



PHOENIX
TECHNOLOGY SERVICES

Piedra Operating LLC

Andrews County, TX (NAD83-TNC)

University 8-8

University 8-8E B H 9WC

OH / 72263

Surveys (Ensign T225)

Anticollision Report

01 June, 2023



Company:	Piedra Operating LLC	Local Co-ordinate Reference:	Well University 8-8E B H 9WC
Project:	Andrews County, TX (NAD83-TNC)	TVD Reference:	RKB @ 3054.00usft (Ensign T225)
Reference Site:	University 8-8	MD Reference:	RKB @ 3054.00usft (Ensign T225)
Site Error:	0.00	North Reference:	Grid
Reference Well:	University 8-8E B H 9WC	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00	Output errors are at	2.00 sigma
Reference Wellbore	OH / 72263	Database:	USAEDMDB
Reference Design:	Surveys (Ensign T225)	Offset TVD Reference:	Offset Datum

Reference	Surveys (Ensign T225)		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	MD + Stations Interval 100.00usft	Error Model:	ISCSWA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Max. Cent. Dist. of 1,000.00usft or Max. SF of 4	Error Surface:	Pedal Curve
Warning Levels Evaluated at:	2.00 Sigma	Casing Method:	Not applied

Survey Program	Date	2023-06-01		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
15.00	1,685.00	TrueShot MWD Surveys (OH / 72263)	MWD	OWSG MWD - Standard
1,900.00	20,903.00	Phoenix MWD Surveys (OH / 72263)	MWD+HRGM+MS	OWSG MWD + HRGM + Multi-Station Correction

Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centers (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
University 8-8						
University 8-8E A H 2MS - OH / 72179 - Plan 2 05-23-23						Out of range
University 8-8E A H 2MS - OH / 72179 - Surveys (Ensign						Out of range
University 8-8E A H 5LS - OH / 72180 - Plan 2 05-12-23						Out of range
University 8-8E A H 5LS - OH / 72180 - Surveys (Ensign						Out of range
University 8-8E A H 8WC - OH / 72181 - Plan 1 03-16-23	20,827.26	20,917.96	1,300.51	966.86	3.898 CC	
University 8-8E A H 8WC - OH / 72181 - Plan 1 03-16-23	20,841.00	20,917.96	1,300.58	966.77	3.896 ES, SF	
University 8-8E A H 8WC - OH / 72181 - Surveys (Ensign	20,779.63	20,810.03	1,311.78	979.12	3.943 CC	
University 8-8E A H 8WC - OH / 72181 - Surveys (Ensign	20,903.00	20,919.59	1,312.55	976.55	3.906 ES, SF	
University 8-8E B H 3MS - OH / 72265 - Plan 1 03-16-23	513.12	513.35	46.56	36.12	4.463 CC	
University 8-8E B H 3MS - OH / 72265 - Plan 1 03-16-23	1,953.96	1,953.83	48.69	34.34	3.392 ES	
University 8-8E B H 3MS - OH / 72265 - Plan 1 03-16-23	8,651.00	8,649.61	133.47	79.23	2.461 SF	
University 8-8E B H 3MS - OH / 72265 - Surveys (Ensign	513.12	513.35	46.56	36.12	4.463 CC	
University 8-8E B H 3MS - OH / 72265 - Surveys (Ensign	1,954.88	1,954.76	48.71	34.32	3.385 ES	
University 8-8E B H 3MS - OH / 72265 - Surveys (Ensign	8,555.51	8,556.13	141.56	87.94	2.640 SF	
University 8-8E B H 6LS - OH / 72264 - Plan 2 05-17-23	430.73	430.79	21.24	11.22	2.120 CC	
University 8-8E B H 6LS - OH / 72264 - Plan 2 05-17-23	9,242.12	9,245.33	64.30	5.71	1.097 Level 2 , ES, SF	
University 8-8E B H 6LS - OH / 72264 - Surveys (Ensign	430.73	430.79	21.24	11.22	2.120 CC	
University 8-8E B H 6LS - OH / 72264 - Surveys (Ensign	500.00	499.95	21.56	11.20	2.081 ES	
University 8-8E B H 6LS - OH / 72264 - Surveys (Ensign	9,086.27	9,088.18	73.85	16.18	1.280 Level 3 , SF	
University 8-8E H 1MS - OH / 71371 - Surveys (Ensign 2						Out of range
University 8-8E H 4LS - OH / 71370 - Surveys (Ensign 22						Out of range
University 8-8E H 7WC - OH / 71369 - Surveys (Ensign 2						Out of range

Company:	Piedra Operating LLC	Local Co-ordinate Reference:	Well University 8-8E B H 9WC
Project:	Andrews County, TX (NAD83-TNC)	TVD Reference:	RKB @ 3054.00usft (Ensign T225)
Reference Site:	University 8-8	MD Reference:	RKB @ 3054.00usft (Ensign T225)
Site Error:	0.00	North Reference:	Grid
Reference Well:	University 8-8E B H 9WC	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00	Output errors are at	2.00 sigma
Reference Wellbore	OH / 72263	Database:	USAEDMDB
Reference Design:	Surveys (Ensign T225)	Offset TVD Reference:	Offset Datum

Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centers (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
University 8-8 Offsets						
State University W 2 - OH - Surveys	6,268.51	6,249.94	813.94	661.86	5.352 CC	
State University W 2 - OH - Surveys	9,550.00	9,531.18	837.43	605.22	3.606 ES	
State University W 2 - OH - Surveys	9,600.00	9,581.24	839.94	606.50	3.598 SF	
U Texas 36994 A/C 2 3 - OH - Surveys						Out of range
U Texas 36995 4 C - OH - Surveys						Out of range
U-Tex 36994 5 - OH - Surveys	16,322.15	10,181.68	408.20	90.15	1.283 Level 3 , CC, ES, SF	
U-Texas 36991 3U - OH - Surveys	15,031.46	10,189.57	945.68	648.31	3.180 CC	
U-Texas 36991 3U - OH - Surveys	15,035.00	10,189.53	945.68	648.29	3.180 ES, SF	
U-Texas 36994 2 L - OH - Surveys	17,592.75	10,175.96	1,037.43	708.00	3.149 CC	
U-Texas 36994 2 L - OH - Surveys	17,600.00	10,175.93	1,037.46	707.93	3.148 ES	
U-Texas 36994 2 L - OH - Surveys	17,630.00	10,175.91	1,038.26	708.36	3.147 SF	
U-Texas 36995 A/C 2 6 - OH - Surveys	18,919.99	10,170.70	1,024.12	684.14	3.012 CC, ES	
U-Texas 36995 A/C 2 6 - OH - Surveys	18,975.00	10,169.88	1,025.59	684.99	3.011 SF	

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 15-MWD, 1765-MWD+HRGM													Offset Well Error:	1.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Center		Distance			Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centers (usft)	Between Ellipses (usft)				
20,587.00	10,180.19	20,687.07	10,163.11	153.13	173.73	-89.40	-10,458.41	3,739.96	1,303.12	976.26	326.85	3.987		
20,600.00	10,180.38	20,700.06	10,163.05	153.31	173.93	-89.40	-10,471.07	3,742.89	1,302.84	975.61	327.23	3.981		
20,676.00	10,179.54	20,776.05	10,162.68	154.30	175.13	-89.45	-10,545.10	3,760.02	1,301.62	972.20	329.42	3.951		
20,700.00	10,178.73	20,800.03	10,162.57	154.62	175.51	-89.48	-10,568.47	3,765.43	1,301.37	971.26	330.11	3.942		
20,768.00	10,176.13	20,867.99	10,162.24	155.51	176.57	-89.58	-10,634.68	3,780.75	1,300.85	968.77	332.08	3.917		
20,798.90	10,174.90	20,898.87	10,162.09	155.92	177.06	-89.63	-10,664.76	3,787.72	1,300.67	967.70	332.97	3.906		
20,800.00	10,174.86	20,899.97	10,162.09	155.93	177.08	-89.63	-10,665.83	3,787.96	1,300.66	967.66	333.00	3.906		
20,815.52	10,174.28	20,915.49	10,162.01	156.14	177.32	-89.65	-10,680.95	3,791.46	1,300.56	967.11	333.45	3.900		
20,827.26	10,173.87	20,917.96	10,162.00	156.29	177.36	-89.65	-10,683.36	3,792.02	1,300.51	966.86	333.65	3.898		CC
20,841.00	10,173.40	20,917.96	10,162.00	156.47	177.36	-89.65	-10,683.36	3,792.02	1,300.58	966.77	333.81	3.896		ES, SF
20,900.00	10,171.44	20,917.96	10,162.00	157.25	177.36	-89.65	-10,683.36	3,792.02	1,302.52	968.41	334.11	3.899		
20,903.00	10,171.34	20,917.96	10,162.00	157.29	177.36	-89.65	-10,683.36	3,792.02	1,302.69	968.58	334.10	3.899		

Company:	Piedra Operating LLC	Local Co-ordinate Reference:	Well University 8-8E B H 9WC
Project:	Andrews County, TX (NAD83-TNC)	TVD Reference:	RKB @ 3054.00usft (Ensign T225)
Reference Site:	University 8-8	MD Reference:	RKB @ 3054.00usft (Ensign T225)
Site Error:	0.00	North Reference:	Grid
Reference Well:	University 8-8E B H 9WC	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00	Output errors are at	2.00 sigma
Reference Wellbore	OH / 72263	Database:	USAEDMDB
Reference Design:	Surveys (Ensign T225)	Offset TVD Reference:	Offset Datum

Offset Design University 8-8E A H 8WC - OH / 72181 - Surveys (Ensign T054)												Offset Site Error:	0.00 usft
Survey Program: 15-MWD, 1884-MWD+HRGM												Offset Well Error:	1.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Center		Distance			Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centers (usft)	Between Ellipses (usft)	Minimum Separation (usft)		
20,676.00	10,179.54	20,720.29	10,160.16	154.30	175.58	-89.36	-10,548.68	3,772.07	1,312.60	982.74	329.85	3.979	CC
20,700.00	10,178.73	20,741.85	10,160.59	154.62	175.92	-89.41	-10,569.70	3,776.85	1,312.25	981.73	330.52	3.970	
20,768.00	10,176.13	20,800.08	10,161.78	155.51	176.84	-89.55	-10,626.40	3,790.04	1,311.78	979.44	332.34	3.947	
20,779.63	10,175.65	20,810.03	10,161.99	155.67	176.99	-89.58	-10,636.08	3,792.34	1,311.78	979.12	332.66	3.943	
20,779.65	10,175.65	20,810.05	10,161.99	155.67	176.99	-89.58	-10,636.10	3,792.34	1,311.78	979.12	332.66	3.943	
20,800.00	10,174.86	20,826.74	10,162.35	155.93	177.26	-89.62	-10,652.34	3,796.22	1,311.80	978.61	333.19	3.937	ES, SF
20,841.00	10,173.40	20,863.00	10,163.13	156.47	177.83	-89.72	-10,687.54	3,804.84	1,312.01	977.72	334.30	3.925	
20,900.00	10,171.44	20,916.59	10,164.29	157.25	178.68	-89.85	-10,739.54	3,817.77	1,312.53	976.61	335.91	3.907	
20,903.00	10,171.34	20,919.59	10,164.35	157.29	178.72	-89.85	-10,742.44	3,818.49	1,312.55	976.55	336.00	3.906	

Company:	Piedra Operating LLC	Local Co-ordinate Reference:	Well University 8-8E B H 9WC
Project:	Andrews County, TX (NAD83-TNC)	TVD Reference:	RKB @ 3054.00usft (Ensign T225)
Reference Site:	University 8-8	MD Reference:	RKB @ 3054.00usft (Ensign T225)
Site Error:	0.00	North Reference:	Grid
Reference Well:	University 8-8E B H 9WC	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00	Output errors are at	2.00 sigma
Reference Wellbore	OH / 72263	Database:	USAEDMDB
Reference Design:	Surveys (Ensign T225)	Offset TVD Reference:	Offset Datum

Offset Design University 8-8E B H 3MS - OH / 72265 - Plan 1 03-16-23												Offset Site Error:	0.00 usft
Survey Program: 15-MWD, 1835-MWD+HRGM+MS												Offset Well Error:	1.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Center		Distance			Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centers (usft)	Between Ellipses (usft)	Minimum Separation (usft)		
0.00	0.00	0.00	0.00	1.00	1.00	76.91	11.33	48.71	50.01				
15.00	15.00	15.00	15.00	1.00	1.00	76.91	11.33	48.71	50.01				
100.00	100.00	100.14	100.14	1.86	1.34	-88.49	11.08	48.64	49.89	46.70	3.19	15.628	
200.00	200.00	200.26	200.26	3.79	2.09	-87.96	10.15	48.40	49.44	43.57	5.87	8.429	
300.00	300.00	300.35	300.34	5.83	2.39	-87.77	9.24	48.13	48.95	40.76	8.19	5.977	
361.00	360.99	361.74	361.73	7.09	2.57	-88.13	8.85	47.52	48.25	38.64	9.61	5.018	
400.00	399.99	400.75	400.73	7.21	2.67	-95.45	8.63	46.95	47.67	37.84	9.83	4.850	
500.00	499.99	500.34	500.31	7.50	2.94	-113.56	8.04	45.71	46.57	36.21	10.36	4.494	
513.12	513.11	513.35	513.32	7.53	2.98	-115.76	7.97	45.65	46.56	36.12	10.43	4.463	CC
539.00	538.99	539.02	538.99	7.61	3.04	-119.90	7.85	45.62	46.62	36.06	10.57	4.412	
600.00	599.98	600.13	600.10	7.67	3.20	-147.29	7.45	45.64	46.93	36.18	10.75	4.365	
628.00	627.98	628.19	628.16	7.70	3.27	-162.89	7.18	45.62	47.05	36.22	10.84	4.343	
700.00	699.98	700.05	700.01	7.77	3.45	-131.02	6.33	45.66	47.39	36.34	11.04	4.291	
717.00	716.98	717.02	716.98	7.79	3.49	-124.53	6.10	45.70	47.48	36.38	11.09	4.279	
800.00	799.97	800.14	800.10	7.88	3.70	-133.56	5.24	45.79	47.93	36.60	11.33	4.230	
805.00	804.97	805.15	805.11	7.89	3.71	-134.00	5.21	45.78	47.95	36.61	11.34	4.227	
890.00	889.97	890.00	889.95	7.98	3.90	-166.64	4.70	45.87	48.67	37.10	11.57	4.208	
900.00	899.97	899.88	899.84	7.99	3.92	-164.62	4.65	45.90	48.79	37.20	11.59	4.209	
976.00	975.96	975.67	975.62	8.07	4.05	-151.59	4.40	46.33	49.85	38.09	11.77	4.236	
1,000.00	999.96	999.79	999.74	8.10	4.10	-155.83	4.33	46.49	50.21	38.38	11.83	4.244	
1,064.00	1,063.96	1,064.12	1,064.07	8.17	4.22	-171.59	3.91	46.66	50.82	38.82	11.99	4.237	
1,100.00	1,099.96	1,099.66	1,099.61	8.21	4.27	-158.89	3.64	46.81	51.15	39.10	12.05	4.244	
1,153.00	1,152.96	1,152.86	1,152.80	8.27	4.37	-131.96	3.40	47.21	51.75	39.57	12.18	4.248	
1,194.00	1,193.96	1,194.17	1,194.11	8.31	4.45	-143.06	3.24	47.25	51.97	39.71	12.27	4.236	
1,200.00	1,199.96	1,200.17	1,200.12	8.32	4.46	-141.66	3.21	47.23	52.00	39.71	12.29	4.231	
1,300.00	1,299.95	1,299.79	1,299.74	8.52	4.66	-120.10	2.82	47.44	52.74	40.11	12.63	4.176	
1,333.00	1,332.95	1,332.88	1,332.82	8.59	4.73	-114.18	2.66	47.59	53.00	40.27	12.74	4.162	
1,400.00	1,399.95	1,400.10	1,400.04	8.68	4.87	-135.71	2.24	47.72	53.47	40.57	12.91	4.143	
1,421.00	1,420.95	1,421.20	1,421.14	8.71	4.91	-141.56	2.11	47.69	53.60	40.64	12.96	4.135	
1,500.00	1,499.94	1,500.36	1,500.30	8.93	5.06	-110.08	1.71	47.27	53.62	40.34	13.29	4.036	
1,597.00	1,596.93	1,597.38	1,597.31	9.20	5.24	-73.75	1.37	46.74	53.02	39.33	13.70	3.871	
1,600.00	1,599.93	1,600.38	1,600.32	9.20	5.25	-73.24	1.35	46.73	52.99	39.29	13.70	3.867	
1,685.00	1,684.93	1,685.50	1,685.43	9.29	5.42	-51.47	0.60	46.15	51.84	37.94	13.90	3.729	
1,700.00	1,699.93	1,700.51	1,700.44	9.33	5.45	-51.51	0.49	46.02	51.61	37.68	13.93	3.705	
1,800.00	1,799.92	1,800.27	1,800.20	9.72	5.68	-51.82	-0.21	45.32	50.13	35.98	14.15	3.542	
1,900.00	1,899.92	1,900.15	1,900.07	10.13	5.82	-51.68	-1.26	45.23	49.08	34.78	14.30	3.432	
1,953.96	1,953.87	1,953.83	1,953.75	10.29	5.85	-82.28	-1.86	45.27	48.69	34.34	14.36	3.392	ES
1,990.00	1,989.90	1,989.35	1,989.26	10.39	5.89	-91.33	-2.36	45.69	48.94	34.54	14.40	3.399	
2,000.00	1,999.90	1,999.20	1,999.11	10.41	5.90	-93.91	-2.53	45.89	49.10	34.68	14.42	3.405	
2,079.00	2,078.81	2,076.98	2,076.82	10.56	6.17	-103.66	-4.12	48.55	51.90	37.31	14.59	3.558	
2,100.00	2,099.77	2,097.62	2,097.43	10.60	6.24	-104.92	-4.64	49.60	53.10	38.45	14.64	3.626	
2,168.00	2,167.59	2,166.25	2,165.93	10.73	6.34	-108.41	-6.84	53.20	57.26	42.38	14.88	3.848	
2,200.00	2,199.48	2,198.83	2,198.45	10.77	6.39	-110.57	-8.22	54.48	58.87	43.87	15.00	3.926	
2,257.00	2,256.29	2,256.94	2,256.46	10.83	6.55	-114.02	-11.25	56.04	61.05	45.74	15.31	3.987	
2,300.00	2,299.15	2,300.47	2,299.91	10.88	6.65	-116.85	-13.97	56.63	62.18	46.66	15.52	4.006	
2,347.00	2,345.98	2,347.45	2,346.79	10.93	6.72	-119.77	-16.97	57.16	63.46	47.77	15.70	4.043	

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

Company:	Piedra Operating LLC	Local Co-ordinate Reference:	Well University 8-8E B H 9WC
Project:	Andrews County, TX (NAD83-TNC)	TVD Reference:	RKB @ 3054.00usft (Ensign T225)
Reference Site:	University 8-8	MD Reference:	RKB @ 3054.00usft (Ensign T225)
Site Error:	0.00	North Reference:	Grid
Reference Well:	University 8-8E B H 9WC	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00	Output errors are at	2.00 sigma
Reference Wellbore	OH / 72263	Database:	USAEDMDB
Reference Design:	Surveys (Ensign T225)	Offset TVD Reference:	Offset Datum

Offset Design University 8-8E B H 3MS - OH / 72265 - Plan 1 03-16-23												Offset Site Error:	0.00 usft
Survey Program: 15-MWD, 1835-MWD+HRGM+MS												Offset Well Error:	1.00 usft
Reference		Offset		Semi Major Axis			Offset Wellbore Center		Distance			Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centers (usft)	Between Ellipses (usft)	Minimum Separation (usft)		
2,400.00	2,398.80	2,400.43	2,399.65	11.00	6.80	-120.01	-20.37	57.76	65.01	49.11	15.90	4.088	
2,437.00	2,435.66	2,437.41	2,436.56	11.04	6.91	-120.17	-22.74	58.18	66.09	50.00	16.09	4.107	
2,500.00	2,498.44	2,500.38	2,499.39	11.12	7.09	-120.39	-26.77	58.89	67.88	51.47	16.42	4.135	
2,526.00	2,524.35	2,526.37	2,525.33	11.16	7.17	-120.47	-28.43	59.18	68.61	52.06	16.55	4.145	
2,600.00	2,598.10	2,600.34	2,599.14	11.27	7.39	-120.75	-33.17	60.01	70.67	53.72	16.95	4.169	
2,617.00	2,615.04	2,617.33	2,616.10	11.29	7.45	-120.81	-34.26	60.21	71.14	54.10	17.04	4.174	
2,700.00	2,697.75	2,700.30	2,698.89	11.42	7.71	-120.40	-39.58	61.14	73.42	55.92	17.50	4.195	
2,706.00	2,703.73	2,706.30	2,704.87	11.43	7.73	-120.37	-39.96	61.21	73.58	56.05	17.54	4.196	
2,794.00	2,791.41	2,794.26	2,792.65	11.58	8.01	-120.91	-45.59	62.20	75.99	57.95	18.04	4.213	
2,800.00	2,797.39	2,800.26	2,798.63	11.59	8.03	-120.96	-45.98	62.27	76.16	58.08	18.07	4.214	
2,884.00	2,881.08	2,884.22	2,882.42	11.74	8.30	-121.28	-51.36	63.22	78.47	59.90	18.57	4.226	
2,900.00	2,897.02	2,900.21	2,898.38	11.77	8.35	-121.27	-52.38	63.40	78.91	60.24	18.66	4.228	
2,973.00	2,969.75	2,973.18	2,971.19	11.91	8.59	-121.25	-57.05	64.22	80.91	61.81	19.10	4.236	
3,000.00	2,996.65	3,000.17	2,998.12	11.96	8.68	-122.28	-58.78	64.52	81.66	62.40	19.27	4.238	
3,063.00	3,059.41	3,063.14	3,060.96	12.09	8.89	-124.62	-62.82	65.23	83.53	63.88	19.65	4.251	
3,100.00	3,096.27	3,100.12	3,097.86	12.16	9.02	-125.95	-65.18	65.65	84.68	64.81	19.88	4.261	
3,152.00	3,148.09	3,152.09	3,149.72	12.27	9.19	-127.79	-68.51	66.24	86.35	66.16	20.19	4.277	
3,200.00	3,195.92	3,200.07	3,197.60	12.37	9.35	-127.04	-71.59	66.78	87.86	67.38	20.48	4.291	
3,243.00	3,238.78	3,243.05	3,240.49	12.46	9.50	-126.32	-74.34	67.26	89.13	68.40	20.74	4.298	
3,300.00	3,295.59	3,300.02	3,297.34	12.58	9.69	-126.28	-77.99	67.91	90.78	69.70	21.08	4.306	
3,332.00	3,327.48	3,332.01	3,329.26	12.65	9.80	-126.27	-80.04	68.27	91.71	70.43	21.28	4.310	
3,400.00	3,395.26	3,399.98	3,397.09	12.81	10.04	-125.31	-84.39	69.03	93.64	71.94	21.70	4.316	
3,421.00	3,416.19	3,420.97	3,418.04	12.86	10.11	-125.00	-85.74	69.27	94.21	72.38	21.83	4.316	
3,500.00	3,494.93	3,499.95	3,496.84	13.04	10.38	-123.69	-90.79	70.16	96.21	73.90	22.32	4.311	
3,510.00	3,504.90	3,509.95	3,506.82	13.07	10.41	-123.52	-91.43	70.28	96.45	74.07	22.38	4.310	
3,599.00	3,593.64	3,598.92	3,595.61	13.28	10.72	-122.23	-97.13	71.28	98.42	75.49	22.93	4.292	
3,600.00	3,594.63	3,599.92	3,596.61	13.29	10.73	-122.23	-97.20	71.29	98.44	75.50	22.94	4.292	
3,688.00	3,682.36	3,687.90	3,684.40	13.50	11.03	-124.11	-102.83	72.28	100.49	77.00	23.50	4.277	
3,700.00	3,694.31	3,699.89	3,696.37	13.54	11.07	-124.34	-103.60	72.42	100.81	77.23	23.57	4.276	
3,777.00	3,771.05	3,776.86	3,773.17	13.73	11.34	-125.78	-108.53	73.29	102.92	78.85	24.07	4.276	
3,800.00	3,793.96	3,799.85	3,796.11	13.79	11.42	-125.49	-110.00	73.55	103.58	79.36	24.22	4.276	
3,867.00	3,860.73	3,866.83	3,862.95	13.97	11.65	-124.60	-114.29	74.30	105.40	80.74	24.66	4.274	
3,900.00	3,893.62	3,899.82	3,895.86	14.05	11.77	-124.41	-116.41	74.67	106.25	81.37	24.88	4.271	
3,957.00	3,950.43	3,956.80	3,952.72	14.21	11.97	-124.04	-120.06	75.32	107.67	82.42	25.25	4.264	
4,000.00	3,993.28	3,999.78	3,995.62	14.32	12.12	-125.09	-122.81	75.80	108.76	83.23	25.54	4.259	
4,047.00	4,040.11	4,046.76	4,042.50	14.45	12.29	-126.20	-125.82	76.33	110.07	84.22	25.85	4.258	
4,100.00	4,092.91	4,099.74	4,095.36	14.60	12.47	-127.63	-129.21	76.93	111.70	85.49	26.21	4.262	
4,138.00	4,130.75	4,137.71	4,133.26	14.70	12.61	-128.63	-131.64	77.36	112.97	86.51	26.46	4.269	
4,200.00	4,192.50	4,199.67	4,195.08	14.87	12.82	-129.04	-135.61	78.06	115.14	88.26	26.89	4.283	
4,227.00	4,219.38	4,226.65	4,222.01	14.95	12.92	-129.22	-137.34	78.36	116.10	89.03	27.07	4.289	
4,300.00	4,292.08	4,299.60	4,294.81	15.15	13.18	-130.08	-142.01	79.18	118.70	91.13	27.57	4.306	
4,316.00	4,308.01	4,315.59	4,310.76	15.20	13.23	-130.26	-143.04	79.36	119.27	91.59	27.67	4.310	
4,400.00	4,391.67	4,399.54	4,394.53	15.44	13.53	-130.33	-148.42	80.31	122.24	94.00	28.25	4.328	
4,405.00	4,396.65	4,404.53	4,399.51	15.45	13.55	-130.34	-148.74	80.37	122.42	94.14	28.28	4.329	
4,494.00	4,485.29	4,493.48	4,488.27	15.71	13.86	-130.62	-154.43	81.37	125.51	96.62	28.88	4.345	

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

Company:	Piedra Operating LLC	Local Co-ordinate Reference:	Well University 8-8E B H 9WC
Project:	Andrews County, TX (NAD83-TNC)	TVD Reference:	RKB @ 3054.00usft (Ensign T225)
Reference Site:	University 8-8	MD Reference:	RKB @ 3054.00usft (Ensign T225)
Site Error:	0.00	North Reference:	Grid
Reference Well:	University 8-8E B H 9WC	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00	Output errors are at	2.00 sigma
Reference Wellbore	OH / 72263	Database:	USAEDMDB
Reference Design:	Surveys (Ensign T225)	Offset TVD Reference:	Offset Datum

Offset Design University 8-8E B H 3MS - OH / 72265 - Plan 1 03-16-23												Offset Site Error:	0.00 usft
Survey Program: 15-MWD, 1835-MWD+HRGM+MS												Offset Well Error:	1.00 usft
Reference		Offset		Semi Major Axis			Offset Wellbore Center		Distance			Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centers (usft)	Between Ellipses (usft)	Minimum Separation (usft)		
4,500.00	4,491.26	4,499.47	4,494.25	15.73	13.89	-130.55	-154.82	81.44	125.71	96.79	28.92	4.346	
4,583.00	4,573.94	4,582.43	4,577.03	15.97	14.18	-129.61	-160.13	82.37	128.45	98.96	29.49	4.356	
4,600.00	4,590.87	4,599.42	4,593.98	16.02	14.24	-129.58	-161.22	82.57	128.99	99.39	29.61	4.357	
4,675.00	4,665.58	4,674.38	4,668.79	16.24	14.51	-129.44	-166.02	83.41	131.37	101.25	30.12	4.361	
4,700.00	4,690.49	4,699.37	4,693.72	16.32	14.60	-129.45	-167.62	83.69	132.15	101.86	30.29	4.362	
4,766.00	4,756.24	4,765.33	4,759.55	16.52	14.83	-129.45	-171.85	84.44	134.19	103.44	30.75	4.364	
4,800.00	4,790.11	4,799.32	4,793.46	16.62	14.95	-128.94	-174.02	84.82	135.20	104.22	30.98	4.364	
4,855.00	4,844.91	4,854.29	4,848.32	16.79	15.15	-128.07	-177.54	85.44	136.74	105.38	31.36	4.360	
4,900.00	4,889.76	4,899.28	4,893.21	16.93	15.31	-128.65	-180.42	85.95	137.95	106.29	31.67	4.356	
4,944.00	4,933.61	4,943.26	4,937.10	17.06	15.47	-129.20	-183.24	86.44	139.13	107.17	31.97	4.352	
5,000.00	4,989.43	4,999.24	4,992.96	17.23	15.67	-129.04	-186.83	87.08	140.57	108.22	32.35	4.346	
5,034.00	5,023.32	5,033.23	5,026.88	17.34	15.79	-128.91	-189.00	87.46	141.39	108.81	32.58	4.340	
5,100.00	5,089.13	5,099.21	5,092.72	17.54	16.02	-128.58	-193.23	88.20	142.92	109.89	33.03	4.327	
5,123.00	5,112.06	5,122.21	5,115.67	17.61	16.11	-128.47	-194.70	88.46	143.44	110.26	33.18	4.323	
5,200.00	5,188.83	5,199.19	5,192.49	17.85	16.38	-127.21	-199.63	89.33	145.11	111.40	33.70	4.305	
5,212.00	5,200.80	5,211.19	5,204.46	17.89	16.42	-127.01	-200.40	89.47	145.35	111.57	33.79	4.302	
5,300.00	5,288.54	5,299.17	5,292.25	18.17	16.74	-126.26	-206.04	90.46	147.18	112.79	34.39	4.280	
5,303.00	5,291.53	5,302.17	5,295.25	18.18	16.75	-126.23	-206.23	90.49	147.24	112.83	34.41	4.279	
5,392.00	5,380.23	5,391.14	5,384.04	18.46	17.07	-124.65	-211.93	91.50	149.18	114.15	35.03	4.259	
5,400.00	5,388.21	5,399.14	5,392.02	18.49	17.10	-124.75	-212.44	91.59	149.35	114.27	35.09	4.257	
5,482.00	5,469.92	5,481.12	5,473.82	18.75	17.39	-125.77	-217.69	92.51	151.23	115.57	35.66	4.241	
5,500.00	5,487.85	5,499.11	5,491.77	18.81	17.46	-125.81	-218.85	92.71	151.66	115.87	35.79	4.238	
5,571.00	5,558.59	5,570.09	5,562.60	19.04	17.71	-125.99	-223.39	93.51	153.39	117.10	36.29	4.227	
5,600.00	5,587.48	5,599.08	5,591.53	19.13	17.82	-126.03	-225.25	93.84	154.10	117.61	36.50	4.223	
5,659.00	5,646.26	5,658.06	5,650.38	19.32	18.03	-126.11	-229.03	94.51	155.54	118.63	36.91	4.214	
5,700.00	5,687.13	5,699.05	5,691.29	19.45	18.18	-124.71	-231.65	94.97	156.40	119.20	37.20	4.204	
5,750.00	5,736.99	5,749.04	5,741.17	19.62	18.36	-122.43	-234.85	95.53	157.11	119.56	37.55	4.184	
5,800.00	5,786.88	5,799.04	5,791.07	19.78	18.54	-124.48	-238.06	96.10	157.63	119.74	37.89	4.160	
5,839.00	5,825.79	5,838.03	5,829.98	19.91	18.68	-126.16	-240.55	96.54	158.06	119.91	38.15	4.143	
5,900.00	5,886.68	5,899.03	5,890.84	20.10	18.90	-130.20	-244.46	97.23	158.73	120.17	38.56	4.116	
5,929.00	5,915.64	5,928.02	5,919.77	20.20	19.00	-132.42	-246.32	97.55	159.04	120.29	38.75	4.104	
6,000.00	5,986.56	5,998.99	5,990.60	20.43	19.26	-139.69	-250.86	98.35	159.56	120.35	39.21	4.069	
6,020.00	6,006.55	6,018.98	6,010.54	20.49	19.33	-143.00	-252.14	98.58	159.62	120.29	39.34	4.058	
6,100.00	6,086.51	6,098.90	6,090.30	20.75	19.62	-140.76	-257.26	99.48	159.48	119.65	39.83	4.004	
6,109.00	6,095.51	6,107.89	6,099.27	20.78	19.65	-140.43	-257.84	99.58	159.42	119.54	39.88	3.997	
6,197.00	6,183.50	6,195.76	6,186.95	21.06	19.96	-138.22	-263.47	100.57	158.27	117.88	40.39	3.918	
6,200.00	6,186.50	6,198.76	6,189.94	21.07	19.98	-138.16	-263.66	100.61	158.21	117.80	40.41	3.915	
6,286.00	6,272.50	6,284.59	6,275.59	21.35	20.28	-115.42	-269.16	101.58	156.57	115.68	40.88	3.830	
6,300.00	6,286.50	6,298.56	6,289.53	21.39	20.34	-104.82	-270.05	101.73	156.30	115.35	40.96	3.816	
6,377.00	6,363.50	6,375.41	6,366.22	21.62	20.61	-70.71	-274.97	102.60	154.86	113.50	41.35	3.745	
6,400.00	6,386.50	6,398.37	6,389.12	21.69	20.70	-63.90	-276.45	102.86	154.42	112.96	41.46	3.724	
6,468.00	6,454.50	6,466.24	6,456.85	21.88	20.94	-49.89	-280.79	103.62	153.13	111.34	41.79	3.664	
6,500.00	6,486.50	6,498.17	6,488.72	21.97	21.06	-46.14	-282.84	103.98	152.53	110.59	41.94	3.637	
6,557.00	6,543.50	6,555.06	6,545.49	22.12	21.26	-40.15	-286.48	104.63	151.48	109.27	42.21	3.589	
6,600.00	6,586.50	6,597.98	6,588.32	22.24	21.42	-38.20	-289.23	105.11	150.71	108.30	42.41	3.554	
6,648.00	6,634.50	6,645.89	6,636.12	22.37	21.59	-36.01	-292.30	105.65	149.91	107.28	42.63	3.517	

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

Company:	Piedra Operating LLC	Local Co-ordinate Reference:	Well University 8-8E B H 9WC
Project:	Andrews County, TX (NAD83-TNC)	TVD Reference:	RKB @ 3054.00usft (Ensign T225)
Reference Site:	University 8-8	MD Reference:	RKB @ 3054.00usft (Ensign T225)
Site Error:	0.00	North Reference:	Grid
Reference Well:	University 8-8E B H 9WC	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00	Output errors are at	2.00 sigma
Reference Wellbore	OH / 72263	Database:	USAEDMDB
Reference Design:	Surveys (Ensign T225)	Offset TVD Reference:	Offset Datum

Offset Design University 8-8E B H 3MS - OH / 72265 - Plan 1 03-16-23												Offset Site Error:	0.00 usft
Survey Program: 15-MWD, 1835-MWD+HRGM+MS												Offset Well Error:	1.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Center		Distance			Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centers (usft)	Between Ellipses (usft)	Minimum Separation (usft)		
6,700.00	6,686.50	6,697.79	6,687.91	22.51	21.78	-35.65	-295.62	106.24	149.10	106.24	42.87	3.478	
6,737.00	6,723.50	6,734.71	6,724.76	22.61	21.91	-35.40	-297.99	106.65	148.58	105.54	43.03	3.453	
6,800.00	6,786.50	6,797.59	6,787.51	22.79	22.14	-37.71	-302.02	107.36	147.77	104.46	43.31	3.412	
6,826.00	6,812.49	6,823.54	6,813.40	22.86	22.22	-38.75	-303.68	107.65	147.48	104.05	43.42	3.396	
6,900.00	6,886.49	6,897.14	6,886.90	23.07	22.45	-25.58	-307.47	108.32	146.82	103.06	43.75	3.356	
6,918.00	6,904.49	6,915.07	6,904.81	23.12	22.52	-21.65	-308.11	108.44	146.69	102.85	43.85	3.346	
7,000.00	6,986.49	6,996.80	6,986.53	23.34	22.85	-21.10	-309.64	108.70	146.24	101.92	44.32	3.300	
7,009.00	6,995.49	7,005.78	6,995.51	23.37	22.87	-21.64	-309.67	108.71	146.20	101.83	44.37	3.295	
7,098.00	7,084.49	7,094.77	7,084.49	23.61	23.12	-17.08	-309.67	108.71	145.81	100.92	44.89	3.248	
7,100.00	7,086.49	7,096.77	7,086.49	23.62	23.12	-17.08	-309.67	108.71	145.80	100.90	44.90	3.247	
7,189.00	7,175.49	7,185.76	7,175.49	23.86	23.40	-11.29	-309.67	108.71	145.38	99.93	45.45	3.199	
7,200.00	7,186.49	7,196.76	7,186.49	23.89	23.44	-8.64	-309.67	108.71	145.32	99.81	45.52	3.193	
7,278.00	7,264.49	7,274.76	7,264.49	24.11	23.69	26.85	-309.67	108.71	145.03	99.03	46.00	3.153	
7,300.00	7,286.49	7,296.76	7,286.49	24.17	23.76	44.03	-309.67	108.71	144.98	98.84	46.14	3.142	
7,354.33	7,340.82	7,351.10	7,340.82	24.33	23.94	90.00	-309.67	108.71	144.93	98.46	46.47	3.118	
7,367.00	7,353.49	7,363.76	7,353.49	24.37	23.98	97.62	-309.67	108.71	144.93	98.38	46.55	3.113	
7,400.00	7,386.49	7,396.76	7,386.49	24.46	24.09	101.56	-309.67	108.71	144.95	98.20	46.75	3.101	
7,441.00	7,427.49	7,437.76	7,427.49	24.58	24.22	105.99	-309.67	108.71	144.99	97.99	46.99	3.085	
7,500.00	7,486.49	7,496.76	7,486.49	24.75	24.41	-175.83	-309.67	108.71	145.16	97.80	47.36	3.065	
7,577.00	7,563.49	7,573.76	7,563.49	24.96	24.66	-151.55	-309.67	108.71	145.73	97.88	47.85	3.045	
7,600.00	7,586.48	7,596.76	7,586.48	25.04	24.74	-148.77	-309.67	108.71	145.96	97.94	48.02	3.040	
7,668.00	7,654.48	7,664.75	7,654.48	25.26	24.96	-140.80	-309.67	108.71	146.60	98.10	48.50	3.023	
7,700.00	7,686.48	7,696.75	7,686.48	25.36	25.06	-125.94	-309.67	108.71	146.83	98.11	48.72	3.014	
7,758.00	7,744.48	7,754.75	7,744.48	25.55	25.25	-70.56	-309.67	108.71	146.91	97.80	49.11	2.992	
7,800.00	7,786.47	7,796.75	7,786.47	25.67	25.39	-17.87	-309.67	108.71	146.61	97.23	49.38	2.969	
7,848.00	7,834.47	7,844.74	7,834.47	25.82	25.55	-2.96	-309.67	108.71	145.76	96.08	49.68	2.934	
7,900.00	7,886.45	7,896.73	7,886.45	25.97	25.72	-6.40	-309.67	108.71	144.63	94.61	50.01	2.892	
7,938.00	7,924.45	7,934.72	7,924.45	26.07	25.85	-9.64	-309.67	108.71	143.90	93.64	50.26	2.863	
8,000.00	7,986.44	7,996.71	7,986.44	26.26	26.05	-23.16	-309.67	108.71	142.95	92.29	50.66	2.822	
8,028.00	8,014.44	8,024.71	8,014.44	26.34	26.14	-32.06	-309.67	108.71	142.62	91.78	50.84	2.805	
8,100.00	8,086.43	8,096.71	8,086.43	26.56	26.38	-66.14	-309.67	108.71	142.13	90.82	51.32	2.770	
8,117.00	8,103.43	8,113.71	8,103.43	26.61	26.44	-79.04	-309.67	108.71	142.09	90.67	51.43	2.763	
8,200.00	8,186.42	8,196.70	8,186.42	26.88	26.71	-49.81	-309.67	108.71	141.40	89.41	52.00	2.719	
8,206.00	8,192.42	8,202.69	8,192.42	26.90	26.73	-49.25	-309.67	108.71	141.31	89.27	52.04	2.715	
8,295.00	8,281.39	8,291.67	8,281.39	27.18	27.03	-53.29	-309.67	108.71	139.89	87.23	52.66	2.656	
8,300.00	8,286.39	8,296.66	8,286.39	27.20	27.04	-53.30	-309.67	108.71	139.82	87.12	52.70	2.653	
8,384.00	8,370.37	8,380.64	8,370.37	27.47	27.32	-53.31	-309.67	108.71	138.71	85.42	53.29	2.603	
8,400.00	8,386.37	8,396.64	8,386.37	27.52	27.38	-54.95	-309.67	108.71	138.53	85.14	53.40	2.594	
8,473.00	8,459.36	8,469.76	8,459.49	27.75	27.60	-65.03	-309.68	108.71	137.94	84.06	53.88	2.560	
8,500.00	8,486.35	8,497.83	8,487.54	27.84	27.68	-59.98	-310.53	108.82	137.61	83.56	54.05	2.546	
8,562.00	8,548.34	8,561.67	8,550.96	28.04	27.97	-52.49	-317.52	109.73	135.82	81.54	54.28	2.502	
8,600.00	8,586.32	8,599.92	8,588.44	28.17	28.17	-59.70	-325.05	110.71	134.48	80.16	54.32	2.476	
8,651.00	8,637.29	8,649.61	8,636.22	28.34	28.42	-67.07	-338.49	112.45	133.47	79.23	54.24	2.461	SF
8,658.46	8,644.75	8,656.69	8,642.93	28.36	28.46	-66.84	-340.74	112.75	133.45	79.24	54.22	2.461	
8,700.00	8,686.25	8,695.21	8,678.89	28.51	28.65	-63.98	-354.41	114.52	134.11	80.08	54.03	2.482	

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

Company:	Piedra Operating LLC	Local Co-ordinate Reference:	Well University 8-8E B H 9WC
Project:	Andrews County, TX (NAD83-TNC)	TVD Reference:	RKB @ 3054.00usft (Ensign T225)
Reference Site:	University 8-8	MD Reference:	RKB @ 3054.00usft (Ensign T225)
Site Error:	0.00	North Reference:	Grid
Reference Well:	University 8-8E B H 9WC	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00	Output errors are at	2.00 sigma
Reference Wellbore	OH / 72263	Database:	USAEDMDB
Reference Design:	Surveys (Ensign T225)	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.00 usft
Survey Program: 15-MWD, 1835-MWD+HRGM+MS												Offset Well Error:	1.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Center		Distance			Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centers (usft)	Between Ellipses (usft)	Minimum Separation (usft)		
8,741.00	8,727.19	8,731.60	8,711.95	28.65	28.83	-59.66	-369.49	116.48	136.44	82.70	53.74	2.539	
8,800.00	8,786.09	8,780.72	8,754.90	28.86	29.07	-49.14	-393.08	119.54	144.02	90.94	53.08	2.713	
8,832.00	8,818.04	8,805.60	8,775.85	28.98	29.18	-43.46	-406.41	121.27	150.73	98.14	52.59	2.866	
8,900.00	8,885.96	8,850.00	8,811.69	29.22	29.38	-44.51	-432.37	124.65	172.20	121.18	51.02	3.375	
8,921.00	8,906.95	8,867.89	8,825.54	29.30	29.46	-46.50	-443.60	126.10	180.76	129.87	50.89	3.552	
9,000.00	8,985.91	8,915.27	8,860.44	29.58	29.66	-43.58	-475.35	130.23	219.76	170.48	49.28	4.459	
9,010.00	8,995.90	8,920.80	8,864.35	29.61	29.68	-43.29	-479.24	130.73	225.33	176.25	49.09	4.590	
9,100.00	9,085.85	8,966.31	8,894.95	29.93	29.86	-33.23	-512.62	135.07	280.65	233.21	47.44	5.916	
9,101.00	9,086.85	8,966.78	8,895.25	29.93	29.87	-33.13	-512.98	135.12	281.31	233.89	47.42	5.932	
9,191.00	9,176.81	9,000.00	8,915.84	30.25	29.99	-43.34	-538.83	138.47	344.42	298.74	45.68	7.539	
9,200.00	9,185.81	9,000.00	8,915.84	30.28	29.99	-43.94	-538.83	138.47	351.18	305.85	45.33	7.747	
9,280.00	9,265.78	9,037.43	8,937.18	30.55	30.13	-46.26	-569.32	142.43	412.24	367.32	44.93	9.176	
9,300.00	9,285.78	9,050.00	8,943.88	30.62	30.17	-47.66	-579.86	143.80	428.17	383.11	45.06	9.502	
9,370.00	9,355.77	9,065.07	8,951.62	30.86	30.23	-61.68	-592.69	145.47	485.09	441.06	44.03	11.017	
9,400.00	9,385.77	9,073.33	8,955.71	30.96	30.25	-60.30	-599.80	146.39	510.12	466.34	43.78	11.653	
9,461.00	9,446.76	9,100.00	8,968.22	31.16	30.35	-57.18	-623.16	149.42	562.03	518.19	43.83	12.822	
9,499.00	9,484.75	9,100.00	8,968.22	31.28	30.35	-67.77	-623.16	149.42	594.55	551.39	43.16	13.777	
9,500.00	9,485.75	9,100.00	8,968.22	31.29	30.35	-67.14	-623.16	149.42	595.41	552.28	43.14	13.802	
9,550.00	9,535.74	9,100.00	8,968.22	31.45	30.35	-31.66	-623.16	149.42	639.08	596.70	42.38	15.080	
9,600.00	9,585.48	9,121.16	8,977.35	32.13	30.42	-0.27	-642.08	151.88	680.96	638.13	42.83	15.898	
9,639.00	9,623.45	9,131.49	8,981.55	32.75	30.45	1.26	-651.44	153.10	711.19	668.35	42.84	16.601	
9,700.00	9,681.20	9,150.00	8,988.65	34.27	30.51	3.60	-668.39	155.30	755.65	712.28	43.37	17.423	
9,730.00	9,708.95	9,150.00	8,988.65	35.08	30.51	3.99	-668.39	155.30	776.86	733.61	43.25	17.962	
9,800.00	9,772.39	9,175.89	8,997.65	35.52	30.59	4.73	-692.47	158.43	825.29	782.11	43.18	19.112	
9,820.00	9,790.21	9,181.29	8,999.39	35.65	30.61	4.84	-697.53	159.08	839.03	795.93	43.09	19.469	
9,900.00	9,860.42	9,200.00	9,005.04	36.07	30.67	1.69	-715.22	161.38	893.81	851.34	42.47	21.045	
9,909.00	9,868.21	9,200.00	9,005.04	36.12	30.67	1.33	-715.22	161.38	899.98	857.65	42.33	21.260	
9,998.00	9,941.93	9,230.22	9,012.92	36.93	30.77	-1.29	-744.16	165.14	957.81	915.63	42.18	22.706	
10,000.00	9,943.51	9,230.80	9,013.06	36.95	30.77	-1.29	-744.71	165.21	959.04	916.86	42.19	22.733	

Company:	Piedra Operating LLC	Local Co-ordinate Reference:	Well University 8-8E B H 9WC
Project:	Andrews County, TX (NAD83-TNC)	TVD Reference:	RKB @ 3054.00usft (Ensign T225)
Reference Site:	University 8-8	MD Reference:	RKB @ 3054.00usft (Ensign T225)
Site Error:	0.00	North Reference:	Grid
Reference Well:	University 8-8E B H 9WC	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00	Output errors are at	2.00 sigma
Reference Wellbore	OH / 72263	Database:	USAEDMDB
Reference Design:	Surveys (Ensign T225)	Offset TVD Reference:	Offset Datum

Offset Design University 8-8E B H 3MS - OH / 72265 - Surveys (Ensign T225)												Offset Site Error:	0.00 usft
Survey Program: 15-MWD, 1900-MWD+HRGM+MS												Offset Well Error:	1.00 usft
Reference		Offset		Semi Major Axis			Offset Wellbore Center		Distance			Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centers (usft)	Between Ellipses (usft)	Minimum Separation (usft)		
0.00	0.00	0.00	0.00	1.00	1.00	76.91	11.33	48.71	50.01				
15.00	15.00	15.00	15.00	1.00	1.00	76.91	11.33	48.71	50.01				
100.00	100.00	100.14	100.14	1.86	1.34	-88.49	11.08	48.64	49.89	46.70	3.19	15.628	
200.00	200.00	200.26	200.26	3.79	2.09	-87.96	10.15	48.40	49.44	43.57	5.87	8.429	
300.00	300.00	300.35	300.34	5.83	2.39	-87.77	9.24	48.13	48.95	40.76	8.19	5.977	
361.00	360.99	361.74	361.73	7.09	2.57	-88.13	8.85	47.52	48.25	38.64	9.61	5.018	
400.00	399.99	400.75	400.73	7.21	2.67	-95.45	8.63	46.95	47.67	37.84	9.83	4.850	
500.00	499.99	500.34	500.31	7.50	2.94	-113.56	8.04	45.71	46.57	36.21	10.36	4.494	
513.12	513.11	513.35	513.32	7.53	2.98	-115.76	7.97	45.65	46.56	36.12	10.43	4.463	CC
539.00	538.99	539.02	538.99	7.61	3.04	-119.90	7.85	45.62	46.62	36.06	10.57	4.412	
600.00	599.98	600.13	600.10	7.67	3.20	-147.29	7.45	45.64	46.93	36.18	10.75	4.365	
628.00	627.98	628.19	628.16	7.70	3.27	-162.89	7.18	45.62	47.05	36.22	10.84	4.343	
700.00	699.98	700.05	700.01	7.77	3.45	-131.02	6.33	45.66	47.39	36.34	11.04	4.291	
717.00	716.98	717.02	716.98	7.79	3.49	-124.53	6.10	45.70	47.48	36.38	11.09	4.279	
800.00	799.97	800.14	800.10	7.88	3.70	-133.56	5.24	45.79	47.93	36.60	11.33	4.230	
805.00	804.97	805.15	805.11	7.89	3.71	-134.00	5.21	45.78	47.95	36.61	11.34	4.227	
890.00	889.97	890.00	889.95	7.98	3.90	-166.64	4.70	45.87	48.67	37.10	11.57	4.208	
900.00	899.97	899.88	899.84	7.99	3.92	-164.62	4.65	45.90	48.79	37.20	11.59	4.209	
976.00	975.96	975.67	975.62	8.07	4.05	-151.59	4.40	46.33	49.85	38.09	11.77	4.236	
1,000.00	999.96	999.79	999.74	8.10	4.10	-155.83	4.33	46.49	50.21	38.38	11.83	4.244	
1,064.00	1,063.96	1,064.12	1,064.07	8.17	4.22	-171.59	3.91	46.66	50.82	38.82	11.99	4.237	
1,100.00	1,099.96	1,099.66	1,099.61	8.21	4.27	-158.89	3.64	46.81	51.15	39.10	12.05	4.244	
1,153.00	1,152.96	1,152.86	1,152.80	8.27	4.37	-131.96	3.40	47.21	51.75	39.57	12.18	4.248	
1,194.00	1,193.96	1,194.17	1,194.11	8.31	4.45	-143.06	3.24	47.25	51.97	39.71	12.27	4.236	
1,200.00	1,199.96	1,200.17	1,200.12	8.32	4.46	-141.66	3.21	47.23	52.00	39.71	12.29	4.231	
1,300.00	1,299.95	1,299.79	1,299.74	8.52	4.66	-120.10	2.82	47.44	52.74	40.11	12.63	4.176	
1,333.00	1,332.95	1,332.88	1,332.82	8.59	4.73	-114.18	2.66	47.59	53.00	40.27	12.74	4.162	
1,400.00	1,399.95	1,400.10	1,400.04	8.68	4.87	-135.71	2.24	47.72	53.47	40.57	12.91	4.143	
1,421.00	1,420.95	1,421.20	1,421.14	8.71	4.91	-141.56	2.11	47.69	53.60	40.64	12.96	4.135	
1,500.00	1,499.94	1,500.36	1,500.30	8.93	5.06	-110.08	1.71	47.27	53.62	40.34	13.29	4.036	
1,597.00	1,596.93	1,597.38	1,597.31	9.20	5.24	-73.75	1.37	46.74	53.02	39.33	13.70	3.871	
1,600.00	1,599.93	1,600.38	1,600.32	9.20	5.25	-73.24	1.35	46.73	52.99	39.29	13.70	3.867	
1,685.00	1,684.93	1,685.50	1,685.43	9.29	5.42	-51.47	0.60	46.15	51.84	37.94	13.90	3.729	
1,700.00	1,699.93	1,700.51	1,700.44	9.33	5.45	-51.51	0.49	46.02	51.61	37.68	13.93	3.705	
1,800.00	1,799.92	1,800.27	1,800.20	9.72	5.68	-51.82	-0.21	45.32	50.13	35.98	14.15	3.542	
1,900.00	1,899.92	1,900.00	1,899.92	10.13	5.82	-51.99	-1.01	45.12	49.04	34.72	14.31	3.427	
1,954.88	1,954.79	1,954.76	1,954.69	10.29	5.86	-83.33	-1.25	45.12	48.71	34.32	14.39	3.385	ES
1,990.00	1,989.90	1,989.67	1,989.59	10.39	5.89	-92.47	-1.47	45.34	48.84	34.39	14.45	3.380	
2,000.00	1,999.90	1,999.47	1,999.39	10.41	5.91	-95.17	-1.54	45.45	48.94	34.47	14.47	3.382	
2,079.00	2,078.81	2,076.82	2,076.69	10.56	6.10	-105.46	-2.62	47.88	51.72	37.04	14.68	3.524	
2,100.00	2,099.77	2,097.46	2,097.29	10.60	6.18	-106.72	-3.08	48.99	53.02	38.23	14.79	3.584	
2,168.00	2,167.59	2,164.21	2,163.83	10.73	6.50	-109.49	-5.33	53.73	58.36	43.33	15.03	3.882	
2,200.00	2,199.48	2,196.17	2,195.64	10.77	6.64	-111.00	-6.82	56.45	61.31	46.20	15.11	4.058	
2,257.00	2,256.29	2,253.27	2,252.44	10.83	6.86	-113.10	-10.12	61.29	66.49	51.25	15.24	4.363	
2,300.00	2,299.15	2,296.05	2,294.97	10.88	6.96	-114.93	-12.94	64.93	70.45	55.10	15.35	4.590	
2,347.00	2,345.98	2,342.75	2,341.40	10.93	7.08	-116.87	-16.02	68.94	75.00	59.54	15.47	4.849	

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

Company:	Piedra Operating LLC	Local Co-ordinate Reference:	Well University 8-8E B H 9WC
Project:	Andrews County, TX (NAD83-TNC)	TVD Reference:	RKB @ 3054.00usft (Ensign T225)
Reference Site:	University 8-8	MD Reference:	RKB @ 3054.00usft (Ensign T225)
Site Error:	0.00	North Reference:	Grid
Reference Well:	University 8-8E B H 9WC	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00	Output errors are at	2.00 sigma
Reference Wellbore	OH / 72263	Database:	USAEDMDB
Reference Design:	Surveys (Ensign T225)	Offset TVD Reference:	Offset Datum

Offset Design University 8-8E B H 3MS - OH / 72265 - Surveys (Ensign T225)												Offset Site Error:	0.00 usft
Survey Program: 15-MWD, 1900-MWD+HRGM+MS												Offset Well Error:	1.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Center		Distance			Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centers (usft)	Between Ellipses (usft)	Minimum Separation (usft)		
2,400.00	2,398.80	2,396.18	2,394.52	11.00	7.20	-116.08	-19.64	73.38	80.07	64.44	15.63	5.124	
2,437.00	2,435.66	2,433.58	2,431.72	11.04	7.29	-115.56	-22.29	76.20	83.30	67.56	15.74	5.293	
2,500.00	2,498.44	2,496.83	2,494.65	11.12	7.43	-114.71	-26.88	80.59	88.38	72.43	15.94	5.543	
2,526.00	2,524.35	2,522.93	2,520.62	11.16	7.49	-114.39	-28.78	82.31	90.38	74.34	16.03	5.638	
2,600.00	2,598.10	2,599.05	2,596.39	11.27	7.68	-113.45	-34.82	86.44	95.09	78.72	16.37	5.809	
2,617.00	2,615.04	2,616.58	2,613.84	11.29	7.72	-113.20	-36.36	87.15	95.91	79.47	16.45	5.832	
2,700.00	2,697.75	2,699.68	2,696.54	11.42	7.93	-111.24	-43.90	90.25	99.56	82.72	16.85	5.909	
2,706.00	2,703.73	2,705.69	2,702.51	11.43	7.95	-111.10	-44.45	90.47	99.82	82.94	16.88	5.914	
2,794.00	2,791.41	2,796.79	2,793.18	11.58	8.14	-110.03	-53.13	92.38	102.19	84.85	17.35	5.892	
2,800.00	2,797.39	2,802.81	2,799.17	11.59	8.15	-109.97	-53.72	92.41	102.26	84.88	17.38	5.883	
2,884.00	2,881.08	2,887.14	2,883.08	11.74	8.34	-108.83	-62.14	92.77	103.09	85.24	17.86	5.774	
2,900.00	2,897.02	2,903.11	2,898.96	11.77	8.38	-108.53	-63.75	92.82	103.22	85.29	17.93	5.756	
2,973.00	2,969.75	2,975.95	2,971.44	11.91	8.55	-107.24	-71.06	93.10	103.89	85.60	18.29	5.680	
3,000.00	2,996.65	3,003.00	2,998.35	11.96	8.62	-107.82	-73.77	93.21	104.16	85.73	18.43	5.653	
3,063.00	3,059.41	3,066.10	3,061.13	12.09	8.77	-109.16	-80.06	93.41	104.86	86.11	18.74	5.594	
3,100.00	3,096.27	3,103.00	3,097.86	12.16	8.87	-109.94	-83.73	93.53	105.34	86.41	18.93	5.564	
3,152.00	3,148.09	3,154.86	3,149.45	12.27	9.01	-111.04	-88.90	93.74	106.16	86.96	19.20	5.529	
3,200.00	3,195.92	3,202.62	3,196.97	12.37	9.14	-109.60	-93.69	94.03	107.00	87.56	19.45	5.503	
3,243.00	3,238.78	3,245.40	3,239.53	12.46	9.26	-108.23	-98.04	94.38	107.78	88.12	19.66	5.481	
3,300.00	3,295.59	3,302.20	3,296.04	12.58	9.42	-107.32	-103.82	94.95	108.88	88.93	19.95	5.457	
3,332.00	3,327.48	3,334.11	3,327.77	12.65	9.51	-106.84	-107.05	95.30	109.55	89.43	20.11	5.446	
3,400.00	3,395.26	3,402.23	3,395.54	12.81	9.72	-104.87	-113.95	96.03	110.89	90.42	20.47	5.418	
3,421.00	3,416.19	3,423.26	3,416.46	12.86	9.78	-104.26	-116.08	96.23	111.26	90.69	20.57	5.408	
3,500.00	3,494.93	3,502.24	3,495.04	13.04	10.02	-101.85	-123.97	96.98	112.56	91.57	20.99	5.363	
3,510.00	3,504.90	3,512.23	3,504.99	13.07	10.05	-101.54	-124.95	97.07	112.71	91.67	21.04	5.357	
3,599.00	3,593.64	3,601.09	3,593.40	13.28	10.32	-99.03	-133.75	97.93	114.00	92.49	21.51	5.301	
3,600.00	3,594.63	3,602.09	3,594.39	13.29	10.33	-99.02	-133.85	97.94	114.01	92.50	21.51	5.300	
3,688.00	3,682.36	3,689.72	3,681.59	13.50	10.60	-99.68	-142.63	98.98	115.54	93.57	21.98	5.257	
3,700.00	3,694.31	3,701.72	3,693.52	13.54	10.64	-99.75	-143.83	99.14	115.79	93.75	22.04	5.253	
3,777.00	3,771.05	3,778.69	3,770.10	13.73	10.89	-100.24	-151.48	100.15	117.49	95.02	22.47	5.229	
3,800.00	3,793.96	3,801.65	3,792.95	13.79	10.96	-99.67	-153.74	100.46	118.01	95.42	22.60	5.223	
3,867.00	3,860.73	3,868.55	3,859.53	13.97	11.18	-98.07	-160.20	101.37	119.51	96.53	22.98	5.201	
3,900.00	3,893.62	3,901.69	3,892.52	14.05	11.29	-97.52	-163.38	101.81	120.20	97.03	23.17	5.189	
3,957.00	3,950.43	3,958.93	3,949.48	14.21	11.48	-96.51	-168.96	102.47	121.25	97.76	23.49	5.162	
4,000.00	3,993.28	4,002.00	3,992.34	14.32	11.63	-97.09	-173.15	102.91	122.01	98.27	23.74	5.139	
4,047.00	4,040.11	4,049.06	4,039.19	14.45	11.78	-97.78	-177.62	103.36	122.88	98.86	24.02	5.116	
4,100.00	4,092.91	4,101.77	4,091.65	14.60	11.96	-98.76	-182.63	103.90	124.02	99.68	24.34	5.096	
4,138.00	4,130.75	4,139.56	4,129.27	14.70	12.09	-99.42	-186.29	104.37	124.98	100.41	24.57	5.087	
4,200.00	4,192.50	4,201.68	4,191.09	14.87	12.30	-99.36	-192.22	105.15	126.62	101.67	24.95	5.075	
4,227.00	4,219.38	4,228.72	4,218.02	14.95	12.39	-99.38	-194.74	105.46	127.32	102.20	25.12	5.069	
4,300.00	4,292.08	4,301.63	4,290.60	15.15	12.64	-99.77	-201.57	106.32	129.24	103.67	25.57	5.054	
4,316.00	4,308.01	4,317.61	4,306.50	15.20	12.69	-99.84	-203.10	106.52	129.68	104.00	25.67	5.051	
4,400.00	4,391.67	4,401.69	4,390.21	15.44	12.98	-99.41	-210.99	107.51	131.91	105.71	26.20	5.034	
4,405.00	4,396.65	4,406.69	4,395.19	15.45	13.00	-99.39	-211.45	107.56	132.04	105.81	26.23	5.033	
4,494.00	4,485.29	4,495.61	4,483.74	15.71	13.30	-99.27	-219.54	108.58	134.35	107.54	26.80	5.013	

Company:	Piedra Operating LLC	Local Co-ordinate Reference:	Well University 8-8E B H 9WC
Project:	Andrews County, TX (NAD83-TNC)	TVD Reference:	RKB @ 3054.00usft (Ensign T225)
Reference Site:	University 8-8	MD Reference:	RKB @ 3054.00usft (Ensign T225)
Site Error:	0.00	North Reference:	Grid
Reference Well:	University 8-8E B H 9WC	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00	Output errors are at	2.00 sigma
Reference Wellbore	OH / 72263	Database:	USAEDMDB
Reference Design:	Surveys (Ensign T225)	Offset TVD Reference:	Offset Datum

Offset Design University 8-8E B H 3MS - OH / 72265 - Surveys (Ensign T225)												Offset Site Error:	0.00 usft
Survey Program: 15-MWD, 1900-MWD+HRGM+MS												Offset Well Error:	1.00 usft
Reference		Offset		Semi Major Axis			Offset Wellbore Center		Distance			Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centers (usft)	Between Ellipses (usft)	Minimum Separation (usft)		
4,500.00	4,491.26	4,501.61	4,489.70	15.73	13.32	-99.17	-220.08	108.65	134.50	107.66	26.84	5.011	
4,583.00	4,573.94	4,584.52	4,572.29	15.97	13.61	-97.94	-227.39	109.64	136.59	109.21	27.37	4.990	
4,600.00	4,590.87	4,601.78	4,589.49	16.02	13.68	-97.88	-228.82	109.84	136.98	109.50	27.49	4.983	
4,675.00	4,665.58	4,677.86	4,665.40	16.24	13.98	-98.14	-233.87	110.29	138.32	110.30	28.02	4.937	
4,700.00	4,690.49	4,702.80	4,690.30	16.32	14.08	-98.40	-235.24	110.34	138.67	110.46	28.20	4.917	
4,766.00	4,756.24	4,768.63	4,756.03	16.52	14.34	-99.02	-238.94	110.52	139.63	110.95	28.68	4.868	
4,800.00	4,790.11	4,802.48	4,789.82	16.62	14.45	-98.80	-240.85	110.65	140.15	111.22	28.93	4.844	
4,855.00	4,844.91	4,857.23	4,844.49	16.79	14.64	-98.44	-243.85	110.93	141.00	111.67	29.33	4.807	
4,900.00	4,889.76	4,902.20	4,889.39	16.93	14.79	-99.45	-246.23	111.18	141.71	112.05	29.66	4.778	
4,944.00	4,933.61	4,946.17	4,933.31	17.06	14.94	-100.45	-248.49	111.43	142.44	112.46	29.98	4.752	
5,000.00	4,989.43	5,002.43	4,989.50	17.23	15.13	-100.89	-251.30	111.69	143.32	112.93	30.39	4.716	
5,034.00	5,023.32	5,036.59	5,023.62	17.34	15.25	-101.13	-252.96	111.78	143.79	113.15	30.64	4.693	
5,100.00	5,089.13	5,102.80	5,089.76	17.54	15.47	-101.56	-256.05	111.86	144.58	113.45	31.13	4.645	
5,123.00	5,112.06	5,125.85	5,112.78	17.61	15.55	-101.73	-257.08	111.85	144.83	113.53	31.30	4.627	
5,200.00	5,188.83	5,202.53	5,189.38	17.85	15.81	-101.36	-260.55	111.91	145.67	113.80	31.87	4.571	
5,212.00	5,200.80	5,214.50	5,201.34	17.89	15.85	-101.29	-261.10	111.93	145.80	113.84	31.96	4.562	
5,300.00	5,288.54	5,302.85	5,289.59	18.17	16.15	-101.53	-265.12	111.98	146.66	114.04	32.62	4.496	
5,303.00	5,291.53	5,305.83	5,292.58	18.18	16.16	-101.54	-265.25	111.97	146.69	114.05	32.64	4.494	
5,392.00	5,380.23	5,394.44	5,381.09	18.46	16.47	-100.94	-269.29	112.02	147.53	114.21	33.32	4.428	
5,400.00	5,388.21	5,402.47	5,389.12	18.49	16.49	-101.12	-269.66	112.04	147.61	114.23	33.38	4.422	
5,482.00	5,469.92	5,484.83	5,471.39	18.75	16.78	-103.10	-273.30	112.00	148.39	114.38	34.02	4.362	
5,500.00	5,487.85	5,502.88	5,489.43	18.81	16.84	-103.36	-274.08	111.96	148.56	114.40	34.16	4.349	
5,571.00	5,558.59	5,574.06	5,560.53	19.04	17.08	-104.38	-277.27	111.75	149.17	114.46	34.72	4.297	
5,600.00	5,587.48	5,602.85	5,589.29	19.13	17.18	-104.76	-278.56	111.66	149.44	114.50	34.94	4.277	
5,659.00	5,646.26	5,661.41	5,647.80	19.32	17.38	-105.55	-281.07	111.56	150.11	114.71	35.40	4.240	
5,700.00	5,687.13	5,702.24	5,688.60	19.45	17.52	-104.68	-282.65	111.53	150.58	114.86	35.72	4.215	
5,750.00	5,736.99	5,752.02	5,738.36	19.62	17.69	-103.11	-284.34	111.48	150.99	114.89	36.11	4.182	
5,800.00	5,786.88	5,801.77	5,788.09	19.78	17.86	-105.98	-285.62	111.39	151.41	114.92	36.50	4.149	
5,839.00	5,825.79	5,840.56	5,826.87	19.91	17.99	-108.44	-286.27	111.27	151.87	115.06	36.80	4.127	
5,900.00	5,886.68	5,901.52	5,887.83	20.10	18.20	-113.76	-287.10	111.06	152.75	115.46	37.28	4.097	
5,929.00	5,915.64	5,930.51	5,916.81	20.20	18.30	-116.58	-287.51	110.96	153.22	115.71	37.51	4.085	
6,000.00	5,986.56	6,001.39	5,987.68	20.43	18.54	-125.27	-288.55	110.74	154.34	116.30	38.04	4.058	
6,020.00	6,006.55	6,021.35	6,007.64	20.49	18.60	-128.97	-288.85	110.69	154.63	116.45	38.18	4.050	
6,100.00	6,086.51	6,100.94	6,087.22	20.75	18.87	-128.25	-289.92	110.56	155.60	116.86	38.74	4.016	
6,109.00	6,095.51	6,109.90	6,096.18	20.78	18.90	-128.10	-290.02	110.56	155.69	116.88	38.81	4.012	
6,197.00	6,183.50	6,197.92	6,184.19	21.06	19.20	-127.55	-291.04	110.50	155.99	116.59	39.40	3.959	
6,200.00	6,186.50	6,200.93	6,187.20	21.07	19.21	-127.54	-291.07	110.49	155.98	116.56	39.42	3.957	
6,286.00	6,272.50	6,287.17	6,273.44	21.35	19.51	-106.36	-292.19	110.39	155.63	115.66	39.97	3.893	
6,300.00	6,286.50	6,301.20	6,287.46	21.39	19.56	-96.01	-292.39	110.37	155.55	115.49	40.06	3.883	
6,377.00	6,363.50	6,378.35	6,364.61	21.62	19.82	-63.28	-293.54	110.21	154.98	114.44	40.54	3.823	
6,400.00	6,386.50	6,401.26	6,387.52	21.69	19.90	-56.88	-293.89	110.16	154.78	114.10	40.68	3.805	
6,468.00	6,454.50	6,469.00	6,455.25	21.88	20.13	-44.11	-294.91	110.09	154.17	113.09	41.09	3.752	
6,500.00	6,486.50	6,500.95	6,487.19	21.97	20.25	-40.94	-295.38	110.08	153.88	112.61	41.28	3.728	
6,557.00	6,543.50	6,557.85	6,544.09	22.12	20.44	-36.00	-296.24	110.11	153.36	111.75	41.62	3.685	
6,600.00	6,586.50	6,600.92	6,587.16	22.24	20.59	-34.84	-296.89	110.13	152.96	111.08	41.88	3.653	
6,648.00	6,634.50	6,649.01	6,635.23	22.37	20.76	-33.56	-297.62	110.12	152.48	110.31	42.16	3.616	

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

Company:	Piedra Operating LLC	Local Co-ordinate Reference:	Well University 8-8E B H 9WC
Project:	Andrews County, TX (NAD83-TNC)	TVD Reference:	RKB @ 3054.00usft (Ensign T225)
Reference Site:	University 8-8	MD Reference:	RKB @ 3054.00usft (Ensign T225)
Site Error:	0.00	North Reference:	Grid
Reference Well:	University 8-8E B H 9WC	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00	Output errors are at	2.00 sigma
Reference Wellbore	OH / 72263	Database:	USAEDMDB
Reference Design:	Surveys (Ensign T225)	Offset TVD Reference:	Offset Datum

Offset Design University 8-8E B H 3MS - OH / 72265 - Surveys (Ensign T225)												Offset Site Error:	0.00 usft
Survey Program: 15-MWD, 1900-MWD+HRGM+MS												Offset Well Error:	1.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Center		Distance			Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centers (usft)	Between Ellipses (usft)	Minimum Separation (usft)		
6,700.00	6,686.50	6,700.98	6,687.20	22.51	20.94	-34.19	-298.41	110.11	151.95	109.47	42.48	3.577	
6,737.00	6,723.50	6,737.96	6,724.18	22.61	21.07	-34.65	-298.98	110.10	151.58	108.88	42.70	3.550	
6,800.00	6,786.50	6,800.86	6,787.07	22.79	21.29	-38.19	-299.93	110.11	151.00	107.92	43.08	3.505	
6,826.00	6,812.49	6,826.82	6,813.02	22.86	21.38	-39.74	-300.32	110.13	150.78	107.55	43.23	3.488	
6,900.00	6,886.49	6,901.11	6,887.31	23.07	21.64	-27.64	-301.46	110.12	150.11	106.43	43.68	3.436	
6,918.00	6,904.49	6,919.18	6,905.38	23.12	21.70	-23.86	-301.75	110.10	149.93	106.14	43.79	3.424	
7,000.00	6,986.49	7,001.33	6,987.51	23.34	21.99	-23.43	-303.12	109.94	149.05	104.76	44.29	3.365	
7,009.00	6,995.49	7,010.34	6,996.52	23.37	22.02	-23.93	-303.28	109.92	148.95	104.61	44.35	3.359	
7,098.00	7,084.49	7,099.24	7,085.41	23.61	22.33	-18.83	-304.79	109.72	147.99	103.10	44.89	3.297	
7,100.00	7,086.49	7,101.25	7,087.41	23.62	22.33	-18.82	-304.82	109.72	147.97	103.06	44.90	3.295	
7,189.00	7,175.49	7,190.47	7,176.62	23.86	22.64	-12.51	-306.30	109.46	146.92	101.47	45.45	3.233	
7,200.00	7,186.49	7,201.49	7,187.65	23.89	22.68	-9.79	-306.48	109.42	146.78	101.27	45.52	3.225	
7,278.00	7,264.49	7,279.66	7,265.81	24.11	22.95	26.17	-307.80	109.08	145.83	99.83	46.00	3.170	
7,300.00	7,286.49	7,301.77	7,287.91	24.17	23.02	43.48	-308.17	108.95	145.58	99.44	46.14	3.155	
7,367.00	7,353.49	7,369.09	7,355.22	24.37	23.25	97.44	-309.24	108.46	144.80	98.24	46.55	3.110	
7,400.00	7,386.49	7,402.13	7,388.25	24.46	23.36	101.55	-309.76	108.17	144.42	97.67	46.75	3.089	
7,441.00	7,427.49	7,443.20	7,429.31	24.58	23.49	106.22	-310.46	107.81	143.94	96.95	46.99	3.063	
7,500.00	7,486.49	7,502.38	7,488.49	24.75	23.72	-175.21	-311.60	107.26	143.33	95.95	47.39	3.025	
7,577.00	7,563.49	7,579.58	7,565.66	24.96	24.02	-150.34	-313.29	106.46	142.77	94.85	47.91	2.980	
7,600.00	7,586.48	7,601.95	7,588.02	25.04	24.10	-147.40	-313.76	106.26	142.69	94.62	48.07	2.968	
7,606.66	7,593.15	7,608.43	7,594.51	25.06	24.12	-146.56	-313.88	106.22	142.69	94.57	48.11	2.966	
7,668.00	7,654.48	7,668.00	7,654.07	25.26	24.34	-139.11	-314.61	106.15	143.02	94.48	48.54	2.946	
7,700.00	7,686.48	7,699.85	7,685.92	25.36	24.45	-124.16	-314.84	106.29	143.34	94.59	48.75	2.941	
7,758.00	7,744.48	7,757.40	7,743.46	25.55	24.64	-68.57	-315.31	106.71	143.73	94.62	49.11	2.927	
7,800.00	7,786.47	7,799.07	7,785.12	25.67	24.77	-15.68	-315.70	107.14	143.76	94.41	49.36	2.913	
7,848.00	7,834.47	7,846.68	7,832.73	25.82	24.93	-0.51	-316.20	107.76	143.43	93.79	49.64	2.890	
7,900.00	7,886.45	7,898.20	7,884.24	25.97	25.08	-3.72	-316.58	108.56	143.01	93.06	49.94	2.863	
7,938.00	7,924.45	7,935.84	7,921.88	26.07	25.20	-6.88	-316.62	109.21	142.91	92.74	50.17	2.848	
7,938.51	7,924.95	7,936.34	7,922.38	26.08	25.20	-6.88	-316.62	109.22	142.91	92.74	50.17	2.848	
8,000.00	7,986.44	7,998.12	7,984.15	26.26	25.38	-20.34	-316.53	110.28	143.01	92.45	50.56	2.828	
8,028.00	8,014.44	8,026.26	8,012.29	26.34	25.47	-29.20	-316.51	110.72	143.11	92.37	50.74	2.820	
8,100.00	8,086.43	8,098.28	8,084.30	26.56	25.68	-63.19	-316.48	111.81	143.67	92.47	51.20	2.806	
8,117.00	8,103.43	8,115.29	8,101.30	26.61	25.73	-76.08	-316.47	112.06	143.88	92.57	51.30	2.804	
8,200.00	8,186.42	8,197.73	8,183.73	26.88	25.98	-46.68	-316.52	113.47	144.51	92.68	51.83	2.788	
8,206.00	8,192.42	8,203.69	8,189.69	26.90	26.00	-46.11	-316.53	113.59	144.52	92.65	51.87	2.786	
8,295.00	8,281.39	8,292.54	8,278.53	27.18	26.27	-49.78	-316.94	115.44	144.74	92.29	52.44	2.760	
8,300.00	8,286.39	8,297.63	8,283.61	27.20	26.29	-49.77	-316.99	115.55	144.75	92.27	52.48	2.758	
8,384.00	8,370.37	8,384.40	8,370.33	27.47	26.64	-48.64	-319.53	116.93	144.35	91.31	53.05	2.721	
8,400.00	8,386.37	8,401.11	8,387.00	27.52	26.79	-49.85	-320.60	117.11	144.13	90.96	53.17	2.711	
8,473.00	8,459.36	8,476.10	8,461.16	27.75	27.53	-55.59	-331.35	118.02	142.62	89.07	53.55	2.663	
8,500.00	8,486.35	8,502.63	8,487.03	27.84	27.83	-48.49	-337.21	118.40	142.11	88.51	53.60	2.651	
8,555.51	8,541.85	8,556.13	8,538.63	28.02	28.48	-38.38	-351.25	119.35	141.56	87.94	53.62	2.640	SF
8,562.00	8,548.34	8,562.28	8,544.51	28.04	28.56	-37.35	-353.05	119.47	141.57	87.95	53.62	2.640	
8,600.00	8,586.32	8,596.91	8,577.32	28.17	28.88	-43.18	-364.10	120.31	142.38	88.81	53.57	2.658	
8,651.00	8,637.29	8,641.71	8,618.89	28.34	29.30	-49.66	-380.71	121.83	146.05	92.63	53.42	2.734	

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

Company:	Piedra Operating LLC	Local Co-ordinate Reference:	Well University 8-8E B H 9WC
Project:	Andrews County, TX (NAD83-TNC)	TVD Reference:	RKB @ 3054.00usft (Ensign T225)
Reference Site:	University 8-8	MD Reference:	RKB @ 3054.00usft (Ensign T225)
Site Error:	0.00	North Reference:	Grid
Reference Well:	University 8-8E B H 9WC	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00	Output errors are at	2.00 sigma
Reference Wellbore	OH / 72263	Database:	USAEDMDB
Reference Design:	Surveys (Ensign T225)	Offset TVD Reference:	Offset Datum

Offset Design University 8-8E B H 3MS - OH / 72265 - Surveys (Ensign T225)												Offset Site Error:	0.00 usft
Survey Program: 15-MWD, 1900-MWD+HRGM+MS												Offset Well Error:	1.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Center		Distance			Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centers (usft)	Between Ellipses (usft)	Minimum Separation (usft)		
8,700.00	8,686.25	8,682.71	8,655.86	28.51	29.76	-46.66	-398.33	123.58	152.68	99.46	53.22	2.869	
8,741.00	8,727.19	8,715.19	8,684.18	28.65	30.15	-42.99	-414.16	125.14	160.71	107.69	53.02	3.031	
8,800.00	8,786.09	8,758.28	8,720.20	28.86	30.70	-34.34	-437.67	127.41	176.96	124.31	52.65	3.361	
8,832.00	8,818.04	8,779.48	8,737.11	28.98	30.99	-29.92	-450.39	128.59	188.36	135.94	52.42	3.593	
8,900.00	8,885.96	8,832.00	8,776.34	29.22	31.73	-31.12	-485.14	131.65	219.47	166.52	52.94	4.145	
8,921.00	8,906.95	8,832.00	8,776.34	29.30	31.73	-36.25	-485.14	131.65	230.18	178.42	51.77	4.447	
9,000.00	8,985.91	8,874.52	8,805.71	29.58	32.11	-35.43	-515.73	134.62	276.92	225.73	51.19	5.409	
9,010.00	8,995.90	8,879.71	8,809.19	29.61	32.16	-35.36	-519.56	135.05	283.26	232.12	51.14	5.539	
9,100.00	9,085.85	8,921.00	8,836.03	29.93	32.54	-27.22	-550.70	138.85	343.73	293.19	50.53	6.802	
9,101.00	9,086.85	8,921.00	8,836.03	29.93	32.54	-27.18	-550.70	138.85	344.43	293.94	50.49	6.821	
9,191.00	9,176.81	8,965.00	8,863.14	30.25	32.77	-37.57	-584.97	144.03	409.95	359.75	50.20	8.166	
9,200.00	9,185.81	8,968.87	8,865.45	30.28	32.79	-37.89	-588.02	144.56	416.73	366.57	50.15	8.309	
9,280.00	9,265.78	9,011.00	8,889.94	30.55	33.02	-41.34	-621.70	150.94	478.55	428.23	50.32	9.510	
9,300.00	9,285.78	9,011.00	8,889.94	30.62	33.02	-43.87	-621.70	150.94	494.22	444.43	49.79	9.926	
9,370.00	9,355.77	9,035.73	8,903.67	30.86	33.12	-57.85	-641.83	155.13	550.60	501.14	49.46	11.132	
9,400.00	9,385.77	9,046.37	8,909.43	30.96	33.17	-56.65	-650.59	156.98	575.21	525.84	49.37	11.651	
9,461.00	9,446.76	9,067.08	8,920.36	31.16	33.25	-54.67	-667.78	160.67	625.80	576.61	49.19	12.721	
9,499.00	9,484.75	9,079.35	8,926.67	31.28	33.31	-64.76	-678.07	162.90	657.71	608.62	49.09	13.397	
9,500.00	9,485.75	9,079.66	8,926.83	31.29	33.31	-64.12	-678.33	162.96	658.55	609.46	49.09	13.415	
9,550.00	9,535.74	9,102.00	8,937.99	31.45	33.40	-27.73	-697.23	167.12	700.94	651.67	49.27	14.226	
9,600.00	9,585.48	9,102.00	8,937.99	32.13	33.40	1.80	-697.23	167.12	741.56	692.71	48.85	15.179	
9,639.00	9,623.45	9,102.00	8,937.99	32.75	33.40	2.61	-697.23	167.12	770.89	722.44	48.45	15.912	
9,700.00	9,681.20	9,140.09	8,955.65	34.27	33.54	5.23	-730.18	174.39	812.45	762.41	50.04	16.235	
9,730.00	9,708.95	9,149.38	8,959.65	35.08	33.57	5.89	-738.38	176.18	832.37	782.00	50.37	16.525	
9,800.00	9,772.39	9,191.00	8,976.01	35.52	33.72	6.65	-775.76	184.30	878.39	827.27	51.12	17.184	
9,820.00	9,790.21	9,191.00	8,976.01	35.65	33.72	6.53	-775.76	184.30	890.95	840.16	50.79	17.543	
9,900.00	9,860.42	9,191.00	8,976.01	36.07	33.72	2.23	-775.76	184.30	941.85	892.58	49.28	19.114	
9,909.00	9,868.21	9,191.00	8,976.01	36.12	33.72	1.83	-775.76	184.30	947.64	898.53	49.11	19.296	

Company:	Piedra Operating LLC	Local Co-ordinate Reference:	Well University 8-8E B H 9WC
Project:	Andrews County, TX (NAD83-TNC)	TVD Reference:	RKB @ 3054.00usft (Ensign T225)
Reference Site:	University 8-8	MD Reference:	RKB @ 3054.00usft (Ensign T225)
Site Error:	0.00	North Reference:	Grid
Reference Well:	University 8-8E B H 9WC	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00	Output errors are at	2.00 sigma
Reference Wellbore	OH / 72263	Database:	USAEDMDB
Reference Design:	Surveys (Ensign T225)	Offset TVD Reference:	Offset Datum

Offset Design		University 8-8E B H 6LS - OH / 72264 - Plan 2 05-17-23										Offset Site Error: 0.00 usft	
Survey Program:		15-MWD, 1991-MWD+HRGM+MS, 7451-MWD+HRGM+MS										Offset Well Error: 1.00 usft	
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Center		Distance		Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centers (usft)	Between Ellipses (usft)			
0.00	0.00	0.00	0.00	1.00	1.00	76.92	5.66	24.36	25.01				
15.00	15.00	15.00	15.00	1.00	1.00	76.92	5.66	24.36	25.01				
100.00	100.00	100.13	100.13	1.86	1.34	-88.53	5.47	24.18	24.79	21.60	3.19	7.762	
200.00	200.00	200.26	200.26	3.79	2.09	-88.21	4.78	23.51	23.97	18.10	5.87	4.083	
300.00	300.00	300.34	300.32	5.83	2.40	-88.33	3.88	22.39	22.66	14.45	8.21	2.759	
361.00	360.99	361.34	361.31	7.09	2.58	-88.75	3.30	21.62	21.76	12.11	9.65	2.255	
400.00	399.99	400.18	400.15	7.21	2.69	-95.97	2.93	21.26	21.34	11.49	9.86	2.165	
430.73	430.72	430.79	430.76	7.30	2.77	-101.55	2.64	21.18	21.24	11.22	10.02	2.120	CC
500.00	499.99	499.95	499.92	7.50	2.94	-113.38	2.02	21.44	21.56	11.20	10.36	2.081	
539.00	538.99	538.93	538.90	7.61	3.03	-119.49	1.70	21.66	21.89	11.34	10.55	2.075	
600.00	599.98	599.93	599.90	7.67	3.18	-146.38	1.17	22.03	22.51	11.79	10.72	2.100	
628.00	627.98	627.93	627.90	7.70	3.24	-161.65	0.89	22.21	22.82	12.03	10.79	2.115	
700.00	699.98	700.04	700.00	7.77	3.42	-129.03	0.03	22.50	23.42	12.43	10.99	2.130	
717.00	716.98	717.07	717.02	7.79	3.47	-122.41	-0.19	22.52	23.49	12.45	11.04	2.127	
800.00	799.97	799.98	799.93	7.88	3.67	-131.35	-1.01	22.68	24.02	12.76	11.27	2.132	
805.00	804.97	805.00	804.95	7.89	3.68	-131.81	-1.03	22.69	24.07	12.79	11.28	2.134	
890.00	889.97	890.14	890.09	7.98	3.87	-164.50	-1.55	22.66	24.67	13.16	11.51	2.144	
900.00	899.97	900.13	900.08	7.99	3.89	-162.44	-1.61	22.63	24.71	13.18	11.54	2.142	
976.00	975.96	976.00	975.95	8.07	4.07	-149.09	-2.13	22.47	25.16	13.41	11.75	2.142	
1,000.00	999.96	1,000.02	999.97	8.10	4.12	-153.26	-2.28	22.47	25.35	13.54	11.81	2.147	
1,064.00	1,063.96	1,063.89	1,063.83	8.17	4.24	-169.20	-2.50	22.67	26.03	14.06	11.97	2.174	
1,100.00	1,099.96	1,099.84	1,099.79	8.21	4.33	-156.77	-2.53	22.88	26.48	14.38	12.10	2.188	
1,153.00	1,152.96	1,152.78	1,152.72	8.27	4.47	-130.31	-2.50	23.28	27.13	14.83	12.30	2.206	
1,194.00	1,193.96	1,193.72	1,193.66	8.31	4.58	-141.84	-2.40	23.67	27.75	15.31	12.44	2.231	
1,200.00	1,199.96	1,199.72	1,199.66	8.32	4.59	-140.51	-2.38	23.73	27.86	15.40	12.46	2.236	
1,300.00	1,299.95	1,299.81	1,299.74	8.52	4.73	-119.96	-2.28	24.58	29.32	16.53	12.78	2.293	
1,333.00	1,332.95	1,332.77	1,332.70	8.59	4.77	-114.45	-2.26	24.83	29.73	16.84	12.89	2.306	
1,400.00	1,399.95	1,399.71	1,399.64	8.68	4.86	-136.96	-2.10	25.44	30.79	17.73	13.06	2.358	
1,421.00	1,420.95	1,420.71	1,420.64	8.71	4.89	-142.99	-2.08	25.65	31.19	18.08	13.11	2.379	
1,500.00	1,499.94	1,499.65	1,499.57	8.93	5.02	-111.55	-2.29	26.52	32.52	19.10	13.42	2.424	
1,597.00	1,596.93	1,596.49	1,596.41	9.20	5.20	-75.11	-2.52	27.94	33.86	20.05	13.81	2.452	
1,600.00	1,599.93	1,599.49	1,599.40	9.20	5.20	-74.61	-2.52	27.99	33.89	20.08	13.81	2.454	
1,685.00	1,684.93	1,684.60	1,684.50	9.29	5.35	-53.41	-2.48	29.38	34.85	20.86	13.99	2.491	
1,700.00	1,699.93	1,699.66	1,699.56	9.33	5.38	-53.41	-2.54	29.57	34.94	20.93	14.02	2.493	
1,800.00	1,799.92	1,799.73	1,799.62	9.72	5.62	-52.88	-3.40	30.68	35.16	20.94	14.22	2.473	
1,900.00	1,899.92	1,899.71	1,899.58	10.13	5.89	-52.11	-4.46	31.93	35.40	21.02	14.38	2.461	
1,990.00	1,989.90	1,989.71	1,989.57	10.39	6.15	-92.05	-5.32	33.03	35.94	21.44	14.50	2.479	
2,000.00	1,999.90	1,999.73	1,999.60	10.41	6.18	-94.79	-5.42	33.15	36.05	21.53	14.52	2.482	
2,079.00	2,078.81	2,078.98	2,078.82	10.56	6.41	-105.64	-7.21	34.06	37.12	22.37	14.75	2.517	
2,100.00	2,099.77	2,100.09	2,099.91	10.60	6.44	-107.15	-7.98	34.28	37.45	22.61	14.84	2.523	
2,168.00	2,167.59	2,168.47	2,168.21	10.73	6.55	-111.35	-11.18	34.75	38.42	23.26	15.17	2.533	
2,200.00	2,199.48	2,200.71	2,200.40	10.77	6.61	-113.62	-13.12	34.83	38.77	23.44	15.33	2.529	
2,257.00	2,256.29	2,258.18	2,257.70	10.83	6.73	-116.53	-17.42	34.77	39.02	23.44	15.58	2.505	
2,300.00	2,299.15	2,301.25	2,300.62	10.88	6.82	-118.65	-21.09	34.58	39.07	23.30	15.77	2.478	
2,347.00	2,345.98	2,348.33	2,347.52	10.93	6.92	-120.77	-25.18	34.31	39.22	23.26	15.96	2.457	
2,400.00	2,398.80	2,401.31	2,400.30	11.00	7.01	-120.02	-29.87	33.99	39.44	23.27	16.17	2.439	

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

Company:	Piedra Operating LLC	Local Co-ordinate Reference:	Well University 8-8E B H 9WC
Project:	Andrews County, TX (NAD83-TNC)	TVD Reference:	RKB @ 3054.00usft (Ensign T225)
Reference Site:	University 8-8	MD Reference:	RKB @ 3054.00usft (Ensign T225)
Site Error:	0.00	North Reference:	Grid
Reference Well:	University 8-8E B H 9WC	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00	Output errors are at	2.00 sigma
Reference Wellbore	OH / 72263	Database:	USAEDMDB
Reference Design:	Surveys (Ensign T225)	Offset TVD Reference:	Offset Datum

Offset Design University 8-8E B H 6LS - OH / 72264 - Plan 2 05-17-23												Offset Site Error:	0.00 usft
Survey Program: 15-MWD, 1991-MWD+HRGM+MS, 7451-MWD+HRGM+MS												Offset Well Error:	1.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Center		Distance			Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centers (usft)	Between Ellipses (usft)	Minimum Separation (usft)		
2,437.00	2,435.66	2,438.30	2,437.14	11.04	7.07	-119.43	-33.18	33.80	39.60	23.28	16.32	2.427	
2,500.00	2,498.44	2,501.23	2,499.80	11.12	7.19	-118.28	-38.88	33.56	39.90	23.34	16.56	2.409	
2,526.00	2,524.35	2,527.19	2,525.66	11.16	7.25	-117.73	-41.25	33.50	40.05	23.38	16.66	2.403	
2,600.00	2,598.10	2,600.99	2,599.14	11.27	7.41	-116.11	-48.04	33.59	40.68	23.72	16.95	2.399	
2,617.00	2,615.04	2,617.94	2,616.02	11.29	7.45	-115.71	-49.61	33.67	40.87	23.85	17.02	2.402	
2,700.00	2,697.75	2,700.89	2,698.63	11.42	7.65	-113.48	-57.04	34.05	41.90	24.54	17.36	2.414	
2,706.00	2,703.73	2,706.89	2,704.61	11.43	7.67	-113.36	-57.56	34.08	41.97	24.59	17.38	2.415	
2,794.00	2,791.41	2,794.90	2,792.32	11.58	7.89	-113.08	-64.77	34.30	43.06	25.26	17.80	2.419	
2,800.00	2,797.39	2,800.90	2,798.31	11.59	7.90	-113.10	-65.24	34.31	43.14	25.31	17.83	2.419	
2,884.00	2,881.08	2,884.97	2,882.11	11.74	8.12	-113.15	-71.84	34.35	44.08	25.81	18.27	2.413	
2,900.00	2,897.02	2,900.98	2,898.07	11.77	8.17	-113.08	-73.11	34.34	44.24	25.89	18.35	2.410	
2,973.00	2,969.75	2,974.04	2,970.89	11.91	8.36	-112.60	-79.10	34.31	44.90	26.16	18.74	2.396	
3,000.00	2,996.65	3,001.06	2,997.81	11.96	8.44	-113.41	-81.37	34.29	45.13	26.25	18.88	2.390	
3,063.00	3,059.41	3,064.10	3,060.64	12.09	8.62	-115.34	-86.60	34.18	45.73	26.51	19.22	2.379	
3,100.00	3,096.27	3,101.05	3,097.46	12.16	8.73	-116.45	-89.63	34.11	46.16	26.73	19.43	2.376	
3,152.00	3,148.09	3,153.00	3,149.24	12.27	8.88	-117.98	-93.84	34.06	46.88	27.17	19.71	2.379	
3,200.00	3,195.92	3,200.95	3,197.03	12.37	9.02	-116.89	-97.72	34.06	47.58	27.62	19.97	2.383	
3,243.00	3,238.78	3,243.93	3,239.86	12.46	9.15	-115.78	-101.26	34.09	48.15	27.96	20.19	2.385	
3,300.00	3,295.59	3,300.91	3,296.67	12.58	9.32	-115.31	-105.87	34.13	48.88	28.38	20.50	2.384	
3,332.00	3,327.48	3,332.91	3,328.56	12.65	9.42	-115.19	-108.36	34.12	49.29	28.61	20.68	2.384	
3,400.00	3,395.26	3,400.84	3,396.29	12.81	9.63	-114.12	-113.55	34.13	50.16	29.09	21.07	2.380	
3,421.00	3,416.19	3,421.81	3,417.21	12.86	9.69	-113.79	-115.14	34.14	50.43	29.23	21.20	2.379	
3,500.00	3,494.93	3,500.67	3,495.83	13.04	9.94	-112.28	-121.13	34.34	51.40	29.75	21.65	2.374	
3,510.00	3,504.90	3,510.65	3,505.79	13.07	9.97	-112.06	-121.89	34.39	51.53	29.82	21.71	2.374	
3,599.00	3,593.64	3,599.84	3,594.66	13.28	10.25	-109.61	-129.42	34.81	52.34	30.17	22.17	2.361	
3,600.00	3,594.63	3,600.84	3,595.66	13.29	10.26	-109.59	-129.51	34.81	52.34	30.17	22.18	2.360	
3,688.00	3,682.36	3,688.79	3,683.24	13.50	10.54	-109.88	-137.48	35.24	53.11	30.49	22.62	2.348	
3,700.00	3,694.31	3,700.79	3,695.19	13.54	10.58	-109.93	-138.54	35.30	53.25	30.56	22.69	2.347	
3,777.00	3,771.05	3,777.76	3,771.86	13.73	10.83	-110.36	-145.36	35.68	54.26	31.15	23.11	2.348	
3,800.00	3,793.96	3,800.76	3,794.77	13.79	10.90	-109.78	-147.38	35.80	54.58	31.34	23.24	2.349	
3,867.00	3,860.73	3,867.77	3,861.53	13.97	11.12	-108.13	-153.25	36.11	55.42	31.80	23.62	2.347	
3,900.00	3,893.62	3,900.73	3,894.36	14.05	11.23	-107.56	-156.12	36.26	55.80	32.00	23.81	2.344	
3,957.00	3,950.43	3,957.66	3,951.06	14.21	11.42	-106.49	-161.12	36.59	56.47	32.34	24.13	2.340	
4,000.00	3,993.28	4,000.72	3,993.97	14.32	11.57	-107.04	-164.88	36.84	56.99	32.62	24.38	2.338	
4,047.00	4,040.11	4,047.80	4,040.87	14.45	11.73	-107.77	-168.93	37.03	57.60	32.94	24.66	2.336	
4,100.00	4,092.91	4,100.70	4,093.58	14.60	11.90	-108.92	-173.41	37.24	58.41	33.42	24.99	2.337	
4,138.00	4,130.75	4,138.63	4,131.37	14.70	12.03	-109.80	-176.57	37.44	59.12	33.89	25.23	2.343	
4,200.00	4,192.50	4,200.43	4,192.95	14.87	12.24	-110.01	-181.77	37.89	60.50	34.86	25.63	2.360	
4,227.00	4,219.38	4,227.34	4,219.77	14.95	12.33	-110.07	-184.06	38.16	61.16	35.36	25.80	2.370	
4,300.00	4,292.08	4,300.40	4,292.56	15.15	12.58	-110.66	-190.23	38.86	62.98	36.71	26.27	2.397	
4,316.00	4,308.01	4,316.41	4,308.52	15.20	12.63	-110.80	-191.55	39.00	63.37	36.99	26.38	2.403	
4,400.00	4,391.67	4,400.26	4,392.09	15.44	12.92	-110.91	-198.22	39.73	65.48	38.54	26.94	2.431	
4,405.00	4,396.65	4,405.25	4,397.07	15.45	12.93	-110.93	-198.60	39.77	65.60	38.64	26.97	2.433	
4,494.00	4,485.29	4,494.00	4,485.55	15.71	13.23	-111.36	-205.45	40.66	67.94	40.37	27.57	2.464	
4,500.00	4,491.26	4,500.12	4,491.65	15.73	13.26	-111.30	-205.93	40.72	68.09	40.49	27.61	2.466	

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

Company:	Piedra Operating LLC	Local Co-ordinate Reference:	Well University 8-8E B H 9WC
Project:	Andrews County, TX (NAD83-TNC)	TVD Reference:	RKB @ 3054.00usft (Ensign T225)
Reference Site:	University 8-8	MD Reference:	RKB @ 3054.00usft (Ensign T225)
Site Error:	0.00	North Reference:	Grid
Reference Well:	University 8-8E B H 9WC	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00	Output errors are at	2.00 sigma
Reference Wellbore	OH / 72263	Database:	USAEDMDB
Reference Design:	Surveys (Ensign T225)	Offset TVD Reference:	Offset Datum

Offset Design University 8-8E B H 6LS - OH / 72264 - Plan 2 05-17-23												Offset Site Error:	0.00 usft
Survey Program: 15-MWD, 1991-MWD+HRGM+MS, 7451-MWD+HRGM+MS												Offset Well Error:	1.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Center		Distance			Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centers (usft)	Between Ellipses (usft)	Minimum Separation (usft)		
4,583.00	4,573.94	4,582.80	4,574.08	15.97	13.54	-110.37	-212.32	41.79	70.39	42.23	28.16	2.500	
4,600.00	4,590.87	4,599.84	4,591.07	16.02	13.60	-110.35	-213.62	42.04	70.87	42.60	28.27	2.506	
4,675.00	4,665.58	4,675.02	4,666.03	16.24	13.86	-110.35	-219.27	42.98	72.84	44.05	28.79	2.530	
4,700.00	4,690.49	4,699.98	4,690.92	16.32	13.95	-110.44	-221.10	43.25	73.45	44.49	28.96	2.536	
4,766.00	4,756.24	4,765.89	4,756.66	16.52	14.18	-110.72	-225.82	43.97	75.10	45.67	29.43	2.552	
4,800.00	4,790.11	4,799.79	4,790.47	16.62	14.29	-110.36	-228.19	44.37	75.95	46.28	29.67	2.560	
4,855.00	4,844.91	4,854.61	4,845.15	16.79	14.48	-109.68	-232.05	45.11	77.34	47.30	30.05	2.574	
4,900.00	4,889.76	4,899.69	4,890.12	16.93	14.64	-110.42	-235.18	45.73	78.46	48.10	30.36	2.585	
4,944.00	4,933.61	4,943.77	4,934.09	17.06	14.79	-111.21	-238.12	46.25	79.52	48.85	30.66	2.593	
5,000.00	4,989.43	5,000.00	4,990.19	17.23	14.98	-111.30	-241.88	46.79	80.72	49.66	31.06	2.599	
5,034.00	5,023.32	5,034.14	5,024.26	17.34	15.10	-111.26	-244.24	47.06	81.33	50.04	31.29	2.599	
5,100.00	5,089.13	5,100.33	5,090.28	17.54	15.33	-111.10	-248.82	47.42	82.32	50.58	31.74	2.593	
5,123.00	5,112.06	5,123.40	5,113.30	17.61	15.41	-111.06	-250.40	47.50	82.63	50.72	31.90	2.590	
5,200.00	5,188.83	5,200.35	5,190.08	17.85	15.68	-110.15	-255.50	47.72	83.54	51.10	32.44	2.575	
5,212.00	5,200.80	5,212.35	5,202.05	17.89	15.72	-110.02	-256.27	47.75	83.67	51.15	32.52	2.573	
5,300.00	5,288.54	5,300.23	5,289.75	18.17	16.03	-109.82	-261.88	48.03	84.69	51.53	33.16	2.554	
5,303.00	5,291.53	5,303.22	5,292.74	18.18	16.04	-109.82	-262.07	48.04	84.73	51.55	33.18	2.554	
5,392.00	5,380.23	5,392.30	5,381.63	18.46	16.35	-108.84	-267.82	48.35	85.76	51.93	33.83	2.535	
5,400.00	5,388.21	5,400.37	5,389.69	18.49	16.38	-109.00	-268.36	48.38	85.84	51.95	33.89	2.533	
5,482.00	5,469.92	5,483.23	5,472.32	18.75	16.66	-110.24	-274.46	48.34	86.30	51.82	34.48	2.503	
5,500.00	5,487.85	5,501.26	5,490.29	18.81	16.73	-110.27	-275.90	48.27	86.32	51.71	34.61	2.494	
5,571.00	5,558.59	5,572.34	5,561.15	19.04	16.98	-110.49	-281.55	47.95	86.39	51.27	35.12	2.460	
5,600.00	5,587.48	5,601.36	5,590.08	19.13	17.08	-110.56	-283.84	47.79	86.40	51.07	35.32	2.446	
5,659.00	5,646.26	5,660.39	5,648.92	19.32	17.28	-110.71	-288.49	47.45	86.40	50.65	35.75	2.417	
5,700.00	5,687.13	5,701.31	5,689.71	19.45	17.43	-109.34	-291.67	47.21	86.30	50.26	36.04	2.395	
5,750.00	5,736.99	5,751.20	5,739.46	19.62	17.60	-107.02	-295.44	46.94	85.98	49.59	36.39	2.363	
5,800.00	5,786.88	5,800.95	5,789.09	19.78	17.78	-109.10	-298.93	46.68	85.66	48.93	36.73	2.332	
5,839.00	5,825.79	5,839.76	5,827.82	19.91	17.91	-110.93	-301.38	46.50	85.56	48.56	37.00	2.312	
5,851.33	5,838.10	5,852.04	5,840.08	19.95	17.96	-111.76	-302.11	46.44	85.55	48.46	37.09	2.307	
5,900.00	5,886.68	5,900.53	5,888.50	20.10	18.13	-115.47	-304.69	46.19	85.64	48.20	37.43	2.288	
5,929.00	5,915.64	5,929.42	5,917.36	20.20	18.23	-118.03	-306.01	46.02	85.77	48.12	37.64	2.279	
6,000.00	5,986.56	6,000.29	5,988.17	20.43	18.47	-126.15	-308.90	45.57	86.10	47.96	38.14	2.257	
6,020.00	6,006.55	6,020.00	6,007.87	20.49	18.54	-129.67	-309.64	45.44	86.18	47.90	38.27	2.252	
6,100.00	6,086.51	6,099.24	6,087.07	20.75	18.81	-128.40	-311.99	45.22	86.64	47.84	38.80	2.233	
6,109.00	6,095.51	6,108.12	6,095.95	20.78	18.85	-128.20	-312.18	45.24	86.71	47.86	38.86	2.232	
6,197.00	6,183.50	6,194.55	6,182.37	21.06	19.11	-127.53	-313.09	45.91	87.74	48.37	39.37	2.229	
6,200.00	6,186.50	6,198.00	6,185.82	21.07	19.12	-127.53	-313.09	45.96	87.79	48.39	39.40	2.228	
6,286.00	6,272.50	6,283.80	6,271.61	21.35	19.36	-106.44	-313.27	47.09	88.91	49.00	39.91	2.228	
6,300.00	6,286.50	6,297.87	6,285.68	21.39	19.40	-96.09	-313.33	47.25	89.05	49.06	39.99	2.227	
6,377.00	6,363.50	6,375.26	6,363.07	21.62	19.64	-63.33	-313.87	48.00	89.54	49.11	40.43	2.215	
6,400.00	6,386.50	6,398.25	6,386.05	21.69	19.71	-56.91	-314.07	48.19	89.60	49.05	40.55	2.210	
6,468.00	6,454.50	6,466.18	6,453.98	21.88	19.93	-44.12	-314.60	48.75	89.75	48.82	40.93	2.193	
6,500.00	6,486.50	6,498.35	6,486.14	21.97	20.03	-40.96	-314.84	48.99	89.77	48.66	41.11	2.184	
6,557.00	6,543.50	6,555.66	6,543.46	22.12	20.22	-36.08	-315.27	49.26	89.61	48.17	41.44	2.162	
6,600.00	6,586.50	6,598.91	6,586.70	22.24	20.37	-35.01	-315.57	49.32	89.34	47.64	41.70	2.142	
6,648.00	6,634.50	6,647.19	6,634.98	22.37	20.53	-33.89	-315.84	49.21	88.90	46.90	42.00	2.117	

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

Company:	Piedra Operating LLC	Local Co-ordinate Reference:	Well University 8-8E B H 9WC
Project:	Andrews County, TX (NAD83-TNC)	TVD Reference:	RKB @ 3054.00usft (Ensign T225)
Reference Site:	University 8-8	MD Reference:	RKB @ 3054.00usft (Ensign T225)
Site Error:	0.00	North Reference:	Grid
Reference Well:	University 8-8E B H 9WC	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00	Output errors are at	2.00 sigma
Reference Wellbore	OH / 72263	Database:	USAEDMDB
Reference Design:	Surveys (Ensign T225)	Offset TVD Reference:	Offset Datum

Offset Design University 8-8E B H 6LS - OH / 72264 - Plan 2 05-17-23												Offset Site Error:	0.00 usft
Survey Program: 15-MWD, 1991-MWD+HRGM+MS, 7451-MWD+HRGM+MS												Offset Well Error:	1.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Center		Distance			Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centers (usft)	Between Ellipses (usft)	Minimum Separation (usft)		
6,700.00	6,686.50	6,699.30	6,687.09	22.51	20.69	-34.73	-316.11	48.96	88.30	45.98	42.32	2.086	
6,737.00	6,723.50	6,736.38	6,724.17	22.61	20.80	-35.35	-316.31	48.74	87.84	45.28	42.55	2.064	
6,800.00	6,786.50	6,799.40	6,787.18	22.79	21.00	-39.18	-316.64	48.33	87.03	44.08	42.94	2.027	
6,826.00	6,812.49	6,825.40	6,813.19	22.86	21.08	-40.86	-316.76	48.16	86.70	43.59	43.11	2.011	
6,900.00	6,886.49	6,899.57	6,887.35	23.07	21.30	-29.13	-317.14	47.58	85.70	42.14	43.57	1.967	
6,918.00	6,904.49	6,917.61	6,905.39	23.12	21.36	-25.44	-317.24	47.42	85.44	41.76	43.68	1.956	
7,000.00	6,986.49	6,999.62	6,987.40	23.34	21.61	-25.40	-317.72	46.65	84.22	40.03	44.19	1.906	
7,009.00	6,995.49	7,008.62	6,996.40	23.37	21.64	-25.94	-317.77	46.57	84.09	39.84	44.24	1.901	
7,098.00	7,084.49	7,097.76	7,085.53	23.61	21.91	-21.24	-318.36	45.66	82.67	37.88	44.79	1.846	
7,100.00	7,086.49	7,099.76	7,087.53	23.62	21.92	-21.23	-318.38	45.64	82.64	37.83	44.81	1.844	
7,189.00	7,175.49	7,188.64	7,176.40	23.86	22.19	-15.32	-318.94	44.71	81.17	35.81	45.36	1.790	
7,200.00	7,186.49	7,199.64	7,187.40	23.89	22.22	-12.65	-319.00	44.60	80.99	35.57	45.43	1.783	
7,278.00	7,264.49	7,277.71	7,265.47	24.11	22.46	22.99	-319.48	43.79	79.78	33.87	45.92	1.738	
7,300.00	7,286.49	7,299.72	7,287.48	24.17	22.53	40.23	-319.63	43.55	79.46	33.41	46.05	1.725	
7,367.00	7,353.49	7,366.75	7,354.50	24.37	22.74	94.07	-320.13	42.82	78.55	32.09	46.46	1.691	
7,400.00	7,386.49	7,399.75	7,387.50	24.46	22.85	98.16	-320.40	42.45	78.14	31.48	46.66	1.675	
7,441.00	7,427.49	7,440.75	7,428.49	24.58	22.98	102.80	-320.76	42.00	77.63	30.73	46.90	1.655	
7,500.00	7,486.49	7,499.75	7,487.49	24.75	23.16	-178.74	-321.29	41.36	77.04	29.78	47.25	1.630	
7,563.02	7,549.51	7,562.49	7,550.22	24.92	23.35	-156.30	-321.84	40.70	76.69	29.06	47.63	1.610	
7,577.00	7,563.49	7,576.13	7,563.86	24.96	23.39	-154.22	-321.91	40.62	76.73	29.02	47.71	1.608	
7,600.00	7,586.48	7,598.76	7,586.48	25.04	23.46	-151.47	-321.93	40.58	76.92	29.06	47.86	1.607	
7,668.00	7,654.48	7,666.75	7,654.48	25.26	23.66	-143.64	-321.93	40.58	77.58	29.26	48.32	1.606	
7,700.00	7,686.48	7,698.75	7,686.48	25.36	23.76	-128.85	-321.93	40.58	77.82	29.29	48.52	1.604	
7,758.00	7,744.48	7,756.75	7,744.48	25.55	23.95	-73.60	-321.93	40.58	77.92	29.01	48.92	1.593	
7,800.00	7,786.47	7,798.75	7,786.47	25.67	24.10	-20.99	-321.93	40.58	77.63	28.45	49.19	1.578	
7,848.00	7,834.47	7,846.74	7,834.47	25.82	24.26	-6.16	-321.93	40.58	76.79	27.30	49.49	1.552	
7,900.00	7,886.45	7,898.73	7,886.45	25.97	24.44	-9.68	-321.93	40.58	75.67	25.84	49.83	1.519	
7,938.00	7,924.45	7,936.72	7,924.45	26.07	24.57	-12.99	-321.93	40.58	74.95	24.88	50.07	1.497	Level 3
8,000.00	7,986.44	7,998.71	7,986.44	26.26	24.78	-26.65	-321.93	40.58	74.01	23.54	50.48	1.466	Level 3
8,028.00	8,014.44	8,026.71	8,014.44	26.34	24.88	-35.63	-321.93	40.58	73.70	23.04	50.66	1.455	Level 3
8,100.00	8,086.43	8,098.70	8,086.43	26.56	25.13	-69.91	-321.93	40.58	73.24	22.10	51.14	1.432	Level 3
8,117.00	8,103.43	8,115.70	8,103.43	26.61	25.19	-82.87	-321.93	40.58	73.21	21.96	51.25	1.429	Level 3
8,200.00	8,186.42	8,198.69	8,186.42	26.88	25.47	-54.07	-321.93	40.58	72.59	20.77	51.82	1.401	Level 3
8,206.00	8,192.42	8,204.69	8,192.42	26.90	25.49	-53.56	-321.93	40.58	72.51	20.64	51.86	1.398	Level 3
8,295.00	8,281.39	8,293.66	8,281.39	27.18	25.80	-58.37	-321.93	40.58	71.24	18.75	52.50	1.357	Level 3
8,300.00	8,286.39	8,298.66	8,286.39	27.20	25.82	-58.43	-321.93	40.58	71.17	18.64	52.53	1.355	Level 3
8,384.00	8,370.37	8,382.64	8,370.37	27.47	26.11	-59.12	-321.93	40.58	70.21	17.09	53.13	1.322	Level 3
8,400.00	8,386.37	8,398.64	8,386.37	27.52	26.16	-60.87	-321.93	40.58	70.06	16.83	53.24	1.316	Level 3
8,473.00	8,459.36	8,471.63	8,459.36	27.75	26.41	-71.40	-321.93	40.58	69.59	15.84	53.75	1.295	Level 3
8,500.00	8,486.35	8,498.63	8,486.35	27.84	26.51	-66.87	-321.93	40.58	69.43	15.49	53.93	1.287	Level 3
8,562.00	8,548.34	8,560.61	8,548.34	28.04	26.72	-62.90	-321.93	40.58	68.77	14.39	54.38	1.265	Level 3
8,600.00	8,586.32	8,598.59	8,586.32	28.17	26.85	-73.80	-321.93	40.58	68.35	13.68	54.66	1.250	Level 3
8,651.00	8,637.29	8,649.56	8,637.29	28.34	27.03	-87.71	-321.93	40.58	68.10	13.05	55.05	1.237	Level 2
8,672.34	8,658.62	8,670.89	8,658.62	28.41	27.10	-90.00	-321.93	40.58	68.08	12.87	55.21	1.233	Level 2
8,700.00	8,686.25	8,698.52	8,686.25	28.51	27.20	-92.46	-321.93	40.58	68.11	12.68	55.43	1.229	Level 2

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

Company:	Piedra Operating LLC	Local Co-ordinate Reference:	Well University 8-8E B H 9WC
Project:	Andrews County, TX (NAD83-TNC)	TVD Reference:	RKB @ 3054.00usft (Ensign T225)
Reference Site:	University 8-8	MD Reference:	RKB @ 3054.00usft (Ensign T225)
Site Error:	0.00	North Reference:	Grid
Reference Well:	University 8-8E B H 9WC	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00	Output errors are at	2.00 sigma
Reference Wellbore	OH / 72263	Database:	USAEDMDB
Reference Design:	Surveys (Ensign T225)	Offset TVD Reference:	Offset Datum

Offset Design University 8-8E B H 6LS - OH / 72264 - Plan 2 05-17-23												Offset Site Error:	0.00 usft
Survey Program: 15-MWD, 1991-MWD+HRGM+MS, 7451-MWD+HRGM+MS												Offset Well Error:	1.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Center		Distance			Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centers (usft)	Between Ellipses (usft)	Minimum Separation (usft)		
8,741.00	8,727.19	8,739.47	8,727.19	28.65	27.34	-95.70	-321.93	40.58	68.27	12.51	55.76	1.224	Level 2
8,800.00	8,786.09	8,798.36	8,786.09	28.86	27.54	-96.56	-321.93	40.58	68.64	12.40	56.24	1.220	Level 2
8,832.00	8,818.04	8,830.31	8,818.04	28.98	27.66	-96.92	-321.93	40.58	68.86	12.36	56.50	1.219	Level 2
8,900.00	8,885.96	8,898.23	8,885.96	29.22	27.89	-108.48	-321.93	40.58	69.51	12.49	57.02	1.219	Level 2
8,921.00	8,906.95	8,919.22	8,906.95	29.30	27.96	-114.13	-321.93	40.58	69.76	12.59	57.18	1.220	Level 2
9,000.00	8,985.91	8,998.18	8,985.91	29.58	28.24	-120.89	-321.93	40.58	70.95	13.20	57.76	1.229	Level 2
9,010.00	8,995.90	9,008.17	8,995.90	29.61	28.27	-121.69	-321.93	40.58	71.13	13.31	57.83	1.230	Level 2
9,100.00	9,085.85	9,101.88	9,089.47	29.93	28.59	-117.14	-325.58	41.42	71.02	12.55	58.46	1.215	Level 2
9,101.00	9,086.85	9,102.94	9,090.52	29.93	28.59	-117.03	-325.70	41.44	70.98	12.51	58.47	1.214	Level 2
9,191.00	9,176.81	9,195.65	9,181.34	30.25	29.01	-118.95	-343.39	45.48	65.99	7.21	58.78	1.123	Level 2
9,200.00	9,185.81	9,204.59	9,189.91	30.28	29.05	-117.58	-345.85	46.04	65.51	6.74	58.78	1.115	Level 2
9,242.12	9,227.91	9,245.33	9,228.46	30.42	29.24	-109.83	-358.69	48.97	64.30	5.71	58.59	1.097	Level 2 , ES, SF
9,280.00	9,265.78	9,280.30	9,260.72	30.55	29.40	-101.70	-371.81	51.96	65.75	7.65	58.10	1.132	Level 2
9,300.00	9,285.78	9,298.05	9,276.77	30.62	29.48	-98.11	-379.20	53.65	67.92	10.22	57.70	1.177	Level 2
9,370.00	9,355.77	9,356.02	9,327.42	30.86	29.75	-94.05	-406.65	59.91	84.51	28.73	55.79	1.515	
9,400.00	9,385.77	9,378.88	9,346.56	30.96	29.85	-86.91	-418.83	62.69	95.72	40.79	54.93	1.743	
9,461.00	9,446.76	9,421.91	9,381.18	31.16	30.04	-75.93	-443.72	68.37	124.36	71.00	53.35	2.331	
9,499.00	9,484.75	9,450.00	9,402.72	31.28	30.16	-81.57	-461.31	72.38	145.42	92.47	52.95	2.746	
9,500.00	9,485.75	9,450.00	9,402.72	31.29	30.16	-80.93	-461.31	72.38	145.99	93.14	52.85	2.762	
9,550.00	9,535.74	9,476.82	9,422.42	31.45	30.27	-40.81	-479.04	76.42	176.33	124.88	51.46	3.427	
9,600.00	9,585.48	9,500.00	9,438.75	32.13	30.37	-6.69	-495.08	80.08	206.33	156.02	50.31	4.101	
9,639.00	9,623.45	9,528.92	9,458.17	32.75	30.48	-2.35	-515.97	84.85	227.05	176.47	50.58	4.489	
9,700.00	9,681.20	9,564.67	9,480.64	34.27	30.63	2.66	-543.07	91.03	257.71	207.07	50.64	5.089	
9,730.00	9,708.95	9,581.73	9,490.75	35.08	30.69	4.55	-556.47	94.09	272.66	222.00	50.66	5.382	
9,800.00	9,772.39	9,620.04	9,511.91	35.52	30.84	6.84	-587.59	101.19	308.33	258.72	49.61	6.215	
9,820.00	9,790.21	9,630.58	9,517.36	35.65	30.88	7.40	-596.40	103.19	318.82	269.49	49.32	6.464	
9,900.00	9,860.42	9,671.53	9,536.91	36.07	31.04	4.37	-631.46	111.19	362.09	314.10	47.98	7.546	
9,909.00	9,868.21	9,676.02	9,538.89	36.12	31.05	4.06	-635.39	112.09	367.07	319.23	47.84	7.673	
9,998.00	9,941.93	9,720.38	9,556.80	36.93	31.22	0.47	-674.94	121.11	414.38	367.70	46.68	8.877	
10,000.00	9,943.51	9,721.37	9,557.17	36.95	31.23	0.45	-675.85	121.32	415.40	368.73	46.67	8.901	
10,088.00	10,008.81	9,765.10	9,571.62	37.85	31.40	-0.06	-716.07	130.49	457.53	411.40	46.13	9.918	
10,100.00	10,017.06	9,771.04	9,573.34	37.93	31.42	-0.03	-721.62	131.76	462.90	416.82	46.08	10.046	
10,178.00	10,066.55	9,800.00	9,580.87	38.44	31.54	0.06	-748.87	137.98	495.78	450.52	45.26	10.955	
10,200.00	10,079.22	9,820.35	9,585.32	38.54	31.62	0.17	-768.23	142.39	504.21	458.55	45.66	11.043	
10,268.00	10,115.35	9,850.00	9,590.53	38.83	31.74	0.31	-796.69	148.88	529.88	484.69	45.19	11.726	
10,300.00	10,130.79	9,868.80	9,593.04	38.92	31.82	0.46	-814.86	153.03	541.50	496.36	45.14	11.995	
10,358.00	10,156.39	9,900.00	9,595.87	39.09	31.95	0.71	-845.14	159.94	562.16	517.17	44.99	12.494	
10,400.00	10,172.64	9,916.16	9,596.66	39.20	32.02	0.78	-860.88	163.53	576.37	531.62	44.75	12.880	
10,447.00	10,188.03	9,941.03	9,597.00	39.31	32.12	0.89	-885.12	169.06	591.10	546.31	44.78	13.199	
10,500.00	10,200.26	9,986.78	9,596.62	39.43	32.33	1.01	-929.69	179.36	603.75	557.70	46.05	13.111	
10,537.00	10,204.66	10,023.46	9,596.32	39.52	32.51	1.02	-965.43	187.63	608.45	561.41	47.05	12.932	
10,561.00	10,205.58	10,047.43	9,596.13	39.55	32.64	1.01	-988.78	193.04	609.57	562.34	47.23	12.907	
10,600.00	10,205.55	10,086.43	9,595.81	39.60	32.84	0.95	-1,026.77	201.83	609.84	562.43	47.41	12.863	
10,650.00	10,204.91	10,136.41	9,595.40	39.67	33.13	0.85	-1,075.47	213.10	609.60	561.94	47.66	12.791	
10,700.00	10,203.84	10,186.40	9,594.99	39.75	33.42	0.76	-1,124.16	224.38	608.92	561.07	47.86	12.723	
10,741.00	10,202.83	10,227.39	9,594.65	39.82	33.68	0.73	-1,164.10	233.62	608.25	560.21	48.04	12.662	

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

Company:	Piedra Operating LLC	Local Co-ordinate Reference:	Well University 8-8E B H 9WC
Project:	Andrews County, TX (NAD83-TNC)	TVD Reference:	RKB @ 3054.00usft (Ensign T225)
Reference Site:	University 8-8	MD Reference:	RKB @ 3054.00usft (Ensign T225)
Site Error:	0.00	North Reference:	Grid
Reference Well:	University 8-8E B H 9WC	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00	Output errors are at	2.00 sigma
Reference Wellbore	OH / 72263	Database:	USAEDMDB
Reference Design:	Surveys (Ensign T225)	Offset TVD Reference:	Offset Datum

Offset Design University 8-8E B H 6LS - OH / 72264 - Plan 2 05-17-23												Offset Site Error:	0.00 usft
Survey Program: 15-MWD, 1991-MWD+HRGM+MS, 7451-MWD+HRGM+MS												Offset Well Error:	1.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Center		Distance			Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centers (usft)	Between Ellipses (usft)	Minimum Separation (usft)		
10,800.00	10,201.87	10,286.39	9,594.17	39.95	34.06	0.73	-1,221.58	246.93	607.77	559.45	48.32	12.579	
10,832.00	10,201.83	10,318.39	9,593.90	40.02	34.27	0.72	-1,252.75	254.14	608.00	559.52	48.47	12.543	
10,900.00	10,202.40	10,386.38	9,593.35	40.21	34.74	0.74	-1,318.99	269.48	609.12	560.29	48.83	12.474	
10,921.00	10,202.68	10,407.37	9,593.17	40.27	34.89	0.76	-1,339.44	274.21	609.58	560.63	48.95	12.454	
11,000.00	10,204.65	10,486.31	9,592.53	40.55	35.47	0.90	-1,416.34	292.02	612.22	562.82	49.40	12.393	
11,011.00	10,205.05	10,497.29	9,592.44	40.59	35.55	0.93	-1,427.04	294.49	612.72	563.25	49.47	12.386	
11,100.00	10,208.52	10,586.15	9,591.71	40.98	36.23	1.19	-1,513.60	314.53	616.97	566.94	50.03	12.332	
11,189.00	10,211.22	10,675.05	9,590.98	41.44	36.95	1.41	-1,600.21	334.58	620.45	569.83	50.62	12.258	
11,200.00	10,211.45	10,686.04	9,590.89	41.50	37.04	1.43	-1,610.92	337.06	620.78	570.09	50.69	12.247	
11,280.00	10,213.66	10,765.97	9,590.23	41.97	37.70	1.57	-1,688.79	355.09	623.69	572.44	51.24	12.171	
11,300.00	10,214.24	10,785.96	9,590.07	42.09	37.87	1.60	-1,708.26	359.59	624.44	573.05	51.39	12.151	
11,369.00	10,214.95	10,854.94	9,589.50	42.54	38.47	1.64	-1,775.46	375.15	625.72	573.82	51.90	12.057	
11,400.00	10,214.79	10,885.94	9,589.25	42.75	38.74	1.62	-1,805.66	382.14	625.81	573.68	52.13	12.005	
11,458.00	10,214.31	10,943.93	9,588.77	43.16	39.25	1.54	-1,862.16	395.22	625.78	573.22	52.56	11.906	
11,500.00	10,213.90	10,985.92	9,588.43	43.46	39.63	1.45	-1,903.06	404.69	625.69	572.83	52.86	11.836	
11,548.00	10,213.50	11,033.91	9,588.04	43.82	40.07	1.34	-1,949.81	415.51	625.65	572.44	53.22	11.757	
11,600.00	10,213.01	11,085.89	9,587.61	44.22	40.55	1.21	-2,000.45	427.24	625.56	571.96	53.61	11.669	
11,637.00	10,212.57	11,122.88	9,587.31	44.51	40.90	1.13	-2,036.48	435.58	625.40	571.51	53.89	11.605	
11,700.00	10,211.76	11,185.86	9,586.79	45.02	41.49	1.01	-2,097.84	449.78	625.09	570.70	54.39	11.493	
11,728.00	10,211.43	11,213.86	9,586.56	45.25	41.76	0.96	-2,125.12	456.10	624.98	570.36	54.62	11.443	
11,800.00	10,210.56	11,285.85	9,585.97	45.87	42.46	0.87	-2,195.25	472.33	624.68	569.47	55.22	11.314	
11,817.00	10,210.34	11,302.85	9,585.83	46.01	42.62	0.86	-2,211.81	476.17	624.60	569.25	55.36	11.283	
11,900.00	10,209.69	11,385.85	9,585.15	46.74	43.44	0.79	-2,292.67	494.88	624.62	568.55	56.08	11.139	
11,907.00	10,209.68	11,392.85	9,585.09	46.80	43.51	0.78	-2,299.49	496.46	624.66	568.53	56.14	11.128	
11,996.00	10,210.50	11,481.83	9,584.36	47.62	44.41	0.77	-2,386.18	516.53	626.22	569.27	56.95	10.996	
12,000.00	10,210.58	11,485.83	9,584.33	47.65	44.45	0.78	-2,390.07	517.43	626.33	569.34	56.99	10.991	
12,085.00	10,210.74	11,570.82	9,583.63	48.45	45.32	0.80	-2,472.87	536.60	627.19	569.38	57.81	10.849	
12,100.00	10,210.48	11,585.82	9,583.51	48.60	45.47	0.79	-2,487.48	539.98	627.05	569.09	57.96	10.819	
12,174.00	10,208.24	11,659.78	9,582.90	49.30	46.24	0.66	-2,559.54	556.66	625.40	566.72	58.68	10.658	
12,200.00	10,207.16	11,685.76	9,582.69	49.56	46.51	0.60	-2,584.84	562.52	624.52	565.60	58.92	10.599	
12,264.00	10,204.35	11,749.70	9,582.16	50.18	47.19	0.48	-2,647.14	576.94	622.23	562.69	59.54	10.451	
12,300.00	10,202.92	11,785.68	9,581.87	50.54	47.57	0.44	-2,682.19	585.06	621.08	561.19	59.89	10.370	
12,355.00	10,201.48	11,840.67	9,581.42	51.08	48.16	0.39	-2,735.76	597.46	620.09	559.65	60.44	10.259	
12,400.00	10,200.67	11,885.67	9,581.05	51.53	48.64	0.36	-2,779.60	607.61	619.66	558.76	60.90	10.175	
12,445.00	10,199.87	11,930.66	9,580.68	51.99	49.12	0.32	-2,823.43	617.75	619.22	557.86	61.36	10.091	
12,500.00	10,198.78	11,985.65	9,580.23	52.55	49.72	0.25	-2,877.00	630.16	618.58	556.66	61.92	9.990	
12,535.00	10,197.99	12,020.64	9,579.94	52.90	50.10	0.19	-2,911.09	638.05	618.07	555.79	62.28	9.924	
12,600.00	10,196.61	12,085.63	9,579.41	53.58	50.82	0.09	-2,974.40	652.70	617.22	554.27	62.95	9.804	
12,626.00	10,196.15	12,111.63	9,579.20	53.85	51.11	0.07	-2,999.73	658.57	616.97	553.75	63.23	9.758	
12,700.00	10,195.22	12,185.62	9,578.59	54.62	51.93	0.01	-3,071.81	675.25	616.65	552.64	64.02	9.633	
12,715.00	10,195.11	12,200.62	9,578.47	54.78	52.09	-0.02	-3,086.42	678.64	616.66	552.49	64.17	9.609	
12,800.00	10,195.06	12,285.61	9,577.77	55.68	53.05	-0.14	-3,169.22	697.80	617.31	552.22	65.09	9.484	
12,804.00	10,195.08	12,289.61	9,577.74	55.72	53.09	-0.14	-3,173.11	698.70	617.37	552.24	65.14	9.478	
12,893.00	10,195.24	12,378.59	9,577.01	56.67	54.10	-0.28	-3,259.80	718.77	618.26	552.15	66.11	9.352	
12,900.00	10,195.22	12,385.58	9,576.95	56.75	54.18	-0.30	-3,266.62	720.35	618.30	552.12	66.19	9.342	

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

Company:	Piedra Operating LLC	Local Co-ordinate Reference:	Well University 8-8E B H 9WC
Project:	Andrews County, TX (NAD83-TNC)	TVD Reference:	RKB @ 3054.00usft (Ensign T225)
Reference Site:	University 8-8	MD Reference:	RKB @ 3054.00usft (Ensign T225)
Site Error:	0.00	North Reference:	Grid
Reference Well:	University 8-8E B H 9WC	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00	Output errors are at	2.00 sigma
Reference Wellbore	OH / 72263	Database:	USAEDMDB
Reference Design:	Surveys (Ensign T225)	Offset TVD Reference:	Offset Datum

Offset Design University 8-8E B H 6LS - OH / 72264 - Plan 2 05-17-23												Offset Site Error:	0.00 usft
Survey Program: 15-MWD, 1991-MWD+HRGM+MS, 7451-MWD+HRGM+MS												Offset Well Error:	1.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Center		Distance			Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centers (usft)	Between Ellipses (usft)	Minimum Separation (usft)		
12,982.00	10,195.05	12,467.55	9,576.28	57.63	55.11	-0.52	-3,346.46	738.83	618.82	551.72	67.09	9.223	
13,000.00	10,195.03	12,485.54	9,576.13	57.83	55.31	-0.57	-3,363.99	742.89	618.96	551.67	67.29	9.198	
13,072.00	10,195.40	12,557.51	9,575.54	58.61	56.14	-0.74	-3,434.11	759.12	619.93	551.83	68.10	9.103	
13,100.00	10,195.63	12,585.49	9,575.31	58.92	56.46	-0.81	-3,461.37	765.43	620.40	551.98	68.42	9.067	
13,161.00	10,195.86	12,646.44	9,574.81	59.59	57.17	-1.02	-3,520.74	779.18	621.17	552.06	69.11	8.988	
13,200.00	10,195.94	12,685.41	9,574.49	60.04	57.62	-1.17	-3,558.70	787.97	621.60	552.04	69.56	8.936	
13,251.00	10,196.21	12,736.40	9,574.07	60.63	58.21	-1.24	-3,608.38	799.47	622.31	552.15	70.16	8.870	
13,300.00	10,196.79	12,785.38	9,573.67	61.21	58.78	-1.20	-3,656.10	810.51	623.27	552.53	70.74	8.811	
13,343.00	10,197.66	12,828.34	9,573.32	61.72	59.29	-1.08	-3,697.95	820.20	624.47	553.22	71.26	8.764	
13,400.00	10,198.99	12,885.27	9,572.85	62.37	59.96	-0.87	-3,753.41	833.04	626.23	554.27	71.95	8.703	
13,431.00	10,199.65	12,916.23	9,572.60	62.73	60.32	-0.76	-3,783.57	840.02	627.13	554.79	72.33	8.670	
13,500.00	10,201.09	12,985.15	9,572.03	63.52	61.14	-0.50	-3,850.71	855.57	629.10	555.91	73.19	8.596	
13,520.00	10,201.50	13,005.12	9,571.87	63.75	61.37	-0.43	-3,870.17	860.07	629.67	556.23	73.44	8.574	
13,600.00	10,203.16	13,085.05	9,571.21	64.67	62.32	-0.19	-3,948.03	878.10	631.97	557.54	74.44	8.490	
13,610.00	10,203.37	13,095.04	9,571.13	64.78	62.44	-0.16	-3,957.77	880.35	632.26	557.70	74.56	8.480	
13,699.00	10,204.99	13,183.98	9,570.40	65.81	63.50	0.05	-4,044.41	900.41	634.61	558.93	75.68	8.385	
13,700.00	10,205.00	13,184.98	9,570.39	65.82	63.51	0.05	-4,045.39	900.63	634.63	558.94	75.69	8.384	
13,788.00	10,206.90	13,272.91	9,569.67	66.85	64.57	0.24	-4,131.06	920.46	637.26	560.45	76.81	8.297	
13,800.00	10,207.21	13,284.90	9,569.57	66.99	64.71	0.26	-4,142.74	923.17	637.67	560.71	76.96	8.286	
13,877.00	10,208.07	13,361.87	9,568.94	67.89	65.64	0.41	-4,217.72	940.53	639.16	561.21	77.95	8.199	
13,900.00	10,207.99	13,384.86	9,568.75	68.16	65.92	0.45	-4,240.12	945.71	639.28	561.03	78.25	8.170	
13,966.00	10,207.32	13,450.85	9,568.21	68.93	66.71	0.58	-4,304.40	960.59	639.16	560.05	79.11	8.080	
14,000.00	10,206.79	13,484.84	9,567.93	69.33	67.13	0.64	-4,337.51	968.26	638.92	559.37	79.55	8.032	
14,055.00	10,205.93	13,539.83	9,567.48	69.98	67.79	0.74	-4,391.08	980.66	638.53	558.27	80.26	7.956	
14,100.00	10,205.31	13,584.82	9,567.11	70.51	68.34	0.82	-4,434.91	990.81	638.28	557.44	80.85	7.895	
14,144.00	10,204.84	13,628.81	9,566.75	71.03	68.88	0.91	-4,477.77	1,000.73	638.19	556.77	81.42	7.838	
14,200.00	10,204.43	13,684.78	9,566.29	71.70	69.56	1.05	-4,532.30	1,013.35	638.26	556.10	82.17	7.768	
14,233.00	10,204.27	13,717.77	9,566.02	72.09	69.97	1.14	-4,564.43	1,020.79	638.40	555.79	82.61	7.728	
14,300.00	10,204.26	13,784.73	9,565.47	72.89	70.79	1.33	-4,629.67	1,035.89	638.98	555.48	83.51	7.652	
14,322.00	10,204.36	13,806.72	9,565.29	73.16	71.06	1.39	-4,651.09	1,040.85	639.28	555.48	83.80	7.629	
14,400.00	10,204.81	13,884.67	9,564.66	74.09	72.01	1.62	-4,727.03	1,058.43	640.44	555.58	84.86	7.547	
14,411.00	10,204.88	13,895.66	9,564.56	74.22	72.15	1.66	-4,737.73	1,060.91	640.61	555.60	85.01	7.536	
14,499.00	10,205.05	13,983.61	9,563.84	75.29	73.23	1.90	-4,823.42	1,080.74	641.59	555.38	86.21	7.442	
14,500.00	10,205.05	13,984.61	9,563.84	75.30	73.25	1.91	-4,824.39	1,080.97	641.60	555.37	86.23	7.441	
14,588.00	10,204.01	14,072.60	9,563.11	76.36	74.34	2.00	-4,910.11	1,100.81	641.30	553.89	87.41	7.337	
14,600.00	10,203.75	14,084.60	9,563.02	76.51	74.48	2.00	-4,921.80	1,103.52	641.14	553.57	87.57	7.322	
14,677.00	10,201.95	14,161.59	9,562.38	77.44	75.44	2.01	-4,996.81	1,120.88	639.99	551.39	88.60	7.224	
14,700.00	10,201.39	14,184.59	9,562.20	77.72	75.73	2.01	-5,019.21	1,126.07	639.61	550.71	88.90	7.195	
14,768.00	10,199.76	14,252.57	9,561.64	78.55	76.57	1.92	-5,085.44	1,141.40	638.49	548.70	89.79	7.111	
14,800.00	10,199.04	14,284.55	9,561.38	78.94	76.97	1.85	-5,116.60	1,148.62	638.02	547.81	90.20	7.073	
14,858.00	10,198.00	14,342.52	9,560.90	79.65	77.69	1.68	-5,173.07	1,161.69	637.40	546.44	90.95	7.008	
14,900.00	10,197.39	14,384.50	9,560.56	80.16	78.22	1.56	-5,213.96	1,171.15	637.09	545.59	91.49	6.963	
14,947.00	10,196.76	14,431.47	9,560.17	80.73	78.80	1.43	-5,259.73	1,181.75	636.81	544.70	92.11	6.914	
15,000.00	10,196.01	14,484.46	9,559.74	81.38	79.47	1.32	-5,311.35	1,193.70	636.46	543.65	92.81	6.858	
15,035.00	10,195.42	14,519.46	9,559.45	81.80	79.91	1.29	-5,345.44	1,201.59	636.15	542.88	93.28	6.820	
15,100.00	10,194.02	14,584.45	9,558.92	82.61	80.72	1.24	-5,408.76	1,216.25	635.27	541.12	94.15	6.748	

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

Company:	Piedra Operating LLC	Local Co-ordinate Reference:	Well University 8-8E B H 9WC
Project:	Andrews County, TX (NAD83-TNC)	TVD Reference:	RKB @ 3054.00usft (Ensign T225)
Reference Site:	University 8-8	MD Reference:	RKB @ 3054.00usft (Ensign T225)
Site Error:	0.00	North Reference:	Grid
Reference Well:	University 8-8E B H 9WC	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00	Output errors are at	2.00 sigma
Reference Wellbore	OH / 72263	Database:	USAEDMDB
Reference Design:	Surveys (Ensign T225)	Offset TVD Reference:	Offset Datum

Offset Design University 8-8E B H 6LS - OH / 72264 - Plan 2 05-17-23												Offset Site Error:	0.00 usft
Survey Program: 15-MWD, 1991-MWD+HRGM+MS, 7451-MWD+HRGM+MS												Offset Well Error:	1.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Center		Distance			Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centers (usft)	Between Ellipses (usft)	Minimum Separation (usft)		
15,124.00	10,193.38	14,608.44	9,558.72	82.90	81.02	1.19	-5,432.13	1,221.66	634.82	540.35	94.47	6.720	
15,200.00	10,190.90	14,684.33	9,558.10	83.85	81.98	0.90	-5,506.06	1,238.77	632.90	537.45	95.45	6.630	
15,213.00	10,190.41	14,697.29	9,557.99	84.01	82.14	0.82	-5,518.69	1,241.70	632.50	536.88	95.62	6.615	
15,300.00	10,188.75	14,784.13	9,557.28	85.11	83.23	0.35	-5,603.29	1,261.28	631.50	534.73	96.77	6.526	
15,302.00	10,188.75	14,786.13	9,557.26	85.13	83.26	0.35	-5,605.24	1,261.73	631.52	534.72	96.80	6.524	
15,391.00	10,188.45	14,875.07	9,556.53	86.23	84.38	0.04	-5,691.88	1,281.79	631.94	533.93	98.01	6.448	
15,400.00	10,188.36	14,884.06	9,556.46	86.35	84.50	0.02	-5,700.64	1,283.82	631.92	533.79	98.13	6.439	
15,482.00	10,186.37	14,966.03	9,555.79	87.36	85.53	-0.15	-5,780.49	1,302.31	630.61	531.35	99.26	6.353	
15,500.00	10,185.69	14,984.02	9,555.64	87.59	85.76	-0.17	-5,798.02	1,306.36	630.07	530.56	99.51	6.332	
15,571.00	10,182.74	15,054.97	9,555.06	88.47	86.66	-0.25	-5,867.14	1,322.36	627.71	527.22	100.49	6.246	
15,600.00	10,181.65	15,083.96	9,554.82	88.83	87.03	-0.30	-5,895.38	1,328.90	626.86	525.96	100.90	6.213	
15,661.00	10,180.66	15,144.94	9,554.32	89.59	87.80	-0.39	-5,954.79	1,342.65	626.37	524.62	101.75	6.156	
15,700.00	10,180.72	15,183.94	9,554.00	90.07	88.30	-0.45	-5,992.78	1,351.45	626.76	524.46	102.30	6.127	
15,751.00	10,181.21	15,234.93	9,553.58	90.71	88.95	-0.49	-6,042.46	1,362.95	627.68	524.65	103.02	6.093	
15,800.00	10,181.91	15,283.92	9,553.18	91.32	89.57	-0.50	-6,090.18	1,374.00	628.78	525.07	103.71	6.063	
15,842.00	10,182.52	15,325.90	9,552.83	91.85	90.10	-0.50	-6,131.09	1,383.47	629.73	525.44	104.30	6.038	
15,900.00	10,183.35	15,383.89	9,552.36	92.57	90.84	-0.49	-6,187.57	1,396.54	631.04	525.93	105.11	6.003	
15,933.00	10,183.81	15,416.88	9,552.09	92.99	91.26	-0.50	-6,219.72	1,403.98	631.77	526.19	105.58	5.984	
16,000.00	10,184.40	15,483.87	9,551.54	93.83	92.12	-0.52	-6,284.98	1,419.09	632.91	526.39	106.52	5.942	
16,022.00	10,184.45	15,505.87	9,551.36	94.10	92.40	-0.54	-6,306.41	1,424.05	633.15	526.32	106.83	5.927	
16,100.00	10,184.58	15,583.86	9,550.72	95.08	93.40	-0.61	-6,382.39	1,441.64	633.92	526.00	107.93	5.874	
16,111.00	10,184.61	15,594.86	9,550.63	95.22	93.54	-0.62	-6,393.10	1,444.12	634.04	525.96	108.08	5.866	
16,199.00	10,184.99	15,682.85	9,549.91	96.32	94.66	-0.69	-6,478.82	1,463.97	635.16	525.83	109.32	5.810	
16,200.00	10,185.00	15,683.85	9,549.90	96.34	94.68	-0.69	-6,479.80	1,464.19	635.17	525.83	109.34	5.809	
16,290.00	10,185.58	15,773.83	9,549.16	97.47	95.83	-0.80	-6,567.46	1,484.48	636.50	525.89	110.61	5.754	
16,300.00	10,185.65	15,783.83	9,549.08	97.60	95.96	-0.81	-6,577.20	1,486.74	636.66	525.90	110.75	5.748	
16,379.00	10,186.19	15,862.80	9,548.43	98.59	96.97	-0.95	-6,654.13	1,504.55	637.87	525.99	111.87	5.702	
16,400.00	10,186.35	15,883.79	9,548.26	98.85	97.24	-0.99	-6,674.58	1,509.28	638.21	526.03	112.17	5.690	
16,468.00	10,187.08	15,951.76	9,547.70	99.71	98.12	-1.16	-6,740.79	1,524.61	639.53	526.39	113.14	5.653	
16,500.00	10,187.69	15,983.73	9,547.44	100.12	98.53	-1.23	-6,771.94	1,531.82	640.43	526.82	113.60	5.637	
16,558.00	10,189.77	16,041.67	9,546.96	100.86	99.27	-1.28	-6,828.39	1,544.89	642.98	528.54	114.44	5.619	
16,600.00	10,191.64	16,083.61	9,546.62	101.39	99.81	-1.26	-6,869.25	1,554.35	645.20	530.15	115.05	5.608	
16,648.00	10,193.61	16,131.55	9,546.23	102.01	100.43	-1.19	-6,915.95	1,565.16	647.54	531.80	115.74	5.595	
16,700.00	10,195.11	16,183.50	9,545.80	102.67	101.10	-1.09	-6,966.56	1,576.88	649.45	532.95	116.50	5.575	
16,737.00	10,195.56	16,220.48	9,545.50	103.14	101.58	-1.00	-7,002.58	1,585.22	650.18	533.15	117.03	5.556	
16,800.00	10,195.62	16,283.46	9,544.98	103.95	102.39	-0.87	-7,063.94	1,599.42	650.73	532.78	117.95	5.517	
16,826.00	10,195.48	16,309.45	9,544.77	104.28	102.72	-0.82	-7,089.26	1,605.28	650.80	532.47	118.33	5.500	
16,900.00	10,195.01	16,383.44	9,544.16	105.22	103.68	-0.68	-7,161.34	1,621.97	650.92	531.52	119.40	5.452	
16,915.00	10,194.93	16,398.43	9,544.04	105.41	103.87	-0.65	-7,175.95	1,625.35	650.95	531.33	119.62	5.442	
17,000.00	10,193.91	16,483.41	9,543.34	106.50	104.97	-0.48	-7,258.73	1,644.51	650.61	529.76	120.85	5.384	
17,004.00	10,193.84	16,487.41	9,543.31	106.55	105.02	-0.47	-7,262.62	1,645.41	650.57	529.66	120.91	5.381	
17,095.00	10,191.99	16,578.37	9,542.56	107.72	106.20	-0.27	-7,351.24	1,665.93	649.45	527.21	122.24	5.313	
17,100.00	10,191.88	16,583.37	9,542.52	107.78	106.27	-0.26	-7,356.11	1,667.06	649.38	527.07	122.31	5.309	
17,184.00	10,190.06	16,667.34	9,541.83	108.86	107.35	-0.10	-7,437.92	1,685.99	648.25	524.71	123.54	5.247	
17,200.00	10,189.72	16,683.34	9,541.70	109.06	107.56	-0.07	-7,453.50	1,689.60	648.04	524.27	123.77	5.236	

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

Company:	Piedra Operating LLC	Local Co-ordinate Reference:	Well University 8-8E B H 9WC
Project:	Andrews County, TX (NAD83-TNC)	TVD Reference:	RKB @ 3054.00usft (Ensign T225)
Reference Site:	University 8-8	MD Reference:	RKB @ 3054.00usft (Ensign T225)
Site Error:	0.00	North Reference:	Grid
Reference Well:	University 8-8E B H 9WC	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00	Output errors are at	2.00 sigma
Reference Wellbore	OH / 72263	Database:	USAEDMDB
Reference Design:	Surveys (Ensign T225)	Offset TVD Reference:	Offset Datum

Offset Design University 8-8E B H 6LS - OH / 72264 - Plan 2 05-17-23												Offset Site Error:	0.00 usft
Survey Program: 15-MWD, 1991-MWD+HRGM+MS, 7451-MWD+HRGM+MS												Offset Well Error:	1.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Center		Distance			Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centers (usft)	Between Ellipses (usft)	Minimum Separation (usft)		
17,272.00	10,188.22	16,755.32	9,541.11	109.99	108.49	0.06	-7,523.62	1,705.84	647.13	522.30	124.83	5.184	
17,300.00	10,187.64	16,783.31	9,540.88	110.35	108.86	0.10	-7,550.90	1,712.15	646.78	521.54	125.24	5.164	
17,362.00	10,186.32	16,845.30	9,540.37	111.14	109.66	0.16	-7,611.29	1,726.13	645.97	519.82	126.15	5.121	
17,400.00	10,185.50	16,883.30	9,540.06	111.63	110.15	0.19	-7,648.30	1,734.70	645.46	518.76	126.70	5.094	
17,451.00	10,184.42	16,934.29	9,539.64	112.29	110.82	0.23	-7,697.98	1,746.20	644.80	517.35	127.45	5.059	
17,500.00	10,183.36	16,983.29	9,539.24	112.91	111.45	0.27	-7,745.71	1,757.25	644.15	515.98	128.17	5.026	
17,540.00	10,182.47	17,023.28	9,538.91	113.43	111.97	0.31	-7,784.67	1,766.27	643.58	514.83	128.76	4.998	
17,600.00	10,181.53	17,083.27	9,538.42	114.20	112.75	0.40	-7,843.11	1,779.80	643.15	513.50	129.65	4.961	
17,630.00	10,181.38	17,113.25	9,538.18	114.59	113.14	0.47	-7,872.33	1,786.56	643.25	513.16	130.09	4.945	
17,700.00	10,181.88	17,183.19	9,537.60	115.50	114.05	0.71	-7,940.46	1,802.33	644.35	513.20	131.15	4.913	
17,718.00	10,182.20	17,201.16	9,537.45	115.73	114.29	0.78	-7,957.97	1,806.38	644.84	513.40	131.43	4.906	
17,800.00	10,183.36	17,283.08	9,536.78	116.79	115.35	1.07	-8,037.77	1,824.86	646.72	514.04	132.68	4.874	
17,807.00	10,183.42	17,290.08	9,536.73	116.88	115.45	1.09	-8,044.59	1,826.44	646.83	514.05	132.79	4.871	
17,898.00	10,184.39	17,381.05	9,535.98	118.06	116.63	1.24	-8,133.21	1,846.95	648.59	514.44	134.15	4.835	
17,900.00	10,184.42	17,383.04	9,535.96	118.08	116.66	1.24	-8,135.16	1,847.40	648.63	514.46	134.18	4.834	
17,987.00	10,185.64	17,470.01	9,535.25	119.21	117.79	1.35	-8,219.88	1,867.02	650.59	515.11	135.48	4.802	
18,000.00	10,185.80	17,483.01	9,535.14	119.38	117.96	1.37	-8,232.54	1,869.95	650.87	515.19	135.67	4.797	
18,076.00	10,186.26	17,558.99	9,534.52	120.37	118.95	1.33	-8,306.57	1,887.08	651.93	515.15	136.78	4.766	
18,100.00	10,186.27	17,582.98	9,534.32	120.68	119.27	1.28	-8,329.94	1,892.49	652.13	515.00	137.13	4.756	
18,167.00	10,186.37	17,649.94	9,533.77	121.55	120.14	1.08	-8,395.17	1,907.60	652.73	514.65	138.08	4.727	
18,200.00	10,186.30	17,682.92	9,533.50	121.97	120.57	0.97	-8,427.29	1,915.03	652.91	514.37	138.54	4.713	
18,256.00	10,185.59	17,738.86	9,533.04	122.69	121.30	0.76	-8,481.79	1,927.65	652.62	513.28	139.34	4.684	
18,300.00	10,184.96	17,782.82	9,532.68	123.25	121.88	0.58	-8,524.62	1,937.56	652.33	512.36	139.97	4.661	
18,345.00	10,184.78	17,827.78	9,532.32	123.83	122.46	0.43	-8,568.42	1,947.70	652.50	511.89	140.61	4.640	
18,400.00	10,185.25	17,882.72	9,531.87	124.54	123.18	0.22	-8,621.94	1,960.09	653.41	512.01	141.41	4.621	
18,433.00	10,185.93	17,915.65	9,531.60	124.97	123.61	0.06	-8,654.02	1,967.52	654.36	512.47	141.88	4.612	
18,500.00	10,186.95	17,982.50	9,531.05	125.83	124.49	-0.30	-8,719.15	1,982.60	655.93	513.08	142.85	4.592	
18,523.00	10,187.00	18,005.46	9,530.86	126.12	124.79	-0.42	-8,741.52	1,987.77	656.18	512.99	143.19	4.583	
18,600.00	10,185.69	18,082.31	9,530.23	127.11	125.80	-0.84	-8,816.38	2,005.10	655.56	511.23	144.34	4.542	
18,613.00	10,185.24	18,095.27	9,530.12	127.28	125.97	-0.91	-8,829.01	2,008.03	655.23	510.69	144.53	4.533	
18,700.00	10,181.69	18,182.04	9,529.41	128.40	127.10	-1.42	-8,913.54	2,027.60	652.51	506.67	145.84	4.474	
18,704.00	10,181.51	18,186.03	9,529.38	128.45	127.15	-1.44	-8,917.42	2,028.50	652.37	506.47	145.90	4.471	
18,794.00	10,179.65	18,275.96	9,528.64	129.64	128.33	-1.70	-9,005.03	2,048.78	651.32	504.05	147.27	4.423	
18,800.00	10,179.66	18,281.96	9,528.59	129.72	128.41	-1.70	-9,010.88	2,050.13	651.38	504.02	147.36	4.420	
18,885.00	10,179.19	18,366.95	9,527.89	130.84	129.53	-1.60	-9,093.68	2,069.30	651.57	502.94	148.64	4.384	
18,900.00	10,178.97	18,381.94	9,527.77	131.04	129.72	-1.58	-9,108.29	2,072.68	651.47	502.61	148.86	4.376	
18,975.00	10,177.02	18,456.92	9,527.16	132.02	130.71	-1.46	-9,181.33	2,089.59	650.10	500.13	149.97	4.335	
19,000.00	10,176.09	18,481.90	9,526.95	132.34	131.04	-1.43	-9,205.67	2,095.22	649.36	499.02	150.34	4.319	
19,065.00	10,173.27	18,546.86	9,526.42	133.19	131.89	-1.36	-9,268.95	2,109.87	647.05	495.75	151.31	4.276	
19,100.00	10,171.54	18,581.83	9,526.13	133.65	132.35	-1.34	-9,303.02	2,117.76	645.61	493.78	151.83	4.252	
19,155.00	10,168.62	18,636.77	9,525.68	134.36	133.07	-1.34	-9,356.54	2,130.15	643.13	490.49	152.65	4.213	
19,200.00	10,166.65	18,681.74	9,525.31	134.95	133.66	-1.35	-9,400.35	2,140.29	641.54	488.21	153.33	4.184	
19,246.00	10,165.73	18,727.74	9,524.93	135.55	134.26	-1.34	-9,445.16	2,150.67	640.99	486.97	154.02	4.162	
19,300.00	10,165.59	18,781.73	9,524.49	136.25	134.97	-1.29	-9,497.76	2,162.84	641.28	486.44	154.84	4.142	
19,335.00	10,165.79	18,816.72	9,524.20	136.71	135.43	-1.23	-9,531.85	2,170.73	641.75	486.39	155.36	4.131	
19,400.00	10,166.37	18,881.70	9,523.67	137.56	136.29	-1.10	-9,595.15	2,185.39	642.84	486.50	156.33	4.112	

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

Company:	Piedra Operating LLC	Local Co-ordinate Reference:	Well University 8-8E B H 9WC
Project:	Andrews County, TX (NAD83-TNC)	TVD Reference:	RKB @ 3054.00usft (Ensign T225)
Reference Site:	University 8-8	MD Reference:	RKB @ 3054.00usft (Ensign T225)
Site Error:	0.00	North Reference:	Grid
Reference Well:	University 8-8E B H 9WC	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00	Output errors are at	2.00 sigma
Reference Wellbore	OH / 72263	Database:	USAEDMDB
Reference Design:	Surveys (Ensign T225)	Offset TVD Reference:	Offset Datum

Offset Design University 8-8E B H 6LS - OH / 72264 - Plan 2 05-17-23												Offset Site Error:	0.00 usft
Survey Program: 15-MWD, 1991-MWD+HRGM+MS, 7451-MWD+HRGM+MS												Offset Well Error:	1.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Center		Distance			Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centers (usft)	Between Ellipses (usft)	Minimum Separation (usft)		
19,424.00	10,166.58	18,905.69	9,523.48	137.87	136.60	-1.05	-9,618.52	2,190.80	643.23	486.54	156.69	4.105	
19,500.00	10,167.18	18,981.66	9,522.85	138.87	137.60	-0.88	-9,692.53	2,207.93	644.42	486.60	157.82	4.083	
19,514.00	10,167.27	18,995.65	9,522.74	139.05	137.79	-0.85	-9,706.16	2,211.09	644.62	486.59	158.03	4.079	
19,600.00	10,167.78	19,081.61	9,522.03	140.17	138.92	-0.64	-9,789.90	2,230.47	645.81	486.49	159.32	4.053	
19,603.00	10,167.80	19,084.61	9,522.01	140.21	138.96	-0.63	-9,792.82	2,231.15	645.85	486.48	159.37	4.053	
19,692.00	10,167.92	19,173.58	9,521.28	141.38	140.13	-0.44	-9,879.50	2,251.21	646.68	485.97	160.71	4.024	
19,700.00	10,167.89	19,181.58	9,521.21	141.48	140.23	-0.43	-9,887.29	2,253.02	646.72	485.89	160.83	4.021	
19,781.00	10,167.05	19,262.56	9,520.55	142.54	141.30	-0.29	-9,966.19	2,271.28	646.53	484.49	162.05	3.990	
19,800.00	10,166.70	19,281.56	9,520.39	142.79	141.55	-0.26	-9,984.69	2,275.57	646.34	484.00	162.33	3.981	
19,870.00	10,164.79	19,351.54	9,519.82	143.71	142.47	-0.18	-10,052.87	2,291.35	644.99	481.60	163.39	3.948	
19,900.00	10,164.00	19,381.53	9,519.57	144.10	142.87	-0.14	-10,082.08	2,298.11	644.45	480.60	163.85	3.933	
19,959.00	10,163.83	19,440.52	9,519.09	144.88	143.65	-0.06	-10,139.55	2,311.42	644.76	480.01	164.75	3.914	
20,000.00	10,164.35	19,481.50	9,518.75	145.41	144.19	0.02	-10,179.48	2,320.66	645.62	480.24	165.38	3.904	
20,050.00	10,164.96	19,531.48	9,518.34	146.07	144.85	0.12	-10,228.16	2,331.93	646.64	480.49	166.15	3.892	
20,100.00	10,165.87	19,581.44	9,517.93	146.73	145.51	0.23	-10,276.84	2,343.20	647.96	481.05	166.91	3.882	
20,139.00	10,167.00	19,620.40	9,517.61	147.24	146.02	0.33	-10,314.79	2,351.98	649.42	481.91	167.51	3.877	
20,200.00	10,168.89	19,681.32	9,517.11	148.04	146.82	0.49	-10,374.14	2,365.72	651.83	483.37	168.45	3.870	
20,227.00	10,169.62	19,708.30	9,516.89	148.40	147.18	0.56	-10,400.42	2,371.81	652.78	483.91	168.87	3.866	
20,300.00	10,171.25	19,781.24	9,516.29	149.35	148.14	0.71	-10,471.49	2,388.26	655.03	485.04	169.99	3.853	
20,316.00	10,171.55	19,797.23	9,516.16	149.57	148.35	0.74	-10,487.06	2,391.86	655.46	485.23	170.23	3.850	
20,400.00	10,173.63	19,881.15	9,515.48	150.67	149.46	0.94	-10,568.82	2,410.79	658.27	486.74	171.53	3.838	
20,409.00	10,173.93	19,890.14	9,515.40	150.79	149.58	0.96	-10,577.57	2,412.82	658.65	486.97	171.67	3.837	
20,498.00	10,177.41	19,978.99	9,514.67	151.96	150.75	1.22	-10,664.13	2,432.85	662.91	489.84	173.07	3.830	
20,500.00	10,177.50	19,980.98	9,514.66	151.99	150.78	1.22	-10,666.08	2,433.30	663.02	489.92	173.10	3.830	
20,587.00	10,180.19	20,067.88	9,513.94	153.13	151.93	1.43	-10,750.73	2,452.90	666.48	492.02	174.46	3.820	
20,600.00	10,180.38	20,080.87	9,513.84	153.31	152.10	1.46	-10,763.39	2,455.83	666.78	492.11	174.67	3.817	
20,676.00	10,179.54	20,156.86	9,513.21	154.30	153.10	1.57	-10,837.41	2,472.97	666.60	490.74	175.86	3.790	
20,700.00	10,178.73	20,180.85	9,513.02	154.62	153.42	1.59	-10,860.78	2,478.38	665.99	489.76	176.23	3.779	
20,768.00	10,176.13	20,248.81	9,512.46	155.51	154.32	1.64	-10,927.00	2,493.71	663.96	486.67	177.29	3.745	
20,800.00	10,174.86	20,280.80	9,512.20	155.93	154.74	1.66	-10,958.16	2,500.92	662.96	485.19	177.77	3.729	
20,841.00	10,173.40	20,305.46	9,512.00	156.47	155.07	1.67	-10,982.18	2,506.48	662.05	484.04	178.00	3.719	
20,900.00	10,171.44	20,305.46	9,512.00	157.25	155.07	1.67	-10,982.18	2,506.48	664.67	487.86	176.81	3.759	
20,903.00	10,171.34	20,305.46	9,512.00	157.29	155.07	1.67	-10,982.18	2,506.48	664.94	488.22	176.72	3.763	

Company:	Piedra Operating LLC	Local Co-ordinate Reference:	Well University 8-8E B H 9WC
Project:	Andrews County, TX (NAD83-TNC)	TVD Reference:	RKB @ 3054.00usft (Ensign T225)
Reference Site:	University 8-8	MD Reference:	RKB @ 3054.00usft (Ensign T225)
Site Error:	0.00	North Reference:	Grid
Reference Well:	University 8-8E B H 9WC	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00	Output errors are at	2.00 sigma
Reference Wellbore	OH / 72263	Database:	USAEDMDB
Reference Design:	Surveys (Ensign T225)	Offset TVD Reference:	Offset Datum

Offset Design		University 8-8E B H 6LS - OH / 72264 - Surveys (Ensgin T225)										Offset Site Error: 0.00 usft	
Survey Program: 15-MWD, 1991-MWD+HRGM+MS												Offset Well Error: 1.00 usft	
Reference		Offset		Semi Major Axis		Offset Wellbore Center		Distance					
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centers (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.00	0.00	0.00	0.00	1.00	1.00	76.92	5.66	24.36	25.01				
15.00	15.00	15.00	15.00	1.00	1.00	76.92	5.66	24.36	25.01				
100.00	100.00	100.13	100.13	1.86	1.34	-88.53	5.47	24.18	24.79	21.60	3.19	7.762	
200.00	200.00	200.26	200.26	3.79	2.09	-88.21	4.78	23.51	23.97	18.10	5.87	4.083	
300.00	300.00	300.34	300.32	5.83	2.40	-88.33	3.88	22.39	22.66	14.45	8.21	2.759	
361.00	360.99	361.34	361.31	7.09	2.58	-88.75	3.30	21.62	21.76	12.11	9.65	2.255	
400.00	399.99	400.18	400.15	7.21	2.69	-95.97	2.93	21.26	21.34	11.49	9.86	2.165	
430.73	430.72	430.79	430.76	7.30	2.77	-101.55	2.64	21.18	21.24	11.22	10.02	2.120	CC
500.00	499.99	499.95	499.92	7.50	2.94	-113.38	2.02	21.44	21.56	11.20	10.36	2.081	ES
539.00	538.99	538.93	538.90	7.61	3.03	-119.49	1.70	21.66	21.89	11.34	10.55	2.075	
600.00	599.98	599.93	599.90	7.67	3.18	-146.38	1.17	22.03	22.51	11.79	10.72	2.100	
628.00	627.98	627.93	627.90	7.70	3.24	-161.65	0.89	22.21	22.82	12.03	10.79	2.115	
700.00	699.98	700.04	700.00	7.77	3.42	-129.03	0.03	22.50	23.42	12.43	10.99	2.130	
717.00	716.98	717.07	717.02	7.79	3.47	-122.41	-0.19	22.52	23.49	12.45	11.04	2.127	
800.00	799.97	799.98	799.93	7.88	3.67	-131.35	-1.01	22.68	24.02	12.76	11.27	2.132	
805.00	804.97	805.00	804.95	7.89	3.68	-131.81	-1.03	22.69	24.07	12.79	11.28	2.134	
890.00	889.97	890.14	890.09	7.98	3.87	-164.50	-1.55	22.66	24.67	13.16	11.51	2.144	
900.00	899.97	900.13	900.08	7.99	3.89	-162.44	-1.61	22.63	24.71	13.18	11.54	2.142	
976.00	975.96	976.00	975.95	8.07	4.07	-149.09	-2.13	22.47	25.16	13.41	11.75	2.142	
1,000.00	999.96	1,000.02	999.97	8.10	4.12	-153.26	-2.28	22.47	25.35	13.54	11.81	2.147	
1,064.00	1,063.96	1,063.89	1,063.83	8.17	4.24	-169.20	-2.50	22.67	26.03	14.06	11.97	2.174	
1,100.00	1,099.96	1,099.84	1,099.79	8.21	4.33	-156.77	-2.53	22.88	26.48	14.38	12.10	2.188	
1,153.00	1,152.96	1,152.78	1,152.72	8.27	4.47	-130.31	-2.50	23.28	27.13	14.83	12.30	2.206	
1,194.00	1,193.96	1,193.72	1,193.66	8.31	4.58	-141.84	-2.40	23.67	27.75	15.31	12.44	2.231	
1,200.00	1,199.96	1,199.72	1,199.66	8.32	4.59	-140.51	-2.38	23.73	27.86	15.40	12.46	2.236	
1,300.00	1,299.95	1,299.81	1,299.74	8.52	4.73	-119.96	-2.28	24.58	29.32	16.53	12.78	2.293	
1,333.00	1,332.95	1,332.77	1,332.70	8.59	4.77	-114.45	-2.26	24.83	29.73	16.84	12.89	2.306	
1,400.00	1,399.95	1,399.71	1,399.64	8.68	4.86	-136.96	-2.10	25.44	30.79	17.73	13.06	2.358	
1,421.00	1,420.95	1,420.71	1,420.64	8.71	4.89	-142.99	-2.08	25.65	31.19	18.08	13.11	2.379	
1,500.00	1,499.94	1,499.65	1,499.57	8.93	5.02	-111.55	-2.29	26.52	32.52	19.10	13.42	2.424	
1,597.00	1,596.93	1,596.49	1,596.41	9.20	5.20	-75.11	-2.52	27.94	33.86	20.05	13.81	2.452	
1,600.00	1,599.93	1,599.49	1,599.40	9.20	5.20	-74.61	-2.52	27.99	33.89	20.08	13.81	2.454	
1,685.00	1,684.93	1,684.60	1,684.50	9.29	5.35	-53.41	-2.48	29.38	34.85	20.86	13.99	2.491	
1,700.00	1,699.93	1,699.66	1,699.56	9.33	5.38	-53.41	-2.54	29.57	34.94	20.93	14.02	2.493	
1,800.00	1,799.92	1,799.73	1,799.62	9.72	5.62	-52.88	-3.40	30.68	35.16	20.94	14.22	2.473	
1,900.00	1,899.92	1,899.71	1,899.58	10.13	5.89	-52.11	-4.46	31.93	35.40	21.02	14.38	2.461	
1,990.00	1,989.90	1,989.71	1,989.57	10.39	6.15	-92.05	-5.32	33.03	35.94	21.44	14.50	2.479	
2,000.00	1,999.90	1,999.73	1,999.60	10.41	6.18	-94.79	-5.42	33.15	36.05	21.53	14.52	2.482	
2,079.00	2,078.81	2,078.98	2,078.82	10.56	6.41	-105.64	-7.21	34.06	37.12	22.37	14.75	2.517	
2,100.00	2,099.77	2,100.09	2,099.91	10.60	6.44	-107.15	-7.98	34.28	37.45	22.61	14.84	2.523	
2,168.00	2,167.59	2,168.47	2,168.21	10.73	6.55	-111.35	-11.18	34.75	38.42	23.26	15.17	2.533	
2,200.00	2,199.48	2,200.71	2,200.40	10.77	6.61	-113.62	-13.12	34.83	38.77	23.44	15.33	2.529	
2,257.00	2,256.29	2,258.18	2,257.70	10.83	6.73	-116.53	-17.42	34.77	39.02	23.44	15.58	2.505	
2,300.00	2,299.15	2,301.25	2,300.62	10.88	6.82	-118.65	-21.09	34.58	39.07	23.30	15.77	2.478	
2,347.00	2,345.98	2,348.33	2,347.52	10.93	6.92	-120.77	-25.18	34.31	39.22	23.26	15.96	2.457	
2,400.00	2,398.80	2,401.31	2,400.30	11.00	7.01	-120.02	-29.87	33.99	39.44	23.27	16.17	2.439	

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

Company:	Piedra Operating LLC	Local Co-ordinate Reference:	Well University 8-8E B H 9WC
Project:	Andrews County, TX (NAD83-TNC)	TVD Reference:	RKB @ 3054.00usft (Ensign T225)
Reference Site:	University 8-8	MD Reference:	RKB @ 3054.00usft (Ensign T225)
Site Error:	0.00	North Reference:	Grid
Reference Well:	University 8-8E B H 9WC	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00	Output errors are at	2.00 sigma
Reference Wellbore	OH / 72263	Database:	USAEDMDB
Reference Design:	Surveys (Ensign T225)	Offset TVD Reference:	Offset Datum

Offset Design University 8-8E B H 6LS - OH / 72264 - Surveys (Ensign T225)												Offset Site Error:	0.00 usft
Survey Program: 15-MWD, 1991-MWD+HRGM+MS												Offset Well Error:	1.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Center		Distance			Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centers (usft)	Between Ellipses (usft)	Minimum Separation (usft)		
2,437.00	2,435.66	2,438.30	2,437.14	11.04	7.07	-119.43	-33.18	33.80	39.60	23.28	16.32	2.427	
2,500.00	2,498.44	2,501.23	2,499.80	11.12	7.19	-118.28	-38.88	33.56	39.90	23.34	16.56	2.409	
2,526.00	2,524.35	2,527.19	2,525.66	11.16	7.25	-117.73	-41.25	33.50	40.05	23.38	16.66	2.403	
2,600.00	2,598.10	2,600.99	2,599.14	11.27	7.41	-116.11	-48.04	33.59	40.68	23.72	16.95	2.399	
2,617.00	2,615.04	2,617.94	2,616.02	11.29	7.45	-115.71	-49.61	33.67	40.87	23.85	17.02	2.402	
2,700.00	2,697.75	2,700.89	2,698.63	11.42	7.65	-113.48	-57.04	34.05	41.90	24.54	17.36	2.414	
2,706.00	2,703.73	2,706.89	2,704.61	11.43	7.67	-113.36	-57.56	34.08	41.97	24.59	17.38	2.415	
2,794.00	2,791.41	2,794.90	2,792.32	11.58	7.89	-113.08	-64.77	34.30	43.06	25.26	17.80	2.419	
2,800.00	2,797.39	2,800.90	2,798.31	11.59	7.90	-113.10	-65.24	34.31	43.14	25.31	17.83	2.419	
2,884.00	2,881.08	2,884.97	2,882.11	11.74	8.12	-113.15	-71.84	34.35	44.08	25.81	18.27	2.413	
2,900.00	2,897.02	2,900.98	2,898.07	11.77	8.17	-113.08	-73.11	34.34	44.24	25.89	18.35	2.410	
2,973.00	2,969.75	2,974.04	2,970.89	11.91	8.36	-112.60	-79.10	34.31	44.90	26.16	18.74	2.396	
3,000.00	2,996.65	3,001.06	2,997.81	11.96	8.44	-113.41	-81.37	34.29	45.13	26.25	18.88	2.390	
3,063.00	3,059.41	3,064.10	3,060.64	12.09	8.62	-115.34	-86.60	34.18	45.73	26.51	19.22	2.379	
3,100.00	3,096.27	3,101.05	3,097.46	12.16	8.73	-116.45	-89.63	34.11	46.16	26.73	19.43	2.376	
3,152.00	3,148.09	3,153.00	3,149.24	12.27	8.88	-117.98	-93.84	34.06	46.88	27.17	19.71	2.379	
3,200.00	3,195.92	3,200.95	3,197.03	12.37	9.02	-116.89	-97.72	34.06	47.58	27.62	19.97	2.383	
3,243.00	3,238.78	3,243.93	3,239.86	12.46	9.15	-115.78	-101.26	34.09	48.15	27.96	20.19	2.385	
3,300.00	3,295.59	3,300.91	3,296.67	12.58	9.32	-115.31	-105.87	34.13	48.88	28.38	20.50	2.384	
3,332.00	3,327.48	3,332.91	3,328.56	12.65	9.42	-115.19	-108.36	34.12	49.29	28.61	20.68	2.384	
3,400.00	3,395.26	3,400.84	3,396.29	12.81	9.63	-114.12	-113.55	34.13	50.16	29.09	21.07	2.380	
3,421.00	3,416.19	3,421.81	3,417.21	12.86	9.69	-113.79	-115.14	34.14	50.43	29.23	21.20	2.379	
3,500.00	3,494.93	3,500.67	3,495.83	13.04	9.94	-112.28	-121.13	34.34	51.40	29.75	21.65	2.374	
3,510.00	3,504.90	3,510.65	3,505.79	13.07	9.97	-112.06	-121.89	34.39	51.53	29.82	21.71	2.374	
3,599.00	3,593.64	3,599.84	3,594.66	13.28	10.25	-109.61	-129.42	34.81	52.34	30.17	22.17	2.361	
3,600.00	3,594.63	3,600.84	3,595.66	13.29	10.26	-109.59	-129.51	34.81	52.34	30.17	22.18	2.360	
3,688.00	3,682.36	3,688.79	3,683.24	13.50	10.54	-109.88	-137.48	35.24	53.11	30.49	22.62	2.348	
3,700.00	3,694.31	3,700.79	3,695.19	13.54	10.58	-109.93	-138.54	35.30	53.25	30.56	22.69	2.347	
3,777.00	3,771.05	3,777.76	3,771.86	13.73	10.83	-110.36	-145.36	35.68	54.26	31.15	23.11	2.348	
3,800.00	3,793.96	3,800.76	3,794.77	13.79	10.90	-109.78	-147.38	35.80	54.58	31.34	23.24	2.349	
3,867.00	3,860.73	3,867.77	3,861.53	13.97	11.12	-108.13	-153.25	36.11	55.42	31.80	23.62	2.347	
3,900.00	3,893.62	3,900.73	3,894.36	14.05	11.23	-107.56	-156.12	36.26	55.80	32.00	23.81	2.344	
3,957.00	3,950.43	3,957.66	3,951.06	14.21	11.42	-106.49	-161.12	36.59	56.47	32.34	24.13	2.340	
4,000.00	3,993.28	4,000.72	3,993.97	14.32	11.57	-107.04	-164.88	36.84	56.99	32.62	24.38	2.338	
4,047.00	4,040.11	4,047.80	4,040.87	14.45	11.73	-107.77	-168.93	37.03	57.60	32.94	24.66	2.336	
4,100.00	4,092.91	4,100.70	4,093.58	14.60	11.90	-108.92	-173.41	37.24	58.41	33.42	24.99	2.337	
4,138.00	4,130.75	4,138.63	4,131.37	14.70	12.03	-109.80	-176.57	37.44	59.12	33.89	25.23	2.343	
4,200.00	4,192.50	4,200.43	4,192.95	14.87	12.24	-110.01	-181.77	37.89	60.50	34.86	25.63	2.360	
4,227.00	4,219.38	4,227.34	4,219.77	14.95	12.33	-110.07	-184.06	38.16	61.16	35.36	25.80	2.370	
4,300.00	4,292.08	4,300.40	4,292.56	15.15	12.58	-110.66	-190.23	38.86	62.98	36.71	26.27	2.397	
4,316.00	4,308.01	4,316.41	4,308.52	15.20	12.63	-110.80	-191.55	39.00	63.37	36.99	26.38	2.403	
4,400.00	4,391.67	4,400.26	4,392.09	15.44	12.92	-110.91	-198.22	39.73	65.48	38.54	26.94	2.431	
4,405.00	4,396.65	4,405.25	4,397.07	15.45	12.93	-110.93	-198.60	39.77	65.60	38.64	26.97	2.433	
4,494.00	4,485.29	4,494.00	4,485.55	15.71	13.23	-111.36	-205.45	40.66	67.94	40.37	27.57	2.464	
4,500.00	4,491.26	4,500.12	4,491.65	15.73	13.26	-111.30	-205.93	40.72	68.09	40.49	27.61	2.466	

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

Company:	Piedra Operating LLC	Local Co-ordinate Reference:	Well University 8-8E B H 9WC
Project:	Andrews County, TX (NAD83-TNC)	TVD Reference:	RKB @ 3054.00usft (Ensign T225)
Reference Site:	University 8-8	MD Reference:	RKB @ 3054.00usft (Ensign T225)
Site Error:	0.00	North Reference:	Grid
Reference Well:	University 8-8E B H 9WC	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00	Output errors are at	2.00 sigma
Reference Wellbore	OH / 72263	Database:	USAEDMDB
Reference Design:	Surveys (Ensign T225)	Offset TVD Reference:	Offset Datum

Offset Design University 8-8E B H 6LS - OH / 72264 - Surveys (Ensign T225)												Offset Site Error:	0.00 usft
Survey Program: 15-MWD, 1991-MWD+HRGM+MS												Offset Well Error:	1.00 usft
Reference		Offset		Semi Major Axis			Offset Wellbore Center		Distance			Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centers (usft)	Between Ellipses (usft)	Minimum Separation (usft)		
4,583.00	4,573.94	4,582.80	4,574.08	15.97	13.54	-110.37	-212.32	41.79	70.39	42.23	28.16	2.500	
4,600.00	4,590.87	4,599.84	4,591.07	16.02	13.60	-110.35	-213.62	42.04	70.87	42.60	28.27	2.506	
4,675.00	4,665.58	4,675.02	4,666.03	16.24	13.86	-110.35	-219.27	42.98	72.84	44.05	28.79	2.530	
4,700.00	4,690.49	4,699.98	4,690.92	16.32	13.95	-110.44	-221.10	43.25	73.45	44.49	28.96	2.536	
4,766.00	4,756.24	4,765.89	4,756.66	16.52	14.18	-110.72	-225.82	43.97	75.10	45.67	29.43	2.552	
4,800.00	4,790.11	4,799.79	4,790.47	16.62	14.29	-110.36	-228.19	44.37	75.95	46.28	29.67	2.560	
4,855.00	4,844.91	4,854.61	4,845.15	16.79	14.48	-109.68	-232.05	45.11	77.34	47.30	30.05	2.574	
4,900.00	4,889.76	4,899.69	4,890.12	16.93	14.64	-110.42	-235.18	45.73	78.46	48.10	30.36	2.585	
4,944.00	4,933.61	4,943.77	4,934.09	17.06	14.79	-111.21	-238.12	46.25	79.52	48.85	30.66	2.593	
5,000.00	4,989.43	5,000.00	4,990.19	17.23	14.98	-111.30	-241.88	46.79	80.72	49.66	31.06	2.599	
5,034.00	5,023.32	5,034.14	5,024.26	17.34	15.10	-111.26	-244.24	47.06	81.33	50.04	31.29	2.599	
5,100.00	5,089.13	5,100.33	5,090.28	17.54	15.33	-111.10	-248.82	47.42	82.32	50.58	31.74	2.593	
5,123.00	5,112.06	5,123.40	5,113.30	17.61	15.41	-111.06	-250.40	47.50	82.63	50.72	31.90	2.590	
5,200.00	5,188.83	5,200.35	5,190.08	17.85	15.68	-110.15	-255.50	47.72	83.54	51.10	32.44	2.575	
5,212.00	5,200.80	5,212.35	5,202.05	17.89	15.72	-110.02	-256.27	47.75	83.67	51.15	32.52	2.573	
5,300.00	5,288.54	5,300.23	5,289.75	18.17	16.03	-109.82	-261.88	48.03	84.69	51.53	33.16	2.554	
5,303.00	5,291.53	5,303.22	5,292.74	18.18	16.04	-109.82	-262.07	48.04	84.73	51.55	33.18	2.554	
5,392.00	5,380.23	5,392.30	5,381.63	18.46	16.35	-108.84	-267.82	48.35	85.76	51.93	33.83	2.535	
5,400.00	5,388.21	5,400.37	5,389.69	18.49	16.38	-109.00	-268.36	48.38	85.84	51.95	33.89	2.533	
5,482.00	5,469.92	5,483.23	5,472.32	18.75	16.66	-110.24	-274.46	48.34	86.30	51.82	34.48	2.503	
5,500.00	5,487.85	5,501.26	5,490.29	18.81	16.73	-110.27	-275.90	48.27	86.32	51.71	34.61	2.494	
5,571.00	5,558.59	5,572.34	5,561.15	19.04	16.98	-110.49	-281.55	47.95	86.39	51.27	35.12	2.460	
5,600.00	5,587.48	5,601.36	5,590.08	19.13	17.08	-110.56	-283.84	47.79	86.40	51.07	35.32	2.446	
5,659.00	5,646.26	5,660.39	5,648.92	19.32	17.28	-110.71	-288.49	47.45	86.40	50.65	35.75	2.417	
5,700.00	5,687.13	5,701.31	5,689.71	19.45	17.43	-109.34	-291.67	47.21	86.30	50.26	36.04	2.395	
5,750.00	5,736.99	5,751.20	5,739.46	19.62	17.60	-107.02	-295.44	46.94	85.98	49.59	36.39	2.363	
5,800.00	5,786.88	5,800.95	5,789.09	19.78	17.78	-109.10	-298.93	46.68	85.66	48.93	36.73	2.332	
5,839.00	5,825.79	5,839.76	5,827.82	19.91	17.91	-110.93	-301.38	46.50	85.56	48.56	37.00	2.312	
5,851.33	5,838.10	5,852.04	5,840.08	19.95	17.96	-111.76	-302.11	46.44	85.55	48.46	37.09	2.307	
5,900.00	5,886.68	5,900.53	5,888.50	20.10	18.13	-115.47	-304.69	46.19	85.64	48.20	37.43	2.288	
5,929.00	5,915.64	5,929.42	5,917.36	20.20	18.23	-118.03	-306.01	46.02	85.77	48.12	37.64	2.279	
6,000.00	5,986.56	6,000.29	5,988.17	20.43	18.47	-126.15	-308.90	45.57	86.10	47.96	38.14	2.257	
6,020.00	6,006.55	6,020.00	6,007.87	20.49	18.54	-129.67	-309.64	45.44	86.18	47.90	38.27	2.252	
6,100.00	6,086.51	6,099.24	6,087.07	20.75	18.81	-128.40	-311.99	45.22	86.64	47.84	38.80	2.233	
6,109.00	6,095.51	6,108.12	6,095.95	20.78	18.85	-128.20	-312.18	45.24	86.71	47.86	38.86	2.232	
6,197.00	6,183.50	6,194.55	6,182.37	21.06	19.11	-127.53	-313.09	45.91	87.74	48.37	39.37	2.229	
6,200.00	6,186.50	6,198.00	6,185.82	21.07	19.12	-127.53	-313.09	45.96	87.79	48.39	39.40	2.228	
6,286.00	6,272.50	6,283.80	6,271.61	21.35	19.36	-106.44	-313.27	47.09	88.91	49.00	39.91	2.228	
6,300.00	6,286.50	6,297.87	6,285.68	21.39	19.40	-96.09	-313.33	47.25	89.05	49.06	39.99	2.227	
6,377.00	6,363.50	6,375.26	6,363.07	21.62	19.64	-63.33	-313.87	48.00	89.54	49.11	40.43	2.215	
6,400.00	6,386.50	6,398.25	6,386.05	21.69	19.71	-56.91	-314.07	48.19	89.60	49.05	40.55	2.210	
6,468.00	6,454.50	6,466.18	6,453.98	21.88	19.93	-44.12	-314.60	48.75	89.75	48.82	40.93	2.193	
6,500.00	6,486.50	6,498.35	6,486.14	21.97	20.03	-40.96	-314.84	48.99	89.77	48.66	41.11	2.184	
6,557.00	6,543.50	6,555.66	6,543.46	22.12	20.22	-36.08	-315.27	49.26	89.61	48.17	41.44	2.162	
6,600.00	6,586.50	6,598.91	6,586.70	22.24	20.37	-35.01	-315.57	49.32	89.34	47.64	41.70	2.142	
6,648.00	6,634.50	6,647.19	6,634.98	22.37	20.53	-33.89	-315.84	49.21	88.90	46.90	42.00	2.117	

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

Company:	Piedra Operating LLC	Local Co-ordinate Reference:	Well University 8-8E B H 9WC
Project:	Andrews County, TX (NAD83-TNC)	TVD Reference:	RKB @ 3054.00usft (Ensign T225)
Reference Site:	University 8-8	MD Reference:	RKB @ 3054.00usft (Ensign T225)
Site Error:	0.00	North Reference:	Grid
Reference Well:	University 8-8E B H 9WC	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00	Output errors are at	2.00 sigma
Reference Wellbore	OH / 72263	Database:	USAEDMDB
Reference Design:	Surveys (Ensign T225)	Offset TVD Reference:	Offset Datum

Offset Design University 8-8E B H 6LS - OH / 72264 - Surveys (Ensign T225)												Offset Site Error:	0.00 usft
Survey Program: 15-MWD, 1991-MWD+HRGM+MS												Offset Well Error:	1.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Center		Distance			Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centers (usft)	Between Ellipses (usft)	Minimum Separation (usft)		
6,700.00	6,686.50	6,699.30	6,687.09	22.51	20.69	-34.73	-316.11	48.96	88.30	45.98	42.32	2.086	
6,737.00	6,723.50	6,736.38	6,724.17	22.61	20.80	-35.35	-316.31	48.74	87.84	45.28	42.55	2.064	
6,800.00	6,786.50	6,799.40	6,787.18	22.79	21.00	-39.18	-316.64	48.33	87.03	44.08	42.94	2.027	
6,826.00	6,812.49	6,825.40	6,813.19	22.86	21.08	-40.86	-316.76	48.16	86.70	43.59	43.11	2.011	
6,900.00	6,886.49	6,899.57	6,887.35	23.07	21.30	-29.13	-317.14	47.58	85.70	42.14	43.57	1.967	
6,918.00	6,904.49	6,917.61	6,905.39	23.12	21.36	-25.44	-317.24	47.42	85.44	41.76	43.68	1.956	
7,000.00	6,986.49	6,999.62	6,987.40	23.34	21.61	-25.40	-317.72	46.65	84.22	40.03	44.19	1.906	
7,009.00	6,995.49	7,008.62	6,996.40	23.37	21.64	-25.94	-317.77	46.57	84.09	39.84	44.24	1.901	
7,098.00	7,084.49	7,097.76	7,085.53	23.61	21.91	-21.24	-318.36	45.66	82.67	37.88	44.79	1.846	
7,100.00	7,086.49	7,099.76	7,087.53	23.62	21.92	-21.23	-318.38	45.64	82.64	37.83	44.81	1.844	
7,189.00	7,175.49	7,188.64	7,176.40	23.86	22.19	-15.32	-318.94	44.71	81.17	35.81	45.36	1.790	
7,200.00	7,186.49	7,199.64	7,187.40	23.89	22.22	-12.65	-319.00	44.60	80.99	35.57	45.43	1.783	
7,278.00	7,264.49	7,277.71	7,265.47	24.11	22.46	22.99	-319.48	43.79	79.78	33.87	45.92	1.738	
7,300.00	7,286.49	7,299.72	7,287.48	24.17	22.53	40.23	-319.63	43.55	79.46	33.41	46.05	1.725	
7,367.00	7,353.49	7,366.75	7,354.50	24.37	22.74	94.07	-320.13	42.82	78.55	32.09	46.46	1.691	
7,400.00	7,386.49	7,399.75	7,387.50	24.46	22.85	98.16	-320.40	42.45	78.14	31.48	46.66	1.675	
7,441.00	7,427.49	7,440.75	7,428.49	24.58	22.98	102.80	-320.76	42.00	77.63	30.73	46.90	1.655	
7,499.38	7,485.87	7,498.51	7,486.24	24.75	23.16	-179.19	-321.22	41.56	77.24	30.00	47.24	1.635	
7,500.00	7,486.49	7,499.12	7,486.86	24.75	23.16	-178.74	-321.23	41.56	77.24	29.99	47.24	1.635	
7,577.00	7,563.49	7,575.11	7,562.85	24.96	23.40	-154.19	-321.62	41.80	77.95	30.26	47.69	1.634	
7,600.00	7,586.48	7,598.03	7,585.76	25.04	23.47	-151.35	-321.69	42.03	78.39	30.54	47.84	1.638	
7,668.00	7,654.48	7,665.84	7,653.57	25.26	23.68	-143.25	-321.85	42.81	79.74	31.45	48.30	1.651	
7,700.00	7,686.48	7,697.73	7,685.46	25.36	23.77	-128.34	-321.90	43.22	80.37	31.87	48.50	1.657	
7,758.00	7,744.48	7,755.53	7,743.25	25.55	23.95	-72.85	-321.99	44.08	81.27	32.41	48.86	1.663	
7,800.00	7,786.47	7,796.38	7,784.09	25.67	24.07	-20.04	-322.00	45.00	81.89	32.79	49.10	1.668	
7,848.00	7,834.47	7,842.97	7,830.65	25.82	24.21	-4.94	-321.87	46.79	82.85	33.50	49.35	1.679	
7,900.00	7,886.45	7,896.33	7,883.97	25.97	24.40	-8.30	-321.48	48.87	83.78	34.04	49.74	1.684	
7,938.00	7,924.45	7,935.57	7,923.19	26.07	24.53	-11.77	-321.00	49.65	83.91	33.87	50.04	1.677	
8,000.00	7,986.44	7,998.21	7,985.83	26.26	24.75	-25.91	-320.08	50.09	83.64	33.16	50.48	1.657	
8,028.00	8,014.44	8,026.48	8,014.08	26.34	24.85	-35.13	-319.67	50.13	83.49	32.81	50.68	1.647	
8,080.89	8,067.32	8,079.33	8,066.94	26.50	25.02	-57.45	-318.95	50.15	83.33	32.29	51.04	1.633	
8,100.00	8,086.43	8,098.43	8,086.03	26.56	25.08	-69.98	-318.72	50.17	83.35	32.18	51.17	1.629	
8,117.00	8,103.43	8,115.41	8,103.02	26.61	25.14	-83.04	-318.54	50.19	83.40	32.12	51.28	1.626	
8,200.00	8,186.42	8,198.13	8,185.72	26.88	25.41	-54.59	-317.72	50.50	83.34	31.50	51.85	1.607	
8,206.00	8,192.42	8,204.10	8,191.70	26.90	25.43	-54.10	-317.66	50.53	83.31	31.42	51.89	1.606	
8,295.00	8,281.39	8,294.13	8,281.72	27.18	25.70	-58.75	-317.57	50.74	82.29	29.79	52.49	1.568	
8,300.00	8,286.39	8,299.15	8,286.74	27.20	25.72	-58.77	-317.60	50.73	82.20	29.67	52.53	1.565	
8,384.00	8,370.37	8,383.42	8,371.01	27.47	26.01	-59.01	-318.15	50.40	80.73	27.61	53.12	1.520	
8,400.00	8,386.37	8,399.38	8,386.97	27.52	26.06	-60.70	-318.25	50.30	80.45	27.22	53.23	1.511	
8,473.00	8,459.36	8,472.18	8,459.77	27.75	26.31	-70.92	-318.68	49.98	79.51	25.78	53.73	1.480	Level 3
8,500.00	8,486.35	8,499.04	8,486.63	27.84	26.40	-66.24	-318.86	49.93	79.23	25.32	53.91	1.470	Level 3
8,562.00	8,548.34	8,560.70	8,548.28	28.04	26.62	-61.70	-319.42	50.07	78.46	24.13	54.33	1.444	Level 3
8,600.00	8,586.32	8,598.52	8,586.10	28.17	26.75	-72.09	-319.88	50.35	78.08	23.49	54.59	1.430	Level 3
8,635.41	8,621.71	8,633.76	8,621.34	28.29	26.87	-81.30	-320.42	50.73	77.96	23.14	54.83	1.422	Level 3
8,651.00	8,637.29	8,649.28	8,636.85	28.34	26.92	-85.10	-320.69	50.94	77.99	23.06	54.93	1.420	Level 3

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

Company:	Piedra Operating LLC	Local Co-ordinate Reference:	Well University 8-8E B H 9WC
Project:	Andrews County, TX (NAD83-TNC)	TVD Reference:	RKB @ 3054.00usft (Ensign T225)
Reference Site:	University 8-8	MD Reference:	RKB @ 3054.00usft (Ensign T225)
Site Error:	0.00	North Reference:	Grid
Reference Well:	University 8-8E B H 9WC	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00	Output errors are at	2.00 sigma
Reference Wellbore	OH / 72263	Database:	USAEDMDB
Reference Design:	Surveys (Ensign T225)	Offset TVD Reference:	Offset Datum

Offset Design University 8-8E B H 6LS - OH / 72264 - Surveys (Ensign T225)												Offset Site Error:	0.00 usft
Survey Program: 15-MWD, 1991-MWD+HRGM+MS												Offset Well Error:	1.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Center		Distance			Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centers (usft)	Between Ellipses (usft)	Minimum Separation (usft)		
8,700.00	8,686.25	8,698.59	8,686.15	28.51	27.09	-88.84	-321.63	51.55	78.07	22.78	55.29	1.412	Level 3
8,741.00	8,727.19	8,739.85	8,727.40	28.65	27.23	-91.20	-322.47	51.92	78.05	22.45	55.59	1.404	Level 3
8,800.00	8,786.09	8,798.88	8,786.42	28.86	27.44	-90.89	-323.57	52.24	77.90	21.85	56.05	1.390	Level 3
8,832.00	8,818.04	8,830.89	8,818.42	28.98	27.56	-90.73	-324.06	52.33	77.78	21.48	56.30	1.381	Level 3
8,900.00	8,885.96	8,899.08	8,886.61	29.22	27.80	-101.40	-325.05	52.36	77.61	20.79	56.82	1.366	Level 3
8,921.00	8,906.95	8,920.15	8,907.68	29.30	27.88	-106.82	-325.37	52.33	77.60	20.62	56.98	1.362	Level 3
9,000.00	8,985.91	9,002.30	8,989.24	29.58	28.66	-107.39	-333.89	54.12	75.98	18.30	57.68	1.317	Level 3
9,010.00	8,995.90	9,012.47	8,999.20	29.61	28.78	-106.64	-335.94	54.61	75.64	17.91	57.73	1.310	Level 3
9,086.27	9,072.13	9,088.18	9,072.11	29.88	30.19	-89.63	-355.76	58.82	73.85	16.18	57.67	1.280	Level 3 , SF
9,100.00	9,085.85	9,101.36	9,084.56	29.93	30.45	-85.94	-360.00	59.64	73.95	16.39	57.56	1.285	Level 3
9,101.00	9,086.85	9,102.31	9,085.45	29.93	30.46	-85.66	-360.32	59.70	73.96	16.41	57.55	1.285	Level 3
9,191.00	9,176.81	9,185.23	9,162.02	30.25	31.27	-78.57	-391.55	65.30	82.08	25.43	56.65	1.449	Level 3
9,200.00	9,185.81	9,193.08	9,169.11	30.28	31.34	-77.13	-394.89	65.86	83.74	27.17	56.57	1.480	Level 3
9,280.00	9,265.78	9,258.75	9,226.94	30.55	31.89	-67.71	-425.46	71.45	106.03	50.11	55.92	1.896	
9,300.00	9,285.78	9,279.00	9,244.22	30.62	32.05	-66.19	-435.81	73.50	113.66	57.32	56.34	2.017	
9,370.00	9,355.77	9,325.91	9,283.16	30.86	32.42	-73.47	-461.42	78.73	144.92	89.52	55.41	2.616	
9,400.00	9,385.77	9,346.70	9,299.91	30.96	32.58	-69.93	-473.47	81.25	160.36	105.11	55.25	2.903	
9,461.00	9,446.76	9,386.79	9,331.29	31.16	32.87	-64.32	-497.89	86.41	194.53	139.61	54.92	3.542	
9,499.00	9,484.75	9,410.33	9,349.12	31.28	33.03	-72.77	-512.92	89.59	217.46	162.75	54.71	3.975	
9,500.00	9,485.75	9,410.93	9,349.57	31.29	33.03	-72.08	-513.31	89.68	218.08	163.37	54.71	3.986	
9,550.00	9,535.74	9,440.20	9,371.08	31.45	33.23	-33.64	-532.73	93.77	249.77	195.35	54.42	4.590	
9,600.00	9,585.48	9,460.00	9,385.22	32.13	33.36	-1.57	-546.29	96.63	280.22	226.49	53.72	5.216	
9,639.00	9,623.45	9,493.95	9,408.70	32.75	33.54	1.76	-570.26	101.73	300.46	245.65	54.81	5.482	
9,700.00	9,681.20	9,532.38	9,434.16	34.27	33.74	5.86	-598.39	107.85	329.48	273.74	55.74	5.911	
9,730.00	9,708.95	9,549.00	9,444.79	35.08	33.83	7.30	-610.87	110.60	343.19	287.20	56.00	6.129	
9,800.00	9,772.39	9,593.23	9,471.82	35.52	34.02	9.09	-645.05	118.11	374.99	319.11	55.87	6.711	
9,820.00	9,790.21	9,605.02	9,478.72	35.65	34.07	9.53	-654.41	120.14	384.15	328.37	55.78	6.887	
9,900.00	9,860.42	9,638.00	9,497.27	36.07	34.21	5.32	-681.06	125.86	421.64	367.68	53.96	7.814	
9,909.00	9,868.21	9,656.47	9,507.18	36.12	34.28	5.34	-696.31	129.11	425.54	370.54	55.00	7.737	
9,998.00	9,941.93	9,707.36	9,532.58	36.93	34.48	0.95	-739.41	138.32	464.54	410.15	54.39	8.541	
10,000.00	9,943.51	9,708.51	9,533.12	36.95	34.48	0.92	-740.41	138.53	465.35	410.96	54.39	8.556	
10,088.00	10,008.81	9,728.00	9,542.08	37.85	34.56	-0.04	-757.33	142.15	499.44	447.53	51.92	9.620	
10,100.00	10,017.06	9,757.30	9,554.36	37.93	34.66	0.15	-783.35	147.72	502.36	448.50	53.85	9.328	
10,178.00	10,066.55	9,791.45	9,566.41	38.44	34.77	0.25	-814.59	154.37	527.37	473.99	53.39	9.878	
10,200.00	10,079.22	9,819.00	9,574.32	38.54	34.87	0.43	-840.40	159.84	534.59	479.96	54.63	9.786	
10,268.00	10,115.35	9,819.00	9,574.32	38.83	34.87	0.41	-840.40	159.84	553.77	501.89	51.87	10.675	
10,300.00	10,130.79	9,819.00	9,574.32	38.92	34.87	0.48	-840.40	159.84	563.71	513.10	50.61	11.139	
10,358.00	10,156.39	9,870.02	9,584.79	39.09	34.99	0.96	-889.23	170.19	578.35	525.03	53.32	10.847	
10,400.00	10,172.64	9,888.16	9,587.21	39.20	35.03	1.03	-906.80	173.93	589.33	535.69	53.64	10.987	
10,447.00	10,188.03	9,934.00	9,590.25	39.31	35.15	1.28	-951.52	183.47	601.79	545.45	56.35	10.681	
10,455.81	10,190.54	9,934.00	9,590.25	39.33	35.15	1.24	-951.52	183.47	603.39	547.18	56.21	10.734	
10,500.00	10,200.26	9,934.00	9,590.25	39.43	35.15	1.12	-951.52	183.47	610.36	554.71	55.65	10.969	
10,507.63	10,201.45	9,935.18	9,590.27	39.45	35.15	1.11	-952.67	183.71	611.38	555.76	55.62	10.992	
10,537.00	10,204.66	9,963.98	9,590.78	39.52	35.20	1.14	-980.84	189.71	614.09	557.38	56.71	10.829	
10,542.50	10,205.02	9,969.39	9,590.88	39.52	35.21	1.15	-986.13	190.84	614.35	557.55	56.80	10.816	
10,561.00	10,205.58	9,987.61	9,591.19	39.55	35.24	1.16	-1,003.96	194.61	614.60	557.48	57.12	10.759	

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

Company:	Piedra Operating LLC	Local Co-ordinate Reference:	Well University 8-8E B H 9WC
Project:	Andrews County, TX (NAD83-TNC)	TVD Reference:	RKB @ 3054.00usft (Ensign T225)
Reference Site:	University 8-8	MD Reference:	RKB @ 3054.00usft (Ensign T225)
Site Error:	0.00	North Reference:	Grid
Reference Well:	University 8-8E B H 9WC	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00	Output errors are at	2.00 sigma
Reference Wellbore	OH / 72263	Database:	USAEDMDB
Reference Design:	Surveys (Ensign T225)	Offset TVD Reference:	Offset Datum

Offset Design University 8-8E B H 6LS - OH / 72264 - Surveys (Ensign T225)												Offset Site Error:	0.00 usft
Survey Program: 15-MWD, 1991-MWD+HRGM+MS												Offset Well Error:	1.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Center		Distance			Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centers (usft)	Between Ellipses (usft)	Minimum Separation (usft)		
10,600.00	10,205.55	10,026.10	9,591.82	39.60	35.32	1.17	-1,041.61	202.55	613.93	556.27	57.66	10.647	
10,611.39	10,205.46	10,037.56	9,592.01	39.61	35.34	1.17	-1,052.83	204.89	613.66	555.95	57.71	10.633	
10,650.00	10,204.91	10,076.42	9,592.65	39.67	35.43	1.17	-1,090.89	212.72	612.47	554.58	57.89	10.580	
10,659.74	10,204.71	10,086.22	9,592.82	39.68	35.45	1.18	-1,100.49	214.66	612.11	554.19	57.93	10.567	
10,700.00	10,203.84	10,126.42	9,593.50	39.75	35.56	1.24	-1,139.90	222.57	610.56	552.50	58.06	10.515	
10,709.81	10,203.61	10,136.07	9,593.66	39.77	35.59	1.26	-1,149.35	224.52	610.17	552.08	58.09	10.503	
10,741.00	10,202.83	10,166.76	9,594.15	39.82	35.68	1.30	-1,179.35	230.98	608.90	550.71	58.19	10.464	
10,753.15	10,202.53	10,178.72	9,594.33	39.85	35.72	1.31	-1,191.01	233.61	608.42	550.19	58.23	10.449	
10,800.00	10,201.87	10,226.51	9,595.05	39.95	35.89	1.28	-1,237.51	244.60	607.06	548.61	58.44	10.387	
10,817.43	10,201.80	10,245.03	9,595.36	39.99	35.97	1.26	-1,255.51	248.95	606.69	548.14	58.55	10.362	
10,832.00	10,201.83	10,260.52	9,595.66	40.02	36.03	1.24	-1,270.56	252.61	606.44	547.80	58.64	10.342	
10,841.40	10,201.88	10,270.51	9,595.86	40.05	36.07	1.23	-1,280.26	254.99	606.30	547.60	58.70	10.329	
10,900.00	10,202.40	10,332.74	9,597.32	40.21	36.35	1.19	-1,340.66	269.93	605.42	546.35	59.07	10.249	
10,919.98	10,202.66	10,353.94	9,597.90	40.27	36.46	1.18	-1,361.22	275.05	605.14	545.94	59.20	10.222	
10,921.00	10,202.68	10,355.03	9,597.93	40.27	36.46	1.18	-1,362.28	275.31	605.13	545.92	59.21	10.221	
10,925.04	10,202.74	10,359.32	9,598.05	40.29	36.49	1.18	-1,366.43	276.35	605.07	545.84	59.23	10.215	
10,964.26	10,203.56	10,396.72	9,599.16	40.42	36.68	1.19	-1,402.70	285.43	604.73	545.39	59.34	10.190	
11,000.00	10,204.65	10,425.72	9,599.75	40.55	36.84	1.21	-1,430.81	292.56	605.10	545.83	59.27	10.210	
11,002.50	10,204.74	10,427.75	9,599.78	40.56	36.85	1.21	-1,432.77	293.06	605.15	545.89	59.26	10.211	
11,011.00	10,205.05	10,434.65	9,599.87	40.59	36.89	1.22	-1,439.45	294.77	605.36	546.11	59.24	10.218	
11,100.00	10,208.52	10,512.70	9,599.82	40.98	37.36	1.24	-1,514.99	314.43	608.86	549.56	59.31	10.266	
11,189.00	10,211.22	10,595.93	9,598.91	41.44	37.91	1.22	-1,595.45	335.68	612.52	552.95	59.57	10.283	
11,200.00	10,211.45	10,606.01	9,598.74	41.50	37.99	1.21	-1,605.20	338.23	612.94	553.35	59.59	10.286	
11,280.00	10,213.66	10,683.76	9,597.06	41.97	38.55	1.15	-1,680.43	357.82	616.86	556.92	59.94	10.291	
11,300.00	10,214.24	10,704.98	9,596.64	42.09	38.71	1.12	-1,700.90	363.35	617.83	557.74	60.10	10.281	
11,369.00	10,214.95	10,774.05	9,595.42	42.54	39.27	0.89	-1,767.45	381.82	619.71	559.23	60.48	10.247	
11,400.00	10,214.79	10,803.32	9,594.83	42.75	39.51	0.80	-1,795.75	389.24	620.16	559.57	60.59	10.235	
11,458.00	10,214.31	10,857.93	9,593.51	43.16	39.98	0.67	-1,848.80	402.18	621.05	560.23	60.82	10.211	
11,500.00	10,213.90	10,897.34	9,592.38	43.46	40.32	0.60	-1,887.20	410.97	621.84	560.86	60.98	10.197	
11,548.00	10,213.50	10,941.10	9,590.92	43.82	40.70	0.56	-1,929.93	420.27	623.05	561.91	61.13	10.192	
11,600.00	10,213.01	10,986.94	9,588.98	44.22	41.10	0.53	-1,974.76	429.65	624.76	563.50	61.26	10.198	
11,637.00	10,212.57	11,023.59	9,587.15	44.51	41.42	0.53	-2,010.63	436.95	626.16	564.66	61.50	10.182	
11,700.00	10,211.76	11,108.90	9,584.59	45.02	42.19	0.49	-2,094.03	454.66	627.24	564.54	62.71	10.002	
11,728.00	10,211.43	11,132.86	9,584.15	45.25	42.41	0.48	-2,117.44	459.75	627.41	564.64	62.77	9.995	
11,800.00	10,210.56	11,201.36	9,582.65	45.87	43.04	0.50	-2,184.41	474.11	628.11	564.93	63.18	9.942	
11,817.00	10,210.34	11,218.43	9,582.24	46.01	43.20	0.51	-2,201.09	477.68	628.31	565.01	63.30	9.925	
11,900.00	10,209.69	11,300.27	9,580.26	46.74	43.98	0.54	-2,281.04	495.07	629.67	565.79	63.88	9.857	
11,907.00	10,209.68	11,306.81	9,580.09	46.80	44.04	0.54	-2,287.43	496.47	629.83	565.92	63.92	9.854	
11,996.00	10,210.50	11,390.51	9,577.49	47.62	44.85	0.59	-2,369.15	514.37	633.44	568.99	64.44	9.829	
12,000.00	10,210.58	11,394.35	9,577.35	47.65	44.89	0.60	-2,372.89	515.19	633.66	569.19	64.47	9.828	
12,085.00	10,210.74	11,485.47	9,574.08	48.45	45.80	0.71	-2,461.78	534.97	636.91	571.51	65.40	9.738	
12,100.00	10,210.48	11,507.61	9,573.64	48.60	46.02	0.71	-2,483.38	539.83	636.95	571.17	65.78	9.683	
12,174.00	10,208.24	11,591.38	9,573.65	49.30	46.87	0.61	-2,565.08	558.32	634.63	567.87	66.76	9.506	
12,200.00	10,207.16	11,615.36	9,573.63	49.56	47.11	0.56	-2,588.48	563.57	633.55	566.64	66.92	9.468	
12,264.00	10,204.35	11,673.42	9,573.26	50.18	47.71	0.51	-2,645.16	576.15	631.15	563.89	67.26	9.384	

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

Company:	Piedra Operating LLC	Local Co-ordinate Reference:	Well University 8-8E B H 9WC
Project:	Andrews County, TX (NAD83-TNC)	TVD Reference:	RKB @ 3054.00usft (Ensign T225)
Reference Site:	University 8-8	MD Reference:	RKB @ 3054.00usft (Ensign T225)
Site Error:	0.00	North Reference:	Grid
Reference Well:	University 8-8E B H 9WC	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00	Output errors are at	2.00 sigma
Reference Wellbore	OH / 72263	Database:	USAEDMDB
Reference Design:	Surveys (Ensign T225)	Offset TVD Reference:	Offset Datum

Offset Design University 8-8E B H 6LS - OH / 72264 - Surveys (Ensgin T225)												Offset Site Error:	0.00 usft
Survey Program: 15-MWD, 1991-MWD+HRGM+MS												Offset Well Error:	1.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Center		Distance			Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centers (usft)	Between Ellipses (usft)	Minimum Separation (usft)		
12,300.00	10,202.92	11,705.79	9,572.81	50.54	48.05	0.51	-2,676.79	583.00	630.23	562.77	67.45	9.343	
12,355.00	10,201.48	11,754.93	9,571.75	51.08	48.56	0.55	-2,724.86	593.16	629.98	562.23	67.75	9.299	
12,400.00	10,200.67	11,794.89	9,570.54	51.53	48.98	0.62	-2,763.99	601.15	630.54	562.55	67.99	9.274	
12,445.00	10,199.87	11,843.57	9,568.84	51.99	49.49	0.72	-2,811.71	610.61	631.33	562.80	68.54	9.212	
12,500.00	10,198.78	11,917.73	9,567.87	52.55	50.28	0.86	-2,884.47	624.89	630.98	561.28	69.70	9.052	
12,535.00	10,197.99	11,956.79	9,568.03	52.90	50.70	0.88	-2,922.74	632.74	630.06	559.89	70.17	8.979	
12,545.41	10,197.75	11,968.85	9,568.14	53.01	50.83	0.88	-2,934.53	635.25	629.72	559.39	70.33	8.954	
12,600.00	10,196.61	12,029.16	9,569.13	53.58	51.49	0.88	-2,993.44	648.12	627.68	556.65	71.03	8.837	
12,619.50	10,196.26	12,049.92	9,569.57	53.78	51.72	0.90	-3,013.74	652.48	626.92	555.66	71.26	8.798	
12,626.00	10,196.15	12,056.83	9,569.72	53.85	51.79	0.91	-3,020.50	653.92	626.66	555.33	71.33	8.785	
12,633.73	10,196.02	12,065.06	9,569.92	53.93	51.88	0.92	-3,028.55	655.62	626.36	554.94	71.42	8.770	
12,700.00	10,195.22	12,128.38	9,571.38	54.62	52.58	0.98	-3,090.53	668.48	624.05	552.08	71.96	8.672	
12,715.00	10,195.11	12,142.08	9,571.63	54.78	52.73	0.98	-3,103.95	671.23	623.66	551.60	72.06	8.654	
12,717.90	10,195.09	12,144.73	9,571.67	54.81	52.76	0.98	-3,106.54	671.76	623.60	551.51	72.08	8.651	
12,721.82	10,195.07	12,148.31	9,571.73	54.85	52.79	0.99	-3,110.05	672.48	623.51	551.40	72.11	8.647	
12,790.15	10,195.01	12,209.36	9,572.39	55.58	53.47	1.07	-3,169.91	684.48	622.74	550.20	72.54	8.585	
12,800.00	10,195.06	12,218.02	9,572.42	55.68	53.57	1.10	-3,178.41	686.11	622.75	550.16	72.60	8.578	
12,800.01	10,195.06	12,218.03	9,572.42	55.68	53.57	1.10	-3,178.42	686.11	622.75	550.16	72.60	8.578	
12,804.00	10,195.08	12,221.54	9,572.43	55.72	53.60	1.10	-3,181.86	686.77	622.77	550.15	72.62	8.575	
12,824.90	10,195.19	12,239.90	9,572.43	55.95	53.81	1.16	-3,199.92	690.15	622.89	550.14	72.75	8.562	
12,893.00	10,195.24	12,311.91	9,572.23	56.67	54.63	1.30	-3,270.68	703.48	623.17	549.59	73.58	8.469	
12,900.00	10,195.22	12,320.22	9,572.27	56.75	54.73	1.29	-3,278.81	705.19	623.12	549.42	73.69	8.456	
12,903.54	10,195.21	12,324.42	9,572.30	56.79	54.78	1.29	-3,282.91	706.07	623.09	549.34	73.75	8.449	
12,982.00	10,195.05	12,409.36	9,573.46	57.63	55.77	1.05	-3,365.65	725.28	621.78	547.06	74.72	8.322	
13,000.00	10,195.03	12,427.94	9,573.79	57.83	55.99	1.00	-3,383.72	729.58	621.45	546.54	74.91	8.296	
13,005.27	10,195.04	12,433.38	9,573.88	57.89	56.05	0.98	-3,389.01	730.84	621.35	546.39	74.97	8.288	
13,006.31	10,195.04	12,434.45	9,573.90	57.90	56.06	0.97	-3,390.05	731.08	621.34	546.36	74.98	8.287	
13,072.00	10,195.40	12,501.40	9,575.19	58.61	56.83	0.78	-3,455.14	746.69	620.40	544.74	75.66	8.200	
13,085.85	10,195.52	12,515.48	9,575.48	58.77	56.99	0.73	-3,468.83	750.00	620.23	544.43	75.80	8.182	
13,100.00	10,195.63	12,529.86	9,575.78	58.92	57.15	0.67	-3,482.80	753.39	620.04	544.09	75.95	8.164	
13,105.37	10,195.66	12,535.32	9,575.89	58.98	57.22	0.65	-3,488.10	754.68	619.96	543.95	76.00	8.157	
13,161.00	10,195.86	12,594.81	9,577.33	59.59	57.90	0.31	-3,545.81	769.03	618.77	542.11	76.66	8.072	
13,178.98	10,195.88	12,614.02	9,577.88	59.80	58.12	0.21	-3,564.42	773.80	618.28	541.41	76.87	8.043	
13,200.00	10,195.94	12,636.20	9,578.56	60.04	58.38	0.10	-3,585.87	779.37	617.69	540.58	77.11	8.010	
13,211.52	10,195.98	12,648.18	9,578.94	60.18	58.52	0.06	-3,597.46	782.38	617.37	540.13	77.24	7.993	
13,251.00	10,196.21	12,689.25	9,580.31	60.63	58.99	-0.04	-3,637.19	792.70	616.27	538.58	77.69	7.932	
13,266.07	10,196.34	12,704.94	9,580.87	60.81	59.18	-0.05	-3,652.37	796.64	615.87	538.00	77.87	7.909	
13,300.00	10,196.79	12,735.19	9,581.90	61.21	59.53	-0.06	-3,681.64	804.21	615.16	537.05	78.11	7.875	
13,314.32	10,197.04	12,747.11	9,582.23	61.38	59.67	-0.05	-3,693.18	807.17	615.02	536.82	78.19	7.866	
13,329.33	10,197.35	12,759.60	9,582.53	61.56	59.81	-0.03	-3,705.28	810.26	614.96	536.69	78.28	7.856	
13,343.00	10,197.66	12,770.98	9,582.76	61.72	59.95	-0.01	-3,716.31	813.06	615.01	536.65	78.35	7.849	
13,355.91	10,197.98	12,781.73	9,582.93	61.87	60.07	0.01	-3,726.73	815.69	615.11	536.68	78.43	7.843	
13,400.00	10,198.99	12,820.78	9,583.29	62.37	60.53	0.09	-3,764.61	825.18	615.71	536.94	78.77	7.817	
13,407.12	10,199.15	12,827.68	9,583.34	62.46	60.61	0.11	-3,771.31	826.84	615.82	536.98	78.84	7.811	
13,431.00	10,199.65	12,850.82	9,583.47	62.73	60.88	0.17	-3,793.77	832.38	616.20	537.11	79.09	7.791	
13,446.86	10,199.98	12,866.19	9,583.54	62.91	61.06	0.21	-3,808.69	836.04	616.46	537.20	79.25	7.778	

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

Company:	Piedra Operating LLC	Local Co-ordinate Reference:	Well University 8-8E B H 9WC
Project:	Andrews County, TX (NAD83-TNC)	TVD Reference:	RKB @ 3054.00usft (Ensign T225)
Reference Site:	University 8-8	MD Reference:	RKB @ 3054.00usft (Ensign T225)
Site Error:	0.00	North Reference:	Grid
Reference Well:	University 8-8E B H 9WC	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00	Output errors are at	2.00 sigma
Reference Wellbore	OH / 72263	Database:	USAEDMDB
Reference Design:	Surveys (Ensign T225)	Offset TVD Reference:	Offset Datum

Offset Design University 8-8E B H 6LS - OH / 72264 - Surveys (Ensign T225)												Offset Site Error:	0.00 usft
Survey Program: 15-MWD, 1991-MWD+HRGM+MS												Offset Well Error:	1.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Center		Distance			Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centers (usft)	Between Ellipses (usft)	Minimum Separation (usft)		
13,500.00	10,201.09	12,919.38	9,583.72	63.52	61.68	0.35	-3,860.38	848.60	617.38	537.52	79.86	7.731	
13,504.62	10,201.18	12,924.17	9,583.74	63.57	61.74	0.36	-3,865.04	849.73	617.46	537.54	79.92	7.726	
13,520.00	10,201.50	12,940.10	9,583.82	63.75	61.92	0.39	-3,880.52	853.52	617.70	537.59	80.11	7.710	
13,538.60	10,201.89	12,959.38	9,583.94	63.96	62.15	0.43	-3,899.24	858.11	617.98	537.63	80.35	7.691	
13,600.00	10,203.16	13,022.03	9,584.43	64.67	62.89	0.54	-3,960.07	873.09	618.78	537.70	81.08	7.631	
13,602.31	10,203.21	13,024.37	9,584.45	64.70	62.92	0.54	-3,962.34	873.64	618.81	537.70	81.11	7.629	
13,610.00	10,203.37	13,032.14	9,584.52	64.78	63.01	0.55	-3,969.89	875.49	618.90	537.70	81.20	7.622	
13,630.90	10,203.79	13,053.28	9,584.71	65.03	63.26	0.59	-3,990.43	880.47	619.14	537.69	81.45	7.602	
13,699.00	10,204.99	13,125.28	9,585.56	65.81	64.11	0.70	-4,060.43	897.33	619.55	537.20	82.35	7.523	
13,699.24	10,204.99	13,125.54	9,585.56	65.82	64.12	0.70	-4,060.68	897.39	619.55	537.19	82.35	7.523	
13,700.00	10,205.00	13,126.36	9,585.58	65.82	64.13	0.70	-4,061.47	897.58	619.55	537.18	82.36	7.522	
13,720.03	10,205.34	13,147.87	9,585.94	66.06	64.38	0.73	-4,082.38	902.62	619.55	536.91	82.64	7.497	
13,788.00	10,206.90	13,207.69	9,586.75	66.85	65.10	0.76	-4,140.43	917.05	620.21	537.04	83.18	7.456	
13,790.72	10,206.98	13,209.97	9,586.76	66.88	65.13	0.76	-4,142.64	917.63	620.28	537.08	83.20	7.456	
13,800.00	10,207.21	13,217.74	9,586.78	66.99	65.22	0.75	-4,150.15	919.60	620.48	537.23	83.26	7.453	
13,877.00	10,208.07	13,292.56	9,586.42	67.89	66.13	0.60	-4,222.24	939.63	621.68	537.61	84.07	7.395	
13,900.00	10,207.99	13,318.21	9,586.42	68.16	66.44	0.52	-4,246.87	946.77	621.60	537.19	84.41	7.364	
13,966.00	10,207.32	13,374.80	9,586.41	68.93	67.13	0.31	-4,301.12	962.90	620.97	536.09	84.88	7.316	
14,000.00	10,206.79	13,399.51	9,585.90	69.33	67.43	0.21	-4,324.76	970.04	621.13	536.15	84.99	7.309	
14,055.00	10,205.93	13,442.81	9,584.16	69.98	67.95	0.02	-4,366.15	982.63	622.45	537.20	85.25	7.301	
14,100.00	10,205.31	13,490.34	9,582.04	70.51	68.54	-0.15	-4,411.71	996.00	623.84	537.97	85.86	7.265	
14,144.00	10,204.84	13,534.44	9,580.22	71.03	69.08	-0.24	-4,454.17	1,007.77	625.19	538.80	86.39	7.237	
14,200.00	10,204.43	13,584.59	9,577.86	71.70	69.70	-0.23	-4,502.68	1,020.30	627.41	540.54	86.88	7.222	
14,233.00	10,204.27	13,614.79	9,576.21	72.09	70.07	-0.18	-4,531.99	1,027.40	629.06	541.86	87.19	7.215	
14,300.00	10,204.26	13,684.68	9,572.45	72.89	70.93	0.04	-4,600.01	1,043.01	632.65	544.53	88.12	7.180	
14,322.00	10,204.36	13,708.45	9,571.25	73.16	71.22	0.13	-4,623.20	1,048.11	633.85	545.40	88.45	7.166	
14,400.00	10,204.81	13,798.95	9,567.70	74.09	72.33	0.52	-4,711.62	1,067.02	637.41	547.57	89.84	7.095	
14,411.00	10,204.88	13,813.18	9,567.33	74.22	72.50	0.59	-4,725.53	1,069.98	637.77	547.68	90.08	7.080	
14,499.00	10,205.05	13,916.80	9,566.57	75.29	73.77	0.98	-4,826.72	1,092.26	638.58	546.89	91.69	6.964	
14,500.00	10,205.05	13,917.82	9,566.57	75.30	73.78	0.99	-4,827.72	1,092.48	638.57	546.87	91.70	6.963	
14,504.79	10,205.04	13,922.72	9,566.58	75.36	73.84	1.00	-4,832.50	1,093.54	638.56	546.79	91.77	6.958	
14,588.00	10,204.01	14,008.17	9,566.82	76.36	74.89	1.15	-4,915.93	1,112.03	637.32	544.43	92.89	6.861	
14,600.00	10,203.75	14,020.55	9,566.89	76.51	75.04	1.16	-4,928.02	1,114.70	637.00	543.95	93.05	6.846	
14,602.33	10,203.69	14,022.95	9,566.90	76.54	75.07	1.16	-4,930.36	1,115.22	636.93	543.85	93.08	6.843	
14,613.94	10,203.44	14,034.93	9,566.97	76.68	75.21	1.17	-4,942.06	1,117.80	636.61	543.37	93.24	6.828	
14,677.00	10,201.95	14,095.54	9,567.30	77.44	75.96	1.24	-5,001.26	1,130.83	634.81	540.84	93.97	6.756	
14,699.49	10,201.40	14,116.40	9,567.32	77.71	76.22	1.26	-5,021.63	1,135.29	634.24	540.04	94.20	6.733	
14,700.00	10,201.39	14,116.88	9,567.32	77.72	76.22	1.26	-5,022.10	1,135.39	634.23	540.02	94.21	6.732	
14,768.00	10,199.76	14,177.11	9,567.01	78.55	76.97	1.27	-5,080.98	1,148.08	632.95	538.12	94.83	6.674	
14,800.00	10,199.04	14,204.38	9,566.57	78.94	77.30	1.26	-5,107.68	1,153.57	632.75	537.65	95.09	6.654	
14,858.00	10,198.00	14,264.06	9,565.20	79.65	78.05	1.26	-5,166.20	1,165.22	633.04	537.16	95.88	6.603	
14,900.00	10,197.39	14,318.36	9,564.79	80.16	78.73	1.15	-5,219.22	1,176.89	632.73	535.97	96.76	6.539	
14,947.00	10,196.76	14,371.09	9,565.14	80.73	79.39	0.99	-5,270.56	1,188.94	631.75	534.26	97.50	6.480	
14,960.97	10,196.58	14,386.61	9,565.33	80.90	79.58	0.95	-5,285.66	1,192.50	631.39	533.68	97.71	6.462	
15,000.00	10,196.01	14,430.24	9,566.07	81.38	80.13	0.87	-5,328.12	1,202.54	630.14	531.82	98.32	6.409	

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

Company:	Piedra Operating LLC	Local Co-ordinate Reference:	Well University 8-8E B H 9WC
Project:	Andrews County, TX (NAD83-TNC)	TVD Reference:	RKB @ 3054.00usft (Ensign T225)
Reference Site:	University 8-8	MD Reference:	RKB @ 3054.00usft (Ensign T225)
Site Error:	0.00	North Reference:	Grid
Reference Well:	University 8-8E B H 9WC	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00	Output errors are at	2.00 sigma
Reference Wellbore	OH / 72263	Database:	USAEDMDB
Reference Design:	Surveys (Ensign T225)	Offset TVD Reference:	Offset Datum

Offset Design University 8-8E B H 6LS - OH / 72264 - Surveys (Ensign T225)												Offset Site Error:	0.00 usft
Survey Program: 15-MWD, 1991-MWD+HRGM+MS												Offset Well Error:	1.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Center		Distance			Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centers (usft)	Between Ellipses (usft)	Minimum Separation (usft)		
15,015.79	10,195.75	14,448.04	9,566.47	81.57	80.35	0.85	-5,345.42	1,206.68	629.53	530.96	98.57	6.387	
15,035.00	10,195.42	14,469.67	9,567.03	81.80	80.62	0.83	-5,366.45	1,211.76	628.70	529.83	98.87	6.359	
15,045.47	10,195.22	14,481.46	9,567.37	81.93	80.77	0.81	-5,377.89	1,214.54	628.20	529.17	99.04	6.343	
15,100.00	10,194.02	14,536.27	9,569.11	82.61	81.46	0.67	-5,431.11	1,227.52	625.25	525.53	99.72	6.270	
15,119.52	10,193.51	14,554.87	9,569.66	82.85	81.69	0.61	-5,449.19	1,231.87	624.15	524.21	99.94	6.245	
15,124.00	10,193.38	14,559.14	9,569.78	82.90	81.74	0.60	-5,453.34	1,232.86	623.90	523.91	99.99	6.239	
15,128.80	10,193.25	14,563.70	9,569.91	82.96	81.80	0.58	-5,457.78	1,233.92	623.62	523.58	100.05	6.233	
15,200.00	10,190.90	14,628.41	9,571.49	83.85	82.61	0.22	-5,520.73	1,248.77	619.52	518.78	100.75	6.149	
15,213.00	10,190.41	14,639.87	9,571.69	84.01	82.76	0.13	-5,531.89	1,251.40	618.80	517.94	100.86	6.135	
15,215.00	10,190.33	14,641.63	9,571.72	84.04	82.78	0.12	-5,533.61	1,251.80	618.69	517.82	100.88	6.133	
15,216.89	10,190.26	14,643.30	9,571.74	84.06	82.80	0.11	-5,535.23	1,252.18	618.59	517.70	100.90	6.131	
15,300.00	10,188.75	14,727.22	9,572.77	85.11	83.85	-0.33	-5,616.90	1,271.45	616.08	514.12	101.96	6.042	
15,302.00	10,188.75	14,729.45	9,572.80	85.13	83.88	-0.34	-5,619.08	1,271.96	616.05	514.06	101.99	6.040	
15,306.58	10,188.76	14,734.58	9,572.89	85.19	83.94	-0.36	-5,624.06	1,273.15	615.98	513.91	102.07	6.035	
15,325.68	10,188.76	14,755.91	9,573.32	85.43	84.21	-0.45	-5,644.80	1,278.11	615.60	513.23	102.37	6.014	
15,391.00	10,188.45	14,812.23	9,574.30	86.23	84.92	-0.70	-5,699.52	1,291.40	614.21	511.23	102.97	5.965	
15,400.00	10,188.36	14,819.49	9,574.34	86.35	85.01	-0.73	-5,706.57	1,293.14	614.07	511.03	103.04	5.959	
15,403.11	10,188.32	14,822.00	9,574.35	86.38	85.04	-0.74	-5,709.00	1,293.74	614.02	510.96	103.07	5.957	
15,407.81	10,188.26	14,825.78	9,574.37	86.44	85.09	-0.76	-5,712.68	1,294.66	613.95	510.85	103.10	5.955	
15,482.00	10,186.37	14,891.42	9,573.87	87.36	85.92	-1.02	-5,776.30	1,310.78	612.64	508.81	103.83	5.900	
15,500.00	10,185.69	14,908.98	9,573.66	87.59	86.14	-1.07	-5,793.30	1,315.19	612.19	508.13	104.06	5.883	
15,571.00	10,182.74	14,977.92	9,572.72	88.47	87.01	-1.35	-5,859.97	1,332.72	610.27	505.34	104.93	5.816	
15,600.00	10,181.65	15,005.95	9,572.27	88.83	87.37	-1.47	-5,887.09	1,339.79	609.68	504.39	105.29	5.791	
15,661.00	10,180.66	15,064.57	9,571.17	89.59	88.11	-1.70	-5,943.84	1,354.40	609.90	503.87	106.03	5.752	
15,700.00	10,180.72	15,101.79	9,570.34	90.07	88.58	-1.84	-5,979.89	1,363.66	610.88	504.38	106.50	5.736	
15,751.00	10,181.21	15,151.39	9,569.09	90.71	89.21	-1.99	-6,027.92	1,375.97	612.71	505.56	107.15	5.718	
15,800.00	10,181.91	15,199.85	9,567.81	91.32	89.83	-2.10	-6,074.86	1,387.93	614.75	506.95	107.79	5.703	
15,842.00	10,182.52	15,246.89	9,566.67	91.85	90.43	-2.17	-6,120.49	1,399.30	616.40	507.90	108.50	5.681	
15,900.00	10,183.35	15,313.80	9,565.94	92.57	91.28	-2.14	-6,185.70	1,414.28	617.86	508.32	109.53	5.641	
15,933.00	10,183.81	15,346.81	9,565.76	92.99	91.70	-2.12	-6,217.93	1,421.39	618.47	508.50	109.98	5.624	
16,000.00	10,184.40	15,415.61	9,565.44	93.83	92.57	-2.08	-6,285.12	1,436.21	619.37	508.44	110.93	5.584	
16,022.00	10,184.45	15,439.43	9,565.42	94.10	92.88	-2.09	-6,308.35	1,441.44	619.44	508.17	111.27	5.567	
16,100.00	10,184.58	15,515.41	9,565.64	95.08	93.84	-2.14	-6,382.40	1,458.49	619.38	507.10	112.28	5.517	
16,111.00	10,184.61	15,524.92	9,565.61	95.22	93.96	-2.15	-6,391.66	1,460.62	619.44	507.06	112.39	5.512	
16,199.00	10,184.99	15,605.20	9,564.54	96.32	94.99	-2.18	-6,469.96	1,478.33	621.00	507.63	113.38	5.477	
16,200.00	10,185.00	15,606.19	9,564.52	96.34	95.00	-2.18	-6,470.93	1,478.54	621.03	507.64	113.39	5.477	
16,290.00	10,185.58	15,693.44	9,562.88	97.47	96.11	-2.20	-6,556.10	1,497.41	623.31	508.77	114.54	5.442	
16,300.00	10,185.65	15,702.84	9,562.67	97.60	96.23	-2.20	-6,565.27	1,499.43	623.61	508.94	114.66	5.439	
16,379.00	10,186.19	15,776.22	9,560.70	98.59	97.17	-2.23	-6,636.92	1,515.18	626.29	510.71	115.59	5.418	
16,400.00	10,186.35	15,795.30	9,560.06	98.85	97.41	-2.25	-6,655.54	1,519.24	627.16	511.34	115.82	5.415	
16,468.00	10,187.08	15,857.55	9,557.58	99.71	98.21	-2.31	-6,716.34	1,532.42	630.63	514.04	116.59	5.409	
16,500.00	10,187.69	15,887.68	9,556.22	100.12	98.59	-2.37	-6,745.74	1,538.85	632.71	515.73	116.98	5.409	
16,558.00	10,189.77	15,947.52	9,553.33	100.86	99.36	-2.40	-6,804.09	1,551.82	637.58	519.73	117.85	5.410	
16,600.00	10,191.64	16,009.97	9,551.63	101.39	100.16	-2.33	-6,865.00	1,565.47	640.57	521.56	119.01	5.382	
16,648.00	10,193.61	16,061.68	9,551.34	102.01	100.82	-2.22	-6,915.45	1,576.79	642.76	522.97	119.79	5.366	
16,700.00	10,195.11	16,111.00	9,551.07	102.67	101.45	-2.08	-6,963.58	1,587.58	644.49	524.04	120.45	5.351	

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

Company:	Piedra Operating LLC	Local Co-ordinate Reference:	Well University 8-8E B H 9WC
Project:	Andrews County, TX (NAD83-TNC)	TVD Reference:	RKB @ 3054.00usft (Ensign T225)
Reference Site:	University 8-8	MD Reference:	RKB @ 3054.00usft (Ensign T225)
Site Error:	0.00	North Reference:	Grid
Reference Well:	University 8-8E B H 9WC	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00	Output errors are at	2.00 sigma
Reference Wellbore	OH / 72263	Database:	USAEDMDB
Reference Design:	Surveys (Ensign T225)	Offset TVD Reference:	Offset Datum

Offset Design University 8-8E B H 6LS - OH / 72264 - Surveys (Ensign T225)												Offset Site Error:	0.00 usft
Survey Program: 15-MWD, 1991-MWD+HRGM+MS												Offset Well Error:	1.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Center		Distance			Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centers (usft)	Between Ellipses (usft)	Minimum Separation (usft)		
16,737.00	10,195.56	16,146.35	9,550.77	103.14	101.91	-2.01	-6,997.99	1,595.64	645.22	524.30	120.92	5.336	
16,800.00	10,195.62	16,203.26	9,549.89	103.95	102.66	-2.02	-7,053.06	1,609.98	646.26	524.62	121.64	5.313	
16,826.00	10,195.48	16,229.25	9,549.37	104.28	103.00	-2.04	-7,078.17	1,616.67	646.66	524.65	122.01	5.300	
16,900.00	10,195.01	16,304.39	9,547.83	105.22	103.99	-1.96	-7,151.20	1,634.26	647.67	524.61	123.06	5.263	
16,915.00	10,194.93	16,320.70	9,547.53	105.41	104.20	-1.92	-7,167.11	1,637.86	647.85	524.54	123.31	5.254	
17,000.00	10,193.91	16,408.83	9,546.39	106.50	105.35	-1.69	-7,253.09	1,657.14	647.85	523.28	124.57	5.201	
17,004.00	10,193.84	16,412.61	9,546.34	106.55	105.40	-1.68	-7,256.78	1,657.99	647.82	523.20	124.62	5.198	
17,095.00	10,191.99	16,497.43	9,544.95	107.72	106.49	-1.55	-7,339.23	1,677.82	647.43	521.70	125.73	5.149	
17,100.00	10,191.88	16,501.94	9,544.85	107.78	106.55	-1.54	-7,343.61	1,678.89	647.43	521.64	125.78	5.147	
17,184.00	10,190.06	16,584.54	9,542.56	108.86	107.62	-1.45	-7,423.88	1,698.23	647.90	520.98	126.92	5.105	
17,200.00	10,189.72	16,603.89	9,542.13	109.06	107.87	-1.41	-7,442.73	1,702.55	647.91	520.67	127.24	5.092	
17,272.00	10,188.22	16,687.74	9,541.29	109.99	108.95	-1.17	-7,524.66	1,720.37	647.06	518.51	128.55	5.034	
17,300.00	10,187.64	16,719.09	9,541.32	110.35	109.36	-1.11	-7,555.25	1,727.25	646.44	517.42	129.02	5.010	
17,362.00	10,186.32	16,783.28	9,541.73	111.14	110.19	-1.05	-7,617.80	1,741.69	644.71	514.77	129.95	4.961	
17,380.34	10,185.92	16,801.73	9,541.86	111.38	110.43	-1.03	-7,635.79	1,745.76	644.19	513.98	130.21	4.947	
17,400.00	10,185.50	16,821.51	9,542.00	111.63	110.69	-1.00	-7,655.09	1,750.08	643.62	513.13	130.49	4.932	
17,411.19	10,185.26	16,832.57	9,542.08	111.77	110.83	-0.99	-7,665.89	1,752.49	643.29	512.65	130.64	4.924	
17,451.00	10,184.42	16,871.51	9,542.33	112.29	111.33	-0.93	-7,703.88	1,760.99	642.18	510.99	131.19	4.895	
17,465.96	10,184.10	16,886.14	9,542.42	112.48	111.52	-0.91	-7,718.16	1,764.20	641.77	510.38	131.39	4.884	
17,500.00	10,183.36	16,919.90	9,542.58	112.91	111.96	-0.87	-7,751.09	1,771.67	640.86	509.00	131.87	4.860	
17,514.37	10,183.04	16,935.46	9,542.67	113.10	112.16	-0.85	-7,766.24	1,775.15	640.46	508.36	132.10	4.848	
17,540.00	10,182.47	16,963.18	9,542.91	113.43	112.52	-0.83	-7,793.24	1,781.46	639.66	507.15	132.51	4.827	
17,551.88	10,182.21	16,976.03	9,543.05	113.58	112.69	-0.82	-7,805.74	1,784.43	639.28	506.58	132.70	4.818	
17,600.00	10,181.53	17,027.16	9,543.79	114.20	113.35	-0.77	-7,855.42	1,796.48	637.89	504.44	133.44	4.780	
17,611.81	10,181.45	17,039.44	9,544.00	114.36	113.51	-0.75	-7,867.35	1,799.40	637.60	503.98	133.62	4.772	
17,630.00	10,181.38	17,058.36	9,544.34	114.59	113.75	-0.72	-7,885.72	1,803.91	637.20	503.31	133.90	4.759	
17,635.82	10,181.38	17,064.41	9,544.45	114.67	113.83	-0.71	-7,891.59	1,805.36	637.09	503.10	133.99	4.755	
17,696.47	10,181.83	17,122.23	9,545.54	115.45	114.58	-0.57	-7,947.71	1,819.25	636.39	501.59	134.80	4.721	
17,700.00	10,181.88	17,125.31	9,545.58	115.50	114.62	-0.57	-7,950.70	1,820.00	636.39	501.55	134.84	4.720	
17,704.16	10,181.95	17,128.94	9,545.63	115.55	114.67	-0.56	-7,954.22	1,820.88	636.40	501.51	134.89	4.718	
17,718.00	10,182.20	17,141.00	9,545.77	115.73	114.83	-0.52	-7,965.92	1,823.81	636.49	501.44	135.05	4.713	
17,800.00	10,183.36	17,212.18	9,545.91	116.79	115.76	-0.40	-8,034.93	1,841.24	637.48	501.50	135.98	4.688	
17,807.00	10,183.42	17,218.21	9,545.86	116.88	115.83	-0.40	-8,040.79	1,842.67	637.59	501.53	136.06	4.686	
17,898.00	10,184.39	17,298.20	9,544.43	118.06	116.88	-0.24	-8,118.72	1,860.63	640.18	503.09	137.09	4.670	
17,900.00	10,184.42	17,300.04	9,544.38	118.08	116.90	-0.24	-8,120.52	1,861.03	640.26	503.14	137.12	4.669	
17,987.00	10,185.64	17,381.42	9,541.86	119.21	117.96	-0.03	-8,200.02	1,878.21	644.16	505.93	138.23	4.660	
18,000.00	10,185.80	17,394.32	9,541.41	119.38	118.13	0.02	-8,212.63	1,880.88	644.77	506.36	138.42	4.658	
18,076.00	10,186.26	17,471.88	9,538.74	120.37	119.13	0.19	-8,288.52	1,896.68	647.85	508.30	139.56	4.642	
18,100.00	10,186.27	17,498.41	9,537.94	120.68	119.48	0.16	-8,314.42	1,902.36	648.59	508.62	139.97	4.634	
18,167.00	10,186.37	17,573.07	9,536.27	121.55	120.46	-0.09	-8,387.04	1,919.62	650.19	509.09	141.10	4.608	
18,200.00	10,186.30	17,610.24	9,535.78	121.97	120.94	-0.25	-8,423.15	1,928.43	650.56	508.89	141.66	4.592	
18,256.00	10,185.59	17,671.31	9,535.46	122.69	121.74	-0.56	-8,482.47	1,942.92	650.16	507.60	142.57	4.560	
18,300.00	10,184.96	17,718.59	9,535.49	123.25	122.36	-0.77	-8,528.44	1,953.94	649.53	506.26	143.27	4.534	
18,345.00	10,184.78	17,761.65	9,535.58	123.83	122.92	-0.95	-8,570.30	1,964.04	649.29	505.42	143.87	4.513	
18,400.00	10,185.25	17,814.48	9,535.51	124.54	123.61	-1.23	-8,621.56	1,976.83	649.90	505.28	144.62	4.494	

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

Company:	Piedra Operating LLC	Local Co-ordinate Reference:	Well University 8-8E B H 9WC
Project:	Andrews County, TX (NAD83-TNC)	TVD Reference:	RKB @ 3054.00usft (Ensign T225)
Reference Site:	University 8-8	MD Reference:	RKB @ 3054.00usft (Ensign T225)
Site Error:	0.00	North Reference:	Grid
Reference Well:	University 8-8E B H 9WC	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00	Output errors are at	2.00 sigma
Reference Wellbore	OH / 72263	Database:	USAEDMDB
Reference Design:	Surveys (Ensign T225)	Offset TVD Reference:	Offset Datum

Offset Design University 8-8E B H 6LS - OH / 72264 - Surveys (Ensign T225)												Offset Site Error:	0.00 usft
Survey Program: 15-MWD, 1991-MWD+HRGM+MS												Offset Well Error:	1.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Center		Distance			Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centers (usft)	Between Ellipses (usft)	Minimum Separation (usft)		
18,433.00	10,185.93	17,847.62	9,535.42	124.97	124.05	-1.43	-8,653.78	1,984.59	650.71	505.61	145.10	4.485	
18,500.00	10,186.95	17,913.17	9,535.22	125.83	124.91	-1.68	-8,717.88	1,998.28	652.02	505.97	146.05	4.464	
18,523.00	10,187.00	17,933.60	9,535.06	126.12	125.18	-1.72	-8,737.94	2,002.14	652.27	505.93	146.33	4.457	
18,600.00	10,185.69	18,002.98	9,533.89	127.11	126.09	-1.74	-8,806.31	2,013.89	652.27	504.99	147.28	4.429	
18,613.00	10,185.24	18,015.32	9,533.61	127.28	126.25	-1.74	-8,818.49	2,015.89	652.11	504.65	147.45	4.422	
18,700.00	10,181.69	18,098.65	9,531.41	128.40	127.34	-1.79	-8,900.62	2,029.77	650.87	502.23	148.63	4.379	
18,704.00	10,181.51	18,102.58	9,531.30	128.45	127.39	-1.80	-8,904.49	2,030.43	650.81	502.12	148.69	4.377	
18,794.00	10,179.65	18,189.82	9,528.66	129.64	128.52	-1.70	-8,990.43	2,045.23	651.59	501.66	149.92	4.346	
18,800.00	10,179.66	18,195.42	9,528.48	129.72	128.59	-1.67	-8,995.95	2,046.19	651.79	501.79	150.00	4.345	
18,885.00	10,179.19	18,274.19	9,525.52	130.84	129.61	-1.23	-9,073.46	2,059.85	654.38	503.31	151.06	4.332	
18,900.00	10,178.97	18,287.72	9,524.93	131.04	129.79	-1.14	-9,086.76	2,062.22	654.79	503.55	151.24	4.329	
18,975.00	10,177.02	18,359.23	9,521.37	132.02	130.71	-0.72	-9,157.06	2,074.86	656.50	504.26	152.24	4.312	
19,000.00	10,176.09	18,390.18	9,519.97	132.34	131.12	-0.54	-9,187.48	2,080.40	656.68	503.90	152.78	4.298	
19,065.00	10,173.27	18,464.59	9,517.66	133.19	132.08	-0.16	-9,260.60	2,094.01	655.84	501.83	154.01	4.259	
19,100.00	10,171.54	18,500.74	9,516.75	133.65	132.55	-0.02	-9,296.08	2,100.89	654.98	500.43	154.56	4.238	
19,155.00	10,168.62	18,555.97	9,515.45	134.36	133.27	0.14	-9,350.22	2,111.67	653.35	497.97	155.38	4.205	
19,200.00	10,166.65	18,600.24	9,514.38	134.95	133.85	0.27	-9,393.67	2,120.09	652.48	496.44	156.04	4.181	
19,246.00	10,165.73	18,647.06	9,513.23	135.55	134.46	0.43	-9,439.65	2,128.90	652.71	495.95	156.76	4.164	
19,300.00	10,165.59	18,702.86	9,511.99	136.25	135.19	0.60	-9,494.32	2,139.99	653.78	496.15	157.63	4.147	
19,335.00	10,165.79	18,739.64	9,511.28	136.71	135.67	0.73	-9,530.33	2,147.42	654.68	496.46	158.22	4.138	
19,400.00	10,166.37	18,810.18	9,510.23	137.56	136.60	1.07	-9,599.52	2,161.11	656.29	496.93	159.36	4.118	
19,424.00	10,166.58	18,839.85	9,510.08	137.87	136.99	1.18	-9,628.56	2,167.22	656.64	496.79	159.85	4.108	
19,500.00	10,167.18	18,920.05	9,510.61	138.87	138.05	1.31	-9,706.56	2,185.81	656.75	495.67	161.08	4.077	
19,503.24	10,167.20	18,922.92	9,510.62	138.91	138.09	1.31	-9,709.35	2,186.49	656.76	495.63	161.12	4.076	
19,514.00	10,167.27	18,932.46	9,510.65	139.05	138.21	1.33	-9,718.62	2,188.76	656.80	495.54	161.26	4.073	
19,600.00	10,167.78	19,012.53	9,510.36	140.17	139.27	1.45	-9,796.45	2,207.56	657.65	495.22	162.43	4.049	
19,603.00	10,167.80	19,015.49	9,510.34	140.21	139.31	1.45	-9,799.34	2,208.24	657.69	495.21	162.47	4.048	
19,692.00	10,167.92	19,118.80	9,510.21	141.38	140.67	1.61	-9,899.84	2,232.12	658.04	493.94	164.10	4.010	
19,700.00	10,167.89	19,129.88	9,510.40	141.48	140.82	1.61	-9,910.57	2,234.87	657.87	493.61	164.27	4.005	
19,703.36	10,167.88	19,134.52	9,510.50	141.53	140.88	1.61	-9,915.06	2,236.04	657.79	493.45	164.34	4.003	
19,781.00	10,167.05	19,231.55	9,514.10	142.54	142.17	1.44	-10,008.60	2,261.57	654.02	488.31	165.71	3.947	
19,800.00	10,166.70	19,254.60	9,515.34	142.79	142.47	1.38	-10,030.76	2,267.78	652.63	486.62	166.01	3.931	
19,803.91	10,166.62	19,258.82	9,515.58	142.84	142.53	1.37	-10,034.82	2,268.92	652.33	486.26	166.07	3.928	
19,805.83	10,166.58	19,261.05	9,515.71	142.87	142.56	1.36	-10,036.96	2,269.52	652.17	486.07	166.10	3.926	
19,870.00	10,164.79	19,335.40	9,520.61	143.71	143.54	1.16	-10,108.40	2,289.56	646.11	479.04	167.07	3.867	
19,884.84	10,164.34	19,336.00	9,520.65	143.90	143.55	1.16	-10,108.97	2,289.72	644.71	477.53	167.18	3.856	
19,900.00	10,164.00	19,355.49	9,521.95	144.10	143.80	1.11	-10,127.69	2,294.97	643.31	475.86	167.45	3.842	
19,909.18	10,163.85	19,361.58	9,522.29	144.22	143.89	1.09	-10,133.54	2,296.62	642.64	475.08	167.55	3.835	
19,959.00	10,163.83	19,394.69	9,523.65	144.88	144.32	1.01	-10,165.38	2,305.58	640.54	472.45	168.09	3.811	
19,976.22	10,164.05	19,406.15	9,523.92	145.10	144.47	0.99	-10,176.41	2,308.69	640.34	472.08	168.26	3.806	
19,980.92	10,164.11	19,409.27	9,523.98	145.16	144.51	0.98	-10,179.42	2,309.54	640.32	472.01	168.30	3.805	
20,000.00	10,164.35	19,425.00	9,524.15	145.41	144.72	0.94	-10,194.55	2,313.81	640.33	471.81	168.53	3.800	
20,011.45	10,164.49	19,431.89	9,524.18	145.56	144.81	0.93	-10,201.18	2,315.69	640.40	471.79	168.61	3.798	
20,050.00	10,164.96	19,470.42	9,524.34	146.07	145.32	0.85	-10,238.27	2,326.13	640.69	471.50	169.19	3.787	
20,061.58	10,165.11	19,481.99	9,524.39	146.22	145.48	0.82	-10,249.41	2,329.25	640.79	471.44	169.36	3.784	
20,100.00	10,165.87	19,521.14	9,524.57	146.73	145.99	0.76	-10,287.12	2,339.77	641.37	471.43	169.94	3.774	

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

Company:	Piedra Operating LLC	Local Co-ordinate Reference:	Well University 8-8E B H 9WC
Project:	Andrews County, TX (NAD83-TNC)	TVD Reference:	RKB @ 3054.00usft (Ensign T225)
Reference Site:	University 8-8	MD Reference:	RKB @ 3054.00usft (Ensign T225)
Site Error:	0.00	North Reference:	Grid
Reference Well:	University 8-8E B H 9WC	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00	Output errors are at	2.00 sigma
Reference Wellbore	OH / 72263	Database:	USAEDMDB
Reference Design:	Surveys (Ensign T225)	Offset TVD Reference:	Offset Datum

Offset Design University 8-8E B H 6LS - OH / 72264 - Surveys (Ensign T225)												Offset Site Error:	0.00 usft
Survey Program: 15-MWD, 1991-MWD+HRGM+MS												Offset Well Error:	1.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Center		Distance			Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centers (usft)	Between Ellipses (usft)	Minimum Separation (usft)		
20,109.08	10,166.10	19,531.29	9,524.63	146.85	146.13	0.75	-10,296.90	2,342.49	641.54	471.44	170.09	3.772	
20,139.00	10,167.00	19,564.75	9,524.97	147.24	146.57	0.71	-10,329.12	2,351.49	642.14	471.55	170.59	3.764	
20,153.02	10,167.47	19,580.43	9,525.19	147.42	146.78	0.69	-10,344.22	2,355.71	642.40	471.58	170.82	3.761	
20,200.00	10,168.89	19,624.61	9,525.91	148.04	147.36	0.62	-10,386.77	2,367.57	643.06	471.61	171.46	3.751	
20,206.08	10,169.06	19,629.44	9,525.95	148.12	147.42	0.62	-10,391.44	2,368.85	643.17	471.65	171.53	3.750	
20,227.00	10,169.62	19,646.08	9,526.05	148.40	147.64	0.60	-10,407.50	2,373.18	643.61	471.85	171.75	3.747	
20,300.00	10,171.25	19,705.63	9,525.52	149.35	148.43	0.60	-10,465.16	2,388.05	645.88	473.33	172.55	3.743	
20,316.00	10,171.55	19,720.07	9,525.24	149.57	148.62	0.60	-10,479.17	2,391.56	646.48	473.73	172.75	3.742	
20,400.00	10,173.63	19,795.72	9,523.21	150.67	149.62	0.67	-10,552.58	2,409.73	650.83	477.03	173.80	3.745	
20,409.00	10,173.93	19,803.77	9,522.94	150.79	149.73	0.68	-10,560.39	2,411.64	651.43	477.52	173.91	3.746	
20,498.00	10,177.41	19,884.29	9,519.60	151.96	150.79	0.85	-10,638.62	2,430.43	658.62	483.59	175.03	3.763	
20,500.00	10,177.50	19,886.23	9,519.51	151.99	150.82	0.86	-10,640.50	2,430.87	658.80	483.75	175.06	3.763	
20,587.00	10,180.19	19,976.16	9,515.22	153.13	152.00	1.16	-10,728.16	2,450.45	665.71	489.22	176.50	3.772	
20,600.00	10,180.38	19,994.74	9,514.52	153.31	152.24	1.23	-10,746.34	2,454.24	666.40	489.53	176.86	3.768	
20,676.00	10,179.54	20,080.65	9,513.01	154.30	153.37	1.64	-10,830.69	2,470.46	666.92	488.56	178.37	3.739	
20,700.00	10,178.73	20,100.33	9,512.61	154.62	153.63	1.75	-10,850.06	2,473.89	666.65	487.99	178.66	3.731	
20,768.00	10,176.13	20,156.60	9,510.78	155.51	154.37	2.09	-10,905.54	2,483.11	666.42	486.94	179.48	3.713	
20,800.00	10,174.86	20,183.68	9,509.59	155.93	154.72	2.27	-10,932.26	2,487.29	666.65	486.79	179.87	3.706	
20,841.00	10,173.40	20,218.32	9,507.79	156.47	155.17	2.52	-10,966.48	2,492.41	667.48	487.11	180.37	3.701	
20,900.00	10,171.44	20,267.47	9,504.63	157.25	155.81	2.91	-11,015.05	2,499.25	669.59	488.53	181.06	3.698	
20,903.00	10,171.34	20,270.46	9,504.42	157.29	155.85	2.94	-11,018.00	2,499.65	669.72	488.60	181.12	3.698	

Company:	Piedra Operating LLC	Local Co-ordinate Reference:	Well University 8-8E B H 9WC
Project:	Andrews County, TX (NAD83-TNC)	TVD Reference:	RKB @ 3054.00usft (Ensign T225)
Reference Site:	University 8-8	MD Reference:	RKB @ 3054.00usft (Ensign T225)
Site Error:	0.00	North Reference:	Grid
Reference Well:	University 8-8E B H 9WC	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00	Output errors are at	2.00 sigma
Reference Wellbore	OH / 72263	Database:	USAEDMDB
Reference Design:	Surveys (Ensign T225)	Offset TVD Reference:	Offset Datum

Offset Design State University W 2 - OH - Surveys												Offset Site Error:	0.00 usft
Survey Program: 100-INCL-ONLY												Offset Well Error:	1.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Center		Distance			Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centers (usft)	Between Ellipses (usft)	Minimum Separation (usft)		
0.00	0.00	0.00	0.00	1.00	1.00	-110.99	-326.46	-850.97	911.46				
15.00	15.00	9.00	9.00	1.00	1.00	-110.99	-326.46	-850.97	911.44				
100.00	100.00	94.00	94.00	1.86	1.29	83.48	-326.46	-850.97	911.43	908.28	3.15	289.572	
164.17	164.17	157.74	157.73	3.08	2.33	83.50	-326.24	-850.97	911.33	905.93	5.40	168.760	
200.00	200.00	191.64	191.64	3.79	3.00	83.51	-326.39	-850.97	911.36	904.58	6.79	134.290	
269.95	269.95	263.22	263.20	5.22	4.47	83.54	-326.25	-850.97	911.26	901.59	9.68	94.172	
300.00	300.00	291.66	291.64	5.83	5.06	83.55	-326.39	-850.97	911.29	900.40	10.89	83.716	
361.00	360.99	354.76	354.72	7.09	6.38	83.59	-326.24	-850.97	911.17	897.70	13.47	67.666	
389.31	389.30	381.56	381.52	7.18	6.95	78.56	-326.32	-850.97	911.16	897.05	14.11	64.585	
400.00	399.99	391.68	391.64	7.21	7.16	76.65	-326.39	-850.97	911.16	896.81	14.35	63.493	
500.00	499.99	491.69	491.64	7.50	9.27	59.42	-326.39	-850.97	910.78	894.04	16.74	54.409	
539.00	538.99	533.05	532.99	7.61	10.15	53.35	-326.46	-850.97	910.57	892.85	17.72	51.379	
600.00	599.98	591.71	591.64	7.67	11.39	26.04	-326.39	-850.97	910.12	891.10	19.02	47.850	
628.00	627.98	622.06	621.98	7.70	12.03	10.23	-326.46	-850.97	909.92	890.23	19.69	46.215	
700.00	699.98	691.73	691.64	7.77	13.51	41.50	-326.39	-850.97	909.36	888.13	21.23	42.828	
717.00	716.98	711.07	710.98	7.79	13.92	47.88	-326.46	-850.97	909.27	887.61	21.66	41.980	
800.00	799.97	791.74	791.64	7.88	15.64	38.67	-326.39	-850.97	908.61	885.16	23.45	38.745	
805.00	804.97	796.48	796.38	7.89	15.74	38.25	-326.43	-850.97	908.57	885.02	23.56	38.570	
890.00	889.97	882.28	882.17	7.98	17.56	5.58	-326.33	-850.97	907.74	882.28	25.46	35.653	
900.00	899.97	891.76	891.64	7.99	17.76	7.55	-326.39	-850.97	907.67	882.00	25.67	35.356	
976.00	975.96	969.03	968.90	8.07	19.40	20.54	-326.27	-850.97	906.88	879.49	27.39	33.108	
1,000.00	999.96	991.77	991.64	8.10	19.89	16.31	-326.39	-850.97	906.69	878.79	27.90	32.497	
1,064.00	1,063.96	1,057.68	1,057.53	8.17	21.29	0.24	-326.24	-850.97	906.09	876.72	29.37	30.849	
1,100.00	1,099.96	1,091.78	1,091.64	8.21	22.01	12.68	-326.39	-850.97	905.89	875.76	30.14	30.061	
1,153.00	1,152.96	1,147.12	1,146.96	8.27	23.19	39.44	-326.46	-850.97	905.64	874.27	31.37	28.870	
1,194.00	1,193.96	1,186.11	1,185.95	8.31	24.02	28.39	-326.35	-850.97	905.35	873.13	32.23	28.095	
1,200.00	1,199.96	1,191.80	1,191.64	8.32	24.14	29.80	-326.39	-850.97	905.32	872.96	32.36	27.979	
1,300.00	1,299.95	1,291.81	1,291.64	8.52	26.27	51.73	-326.39	-850.97	904.60	869.93	34.67	26.092	
1,333.00	1,332.95	1,327.14	1,326.95	8.59	27.02	57.79	-326.46	-850.97	904.42	868.94	35.48	25.490	
1,400.00	1,399.95	1,391.83	1,391.64	8.68	28.39	36.48	-326.39	-850.97	903.89	866.96	36.93	24.475	
1,421.00	1,420.95	1,415.15	1,414.95	8.71	28.89	30.69	-326.46	-850.97	903.70	866.25	37.45	24.130	
1,500.00	1,499.94	1,491.85	1,491.64	8.93	30.52	62.63	-326.39	-850.97	903.08	863.80	39.28	22.993	
1,561.35	1,561.29	1,555.22	1,555.00	9.10	31.87	88.40	-326.24	-850.97	902.87	862.09	40.77	22.143	
1,597.00	1,596.93	1,589.02	1,588.79	9.20	32.59	99.96	-326.37	-850.97	902.95	861.37	41.58	21.715	
1,600.00	1,599.93	1,591.86	1,591.64	9.20	32.65	100.50	-326.39	-850.97	902.96	861.32	41.64	21.683	
1,685.00	1,684.93	1,677.65	1,677.41	9.29	34.47	122.61	-326.30	-850.97	903.24	859.73	43.52	20.757	
1,700.00	1,699.93	1,691.88	1,691.64	9.33	34.78	122.61	-326.39	-850.97	903.35	859.53	43.82	20.616	
1,800.00	1,799.92	1,791.89	1,791.64	9.72	36.91	122.67	-326.39	-850.97	903.89	857.92	45.97	19.661	
1,900.00	1,899.92	1,891.90	1,891.63	10.13	39.03	122.74	-326.39	-850.97	904.50	856.33	48.17	18.778	
1,990.00	1,989.90	1,982.42	1,982.14	10.39	40.96	83.66	-326.33	-850.97	904.64	854.48	50.16	18.035	
2,000.00	1,999.90	1,991.91	1,991.63	10.41	41.16	81.17	-326.39	-850.97	904.62	854.25	50.37	17.958	
2,079.00	2,078.81	2,071.93	2,071.63	10.56	42.86	73.01	-326.28	-850.97	903.69	851.50	52.19	17.316	
2,100.00	2,099.77	2,091.84	2,091.54	10.60	43.29	72.33	-326.39	-850.97	903.33	850.68	52.64	17.159	
2,168.00	2,167.59	2,161.30	2,160.99	10.73	44.77	70.80	-326.25	-850.97	901.69	847.46	54.23	16.628	
2,200.00	2,199.48	2,191.63	2,191.32	10.77	45.41	69.50	-326.39	-850.97	900.87	845.95	54.92	16.403	
2,257.00	2,256.29	2,250.59	2,250.26	10.83	46.66	67.28	-326.24	-850.97	899.11	842.85	56.25	15.983	

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

Company:	Piedra Operating LLC	Local Co-ordinate Reference:	Well University 8-8E B H 9WC
Project:	Andrews County, TX (NAD83-TNC)	TVD Reference:	RKB @ 3054.00usft (Ensign T225)
Reference Site:	University 8-8	MD Reference:	RKB @ 3054.00usft (Ensign T225)
Site Error:	0.00	North Reference:	Grid
Reference Well:	University 8-8E B H 9WC	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00	Output errors are at	2.00 sigma
Reference Wellbore	OH / 72263	Database:	USAEDMDB
Reference Design:	Surveys (Ensign T225)	Offset TVD Reference:	Offset Datum

Offset Design State University W 2 - OH - Surveys												Offset Site Error:	0.00 usft
Survey Program: 100-INCL-ONLY												Offset Well Error:	1.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Center		Distance			Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centers (usft)	Between Ellipses (usft)	Minimum Separation (usft)		
2,300.00	2,299.15	2,291.39	2,291.06	10.88	47.53	65.09	-326.39	-850.97	897.73	840.54	57.19	15.697	
2,347.00	2,345.98	2,340.32	2,339.98	10.93	48.57	62.82	-326.46	-850.97	896.02	837.71	58.31	15.368	
2,400.00	2,398.80	2,391.12	2,390.78	11.00	49.66	63.28	-326.38	-850.97	893.96	834.49	59.48	15.031	
2,437.00	2,435.66	2,430.02	2,429.66	11.04	50.48	63.60	-326.46	-850.97	892.59	832.22	60.37	14.786	
2,500.00	2,498.44	2,490.86	2,490.50	11.12	51.78	64.15	-326.38	-850.97	890.24	828.47	61.77	14.412	
2,526.00	2,524.35	2,518.72	2,518.35	11.16	52.37	64.38	-326.46	-850.97	889.32	826.91	62.41	14.250	
2,600.00	2,598.10	2,590.60	2,590.22	11.27	53.90	64.93	-326.38	-850.97	886.66	822.59	64.08	13.837	
2,617.00	2,615.04	2,609.43	2,609.04	11.29	54.30	65.07	-326.46	-850.97	886.09	821.58	64.51	13.736	
2,700.00	2,697.75	2,690.33	2,689.94	11.42	56.02	66.46	-326.38	-850.97	883.21	816.82	66.39	13.303	
2,706.00	2,703.73	2,696.06	2,695.67	11.43	56.14	66.56	-326.42	-850.97	883.02	816.50	66.53	13.273	
2,794.00	2,791.41	2,784.33	2,783.92	11.58	58.02	67.14	-326.34	-850.97	880.05	811.48	68.58	12.833	
2,800.00	2,797.39	2,790.06	2,789.65	11.59	58.14	67.17	-326.38	-850.97	879.87	811.16	68.71	12.805	
2,884.00	2,881.08	2,874.47	2,874.05	11.74	59.94	67.92	-326.29	-850.97	877.10	806.42	70.68	12.409	
2,900.00	2,897.02	2,889.78	2,889.36	11.77	60.27	68.13	-326.38	-850.97	876.61	805.57	71.04	12.340	
2,973.00	2,969.75	2,963.63	2,963.19	11.91	61.84	69.14	-326.25	-850.97	874.27	801.50	72.77	12.015	
3,000.00	2,996.65	2,989.49	2,989.06	11.96	62.39	68.46	-326.37	-850.97	873.45	800.07	73.38	11.904	
3,063.00	3,059.41	3,053.71	3,053.26	12.09	63.76	66.90	-326.24	-850.97	871.33	796.45	74.88	11.636	
3,100.00	3,096.27	3,089.20	3,088.75	12.16	64.51	65.95	-326.37	-850.97	870.09	794.37	75.72	11.491	
3,152.00	3,148.09	3,142.55	3,142.09	12.27	65.65	64.57	-326.46	-850.97	868.26	791.28	76.98	11.280	
3,200.00	3,195.92	3,188.93	3,188.46	12.37	66.63	65.67	-326.37	-850.97	866.56	788.48	78.08	11.099	
3,243.00	3,238.78	3,233.25	3,232.78	12.46	67.58	66.69	-326.46	-850.97	865.16	786.04	79.12	10.934	
3,300.00	3,295.59	3,288.68	3,288.20	12.58	68.76	67.13	-326.37	-850.97	863.32	782.88	80.44	10.732	
3,332.00	3,327.48	3,321.97	3,321.48	12.65	69.46	67.38	-326.46	-850.97	862.33	781.10	81.23	10.616	
3,400.00	3,395.26	3,388.42	3,387.93	12.81	70.88	68.86	-326.37	-850.97	860.23	777.42	82.81	10.388	
3,421.00	3,416.19	3,410.69	3,410.19	12.86	71.35	69.32	-326.46	-850.97	859.64	776.31	83.33	10.316	
3,500.00	3,494.93	3,488.18	3,487.67	13.04	73.00	71.21	-326.36	-850.97	857.49	772.31	85.18	10.067	
3,510.00	3,504.90	3,497.84	3,497.32	13.07	73.21	71.45	-326.44	-850.97	857.25	771.84	85.41	10.037	
3,599.00	3,593.64	3,586.98	3,586.46	13.28	75.10	73.35	-326.36	-850.97	855.14	767.62	87.53	9.770	
3,600.00	3,594.63	3,587.95	3,587.42	13.29	75.12	73.36	-326.36	-850.97	855.12	767.57	87.55	9.767	
3,688.00	3,682.36	3,676.10	3,675.55	13.50	77.00	72.16	-326.30	-850.97	853.03	763.38	89.65	9.515	
3,700.00	3,694.31	3,687.71	3,687.17	13.54	77.25	72.03	-326.36	-850.97	852.74	762.81	89.93	9.482	
3,777.00	3,771.05	3,765.16	3,764.60	13.73	78.90	71.29	-326.26	-850.97	850.69	758.91	91.78	9.269	
3,800.00	3,793.96	3,787.44	3,786.88	13.79	79.37	71.79	-326.36	-850.97	850.09	757.78	92.31	9.209	
3,867.00	3,860.73	3,855.15	3,854.58	13.97	80.81	73.29	-326.24	-850.97	848.39	754.45	93.93	9.032	
3,900.00	3,893.62	3,887.17	3,886.59	14.05	81.49	73.77	-326.36	-850.97	847.63	752.93	94.70	8.951	
3,957.00	3,950.43	3,945.01	3,944.43	14.21	82.72	74.63	-326.46	-850.97	846.37	750.29	96.09	8.809	
4,000.00	3,993.28	3,986.90	3,986.31	14.32	83.61	73.97	-326.36	-850.97	845.39	748.30	97.09	8.707	
4,047.00	4,040.11	4,034.71	4,034.11	14.45	84.63	73.29	-326.46	-850.97	844.28	746.04	98.24	8.594	
4,100.00	4,092.91	4,086.61	4,086.01	14.60	85.74	72.40	-326.35	-850.97	842.90	743.40	99.49	8.472	
4,138.00	4,130.75	4,125.37	4,124.75	14.70	86.56	71.81	-326.46	-850.97	841.86	741.44	100.42	8.383	
4,200.00	4,192.50	4,186.28	4,185.66	14.87	87.86	72.07	-326.35	-850.97	840.09	738.19	101.90	8.245	
4,227.00	4,219.38	4,214.01	4,213.38	14.95	88.45	72.18	-326.46	-850.97	839.34	736.78	102.56	8.184	
4,300.00	4,292.08	4,285.94	4,285.30	15.15	89.98	72.10	-326.35	-850.97	837.27	732.97	104.30	8.028	
4,316.00	4,308.01	4,302.66	4,302.01	15.20	90.33	72.08	-326.46	-850.97	836.84	732.14	104.70	7.993	
4,400.00	4,391.67	4,385.60	4,384.96	15.44	92.10	72.83	-326.35	-850.97	834.52	727.81	106.71	7.821	

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

Company:	Piedra Operating LLC	Local Co-ordinate Reference:	Well University 8-8E B H 9WC
Project:	Andrews County, TX (NAD83-TNC)	TVD Reference:	RKB @ 3054.00usft (Ensign T225)
Reference Site:	University 8-8	MD Reference:	RKB @ 3054.00usft (Ensign T225)
Site Error:	0.00	North Reference:	Grid
Reference Well:	University 8-8E B H 9WC	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00	Output errors are at	2.00 sigma
Reference Wellbore	OH / 72263	Database:	USAEDMDB
Reference Design:	Surveys (Ensign T225)	Offset TVD Reference:	Offset Datum

Offset Design State University W 2 - OH - Surveys												Offset Site Error:	0.00 usft
Survey Program: 100-INC-ONLY												Offset Well Error:	1.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Center		Distance			Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centers (usft)	Between Ellipses (usft)	Minimum Separation (usft)		
4,405.00	4,396.65	4,390.49	4,389.84	15.45	92.20	72.87	-326.38	-850.97	834.39	727.57	106.83	7.811	
4,494.00	4,485.29	4,479.41	4,478.74	15.71	94.10	73.43	-326.31	-850.97	832.07	723.09	108.98	7.635	
4,500.00	4,491.26	4,485.28	4,484.61	15.73	94.22	73.55	-326.35	-850.97	831.92	722.80	109.12	7.624	
4,583.00	4,573.94	4,568.30	4,567.62	15.97	95.99	75.25	-326.27	-850.97	829.93	718.80	111.13	7.468	
4,600.00	4,590.87	4,584.96	4,584.28	16.02	96.34	75.43	-326.34	-850.97	829.56	718.03	111.53	7.438	
4,675.00	4,665.58	4,660.12	4,659.42	16.24	97.94	76.26	-326.25	-850.97	827.93	714.58	113.35	7.304	
4,700.00	4,690.49	4,684.65	4,683.96	16.32	98.46	76.47	-326.34	-850.97	827.43	713.48	113.95	7.261	
4,766.00	4,756.24	4,750.93	4,750.22	16.52	99.87	77.06	-326.24	-850.97	826.10	710.54	115.56	7.149	
4,800.00	4,790.11	4,784.35	4,783.64	16.62	100.59	77.86	-326.34	-850.97	825.47	709.10	116.37	7.094	
4,855.00	4,844.91	4,839.63	4,838.91	16.79	101.76	79.18	-326.46	-850.97	824.55	706.84	117.71	7.005	
4,900.00	4,889.76	4,884.06	4,883.33	16.93	102.71	78.96	-326.34	-850.97	823.82	705.03	118.79	6.935	
4,944.00	4,933.61	4,928.34	4,927.61	17.06	103.65	78.73	-326.46	-850.97	823.13	703.27	119.86	6.867	
5,000.00	4,989.43	4,983.79	4,983.05	17.23	104.83	79.26	-326.34	-850.97	822.26	701.05	121.21	6.784	
5,034.00	5,023.32	5,018.07	5,017.32	17.34	105.56	79.58	-326.46	-850.97	821.78	699.73	122.04	6.734	
5,100.00	5,089.13	5,083.56	5,082.80	17.54	106.95	80.27	-326.34	-850.97	820.87	697.24	123.63	6.640	
5,123.00	5,112.06	5,106.82	5,106.06	17.61	107.45	80.50	-326.46	-850.97	820.59	696.39	124.20	6.607	
5,200.00	5,188.83	5,183.33	5,182.56	17.85	109.08	82.17	-326.33	-850.97	819.69	693.63	126.06	6.503	
5,212.00	5,200.80	5,195.20	5,194.43	17.89	109.33	82.43	-326.42	-850.97	819.57	693.23	126.35	6.487	
5,300.00	5,288.54	5,283.09	5,282.31	18.17	111.20	83.72	-326.33	-850.97	818.75	690.27	128.48	6.372	
5,303.00	5,291.53	5,286.06	5,285.28	18.18	111.26	83.76	-326.35	-850.97	818.73	690.17	128.56	6.369	
5,392.00	5,380.23	5,374.89	5,374.09	18.46	113.15	86.06	-326.29	-850.97	818.08	687.37	130.72	6.258	
5,400.00	5,388.21	5,382.82	5,382.02	18.49	113.32	86.03	-326.33	-850.97	818.04	687.13	130.91	6.249	
5,482.00	5,469.92	5,464.67	5,463.85	18.75	115.06	85.78	-326.26	-850.97	817.54	684.64	132.90	6.152	
5,500.00	5,487.85	5,482.53	5,481.72	18.81	115.45	85.90	-326.33	-850.97	817.44	684.10	133.34	6.131	
5,571.00	5,558.59	5,553.41	5,552.58	19.04	116.95	86.41	-326.24	-850.97	817.02	681.96	135.06	6.049	
5,600.00	5,587.48	5,582.23	5,581.40	19.13	117.57	86.65	-326.33	-850.97	816.87	681.11	135.76	6.017	
5,659.00	5,646.26	5,641.11	5,640.26	19.32	118.82	87.14	-326.46	-850.97	816.60	679.40	137.20	5.952	
5,700.00	5,687.13	5,681.94	5,681.09	19.45	119.69	88.90	-326.33	-850.97	816.48	678.29	138.19	5.908	
5,722.94	5,710.00	5,704.86	5,704.00	19.53	120.18	90.00	-326.46	-850.97	816.46	677.71	138.75	5.884	
5,750.00	5,736.99	5,731.85	5,730.99	19.62	120.75	91.46	-326.46	-850.97	816.49	677.08	139.41	5.857	
5,800.00	5,786.88	5,781.74	5,780.88	19.78	121.81	89.60	-326.32	-850.97	816.52	675.90	140.62	5.807	
5,839.00	5,825.79	5,820.67	5,819.79	19.91	122.64	88.00	-326.46	-850.97	816.47	674.90	141.57	5.767	
5,900.00	5,886.68	5,881.60	5,880.72	20.10	123.94	83.97	-326.32	-850.97	816.21	673.16	143.06	5.706	
5,929.00	5,915.64	5,910.53	5,909.64	20.20	124.55	81.67	-326.46	-850.97	816.01	672.25	143.76	5.676	
6,000.00	5,986.56	5,981.52	5,980.62	20.43	126.06	73.94	-326.32	-850.97	815.36	669.85	145.50	5.604	
6,020.00	6,006.55	6,001.45	6,000.55	20.49	126.49	70.39	-326.46	-850.97	815.13	669.14	145.99	5.583	
6,100.00	6,086.51	6,081.50	6,080.59	20.75	128.19	71.56	-326.32	-850.97	814.39	666.43	147.96	5.504	
6,109.00	6,095.51	6,090.52	6,089.62	20.78	128.38	71.75	-326.38	-850.97	814.32	666.14	148.18	5.496	
6,197.00	6,183.50	6,178.50	6,177.58	21.06	130.26	72.35	-326.31	-850.97	813.98	663.64	150.34	5.414	
6,200.00	6,186.50	6,181.51	6,180.59	21.07	130.32	72.35	-326.32	-850.97	813.98	663.57	150.41	5.412	
6,268.51	6,255.01	6,249.94	6,249.01	21.29	131.78	87.49	-326.46	-850.97	813.94	661.86	152.08	5.352	CC
6,286.00	6,272.50	6,267.49	6,266.55	21.35	132.15	93.24	-326.26	-850.97	813.94	661.43	152.51	5.337	
6,300.00	6,286.50	6,281.53	6,280.59	21.39	132.45	103.54	-326.32	-850.97	813.95	661.10	152.85	5.325	
6,377.00	6,363.50	6,358.48	6,357.53	21.62	134.09	135.98	-326.24	-850.97	814.07	659.37	154.71	5.262	
6,400.00	6,386.50	6,381.54	6,380.59	21.69	134.58	142.29	-326.32	-850.97	814.14	658.88	155.26	5.244	
6,468.00	6,454.50	6,449.47	6,448.50	21.88	136.02	154.81	-326.46	-850.97	814.43	657.53	156.90	5.191	

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

Company:	Piedra Operating LLC	Local Co-ordinate Reference:	Well University 8-8E B H 9WC
Project:	Andrews County, TX (NAD83-TNC)	TVD Reference:	RKB @ 3054.00usft (Ensign T225)
Reference Site:	University 8-8	MD Reference:	RKB @ 3054.00usft (Ensign T225)
Site Error:	0.00	North Reference:	Grid
Reference Well:	University 8-8E B H 9WC	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00	Output errors are at	2.00 sigma
Reference Wellbore	OH / 72263	Database:	USAEDMDB
Reference Design:	Surveys (Ensign T225)	Offset TVD Reference:	Offset Datum

Offset Design State University W 2 - OH - Surveys												Offset Site Error:	0.00 usft
Survey Program: 100-INC-ONLY												Offset Well Error:	1.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Center		Distance			Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centers (usft)	Between Ellipses (usft)	Minimum Separation (usft)		
6,500.00	6,486.50	6,481.56	6,480.59	21.97	136.71	157.87	-326.32	-850.97	814.61	656.93	157.68	5.166	
6,557.00	6,543.50	6,538.48	6,537.50	22.12	137.92	162.59	-326.46	-850.97	814.95	655.89	159.05	5.124	
6,600.00	6,586.50	6,581.57	6,580.59	22.24	138.84	163.59	-326.32	-850.97	815.22	655.13	160.09	5.092	
6,648.00	6,634.50	6,629.49	6,628.50	22.37	139.86	164.68	-326.46	-850.97	815.52	654.27	161.25	5.057	
6,700.00	6,686.50	6,681.59	6,680.59	22.51	140.96	163.85	-326.32	-850.97	815.86	653.34	162.51	5.020	
6,737.00	6,723.50	6,718.51	6,717.50	22.61	141.75	163.24	-326.46	-850.97	816.08	652.68	163.41	4.994	
6,800.00	6,786.50	6,781.60	6,780.59	22.79	143.09	159.46	-326.32	-850.97	816.46	651.53	164.93	4.950	
6,826.00	6,812.49	6,807.52	6,806.49	22.86	143.64	157.80	-326.46	-850.97	816.61	651.05	165.56	4.932	
6,900.00	6,886.49	6,881.62	6,880.59	23.07	145.22	169.58	-326.32	-850.97	817.00	649.64	167.36	4.882	
6,918.00	6,904.49	6,899.67	6,898.64	23.12	145.61	173.26	-326.45	-850.97	817.09	649.29	167.80	4.870	
7,000.00	6,986.49	6,981.63	6,980.59	23.34	147.35	173.27	-326.32	-850.97	817.47	647.68	169.79	4.815	
7,009.00	6,995.49	6,990.66	6,989.62	23.37	147.54	172.73	-326.38	-850.97	817.51	647.51	170.01	4.809	
7,098.00	7,084.49	7,079.64	7,078.58	23.61	149.44	177.35	-326.31	-850.97	817.92	645.75	172.17	4.751	
7,100.00	7,086.49	7,081.65	7,080.59	23.62	149.48	177.34	-326.32	-850.97	817.93	645.71	172.22	4.749	
7,189.00	7,175.49	7,170.63	7,169.55	23.86	151.37	-176.82	-326.27	-850.97	818.37	643.98	174.39	4.693	
7,200.00	7,186.49	7,181.66	7,180.59	23.89	151.61	-174.17	-326.32	-850.97	818.42	643.76	174.66	4.686	
7,278.00	7,264.49	7,259.61	7,258.52	24.11	153.27	-138.69	-326.24	-850.97	818.70	642.14	176.57	4.637	
7,300.00	7,286.49	7,281.67	7,280.58	24.17	153.74	-121.53	-326.32	-850.97	818.74	641.64	177.10	4.623	
7,367.00	7,353.49	7,348.59	7,347.49	24.37	155.16	-68.03	-326.46	-850.97	818.74	640.02	178.72	4.581	
7,400.00	7,386.49	7,381.69	7,380.58	24.46	155.86	-64.13	-326.32	-850.97	818.70	639.18	179.52	4.561	
7,441.00	7,427.49	7,422.61	7,421.49	24.58	156.73	-59.77	-326.46	-850.97	818.63	638.12	180.50	4.535	
7,500.00	7,486.49	7,481.70	7,480.58	24.75	157.99	18.37	-326.32	-850.97	818.44	636.49	181.95	4.498	
7,577.00	7,563.49	7,558.64	7,557.51	24.96	159.63	42.77	-326.24	-850.97	817.94	634.11	183.83	4.449	
7,600.00	7,586.48	7,581.72	7,580.58	25.04	160.12	45.61	-326.32	-850.97	817.75	633.35	184.41	4.435	
7,668.00	7,654.48	7,649.63	7,648.48	25.26	161.57	53.78	-326.46	-850.97	817.24	631.14	186.10	4.391	
7,700.00	7,686.48	7,681.73	7,680.58	25.36	162.25	68.76	-326.32	-850.97	817.08	630.20	186.89	4.372	
7,726.38	7,712.86	7,708.02	7,706.86	25.45	162.81	89.99	-326.46	-850.97	817.04	629.51	187.53	4.357	
7,758.00	7,744.48	7,739.64	7,738.48	25.55	163.48	124.31	-326.46	-850.97	817.10	628.80	188.30	4.339	
7,800.00	7,786.47	7,781.74	7,780.58	25.67	164.38	177.11	-326.32	-850.97	817.45	628.12	189.33	4.318	
7,848.00	7,834.47	7,829.64	7,828.47	25.82	165.40	-167.95	-326.46	-850.97	818.30	627.80	190.49	4.296	
7,900.00	7,886.45	7,881.74	7,880.56	25.97	166.51	-171.36	-326.32	-850.97	819.42	627.65	191.77	4.273	
7,938.00	7,924.45	7,919.64	7,918.45	26.07	167.31	-174.58	-326.46	-850.97	820.14	627.44	192.70	4.256	
8,000.00	7,986.44	7,981.74	7,980.54	26.26	168.63	172.02	-326.32	-850.97	821.13	626.91	194.22	4.228	
8,028.00	8,014.44	8,009.65	8,008.44	26.34	169.23	163.19	-326.46	-850.97	821.49	626.59	194.90	4.215	
8,100.00	8,086.43	8,081.75	8,080.54	26.56	170.76	129.34	-326.32	-850.97	822.09	625.44	196.65	4.180	
8,117.00	8,103.43	8,098.81	8,097.60	26.61	171.13	116.48	-326.44	-850.97	822.16	625.09	197.07	4.172	
8,200.00	8,186.42	8,181.76	8,180.53	26.88	172.89	146.20	-326.32	-850.97	823.12	624.02	199.09	4.134	
8,206.00	8,192.42	8,187.78	8,186.55	26.90	173.02	146.81	-326.36	-850.97	823.24	624.00	199.24	4.132	
8,295.00	8,281.39	8,276.73	8,275.49	27.18	174.91	143.58	-326.30	-850.97	825.09	623.69	201.41	4.097	
8,300.00	8,286.39	8,281.75	8,280.51	27.20	175.02	143.61	-326.32	-850.97	825.19	623.67	201.53	4.095	
8,384.00	8,370.37	8,365.69	8,364.43	27.47	176.81	144.30	-326.26	-850.97	826.70	623.12	203.58	4.061	
8,400.00	8,386.37	8,381.75	8,380.49	27.52	177.15	142.76	-326.32	-850.97	826.93	622.97	203.97	4.054	
8,473.00	8,459.36	8,454.65	8,453.37	27.75	178.70	133.15	-326.24	-850.97	827.80	622.05	205.75	4.023	
8,500.00	8,486.35	8,481.76	8,480.48	27.84	179.28	138.03	-326.32	-850.97	828.11	621.71	206.41	4.012	
8,562.00	8,548.34	8,543.62	8,542.34	28.04	180.59	143.19	-326.46	-850.97	829.29	621.37	207.92	3.989	

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

Company:	Piedra Operating LLC	Local Co-ordinate Reference:	Well University 8-8E B H 9WC
Project:	Andrews County, TX (NAD83-TNC)	TVD Reference:	RKB @ 3054.00usft (Ensign T225)
Reference Site:	University 8-8	MD Reference:	RKB @ 3054.00usft (Ensign T225)
Site Error:	0.00	North Reference:	Grid
Reference Well:	University 8-8E B H 9WC	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00	Output errors are at	2.00 sigma
Reference Wellbore	OH / 72263	Database:	USAEDMDB
Reference Design:	Surveys (Ensign T225)	Offset TVD Reference:	Offset Datum

Offset Design State University W 2 - OH - Surveys												Offset Site Error:	0.00 usft
Survey Program: 100-INCL-ONLY												Offset Well Error:	1.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Center		Distance			Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centers (usft)	Between Ellipses (usft)	Minimum Separation (usft)		
8,600.00	8,586.32	8,581.75	8,580.46	28.17	181.40	133.24	-326.32	-850.97	830.15	621.30	208.85	3.975	
8,651.00	8,637.29	8,632.59	8,631.29	28.34	182.49	120.72	-326.46	-850.97	831.10	621.01	210.09	3.956	
8,700.00	8,686.25	8,681.71	8,680.41	28.51	183.53	117.72	-326.32	-850.97	832.05	620.75	211.30	3.938	
8,741.00	8,727.19	8,722.51	8,721.19	28.65	184.40	116.44	-326.46	-850.97	833.05	620.75	212.30	3.924	
8,800.00	8,786.09	8,781.59	8,780.28	28.86	185.66	118.70	-326.32	-850.97	834.67	620.93	213.74	3.905	
8,832.00	8,818.04	8,813.37	8,812.04	28.98	186.33	119.97	-326.46	-850.97	835.57	621.04	214.52	3.895	
8,900.00	8,885.96	8,881.50	8,880.17	29.22	187.78	111.22	-326.32	-850.97	837.00	620.80	216.19	3.872	
8,921.00	8,906.95	8,902.30	8,900.95	29.30	188.23	106.15	-326.46	-850.97	837.22	620.52	216.70	3.863	
9,000.00	8,985.91	8,981.48	8,980.13	29.58	189.91	101.42	-326.32	-850.97	837.83	619.18	218.65	3.832	
9,010.00	8,995.90	8,991.55	8,990.21	29.61	190.13	100.88	-326.39	-850.97	837.90	619.00	218.90	3.828	
9,100.00	9,085.85	9,081.46	9,080.10	29.93	192.04	105.12	-326.32	-850.97	838.57	617.46	221.11	3.793	
9,101.00	9,086.85	9,082.47	9,081.10	29.93	192.06	105.17	-326.33	-850.97	838.58	617.44	221.13	3.792	
9,191.00	9,176.81	9,172.38	9,171.00	30.25	193.98	91.11	-326.28	-850.97	838.98	615.63	223.35	3.756	
9,200.00	9,185.81	9,181.45	9,180.07	30.28	194.17	90.52	-326.32	-850.97	838.98	615.41	223.57	3.753	
9,280.00	9,265.78	9,261.27	9,259.88	30.55	195.87	84.59	-326.25	-850.97	838.90	613.36	225.54	3.719	
9,300.00	9,285.78	9,281.45	9,280.05	30.62	196.30	82.15	-326.32	-850.97	838.85	612.81	226.04	3.711	
9,370.00	9,355.77	9,351.19	9,349.78	30.86	197.78	67.20	-326.24	-850.97	838.56	610.80	227.77	3.682	
9,400.00	9,385.77	9,381.46	9,380.05	30.96	198.42	67.79	-326.32	-850.97	838.39	609.87	228.52	3.669	
9,461.00	9,446.76	9,442.18	9,440.76	31.16	199.72	68.68	-326.46	-850.97	837.99	607.97	230.03	3.643	
9,499.00	9,484.75	9,480.46	9,479.03	31.28	200.53	57.92	-326.32	-850.97	837.67	606.70	230.96	3.627	
9,500.00	9,485.75	9,481.47	9,480.04	31.29	200.55	58.57	-326.32	-850.97	837.65	606.67	230.99	3.626	
9,543.14	9,528.89	9,524.32	9,522.89	31.42	201.47	90.02	-326.46	-850.97	837.42	605.38	232.04	3.609	
9,550.00	9,535.74	9,531.18	9,529.74	31.45	201.61	94.97	-326.46	-850.97	837.43	605.22	232.21	3.606	ES
9,600.00	9,585.48	9,581.24	9,579.80	32.13	202.68	125.74	-326.32	-850.97	839.94	606.50	233.44	3.598	SF
9,639.00	9,623.45	9,618.91	9,617.45	32.75	203.48	126.98	-326.46	-850.97	845.25	610.88	234.37	3.606	
9,700.00	9,681.20	9,677.03	9,675.58	34.27	204.72	130.00	-326.30	-850.97	857.93	622.03	235.90	3.637	
9,730.00	9,708.95	9,704.42	9,702.95	35.08	205.30	131.03	-326.46	-850.97	865.64	629.00	236.64	3.658	
9,800.00	9,772.39	9,768.22	9,766.75	35.52	206.66	131.48	-326.27	-850.97	886.24	647.89	238.35	3.718	
9,820.00	9,790.21	9,786.45	9,784.98	35.65	207.04	131.61	-326.35	-850.97	892.62	653.78	238.84	3.737	
9,900.00	9,860.42	9,856.07	9,854.58	36.07	208.53	124.34	-326.24	-850.97	917.99	677.34	240.64	3.815	
9,909.00	9,868.21	9,864.08	9,862.60	36.12	208.70	123.63	-326.25	-850.97	920.76	679.91	240.85	3.823	
9,998.00	9,941.93	9,937.43	9,935.93	36.93	210.26	115.19	-326.46	-850.97	948.32	705.45	242.86	3.905	
10,000.00	9,943.51	9,939.01	9,937.51	36.95	210.29	115.14	-326.46	-850.97	948.95	706.04	242.91	3.907	
10,088.00	10,008.81	10,004.33	10,002.81	37.85	211.68	112.89	-326.46	-850.97	979.24	734.54	244.70	4.002	
10,100.00	10,017.06	10,012.57	10,011.06	37.93	211.86	112.78	-326.46	-850.97	983.79	738.86	244.93	4.017	

Company:	Piedra Operating LLC	Local Co-ordinate Reference:	Well University 8-8E B H 9WC
Project:	Andrews County, TX (NAD83-TNC)	TVD Reference:	RKB @ 3054.00usft (Ensign T225)
Reference Site:	University 8-8	MD Reference:	RKB @ 3054.00usft (Ensign T225)
Site Error:	0.00	North Reference:	Grid
Reference Well:	University 8-8E B H 9WC	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00	Output errors are at	2.00 sigma
Reference Wellbore	OH / 72263	Database:	USAEDMDB
Reference Design:	Surveys (Ensign T225)	Offset TVD Reference:	Offset Datum

Offset Design U-TEX 36994 5 - OH - Surveys												Offset Site Error: 0.00 usft	
Survey Program: 204-INCL-ONLY												Offset Well Error: 1.00 usft	
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Center		Distance		Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centers (usft)	Between Ellipses (usft)			
15,391.00	10,188.45	10,184.33	10,182.45	86.23	220.28	91.20	-6,690.83	1,084.44	1,013.66	741.60	272.07	3.726	
15,400.00	10,188.36	10,184.24	10,182.36	86.35	220.28	91.56	-6,690.83	1,084.44	1,005.35	733.10	272.25	3.693	
15,482.00	10,186.37	10,182.25	10,180.37	87.36	220.23	94.35	-6,690.83	1,084.44	930.65	656.57	274.08	3.396	
15,500.00	10,185.69	10,181.57	10,179.69	87.59	220.21	94.44	-6,690.83	1,084.44	914.52	639.98	274.54	3.331	
15,571.00	10,182.74	10,178.61	10,176.74	88.47	220.14	94.74	-6,690.83	1,084.44	851.48	574.96	276.52	3.079	
15,600.00	10,181.65	10,177.52	10,175.65	88.83	220.11	93.16	-6,690.83	1,084.44	826.05	548.62	277.43	2.977	
15,661.00	10,180.66	10,176.53	10,174.66	89.59	220.09	90.16	-6,690.83	1,084.44	773.34	493.74	279.60	2.766	
15,700.00	10,180.72	10,176.60	10,174.72	90.07	220.09	89.55	-6,690.83	1,084.44	740.35	459.17	281.18	2.633	
15,751.00	10,181.21	10,177.09	10,175.21	90.71	220.10	88.88	-6,690.83	1,084.44	698.35	414.84	283.51	2.463	
15,800.00	10,181.91	10,177.79	10,175.91	91.32	220.12	88.97	-6,690.83	1,084.44	659.36	373.31	286.05	2.305	
15,842.00	10,182.52	10,178.40	10,176.52	91.85	220.13	89.04	-6,690.83	1,084.44	627.14	338.69	288.45	2.174	
15,900.00	10,183.35	10,179.23	10,177.35	92.57	220.15	89.19	-6,690.83	1,084.44	584.69	292.58	292.11	2.002	
15,933.00	10,183.81	10,179.69	10,177.81	92.99	220.16	89.27	-6,690.83	1,084.44	561.73	267.36	294.37	1.908	
16,000.00	10,184.40	10,180.28	10,178.40	93.83	220.18	89.82	-6,690.83	1,084.44	518.24	218.98	299.26	1.732	
16,022.00	10,184.45	10,180.33	10,178.45	94.10	220.18	89.96	-6,690.83	1,084.44	505.02	204.08	300.94	1.678	
16,100.00	10,184.58	10,180.46	10,178.58	95.08	220.18	89.93	-6,690.83	1,084.44	463.53	156.57	306.96	1.510	
16,111.00	10,184.61	10,180.49	10,178.61	95.22	220.18	89.92	-6,690.83	1,084.44	458.45	150.66	307.80	1.489	Level 3
16,199.00	10,184.99	10,180.87	10,178.99	96.32	220.19	89.90	-6,690.83	1,084.44	425.85	112.04	313.80	1.357	Level 3
16,200.00	10,185.00	10,180.88	10,179.00	96.34	220.19	89.90	-6,690.83	1,084.44	425.56	111.70	313.86	1.356	Level 3
16,290.00	10,185.58	10,181.46	10,179.58	97.47	220.21	89.97	-6,690.83	1,084.44	409.40	91.82	317.58	1.289	Level 3
16,300.00	10,185.65	10,181.53	10,179.65	97.60	220.21	89.98	-6,690.83	1,084.44	408.77	90.99	317.78	1.286	Level 3
16,322.15	10,185.80	10,181.68	10,179.80	97.87	220.21	90.00	-6,690.83	1,084.44	408.20	90.15	318.05	1.283	Level 3 , CC, ES
16,379.00	10,186.19	10,182.07	10,180.19	98.59	220.22	90.05	-6,690.83	1,084.44	411.93	94.27	317.67	1.297	Level 3
16,400.00	10,186.35	10,182.22	10,180.35	98.85	220.23	90.09	-6,690.83	1,084.44	415.19	98.05	317.15	1.309	Level 3
16,468.00	10,187.08	10,182.96	10,181.08	99.71	220.24	90.26	-6,690.83	1,084.44	432.50	118.20	314.30	1.376	Level 3
16,500.00	10,187.69	10,183.57	10,181.69	100.12	220.26	90.63	-6,690.83	1,084.44	444.14	131.66	312.48	1.421	Level 3
16,558.00	10,189.77	10,185.64	10,183.77	100.86	220.31	91.61	-6,690.83	1,084.44	470.84	162.04	308.79	1.525	
16,600.00	10,191.64	10,187.52	10,185.64	101.39	220.36	91.78	-6,690.83	1,084.44	494.02	188.03	305.99	1.614	
16,648.00	10,193.61	10,189.48	10,187.61	102.01	220.40	91.92	-6,690.83	1,084.44	523.75	220.94	302.81	1.730	
16,700.00	10,195.11	10,190.99	10,189.11	102.67	220.44	91.09	-6,690.83	1,084.44	559.08	259.58	299.51	1.867	
16,737.00	10,195.56	10,191.44	10,189.56	103.14	220.45	90.32	-6,690.83	1,084.44	585.80	288.52	297.28	1.971	
16,800.00	10,195.62	10,191.50	10,189.62	103.95	220.45	89.76	-6,690.83	1,084.44	633.66	339.90	293.76	2.157	
16,826.00	10,195.48	10,191.36	10,189.48	104.28	220.45	89.49	-6,690.83	1,084.44	654.13	361.72	292.42	2.237	
16,900.00	10,195.01	10,190.89	10,189.01	105.22	220.44	89.49	-6,690.83	1,084.44	714.31	425.36	288.95	2.472	
16,915.00	10,194.93	10,190.80	10,188.93	105.41	220.44	89.50	-6,690.83	1,084.44	726.81	438.50	288.30	2.521	
17,000.00	10,193.91	10,189.79	10,187.91	106.50	220.41	88.16	-6,690.83	1,084.44	799.43	514.39	285.04	2.805	
17,004.00	10,193.84	10,189.72	10,187.84	106.55	220.41	88.09	-6,690.83	1,084.44	802.91	518.01	284.90	2.818	
17,095.00	10,191.99	10,187.87	10,185.99	107.72	220.36	87.50	-6,690.83	1,084.44	883.26	601.24	282.02	3.132	
17,100.00	10,191.88	10,187.76	10,185.88	107.78	220.36	87.49	-6,690.83	1,084.44	887.73	605.85	281.88	3.149	
17,184.00	10,190.06	10,185.94	10,184.06	108.86	220.32	87.31	-6,690.83	1,084.44	963.54	683.87	279.67	3.445	
17,200.00	10,189.72	10,185.60	10,183.72	109.06	220.31	87.29	-6,690.83	1,084.44	978.13	698.83	279.29	3.502	
17,272.00	10,188.22	10,184.10	10,182.22	109.99	220.27	87.17	-6,690.83	1,084.44	1,044.23	766.50	277.73	3.760	
17,300.00	10,187.64	10,183.52	10,181.64	110.35	220.26	87.07	-6,690.83	1,084.44	1,070.11	792.93	277.17	3.861	

Company:	Piedra Operating LLC	Local Co-ordinate Reference:	Well University 8-8E B H 9WC
Project:	Andrews County, TX (NAD83-TNC)	TVD Reference:	RKB @ 3054.00usft (Ensign T225)
Reference Site:	University 8-8	MD Reference:	RKB @ 3054.00usft (Ensign T225)
Site Error:	0.00	North Reference:	Grid
Reference Well:	University 8-8E B H 9WC	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00	Output errors are at	2.00 sigma
Reference Wellbore	OH / 72263	Database:	USAEDMDB
Reference Design:	Surveys (Ensign T225)	Offset TVD Reference:	Offset Datum

Offset Design U-Texas 36991 3U - OH - Surveys												Offset Site Error:	0.00 usft
Survey Program: 100-INCL-ONLY												Offset Well Error:	1.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Center		Distance			Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centers (usft)	Between Ellipses (usft)	Minimum Separation (usft)		
14,499.00	10,205.05	10,200.60	10,199.05	75.29	215.86	90.06	-5,554.02	293.89	1,089.81	804.56	285.24	3.821	
14,500.00	10,205.05	10,200.59	10,199.05	75.30	215.86	90.07	-5,554.02	293.89	1,089.34	804.07	285.27	3.819	
14,588.00	10,204.01	10,194.54	10,193.01	76.36	215.73	90.27	-5,553.97	293.89	1,050.34	762.59	287.75	3.650	
14,600.00	10,203.75	10,194.39	10,192.85	76.51	215.73	90.27	-5,553.97	293.89	1,045.37	757.28	288.09	3.629	
14,677.00	10,201.95	10,193.28	10,191.75	77.44	215.70	90.26	-5,553.96	293.89	1,016.35	726.10	290.24	3.502	
14,700.00	10,201.39	10,192.92	10,191.39	77.72	215.70	90.25	-5,553.96	293.89	1,008.60	717.73	290.86	3.468	
14,768.00	10,199.76	10,191.87	10,190.34	78.55	215.67	90.20	-5,553.95	293.89	987.51	694.91	292.60	3.375	
14,800.00	10,199.04	10,191.42	10,189.89	78.94	215.66	90.13	-5,553.95	293.89	978.69	685.33	293.36	3.336	
14,858.00	10,198.00	10,190.83	10,189.30	79.65	215.65	90.02	-5,553.94	293.89	964.99	670.36	294.64	3.275	
14,900.00	10,197.39	10,190.53	10,189.00	80.16	215.64	89.99	-5,553.94	293.89	957.10	661.64	295.46	3.239	
14,947.00	10,196.76	10,190.24	10,188.71	80.73	215.64	89.96	-5,553.94	293.89	950.52	654.25	296.26	3.208	
15,000.00	10,196.01	10,189.87	10,188.33	81.38	215.63	89.94	-5,553.94	293.89	946.35	649.34	297.01	3.186	
15,031.46	10,195.48	10,189.57	10,188.03	81.76	215.62	89.91	-5,553.93	293.89	945.68	648.31	297.36	3.180	CC
15,035.00	10,195.42	10,189.53	10,188.00	81.80	215.62	89.91	-5,553.93	293.89	945.68	648.29	297.40	3.180	ES, SF
15,100.00	10,194.02	10,188.59	10,187.06	82.61	215.60	89.86	-5,553.93	293.89	947.69	649.79	297.90	3.181	
15,124.00	10,193.38	10,188.12	10,186.59	82.90	215.59	89.83	-5,553.92	293.89	949.28	651.27	298.00	3.185	
15,200.00	10,190.90	10,186.16	10,184.62	83.85	215.55	89.74	-5,553.91	293.89	956.44	658.36	298.08	3.209	
15,213.00	10,190.41	10,185.74	10,184.21	84.01	215.54	89.72	-5,553.91	293.89	957.94	659.89	298.05	3.214	
15,300.00	10,188.75	10,184.61	10,183.08	85.11	215.52	90.03	-5,553.90	293.89	973.63	676.00	297.63	3.271	
15,302.00	10,188.75	10,184.62	10,183.09	85.13	215.52	90.05	-5,553.90	293.89	974.11	676.50	297.61	3.273	
15,391.00	10,188.45	10,184.86	10,183.32	86.23	215.52	89.88	-5,553.90	293.89	999.64	702.91	296.73	3.369	
15,400.00	10,188.36	10,184.82	10,183.29	86.35	215.52	89.82	-5,553.90	293.89	1,002.65	706.03	296.62	3.380	
15,482.00	10,186.37	10,183.25	10,181.72	87.36	215.49	89.07	-5,553.89	293.89	1,034.26	738.83	295.43	3.501	
15,500.00	10,185.69	10,182.65	10,181.11	87.59	215.48	88.99	-5,553.89	293.89	1,042.12	746.99	295.13	3.531	
15,571.00	10,182.74	10,179.94	10,178.41	88.47	215.42	88.67	-5,553.88	293.89	1,075.25	781.37	293.87	3.659	
15,600.00	10,181.65	10,178.93	10,177.40	88.83	215.40	89.06	-5,553.87	293.89	1,089.73	796.41	293.33	3.715	
15,661.00	10,180.66	10,178.19	10,176.66	89.59	215.38	90.06	-5,553.87	293.89	1,122.04	829.88	292.17	3.840	
15,700.00	10,180.72	10,178.47	10,176.94	90.07	215.39	90.34	-5,553.87	293.89	1,144.01	852.59	291.42	3.926	

Company:	Piedra Operating LLC	Local Co-ordinate Reference:	Well University 8-8E B H 9WC
Project:	Andrews County, TX (NAD83-TNC)	TVD Reference:	RKB @ 3054.00usft (Ensign T225)
Reference Site:	University 8-8	MD Reference:	RKB @ 3054.00usft (Ensign T225)
Site Error:	0.00	North Reference:	Grid
Reference Well:	University 8-8E B H 9WC	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00	Output errors are at	2.00 sigma
Reference Wellbore	OH / 72263	Database:	USAEDMDB
Reference Design:	Surveys (Ensign T225)	Offset TVD Reference:	Offset Datum

Offset Design U-Texas 36994 2 L - OH - Surveys												Offset Site Error:	0.00 usft
Survey Program: 100-INC-ONLY												Offset Well Error:	1.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Center		Distance			Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centers (usft)	Between Ellipses (usft)	Minimum Separation (usft)		
17,000.00	10,193.91	10,184.44	10,182.91	106.50	215.51	90.31	-8,098.19	778.82	1,198.59	888.92	309.67	3.871	
17,004.00	10,193.84	10,184.39	10,182.86	106.55	215.51	90.33	-8,098.19	778.82	1,196.64	886.79	309.85	3.862	
17,095.00	10,191.99	10,183.22	10,181.69	107.72	215.49	90.37	-8,098.18	778.82	1,154.71	840.96	313.74	3.680	
17,100.00	10,191.88	10,183.15	10,181.62	107.78	215.49	90.36	-8,098.18	778.82	1,152.55	838.60	313.95	3.671	
17,184.00	10,190.06	10,181.94	10,180.41	108.86	215.46	90.28	-8,098.17	778.82	1,119.05	801.62	317.43	3.525	
17,200.00	10,189.72	10,181.72	10,180.19	109.06	215.46	90.27	-8,098.17	778.82	1,113.26	795.19	318.08	3.500	
17,272.00	10,188.22	10,180.70	10,179.17	109.99	215.44	90.20	-8,098.17	778.82	1,089.61	768.76	320.85	3.396	
17,300.00	10,187.64	10,180.30	10,178.77	110.35	215.43	90.19	-8,098.17	778.82	1,081.49	759.62	321.87	3.360	
17,362.00	10,186.32	10,179.38	10,177.85	111.14	215.41	90.16	-8,098.16	778.82	1,065.62	741.64	323.98	3.289	
17,400.00	10,185.50	10,178.80	10,177.26	111.63	215.39	90.12	-8,098.16	778.82	1,057.46	732.31	325.15	3.252	
17,451.00	10,184.42	10,178.01	10,176.48	112.29	215.38	90.08	-8,098.15	778.82	1,048.63	722.05	326.58	3.211	
17,500.00	10,183.36	10,177.24	10,175.71	112.91	215.36	90.04	-8,098.15	778.82	1,042.46	714.71	327.75	3.181	
17,540.00	10,182.47	10,176.57	10,175.03	113.43	215.35	90.00	-8,098.15	778.82	1,039.13	710.56	328.57	3.163	
17,592.75	10,181.60	10,175.96	10,174.43	114.11	215.33	89.94	-8,098.14	778.82	1,037.43	708.00	329.44	3.149	CC
17,600.00	10,181.53	10,175.93	10,174.40	114.20	215.33	89.93	-8,098.14	778.82	1,037.46	707.93	329.54	3.148	ES
17,630.00	10,181.38	10,175.91	10,174.38	114.59	215.33	89.94	-8,098.14	778.82	1,038.26	708.36	329.90	3.147	SF
17,700.00	10,181.88	10,176.70	10,175.17	115.50	215.35	90.07	-8,098.15	778.82	1,044.19	713.73	330.46	3.160	
17,718.00	10,182.20	10,177.09	10,175.56	115.73	215.36	90.13	-8,098.15	778.82	1,046.61	716.08	330.53	3.166	
17,800.00	10,183.36	10,178.61	10,177.08	116.79	215.39	90.08	-8,098.16	778.82	1,060.72	730.23	330.50	3.209	
17,807.00	10,183.42	10,178.69	10,177.16	116.88	215.39	90.07	-8,098.16	778.82	1,062.13	731.67	330.47	3.214	
17,898.00	10,184.39	10,180.12	10,178.59	118.06	215.42	90.24	-8,098.16	778.82	1,083.70	753.98	329.72	3.287	
17,900.00	10,184.42	10,180.16	10,178.63	118.08	215.42	90.24	-8,098.17	778.82	1,084.24	754.55	329.69	3.289	
17,987.00	10,185.64	10,181.86	10,180.32	119.21	215.46	90.33	-8,098.17	778.82	1,111.29	782.87	328.42	3.384	
18,000.00	10,185.80	10,182.10	10,180.57	119.38	215.46	90.29	-8,098.18	778.82	1,115.86	787.66	328.19	3.400	
18,076.00	10,186.26	10,183.00	10,181.47	120.37	215.48	90.07	-8,098.18	778.82	1,143.61	816.97	326.65	3.501	
18,100.00	10,186.27	10,183.16	10,181.63	120.68	215.49	90.09	-8,098.18	778.82	1,152.83	826.74	326.09	3.535	
18,167.00	10,186.37	10,183.66	10,182.13	121.55	215.50	90.15	-8,098.18	778.82	1,180.43	856.01	324.42	3.639	
18,200.00	10,186.30	10,183.80	10,182.27	121.97	215.50	89.93	-8,098.19	778.82	1,194.99	871.46	323.53	3.694	
18,256.00	10,185.59	10,183.38	10,181.85	122.69	215.49	89.51	-8,098.18	778.82	1,221.10	899.17	321.93	3.793	
18,300.00	10,184.96	10,182.97	10,181.44	123.25	215.48	89.81	-8,098.18	778.82	1,243.01	922.38	320.63	3.877	
18,345.00	10,184.78	10,183.05	10,181.52	123.83	215.49	90.19	-8,098.18	778.82	1,266.83	947.55	319.28	3.968	

Company:	Piedra Operating LLC	Local Co-ordinate Reference:	Well University 8-8E B H 9WC
Project:	Andrews County, TX (NAD83-TNC)	TVD Reference:	RKB @ 3054.00usft (Ensign T225)
Reference Site:	University 8-8	MD Reference:	RKB @ 3054.00usft (Ensign T225)
Site Error:	0.00	North Reference:	Grid
Reference Well:	University 8-8E B H 9WC	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00	Output errors are at	2.00 sigma
Reference Wellbore	OH / 72263	Database:	USAEDMDB
Reference Design:	Surveys (Ensign T225)	Offset TVD Reference:	Offset Datum

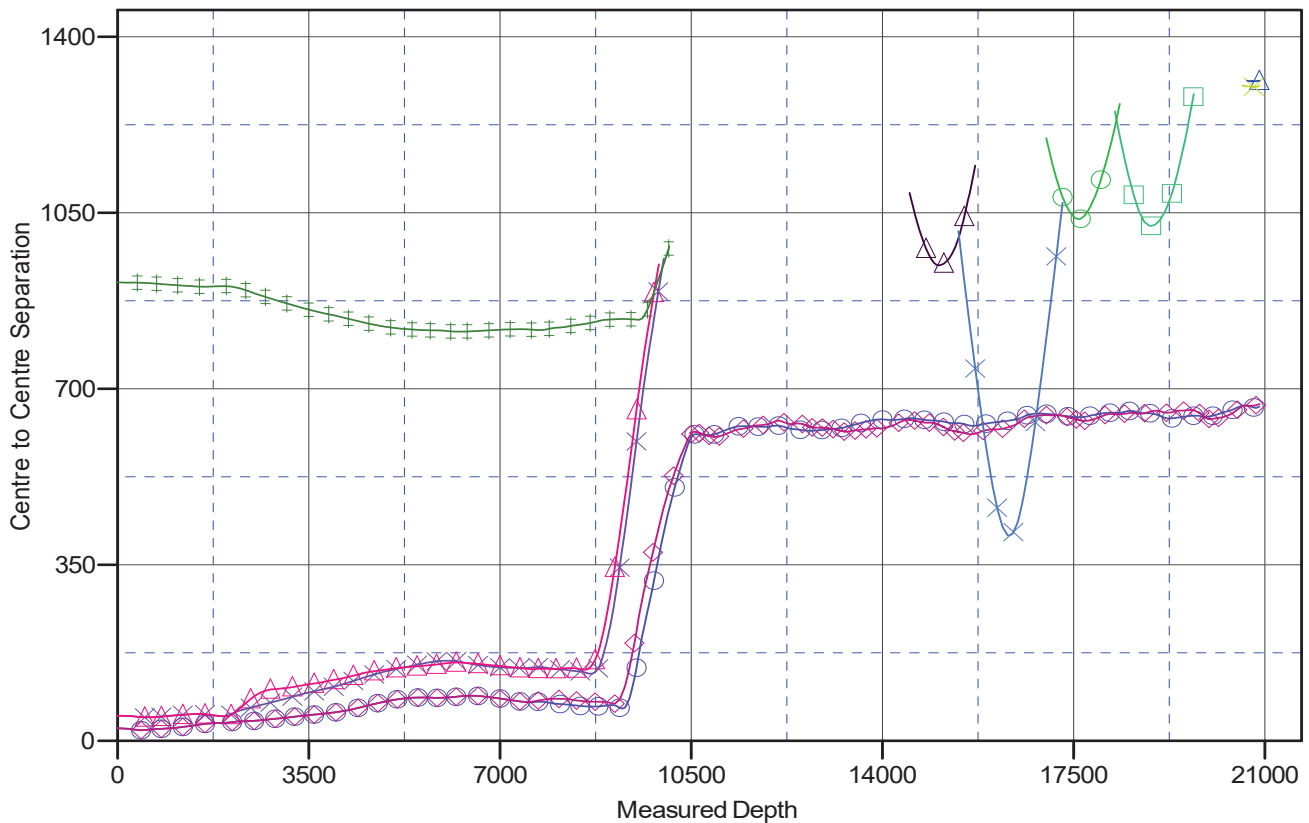
Offset Design U-Texas 36995 A/C 2 6 - OH - Surveys												Offset Site Error:	0.00 usft
Survey Program: 203-INC-ONLY												Offset Well Error:	1.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Center		Distance			Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centers (usft)	Between Ellipses (usft)	Minimum Separation (usft)		
18,256.00	10,185.59	10,169.30	10,167.91	122.69	208.66	90.15	-9,386.19	1,068.01	1,251.88	937.35	314.53	3.980	
18,300.00	10,184.96	10,169.24	10,167.85	123.25	208.66	89.73	-9,386.19	1,068.01	1,226.82	910.20	316.62	3.875	
18,345.00	10,184.78	10,169.58	10,168.19	123.83	208.66	89.36	-9,386.20	1,068.01	1,202.55	883.78	318.77	3.772	
18,400.00	10,185.25	10,170.61	10,169.22	124.54	208.68	88.90	-9,386.21	1,068.01	1,174.29	852.88	321.41	3.654	
18,433.00	10,185.93	10,181.33	10,179.93	124.97	208.91	89.19	-9,386.36	1,068.01	1,157.90	834.73	323.16	3.583	
18,500.00	10,186.95	10,182.35	10,180.95	125.83	208.93	89.84	-9,386.36	1,068.01	1,126.52	800.26	326.26	3.453	
18,523.00	10,187.00	10,182.40	10,181.00	126.12	208.93	90.03	-9,386.36	1,068.01	1,116.52	789.23	327.29	3.411	
18,600.00	10,185.69	10,181.10	10,179.69	127.11	208.91	90.75	-9,386.36	1,068.01	1,085.71	755.13	330.58	3.284	
18,613.00	10,185.24	10,173.11	10,171.72	127.28	208.74	90.42	-9,386.24	1,068.01	1,080.89	749.93	330.96	3.266	
18,700.00	10,181.69	10,170.94	10,169.54	128.40	208.69	90.41	-9,386.21	1,068.01	1,052.40	718.17	334.23	3.149	
18,704.00	10,181.51	10,170.82	10,169.43	128.45	208.69	90.41	-9,386.21	1,068.01	1,051.25	716.88	334.37	3.144	
18,794.00	10,179.65	10,170.18	10,168.79	129.64	208.68	89.71	-9,386.20	1,068.01	1,032.35	695.12	337.23	3.061	
18,800.00	10,179.66	10,170.26	10,168.87	129.72	208.68	89.72	-9,386.20	1,068.01	1,031.58	694.18	337.40	3.057	
18,885.00	10,179.19	10,170.85	10,169.45	130.84	208.69	89.82	-9,386.21	1,068.01	1,024.73	685.34	339.40	3.019	
18,900.00	10,178.97	10,170.82	10,169.43	131.04	208.69	89.82	-9,386.21	1,068.01	1,024.32	684.66	339.66	3.016	
18,919.99	10,178.59	10,170.70	10,169.31	131.30	208.69	89.82	-9,386.21	1,068.01	1,024.12	684.14	339.98	3.012	
18,975.00	10,177.02	10,169.88	10,168.48	132.02	208.67	89.75	-9,386.20	1,068.01	1,025.59	684.99	340.60	3.011	SF
19,000.00	10,176.09	10,169.28	10,167.89	132.34	208.66	89.71	-9,386.19	1,068.01	1,027.21	686.44	340.76	3.014	
19,065.00	10,173.27	10,167.32	10,165.93	133.19	208.61	89.56	-9,386.17	1,068.01	1,033.88	693.02	340.86	3.033	
19,100.00	10,171.54	10,166.03	10,164.64	133.65	208.59	89.48	-9,386.15	1,068.01	1,038.93	698.22	340.71	3.049	
19,155.00	10,168.62	10,163.78	10,162.39	134.36	208.54	89.33	-9,386.12	1,068.01	1,048.89	708.67	340.22	3.083	
19,200.00	10,166.65	10,162.33	10,160.93	134.95	208.51	89.55	-9,386.11	1,068.01	1,059.03	719.43	339.61	3.118	
19,246.00	10,165.73	10,161.93	10,160.53	135.55	208.50	89.91	-9,386.10	1,068.01	1,071.42	732.61	338.81	3.162	
19,300.00	10,165.59	10,162.40	10,161.01	136.25	208.51	90.13	-9,386.11	1,068.01	1,088.64	750.96	337.69	3.224	
19,335.00	10,165.79	10,163.01	10,161.62	136.71	208.52	90.32	-9,386.11	1,068.01	1,101.38	764.52	336.86	3.270	
19,400.00	10,166.37	10,164.39	10,163.00	137.56	208.55	90.39	-9,386.13	1,068.01	1,127.72	792.59	335.13	3.365	
19,424.00	10,166.58	10,164.91	10,163.52	137.87	208.56	90.41	-9,386.14	1,068.01	1,138.22	803.78	334.43	3.403	
19,500.00	10,167.18	10,166.50	10,165.11	138.87	208.60	90.45	-9,386.16	1,068.01	1,174.26	842.17	332.09	3.536	
19,514.00	10,167.27	10,166.78	10,165.39	139.05	208.60	90.46	-9,386.16	1,068.01	1,181.35	849.71	331.64	3.562	
19,600.00	10,167.78	10,168.47	10,167.08	140.17	208.64	90.50	-9,386.18	1,068.01	1,227.44	898.68	328.75	3.734	
19,603.00	10,167.80	10,168.53	10,167.13	140.21	208.64	90.50	-9,386.18	1,068.01	1,229.12	900.47	328.65	3.740	
19,692.00	10,167.92	10,169.88	10,168.49	141.38	208.67	90.26	-9,386.20	1,068.01	1,281.08	955.53	325.54	3.935	
19,700.00	10,167.89	10,169.97	10,168.57	141.48	208.67	90.20	-9,386.20	1,068.01	1,285.93	960.67	325.26	3.954	

Company:	Piedra Operating LLC	Local Co-ordinate Reference:	Well University 8-8E B H 9WC
Project:	Andrews County, TX (NAD83-TNC)	TVD Reference:	RKB @ 3054.00usft (Ensign T225)
Reference Site:	University 8-8	MD Reference:	RKB @ 3054.00usft (Ensign T225)
Site Error:	0.00	North Reference:	Grid
Reference Well:	University 8-8E B H 9WC	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00	Output errors are at	2.00 sigma
Reference Wellbore	OH / 72263	Database:	USAEDMDB
Reference Design:	Surveys (Ensign T225)	Offset TVD Reference:	Offset Datum

Reference Depths are relative to RKB @ 3054.00usft (Ensign T225)
Offset Depths are relative to Offset Datum
Central Meridian is 98° 30' 0.000000 W °

Coordinates are relative to: University 8-8E B H 9WC
Coordinate System is US State Plane 1983, Texas North Central Zone
Grid Convergence at Surface is: -2.104°

Ladder Plot



LEGEND

University 8-8E B H 3MS, OH / 72265, Plan 1 03-16-23 V0	University 8-8E A H 8WC, OH / 72181, Surveys (Ensign T054) V0	University 8-8E B H 6LS, OH / 72264, Plan 2 05-17-23 V0
University 8-8E B H 3MS, OH / 72265, Surveys (Ensign T225) V0	University 8-8E A H 8WC, OH / 72181, Plan 1 03-16-23 V0	University 8-8E B H 6LS, OH / 72264, Surveys (Ensign T225) V0
State University W2, OH, Surveys V0	U-Texas 369942 L, OH, Surveys V0	U-Tex 36994 5 OH, Surveys V0
U-Texas 36995 A/C 2.6, OH, Surveys V0	U-Texas 369913U, OH, Surveys V0	

Company:	Piedra Operating LLC	Local Co-ordinate Reference:	Well University 8-8E B H 9WC
Project:	Andrews County, TX (NAD83-TNC)	TVD Reference:	RKB @ 3054.00usft (Ensign T225)
Reference Site:	University 8-8	MD Reference:	RKB @ 3054.00usft (Ensign T225)
Site Error:	0.00	North Reference:	Grid
Reference Well:	University 8-8E B H 9WC	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00	Output errors are at	2.00 sigma
Reference Wellbore	OH / 72263	Database:	USAEDMDB
Reference Design:	Surveys (Ensign T225)	Offset TVD Reference:	Offset Datum

Reference Depths are relative to RKB @ 3054.00usft (Ensign T225)

Offset Depths are relative to Offset Datum

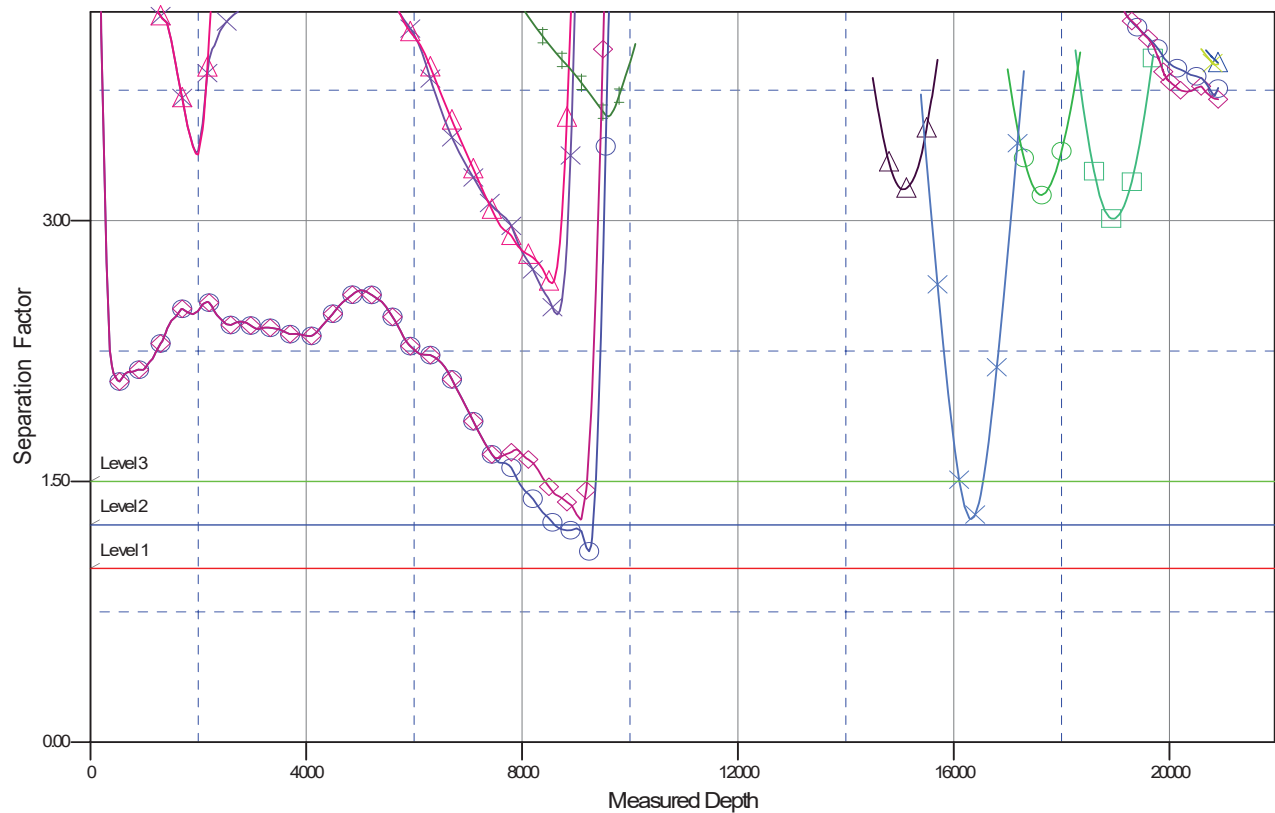
Central Meridian is 98° 30' 0.000000 W °

Coordinates are relative to: University 8-8E B H 9WC

Coordinate System is US State Plane 1983, Texas North Central Zone

Grid Convergence at Surface is: -2.104°

Separation Factor Plot



LEGEND

University 8-8E B H 3MS, OH / 72265, Plan 1 03-16-23 V0	University 8-8E A H 8WC, OH / 72181, Surveys (Ensign T054) V0	University 8-8E B H 6LS, OH / 72264, Plan 2 05-17-23 V0
University 8-8E B H 3MS, OH / 72265, Surveys (Ensign T225) V0	University 8-8E A H 8WC, OH / 72181, Plan 1 03-16-23 V0	University 8-8E B H 6LS, OH / 72264, Surveys (Ensign T225) V0
State University W 2, OH, Surveys V0	U-Texas 369942 L, OH, Surveys V0	U-Tex 36994 5, OH, Surveys V0
U-Texas 36995A/C 2.6, OH, Surveys V0	U-Texas 369913U, OH, Surveys V0	