



PHOENIX
TECHNOLOGY SERVICES

Piedra Operating LLC

Andrews County, TX (NAD83-TNC)

University 8-8

University 8-8E A H 8WC

OH / 72181

Surveys (Ensign T054)

Anticollision Report

15 May, 2023



Company:	Piedra Operating LLC	Local Co-ordinate Reference:	Well University 8-8E A H 8WC
Project:	Andrews County, TX (NAD83-TNC)	TVD Reference:	RKB @ 3050.00usft (Ensign T054)
Reference Site:	University 8-8	MD Reference:	RKB @ 3050.00usft (Ensign T054)
Site Error:	0.00	North Reference:	Grid
Reference Well:	University 8-8E A H 8WC	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00	Output errors are at	2.00 sigma
Reference Wellbore	OH / 72181	Database:	USAEDMDB
Reference Design:	Surveys (Ensign T054)	Offset TVD Reference:	Offset Datum

Reference	Surveys (Ensign T054)		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	MD + Stations Interval 100.00usft	Error Model:	ISCWSA
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	2023-05-15		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
15.00	1,765.00	TrueShot MWD Surveys (OH / 72181)	MWD	OWSG MWD - Standard
1,884.00	20,943.00	Phoenix MWD Surveys (OH / 72181)	MWD+HRGM	OWSG MWD + HRGM

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						
Sec 4/9/16 Blk 8/9 T3N						
Offset University 8-16 1 - OH - As Drilled	20,299.96	10,116.53	1,639.62	1,167.70	3.474 CC	
Offset University 8-16 1 - OH - As Drilled	20,366.00	10,115.88	1,640.51	1,167.66	3.469 ES, SF	
University 8-8						
University 8-8E A H 2MS - OH / 72179 - Plan 1 03-16-23	1,103.32	1,103.41	49.72	41.82	6.288 CC	
University 8-8E A H 2MS - OH / 72179 - Plan 1 03-16-23	2,500.00	2,496.91	51.91	39.12	4.057 ES	
University 8-8E A H 2MS - OH / 72179 - Plan 1 03-16-23	8,672.00	8,668.48	138.28	97.09	3.358 SF	
University 8-8E A H 2MS - OH / 72179 - Surveys (Ensign	1,103.32	1,103.41	49.72	41.82	6.288 CC	
University 8-8E A H 2MS - OH / 72179 - Surveys (Ensign	2,300.00	2,296.48	52.49	39.97	4.193 ES	
University 8-8E A H 2MS - OH / 72179 - Surveys (Ensign	2,332.00	2,328.30	52.59	40.00	4.176 SF	
University 8-8E A H 5LS - OH / 72180 - Plan 2 05-12-23	2,536.30	2,535.11	9.24	-4.54	0.671 Level 1 , CC	
University 8-8E A H 5LS - OH / 72180 - Plan 2 05-12-23	2,542.00	2,540.80	9.25	-4.57	0.669 Level 1 , ES, SF	
University 8-8E A H 5LS - OH / 72180 - Surveys (Ensign	2,536.30	2,535.11	9.24	-4.54	0.671 Level 1 , CC	
University 8-8E A H 5LS - OH / 72180 - Surveys (Ensign	2,542.00	2,540.80	9.25	-4.57	0.669 Level 1 , ES, SF	
University 8-8E B H 3MS - OH / 72265 - Plan 1 03-16-23						Out of range
University 8-8E B H 3MS - OH / 72265 - Surveys (Ensign						Out of range
University 8-8E B H 6LS - OH / 72264 - Plan 1 03-16-23						Out of range
University 8-8E B H 6LS - OH / 72264 - Surveys (Ensign						Out of range
University 8-8E B H 9WC - OH / 72263 - Plan 1 03-16-23	20,863.00	20,920.60	1,331.37	997.57	3.989 CC, ES	
University 8-8E B H 9WC - OH / 72263 - Plan 1 03-16-23	20,899.96	20,920.60	1,332.64	998.46	3.988 SF	
University 8-8E B H 9WC - OH / 72263 - Surveys (Ensign						Out of range
University 8-8E H 1MS - OH / 71371 - Surveys (Ensign 2	8,675.70	8,697.84	733.97	687.61	15.831 CC, ES	
University 8-8E H 1MS - OH / 71371 - Surveys (Ensign 2	8,762.00	8,748.45	736.17	689.47	15.763 SF	
University 8-8E H 4LS - OH / 71370 - Surveys (Ensign 22	7,179.78	7,178.13	667.28	632.83	19.368 CC	
University 8-8E H 4LS - OH / 71370 - Surveys (Ensign 22	20,943.00	20,371.32	892.66	616.77	3.236 ES, SF	
University 8-8E H 7WC - OH / 71369 - Surveys (Ensign 2	10,043.65	9,999.42	555.83	507.91	11.599 CC	
University 8-8E H 7WC - OH / 71369 - Surveys (Ensign 2	20,943.00	20,945.94	650.64	314.61	1.936 ES, SF	
University 8-8 Offsets						
U Texas 36994 A/C 2 3 - OH - Surveys	17,728.23	10,172.75	295.81	-48.01	0.860 Level 1 , CC, ES, SF	
U Texas 36995 4 C - OH - Surveys	20,360.36	10,154.81	281.71	-103.09	0.732 Level 1 , CC, ES, SF	
U-Tex 36994 5 - OH - Surveys						Out of range

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

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Reference Site:	University 8-8	MD Reference:	RKB @ 3050.00usft (Ensign T054)
Site Error:	0.00	North Reference:	Grid
Reference Well:	University 8-8E A H 8WC	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00	Output errors are at	2.00 sigma
Reference Wellbore	OH / 72181	Database:	USAEDMDB
Reference Design:	Surveys (Ensign T054)	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.00 usft
Survey Program: 281-Inclinometer1												Offset Well Error:	0.00 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)		
19,599.96	10,170.86	10,125.31	10,124.62	158.04	303.22	-89.99	-10,024.34	4,152.36	1,773.95	1,325.21	448.75	3.953	
19,650.00	10,170.64	10,125.51	10,124.83	158.83	303.22	-90.04	-10,024.35	4,152.36	1,755.04	1,304.04	451.00	3.891	
19,699.96	10,170.27	10,125.56	10,124.87	159.61	303.22	-90.13	-10,024.35	4,152.36	1,737.57	1,284.37	453.20	3.834	
19,740.00	10,169.81	10,125.44	10,124.76	160.24	303.22	-90.20	-10,024.34	4,152.36	1,724.68	1,269.77	454.91	3.791	
19,799.96	10,168.91	10,125.05	10,124.37	161.17	303.21	-90.24	-10,024.34	4,152.36	1,707.15	1,249.76	457.39	3.732	
19,829.00	10,168.41	10,124.80	10,124.11	161.62	303.20	-90.25	-10,024.34	4,152.36	1,699.38	1,240.83	458.55	3.706	
19,899.96	10,167.15	10,124.14	10,123.45	162.73	303.18	-90.22	-10,024.33	4,152.36	1,682.36	1,221.12	461.25	3.647	
19,919.00	10,166.82	10,123.97	10,123.29	163.03	303.18	-90.21	-10,024.33	4,152.36	1,678.27	1,216.33	461.94	3.633	
19,999.96	10,165.24	10,123.06	10,122.38	164.29	303.15	-90.24	-10,024.32	4,152.36	1,663.14	1,198.44	464.70	3.579	
20,008.00	10,165.06	10,122.95	10,122.27	164.41	303.15	-90.24	-10,024.32	4,152.36	1,661.85	1,196.89	464.96	3.574	
20,097.00	10,162.72	10,121.35	10,120.66	165.80	303.10	-90.24	-10,024.31	4,152.36	1,650.06	1,182.48	467.58	3.529	
20,099.96	10,162.63	10,121.28	10,120.60	165.85	303.09	-90.24	-10,024.31	4,152.36	1,649.75	1,182.09	467.66	3.528	
20,187.00	10,159.39	10,118.74	10,118.06	167.20	303.02	-90.22	-10,024.29	4,152.36	1,642.72	1,172.95	469.77	3.497	
20,199.96	10,158.85	10,118.30	10,117.61	167.41	303.00	-90.20	-10,024.28	4,152.36	1,642.02	1,171.97	470.05	3.493	
20,276.00	10,156.70	10,116.75	10,116.06	168.60	302.96	-90.11	-10,024.27	4,152.36	1,639.73	1,168.22	471.52	3.478	
20,299.96	10,156.30	10,116.53	10,115.85	168.98	302.95	-90.11	-10,024.27	4,152.36	1,639.62	1,167.70	471.92	3.474	CC
20,300.21	10,156.29	10,116.53	10,115.85	168.98	302.95	-90.11	-10,024.27	4,152.36	1,639.62	1,167.69	471.92	3.474	
20,366.00	10,155.12	10,115.88	10,115.20	170.02	302.93	-90.10	-10,024.26	4,152.36	1,640.51	1,167.66	472.85	3.469	ES, SF
20,399.96	10,154.69	10,115.73	10,115.04	170.55	302.93	-90.12	-10,024.26	4,152.36	1,641.85	1,168.62	473.23	3.469	
20,456.00	10,154.88	10,116.37	10,115.69	171.44	302.95	-90.22	-10,024.27	4,152.36	1,645.91	1,172.18	473.73	3.474	
20,499.96	10,155.52	10,117.40	10,116.71	172.13	302.98	-90.28	-10,024.28	4,152.36	1,650.67	1,176.67	474.01	3.482	
20,547.00	10,156.36	10,118.65	10,117.97	172.87	303.01	-90.36	-10,024.29	4,152.36	1,657.28	1,183.10	474.18	3.495	
20,599.96	10,157.47	10,120.23	10,119.55	173.70	303.06	-90.44	-10,024.30	4,152.36	1,666.41	1,192.19	474.22	3.514	
20,638.00	10,158.35	10,121.46	10,120.78	174.29	303.10	-90.51	-10,024.31	4,152.36	1,673.98	1,199.82	474.16	3.530	
20,699.96	10,159.75	10,123.43	10,122.75	175.26	303.16	-90.54	-10,024.33	4,152.36	1,688.05	1,214.16	473.89	3.562	
20,728.00	10,160.32	10,124.26	10,123.58	175.70	303.19	-90.54	-10,024.33	4,152.36	1,695.12	1,221.42	473.70	3.578	
20,799.96	10,161.78	10,126.41	10,125.72	176.84	303.25	-90.63	-10,024.35	4,152.36	1,714.89	1,241.85	473.04	3.625	
20,819.00	10,162.18	10,126.99	10,126.30	177.13	303.27	-90.65	-10,024.36	4,152.36	1,720.48	1,247.65	472.83	3.639	
20,863.00	10,163.13	10,128.36	10,127.67	177.83	303.31	-90.69	-10,024.37	4,152.36	1,733.89	1,261.62	472.27	3.671	
20,899.96	10,163.93	10,129.51	10,128.83	178.41	303.34	-90.73	-10,024.38	4,152.36	1,745.77	1,274.03	471.74	3.701	
20,943.00	10,164.86	10,130.87	10,130.18	179.10	303.39	-90.78	-10,024.39	4,152.36	1,760.47	1,289.42	471.05	3.737	

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Reference Site:	University 8-8	MD Reference:	RKB @ 3050.00usft (Ensign T054)
Site Error:	0.00	North Reference:	Grid
Reference Well:	University 8-8E A H 8WC	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00	Output errors are at	2.00 sigma
Reference Wellbore	OH / 72181	Database:	USAEDMDB
Reference Design:	Surveys (Ensign T054)	Offset TVD Reference:	Offset Datum

Offset Design University 8-8E A H 2MS - OH / 72179 - Plan 1 03-16-23												Offset Site Error:	0.00 usft
Survey Program: 15-MWD, 1834-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	77.04	11.22	48.77	50.04				
15.00	15.00	15.00	15.00	1.00	1.00	77.04	11.22	48.77	50.04				
100.00	100.00	100.00	100.00	1.28	1.31	139.60	11.09	48.80	50.37	47.78	2.59	19.475	
177.00	176.99	176.99	176.98	1.90	1.90	140.82	10.74	48.87	51.23	47.44	3.79	13.516	
200.00	199.99	200.00	199.99	1.98	1.98	138.69	10.59	48.90	51.54	47.60	3.94	13.079	
268.00	267.98	268.00	268.00	2.21	2.21	105.60	10.05	48.96	51.94	47.56	4.38	11.867	
300.00	299.98	300.00	299.99	2.31	2.30	113.92	9.80	48.99	51.98	47.43	4.55	11.414	
357.00	356.98	356.94	356.93	2.48	2.48	121.02	9.55	49.05	52.22	47.35	4.87	10.713	
400.00	399.98	400.01	400.01	2.60	2.59	103.76	9.48	49.07	52.39	47.31	5.08	10.305	
444.00	443.98	444.10	444.09	2.73	2.70	87.60	9.45	49.01	52.37	47.07	5.30	9.882	
500.00	499.97	500.14	500.13	2.89	2.81	98.75	9.44	48.86	52.26	46.71	5.56	9.408	
533.00	532.97	533.16	533.15	2.98	2.88	104.24	9.47	48.75	52.24	46.53	5.71	9.153	
600.00	599.96	600.10	600.09	3.16	3.04	79.44	9.49	48.54	52.08	46.08	6.00	8.674	
621.00	620.96	621.08	621.08	3.21	3.08	69.41	9.47	48.50	51.98	45.88	6.10	8.523	
700.00	699.96	700.03	700.03	3.42	3.27	99.01	9.22	48.38	51.75	45.32	6.43	8.051	
702.54	702.50	702.57	702.57	3.42	3.27	100.28	9.21	48.38	51.75	45.31	6.44	8.038	
710.00	709.96	710.03	710.02	3.44	3.29	104.10	9.17	48.37	51.75	45.28	6.47	8.000	
799.00	798.96	799.17	799.16	3.67	3.50	84.81	8.60	48.19	51.57	44.74	6.83	7.550	
800.00	799.96	800.17	800.16	3.67	3.51	84.83	8.59	48.18	51.57	44.73	6.83	7.545	
890.00	889.95	890.00	889.98	3.89	3.72	54.60	8.01	48.00	51.04	43.86	7.18	7.111	
900.00	899.95	899.99	899.98	3.91	3.74	56.52	7.95	47.99	50.97	43.76	7.21	7.067	
977.00	976.95	977.09	977.08	4.08	3.91	69.09	7.62	47.87	50.43	42.95	7.48	6.742	
1,000.00	999.94	1,000.10	1,000.09	4.14	3.97	70.30	7.54	47.81	50.26	42.71	7.56	6.651	
1,062.00	1,061.94	1,062.10	1,062.08	4.28	4.10	73.99	7.11	47.62	49.85	42.08	7.77	6.419	
1,100.00	1,099.94	1,100.09	1,100.08	4.37	4.19	101.89	6.75	47.50	49.72	41.83	7.90	6.297	
1,103.32	1,103.26	1,103.41	1,103.40	4.38	4.20	104.41	6.72	47.49	49.72	41.82	7.91	6.288	CC
1,148.00	1,147.94	1,148.10	1,148.08	4.49	4.30	133.41	6.38	47.34	49.87	41.81	8.06	6.188	
1,200.00	1,199.93	1,200.01	1,199.99	4.61	4.41	136.47	6.05	47.20	50.20	41.95	8.25	6.088	
1,238.00	1,237.93	1,237.94	1,237.92	4.70	4.50	139.63	5.80	47.16	50.45	42.06	8.38	6.018	
1,300.00	1,299.93	1,300.04	1,300.02	4.84	4.64	144.71	5.26	47.07	50.78	42.19	8.60	5.907	
1,324.00	1,323.93	1,324.09	1,324.07	4.89	4.70	147.33	4.98	46.98	50.86	42.18	8.68	5.859	
1,400.00	1,399.92	1,400.02	1,399.99	5.05	5.04	147.94	4.05	46.69	51.12	41.98	9.14	5.595	
1,412.00	1,411.93	1,412.01	1,411.98	5.08	5.10	148.05	3.91	46.65	51.18	41.97	9.21	5.556	
1,500.00	1,499.92	1,499.91	1,499.87	5.28	5.53	124.28	3.00	46.51	51.66	41.89	9.77	5.290	
1,600.00	1,599.92	1,600.16	1,600.12	5.71	5.77	159.25	1.97	46.19	52.12	41.73	10.38	5.020	
1,675.00	1,674.92	1,675.24	1,675.18	6.04	5.94	-179.35	0.87	45.61	52.40	41.57	10.83	4.839	
1,700.00	1,699.91	1,700.28	1,700.22	6.08	6.00	-179.24	0.42	45.37	52.48	41.56	10.91	4.808	
1,765.00	1,764.92	1,765.48	1,765.41	6.19	6.14	180.00	-0.44	44.64	52.42	41.29	11.14	4.707	
1,800.00	1,799.91	1,800.25	1,800.18	6.26	6.20	-171.85	-0.71	44.28	52.33	41.08	11.25	4.652	
1,800.78	1,800.69	1,801.02	1,800.95	6.26	6.20	-171.84	-0.71	44.28	52.33	41.08	11.25	4.652	
1,884.00	1,883.91	1,883.95	1,883.88	6.42	6.29	-148.94	-0.91	44.19	52.66	41.20	11.46	4.595	
1,900.00	1,899.91	1,899.94	1,899.87	6.43	6.30	-101.82	-0.93	44.19	52.71	41.22	11.49	4.587	
1,973.00	1,972.91	1,972.37	1,972.30	6.51	6.34	-58.81	-1.24	44.38	52.60	40.98	11.62	4.528	
2,000.00	1,999.89	1,998.98	1,998.90	6.56	6.36	-54.80	-1.65	44.70	52.59	40.93	11.66	4.511	
2,008.87	2,008.76	2,007.72	2,007.64	6.58	6.38	-54.10	-1.83	44.83	52.58	40.91	11.68	4.503	
2,064.00	2,063.82	2,062.05	2,061.93	6.70	6.56	-52.33	-3.39	46.07	52.50	40.69	11.80	4.447	

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 A H 8WC
Project:	Andrews County, TX (NAD83-TNC)	TVD Reference:	RKB @ 3050.00usft (Ensign T054)
Reference Site:	University 8-8	MD Reference:	RKB @ 3050.00usft (Ensign T054)
Site Error:	0.00	North Reference:	Grid
Reference Well:	University 8-8E A H 8WC	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00	Output errors are at	2.00 sigma
Reference Wellbore	OH / 72181	Database:	USAEDMDB
Reference Design:	Surveys (Ensign T054)	Offset TVD Reference:	Offset Datum

Offset Design University 8-8E A H 2MS - OH / 72179 - Plan 1 03-16-23												Offset Site Error:	0.00 usft
Survey Program: 15-MWD, 1834-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)		
2,077.17	2,076.96	2,075.03	2,074.89	6.72	6.60	-51.69	-3.88	46.46	52.48	40.66	11.83	4.437	
2,100.00	2,099.74	2,097.53	2,097.36	6.74	6.68	-50.56	-4.84	47.22	52.53	40.66	11.87	4.426	
2,153.00	2,152.62	2,149.98	2,149.69	6.81	6.75	-47.90	-7.58	49.42	52.91	40.96	11.95	4.428	
2,200.00	2,199.49	2,196.97	2,196.57	6.88	6.79	-43.99	-10.20	51.54	53.05	41.01	12.03	4.408	
2,243.00	2,242.34	2,239.97	2,239.46	6.94	6.88	-41.36	-12.61	53.48	52.74	40.62	12.12	4.353	
2,300.00	2,299.11	2,296.96	2,296.30	7.02	7.00	-43.74	-15.80	56.04	52.15	39.92	12.23	4.265	
2,332.00	2,331.00	2,328.96	2,328.21	7.07	7.09	-45.13	-17.59	57.48	51.90	39.60	12.30	4.220	
2,386.00	2,384.79	2,382.95	2,382.07	7.14	7.25	-52.78	-20.61	59.91	51.70	39.31	12.39	4.173	
2,396.44	2,395.19	2,393.39	2,392.47	7.17	7.28	-53.44	-21.19	60.38	51.69	39.27	12.42	4.161	
2,400.00	2,398.73	2,396.94	2,396.02	7.18	7.29	-53.67	-21.39	60.54	51.69	39.26	12.44	4.157	
2,500.00	2,498.33	2,496.91	2,495.73	7.49	7.59	-60.28	-26.98	65.05	51.91	39.12	12.80	4.057	ES
2,542.00	2,540.15	2,538.90	2,537.61	7.62	7.71	-63.16	-29.33	66.94	52.14	39.18	12.96	4.024	
2,599.99	2,597.84	2,596.82	2,595.38	7.73	7.89	-83.67	-32.57	69.55	53.29	40.18	13.11	4.064	
2,606.00	2,603.80	2,602.81	2,601.36	7.74	7.91	-85.50	-32.90	69.82	53.50	40.37	13.13	4.075	
2,697.00	2,694.12	2,693.53	2,691.84	7.93	8.19	-94.76	-37.98	73.90	57.47	44.09	13.38	4.295	
2,699.99	2,697.09	2,696.52	2,694.82	7.94	8.19	-94.76	-38.14	74.04	57.62	44.23	13.39	4.303	
2,787.00	2,783.42	2,783.26	2,781.34	8.13	8.47	-93.55	-43.00	77.94	61.64	47.94	13.70	4.499	
2,799.99	2,796.32	2,796.22	2,794.27	8.16	8.51	-93.24	-43.72	78.53	62.17	48.42	13.75	4.520	
2,876.00	2,871.84	2,872.09	2,869.94	8.34	8.75	-90.04	-47.96	81.94	64.83	50.76	14.07	4.609	
2,899.99	2,895.70	2,896.06	2,893.84	8.40	8.82	-90.89	-49.30	83.02	65.54	51.38	14.17	4.626	
2,967.00	2,962.31	2,962.97	2,960.59	8.57	9.03	-93.19	-53.05	86.04	67.62	53.15	14.47	4.674	
2,999.99	2,995.12	2,995.92	2,993.46	8.66	9.14	-93.30	-54.89	87.52	68.64	54.03	14.62	4.696	
3,056.00	3,050.85	3,051.88	3,049.27	8.80	9.32	-92.91	-58.02	90.04	70.27	55.39	14.87	4.724	
3,099.99	3,094.66	3,095.85	3,093.12	8.92	9.46	-91.32	-60.48	92.02	71.39	56.33	15.07	4.739	
3,146.00	3,140.51	3,141.84	3,138.99	9.04	9.61	-88.68	-63.05	94.09	72.38	57.12	15.26	4.743	
3,199.99	3,194.34	3,195.82	3,192.83	9.18	9.79	-89.55	-66.07	96.52	73.44	57.96	15.48	4.744	
3,236.00	3,230.24	3,231.82	3,228.74	9.28	9.91	-90.14	-68.08	98.14	74.17	58.54	15.63	4.745	
3,299.99	3,294.05	3,295.79	3,292.55	9.45	10.12	-91.57	-71.66	101.02	75.52	59.63	15.89	4.752	
3,326.00	3,319.99	3,321.79	3,318.48	9.52	10.20	-92.12	-73.12	102.19	76.10	60.10	16.00	4.757	
3,399.99	3,393.83	3,395.77	3,392.27	9.72	10.45	-90.59	-77.25	105.53	77.69	61.41	16.28	4.773	
3,416.00	3,409.81	3,411.77	3,408.23	9.76	10.50	-90.18	-78.15	106.25	78.02	61.68	16.34	4.776	
3,499.99	3,493.85	3,495.75	3,491.99	9.99	10.78	-87.95	-82.84	110.03	79.67	63.02	16.65	4.785	
3,507.00	3,500.64	3,502.75	3,498.97	10.01	10.81	-87.76	-83.24	110.34	79.80	63.12	16.68	4.785	
3,597.00	3,590.48	3,592.73	3,588.72	10.25	11.11	-85.98	-88.27	114.40	81.42	64.41	17.01	4.785	
3,599.99	3,593.47	3,595.72	3,591.71	10.26	11.12	-85.96	-88.44	114.53	81.48	64.45	17.03	4.785	
3,686.00	3,679.32	3,681.71	3,677.48	10.50	11.41	-86.41	-93.25	118.40	83.03	65.67	17.35	4.784	
3,699.99	3,693.29	3,695.70	3,691.43	10.54	11.46	-86.08	-94.03	119.03	83.28	65.87	17.41	4.784	
3,776.00	3,769.16	3,771.70	3,767.23	10.75	11.71	-84.23	-98.28	122.46	84.62	66.92	17.70	4.780	
3,799.99	3,793.11	3,795.69	3,791.15	10.82	11.79	-84.33	-99.62	123.54	85.03	67.24	17.80	4.778	
3,865.00	3,858.01	3,860.68	3,855.98	11.01	12.02	-84.62	-103.26	126.46	86.18	68.12	18.05	4.773	
3,899.99	3,892.94	3,895.67	3,890.87	11.11	12.13	-83.47	-105.21	128.04	86.79	68.60	18.19	4.771	
3,954.00	3,946.86	3,949.66	3,944.73	11.26	12.32	-81.53	-108.23	130.47	87.69	69.29	18.40	4.765	
3,999.99	3,992.78	3,995.65	3,990.60	11.39	12.48	-81.17	-110.80	132.54	88.43	69.84	18.58	4.758	
4,044.00	4,036.71	4,039.64	4,034.48	11.52	12.63	-80.86	-113.26	134.52	89.13	70.37	18.76	4.751	
4,099.99	4,092.62	4,095.63	4,090.32	11.68	12.82	-80.90	-116.40	137.04	90.04	71.06	18.98	4.743	

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 A H 8WC
Project:	Andrews County, TX (NAD83-TNC)	TVD Reference:	RKB @ 3050.00usft (Ensign T054)
Reference Site:	University 8-8	MD Reference:	RKB @ 3050.00usft (Ensign T054)
Site Error:	0.00	North Reference:	Grid
Reference Well:	University 8-8E A H 8WC	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00	Output errors are at	2.00 sigma
Reference Wellbore	OH / 72181	Database:	USAEDMDB
Reference Design:	Surveys (Ensign T054)	Offset TVD Reference:	Offset Datum

Offset Design University 8-8E A H 2MS - OH / 72179 - Plan 1 03-16-23												Offset Site Error:	0.00 usft
Survey Program: 15-MWD, 1834-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)		
4,134.00	4,126.57	4,129.63	4,124.23	11.78	12.94	-80.92	-118.30	138.57	90.62	71.50	19.12	4.739	
4,199.99	4,192.46	4,195.60	4,190.04	11.97	13.16	-80.09	-121.99	141.55	91.75	72.36	19.39	4.732	
4,223.00	4,215.44	4,218.61	4,212.98	12.04	13.24	-79.80	-123.27	142.58	92.14	72.66	19.48	4.730	
4,299.99	4,292.32	4,295.58	4,289.76	12.27	13.51	-76.78	-127.58	146.05	93.39	73.59	19.80	4.717	
4,312.00	4,304.31	4,307.59	4,301.73	12.30	13.55	-76.30	-128.25	146.59	93.57	73.72	19.85	4.715	
4,399.99	4,392.18	4,395.56	4,389.47	12.56	13.86	-78.03	-133.17	150.55	94.99	74.78	20.21	4.700	
4,402.00	4,394.18	4,397.56	4,391.48	12.57	13.86	-78.07	-133.28	150.64	95.03	74.81	20.22	4.699	
4,491.00	4,483.07	4,486.54	4,480.22	12.83	14.17	-75.05	-138.26	154.65	96.56	75.97	20.60	4.688	
4,499.99	4,492.05	4,495.53	4,489.19	12.86	14.20	-74.81	-138.76	155.05	96.71	76.08	20.63	4.687	
4,583.00	4,574.95	4,578.51	4,571.96	13.10	14.49	-72.75	-143.40	158.79	98.06	77.06	20.99	4.671	
4,599.99	4,591.92	4,595.50	4,588.90	13.15	14.55	-72.02	-144.35	159.56	98.32	77.25	21.07	4.667	
4,673.00	4,664.84	4,668.49	4,661.70	13.37	14.81	-68.80	-148.44	162.84	99.36	77.97	21.39	4.645	
4,699.99	4,691.80	4,695.47	4,688.62	13.45	14.90	-68.55	-149.95	164.06	99.73	78.22	21.51	4.636	
4,764.00	4,755.73	4,759.46	4,752.44	13.64	15.13	-67.90	-153.52	166.94	100.65	78.85	21.80	4.616	
4,799.99	4,791.68	4,795.44	4,788.33	13.74	15.25	-66.61	-155.54	168.56	101.18	79.21	21.97	4.605	
4,855.00	4,846.63	4,850.44	4,843.18	13.90	15.45	-64.66	-158.61	171.04	101.94	79.71	22.23	4.586	
4,899.99	4,891.57	4,895.41	4,888.04	14.04	15.60	-65.43	-161.13	173.06	102.59	80.14	22.44	4.571	
4,943.00	4,934.53	4,938.41	4,930.92	14.16	15.75	-66.22	-163.53	175.00	103.27	80.62	22.65	4.560	
4,999.99	4,991.47	4,995.38	4,987.74	14.33	15.95	-64.50	-166.72	177.56	104.24	81.31	22.93	4.547	
5,033.00	5,024.45	5,028.37	5,020.66	14.42	16.07	-63.44	-168.56	179.05	104.80	81.71	23.09	4.539	
5,099.99	5,091.38	5,095.33	5,087.44	14.62	16.31	-61.75	-172.31	182.06	105.98	82.55	23.43	4.523	
5,122.00	5,113.37	5,117.33	5,109.38	14.68	16.38	-61.19	-173.54	183.06	106.37	82.82	23.54	4.518	
5,199.99	5,191.30	5,195.28	5,187.13	14.91	16.66	-63.39	-177.90	186.57	107.88	83.93	23.95	4.504	
5,212.00	5,203.30	5,207.28	5,199.11	14.94	16.70	-63.76	-178.57	187.11	108.14	84.12	24.01	4.503	
5,299.99	5,291.21	5,295.23	5,286.83	15.20	17.01	-56.95	-183.49	191.07	109.80	85.31	24.49	4.484	
5,303.00	5,294.22	5,298.24	5,289.83	15.21	17.02	-56.74	-183.66	191.20	109.85	85.34	24.51	4.483	
5,394.00	5,385.13	5,389.21	5,380.56	15.48	17.35	-56.22	-188.75	195.30	111.28	86.27	25.01	4.449	
5,399.99	5,391.11	5,395.19	5,386.53	15.50	17.37	-56.05	-189.08	195.57	111.37	86.32	25.05	4.446	
5,484.00	5,475.02	5,479.18	5,470.30	15.75	17.66	-53.94	-193.78	199.35	112.51	86.99	25.52	4.408	
5,499.99	5,490.99	5,495.17	5,486.25	15.80	17.72	-54.19	-194.67	200.07	112.70	87.09	25.61	4.400	
5,573.00	5,563.91	5,568.16	5,559.05	16.02	17.98	-55.35	-198.75	203.36	113.67	87.64	26.03	4.367	
5,599.99	5,590.86	5,595.14	5,585.97	16.10	18.08	-56.05	-200.26	204.57	114.07	87.89	26.18	4.357	
5,662.00	5,652.80	5,657.14	5,647.80	16.30	18.30	-57.71	-203.73	207.37	115.08	88.55	26.54	4.337	
5,699.99	5,690.74	5,695.12	5,685.68	16.41	18.43	-58.37	-205.85	209.08	115.75	89.00	26.75	4.327	
5,752.00	5,742.69	5,747.12	5,737.55	16.58	18.62	-59.24	-208.76	211.42	116.66	89.61	27.05	4.313	
5,799.99	5,790.61	5,795.10	5,785.40	16.73	18.79	-56.57	-211.45	213.58	117.44	90.12	27.32	4.299	
5,841.00	5,831.56	5,836.10	5,826.30	16.86	18.93	-54.32	-213.74	215.42	118.04	90.48	27.56	4.283	
5,899.99	5,890.47	5,895.08	5,885.12	17.04	19.14	-53.73	-217.04	218.08	118.86	90.96	27.90	4.259	
5,932.00	5,922.44	5,927.08	5,917.05	17.14	19.26	-53.39	-218.83	219.52	119.33	91.23	28.10	4.247	
5,999.99	5,990.34	5,995.05	5,984.84	17.36	19.50	-60.20	-222.63	222.58	120.51	92.02	28.49	4.230	
6,022.00	6,012.32	6,017.06	6,006.79	17.43	19.58	-62.36	-223.86	223.57	120.96	92.34	28.62	4.227	
6,099.99	6,090.19	6,095.03	6,084.56	17.68	19.86	-65.13	-228.22	227.09	122.62	93.58	29.04	4.223	
6,113.00	6,103.18	6,108.04	6,097.53	17.72	19.90	-65.56	-228.95	227.67	122.90	93.79	29.11	4.222	
6,199.99	6,190.02	6,195.00	6,184.28	18.01	20.21	-64.29	-233.81	231.59	124.77	95.20	29.57	4.219	
6,202.00	6,192.03	6,197.02	6,186.28	18.01	20.22	-64.26	-233.93	231.68	124.81	95.23	29.58	4.219	
6,292.00	6,281.89	6,286.99	6,276.03	18.31	20.54	-62.85	-238.96	235.73	126.74	96.67	30.07	4.215	

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 A H 8WC
Project:	Andrews County, TX (NAD83-TNC)	TVD Reference:	RKB @ 3050.00usft (Ensign T054)
Reference Site:	University 8-8	MD Reference:	RKB @ 3050.00usft (Ensign T054)
Site Error:	0.00	North Reference:	Grid
Reference Well:	University 8-8E A H 8WC	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00	Output errors are at	2.00 sigma
Reference Wellbore	OH / 72181	Database:	USAEDMDB
Reference Design:	Surveys (Ensign T054)	Offset TVD Reference:	Offset Datum

Offset Design University 8-8E A H 2MS - OH / 72179 - Plan 1 03-16-23												Offset Site Error:	0.00 usft
Survey Program: 15-MWD, 1834-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)		
6,299.99	6,289.86	6,294.98	6,283.99	18.33	20.57	-62.88	-239.41	236.09	126.91	96.80	30.12	4.214	
6,381.00	6,370.76	6,375.97	6,364.78	18.60	20.86	-63.12	-243.94	239.74	128.67	98.11	30.56	4.210	
6,399.99	6,389.72	6,394.95	6,383.71	18.66	20.93	-63.58	-245.00	240.59	129.10	98.43	30.67	4.209	
6,470.00	6,459.63	6,464.95	6,453.52	18.88	21.18	-65.34	-248.91	243.74	130.76	99.71	31.06	4.211	
6,499.99	6,489.58	6,494.92	6,483.42	18.98	21.29	-64.55	-250.59	245.09	131.50	100.28	31.22	4.212	
6,559.00	6,548.51	6,553.92	6,542.26	19.17	21.50	-62.91	-253.89	247.75	132.94	101.39	31.55	4.213	
6,599.99	6,589.45	6,594.89	6,583.13	19.30	21.65	-62.51	-256.18	249.60	133.94	102.15	31.79	4.213	
6,651.00	6,640.40	6,645.88	6,633.99	19.47	21.83	-62.00	-259.03	251.89	135.17	103.09	32.08	4.213	
6,699.99	6,689.33	6,694.85	6,682.83	19.62	22.00	-62.82	-261.77	254.10	136.40	104.03	32.37	4.214	
6,740.00	6,729.30	6,734.85	6,722.73	19.75	22.15	-63.51	-264.01	255.90	137.44	104.84	32.60	4.216	
6,799.99	6,789.21	6,794.81	6,782.54	19.94	22.37	-62.39	-267.36	258.60	139.03	106.08	32.95	4.219	
6,830.00	6,819.19	6,825.43	6,813.08	20.04	22.49	-61.84	-269.02	259.94	139.77	106.64	33.13	4.219	
6,899.99	6,889.11	6,897.78	6,885.33	20.26	22.76	-62.07	-271.99	262.33	140.71	107.22	33.49	4.202	
6,919.00	6,908.10	6,917.44	6,904.98	20.32	22.84	-62.23	-272.55	262.78	140.78	107.20	33.58	4.193	
6,999.99	6,989.01	7,001.12	6,988.64	20.57	23.18	-64.78	-273.76	263.75	140.18	106.30	33.88	4.138	
7,009.00	6,998.01	7,010.43	6,997.95	20.60	23.21	-65.11	-273.78	263.77	140.03	106.13	33.90	4.130	
7,099.00	7,087.94	7,100.42	7,087.94	20.88	23.45	-68.50	-273.78	263.77	138.56	104.43	34.14	4.059	
7,099.99	7,088.92	7,101.40	7,088.92	20.89	23.45	-68.51	-273.78	263.77	138.55	104.41	34.14	4.058	
7,188.00	7,176.87	7,189.35	7,176.87	21.15	23.71	-73.51	-273.78	263.77	137.45	103.06	34.39	3.997	
7,199.99	7,188.85	7,201.33	7,188.85	21.19	23.75	-73.41	-273.78	263.77	137.32	102.89	34.42	3.989	
7,278.00	7,266.81	7,279.29	7,266.81	21.42	23.99	-72.55	-273.78	263.77	136.49	101.84	34.65	3.939	
7,299.99	7,288.78	7,301.27	7,288.78	21.49	24.05	-75.34	-273.78	263.77	136.28	101.56	34.72	3.925	
7,368.00	7,356.76	7,369.24	7,356.76	21.69	24.26	-84.94	-273.78	263.77	135.90	100.97	34.92	3.891	
7,399.99	7,388.73	7,401.21	7,388.73	21.77	24.36	-87.66	-273.78	263.77	135.83	100.82	35.02	3.879	
7,426.86	7,415.59	7,428.07	7,415.59	21.85	24.44	-90.00	-273.78	263.77	135.82	100.72	35.10	3.870	
7,473.00	7,461.71	7,474.20	7,461.71	21.98	24.58	-94.15	-273.78	263.77	135.87	100.63	35.24	3.856	
7,499.99	7,488.69	7,501.17	7,488.69	22.06	24.67	-95.54	-273.78	263.77	135.93	100.61	35.32	3.849	
7,597.00	7,585.66	7,598.14	7,585.66	22.33	24.97	-100.43	-273.78	263.77	136.33	100.71	35.63	3.827	
7,599.98	7,588.64	7,601.13	7,588.64	22.33	24.98	-100.47	-273.78	263.77	136.35	100.71	35.63	3.826	
7,686.00	7,674.62	7,687.10	7,674.62	22.55	25.25	-105.31	-273.78	263.77	136.94	101.06	35.88	3.817	
7,699.98	7,688.60	7,701.08	7,688.60	22.59	25.29	-103.78	-273.78	263.77	137.04	101.12	35.93	3.815	
7,776.00	7,764.60	7,777.08	7,764.60	22.77	25.53	-60.77	-273.78	263.77	137.16	100.95	36.21	3.788	
7,799.98	7,788.58	7,801.07	7,788.58	22.82	25.60	-50.49	-273.78	263.77	137.03	100.70	36.32	3.773	
7,866.00	7,854.59	7,867.07	7,854.59	22.97	25.81	-41.99	-273.78	263.77	136.21	99.59	36.61	3.720	
7,899.98	7,888.56	7,901.05	7,888.56	23.05	25.92	-39.72	-273.78	263.77	135.57	98.80	36.77	3.687	
7,955.00	7,943.56	7,956.04	7,943.56	23.18	26.09	-36.87	-273.78	263.77	134.38	97.37	37.01	3.631	
7,999.98	7,988.53	8,001.01	7,988.53	23.30	26.23	-44.53	-273.78	263.77	133.44	96.23	37.21	3.586	
8,046.00	8,034.53	8,047.01	8,034.53	23.41	26.38	-54.45	-273.78	263.77	132.70	95.29	37.42	3.547	
8,099.98	8,088.50	8,100.98	8,088.50	23.55	26.55	-54.01	-273.78	263.77	131.97	94.32	37.65	3.506	
8,135.00	8,123.50	8,135.99	8,123.50	23.64	26.66	-53.77	-273.78	263.77	131.47	93.68	37.79	3.479	
8,193.72	8,182.21	8,194.69	8,182.21	23.79	26.85	-90.00	-273.78	263.77	131.05	93.03	38.02	3.447	
8,199.98	8,188.47	8,200.96	8,188.47	23.80	26.87	-94.81	-273.78	263.77	131.05	93.01	38.04	3.445	
8,224.00	8,212.48	8,224.97	8,212.48	23.86	26.95	-112.83	-273.78	263.77	131.16	93.03	38.13	3.440	
8,299.98	8,288.46	8,300.94	8,288.46	24.03	27.19	-106.90	-273.78	263.77	131.63	93.23	38.40	3.428	
8,314.00	8,302.47	8,314.95	8,302.47	24.06	27.24	-105.63	-273.78	263.77	131.69	93.25	38.44	3.426	

Company:	Piedra Operating LLC	Local Co-ordinate Reference:	Well University 8-8E A H 8WC
Project:	Andrews County, TX (NAD83-TNC)	TVD Reference:	RKB @ 3050.00usft (Ensign T054)
Reference Site:	University 8-8	MD Reference:	RKB @ 3050.00usft (Ensign T054)
Site Error:	0.00	North Reference:	Grid
Reference Well:	University 8-8E A H 8WC	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00	Output errors are at	2.00 sigma
Reference Wellbore	OH / 72181	Database:	USAEDMDB
Reference Design:	Surveys (Ensign T054)	Offset TVD Reference:	Offset Datum

Offset Design University 8-8E A H 2MS - OH / 72179 - Plan 1 03-16-23												Offset Site Error:	0.00 usft
Survey Program: 15-MWD, 1834-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)		
8,399.98	8,388.44	8,400.93	8,388.44	24.22	27.51	-129.31	-273.78	263.77	132.22	93.48	38.75	3.412	
8,403.00	8,391.46	8,403.94	8,391.46	24.23	27.52	-130.40	-273.78	263.77	132.25	93.49	38.76	3.412	
8,492.00	8,480.45	8,493.39	8,480.90	24.34	27.79	-153.32	-274.40	263.86	133.21	94.17	39.05	3.412	
8,499.98	8,488.43	8,501.50	8,488.99	24.34	27.82	-154.29	-274.84	263.92	133.30	94.22	39.08	3.411	
8,582.00	8,570.44	8,583.51	8,570.22	24.39	28.26	-159.57	-285.56	265.44	134.37	94.66	39.70	3.384	
8,599.98	8,588.42	8,601.00	8,587.29	24.41	28.36	-152.73	-289.33	265.98	134.79	94.87	39.92	3.376	
8,672.00	8,660.42	8,668.48	8,651.84	24.48	28.74	-127.42	-308.65	268.73	138.28	97.09	41.18	3.358	SF
8,699.98	8,688.39	8,693.45	8,675.09	24.55	28.88	-106.85	-317.69	270.02	140.80	98.96	41.84	3.365	
8,762.00	8,750.34	8,746.31	8,722.84	24.70	29.16	-83.05	-340.07	273.20	149.46	106.09	43.37	3.446	
8,799.98	8,788.26	8,776.76	8,749.34	24.81	29.31	-73.58	-354.91	275.32	157.25	112.98	44.27	3.552	
8,851.00	8,839.23	8,814.89	8,781.33	24.97	29.50	-57.83	-375.43	278.24	171.32	126.05	45.26	3.785	
8,899.98	8,888.18	8,850.00	8,809.52	25.11	29.66	-53.52	-396.15	281.18	188.99	142.99	46.00	4.109	
8,940.00	8,928.17	8,874.10	8,828.10	25.23	29.76	-50.98	-411.34	283.35	206.35	160.22	46.13	4.474	
8,999.98	8,988.12	8,909.00	8,853.83	25.40	29.91	-33.78	-434.68	286.67	236.86	190.72	46.14	5.134	
9,030.00	9,018.13	8,924.98	8,865.12	25.48	29.97	-19.92	-445.88	288.26	253.95	207.92	46.03	5.517	
9,099.98	9,088.10	8,958.92	8,888.03	25.66	30.10	-15.79	-470.66	291.79	297.75	252.16	45.59	6.531	
9,120.00	9,108.12	8,967.85	8,893.81	25.71	30.13	-14.80	-477.41	292.75	311.15	265.72	45.43	6.849	
9,199.98	9,188.09	9,000.00	8,913.71	25.90	30.25	-46.44	-502.39	296.30	367.87	323.17	44.71	8.228	
9,209.00	9,197.11	9,000.00	8,913.71	25.93	30.25	-49.57	-502.39	296.30	374.58	330.16	44.42	8.432	
9,299.00	9,287.09	9,035.31	8,933.91	26.12	30.36	-57.51	-531.06	300.38	443.66	399.77	43.90	10.107	
9,299.98	9,288.08	9,035.62	8,934.08	26.12	30.36	-57.49	-531.33	300.42	444.44	400.55	43.89	10.127	
9,389.00	9,377.09	9,062.07	8,948.00	26.25	30.44	-84.76	-553.58	303.59	516.68	473.47	43.21	11.958	
9,399.98	9,388.07	9,065.05	8,949.50	26.25	30.45	-91.62	-556.13	303.95	525.81	482.69	43.13	12.192	
9,499.00	9,487.07	9,100.00	8,966.12	26.25	30.55	-139.22	-586.56	308.28	610.42	567.51	42.91	14.224	
9,499.98	9,488.05	9,100.00	8,966.12	26.25	30.55	-137.68	-586.56	308.28	611.26	568.37	42.90	14.249	
9,568.00	9,556.05	9,100.00	8,966.12	26.31	30.55	-24.40	-586.56	308.28	669.92	627.95	41.97	15.962	
9,599.98	9,587.94	9,100.00	8,966.12	26.63	30.55	-9.35	-586.56	308.28	697.16	655.46	41.70	16.719	
9,658.00	9,645.11	9,126.64	8,977.52	27.22	30.61	-3.43	-610.40	311.68	743.52	701.46	42.05	17.680	
9,699.98	9,685.66	9,150.00	8,986.58	27.52	30.67	-1.93	-631.72	314.71	775.71	733.38	42.33	18.323	
9,748.00	9,731.12	9,150.00	8,986.58	27.87	30.67	-1.56	-631.72	314.71	810.69	768.94	41.76	19.415	
9,799.98	9,779.10	9,164.88	8,991.89	28.21	30.71	-2.09	-645.48	316.67	847.36	805.78	41.58	20.377	
9,837.00	9,812.43	9,175.18	8,995.35	28.44	30.73	-2.26	-655.08	318.04	872.67	831.23	41.45	21.056	
9,899.98	9,867.64	9,200.00	9,002.98	28.80	30.79	-2.02	-678.46	321.36	914.65	873.26	41.39	22.097	
9,928.00	9,891.61	9,200.00	9,002.98	28.96	30.79	-2.15	-678.46	321.36	932.84	891.78	41.06	22.716	
9,999.98	9,950.64	9,220.94	9,008.61	29.41	30.84	-2.12	-698.43	324.20	977.70	936.78	40.92	23.895	
10,018.00	9,964.73	9,226.12	9,009.89	29.52	30.85	-2.10	-703.39	324.91	988.37	947.49	40.88	24.179	

Company:	Piedra Operating LLC	Local Co-ordinate Reference:	Well University 8-8E A H 8WC
Project:	Andrews County, TX (NAD83-TNC)	TVD Reference:	RKB @ 3050.00usft (Ensign T054)
Reference Site:	University 8-8	MD Reference:	RKB @ 3050.00usft (Ensign T054)
Site Error:	0.00	North Reference:	Grid
Reference Well:	University 8-8E A H 8WC	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00	Output errors are at	2.00 sigma
Reference Wellbore	OH / 72181	Database:	USAEDMDB
Reference Design:	Surveys (Ensign T054)	Offset TVD Reference:	Offset Datum

Offset Design University 8-8E A H 2MS - OH / 72179 - 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)		
0.00	0.00	0.00	0.00	1.00	1.00	77.04	11.22	48.77	50.04				
15.00	15.00	15.00	15.00	1.00	1.00	77.04	11.22	48.77	50.04				
100.00	100.00	100.00	100.00	1.28	1.31	139.60	11.09	48.80	50.37	47.78	2.59	19.475	
177.00	176.99	176.99	176.98	1.90	1.90	140.82	10.74	48.87	51.23	47.44	3.79	13.516	
200.00	199.99	200.00	199.99	1.98	1.98	138.69	10.59	48.90	51.54	47.60	3.94	13.079	
268.00	267.98	268.00	268.00	2.21	2.21	105.60	10.05	48.96	51.94	47.56	4.38	11.867	
300.00	299.98	300.00	299.99	2.31	2.30	113.92	9.80	48.99	51.98	47.43	4.55	11.414	
357.00	356.98	356.94	356.93	2.48	2.48	121.02	9.55	49.05	52.22	47.35	4.87	10.713	
400.00	399.98	400.01	400.01	2.60	2.59	103.76	9.48	49.07	52.39	47.31	5.08	10.305	
444.00	443.98	444.10	444.09	2.73	2.70	87.60	9.45	49.01	52.37	47.07	5.30	9.882	
500.00	499.97	500.14	500.13	2.89	2.81	98.75	9.44	48.86	52.26	46.71	5.56	9.408	
533.00	532.97	533.16	533.15	2.98	2.88	104.24	9.47	48.75	52.24	46.53	5.71	9.153	
600.00	599.96	600.10	600.09	3.16	3.04	79.44	9.49	48.54	52.08	46.08	6.00	8.674	
621.00	620.96	621.08	621.08	3.21	3.08	69.41	9.47	48.50	51.98	45.88	6.10	8.523	
700.00	699.96	700.03	700.03	3.42	3.27	99.01	9.22	48.38	51.75	45.32	6.43	8.051	
702.54	702.50	702.57	702.57	3.42	3.27	100.28	9.21	48.38	51.75	45.31	6.44	8.038	
710.00	709.96	710.03	710.02	3.44	3.29	104.10	9.17	48.37	51.75	45.28	6.47	8.000	
799.00	798.96	799.17	799.16	3.67	3.50	84.81	8.60	48.19	51.57	44.74	6.83	7.550	
800.00	799.96	800.17	800.16	3.67	3.51	84.83	8.59	48.18	51.57	44.73	6.83	7.545	
890.00	889.95	890.00	889.98	3.89	3.72	54.60	8.01	48.00	51.04	43.86	7.18	7.111	
900.00	899.95	899.99	899.98	3.91	3.74	56.52	7.95	47.99	50.97	43.76	7.21	7.067	
977.00	976.95	977.09	977.08	4.08	3.91	69.09	7.62	47.87	50.43	42.95	7.48	6.742	
1,000.00	999.94	1,000.10	1,000.09	4.14	3.97	70.30	7.54	47.81	50.26	42.71	7.56	6.651	
1,062.00	1,061.94	1,062.10	1,062.08	4.28	4.10	73.99	7.11	47.62	49.85	42.08	7.77	6.419	
1,100.00	1,099.94	1,100.09	1,100.08	4.37	4.19	101.89	6.75	47.50	49.72	41.83	7.90	6.297	
1,103.32	1,103.26	1,103.41	1,103.40	4.38	4.20	104.41	6.72	47.49	49.72	41.82	7.91	6.288	CC
1,148.00	1,147.94	1,148.10	1,148.08	4.49	4.30	133.41	6.38	47.34	49.87	41.81	8.06	6.188	
1,200.00	1,199.93	1,200.01	1,199.99	4.61	4.41	136.47	6.05	47.20	50.20	41.95	8.25	6.088	
1,238.00	1,237.93	1,237.94	1,237.92	4.70	4.50	139.63	5.80	47.16	50.45	42.06	8.38	6.018	
1,300.00	1,299.93	1,300.04	1,300.02	4.84	4.64	144.71	5.26	47.07	50.78	42.19	8.60	5.907	
1,324.00	1,323.93	1,324.09	1,324.07	4.89	4.70	147.33	4.98	46.98	50.86	42.18	8.68	5.859	
1,400.00	1,399.92	1,400.02	1,399.99	5.05	5.04	147.94	4.05	46.69	51.12	41.98	9.14	5.595	
1,412.00	1,411.93	1,412.01	1,411.98	5.08	5.10	148.05	3.91	46.65	51.18	41.97	9.21	5.556	
1,500.00	1,499.92	1,499.91	1,499.87	5.28	5.53	124.28	3.00	46.51	51.66	41.89	9.77	5.290	
1,600.00	1,599.92	1,600.16	1,600.12	5.71	5.77	159.25	1.97	46.19	52.12	41.73	10.38	5.020	
1,675.00	1,674.92	1,675.24	1,675.18	6.04	5.94	-179.35	0.87	45.61	52.40	41.57	10.83	4.839	
1,700.00	1,699.91	1,700.28	1,700.22	6.08	6.00	-179.24	0.42	45.37	52.48	41.56	10.91	4.808	
1,765.00	1,764.92	1,765.48	1,765.41	6.19	6.14	180.00	-0.44	44.64	52.42	41.29	11.14	4.707	
1,800.00	1,799.91	1,800.25	1,800.18	6.26	6.20	-171.85	-0.71	44.28	52.33	41.08	11.25	4.652	
1,800.75	1,800.66	1,800.99	1,800.92	6.26	6.20	-171.84	-0.71	44.28	52.33	41.08	11.25	4.652	
1,884.00	1,883.91	1,884.00	1,883.93	6.42	6.30	-148.85	-0.96	44.05	52.54	41.06	11.48	4.577	
1,900.00	1,899.91	1,900.09	1,900.01	6.43	6.31	-101.66	-1.03	43.98	52.53	41.01	11.53	4.558	
1,973.00	1,972.91	1,972.58	1,972.50	6.51	6.39	-58.13	-1.79	43.99	52.36	40.63	11.73	4.465	
2,000.00	1,999.89	1,999.03	1,998.95	6.56	6.43	-54.01	-2.28	44.21	52.28	40.47	11.81	4.426	
2,023.39	2,023.27	2,021.95	2,021.86	6.61	6.46	-52.45	-2.83	44.60	52.26	40.37	11.89	4.397	
2,064.00	2,063.82	2,061.73	2,061.61	6.70	6.52	-51.47	-4.10	45.71	52.32	40.32	12.01	4.358	

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 A H 8WC
Project:	Andrews County, TX (NAD83-TNC)	TVD Reference:	RKB @ 3050.00usft (Ensign T054)
Reference Site:	University 8-8	MD Reference:	RKB @ 3050.00usft (Ensign T054)
Site Error:	0.00	North Reference:	Grid
Reference Well:	University 8-8E A H 8WC	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00	Output errors are at	2.00 sigma
Reference Wellbore	OH / 72181	Database:	USAEDMDB
Reference Design:	Surveys (Ensign T054)	Offset TVD Reference:	Offset Datum

Offset Design University 8-8E A H 2MS - OH / 72179 - 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)		
2,100.00	2,099.74	2,097.43	2,097.25	6.74	6.56	-49.83	-5.48	47.04	52.49	40.41	12.08	4.346	
2,153.00	2,152.62	2,150.05	2,149.77	6.81	6.62	-47.65	-7.78	49.27	52.80	40.62	12.18	4.335	
2,200.00	2,199.49	2,196.91	2,196.53	6.88	6.67	-44.24	-9.95	51.46	52.93	40.64	12.29	4.307	
2,243.00	2,242.34	2,239.80	2,239.32	6.94	6.71	-42.14	-11.89	53.57	52.71	40.33	12.38	4.256	
2,295.51	2,294.65	2,292.02	2,291.42	7.02	6.77	-44.89	-14.35	56.31	52.48	39.98	12.51	4.196	
2,300.00	2,299.11	2,296.48	2,295.86	7.02	6.78	-45.12	-14.58	56.56	52.49	39.97	12.52	4.193	ES
2,332.00	2,331.00	2,328.30	2,327.59	7.07	6.82	-46.69	-16.24	58.36	52.59	40.00	12.59	4.176	SF
2,386.00	2,384.79	2,382.15	2,381.25	7.14	6.88	-54.35	-19.31	61.53	53.18	40.46	12.71	4.183	
2,400.00	2,398.73	2,396.10	2,395.16	7.18	6.90	-55.18	-20.16	62.37	53.40	40.63	12.77	4.182	
2,500.00	2,498.33	2,495.80	2,494.44	7.49	7.04	-60.72	-26.78	68.58	55.48	42.31	13.17	4.212	
2,542.00	2,540.15	2,537.77	2,536.21	7.62	7.10	-62.90	-29.77	71.30	56.60	43.25	13.35	4.240	
2,599.99	2,597.84	2,595.78	2,593.96	7.73	7.19	-82.33	-33.91	75.00	58.85	45.33	13.52	4.354	
2,606.00	2,603.80	2,601.78	2,599.94	7.74	7.20	-84.05	-34.34	75.38	59.16	45.63	13.53	4.372	
2,697.00	2,694.12	2,692.32	2,690.06	7.93	7.35	-91.52	-40.78	81.18	64.62	50.89	13.73	4.707	
2,699.99	2,697.09	2,695.30	2,693.02	7.94	7.36	-91.46	-40.99	81.37	64.82	51.09	13.73	4.720	
2,787.00	2,783.42	2,782.01	2,779.32	8.13	7.53	-88.67	-47.14	87.09	70.17	56.24	13.93	5.036	
2,799.99	2,796.32	2,794.96	2,792.22	8.16	7.55	-88.14	-48.05	87.95	70.89	56.92	13.97	5.076	
2,876.00	2,871.84	2,870.75	2,867.64	8.34	7.71	-83.68	-53.42	93.01	74.67	60.51	14.16	5.274	
2,899.99	2,895.70	2,894.67	2,891.44	8.40	7.77	-84.13	-55.11	94.63	75.75	61.53	14.22	5.327	
2,967.00	2,962.31	2,961.44	2,957.89	8.57	7.92	-85.37	-59.81	99.22	78.87	64.47	14.40	5.477	
2,999.99	2,995.12	2,994.45	2,990.74	8.66	8.00	-84.98	-62.14	101.52	80.41	65.92	14.49	5.550	
3,056.00	3,050.85	3,050.55	3,046.57	8.80	8.14	-83.73	-66.19	105.35	82.85	68.20	14.64	5.657	
3,099.99	3,094.66	3,094.73	3,090.53	8.92	8.26	-81.46	-69.48	108.28	84.55	69.78	14.77	5.723	
3,146.00	3,140.51	3,140.96	3,136.53	9.04	8.39	-78.12	-73.01	111.24	86.08	71.17	14.91	5.772	
3,199.99	3,194.34	3,195.40	3,190.70	9.18	8.54	-78.22	-77.20	114.50	87.60	72.52	15.08	5.809	
3,236.00	3,230.24	3,231.72	3,226.87	9.28	8.64	-78.35	-79.95	116.50	88.47	73.27	15.19	5.823	
3,299.99	3,294.05	3,295.65	3,290.53	9.45	8.83	-79.11	-84.70	119.87	89.99	74.60	15.39	5.848	
3,326.00	3,319.99	3,321.61	3,316.38	9.52	8.90	-79.43	-86.59	121.26	90.68	75.21	15.47	5.862	
3,399.99	3,393.83	3,395.63	3,390.11	9.72	9.12	-77.37	-91.95	125.18	92.68	76.97	15.71	5.899	
3,416.00	3,409.81	3,411.64	3,406.06	9.76	9.17	-76.85	-93.10	126.02	93.11	77.34	15.76	5.906	
3,499.99	3,493.65	3,496.08	3,490.18	9.99	9.43	-74.23	-98.96	130.21	95.09	79.04	16.05	5.924	
3,507.00	3,500.64	3,503.12	3,497.20	10.01	9.45	-74.02	-99.43	130.53	95.23	79.15	16.08	5.924	
3,597.00	3,590.48	3,593.24	3,587.04	10.25	9.72	-72.11	-105.26	134.58	96.89	80.51	16.38	5.916	
3,599.99	3,593.47	3,596.24	3,590.03	10.26	9.73	-72.09	-105.45	134.71	96.94	80.55	16.39	5.916	
3,686.00	3,679.32	3,682.08	3,675.61	10.50	9.99	-72.47	-110.91	138.56	98.53	81.85	16.68	5.907	
3,699.99	3,693.29	3,696.10	3,689.59	10.54	10.04	-72.12	-111.81	139.20	98.80	82.07	16.73	5.906	
3,776.00	3,769.16	3,772.42	3,765.68	10.75	10.27	-70.19	-116.70	142.53	100.08	83.09	17.00	5.889	
3,799.99	3,793.11	3,796.34	3,789.53	10.82	10.35	-70.27	-118.23	143.54	100.45	83.37	17.08	5.881	
3,865.00	3,858.01	3,861.06	3,854.06	11.01	10.55	-70.53	-122.30	146.38	101.58	84.27	17.31	5.868	
3,899.99	3,892.94	3,896.06	3,888.96	11.11	10.66	-69.39	-124.46	147.96	102.24	84.80	17.44	5.864	
3,954.00	3,946.86	3,950.13	3,942.86	11.26	10.84	-67.46	-127.81	150.38	103.21	85.57	17.64	5.852	
3,999.99	3,992.78	3,996.09	3,988.70	11.39	10.98	-67.12	-130.65	152.42	104.00	86.19	17.81	5.838	
4,044.00	4,036.71	4,040.07	4,032.55	11.52	11.12	-66.83	-133.35	154.37	104.76	86.78	17.98	5.825	
4,099.99	4,092.62	4,095.87	4,088.19	11.68	11.30	-66.94	-136.70	156.90	105.79	87.59	18.20	5.813	
4,134.00	4,126.57	4,129.75	4,121.98	11.78	11.41	-67.02	-138.68	158.48	106.50	88.17	18.33	5.810	

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 A H 8WC
Project:	Andrews County, TX (NAD83-TNC)	TVD Reference:	RKB @ 3050.00usft (Ensign T054)
Reference Site:	University 8-8	MD Reference:	RKB @ 3050.00usft (Ensign T054)
Site Error:	0.00	North Reference:	Grid
Reference Well:	University 8-8E A H 8WC	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00	Output errors are at	2.00 sigma
Reference Wellbore	OH / 72181	Database:	USAEDMDB
Reference Design:	Surveys (Ensign T054)	Offset TVD Reference:	Offset Datum

Offset Design University 8-8E A H 2MS - OH / 72179 - 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)		
4,199.99	4,192.46	4,195.69	4,187.73	11.97	11.63	-66.33	-142.57	161.61	107.95	89.35	18.60	5.805	
4,223.00	4,215.44	4,218.68	4,210.65	12.04	11.70	-66.06	-143.96	162.70	108.46	89.77	18.69	5.802	
4,299.99	4,292.32	4,296.31	4,288.06	12.27	11.96	-63.24	-148.43	166.18	109.89	90.88	19.01	5.781	
4,312.00	4,304.31	4,308.42	4,300.15	12.30	12.00	-62.82	-149.08	166.67	110.06	91.01	19.05	5.776	
4,399.99	4,392.18	4,396.95	4,388.52	12.56	12.28	-65.17	-153.43	170.01	111.11	91.74	19.38	5.734	
4,402.00	4,394.18	4,398.98	4,390.53	12.57	12.29	-65.23	-153.52	170.08	111.13	91.75	19.39	5.733	
4,491.00	4,483.07	4,488.12	4,479.54	12.83	12.57	-63.08	-157.45	173.13	112.03	92.33	19.69	5.689	
4,499.99	4,492.05	4,497.11	4,488.51	12.86	12.59	-62.94	-157.83	173.43	112.11	92.39	19.72	5.684	
4,583.00	4,574.95	4,579.95	4,571.24	13.10	12.85	-61.74	-161.33	176.26	112.87	92.85	20.02	5.638	
4,599.99	4,591.92	4,596.94	4,588.20	13.15	12.91	-61.18	-162.05	176.86	113.02	92.94	20.08	5.629	
4,673.00	4,664.84	4,669.95	4,661.10	13.37	13.14	-58.71	-165.10	179.41	113.58	93.24	20.34	5.584	
4,699.99	4,691.80	4,697.06	4,688.17	13.45	13.22	-58.73	-166.22	180.34	113.77	93.33	20.44	5.566	
4,764.00	4,755.73	4,761.40	4,752.43	13.64	13.43	-58.78	-168.79	182.42	114.11	93.44	20.67	5.520	
4,799.99	4,791.68	4,797.32	4,788.30	13.74	13.54	-57.90	-170.20	183.53	114.27	93.46	20.80	5.493	
4,855.00	4,846.63	4,852.18	4,843.09	13.90	13.71	-56.56	-172.36	185.30	114.52	93.51	21.01	5.452	
4,899.99	4,891.57	4,897.32	4,888.17	14.04	13.85	-57.82	-174.12	186.75	114.74	93.57	21.17	5.420	
4,943.00	4,934.53	4,940.50	4,931.30	14.16	13.99	-59.10	-175.79	188.07	114.95	93.62	21.33	5.390	
4,999.99	4,991.47	4,997.82	4,988.55	14.33	14.17	-58.01	-178.01	189.71	115.16	93.62	21.54	5.347	
5,033.00	5,024.45	5,031.02	5,021.72	14.42	14.27	-57.30	-179.33	190.58	115.21	93.55	21.66	5.318	
5,099.99	5,091.38	5,097.76	5,088.39	14.62	14.48	-56.38	-181.87	192.34	115.34	93.42	21.92	5.262	
5,122.00	5,113.37	5,119.69	5,110.29	14.68	14.55	-56.09	-182.64	192.94	115.42	93.42	22.00	5.246	
5,199.99	5,191.30	5,197.95	5,188.48	14.91	14.79	-59.32	-185.28	195.06	115.75	93.46	22.29	5.194	
5,212.00	5,203.30	5,210.00	5,200.52	14.94	14.82	-59.85	-185.68	195.36	115.80	93.47	22.33	5.186	
5,299.99	5,291.21	5,297.99	5,288.43	15.20	15.10	-54.15	-188.66	197.59	115.93	93.28	22.65	5.119	
5,303.00	5,294.22	5,301.00	5,291.44	15.21	15.11	-53.98	-188.76	197.67	115.92	93.27	22.66	5.117	
5,394.00	5,385.13	5,391.81	5,382.16	15.48	15.38	-54.63	-191.71	200.04	115.79	92.82	22.97	5.041	
5,399.99	5,391.11	5,397.80	5,388.15	15.50	15.40	-54.55	-191.88	200.20	115.78	92.79	22.99	5.037	
5,484.00	5,475.02	5,481.97	5,472.25	15.75	15.66	-53.45	-194.69	202.41	115.45	92.19	23.27	4.962	
5,499.99	5,490.99	5,497.96	5,488.22	15.80	15.71	-53.86	-195.28	202.82	115.35	92.03	23.32	4.947	
5,573.00	5,563.91	5,570.96	5,561.14	16.02	15.94	-55.78	-197.92	204.70	114.98	91.42	23.56	4.880	
5,599.99	5,590.86	5,597.86	5,588.02	16.10	16.02	-56.77	-198.86	205.41	114.89	91.24	23.65	4.859	
5,638.14	5,628.97	5,635.88	5,626.01	16.22	16.14	-58.23	-200.13	206.43	114.84	91.08	23.76	4.833	
5,662.00	5,652.80	5,659.66	5,649.77	16.30	16.22	-59.18	-200.88	207.09	114.86	91.03	23.83	4.820	
5,699.99	5,690.74	5,697.70	5,687.78	16.41	16.33	-60.34	-202.02	208.15	114.91	90.98	23.93	4.802	
5,752.00	5,742.69	5,749.80	5,739.83	16.58	16.49	-61.93	-203.49	209.57	114.95	90.90	24.05	4.779	
5,799.99	5,790.61	5,797.76	5,787.76	16.73	16.64	-59.93	-204.84	210.85	114.92	90.76	24.15	4.758	
5,841.00	5,831.56	5,838.74	5,828.71	16.86	16.76	-58.21	-206.07	211.96	114.82	90.57	24.25	4.735	
5,899.99	5,890.47	5,897.86	5,887.77	17.04	16.95	-58.32	-207.97	213.55	114.62	90.21	24.40	4.697	
5,932.00	5,922.44	5,929.94	5,919.82	17.14	17.05	-58.32	-209.08	214.38	114.50	90.00	24.50	4.674	
5,999.99	5,990.34	5,998.09	5,987.91	17.36	17.26	-65.88	-211.36	216.09	114.36	89.70	24.66	4.637	
6,000.87	5,991.22	5,998.98	5,988.80	17.36	17.26	-65.89	-211.39	216.11	114.36	89.70	24.67	4.637	
6,022.00	6,012.32	6,020.15	6,009.96	17.43	17.33	-68.31	-212.04	216.61	114.38	89.67	24.70	4.630	
6,099.99	6,090.19	6,098.25	6,088.00	17.68	17.57	-71.99	-214.56	218.42	114.46	89.65	24.81	4.613	
6,113.00	6,103.18	6,111.29	6,101.02	17.72	17.61	-72.56	-215.02	218.72	114.47	89.64	24.83	4.610	
6,199.99	6,190.02	6,198.27	6,187.93	18.01	17.88	-72.26	-217.90	220.66	114.56	89.64	24.92	4.597	
6,202.00	6,192.03	6,200.28	6,189.95	18.01	17.88	-72.25	-217.96	220.71	114.56	89.64	24.92	4.597	

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 A H 8WC
Project:	Andrews County, TX (NAD83-TNC)	TVD Reference:	RKB @ 3050.00usft (Ensign T054)
Reference Site:	University 8-8	MD Reference:	RKB @ 3050.00usft (Ensign T054)
Site Error:	0.00	North Reference:	Grid
Reference Well:	University 8-8E A H 8WC	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00	Output errors are at	2.00 sigma
Reference Wellbore	OH / 72181	Database:	USAEDMDB
Reference Design:	Surveys (Ensign T054)	Offset TVD Reference:	Offset Datum

Offset Design University 8-8E A H 2MS - OH / 72179 - 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)		
6,292.00	6,281.89	6,289.53	6,279.11	18.31	18.16	-71.79	-220.94	222.99	114.92	89.87	25.06	4.586	
6,299.99	6,289.86	6,297.45	6,287.03	18.33	18.19	-71.89	-221.23	223.23	114.98	89.91	25.07	4.586	
6,381.00	6,370.76	6,377.85	6,367.33	18.60	18.45	-72.84	-224.08	225.83	115.85	90.61	25.24	4.590	
6,399.99	6,389.72	6,396.89	6,386.35	18.66	18.51	-73.47	-224.75	226.49	116.11	90.83	25.28	4.593	
6,470.00	6,459.63	6,467.24	6,456.61	18.88	18.74	-75.76	-227.38	228.84	117.04	91.60	25.44	4.601	
6,499.99	6,489.58	6,497.21	6,486.55	18.98	18.84	-75.17	-228.55	229.80	117.42	91.91	25.52	4.602	
6,559.00	6,548.51	6,556.16	6,545.41	19.17	19.03	-73.91	-230.85	231.71	118.16	92.49	25.67	4.603	
6,599.99	6,589.45	6,596.98	6,586.18	19.30	19.16	-73.78	-232.42	233.06	118.69	92.90	25.78	4.603	
6,651.00	6,640.40	6,647.77	6,636.91	19.47	19.33	-73.62	-234.32	234.83	119.43	93.50	25.93	4.606	
6,699.99	6,689.33	6,697.01	6,686.08	19.62	19.49	-74.76	-236.15	236.53	120.16	94.10	26.06	4.611	
6,740.00	6,729.30	6,737.25	6,726.27	19.75	19.62	-75.71	-237.67	237.84	120.72	94.54	26.17	4.612	
6,799.99	6,789.21	6,796.99	6,785.94	19.94	19.81	-75.00	-239.87	239.77	121.55	95.21	26.34	4.615	
6,830.00	6,819.19	6,826.86	6,815.78	20.04	19.91	-74.66	-240.90	240.78	122.00	95.59	26.42	4.618	
6,899.99	6,889.11	6,897.07	6,885.91	20.26	20.14	-75.02	-243.28	243.11	123.05	96.45	26.60	4.626	
6,919.00	6,908.10	6,916.15	6,904.97	20.32	20.20	-75.11	-243.94	243.72	123.32	96.67	26.65	4.627	
6,999.99	6,989.01	6,997.16	6,985.88	20.57	20.46	-76.88	-246.80	246.29	124.50	97.61	26.89	4.631	
7,009.00	6,998.01	7,006.17	6,994.89	20.60	20.49	-77.08	-247.13	246.58	124.64	97.72	26.91	4.631	
7,099.00	7,087.94	7,096.19	7,084.81	20.88	20.78	-79.11	-250.25	249.40	126.11	98.93	27.19	4.639	
7,099.99	7,088.92	7,097.18	7,085.79	20.89	20.79	-79.11	-250.29	249.43	126.13	98.94	27.19	4.639	
7,188.00	7,176.87	7,185.56	7,174.10	21.15	21.07	-82.85	-253.07	252.01	127.65	100.21	27.43	4.653	
7,199.99	7,188.85	7,197.60	7,186.12	21.19	21.10	-82.59	-253.44	252.33	127.85	100.38	27.46	4.655	
7,278.00	7,266.81	7,275.94	7,264.40	21.42	21.35	-80.57	-256.00	254.38	129.00	101.30	27.70	4.657	
7,299.99	7,288.78	7,297.85	7,286.29	21.49	21.42	-83.01	-256.76	254.93	129.31	101.54	27.77	4.656	
7,368.00	7,356.76	7,365.56	7,353.93	21.69	21.64	-91.51	-259.10	256.74	130.59	102.58	28.01	4.662	
7,399.99	7,388.73	7,397.76	7,386.10	21.77	21.74	-93.70	-260.22	257.62	131.30	103.18	28.13	4.668	
7,473.00	7,461.71	7,462.00	7,450.28	21.98	21.95	-99.02	-262.51	259.19	133.17	104.78	28.39	4.690	
7,499.99	7,488.69	7,462.00	7,450.28	22.06	21.95	-100.07	-262.51	259.19	138.26	109.98	28.28	4.889	
7,597.00	7,585.66	7,462.00	7,450.28	22.33	21.95	-103.77	-262.51	259.19	190.11	163.16	26.95	7.054	
7,599.98	7,588.64	7,462.00	7,450.28	22.33	21.95	-103.77	-262.51	259.19	192.26	165.35	26.91	7.144	
7,686.00	7,674.62	7,462.00	7,450.28	22.55	21.95	-107.48	-262.51	259.19	261.47	235.29	26.18	9.988	
7,699.98	7,688.60	7,462.00	7,450.28	22.59	21.95	-106.14	-262.51	259.19	273.62	247.51	26.11	10.479	
7,776.00	7,764.60	7,462.00	7,450.28	22.77	21.95	-64.90	-262.51	259.19	341.95	316.03	25.92	13.193	
7,799.98	7,788.58	7,462.00	7,450.28	22.82	21.95	-54.18	-262.51	259.19	364.08	338.18	25.90	14.057	
7,866.00	7,854.59	7,462.00	7,450.28	22.97	21.95	-44.21	-262.51	259.19	425.87	399.99	25.89	16.450	
7,899.98	7,888.56	7,462.00	7,450.28	23.05	21.95	-41.59	-262.51	259.19	458.08	432.18	25.91	17.683	
7,955.00	7,943.56	7,462.00	7,450.28	23.18	21.95	-38.14	-262.51	259.19	510.66	484.71	25.95	19.677	
7,999.98	7,988.53	7,462.00	7,450.28	23.30	21.95	-45.38	-262.51	259.19	554.02	528.01	26.01	21.301	
8,046.00	8,034.53	7,462.00	7,450.28	23.41	21.95	-54.83	-262.51	259.19	598.67	572.59	26.08	22.957	
8,099.98	8,088.50	7,462.00	7,450.28	23.55	21.95	-53.85	-262.51	259.19	651.31	625.14	26.17	24.887	
8,135.00	8,123.50	7,462.00	7,450.28	23.64	21.95	-53.24	-262.51	259.19	685.57	659.33	26.24	26.132	
8,199.98	8,188.47	7,462.00	7,450.28	23.80	21.95	-94.16	-262.51	259.19	749.42	723.05	26.36	28.425	
8,224.00	8,212.48	7,462.00	7,450.28	23.86	21.95	-112.16	-262.51	259.19	773.11	746.69	26.41	29.268	
8,299.98	8,288.46	7,462.00	7,450.28	24.03	21.95	-106.16	-262.51	259.19	848.19	821.61	26.58	31.910	
8,314.00	8,302.47	7,462.00	7,450.28	24.06	21.95	-104.88	-262.51	259.19	862.06	835.44	26.61	32.393	
8,399.98	8,388.44	7,462.00	7,450.28	24.22	21.95	-130.73	-262.51	259.19	947.22	920.41	26.81	35.329	

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 A H 8WC
Project:	Andrews County, TX (NAD83-TNC)	TVD Reference:	RKB @ 3050.00usft (Ensign T054)
Reference Site:	University 8-8	MD Reference:	RKB @ 3050.00usft (Ensign T054)
Site Error:	0.00	North Reference:	Grid
Reference Well:	University 8-8E A H 8WC	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00	Output errors are at	2.00 sigma
Reference Wellbore	OH / 72181	Database:	USAEDMDB
Reference Design:	Surveys (Ensign T054)	Offset TVD Reference:	Offset Datum

Offset Design University 8-8E A H 2MS - OH / 72179 - 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)		
8,403.00	8,391.46	7,462.00	7,450.28	24.23	21.95	-131.90	-262.51	259.19	950.21	923.39	26.82	35.431	

Company:	Piedra Operating LLC	Local Co-ordinate Reference:	Well University 8-8E A H 8WC
Project:	Andrews County, TX (NAD83-TNC)	TVD Reference:	RKB @ 3050.00usft (Ensign T054)
Reference Site:	University 8-8	MD Reference:	RKB @ 3050.00usft (Ensign T054)
Site Error:	0.00	North Reference:	Grid
Reference Well:	University 8-8E A H 8WC	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00	Output errors are at	2.00 sigma
Reference Wellbore	OH / 72181	Database:	USAEDMDB
Reference Design:	Surveys (Ensign T054)	Offset TVD Reference:	Offset Datum

Offset Design		University 8-8E A H 5LS - OH / 72180 - Plan 2 05-12-23									Offset Site Error:		0.00 usft
Survey Program:		15-MWD, 1973-MWD+HRGM+MS, 7481-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	99.97	99.97	1.28	1.31	139.49	5.74	24.39	25.38	22.80	2.59	9.813	
177.00	176.99	176.93	176.93	1.90	1.90	140.69	5.94	24.49	26.38	22.59	3.79	6.958	
200.00	199.99	199.96	199.96	1.98	1.98	138.52	6.02	24.51	26.73	22.78	3.94	6.781	
268.00	267.98	268.05	268.05	2.21	2.20	104.90	6.20	24.43	27.10	22.73	4.38	6.194	
300.00	299.98	300.07	300.06	2.31	2.28	112.95	6.26	24.33	27.07	22.52	4.55	5.950	
319.15	319.13	319.22	319.22	2.36	2.33	115.95	6.28	24.26	27.07	22.41	4.65	5.815	
357.00	356.98	357.09	357.08	2.48	2.43	120.11	6.27	24.12	27.09	22.23	4.86	5.571	
400.00	399.98	400.06	400.05	2.60	2.54	103.21	6.23	23.99	27.10	22.03	5.07	5.341	
444.00	443.98	444.03	444.03	2.73	2.64	87.58	6.17	23.89	27.04	21.75	5.29	5.109	
500.00	499.97	500.11	500.11	2.89	2.77	99.58	6.07	23.71	26.89	21.33	5.56	4.834	
533.00	532.97	533.15	533.15	2.98	2.85	105.63	6.00	23.52	26.79	21.07	5.72	4.680	
600.00	599.96	600.04	600.04	3.16	3.01	81.83	5.90	23.21	26.54	20.51	6.03	4.399	
621.00	620.96	621.01	621.01	3.21	3.07	72.04	5.89	23.16	26.45	20.31	6.13	4.314	
700.00	699.96	700.12	700.11	3.42	3.25	102.32	5.77	22.88	26.10	19.62	6.48	4.029	
710.00	709.96	710.13	710.13	3.44	3.27	107.48	5.74	22.82	26.06	19.54	6.52	3.995	
799.00	798.96	799.03	799.02	3.67	3.47	89.04	5.41	22.42	25.75	18.84	6.91	3.728	
800.00	799.96	800.02	800.02	3.67	3.47	89.07	5.41	22.42	25.74	18.83	6.91	3.725	
890.00	889.95	890.02	890.01	3.89	3.66	59.88	5.08	22.22	25.30	18.04	7.26	3.485	
900.00	899.95	900.01	900.01	3.91	3.68	61.90	5.06	22.19	25.23	17.93	7.30	3.458	
977.00	976.95	977.02	977.01	4.08	3.83	75.06	5.11	22.02	24.72	17.15	7.58	3.263	
1,000.00	999.94	1,000.01	1,000.01	4.14	3.87	76.41	5.17	21.97	24.59	16.94	7.66	3.212	
1,062.00	1,061.94	1,062.01	1,062.00	4.28	3.99	80.66	5.14	21.81	24.28	16.41	7.88	3.083	
1,093.57	1,093.51	1,093.59	1,093.58	4.36	4.05	104.02	5.03	21.72	24.21	16.22	7.99	3.030	
1,100.00	1,099.94	1,100.01	1,100.01	4.37	4.06	109.00	5.01	21.69	24.22	16.20	8.02	3.021	
1,148.00	1,147.94	1,148.03	1,148.02	4.49	4.16	141.05	4.85	21.51	24.41	16.22	8.19	2.979	
1,200.00	1,199.93	1,200.04	1,200.03	4.61	4.39	144.61	4.69	21.27	24.72	16.19	8.53	2.897	
1,238.00	1,237.93	1,238.06	1,238.05	4.70	4.58	148.04	4.57	21.07	24.85	16.05	8.80	2.824	
1,300.00	1,299.93	1,300.07	1,300.06	4.84	4.90	153.35	4.37	20.69	24.94	15.71	9.23	2.703	
1,324.00	1,323.93	1,324.09	1,324.07	4.89	5.02	155.96	4.30	20.53	24.95	15.55	9.40	2.655	
1,400.00	1,399.92	1,400.14	1,400.12	5.05	5.21	156.48	4.10	19.94	24.90	15.17	9.73	2.558	
1,412.00	1,411.93	1,412.15	1,412.13	5.08	5.23	156.59	4.07	19.83	24.88	15.10	9.78	2.544	
1,460.28	1,460.20	1,460.37	1,460.35	5.19	5.33	143.65	3.96	19.40	24.82	14.86	9.96	2.491	
1,500.00	1,499.92	1,500.00	1,499.99	5.28	5.40	133.29	3.77	19.16	24.88	14.76	10.11	2.460	
1,600.00	1,599.92	1,600.01	1,599.99	5.71	5.59	168.83	3.24	18.76	25.33	14.61	10.72	2.362	
1,675.00	1,674.92	1,675.03	1,675.01	6.04	5.73	-170.42	3.01	18.40	25.71	14.53	11.18	2.299	
1,700.00	1,699.91	1,700.03	1,700.01	6.08	5.78	-170.65	2.93	18.27	25.83	14.57	11.27	2.292	
1,765.00	1,764.92	1,765.04	1,765.01	6.19	5.91	-171.97	2.73	17.93	26.03	14.53	11.50	2.263	
1,800.00	1,799.91	1,800.08	1,800.06	6.26	5.97	-163.90	2.63	17.73	26.06	14.43	11.63	2.241	
1,884.00	1,883.91	1,884.22	1,884.19	6.42	6.12	-140.20	2.45	16.70	25.54	13.60	11.94	2.140	
1,900.00	1,899.91	1,900.20	1,900.16	6.43	6.14	-92.89	2.39	16.49	25.40	13.41	11.99	2.119	
1,973.00	1,972.91	1,973.00	1,972.96	6.51	6.28	-49.45	1.98	15.66	24.29	12.06	12.24	1.986	
2,000.00	1,999.89	2,000.00	1,999.96	6.56	6.34	-45.67	1.74	15.42	23.66	11.33	12.33	1.919	
2,064.00	2,063.82	2,063.77	2,063.72	6.70	6.49	-44.90	0.74	15.09	21.52	8.98	12.54	1.716	
2,100.00	2,099.74	2,099.54	2,099.48	6.74	6.55	-44.51	-0.18	15.10	20.20	7.60	12.60	1.603	

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 A H 8WC
Project:	Andrews County, TX (NAD83-TNC)	TVD Reference:	RKB @ 3050.00usft (Ensign T054)
Reference Site:	University 8-8	MD Reference:	RKB @ 3050.00usft (Ensign T054)
Site Error:	0.00	North Reference:	Grid
Reference Well:	University 8-8E A H 8WC	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00	Output errors are at	2.00 sigma
Reference Wellbore	OH / 72181	Database:	USAEDMDB
Reference Design:	Surveys (Ensign T054)	Offset TVD Reference:	Offset Datum

Offset Design University 8-8E A H 5LS - OH / 72180 - Plan 2 05-12-23												Offset Site Error:	0.00 usft
Survey Program: 15-MWD, 1973-MWD+HRGM+MS, 7481-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)		
2,153.00	2,152.62	2,152.26	2,152.16	6.81	6.64	-43.13	-2.27	15.50	18.61	5.92	12.68	1.467	Level 3
2,200.00	2,199.49	2,199.21	2,199.05	6.88	6.73	-39.84	-4.53	16.10	17.15	4.38	12.77	1.343	Level 3
2,243.00	2,242.34	2,242.16	2,241.94	6.94	6.81	-38.15	-6.62	16.69	15.43	2.58	12.85	1.201	Level 2
2,300.00	2,299.11	2,299.01	2,298.70	7.02	6.91	-41.96	-9.57	17.67	13.21	0.25	12.97	1.019	Level 2
2,332.00	2,331.00	2,330.94	2,330.58	7.07	6.97	-43.93	-11.39	18.37	12.23	-0.80	13.03	0.939	Level 1
2,386.00	2,384.79	2,384.90	2,384.43	7.14	7.07	-53.65	-14.54	19.70	10.96	-2.17	13.14	0.834	Level 1
2,400.00	2,398.73	2,398.89	2,398.39	7.18	7.10	-55.52	-15.34	20.06	10.70	-2.49	13.19	0.812	Level 1
2,500.00	2,498.33	2,498.84	2,498.15	7.49	7.31	-73.04	-21.05	22.74	9.41	-4.20	13.61	0.691	Level 1
2,536.30	2,534.47	2,535.11	2,534.33	7.60	7.39	-80.88	-23.11	23.74	9.24	-4.54	13.79	0.671	Level 1 , CC
2,542.00	2,540.15	2,540.80	2,540.02	7.62	7.40	-82.15	-23.44	23.91	9.25	-4.57	13.82	0.669	Level 1 , ES, SI
2,599.99	2,597.84	2,598.66	2,597.75	7.73	7.53	-112.15	-26.68	25.86	10.74	-3.36	14.10	0.762	Level 1
2,606.00	2,603.80	2,604.65	2,603.72	7.74	7.54	-114.82	-27.01	26.09	11.06	-3.07	14.14	0.783	Level 1
2,697.00	2,694.12	2,695.29	2,694.14	7.93	7.74	-129.93	-32.12	29.97	17.40	2.81	14.59	1.192	Level 2
2,699.99	2,697.09	2,698.27	2,697.12	7.94	7.74	-129.96	-32.29	30.11	17.64	3.04	14.60	1.208	Level 2
2,787.00	2,783.42	2,785.01	2,783.61	8.13	7.94	-128.79	-37.22	34.21	24.14	9.12	15.02	1.607	
2,799.99	2,796.32	2,797.97	2,796.55	8.16	7.97	-128.42	-37.96	34.82	25.01	9.92	15.08	1.658	
2,876.00	2,871.84	2,873.89	2,872.26	8.34	8.16	-124.80	-42.28	38.32	29.27	13.82	15.45	1.895	
2,899.99	2,895.70	2,897.84	2,896.14	8.40	8.22	-125.51	-43.64	39.40	30.41	14.85	15.56	1.954	
2,967.00	2,962.31	2,964.68	2,962.80	8.57	8.39	-127.27	-47.40	42.52	33.75	17.85	15.90	2.123	
2,999.99	2,995.12	2,997.59	2,995.63	8.66	8.48	-127.02	-49.21	44.10	35.39	19.34	16.06	2.204	
3,056.00	3,050.85	3,053.47	3,051.36	8.80	8.63	-125.94	-52.22	46.82	37.95	21.63	16.32	2.325	
3,099.99	3,094.66	3,097.43	3,095.20	8.92	8.75	-123.77	-54.55	48.99	39.66	23.14	16.52	2.400	
3,146.00	3,140.51	3,143.41	3,141.06	9.04	8.87	-120.56	-56.97	51.23	41.05	24.33	16.72	2.455	
3,199.99	3,194.34	3,197.29	3,194.81	9.18	9.03	-120.79	-59.75	53.89	42.52	25.57	16.95	2.509	
3,236.00	3,230.24	3,233.22	3,230.65	9.28	9.13	-120.94	-61.57	55.71	43.60	26.50	17.10	2.550	
3,299.99	3,294.05	3,297.11	3,294.38	9.45	9.31	-121.57	-64.68	58.98	45.55	28.19	17.36	2.624	
3,326.00	3,319.99	3,323.08	3,320.28	9.52	9.38	-121.79	-65.91	60.30	46.33	28.87	17.46	2.654	
3,399.99	3,393.83	3,397.09	3,394.11	9.72	9.60	-119.26	-69.44	64.08	48.34	30.60	17.73	2.726	
3,416.00	3,409.81	3,413.10	3,410.09	9.76	9.64	-118.62	-70.22	64.90	48.72	30.93	17.79	2.739	
3,499.99	3,493.65	3,497.12	3,493.88	9.99	9.90	-115.09	-74.46	69.28	50.56	32.49	18.07	2.798	
3,507.00	3,500.64	3,504.13	3,500.87	10.01	9.92	-114.79	-74.83	69.66	50.71	32.62	18.09	2.803	
3,597.00	3,590.48	3,594.53	3,591.01	10.25	10.20	-111.45	-79.91	74.32	52.17	33.79	18.38	2.839	
3,599.99	3,593.47	3,597.54	3,594.01	10.26	10.21	-111.38	-80.10	74.47	52.21	33.82	18.39	2.839	
3,686.00	3,679.32	3,684.19	3,680.37	10.50	10.49	-110.01	-85.92	78.54	52.73	34.08	18.65	2.827	
3,699.99	3,693.29	3,698.20	3,694.33	10.54	10.53	-109.35	-86.95	79.15	52.74	34.05	18.69	2.821	
3,776.00	3,769.16	3,774.25	3,770.10	10.75	10.78	-105.77	-92.55	82.42	52.69	33.77	18.92	2.785	
3,799.99	3,793.11	3,798.19	3,793.95	10.82	10.86	-105.34	-94.31	83.43	52.67	33.68	18.99	2.774	
3,802.48	3,795.60	3,800.67	3,796.42	10.83	10.87	-105.26	-94.49	83.54	52.67	33.67	18.99	2.773	
3,865.00	3,858.01	3,863.04	3,858.57	11.01	11.07	-104.17	-99.00	86.27	52.79	33.62	19.17	2.753	
3,899.99	3,892.94	3,898.00	3,893.41	11.11	11.18	-102.25	-101.49	87.83	52.92	33.65	19.27	2.746	
3,954.00	3,946.86	3,951.97	3,947.18	11.26	11.36	-99.11	-105.29	90.24	53.09	33.67	19.42	2.734	
3,999.99	3,992.78	3,997.91	3,992.96	11.39	11.51	-97.75	-108.51	92.30	53.24	33.70	19.54	2.725	
4,044.00	4,036.71	4,041.86	4,036.77	11.52	11.66	-96.51	-111.56	94.29	53.46	33.79	19.66	2.718	
4,099.99	4,092.62	4,097.71	4,092.43	11.68	11.85	-95.42	-115.36	96.87	53.85	34.03	19.82	2.717	
4,134.00	4,126.57	4,131.63	4,126.24	11.78	11.96	-94.79	-117.59	98.45	54.18	34.26	19.92	2.720	

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 A H 8WC
Project:	Andrews County, TX (NAD83-TNC)	TVD Reference:	RKB @ 3050.00usft (Ensign T054)
Reference Site:	University 8-8	MD Reference:	RKB @ 3050.00usft (Ensign T054)
Site Error:	0.00	North Reference:	Grid
Reference Well:	University 8-8E A H 8WC	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00	Output errors are at	2.00 sigma
Reference Wellbore	OH / 72181	Database:	USAEDMDB
Reference Design:	Surveys (Ensign T054)	Offset TVD Reference:	Offset Datum

Offset Design University 8-8E A H 5LS - OH / 72180 - Plan 2 05-12-23												Offset Site Error:	0.00 usft
Survey Program: 15-MWD, 1973-MWD+HRGM+MS, 7481-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)		
4,199.99	4,192.46	4,197.49	4,191.89	11.97	12.18	-92.79	-121.79	101.59	54.97	34.86	20.11	2.733	
4,223.00	4,215.44	4,220.46	4,214.78	12.04	12.25	-92.11	-123.23	102.70	55.28	35.10	20.18	2.739	
4,299.99	4,292.32	4,297.37	4,291.47	12.27	12.51	-87.94	-127.93	106.43	56.32	35.91	20.42	2.759	
4,312.00	4,304.31	4,309.37	4,303.43	12.30	12.55	-87.30	-128.64	107.01	56.48	36.03	20.46	2.761	
4,399.99	4,392.18	4,397.23	4,391.04	12.56	12.84	-88.07	-133.68	111.24	57.84	37.10	20.75	2.788	
4,402.00	4,394.18	4,399.24	4,393.04	12.57	12.85	-88.09	-133.79	111.34	57.88	37.12	20.76	2.789	
4,491.00	4,483.07	4,488.14	4,481.70	12.83	13.15	-84.29	-138.61	115.64	59.48	38.42	21.06	2.824	
4,499.99	4,492.05	4,497.11	4,490.66	12.86	13.18	-83.98	-139.09	116.08	59.65	38.55	21.09	2.828	
4,583.00	4,574.95	4,579.98	4,573.31	13.10	13.46	-81.37	-143.40	120.16	61.20	39.81	21.39	2.861	
4,599.99	4,591.92	4,596.99	4,590.28	13.15	13.52	-80.55	-144.26	121.01	61.52	40.07	21.46	2.867	
4,673.00	4,664.84	4,670.12	4,663.20	13.37	13.77	-76.65	-148.36	124.68	62.73	41.00	21.73	2.887	
4,699.99	4,691.80	4,697.20	4,690.20	13.45	13.86	-76.02	-150.00	126.04	63.11	41.28	21.83	2.891	
4,764.00	4,755.73	4,761.46	4,754.25	13.64	14.08	-74.41	-154.08	129.10	63.87	41.79	22.08	2.893	
4,799.99	4,791.68	4,797.41	4,790.09	13.74	14.21	-72.55	-156.41	130.75	64.25	42.02	22.23	2.890	
4,855.00	4,846.63	4,852.34	4,844.85	13.90	14.40	-69.80	-159.91	133.29	64.85	42.39	22.46	2.887	
4,899.99	4,891.57	4,897.33	4,889.70	14.04	14.55	-69.96	-162.73	135.37	65.38	42.72	22.66	2.886	
4,943.00	4,934.53	4,940.34	4,932.59	14.16	14.70	-70.18	-165.41	137.34	65.96	43.11	22.85	2.886	
4,999.99	4,991.47	4,997.41	4,989.50	14.33	14.90	-67.79	-168.87	139.87	66.74	43.62	23.12	2.886	
5,033.00	5,024.45	5,030.48	5,022.48	14.42	15.01	-66.42	-170.79	141.27	67.17	43.88	23.28	2.885	
5,099.99	5,091.38	5,097.46	5,089.29	14.62	15.24	-64.18	-174.58	144.04	68.01	44.39	23.62	2.880	
5,122.00	5,113.37	5,119.46	5,111.24	14.68	15.32	-63.44	-175.83	144.95	68.29	44.56	23.73	2.878	
5,199.99	5,191.30	5,197.28	5,188.86	14.91	15.59	-64.89	-180.36	148.25	69.51	45.36	24.15	2.879	
5,212.00	5,203.30	5,209.26	5,200.80	14.94	15.63	-65.12	-181.09	148.77	69.74	45.52	24.21	2.880	
5,299.99	5,291.21	5,297.10	5,288.40	15.20	15.94	-57.38	-186.37	152.70	71.30	46.59	24.72	2.885	
5,303.00	5,294.22	5,300.11	5,291.40	15.21	15.95	-57.14	-186.55	152.84	71.35	46.62	24.73	2.885	
5,394.00	5,385.13	5,391.42	5,382.45	15.48	16.27	-55.66	-192.19	156.78	72.58	47.29	25.29	2.870	
5,399.99	5,391.11	5,397.41	5,388.42	15.50	16.29	-55.42	-192.57	157.03	72.64	47.31	25.33	2.868	
5,484.00	5,475.02	5,481.39	5,472.15	15.75	16.59	-52.30	-198.06	160.45	73.42	47.56	25.86	2.839	
5,499.99	5,490.99	5,497.38	5,488.10	15.80	16.64	-52.35	-199.11	161.10	73.55	47.58	25.97	2.832	
5,573.00	5,563.91	5,570.42	5,560.92	16.02	16.90	-52.61	-203.98	164.04	74.21	47.76	26.46	2.805	
5,599.99	5,590.86	5,597.40	5,587.81	16.10	16.99	-52.96	-205.79	165.12	74.49	47.86	26.64	2.797	
5,662.00	5,652.80	5,659.37	5,649.59	16.30	17.21	-53.86	-209.96	167.60	75.28	48.21	27.06	2.781	
5,699.99	5,690.74	5,697.29	5,687.39	16.41	17.35	-54.06	-212.53	169.13	75.83	48.50	27.33	2.775	
5,752.00	5,742.69	5,749.20	5,739.14	16.58	17.53	-54.32	-216.07	171.27	76.63	48.94	27.68	2.768	
5,799.99	5,790.61	5,797.25	5,787.04	16.73	17.70	-51.08	-219.39	173.24	77.33	49.31	28.02	2.760	
5,841.00	5,831.56	5,838.33	5,827.98	16.86	17.84	-48.31	-222.25	174.89	77.82	49.50	28.32	2.748	
5,899.99	5,890.47	5,897.82	5,887.29	17.04	18.05	-46.96	-226.38	177.04	78.30	49.54	28.76	2.723	
5,932.00	5,922.44	5,930.12	5,919.49	17.14	18.17	-46.21	-228.59	178.04	78.42	49.42	29.00	2.704	
5,999.99	5,990.34	5,998.94	5,988.14	17.36	18.41	-52.26	-233.14	179.69	78.37	48.87	29.50	2.656	
6,022.00	6,012.32	6,021.22	6,010.38	17.43	18.49	-54.24	-234.55	180.07	78.26	48.61	29.66	2.639	
6,099.99	6,090.19	6,099.44	6,088.44	17.68	18.76	-56.57	-239.24	181.18	77.65	47.49	30.15	2.575	
6,113.00	6,103.18	6,112.49	6,101.47	17.72	18.80	-56.96	-239.99	181.35	77.52	47.28	30.23	2.564	
6,199.99	6,190.02	6,200.11	6,188.99	18.01	19.11	-56.00	-244.16	182.23	76.27	45.59	30.68	2.486	
6,202.00	6,192.03	6,202.13	6,191.01	18.01	19.12	-55.99	-244.23	182.24	76.24	45.55	30.69	2.484	
6,292.00	6,281.89	6,292.12	6,280.93	18.31	19.43	-55.41	-247.69	182.89	74.60	43.49	31.11	2.398	
6,299.99	6,289.86	6,300.12	6,288.92	18.33	19.46	-55.51	-248.00	182.95	74.46	43.31	31.15	2.390	

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 A H 8WC
Project:	Andrews County, TX (NAD83-TNC)	TVD Reference:	RKB @ 3050.00usft (Ensign T054)
Reference Site:	University 8-8	MD Reference:	RKB @ 3050.00usft (Ensign T054)
Site Error:	0.00	North Reference:	Grid
Reference Well:	University 8-8E A H 8WC	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00	Output errors are at	2.00 sigma
Reference Wellbore	OH / 72181	Database:	USAEDMDB
Reference Design:	Surveys (Ensign T054)	Offset TVD Reference:	Offset Datum

Offset Design University 8-8E A H 5LS - OH / 72180 - Plan 2 05-12-23												Offset Site Error:	0.00 usft
Survey Program: 15-MWD, 1973-MWD+HRGM+MS, 7481-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)		
6,381.00	6,370.76	6,381.19	6,369.94	18.60	19.74	-56.48	-251.12	183.46	72.96	41.43	31.53	2.314	
6,399.99	6,389.72	6,400.18	6,388.91	18.66	19.80	-57.12	-251.84	183.58	72.62	41.00	31.62	2.297	
6,470.00	6,459.63	6,470.19	6,458.86	18.88	20.04	-59.58	-254.46	183.99	71.43	39.49	31.94	2.236	
6,499.99	6,489.58	6,500.14	6,488.80	18.98	20.15	-59.11	-255.57	184.17	70.96	38.89	32.07	2.212	
6,559.00	6,548.51	6,559.09	6,547.71	19.17	20.35	-58.06	-257.73	184.57	70.05	37.71	32.34	2.166	
6,599.99	6,589.45	6,600.14	6,588.72	19.30	20.49	-58.07	-259.23	184.84	69.42	36.88	32.54	2.133	
6,651.00	6,640.40	6,651.22	6,639.77	19.47	20.67	-58.05	-261.10	185.13	68.58	35.80	32.78	2.092	
6,699.99	6,689.33	6,700.18	6,688.70	19.62	20.84	-59.34	-262.87	185.39	67.79	34.78	33.01	2.054	
6,740.00	6,729.30	6,740.18	6,728.67	19.75	20.98	-60.43	-264.30	185.61	67.20	34.00	33.20	2.024	
6,799.99	6,789.21	6,800.11	6,788.57	19.94	21.18	-59.92	-266.44	185.96	66.35	32.88	33.48	1.982	
6,830.00	6,819.19	6,830.10	6,818.54	20.04	21.29	-59.65	-267.51	186.16	65.93	32.32	33.62	1.961	
6,899.99	6,889.11	6,900.13	6,888.52	20.26	21.53	-60.17	-269.98	186.59	64.97	31.03	33.95	1.914	
6,919.00	6,908.10	6,919.16	6,907.54	20.32	21.60	-60.30	-270.64	186.70	64.72	30.68	34.04	1.901	
6,999.99	6,989.01	7,000.11	6,988.44	20.57	21.88	-62.38	-273.36	187.18	63.71	29.31	34.41	1.852	
7,009.00	6,998.01	7,009.12	6,997.45	20.60	21.91	-62.63	-273.66	187.24	63.61	29.16	34.45	1.847	
7,099.00	7,087.94	7,099.16	7,087.44	20.88	22.22	-65.12	-276.49	187.78	62.73	27.88	34.85	1.800	
7,099.99	7,088.92	7,100.15	7,088.43	20.89	22.22	-65.12	-276.52	187.79	62.72	27.87	34.85	1.800	
7,188.00	7,176.87	7,188.20	7,176.44	21.15	22.53	-69.25	-279.18	188.26	62.06	26.82	35.23	1.761	
7,199.99	7,188.85	7,200.21	7,188.45	21.19	22.57	-69.03	-279.54	188.32	61.97	26.69	35.29	1.756	
7,278.00	7,266.81	7,278.40	7,266.59	21.42	22.84	-67.37	-281.84	188.57	61.31	25.68	35.63	1.721	
7,299.99	7,288.78	7,300.42	7,288.61	21.49	22.92	-69.92	-282.47	188.60	61.11	25.38	35.73	1.710	
7,368.00	7,356.76	7,368.55	7,356.71	21.69	23.15	-78.86	-284.34	188.63	60.63	24.61	36.03	1.683	
7,399.99	7,388.73	7,400.57	7,388.72	21.77	23.26	-81.26	-285.19	188.60	60.48	24.32	36.16	1.672	
7,473.00	7,461.71	7,473.78	7,461.91	21.98	23.50	-87.01	-287.17	188.44	60.20	23.72	36.48	1.650	
7,499.99	7,488.69	7,500.82	7,488.94	22.06	23.59	-88.12	-287.89	188.30	60.05	23.47	36.59	1.641	
7,597.00	7,585.66	7,597.78	7,585.86	22.33	23.89	-92.12	-290.43	187.79	59.66	22.68	36.98	1.613	
7,599.98	7,588.64	7,600.76	7,588.84	22.33	23.90	-92.15	-290.49	187.78	59.65	22.66	36.99	1.613	
7,625.20	7,613.85	7,625.88	7,613.96	22.40	23.97	-93.63	-290.89	187.70	59.63	22.59	37.04	1.610	
7,686.00	7,674.62	7,686.54	7,674.62	22.55	24.15	-97.86	-291.08	187.66	59.78	22.73	37.05	1.613	
7,699.98	7,688.60	7,700.52	7,688.60	22.59	24.19	-96.55	-291.08	187.66	59.84	22.78	37.06	1.615	
7,776.00	7,764.60	7,776.53	7,764.60	22.77	24.42	-54.21	-291.08	187.66	59.80	22.58	37.22	1.607	
7,799.98	7,788.58	7,800.51	7,788.58	22.82	24.49	-44.02	-291.08	187.66	59.65	22.33	37.32	1.598	
7,866.00	7,854.59	7,866.51	7,854.59	22.97	24.71	-35.87	-291.08	187.66	58.74	21.19	37.56	1.564	
7,899.98	7,888.56	7,900.49	7,888.56	23.05	24.82	-33.84	-291.08	187.66	58.06	20.38	37.68	1.541	
7,955.00	7,943.56	7,955.48	7,943.56	23.18	25.01	-31.41	-291.08	187.66	56.78	18.92	37.86	1.500	Level 3
7,999.98	7,988.53	8,000.45	7,988.53	23.30	25.16	-39.45	-291.08	187.66	55.77	17.76	38.01	1.467	Level 3
8,046.00	8,034.53	8,046.45	8,034.53	23.41	25.31	-49.81	-291.08	187.66	54.96	16.82	38.15	1.441	Level 3
8,099.98	8,088.50	8,100.42	8,088.50	23.55	25.49	-49.95	-291.08	187.66	54.15	15.85	38.30	1.414	Level 3
8,135.00	8,123.50	8,135.43	8,123.50	23.64	25.61	-50.09	-291.08	187.66	53.61	15.21	38.40	1.396	Level 3
8,197.56	8,186.05	8,197.98	8,186.05	23.79	25.82	-90.00	-291.08	187.66	53.12	14.58	38.54	1.378	Level 3
8,199.98	8,188.47	8,200.40	8,188.47	23.80	25.83	-91.89	-291.08	187.66	53.12	14.58	38.54	1.378	Level 3
8,224.00	8,212.48	8,224.41	8,212.48	23.86	25.91	-110.19	-291.08	187.66	53.21	14.61	38.60	1.378	Level 3
8,299.98	8,288.46	8,300.38	8,288.46	24.03	26.16	-105.09	-291.08	187.66	53.63	14.87	38.76	1.384	Level 3
8,314.00	8,302.47	8,314.40	8,302.47	24.06	26.21	-103.96	-291.08	187.66	53.69	14.89	38.79	1.384	Level 3
8,399.98	8,388.44	8,400.37	8,388.44	24.22	26.50	-128.35	-291.08	187.66	54.19	15.17	39.02	1.389	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 A H 8WC
Project:	Andrews County, TX (NAD83-TNC)	TVD Reference:	RKB @ 3050.00usft (Ensign T054)
Reference Site:	University 8-8	MD Reference:	RKB @ 3050.00usft (Ensign T054)
Site Error:	0.00	North Reference:	Grid
Reference Well:	University 8-8E A H 8WC	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00	Output errors are at	2.00 sigma
Reference Wellbore	OH / 72181	Database:	USAEDMDB
Reference Design:	Surveys (Ensign T054)	Offset TVD Reference:	Offset Datum

Offset Design University 8-8E A H 5LS - OH / 72180 - Plan 2 05-12-23												Offset Site Error:	0.00 usft
Survey Program: 15-MWD, 1973-MWD+HRGM+MS, 7481-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)		
8,403.00	8,391.46	8,403.39	8,391.46	24.23	26.51	-129.45	-291.08	187.66	54.21	15.19	39.02	1.389	Level 3
8,492.00	8,480.45	8,492.38	8,480.45	24.34	26.81	-153.11	-291.08	187.66	55.22	15.95	39.27	1.406	Level 3
8,499.98	8,488.43	8,500.36	8,488.43	24.34	26.84	-154.31	-291.08	187.66	55.34	16.04	39.29	1.408	Level 3
8,582.00	8,570.44	8,582.36	8,570.44	24.39	27.12	-164.52	-291.08	187.66	56.75	17.23	39.52	1.436	Level 3
8,599.98	8,588.42	8,600.34	8,588.42	24.41	27.18	-159.34	-291.08	187.66	57.10	17.52	39.58	1.443	Level 3
8,672.00	8,660.42	8,672.34	8,660.42	24.48	27.42	-142.62	-291.08	187.66	58.50	18.72	39.78	1.471	Level 3
8,699.98	8,688.39	8,700.31	8,688.39	24.55	27.52	-126.11	-291.08	187.66	59.05	19.18	39.87	1.481	Level 3
8,762.00	8,750.34	8,762.26	8,750.34	24.70	27.73	-112.65	-291.08	187.66	60.35	20.29	40.07	1.506	
8,799.98	8,788.26	8,800.19	8,788.26	24.81	27.85	-109.58	-291.08	187.66	61.10	20.89	40.22	1.519	
8,851.00	8,839.23	8,851.16	8,839.23	24.97	28.03	-101.79	-291.08	187.66	61.74	21.27	40.46	1.526	
8,899.98	8,888.18	8,900.10	8,888.18	25.11	28.20	-104.72	-291.08	187.66	62.17	21.44	40.73	1.526	
8,940.00	8,928.17	8,940.09	8,928.17	25.23	28.33	-107.13	-291.08	187.66	62.57	21.60	40.97	1.527	
8,999.98	8,988.12	9,000.05	8,988.12	25.40	28.54	-96.11	-291.08	187.66	62.98	21.64	41.34	1.524	
9,030.00	9,018.13	9,030.08	9,018.15	25.48	28.63	-84.77	-291.08	187.66	62.99	21.49	41.50	1.518	
9,099.98	9,088.10	9,101.29	9,089.17	25.66	28.90	-81.91	-295.48	188.82	62.12	20.50	41.62	1.493	Level 3
9,120.00	9,108.12	9,121.39	9,109.07	25.71	29.00	-79.59	-298.27	189.55	61.74	20.11	41.63	1.483	Level 3
9,153.62	9,141.74	9,154.67	9,141.74	25.79	29.18	-90.25	-304.35	191.16	61.39	19.57	41.82	1.468	Level 3
9,199.98	9,188.09	9,199.25	9,184.83	25.90	29.41	-99.95	-315.36	194.06	62.52	19.71	42.81	1.461	Level 3
9,209.00	9,197.11	9,207.71	9,192.90	25.93	29.45	-101.00	-317.81	194.70	63.09	19.97	43.12	1.463	Level 3
9,299.00	9,287.09	9,287.62	9,267.00	26.12	29.86	-90.41	-346.57	202.27	77.48	30.49	46.99	1.649	
9,299.98	9,288.08	9,288.44	9,267.74	26.12	29.86	-90.19	-346.92	202.36	77.74	30.71	47.03	1.653	
9,389.00	9,377.09	9,358.15	9,328.42	26.25	30.21	-103.47	-380.03	211.08	109.64	60.60	49.05	2.236	
9,399.98	9,388.07	9,366.08	9,335.04	26.25	30.24	-109.04	-384.24	212.19	114.66	65.54	49.12	2.334	
9,499.00	9,487.07	9,430.88	9,386.80	26.25	30.54	-149.14	-421.89	222.10	168.37	119.48	48.89	3.444	
9,499.98	9,488.05	9,431.47	9,387.25	26.25	30.54	-147.53	-422.25	222.20	168.97	120.09	48.88	3.457	
9,568.00	9,556.05	9,470.41	9,416.09	26.31	30.71	-29.91	-447.54	228.85	211.40	163.08	48.31	4.375	
9,599.98	9,587.94	9,488.07	9,428.57	26.63	30.78	-13.15	-459.62	232.03	231.34	183.11	48.22	4.797	
9,658.00	9,645.11	9,520.22	9,450.29	27.22	30.91	-6.05	-482.55	238.07	265.35	217.41	47.94	5.535	
9,699.98	9,685.66	9,550.00	9,469.18	27.52	31.03	-3.75	-504.80	243.93	288.74	240.63	48.11	6.002	
9,748.00	9,731.12	9,569.37	9,480.82	27.87	31.10	-2.36	-519.77	247.87	314.48	267.33	47.15	6.670	
9,799.98	9,779.10	9,600.00	9,498.13	28.21	31.22	-2.40	-544.20	254.30	341.80	294.98	46.82	7.300	
9,837.00	9,812.43	9,616.39	9,506.84	28.44	31.28	-2.48	-557.63	257.84	360.90	314.68	46.23	7.807	
9,899.98	9,867.64	9,650.00	9,523.43	28.80	31.40	-2.02	-585.90	265.28	393.22	347.60	45.61	8.620	
9,928.00	9,891.61	9,662.58	9,529.19	28.96	31.44	-1.88	-596.71	268.13	407.59	362.37	45.22	9.013	
9,999.98	9,950.64	9,700.00	9,544.87	29.41	31.57	-1.70	-629.56	276.78	443.36	398.68	44.69	9.922	
10,018.00	9,964.73	9,700.00	9,544.87	29.52	31.57	-1.82	-629.56	276.78	452.03	407.97	44.06	10.259	
10,099.98	10,024.93	9,750.00	9,562.29	29.99	31.74	-1.52	-674.87	288.70	488.90	444.98	43.93	11.130	
10,108.00	10,030.46	9,750.00	9,562.29	30.04	31.74	-1.56	-674.87	288.70	492.30	448.62	43.68	11.271	
10,198.00	10,088.20	9,800.00	9,575.56	30.46	31.91	-1.01	-721.47	300.97	529.11	485.84	43.26	12.230	
10,199.98	10,089.38	9,800.00	9,575.56	30.47	31.91	-1.02	-721.47	300.97	529.86	486.66	43.21	12.264	
10,287.00	10,138.68	9,835.70	9,582.44	30.80	32.03	-0.83	-755.34	309.89	563.88	521.56	42.31	13.326	
10,299.98	10,145.50	9,850.00	9,584.58	30.85	32.08	-0.78	-769.01	313.49	568.99	526.40	42.59	13.361	
10,376.00	10,179.83	9,877.12	9,587.67	31.13	32.17	-0.89	-795.06	320.35	594.68	552.50	42.18	14.097	
10,399.98	10,188.58	9,900.00	9,589.28	31.19	32.25	-0.91	-817.13	326.16	601.83	559.30	42.53	14.152	
10,465.00	10,207.07	9,918.90	9,589.93	31.34	32.32	-1.03	-835.40	330.97	617.33	575.17	42.16	14.642	
10,499.98	10,213.55	9,937.29	9,589.97	31.38	32.39	-1.03	-853.18	335.65	623.70	581.38	42.32	14.738	

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 A H 8WC
Project:	Andrews County, TX (NAD83-TNC)	TVD Reference:	RKB @ 3050.00usft (Ensign T054)
Reference Site:	University 8-8	MD Reference:	RKB @ 3050.00usft (Ensign T054)
Site Error:	0.00	North Reference:	Grid
Reference Well:	University 8-8E A H 8WC	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00	Output errors are at	2.00 sigma
Reference Wellbore	OH / 72181	Database:	USAEDMDB
Reference Design:	Surveys (Ensign T054)	Offset TVD Reference:	Offset Datum

Offset Design University 8-8E A H 5LS - OH / 72180 - Plan 2 05-12-23												Offset Site Error:	0.00 usft
Survey Program: 15-MWD, 1973-MWD+HRGM+MS, 7481-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)		
10,556.00	10,218.18	9,993.21	9,589.51	31.43	32.61	-0.88	-907.41	349.29	628.76	585.65	43.11	14.585	
10,599.98	10,218.99	10,037.13	9,589.15	31.44	32.80	-0.59	-950.17	359.31	629.89	586.61	43.28	14.555	
10,645.00	10,219.74	10,081.96	9,588.78	31.46	33.01	-0.23	-993.84	369.42	630.99	587.54	43.45	14.523	
10,669.00	10,220.07	10,105.85	9,588.59	31.46	33.12	-0.02	-1,017.11	374.80	631.50	587.96	43.54	14.503	
10,699.98	10,220.27	10,136.71	9,588.33	31.47	33.28	0.22	-1,047.19	381.76	631.96	588.28	43.68	14.467	
10,759.00	10,219.95	10,195.65	9,587.85	31.48	33.60	0.53	-1,104.60	395.04	632.15	588.19	43.96	14.381	
10,799.98	10,219.41	10,236.59	9,587.51	31.49	33.84	0.66	-1,144.49	404.28	631.96	587.80	44.17	14.309	
10,848.00	10,218.80	10,284.57	9,587.12	31.49	34.13	0.85	-1,191.23	415.09	631.77	587.36	44.41	14.225	
10,899.98	10,217.84	10,336.52	9,586.69	31.50	34.46	1.02	-1,241.84	426.80	631.27	586.57	44.70	14.122	
10,937.00	10,216.79	10,373.53	9,586.39	31.51	34.70	1.05	-1,277.90	435.14	630.53	585.62	44.91	14.040	
10,999.98	10,214.60	10,436.48	9,585.87	31.52	35.13	1.03	-1,339.23	449.34	628.85	583.57	45.28	13.887	
11,026.00	10,213.61	10,462.49	9,585.66	31.53	35.32	1.03	-1,364.57	455.20	628.07	582.63	45.44	13.822	
11,099.98	10,210.65	10,536.43	9,585.05	31.55	35.85	1.10	-1,436.60	471.87	625.74	579.82	45.91	13.629	
11,118.00	10,209.91	10,554.44	9,584.91	31.56	35.99	1.14	-1,454.14	475.93	625.15	579.12	46.03	13.582	
11,199.98	10,207.41	10,636.38	9,584.23	31.62	36.62	1.24	-1,533.98	494.40	623.34	576.75	46.59	13.380	
11,207.00	10,207.28	10,643.41	9,584.18	31.63	36.68	1.24	-1,540.82	495.98	623.27	576.63	46.64	13.364	
11,296.00	10,205.37	10,732.39	9,583.45	31.79	37.39	1.30	-1,627.51	516.04	622.10	574.83	47.28	13.159	
11,299.98	10,205.27	10,736.37	9,583.41	31.80	37.43	1.31	-1,631.39	516.94	622.04	574.73	47.31	13.149	
11,386.00	10,202.77	10,822.35	9,582.71	32.23	38.15	1.49	-1,715.15	536.32	620.29	572.34	47.95	12.935	
11,399.98	10,202.33	10,836.32	9,582.59	32.33	38.27	1.53	-1,728.76	539.47	619.98	571.92	48.06	12.899	
11,478.00	10,200.61	10,914.33	9,581.95	33.14	38.94	1.63	-1,804.76	557.06	618.93	570.24	48.68	12.713	
11,499.98	10,200.28	10,936.30	9,581.77	33.39	39.14	1.63	-1,826.17	562.01	618.78	569.91	48.86	12.663	
11,567.00	10,199.09	11,003.32	9,581.22	34.26	39.74	1.66	-1,891.46	577.12	618.15	568.74	49.42	12.509	
11,599.98	10,198.62	11,036.30	9,580.95	34.71	40.04	1.68	-1,923.58	584.55	617.95	568.25	49.70	12.433	
11,656.00	10,198.63	11,092.31	9,580.49	35.48	40.56	1.64	-1,978.16	597.18	618.40	568.21	50.19	12.321	
11,699.98	10,198.87	11,136.28	9,580.13	36.08	40.97	1.55	-2,020.99	607.09	618.99	568.40	50.58	12.237	
11,745.00	10,198.79	11,181.28	9,579.76	36.71	41.39	1.44	-2,064.83	617.24	619.24	568.26	50.98	12.146	
11,799.98	10,198.66	11,236.24	9,579.31	37.49	41.92	1.30	-2,118.37	629.62	619.52	568.04	51.49	12.033	
11,836.00	10,198.77	11,272.24	9,579.02	38.00	42.27	1.21	-2,153.45	637.74	619.91	568.09	51.82	11.963	
11,899.98	10,199.19	11,336.20	9,578.49	38.91	42.90	1.07	-2,215.75	652.16	620.83	568.40	52.43	11.842	
11,928.00	10,199.44	11,364.21	9,578.26	39.31	43.17	1.02	-2,243.05	658.47	621.30	568.60	52.69	11.791	
11,999.98	10,199.94	11,436.17	9,577.67	40.35	43.89	0.91	-2,313.15	674.70	622.36	568.97	53.39	11.656	
12,018.00	10,200.00	11,454.19	9,577.52	40.61	44.07	0.89	-2,330.71	678.76	622.57	569.00	53.57	11.621	
12,099.98	10,200.39	11,536.16	9,576.85	41.81	44.91	0.86	-2,410.56	697.24	623.63	569.24	54.39	11.466	
12,108.00	10,200.45	11,544.18	9,576.79	41.93	44.99	0.87	-2,418.38	699.04	623.75	569.28	54.47	11.451	
12,198.00	10,200.89	11,634.17	9,576.05	43.25	45.92	0.95	-2,506.05	719.33	624.95	569.56	55.39	11.283	
12,199.98	10,200.89	11,636.15	9,576.03	43.28	45.94	0.95	-2,507.97	719.78	624.97	569.56	55.41	11.279	
12,287.00	10,200.44	11,723.15	9,575.32	44.59	46.85	0.87	-2,592.73	739.39	625.21	568.89	56.32	11.101	
12,299.98	10,200.27	11,736.11	9,575.21	44.78	46.99	0.81	-2,605.36	742.31	625.14	568.68	56.46	11.073	
12,376.00	10,199.36	11,812.08	9,574.59	45.89	47.80	0.54	-2,679.37	759.44	624.82	567.55	57.27	10.910	
12,399.98	10,199.06	11,836.04	9,574.39	46.24	48.06	0.47	-2,702.71	764.84	624.71	567.17	57.53	10.859	
12,466.00	10,197.86	11,902.01	9,573.85	47.21	48.76	0.24	-2,766.99	779.71	624.03	565.78	58.25	10.713	
12,499.98	10,197.23	11,935.97	9,573.57	47.71	49.13	0.13	-2,800.06	787.36	623.68	565.05	58.63	10.637	
12,557.00	10,196.75	11,992.96	9,573.10	48.55	49.75	-0.05	-2,855.59	800.21	623.67	564.40	59.27	10.523	
12,599.98	10,196.60	12,035.91	9,572.75	49.19	50.23	-0.18	-2,897.43	809.89	623.88	564.12	59.76	10.440	

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 A H 8WC
Project:	Andrews County, TX (NAD83-TNC)	TVD Reference:	RKB @ 3050.00usft (Ensign T054)
Reference Site:	University 8-8	MD Reference:	RKB @ 3050.00usft (Ensign T054)
Site Error:	0.00	North Reference:	Grid
Reference Well:	University 8-8E A H 8WC	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00	Output errors are at	2.00 sigma
Reference Wellbore	OH / 72181	Database:	USAEDMDB
Reference Design:	Surveys (Ensign T054)	Offset TVD Reference:	Offset Datum

Offset Design University 8-8E A H 5LS - OH / 72180 - Plan 2 05-12-23												Offset Site Error:	0.00 usft
Survey Program: 15-MWD, 1973-MWD+HRGM+MS, 7481-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)		
12,646.00	10,196.32	12,081.91	9,572.37	49.87	50.73	-0.32	-2,942.24	820.26	623.97	563.69	60.28	10.351	
12,699.97	10,195.78	12,135.85	9,571.93	50.67	51.33	-0.48	-2,994.80	832.43	623.89	562.98	60.90	10.244	
12,736.00	10,195.27	12,171.86	9,571.64	51.20	51.73	-0.58	-3,029.88	840.54	623.69	562.37	61.32	10.171	
12,799.97	10,194.90	12,235.81	9,571.11	52.15	52.45	-0.74	-3,092.18	854.96	623.86	561.79	62.08	10.050	
12,827.00	10,195.11	12,262.83	9,570.89	52.56	52.75	-0.80	-3,118.50	861.05	624.31	561.91	62.40	10.005	
12,899.97	10,195.75	12,335.77	9,570.29	53.65	53.57	-0.96	-3,189.56	877.49	625.57	562.30	63.27	9.888	
12,917.00	10,195.83	12,352.79	9,570.15	53.90	53.77	-1.00	-3,206.14	881.33	625.79	562.32	63.47	9.860	
12,999.97	10,196.11	12,435.74	9,569.47	55.15	54.71	-1.15	-3,286.96	900.03	626.78	562.32	64.47	9.722	
13,007.00	10,196.13	12,442.76	9,569.41	55.25	54.79	-1.16	-3,293.80	901.61	626.86	562.31	64.55	9.711	
13,097.00	10,196.57	12,532.75	9,568.68	56.62	55.82	-1.22	-3,381.47	921.90	628.06	562.42	65.64	9.568	
13,099.97	10,196.60	12,535.73	9,568.65	56.66	55.86	-1.22	-3,384.37	922.57	628.11	562.43	65.68	9.563	
13,186.00	10,197.50	12,621.74	9,567.95	57.97	56.85	-1.19	-3,468.16	941.96	629.71	562.98	66.73	9.437	
13,199.97	10,197.69	12,635.71	9,567.83	58.18	57.01	-1.19	-3,481.77	945.11	630.01	563.11	66.90	9.417	
13,274.00	10,198.66	12,709.72	9,567.22	59.31	57.87	-1.15	-3,553.87	961.79	631.58	563.77	67.81	9.314	
13,299.97	10,198.98	12,735.68	9,567.01	59.71	58.18	-1.13	-3,579.17	967.64	632.11	563.98	68.13	9.278	
13,363.00	10,199.70	12,798.70	9,566.49	60.67	58.91	-1.11	-3,640.56	981.85	633.34	564.43	68.91	9.191	
13,399.97	10,200.07	12,835.66	9,566.19	61.24	59.35	-1.11	-3,676.57	990.18	634.02	564.64	69.38	9.139	
13,454.00	10,200.54	12,889.68	9,565.75	62.06	59.98	-1.13	-3,729.20	1,002.36	634.94	564.88	70.06	9.063	
13,499.97	10,200.87	12,935.65	9,565.37	62.77	60.53	-1.15	-3,773.98	1,012.72	635.65	565.01	70.64	8.998	
13,543.00	10,201.14	12,978.67	9,565.02	63.42	61.04	-1.16	-3,815.89	1,022.42	636.27	565.08	71.19	8.938	
13,599.97	10,201.37	13,035.64	9,564.55	64.30	61.71	-1.15	-3,871.39	1,035.26	636.97	565.06	71.91	8.857	
13,633.00	10,201.43	13,068.67	9,564.28	64.80	62.11	-1.14	-3,903.57	1,042.71	637.30	564.96	72.34	8.810	
13,699.97	10,201.21	13,135.64	9,563.73	65.83	62.91	-1.11	-3,968.81	1,057.81	637.62	564.43	73.20	8.711	
13,723.00	10,201.01	13,158.66	9,563.54	66.19	63.18	-1.10	-3,991.25	1,063.00	637.60	564.11	73.49	8.676	
13,799.97	10,199.92	13,235.63	9,562.91	67.37	64.11	-1.05	-4,066.23	1,080.35	637.14	562.66	74.48	8.554	
13,812.00	10,199.70	13,247.66	9,562.81	67.56	64.25	-1.04	-4,077.95	1,083.06	637.02	562.38	74.64	8.535	
13,899.97	10,197.21	13,335.61	9,562.09	68.91	65.31	-1.02	-4,163.63	1,102.89	635.24	559.46	75.78	8.382	
13,902.00	10,197.13	13,337.64	9,562.07	68.94	65.33	-1.02	-4,165.61	1,103.34	635.18	559.37	75.81	8.378	
13,991.00	10,193.65	13,426.59	9,561.34	70.31	66.41	-0.98	-4,252.27	1,123.40	632.42	555.45	76.97	8.216	
13,999.97	10,193.29	13,435.56	9,561.27	70.45	66.52	-0.97	-4,261.01	1,125.42	632.13	555.04	77.09	8.200	
14,080.00	10,189.69	13,515.53	9,560.61	71.69	67.49	-0.89	-4,338.91	1,143.44	629.17	551.03	78.14	8.052	
14,099.97	10,188.83	13,535.49	9,560.45	72.00	67.73	-0.87	-4,358.36	1,147.94	628.47	550.07	78.41	8.015	
14,170.00	10,187.78	13,605.50	9,559.87	73.08	68.59	-0.75	-4,426.56	1,163.73	627.98	548.62	79.35	7.914	
14,199.97	10,188.03	13,635.45	9,559.63	73.55	68.95	-0.68	-4,455.74	1,170.48	628.46	548.71	79.75	7.881	
14,260.00	10,188.82	13,695.43	9,559.14	74.49	69.69	-0.50	-4,514.18	1,184.00	629.73	549.19	80.54	7.819	
14,299.97	10,189.37	13,735.37	9,558.81	75.12	70.18	-0.37	-4,553.09	1,193.00	630.59	549.53	81.07	7.779	
14,349.00	10,189.72	13,784.38	9,558.41	75.88	70.78	-0.25	-4,600.83	1,204.05	631.34	549.62	81.72	7.726	
14,399.97	10,189.75	13,835.34	9,557.99	76.68	71.41	-0.17	-4,650.48	1,215.54	631.79	549.38	82.41	7.667	
14,438.00	10,189.57	13,873.36	9,557.68	77.27	71.88	-0.12	-4,687.52	1,224.11	631.91	549.00	82.92	7.621	
14,499.97	10,189.13	13,935.33	9,557.17	78.23	72.64	-0.05	-4,747.89	1,238.08	631.98	548.22	83.76	7.546	
14,529.00	10,188.92	13,964.35	9,556.93	78.69	73.00	-0.01	-4,776.17	1,244.62	632.01	547.86	84.15	7.511	
14,599.97	10,188.52	14,035.30	9,556.35	79.80	73.88	0.15	-4,845.29	1,260.62	632.20	547.09	85.11	7.428	
14,618.00	10,188.46	14,053.32	9,556.20	80.08	74.10	0.20	-4,862.84	1,264.68	632.28	546.93	85.35	7.408	
14,699.97	10,188.34	14,135.22	9,555.53	81.37	75.12	0.51	-4,942.63	1,283.14	632.86	546.39	86.47	7.319	
14,709.00	10,188.35	14,144.23	9,555.46	81.52	75.23	0.55	-4,951.41	1,285.17	632.95	546.35	86.59	7.309	
14,799.00	10,188.32	14,234.15	9,554.72	82.94	76.35	0.90	-5,039.01	1,305.44	633.71	545.88	87.83	7.215	

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 A H 8WC
Project:	Andrews County, TX (NAD83-TNC)	TVD Reference:	RKB @ 3050.00usft (Ensign T054)
Reference Site:	University 8-8	MD Reference:	RKB @ 3050.00usft (Ensign T054)
Site Error:	0.00	North Reference:	Grid
Reference Well:	University 8-8E A H 8WC	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00	Output errors are at	2.00 sigma
Reference Wellbore	OH / 72181	Database:	USAEDMDB
Reference Design:	Surveys (Ensign T054)	Offset TVD Reference:	Offset Datum

Offset Design University 8-8E A H 5LS - OH / 72180 - Plan 2 05-12-23												Offset Site Error:	0.00 usft
Survey Program: 15-MWD, 1973-MWD+HRGM+MS, 7481-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)		
14,799.97	10,188.32	14,235.12	9,554.71	82.95	76.36	0.91	-5,039.95	1,305.66	633.72	545.87	87.85	7.214	
14,889.00	10,188.14	14,324.07	9,553.98	84.36	77.47	1.23	-5,126.61	1,325.71	634.34	545.25	89.09	7.121	
14,899.97	10,188.14	14,335.03	9,553.89	84.53	77.61	1.28	-5,137.29	1,328.18	634.43	545.19	89.24	7.109	
14,979.00	10,189.51	14,414.01	9,553.24	85.78	78.60	1.45	-5,214.23	1,345.99	636.50	546.14	90.35	7.044	
14,999.97	10,190.22	14,434.96	9,553.07	86.10	78.86	1.46	-5,234.64	1,350.71	637.37	546.73	90.65	7.031	
15,068.00	10,192.63	14,502.92	9,552.51	87.16	79.71	1.41	-5,300.85	1,366.03	640.33	548.74	91.59	6.991	
15,099.97	10,193.83	14,534.85	9,552.25	87.65	80.11	1.35	-5,331.96	1,373.23	641.78	549.74	92.04	6.973	
15,159.00	10,196.13	14,593.80	9,551.77	88.55	80.85	1.23	-5,389.39	1,386.52	644.53	551.67	92.86	6.941	
15,199.97	10,197.42	14,634.72	9,551.43	89.18	81.37	1.14	-5,429.26	1,395.74	646.13	552.69	93.44	6.915	
15,249.00	10,198.03	14,683.73	9,551.03	89.94	81.99	1.03	-5,477.00	1,406.79	647.12	552.99	94.13	6.875	
15,299.97	10,197.88	14,734.68	9,550.61	90.72	82.63	0.90	-5,526.64	1,418.28	647.37	552.52	94.85	6.825	
15,338.00	10,197.44	14,772.68	9,550.30	91.30	83.11	0.79	-5,563.66	1,426.84	647.22	551.84	95.38	6.786	
15,399.97	10,196.14	14,834.59	9,549.79	92.24	83.89	0.56	-5,623.98	1,440.80	646.40	550.14	96.26	6.715	
15,428.00	10,195.32	14,862.58	9,549.56	92.67	84.25	0.45	-5,651.25	1,447.11	645.79	549.14	96.65	6.682	
15,499.97	10,192.88	14,934.44	9,548.97	93.76	85.16	0.13	-5,721.25	1,463.31	643.93	546.25	97.68	6.592	
15,518.00	10,192.23	14,952.44	9,548.82	94.04	85.38	0.05	-5,738.79	1,467.37	643.43	545.49	97.94	6.570	
15,599.97	10,189.71	15,034.36	9,548.15	95.30	86.42	-0.16	-5,818.59	1,485.83	641.58	542.47	99.11	6.473	
15,607.00	10,189.53	15,041.39	9,548.09	95.41	86.51	-0.16	-5,825.44	1,487.42	641.46	542.25	99.21	6.466	
15,699.00	10,186.52	15,133.36	9,547.34	96.85	87.68	-0.15	-5,915.04	1,508.15	639.21	538.69	100.52	6.359	
15,699.97	10,186.48	15,134.33	9,547.33	96.86	87.69	-0.15	-5,915.99	1,508.37	639.18	538.64	100.53	6.358	
15,789.00	10,182.46	15,223.29	9,546.60	98.25	88.82	-0.09	-6,002.66	1,528.43	635.88	534.08	101.80	6.247	
15,799.97	10,181.93	15,234.25	9,546.51	98.42	88.96	-0.08	-6,013.34	1,530.90	635.44	533.49	101.95	6.233	
15,879.00	10,178.81	15,313.24	9,545.86	99.65	89.97	-0.11	-6,090.29	1,548.70	632.97	529.89	103.08	6.140	
15,899.97	10,178.24	15,334.20	9,545.69	99.97	90.24	-0.14	-6,110.71	1,553.43	632.57	529.18	103.39	6.118	
15,969.00	10,177.72	15,403.23	9,545.13	101.04	91.12	-0.20	-6,177.96	1,568.99	632.62	528.23	104.39	6.060	
15,999.97	10,177.95	15,434.19	9,544.87	101.53	91.52	-0.22	-6,208.12	1,575.97	633.11	528.27	104.84	6.039	
16,058.00	10,178.36	15,492.22	9,544.40	102.43	92.26	-0.25	-6,264.65	1,589.05	633.99	528.31	105.68	5.999	
16,099.97	10,178.64	15,534.18	9,544.05	103.08	92.79	-0.28	-6,305.53	1,598.51	634.62	528.33	106.28	5.971	
16,147.00	10,178.96	15,581.20	9,543.67	103.81	93.40	-0.32	-6,351.35	1,609.11	635.32	528.36	106.97	5.939	
16,199.97	10,179.39	15,634.16	9,543.23	104.64	94.07	-0.36	-6,402.94	1,621.05	636.20	528.46	107.73	5.905	
16,237.00	10,179.79	15,671.19	9,542.93	105.21	94.55	-0.37	-6,439.01	1,629.39	636.90	528.62	108.27	5.882	
16,299.97	10,180.52	15,734.14	9,542.41	106.19	95.36	-0.39	-6,500.34	1,643.59	638.14	528.96	109.19	5.845	
16,326.00	10,180.81	15,760.17	9,542.20	106.60	95.69	-0.40	-6,525.70	1,649.45	638.65	529.09	109.56	5.829	
16,399.97	10,181.33	15,834.13	9,541.59	107.75	96.64	-0.46	-6,597.75	1,666.13	639.78	529.14	110.64	5.782	
16,416.00	10,181.36	15,850.16	9,541.46	108.00	96.85	-0.47	-6,613.37	1,669.74	639.94	529.06	110.88	5.772	
16,499.97	10,181.64	15,934.12	9,540.77	109.30	97.93	-0.55	-6,695.16	1,688.67	640.93	528.82	112.11	5.717	
16,507.00	10,181.69	15,941.15	9,540.71	109.41	98.02	-0.55	-6,702.01	1,690.25	641.03	528.82	112.21	5.713	
16,596.00	10,182.62	16,030.13	9,539.98	110.80	99.16	-0.59	-6,788.70	1,710.31	642.69	529.18	113.51	5.662	
16,599.97	10,182.68	16,034.10	9,539.95	110.86	99.21	-0.59	-6,792.56	1,711.20	642.78	529.22	113.57	5.660	
16,686.00	10,184.04	16,120.10	9,539.24	112.21	100.32	-0.61	-6,876.35	1,730.59	644.85	530.02	114.83	5.616	
16,699.97	10,184.27	16,134.07	9,539.13	112.42	100.50	-0.62	-6,889.96	1,733.74	645.20	530.17	115.03	5.609	
16,775.00	10,185.38	16,209.08	9,538.51	113.59	101.47	-0.68	-6,963.03	1,750.65	646.93	530.79	116.14	5.570	
16,799.97	10,185.70	16,234.04	9,538.31	113.98	101.79	-0.69	-6,987.35	1,756.28	647.45	530.95	116.50	5.557	
16,865.00	10,186.42	16,299.06	9,537.78	115.00	102.63	-0.66	-7,050.69	1,770.93	648.71	531.26	117.45	5.523	
16,899.97	10,186.83	16,334.01	9,537.49	115.56	103.09	-0.59	-7,084.74	1,778.81	649.39	531.43	117.96	5.505	

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 A H 8WC
Project:	Andrews County, TX (NAD83-TNC)	TVD Reference:	RKB @ 3050.00usft (Ensign T054)
Reference Site:	University 8-8	MD Reference:	RKB @ 3050.00usft (Ensign T054)
Site Error:	0.00	North Reference:	Grid
Reference Well:	University 8-8E A H 8WC	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00	Output errors are at	2.00 sigma
Reference Wellbore	OH / 72181	Database:	USAEDMDB
Reference Design:	Surveys (Ensign T054)	Offset TVD Reference:	Offset Datum

Offset Design University 8-8E A H 5LS - OH / 72180 - Plan 2 05-12-23												Offset Site Error:	0.00 usft
Survey Program: 15-MWD, 1973-MWD+HRGM+MS, 7481-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)		
16,955.00	10,187.66	16,388.98	9,537.04	116.43	103.80	-0.41	-7,138.30	1,791.21	650.65	531.91	118.75	5.479	
16,999.97	10,188.15	16,433.89	9,536.67	117.15	104.38	-0.22	-7,182.05	1,801.33	651.50	532.11	119.40	5.457	
17,045.00	10,188.07	16,478.90	9,536.30	117.87	104.96	-0.09	-7,225.90	1,811.48	651.79	531.74	120.05	5.429	
17,099.97	10,187.48	16,533.83	9,535.85	118.74	105.67	0.07	-7,279.42	1,823.86	651.65	530.80	120.85	5.392	
17,134.00	10,186.98	16,567.83	9,535.57	119.28	106.11	0.20	-7,312.54	1,831.52	651.43	530.09	121.35	5.368	
17,199.97	10,185.80	16,633.72	9,535.03	120.33	106.97	0.48	-7,376.73	1,846.38	650.81	528.50	122.31	5.321	
17,225.00	10,185.29	16,658.72	9,534.83	120.73	107.29	0.58	-7,401.09	1,852.01	650.53	527.85	122.68	5.303	
17,299.97	10,183.94	16,733.64	9,534.21	121.92	108.26	0.83	-7,474.07	1,868.90	649.82	526.03	123.79	5.249	
17,315.00	10,183.72	16,748.67	9,534.09	122.16	108.46	0.86	-7,488.72	1,872.29	649.72	525.71	124.01	5.239	
17,399.97	10,182.29	16,833.62	9,533.39	123.50	109.56	0.99	-7,571.48	1,891.44	649.02	523.74	125.27	5.181	
17,404.00	10,182.21	16,837.65	9,533.36	123.57	109.61	0.99	-7,575.41	1,892.35	648.97	523.64	125.33	5.178	
17,493.00	10,179.94	16,926.63	9,532.63	124.96	110.77	1.00	-7,662.09	1,912.41	647.43	520.78	126.65	5.112	
17,499.97	10,179.72	16,933.59	9,532.57	125.07	110.86	0.98	-7,668.87	1,913.98	647.26	520.51	126.75	5.107	
17,585.00	10,176.27	17,018.56	9,531.87	126.38	111.97	0.81	-7,751.65	1,933.13	644.48	516.48	128.00	5.035	
17,599.97	10,175.60	17,033.51	9,531.75	126.61	112.16	0.78	-7,766.22	1,936.50	643.93	515.70	128.23	5.022	
17,675.00	10,173.71	17,108.52	9,531.14	127.78	113.14	0.66	-7,839.29	1,953.41	642.63	513.29	129.34	4.968	
17,699.96	10,173.43	17,133.48	9,530.93	128.16	113.46	0.62	-7,863.61	1,959.04	642.56	512.84	129.71	4.954	
17,765.00	10,172.17	17,198.49	9,530.40	129.17	114.31	0.51	-7,926.95	1,973.69	641.81	511.14	130.68	4.911	
17,799.96	10,171.38	17,233.45	9,530.11	129.73	114.76	0.46	-7,961.01	1,981.58	641.32	510.12	131.20	4.888	
17,854.00	10,170.60	17,287.48	9,529.67	130.58	115.47	0.53	-8,013.64	1,993.75	640.99	508.99	132.00	4.856	
17,899.96	10,169.95	17,333.41	9,529.29	131.31	116.07	0.67	-8,058.39	2,004.11	640.73	508.04	132.69	4.829	
17,945.00	10,168.89	17,378.42	9,528.92	132.03	116.65	0.81	-8,102.23	2,014.25	640.06	506.70	133.36	4.799	
17,999.96	10,167.62	17,433.36	9,528.47	132.90	117.37	0.94	-8,155.76	2,026.64	639.25	505.07	134.18	4.764	
18,034.00	10,167.10	17,467.39	9,528.19	133.43	117.82	0.97	-8,188.92	2,034.31	639.02	504.33	134.69	4.744	
18,099.96	10,166.37	17,533.35	9,527.65	134.47	118.68	0.98	-8,253.18	2,049.18	638.83	503.16	135.68	4.709	
18,124.00	10,166.13	17,557.39	9,527.45	134.84	118.99	0.97	-8,276.60	2,054.60	638.79	502.76	136.03	4.696	
18,199.96	10,165.35	17,633.35	9,526.83	136.03	119.98	0.95	-8,350.60	2,071.72	638.63	501.46	137.17	4.656	
18,213.00	10,165.21	17,646.39	9,526.72	136.24	120.15	0.95	-8,363.30	2,074.66	638.59	501.23	137.36	4.649	
18,299.96	10,164.37	17,733.35	9,526.01	137.60	121.29	0.92	-8,448.02	2,094.27	638.47	499.81	138.66	4.604	
18,303.00	10,164.35	17,736.39	9,525.98	137.64	121.33	0.92	-8,450.98	2,094.95	638.47	499.76	138.71	4.603	
18,393.00	10,163.81	17,826.39	9,525.25	139.05	122.51	0.92	-8,538.66	2,115.24	638.66	498.61	140.05	4.560	
18,399.96	10,163.78	17,833.35	9,525.19	139.16	122.60	0.92	-8,545.44	2,116.81	638.69	498.53	140.16	4.557	
18,483.00	10,163.37	17,916.38	9,524.51	140.47	123.69	0.98	-8,626.34	2,135.53	638.98	497.57	141.41	4.519	
18,499.96	10,163.27	17,933.34	9,524.37	140.74	123.91	1.01	-8,642.86	2,139.35	639.02	497.36	141.66	4.511	
18,572.00	10,162.71	18,005.36	9,523.78	141.88	124.85	1.14	-8,713.02	2,155.59	639.08	496.33	142.75	4.477	
18,599.96	10,162.52	18,033.32	9,523.55	142.32	125.22	1.20	-8,740.26	2,161.89	639.13	495.96	143.17	4.464	
18,661.00	10,162.59	18,094.35	9,523.05	143.28	126.02	1.23	-8,799.72	2,175.65	639.71	495.62	144.09	4.440	
18,699.96	10,162.89	18,133.31	9,522.73	143.89	126.53	1.20	-8,837.67	2,184.43	640.32	495.64	144.68	4.426	
18,750.00	10,163.38	18,183.34	9,522.32	144.67	127.18	1.16	-8,886.41	2,195.71	641.22	495.79	145.43	4.409	
18,799.96	10,163.95	18,233.29	9,521.91	145.46	127.84	1.12	-8,935.07	2,206.97	642.19	496.01	146.17	4.393	
18,841.00	10,164.44	18,274.32	9,521.57	146.10	128.38	1.12	-8,975.04	2,216.22	643.01	496.22	146.79	4.380	
18,899.96	10,165.26	18,333.27	9,521.09	147.03	129.15	1.14	-9,032.47	2,229.51	644.32	496.64	147.68	4.363	
18,931.00	10,165.77	18,364.29	9,520.83	147.51	129.56	1.16	-9,062.70	2,236.50	645.10	496.95	148.15	4.354	
18,999.96	10,167.03	18,433.22	9,520.27	148.61	130.46	1.27	-9,129.85	2,252.04	646.94	497.74	149.20	4.336	
19,020.00	10,167.41	18,453.24	9,520.10	148.92	130.73	1.31	-9,149.35	2,256.55	647.50	497.99	149.51	4.331	
19,099.96	10,168.71	18,533.14	9,519.45	150.19	131.78	1.52	-9,227.20	2,274.56	649.52	498.79	150.73	4.309	

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 A H 8WC
Project:	Andrews County, TX (NAD83-TNC)	TVD Reference:	RKB @ 3050.00usft (Ensign T054)
Reference Site:	University 8-8	MD Reference:	RKB @ 3050.00usft (Ensign T054)
Site Error:	0.00	North Reference:	Grid
Reference Well:	University 8-8E A H 8WC	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00	Output errors are at	2.00 sigma
Reference Wellbore	OH / 72181	Database:	USAEDMDB
Reference Design:	Surveys (Ensign T054)	Offset TVD Reference:	Offset Datum

Offset Design University 8-8E A H 5LS - OH / 72180 - Plan 2 05-12-23												Offset Site Error:	0.00 usft
Survey Program: 15-MWD, 1973-MWD+HRGM+MS, 7481-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)		
19,109.00	10,168.83	18,542.17	9,519.37	150.34	131.90	1.54	-9,236.00	2,276.60	649.72	498.85	150.87	4.306	
19,200.00	10,169.80	18,633.13	9,518.63	151.78	133.09	1.73	-9,324.61	2,297.11	651.50	499.22	152.27	4.279	
19,291.00	10,170.57	18,724.12	9,517.88	153.21	134.29	1.74	-9,413.25	2,317.62	653.01	499.37	153.65	4.250	
19,299.96	10,170.65	18,733.08	9,517.81	153.35	134.40	1.73	-9,421.98	2,319.64	653.16	499.38	153.78	4.247	
19,382.00	10,170.96	18,815.10	9,517.13	154.63	135.48	1.63	-9,501.89	2,338.13	654.11	499.11	155.01	4.220	
19,399.96	10,170.96	18,833.06	9,516.99	154.91	135.72	1.61	-9,519.39	2,342.17	654.25	498.98	155.27	4.214	
19,471.00	10,171.01	18,904.09	9,516.40	156.02	136.65	1.55	-9,588.59	2,358.19	654.86	498.52	156.34	4.189	
19,499.96	10,171.03	18,933.05	9,516.17	156.47	137.04	1.54	-9,616.80	2,364.72	655.12	498.34	156.78	4.179	
19,560.00	10,170.97	18,993.09	9,515.67	157.42	137.83	1.53	-9,675.29	2,378.25	655.55	497.86	157.69	4.157	
19,599.96	10,170.86	19,033.05	9,515.35	158.04	138.35	1.53	-9,714.22	2,387.26	655.77	497.47	158.29	4.143	
19,650.00	10,170.64	19,083.09	9,514.94	158.83	139.01	1.52	-9,762.97	2,398.54	655.96	496.91	159.05	4.124	
19,699.96	10,170.27	19,133.05	9,514.53	159.61	139.67	1.50	-9,811.64	2,409.80	655.99	496.18	159.80	4.105	
19,740.00	10,169.81	19,173.09	9,514.20	160.24	140.20	1.46	-9,850.65	2,418.83	655.84	495.44	160.40	4.089	
19,799.96	10,168.91	19,233.04	9,513.71	161.17	140.99	1.39	-9,909.05	2,432.34	655.42	494.12	161.30	4.063	
19,829.00	10,168.41	19,262.07	9,513.47	161.62	141.37	1.36	-9,937.34	2,438.89	655.15	493.40	161.74	4.051	
19,899.96	10,167.15	19,333.02	9,512.89	162.73	142.31	1.26	-10,006.46	2,454.88	654.44	491.64	162.81	4.020	
19,919.00	10,166.82	19,352.06	9,512.73	163.03	142.56	1.24	-10,025.01	2,459.17	654.27	491.17	163.09	4.012	
19,999.96	10,165.24	19,433.01	9,512.07	164.29	143.62	1.14	-10,103.87	2,477.42	653.32	489.01	164.31	3.976	
20,008.00	10,165.06	19,441.05	9,512.00	164.41	143.73	1.13	-10,111.70	2,479.23	653.21	488.78	164.43	3.972	
20,097.00	10,162.72	19,530.02	9,511.27	165.80	144.90	1.03	-10,198.38	2,499.29	651.58	485.80	165.78	3.930	
20,099.96	10,162.63	19,532.98	9,511.25	165.85	144.94	1.02	-10,201.27	2,499.96	651.51	485.69	165.82	3.929	
20,187.00	10,159.39	19,619.98	9,510.53	167.20	146.09	0.94	-10,286.02	2,519.57	648.97	481.84	167.13	3.883	
20,199.96	10,158.85	19,632.93	9,510.43	167.41	146.26	0.93	-10,298.64	2,522.49	648.53	481.20	167.33	3.876	
20,276.00	10,156.70	19,708.95	9,509.80	168.60	147.27	0.90	-10,372.70	2,539.63	647.00	478.51	168.49	3.840	
20,299.96	10,156.30	19,732.91	9,509.61	168.98	147.58	0.90	-10,396.04	2,545.03	646.79	477.94	168.85	3.831	
20,366.00	10,155.12	19,798.95	9,509.06	170.02	148.45	0.95	-10,460.37	2,559.91	646.17	476.31	169.86	3.804	
20,399.96	10,154.69	19,832.90	9,508.78	170.55	148.90	1.00	-10,493.45	2,567.57	646.03	475.65	170.38	3.792	
20,456.00	10,154.88	19,888.93	9,508.33	171.44	149.64	1.04	-10,548.04	2,580.20	646.68	475.44	171.24	3.777	
20,499.96	10,155.52	19,932.88	9,507.96	172.13	150.22	1.05	-10,590.86	2,590.11	647.69	475.78	171.91	3.768	
20,547.00	10,156.36	19,979.91	9,507.58	172.87	150.85	1.04	-10,636.67	2,600.71	648.91	476.29	172.62	3.759	
20,599.96	10,157.47	20,032.84	9,507.14	173.70	151.55	1.02	-10,688.24	2,612.64	650.45	477.02	173.43	3.751	
20,638.00	10,158.35	20,070.86	9,506.83	174.29	152.05	1.00	-10,725.28	2,621.21	651.64	477.63	174.01	3.745	
20,699.96	10,159.75	20,132.79	9,506.32	175.26	152.87	0.97	-10,785.62	2,635.17	653.54	478.59	174.95	3.736	
20,728.00	10,160.32	20,160.82	9,506.09	175.70	153.24	0.96	-10,812.92	2,641.49	654.34	478.96	175.38	3.731	
20,799.96	10,161.78	20,232.75	9,505.50	176.84	154.19	0.95	-10,883.00	2,657.71	656.39	479.92	176.47	3.720	
20,819.00	10,162.18	20,251.78	9,505.35	177.13	154.44	0.96	-10,901.54	2,662.00	656.95	480.19	176.76	3.717	
20,863.00	10,163.13	20,294.20	9,505.00	177.83	155.00	1.00	-10,942.86	2,671.56	658.27	480.90	177.37	3.711	
20,899.96	10,163.93	20,294.20	9,505.00	178.41	155.00	1.00	-10,942.86	2,671.56	660.50	484.33	176.17	3.749	
20,943.00	10,164.86	20,294.20	9,505.00	179.10	155.00	1.00	-10,942.86	2,671.56	665.69	491.47	174.22	3.821	

Company:	Piedra Operating LLC	Local Co-ordinate Reference:	Well University 8-8E A H 8WC
Project:	Andrews County, TX (NAD83-TNC)	TVD Reference:	RKB @ 3050.00usft (Ensign T054)
Reference Site:	University 8-8	MD Reference:	RKB @ 3050.00usft (Ensign T054)
Site Error:	0.00	North Reference:	Grid
Reference Well:	University 8-8E A H 8WC	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00	Output errors are at	2.00 sigma
Reference Wellbore	OH / 72181	Database:	USAEDMDB
Reference Design:	Surveys (Ensign T054)	Offset TVD Reference:	Offset Datum

Offset Design University 8-8E A H 5LS - OH / 72180 - Surveys (Ensign T054)												Offset Site Error:	0.00 usft
Survey Program: 15-MWD, 1973-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	76.92	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	99.97	99.97	1.28	1.31	139.49	5.74	24.39	25.38	22.80	2.59	9.813	
177.00	176.99	176.93	176.93	1.90	1.90	140.69	5.94	24.49	26.38	22.59	3.79	6.958	
200.00	199.99	199.96	199.96	1.98	1.98	138.52	6.02	24.51	26.73	22.78	3.94	6.781	
268.00	267.98	268.05	268.05	2.21	2.20	104.90	6.20	24.43	27.10	22.73	4.38	6.194	
300.00	299.98	300.07	300.06	2.31	2.28	112.95	6.26	24.33	27.07	22.52	4.55	5.950	
319.15	319.13	319.22	319.22	2.36	2.33	115.95	6.28	24.26	27.07	22.41	4.65	5.815	
357.00	356.98	357.09	357.08	2.48	2.43	120.11	6.27	24.12	27.09	22.23	4.86	5.571	
400.00	399.98	400.06	400.05	2.60	2.54	103.21	6.23	23.99	27.10	22.03	5.07	5.341	
444.00	443.98	444.03	444.03	2.73	2.64	87.58	6.17	23.89	27.04	21.75	5.29	5.109	
500.00	499.97	500.11	500.11	2.89	2.77	99.58	6.07	23.71	26.89	21.33	5.56	4.834	
533.00	532.97	533.15	533.15	2.98	2.85	105.63	6.00	23.52	26.79	21.07	5.72	4.680	
600.00	599.96	600.04	600.04	3.16	3.01	81.83	5.90	23.21	26.54	20.51	6.03	4.399	
621.00	620.96	621.01	621.01	3.21	3.07	72.04	5.89	23.16	26.45	20.31	6.13	4.314	
700.00	699.96	700.12	700.11	3.42	3.25	102.32	5.77	22.88	26.10	19.62	6.48	4.029	
710.00	709.96	710.13	710.13	3.44	3.27	107.48	5.74	22.82	26.06	19.54	6.52	3.995	
799.00	798.96	799.03	799.02	3.67	3.47	89.04	5.41	22.42	25.75	18.84	6.91	3.728	
800.00	799.96	800.02	800.02	3.67	3.47	89.07	5.41	22.42	25.74	18.83	6.91	3.725	
890.00	889.95	890.02	890.01	3.89	3.66	59.88	5.08	22.22	25.30	18.04	7.26	3.485	
900.00	899.95	900.01	900.01	3.91	3.68	61.90	5.06	22.19	25.23	17.93	7.30	3.458	
977.00	976.95	977.02	977.01	4.08	3.83	75.06	5.11	22.02	24.72	17.15	7.58	3.263	
1,000.00	999.94	1,000.01	1,000.01	4.14	3.87	76.41	5.17	21.97	24.59	16.94	7.66	3.212	
1,062.00	1,061.94	1,062.01	1,062.00	4.28	3.99	80.66	5.14	21.81	24.28	16.41	7.88	3.083	
1,093.57	1,093.51	1,093.59	1,093.58	4.36	4.05	104.02	5.03	21.72	24.21	16.22	7.99	3.030	
1,100.00	1,099.94	1,100.01	1,100.01	4.37	4.06	109.00	5.01	21.69	24.22	16.20	8.02	3.021	
1,148.00	1,147.94	1,148.03	1,148.02	4.49	4.16	141.05	4.85	21.51	24.41	16.22	8.19	2.979	
1,200.00	1,199.93	1,200.04	1,200.03	4.61	4.39	144.61	4.69	21.27	24.72	16.19	8.53	2.897	
1,238.00	1,237.93	1,238.06	1,238.05	4.70	4.58	148.04	4.57	21.07	24.85	16.05	8.80	2.824	
1,300.00	1,299.93	1,300.07	1,300.06	4.84	4.90	153.35	4.37	20.69	24.94	15.71	9.23	2.703	
1,324.00	1,323.93	1,324.09	1,324.07	4.89	5.02	155.96	4.30	20.53	24.95	15.55	9.40	2.655	
1,400.00	1,399.92	1,400.14	1,400.12	5.05	5.21	156.48	4.10	19.94	24.90	15.17	9.73	2.558	
1,412.00	1,411.93	1,412.15	1,412.13	5.08	5.23	156.59	4.07	19.83	24.88	15.10	9.78	2.544	
1,460.28	1,460.20	1,460.37	1,460.35	5.19	5.33	143.65	3.96	19.40	24.82	14.86	9.96	2.491	
1,500.00	1,499.92	1,500.00	1,499.99	5.28	5.40	133.29	3.77	19.16	24.88	14.76	10.11	2.460	
1,600.00	1,599.92	1,600.01	1,599.99	5.71	5.59	168.83	3.24	18.76	25.33	14.61	10.72	2.362	
1,675.00	1,674.92	1,675.03	1,675.01	6.04	5.73	-170.42	3.01	18.40	25.71	14.53	11.18	2.299	
1,700.00	1,699.91	1,700.03	1,700.01	6.08	5.78	-170.65	2.93	18.27	25.83	14.57	11.27	2.292	
1,765.00	1,764.92	1,765.04	1,765.01	6.19	5.91	-171.97	2.73	17.93	26.03	14.53	11.50	2.263	
1,800.00	1,799.91	1,800.08	1,800.06	6.26	5.97	-163.90	2.63	17.73	26.06	14.43	11.63	2.241	
1,884.00	1,883.91	1,884.22	1,884.19	6.42	6.12	-140.20	2.45	16.70	25.54	13.60	11.94	2.140	
1,900.00	1,899.91	1,900.20	1,900.16	6.43	6.14	-92.89	2.39	16.49	25.40	13.41	11.99	2.119	
1,973.00	1,972.91	1,973.00	1,972.96	6.51	6.28	-49.45	1.98	15.66	24.29	12.06	12.24	1.986	
2,000.00	1,999.89	2,000.00	1,999.96	6.56	6.34	-45.67	1.74	15.42	23.66	11.33	12.33	1.919	
2,064.00	2,063.82	2,063.77	2,063.72	6.70	6.49	-44.90	0.74	15.09	21.52	8.98	12.54	1.716	
2,100.00	2,099.74	2,099.54	2,099.48	6.74	6.55	-44.51	-0.18	15.10	20.20	7.60	12.60	1.603	

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 A H 8WC
Project:	Andrews County, TX (NAD83-TNC)	TVD Reference:	RKB @ 3050.00usft (Ensign T054)
Reference Site:	University 8-8	MD Reference:	RKB @ 3050.00usft (Ensign T054)
Site Error:	0.00	North Reference:	Grid
Reference Well:	University 8-8E A H 8WC	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00	Output errors are at	2.00 sigma
Reference Wellbore	OH / 72181	Database:	USAEDMDB
Reference Design:	Surveys (Ensign T054)	Offset TVD Reference:	Offset Datum

Offset Design University 8-8E A H 5LS - OH / 72180 - Surveys (Ensign T054)												Offset Site Error:	0.00 usft
Survey Program: 15-MWD, 1973-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)		
2,153.00	2,152.62	2,152.26	2,152.16	6.81	6.64	-43.13	-2.27	15.50	18.61	5.92	12.68	1.467	Level 3
2,200.00	2,199.49	2,199.21	2,199.05	6.88	6.73	-39.84	-4.53	16.10	17.15	4.38	12.77	1.343	Level 3
2,243.00	2,242.34	2,242.16	2,241.94	6.94	6.81	-38.15	-6.62	16.69	15.43	2.58	12.85	1.201	Level 2
2,300.00	2,299.11	2,299.01	2,298.70	7.02	6.91	-41.96	-9.57	17.67	13.21	0.25	12.97	1.019	Level 2
2,332.00	2,331.00	2,330.94	2,330.58	7.07	6.97	-43.93	-11.39	18.37	12.23	-0.80	13.03	0.939	Level 1
2,386.00	2,384.79	2,384.90	2,384.43	7.14	7.07	-53.65	-14.54	19.70	10.96	-2.17	13.14	0.834	Level 1
2,400.00	2,398.73	2,398.89	2,398.39	7.18	7.10	-55.52	-15.34	20.06	10.70	-2.49	13.19	0.812	Level 1
2,500.00	2,498.33	2,498.84	2,498.15	7.49	7.31	-73.04	-21.05	22.74	9.41	-4.20	13.61	0.691	Level 1
2,536.30	2,534.47	2,535.11	2,534.33	7.60	7.39	-80.88	-23.11	23.74	9.24	-4.54	13.79	0.671	Level 1 , CC
2,542.00	2,540.15	2,540.80	2,540.02	7.62	7.40	-82.15	-23.44	23.91	9.25	-4.57	13.82	0.669	Level 1 , ES, SI
2,599.99	2,597.84	2,598.66	2,597.75	7.73	7.53	-112.15	-26.68	25.86	10.74	-3.36	14.10	0.762	Level 1
2,606.00	2,603.80	2,604.65	2,603.72	7.74	7.54	-114.82	-27.01	26.09	11.06	-3.07	14.14	0.783	Level 1
2,697.00	2,694.12	2,695.29	2,694.14	7.93	7.74	-129.93	-32.12	29.97	17.40	2.81	14.59	1.192	Level 2
2,699.99	2,697.09	2,698.27	2,697.12	7.94	7.74	-129.96	-32.29	30.11	17.64	3.04	14.60	1.208	Level 2
2,787.00	2,783.42	2,785.01	2,783.61	8.13	7.94	-128.79	-37.22	34.21	24.14	9.12	15.02	1.607	
2,799.99	2,796.32	2,797.97	2,796.55	8.16	7.97	-128.42	-37.96	34.82	25.01	9.92	15.08	1.658	
2,876.00	2,871.84	2,873.89	2,872.26	8.34	8.16	-124.80	-42.28	38.32	29.27	13.82	15.45	1.895	
2,899.99	2,895.70	2,897.84	2,896.14	8.40	8.22	-125.51	-43.64	39.40	30.41	14.85	15.56	1.954	
2,967.00	2,962.31	2,964.68	2,962.80	8.57	8.39	-127.27	-47.40	42.52	33.75	17.85	15.90	2.123	
2,999.99	2,995.12	2,997.59	2,995.63	8.66	8.48	-127.02	-49.21	44.10	35.39	19.34	16.06	2.204	
3,056.00	3,050.85	3,053.47	3,051.36	8.80	8.63	-125.94	-52.22	46.82	37.95	21.63	16.32	2.325	
3,099.99	3,094.66	3,097.43	3,095.20	8.92	8.75	-123.77	-54.55	48.99	39.66	23.14	16.52	2.400	
3,146.00	3,140.51	3,143.41	3,141.06	9.04	8.87	-120.56	-56.97	51.23	41.05	24.33	16.72	2.455	
3,199.99	3,194.34	3,197.29	3,194.81	9.18	9.03	-120.79	-59.75	53.89	42.52	25.57	16.95	2.509	
3,236.00	3,230.24	3,233.22	3,230.65	9.28	9.13	-120.94	-61.57	55.71	43.60	26.50	17.10	2.550	
3,299.99	3,294.05	3,297.11	3,294.38	9.45	9.31	-121.57	-64.68	58.98	45.55	28.19	17.36	2.624	
3,326.00	3,319.99	3,323.08	3,320.28	9.52	9.38	-121.79	-65.91	60.30	46.33	28.87	17.46	2.654	
3,399.99	3,393.83	3,397.09	3,394.11	9.72	9.60	-119.26	-69.44	64.08	48.34	30.60	17.73	2.726	
3,416.00	3,409.81	3,413.10	3,410.09	9.76	9.64	-118.62	-70.22	64.90	48.72	30.93	17.79	2.739	
3,499.99	3,493.65	3,497.12	3,493.88	9.99	9.90	-115.09	-74.46	69.28	50.56	32.49	18.07	2.798	
3,507.00	3,500.64	3,504.13	3,500.87	10.01	9.92	-114.79	-74.83	69.66	50.71	32.62	18.09	2.803	
3,597.00	3,590.48	3,594.53	3,591.01	10.25	10.20	-111.45	-79.91	74.32	52.17	33.79	18.38	2.839	
3,599.99	3,593.47	3,597.54	3,594.01	10.26	10.21	-111.38	-80.10	74.47	52.21	33.82	18.39	2.839	
3,686.00	3,679.32	3,684.19	3,680.37	10.50	10.49	-110.01	-85.92	78.54	52.73	34.08	18.65	2.827	
3,699.99	3,693.29	3,698.20	3,694.33	10.54	10.53	-109.35	-86.95	79.15	52.74	34.05	18.69	2.821	
3,776.00	3,769.16	3,774.25	3,770.10	10.75	10.78	-105.77	-92.55	82.42	52.69	33.77	18.92	2.785	
3,799.99	3,793.11	3,798.19	3,793.95	10.82	10.86	-105.34	-94.31	83.43	52.67	33.68	18.99	2.774	
3,802.48	3,795.60	3,800.67	3,796.42	10.83	10.87	-105.26	-94.49	83.54	52.67	33.67	18.99	2.773	
3,865.00	3,858.01	3,863.04	3,858.57	11.01	11.07	-104.17	-99.00	86.27	52.79	33.62	19.17	2.753	
3,899.99	3,892.94	3,898.00	3,893.41	11.11	11.18	-102.25	-101.49	87.83	52.92	33.65	19.27	2.746	
3,954.00	3,946.86	3,951.97	3,947.18	11.26	11.36	-99.11	-105.29	90.24	53.09	33.67	19.42	2.734	
3,999.99	3,992.78	3,997.91	3,992.96	11.39	11.51	-97.75	-108.51	92.30	53.24	33.70	19.54	2.725	
4,044.00	4,036.71	4,041.86	4,036.77	11.52	11.66	-96.51	-111.56	94.29	53.46	33.79	19.66	2.718	
4,099.99	4,092.62	4,097.71	4,092.43	11.68	11.85	-95.42	-115.36	96.87	53.85	34.03	19.82	2.717	
4,134.00	4,126.57	4,131.63	4,126.24	11.78	11.96	-94.79	-117.59	98.45	54.18	34.26	19.92	2.720	

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 A H 8WC
Project:	Andrews County, TX (NAD83-TNC)	TVD Reference:	RKB @ 3050.00usft (Ensign T054)
Reference Site:	University 8-8	MD Reference:	RKB @ 3050.00usft (Ensign T054)
Site Error:	0.00	North Reference:	Grid
Reference Well:	University 8-8E A H 8WC	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00	Output errors are at	2.00 sigma
Reference Wellbore	OH / 72181	Database:	USAEDMDB
Reference Design:	Surveys (Ensign T054)	Offset TVD Reference:	Offset Datum

Offset Design University 8-8E A H 5LS - OH / 72180 - Surveys (Ensign T054)												Offset Site Error:	0.00 usft
Survey Program: 15-MWD, 1973-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)		
4,199.99	4,192.46	4,197.49	4,191.89	11.97	12.18	-92.79	-121.79	101.59	54.97	34.86	20.11	2.733	
4,223.00	4,215.44	4,220.46	4,214.78	12.04	12.25	-92.11	-123.23	102.70	55.28	35.10	20.18	2.739	
4,299.99	4,292.32	4,297.37	4,291.47	12.27	12.51	-87.94	-127.93	106.43	56.32	35.91	20.42	2.759	
4,312.00	4,304.31	4,309.37	4,303.43	12.30	12.55	-87.30	-128.64	107.01	56.48	36.03	20.46	2.761	
4,399.99	4,392.18	4,397.23	4,391.04	12.56	12.84	-88.07	-133.68	111.24	57.84	37.10	20.75	2.788	
4,402.00	4,394.18	4,399.24	4,393.04	12.57	12.85	-88.09	-133.79	111.34	57.88	37.12	20.76	2.789	
4,491.00	4,483.07	4,488.14	4,481.70	12.83	13.15	-84.29	-138.61	115.64	59.48	38.42	21.06	2.824	
4,499.99	4,492.05	4,497.11	4,490.66	12.86	13.18	-83.98	-139.09	116.08	59.65	38.55	21.09	2.828	
4,583.00	4,574.95	4,579.98	4,573.31	13.10	13.46	-81.37	-143.40	120.16	61.20	39.81	21.39	2.861	
4,599.99	4,591.92	4,596.99	4,590.28	13.15	13.52	-80.55	-144.26	121.01	61.52	40.07	21.46	2.867	
4,673.00	4,664.84	4,670.12	4,663.20	13.37	13.77	-76.65	-148.36	124.68	62.73	41.00	21.73	2.887	
4,699.99	4,691.80	4,697.20	4,690.20	13.45	13.86	-76.02	-150.00	126.04	63.11	41.28	21.83	2.891	
4,764.00	4,755.73	4,761.46	4,754.25	13.64	14.08	-74.41	-154.08	129.10	63.87	41.79	22.08	2.893	
4,799.99	4,791.68	4,797.41	4,790.09	13.74	14.21	-72.55	-156.41	130.75	64.25	42.02	22.23	2.890	
4,855.00	4,846.63	4,852.34	4,844.85	13.90	14.40	-69.80	-159.91	133.29	64.85	42.39	22.46	2.887	
4,899.99	4,891.57	4,897.33	4,889.70	14.04	14.55	-69.96	-162.73	135.37	65.38	42.72	22.66	2.886	
4,943.00	4,934.53	4,940.34	4,932.59	14.16	14.70	-70.18	-165.41	137.34	65.96	43.11	22.85	2.886	
4,999.99	4,991.47	4,997.41	4,989.50	14.33	14.90	-67.79	-168.87	139.87	66.74	43.62	23.12	2.886	
5,033.00	5,024.45	5,030.48	5,022.48	14.42	15.01	-66.42	-170.79	141.27	67.17	43.88	23.28	2.885	
5,099.99	5,091.38	5,097.46	5,089.29	14.62	15.24	-64.18	-174.58	144.04	68.01	44.39	23.62	2.880	
5,122.00	5,113.37	5,119.46	5,111.24	14.68	15.32	-63.44	-175.83	144.95	68.29	44.56	23.73	2.878	
5,199.99	5,191.30	5,197.28	5,188.86	14.91	15.59	-64.89	-180.36	148.25	69.51	45.36	24.15	2.879	
5,212.00	5,203.30	5,209.26	5,200.80	14.94	15.63	-65.12	-181.09	148.77	69.74	45.52	24.21	2.880	
5,299.99	5,291.21	5,297.10	5,288.40	15.20	15.94	-57.38	-186.37	152.70	71.30	46.59	24.72	2.885	
5,303.00	5,294.22	5,300.11	5,291.40	15.21	15.95	-57.14	-186.55	152.84	71.35	46.62	24.73	2.885	
5,394.00	5,385.13	5,391.42	5,382.45	15.48	16.27	-55.66	-192.19	156.78	72.58	47.29	25.29	2.870	
5,399.99	5,391.11	5,397.41	5,388.42	15.50	16.29	-55.42	-192.57	157.03	72.64	47.31	25.33	2.868	
5,484.00	5,475.02	5,481.39	5,472.15	15.75	16.59	-52.30	-198.06	160.45	73.42	47.56	25.86	2.839	
5,499.99	5,490.99	5,497.38	5,488.10	15.80	16.64	-52.35	-199.11	161.10	73.55	47.58	25.97	2.832	
5,573.00	5,563.91	5,570.42	5,560.92	16.02	16.90	-52.61	-203.98	164.04	74.21	47.76	26.46	2.805	
5,599.99	5,590.86	5,597.40	5,587.81	16.10	16.99	-52.96	-205.79	165.12	74.49	47.86	26.64	2.797	
5,662.00	5,652.80	5,659.37	5,649.59	16.30	17.21	-53.86	-209.96	167.60	75.28	48.21	27.06	2.781	
5,699.99	5,690.74	5,697.29	5,687.39	16.41	17.35	-54.06	-212.53	169.13	75.83	48.50	27.33	2.775	
5,752.00	5,742.69	5,749.20	5,739.14	16.58	17.53	-54.32	-216.07	171.27	76.63	48.94	27.68	2.768	
5,799.99	5,790.61	5,797.25	5,787.04	16.73	17.70	-51.08	-219.39	173.24	77.33	49.31	28.02	2.760	
5,841.00	5,831.56	5,838.33	5,827.98	16.86	17.84	-48.31	-222.25	174.89	77.82	49.50	28.32	2.748	
5,899.99	5,890.47	5,897.82	5,887.29	17.04	18.05	-46.96	-226.38	177.04	78.30	49.54	28.76	2.723	
5,932.00	5,922.44	5,930.12	5,919.49	17.14	18.17	-46.21	-228.59	178.04	78.42	49.42	29.00	2.704	
5,999.99	5,990.34	5,998.94	5,988.14	17.36	18.41	-52.26	-233.14	179.69	78.37	48.87	29.50	2.656	
6,022.00	6,012.32	6,021.22	6,010.38	17.43	18.49	-54.24	-234.55	180.07	78.26	48.61	29.66	2.639	
6,099.99	6,090.19	6,099.44	6,088.44	17.68	18.76	-56.57	-239.24	181.18	77.65	47.49	30.15	2.575	
6,113.00	6,103.18	6,112.49	6,101.47	17.72	18.80	-56.96	-239.99	181.35	77.52	47.28	30.23	2.564	
6,199.99	6,190.02	6,200.11	6,188.99	18.01	19.11	-56.00	-244.16	182.23	76.27	45.59	30.68	2.486	
6,202.00	6,192.03	6,202.13	6,191.01	18.01	19.12	-55.99	-244.23	182.24	76.24	45.55	30.69	2.484	
6,292.00	6,281.89	6,292.12	6,280.93	18.31	19.43	-55.41	-247.69	182.89	74.60	43.49	31.11	2.398	
6,299.99	6,289.86	6,300.12	6,288.92	18.33	19.46	-55.51	-248.00	182.95	74.46	43.31	31.15	2.390	

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 A H 8WC
Project:	Andrews County, TX (NAD83-TNC)	TVD Reference:	RKB @ 3050.00usft (Ensign T054)
Reference Site:	University 8-8	MD Reference:	RKB @ 3050.00usft (Ensign T054)
Site Error:	0.00	North Reference:	Grid
Reference Well:	University 8-8E A H 8WC	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00	Output errors are at	2.00 sigma
Reference Wellbore	OH / 72181	Database:	USAEDMDB
Reference Design:	Surveys (Ensign T054)	Offset TVD Reference:	Offset Datum

Offset Design University 8-8E A H 5LS - OH / 72180 - Surveys (Ensign T054)												Offset Site Error:	0.00 usft
Survey Program: 15-MWD, 1973-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)		
6,381.00	6,370.76	6,381.19	6,369.94	18.60	19.74	-56.48	-251.12	183.46	72.96	41.43	31.53	2.314	
6,399.99	6,389.72	6,400.18	6,388.91	18.66	19.80	-57.12	-251.84	183.58	72.62	41.00	31.62	2.297	
6,470.00	6,459.63	6,470.19	6,458.86	18.88	20.04	-59.58	-254.46	183.99	71.43	39.49	31.94	2.236	
6,499.99	6,489.58	6,500.14	6,488.80	18.98	20.15	-59.11	-255.57	184.17	70.96	38.89	32.07	2.212	
6,559.00	6,548.51	6,559.09	6,547.71	19.17	20.35	-58.06	-257.73	184.57	70.05	37.71	32.34	2.166	
6,599.99	6,589.45	6,600.14	6,588.72	19.30	20.49	-58.07	-259.23	184.84	69.42	36.88	32.54	2.133	
6,651.00	6,640.40	6,651.22	6,639.77	19.47	20.67	-58.05	-261.10	185.13	68.58	35.80	32.78	2.092	
6,699.99	6,689.33	6,700.18	6,688.70	19.62	20.84	-59.34	-262.87	185.39	67.79	34.78	33.01	2.054	
6,740.00	6,729.30	6,740.18	6,728.67	19.75	20.98	-60.43	-264.30	185.61	67.20	34.00	33.20	2.024	
6,799.99	6,789.21	6,800.11	6,788.57	19.94	21.18	-59.92	-266.44	185.96	66.35	32.88	33.48	1.982	
6,830.00	6,819.19	6,830.10	6,818.54	20.04	21.29	-59.65	-267.51	186.16	65.93	32.32	33.62	1.961	
6,899.99	6,889.11	6,900.13	6,888.52	20.26	21.53	-60.17	-269.98	186.59	64.97	31.03	33.95	1.914	
6,919.00	6,908.10	6,919.16	6,907.54	20.32	21.60	-60.30	-270.64	186.70	64.72	30.68	34.04	1.901	
6,999.99	6,989.01	7,000.11	6,988.44	20.57	21.88	-62.38	-273.36	187.18	63.71	29.31	34.41	1.852	
7,009.00	6,998.01	7,009.12	6,997.45	20.60	21.91	-62.63	-273.66	187.24	63.61	29.16	34.45	1.847	
7,099.00	7,087.94	7,099.16	7,087.44	20.88	22.22	-65.12	-276.49	187.78	62.73	27.88	34.85	1.800	
7,099.99	7,088.92	7,100.15	7,088.43	20.89	22.22	-65.12	-276.52	187.79	62.72	27.87	34.85	1.800	
7,188.00	7,176.87	7,188.20	7,176.44	21.15	22.53	-69.25	-279.18	188.26	62.06	26.82	35.23	1.761	
7,199.99	7,188.85	7,200.21	7,188.45	21.19	22.57	-69.03	-279.54	188.32	61.97	26.69	35.29	1.756	
7,278.00	7,266.81	7,278.40	7,266.59	21.42	22.84	-67.37	-281.84	188.57	61.31	25.68	35.63	1.721	
7,299.99	7,288.78	7,300.42	7,288.61	21.49	22.92	-69.92	-282.47	188.60	61.11	25.38	35.73	1.710	
7,368.00	7,356.76	7,368.55	7,356.71	21.69	23.15	-78.86	-284.34	188.63	60.63	24.61	36.03	1.683	
7,399.99	7,388.73	7,400.57	7,388.72	21.77	23.26	-81.26	-285.19	188.60	60.48	24.32	36.16	1.672	
7,473.00	7,461.71	7,473.78	7,461.91	21.98	23.50	-87.01	-287.17	188.44	60.20	23.72	36.48	1.650	
7,480.50	7,469.21	7,481.00	7,469.12	22.00	23.53	-87.32	-287.37	188.41	60.16	23.65	36.51	1.648	
7,499.99	7,488.69	7,481.00	7,469.12	22.06	23.53	-88.08	-287.37	188.41	63.24	27.42	35.82	1.765	
7,597.00	7,585.66	7,481.00	7,469.12	22.33	23.53	-91.75	-287.37	188.41	131.18	103.03	28.15	4.660	
7,599.98	7,588.64	7,481.00	7,469.12	22.33	23.53	-91.75	-287.37	188.41	133.84	105.81	28.04	4.774	
7,686.00	7,674.62	7,481.00	7,469.12	22.55	23.53	-95.32	-287.37	188.41	214.25	187.89	26.37	8.126	
7,699.98	7,688.60	7,481.00	7,469.12	22.59	23.53	-94.42	-287.37	188.41	227.71	201.46	26.25	8.674	
7,776.00	7,764.60	7,481.00	7,469.12	22.77	23.53	-56.00	-287.37	188.41	301.66	275.73	25.92	11.636	
7,799.98	7,788.58	7,481.00	7,469.12	22.82	23.53	-45.06	-287.37	188.41	325.16	299.28	25.88	12.562	
7,866.00	7,854.59	7,481.00	7,469.12	22.97	23.53	-34.47	-287.37	188.41	390.07	364.22	25.85	15.092	
7,899.98	7,888.56	7,481.00	7,469.12	23.05	23.53	-31.87	-287.37	188.41	423.58	397.73	25.86	16.382	
7,955.00	7,943.56	7,481.00	7,469.12	23.18	23.53	-28.45	-287.37	188.41	477.95	452.05	25.90	18.452	
7,999.98	7,988.53	7,481.00	7,469.12	23.30	23.53	-35.27	-287.37	188.41	522.51	496.55	25.96	20.128	
8,046.00	8,034.53	7,481.00	7,469.12	23.41	23.53	-44.21	-287.37	188.41	568.19	542.15	26.03	21.827	
8,099.98	8,088.50	7,481.00	7,469.12	23.55	23.53	-43.20	-287.37	188.41	621.85	595.72	26.13	23.799	
8,135.00	8,123.50	7,481.00	7,469.12	23.64	23.53	-42.57	-287.37	188.41	656.68	630.48	26.20	25.067	
8,199.98	8,188.47	7,481.00	7,469.12	23.80	23.53	-81.89	-287.37	188.41	721.41	695.08	26.33	27.395	
8,224.00	8,212.48	7,481.00	7,469.12	23.86	23.53	-99.11	-287.37	188.41	745.37	718.98	26.39	28.248	
8,299.98	8,288.46	7,481.00	7,469.12	24.03	23.53	-94.22	-287.37	188.41	821.19	794.62	26.56	30.917	
8,314.00	8,302.47	7,481.00	7,469.12	24.06	23.53	-93.15	-287.37	188.41	835.17	808.58	26.59	31.405	
8,399.98	8,388.44	7,481.00	7,469.12	24.22	23.53	-122.02	-287.37	188.41	921.01	894.21	26.80	34.366	
8,403.00	8,391.46	7,481.00	7,469.12	24.23	23.53	-123.32	-287.37	188.41	924.02	897.22	26.81	34.469	

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 A H 8WC
Project:	Andrews County, TX (NAD83-TNC)	TVD Reference:	RKB @ 3050.00usft (Ensign T054)
Reference Site:	University 8-8	MD Reference:	RKB @ 3050.00usft (Ensign T054)
Site Error:	0.00	North Reference:	Grid
Reference Well:	University 8-8E A H 8WC	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00	Output errors are at	2.00 sigma
Reference Wellbore	OH / 72181	Database:	USAEDMDB
Reference Design:	Surveys (Ensign T054)	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.00 usft
University 8-8E B H 9WC - OH / 72263 - Plan 1 03-16-23												Offset Well Error:	1.00 usft
Survey Program: 15-MWD, 1685-MWD+HRGM+MS													
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
20,863.00	10,163.13	20,920.60	10,164.00	177.83	155.99	89.89	-11,241.94	1,386.08	1,331.37	997.57	333.80	3.989	CC, ES
20,899.96	10,163.93	20,920.60	10,164.00	178.41	155.99	89.89	-11,241.94	1,386.08	1,332.64	998.46	334.18	3.988	SF
20,943.00	10,164.86	20,920.60	10,164.00	179.10	155.99	89.89	-11,241.94	1,386.08	1,335.41	1,001.09	334.32	3.994	

Company:	Piedra Operating LLC	Local Co-ordinate Reference:	Well University 8-8E A H 8WC
Project:	Andrews County, TX (NAD83-TNC)	TVD Reference:	RKB @ 3050.00usft (Ensign T054)
Reference Site:	University 8-8	MD Reference:	RKB @ 3050.00usft (Ensign T054)
Site Error:	0.00	North Reference:	Grid
Reference Well:	University 8-8E A H 8WC	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00	Output errors are at	2.00 sigma
Reference Wellbore	OH / 72181	Database:	USAEDMDB
Reference Design:	Surveys (Ensign T054)	Offset TVD Reference:	Offset Datum

Offset Design University 8-8E H 1MS - OH / 71371 - Surveys (Ensign 225)												Offset Site Error:	0.00 usft
Survey Program: 15-MWD, 1920-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	76.97	174.69	754.90	774.85				
15.00	15.00	13.00	13.00	1.00	1.00	76.97	174.69	754.90	774.85				
100.00	100.00	97.37	97.37	1.28	1.40	139.08	174.68	754.94	775.20	772.53	2.67	289.874	
177.00	176.99	173.77	173.77	1.90	2.13	139.13	174.65	755.04	776.15	772.12	4.03	192.816	
200.00	199.99	196.59	196.59	1.98	2.37	136.58	174.63	755.08	776.48	772.14	4.34	178.858	
268.00	267.98	264.71	264.71	2.21	2.92	102.39	174.54	755.23	777.02	771.91	5.11	152.053	
300.00	299.98	296.86	296.86	2.31	3.16	110.27	174.45	755.30	777.12	771.68	5.43	143.078	
357.00	356.98	354.13	354.13	2.48	3.58	116.70	174.18	755.43	777.38	771.37	6.01	129.355	
400.00	399.98	397.33	397.33	2.60	3.90	98.98	173.91	755.54	777.55	771.12	6.43	120.868	
444.00	443.98	441.80	441.79	2.73	4.06	82.35	173.64	755.63	777.58	770.88	6.70	116.141	
500.00	499.97	498.47	498.47	2.89	4.21	92.88	173.48	755.65	777.54	770.57	6.97	111.486	
501.13	501.11	499.62	499.61	2.89	4.21	92.88	173.48	755.65	777.54	770.56	6.98	111.395	
533.00	532.97	531.87	531.87	2.98	4.30	98.00	173.49	755.62	777.55	770.41	7.14	108.910	
600.00	599.96	597.70	597.70	3.16	4.39	72.45	173.54	755.58	777.48	770.11	7.37	105.452	
621.00	620.96	618.32	618.31	3.21	4.42	62.20	173.52	755.59	777.41	769.97	7.45	104.416	
700.00	699.96	700.17	700.17	3.42	4.54	90.88	173.34	755.56	777.16	769.44	7.72	100.708	
710.00	709.96	710.55	710.55	3.44	4.55	95.84	173.30	755.53	777.13	769.38	7.75	100.256	
799.00	798.96	797.00	797.00	3.67	4.66	75.25	173.18	755.37	776.88	768.85	8.04	96.681	
800.00	799.96	797.00	797.00	3.67	4.66	75.25	173.18	755.37	776.88	768.85	8.04	96.659	
890.00	889.95	885.17	885.17	3.89	4.76	43.55	173.38	755.45	776.55	768.24	8.31	93.412	
900.00	899.95	894.96	894.95	3.91	4.77	45.31	173.42	755.48	776.51	768.17	8.34	93.073	
977.00	976.95	970.32	970.32	4.08	4.87	56.62	173.53	755.83	776.31	767.74	8.57	90.552	
1,000.00	999.94	993.83	993.82	4.14	4.90	57.45	173.54	755.96	776.28	767.64	8.64	89.812	
1,062.00	1,061.94	1,057.20	1,057.19	4.28	4.99	59.84	173.69	756.22	776.15	767.32	8.83	87.873	
1,079.00	1,078.94	1,074.10	1,074.09	4.32	5.01	71.38	173.75	756.27	776.13	767.25	8.88	87.375	
1,100.00	1,099.94	1,094.94	1,094.94	4.37	5.04	86.83	173.85	756.33	776.16	767.22	8.94	86.776	
1,148.00	1,147.94	1,142.60	1,142.59	4.49	5.10	117.36	174.14	756.46	776.50	767.41	9.09	85.467	
1,200.00	1,199.93	1,201.04	1,201.03	4.61	5.16	119.54	174.44	756.42	776.82	767.58	9.24	84.079	
1,238.00	1,237.93	1,242.61	1,242.60	4.70	5.20	122.15	174.52	756.11	776.74	767.39	9.35	83.100	
1,300.00	1,299.93	1,303.81	1,303.80	4.84	5.26	126.32	174.36	755.64	776.50	766.99	9.50	81.704	
1,324.00	1,323.93	1,327.68	1,327.66	4.89	5.30	128.53	174.20	755.49	776.41	766.83	9.58	81.027	
1,400.00	1,399.92	1,404.61	1,404.59	5.05	5.59	127.81	173.68	754.97	776.13	766.14	9.98	77.734	
1,412.00	1,411.93	1,416.76	1,416.74	5.08	5.63	127.72	173.60	754.88	776.08	766.03	10.05	77.238	
1,500.00	1,499.92	1,505.98	1,505.96	5.28	5.96	102.48	173.06	754.13	775.52	765.02	10.50	73.827	
1,600.00	1,599.92	1,608.61	1,608.58	5.71	6.07	135.86	172.11	752.89	774.50	763.47	11.02	70.266	
1,656.89	1,656.80	1,660.84	1,660.80	5.96	6.13	151.74	171.51	752.44	774.26	762.94	11.32	68.408	
1,675.00	1,674.92	1,678.04	1,678.00	6.04	6.15	155.91	171.31	752.36	774.29	762.87	11.41	67.841	
1,700.00	1,699.91	1,704.78	1,704.73	6.08	6.19	155.52	170.98	752.22	774.29	762.81	11.48	67.442	
1,765.00	1,764.92	1,772.82	1,772.77	6.19	6.28	153.73	169.98	751.63	773.94	762.29	11.65	66.410	
1,800.00	1,799.91	1,805.34	1,805.29	6.26	6.32	161.54	169.55	751.35	773.72	761.96	11.75	65.826	
1,884.00	1,883.91	1,889.77	1,889.70	6.42	6.38	-175.59	168.81	750.81	773.44	761.47	11.98	64.579	
1,900.00	1,899.91	1,906.86	1,906.80	6.43	6.39	-128.43	168.67	750.65	773.33	761.32	12.02	64.357	
1,973.00	1,972.91	1,977.88	1,977.81	6.51	6.48	-84.77	167.73	750.05	772.58	760.29	12.29	62.871	
2,000.00	1,999.89	2,003.62	2,003.54	6.56	6.54	-80.45	167.09	749.97	772.26	759.88	12.38	62.404	
2,064.00	2,063.82	2,066.82	2,066.68	6.70	6.75	-76.89	164.47	750.09	771.20	758.61	12.59	61.266	
2,100.00	2,099.74	2,102.61	2,102.39	6.74	6.91	-74.44	162.12	750.35	770.41	757.70	12.71	60.615	

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 A H 8WC
Project:	Andrews County, TX (NAD83-TNC)	TVD Reference:	RKB @ 3050.00usft (Ensign T054)
Reference Site:	University 8-8	MD Reference:	RKB @ 3050.00usft (Ensign T054)
Site Error:	0.00	North Reference:	Grid
Reference Well:	University 8-8E A H 8WC	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00	Output errors are at	2.00 sigma
Reference Wellbore	OH / 72181	Database:	USAEDMDB
Reference Design:	Surveys (Ensign T054)	Offset TVD Reference:	Offset Datum

Offset Design University 8-8E H 1MS - OH / 71371 - Surveys (Ensign 225)												Offset Site Error:	0.00 usft
Survey Program: 15-MWD, 1920-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)		
2,153.00	2,152.62	2,156.81	2,156.41	6.81	7.12	-71.20	157.76	750.87	768.98	756.13	12.85	59.843	
2,200.00	2,199.49	2,204.12	2,203.52	6.88	7.30	-66.83	153.37	751.38	767.32	754.35	12.98	59.130	
2,243.00	2,242.34	2,245.63	2,244.83	6.94	7.40	-63.65	149.36	751.91	765.50	752.41	13.09	58.482	
2,300.00	2,299.11	2,298.94	2,297.88	7.02	7.52	-65.18	144.15	752.74	763.09	749.86	13.24	57.650	
2,332.00	2,331.00	2,327.02	2,325.82	7.07	7.58	-66.07	141.44	753.33	762.00	748.69	13.32	57.227	
2,386.00	2,384.79	2,374.61	2,373.18	7.14	7.69	-72.63	136.94	754.65	760.81	747.38	13.42	56.672	
2,400.00	2,398.73	2,388.55	2,387.05	7.18	7.72	-73.17	135.63	755.09	760.62	747.14	13.48	56.413	
2,500.00	2,498.33	2,487.64	2,485.66	7.49	7.95	-76.89	126.40	758.26	759.61	745.71	13.90	54.645	
2,542.00	2,540.15	2,528.63	2,526.46	7.62	8.05	-78.38	122.66	759.62	759.39	745.32	14.08	53.941	
2,548.15	2,546.28	2,534.64	2,532.44	7.63	8.06	-80.58	122.12	759.82	759.38	745.29	14.10	53.866	
2,599.99	2,597.84	2,586.06	2,583.61	7.73	8.19	-96.12	117.50	761.58	760.13	745.86	14.27	53.276	
2,606.00	2,603.80	2,592.07	2,589.60	7.74	8.20	-97.59	116.96	761.79	760.31	746.02	14.29	53.213	
2,697.00	2,694.12	2,684.10	2,681.19	7.93	8.43	-100.95	108.58	764.93	763.55	748.99	14.57	52.417	
2,699.99	2,697.09	2,687.17	2,684.25	7.94	8.44	-100.75	108.30	765.03	763.67	749.09	14.58	52.391	
2,787.00	2,783.42	2,776.09	2,772.76	8.13	8.67	-94.52	100.31	767.81	766.24	751.38	14.86	51.555	
2,799.99	2,796.32	2,789.32	2,785.93	8.16	8.70	-93.56	99.14	768.20	766.50	751.59	14.91	51.420	
2,876.00	2,871.84	2,865.29	2,861.58	8.34	8.91	-87.17	92.46	770.39	767.37	752.21	15.17	50.600	
2,899.99	2,895.70	2,888.84	2,885.04	8.40	8.97	-87.17	90.45	771.08	767.51	752.26	15.25	50.334	
2,967.00	2,962.31	2,955.92	2,951.85	8.57	9.16	-87.19	84.83	773.05	767.93	752.44	15.49	49.585	
2,999.99	2,995.12	2,989.45	2,985.25	8.66	9.25	-86.26	82.01	774.01	768.08	752.48	15.61	49.215	
3,056.00	3,050.85	3,045.72	3,041.30	8.80	9.41	-84.44	77.28	775.58	768.19	752.38	15.81	48.588	
3,099.99	3,094.66	3,089.65	3,085.07	8.92	9.53	-82.03	73.69	776.79	768.15	752.18	15.97	48.099	
3,146.00	3,140.51	3,135.75	3,131.00	9.04	9.66	-78.87	69.95	778.05	767.99	751.84	16.14	47.579	
3,199.99	3,194.34	3,189.88	3,184.91	9.18	9.82	-79.32	65.41	779.55	767.72	751.37	16.34	46.978	
3,236.00	3,230.24	3,225.39	3,220.27	9.28	9.92	-79.61	62.30	780.57	767.56	751.08	16.48	46.582	
3,299.99	3,294.05	3,288.71	3,283.28	9.45	10.11	-80.63	56.38	782.53	767.44	750.73	16.72	45.903	
3,305.43	3,299.47	3,294.20	3,288.74	9.46	10.12	-80.72	55.85	782.70	767.44	750.70	16.74	45.845	
3,326.00	3,319.99	3,314.97	3,309.41	9.52	10.18	-81.10	53.87	783.35	767.45	750.63	16.82	45.628	
3,399.99	3,393.83	3,389.88	3,383.96	9.72	10.41	-79.60	46.87	785.62	767.45	750.34	17.11	44.861	
3,416.00	3,409.81	3,406.19	3,400.19	9.76	10.46	-79.24	45.37	786.10	767.43	750.26	17.17	44.695	
3,499.99	3,493.65	3,490.11	3,483.74	9.99	10.71	-77.32	37.82	788.43	767.20	749.70	17.50	43.840	
3,507.00	3,500.64	3,496.89	3,490.49	10.01	10.73	-77.16	37.21	788.62	767.18	749.65	17.53	43.772	
3,597.00	3,590.48	3,585.30	3,578.51	10.25	11.00	-75.73	29.35	791.28	767.03	749.15	17.88	42.899	
3,599.99	3,593.47	3,588.30	3,581.50	10.26	11.00	-75.72	29.09	791.37	767.02	749.13	17.89	42.870	
3,686.00	3,679.32	3,675.21	3,668.05	10.50	11.27	-76.49	21.67	793.94	766.89	748.65	18.24	42.041	
3,699.99	3,693.29	3,689.52	3,682.31	10.54	11.32	-76.21	20.47	794.34	766.86	748.56	18.30	41.905	
3,776.00	3,769.16	3,765.73	3,758.23	10.75	11.56	-74.65	14.19	796.40	766.57	747.96	18.61	41.184	
3,799.99	3,793.11	3,789.29	3,781.70	10.82	11.63	-74.85	12.29	797.04	766.49	747.77	18.71	40.963	
3,865.00	3,858.01	3,853.83	3,846.01	11.01	11.84	-75.40	7.17	798.83	766.33	747.35	18.98	40.375	
3,899.99	3,892.94	3,888.92	3,880.98	11.11	11.95	-74.40	4.42	799.81	766.25	747.12	19.13	40.061	
3,954.00	3,946.86	3,942.95	3,934.83	11.26	12.12	-72.75	0.24	801.28	766.08	746.73	19.35	39.584	
3,999.99	3,992.78	3,988.89	3,980.63	11.39	12.27	-72.67	-3.20	802.52	765.92	746.37	19.55	39.182	
4,044.00	4,036.71	4,033.00	4,024.61	11.52	12.41	-72.60	-6.40	803.69	765.76	746.02	19.74	38.801	
4,099.99	4,092.62	4,089.20	4,080.64	11.68	12.59	-72.95	-10.41	805.15	765.55	745.57	19.98	38.325	
4,134.00	4,126.57	4,123.25	4,114.60	11.78	12.70	-73.18	-12.80	806.02	765.44	745.32	20.12	38.042	

Company:	Piedra Operating LLC	Local Co-ordinate Reference:	Well University 8-8E A H 8WC
Project:	Andrews County, TX (NAD83-TNC)	TVD Reference:	RKB @ 3050.00usft (Ensign T054)
Reference Site:	University 8-8	MD Reference:	RKB @ 3050.00usft (Ensign T054)
Site Error:	0.00	North Reference:	Grid
Reference Well:	University 8-8E A H 8WC	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00	Output errors are at	2.00 sigma
Reference Wellbore	OH / 72181	Database:	USAEDMDB
Reference Design:	Surveys (Ensign T054)	Offset TVD Reference:	Offset Datum

Offset Design University 8-8E H 1MS - OH / 71371 - Surveys (Ensign 225)												Offset Site Error:	0.00 usft
Survey Program: 15-MWD, 1920-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)		
4,199.99	4,192.46	4,189.26	4,180.44	11.97	12.91	-72.80	-17.24	807.67	765.25	744.84	20.40	37.505	
4,223.00	4,215.44	4,212.09	4,203.21	12.04	12.99	-72.67	-18.73	808.24	765.18	744.68	20.50	37.322	
4,299.99	4,292.32	4,288.65	4,279.59	12.27	13.23	-70.21	-23.66	810.17	764.92	744.09	20.83	36.716	
4,312.00	4,304.31	4,300.70	4,291.61	12.30	13.27	-69.82	-24.43	810.47	764.87	743.98	20.89	36.622	
4,399.99	4,392.18	4,389.07	4,379.77	12.56	13.56	-72.20	-30.08	812.68	764.56	743.29	21.27	35.944	
4,402.00	4,394.18	4,391.09	4,381.79	12.57	13.56	-72.25	-30.21	812.73	764.56	743.28	21.28	35.929	
4,491.00	4,483.07	4,479.84	4,470.34	12.83	13.85	-69.99	-35.66	814.86	764.29	742.63	21.67	35.273	
4,499.99	4,492.05	4,488.63	4,479.12	12.86	13.88	-69.84	-36.19	815.08	764.27	742.56	21.71	35.208	
4,583.00	4,574.95	4,570.56	4,560.89	13.10	14.15	-68.54	-40.90	817.14	764.08	742.01	22.07	34.618	
4,599.99	4,591.92	4,587.58	4,577.87	13.15	14.20	-67.96	-41.85	817.57	764.03	741.88	22.15	34.498	
4,673.00	4,664.84	4,660.55	4,650.71	13.37	14.44	-65.41	-45.85	819.40	763.72	741.25	22.47	33.986	
4,699.99	4,691.80	4,687.45	4,677.56	13.45	14.53	-65.41	-47.28	820.07	763.60	741.01	22.59	33.799	
4,764.00	4,755.73	4,753.67	4,743.67	13.64	14.75	-65.42	-50.74	821.67	763.30	740.41	22.89	33.348	
4,799.99	4,791.68	4,792.16	4,782.10	13.74	14.87	-64.51	-52.79	822.45	762.99	739.93	23.06	33.086	
4,855.00	4,846.63	4,850.87	4,840.71	13.90	15.07	-63.12	-56.06	823.43	762.25	738.92	23.33	32.673	
4,899.99	4,891.57	4,898.85	4,888.59	14.04	15.22	-64.33	-58.98	824.05	761.46	737.91	23.55	32.335	
4,943.00	4,934.53	4,941.59	4,931.25	14.16	15.37	-65.56	-61.60	824.54	760.69	736.94	23.75	32.026	
4,999.99	4,991.47	4,998.55	4,988.11	14.33	15.56	-64.45	-64.93	825.17	759.73	735.71	24.02	31.625	
5,033.00	5,024.45	5,031.69	5,021.19	14.42	15.67	-63.77	-66.81	825.52	759.17	734.99	24.18	31.396	
5,099.99	5,091.38	5,098.78	5,088.18	14.62	15.89	-62.89	-70.53	826.21	758.02	733.52	24.50	30.939	
5,122.00	5,113.37	5,120.75	5,110.12	14.68	15.96	-62.59	-71.70	826.43	757.64	733.04	24.61	30.792	
5,199.99	5,191.30	5,198.95	5,188.21	14.91	16.22	-65.77	-75.70	827.17	756.41	731.43	24.98	30.282	
5,212.00	5,203.30	5,211.06	5,200.31	14.94	16.26	-66.28	-76.31	827.28	756.23	731.20	25.04	30.206	
5,299.99	5,291.21	5,296.34	5,285.48	15.20	16.55	-60.52	-80.50	828.09	754.78	729.33	25.45	29.659	
5,303.00	5,294.22	5,299.15	5,288.28	15.21	16.56	-60.34	-80.63	828.13	754.73	729.27	25.46	29.641	
5,394.00	5,385.13	5,386.03	5,375.07	15.48	16.85	-60.81	-84.50	829.47	753.50	727.61	25.89	29.109	
5,399.99	5,391.11	5,391.87	5,380.90	15.50	16.87	-60.70	-84.74	829.57	753.43	727.51	25.91	29.075	
5,484.00	5,475.02	5,476.17	5,465.11	15.75	17.15	-59.39	-88.19	831.06	752.34	726.02	26.32	28.588	
5,499.99	5,490.99	5,492.63	5,481.56	15.80	17.21	-59.78	-88.86	831.33	752.09	725.70	26.39	28.494	
5,573.00	5,563.91	5,567.13	5,556.00	16.02	17.46	-61.58	-91.81	832.43	750.92	724.17	26.75	28.071	
5,599.99	5,590.86	5,594.51	5,583.35	16.10	17.55	-62.50	-92.89	832.80	750.49	723.61	26.88	27.918	
5,662.00	5,652.80	5,656.94	5,645.73	16.30	17.76	-64.69	-95.30	833.60	749.57	722.38	27.18	27.576	
5,699.99	5,690.74	5,695.08	5,683.84	16.41	17.89	-65.66	-96.73	834.08	749.03	721.67	27.36	27.373	
5,752.00	5,742.69	5,746.11	5,734.84	16.58	18.07	-66.90	-98.57	834.72	748.33	720.72	27.61	27.105	
5,799.99	5,790.61	5,793.05	5,781.74	16.73	18.23	-64.56	-100.21	835.37	747.70	719.87	27.83	26.862	
5,841.00	5,831.56	5,834.93	5,823.59	16.86	18.37	-62.59	-101.65	835.96	747.09	719.06	28.03	26.650	
5,899.99	5,890.47	5,894.90	5,883.52	17.04	18.57	-62.44	-103.72	836.71	746.08	717.76	28.32	26.342	
5,932.00	5,922.44	5,926.98	5,915.58	17.14	18.68	-62.35	-104.83	837.09	745.53	717.05	28.48	26.178	
5,999.99	5,990.34	5,995.14	5,983.70	17.36	18.91	-69.64	-107.22	837.91	744.55	715.74	28.81	25.848	
6,022.00	6,012.32	6,017.24	6,005.78	17.43	18.99	-71.92	-107.98	838.16	744.30	715.39	28.91	25.745	
6,099.99	6,090.19	6,094.92	6,083.41	17.68	19.25	-75.01	-110.58	839.04	743.55	714.27	29.27	25.399	
6,113.00	6,103.18	6,107.76	6,096.24	17.72	19.29	-75.48	-110.97	839.19	743.44	714.10	29.33	25.344	
6,199.99	6,190.02	6,194.62	6,183.06	18.01	19.59	-74.50	-113.29	840.18	742.74	713.01	29.73	24.981	
6,202.00	6,192.03	6,196.65	6,185.09	18.01	19.59	-74.48	-113.33	840.20	742.72	712.98	29.74	24.973	
6,292.00	6,281.89	6,287.04	6,275.46	18.31	19.90	-73.51	-115.15	841.06	741.90	711.75	30.15	24.606	
6,299.99	6,289.86	6,295.03	6,283.45	18.33	19.92	-73.58	-115.31	841.13	741.82	711.64	30.19	24.574	

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 A H 8WC
Project:	Andrews County, TX (NAD83-TNC)	TVD Reference:	RKB @ 3050.00usft (Ensign T054)
Reference Site:	University 8-8	MD Reference:	RKB @ 3050.00usft (Ensign T054)
Site Error:	0.00	North Reference:	Grid
Reference Well:	University 8-8E A H 8WC	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00	Output errors are at	2.00 sigma
Reference Wellbore	OH / 72181	Database:	USAEDMDB
Reference Design:	Surveys (Ensign T054)	Offset TVD Reference:	Offset Datum

Offset Design		University 8-8E H 1MS - OH / 71371 - Surveys (Ensign 225)										Offset Site Error:		0.00 usft
Survey Program:		15-MWD, 1920-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)			
6,381.00	6,370.76	6,377.05	6,365.45	18.60	20.20	-74.24	-116.99	841.87	741.05	710.48	30.56	24.249		
6,399.99	6,389.72	6,396.41	6,384.81	18.66	20.27	-74.81	-117.43	842.03	740.85	710.20	30.65	24.173		
6,470.00	6,459.63	6,465.56	6,453.93	18.88	20.50	-76.92	-119.02	842.58	740.23	709.26	30.96	23.906		
6,499.99	6,489.58	6,494.83	6,483.20	18.98	20.60	-76.29	-119.65	842.86	740.03	708.93	31.10	23.797		
6,559.00	6,548.51	6,553.61	6,541.96	19.17	20.80	-74.99	-120.87	843.44	739.65	708.28	31.36	23.583		
6,599.99	6,589.45	6,594.61	6,582.95	19.30	20.94	-74.85	-121.74	843.85	739.36	707.81	31.55	23.434		
6,651.00	6,640.40	6,646.07	6,634.40	19.47	21.12	-74.66	-122.79	844.33	738.99	707.21	31.79	23.250		
6,699.99	6,689.33	6,695.50	6,683.81	19.62	21.29	-75.80	-123.72	844.76	738.63	706.63	32.01	23.077		
6,740.00	6,729.30	6,735.90	6,724.21	19.75	21.42	-76.76	-124.46	845.08	738.36	706.17	32.19	22.937		
6,799.99	6,789.21	6,796.32	6,784.62	19.94	21.63	-76.05	-125.59	845.52	737.92	705.45	32.46	22.730		
6,830.00	6,819.19	6,826.44	6,814.73	20.04	21.73	-75.69	-126.16	845.73	737.67	705.07	32.60	22.628		
6,899.99	6,889.11	6,895.92	6,884.20	20.26	21.97	-76.00	-127.51	846.22	737.12	704.20	32.92	22.394		
6,919.00	6,908.10	6,914.59	6,902.86	20.32	22.03	-76.08	-127.84	846.36	736.99	703.99	33.00	22.332		
6,999.99	6,989.01	6,994.23	6,982.49	20.57	22.30	-77.92	-129.05	847.02	736.62	703.26	33.36	22.083		
7,009.00	6,998.01	7,003.10	6,991.36	20.60	22.33	-78.13	-129.18	847.10	736.59	703.19	33.40	22.056		
7,099.00	7,087.94	7,092.88	7,081.12	20.88	22.71	-80.30	-130.39	847.96	736.50	702.70	33.80	21.790		
7,099.99	7,088.92	7,093.87	7,082.12	20.89	22.71	-80.30	-130.40	847.97	736.50	702.70	33.80	21.788		
7,103.00	7,091.94	7,096.91	7,085.15	20.89	22.73	-80.43	-130.44	847.99	736.50	702.68	33.82	21.779		
7,188.00	7,176.87	7,182.48	7,170.71	21.15	23.14	-84.14	-131.50	848.73	736.58	702.37	34.20	21.536		
7,199.99	7,188.85	7,194.54	7,182.78	21.19	23.19	-83.88	-131.64	848.83	736.59	702.34	34.26	21.503		
7,278.00	7,266.81	7,273.74	7,261.97	21.42	23.65	-82.03	-132.56	849.40	736.63	701.98	34.65	21.259		
7,298.52	7,287.32	7,294.65	7,282.87	21.48	23.78	-84.38	-132.81	849.53	736.62	701.86	34.76	21.194		
7,299.99	7,288.78	7,296.14	7,284.37	21.49	23.79	-84.55	-132.83	849.54	736.62	701.85	34.76	21.189		
7,368.00	7,356.76	7,365.44	7,353.66	21.69	24.22	-93.35	-133.68	849.88	736.73	701.61	35.12	20.978		
7,399.99	7,388.73	7,397.97	7,386.18	21.77	24.42	-95.70	-134.09	850.00	736.84	701.56	35.28	20.885		
7,473.00	7,461.71	7,470.10	7,458.31	21.98	24.68	-101.37	-135.00	850.29	737.26	701.66	35.60	20.711		
7,499.99	7,488.69	7,496.88	7,485.09	22.06	24.79	-102.46	-135.33	850.41	737.48	701.76	35.71	20.650		
7,597.00	7,585.66	7,593.16	7,581.37	22.33	25.21	-106.30	-136.23	850.86	738.45	702.32	36.13	20.440		
7,599.98	7,588.64	7,596.12	7,584.33	22.33	25.22	-106.30	-136.25	850.87	738.48	702.34	36.14	20.435		
7,686.00	7,674.62	7,677.71	7,665.91	22.55	25.54	-110.22	-136.66	851.33	739.70	703.25	36.45	20.293		
7,699.98	7,688.60	7,690.07	7,678.26	22.59	25.58	-108.54	-136.68	851.47	739.98	703.48	36.50	20.273		
7,776.00	7,764.60	7,759.88	7,748.07	22.77	25.80	-65.10	-136.61	852.65	741.46	704.67	36.79	20.157		
7,799.98	7,788.58	7,783.70	7,771.89	22.82	25.87	-54.77	-136.49	853.10	741.82	704.92	36.89	20.108		
7,866.00	7,854.59	7,851.49	7,839.66	22.97	26.06	-46.01	-135.87	854.32	742.35	705.15	37.19	19.958		
7,899.98	7,888.56	7,888.32	7,876.48	23.05	26.16	-43.58	-135.49	854.82	742.28	704.91	37.36	19.866		
7,955.00	7,943.56	7,947.04	7,935.20	23.18	26.32	-40.45	-134.94	855.35	741.75	704.11	37.64	19.709		
7,999.98	7,988.53	7,994.43	7,982.58	23.30	26.46	-47.85	-134.71	855.64	741.17	703.31	37.85	19.580		
8,046.00	8,034.53	8,041.74	8,029.90	23.41	26.59	-57.47	-134.64	855.83	740.68	702.60	38.07	19.455		
8,099.98	8,088.50	8,095.00	8,083.16	23.55	26.74	-56.67	-134.60	855.98	740.14	701.83	38.32	19.317		
8,135.00	8,123.50	8,130.27	8,118.43	23.64	26.84	-56.19	-134.56	856.08	739.79	701.31	38.48	19.227		
8,166.44	8,154.94	8,160.40	8,148.55	23.72	26.93	-72.81	-134.50	856.22	739.64	701.04	38.60	19.160		
8,199.98	8,188.47	8,193.04	8,181.20	23.80	27.02	-96.80	-134.40	856.43	739.80	701.06	38.74	19.096		
8,224.00	8,212.48	8,217.42	8,205.57	23.86	27.09	-114.66	-134.31	856.58	740.09	701.25	38.84	19.054		
8,299.98	8,288.46	8,294.97	8,283.12	24.03	27.31	-108.30	-133.95	856.95	741.03	701.90	39.14	18.935		
8,314.00	8,302.47	8,309.49	8,297.64	24.06	27.36	-106.95	-133.89	857.00	741.16	701.97	39.19	18.912		

Company:	Piedra Operating LLC	Local Co-ordinate Reference:	Well University 8-8E A H 8WC
Project:	Andrews County, TX (NAD83-TNC)	TVD Reference:	RKB @ 3050.00usft (Ensign T054)
Reference Site:	University 8-8	MD Reference:	RKB @ 3050.00usft (Ensign T054)
Site Error:	0.00	North Reference:	Grid
Reference Well:	University 8-8E A H 8WC	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00	Output errors are at	2.00 sigma
Reference Wellbore	OH / 72181	Database:	USAEDMDB
Reference Design:	Surveys (Ensign T054)	Offset TVD Reference:	Offset Datum

Offset Design University 8-8E H 1MS - OH / 71371 - Surveys (Ensign 225)												Offset Site Error:	0.00 usft
Survey Program: 15-MWD, 1920-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)		
8,399.98	8,388.44	8,408.52	8,396.63	24.22	28.46	-130.13	-135.42	857.20	741.63	700.78	40.84	18.158	
8,403.00	8,391.46	8,412.51	8,400.60	24.23	28.56	-131.18	-135.73	857.22	741.61	700.64	40.97	18.100	
8,492.00	8,480.45	8,522.18	8,508.96	24.34	32.10	-152.86	-152.32	857.55	739.95	695.13	44.83	16.507	
8,499.98	8,488.43	8,531.61	8,518.21	24.34	32.45	-153.86	-154.17	857.54	739.74	694.56	45.17	16.376	
8,582.00	8,570.44	8,639.79	8,622.21	24.39	33.42	-161.36	-183.47	856.78	736.34	690.39	45.95	16.025	
8,599.98	8,588.42	8,648.20	8,630.05	24.41	33.57	-155.84	-186.53	856.82	735.55	689.51	46.04	15.977	
8,672.00	8,660.42	8,695.51	8,673.10	24.48	34.14	-136.87	-206.07	857.95	733.98	687.63	46.35	15.837	
8,675.70	8,664.12	8,697.84	8,675.17	24.49	34.17	-133.86	-207.13	858.05	733.97	687.61	46.36	15.831	CC, ES
8,699.98	8,688.39	8,719.00	8,693.71	24.55	34.44	-118.95	-217.25	859.21	734.18	687.67	46.51	15.785	
8,762.00	8,750.34	8,748.45	8,718.99	24.70	34.80	-101.97	-232.20	861.44	736.17	689.47	46.70	15.763	SF
8,799.98	8,788.26	8,769.49	8,736.76	24.81	35.06	-96.32	-243.27	863.47	738.53	691.71	46.82	15.773	
8,851.00	8,839.23	8,810.00	8,770.28	24.97	35.57	-84.91	-265.48	868.42	743.16	696.08	47.08	15.785	
8,899.98	8,888.18	8,825.81	8,783.09	25.11	35.66	-85.49	-274.48	870.64	748.81	701.77	47.05	15.916	
8,940.00	8,928.17	8,851.87	8,803.86	25.23	35.82	-85.47	-289.73	874.47	754.70	707.56	47.13	16.012	
8,999.98	8,988.12	8,899.00	8,840.31	25.40	36.11	-70.84	-318.68	881.88	765.34	717.98	47.36	16.160	
9,030.00	9,018.13	8,907.31	8,846.55	25.48	36.16	-58.59	-323.98	883.23	771.30	724.01	47.30	16.308	
9,099.98	9,088.10	8,948.56	8,876.21	25.66	36.41	-56.70	-351.85	889.92	787.65	740.22	47.43	16.607	
9,120.00	9,108.12	8,959.23	8,883.50	25.71	36.48	-56.20	-359.45	891.63	792.97	745.51	47.45	16.710	
9,199.98	9,188.09	8,989.00	8,902.94	25.90	36.66	-90.17	-381.49	896.36	817.52	770.20	47.32	17.276	
9,209.00	9,197.11	8,989.00	8,902.94	25.93	36.66	-93.36	-381.49	896.36	820.69	773.44	47.25	17.368	
9,299.00	9,287.09	9,027.36	8,925.99	26.12	36.91	-102.54	-411.48	902.69	855.38	808.18	47.20	18.124	
9,299.98	9,288.08	9,027.65	8,926.16	26.12	36.91	-102.52	-411.71	902.74	855.79	808.60	47.19	18.134	
9,389.00	9,377.09	9,051.85	8,939.47	26.25	37.07	-130.77	-431.46	907.04	896.67	849.76	46.91	19.116	
9,399.98	9,388.07	9,078.00	8,952.75	26.25	37.24	-136.36	-453.44	911.93	902.79	855.43	47.36	19.062	
9,499.00	9,487.07	9,078.00	8,952.75	26.25	37.24	173.16	-453.44	911.93	955.48	908.94	46.54	20.530	
9,499.98	9,488.05	9,078.00	8,952.75	26.25	37.24	174.71	-453.44	911.93	956.04	909.51	46.53	20.545	
9,568.00	9,556.05	9,078.00	8,952.75	26.31	37.24	-70.74	-453.44	911.93	995.77	949.69	46.08	21.610	

Company:	Piedra Operating LLC	Local Co-ordinate Reference:	Well University 8-8E A H 8WC
Project:	Andrews County, TX (NAD83-TNC)	TVD Reference:	RKB @ 3050.00usft (Ensign T054)
Reference Site:	University 8-8	MD Reference:	RKB @ 3050.00usft (Ensign T054)
Site Error:	0.00	North Reference:	Grid
Reference Well:	University 8-8E A H 8WC	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00	Output errors are at	2.00 sigma
Reference Wellbore	OH / 72181	Database:	USAEDMDB
Reference Design:	Surveys (Ensign T054)	Offset TVD Reference:	Offset Datum

Offset Design University 8-8E H 4LS - OH / 71370 - Surveys (Ensign 225)												Offset Site Error:	0.00 usft
Survey Program: 15-MWD, 1920-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	76.97	168.81	729.73	749.00				
15.00	15.00	13.00	13.00	1.00	1.00	76.97	168.81	729.73	749.00				
100.00	100.00	102.46	102.46	1.28	1.33	139.07	168.91	729.44	749.08	746.47	2.61	287.267	
177.00	176.99	183.41	183.40	1.90	1.94	139.10	169.17	728.66	749.26	745.42	3.83	195.375	
200.00	199.99	206.67	206.66	1.98	2.02	136.53	169.28	728.36	749.29	745.30	3.98	188.055	
268.00	267.98	274.83	274.82	2.21	2.25	102.28	169.69	727.42	748.88	744.45	4.43	169.040	
300.00	299.98	304.19	304.18	2.31	2.34	110.13	169.88	727.07	748.61	744.00	4.60	162.576	
357.00	356.98	359.00	358.98	2.48	2.51	116.52	170.14	726.73	748.51	743.59	4.93	151.958	
358.28	358.26	359.00	358.98	2.49	2.51	116.00	170.14	726.73	748.51	743.58	4.93	151.862	
400.00	399.98	398.77	398.75	2.60	2.62	98.76	170.26	726.65	748.57	743.45	5.13	145.947	
444.00	443.98	442.23	442.21	2.73	2.74	82.10	170.36	726.60	748.55	743.20	5.35	140.041	
481.74	481.72	479.65	479.63	2.83	2.82	89.46	170.41	726.58	748.51	743.00	5.51	135.796	
500.00	499.97	497.77	497.75	2.89	2.86	92.62	170.42	726.58	748.52	742.93	5.59	133.855	
533.00	532.97	530.52	530.50	2.98	2.93	97.74	170.44	726.59	748.57	742.84	5.74	130.482	
600.00	599.96	599.68	599.66	3.16	3.06	72.21	170.33	726.57	748.48	742.46	6.02	124.431	
621.00	620.96	621.41	621.39	3.21	3.10	61.97	170.24	726.53	748.34	742.24	6.10	122.624	
700.00	699.96	703.28	703.26	3.42	3.27	90.64	170.05	726.14	747.75	741.31	6.44	116.073	
710.00	709.96	713.37	713.35	3.44	3.29	95.60	170.05	726.06	747.68	741.20	6.48	115.307	
799.00	798.96	797.00	796.98	3.67	3.47	75.01	169.72	725.65	747.12	740.28	6.84	109.272	
800.00	799.96	797.00	796.98	3.67	3.47	75.01	169.72	725.65	747.11	740.28	6.84	109.243	
840.52	840.48	834.97	834.94	3.77	3.58	58.73	169.57	725.69	746.99	740.00	6.99	106.872	
890.00	889.95	883.00	882.97	3.89	3.77	43.34	169.83	726.14	747.19	740.01	7.17	104.200	
890.89	890.85	883.00	882.97	3.89	3.77	43.34	169.83	726.14	747.18	740.01	7.17	104.179	
900.00	899.95	887.02	886.99	3.91	3.78	45.09	169.87	726.20	747.23	740.04	7.19	103.856	
977.00	976.95	986.11	986.07	4.08	4.17	56.42	169.79	725.98	746.43	738.86	7.57	98.636	
1,000.00	999.94	1,009.60	1,009.56	4.14	4.27	57.27	169.55	725.67	745.92	738.19	7.72	96.561	
1,062.00	1,061.94	1,072.93	1,072.89	4.28	4.55	59.71	168.73	724.78	744.49	736.34	8.15	91.365	
1,100.00	1,099.94	1,111.74	1,111.68	4.37	4.72	86.75	168.09	724.21	743.68	735.27	8.41	88.459	
1,148.00	1,147.94	1,159.55	1,159.48	4.49	4.88	117.36	167.20	723.48	742.90	734.22	8.68	85.578	
1,200.00	1,199.93	1,208.59	1,208.51	4.61	4.95	119.58	166.69	722.77	742.36	733.50	8.86	83.788	
1,238.00	1,237.93	1,243.80	1,243.72	4.70	5.00	122.19	166.69	722.32	742.07	733.08	8.98	82.603	
1,281.43	1,281.36	1,282.51	1,282.43	4.80	5.05	124.89	166.81	722.00	741.93	732.83	9.10	81.504	
1,300.00	1,299.93	1,299.06	1,298.97	4.84	5.08	126.33	166.89	721.94	741.96	732.80	9.15	81.054	
1,324.00	1,323.93	1,322.24	1,322.15	4.89	5.11	128.52	167.02	721.90	742.04	732.82	9.22	80.441	
1,400.00	1,399.92	1,399.71	1,399.62	5.05	5.25	127.71	167.83	721.62	742.26	732.80	9.46	78.438	
1,412.00	1,411.93	1,411.76	1,411.67	5.08	5.29	127.60	168.01	721.56	742.29	732.78	9.51	78.049	
1,500.00	1,499.92	1,498.02	1,497.92	5.28	5.63	102.24	169.15	721.21	742.46	732.50	9.97	74.492	
1,600.00	1,599.92	1,596.13	1,596.03	5.71	5.99	135.50	170.11	721.13	742.95	732.24	10.72	69.337	
1,675.00	1,674.92	1,670.29	1,670.18	6.04	6.10	155.44	171.01	721.17	743.71	732.61	11.10	67.008	
1,700.00	1,699.91	1,693.76	1,693.64	6.08	6.12	155.00	171.39	721.20	744.02	732.88	11.15	66.758	
1,765.00	1,764.92	1,753.40	1,753.28	6.19	6.16	153.07	172.42	721.53	745.01	733.76	11.25	66.211	
1,800.00	1,799.91	1,789.28	1,789.15	6.26	6.18	160.83	172.87	721.91	745.64	734.31	11.33	65.814	
1,884.00	1,883.91	1,878.13	1,878.00	6.42	6.21	-176.36	173.16	722.58	746.70	735.18	11.53	64.785	
1,900.00	1,899.91	1,894.78	1,894.65	6.43	6.22	-129.20	173.21	722.65	746.84	735.28	11.56	64.584	
1,973.00	1,972.91	1,968.19	1,968.06	6.51	6.23	-85.58	173.13	722.93	747.16	735.38	11.78	63.429	
2,000.00	1,999.89	1,994.87	1,994.73	6.56	6.24	-81.26	172.70	723.14	747.18	735.33	11.84	63.083	

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 A H 8WC
Project:	Andrews County, TX (NAD83-TNC)	TVD Reference:	RKB @ 3050.00usft (Ensign T054)
Reference Site:	University 8-8	MD Reference:	RKB @ 3050.00usft (Ensign T054)
Site Error:	0.00	North Reference:	Grid
Reference Well:	University 8-8E A H 8WC	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00	Output errors are at	2.00 sigma
Reference Wellbore	OH / 72181	Database:	USAEDMDB
Reference Design:	Surveys (Ensign T054)	Offset TVD Reference:	Offset Datum

Offset Design University 8-8E H 4LS - OH / 71370 - Surveys (Ensign 225)												Offset Site Error:	0.00 usft
Survey Program: 15-MWD, 1920-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)		
2,064.00	2,063.82	2,059.93	2,059.74	6.70	6.51	-77.71	170.47	723.89	746.83	734.69	12.14	61.522	
2,100.00	2,099.74	2,096.90	2,096.64	6.74	6.85	-75.28	168.21	724.47	746.37	734.00	12.37	60.342	
2,153.00	2,152.62	2,150.99	2,150.55	6.81	7.14	-72.03	163.94	725.46	745.39	732.87	12.52	59.532	
2,200.00	2,199.49	2,198.70	2,198.05	6.88	7.35	-67.65	159.53	726.41	744.14	731.51	12.64	58.895	
2,243.00	2,242.34	2,241.36	2,240.50	6.94	7.45	-64.45	155.37	727.30	742.64	729.89	12.75	58.264	
2,300.00	2,299.11	2,298.18	2,297.03	7.02	7.58	-65.97	149.77	728.52	740.54	727.64	12.90	57.417	
2,332.00	2,331.00	2,330.54	2,329.22	7.07	7.65	-66.84	146.54	729.22	739.43	726.44	12.99	56.934	
2,386.00	2,384.79	2,384.85	2,383.24	7.14	7.77	-73.37	141.06	730.36	737.80	724.69	13.12	56.251	
2,400.00	2,398.73	2,398.63	2,396.95	7.18	7.80	-73.91	139.66	730.65	737.45	724.27	13.18	55.964	
2,500.00	2,498.33	2,497.63	2,495.40	7.49	8.02	-77.58	129.54	732.87	735.30	721.68	13.62	53.993	
2,542.00	2,540.15	2,539.62	2,537.15	7.62	8.12	-79.04	125.19	733.84	734.56	720.75	13.81	53.197	
2,572.02	2,570.03	2,569.41	2,566.77	7.68	8.19	-89.04	122.09	734.53	734.31	720.39	13.91	52.776	
2,599.99	2,597.84	2,596.93	2,594.14	7.73	8.25	-96.74	119.22	735.19	734.53	720.51	14.01	52.416	
2,606.00	2,603.80	2,602.84	2,600.01	7.74	8.27	-98.20	118.60	735.34	734.63	720.60	14.03	52.344	
2,697.00	2,694.12	2,693.10	2,689.75	7.93	8.49	-101.49	109.17	737.61	736.84	722.51	14.33	51.409	
2,699.99	2,697.09	2,696.09	2,692.72	7.94	8.50	-101.29	108.86	737.68	736.93	722.59	14.34	51.379	
2,787.00	2,783.42	2,785.44	2,781.59	8.13	8.73	-95.00	99.84	739.80	738.69	724.04	14.65	50.415	
2,799.99	2,796.32	2,799.10	2,795.18	8.16	8.77	-94.04	98.51	740.08	738.80	724.10	14.70	50.257	
2,876.00	2,871.84	2,879.67	2,875.38	8.34	8.98	-87.63	90.90	741.37	738.63	723.64	14.99	49.262	
2,899.99	2,895.70	2,905.23	2,900.83	8.40	9.05	-87.63	88.56	741.65	738.32	723.23	15.09	48.929	
2,967.00	2,962.31	2,974.40	2,969.72	8.57	9.23	-87.63	82.26	742.20	737.24	721.88	15.36	48.001	
2,999.99	2,995.12	3,008.21	3,003.37	8.66	9.32	-86.69	79.14	742.42	736.63	721.14	15.49	47.552	
3,056.00	3,050.85	3,063.95	3,058.88	8.80	9.47	-84.85	74.02	742.75	735.44	719.73	15.71	46.799	
3,099.99	3,094.66	3,107.20	3,101.96	8.92	9.59	-82.42	70.11	743.02	734.40	718.52	15.89	46.220	
3,146.00	3,140.51	3,150.31	3,144.88	9.04	9.71	-79.22	66.19	743.40	733.31	717.25	16.07	45.647	
3,199.99	3,194.34	3,200.85	3,195.20	9.18	9.85	-79.66	61.53	744.09	732.20	715.93	16.27	45.004	
3,236.00	3,230.24	3,234.45	3,228.65	9.28	9.95	-79.94	58.44	744.68	731.62	715.22	16.41	44.597	
3,299.99	3,294.05	3,295.08	3,289.02	9.45	10.13	-80.98	52.97	746.01	730.97	714.32	16.65	43.908	
3,326.00	3,319.99	3,320.90	3,314.73	9.52	10.20	-81.46	50.65	746.62	730.80	714.05	16.75	43.633	
3,399.99	3,393.83	3,394.67	3,388.18	9.72	10.42	-79.98	43.99	748.40	730.39	713.35	17.04	42.868	
3,416.00	3,409.81	3,410.75	3,404.18	9.76	10.47	-79.62	42.52	748.79	730.30	713.20	17.10	42.704	
3,499.99	3,493.85	3,495.51	3,488.56	9.99	10.72	-77.69	34.79	750.82	729.70	712.26	17.44	41.844	
3,507.00	3,500.64	3,502.62	3,495.65	10.01	10.74	-77.53	34.14	750.98	729.64	712.18	17.47	41.773	
3,597.00	3,590.48	3,593.53	3,586.18	10.25	11.02	-76.10	26.15	752.93	728.73	710.89	17.84	40.858	
3,599.99	3,593.47	3,596.53	3,589.17	10.26	11.03	-76.09	25.89	752.99	728.70	710.85	17.85	40.828	
3,686.00	3,679.32	3,681.93	3,674.25	10.50	11.29	-76.86	18.64	754.73	727.78	709.58	18.20	39.985	
3,699.99	3,693.29	3,695.67	3,687.93	10.54	11.34	-76.58	17.47	755.02	727.65	709.39	18.26	39.851	
3,776.00	3,769.16	3,771.38	3,763.35	10.75	11.57	-75.01	11.08	756.68	726.94	708.36	18.58	39.131	
3,799.99	3,793.11	3,795.57	3,787.46	10.82	11.65	-75.20	9.05	757.20	726.70	708.02	18.68	38.904	
3,865.00	3,858.01	3,860.19	3,851.83	11.01	11.85	-75.73	3.69	758.57	726.06	707.11	18.95	38.309	
3,899.99	3,892.94	3,894.65	3,886.17	11.11	11.96	-74.72	0.86	759.32	725.75	706.65	19.10	37.998	
3,954.00	3,946.86	3,947.99	3,939.32	11.26	12.13	-73.05	-3.50	760.53	725.28	705.95	19.33	37.525	
3,999.99	3,992.78	3,993.47	3,984.63	11.39	12.28	-72.94	-7.24	761.59	724.90	705.37	19.52	37.128	
4,044.00	4,036.71	4,037.57	4,028.56	11.52	12.42	-72.83	-11.00	762.67	724.53	704.82	19.72	36.749	
4,099.99	4,092.62	4,093.77	4,084.48	11.68	12.61	-73.07	-16.36	764.12	724.07	704.11	19.96	36.275	

Company:	Piedra Operating LLC	Local Co-ordinate Reference:	Well University 8-8E A H 8WC
Project:	Andrews County, TX (NAD83-TNC)	TVD Reference:	RKB @ 3050.00usft (Ensign T054)
Reference Site:	University 8-8	MD Reference:	RKB @ 3050.00usft (Ensign T054)
Site Error:	0.00	North Reference:	Grid
Reference Well:	University 8-8E A H 8WC	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00	Output errors are at	2.00 sigma
Reference Wellbore	OH / 72181	Database:	USAEDMDB
Reference Design:	Surveys (Ensign T054)	Offset TVD Reference:	Offset Datum

Offset Design University 8-8E H 4LS - OH / 71370 - Surveys (Ensign 225)												Offset Site Error:	0.00 usft
Survey Program: 15-MWD, 1920-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)		
4,134.00	4,126.57	4,127.08	4,117.62	11.78	12.72	-73.22	-19.69	765.02	723.83	703.73	20.11	35.997	
4,199.99	4,192.46	4,191.84	4,182.03	11.97	12.93	-72.67	-26.07	766.84	723.48	703.09	20.40	35.472	
4,223.00	4,215.44	4,214.63	4,204.71	12.04	13.01	-72.48	-28.30	767.49	723.38	702.88	20.50	35.292	
4,299.99	4,292.32	4,290.93	4,280.60	12.27	13.26	-69.81	-35.80	769.74	723.02	702.18	20.84	34.697	
4,312.00	4,304.31	4,302.84	4,292.45	12.30	13.30	-69.39	-36.97	770.09	722.96	702.07	20.89	34.605	
4,399.99	4,392.18	4,396.23	4,385.35	12.56	13.61	-71.50	-46.15	772.79	722.54	701.22	21.32	33.896	
4,402.00	4,394.18	4,398.65	4,387.76	12.57	13.61	-71.54	-46.39	772.84	722.52	701.19	21.33	33.877	
4,491.00	4,483.07	4,497.88	4,486.44	12.83	13.95	-68.94	-56.64	774.09	720.68	698.89	21.79	33.068	
4,499.99	4,492.05	4,507.11	4,495.62	12.86	13.98	-68.76	-57.60	774.17	720.46	698.62	21.84	32.989	
4,583.00	4,574.95	4,589.95	4,578.02	13.10	14.26	-67.17	-66.17	774.74	718.24	695.99	22.25	32.287	
4,599.99	4,591.92	4,606.61	4,594.59	13.15	14.32	-66.53	-67.87	774.86	717.78	695.46	22.33	32.149	
4,673.00	4,664.84	4,679.02	4,666.64	13.37	14.56	-63.73	-75.11	775.44	715.82	693.14	22.68	31.560	
4,699.99	4,691.80	4,705.94	4,693.43	13.45	14.65	-63.64	-77.74	775.65	715.09	692.27	22.81	31.345	
4,764.00	4,755.73	4,769.38	4,756.58	13.64	14.86	-63.43	-83.81	776.15	713.42	690.29	23.13	30.849	
4,799.99	4,791.68	4,805.00	4,792.04	13.74	14.97	-62.41	-87.14	776.44	712.51	689.21	23.30	30.576	
4,855.00	4,846.63	4,860.01	4,846.81	13.90	15.16	-60.86	-92.18	776.88	711.09	687.51	23.58	30.161	
4,899.99	4,891.57	4,904.94	4,891.56	14.04	15.31	-61.97	-96.20	777.23	709.94	686.15	23.80	29.830	
4,943.00	4,934.53	4,947.58	4,934.07	14.16	15.48	-63.15	-99.49	777.51	708.93	684.92	24.01	29.526	
4,999.99	4,991.47	5,004.38	4,990.77	14.33	15.70	-62.04	-102.74	777.77	707.66	683.37	24.29	29.136	
5,033.00	5,024.45	5,037.56	5,023.92	14.42	15.82	-61.37	-104.30	777.89	706.93	682.48	24.45	28.915	
5,099.99	5,091.38	5,103.92	5,090.23	14.62	16.07	-60.58	-106.81	778.04	705.43	680.67	24.77	28.484	
5,122.00	5,113.37	5,125.33	5,111.64	14.68	16.14	-60.33	-107.35	778.08	704.97	680.11	24.87	28.350	
5,199.99	5,191.30	5,202.19	5,188.49	14.91	16.41	-63.75	-108.27	778.25	703.56	678.34	25.22	27.896	
5,212.00	5,203.30	5,214.18	5,200.48	14.94	16.45	-64.30	-108.38	778.27	703.37	678.10	25.28	27.828	
5,299.99	5,291.21	5,302.31	5,288.61	15.20	16.75	-58.81	-109.19	778.47	701.73	676.05	25.68	27.325	
5,303.00	5,294.22	5,305.34	5,291.63	15.21	16.76	-58.65	-109.21	778.47	701.66	675.97	25.69	27.308	
5,394.00	5,385.13	5,397.65	5,383.94	15.48	17.06	-59.39	-110.03	778.58	699.56	673.43	26.13	26.771	
5,399.99	5,391.11	5,403.77	5,390.06	15.50	17.08	-59.30	-110.08	778.58	699.41	673.25	26.16	26.735	
5,484.00	5,475.02	5,486.10	5,472.39	15.75	17.34	-58.21	-110.97	778.61	697.20	670.64	26.56	26.251	
5,499.99	5,490.99	5,501.45	5,487.74	15.80	17.39	-58.63	-111.17	778.65	696.79	670.16	26.63	26.162	
5,573.00	5,563.91	5,572.91	5,559.19	16.02	17.63	-60.58	-112.25	779.02	695.15	668.18	26.97	25.771	
5,599.99	5,590.86	5,599.56	5,585.83	16.10	17.72	-61.55	-112.71	779.19	694.61	667.51	27.10	25.632	
5,662.00	5,652.80	5,661.36	5,647.62	16.30	17.92	-63.84	-113.84	779.63	693.50	666.11	27.39	25.322	
5,699.99	5,690.74	5,699.32	5,685.57	16.41	18.05	-64.88	-114.50	779.90	692.86	665.30	27.56	25.137	
5,752.00	5,742.69	5,754.97	5,741.22	16.58	18.23	-66.22	-115.45	780.14	691.87	664.05	27.82	24.869	
5,799.99	5,790.61	5,806.01	5,792.25	16.73	18.40	-63.96	-116.35	780.10	690.65	662.59	28.06	24.612	
5,841.00	5,831.56	5,848.42	5,834.64	16.86	18.53	-62.07	-117.10	779.94	689.40	661.14	28.27	24.387	
5,899.99	5,890.47	5,907.67	5,893.89	17.04	18.72	-62.02	-118.13	779.59	687.46	658.90	28.57	24.066	
5,932.00	5,922.44	5,938.75	5,924.97	17.14	18.82	-61.98	-118.65	779.44	686.46	657.73	28.72	23.898	
5,999.99	5,990.34	6,006.38	5,992.58	17.36	19.04	-69.39	-119.72	779.20	684.62	655.57	29.06	23.561	
6,022.00	6,012.32	6,028.77	6,014.97	17.43	19.11	-71.72	-120.08	779.11	684.10	654.93	29.17	23.455	
6,099.99	6,090.19	6,106.43	6,092.63	17.68	19.36	-74.95	-121.33	778.74	682.30	652.76	29.54	23.097	
6,113.00	6,103.18	6,119.21	6,105.40	17.72	19.40	-75.44	-121.53	778.69	682.02	652.42	29.60	23.040	
6,199.99	6,190.02	6,206.49	6,192.67	18.01	19.69	-74.58	-122.90	778.37	680.19	650.18	30.02	22.661	
6,202.00	6,192.03	6,208.53	6,194.71	18.01	19.69	-74.55	-122.93	778.36	680.15	650.12	30.03	22.652	
6,292.00	6,281.89	6,300.49	6,286.66	18.31	19.99	-73.67	-124.36	777.83	678.03	647.57	30.46	22.258	

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 A H 8WC
Project:	Andrews County, TX (NAD83-TNC)	TVD Reference:	RKB @ 3050.00usft (Ensign T054)
Reference Site:	University 8-8	MD Reference:	RKB @ 3050.00usft (Ensign T054)
Site Error:	0.00	North Reference:	Grid
Reference Well:	University 8-8E A H 8WC	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00	Output errors are at	2.00 sigma
Reference Wellbore	OH / 72181	Database:	USAEDMDB
Reference Design:	Surveys (Ensign T054)	Offset TVD Reference:	Offset Datum

Offset Design University 8-8E H 4LS - OH / 71370 - Surveys (Ensign 225)												Offset Site Error:	0.00 usft
Survey Program: 15-MWD, 1920-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)		
6,299.99	6,289.86	6,308.68	6,294.84	18.33	20.01	-73.74	-124.48	777.76	677.83	647.33	30.50	22.223	
6,381.00	6,370.76	6,387.42	6,373.57	18.60	20.27	-74.47	-125.69	777.22	675.86	644.98	30.88	21.887	
6,399.99	6,389.72	6,405.59	6,391.74	18.66	20.32	-75.04	-125.97	777.14	675.47	644.50	30.97	21.812	
6,470.00	6,459.63	6,473.19	6,459.33	18.88	20.55	-77.22	-127.02	777.04	674.28	643.00	31.28	21.553	
6,499.99	6,489.58	6,502.20	6,488.33	18.98	20.65	-76.61	-127.50	777.07	673.87	642.45	31.42	21.448	
6,559.00	6,548.51	6,561.25	6,547.38	19.17	20.85	-75.35	-128.52	777.19	673.08	641.39	31.69	21.240	
6,599.99	6,589.45	6,602.21	6,588.34	19.30	20.99	-75.23	-129.28	777.27	672.50	640.62	31.88	21.096	
6,651.00	6,640.40	6,652.55	6,638.67	19.47	21.16	-75.07	-130.18	777.39	671.81	639.69	32.11	20.921	
6,699.99	6,689.33	6,701.15	6,687.26	19.62	21.32	-76.23	-130.98	777.54	671.21	638.88	32.33	20.760	
6,740.00	6,729.30	6,741.25	6,727.35	19.75	21.46	-77.21	-131.61	777.66	670.77	638.26	32.51	20.630	
6,799.99	6,789.21	6,801.69	6,787.78	19.94	21.67	-76.53	-132.52	777.82	670.11	637.32	32.79	20.438	
6,830.00	6,819.19	6,832.12	6,818.21	20.04	21.77	-76.19	-132.98	777.87	669.74	636.81	32.93	20.341	
6,899.99	6,889.11	6,901.48	6,887.57	20.26	22.01	-76.54	-134.02	777.96	668.86	635.62	33.24	20.122	
6,919.00	6,908.10	6,920.02	6,906.10	20.32	22.07	-76.64	-134.28	778.01	668.65	635.33	33.33	20.065	
6,999.99	6,989.01	7,000.04	6,986.11	20.57	22.34	-78.51	-135.38	778.31	667.96	634.28	33.68	19.831	
7,009.00	6,998.01	7,009.02	6,995.10	20.60	22.37	-78.73	-135.50	778.35	667.90	634.18	33.72	19.805	
7,099.00	7,087.94	7,098.04	7,084.11	20.88	22.67	-80.92	-136.64	778.75	667.41	633.29	34.11	19.565	
7,099.99	7,088.92	7,099.01	7,085.08	20.89	22.68	-80.92	-136.65	778.75	667.40	633.29	34.12	19.562	
7,179.78	7,168.66	7,178.13	7,164.18	21.13	22.94	-84.42	-137.55	779.22	667.28	632.83	34.45	19.368	CC
7,188.00	7,176.87	7,186.31	7,172.37	21.15	22.97	-84.79	-137.64	779.27	667.28	632.80	34.49	19.348	
7,199.99	7,188.85	7,198.24	7,184.30	21.19	23.01	-84.53	-137.76	779.34	667.29	632.75	34.54	19.320	
7,278.00	7,266.81	7,275.66	7,261.71	21.42	23.27	-82.71	-138.52	779.83	667.30	632.44	34.86	19.141	
7,299.99	7,288.78	7,297.45	7,283.50	21.49	23.34	-85.23	-138.73	779.98	667.33	632.37	34.95	19.093	
7,368.00	7,356.76	7,364.70	7,350.74	21.69	23.56	-94.05	-139.42	780.51	667.68	632.45	35.23	18.954	
7,399.99	7,388.73	7,396.31	7,382.35	21.77	23.67	-96.40	-139.79	780.79	667.97	632.61	35.35	18.893	
7,473.00	7,461.71	7,467.51	7,453.54	21.98	23.90	-102.08	-140.60	781.54	668.89	633.25	35.64	18.767	
7,499.99	7,488.69	7,494.59	7,480.62	22.06	24.00	-103.17	-140.89	781.87	669.31	633.56	35.76	18.718	
7,597.00	7,585.66	7,594.90	7,580.92	22.33	24.43	-106.99	-142.22	782.84	670.70	634.50	36.20	18.526	
7,599.98	7,588.64	7,597.99	7,584.00	22.33	24.45	-106.99	-142.27	782.86	670.74	634.52	36.22	18.521	
7,686.00	7,674.62	7,680.64	7,666.64	22.55	24.78	-110.85	-143.56	783.47	671.93	635.38	36.54	18.387	
7,699.98	7,688.60	7,692.82	7,678.82	22.59	24.82	-109.16	-143.68	783.62	672.21	635.61	36.59	18.369	
7,776.00	7,764.60	7,760.06	7,746.05	22.77	25.05	-65.70	-143.87	784.95	673.85	636.98	36.87	18.278	
7,799.98	7,788.58	7,781.90	7,767.88	22.82	25.11	-55.36	-143.79	785.52	674.36	637.39	36.96	18.244	
7,866.00	7,854.59	7,842.81	7,828.76	22.97	25.29	-46.59	-143.21	787.38	675.72	638.48	37.23	18.149	
7,899.98	7,888.56	7,875.12	7,861.05	23.05	25.38	-44.16	-142.65	788.46	676.37	638.99	37.38	18.094	
7,955.00	7,943.56	7,929.60	7,915.47	23.18	25.54	-41.07	-141.29	790.35	677.42	639.79	37.63	18.003	
7,999.98	7,988.53	7,979.90	7,965.74	23.30	25.69	-48.55	-140.03	791.84	678.09	640.24	37.85	17.913	
8,046.00	8,034.53	8,029.56	8,015.37	23.41	25.83	-58.24	-138.97	792.99	678.67	640.60	38.08	17.824	
8,099.98	8,088.50	8,085.81	8,071.60	23.55	25.99	-57.51	-138.09	794.14	679.28	640.95	38.33	17.724	
8,135.00	8,123.50	8,123.25	8,109.03	23.64	26.10	-57.05	-137.67	794.82	679.53	641.04	38.49	17.654	
8,199.98	8,188.47	8,193.50	8,179.28	23.80	26.31	-97.71	-137.02	795.72	680.13	641.36	38.77	17.541	
8,224.00	8,212.48	8,220.04	8,205.81	23.86	26.39	-115.60	-136.78	795.90	680.47	641.59	38.88	17.503	
8,299.98	8,288.46	8,301.60	8,287.37	24.03	26.64	-109.29	-136.00	795.85	681.12	641.96	39.16	17.392	
8,314.00	8,302.47	8,315.90	8,301.67	24.06	26.68	-107.94	-135.93	795.81	681.18	641.96	39.21	17.372	
8,399.98	8,388.44	8,405.02	8,390.79	24.22	26.95	-131.23	-136.11	795.53	681.44	641.91	39.53	17.237	

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 A H 8WC
Project:	Andrews County, TX (NAD83-TNC)	TVD Reference:	RKB @ 3050.00usft (Ensign T054)
Reference Site:	University 8-8	MD Reference:	RKB @ 3050.00usft (Ensign T054)
Site Error:	0.00	North Reference:	Grid
Reference Well:	University 8-8E A H 8WC	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00	Output errors are at	2.00 sigma
Reference Wellbore	OH / 72181	Database:	USAEDMDB
Reference Design:	Surveys (Ensign T054)	Offset TVD Reference:	Offset Datum

Offset Design University 8-8E H 4LS - OH / 71370 - Surveys (Ensign 225)												Offset Site Error:	0.00 usft
Survey Program: 15-MWD, 1920-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)		
8,403.00	8,391.46	8,408.20	8,393.97	24.23	26.96	-132.31	-136.13	795.51	681.45	641.90	39.55	17.232	
8,492.00	8,480.45	8,498.64	8,484.40	24.34	27.24	-155.20	-136.72	794.84	681.70	641.83	39.87	17.098	
8,499.98	8,488.43	8,506.49	8,492.26	24.34	27.27	-156.34	-136.78	794.79	681.75	641.85	39.90	17.087	
8,582.00	8,570.44	8,593.67	8,579.42	24.39	27.55	-165.98	-137.80	794.11	682.34	642.14	40.20	16.974	
8,599.98	8,588.42	8,613.84	8,599.59	24.41	27.61	-160.68	-138.16	793.83	682.37	642.10	40.27	16.944	
8,672.00	8,660.42	8,696.31	8,682.02	24.48	27.87	-143.15	-139.84	791.97	681.86	641.30	40.56	16.813	
8,699.98	8,688.39	8,726.08	8,711.77	24.55	27.97	-126.12	-140.40	790.98	681.37	640.69	40.68	16.750	
8,762.00	8,750.34	8,780.89	8,766.55	24.70	28.13	-110.45	-141.24	789.38	680.64	639.72	40.91	16.635	
8,799.98	8,788.26	8,814.82	8,800.47	24.81	28.24	-105.69	-141.63	788.65	680.38	639.32	41.06	16.570	
8,851.00	8,839.23	8,862.98	8,848.62	24.97	28.39	-96.01	-142.13	787.85	679.87	638.61	41.27	16.475	
8,899.98	8,888.18	8,910.28	8,895.91	25.11	28.57	-97.37	-142.69	787.26	679.36	637.86	41.50	16.369	
8,940.00	8,928.17	8,951.62	8,937.21	25.23	28.84	-98.45	-144.46	787.07	678.95	637.16	41.79	16.245	
8,999.98	8,988.12	9,013.22	8,998.51	25.40	29.38	-85.48	-150.37	787.49	678.01	635.75	42.26	16.044	
9,030.00	9,018.13	9,043.52	9,028.40	25.48	29.77	-73.18	-155.27	788.16	677.35	634.84	42.51	15.935	
9,099.98	9,088.10	9,114.07	9,096.88	25.66	30.58	-71.97	-171.91	790.90	675.80	632.79	43.02	15.711	
9,120.00	9,108.12	9,134.27	9,116.19	25.71	30.78	-71.54	-177.76	791.87	675.39	632.25	43.14	15.656	
9,199.98	9,188.09	9,213.65	9,190.71	25.90	31.46	-104.98	-204.71	796.27	674.49	630.84	43.64	15.455	
9,209.00	9,197.11	9,222.47	9,198.86	25.93	31.52	-107.90	-208.03	796.79	674.48	630.77	43.70	15.433	
9,210.11	9,198.22	9,223.55	9,199.85	25.93	31.53	-107.87	-208.44	796.85	674.48	630.77	43.71	15.431	
9,299.00	9,287.09	9,290.51	9,260.57	26.12	32.12	-116.84	-236.23	801.42	675.90	631.72	44.19	15.296	
9,299.98	9,288.08	9,291.08	9,261.07	26.12	32.13	-116.82	-236.50	801.47	675.95	631.75	44.19	15.296	
9,389.00	9,377.09	9,348.00	9,309.39	26.25	32.75	-143.84	-265.73	808.27	683.12	638.51	44.60	15.316	
9,399.98	9,388.07	9,348.00	9,309.39	26.25	32.75	-150.93	-265.73	808.27	684.38	639.81	44.57	15.354	
9,499.00	9,487.07	9,392.84	9,345.26	26.25	33.35	161.08	-291.56	815.74	701.40	656.62	44.78	15.663	
9,499.98	9,488.05	9,393.28	9,345.61	26.25	33.35	162.64	-291.82	815.83	701.61	656.83	44.79	15.666	
9,568.00	9,556.05	9,438.00	9,379.93	26.31	33.95	-81.61	-318.94	825.13	717.89	672.69	45.20	15.883	
9,599.98	9,587.94	9,438.00	9,379.93	26.63	33.95	-65.81	-318.94	825.13	725.57	680.37	45.21	16.051	
9,658.00	9,645.11	9,481.05	9,411.60	27.22	34.23	-58.09	-346.38	834.96	738.47	692.64	45.83	16.114	
9,699.98	9,685.66	9,512.09	9,433.65	27.52	34.44	-55.86	-367.04	842.03	746.55	700.36	46.19	16.161	
9,748.00	9,731.12	9,544.73	9,456.09	27.87	34.62	-53.78	-389.54	849.49	754.92	708.36	46.56	16.215	
9,799.98	9,779.10	9,577.78	9,477.93	28.21	34.77	-54.06	-413.11	857.24	763.58	716.69	46.89	16.285	
9,837.00	9,812.43	9,601.25	9,492.87	28.44	34.89	-53.99	-430.30	862.88	769.77	722.67	47.10	16.342	
9,899.98	9,867.64	9,616.00	9,502.02	28.80	34.95	-53.99	-441.30	866.48	781.05	734.15	46.90	16.655	
9,928.00	9,891.61	9,648.56	9,521.06	28.96	35.12	-53.21	-466.40	874.64	785.71	738.28	47.43	16.567	
9,999.98	9,950.64	9,682.26	9,538.75	29.41	35.29	-52.64	-493.71	883.42	799.14	751.48	47.66	16.766	
10,018.00	9,964.73	9,705.00	9,549.46	29.52	35.41	-52.08	-512.82	889.51	802.76	754.68	48.08	16.697	
10,099.98	10,024.93	9,731.61	9,560.87	29.99	35.53	-51.54	-535.73	896.76	817.57	769.48	48.08	17.003	
10,108.00	10,030.46	9,735.80	9,562.57	30.04	35.55	-51.44	-539.39	897.92	818.99	770.87	48.13	17.017	
10,198.00	10,088.20	9,794.00	9,583.29	30.46	35.81	-49.71	-591.30	914.07	834.53	785.62	48.92	17.061	
10,199.98	10,089.38	9,794.00	9,583.29	30.47	35.81	-49.71	-591.30	914.07	834.83	785.94	48.90	17.074	
10,287.00	10,138.68	9,794.00	9,583.29	30.80	35.81	-49.53	-591.30	914.07	850.86	802.75	48.11	17.687	
10,299.98	10,145.50	9,794.00	9,583.29	30.85	35.81	-49.46	-591.30	914.07	853.67	805.63	48.04	17.770	
10,376.00	10,179.83	9,878.03	9,604.03	31.13	36.11	-48.09	-669.22	937.49	863.61	812.35	51.25	16.850	
10,399.98	10,188.58	9,890.99	9,606.28	31.19	36.16	-47.97	-681.47	941.07	866.92	815.17	51.74	16.754	
10,465.00	10,207.07	9,926.19	9,611.08	31.34	36.30	-47.60	-714.97	950.72	875.11	822.00	53.12	16.475	
10,499.98	10,213.55	9,945.16	9,612.87	31.38	36.37	-47.05	-733.14	955.88	878.22	824.26	53.95	16.278	

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 A H 8WC
Project:	Andrews County, TX (NAD83-TNC)	TVD Reference:	RKB @ 3050.00usft (Ensign T054)
Reference Site:	University 8-8	MD Reference:	RKB @ 3050.00usft (Ensign T054)
Site Error:	0.00	North Reference:	Grid
Reference Well:	University 8-8E A H 8WC	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00	Output errors are at	2.00 sigma
Reference Wellbore	OH / 72181	Database:	USAEDMDB
Reference Design:	Surveys (Ensign T054)	Offset TVD Reference:	Offset Datum

Offset Design University 8-8E H 4LS - OH / 71370 - Surveys (Ensign 225)												Offset Site Error:	0.00 usft
Survey Program: 15-MWD, 1920-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)		
10,556.00	10,218.18	9,993.00	9,614.93	31.43	36.56	-46.72	-779.17	968.69	879.40	823.30	56.10	15.676	
10,571.85	10,218.48	9,993.00	9,614.93	31.44	36.56	-46.70	-779.17	968.69	878.73	822.71	56.02	15.687	
10,599.98	10,218.99	10,005.34	9,614.99	31.44	36.60	-46.66	-791.07	971.95	878.02	821.87	56.14	15.639	
10,613.03	10,219.21	10,018.77	9,615.06	31.45	36.63	-46.62	-804.03	975.49	877.69	821.33	56.36	15.573	
10,645.00	10,219.74	10,051.67	9,615.19	31.46	36.72	-46.50	-835.79	984.08	876.70	819.80	56.90	15.408	
10,654.06	10,219.88	10,061.00	9,615.22	31.46	36.75	-46.47	-844.80	986.50	876.38	819.32	57.05	15.361	
10,669.00	10,220.07	10,076.36	9,615.25	31.46	36.79	-46.43	-859.64	990.46	875.83	818.52	57.30	15.284	
10,676.25	10,220.14	10,083.82	9,615.27	31.47	36.82	-46.42	-866.85	992.38	875.56	818.13	57.43	15.245	
10,699.98	10,220.27	10,108.19	9,615.31	31.47	36.89	-46.40	-890.41	998.63	874.79	817.06	57.73	15.153	
10,709.25	10,220.28	10,117.72	9,615.32	31.47	36.92	-46.39	-899.62	1,001.06	874.53	816.68	57.85	15.118	
10,759.00	10,219.95	10,168.88	9,615.36	31.48	37.08	-46.39	-949.10	1,014.04	873.49	815.04	58.46	14.943	
10,770.40	10,219.80	10,180.05	9,615.36	31.48	37.12	-46.39	-959.92	1,016.85	873.32	814.73	58.59	14.906	
10,799.98	10,219.41	10,208.29	9,615.33	31.49	37.21	-46.39	-987.24	1,023.97	872.84	813.92	58.92	14.814	
10,812.06	10,219.25	10,219.82	9,615.31	31.49	37.26	-46.39	-998.40	1,026.88	872.64	813.58	59.06	14.777	
10,848.00	10,218.80	10,254.12	9,615.17	31.49	37.38	-46.38	-1,031.59	1,035.55	871.98	812.52	59.46	14.665	
10,862.20	10,218.60	10,268.06	9,615.09	31.50	37.43	-46.38	-1,045.08	1,039.07	871.74	812.11	59.64	14.618	
10,899.98	10,217.84	10,306.60	9,614.84	31.50	37.59	-46.38	-1,082.38	1,048.75	871.36	811.23	60.13	14.491	
10,909.85	10,217.59	10,316.67	9,614.76	31.50	37.63	-46.39	-1,092.13	1,051.26	871.32	811.05	60.26	14.459	
10,922.00	10,217.26	10,329.06	9,614.66	31.51	37.68	-46.40	-1,104.13	1,054.35	871.30	810.88	60.42	14.420	
10,937.00	10,216.79	10,344.36	9,614.53	31.51	37.75	-46.42	-1,118.95	1,058.14	871.33	810.71	60.62	14.374	
10,999.98	10,214.60	10,406.03	9,613.94	31.52	38.03	-46.57	-1,178.70	1,073.40	871.40	809.98	61.42	14.188	
11,018.17	10,213.91	10,423.75	9,613.76	31.52	38.12	-46.62	-1,195.87	1,077.81	871.37	809.72	61.65	14.135	
11,026.00	10,213.61	10,431.39	9,613.69	31.53	38.16	-46.64	-1,203.26	1,079.71	871.34	809.60	61.75	14.112	
11,030.94	10,213.42	10,436.20	9,613.64	31.53	38.18	-46.65	-1,207.92	1,080.91	871.33	809.52	61.81	14.097	
11,099.98	10,210.65	10,503.97	9,612.81	31.55	38.53	-46.81	-1,273.56	1,097.74	870.63	807.89	62.74	13.877	
11,118.00	10,209.91	10,521.68	9,612.55	31.56	38.63	-46.84	-1,290.72	1,102.12	870.31	807.33	62.98	13.818	
11,121.74	10,209.76	10,525.36	9,612.49	31.56	38.65	-46.85	-1,294.28	1,103.02	870.24	807.21	63.04	13.805	
11,123.33	10,209.69	10,526.91	9,612.46	31.56	38.66	-46.85	-1,295.79	1,103.41	870.21	807.16	63.06	13.800	
11,172.81	10,208.04	10,578.69	9,611.75	31.59	38.96	-46.88	-1,345.96	1,116.19	869.79	805.97	63.81	13.630	
11,199.98	10,207.41	10,607.19	9,611.47	31.62	39.12	-46.91	-1,373.57	1,123.24	869.91	805.68	64.23	13.544	
11,199.99	10,207.41	10,607.20	9,611.47	31.62	39.12	-46.91	-1,373.58	1,123.25	869.91	805.68	64.23	13.544	
11,207.00	10,207.28	10,614.56	9,611.41	31.63	39.17	-46.92	-1,380.71	1,125.07	869.99	805.65	64.34	13.522	
11,296.00	10,205.37	10,707.03	9,610.47	31.79	39.76	-47.04	-1,470.40	1,147.54	869.95	804.22	65.73	13.235	
11,299.98	10,205.27	10,711.28	9,610.42	31.80	39.78	-47.04	-1,474.53	1,148.55	869.90	804.11	65.80	13.221	
11,304.16	10,205.16	10,715.79	9,610.36	31.82	39.82	-47.04	-1,478.91	1,149.62	869.84	803.98	65.87	13.206	
11,313.08	10,204.93	10,725.40	9,610.24	31.84	39.88	-47.05	-1,488.25	1,151.90	869.71	803.69	66.02	13.174	
11,386.00	10,202.77	10,802.95	9,609.41	32.23	40.41	-47.08	-1,563.64	1,170.02	867.92	800.70	67.22	12.911	
11,399.98	10,202.33	10,816.04	9,609.25	32.33	40.51	-47.07	-1,576.39	1,173.03	867.53	800.10	67.43	12.866	
11,402.75	10,202.25	10,818.64	9,609.22	32.35	40.53	-47.07	-1,578.92	1,173.63	867.46	799.99	67.47	12.857	
11,411.74	10,201.99	10,827.06	9,609.10	32.43	40.59	-47.06	-1,587.11	1,175.56	867.26	799.65	67.60	12.829	
11,458.61	10,200.92	10,871.00	9,608.21	32.91	40.91	-47.03	-1,629.89	1,185.53	866.78	798.49	68.29	12.693	
11,478.00	10,200.61	10,889.72	9,607.71	33.14	41.05	-47.01	-1,648.13	1,189.73	866.86	798.28	68.58	12.640	
11,483.10	10,200.53	10,895.12	9,607.57	33.19	41.09	-47.01	-1,653.39	1,190.94	866.90	798.22	68.67	12.623	
11,499.98	10,200.28	10,913.00	9,607.13	33.39	41.22	-47.00	-1,670.81	1,194.96	866.99	798.01	68.98	12.569	
11,567.00	10,199.09	10,984.71	9,605.91	34.26	41.78	-47.00	-1,740.62	1,211.31	866.82	796.69	70.13	12.360	

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 A H 8WC
Project:	Andrews County, TX (NAD83-TNC)	TVD Reference:	RKB @ 3050.00usft (Ensign T054)
Reference Site:	University 8-8	MD Reference:	RKB @ 3050.00usft (Ensign T054)
Site Error:	0.00	North Reference:	Grid
Reference Well:	University 8-8E A H 8WC	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00	Output errors are at	2.00 sigma
Reference Wellbore	OH / 72181	Database:	USAEDMDB
Reference Design:	Surveys (Ensign T054)	Offset TVD Reference:	Offset Datum

Offset Design University 8-8E H 4LS - OH / 71370 - Surveys (Ensign 225)												Offset Site Error:	0.00 usft
Survey Program: 15-MWD, 1920-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)		
11,579.81	10,198.87	10,999.24	9,605.74	34.44	41.90	-47.00	-1,754.77	1,214.60	866.72	796.36	70.37	12.317	
11,593.06	10,198.89	11,014.26	9,605.56	34.61	42.02	-46.99	-1,769.40	1,217.98	866.67	796.06	70.62	12.273	
11,599.98	10,198.62	11,022.11	9,605.47	34.71	42.08	-46.99	-1,777.05	1,219.73	866.67	795.92	70.75	12.250	
11,612.83	10,198.53	11,036.69	9,605.31	34.88	42.20	-46.99	-1,791.27	1,222.95	866.69	795.70	70.99	12.208	
11,656.00	10,198.63	11,083.70	9,604.86	35.48	42.58	-46.97	-1,837.16	1,233.18	867.14	795.35	71.79	12.079	
11,665.97	10,198.71	11,094.05	9,604.80	35.61	42.67	-46.96	-1,847.25	1,235.43	867.32	795.35	71.96	12.052	
11,699.98	10,198.87	11,129.32	9,604.70	36.08	42.97	-46.97	-1,881.66	1,243.20	867.88	795.33	72.56	11.961	
11,710.24	10,198.88	11,139.96	9,604.71	36.23	43.05	-46.98	-1,892.04	1,245.56	868.04	795.30	72.74	11.934	
11,745.00	10,198.79	11,176.32	9,604.83	36.71	43.37	-47.02	-1,927.48	1,253.66	868.53	795.16	73.37	11.838	
11,757.64	10,198.73	11,189.61	9,604.88	36.89	43.48	-47.04	-1,940.45	1,256.59	868.69	795.09	73.60	11.803	
11,799.98	10,198.66	11,234.15	9,605.00	37.49	43.87	-47.10	-1,983.91	1,266.31	869.21	794.84	74.37	11.687	
11,808.28	10,198.67	11,242.88	9,605.01	37.60	43.94	-47.11	-1,992.44	1,268.19	869.31	794.79	74.52	11.665	
11,836.00	10,198.77	11,273.98	9,605.01	38.00	44.22	-47.12	-2,022.83	1,274.74	869.60	794.53	75.07	11.584	
11,850.95	10,198.85	11,290.74	9,604.96	38.21	44.37	-47.11	-2,039.25	1,278.16	869.72	794.36	75.36	11.540	
11,899.98	10,199.19	11,344.15	9,604.53	38.91	44.86	-47.05	-2,091.63	1,288.52	869.86	793.57	76.29	11.402	
11,906.53	10,199.25	11,350.64	9,604.47	39.00	44.92	-47.04	-2,098.01	1,289.75	869.87	793.47	76.40	11.386	
11,928.00	10,199.44	11,371.93	9,604.25	39.31	45.11	-47.00	-2,118.91	1,293.78	869.87	793.10	76.77	11.331	
11,999.98	10,199.94	11,439.59	9,603.54	40.35	45.74	-46.88	-2,185.32	1,306.68	869.64	791.71	77.93	11.159	
12,018.00	10,200.00	11,454.20	9,603.40	40.61	45.88	-46.86	-2,199.64	1,309.59	869.60	791.42	78.19	11.122	
12,020.82	10,200.01	11,456.48	9,603.38	40.65	45.91	-46.86	-2,201.88	1,310.06	869.60	791.37	78.23	11.117	
12,021.41	10,200.01	11,456.96	9,603.38	40.66	45.91	-46.86	-2,202.35	1,310.15	869.60	791.36	78.23	11.115	
12,037.00	10,200.06	11,469.60	9,603.26	40.89	46.03	-46.84	-2,214.72	1,312.76	869.60	791.14	78.45	11.084	
12,099.98	10,200.39	11,524.02	9,602.86	41.81	46.56	-46.80	-2,267.81	1,324.67	869.87	790.46	79.41	10.954	
12,100.75	10,200.40	11,524.92	9,602.86	41.82	46.57	-46.79	-2,268.69	1,324.87	869.88	790.45	79.43	10.952	
12,108.00	10,200.45	11,533.36	9,602.80	41.93	46.65	-46.79	-2,276.92	1,326.75	869.90	790.32	79.58	10.931	
12,198.00	10,200.89	11,635.23	9,602.29	43.25	47.65	-46.62	-2,376.46	1,348.40	868.92	787.51	81.42	10.673	
12,199.98	10,200.89	11,637.35	9,602.28	43.28	47.67	-46.62	-2,378.53	1,348.84	868.88	787.43	81.45	10.667	
12,204.57	10,200.90	11,642.28	9,602.26	43.35	47.72	-46.61	-2,383.35	1,349.85	868.78	787.24	81.54	10.654	
12,215.62	10,200.91	11,654.11	9,602.21	43.52	47.84	-46.60	-2,394.94	1,352.27	868.58	786.82	81.76	10.624	
12,265.89	10,200.67	11,705.58	9,602.05	44.28	48.35	-46.58	-2,445.34	1,362.68	868.11	785.40	82.71	10.496	
12,287.00	10,200.44	11,724.98	9,601.99	44.59	48.54	-46.59	-2,464.34	1,366.63	868.21	785.13	83.08	10.451	
12,289.98	10,200.40	11,727.73	9,601.98	44.64	48.57	-46.60	-2,467.02	1,367.20	868.24	785.11	83.13	10.444	
12,299.98	10,200.27	11,736.91	9,601.95	44.78	48.66	-46.61	-2,476.01	1,369.09	868.34	785.03	83.30	10.424	
12,317.50	10,200.05	11,753.01	9,601.89	45.04	48.82	-46.64	-2,491.76	1,372.43	868.52	784.91	83.61	10.388	
12,376.00	10,199.36	11,812.39	9,601.75	45.89	49.42	-46.73	-2,549.80	1,384.98	869.15	784.40	84.75	10.256	
12,381.58	10,199.30	11,818.68	9,601.77	45.97	49.49	-46.74	-2,555.94	1,386.32	869.18	784.31	84.87	10.242	
12,399.98	10,199.06	11,839.42	9,601.90	46.24	49.70	-46.78	-2,576.20	1,390.74	869.25	783.98	85.27	10.194	
12,466.00	10,197.86	11,908.10	9,602.98	47.21	50.41	-46.98	-2,643.25	1,405.59	869.03	782.38	86.64	10.030	
12,485.19	10,197.47	11,926.67	9,603.46	47.49	50.61	-47.05	-2,661.34	1,409.78	868.95	781.92	87.02	9.985	
12,499.98	10,197.23	11,940.98	9,603.88	47.71	50.76	-47.11	-2,675.26	1,413.07	868.93	781.61	87.32	9.951	
12,501.57	10,197.21	11,942.53	9,603.93	47.73	50.77	-47.11	-2,676.76	1,413.42	868.93	781.57	87.35	9.947	
12,513.24	10,197.05	11,953.82	9,604.29	47.91	50.89	-47.16	-2,687.73	1,416.06	868.94	781.35	87.59	9.921	
12,557.00	10,196.75	11,996.81	9,605.83	48.55	51.35	-47.34	-2,729.47	1,426.24	869.16	780.67	88.49	9.822	
12,566.93	10,196.73	12,006.60	9,606.18	48.70	51.45	-47.38	-2,738.98	1,428.56	869.23	780.54	88.69	9.800	
12,599.98	10,196.60	12,039.16	9,607.36	49.19	51.80	-47.51	-2,770.58	1,436.33	869.47	780.09	89.38	9.728	
12,610.69	10,196.55	12,049.73	9,607.75	49.34	51.91	-47.55	-2,780.83	1,438.85	869.54	779.93	89.60	9.704	

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 A H 8WC
Project:	Andrews County, TX (NAD83-TNC)	TVD Reference:	RKB @ 3050.00usft (Ensign T054)
Reference Site:	University 8-8	MD Reference:	RKB @ 3050.00usft (Ensign T054)
Site Error:	0.00	North Reference:	Grid
Reference Well:	University 8-8E A H 8WC	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00	Output errors are at	2.00 sigma
Reference Wellbore	OH / 72181	Database:	USAEDMDB
Reference Design:	Surveys (Ensign T054)	Offset TVD Reference:	Offset Datum

Offset Design University 8-8E H 4LS - OH / 71370 - Surveys (Ensign 225)												Offset Site Error:	0.00 usft
Survey Program: 15-MWD, 1920-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)		
12,646.00	10,196.32	12,088.12	9,609.25	49.87	52.33	-47.72	-2,818.09	1,448.03	869.67	779.25	90.42	9.618	
12,688.74	10,195.91	12,135.03	9,611.37	50.50	52.83	-47.94	-2,863.59	1,459.23	869.55	778.11	91.44	9.510	
12,699.97	10,195.78	12,147.35	9,611.98	50.67	52.97	-48.00	-2,875.54	1,462.16	869.46	777.75	91.71	9.481	
12,734.15	10,195.30	12,171.32	9,613.03	51.17	53.23	-48.12	-2,898.77	1,467.96	869.33	777.08	92.25	9.424	
12,736.00	10,195.27	12,172.70	9,613.09	51.20	53.24	-48.13	-2,900.11	1,468.30	869.33	777.05	92.28	9.420	
12,750.45	10,195.08	12,183.44	9,613.49	51.42	53.36	-48.18	-2,910.51	1,470.94	869.38	776.86	92.53	9.396	
12,799.97	10,194.90	12,220.25	9,614.56	52.15	53.76	-48.34	-2,946.13	1,480.17	870.27	776.93	93.34	9.324	
12,805.90	10,194.93	12,234.00	9,614.84	52.24	53.91	-48.39	-2,959.42	1,483.69	870.51	776.88	93.63	9.297	
12,827.00	10,195.11	12,242.12	9,614.98	52.56	54.00	-48.42	-2,967.26	1,485.78	871.20	777.39	93.81	9.287	
12,842.87	10,195.29	12,257.20	9,615.23	52.79	54.17	-48.46	-2,981.83	1,489.66	871.82	777.69	94.13	9.262	
12,899.97	10,195.75	12,311.46	9,615.97	53.65	54.77	-48.60	-3,034.26	1,503.64	874.05	778.74	95.31	9.171	
12,903.68	10,195.77	12,314.99	9,616.00	53.70	54.81	-48.61	-3,037.66	1,504.55	874.19	778.81	95.38	9.165	
12,917.00	10,195.83	12,327.83	9,616.14	53.90	54.95	-48.64	-3,050.07	1,507.85	874.72	779.05	95.66	9.144	
12,935.32	10,195.90	12,346.13	9,616.33	54.18	55.15	-48.69	-3,067.75	1,512.57	875.42	779.36	96.06	9.113	
12,999.97	10,196.11	12,410.71	9,617.02	55.15	55.87	-48.87	-3,130.14	1,529.24	877.65	780.18	97.47	9.004	
12,999.98	10,196.11	12,410.71	9,617.02	55.15	55.87	-48.87	-3,130.14	1,529.24	877.65	780.18	97.47	9.004	
13,007.00	10,196.13	12,418.09	9,617.10	55.25	55.95	-48.89	-3,137.26	1,531.15	877.87	780.24	97.64	8.991	
13,027.31	10,196.19	12,439.91	9,617.37	55.56	56.20	-48.95	-3,158.36	1,536.77	878.45	780.34	98.12	8.953	
13,097.00	10,196.57	12,502.00	9,618.26	56.62	56.89	-49.08	-3,218.38	1,552.61	879.94	780.47	99.47	8.847	
13,097.20	10,196.58	12,511.60	9,618.39	56.62	57.00	-49.09	-3,227.66	1,555.04	879.88	780.20	99.68	8.827	
13,099.97	10,196.60	12,513.78	9,618.41	56.66	57.02	-49.10	-3,229.78	1,555.59	879.93	780.20	99.73	8.823	
13,118.74	10,196.75	12,528.60	9,618.50	56.95	57.19	-49.11	-3,244.12	1,559.33	880.31	780.27	100.04	8.799	
13,186.00	10,197.50	12,581.67	9,617.84	57.97	57.79	-49.11	-3,295.50	1,572.61	882.51	781.37	101.14	8.726	
13,189.01	10,197.54	12,593.00	9,617.50	58.02	57.92	-49.09	-3,306.46	1,575.42	882.69	781.32	101.38	8.707	
13,199.97	10,197.69	12,593.00	9,617.50	58.18	57.92	-49.09	-3,306.46	1,575.42	883.12	781.75	101.36	8.713	
13,215.93	10,197.90	12,608.24	9,617.01	58.43	58.09	-49.07	-3,321.21	1,579.20	883.83	782.16	101.67	8.693	
13,274.00	10,198.66	12,665.09	9,615.32	59.31	58.74	-49.01	-3,376.21	1,593.50	886.35	783.52	102.83	8.620	
13,279.60	10,198.73	12,670.57	9,615.17	59.40	58.80	-49.00	-3,381.51	1,594.89	886.59	783.65	102.94	8.613	
13,299.97	10,198.98	12,691.93	9,614.60	59.71	59.05	-48.98	-3,402.16	1,600.33	887.47	784.09	103.38	8.585	
13,313.73	10,199.15	12,707.62	9,614.20	59.92	59.23	-48.96	-3,417.34	1,604.31	888.05	784.34	103.71	8.563	
13,363.00	10,199.70	12,763.86	9,612.94	60.67	59.87	-48.92	-3,471.78	1,618.32	889.95	785.07	104.88	8.485	
13,371.11	10,199.78	12,773.12	9,612.75	60.80	59.98	-48.91	-3,480.76	1,620.60	890.24	785.16	105.08	8.472	
13,399.97	10,200.07	12,803.78	9,612.07	61.24	60.33	-48.88	-3,510.50	1,628.00	891.24	785.52	105.71	8.431	
13,411.85	10,200.18	12,816.42	9,611.75	61.42	60.48	-48.87	-3,522.78	1,631.00	891.64	785.67	105.97	8.414	
13,454.00	10,200.54	12,861.30	9,610.41	62.06	61.00	-48.80	-3,566.42	1,641.34	893.05	786.16	106.89	8.355	
13,464.19	10,200.62	12,871.49	9,610.11	62.22	61.12	-48.79	-3,576.35	1,643.67	893.37	786.28	107.09	8.342	
13,499.97	10,200.87	12,907.40	9,609.54	62.77	61.55	-48.78	-3,611.19	1,652.30	894.46	786.61	107.85	8.293	
13,509.58	10,200.94	12,917.04	9,609.53	62.91	61.66	-48.79	-3,620.52	1,654.74	894.73	786.67	108.07	8.280	
13,543.00	10,201.14	12,950.54	9,609.91	63.42	62.06	-48.85	-3,652.84	1,663.56	895.62	786.80	108.82	8.230	
13,555.63	10,201.21	12,961.57	9,610.14	63.62	62.19	-48.88	-3,663.45	1,666.56	895.94	786.86	109.08	8.214	
13,599.97	10,201.37	13,000.12	9,610.77	64.30	62.65	-48.98	-3,700.52	1,677.11	897.19	787.22	109.98	8.158	
13,607.25	10,201.39	13,006.45	9,610.85	64.41	62.73	-49.00	-3,706.60	1,678.85	897.42	787.29	110.12	8.149	
13,633.00	10,201.43	13,028.83	9,611.07	64.80	63.00	-49.05	-3,728.12	1,685.03	898.24	787.60	110.64	8.119	
13,647.64	10,201.43	13,041.00	9,611.14	65.03	63.14	-49.08	-3,739.81	1,688.40	898.73	787.81	110.92	8.102	
13,699.97	10,201.21	13,085.58	9,610.72	65.83	63.67	-49.14	-3,782.72	1,700.46	900.56	788.64	111.92	8.046	

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 A H 8WC
Project:	Andrews County, TX (NAD83-TNC)	TVD Reference:	RKB @ 3050.00usft (Ensign T054)
Reference Site:	University 8-8	MD Reference:	RKB @ 3050.00usft (Ensign T054)
Site Error:	0.00	North Reference:	Grid
Reference Well:	University 8-8E A H 8WC	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00	Output errors are at	2.00 sigma
Reference Wellbore	OH / 72181	Database:	USAEDMDB
Reference Design:	Surveys (Ensign T054)	Offset TVD Reference:	Offset Datum

Offset Design University 8-8E H 4LS - OH / 71370 - Surveys (Ensign 225)												Offset Site Error:	0.00 usft
Survey Program: 15-MWD, 1920-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)		
13,705.00	10,201.17	13,089.81	9,610.61	65.91	63.72	-49.14	-3,786.80	1,701.58	900.74	788.73	112.01	8.041	
13,723.00	10,201.01	13,104.97	9,610.12	66.19	63.90	-49.14	-3,801.42	1,705.53	901.41	789.07	112.34	8.024	
13,740.52	10,200.81	13,119.71	9,609.50	66.46	64.08	-49.13	-3,815.66	1,709.31	902.08	789.43	112.65	8.008	
13,799.97	10,199.92	13,214.55	9,606.45	67.37	65.20	-49.10	-3,907.52	1,732.65	903.54	788.82	114.72	7.876	
13,812.00	10,199.70	13,236.39	9,606.48	67.56	65.46	-49.13	-3,928.73	1,737.85	903.45	788.25	115.20	7.843	
13,813.12	10,199.68	13,238.42	9,606.50	67.57	65.48	-49.13	-3,930.71	1,738.33	903.44	788.19	115.24	7.839	
13,899.97	10,197.21	13,336.12	9,606.01	68.91	66.64	-49.23	-4,026.00	1,759.86	901.62	784.22	117.39	7.680	
13,902.00	10,197.13	13,338.49	9,606.01	68.94	66.67	-49.23	-4,028.32	1,760.36	901.55	784.10	117.44	7.676	
13,906.60	10,196.96	13,343.85	9,606.00	69.01	66.73	-49.24	-4,033.56	1,761.49	901.38	783.82	117.56	7.667	
13,926.22	10,196.20	13,366.74	9,606.04	69.31	67.01	-49.27	-4,055.93	1,766.30	900.61	782.54	118.07	7.628	
13,991.00	10,193.65	13,436.49	9,606.46	70.31	67.83	-49.35	-4,124.19	1,780.69	897.32	777.69	119.63	7.501	
13,999.97	10,193.29	13,445.49	9,606.49	70.45	67.94	-49.36	-4,133.00	1,782.51	896.81	776.99	119.83	7.484	
14,003.27	10,193.15	13,448.79	9,606.50	70.50	67.98	-49.36	-4,136.24	1,783.17	896.63	776.72	119.90	7.478	
14,009.68	10,192.89	13,455.23	9,606.51	70.60	68.06	-49.36	-4,142.54	1,784.47	896.26	776.22	120.05	7.466	
14,080.00	10,189.69	13,520.26	9,606.40	71.69	68.83	-49.42	-4,206.27	1,797.43	892.23	770.70	121.54	7.341	
14,099.97	10,188.83	13,537.14	9,606.36	72.00	69.03	-49.40	-4,222.78	1,800.92	891.23	769.30	121.94	7.309	
14,104.76	10,188.86	13,541.19	9,606.35	72.07	69.08	-49.40	-4,226.74	1,801.77	891.02	768.99	122.03	7.302	
14,106.12	10,188.62	13,542.33	9,606.35	72.09	69.10	-49.40	-4,227.86	1,802.01	890.96	768.91	122.06	7.300	
14,170.00	10,187.78	13,599.86	9,606.29	73.08	69.79	-49.31	-4,283.99	1,814.56	889.12	765.79	123.33	7.209	
14,184.05	10,187.88	13,614.44	9,606.33	73.30	69.96	-49.28	-4,298.21	1,817.82	888.86	765.22	123.64	7.189	
14,199.97	10,188.03	13,630.96	9,606.42	73.55	70.16	-49.26	-4,314.30	1,821.53	888.55	764.57	123.99	7.167	
14,208.87	10,188.12	13,640.20	9,606.49	73.69	70.27	-49.24	-4,323.30	1,823.62	888.37	764.19	124.18	7.154	
14,260.00	10,188.82	13,695.60	9,607.22	74.49	70.94	-49.15	-4,377.24	1,836.26	887.18	761.83	125.35	7.078	
14,277.99	10,189.10	13,716.15	9,607.70	74.77	71.19	-49.14	-4,397.22	1,841.01	886.67	760.89	125.79	7.049	
14,299.97	10,189.37	13,741.26	9,608.45	75.12	71.50	-49.15	-4,421.64	1,846.84	886.00	759.67	126.34	7.013	
14,308.00	10,189.45	13,750.43	9,608.77	75.24	71.61	-49.15	-4,430.55	1,848.98	885.75	759.21	126.54	7.000	
14,349.00	10,189.72	13,790.22	9,610.25	75.88	72.09	-49.21	-4,469.21	1,858.29	884.44	756.98	127.46	6.939	
14,363.74	10,189.76	13,803.79	9,610.70	76.11	72.26	-49.23	-4,482.40	1,861.46	884.02	756.24	127.78	6.918	
14,399.97	10,189.75	13,837.16	9,611.68	76.68	72.66	-49.27	-4,514.84	1,869.24	883.07	754.50	128.57	6.868	
14,415.17	10,189.70	13,850.00	9,612.01	76.91	72.82	-49.29	-4,527.31	1,872.23	882.72	753.84	128.88	6.849	
14,438.00	10,189.57	13,873.17	9,612.49	77.27	73.10	-49.32	-4,549.85	1,877.57	882.20	752.78	129.42	6.817	
14,445.50	10,189.51	13,880.38	9,612.61	77.39	73.19	-49.32	-4,556.87	1,879.22	882.04	752.45	129.59	6.807	
14,499.97	10,189.13	13,932.77	9,613.01	78.23	73.82	-49.32	-4,607.95	1,890.86	880.81	750.04	130.77	6.736	
14,518.43	10,188.99	13,953.54	9,612.96	78.52	74.08	-49.30	-4,628.24	1,895.30	880.36	749.15	131.21	6.710	
14,529.00	10,188.92	13,966.35	9,612.89	78.69	74.24	-49.28	-4,640.78	1,897.96	880.06	748.59	131.47	6.694	
14,537.71	10,188.86	13,976.91	9,612.81	78.82	74.37	-49.26	-4,651.11	1,900.10	879.79	748.10	131.69	6.681	
14,599.97	10,188.52	14,048.35	9,611.73	79.80	75.24	-49.00	-4,721.29	1,913.42	877.06	744.03	133.04	6.593	
14,614.77	10,188.47	14,063.37	9,611.44	80.03	75.42	-48.93	-4,736.06	1,916.09	876.29	742.98	133.32	6.573	
14,618.00	10,188.46	14,066.65	9,611.38	80.08	75.46	-48.91	-4,739.29	1,916.67	876.12	742.74	133.38	6.569	
14,623.59	10,188.44	14,072.32	9,611.27	80.17	75.53	-48.89	-4,744.87	1,917.68	875.82	742.34	133.48	6.561	
14,699.97	10,188.34	14,151.39	9,609.58	81.37	76.50	-48.45	-4,822.72	1,931.41	871.38	736.51	134.87	6.461	
14,709.00	10,188.35	14,160.98	9,609.32	81.52	76.62	-48.39	-4,832.18	1,932.99	870.80	735.78	135.02	6.449	
14,712.32	10,188.35	14,164.50	9,609.21	81.57	76.66	-48.37	-4,835.65	1,933.56	870.59	735.51	135.08	6.445	
14,725.58	10,188.36	14,178.57	9,608.78	81.78	76.83	-48.28	-4,849.53	1,935.81	869.74	734.43	135.30	6.428	
14,799.00	10,188.32	14,254.36	9,606.28	82.94	77.76	-47.80	-4,924.36	1,947.57	865.11	728.61	136.50	6.338	
14,799.97	10,188.32	14,255.35	9,606.26	82.95	77.77	-47.80	-4,925.34	1,947.73	865.05	728.53	136.52	6.337	

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 A H 8WC
Project:	Andrews County, TX (NAD83-TNC)	TVD Reference:	RKB @ 3050.00usft (Ensign T054)
Reference Site:	University 8-8	MD Reference:	RKB @ 3050.00usft (Ensign T054)
Site Error:	0.00	North Reference:	Grid
Reference Well:	University 8-8E A H 8WC	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00	Output errors are at	2.00 sigma
Reference Wellbore	OH / 72181	Database:	USAEDMDB
Reference Design:	Surveys (Ensign T054)	Offset TVD Reference:	Offset Datum

Offset Design University 8-8E H 4LS - OH / 71370 - Surveys (Ensign 225)												Offset Site Error:	0.00 usft
Survey Program: 15-MWD, 1920-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)		
14,804.79	10,188.32	14,260.26	9,606.14	83.03	77.83	-47.77	-4,930.18	1,948.52	864.76	728.16	136.60	6.331	
14,818.03	10,188.30	14,273.76	9,605.84	83.24	77.99	-47.69	-4,943.50	1,950.73	863.93	727.11	136.82	6.314	
14,889.00	10,188.14	14,332.29	9,605.01	84.36	78.72	-47.41	-5,001.12	1,960.95	859.65	721.76	137.89	6.234	
14,899.97	10,188.14	14,340.27	9,604.92	84.53	78.82	-47.37	-5,008.95	1,962.49	859.13	721.09	138.05	6.224	
14,903.33	10,188.14	14,342.72	9,604.89	84.58	78.85	-47.37	-5,011.35	1,962.97	858.99	720.90	138.09	6.220	
14,907.67	10,188.16	14,345.88	9,604.86	84.65	78.89	-47.35	-5,014.45	1,963.60	858.83	720.67	138.15	6.216	
14,947.03	10,188.65	14,374.60	9,604.56	85.27	79.25	-47.27	-5,042.54	1,969.56	858.10	719.40	138.71	6.186	
14,979.00	10,189.51	14,404.98	9,604.28	85.78	79.63	-47.22	-5,072.16	1,976.29	858.47	719.16	139.31	6.162	
14,983.73	10,189.67	14,410.65	9,604.24	85.85	79.70	-47.20	-5,077.69	1,977.53	858.56	719.14	139.42	6.158	
14,999.97	10,190.22	14,430.11	9,604.09	86.10	79.95	-47.16	-5,096.69	1,981.76	858.88	719.08	139.80	6.144	
15,015.10	10,190.74	14,448.24	9,603.96	86.33	80.18	-47.12	-5,114.40	1,985.62	859.18	719.03	140.15	6.130	
15,068.00	10,192.63	14,500.73	9,603.63	87.16	80.84	-47.01	-5,165.76	1,996.50	860.43	719.24	141.19	6.094	
15,074.95	10,192.89	14,506.43	9,603.57	87.26	80.91	-47.00	-5,171.33	1,997.69	860.67	719.37	141.30	6.091	
15,099.97	10,193.83	14,526.97	9,603.29	87.65	81.16	-46.96	-5,191.41	2,002.01	861.62	719.91	141.71	6.080	
15,112.45	10,194.31	14,537.21	9,603.12	87.84	81.29	-46.93	-5,201.41	2,004.18	862.16	720.25	141.91	6.075	
15,159.00	10,196.13	14,576.37	9,602.26	88.55	81.77	-46.84	-5,239.64	2,012.64	864.51	721.84	142.67	6.060	
15,167.67	10,196.46	14,584.24	9,602.06	88.69	81.87	-46.81	-5,247.31	2,014.36	864.98	722.16	142.82	6.056	
15,199.97	10,197.42	14,613.54	9,601.29	89.18	82.24	-46.73	-5,275.89	2,020.81	866.65	723.24	143.40	6.043	
15,210.51	10,197.63	14,623.11	9,601.03	89.35	82.36	-46.71	-5,285.21	2,022.94	867.16	723.56	143.60	6.039	
15,249.00	10,198.03	14,658.33	9,600.00	89.94	82.79	-46.65	-5,319.52	2,030.83	868.87	724.52	144.35	6.019	
15,260.13	10,198.04	14,669.80	9,599.66	90.11	82.94	-46.64	-5,330.69	2,033.42	869.32	724.72	144.60	6.012	
15,299.97	10,197.88	14,710.89	9,598.52	90.72	83.45	-46.63	-5,370.70	2,042.71	870.86	725.34	145.51	5.985	
15,308.30	10,197.81	14,719.48	9,598.29	90.85	83.56	-46.63	-5,379.07	2,044.65	871.16	725.45	145.71	5.979	
15,338.00	10,197.44	14,745.00	9,597.66	91.30	83.87	-46.64	-5,403.91	2,050.44	872.22	725.91	146.31	5.962	
15,351.51	10,197.22	14,761.19	9,597.29	91.51	84.08	-46.66	-5,419.66	2,054.16	872.69	726.00	146.69	5.949	
15,399.97	10,196.14	14,803.62	9,596.49	92.24	84.61	-46.74	-5,460.85	2,064.33	874.61	726.84	147.78	5.918	
15,406.03	10,195.98	14,808.92	9,596.41	92.34	84.68	-46.75	-5,465.98	2,065.65	874.88	726.96	147.92	5.915	
15,428.00	10,195.32	14,828.11	9,596.14	92.67	84.92	-46.81	-5,484.55	2,070.49	875.86	727.42	148.44	5.900	
15,443.79	10,194.80	14,843.48	9,595.98	92.91	85.12	-46.89	-5,499.40	2,074.44	876.60	727.73	148.87	5.888	
15,499.97	10,192.88	14,903.62	9,596.00	93.76	85.88	-47.23	-5,557.40	2,090.33	878.95	728.36	150.60	5.836	
15,503.95	10,192.74	14,907.87	9,596.04	93.82	85.93	-47.26	-5,561.49	2,091.48	879.10	728.38	150.72	5.833	
15,518.00	10,192.23	14,922.88	9,596.24	94.04	86.12	-47.36	-5,575.94	2,095.55	879.62	728.45	151.17	5.819	
15,537.14	10,191.56	14,943.79	9,596.56	94.33	86.39	-47.52	-5,596.06	2,101.21	880.22	728.43	151.79	5.799	
15,599.97	10,189.71	15,012.83	9,597.34	95.30	87.26	-47.91	-5,662.70	2,119.26	881.19	727.49	153.71	5.733	
15,599.98	10,189.71	15,012.84	9,597.34	95.30	87.26	-47.91	-5,662.71	2,119.26	881.19	727.49	153.71	5.733	
15,607.00	10,189.53	15,020.58	9,597.40	95.41	87.35	-47.94	-5,670.20	2,121.21	881.20	727.30	153.91	5.726	
15,699.00	10,186.52	15,120.18	9,597.97	96.85	88.61	-48.22	-5,766.79	2,145.52	880.02	723.56	156.46	5.624	
15,699.97	10,186.48	15,121.13	9,597.97	96.86	88.62	-48.22	-5,767.71	2,145.75	879.99	723.51	156.49	5.623	
15,704.77	10,186.28	15,125.83	9,597.97	96.94	88.68	-48.23	-5,772.28	2,146.85	879.88	723.27	156.61	5.618	
15,717.02	10,185.76	15,137.83	9,597.94	97.13	88.83	-48.26	-5,783.95	2,149.64	879.57	722.66	156.91	5.606	
15,789.00	10,182.46	15,207.53	9,597.01	98.25	89.72	-48.36	-5,851.86	2,165.28	877.53	718.92	158.61	5.533	
15,799.97	10,181.93	15,217.42	9,596.89	98.42	89.85	-48.36	-5,861.50	2,167.54	877.23	718.36	158.86	5.522	
15,802.15	10,181.83	15,219.39	9,596.87	98.45	89.87	-48.37	-5,863.41	2,167.99	877.17	718.26	158.91	5.520	
15,815.66	10,181.22	15,231.57	9,596.82	98.66	90.03	-48.38	-5,875.24	2,170.88	876.89	717.65	159.23	5.507	
15,854.18	10,179.66	15,266.23	9,597.16	99.26	90.48	-48.49	-5,908.77	2,179.66	876.54	716.33	160.20	5.471	

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 A H 8WC
Project:	Andrews County, TX (NAD83-TNC)	TVD Reference:	RKB @ 3050.00usft (Ensign T054)
Reference Site:	University 8-8	MD Reference:	RKB @ 3050.00usft (Ensign T054)
Site Error:	0.00	North Reference:	Grid
Reference Well:	University 8-8E A H 8WC	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00	Output errors are at	2.00 sigma
Reference Wellbore	OH / 72181	Database:	USAEDMDB
Reference Design:	Surveys (Ensign T054)	Offset TVD Reference:	Offset Datum

Offset Design University 8-8E H 4LS - OH / 71370 - Surveys (Ensign 225)												Offset Site Error:	0.00 usft
Survey Program: 15-MWD, 1920-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)		
15,879.00	10,178.81	15,289.00	9,597.78	99.65	90.78	-48.61	-5,930.67	2,185.87	876.68	715.79	160.90	5.449	
15,883.79	10,178.67	15,293.02	9,597.92	99.72	90.83	-48.64	-5,934.52	2,186.99	876.74	715.72	161.02	5.445	
15,899.97	10,178.24	15,308.46	9,598.46	99.97	91.03	-48.74	-5,949.33	2,191.35	876.98	715.49	161.50	5.430	
15,915.48	10,177.94	15,323.28	9,598.99	100.22	91.22	-48.84	-5,963.53	2,195.55	877.28	715.33	161.95	5.417	
15,969.00	10,177.72	15,374.39	9,600.95	101.04	91.89	-49.14	-6,012.44	2,210.24	878.74	715.27	163.47	5.376	
15,975.78	10,177.77	15,379.00	9,601.14	101.15	91.95	-49.16	-6,016.85	2,211.58	878.97	715.37	163.60	5.373	
15,999.97	10,177.95	15,403.07	9,602.00	101.53	92.26	-49.27	-6,039.88	2,218.53	879.83	715.53	164.29	5.355	
16,012.53	10,178.05	15,414.64	9,602.33	101.72	92.40	-49.31	-6,050.96	2,221.83	880.30	715.68	164.62	5.347	
16,058.00	10,178.36	15,456.58	9,603.06	102.43	92.94	-49.44	-6,091.23	2,233.53	882.15	716.39	165.76	5.322	
16,067.02	10,178.42	15,464.90	9,603.13	102.57	93.05	-49.46	-6,099.23	2,235.81	882.54	716.56	165.98	5.317	
16,099.97	10,178.64	15,496.70	9,603.25	103.08	93.45	-49.53	-6,129.83	2,244.47	884.02	717.21	166.81	5.300	
16,110.04	10,178.71	15,506.50	9,603.28	103.24	93.58	-49.56	-6,139.26	2,247.14	884.48	717.41	167.06	5.294	
16,147.00	10,178.96	15,542.47	9,603.40	103.81	94.04	-49.64	-6,173.85	2,256.98	886.20	718.20	168.01	5.275	
16,158.42	10,179.04	15,553.59	9,603.44	103.99	94.18	-49.67	-6,184.54	2,260.03	886.75	718.45	168.30	5.269	
16,199.97	10,179.39	15,598.62	9,603.48	104.64	94.75	-49.76	-6,227.90	2,272.22	888.64	719.17	169.46	5.244	
16,208.04	10,179.47	15,607.54	9,603.46	104.76	94.87	-49.77	-6,236.50	2,274.57	888.98	719.29	169.69	5.239	
16,237.00	10,179.79	15,639.57	9,603.27	105.21	95.28	-49.80	-6,267.44	2,282.85	890.12	719.65	170.47	5.222	
16,250.91	10,179.95	15,655.14	9,603.12	105.43	95.48	-49.80	-6,282.50	2,286.78	890.63	719.79	170.84	5.213	
16,299.97	10,180.52	15,712.56	9,602.55	106.19	96.21	-49.80	-6,338.18	2,300.84	892.21	720.04	172.18	5.182	
16,305.77	10,180.58	15,719.36	9,602.49	106.28	96.30	-49.79	-6,344.78	2,302.46	892.38	720.05	172.33	5.178	
16,326.00	10,180.81	15,743.05	9,602.27	106.60	96.60	-49.79	-6,367.80	2,308.03	892.91	720.04	172.87	5.165	
16,342.55	10,180.99	15,759.75	9,602.09	106.86	96.81	-49.78	-6,384.05	2,311.91	893.31	720.06	173.25	5.156	
16,399.97	10,181.33	15,817.25	9,601.13	107.75	97.54	-49.73	-6,440.04	2,324.93	894.60	720.06	174.54	5.125	
16,403.57	10,181.34	15,820.86	9,601.06	107.81	97.59	-49.73	-6,443.56	2,325.73	894.68	720.06	174.62	5.124	
16,416.00	10,181.36	15,833.30	9,600.77	108.00	97.75	-49.71	-6,455.69	2,328.48	894.94	720.04	174.89	5.117	
16,434.78	10,181.38	15,851.33	9,600.35	108.29	97.98	-49.70	-6,473.27	2,332.47	895.33	720.03	175.30	5.108	
16,499.97	10,181.64	15,913.81	9,599.19	109.30	98.77	-49.66	-6,534.09	2,346.71	896.88	720.17	176.71	5.075	
16,499.99	10,181.65	15,913.83	9,599.19	109.31	98.78	-49.66	-6,534.11	2,346.72	896.88	720.17	176.71	5.075	
16,507.00	10,181.69	15,920.55	9,599.09	109.41	98.86	-49.66	-6,540.65	2,348.28	897.06	720.20	176.86	5.072	
16,527.02	10,181.84	15,941.00	9,598.82	109.73	99.12	-49.66	-6,560.52	2,353.08	897.58	720.25	177.33	5.062	
16,596.00	10,182.62	16,012.11	9,598.16	110.80	100.03	-49.64	-6,629.63	2,369.84	899.22	720.27	178.95	5.025	
16,596.04	10,182.62	16,012.16	9,598.16	110.80	100.03	-49.64	-6,629.67	2,369.85	899.22	720.27	178.95	5.025	
16,599.97	10,182.68	16,016.12	9,598.14	110.86	100.08	-49.63	-6,633.52	2,370.79	899.31	720.27	179.04	5.023	
16,619.08	10,182.96	16,035.42	9,598.04	111.16	100.33	-49.63	-6,652.27	2,375.37	899.75	720.27	179.48	5.013	
16,686.00	10,184.04	16,103.00	9,597.98	112.21	101.19	-49.63	-6,717.87	2,391.61	901.51	720.44	181.07	4.979	
16,689.10	10,184.09	16,106.38	9,597.99	112.25	101.24	-49.63	-6,721.15	2,392.43	901.60	720.45	181.15	4.977	
16,699.97	10,184.27	16,118.24	9,598.01	112.42	101.39	-49.63	-6,732.66	2,395.29	901.90	720.47	181.43	4.971	
16,716.85	10,184.54	16,136.66	9,598.02	112.69	101.62	-49.63	-6,750.55	2,399.67	902.34	720.48	181.86	4.962	
16,775.00	10,185.38	16,199.81	9,597.86	113.59	102.43	-49.62	-6,811.99	2,414.25	903.62	720.32	183.30	4.930	
16,780.70	10,185.45	16,205.70	9,597.85	113.68	102.51	-49.62	-6,817.73	2,415.58	903.73	720.29	183.44	4.927	
16,799.97	10,185.70	16,225.63	9,597.82	113.98	102.76	-49.61	-6,837.14	2,420.12	904.01	720.12	183.90	4.916	
16,865.00	10,186.42	16,293.37	9,598.12	115.00	103.63	-49.57	-6,903.06	2,435.72	904.20	718.76	185.44	4.876	
16,883.87	10,186.63	16,314.03	9,598.14	115.30	103.90	-49.53	-6,923.19	2,440.35	904.01	718.13	185.88	4.863	
16,899.97	10,186.83	16,331.63	9,598.03	115.56	104.13	-49.48	-6,940.38	2,444.14	903.75	717.52	186.23	4.853	
16,910.32	10,186.96	16,342.93	9,597.90	115.72	104.27	-49.44	-6,951.43	2,446.51	903.54	717.09	186.44	4.846	
16,955.00	10,187.66	16,389.93	9,596.84	116.43	104.88	-49.17	-6,997.50	2,455.77	902.22	715.00	187.22	4.819	

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 A H 8WC
Project:	Andrews County, TX (NAD83-TNC)	TVD Reference:	RKB @ 3050.00usft (Ensign T054)
Reference Site:	University 8-8	MD Reference:	RKB @ 3050.00usft (Ensign T054)
Site Error:	0.00	North Reference:	Grid
Reference Well:	University 8-8E A H 8WC	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00	Output errors are at	2.00 sigma
Reference Wellbore	OH / 72181	Database:	USAEDMDB
Reference Design:	Surveys (Ensign T054)	Offset TVD Reference:	Offset Datum

Offset Design University 8-8E H 4LS - OH / 71370 - Surveys (Ensign 225)												Offset Site Error:	0.00 usft
Survey Program: 15-MWD, 1920-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)		
16,971.66	10,187.91	16,406.21	9,596.31	116.70	105.09	-49.10	-7,013.47	2,458.82	901.63	714.17	187.46	4.810	
16,999.97	10,188.15	16,433.85	9,595.25	117.15	105.44	-48.96	-7,040.63	2,463.88	900.66	712.80	187.87	4.794	
17,008.99	10,188.18	16,442.66	9,594.86	117.29	105.56	-48.92	-7,049.28	2,465.46	900.36	712.37	188.00	4.789	
17,045.00	10,188.07	16,482.82	9,592.95	117.87	106.07	-48.72	-7,088.78	2,472.48	899.16	710.58	188.58	4.768	
17,054.04	10,187.99	16,494.85	9,592.44	118.01	106.22	-48.65	-7,100.62	2,474.55	898.80	710.05	188.75	4.762	
17,099.97	10,187.48	16,555.98	9,590.64	118.74	107.00	-48.36	-7,160.84	2,484.93	896.22	706.58	189.64	4.726	
17,117.19	10,187.24	16,571.58	9,590.32	119.01	107.20	-48.28	-7,176.21	2,487.55	895.00	705.09	189.90	4.713	
17,134.00	10,186.98	16,587.36	9,589.98	119.28	107.40	-48.20	-7,191.77	2,490.21	893.76	703.60	190.17	4.700	
17,144.77	10,186.80	16,597.48	9,589.75	119.45	107.53	-48.16	-7,201.73	2,491.91	892.96	702.63	190.33	4.692	
17,199.97	10,185.80	16,643.00	9,588.60	120.33	108.11	-47.94	-7,246.59	2,499.59	888.92	697.81	191.10	4.651	
17,220.69	10,185.38	16,664.29	9,588.01	120.66	108.38	-47.84	-7,267.54	2,503.27	887.46	696.02	191.44	4.636	
17,225.00	10,185.29	16,667.63	9,587.91	120.73	108.43	-47.83	-7,270.83	2,503.86	887.17	695.68	191.50	4.633	
17,232.87	10,185.13	16,673.75	9,587.74	120.86	108.51	-47.80	-7,276.85	2,504.96	886.67	695.07	191.61	4.628	
17,299.97	10,183.94	16,732.00	9,585.96	121.92	109.25	-47.60	-7,334.00	2,516.10	883.80	691.13	192.66	4.587	
17,315.00	10,183.72	16,732.00	9,585.96	122.16	109.25	-47.60	-7,334.00	2,516.10	883.48	690.78	192.70	4.585	
17,315.03	10,183.72	16,732.00	9,585.96	122.16	109.25	-47.60	-7,334.00	2,516.10	883.48	690.78	192.70	4.585	
17,317.91	10,183.67	16,740.70	9,585.67	122.21	109.37	-47.58	-7,342.51	2,517.86	883.41	690.55	192.86	4.581	
17,399.97	10,182.29	16,810.19	9,583.11	123.50	110.27	-47.41	-7,410.41	2,532.42	882.48	688.27	194.21	4.544	
17,404.00	10,182.21	16,813.61	9,582.97	123.57	110.31	-47.40	-7,413.74	2,533.15	882.46	688.19	194.27	4.542	
17,406.66	10,182.16	16,815.86	9,582.88	123.61	110.34	-47.40	-7,415.94	2,533.64	882.45	688.13	194.32	4.541	
17,419.48	10,181.89	16,827.66	9,582.39	123.81	110.49	-47.37	-7,427.45	2,536.20	882.42	687.87	194.55	4.536	
17,424.27	10,181.79	16,832.74	9,582.17	123.88	110.56	-47.36	-7,432.41	2,537.30	882.43	687.77	194.65	4.533	
17,493.00	10,179.94	16,905.67	9,578.55	124.96	111.50	-47.18	-7,503.68	2,552.38	882.88	686.75	196.13	4.501	
17,493.01	10,179.94	16,905.68	9,578.55	124.96	111.50	-47.18	-7,503.68	2,552.38	882.88	686.75	196.13	4.501	
17,499.97	10,179.72	16,913.14	9,578.13	125.07	111.59	-47.17	-7,510.99	2,553.85	882.96	686.68	196.28	4.498	
17,585.00	10,176.27	17,006.40	9,574.59	126.38	112.80	-47.19	-7,602.15	2,573.12	883.08	684.66	198.43	4.450	
17,599.97	10,175.60	17,021.24	9,574.24	126.61	112.99	-47.22	-7,616.64	2,576.30	883.00	684.19	198.81	4.441	
17,601.10	10,175.55	17,022.36	9,574.21	126.63	113.00	-47.22	-7,617.74	2,576.54	882.99	684.16	198.84	4.441	
17,604.32	10,175.42	17,025.56	9,574.13	126.68	113.04	-47.22	-7,620.86	2,577.22	882.98	684.06	198.92	4.439	
17,617.73	10,174.93	17,038.86	9,573.80	126.89	113.21	-47.24	-7,633.86	2,580.06	882.96	683.72	199.24	4.432	
17,675.00	10,173.71	17,095.42	9,572.25	127.78	113.94	-47.25	-7,689.11	2,592.02	883.33	682.79	200.54	4.405	
17,680.69	10,173.85	17,100.85	9,572.09	127.87	114.01	-47.24	-7,694.42	2,593.16	883.41	682.75	200.65	4.403	
17,699.96	10,173.43	17,119.25	9,571.56	128.16	114.25	-47.22	-7,712.39	2,597.05	883.66	682.60	201.06	4.395	
17,714.72	10,173.21	17,133.33	9,571.14	128.39	114.43	-47.21	-7,726.14	2,600.04	883.86	682.49	201.37	4.389	
17,765.00	10,172.17	17,178.00	9,569.81	129.17	115.01	-47.20	-7,769.76	2,609.61	884.53	682.11	202.42	4.370	
17,774.23	10,171.94	17,187.89	9,569.51	129.32	115.14	-47.21	-7,779.41	2,611.76	884.65	681.99	202.65	4.365	
17,799.96	10,171.38	17,207.92	9,568.90	129.73	115.40	-47.24	-7,798.92	2,616.24	884.94	681.82	203.12	4.357	
17,812.55	10,171.16	17,217.71	9,568.60	129.93	115.53	-47.25	-7,808.44	2,618.49	885.06	681.72	203.34	4.353	
17,854.00	10,170.60	17,249.97	9,567.60	130.58	115.95	-47.24	-7,839.75	2,626.20	885.32	681.33	204.00	4.340	
17,869.09	10,170.44	17,267.00	9,567.07	130.82	116.17	-47.22	-7,856.24	2,630.43	885.42	681.06	204.36	4.333	
17,899.96	10,169.95	17,289.62	9,566.34	131.31	116.47	-47.19	-7,878.11	2,636.15	885.59	680.79	204.80	4.324	
17,910.39	10,169.74	17,299.41	9,566.02	131.48	116.60	-47.18	-7,887.58	2,638.63	885.64	680.63	205.01	4.320	
17,945.00	10,168.89	17,331.92	9,564.87	132.03	117.02	-47.16	-7,919.01	2,646.87	885.78	680.07	205.71	4.306	
17,957.58	10,168.55	17,343.74	9,564.43	132.23	117.18	-47.14	-7,930.43	2,649.86	885.85	679.88	205.97	4.301	
17,999.96	10,167.62	17,396.04	9,562.71	132.90	117.86	-47.11	-7,980.99	2,663.13	886.41	679.19	207.22	4.278	

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 A H 8WC
Project:	Andrews County, TX (NAD83-TNC)	TVD Reference:	RKB @ 3050.00usft (Ensign T054)
Reference Site:	University 8-8	MD Reference:	RKB @ 3050.00usft (Ensign T054)
Site Error:	0.00	North Reference:	Grid
Reference Well:	University 8-8E A H 8WC	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00	Output errors are at	2.00 sigma
Reference Wellbore	OH / 72181	Database:	USAEDMDB
Reference Design:	Surveys (Ensign T054)	Offset TVD Reference:	Offset Datum

Offset Design University 8-8E H 4LS - OH / 71370 - Surveys (Ensign 225)												Offset Site Error:	0.00 usft
Survey Program: 15-MWD, 1920-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)		
18,007.81	10,167.48	17,407.01	9,562.48	133.02	118.00	-47.11	-7,991.60	2,665.90	886.51	679.01	207.50	4.272	
18,034.00	10,167.10	17,443.64	9,562.10	133.43	118.48	-47.14	-8,027.06	2,675.12	886.80	678.37	208.43	4.255	
18,049.26	10,166.92	17,464.98	9,562.15	133.67	118.75	-47.18	-8,047.71	2,680.46	886.91	677.92	208.98	4.244	
18,099.96	10,166.37	17,516.28	9,562.39	134.47	119.42	-47.27	-8,097.37	2,693.35	887.34	676.99	210.35	4.218	
18,105.52	10,166.31	17,522.31	9,562.45	134.55	119.50	-47.28	-8,103.21	2,694.86	887.38	676.87	210.51	4.215	
18,124.00	10,166.13	17,542.25	9,562.69	134.84	119.76	-47.33	-8,122.51	2,699.88	887.52	676.46	211.06	4.205	
18,141.70	10,165.96	17,560.90	9,562.93	135.12	120.00	-47.37	-8,140.56	2,704.56	887.63	676.07	211.57	4.195	
18,199.96	10,165.35	17,622.30	9,563.79	136.03	120.80	-47.52	-8,200.02	2,719.85	887.86	674.61	213.25	4.163	
18,203.01	10,165.32	17,625.51	9,563.84	136.08	120.84	-47.53	-8,203.12	2,720.64	887.87	674.53	213.34	4.162	
18,213.00	10,165.21	17,636.05	9,564.00	136.24	120.98	-47.55	-8,213.33	2,723.24	887.88	674.25	213.63	4.156	
18,299.96	10,164.37	17,726.95	9,564.40	137.60	122.17	-47.66	-8,301.72	2,744.46	887.79	671.86	215.92	4.112	
18,303.00	10,164.35	17,729.90	9,564.38	137.64	122.20	-47.66	-8,304.59	2,745.12	887.78	671.79	215.99	4.110	
18,307.36	10,164.32	17,734.12	9,564.36	137.71	122.26	-47.66	-8,308.71	2,746.07	887.77	671.68	216.09	4.108	
18,325.19	10,164.18	17,751.41	9,564.25	137.99	122.48	-47.66	-8,325.57	2,749.91	887.74	671.24	216.50	4.100	
18,393.00	10,163.81	17,817.26	9,563.44	139.05	123.34	-47.62	-8,389.81	2,764.32	887.68	669.72	217.97	4.073	
18,399.96	10,163.78	17,824.07	9,563.33	139.16	123.43	-47.61	-8,396.46	2,765.80	887.68	669.57	218.11	4.070	
18,403.49	10,163.76	17,827.52	9,563.27	139.22	123.47	-47.61	-8,399.83	2,766.54	887.68	669.49	218.18	4.068	
18,419.02	10,163.69	17,842.71	9,562.99	139.46	123.67	-47.59	-8,414.66	2,769.81	887.65	669.14	218.50	4.062	
18,483.00	10,163.37	17,905.29	9,561.59	140.47	124.48	-47.47	-8,475.78	2,783.15	887.30	667.55	219.75	4.038	
18,499.96	10,163.27	17,921.91	9,561.16	140.74	124.70	-47.43	-8,492.02	2,786.67	887.15	667.08	220.07	4.031	
18,504.92	10,163.23	17,926.77	9,561.03	140.82	124.76	-47.42	-8,496.77	2,787.69	887.10	666.94	220.16	4.029	
18,507.17	10,163.22	17,928.97	9,560.97	140.85	124.79	-47.42	-8,498.93	2,788.16	887.08	666.88	220.20	4.028	
18,572.00	10,162.71	17,992.81	9,559.15	141.88	125.62	-47.25	-8,561.30	2,801.58	886.20	664.82	221.38	4.003	
18,593.19	10,162.55	18,014.64	9,558.52	142.21	125.90	-47.19	-8,582.64	2,806.16	885.93	664.15	221.78	3.995	
18,599.96	10,162.52	18,021.62	9,558.33	142.32	126.00	-47.17	-8,589.47	2,807.63	885.87	663.97	221.90	3.992	
18,605.33	10,162.50	18,027.16	9,558.17	142.40	126.07	-47.16	-8,594.87	2,808.80	885.84	663.84	222.01	3.990	
18,618.07	10,162.47	18,040.29	9,557.82	142.61	126.24	-47.13	-8,607.70	2,811.56	885.81	663.56	222.25	3.986	
18,661.00	10,162.59	18,085.54	9,556.69	143.28	126.83	-47.04	-8,651.93	2,821.09	886.15	663.02	223.13	3.971	
18,669.96	10,162.65	18,095.99	9,556.47	143.42	126.96	-47.02	-8,662.14	2,823.29	886.27	662.94	223.33	3.968	
18,699.96	10,162.89	18,130.97	9,555.89	143.89	127.42	-46.97	-8,696.33	2,830.64	886.61	662.58	224.03	3.958	
18,711.58	10,162.99	18,144.51	9,555.74	144.07	127.59	-46.96	-8,709.58	2,833.47	886.70	662.41	224.30	3.953	
18,750.00	10,163.38	18,186.52	9,555.46	144.67	128.14	-46.91	-8,750.66	2,842.23	886.91	661.75	225.16	3.939	
18,761.65	10,163.51	18,198.32	9,555.38	144.86	128.29	-46.89	-8,762.21	2,844.68	886.96	661.56	225.40	3.935	
18,799.96	10,163.95	18,237.11	9,555.11	145.46	128.80	-46.83	-8,800.17	2,852.67	887.05	660.87	226.18	3.922	
18,841.00	10,164.44	18,277.49	9,554.77	146.10	129.32	-46.75	-8,839.68	2,860.92	887.00	660.02	226.97	3.908	
18,852.88	10,164.59	18,288.79	9,554.69	146.28	129.47	-46.73	-8,850.75	2,863.26	886.97	659.78	227.20	3.904	
18,899.96	10,165.26	18,333.62	9,554.41	147.03	130.05	-46.64	-8,894.57	2,872.67	886.89	658.82	228.07	3.889	
18,911.13	10,165.44	18,344.26	9,554.36	147.20	130.19	-46.62	-8,904.97	2,874.94	886.87	658.59	228.28	3.885	
18,931.00	10,165.77	18,363.23	9,554.27	147.51	130.44	-46.58	-8,923.50	2,879.01	886.85	658.20	228.65	3.879	
18,936.87	10,165.88	18,368.85	9,554.25	147.61	130.51	-46.56	-8,928.98	2,880.22	886.84	658.09	228.75	3.877	
18,999.96	10,167.03	18,429.14	9,553.94	148.61	131.30	-46.41	-8,987.83	2,893.32	886.59	656.71	229.87	3.857	
19,020.00	10,167.41	18,448.02	9,553.84	148.92	131.54	-46.35	-9,006.25	2,897.48	886.44	656.23	230.21	3.851	
19,020.01	10,167.41	18,448.04	9,553.84	148.92	131.54	-46.35	-9,006.27	2,897.48	886.44	656.23	230.21	3.851	
19,025.84	10,167.52	18,453.47	9,553.82	149.02	131.62	-46.34	-9,011.56	2,898.69	886.40	656.09	230.31	3.849	
19,099.96	10,168.71	18,522.56	9,553.93	150.19	132.52	-46.22	-9,078.77	2,914.69	885.89	654.22	231.67	3.824	
19,109.00	10,168.83	18,531.05	9,553.99	150.34	132.63	-46.21	-9,087.01	2,916.73	885.83	653.98	231.85	3.821	

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 A H 8WC
Project:	Andrews County, TX (NAD83-TNC)	TVD Reference:	RKB @ 3050.00usft (Ensign T054)
Reference Site:	University 8-8	MD Reference:	RKB @ 3050.00usft (Ensign T054)
Site Error:	0.00	North Reference:	Grid
Reference Well:	University 8-8E A H 8WC	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00	Output errors are at	2.00 sigma
Reference Wellbore	OH / 72181	Database:	USAEDMDB
Reference Design:	Surveys (Ensign T054)	Offset TVD Reference:	Offset Datum

Offset Design University 8-8E H 4LS - OH / 71370 - Surveys (Ensign 225)												Offset Site Error:	0.00 usft
Survey Program: 15-MWD, 1920-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)		
19,112.11	10,168.87	18,534.01	9,554.01	150.39	132.67	-46.21	-9,089.89	2,917.45	885.81	653.90	231.91	3.820	
19,123.18	10,169.01	18,544.54	9,554.07	150.56	132.81	-46.20	-9,100.10	2,919.99	885.76	653.62	232.13	3.816	
19,151.23	10,169.34	18,571.23	9,554.21	151.01	133.16	-46.19	-9,126.00	2,926.44	885.70	652.98	232.71	3.806	
19,200.00	10,169.80	18,619.00	9,554.32	151.78	133.78	-46.17	-9,172.35	2,938.00	885.87	652.09	233.78	3.789	
19,220.79	10,169.97	18,640.92	9,554.35	152.11	134.07	-46.17	-9,193.63	2,943.28	886.04	651.76	234.28	3.782	
19,291.00	10,170.57	18,719.69	9,554.77	153.21	135.10	-46.20	-9,270.18	2,961.85	886.84	650.68	236.16	3.755	
19,292.47	10,170.59	18,721.24	9,554.79	153.23	135.12	-46.21	-9,271.68	2,962.21	886.86	650.66	236.20	3.755	
19,299.96	10,170.65	18,729.11	9,554.88	153.35	135.23	-46.21	-9,279.33	2,964.06	886.96	650.56	236.40	3.752	
19,318.88	10,170.78	18,749.00	9,555.19	153.65	135.49	-46.24	-9,298.65	2,968.79	887.20	650.28	236.92	3.745	
19,382.00	10,170.96	18,813.89	9,556.93	154.63	136.34	-46.41	-9,361.53	2,984.71	887.74	648.96	238.78	3.718	
19,386.16	10,170.96	18,817.89	9,557.04	154.69	136.39	-46.43	-9,365.41	2,985.69	887.77	648.87	238.89	3.716	
19,399.96	10,170.96	18,831.17	9,557.33	154.91	136.57	-46.46	-9,378.29	2,988.89	887.86	648.58	239.27	3.711	
19,416.46	10,170.97	18,847.05	9,557.58	155.17	136.78	-46.49	-9,393.72	2,992.63	887.95	648.25	239.70	3.704	
19,471.00	10,171.01	18,899.59	9,557.67	156.02	137.47	-46.51	-9,444.91	3,004.45	888.22	647.25	240.97	3.686	
19,477.73	10,171.02	18,906.08	9,557.63	156.13	137.55	-46.50	-9,451.25	3,005.88	888.25	647.13	241.12	3.684	
19,499.96	10,171.03	18,927.53	9,557.51	156.47	137.84	-46.50	-9,472.17	3,010.61	888.32	646.72	241.60	3.677	
19,513.94	10,171.03	18,941.02	9,557.43	156.69	138.01	-46.49	-9,485.32	3,013.60	888.36	646.45	241.91	3.672	
19,560.00	10,170.97	18,985.46	9,557.16	157.42	138.60	-46.48	-9,528.64	3,023.50	888.45	645.53	242.92	3.657	
19,569.29	10,170.95	18,994.42	9,557.11	157.56	138.71	-46.48	-9,537.38	3,025.51	888.46	645.34	243.12	3.654	
19,599.96	10,170.86	19,024.01	9,556.92	158.04	139.10	-46.47	-9,566.21	3,032.17	888.53	644.73	243.80	3.644	
19,611.55	10,170.82	19,035.20	9,556.85	158.22	139.25	-46.47	-9,577.10	3,034.70	888.57	644.50	244.06	3.641	
19,650.00	10,170.64	19,072.17	9,556.61	158.83	139.73	-46.47	-9,613.11	3,043.10	888.73	643.80	244.93	3.628	
19,661.48	10,170.57	19,082.99	9,556.52	159.01	139.87	-46.47	-9,623.64	3,045.57	888.79	643.60	245.19	3.625	
19,699.96	10,170.27	19,119.26	9,556.15	159.61	140.35	-46.48	-9,658.96	3,053.83	889.09	643.03	246.06	3.613	
19,709.12	10,170.17	19,127.89	9,556.04	159.75	140.46	-46.48	-9,667.36	3,055.80	889.18	642.91	246.27	3.611	
19,740.00	10,169.81	19,158.00	9,555.60	160.24	140.86	-46.49	-9,696.68	3,062.65	889.54	642.54	247.00	3.601	
19,753.69	10,169.62	19,170.40	9,555.40	160.45	141.02	-46.50	-9,708.75	3,065.47	889.72	642.41	247.31	3.598	
19,799.96	10,168.91	19,215.82	9,554.64	161.17	141.62	-46.52	-9,752.97	3,075.83	890.33	641.89	248.43	3.584	
19,806.60	10,168.80	19,222.34	9,554.53	161.27	141.70	-46.53	-9,759.31	3,077.31	890.41	641.82	248.59	3.582	
19,829.00	10,168.41	19,244.33	9,554.14	161.62	141.99	-46.54	-9,780.72	3,082.34	890.71	641.56	249.15	3.575	
19,845.45	10,168.11	19,262.29	9,553.84	161.88	142.23	-46.56	-9,798.20	3,086.44	890.92	641.33	249.59	3.570	
19,899.96	10,167.15	19,322.97	9,553.04	162.73	143.02	-46.61	-9,857.31	3,100.14	891.36	640.26	251.09	3.550	
19,904.39	10,167.07	19,327.90	9,553.00	162.80	143.09	-46.62	-9,862.11	3,101.25	891.37	640.16	251.22	3.548	
19,919.00	10,166.82	19,342.89	9,552.86	163.03	143.28	-46.63	-9,876.72	3,104.59	891.42	639.83	251.59	3.543	
19,937.73	10,166.49	19,360.47	9,552.66	163.32	143.51	-46.65	-9,893.86	3,108.51	891.49	639.45	252.04	3.537	
19,999.96	10,165.24	19,418.89	9,551.66	164.29	144.28	-46.68	-9,950.83	3,121.40	891.78	638.29	253.49	3.518	
20,000.74	10,165.22	19,419.62	9,551.64	164.30	144.29	-46.68	-9,951.54	3,121.56	891.79	638.28	253.51	3.518	
20,008.00	10,165.06	19,427.00	9,551.48	164.41	144.39	-46.68	-9,958.74	3,123.18	891.83	638.14	253.68	3.516	
20,028.58	10,164.58	19,446.25	9,551.01	164.73	144.64	-46.69	-9,977.52	3,127.38	891.94	637.79	254.15	3.510	
20,097.00	10,162.72	19,512.16	9,549.10	165.80	145.50	-46.69	-10,041.84	3,141.64	892.26	636.55	255.71	3.489	
20,097.01	10,162.72	19,512.17	9,549.10	165.80	145.50	-46.69	-10,041.85	3,141.65	892.26	636.55	255.71	3.489	
20,099.96	10,162.63	19,515.01	9,549.00	165.85	145.54	-46.69	-10,044.63	3,142.26	892.28	636.50	255.78	3.488	
20,187.00	10,159.39	19,614.02	9,546.98	167.20	146.84	-46.80	-10,141.25	3,163.74	891.43	633.22	258.20	3.452	
20,199.96	10,158.85	19,626.54	9,546.90	167.41	147.01	-46.82	-10,153.46	3,166.52	891.15	632.59	258.55	3.447	
20,202.51	10,158.75	19,629.00	9,546.89	167.45	147.04	-46.82	-10,155.85	3,167.06	891.10	632.47	258.62	3.446	

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 A H 8WC
Project:	Andrews County, TX (NAD83-TNC)	TVD Reference:	RKB @ 3050.00usft (Ensign T054)
Reference Site:	University 8-8	MD Reference:	RKB @ 3050.00usft (Ensign T054)
Site Error:	0.00	North Reference:	Grid
Reference Well:	University 8-8E A H 8WC	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00	Output errors are at	2.00 sigma
Reference Wellbore	OH / 72181	Database:	USAEDMDB
Reference Design:	Surveys (Ensign T054)	Offset TVD Reference:	Offset Datum

Offset Design University 8-8E H 4LS - OH / 71370 - Surveys (Ensign 225)												Offset Site Error:	0.00 usft
Survey Program: 15-MWD, 1920-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)		
20,212.67	10,158.37	19,638.82	9,546.84	167.61	147.17	-46.84	-10,165.43	3,169.27	890.90	632.01	258.89	3.441	
20,276.00	10,156.70	19,700.09	9,546.90	168.60	147.97	-46.94	-10,225.04	3,183.41	890.17	629.59	260.58	3.416	
20,290.74	10,156.45	19,715.79	9,547.00	168.83	148.18	-46.96	-10,240.29	3,187.13	890.06	629.06	261.00	3.410	
20,299.96	10,156.30	19,725.60	9,547.09	168.98	148.31	-46.98	-10,249.82	3,189.46	889.97	628.70	261.27	3.406	
20,306.97	10,156.18	19,733.06	9,547.17	169.09	148.41	-47.00	-10,257.07	3,191.23	889.88	628.41	261.47	3.403	
20,366.00	10,155.12	19,795.48	9,548.15	170.02	149.23	-47.11	-10,317.66	3,206.21	888.72	625.54	263.18	3.377	
20,385.69	10,154.82	19,814.80	9,548.53	170.33	149.48	-47.14	-10,336.40	3,210.87	888.28	624.57	263.71	3.368	
20,399.96	10,154.69	19,828.81	9,548.79	170.55	149.67	-47.15	-10,350.00	3,214.25	888.04	623.95	264.09	3.363	
20,410.01	10,154.65	19,838.67	9,548.96	170.71	149.80	-47.16	-10,359.57	3,216.62	887.91	623.56	264.35	3.359	
20,440.34	10,154.72	19,868.45	9,549.45	171.19	150.19	-47.19	-10,388.47	3,223.76	887.75	622.63	265.12	3.349	
20,456.00	10,154.88	19,883.94	9,549.69	171.44	150.40	-47.20	-10,403.51	3,227.47	887.80	622.29	265.51	3.344	
20,466.14	10,155.01	19,894.51	9,549.83	171.60	150.54	-47.21	-10,413.77	3,229.98	887.85	622.09	265.76	3.341	
20,499.96	10,155.52	19,929.75	9,550.17	172.13	151.00	-47.21	-10,448.05	3,238.18	888.11	621.53	266.58	3.331	
20,510.73	10,155.70	19,940.97	9,550.23	172.30	151.15	-47.20	-10,458.97	3,240.73	888.21	621.37	266.84	3.329	
20,547.00	10,156.36	19,978.13	9,550.28	172.87	151.64	-47.18	-10,495.20	3,249.00	888.62	620.99	267.64	3.320	
20,559.02	10,156.60	19,989.62	9,550.27	173.05	151.79	-47.17	-10,506.41	3,251.54	888.79	620.91	267.88	3.318	
20,599.96	10,157.47	20,028.79	9,550.21	173.70	152.30	-47.13	-10,544.61	3,260.22	889.46	620.75	268.71	3.310	
20,608.54	10,157.66	20,037.00	9,550.20	173.83	152.41	-47.12	-10,552.61	3,262.05	889.61	620.73	268.88	3.309	
20,638.00	10,158.35	20,065.74	9,550.13	174.29	152.79	-47.09	-10,580.61	3,268.47	890.20	620.72	269.49	3.303	
20,652.09	10,158.68	20,080.65	9,550.10	174.51	152.99	-47.07	-10,595.15	3,271.81	890.48	620.69	269.80	3.301	
20,699.96	10,159.75	20,131.32	9,550.14	175.26	153.65	-47.03	-10,644.54	3,283.13	891.28	620.41	270.87	3.290	
20,706.38	10,159.88	20,138.11	9,550.16	175.36	153.74	-47.02	-10,651.16	3,284.64	891.37	620.35	271.01	3.289	
20,728.00	10,160.32	20,160.44	9,550.24	175.70	154.04	-47.01	-10,672.93	3,289.61	891.63	620.14	271.50	3.284	
20,744.65	10,160.65	20,177.22	9,550.32	175.97	154.26	-46.99	-10,689.29	3,293.36	891.82	619.95	271.86	3.280	
20,799.96	10,161.78	20,232.99	9,550.67	176.84	154.99	-46.94	-10,743.64	3,305.85	892.25	619.18	273.07	3.268	
20,804.37	10,161.87	20,237.45	9,550.71	176.90	155.05	-46.94	-10,747.98	3,306.86	892.27	619.11	273.16	3.266	
20,819.00	10,162.18	20,251.20	9,550.81	177.13	155.23	-46.92	-10,761.38	3,309.95	892.34	618.88	273.45	3.263	
20,829.25	10,162.40	20,260.81	9,550.87	177.30	155.36	-46.91	-10,770.74	3,312.12	892.38	618.73	273.66	3.261	
20,863.00	10,163.13	20,292.45	9,551.04	177.83	155.77	-46.86	-10,801.55	3,319.30	892.47	618.16	274.31	3.254	
20,871.59	10,163.31	20,300.50	9,551.08	177.97	155.88	-46.85	-10,809.39	3,321.13	892.48	618.01	274.47	3.252	
20,899.96	10,163.93	20,328.29	9,551.18	178.41	156.25	-46.81	-10,836.45	3,327.48	892.55	617.53	275.02	3.245	
20,909.97	10,164.15	20,338.30	9,551.22	178.57	156.38	-46.80	-10,846.20	3,329.76	892.57	617.35	275.22	3.243	
20,943.00	10,164.86	20,371.32	9,551.34	179.10	156.81	-46.75	-10,878.35	3,337.30	892.66	616.77	275.88	3.236	ES, SF

Company:	Piedra Operating LLC	Local Co-ordinate Reference:	Well University 8-8E A H 8WC
Project:	Andrews County, TX (NAD83-TNC)	TVD Reference:	RKB @ 3050.00usft (Ensign T054)
Reference Site:	University 8-8	MD Reference:	RKB @ 3050.00usft (Ensign T054)
Site Error:	0.00	North Reference:	Grid
Reference Well:	University 8-8E A H 8WC	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00	Output errors are at	2.00 sigma
Reference Wellbore	OH / 72181	Database:	USAEDMDB
Reference Design:	Surveys (Ensign T054)	Offset TVD Reference:	Offset Datum

Offset Design University 8-8E H 7WC - OH / 71369 - Surveys (Ensign 225)												Offset Site Error:	0.00 usft
Survey Program: 15-MWD, 1920-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	76.97	163.47	706.13	724.81				
15.00	15.00	13.00	13.00	1.00	1.00	76.97	163.47	706.13	724.80				
100.00	100.00	99.32	99.32	1.28	1.31	139.08	163.39	706.07	725.05	722.46	2.59	280.386	
177.00	176.99	177.55	177.55	1.90	1.91	139.15	163.18	705.90	725.70	721.89	3.81	190.703	
200.00	199.99	200.32	200.32	1.98	1.99	136.60	163.09	705.84	725.91	721.96	3.96	183.439	
268.00	267.98	267.53	267.53	2.21	2.21	102.44	162.55	705.78	726.14	721.75	4.39	165.342	
293.31	293.29	292.73	292.72	2.29	2.29	109.10	162.28	705.79	726.13	721.60	4.53	160.221	
300.00	299.98	299.39	299.39	2.31	2.31	110.34	162.22	705.79	726.13	721.56	4.57	158.921	
357.00	356.98	356.17	356.16	2.48	2.48	116.79	161.69	705.81	726.22	721.33	4.89	148.587	
400.00	399.98	398.16	398.15	2.60	2.60	99.08	161.33	705.84	726.31	721.21	5.10	142.536	
444.00	443.98	441.06	441.05	2.73	2.72	82.46	160.95	705.95	726.33	721.02	5.31	136.820	
446.09	446.06	443.10	443.09	2.73	2.73	82.90	160.93	705.96	726.33	721.01	5.32	136.568	
500.00	499.97	498.08	498.07	2.89	2.88	93.04	160.33	706.13	726.35	720.79	5.57	130.483	
533.00	532.97	531.86	531.84	2.98	2.97	98.19	159.86	706.22	726.37	720.65	5.72	127.008	
600.00	599.96	596.96	596.94	3.16	3.11	72.70	159.27	706.35	726.34	720.35	5.99	121.264	
621.00	620.96	617.34	617.32	3.21	3.15	62.46	159.26	706.39	726.29	720.22	6.07	119.559	
653.65	653.61	649.71	649.69	3.30	3.21	72.01	159.34	706.45	726.26	720.06	6.20	117.114	
700.00	699.96	695.81	695.79	3.42	3.28	91.11	159.42	706.57	726.33	719.95	6.38	113.846	
710.00	709.96	705.76	705.74	3.44	3.30	96.07	159.43	706.60	726.36	719.95	6.42	113.169	
799.00	798.96	795.87	795.85	3.67	3.43	75.46	159.72	706.75	726.51	719.76	6.76	107.537	
800.00	799.96	796.88	796.86	3.67	3.44	75.46	159.73	706.75	726.51	719.75	6.76	107.479	
890.00	889.95	885.99	885.97	3.89	3.55	43.74	160.28	706.82	726.25	719.17	7.08	102.642	
900.00	899.95	895.66	895.63	3.91	3.57	45.50	160.34	706.84	726.20	719.09	7.11	102.153	
977.00	976.95	970.11	970.09	4.08	3.68	56.78	160.78	707.12	726.01	718.64	7.37	98.562	
1,000.00	999.94	994.01	993.98	4.14	3.71	57.60	160.91	707.24	725.99	718.54	7.44	97.516	
1,062.00	1,061.94	1,058.45	1,058.42	4.28	3.81	59.97	161.34	707.40	725.82	718.16	7.66	94.791	
1,079.82	1,079.76	1,075.23	1,075.20	4.33	3.84	72.09	161.47	707.41	725.78	718.07	7.71	94.090	
1,100.00	1,099.94	1,094.28	1,094.25	4.37	3.87	86.95	161.65	707.46	725.83	718.05	7.78	93.318	
1,148.00	1,147.94	1,139.60	1,139.57	4.49	3.94	117.47	162.13	707.68	726.30	718.37	7.93	91.584	
1,200.00	1,199.93	1,193.77	1,193.73	4.61	4.03	119.64	162.63	707.99	727.00	718.89	8.11	89.638	
1,238.00	1,237.93	1,233.82	1,233.78	4.70	4.10	122.25	162.78	708.14	727.35	719.10	8.24	88.230	
1,300.00	1,299.93	1,294.86	1,294.82	4.84	4.20	126.41	162.92	708.34	727.84	719.39	8.45	86.168	
1,324.00	1,323.93	1,318.51	1,318.47	4.89	4.25	128.61	162.99	708.43	728.04	719.51	8.53	85.397	
1,400.00	1,399.92	1,395.96	1,395.92	5.05	4.37	127.83	163.42	708.64	728.65	719.88	8.77	83.077	
1,412.00	1,411.93	1,408.20	1,408.16	5.08	4.39	127.73	163.52	708.65	728.73	719.92	8.81	82.722	
1,500.00	1,499.92	1,496.95	1,496.91	5.28	4.54	102.44	163.86	708.75	729.18	720.09	9.09	80.207	
1,600.00	1,599.92	1,598.61	1,598.57	5.71	4.69	135.75	164.14	708.73	729.58	719.92	9.65	75.599	
1,675.00	1,674.92	1,675.65	1,675.61	6.04	4.78	155.74	164.32	708.51	729.92	719.87	10.05	72.635	
1,700.00	1,699.91	1,700.49	1,700.44	6.08	4.81	155.32	164.35	708.41	730.03	719.92	10.11	72.188	
1,765.00	1,764.92	1,765.13	1,765.09	6.19	4.88	153.44	164.66	708.14	730.23	719.95	10.28	71.047	
1,800.00	1,799.91	1,800.97	1,800.92	6.26	4.92	161.21	164.86	707.96	730.27	719.89	10.38	70.355	
1,884.00	1,883.91	1,888.86	1,888.81	6.42	4.98	-175.99	165.06	707.37	730.15	719.55	10.59	68.940	
1,900.00	1,899.91	1,906.00	1,905.96	6.43	4.98	-128.84	165.10	707.18	730.05	719.42	10.62	68.716	
1,973.00	1,972.91	1,981.78	1,981.73	6.51	5.04	-85.28	165.13	706.15	729.14	718.31	10.83	67.348	
2,000.00	1,999.89	2,009.60	2,009.54	6.56	5.10	-81.01	165.02	705.74	728.62	717.75	10.87	67.004	
2,064.00	2,063.82	2,074.93	2,074.85	6.70	5.30	-77.62	164.03	704.82	726.94	715.77	11.16	65.112	

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 A H 8WC
Project:	Andrews County, TX (NAD83-TNC)	TVD Reference:	RKB @ 3050.00usft (Ensign T054)
Reference Site:	University 8-8	MD Reference:	RKB @ 3050.00usft (Ensign T054)
Site Error:	0.00	North Reference:	Grid
Reference Well:	University 8-8E A H 8WC	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00	Output errors are at	2.00 sigma
Reference Wellbore	OH / 72181	Database:	USAEDMDB
Reference Design:	Surveys (Ensign T054)	Offset TVD Reference:	Offset Datum

Offset Design University 8-8E H 7WC - OH / 71369 - Surveys (Ensign 225)												Offset Site Error:	0.00 usft
Survey Program: 15-MWD, 1920-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)		
2,100.00	2,099.74	2,111.58	2,111.49	6.74	5.42	-75.28	162.89	704.38	725.73	714.39	11.34	64.021	
2,153.00	2,152.62	2,165.21	2,165.06	6.81	5.60	-72.22	160.65	703.81	723.68	712.10	11.59	62.463	
2,200.00	2,199.49	2,212.23	2,212.02	6.88	5.73	-68.01	158.18	703.39	721.52	709.73	11.79	61.208	
2,243.00	2,242.34	2,254.62	2,254.33	6.94	5.83	-64.97	155.58	703.11	719.21	707.28	11.93	60.272	
2,300.00	2,299.11	2,311.67	2,311.24	7.02	5.97	-66.63	151.57	702.90	716.05	703.92	12.13	59.039	
2,332.00	2,331.00	2,344.20	2,343.67	7.07	6.05	-67.58	149.07	702.79	714.33	702.09	12.24	58.368	
2,386.00	2,384.79	2,398.82	2,398.10	7.14	6.18	-74.22	144.59	702.63	711.65	699.25	12.40	57.377	
2,400.00	2,398.73	2,412.90	2,412.13	7.18	6.22	-74.78	143.41	702.59	711.02	698.54	12.47	57.005	
2,500.00	2,498.33	2,513.41	2,512.27	7.49	6.50	-78.62	134.69	702.30	706.72	693.74	12.98	54.455	
2,542.00	2,540.15	2,555.62	2,554.31	7.62	6.61	-80.14	130.91	702.18	705.04	691.85	13.19	53.441	
2,599.99	2,597.84	2,614.66	2,613.10	7.73	6.79	-97.96	125.51	701.99	703.65	690.21	13.44	52.370	
2,606.00	2,603.80	2,620.77	2,619.18	7.74	6.80	-99.44	124.94	701.96	703.60	690.14	13.46	52.268	
2,674.93	2,672.23	2,690.62	2,688.73	7.89	7.01	-102.09	118.35	701.66	703.40	689.67	13.73	51.230	
2,697.00	2,694.12	2,712.93	2,710.93	7.93	7.08	-102.87	116.19	701.55	703.42	689.60	13.82	50.910	
2,699.99	2,697.09	2,715.96	2,713.94	7.94	7.09	-102.67	115.90	701.54	703.42	689.60	13.83	50.866	
2,787.00	2,783.42	2,804.84	2,802.38	8.13	7.37	-96.43	107.06	701.06	702.78	688.60	14.19	49.538	
2,799.99	2,796.32	2,818.15	2,815.63	8.16	7.41	-95.47	105.71	700.96	702.55	688.31	14.24	49.333	
2,876.00	2,871.84	2,897.02	2,894.06	8.34	7.66	-89.03	97.58	700.28	700.44	685.87	14.57	48.087	
2,899.99	2,895.70	2,921.89	2,918.79	8.40	7.74	-89.01	94.96	700.01	699.54	684.87	14.67	47.684	
2,967.00	2,962.31	2,990.41	2,986.90	8.57	7.96	-88.95	87.49	699.20	696.92	681.95	14.96	46.571	
2,999.99	2,995.12	3,024.34	3,020.62	8.66	8.07	-87.97	83.65	698.77	695.54	680.43	15.11	46.031	
3,056.00	3,050.85	3,082.34	3,078.21	8.80	8.26	-86.03	76.91	697.94	692.94	677.58	15.36	45.116	
3,099.99	3,094.66	3,127.57	3,123.11	8.92	8.41	-83.49	71.51	697.22	690.67	675.11	15.56	44.397	
3,146.00	3,140.51	3,174.67	3,169.86	9.04	8.56	-80.18	65.80	696.40	688.07	672.30	15.76	43.648	
3,199.99	3,194.34	3,227.63	3,222.41	9.18	8.74	-80.51	59.31	695.46	684.92	668.92	16.00	42.801	
3,236.00	3,230.24	3,262.41	3,256.93	9.28	8.85	-80.73	55.08	694.91	682.91	666.75	16.16	42.259	
3,299.99	3,294.05	3,321.64	3,315.74	9.45	9.05	-81.65	48.05	694.15	679.67	663.24	16.43	41.366	
3,326.00	3,319.99	3,345.34	3,339.28	9.52	9.13	-82.10	45.39	693.94	678.55	662.01	16.54	41.027	
3,399.99	3,393.83	3,417.12	3,410.65	9.72	9.37	-80.53	37.65	693.58	675.71	658.85	16.86	40.080	
3,416.00	3,409.81	3,433.15	3,426.59	9.76	9.43	-80.15	35.93	693.50	675.10	658.17	16.93	39.877	
3,499.99	3,493.65	3,509.52	3,502.52	9.99	9.68	-78.17	27.86	693.38	672.15	654.88	17.27	38.911	
3,507.00	3,500.64	3,515.61	3,508.58	10.01	9.70	-78.00	27.25	693.42	671.96	654.66	17.30	38.838	
3,597.00	3,590.48	3,599.41	3,592.00	10.25	9.98	-76.54	19.29	694.41	670.03	652.36	17.67	37.917	
3,599.99	3,593.47	3,602.33	3,594.91	10.26	9.99	-76.53	19.02	694.45	669.97	652.29	17.68	37.887	
3,686.00	3,679.32	3,688.22	3,680.41	10.50	10.28	-77.23	10.93	695.75	668.44	650.39	18.05	37.025	
3,699.99	3,693.29	3,702.45	3,694.57	10.54	10.33	-76.93	9.58	695.96	668.18	650.07	18.12	36.886	
3,776.00	3,769.16	3,779.46	3,771.22	10.75	10.59	-75.28	2.23	697.00	666.67	648.22	18.45	36.131	
3,799.99	3,793.11	3,803.72	3,795.36	10.82	10.67	-75.44	-0.12	697.31	666.16	647.60	18.56	35.896	
3,865.00	3,858.01	3,869.12	3,860.44	11.01	10.90	-75.88	-6.54	698.12	664.77	645.93	18.85	35.268	
3,899.99	3,892.94	3,904.26	3,895.41	11.11	11.02	-74.81	-10.04	698.56	664.02	645.01	19.01	34.936	
3,954.00	3,946.86	3,958.99	3,949.86	11.26	11.21	-73.05	-15.53	699.20	662.78	643.53	19.25	34.426	
3,999.99	3,992.78	4,005.66	3,996.29	11.39	11.37	-72.86	-20.20	699.69	661.66	642.20	19.46	33.993	
4,044.00	4,036.71	4,050.38	4,040.78	11.52	11.53	-72.69	-24.70	700.11	660.53	640.86	19.67	33.581	
4,099.99	4,092.62	4,107.05	4,097.15	11.68	11.72	-72.90	-30.44	700.57	659.05	639.11	19.93	33.066	
4,134.00	4,126.57	4,141.07	4,131.00	11.78	11.84	-73.03	-33.93	700.84	658.16	638.07	20.09	32.761	

Company:	Piedra Operating LLC	Local Co-ordinate Reference:	Well University 8-8E A H 8WC
Project:	Andrews County, TX (NAD83-TNC)	TVD Reference:	RKB @ 3050.00usft (Ensign T054)
Reference Site:	University 8-8	MD Reference:	RKB @ 3050.00usft (Ensign T054)
Site Error:	0.00	North Reference:	Grid
Reference Well:	University 8-8E A H 8WC	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00	Output errors are at	2.00 sigma
Reference Wellbore	OH / 72181	Database:	USAEDMDB
Reference Design:	Surveys (Ensign T054)	Offset TVD Reference:	Offset Datum

Offset Design University 8-8E H 7WC - OH / 71369 - Surveys (Ensign 225)												Offset Site Error:	0.00 usft
Survey Program: 15-MWD, 1920-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)		
4,199.99	4,192.46	4,207.21	4,196.78	11.97	12.08	-72.45	-40.76	701.36	656.45	636.05	20.40	32.181	
4,223.00	4,215.44	4,230.35	4,219.81	12.04	12.16	-72.25	-43.08	701.52	655.85	635.34	20.51	31.982	
4,299.99	4,292.32	4,305.04	4,294.16	12.27	12.42	-69.60	-50.16	702.00	653.80	632.94	20.86	31.342	
4,312.00	4,304.31	4,316.16	4,305.23	12.30	12.46	-69.18	-51.15	702.10	653.51	632.60	20.91	31.250	
4,399.99	4,392.18	4,400.66	4,389.42	12.56	12.75	-71.41	-58.27	703.20	651.90	630.59	21.31	30.592	
4,402.00	4,394.18	4,402.68	4,391.43	12.57	12.76	-71.46	-58.43	703.23	651.86	630.54	21.32	30.577	
4,491.00	4,483.07	4,491.60	4,480.06	12.83	13.07	-69.03	-65.65	704.44	650.45	628.71	21.73	29.932	
4,499.99	4,492.05	4,500.54	4,488.96	12.86	13.10	-68.86	-66.38	704.56	650.30	628.53	21.77	29.868	
4,583.00	4,574.95	4,584.50	4,572.62	13.10	13.39	-67.37	-73.35	705.73	648.90	626.73	22.17	29.271	
4,599.99	4,591.92	4,601.95	4,590.01	13.15	13.45	-66.75	-74.85	705.95	648.56	626.31	22.25	29.146	
4,673.00	4,664.84	4,674.57	4,662.34	13.37	13.70	-63.99	-81.23	706.83	647.00	624.40	22.60	28.627	
4,699.99	4,691.80	4,700.92	4,688.59	13.45	13.80	-63.91	-83.52	707.18	646.45	623.72	22.73	28.440	
4,764.00	4,755.73	4,764.98	4,752.42	13.64	14.02	-63.73	-88.99	708.07	645.24	622.19	23.04	28.002	
4,799.99	4,791.68	4,801.34	4,788.64	13.74	14.15	-62.71	-92.06	708.54	644.53	621.31	23.22	27.758	
4,855.00	4,846.63	4,856.27	4,843.37	13.90	14.34	-61.18	-96.70	709.23	643.40	619.91	23.49	27.389	
4,899.99	4,891.57	4,901.17	4,888.10	14.04	14.50	-62.28	-100.54	709.81	642.49	618.78	23.71	27.094	
4,943.00	4,934.53	4,944.45	4,931.22	14.16	14.65	-63.41	-104.22	710.36	641.69	617.76	23.93	26.819	
4,999.99	4,991.47	5,001.82	4,988.39	14.33	14.86	-62.15	-108.97	711.03	640.64	616.43	24.21	26.460	
5,033.00	5,024.45	5,035.11	5,021.57	14.42	14.97	-61.39	-111.64	711.39	640.02	615.65	24.38	26.255	
5,099.99	5,091.38	5,102.63	5,088.88	14.62	15.21	-60.35	-116.86	712.04	638.73	614.02	24.71	25.844	
5,122.00	5,113.37	5,124.79	5,110.98	14.68	15.29	-60.00	-118.57	712.25	638.30	613.47	24.83	25.711	
5,199.99	5,191.30	5,205.62	5,191.57	14.91	15.58	-62.97	-124.72	712.85	636.76	611.53	25.23	25.238	
5,212.00	5,203.30	5,218.43	5,204.35	14.94	15.62	-63.46	-125.61	712.88	636.50	611.20	25.29	25.164	
5,299.99	5,291.21	5,309.81	5,295.55	15.20	15.95	-57.58	-131.17	712.70	633.99	608.24	25.76	24.616	
5,303.00	5,294.22	5,312.88	5,298.63	15.21	15.96	-57.40	-131.33	712.69	633.89	608.12	25.77	24.597	
5,394.00	5,385.13	5,401.45	5,387.10	15.48	16.28	-57.88	-135.17	712.23	630.85	604.62	26.23	24.051	
5,399.99	5,391.11	5,407.14	5,392.80	15.50	16.30	-57.78	-135.35	712.22	630.67	604.41	26.26	24.017	
5,484.00	5,475.02	5,488.37	5,474.00	15.75	16.59	-56.60	-137.36	712.14	628.16	601.48	26.67	23.551	
5,499.99	5,490.99	5,503.95	5,489.58	15.80	16.65	-57.01	-137.71	712.16	627.69	600.94	26.75	23.465	
5,573.00	5,563.91	5,577.19	5,562.80	16.02	16.90	-58.93	-139.38	712.27	625.68	598.57	27.11	23.078	
5,599.99	5,590.86	5,604.53	5,590.13	16.10	17.00	-59.89	-140.01	712.29	624.94	597.70	27.24	22.938	
5,662.00	5,652.80	5,666.64	5,652.22	16.30	17.21	-62.18	-141.46	712.30	623.33	595.78	27.55	22.625	
5,699.99	5,690.74	5,704.64	5,690.21	16.41	17.35	-63.20	-142.35	712.31	622.38	594.65	27.74	22.440	
5,752.00	5,742.69	5,756.80	5,742.35	16.58	17.53	-64.52	-143.59	712.31	621.08	593.09	27.99	22.189	
5,799.99	5,790.61	5,804.79	5,790.33	16.73	17.69	-62.24	-144.76	712.30	619.82	591.59	28.23	21.959	
5,841.00	5,831.56	5,845.52	5,831.05	16.86	17.84	-60.32	-145.78	712.31	618.66	590.24	28.43	21.764	
5,899.99	5,890.47	5,904.45	5,889.96	17.04	18.04	-60.23	-147.27	712.35	617.00	588.28	28.72	21.483	
5,932.00	5,922.44	5,936.72	5,922.22	17.14	18.15	-60.18	-148.07	712.35	616.09	587.21	28.88	21.333	
5,999.99	5,990.34	6,004.69	5,990.17	17.36	18.39	-67.54	-149.73	712.33	614.34	585.13	29.21	21.030	
6,022.00	6,012.32	6,026.52	6,011.99	17.43	18.47	-69.86	-150.27	712.33	613.86	584.54	29.32	20.937	
6,099.99	6,090.19	6,104.60	6,090.05	17.68	18.74	-73.05	-152.23	712.36	612.28	582.59	29.69	20.623	
6,113.00	6,103.18	6,117.72	6,103.16	17.72	18.78	-73.52	-152.56	712.36	612.02	582.27	29.75	20.571	
6,199.99	6,190.02	6,205.15	6,190.57	18.01	19.09	-72.61	-154.74	712.30	610.22	580.05	30.16	20.230	
6,202.00	6,192.03	6,207.17	6,192.59	18.01	19.09	-72.59	-154.79	712.30	610.18	580.00	30.17	20.222	
6,292.00	6,281.89	6,298.43	6,283.83	18.31	19.41	-71.66	-156.89	712.10	608.19	577.58	30.61	19.871	
6,299.99	6,289.86	6,306.58	6,291.97	18.33	19.44	-71.73	-157.06	712.07	608.00	577.35	30.64	19.840	

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 A H 8WC
Project:	Andrews County, TX (NAD83-TNC)	TVD Reference:	RKB @ 3050.00usft (Ensign T054)
Reference Site:	University 8-8	MD Reference:	RKB @ 3050.00usft (Ensign T054)
Site Error:	0.00	North Reference:	Grid
Reference Well:	University 8-8E A H 8WC	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00	Output errors are at	2.00 sigma
Reference Wellbore	OH / 72181	Database:	USAEDMDB
Reference Design:	Surveys (Ensign T054)	Offset TVD Reference:	Offset Datum

Offset Design University 8-8E H 7WC - OH / 71369 - Surveys (Ensign 225)												Offset Site Error:	0.00 usft
Survey Program: 15-MWD, 1920-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
6,381.00	6,370.76	6,387.68	6,373.05	18.60	19.72	-72.44	-158.77	711.71	606.06	575.02	31.03	19.530	
6,399.99	6,389.72	6,406.57	6,391.94	18.66	19.79	-73.02	-159.17	711.63	605.62	574.50	31.12	19.460	
6,470.00	6,459.63	6,476.84	6,462.19	18.88	20.03	-75.19	-160.67	711.33	604.09	572.64	31.45	19.206	
6,499.99	6,489.58	6,506.96	6,492.31	18.98	20.13	-74.58	-161.30	711.18	603.46	571.86	31.60	19.099	
6,559.00	6,548.51	6,566.18	6,551.51	19.17	20.34	-73.32	-162.52	710.88	602.15	570.27	31.88	18.891	
6,599.99	6,589.45	6,607.21	6,592.53	19.30	20.48	-73.20	-163.36	710.65	601.21	569.14	32.07	18.746	
6,651.00	6,640.40	6,658.08	6,643.39	19.47	20.66	-73.05	-164.40	710.38	600.05	567.73	32.32	18.568	
6,699.99	6,689.33	6,706.92	6,692.22	19.62	20.83	-74.21	-165.41	710.12	598.97	566.42	32.55	18.403	
6,740.00	6,729.30	6,746.81	6,732.10	19.75	20.97	-75.19	-166.22	709.92	598.14	565.40	32.74	18.271	
6,799.99	6,789.21	6,806.63	6,791.91	19.94	21.18	-74.51	-167.40	709.62	596.92	563.90	33.02	18.078	
6,830.00	6,819.19	6,836.57	6,821.84	20.04	21.28	-74.16	-167.98	709.47	596.30	563.14	33.16	17.983	
6,899.99	6,889.11	6,906.07	6,891.33	20.26	21.53	-74.52	-169.28	709.15	594.90	561.41	33.49	17.765	
6,919.00	6,908.10	6,924.91	6,910.17	20.32	21.59	-74.62	-169.61	709.07	594.54	560.96	33.58	17.708	
6,999.99	6,989.01	7,005.89	6,991.13	20.57	21.87	-76.50	-170.98	708.75	593.10	559.15	33.95	17.469	
7,009.00	6,998.01	7,014.94	7,000.18	20.60	21.91	-76.72	-171.13	708.71	592.95	558.95	33.99	17.443	
7,099.00	7,087.94	7,104.79	7,090.02	20.88	22.22	-78.93	-172.50	708.29	591.52	557.11	34.41	17.192	
7,099.99	7,088.92	7,105.77	7,091.01	20.89	22.22	-78.93	-172.51	708.29	591.51	557.10	34.41	17.189	
7,188.00	7,176.87	7,193.27	7,178.49	21.15	22.52	-82.82	-173.66	707.90	590.39	555.58	34.81	16.962	
7,199.99	7,188.85	7,205.18	7,190.40	21.19	22.57	-82.57	-173.81	707.86	590.26	555.40	34.86	16.932	
7,278.00	7,266.81	7,282.85	7,268.07	21.42	22.84	-80.76	-174.77	707.57	589.40	554.19	35.21	16.740	
7,299.99	7,288.78	7,304.75	7,289.96	21.49	22.91	-83.29	-175.02	707.50	589.18	553.87	35.31	16.688	
7,368.00	7,356.76	7,372.10	7,357.31	21.69	23.15	-92.13	-175.72	707.29	588.75	553.15	35.60	16.537	
7,399.99	7,388.73	7,403.73	7,388.94	21.77	23.26	-94.50	-175.99	707.21	588.68	552.94	35.74	16.473	
7,421.46	7,410.20	7,424.88	7,410.09	21.84	23.32	-96.15	-176.17	707.16	588.66	552.84	35.82	16.434	
7,473.00	7,461.71	7,476.19	7,461.40	21.98	23.50	-100.24	-176.57	707.09	588.73	552.69	36.04	16.338	
7,499.99	7,488.69	7,503.24	7,488.45	22.06	23.59	-101.35	-176.78	707.05	588.80	552.65	36.15	16.287	
7,597.00	7,585.66	7,600.77	7,585.97	22.33	23.94	-105.25	-177.57	706.87	589.14	552.56	36.58	16.105	
7,599.98	7,588.64	7,603.78	7,588.98	22.33	23.95	-105.26	-177.59	706.86	589.15	552.56	36.59	16.100	
7,686.00	7,674.62	7,686.92	7,672.12	22.55	24.22	-109.22	-178.06	706.69	589.67	552.77	36.91	15.978	
7,699.98	7,688.60	7,699.90	7,685.10	22.59	24.26	-107.55	-178.08	706.72	589.82	552.87	36.95	15.961	
7,776.00	7,764.60	7,773.75	7,758.95	22.77	24.48	-64.14	-178.03	707.14	590.45	553.21	37.24	15.855	
7,799.98	7,788.58	7,798.01	7,783.21	22.82	24.55	-53.81	-178.01	707.28	590.47	553.13	37.35	15.811	
7,866.00	7,854.59	7,867.53	7,852.73	22.97	24.76	-45.06	-177.86	707.50	589.93	552.30	37.64	15.674	
7,899.98	7,888.56	7,904.09	7,889.29	23.05	24.87	-42.65	-177.62	707.36	589.25	551.45	37.80	15.590	
7,955.00	7,943.56	7,963.78	7,948.97	23.18	25.05	-39.57	-177.07	706.73	587.63	549.60	38.04	15.448	
7,999.98	7,988.53	8,012.05	7,997.23	23.30	25.19	-47.05	-176.58	705.85	586.02	547.78	38.23	15.328	
8,046.00	8,034.53	8,059.01	8,044.18	23.41	25.33	-56.74	-176.18	704.85	584.44	546.01	38.43	15.209	
8,099.98	8,088.50	8,113.95	8,099.11	23.55	25.49	-56.02	-175.91	703.62	582.61	543.96	38.65	15.073	
8,135.00	8,123.50	8,149.43	8,134.57	23.64	25.60	-55.57	-175.86	702.81	581.37	542.56	38.80	14.982	
8,199.98	8,188.47	8,215.69	8,200.82	23.80	25.79	-96.22	-175.98	701.25	579.46	540.40	39.06	14.835	
8,224.00	8,212.48	8,240.32	8,225.44	23.86	25.87	-114.10	-176.06	700.63	578.97	539.81	39.16	14.785	
8,299.98	8,288.46	8,315.77	8,300.86	24.03	26.10	-107.74	-176.41	698.68	577.47	538.04	39.43	14.644	
8,314.00	8,302.47	8,329.39	8,314.48	24.06	26.14	-106.39	-176.50	698.36	577.19	537.71	39.49	14.618	
8,399.98	8,388.44	8,412.13	8,397.20	24.22	26.40	-129.66	-177.16	696.66	575.86	536.07	39.79	14.471	
8,403.00	8,391.46	8,415.01	8,400.08	24.23	26.41	-130.74	-177.18	696.61	575.83	536.03	39.80	14.466	

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 A H 8WC
Project:	Andrews County, TX (NAD83-TNC)	TVD Reference:	RKB @ 3050.00usft (Ensign T054)
Reference Site:	University 8-8	MD Reference:	RKB @ 3050.00usft (Ensign T054)
Site Error:	0.00	North Reference:	Grid
Reference Well:	University 8-8E A H 8WC	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00	Output errors are at	2.00 sigma
Reference Wellbore	OH / 72181	Database:	USAEDMDB
Reference Design:	Surveys (Ensign T054)	Offset TVD Reference:	Offset Datum

Offset Design University 8-8E H 7WC - OH / 71369 - Surveys (Ensign 225)												Offset Site Error:	0.00 usft
Survey Program: 15-MWD, 1920-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)		
8,465.90	8,454.36	8,474.73	8,459.79	24.30	26.61	-148.33	-177.66	695.74	575.49	535.47	40.01	14.382	
8,492.00	8,480.45	8,499.25	8,484.31	24.34	26.69	-153.63	-177.87	695.50	575.55	535.44	40.10	14.352	
8,499.98	8,488.43	8,506.76	8,491.81	24.34	26.72	-154.77	-177.93	695.44	575.59	535.46	40.13	14.344	
8,582.00	8,570.44	8,582.99	8,568.05	24.39	26.97	-164.43	-178.63	695.23	576.63	536.25	40.37	14.282	
8,599.98	8,588.42	8,599.58	8,584.63	24.41	27.03	-159.13	-178.78	695.29	577.01	536.58	40.43	14.273	
8,672.00	8,660.42	8,671.29	8,656.34	24.48	27.27	-141.63	-179.39	695.82	578.78	538.12	40.66	14.235	
8,699.98	8,688.39	8,700.71	8,685.76	24.55	27.37	-124.57	-179.62	695.94	579.38	538.61	40.77	14.210	
8,762.00	8,750.34	8,776.70	8,761.74	24.70	27.64	-108.97	-180.41	695.41	580.03	538.94	41.09	14.117	
8,799.98	8,788.26	8,823.49	8,808.50	24.81	27.80	-104.27	-181.23	694.08	579.42	538.13	41.28	14.035	
8,851.00	8,839.23	8,882.00	8,866.95	24.97	28.00	-94.62	-182.35	691.64	577.52	535.99	41.53	13.905	
8,899.98	8,888.18	8,931.03	8,915.91	25.11	28.16	-96.00	-183.34	689.20	575.09	533.35	41.74	13.777	
8,940.00	8,928.17	8,969.18	8,954.01	25.23	28.29	-97.20	-184.15	687.42	573.25	531.34	41.91	13.679	
8,999.98	8,988.12	9,028.40	9,013.15	25.40	28.48	-84.65	-185.49	684.86	570.47	528.31	42.17	13.529	
9,030.00	9,018.13	9,058.45	9,043.17	25.48	28.58	-72.71	-186.27	683.57	568.93	526.63	42.30	13.450	
9,099.98	9,088.10	9,123.77	9,108.42	25.66	28.79	-72.86	-187.75	680.94	565.45	522.86	42.60	13.275	
9,120.00	9,108.12	9,142.04	9,126.67	25.71	28.85	-72.93	-187.98	680.28	564.60	521.92	42.68	13.229	
9,199.98	9,188.09	9,217.36	9,201.96	25.90	29.09	-108.73	-188.24	677.89	562.11	519.13	42.98	13.077	
9,209.00	9,197.11	9,225.98	9,210.57	25.93	29.12	-111.95	-188.24	677.64	561.91	518.90	43.02	13.063	
9,299.00	9,287.09	9,312.64	9,297.21	26.12	29.38	-123.42	-188.19	675.46	560.41	517.08	43.33	12.932	
9,299.98	9,288.08	9,313.59	9,298.16	26.12	29.39	-123.42	-188.19	675.44	560.40	517.06	43.34	12.931	
9,389.00	9,377.09	9,398.85	9,383.40	26.25	29.66	-152.97	-188.51	673.89	559.69	516.04	43.65	12.823	
9,399.98	9,388.07	9,409.31	9,393.86	26.25	29.70	-160.05	-188.57	673.75	559.67	515.98	43.68	12.812	
9,410.00	9,398.08	9,418.85	9,403.40	26.25	29.73	-166.59	-188.63	673.63	559.66	515.94	43.72	12.802	
9,499.00	9,487.07	9,503.22	9,487.77	26.25	30.01	149.95	-189.23	673.01	560.21	516.19	44.02	12.727	
9,499.98	9,488.05	9,504.18	9,488.72	26.25	30.01	151.48	-189.23	673.01	560.22	516.20	44.02	12.726	
9,568.00	9,556.05	9,560.64	9,545.16	26.31	30.30	-95.49	-190.47	673.43	561.10	516.73	44.37	12.645	
9,599.98	9,587.94	9,584.78	9,569.21	26.63	30.46	-80.44	-192.25	674.43	561.61	517.01	44.61	12.591	
9,658.00	9,645.11	9,631.75	9,615.68	27.22	30.83	-75.93	-198.06	677.89	561.89	516.86	45.03	12.478	
9,699.98	9,685.66	9,671.41	9,654.61	27.52	31.23	-75.74	-204.66	681.61	561.32	516.02	45.31	12.390	
9,748.00	9,731.12	9,716.12	9,698.12	27.87	31.68	-75.89	-213.72	686.39	560.02	514.41	45.61	12.279	
9,799.98	9,779.10	9,762.48	9,742.65	28.21	31.94	-78.44	-225.19	692.26	558.55	512.62	45.92	12.163	
9,837.00	9,812.43	9,795.00	9,773.44	28.44	32.14	-79.94	-234.55	696.98	557.82	511.67	46.15	12.088	
9,899.98	9,867.64	9,852.19	9,826.37	28.80	32.55	-81.62	-253.91	706.57	557.19	510.61	46.58	11.961	
9,921.01	9,885.66	9,871.21	9,843.57	28.92	32.69	-82.10	-261.20	710.14	557.15	510.42	46.73	11.923	
9,921.03	9,885.68	9,871.23	9,843.58	28.92	32.69	-82.10	-261.21	710.14	557.15	510.42	46.73	11.922	
9,928.00	9,891.61	9,877.54	9,849.25	28.96	32.74	-82.25	-263.72	711.36	557.16	510.38	46.78	11.910	
9,999.98	9,950.64	9,966.54	9,927.08	29.41	33.42	-84.58	-303.26	728.54	556.48	508.93	47.54	11.705	
10,015.04	9,962.44	9,985.77	9,943.42	29.50	33.57	-85.06	-312.74	732.09	556.06	508.36	47.71	11.656	
10,018.00	9,964.73	9,973.00	9,932.59	29.52	33.47	-84.94	-306.41	729.74	556.16	508.53	47.63	11.676	
10,043.65	9,984.28	9,999.42	9,954.63	29.67	33.77	-85.69	-319.94	735.10	555.83	507.91	47.92	11.599	
10,099.98	10,024.93	10,038.31	9,985.27	29.99	34.20	-86.77	-341.88	744.64	556.93	508.50	48.43	11.499	
10,108.00	10,030.46	10,043.87	9,989.46	30.04	34.27	-86.89	-345.21	746.16	557.27	508.76	48.51	11.489	
10,198.00	10,088.20	10,109.23	10,036.66	30.46	34.99	-87.38	-386.69	766.44	563.33	513.85	49.49	11.383	
10,199.98	10,089.38	10,110.69	10,036.65	30.47	35.01	-87.40	-387.65	766.94	563.51	514.00	49.51	11.381	
10,287.00	10,138.68	10,182.11	10,082.16	30.80	35.60	-88.15	-436.12	792.94	573.31	522.68	50.63	11.324	
10,299.98	10,145.50	10,194.67	10,089.78	30.85	35.66	-88.32	-444.91	797.70	575.00	524.18	50.82	11.314	

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 A H 8WC
Project:	Andrews County, TX (NAD83-TNC)	TVD Reference:	RKB @ 3050.00usft (Ensign T054)
Reference Site:	University 8-8	MD Reference:	RKB @ 3050.00usft (Ensign T054)
Site Error:	0.00	North Reference:	Grid
Reference Well:	University 8-8E A H 8WC	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00	Output errors are at	2.00 sigma
Reference Wellbore	OH / 72181	Database:	USAEDMDB
Reference Design:	Surveys (Ensign T054)	Offset TVD Reference:	Offset Datum

Offset Design University 8-8E H 7WC - OH / 71369 - Surveys (Ensign 225)												Offset Site Error:	0.00 usft
Survey Program: 15-MWD, 1920-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)		
10,376.00	10,179.83	10,266.92	10,131.21	31.13	35.97	-89.13	-497.02	825.70	586.48	534.49	51.99	11.282	
10,399.98	10,188.58	10,289.32	10,142.39	31.19	36.05	-89.36	-514.18	834.77	590.77	538.38	52.39	11.277	
10,465.00	10,207.07	10,349.43	10,167.33	31.34	36.28	-89.41	-562.63	860.03	604.48	551.01	53.47	11.305	
10,499.98	10,213.55	10,380.81	10,177.79	31.38	36.40	-88.56	-588.89	873.66	612.28	558.17	54.11	11.316	
10,556.00	10,218.18	10,457.53	10,196.04	31.43	36.68	-88.27	-655.32	907.23	622.73	567.53	55.20	11.282	
10,599.98	10,218.99	10,571.66	10,202.88	31.44	37.18	-88.72	-761.21	948.69	625.54	569.07	56.47	11.078	
10,645.00	10,219.74	10,645.68	10,204.34	31.46	37.52	-88.72	-832.15	969.77	624.10	566.45	57.65	10.825	
10,669.00	10,220.07	10,672.37	10,204.96	31.46	37.61	-88.76	-857.86	976.88	622.85	564.73	58.12	10.717	
10,699.98	10,220.27	10,706.82	10,205.81	31.47	37.74	-88.85	-891.10	985.89	621.42	562.67	58.75	10.577	
10,739.95	10,220.15	10,738.60	10,206.60	31.48	37.85	-88.93	-921.74	994.29	620.63	561.15	59.48	10.435	
10,759.00	10,219.95	10,753.44	10,206.94	31.48	37.91	-88.97	-936.01	998.37	620.81	560.99	59.82	10.378	
10,799.98	10,219.41	10,785.35	10,207.64	31.49	38.03	-89.08	-966.59	1,007.46	621.77	561.21	60.56	10.267	
10,848.00	10,218.80	10,828.22	10,208.49	31.49	38.22	-89.22	-1,007.51	1,020.20	623.21	561.76	61.46	10.141	
10,899.98	10,217.84	10,877.62	10,209.44	31.50	38.45	-89.32	-1,054.60	1,035.10	625.63	563.13	62.49	10.011	
10,937.00	10,216.79	10,912.60	10,210.08	31.51	38.62	-89.40	-1,087.91	1,045.76	628.44	565.21	63.23	9.939	
10,999.98	10,214.60	10,971.93	10,211.17	31.52	38.93	-89.68	-1,144.33	1,064.08	634.04	569.57	64.47	9.834	
11,026.00	10,213.61	11,001.42	10,211.67	31.53	39.09	-89.82	-1,172.37	1,073.20	636.29	571.28	65.02	9.787	
11,099.98	10,210.65	11,096.72	10,212.70	31.55	39.66	-90.29	-1,263.46	1,101.15	640.80	574.12	66.68	9.610	
11,118.00	10,209.91	11,125.57	10,212.92	31.56	39.85	-90.43	-1,291.28	1,108.82	641.16	574.03	67.13	9.551	
11,199.98	10,207.41	11,213.67	10,213.65	31.62	40.46	-90.71	-1,376.68	1,130.46	641.85	572.91	68.94	9.310	
11,207.00	10,207.28	11,220.10	10,213.73	31.63	40.50	-90.73	-1,382.91	1,132.05	642.03	572.94	69.09	9.293	
11,296.00	10,205.37	11,308.64	10,214.90	31.79	41.13	-91.02	-1,468.61	1,154.25	643.68	572.66	71.02	9.064	
11,296.01	10,205.37	11,308.65	10,214.90	31.79	41.13	-91.02	-1,468.62	1,154.26	643.68	572.66	71.02	9.064	
11,299.98	10,205.27	11,312.74	10,214.95	31.80	41.16	-91.03	-1,472.57	1,155.27	643.70	572.60	71.10	9.053	
11,386.00	10,202.77	11,435.59	10,215.68	32.23	42.11	-91.45	-1,592.33	1,182.55	641.47	568.23	73.24	8.758	
11,399.98	10,202.33	11,447.15	10,215.71	32.33	42.20	-91.47	-1,603.67	1,184.81	640.69	567.13	73.55	8.710	
11,478.00	10,200.61	11,515.00	10,216.19	33.14	42.77	-91.59	-1,670.04	1,198.90	638.38	563.07	75.30	8.477	
11,499.98	10,200.28	11,534.62	10,216.35	33.39	42.93	-91.63	-1,689.19	1,203.16	638.18	562.36	75.83	8.416	
11,567.00	10,199.09	11,607.35	10,216.03	34.26	43.52	-91.73	-1,760.26	1,218.58	636.93	559.59	77.34	8.236	
11,599.98	10,198.62	11,638.61	10,215.56	34.71	43.78	-91.71	-1,790.82	1,225.13	636.26	558.19	78.07	8.150	
11,640.80	10,198.52	11,677.79	10,214.83	35.27	44.11	-91.65	-1,829.10	1,233.43	635.97	556.97	79.00	8.050	
11,656.00	10,198.63	11,693.00	10,214.51	35.48	44.23	-91.61	-1,843.96	1,236.68	636.01	556.65	79.36	8.014	
11,656.14	10,198.63	11,693.00	10,214.51	35.48	44.23	-91.61	-1,843.96	1,236.68	636.01	556.65	79.36	8.014	
11,699.98	10,198.87	11,730.60	10,213.64	36.08	44.56	-91.51	-1,880.65	1,244.90	636.58	556.24	80.34	7.924	
11,699.98	10,198.87	11,730.60	10,213.64	36.09	44.56	-91.51	-1,880.65	1,244.90	636.58	556.24	80.34	7.924	
11,745.00	10,198.79	11,769.66	10,212.67	36.71	44.90	-91.42	-1,918.67	1,253.79	637.86	556.51	81.35	7.841	
11,799.98	10,198.66	11,818.87	10,211.35	37.49	45.33	-91.32	-1,966.46	1,265.44	640.05	557.45	82.60	7.749	
11,836.00	10,198.77	11,851.52	10,210.44	38.00	45.62	-91.24	-1,998.12	1,273.38	641.64	558.22	83.42	7.692	
11,899.98	10,199.19	11,908.73	10,208.78	38.91	46.15	-91.05	-2,053.48	1,287.72	644.72	559.84	84.88	7.596	
11,928.00	10,199.44	11,933.57	10,208.00	39.31	46.37	-90.97	-2,077.46	1,294.13	646.19	560.67	85.52	7.556	
11,999.98	10,199.94	12,008.66	10,205.47	40.35	47.07	-90.67	-2,149.88	1,313.79	649.95	562.69	87.26	7.448	
12,018.00	10,200.00	12,029.91	10,204.68	40.61	47.28	-90.59	-2,170.43	1,319.17	650.66	562.94	87.72	7.417	
12,099.98	10,200.39	12,105.07	10,202.08	41.81	48.00	-90.34	-2,243.12	1,338.06	653.11	563.45	89.66	7.284	
12,108.00	10,200.45	12,111.68	10,201.91	41.93	48.06	-90.32	-2,249.51	1,339.79	653.37	563.52	89.85	7.272	
12,198.00	10,200.89	12,206.64	10,200.43	43.25	49.00	-90.14	-2,341.04	1,365.02	656.15	564.03	92.11	7.123	

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 A H 8WC
Project:	Andrews County, TX (NAD83-TNC)	TVD Reference:	RKB @ 3050.00usft (Ensign T054)
Reference Site:	University 8-8	MD Reference:	RKB @ 3050.00usft (Ensign T054)
Site Error:	0.00	North Reference:	Grid
Reference Well:	University 8-8E A H 8WC	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00	Output errors are at	2.00 sigma
Reference Wellbore	OH / 72181	Database:	USAEDMDB
Reference Design:	Surveys (Ensign T054)	Offset TVD Reference:	Offset Datum

Offset Design University 8-8E H 7WC - OH / 71369 - Surveys (Ensign 225)												Offset Site Error:	0.00 usft
Survey Program: 15-MWD, 1920-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)		
12,199.98	10,200.89	12,209.10	10,200.40	43.28	49.03	-90.13	-2,343.41	1,365.65	656.18	564.01	92.17	7.119	
12,287.00	10,200.44	12,318.61	10,200.61	44.59	50.12	-90.16	-2,449.76	1,391.75	658.57	564.04	94.53	6.967	
12,299.98	10,200.27	12,334.99	10,200.98	44.78	50.29	-90.21	-2,465.74	1,395.34	659.04	564.16	94.88	6.946	
12,376.00	10,199.36	12,404.97	10,202.42	45.89	51.00	-90.41	-2,533.94	1,410.92	661.77	565.04	96.74	6.841	
12,399.98	10,199.06	12,428.45	10,202.87	46.24	51.23	-90.47	-2,556.81	1,416.22	662.64	565.31	97.33	6.808	
12,466.00	10,197.86	12,494.66	10,204.07	47.21	51.90	-90.66	-2,621.30	1,431.16	665.10	566.12	98.98	6.719	
12,499.98	10,197.23	12,528.06	10,204.65	47.71	52.25	-90.78	-2,653.84	1,438.70	666.37	566.54	99.83	6.675	
12,557.00	10,196.75	12,583.71	10,205.75	48.55	52.82	-90.94	-2,708.02	1,451.34	668.47	567.21	101.26	6.602	
12,599.98	10,196.60	12,626.28	10,206.71	49.19	53.26	-91.03	-2,749.46	1,461.07	670.05	567.70	102.34	6.547	
12,646.00	10,196.32	12,672.12	10,207.79	49.87	53.74	-91.13	-2,794.07	1,471.55	671.73	568.22	103.51	6.490	
12,699.97	10,195.78	12,726.94	10,209.15	50.67	54.32	-91.28	-2,847.42	1,484.06	673.64	568.75	104.89	6.422	
12,736.00	10,195.27	12,763.73	10,210.07	51.20	54.71	-91.40	-2,883.24	1,492.41	674.82	569.01	105.82	6.377	
12,799.97	10,194.90	12,832.91	10,211.77	52.15	55.44	-91.60	-2,950.66	1,507.83	676.47	568.98	107.49	6.293	
12,800.06	10,194.90	12,833.01	10,211.77	52.15	55.44	-91.60	-2,950.75	1,507.85	676.47	568.98	107.49	6.293	
12,827.00	10,195.11	12,862.46	10,212.44	52.56	55.76	-91.65	-2,979.50	1,514.24	676.90	568.71	108.20	6.256	
12,827.13	10,195.12	12,862.61	10,212.45	52.56	55.76	-91.65	-2,979.64	1,514.27	676.91	568.71	108.20	6.256	
12,899.97	10,195.75	12,950.32	10,213.24	53.65	56.70	-91.65	-3,065.49	1,532.23	677.10	566.95	110.15	6.147	
12,917.00	10,195.83	12,966.25	10,213.16	53.90	56.87	-91.64	-3,081.11	1,535.33	676.97	566.39	110.58	6.122	
12,999.97	10,196.11	13,043.00	10,212.85	55.15	57.70	-91.59	-3,156.27	1,550.87	676.64	563.93	112.71	6.004	
13,001.75	10,196.11	13,043.00	10,212.85	55.18	57.70	-91.59	-3,156.27	1,550.87	676.63	563.88	112.74	6.002	
13,007.00	10,196.13	13,047.52	10,212.83	55.25	57.75	-91.58	-3,160.69	1,551.81	676.61	563.74	112.88	5.994	
13,097.00	10,196.57	13,142.94	10,212.20	56.62	58.80	-91.48	-3,254.10	1,571.34	675.23	559.98	115.25	5.859	
13,099.97	10,196.60	13,146.08	10,212.17	56.66	58.83	-91.48	-3,257.17	1,571.97	675.15	559.82	115.33	5.854	
13,186.00	10,197.50	13,235.96	10,210.94	57.97	59.82	-91.29	-3,345.27	1,589.70	672.40	554.79	117.61	5.717	
13,199.97	10,197.69	13,249.82	10,210.70	58.18	59.97	-91.25	-3,358.87	1,592.41	671.91	553.94	117.97	5.695	
13,274.00	10,198.66	13,322.27	10,209.20	59.31	60.78	-91.05	-3,429.90	1,606.59	669.17	549.24	119.92	5.580	
13,299.97	10,198.98	13,345.98	10,208.63	59.71	61.04	-90.98	-3,453.12	1,611.31	668.27	547.66	120.60	5.541	
13,363.00	10,199.70	13,403.00	10,207.11	60.67	61.68	-90.80	-3,508.92	1,622.98	666.69	544.44	122.25	5.454	
13,399.97	10,200.07	13,437.43	10,206.24	61.24	62.07	-90.70	-3,542.56	1,630.25	666.16	542.94	123.21	5.407	
13,454.00	10,200.54	13,487.02	10,205.34	62.06	62.63	-90.59	-3,590.97	1,640.98	665.91	541.29	124.62	5.343	
13,454.94	10,200.55	13,487.89	10,205.33	62.08	62.64	-90.58	-3,591.81	1,641.17	665.91	541.26	124.65	5.342	
13,499.97	10,200.87	13,527.86	10,204.97	62.77	63.10	-90.53	-3,630.77	1,650.09	666.03	540.22	125.81	5.294	
13,501.11	10,200.88	13,528.86	10,204.97	62.78	63.11	-90.53	-3,631.75	1,650.32	666.04	540.20	125.84	5.293	
13,543.00	10,201.14	13,565.87	10,204.97	63.42	63.53	-90.50	-3,667.76	1,658.86	666.32	539.40	126.92	5.250	
13,543.02	10,201.14	13,565.89	10,204.97	63.42	63.53	-90.50	-3,667.78	1,658.86	666.32	539.40	126.92	5.250	
13,599.97	10,201.37	13,622.76	10,205.43	64.30	64.18	-90.52	-3,723.05	1,672.28	666.86	538.42	128.44	5.192	
13,600.13	10,201.37	13,622.93	10,205.43	64.30	64.18	-90.52	-3,723.21	1,672.32	666.86	538.41	128.45	5.192	
13,633.00	10,201.43	13,657.71	10,205.73	64.80	64.58	-90.54	-3,757.03	1,680.42	667.03	537.68	129.35	5.157	
13,699.97	10,201.21	13,727.00	10,206.38	65.83	65.38	-90.62	-3,824.46	1,696.32	667.00	535.83	131.17	5.085	
13,723.00	10,201.01	13,750.68	10,206.64	66.19	65.66	-90.66	-3,847.52	1,701.72	666.89	535.09	131.80	5.060	
13,799.97	10,199.92	13,829.91	10,207.50	67.37	66.57	-90.83	-3,924.71	1,719.58	666.39	532.49	133.90	4.977	
13,812.00	10,199.70	13,842.29	10,207.62	67.56	66.72	-90.86	-3,936.77	1,722.35	666.30	532.07	134.23	4.964	
13,880.28	10,197.91	13,908.48	10,208.17	68.61	67.49	-91.05	-4,001.27	1,737.20	666.04	529.98	136.06	4.895	
13,899.97	10,197.21	13,927.38	10,208.28	68.91	67.71	-91.12	-4,019.67	1,741.49	666.07	529.49	136.58	4.877	
13,899.98	10,197.21	13,927.39	10,208.28	68.91	67.71	-91.12	-4,019.68	1,741.49	666.07	529.49	136.58	4.877	
13,902.00	10,197.13	13,929.32	10,208.30	68.94	67.73	-91.13	-4,021.57	1,741.93	666.07	529.44	136.64	4.875	

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 A H 8WC
Project:	Andrews County, TX (NAD83-TNC)	TVD Reference:	RKB @ 3050.00usft (Ensign T054)
Reference Site:	University 8-8	MD Reference:	RKB @ 3050.00usft (Ensign T054)
Site Error:	0.00	North Reference:	Grid
Reference Well:	University 8-8E A H 8WC	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00	Output errors are at	2.00 sigma
Reference Wellbore	OH / 72181	Database:	USAEDMDB
Reference Design:	Surveys (Ensign T054)	Offset TVD Reference:	Offset Datum

Offset Design University 8-8E H 7WC - OH / 71369 - Surveys (Ensign 225)												Offset Site Error:	0.00 usft
Survey Program: 15-MWD, 1920-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)		
13,991.00	10,193.65	14,017.46	10,208.96	70.31	68.76	-91.51	-4,107.38	1,762.07	665.87	526.83	139.04	4.789	
13,999.97	10,193.29	14,026.39	10,209.06	70.45	68.87	-91.55	-4,116.07	1,764.11	665.80	526.52	139.28	4.780	
14,080.00	10,189.69	14,107.75	10,210.06	71.69	69.83	-91.95	-4,195.28	1,782.63	665.20	523.74	141.46	4.702	
14,099.97	10,188.83	14,127.72	10,210.32	72.00	70.06	-92.05	-4,214.73	1,787.14	665.01	523.01	142.01	4.683	
14,170.00	10,187.78	14,196.28	10,210.50	73.08	70.88	-92.13	-4,281.50	1,802.77	663.87	519.96	143.91	4.613	
14,199.97	10,188.03	14,224.73	10,210.25	73.55	71.21	-92.08	-4,309.17	1,809.31	663.18	518.46	144.72	4.582	
14,260.00	10,188.82	14,280.28	10,209.48	74.49	71.87	-91.94	-4,363.17	1,822.36	661.70	515.36	146.34	4.522	
14,299.97	10,189.37	14,317.32	10,208.82	75.12	72.32	-91.85	-4,399.11	1,831.27	660.92	513.51	147.42	4.483	
14,339.76	10,189.68	14,354.24	10,208.16	75.74	72.76	-91.78	-4,434.91	1,840.31	660.63	512.15	148.49	4.449	
14,349.00	10,189.72	14,362.82	10,208.02	75.88	72.86	-91.76	-4,443.22	1,842.43	660.63	511.90	148.73	4.442	
14,350.33	10,189.73	14,364.05	10,207.99	75.91	72.88	-91.76	-4,444.41	1,842.73	660.63	511.87	148.77	4.441	
14,399.97	10,189.75	14,410.39	10,207.21	76.68	73.43	-91.69	-4,489.27	1,854.33	661.00	510.90	150.10	4.404	
14,399.98	10,189.75	14,410.41	10,207.21	76.68	73.43	-91.69	-4,489.28	1,854.34	661.00	510.90	150.10	4.404	
14,438.00	10,189.57	14,446.14	10,206.64	77.27	73.86	-91.64	-4,523.83	1,863.42	661.63	510.51	151.12	4.378	
14,438.02	10,189.57	14,446.15	10,206.63	77.27	73.86	-91.64	-4,523.85	1,863.43	661.63	510.51	151.12	4.378	
14,499.97	10,189.13	14,504.85	10,205.71	78.23	74.57	-91.60	-4,580.54	1,878.61	662.91	510.12	152.79	4.339	
14,500.09	10,189.12	14,504.97	10,205.71	78.24	74.57	-91.60	-4,580.66	1,878.64	662.92	510.12	152.79	4.339	
14,529.00	10,188.92	14,532.63	10,205.28	78.69	74.91	-91.58	-4,607.35	1,885.87	663.50	509.92	153.58	4.320	
14,529.05	10,188.92	14,532.68	10,205.28	78.69	74.91	-91.58	-4,607.39	1,885.89	663.50	509.92	153.58	4.320	
14,599.97	10,188.52	14,597.42	10,204.20	79.80	75.69	-91.52	-4,669.80	1,903.09	664.64	509.18	155.45	4.275	
14,600.45	10,188.52	14,597.84	10,204.19	79.81	75.70	-91.52	-4,670.20	1,903.20	664.65	509.18	155.47	4.275	
14,618.00	10,188.46	14,613.02	10,203.90	80.08	75.88	-91.50	-4,684.80	1,907.35	664.90	508.99	155.92	4.264	
14,618.83	10,188.46	14,613.73	10,203.88	80.09	75.89	-91.50	-4,685.49	1,907.55	664.92	508.98	155.94	4.264	
14,699.97	10,188.34	14,709.32	10,202.10	81.37	77.07	-91.36	-4,777.38	1,933.80	665.76	507.32	158.44	4.202	
14,709.00	10,188.35	14,724.79	10,202.03	81.52	77.27	-91.35	-4,792.36	1,937.65	665.54	506.77	158.77	4.192	
14,799.00	10,188.32	14,852.60	10,202.82	82.94	78.88	-91.44	-4,917.24	1,964.75	660.26	498.71	161.54	4.087	
14,799.97	10,188.32	14,853.57	10,202.83	82.95	78.89	-91.44	-4,918.19	1,964.94	660.18	498.61	161.57	4.086	
14,889.00	10,188.14	14,944.08	10,203.59	84.36	79.99	-91.55	-5,007.09	1,981.95	653.16	489.10	164.05	3.981	
14,899.97	10,188.14	14,955.98	10,203.66	84.53	80.14	-91.54	-5,018.78	1,984.15	652.25	487.89	164.36	3.968	
14,979.00	10,189.51	15,041.20	10,203.71	85.78	81.17	-91.33	-5,102.62	1,999.44	646.69	480.14	166.54	3.883	
14,999.97	10,190.22	15,063.43	10,203.67	86.10	81.44	-91.27	-5,124.51	2,003.31	645.49	478.37	167.12	3.862	
15,068.00	10,192.63	15,130.78	10,203.52	87.16	82.26	-91.08	-5,190.86	2,014.83	642.30	473.29	169.01	3.800	
15,099.97	10,193.83	15,158.57	10,203.25	87.65	82.60	-90.96	-5,218.22	2,019.75	641.32	471.41	169.91	3.774	
15,159.00	10,196.13	15,211.51	10,202.22	88.55	83.24	-90.69	-5,270.22	2,029.60	640.17	468.61	171.56	3.731	
15,199.97	10,197.42	15,253.05	10,201.09	89.18	83.75	-90.49	-5,311.00	2,037.46	639.58	466.89	172.69	3.704	
15,249.00	10,198.03	15,301.16	10,199.55	89.94	84.34	-90.31	-5,358.21	2,046.52	638.95	464.89	174.05	3.671	
15,281.14	10,197.99	15,329.27	10,198.68	90.43	84.69	-90.24	-5,385.78	2,051.95	638.78	463.84	174.94	3.651	
15,299.97	10,197.88	15,345.74	10,198.22	90.72	84.89	-90.21	-5,401.92	2,055.21	638.84	463.38	175.46	3.641	
15,338.00	10,197.44	15,381.00	10,197.36	91.30	85.33	-90.16	-5,436.43	2,062.39	639.30	462.80	176.50	3.622	
15,399.97	10,196.14	15,434.91	10,196.28	92.24	85.99	-90.13	-5,489.11	2,073.82	641.03	462.85	178.18	3.598	
15,428.00	10,195.32	15,460.20	10,195.84	92.67	86.31	-90.14	-5,513.79	2,079.34	642.20	463.26	178.94	3.589	
15,499.97	10,192.88	15,530.81	10,194.81	93.76	87.18	-90.26	-5,582.62	2,095.03	645.53	464.62	180.91	3.568	
15,518.00	10,192.23	15,548.81	10,194.57	94.04	87.41	-90.29	-5,600.17	2,099.03	646.34	464.93	181.41	3.563	
15,599.97	10,189.71	15,630.35	10,193.30	95.30	88.42	-90.49	-5,679.65	2,117.19	648.23	464.53	183.69	3.529	
15,599.97	10,189.71	15,630.35	10,193.30	95.30	88.42	-90.49	-5,679.65	2,117.19	648.23	464.53	183.69	3.529	

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 A H 8WC
Project:	Andrews County, TX (NAD83-TNC)	TVD Reference:	RKB @ 3050.00usft (Ensign T054)
Reference Site:	University 8-8	MD Reference:	RKB @ 3050.00usft (Ensign T054)
Site Error:	0.00	North Reference:	Grid
Reference Well:	University 8-8E A H 8WC	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00	Output errors are at	2.00 sigma
Reference Wellbore	OH / 72181	Database:	USAEDMDB
Reference Design:	Surveys (Ensign T054)	Offset TVD Reference:	Offset Datum

Offset Design University 8-8E H 7WC - OH / 71369 - Surveys (Ensign 225)												Offset Site Error:	0.00 usft
Survey Program: 15-MWD, 1920-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)		
15,607.00	10,189.53	15,637.34	10,193.17	95.41	88.51	-90.50	-5,686.47	2,118.75	648.23	464.34	183.89	3.525	
15,699.00	10,186.52	15,727.13	10,190.96	96.85	89.63	-90.58	-5,773.94	2,138.91	647.98	461.53	186.45	3.475	
15,699.97	10,186.48	15,728.08	10,190.93	96.86	89.64	-90.58	-5,774.85	2,139.12	647.98	461.50	186.48	3.475	
15,789.00	10,182.46	15,814.37	10,188.56	98.25	90.72	-90.73	-5,858.83	2,158.83	647.63	458.68	188.95	3.427	
15,799.97	10,181.93	15,824.99	10,188.33	98.42	90.85	-90.75	-5,869.17	2,161.28	647.60	458.34	189.26	3.422	
15,802.01	10,181.84	15,826.97	10,188.29	98.45	90.88	-90.75	-5,871.09	2,161.74	647.60	458.29	189.32	3.421	
15,879.00	10,178.81	15,900.89	10,186.92	99.65	91.80	-90.84	-5,942.96	2,178.99	648.67	457.22	191.44	3.388	
15,899.97	10,178.24	15,920.99	10,186.60	99.97	92.05	-90.88	-5,962.49	2,183.74	649.23	457.21	192.02	3.381	
15,969.00	10,177.72	15,982.21	10,185.94	101.04	92.82	-90.91	-6,021.88	2,198.57	651.10	457.24	193.86	3.359	
15,999.97	10,177.95	16,014.00	10,185.86	101.53	93.22	-90.88	-6,052.64	2,206.57	652.10	457.36	194.74	3.349	
16,058.00	10,178.36	16,061.83	10,186.26	102.43	93.83	-90.89	-6,098.85	2,218.92	654.43	458.21	196.21	3.335	
16,099.97	10,178.64	16,099.71	10,187.13	103.08	94.31	-90.94	-6,135.37	2,228.95	656.48	459.16	197.32	3.327	
16,147.00	10,178.96	16,147.35	10,188.69	103.81	94.91	-91.04	-6,181.24	2,241.68	658.95	460.30	198.65	3.317	
16,199.97	10,179.39	16,202.78	10,190.79	104.64	95.61	-91.19	-6,234.66	2,256.37	661.52	461.33	200.19	3.304	
16,237.00	10,179.79	16,246.19	10,192.45	105.21	96.16	-91.29	-6,276.56	2,267.57	662.92	461.57	201.35	3.292	
16,299.97	10,180.52	16,326.71	10,195.20	106.19	97.19	-91.44	-6,354.62	2,287.10	664.36	461.02	203.34	3.267	
16,300.09	10,180.52	16,326.88	10,195.21	106.20	97.19	-91.45	-6,354.79	2,287.14	664.36	461.01	203.34	3.267	
16,326.00	10,180.81	16,363.41	10,196.31	106.60	97.66	-91.51	-6,390.41	2,295.17	664.39	460.25	204.15	3.254	
16,399.97	10,181.33	16,442.41	10,198.71	107.75	98.66	-91.67	-6,467.67	2,311.44	663.62	457.37	206.25	3.218	
16,416.00	10,181.36	16,458.70	10,199.27	108.00	98.87	-91.72	-6,483.62	2,314.77	663.46	456.76	206.70	3.210	
16,499.97	10,181.64	16,548.54	10,201.28	109.30	100.00	-91.87	-6,571.60	2,332.77	662.18	453.12	209.06	3.167	
16,507.00	10,181.69	16,556.09	10,201.33	109.41	100.10	-91.87	-6,579.01	2,334.25	662.02	452.76	209.26	3.164	
16,596.00	10,182.62	16,634.48	10,201.35	110.80	101.09	-91.79	-6,655.76	2,350.21	660.37	448.61	211.76	3.119	
16,599.97	10,182.68	16,637.98	10,201.33	110.86	101.13	-91.78	-6,659.17	2,350.95	660.31	448.44	211.87	3.117	
16,686.00	10,184.04	16,722.13	10,200.48	112.21	102.20	-91.60	-6,741.36	2,368.99	659.61	445.31	214.30	3.078	
16,689.65	10,184.10	16,725.73	10,200.42	112.26	102.25	-91.59	-6,744.88	2,369.77	659.60	445.19	214.41	3.076	
16,699.97	10,184.27	16,734.00	10,200.29	112.42	102.35	-91.57	-6,752.96	2,371.55	659.57	444.88	214.69	3.072	
16,710.55	10,184.44	16,744.72	10,200.11	112.59	102.49	-91.53	-6,763.41	2,373.88	659.55	444.56	214.99	3.068	
16,775.00	10,185.38	16,799.86	10,199.27	113.59	103.19	-91.39	-6,817.13	2,386.29	660.06	443.31	216.75	3.045	
16,775.06	10,185.38	16,799.91	10,199.27	113.59	103.19	-91.39	-6,817.18	2,386.30	660.06	443.31	216.75	3.045	
16,799.97	10,185.70	16,824.00	10,198.94	113.98	103.50	-91.33	-6,840.60	2,391.96	660.44	442.99	217.45	3.037	
16,800.08	10,185.70	16,824.00	10,198.94	113.98	103.50	-91.33	-6,840.60	2,391.96	660.44	442.99	217.45	3.037	
16,865.00	10,186.42	16,881.68	10,198.13	115.00	104.24	-91.19	-6,896.58	2,405.85	660.96	441.75	219.22	3.015	
16,899.97	10,186.83	16,913.00	10,197.63	115.56	104.64	-91.11	-6,926.93	2,413.54	660.86	440.69	220.17	3.002	
16,955.00	10,187.66	16,964.95	10,196.70	116.43	105.30	-90.94	-6,977.21	2,426.55	660.02	438.32	221.70	2.977	
16,999.97	10,188.15	17,008.54	10,195.81	117.15	105.86	-90.84	-7,019.34	2,437.72	659.39	436.42	222.97	2.957	
17,045.00	10,188.07	17,071.27	10,194.30	117.87	106.67	-90.73	-7,080.18	2,452.94	658.68	434.17	224.52	2.934	
17,099.97	10,187.48	17,121.34	10,192.94	118.74	107.32	-90.67	-7,128.91	2,464.35	656.99	430.94	226.05	2.906	
17,134.00	10,186.98	17,146.68	10,192.31	119.28	107.65	-90.66	-7,153.48	2,470.51	656.12	429.20	226.92	2.891	
17,199.97	10,185.80	17,202.08	10,191.09	120.33	108.37	-90.65	-7,206.95	2,484.98	655.35	426.72	228.63	2.866	
17,225.00	10,185.29	17,228.13	10,190.50	120.73	108.71	-90.64	-7,232.06	2,491.87	655.16	425.78	229.38	2.856	
17,299.97	10,183.94	17,328.54	10,188.31	121.92	110.02	-90.58	-7,329.21	2,517.12	654.70	422.79	231.91	2.823	
17,315.00	10,183.72	17,353.61	10,187.99	122.16	110.34	-90.58	-7,353.67	2,522.60	654.30	421.89	232.41	2.815	
17,399.97	10,182.29	17,440.99	10,187.03	123.50	111.47	-90.63	-7,439.15	2,540.72	651.26	416.40	234.85	2.773	
17,404.00	10,182.21	17,445.02	10,186.98	123.57	111.53	-90.64	-7,443.09	2,541.56	651.11	416.14	234.97	2.771	
17,493.00	10,179.94	17,537.82	10,185.37	124.96	112.71	-90.66	-7,533.91	2,560.56	649.44	411.94	237.51	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 A H 8WC
Project:	Andrews County, TX (NAD83-TNC)	TVD Reference:	RKB @ 3050.00usft (Ensign T054)
Reference Site:	University 8-8	MD Reference:	RKB @ 3050.00usft (Ensign T054)
Site Error:	0.00	North Reference:	Grid
Reference Well:	University 8-8E A H 8WC	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00	Output errors are at	2.00 sigma
Reference Wellbore	OH / 72181	Database:	USAEDMDB
Reference Design:	Surveys (Ensign T054)	Offset TVD Reference:	Offset Datum

Offset Design University 8-8E H 7WC - OH / 71369 - Surveys (Ensign 225)												Offset Site Error:	0.00 usft
Survey Program: 15-MWD, 1920-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)		
17,499.97	10,179.72	17,545.23	10,185.20	125.07	112.81	-90.66	-7,541.17	2,562.05	649.43	411.72	237.70	2.732	
17,585.00	10,176.27	17,630.00	10,182.69	126.38	113.89	-90.74	-7,624.24	2,578.73	648.94	408.84	240.10	2.703	
17,599.97	10,175.60	17,648.36	10,182.06	126.61	114.13	-90.76	-7,642.24	2,582.30	648.81	408.29	240.52	2.697	
17,675.00	10,173.71	17,719.00	10,180.13	127.78	115.03	-90.75	-7,711.37	2,596.68	648.50	405.85	242.65	2.673	
17,684.15	10,173.62	17,722.99	10,180.04	127.92	115.08	-90.74	-7,715.27	2,597.52	648.48	405.58	242.90	2.670	
17,699.96	10,173.43	17,739.05	10,179.66	128.16	115.29	-90.73	-7,730.96	2,600.90	648.49	405.14	243.35	2.665	
17,700.94	10,173.42	17,740.04	10,179.64	128.18	115.30	-90.73	-7,731.93	2,601.11	648.49	405.11	243.38	2.665	
17,765.00	10,172.17	17,805.06	10,177.74	129.17	116.14	-90.66	-7,795.48	2,614.74	648.75	403.54	245.20	2.646	
17,799.96	10,171.38	17,836.17	10,176.82	129.73	116.54	-90.67	-7,825.88	2,621.31	648.66	402.47	246.19	2.635	
17,854.00	10,170.60	17,883.40	10,176.18	130.58	117.15	-90.69	-7,871.95	2,631.69	647.42	399.72	247.70	2.614	
17,899.96	10,169.95	17,926.15	10,176.24	131.31	117.70	-90.77	-7,913.57	2,641.43	645.95	396.96	248.99	2.594	
17,945.00	10,168.89	17,969.64	10,176.49	132.03	118.26	-90.90	-7,955.88	2,651.46	644.69	394.42	250.27	2.576	
17,999.96	10,167.62	18,022.36	10,176.93	132.90	118.94	-91.01	-8,007.15	2,663.75	643.83	392.01	251.82	2.557	
18,011.61	10,167.42	18,033.49	10,177.03	133.08	119.08	-91.03	-8,017.97	2,666.37	643.80	391.66	252.14	2.553	
18,034.00	10,167.10	18,054.90	10,177.20	133.43	119.36	-91.07	-8,038.77	2,671.43	643.90	391.13	252.77	2.547	
18,036.04	10,167.08	18,056.85	10,177.21	133.47	119.39	-91.07	-8,040.67	2,671.90	643.92	391.09	252.83	2.547	
18,099.96	10,166.37	18,118.04	10,177.66	134.47	120.18	-91.17	-8,100.07	2,686.54	644.81	390.19	254.62	2.532	
18,100.05	10,166.37	18,118.12	10,177.66	134.47	120.18	-91.17	-8,100.15	2,686.56	644.81	390.19	254.62	2.532	
18,124.00	10,166.13	18,141.05	10,177.79	134.84	120.47	-91.20	-8,122.40	2,692.12	645.29	390.00	255.29	2.528	
18,199.96	10,165.35	18,213.71	10,178.28	136.03	121.42	-91.31	-8,192.83	2,709.95	647.15	389.75	257.40	2.514	
18,213.00	10,165.21	18,226.16	10,178.43	136.24	121.58	-91.33	-8,204.89	2,713.04	647.51	389.75	257.76	2.512	
18,299.96	10,164.37	18,308.43	10,180.06	137.60	122.64	-91.54	-8,284.50	2,733.74	650.19	390.04	260.15	2.499	
18,303.00	10,164.35	18,311.28	10,180.14	137.64	122.68	-91.55	-8,287.26	2,734.47	650.29	390.06	260.23	2.499	
18,393.00	10,163.81	18,394.79	10,182.81	139.05	123.77	-91.83	-8,367.85	2,756.14	653.57	390.92	262.65	2.488	
18,399.96	10,163.78	18,401.18	10,183.05	139.16	123.85	-91.86	-8,374.02	2,757.84	653.84	391.00	262.84	2.488	
18,483.00	10,163.37	18,499.16	10,186.65	140.47	125.13	-92.21	-8,468.52	2,783.42	656.37	390.89	265.48	2.472	
18,486.27	10,163.35	18,503.92	10,186.78	140.52	125.19	-92.22	-8,473.13	2,784.57	656.38	390.79	265.59	2.471	
18,499.96	10,163.27	18,523.81	10,187.23	140.74	125.45	-92.27	-8,492.46	2,789.28	656.34	390.28	266.06	2.467	
18,572.00	10,162.71	18,597.94	10,188.52	141.88	126.42	-92.44	-8,564.60	2,806.29	655.16	387.02	268.14	2.443	
18,599.96	10,162.52	18,626.05	10,188.97	142.32	126.79	-92.49	-8,591.95	2,812.74	654.73	385.79	268.94	2.434	
18,633.39	10,162.48	18,660.81	10,189.49	142.85	127.24	-92.54	-8,625.79	2,820.67	654.56	384.65	269.90	2.425	
18,661.00	10,162.59	18,689.52	10,189.90	143.28	127.61	-92.57	-8,653.75	2,827.18	654.68	383.97	270.70	2.418	
18,661.26	10,162.59	18,689.79	10,189.90	143.29	127.62	-92.57	-8,654.01	2,827.24	654.68	383.97	270.71	2.418	
18,699.96	10,162.89	18,729.87	10,190.44	143.89	128.14	-92.59	-8,693.06	2,836.24	654.97	383.15	271.82	2.410	
18,700.77	10,162.89	18,730.70	10,190.45	143.90	128.15	-92.59	-8,693.88	2,836.43	654.98	383.13	271.85	2.409	
18,750.00	10,163.38	18,781.41	10,191.13	144.67	128.81	-92.61	-8,743.31	2,847.71	655.28	382.02	273.26	2.398	
18,759.43	10,163.49	18,791.13	10,191.26	144.82	128.93	-92.61	-8,752.78	2,849.86	655.32	381.79	273.53	2.396	
18,799.96	10,163.95	18,834.41	10,191.87	145.46	129.49	-92.61	-8,795.01	2,859.34	655.29	380.59	274.70	2.385	
18,841.00	10,164.44	18,878.70	10,192.52	146.10	130.07	-92.62	-8,838.27	2,868.84	654.87	378.99	275.88	2.374	
18,899.96	10,165.26	18,948.08	10,193.26	147.03	130.97	-92.60	-8,906.16	2,883.06	653.34	375.78	277.56	2.354	
18,931.00	10,165.77	18,985.35	10,193.28	147.51	131.45	-92.55	-8,942.74	2,890.23	651.95	373.52	278.42	2.342	
18,999.96	10,167.03	19,048.29	10,192.67	148.61	132.26	-92.39	-9,004.49	2,902.39	648.30	367.84	280.46	2.312	
19,020.00	10,167.41	19,070.00	10,192.27	148.92	132.55	-92.32	-9,025.77	2,906.70	647.18	366.14	281.04	2.303	
19,099.96	10,168.71	19,147.43	10,190.07	150.19	133.55	-92.04	-9,101.61	2,922.13	642.52	359.13	283.39	2.267	
19,109.00	10,168.83	19,156.57	10,189.73	150.34	133.67	-92.00	-9,110.56	2,923.95	641.98	358.32	283.66	2.263	

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 A H 8WC
Project:	Andrews County, TX (NAD83-TNC)	TVD Reference:	RKB @ 3050.00usft (Ensign T054)
Reference Site:	University 8-8	MD Reference:	RKB @ 3050.00usft (Ensign T054)
Site Error:	0.00	North Reference:	Grid
Reference Well:	University 8-8E A H 8WC	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00	Output errors are at	2.00 sigma
Reference Wellbore	OH / 72181	Database:	USAEDMDB
Reference Design:	Surveys (Ensign T054)	Offset TVD Reference:	Offset Datum

Offset Design University 8-8E H 7WC - OH / 71369 - Surveys (Ensign 225)												Offset Site Error:	0.00 usft
Survey Program: 15-MWD, 1920-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)		
19,200.00	10,169.80	19,236.16	10,186.56	151.78	134.70	-91.67	-9,188.37	2,940.40	638.05	351.72	286.33	2.228	
19,255.42	10,170.27	19,285.75	10,184.66	152.65	135.35	-91.47	-9,236.70	2,951.34	637.36	349.45	287.91	2.214	
19,291.00	10,170.57	19,317.98	10,183.67	153.21	135.77	-91.36	-9,268.07	2,958.65	637.64	348.72	288.92	2.207	
19,291.01	10,170.57	19,317.98	10,183.67	153.21	135.77	-91.36	-9,268.08	2,958.65	637.64	348.72	288.92	2.207	
19,299.96	10,170.65	19,326.10	10,183.46	153.35	135.88	-91.34	-9,275.97	2,960.52	637.79	348.62	289.17	2.206	
19,300.01	10,170.65	19,326.14	10,183.46	153.35	135.88	-91.34	-9,276.01	2,960.53	637.79	348.62	289.17	2.206	
19,382.00	10,170.96	19,403.26	10,181.84	154.63	136.88	-91.15	-9,350.96	2,978.63	639.67	348.20	291.48	2.195	
19,399.96	10,170.96	19,420.28	10,181.56	154.91	137.10	-91.13	-9,367.49	2,982.69	640.17	348.18	291.98	2.192	
19,471.00	10,171.01	19,486.48	10,180.60	156.02	137.97	-91.04	-9,431.70	2,998.77	642.05	348.10	293.95	2.184	
19,499.96	10,171.03	19,513.40	10,180.24	156.47	138.32	-91.00	-9,457.77	3,005.45	642.84	348.09	294.75	2.181	
19,560.00	10,170.97	19,570.09	10,179.77	157.42	139.06	-90.96	-9,512.63	3,019.74	644.55	348.14	296.41	2.175	
19,599.96	10,170.86	19,607.89	10,179.79	158.04	139.56	-90.96	-9,549.17	3,029.42	645.81	348.30	297.52	2.171	
19,650.00	10,170.64	19,666.88	10,179.97	158.83	140.33	-91.00	-9,606.26	3,044.24	647.24	348.12	299.13	2.164	
19,699.96	10,170.27	19,725.98	10,180.01	159.61	141.11	-91.03	-9,663.67	3,058.26	648.12	347.44	300.68	2.156	
19,699.99	10,170.27	19,726.01	10,180.01	159.61	141.11	-91.03	-9,663.71	3,058.26	648.12	347.44	300.68	2.156	
19,740.00	10,169.81	19,772.65	10,180.27	160.24	141.72	-91.09	-9,709.15	3,068.77	648.56	346.68	301.88	2.148	
19,740.04	10,169.81	19,772.70	10,180.27	160.24	141.72	-91.09	-9,709.19	3,068.78	648.56	346.68	301.88	2.148	
19,799.96	10,168.91	19,833.39	10,180.90	161.17	142.51	-91.23	-9,768.42	3,082.00	648.95	345.36	303.59	2.138	
19,800.02	10,168.91	19,833.44	10,180.90	161.17	142.51	-91.23	-9,768.48	3,082.01	648.95	345.36	303.59	2.138	
19,829.00	10,168.41	19,860.98	10,181.18	161.62	142.87	-91.29	-9,795.34	3,088.07	649.25	344.84	304.41	2.133	
19,830.94	10,168.37	19,862.83	10,181.19	161.65	142.90	-91.30	-9,797.14	3,088.48	649.27	344.81	304.46	2.133	
19,899.96	10,167.15	19,927.97	10,181.80	162.73	143.75	-91.45	-9,860.62	3,103.09	650.26	343.87	306.40	2.122	
19,900.06	10,167.15	19,928.06	10,181.80	162.73	143.75	-91.45	-9,860.71	3,103.11	650.27	343.87	306.40	2.122	
19,919.00	10,166.82	19,945.88	10,181.97	163.03	143.98	-91.49	-9,878.06	3,107.17	650.60	343.67	306.93	2.120	
19,919.38	10,166.82	19,946.24	10,181.97	163.03	143.99	-91.49	-9,878.41	3,107.25	650.61	343.67	306.94	2.120	
19,999.96	10,165.24	20,027.26	10,182.76	164.29	145.05	-91.69	-9,957.25	3,125.88	652.18	342.94	309.23	2.109	
20,000.03	10,165.24	20,027.33	10,182.76	164.29	145.05	-91.69	-9,957.32	3,125.89	652.18	342.94	309.23	2.109	
20,008.00	10,165.06	20,035.63	10,182.85	164.41	145.16	-91.72	-9,965.40	3,127.79	652.32	342.85	309.46	2.108	
20,010.26	10,165.01	20,037.98	10,182.88	164.45	145.19	-91.72	-9,967.69	3,128.32	652.35	342.83	309.53	2.108	
20,097.00	10,162.72	20,133.90	10,183.87	165.80	146.44	-92.02	-10,061.22	3,149.58	653.34	341.31	312.03	2.094	
20,097.01	10,162.72	20,133.91	10,183.87	165.80	146.44	-92.02	-10,061.23	3,149.58	653.34	341.31	312.03	2.094	
20,099.96	10,162.63	20,137.25	10,183.89	165.85	146.49	-92.04	-10,064.49	3,150.30	653.35	341.24	312.11	2.093	
20,187.00	10,159.39	20,234.90	10,184.82	167.20	147.76	-92.46	-10,160.06	3,170.31	652.65	338.12	314.53	2.075	
20,199.96	10,158.85	20,249.29	10,184.99	167.41	147.95	-92.53	-10,174.17	3,173.13	652.39	337.50	314.88	2.072	
20,276.00	10,156.70	20,333.36	10,184.59	168.60	149.04	-92.68	-10,256.72	3,189.06	650.01	333.05	316.96	2.051	
20,299.96	10,156.30	20,355.24	10,184.15	168.98	149.33	-92.68	-10,278.21	3,193.12	649.02	331.35	317.67	2.043	
20,366.00	10,155.12	20,416.18	10,182.70	170.02	150.12	-92.68	-10,338.01	3,204.76	646.04	326.43	319.62	2.021	
20,399.96	10,154.69	20,445.63	10,181.86	170.55	150.51	-92.61	-10,366.87	3,210.60	644.59	323.96	320.63	2.010	
20,456.00	10,154.88	20,493.52	10,180.21	171.44	151.13	-92.42	-10,413.68	3,220.57	643.03	320.75	322.28	1.995	
20,499.96	10,155.52	20,532.95	10,178.61	172.13	151.65	-92.23	-10,452.12	3,229.19	642.52	318.95	323.57	1.986	
20,530.78	10,156.05	20,561.86	10,177.38	172.61	152.03	-92.08	-10,480.28	3,235.63	642.42	317.95	324.47	1.980	
20,547.00	10,156.36	20,577.07	10,176.72	172.87	152.23	-92.00	-10,495.08	3,239.06	642.44	317.50	324.94	1.977	
20,548.79	10,156.40	20,578.75	10,176.64	172.89	152.25	-91.99	-10,496.71	3,239.43	642.45	317.45	324.99	1.977	
20,599.96	10,157.47	20,625.94	10,174.59	173.70	152.87	-91.72	-10,542.61	3,250.22	642.77	316.30	326.47	1.969	
20,600.00	10,157.47	20,625.97	10,174.59	173.70	152.87	-91.72	-10,542.64	3,250.22	642.77	316.30	326.47	1.969	
20,638.00	10,158.35	20,660.43	10,173.32	174.29	153.33	-91.53	-10,576.12	3,258.30	643.25	315.71	327.54	1.964	

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 A H 8WC
Project:	Andrews County, TX (NAD83-TNC)	TVD Reference:	RKB @ 3050.00usft (Ensign T054)
Reference Site:	University 8-8	MD Reference:	RKB @ 3050.00usft (Ensign T054)
Site Error:	0.00	North Reference:	Grid
Reference Well:	University 8-8E A H 8WC	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00	Output errors are at	2.00 sigma
Reference Wellbore	OH / 72181	Database:	USAEDMDB
Reference Design:	Surveys (Ensign T054)	Offset TVD Reference:	Offset Datum

Offset Design University 8-8E H 7WC - OH / 71369 - Surveys (Ensign 225)												Offset Site Error:	0.00 usft
Survey Program: 15-MWD, 1920-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)		
20,639.00	10,158.37	20,661.33	10,173.29	174.31	153.34	-91.53	-10,576.99	3,258.51	643.27	315.70	327.57	1.964	
20,699.96	10,159.75	20,716.40	10,171.75	175.26	154.06	-91.27	-10,630.41	3,271.79	644.48	315.22	329.26	1.957	
20,728.00	10,160.32	20,741.59	10,171.11	175.70	154.39	-91.17	-10,654.81	3,278.03	645.23	315.20	330.02	1.955	
20,799.96	10,161.78	20,808.22	10,169.50	176.84	155.27	-90.89	-10,719.22	3,295.00	647.32	315.32	332.00	1.950	
20,819.00	10,162.18	20,826.67	10,168.99	177.13	155.52	-90.81	-10,737.04	3,299.76	647.84	315.30	332.54	1.948	
20,863.00	10,163.13	20,869.30	10,167.63	177.83	156.08	-90.60	-10,778.19	3,310.82	648.84	315.05	333.79	1.944	
20,899.96	10,163.93	20,904.24	10,166.33	178.41	156.54	-90.42	-10,811.89	3,319.97	649.61	314.79	334.81	1.940	
20,943.00	10,164.86	20,945.94	10,164.60	179.10	157.09	-90.18	-10,852.06	3,331.01	650.64	314.61	336.03	1.936	ES, SF

Company:	Piedra Operating LLC	Local Co-ordinate Reference:	Well University 8-8E A H 8WC
Project:	Andrews County, TX (NAD83-TNC)	TVD Reference:	RKB @ 3050.00usft (Ensign T054)
Reference Site:	University 8-8	MD Reference:	RKB @ 3050.00usft (Ensign T054)
Site Error:	0.00	North Reference:	Grid
Reference Well:	University 8-8E A H 8WC	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00	Output errors are at	2.00 sigma
Reference Wellbore	OH / 72181	Database:	USAEDMDB
Reference Design:	Surveys (Ensign T054)	Offset TVD Reference:	Offset Datum

Offset Design U Texas 36994 A/C 2 3 - 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)		
16,775.00	10,185.38	10,180.34	10,178.81	113.59	215.43	-86.94	-7,833.91	2,262.26	1,007.32	744.75	262.57	3.836	
16,799.97	10,185.70	10,180.73	10,179.19	113.98	215.44	-87.08	-7,833.91	2,262.26	983.64	720.39	263.25	3.737	
16,865.00	10,186.42	10,181.67	10,180.13	115.00	215.46	-87.45	-7,833.91	2,262.26	922.01	656.85	265.16	3.477	
16,899.97	10,186.83	10,182.19	10,180.66	115.56	215.47	-86.96	-7,833.92	2,262.26	888.88	622.63	266.25	3.338	
16,955.00	10,187.66	10,183.20	10,181.66	116.43	215.49	-86.20	-7,833.92	2,262.26	836.72	568.62	268.10	3.121	
16,999.97	10,188.15	10,183.86	10,182.33	117.15	215.50	-88.50	-7,833.93	2,262.26	794.32	524.53	269.79	2.944	
17,045.00	10,188.07	10,184.02	10,182.49	117.87	215.51	-90.43	-7,833.93	2,262.26	752.34	480.61	271.73	2.769	
17,099.97	10,187.48	10,183.77	10,182.24	118.74	215.50	-91.09	-7,833.93	2,262.26	701.61	427.18	274.43	2.557	
17,134.00	10,186.98	10,183.49	10,181.96	119.28	215.49	-91.47	-7,833.92	2,262.26	670.39	394.11	276.28	2.427	
17,199.97	10,185.80	10,182.74	10,181.21	120.33	215.48	-91.71	-7,833.92	2,262.26	610.62	330.24	280.38	2.178	
17,225.00	10,185.29	10,182.40	10,180.87	120.73	215.47	-91.78	-7,833.92	2,262.26	588.29	306.13	282.16	2.085	
17,299.97	10,183.94	10,181.51	10,179.98	121.92	215.45	-90.98	-7,833.91	2,262.26	523.36	234.85	288.51	1.814	
17,315.00	10,183.72	10,181.38	10,179.84	122.16	215.45	-90.84	-7,833.91	2,262.26	510.80	220.80	290.00	1.761	
17,399.97	10,182.29	10,180.44	10,178.91	123.50	215.43	-91.04	-7,833.91	2,262.26	442.83	143.06	299.77	1.477	Level 3
17,404.00	10,182.21	10,180.39	10,178.85	123.57	215.43	-91.04	-7,833.91	2,262.26	439.75	139.46	300.29	1.464	Level 3
17,493.00	10,179.94	10,178.63	10,177.10	124.96	215.39	-91.26	-7,833.90	2,262.26	377.77	64.39	313.38	1.205	Level 2
17,499.97	10,179.72	10,178.45	10,176.91	125.07	215.39	-91.28	-7,833.90	2,262.26	373.49	58.98	314.51	1.188	Level 2
17,585.00	10,176.27	10,175.45	10,173.92	126.38	215.32	-91.26	-7,833.88	2,262.26	328.81	0.28	328.53	1.001	Level 2
17,599.97	10,175.60	10,174.85	10,173.32	126.61	215.31	-90.97	-7,833.88	2,262.26	322.63	-8.24	330.87	0.975	Level 1
17,675.00	10,173.71	10,173.27	10,171.74	127.78	215.28	-90.10	-7,833.87	2,262.26	300.70	-39.81	340.51	0.883	Level 1
17,699.96	10,173.43	10,173.10	10,171.57	128.16	215.27	-90.10	-7,833.87	2,262.26	297.20	-45.31	342.51	0.868	Level 1
17,728.23	10,172.98	10,172.75	10,171.22	128.60	215.27	-90.05	-7,833.87	2,262.26	295.81	-48.01	343.81	0.860	Level 1, CC, ES
17,765.00	10,172.17	10,172.07	10,170.54	129.17	215.25	-89.89	-7,833.87	2,262.26	298.15	-45.74	343.89	0.867	Level 1
17,799.96	10,171.38	10,171.41	10,169.88	129.73	215.24	-89.85	-7,833.87	2,262.26	304.18	-38.18	342.36	0.888	Level 1
17,854.00	10,170.60	10,170.80	10,169.27	130.58	215.22	-89.93	-7,833.86	2,262.26	319.39	-18.02	337.41	0.947	Level 1
17,899.96	10,169.95	10,170.29	10,168.76	131.31	215.21	-89.59	-7,833.86	2,262.26	337.93	6.43	331.50	1.019	Level 2
17,945.00	10,168.89	10,169.34	10,167.81	132.03	215.19	-89.10	-7,833.86	2,262.26	360.90	35.90	325.00	1.110	Level 2
17,999.96	10,167.62	10,168.18	10,166.65	132.90	215.17	-89.28	-7,833.86	2,262.26	394.53	77.51	317.02	1.245	Level 2
18,034.00	10,167.10	10,167.74	10,166.21	133.43	215.16	-89.51	-7,833.85	2,262.26	418.00	105.62	312.37	1.338	Level 3
18,099.96	10,166.37	10,167.16	10,165.63	134.47	215.15	-89.51	-7,833.85	2,262.26	467.53	163.27	304.26	1.537	
18,124.00	10,166.13	10,166.98	10,165.45	134.84	215.14	-89.52	-7,833.85	2,262.26	486.60	184.99	301.61	1.613	
18,199.96	10,165.35	10,166.36	10,164.83	136.03	215.13	-89.28	-7,833.85	2,262.26	549.47	255.22	294.25	1.867	
18,213.00	10,165.21	10,166.25	10,164.71	136.24	215.13	-89.24	-7,833.85	2,262.26	560.59	267.46	293.13	1.912	
18,299.96	10,164.37	10,165.58	10,164.05	137.60	215.11	-89.44	-7,833.85	2,262.26	636.59	349.99	286.60	2.221	
18,303.00	10,164.35	10,165.56	10,164.03	137.64	215.11	-89.45	-7,833.85	2,262.26	639.29	352.89	286.40	2.232	
18,393.00	10,163.81	10,165.22	10,163.69	139.05	215.11	-89.83	-7,833.85	2,262.26	720.53	439.44	281.10	2.563	
18,399.96	10,163.78	10,165.20	10,163.67	139.16	215.11	-89.81	-7,833.85	2,262.26	726.90	446.16	280.73	2.589	
18,483.00	10,163.37	10,164.98	10,163.45	140.47	215.10	-89.61	-7,833.85	2,262.26	803.36	526.53	276.82	2.902	
18,499.96	10,163.27	10,164.91	10,163.38	140.74	215.10	-89.50	-7,833.85	2,262.26	819.09	542.98	276.11	2.967	
18,572.00	10,162.71	10,164.46	10,162.93	141.88	215.09	-89.00	-7,833.84	2,262.26	886.28	612.94	273.34	3.242	
18,599.96	10,162.52	10,164.32	10,162.79	142.32	215.09	-89.73	-7,833.84	2,262.26	912.57	640.18	272.39	3.350	
18,661.00	10,162.59	10,164.59	10,163.06	143.28	215.09	-91.76	-7,833.85	2,262.26	970.60	699.97	270.63	3.586	
18,699.96	10,162.89	10,165.06	10,163.53	143.89	215.10	-92.24	-7,833.85	2,262.26	1,007.95	738.28	269.67	3.738	
18,750.00	10,163.38	10,165.83	10,164.30	144.67	215.12	-92.92	-7,833.85	2,262.26	1,056.11	787.54	268.57	3.932	

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 A H 8WC
Project:	Andrews County, TX (NAD83-TNC)	TVD Reference:	RKB @ 3050.00usft (Ensign T054)
Reference Site:	University 8-8	MD Reference:	RKB @ 3050.00usft (Ensign T054)
Site Error:	0.00	North Reference:	Grid
Reference Well:	University 8-8E A H 8WC	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00	Output errors are at	2.00 sigma
Reference Wellbore	OH / 72181	Database:	USAEDMDB
Reference Design:	Surveys (Ensign T054)	Offset TVD Reference:	Offset Datum

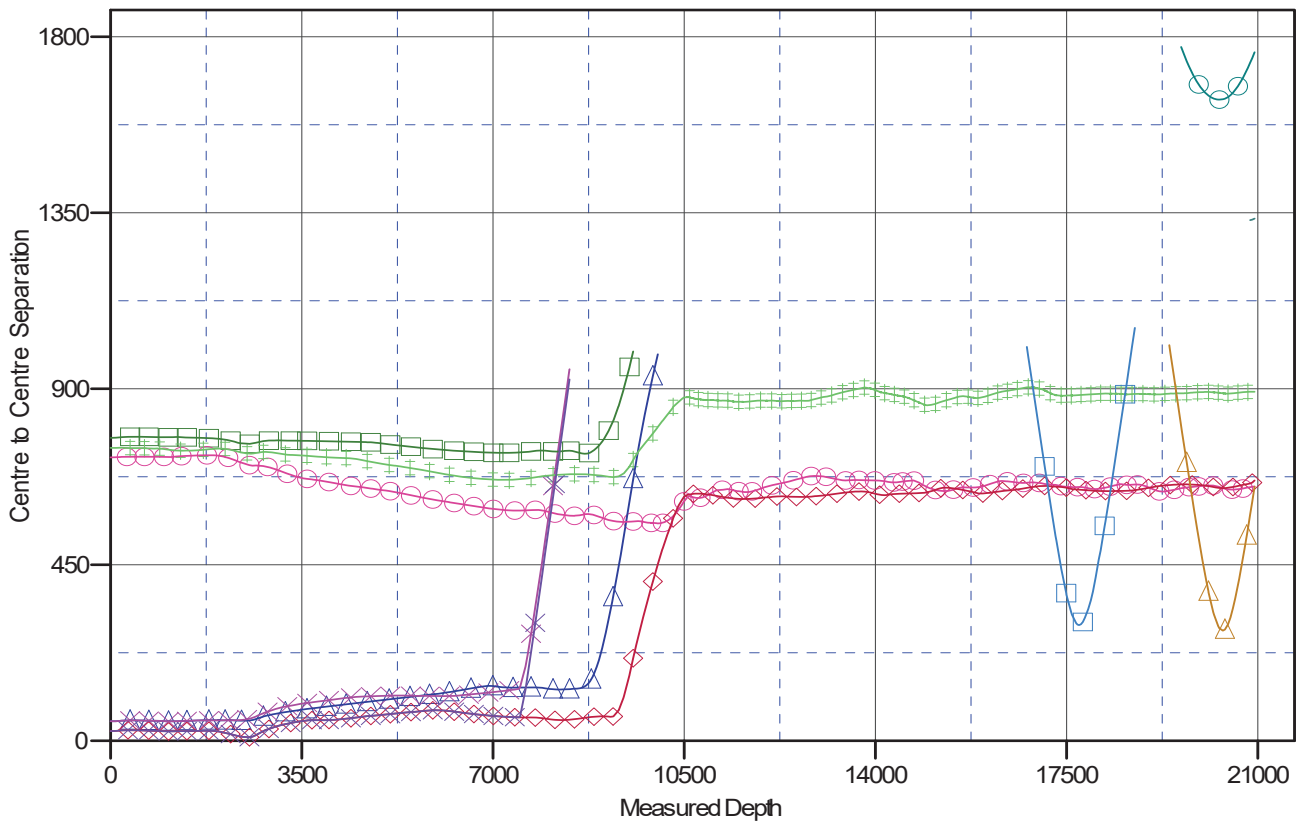
Offset Design U Texas 36995 4 C - OH - Surveys												Offset Site Error:	0.00 usft
Survey Program: 100-INC-ONLY												Offset Well Error:	1.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Center		Distance			Separation Factor	Warning
Measured Depth (usft)	Vertical 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)		
19,382.00	10,170.96	10,167.74	10,166.21	154.63	215.16	-89.49	-10,389.99	2,843.74	1,011.63	743.00	268.63	3.766	
19,399.96	10,170.96	10,167.79	10,166.26	154.91	215.16	-89.44	-10,389.99	2,843.74	994.42	725.17	269.25	3.693	
19,471.00	10,171.01	10,168.02	10,166.49	156.02	215.17	-89.26	-10,389.99	2,843.74	926.53	654.60	271.93	3.407	
19,499.96	10,171.03	10,168.12	10,166.59	156.47	215.17	-89.47	-10,389.99	2,843.74	898.95	625.81	273.15	3.291	
19,560.00	10,170.97	10,168.23	10,166.70	157.42	215.17	-89.87	-10,389.99	2,843.74	842.01	566.08	275.93	3.052	
19,599.96	10,170.86	10,168.24	10,166.71	158.04	215.17	-90.10	-10,389.99	2,843.74	804.35	526.33	278.02	2.893	
19,650.00	10,170.64	10,168.18	10,166.65	158.83	215.17	-90.35	-10,389.99	2,843.74	757.54	476.57	280.97	2.696	
19,699.96	10,170.27	10,167.99	10,166.46	159.61	215.16	-90.92	-10,389.99	2,843.74	711.33	426.96	284.37	2.501	
19,740.00	10,169.81	10,167.68	10,166.15	160.24	215.16	-91.30	-10,389.99	2,843.74	674.77	387.28	287.49	2.347	
19,799.96	10,168.91	10,167.02	10,165.49	161.17	215.14	-91.55	-10,389.99	2,843.74	620.90	328.00	292.90	2.120	
19,829.00	10,168.41	10,166.63	10,165.10	161.62	215.14	-91.64	-10,389.98	2,843.74	595.25	299.38	295.88	2.012	
19,899.96	10,167.15	10,165.64	10,164.11	162.73	215.11	-91.37	-10,389.98	2,843.74	534.04	229.73	304.31	1.755	
19,919.00	10,166.82	10,165.38	10,163.85	163.03	215.11	-91.29	-10,389.98	2,843.74	518.03	211.15	306.88	1.688	
19,999.96	10,165.24	10,164.07	10,162.54	164.29	215.08	-91.42	-10,389.98	2,843.74	452.56	133.07	319.49	1.416	Level 3
20,008.00	10,165.06	10,163.92	10,162.39	164.41	215.08	-91.43	-10,389.98	2,843.74	446.33	125.43	320.91	1.391	Level 3
20,097.00	10,162.72	10,161.86	10,160.33	165.80	215.03	-91.46	-10,389.97	2,843.74	381.99	43.49	338.50	1.128	Level 2
20,099.96	10,162.63	10,161.78	10,160.25	165.85	215.03	-91.47	-10,389.97	2,843.74	380.02	40.88	339.14	1.121	Level 2
20,187.00	10,159.39	10,158.77	10,157.24	167.20	214.97	-91.45	-10,389.97	2,843.74	328.62	-30.26	358.87	0.916	Level 1
20,199.96	10,158.85	10,158.25	10,156.72	167.41	214.96	-91.22	-10,389.97	2,843.74	322.23	-39.57	361.81	0.891	Level 1
20,276.00	10,156.70	10,156.21	10,154.68	168.60	214.91	-90.26	-10,389.96	2,843.74	293.39	-83.64	377.03	0.778	Level 1
20,299.96	10,156.30	10,155.83	10,154.30	168.98	214.91	-90.20	-10,389.96	2,843.74	287.76	-92.74	380.51	0.756	Level 1
20,360.36	10,155.22	10,154.81	10,153.28	169.93	214.88	-90.01	-10,389.96	2,843.74	281.71	-103.09	384.81	0.732	Level 1, CC, E
20,366.00	10,155.12	10,154.71	10,153.18	170.02	214.88	-89.99	-10,389.96	2,843.74	281.77	-103.08	384.84	0.732	Level 1
20,399.96	10,154.69	10,154.30	10,152.77	170.55	214.87	-89.96	-10,389.96	2,843.74	284.51	-99.20	383.70	0.741	Level 1
20,456.00	10,154.88	10,154.53	10,153.00	171.44	214.88	-90.29	-10,389.96	2,843.74	297.88	-79.48	377.36	0.789	Level 1
20,499.96	10,155.52	10,155.24	10,153.71	172.13	214.89	-90.51	-10,389.96	2,843.74	315.24	-54.43	369.67	0.853	Level 1
20,547.00	10,156.36	10,156.16	10,154.63	172.87	214.91	-90.82	-10,389.96	2,843.74	339.39	-20.83	360.21	0.942	Level 1
20,599.96	10,157.47	10,157.38	10,155.85	173.70	214.94	-91.19	-10,389.97	2,843.74	371.95	22.60	349.35	1.065	Level 2
20,638.00	10,158.35	10,158.37	10,156.84	174.29	214.96	-91.50	-10,389.97	2,843.74	398.06	56.16	341.90	1.164	Level 2
20,699.96	10,159.75	10,159.97	10,158.44	175.26	214.99	-91.63	-10,389.97	2,843.74	444.27	113.40	330.87	1.343	Level 3
20,728.00	10,160.32	10,160.64	10,159.11	175.70	215.01	-91.67	-10,389.97	2,843.74	466.38	140.00	326.38	1.429	Level 3
20,799.96	10,161.78	10,162.38	10,160.85	176.84	215.05	-92.09	-10,389.97	2,843.74	525.52	209.33	316.19	1.662	
20,819.00	10,162.18	10,162.87	10,161.34	177.13	215.06	-92.21	-10,389.97	2,843.74	541.63	227.84	313.79	1.726	
20,863.00	10,163.13	10,164.02	10,162.49	177.83	215.08	-92.42	-10,389.98	2,843.74	579.42	270.76	308.66	1.877	
20,899.96	10,163.93	10,165.01	10,163.48	178.41	215.10	-92.62	-10,389.98	2,843.74	611.71	306.94	304.77	2.007	
20,943.00	10,164.86	10,166.18	10,164.65	179.10	215.13	-92.85	-10,389.98	2,843.74	649.95	349.24	300.71	2.161	

Company:	Piedra Operating LLC	Local Co-ordinate Reference:	Well University 8-8E A H 8WC
Project:	Andrews County, TX (NAD83-TNC)	TVD Reference:	RKB @ 3050.00usft (Ensign T054)
Reference Site:	University 8-8	MD Reference:	RKB @ 3050.00usft (Ensign T054)
Site Error:	0.00	North Reference:	Grid
Reference Well:	University 8-8E A H 8WC	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00	Output errors are at	2.00 sigma
Reference Wellbore	OH / 72181	Database:	USAEDMDB
Reference Design:	Surveys (Ensign T054)	Offset TVD Reference:	Offset Datum

Reference Depths are relative to RKB @ 3050.00usft (Ensign T054)
Offset Depths are relative to Offset Datum
Central Meridian is 98° 30' 0.000000 W °

Coordinates are relative to: University 8-8E A H 8WC
Coordinate System is US State Plane 1983, Texas North Central Zone
Grid Convergence at Surface is: -2.102°

Ladder Plot



LEGEND

University 8-8E B H 8WC, OH / 72263, Plan1 03-16-23 V0	Offset University 8-16 1, OH, As Drilled V0	University 8-8E A H 8LS, OH / 72180, Surveys (Ensign T054) V0
University 8-8E A H 2MS, OH / 72179, Plan1 03-16-23 V0	University 8-8E H 7WC, OH / 71369, Surveys (Ensign 225) V0	U Texas 3698-4 C, OH, Surveys V0
University 8-8E A H 2MS, OH / 72179, Surveys (Ensign T054) V0	University 8-8E H 4LS, OH / 71370, Surveys (Ensign 225) V0	U Texas 3698 A/C 2.3, OH, Surveys V0
University 8-8E H 1MS, OH / 71371, Surveys (Ensign 225) V0	University 8-8E A H 5LS, OH / 72180, Plan 2 05-12-23 V0	

Company:	Piedra Operating LLC	Local Co-ordinate Reference:	Well University 8-8E A H 8WC
Project:	Andrews County, TX (NAD83-TNC)	TVD Reference:	RKB @ 3050.00usft (Ensign T054)
Reference Site:	University 8-8	MD Reference:	RKB @ 3050.00usft (Ensign T054)
Site Error:	0.00	North Reference:	Grid
Reference Well:	University 8-8E A H 8WC	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00	Output errors are at	2.00 sigma
Reference Wellbore	OH / 72181	Database:	USAEDMDB
Reference Design:	Surveys (Ensign T054)	Offset TVD Reference:	Offset Datum

Reference Depths are relative to RKB @ 3050.00usft (Ensign T054)

Offset Depths are relative to Offset Datum

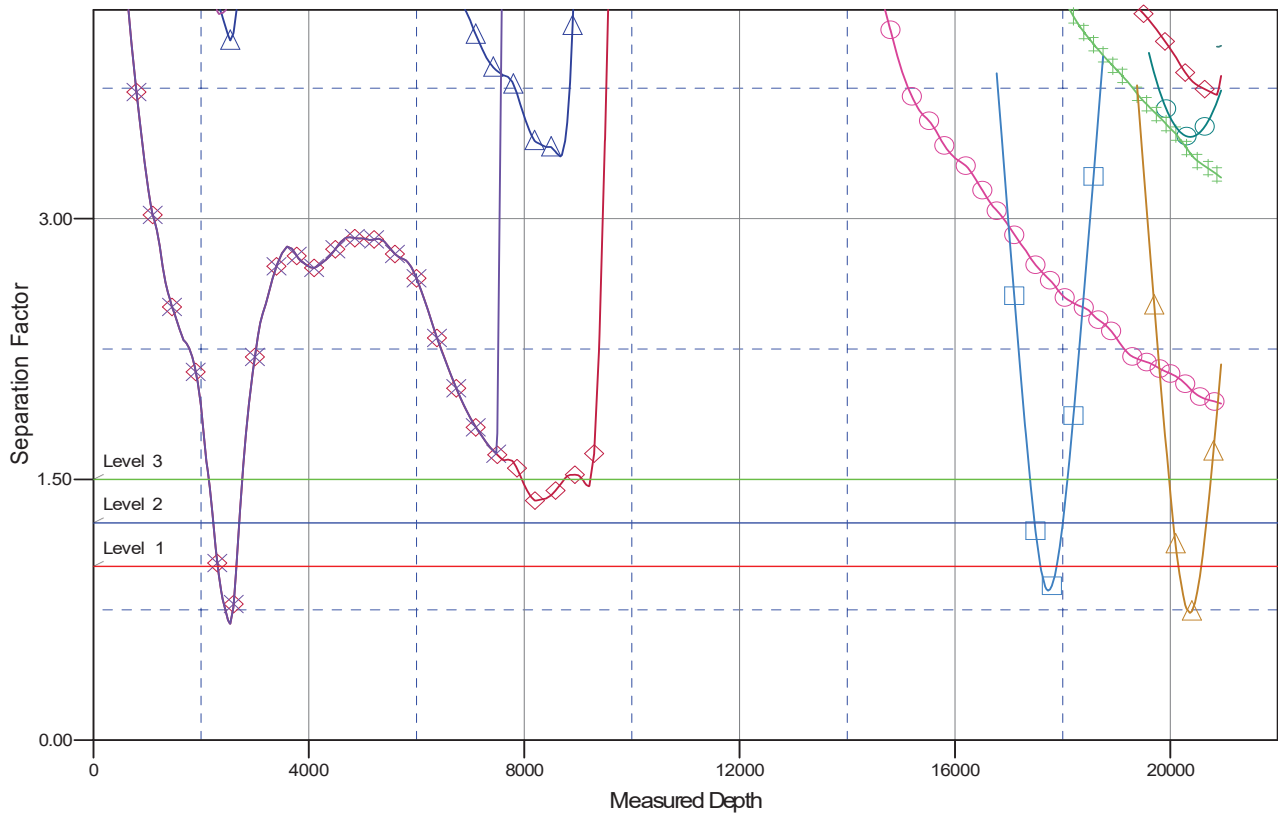
Central Meridian is 98° 30' 0.000000 W °

Coordinates are relative to: University 8-8E A H 8WC

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

Grid Convergence at Surface is: -2.102°

Separation Factor Plot



LEGEND

University 8-8E H 8WC, OH / 72263, Plan1 03-16-23 V0	Offset University 8-16 1, OH, As Drilled V0	University 8-8E A H 5LS, OH / 72180, Surveys (Ensign T054) V0
University 8-8E A H 2MS, OH / 72179, Plan1 03-16-23 V0	University 8-8E H 7WC, OH / 71369, Surveys (Ensign 225) V0	U Texas 3698-4 C, OH, Surveys V0
University 8-8E A H 2MS, OH / 72179, Surveys (Ensign T054) V0	University 8-8E H 4LS, OH / 71370, Surveys (Ensign 225) V0	U Texas 3698 A/C 2.3, OH, Surveys V0
University 8-8E H 1MS, OH / 71371, Surveys (Ensign 225) V0	University 8-8E A H 5LS, OH / 72180, Plan 2 05-12-23 V0	