	8,068.10	187.42	102.20	21.13	-440.60	6,232.93	1,154.37	1,025.29	129.08	8.943	
15,550.00	9,150.00	11,092.08	8,069.10	188.83	103.71	20.83	-433.83	6,282.99	1,151.03	1,021.75	129.29	8.903	
15,600.00	9,150.00	11,152.94	8,070.74	190.24	105.52	20.50	-426.13	6,343.35	1,147.53	1,018.06	129.47	8.863	
15,650.00	9,150.00	11,218.80	8,073.30	191.66	107.49	20.13	-417.39	6,408.57	1,143.38	1,013.83	129.56	8.825	
15,700.00	9,150.00	11,277.48	8,076.00	193.07	109.24	19.78	-408.97	6,466.58	1,138.75	1,009.16	129.59	8.788	
15,750.00	9,150.00	11,337.61	8,079.12	194.49	111.03	19.39	-399.70	6,525.91	1,133.68	1,004.21	129.47	8.756	
15,800.00	9,150.00	11,397.69	8,082.65	195.90	112.82	18.88	-389.88	6,585.08	1,128.17	998.93	129.24	8.729	
15,850.00	9,150.00	11,438.75	8,085.08	197.31	114.04	18.69	-383.19	6,625.51	1,122.68	993.37	129.31	8.682	
15,900.00	9,150.00	11,481.30	8,087.45	198.73	115.31	18.41	-376.57	6,667.48	1,117.52	988.16	129.37	8.639	
15,950.00	9,150.00	11,532.06	8,090.19	200.14	116.83	18.07	-368.87	6,717.57	1,112.55	983.25	129.30	8.604	
16,000.00	9,150.00	11,584.28	8,093.09	201.56	118.39	17.72	-360.80	6,769.09	1,107.49	978.32	129.17	8.574	
16,050.00	9,150.00	11,627.33	8,095.37	202.98	119.68	17.42	-354.02	6,811.54	1,102.54	973.42	129.12	8.539	
16,100.00	9,150.00	11,670.58	8,097.36	204.39	120.97	17.11	-347.06	6,854.18	1,097.91	968.91	129.01	8.511	
16,150.00	9,150.00	11,710.61	8,098.91	205.81	122.17	16.80	-340.57	6,893.65	1,093.66	964.77	128.89	8.485	
16,200.00	9,150.00	11,750.14	8,100.10	207.22	123.35	16.50	-334.28	6,932.66	1,089.90	961.13	128.77	8.464	
16,250.00	9,150.00	11,802.59	8,101.40	208.64	124.93	16.11	-326.12	6,984.45	1,086.49	958.08	128.42	8.461	
16,300.00	9,150.00	11,870.84	8,104.04	210.06	126.97	15.61	-315.51	7,051.82	1,082.47	954.66	127.82	8.469	
16,350.00	9,150.00	11,909.74	8,105.72	211.47	128.14	15.33	-309.69	7,090.25	1,078.35	950.60	127.75	8.441	
16,400.00	9,150.00	11,950.72	8,107.27	212.89	129.38	15.06	-303.96	7,130.80	1,074.66	946.97	127.69	8.416	
16,450.00	9,150.00	11,985.11	8,108.27	214.31	130.41	14.84	-299.33	7,164.85	1,071.51	943.79	127.71	8.390	
16,500.00	9,150.00	12,017.52	8,108.65	215.73	131.39	14.61	-294.85	7,198.96	1,069.17	941.50	127.67	8.374 SF	
16,550.00	9,150.00	12,056.00	8,108.35	217.15	132.55	14.32	-289.35	7,235.04	1,067.70	940.24	127.46	8.377	
16,600.00	9,150.00	12,087.33	8,107.67	218.56	133.50	14.08	-284.90	7,266.04	1,066.92	939.62	127.30	8.381	
16,643.13	9,150.00	12,120.69	8,106.71	219.79	134.51	13.83	-280.41	7,299.09	1,066.72	939.61	127.11	8.392 ES	
16,650.00	9,150.00	12,126.01	8,106.54	219.98	134.67	13.79	-279.72	7,304.36	1,066.72	939.65	127.08	8.394	
16,700.00	9,150.00	12,176.55	8,104.74	221.40	136.19	13.44	-273.30	7,354.45	1,066.96	940.19	126.77	8.416	
16,750.00	9,150.00	12,244.14	8,103.01	222.82	138.24	12.93	-263.99	7,421.38	1,066.63	940.44	126.19	8.453	
16,800.00	9,150.00	12,293.96	8,102.02	224.24	139.74	12.52	-256.40	7,470.61	1,065.93	940.24	125.68	8.481	
16,850.00	9,150.00	12,343.35	8,101.01	225.66	141.23	12.11	-248.77	7,519.39	1,065.27	940.10	125.16	8.511	
16,879.88	9,150.00	12,360.00	8,100.67	226.51	141.73	11.97	-246.19	7,535.84	1,064.98	939.94	125.03	8.517 CC	
16,900.00	9,150.00	12,360.00	8,100.67	227.08	141.73	11.97	-246.19	7,535.84	1,065.17	940.09	125.08	8.516	
16,950.00	9,150.00	12,360.00	8,100.67	228.50	141.73	11.97	-246.19	7,535.84	1,067.28	942.23	125.06	8.534	
17,000.00	9,150.00	12,360.00	8,100.67	229.92	141.73	11.97	-246.19	7,535.84	1,071.73	946.89	124.84	8.585	
17,002.43	9,150.00	12,360.00	8,100.67	229.98	141.73	11.97	-246.19	7,535.84	1,072.01	947.42	124.58	8.605	

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

Anticollision Report

Company: WCDSC Permian NM
Project: Eddy County (NAD 83 NM Eastern)
Reference Site: Sec 27-T19S-R29E
Site Error: 5.00 ft
Reference Well: Coral PWU 28-27 62H
Well Error: 0.50 ft
Reference Wellbore: Wellbore #1
Reference Design: Permit Plan 2

Local Co-ordinate Reference: Well Coral PWU 28-27 62H
TVD Reference: RKB @ 3333.00ft
MD Reference: RKB @ 3333.00ft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM r5000.141_Prod US
Offset TVD Reference: Offset Datum

Offset Design													Offset Site Error:	5.00 ft
Survey Program: 100-NS-Gyro-DP, 7435-MWD+HDGM													Offset Well Error:	0.50 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
16,900.00	9,150.00	12,035.78	8,083.75	227.08	125.33	-44.52	1,022.37	7,854.41	1,497.62	1,240.75	256.86	5.830		
16,950.00	9,150.00	12,099.78	8,087.23	228.50	127.08	-44.53	1,019.45	7,718.22	1,494.07	1,235.00	259.06	5.767		
17,000.00	9,150.00	12,161.66	8,091.21	229.92	128.77	-44.56	1,016.50	7,779.93	1,490.10	1,228.83	261.28	5.703		
17,002.43	9,150.00	12,164.67	8,091.42	229.98	128.85	-44.56	1,016.36	7,782.92	1,489.90	1,228.44	261.46	5.698	CC, ES, SF	

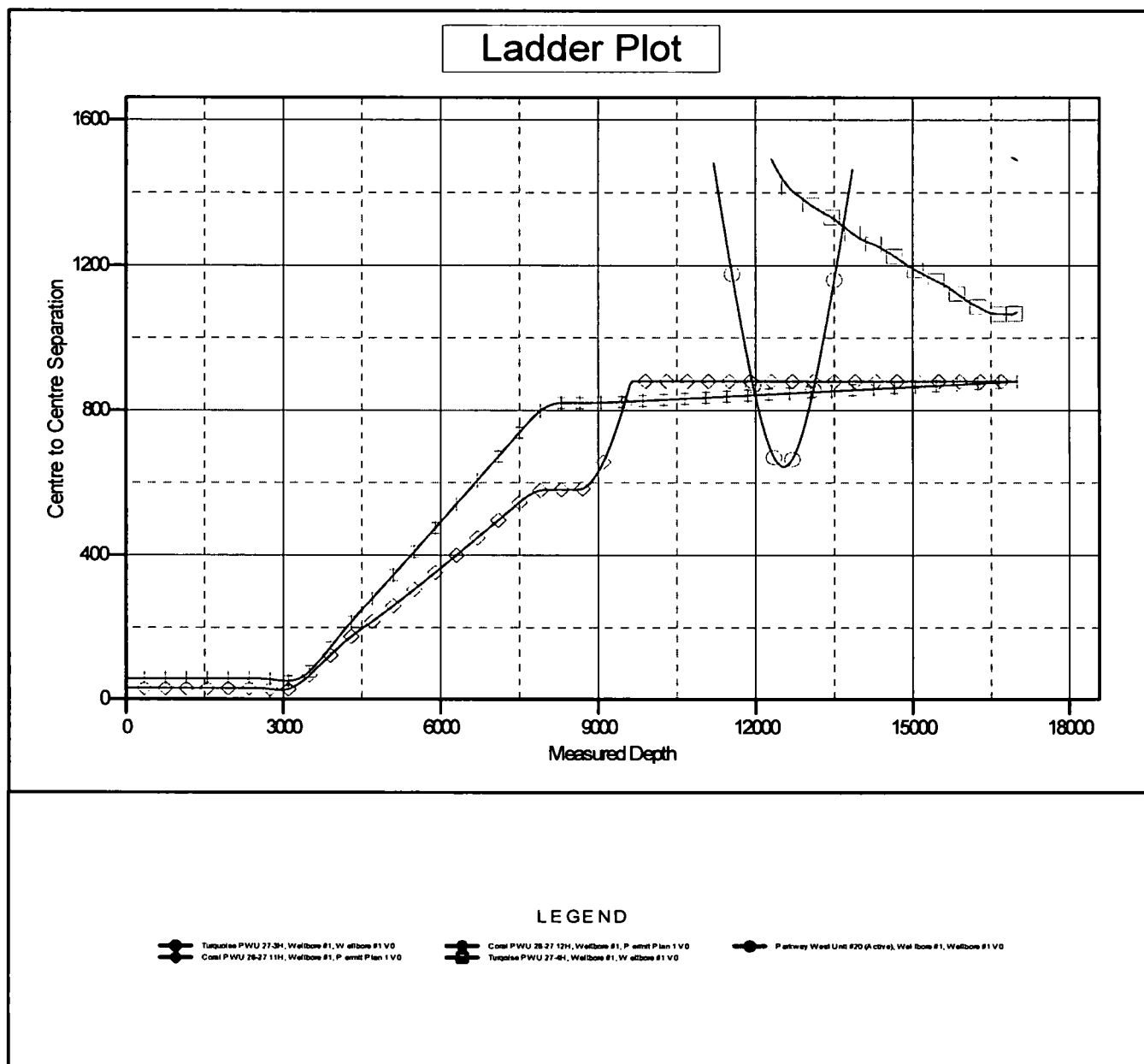
Anticollision Report

Company: WCDSC Permian NM
Project: Eddy County (NAD 83 NM Eastern)
Reference Site: Sec 27-T19S-R29E
Site Error: 5.00 ft
Reference Well: Coral PWU 28-27 62H
Well Error: 0.50 ft
Reference Wellbore: Wellbore #1
Reference Design: Permit Plan 2

Local Co-ordinate Reference: Well Coral PWU 28-27 62H
TVD Reference: RKB @ 3333.00ft
MD Reference: RKB @ 3333.00ft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM r5000.141_Prod US
Offset TVD Reference: Offset Datum

Reference Depths are relative to RKB @ 3333.00ft
 Offset Depths are relative to Offset Datum
 Central Meridian is -104.333334

Coordinates are relative to: Coral PWU 28-27 62H
 Coordinate System is US State Plane 1983, New Mexico Eastern Zone
 Grid Convergence at Surface is: 0.14°



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

Anticollision Report

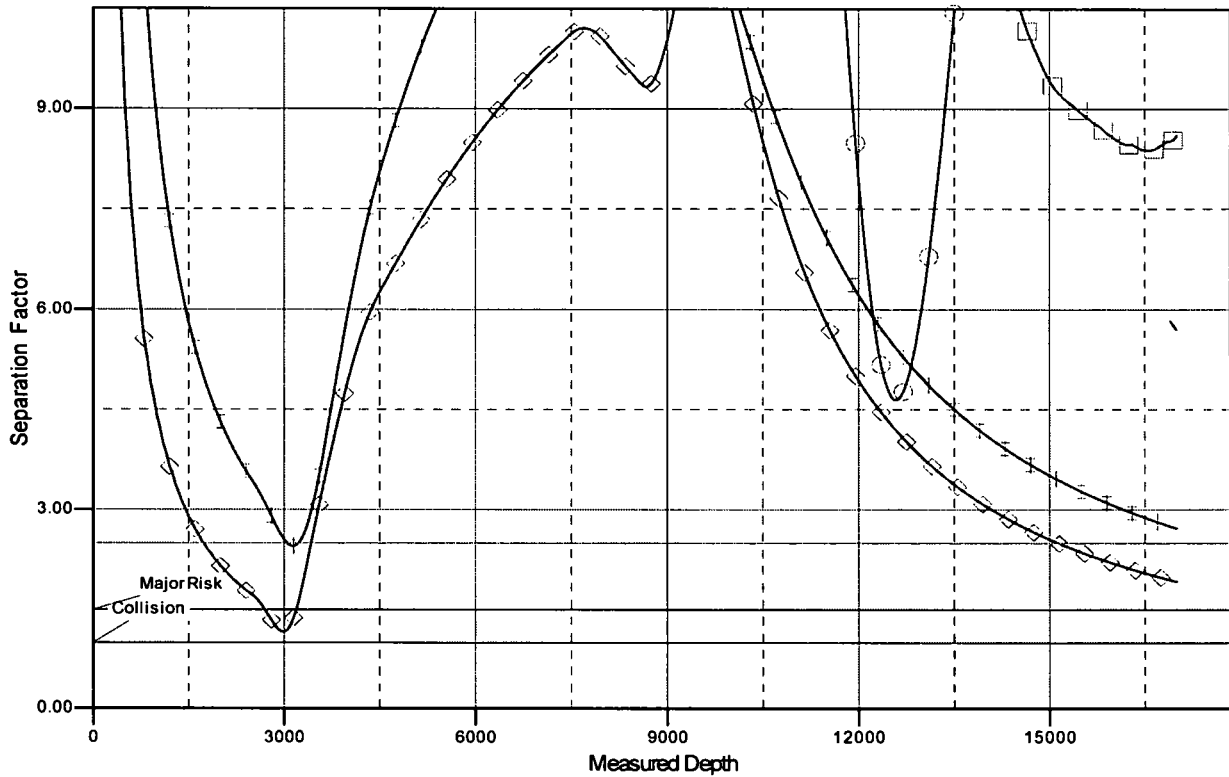
Company: WCDSC Permian NM
Project: Eddy County (NAD 83 NM Eastern)
Reference Site: Sec 27-T19S-R29E
Site Error: 5.00 ft
Reference Well: Coral PWU 28-27 62H
Well Error: 0.50 ft
Reference Wellbore: Wellbore #1
Reference Design: Permit Plan 2

Local Co-ordinate Reference: Well Coral PWU 28-27 62H
TVD Reference: RKB @ 3333.00ft
MD Reference: RKB @ 3333.00ft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM r5000.141_Prod US
Offset TVD Reference: Offset Datum

Reference Depths are relative to RKB @ 3333.00ft
 Offset Depths are relative to Offset Datum
 Central Meridian is -104.333334

Coordinates are relative to: Coral PWU 28-27 62H
 Coordinate System is US State Plane 1983, New Mexico Eastern Zone
 Grid Convergence at Surface is: 0.14°

Separation Factor Plot



LEGEND

Turquoise PWU 27-3H, Wellbore #1, W. Permit Plan 1 V0
 Coral PWU 28-27 11H, Wellbore #1, P. Permit Plan 1 V0

Coral PWU 28-27 12H, Wellbore #1, P. Permit Plan 1 V0
 Turquoise PWU 27-4H, Wellbore #1, W. Permit Plan 1 V0

Parkway West Unit #20 (Active), Wellbore #1, Wellbore #1 V0