



**PHOENIX**  
TECHNOLOGY SERVICES

## **Piedra Operating LLC**

**Andrews County, TX (NAD83-TNC)**

**University 8-8**

**University 8-8E A H 5LS**

**OH / 72180**

**Surveys (Ensign T054)**

## **Anticollision Report**

**31 May, 2023**



<b>Company:</b>	Piedra Operating LLC	<b>Local Co-ordinate Reference:</b>	Well University 8-8E A H 5LS
<b>Project:</b>	Andrews County, TX (NAD83-TNC)	<b>TVD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Reference Site:</b>	University 8-8	<b>MD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Site Error:</b>	0.00	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	University 8-8E A H 5LS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	1.00	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH / 72180	<b>Database:</b>	USAEDMDB
<b>Reference Design:</b>	Surveys (Ensign T054)	<b>Offset TVD Reference:</b>	Offset Datum

<b>Reference</b>	Surveys (Ensign T054)		
<b>Filter type:</b>	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
<b>Interpolation Method:</b>	MD + Stations Interval 100.00usft	<b>Error Model:</b>	ISCWSA
<b>Depth Range:</b>	Unlimited	<b>Scan Method:</b>	Closest Approach 3D
<b>Results Limited by:</b>	Max. Cent. Dist. of 1,000.00usft or Max. SF of 4	<b>Error Surface:</b>	Pedal Curve
<b>Warning Levels Evaluated at:</b>	2.00 Sigma	<b>Casing Method:</b>	Not applied

<b>Survey Program</b>	<b>Date</b>	5/31/23		
<b>From (usft)</b>	<b>To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>
15.00	1,846.00	TrueShot MWD Surveys (OH / 72180)	MWD	OWSG MWD - Standard
1,973.00	20,311.00	Phoenix MWD Surveys (OH / 72180)	MWD+HRGM+MS	OWSG MWD + HRGM + Multi-Station Correction

Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centers (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Sec 4/9/16 Blk 8/9 T3N						
Offset University 8-16 1 - OH - As Drilled	19,651.00	9,476.82	1,670.10	1,238.59	3.870 CC	
Offset University 8-16 1 - OH - As Drilled	19,651.12	9,476.82	1,670.10	1,238.59	3.870 ES	
Offset University 8-16 1 - OH - As Drilled	19,699.96	9,477.25	1,670.91	1,238.75	3.866 SF	
University 8-8						
University 8-8E A H 2MS - OH / 72179 - Plan 2 05-23-23	226.56	226.57	24.80	20.69	6.037 CC	
University 8-8E A H 2MS - OH / 72179 - Plan 2 05-23-23	5,799.99	5,799.18	40.31	12.69	1.459 Level 3 , ES	
University 8-8E A H 2MS - OH / 72179 - Plan 2 05-23-23	5,841.00	5,840.17	40.45	12.69	1.457 Level 3 , SF	
University 8-8E A H 2MS - OH / 72179 - Surveys (Ensign	226.56	226.57	24.80	20.69	6.037 CC	
University 8-8E A H 2MS - OH / 72179 - Surveys (Ensign	5,799.99	5,799.18	40.31	12.69	1.459 Level 3 , ES	
University 8-8E A H 2MS - OH / 72179 - Surveys (Ensign	5,841.00	5,840.17	40.45	12.69	1.457 Level 3 , SF	
University 8-8E A H 8WC - OH / 72181 - Plan 1 03-16-23	8,690.23	8,690.60	18.02	-25.93	0.410 Level 1 , CC	
University 8-8E A H 8WC - OH / 72181 - Plan 1 03-16-23	8,699.98	8,700.35	18.04	-26.11	0.409 Level 1 , SF	
University 8-8E A H 8WC - OH / 72181 - Plan 1 03-16-23	8,760.00	8,760.29	18.95	-26.59	0.416 Level 1 , ES	
University 8-8E A H 8WC - OH / 72181 - Surveys (Ensign	2,534.74	2,535.93	9.24	-4.54	0.671 Level 1 , CC, 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 2 05-17-23					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 2 05-24-23					Out of range	
University 8-8E B H 9WC - OH / 72263 - Surveys (Ensign					Out of range	
University 8-8E H 1MS - OH / 71371 - Surveys (Ensign 2	6,010.16	6,005.51	670.15	635.71	19.459 CC	
University 8-8E H 1MS - OH / 71371 - Surveys (Ensign 2	20,311.00	19,814.00	846.14	573.71	3.106 ES, SF	
University 8-8E H 4LS - OH / 71370 - Surveys (Ensign 22	9,369.72	9,377.91	602.31	541.75	9.946 CC	
University 8-8E H 4LS - OH / 71370 - Surveys (Ensign 22	20,311.00	20,373.00	694.58	381.23	2.217 ES, SF	
University 8-8E H 7WC - OH / 71369 - Surveys (Ensign 2	9,255.82	9,244.72	511.66	452.98	8.720 CC, ES	
University 8-8E H 7WC - OH / 71369 - Surveys (Ensign 2	20,311.00	20,981.95	950.47	687.89	3.620 SF	
University 8-8 Offsets						
U Texas 36994 A/C 2 3 - OH - Surveys	17,079.73	9,511.00	319.85	4.50	1.014 Level 2 , CC, ES, SF	
U Texas 36995 4 C - OH - Surveys	19,712.29	9,518.77	312.83	-37.30	0.893 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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<b>Reference Site:</b>	University 8-8	<b>MD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Site Error:</b>	0.00	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	University 8-8E A H 5LS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	1.00	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH / 72180	<b>Database:</b>	USAEDMDB
<b>Reference Design:</b>	Surveys (Ensign T054)	<b>Offset TVD Reference:</b>	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			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)		
19,382.00	9,514.17	9,471.39	9,470.81	144.46	283.36	-89.86	-10,029.72	4,128.00	1,687.26	1,261.48	425.79	3.963	
19,399.96	9,514.53	9,471.80	9,471.22	144.70	283.37	-89.87	-10,029.72	4,128.00	1,685.04	1,258.77	426.27	3.953	
19,472.00	9,516.18	9,473.61	9,473.02	145.64	283.43	-89.91	-10,029.72	4,128.00	1,678.17	1,250.09	428.08	3.920	
19,499.96	9,516.82	9,474.32	9,473.73	146.01	283.45	-89.94	-10,029.72	4,128.00	1,676.22	1,247.50	428.72	3.910	
19,561.00	9,517.92	9,475.56	9,474.98	146.81	283.49	-89.98	-10,029.73	4,128.00	1,672.53	1,242.54	429.99	3.890	
19,599.96	9,518.44	9,476.18	9,475.59	147.33	283.50	-90.00	-10,029.73	4,128.00	1,670.88	1,240.18	430.70	3.879	
19,651.00	9,518.96	9,476.82	9,476.23	148.00	283.52	-90.03	-10,029.73	4,128.00	1,670.10	1,238.59	431.51	3.870	CC
19,651.12	9,518.96	9,476.82	9,476.23	148.00	283.52	-90.03	-10,029.73	4,128.00	1,670.10	1,238.59	431.51	3.870	ES
19,699.96	9,519.28	9,477.25	9,476.67	148.64	283.54	-90.04	-10,029.73	4,128.00	1,670.91	1,238.75	432.16	3.866	SF
19,740.00	9,519.41	9,477.48	9,476.89	149.17	283.54	-90.04	-10,029.73	4,128.00	1,672.77	1,240.16	432.60	3.867	
19,799.96	9,519.65	9,477.85	9,477.27	149.96	283.56	-90.08	-10,029.73	4,128.00	1,677.51	1,244.39	433.11	3.873	
19,830.00	9,519.86	9,478.14	9,477.55	150.35	283.56	-90.10	-10,029.73	4,128.00	1,680.75	1,247.44	433.31	3.879	
19,899.96	9,520.24	9,478.69	9,478.11	151.27	283.58	-90.08	-10,029.73	4,128.00	1,690.74	1,257.17	433.58	3.900	
19,919.00	9,520.28	9,478.78	9,478.19	151.52	283.58	-90.06	-10,029.73	4,128.00	1,694.07	1,260.47	433.61	3.907	
19,999.96	9,519.45	9,478.12	9,477.53	152.58	283.56	-89.78	-10,029.73	4,128.00	1,710.33	1,276.82	433.52	3.945	
20,008.00	9,519.26	9,477.95	9,477.36	152.69	283.56	-89.74	-10,029.73	4,128.00	1,712.11	1,278.63	433.49	3.950	

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<b>Reference Site:</b>	University 8-8	<b>MD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Site Error:</b>	0.00	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	University 8-8E A H 5LS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	1.00	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH / 72180	<b>Database:</b>	USAEDMDB
<b>Reference Design:</b>	Surveys (Ensign T054)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design University 8-8E A H 2MS - OH / 72179 - Plan 2 05-23-23												Offset Site Error:	0.00 usft
Survey Program: 15-MWD, 1884-MWD+HRGM, 7462-MWD+HRGM												Offset Well Error:	1.00 usft
Reference		Offset		Semi Major Axis			Offset Wellbore Center		Distance			Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centers (usft)	Between Ellipses (usft)	Minimum Separation (usft)		
0.00	0.00	0.00	0.00	1.00	1.00	77.17	5.56	24.41	25.04				
15.00	15.00	15.00	15.00	1.00	1.00	77.17	5.56	24.41	25.04				
100.00	100.00	100.00	100.00	1.28	1.31	52.36	5.43	24.44	24.98	22.40	2.59	9.657	
178.00	178.00	178.00	178.00	1.91	1.91	53.61	5.07	24.52	24.85	21.04	3.81	6.521	
200.00	200.00	200.00	200.00	1.98	1.98	70.63	4.93	24.54	24.81	20.87	3.94	6.291	
226.56	226.55	226.57	226.56	2.06	2.07	97.47	4.74	24.57	24.80	20.69	4.11	6.037	CC
268.00	268.00	268.02	268.02	2.20	2.21	133.95	4.39	24.61	24.84	20.47	4.37	5.688	
300.00	300.00	300.00	300.00	2.28	2.30	151.86	4.14	24.63	24.91	20.38	4.54	5.490	
356.00	356.00	355.98	355.97	2.43	2.48	-176.38	3.89	24.69	25.14	20.29	4.84	5.190	
400.00	400.00	400.02	400.01	2.54	2.59	-163.03	3.82	24.71	25.29	20.24	5.06	5.003	
443.00	443.00	443.06	443.05	2.64	2.69	-140.81	3.79	24.66	25.33	20.07	5.26	4.812	
453.91	453.91	453.97	453.97	2.66	2.72	-149.69	3.78	24.63	25.33	20.01	5.32	4.765	
500.00	500.00	500.08	500.07	2.77	2.81	-166.34	3.78	24.50	25.37	19.85	5.53	4.590	
532.00	532.00	532.09	532.09	2.85	2.88	-170.99	3.81	24.39	25.46	19.78	5.68	4.484	
600.00	600.00	600.06	600.06	3.01	3.04	-169.01	3.83	24.19	25.59	19.59	6.00	4.264	
623.00	623.00	623.06	623.05	3.07	3.09	-165.68	3.81	24.14	25.59	19.48	6.11	4.187	
632.29	632.29	632.35	632.34	3.09	3.11	-165.43	3.80	24.12	25.58	19.43	6.15	4.159	
700.00	699.99	700.04	700.04	3.25	3.27	-164.67	3.56	24.02	25.73	19.28	6.45	3.989	
712.00	712.00	712.04	712.03	3.27	3.29	-164.54	3.50	24.01	25.79	19.29	6.50	3.965	
800.00	799.99	800.12	800.11	3.47	3.51	-123.62	2.93	23.83	25.96	19.08	6.89	3.770	
804.00	803.99	804.12	804.11	3.48	3.52	-121.43	2.91	23.81	25.96	19.05	6.90	3.760	
850.27	850.26	850.34	850.33	3.57	3.63	-129.94	2.60	23.68	25.92	18.83	7.09	3.656	
892.00	891.99	892.03	892.02	3.66	3.72	-143.28	2.34	23.64	25.95	18.69	7.26	3.576	
900.00	899.99	900.03	900.02	3.68	3.74	-150.04	2.29	23.63	25.96	18.67	7.29	3.562	
982.00	981.99	982.08	982.07	3.84	3.93	117.61	1.94	23.50	25.97	18.36	7.60	3.415	
1,000.00	999.99	1,000.09	1,000.07	3.87	3.97	135.52	1.88	23.45	25.94	18.27	7.67	3.383	
1,070.00	1,069.99	1,070.11	1,070.09	4.00	4.12	-135.26	1.37	23.24	25.88	17.95	7.93	3.265	
1,100.00	1,099.99	1,100.11	1,100.09	4.06	4.19	-139.72	1.09	23.14	25.87	17.83	8.03	3.219	
1,110.47	1,110.46	1,110.57	1,110.56	4.08	4.21	-141.17	1.00	23.11	25.87	17.79	8.07	3.204	
1,157.00	1,156.99	1,157.11	1,157.09	4.18	4.32	-146.98	0.66	22.95	25.88	17.64	8.24	3.140	
1,200.00	1,199.99	1,200.06	1,200.04	4.39	4.41	-150.66	0.39	22.84	25.97	17.44	8.53	3.044	
1,300.00	1,299.99	1,300.10	1,300.07	4.90	4.64	-156.56	-0.40	22.71	26.39	17.20	9.19	2.872	
1,336.00	1,335.99	1,336.14	1,336.12	5.08	4.73	-157.80	-0.83	22.57	26.48	17.05	9.43	2.808	
1,400.00	1,399.98	1,400.09	1,400.06	5.21	5.04	-166.59	-1.61	22.33	26.75	16.92	9.83	2.722	
1,428.00	1,427.98	1,428.08	1,428.04	5.27	5.18	-169.44	-1.93	22.26	26.94	16.94	10.00	2.694	
1,500.00	1,499.98	1,500.02	1,499.99	5.40	5.53	-126.66	-2.66	22.15	27.36	16.93	10.43	2.624	
1,516.00	1,515.98	1,516.03	1,516.00	5.43	5.59	-115.49	-2.81	22.14	27.42	16.92	10.50	2.611	
1,600.00	1,599.98	1,600.18	1,600.14	5.59	5.77	-140.34	-3.69	21.83	27.47	16.71	10.76	2.553	
1,608.00	1,607.98	1,608.19	1,608.14	5.60	5.79	-143.57	-3.79	21.78	27.45	16.67	10.78	2.546	
1,697.00	1,696.98	1,697.26	1,697.21	5.77	5.99	-143.29	-5.19	21.04	27.22	16.18	11.04	2.466	
1,700.00	1,699.97	1,700.26	1,700.21	5.78	6.00	-143.20	-5.24	21.01	27.21	16.16	11.05	2.463	
1,788.00	1,787.98	1,788.27	1,788.20	5.96	6.18	-144.31	-6.29	20.02	26.77	15.47	11.30	2.369	
1,797.54	1,797.52	1,797.76	1,797.69	5.97	6.20	-151.52	-6.36	19.94	26.76	15.43	11.33	2.363	
1,800.00	1,799.97	1,800.20	1,800.13	5.97	6.20	-152.98	-6.37	19.92	26.76	15.43	11.33	2.361	
1,846.00	1,845.97	1,846.06	1,845.99	6.05	6.26	-167.07	-6.51	19.81	27.15	15.71	11.44	2.374	
1,900.00	1,899.96	1,900.11	1,900.04	6.14	6.31	-155.72	-6.69	19.62	27.70	16.11	11.59	2.389	

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

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<b>Reference Well:</b>	University 8-8E A H 5LS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	1.00	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH / 72180	<b>Database:</b>	USAEDMDB
<b>Reference Design:</b>	Surveys (Ensign T054)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design University 8-8E A H 2MS - OH / 72179 - Plan 2 05-23-23												Offset Site Error:	0.00 usft
Survey Program: 15-MWD, 1884-MWD+HRGM, 7462-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)		
1,973.00	1,972.96	1,973.00	1,972.92	6.28	6.39	-136.74	-7.45	19.63	28.58	16.76	11.82	2.417	
2,000.00	1,999.95	1,999.57	1,999.49	6.34	6.43	-117.38	-7.95	19.86	29.08	17.16	11.92	2.439	
2,064.00	2,063.95	2,062.82	2,062.69	6.49	6.52	-88.34	-9.80	21.39	31.07	18.92	12.15	2.557	
2,100.00	2,099.93	2,098.63	2,098.45	6.55	6.56	-74.36	-11.19	22.73	32.46	20.25	12.22	2.657	
2,153.00	2,152.89	2,151.37	2,151.09	6.65	6.62	-66.34	-13.50	24.97	34.31	22.00	12.32	2.786	
2,200.00	2,199.83	2,198.25	2,197.87	6.73	6.67	-65.78	-15.67	27.17	35.89	23.47	12.42	2.889	
2,242.00	2,241.78	2,240.16	2,239.68	6.81	6.71	-65.38	-17.57	29.23	37.34	24.82	12.52	2.983	
2,300.00	2,299.69	2,297.90	2,297.28	6.91	6.78	-62.30	-20.31	32.28	39.34	26.67	12.67	3.106	
2,332.00	2,331.63	2,329.76	2,329.04	6.97	6.82	-61.01	-21.98	34.08	40.42	27.67	12.75	3.171	
2,400.00	2,399.49	2,397.58	2,396.63	7.10	6.90	-58.86	-25.91	38.10	42.74	29.81	12.93	3.305	
2,423.00	2,422.45	2,420.52	2,419.48	7.15	6.93	-57.94	-27.36	39.49	43.54	30.55	12.99	3.352	
2,500.00	2,499.29	2,497.28	2,495.91	7.31	7.04	-57.48	-32.54	44.31	46.38	33.19	13.20	3.515	
2,515.00	2,514.27	2,512.23	2,510.80	7.34	7.06	-57.35	-33.60	45.28	46.98	33.74	13.23	3.550	
2,599.99	2,599.08	2,597.28	2,595.46	7.53	7.19	-47.30	-39.68	50.74	49.85	36.37	13.48	3.698	
2,606.00	2,605.08	2,603.30	2,601.44	7.54	7.20	-46.63	-40.10	51.11	50.01	36.51	13.50	3.705	
2,696.00	2,694.85	2,693.12	2,690.85	7.74	7.36	-40.66	-46.49	56.87	52.11	38.33	13.78	3.782	
2,699.99	2,698.83	2,697.11	2,694.82	7.75	7.36	-40.61	-46.78	57.13	52.19	38.40	13.79	3.784	
2,786.00	2,784.60	2,783.08	2,780.39	7.94	7.53	-39.36	-52.87	62.80	53.99	39.90	14.09	3.831	
2,799.99	2,798.56	2,797.06	2,794.30	7.98	7.56	-39.47	-53.86	63.73	54.29	40.15	14.14	3.838	
2,876.00	2,874.36	2,872.97	2,869.85	8.17	7.72	-40.11	-59.23	68.80	56.06	41.63	14.43	3.885	
2,899.99	2,898.29	2,896.93	2,893.70	8.23	7.77	-39.24	-60.93	70.42	56.65	42.12	14.53	3.900	
2,966.00	2,964.12	2,962.83	2,959.27	8.40	7.92	-36.85	-65.57	74.96	58.29	43.49	14.80	3.939	
2,999.99	2,998.02	2,996.83	2,993.11	8.49	8.01	-35.64	-67.97	77.32	59.12	44.17	14.94	3.956	
3,055.00	3,052.89	3,051.87	3,047.88	8.63	8.15	-33.51	-71.95	81.08	60.39	45.20	15.19	3.977	
3,099.99	3,097.76	3,096.96	3,092.75	8.75	8.27	-32.83	-75.31	84.07	61.38	45.98	15.39	3.987	
3,146.00	3,143.65	3,143.07	3,138.63	8.88	8.39	-32.04	-78.83	87.01	62.32	46.72	15.61	3.993	
3,199.99	3,197.50	3,197.42	3,192.72	9.03	8.54	-29.21	-83.01	90.26	63.23	47.36	15.88	3.983	
3,236.00	3,233.42	3,233.67	3,228.81	9.13	8.65	-27.27	-85.75	92.24	63.63	47.58	16.06	3.963	
3,299.99	3,297.25	3,297.66	3,292.53	9.32	8.83	-24.77	-90.50	95.62	64.24	47.85	16.39	3.920	
3,325.00	3,322.20	3,322.66	3,317.42	9.39	8.90	-23.79	-92.33	96.95	64.50	47.98	16.52	3.905	
3,399.99	3,397.01	3,397.69	3,392.16	9.61	9.13	-23.22	-97.75	100.93	65.26	48.33	16.93	3.855	
3,416.00	3,412.97	3,413.71	3,408.11	9.65	9.18	-23.12	-98.91	101.77	65.40	48.38	17.02	3.843	
3,499.99	3,496.75	3,498.18	3,492.28	9.91	9.43	-22.46	-104.76	105.95	65.76	48.26	17.50	3.758	
3,507.00	3,503.73	3,505.23	3,499.30	9.93	9.45	-22.42	-105.23	106.27	65.75	48.22	17.54	3.749	
3,596.00	3,592.47	3,594.41	3,588.21	10.20	9.72	-27.75	-110.99	110.27	65.49	47.46	18.03	3.632	
3,599.99	3,596.45	3,598.40	3,592.19	10.22	9.73	-28.14	-111.25	110.45	65.47	47.42	18.05	3.626	
3,686.00	3,682.17	3,684.28	3,677.81	10.49	10.00	-36.43	-116.71	114.31	65.19	46.68	18.51	3.522	
3,699.99	3,696.11	3,698.30	3,691.78	10.54	10.04	-36.72	-117.61	114.94	65.16	46.58	18.58	3.507	
3,776.00	3,771.84	3,774.51	3,767.76	10.79	10.28	-38.29	-122.50	118.26	64.93	45.95	18.97	3.422	
3,799.99	3,795.75	3,798.47	3,791.65	10.86	10.36	-37.86	-124.03	119.27	64.84	45.74	19.10	3.395	
3,864.00	3,859.53	3,862.36	3,855.35	11.07	10.56	-36.68	-128.04	122.08	64.63	45.19	19.43	3.326	
3,899.99	3,895.39	3,898.36	3,891.25	11.19	10.67	-36.79	-130.27	123.71	64.52	44.90	19.62	3.288	
3,954.00	3,949.21	3,952.41	3,945.14	11.37	10.84	-36.92	-133.61	126.12	64.35	44.45	19.91	3.233	
3,999.99	3,995.04	3,998.40	3,991.00	11.52	10.99	-36.77	-136.46	128.16	64.20	44.04	20.15	3.185	
4,044.00	4,038.90	4,042.41	4,034.88	11.67	11.13	-36.63	-139.15	130.12	64.03	43.64	20.39	3.140	

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

<b>Company:</b>	Piedra Operating LLC	<b>Local Co-ordinate Reference:</b>	Well University 8-8E A H 5LS
<b>Project:</b>	Andrews County, TX (NAD83-TNC)	<b>TVD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Reference Site:</b>	University 8-8	<b>MD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Site Error:</b>	0.00	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	University 8-8E A H 5LS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	1.00	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH / 72180	<b>Database:</b>	USAEDMDB
<b>Reference Design:</b>	Surveys (Ensign T054)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design University 8-8E A H 2MS - OH / 72179 - Plan 2 05-23-23												Offset Site Error:	0.00 usft
Survey Program: 15-MWD, 1884-MWD+HRGM, 7462-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)		
4,099.99	4,094.70	4,098.35	4,090.66	11.85	11.31	-35.31	-142.51	132.65	63.85	43.15	20.69	3.085	
4,133.00	4,127.60	4,131.32	4,123.54	11.96	11.42	-34.49	-144.43	134.19	63.76	42.89	20.87	3.055	
4,199.99	4,194.38	4,198.23	4,190.26	12.18	11.64	-33.32	-148.38	137.37	63.64	42.39	21.25	2.995	
4,222.00	4,216.32	4,220.22	4,212.18	12.26	11.71	-32.87	-149.71	138.42	63.61	42.23	21.38	2.976	
4,299.99	4,294.08	4,298.76	4,290.51	12.52	11.96	-32.11	-154.22	141.92	63.23	41.41	21.83	2.897	
4,312.00	4,306.05	4,310.85	4,302.58	12.56	12.00	-32.01	-154.86	142.41	63.12	41.23	21.89	2.883	
4,399.99	4,393.79	4,399.27	4,390.83	12.85	12.29	-30.22	-159.20	145.73	62.01	39.62	22.38	2.770	
4,401.00	4,394.80	4,400.29	4,391.84	12.86	12.29	-30.20	-159.24	145.77	61.99	39.60	22.39	2.769	
4,491.00	4,484.56	4,490.43	4,481.84	13.16	12.57	-29.55	-163.21	148.84	60.48	37.60	22.88	2.643	
4,499.99	4,493.53	4,499.41	4,490.81	13.19	12.60	-29.37	-163.59	149.14	60.32	37.38	22.93	2.630	
4,582.00	4,575.33	4,581.33	4,572.61	13.47	12.86	-27.62	-167.05	151.95	58.89	35.50	23.39	2.518	
4,599.99	4,593.27	4,599.32	4,590.57	13.53	12.91	-28.69	-167.81	152.58	58.59	35.10	23.49	2.494	
4,673.00	4,666.07	4,672.32	4,663.47	13.78	13.15	-33.02	-170.86	155.13	57.20	33.33	23.88	2.396	
4,699.99	4,692.98	4,699.38	4,690.49	13.87	13.23	-34.90	-171.97	156.06	56.65	32.64	24.01	2.359	
4,764.00	4,756.79	4,763.55	4,754.58	14.09	13.43	-39.59	-174.54	158.13	55.29	30.98	24.31	2.275	
4,799.99	4,792.66	4,799.48	4,790.46	14.22	13.55	-39.80	-175.94	159.24	54.53	30.07	24.46	2.229	
4,854.00	4,846.51	4,853.40	4,844.31	14.40	13.72	-40.07	-178.06	160.98	53.47	28.77	24.70	2.165	
4,899.99	4,892.36	4,899.46	4,890.31	14.56	13.86	-41.22	-179.86	162.46	52.60	27.70	24.90	2.112	
4,943.00	4,935.24	4,942.53	4,933.33	14.71	13.99	-42.32	-181.52	163.77	51.74	26.66	25.08	2.063	
4,999.99	4,992.07	4,999.63	4,990.36	14.91	14.17	-43.49	-183.74	165.40	50.62	25.30	25.32	1.999	
5,033.00	5,024.99	5,032.71	5,023.40	15.02	14.28	-44.05	-185.06	166.26	50.00	24.53	25.46	1.963	
5,099.99	5,091.82	5,099.61	5,090.23	15.25	14.48	-45.37	-187.59	168.03	48.80	23.06	25.75	1.896	
5,122.00	5,113.77	5,121.59	5,112.19	15.33	14.55	-45.89	-188.36	168.64	48.44	22.61	25.83	1.875	
5,199.99	5,191.56	5,199.67	5,190.20	15.60	14.79	-48.18	-190.99	170.74	47.00	20.89	26.11	1.800	
5,212.00	5,203.54	5,211.70	5,202.21	15.64	14.83	-48.58	-191.39	171.05	46.75	20.59	26.15	1.787	
5,299.99	5,291.28	5,299.63	5,290.06	15.95	15.10	-49.70	-194.38	173.27	44.87	18.43	26.44	1.697	
5,303.00	5,294.28	5,302.63	5,293.07	15.96	15.11	-49.73	-194.48	173.35	44.81	18.36	26.45	1.694	
5,393.00	5,384.02	5,392.52	5,382.88	16.28	15.39	-58.51	-197.39	175.70	43.23	16.54	26.69	1.620	
5,399.99	5,390.99	5,399.51	5,389.86	16.30	15.41	-58.84	-197.59	175.89	43.13	16.43	26.70	1.615	
5,483.00	5,473.76	5,482.53	5,472.81	16.59	15.66	-62.90	-200.37	178.07	42.06	15.17	26.89	1.564	
5,499.99	5,490.70	5,499.51	5,489.77	16.65	15.72	-63.82	-201.00	178.50	41.85	14.91	26.94	1.554	
5,573.00	5,563.48	5,572.47	5,562.66	16.91	15.95	-67.98	-203.64	180.38	41.07	13.97	27.10	1.515	
5,599.99	5,590.39	5,599.40	5,589.56	17.00	16.03	-69.24	-204.58	181.09	40.85	13.68	27.16	1.504	
5,662.00	5,652.21	5,661.28	5,651.38	17.22	16.22	-72.39	-206.58	182.78	40.51	13.21	27.30	1.484	Level 3
5,699.99	5,690.08	5,699.25	5,689.32	17.36	16.34	-74.30	-207.72	183.84	40.39	13.02	27.38	1.475	Level 3
5,752.00	5,741.93	5,751.22	5,741.26	17.54	16.50	-77.13	-209.19	185.25	40.29	12.79	27.50	1.465	Level 3
5,769.87	5,759.74	5,769.08	5,759.10	17.60	16.55	-78.61	-209.68	185.72	40.28	12.74	27.54	1.462	Level 3
5,799.99	5,789.76	5,799.18	5,789.18	17.71	16.64	-81.07	-210.54	186.53	40.31	12.69	27.63	1.459	Level 3 , ES
5,841.00	5,830.64	5,840.17	5,830.13	17.85	16.77	-84.32	-211.77	187.64	40.45	12.69	27.76	1.457	Level 3 , SF
5,899.99	5,889.45	5,899.20	5,889.11	18.06	16.95	-91.60	-213.68	189.22	40.90	12.91	27.98	1.461	Level 3
5,931.00	5,920.37	5,930.24	5,920.12	18.17	17.05	-95.37	-214.75	190.03	41.26	13.14	28.12	1.467	Level 3
5,999.99	5,989.19	5,999.18	5,989.00	18.41	17.26	-104.61	-217.05	191.75	42.44	14.00	28.44	1.492	Level 3
6,022.00	6,011.15	6,021.17	6,010.98	18.49	17.33	-107.77	-217.73	192.28	42.94	14.39	28.55	1.504	
6,099.99	6,088.99	6,099.25	6,089.00	18.76	17.57	-110.69	-220.26	194.08	44.69	15.75	28.94	1.544	
6,112.00	6,100.99	6,111.28	6,101.01	18.80	17.61	-111.07	-220.67	194.36	44.93	15.94	28.99	1.550	
6,199.99	6,188.87	6,199.16	6,188.83	19.11	17.88	-113.34	-223.58	196.32	46.55	17.13	29.42	1.582	

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

<b>Company:</b>	Piedra Operating LLC	<b>Local Co-ordinate Reference:</b>	Well University 8-8E A H 5LS
<b>Project:</b>	Andrews County, TX (NAD83-TNC)	<b>TVD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Reference Site:</b>	University 8-8	<b>MD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Site Error:</b>	0.00	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	University 8-8E A H 5LS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	1.00	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH / 72180	<b>Database:</b>	USAEDMDB
<b>Reference Design:</b>	Surveys (Ensign T054)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design University 8-8E A H 2MS - OH / 72179 - Plan 2 05-23-23												Offset Site Error:	0.00 usft
Survey Program: 15-MWD, 1884-MWD+HRGM, 7462-MWD+HRGM												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)		
6,201.00	6,189.88	6,200.18	6,189.84	19.11	17.88	-113.37	-223.61	196.35	46.56	17.14	29.42	1.583	
6,291.00	6,279.81	6,290.02	6,279.60	19.43	18.16	-113.33	-226.62	198.65	48.19	18.36	29.83	1.615	
6,299.99	6,288.79	6,298.98	6,288.55	19.46	18.19	-113.37	-226.95	198.91	48.37	18.50	29.87	1.619	
6,381.00	6,369.74	6,379.71	6,369.19	19.74	18.45	-113.59	-229.81	201.54	50.27	20.03	30.25	1.662	
6,399.99	6,388.71	6,398.74	6,388.19	19.80	18.51	-113.25	-230.48	202.20	50.77	20.43	30.34	1.674	
6,470.00	6,458.68	6,468.93	6,458.30	20.04	18.74	-111.91	-233.10	204.53	52.40	21.73	30.67	1.709	
6,499.99	6,488.64	6,498.90	6,488.23	20.15	18.84	-110.77	-234.28	205.49	53.03	22.22	30.82	1.721	
6,559.00	6,547.62	6,557.86	6,547.11	20.35	19.03	-108.54	-236.57	207.40	54.28	23.17	31.11	1.745	
6,599.99	6,588.57	6,598.75	6,587.95	20.49	19.17	-109.29	-238.15	208.77	55.19	23.88	31.31	1.763	
6,650.00	6,638.55	6,648.63	6,637.77	20.66	19.33	-110.24	-240.01	210.50	56.45	24.88	31.57	1.788	
6,699.99	6,688.51	6,698.72	6,687.79	20.84	19.49	-108.97	-241.88	212.23	57.73	25.89	31.83	1.813	
6,740.00	6,728.49	6,738.83	6,727.85	20.97	19.63	-107.97	-243.39	213.53	58.65	26.61	32.05	1.830	
6,799.99	6,788.44	6,798.63	6,787.58	21.18	19.82	-106.22	-245.58	215.47	60.04	27.68	32.37	1.855	
6,830.00	6,818.43	6,828.55	6,817.46	21.29	19.92	-105.41	-246.61	216.48	60.79	28.27	32.52	1.869	
6,899.99	6,888.38	6,898.63	6,887.47	21.53	20.14	-105.61	-249.00	218.80	62.53	29.63	32.90	1.901	
6,919.00	6,907.38	6,917.67	6,906.49	21.59	20.20	-105.67	-249.65	219.41	62.99	29.98	33.00	1.909	
6,999.99	6,988.32	6,998.67	6,987.40	21.88	20.47	-103.34	-252.52	221.98	64.83	31.38	33.45	1.938	
7,009.00	6,997.33	7,007.69	6,996.40	21.91	20.50	-103.06	-252.84	222.26	65.02	31.52	33.50	1.941	
7,099.00	7,087.28	7,097.61	7,086.23	22.22	20.79	-102.32	-255.96	225.08	67.00	33.00	34.00	1.970	
7,099.99	7,088.26	7,098.60	7,087.21	22.22	20.79	-102.31	-255.99	225.11	67.02	33.01	34.01	1.971	
7,188.00	7,176.24	7,186.75	7,175.28	22.53	21.07	-102.68	-258.77	227.68	68.91	34.41	34.50	1.998	
7,199.99	7,188.22	7,198.77	7,187.29	22.57	21.11	-103.33	-259.13	228.01	69.15	34.59	34.56	2.001	
7,277.00	7,265.20	7,275.98	7,264.44	22.84	21.35	-107.62	-261.66	230.02	70.69	35.70	34.99	2.020	
7,299.99	7,288.17	7,298.92	7,287.36	22.92	21.43	-108.54	-262.45	230.60	71.15	36.02	35.13	2.025	
7,367.00	7,355.16	7,365.76	7,354.13	23.15	21.64	-111.45	-264.77	232.39	72.63	37.10	35.53	2.044	
7,399.99	7,388.14	7,398.86	7,387.20	23.26	21.75	-112.36	-265.92	233.29	73.41	37.68	35.73	2.054	
7,457.00	7,445.13	7,456.11	7,444.39	23.45	21.93	-113.87	-267.96	234.69	74.66	38.58	36.09	2.069	
7,481.00	7,469.12	7,480.13	7,468.39	23.53	22.00	-120.14	-268.82	235.24	75.19	38.97	36.22	2.076	
7,499.99	7,488.10	7,499.10	7,487.35	23.59	22.06	-120.30	-269.51	235.66	75.64	39.31	36.33	2.082	
7,595.00	7,583.07	7,594.08	7,582.24	23.90	22.36	-120.96	-272.94	237.80	78.04	41.13	36.91	2.114	
7,599.98	7,588.06	7,599.06	7,587.21	23.91	22.38	-121.16	-273.12	237.92	78.18	41.23	36.94	2.116	
7,685.00	7,673.03	7,684.20	7,672.28	24.20	22.64	-124.48	-276.05	239.75	80.57	43.13	37.44	2.152	
7,699.98	7,688.00	7,699.23	7,687.31	24.25	22.68	-126.26	-276.48	240.01	81.00	43.49	37.51	2.159	
7,774.00	7,761.97	7,773.49	7,761.55	24.49	22.89	-134.45	-278.10	241.03	83.24	45.38	37.86	2.198	
7,799.98	7,787.94	7,799.57	7,787.62	24.57	22.96	-136.76	-278.48	241.26	83.96	45.99	37.98	2.211	
7,864.00	7,851.95	7,863.82	7,851.87	24.76	23.05	161.37	-278.98	241.57	84.88	46.63	38.25	2.219	
7,899.98	7,887.93	7,899.89	7,887.93	24.86	23.07	155.48	-279.01	241.59	85.12	46.73	38.38	2.218	
7,954.00	7,941.94	7,953.90	7,941.94	25.02	23.09	153.77	-279.01	241.59	85.81	47.21	38.60	2.223	
7,999.98	7,987.91	7,999.87	7,987.91	25.15	23.10	160.59	-279.01	241.59	86.73	47.93	38.79	2.236	
8,044.00	8,031.91	8,043.87	8,031.91	25.28	23.11	164.70	-279.01	241.59	87.88	48.91	38.97	2.255	
8,099.98	8,087.87	8,099.83	8,087.87	25.44	23.12	-176.57	-279.01	241.59	89.45	50.27	39.18	2.283	
8,133.00	8,120.88	8,132.83	8,120.88	25.54	23.13	-164.37	-279.01	241.59	90.32	51.03	39.28	2.299	
8,199.98	8,187.84	8,199.79	8,187.84	25.74	23.14	-152.31	-279.01	241.59	91.93	52.44	39.49	2.328	
8,223.00	8,210.85	8,222.80	8,210.85	25.81	23.14	-148.03	-279.01	241.59	92.44	52.89	39.56	2.337	
8,299.98	8,287.81	8,299.77	8,287.81	26.06	23.16	-135.25	-279.01	241.59	93.79	54.01	39.78	2.358	

<b>Company:</b>	Piedra Operating LLC	<b>Local Co-ordinate Reference:</b>	Well University 8-8E A H 5LS
<b>Project:</b>	Andrews County, TX (NAD83-TNC)	<b>TVD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Reference Site:</b>	University 8-8	<b>MD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Site Error:</b>	0.00	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	University 8-8E A H 5LS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	1.00	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH / 72180	<b>Database:</b>	USAEDMDB
<b>Reference Design:</b>	Surveys (Ensign T054)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design University 8-8E A H 2MS - OH / 72179 - Plan 2 05-23-23												Offset Site Error:	0.00 usft
Survey Program: 15-MWD, 1884-MWD+HRGM, 7462-MWD+HRGM												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)		
8,312.00	8,299.83	8,311.78	8,299.83	26.10	23.16	-132.41	-279.01	241.59	93.95	54.13	39.82	2.359	
8,399.98	8,387.80	8,399.76	8,387.80	26.38	23.18	-138.17	-279.01	241.59	94.87	54.77	40.10	2.366	
8,401.00	8,388.82	8,400.77	8,388.82	26.39	23.18	-138.27	-279.01	241.59	94.88	54.78	40.10	2.366	
8,490.00	8,477.81	8,490.47	8,478.51	26.66	23.22	-167.32	-279.52	241.66	95.95	55.53	40.42	2.374	
8,499.98	8,487.79	8,500.73	8,488.76	26.69	23.24	-168.62	-280.05	241.74	96.03	55.54	40.49	2.372	
8,581.00	8,568.79	8,582.70	8,569.94	26.94	23.57	-174.11	-290.73	243.24	96.30	54.67	41.62	2.314	
8,599.98	8,587.77	8,601.36	8,588.15	27.00	23.65	-161.46	-294.76	243.80	96.50	54.44	42.06	2.294	
8,670.00	8,657.77	8,667.72	8,651.62	27.21	23.97	-121.59	-313.80	246.48	99.37	55.23	44.13	2.252	
8,699.98	8,687.74	8,694.81	8,676.82	27.33	24.10	-101.06	-323.65	247.86	102.20	57.08	45.11	2.265	
8,760.00	8,747.68	8,746.60	8,723.56	27.56	24.35	-78.34	-345.70	250.96	111.68	64.91	46.76	2.388	
8,799.98	8,787.58	8,779.10	8,751.79	27.72	24.51	-73.01	-361.63	253.20	121.29	73.82	47.46	2.555	
8,849.00	8,836.49	8,816.42	8,783.03	27.92	24.68	-67.24	-381.85	256.04	137.13	89.30	47.82	2.867	
8,872.00	8,859.45	8,832.97	8,796.44	28.00	24.76	-63.98	-391.45	257.39	146.04	98.22	47.82	3.054	
8,899.98	8,887.36	8,850.00	8,809.94	28.11	24.84	-49.41	-401.73	258.84	157.82	110.34	47.48	3.324	
8,941.00	8,928.19	8,879.85	8,832.84	28.27	24.98	-35.15	-420.69	261.50	176.21	128.86	47.35	3.721	
8,999.98	8,986.21	8,918.25	8,860.78	29.02	25.15	-19.47	-446.76	265.17	202.52	155.54	46.98	4.310	
9,031.00	9,016.02	8,938.32	8,874.66	29.44	25.24	-15.26	-461.11	267.18	215.38	168.64	46.73	4.609	
9,099.98	9,080.85	8,981.53	8,902.78	30.46	25.42	-8.39	-493.59	271.75	244.02	197.68	46.35	5.265	
9,121.00	9,100.27	9,000.00	8,914.03	30.79	25.50	-6.14	-508.10	273.79	253.17	206.46	46.72	5.419	
9,199.98	9,171.23	9,040.43	8,936.97	31.40	25.65	-3.34	-541.05	278.42	287.40	242.26	45.15	6.366	
9,210.00	9,179.96	9,050.00	8,942.05	31.48	25.69	-2.70	-549.08	279.55	291.79	246.46	45.32	6.438	
9,299.00	9,255.54	9,100.00	8,966.36	32.18	25.86	-3.64	-592.33	285.62	331.70	287.68	44.02	7.535	
9,299.98	9,256.36	9,100.00	8,966.36	32.19	25.86	-3.69	-592.33	285.62	332.14	288.18	43.96	7.555	
9,389.00	9,329.05	9,150.00	8,986.77	32.75	26.01	-5.22	-637.51	291.97	375.43	332.78	42.65	8.802	
9,399.98	9,337.84	9,150.00	8,986.77	32.81	26.01	-5.09	-637.51	291.97	380.90	338.78	42.12	9.043	
9,479.00	9,398.36	9,189.39	9,000.00	33.28	26.12	-3.24	-674.25	297.14	419.99	378.92	41.07	10.227	
9,499.98	9,413.49	9,200.00	9,003.13	33.43	26.15	-2.81	-684.29	298.55	429.97	388.96	41.01	10.484	
9,568.00	9,458.53	9,233.76	9,011.81	33.92	26.23	-1.63	-716.58	303.09	459.86	419.03	40.83	11.264	
9,599.98	9,477.62	9,250.00	9,015.30	34.11	26.27	-1.17	-732.29	305.30	472.78	431.94	40.84	11.578	
9,657.00	9,508.72	9,277.77	9,020.23	34.46	26.33	-0.45	-759.35	309.10	494.64	453.81	40.84	12.113	
9,699.98	9,529.60	9,300.00	9,023.21	34.64	26.37	-0.05	-781.17	312.16	510.15	469.35	40.80	12.504	
9,748.00	9,550.27	9,322.20	9,025.33	34.85	26.41	0.32	-803.05	315.24	526.48	485.80	40.69	12.939	
9,799.98	9,568.71	9,350.00	9,026.78	35.03	26.46	0.71	-830.54	319.10	542.30	501.30	41.00	13.226	
9,837.00	9,578.89	9,369.81	9,027.00	35.17	26.49	0.96	-850.15	321.86	551.98	510.75	41.23	13.389	
9,899.98	9,588.83	9,423.52	9,026.64	35.33	26.57	1.54	-903.27	329.83	562.42	519.13	43.29	12.990	
9,928.00	9,589.86	9,451.56	9,026.45	35.41	26.62	1.78	-930.94	334.39	563.70	519.36	44.34	12.713	
9,952.00	9,589.61	9,475.65	9,026.29	35.46	26.67	1.97	-954.67	338.52	563.68	519.16	44.51	12.663	
9,999.98	9,588.60	9,523.89	9,025.97	35.57	26.77	2.28	-1,002.08	347.39	563.09	518.37	44.72	12.591	
10,042.00	9,587.53	9,566.20	9,025.69	35.67	26.87	2.49	-1,043.54	355.83	562.39	517.48	44.92	12.521	
10,099.98	9,586.09	9,624.64	9,025.30	35.85	27.04	2.57	-1,100.59	368.49	561.36	516.16	45.20	12.420	
10,132.00	9,585.40	9,656.63	9,025.09	35.96	27.13	2.47	-1,131.76	375.70	560.84	515.49	45.35	12.366	
10,199.98	9,583.86	9,724.51	9,024.64	36.22	27.38	2.12	-1,197.89	391.01	559.61	513.91	45.70	12.245	
10,223.00	9,583.26	9,747.49	9,024.48	36.31	27.47	1.98	-1,220.27	396.18	559.11	513.29	45.83	12.201	
10,299.98	9,581.11	9,824.29	9,023.97	36.63	27.84	1.48	-1,295.09	413.50	557.33	511.07	46.26	12.048	
10,312.00	9,580.77	9,836.28	9,023.89	36.68	27.90	1.40	-1,306.78	416.20	557.05	510.72	46.33	12.023	
10,399.98	9,578.76	9,924.10	9,023.31	37.11	28.45	0.87	-1,392.33	436.00	555.52	508.65	46.87	11.852	

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



<b>Company:</b>	Piedra Operating LLC	<b>Local Co-ordinate Reference:</b>	Well University 8-8E A H 5LS
<b>Project:</b>	Andrews County, TX (NAD83-TNC)	<b>TVD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Reference Site:</b>	University 8-8	<b>MD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Site Error:</b>	0.00	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	University 8-8E A H 5LS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	1.00	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH / 72180	<b>Database:</b>	USAEDMDB
<b>Reference Design:</b>	Surveys (Ensign T054)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design University 8-8E A H 2MS - OH / 72179 - Plan 2 05-23-23												Offset Site Error:	0.00 usft
Survey Program: 15-MWD, 1884-MWD+HRGM, 7462-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)		
10,401.00	9,578.74	9,925.11	9,023.30	37.12	28.45	0.86	-1,393.32	436.23	555.51	508.63	46.88	11.851	
10,490.00	9,577.42	10,013.97	9,022.71	37.61	29.13	0.35	-1,479.89	456.26	554.73	507.27	47.46	11.688	
10,499.98	9,577.29	10,023.93	9,022.64	37.68	29.22	0.29	-1,489.60	458.50	554.66	507.13	47.53	11.669	
10,580.00	9,576.23	10,103.89	9,022.11	38.20	29.95	-0.04	-1,567.49	476.53	554.14	506.04	48.09	11.522	
10,599.98	9,575.95	10,123.86	9,021.98	38.34	30.15	-0.08	-1,586.95	481.03	553.99	505.75	48.24	11.484	
10,670.00	9,574.71	10,193.86	9,021.51	38.84	30.87	-0.26	-1,655.14	496.81	553.22	504.46	48.75	11.347	
10,699.98	9,574.09	10,223.82	9,021.31	39.07	31.20	-0.35	-1,684.34	503.56	552.80	503.82	48.99	11.285	
10,759.00	9,572.88	10,282.81	9,020.92	39.51	31.88	-0.53	-1,741.81	516.86	551.99	502.55	49.44	11.164	
10,799.98	9,571.96	10,323.77	9,020.65	39.83	32.36	-0.66	-1,781.70	526.09	551.36	501.59	49.77	11.077	
10,848.00	9,570.69	10,371.74	9,020.33	40.21	32.95	-0.85	-1,828.45	536.91	550.44	500.27	50.17	10.972	
10,899.98	9,569.58	10,423.69	9,019.98	40.65	33.60	-1.01	-1,879.06	548.62	549.70	499.09	50.61	10.861	
10,938.00	9,569.24	10,461.71	9,019.73	40.98	34.08	-1.04	-1,916.10	557.19	549.62	498.68	50.93	10.791	
10,999.98	9,569.14	10,523.68	9,019.32	41.56	34.89	-0.95	-1,976.47	571.16	549.92	498.45	51.46	10.686	
11,026.00	9,569.19	10,549.69	9,019.14	41.80	35.23	-0.87	-2,001.81	577.02	550.12	498.44	51.68	10.644	
11,099.98	9,569.28	10,623.62	9,018.65	42.48	36.22	-0.60	-2,073.83	593.69	550.67	498.35	52.32	10.525	
11,118.00	9,569.27	10,641.63	9,018.53	42.65	36.47	-0.53	-2,091.38	597.75	550.77	498.30	52.48	10.496	
11,199.98	9,568.81	10,723.57	9,017.98	43.41	37.59	-0.27	-2,171.21	616.22	550.84	497.63	53.21	10.353	
11,207.00	9,568.73	10,730.59	9,017.94	43.48	37.69	-0.24	-2,178.05	617.80	550.81	497.54	53.27	10.340	
11,297.00	9,567.33	10,820.55	9,017.34	44.33	38.94	0.02	-2,265.69	638.08	550.00	495.90	54.10	10.167	
11,299.98	9,567.27	10,823.52	9,017.32	44.36	38.99	0.03	-2,268.59	638.75	549.96	495.83	54.13	10.161	
11,387.00	9,565.32	10,910.49	9,016.74	45.21	40.22	0.33	-2,353.31	658.36	548.60	493.65	54.94	9.985	
11,399.98	9,565.02	10,923.45	9,016.65	45.34	40.40	0.38	-2,365.94	661.28	548.39	493.32	55.07	9.958	
11,478.00	9,564.25	11,001.42	9,016.13	46.12	41.52	0.68	-2,441.90	678.86	548.17	492.33	55.83	9.818	
11,499.98	9,564.24	11,023.39	9,015.99	46.34	41.83	0.76	-2,463.30	683.81	548.32	492.26	56.05	9.782	
11,567.00	9,563.79	11,090.37	9,015.54	47.02	42.80	1.01	-2,528.56	698.91	548.34	491.61	56.73	9.666	
11,599.98	9,563.52	11,123.33	9,015.32	47.36	43.28	1.12	-2,560.67	706.34	548.31	491.25	57.06	9.609	
11,656.00	9,563.61	11,179.34	9,014.95	47.94	44.10	1.23	-2,615.23	718.96	548.80	491.16	57.64	9.521	
11,699.98	9,563.94	11,223.31	9,014.66	48.40	44.74	1.26	-2,658.07	728.88	549.43	491.33	58.10	9.456	
11,746.00	9,564.28	11,269.33	9,014.35	48.89	45.41	1.27	-2,702.91	739.25	550.08	491.49	58.59	9.389	
11,799.98	9,564.93	11,323.29	9,013.99	49.46	46.21	1.29	-2,755.48	751.42	551.09	491.93	59.17	9.314	
11,837.00	9,565.66	11,360.30	9,013.75	49.85	46.75	1.36	-2,791.53	759.76	552.09	492.53	59.56	9.269	
11,899.98	9,567.14	11,423.22	9,013.33	50.53	47.69	1.53	-2,852.83	773.94	554.02	493.78	60.24	9.196	
11,928.00	9,567.81	11,451.22	9,013.14	50.84	48.10	1.61	-2,880.11	780.25	554.90	494.35	60.55	9.164	
11,999.98	9,569.45	11,523.15	9,012.66	51.63	49.17	1.74	-2,950.19	796.47	557.05	495.71	61.35	9.080	
12,018.00	9,569.83	11,541.17	9,012.54	51.83	49.44	1.74	-2,967.74	800.53	557.55	496.01	61.55	9.059	
12,099.98	9,570.85	11,623.12	9,012.00	52.74	50.66	1.61	-3,047.58	819.01	559.08	496.60	62.48	8.949	
12,109.00	9,570.87	11,632.14	9,011.94	52.84	50.80	1.58	-3,056.37	821.04	559.16	496.58	62.58	8.935	
12,198.00	9,571.32	11,721.09	9,011.34	53.81	52.13	1.31	-3,143.03	841.09	560.13	496.53	63.60	8.807	
12,199.98	9,571.33	11,723.07	9,011.33	53.84	52.16	1.30	-3,144.96	841.54	560.16	496.53	63.63	8.804	
12,288.00	9,571.92	11,811.03	9,010.74	54.81	53.48	1.00	-3,230.65	861.37	561.27	496.62	64.66	8.681	
12,299.98	9,571.99	11,823.00	9,010.66	54.94	53.66	0.95	-3,242.31	864.06	561.41	496.61	64.80	8.664	
12,377.00	9,572.37	11,899.95	9,010.15	55.79	54.83	0.63	-3,317.28	881.41	562.26	496.55	65.72	8.556	
12,399.98	9,572.49	11,922.90	9,010.00	56.05	55.17	0.52	-3,339.64	886.59	562.53	496.53	66.00	8.524	
12,467.00	9,573.03	11,989.85	9,009.55	56.80	56.18	0.22	-3,404.87	901.68	563.49	496.68	66.81	8.434	
12,499.98	9,573.40	12,022.79	9,009.33	57.17	56.68	0.07	-3,436.96	909.10	564.07	496.85	67.22	8.391	

<b>Company:</b>	Piedra Operating LLC	<b>Local Co-ordinate Reference:</b>	Well University 8-8E A H 5LS
<b>Project:</b>	Andrews County, TX (NAD83-TNC)	<b>TVD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Reference Site:</b>	University 8-8	<b>MD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Site Error:</b>	0.00	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	University 8-8E A H 5LS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	1.00	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH / 72180	<b>Database:</b>	USAEDMDB
<b>Reference Design:</b>	Surveys (Ensign T054)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design University 8-8E A H 2MS - OH / 72179 - Plan 2 05-23-23												Offset Site Error:	0.00 usft
Survey Program: 15-MWD, 1884-MWD+HRGM, 7462-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)		
12,558.00	9,574.15	12,080.73	9,008.95	57.83	57.56	-0.22	-3,493.41	922.16	565.22	497.28	67.94	8.319	
12,599.98	9,574.63	12,122.65	9,008.67	58.30	58.20	-0.43	-3,534.25	931.61	565.99	497.52	68.47	8.266	
12,647.00	9,574.88	12,169.64	9,008.36	58.84	58.91	-0.62	-3,580.02	942.21	566.57	497.51	69.06	8.204	
12,699.97	9,574.76	12,222.58	9,008.00	59.44	59.72	-0.81	-3,631.60	954.14	566.83	497.10	69.73	8.129	
12,737.00	9,574.41	12,259.57	9,007.76	59.87	60.28	-0.95	-3,667.64	962.48	566.75	496.54	70.20	8.073	
12,799.97	9,573.76	12,322.50	9,007.34	60.60	61.24	-1.20	-3,728.95	976.67	566.56	495.55	71.02	7.978	
12,827.00	9,573.57	12,349.51	9,007.16	60.91	61.65	-1.30	-3,755.26	982.75	566.57	495.21	71.37	7.939	
12,899.97	9,573.03	12,422.43	9,006.67	61.75	62.77	-1.58	-3,826.30	999.19	566.59	494.27	72.32	7.835	
12,918.00	9,572.87	12,440.44	9,006.55	61.96	63.04	-1.65	-3,843.85	1,003.25	566.57	494.01	72.56	7.809	
12,999.97	9,572.48	12,522.39	9,006.01	62.93	64.30	-1.86	-3,923.68	1,021.73	566.78	493.15	73.62	7.698	
13,007.00	9,572.48	12,529.42	9,005.96	63.02	64.40	-1.86	-3,930.53	1,023.31	566.83	493.11	73.71	7.690	
13,097.00	9,572.61	12,619.41	9,005.36	64.09	65.78	-1.90	-4,018.21	1,043.60	567.57	492.71	74.87	7.581	
13,099.97	9,572.62	12,622.39	9,005.34	64.12	65.83	-1.90	-4,021.10	1,044.27	567.60	492.70	74.90	7.578	
13,186.00	9,573.32	12,708.40	9,004.77	65.15	67.15	-1.84	-4,104.90	1,063.66	568.85	492.85	76.00	7.485	
13,199.97	9,573.51	12,722.36	9,004.68	65.32	67.36	-1.80	-4,118.51	1,066.81	569.13	492.96	76.17	7.472	
13,275.00	9,574.94	12,797.32	9,004.18	66.23	68.51	-1.54	-4,191.53	1,083.70	570.98	493.88	77.09	7.406	
13,299.97	9,575.39	12,822.26	9,004.01	66.53	68.90	-1.42	-4,215.83	1,089.33	571.56	494.15	77.41	7.384	
13,366.00	9,575.28	12,888.21	9,003.57	67.33	69.91	-1.11	-4,280.08	1,104.19	571.83	493.59	78.23	7.309	
13,399.97	9,574.60	12,922.14	9,003.35	67.74	70.43	-0.95	-4,313.13	1,111.84	571.34	492.68	78.66	7.263	
13,455.00	9,572.87	12,977.09	9,002.98	68.41	71.28	-0.70	-4,366.67	1,124.23	569.94	490.57	79.37	7.181	
13,499.97	9,571.07	13,021.99	9,002.68	68.96	71.97	-0.49	-4,410.41	1,134.35	568.42	488.49	79.93	7.111	
13,544.00	9,569.21	13,065.94	9,002.39	69.49	72.65	-0.28	-4,453.23	1,144.26	566.84	486.35	80.49	7.043	
13,599.97	9,566.63	13,121.80	9,002.02	70.18	73.51	0.00	-4,507.65	1,156.85	564.63	483.43	81.20	6.954	
13,635.00	9,564.88	13,156.75	9,001.78	70.61	74.05	0.18	-4,541.70	1,164.73	563.11	481.47	81.64	6.897	
13,699.97	9,562.36	13,221.64	9,001.35	71.41	75.05	0.43	-4,604.92	1,179.36	561.04	478.54	82.50	6.801	
13,724.00	9,561.85	13,245.66	9,001.19	71.70	75.42	0.48	-4,628.32	1,184.77	560.69	477.87	82.82	6.770	
13,799.97	9,560.95	13,321.62	9,000.69	72.64	76.59	0.62	-4,702.32	1,201.90	560.31	476.48	83.84	6.683	
13,813.00	9,560.87	13,334.65	9,000.60	72.80	76.80	0.64	-4,715.01	1,204.83	560.32	476.31	84.01	6.670	
13,899.97	9,560.51	13,421.60	9,000.02	73.87	78.14	0.80	-4,799.73	1,224.44	560.55	475.39	85.17	6.582	
13,902.00	9,560.50	13,423.63	9,000.01	73.89	78.17	0.80	-4,801.71	1,224.89	560.56	475.37	85.20	6.580	
13,992.00	9,560.63	13,513.62	8,999.41	75.00	79.56	0.91	-4,889.38	1,245.18	561.30	474.90	86.40	6.496	
13,999.97	9,560.66	13,521.59	8,999.36	75.10	79.69	0.91	-4,897.15	1,246.98	561.39	474.88	86.51	6.489	
14,081.00	9,559.69	13,602.61	8,998.82	76.10	80.94	0.87	-4,976.08	1,265.24	560.95	473.32	87.63	6.402	
14,099.97	9,559.16	13,621.58	8,998.69	76.34	81.24	0.83	-4,994.55	1,269.51	560.54	472.65	87.89	6.378	
14,171.00	9,556.95	13,692.54	8,998.22	77.22	82.34	0.59	-5,063.69	1,285.51	558.78	469.90	88.88	6.287	
14,199.97	9,555.94	13,721.47	8,998.02	77.58	82.78	0.45	-5,091.87	1,292.03	557.95	468.67	89.28	6.249	
14,260.00	9,553.59	13,781.38	8,997.63	78.32	83.71	0.14	-5,150.24	1,305.54	555.98	465.85	90.13	6.169	
14,299.97	9,552.03	13,821.29	8,997.36	78.81	84.33	-0.07	-5,189.12	1,314.53	554.69	463.99	90.69	6.116	
14,349.00	9,550.45	13,870.27	8,997.03	79.42	85.09	-0.26	-5,236.84	1,325.58	553.43	462.05	91.39	6.056	
14,399.97	9,549.10	13,921.21	8,996.69	80.05	85.88	-0.40	-5,286.47	1,337.06	552.44	460.33	92.10	5.998	
14,439.00	9,548.23	13,960.22	8,996.43	80.54	86.49	-0.51	-5,324.47	1,345.85	551.83	459.18	92.66	5.956	
14,499.97	9,546.77	14,021.15	8,996.03	81.29	87.44	-0.71	-5,383.83	1,359.59	550.80	457.27	93.53	5.889	
14,529.00	9,545.92	14,050.15	8,995.84	81.65	87.89	-0.83	-5,412.08	1,366.13	550.16	456.21	93.95	5.856	
14,599.97	9,544.25	14,121.08	8,995.36	82.55	88.99	-1.02	-5,481.19	1,382.12	548.98	454.02	94.96	5.781	
14,619.00	9,543.97	14,140.11	8,995.24	82.79	89.28	-1.02	-5,499.73	1,386.41	548.83	453.61	95.22	5.764	
14,699.97	9,542.79	14,221.08	8,994.70	83.83	90.54	-0.97	-5,578.61	1,404.66	548.18	451.84	96.35	5.690	

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

<b>Company:</b>	Piedra Operating LLC	<b>Local Co-ordinate Reference:</b>	Well University 8-8E A H 5LS
<b>Project:</b>	Andrews County, TX (NAD83-TNC)	<b>TVD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Reference Site:</b>	University 8-8	<b>MD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Site Error:</b>	0.00	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	University 8-8E A H 5LS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	1.00	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH / 72180	<b>Database:</b>	USAEDMDB
<b>Reference Design:</b>	Surveys (Ensign T054)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design University 8-8E A H 2MS - OH / 72179 - Plan 2 05-23-23												Offset Site Error:	0.00 usft
Survey Program: 15-MWD, 1884-MWD+HRGM, 7462-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)		
14,710.00	9,542.63	14,231.11	8,994.63	83.95	90.70	-0.96	-5,588.38	1,406.92	548.08	451.60	96.48	5.681	
14,800.00	9,541.46	14,321.10	8,994.03	85.08	92.10	-0.87	-5,676.06	1,427.21	547.50	449.77	97.73	5.602	
14,889.00	9,540.74	14,410.09	8,993.44	86.20	93.48	-0.74	-5,762.75	1,447.27	547.36	448.40	98.96	5.531	
14,899.97	9,540.68	14,421.06	8,993.37	86.34	93.65	-0.73	-5,773.44	1,449.74	547.37	448.26	99.11	5.523	
14,979.00	9,541.17	14,500.04	8,992.84	87.35	94.88	-0.49	-5,850.39	1,467.55	548.36	448.16	100.19	5.473	
14,999.97	9,541.54	14,520.99	8,992.70	87.62	95.21	-0.39	-5,870.79	1,472.27	548.86	448.38	100.47	5.463	
15,069.00	9,543.18	14,589.91	8,992.24	88.50	96.28	-0.06	-5,937.94	1,487.80	550.95	449.54	101.41	5.433	
15,099.97	9,544.14	14,620.83	8,992.04	88.90	96.76	0.08	-5,968.06	1,494.77	552.12	450.28	101.84	5.421	
15,159.00	9,546.36	14,679.75	8,991.64	89.65	97.68	0.33	-6,025.47	1,508.06	554.73	452.08	102.65	5.404	
15,199.97	9,547.85	14,720.66	8,991.37	90.17	98.32	0.47	-6,065.32	1,517.28	556.51	453.28	103.23	5.391	
15,249.00	9,549.06	14,769.65	8,991.05	90.80	99.08	0.60	-6,113.05	1,528.32	558.06	454.14	103.92	5.370	
15,299.97	9,550.10	14,820.59	8,990.71	91.45	99.88	0.71	-6,162.68	1,539.81	559.45	454.81	104.64	5.346	
15,338.00	9,551.03	14,858.59	8,990.45	91.93	100.47	0.81	-6,199.70	1,548.37	560.65	455.47	105.18	5.330	
15,399.97	9,552.34	14,920.52	8,990.04	92.72	101.44	0.93	-6,260.04	1,562.33	562.38	456.32	106.06	5.303	
15,429.00	9,552.73	14,949.55	8,989.85	93.09	101.89	0.95	-6,288.31	1,568.88	562.97	456.50	106.47	5.288	
15,499.97	9,553.44	15,020.51	8,989.38	94.00	103.00	0.97	-6,357.44	1,584.87	564.16	456.67	107.49	5.249	
15,518.00	9,553.59	15,038.54	8,989.26	94.23	103.28	0.98	-6,375.01	1,588.94	564.43	456.69	107.74	5.239	
15,599.97	9,553.45	15,120.50	8,988.71	95.27	104.56	0.93	-6,454.86	1,607.41	564.83	455.90	108.92	5.186	
15,608.00	9,553.35	15,128.53	8,988.66	95.37	104.68	0.92	-6,462.68	1,609.22	564.78	455.74	109.04	5.180	
15,699.00	9,552.94	15,219.53	8,988.05	96.54	106.10	0.91	-6,551.34	1,629.74	564.98	454.63	110.35	5.120	
15,699.97	9,552.95	15,220.50	8,988.04	96.55	106.12	0.92	-6,552.28	1,629.96	564.99	454.62	110.36	5.119	
15,789.00	9,553.43	15,309.50	8,987.45	97.69	107.51	1.10	-6,638.99	1,650.02	566.10	454.45	111.64	5.071	
15,799.97	9,553.50	15,320.46	8,987.38	97.83	107.68	1.13	-6,649.67	1,652.49	566.25	454.45	111.80	5.065	
15,880.00	9,554.36	15,400.43	8,986.85	98.86	108.93	1.41	-6,727.58	1,670.52	567.70	454.75	112.96	5.026	
15,899.97	9,554.64	15,420.38	8,986.71	99.12	109.24	1.49	-6,747.01	1,675.01	568.13	454.89	113.25	5.017	
15,969.00	9,555.45	15,489.33	8,986.25	100.01	110.32	1.78	-6,814.19	1,690.56	569.49	455.24	114.25	4.985	
15,999.97	9,555.68	15,520.27	8,986.05	100.41	110.80	1.91	-6,844.33	1,697.53	569.97	455.26	114.71	4.969	
16,058.00	9,555.59	15,578.27	8,985.66	101.15	111.71	2.12	-6,900.83	1,710.61	570.33	454.77	115.56	4.935	
16,099.97	9,554.86	15,620.22	8,985.38	101.70	112.36	2.22	-6,941.71	1,720.07	569.91	453.73	116.19	4.905	
16,148.00	9,552.98	15,668.22	8,985.06	102.33	113.11	2.20	-6,988.47	1,730.89	568.34	451.45	116.89	4.862	
16,199.97	9,550.32	15,720.13	8,984.72	103.00	113.92	2.09	-7,039.04	1,742.59	565.99	448.34	117.65	4.811	
16,238.00	9,548.34	15,758.10	8,984.46	103.50	114.52	1.99	-7,076.04	1,751.15	564.22	446.02	118.21	4.773	
16,299.97	9,544.83	15,819.97	8,984.05	104.29	115.48	1.81	-7,136.30	1,765.09	561.07	441.97	119.09	4.711	
16,327.00	9,543.15	15,846.94	8,983.87	104.64	115.91	1.73	-7,162.59	1,771.17	559.54	440.05	119.48	4.683	
16,399.97	9,538.01	15,919.73	8,983.39	105.57	117.05	1.52	-7,233.50	1,787.58	554.83	434.29	120.53	4.603	
16,417.00	9,536.68	15,936.71	8,983.28	105.79	117.31	1.47	-7,250.04	1,791.41	553.60	432.81	120.78	4.583	
16,499.97	9,528.75	16,019.31	8,982.73	106.85	118.60	1.24	-7,330.51	1,810.03	546.16	424.17	121.99	4.477	
16,507.00	9,527.95	16,026.30	8,982.68	106.94	118.71	1.22	-7,337.32	1,811.61	545.41	423.31	122.09	4.467	
16,596.00	9,519.14	16,114.87	8,982.09	108.08	120.10	0.95	-7,423.62	1,831.57	537.14	413.73	123.41	4.352	
16,599.97	9,518.82	16,118.83	8,982.06	108.13	120.16	0.93	-7,427.47	1,832.47	536.84	413.36	123.47	4.348	
16,686.00	9,513.74	16,204.69	8,981.49	109.24	121.50	0.63	-7,511.12	1,851.82	532.29	407.52	124.77	4.266	
16,699.97	9,513.26	16,218.64	8,981.40	109.42	121.72	0.58	-7,524.71	1,854.97	531.90	406.91	124.98	4.256	
16,776.00	9,511.76	16,294.52	8,980.89	110.40	122.91	0.11	-7,598.64	1,872.07	530.88	404.71	126.17	4.208	
16,799.97	9,511.58	16,318.41	8,980.73	110.71	123.28	-0.10	-7,621.91	1,877.46	530.86	404.32	126.54	4.195	
16,865.00	9,511.11	16,383.25	8,980.30	111.55	124.30	-0.65	-7,685.07	1,892.07	530.86	403.28	127.58	4.161	

<b>Company:</b>	Piedra Operating LLC	<b>Local Co-ordinate Reference:</b>	Well University 8-8E A H 5LS
<b>Project:</b>	Andrews County, TX (NAD83-TNC)	<b>TVD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Reference Site:</b>	University 8-8	<b>MD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Site Error:</b>	0.00	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	University 8-8E A H 5LS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	1.00	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH / 72180	<b>Database:</b>	USAEDMDB
<b>Reference Design:</b>	Surveys (Ensign T054)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design University 8-8E A H 2MS - OH / 72179 - Plan 2 05-23-23												Offset Site Error:	0.00 usft
Survey Program: 15-MWD, 1884-MWD+HRGM, 7462-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)		
16,899.97	9,510.88	16,418.12	8,980.07	111.99	124.85	-0.93	-7,719.05	1,899.93	530.90	402.75	128.15	4.143	
16,956.00	9,510.59	16,474.05	8,979.70	112.71	125.72	-1.30	-7,773.54	1,912.54	531.05	401.99	129.05	4.115	
16,999.97	9,510.61	16,517.96	8,979.41	113.28	126.41	-1.54	-7,816.31	1,922.44	531.41	401.65	129.76	4.095	
17,046.00	9,511.07	16,563.94	8,979.10	113.87	127.13	-1.75	-7,861.12	1,932.81	532.23	401.74	130.50	4.079	
17,099.97	9,511.86	16,617.87	8,978.74	114.57	127.97	-1.95	-7,913.65	1,944.96	533.44	402.09	131.35	4.061	
17,135.00	9,512.34	16,652.88	8,978.51	115.02	128.52	-2.06	-7,947.76	1,952.86	534.19	402.29	131.90	4.050	
17,199.97	9,513.39	16,717.80	8,978.08	115.86	129.54	-2.25	-8,011.01	1,967.49	535.75	402.82	132.93	4.030	
17,225.00	9,513.89	16,742.81	8,977.91	116.18	129.93	-2.33	-8,035.38	1,973.13	536.44	403.12	133.33	4.024	
17,299.97	9,515.34	16,817.73	8,977.41	117.16	131.10	-2.51	-8,108.37	1,990.02	538.46	403.96	134.50	4.003	
17,315.00	9,515.60	16,832.76	8,977.31	117.35	131.34	-2.53	-8,123.01	1,993.41	538.83	404.10	134.73	3.999	
17,399.97	9,516.47	16,917.71	8,976.74	118.45	132.67	-2.61	-8,205.77	2,012.56	540.30	404.28	136.02	3.972	
17,405.00	9,516.48	16,922.74	8,976.71	118.52	132.75	-2.62	-8,210.67	2,013.69	540.35	404.25	136.10	3.970	
17,494.00	9,518.10	17,011.71	8,976.12	119.68	134.14	-2.65	-8,297.35	2,033.75	542.57	405.13	137.44	3.948	
17,499.97	9,518.30	17,017.67	8,976.08	119.76	134.24	-2.64	-8,303.15	2,035.09	542.81	405.28	137.53	3.947	
17,586.00	9,521.10	17,103.63	8,975.51	120.88	135.59	-2.49	-8,386.90	2,054.47	546.12	407.36	138.76	3.936	
17,599.97	9,521.53	17,117.58	8,975.41	121.06	135.80	-2.46	-8,400.49	2,057.61	546.63	407.67	138.95	3.934	
17,676.00	9,523.61	17,193.55	8,974.91	122.06	137.00	-2.27	-8,474.50	2,074.74	549.14	409.12	140.02	3.922	
17,699.96	9,524.22	17,217.50	8,974.75	122.37	137.37	-2.21	-8,497.83	2,080.14	549.89	409.53	140.36	3.918	
17,766.00	9,526.07	17,283.48	8,974.31	123.23	138.41	-2.05	-8,562.11	2,095.01	552.12	410.84	141.29	3.908	
17,799.96	9,527.13	17,317.41	8,974.08	123.68	138.94	-1.98	-8,595.17	2,102.66	553.38	411.61	141.77	3.903	
17,855.00	9,529.01	17,372.39	8,973.72	124.40	139.80	-1.87	-8,648.74	2,115.05	555.60	413.04	142.56	3.897	
17,899.96	9,530.60	17,417.31	8,973.42	124.99	140.50	-1.81	-8,692.50	2,125.18	557.48	414.26	143.21	3.893	
17,946.00	9,532.16	17,463.31	8,973.11	125.59	141.23	-1.83	-8,737.31	2,135.55	559.35	415.44	143.91	3.887	
17,999.96	9,534.01	17,517.22	8,972.75	126.30	142.07	-1.91	-8,789.83	2,147.70	561.58	416.84	144.74	3.880	
18,035.00	9,535.26	17,552.22	8,972.52	126.76	142.62	-1.97	-8,823.93	2,155.59	563.09	417.81	145.29	3.876	
18,099.96	9,537.31	17,617.13	8,972.09	127.61	143.64	-2.03	-8,887.17	2,170.23	565.59	419.32	146.27	3.867	
18,124.00	9,537.91	17,641.15	8,971.93	127.92	144.01	-2.02	-8,910.57	2,175.64	566.34	419.72	146.63	3.862	
18,199.96	9,539.33	17,717.07	8,971.42	128.93	145.21	-1.84	-8,984.54	2,192.75	568.21	420.50	147.71	3.847	
18,214.00	9,539.52	17,731.10	8,971.33	129.11	145.43	-1.79	-8,998.20	2,195.92	568.48	420.58	147.90	3.844	
18,299.96	9,541.18	17,816.96	8,970.76	130.24	146.77	-1.43	-9,081.85	2,215.27	570.61	421.53	149.08	3.827	
18,304.00	9,541.29	17,820.99	8,970.73	130.30	146.84	-1.42	-9,085.78	2,216.18	570.74	421.60	149.14	3.827	
18,394.00	9,541.98	17,910.92	8,970.13	131.48	148.25	-1.09	-9,173.39	2,236.45	571.96	421.55	150.42	3.803	
18,399.96	9,541.91	17,916.88	8,970.09	131.56	148.34	-1.07	-9,179.20	2,237.80	571.93	421.43	150.50	3.800	
18,484.00	9,541.46	18,000.79	8,969.53	132.67	149.66	-0.65	-9,260.95	2,256.71	571.97	420.30	151.68	3.771	
18,499.96	9,541.41	18,016.72	8,969.43	132.89	149.91	-0.53	-9,276.46	2,260.30	572.02	420.12	151.90	3.766	
18,573.00	9,540.09	18,089.66	8,968.94	133.87	151.05	-0.17	-9,347.52	2,276.75	571.16	418.22	152.94	3.734	
18,599.96	9,539.22	18,116.60	8,968.76	134.22	151.48	-0.10	-9,373.77	2,282.82	570.47	417.13	153.34	3.720	
18,662.00	9,536.88	18,178.60	8,968.35	135.05	152.45	0.02	-9,434.17	2,296.80	568.54	414.28	154.26	3.686	
18,699.96	9,535.19	18,216.53	8,968.10	135.54	153.04	0.05	-9,471.13	2,305.35	567.11	412.28	154.82	3.663	
18,751.00	9,532.57	18,267.52	8,967.76	136.21	153.84	0.06	-9,520.80	2,316.84	564.83	409.24	155.59	3.630	
18,799.96	9,529.63	18,316.41	8,967.43	136.85	154.61	0.04	-9,568.44	2,327.86	562.21	405.88	156.32	3.596	
18,841.00	9,526.79	18,357.37	8,967.16	137.39	155.25	0.01	-9,608.34	2,337.10	559.65	402.70	156.94	3.566	
18,899.96	9,523.14	18,416.23	8,966.77	138.16	156.18	-0.07	-9,665.69	2,350.37	556.39	398.54	157.84	3.525	
18,931.00	9,521.75	18,447.24	8,966.56	138.57	156.67	-0.14	-9,695.89	2,357.36	555.20	396.88	158.32	3.507	
18,999.96	9,518.97	18,516.13	8,966.10	139.47	157.75	-0.35	-9,763.01	2,372.89	552.89	393.50	159.39	3.469	
19,021.00	9,518.10	18,537.15	8,965.96	139.74	158.08	-0.42	-9,783.48	2,377.62	552.16	392.44	159.72	3.457	

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

<b>Company:</b>	Piedra Operating LLC	<b>Local Co-ordinate Reference:</b>	Well University 8-8E A H 5LS
<b>Project:</b>	Andrews County, TX (NAD83-TNC)	<b>TVD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Reference Site:</b>	University 8-8	<b>MD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Site Error:</b>	0.00	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	University 8-8E A H 5LS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	1.00	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH / 72180	<b>Database:</b>	USAEDMDB
<b>Reference Design:</b>	Surveys (Ensign T054)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design University 8-8E A H 2MS - OH / 72179 - Plan 2 05-23-23												Offset Site Error:	0.00 usft
Survey Program: 15-MWD, 1884-MWD+HRGM, 7462-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)		
19,099.96	9,514.55	18,615.99	8,965.44	140.77	159.32	-0.74	-9,860.29	2,395.40	549.18	388.20	160.97	3.412	
19,110.00	9,514.07	18,626.01	8,965.37	140.90	159.47	-0.79	-9,870.06	2,397.65	548.77	387.64	161.13	3.406	
19,199.96	9,511.80	18,715.88	8,964.77	142.08	160.88	-1.16	-9,957.61	2,417.91	547.15	384.56	162.59	3.365	
19,201.00	9,511.79	18,716.92	8,964.77	142.09	160.90	-1.16	-9,958.62	2,418.15	547.16	384.55	162.61	3.365	
19,292.00	9,512.49	18,807.88	8,964.16	143.28	162.33	-1.40	-10,047.24	2,438.65	548.51	384.45	164.06	3.343	
19,299.96	9,512.63	18,815.84	8,964.11	143.39	162.45	-1.41	-10,054.99	2,440.45	548.70	384.52	164.19	3.342	
19,382.00	9,514.17	18,897.82	8,963.56	144.46	163.74	-1.62	-10,134.87	2,458.93	550.84	385.35	165.50	3.328	
19,399.96	9,514.53	18,915.77	8,963.44	144.70	164.02	-1.68	-10,152.35	2,462.97	551.35	385.56	165.79	3.326	
19,472.00	9,516.18	18,987.74	8,962.96	145.64	165.15	-1.92	-10,222.46	2,479.20	553.54	386.58	166.96	3.315	
19,499.96	9,516.82	19,015.67	8,962.78	146.01	165.59	-2.00	-10,249.68	2,485.50	554.40	386.99	167.41	3.312	
19,561.00	9,517.92	19,076.69	8,962.37	146.81	166.55	-2.09	-10,309.12	2,499.25	555.93	387.57	168.36	3.302	
19,599.96	9,518.44	19,115.64	8,962.11	147.33	167.16	-2.08	-10,347.07	2,508.03	556.71	387.76	168.95	3.295	
19,651.00	9,518.96	19,166.67	8,961.77	148.00	167.96	-2.09	-10,396.79	2,519.54	557.57	387.84	169.73	3.285	
19,699.96	9,519.28	19,215.63	8,961.44	148.64	168.73	-2.10	-10,444.48	2,530.57	558.22	387.75	170.48	3.275	
19,740.00	9,519.41	19,255.66	8,961.18	149.17	169.36	-2.12	-10,483.49	2,539.60	558.63	387.54	171.09	3.265	
19,799.96	9,519.65	19,315.62	8,960.78	149.96	170.30	-2.17	-10,541.90	2,553.11	559.28	387.26	172.02	3.251	
19,830.00	9,519.86	19,345.65	8,960.58	150.35	170.78	-2.20	-10,571.16	2,559.88	559.71	387.21	172.49	3.245	
19,899.96	9,520.24	19,415.60	8,960.11	151.27	171.88	-2.31	-10,639.30	2,575.65	560.60	387.00	173.60	3.229	
19,919.00	9,520.28	19,434.63	8,959.99	151.52	172.17	-2.36	-10,657.85	2,579.94	560.78	386.87	173.91	3.225	
19,999.96	9,519.45	19,515.57	8,959.45	152.58	173.45	-2.53	-10,736.70	2,598.19	560.56	385.34	175.22	3.199	
20,008.00	9,519.26	19,523.61	8,959.39	152.69	173.57	-2.55	-10,744.53	2,600.00	560.44	385.09	175.35	3.196	
20,098.00	9,516.90	19,613.57	8,958.80	153.87	174.99	-2.74	-10,832.18	2,620.28	558.76	381.94	176.81	3.160	
20,099.96	9,516.84	19,615.53	8,958.78	153.90	175.02	-2.74	-10,834.09	2,620.72	558.72	381.87	176.85	3.159	
20,187.00	9,515.83	19,702.55	8,958.20	155.04	176.39	-2.93	-10,918.86	2,640.34	558.37	380.10	178.27	3.132	
20,199.96	9,515.88	19,715.51	8,958.12	155.21	176.59	-2.96	-10,931.48	2,643.26	558.53	380.05	178.48	3.129	
20,250.00	9,516.16	19,732.99	8,958.00	155.87	176.86	-2.99	-10,948.52	2,647.20	560.11	382.53	177.59	3.154	
20,299.96	9,516.46	19,732.99	8,958.00	156.53	176.86	-2.99	-10,948.52	2,647.20	565.89	391.06	174.83	3.237	
20,311.00	9,516.53	19,732.99	8,958.00	156.67	176.86	-2.99	-10,948.52	2,647.20	567.75	393.67	174.08	3.261	

<b>Company:</b>	Piedra Operating LLC	<b>Local Co-ordinate Reference:</b>	Well University 8-8E A H 5LS
<b>Project:</b>	Andrews County, TX (NAD83-TNC)	<b>TVD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Reference Site:</b>	University 8-8	<b>MD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Site Error:</b>	0.00	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	University 8-8E A H 5LS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	1.00	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH / 72180	<b>Database:</b>	USAEDMDB
<b>Reference Design:</b>	Surveys (Ensign T054)	<b>Offset TVD Reference:</b>	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			Offset Wellbore Center		Distance			Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centers (usft)	Between Ellipses (usft)	Minimum Separation (usft)		
0.00	0.00	0.00	0.00	1.00	1.00	77.17	5.56	24.41	25.04				
15.00	15.00	15.00	15.00	1.00	1.00	77.17	5.56	24.41	25.04				
100.00	100.00	100.00	100.00	1.28	1.31	52.36	5.43	24.44	24.98	22.40	2.59	9.657	
178.00	178.00	178.00	178.00	1.91	1.91	53.61	5.07	24.52	24.85	21.04	3.81	6.521	
200.00	200.00	200.00	200.00	1.98	1.98	70.63	4.93	24.54	24.81	20.87	3.94	6.291	
226.56	226.55	226.57	226.56	2.06	2.07	97.47	4.74	24.57	24.80	20.69	4.11	6.037	CC
268.00	268.00	268.02	268.02	2.20	2.21	133.95	4.39	24.61	24.84	20.47	4.37	5.688	
300.00	300.00	300.00	300.00	2.28	2.30	151.86	4.14	24.63	24.91	20.38	4.54	5.490	
356.00	356.00	355.98	355.97	2.43	2.48	-176.38	3.89	24.69	25.14	20.29	4.84	5.190	
400.00	400.00	400.02	400.01	2.54	2.59	-163.03	3.82	24.71	25.29	20.24	5.06	5.003	
443.00	443.00	443.06	443.05	2.64	2.69	-140.81	3.79	24.66	25.33	20.07	5.26	4.812	
453.91	453.91	453.97	453.97	2.66	2.72	-149.69	3.78	24.63	25.33	20.01	5.32	4.765	
500.00	500.00	500.08	500.07	2.77	2.81	-166.34	3.78	24.50	25.37	19.85	5.53	4.590	
532.00	532.00	532.09	532.09	2.85	2.88	-170.99	3.81	24.39	25.46	19.78	5.68	4.484	
600.00	600.00	600.06	600.06	3.01	3.04	-169.01	3.83	24.19	25.59	19.59	6.00	4.264	
623.00	623.00	623.06	623.05	3.07	3.09	-165.68	3.81	24.14	25.59	19.48	6.11	4.187	
632.29	632.29	632.35	632.34	3.09	3.11	-165.43	3.80	24.12	25.58	19.43	6.15	4.159	
700.00	699.99	700.04	700.04	3.25	3.27	-164.67	3.56	24.02	25.73	19.28	6.45	3.989	
712.00	712.00	712.04	712.03	3.27	3.29	-164.54	3.50	24.01	25.79	19.29	6.50	3.965	
800.00	799.99	800.12	800.11	3.47	3.51	-123.62	2.93	23.83	25.96	19.08	6.89	3.770	
804.00	803.99	804.12	804.11	3.48	3.52	-121.43	2.91	23.81	25.96	19.05	6.90	3.760	
850.27	850.26	850.34	850.33	3.57	3.63	-129.94	2.60	23.68	25.92	18.83	7.09	3.656	
892.00	891.99	892.03	892.02	3.66	3.72	-143.28	2.34	23.64	25.95	18.69	7.26	3.576	
900.00	899.99	900.03	900.02	3.68	3.74	-150.04	2.29	23.63	25.96	18.67	7.29	3.562	
982.00	981.99	982.08	982.07	3.84	3.93	117.61	1.94	23.50	25.97	18.36	7.60	3.415	
1,000.00	999.99	1,000.09	1,000.07	3.87	3.97	135.52	1.88	23.45	25.94	18.27	7.67	3.383	
1,070.00	1,069.99	1,070.11	1,070.09	4.00	4.12	-135.26	1.37	23.24	25.88	17.95	7.93	3.265	
1,100.00	1,099.99	1,100.11	1,100.09	4.06	4.19	-139.72	1.09	23.14	25.87	17.83	8.03	3.219	
1,110.47	1,110.46	1,110.57	1,110.56	4.08	4.21	-141.17	1.00	23.11	25.87	17.79	8.07	3.204	
1,157.00	1,156.99	1,157.11	1,157.09	4.18	4.32	-146.98	0.66	22.95	25.88	17.64	8.24	3.140	
1,200.00	1,199.99	1,200.06	1,200.04	4.39	4.41	-150.66	0.39	22.84	25.97	17.44	8.53	3.044	
1,300.00	1,299.99	1,300.10	1,300.07	4.90	4.64	-156.56	-0.40	22.71	26.39	17.20	9.19	2.872	
1,336.00	1,335.99	1,336.14	1,336.12	5.08	4.73	-157.80	-0.83	22.57	26.48	17.05	9.43	2.808	
1,400.00	1,399.98	1,400.09	1,400.06	5.21	5.04	-166.59	-1.61	22.33	26.75	16.92	9.83	2.722	
1,428.00	1,427.98	1,428.08	1,428.04	5.27	5.18	-169.44	-1.93	22.26	26.94	16.94	10.00	2.694	
1,500.00	1,499.98	1,500.02	1,499.99	5.40	5.53	-126.66	-2.66	22.15	27.36	16.93	10.43	2.624	
1,516.00	1,515.98	1,516.03	1,516.00	5.43	5.59	-115.49	-2.81	22.14	27.42	16.92	10.50	2.611	
1,600.00	1,599.98	1,600.18	1,600.14	5.59	5.77	-140.34	-3.69	21.83	27.47	16.71	10.76	2.553	
1,608.00	1,607.98	1,608.19	1,608.14	5.60	5.79	-143.57	-3.79	21.78	27.45	16.67	10.78	2.546	
1,697.00	1,696.98	1,697.26	1,697.21	5.77	5.99	-143.29	-5.19	21.04	27.22	16.18	11.04	2.466	
1,700.00	1,699.97	1,700.26	1,700.21	5.78	6.00	-143.20	-5.24	21.01	27.21	16.16	11.05	2.463	
1,788.00	1,787.98	1,788.27	1,788.20	5.96	6.18	-144.31	-6.29	20.02	26.77	15.47	11.30	2.369	
1,797.54	1,797.52	1,797.76	1,797.69	5.97	6.20	-151.52	-6.36	19.94	26.76	15.43	11.33	2.363	
1,800.00	1,799.97	1,800.20	1,800.13	5.97	6.20	-152.98	-6.37	19.92	26.76	15.43	11.33	2.361	
1,846.00	1,845.97	1,846.06	1,845.99	6.05	6.26	-167.07	-6.51	19.81	27.15	15.71	11.44	2.374	
1,900.00	1,899.96	1,900.11	1,900.04	6.14	6.31	-155.72	-6.69	19.62	27.70	16.11	11.59	2.389	

<b>Company:</b>	Piedra Operating LLC	<b>Local Co-ordinate Reference:</b>	Well University 8-8E A H 5LS
<b>Project:</b>	Andrews County, TX (NAD83-TNC)	<b>TVD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Reference Site:</b>	University 8-8	<b>MD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Site Error:</b>	0.00	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	University 8-8E A H 5LS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	1.00	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH / 72180	<b>Database:</b>	USAEDMDB
<b>Reference Design:</b>	Surveys (Ensign T054)	<b>Offset TVD Reference:</b>	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)		
1,973.00	1,972.96	1,973.00	1,972.92	6.28	6.39	-136.74	-7.45	19.63	28.58	16.76	11.82	2.417	
2,000.00	1,999.95	1,999.57	1,999.49	6.34	6.43	-117.38	-7.95	19.86	29.08	17.16	11.92	2.439	
2,064.00	2,063.95	2,062.82	2,062.69	6.49	6.52	-88.34	-9.80	21.39	31.07	18.92	12.15	2.557	
2,100.00	2,099.93	2,098.63	2,098.45	6.55	6.56	-74.36	-11.19	22.73	32.46	20.25	12.22	2.657	
2,153.00	2,152.89	2,151.37	2,151.09	6.65	6.62	-66.34	-13.50	24.97	34.31	22.00	12.32	2.786	
2,200.00	2,199.83	2,198.25	2,197.87	6.73	6.67	-65.78	-15.67	27.17	35.89	23.47	12.42	2.889	
2,242.00	2,241.78	2,240.16	2,239.68	6.81	6.71	-65.38	-17.57	29.23	37.34	24.82	12.52	2.983	
2,300.00	2,299.69	2,297.90	2,297.28	6.91	6.78	-62.30	-20.31	32.28	39.34	26.67	12.67	3.106	
2,332.00	2,331.63	2,329.76	2,329.04	6.97	6.82	-61.01	-21.98	34.08	40.42	27.67	12.75	3.171	
2,400.00	2,399.49	2,397.58	2,396.63	7.10	6.90	-58.86	-25.91	38.10	42.74	29.81	12.93	3.305	
2,423.00	2,422.45	2,420.52	2,419.48	7.15	6.93	-57.94	-27.36	39.49	43.54	30.55	12.99	3.352	
2,500.00	2,499.29	2,497.28	2,495.91	7.31	7.04	-57.48	-32.54	44.31	46.38	33.19	13.20	3.515	
2,515.00	2,514.27	2,512.23	2,510.80	7.34	7.06	-57.35	-33.60	45.28	46.98	33.74	13.23	3.550	
2,599.99	2,599.08	2,597.28	2,595.46	7.53	7.19	-47.30	-39.68	50.74	49.85	36.37	13.48	3.698	
2,606.00	2,605.08	2,603.30	2,601.44	7.54	7.20	-46.63	-40.10	51.11	50.01	36.51	13.50	3.705	
2,696.00	2,694.85	2,693.12	2,690.85	7.74	7.36	-40.66	-46.49	56.87	52.11	38.33	13.78	3.782	
2,699.99	2,698.83	2,697.11	2,694.82	7.75	7.36	-40.61	-46.78	57.13	52.19	38.40	13.79	3.784	
2,786.00	2,784.60	2,783.08	2,780.39	7.94	7.53	-39.36	-52.87	62.80	53.99	39.90	14.09	3.831	
2,799.99	2,798.56	2,797.06	2,794.30	7.98	7.56	-39.47	-53.86	63.73	54.29	40.15	14.14	3.838	
2,876.00	2,874.36	2,872.97	2,869.85	8.17	7.72	-40.11	-59.23	68.80	56.06	41.63	14.43	3.885	
2,899.99	2,898.29	2,896.93	2,893.70	8.23	7.77	-39.24	-60.93	70.42	56.65	42.12	14.53	3.900	
2,966.00	2,964.12	2,962.83	2,959.27	8.40	7.92	-36.85	-65.57	74.96	58.29	43.49	14.80	3.939	
2,999.99	2,998.02	2,996.83	2,993.11	8.49	8.01	-35.64	-67.97	77.32	59.12	44.17	14.94	3.956	
3,055.00	3,052.89	3,051.87	3,047.88	8.63	8.15	-33.51	-71.95	81.08	60.39	45.20	15.19	3.977	
3,099.99	3,097.76	3,096.96	3,092.75	8.75	8.27	-32.83	-75.31	84.07	61.38	45.98	15.39	3.987	
3,146.00	3,143.65	3,143.07	3,138.63	8.88	8.39	-32.04	-78.83	87.01	62.32	46.72	15.61	3.993	
3,199.99	3,197.50	3,197.42	3,192.72	9.03	8.54	-29.21	-83.01	90.26	63.23	47.36	15.88	3.983	
3,236.00	3,233.42	3,233.67	3,228.81	9.13	8.65	-27.27	-85.75	92.24	63.63	47.58	16.06	3.963	
3,299.99	3,297.25	3,297.66	3,292.53	9.32	8.83	-24.77	-90.50	95.62	64.24	47.85	16.39	3.920	
3,325.00	3,322.20	3,322.66	3,317.42	9.39	8.90	-23.79	-92.33	96.95	64.50	47.98	16.52	3.905	
3,399.99	3,397.01	3,397.69	3,392.16	9.61	9.13	-23.22	-97.75	100.93	65.26	48.33	16.93	3.855	
3,416.00	3,412.97	3,413.71	3,408.11	9.65	9.18	-23.12	-98.91	101.77	65.40	48.38	17.02	3.843	
3,499.99	3,496.75	3,498.18	3,492.28	9.91	9.43	-22.46	-104.76	105.95	65.76	48.26	17.50	3.758	
3,507.00	3,503.73	3,505.23	3,499.30	9.93	9.45	-22.42	-105.23	106.27	65.75	48.22	17.54	3.749	
3,596.00	3,592.47	3,594.41	3,588.21	10.20	9.72	-27.75	-110.99	110.27	65.49	47.46	18.03	3.632	
3,599.99	3,596.45	3,598.40	3,592.19	10.22	9.73	-28.14	-111.25	110.45	65.47	47.42	18.05	3.626	
3,686.00	3,682.17	3,684.28	3,677.81	10.49	10.00	-36.43	-116.71	114.31	65.19	46.68	18.51	3.522	
3,699.99	3,696.11	3,698.30	3,691.78	10.54	10.04	-36.72	-117.61	114.94	65.16	46.58	18.58	3.507	
3,776.00	3,771.84	3,774.51	3,767.76	10.79	10.28	-38.29	-122.50	118.26	64.93	45.95	18.97	3.422	
3,799.99	3,795.75	3,798.47	3,791.65	10.86	10.36	-37.86	-124.03	119.27	64.84	45.74	19.10	3.395	
3,864.00	3,859.53	3,862.36	3,855.35	11.07	10.56	-36.68	-128.04	122.08	64.63	45.19	19.43	3.326	
3,899.99	3,895.39	3,898.36	3,891.25	11.19	10.67	-36.79	-130.27	123.71	64.52	44.90	19.62	3.288	
3,954.00	3,949.21	3,952.41	3,945.14	11.37	10.84	-36.92	-133.61	126.12	64.35	44.45	19.91	3.233	
3,999.99	3,995.04	3,998.40	3,991.00	11.52	10.99	-36.77	-136.46	128.16	64.20	44.04	20.15	3.185	
4,044.00	4,038.90	4,042.41	4,034.88	11.67	11.13	-36.63	-139.15	130.12	64.03	43.64	20.39	3.140	

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



<b>Company:</b>	Piedra Operating LLC	<b>Local Co-ordinate Reference:</b>	Well University 8-8E A H 5LS
<b>Project:</b>	Andrews County, TX (NAD83-TNC)	<b>TVD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Reference Site:</b>	University 8-8	<b>MD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Site Error:</b>	0.00	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	University 8-8E A H 5LS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	1.00	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH / 72180	<b>Database:</b>	USAEDMDB
<b>Reference Design:</b>	Surveys (Ensign T054)	<b>Offset TVD Reference:</b>	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)		
4,099.99	4,094.70	4,098.35	4,090.66	11.85	11.31	-35.31	-142.51	132.65	63.85	43.15	20.69	3.085	
4,133.00	4,127.60	4,131.32	4,123.54	11.96	11.42	-34.49	-144.43	134.19	63.76	42.89	20.87	3.055	
4,199.99	4,194.38	4,198.23	4,190.26	12.18	11.64	-33.32	-148.38	137.37	63.64	42.39	21.25	2.995	
4,222.00	4,216.32	4,220.22	4,212.18	12.26	11.71	-32.87	-149.71	138.42	63.61	42.23	21.38	2.976	
4,299.99	4,294.08	4,298.76	4,290.51	12.52	11.96	-32.11	-154.22	141.92	63.23	41.41	21.83	2.897	
4,312.00	4,306.05	4,310.85	4,302.58	12.56	12.00	-32.01	-154.86	142.41	63.12	41.23	21.89	2.883	
4,399.99	4,393.79	4,399.27	4,390.83	12.85	12.29	-30.22	-159.20	145.73	62.01	39.62	22.38	2.770	
4,401.00	4,394.80	4,400.29	4,391.84	12.86	12.29	-30.20	-159.24	145.77	61.99	39.60	22.39	2.769	
4,491.00	4,484.56	4,490.43	4,481.84	13.16	12.57	-29.55	-163.21	148.84	60.48	37.60	22.88	2.643	
4,499.99	4,493.53	4,499.41	4,490.81	13.19	12.60	-29.37	-163.59	149.14	60.32	37.38	22.93	2.630	
4,582.00	4,575.33	4,581.33	4,572.61	13.47	12.86	-27.62	-167.05	151.95	58.89	35.50	23.39	2.518	
4,599.99	4,593.27	4,599.32	4,590.57	13.53	12.91	-28.69	-167.81	152.58	58.59	35.10	23.49	2.494	
4,673.00	4,666.07	4,672.32	4,663.47	13.78	13.15	-33.02	-170.86	155.13	57.20	33.33	23.88	2.396	
4,699.99	4,692.98	4,699.38	4,690.49	13.87	13.23	-34.90	-171.97	156.06	56.65	32.64	24.01	2.359	
4,764.00	4,756.79	4,763.55	4,754.58	14.09	13.43	-39.59	-174.54	158.13	55.29	30.98	24.31	2.275	
4,799.99	4,792.66	4,799.48	4,790.46	14.22	13.55	-39.80	-175.94	159.24	54.53	30.07	24.46	2.229	
4,854.00	4,846.51	4,853.40	4,844.31	14.40	13.72	-40.07	-178.06	160.98	53.47	28.77	24.70	2.165	
4,899.99	4,892.36	4,899.46	4,890.31	14.56	13.86	-41.22	-179.86	162.46	52.60	27.70	24.90	2.112	
4,943.00	4,935.24	4,942.53	4,933.33	14.71	13.99	-42.32	-181.52	163.77	51.74	26.66	25.08	2.063	
4,999.99	4,992.07	4,999.63	4,990.36	14.91	14.17	-43.49	-183.74	165.40	50.62	25.30	25.32	1.999	
5,033.00	5,024.99	5,032.71	5,023.40	15.02	14.28	-44.05	-185.06	166.26	50.00	24.53	25.46	1.963	
5,099.99	5,091.82	5,099.61	5,090.23	15.25	14.48	-45.37	-187.59	168.03	48.80	23.06	25.75	1.896	
5,122.00	5,113.77	5,121.59	5,112.19	15.33	14.55	-45.89	-188.36	168.64	48.44	22.61	25.83	1.875	
5,199.99	5,191.56	5,199.67	5,190.20	15.60	14.79	-48.18	-190.99	170.74	47.00	20.89	26.11	1.800	
5,212.00	5,203.54	5,211.70	5,202.21	15.64	14.83	-48.58	-191.39	171.05	46.75	20.59	26.15	1.787	
5,299.99	5,291.28	5,299.63	5,290.06	15.95	15.10	-49.70	-194.38	173.27	44.87	18.43	26.44	1.697	
5,303.00	5,294.28	5,302.63	5,293.07	15.96	15.11	-49.73	-194.48	173.35	44.81	18.36	26.45	1.694	
5,393.00	5,384.02	5,392.52	5,382.88	16.28	15.39	-58.51	-197.39	175.70	43.23	16.54	26.69	1.620	
5,399.99	5,390.99	5,399.51	5,389.86	16.30	15.41	-58.84	-197.59	175.89	43.13	16.43	26.70	1.615	
5,483.00	5,473.76	5,482.53	5,472.81	16.59	15.66	-62.90	-200.37	178.07	42.06	15.17	26.89	1.564	
5,499.99	5,490.70	5,499.51	5,489.77	16.65	15.72	-63.82	-201.00	178.50	41.85	14.91	26.94	1.554	
5,573.00	5,563.48	5,572.47	5,562.66	16.91	15.95	-67.98	-203.64	180.38	41.07	13.97	27.10	1.515	
5,599.99	5,590.39	5,599.40	5,589.56	17.00	16.03	-69.24	-204.58	181.09	40.85	13.68	27.16	1.504	
5,662.00	5,652.21	5,661.28	5,651.38	17.22	16.22	-72.39	-206.58	182.78	40.51	13.21	27.30	1.484	Level 3
5,699.99	5,690.08	5,699.25	5,689.32	17.36	16.34	-74.30	-207.72	183.84	40.39	13.02	27.38	1.475	Level 3
5,752.00	5,741.93	5,751.22	5,741.26	17.54	16.50	-77.13	-209.19	185.25	40.29	12.79	27.50	1.465	Level 3
5,769.87	5,759.74	5,769.08	5,759.10	17.60	16.55	-78.61	-209.68	185.72	40.28	12.74	27.54	1.462	Level 3
5,799.99	5,789.76	5,799.18	5,789.18	17.71	16.64	-81.07	-210.54	186.53	40.31	12.69	27.63	1.459	Level 3 , ES
5,841.00	5,830.64	5,840.17	5,830.13	17.85	16.77	-84.32	-211.77	187.64	40.45	12.69	27.76	1.457	Level 3 , SF
5,899.99	5,889.45	5,899.20	5,889.11	18.06	16.95	-91.60	-213.68	189.22	40.90	12.91	27.98	1.461	Level 3
5,931.00	5,920.37	5,930.24	5,920.12	18.17	17.05	-95.37	-214.75	190.03	41.26	13.14	28.12	1.467	Level 3
5,999.99	5,989.19	5,999.18	5,989.00	18.41	17.26	-104.61	-217.05	191.75	42.44	14.00	28.44	1.492	Level 3
6,022.00	6,011.15	6,021.17	6,010.98	18.49	17.33	-107.77	-217.73	192.28	42.94	14.39	28.55	1.504	
6,099.99	6,088.99	6,099.25	6,089.00	18.76	17.57	-110.69	-220.26	194.08	44.69	15.75	28.94	1.544	
6,112.00	6,100.99	6,111.28	6,101.01	18.80	17.61	-111.07	-220.67	194.36	44.93	15.94	28.99	1.550	
6,199.99	6,188.87	6,199.16	6,188.83	19.11	17.88	-113.34	-223.58	196.32	46.55	17.13	29.42	1.582	

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



<b>Company:</b>	Piedra Operating LLC	<b>Local Co-ordinate Reference:</b>	Well University 8-8E A H 5LS
<b>Project:</b>	Andrews County, TX (NAD83-TNC)	<b>TVD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Reference Site:</b>	University 8-8	<b>MD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Site Error:</b>	0.00	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	University 8-8E A H 5LS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	1.00	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH / 72180	<b>Database:</b>	USAEDMDB
<b>Reference Design:</b>	Surveys (Ensign T054)	<b>Offset TVD Reference:</b>	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			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)		
6,201.00	6,189.88	6,200.18	6,189.84	19.11	17.88	-113.37	-223.61	196.35	46.56	17.14	29.42	1.583	
6,291.00	6,279.81	6,290.02	6,279.60	19.43	18.16	-113.33	-226.62	198.65	48.19	18.36	29.83	1.615	
6,299.99	6,288.79	6,298.98	6,288.55	19.46	18.19	-113.37	-226.95	198.91	48.37	18.50	29.87	1.619	
6,381.00	6,369.74	6,379.71	6,369.19	19.74	18.45	-113.59	-229.81	201.54	50.27	20.03	30.25	1.662	
6,399.99	6,388.71	6,398.74	6,388.19	19.80	18.51	-113.25	-230.48	202.20	50.77	20.43	30.34	1.674	
6,470.00	6,458.68	6,468.93	6,458.30	20.04	18.74	-111.91	-233.10	204.53	52.40	21.73	30.67	1.709	
6,499.99	6,488.64	6,498.90	6,488.23	20.15	18.84	-110.77	-234.28	205.49	53.03	22.22	30.82	1.721	
6,559.00	6,547.62	6,557.86	6,547.11	20.35	19.03	-108.54	-236.57	207.40	54.28	23.17	31.11	1.745	
6,599.99	6,588.57	6,598.75	6,587.95	20.49	19.17	-109.29	-238.15	208.77	55.19	23.88	31.31	1.763	
6,650.00	6,638.55	6,648.63	6,637.77	20.66	19.33	-110.24	-240.01	210.50	56.45	24.88	31.57	1.788	
6,699.99	6,688.51	6,698.72	6,687.79	20.84	19.49	-108.97	-241.88	212.23	57.73	25.89	31.83	1.813	
6,740.00	6,728.49	6,738.83	6,727.85	20.97	19.63	-107.97	-243.39	213.53	58.65	26.61	32.05	1.830	
6,799.99	6,788.44	6,798.63	6,787.58	21.18	19.82	-106.22	-245.58	215.47	60.04	27.68	32.37	1.855	
6,830.00	6,818.43	6,828.55	6,817.46	21.29	19.92	-105.41	-246.61	216.48	60.79	28.27	32.52	1.869	
6,899.99	6,888.38	6,898.63	6,887.47	21.53	20.14	-105.61	-249.00	218.80	62.53	29.63	32.90	1.901	
6,919.00	6,907.38	6,917.67	6,906.49	21.59	20.20	-105.67	-249.65	219.41	62.99	29.98	33.00	1.909	
6,999.99	6,988.32	6,998.67	6,987.40	21.88	20.47	-103.34	-252.52	221.98	64.83	31.38	33.45	1.938	
7,009.00	6,997.33	7,007.69	6,996.40	21.91	20.50	-103.06	-252.84	222.26	65.02	31.52	33.50	1.941	
7,099.00	7,087.28	7,097.61	7,086.23	22.22	20.79	-102.32	-255.96	225.08	67.00	33.00	34.00	1.970	
7,099.99	7,088.26	7,098.60	7,087.21	22.22	20.79	-102.31	-255.99	225.11	67.02	33.01	34.01	1.971	
7,188.00	7,176.24	7,186.75	7,175.28	22.53	21.07	-102.68	-258.77	227.68	68.91	34.41	34.50	1.998	
7,199.99	7,188.22	7,198.77	7,187.29	22.57	21.11	-103.33	-259.13	228.01	69.15	34.59	34.56	2.001	
7,277.00	7,265.20	7,275.98	7,264.44	22.84	21.35	-107.62	-261.66	230.02	70.69	35.70	34.99	2.020	
7,299.99	7,288.17	7,298.92	7,287.36	22.92	21.43	-108.54	-262.45	230.60	71.15	36.02	35.13	2.025	
7,367.00	7,355.16	7,365.76	7,354.13	23.15	21.64	-111.45	-264.77	232.39	72.63	37.10	35.53	2.044	
7,399.99	7,388.14	7,398.86	7,387.20	23.26	21.75	-112.36	-265.92	233.29	73.41	37.68	35.73	2.054	
7,457.00	7,445.13	7,456.11	7,444.39	23.45	21.93	-113.87	-267.96	234.69	74.66	38.58	36.09	2.069	
7,481.00	7,469.12	7,480.20	7,468.46	23.53	22.01	-120.15	-268.82	235.23	75.18	38.95	36.23	2.075	
7,499.99	7,488.10	7,499.26	7,487.50	23.59	22.07	-120.32	-269.50	235.62	75.60	39.25	36.35	2.080	
7,595.00	7,583.07	7,594.64	7,582.81	23.90	22.39	-121.18	-272.80	237.26	77.57	40.64	36.93	2.101	
7,599.98	7,588.06	7,599.64	7,587.81	23.91	22.41	-121.41	-272.97	237.33	77.66	40.71	36.95	2.102	
7,685.00	7,673.03	7,684.80	7,672.92	24.20	22.66	-125.01	-275.71	238.39	79.37	41.96	37.41	2.122	
7,699.98	7,688.00	7,699.80	7,687.92	24.25	22.70	-126.78	-276.17	238.55	79.69	42.21	37.48	2.126	
7,774.00	7,761.97	7,773.92	7,762.00	24.49	22.91	-134.62	-278.40	239.26	81.46	43.62	37.84	2.153	
7,799.98	7,787.94	7,800.07	7,788.13	24.57	22.95	-136.71	-279.11	239.44	82.03	44.08	37.95	2.162	
7,864.00	7,851.95	7,864.53	7,852.59	24.76	23.06	161.67	-280.09	239.39	82.47	44.25	38.22	2.158	
7,898.10	7,886.05	7,898.71	7,886.77	24.86	23.08	155.98	-280.30	239.16	82.40	44.07	38.33	2.150	
7,899.98	7,887.93	7,900.60	7,888.65	24.86	23.08	155.86	-280.31	239.14	82.40	44.07	38.34	2.149	
7,954.00	7,941.94	7,954.72	7,942.77	25.02	23.10	154.32	-280.67	238.71	82.59	44.07	38.52	2.144	
7,999.98	7,987.91	8,000.70	7,988.75	25.15	23.11	161.27	-280.98	238.32	83.04	44.37	38.68	2.147	
8,044.00	8,031.91	8,044.71	8,032.75	25.28	23.13	165.51	-281.27	237.94	83.75	44.93	38.83	2.157	
8,099.98	8,087.87	8,100.63	8,088.67	25.44	23.14	-175.63	-281.62	237.47	84.78	45.78	39.01	2.174	
8,133.00	8,120.88	8,133.60	8,121.65	25.54	23.15	-163.37	-281.82	237.21	85.35	46.25	39.09	2.183	
8,199.98	8,187.84	8,200.50	8,188.54	25.74	23.19	-151.17	-282.23	236.73	86.38	47.11	39.27	2.200	
8,223.00	8,210.85	8,223.48	8,211.52	25.81	23.20	-146.84	-282.39	236.58	86.70	47.37	39.33	2.205	

<b>Company:</b>	Piedra Operating LLC	<b>Local Co-ordinate Reference:</b>	Well University 8-8E A H 5LS
<b>Project:</b>	Andrews County, TX (NAD83-TNC)	<b>TVD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Reference Site:</b>	University 8-8	<b>MD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Site Error:</b>	0.00	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	University 8-8E A H 5LS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	1.00	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH / 72180	<b>Database:</b>	USAEDMDB
<b>Reference Design:</b>	Surveys (Ensign T054)	<b>Offset TVD Reference:</b>	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)		
8,299.98	8,287.81	8,300.38	8,288.42	26.06	23.27	-133.86	-282.92	236.14	87.46	47.92	39.54	2.212	
8,312.00	8,299.83	8,312.38	8,300.42	26.10	23.28	-130.99	-283.00	236.08	87.53	47.96	39.57	2.212	
8,399.98	8,387.80	8,400.21	8,388.12	26.38	23.59	-134.21	-286.99	236.60	87.88	47.55	40.33	2.179	
8,401.00	8,388.82	8,401.22	8,389.13	26.39	23.59	-134.25	-287.08	236.62	87.89	47.55	40.34	2.179	
8,490.00	8,477.81	8,487.56	8,474.72	26.66	24.02	-156.53	-297.83	239.71	90.11	48.43	41.68	2.162	
8,499.98	8,487.79	8,497.23	8,484.24	26.69	24.07	-157.13	-299.41	240.25	90.64	48.77	41.87	2.165	
8,581.00	8,568.79	8,576.62	8,561.94	26.94	24.46	-159.51	-315.08	244.74	96.33	52.51	43.81	2.199	
8,599.98	8,587.77	8,594.89	8,579.65	27.00	24.57	-146.82	-319.38	245.77	98.11	53.79	44.33	2.213	
8,670.00	8,657.77	8,660.57	8,642.53	27.21	24.96	-108.32	-337.95	249.47	106.76	60.48	46.27	2.307	
8,699.98	8,687.74	8,687.44	8,667.79	27.33	25.13	-88.91	-346.99	251.00	111.66	64.62	47.04	2.374	
8,760.00	8,747.68	8,738.53	8,714.63	27.56	25.50	-68.80	-367.08	254.19	124.30	76.04	48.26	2.576	
8,799.98	8,787.58	8,764.00	8,737.33	27.72	25.69	-66.12	-378.52	255.94	135.40	87.19	48.20	2.809	
8,849.00	8,836.49	8,804.04	8,771.88	27.92	26.00	-61.93	-398.36	259.76	152.50	103.66	48.84	3.123	
8,872.00	8,859.45	8,819.12	8,784.49	28.00	26.12	-59.76	-406.39	261.72	162.07	113.31	48.76	3.324	
8,899.98	8,887.36	8,836.88	8,799.03	28.11	26.25	-46.08	-416.25	264.38	174.58	125.98	48.60	3.592	
8,941.00	8,928.19	8,864.20	8,820.72	28.27	26.44	-33.69	-432.15	269.13	193.88	145.47	48.41	4.005	
8,999.98	8,986.21	8,908.85	8,855.06	29.02	26.67	-19.30	-459.60	276.88	219.77	170.97	48.80	4.504	
9,031.00	9,016.02	8,932.68	8,872.87	29.44	26.79	-15.61	-474.94	280.86	231.51	182.54	48.97	4.727	
9,099.98	9,080.85	8,975.39	8,903.32	30.46	27.05	-10.06	-503.97	288.09	256.70	207.78	48.92	5.248	
9,121.00	9,100.27	8,987.23	8,911.24	30.79	27.13	-8.67	-512.50	290.27	264.77	215.94	48.82	5.423	
9,199.98	9,171.23	9,032.00	8,938.93	31.40	27.41	-6.46	-546.51	299.14	295.83	247.75	48.08	6.153	
9,210.00	9,179.96	9,032.00	8,938.93	31.48	27.41	-6.48	-546.51	299.14	299.83	252.37	47.46	6.317	
9,299.00	9,255.54	9,077.33	8,962.70	32.18	27.61	-8.36	-583.76	309.15	337.65	291.30	46.35	7.284	
9,299.98	9,256.36	9,077.78	8,962.91	32.19	27.62	-8.38	-584.14	309.25	338.09	291.76	46.33	7.297	
9,389.00	9,329.05	9,122.00	8,981.18	32.75	27.82	-10.61	-622.94	319.91	381.53	336.33	45.19	8.442	
9,399.98	9,337.84	9,122.00	8,981.18	32.81	27.82	-10.43	-622.94	319.91	387.16	342.50	44.66	8.669	
9,479.00	9,398.36	9,158.72	8,992.94	33.28	27.90	-8.68	-656.64	328.52	427.48	383.82	43.67	9.790	
9,499.98	9,413.49	9,168.59	8,995.65	33.43	27.92	-8.21	-665.89	330.64	437.81	394.18	43.63	10.034	
9,568.00	9,458.53	9,211.00	9,005.00	33.92	28.03	-6.57	-706.43	338.75	469.15	424.98	44.17	10.622	
9,599.98	9,477.62	9,211.00	9,005.00	34.11	28.03	-6.39	-706.43	338.75	482.51	439.18	43.32	11.137	
9,657.00	9,508.72	9,245.47	9,010.24	34.46	28.07	-5.36	-739.96	344.77	505.31	461.59	43.71	11.559	
9,699.98	9,529.60	9,267.86	9,012.71	34.64	28.09	-4.86	-761.85	348.77	521.38	477.67	43.72	11.926	
9,748.00	9,550.27	9,301.00	9,015.02	34.85	28.13	-4.23	-794.35	354.80	538.33	494.23	44.11	12.205	
9,799.98	9,568.71	9,327.11	9,016.02	35.03	28.15	-3.81	-820.00	359.63	554.20	509.95	44.25	12.525	
9,837.00	9,578.89	9,354.11	9,016.64	35.17	28.17	-3.47	-846.50	364.70	563.35	518.67	44.68	12.609	
9,899.98	9,588.83	9,404.04	9,016.74	35.33	28.21	-3.01	-895.51	374.29	572.88	526.34	46.54	12.309	
9,928.00	9,589.86	9,432.51	9,016.59	35.41	28.24	-2.85	-923.39	380.02	573.98	526.39	47.59	12.062	
9,952.00	9,589.61	9,457.51	9,016.50	35.46	28.26	-2.74	-947.87	385.07	573.77	525.98	47.79	12.006	
9,999.98	9,588.60	9,507.52	9,016.46	35.57	28.31	-2.53	-996.84	395.20	572.69	524.65	48.05	11.919	
10,014.18	9,588.25	9,522.47	9,016.49	35.60	28.33	-2.46	-1,011.49	398.23	572.30	524.17	48.14	11.889	
10,042.00	9,587.53	9,551.77	9,016.59	35.67	28.37	-2.33	-1,040.19	404.11	571.42	523.12	48.30	11.830	
10,054.46	9,587.20	9,564.88	9,016.66	35.71	28.38	-2.27	-1,053.04	406.73	571.00	522.62	48.38	11.802	
10,099.98	9,586.09	9,612.76	9,017.06	35.85	28.46	-2.19	-1,099.95	416.28	569.48	520.80	48.67	11.700	
10,111.38	9,585.83	9,624.73	9,017.19	35.89	28.48	-2.20	-1,111.67	418.74	569.10	520.35	48.75	11.675	
10,132.00	9,585.40	9,646.36	9,017.46	35.96	28.52	-2.26	-1,132.82	423.28	568.43	519.54	48.88	11.628	
10,138.27	9,585.28	9,652.94	9,017.55	35.98	28.53	-2.28	-1,139.24	424.68	568.22	519.29	48.93	11.614	

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

<b>Company:</b>	Piedra Operating LLC	<b>Local Co-ordinate Reference:</b>	Well University 8-8E A H 5LS
<b>Project:</b>	Andrews County, TX (NAD83-TNC)	<b>TVD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Reference Site:</b>	University 8-8	<b>MD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Site Error:</b>	0.00	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	University 8-8E A H 5LS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	1.00	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH / 72180	<b>Database:</b>	USAEDMDB
<b>Reference Design:</b>	Surveys (Ensign T054)	<b>Offset TVD Reference:</b>	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		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)			
10,199.98	9,583.86	9,716.78	9,018.62	36.22	28.67	-2.61	-1,201.50	438.74	565.90	516.57	49.33	11.473	
10,220.20	9,583.33	9,737.45	9,019.01	36.30	28.72	-2.73	-1,221.67	443.26	565.04	515.59	49.45	11.426	
10,223.00	9,583.26	9,740.32	9,019.07	36.31	28.73	-2.75	-1,224.47	443.88	564.92	515.45	49.47	11.419	
10,227.54	9,583.14	9,744.96	9,019.16	36.33	28.74	-2.78	-1,229.00	444.89	564.72	515.22	49.50	11.409	
10,299.98	9,581.11	9,821.97	9,020.92	36.63	28.98	-3.24	-1,304.15	461.61	561.26	511.16	50.10	11.202	
10,312.00	9,580.77	9,835.03	9,021.30	36.68	29.03	-3.32	-1,316.88	464.52	560.61	510.39	50.22	11.164	
10,315.61	9,580.66	9,838.95	9,021.42	36.70	29.04	-3.35	-1,320.70	465.39	560.41	510.15	50.25	11.152	
10,323.13	9,580.45	9,847.12	9,021.68	36.73	29.07	-3.40	-1,328.65	467.23	559.99	509.66	50.33	11.127	
10,399.98	9,578.76	9,921.52	9,024.05	37.11	29.41	-3.88	-1,401.03	484.27	556.15	505.43	50.71	10.967	
10,401.00	9,578.74	9,922.48	9,024.08	37.12	29.41	-3.89	-1,401.97	484.49	556.10	505.39	50.72	10.965	
10,405.79	9,578.66	9,927.00	9,024.21	37.14	29.44	-3.92	-1,406.36	485.53	555.91	505.17	50.74	10.957	
10,417.46	9,578.47	9,938.00	9,024.51	37.20	29.50	-3.99	-1,417.06	488.08	555.45	504.66	50.79	10.937	
10,490.00	9,577.42	10,012.93	9,026.63	37.61	29.96	-4.53	-1,489.87	505.66	552.71	501.32	51.39	10.756	
10,499.98	9,577.29	10,023.48	9,026.98	37.68	30.03	-4.61	-1,500.12	508.16	552.31	500.82	51.48	10.728	
10,502.96	9,577.25	10,026.63	9,027.08	37.69	30.06	-4.63	-1,503.18	508.91	552.18	500.67	51.51	10.720	
10,507.56	9,577.19	10,031.50	9,027.25	37.72	30.09	-4.66	-1,507.90	510.07	551.99	500.44	51.56	10.707	
10,580.00	9,576.23	10,095.72	9,029.09	38.20	30.60	-4.97	-1,570.25	525.34	549.29	497.56	51.72	10.620	
10,599.98	9,575.95	10,112.86	9,029.37	38.34	30.75	-5.04	-1,586.91	529.36	548.73	496.99	51.74	10.605	
10,603.49	9,575.90	10,115.87	9,029.41	38.36	30.78	-5.05	-1,589.83	530.07	548.64	496.90	51.75	10.602	
10,603.83	9,575.89	10,116.16	9,029.41	38.37	30.78	-5.05	-1,590.12	530.14	548.63	496.89	51.75	10.602	
10,670.00	9,574.71	10,178.00	9,029.87	38.84	31.37	-5.27	-1,650.26	544.53	547.16	495.11	52.05	10.513	
10,683.27	9,574.44	10,190.83	9,029.93	38.94	31.50	-5.32	-1,662.73	547.51	546.87	494.74	52.13	10.491	
10,699.98	9,574.09	10,206.99	9,029.99	39.07	31.67	-5.39	-1,678.45	551.27	546.52	494.28	52.23	10.463	
10,708.73	9,573.91	10,215.45	9,030.01	39.13	31.76	-5.42	-1,686.68	553.23	546.34	494.06	52.29	10.449	
10,759.00	9,572.88	10,268.18	9,030.24	39.51	32.34	-5.63	-1,737.96	565.52	545.27	492.48	52.79	10.329	
10,770.50	9,572.63	10,280.44	9,030.34	39.60	32.48	-5.69	-1,749.88	568.38	544.98	492.06	52.92	10.298	
10,799.98	9,571.96	10,311.85	9,030.67	39.83	32.85	-5.84	-1,780.41	575.74	544.12	490.87	53.25	10.219	
10,812.11	9,571.66	10,325.28	9,030.86	39.93	33.01	-5.91	-1,793.47	578.90	543.71	490.30	53.41	10.180	
10,848.00	9,570.69	10,365.01	9,031.60	40.21	33.49	-6.14	-1,832.08	588.22	542.27	488.38	53.89	10.062	
10,862.38	9,570.31	10,380.91	9,031.97	40.33	33.69	-6.21	-1,847.53	591.95	541.63	487.54	54.09	10.013	
10,899.98	9,569.58	10,418.71	9,033.00	40.65	34.16	-6.35	-1,884.26	600.83	540.03	485.60	54.43	9.922	
10,910.34	9,569.45	10,428.05	9,033.23	40.74	34.28	-6.37	-1,893.33	603.03	539.67	485.20	54.47	9.908	
10,938.00	9,569.24	10,453.00	9,033.77	40.98	34.60	-6.40	-1,917.56	608.95	538.91	484.33	54.58	9.874	
10,949.16	9,569.20	10,463.07	9,033.95	41.09	34.73	-6.41	-1,927.34	611.35	538.68	484.06	54.63	9.862	
10,999.98	9,569.14	10,507.20	9,034.48	41.56	35.31	-6.38	-1,970.20	621.88	538.01	483.26	54.75	9.827	
11,014.10	9,569.16	10,518.72	9,034.50	41.69	35.46	-6.35	-1,981.40	624.55	537.97	483.22	54.74	9.827	
11,014.45	9,569.16	10,519.00	9,034.50	41.69	35.47	-6.35	-1,981.68	624.62	537.97	483.22	54.74	9.827	
11,026.00	9,569.19	10,528.42	9,034.46	41.80	35.59	-6.32	-1,990.85	626.76	537.99	483.25	54.74	9.828	
11,099.98	9,569.28	10,590.12	9,033.23	42.48	36.43	-5.99	-2,051.12	639.90	539.16	484.39	54.77	9.844	
11,118.00	9,569.27	10,607.67	9,032.68	42.65	36.66	-5.88	-2,068.28	643.50	539.61	484.72	54.89	9.831	
11,199.98	9,568.81	10,688.51	9,030.01	43.41	37.76	-5.44	-2,147.30	660.36	541.46	485.96	55.50	9.757	
11,207.00	9,568.73	10,695.75	9,029.77	43.48	37.86	-5.40	-2,154.38	661.86	541.58	486.02	55.56	9.747	
11,297.00	9,567.33	10,788.43	9,026.92	44.33	39.15	-4.87	-2,245.12	680.51	542.52	486.09	56.43	9.614	
11,299.98	9,567.27	10,791.49	9,026.83	44.36	39.19	-4.85	-2,248.12	681.12	542.53	486.07	56.46	9.609	
11,387.00	9,565.32	10,879.71	9,024.49	45.21	40.42	-4.27	-2,334.59	698.37	542.45	485.21	57.24	9.477	

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

<b>Company:</b>	Piedra Operating LLC	<b>Local Co-ordinate Reference:</b>	Well University 8-8E A H 5LS
<b>Project:</b>	Andrews County, TX (NAD83-TNC)	<b>TVD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Reference Site:</b>	University 8-8	<b>MD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Site Error:</b>	0.00	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	University 8-8E A H 5LS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	1.00	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH / 72180	<b>Database:</b>	USAEDMDB
<b>Reference Design:</b>	Surveys (Ensign T054)	<b>Offset TVD Reference:</b>	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)		
11,399.98	9,565.02	10,892.52	9,024.15	45.34	40.60	-4.17	-2,347.16	700.87	542.43	485.08	57.34	9.459	
11,478.00	9,564.25	10,970.29	9,022.07	46.12	41.71	-3.61	-2,423.40	716.08	543.39	485.39	58.01	9.368	
11,499.98	9,564.24	10,992.52	9,021.50	46.34	42.02	-3.47	-2,445.16	720.54	543.87	485.65	58.22	9.342	
11,567.00	9,563.79	11,059.03	9,019.84	47.02	42.98	-3.08	-2,510.22	734.29	544.87	486.07	58.80	9.267	
11,599.98	9,563.52	11,091.10	9,018.99	47.36	43.44	-2.91	-2,541.56	741.01	545.40	486.34	59.06	9.235	
11,656.00	9,563.61	11,145.26	9,017.43	47.94	44.22	-2.68	-2,594.49	752.39	547.01	487.51	59.50	9.193	
11,699.98	9,563.94	11,187.48	9,016.07	48.40	44.83	-2.54	-2,635.79	761.10	548.71	488.86	59.84	9.169	
11,746.00	9,564.28	11,231.94	9,014.49	48.89	45.48	-2.41	-2,679.30	770.10	550.64	490.42	60.22	9.144	
11,799.98	9,564.93	11,284.34	9,012.50	49.46	46.24	-2.29	-2,730.55	780.83	553.28	492.60	60.68	9.119	
11,837.00	9,565.66	11,321.19	9,011.03	49.85	46.78	-2.16	-2,766.58	788.43	555.42	494.39	61.03	9.101	
11,899.98	9,567.14	11,384.69	9,008.56	50.53	47.70	-1.82	-2,828.72	801.25	559.24	497.56	61.68	9.067	
11,928.00	9,567.81	11,418.81	9,007.42	50.84	48.20	-1.62	-2,862.15	807.99	560.80	498.54	62.26	9.007	
11,999.98	9,569.45	11,504.74	9,006.27	51.63	49.46	-1.15	-2,946.45	824.54	563.29	499.62	63.67	8.847	
12,018.00	9,569.83	11,524.60	9,006.25	51.83	49.76	-1.09	-2,965.94	828.41	563.67	499.73	63.95	8.814	
12,037.26	9,570.19	11,545.85	9,006.31	52.04	50.07	-1.04	-2,986.76	832.62	563.98	499.73	64.25	8.778	
12,099.98	9,570.85	11,608.87	9,006.72	52.74	51.00	-1.01	-3,048.48	845.37	564.22	499.27	64.94	8.688	
12,109.00	9,570.87	11,617.52	9,006.76	52.84	51.13	-1.02	-3,056.95	847.12	564.21	499.18	65.03	8.677	
12,112.09	9,570.88	11,620.49	9,006.78	52.87	51.17	-1.02	-3,059.86	847.72	564.20	499.15	65.05	8.673	
12,198.00	9,571.32	11,702.45	9,006.85	53.81	52.39	-1.06	-3,140.13	864.27	564.57	498.76	65.81	8.578	
12,199.98	9,571.33	11,704.33	9,006.84	53.84	52.42	-1.07	-3,141.97	864.66	564.59	498.76	65.83	8.576	
12,288.00	9,571.92	11,788.47	9,006.28	54.81	53.67	-1.16	-3,224.35	881.75	565.78	499.14	66.64	8.490	
12,299.98	9,571.99	11,799.98	9,006.17	54.94	53.84	-1.17	-3,235.63	884.08	565.98	499.22	66.75	8.479	
12,377.00	9,572.37	11,875.82	9,005.22	55.79	54.97	-1.30	-3,309.89	899.42	567.35	499.76	67.58	8.395	
12,399.98	9,572.49	11,898.97	9,004.93	56.05	55.32	-1.36	-3,332.53	904.22	567.76	499.90	67.86	8.366	
12,467.00	9,573.03	11,969.76	9,004.23	56.80	56.38	-1.58	-3,401.70	919.26	569.03	500.19	68.84	8.265	
12,499.98	9,573.40	12,005.88	9,004.14	57.17	56.92	-1.71	-3,436.98	927.02	569.51	500.12	69.40	8.207	
12,558.00	9,574.15	12,067.56	9,004.38	57.83	57.86	-1.98	-3,497.14	940.61	570.12	499.83	70.29	8.111	
12,567.85	9,574.29	12,077.94	9,004.46	57.94	58.02	-2.03	-3,507.24	942.99	570.20	499.76	70.44	8.095	
12,599.98	9,574.63	12,111.52	9,004.79	58.30	58.53	-2.22	-3,539.89	950.87	570.29	499.38	70.91	8.042	
12,647.00	9,574.88	12,156.57	9,005.21	58.84	59.21	-2.44	-3,583.67	961.46	570.20	498.78	71.41	7.984	
12,660.53	9,574.90	12,169.53	9,005.31	58.99	59.41	-2.50	-3,596.28	964.47	570.14	498.58	71.56	7.968	
12,699.97	9,574.76	12,206.84	9,005.49	59.44	59.98	-2.65	-3,632.60	973.01	569.88	497.93	71.95	7.920	
12,709.87	9,574.69	12,215.75	9,005.50	59.56	60.11	-2.68	-3,641.29	974.99	569.81	497.78	72.03	7.911	
12,737.00	9,574.41	12,240.20	9,005.45	59.87	60.48	-2.75	-3,665.17	980.22	569.62	497.38	72.24	7.885	
12,799.97	9,573.76	12,297.54	9,004.83	60.60	61.35	-2.79	-3,721.41	991.34	569.67	496.94	72.73	7.832	
12,827.00	9,573.57	12,323.40	9,004.39	60.91	61.74	-2.75	-3,746.87	995.89	569.93	496.93	73.00	7.808	
12,899.97	9,573.03	12,397.37	9,002.84	61.75	62.84	-2.51	-3,819.90	1,007.49	570.82	496.93	73.89	7.725	
12,918.00	9,572.87	12,419.06	9,002.53	61.96	63.16	-2.43	-3,841.34	1,010.78	570.89	496.61	74.27	7.686	
12,999.97	9,572.48	12,501.90	9,002.24	62.93	64.38	-2.02	-3,923.20	1,023.45	570.60	495.35	75.25	7.583	
13,007.00	9,572.48	12,507.66	9,002.18	63.02	64.47	-1.98	-3,928.90	1,024.28	570.66	495.39	75.27	7.582	
13,097.00	9,572.61	12,604.30	9,000.36	64.09	65.89	-1.12	-4,024.65	1,037.26	572.36	495.76	76.60	7.472	
13,099.97	9,572.62	12,609.15	9,000.37	64.12	65.96	-1.08	-4,029.45	1,037.95	572.36	495.63	76.72	7.460	
13,104.35	9,572.63	12,616.30	9,000.41	64.18	66.07	-1.03	-4,036.52	1,038.98	572.34	495.43	76.91	7.442	
13,186.00	9,573.32	12,721.73	9,004.01	65.15	67.67	-0.32	-4,140.29	1,057.14	570.07	491.08	79.00	7.217	
13,199.97	9,573.51	12,738.38	9,004.90	65.32	67.92	-0.25	-4,156.53	1,060.68	569.52	490.23	79.29	7.183	
13,202.75	9,573.55	12,741.68	9,005.09	65.35	67.97	-0.24	-4,159.75	1,061.41	569.40	490.05	79.35	7.176	

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

<b>Company:</b>	Piedra Operating LLC	<b>Local Co-ordinate Reference:</b>	Well University 8-8E A H 5LS
<b>Project:</b>	Andrews County, TX (NAD83-TNC)	<b>TVD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Reference Site:</b>	University 8-8	<b>MD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Site Error:</b>	0.00	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	University 8-8E A H 5LS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	1.00	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH / 72180	<b>Database:</b>	USAEDMDB
<b>Reference Design:</b>	Surveys (Ensign T054)	<b>Offset TVD Reference:</b>	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)		
13,212.49	9,573.71	12,752.32	9,005.70	65.47	68.14	-0.20	-4,170.10	1,063.77	568.99	489.48	79.51	7.156	
13,275.00	9,574.94	12,822.07	9,010.23	66.23	69.22	0.03	-4,237.70	1,080.34	566.16	485.54	80.62	7.023	
13,290.15	9,575.24	12,828.00	9,010.65	66.41	69.31	0.05	-4,243.42	1,081.83	565.45	485.06	80.39	7.034	
13,299.97	9,575.39	12,843.77	9,011.75	66.53	69.55	0.07	-4,258.63	1,085.86	564.86	484.07	80.79	6.991	
13,307.45	9,575.47	12,849.77	9,012.13	66.62	69.65	0.08	-4,264.42	1,087.41	564.46	483.64	80.82	6.984	
13,366.00	9,575.28	12,896.79	9,014.62	67.33	70.38	0.11	-4,309.69	1,099.87	561.17	480.12	81.05	6.923	
13,385.56	9,574.92	12,918.00	9,015.44	67.57	70.71	0.11	-4,330.07	1,105.68	560.08	478.69	81.39	6.881	
13,399.97	9,574.60	12,918.00	9,015.44	67.74	70.71	0.11	-4,330.07	1,105.68	559.28	478.39	80.89	6.914	
13,406.58	9,574.43	12,929.71	9,015.80	67.82	70.89	0.10	-4,341.31	1,108.92	558.87	477.64	81.22	6.881	
13,455.00	9,572.87	12,969.68	9,016.67	68.41	71.52	0.06	-4,379.68	1,120.09	556.25	474.80	81.45	6.829	
13,471.38	9,572.23	12,983.21	9,016.83	68.61	71.73	0.04	-4,392.66	1,123.90	555.42	473.89	81.52	6.813	
13,499.97	9,571.07	13,008.00	9,016.94	68.96	72.12	0.00	-4,416.43	1,130.95	554.13	472.43	81.71	6.782	
13,508.61	9,570.72	13,016.47	9,016.95	69.06	72.25	-0.01	-4,424.55	1,133.37	553.77	471.96	81.81	6.769	
13,544.00	9,569.21	13,057.89	9,017.27	69.49	72.90	-0.08	-4,464.20	1,145.34	551.99	469.41	82.58	6.685	
13,552.94	9,568.81	13,068.35	9,017.42	69.60	73.07	-0.10	-4,474.20	1,148.39	551.47	468.70	82.77	6.663	
13,599.97	9,566.63	13,098.00	9,018.00	70.18	73.53	-0.17	-4,502.53	1,157.14	548.70	466.20	82.49	6.651	
13,635.00	9,564.88	13,135.98	9,018.26	70.61	74.13	-0.25	-4,538.86	1,168.20	546.66	463.52	83.13	6.576	
13,699.97	9,562.36	13,187.00	9,016.57	71.41	74.93	-0.31	-4,587.83	1,182.37	546.15	462.86	83.29	6.557	
13,724.00	9,561.85	13,200.88	9,015.81	71.70	75.15	-0.33	-4,601.17	1,186.12	546.86	463.80	83.06	6.584	
13,799.97	9,560.95	13,281.38	9,011.78	72.64	76.41	-0.58	-4,678.58	1,207.84	549.79	465.46	84.33	6.520	
13,813.00	9,560.87	13,295.03	9,011.16	72.80	76.62	-0.62	-4,691.71	1,211.55	550.31	465.77	84.54	6.510	
13,899.97	9,560.51	13,385.45	9,007.46	73.87	78.04	-0.96	-4,778.45	1,236.78	553.55	467.65	85.90	6.444	
13,902.00	9,560.50	13,387.50	9,007.38	73.89	78.07	-0.97	-4,780.42	1,237.35	553.62	467.69	85.93	6.442	
13,992.00	9,560.63	13,478.87	9,003.97	75.00	79.50	-1.22	-4,868.47	1,261.51	557.16	469.93	87.23	6.387	
13,999.97	9,560.66	13,487.04	9,003.67	75.10	79.63	-1.23	-4,876.38	1,263.55	557.49	470.13	87.35	6.382	
14,081.00	9,559.69	13,568.89	9,000.85	76.10	80.90	-1.33	-4,955.83	1,282.99	559.34	470.83	88.51	6.320	
14,099.97	9,559.16	13,587.37	9,000.20	76.34	81.19	-1.37	-4,973.80	1,287.25	559.49	470.74	88.75	6.304	
14,171.00	9,556.95	13,656.23	8,997.63	77.22	82.25	-1.59	-5,040.80	1,302.96	560.00	470.36	89.64	6.247	
14,199.97	9,555.94	13,684.04	8,996.51	77.58	82.68	-1.72	-5,067.85	1,309.30	560.20	470.21	89.99	6.225	
14,260.00	9,553.59	13,742.47	8,993.98	78.32	83.59	-2.03	-5,124.68	1,322.65	560.56	469.77	90.79	6.174	
14,299.97	9,552.03	13,782.73	8,992.22	78.81	84.21	-2.28	-5,163.85	1,331.80	560.83	469.44	91.39	6.137	
14,349.00	9,550.45	13,829.23	8,990.17	79.42	84.93	-2.49	-5,209.10	1,342.30	561.49	469.52	91.96	6.106	
14,399.97	9,549.10	13,872.34	8,987.80	80.05	85.60	-2.61	-5,251.02	1,352.06	563.01	470.74	92.27	6.102	
14,439.00	9,548.23	13,907.23	8,985.46	80.54	86.14	-2.71	-5,284.92	1,359.99	564.80	472.20	92.61	6.099	
14,499.97	9,546.77	14,001.88	8,981.68	81.29	87.60	-2.87	-5,377.27	1,380.29	565.84	470.60	95.24	5.941	
14,529.00	9,545.92	14,020.37	8,981.17	81.65	87.88	-2.90	-5,395.38	1,384.01	565.73	470.60	95.13	5.947	
14,599.97	9,544.25	14,082.00	8,978.43	82.55	88.82	-2.91	-5,455.79	1,395.88	567.12	471.50	95.62	5.931	
14,619.00	9,543.97	14,098.72	8,977.51	82.79	89.07	-2.87	-5,472.19	1,399.01	567.83	472.09	95.74	5.931	
14,699.97	9,542.79	14,200.62	8,974.89	83.83	90.63	-2.49	-5,572.07	1,418.99	568.48	470.63	97.84	5.810	
14,710.00	9,542.63	14,210.31	8,974.76	83.95	90.78	-2.46	-5,581.56	1,420.93	568.43	470.48	97.95	5.803	
14,800.00	9,541.46	14,307.22	8,973.58	85.08	92.27	-2.12	-5,676.48	1,440.42	568.27	468.81	99.45	5.714	
14,889.00	9,540.74	14,422.12	8,975.92	86.20	94.04	-1.79	-5,788.82	1,464.40	565.68	463.88	101.81	5.556	
14,899.97	9,540.68	14,436.68	8,976.62	86.34	94.26	-1.74	-5,803.02	1,467.51	565.09	462.98	102.11	5.534	
14,903.28	9,540.67	14,441.07	8,976.85	86.39	94.33	-1.73	-5,807.31	1,468.45	564.90	462.70	102.20	5.527	
14,907.74	9,540.66	14,446.98	8,977.17	86.44	94.42	-1.71	-5,813.07	1,469.72	564.64	462.32	102.32	5.518	

<b>Company:</b>	Piedra Operating LLC	<b>Local Co-ordinate Reference:</b>	Well University 8-8E A H 5LS
<b>Project:</b>	Andrews County, TX (NAD83-TNC)	<b>TVD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Reference Site:</b>	University 8-8	<b>MD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Site Error:</b>	0.00	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	University 8-8E A H 5LS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	1.00	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH / 72180	<b>Database:</b>	USAEDMDB
<b>Reference Design:</b>	Surveys (Ensign T054)	<b>Offset TVD Reference:</b>	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)		
14,979.00	9,541.17	14,527.21	8,982.23	87.35	95.66	-1.26	-5,891.27	1,486.95	560.59	456.96	103.62	5.410	
14,999.97	9,541.54	14,552.93	8,984.19	87.62	96.06	-1.12	-5,916.30	1,492.49	559.33	455.24	104.09	5.374	
15,003.15	9,541.60	14,556.86	8,984.51	87.66	96.12	-1.10	-5,920.13	1,493.34	559.13	454.97	104.16	5.368	
15,004.25	9,541.62	14,558.22	8,984.62	87.67	96.14	-1.09	-5,921.45	1,493.63	559.06	454.88	104.18	5.366	
15,069.00	9,543.18	14,632.77	8,991.69	88.50	97.29	-0.71	-5,993.86	1,509.87	554.39	448.98	105.41	5.259	
15,090.32	9,543.83	14,651.23	8,993.50	88.78	97.58	-0.62	-6,011.79	1,513.86	552.92	447.33	105.59	5.237	
15,099.97	9,544.14	14,659.59	8,994.29	88.90	97.71	-0.58	-6,019.92	1,515.66	552.32	446.65	105.67	5.227	
15,109.36	9,544.46	14,667.73	8,995.04	89.02	97.83	-0.54	-6,027.84	1,517.40	551.77	446.02	105.75	5.218	
15,159.00	9,546.36	14,711.00	8,998.72	89.65	98.50	-0.31	-6,069.97	1,526.54	549.41	443.24	106.17	5.175	
15,170.68	9,546.83	14,711.00	8,998.72	89.80	98.50	-0.32	-6,069.97	1,526.54	549.07	443.22	105.85	5.187	
15,199.97	9,547.85	14,741.23	9,000.83	90.17	98.97	-0.20	-6,099.44	1,532.97	548.03	441.73	106.30	5.156	
15,211.96	9,548.20	14,750.15	9,001.34	90.32	99.11	-0.18	-6,108.12	1,534.91	547.69	441.36	106.33	5.151	
15,249.00	9,549.06	14,777.71	9,002.61	90.80	99.54	-0.12	-6,134.97	1,541.05	546.83	440.40	106.44	5.138	
15,263.18	9,549.32	14,788.27	9,002.97	90.98	99.70	-0.10	-6,145.24	1,543.45	546.61	440.14	106.47	5.134	
15,299.97	9,550.10	14,823.85	9,003.91	91.45	100.26	-0.04	-6,179.82	1,551.74	546.41	439.48	106.93	5.110	
15,309.56	9,550.32	14,834.72	9,004.24	91.57	100.43	-0.02	-6,190.38	1,554.32	546.35	439.22	107.13	5.100	
15,338.00	9,551.03	14,866.94	9,005.35	91.93	100.93	0.01	-6,221.63	1,562.08	546.07	438.38	107.70	5.070	
15,349.14	9,551.31	14,879.56	9,005.85	92.07	101.13	0.02	-6,233.86	1,565.16	545.92	438.00	107.92	5.058	
15,399.97	9,552.34	14,924.74	9,007.56	92.72	101.84	-0.03	-6,277.62	1,576.25	545.03	436.65	108.38	5.029	
15,417.97	9,552.60	14,939.77	9,007.97	92.95	102.07	-0.05	-6,292.20	1,579.89	544.80	436.29	108.50	5.021	
15,429.00	9,552.73	14,948.98	9,008.18	93.09	102.22	-0.06	-6,301.14	1,582.10	544.67	436.10	108.57	5.017	
15,434.48	9,552.79	14,953.56	9,008.28	93.16	102.29	-0.07	-6,305.58	1,583.20	544.62	436.01	108.61	5.015	
15,499.97	9,553.44	15,015.33	9,009.09	94.00	103.26	-0.12	-6,365.60	1,597.79	544.40	435.03	109.36	4.978	
15,518.00	9,553.59	15,034.17	9,009.35	94.23	103.55	-0.13	-6,383.92	1,602.18	544.30	434.64	109.66	4.964	
15,520.32	9,553.61	15,036.59	9,009.39	94.26	103.59	-0.14	-6,386.27	1,602.74	544.28	434.59	109.69	4.962	
15,523.23	9,553.63	15,039.64	9,009.43	94.29	103.64	-0.14	-6,389.23	1,603.45	544.26	434.52	109.74	4.959	
15,599.97	9,553.45	15,106.91	9,010.19	95.27	104.69	-0.22	-6,454.70	1,618.94	543.27	432.89	110.38	4.922	
15,608.00	9,553.35	15,113.17	9,010.16	95.37	104.78	-0.23	-6,460.79	1,620.37	543.20	432.79	110.41	4.920	
15,699.00	9,552.94	15,190.29	9,008.40	96.54	105.99	-0.25	-6,535.93	1,637.64	544.81	433.84	110.98	4.909	
15,699.97	9,552.95	15,191.24	9,008.37	96.55	106.00	-0.25	-6,536.85	1,637.85	544.85	433.86	110.99	4.909	
15,789.00	9,553.43	15,276.97	9,005.52	97.69	107.34	-0.09	-6,620.31	1,657.26	548.29	436.23	112.06	4.893	
15,799.97	9,553.50	15,287.17	9,005.13	97.83	107.49	-0.07	-6,630.24	1,659.57	548.78	436.61	112.17	4.892	
15,880.00	9,554.36	15,365.45	9,001.81	98.86	108.71	0.20	-6,706.44	1,677.18	553.03	439.83	113.20	4.886	
15,899.97	9,554.64	15,387.20	9,000.95	99.12	109.05	0.29	-6,727.61	1,682.10	554.10	440.53	113.58	4.879	
15,969.00	9,555.45	15,461.51	8,998.51	100.01	110.21	0.59	-6,799.91	1,699.07	557.20	442.37	114.84	4.852	
15,999.97	9,555.68	15,494.31	8,997.64	100.41	110.72	0.72	-6,831.82	1,706.61	558.27	442.89	115.37	4.839	
16,058.00	9,555.59	15,562.40	8,996.41	101.15	111.79	0.93	-6,898.05	1,722.38	559.27	442.55	116.72	4.792	
16,099.97	9,554.86	15,614.85	8,996.53	101.70	112.61	0.98	-6,949.02	1,734.71	558.44	440.61	117.84	4.739	
16,148.00	9,552.98	15,655.09	8,996.63	102.33	113.24	0.94	-6,988.22	1,743.85	556.42	438.26	118.17	4.709	
16,199.97	9,550.32	15,700.00	8,996.31	103.00	113.94	0.89	-7,032.08	1,753.46	554.14	435.56	118.57	4.673	
16,238.00	9,548.34	15,735.62	8,995.75	103.50	114.49	0.86	-7,066.94	1,760.77	552.74	433.74	119.00	4.645	
16,299.97	9,544.83	15,792.44	8,994.42	104.29	115.37	0.84	-7,122.59	1,772.18	550.68	431.06	119.62	4.603	
16,327.00	9,543.15	15,819.36	8,993.67	104.64	115.78	0.83	-7,148.95	1,777.55	549.74	429.74	120.01	4.581	
16,399.97	9,538.01	15,892.33	8,991.62	105.57	116.91	0.78	-7,220.37	1,792.38	546.66	425.59	121.06	4.516	
16,417.00	9,536.68	15,909.76	8,991.14	105.79	117.18	0.76	-7,237.41	1,795.98	545.79	424.46	121.33	4.498	
16,499.97	9,528.75	15,993.42	8,988.99	106.85	118.48	0.63	-7,319.15	1,813.70	539.97	417.38	122.58	4.405	

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

<b>Company:</b>	Piedra Operating LLC	<b>Local Co-ordinate Reference:</b>	Well University 8-8E A H 5LS
<b>Project:</b>	Andrews County, TX (NAD83-TNC)	<b>TVD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Reference Site:</b>	University 8-8	<b>MD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Site Error:</b>	0.00	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	University 8-8E A H 5LS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	1.00	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH / 72180	<b>Database:</b>	USAEDMDB
<b>Reference Design:</b>	Surveys (Ensign T054)	<b>Offset TVD Reference:</b>	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)		
16,507.00	9,527.95	16,000.27	8,988.81	106.94	118.59	0.61	-7,325.84	1,815.20	539.35	416.67	122.68	4.396	
16,596.00	9,519.14	16,088.43	8,986.40	108.08	119.96	0.31	-7,411.64	1,835.26	532.95	408.98	123.97	4.299	
16,599.97	9,518.82	16,092.49	8,986.29	108.13	120.03	0.29	-7,415.59	1,836.21	532.73	408.69	124.03	4.295	
16,686.00	9,513.74	16,181.65	8,984.11	109.24	121.43	-0.14	-7,502.18	1,857.36	529.75	404.22	125.52	4.220	
16,699.97	9,513.26	16,196.45	8,983.81	109.42	121.66	-0.20	-7,516.57	1,860.82	529.55	403.76	125.78	4.210	
16,776.00	9,511.76	16,273.67	8,982.55	110.40	122.87	-0.68	-7,591.75	1,878.36	529.32	402.27	127.06	4.166	
16,799.97	9,511.58	16,296.87	8,982.15	110.71	123.23	-0.87	-7,614.37	1,883.55	529.59	402.19	127.40	4.157	
16,865.00	9,511.11	16,360.54	8,980.91	111.55	124.22	-1.38	-7,676.45	1,897.63	530.49	402.09	128.40	4.131	
16,899.97	9,510.88	16,395.13	8,980.20	111.99	124.76	-1.64	-7,710.19	1,905.21	531.04	402.08	128.96	4.118	
16,956.00	9,510.59	16,455.96	8,979.09	112.71	125.71	-2.02	-7,769.52	1,918.59	531.87	401.75	130.12	4.088	
16,999.97	9,510.61	16,506.61	8,978.85	113.28	126.51	-2.33	-7,818.78	1,930.33	532.20	401.01	131.18	4.057	
17,046.00	9,511.07	16,551.01	8,978.86	113.87	127.20	-2.57	-7,861.95	1,940.71	532.74	400.88	131.86	4.040	
17,099.97	9,511.86	16,604.15	8,978.66	114.57	128.04	-2.75	-7,913.75	1,952.58	533.81	401.13	132.68	4.023	
17,135.00	9,512.34	16,645.39	8,978.76	115.02	128.68	-2.85	-7,953.97	1,961.71	534.26	400.73	133.52	4.001	
17,199.97	9,513.39	16,717.54	8,980.00	115.86	129.81	-3.08	-8,024.27	1,977.91	534.28	399.39	134.88	3.961	
17,212.53	9,513.64	16,730.50	8,980.28	116.02	130.01	-3.12	-8,036.90	1,980.77	534.26	399.16	135.10	3.955	
17,225.00	9,513.89	16,743.35	8,980.57	116.18	130.21	-3.15	-8,049.44	1,983.59	534.25	398.93	135.32	3.948	
17,232.24	9,514.04	16,750.82	8,980.75	116.28	130.33	-3.17	-8,056.73	1,985.21	534.24	398.80	135.44	3.944	
17,299.97	9,515.34	16,822.17	8,982.61	117.16	131.44	-3.21	-8,126.41	2,000.43	533.81	397.19	136.62	3.907	
17,314.38	9,515.59	16,837.53	8,983.08	117.34	131.68	-3.20	-8,141.42	2,003.68	533.61	396.74	136.87	3.899	
17,315.00	9,515.60	16,838.20	8,983.10	117.35	131.69	-3.20	-8,142.06	2,003.82	533.60	396.72	136.88	3.898	
17,317.89	9,515.65	16,841.27	8,983.20	117.39	131.74	-3.20	-8,145.07	2,004.47	533.56	396.63	136.93	3.897	
17,399.97	9,516.47	16,913.59	8,985.20	118.45	132.86	-3.20	-8,215.70	2,019.88	532.15	394.43	137.72	3.864	
17,405.00	9,516.48	16,917.67	8,985.25	118.52	132.93	-3.20	-8,219.67	2,020.77	532.10	394.35	137.75	3.863	
17,408.94	9,516.49	16,920.85	8,985.29	118.57	132.98	-3.20	-8,222.79	2,021.46	532.07	394.29	137.78	3.862	
17,418.75	9,516.55	16,928.78	8,985.36	118.70	133.10	-3.21	-8,230.52	2,023.21	532.03	394.19	137.84	3.860	
17,494.00	9,518.10	16,987.81	8,984.97	119.68	134.02	-3.20	-8,288.05	2,036.39	534.09	395.94	138.15	3.866	
17,499.97	9,518.30	16,992.36	8,984.86	119.76	134.09	-3.20	-8,292.49	2,037.41	534.43	396.27	138.16	3.868	
17,586.00	9,521.10	17,062.70	8,981.75	120.88	135.19	-3.05	-8,361.00	2,053.02	540.87	402.37	138.50	3.905	
17,599.97	9,521.53	17,077.61	8,980.95	121.06	135.42	-3.01	-8,375.52	2,056.32	542.02	403.28	138.74	3.907	
17,676.00	9,523.61	17,161.42	8,977.06	122.06	136.73	-2.77	-8,457.10	2,075.11	547.55	407.31	140.23	3.905	
17,699.96	9,524.22	17,189.91	8,976.12	122.37	137.18	-2.71	-8,484.79	2,081.72	548.93	408.11	140.82	3.898	
17,766.00	9,526.07	17,262.42	8,974.66	123.23	138.32	-2.66	-8,555.13	2,099.27	552.07	409.95	142.13	3.884	
17,799.96	9,527.13	17,297.06	8,974.13	123.68	138.87	-2.67	-8,588.66	2,107.95	553.66	410.99	142.67	3.881	
17,855.00	9,529.01	17,351.56	8,973.35	124.40	139.74	-2.74	-8,641.33	2,121.93	556.37	412.88	143.49	3.877	
17,899.96	9,530.60	17,395.38	8,972.65	124.99	140.43	-2.84	-8,683.62	2,133.40	558.74	414.60	144.14	3.876	
17,946.00	9,532.16	17,443.00	8,971.89	125.59	141.19	-3.03	-8,729.55	2,145.95	561.14	416.15	144.99	3.870	
17,999.96	9,534.01	17,500.43	8,971.24	126.30	142.11	-3.32	-8,785.00	2,160.89	563.75	417.66	146.09	3.859	
18,035.00	9,535.26	17,541.86	8,971.15	126.76	142.76	-3.53	-8,825.04	2,171.55	565.18	418.18	147.01	3.845	
18,050.22	9,535.80	17,559.88	8,971.26	126.95	143.05	-3.61	-8,842.45	2,176.16	565.67	418.27	147.40	3.838	
18,099.96	9,537.31	17,611.47	8,971.92	127.61	143.87	-3.78	-8,892.36	2,189.23	566.65	418.34	148.31	3.821	
18,105.47	9,537.46	17,616.54	8,971.98	127.68	143.95	-3.79	-8,897.26	2,190.49	566.74	418.37	148.38	3.820	
18,124.00	9,537.91	17,633.59	8,972.14	127.92	144.22	-3.81	-8,913.78	2,194.71	567.04	418.44	148.60	3.816	
18,141.59	9,538.30	17,649.78	8,972.24	128.15	144.47	-3.82	-8,929.48	2,198.67	567.32	418.52	148.80	3.813	
18,199.96	9,539.33	17,709.73	8,972.47	128.93	145.42	-3.74	-8,987.66	2,213.11	568.10	418.38	149.72	3.795	



<b>Company:</b>	Piedra Operating LLC	<b>Local Co-ordinate Reference:</b>	Well University 8-8E A H 5LS
<b>Project:</b>	Andrews County, TX (NAD83-TNC)	<b>TVD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Reference Site:</b>	University 8-8	<b>MD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Site Error:</b>	0.00	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	University 8-8E A H 5LS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	1.00	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH / 72180	<b>Database:</b>	USAEDMDB
<b>Reference Design:</b>	Surveys (Ensign T054)	<b>Offset TVD Reference:</b>	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)		
18,203.26	9,539.38	17,713.47	8,972.50	128.97	145.48	-3.74	-8,991.29	2,214.02	568.11	418.33	149.78	3.793	
18,214.00	9,539.52	17,725.68	8,972.62	129.11	145.67	-3.71	-9,003.13	2,217.03	568.14	418.14	150.00	3.788	
18,251.25	9,540.10	17,768.03	8,973.32	129.60	146.35	-3.66	-9,044.11	2,227.68	568.07	417.31	150.76	3.768	
18,299.96	9,541.18	17,805.94	8,973.71	130.24	146.94	-3.57	-9,080.87	2,236.94	568.58	417.62	150.96	3.767	
18,299.97	9,541.18	17,805.95	8,973.71	130.24	146.94	-3.57	-9,080.88	2,236.94	568.58	417.62	150.96	3.767	
18,304.00	9,541.29	17,809.13	8,973.71	130.30	146.99	-3.56	-9,083.97	2,237.68	568.68	417.70	150.97	3.767	
18,394.00	9,541.98	17,886.53	8,972.38	131.48	148.20	-3.16	-9,159.59	2,254.13	570.61	419.08	151.53	3.766	
18,399.96	9,541.91	17,892.43	8,972.23	131.56	148.30	-3.13	-9,165.37	2,255.26	570.67	419.08	151.59	3.764	
18,484.00	9,541.46	17,975.39	8,970.00	132.67	149.57	-2.29	-9,247.04	2,269.61	572.06	419.62	152.44	3.753	
18,499.96	9,541.41	17,991.20	8,969.57	132.89	149.81	-2.07	-9,262.63	2,272.22	572.37	419.77	152.60	3.751	
18,573.00	9,540.09	18,062.27	8,967.57	133.87	150.89	-1.25	-9,332.70	2,283.99	572.88	419.51	153.37	3.735	
18,599.96	9,539.22	18,087.71	8,966.77	134.22	151.27	-1.01	-9,357.78	2,288.11	572.82	419.18	153.64	3.728	
18,662.00	9,536.88	18,146.72	8,964.67	135.05	152.17	-0.47	-9,416.02	2,297.44	572.62	418.32	154.30	3.711	
18,699.96	9,535.19	18,183.38	8,963.25	135.54	152.72	-0.18	-9,452.19	2,303.18	572.39	417.64	154.75	3.699	
18,751.00	9,532.57	18,232.37	8,961.23	136.21	153.46	0.19	-9,500.54	2,310.83	571.89	416.53	155.36	3.681	
18,799.96	9,529.63	18,278.90	8,959.13	136.85	154.17	0.51	-9,546.45	2,318.11	571.18	415.25	155.93	3.663	
18,841.00	9,526.79	18,324.32	8,957.01	137.39	154.86	0.79	-9,591.24	2,325.33	570.30	413.53	156.77	3.638	
18,899.96	9,523.14	18,406.26	8,955.40	138.16	156.12	1.00	-9,671.67	2,340.84	567.83	409.00	158.82	3.575	
18,931.00	9,521.75	18,434.51	8,955.23	138.57	156.56	0.99	-9,699.31	2,346.69	566.60	407.44	159.16	3.560	
18,999.96	9,518.97	18,503.34	8,954.94	139.47	157.64	0.88	-9,766.55	2,361.41	564.10	403.91	160.19	3.521	
19,021.00	9,518.10	18,523.76	8,954.83	139.74	157.96	0.83	-9,786.48	2,365.84	563.33	402.85	160.48	3.510	
19,099.96	9,514.55	18,598.54	8,954.20	140.77	159.13	0.58	-9,859.45	2,382.19	560.44	398.97	161.47	3.471	
19,110.00	9,514.07	18,607.62	8,954.07	140.90	159.27	0.55	-9,868.31	2,384.19	560.09	398.52	161.57	3.467	
19,199.96	9,511.80	18,691.40	8,952.24	142.08	160.58	0.24	-9,949.98	2,402.75	559.75	397.11	162.64	3.442	
19,201.00	9,511.79	18,692.42	8,952.21	142.09	160.60	0.23	-9,950.98	2,402.97	559.78	397.12	162.66	3.441	
19,292.00	9,512.49	18,781.98	8,949.77	143.28	162.00	0.05	-10,038.32	2,422.62	562.95	398.97	163.98	3.433	
19,299.96	9,512.63	18,789.85	8,949.55	143.39	162.12	0.04	-10,045.99	2,424.34	563.31	399.22	164.10	3.433	
19,382.00	9,514.17	18,870.21	8,947.18	144.46	163.38	-0.11	-10,124.35	2,442.03	567.27	402.00	165.27	3.432	
19,399.96	9,514.53	18,887.53	8,946.63	144.70	163.65	-0.15	-10,141.23	2,445.88	568.21	402.70	165.51	3.433	
19,472.00	9,516.18	18,965.65	8,944.18	145.64	164.87	-0.39	-10,217.33	2,463.34	572.15	405.20	166.95	3.427	
19,499.96	9,516.82	19,002.03	8,943.66	146.01	165.44	-0.50	-10,252.80	2,471.43	573.19	405.40	167.79	3.416	
19,561.00	9,517.92	19,073.32	8,943.94	146.81	166.56	-0.57	-10,322.28	2,487.38	574.05	404.88	169.17	3.393	
19,599.96	9,518.44	19,116.78	8,944.61	147.33	167.24	-0.60	-10,364.56	2,497.41	573.97	404.02	169.95	3.377	
19,611.33	9,518.57	19,128.93	8,944.85	147.48	167.44	-0.61	-10,376.37	2,500.26	573.88	403.73	170.15	3.373	
19,651.00	9,518.96	19,171.29	8,945.82	148.00	168.10	-0.66	-10,417.51	2,510.31	573.36	402.50	170.86	3.356	
19,665.95	9,519.08	19,187.26	8,946.23	148.20	168.36	-0.69	-10,433.00	2,514.15	573.09	401.96	171.13	3.349	
19,699.96	9,519.28	19,201.00	8,946.62	148.64	168.57	-0.72	-10,446.33	2,517.47	572.73	401.94	170.79	3.353	
19,740.00	9,519.41	19,201.00	8,946.62	149.17	168.57	-0.72	-10,446.33	2,517.47	574.60	405.43	169.17	3.396	
19,799.96	9,519.65	19,201.00	8,946.62	149.96	168.57	-0.69	-10,446.33	2,517.47	582.60	417.04	165.56	3.519	
19,830.00	9,519.86	19,201.00	8,946.62	150.35	168.57	-0.68	-10,446.33	2,517.47	588.96	425.69	163.27	3.607	
19,899.96	9,520.24	19,201.00	8,946.62	151.27	168.57	-0.50	-10,446.33	2,517.47	609.18	452.17	157.01	3.880	
19,919.00	9,520.28	19,201.00	8,946.62	151.52	168.57	-0.45	-10,446.33	2,517.47	615.88	460.75	155.13	3.970	
19,999.96	9,519.45	19,201.00	8,946.62	152.58	168.57	-0.64	-10,446.33	2,517.47	648.99	502.40	146.59	4.427	
20,008.00	9,519.26	19,201.00	8,946.62	152.69	168.57	-0.66	-10,446.33	2,517.47	652.64	506.93	145.71	4.479	
20,098.00	9,516.90	19,201.00	8,946.62	153.87	168.57	-0.38	-10,446.33	2,517.47	698.32	562.49	135.83	5.141	
20,099.96	9,516.84	19,201.00	8,946.62	153.90	168.57	-0.38	-10,446.33	2,517.47	699.41	563.79	135.62	5.157	

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



<b>Company:</b>	Piedra Operating LLC	<b>Local Co-ordinate Reference:</b>	Well University 8-8E A H 5LS
<b>Project:</b>	Andrews County, TX (NAD83-TNC)	<b>TVD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Reference Site:</b>	University 8-8	<b>MD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Site Error:</b>	0.00	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	University 8-8E A H 5LS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	1.00	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH / 72180	<b>Database:</b>	USAEDMDB
<b>Reference Design:</b>	Surveys (Ensign T054)	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> University 8-8E A H 2MS - OH / 72179 - Surveys (Ensign T054)												<b>Offset Site Error:</b>	0.00 usft
Survey Program: 15-MWD, 1884-MWD+HRGM												<b>Offset Well Error:</b>	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)		
20,187.00	9,515.83	19,201.00	8,946.62	155.04	168.57	-0.69	-10,446.33	2,517.47	752.38	625.77	126.61	5.942	
20,199.96	9,515.88	19,201.00	8,946.62	155.21	168.57	-0.73	-10,446.33	2,517.47	760.96	635.61	125.35	6.071	
20,250.00	9,516.16	19,201.00	8,946.62	155.87	168.57	-0.93	-10,446.33	2,517.47	795.24	674.57	120.68	6.590	
20,299.96	9,516.46	19,201.00	8,946.62	156.53	168.57	-0.93	-10,446.33	2,517.47	831.08	714.76	116.32	7.145	
20,311.00	9,516.53	19,201.00	8,946.62	156.67	168.57	-0.93	-10,446.33	2,517.47	839.20	723.80	115.40	7.272	

<b>Company:</b>	Piedra Operating LLC	<b>Local Co-ordinate Reference:</b>	Well University 8-8E A H 5LS
<b>Project:</b>	Andrews County, TX (NAD83-TNC)	<b>TVD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Reference Site:</b>	University 8-8	<b>MD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Site Error:</b>	0.00	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	University 8-8E A H 5LS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	1.00	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH / 72180	<b>Database:</b>	USAEDMDB
<b>Reference Design:</b>	Surveys (Ensign T054)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design University 8-8E A H 8WC - OH / 72181 - Plan 1 03-16-23												Offset Site Error:	0.00 usft
Survey Program: 15-MWD, 1765-MWD+HRGM												Offset Well Error:	1.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Center		Distance			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	-103.08	-5.66	-24.36	25.01				
15.00	15.00	15.00	15.00	1.00	1.00	-103.08	-5.66	-24.36	25.01				
100.00	100.00	99.81	99.81	1.28	1.31	-127.87	-5.46	-24.73	25.38	22.80	2.59	9.818	
178.00	178.00	177.62	177.61	1.91	1.90	-126.65	-4.93	-25.74	26.40	22.60	3.80	6.942	
200.00	200.00	199.71	199.69	1.98	1.97	-109.73	-4.74	-26.07	26.72	22.78	3.94	6.782	
268.00	268.00	267.98	267.97	2.20	2.21	-47.51	-4.34	-26.59	27.10	22.73	4.38	6.194	
300.00	300.00	299.95	299.93	2.28	2.31	-30.16	-4.19	-26.68	27.07	22.52	4.55	5.951	
319.23	319.23	319.16	319.14	2.33	2.36	-18.78	-4.07	-26.76	27.07	22.41	4.65	5.815	
356.00	356.00	355.88	355.86	2.43	2.48	1.70	-3.82	-26.95	27.09	22.23	4.86	5.578	
400.00	400.00	399.96	399.94	2.54	2.60	15.83	-3.45	-27.17	27.10	22.03	5.07	5.342	
443.00	443.00	443.03	443.01	2.64	2.73	39.12	-3.02	-27.28	27.04	21.76	5.29	5.114	
500.00	500.00	499.97	499.94	2.77	2.89	15.35	-2.38	-27.39	26.89	21.33	5.56	4.835	
532.00	532.00	531.93	531.90	2.85	2.98	11.81	-2.00	-27.52	26.79	21.07	5.72	4.685	
600.00	600.00	600.07	600.03	3.01	3.16	15.86	-1.23	-27.65	26.54	20.51	6.03	4.399	
623.00	623.00	623.11	623.07	3.07	3.22	19.70	-1.00	-27.61	26.44	20.30	6.14	4.306	
700.00	699.99	699.99	699.95	3.25	3.42	22.00	-0.37	-27.57	26.10	19.62	6.48	4.029	
712.00	712.00	711.98	711.94	3.27	3.45	22.26	-0.29	-27.60	26.05	19.52	6.53	3.989	
800.00	799.99	800.04	800.00	3.47	3.67	64.83	0.37	-27.68	25.74	18.83	6.91	3.725	
804.00	803.99	804.05	804.00	3.48	3.68	67.13	0.41	-27.67	25.73	18.81	6.93	3.715	
892.00	891.99	892.17	892.13	3.66	3.89	47.19	1.17	-27.37	25.29	18.02	7.27	3.480	
900.00	899.99	900.17	900.12	3.68	3.91	40.57	1.25	-27.32	25.23	17.93	7.30	3.458	
982.00	981.99	982.13	982.07	3.84	4.10	-50.69	2.14	-26.89	24.69	17.10	7.59	3.252	
1,000.00	999.99	1,000.12	1,000.06	3.87	4.14	-32.58	2.36	-26.81	24.59	16.94	7.66	3.212	
1,070.00	1,069.99	1,070.07	1,070.01	4.00	4.30	57.85	3.18	-26.53	24.25	16.35	7.91	3.068	
1,093.60	1,093.60	1,093.59	1,093.53	4.05	4.36	54.81	3.45	-26.51	24.21	16.22	7.99	3.030	
1,100.00	1,099.99	1,099.96	1,099.90	4.06	4.37	54.04	3.52	-26.52	24.22	16.20	8.02	3.021	
1,157.00	1,156.99	1,156.80	1,156.74	4.18	4.51	48.06	4.14	-26.85	24.47	16.25	8.23	2.974	
1,200.00	1,199.99	1,199.84	1,199.77	4.39	4.61	45.20	4.53	-27.19	24.72	16.19	8.53	2.898	
1,300.00	1,299.99	1,299.91	1,299.84	4.90	4.84	40.23	5.12	-27.77	24.94	15.71	9.23	2.703	
1,336.00	1,335.99	1,335.92	1,335.84	5.08	4.91	38.91	5.26	-27.94	24.94	15.46	9.48	2.632	
1,400.00	1,399.98	1,399.89	1,399.81	5.21	5.05	29.88	5.55	-28.28	24.90	15.17	9.73	2.558	
1,428.00	1,427.98	1,427.89	1,427.82	5.27	5.11	26.97	5.69	-28.44	24.86	15.01	9.84	2.525	
1,460.34	1,460.32	1,460.25	1,460.17	5.33	5.19	43.38	5.87	-28.60	24.82	14.86	9.96	2.491	
1,500.00	1,499.98	1,499.92	1,499.85	5.40	5.28	70.53	6.13	-28.75	24.88	14.76	10.11	2.460	
1,516.00	1,515.98	1,515.92	1,515.84	5.43	5.35	82.07	6.24	-28.81	24.94	14.72	10.21	2.442	
1,600.00	1,599.98	1,599.86	1,599.78	5.59	5.71	58.06	6.69	-29.24	25.33	14.61	10.72	2.362	
1,608.00	1,607.98	1,607.86	1,607.78	5.60	5.75	54.79	6.72	-29.29	25.37	14.59	10.77	2.355	
1,697.00	1,696.98	1,696.85	1,696.77	5.77	6.08	53.51	6.96	-30.01	25.82	14.56	11.26	2.293	
1,700.00	1,699.97	1,699.85	1,699.77	5.78	6.08	53.54	6.96	-30.03	25.83	14.56	11.27	2.292	
1,788.00	1,787.98	1,787.92	1,787.84	5.96	6.21	51.39	7.10	-30.58	26.07	14.51	11.56	2.255	
1,800.00	1,799.97	1,799.92	1,799.83	5.97	6.22	42.74	7.11	-30.65	26.07	14.49	11.59	2.251	
1,846.00	1,845.97	1,845.92	1,845.83	6.05	6.27	29.20	7.18	-30.89	25.89	14.19	11.70	2.212	
1,900.00	1,899.96	1,899.91	1,899.83	6.14	6.34	41.48	7.25	-31.17	25.57	13.69	11.88	2.152	
1,973.00	1,972.96	1,973.22	1,973.13	6.28	6.50	59.55	6.42	-31.49	24.93	12.64	12.29	2.028	
2,000.00	1,999.95	2,000.32	2,000.21	6.34	6.56	77.56	5.64	-31.57	24.57	12.13	12.44	1.975	
2,064.00	2,063.95	2,064.53	2,064.35	6.49	6.67	101.53	2.77	-31.70	23.71	11.07	12.64	1.876	

<b>Company:</b>	Piedra Operating LLC	<b>Local Co-ordinate Reference:</b>	Well University 8-8E A H 5LS
<b>Project:</b>	Andrews County, TX (NAD83-TNC)	<b>TVD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Reference Site:</b>	University 8-8	<b>MD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Site Error:</b>	0.00	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	University 8-8E A H 5LS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	1.00	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH / 72180	<b>Database:</b>	USAEDMDB
<b>Reference Design:</b>	Surveys (Ensign T054)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design University 8-8E A H 8WC - OH / 72181 - Plan 1 03-16-23												Offset Site Error:	0.00 usft	
Survey Program: 15-MWD, 1765-MWD+HRGM												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)			
2,100.00	2,099.93	2,100.61	2,100.37	6.55	6.73	111.98	0.52	-31.72	23.36	10.65	12.71	1.838		
2,153.00	2,152.89	2,153.92	2,153.55	6.65	6.78	116.17	-3.22	-31.41	23.07	10.27	12.80	1.802		
2,200.00	2,199.83	2,201.25	2,200.76	6.73	6.83	115.38	-6.36	-30.35	22.45	9.56	12.89	1.741		
2,242.00	2,241.78	2,243.31	2,242.71	6.81	6.87	115.09	-9.03	-28.93	21.53	8.57	12.96	1.661		
2,300.00	2,299.69	2,301.30	2,300.55	6.91	6.95	117.55	-12.70	-26.95	20.47	7.39	13.07	1.566		
2,332.00	2,331.63	2,333.30	2,332.47	6.97	7.00	118.83	-14.73	-25.86	20.06	6.91	13.14	1.526		
2,400.00	2,399.49	2,401.29	2,400.28	7.10	7.11	120.55	-19.04	-23.54	19.39	6.09	13.30	1.458	Level 3	
2,423.00	2,422.45	2,424.29	2,423.23	7.15	7.15	121.04	-20.49	-22.75	19.20	5.85	13.35	1.438	Level 3	
2,500.00	2,499.29	2,501.29	2,500.02	7.31	7.28	119.57	-25.37	-20.12	18.60	5.05	13.55	1.373	Level 3	
2,515.00	2,514.27	2,516.29	2,514.98	7.34	7.31	119.28	-26.32	-19.61	18.49	4.90	13.59	1.360	Level 3	
2,575.62	2,574.77	2,576.91	2,575.45	7.47	7.43	124.55	-30.16	-17.54	18.25	4.50	13.75	1.327	Level 3	
2,599.99	2,599.08	2,601.28	2,599.75	7.53	7.47	126.42	-31.71	-16.71	18.29	4.47	13.82	1.323	Level 3	
2,606.00	2,605.08	2,607.29	2,605.74	7.54	7.49	126.86	-32.09	-16.50	18.31	4.47	13.84	1.323	Level 3	
2,696.00	2,694.85	2,697.28	2,695.50	7.74	7.67	129.71	-37.79	-13.43	19.09	4.99	14.10	1.354	Level 3	
2,699.99	2,698.83	2,701.28	2,699.49	7.75	7.68	129.64	-38.04	-13.30	19.14	5.03	14.11	1.357	Level 3	
2,786.00	2,784.60	2,787.27	2,785.26	7.94	7.87	128.35	-43.49	-10.36	20.28	5.92	14.37	1.412	Level 3	
2,799.99	2,798.56	2,801.26	2,799.22	7.98	7.90	127.84	-44.38	-9.88	20.46	6.06	14.41	1.420	Level 3	
2,876.00	2,874.36	2,877.26	2,875.02	8.17	8.07	125.21	-49.19	-7.29	21.38	6.74	14.65	1.460	Level 3	
2,899.99	2,898.29	2,901.26	2,898.95	8.23	8.12	125.49	-50.71	-6.47	21.66	6.94	14.72	1.471	Level 3	
2,966.00	2,964.12	2,967.25	2,964.78	8.40	8.28	126.19	-54.89	-4.22	22.52	7.58	14.94	1.507		
2,999.99	2,998.02	3,001.24	2,998.68	8.49	8.36	126.44	-57.05	-3.06	23.01	7.96	15.06	1.528		
3,055.00	3,052.89	3,056.24	3,053.53	8.63	8.50	126.77	-60.53	-1.18	23.87	8.63	15.24	1.566		
3,099.99	3,097.76	3,101.23	3,098.40	8.75	8.61	125.82	-63.38	0.36	24.60	9.20	15.40	1.597		
3,146.00	3,143.65	3,147.23	3,144.28	8.88	8.73	124.86	-66.30	1.93	25.33	9.77	15.56	1.628		
3,199.99	3,197.50	3,201.21	3,198.13	9.03	8.86	125.51	-69.72	3.77	26.24	10.49	15.76	1.666		
3,236.00	3,233.42	3,237.21	3,234.03	9.13	8.96	125.90	-72.00	5.00	26.91	11.02	15.89	1.694		
3,299.99	3,297.25	3,301.19	3,297.84	9.32	9.13	125.53	-76.05	7.18	28.15	12.03	16.12	1.746		
3,325.00	3,322.20	3,326.19	3,322.78	9.39	9.20	125.36	-77.63	8.04	28.64	12.42	16.22	1.766		
3,399.99	3,397.01	3,401.16	3,397.56	9.61	9.40	122.76	-82.38	10.59	30.14	13.64	16.50	1.826		
3,416.00	3,412.97	3,417.16	3,413.52	9.65	9.44	122.27	-83.40	11.14	30.46	13.90	16.56	1.839		
3,499.99	3,496.75	3,501.13	3,497.27	9.91	9.68	120.35	-88.72	14.01	32.20	15.32	16.89	1.907		
3,507.00	3,503.73	3,508.14	3,504.26	9.93	9.70	120.22	-89.16	14.25	32.35	15.44	16.91	1.913		
3,596.00	3,592.47	3,597.12	3,593.01	10.20	9.95	113.79	-94.80	17.28	34.00	16.75	17.26	1.970		
3,599.99	3,596.45	3,601.12	3,596.99	10.22	9.96	113.40	-95.05	17.42	34.07	16.79	17.27	1.972		
3,686.00	3,682.17	3,687.11	3,682.77	10.49	10.21	106.36	-100.50	20.36	35.03	17.42	17.61	1.989		
3,699.99	3,696.11	3,701.11	3,696.73	10.54	10.25	106.47	-101.39	20.83	35.13	17.46	17.66	1.988		
3,776.00	3,771.84	3,777.11	3,772.53	10.79	10.47	107.00	-106.20	23.43	35.59	17.62	17.97	1.980		
3,799.99	3,795.75	3,801.10	3,796.46	10.86	10.54	108.07	-107.72	24.25	35.74	17.66	18.07	1.977		
3,864.00	3,859.53	3,865.10	3,860.29	11.07	10.73	110.84	-111.78	26.43	36.22	17.88	18.34	1.975		
3,899.99	3,895.39	3,901.09	3,896.19	11.19	10.84	111.56	-114.06	27.66	36.54	18.05	18.49	1.976		
3,954.00	3,949.21	3,955.09	3,950.05	11.37	11.01	112.57	-117.48	29.50	37.03	18.31	18.73	1.978		
3,999.99	3,995.04	4,001.08	3,995.92	11.52	11.14	113.61	-120.39	31.07	37.47	18.54	18.93	1.980		
4,044.00	4,038.90	4,045.08	4,039.81	11.67	11.28	114.57	-123.18	32.58	37.92	18.79	19.12	1.983		
4,099.99	4,094.70	4,101.07	4,095.65	11.85	11.45	116.78	-126.73	34.49	38.54	19.17	19.37	1.990		
4,133.00	4,127.60	4,134.08	4,128.57	11.96	11.55	118.00	-128.82	35.61	38.95	19.43	19.52	1.995		

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

<b>Company:</b>	Piedra Operating LLC	<b>Local Co-ordinate Reference:</b>	Well University 8-8E A H 5LS
<b>Project:</b>	Andrews County, TX (NAD83-TNC)	<b>TVD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Reference Site:</b>	University 8-8	<b>MD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Site Error:</b>	0.00	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	University 8-8E A H 5LS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	1.00	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH / 72180	<b>Database:</b>	USAEDMDB
<b>Reference Design:</b>	Surveys (Ensign T054)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design University 8-8E A H 8WC - OH / 72181 - Plan 1 03-16-23												Offset Site Error:	0.00 usft
Survey Program: 15-MWD, 1765-MWD+HRGM												Offset Well Error:	1.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Center		Distance			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	4,194.38	4,201.06	4,195.39	12.18	11.76	119.66	-133.06	37.90	39.84	20.02	19.82	2.010	
4,222.00	4,216.32	4,223.07	4,217.33	12.26	11.83	120.17	-134.46	38.65	40.16	20.24	19.92	2.016	
4,299.99	4,294.08	4,301.05	4,295.12	12.52	12.08	121.05	-139.40	41.31	41.29	21.02	20.27	2.037	
4,312.00	4,306.05	4,313.06	4,307.09	12.56	12.11	121.17	-140.16	41.72	41.46	21.14	20.32	2.040	
4,399.99	4,393.79	4,401.04	4,394.84	12.85	12.39	122.81	-145.73	44.73	42.76	22.05	20.71	2.065	
4,401.00	4,394.80	4,402.05	4,395.85	12.86	12.40	122.83	-145.80	44.76	42.77	22.06	20.72	2.065	
4,491.00	4,484.56	4,492.03	4,485.60	13.16	12.68	123.11	-151.50	47.83	44.17	23.06	21.11	2.092	
4,499.99	4,493.53	4,501.02	4,494.57	13.19	12.71	123.25	-152.07	48.14	44.32	23.17	21.15	2.095	
4,582.00	4,575.33	4,583.02	4,576.35	13.47	12.98	124.44	-157.26	50.94	45.71	24.20	21.51	2.125	
4,599.99	4,593.27	4,601.01	4,594.29	13.53	13.04	123.24	-158.40	51.55	46.02	24.43	21.59	2.132	
4,673.00	4,666.07	4,674.00	4,667.10	13.78	13.27	119.22	-163.03	54.04	47.27	25.35	21.92	2.157	
4,699.99	4,692.98	4,700.99	4,694.02	13.87	13.36	117.76	-164.74	54.96	47.70	25.66	22.04	2.164	
4,764.00	4,756.79	4,764.99	4,757.86	14.09	13.57	114.50	-168.79	57.15	48.54	26.19	22.34	2.172	
4,799.99	4,792.66	4,800.98	4,793.75	14.22	13.69	115.23	-171.07	58.38	48.95	26.43	22.52	2.174	
4,854.00	4,846.51	4,854.99	4,847.62	14.40	13.87	116.26	-174.49	60.22	49.59	26.82	22.77	2.177	
4,899.99	4,892.36	4,900.97	4,893.48	14.56	14.02	116.18	-177.41	61.79	50.14	27.15	22.99	2.181	
4,943.00	4,935.24	4,943.98	4,936.38	14.71	14.16	116.08	-180.13	63.26	50.64	27.44	23.20	2.183	
4,999.99	4,992.07	5,000.97	4,993.22	14.91	14.35	116.02	-183.74	65.20	51.24	27.77	23.47	2.183	
5,033.00	5,024.99	5,033.98	5,026.14	15.02	14.46	115.87	-185.83	66.33	51.53	27.91	23.62	2.182	
5,099.99	5,091.82	5,100.96	5,092.95	15.25	14.68	115.41	-190.08	68.62	52.09	28.16	23.93	2.177	
5,122.00	5,113.77	5,122.97	5,114.91	15.33	14.76	115.26	-191.47	69.37	52.27	28.24	24.03	2.175	
5,199.99	5,191.56	5,200.96	5,192.69	15.60	15.02	114.83	-196.41	72.03	52.98	28.58	24.40	2.172	
5,212.00	5,203.54	5,212.97	5,204.67	15.64	15.06	114.80	-197.17	72.44	53.11	28.65	24.46	2.171	
5,299.99	5,291.28	5,300.95	5,292.42	15.95	15.36	116.28	-202.75	75.44	54.08	29.20	24.88	2.174	
5,303.00	5,294.28	5,303.96	5,295.43	15.96	15.37	116.33	-202.94	75.55	54.12	29.23	24.89	2.174	
5,393.00	5,384.02	5,393.96	5,385.19	16.28	15.67	111.01	-208.64	78.62	54.93	29.61	25.33	2.169	
5,399.99	5,390.99	5,400.95	5,392.16	16.30	15.69	111.03	-209.08	78.86	54.98	29.61	25.36	2.168	
5,483.00	5,473.76	5,483.96	5,474.95	16.59	15.98	110.89	-214.34	81.69	55.49	29.71	25.78	2.152	
5,499.99	5,490.70	5,500.94	5,491.90	16.65	16.03	110.74	-215.42	82.27	55.59	29.73	25.87	2.149	
5,573.00	5,563.48	5,573.95	5,564.72	16.91	16.28	110.14	-220.05	84.76	55.98	29.75	26.24	2.134	
5,599.99	5,590.39	5,600.94	5,591.64	17.00	16.38	110.30	-221.76	85.68	56.12	29.74	26.38	2.128	
5,662.00	5,652.21	5,662.95	5,653.48	17.22	16.59	110.68	-225.68	87.80	56.43	29.73	26.70	2.114	
5,699.99	5,690.08	5,700.94	5,691.37	17.36	16.72	111.11	-228.09	89.10	56.64	29.74	26.89	2.106	
5,752.00	5,741.93	5,752.95	5,743.25	17.54	16.90	111.73	-231.39	90.87	56.96	29.79	27.17	2.096	
5,799.99	5,789.76	5,800.94	5,791.11	17.71	17.06	111.08	-234.43	92.51	57.24	29.82	27.42	2.087	
5,841.00	5,830.64	5,841.95	5,832.01	17.85	17.20	110.53	-237.02	93.91	57.44	29.79	27.65	2.078	
5,899.99	5,889.45	5,900.93	5,890.85	18.06	17.41	106.74	-240.76	95.92	57.49	29.53	27.96	2.056	
5,931.00	5,920.37	5,931.94	5,921.78	18.17	17.51	104.53	-242.73	96.98	57.36	29.23	28.13	2.039	
5,999.99	5,989.19	6,000.93	5,990.58	18.41	17.75	97.99	-247.10	99.34	56.63	28.13	28.49	1.987	
6,022.00	6,011.15	6,022.94	6,012.54	18.49	17.83	95.48	-248.49	100.09	56.25	27.65	28.60	1.967	
6,099.99	6,088.99	6,100.91	6,090.30	18.76	18.10	93.93	-253.43	102.75	54.76	25.78	28.98	1.889	
6,112.00	6,100.99	6,112.92	6,102.28	18.80	18.14	93.64	-254.19	103.16	54.52	25.48	29.04	1.877	
6,199.99	6,188.87	6,200.87	6,190.00	19.11	18.45	90.09	-259.76	106.16	52.67	23.27	29.39	1.792	
6,201.00	6,189.88	6,201.88	6,191.01	19.11	18.45	90.03	-259.83	106.20	52.65	23.25	29.40	1.791	
6,291.00	6,279.81	6,291.82	6,280.72	19.43	18.77	86.38	-265.53	109.27	50.76	21.03	29.73	1.707	
6,299.99	6,288.79	6,300.80	6,289.68	19.46	18.80	85.93	-266.10	109.57	50.57	20.81	29.77	1.699	

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

<b>Company:</b>	Piedra Operating LLC	<b>Local Co-ordinate Reference:</b>	Well University 8-8E A H 5LS
<b>Project:</b>	Andrews County, TX (NAD83-TNC)	<b>TVD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Reference Site:</b>	University 8-8	<b>MD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Site Error:</b>	0.00	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	University 8-8E A H 5LS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	1.00	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH / 72180	<b>Database:</b>	USAEDMDB
<b>Reference Design:</b>	Surveys (Ensign T054)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design University 8-8E A H 8WC - OH / 72181 - Plan 1 03-16-23												Offset Site Error:	0.00 usft
Survey Program: 15-MWD, 1765-MWD+HRGM												Offset Well Error:	1.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Center		Distance			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	6,369.74	6,381.75	6,370.42	19.74	19.08	81.66	-271.23	112.34	48.96	18.86	30.10	1.627	
6,399.99	6,388.71	6,400.73	6,389.35	19.80	19.15	80.99	-272.43	112.99	48.59	18.41	30.18	1.610	
6,470.00	6,458.68	6,470.69	6,459.13	20.04	19.39	78.39	-276.86	115.37	47.32	16.82	30.51	1.551	
6,499.99	6,488.64	6,500.65	6,489.02	20.15	19.50	77.77	-278.76	116.40	46.83	16.17	30.66	1.527	
6,559.00	6,547.62	6,559.62	6,547.83	20.35	19.70	76.48	-282.49	118.41	45.96	14.97	30.99	1.483	Level 3
6,599.99	6,588.57	6,600.58	6,588.68	20.49	19.85	73.24	-285.09	119.81	45.42	14.17	31.25	1.453	Level 3
6,650.00	6,638.55	6,650.56	6,638.53	20.66	20.02	69.20	-288.26	121.51	44.78	13.18	31.60	1.417	Level 3
6,699.99	6,688.51	6,700.50	6,688.35	20.84	20.20	67.30	-291.42	123.22	44.20	12.21	31.99	1.382	Level 3
6,740.00	6,728.49	6,740.48	6,728.22	20.97	20.34	65.73	-293.95	124.58	43.82	11.48	32.34	1.355	Level 3
6,799.99	6,788.44	6,800.42	6,788.01	21.18	20.55	63.68	-297.75	126.63	43.38	10.46	32.92	1.318	Level 3
6,830.00	6,818.43	6,830.47	6,817.99	21.29	20.66	62.77	-299.56	127.61	43.20	9.99	33.21	1.301	Level 3
6,899.99	6,888.38	6,900.63	6,888.05	21.53	20.90	60.10	-302.73	129.31	42.64	8.89	33.75	1.263	Level 3
6,919.00	6,907.38	6,919.70	6,907.11	21.59	20.96	59.74	-303.33	129.64	42.44	8.58	33.85	1.254	Level 3
6,999.99	6,988.32	7,000.90	6,988.29	21.88	21.18	62.51	-304.64	130.34	41.37	7.29	34.08	1.214	Level 2
7,009.00	6,997.33	7,009.93	6,997.32	21.91	21.19	63.02	-304.66	130.35	41.24	7.17	34.07	1.210	Level 2
7,099.00	7,087.28	7,099.89	7,087.28	22.22	21.20	66.42	-304.66	130.35	40.01	5.96	34.05	1.175	Level 2
7,099.99	7,088.26	7,100.87	7,088.26	22.22	21.20	66.46	-304.66	130.35	39.99	5.95	34.05	1.175	Level 2
7,188.00	7,176.24	7,188.85	7,176.24	22.53	21.22	68.95	-304.66	130.35	38.97	4.86	34.11	1.142	Level 2
7,199.99	7,188.22	7,200.83	7,188.22	22.57	21.22	68.71	-304.66	130.35	38.84	4.71	34.13	1.138	Level 2
7,277.00	7,265.20	7,277.81	7,265.20	22.84	21.24	66.85	-304.66	130.35	37.98	3.70	34.27	1.108	Level 2
7,299.99	7,288.17	7,300.78	7,288.17	22.92	21.25	66.58	-304.66	130.35	37.72	3.39	34.33	1.099	Level 2
7,367.00	7,355.16	7,367.77	7,355.16	23.15	21.26	65.38	-304.66	130.35	36.97	2.44	34.53	1.071	Level 2
7,399.99	7,388.14	7,400.75	7,388.14	23.26	21.27	65.28	-304.66	130.35	36.60	1.95	34.65	1.056	Level 2
7,457.00	7,445.13	7,457.74	7,445.13	23.45	21.28	65.23	-304.66	130.35	35.95	1.07	34.88	1.031	Level 2
7,481.00	7,469.12	7,481.73	7,469.12	23.53	21.28	59.57	-304.66	130.35	35.65	0.67	34.98	1.019	Level 2
7,499.99	7,488.10	7,500.71	7,488.10	23.59	21.29	59.89	-304.66	130.35	35.39	0.32	35.07	1.009	Level 2
7,595.00	7,583.07	7,595.68	7,583.07	23.90	21.31	62.12	-304.66	130.35	34.03	-1.54	35.58	0.957	Level 1
7,599.98	7,588.06	7,600.67	7,588.06	23.91	21.31	62.09	-304.66	130.35	33.96	-1.65	35.61	0.954	Level 1
7,685.00	7,673.03	7,685.64	7,673.03	24.20	21.33	62.22	-304.66	130.35	32.67	-3.54	36.21	0.902	Level 1
7,699.98	7,688.00	7,700.61	7,688.00	24.25	21.33	61.19	-304.66	130.35	32.42	-3.91	36.33	0.892	Level 1
7,774.00	7,761.97	7,774.58	7,761.97	24.49	21.35	57.26	-304.66	130.35	31.05	-5.93	36.98	0.840	Level 1
7,799.98	7,787.94	7,800.55	7,787.94	24.57	21.36	56.40	-304.66	130.35	30.59	-6.63	37.21	0.822	Level 1
7,864.00	7,851.95	7,864.56	7,851.95	24.76	21.37	-4.10	-304.66	130.35	29.98	-7.64	37.62	0.797	Level 1
7,899.98	7,887.93	7,900.54	7,887.93	24.86	21.38	-10.14	-304.66	130.35	29.73	-8.01	37.75	0.788	Level 1
7,954.00	7,941.94	7,954.55	7,941.94	25.02	21.39	-12.37	-304.66	130.35	28.98	-8.94	37.92	0.764	Level 1
7,999.98	7,987.91	8,000.52	7,987.91	25.15	21.40	-6.11	-304.66	130.35	28.00	-10.05	38.05	0.736	Level 1
8,044.00	8,031.91	8,044.52	8,031.91	25.28	21.41	-2.40	-304.66	130.35	26.80	-11.39	38.19	0.702	Level 1
8,099.98	8,087.87	8,100.48	8,087.87	25.44	21.43	16.61	-304.66	130.35	25.23	-13.21	38.44	0.656	Level 1
8,133.00	8,120.88	8,133.49	8,120.88	25.54	21.43	29.69	-304.66	130.35	24.42	-14.23	38.65	0.632	Level 1
8,199.98	8,187.84	8,200.45	8,187.84	25.74	21.45	44.69	-304.66	130.35	23.03	-16.17	39.20	0.588	Level 1
8,223.00	8,210.85	8,223.46	8,210.85	25.81	21.46	50.23	-304.66	130.35	22.63	-16.79	39.42	0.574	Level 1
8,299.98	8,287.81	8,300.42	8,287.81	26.06	21.47	67.35	-304.66	130.35	21.73	-18.46	40.19	0.541	Level 1
8,312.00	8,299.83	8,312.44	8,299.83	26.10	21.48	70.84	-304.66	130.35	21.65	-18.66	40.31	0.537	Level 1
8,399.98	8,387.80	8,400.41	8,387.80	26.38	21.50	68.95	-304.66	130.35	21.21	-19.88	41.09	0.516	Level 1
8,401.00	8,388.82	8,401.43	8,388.82	26.39	21.50	68.89	-304.66	130.35	21.20	-19.89	41.10	0.516	Level 1

<b>Company:</b>	Piedra Operating LLC	<b>Local Co-ordinate Reference:</b>	Well University 8-8E A H 5LS
<b>Project:</b>	Andrews County, TX (NAD83-TNC)	<b>TVD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Reference Site:</b>	University 8-8	<b>MD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Site Error:</b>	0.00	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	University 8-8E A H 5LS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	1.00	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH / 72180	<b>Database:</b>	USAEDMDB
<b>Reference Design:</b>	Surveys (Ensign T054)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design University 8-8E A H 8WC - OH / 72181 - Plan 1 03-16-23												Offset Site Error:	0.00 usft
Survey Program: 15-MWD, 1765-MWD+HRGM												Offset Well Error:	1.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Center		Distance			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)		
8,490.00	8,477.81	8,490.42	8,477.81	26.66	21.52	42.63	-304.66	130.35	20.44	-21.38	41.82	0.489	Level 1
8,499.98	8,487.79	8,500.40	8,487.79	26.69	21.52	41.36	-304.66	130.35	20.31	-21.60	41.91	0.485	Level 1
8,581.00	8,568.79	8,581.40	8,568.79	26.94	21.54	32.19	-304.66	130.35	19.11	-23.47	42.58	0.449	Level 1
8,599.98	8,587.77	8,600.38	8,587.77	27.00	21.55	43.15	-304.66	130.35	18.82	-23.93	42.75	0.440	Level 1
8,670.00	8,657.77	8,670.38	8,657.77	27.21	21.57	76.56	-304.66	130.35	18.08	-25.53	43.61	0.415	Level 1
8,690.23	8,677.99	8,690.60	8,677.99	27.29	21.57	89.99	-304.66	130.35	18.02	-25.93	43.95	0.410	Level 1 , CC
8,699.98	8,687.74	8,700.35	8,687.74	27.33	21.57	94.92	-304.66	130.35	18.04	-26.11	44.14	0.409	Level 1 , SF
8,760.00	8,747.68	8,760.29	8,747.68	27.56	21.59	116.34	-304.66	130.35	18.95	-26.59	45.53	0.416	Level 1 , ES
8,799.98	8,787.58	8,800.19	8,787.58	27.72	21.60	121.96	-304.66	130.35	20.20	-26.23	46.43	0.435	Level 1
8,849.00	8,836.49	8,849.10	8,836.49	27.92	21.61	127.74	-304.66	130.35	21.99	-25.30	47.29	0.465	Level 1
8,872.00	8,859.45	8,872.06	8,859.45	28.00	21.62	130.96	-304.66	130.35	22.91	-24.70	47.61	0.481	Level 1
8,899.98	8,887.36	8,899.97	8,887.36	28.11	21.63	145.65	-304.66	130.35	24.41	-23.54	47.95	0.509	Level 1
8,941.00	8,928.19	8,940.80	8,928.19	28.27	21.64	159.04	-304.66	130.35	27.89	-20.46	48.35	0.577	Level 1
8,999.98	8,986.21	8,998.82	8,986.21	29.02	21.65	172.83	-304.66	130.35	38.02	-11.26	49.27	0.772	Level 1
9,031.00	9,016.02	9,028.63	9,016.02	29.44	21.66	175.81	-304.66	130.35	46.53	-3.20	49.73	0.936	Level 1
9,099.98	9,080.85	9,093.46	9,080.85	30.46	21.68	179.92	-304.66	130.35	70.05	19.17	50.89	1.377	Level 3
9,121.00	9,100.27	9,112.88	9,100.27	30.79	21.68	-179.28	-304.66	130.35	78.08	26.86	51.22	1.524	
9,199.98	9,171.23	9,183.84	9,171.23	31.40	21.70	179.71	-304.66	130.35	112.69	60.78	51.90	2.171	
9,210.00	9,179.96	9,192.57	9,179.96	31.48	21.70	179.62	-304.66	130.35	117.59	65.61	51.99	2.262	
9,299.00	9,255.54	9,268.15	9,255.54	32.18	21.72	172.88	-304.66	130.35	164.44	111.77	52.68	3.122	
9,299.98	9,256.36	9,268.97	9,256.36	32.19	21.72	172.80	-304.66	130.35	164.99	112.31	52.68	3.132	
9,389.00	9,329.05	9,341.66	9,329.05	32.75	21.74	166.83	-304.66	130.35	215.78	162.62	53.16	4.059	
9,399.98	9,337.84	9,350.45	9,337.84	32.81	21.74	167.35	-304.66	130.35	222.26	169.04	53.22	4.176	
9,479.00	9,398.36	9,410.97	9,398.36	33.28	21.76	170.45	-304.66	130.35	272.46	218.81	53.65	5.078	
9,499.98	9,413.49	9,426.10	9,413.49	33.43	21.77	170.95	-304.66	130.35	286.90	233.08	53.82	5.331	
9,568.00	9,458.53	9,471.14	9,458.53	33.92	21.78	172.24	-304.66	130.35	337.56	283.22	54.35	6.211	
9,599.98	9,477.62	9,490.23	9,477.62	34.11	21.78	172.66	-304.66	130.35	363.14	308.59	54.55	6.657	
9,657.00	9,508.72	9,521.33	9,508.72	34.46	21.79	173.25	-304.66	130.35	410.81	355.90	54.90	7.483	
9,699.98	9,529.60	9,542.21	9,529.60	34.64	21.80	172.20	-304.66	130.35	448.29	393.23	55.06	8.142	
9,748.00	9,550.27	9,562.88	9,550.27	34.85	21.80	170.74	-304.66	130.35	491.54	436.30	55.24	8.899	
9,799.98	9,568.71	9,581.32	9,568.71	35.03	21.81	165.98	-304.66	130.35	539.99	484.63	55.36	9.754	
9,837.00	9,578.89	9,591.50	9,578.89	35.17	21.81	160.73	-304.66	130.35	575.46	520.01	55.45	10.377	
9,899.98	9,588.83	10,617.95	10,211.69	35.33	25.14	177.54	-914.86	320.84	623.44	576.80	46.64	13.367	
9,928.00	9,589.86	10,645.67	10,211.56	35.41	25.15	177.61	-941.53	328.41	622.25	574.57	47.68	13.051	
9,952.00	9,589.61	10,669.45	10,211.44	35.46	25.17	177.66	-964.46	334.70	622.36	574.51	47.85	13.006	
9,999.98	9,588.60	10,717.00	10,211.21	35.57	25.19	177.69	-1,010.46	346.71	623.13	575.08	48.05	12.969	
10,042.00	9,587.53	10,758.63	10,211.01	35.67	25.22	177.66	-1,050.91	356.59	624.00	575.78	48.23	12.939	
10,099.98	9,586.09	10,816.46	10,210.73	35.85	25.28	177.67	-1,107.24	369.66	625.17	576.69	48.48	12.895	
10,132.00	9,585.40	10,848.46	10,210.58	35.96	25.32	177.78	-1,138.41	376.88	625.66	577.03	48.63	12.866	
10,199.98	9,583.86	10,916.34	10,210.25	36.22	25.45	178.11	-1,204.54	392.18	626.74	577.79	48.95	12.803	
10,223.00	9,583.26	10,939.31	10,210.14	36.31	25.50	178.24	-1,226.92	397.36	627.19	578.12	49.07	12.782	
10,299.98	9,581.11	11,016.11	10,209.77	36.63	25.81	178.70	-1,301.74	414.68	628.83	579.36	49.47	12.712	
10,312.00	9,580.77	11,028.10	10,209.71	36.68	25.87	178.77	-1,313.43	417.38	629.10	579.57	49.53	12.701	
10,399.98	9,578.76	11,115.91	10,209.29	37.11	26.54	179.24	-1,398.97	437.18	630.59	580.57	50.03	12.605	
10,401.00	9,578.74	11,116.93	10,209.28	37.12	26.55	179.24	-1,399.97	437.41	630.61	580.57	50.03	12.604	
10,490.00	9,577.42	11,205.79	10,208.85	37.61	27.50	179.70	-1,486.53	457.44	631.45	580.89	50.56	12.488	

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

<b>Company:</b>	Piedra Operating LLC	<b>Local Co-ordinate Reference:</b>	Well University 8-8E A H 5LS
<b>Project:</b>	Andrews County, TX (NAD83-TNC)	<b>TVD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Reference Site:</b>	University 8-8	<b>MD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Site Error:</b>	0.00	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	University 8-8E A H 5LS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	1.00	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH / 72180	<b>Database:</b>	USAEDMDB
<b>Reference Design:</b>	Surveys (Ensign T054)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design University 8-8E A H 8WC - OH / 72181 - Plan 1 03-16-23												Offset Site Error:	0.00 usft
Survey Program: 15-MWD, 1765-MWD+HRGM												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)		
10,499.98	9,577.29	11,215.75	10,208.80	37.68	27.62	179.75	-1,496.24	459.69	631.53	580.90	50.63	12.474	
10,580.00	9,576.23	11,295.70	10,208.42	38.20	28.63	-179.98	-1,574.14	477.72	632.19	581.06	51.14	12.363	
10,599.98	9,575.95	11,315.68	10,208.32	38.34	28.89	-179.94	-1,593.59	482.22	632.38	581.11	51.27	12.335	
10,670.00	9,574.71	11,385.67	10,207.98	38.84	29.82	-179.78	-1,661.78	498.00	633.29	581.55	51.74	12.240	
10,699.98	9,574.09	11,415.63	10,207.84	39.07	30.22	-179.71	-1,690.98	504.76	633.76	581.81	51.95	12.200	
10,759.00	9,572.88	11,474.62	10,207.55	39.51	31.04	-179.56	-1,748.45	518.06	634.70	582.34	52.37	12.121	
10,799.98	9,571.96	11,515.57	10,207.36	39.83	31.61	-179.44	-1,788.34	527.29	635.44	582.77	52.67	12.066	
10,848.00	9,570.69	11,563.55	10,207.13	40.21	32.28	-179.27	-1,835.08	538.11	636.49	583.47	53.02	12.004	
10,899.98	9,569.58	11,615.50	10,206.88	40.65	33.02	-179.15	-1,885.69	549.82	637.37	583.94	53.42	11.930	
10,938.00	9,569.24	11,653.52	10,206.69	40.98	33.56	-179.13	-1,922.73	558.39	637.53	583.81	53.72	11.867	
10,999.98	9,569.14	11,715.49	10,206.39	41.56	34.45	-179.22	-1,983.11	572.36	637.32	583.09	54.22	11.754	
11,026.00	9,569.19	11,741.49	10,206.27	41.80	34.83	-179.30	-2,008.44	578.23	637.14	582.70	54.43	11.705	
11,099.98	9,569.28	11,815.43	10,205.91	42.48	35.90	-179.53	-2,080.47	594.90	636.66	581.62	55.04	11.567	
11,118.00	9,569.27	11,833.44	10,205.82	42.65	36.16	-179.59	-2,098.02	598.96	636.58	581.39	55.19	11.533	
11,199.98	9,568.81	11,915.38	10,205.43	43.41	37.36	-179.82	-2,177.84	617.43	636.63	580.74	55.90	11.390	
11,207.00	9,568.73	11,922.39	10,205.39	43.48	37.46	-179.84	-2,184.68	619.01	636.67	580.72	55.96	11.378	
11,297.00	9,567.33	12,012.35	10,204.96	44.33	38.78	179.93	-2,272.32	639.30	637.64	580.89	56.75	11.236	
11,299.98	9,567.27	12,015.33	10,204.95	44.36	38.83	179.93	-2,275.22	639.97	637.69	580.91	56.78	11.231	
11,387.00	9,565.32	12,102.29	10,204.53	45.21	40.11	179.67	-2,359.94	659.57	639.23	581.66	57.57	11.103	
11,399.98	9,565.02	12,115.25	10,204.46	45.34	40.31	179.62	-2,372.57	662.50	639.47	581.77	57.70	11.083	
11,478.00	9,564.25	12,193.22	10,204.09	46.12	41.47	179.37	-2,448.54	680.08	639.88	581.44	58.44	10.949	
11,499.98	9,564.24	12,215.19	10,203.98	46.34	41.79	179.30	-2,469.93	685.03	639.79	581.14	58.66	10.908	
11,567.00	9,563.79	12,282.17	10,203.66	47.02	42.80	179.09	-2,535.19	700.13	639.96	580.65	59.31	10.789	
11,599.98	9,563.52	12,315.13	10,203.50	47.36	43.29	179.00	-2,567.30	707.56	640.09	580.44	59.64	10.732	
11,656.00	9,563.61	12,371.14	10,203.23	47.94	44.13	178.91	-2,621.87	720.19	639.75	579.55	60.20	10.627	
11,699.98	9,563.94	12,415.11	10,203.02	48.40	44.79	178.88	-2,664.71	730.10	639.21	578.56	60.64	10.540	
11,746.00	9,564.28	12,461.13	10,202.80	48.89	45.48	178.88	-2,709.54	740.48	638.64	577.53	61.11	10.451	
11,799.98	9,564.93	12,515.10	10,202.54	49.46	46.30	178.85	-2,762.12	752.65	637.74	576.08	61.67	10.342	
11,837.00	9,565.66	12,552.10	10,202.36	49.85	46.85	178.78	-2,798.17	760.99	636.84	574.79	62.05	10.263	
11,899.98	9,567.14	12,615.03	10,202.05	50.53	47.81	178.62	-2,859.48	775.18	635.10	572.39	62.72	10.126	
11,928.00	9,567.81	12,643.03	10,201.92	50.84	48.23	178.55	-2,886.76	781.49	634.32	571.30	63.02	10.066	
11,999.98	9,569.45	12,714.97	10,201.57	51.63	49.32	178.44	-2,956.84	797.71	632.37	568.57	63.79	9.913	
12,018.00	9,569.83	12,732.99	10,201.48	51.83	49.59	178.44	-2,974.39	801.77	631.90	567.91	63.99	9.875	
12,099.98	9,570.85	12,814.94	10,201.09	52.74	50.84	178.56	-3,054.23	820.25	630.45	565.58	64.87	9.718	
12,109.00	9,570.87	12,823.96	10,201.05	52.84	50.98	178.59	-3,063.02	822.28	630.37	565.40	64.97	9.703	
12,198.00	9,571.32	12,912.91	10,200.62	53.81	52.33	178.83	-3,149.69	842.34	629.44	563.50	65.94	9.546	
12,199.98	9,571.33	12,914.89	10,200.61	53.84	52.36	178.83	-3,151.61	842.79	629.41	563.46	65.96	9.542	
12,288.00	9,571.92	13,002.86	10,200.18	54.81	53.70	179.11	-3,237.31	862.62	628.35	561.42	66.93	9.388	
12,299.98	9,571.99	13,014.82	10,200.13	54.94	53.89	179.15	-3,248.97	865.32	628.21	561.15	67.06	9.368	
12,377.00	9,572.37	13,091.78	10,199.75	55.79	55.06	179.44	-3,323.94	882.67	627.42	559.50	67.92	9.237	
12,399.98	9,572.49	13,114.73	10,199.64	56.05	55.41	179.53	-3,346.30	887.84	627.18	559.00	68.18	9.199	
12,467.00	9,573.03	13,181.68	10,199.32	56.80	56.44	179.81	-3,411.53	902.94	626.30	557.36	68.94	9.084	
12,499.98	9,573.40	13,214.62	10,199.16	57.17	56.94	179.94	-3,443.62	910.36	625.77	556.45	69.32	9.027	
12,558.00	9,574.15	13,272.56	10,198.88	57.83	57.83	-179.79	-3,500.07	923.43	624.74	554.75	69.99	8.926	
12,599.98	9,574.63	13,314.48	10,198.68	58.30	58.48	-179.61	-3,540.91	932.88	624.07	553.59	70.48	8.855	

<b>Company:</b>	Piedra Operating LLC	<b>Local Co-ordinate Reference:</b>	Well University 8-8E A H 5LS
<b>Project:</b>	Andrews County, TX (NAD83-TNC)	<b>TVD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Reference Site:</b>	University 8-8	<b>MD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Site Error:</b>	0.00	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	University 8-8E A H 5LS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	1.00	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH / 72180	<b>Database:</b>	USAEDMDB
<b>Reference Design:</b>	Surveys (Ensign T054)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design University 8-8E A H 8WC - OH / 72181 - Plan 1 03-16-23												Offset Site Error:	0.00 usft
Survey Program: 15-MWD, 1765-MWD+HRGM												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)		
12,647.00	9,574.88	13,361.47	10,198.45	58.84	59.20	-179.44	-3,586.69	943.47	623.61	552.57	71.03	8.779	
12,699.97	9,574.76	13,414.41	10,198.20	59.44	60.01	-179.26	-3,638.26	955.41	623.49	551.83	71.66	8.701	
12,737.00	9,574.41	13,451.41	10,198.02	59.87	60.58	-179.13	-3,674.31	963.75	623.69	551.58	72.10	8.650	
12,799.97	9,573.76	13,514.33	10,197.72	60.60	61.55	-178.91	-3,735.61	977.94	624.07	551.21	72.86	8.565	
12,827.00	9,573.57	13,541.34	10,197.59	60.91	61.96	-178.82	-3,761.92	984.03	624.15	550.97	73.19	8.528	
12,899.97	9,573.03	13,614.26	10,197.23	61.75	63.09	-178.56	-3,832.96	1,000.47	624.40	550.32	74.08	8.429	
12,918.00	9,572.87	13,632.27	10,197.15	61.96	63.36	-178.50	-3,850.51	1,004.53	624.49	550.20	74.30	8.405	
12,999.97	9,572.48	13,714.22	10,196.75	62.93	64.63	-178.34	-3,930.35	1,023.01	624.55	549.24	75.31	8.293	
13,007.00	9,572.48	13,721.25	10,196.72	63.02	64.74	-178.33	-3,937.19	1,024.59	624.51	549.12	75.39	8.283	
13,097.00	9,572.61	13,811.24	10,196.28	64.09	66.13	-178.29	-4,024.87	1,044.88	623.96	547.45	76.51	8.155	
13,099.97	9,572.62	13,814.22	10,196.27	64.12	66.17	-178.29	-4,027.77	1,045.55	623.94	547.39	76.55	8.151	
13,186.00	9,573.32	13,900.23	10,195.85	65.15	67.50	-178.36	-4,111.57	1,064.95	622.80	545.19	77.62	8.024	
13,199.97	9,573.51	13,914.20	10,195.79	65.32	67.72	-178.39	-4,125.18	1,068.10	622.53	544.74	77.79	8.002	
13,275.00	9,574.94	13,989.16	10,195.42	66.23	68.88	-178.63	-4,198.20	1,085.00	620.67	541.95	78.73	7.884	
13,299.97	9,575.39	14,014.10	10,195.30	66.53	69.26	-178.74	-4,222.50	1,090.62	620.08	541.03	79.05	7.845	
13,366.00	9,575.28	14,080.05	10,194.99	67.33	70.28	-179.03	-4,286.75	1,105.49	619.81	539.91	79.89	7.758	
13,399.97	9,574.60	14,113.98	10,194.82	67.74	70.81	-179.18	-4,319.81	1,113.14	620.30	539.96	80.33	7.721	
13,455.00	9,572.87	14,168.93	10,194.56	68.41	71.66	-179.41	-4,373.34	1,125.53	621.73	540.68	81.05	7.671	
13,499.97	9,571.07	14,213.82	10,194.34	68.96	72.36	-179.60	-4,417.08	1,135.65	623.29	541.66	81.63	7.635	
13,544.00	9,569.21	14,257.77	10,194.13	69.49	73.04	-179.80	-4,459.89	1,145.56	624.93	542.73	82.20	7.602	
13,599.97	9,566.63	14,313.62	10,193.86	70.18	73.90	-179.94	-4,514.31	1,158.15	627.24	544.31	82.93	7.563	
13,635.00	9,564.88	14,348.57	10,193.69	70.61	74.45	-179.79	-4,548.36	1,166.03	628.82	545.43	83.39	7.541	
13,699.97	9,562.36	14,413.46	10,193.38	71.41	75.45	-179.58	-4,611.58	1,180.66	631.04	546.79	84.25	7.490	
13,724.00	9,561.85	14,437.48	10,193.26	71.70	75.83	-179.54	-4,634.98	1,186.08	631.44	546.87	84.57	7.466	
13,799.97	9,560.95	14,513.44	10,192.90	72.64	77.01	-179.42	-4,708.98	1,203.20	631.98	546.40	85.59	7.384	
13,813.00	9,560.87	14,526.46	10,192.83	72.80	77.21	-179.40	-4,721.67	1,206.14	632.00	546.24	85.76	7.369	
13,899.97	9,560.51	14,613.42	10,192.41	73.87	78.56	-179.27	-4,806.39	1,225.75	631.96	545.05	86.92	7.271	
13,902.00	9,560.50	14,615.45	10,192.40	73.89	78.59	-179.26	-4,808.36	1,226.20	631.96	545.02	86.94	7.269	
13,992.00	9,560.63	14,705.44	10,191.97	75.00	79.99	-179.17	-4,896.04	1,246.49	631.42	543.27	88.14	7.164	
13,999.97	9,560.66	14,713.41	10,191.93	75.10	80.11	-179.16	-4,903.80	1,248.29	631.34	543.09	88.25	7.154	
14,081.00	9,559.69	14,794.43	10,191.54	76.10	81.37	-179.22	-4,982.74	1,266.56	631.92	542.58	89.34	7.073	
14,099.97	9,559.16	14,813.39	10,191.45	76.34	81.67	-179.26	-5,001.21	1,270.83	632.35	542.76	89.59	7.058	
14,171.00	9,556.95	14,884.35	10,191.11	77.22	82.77	-179.49	-5,070.34	1,286.83	634.19	543.65	90.53	7.005	
14,199.97	9,555.94	14,913.28	10,190.97	77.58	83.22	-179.61	-5,098.52	1,293.35	635.05	544.13	90.91	6.985	
14,260.00	9,553.59	14,973.19	10,190.68	78.32	84.16	-179.89	-5,156.89	1,306.86	637.09	545.39	91.70	6.947	
14,299.97	9,552.03	15,013.09	10,190.49	78.81	84.78	-179.93	-5,195.76	1,315.86	638.46	546.23	92.23	6.922	
14,349.00	9,550.45	15,062.07	10,190.25	79.42	85.54	-179.78	-5,243.48	1,326.90	639.81	546.92	92.89	6.888	
14,399.97	9,549.10	15,113.01	10,190.00	80.05	86.33	-179.65	-5,293.11	1,338.39	640.92	547.34	93.58	6.849	
14,439.00	9,548.23	15,152.02	10,189.82	80.54	86.94	-179.56	-5,331.11	1,347.18	641.61	547.50	94.11	6.818	
14,499.97	9,546.77	15,212.95	10,189.52	81.29	87.89	-179.39	-5,390.47	1,360.92	642.80	547.86	94.93	6.771	
14,529.00	9,545.92	15,241.95	10,189.38	81.65	88.34	-179.29	-5,418.72	1,367.46	643.51	548.19	95.33	6.751	
14,599.97	9,544.25	15,312.88	10,189.04	82.55	89.45	-179.15	-5,487.83	1,383.45	644.87	548.57	96.30	6.696	
14,619.00	9,543.97	15,331.91	10,188.95	82.79	89.75	-179.16	-5,506.37	1,387.74	645.06	548.50	96.56	6.680	
14,699.97	9,542.79	15,412.87	10,188.56	83.83	91.01	-179.20	-5,585.24	1,405.99	645.84	548.16	97.67	6.612	
14,710.00	9,542.63	15,422.90	10,188.51	83.95	91.17	-179.20	-5,595.02	1,408.26	645.95	548.14	97.81	6.604	
14,800.00	9,541.46	15,512.89	10,188.07	85.08	92.57	-179.29	-5,682.69	1,428.55	646.68	547.63	99.05	6.529	



<b>Company:</b>	Piedra Operating LLC	<b>Local Co-ordinate Reference:</b>	Well University 8-8E A H 5LS
<b>Project:</b>	Andrews County, TX (NAD83-TNC)	<b>TVD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Reference Site:</b>	University 8-8	<b>MD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Site Error:</b>	0.00	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	University 8-8E A H 5LS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	1.00	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH / 72180	<b>Database:</b>	USAEDMDB
<b>Reference Design:</b>	Surveys (Ensign T054)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design University 8-8E A H 8WC - OH / 72181 - Plan 1 03-16-23												Offset Site Error:	0.00 usft
Survey Program: 15-MWD, 1765-MWD+HRGM												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)		
14,889.00	9,540.74	15,601.89	10,187.65	86.20	93.96	-179.39	-5,769.39	1,448.61	646.95	546.67	100.28	6.452	
14,899.97	9,540.68	15,612.85	10,187.59	86.34	94.13	-179.41	-5,780.07	1,451.08	646.95	546.52	100.43	6.442	
14,979.00	9,541.17	15,691.84	10,187.21	87.35	95.36	-179.63	-5,857.02	1,468.89	646.07	544.53	101.53	6.363	
14,999.97	9,541.54	15,712.78	10,187.11	87.62	95.69	-179.71	-5,877.43	1,473.61	645.59	543.76	101.83	6.340	
15,069.00	9,543.18	15,781.71	10,186.78	88.50	96.77	-179.99	-5,944.58	1,489.15	643.60	540.80	102.80	6.261	
15,099.97	9,544.14	15,812.63	10,186.63	88.90	97.25	179.89	-5,974.71	1,496.13	642.50	539.26	103.24	6.223	
15,159.00	9,546.36	15,871.56	10,186.34	89.65	98.17	179.68	-6,032.12	1,509.41	640.00	535.93	104.08	6.149	
15,199.97	9,547.85	15,912.47	10,186.15	90.17	98.81	179.56	-6,071.97	1,518.64	638.32	533.66	104.66	6.099	
15,249.00	9,549.06	15,961.46	10,185.91	90.80	99.58	179.45	-6,119.70	1,529.68	636.89	531.53	105.36	6.045	
15,299.97	9,550.10	16,012.41	10,185.66	91.45	100.37	179.34	-6,169.33	1,541.17	635.61	529.52	106.09	5.991	
15,338.00	9,551.03	16,050.41	10,185.48	91.93	100.97	179.26	-6,206.36	1,549.74	634.51	527.88	106.64	5.950	
15,399.97	9,552.34	16,112.34	10,185.18	92.72	101.94	179.15	-6,266.70	1,563.70	632.92	525.40	107.52	5.887	
15,429.00	9,552.73	16,141.37	10,185.04	93.09	102.39	179.13	-6,294.97	1,570.24	632.39	524.46	107.93	5.859	
15,499.97	9,553.44	16,212.33	10,184.70	94.00	103.50	179.11	-6,364.11	1,586.24	631.34	522.41	108.94	5.795	
15,518.00	9,553.59	16,230.36	10,184.61	94.23	103.78	179.11	-6,381.67	1,590.31	631.10	521.91	109.19	5.780	
15,599.97	9,553.45	16,312.32	10,184.22	95.27	105.06	179.16	-6,461.53	1,608.79	630.84	520.49	110.36	5.716	
15,608.00	9,553.35	16,320.35	10,184.18	95.37	105.19	179.17	-6,469.35	1,610.60	630.91	520.44	110.47	5.711	
15,699.00	9,552.94	16,411.35	10,183.74	96.54	106.61	179.16	-6,558.00	1,631.12	630.87	519.11	111.77	5.645	
15,699.97	9,552.95	16,412.32	10,183.74	96.55	106.63	179.16	-6,558.94	1,631.33	630.86	519.08	111.78	5.644	
15,789.00	9,553.43	16,501.33	10,183.31	97.69	108.02	178.98	-6,645.66	1,651.40	629.98	516.91	113.07	5.572	
15,799.97	9,553.50	16,512.29	10,183.25	97.83	108.19	178.95	-6,656.34	1,653.87	629.86	516.63	113.23	5.563	
15,880.00	9,554.36	16,592.26	10,182.87	98.86	109.44	178.69	-6,734.25	1,671.90	628.68	514.27	114.41	5.495	
15,899.97	9,554.64	16,612.21	10,182.77	99.12	109.76	178.61	-6,753.68	1,676.40	628.32	513.61	114.71	5.478	
15,969.00	9,555.45	16,681.17	10,182.44	100.01	110.84	178.34	-6,820.86	1,691.95	627.25	511.51	115.75	5.419	
15,999.97	9,555.68	16,712.10	10,182.29	100.41	111.32	178.22	-6,851.01	1,698.93	626.92	510.70	116.21	5.395	
16,058.00	9,555.59	16,770.10	10,182.01	101.15	112.23	178.03	-6,907.51	1,712.00	626.80	509.71	117.09	5.353	
16,099.97	9,554.86	16,812.05	10,181.81	101.70	112.89	177.97	-6,948.38	1,721.46	627.35	509.64	117.71	5.330	
16,148.00	9,552.98	16,860.05	10,181.58	102.33	113.64	178.01	-6,995.14	1,732.28	628.99	510.58	118.41	5.312	
16,199.97	9,550.32	16,911.95	10,181.33	103.00	114.45	178.13	-7,045.70	1,743.98	631.35	512.21	119.14	5.299	
16,238.00	9,548.34	16,949.92	10,181.14	103.50	115.05	178.23	-7,082.70	1,752.55	633.11	513.44	119.67	5.290	
16,299.97	9,544.83	17,011.78	10,180.84	104.29	116.01	178.41	-7,142.96	1,766.49	636.26	515.73	120.53	5.279	
16,327.00	9,543.15	17,038.76	10,180.71	104.64	116.44	178.49	-7,169.24	1,772.57	637.80	516.89	120.91	5.275	
16,399.97	9,538.01	17,111.53	10,180.36	105.57	117.58	178.69	-7,240.15	1,788.98	642.53	520.61	121.92	5.270	
16,417.00	9,536.68	17,128.51	10,180.28	105.79	117.84	178.74	-7,256.69	1,792.81	643.76	521.61	122.16	5.270	
16,499.97	9,528.75	17,211.10	10,179.88	106.85	119.14	178.97	-7,337.14	1,811.43	651.25	527.92	123.33	5.281	
16,507.00	9,527.95	17,218.09	10,179.85	106.94	119.25	178.99	-7,343.95	1,813.01	652.01	528.58	123.43	5.283	
16,596.00	9,519.14	17,306.64	10,179.42	108.08	120.64	179.24	-7,430.23	1,832.97	660.34	535.65	124.70	5.296	
16,599.97	9,518.82	17,310.60	10,179.40	108.13	120.70	179.25	-7,434.08	1,833.86	660.65	535.90	124.75	5.296	
16,686.00	9,513.74	17,396.45	10,178.99	109.24	122.04	179.50	-7,517.72	1,853.22	665.28	539.28	126.01	5.280	
16,699.97	9,513.26	17,410.40	10,178.92	109.42	122.26	179.55	-7,531.32	1,856.37	665.69	539.48	126.21	5.274	
16,776.00	9,511.76	17,486.28	10,178.55	110.40	123.45	179.95	-7,605.24	1,873.48	666.81	539.49	127.31	5.237	
16,799.97	9,511.58	17,510.17	10,178.44	110.71	123.83	-179.89	-7,628.52	1,878.86	666.87	539.21	127.66	5.224	
16,865.00	9,511.11	17,575.01	10,178.13	111.55	124.84	-179.45	-7,691.68	1,893.48	667.05	538.45	128.60	5.187	
16,899.97	9,510.88	17,609.88	10,177.96	111.99	125.39	-179.23	-7,725.65	1,901.34	667.14	538.03	129.11	5.167	
16,956.00	9,510.59	17,665.81	10,177.69	112.71	126.27	-178.94	-7,780.14	1,913.95	667.22	537.28	129.94	5.135	

<b>Company:</b>	Piedra Operating LLC	<b>Local Co-ordinate Reference:</b>	Well University 8-8E A H 5LS
<b>Project:</b>	Andrews County, TX (NAD83-TNC)	<b>TVD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Reference Site:</b>	University 8-8	<b>MD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Site Error:</b>	0.00	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	University 8-8E A H 5LS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	1.00	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH / 72180	<b>Database:</b>	USAEDMDB
<b>Reference Design:</b>	Surveys (Ensign T054)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design University 8-8E A H 8WC - OH / 72181 - Plan 1 03-16-23												Offset Site Error:	0.00 usft
Survey Program: 15-MWD, 1765-MWD+HRGM												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)		
16,999.97	9,510.61	17,709.72	10,177.48	113.28	126.96	-178.75	-7,822.92	1,923.85	667.03	536.44	130.59	5.108	
17,046.00	9,511.07	17,755.70	10,177.25	113.87	127.68	-178.59	-7,867.72	1,934.22	666.39	535.11	131.28	5.076	
17,099.97	9,511.86	17,809.63	10,176.99	114.57	128.52	-178.43	-7,920.26	1,946.38	665.39	533.31	132.09	5.038	
17,135.00	9,512.34	17,844.64	10,176.83	115.02	129.07	-178.34	-7,954.37	1,954.27	664.77	532.16	132.61	5.013	
17,199.97	9,513.39	17,909.57	10,176.51	115.86	130.09	-178.17	-8,017.62	1,968.91	663.46	529.88	133.58	4.967	
17,225.00	9,513.89	17,934.58	10,176.39	116.18	130.48	-178.10	-8,041.99	1,974.55	662.87	528.91	133.96	4.948	
17,299.97	9,515.34	18,009.50	10,176.03	117.16	131.66	-177.95	-8,114.98	1,991.44	661.12	526.04	135.08	4.894	
17,315.00	9,515.60	18,024.53	10,175.96	117.35	131.90	-177.94	-8,129.63	1,994.83	660.79	525.48	135.31	4.884	
17,399.97	9,516.47	18,109.48	10,175.55	118.45	133.23	-177.86	-8,212.39	2,013.99	659.55	522.98	136.57	4.829	
17,405.00	9,516.48	18,114.52	10,175.52	118.52	133.31	-177.85	-8,217.29	2,015.12	659.51	522.87	136.65	4.826	
17,494.00	9,518.10	18,203.49	10,175.09	119.68	134.70	-177.83	-8,303.97	2,035.18	657.48	519.51	137.97	4.765	
17,499.97	9,518.30	18,209.45	10,175.07	119.76	134.80	-177.83	-8,309.78	2,036.52	657.25	519.19	138.06	4.761	
17,586.00	9,521.10	18,295.41	10,174.65	120.88	136.15	-177.94	-8,393.53	2,055.91	653.99	514.67	139.32	4.694	
17,599.97	9,521.53	18,309.36	10,174.58	121.06	136.37	-177.96	-8,407.12	2,059.05	653.48	513.96	139.52	4.684	
17,676.00	9,523.61	18,385.34	10,174.22	122.06	137.56	-178.11	-8,481.14	2,076.18	650.97	510.35	140.62	4.629	
17,699.96	9,524.22	18,409.29	10,174.10	122.37	137.93	-178.15	-8,504.47	2,081.58	650.23	509.26	140.97	4.612	
17,766.00	9,526.07	18,475.27	10,173.78	123.23	138.97	-178.27	-8,568.75	2,096.46	648.02	506.09	141.93	4.566	
17,799.96	9,527.13	18,509.21	10,173.62	123.68	139.50	-178.33	-8,601.82	2,104.11	646.78	504.35	142.43	4.541	
17,855.00	9,529.01	18,564.19	10,173.35	124.40	140.37	-178.41	-8,655.38	2,116.51	644.60	501.37	143.23	4.500	
17,899.96	9,530.60	18,609.12	10,173.14	124.99	141.07	-178.44	-8,699.15	2,126.64	642.78	498.88	143.90	4.467	
17,946.00	9,532.16	18,655.12	10,172.92	125.59	141.79	-178.40	-8,743.97	2,137.01	641.01	496.42	144.58	4.434	
17,999.96	9,534.01	18,709.03	10,172.66	126.30	142.64	-178.32	-8,796.49	2,149.16	638.93	493.54	145.39	4.394	
18,035.00	9,535.26	18,744.03	10,172.49	126.76	143.19	-178.25	-8,830.59	2,157.05	637.53	491.60	145.92	4.369	
18,099.96	9,537.31	18,808.95	10,172.17	127.61	144.21	-178.20	-8,893.84	2,171.69	635.18	488.29	146.89	4.324	
18,124.00	9,537.91	18,832.98	10,172.06	127.92	144.59	-178.21	-8,917.24	2,177.11	634.46	487.21	147.25	4.309	
18,199.96	9,539.33	18,908.90	10,171.69	128.93	145.78	-178.38	-8,991.21	2,194.23	632.63	484.27	148.36	4.264	
18,214.00	9,539.52	18,922.92	10,171.62	129.11	146.00	-178.42	-9,004.87	2,197.39	632.35	483.79	148.56	4.256	
18,299.96	9,541.18	19,008.79	10,171.21	130.24	147.35	-178.73	-9,088.53	2,216.75	630.19	480.38	149.81	4.207	
18,304.00	9,541.29	19,012.82	10,171.19	130.30	147.41	-178.75	-9,092.45	2,217.66	630.06	480.20	149.87	4.204	
18,394.00	9,541.98	19,102.75	10,170.76	131.48	148.82	-179.03	-9,180.07	2,237.93	628.88	477.68	151.20	4.159	
18,399.96	9,541.91	19,108.71	10,170.73	131.56	148.92	-179.05	-9,185.87	2,239.28	628.91	477.62	151.29	4.157	
18,484.00	9,541.46	19,192.62	10,170.32	132.67	150.24	-179.46	-9,267.63	2,258.20	628.90	476.36	152.53	4.123	
18,499.96	9,541.41	19,208.55	10,170.25	132.89	150.49	-179.56	-9,283.14	2,261.79	628.86	476.09	152.77	4.116	
18,573.00	9,540.09	19,281.49	10,169.89	133.87	151.63	-179.87	-9,354.20	2,278.23	629.82	475.94	153.87	4.093	
18,599.96	9,539.22	19,308.43	10,169.76	134.22	152.06	-179.93	-9,380.45	2,284.31	630.55	476.28	154.28	4.087	
18,662.00	9,536.88	19,370.43	10,169.47	135.05	153.03	179.97	-9,440.85	2,298.28	632.59	477.38	155.21	4.076	
18,699.96	9,535.19	19,408.36	10,169.28	135.54	153.63	179.95	-9,477.80	2,306.84	634.10	478.32	155.78	4.070	
18,751.00	9,532.57	19,459.34	10,169.04	136.21	154.43	179.94	-9,527.47	2,318.33	636.47	479.93	156.54	4.066	
18,799.96	9,529.63	19,508.23	10,168.80	136.85	155.20	179.96	-9,575.10	2,329.35	639.18	481.91	157.27	4.064	
18,841.00	9,526.79	19,549.18	10,168.60	137.39	155.84	179.99	-9,614.99	2,338.59	641.82	483.94	157.88	4.065	
18,899.96	9,523.14	19,608.04	10,168.32	138.16	156.76	-179.93	-9,672.34	2,351.86	645.19	486.43	158.76	4.064	
18,931.00	9,521.75	19,639.04	10,168.17	138.57	157.25	-179.87	-9,702.54	2,358.85	646.43	487.21	159.22	4.060	
18,999.96	9,518.97	19,707.93	10,167.84	139.47	158.33	-179.69	-9,769.66	2,374.38	648.88	488.63	160.26	4.049	
19,021.00	9,518.10	19,728.94	10,167.74	139.74	158.66	-179.63	-9,790.13	2,379.12	649.66	489.09	160.57	4.046	
19,099.96	9,514.55	19,807.78	10,167.36	140.77	159.90	-179.35	-9,866.93	2,396.89	652.85	491.10	161.75	4.036	
19,110.00	9,514.07	19,817.80	10,167.31	140.90	160.06	-179.31	-9,876.69	2,399.15	653.29	491.38	161.90	4.035	

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

<b>Company:</b>	Piedra Operating LLC	<b>Local Co-ordinate Reference:</b>	Well University 8-8E A H 5LS
<b>Project:</b>	Andrews County, TX (NAD83-TNC)	<b>TVD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Reference Site:</b>	University 8-8	<b>MD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Site Error:</b>	0.00	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	University 8-8E A H 5LS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	1.00	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH / 72180	<b>Database:</b>	USAEDMDB
<b>Reference Design:</b>	Surveys (Ensign T054)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design University 8-8E A H 8WC - OH / 72181 - Plan 1 03-16-23												Offset Site Error:	0.00 usft
Survey Program: 15-MWD, 1765-MWD+HRGM												Offset Well Error:	1.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Center		Distance			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)		
19,199.96	9,511.80	19,907.66	10,166.87	142.08	161.47	-179.02	-9,964.25	2,419.41	655.18	491.90	163.28	4.013	
19,201.00	9,511.79	19,908.70	10,166.87	142.09	161.49	-179.01	-9,965.26	2,419.65	655.18	491.88	163.30	4.012	
19,292.00	9,512.49	19,999.67	10,166.43	143.28	162.92	-178.82	-10,053.88	2,440.16	654.08	489.39	164.70	3.971	
19,299.96	9,512.63	20,007.62	10,166.39	143.39	163.05	-178.81	-10,061.63	2,441.95	653.91	489.09	164.82	3.967	
19,382.00	9,514.17	20,089.61	10,166.00	144.46	164.33	-178.62	-10,141.51	2,460.44	652.03	485.96	166.07	3.926	
19,399.96	9,514.53	20,107.56	10,165.91	144.70	164.62	-178.57	-10,158.99	2,464.48	651.58	485.24	166.35	3.917	
19,472.00	9,516.18	20,179.53	10,165.56	145.64	165.75	-178.35	-10,229.11	2,480.71	649.66	482.20	167.46	3.880	
19,499.96	9,516.82	20,207.47	10,165.43	146.01	166.19	-178.28	-10,256.33	2,487.01	648.91	481.01	167.89	3.865	
19,561.00	9,517.92	20,268.48	10,165.13	146.81	167.15	-178.21	-10,315.77	2,500.77	647.53	478.71	168.82	3.836	
19,599.96	9,518.44	20,307.44	10,164.95	147.33	167.76	-178.21	-10,353.72	2,509.55	646.83	477.42	169.41	3.818	
19,651.00	9,518.96	20,358.47	10,164.70	148.00	168.56	-178.20	-10,403.44	2,521.05	646.06	475.88	170.18	3.796	
19,699.96	9,519.28	20,407.43	10,164.46	148.64	169.33	-178.19	-10,451.14	2,532.09	645.51	474.59	170.92	3.777	
19,740.00	9,519.41	20,447.47	10,164.27	149.17	169.96	-178.16	-10,490.14	2,541.12	645.20	473.67	171.53	3.761	
19,799.96	9,519.65	20,507.42	10,163.98	149.96	170.90	-178.12	-10,548.55	2,554.64	644.69	472.25	172.44	3.739	
19,830.00	9,519.86	20,537.46	10,163.84	150.35	171.38	-178.08	-10,577.82	2,561.41	644.34	471.44	172.90	3.727	
19,899.96	9,520.24	20,607.40	10,163.50	151.27	172.48	-177.97	-10,645.96	2,577.18	643.66	469.69	173.98	3.700	
19,919.00	9,520.28	20,626.44	10,163.41	151.52	172.78	-177.93	-10,664.50	2,581.47	643.55	469.28	174.27	3.693	
19,999.96	9,519.45	20,707.38	10,163.02	152.58	174.05	-177.79	-10,743.36	2,599.72	644.06	468.52	175.53	3.669	
20,008.00	9,519.26	20,715.42	10,162.98	152.69	174.17	-177.78	-10,751.19	2,601.53	644.21	468.55	175.66	3.667	
20,098.00	9,516.90	20,805.38	10,162.54	153.87	175.59	-177.62	-10,838.83	2,621.82	646.21	469.15	177.06	3.650	
20,099.96	9,516.84	20,807.33	10,162.53	153.90	175.62	-177.62	-10,840.74	2,622.26	646.26	469.17	177.09	3.649	
20,187.00	9,515.83	20,894.35	10,162.11	155.04	176.99	-177.46	-10,925.51	2,641.88	646.93	468.47	178.46	3.625	
20,199.96	9,515.88	20,907.31	10,162.05	155.21	177.19	-177.44	-10,938.14	2,644.80	646.82	468.16	178.66	3.620	
20,250.00	9,516.16	20,917.96	10,162.00	155.87	177.36	-177.42	-10,948.52	2,647.20	647.54	467.54	180.00	3.597	
20,250.00	9,516.16	20,917.96	10,162.00	155.87	177.36	-177.42	-10,948.52	2,647.20	647.54	467.54	180.00	3.597	
20,299.96	9,516.46	20,917.96	10,162.00	156.53	177.36	-177.42	-10,948.52	2,647.20	651.97	471.31	180.67	3.609	
20,300.25	9,516.46	20,917.96	10,162.00	156.53	177.36	-177.42	-10,948.52	2,647.20	652.01	471.34	180.67	3.609	
20,311.00	9,516.53	20,917.96	10,162.00	156.67	177.36	-177.42	-10,948.52	2,647.20	653.47	472.77	180.69	3.616	

<b>Company:</b>	Piedra Operating LLC	<b>Local Co-ordinate Reference:</b>	Well University 8-8E A H 5LS
<b>Project:</b>	Andrews County, TX (NAD83-TNC)	<b>TVD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Reference Site:</b>	University 8-8	<b>MD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Site Error:</b>	0.00	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	University 8-8E A H 5LS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	1.00	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH / 72180	<b>Database:</b>	USAEDMDB
<b>Reference Design:</b>	Surveys (Ensign T054)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design University 8-8E A H 8WC - OH / 72181 - Surveys (Ensign T054)												Offset Site Error:	0.00 usft
Survey Program: 15-MWD, 1884-MWD+HRGM												Offset Well Error:	1.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Center		Distance			Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centers (usft)	Between Ellipses (usft)	Minimum Separation (usft)		
0.00	0.00	0.00	0.00	1.00	1.00	-103.08	-5.66	-24.36	25.01				
15.00	15.00	15.00	15.00	1.00	1.00	-103.08	-5.66	-24.36	25.01				
100.00	100.00	99.81	99.81	1.28	1.31	-127.87	-5.46	-24.73	25.38	22.80	2.59	9.818	
178.00	178.00	177.62	177.61	1.91	1.90	-126.65	-4.93	-25.74	26.40	22.60	3.80	6.942	
200.00	200.00	199.71	199.69	1.98	1.97	-109.73	-4.74	-26.07	26.72	22.78	3.94	6.782	
268.00	268.00	267.98	267.97	2.20	2.21	-47.51	-4.34	-26.59	27.10	22.73	4.38	6.194	
300.00	300.00	299.95	299.93	2.28	2.31	-30.16	-4.19	-26.68	27.07	22.52	4.55	5.951	
319.23	319.23	319.16	319.14	2.33	2.36	-18.78	-4.07	-26.76	27.07	22.41	4.65	5.815	
356.00	356.00	355.88	355.86	2.43	2.48	1.70	-3.82	-26.95	27.09	22.23	4.86	5.578	
400.00	400.00	399.96	399.94	2.54	2.60	15.83	-3.45	-27.17	27.10	22.03	5.07	5.342	
443.00	443.00	443.03	443.01	2.64	2.73	39.12	-3.02	-27.28	27.04	21.76	5.29	5.114	
500.00	500.00	499.97	499.94	2.77	2.89	15.35	-2.38	-27.39	26.89	21.33	5.56	4.835	
532.00	532.00	531.93	531.90	2.85	2.98	11.81	-2.00	-27.52	26.79	21.07	5.72	4.685	
600.00	600.00	600.07	600.03	3.01	3.16	15.86	-1.23	-27.65	26.54	20.51	6.03	4.399	
623.00	623.00	623.11	623.07	3.07	3.22	19.70	-1.00	-27.61	26.44	20.30	6.14	4.306	
700.00	699.99	699.99	699.95	3.25	3.42	22.00	-0.37	-27.57	26.10	19.62	6.48	4.029	
712.00	712.00	711.98	711.94	3.27	3.45	22.26	-0.29	-27.60	26.05	19.52	6.53	3.989	
800.00	799.99	800.04	800.00	3.47	3.67	64.83	0.37	-27.68	25.74	18.83	6.91	3.725	
804.00	803.99	804.05	804.00	3.48	3.68	67.13	0.41	-27.67	25.73	18.81	6.93	3.715	
892.00	891.99	892.17	892.13	3.66	3.89	47.19	1.17	-27.37	25.29	18.02	7.27	3.480	
900.00	899.99	900.17	900.12	3.68	3.91	40.57	1.25	-27.32	25.23	17.93	7.30	3.458	
982.00	981.99	982.13	982.07	3.84	4.10	-50.69	2.14	-26.89	24.69	17.10	7.59	3.252	
1,000.00	999.99	1,000.12	1,000.06	3.87	4.14	-32.58	2.36	-26.81	24.59	16.94	7.66	3.212	
1,070.00	1,069.99	1,070.07	1,070.01	4.00	4.30	57.85	3.18	-26.53	24.25	16.35	7.91	3.068	
1,093.60	1,093.60	1,093.59	1,093.53	4.05	4.36	54.81	3.45	-26.51	24.21	16.22	7.99	3.030	
1,100.00	1,099.99	1,099.96	1,099.90	4.06	4.37	54.04	3.52	-26.52	24.22	16.20	8.02	3.021	
1,157.00	1,156.99	1,156.80	1,156.74	4.18	4.51	48.06	4.14	-26.85	24.47	16.25	8.23	2.974	
1,200.00	1,199.99	1,199.84	1,199.77	4.39	4.61	45.20	4.53	-27.19	24.72	16.19	8.53	2.898	
1,300.00	1,299.99	1,299.91	1,299.84	4.90	4.84	40.23	5.12	-27.77	24.94	15.71	9.23	2.703	
1,336.00	1,335.99	1,335.92	1,335.84	5.08	4.91	38.91	5.26	-27.94	24.94	15.46	9.48	2.632	
1,400.00	1,399.98	1,399.89	1,399.81	5.21	5.05	29.88	5.55	-28.28	24.90	15.17	9.73	2.558	
1,428.00	1,427.98	1,427.89	1,427.82	5.27	5.11	26.97	5.69	-28.44	24.86	15.01	9.84	2.525	
1,460.34	1,460.32	1,460.25	1,460.17	5.33	5.19	43.38	5.87	-28.60	24.82	14.86	9.96	2.491	
1,500.00	1,499.98	1,499.92	1,499.85	5.40	5.28	70.53	6.13	-28.75	24.88	14.76	10.11	2.460	
1,516.00	1,515.98	1,515.92	1,515.84	5.43	5.35	82.07	6.24	-28.81	24.94	14.72	10.21	2.442	
1,600.00	1,599.98	1,599.86	1,599.78	5.59	5.71	58.06	6.69	-29.24	25.33	14.61	10.72	2.362	
1,608.00	1,607.98	1,607.86	1,607.78	5.60	5.75	54.79	6.72	-29.29	25.37	14.59	10.77	2.355	
1,697.00	1,696.98	1,696.85	1,696.77	5.77	6.08	53.51	6.96	-30.01	25.82	14.56	11.26	2.293	
1,700.00	1,699.97	1,699.85	1,699.77	5.78	6.08	53.54	6.96	-30.03	25.83	14.56	11.27	2.292	
1,788.00	1,787.98	1,787.93	1,787.85	5.96	6.24	51.38	7.09	-30.58	26.06	14.47	11.59	2.249	
1,800.00	1,799.97	1,799.93	1,799.85	5.97	6.26	42.71	7.10	-30.64	26.06	14.43	11.63	2.241	
1,846.00	1,845.97	1,845.95	1,845.87	6.05	6.34	29.07	7.10	-30.86	25.84	14.06	11.78	2.193	
1,900.00	1,899.96	1,900.04	1,899.96	6.14	6.43	41.09	7.02	-31.09	25.40	13.41	11.99	2.119	
1,973.00	1,972.96	1,973.41	1,973.31	6.28	6.51	59.33	6.07	-30.94	24.29	12.06	12.23	1.985	
2,000.00	1,999.95	2,000.63	2,000.52	6.34	6.57	77.76	5.35	-30.68	23.65	11.32	12.32	1.919	
2,064.00	2,063.95	2,065.09	2,064.90	6.49	6.70	102.80	2.48	-29.43	21.50	8.96	12.53	1.715	

<b>Company:</b>	Piedra Operating LLC	<b>Local Co-ordinate Reference:</b>	Well University 8-8E A H 5LS
<b>Project:</b>	Andrews County, TX (NAD83-TNC)	<b>TVD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Reference Site:</b>	University 8-8	<b>MD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Site Error:</b>	0.00	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	University 8-8E A H 5LS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	1.00	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH / 72180	<b>Database:</b>	USAEDMDB
<b>Reference Design:</b>	Surveys (Ensign T054)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design University 8-8E A H 8WC - OH / 72181 - Surveys (Ensign T054)												Offset Site Error: 0.00 usft	
Survey Program: 15-MWD, 1884-MWD+HRGM												Offset Well Error: 1.00 usft	
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Center		Distance		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)			
2,100.00	2,099.93	2,101.14	2,100.88	6.55	6.75	114.28	0.41	-28.41	20.17	7.58	12.59	1.602	
2,153.00	2,152.89	2,154.23	2,153.85	6.65	6.81	120.65	-2.76	-26.66	18.58	5.91	12.67	1.466	Level 3
2,200.00	2,199.83	2,201.40	2,200.88	6.73	6.88	120.72	-5.74	-24.73	17.11	4.36	12.75	1.342	Level 3
2,242.00	2,241.78	2,243.52	2,242.86	6.81	6.94	120.28	-8.60	-22.61	15.42	2.60	12.83	1.202	Level 2
2,300.00	2,299.69	2,301.43	2,300.54	6.91	7.03	121.91	-12.65	-19.54	13.17	0.22	12.95	1.017	Level 2
2,332.00	2,331.63	2,333.39	2,332.39	6.97	7.07	122.59	-14.88	-17.93	12.20	-0.82	13.02	0.937	Level 1
2,400.00	2,399.49	2,401.29	2,400.03	7.10	7.19	120.63	-19.94	-14.88	10.68	-2.50	13.19	0.810	Level 1
2,423.00	2,422.45	2,424.28	2,422.92	7.15	7.26	118.96	-21.75	-13.93	10.30	-2.98	13.28	0.776	Level 1
2,500.00	2,499.29	2,501.22	2,499.54	7.31	7.49	107.56	-28.03	-10.90	9.40	-4.21	13.61	0.690	Level 1
2,515.00	2,514.27	2,516.21	2,514.47	7.34	7.54	104.89	-29.29	-10.33	9.30	-4.38	13.68	0.680	Level 1
2,534.74	2,533.97	2,535.93	2,534.11	7.38	7.60	103.44	-30.98	-9.60	9.24	-4.54	13.78	0.671	Level 1 , CC, ES
2,599.99	2,599.08	2,600.78	2,598.61	7.53	7.73	96.64	-37.37	-8.03	10.80	-3.31	14.10	0.766	Level 1
2,606.00	2,605.08	2,606.73	2,604.53	7.54	7.74	96.03	-38.05	-7.98	11.12	-3.01	14.13	0.787	Level 1
2,696.00	2,694.85	2,696.29	2,693.41	7.74	7.93	89.15	-48.98	-7.62	17.40	2.84	14.56	1.195	Level 2
2,699.99	2,698.83	2,700.28	2,697.37	7.75	7.94	88.83	-49.50	-7.62	17.72	3.15	14.58	1.216	Level 2
2,786.00	2,784.60	2,786.35	2,782.78	7.94	8.13	83.91	-60.17	-6.93	24.15	9.16	14.99	1.611	
2,799.99	2,798.56	2,800.39	2,796.71	7.98	8.16	82.99	-61.83	-6.71	25.08	10.02	15.06	1.665	
2,876.00	2,874.36	2,876.72	2,872.56	8.17	8.35	78.70	-70.25	-5.04	29.34	13.90	15.44	1.900	
2,899.99	2,898.29	2,900.68	2,896.38	8.23	8.41	78.60	-72.74	-4.40	30.48	14.92	15.56	1.959	
2,966.00	2,964.12	2,966.58	2,961.90	8.40	8.57	78.57	-79.63	-2.60	33.77	17.89	15.88	2.126	
2,999.99	2,998.02	3,000.69	2,995.81	8.49	8.66	78.69	-83.12	-1.65	35.47	19.42	16.05	2.210	
3,055.00	3,052.89	3,055.90	3,050.75	8.63	8.80	79.34	-88.40	-0.07	37.98	21.67	16.32	2.328	
3,099.99	3,097.76	3,101.20	3,095.86	8.75	8.92	79.06	-92.31	1.25	39.72	23.20	16.52	2.404	
3,146.00	3,143.65	3,147.53	3,142.03	8.88	9.04	79.11	-95.83	2.64	41.10	24.37	16.73	2.457	
3,199.99	3,197.50	3,201.46	3,195.80	9.03	9.19	81.15	-99.68	4.27	42.58	25.63	16.95	2.511	
3,236.00	3,233.42	3,237.43	3,231.66	9.13	9.28	82.49	-102.28	5.35	43.66	26.56	17.11	2.553	
3,299.99	3,297.25	3,301.50	3,295.56	9.32	9.45	84.15	-106.73	7.12	45.62	28.25	17.37	2.627	
3,325.00	3,322.20	3,326.54	3,320.54	9.39	9.52	84.92	-108.35	7.74	46.37	28.90	17.46	2.655	
3,399.99	3,397.01	3,401.72	3,395.56	9.61	9.72	85.24	-112.90	9.51	48.39	30.65	17.74	2.728	
3,416.00	3,412.97	3,417.77	3,411.57	9.65	9.76	85.38	-113.80	9.88	48.77	30.97	17.80	2.741	
3,499.99	3,496.75	3,501.82	3,495.47	9.91	9.99	86.50	-118.44	11.86	50.61	32.53	18.08	2.800	
3,507.00	3,503.73	3,508.83	3,502.47	9.93	10.01	86.60	-118.82	12.03	50.76	32.66	18.10	2.804	
3,596.00	3,592.47	3,597.86	3,591.34	10.20	10.25	82.60	-123.64	14.25	52.19	33.80	18.38	2.839	
3,599.99	3,596.45	3,601.85	3,595.32	10.22	10.27	82.30	-123.85	14.35	52.23	33.84	18.40	2.839	
3,686.00	3,682.17	3,687.77	3,681.09	10.49	10.50	76.54	-128.52	16.51	52.74	34.08	18.66	2.826	
3,699.99	3,696.11	3,701.77	3,695.07	10.54	10.54	76.78	-129.29	16.86	52.74	34.04	18.70	2.820	
3,776.00	3,771.84	3,777.84	3,771.00	10.79	10.76	78.00	-133.38	18.80	52.69	33.76	18.92	2.784	
3,799.99	3,795.75	3,801.80	3,794.92	10.86	10.83	79.31	-134.66	19.42	52.67	33.67	18.99	2.773	
3,801.02	3,796.77	3,802.83	3,795.95	10.87	10.83	79.34	-134.71	19.44	52.67	33.67	19.00	2.773	
3,864.00	3,859.53	3,865.75	3,858.76	11.07	11.01	82.79	-138.09	21.05	52.79	33.62	19.17	2.753	
3,899.99	3,895.39	3,901.80	3,894.75	11.19	11.11	83.99	-140.00	21.96	52.93	33.65	19.28	2.746	
3,954.00	3,949.21	3,955.89	3,948.74	11.37	11.27	85.85	-142.74	23.35	53.09	33.67	19.42	2.733	
3,999.99	3,995.04	4,001.86	3,994.64	11.52	11.40	87.66	-145.03	24.54	53.25	33.70	19.55	2.724	
4,044.00	4,038.90	4,045.84	4,038.55	11.67	11.53	89.34	-147.26	25.70	53.47	33.80	19.67	2.718	
4,099.99	4,094.70	4,101.80	4,094.42	11.85	11.69	92.55	-150.08	27.16	53.87	34.04	19.83	2.717	

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

<b>Company:</b>	Piedra Operating LLC	<b>Local Co-ordinate Reference:</b>	Well University 8-8E A H 5LS
<b>Project:</b>	Andrews County, TX (NAD83-TNC)	<b>TVD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Reference Site:</b>	University 8-8	<b>MD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Site Error:</b>	0.00	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	University 8-8E A H 5LS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	1.00	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH / 72180	<b>Database:</b>	USAEDMDB
<b>Reference Design:</b>	Surveys (Ensign T054)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design University 8-8E A H 8WC - OH / 72181 - Surveys (Ensign T054)												Offset Site Error:	0.00 usft
Survey Program: 15-MWD, 1884-MWD+HRGM												Offset Well Error:	1.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Center		Distance			Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centers (usft)	Between Ellipses (usft)	Minimum Separation (usft)		
4,133.00	4,127.60	4,134.79	4,127.36	11.96	11.78	94.46	-151.71	27.99	54.19	34.27	19.92	2.720	
4,199.99	4,194.38	4,201.77	4,194.24	12.18	11.98	97.63	-154.97	29.65	55.00	34.88	20.12	2.733	
4,222.00	4,216.32	4,223.78	4,216.21	12.26	12.04	98.66	-156.04	30.20	55.29	35.11	20.19	2.739	
4,299.99	4,294.08	4,301.87	4,294.19	12.52	12.27	101.41	-159.74	32.20	56.35	35.93	20.43	2.759	
4,312.00	4,306.05	4,313.88	4,306.19	12.56	12.31	101.82	-160.29	32.52	56.51	36.05	20.47	2.761	
4,399.99	4,393.79	4,401.72	4,393.90	12.85	12.57	105.67	-164.40	34.76	57.88	37.12	20.76	2.788	
4,401.00	4,394.80	4,402.72	4,394.90	12.86	12.57	105.72	-164.45	34.79	57.90	37.14	20.76	2.789	
4,491.00	4,484.56	4,492.79	4,484.85	13.16	12.83	108.47	-168.46	36.96	59.53	38.45	21.07	2.824	
4,499.99	4,493.53	4,501.78	4,493.84	13.19	12.86	108.87	-168.84	37.18	59.69	38.58	21.11	2.828	
4,582.00	4,575.33	4,583.85	4,575.80	13.47	13.10	112.36	-172.36	39.24	61.23	39.83	21.40	2.861	
4,599.99	4,593.27	4,601.86	4,593.79	13.53	13.16	111.63	-173.15	39.72	61.57	40.10	21.47	2.867	
4,673.00	4,666.07	4,674.96	4,666.80	13.78	13.37	109.42	-176.24	41.71	62.76	41.02	21.74	2.887	
4,699.99	4,692.98	4,701.93	4,693.73	13.87	13.45	108.58	-177.34	42.45	63.14	41.30	21.84	2.890	
4,764.00	4,756.79	4,765.88	4,757.61	14.09	13.64	106.80	-179.90	44.17	63.90	41.80	22.09	2.892	
4,799.99	4,792.66	4,801.89	4,793.58	14.22	13.75	108.36	-181.31	45.14	64.27	42.03	22.24	2.890	
4,854.00	4,846.51	4,855.95	4,847.57	14.40	13.91	110.64	-183.40	46.63	64.86	42.39	22.47	2.887	
4,899.99	4,892.36	4,901.82	4,893.40	14.56	14.04	111.63	-185.15	47.87	65.41	42.74	22.67	2.885	
4,943.00	4,935.24	4,944.72	4,936.25	14.71	14.17	112.56	-186.78	48.97	65.99	43.12	22.87	2.886	
4,999.99	4,992.07	5,001.69	4,993.16	14.91	14.33	113.92	-188.87	50.38	66.77	43.64	23.14	2.886	
5,033.00	5,024.99	5,034.68	5,026.13	15.02	14.43	114.65	-190.02	51.19	67.19	43.90	23.30	2.884	
5,099.99	5,091.82	5,101.65	5,093.04	15.25	14.62	116.04	-192.29	52.81	68.04	44.41	23.63	2.879	
5,122.00	5,113.77	5,123.65	5,115.02	15.33	14.69	116.50	-193.02	53.34	68.32	44.58	23.74	2.877	
5,199.99	5,191.56	5,201.41	5,192.72	15.60	14.91	118.17	-195.59	55.10	69.55	45.39	24.16	2.879	
5,212.00	5,203.54	5,213.40	5,204.69	15.64	14.95	118.45	-195.98	55.36	69.78	45.55	24.23	2.880	
5,299.99	5,291.28	5,301.74	5,292.96	15.95	15.21	122.10	-198.95	57.48	71.34	46.61	24.73	2.884	
5,303.00	5,294.28	5,304.75	5,295.97	15.96	15.21	122.22	-199.05	57.56	71.39	46.64	24.75	2.884	
5,393.00	5,384.02	5,394.80	5,385.93	16.28	15.48	118.84	-202.25	60.05	72.59	47.29	25.30	2.870	
5,399.99	5,390.99	5,401.81	5,392.93	16.30	15.50	119.00	-202.51	60.25	72.66	47.32	25.34	2.867	
5,483.00	5,473.76	5,485.02	5,476.05	16.59	15.75	120.38	-205.69	62.79	73.43	47.56	25.87	2.838	
5,499.99	5,490.70	5,501.98	5,492.98	16.65	15.81	120.51	-206.36	63.33	73.57	47.58	25.98	2.831	
5,573.00	5,563.48	5,574.84	5,565.75	16.91	16.03	121.10	-209.27	65.59	74.23	47.76	26.47	2.804	
5,599.99	5,590.39	5,601.75	5,592.62	17.00	16.11	121.68	-210.35	66.39	74.52	47.86	26.65	2.796	
5,662.00	5,652.21	5,663.57	5,654.37	17.22	16.30	123.01	-212.84	68.13	75.31	48.23	27.08	2.781	
5,699.99	5,690.08	5,701.56	5,692.31	17.36	16.42	123.99	-214.40	69.16	75.86	48.52	27.34	2.774	
5,752.00	5,741.93	5,753.58	5,744.27	17.54	16.58	125.24	-216.65	70.58	76.66	48.96	27.70	2.768	
5,799.99	5,789.76	5,801.71	5,792.33	17.71	16.73	125.12	-218.77	71.95	77.36	49.32	28.04	2.759	
5,841.00	5,830.64	5,842.84	5,833.40	17.85	16.86	125.05	-220.55	73.21	77.84	49.51	28.33	2.747	
5,899.99	5,889.45	5,901.73	5,892.21	18.06	17.05	122.04	-223.04	75.04	78.31	49.53	28.77	2.721	
5,931.00	5,920.37	5,932.70	5,923.13	18.17	17.14	120.29	-224.31	75.98	78.42	49.41	29.01	2.703	
5,999.99	5,989.19	6,001.33	5,991.68	18.41	17.36	114.84	-227.28	77.88	78.37	48.85	29.51	2.655	
6,022.00	6,011.15	6,023.24	6,013.56	18.49	17.43	112.68	-228.30	78.42	78.26	48.59	29.66	2.638	
6,099.99	6,088.99	6,101.31	6,091.50	18.76	17.68	112.29	-232.22	80.28	77.64	47.48	30.16	2.574	
6,112.00	6,100.99	6,113.33	6,103.51	18.80	17.72	112.16	-232.87	80.56	77.52	47.28	30.23	2.564	
6,199.99	6,188.87	6,201.24	6,191.27	19.11	18.01	110.27	-237.52	82.64	76.26	45.57	30.69	2.485	
6,201.00	6,189.88	6,202.25	6,192.28	19.11	18.02	110.23	-237.57	82.67	76.24	45.55	30.69	2.484	
6,291.00	6,279.81	6,292.24	6,282.13	19.43	18.31	108.98	-242.09	84.80	74.61	43.50	31.11	2.398	

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

<b>Company:</b>	Piedra Operating LLC	<b>Local Co-ordinate Reference:</b>	Well University 8-8E A H 5LS
<b>Project:</b>	Andrews County, TX (NAD83-TNC)	<b>TVD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Reference Site:</b>	University 8-8	<b>MD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Site Error:</b>	0.00	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	University 8-8E A H 5LS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	1.00	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH / 72180	<b>Database:</b>	USAEDMDB
<b>Reference Design:</b>	Surveys (Ensign T054)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design University 8-8E A H 8WC - OH / 72181 - Surveys (Ensign T054)												Offset Site Error:	0.00 usft
Survey Program: 15-MWD, 1884-MWD+HRGM												Offset Well Error:	1.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Center		Distance			Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centers (usft)	Between Ellipses (usft)	Minimum Separation (usft)		
6,299.99	6,288.79	6,301.22	6,291.10	19.46	18.34	108.78	-242.53	85.01	74.45	43.29	31.16	2.389	
6,381.00	6,369.74	6,382.16	6,371.91	19.74	18.60	106.95	-246.49	86.91	72.95	41.41	31.54	2.313	
6,399.99	6,388.71	6,401.10	6,390.83	19.80	18.66	106.89	-247.41	87.34	72.61	40.98	31.63	2.296	
6,470.00	6,458.68	6,470.95	6,460.58	20.04	18.89	106.63	-250.80	88.84	71.42	39.48	31.95	2.236	
6,499.99	6,488.64	6,500.94	6,490.53	20.15	18.98	107.06	-252.24	89.46	70.95	38.87	32.08	2.212	
6,559.00	6,547.62	6,559.97	6,549.48	20.35	19.17	107.97	-254.98	90.70	70.05	37.69	32.35	2.165	
6,599.99	6,588.57	6,600.94	6,590.40	20.49	19.31	106.35	-256.83	91.57	69.41	36.86	32.55	2.133	
6,650.00	6,638.55	6,650.94	6,640.34	20.66	19.47	104.40	-259.07	92.63	68.59	35.81	32.78	2.092	
6,699.99	6,688.51	6,700.83	6,690.17	20.84	19.63	104.68	-261.27	93.65	67.79	34.77	33.02	2.053	
6,740.00	6,728.49	6,740.77	6,730.07	20.97	19.75	104.90	-263.01	94.43	67.20	33.99	33.21	2.024	
6,799.99	6,788.44	6,800.79	6,790.02	21.18	19.94	105.59	-265.61	95.59	66.35	32.86	33.48	1.981	
6,830.00	6,818.43	6,830.82	6,820.01	21.29	20.04	105.94	-266.90	96.18	65.93	32.30	33.62	1.961	
6,899.99	6,888.38	6,900.72	6,889.84	21.53	20.26	104.72	-269.84	97.54	64.97	31.02	33.95	1.914	
6,919.00	6,907.38	6,919.71	6,908.81	21.59	20.32	104.39	-270.61	97.89	64.71	30.67	34.04	1.901	
6,999.99	6,988.32	7,000.58	6,989.60	21.88	20.58	105.42	-273.88	99.33	63.71	29.30	34.41	1.851	
7,009.00	6,997.33	7,009.58	6,998.59	21.91	20.60	105.54	-274.24	99.49	63.61	29.16	34.46	1.846	
7,099.00	7,087.28	7,099.37	7,088.31	22.22	20.88	104.77	-277.67	100.86	62.73	27.87	34.85	1.800	
7,099.99	7,088.26	7,100.36	7,089.29	22.22	20.89	104.76	-277.71	100.88	62.72	27.86	34.86	1.799	
7,188.00	7,176.24	7,188.20	7,177.07	22.53	21.15	103.16	-280.91	101.97	62.06	26.82	35.24	1.761	
7,199.99	7,188.22	7,200.19	7,189.05	22.57	21.19	102.36	-281.34	102.11	61.97	26.69	35.29	1.756	
7,277.00	7,265.20	7,277.21	7,266.02	22.84	21.42	97.03	-284.00	102.99	61.33	25.69	35.63	1.721	
7,299.99	7,288.17	7,300.09	7,288.88	22.92	21.49	95.77	-284.74	103.23	61.11	25.38	35.73	1.710	
7,367.00	7,355.16	7,366.77	7,355.53	23.15	21.68	91.76	-286.84	103.71	60.64	24.62	36.03	1.683	
7,399.99	7,388.14	7,399.67	7,388.42	23.26	21.77	90.31	-287.84	103.84	60.48	24.32	36.16	1.672	
7,457.00	7,445.13	7,456.54	7,445.26	23.45	21.93	87.91	-289.53	103.95	60.26	23.85	36.41	1.655	
7,481.00	7,469.12	7,480.49	7,469.20	23.53	22.00	81.28	-290.23	103.96	60.16	23.65	36.51	1.648	
7,499.99	7,488.10	7,499.45	7,488.16	23.59	22.05	80.83	-290.79	103.95	60.06	23.46	36.60	1.641	
7,595.00	7,583.07	7,594.36	7,583.02	23.90	22.32	78.97	-293.59	103.83	59.56	22.54	37.03	1.609	
7,599.98	7,588.06	7,599.34	7,587.99	23.91	22.33	78.72	-293.73	103.82	59.54	22.49	37.05	1.607	
7,685.00	7,673.03	7,684.23	7,672.85	24.20	22.55	74.75	-296.31	103.53	59.07	21.63	37.44	1.578	
7,699.98	7,688.00	7,699.28	7,687.89	24.25	22.59	72.98	-296.75	103.47	58.97	21.45	37.52	1.572	
7,774.00	7,761.97	7,773.64	7,762.24	24.49	22.76	66.15	-298.00	103.51	57.91	19.86	38.05	1.522	
7,799.98	7,787.94	7,799.86	7,788.46	24.57	22.82	64.58	-298.18	103.67	57.39	19.10	38.29	1.499	Level 3
7,864.00	7,851.95	7,864.49	7,853.08	24.76	22.97	2.90	-298.85	104.57	55.94	17.25	38.69	1.446	Level 3
7,899.98	7,887.93	7,900.61	7,889.19	24.86	23.06	-3.51	-299.33	105.32	54.91	16.08	38.84	1.414	Level 3
7,954.00	7,941.94	7,954.79	7,943.35	25.02	23.18	-6.20	-300.07	106.62	52.81	13.77	39.03	1.353	Level 3
7,999.98	7,987.91	8,000.48	7,989.02	25.15	23.30	-0.35	-300.72	107.69	50.70	11.53	39.17	1.294	Level 3
8,044.00	8,031.91	8,044.22	8,032.74	25.28	23.41	2.83	-301.41	108.51	48.64	9.35	39.29	1.238	Level 2
8,099.98	8,087.87	8,100.17	8,088.68	25.44	23.55	20.75	-302.32	109.45	46.13	6.65	39.48	1.168	Level 2
8,133.00	8,120.88	8,133.18	8,121.68	25.54	23.64	32.87	-302.87	110.02	44.76	5.13	39.63	1.129	Level 2
8,199.98	8,187.84	8,199.45	8,187.94	25.74	23.80	45.26	-304.02	110.68	42.71	2.77	39.94	1.069	Level 2
8,223.00	8,210.85	8,222.23	8,210.72	25.81	23.85	49.73	-304.44	110.67	42.32	2.27	40.05	1.057	Level 2
8,299.98	8,287.81	8,299.29	8,287.76	26.06	24.03	63.18	-305.81	110.45	41.54	1.16	40.38	1.029	Level 2
8,312.00	8,299.83	8,311.32	8,299.79	26.10	24.05	66.12	-306.01	110.44	41.46	1.03	40.43	1.025	Level 2
8,399.98	8,387.80	8,399.12	8,387.58	26.38	24.22	60.86	-307.23	110.15	41.15	0.38	40.77	1.009	Level 2



<b>Company:</b>	Piedra Operating LLC	<b>Local Co-ordinate Reference:</b>	Well University 8-8E A H 5LS
<b>Project:</b>	Andrews County, TX (NAD83-TNC)	<b>TVD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Reference Site:</b>	University 8-8	<b>MD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Site Error:</b>	0.00	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	University 8-8E A H 5LS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	1.00	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH / 72180	<b>Database:</b>	USAEDMDB
<b>Reference Design:</b>	Surveys (Ensign T054)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design University 8-8E A H 8WC - OH / 72181 - Surveys (Ensign T054)												Offset Site Error:	0.00 usft
Survey Program: 15-MWD, 1884-MWD+HRGM												Offset Well Error:	1.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Center		Distance			Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centers (usft)	Between Ellipses (usft)	Minimum Separation (usft)		
8,401.00	8,388.82	8,400.13	8,388.59	26.39	24.22	60.76	-307.24	110.14	41.15	0.38	40.77	1.009	Level 2
8,490.00	8,477.81	8,488.84	8,477.30	26.66	24.33	31.60	-308.18	109.33	41.02	-0.02	41.04	0.999	Level 1
8,499.98	8,487.79	8,498.80	8,487.25	26.69	24.34	29.98	-308.28	109.20	41.00	-0.07	41.07	0.998	Level 1
8,581.00	8,568.79	8,579.64	8,568.08	26.94	24.39	17.92	-309.08	107.96	40.87	-0.38	41.25	0.991	Level 1
8,599.98	8,587.77	8,598.64	8,587.07	27.00	24.41	28.12	-309.28	107.62	40.86	-0.43	41.29	0.989	Level 1
8,615.46	8,603.24	8,614.13	8,602.56	27.04	24.42	35.89	-309.46	107.36	40.85	-0.48	41.33	0.988	Level 1
8,670.00	8,657.77	8,668.73	8,657.14	27.21	24.48	57.30	-310.33	106.47	40.89	-0.63	41.52	0.985	Level 1
8,699.98	8,687.74	8,698.83	8,687.23	27.33	24.54	72.84	-311.06	106.04	40.93	-0.75	41.68	0.982	Level 1
8,760.00	8,747.68	8,759.12	8,747.46	27.56	24.69	85.76	-313.70	105.45	40.98	-1.06	42.04	0.975	Level 1
8,799.98	8,787.58	8,799.31	8,787.59	27.72	24.81	85.35	-315.89	105.30	40.87	-1.44	42.32	0.966	Level 1
8,849.00	8,836.49	8,848.57	8,836.80	27.92	24.96	85.49	-318.10	105.40	40.42	-2.35	42.77	0.945	Level 1
8,872.00	8,859.45	8,871.56	8,859.77	28.00	25.03	86.67	-318.98	105.53	40.13	-2.87	43.01	0.933	Level 1
8,891.72	8,879.12	8,891.25	8,879.45	28.07	25.09	96.26	-319.73	105.63	40.02	-3.23	43.25	0.925	Level 1
8,899.98	8,887.36	8,899.50	8,887.69	28.11	25.11	99.56	-320.04	105.67	40.04	-3.33	43.36	0.923	Level 1
8,941.00	8,928.19	8,940.40	8,928.57	28.27	25.23	112.26	-321.54	105.85	40.80	-3.33	44.13	0.925	Level 1
8,999.98	8,986.21	8,998.74	8,986.88	29.02	25.39	131.01	-323.27	106.19	45.86	-0.38	46.24	0.992	Level 1
9,031.00	9,016.02	9,028.70	9,016.83	29.44	25.48	138.80	-323.87	106.45	51.56	3.80	47.76	1.080	Level 2
9,099.98	9,080.85	9,093.77	9,081.89	30.46	25.65	153.03	-324.86	107.04	70.49	19.60	50.90	1.385	Level 3
9,121.00	9,100.27	9,113.25	9,101.37	30.79	25.70	156.18	-325.12	107.20	77.56	25.89	51.66	1.501	
9,199.98	9,171.23	9,184.37	9,172.48	31.40	25.87	161.52	-326.13	107.50	109.36	55.68	53.68	2.037	
9,210.00	9,179.96	9,193.13	9,181.24	31.48	25.89	162.02	-326.28	107.50	113.98	60.08	53.89	2.115	
9,299.00	9,255.54	9,268.94	9,257.04	32.18	26.05	159.57	-327.54	107.26	158.18	102.73	55.45	2.853	
9,299.98	9,256.36	9,269.76	9,257.85	32.19	26.06	159.54	-327.55	107.26	158.70	103.23	55.46	2.861	
9,389.00	9,329.05	9,342.13	9,330.22	32.75	26.18	156.40	-328.59	106.83	206.85	150.29	56.56	3.657	
9,399.98	9,337.84	9,350.82	9,338.91	32.81	26.20	157.09	-328.69	106.77	213.03	156.35	56.68	3.758	
9,479.00	9,398.36	9,410.07	9,398.15	33.28	26.25	161.15	-329.24	106.18	261.61	204.19	57.41	4.556	
9,499.98	9,413.49	9,424.62	9,412.70	33.43	26.25	161.73	-329.32	106.00	275.76	218.14	57.62	4.786	
9,568.00	9,458.53	9,467.53	9,455.61	33.92	26.25	163.01	-329.38	105.36	325.86	267.62	58.25	5.594	
9,599.98	9,477.62	9,485.50	9,473.57	34.11	26.25	163.44	-329.34	105.05	351.32	292.84	58.48	6.007	
9,657.00	9,508.72	9,522.16	9,510.23	34.46	26.27	164.30	-329.32	104.46	398.78	339.76	59.03	6.756	
9,699.98	9,529.60	9,553.27	9,541.33	34.64	26.30	163.80	-329.93	104.30	435.64	376.23	59.41	7.333	
9,748.00	9,550.27	9,703.55	9,689.08	34.85	27.55	168.86	-351.74	115.07	474.84	413.37	61.46	7.726	
9,799.98	9,568.71	9,805.17	9,783.82	35.03	28.24	169.92	-383.98	132.29	513.04	451.12	61.92	8.286	
9,837.00	9,578.89	9,864.40	9,836.67	35.17	28.60	170.20	-408.03	143.90	539.88	477.76	62.11	8.692	
9,899.98	9,588.83	9,986.07	9,939.56	35.33	29.32	171.17	-467.17	170.24	587.42	525.24	62.18	9.447	
9,928.00	9,589.86	10,122.35	10,040.18	35.41	30.11	173.49	-552.43	203.67	607.27	546.37	60.91	9.971	
9,928.05	9,589.86	10,122.50	10,040.27	35.41	30.11	173.49	-552.53	203.71	607.31	546.40	60.90	9.971	
9,952.00	9,589.61	10,201.54	10,090.31	35.46	30.48	174.74	-609.93	224.78	622.56	562.75	59.82	10.408	
9,952.14	9,589.61	10,202.02	10,090.59	35.46	30.48	174.75	-610.30	224.91	622.64	562.84	59.81	10.411	
9,999.98	9,588.60	10,639.57	10,219.66	35.57	31.46	177.59	-999.85	342.55	631.67	581.19	50.49	12.512	
9,999.99	9,588.60	10,639.59	10,219.66	35.57	31.46	177.59	-999.86	342.56	631.67	581.19	50.49	12.512	
10,042.00	9,587.53	10,687.84	10,220.22	35.67	31.47	177.90	-1,045.68	357.68	633.11	582.63	50.49	12.540	
10,099.98	9,586.09	10,756.28	10,219.98	35.85	31.48	178.28	-1,111.34	376.98	634.25	583.79	50.45	12.571	
10,132.00	9,585.40	10,788.58	10,219.56	35.96	31.48	178.50	-1,142.51	385.41	634.45	583.87	50.58	12.543	
10,199.98	9,583.86	10,857.34	10,218.67	36.22	31.50	179.10	-1,208.76	403.79	634.97	584.11	50.86	12.485	
10,223.00	9,583.26	10,883.87	10,218.20	36.31	31.50	179.34	-1,234.39	410.65	635.14	584.27	50.87	12.485	

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



<b>Company:</b>	Piedra Operating LLC	<b>Local Co-ordinate Reference:</b>	Well University 8-8E A H 5LS
<b>Project:</b>	Andrews County, TX (NAD83-TNC)	<b>TVD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Reference Site:</b>	University 8-8	<b>MD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Site Error:</b>	0.00	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	University 8-8E A H 5LS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	1.00	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH / 72180	<b>Database:</b>	USAEDMDB
<b>Reference Design:</b>	Surveys (Ensign T054)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design University 8-8E A H 8WC - OH / 72181 - Surveys (Ensign T054)												Offset Site Error:	0.00 usft
Survey Program: 15-MWD, 1884-MWD+HRGM												Offset Well Error:	1.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Center		Distance		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)			
10,299.98	9,581.11	10,969.55	10,215.70	36.63	31.51	179.88	-1,317.72	430.38	634.98	583.98	51.00	12.451	
10,312.00	9,580.77	10,982.14	10,215.25	36.68	31.51	179.95	-1,329.99	433.19	634.90	583.86	51.04	12.439	
10,399.98	9,578.76	11,072.73	10,211.76	37.11	31.54	-179.57	-1,418.10	453.90	633.52	582.11	51.41	12.322	
10,401.00	9,578.74	11,073.76	10,211.72	37.12	31.54	-179.56	-1,419.11	454.15	633.50	582.08	51.42	12.321	
10,490.00	9,577.42	11,156.74	10,208.51	37.61	31.58	-178.99	-1,499.52	474.36	631.47	579.39	52.08	12.126	
10,499.98	9,577.29	11,165.29	10,208.25	37.68	31.59	-178.94	-1,507.83	476.38	631.31	579.14	52.18	12.100	
10,580.00	9,576.23	11,240.03	10,206.64	38.20	31.67	-178.70	-1,580.57	493.44	630.70	577.89	52.80	11.944	
10,599.98	9,575.95	11,261.02	10,206.20	38.34	31.71	-178.65	-1,600.98	498.33	630.57	577.67	52.90	11.921	
10,670.00	9,574.71	11,334.62	10,204.33	38.84	31.92	-178.35	-1,672.37	516.17	630.11	576.88	53.23	11.837	
10,699.98	9,574.09	11,366.15	10,203.40	39.07	32.09	-178.20	-1,702.89	524.02	629.89	576.50	53.38	11.799	
10,759.00	9,572.88	11,421.83	10,201.73	39.51	32.52	-177.93	-1,756.79	537.88	629.44	575.56	53.88	11.682	
10,799.98	9,571.96	11,458.45	10,200.93	39.83	32.91	-177.78	-1,792.36	546.54	629.53	575.23	54.30	11.594	
10,848.00	9,570.69	11,505.09	10,200.20	40.21	33.46	-177.61	-1,837.77	557.14	630.12	575.44	54.68	11.524	
10,899.98	9,569.58	11,558.95	10,199.25	40.65	34.16	-177.47	-1,890.18	569.55	630.38	575.38	55.00	11.461	
10,938.00	9,569.24	11,592.28	10,198.70	40.98	34.60	-177.45	-1,922.60	577.25	630.12	574.69	55.44	11.367	
10,999.98	9,569.14	11,644.06	10,198.54	41.56	35.31	-177.56	-1,973.12	588.59	629.97	573.74	56.24	11.202	
10,999.98	9,569.14	11,644.06	10,198.54	41.56	35.31	-177.56	-1,973.12	588.59	629.97	573.74	56.24	11.202	
11,026.00	9,569.19	11,669.12	10,198.73	41.80	35.66	-177.67	-1,997.63	593.82	630.08	573.61	56.46	11.159	
11,099.98	9,569.28	11,750.74	10,198.76	42.48	36.79	-178.11	-2,077.59	610.21	629.84	573.05	56.79	11.090	
11,118.00	9,569.27	11,767.48	10,198.69	42.65	37.03	-178.21	-2,094.00	613.51	629.74	572.77	56.97	11.053	
11,199.98	9,568.81	11,843.95	10,198.81	43.41	38.11	-178.61	-2,168.94	628.73	630.19	572.38	57.81	10.902	
11,199.99	9,568.81	11,843.97	10,198.81	43.41	38.11	-178.61	-2,168.95	628.73	630.19	572.38	57.81	10.902	
11,207.00	9,568.73	11,850.74	10,198.85	43.48	38.21	-178.65	-2,175.59	630.10	630.30	572.43	57.87	10.891	
11,207.33	9,568.73	11,851.06	10,198.85	43.48	38.21	-178.65	-2,175.90	630.16	630.30	572.43	57.87	10.891	
11,297.00	9,567.33	11,938.62	10,199.54	44.33	39.46	-179.05	-2,261.60	648.13	632.32	573.63	58.69	10.774	
11,297.06	9,567.32	11,938.69	10,199.54	44.34	39.46	-179.05	-2,261.66	648.14	632.32	573.63	58.69	10.774	
11,299.98	9,567.27	11,941.74	10,199.57	44.36	39.51	-179.06	-2,264.65	648.78	632.40	573.69	58.71	10.771	
11,300.02	9,567.26	11,941.78	10,199.57	44.36	39.51	-179.06	-2,264.69	648.79	632.41	573.69	58.71	10.771	
11,387.00	9,565.32	12,031.80	10,200.04	45.21	40.81	-179.43	-2,352.63	667.95	634.76	575.39	59.37	10.692	
11,387.02	9,565.31	12,031.82	10,200.04	45.21	40.81	-179.43	-2,352.66	667.95	634.76	575.39	59.37	10.692	
11,399.98	9,565.02	12,044.35	10,200.09	45.34	40.99	-179.49	-2,364.89	670.70	635.10	575.60	59.50	10.674	
11,400.36	9,565.01	12,044.72	10,200.09	45.35	41.00	-179.49	-2,365.25	670.78	635.11	575.61	59.50	10.674	
11,478.00	9,564.25	12,120.71	10,200.53	46.12	42.11	-179.73	-2,439.26	688.00	636.30	576.04	60.26	10.560	
11,478.10	9,564.25	12,120.81	10,200.53	46.12	42.11	-179.73	-2,439.36	688.02	636.30	576.04	60.26	10.559	
11,499.98	9,564.24	12,143.40	10,200.67	46.34	42.45	-179.78	-2,461.32	693.30	636.44	576.00	60.44	10.530	
11,567.00	9,563.79	12,213.90	10,200.91	47.02	43.49	-179.93	-2,529.80	710.05	637.12	576.17	60.95	10.453	
11,599.98	9,563.52	12,250.93	10,200.78	47.36	44.05	179.95	-2,565.93	718.15	637.28	576.15	61.13	10.424	
11,656.00	9,563.61	12,310.58	10,200.14	47.94	44.94	179.67	-2,624.48	729.53	636.59	575.04	61.55	10.343	
11,699.98	9,563.94	12,354.08	10,199.62	48.40	45.57	179.49	-2,667.21	737.67	635.74	573.75	62.00	10.255	
11,746.00	9,564.28	12,401.82	10,199.03	48.89	46.27	179.34	-2,714.08	746.75	634.85	572.46	62.39	10.175	
11,799.98	9,564.93	12,460.16	10,197.98	49.46	47.13	179.09	-2,771.35	757.81	633.27	570.48	62.79	10.086	
11,837.00	9,565.66	12,493.69	10,197.33	49.85	47.62	178.91	-2,804.27	764.16	631.85	568.57	63.28	9.986	
11,899.98	9,567.14	12,548.87	10,196.78	50.53	48.43	178.60	-2,858.42	774.72	629.83	565.64	64.18	9.813	
11,928.00	9,567.81	12,576.48	10,196.70	50.84	48.84	178.44	-2,885.51	780.04	629.13	564.63	64.49	9.755	
11,999.98	9,569.45	12,651.39	10,196.27	51.63	49.95	178.10	-2,959.00	794.53	627.19	562.03	65.16	9.626	

<b>Company:</b>	Piedra Operating LLC	<b>Local Co-ordinate Reference:</b>	Well University 8-8E A H 5LS
<b>Project:</b>	Andrews County, TX (NAD83-TNC)	<b>TVD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Reference Site:</b>	University 8-8	<b>MD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Site Error:</b>	0.00	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	University 8-8E A H 5LS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	1.00	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH / 72180	<b>Database:</b>	USAEDMDB
<b>Reference Design:</b>	Surveys (Ensign T054)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design University 8-8E A H 8WC - OH / 72181 - Surveys (Ensign T054)												Offset Site Error:	0.00 usft
Survey Program: 15-MWD, 1884-MWD+HRGM												Offset Well Error:	1.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Center		Distance			Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centers (usft)	Between Ellipses (usft)	Minimum Separation (usft)		
12,018.00	9,569.83	12,670.45	10,196.10	51.83	50.23	178.05	-2,977.70	798.23	626.66	561.35	65.31	9.595	
12,099.98	9,570.85	12,752.85	10,195.05	52.74	51.45	177.94	-3,058.50	814.35	624.64	558.47	66.18	9.439	
12,109.00	9,570.87	12,760.44	10,194.98	52.84	51.56	177.94	-3,065.95	815.86	624.53	558.21	66.32	9.417	
12,198.00	9,571.32	12,837.56	10,195.24	53.81	52.71	177.97	-3,141.49	831.33	624.35	556.67	67.67	9.226	
12,198.01	9,571.32	12,837.57	10,195.24	53.81	52.71	177.97	-3,141.50	831.33	624.35	556.67	67.67	9.226	
12,199.98	9,571.33	12,839.66	10,195.26	53.84	52.75	177.97	-3,143.54	831.75	624.35	556.66	67.69	9.224	
12,218.26	9,571.47	12,859.03	10,195.45	54.04	53.04	177.99	-3,162.52	835.67	624.39	556.54	67.85	9.202	
12,288.00	9,571.92	12,932.20	10,195.89	54.81	54.13	178.06	-3,234.18	850.45	624.33	555.83	68.50	9.115	
12,290.54	9,571.94	12,934.76	10,195.89	54.83	54.17	178.06	-3,236.68	850.97	624.32	555.80	68.52	9.111	
12,299.98	9,571.99	12,944.29	10,195.93	54.94	54.31	178.08	-3,246.01	852.92	624.29	555.67	68.62	9.098	
12,316.26	9,572.08	12,960.73	10,195.99	55.12	54.56	178.10	-3,262.10	856.29	624.25	555.46	68.79	9.074	
12,377.00	9,572.37	13,021.50	10,196.17	55.79	55.47	178.25	-3,321.52	869.04	624.09	554.64	69.45	8.986	
12,381.88	9,572.39	13,026.25	10,196.19	55.85	55.55	178.26	-3,326.16	870.06	624.08	554.57	69.51	8.978	
12,399.98	9,572.49	13,043.86	10,196.26	56.05	55.81	178.32	-3,343.35	873.87	624.04	554.32	69.73	8.950	
12,414.30	9,572.58	13,057.80	10,196.33	56.21	56.02	178.37	-3,356.95	876.92	624.01	554.11	69.90	8.928	
12,467.00	9,573.03	13,108.85	10,196.66	56.80	56.80	178.57	-3,406.70	888.40	623.84	553.31	70.53	8.845	
12,474.02	9,573.11	13,115.56	10,196.72	56.88	56.90	178.60	-3,413.23	889.93	623.82	553.20	70.62	8.834	
12,499.98	9,573.40	13,140.37	10,196.95	57.17	57.28	178.71	-3,437.38	895.58	623.74	552.80	70.94	8.792	
12,512.33	9,573.54	13,152.18	10,197.08	57.31	57.46	178.76	-3,448.88	898.27	623.71	552.61	71.10	8.773	
12,558.00	9,574.15	13,196.32	10,197.64	57.83	58.13	178.97	-3,491.86	908.35	623.64	551.98	71.66	8.703	
12,571.18	9,574.33	13,209.58	10,197.82	57.98	58.33	179.04	-3,504.76	911.39	623.62	551.82	71.80	8.685	
12,599.98	9,574.63	13,238.53	10,198.20	58.30	58.77	179.18	-3,532.92	918.06	623.68	551.56	72.12	8.648	
12,600.20	9,574.63	13,238.75	10,198.20	58.31	58.78	179.18	-3,533.14	918.11	623.68	551.56	72.12	8.648	
12,647.00	9,574.88	13,285.90	10,198.81	58.84	59.50	179.39	-3,579.00	929.08	624.01	551.37	72.64	8.590	
12,647.17	9,574.88	13,286.07	10,198.81	58.84	59.50	179.39	-3,579.16	929.12	624.01	551.37	72.64	8.590	
12,699.97	9,574.76	13,339.59	10,199.44	59.44	60.32	179.60	-3,631.24	941.44	624.73	551.51	73.22	8.532	
12,700.05	9,574.76	13,339.66	10,199.44	59.45	60.32	179.60	-3,631.31	941.46	624.73	551.51	73.22	8.532	
12,737.00	9,574.41	13,377.18	10,199.85	59.87	60.89	179.73	-3,667.85	949.96	625.47	551.84	73.63	8.495	
12,737.11	9,574.41	13,377.29	10,199.85	59.87	60.89	179.73	-3,667.96	949.98	625.48	551.85	73.63	8.495	
12,799.97	9,573.76	13,441.33	10,200.44	60.60	61.87	179.94	-3,730.39	964.21	626.70	552.37	74.32	8.432	
12,800.06	9,573.76	13,441.42	10,200.44	60.60	61.87	179.94	-3,730.48	964.22	626.70	552.38	74.32	8.432	
12,827.00	9,573.57	13,468.82	10,200.65	60.91	62.29	-179.98	-3,757.22	970.22	627.10	552.48	74.62	8.403	
12,827.20	9,573.57	13,469.02	10,200.66	60.91	62.29	-179.98	-3,757.41	970.27	627.10	552.48	74.63	8.403	
12,899.97	9,573.03	13,542.92	10,201.14	61.75	63.42	-179.74	-3,829.45	986.73	628.12	552.67	75.45	8.325	
12,900.03	9,573.03	13,542.97	10,201.14	61.75	63.42	-179.74	-3,829.50	986.74	628.12	552.67	75.45	8.325	
12,918.00	9,572.87	13,561.54	10,201.23	61.96	63.71	-179.68	-3,847.59	990.94	628.38	552.74	75.64	8.307	
12,999.97	9,572.48	13,646.90	10,201.43	62.93	65.02	-179.48	-3,930.71	1,010.37	628.98	552.47	76.51	8.221	
13,007.00	9,572.48	13,654.52	10,201.42	63.02	65.13	-179.47	-3,938.13	1,012.12	628.97	552.40	76.57	8.214	
13,097.00	9,572.61	13,751.60	10,200.67	64.09	66.63	-179.37	-4,032.56	1,034.63	628.15	550.73	77.42	8.113	
13,099.97	9,572.62	13,754.77	10,200.63	64.12	66.68	-179.37	-4,035.64	1,035.36	628.11	550.65	77.45	8.110	
13,186.00	9,573.32	13,849.24	10,198.85	65.15	68.13	-179.42	-4,127.54	1,057.16	625.79	547.59	78.20	8.002	
13,199.97	9,573.51	13,865.33	10,198.39	65.32	68.38	-179.45	-4,143.20	1,060.83	625.19	546.89	78.30	7.985	
13,275.00	9,574.94	13,945.66	10,195.45	66.23	69.61	-179.73	-4,221.37	1,079.10	621.00	541.97	79.03	7.858	
13,299.97	9,575.39	13,970.93	10,194.45	66.53	70.00	-179.82	-4,245.93	1,084.99	619.56	540.24	79.33	7.810	
13,366.00	9,575.28	14,040.19	10,191.56	67.33	71.07	179.94	-4,313.15	1,101.39	616.91	536.86	80.04	7.707	
13,399.97	9,574.60	14,076.36	10,189.86	67.74	71.63	179.83	-4,348.25	1,109.93	616.00	535.60	80.39	7.662	

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

<b>Company:</b>	Piedra Operating LLC	<b>Local Co-ordinate Reference:</b>	Well University 8-8E A H 5LS
<b>Project:</b>	Andrews County, TX (NAD83-TNC)	<b>TVD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Reference Site:</b>	University 8-8	<b>MD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Site Error:</b>	0.00	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	University 8-8E A H 5LS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	1.00	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH / 72180	<b>Database:</b>	USAEDMDB
<b>Reference Design:</b>	Surveys (Ensign T054)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design University 8-8E A H 8WC - OH / 72181 - Surveys (Ensign T054)												Offset Site Error:	0.00 usft
Survey Program: 15-MWD, 1884-MWD+HRGM												Offset Well Error:	1.00 usft
Reference		Offset		Semi Major Axis			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)		
13,455.00	9,572.87	14,117.36	10,188.29	68.41	72.27	179.70	-4,388.04	1,119.69	615.63	534.00	81.63	7.542	
13,499.97	9,571.07	14,149.91	10,187.77	68.96	72.77	179.62	-4,419.61	1,127.64	616.72	534.07	82.65	7.462	
13,544.00	9,569.21	14,185.19	10,187.89	69.49	73.32	179.54	-4,453.78	1,136.44	618.73	535.21	83.52	7.408	
13,544.03	9,569.21	14,185.22	10,187.89	69.49	73.32	179.54	-4,453.80	1,136.44	618.73	535.21	83.52	7.408	
13,599.97	9,566.63	14,237.52	10,188.48	70.18	74.14	179.45	-4,504.36	1,149.80	621.94	537.59	84.35	7.374	
13,601.51	9,566.56	14,238.96	10,188.50	70.20	74.16	179.45	-4,505.75	1,150.18	622.03	537.66	84.37	7.373	
13,635.00	9,564.88	14,272.01	10,189.01	70.61	74.68	179.41	-4,537.66	1,158.79	624.23	539.42	84.81	7.361	
13,637.77	9,564.74	14,275.05	10,189.06	70.64	74.73	179.41	-4,540.59	1,159.58	624.41	539.58	84.83	7.360	
13,699.97	9,562.36	14,343.28	10,189.70	71.41	75.80	179.35	-4,606.60	1,176.84	627.39	541.95	85.44	7.343	
13,699.98	9,562.36	14,343.29	10,189.70	71.41	75.80	179.35	-4,606.61	1,176.84	627.39	541.95	85.44	7.343	
13,724.00	9,561.85	14,369.35	10,189.77	71.70	76.20	179.35	-4,631.88	1,183.23	627.97	542.29	85.68	7.329	
13,799.97	9,560.95	14,450.52	10,189.48	72.64	77.46	179.33	-4,710.69	1,202.63	628.59	542.09	86.50	7.267	
13,813.00	9,560.87	14,463.55	10,189.39	72.80	77.67	179.32	-4,723.35	1,205.73	628.57	541.90	86.67	7.252	
13,899.97	9,560.51	14,550.00	10,188.78	73.87	79.02	179.32	-4,807.23	1,226.61	628.33	540.51	87.82	7.155	
13,902.00	9,560.50	14,551.98	10,188.76	73.89	79.05	179.32	-4,809.15	1,227.10	628.32	540.48	87.84	7.153	
13,992.00	9,560.63	14,639.62	10,188.40	75.00	80.42	179.48	-4,893.87	1,249.54	627.80	538.71	89.09	7.047	
13,999.97	9,560.66	14,647.39	10,188.38	75.10	80.54	179.50	-4,901.37	1,251.59	627.75	538.55	89.20	7.037	
14,081.00	9,559.69	14,726.94	10,188.36	76.10	81.80	179.88	-4,977.97	1,273.01	628.67	538.36	90.31	6.961	
14,099.97	9,559.16	14,746.12	10,188.36	76.34	82.10	180.00	-4,996.44	1,278.17	629.20	538.65	90.56	6.948	
14,171.00	9,556.95	14,817.83	10,188.30	77.22	83.23	-179.51	-5,065.60	1,297.15	631.37	539.89	91.47	6.902	
14,199.97	9,555.94	14,846.99	10,188.25	77.58	83.69	-179.29	-5,093.72	1,304.86	632.35	540.50	91.85	6.885	
14,260.00	9,553.59	14,903.54	10,188.15	78.32	84.59	-178.81	-5,148.23	1,319.92	634.70	541.92	92.77	6.841	
14,260.06	9,553.59	14,903.59	10,188.15	78.32	84.59	-178.81	-5,148.28	1,319.93	634.70	541.92	92.78	6.841	
14,299.97	9,552.03	14,935.43	10,188.44	78.81	85.09	-178.57	-5,179.06	1,328.08	636.71	543.13	93.58	6.804	
14,299.98	9,552.03	14,935.44	10,188.44	78.81	85.09	-178.57	-5,179.07	1,328.08	636.71	543.13	93.58	6.804	
14,349.00	9,550.45	14,979.00	10,189.51	79.42	85.78	-178.36	-5,221.33	1,338.56	639.53	545.12	94.42	6.773	
14,349.02	9,550.45	14,979.00	10,189.51	79.42	85.78	-178.36	-5,221.33	1,338.56	639.54	545.12	94.42	6.773	
14,399.97	9,549.10	15,023.42	10,191.03	80.05	86.46	-178.25	-5,264.58	1,348.58	642.63	547.32	95.30	6.743	
14,401.70	9,549.06	15,025.11	10,191.09	80.07	86.49	-178.25	-5,266.23	1,348.95	642.73	547.40	95.33	6.742	
14,439.00	9,548.23	15,061.54	10,192.39	80.54	87.05	-178.21	-5,301.80	1,356.73	644.92	549.06	95.85	6.728	
14,441.68	9,548.18	15,064.16	10,192.49	80.57	87.10	-178.21	-5,304.35	1,357.27	645.07	549.18	95.89	6.727	
14,499.97	9,546.77	15,121.17	10,194.65	81.29	87.97	-178.18	-5,360.11	1,369.00	648.70	551.99	96.71	6.708	
14,501.20	9,546.73	15,122.37	10,194.69	81.31	87.99	-178.18	-5,361.28	1,369.25	648.78	552.05	96.73	6.707	
14,529.00	9,545.92	15,149.55	10,195.76	81.65	88.41	-178.15	-5,387.87	1,374.79	650.70	553.58	97.12	6.700	
14,531.48	9,545.85	15,151.98	10,195.85	81.69	88.45	-178.15	-5,390.24	1,375.29	650.87	553.72	97.16	6.699	
14,599.97	9,544.25	15,243.51	10,198.01	82.55	89.85	-178.13	-5,479.86	1,393.76	654.12	556.72	97.39	6.716	
14,619.00	9,543.97	15,266.28	10,198.03	82.79	90.20	-178.18	-5,502.18	1,398.30	654.40	556.87	97.53	6.710	
14,699.97	9,542.79	15,359.13	10,197.08	83.83	91.62	-178.51	-5,593.29	1,416.15	654.65	556.43	98.22	6.665	
14,710.00	9,542.63	15,370.60	10,196.85	83.95	91.80	-178.55	-5,604.55	1,418.27	654.60	556.29	98.30	6.659	
14,800.00	9,541.46	15,468.90	10,193.96	85.08	93.29	-179.08	-5,701.24	1,435.79	653.00	553.77	99.22	6.581	
14,889.00	9,540.74	15,555.70	10,190.95	86.20	94.62	-179.49	-5,786.51	1,451.64	650.56	550.05	100.51	6.473	
14,899.97	9,540.68	15,565.71	10,190.65	86.34	94.77	-179.53	-5,796.32	1,453.66	650.28	549.59	100.69	6.458	
14,979.00	9,541.17	15,645.48	10,188.47	87.35	96.01	-179.84	-5,874.10	1,471.18	647.63	545.87	101.75	6.365	
14,999.97	9,541.54	15,669.29	10,187.67	87.62	96.38	-179.93	-5,897.28	1,476.60	646.55	544.61	101.94	6.342	
15,069.00	9,543.18	15,744.20	10,184.57	88.50	97.55	179.80	-5,970.11	1,493.83	642.04	539.36	102.68	6.253	

<b>Company:</b>	Piedra Operating LLC	<b>Local Co-ordinate Reference:</b>	Well University 8-8E A H 5LS
<b>Project:</b>	Andrews County, TX (NAD83-TNC)	<b>TVD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Reference Site:</b>	University 8-8	<b>MD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Site Error:</b>	0.00	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	University 8-8E A H 5LS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	1.00	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH / 72180	<b>Database:</b>	USAEDMDB
<b>Reference Design:</b>	Surveys (Ensign T054)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design University 8-8E A H 8WC - OH / 72181 - Surveys (Ensign T054)												Offset Site Error:	0.00 usft
Survey Program: 15-MWD, 1884-MWD+HRGM												Offset Well Error:	1.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Center		Distance			Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centers (usft)	Between Ellipses (usft)	Minimum Separation (usft)		
15,099.97	9,544.14	15,776.84	10,183.05	88.90	98.06	179.70	-6,001.82	1,501.45	639.65	536.60	103.05	6.207	
15,159.00	9,546.36	15,831.16	10,180.56	89.65	98.91	179.54	-6,054.61	1,513.95	634.75	530.71	104.04	6.101	
15,199.97	9,547.85	15,867.54	10,179.19	90.17	99.47	179.41	-6,090.11	1,521.86	631.73	526.96	104.77	6.029	
15,249.00	9,549.06	15,907.26	10,178.09	90.80	100.09	179.28	-6,128.92	1,530.22	629.19	523.39	105.80	5.947	
15,299.97	9,550.10	15,947.18	10,177.66	91.45	100.71	179.16	-6,167.90	1,538.80	627.63	520.73	106.90	5.871	
15,338.00	9,551.03	15,979.26	10,177.80	91.93	101.20	179.07	-6,199.19	1,545.84	626.87	519.24	107.63	5.824	
15,351.24	9,551.36	15,992.58	10,177.90	92.10	101.41	179.03	-6,212.19	1,548.77	626.65	518.83	107.82	5.812	
15,399.97	9,552.34	16,041.64	10,178.25	92.72	102.17	178.91	-6,260.06	1,559.52	626.04	517.54	108.50	5.770	
15,406.14	9,552.43	16,047.85	10,178.29	92.80	102.27	178.90	-6,266.12	1,560.88	625.99	517.40	108.59	5.765	
15,429.00	9,552.73	16,070.76	10,178.44	93.09	102.63	178.87	-6,288.48	1,565.87	625.85	516.94	108.91	5.747	
15,444.05	9,552.89	16,085.79	10,178.54	93.28	102.86	178.85	-6,303.14	1,569.13	625.79	516.67	109.12	5.735	
15,499.97	9,553.44	16,141.63	10,178.92	94.00	103.73	178.80	-6,357.65	1,581.25	625.64	515.72	109.92	5.692	
15,503.79	9,553.47	16,145.44	10,178.95	94.04	103.79	178.79	-6,361.37	1,582.08	625.63	515.66	109.97	5.689	
15,518.00	9,553.59	16,159.25	10,179.04	94.23	104.00	178.78	-6,374.85	1,585.08	625.61	515.43	110.18	5.678	
15,519.86	9,553.61	16,161.04	10,179.06	94.25	104.03	178.78	-6,376.60	1,585.47	625.61	515.40	110.21	5.676	
15,599.97	9,553.45	16,238.65	10,179.81	95.27	105.24	178.78	-6,452.29	1,602.59	626.54	515.13	111.42	5.623	
15,600.08	9,553.45	16,238.76	10,179.81	95.27	105.24	178.78	-6,452.40	1,602.61	626.55	515.13	111.42	5.623	
15,608.00	9,553.35	16,246.69	10,179.90	95.37	105.36	178.78	-6,460.13	1,604.38	626.74	515.21	111.53	5.619	
15,608.25	9,553.34	16,246.94	10,179.91	95.37	105.37	178.78	-6,460.37	1,604.44	626.74	515.21	111.53	5.619	
15,699.00	9,552.94	16,338.75	10,180.95	96.54	106.80	178.76	-6,549.92	1,624.65	628.19	515.40	112.79	5.570	
15,699.00	9,552.94	16,338.75	10,180.95	96.54	106.80	178.76	-6,549.92	1,624.66	628.19	515.40	112.79	5.570	
15,699.97	9,552.95	16,339.79	10,180.96	96.55	106.81	178.76	-6,550.94	1,624.88	628.19	515.39	112.80	5.569	
15,718.46	9,553.04	16,359.74	10,181.13	96.79	107.12	178.72	-6,570.42	1,629.22	628.27	515.25	113.02	5.559	
15,789.00	9,553.43	16,433.68	10,181.38	97.69	108.27	178.50	-6,642.61	1,645.16	628.17	514.22	113.94	5.513	
15,791.33	9,553.44	16,435.92	10,181.38	97.72	108.31	178.49	-6,644.80	1,645.65	628.16	514.18	113.98	5.511	
15,799.97	9,553.50	16,444.21	10,181.40	97.83	108.44	178.46	-6,652.90	1,647.43	628.13	514.01	114.12	5.504	
15,817.19	9,553.64	16,460.75	10,181.45	98.05	108.69	178.40	-6,669.05	1,651.00	628.07	513.67	114.39	5.490	
15,880.00	9,554.36	16,520.90	10,181.79	98.86	109.63	178.15	-6,727.76	1,664.06	627.78	512.38	115.41	5.440	
15,884.25	9,554.42	16,524.94	10,181.82	98.92	109.69	178.14	-6,731.70	1,664.94	627.76	512.29	115.48	5.436	
15,899.97	9,554.64	16,539.86	10,181.95	99.12	109.93	178.07	-6,746.26	1,668.22	627.71	511.97	115.74	5.423	
15,918.18	9,554.87	16,557.15	10,182.13	99.35	110.20	178.00	-6,763.12	1,672.05	627.69	511.65	116.04	5.409	
15,969.00	9,555.45	16,605.69	10,182.76	100.01	110.95	177.80	-6,810.42	1,682.92	627.85	510.98	116.87	5.372	
15,969.15	9,555.46	16,605.83	10,182.76	100.01	110.96	177.80	-6,810.56	1,682.95	627.85	510.98	116.88	5.372	
15,999.97	9,555.68	16,635.97	10,183.22	100.41	111.43	177.68	-6,839.93	1,689.68	628.15	510.79	117.36	5.352	
16,000.13	9,555.68	16,636.13	10,183.22	100.41	111.43	177.68	-6,840.08	1,689.72	628.15	510.79	117.36	5.352	
16,058.00	9,555.59	16,693.05	10,184.16	101.15	112.32	177.46	-6,895.61	1,702.22	629.30	511.03	118.27	5.321	
16,058.02	9,555.59	16,693.07	10,184.16	101.15	112.32	177.46	-6,895.63	1,702.23	629.30	511.03	118.27	5.321	
16,099.97	9,554.86	16,736.17	10,184.84	101.70	112.99	177.33	-6,937.69	1,711.59	630.74	511.88	118.87	5.306	
16,102.12	9,554.79	16,738.38	10,184.87	101.73	113.02	177.32	-6,939.85	1,712.07	630.84	511.94	118.90	5.306	
16,148.00	9,552.98	16,785.52	10,185.52	102.33	113.76	177.30	-6,985.87	1,722.28	633.28	513.76	119.52	5.299	
16,150.26	9,552.86	16,787.85	10,185.54	102.36	113.79	177.31	-6,988.13	1,722.79	633.42	513.87	119.55	5.298	
16,199.97	9,550.32	16,838.94	10,186.15	103.00	114.59	177.44	-7,037.89	1,734.38	636.49	516.30	120.19	5.296	
16,201.66	9,550.23	16,840.68	10,186.17	103.02	114.62	177.44	-7,039.58	1,734.79	636.59	516.38	120.21	5.295	
16,238.00	9,548.34	16,877.13	10,186.55	103.50	115.19	177.59	-7,074.96	1,743.53	638.80	518.10	120.70	5.292	
16,240.79	9,548.19	16,879.79	10,186.58	103.53	115.24	177.60	-7,077.55	1,744.19	638.97	518.23	120.74	5.292	
16,299.97	9,544.83	16,936.36	10,187.35	104.29	116.14	177.94	-7,132.21	1,758.75	642.99	521.40	121.58	5.288	

<b>Company:</b>	Piedra Operating LLC	<b>Local Co-ordinate Reference:</b>	Well University 8-8E A H 5LS
<b>Project:</b>	Andrews County, TX (NAD83-TNC)	<b>TVD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Reference Site:</b>	University 8-8	<b>MD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Site Error:</b>	0.00	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	University 8-8E A H 5LS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	1.00	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH / 72180	<b>Database:</b>	USAEDMDB
<b>Reference Design:</b>	Surveys (Ensign T054)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design University 8-8E A H 8WC - OH / 72181 - Surveys (Ensign T054)												Offset Site Error:	0.00 usft
Survey Program: 15-MWD, 1884-MWD+HRGM												Offset Well Error:	1.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Center		Distance			Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centers (usft)	Between Ellipses (usft)	Minimum Separation (usft)		
16,301.09	9,544.77	16,937.43	10,187.37	104.30	116.15	177.94	-7,133.24	1,759.04	643.07	521.47	121.60	5.288	
16,327.00	9,543.15	16,964.03	10,187.80	104.64	116.58	178.13	-7,158.82	1,766.28	645.04	523.13	121.91	5.291	
16,399.97	9,538.01	17,052.43	10,188.00	105.57	117.98	178.67	-7,244.15	1,789.39	650.20	527.80	122.40	5.312	
16,417.00	9,536.68	17,069.58	10,187.84	105.79	118.26	178.77	-7,260.72	1,793.78	651.35	528.73	122.62	5.312	
16,499.97	9,528.75	17,156.78	10,186.60	106.85	119.64	179.33	-7,344.77	1,817.02	658.00	534.40	123.61	5.323	
16,507.00	9,527.95	17,164.00	10,186.47	106.94	119.76	179.38	-7,351.71	1,818.98	658.67	534.97	123.70	5.325	
16,596.00	9,519.14	17,253.10	10,184.74	108.08	121.18	179.98	-7,437.47	1,843.07	665.71	540.77	124.94	5.328	
16,599.97	9,518.82	17,256.87	10,184.67	108.13	121.24	-180.00	-7,441.11	1,844.06	665.97	540.96	125.00	5.328	
16,686.00	9,513.74	17,340.94	10,183.32	109.24	122.57	-179.59	-7,522.52	1,864.98	669.69	543.36	126.32	5.301	
16,699.97	9,513.26	17,355.45	10,183.09	109.42	122.80	-179.51	-7,536.60	1,868.50	669.94	543.43	126.51	5.295	
16,776.00	9,511.76	17,436.20	10,181.51	110.40	124.07	-178.96	-7,614.98	1,887.84	670.03	542.54	127.50	5.255	
16,799.97	9,511.58	17,462.59	10,180.84	110.71	124.48	-178.78	-7,640.69	1,893.72	669.63	541.86	127.77	5.241	
16,865.00	9,511.11	17,535.65	10,178.43	111.55	125.62	-178.41	-7,712.14	1,908.78	668.05	539.59	128.46	5.200	
16,899.97	9,510.88	17,575.45	10,176.73	111.99	126.23	-178.26	-7,751.09	1,916.83	666.83	538.03	128.80	5.177	
16,956.00	9,510.59	17,621.74	10,174.79	112.71	126.95	-178.14	-7,796.37	1,926.22	664.88	534.90	129.98	5.115	
16,999.97	9,510.61	17,655.67	10,173.96	113.28	127.48	-178.05	-7,829.55	1,933.26	663.82	532.85	130.97	5.068	
17,046.00	9,511.07	17,699.00	10,173.44	113.87	128.15	-177.96	-7,871.91	1,942.38	662.85	531.10	131.75	5.031	
17,099.97	9,511.86	17,760.68	10,172.27	114.57	129.11	-177.88	-7,932.25	1,955.08	661.07	528.78	132.29	4.997	
17,135.00	9,512.34	17,792.55	10,171.53	115.02	129.61	-177.85	-7,963.40	1,961.77	659.78	526.87	132.91	4.964	
17,199.97	9,513.39	17,854.00	10,170.60	115.86	130.58	-177.60	-8,023.05	1,976.51	657.85	523.84	134.02	4.909	
17,225.00	9,513.89	17,877.25	10,170.33	116.18	130.95	-177.46	-8,045.50	1,982.53	657.13	522.66	134.47	4.887	
17,299.97	9,515.34	17,959.53	10,168.50	117.16	132.26	-177.07	-8,124.98	2,003.74	654.20	518.78	135.42	4.831	
17,315.00	9,515.60	17,973.10	10,168.17	117.35	132.47	-177.03	-8,138.11	2,007.14	653.60	517.90	135.70	4.817	
17,399.97	9,516.47	18,051.29	10,166.90	118.45	133.70	-176.86	-8,214.08	2,025.63	651.45	514.24	137.20	4.748	
17,405.00	9,516.48	18,056.25	10,166.84	118.52	133.78	-176.85	-8,218.91	2,026.76	651.38	514.10	137.28	4.745	
17,494.00	9,518.10	18,144.44	10,165.93	119.68	135.16	-176.84	-8,304.85	2,046.51	648.85	510.23	138.63	4.681	
17,499.97	9,518.30	18,150.47	10,165.87	119.76	135.26	-176.85	-8,310.72	2,047.85	648.59	509.87	138.71	4.676	
17,586.00	9,521.10	18,236.55	10,164.95	120.88	136.60	-176.98	-8,394.66	2,066.96	644.79	504.84	139.95	4.607	
17,599.97	9,521.53	18,250.17	10,164.82	121.06	136.82	-177.01	-8,407.94	2,069.99	644.21	504.05	140.16	4.596	
17,676.00	9,523.61	18,324.27	10,164.19	122.06	137.98	-177.16	-8,480.16	2,086.51	641.39	500.09	141.29	4.539	
17,699.96	9,524.22	18,347.57	10,164.04	122.37	138.34	-177.21	-8,502.87	2,091.75	640.60	498.94	141.65	4.522	
17,766.00	9,526.07	18,412.41	10,163.72	123.23	139.36	-177.31	-8,566.01	2,106.49	638.36	495.73	142.64	4.475	
17,799.96	9,527.13	18,446.54	10,163.56	123.68	139.90	-177.34	-8,599.20	2,114.44	637.13	494.00	143.12	4.452	
17,855.00	9,529.01	18,502.18	10,163.25	124.40	140.77	-177.35	-8,653.23	2,127.72	634.93	491.02	143.91	4.412	
17,899.96	9,530.60	18,548.13	10,162.92	124.99	141.50	-177.29	-8,697.78	2,138.98	633.03	488.48	144.56	4.379	
17,946.00	9,532.16	18,592.57	10,162.55	125.59	142.20	-177.16	-8,740.82	2,150.00	631.17	485.85	145.32	4.343	
17,999.96	9,534.01	18,641.57	10,162.50	126.30	142.98	-177.04	-8,788.46	2,161.47	629.33	483.02	146.31	4.301	
18,007.65	9,534.28	18,648.55	10,162.52	126.40	143.09	-177.03	-8,795.27	2,163.03	629.09	482.65	146.44	4.296	
18,035.00	9,535.26	18,674.23	10,162.68	126.76	143.49	-177.00	-8,820.33	2,168.64	628.30	481.39	146.91	4.277	
18,049.09	9,535.76	18,687.88	10,162.79	126.94	143.70	-176.98	-8,833.65	2,171.61	627.92	480.78	147.14	4.268	
18,099.96	9,537.31	18,737.19	10,163.24	127.61	144.47	-176.98	-8,881.79	2,182.31	626.83	478.90	147.93	4.237	
18,105.12	9,537.45	18,742.19	10,163.30	127.67	144.55	-176.98	-8,886.66	2,183.39	626.75	478.73	148.01	4.234	
18,124.00	9,537.91	18,760.71	10,163.50	127.92	144.84	-177.01	-8,904.75	2,187.41	626.48	478.18	148.30	4.225	
18,140.18	9,538.27	18,776.73	10,163.68	128.14	145.09	-177.03	-8,920.38	2,190.91	626.29	477.76	148.53	4.216	
18,199.96	9,539.33	18,835.91	10,164.38	128.93	146.02	-177.17	-8,978.06	2,204.10	625.84	476.45	149.39	4.189	

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

<b>Company:</b>	Piedra Operating LLC	<b>Local Co-ordinate Reference:</b>	Well University 8-8E A H 5LS
<b>Project:</b>	Andrews County, TX (NAD83-TNC)	<b>TVD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Reference Site:</b>	University 8-8	<b>MD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Site Error:</b>	0.00	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	University 8-8E A H 5LS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	1.00	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH / 72180	<b>Database:</b>	USAEDMDB
<b>Reference Design:</b>	Surveys (Ensign T054)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design University 8-8E A H 8WC - OH / 72181 - Surveys (Ensign T054)												Offset Site Error:	0.00 usft
Survey Program: 15-MWD, 1884-MWD+HRGM												Offset Well Error:	1.00 usft
Reference		Offset		Semi Major Axis			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)		
18,202.94	9,539.37	18,838.86	10,164.41	128.96	146.06	-177.18	-8,980.93	2,204.77	625.83	476.39	149.44	4.188	
18,214.00	9,539.52	18,849.53	10,164.54	129.11	146.23	-177.21	-8,991.32	2,207.20	625.80	476.20	149.60	4.183	
18,232.43	9,539.78	18,867.20	10,164.78	129.35	146.51	-177.27	-9,008.52	2,211.24	625.75	475.87	149.88	4.175	
18,299.96	9,541.18	18,932.00	10,165.79	130.24	147.53	-177.46	-9,071.51	2,226.39	625.31	474.40	150.91	4.144	
18,304.00	9,541.29	18,935.97	10,165.86	130.30	147.59	-177.47	-9,075.38	2,227.33	625.27	474.30	150.97	4.142	
18,305.83	9,541.34	18,937.77	10,165.89	130.32	147.62	-177.47	-9,077.12	2,227.76	625.25	474.25	151.00	4.141	
18,326.49	9,541.78	18,958.13	10,166.26	130.59	147.94	-177.52	-9,096.88	2,232.65	625.16	473.85	151.30	4.132	
18,394.00	9,541.98	19,024.91	10,167.50	131.48	149.00	-177.60	-9,161.55	2,249.24	626.18	473.86	152.32	4.111	
18,394.00	9,541.98	19,024.91	10,167.50	131.48	149.00	-177.60	-9,161.56	2,249.24	626.18	473.86	152.32	4.111	
18,399.96	9,541.91	19,031.12	10,167.61	131.56	149.10	-177.59	-9,167.57	2,250.81	626.35	473.95	152.40	4.110	
18,400.02	9,541.91	19,031.19	10,167.61	131.56	149.10	-177.59	-9,167.63	2,250.83	626.35	473.95	152.40	4.110	
18,484.00	9,541.46	19,118.69	10,168.96	132.67	150.49	-177.75	-9,252.24	2,273.11	628.02	474.50	153.52	4.091	
18,484.05	9,541.46	19,118.75	10,168.96	132.67	150.49	-177.75	-9,252.29	2,273.12	628.02	474.50	153.52	4.091	
18,499.96	9,541.41	19,135.27	10,169.16	132.89	150.75	-177.82	-9,268.28	2,277.29	628.24	474.51	153.73	4.087	
18,500.03	9,541.41	19,135.34	10,169.16	132.89	150.76	-177.82	-9,268.35	2,277.31	628.24	474.51	153.73	4.087	
18,573.00	9,540.09	19,210.73	10,169.89	133.87	151.95	-178.04	-9,341.45	2,295.71	630.19	475.49	154.71	4.073	
18,573.02	9,540.09	19,210.75	10,169.89	133.87	151.95	-178.04	-9,341.47	2,295.71	630.19	475.49	154.71	4.073	
18,599.96	9,539.22	19,237.73	10,170.12	134.22	152.37	-178.09	-9,367.72	2,301.99	631.27	476.17	155.10	4.070	
18,599.98	9,539.22	19,237.75	10,170.12	134.22	152.37	-178.09	-9,367.73	2,301.99	631.27	476.17	155.10	4.070	
18,662.00	9,536.88	19,300.40	10,170.65	135.05	153.36	-178.23	-9,428.85	2,315.76	634.09	478.11	155.98	4.065	
18,663.71	9,536.81	19,302.22	10,170.67	135.07	153.39	-178.24	-9,430.62	2,316.15	634.17	478.17	156.00	4.065	
18,699.96	9,535.19	19,340.84	10,170.89	135.54	153.99	-178.32	-9,468.36	2,324.35	635.97	479.52	156.45	4.065	
18,702.16	9,535.09	19,343.18	10,170.90	135.57	154.02	-178.32	-9,470.65	2,324.85	636.08	479.60	156.48	4.065	
18,751.00	9,532.57	19,394.24	10,170.96	136.21	154.82	-178.40	-9,520.55	2,335.64	638.64	481.51	157.13	4.064	
18,751.02	9,532.57	19,394.25	10,170.96	136.21	154.82	-178.40	-9,520.57	2,335.64	638.64	481.51	157.13	4.064	
18,799.96	9,529.63	19,442.53	10,170.98	136.85	155.58	-178.44	-9,567.72	2,346.01	641.59	483.73	157.87	4.064	
18,801.77	9,529.51	19,444.31	10,170.98	136.88	155.60	-178.44	-9,569.46	2,346.39	641.71	483.82	157.89	4.064	
18,841.00	9,526.79	19,483.40	10,171.02	137.39	156.21	-178.44	-9,607.59	2,354.99	644.47	485.99	158.48	4.067	
18,899.96	9,523.14	19,543.63	10,171.00	138.16	157.16	-178.39	-9,666.30	2,368.43	648.11	488.79	159.32	4.068	
18,931.00	9,521.75	19,575.36	10,170.93	138.57	157.66	-178.32	-9,697.22	2,375.60	649.47	489.69	159.78	4.065	
18,999.96	9,518.97	19,645.91	10,170.66	139.47	158.76	-178.16	-9,765.96	2,391.42	652.03	491.25	160.79	4.055	
19,021.00	9,518.10	19,668.12	10,170.53	139.74	159.11	-178.10	-9,787.62	2,396.36	652.81	491.73	161.07	4.053	
19,099.96	9,514.55	19,751.81	10,169.65	140.77	160.42	-177.88	-9,869.32	2,414.45	655.59	493.45	162.14	4.043	
19,110.00	9,514.07	19,762.22	10,169.50	140.90	160.58	-177.85	-9,879.49	2,416.66	655.94	493.66	162.28	4.042	
19,199.96	9,511.80	19,854.39	10,167.95	142.08	162.02	-177.68	-9,969.58	2,436.10	656.79	493.18	163.61	4.014	
19,201.00	9,511.79	19,855.42	10,167.93	142.09	162.03	-177.68	-9,970.59	2,436.32	656.78	493.15	163.62	4.014	
19,292.00	9,512.49	19,946.99	10,166.32	143.28	163.46	-177.60	-10,060.07	2,455.66	654.51	489.51	165.00	3.967	
19,299.96	9,512.63	19,955.27	10,166.16	143.39	163.59	-177.60	-10,068.17	2,457.41	654.23	489.11	165.11	3.962	
19,382.00	9,514.17	20,041.14	10,164.27	144.46	164.93	-177.48	-10,152.07	2,475.60	650.92	484.69	166.23	3.916	
19,399.96	9,514.53	20,060.12	10,163.77	144.70	165.23	-177.45	-10,170.61	2,479.62	650.10	483.63	166.48	3.905	
19,472.00	9,516.18	20,138.11	10,161.36	145.64	166.44	-177.29	-10,246.78	2,496.17	646.30	478.93	167.37	3.861	
19,499.96	9,516.82	20,169.04	10,160.16	146.01	166.92	-177.25	-10,276.97	2,502.83	644.60	476.91	167.69	3.844	
19,561.00	9,517.92	20,224.29	10,157.97	146.81	167.79	-177.26	-10,330.84	2,514.87	641.12	472.28	168.84	3.797	
19,599.96	9,518.44	20,256.75	10,157.08	147.33	168.30	-177.27	-10,362.48	2,522.05	639.52	469.87	169.65	3.770	
19,651.00	9,518.96	20,304.15	10,156.22	148.00	169.04	-177.26	-10,408.66	2,532.72	638.08	467.54	170.54	3.741	
19,699.96	9,519.28	20,353.46	10,155.35	148.64	169.82	-177.20	-10,456.59	2,544.27	636.92	465.64	171.29	3.719	

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

<b>Company:</b>	Piedra Operating LLC	<b>Local Co-ordinate Reference:</b>	Well University 8-8E A H 5LS
<b>Project:</b>	Andrews County, TX (NAD83-TNC)	<b>TVD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Reference Site:</b>	University 8-8	<b>MD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Site Error:</b>	0.00	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	University 8-8E A H 5LS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	1.00	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH / 72180	<b>Database:</b>	USAEDMDB
<b>Reference Design:</b>	Surveys (Ensign T054)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design University 8-8E A H 8WC - OH / 72181 - Surveys (Ensign T054)												Offset Site Error:	0.00 usft
Survey Program: 15-MWD, 1884-MWD+HRGM												Offset Well Error:	1.00 usft
Reference		Offset		Semi Major Axis			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)		
19,740.00	9,519.41	20,388.62	10,154.79	149.17	170.37	-177.13	-10,490.72	2,552.71	636.21	464.14	172.07	3.697	
19,799.96	9,519.85	20,437.80	10,154.70	149.96	171.15	-177.04	-10,538.51	2,564.29	635.92	462.58	173.33	3.669	
19,799.96	9,519.85	20,437.80	10,154.70	149.96	171.15	-177.04	-10,538.51	2,564.29	635.92	462.58	173.33	3.669	
19,830.00	9,519.86	20,463.54	10,154.98	150.35	171.55	-177.01	-10,563.56	2,570.24	636.05	462.13	173.92	3.657	
19,830.04	9,519.86	20,463.58	10,154.98	150.35	171.56	-177.01	-10,563.59	2,570.25	636.05	462.13	173.92	3.657	
19,899.96	9,520.24	20,530.71	10,156.05	151.27	172.61	-176.91	-10,628.98	2,585.42	636.86	461.77	175.08	3.637	
19,900.02	9,520.24	20,530.76	10,156.05	151.27	172.61	-176.91	-10,629.03	2,585.43	636.86	461.77	175.08	3.637	
19,919.00	9,520.28	20,549.00	10,156.40	151.52	172.90	-176.89	-10,646.81	2,589.47	637.20	461.80	175.40	3.633	
19,919.05	9,520.28	20,549.05	10,156.40	151.52	172.90	-176.89	-10,646.86	2,589.48	637.20	461.80	175.40	3.633	
19,999.96	9,519.45	20,627.43	10,158.10	152.58	174.13	-176.78	-10,723.29	2,606.76	639.85	463.12	176.72	3.621	
20,000.03	9,519.44	20,627.50	10,158.10	152.59	174.13	-176.78	-10,723.36	2,606.78	639.85	463.13	176.73	3.621	
20,008.00	9,519.26	20,635.21	10,158.28	152.69	174.25	-176.77	-10,730.88	2,608.48	640.23	463.37	176.85	3.620	
20,008.03	9,519.26	20,635.24	10,158.28	152.69	174.25	-176.77	-10,730.91	2,608.49	640.23	463.37	176.85	3.620	
20,098.00	9,516.90	20,727.77	10,160.31	153.87	175.70	-176.67	-10,821.13	2,628.91	644.64	466.45	178.19	3.618	
20,098.05	9,516.90	20,727.81	10,160.31	153.87	175.70	-176.67	-10,821.17	2,628.92	644.64	466.45	178.19	3.618	
20,099.96	9,516.84	20,729.70	10,160.35	153.90	175.73	-176.67	-10,823.02	2,629.34	644.74	466.52	178.22	3.618	
20,099.96	9,516.84	20,729.70	10,160.35	153.90	175.73	-176.67	-10,823.02	2,629.34	644.74	466.52	178.22	3.618	
20,187.00	9,515.83	20,815.30	10,162.11	155.04	177.08	-176.51	-10,906.37	2,648.74	647.65	468.01	179.64	3.605	
20,187.03	9,515.83	20,815.34	10,162.11	155.04	177.08	-176.51	-10,906.40	2,648.74	647.65	468.01	179.64	3.605	
20,199.96	9,515.88	20,828.07	10,162.38	155.21	177.28	-176.49	-10,918.79	2,651.71	647.88	468.03	179.85	3.602	
20,200.10	9,515.89	20,828.21	10,162.38	155.21	177.28	-176.48	-10,918.92	2,651.74	647.88	468.03	179.85	3.602	
20,250.00	9,516.16	20,877.61	10,163.45	155.87	178.06	-176.36	-10,966.88	2,663.54	648.78	468.10	180.67	3.591	
20,250.14	9,516.16	20,877.74	10,163.45	155.87	178.06	-176.36	-10,967.01	2,663.58	648.78	468.10	180.68	3.591	
20,299.96	9,516.46	20,927.54	10,164.53	156.53	178.85	-176.23	-11,015.32	2,675.59	649.65	468.16	181.49	3.580	
20,299.99	9,516.46	20,927.57	10,164.53	156.53	178.85	-176.23	-11,015.35	2,675.60	649.65	468.16	181.49	3.580	
20,311.00	9,516.53	20,938.58	10,164.76	156.67	179.03	-176.21	-11,026.03	2,678.26	649.84	468.17	181.67	3.577	



<b>Company:</b>	Piedra Operating LLC	<b>Local Co-ordinate Reference:</b>	Well University 8-8E A H 5LS
<b>Project:</b>	Andrews County, TX (NAD83-TNC)	<b>TVD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Reference Site:</b>	University 8-8	<b>MD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Site Error:</b>	0.00	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	University 8-8E A H 5LS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	1.00	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH / 72180	<b>Database:</b>	USAEDMDB
<b>Reference Design:</b>	Surveys (Ensign T054)	<b>Offset TVD Reference:</b>	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)		
0.00	0.00	0.00	0.00	1.00	1.00	76.97	169.03	730.54	749.84				
15.00	15.00	13.00	13.00	1.00	1.00	76.97	169.03	730.54	749.84				
100.00	100.00	97.39	97.39	1.28	1.40	51.71	169.02	730.58	749.82	747.15	2.68	280.270	
178.00	178.00	174.82	174.82	1.91	2.14	51.73	168.99	730.68	749.77	745.73	4.05	185.234	
190.57	190.57	187.30	187.30	1.95	2.27	60.47	168.98	730.70	749.77	745.55	4.22	177.774	
200.00	200.00	196.65	196.65	1.98	2.37	68.27	168.97	730.72	749.77	745.42	4.35	172.510	
268.00	268.00	264.77	264.77	2.20	2.92	129.89	168.88	730.87	749.94	744.83	5.10	146.969	
300.00	300.00	296.92	296.92	2.28	3.16	147.07	168.78	730.94	750.07	744.65	5.42	138.410	
356.00	356.00	353.18	353.18	2.43	3.57	178.19	168.53	731.07	750.33	744.36	5.98	125.520	
400.00	400.00	397.39	397.38	2.54	3.90	-168.55	168.25	731.18	750.52	744.11	6.41	117.085	
443.00	443.00	440.83	440.82	2.64	4.05	-146.27	167.98	731.27	750.65	743.98	6.67	112.610	
500.00	500.00	498.48	498.48	2.77	4.21	-171.58	167.82	731.29	750.84	743.88	6.96	107.941	
532.00	532.00	530.85	530.84	2.85	4.29	-176.06	167.83	731.26	751.00	743.88	7.12	105.486	
600.00	600.00	597.74	597.74	3.01	4.39	-173.85	167.88	731.22	751.31	743.93	7.38	101.801	
623.00	623.00	621.00	621.00	3.07	4.42	-170.52	167.86	731.24	751.37	743.91	7.47	100.611	
700.00	699.99	700.15	700.14	3.25	4.54	-169.84	167.68	731.20	751.60	743.84	7.75	96.937	
712.00	712.00	712.40	712.39	3.27	4.56	-169.81	167.63	731.17	751.64	743.84	7.80	96.395	
800.00	799.99	798.68	798.67	3.47	4.66	-129.46	167.52	731.01	751.91	743.80	8.11	92.730	
804.00	803.99	802.53	802.52	3.48	4.67	-127.28	167.53	731.01	751.92	743.80	8.12	92.569	
892.00	891.99	887.24	887.23	3.66	4.77	-149.73	167.73	731.09	752.32	743.91	8.41	89.467	
900.00	899.99	895.07	895.07	3.68	4.78	-156.57	167.76	731.12	752.37	743.93	8.43	89.196	
982.00	981.99	975.62	975.62	3.84	4.88	110.16	167.87	731.50	752.94	744.23	8.70	86.507	
1,000.00	999.99	994.00	993.99	3.87	4.90	127.85	167.88	731.61	753.07	744.30	8.76	85.941	
1,070.00	1,069.99	1,065.27	1,065.26	4.00	5.00	-143.93	168.06	731.88	753.56	744.57	8.99	83.813	
1,100.00	1,099.99	1,095.04	1,095.04	4.06	5.04	-148.82	168.19	731.97	753.79	744.70	9.09	82.926	
1,157.00	1,156.99	1,152.51	1,152.51	4.18	5.11	-156.64	168.54	732.13	754.29	745.01	9.28	81.296	
1,200.00	1,199.99	1,200.96	1,200.95	4.39	5.16	-160.66	168.78	732.06	754.50	744.95	9.55	79.018	
1,300.00	1,299.99	1,303.75	1,303.74	4.90	5.26	-167.67	168.70	731.28	754.37	744.21	10.16	74.275	
1,336.00	1,335.99	1,339.78	1,339.76	5.08	5.35	-169.59	168.46	731.06	754.36	743.94	10.42	72.371	
1,346.29	1,346.28	1,350.19	1,350.18	5.10	5.39	-171.48	168.39	730.99	754.36	743.88	10.48	71.964	
1,400.00	1,399.98	1,404.53	1,404.52	5.21	5.59	-179.70	168.02	730.62	754.37	743.58	10.79	69.913	
1,428.00	1,427.98	1,432.87	1,432.85	5.27	5.69	176.91	167.84	730.40	754.39	743.44	10.95	68.889	
1,500.00	1,499.98	1,505.85	1,505.83	5.40	5.96	-141.25	167.40	729.78	754.27	742.92	11.34	66.499	
1,516.00	1,515.98	1,522.86	1,522.84	5.43	5.98	-130.17	167.28	729.61	754.17	742.79	11.39	66.224	
1,600.00	1,599.98	1,608.51	1,608.47	5.59	6.07	-155.96	166.45	728.53	753.38	741.75	11.63	64.790	
1,608.00	1,607.98	1,615.87	1,615.84	5.60	6.08	-159.33	166.36	728.45	753.31	741.66	11.65	64.656	
1,697.00	1,696.98	1,701.62	1,701.57	5.77	6.18	-161.39	165.36	727.88	752.98	741.06	11.92	63.192	
1,700.00	1,699.97	1,704.82	1,704.77	5.78	6.19	-161.39	165.32	727.86	752.97	741.04	11.93	63.141	
1,788.00	1,787.98	1,794.19	1,794.13	5.96	6.30	-164.22	164.02	727.07	752.44	740.25	12.19	61.705	
1,800.00	1,799.97	1,805.35	1,805.29	5.97	6.32	-172.97	163.89	726.99	752.40	740.17	12.22	61.548	
1,808.46	1,808.43	1,813.22	1,813.16	5.99	6.33	-177.17	163.80	726.93	752.39	740.14	12.25	61.439	
1,846.00	1,845.97	1,849.18	1,849.12	6.05	6.36	172.97	163.47	726.74	752.56	740.22	12.34	60.991	
1,900.00	1,899.96	1,906.75	1,906.69	6.14	6.39	-175.58	163.02	726.30	752.81	740.34	12.47	60.359	
1,973.00	1,972.96	1,978.04	1,977.96	6.28	6.48	-157.06	162.06	725.69	752.89	740.14	12.75	59.072	
2,000.00	1,999.95	2,003.89	2,003.81	6.34	6.54	-138.03	161.42	725.61	752.95	740.09	12.86	58.530	
2,064.00	2,063.95	2,067.48	2,067.34	6.49	6.75	-109.98	158.77	725.73	753.03	739.87	13.16	57.235	

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

<b>Company:</b>	Piedra Operating LLC	<b>Local Co-ordinate Reference:</b>	Well University 8-8E A H 5LS
<b>Project:</b>	Andrews County, TX (NAD83-TNC)	<b>TVD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Reference Site:</b>	University 8-8	<b>MD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Site Error:</b>	0.00	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	University 8-8E A H 5LS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	1.00	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH / 72180	<b>Database:</b>	USAEDMDB
<b>Reference Design:</b>	Surveys (Ensign T054)	<b>Offset TVD Reference:</b>	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)		
2,100.00	2,099.93	2,103.46	2,103.24	6.55	6.91	-96.36	156.40	726.00	752.97	739.67	13.30	56.622	
2,153.00	2,152.89	2,157.74	2,157.34	6.65	7.12	-88.05	152.02	726.52	752.60	739.13	13.47	55.886	
2,200.00	2,199.83	2,205.07	2,204.46	6.73	7.30	-86.78	147.62	727.04	752.07	738.46	13.60	55.280	
2,242.00	2,241.78	2,245.64	2,244.84	6.81	7.40	-85.67	143.70	727.55	751.60	737.88	13.72	54.765	
2,300.00	2,299.69	2,299.89	2,298.82	6.91	7.52	-81.63	138.40	728.40	750.96	737.07	13.88	54.095	
2,332.00	2,331.63	2,328.02	2,326.82	6.97	7.58	-79.84	135.69	728.99	750.67	736.71	13.97	53.750	
2,400.00	2,399.49	2,389.75	2,388.25	7.10	7.72	-77.13	129.86	730.77	750.43	736.28	14.15	53.031	
2,423.00	2,422.45	2,412.65	2,411.03	7.15	7.77	-76.20	127.72	731.50	750.38	736.16	14.22	52.781	
2,500.00	2,499.29	2,488.77	2,486.79	7.31	7.95	-76.13	120.64	733.94	750.23	735.78	14.45	51.924	
2,515.00	2,514.27	2,503.41	2,501.36	7.34	7.99	-76.12	119.30	734.42	750.21	735.72	14.49	51.760	
2,599.99	2,599.08	2,587.19	2,584.74	7.53	8.19	-66.92	111.74	737.26	749.80	735.04	14.76	50.798	
2,606.00	2,605.08	2,593.20	2,590.73	7.54	8.20	-66.31	111.19	737.47	749.74	734.96	14.78	50.728	
2,696.00	2,694.85	2,684.24	2,681.34	7.74	8.43	-61.26	102.91	740.58	748.37	733.30	15.08	49.634	
2,699.99	2,698.83	2,688.34	2,685.41	7.75	8.44	-61.25	102.54	740.71	748.29	733.20	15.09	49.582	
2,786.00	2,784.60	2,776.23	2,772.90	7.94	8.67	-60.77	94.64	743.46	746.41	731.01	15.40	48.465	
2,799.99	2,798.56	2,790.47	2,787.08	7.98	8.71	-61.00	93.37	743.88	746.09	730.63	15.45	48.277	
2,876.00	2,874.36	2,866.42	2,862.71	8.17	8.91	-62.24	86.70	746.07	744.38	728.63	15.74	47.279	
2,899.99	2,898.29	2,890.01	2,886.20	8.23	8.98	-61.54	84.69	746.76	743.87	728.03	15.84	46.965	
2,966.00	2,964.12	2,956.10	2,952.03	8.40	9.16	-59.63	79.15	748.70	742.42	726.32	16.11	46.097	
2,999.99	2,998.02	2,990.60	2,986.40	8.49	9.26	-58.70	76.25	749.69	741.60	725.35	16.25	45.643	
3,055.00	3,052.89	3,045.85	3,041.43	8.63	9.41	-57.18	71.61	751.23	740.18	723.70	16.48	44.916	
3,099.99	3,097.76	3,090.82	3,086.23	8.75	9.53	-57.12	67.93	752.46	738.99	722.31	16.67	44.321	
3,146.00	3,143.65	3,136.84	3,132.08	8.88	9.67	-57.07	64.20	753.72	737.79	720.91	16.88	43.718	
3,199.99	3,197.50	3,190.81	3,185.84	9.03	9.82	-55.19	59.67	755.22	736.34	719.22	17.12	43.014	
3,236.00	3,233.42	3,226.19	3,221.07	9.13	9.92	-53.92	56.57	756.24	735.33	718.05	17.28	42.551	
3,299.99	3,297.25	3,289.31	3,283.88	9.32	10.11	-52.58	50.66	758.19	733.58	716.01	17.57	41.741	
3,325.00	3,322.20	3,314.57	3,309.01	9.39	10.18	-52.04	48.25	758.98	732.90	715.21	17.69	41.426	
3,399.99	3,397.01	3,390.49	3,384.56	9.61	10.41	-52.72	41.15	761.28	730.81	712.76	18.05	40.481	
3,416.00	3,412.97	3,406.80	3,400.80	9.65	10.46	-52.86	39.66	761.75	730.35	712.22	18.13	40.281	
3,499.99	3,496.75	3,490.71	3,484.34	9.91	10.71	-53.34	32.10	764.09	727.81	709.26	18.55	39.238	
3,507.00	3,503.73	3,497.51	3,491.10	9.93	10.73	-53.38	31.49	764.28	727.60	709.02	18.58	39.154	
3,596.00	3,592.47	3,585.05	3,578.26	10.20	10.99	-59.31	23.71	766.91	725.28	706.24	19.04	38.098	
3,599.99	3,596.45	3,589.06	3,582.25	10.22	11.01	-59.71	23.36	767.03	725.18	706.13	19.06	38.051	
3,686.00	3,682.17	3,676.05	3,668.89	10.49	11.28	-67.69	15.93	769.60	723.49	703.96	19.53	37.049	
3,699.99	3,696.11	3,690.36	3,683.15	10.54	11.32	-67.86	14.74	770.01	723.25	703.64	19.61	36.886	
3,776.00	3,771.84	3,766.62	3,759.11	10.79	11.56	-68.78	8.45	772.06	721.95	701.91	20.04	36.029	
3,799.99	3,795.75	3,790.23	3,782.64	10.86	11.64	-68.15	6.55	772.71	721.57	701.39	20.17	35.766	
3,864.00	3,859.53	3,853.86	3,846.04	11.07	11.84	-66.44	1.51	774.48	720.49	699.95	20.54	35.076	
3,899.99	3,895.39	3,889.96	3,882.02	11.19	11.95	-66.26	-1.32	775.48	719.85	699.10	20.75	34.693	
3,954.00	3,949.21	3,944.05	3,935.93	11.37	12.13	-65.98	-5.51	776.96	718.87	697.81	21.06	34.129	
3,999.99	3,995.04	3,990.07	3,981.80	11.52	12.27	-65.52	-8.94	778.19	718.02	696.69	21.33	33.658	
4,044.00	4,038.90	4,034.21	4,025.81	11.67	12.41	-65.09	-12.15	779.36	717.18	695.58	21.59	33.213	
4,099.99	4,094.70	4,090.42	4,081.85	11.85	12.59	-63.40	-16.16	780.82	716.03	694.11	21.93	32.658	
4,133.00	4,127.60	4,123.50	4,114.84	11.96	12.70	-62.37	-18.47	781.67	715.32	693.20	22.12	32.336	
4,199.99	4,194.38	4,190.56	4,181.73	12.18	12.92	-60.94	-22.98	783.35	713.78	691.26	22.52	31.694	

<b>Company:</b>	Piedra Operating LLC	<b>Local Co-ordinate Reference:</b>	Well University 8-8E A H 5LS
<b>Project:</b>	Andrews County, TX (NAD83-TNC)	<b>TVD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Reference Site:</b>	University 8-8	<b>MD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Site Error:</b>	0.00	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	University 8-8E A H 5LS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	1.00	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH / 72180	<b>Database:</b>	USAEDMDB
<b>Reference Design:</b>	Surveys (Ensign T054)	<b>Offset TVD Reference:</b>	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)		
4,222.00	4,216.32	4,212.41	4,203.53	12.26	12.99	-60.46	-24.41	783.89	713.26	690.61	22.65	31.488	
4,299.99	4,294.08	4,290.02	4,280.95	12.52	13.24	-59.54	-29.40	785.84	711.43	688.31	23.12	30.772	
4,312.00	4,306.05	4,302.06	4,292.96	12.56	13.28	-59.40	-30.17	786.15	711.14	687.95	23.19	30.664	
4,399.99	4,393.79	4,390.41	4,381.11	12.85	13.56	-57.23	-35.82	788.36	709.04	685.32	23.72	29.889	
4,401.00	4,394.80	4,391.42	4,382.12	12.86	13.57	-57.20	-35.89	788.38	709.02	685.29	23.73	29.880	
4,491.00	4,484.56	4,481.20	4,471.70	13.16	13.86	-56.09	-41.40	790.54	706.75	682.48	24.27	29.116	
4,499.99	4,493.53	4,490.01	4,480.49	13.19	13.88	-55.86	-41.93	790.75	706.52	682.20	24.33	29.042	
4,582.00	4,575.33	4,571.07	4,561.39	13.47	14.15	-53.74	-46.59	792.79	704.50	679.67	24.82	28.380	
4,599.99	4,593.27	4,589.10	4,579.38	13.53	14.21	-54.74	-47.60	793.25	704.05	679.11	24.93	28.236	
4,673.00	4,666.07	4,662.07	4,652.22	13.78	14.45	-58.43	-51.59	795.08	702.24	676.86	25.39	27.662	
4,699.99	4,692.98	4,688.97	4,679.08	13.87	14.53	-59.94	-53.02	795.75	701.61	676.05	25.56	27.454	
4,764.00	4,756.79	4,755.09	4,745.09	14.09	14.75	-63.48	-56.47	797.34	700.23	674.26	25.97	26.963	
4,799.99	4,792.66	4,793.35	4,783.28	14.22	14.88	-62.95	-58.51	798.12	699.38	673.17	26.21	26.686	
4,854.00	4,846.51	4,850.62	4,840.46	14.40	15.07	-62.13	-61.71	799.07	697.86	671.29	26.57	26.265	
4,899.99	4,892.36	4,899.15	4,888.89	14.56	15.23	-62.31	-64.66	799.70	696.36	669.49	26.88	25.909	
4,943.00	4,935.24	4,942.09	4,931.75	14.71	15.37	-62.48	-67.29	800.19	694.91	667.75	27.16	25.585	
4,999.99	4,992.07	4,999.05	4,988.61	14.91	15.56	-62.51	-70.62	800.82	693.06	665.52	27.54	25.168	
5,033.00	5,024.99	5,032.17	5,021.67	15.02	15.67	-62.52	-72.50	801.17	692.03	664.28	27.76	24.933	
5,099.99	5,091.82	5,099.25	5,088.65	15.25	15.89	-62.62	-76.22	801.86	689.98	661.78	28.20	24.468	
5,122.00	5,113.77	5,121.22	5,110.58	15.33	15.96	-62.66	-77.39	802.07	689.31	660.96	28.35	24.318	
5,199.99	5,191.56	5,199.38	5,188.64	15.60	16.23	-62.90	-81.38	802.82	686.86	657.99	28.87	23.793	
5,212.00	5,203.54	5,211.47	5,200.72	15.64	16.27	-62.93	-81.99	802.93	686.46	657.51	28.95	23.713	
5,299.99	5,291.28	5,296.91	5,286.05	15.95	16.55	-61.46	-86.19	803.74	683.54	654.01	29.53	23.146	
5,303.00	5,294.28	5,299.74	5,288.87	15.96	16.56	-61.41	-86.32	803.78	683.45	653.90	29.55	23.127	
5,393.00	5,384.02	5,385.99	5,375.03	16.28	16.85	-66.91	-90.15	805.11	681.23	651.09	30.15	22.598	
5,399.99	5,390.99	5,392.82	5,381.85	16.30	16.87	-66.93	-90.44	805.22	681.10	650.91	30.19	22.559	
5,483.00	5,473.76	5,476.05	5,465.00	16.59	17.15	-67.54	-93.85	806.70	679.53	648.78	30.76	22.095	
5,499.99	5,490.70	5,493.48	5,482.41	16.65	17.21	-67.81	-94.55	806.98	679.19	648.32	30.87	22.000	
5,573.00	5,563.48	5,567.77	5,556.64	16.91	17.46	-68.93	-97.50	808.08	677.68	646.30	31.38	21.598	
5,599.99	5,590.39	5,595.09	5,583.93	17.00	17.55	-68.98	-98.57	808.45	677.11	645.54	31.56	21.451	
5,662.00	5,652.21	5,657.42	5,646.21	17.22	17.77	-69.09	-100.98	809.25	675.75	643.75	32.00	21.120	
5,699.99	5,690.08	5,695.49	5,684.25	17.36	17.90	-68.97	-102.40	809.72	674.89	642.63	32.26	20.920	
5,752.00	5,741.93	5,746.55	5,735.28	17.54	18.07	-68.83	-104.25	810.37	673.72	641.10	32.62	20.654	
5,799.99	5,789.76	5,793.56	5,782.25	17.71	18.23	-69.96	-105.89	811.02	672.72	639.77	32.95	20.416	
5,841.00	5,830.64	5,835.32	5,823.98	17.85	18.37	-70.94	-107.33	811.60	671.93	638.69	33.24	20.215	
5,899.99	5,889.45	5,895.14	5,883.76	18.06	18.57	-75.30	-109.39	812.35	670.94	637.28	33.66	19.934	
5,931.00	5,920.37	5,926.19	5,914.79	18.17	18.68	-77.75	-110.46	812.73	670.56	636.69	33.88	19.794	
5,999.99	5,989.19	5,995.31	5,983.86	18.41	18.91	-84.56	-112.88	813.55	670.16	635.79	34.37	19.500	
6,010.16	5,999.34	6,005.51	5,994.05	18.45	18.95	-85.69	-113.24	813.67	670.15	635.71	34.44	19.459	CC
6,022.00	6,011.15	6,017.38	6,005.92	18.49	18.99	-87.06	-113.65	813.81	670.16	635.64	34.52	19.412	
6,099.99	6,088.99	6,095.00	6,083.49	18.76	19.25	-88.26	-116.24	814.69	670.34	635.26	35.08	19.112	
6,112.00	6,100.99	6,106.84	6,095.32	18.80	19.29	-88.46	-116.60	814.82	670.38	635.22	35.16	19.067	
6,199.99	6,188.87	6,194.54	6,182.98	19.11	19.59	-90.30	-118.94	815.82	670.85	635.07	35.77	18.753	
6,201.00	6,189.88	6,195.56	6,184.00	19.11	19.59	-90.33	-118.97	815.83	670.85	635.07	35.78	18.749	
6,291.00	6,279.81	6,285.87	6,274.29	19.43	19.89	-91.10	-120.79	816.69	671.39	634.98	36.41	18.442	
6,299.99	6,288.79	6,294.86	6,283.28	19.46	19.92	-91.26	-120.96	816.77	671.44	634.97	36.47	18.412	

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

<b>Company:</b>	Piedra Operating LLC	<b>Local Co-ordinate Reference:</b>	Well University 8-8E A H 5LS
<b>Project:</b>	Andrews County, TX (NAD83-TNC)	<b>TVD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Reference Site:</b>	University 8-8	<b>MD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Site Error:</b>	0.00	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	University 8-8E A H 5LS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	1.00	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH / 72180	<b>Database:</b>	USAEDMDB
<b>Reference Design:</b>	Surveys (Ensign T054)	<b>Offset TVD Reference:</b>	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)		
6,381.00	6,369.74	6,376.86	6,365.26	19.74	20.20	-92.70	-122.65	817.51	671.93	634.89	37.04	18.142	
6,399.99	6,388.71	6,396.21	6,384.60	19.80	20.27	-92.67	-123.09	817.67	672.03	634.86	37.17	18.080	
6,470.00	6,458.68	6,465.44	6,453.81	20.04	20.50	-92.52	-124.68	818.23	672.38	634.72	37.66	17.856	
6,499.99	6,488.64	6,494.77	6,483.13	20.15	20.60	-91.91	-125.31	818.50	672.57	634.70	37.86	17.763	
6,559.00	6,547.62	6,553.59	6,541.94	20.35	20.80	-90.69	-126.53	819.08	672.94	634.67	38.27	17.583	
6,599.99	6,588.57	6,594.60	6,582.94	20.49	20.94	-92.12	-127.40	819.49	673.20	634.64	38.56	17.459	
6,650.00	6,638.55	6,644.98	6,633.31	20.66	21.11	-93.88	-128.43	819.97	673.55	634.64	38.91	17.311	
6,699.99	6,688.51	6,695.36	6,683.67	20.84	21.28	-93.42	-129.38	820.40	673.90	634.63	39.26	17.164	
6,740.00	6,728.49	6,735.73	6,724.04	20.97	21.42	-93.03	-130.12	820.72	674.13	634.59	39.54	17.048	
6,799.99	6,788.44	6,796.14	6,784.43	21.18	21.63	-92.10	-131.24	821.16	674.43	634.46	39.97	16.875	
6,830.00	6,818.43	6,826.26	6,814.55	21.29	21.73	-91.64	-131.82	821.37	674.55	634.37	40.18	16.789	
6,899.99	6,888.38	6,895.78	6,884.05	21.53	21.97	-92.61	-133.17	821.86	674.84	634.17	40.67	16.594	
6,919.00	6,907.38	6,914.46	6,902.74	21.59	22.03	-92.88	-133.49	822.00	674.94	634.14	40.80	16.542	
6,999.99	6,988.32	6,994.18	6,982.44	21.88	22.30	-91.56	-134.71	822.66	675.45	634.08	41.36	16.330	
7,009.00	6,997.33	7,003.07	6,991.33	21.91	22.33	-91.41	-134.84	822.74	675.51	634.08	41.42	16.307	
7,099.00	7,087.28	7,092.85	7,081.10	22.22	22.71	-91.81	-136.05	823.60	676.16	634.10	42.06	16.076	
7,099.99	7,088.26	7,093.85	7,082.09	22.22	22.71	-91.81	-136.06	823.61	676.17	634.10	42.07	16.073	
7,188.00	7,176.24	7,182.39	7,170.63	22.53	23.14	-93.07	-137.16	824.37	676.79	634.09	42.70	15.849	
7,199.99	7,188.22	7,194.45	7,182.68	22.57	23.19	-93.83	-137.30	824.47	676.88	634.09	42.79	15.819	
7,277.00	7,265.20	7,272.54	7,260.76	22.84	23.64	-98.95	-138.21	825.04	677.48	634.09	43.39	15.614	
7,299.99	7,288.17	7,295.92	7,284.15	22.92	23.79	-100.16	-138.49	825.18	677.66	634.09	43.58	15.552	
7,367.00	7,355.16	7,364.10	7,352.32	23.15	24.21	-104.02	-139.32	825.52	678.19	634.07	44.12	15.373	
7,399.99	7,388.14	7,397.62	7,385.83	23.26	24.42	-105.40	-139.74	825.64	678.44	634.06	44.38	15.286	
7,457.00	7,445.13	7,454.00	7,442.21	23.45	24.62	-107.72	-140.46	825.86	678.93	634.14	44.79	15.157	
7,481.00	7,469.12	7,477.76	7,465.97	23.53	24.71	-114.33	-140.76	825.96	679.20	634.24	44.96	15.108	
7,499.99	7,488.10	7,496.60	7,484.81	23.59	24.79	-114.76	-140.99	826.05	679.45	634.36	45.09	15.069	
7,595.00	7,583.07	7,590.89	7,579.09	23.90	25.20	-116.69	-141.87	826.49	680.89	635.13	45.76	14.879	
7,599.98	7,588.06	7,595.84	7,584.04	23.91	25.22	-116.96	-141.91	826.51	680.98	635.18	45.80	14.869	
7,685.00	7,673.03	7,676.81	7,665.01	24.20	25.54	-121.16	-142.31	826.97	682.70	636.29	46.40	14.712	
7,699.98	7,688.00	7,690.16	7,678.36	24.25	25.58	-123.01	-142.34	827.11	683.12	636.62	46.50	14.690	
7,774.00	7,761.97	7,758.35	7,746.54	24.49	25.80	-131.22	-142.28	828.26	685.96	638.96	47.00	14.595	
7,799.98	7,787.94	7,784.11	7,772.29	24.57	25.87	-133.47	-142.15	828.75	687.04	639.86	47.18	14.561	
7,864.00	7,851.95	7,849.52	7,837.69	24.76	26.05	164.55	-141.55	829.93	689.03	641.39	47.64	14.463	
7,899.98	7,887.93	7,888.28	7,876.44	24.86	26.16	158.56	-141.15	830.47	689.84	641.94	47.89	14.404	
7,954.00	7,941.94	7,945.71	7,933.87	25.02	26.32	156.62	-140.61	830.99	691.14	642.88	48.26	14.321	
7,999.98	7,987.91	7,994.04	7,982.19	25.15	26.46	163.21	-140.37	831.28	692.40	643.84	48.56	14.258	
8,044.00	8,031.91	8,039.25	8,027.40	25.28	26.58	167.11	-140.31	831.46	693.75	644.91	48.85	14.203	
8,099.98	8,087.87	8,095.00	8,083.16	25.44	26.74	-174.26	-140.26	831.62	695.49	646.28	49.21	14.133	
8,133.00	8,120.88	8,127.91	8,116.07	25.54	26.84	-161.99	-140.23	831.71	696.45	647.02	49.43	14.090	
8,199.98	8,187.84	8,192.68	8,180.84	25.74	27.02	-149.59	-140.06	832.07	698.44	648.55	49.89	14.001	
8,223.00	8,210.85	8,216.01	8,204.16	25.81	27.09	-145.16	-139.98	832.21	699.09	649.04	50.05	13.968	
8,299.98	8,287.81	8,294.45	8,282.60	26.06	27.31	-131.86	-139.62	832.59	700.83	650.23	50.60	13.850	
8,312.00	8,299.83	8,306.88	8,295.03	26.10	27.35	-128.93	-139.56	832.64	701.03	650.34	50.69	13.831	
8,399.98	8,387.80	8,407.93	8,396.04	26.38	28.45	-134.11	-141.04	832.84	701.81	649.19	52.61	13.339	
8,401.00	8,388.82	8,409.28	8,397.39	26.39	28.48	-134.19	-141.14	832.85	701.80	649.14	52.66	13.327	

<b>Company:</b>	Piedra Operating LLC	<b>Local Co-ordinate Reference:</b>	Well University 8-8E A H 5LS
<b>Project:</b>	Andrews County, TX (NAD83-TNC)	<b>TVD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Reference Site:</b>	University 8-8	<b>MD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Site Error:</b>	0.00	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	University 8-8E A H 5LS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	1.00	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH / 72180	<b>Database:</b>	USAEDMDB
<b>Reference Design:</b>	Surveys (Ensign T054)	<b>Offset TVD Reference:</b>	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)		
8,490.00	8,477.81	8,519.18	8,506.02	26.66	31.99	-161.98	-157.41	833.20	700.12	643.47	56.65	12.358	
8,499.98	8,487.79	8,530.92	8,517.53	26.69	32.42	-163.40	-159.69	833.18	699.85	642.75	57.10	12.257	
8,581.00	8,568.79	8,637.30	8,619.88	26.94	33.40	-172.88	-188.27	832.45	696.35	638.51	57.84	12.040	
8,599.98	8,587.77	8,647.99	8,629.85	27.00	33.57	-162.31	-192.11	832.46	695.43	637.45	57.97	11.996	
8,670.00	8,657.77	8,695.26	8,672.87	27.21	34.14	-131.65	-211.61	833.58	693.57	635.23	58.34	11.888	
8,682.34	8,670.11	8,703.20	8,679.90	27.26	34.24	-123.64	-215.28	833.95	693.53	635.13	58.40	11.875	
8,699.98	8,687.74	8,719.00	8,693.71	27.33	34.44	-115.41	-222.91	834.85	693.64	635.16	58.48	11.861	
8,760.00	8,747.68	8,749.61	8,719.97	27.56	34.82	-101.77	-238.46	837.19	695.44	636.74	58.70	11.848	
8,799.98	8,787.58	8,772.35	8,739.16	27.72	35.10	-101.82	-250.47	839.42	698.03	639.25	58.78	11.875	
8,849.00	8,836.49	8,810.00	8,770.28	27.92	35.57	-101.44	-271.14	844.06	702.98	644.11	58.86	11.942	
8,872.00	8,859.45	8,810.00	8,770.28	28.00	35.57	-101.08	-271.14	844.06	705.73	646.96	58.78	12.007	
8,899.98	8,887.36	8,831.66	8,787.79	28.11	35.70	-88.46	-283.51	847.13	709.49	650.74	58.75	12.077	
8,941.00	8,928.19	8,859.63	8,809.96	28.27	35.87	-77.53	-300.04	851.29	715.14	656.48	58.67	12.190	
8,999.98	8,986.21	8,899.00	8,840.31	29.02	36.11	-65.19	-324.34	857.52	722.27	663.71	58.55	12.336	
9,031.00	9,016.02	8,924.32	8,859.06	29.44	36.26	-62.19	-340.83	861.65	724.95	666.42	58.53	12.386	
9,099.98	9,080.85	8,975.59	8,894.35	30.46	36.58	-57.18	-377.07	869.88	729.36	670.86	58.50	12.468	
9,121.00	9,100.27	8,989.00	8,902.94	30.79	36.66	-55.92	-387.15	872.00	730.48	672.01	58.47	12.494	
9,199.98	9,171.23	9,031.95	8,928.59	31.40	36.94	-54.77	-420.84	879.13	734.71	676.41	58.30	12.601	
9,210.00	9,179.96	9,037.16	8,931.50	31.48	36.97	-54.62	-425.06	880.04	735.27	676.99	58.28	12.616	
9,299.00	9,255.54	9,078.00	8,952.75	32.18	37.24	-58.28	-459.10	887.57	743.65	685.75	57.90	12.843	
9,299.98	9,256.36	9,078.00	8,952.75	32.19	37.24	-58.34	-459.10	887.57	743.78	685.89	57.89	12.848	
9,389.00	9,329.05	9,132.18	8,977.06	32.75	37.48	-61.37	-506.30	898.30	759.79	702.07	57.71	13.165	
9,399.98	9,337.84	9,138.02	8,979.44	32.81	37.51	-60.86	-511.50	899.49	762.28	704.61	57.67	13.217	
9,479.00	9,398.36	9,168.00	8,990.90	33.28	37.65	-57.86	-538.48	905.74	779.95	722.70	57.24	13.625	
9,499.98	9,413.49	9,190.28	8,998.61	33.43	37.73	-56.61	-558.83	910.52	784.23	726.86	57.37	13.670	
9,568.00	9,458.53	9,225.63	9,009.50	33.92	37.87	-54.11	-591.51	918.42	797.11	739.76	57.36	13.898	
9,599.98	9,477.62	9,259.00	9,018.25	34.11	38.00	-52.88	-622.76	926.21	802.76	745.12	57.64	13.928	
9,657.00	9,508.72	9,259.00	9,018.25	34.46	38.00	-52.17	-622.76	926.21	811.39	754.05	57.35	14.149	
9,699.98	9,529.60	9,296.81	9,026.26	34.64	38.13	-51.24	-658.60	935.21	817.21	759.59	57.62	14.183	
9,748.00	9,550.27	9,335.00	9,032.21	34.85	38.27	-50.35	-695.20	944.31	823.69	765.80	57.89	14.228	
9,799.98	9,568.71	9,352.49	9,034.15	35.03	38.33	-49.90	-712.09	948.42	829.62	771.66	57.96	14.314	
9,837.00	9,578.89	9,374.56	9,035.78	35.17	38.40	-49.47	-733.52	953.43	833.23	775.08	58.15	14.329	
9,850.41	9,581.89	9,388.41	9,036.57	35.21	38.45	-49.23	-747.00	956.51	834.26	775.93	58.33	14.302	
9,899.98	9,588.83	9,440.06	9,039.40	35.33	38.63	-48.84	-797.32	967.77	835.56	776.43	59.12	14.132	
9,928.00	9,589.86	9,469.18	9,040.92	35.41	38.74	-48.96	-825.74	973.97	834.50	774.85	59.65	13.990	
9,936.51	9,589.82	9,477.85	9,041.38	35.43	38.77	-48.99	-834.19	975.81	833.97	774.23	59.74	13.960	
9,952.00	9,589.61	9,493.60	9,042.24	35.46	38.84	-49.06	-849.56	979.18	832.91	773.01	59.90	13.905	
9,959.55	9,589.47	9,501.28	9,042.67	35.48	38.87	-49.08	-857.05	980.82	832.37	772.39	59.97	13.879	
9,999.98	9,588.60	9,542.36	9,045.11	35.57	39.03	-49.21	-897.08	989.72	829.34	768.97	60.37	13.738	
10,015.25	9,588.23	9,556.95	9,046.02	35.61	39.09	-49.27	-911.28	992.92	828.15	767.64	60.51	13.686	
10,042.00	9,587.53	9,580.51	9,047.45	35.67	39.19	-49.35	-934.22	998.11	826.08	765.33	60.75	13.597	
10,055.38	9,587.17	9,592.29	9,048.14	35.71	39.24	-49.40	-945.69	1,000.73	825.13	764.25	60.88	13.553	
10,099.98	9,586.09	9,631.63	9,050.27	35.85	39.41	-49.58	-983.97	1,009.54	822.94	761.61	61.33	13.418	
10,111.82	9,585.82	9,640.00	9,050.70	35.89	39.45	-49.61	-992.11	1,011.44	822.62	761.19	61.44	13.390	
10,132.00	9,585.40	9,657.92	9,051.54	35.96	39.53	-49.70	-1,009.54	1,015.50	822.35	760.69	61.65	13.338	
10,141.37	9,585.21	9,665.38	9,051.85	35.99	39.57	-49.74	-1,016.79	1,017.20	822.32	760.57	61.75	13.316	

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

<b>Company:</b>	Piedra Operating LLC	<b>Local Co-ordinate Reference:</b>	Well University 8-8E A H 5LS
<b>Project:</b>	Andrews County, TX (NAD83-TNC)	<b>TVD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Reference Site:</b>	University 8-8	<b>MD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Site Error:</b>	0.00	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	University 8-8E A H 5LS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	1.00	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH / 72180	<b>Database:</b>	USAEDMDB
<b>Reference Design:</b>	Surveys (Ensign T054)	<b>Offset TVD Reference:</b>	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)		
10,147.44	9,585.08	9,670.21	9,052.03	36.02	39.59	-49.76	-1,021.49	1,018.30	822.32	760.50	61.82	13.303	
10,199.98	9,583.86	9,712.03	9,053.27	36.22	39.78	-49.97	-1,062.18	1,027.91	822.86	760.48	62.37	13.193	
10,205.10	9,583.73	9,716.11	9,053.36	36.24	39.80	-49.99	-1,066.15	1,028.85	822.96	760.54	62.43	13.183	
10,223.00	9,583.26	9,729.00	9,053.57	36.31	39.86	-50.05	-1,078.69	1,031.83	823.41	760.80	62.61	13.152	
10,239.67	9,582.80	9,743.66	9,053.76	36.38	39.94	-50.12	-1,092.94	1,035.25	823.91	761.10	62.80	13.119	
10,299.98	9,581.11	9,791.75	9,054.07	36.63	40.18	-50.38	-1,139.61	1,046.81	826.28	762.81	63.47	13.018	
10,302.55	9,581.04	9,793.79	9,054.08	36.64	40.19	-50.39	-1,141.60	1,047.32	826.40	762.91	63.50	13.014	
10,312.00	9,580.77	9,801.32	9,054.08	36.68	40.23	-50.43	-1,148.89	1,049.18	826.86	763.26	63.61	13.000	
10,330.71	9,580.25	9,818.00	9,054.05	36.77	40.32	-50.53	-1,165.04	1,053.34	827.84	764.00	63.83	12.969	
10,399.98	9,578.76	9,883.75	9,054.08	37.11	40.68	-50.92	-1,228.61	1,070.13	831.61	766.88	64.73	12.848	
10,400.21	9,578.75	9,883.97	9,054.08	37.11	40.68	-50.92	-1,228.83	1,070.19	831.62	766.89	64.73	12.848	
10,401.00	9,578.74	9,884.75	9,054.09	37.12	40.69	-50.92	-1,229.58	1,070.39	831.67	766.93	64.74	12.846	
10,419.61	9,578.44	9,902.98	9,054.20	37.22	40.79	-51.01	-1,247.18	1,075.15	832.70	767.71	64.99	12.813	
10,490.00	9,577.42	9,974.85	9,054.93	37.61	41.21	-51.39	-1,316.51	1,094.05	836.86	770.86	66.00	12.680	
10,492.07	9,577.39	9,976.97	9,054.96	37.63	41.22	-51.41	-1,318.56	1,094.61	836.99	770.96	66.03	12.676	
10,499.98	9,577.29	9,985.07	9,055.07	37.68	41.27	-51.46	-1,326.37	1,096.75	837.45	771.31	66.14	12.661	
10,517.70	9,577.06	10,003.41	9,055.33	37.79	41.38	-51.58	-1,344.06	1,101.58	838.42	772.01	66.41	12.625	
10,580.00	9,576.23	10,069.34	9,055.60	38.20	41.80	-51.87	-1,407.85	1,118.24	840.82	773.50	67.32	12.490	
10,584.46	9,576.17	10,074.07	9,055.57	38.23	41.83	-51.88	-1,412.43	1,119.39	840.93	773.55	67.38	12.480	
10,599.98	9,575.95	10,090.57	9,055.44	38.34	41.94	-51.91	-1,428.46	1,123.34	841.32	773.72	67.60	12.445	
10,615.74	9,575.71	10,107.41	9,055.31	38.45	42.05	-51.94	-1,444.81	1,127.36	841.70	773.86	67.83	12.408	
10,670.00	9,574.71	10,165.38	9,055.15	38.84	42.44	-52.07	-1,501.10	1,141.18	842.84	774.20	68.64	12.280	
10,676.78	9,574.57	10,172.61	9,055.16	38.89	42.49	-52.09	-1,508.13	1,142.91	842.96	774.22	68.74	12.263	
10,699.98	9,574.09	10,196.31	9,055.18	39.07	42.65	-52.16	-1,531.15	1,148.54	843.39	774.30	69.09	12.208	
10,713.32	9,573.82	10,209.87	9,055.18	39.16	42.74	-52.19	-1,544.32	1,151.74	843.64	774.35	69.28	12.176	
10,759.00	9,572.88	10,256.31	9,055.04	39.51	43.06	-52.31	-1,589.48	1,162.57	844.48	774.52	69.96	12.071	
10,768.20	9,572.68	10,265.54	9,054.99	39.58	43.13	-52.32	-1,598.46	1,164.70	844.66	774.56	70.10	12.049	
10,799.98	9,571.96	10,296.35	9,054.71	39.83	43.35	-52.38	-1,628.46	1,171.74	845.30	774.73	70.57	11.978	
10,810.67	9,571.69	10,306.72	9,054.57	39.91	43.42	-52.40	-1,638.56	1,174.09	845.54	774.81	70.73	11.955	
10,848.00	9,570.69	10,342.92	9,053.91	40.21	43.69	-52.46	-1,673.83	1,182.20	846.43	775.15	71.28	11.875	
10,859.88	9,570.38	10,354.57	9,053.65	40.31	43.77	-52.49	-1,685.19	1,184.78	846.72	775.26	71.46	11.849	
10,899.98	9,569.58	10,395.38	9,052.69	40.65	44.08	-52.56	-1,724.98	1,193.77	847.45	775.39	72.06	11.760	
10,908.81	9,569.47	10,404.37	9,052.48	40.73	44.14	-52.57	-1,733.75	1,195.75	847.56	775.37	72.19	11.741	
10,938.00	9,569.24	10,434.08	9,051.79	40.98	44.37	-52.55	-1,762.72	1,202.27	847.78	775.17	72.61	11.676	
10,999.98	9,569.14	10,492.84	9,050.37	41.56	44.83	-52.43	-1,820.02	1,215.21	847.63	774.17	73.46	11.539	
11,018.07	9,569.17	10,509.80	9,049.93	41.73	44.96	-52.38	-1,836.56	1,218.99	847.45	773.75	73.70	11.499	
11,026.00	9,569.19	10,517.24	9,049.73	41.80	45.02	-52.36	-1,843.80	1,220.65	847.35	773.55	73.80	11.482	
11,031.05	9,569.20	10,521.97	9,049.60	41.85	45.05	-52.34	-1,848.42	1,221.71	847.29	773.42	73.87	11.471	
11,099.98	9,569.28	10,588.83	9,047.60	42.48	45.59	-52.13	-1,913.55	1,236.62	846.56	771.77	74.79	11.319	
11,118.00	9,569.27	10,606.40	9,047.00	42.65	45.74	-52.07	-1,930.68	1,240.51	846.42	771.38	75.04	11.280	
11,121.57	9,569.26	10,609.87	9,046.87	42.68	45.77	-52.06	-1,934.07	1,241.28	846.39	771.30	75.08	11.272	
11,123.26	9,569.26	10,611.53	9,046.81	42.70	45.78	-52.05	-1,935.68	1,241.64	846.37	771.27	75.11	11.269	
11,199.98	9,568.81	10,694.89	9,043.98	43.41	46.48	-51.80	-2,016.99	1,259.80	845.36	769.12	76.24	11.089	
11,207.00	9,568.73	10,702.62	9,043.75	43.48	46.54	-51.78	-2,024.54	1,261.46	845.21	768.87	76.34	11.071	
11,210.58	9,568.69	10,706.56	9,043.64	43.51	46.57	-51.77	-2,028.39	1,262.31	845.14	768.74	76.40	11.063	

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

<b>Company:</b>	Piedra Operating LLC	<b>Local Co-ordinate Reference:</b>	Well University 8-8E A H 5LS
<b>Project:</b>	Andrews County, TX (NAD83-TNC)	<b>TVD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Reference Site:</b>	University 8-8	<b>MD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Site Error:</b>	0.00	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	University 8-8E A H 5LS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	1.00	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH / 72180	<b>Database:</b>	USAEDMDB
<b>Reference Design:</b>	Surveys (Ensign T054)	<b>Offset TVD Reference:</b>	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)		
11,215.93	9,568.63	10,712.46	9,043.47	43.56	46.62	-51.75	-2,034.14	1,263.57	845.02	768.54	76.48	11.049	
11,297.00	9,567.33	10,793.13	9,041.16	44.33	47.32	-51.57	-2,112.90	1,280.87	843.13	765.47	77.66	10.856	
11,299.98	9,567.27	10,796.11	9,041.08	44.36	47.34	-51.57	-2,115.81	1,281.51	843.06	765.35	77.71	10.849	
11,304.38	9,567.18	10,800.59	9,040.96	44.41	47.38	-51.56	-2,120.18	1,282.47	842.95	765.17	77.78	10.838	
11,314.78	9,566.96	10,811.32	9,040.65	44.51	47.48	-51.54	-2,130.67	1,284.77	842.67	764.74	77.94	10.812	
11,387.00	9,565.32	10,885.80	9,038.40	45.21	48.13	-51.36	-2,203.43	1,300.47	840.23	761.20	79.03	10.632	
11,399.98	9,565.02	10,900.22	9,037.96	45.34	48.26	-51.31	-2,217.53	1,303.47	839.71	760.48	79.23	10.598	
11,402.64	9,564.97	10,903.20	9,037.88	45.37	48.29	-51.30	-2,220.44	1,304.09	839.61	760.33	79.28	10.591	
11,413.42	9,564.76	10,915.27	9,037.59	45.48	48.40	-51.27	-2,232.24	1,306.63	839.20	759.75	79.45	10.563	
11,478.00	9,564.25	10,987.09	9,036.82	46.12	49.05	-51.08	-2,302.40	1,322.00	836.93	756.43	80.50	10.397	
11,493.93	9,564.25	11,004.15	9,036.78	46.28	49.21	-51.05	-2,319.06	1,325.66	836.39	755.63	80.76	10.357	
11,499.98	9,564.24	11,010.62	9,036.76	46.34	49.27	-51.04	-2,325.38	1,327.04	836.18	755.32	80.86	10.342	
11,506.64	9,564.23	11,017.76	9,036.74	46.41	49.33	-51.03	-2,332.35	1,328.56	835.93	754.97	80.96	10.325	
11,567.00	9,563.79	11,081.72	9,036.55	47.02	49.93	-50.91	-2,394.90	1,341.92	833.29	751.35	81.94	10.170	
11,580.89	9,563.64	11,096.06	9,036.52	47.17	50.06	-50.88	-2,408.94	1,344.88	832.63	750.48	82.16	10.134	
11,599.98	9,563.52	11,115.77	9,036.50	47.36	50.25	-50.84	-2,428.22	1,348.95	831.84	749.38	82.47	10.087	
11,610.06	9,563.48	11,126.18	9,036.49	47.47	50.35	-50.82	-2,438.40	1,351.10	831.47	748.84	82.63	10.062	
11,656.00	9,563.61	11,173.33	9,036.52	47.94	50.79	-50.75	-2,484.55	1,360.80	830.22	746.85	83.38	9.958	
11,672.74	9,563.73	11,190.34	9,036.50	48.12	50.96	-50.72	-2,501.20	1,364.26	829.91	746.27	83.65	9.921	
11,699.98	9,563.94	11,218.01	9,036.42	48.40	51.22	-50.67	-2,528.30	1,369.84	829.46	745.37	84.09	9.864	
11,708.56	9,564.00	11,226.73	9,036.38	48.49	51.30	-50.65	-2,536.85	1,371.58	829.33	745.10	84.23	9.846	
11,746.00	9,564.28	11,265.10	9,036.15	48.89	51.68	-50.58	-2,574.46	1,379.18	828.83	743.99	84.84	9.769	
11,754.92	9,564.35	11,274.31	9,036.10	48.98	51.76	-50.56	-2,583.49	1,380.99	828.71	743.73	84.99	9.751	
11,799.98	9,564.93	11,320.83	9,035.87	49.46	52.22	-50.42	-2,629.10	1,390.12	827.94	742.23	85.71	9.660	
11,816.04	9,565.22	11,337.27	9,035.80	49.63	52.38	-50.35	-2,645.22	1,393.33	827.59	741.63	85.96	9.627	
11,837.00	9,565.66	11,358.06	9,035.70	49.85	52.58	-50.26	-2,665.61	1,397.38	827.08	740.80	86.28	9.586	
11,848.09	9,565.92	11,369.05	9,035.65	49.97	52.69	-50.22	-2,676.39	1,399.53	826.80	740.35	86.45	9.564	
11,899.98	9,567.14	11,420.48	9,035.38	50.53	53.20	-50.00	-2,726.84	1,409.55	825.43	738.21	87.22	9.464	
11,912.55	9,567.44	11,432.95	9,035.32	50.67	53.33	-49.94	-2,739.07	1,411.98	825.09	737.68	87.41	9.439	
11,928.00	9,567.81	11,448.30	9,035.29	50.84	53.48	-49.88	-2,754.11	1,415.02	824.66	737.02	87.64	9.409	
11,936.41	9,568.01	11,456.66	9,035.30	50.93	53.57	-49.85	-2,762.30	1,416.70	824.43	736.66	87.77	9.393	
11,999.98	9,569.45	11,520.10	9,035.92	51.63	54.21	-49.77	-2,824.35	1,429.89	823.37	734.55	88.82	9.271	
12,018.00	9,569.83	11,538.67	9,036.24	51.83	54.40	-49.76	-2,842.49	1,433.86	823.26	734.12	89.14	9.236	
12,021.03	9,569.89	11,541.79	9,036.29	51.86	54.43	-49.76	-2,845.54	1,434.53	823.25	734.06	89.19	9.230	
12,021.43	9,569.90	11,542.21	9,036.30	51.87	54.44	-49.76	-2,845.94	1,434.62	823.25	734.05	89.20	9.230	
12,089.08	9,570.79	11,611.05	9,037.75	52.62	55.15	-49.82	-2,913.17	1,449.39	823.09	732.63	90.46	9.099	
12,099.98	9,570.85	11,621.21	9,038.00	52.74	55.25	-49.84	-2,923.08	1,451.61	823.10	732.44	90.66	9.079	
12,101.53	9,570.85	11,622.66	9,038.04	52.75	55.27	-49.84	-2,924.49	1,451.93	823.10	732.41	90.69	9.076	
12,109.00	9,570.87	11,629.62	9,038.22	52.84	55.34	-49.86	-2,931.28	1,453.46	823.12	732.29	90.83	9.062	
12,129.36	9,570.93	11,648.60	9,038.76	53.06	55.54	-49.91	-2,949.77	1,457.70	823.21	731.99	91.22	9.024	
12,198.00	9,571.32	11,710.95	9,040.83	53.81	56.20	-50.10	-3,010.38	1,472.18	823.93	731.39	92.55	8.903	
12,198.00	9,571.32	11,710.96	9,040.83	53.81	56.20	-50.10	-3,010.39	1,472.18	823.93	731.39	92.55	8.903	
12,199.98	9,571.33	11,712.65	9,040.88	53.84	56.22	-50.11	-3,012.03	1,472.58	823.97	731.38	92.58	8.900	
12,219.31	9,571.48	11,729.29	9,041.35	54.05	56.39	-50.16	-3,028.19	1,476.52	824.34	731.39	92.95	8.869	
12,288.00	9,571.92	11,789.23	9,042.46	54.81	57.03	-50.32	-3,086.39	1,490.79	826.34	732.09	94.24	8.768	
12,290.61	9,571.94	11,791.82	9,042.50	54.84	57.06	-50.32	-3,088.91	1,491.41	826.43	732.13	94.30	8.764	

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



<b>Company:</b>	Piedra Operating LLC	<b>Local Co-ordinate Reference:</b>	Well University 8-8E A H 5LS
<b>Project:</b>	Andrews County, TX (NAD83-TNC)	<b>TVD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Reference Site:</b>	University 8-8	<b>MD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Site Error:</b>	0.00	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	University 8-8E A H 5LS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	1.00	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH / 72180	<b>Database:</b>	USAEDMDB
<b>Reference Design:</b>	Surveys (Ensign T054)	<b>Offset TVD Reference:</b>	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)		
12,299.98	9,571.99	11,801.09	9,042.62	54.94	57.16	-50.35	-3,097.91	1,493.63	826.77	732.28	94.49	8.750	
12,316.68	9,572.08	11,817.64	9,042.84	55.12	57.33	-50.39	-3,113.98	1,497.61	827.39	732.55	94.83	8.725	
12,377.00	9,572.37	11,877.36	9,043.75	55.79	57.98	-50.58	-3,171.91	1,512.06	829.75	733.66	96.09	8.635	
12,381.96	9,572.39	11,882.24	9,043.84	55.85	58.03	-50.60	-3,176.64	1,513.25	829.96	733.76	96.19	8.628	
12,399.98	9,572.49	11,899.94	9,044.16	56.05	58.22	-50.66	-3,193.80	1,517.59	830.71	734.14	96.57	8.602	
12,414.37	9,572.58	11,914.08	9,044.44	56.21	58.37	-50.71	-3,207.50	1,521.08	831.33	734.45	96.88	8.581	
12,467.00	9,573.03	11,965.66	9,045.60	56.80	58.93	-50.91	-3,257.43	1,533.95	833.69	735.69	98.00	8.507	
12,473.98	9,573.11	11,972.25	9,045.75	56.88	59.01	-50.94	-3,263.81	1,535.61	834.02	735.87	98.15	8.497	
12,499.98	9,573.40	11,996.79	9,046.25	57.17	59.27	-51.03	-3,287.56	1,541.75	835.32	736.62	98.70	8.463	
12,512.05	9,573.54	12,008.19	9,046.44	57.31	59.40	-51.06	-3,298.60	1,544.59	835.95	737.00	98.95	8.448	
12,558.00	9,574.15	12,051.58	9,046.92	57.83	59.87	-51.19	-3,340.65	1,555.31	838.58	738.69	99.89	8.395	
12,566.90	9,574.27	12,060.89	9,046.98	57.93	59.98	-51.22	-3,349.67	1,557.58	839.11	739.03	100.09	8.384	
12,599.98	9,574.63	12,097.79	9,047.13	58.30	60.38	-51.30	-3,385.49	1,566.43	840.84	740.01	100.83	8.339	
12,610.30	9,574.71	12,109.31	9,047.16	58.42	60.51	-51.32	-3,396.70	1,569.14	841.30	740.24	101.06	8.325	
12,647.00	9,574.88	12,149.76	9,047.17	58.84	60.96	-51.38	-3,436.07	1,578.40	842.61	740.76	101.85	8.273	
12,658.76	9,574.90	12,161.75	9,047.14	58.97	61.09	-51.39	-3,447.75	1,581.09	842.95	740.86	102.09	8.257	
12,699.97	9,574.76	12,203.76	9,046.86	59.44	61.56	-51.43	-3,488.73	1,590.34	844.05	741.12	102.93	8.200	
12,708.27	9,574.70	12,212.21	9,046.78	59.54	61.65	-51.44	-3,496.98	1,592.17	844.25	741.15	103.10	8.188	
12,737.00	9,574.41	12,242.52	9,046.39	59.87	61.99	-51.46	-3,526.59	1,598.66	844.90	741.21	103.70	8.148	
12,751.48	9,574.24	12,259.57	9,046.17	60.04	62.18	-51.48	-3,543.25	1,602.24	845.18	741.16	104.02	8.125	
12,799.97	9,573.76	12,316.70	9,045.60	60.60	62.81	-51.52	-3,599.17	1,613.90	845.82	740.75	105.07	8.050	
12,806.20	9,573.71	12,324.02	9,045.54	60.67	62.89	-51.53	-3,606.36	1,615.36	845.87	740.67	105.20	8.040	
12,827.00	9,573.57	12,343.54	9,045.37	60.91	63.11	-51.53	-3,625.48	1,619.22	846.05	740.44	105.60	8.011	
12,843.57	9,573.46	12,358.92	9,045.19	61.10	63.28	-51.53	-3,640.56	1,622.26	846.22	740.30	105.92	7.989	
12,899.97	9,573.03	12,411.24	9,044.23	61.75	63.87	-51.52	-3,691.85	1,632.54	846.96	739.97	106.99	7.916	
12,904.06	9,573.00	12,415.04	9,044.14	61.80	63.91	-51.52	-3,695.58	1,633.28	847.03	739.96	107.06	7.911	
12,918.00	9,572.87	12,429.18	9,043.79	61.96	64.07	-51.51	-3,709.44	1,636.03	847.24	739.91	107.33	7.893	
12,937.28	9,572.71	12,448.74	9,043.23	62.19	64.29	-51.50	-3,728.63	1,639.77	847.49	739.79	107.70	7.869	
12,999.97	9,572.48	12,511.27	9,040.92	62.93	64.99	-51.34	-3,790.05	1,651.26	847.65	738.85	108.80	7.791	
13,007.00	9,572.48	12,517.51	9,040.66	63.02	65.07	-51.31	-3,796.19	1,652.39	847.62	738.70	108.92	7.782	
13,010.53	9,572.48	12,520.65	9,040.53	63.06	65.10	-51.30	-3,799.27	1,652.96	847.60	738.63	108.97	7.778	
13,039.07	9,572.50	12,546.00	9,039.45	63.40	65.39	-51.20	-3,824.16	1,657.63	847.53	738.11	109.42	7.745	
13,097.00	9,572.61	12,598.42	9,037.17	64.09	65.98	-51.01	-3,875.57	1,667.62	847.80	737.45	110.35	7.683	
13,097.01	9,572.61	12,598.42	9,037.17	64.09	65.98	-51.01	-3,875.58	1,667.63	847.80	737.45	110.35	7.683	
13,099.97	9,572.62	12,601.77	9,037.03	64.12	66.02	-51.00	-3,878.85	1,668.28	847.82	737.42	110.41	7.679	
13,186.00	9,573.32	12,698.29	9,034.77	65.15	67.13	-50.68	-3,973.37	1,687.70	847.34	735.35	112.00	7.566	
13,199.97	9,573.51	12,713.51	9,034.68	65.32	67.30	-50.63	-3,988.26	1,690.85	847.07	734.81	112.26	7.546	
13,202.74	9,573.55	12,716.52	9,034.67	65.35	67.34	-50.62	-3,991.21	1,691.48	847.01	734.70	112.31	7.542	
13,211.42	9,573.69	12,725.98	9,034.66	65.46	67.45	-50.59	-4,000.45	1,693.45	846.81	734.34	112.47	7.529	
13,275.00	9,574.94	12,788.04	9,035.02	66.23	68.16	-50.36	-4,061.11	1,706.54	844.85	731.28	113.57	7.439	
13,290.24	9,575.24	12,799.26	9,035.07	66.41	68.29	-50.34	-4,072.07	1,708.98	844.37	730.58	113.79	7.420	
13,299.97	9,575.39	12,806.43	9,035.08	66.53	68.38	-50.32	-4,079.06	1,710.56	844.06	730.13	113.93	7.409	
13,307.48	9,575.47	12,811.96	9,035.07	66.62	68.44	-50.31	-4,084.45	1,711.79	843.83	729.79	114.04	7.399	
13,366.00	9,575.28	12,863.00	9,034.55	67.33	69.04	-50.23	-4,134.13	1,723.49	842.09	727.08	115.01	7.322	
13,385.76	9,574.92	12,871.50	9,034.39	67.57	69.14	-50.22	-4,142.39	1,725.50	841.47	726.23	115.24	7.302	

<b>Company:</b>	Piedra Operating LLC	<b>Local Co-ordinate Reference:</b>	Well University 8-8E A H 5LS
<b>Project:</b>	Andrews County, TX (NAD83-TNC)	<b>TVD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Reference Site:</b>	University 8-8	<b>MD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Site Error:</b>	0.00	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	University 8-8E A H 5LS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	1.00	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH / 72180	<b>Database:</b>	USAEDMDB
<b>Reference Design:</b>	Surveys (Ensign T054)	<b>Offset TVD Reference:</b>	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)		
13,399.97	9,574.60	12,884.86	9,034.15	67.74	69.30	-50.21	-4,155.36	1,728.67	841.05	725.55	115.50	7.282	
13,406.72	9,574.43	12,891.20	9,034.03	67.82	69.37	-50.21	-4,161.52	1,730.18	840.85	725.22	115.63	7.272	
13,455.00	9,572.87	12,936.60	9,033.17	68.41	69.90	-50.19	-4,205.57	1,741.10	839.31	722.78	116.54	7.202	
13,471.53	9,572.22	12,953.00	9,032.86	68.61	70.10	-50.19	-4,221.48	1,745.10	838.76	721.89	116.87	7.177	
13,499.97	9,571.07	12,983.11	9,032.34	68.96	70.45	-50.20	-4,250.68	1,752.44	837.73	720.26	117.47	7.132	
13,509.11	9,570.70	12,993.10	9,032.21	69.07	70.57	-50.20	-4,260.37	1,754.88	837.36	719.70	117.67	7.116	
13,544.00	9,569.21	13,031.25	9,031.81	69.49	71.02	-50.22	-4,297.37	1,764.17	835.83	717.40	118.43	7.058	
13,557.50	9,568.61	13,046.67	9,031.71	69.66	71.20	-50.23	-4,312.32	1,767.92	835.17	716.43	118.74	7.034	
13,599.97	9,566.63	13,103.39	9,031.17	70.18	71.88	-50.24	-4,367.54	1,780.84	832.63	712.86	119.77	6.952	
13,617.53	9,565.77	13,126.78	9,030.83	70.39	72.16	-50.22	-4,390.42	1,785.72	831.35	711.18	120.17	6.918	
13,635.00	9,564.88	13,145.44	9,030.53	70.61	72.38	-50.19	-4,408.69	1,789.47	829.97	709.45	120.52	6.887	
13,646.17	9,564.33	13,156.30	9,030.39	70.74	72.51	-50.17	-4,419.33	1,791.68	829.12	708.39	120.73	6.868	
13,699.97	9,562.36	13,208.68	9,029.97	71.41	73.14	-50.07	-4,470.55	1,802.62	826.01	704.23	121.78	6.783	
13,713.57	9,562.04	13,222.00	9,029.93	71.58	73.30	-50.06	-4,483.56	1,805.47	825.49	703.44	122.05	6.764	
13,724.00	9,561.85	13,222.00	9,029.93	71.70	73.30	-50.06	-4,483.56	1,805.47	825.22	703.08	122.14	6.756	
13,731.18	9,561.73	13,235.60	9,029.92	71.79	73.47	-50.05	-4,496.82	1,808.45	824.99	702.63	122.36	6.742	
13,799.97	9,560.95	13,288.93	9,029.93	72.64	74.11	-50.06	-4,548.66	1,820.99	824.07	700.48	123.59	6.668	
13,807.91	9,560.90	13,295.08	9,029.93	72.74	74.18	-50.07	-4,554.62	1,822.52	824.06	700.33	123.74	6.660	
13,807.92	9,560.90	13,295.09	9,029.93	72.74	74.18	-50.07	-4,554.63	1,822.52	824.06	700.33	123.74	6.660	
13,813.00	9,560.87	13,299.03	9,029.94	72.80	74.23	-50.07	-4,558.44	1,823.51	824.07	700.24	123.83	6.655	
13,832.95	9,560.78	13,315.58	9,029.97	73.05	74.43	-50.08	-4,574.44	1,827.75	824.17	699.96	124.20	6.636	
13,899.97	9,560.51	13,383.61	9,030.20	73.87	75.26	-50.16	-4,640.16	1,845.33	824.76	699.08	125.68	6.562	
13,900.01	9,560.51	13,383.65	9,030.20	73.87	75.26	-50.16	-4,640.20	1,845.34	824.76	699.08	125.68	6.562	
13,902.00	9,560.50	13,385.67	9,030.21	73.89	75.29	-50.16	-4,642.15	1,845.86	824.78	699.05	125.73	6.560	
13,922.46	9,560.46	13,406.38	9,030.32	74.14	75.54	-50.19	-4,662.15	1,851.22	825.02	698.83	126.18	6.538	
13,992.00	9,560.63	13,476.08	9,030.52	75.00	76.38	-50.26	-4,729.51	1,869.11	826.11	698.42	127.69	6.470	
13,992.67	9,560.63	13,476.75	9,030.52	75.01	76.38	-50.26	-4,730.16	1,869.28	826.13	698.42	127.70	6.469	
13,999.97	9,560.66	13,484.07	9,030.52	75.10	76.47	-50.26	-4,737.24	1,871.14	826.27	698.41	127.86	6.462	
14,018.18	9,560.66	13,502.98	9,030.50	75.32	76.70	-50.27	-4,755.54	1,875.93	826.62	698.35	128.27	6.444	
14,081.00	9,559.69	13,570.42	9,030.33	76.10	77.51	-50.37	-4,820.88	1,892.62	827.65	697.88	129.78	6.378	
14,085.31	9,559.57	13,575.05	9,030.31	76.16	77.57	-50.38	-4,825.37	1,893.74	827.71	697.83	129.88	6.373	
14,099.97	9,559.16	13,590.81	9,030.24	76.34	77.76	-50.42	-4,840.66	1,897.54	827.94	697.69	130.25	6.357	
14,115.99	9,558.69	13,608.04	9,030.20	76.54	77.97	-50.46	-4,857.39	1,901.70	828.20	697.54	130.65	6.339	
14,171.00	9,556.95	13,667.19	9,030.41	77.22	78.69	-50.67	-4,914.79	1,915.99	829.24	697.14	132.10	6.277	
14,177.48	9,556.74	13,674.15	9,030.47	77.30	78.77	-50.70	-4,921.54	1,917.67	829.38	697.10	132.27	6.270	
14,199.97	9,555.94	13,693.16	9,030.65	77.58	79.00	-50.79	-4,939.96	1,922.33	829.91	697.09	132.82	6.248	
14,213.10	9,555.46	13,704.48	9,030.78	77.74	79.14	-50.85	-4,950.93	1,925.17	830.27	697.12	133.15	6.236	
14,260.00	9,553.59	13,744.86	9,031.32	78.32	79.64	-51.09	-4,989.94	1,935.58	831.84	697.49	134.36	6.191	
14,268.76	9,553.23	13,752.39	9,031.44	78.42	79.73	-51.16	-4,997.20	1,937.57	832.18	697.60	134.59	6.183	
14,299.97	9,552.03	13,780.91	9,031.94	78.81	80.08	-51.40	-5,024.65	1,945.27	833.39	697.95	135.43	6.153	
14,310.80	9,551.65	13,791.12	9,032.16	78.94	80.21	-51.49	-5,034.47	1,948.07	833.79	698.06	135.73	6.143	
14,349.00	9,550.45	13,827.16	9,033.07	79.42	80.65	-51.78	-5,069.06	1,958.13	835.13	698.36	136.78	6.106	
14,360.37	9,550.13	13,837.87	9,033.38	79.56	80.78	-51.85	-5,079.33	1,961.17	835.53	698.43	137.09	6.095	
14,399.97	9,549.10	13,890.12	9,034.94	80.05	81.44	-52.20	-5,129.48	1,975.72	836.77	698.33	138.44	6.044	
14,409.10	9,548.89	13,904.07	9,035.28	80.17	81.61	-52.27	-5,142.96	1,979.33	836.94	698.18	138.77	6.031	
14,439.00	9,548.23	13,949.90	9,036.18	80.54	82.19	-52.46	-5,187.44	1,990.32	837.16	697.42	139.74	5.991	

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

<b>Company:</b>	Piedra Operating LLC	<b>Local Co-ordinate Reference:</b>	Well University 8-8E A H 5LS
<b>Project:</b>	Andrews County, TX (NAD83-TNC)	<b>TVD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Reference Site:</b>	University 8-8	<b>MD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Site Error:</b>	0.00	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	University 8-8E A H 5LS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	1.00	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH / 72180	<b>Database:</b>	USAEDMDB
<b>Reference Design:</b>	Surveys (Ensign T054)	<b>Offset TVD Reference:</b>	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)		
14,453.01	9,547.93	13,960.60	9,036.38	80.71	82.32	-52.49	-5,197.84	1,992.83	837.21	697.15	140.06	5.978	
14,499.97	9,546.77	14,007.02	9,037.33	81.29	82.90	-52.67	-5,242.96	2,003.69	837.48	696.20	141.28	5.928	
14,506.63	9,546.58	14,013.60	9,037.48	81.38	82.99	-52.70	-5,249.35	2,005.24	837.53	696.08	141.45	5.921	
14,529.00	9,545.92	14,036.38	9,038.02	81.65	83.27	-52.81	-5,271.48	2,010.64	837.74	695.68	142.06	5.897	
14,599.97	9,544.25	14,115.02	9,040.81	82.55	84.24	-53.22	-5,347.79	2,029.43	837.33	693.27	144.06	5.812	
14,614.05	9,544.03	14,128.70	9,041.41	82.73	84.41	-53.27	-5,361.06	2,032.70	837.00	692.58	144.42	5.796	
14,619.00	9,543.97	14,133.35	9,041.61	82.79	84.46	-53.29	-5,365.57	2,033.81	836.87	692.33	144.54	5.790	
14,624.72	9,543.89	14,138.73	9,041.82	82.87	84.53	-53.30	-5,370.79	2,035.09	836.71	692.04	144.68	5.783	
14,699.97	9,542.79	14,209.58	9,043.61	83.83	85.40	-53.46	-5,439.71	2,051.43	834.89	688.44	146.44	5.701	
14,710.00	9,542.63	14,219.87	9,043.73	83.95	85.53	-53.47	-5,449.74	2,053.73	834.66	687.98	146.68	5.690	
14,713.00	9,542.58	14,222.95	9,043.77	83.99	85.57	-53.48	-5,452.73	2,054.42	834.59	687.84	146.75	5.687	
14,724.16	9,542.40	14,234.41	9,043.89	84.13	85.71	-53.49	-5,463.91	2,056.97	834.33	687.32	147.01	5.675	
14,800.00	9,541.46	14,313.30	9,044.34	85.08	86.68	-53.49	-5,540.91	2,074.09	832.28	683.58	148.70	5.597	
14,818.22	9,541.29	14,333.52	9,044.46	85.31	86.93	-53.49	-5,560.67	2,078.40	831.71	682.60	149.11	5.578	
14,889.00	9,540.74	14,406.40	9,045.32	86.20	87.83	-53.49	-5,631.90	2,093.80	829.36	678.69	150.67	5.504	
14,899.97	9,540.68	14,415.71	9,045.39	86.34	87.94	-53.48	-5,641.01	2,095.76	829.04	678.15	150.89	5.494	
14,903.28	9,540.67	14,418.53	9,045.40	86.39	87.98	-53.47	-5,643.75	2,096.35	828.94	677.98	150.96	5.491	
14,907.08	9,540.66	14,421.75	9,045.42	86.44	88.02	-53.47	-5,646.90	2,097.03	828.83	677.80	151.03	5.488	
14,979.00	9,541.17	14,483.12	9,044.96	87.35	88.78	-53.23	-5,706.90	2,109.96	826.75	674.45	152.29	5.429	
14,999.97	9,541.54	14,502.25	9,044.62	87.62	89.01	-53.14	-5,725.59	2,114.01	826.18	673.55	152.63	5.413	
15,002.96	9,541.59	14,504.98	9,044.57	87.66	89.05	-53.13	-5,728.26	2,114.59	826.11	673.43	152.68	5.411	
15,004.17	9,541.62	14,506.09	9,044.55	87.67	89.06	-53.13	-5,729.34	2,114.82	826.08	673.38	152.70	5.410	
15,069.00	9,543.18	14,567.00	9,043.23	88.50	89.82	-52.82	-5,788.81	2,127.92	824.95	671.24	153.71	5.367	
15,089.37	9,543.80	14,586.56	9,042.77	88.76	90.06	-52.72	-5,807.90	2,132.15	824.75	670.73	154.03	5.355	
15,099.97	9,544.14	14,597.80	9,042.51	88.90	90.20	-52.66	-5,818.87	2,134.58	824.66	670.46	154.20	5.348	
15,109.02	9,544.45	14,607.40	9,042.30	89.01	90.32	-52.61	-5,828.25	2,136.65	824.59	670.25	154.35	5.343	
15,159.00	9,546.36	14,660.60	9,041.21	89.65	90.98	-52.33	-5,880.20	2,148.04	824.33	669.18	155.15	5.313	
15,170.26	9,546.81	14,673.42	9,040.96	89.79	91.14	-52.27	-5,892.73	2,150.75	824.28	668.95	155.34	5.306	
15,199.97	9,547.85	14,707.26	9,040.28	90.17	91.56	-52.11	-5,925.84	2,157.72	824.05	668.22	155.83	5.288	
15,211.91	9,548.20	14,720.86	9,039.99	90.32	91.73	-52.05	-5,939.15	2,160.45	823.92	667.88	156.03	5.280	
15,249.00	9,549.06	14,761.48	9,039.09	90.80	92.23	-51.87	-5,978.98	2,168.39	823.36	666.71	156.65	5.256	
15,263.43	9,549.33	14,776.27	9,038.78	90.98	92.42	-51.80	-5,993.49	2,171.26	823.11	666.22	156.89	5.247	
15,299.97	9,550.10	14,813.73	9,038.05	91.45	92.88	-51.62	-6,030.22	2,178.53	822.46	664.98	157.48	5.223	
15,309.99	9,550.33	14,824.00	9,037.87	91.57	93.01	-51.57	-6,040.30	2,180.53	822.28	664.63	157.65	5.216	
15,338.00	9,551.03	14,852.41	9,037.39	91.93	93.37	-51.43	-6,068.16	2,186.05	821.75	663.66	158.09	5.198	
15,349.30	9,551.32	14,863.78	9,037.19	92.07	93.51	-51.38	-6,079.32	2,188.25	821.54	663.27	158.27	5.191	
15,399.97	9,552.34	14,914.81	9,036.24	92.72	94.14	-51.19	-6,129.39	2,198.07	820.74	661.64	159.10	5.159	
15,418.15	9,552.60	14,933.03	9,035.89	92.95	94.37	-51.13	-6,147.27	2,201.56	820.50	661.09	159.41	5.147	
15,429.00	9,552.73	14,943.80	9,035.68	93.09	94.50	-51.10	-6,157.84	2,203.62	820.38	660.78	159.60	5.140	
15,434.60	9,552.79	14,949.36	9,035.58	93.16	94.57	-51.08	-6,163.29	2,204.69	820.32	660.62	159.70	5.137	
15,499.97	9,553.44	15,014.27	9,034.52	94.00	95.38	-50.89	-6,226.96	2,217.29	819.63	658.77	160.86	5.095	
15,518.00	9,553.59	15,034.04	9,034.25	94.23	95.63	-50.84	-6,246.34	2,221.16	819.43	658.23	161.21	5.083	
15,520.72	9,553.61	15,037.12	9,034.22	94.26	95.67	-50.83	-6,249.36	2,221.76	819.40	658.14	161.26	5.081	
15,523.29	9,553.63	15,040.03	9,034.19	94.29	95.70	-50.83	-6,252.22	2,222.33	819.37	658.06	161.31	5.079	
15,599.97	9,553.45	15,122.41	9,033.83	95.27	96.74	-50.74	-6,333.04	2,238.26	817.85	654.97	162.88	5.021	

<b>Company:</b>	Piedra Operating LLC	<b>Local Co-ordinate Reference:</b>	Well University 8-8E A H 5LS
<b>Project:</b>	Andrews County, TX (NAD83-TNC)	<b>TVD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Reference Site:</b>	University 8-8	<b>MD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Site Error:</b>	0.00	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	University 8-8E A H 5LS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	1.00	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH / 72180	<b>Database:</b>	USAEDMDB
<b>Reference Design:</b>	Surveys (Ensign T054)	<b>Offset TVD Reference:</b>	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)		
15,608.00	9,553.35	15,129.22	9,033.85	95.37	96.82	-50.74	-6,339.72	2,239.61	817.68	654.63	163.05	5.015	
15,611.37	9,553.30	15,132.08	9,033.86	95.41	96.86	-50.74	-6,342.52	2,240.18	817.61	654.49	163.12	5.012	
15,616.04	9,553.25	15,136.04	9,033.88	95.47	96.91	-50.74	-6,346.39	2,240.97	817.52	654.30	163.21	5.009	
15,699.00	9,552.94	15,207.86	9,034.52	96.54	97.82	-50.73	-6,416.52	2,256.46	816.12	651.19	164.93	4.948	
15,699.97	9,552.95	15,208.87	9,034.54	96.55	97.83	-50.73	-6,417.50	2,256.69	816.10	651.15	164.95	4.947	
15,704.77	9,552.97	15,213.87	9,034.60	96.61	97.89	-50.73	-6,422.37	2,257.82	816.03	650.97	165.06	4.944	
15,716.91	9,553.03	15,226.51	9,034.75	96.77	98.05	-50.72	-6,434.69	2,260.66	815.82	650.49	165.32	4.935	
15,789.00	9,553.43	15,300.74	9,035.39	97.69	98.99	-50.63	-6,507.11	2,276.94	814.10	647.28	166.81	4.880	
15,799.97	9,553.50	15,311.33	9,035.47	97.83	99.13	-50.61	-6,517.44	2,279.25	813.78	646.75	167.03	4.872	
15,802.17	9,553.52	15,313.46	9,035.49	97.86	99.15	-50.61	-6,519.52	2,279.72	813.71	646.65	167.07	4.871	
15,815.73	9,553.63	15,326.55	9,035.61	98.04	99.32	-50.58	-6,532.29	2,282.59	813.32	645.99	167.33	4.861	
15,880.00	9,554.36	15,388.69	9,036.38	98.86	100.10	-50.45	-6,592.84	2,296.53	811.39	642.83	168.56	4.814	
15,899.97	9,554.64	15,408.14	9,036.69	99.12	100.35	-50.42	-6,611.77	2,300.99	810.78	641.83	168.95	4.799	
15,904.16	9,554.69	15,412.23	9,036.76	99.17	100.40	-50.42	-6,615.75	2,301.93	810.65	641.62	169.03	4.796	
15,905.99	9,554.72	15,414.01	9,036.79	99.20	100.43	-50.41	-6,617.48	2,302.34	810.59	641.52	169.07	4.794	
15,969.00	9,555.45	15,475.87	9,038.03	100.01	101.21	-50.35	-6,677.61	2,316.84	808.61	638.28	170.34	4.747	
15,982.92	9,555.58	15,490.87	9,038.35	100.19	101.40	-50.34	-6,692.19	2,320.36	808.15	637.51	170.64	4.736	
15,999.97	9,555.68	15,509.24	9,038.70	100.41	101.63	-50.34	-6,710.06	2,324.61	807.55	636.55	171.01	4.722	
16,009.35	9,555.71	15,519.35	9,038.88	100.53	101.76	-50.33	-6,719.89	2,326.92	807.21	636.00	171.21	4.715	
16,058.00	9,555.59	15,569.78	9,039.62	101.15	102.40	-50.32	-6,769.05	2,338.16	805.26	633.02	172.24	4.675	
16,075.67	9,555.38	15,584.96	9,039.84	101.38	102.60	-50.34	-6,783.84	2,341.57	804.59	631.98	172.60	4.661	
16,099.97	9,554.86	15,605.83	9,040.21	101.70	102.86	-50.40	-6,804.14	2,346.40	803.83	630.67	173.15	4.642	
16,108.30	9,554.61	15,612.99	9,040.35	101.81	102.95	-50.42	-6,811.09	2,348.10	803.61	630.26	173.35	4.636	
16,148.00	9,552.98	15,653.00	9,041.28	102.33	103.47	-50.60	-6,849.87	2,357.93	802.92	628.43	174.50	4.601	
16,162.08	9,552.26	15,659.44	9,041.45	102.51	103.55	-50.64	-6,856.10	2,359.56	802.76	627.94	174.82	4.592	
16,199.97	9,550.32	15,693.82	9,042.42	103.00	103.99	-50.87	-6,889.30	2,368.44	802.57	626.61	175.96	4.561	
16,208.14	9,549.90	15,701.23	9,042.64	103.11	104.09	-50.92	-6,896.44	2,370.39	802.57	626.36	176.21	4.555	
16,208.80	9,549.86	15,701.83	9,042.65	103.12	104.10	-50.92	-6,897.02	2,370.54	802.57	626.34	176.23	4.554	
16,238.00	9,548.34	15,728.27	9,043.48	103.50	104.44	-51.12	-6,922.49	2,377.59	802.65	625.51	177.14	4.531	
16,252.36	9,547.57	15,741.26	9,043.90	103.68	104.60	-51.23	-6,934.99	2,381.10	802.73	625.14	177.59	4.520	
16,299.97	9,544.83	15,786.66	9,045.22	104.29	105.19	-51.60	-6,978.67	2,393.38	803.02	623.87	179.15	4.482	
16,306.24	9,544.45	15,792.68	9,045.36	104.37	105.26	-51.65	-6,984.48	2,394.99	803.05	623.70	179.35	4.477	
16,327.00	9,543.15	15,812.64	9,045.75	104.64	105.52	-51.80	-7,003.72	2,400.28	803.15	623.13	180.02	4.461	
16,343.97	9,542.03	15,828.97	9,045.99	104.85	105.73	-51.92	-7,019.47	2,404.57	803.22	622.66	180.56	4.448	
16,399.97	9,538.01	15,881.14	9,046.54	105.57	106.40	-52.32	-7,069.81	2,418.25	803.42	621.08	182.33	4.406	
16,403.93	9,537.71	15,884.80	9,046.57	105.62	106.44	-52.35	-7,073.35	2,419.22	803.43	620.97	182.46	4.403	
16,417.00	9,536.68	15,896.92	9,046.68	105.79	106.60	-52.44	-7,085.03	2,422.44	803.47	620.59	182.88	4.393	
16,499.97	9,528.75	15,979.13	9,047.20	106.85	107.65	-53.19	-7,164.29	2,444.26	803.04	617.30	185.75	4.323	
16,507.00	9,527.95	15,986.35	9,047.22	106.94	107.74	-53.26	-7,171.26	2,446.14	802.92	616.92	186.00	4.317	
16,510.56	9,527.55	15,990.00	9,047.23	106.99	107.79	-53.29	-7,174.78	2,447.09	802.86	616.73	186.13	4.313	
16,515.93	9,526.94	15,995.52	9,047.24	107.06	107.86	-53.34	-7,180.11	2,448.53	802.77	616.45	186.32	4.309	
16,596.00	9,519.14	16,083.07	9,046.81	108.08	108.98	-53.98	-7,264.88	2,470.41	802.01	612.90	189.11	4.241	
16,599.97	9,518.82	16,087.49	9,046.75	108.13	109.04	-54.00	-7,269.17	2,471.46	801.99	612.75	189.24	4.238	
16,604.14	9,518.48	16,092.14	9,046.69	108.19	109.10	-54.03	-7,273.69	2,472.56	801.97	612.60	189.37	4.235	
16,622.22	9,517.13	16,111.93	9,046.39	108.42	109.35	-54.13	-7,292.93	2,477.17	801.93	612.00	189.93	4.222	
16,622.65	9,517.10	16,112.38	9,046.38	108.43	109.36	-54.13	-7,293.37	2,477.28	801.93	611.99	189.95	4.222	

<b>Company:</b>	Piedra Operating LLC	<b>Local Co-ordinate Reference:</b>	Well University 8-8E A H 5LS
<b>Project:</b>	Andrews County, TX (NAD83-TNC)	<b>TVD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Reference Site:</b>	University 8-8	<b>MD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Site Error:</b>	0.00	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	University 8-8E A H 5LS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	1.00	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH / 72180	<b>Database:</b>	USAEDMDB
<b>Reference Design:</b>	Surveys (Ensign T054)	<b>Offset TVD Reference:</b>	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)		
16,686.00	9,513.74	16,179.79	9,045.62	109.24	110.22	-54.42	-7,358.94	2,492.88	802.40	610.61	191.79	4.184	
16,689.14	9,513.62	16,183.13	9,045.59	109.28	110.27	-54.42	-7,362.19	2,493.65	802.45	610.57	191.88	4.182	
16,699.97	9,513.26	16,194.65	9,045.52	109.42	110.41	-54.45	-7,373.40	2,496.31	802.65	610.47	192.18	4.177	
16,715.87	9,512.79	16,211.12	9,045.44	109.62	110.62	-54.49	-7,389.42	2,500.12	803.08	610.45	192.63	4.169	
16,776.00	9,511.76	16,273.28	9,045.40	110.40	111.42	-54.70	-7,449.89	2,514.54	805.98	611.64	194.34	4.147	
16,780.85	9,511.72	16,278.29	9,045.41	110.46	111.48	-54.72	-7,454.76	2,515.70	806.30	611.82	194.48	4.146	
16,799.97	9,511.58	16,295.98	9,045.47	110.71	111.71	-54.80	-7,471.97	2,519.83	807.55	612.54	195.01	4.141	
16,812.80	9,511.49	16,306.77	9,045.46	110.88	111.85	-54.84	-7,482.46	2,522.35	808.42	613.07	195.35	4.138	
16,865.00	9,511.11	16,350.66	9,045.06	111.55	112.41	-55.00	-7,525.11	2,532.67	812.25	615.58	196.67	4.130	
16,871.86	9,511.06	16,356.42	9,044.96	111.63	112.49	-55.02	-7,530.71	2,534.03	812.79	615.95	196.84	4.129	
16,899.97	9,510.88	16,380.78	9,044.44	111.99	112.80	-55.11	-7,554.36	2,539.81	814.98	617.45	197.53	4.126	
16,911.22	9,510.82	16,391.93	9,044.16	112.14	112.94	-55.14	-7,565.19	2,542.46	815.83	618.02	197.82	4.124	
16,956.00	9,510.59	16,436.33	9,043.08	112.71	113.51	-55.25	-7,608.30	2,553.02	819.00	620.05	198.94	4.117	
16,964.91	9,510.56	16,445.16	9,042.86	112.83	113.63	-55.28	-7,616.88	2,555.12	819.59	620.42	199.16	4.115	
16,999.97	9,510.61	16,481.01	9,041.98	113.28	114.09	-55.35	-7,651.70	2,563.65	821.88	621.86	200.03	4.109	
17,009.39	9,510.66	16,491.04	9,041.74	113.40	114.22	-55.36	-7,661.43	2,566.02	822.48	622.23	200.26	4.107	
17,046.00	9,511.07	16,529.99	9,040.80	113.87	114.72	-55.39	-7,699.29	2,575.15	824.72	623.60	201.12	4.101	
17,057.19	9,511.23	16,541.90	9,040.52	114.02	114.87	-55.39	-7,710.87	2,577.92	825.38	623.99	201.38	4.099	
17,099.97	9,511.86	16,584.82	9,039.48	114.57	115.42	-55.36	-7,752.62	2,587.82	827.69	625.37	202.32	4.091	
17,107.28	9,511.96	16,591.98	9,039.29	114.66	115.51	-55.36	-7,759.58	2,589.47	828.07	625.60	202.48	4.090	
17,135.00	9,512.34	16,619.11	9,038.56	115.02	115.86	-55.33	-7,785.98	2,595.71	829.47	626.41	203.06	4.085	
17,148.34	9,512.53	16,632.17	9,038.19	115.19	116.03	-55.32	-7,798.68	2,598.71	830.14	626.80	203.34	4.082	
17,199.97	9,513.39	16,681.43	9,036.80	115.86	116.67	-55.27	-7,846.58	2,610.11	832.98	628.57	204.41	4.075	
17,205.03	9,513.49	16,686.22	9,036.68	115.92	116.73	-55.26	-7,851.24	2,611.24	833.28	628.77	204.51	4.074	
17,225.00	9,513.89	16,705.13	9,036.22	116.18	116.97	-55.25	-7,869.60	2,615.72	834.52	629.59	204.93	4.072	
17,240.76	9,514.21	16,720.05	9,035.89	116.39	117.16	-55.25	-7,884.08	2,619.29	835.49	630.23	205.27	4.070	
17,299.97	9,515.34	16,782.43	9,034.83	117.16	117.97	-55.22	-7,944.59	2,634.41	838.55	631.92	206.63	4.058	
17,303.21	9,515.39	16,785.95	9,034.79	117.20	118.01	-55.21	-7,948.01	2,635.26	838.68	631.98	206.70	4.057	
17,315.00	9,515.60	16,798.76	9,034.66	117.35	118.18	-55.21	-7,960.44	2,638.37	839.13	632.15	206.98	4.054	
17,333.54	9,515.89	16,818.91	9,034.51	117.59	118.44	-55.20	-7,979.99	2,643.27	839.76	632.34	207.42	4.049	
17,399.97	9,516.47	16,887.23	9,034.24	118.45	119.32	-55.21	-8,046.27	2,659.82	841.80	632.78	209.02	4.027	
17,400.32	9,516.47	16,887.59	9,034.24	118.46	119.32	-55.21	-8,046.62	2,659.91	841.81	632.78	209.03	4.027	
17,405.00	9,516.48	16,892.39	9,034.23	118.52	119.39	-55.21	-8,051.27	2,661.07	841.94	632.80	209.14	4.026	
17,425.21	9,516.60	16,913.10	9,034.17	118.78	119.65	-55.23	-8,071.37	2,666.07	842.51	632.87	209.63	4.019	
17,494.00	9,518.10	16,990.94	9,033.70	119.68	120.66	-55.15	-8,147.07	2,684.17	844.03	632.83	211.20	3.996	
17,494.11	9,518.10	16,991.06	9,033.70	119.68	120.66	-55.15	-8,147.19	2,684.19	844.03	632.83	211.21	3.996	
17,499.97	9,518.30	16,997.69	9,033.64	119.76	120.75	-55.13	-8,153.65	2,685.67	844.12	632.80	211.32	3.994	
17,519.38	9,518.95	17,015.72	9,033.44	120.01	120.98	-55.07	-8,171.24	2,689.67	844.40	632.73	211.67	3.989	
17,586.00	9,521.10	17,074.32	9,032.62	120.88	121.74	-54.88	-8,228.29	2,702.98	845.37	632.59	212.78	3.973	
17,589.16	9,521.20	17,077.10	9,032.57	120.92	121.77	-54.87	-8,230.99	2,703.62	845.41	632.58	212.83	3.972	
17,599.97	9,521.53	17,091.00	9,032.34	121.06	121.95	-54.82	-8,244.52	2,706.86	845.60	632.53	213.07	3.969	
17,617.19	9,522.04	17,103.51	9,032.13	121.29	122.11	-54.78	-8,256.67	2,709.78	845.86	632.54	213.32	3.965	
17,676.00	9,523.61	17,163.70	9,031.41	122.06	122.89	-54.62	-8,315.17	2,723.98	846.58	632.13	214.45	3.948	
17,681.48	9,523.75	17,169.32	9,031.37	122.13	122.97	-54.61	-8,320.62	2,725.31	846.63	632.07	214.56	3.946	
17,699.96	9,524.22	17,188.41	9,031.24	122.37	123.21	-54.57	-8,339.17	2,729.85	846.82	631.89	214.93	3.940	

<b>Company:</b>	Piedra Operating LLC	<b>Local Co-ordinate Reference:</b>	Well University 8-8E A H 5LS
<b>Project:</b>	Andrews County, TX (NAD83-TNC)	<b>TVD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Reference Site:</b>	University 8-8	<b>MD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Site Error:</b>	0.00	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	University 8-8E A H 5LS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	1.00	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH / 72180	<b>Database:</b>	USAEDMDB
<b>Reference Design:</b>	Surveys (Ensign T054)	<b>Offset TVD Reference:</b>	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)		
17,715.04	9,524.62	17,204.16	9,031.17	122.57	123.42	-54.54	-8,354.46	2,733.61	846.97	631.74	215.24	3.935	
17,766.00	9,526.07	17,257.41	9,031.11	123.23	124.11	-54.44	-8,406.17	2,746.32	847.54	631.25	216.29	3.919	
17,773.72	9,526.30	17,265.48	9,031.13	123.34	124.21	-54.42	-8,414.01	2,748.24	847.63	631.18	216.45	3.916	
17,799.96	9,527.13	17,291.17	9,031.19	123.68	124.54	-54.38	-8,438.95	2,754.39	847.96	631.00	216.97	3.908	
17,812.33	9,527.53	17,303.15	9,031.22	123.84	124.70	-54.36	-8,450.58	2,757.26	848.14	630.94	217.21	3.905	
17,855.00	9,529.01	17,344.50	9,031.27	124.40	125.23	-54.28	-8,490.72	2,767.20	848.89	630.85	218.04	3.893	
17,864.86	9,529.37	17,354.05	9,031.27	124.53	125.36	-54.27	-8,499.99	2,769.51	849.10	630.87	218.23	3.891	
17,899.96	9,530.60	17,390.77	9,031.33	124.99	125.83	-54.23	-8,535.62	2,778.36	850.03	631.06	218.97	3.882	
17,909.88	9,530.95	17,401.30	9,031.38	125.12	125.97	-54.22	-8,545.85	2,780.90	850.33	631.14	219.19	3.879	
17,946.00	9,532.16	17,439.67	9,031.65	125.59	126.47	-54.21	-8,583.08	2,790.15	851.60	631.57	220.03	3.870	
17,957.56	9,532.55	17,451.95	9,031.78	125.74	126.63	-54.21	-8,595.00	2,793.11	852.04	631.74	220.30	3.868	
17,999.96	9,534.01	17,495.36	9,032.37	126.30	127.19	-54.22	-8,637.10	2,803.63	853.72	632.42	221.30	3.858	
18,007.43	9,534.27	17,503.00	9,032.50	126.39	127.29	-54.23	-8,644.52	2,805.50	854.03	632.54	221.48	3.856	
18,035.00	9,535.26	17,531.27	9,033.05	126.76	127.66	-54.25	-8,671.92	2,812.42	855.19	633.03	222.16	3.849	
18,049.24	9,535.77	17,544.87	9,033.35	126.94	127.84	-54.25	-8,685.10	2,815.76	855.76	633.27	222.49	3.846	
18,099.96	9,537.31	17,589.30	9,034.24	127.61	128.41	-54.26	-8,728.11	2,826.87	857.38	633.77	223.61	3.834	
18,105.33	9,537.45	17,594.01	9,034.33	127.68	128.48	-54.26	-8,732.66	2,828.06	857.51	633.79	223.73	3.833	
18,124.00	9,537.91	17,610.36	9,034.62	127.92	128.69	-54.26	-8,748.47	2,832.24	857.93	633.80	224.13	3.828	
18,141.55	9,538.30	17,630.00	9,034.94	128.15	128.94	-54.26	-8,767.44	2,837.30	858.27	633.68	224.58	3.822	
18,199.96	9,539.33	17,683.45	9,035.32	128.93	129.64	-54.22	-8,819.14	2,850.85	858.76	632.96	225.80	3.803	
18,214.00	9,539.52	17,697.45	9,035.27	129.11	129.82	-54.20	-8,832.72	2,854.29	858.72	632.63	226.09	3.798	
18,218.08	9,539.57	17,701.52	9,035.25	129.16	129.88	-54.19	-8,836.66	2,855.29	858.70	632.53	226.17	3.797	
18,299.96	9,541.18	17,791.86	9,033.87	130.24	131.05	-53.90	-8,924.51	2,876.34	858.22	630.49	227.74	3.769	
18,304.00	9,541.29	17,796.43	9,033.78	130.30	131.11	-53.88	-8,928.96	2,877.36	858.18	630.38	227.80	3.767	
18,308.17	9,541.40	17,801.14	9,033.68	130.35	131.17	-53.86	-8,933.55	2,878.40	858.14	630.27	227.88	3.766	
18,325.13	9,541.76	17,819.59	9,033.28	130.57	131.41	-53.79	-8,951.55	2,882.43	857.93	629.76	228.16	3.760	
18,394.00	9,541.98	17,892.48	9,032.00	131.48	132.36	-53.63	-9,022.68	2,898.29	856.48	627.02	229.46	3.733	
18,399.96	9,541.91	17,898.79	9,031.91	131.56	132.44	-53.61	-9,028.84	2,899.67	856.31	626.73	229.58	3.730	
18,403.78	9,541.88	17,902.24	9,031.86	131.61	132.49	-53.60	-9,032.21	2,900.41	856.19	626.54	229.65	3.728	
18,420.64	9,541.72	17,917.90	9,031.63	131.83	132.69	-53.56	-9,047.49	2,903.82	855.63	625.67	229.97	3.721	
18,484.00	9,541.46	17,976.69	9,030.59	132.67	133.45	-53.31	-9,104.84	2,916.73	852.88	621.87	231.01	3.692	
18,499.96	9,541.41	17,991.58	9,030.29	132.89	133.65	-53.28	-9,119.36	2,920.03	852.09	620.84	231.26	3.685	
18,504.90	9,541.38	17,996.28	9,030.19	132.95	133.71	-53.27	-9,123.93	2,921.07	851.87	620.53	231.34	3.682	
18,510.10	9,541.34	18,001.23	9,030.08	133.02	133.77	-53.26	-9,128.76	2,922.17	851.63	620.21	231.42	3.680	
18,573.00	9,540.09	18,061.16	9,028.56	133.87	134.55	-53.16	-9,187.19	2,935.43	849.35	616.77	232.58	3.652	
18,594.86	9,539.39	18,079.00	9,028.03	134.16	134.78	-53.14	-9,204.57	2,939.37	848.78	615.79	232.99	3.643	
18,599.96	9,539.22	18,086.58	9,027.80	134.22	134.88	-53.13	-9,211.97	2,941.05	848.65	615.52	233.13	3.640	
18,605.32	9,539.03	18,091.51	9,027.64	134.30	134.95	-53.13	-9,216.77	2,942.14	848.52	615.29	233.24	3.638	
18,662.00	9,536.88	18,143.59	9,025.94	135.05	135.63	-53.09	-9,267.49	2,953.81	847.52	613.09	234.43	3.615	
18,674.03	9,536.37	18,154.64	9,025.56	135.20	135.77	-53.09	-9,278.25	2,956.31	847.38	612.69	234.69	3.611	
18,699.96	9,535.19	18,178.55	9,024.71	135.54	136.08	-53.09	-9,301.52	2,961.77	847.14	611.87	235.27	3.601	
18,711.04	9,534.66	18,188.83	9,024.34	135.69	136.22	-53.09	-9,311.51	2,964.13	847.06	611.53	235.53	3.596	
18,751.00	9,532.57	18,225.89	9,022.95	136.21	136.70	-53.12	-9,347.55	2,972.70	846.89	610.42	236.47	3.581	
18,765.76	9,531.73	18,239.59	9,022.41	136.41	136.88	-53.13	-9,360.85	2,975.89	846.86	610.03	236.83	3.576	
18,799.96	9,529.63	18,272.80	9,021.07	136.85	137.31	-53.18	-9,393.11	2,983.67	846.81	609.11	237.70	3.563	
18,814.10	9,528.69	18,287.81	9,020.42	137.04	137.51	-53.20	-9,407.70	2,987.14	846.76	608.68	238.08	3.557	

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

<b>Company:</b>	Piedra Operating LLC	<b>Local Co-ordinate Reference:</b>	Well University 8-8E A H 5LS
<b>Project:</b>	Andrews County, TX (NAD83-TNC)	<b>TVD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Reference Site:</b>	University 8-8	<b>MD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Site Error:</b>	0.00	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	University 8-8E A H 5LS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	1.00	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH / 72180	<b>Database:</b>	USAEDMDB
<b>Reference Design:</b>	Surveys (Ensign T054)	<b>Offset TVD Reference:</b>	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)		
18,841.00	9,526.79	18,316.38	9,019.08	137.39	137.88	-53.25	-9,435.49	2,993.62	846.59	607.79	238.80	3.545	
18,852.95	9,525.95	18,329.07	9,018.44	137.55	138.04	-53.25	-9,447.85	2,996.45	846.51	607.40	239.11	3.540	
18,868.33	9,524.94	18,345.41	9,017.58	137.75	138.26	-53.26	-9,463.77	3,000.04	846.47	606.97	239.50	3.534	
18,899.96	9,523.14	18,384.88	9,015.59	138.16	138.77	-53.27	-9,502.26	3,008.55	846.53	606.18	240.35	3.522	
18,907.20	9,522.78	18,394.12	9,015.19	138.26	138.89	-53.27	-9,511.28	3,010.51	846.55	606.01	240.54	3.519	
18,931.00	9,521.75	18,424.52	9,014.00	138.57	139.29	-53.27	-9,540.97	3,016.90	846.64	605.47	241.17	3.511	
18,952.85	9,520.88	18,452.43	9,013.12	138.85	139.65	-53.29	-9,568.26	3,022.67	846.67	604.93	241.74	3.502	
18,999.96	9,518.97	18,490.05	9,012.15	139.47	140.14	-53.34	-9,604.97	3,030.85	847.04	604.17	242.87	3.488	
19,004.73	9,518.77	18,494.25	9,012.06	139.53	140.20	-53.35	-9,609.06	3,031.79	847.10	604.11	242.99	3.486	
19,021.00	9,518.10	18,508.56	9,011.76	139.74	140.39	-53.38	-9,623.00	3,035.02	847.35	603.93	243.42	3.481	
19,038.55	9,517.35	18,523.98	9,011.49	139.97	140.59	-53.42	-9,638.01	3,038.58	847.67	603.78	243.89	3.476	
19,099.96	9,514.55	18,583.05	9,010.71	140.77	141.36	-53.62	-9,695.37	3,052.63	849.14	603.44	245.69	3.456	
19,102.19	9,514.45	18,585.21	9,010.69	140.80	141.39	-53.63	-9,697.47	3,053.15	849.20	603.44	245.76	3.455	
19,110.00	9,514.07	18,592.80	9,010.62	140.90	141.49	-53.66	-9,704.83	3,054.99	849.42	603.41	246.00	3.453	
19,130.17	9,513.20	18,612.39	9,010.46	141.17	141.75	-53.77	-9,723.83	3,059.76	850.02	603.40	246.62	3.447	
19,199.96	9,511.80	18,693.20	9,010.29	142.08	142.80	-54.10	-9,802.26	3,079.24	852.26	603.48	248.79	3.426	
19,200.22	9,511.80	18,693.50	9,010.29	142.08	142.81	-54.10	-9,802.55	3,079.31	852.27	603.48	248.79	3.426	
19,201.00	9,511.79	18,694.43	9,010.29	142.09	142.82	-54.10	-9,803.45	3,079.53	852.29	603.48	248.82	3.425	
19,221.61	9,511.80	18,718.88	9,010.41	142.36	143.14	-54.15	-9,827.22	3,085.25	852.87	603.46	249.41	3.420	
19,292.00	9,512.49	18,796.41	9,011.58	143.28	144.15	-54.29	-9,902.59	3,103.39	854.47	603.15	251.32	3.400	
19,292.66	9,512.50	18,797.13	9,011.60	143.29	144.16	-54.29	-9,903.29	3,103.56	854.49	603.15	251.34	3.400	
19,299.96	9,512.63	18,805.23	9,011.80	143.39	144.27	-54.30	-9,911.16	3,105.46	854.63	603.09	251.54	3.398	
19,318.11	9,512.95	18,823.37	9,012.27	143.62	144.51	-54.33	-9,928.78	3,109.73	855.00	602.99	252.01	3.393	
19,382.00	9,514.17	18,888.39	9,014.22	144.46	145.36	-54.47	-9,991.93	3,125.13	856.59	602.84	253.75	3.376	
19,385.97	9,514.25	18,892.74	9,014.37	144.51	145.42	-54.48	-9,996.15	3,126.17	856.71	602.84	253.87	3.375	
19,399.96	9,514.53	18,909.98	9,014.89	144.70	145.64	-54.52	-10,012.91	3,130.19	857.08	602.80	254.28	3.371	
19,416.32	9,514.88	18,930.17	9,015.38	144.91	145.91	-54.55	-10,032.57	3,134.72	857.47	602.73	254.74	3.366	
19,472.00	9,516.18	18,995.37	9,016.10	145.64	146.77	-54.54	-10,096.39	3,148.04	858.40	602.36	256.05	3.353	
19,478.45	9,516.33	19,001.84	9,016.12	145.72	146.85	-54.53	-10,102.73	3,149.30	858.49	602.31	256.19	3.351	
19,499.96	9,516.82	19,023.41	9,016.18	146.01	147.13	-54.49	-10,123.90	3,153.47	858.66	602.03	256.63	3.346	
19,561.00	9,517.92	19,084.27	9,016.16	146.81	147.93	-54.35	-10,183.64	3,165.10	858.18	600.35	257.83	3.328	
19,579.03	9,518.18	19,101.94	9,016.09	147.05	148.16	-54.31	-10,200.99	3,168.43	857.83	599.66	258.16	3.323	
19,599.96	9,518.44	19,122.45	9,015.95	147.33	148.43	-54.26	-10,221.13	3,172.28	857.41	598.87	258.55	3.316	
19,611.55	9,518.58	19,133.80	9,015.86	147.48	148.57	-54.23	-10,232.28	3,174.40	857.18	598.43	258.76	3.313	
19,651.00	9,518.96	19,172.76	9,015.42	148.00	149.08	-54.13	-10,270.57	3,181.63	856.39	596.92	259.47	3.301	
19,666.18	9,519.08	19,188.00	9,015.25	148.20	149.28	-54.09	-10,285.55	3,184.46	856.08	596.33	259.75	3.296	
19,699.96	9,519.28	19,221.94	9,014.96	148.64	149.72	-54.02	-10,318.88	3,190.81	855.39	595.01	260.38	3.285	
19,709.63	9,519.32	19,231.65	9,014.89	148.77	149.85	-54.01	-10,328.41	3,192.64	855.20	594.63	260.57	3.282	
19,740.00	9,519.41	19,261.74	9,014.73	149.17	150.24	-53.96	-10,357.96	3,198.34	854.59	593.42	261.17	3.272	
19,747.90	9,519.43	19,269.41	9,014.69	149.27	150.34	-53.95	-10,365.50	3,199.80	854.44	593.11	261.33	3.270	
19,799.96	9,519.65	19,320.03	9,014.43	149.96	151.00	-53.87	-10,415.17	3,209.48	853.64	591.26	262.38	3.253	
19,817.65	9,519.76	19,338.00	9,014.33	150.19	151.23	-53.84	-10,432.81	3,212.94	853.44	590.71	262.73	3.248	
19,830.00	9,519.86	19,349.47	9,014.26	150.35	151.38	-53.82	-10,444.06	3,215.15	853.31	590.34	262.98	3.245	
19,838.81	9,519.93	19,358.21	9,014.21	150.47	151.50	-53.81	-10,452.64	3,216.83	853.24	590.08	263.15	3.242	
19,899.96	9,520.24	19,418.94	9,013.86	151.27	152.29	-53.74	-10,512.23	3,228.55	852.86	588.44	264.41	3.225	



<b>Company:</b>	Piedra Operating LLC	<b>Local Co-ordinate Reference:</b>	Well University 8-8E A H 5LS
<b>Project:</b>	Andrews County, TX (NAD83-TNC)	<b>TVD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Reference Site:</b>	University 8-8	<b>MD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Site Error:</b>	0.00	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	University 8-8E A H 5LS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	1.00	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH / 72180	<b>Database:</b>	USAEDMDB
<b>Reference Design:</b>	Surveys (Ensign T054)	<b>Offset TVD Reference:</b>	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)		
19,919.00	9,520.28	19,438.51	9,013.73	151.52	152.54	-53.73	-10,531.43	3,232.33	852.80	587.98	264.82	3.220	
19,920.25	9,520.28	19,439.85	9,013.72	151.54	152.56	-53.72	-10,532.74	3,232.58	852.79	587.94	264.85	3.220	
19,924.52	9,520.28	19,444.40	9,013.69	151.59	152.62	-53.72	-10,537.21	3,233.45	852.77	587.84	264.94	3.219	
19,999.96	9,519.45	19,524.62	9,012.65	152.58	153.66	-53.66	-10,616.06	3,248.15	851.49	584.96	266.52	3.195	
20,008.00	9,519.26	19,532.69	9,012.51	152.69	153.77	-53.65	-10,624.01	3,249.58	851.24	584.56	266.69	3.192	
20,011.41	9,519.18	19,536.11	9,012.45	152.73	153.81	-53.65	-10,627.38	3,250.18	851.14	584.38	266.76	3.191	
20,015.96	9,519.07	19,540.69	9,012.37	152.79	153.87	-53.65	-10,631.88	3,250.99	851.00	584.14	266.86	3.189	
20,098.00	9,516.90	19,622.50	9,010.81	153.87	154.94	-53.58	-10,712.41	3,265.33	848.62	580.01	268.61	3.159	
20,099.96	9,516.84	19,624.38	9,010.78	153.90	154.96	-53.58	-10,714.26	3,265.66	848.56	579.91	268.65	3.159	
20,104.57	9,516.72	19,628.80	9,010.68	153.96	155.02	-53.57	-10,718.61	3,266.43	848.44	579.69	268.75	3.157	
20,125.02	9,516.26	19,648.41	9,010.26	154.23	155.27	-53.54	-10,737.92	3,269.86	847.97	578.79	269.18	3.150	
20,187.00	9,515.83	19,707.87	9,008.83	155.04	156.05	-53.40	-10,796.43	3,280.29	847.04	576.71	270.34	3.133	
20,199.96	9,515.88	19,720.31	9,008.51	155.21	156.21	-53.36	-10,808.68	3,282.49	846.94	576.38	270.56	3.130	
20,202.45	9,515.90	19,722.71	9,008.45	155.24	156.24	-53.35	-10,811.03	3,282.91	846.92	576.31	270.60	3.130	
20,212.78	9,515.95	19,732.63	9,008.21	155.38	156.37	-53.32	-10,820.79	3,284.68	846.83	576.05	270.78	3.127	
20,250.00	9,516.16	19,769.06	9,007.35	155.87	156.84	-53.22	-10,856.63	3,291.23	846.52	575.10	271.42	3.119	
20,264.63	9,516.24	19,783.68	9,007.00	156.06	157.03	-53.17	-10,871.00	3,293.86	846.39	574.73	271.67	3.116	
20,299.96	9,516.46	19,814.00	9,006.29	156.53	157.43	-53.08	-10,900.81	3,299.32	846.10	573.83	272.27	3.108	
20,302.32	9,516.48	19,814.00	9,006.29	156.56	157.43	-53.08	-10,900.81	3,299.32	846.10	573.79	272.31	3.107	
20,302.50	9,516.48	19,814.00	9,006.29	156.56	157.43	-53.08	-10,900.81	3,299.32	846.10	573.79	272.31	3.107	
20,311.00	9,516.53	19,814.00	9,006.29	156.67	157.43	-53.08	-10,900.81	3,299.32	846.14	573.71	272.43	3.106	ES, SF

<b>Company:</b>	Piedra Operating LLC	<b>Local Co-ordinate Reference:</b>	Well University 8-8E A H 5LS
<b>Project:</b>	Andrews County, TX (NAD83-TNC)	<b>TVD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Reference Site:</b>	University 8-8	<b>MD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Site Error:</b>	0.00	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	University 8-8E A H 5LS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	1.00	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH / 72180	<b>Database:</b>	USAEDMDB
<b>Reference Design:</b>	Surveys (Ensign T054)	<b>Offset TVD Reference:</b>	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)		
0.00	0.00	0.00	0.00	1.00	1.00	76.98	163.15	705.37	724.00				
15.00	15.00	13.00	13.00	1.00	1.00	76.98	163.15	705.37	723.99				
100.00	100.00	102.30	102.30	1.28	1.33	51.70	163.25	705.08	723.69	721.09	2.61	277.544	
178.00	178.00	184.12	184.12	1.91	1.95	51.68	163.51	704.29	722.87	719.02	3.85	187.806	
200.00	200.00	206.36	206.35	1.98	2.02	68.21	163.62	704.00	722.58	718.59	3.99	181.198	
268.00	268.00	274.54	274.53	2.20	2.25	129.77	164.03	703.07	721.81	717.38	4.42	163.253	
300.00	300.00	303.99	303.98	2.28	2.34	146.92	164.22	702.72	721.57	716.98	4.59	157.156	
356.00	356.00	359.00	358.98	2.43	2.51	177.99	164.48	702.38	721.48	716.58	4.90	147.217	
358.07	358.07	359.00	358.98	2.44	2.51	177.99	164.48	702.38	721.48	716.57	4.91	147.066	
400.00	400.00	398.76	398.74	2.54	2.62	-168.78	164.60	702.29	721.56	716.45	5.11	141.325	
443.00	443.00	441.25	441.23	2.64	2.73	-146.53	164.70	702.24	721.63	716.31	5.32	135.743	
500.00	500.00	497.80	497.78	2.77	2.86	-171.86	164.76	702.23	721.83	716.26	5.57	129.506	
532.00	532.00	529.57	529.55	2.85	2.93	-176.33	164.78	702.24	722.04	716.32	5.72	126.280	
600.00	600.00	599.67	599.65	3.01	3.06	-174.12	164.67	702.21	722.33	716.30	6.02	119.941	
623.00	623.00	623.45	623.43	3.07	3.11	-170.78	164.57	702.16	722.31	716.19	6.13	117.906	
700.00	699.99	703.12	703.10	3.25	3.27	-170.10	164.39	701.78	722.21	715.73	6.48	111.488	
712.00	712.00	715.17	715.14	3.27	3.30	-170.08	164.39	701.69	722.20	715.67	6.53	110.570	
795.77	795.76	797.00	796.98	3.46	3.47	-132.02	164.06	701.29	722.16	715.26	6.90	104.694	
800.00	799.99	797.00	796.98	3.47	3.47	-129.72	164.06	701.29	722.17	715.26	6.91	104.544	
803.35	803.34	803.38	803.36	3.48	3.48	-127.89	164.01	701.28	722.16	715.23	6.93	104.226	
804.00	803.99	803.94	803.91	3.48	3.48	-127.54	164.01	701.27	722.16	715.23	6.93	104.186	
892.00	891.99	883.00	882.97	3.66	3.77	-149.97	164.17	701.78	722.99	715.73	7.26	99.562	
900.00	899.99	887.48	887.45	3.68	3.78	-156.81	164.22	701.84	723.12	715.84	7.29	99.251	
982.00	981.99	990.95	990.92	3.84	4.19	109.93	164.08	701.56	722.98	715.27	7.71	93.751	
1,000.00	999.99	1,009.34	1,009.31	3.87	4.27	127.62	163.89	701.31	722.73	714.89	7.84	92.199	
1,070.00	1,069.99	1,080.86	1,080.81	4.00	4.58	-144.10	162.94	700.31	721.75	713.42	8.33	86.616	
1,100.00	1,099.99	1,111.50	1,111.45	4.06	4.72	-148.95	162.43	699.85	721.32	712.78	8.55	84.388	
1,157.00	1,156.99	1,167.82	1,167.75	4.18	4.90	-156.68	161.41	699.00	720.50	711.63	8.87	81.191	
1,200.00	1,199.99	1,208.35	1,208.27	4.39	4.95	-160.66	161.03	698.42	720.04	710.88	9.17	78.561	
1,264.73	1,264.72	1,267.50	1,267.41	4.72	5.03	-165.51	161.09	697.74	719.73	710.14	9.58	75.108	
1,300.00	1,299.99	1,299.03	1,298.94	4.90	5.08	-167.69	161.23	697.58	719.83	710.03	9.80	73.436	
1,336.00	1,335.99	1,334.42	1,334.34	5.08	5.14	-169.65	161.45	697.52	720.08	710.04	10.04	71.752	
1,400.00	1,399.98	1,399.54	1,399.45	5.21	5.25	-179.84	162.17	697.27	720.54	710.27	10.26	70.202	
1,428.00	1,427.98	1,427.28	1,427.18	5.27	5.35	176.72	162.57	697.12	720.75	710.34	10.41	69.258	
1,500.00	1,499.98	1,497.92	1,497.82	5.40	5.63	-141.53	163.48	696.85	721.27	710.47	10.80	66.787	
1,516.00	1,515.98	1,513.62	1,513.52	5.43	5.69	-130.47	163.66	696.81	721.36	710.47	10.89	66.259	
1,600.00	1,599.98	1,596.12	1,596.02	5.59	5.99	-156.37	164.45	696.77	721.93	710.61	11.32	63.800	
1,608.00	1,607.98	1,604.03	1,603.92	5.60	6.00	-159.75	164.53	696.78	721.99	710.65	11.34	63.680	
1,697.00	1,696.98	1,690.92	1,690.81	5.77	6.12	-161.96	165.68	696.83	722.81	711.23	11.58	62.431	
1,700.00	1,699.97	1,693.71	1,693.60	5.78	6.12	-161.97	165.72	696.84	722.84	711.26	11.58	62.398	
1,788.00	1,787.98	1,776.59	1,776.46	5.96	6.18	-164.97	167.08	697.42	724.29	712.51	11.77	61.520	
1,800.00	1,799.97	1,789.50	1,789.37	5.97	6.18	-173.74	167.21	697.56	724.52	712.72	11.80	61.413	
1,846.00	1,845.97	1,838.80	1,838.67	6.05	6.21	172.16	167.43	697.98	725.46	713.57	11.89	61.014	
1,900.00	1,899.96	1,894.89	1,894.76	6.14	6.22	-176.41	167.55	698.29	726.53	714.51	12.02	60.453	
1,973.00	1,972.96	1,968.50	1,968.37	6.28	6.23	-157.94	167.46	698.58	727.69	715.45	12.24	59.468	
2,000.00	1,999.95	1,995.31	1,995.17	6.34	6.24	-138.92	167.03	698.78	728.08	715.74	12.33	59.026	

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

<b>Company:</b>	Piedra Operating LLC	<b>Local Co-ordinate Reference:</b>	Well University 8-8E A H 5LS
<b>Project:</b>	Andrews County, TX (NAD83-TNC)	<b>TVD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Reference Site:</b>	University 8-8	<b>MD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Site Error:</b>	0.00	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	University 8-8E A H 5LS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	1.00	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH / 72180	<b>Database:</b>	USAEDMDB
<b>Reference Design:</b>	Surveys (Ensign T054)	<b>Offset TVD Reference:</b>	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)		
2,064.00	2,063.95	2,060.75	2,060.57	6.49	6.51	-110.88	164.76	699.54	728.85	716.13	12.72	57.318	
2,100.00	2,099.93	2,097.90	2,097.64	6.55	6.86	-97.25	162.48	700.13	729.09	716.12	12.97	56.198	
2,153.00	2,152.89	2,152.08	2,151.64	6.65	7.14	-88.93	158.18	701.12	729.15	716.00	13.15	55.444	
2,200.00	2,199.83	2,199.82	2,199.17	6.73	7.35	-87.65	153.77	702.07	729.01	715.73	13.28	54.902	
2,242.00	2,241.78	2,241.49	2,240.63	6.81	7.45	-86.52	149.70	702.94	728.84	715.44	13.40	54.403	
2,300.00	2,299.69	2,299.32	2,298.16	6.91	7.58	-82.44	143.99	704.19	728.48	714.92	13.56	53.722	
2,332.00	2,331.63	2,331.67	2,330.35	6.97	7.65	-80.63	140.76	704.88	728.16	714.51	13.65	53.326	
2,400.00	2,399.49	2,399.72	2,398.03	7.10	7.80	-77.88	133.89	706.31	727.28	713.42	13.86	52.469	
2,423.00	2,422.45	2,422.37	2,420.56	7.15	7.85	-76.93	131.59	706.81	726.96	713.02	13.93	52.179	
2,500.00	2,499.29	2,498.68	2,496.45	7.31	8.02	-76.81	123.77	708.54	725.90	711.72	14.18	51.184	
2,515.00	2,514.27	2,513.67	2,511.35	7.34	8.06	-76.79	122.22	708.88	725.71	711.47	14.23	50.990	
2,599.99	2,599.08	2,597.88	2,595.08	7.53	8.26	-67.50	113.46	710.86	724.15	709.63	14.52	49.872	
2,606.00	2,605.08	2,603.78	2,600.95	7.54	8.27	-66.89	112.84	711.00	724.01	709.47	14.54	49.792	
2,696.00	2,694.85	2,693.00	2,689.65	7.74	8.49	-61.76	103.52	713.25	721.59	706.73	14.85	48.577	
2,699.99	2,698.83	2,696.99	2,693.61	7.75	8.50	-61.74	103.11	713.35	721.46	706.59	14.87	48.521	
2,786.00	2,784.60	2,785.26	2,781.41	7.94	8.73	-61.19	94.20	715.44	718.74	703.55	15.20	47.294	
2,799.99	2,798.56	2,799.95	2,796.03	7.98	8.77	-61.40	92.77	715.74	718.27	703.01	15.25	47.085	
2,876.00	2,874.36	2,880.42	2,876.12	8.17	8.98	-62.60	85.17	717.02	715.49	699.91	15.58	45.932	
2,899.99	2,898.29	2,905.93	2,901.53	8.23	9.05	-61.90	82.83	717.30	714.52	698.84	15.68	45.558	
2,966.00	2,964.12	2,973.90	2,969.21	8.40	9.23	-59.96	76.65	717.84	711.59	695.61	15.98	44.534	
2,999.99	2,998.02	3,008.63	3,003.80	8.49	9.32	-59.01	73.44	718.07	709.97	693.84	16.13	44.007	
3,055.00	3,052.89	3,063.34	3,058.27	8.63	9.47	-57.47	68.41	718.39	707.27	690.89	16.38	43.170	
3,099.99	3,097.76	3,107.56	3,102.31	8.75	9.59	-57.40	64.41	718.66	705.06	688.47	16.59	42.496	
3,146.00	3,143.65	3,150.67	3,145.24	8.88	9.71	-57.32	60.50	719.05	702.94	686.15	16.80	41.846	
3,199.99	3,197.50	3,201.24	3,195.59	9.03	9.85	-55.42	55.83	719.74	700.66	683.62	17.04	41.108	
3,236.00	3,233.42	3,234.91	3,229.12	9.13	9.95	-54.14	52.74	720.33	699.23	682.02	17.21	40.636	
3,299.99	3,297.25	3,295.67	3,289.61	9.32	10.13	-52.83	47.26	721.66	696.93	679.43	17.50	39.818	
3,325.00	3,322.20	3,320.48	3,314.31	9.39	10.20	-52.29	45.03	722.25	696.08	678.46	17.62	39.503	
3,399.99	3,397.01	3,395.16	3,388.67	9.61	10.42	-52.99	38.28	724.06	693.57	675.58	17.98	38.565	
3,416.00	3,412.97	3,411.22	3,404.65	9.65	10.47	-53.13	36.82	724.45	693.03	674.97	18.06	38.367	
3,499.99	3,496.75	3,495.92	3,488.98	9.91	10.72	-53.60	29.09	726.47	690.13	671.65	18.49	37.330	
3,507.00	3,503.73	3,503.04	3,496.07	9.93	10.74	-53.64	28.45	726.63	689.88	671.36	18.52	37.244	
3,596.00	3,592.47	3,592.97	3,585.63	10.20	11.02	-59.57	20.53	728.56	686.80	667.81	18.99	36.160	
3,599.99	3,596.45	3,596.99	3,589.63	10.22	11.03	-59.97	20.19	728.64	686.67	667.66	19.02	36.111	
3,686.00	3,682.17	3,682.45	3,674.76	10.49	11.29	-67.97	12.93	730.38	684.19	664.70	19.49	35.105	
3,699.99	3,696.11	3,696.20	3,688.46	10.54	11.34	-68.13	11.77	730.68	683.86	664.29	19.57	34.945	
3,776.00	3,771.84	3,771.97	3,763.94	10.79	11.57	-69.05	5.37	732.33	682.16	662.15	20.01	34.099	
3,799.99	3,795.75	3,796.17	3,788.05	10.86	11.65	-68.41	3.34	732.85	681.62	661.48	20.15	33.836	
3,864.00	3,859.53	3,859.84	3,851.49	11.07	11.85	-66.69	-1.94	734.20	680.09	659.57	20.52	33.149	
3,899.99	3,895.39	3,895.34	3,886.86	11.19	11.96	-66.49	-4.86	734.98	679.22	658.49	20.73	32.772	
3,954.00	3,949.21	3,948.72	3,940.05	11.37	12.13	-66.20	-9.22	736.19	677.95	656.91	21.04	32.220	
3,999.99	3,995.04	3,994.23	3,985.39	11.52	12.28	-65.71	-12.96	737.25	676.89	655.58	21.31	31.761	
4,044.00	4,038.90	4,038.18	4,029.17	11.67	12.42	-65.23	-16.72	738.33	675.88	654.30	21.57	31.329	
4,099.99	4,094.70	4,094.15	4,084.86	11.85	12.61	-63.44	-22.06	739.77	674.53	652.62	21.90	30.794	
4,133.00	4,127.60	4,126.56	4,117.10	11.96	12.71	-62.32	-25.30	740.65	673.71	651.61	22.10	30.486	

<b>Company:</b>	Piedra Operating LLC	<b>Local Co-ordinate Reference:</b>	Well University 8-8E A H 5LS
<b>Project:</b>	Andrews County, TX (NAD83-TNC)	<b>TVD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Reference Site:</b>	University 8-8	<b>MD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Site Error:</b>	0.00	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	University 8-8E A H 5LS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	1.00	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH / 72180	<b>Database:</b>	USAEDMDB
<b>Reference Design:</b>	Surveys (Ensign T054)	<b>Offset TVD Reference:</b>	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)		
4,199.99	4,194.38	4,192.44	4,182.63	12.18	12.93	-60.71	-31.79	742.50	672.08	649.58	22.49	29.878	
4,222.00	4,216.32	4,214.26	4,204.34	12.26	13.00	-60.17	-33.93	743.12	671.54	648.92	22.62	29.682	
4,299.99	4,294.08	4,291.62	4,281.29	12.52	13.26	-59.03	-41.53	745.40	669.67	646.58	23.09	29.005	
4,312.00	4,306.05	4,303.54	4,293.15	12.56	13.30	-58.84	-42.70	745.76	669.39	646.23	23.16	28.903	
4,399.99	4,393.79	4,396.58	4,385.70	12.85	13.61	-56.39	-51.84	748.44	667.23	643.52	23.71	28.141	
4,401.00	4,394.80	4,397.78	4,386.89	12.86	13.61	-56.36	-51.96	748.46	667.20	643.48	23.72	28.131	
4,491.00	4,484.56	4,497.29	4,485.86	13.16	13.95	-54.89	-62.24	749.73	663.43	639.12	24.31	27.288	
4,499.99	4,493.53	4,506.50	4,495.02	13.19	13.98	-54.63	-63.20	749.80	663.01	638.64	24.37	27.206	
4,582.00	4,575.33	4,588.40	4,576.48	13.47	14.26	-52.19	-71.68	750.37	659.04	634.15	24.88	26.484	
4,599.99	4,593.27	4,606.07	4,594.05	13.53	14.31	-53.12	-73.47	750.50	658.18	633.18	25.00	26.331	
4,673.00	4,666.07	4,678.55	4,666.17	13.78	14.55	-56.55	-80.72	751.08	654.75	629.29	25.46	25.722	
4,699.99	4,692.98	4,705.50	4,692.99	13.87	14.64	-57.96	-83.36	751.29	653.51	627.88	25.63	25.500	
4,764.00	4,756.79	4,769.05	4,756.24	14.09	14.85	-61.27	-89.44	751.79	650.76	624.72	26.04	24.992	
4,799.99	4,792.66	4,804.73	4,791.77	14.22	14.97	-60.62	-92.77	752.08	649.30	623.03	26.27	24.715	
4,854.00	4,846.51	4,858.77	4,845.58	14.40	15.15	-59.62	-97.73	752.51	647.09	620.46	26.62	24.306	
4,899.99	4,892.36	4,904.77	4,891.39	14.56	15.31	-59.69	-101.85	752.87	645.20	618.27	26.92	23.965	
4,943.00	4,935.24	4,947.59	4,934.09	14.71	15.48	-59.79	-105.15	753.15	643.45	616.25	27.20	23.653	
4,999.99	4,992.07	5,004.52	4,990.92	14.91	15.70	-59.82	-108.41	753.42	641.23	613.65	27.58	23.247	
5,033.00	5,024.99	5,037.71	5,024.07	15.02	15.82	-59.86	-109.96	753.53	639.99	612.19	27.80	23.018	
5,099.99	5,091.82	5,104.15	5,090.46	15.25	16.07	-60.07	-112.48	753.68	637.52	609.27	28.25	22.569	
5,122.00	5,113.77	5,125.62	5,111.93	15.33	16.14	-60.16	-113.01	753.72	636.74	608.35	28.39	22.426	
5,199.99	5,191.56	5,202.51	5,188.82	15.60	16.41	-60.67	-113.94	753.89	634.01	605.10	28.92	21.926	
5,212.00	5,203.54	5,214.49	5,200.79	15.64	16.45	-60.75	-114.05	753.92	633.59	604.59	29.00	21.851	
5,299.99	5,291.28	5,302.46	5,288.75	15.95	16.75	-59.60	-114.85	754.11	630.40	600.80	29.59	21.301	
5,303.00	5,294.28	5,305.47	5,291.77	15.96	16.76	-59.56	-114.88	754.11	630.29	600.67	29.61	21.283	
5,393.00	5,384.02	5,396.48	5,382.78	16.28	17.05	-65.40	-115.67	754.22	627.15	596.91	30.24	20.737	
5,399.99	5,390.99	5,403.60	5,389.89	16.30	17.08	-65.44	-115.74	754.22	626.92	596.63	30.29	20.695	
5,483.00	5,473.76	5,485.04	5,471.33	16.59	17.34	-66.30	-116.62	754.25	624.20	593.33	30.87	20.218	
5,499.99	5,490.70	5,501.40	5,487.69	16.65	17.39	-66.61	-116.83	754.29	623.70	592.71	30.99	20.125	
5,573.00	5,563.48	5,572.96	5,559.23	16.91	17.63	-67.91	-117.91	754.66	621.71	590.21	31.50	19.739	
5,599.99	5,590.39	5,599.62	5,585.89	17.00	17.72	-68.01	-118.38	754.84	621.02	589.33	31.68	19.600	
5,662.00	5,652.21	5,661.35	5,647.61	17.22	17.92	-68.26	-119.50	755.27	619.47	587.35	32.11	19.289	
5,699.99	5,690.08	5,699.25	5,685.50	17.36	18.05	-68.22	-120.16	755.54	618.51	586.13	32.38	19.102	
5,752.00	5,741.93	5,754.40	5,740.64	17.54	18.23	-68.21	-121.10	755.79	617.06	584.29	32.76	18.835	
5,799.99	5,789.76	5,805.03	5,791.27	17.71	18.39	-69.46	-121.99	755.75	615.48	582.37	33.11	18.586	
5,841.00	5,830.64	5,847.21	5,833.44	17.85	18.53	-70.53	-122.74	755.59	614.07	580.65	33.42	18.374	
5,899.99	5,889.45	5,906.41	5,892.63	18.06	18.72	-75.01	-123.77	755.24	612.18	578.32	33.86	18.080	
5,931.00	5,920.37	5,936.57	5,922.79	18.17	18.81	-77.53	-124.27	755.09	611.38	577.29	34.09	17.936	
5,999.99	5,989.19	6,005.09	5,991.30	18.41	19.03	-84.49	-125.36	754.85	610.17	575.56	34.60	17.634	
6,022.00	6,011.15	6,027.43	6,013.64	18.49	19.11	-87.04	-125.72	754.75	609.90	575.14	34.77	17.543	
6,099.99	6,088.99	6,105.15	6,091.34	18.76	19.36	-88.40	-126.97	754.39	609.11	573.76	35.35	17.233	
6,112.00	6,100.99	6,116.97	6,103.16	18.80	19.40	-88.62	-127.16	754.34	609.00	573.57	35.43	17.187	
6,199.99	6,188.87	6,205.18	6,191.36	19.11	19.68	-90.58	-128.54	754.02	608.38	572.30	36.08	16.862	
6,201.00	6,189.88	6,206.21	6,192.39	19.11	19.68	-90.61	-128.55	754.01	608.37	572.28	36.09	16.858	
6,291.00	6,279.81	6,297.98	6,284.14	19.43	19.98	-91.46	-129.98	753.49	607.64	570.90	36.75	16.536	
6,299.99	6,288.79	6,307.17	6,293.33	19.46	20.01	-91.63	-130.12	753.42	607.56	570.75	36.81	16.504	

<b>Company:</b>	Piedra Operating LLC	<b>Local Co-ordinate Reference:</b>	Well University 8-8E A H 5LS
<b>Project:</b>	Andrews County, TX (NAD83-TNC)	<b>TVD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Reference Site:</b>	University 8-8	<b>MD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Site Error:</b>	0.00	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	University 8-8E A H 5LS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	1.00	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH / 72180	<b>Database:</b>	USAEDMDB
<b>Reference Design:</b>	Surveys (Ensign T054)	<b>Offset TVD Reference:</b>	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)		
6,381.00	6,369.74	6,386.27	6,372.43	19.74	20.26	-93.14	-131.33	752.86	606.88	569.48	37.40	16.228	
6,399.99	6,388.71	6,404.54	6,390.69	19.80	20.32	-93.12	-131.61	752.79	606.78	569.25	37.53	16.167	
6,470.00	6,458.68	6,472.43	6,458.58	20.04	20.55	-93.04	-132.67	752.68	606.59	568.56	38.03	15.951	
6,499.99	6,488.64	6,501.56	6,487.70	20.15	20.65	-92.45	-133.15	752.71	606.57	568.33	38.24	15.862	
6,559.00	6,547.62	6,560.64	6,546.77	20.35	20.85	-91.27	-134.17	752.83	606.54	567.88	38.66	15.689	
6,599.99	6,588.57	6,601.64	6,587.76	20.49	20.98	-92.73	-134.93	752.91	606.51	567.56	38.95	15.571	
6,604.63	6,593.22	6,606.23	6,592.35	20.51	21.00	-92.89	-135.01	752.92	606.51	567.53	38.98	15.558	
6,650.00	6,638.55	6,651.04	6,637.16	20.66	21.15	-94.51	-135.81	753.03	606.56	567.25	39.30	15.432	
6,699.99	6,688.51	6,700.65	6,686.76	20.84	21.32	-94.07	-136.63	753.18	606.67	567.01	39.66	15.297	
6,740.00	6,728.49	6,740.74	6,726.85	20.97	21.46	-93.70	-137.26	753.30	606.74	566.80	39.94	15.190	
6,799.99	6,788.44	6,801.14	6,787.24	21.18	21.66	-92.80	-138.17	753.46	606.82	566.45	40.37	15.031	
6,830.00	6,818.43	6,831.54	6,817.63	21.29	21.77	-92.36	-138.63	753.51	606.82	566.23	40.59	14.951	
6,879.40	6,867.80	6,880.88	6,866.96	21.46	21.94	-93.08	-139.37	753.57	606.79	565.85	40.94	14.822	
6,899.99	6,888.38	6,900.99	6,887.08	21.53	22.00	-93.38	-139.67	753.60	606.80	565.71	41.08	14.770	
6,919.00	6,907.38	6,919.57	6,905.65	21.59	22.07	-93.66	-139.94	753.65	606.82	565.61	41.22	14.723	
6,999.99	6,988.32	6,999.67	6,985.75	21.88	22.34	-92.38	-141.04	753.95	607.02	565.23	41.79	14.527	
7,009.00	6,997.33	7,008.66	6,994.74	21.91	22.37	-92.22	-141.16	753.99	607.04	565.19	41.85	14.505	
7,099.00	7,087.28	7,097.78	7,083.84	22.22	22.67	-92.65	-142.29	754.39	607.29	564.81	42.48	14.297	
7,099.99	7,088.26	7,098.75	7,084.81	22.22	22.68	-92.65	-142.31	754.39	607.30	564.81	42.48	14.295	
7,188.00	7,176.24	7,186.09	7,172.15	22.53	22.97	-93.94	-143.30	754.91	607.72	564.63	43.09	14.103	
7,199.99	7,188.22	7,198.03	7,184.08	22.57	23.01	-94.70	-143.42	754.98	607.79	564.62	43.18	14.077	
7,277.00	7,265.20	7,274.51	7,260.56	22.84	23.27	-99.84	-144.17	755.46	608.38	564.67	43.71	13.919	
7,299.99	7,288.17	7,297.31	7,283.36	22.92	23.34	-101.06	-144.39	755.62	608.60	564.73	43.87	13.874	
7,367.00	7,355.16	7,363.66	7,349.71	23.15	23.56	-104.93	-145.07	756.14	609.35	565.03	44.33	13.746	
7,399.99	7,388.14	7,396.31	7,382.35	23.26	23.67	-106.32	-145.45	756.43	609.79	565.23	44.56	13.686	
7,457.00	7,445.13	7,452.03	7,438.06	23.45	23.85	-108.64	-146.09	757.00	610.67	565.72	44.94	13.587	
7,481.00	7,469.12	7,475.47	7,461.51	23.53	23.93	-115.26	-146.34	757.28	611.12	566.02	45.10	13.550	
7,499.99	7,488.10	7,494.75	7,480.77	23.59	24.00	-115.69	-146.55	757.51	611.52	566.28	45.24	13.518	
7,595.00	7,583.07	7,592.74	7,578.75	23.90	24.43	-117.59	-147.85	758.46	613.36	567.43	45.93	13.353	
7,599.98	7,588.06	7,597.88	7,583.90	23.91	24.45	-117.85	-147.92	758.50	613.45	567.48	45.97	13.344	
7,685.00	7,673.03	7,679.87	7,665.87	24.20	24.78	-121.99	-149.21	759.10	615.12	568.54	46.58	13.205	
7,699.98	7,688.00	7,693.03	7,679.03	24.25	24.82	-123.83	-149.34	759.27	615.54	568.86	46.68	13.186	
7,774.00	7,761.97	7,758.95	7,744.94	24.49	25.05	-132.02	-149.54	760.56	618.55	571.38	47.16	13.115	
7,799.98	7,787.94	7,782.72	7,768.70	24.57	25.11	-134.27	-149.45	761.18	619.80	572.47	47.33	13.094	
7,864.00	7,851.95	7,841.98	7,827.92	24.76	25.29	-163.76	-148.88	763.00	622.59	574.84	47.75	13.038	
7,899.98	7,887.93	7,876.21	7,862.14	24.86	25.38	-157.76	-148.29	764.14	624.14	576.17	47.98	13.009	
7,954.00	7,941.94	7,929.65	7,915.53	25.02	25.54	-155.77	-146.95	765.99	627.00	578.67	48.33	12.973	
7,999.98	7,987.91	7,980.62	7,966.45	25.15	25.69	-162.30	-145.68	767.50	629.53	580.88	48.65	12.939	
8,044.00	8,031.91	8,027.89	8,013.70	25.28	25.83	-166.15	-144.67	768.59	631.91	582.95	48.95	12.909	
8,099.98	8,087.87	8,086.08	8,071.88	25.44	26.00	-175.27	-143.75	769.79	634.82	585.48	49.33	12.868	
8,133.00	8,120.88	8,121.20	8,106.99	25.54	26.10	-163.01	-143.35	770.43	636.36	586.80	49.56	12.839	
8,199.98	8,187.84	8,193.21	8,178.99	25.74	26.31	-150.64	-142.68	771.36	638.95	588.91	50.05	12.767	
8,223.00	8,210.85	8,218.45	8,204.23	25.81	26.39	-146.23	-142.45	771.53	639.66	589.45	50.21	12.739	
8,299.98	8,287.81	8,300.82	8,286.59	26.06	26.63	-132.99	-141.66	771.50	641.12	590.36	50.76	12.630	
8,312.00	8,299.83	8,313.08	8,298.85	26.10	26.67	-130.07	-141.60	771.46	641.25	590.41	50.85	12.612	

<b>Company:</b>	Piedra Operating LLC	<b>Local Co-ordinate Reference:</b>	Well University 8-8E A H 5LS
<b>Project:</b>	Andrews County, TX (NAD83-TNC)	<b>TVD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Reference Site:</b>	University 8-8	<b>MD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Site Error:</b>	0.00	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	University 8-8E A H 5LS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	1.00	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH / 72180	<b>Database:</b>	USAEDMDB
<b>Reference Design:</b>	Surveys (Ensign T054)	<b>Offset TVD Reference:</b>	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					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)	Separation Factor	
8,399.98	8,387.80	8,404.12	8,389.89	26.38	26.94	-135.35	-141.77	771.18	641.83	590.37	51.46	12.471	
8,401.00	8,388.82	8,405.19	8,390.96	26.39	26.95	-135.44	-141.77	771.17	641.83	590.36	51.47	12.469	
8,490.00	8,477.81	8,495.76	8,481.52	26.66	27.23	-164.50	-142.35	770.50	642.17	590.07	52.10	12.325	
8,499.98	8,487.79	8,505.59	8,491.36	26.69	27.26	-166.09	-142.43	770.44	642.25	590.08	52.17	12.310	
8,581.00	8,568.79	8,591.28	8,577.03	26.94	27.54	-177.79	-143.42	769.78	642.90	590.15	52.74	12.189	
8,599.98	8,587.77	8,612.44	8,598.20	27.00	27.61	-167.50	-143.80	769.49	642.93	590.05	52.88	12.158	
8,670.00	8,657.77	8,691.87	8,677.58	27.21	27.86	-138.35	-145.41	767.75	642.45	589.06	53.39	12.033	
8,699.98	8,687.74	8,724.28	8,709.97	27.33	27.96	-123.06	-146.03	766.68	641.94	588.32	53.62	11.971	
8,760.00	8,747.68	8,777.65	8,763.31	27.56	28.12	-110.86	-146.86	765.10	641.29	587.21	54.08	11.858	
8,783.05	8,770.68	8,798.13	8,783.79	27.65	28.18	-111.51	-147.11	764.63	641.24	586.98	54.26	11.819	
8,799.98	8,787.58	8,813.45	8,799.10	27.72	28.23	-111.98	-147.27	764.32	641.27	586.88	54.39	11.791	
8,849.00	8,836.49	8,859.85	8,845.49	27.92	28.38	-113.39	-147.75	763.53	641.54	586.77	54.77	11.714	
8,872.00	8,859.45	8,881.62	8,867.26	28.00	28.44	-113.12	-147.98	763.23	641.73	586.80	54.93	11.683	
8,899.98	8,887.36	8,909.14	8,894.77	28.11	28.57	-101.71	-148.33	762.92	641.90	586.73	55.17	11.635	
8,941.00	8,928.19	8,952.03	8,937.62	28.27	28.84	-92.40	-150.15	762.71	641.66	586.06	55.60	11.540	
8,999.98	8,986.21	9,014.02	8,999.30	29.02	29.39	-83.10	-156.15	763.15	639.67	583.35	56.32	11.359	
9,031.00	9,016.02	9,046.88	9,031.70	29.44	29.81	-81.87	-161.56	763.90	637.66	580.94	56.72	11.242	
9,099.98	9,080.85	9,122.05	9,104.52	30.46	30.66	-79.90	-179.83	766.92	631.19	573.70	57.49	10.980	
9,121.00	9,100.27	9,145.39	9,126.76	30.79	30.90	-79.50	-186.83	768.08	628.66	570.97	57.69	10.897	
9,199.98	9,171.23	9,233.69	9,209.19	31.40	31.60	-81.80	-218.01	773.10	617.67	559.26	58.41	10.574	
9,210.00	9,179.96	9,244.90	9,219.47	31.48	31.68	-82.10	-222.42	773.78	616.14	557.63	58.51	10.531	
9,299.00	9,255.54	9,322.84	9,288.48	32.18	32.48	-88.91	-257.81	780.53	605.34	545.82	59.52	10.170	
9,299.98	9,256.36	9,323.66	9,289.18	32.19	32.48	-88.99	-258.24	780.63	605.26	545.73	59.54	10.166	
9,369.72	9,313.50	9,377.91	9,333.47	32.62	33.15	-93.56	-288.46	788.69	602.31	541.75	60.56	9.946	CC
9,389.00	9,329.05	9,391.96	9,344.58	32.75	33.33	-94.68	-296.70	791.22	602.54	541.70	60.84	9.903	
9,399.98	9,337.84	9,399.96	9,350.83	32.81	33.44	-94.46	-301.45	792.74	602.82	541.84	60.99	9.884	
9,479.00	9,398.36	9,470.22	9,403.75	33.28	34.16	-93.12	-345.00	808.13	605.81	543.81	61.99	9.772	
9,499.98	9,413.49	9,495.50	9,421.95	33.43	34.33	-92.86	-361.57	813.90	606.43	544.21	62.22	9.747	
9,568.00	9,458.53	9,570.60	9,473.26	33.92	34.74	-92.44	-413.59	831.18	607.47	544.54	62.94	9.652	
9,568.01	9,458.54	9,570.61	9,473.27	33.92	34.74	-92.44	-413.59	831.18	607.47	544.54	62.94	9.652	
9,599.98	9,477.62	9,603.93	9,494.54	34.11	34.90	-92.47	-437.95	839.17	607.74	544.46	63.29	9.603	
9,601.52	9,478.51	9,605.53	9,495.55	34.12	34.91	-92.47	-439.14	839.56	607.75	544.45	63.30	9.601	
9,657.00	9,508.72	9,666.82	9,530.91	34.46	35.21	-92.52	-486.70	855.00	607.86	543.98	63.89	9.515	
9,699.98	9,529.60	9,714.99	9,553.87	34.64	35.45	-92.71	-527.02	867.87	607.72	543.41	64.31	9.449	
9,711.15	9,534.66	9,727.51	9,559.18	34.69	35.51	-92.72	-537.83	871.28	607.69	543.27	64.42	9.433	
9,748.00	9,550.27	9,768.68	9,574.93	34.85	35.69	-92.71	-574.13	882.64	607.61	542.83	64.78	9.379	
9,754.35	9,552.77	9,775.76	9,577.37	34.87	35.72	-92.72	-580.47	884.61	607.61	542.76	64.85	9.370	
9,799.98	9,568.71	9,827.87	9,592.92	35.03	35.93	-92.76	-628.01	899.18	607.82	542.48	65.34	9.303	
9,800.10	9,568.75	9,828.01	9,592.96	35.04	35.93	-92.76	-628.14	899.22	607.82	542.48	65.34	9.302	
9,837.00	9,578.89	9,870.61	9,602.63	35.17	36.09	-92.71	-667.89	911.07	608.25	542.49	65.76	9.250	
9,839.24	9,579.42	9,873.20	9,603.13	35.18	36.10	-92.70	-670.33	911.79	608.28	542.50	65.78	9.247	
9,899.98	9,588.83	9,943.16	9,612.71	35.33	36.36	-92.53	-736.89	930.98	609.38	542.87	66.51	9.163	
9,900.67	9,588.89	9,943.95	9,612.78	35.34	36.37	-92.53	-737.64	931.19	609.39	542.88	66.51	9.162	
9,928.00	9,589.86	9,975.44	9,614.59	35.41	36.49	-92.51	-767.91	939.67	610.01	543.16	66.85	9.125	
9,928.66	9,589.85	9,976.21	9,614.61	35.41	36.50	-92.51	-768.65	939.87	610.02	543.17	66.86	9.124	
9,952.00	9,589.61	10,003.13	9,614.91	35.46	36.60	-92.54	-794.60	947.01	610.54	543.41	67.13	9.095	

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

<b>Company:</b>	Piedra Operating LLC	<b>Local Co-ordinate Reference:</b>	Well University 8-8E A H 5LS
<b>Project:</b>	Andrews County, TX (NAD83-TNC)	<b>TVD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Reference Site:</b>	University 8-8	<b>MD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Site Error:</b>	0.00	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	University 8-8E A H 5LS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	1.00	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH / 72180	<b>Database:</b>	USAEDMDB
<b>Reference Design:</b>	Surveys (Ensign T054)	<b>Offset TVD Reference:</b>	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)		
9,952.04	9,589.61	10,003.18	9,614.91	35.46	36.61	-92.54	-794.65	947.02	610.54	543.41	67.13	9.095	
9,999.98	9,588.80	10,053.04	9,615.19	35.57	36.73	-92.66	-842.77	960.08	611.42	543.72	67.70	9.031	
10,000.02	9,588.59	10,053.08	9,615.19	35.57	36.73	-92.66	-842.81	960.09	611.42	543.72	67.70	9.031	
10,042.00	9,587.53	10,097.23	9,615.29	35.67	36.86	-92.77	-885.47	971.47	611.94	543.74	68.20	8.973	
10,042.02	9,587.53	10,097.25	9,615.29	35.67	36.86	-92.77	-885.49	971.47	611.94	543.74	68.20	8.973	
10,099.98	9,586.09	10,157.35	9,615.35	35.85	37.04	-92.86	-943.61	986.77	613.68	544.71	68.97	8.898	
10,100.02	9,586.09	10,157.39	9,615.35	35.85	37.04	-92.86	-943.65	986.78	613.68	544.71	68.97	8.898	
10,132.00	9,585.40	10,189.79	9,615.36	35.96	37.15	-92.90	-975.01	994.95	615.65	546.24	69.41	8.870	
10,199.98	9,583.86	10,257.20	9,615.15	36.22	37.39	-92.96	-1,040.23	1,011.97	621.13	550.75	70.38	8.825	
10,223.00	9,583.26	10,280.96	9,615.02	36.31	37.49	-92.98	-1,063.22	1,017.96	623.21	552.50	70.71	8.814	
10,299.98	9,581.11	10,360.64	9,614.38	36.63	37.82	-93.08	-1,140.39	1,037.80	630.09	558.33	71.76	8.780	
10,312.00	9,580.77	10,372.40	9,614.27	36.68	37.88	-93.09	-1,151.78	1,040.71	631.15	559.21	71.93	8.774	
10,399.98	9,578.76	10,459.27	9,613.39	37.11	38.30	-93.23	-1,235.92	1,062.30	638.45	565.23	73.22	8.719	
10,401.00	9,578.74	10,460.32	9,613.38	37.12	38.30	-93.23	-1,236.93	1,062.56	638.53	565.29	73.24	8.718	
10,490.00	9,577.42	10,550.37	9,612.11	37.61	38.79	-93.21	-1,324.18	1,084.83	645.51	570.94	74.57	8.656	
10,499.98	9,577.29	10,560.17	9,611.98	37.68	38.85	-93.21	-1,333.67	1,087.25	646.30	571.57	74.73	8.649	
10,580.00	9,576.23	10,641.02	9,611.20	38.20	39.33	-93.23	-1,412.01	1,107.25	651.18	575.17	76.00	8.568	
10,580.05	9,576.23	10,641.08	9,611.20	38.20	39.33	-93.23	-1,412.07	1,107.26	651.18	575.18	76.00	8.568	
10,599.98	9,575.95	10,662.74	9,610.99	38.34	39.47	-93.23	-1,433.07	1,112.54	652.00	575.68	76.32	8.543	
10,600.03	9,575.95	10,662.79	9,610.99	38.34	39.47	-93.23	-1,433.12	1,112.56	652.00	575.68	76.32	8.543	
10,670.00	9,574.71	10,737.65	9,610.09	38.84	39.96	-93.23	-1,505.81	1,130.43	654.71	577.26	77.46	8.453	
10,670.21	9,574.70	10,737.87	9,610.09	38.85	39.96	-93.23	-1,506.03	1,130.48	654.72	577.26	77.46	8.452	
10,699.98	9,574.09	10,768.98	9,609.74	39.07	40.18	-93.25	-1,536.26	1,137.77	655.83	577.88	77.95	8.413	
10,700.68	9,574.08	10,769.71	9,609.73	39.07	40.18	-93.25	-1,536.98	1,137.94	655.86	577.90	77.96	8.412	
10,759.00	9,572.88	10,831.53	9,609.02	39.51	40.62	-93.29	-1,597.12	1,152.22	657.91	578.97	78.93	8.335	
10,760.03	9,572.85	10,832.63	9,609.01	39.52	40.63	-93.29	-1,598.19	1,152.48	657.94	578.99	78.95	8.334	
10,799.98	9,571.96	10,875.44	9,608.10	39.83	40.94	-93.27	-1,639.88	1,162.17	659.27	579.65	79.62	8.280	
10,801.01	9,571.93	10,876.54	9,608.07	39.84	40.95	-93.27	-1,640.95	1,162.42	659.31	579.67	79.64	8.278	
10,848.00	9,570.69	10,922.10	9,606.93	40.21	41.29	-93.25	-1,685.33	1,172.66	661.06	580.59	80.47	8.215	
10,848.03	9,570.69	10,922.13	9,606.93	40.21	41.29	-93.25	-1,685.36	1,172.67	661.06	580.59	80.47	8.215	
10,899.98	9,569.58	10,971.43	9,606.08	40.65	41.68	-93.32	-1,733.35	1,183.90	662.66	581.24	81.42	8.139	
10,900.00	9,569.58	10,971.45	9,606.08	40.66	41.68	-93.32	-1,733.37	1,183.91	662.67	581.24	81.42	8.139	
10,938.00	9,569.24	11,013.47	9,605.57	40.98	42.01	-93.32	-1,774.29	1,193.45	662.95	580.85	82.10	8.075	
10,999.98	9,569.14	11,079.60	9,604.89	41.56	42.55	-93.27	-1,838.82	1,207.93	661.56	578.32	83.24	7.948	
11,026.00	9,569.19	11,104.07	9,604.75	41.80	42.75	-93.26	-1,862.69	1,213.27	660.52	576.78	83.74	7.888	
11,099.98	9,569.28	11,176.29	9,604.83	42.48	43.37	-93.28	-1,933.11	1,229.29	657.65	572.51	85.14	7.724	
11,118.00	9,569.27	11,195.53	9,604.89	42.65	43.53	-93.29	-1,951.87	1,233.53	656.97	571.50	85.48	7.686	
11,199.98	9,568.81	11,289.80	9,604.96	43.41	44.36	-93.38	-2,043.99	1,253.61	653.43	566.44	86.99	7.511	
11,207.00	9,568.73	11,298.56	9,604.92	43.48	44.44	-93.39	-2,052.57	1,255.37	653.04	565.93	87.12	7.496	
11,297.00	9,567.33	11,394.75	9,604.01	44.33	45.32	-93.51	-2,146.97	1,273.75	647.34	558.49	88.85	7.286	
11,299.98	9,567.27	11,397.70	9,603.98	44.36	45.35	-93.51	-2,149.88	1,274.31	647.15	558.25	88.91	7.279	
11,387.00	9,565.32	11,471.57	9,603.25	45.21	46.05	-93.65	-2,222.31	1,288.81	641.79	551.08	90.71	7.075	
11,399.98	9,565.02	11,481.83	9,603.16	45.34	46.15	-93.66	-2,232.33	1,290.98	641.11	550.13	90.98	7.046	
11,478.00	9,564.25	11,557.23	9,602.66	46.12	46.89	-93.63	-2,305.87	1,307.63	637.94	545.36	92.58	6.891	
11,499.98	9,564.24	11,582.40	9,602.53	46.34	47.13	-93.64	-2,330.45	1,313.04	636.94	543.93	93.02	6.848	

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



<b>Company:</b>	Piedra Operating LLC	<b>Local Co-ordinate Reference:</b>	Well University 8-8E A H 5LS
<b>Project:</b>	Andrews County, TX (NAD83-TNC)	<b>TVD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Reference Site:</b>	University 8-8	<b>MD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Site Error:</b>	0.00	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	University 8-8E A H 5LS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	1.00	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH / 72180	<b>Database:</b>	USAEDMDB
<b>Reference Design:</b>	Surveys (Ensign T054)	<b>Offset TVD Reference:</b>	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)		
11,567.00	9,563.79	11,654.65	9,602.21	47.02	47.84	-93.71	-2,401.13	1,328.02	633.33	538.96	94.37	6.711	
11,599.98	9,563.52	11,689.44	9,602.10	47.36	48.19	-93.70	-2,435.20	1,335.07	631.52	536.47	95.04	6.645	
11,656.00	9,563.61	11,741.57	9,601.94	47.94	48.71	-93.66	-2,486.23	1,345.69	629.24	533.02	96.22	6.539	
11,699.98	9,563.94	11,782.00	9,601.78	48.40	49.11	-93.63	-2,525.76	1,354.17	628.20	531.05	97.15	6.466	
11,746.00	9,564.28	11,827.31	9,601.81	48.89	49.58	-93.61	-2,570.04	1,363.80	627.54	529.42	98.12	6.395	
11,799.98	9,564.93	11,873.00	9,602.29	49.46	50.04	-93.59	-2,614.67	1,373.56	626.63	527.34	99.29	6.311	
11,837.00	9,565.66	11,910.69	9,603.04	49.85	50.44	-93.58	-2,651.43	1,381.81	625.68	525.60	100.08	6.252	
11,899.98	9,567.14	11,964.90	9,604.68	50.53	51.01	-93.61	-2,704.16	1,394.32	624.37	522.91	101.45	6.154	
11,928.00	9,567.81	11,992.39	9,605.67	50.84	51.30	-93.64	-2,730.85	1,400.83	623.90	521.83	102.06	6.113	
11,968.96	9,568.76	12,032.56	9,607.12	51.29	51.73	-93.71	-2,769.84	1,410.39	623.54	520.58	102.96	6.056	
11,999.98	9,569.45	12,063.17	9,608.25	51.63	52.06	-93.77	-2,799.54	1,417.71	623.75	520.10	103.64	6.018	
11,999.99	9,569.45	12,063.19	9,608.25	51.63	52.06	-93.77	-2,799.55	1,417.71	623.75	520.10	103.65	6.018	
12,018.00	9,569.83	12,081.17	9,608.96	51.83	52.25	-93.80	-2,817.00	1,422.01	624.04	520.00	104.04	5.998	
12,018.01	9,569.83	12,081.18	9,608.96	51.83	52.25	-93.80	-2,817.01	1,422.01	624.04	520.00	104.04	5.998	
12,099.98	9,570.85	12,160.87	9,612.60	52.74	53.11	-94.02	-2,894.31	1,441.06	626.67	520.81	105.86	5.920	
12,099.98	9,570.85	12,160.88	9,612.60	52.74	53.12	-94.02	-2,894.31	1,441.06	626.67	520.81	105.86	5.920	
12,109.00	9,570.87	12,168.93	9,612.94	52.84	53.20	-94.04	-2,902.12	1,443.02	627.11	521.05	106.06	5.913	
12,109.04	9,570.87	12,168.96	9,612.94	52.84	53.20	-94.04	-2,902.15	1,443.03	627.11	521.05	106.06	5.913	
12,198.00	9,571.32	12,250.15	9,615.12	53.81	54.09	-94.19	-2,980.68	1,463.49	632.30	524.28	108.02	5.854	
12,198.01	9,571.32	12,250.16	9,615.12	53.81	54.09	-94.19	-2,980.69	1,463.49	632.30	524.28	108.02	5.854	
12,199.98	9,571.33	12,252.13	9,615.15	53.84	54.11	-94.19	-2,982.59	1,464.00	632.43	524.36	108.06	5.853	
12,200.34	9,571.34	12,252.50	9,615.16	53.84	54.12	-94.19	-2,982.95	1,464.09	632.45	524.38	108.07	5.852	
12,288.00	9,571.92	12,340.04	9,616.26	54.81	55.08	-94.20	-3,067.53	1,486.64	638.36	528.35	110.01	5.803	
12,288.01	9,571.92	12,340.05	9,616.26	54.81	55.08	-94.20	-3,067.54	1,486.65	638.36	528.35	110.01	5.803	
12,299.98	9,571.99	12,351.90	9,616.39	54.94	55.22	-94.20	-3,078.99	1,489.70	639.22	528.95	110.27	5.797	
12,377.00	9,572.37	12,428.85	9,617.23	55.79	56.07	-94.20	-3,153.32	1,509.57	645.04	533.06	111.99	5.760	
12,399.98	9,572.49	12,452.59	9,617.53	56.05	56.34	-94.21	-3,176.27	1,515.67	646.82	534.31	112.51	5.749	
12,467.00	9,573.03	12,522.55	9,618.48	56.80	57.12	-94.23	-3,243.92	1,533.45	651.79	537.77	114.02	5.716	
12,467.03	9,573.03	12,522.59	9,618.48	56.80	57.12	-94.23	-3,243.96	1,533.46	651.79	537.77	114.02	5.716	
12,499.98	9,573.40	12,557.78	9,618.32	57.17	57.52	-94.17	-3,278.02	1,542.29	654.12	539.35	114.77	5.699	
12,500.03	9,573.40	12,557.84	9,618.32	57.17	57.52	-94.17	-3,278.08	1,542.31	654.12	539.35	114.77	5.699	
12,558.00	9,574.15	12,616.50	9,616.76	57.83	58.19	-93.96	-3,334.87	1,556.90	658.20	542.11	116.08	5.670	
12,599.98	9,574.63	12,655.92	9,615.58	58.30	58.64	-93.77	-3,373.01	1,566.81	661.20	544.17	117.03	5.650	
12,647.00	9,574.88	12,702.78	9,614.33	58.84	59.17	-93.59	-3,418.31	1,578.73	664.35	546.25	118.10	5.625	
12,647.01	9,574.88	12,702.78	9,614.33	58.84	59.17	-93.59	-3,418.32	1,578.73	664.35	546.25	118.10	5.625	
12,699.97	9,574.76	12,759.95	9,613.02	59.44	59.83	-93.44	-3,473.66	1,593.00	667.54	548.21	119.33	5.594	
12,700.03	9,574.76	12,760.01	9,613.02	59.45	59.83	-93.44	-3,473.71	1,593.02	667.54	548.21	119.33	5.594	
12,737.00	9,574.41	12,802.57	9,612.10	59.87	60.32	-93.37	-3,514.99	1,603.36	669.60	549.40	120.20	5.571	
12,737.12	9,574.41	12,802.72	9,612.10	59.87	60.32	-93.37	-3,515.13	1,603.39	669.61	549.41	120.20	5.571	
12,799.97	9,573.76	12,861.00	9,610.42	60.60	60.99	-93.28	-3,571.80	1,616.92	672.44	550.80	121.64	5.528	
12,799.97	9,573.76	12,861.00	9,610.42	60.60	60.99	-93.28	-3,571.80	1,616.92	672.44	550.80	121.64	5.528	
12,827.00	9,573.57	12,890.38	9,609.71	60.91	61.34	-93.23	-3,600.36	1,623.77	673.62	551.34	122.28	5.509	
12,827.01	9,573.57	12,890.39	9,609.71	60.91	61.34	-93.23	-3,600.36	1,623.77	673.62	551.34	122.28	5.509	
12,899.97	9,573.03	12,951.00	9,609.92	61.75	62.07	-93.26	-3,658.94	1,639.32	678.67	554.73	123.94	5.476	
12,918.00	9,572.87	12,957.74	9,610.06	61.96	62.15	-93.27	-3,665.43	1,641.16	680.17	555.89	124.28	5.473	
12,999.97	9,572.48	13,036.92	9,611.12	62.93	63.09	-93.40	-3,741.55	1,662.91	686.30	560.09	126.21	5.438	

<b>Company:</b>	Piedra Operating LLC	<b>Local Co-ordinate Reference:</b>	Well University 8-8E A H 5LS
<b>Project:</b>	Andrews County, TX (NAD83-TNC)	<b>TVD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Reference Site:</b>	University 8-8	<b>MD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Site Error:</b>	0.00	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	University 8-8E A H 5LS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	1.00	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH / 72180	<b>Database:</b>	USAEDMDB
<b>Reference Design:</b>	Surveys (Ensign T054)	<b>Offset TVD Reference:</b>	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)		
13,007.00	9,572.48	13,044.65	9,611.16	63.02	63.19	-93.40	-3,748.98	1,665.05	686.71	560.33	126.38	5.434	
13,007.43	9,572.48	13,045.21	9,611.16	63.02	63.19	-93.40	-3,749.51	1,665.20	686.73	560.34	126.39	5.433	
13,097.00	9,572.61	13,156.49	9,607.73	64.09	64.51	-93.09	-3,856.89	1,694.16	690.15	561.48	128.67	5.364	
13,097.04	9,572.61	13,156.53	9,607.73	64.09	64.51	-93.09	-3,856.93	1,694.17	690.15	561.48	128.67	5.364	
13,099.97	9,572.62	13,159.71	9,607.61	64.12	64.55	-93.08	-3,860.01	1,694.95	690.23	561.49	128.74	5.361	
13,100.16	9,572.62	13,159.91	9,607.60	64.13	64.55	-93.08	-3,860.20	1,695.00	690.23	561.49	128.74	5.361	
13,186.00	9,573.32	13,258.08	9,606.33	65.15	65.72	-92.89	-3,955.50	1,718.48	690.68	559.84	130.84	5.279	
13,199.97	9,573.51	13,275.54	9,606.27	65.32	65.92	-92.86	-3,972.52	1,722.42	690.35	559.17	131.18	5.263	
13,275.00	9,574.94	13,359.61	9,606.02	66.23	66.92	-92.68	-4,054.62	1,740.45	686.78	553.79	132.99	5.164	
13,299.97	9,575.39	13,385.79	9,606.13	66.53	67.23	-92.70	-4,080.23	1,745.92	685.20	551.60	133.59	5.129	
13,366.00	9,575.28	13,457.16	9,606.51	67.33	68.08	-92.87	-4,150.09	1,760.50	680.68	545.50	135.18	5.036	
13,399.97	9,574.60	13,494.16	9,606.47	67.74	68.52	-92.98	-4,186.36	1,767.82	678.15	542.16	135.99	4.987	
13,455.00	9,572.87	13,539.36	9,606.36	68.41	69.06	-93.15	-4,230.61	1,777.02	674.47	537.15	137.32	4.912	
13,499.97	9,571.07	13,581.00	9,606.29	68.96	69.56	-93.32	-4,271.27	1,786.01	672.02	533.62	138.40	4.856	
13,544.00	9,569.21	13,617.88	9,606.35	69.49	70.00	-93.48	-4,307.22	1,794.23	669.85	530.40	139.46	4.803	
13,599.97	9,566.63	13,670.00	9,606.80	70.18	70.63	-93.75	-4,357.99	1,806.04	667.33	526.53	140.80	4.739	
13,635.00	9,564.88	13,703.56	9,607.39	70.61	71.04	-93.95	-4,390.64	1,813.74	665.92	524.28	141.65	4.701	
13,699.97	9,562.36	13,765.09	9,609.33	71.41	71.78	-94.24	-4,450.45	1,828.05	664.37	521.15	143.21	4.639	
13,705.82	9,562.21	13,771.04	9,609.56	71.48	71.86	-94.27	-4,456.24	1,829.45	664.31	520.96	143.36	4.634	
13,724.00	9,561.85	13,789.60	9,610.23	71.70	72.08	-94.35	-4,474.26	1,833.79	664.21	520.41	143.80	4.619	
13,740.73	9,561.58	13,806.68	9,610.80	71.91	72.29	-94.43	-4,490.86	1,837.78	664.16	519.95	144.21	4.606	
13,799.97	9,560.95	13,869.62	9,612.43	72.64	73.06	-94.63	-4,552.06	1,852.40	663.71	518.04	145.66	4.556	
13,813.00	9,560.87	13,884.81	9,612.68	72.80	73.24	-94.66	-4,566.85	1,855.86	663.50	517.51	145.99	4.545	
13,899.97	9,560.51	13,996.08	9,612.60	73.87	74.60	-94.71	-4,675.57	1,879.50	660.97	512.88	148.10	4.463	
13,902.00	9,560.50	13,998.94	9,612.57	73.89	74.64	-94.71	-4,678.37	1,880.05	660.88	512.73	148.15	4.461	
13,992.00	9,560.63	14,099.28	9,610.75	75.00	75.86	-94.55	-4,777.06	1,898.08	655.45	505.14	150.31	4.361	
13,999.97	9,560.66	14,107.47	9,610.58	75.10	75.97	-94.54	-4,785.13	1,899.52	654.96	504.46	150.50	4.352	
14,081.00	9,559.69	14,205.36	9,607.84	76.10	77.16	-94.52	-4,881.64	1,915.60	650.37	498.03	152.34	4.269	
14,099.97	9,559.16	14,222.33	9,607.23	76.34	77.36	-94.51	-4,898.40	1,918.18	649.37	496.54	152.83	4.249	
14,171.00	9,556.95	14,284.13	9,605.65	77.22	78.12	-94.52	-4,959.38	1,928.08	647.16	492.48	154.67	4.184	
14,192.85	9,556.20	14,298.00	9,605.44	77.49	78.29	-94.54	-4,973.05	1,930.42	646.95	491.68	155.27	4.167	
14,199.97	9,555.94	14,298.00	9,605.44	77.58	78.29	-94.54	-4,973.05	1,930.42	647.00	491.52	155.48	4.161	
14,207.40	9,555.67	14,312.55	9,605.25	77.67	78.47	-94.57	-4,987.38	1,932.95	646.91	491.28	155.63	4.157	
14,260.00	9,553.59	14,349.94	9,604.81	78.32	78.94	-94.64	-5,024.09	1,940.05	647.88	490.89	156.99	4.127	
14,260.03	9,553.59	14,349.96	9,604.81	78.32	78.94	-94.64	-5,024.11	1,940.06	647.88	490.89	156.99	4.127	
14,299.97	9,552.03	14,387.00	9,604.44	78.81	79.41	-94.76	-5,060.30	1,947.94	649.40	491.42	157.98	4.111	
14,299.99	9,552.03	14,387.00	9,604.44	78.81	79.41	-94.76	-5,060.30	1,947.94	649.40	491.42	157.98	4.111	
14,349.00	9,550.45	14,429.74	9,604.09	79.42	79.95	-94.88	-5,101.99	1,957.32	650.89	491.70	159.20	4.089	
14,349.34	9,550.44	14,430.13	9,604.09	79.42	79.95	-94.88	-5,102.37	1,957.40	650.90	491.69	159.21	4.088	
14,399.97	9,549.10	14,486.52	9,603.75	80.05	80.66	-94.98	-5,157.52	1,969.20	651.52	491.05	160.47	4.060	
14,401.05	9,549.08	14,487.52	9,603.74	80.07	80.67	-94.98	-5,158.49	1,969.40	651.53	491.04	160.50	4.059	
14,439.00	9,548.23	14,522.63	9,603.36	80.54	81.11	-95.01	-5,192.83	1,976.73	651.92	490.49	161.43	4.038	
14,439.65	9,548.22	14,523.24	9,603.35	80.55	81.12	-95.01	-5,193.42	1,976.86	651.93	490.48	161.45	4.038	
14,499.97	9,546.77	14,579.32	9,602.19	81.29	81.81	-95.00	-5,248.18	1,988.92	653.22	490.28	162.94	4.009	
14,499.98	9,546.77	14,579.33	9,602.19	81.29	81.81	-95.00	-5,248.19	1,988.93	653.22	490.28	162.94	4.009	

<b>Company:</b>	Piedra Operating LLC	<b>Local Co-ordinate Reference:</b>	Well University 8-8E A H 5LS
<b>Project:</b>	Andrews County, TX (NAD83-TNC)	<b>TVD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Reference Site:</b>	University 8-8	<b>MD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Site Error:</b>	0.00	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	University 8-8E A H 5LS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	1.00	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH / 72180	<b>Database:</b>	USAEDMDB
<b>Reference Design:</b>	Surveys (Ensign T054)	<b>Offset TVD Reference:</b>	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)		
14,529.00	9,545.92	14,606.74	9,601.48	81.65	82.15	-94.99	-5,274.92	1,994.95	654.21	490.56	163.65	3.998	
14,529.22	9,545.92	14,606.95	9,601.47	81.66	82.15	-94.99	-5,275.12	1,994.99	654.22	490.56	163.66	3.997	
14,599.97	9,544.25	14,674.57	9,599.52	82.55	83.00	-95.01	-5,341.00	2,010.14	655.71	490.29	165.42	3.964	
14,603.93	9,544.18	14,678.48	9,599.41	82.60	83.05	-95.01	-5,344.80	2,011.02	655.72	490.20	165.52	3.962	
14,619.00	9,543.97	14,693.33	9,598.99	82.79	83.23	-95.00	-5,359.26	2,014.38	655.68	489.78	165.90	3.952	
14,638.16	9,543.72	14,712.22	9,598.48	83.04	83.47	-94.97	-5,377.65	2,018.65	655.55	489.17	166.38	3.940	
14,699.97	9,542.79	14,768.07	9,597.14	83.83	84.17	-94.93	-5,432.01	2,031.41	655.35	487.43	167.92	3.903	
14,700.39	9,542.79	14,768.41	9,597.13	83.83	84.17	-94.93	-5,432.34	2,031.49	655.35	487.42	167.93	3.903	
14,710.00	9,542.63	14,776.17	9,596.98	83.95	84.27	-94.93	-5,439.88	2,033.32	655.40	487.24	168.16	3.898	
14,712.30	9,542.59	14,778.03	9,596.94	83.98	84.29	-94.93	-5,441.68	2,033.76	655.42	487.20	168.21	3.896	
14,800.00	9,541.46	14,850.15	9,595.93	85.08	85.20	-94.92	-5,511.50	2,051.82	656.69	486.42	170.27	3.857	
14,800.08	9,541.46	14,850.22	9,595.93	85.09	85.20	-94.92	-5,511.57	2,051.84	656.69	486.42	170.27	3.857	
14,889.00	9,540.74	14,930.11	9,596.36	86.20	86.21	-95.00	-5,588.56	2,073.16	659.44	487.06	172.38	3.825	
14,889.00	9,540.74	14,930.12	9,596.36	86.20	86.21	-95.00	-5,588.56	2,073.16	659.44	487.06	172.38	3.825	
14,899.97	9,540.68	14,943.04	9,596.55	86.34	86.38	-95.03	-5,601.00	2,076.66	659.83	487.15	172.68	3.821	
14,900.05	9,540.68	14,943.13	9,596.55	86.35	86.38	-95.03	-5,601.09	2,076.68	659.83	487.15	172.69	3.821	
14,979.00	9,541.17	15,035.45	9,597.51	87.35	87.54	-95.05	-5,690.26	2,100.59	660.21	485.37	174.84	3.776	
14,999.97	9,541.54	15,059.12	9,597.67	87.62	87.84	-95.03	-5,713.18	2,106.46	659.71	484.31	175.39	3.761	
15,069.00	9,543.18	15,138.69	9,597.94	88.50	88.84	-94.89	-5,790.44	2,125.48	657.42	480.20	177.23	3.710	
15,099.97	9,544.14	15,175.56	9,597.59	88.90	89.31	-94.76	-5,826.35	2,133.86	656.02	477.98	178.04	3.685	
15,159.00	9,546.36	15,224.85	9,596.84	89.65	89.94	-94.54	-5,874.37	2,144.92	653.39	473.87	179.52	3.640	
15,199.97	9,547.85	15,252.31	9,596.93	90.17	90.30	-94.49	-5,900.99	2,151.68	652.77	472.31	180.45	3.617	
15,201.31	9,547.89	15,253.21	9,596.94	90.19	90.31	-94.49	-5,901.86	2,151.91	652.77	472.29	180.48	3.617	
15,249.00	9,549.06	15,289.00	9,597.78	90.80	90.78	-94.48	-5,936.33	2,161.51	653.63	472.09	181.54	3.601	
15,249.12	9,549.06	15,289.00	9,597.78	90.80	90.78	-94.48	-5,936.33	2,161.51	653.64	472.10	181.54	3.601	
15,299.97	9,550.10	15,330.69	9,599.27	91.45	91.32	-94.53	-5,976.28	2,173.30	655.56	472.88	182.68	3.589	
15,301.24	9,550.13	15,331.86	9,599.31	91.46	91.33	-94.53	-5,977.40	2,173.63	655.61	472.90	182.71	3.588	
15,338.00	9,551.03	15,365.68	9,600.61	91.93	91.78	-94.57	-6,009.77	2,183.36	657.08	473.49	183.59	3.579	
15,339.60	9,551.07	15,367.15	9,600.67	91.95	91.80	-94.57	-6,011.18	2,183.78	657.15	473.52	183.63	3.579	
15,399.97	9,552.34	15,436.04	9,602.79	92.72	92.68	-94.61	-6,077.16	2,203.49	659.86	474.54	185.33	3.561	
15,400.66	9,552.35	15,436.87	9,602.81	92.73	92.69	-94.60	-6,077.95	2,203.72	659.90	474.55	185.35	3.560	
15,429.00	9,552.73	15,470.94	9,603.15	93.09	93.12	-94.58	-6,110.70	2,213.10	661.13	474.97	186.16	3.551	
15,430.86	9,552.75	15,473.18	9,603.16	93.12	93.15	-94.58	-6,112.85	2,213.70	661.21	474.99	186.22	3.551	
15,499.97	9,553.44	15,540.07	9,603.40	94.00	94.01	-94.52	-6,177.21	2,231.97	664.36	476.42	187.94	3.535	
15,500.21	9,553.44	15,540.31	9,603.40	94.00	94.01	-94.51	-6,177.44	2,232.03	664.37	476.42	187.95	3.535	
15,518.00	9,553.59	15,557.68	9,603.46	94.23	94.23	-94.50	-6,194.14	2,236.80	665.23	476.84	188.40	3.531	
15,518.96	9,553.60	15,558.62	9,603.46	94.24	94.24	-94.50	-6,195.04	2,237.06	665.28	476.86	188.42	3.531	
15,599.97	9,553.45	15,657.47	9,603.09	95.27	95.51	-94.41	-6,290.42	2,263.00	668.81	478.09	190.72	3.507	
15,600.19	9,553.45	15,657.73	9,603.09	95.27	95.51	-94.41	-6,290.68	2,263.07	668.82	478.09	190.73	3.507	
15,608.00	9,553.35	15,666.47	9,603.00	95.37	95.62	-94.40	-6,299.14	2,265.25	669.11	478.18	190.93	3.504	
15,608.01	9,553.35	15,666.49	9,603.00	95.37	95.62	-94.40	-6,299.16	2,265.25	669.11	478.18	190.93	3.504	
15,699.00	9,552.94	15,770.94	9,601.95	96.54	96.95	-94.36	-6,400.59	2,290.12	670.24	476.88	193.36	3.466	
15,699.97	9,552.95	15,772.02	9,601.93	96.55	96.97	-94.36	-6,401.65	2,290.36	670.23	476.85	193.38	3.466	
15,789.00	9,553.43	15,864.02	9,600.08	97.69	98.14	-94.17	-6,491.30	2,310.96	668.06	472.37	195.69	3.414	
15,799.97	9,553.50	15,873.86	9,599.88	97.83	98.27	-94.14	-6,500.88	2,313.18	667.73	471.76	195.96	3.407	
15,880.00	9,554.36	15,947.69	9,598.74	98.86	99.21	-93.97	-6,572.69	2,330.29	665.25	467.26	197.99	3.360	

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

<b>Company:</b>	Piedra Operating LLC	<b>Local Co-ordinate Reference:</b>	Well University 8-8E A H 5LS
<b>Project:</b>	Andrews County, TX (NAD83-TNC)	<b>TVD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Reference Site:</b>	University 8-8	<b>MD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Site Error:</b>	0.00	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	University 8-8E A H 5LS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	1.00	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH / 72180	<b>Database:</b>	USAEDMDB
<b>Reference Design:</b>	Surveys (Ensign T054)	<b>Offset TVD Reference:</b>	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)		
15,899.97	9,554.64	15,967.21	9,598.53	99.12	99.46	-93.94	-6,591.66	2,334.88	664.57	466.07	198.50	3.348	
15,969.00	9,555.45	16,034.16	9,598.05	100.01	100.31	-93.84	-6,656.71	2,350.72	662.31	462.06	200.26	3.307	
15,999.97	9,555.68	16,063.72	9,597.97	100.41	100.69	-93.83	-6,685.41	2,357.78	661.44	460.40	201.04	3.290	
16,058.00	9,555.59	16,122.29	9,598.01	101.15	101.44	-93.87	-6,742.25	2,371.90	660.31	457.77	202.53	3.260	
16,069.29	9,555.47	16,135.18	9,598.02	101.30	101.61	-93.88	-6,754.77	2,374.96	660.13	457.30	202.83	3.255	
16,099.97	9,554.86	16,170.21	9,597.97	101.70	102.05	-93.92	-6,788.84	2,383.15	659.93	456.28	203.65	3.241	
16,101.80	9,554.80	16,172.31	9,597.96	101.72	102.08	-93.92	-6,790.88	2,383.63	659.93	456.23	203.70	3.240	
16,148.00	9,552.98	16,219.83	9,597.82	102.33	102.69	-93.99	-6,837.17	2,394.44	660.50	455.61	204.88	3.224	
16,148.02	9,552.98	16,219.85	9,597.82	102.33	102.69	-93.99	-6,837.17	2,394.44	660.50	455.61	204.88	3.224	
16,199.97	9,550.32	16,269.13	9,597.95	103.00	103.32	-94.20	-6,885.14	2,405.75	662.15	455.97	206.18	3.211	
16,201.51	9,550.24	16,270.59	9,597.96	103.02	103.34	-94.20	-6,886.56	2,406.09	662.21	455.99	206.22	3.211	
16,238.00	9,548.34	16,316.11	9,598.13	103.50	103.93	-94.40	-6,930.88	2,416.45	663.49	456.31	207.18	3.202	
16,238.11	9,548.33	16,316.27	9,598.13	103.50	103.93	-94.40	-6,931.04	2,416.48	663.50	456.31	207.19	3.202	
16,299.97	9,544.83	16,400.76	9,596.50	104.29	105.02	-94.67	-7,013.79	2,433.45	663.93	455.23	208.70	3.181	
16,327.00	9,543.15	16,432.79	9,595.29	104.64	105.43	-94.74	-7,045.25	2,439.34	663.65	454.30	209.35	3.170	
16,399.97	9,538.01	16,511.82	9,591.81	105.57	106.44	-94.95	-7,122.99	2,453.10	662.20	451.07	211.13	3.136	
16,417.00	9,536.68	16,529.27	9,591.27	105.79	106.66	-95.02	-7,140.18	2,456.07	661.83	450.28	211.55	3.129	
16,499.97	9,528.75	16,612.44	9,589.39	106.85	107.72	-95.61	-7,222.14	2,470.07	660.02	446.46	213.57	3.090	
16,507.00	9,527.95	16,619.43	9,589.22	106.94	107.81	-95.67	-7,229.02	2,471.25	659.88	446.14	213.74	3.087	
16,529.77	9,525.44	16,642.06	9,588.62	107.23	108.10	-95.83	-7,251.32	2,475.07	659.42	445.14	214.29	3.077	
16,596.00	9,519.14	16,695.34	9,587.10	108.08	108.78	-96.11	-7,303.73	2,484.58	658.78	442.76	216.03	3.050	
16,596.28	9,519.12	16,695.57	9,587.09	108.09	108.79	-96.12	-7,303.95	2,484.63	658.78	442.75	216.03	3.049	
16,599.97	9,518.82	16,698.53	9,587.00	108.13	108.82	-96.13	-7,306.85	2,485.19	658.78	442.66	216.13	3.048	
16,603.60	9,518.52	16,701.45	9,586.91	108.18	108.86	-96.14	-7,309.72	2,485.74	658.79	442.57	216.22	3.047	
16,686.00	9,513.74	16,772.05	9,584.58	109.24	109.77	-96.31	-7,378.83	2,499.97	659.68	441.35	218.34	3.021	
16,686.22	9,513.73	16,772.24	9,584.58	109.24	109.77	-96.31	-7,379.02	2,500.01	659.69	441.34	218.34	3.021	
16,699.97	9,513.26	16,784.65	9,584.12	109.42	109.94	-96.30	-7,391.14	2,502.61	659.97	441.27	218.70	3.018	
16,699.97	9,513.26	16,784.65	9,584.12	109.42	109.94	-96.30	-7,391.14	2,502.61	659.97	441.27	218.70	3.018	
16,776.00	9,511.76	16,863.26	9,580.76	110.40	110.95	-96.13	-7,467.86	2,519.40	663.43	442.73	220.70	3.006	
16,776.76	9,511.75	16,864.17	9,580.71	110.41	110.96	-96.13	-7,468.75	2,519.59	663.47	442.75	220.72	3.006	
16,799.97	9,511.58	16,892.05	9,579.29	110.71	111.32	-96.01	-7,496.00	2,525.30	664.71	443.39	221.33	3.003	
16,800.01	9,511.58	16,892.10	9,579.29	110.71	111.32	-96.01	-7,496.05	2,525.31	664.72	443.39	221.33	3.003	
16,865.00	9,511.11	16,953.33	9,576.21	111.55	112.11	-95.75	-7,555.96	2,537.58	667.89	444.83	223.06	2.994	
16,866.09	9,511.11	16,954.27	9,576.17	111.56	112.12	-95.75	-7,556.88	2,537.78	667.94	444.86	223.09	2.994	
16,899.97	9,510.88	16,983.40	9,575.17	111.99	112.50	-95.67	-7,585.35	2,543.85	669.73	445.76	223.97	2.990	
16,901.86	9,510.87	16,985.03	9,575.12	112.02	112.52	-95.67	-7,586.94	2,544.20	669.83	445.81	224.02	2.990	
16,956.00	9,510.59	17,038.21	9,573.82	112.71	113.21	-95.56	-7,638.88	2,555.56	672.37	446.94	225.43	2.983	
16,956.10	9,510.59	17,038.32	9,573.82	112.71	113.21	-95.56	-7,638.98	2,555.59	672.38	446.94	225.43	2.983	
16,999.97	9,510.61	17,083.96	9,572.58	113.28	113.80	-95.46	-7,683.58	2,565.25	673.83	447.24	226.58	2.974	
16,999.98	9,510.61	17,083.98	9,572.58	113.28	113.80	-95.46	-7,683.59	2,565.25	673.83	447.24	226.58	2.974	
17,046.00	9,511.07	17,128.56	9,571.28	113.87	114.37	-95.31	-7,727.15	2,574.67	674.91	447.11	227.79	2.963	
17,046.20	9,511.07	17,128.76	9,571.28	113.87	114.37	-95.31	-7,727.34	2,574.71	674.91	447.11	227.80	2.963	
17,099.97	9,511.86	17,178.00	9,569.81	114.57	115.01	-95.11	-7,775.42	2,585.25	675.91	446.71	229.21	2.949	
17,100.00	9,511.86	17,178.00	9,569.81	114.57	115.01	-95.11	-7,775.42	2,585.25	675.91	446.71	229.21	2.949	
17,135.00	9,512.34	17,207.11	9,568.92	115.02	115.39	-94.99	-7,803.80	2,591.70	676.66	446.55	230.10	2.941	

<b>Company:</b>	Piedra Operating LLC	<b>Local Co-ordinate Reference:</b>	Well University 8-8E A H 5LS
<b>Project:</b>	Andrews County, TX (NAD83-TNC)	<b>TVD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Reference Site:</b>	University 8-8	<b>MD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Site Error:</b>	0.00	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	University 8-8E A H 5LS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	1.00	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH / 72180	<b>Database:</b>	USAEDMDB
<b>Reference Design:</b>	Surveys (Ensign T054)	<b>Offset TVD Reference:</b>	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)		
17,135.01	9,512.34	17,207.12	9,568.92	115.02	115.39	-94.99	-7,803.80	2,591.70	676.66	446.55	230.10	2.941	
17,199.97	9,513.39	17,267.00	9,567.07	115.86	116.17	-94.75	-7,861.90	2,606.08	679.22	447.43	231.79	2.930	
17,200.84	9,513.41	17,267.00	9,567.07	115.87	116.17	-94.75	-7,861.90	2,606.08	679.25	447.45	231.80	2.930	
17,225.00	9,513.89	17,279.53	9,566.67	116.18	116.33	-94.69	-7,874.02	2,609.24	680.51	448.21	232.31	2.929	
17,225.07	9,513.89	17,279.60	9,566.67	116.18	116.34	-94.69	-7,874.08	2,609.26	680.52	448.21	232.31	2.929	
17,299.97	9,515.34	17,353.55	9,564.05	117.16	117.30	-94.29	-7,945.58	2,628.00	684.05	449.76	234.29	2.920	
17,300.51	9,515.35	17,354.09	9,564.03	117.16	117.31	-94.29	-7,946.10	2,628.14	684.07	449.76	234.31	2.920	
17,315.00	9,515.60	17,368.61	9,563.49	117.35	117.50	-94.21	-7,960.12	2,631.83	684.58	449.88	234.69	2.917	
17,318.81	9,515.67	17,372.44	9,563.36	117.40	117.55	-94.20	-7,963.83	2,632.80	684.70	449.91	234.79	2.916	
17,399.97	9,516.47	17,454.16	9,562.10	118.45	118.61	-93.98	-8,042.90	2,653.39	687.64	450.71	236.93	2.902	
17,400.01	9,516.47	17,454.20	9,562.10	118.46	118.61	-93.98	-8,042.94	2,653.40	687.64	450.71	236.93	2.902	
17,405.00	9,516.48	17,459.11	9,562.10	118.52	118.68	-93.98	-8,047.69	2,654.63	687.84	450.78	237.06	2.902	
17,407.48	9,516.49	17,461.54	9,562.10	118.55	118.71	-93.98	-8,050.04	2,655.24	687.93	450.81	237.13	2.901	
17,494.00	9,518.10	17,547.09	9,562.75	119.68	119.82	-93.91	-8,132.85	2,676.74	690.39	451.02	239.37	2.884	
17,494.32	9,518.11	17,547.42	9,562.75	119.68	119.83	-93.91	-8,133.16	2,676.82	690.40	451.02	239.38	2.884	
17,499.97	9,518.30	17,553.27	9,562.83	119.76	119.90	-93.90	-8,138.82	2,678.29	690.49	450.96	239.53	2.883	
17,500.12	9,518.30	17,553.42	9,562.83	119.76	119.91	-93.90	-8,138.97	2,678.33	690.49	450.96	239.53	2.883	
17,586.00	9,521.10	17,645.17	9,564.11	120.88	121.10	-93.73	-8,227.84	2,701.11	691.12	449.26	241.87	2.857	
17,589.34	9,521.20	17,649.30	9,564.16	120.93	121.15	-93.72	-8,231.85	2,702.11	691.11	449.14	241.96	2.856	
17,599.97	9,521.53	17,662.44	9,564.28	121.06	121.33	-93.70	-8,244.61	2,705.26	691.02	448.75	242.27	2.852	
17,676.00	9,523.61	17,750.99	9,564.26	122.06	122.48	-93.51	-8,330.81	2,725.46	689.34	444.97	244.37	2.821	
17,699.96	9,524.22	17,776.51	9,564.01	122.37	122.81	-93.44	-8,355.71	2,731.08	688.61	443.60	245.01	2.811	
17,766.00	9,526.07	17,846.11	9,562.92	123.23	123.72	-93.19	-8,423.64	2,746.19	686.46	439.69	246.77	2.782	
17,799.96	9,527.13	17,881.61	9,562.16	123.68	124.18	-93.04	-8,458.31	2,753.77	685.30	437.63	247.67	2.767	
17,855.00	9,529.01	17,937.95	9,560.73	124.40	124.91	-92.76	-8,513.36	2,765.69	683.36	434.23	249.13	2.743	
17,899.96	9,530.60	17,983.63	9,559.43	124.99	125.50	-92.55	-8,557.99	2,775.30	682.11	431.79	250.32	2.725	
17,946.00	9,532.16	18,029.14	9,558.12	125.59	126.09	-92.34	-8,602.47	2,784.85	681.54	430.00	251.54	2.709	
17,985.96	9,533.52	18,068.60	9,557.10	126.11	126.61	-92.15	-8,641.03	2,793.16	681.46	428.87	252.59	2.698	
17,999.96	9,534.01	18,082.56	9,556.76	126.30	126.79	-92.09	-8,654.67	2,796.11	681.47	428.51	252.96	2.694	
17,999.97	9,534.01	18,082.57	9,556.76	126.30	126.79	-92.09	-8,654.68	2,796.11	681.47	428.51	252.96	2.694	
18,035.00	9,535.26	18,118.01	9,556.08	126.76	127.25	-91.93	-8,689.33	2,803.56	681.55	427.67	253.88	2.685	
18,099.96	9,537.31	18,184.24	9,555.47	127.61	128.11	-91.66	-8,754.09	2,817.40	680.97	425.38	255.59	2.664	
18,124.00	9,537.91	18,209.22	9,555.31	127.92	128.43	-91.59	-8,778.53	2,822.57	680.32	424.10	256.22	2.655	
18,199.96	9,539.33	18,284.81	9,554.71	128.93	129.42	-91.43	-8,852.51	2,838.07	676.93	418.72	258.21	2.622	
18,214.00	9,539.52	18,297.73	9,554.62	129.11	129.59	-91.41	-8,865.15	2,840.76	676.15	417.57	258.58	2.615	
18,299.96	9,541.18	18,378.15	9,554.20	130.24	130.63	-91.21	-8,943.72	2,857.87	671.51	410.69	260.82	2.575	
18,304.00	9,541.29	18,382.02	9,554.18	130.30	130.68	-91.19	-8,947.51	2,858.71	671.30	410.38	260.92	2.573	
18,394.00	9,541.98	18,465.20	9,553.79	131.48	131.77	-91.20	-9,028.65	2,876.97	667.59	404.34	263.24	2.536	
18,399.96	9,541.91	18,470.31	9,553.79	131.56	131.84	-91.21	-9,033.63	2,878.12	667.42	404.02	263.39	2.534	
18,484.00	9,541.46	18,544.50	9,554.07	132.67	132.81	-91.26	-9,105.72	2,895.62	663.89	398.38	265.50	2.500	
18,499.96	9,541.41	18,560.33	9,554.16	132.89	133.02	-91.29	-9,121.09	2,899.45	663.03	397.11	265.93	2.493	
18,573.00	9,540.09	18,634.04	9,554.34	133.87	133.98	-91.43	-9,192.61	2,917.27	660.81	392.95	267.87	2.467	
18,599.96	9,539.22	18,663.12	9,554.42	134.22	134.36	-91.51	-9,220.84	2,924.22	660.50	391.90	268.60	2.459	
18,662.00	9,536.88	18,726.27	9,554.84	135.05	135.19	-91.73	-9,282.23	2,939.04	660.09	389.84	270.24	2.443	
18,662.78	9,536.85	18,726.95	9,554.85	135.06	135.20	-91.74	-9,282.89	2,939.20	660.09	389.83	270.26	2.442	
18,699.96	9,535.19	18,759.53	9,555.41	135.54	135.63	-91.89	-9,314.52	2,946.97	660.37	389.20	271.17	2.435	

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

<b>Company:</b>	Piedra Operating LLC	<b>Local Co-ordinate Reference:</b>	Well University 8-8E A H 5LS
<b>Project:</b>	Andrews County, TX (NAD83-TNC)	<b>TVD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Reference Site:</b>	University 8-8	<b>MD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Site Error:</b>	0.00	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	University 8-8E A H 5LS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	1.00	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH / 72180	<b>Database:</b>	USAEDMDB
<b>Reference Design:</b>	Surveys (Ensign T054)	<b>Offset TVD Reference:</b>	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)		
18,701.93	9,535.10	18,761.25	9,555.44	135.57	135.65	-91.90	-9,316.19	2,947.39	660.40	389.18	271.22	2.435	
18,751.00	9,532.57	18,806.72	9,556.73	136.21	136.25	-92.18	-9,360.25	2,958.59	661.54	389.10	272.43	2.428	
18,751.21	9,532.56	18,807.00	9,556.74	136.22	136.25	-92.18	-9,360.51	2,958.66	661.54	389.10	272.44	2.428	
18,799.96	9,529.63	18,871.21	9,557.76	136.85	137.10	-92.58	-9,422.90	2,973.82	662.44	388.58	273.86	2.419	
18,800.55	9,529.59	18,871.99	9,557.76	136.86	137.11	-92.58	-9,423.66	2,973.99	662.45	388.57	273.88	2.419	
18,841.00	9,526.79	18,915.61	9,557.58	137.39	137.68	-92.81	-9,466.20	2,983.62	662.66	387.73	274.93	2.410	
18,841.35	9,526.77	18,915.95	9,557.58	137.40	137.68	-92.82	-9,466.53	2,983.69	662.66	387.72	274.94	2.410	
18,899.96	9,523.14	18,972.56	9,557.24	138.16	138.43	-93.07	-9,521.73	2,996.26	663.46	387.02	276.44	2.400	
18,900.11	9,523.13	18,972.70	9,557.24	138.16	138.43	-93.07	-9,521.87	2,996.29	663.46	387.02	276.44	2.400	
18,931.00	9,521.75	19,002.56	9,557.06	138.57	138.82	-93.16	-9,550.97	3,002.98	664.19	386.96	277.23	2.396	
18,933.74	9,521.64	19,005.21	9,557.04	138.60	138.85	-93.17	-9,553.55	3,003.57	664.26	386.96	277.30	2.395	
18,999.96	9,518.97	19,069.31	9,556.63	139.47	139.69	-93.33	-9,615.98	3,018.09	666.39	387.40	278.99	2.389	
19,000.32	9,518.96	19,069.66	9,556.62	139.47	139.70	-93.33	-9,616.33	3,018.18	666.40	387.40	279.00	2.389	
19,021.00	9,518.10	19,090.49	9,556.46	139.74	139.97	-93.38	-9,636.60	3,022.92	667.18	387.65	279.53	2.387	
19,021.84	9,518.06	19,091.33	9,556.45	139.75	139.98	-93.38	-9,637.43	3,023.11	667.21	387.66	279.55	2.387	
19,099.96	9,514.55	19,169.80	9,555.41	140.77	141.01	-93.54	-9,713.82	3,040.98	670.64	389.08	281.57	2.382	
19,099.97	9,514.55	19,169.81	9,555.41	140.77	141.01	-93.54	-9,713.83	3,040.98	670.64	389.08	281.57	2.382	
19,110.00	9,514.07	19,179.73	9,555.25	140.90	141.14	-93.56	-9,723.49	3,043.24	671.14	389.32	281.82	2.381	
19,110.07	9,514.07	19,179.80	9,555.24	140.90	141.14	-93.56	-9,723.56	3,043.25	671.15	389.32	281.83	2.381	
19,199.96	9,511.80	19,269.90	9,553.72	142.08	142.33	-93.73	-9,811.27	3,063.81	674.88	390.71	284.17	2.375	
19,199.96	9,511.80	19,269.90	9,553.72	142.08	142.33	-93.73	-9,811.27	3,063.81	674.88	390.71	284.17	2.375	
19,201.00	9,511.79	19,270.98	9,553.70	142.09	142.34	-93.73	-9,812.32	3,064.06	674.91	390.71	284.20	2.375	
19,201.03	9,511.79	19,271.01	9,553.70	142.09	142.34	-93.73	-9,812.35	3,064.06	674.91	390.72	284.20	2.375	
19,292.00	9,512.49	19,365.56	9,552.60	143.28	143.58	-93.58	-9,904.48	3,085.28	676.92	390.29	286.63	2.362	
19,292.01	9,512.49	19,365.57	9,552.60	143.28	143.58	-93.58	-9,904.49	3,085.28	676.92	390.29	286.63	2.362	
19,299.96	9,512.63	19,373.84	9,552.48	143.39	143.69	-93.56	-9,912.55	3,087.11	677.03	390.19	286.84	2.360	
19,300.03	9,512.63	19,373.90	9,552.48	143.39	143.69	-93.56	-9,912.62	3,087.13	677.03	390.19	286.84	2.360	
19,382.00	9,514.17	19,459.09	9,550.68	144.46	144.81	-93.28	-9,995.71	3,105.82	678.42	389.37	289.04	2.347	
19,382.00	9,514.17	19,459.09	9,550.68	144.46	144.81	-93.28	-9,995.71	3,105.82	678.42	389.37	289.04	2.347	
19,399.96	9,514.53	19,477.73	9,550.16	144.70	145.05	-93.20	-10,013.90	3,109.86	678.78	389.25	289.53	2.344	
19,400.04	9,514.54	19,477.81	9,550.16	144.70	145.05	-93.20	-10,013.98	3,109.88	678.78	389.25	289.53	2.344	
19,472.00	9,516.18	19,549.70	9,547.98	145.64	146.00	-92.88	-10,084.15	3,125.36	680.25	388.79	291.45	2.334	
19,472.01	9,516.18	19,549.72	9,547.98	145.64	146.00	-92.88	-10,084.16	3,125.37	680.25	388.79	291.45	2.334	
19,499.96	9,516.82	19,576.40	9,547.43	146.01	146.35	-92.76	-10,110.20	3,131.15	680.77	388.58	292.20	2.330	
19,500.00	9,516.82	19,576.44	9,547.43	146.01	146.35	-92.76	-10,110.24	3,131.16	680.77	388.58	292.20	2.330	
19,561.00	9,517.92	19,632.63	9,546.87	146.81	147.09	-92.60	-10,165.06	3,143.52	681.09	387.30	293.79	2.318	
19,572.19	9,518.08	19,642.48	9,546.83	146.96	147.21	-92.59	-10,174.66	3,145.73	681.08	387.01	294.08	2.316	
19,599.96	9,518.44	19,666.95	9,546.80	147.33	147.54	-92.56	-10,198.48	3,151.31	681.15	386.37	294.78	2.311	
19,600.69	9,518.45	19,667.59	9,546.80	147.33	147.55	-92.56	-10,199.10	3,151.46	681.16	386.36	294.80	2.311	
19,651.00	9,518.96	19,713.03	9,546.98	148.00	148.14	-92.53	-10,243.27	3,162.11	681.65	385.57	296.08	2.302	
19,651.02	9,518.96	19,713.05	9,546.98	148.00	148.14	-92.53	-10,243.29	3,162.12	681.65	385.57	296.08	2.302	
19,699.96	9,519.28	19,759.88	9,547.51	148.64	148.76	-92.54	-10,288.77	3,173.28	682.45	385.11	297.33	2.295	
19,701.73	9,519.29	19,761.57	9,547.54	148.67	148.78	-92.55	-10,290.41	3,173.69	682.48	385.10	297.38	2.295	
19,740.00	9,519.41	19,798.65	9,548.22	149.17	149.27	-92.59	-10,326.40	3,182.62	683.34	384.98	298.36	2.290	
19,741.61	9,519.41	19,800.30	9,548.25	149.19	149.29	-92.59	-10,327.99	3,183.02	683.38	384.98	298.41	2.290	

<b>Company:</b>	Piedra Operating LLC	<b>Local Co-ordinate Reference:</b>	Well University 8-8E A H 5LS
<b>Project:</b>	Andrews County, TX (NAD83-TNC)	<b>TVD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Reference Site:</b>	University 8-8	<b>MD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Site Error:</b>	0.00	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	University 8-8E A H 5LS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	1.00	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH / 72180	<b>Database:</b>	USAEDMDB
<b>Reference Design:</b>	Surveys (Ensign T054)	<b>Offset TVD Reference:</b>	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)		
19,799.96	9,519.65	19,859.83	9,549.32	149.96	150.08	-92.66	-10,385.76	3,197.34	684.84	384.89	299.95	2.283	
19,800.70	9,519.65	19,860.58	9,549.33	149.97	150.09	-92.66	-10,386.49	3,197.52	684.86	384.89	299.97	2.283	
19,830.00	9,519.86	19,891.87	9,549.80	150.35	150.50	-92.68	-10,416.87	3,205.00	685.61	384.84	300.77	2.280	
19,832.53	9,519.88	19,894.88	9,549.84	150.39	150.54	-92.68	-10,419.80	3,205.71	685.67	384.83	300.84	2.279	
19,899.96	9,520.24	19,975.03	9,550.29	151.27	151.60	-92.68	-10,497.84	3,223.96	686.97	384.25	302.72	2.269	
19,899.98	9,520.24	19,975.05	9,550.29	151.27	151.60	-92.68	-10,497.85	3,223.96	686.97	384.25	302.72	2.269	
19,919.00	9,520.28	19,992.71	9,550.27	151.52	151.83	-92.67	-10,515.08	3,227.86	687.32	384.10	303.21	2.267	
19,919.13	9,520.28	19,992.83	9,550.27	151.52	151.83	-92.67	-10,515.20	3,227.89	687.32	384.10	303.22	2.267	
19,999.96	9,519.45	20,071.54	9,550.12	152.58	152.87	-92.70	-10,591.94	3,245.42	688.80	383.48	305.32	2.256	
19,999.97	9,519.45	20,071.55	9,550.12	152.58	152.87	-92.70	-10,591.94	3,245.42	688.80	383.48	305.32	2.256	
20,008.00	9,519.26	20,079.66	9,550.10	152.69	152.97	-92.71	-10,599.85	3,247.23	688.93	383.40	305.53	2.255	
20,008.06	9,519.26	20,079.72	9,550.10	152.69	152.97	-92.71	-10,599.90	3,247.25	688.93	383.40	305.53	2.255	
20,098.00	9,516.90	20,169.86	9,550.29	153.87	154.16	-92.90	-10,687.77	3,267.36	690.66	382.79	307.87	2.243	
20,098.00	9,516.90	20,169.86	9,550.29	153.87	154.16	-92.90	-10,687.77	3,267.36	690.66	382.79	307.87	2.243	
20,099.96	9,516.84	20,171.78	9,550.30	153.90	154.19	-92.91	-10,689.64	3,267.78	690.70	382.78	307.92	2.243	
20,100.01	9,516.84	20,171.82	9,550.30	153.90	154.19	-92.91	-10,689.68	3,267.79	690.70	382.78	307.92	2.243	
20,187.00	9,515.83	20,256.82	9,550.84	155.04	155.31	-93.07	-10,772.52	3,286.86	692.50	382.33	310.18	2.233	
20,187.01	9,515.83	20,256.83	9,550.84	155.04	155.31	-93.07	-10,772.53	3,286.87	692.50	382.33	310.18	2.233	
20,199.96	9,515.88	20,269.38	9,550.92	155.21	155.47	-93.07	-10,784.75	3,289.70	692.73	382.22	310.51	2.231	
20,200.11	9,515.89	20,269.52	9,550.92	155.21	155.47	-93.07	-10,784.89	3,289.74	692.74	382.22	310.52	2.231	
20,250.00	9,516.16	20,318.15	9,551.15	155.87	156.11	-93.06	-10,832.23	3,300.80	693.58	381.77	311.82	2.224	
20,250.00	9,516.16	20,318.15	9,551.15	155.87	156.11	-93.06	-10,832.24	3,300.80	693.58	381.77	311.82	2.224	
20,299.96	9,516.46	20,368.10	9,551.33	156.53	156.77	-93.05	-10,880.87	3,312.21	694.38	381.25	313.13	2.218	
20,299.96	9,516.46	20,368.10	9,551.33	156.53	156.77	-93.05	-10,880.87	3,312.21	694.38	381.25	313.13	2.218	
20,311.00	9,516.53	20,373.00	9,551.35	156.67	156.83	-93.05	-10,885.64	3,313.33	694.58	381.23	313.35	2.217	ES, SF



<b>Company:</b>	Piedra Operating LLC	<b>Local Co-ordinate Reference:</b>	Well University 8-8E A H 5LS
<b>Project:</b>	Andrews County, TX (NAD83-TNC)	<b>TVD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Reference Site:</b>	University 8-8	<b>MD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Site Error:</b>	0.00	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	University 8-8E A H 5LS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	1.00	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH / 72180	<b>Database:</b>	USAEDMDB
<b>Reference Design:</b>	Surveys (Ensign T054)	<b>Offset TVD Reference:</b>	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)		
0.00	0.00	0.00	0.00	1.00	1.00	76.97	157.81	681.77	699.80				
15.00	15.00	13.00	13.00	1.00	1.00	76.97	157.81	681.77	699.80				
100.00	100.00	99.28	99.28	1.28	1.31	51.71	157.73	681.71	699.67	697.08	2.59	270.506	
178.00	178.00	178.48	178.48	1.91	1.92	51.74	157.52	681.54	699.32	695.49	3.82	182.831	
200.00	200.00	200.25	200.25	1.98	1.99	68.28	157.43	681.49	699.20	695.24	3.96	176.506	
263.41	263.41	262.97	262.96	2.18	2.20	126.96	156.94	681.42	699.06	694.71	4.35	160.525	
268.00	268.00	267.50	267.50	2.20	2.21	129.94	156.89	681.42	699.06	694.68	4.38	159.468	
300.00	300.00	299.37	299.36	2.28	2.31	147.13	156.56	681.43	699.08	694.53	4.56	153.429	
356.00	356.00	355.16	355.15	2.43	2.48	178.28	156.04	681.45	699.17	694.31	4.86	143.871	
400.00	400.00	398.19	398.18	2.54	2.60	-168.45	155.67	681.49	699.28	694.20	5.07	137.861	
443.00	443.00	440.16	440.15	2.64	2.72	-146.17	155.30	681.59	699.40	694.12	5.28	132.462	
500.00	500.00	498.15	498.13	2.77	2.88	-171.43	154.67	681.78	699.64	694.09	5.55	126.094	
532.00	532.00	530.88	530.87	2.85	2.97	-175.87	154.21	681.86	699.81	694.11	5.70	122.778	
600.00	600.00	597.04	597.02	3.01	3.11	-173.61	153.61	681.99	700.14	694.15	6.00	116.745	
623.00	623.00	619.36	619.34	3.07	3.16	-170.28	153.61	682.03	700.24	694.14	6.10	114.830	
700.00	699.99	695.92	695.90	3.25	3.28	-169.62	153.76	682.21	700.74	694.33	6.42	109.207	
712.00	712.00	707.86	707.84	3.27	3.30	-169.60	153.77	682.25	700.86	694.39	6.47	108.390	
800.00	799.99	796.92	796.90	3.47	3.44	-129.27	154.07	682.39	701.52	694.69	6.83	102.734	
804.00	803.99	800.89	800.87	3.48	3.44	-127.10	154.09	682.39	701.54	694.69	6.84	102.495	
892.00	891.99	887.98	887.96	3.66	3.56	-149.57	154.63	682.47	701.99	694.82	7.17	97.886	
900.00	899.99	895.73	895.70	3.68	3.57	-156.41	154.68	682.48	702.04	694.84	7.20	97.498	
982.00	981.99	975.48	975.45	3.84	3.69	110.29	155.14	682.79	702.62	695.12	7.50	93.702	
1,000.00	999.99	994.15	994.12	3.87	3.71	127.97	155.25	682.88	702.75	695.19	7.56	92.908	
1,070.00	1,069.99	1,066.00	1,065.98	4.00	3.83	-143.84	155.74	683.04	703.20	695.38	7.82	89.955	
1,100.00	1,099.99	1,094.37	1,094.34	4.06	3.87	-148.74	155.99	683.10	703.44	695.52	7.92	88.778	
1,157.00	1,156.99	1,148.63	1,148.59	4.18	3.95	-156.58	156.57	683.38	704.12	695.99	8.13	86.642	
1,200.00	1,199.99	1,193.91	1,193.88	4.39	4.03	-160.60	156.97	683.64	704.67	696.25	8.42	83.690	
1,300.00	1,299.99	1,294.99	1,294.95	4.90	4.20	-167.63	157.26	683.98	705.69	696.59	9.10	77.554	
1,336.00	1,335.99	1,330.79	1,330.75	5.08	4.27	-169.57	157.38	684.12	706.12	696.78	9.34	75.583	
1,400.00	1,399.98	1,396.00	1,395.96	5.21	4.37	-179.73	157.76	684.28	706.90	697.32	9.58	73.811	
1,428.00	1,427.98	1,424.36	1,424.32	5.27	4.42	176.85	157.98	684.31	707.24	697.55	9.68	73.061	
1,500.00	1,499.98	1,497.04	1,497.00	5.40	4.54	-141.34	158.20	684.40	707.94	698.01	9.93	71.291	
1,516.00	1,515.98	1,513.26	1,513.22	5.43	4.56	-130.28	158.21	684.42	708.04	698.06	9.98	70.921	
1,600.00	1,599.98	1,598.59	1,598.54	5.59	4.69	-156.13	158.48	684.37	708.49	698.23	10.26	69.067	
1,608.00	1,607.98	1,606.81	1,606.77	5.60	4.69	-159.51	158.51	684.36	708.52	698.24	10.28	68.910	
1,697.00	1,696.98	1,697.45	1,697.41	5.77	4.80	-161.65	158.68	684.07	708.76	698.21	10.55	67.179	
1,700.00	1,699.97	1,700.43	1,700.39	5.78	4.81	-161.65	158.69	684.05	708.77	698.21	10.56	67.122	
1,788.00	1,787.98	1,788.57	1,788.52	5.96	4.91	-164.61	159.14	683.67	709.01	698.19	10.82	65.510	
1,800.00	1,799.97	1,800.86	1,800.81	5.97	4.92	-173.38	159.20	683.61	709.05	698.19	10.85	65.325	
1,846.00	1,845.97	1,848.02	1,847.98	6.05	4.97	172.52	159.33	683.34	709.34	698.36	10.97	64.643	
1,900.00	1,899.96	1,905.74	1,905.69	6.14	4.98	-176.07	159.43	682.83	709.64	698.56	11.08	64.024	
1,973.00	1,972.96	1,981.53	1,981.48	6.28	5.04	-157.64	159.47	681.80	709.58	698.30	11.29	62.878	
2,000.00	1,999.95	2,009.37	2,009.31	6.34	5.10	-138.66	159.36	681.38	709.46	698.09	11.36	62.430	
2,064.00	2,063.95	2,074.99	2,074.92	6.49	5.30	-110.76	158.37	680.46	708.92	697.19	11.73	60.433	
2,100.00	2,099.93	2,111.78	2,111.69	6.55	5.42	-97.25	157.22	680.02	708.44	696.52	11.92	59.419	
2,153.00	2,152.89	2,165.56	2,165.41	6.65	5.60	-89.13	154.97	679.45	707.46	695.26	12.21	57.965	

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

<b>Company:</b>	Piedra Operating LLC	<b>Local Co-ordinate Reference:</b>	Well University 8-8E A H 5LS
<b>Project:</b>	Andrews County, TX (NAD83-TNC)	<b>TVD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Reference Site:</b>	University 8-8	<b>MD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Site Error:</b>	0.00	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	University 8-8E A H 5LS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	1.00	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH / 72180	<b>Database:</b>	USAEDMDB
<b>Reference Design:</b>	Surveys (Ensign T054)	<b>Offset TVD Reference:</b>	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)		
2,200.00	2,199.83	2,212.70	2,212.49	6.73	5.74	-88.02	152.49	679.02	706.42	694.00	12.42	56.865	
2,242.00	2,241.78	2,254.24	2,253.95	6.81	5.83	-87.03	149.95	678.76	705.47	692.90	12.58	56.083	
2,300.00	2,299.69	2,312.42	2,311.99	6.91	5.97	-83.11	145.85	678.54	704.04	691.24	12.79	55.032	
2,332.00	2,331.63	2,344.99	2,344.46	6.97	6.05	-81.38	143.35	678.43	703.11	690.20	12.91	54.458	
2,400.00	2,399.49	2,413.73	2,412.96	7.10	6.22	-78.74	137.68	678.23	700.89	687.72	13.17	53.224	
2,423.00	2,422.45	2,436.88	2,436.03	7.15	6.29	-77.84	135.71	678.16	700.08	686.82	13.26	52.810	
2,500.00	2,499.29	2,514.25	2,513.11	7.31	6.50	-77.83	128.96	677.94	697.32	683.76	13.56	51.410	
2,515.00	2,514.27	2,529.32	2,528.11	7.34	6.54	-77.83	127.62	677.90	696.78	683.16	13.62	51.142	
2,599.99	2,599.08	2,615.43	2,613.86	7.53	6.79	-68.66	119.78	677.62	693.19	679.21	13.98	49.597	
2,606.00	2,605.08	2,621.53	2,619.94	7.54	6.81	-68.05	119.21	677.60	692.90	678.89	14.00	49.487	
2,696.00	2,694.85	2,712.50	2,710.49	7.74	7.08	-63.03	110.58	677.20	687.98	673.60	14.38	47.832	
2,699.99	2,698.83	2,716.52	2,714.50	7.75	7.09	-63.02	110.18	677.18	687.74	673.34	14.40	47.758	
2,786.00	2,784.60	2,804.14	2,801.68	7.94	7.37	-62.52	101.47	676.70	682.53	667.74	14.78	46.164	
2,799.99	2,798.56	2,818.44	2,815.90	7.98	7.41	-62.74	100.03	676.60	681.66	666.81	14.85	45.904	
2,876.00	2,874.36	2,897.00	2,894.04	8.17	7.66	-63.91	91.93	675.93	676.86	661.65	15.21	44.508	
2,899.99	2,898.29	2,921.77	2,918.68	8.23	7.74	-63.19	89.31	675.66	675.30	659.97	15.32	44.069	
2,966.00	2,964.12	2,988.95	2,985.46	8.40	7.95	-61.17	81.99	674.86	670.80	655.15	15.64	42.877	
2,999.99	2,998.02	3,023.72	3,020.00	8.49	8.07	-60.17	78.06	674.42	668.38	652.57	15.81	42.267	
3,055.00	3,052.89	3,080.35	3,076.24	8.63	8.25	-58.52	71.49	673.62	664.30	648.22	16.09	41.293	
3,099.99	3,097.76	3,126.39	3,121.94	8.75	8.40	-58.34	65.99	672.88	660.84	644.53	16.32	40.500	
3,146.00	3,143.65	3,173.29	3,168.49	8.88	8.56	-58.15	60.30	672.07	657.25	640.70	16.55	39.707	
3,199.99	3,197.50	3,226.23	3,221.03	9.03	8.73	-56.11	53.82	671.13	652.97	636.14	16.83	38.799	
3,236.00	3,233.42	3,261.00	3,255.53	9.13	8.85	-54.75	49.59	670.57	650.14	633.12	17.01	38.214	
3,299.99	3,297.25	3,320.52	3,314.62	9.32	9.05	-53.31	42.52	669.80	645.30	627.96	17.34	37.224	
3,325.00	3,322.20	3,343.44	3,337.39	9.39	9.13	-52.74	39.94	669.60	643.54	626.08	17.46	36.857	
3,399.99	3,397.01	3,416.09	3,409.62	9.61	9.37	-53.35	32.11	669.22	638.61	620.76	17.85	35.772	
3,416.00	3,412.97	3,432.09	3,425.53	9.65	9.42	-53.47	30.38	669.15	637.57	619.63	17.94	35.544	
3,499.99	3,496.75	3,509.02	3,502.03	9.91	9.68	-53.88	22.25	669.02	632.35	613.99	18.37	34.426	
3,507.00	3,503.73	3,515.17	3,508.14	9.93	9.70	-53.91	21.64	669.06	631.97	613.57	18.40	34.339	
3,596.00	3,592.47	3,598.37	3,590.96	10.20	9.98	-59.81	13.73	670.03	627.91	609.04	18.87	33.271	
3,599.99	3,596.45	3,602.26	3,594.84	10.22	9.99	-60.21	13.36	670.09	627.75	608.86	18.89	33.224	
3,686.00	3,682.17	3,688.13	3,680.32	10.49	10.28	-68.14	5.28	671.39	624.71	605.33	19.38	32.234	
3,699.99	3,696.11	3,702.35	3,694.47	10.54	10.33	-68.29	3.93	671.60	624.25	604.79	19.46	32.074	
3,776.00	3,771.84	3,779.26	3,771.02	10.79	10.59	-69.13	-3.41	672.64	621.79	601.88	19.91	31.229	
3,799.99	3,795.75	3,803.49	3,795.14	10.86	10.67	-68.46	-5.76	672.95	621.01	600.95	20.05	30.967	
3,864.00	3,859.53	3,867.83	3,859.16	11.07	10.89	-66.66	-12.07	673.75	618.78	598.34	20.44	30.279	
3,899.99	3,895.39	3,903.95	3,895.09	11.19	11.02	-66.41	-15.67	674.19	617.47	596.82	20.65	29.900	
3,954.00	3,949.21	3,958.63	3,949.50	11.37	11.21	-66.02	-21.15	674.84	615.48	594.50	20.98	29.339	
3,999.99	3,995.04	4,005.27	3,995.90	11.52	11.37	-65.46	-25.83	675.33	613.71	592.45	21.26	28.868	
4,044.00	4,038.90	4,049.94	4,040.34	11.67	11.52	-64.92	-30.32	675.74	611.94	590.41	21.53	28.423	
4,099.99	4,094.70	4,106.54	4,096.65	11.85	11.72	-63.09	-36.05	676.21	609.58	587.70	21.88	27.866	
4,133.00	4,127.60	4,139.54	4,129.48	11.96	11.84	-61.96	-39.43	676.47	608.14	586.06	22.08	27.546	
4,199.99	4,194.38	4,206.69	4,196.27	12.18	12.08	-60.31	-46.37	677.00	605.13	582.64	22.49	26.908	
4,222.00	4,216.32	4,228.86	4,218.32	12.26	12.15	-59.76	-48.59	677.15	604.12	581.49	22.63	26.701	
4,299.99	4,294.08	4,304.90	4,294.01	12.52	12.42	-58.64	-55.80	677.64	600.52	577.42	23.10	25.995	

<b>Company:</b>	Piedra Operating LLC	<b>Local Co-ordinate Reference:</b>	Well University 8-8E A H 5LS
<b>Project:</b>	Andrews County, TX (NAD83-TNC)	<b>TVD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Reference Site:</b>	University 8-8	<b>MD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Site Error:</b>	0.00	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	University 8-8E A H 5LS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	1.00	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH / 72180	<b>Database:</b>	USAEDMDB
<b>Reference Design:</b>	Surveys (Ensign T054)	<b>Offset TVD Reference:</b>	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)		
4,312.00	4,306.05	4,316.10	4,305.18	12.56	12.46	-58.47	-56.81	677.74	600.01	576.84	23.17	25.893	
4,399.99	4,393.79	4,400.97	4,389.73	12.85	12.75	-56.14	-63.95	678.84	596.63	572.93	23.70	25.169	
4,401.00	4,394.80	4,401.98	4,390.74	12.86	12.76	-56.11	-64.03	678.86	596.60	572.89	23.71	25.161	
4,491.00	4,484.56	4,491.89	4,480.35	13.16	13.07	-54.83	-71.33	680.09	593.19	568.92	24.27	24.446	
4,499.99	4,493.53	4,500.83	4,489.25	13.19	13.10	-54.58	-72.06	680.21	592.85	568.53	24.32	24.376	
4,582.00	4,575.33	4,583.60	4,571.73	13.47	13.39	-52.25	-78.93	681.36	589.65	564.82	24.83	23.747	
4,599.99	4,593.27	4,602.01	4,590.07	13.53	13.45	-53.20	-80.52	681.60	588.92	563.97	24.94	23.609	
4,673.00	4,666.07	4,674.64	4,662.41	13.78	13.70	-56.68	-86.90	682.47	585.88	560.48	25.40	23.065	
4,699.99	4,692.98	4,701.06	4,688.73	13.87	13.80	-58.11	-89.19	682.83	584.83	559.25	25.57	22.869	
4,764.00	4,756.79	4,765.16	4,752.59	14.09	14.02	-61.46	-94.66	683.71	582.53	556.55	25.98	22.419	
4,799.99	4,792.66	4,801.50	4,788.79	14.22	14.15	-60.83	-97.73	684.19	581.27	555.05	26.22	22.171	
4,854.00	4,846.51	4,855.44	4,842.54	14.40	14.34	-59.85	-102.29	684.87	579.34	552.77	26.57	21.806	
4,899.99	4,892.36	4,901.36	4,888.29	14.56	14.50	-59.93	-106.21	685.46	577.70	550.84	26.87	21.503	
4,943.00	4,935.24	4,944.63	4,931.40	14.71	14.65	-59.99	-109.89	686.00	576.18	549.03	27.15	21.225	
4,999.99	4,992.07	5,002.00	4,988.57	14.91	14.86	-59.88	-114.65	686.67	574.20	546.68	27.52	20.865	
5,033.00	5,024.99	5,035.28	5,021.74	15.02	14.97	-59.81	-117.32	687.03	573.09	545.36	27.74	20.663	
5,099.99	5,091.82	5,102.78	5,089.03	15.25	15.21	-59.76	-122.53	687.69	570.84	542.67	28.18	20.260	
5,122.00	5,113.77	5,124.93	5,111.11	15.33	15.29	-59.75	-124.24	687.89	570.09	541.77	28.32	20.129	
5,199.99	5,191.56	5,205.47	5,191.42	15.60	15.58	-59.79	-130.37	688.49	567.24	538.39	28.85	19.664	
5,212.00	5,203.54	5,218.19	5,204.11	15.64	15.62	-59.80	-131.25	688.53	566.74	537.81	28.93	19.590	
5,299.99	5,291.28	5,309.16	5,294.91	15.95	15.94	-58.24	-136.79	688.35	562.64	533.10	29.54	19.048	
5,303.00	5,294.28	5,312.23	5,297.97	15.96	15.95	-58.19	-136.96	688.33	562.49	532.93	29.56	19.030	
5,393.00	5,384.02	5,400.04	5,385.70	16.28	16.27	-63.76	-140.79	687.88	558.34	528.16	30.18	18.501	
5,399.99	5,390.99	5,406.71	5,392.37	16.30	16.29	-63.78	-141.00	687.86	558.05	527.83	30.23	18.462	
5,483.00	5,473.76	5,487.15	5,472.78	16.59	16.59	-64.58	-142.99	687.78	554.97	524.16	30.81	18.015	
5,499.99	5,490.70	5,503.73	5,489.36	16.65	16.65	-64.88	-143.37	687.80	554.38	523.45	30.93	17.926	
5,573.00	5,563.48	5,576.85	5,562.45	16.91	16.90	-66.17	-145.03	687.91	551.94	520.50	31.44	17.554	
5,599.99	5,590.39	5,604.11	5,589.71	17.00	17.00	-66.28	-145.66	687.93	551.03	519.40	31.63	17.419	
5,662.00	5,652.21	5,666.14	5,651.72	17.22	17.21	-66.53	-147.11	687.94	548.92	516.84	32.08	17.113	
5,699.99	5,690.08	5,704.08	5,689.65	17.36	17.34	-66.51	-148.00	687.95	547.61	515.27	32.35	16.929	
5,752.00	5,741.93	5,756.16	5,741.72	17.54	17.53	-66.48	-149.23	687.95	545.79	513.07	32.72	16.680	
5,799.99	5,789.76	5,804.10	5,789.65	17.71	17.69	-67.71	-150.41	687.95	544.12	511.06	33.07	16.456	
5,841.00	5,830.64	5,844.82	5,830.35	17.85	17.83	-68.76	-151.42	687.95	542.76	509.40	33.36	16.270	
5,899.99	5,889.45	5,903.69	5,889.20	18.06	18.04	-73.22	-152.91	687.99	541.07	507.29	33.79	16.015	
5,931.00	5,920.37	5,934.88	5,920.38	18.17	18.15	-75.73	-153.69	688.00	540.34	506.33	34.01	15.887	
5,999.99	5,989.19	6,003.83	5,989.31	18.41	18.39	-82.67	-155.37	687.97	539.13	504.62	34.51	15.620	
6,022.00	6,011.15	6,025.67	6,011.15	18.49	18.46	-85.21	-155.91	687.97	538.90	504.22	34.67	15.542	
6,099.99	6,088.99	6,103.72	6,089.17	18.76	18.73	-86.53	-157.87	688.00	538.27	503.03	35.24	15.273	
6,112.00	6,100.99	6,115.82	6,101.27	18.80	18.78	-86.75	-158.17	688.00	538.18	502.85	35.33	15.233	
6,199.99	6,188.87	6,204.21	6,189.63	19.11	19.08	-88.65	-160.38	687.94	537.57	501.61	35.96	14.948	
6,201.00	6,189.88	6,205.23	6,190.64	19.11	19.09	-88.68	-160.40	687.94	537.56	501.59	35.97	14.945	
6,291.00	6,279.81	6,296.29	6,281.69	19.43	19.40	-89.48	-162.50	687.75	536.98	500.36	36.62	14.664	
6,299.99	6,288.79	6,305.43	6,290.82	19.46	19.44	-89.64	-162.70	687.72	536.91	500.22	36.68	14.636	
6,381.00	6,369.74	6,386.58	6,371.95	19.74	19.72	-91.13	-164.41	687.36	536.28	499.01	37.27	14.390	
6,399.99	6,388.71	6,405.50	6,390.86	19.80	19.78	-91.11	-164.81	687.28	536.15	498.74	37.41	14.333	
6,470.00	6,458.68	6,475.75	6,461.10	20.04	20.03	-91.01	-166.30	686.98	535.64	497.73	37.91	14.129	

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

<b>Company:</b>	Piedra Operating LLC	<b>Local Co-ordinate Reference:</b>	Well University 8-8E A H 5LS
<b>Project:</b>	Andrews County, TX (NAD83-TNC)	<b>TVD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Reference Site:</b>	University 8-8	<b>MD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Site Error:</b>	0.00	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	University 8-8E A H 5LS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	1.00	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH / 72180	<b>Database:</b>	USAEDMDB
<b>Reference Design:</b>	Surveys (Ensign T054)	<b>Offset TVD Reference:</b>	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)		
6,499.99	6,488.64	6,505.87	6,491.21	20.15	20.13	-90.42	-166.93	686.83	535.40	497.28	38.13	14.042	
6,559.00	6,547.62	6,565.07	6,550.41	20.35	20.34	-89.24	-168.16	686.53	534.88	496.33	38.55	13.873	
6,599.99	6,588.57	6,606.12	6,591.44	20.49	20.48	-90.71	-169.00	686.30	534.51	495.66	38.85	13.757	
6,650.00	6,638.55	6,656.03	6,641.34	20.66	20.65	-92.50	-170.02	686.03	534.11	494.89	39.22	13.620	
6,699.99	6,688.51	6,705.90	6,691.20	20.84	20.83	-92.05	-171.05	685.77	533.74	494.16	39.58	13.485	
6,740.00	6,728.49	6,745.81	6,731.11	20.97	20.97	-91.68	-171.86	685.56	533.43	493.56	39.87	13.380	
6,799.99	6,788.44	6,805.66	6,790.94	21.18	21.18	-90.78	-173.04	685.27	532.97	492.66	40.30	13.224	
6,830.00	6,818.43	6,835.61	6,820.88	21.29	21.28	-90.34	-173.62	685.12	532.73	492.20	40.52	13.147	
6,899.99	6,888.38	6,905.18	6,890.44	21.53	21.52	-91.36	-174.92	684.80	532.20	491.17	41.03	12.972	
6,919.00	6,907.38	6,924.04	6,909.29	21.59	21.59	-91.64	-175.26	684.72	532.07	490.91	41.16	12.926	
6,999.99	6,988.32	7,005.00	6,990.25	21.88	21.87	-90.36	-176.63	684.39	531.54	489.79	41.75	12.731	
7,009.00	6,997.33	7,014.05	6,999.29	21.91	21.90	-90.21	-176.77	684.35	531.47	489.66	41.82	12.710	
7,099.00	7,087.28	7,103.91	7,089.14	22.22	22.21	-90.65	-178.14	683.94	530.82	488.35	42.47	12.500	
7,099.99	7,088.26	7,104.89	7,090.12	22.22	22.22	-90.65	-178.16	683.93	530.81	488.34	42.47	12.498	
7,188.00	7,176.24	7,192.45	7,177.67	22.53	22.52	-91.97	-179.31	683.55	530.27	487.16	43.11	12.301	
7,199.99	7,188.22	7,204.36	7,189.59	22.57	22.56	-92.73	-179.46	683.50	530.20	487.01	43.20	12.274	
7,277.00	7,265.20	7,281.07	7,266.29	22.84	22.83	-97.89	-180.41	683.22	529.95	486.19	43.75	12.112	
7,299.99	7,288.17	7,303.97	7,289.19	22.92	22.91	-99.12	-180.68	683.14	529.91	485.99	43.92	12.065	
7,331.42	7,319.60	7,335.13	7,320.35	23.02	23.02	-100.89	-181.02	683.04	529.89	485.74	44.15	12.002	
7,367.00	7,355.16	7,370.38	7,355.59	23.15	23.14	-103.02	-181.36	682.94	529.92	485.51	44.41	11.933	
7,399.99	7,388.14	7,403.03	7,388.24	23.26	23.25	-104.43	-181.65	682.85	529.98	485.34	44.65	11.871	
7,457.00	7,445.13	7,459.50	7,444.71	23.45	23.44	-106.80	-182.10	682.76	530.21	485.16	45.05	11.770	
7,481.00	7,469.12	7,483.55	7,468.76	23.53	23.52	-113.44	-182.29	682.72	530.36	485.15	45.22	11.730	
7,499.99	7,488.10	7,502.58	7,487.79	23.59	23.59	-113.88	-182.44	682.69	530.51	485.16	45.35	11.697	
7,595.00	7,583.07	7,598.03	7,583.23	23.90	23.93	-115.88	-183.21	682.52	531.36	485.31	46.05	11.539	
7,599.98	7,588.06	7,603.05	7,588.25	23.91	23.94	-116.15	-183.25	682.51	531.40	485.32	46.09	11.531	
7,685.00	7,673.03	7,685.51	7,670.71	24.20	24.22	-120.42	-183.71	682.33	532.44	485.74	46.70	11.402	
7,699.98	7,688.00	7,699.51	7,684.71	24.25	24.26	-122.28	-183.74	682.36	532.73	485.93	46.80	11.383	
7,774.00	7,761.97	7,771.44	7,756.64	24.49	24.47	-130.56	-183.70	682.77	534.74	487.43	47.31	11.304	
7,799.98	7,787.94	7,797.68	7,782.88	24.57	24.55	-132.81	-183.67	682.92	535.46	487.97	47.49	11.275	
7,864.00	7,851.95	7,864.62	7,849.82	24.76	24.75	165.23	-183.53	683.15	536.42	488.48	47.94	11.190	
7,899.98	7,887.93	7,903.01	7,888.21	24.86	24.87	159.23	-183.29	683.01	536.58	488.41	48.18	11.138	
7,954.00	7,941.94	7,961.15	7,946.34	25.02	25.04	157.27	-182.75	682.41	536.87	488.34	48.53	11.064	
7,999.98	7,987.91	8,010.33	7,995.51	25.15	25.19	163.80	-182.25	681.53	537.10	488.29	48.81	11.004	
8,044.00	8,031.91	8,055.25	8,040.42	25.28	25.32	167.65	-181.87	680.58	537.45	488.37	49.08	10.950	
8,099.98	8,087.87	8,112.26	8,097.41	25.44	25.49	-173.80	-181.58	679.31	537.87	488.43	49.44	10.880	
8,133.00	8,120.88	8,145.73	8,130.87	25.54	25.59	-161.56	-181.52	678.54	538.01	488.36	49.65	10.836	
8,199.98	8,187.84	8,213.96	8,199.09	25.74	25.79	-149.21	-181.64	676.94	538.03	487.92	50.11	10.737	
8,223.00	8,210.85	8,237.53	8,222.65	25.81	25.86	-144.79	-181.71	676.34	537.95	487.68	50.27	10.701	
8,299.98	8,287.81	8,314.17	8,299.26	26.06	26.09	-131.51	-182.06	674.36	537.21	486.41	50.81	10.574	
8,312.00	8,299.83	8,325.88	8,310.97	26.10	26.13	-128.58	-182.13	674.08	537.06	486.17	50.89	10.553	
8,399.98	8,387.80	8,410.83	8,395.90	26.38	26.40	-133.85	-182.81	672.32	535.98	484.48	51.50	10.407	
8,401.00	8,388.82	8,411.81	8,396.88	26.39	26.40	-133.95	-182.82	672.31	535.97	484.46	51.51	10.405	
8,459.47	8,447.28	8,467.61	8,452.67	26.57	26.58	-155.51	-183.26	671.47	535.65	483.74	51.91	10.319	
8,490.00	8,477.81	8,496.43	8,481.49	26.66	26.68	-163.00	-183.50	671.16	535.75	483.63	52.12	10.279	

<b>Company:</b>	Piedra Operating LLC	<b>Local Co-ordinate Reference:</b>	Well University 8-8E A H 5LS
<b>Project:</b>	Andrews County, TX (NAD83-TNC)	<b>TVD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Reference Site:</b>	University 8-8	<b>MD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Site Error:</b>	0.00	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	University 8-8E A H 5LS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	1.00	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH / 72180	<b>Database:</b>	USAEDMDB
<b>Reference Design:</b>	Surveys (Ensign T054)	<b>Offset TVD Reference:</b>	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)		
8,499.98	8,487.79	8,505.86	8,490.91	26.69	26.71	-164.60	-183.59	671.09	535.81	483.63	52.19	10.267	
8,581.00	8,568.79	8,581.57	8,566.63	26.94	26.97	-176.31	-184.28	670.87	536.88	484.17	52.72	10.184	
8,599.98	8,587.77	8,599.18	8,584.23	27.00	27.03	-166.02	-184.44	670.93	537.28	484.44	52.84	10.168	
8,670.00	8,657.77	8,668.76	8,653.81	27.21	27.26	-136.88	-185.03	671.45	538.99	485.67	53.32	10.109	
8,699.98	8,687.74	8,700.16	8,685.20	27.33	27.37	-121.57	-185.28	671.58	539.64	486.09	53.55	10.078	
8,760.00	8,747.68	8,772.31	8,757.35	27.56	27.62	-109.45	-186.00	671.14	540.40	486.33	54.07	9.994	
8,799.98	8,787.58	8,821.11	8,806.12	27.72	27.79	-110.66	-186.84	669.80	540.05	485.63	54.42	9.923	
8,849.00	8,836.49	8,876.73	8,861.68	27.92	27.98	-112.13	-187.91	667.54	539.02	484.18	54.84	9.830	
8,872.00	8,859.45	8,901.74	8,886.66	28.00	28.07	-111.90	-188.41	666.29	538.34	483.33	55.01	9.787	
8,899.98	8,887.36	8,928.48	8,913.36	28.11	28.15	-100.57	-188.95	664.96	537.38	482.16	55.22	9.732	
8,941.00	8,928.19	8,967.59	8,952.42	28.27	28.28	-91.47	-189.77	663.14	535.65	480.12	55.53	9.646	
8,999.98	8,986.21	9,024.95	9,009.71	29.02	28.47	-82.96	-191.07	660.65	531.92	475.86	56.06	9.488	
9,031.00	9,016.02	9,054.89	9,039.61	29.44	28.57	-82.35	-191.83	659.37	529.22	472.85	56.36	9.389	
9,099.98	9,080.85	9,115.79	9,100.45	30.46	28.77	-81.92	-193.29	656.88	522.37	465.34	57.03	9.160	
9,121.00	9,100.27	9,133.40	9,118.04	30.79	28.82	-82.07	-193.54	656.23	520.26	463.02	57.24	9.089	
9,199.98	9,171.23	9,199.13	9,183.74	31.40	29.03	-86.57	-193.89	654.07	513.67	455.63	58.04	8.851	
9,210.00	9,179.96	9,207.41	9,192.02	31.48	29.06	-87.16	-193.90	653.82	513.04	454.90	58.14	8.824	
9,255.82	9,219.32	9,244.72	9,229.31	31.84	29.17	-92.54	-193.89	652.77	511.66	452.98	58.68	8.720	CC, ES
9,299.00	9,255.54	9,279.68	9,264.25	32.18	29.28	-97.20	-193.84	651.87	512.93	453.73	59.20	8.664	
9,299.98	9,256.36	9,280.47	9,265.05	32.19	29.28	-97.32	-193.84	651.85	512.99	453.77	59.22	8.663	
9,389.00	9,329.05	9,351.60	9,336.16	32.75	29.51	-107.34	-193.95	650.31	524.37	463.82	60.54	8.661	
9,399.98	9,337.84	9,360.12	9,344.67	32.81	29.53	-107.57	-193.98	650.15	526.55	465.86	60.69	8.676	
9,479.00	9,398.36	9,418.95	9,403.50	33.28	29.73	-109.16	-194.29	649.27	545.35	483.64	61.71	8.837	
9,499.98	9,413.49	9,433.73	9,418.28	33.43	29.78	-109.40	-194.39	649.11	551.36	489.40	61.96	8.899	
9,568.00	9,458.53	9,477.26	9,461.80	33.92	29.92	-109.73	-194.69	648.76	574.58	511.84	62.74	9.158	
9,599.98	9,477.62	9,495.77	9,480.31	34.11	29.98	-110.02	-194.83	648.68	587.50	524.42	63.08	9.313	
9,657.00	9,508.72	9,526.44	9,510.99	34.46	30.08	-110.16	-195.06	648.59	613.57	549.91	63.66	9.638	
9,699.98	9,529.60	9,562.97	9,547.48	34.64	30.31	-111.69	-196.26	649.14	635.65	571.24	64.41	9.869	
9,748.00	9,550.27	9,609.70	9,593.93	34.85	30.64	-113.53	-200.63	651.69	662.34	597.02	65.31	10.141	
9,799.98	9,568.71	9,654.86	9,638.40	35.03	31.06	-113.98	-207.40	655.64	693.76	627.46	66.31	10.463	
9,837.00	9,578.89	9,685.24	9,668.11	35.17	31.38	-113.81	-212.94	658.66	717.98	650.97	67.01	10.715	
9,899.98	9,588.83	9,737.72	9,718.95	35.33	31.80	-109.99	-224.44	664.64	762.68	694.76	67.92	11.229	
9,928.00	9,589.86	9,760.45	9,740.72	35.41	31.93	-107.67	-230.30	667.62	783.87	715.61	68.26	11.484	
9,952.00	9,589.61	9,780.07	9,759.35	35.46	32.05	-108.49	-235.78	670.39	802.43	733.96	68.47	11.719	
9,999.98	9,588.60	9,859.73	9,833.21	35.57	32.60	-115.50	-262.41	683.61	839.71	770.59	69.11	12.150	
10,042.00	9,587.53	10,679.18	10,205.13	35.67	37.64	-135.96	-870.09	954.32	861.72	793.82	67.90	12.690	
10,044.31	9,587.47	10,681.66	10,205.19	35.68	37.64	-135.96	-872.48	954.97	861.83	793.91	67.92	12.689	
10,099.98	9,586.09	10,733.41	10,206.47	35.85	37.83	-136.05	-922.40	968.53	865.28	796.81	68.48	12.636	
10,100.89	9,586.07	10,734.14	10,206.49	35.85	37.84	-136.05	-923.11	968.73	865.36	796.87	68.49	12.635	
10,132.00	9,585.40	10,759.19	10,207.07	35.96	37.93	-136.07	-947.19	975.61	868.17	799.30	68.87	12.606	
10,133.36	9,585.38	10,760.29	10,207.09	35.97	37.94	-136.07	-948.24	975.92	868.31	799.42	68.89	12.605	
10,199.98	9,583.86	10,816.67	10,208.27	36.22	38.17	-135.88	-1,002.15	992.39	875.98	806.28	69.70	12.568	
10,200.27	9,583.85	10,816.95	10,208.27	36.22	38.17	-135.88	-1,002.42	992.47	876.02	806.32	69.70	12.568	
10,223.00	9,583.26	10,838.61	10,208.70	36.31	38.27	-135.79	-1,023.08	998.96	878.95	809.00	69.95	12.566	
10,223.85	9,583.24	10,839.42	10,208.71	36.32	38.27	-135.79	-1,023.85	999.21	879.07	809.11	69.96	12.566	
10,299.98	9,581.11	10,911.53	10,210.06	36.63	38.62	-135.45	-1,092.55	1,021.08	889.32	818.56	70.75	12.569	

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

<b>Company:</b>	Piedra Operating LLC	<b>Local Co-ordinate Reference:</b>	Well University 8-8E A H 5LS
<b>Project:</b>	Andrews County, TX (NAD83-TNC)	<b>TVD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Reference Site:</b>	University 8-8	<b>MD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Site Error:</b>	0.00	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	University 8-8E A H 5LS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	1.00	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH / 72180	<b>Database:</b>	USAEDMDB
<b>Reference Design:</b>	Surveys (Ensign T054)	<b>Offset TVD Reference:</b>	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)		
10,300.08	9,581.11	10,911.63	10,210.07	36.63	38.62	-135.45	-1,092.65	1,021.11	889.33	818.58	70.76	12.569	
10,312.00	9,580.77	10,922.81	10,210.27	36.68	38.67	-135.39	-1,103.28	1,024.54	890.98	820.09	70.88	12.570	
10,312.84	9,580.74	10,923.60	10,210.29	36.69	38.68	-135.39	-1,104.03	1,024.78	891.09	820.20	70.89	12.570	
10,399.98	9,578.76	11,015.62	10,211.88	37.11	39.17	-134.96	-1,191.56	1,053.16	902.48	830.76	71.72	12.584	
10,400.00	9,578.76	11,015.65	10,211.88	37.11	39.17	-134.96	-1,191.59	1,053.17	902.48	830.76	71.72	12.584	
10,401.00	9,578.74	11,016.92	10,211.90	37.12	39.18	-134.96	-1,192.79	1,053.55	902.59	830.87	71.72	12.584	
10,402.46	9,578.71	11,018.78	10,211.92	37.12	39.19	-134.95	-1,194.56	1,054.12	902.76	831.03	71.73	12.585	
10,490.00	9,577.42	11,149.51	10,213.08	37.61	40.02	-134.48	-1,320.12	1,090.46	911.21	839.06	72.15	12.629	
10,490.31	9,577.41	11,150.03	10,213.08	37.61	40.02	-134.48	-1,320.62	1,090.58	911.23	839.08	72.15	12.630	
10,499.98	9,577.29	11,166.08	10,213.18	37.68	40.13	-134.43	-1,336.21	1,094.42	911.86	839.68	72.18	12.633	
10,502.72	9,577.25	11,170.64	10,213.21	37.69	40.16	-134.42	-1,340.64	1,095.48	912.02	839.83	72.19	12.634	
10,580.00	9,576.23	11,230.39	10,213.86	38.20	40.58	-134.28	-1,398.52	1,110.26	916.55	843.24	73.31	12.502	
10,580.74	9,576.22	11,231.02	10,213.87	38.20	40.58	-134.28	-1,399.14	1,110.42	916.59	843.27	73.32	12.501	
10,599.98	9,575.95	11,248.29	10,214.12	38.34	40.70	-134.26	-1,415.85	1,114.76	917.65	844.08	73.57	12.473	
10,602.45	9,575.91	11,250.93	10,214.16	38.36	40.72	-134.26	-1,418.41	1,115.43	917.79	844.19	73.60	12.471	
10,670.00	9,574.71	11,323.34	10,215.06	38.84	41.23	-134.19	-1,488.51	1,133.56	921.66	847.35	74.31	12.402	
10,671.05	9,574.69	11,324.47	10,215.07	38.85	41.24	-134.19	-1,489.59	1,133.84	921.73	847.40	74.33	12.401	
10,699.98	9,574.09	11,373.49	10,215.47	39.07	41.61	-134.17	-1,537.21	1,145.52	923.19	848.76	74.43	12.403	
10,700.02	9,574.09	11,373.57	10,215.47	39.07	41.61	-134.17	-1,537.28	1,145.54	923.19	848.76	74.43	12.403	
10,759.00	9,572.88	11,450.73	10,215.72	39.51	42.23	-134.23	-1,612.84	1,161.16	924.27	849.35	74.91	12.338	
10,759.03	9,572.88	11,450.76	10,215.72	39.51	42.23	-134.23	-1,612.86	1,161.16	924.27	849.35	74.91	12.338	
10,799.98	9,571.96	11,482.75	10,215.90	39.83	42.50	-134.25	-1,644.18	1,167.66	925.34	849.82	75.52	12.252	
10,802.02	9,571.91	11,484.34	10,215.91	39.85	42.52	-134.25	-1,645.74	1,168.00	925.41	849.86	75.55	12.248	
10,848.00	9,570.69	11,523.93	10,216.27	40.21	42.85	-134.27	-1,684.41	1,176.49	927.42	851.23	76.20	12.171	
10,850.16	9,570.63	11,526.82	10,216.30	40.23	42.87	-134.27	-1,687.23	1,177.11	927.53	851.31	76.22	12.170	
10,899.98	9,569.58	11,593.30	10,216.20	40.65	43.41	-134.30	-1,752.19	1,191.29	928.74	852.08	76.66	12.115	
10,908.07	9,569.48	11,604.11	10,216.07	40.72	43.50	-134.31	-1,762.76	1,193.55	928.73	851.99	76.73	12.103	
10,938.00	9,569.24	11,634.56	10,215.62	40.98	43.75	-134.32	-1,792.52	1,199.92	928.32	851.20	77.11	12.038	
10,951.73	9,569.20	11,648.53	10,215.39	41.11	43.86	-134.33	-1,806.18	1,202.86	927.98	850.68	77.30	12.006	
10,999.98	9,569.14	11,693.00	10,214.51	41.56	44.23	-134.38	-1,849.62	1,212.32	926.29	848.31	77.98	11.879	
11,005.89	9,569.15	11,702.30	10,214.30	41.61	44.31	-134.39	-1,858.70	1,214.32	926.02	848.00	78.02	11.869	
11,026.00	9,569.19	11,720.15	10,213.89	41.80	44.47	-134.41	-1,876.12	1,218.22	925.09	846.78	78.31	11.813	
11,042.94	9,569.23	11,735.19	10,213.53	41.96	44.60	-134.42	-1,890.78	1,221.57	924.30	845.74	78.56	11.766	
11,099.98	9,569.28	11,784.00	10,212.29	42.48	45.02	-134.42	-1,938.26	1,232.78	922.03	842.63	79.40	11.612	
11,104.01	9,569.28	11,789.62	10,212.14	42.52	45.07	-134.42	-1,943.72	1,234.10	921.89	842.45	79.44	11.605	
11,118.00	9,569.27	11,802.44	10,211.79	42.65	45.19	-134.42	-1,956.17	1,237.14	921.43	841.78	79.64	11.570	
11,136.22	9,569.23	11,819.13	10,211.34	42.82	45.33	-134.41	-1,972.37	1,241.14	920.88	840.97	79.91	11.525	
11,199.98	9,568.81	11,874.00	10,209.80	43.41	45.83	-134.39	-2,025.55	1,254.59	919.45	838.59	80.87	11.370	
11,201.50	9,568.79	11,878.94	10,209.66	43.42	45.87	-134.39	-2,030.33	1,255.82	919.42	838.56	80.85	11.371	
11,207.00	9,568.73	11,883.95	10,209.51	43.48	45.92	-134.38	-2,035.18	1,257.08	919.33	838.40	80.94	11.359	
11,226.38	9,568.50	11,901.63	10,208.99	43.66	46.08	-134.37	-2,052.28	1,261.55	919.07	837.85	81.22	11.315	
11,297.00	9,567.33	11,967.17	10,206.91	44.33	46.68	-134.30	-2,115.52	1,278.63	918.74	836.46	82.28	11.166	
11,299.98	9,567.27	11,970.88	10,206.79	44.36	46.72	-134.30	-2,119.09	1,279.61	918.74	836.43	82.32	11.161	
11,302.63	9,567.21	11,974.18	10,206.68	44.39	46.75	-134.30	-2,122.27	1,280.48	918.74	836.39	82.35	11.157	
11,318.53	9,566.88	11,993.99	10,205.99	44.54	46.94	-134.28	-2,141.37	1,285.66	918.68	836.13	82.55	11.129	

<b>Company:</b>	Piedra Operating LLC	<b>Local Co-ordinate Reference:</b>	Well University 8-8E A H 5LS
<b>Project:</b>	Andrews County, TX (NAD83-TNC)	<b>TVD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Reference Site:</b>	University 8-8	<b>MD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Site Error:</b>	0.00	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	University 8-8E A H 5LS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	1.00	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH / 72180	<b>Database:</b>	USAEDMDB
<b>Reference Design:</b>	Surveys (Ensign T054)	<b>Offset TVD Reference:</b>	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)		
11,387.00	9,565.32	12,069.12	10,203.19	45.21	47.65	-134.28	-2,214.05	1,304.53	917.58	834.10	83.48	10.992	
11,389.83	9,565.25	12,071.17	10,203.12	45.24	47.67	-134.28	-2,216.03	1,305.04	917.53	834.00	83.53	10.985	
11,399.98	9,565.02	12,078.53	10,202.87	45.34	47.74	-134.27	-2,223.15	1,306.89	917.36	833.66	83.70	10.960	
11,416.93	9,564.71	12,090.82	10,202.48	45.51	47.86	-134.26	-2,235.03	1,310.02	917.11	833.12	83.99	10.919	
11,478.00	9,564.25	12,145.00	10,201.25	46.12	48.39	-134.20	-2,287.26	1,324.37	916.63	831.65	84.98	10.787	
11,491.23	9,564.25	12,145.00	10,201.25	46.25	48.39	-134.20	-2,287.26	1,324.37	916.53	831.25	85.28	10.747	
11,499.98	9,564.24	12,154.75	10,201.10	46.34	48.49	-134.19	-2,296.64	1,327.02	916.53	831.12	85.41	10.731	
11,514.10	9,564.20	12,171.28	10,200.86	46.49	48.65	-134.18	-2,312.56	1,331.45	916.51	830.90	85.61	10.705	
11,567.00	9,563.79	12,233.18	10,200.17	47.02	49.27	-134.18	-2,372.38	1,347.35	916.25	829.91	86.34	10.612	
11,574.09	9,563.71	12,241.48	10,200.10	47.10	49.35	-134.18	-2,380.42	1,349.39	916.20	829.76	86.44	10.599	
11,599.98	9,563.52	12,266.26	10,200.05	47.36	49.60	-134.20	-2,404.47	1,355.38	916.03	829.19	86.84	10.549	
11,611.99	9,563.48	12,278.21	10,200.10	47.49	49.72	-134.21	-2,416.09	1,358.19	915.96	828.94	87.02	10.526	
11,656.00	9,563.61	12,321.97	10,200.68	47.94	50.16	-134.25	-2,458.70	1,368.14	915.82	828.14	87.68	10.445	
11,669.09	9,563.71	12,334.74	10,200.96	48.08	50.29	-134.27	-2,471.15	1,370.94	915.81	827.93	87.88	10.421	
11,699.98	9,563.94	12,364.61	10,201.59	48.40	50.59	-134.30	-2,500.28	1,377.54	915.87	827.52	88.35	10.366	
11,700.18	9,563.94	12,364.81	10,201.60	48.41	50.59	-134.30	-2,500.47	1,377.58	915.87	827.52	88.36	10.366	
11,746.00	9,564.28	12,409.12	10,202.50	48.89	51.04	-134.34	-2,543.65	1,387.50	916.21	827.14	89.07	10.287	
11,746.21	9,564.28	12,409.33	10,202.50	48.89	51.04	-134.34	-2,543.85	1,387.55	916.21	827.14	89.07	10.286	
11,799.98	9,564.93	12,464.07	10,203.54	49.46	51.59	-134.36	-2,597.17	1,399.91	916.27	826.39	89.88	10.194	
11,807.96	9,565.07	12,472.26	10,203.68	49.54	51.68	-134.36	-2,605.14	1,401.75	916.19	826.18	90.00	10.179	
11,837.00	9,565.66	12,502.00	10,204.20	49.85	51.98	-134.37	-2,634.11	1,408.46	915.70	825.26	90.44	10.125	
11,850.84	9,565.98	12,515.20	10,204.42	50.00	52.11	-134.38	-2,646.98	1,411.44	915.40	824.74	90.66	10.097	
11,899.98	9,567.14	12,561.51	10,205.29	50.53	52.59	-134.43	-2,692.07	1,421.93	914.33	822.89	91.44	10.000	
11,906.13	9,567.28	12,567.31	10,205.41	50.60	52.65	-134.43	-2,697.72	1,423.25	914.20	822.66	91.53	9.988	
11,928.00	9,567.81	12,587.93	10,205.85	50.84	52.86	-134.45	-2,717.79	1,427.95	913.73	821.85	91.88	9.945	
11,943.70	9,568.18	12,603.04	10,206.18	51.01	53.02	-134.47	-2,732.49	1,431.40	913.44	821.31	92.13	9.915	
11,999.98	9,569.45	12,658.19	10,207.46	51.63	53.59	-134.52	-2,786.17	1,444.01	913.05	820.03	93.03	9.815	
11,999.98	9,569.45	12,658.20	10,207.46	51.63	53.59	-134.52	-2,786.18	1,444.01	913.05	820.03	93.03	9.815	
12,018.00	9,569.83	12,675.86	10,207.88	51.83	53.78	-134.53	-2,803.37	1,448.05	913.15	819.83	93.32	9.785	
12,018.03	9,569.83	12,675.90	10,207.88	51.83	53.78	-134.53	-2,803.40	1,448.06	913.15	819.83	93.32	9.785	
12,099.98	9,570.85	12,758.79	10,209.95	52.74	54.65	-134.53	-2,884.10	1,466.93	914.92	820.25	94.67	9.665	
12,100.21	9,570.85	12,759.04	10,209.96	52.74	54.66	-134.53	-2,884.33	1,466.99	914.93	820.26	94.67	9.664	
12,109.00	9,570.87	12,767.95	10,210.18	52.84	54.75	-134.53	-2,893.01	1,469.01	915.24	820.43	94.81	9.653	
12,112.84	9,570.88	12,771.85	10,210.28	52.88	54.79	-134.53	-2,896.81	1,469.89	915.39	820.51	94.88	9.648	
12,198.00	9,571.32	12,868.31	10,212.57	53.81	55.82	-134.51	-2,990.87	1,491.13	917.99	821.79	96.20	9.543	
12,198.00	9,571.32	12,868.31	10,212.57	53.81	55.82	-134.51	-2,990.87	1,491.13	917.99	821.79	96.20	9.543	
12,199.98	9,571.33	12,871.37	10,212.63	53.84	55.85	-134.51	-2,993.86	1,491.78	918.03	821.81	96.22	9.541	
12,200.14	9,571.33	12,871.62	10,212.64	53.84	55.86	-134.51	-2,994.11	1,491.84	918.03	821.81	96.22	9.541	
12,288.00	9,571.92	12,984.31	10,213.08	54.81	57.07	-134.46	-3,104.48	1,514.54	918.31	820.80	97.51	9.418	
12,288.01	9,571.92	12,984.32	10,213.08	54.81	57.07	-134.46	-3,104.49	1,514.54	918.31	820.80	97.51	9.418	
12,299.98	9,571.99	12,994.95	10,213.03	54.94	57.18	-134.45	-3,114.90	1,516.66	918.33	820.60	97.73	9.397	
12,300.30	9,571.99	12,995.24	10,213.03	54.94	57.19	-134.45	-3,115.18	1,516.72	918.33	820.60	97.74	9.396	
12,377.00	9,572.37	13,068.34	10,212.74	55.79	57.98	-134.35	-3,186.72	1,531.78	919.04	819.92	99.12	9.272	
12,377.05	9,572.37	13,068.40	10,212.74	55.79	57.98	-134.35	-3,186.77	1,531.79	919.04	819.92	99.12	9.272	
12,399.98	9,572.49	13,093.74	10,212.60	56.05	58.26	-134.31	-3,211.58	1,537.01	919.27	819.76	99.51	9.238	
12,400.27	9,572.49	13,094.07	10,212.60	56.05	58.26	-134.31	-3,211.90	1,537.07	919.27	819.76	99.52	9.237	

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



<b>Company:</b>	Piedra Operating LLC	<b>Local Co-ordinate Reference:</b>	Well University 8-8E A H 5LS
<b>Project:</b>	Andrews County, TX (NAD83-TNC)	<b>TVD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Reference Site:</b>	University 8-8	<b>MD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Site Error:</b>	0.00	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	University 8-8E A H 5LS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	1.00	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH / 72180	<b>Database:</b>	USAEDMDB
<b>Reference Design:</b>	Surveys (Ensign T054)	<b>Offset TVD Reference:</b>	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)		
12,467.00	9,573.03	13,168.04	10,211.92	56.80	59.07	-134.19	-3,284.34	1,552.00	919.44	818.78	100.66	9.134	
12,474.02	9,573.11	13,175.84	10,211.83	56.88	59.16	-134.18	-3,291.99	1,553.55	919.41	818.63	100.78	9.123	
12,499.98	9,573.40	13,204.69	10,211.44	57.17	59.47	-134.13	-3,320.27	1,559.24	919.28	818.05	101.23	9.081	
12,512.42	9,573.55	13,218.52	10,211.23	57.31	59.63	-134.10	-3,333.83	1,561.95	919.20	817.75	101.45	9.060	
12,558.00	9,574.15	13,266.12	10,210.39	57.83	60.15	-134.00	-3,380.51	1,571.24	918.83	816.55	102.29	8.983	
12,566.99	9,574.27	13,275.47	10,210.21	57.93	60.26	-133.97	-3,389.67	1,573.06	918.76	816.30	102.46	8.967	
12,599.98	9,574.63	13,309.75	10,209.48	58.30	60.64	-133.90	-3,423.28	1,579.77	918.41	815.35	103.06	8.911	
12,610.10	9,574.71	13,319.46	10,209.26	58.42	60.75	-133.88	-3,432.81	1,581.68	918.30	815.04	103.26	8.893	
12,647.00	9,574.88	13,354.49	10,208.42	58.84	61.14	-133.82	-3,467.12	1,588.67	917.88	813.92	103.96	8.829	
12,658.37	9,574.90	13,365.28	10,208.14	58.97	61.26	-133.80	-3,477.68	1,590.85	917.77	813.59	104.18	8.809	
12,699.97	9,574.76	13,403.00	10,207.11	59.44	61.68	-133.73	-3,514.58	1,598.63	917.59	812.60	104.99	8.740	
12,699.98	9,574.76	13,403.00	10,207.11	59.44	61.68	-133.73	-3,514.58	1,598.63	917.59	812.60	104.99	8.740	
12,737.00	9,574.41	13,435.41	10,206.28	59.87	62.05	-133.68	-3,546.24	1,605.46	917.82	812.09	105.72	8.681	
12,737.08	9,574.41	13,435.47	10,206.28	59.87	62.05	-133.68	-3,546.31	1,605.47	917.82	812.09	105.72	8.681	
12,799.97	9,573.76	13,493.00	10,205.27	60.60	62.70	-133.59	-3,602.46	1,617.93	918.83	811.88	106.95	8.592	
12,799.98	9,573.76	13,493.00	10,205.27	60.60	62.70	-133.59	-3,602.46	1,617.93	918.83	811.88	106.95	8.592	
12,827.00	9,573.57	13,509.32	10,205.09	60.91	62.88	-133.56	-3,618.37	1,621.55	919.39	811.87	107.52	8.551	
12,827.04	9,573.57	13,509.35	10,205.09	60.91	62.88	-133.56	-3,618.40	1,621.56	919.39	811.87	107.52	8.551	
12,899.97	9,573.03	13,566.30	10,204.98	61.75	63.53	-133.47	-3,673.84	1,634.60	921.85	812.87	108.98	8.459	
12,900.68	9,573.03	13,566.86	10,204.98	61.76	63.54	-133.47	-3,674.38	1,634.73	921.88	812.89	108.99	8.458	
12,918.00	9,572.87	13,583.00	10,205.09	61.96	63.72	-133.45	-3,690.07	1,638.54	922.69	813.37	109.33	8.440	
12,921.33	9,572.84	13,583.00	10,205.09	62.00	63.72	-133.45	-3,690.07	1,638.54	922.85	813.45	109.40	8.435	
12,999.97	9,572.48	13,666.04	10,205.80	62.93	64.68	-133.37	-3,770.80	1,657.98	925.35	814.49	110.86	8.347	
12,999.98	9,572.48	13,666.05	10,205.80	62.93	64.68	-133.37	-3,770.80	1,657.99	925.35	814.49	110.86	8.347	
13,007.00	9,572.48	13,673.47	10,205.87	63.02	64.76	-133.36	-3,778.02	1,659.70	925.45	814.46	110.99	8.338	
13,007.17	9,572.48	13,673.65	10,205.87	63.02	64.77	-133.36	-3,778.20	1,659.74	925.45	814.46	110.99	8.338	
13,097.00	9,572.61	13,764.13	10,206.80	64.09	65.81	-133.37	-3,866.29	1,680.41	926.50	813.86	112.63	8.226	
13,097.07	9,572.61	13,764.20	10,206.80	64.09	65.81	-133.37	-3,866.35	1,680.43	926.50	813.86	112.63	8.226	
13,099.97	9,572.62	13,767.25	10,206.83	64.12	65.85	-133.37	-3,869.32	1,681.12	926.53	813.84	112.69	8.222	
13,118.02	9,572.69	13,786.18	10,207.05	64.34	66.07	-133.37	-3,887.76	1,685.39	926.65	813.64	113.01	8.200	
13,186.00	9,573.32	13,857.15	10,207.76	65.15	66.89	-133.41	-3,956.91	1,701.31	926.10	811.87	114.22	8.108	
13,189.06	9,573.36	13,860.17	10,207.79	65.19	66.93	-133.41	-3,959.86	1,701.98	926.03	811.76	114.28	8.103	
13,199.97	9,573.51	13,870.93	10,207.88	65.32	67.05	-133.42	-3,970.35	1,704.39	925.80	811.32	114.48	8.087	
13,216.63	9,573.77	13,887.36	10,208.01	65.52	67.24	-133.43	-3,986.36	1,708.08	925.37	810.60	114.78	8.062	
13,275.00	9,574.94	13,944.79	10,208.38	66.23	67.91	-133.48	-4,042.29	1,721.10	923.30	807.48	115.82	7.972	
13,280.66	9,575.06	13,950.19	10,208.41	66.30	67.98	-133.49	-4,047.55	1,722.34	923.07	807.14	115.92	7.963	
13,299.97	9,575.39	13,968.63	10,208.53	66.53	68.19	-133.53	-4,065.50	1,726.55	922.33	806.06	116.27	7.933	
13,314.54	9,575.52	13,982.54	10,208.64	66.71	68.35	-133.56	-4,079.04	1,729.73	921.85	805.33	116.52	7.911	
13,366.00	9,575.28	14,031.76	10,209.12	67.33	68.93	-133.71	-4,126.95	1,740.98	920.72	803.33	117.39	7.843	
13,373.31	9,575.16	14,039.08	10,209.20	67.42	69.02	-133.73	-4,134.08	1,742.65	920.62	803.11	117.51	7.834	
13,399.97	9,574.60	14,065.79	10,209.52	67.74	69.33	-133.82	-4,160.09	1,748.74	920.37	802.43	117.94	7.804	
13,433.68	9,573.63	14,099.55	10,209.95	68.15	69.73	-133.95	-4,192.96	1,756.41	920.25	801.79	118.47	7.768	
13,455.00	9,572.87	14,121.18	10,210.24	68.41	69.99	-134.04	-4,214.03	1,761.31	920.30	801.51	118.79	7.747	
13,455.20	9,572.86	14,121.41	10,210.24	68.41	69.99	-134.04	-4,214.25	1,761.36	920.30	801.51	118.79	7.747	
13,499.97	9,571.07	14,173.11	10,210.57	68.96	70.60	-134.25	-4,264.60	1,773.11	920.31	800.86	119.46	7.704	

<b>Company:</b>	Piedra Operating LLC	<b>Local Co-ordinate Reference:</b>	Well University 8-8E A H 5LS
<b>Project:</b>	Andrews County, TX (NAD83-TNC)	<b>TVD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Reference Site:</b>	University 8-8	<b>MD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Site Error:</b>	0.00	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	University 8-8E A H 5LS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	1.00	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH / 72180	<b>Database:</b>	USAEDMDB
<b>Reference Design:</b>	Surveys (Ensign T054)	<b>Offset TVD Reference:</b>	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)		
13,509.33	9,570.69	14,183.92	10,210.56	69.07	70.73	-134.29	-4,275.12	1,775.58	920.27	800.68	119.60	7.695	
13,544.00	9,569.21	14,221.76	10,210.28	69.49	71.18	-134.43	-4,311.95	1,784.27	920.02	799.88	120.13	7.658	
13,555.94	9,568.68	14,233.50	10,210.15	69.64	71.32	-134.47	-4,323.36	1,786.99	919.92	799.60	120.32	7.646	
13,599.97	9,566.63	14,276.81	10,209.54	70.18	71.83	-134.61	-4,365.46	1,797.18	919.69	798.66	121.03	7.599	
13,607.40	9,566.27	14,284.12	10,209.42	70.27	71.92	-134.63	-4,372.55	1,798.92	919.67	798.52	121.15	7.591	
13,635.00	9,564.88	14,310.45	10,208.95	70.61	72.23	-134.70	-4,398.11	1,805.25	919.63	798.03	121.60	7.563	
13,635.02	9,564.88	14,310.47	10,208.95	70.61	72.23	-134.70	-4,398.13	1,805.25	919.63	798.03	121.60	7.563	
13,699.97	9,562.36	14,370.11	10,207.89	71.41	72.95	-134.75	-4,455.94	1,819.88	919.85	797.11	122.75	7.494	
13,699.97	9,562.36	14,370.12	10,207.89	71.41	72.95	-134.75	-4,455.94	1,819.88	919.85	797.11	122.75	7.494	
13,724.00	9,561.85	14,392.24	10,207.52	71.70	73.21	-134.75	-4,477.36	1,825.40	920.02	796.81	123.21	7.467	
13,724.36	9,561.84	14,392.57	10,207.51	71.71	73.22	-134.75	-4,477.68	1,825.49	920.02	796.81	123.22	7.467	
13,799.97	9,560.95	14,463.12	10,206.37	72.64	74.07	-134.70	-4,545.90	1,843.43	920.45	795.74	124.71	7.380	
13,800.03	9,560.95	14,463.18	10,206.36	72.64	74.07	-134.70	-4,545.96	1,843.44	920.45	795.73	124.72	7.380	
13,813.00	9,560.87	14,478.00	10,206.13	72.80	74.25	-134.68	-4,560.28	1,847.27	920.49	795.52	124.98	7.365	
13,813.34	9,560.87	14,478.00	10,206.13	72.81	74.25	-134.68	-4,560.28	1,847.27	920.49	795.51	124.98	7.365	
13,899.97	9,560.51	14,558.74	10,204.86	73.87	75.22	-134.57	-4,638.19	1,868.39	921.03	794.29	126.74	7.267	
13,899.97	9,560.51	14,558.74	10,204.86	73.87	75.22	-134.57	-4,638.20	1,868.39	921.03	794.29	126.74	7.267	
13,902.00	9,560.50	14,560.69	10,204.83	73.89	75.25	-134.57	-4,640.07	1,868.91	921.05	794.27	126.78	7.265	
13,902.35	9,560.50	14,561.02	10,204.82	73.90	75.25	-134.57	-4,640.40	1,869.00	921.06	794.27	126.79	7.265	
13,992.00	9,560.63	14,642.96	10,203.26	75.00	76.25	-134.37	-4,719.21	1,891.33	922.14	793.44	128.70	7.165	
13,992.09	9,560.63	14,643.04	10,203.26	75.00	76.25	-134.37	-4,719.29	1,891.36	922.14	793.44	128.71	7.165	
13,999.97	9,560.66	14,650.21	10,203.09	75.10	76.34	-134.34	-4,726.16	1,893.38	922.28	793.39	128.88	7.156	
13,999.98	9,560.66	14,650.21	10,203.09	75.10	76.34	-134.34	-4,726.17	1,893.38	922.28	793.39	128.88	7.156	
14,081.00	9,559.69	14,749.57	10,202.08	76.10	77.58	-134.15	-4,822.09	1,919.17	924.82	794.18	130.64	7.079	
14,081.79	9,559.67	14,750.69	10,202.09	76.11	77.59	-134.15	-4,823.19	1,919.43	924.85	794.20	130.66	7.079	
14,099.97	9,559.16	14,776.47	10,202.24	76.34	77.92	-134.16	-4,848.31	1,925.18	925.54	794.55	130.99	7.066	
14,103.10	9,559.07	14,780.90	10,202.27	76.38	77.97	-134.16	-4,852.64	1,926.13	925.65	794.60	131.05	7.063	
14,171.00	9,556.95	14,865.47	10,202.93	77.22	79.03	-134.27	-4,935.54	1,942.82	927.76	795.54	132.22	7.017	
14,172.27	9,556.91	14,866.75	10,202.94	77.23	79.05	-134.28	-4,936.79	1,943.06	927.80	795.56	132.25	7.016	
14,199.97	9,555.94	14,894.57	10,203.18	77.58	79.39	-134.31	-4,964.12	1,948.30	928.81	796.07	132.74	6.997	
14,202.46	9,555.85	14,897.06	10,203.20	77.61	79.42	-134.32	-4,966.57	1,948.77	928.90	796.12	132.79	6.996	
14,260.00	9,553.59	14,959.81	10,203.67	78.32	80.18	-134.40	-5,028.21	1,960.50	931.32	797.54	133.78	6.962	
14,261.70	9,553.52	14,961.82	10,203.68	78.34	80.21	-134.40	-5,030.19	1,960.87	931.39	797.59	133.80	6.961	
14,299.97	9,552.03	15,007.15	10,203.77	78.81	80.76	-134.49	-5,074.76	1,969.07	932.59	798.17	134.43	6.937	
14,299.98	9,552.03	15,007.15	10,203.77	78.81	80.76	-134.49	-5,074.77	1,969.07	932.59	798.17	134.43	6.937	
14,349.00	9,550.45	15,060.24	10,203.68	79.42	81.40	-134.62	-5,127.03	1,978.40	933.11	797.87	135.24	6.900	
14,359.78	9,550.14	15,071.63	10,203.66	79.55	81.54	-134.65	-5,138.25	1,980.36	933.12	797.69	135.42	6.890	
14,399.97	9,549.10	15,113.82	10,203.60	80.05	82.05	-134.75	-5,179.82	1,987.55	932.98	796.90	136.09	6.856	
14,408.31	9,548.91	15,122.18	10,203.57	80.16	82.15	-134.77	-5,188.06	1,988.98	932.93	796.70	136.23	6.848	
14,439.00	9,548.23	15,152.93	10,203.32	80.54	82.53	-134.82	-5,218.33	1,994.38	932.69	795.92	136.77	6.819	
14,482.55	9,547.23	15,196.60	10,202.57	81.08	83.06	-134.84	-5,261.24	2,002.41	932.50	794.91	137.58	6.778	
14,499.97	9,546.77	15,215.48	10,202.12	81.29	83.29	-134.84	-5,279.77	2,006.00	932.52	794.61	137.91	6.762	
14,499.98	9,546.77	15,215.48	10,202.12	81.29	83.29	-134.84	-5,279.78	2,006.00	932.52	794.61	137.91	6.762	
14,529.00	9,545.92	15,247.50	10,201.26	81.65	83.69	-134.83	-5,311.20	2,012.05	932.62	794.16	138.46	6.736	
14,544.11	9,545.48	15,264.17	10,200.76	81.85	83.89	-134.84	-5,327.57	2,015.20	932.62	793.88	138.75	6.722	
14,599.97	9,544.25	15,316.54	10,199.06	82.55	84.53	-134.91	-5,378.97	2,025.11	931.53	791.67	139.85	6.661	

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

<b>Company:</b>	Piedra Operating LLC	<b>Local Co-ordinate Reference:</b>	Well University 8-8E A H 5LS
<b>Project:</b>	Andrews County, TX (NAD83-TNC)	<b>TVD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Reference Site:</b>	University 8-8	<b>MD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Site Error:</b>	0.00	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	University 8-8E A H 5LS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	1.00	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH / 72180	<b>Database:</b>	USAEDMDB
<b>Reference Design:</b>	Surveys (Ensign T054)	<b>Offset TVD Reference:</b>	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)		
14,604.21	9,544.18	15,319.98	10,198.96	82.61	84.58	-134.92	-5,382.34	2,025.78	931.39	791.46	139.94	6.656	
14,619.00	9,543.97	15,331.96	10,198.61	82.79	84.72	-134.94	-5,394.08	2,028.12	930.89	790.65	140.24	6.638	
14,637.08	9,543.73	15,346.60	10,198.20	83.02	84.90	-134.95	-5,408.43	2,031.03	930.27	789.67	140.60	6.617	
14,699.97	9,542.79	15,398.62	10,196.98	83.83	85.55	-135.00	-5,459.32	2,041.72	928.72	786.88	141.84	6.548	
14,702.15	9,542.76	15,400.50	10,196.94	83.85	85.57	-135.00	-5,461.16	2,042.11	928.68	786.80	141.88	6.545	
14,710.00	9,542.63	15,407.27	10,196.80	83.95	85.65	-135.00	-5,467.77	2,043.54	928.55	786.51	142.03	6.537	
14,729.58	9,542.31	15,424.15	10,196.47	84.20	85.86	-135.02	-5,484.26	2,047.14	928.23	785.82	142.41	6.518	
14,800.00	9,541.46	15,486.65	10,195.44	85.08	86.64	-135.06	-5,545.23	2,060.85	927.11	783.34	143.77	6.449	
14,819.37	9,541.28	15,505.67	10,195.16	85.33	86.87	-135.07	-5,563.77	2,065.08	926.78	782.64	144.14	6.430	
14,889.00	9,540.74	15,575.05	10,194.23	86.20	87.73	-135.09	-5,631.41	2,080.51	925.75	780.27	145.47	6.364	
14,891.38	9,540.73	15,577.57	10,194.19	86.24	87.76	-135.09	-5,633.87	2,081.07	925.71	780.19	145.52	6.361	
14,899.97	9,540.68	15,586.69	10,194.06	86.34	87.88	-135.10	-5,642.75	2,083.10	925.56	779.87	145.69	6.353	
14,917.53	9,540.65	15,605.32	10,193.76	86.57	88.11	-135.11	-5,660.91	2,087.25	925.13	779.10	146.03	6.335	
14,979.00	9,541.17	15,670.11	10,192.45	87.35	88.92	-135.13	-5,724.06	2,101.71	922.32	775.10	147.22	6.265	
14,983.93	9,541.25	15,675.22	10,192.33	87.41	88.98	-135.13	-5,729.03	2,102.85	922.02	774.70	147.32	6.259	
14,999.97	9,541.54	15,691.84	10,191.92	87.62	89.19	-135.13	-5,745.23	2,106.58	921.00	773.37	147.63	6.238	
15,016.37	9,541.87	15,708.83	10,191.47	87.83	89.40	-135.12	-5,761.77	2,110.41	919.93	771.97	147.96	6.217	
15,069.00	9,543.18	15,761.00	10,189.94	88.50	90.05	-135.08	-5,812.56	2,122.24	916.27	767.23	149.04	6.148	
15,076.40	9,543.40	15,767.63	10,189.75	88.60	90.13	-135.07	-5,819.02	2,123.75	915.75	766.55	149.19	6.138	
15,099.97	9,544.14	15,788.75	10,189.18	88.90	90.40	-135.04	-5,839.57	2,128.59	914.11	764.42	149.69	6.107	
15,114.08	9,544.62	15,801.40	10,188.86	89.08	90.56	-135.02	-5,851.88	2,131.49	913.14	763.15	149.98	6.088	
15,159.00	9,546.36	15,841.90	10,187.99	89.65	91.06	-134.96	-5,891.27	2,140.84	910.14	759.20	150.94	6.030	
15,168.63	9,546.75	15,850.86	10,187.82	89.77	91.17	-134.95	-5,899.99	2,142.92	909.53	758.38	151.15	6.017	
15,199.97	9,547.85	15,880.05	10,187.28	90.17	91.54	-134.93	-5,928.36	2,149.73	907.80	755.97	151.83	5.979	
15,211.16	9,548.18	15,890.48	10,187.10	90.31	91.67	-134.92	-5,938.50	2,152.18	907.27	755.20	152.07	5.966	
15,249.00	9,549.06	15,925.00	10,186.53	90.80	92.10	-134.89	-5,972.04	2,160.33	905.87	752.99	152.88	5.925	
15,260.35	9,549.27	15,934.78	10,186.39	90.94	92.23	-134.88	-5,981.53	2,162.66	905.55	752.42	153.12	5.914	
15,299.97	9,550.10	15,966.62	10,186.04	91.45	92.63	-134.84	-6,012.43	2,170.37	904.51	750.54	153.97	5.875	
15,308.37	9,550.29	15,973.37	10,185.99	91.55	92.71	-134.83	-6,018.97	2,172.03	904.31	750.16	154.15	5.867	
15,338.00	9,551.03	15,997.19	10,185.88	91.93	93.01	-134.80	-6,042.04	2,177.96	903.66	748.89	154.77	5.839	
15,376.17	9,551.91	16,027.12	10,185.89	92.42	93.39	-134.77	-6,070.99	2,185.57	903.26	747.69	155.58	5.806	
15,399.97	9,552.34	16,045.21	10,186.03	92.72	93.62	-134.75	-6,088.47	2,190.23	903.42	747.35	156.07	5.789	
15,399.98	9,552.34	16,045.22	10,186.03	92.72	93.62	-134.75	-6,088.47	2,190.23	903.42	747.35	156.07	5.789	
15,429.00	9,552.73	16,067.27	10,186.36	93.09	93.90	-134.73	-6,109.76	2,195.99	904.05	747.38	156.66	5.771	
15,432.12	9,552.76	16,069.64	10,186.40	93.13	93.93	-134.73	-6,112.04	2,196.61	904.14	747.41	156.73	5.769	
15,499.97	9,553.44	16,125.57	10,187.95	94.00	94.63	-134.67	-6,165.93	2,211.52	906.87	748.77	158.10	5.736	
15,500.67	9,553.44	16,126.25	10,187.97	94.01	94.64	-134.67	-6,166.59	2,211.70	906.90	748.79	158.12	5.736	
15,518.00	9,553.59	16,143.01	10,188.54	94.23	94.85	-134.66	-6,182.72	2,216.17	907.72	749.25	158.48	5.728	
15,520.88	9,553.61	16,145.79	10,188.64	94.26	94.89	-134.66	-6,185.41	2,216.91	907.86	749.33	158.54	5.727	
15,599.97	9,553.45	16,229.45	10,191.82	95.27	95.95	-134.63	-6,266.05	2,238.94	912.64	752.45	160.18	5.697	
15,599.97	9,553.45	16,229.46	10,191.82	95.27	95.95	-134.63	-6,266.05	2,238.94	912.64	752.45	160.18	5.697	
15,608.00	9,553.35	16,239.28	10,192.19	95.37	96.08	-134.63	-6,275.54	2,241.45	913.17	752.82	160.35	5.695	
15,611.16	9,553.31	16,243.14	10,192.34	95.41	96.12	-134.63	-6,279.27	2,242.44	913.38	752.96	160.42	5.694	
15,699.00	9,552.94	16,364.32	10,196.34	96.54	97.67	-134.77	-6,396.96	2,271.00	916.39	754.25	162.14	5.652	
15,699.97	9,552.95	16,365.76	10,196.38	96.55	97.69	-134.77	-6,398.37	2,271.31	916.39	754.23	162.16	5.651	

<b>Company:</b>	Piedra Operating LLC	<b>Local Co-ordinate Reference:</b>	Well University 8-8E A H 5LS
<b>Project:</b>	Andrews County, TX (NAD83-TNC)	<b>TVD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Reference Site:</b>	University 8-8	<b>MD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Site Error:</b>	0.00	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	University 8-8E A H 5LS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	1.00	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH / 72180	<b>Database:</b>	USAEDMDB
<b>Reference Design:</b>	Surveys (Ensign T054)	<b>Offset TVD Reference:</b>	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)		
15,704.21	9,552.97	16,372.06	10,196.56	96.60	97.77	-134.79	-6,404.52	2,272.63	916.37	754.14	162.23	5.649	
15,718.96	9,553.04	16,393.97	10,197.17	96.79	98.05	-134.85	-6,425.97	2,277.09	916.21	753.75	162.46	5.640	
15,789.00	9,553.43	16,455.55	10,199.16	97.69	98.83	-135.04	-6,486.19	2,289.77	915.41	751.78	163.62	5.595	
15,791.38	9,553.44	16,457.84	10,199.24	97.72	98.86	-135.05	-6,488.43	2,290.24	915.37	751.71	163.66	5.593	
15,799.97	9,553.50	16,466.60	10,199.55	97.83	98.97	-135.08	-6,497.00	2,292.03	915.24	751.44	163.79	5.588	
15,817.58	9,553.64	16,490.97	10,200.30	98.06	99.28	-135.16	-6,520.86	2,296.96	914.85	750.80	164.05	5.577	
15,880.00	9,554.36	16,570.52	10,201.39	98.86	100.28	-135.40	-6,598.82	2,312.74	912.06	747.07	164.99	5.528	
15,884.64	9,554.43	16,574.90	10,201.40	98.92	100.34	-135.41	-6,603.11	2,313.61	911.80	746.73	165.07	5.524	
15,899.97	9,554.64	16,589.38	10,201.43	99.12	100.52	-135.45	-6,617.29	2,316.52	910.95	745.62	165.33	5.510	
15,915.90	9,554.84	16,604.42	10,201.43	99.32	100.71	-135.49	-6,632.02	2,319.59	910.08	744.47	165.61	5.495	
15,969.00	9,555.45	16,655.91	10,201.23	100.01	101.36	-135.59	-6,682.36	2,330.42	907.33	740.78	166.54	5.448	
15,976.10	9,555.52	16,663.53	10,201.17	100.10	101.46	-135.61	-6,689.80	2,332.06	906.97	740.30	166.67	5.442	
15,999.97	9,555.68	16,689.17	10,200.92	100.41	101.78	-135.65	-6,714.83	2,337.55	905.82	738.73	167.09	5.421	
16,013.14	9,555.72	16,703.31	10,200.75	100.58	101.96	-135.68	-6,728.65	2,340.59	905.22	737.90	167.32	5.410	
16,058.00	9,555.59	16,747.66	10,200.06	101.15	102.53	-135.75	-6,771.94	2,350.16	903.41	735.27	168.14	5.373	
16,067.23	9,555.50	16,755.40	10,199.93	101.27	102.62	-135.75	-6,779.49	2,351.86	903.14	734.82	168.32	5.366	
16,099.97	9,554.86	16,782.87	10,199.51	101.70	102.97	-135.76	-6,806.26	2,358.02	902.83	733.88	168.95	5.344	
16,099.99	9,554.85	16,782.89	10,199.51	101.70	102.97	-135.76	-6,806.28	2,358.03	902.83	733.88	168.95	5.344	
16,148.00	9,552.98	16,824.00	10,198.94	102.33	103.50	-135.72	-6,846.26	2,367.60	904.19	734.28	169.91	5.322	
16,150.03	9,552.88	16,824.00	10,198.94	102.35	103.50	-135.72	-6,846.26	2,367.60	904.29	734.34	169.95	5.321	
16,199.97	9,550.32	16,872.99	10,198.27	103.00	104.12	-135.71	-6,893.81	2,379.37	907.00	736.02	170.98	5.305	
16,201.37	9,550.25	16,874.34	10,198.25	103.02	104.14	-135.70	-6,895.11	2,379.70	907.08	736.07	171.01	5.304	
16,238.00	9,548.34	16,909.53	10,197.69	103.50	104.59	-135.68	-6,929.23	2,388.32	909.26	737.47	171.79	5.293	
16,240.14	9,548.23	16,913.00	10,197.63	103.52	104.64	-135.68	-6,932.59	2,389.18	909.40	737.56	171.84	5.292	
16,299.97	9,544.83	16,968.37	10,196.63	104.29	105.34	-135.61	-6,986.18	2,403.06	913.38	740.28	173.10	5.277	
16,300.84	9,544.78	16,969.19	10,196.61	104.30	105.35	-135.61	-6,986.98	2,403.27	913.45	740.32	173.12	5.276	
16,327.00	9,543.15	16,994.00	10,196.11	104.64	105.67	-135.58	-7,010.95	2,409.61	915.36	741.68	173.68	5.270	
16,329.22	9,543.00	16,996.10	10,196.07	104.66	105.70	-135.57	-7,012.98	2,410.15	915.53	741.80	173.73	5.270	
16,399.97	9,538.01	17,097.50	10,193.57	105.57	107.00	-135.54	-7,111.39	2,434.46	920.11	744.91	175.20	5.252	
16,400.62	9,537.96	17,098.47	10,193.54	105.58	107.02	-135.54	-7,112.33	2,434.68	920.14	744.93	175.21	5.252	
16,417.00	9,536.68	17,106.41	10,193.33	105.79	107.12	-135.54	-7,120.06	2,436.51	921.10	745.56	175.54	5.247	
16,419.66	9,536.47	17,108.33	10,193.28	105.82	107.15	-135.54	-7,121.92	2,436.95	921.27	745.68	175.59	5.247	
16,499.97	9,528.75	17,165.94	10,191.87	106.85	107.90	-135.49	-7,177.77	2,451.06	928.16	751.09	177.07	5.242	
16,499.97	9,528.75	17,165.94	10,191.87	106.85	107.90	-135.49	-7,177.77	2,451.06	928.16	751.09	177.07	5.242	
16,507.00	9,527.95	17,180.00	10,191.57	106.94	108.09	-135.49	-7,191.32	2,454.75	929.00	751.76	177.24	5.241	
16,509.24	9,527.70	17,180.00	10,191.57	106.97	108.09	-135.50	-7,191.32	2,454.75	929.23	751.96	177.28	5.242	
16,596.00	9,519.14	17,261.55	10,189.69	108.08	109.14	-135.62	-7,269.95	2,476.30	938.17	759.16	179.01	5.241	
16,596.17	9,519.13	17,261.73	10,189.69	108.09	109.15	-135.62	-7,270.13	2,476.34	938.18	759.17	179.01	5.241	
16,599.97	9,518.82	17,265.79	10,189.59	108.13	109.20	-135.63	-7,274.05	2,477.41	938.53	759.43	179.09	5.240	
16,602.84	9,518.59	17,268.86	10,189.51	108.17	109.24	-135.63	-7,277.01	2,478.21	938.78	759.62	179.16	5.240	
16,686.00	9,513.74	17,378.55	10,187.73	109.24	110.66	-135.75	-7,383.73	2,503.42	943.40	762.51	180.89	5.215	
16,686.01	9,513.74	17,378.56	10,187.73	109.24	110.67	-135.75	-7,383.74	2,503.42	943.40	762.51	180.89	5.215	
16,699.97	9,513.26	17,392.79	10,187.58	109.42	110.85	-135.75	-7,397.65	2,506.37	943.81	762.64	181.17	5.209	
16,700.04	9,513.25	17,392.86	10,187.58	109.42	110.85	-135.75	-7,397.72	2,506.38	943.81	762.64	181.18	5.209	
16,776.00	9,511.76	17,472.55	10,186.61	110.40	111.88	-135.68	-7,475.68	2,522.89	946.42	763.49	182.92	5.174	
16,777.04	9,511.75	17,473.74	10,186.59	110.42	111.89	-135.67	-7,476.84	2,523.14	946.45	763.51	182.95	5.173	

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

<b>Company:</b>	Piedra Operating LLC	<b>Local Co-ordinate Reference:</b>	Well University 8-8E A H 5LS
<b>Project:</b>	Andrews County, TX (NAD83-TNC)	<b>TVD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Reference Site:</b>	University 8-8	<b>MD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Site Error:</b>	0.00	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	University 8-8E A H 5LS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	1.00	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH / 72180	<b>Database:</b>	USAEDMDB
<b>Reference Design:</b>	Surveys (Ensign T054)	<b>Offset TVD Reference:</b>	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)		
16,799.97	9,511.58	17,499.85	10,186.15	110.71	112.23	-135.59	-7,502.40	2,528.49	947.24	763.73	183.51	5.162	
16,799.99	9,511.58	17,499.87	10,186.15	110.71	112.23	-135.59	-7,502.42	2,528.50	947.24	763.73	183.51	5.162	
16,865.00	9,511.11	17,575.43	10,184.42	111.55	113.19	-135.37	-7,576.40	2,543.71	948.98	763.88	185.10	5.127	
16,865.03	9,511.11	17,575.46	10,184.42	111.55	113.20	-135.37	-7,576.43	2,543.72	948.98	763.88	185.10	5.127	
16,899.97	9,510.88	17,617.01	10,183.14	111.99	113.73	-135.25	-7,617.16	2,551.86	949.44	763.51	185.93	5.106	
16,899.98	9,510.88	17,617.03	10,183.14	111.99	113.73	-135.25	-7,617.18	2,551.87	949.44	763.51	185.93	5.106	
16,956.00	9,510.59	17,666.33	10,181.50	112.71	114.36	-135.13	-7,665.50	2,561.50	949.56	762.22	187.34	5.069	
16,965.32	9,510.56	17,673.84	10,181.28	112.83	114.45	-135.11	-7,672.85	2,563.01	949.57	762.00	187.57	5.062	
16,999.97	9,510.61	17,701.74	10,180.54	113.28	114.81	-135.04	-7,700.15	2,568.71	949.55	761.11	188.44	5.039	
17,009.77	9,510.67	17,709.63	10,180.35	113.40	114.91	-135.02	-7,707.87	2,570.36	949.53	760.85	188.69	5.032	
17,046.00	9,511.07	17,746.47	10,179.48	113.87	115.39	-134.92	-7,743.87	2,578.10	949.29	759.72	189.58	5.007	
17,057.70	9,511.24	17,759.53	10,179.13	114.02	115.55	-134.89	-7,756.64	2,580.85	949.13	759.26	189.86	4.999	
17,099.97	9,511.86	17,806.71	10,177.68	114.57	116.16	-134.76	-7,802.75	2,590.72	948.29	757.39	190.90	4.967	
17,107.68	9,511.96	17,809.00	10,177.60	114.67	116.19	-134.76	-7,804.99	2,591.20	948.12	757.01	191.11	4.961	
17,135.00	9,512.34	17,832.28	10,176.92	115.02	116.49	-134.70	-7,827.73	2,596.12	947.57	755.78	191.79	4.941	
17,149.14	9,512.54	17,842.26	10,176.69	115.20	116.62	-134.68	-7,837.48	2,598.27	947.37	755.23	192.14	4.931	
17,199.97	9,513.39	17,878.16	10,176.20	115.86	117.08	-134.60	-7,872.49	2,606.16	947.15	753.76	193.39	4.898	
17,200.08	9,513.40	17,878.24	10,176.20	115.86	117.08	-134.60	-7,872.57	2,606.17	947.15	753.76	193.39	4.898	
17,225.00	9,513.89	17,899.00	10,176.16	116.18	117.35	-134.55	-7,892.80	2,610.86	947.34	753.35	194.00	4.883	
17,225.19	9,513.89	17,899.00	10,176.16	116.18	117.35	-134.55	-7,892.80	2,610.86	947.35	753.35	194.00	4.883	
17,299.97	9,515.34	17,963.92	10,176.45	117.16	118.19	-134.40	-7,955.98	2,625.77	947.98	752.23	195.75	4.843	
17,300.03	9,515.34	17,963.99	10,176.45	117.16	118.19	-134.40	-7,956.04	2,625.79	947.98	752.23	195.75	4.843	
17,315.00	9,515.60	17,977.77	10,176.56	117.35	118.36	-134.38	-7,969.46	2,628.98	948.05	751.96	196.09	4.835	
17,315.24	9,515.61	17,978.00	10,176.56	117.35	118.37	-134.38	-7,969.67	2,629.04	948.05	751.96	196.09	4.835	
17,399.97	9,516.47	18,058.97	10,177.23	118.45	119.41	-134.31	-8,048.39	2,648.04	949.16	751.18	197.97	4.794	
17,399.97	9,516.47	18,058.97	10,177.23	118.46	119.41	-134.31	-8,048.39	2,648.04	949.16	751.18	197.97	4.794	
17,405.00	9,516.48	18,063.81	10,177.27	118.52	119.48	-134.30	-8,053.08	2,649.19	949.27	751.18	198.09	4.792	
17,405.22	9,516.48	18,064.02	10,177.27	118.52	119.48	-134.30	-8,053.29	2,649.24	949.27	751.18	198.09	4.792	
17,494.00	9,518.10	18,150.53	10,177.84	119.68	120.60	-134.17	-8,137.25	2,670.07	949.74	749.62	200.13	4.746	
17,499.97	9,518.30	18,156.36	10,177.87	119.76	120.67	-134.16	-8,142.90	2,671.49	949.67	749.40	200.27	4.742	
17,500.29	9,518.31	18,156.68	10,177.87	119.76	120.68	-134.16	-8,143.21	2,671.57	949.66	749.39	200.28	4.742	
17,518.59	9,518.92	18,170.00	10,177.94	120.00	120.85	-134.13	-8,156.13	2,674.82	949.43	748.75	200.68	4.731	
17,586.00	9,521.10	18,232.54	10,178.52	120.88	121.66	-134.04	-8,216.73	2,690.27	948.65	746.45	202.20	4.692	
17,589.00	9,521.19	18,235.14	10,178.56	120.92	121.69	-134.04	-8,219.25	2,690.92	948.63	746.36	202.27	4.690	
17,599.97	9,521.53	18,244.66	10,178.71	121.06	121.82	-134.03	-8,228.47	2,693.29	948.54	746.04	202.50	4.684	
17,641.33	9,522.71	18,280.43	10,179.40	121.60	122.28	-134.01	-8,263.09	2,702.28	948.39	745.03	203.36	4.664	
17,676.00	9,523.61	18,310.33	10,180.11	122.06	122.67	-134.00	-8,291.99	2,709.87	948.50	744.43	204.07	4.648	
17,676.10	9,523.61	18,310.41	10,180.12	122.06	122.67	-134.00	-8,292.07	2,709.89	948.50	744.43	204.07	4.648	
17,699.96	9,524.22	18,330.99	10,180.69	122.37	122.94	-133.99	-8,311.95	2,715.16	948.68	744.13	204.55	4.638	
17,700.15	9,524.22	18,331.15	10,180.69	122.37	122.94	-133.99	-8,312.11	2,715.20	948.68	744.13	204.55	4.638	
17,766.00	9,526.07	18,387.74	10,182.55	123.23	123.68	-133.98	-8,366.72	2,729.92	949.59	743.71	205.88	4.612	
17,766.01	9,526.07	18,387.74	10,182.56	123.23	123.68	-133.98	-8,366.72	2,729.92	949.59	743.71	205.88	4.612	
17,799.96	9,527.13	18,416.87	10,183.66	123.68	124.06	-133.97	-8,394.78	2,737.65	950.29	743.72	206.57	4.600	
17,800.01	9,527.13	18,416.91	10,183.66	123.68	124.06	-133.97	-8,394.82	2,737.66	950.29	743.72	206.57	4.600	
17,855.00	9,529.01	18,495.57	10,186.56	124.40	125.08	-133.92	-8,470.70	2,758.18	951.26	743.21	208.05	4.572	

<b>Company:</b>	Piedra Operating LLC	<b>Local Co-ordinate Reference:</b>	Well University 8-8E A H 5LS
<b>Project:</b>	Andrews County, TX (NAD83-TNC)	<b>TVD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Reference Site:</b>	University 8-8	<b>MD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Site Error:</b>	0.00	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	University 8-8E A H 5LS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	1.00	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH / 72180	<b>Database:</b>	USAEDMDB
<b>Reference Design:</b>	Surveys (Ensign T054)	<b>Offset TVD Reference:</b>	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
17,864.67	9,529.36	18,514.72	10,187.04	124.53	125.34	-133.92	-8,489.28	2,762.79	951.19	742.86	208.33	4.566	
17,899.96	9,530.60	18,558.49	10,187.86	124.99	125.91	-133.91	-8,531.86	2,772.88	950.70	741.54	209.16	4.545	
17,909.86	9,530.94	18,568.53	10,188.03	125.12	126.04	-133.91	-8,541.64	2,775.19	950.61	741.22	209.39	4.540	
17,946.00	9,532.16	18,605.23	10,188.64	125.59	126.52	-133.88	-8,577.35	2,783.60	950.49	740.25	210.24	4.521	
17,946.01	9,532.16	18,605.23	10,188.64	125.59	126.52	-133.88	-8,577.36	2,783.61	950.49	740.25	210.24	4.521	
17,999.96	9,534.01	18,661.79	10,189.51	126.30	127.25	-133.80	-8,632.41	2,796.54	950.55	739.00	211.54	4.493	
18,007.38	9,534.27	18,669.66	10,189.62	126.39	127.36	-133.79	-8,640.07	2,798.33	950.55	738.82	211.73	4.490	
18,035.00	9,535.26	18,698.99	10,190.03	126.76	127.74	-133.74	-8,668.63	2,804.95	950.54	738.13	212.40	4.475	
18,048.73	9,535.75	18,713.56	10,190.22	126.94	127.93	-133.70	-8,682.84	2,808.23	950.50	737.76	212.74	4.468	
18,099.96	9,537.31	18,766.09	10,190.92	127.61	128.61	-133.63	-8,734.04	2,819.95	950.06	736.14	213.91	4.441	
18,105.17	9,537.45	18,771.43	10,190.99	127.68	128.68	-133.63	-8,739.24	2,821.14	949.98	735.96	214.02	4.439	
18,124.00	9,537.91	18,790.77	10,191.26	127.92	128.93	-133.63	-8,758.09	2,825.42	949.67	735.25	214.42	4.429	
18,140.54	9,538.28	18,808.05	10,191.50	128.14	129.15	-133.63	-8,774.95	2,829.23	949.35	734.59	214.76	4.420	
18,199.96	9,539.33	18,871.73	10,192.41	128.93	129.98	-133.73	-8,837.12	2,843.00	947.71	731.81	215.90	4.390	
18,203.11	9,539.38	18,875.10	10,192.46	128.97	130.02	-133.73	-8,840.42	2,843.71	947.60	731.65	215.95	4.388	
18,214.00	9,539.52	18,886.76	10,192.64	129.11	130.17	-133.76	-8,851.81	2,846.18	947.21	731.07	216.14	4.382	
18,233.69	9,539.80	18,913.06	10,192.99	129.37	130.51	-133.82	-8,877.53	2,851.67	946.39	729.92	216.47	4.372	
18,299.96	9,541.18	19,000.34	10,193.21	130.24	131.64	-133.99	-8,963.12	2,868.73	942.10	724.57	217.53	4.331	
18,304.00	9,541.29	19,004.56	10,193.18	130.30	131.70	-134.00	-8,967.26	2,869.53	941.79	724.18	217.60	4.328	
18,305.94	9,541.34	19,006.60	10,193.17	130.32	131.73	-134.00	-8,969.26	2,869.92	941.63	724.00	217.64	4.327	
18,325.19	9,541.76	19,026.76	10,192.97	130.57	131.99	-134.06	-8,989.04	2,873.82	940.20	722.23	217.98	4.313	
18,394.00	9,541.98	19,102.05	10,191.51	131.48	132.96	-134.23	-9,062.82	2,888.74	936.10	716.90	219.20	4.271	
18,399.96	9,541.91	19,108.98	10,191.32	131.56	133.05	-134.24	-9,069.62	2,890.12	935.79	716.48	219.30	4.267	
18,400.37	9,541.91	19,109.46	10,191.30	131.56	133.06	-134.25	-9,070.08	2,890.22	935.76	716.45	219.31	4.267	
18,419.68	9,541.73	19,131.89	10,190.61	131.82	133.35	-134.31	-9,092.06	2,894.69	934.60	714.96	219.64	4.255	
18,484.00	9,541.46	19,195.19	10,188.21	132.67	134.17	-134.53	-9,154.02	2,907.39	929.28	708.51	220.77	4.209	
18,487.92	9,541.46	19,198.61	10,188.07	132.72	134.21	-134.54	-9,157.36	2,908.10	928.91	708.07	220.84	4.206	
18,499.96	9,541.41	19,209.11	10,187.65	132.89	134.35	-134.55	-9,167.61	2,910.29	927.86	706.81	221.05	4.197	
18,517.30	9,541.26	19,224.23	10,187.04	133.12	134.55	-134.57	-9,182.39	2,913.48	926.54	705.17	221.37	4.185	
18,573.00	9,540.09	19,271.23	10,185.17	133.87	135.16	-134.58	-9,228.22	2,923.74	923.80	701.36	222.44	4.153	
18,578.94	9,539.90	19,276.05	10,184.99	133.95	135.22	-134.58	-9,232.91	2,924.81	923.64	701.09	222.56	4.150	
18,599.96	9,539.22	19,293.07	10,184.41	134.22	135.44	-134.59	-9,249.49	2,928.63	923.22	700.26	222.96	4.141	
18,637.81	9,537.85	19,323.74	10,183.52	134.73	135.84	-134.61	-9,279.33	2,935.62	922.95	699.26	223.68	4.126	
18,662.00	9,536.88	19,343.82	10,183.03	135.05	136.11	-134.61	-9,298.86	2,940.27	923.10	698.95	224.14	4.118	
18,662.05	9,536.88	19,343.87	10,183.03	135.05	136.11	-134.62	-9,298.91	2,940.29	923.10	698.95	224.15	4.118	
18,699.96	9,535.19	19,377.97	10,182.31	135.54	136.55	-134.63	-9,332.05	2,948.28	923.75	698.89	224.86	4.108	
18,700.00	9,535.19	19,378.00	10,182.31	135.54	136.55	-134.63	-9,332.09	2,948.29	923.76	698.89	224.86	4.108	
18,751.00	9,532.57	19,423.85	10,181.50	136.21	137.15	-134.66	-9,376.61	2,959.19	925.38	699.56	225.82	4.098	
18,753.01	9,532.46	19,429.00	10,181.42	136.24	137.22	-134.66	-9,381.61	2,960.43	925.47	699.59	225.87	4.097	
18,799.96	9,529.63	19,468.41	10,180.85	136.85	137.73	-134.68	-9,419.84	2,969.97	927.68	700.95	226.73	4.092	
18,801.48	9,529.53	19,469.79	10,180.83	136.87	137.75	-134.68	-9,421.17	2,970.31	927.77	701.01	226.76	4.091	
18,841.00	9,526.79	19,505.78	10,180.34	137.39	138.22	-134.70	-9,456.05	2,979.19	930.14	702.66	227.48	4.089	
18,843.14	9,526.64	19,507.72	10,180.32	137.42	138.25	-134.70	-9,457.94	2,979.67	930.28	702.76	227.52	4.089	
18,899.96	9,523.14	19,556.63	10,179.83	138.16	138.89	-134.77	-9,505.27	2,991.96	934.00	705.40	228.60	4.086	
18,901.03	9,523.09	19,557.53	10,179.82	138.18	138.90	-134.78	-9,506.14	2,992.19	934.07	705.45	228.62	4.086	
18,931.00	9,521.75	19,582.85	10,179.75	138.57	139.23	-134.80	-9,530.62	2,998.63	936.07	706.83	229.24	4.083	

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

<b>Company:</b>	Piedra Operating LLC	<b>Local Co-ordinate Reference:</b>	Well University 8-8E A H 5LS
<b>Project:</b>	Andrews County, TX (NAD83-TNC)	<b>TVD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Reference Site:</b>	University 8-8	<b>MD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Site Error:</b>	0.00	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	University 8-8E A H 5LS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	1.00	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH / 72180	<b>Database:</b>	USAEDMDB
<b>Reference Design:</b>	Surveys (Ensign T054)	<b>Offset TVD Reference:</b>	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)		
18,933.18	9,521.66	19,584.68	10,179.75	138.60	139.26	-134.79	-9,532.40	2,999.10	936.22	706.93	229.29	4.083	
18,999.96	9,518.97	19,655.83	10,179.95	139.47	140.19	-134.75	-9,601.22	3,017.17	941.03	710.21	230.82	4.077	
19,000.64	9,518.94	19,656.69	10,179.96	139.48	140.20	-134.74	-9,602.05	3,017.39	941.08	710.24	230.84	4.077	
19,021.00	9,518.10	19,682.35	10,179.99	139.74	140.53	-134.73	-9,626.93	3,023.63	942.44	711.13	231.32	4.074	
19,023.64	9,517.98	19,685.68	10,179.99	139.78	140.58	-134.73	-9,630.16	3,024.43	942.61	711.24	231.38	4.074	
19,099.96	9,514.55	19,769.34	10,180.24	140.77	141.67	-134.73	-9,711.58	3,043.69	947.60	714.61	232.99	4.067	
19,100.29	9,514.54	19,769.69	10,180.24	140.78	141.68	-134.73	-9,711.92	3,043.76	947.62	714.62	233.00	4.067	
19,110.00	9,514.07	19,780.03	10,180.33	140.90	141.81	-134.74	-9,722.00	3,046.04	948.29	715.10	233.19	4.067	
19,113.43	9,513.91	19,783.68	10,180.37	140.95	141.86	-134.75	-9,725.57	3,046.83	948.52	715.26	233.26	4.066	
19,199.96	9,511.80	19,867.70	10,181.24	142.08	142.96	-134.84	-9,807.55	3,065.20	952.55	717.49	235.06	4.052	
19,199.97	9,511.80	19,867.71	10,181.24	142.08	142.96	-134.84	-9,807.56	3,065.21	952.55	717.49	235.06	4.052	
19,201.00	9,511.79	19,868.70	10,181.25	142.09	142.97	-134.84	-9,808.52	3,065.42	952.58	717.50	235.08	4.052	
19,201.02	9,511.79	19,868.71	10,181.25	142.09	142.97	-134.84	-9,808.54	3,065.43	952.58	717.50	235.08	4.052	
19,292.00	9,512.49	19,954.47	10,182.05	143.28	144.09	-134.75	-9,892.07	3,084.78	954.27	717.10	237.17	4.024	
19,292.10	9,512.50	19,954.56	10,182.05	143.28	144.10	-134.75	-9,892.16	3,084.80	954.27	717.10	237.17	4.024	
19,299.96	9,512.63	19,961.94	10,182.12	143.39	144.19	-134.75	-9,899.35	3,086.50	954.36	717.00	237.36	4.021	
19,300.12	9,512.63	19,962.09	10,182.12	143.39	144.19	-134.75	-9,899.49	3,086.53	954.37	717.00	237.36	4.021	
19,382.00	9,514.17	20,044.94	10,182.95	144.46	145.28	-134.63	-9,980.13	3,105.54	955.59	716.23	239.37	3.992	
19,382.00	9,514.17	20,044.94	10,182.95	144.46	145.28	-134.63	-9,980.13	3,105.54	955.59	716.23	239.37	3.992	
19,399.96	9,514.53	20,063.38	10,183.17	144.70	145.52	-134.60	-9,998.09	3,109.72	955.90	716.08	239.81	3.986	
19,400.05	9,514.54	20,063.48	10,183.17	144.70	145.52	-134.60	-9,998.19	3,109.74	955.90	716.08	239.82	3.986	
19,472.00	9,516.18	20,148.46	10,183.98	145.64	146.63	-134.47	-10,081.11	3,128.32	956.58	714.97	241.61	3.959	
19,477.88	9,516.32	20,155.41	10,184.03	145.72	146.72	-134.45	-10,087.90	3,129.78	956.59	714.84	241.76	3.957	
19,499.96	9,516.82	20,178.90	10,184.23	146.01	147.03	-134.42	-10,110.87	3,134.67	956.54	714.27	242.27	3.948	
19,512.97	9,517.09	20,192.96	10,184.36	146.18	147.21	-134.41	-10,124.63	3,137.55	956.44	713.88	242.56	3.943	
19,561.00	9,517.92	20,246.30	10,184.96	146.81	147.91	-134.43	-10,176.90	3,148.19	955.67	712.14	243.52	3.924	
19,569.60	9,518.05	20,259.02	10,185.07	146.92	148.07	-134.44	-10,189.37	3,150.67	955.44	711.77	243.67	3.921	
19,599.96	9,518.44	20,303.87	10,185.01	147.33	148.66	-134.48	-10,233.40	3,159.22	954.38	710.20	244.18	3.908	
19,611.61	9,518.58	20,321.07	10,184.80	147.48	148.88	-134.49	-10,250.30	3,162.43	953.86	709.49	244.37	3.903	
19,651.00	9,518.96	20,363.02	10,183.98	148.00	149.43	-134.52	-10,291.51	3,170.22	951.93	706.78	245.16	3.883	
19,662.19	9,519.05	20,373.87	10,183.74	148.15	149.57	-134.52	-10,302.16	3,172.27	951.41	706.02	245.39	3.877	
19,699.96	9,519.28	20,410.50	10,182.85	148.64	150.05	-134.52	-10,338.11	3,179.30	949.76	703.56	246.20	3.858	
19,709.02	9,519.32	20,419.29	10,182.61	148.76	150.16	-134.52	-10,346.72	3,181.01	949.40	702.99	246.40	3.853	
19,740.00	9,519.41	20,448.11	10,181.78	149.17	150.54	-134.51	-10,374.95	3,186.74	948.24	701.14	247.10	3.837	
19,753.48	9,519.44	20,460.59	10,181.38	149.35	150.70	-134.49	-10,387.16	3,189.29	947.79	700.37	247.42	3.831	
19,799.96	9,519.65	20,503.63	10,179.82	149.96	151.27	-134.42	-10,429.20	3,198.39	946.29	697.72	248.57	3.807	
19,806.66	9,519.69	20,512.00	10,179.48	150.05	151.38	-134.40	-10,437.36	3,200.22	946.09	697.35	248.74	3.804	
19,830.00	9,519.86	20,532.17	10,178.64	150.35	151.64	-134.35	-10,457.02	3,204.66	945.39	696.03	249.36	3.791	
19,845.51	9,519.98	20,547.08	10,178.01	150.56	151.84	-134.31	-10,471.54	3,207.97	944.96	695.19	249.77	3.783	
19,899.96	9,520.24	20,599.38	10,175.73	151.27	152.52	-134.16	-10,522.45	3,219.76	943.82	692.55	251.27	3.756	
19,904.09	9,520.25	20,603.00	10,175.57	151.33	152.57	-134.15	-10,525.97	3,220.58	943.76	692.38	251.38	3.754	
19,919.00	9,520.28	20,615.31	10,175.03	151.52	152.73	-134.11	-10,537.94	3,223.40	943.58	691.78	251.80	3.747	
19,946.25	9,520.21	20,637.29	10,174.14	151.88	153.02	-134.05	-10,559.29	3,228.50	943.46	690.92	252.54	3.736	
19,999.96	9,519.45	20,680.61	10,172.70	152.58	153.59	-133.95	-10,601.37	3,238.75	943.94	690.05	253.89	3.718	
20,000.04	9,519.44	20,680.68	10,172.70	152.59	153.59	-133.95	-10,601.43	3,238.77	943.94	690.05	253.89	3.718	



<b>Company:</b>	Piedra Operating LLC	<b>Local Co-ordinate Reference:</b>	Well University 8-8E A H 5LS
<b>Project:</b>	Andrews County, TX (NAD83-TNC)	<b>TVD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Reference Site:</b>	University 8-8	<b>MD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Site Error:</b>	0.00	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	University 8-8E A H 5LS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	1.00	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH / 72180	<b>Database:</b>	USAEDMDB
<b>Reference Design:</b>	Surveys (Ensign T054)	<b>Offset TVD Reference:</b>	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)		
20,008.00	9,519.26	20,692.00	10,172.38	152.69	153.74	-133.93	-10,612.42	3,241.49	944.11	690.00	254.11	3.715	
20,008.06	9,519.26	20,692.00	10,172.38	152.69	153.74	-133.93	-10,612.42	3,241.49	944.11	690.00	254.11	3.715	
20,098.00	9,516.90	20,765.34	10,170.54	153.87	154.71	-133.80	-10,683.45	3,259.65	946.93	690.67	256.26	3.695	
20,098.04	9,516.90	20,765.37	10,170.54	153.87	154.71	-133.80	-10,683.48	3,259.66	946.93	690.67	256.26	3.695	
20,099.96	9,516.84	20,767.05	10,170.50	153.90	154.73	-133.79	-10,685.10	3,260.09	947.01	690.70	256.31	3.695	
20,099.99	9,516.84	20,767.08	10,170.50	153.90	154.73	-133.79	-10,685.12	3,260.09	947.01	690.70	256.31	3.695	
20,187.00	9,515.83	20,855.93	10,168.08	155.04	155.90	-133.57	-10,770.94	3,282.99	949.49	690.73	258.75	3.669	
20,187.02	9,515.83	20,855.95	10,168.08	155.04	155.90	-133.57	-10,770.97	3,282.99	949.49	690.73	258.75	3.669	
20,199.96	9,515.88	20,869.58	10,167.62	155.21	156.08	-133.51	-10,784.12	3,286.54	949.64	690.49	259.15	3.664	
20,200.10	9,515.89	20,869.73	10,167.61	155.21	156.08	-133.51	-10,784.26	3,286.58	949.64	690.49	259.15	3.664	
20,250.00	9,516.16	20,920.97	10,165.65	155.87	156.76	-133.30	-10,833.67	3,300.03	950.08	689.39	260.69	3.645	
20,250.22	9,516.16	20,921.20	10,165.65	155.87	156.76	-133.30	-10,833.88	3,300.09	950.08	689.39	260.69	3.644	
20,299.96	9,516.46	20,970.94	10,163.54	156.53	157.42	-133.08	-10,881.80	3,313.28	950.40	688.16	262.23	3.624	
20,300.00	9,516.46	20,970.98	10,163.54	156.53	157.42	-133.08	-10,881.84	3,313.29	950.40	688.16	262.23	3.624	
20,311.00	9,516.53	20,981.95	10,163.07	156.67	157.56	-133.03	-10,892.41	3,316.20	950.47	687.89	262.58	3.620	SF

<b>Company:</b>	Piedra Operating LLC	<b>Local Co-ordinate Reference:</b>	Well University 8-8E A H 5LS
<b>Project:</b>	Andrews County, TX (NAD83-TNC)	<b>TVD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Reference Site:</b>	University 8-8	<b>MD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Site Error:</b>	0.00	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	University 8-8E A H 5LS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	1.00	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH / 72180	<b>Database:</b>	USAEDMDB
<b>Reference Design:</b>	Surveys (Ensign T054)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design U Texas 36994 A/C 2 3 - 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)		
16,148.00	9,552.98	9,552.10	9,550.66	102.33	202.06	-98.87	-7,839.49	2,237.90	980.56	734.33	246.23	3.982	
16,199.97	9,550.32	9,549.76	9,548.32	103.00	202.01	-98.49	-7,839.70	2,237.90	931.52	684.28	247.25	3.768	
16,238.00	9,548.34	9,547.78	9,546.34	103.50	201.96	-98.16	-7,839.70	2,237.90	895.74	647.64	248.10	3.610	
16,299.97	9,544.83	9,544.27	9,542.83	104.29	201.89	-98.72	-7,839.70	2,237.90	837.92	588.21	249.71	3.356	
16,327.00	9,543.15	9,542.58	9,541.15	104.64	201.85	-98.91	-7,839.70	2,237.90	812.89	562.38	250.51	3.245	
16,399.97	9,538.01	9,537.45	9,536.01	105.57	201.74	-99.59	-7,839.70	2,237.90	746.04	493.03	253.01	2.949	
16,417.00	9,536.68	9,536.12	9,534.68	105.79	201.72	-99.70	-7,839.70	2,237.90	730.61	476.93	253.68	2.880	
16,499.97	9,528.75	9,528.18	9,526.75	106.85	201.55	-101.91	-7,839.70	2,237.90	656.63	399.17	257.46	2.550	
16,507.00	9,527.95	9,527.39	9,525.95	106.94	201.53	-102.06	-7,839.70	2,237.90	650.46	392.64	257.82	2.523	
16,596.00	9,519.14	9,518.58	9,517.14	108.08	201.34	-97.44	-7,839.70	2,237.90	574.02	310.74	263.28	2.180	
16,599.97	9,518.82	9,518.25	9,516.82	108.13	201.34	-97.20	-7,839.70	2,237.90	570.69	307.13	263.56	2.165	
16,686.00	9,513.74	9,513.17	9,511.74	109.24	201.23	-92.67	-7,839.70	2,237.90	500.70	229.99	270.71	1.850	
16,699.97	9,513.26	9,512.69	9,511.26	109.42	201.22	-92.22	-7,839.70	2,237.90	489.83	217.77	272.07	1.800	
16,776.00	9,511.76	9,511.19	9,509.76	110.40	201.19	-90.37	-7,839.70	2,237.90	435.08	154.43	280.65	1.550	
16,799.97	9,511.58	9,511.02	9,509.58	110.71	201.18	-90.34	-7,839.70	2,237.90	419.55	135.82	283.73	1.479	Level 3
16,865.00	9,511.11	9,510.55	9,509.11	111.55	201.17	-90.25	-7,839.70	2,237.90	381.78	89.14	292.65	1.305	Level 3
16,899.97	9,510.88	9,510.32	9,508.88	111.99	201.17	-90.18	-7,839.70	2,237.90	364.50	66.95	297.55	1.225	Level 2
16,956.00	9,510.59	9,510.03	9,508.59	112.71	201.16	-90.09	-7,839.70	2,237.90	341.84	36.82	305.02	1.121	Level 2
16,999.97	9,510.61	9,510.04	9,508.61	113.28	201.16	-89.93	-7,839.70	2,237.90	329.20	19.21	309.99	1.062	Level 2
17,046.00	9,511.07	9,510.50	9,509.07	113.87	201.17	-89.91	-7,839.70	2,237.90	321.55	7.78	313.78	1.025	Level 2
17,079.73	9,511.57	9,511.00	9,509.57	114.31	201.18	-90.00	-7,839.70	2,237.90	319.85	4.50	315.35	1.014	Level 2 , CC, E
17,099.97	9,511.86	9,511.29	9,509.86	114.57	201.19	-90.05	-7,839.70	2,237.90	320.46	4.71	315.75	1.015	Level 2
17,135.00	9,512.34	9,511.78	9,510.34	115.02	201.20	-90.13	-7,839.70	2,237.90	324.41	8.92	315.49	1.028	Level 2
17,199.97	9,513.39	9,512.83	9,511.39	115.86	201.22	-90.40	-7,839.70	2,237.90	341.27	29.07	312.20	1.093	Level 2
17,225.00	9,513.89	9,513.33	9,511.89	116.18	201.23	-90.54	-7,839.70	2,237.90	350.85	40.65	310.20	1.131	Level 2
17,299.97	9,515.34	9,514.77	9,513.34	117.16	201.26	-90.68	-7,839.70	2,237.90	387.26	84.41	302.85	1.279	Level 3
17,315.00	9,515.60	9,515.04	9,513.60	117.35	201.27	-90.69	-7,839.70	2,237.90	395.70	94.46	301.24	1.314	Level 3
17,399.97	9,516.47	9,515.90	9,514.47	118.45	201.29	-90.17	-7,839.70	2,237.90	450.03	157.73	292.29	1.540	
17,405.00	9,516.48	9,515.92	9,514.48	118.52	201.29	-90.13	-7,839.70	2,237.90	453.55	161.77	291.79	1.554	
17,494.00	9,518.10	9,517.53	9,516.10	119.68	201.32	-92.36	-7,839.70	2,237.90	519.39	235.91	283.48	1.832	
17,499.97	9,518.30	9,517.74	9,516.30	119.76	201.33	-92.38	-7,839.70	2,237.90	524.00	241.03	282.97	1.852	
17,586.00	9,521.10	9,520.53	9,519.10	120.88	201.38	-92.60	-7,839.70	2,237.90	592.89	316.62	276.28	2.146	
17,599.97	9,521.53	9,520.96	9,519.53	121.06	201.39	-92.58	-7,839.70	2,237.90	604.44	329.14	275.30	2.196	
17,676.00	9,523.61	9,523.05	9,521.61	122.06	201.44	-92.41	-7,839.70	2,237.90	668.89	398.34	270.55	2.472	
17,699.96	9,524.22	9,523.65	9,522.22	122.37	201.45	-92.66	-7,839.70	2,237.90	689.68	420.45	269.22	2.562	
17,766.00	9,526.07	9,525.51	9,524.07	123.23	201.49	-93.43	-7,839.70	2,237.90	748.01	482.03	265.98	2.812	
17,799.96	9,527.13	9,526.56	9,525.13	123.68	201.51	-93.89	-7,839.70	2,237.90	778.51	513.99	264.52	2.943	
17,855.00	9,529.01	9,528.45	9,527.01	124.40	201.55	-94.70	-7,839.70	2,237.90	828.54	566.13	262.41	3.157	
17,899.96	9,530.60	9,530.04	9,528.60	124.99	201.59	-94.99	-7,839.70	2,237.90	870.00	609.09	260.91	3.334	
17,946.00	9,532.16	9,531.60	9,530.16	125.59	201.62	-95.29	-7,839.70	2,237.90	913.04	653.44	259.60	3.517	
17,999.96	9,534.01	9,533.44	9,532.01	126.30	201.66	-96.04	-7,839.70	2,237.90	964.02	705.75	258.27	3.733	
18,035.00	9,535.26	9,534.70	9,533.26	126.76	201.69	-96.56	-7,839.70	2,237.90	997.33	739.82	257.50	3.873	

<b>Company:</b>	Piedra Operating LLC	<b>Local Co-ordinate Reference:</b>	Well University 8-8E A H 5LS
<b>Project:</b>	Andrews County, TX (NAD83-TNC)	<b>TVD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Reference Site:</b>	University 8-8	<b>MD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Site Error:</b>	0.00	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	University 8-8E A H 5LS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	1.00	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH / 72180	<b>Database:</b>	USAEDMDB
<b>Reference Design:</b>	Surveys (Ensign T054)	<b>Offset TVD Reference:</b>	Offset Datum

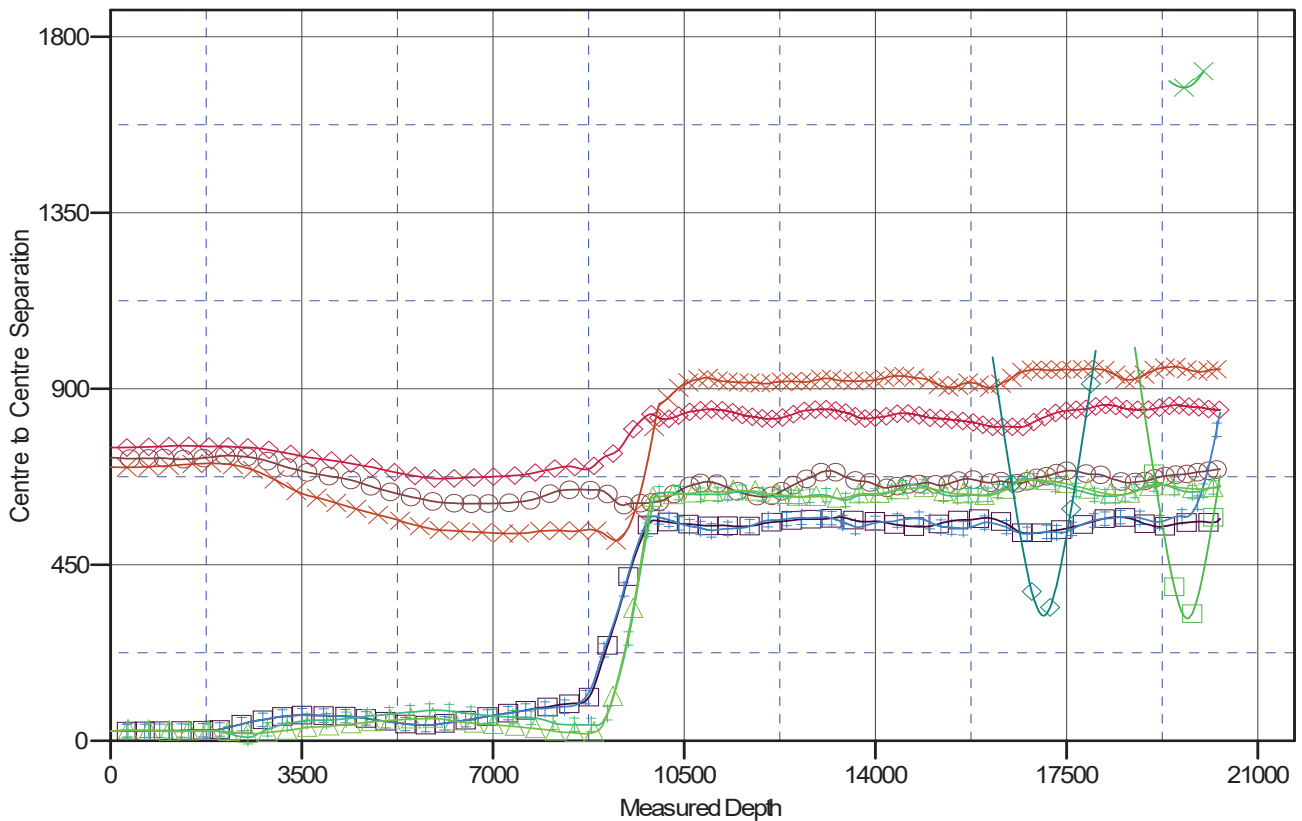
Offset Design U Texas 36995 4 C - OH - Surveys												Offset Site Error:	0.00 usft
Survey Program: 100-INC-ONLY												Offset Well Error:	1.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Center		Distance			Separation Factor	Warning
Measured Depth (usft)	Vertical 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)		
18,751.00	9,532.57	9,532.01	9,530.57	136.21	201.63	-100.24	-10,395.84	2,819.38	1,005.31	750.98	254.32	3.953	
18,799.96	9,529.63	9,529.06	9,527.63	136.85	201.57	-101.26	-10,395.84	2,819.38	958.71	702.98	255.73	3.749	
18,841.00	9,526.79	9,526.23	9,524.79	137.39	201.51	-101.96	-10,395.84	2,819.38	919.89	662.84	257.05	3.579	
18,899.96	9,523.14	9,522.58	9,521.14	138.16	201.43	-97.56	-10,395.84	2,819.38	864.58	605.31	259.27	3.335	
18,931.00	9,521.75	9,521.18	9,519.75	138.57	201.40	-95.51	-10,395.84	2,819.38	835.74	575.11	260.62	3.207	
18,999.96	9,518.97	9,518.41	9,516.97	139.47	201.34	-95.22	-10,395.84	2,819.38	772.40	508.26	264.14	2.924	
19,021.00	9,518.10	9,517.53	9,516.10	139.74	201.32	-95.12	-10,395.84	2,819.38	753.31	487.95	265.36	2.839	
19,099.96	9,514.55	9,513.99	9,512.55	140.77	201.25	-94.99	-10,395.84	2,819.38	682.93	412.24	270.69	2.523	
19,110.00	9,514.07	9,513.51	9,512.07	140.90	201.24	-94.96	-10,395.84	2,819.38	674.14	402.68	271.46	2.483	
19,199.96	9,511.80	9,511.23	9,509.80	142.08	201.19	-90.21	-10,395.84	2,819.38	596.77	317.39	279.38	2.136	
19,201.00	9,511.79	9,511.23	9,509.79	142.09	201.19	-90.16	-10,395.84	2,819.38	595.89	316.41	279.48	2.132	
19,292.00	9,512.49	9,511.93	9,510.49	143.28	201.20	-88.70	-10,395.84	2,819.38	520.98	231.35	289.63	1.799	
19,299.96	9,512.63	9,512.07	9,510.63	143.39	201.20	-88.71	-10,395.84	2,819.38	514.65	224.01	290.64	1.771	
19,382.00	9,514.17	9,513.60	9,512.17	144.46	201.24	-88.84	-10,395.84	2,819.38	452.77	150.45	302.32	1.498	Level 3
19,399.96	9,514.53	9,513.97	9,512.53	144.70	201.25	-88.85	-10,395.84	2,819.38	440.18	134.99	305.20	1.442	Level 3
19,472.00	9,516.18	9,515.61	9,514.18	145.64	201.28	-88.98	-10,395.84	2,819.38	394.01	76.37	317.65	1.240	Level 2
19,499.96	9,516.82	9,516.26	9,514.82	146.01	201.29	-89.20	-10,395.84	2,819.38	378.18	55.47	322.71	1.172	Level 2
19,561.00	9,517.92	9,517.36	9,515.92	146.81	201.32	-89.59	-10,395.84	2,819.38	347.99	14.46	333.53	1.043	Level 2
19,599.96	9,518.44	9,517.88	9,516.44	147.33	201.33	-89.75	-10,395.84	2,819.38	332.73	-7.05	339.78	0.979	Level 1
19,651.00	9,518.96	9,518.40	9,516.96	148.00	201.34	-89.90	-10,395.84	2,819.38	318.91	-27.36	346.28	0.921	Level 1
19,699.96	9,519.28	9,518.72	9,517.28	148.64	201.35	-89.99	-10,395.84	2,819.38	313.08	-36.68	349.76	0.895	Level 1
19,712.29	9,519.33	9,518.77	9,517.33	148.81	201.35	-90.00	-10,395.84	2,819.38	312.83	-37.30	350.13	0.893	Level 1, CC, E
19,740.00	9,519.41	9,518.85	9,517.41	149.17	201.35	-90.01	-10,395.84	2,819.38	314.09	-36.09	350.18	0.897	Level 1
19,799.96	9,519.65	9,519.08	9,517.65	149.96	201.35	-90.10	-10,395.84	2,819.38	325.11	-21.69	346.80	0.937	Level 1
19,830.00	9,519.86	9,519.30	9,517.86	150.35	201.36	-90.18	-10,395.84	2,819.38	334.63	-9.01	343.64	0.974	Level 1
19,899.96	9,520.24	9,519.68	9,518.24	151.27	201.37	-90.10	-10,395.84	2,819.38	365.84	31.80	334.04	1.095	Level 2
19,919.00	9,520.28	9,519.72	9,518.28	151.52	201.37	-90.05	-10,395.84	2,819.38	376.25	45.09	331.16	1.136	Level 2
19,999.96	9,519.45	9,518.88	9,517.45	152.58	201.35	-88.84	-10,395.84	2,819.38	427.04	108.18	318.86	1.339	Level 3
20,008.00	9,519.26	9,518.70	9,517.26	152.69	201.35	-88.68	-10,395.84	2,819.38	432.56	114.89	317.68	1.362	Level 3
20,098.00	9,516.90	9,516.33	9,514.90	153.87	201.30	-87.94	-10,395.84	2,819.38	499.25	193.71	305.53	1.634	
20,099.96	9,516.84	9,516.28	9,514.84	153.90	201.29	-87.98	-10,395.84	2,819.38	500.78	195.49	305.29	1.640	
20,187.00	9,515.83	9,515.26	9,513.83	155.04	201.27	-90.38	-10,395.84	2,819.38	571.55	275.89	295.66	1.933	
20,199.96	9,515.88	9,515.32	9,513.88	155.21	201.27	-90.42	-10,395.84	2,819.38	582.44	288.05	294.39	1.978	
20,250.00	9,516.16	9,515.59	9,514.16	155.87	201.28	-90.60	-10,395.84	2,819.38	625.17	335.33	289.84	2.157	
20,299.96	9,516.46	9,515.90	9,514.46	156.53	201.29	-90.66	-10,395.84	2,819.38	668.80	382.99	285.81	2.340	
20,311.00	9,516.53	9,515.96	9,514.53	156.67	201.29	-90.67	-10,395.84	2,819.38	678.56	393.57	284.99	2.381	

<b>Company:</b>	Piedra Operating LLC	<b>Local Co-ordinate Reference:</b>	Well University 8-8E A H 5LS
<b>Project:</b>	Andrews County, TX (NAD83-TNC)	<b>TVD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Reference Site:</b>	University 8-8	<b>MD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Site Error:</b>	0.00	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	University 8-8E A H 5LS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	1.00	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH / 72180	<b>Database:</b>	USAEDMDB
<b>Reference Design:</b>	Surveys (Ensign T054)	<b>Offset TVD Reference:</b>	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 5LS  
Coordinate System is US State Plane 1983, Texas North Central Zone  
Grid Convergence at Surface is: -2.102°

## Ladder Plot



### LEGEND

University 8-8E A H 2MS, OH / 72179, Plan2 05-23-23 V0	University 8-8E H 7WC, OH / 71369, Surveys (Ensign 225) V0	U Texas 3608 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 3608 A/C 2 3, OH, Surveys V0
University 8-8E H 1MS, OH / 71371, Surveys (Ensign 225) V0	University 8-8E A H 8WC, OH / 72181, Surveys (Ensign T054) V0	
Offset University 8-16 1, OH, As Drilled V0	University 8-8E A H 8WC, OH / 72181, Plan1 03-15-23 V0	

<b>Company:</b>	Piedra Operating LLC	<b>Local Co-ordinate Reference:</b>	Well University 8-8E A H 5LS
<b>Project:</b>	Andrews County, TX (NAD83-TNC)	<b>TVD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Reference Site:</b>	University 8-8	<b>MD Reference:</b>	RKB @ 3050.00usft (Ensign T054)
<b>Site Error:</b>	0.00	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	University 8-8E A H 5LS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	1.00	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH / 72180	<b>Database:</b>	USAEDMDB
<b>Reference Design:</b>	Surveys (Ensign T054)	<b>Offset TVD Reference:</b>	Offset Datum

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

Offset Depths are relative to Offset Datum

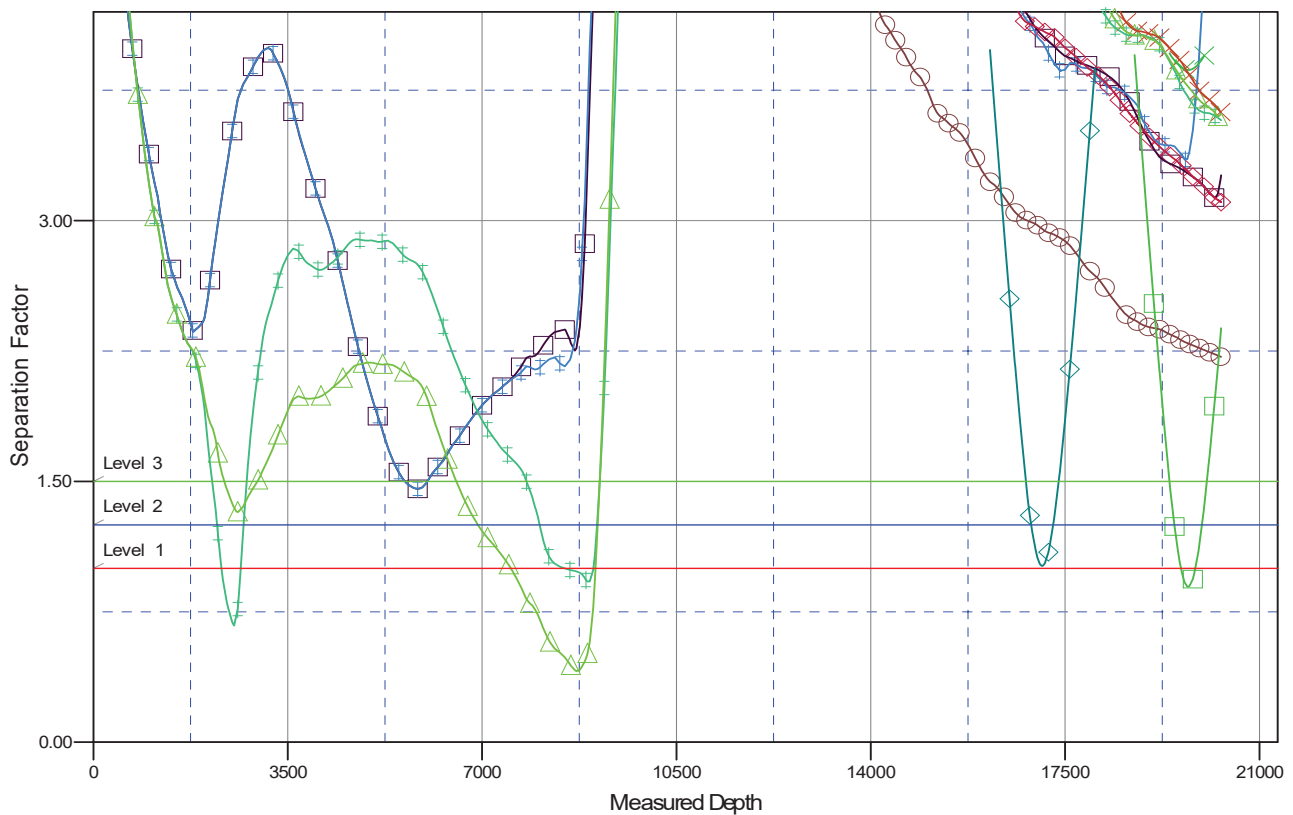
Central Meridian is 98° 30' 0.000000 W °

Coordinates are relative to: University 8-8E A H 5LS

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 A H 2M S, OH / 72179, Plan2 05-23-23 V0	University 8-8E H 7WC, OH / 71369, Surveys (Ensign 225) V0	U Texas 3695 4 C, OH, Surveys V0
University 8-8E A H 2M S, OH / 72179, Surveys (Ensign T054) V0	University 8-8E H 4LS, OH / 71370, Surveys (Ensign 225) V0	U Texas 3695 A/C 2.3, OH, Surveys V0
University 8-8E H 1M S, OH / 71371, Surveys (Ensign 225) V0	University 8-8E A H 8WC, OH / 72181, Surveys (Ensign T054) V0	
Offset University 8-16 1, OH, As Drilled V0	University 8-8E A H 8WC, OH / 72181, Plan1 03-16-23 V0	