



PO Box 4482, Midland, TX 79704 | 972-505-0433

Railroad Commission of Texas
Oil & Gas Division
P.O. Box 12967
Austin, TX 78711

Attn: Pam Johns


11/6/2019

Re: Piedra Operating, LLC.
Well: University 5-38 2H
Field: Spraberry (Trend Area) R 40 EXC
Rig: Scandrill Discoverer
County: Andrews County, TX
Permit: 850696
API Well No: 42-003-48038

Enclosed please find the original of the surveys performed on the referenced well by True Shot, LLC. (P-5 No. 871488). Other information required by your office is as follows:

Name & Title Of Surveyor	Wellhole Number	Survey Depths	Dates Performed	Type Survey
J. Vasquez, Field Service Technician	Original Hole	144'-20318'	8/25/2019 – 10/29/2019	MWD

A certified plat on which the bottom hole location is oriented both to the surface location and to the lease lines (or unit line in case of pooling) is attached to the survey report. If additional information is required, please contact the undersigned at the letterhead address and phone number.


11/6/2019
Dustin Trevino
President

Cc: Piedra Operating, LLC.



Company: Piedra Operating, LLC Job Number: 04-1-19-2816 Calculation Method Minimum Curvature
 Well: University 5-38 #2H Mag (Grid): 8.16° Proposed Azimuth 166.94
 Location: Andrews County, Tx Dir Driller: Aaron Lee Depth Reference 25'
 Rig: Scandrill Discoverer FST: Joey V. Tie Into: Assumed Vertical
 Job Date: 8/25/2019 - 10/29/2019

Survey Number	Survey Depth (ft)	Inclination (deg)	Azimuth (deg)	Course Length (ft)	True Vertical Depth (ft)	Vertical Section (ft)	Coordinates		Closure		Dogleg Severity (d/100')	Build Rate (d/100')	Walk Rate (d/100')		
							N/S (ft)	E/W (ft)	Distance (ft)	Direction Azimuth					
Tie In	0.00	0.00	0.00	0	0.00	0.00	0.00	0	0.00	0					
1	144	0.90	118.10	144	143.99	0.74	0.53	S	1.00	E	1.13	118.10	0.63	0.63	82.01
2	262	1.00	163.10	118	261.98	2.38	1.95	S	2.11	E	2.88	132.75	0.62	0.08	38.14
3	323	0.80	191.20	61	322.97	3.30	2.88	S	2.19	E	3.62	142.81	0.78	-0.33	46.07
4	382	0.80	131.80	59	381.97	4.01	3.56	S	2.41	E	4.30	145.86	1.34	0.00	-100.68
5	440	1.30	141.80	58	439.96	4.94	4.35	S	3.12	E	5.35	144.31	0.91	0.86	17.24
6	499	0.60	143.90	59	498.95	5.83	5.12	S	3.72	E	6.33	144.03	1.19	-1.19	3.56
7	556	0.60	188.80	57	555.95	6.38	5.66	S	3.85	E	6.84	145.78	0.80	0.00	78.77
8	613	0.80	130.30	57	612.94	6.98	6.21	S	4.11	E	7.45	146.53	1.24	0.35	-102.63
9	738	0.60	44.80	125	737.94	7.33	6.31	S	5.23	E	8.20	140.34	0.77	-0.16	-68.40
10	832	2.10	343.40	94	831.91	5.35	4.31	S	5.09	E	6.67	130.28	2.01	1.60	317.66
11	927	1.70	1.30	95	926.86	2.25	1.23	S	4.62	E	4.78	104.95	0.75	-0.42	-360.11
12	1022	1.30	1.40	95	1021.83	-0.16	1.25	N	4.68	E	4.85	75.03	0.42	-0.42	0.11
13	1116	1.00	353.60	94	1115.81	-2.01	3.13	N	4.62	E	5.58	55.83	0.36	-0.32	374.68
14	1211	1.10	341.20	95	1210.79	-3.74	4.82	N	4.23	E	6.41	41.26	0.26	0.11	-13.05
15	1305	1.00	305.40	94	1304.78	-5.25	6.15	N	3.27	E	6.96	28.00	0.69	-0.11	-38.09
16	1400	0.70	316.90	95	1399.77	-6.37	7.05	N	2.20	E	7.39	17.30	0.36	-0.32	12.11
17	1495	0.60	131.50	95	1494.76	-6.47	7.15	N	2.17	E	7.47	16.91	1.37	-0.11	-195.16
18	1590	1.10	155.40	95	1589.75	-5.17	5.99	N	2.93	E	6.67	26.04	0.63	0.53	25.16
19	1684	1.20	192.50	94	1683.74	-3.40	4.21	N	3.09	E	5.22	36.28	0.78	0.11	39.47
20	1778	0.70	126.90	94	1777.72	-2.07	2.90	N	3.33	E	4.42	48.97	1.18	-0.53	-69.79
21	1813	0.60	195.50	35	1812.72	-1.75	2.60	N	3.46	E	4.32	53.08	2.11	-0.29	196.00
22	1968	0.70	142.90	155	1967.71	-0.17	1.06	N	3.81	E	3.96	74.46	0.38	0.06	-33.94
23	2062	1.50	98.70	94	2061.70	0.81	0.42	N	5.37	E	5.39	85.58	1.18	0.85	-47.02
24	2156	2.80	86.80	94	2155.63	1.66	0.36	N	8.88	E	8.89	87.70	1.45	1.38	-12.66
25	2250	3.20	57.90	94	2249.51	1.20	1.88	N	13.40	E	13.53	82.01	1.64	0.43	-30.74
26	2344	4.30	50.10	94	2343.30	-1.25	5.53	N	18.32	E	19.14	73.19	1.29	1.17	-8.30
27	2438	4.30	47.60	94	2437.04	-4.57	10.17	N	23.63	E	25.73	66.71	0.20	0.00	-2.66
28	2532	3.60	45.20	94	2530.82	-7.85	14.63	N	28.33	E	31.88	62.69	0.77	-0.74	-2.55
29	2627	4.40	50.50	95	2625.58	-11.04	19.05	N	33.25	E	38.32	60.20	0.93	0.84	5.58
30	2721	4.70	54.10	94	2719.29	-14.14	23.60	N	39.16	E	45.72	58.92	0.44	0.32	3.83
31	2816	4.50	53.50	95	2813.98	-17.13	28.10	N	45.30	E	53.31	58.19	0.22	-0.21	-0.63
32	2909	4.50	53.90	93	2906.69	-20.01	32.42	N	51.18	E	60.59	57.65	0.03	0.00	0.43
33	3004	4.10	53.60	95	3001.43	-22.82	36.63	N	56.93	E	67.70	57.24	0.42	-0.42	-0.32
34	3098	3.90	49.20	94	3095.20	-25.64	40.71	N	62.05	E	74.22	56.73	0.39	-0.21	-4.68



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Well: University 5-38 #2H **Mag (Grid):** 8.16° **Proposed Azimuth:** 166.94
Location: Andrews County, Tx **Dir Driller:** Aaron Lee **Depth Reference:** 25'
Rig: Scandrill Discoverer **FST:** Joey V. **Tie Into:** Assumed Vertical
Job Date: 8/25/2019 - 10/29/2019

Survey Number	Survey Depth (ft)	Inclination (deg)	Azimuth (deg)	Course Length (ft)	True Vertical Depth (ft)	Vertical Section (ft)	Coordinates		Closure		Dogleg Severity (d/100')	Build Rate (d/100')	Walk Rate (d/100')
							N/S (ft)	E/W (ft)	Distance (ft)	Direction Azimuth			
35	3193	4.90	58.20	95	3189.92	-28.44	44.96 N	67.95 E	81.48	56.51	1.28	1.05	9.47
36	3287	5.10	65.10	94	3283.56	-30.59	48.84 N	75.15 E	89.62	56.98	0.67	0.21	7.34
37	3382	4.50	62.40	95	3378.23	-32.39	52.34 N	82.28 E	97.52	57.54	0.67	-0.63	-2.84
38	3476	4.10	63.30	94	3471.96	-34.11	55.56 N	88.55 E	104.54	57.90	0.43	-0.43	0.96
39	3570	5.40	56.50	94	3565.64	-36.45	59.51 N	95.24 E	112.31	58.00	1.50	1.38	-7.23
40	3665	5.70	55.60	95	3660.19	-39.73	64.64 N	102.86 E	121.49	57.85	0.33	0.32	-0.95
41	3760	5.30	55.40	95	3754.76	-43.05	69.80 N	110.37 E	130.59	57.69	0.42	-0.42	-0.21
42	3853	5.00	55.40	93	3847.38	-46.12	74.54 N	117.24 E	138.93	57.55	0.32	-0.32	0.00
43	3947	4.50	54.80	94	3941.06	-49.01	78.99 N	123.62 E	146.71	57.42	0.53	-0.53	-0.64
44	4041	5.40	58.40	94	4034.71	-51.81	83.43 N	130.41 E	154.81	57.39	1.01	0.96	3.83
45	4135	5.30	58.50	94	4128.30	-54.59	88.02 N	137.87 E	163.58	57.45	0.11	-0.11	0.11
46	4229	4.90	55.60	94	4221.92	-57.42	92.56 N	144.89 E	171.93	57.43	0.51	-0.43	-3.09
47	4324	4.60	58.50	95	4316.60	-60.10	96.84 N	151.48 E	179.79	57.41	0.40	-0.32	3.05
48	4418	5.00	61.20	94	4410.27	-62.41	100.78 N	158.29 E	187.65	57.51	0.49	0.43	2.87
49	4512	5.00	58.10	94	4503.91	-64.84	104.92 N	165.36 E	195.83	57.60	0.29	0.00	-3.30
50	4606	4.50	59.70	94	4597.59	-67.26	108.95 N	172.02 E	203.61	57.65	0.55	-0.53	1.70
51	4700	4.60	49.70	94	4691.29	-70.08	113.24 N	178.08 E	211.03	57.55	0.85	0.11	-10.64
52	4795	5.90	47.60	95	4785.89	-74.21	119.00 N	184.59 E	219.62	57.19	1.38	1.37	-2.21
53	4889	5.80	49.00	94	4879.40	-78.80	125.37 N	191.74 E	229.09	56.82	0.19	-0.11	1.49
54	4984	4.90	48.40	95	4973.99	-82.99	131.22 N	198.40 E	237.86	56.52	0.95	-0.95	-0.63
55	5078	5.10	52.20	94	5067.63	-86.66	136.44 N	204.70 E	246.01	56.31	0.41	0.21	4.04
56	5173	4.80	57.90	95	5162.28	-89.72	141.14 N	211.40 E	254.19	56.27	0.61	-0.32	6.00
57	5267	4.30	56.90	94	5255.98	-92.21	145.16 N	217.69 E	261.65	56.30	0.54	-0.53	-1.06
58	5361	5.50	55.60	94	5349.63	-95.06	149.63 N	224.36 E	269.67	56.30	1.28	1.28	-1.38
59	5456	5.90	58.90	95	5444.17	-98.23	154.72 N	232.29 E	279.10	56.33	0.54	0.42	3.47
60	5535	5.90	58.90	79	5522.75	-100.74	158.92 N	239.25 E	287.22	56.41	0.00	0.00	0.00
61	5651	5.71	61.25	116	5638.15	-104.15	164.77 N	249.41 E	298.92	56.55	0.26	-0.16	2.03
62	5746	5.23	60.89	95	5732.72	-106.63	169.15 N	257.34 E	307.95	56.68	0.51	-0.51	-0.38
63	5840	5.23	60.45	94	5826.33	-109.03	173.35 N	264.81 E	316.50	56.79	0.04	0.00	-0.47
64	5935	5.05	61.77	95	5920.95	-111.35	177.46 N	272.26 E	324.99	56.90	0.23	-0.19	1.39
65	6029	5.01	61.07	94	6014.58	-113.55	181.40 N	279.50 E	333.20	57.01	0.08	-0.04	-0.74
66	6123	5.05	62.83	94	6108.22	-115.69	185.28 N	286.77 E	341.42	57.13	0.17	0.04	1.87
67	6218	4.84	62.83	95	6202.87	-117.68	189.02 N	294.05 E	349.56	57.27	0.22	-0.22	0.00
68	6313	4.75	62.39	95	6297.54	-119.65	192.67 N	301.10 E	357.47	57.39	0.10	-0.09	-0.46
69	6407	4.88	61.86	94	6391.20	-121.66	196.36 N	308.08 E	365.34	57.49	0.15	0.14	-0.56
70	6502	4.75	59.84	95	6485.87	-123.87	200.24 N	315.04 E	373.30	57.56	0.22	-0.14	-2.13



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71	6596	4.79	61.77	94	6579.54	-126.04	204.05 N	321.87 E	381.10	57.63	0.18	0.04	2.05
72	6690	4.84	61.69	94	6673.21	-128.11	207.79 N	328.82 E	388.97	57.71	0.05	0.05	-0.09
73	6785	4.70	63.09	95	6767.88	-130.10	211.45 N	335.81 E	396.84	57.80	0.19	-0.15	1.47
74	6879	4.48	63.79	94	6861.58	-131.86	214.82 N	342.54 E	404.33	57.91	0.24	-0.23	0.74
75	6973	4.22	64.76	94	6955.31	-133.42	217.91 N	348.96 E	411.42	58.02	0.29	-0.28	1.03
76	7067	3.38	64.23	94	7049.10	-134.76	220.59 N	354.59 E	417.61	58.11	0.89	-0.89	-0.56
77	7162	4.92	53.95	95	7143.85	-136.97	224.21 N	360.40 E	424.45	58.11	1.79	1.62	-10.82
78	7256	3.91	55.45	94	7237.57	-139.72	228.40 N	366.30 E	431.68	58.06	1.08	-1.07	1.60
79	7350	5.98	52.81	94	7331.22	-142.89	233.18 N	372.84 E	439.75	57.98	2.21	2.20	-2.81
80	7445	5.01	51.67	95	7425.78	-146.69	238.74 N	380.04 E	448.81	57.86	1.03	-1.02	-1.20
81	7539	4.04	53.34	94	7519.48	-149.77	243.26 N	385.92 E	456.19	57.77	1.04	-1.03	1.78
82	7633	5.63	55.53	94	7613.15	-152.77	247.85 N	392.37 E	464.10	57.72	1.70	1.69	2.33
83	7726	4.57	60.98	93	7705.78	-155.46	252.23 N	399.38 E	472.36	57.73	1.25	-1.14	5.86
84	7821	5.98	63.27	95	7800.37	-157.67	256.29 N	407.11 E	481.06	57.81	1.50	1.48	2.41
85	7915	4.84	67.22	94	7893.95	-159.50	260.03 N	415.14 E	489.85	57.94	1.28	-1.21	4.20
86	8009	5.98	52.19	94	7987.54	-162.21	264.57 N	422.66 E	498.64	57.96	1.92	1.21	-15.99
87	8104	4.57	59.84	95	8082.13	-165.40	269.50 N	429.84 E	507.34	57.91	1.66	-1.48	8.05
88	8199	6.33	52.81	95	8176.70	-168.65	274.57 N	437.29 E	516.34	57.88	1.98	1.85	-7.40
89	8293	4.84	45.25	94	8270.25	-172.86	280.50 N	444.23 E	525.38	57.73	1.76	-1.59	-8.04
90	8387	4.92	48.41	94	8363.91	-176.86	285.96 N	450.06 E	533.23	57.57	0.30	0.09	3.36
91	8481	3.69	54.04	94	8457.65	-179.97	290.41 N	455.53 E	540.23	57.48	1.38	-1.31	5.99
92	8575	3.96	62.21	94	8551.44	-181.97	293.70 N	460.85 E	546.48	57.49	0.65	0.29	8.69
93	8669	4.13	63.97	94	8645.20	-183.55	296.70 N	466.76 E	553.08	57.56	0.22	0.18	1.87
94	8763	3.78	63.36	94	8738.98	-185.04	299.58 N	472.57 E	559.53	57.63	0.38	-0.37	-0.65
95	8857	3.12	73.46	94	8832.81	-185.92	301.70 N	477.79 E	565.07	57.73	0.95	-0.70	10.74
96	8950	2.37	129.01	93	8925.72	-184.56	301.21 N	481.71 E	568.13	57.98	2.84	-0.81	59.73
97	9029	3.78	146.06	79	9004.60	-180.84	298.02 N	484.44 E	568.77	58.40	2.11	1.78	21.58
98	9124	12.31	160.74	95	9098.59	-167.82	285.84 N	489.54 E	566.88	59.72	9.16	8.98	15.45
99	9218	18.68	157.22	94	9189.13	-143.00	262.47 N	498.68 E	563.54	62.24	6.85	6.78	-3.74
100	9313	26.15	155.11	95	9276.89	-107.46	229.41 N	513.40 E	562.33	65.92	7.91	7.86	-2.22
101	9406	31.78	160.04	93	9358.24	-63.05	187.76 N	530.40 E	562.66	70.51	6.57	6.05	5.30
102	9453	36.66	162.76	47	9397.09	-36.75	162.71 N	538.79 E	562.82	73.20	10.88	10.38	5.79
103	9500	41.45	165.04	47	9433.58	-7.19	134.26 N	546.97 E	563.21	76.21	10.64	10.19	4.85
104	9594	50.24	166.10	94	9499.00	60.17	69.00 N	563.72 E	567.92	83.02	9.39	9.35	1.13
105	9642	53.45	165.31	48	9528.65	97.90	32.43 N	573.04 E	573.96	86.76	6.81	6.69	-1.65
106	9689	57.41	166.80	47	9555.31	136.58	5.12 S	582.35 E	582.38	90.50	8.82	8.43	3.17



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107	9736	66.77	164.34	47	9577.29	178.05	45.29 S	592.73 E	594.45	94.37	20.44	19.91	-5.23
108	9783	76.70	161.79	47	9592.00	222.52	87.92 S	605.74 E	612.08	98.26	21.74	21.13	-5.43
109	9877	87.91	168.30	94	9604.58	315.43	177.74 S	629.66 E	654.26	105.76	13.75	11.93	6.93
110	9972	92.57	170.58	95	9604.18	410.30	271.10 S	647.06 E	701.56	112.73	5.46	4.91	2.40
111	10066	89.01	169.97	94	9602.89	504.12	363.72 S	662.94 E	756.16	118.75	3.84	-3.79	-0.65
112	10161	89.01	169.44	95	9604.53	598.99	457.18 S	679.91 E	819.32	123.92	0.56	0.00	-0.56
113	10255	90.33	168.56	94	9605.07	692.93	549.45 S	697.85 E	888.19	128.21	1.69	1.40	-0.94
114	10350	89.93	166.19	95	9604.86	787.92	642.14 S	718.61 E	963.72	131.78	2.53	-0.42	-2.49
115	10443	92.53	166.10	93	9602.86	880.88	732.41 S	740.87 E	1041.78	134.67	2.80	2.80	-0.10
116	10538	93.32	165.04	95	9598.01	975.73	824.29 S	764.51 E	1124.25	137.15	1.39	0.83	-1.12
117	10632	92.88	167.95	94	9592.93	1069.58	915.55 S	786.43 E	1206.94	139.34	3.13	-0.47	3.10
118	10726	89.23	168.56	94	9591.20	1163.52	1007.55 S	805.56 E	1289.99	141.36	3.94	-3.88	0.65
119	10820	88.44	167.07	94	9593.11	1257.49	1099.41 S	825.39 E	1374.76	143.10	1.79	-0.84	-1.59
120	10914	90.46	169.79	94	9594.01	1351.44	1191.48 S	844.24 E	1460.26	144.68	3.60	2.15	2.89
121	11008	90.81	168.82	94	9592.97	1445.35	1283.84 S	861.69 E	1546.20	146.13	1.10	0.37	-1.03
122	11102	90.59	167.77	94	9591.82	1539.31	1375.88 S	880.76 E	1633.64	147.38	1.14	-0.23	-1.12
123	11197	90.33	167.33	95	9591.06	1634.30	1468.64 S	901.24 E	1723.12	148.46	0.54	-0.27	-0.46
124	11291	90.37	168.21	94	9590.48	1728.29	1560.50 S	921.15 E	1812.09	149.45	0.94	0.04	0.94
125	11386	88.44	168.38	95	9591.47	1823.26	1653.52 S	940.42 E	1902.24	150.37	2.04	-2.03	0.18
126	11480	88.04	167.07	94	9594.36	1917.20	1745.32 S	960.39 E	1992.11	151.18	1.46	-0.43	-1.39
127	11574	87.78	167.24	94	9597.79	2011.14	1836.91 S	981.28 E	2082.58	151.89	0.33	-0.28	0.18
128	11668	89.85	169.00	94	9599.73	2105.09	1928.87 S	1000.62 E	2172.97	152.58	2.89	2.20	1.87
129	11763	89.85	167.51	95	9599.98	2200.06	2021.88 S	1019.96 E	2264.58	153.23	1.57	0.00	-1.57
130	11858	90.55	167.42	95	9599.65	2295.06	2114.61 S	1040.58 E	2356.77	153.80	0.74	0.74	-0.09
131	11951	91.30	167.77	93	9598.15	2388.04	2205.43 S	1060.55 E	2447.18	154.32	0.89	0.81	0.38
132	12045	88.92	167.51	94	9597.97	2482.02	2297.24 S	1080.67 E	2538.73	154.81	2.55	-2.53	-0.28
133	12139	89.23	167.77	94	9599.48	2576.00	2389.05 S	1100.79 E	2630.46	155.26	0.43	0.33	0.28
134	12234	89.67	167.42	95	9600.39	2670.99	2481.83 S	1121.20 E	2723.34	155.69	0.59	0.46	-0.37
135	12327	90.24	167.24	93	9600.47	2763.99	2572.56 S	1141.60 E	2814.48	156.07	0.64	0.61	-0.19
136	12422	88.97	167.24	95	9601.12	2858.98	2665.21 S	1162.58 E	2907.74	156.43	1.34	-1.34	0.00
137	12517	91.30	166.98	95	9600.90	2953.98	2757.81 S	1183.77 E	3001.14	156.77	2.47	2.45	-0.27
138	12611	90.64	165.66	94	9599.31	3047.96	2849.13 S	1206.00 E	3093.86	157.06	1.57	-0.70	-1.40
139	12706	90.77	165.22	95	9598.14	3142.92	2941.07 S	1229.88 E	3187.87	157.31	0.48	0.14	-0.46
140	12800	91.87	164.52	94	9595.97	3236.83	3031.79 S	1254.40 E	3281.05	157.52	1.39	1.17	-0.74
141	12895	93.36	165.48	95	9591.64	3331.67	3123.45 S	1278.97 E	3375.16	157.73	1.87	1.57	1.01
142	12989	88.88	166.10	94	9589.80	3425.61	3214.53 S	1302.03 E	3468.21	157.95	4.81	-4.77	0.66



Company: Piedra Operating, LLC Job Number: 04-1-19-2816 Calculation Method: Minimum Curvature
 Well: University 5-38 #2H Mag (Grid): 8.16° Proposed Azimuth: 166.94
 Location: Andrews County, Tx Dir Driller: Aaron Lee Depth Reference: 25'
 Rig: Scandrill Discoverer FST: Joey V. Tie Into: Assumed Vertical
 Job Date: 8/25/2019 - 10/29/2019

Survey Number	Survey Depth (ft)	Inclination (deg)	Azimuth (deg)	Course Length (ft)	True Vertical Depth (ft)	Vertical Section (ft)	Coordinates		Closure		Dogleg Severity (d/100')	Build Rate (d/100')	Walk Rate (d/100')
							N/S (ft)	E/W (ft)	Distance (ft)	Direction Azimuth			
143	13084	87.87	164.52	95	9592.50	3520.53	3306.39 S	1326.11 E	3562.41	158.15	1.97	-1.06	-1.66
144	13178	89.10	166.28	94	9594.98	3614.46	3397.32 S	1349.79 E	3655.64	158.33	2.28	1.31	1.87
145	13273	91.47	166.89	95	9594.51	3709.44	3489.72 S	1371.83 E	3749.67	158.54	2.58	2.49	0.64
146	13368	90.37	168.03	95	9592.98	3804.43	3582.43 S	1392.45 E	3843.54	158.76	1.67	-1.16	1.20
147	13462	86.77	166.54	94	9595.33	3898.38	3674.08 S	1413.13 E	3936.47	158.96	4.14	-3.83	-1.59
148	13557	87.87	166.63	95	9599.77	3993.27	3766.39 S	1435.15 E	4030.55	159.14	1.16	1.16	0.09
149	13652	89.36	165.75	95	9602.07	4088.23	3858.61 S	1457.82 E	4124.82	159.30	1.82	1.57	-0.93
150	13747	90.37	165.48	95	9602.29	4183.20	3950.63 S	1481.42 E	4219.25	159.44	1.10	1.06	-0.28
151	13842	91.08	165.57	95	9601.09	4278.17	4042.61 S	1505.16 E	4313.72	159.58	0.75	0.75	0.09
152	13937	91.56	165.40	95	9598.90	4373.11	4134.55 S	1528.97 E	4408.20	159.71	0.54	0.51	-0.18
153	14031	91.12	166.28	94	9596.70	4467.07	4225.67 S	1551.96 E	4501.65	159.83	1.05	-0.47	0.94
154	14125	90.37	168.21	94	9595.48	4561.05	4317.34 S	1572.71 E	4594.87	159.98	2.20	-0.80	2.05
155	14219	90.68	167.77	94	9594.62	4655.03	4409.28 S	1592.27 E	4687.97	160.14	0.57	0.33	-0.47
156	14313	88.09	167.24	94	9595.63	4749.01	4501.04 S	1612.60 E	4781.19	160.29	2.81	-2.76	-0.56
157	14408	87.21	166.19	95	9599.52	4843.93	4593.41 S	1634.41 E	4875.53	160.41	1.44	-0.93	-1.11
158	14502	88.62	168.03	94	9602.94	4937.86	4684.98 S	1655.36 E	4968.83	160.54	2.47	1.50	1.96
159	14597	88.22	168.21	95	9605.56	5032.80	4777.91 S	1674.91 E	5062.98	160.68	0.46	-0.42	0.19
160	14692	91.60	169.88	95	9605.71	5127.72	4871.16 S	1692.96 E	5156.97	160.84	3.97	3.56	1.76
161	14786	91.16	169.53	94	9603.45	5221.59	4963.62 S	1709.76 E	5249.84	160.99	0.60	-0.47	-0.37
162	14881	91.65	170.41	95	9601.12	5316.42	5057.14 S	1726.30 E	5343.66	161.15	1.06	0.52	0.93
163	14975	92.79	170.05	94	9597.48	5410.20	5149.70 S	1742.24 E	5436.44	161.31	1.27	1.21	-0.38
164	15070	91.12	168.12	95	9594.24	5505.07	5242.92 S	1760.22 E	5530.51	161.44	2.69	-1.76	-2.03
165	15165	90.29	166.89	95	9593.07	5600.05	5335.66 S	1780.77 E	5624.98	161.54	1.56	-0.87	-1.29
166	15259	89.54	167.15	94	9593.21	5694.05	5427.26 S	1801.88 E	5718.56	161.63	0.84	-0.80	0.28
167	15353	89.45	166.45	94	9594.03	5788.05	5518.77 S	1823.34 E	5812.18	161.72	0.75	-0.10	-0.74
168	15449	89.67	166.01	96	9594.77	5884.04	5612.01 S	1846.19 E	5907.88	161.79	0.51	0.23	-0.46
169	15543	90.15	165.75	94	9594.92	5978.02	5703.17 S	1869.13 E	6001.65	161.85	0.58	0.51	-0.28
170	15638	89.36	164.61	95	9595.33	6072.97	5795.01 S	1893.42 E	6096.49	161.91	1.46	-0.83	-1.20
171	15731	88.31	161.88	93	9597.22	6165.75	5884.03 S	1920.22 E	6189.43	161.93	3.14	-1.13	-2.94
172	15826	89.93	163.99	95	9598.68	6260.50	5974.83 S	1948.10 E	6284.40	161.94	2.80	1.71	2.22
173	15920	90.64	164.52	94	9598.21	6354.39	6065.30 S	1973.60 E	6378.32	161.98	0.94	0.76	0.56
174	16014	91.25	165.57	94	9596.66	6448.33	6156.10 S	1997.86 E	6472.17	162.02	1.29	0.65	1.12
175	16109	91.38	165.22	95	9594.48	6543.27	6248.01 S	2021.81 E	6566.99	162.07	0.39	0.14	-0.37
176	16203	87.60	169.00	94	9595.32	6637.23	6339.60 S	2042.77 E	6660.59	162.14	5.69	-4.02	4.02
177	16298	87.30	168.38	95	9599.54	6732.09	6432.66 S	2061.38 E	6754.88	162.23	0.72	-0.32	-0.65
178	16392	89.27	169.18	94	9602.36	6825.99	6524.82 S	2079.66 E	6848.23	162.32	2.26	2.10	0.85



Company:	<u>Piedra Operating, LLC</u>	Job Number:	<u>04-1-19-2816</u>	Calculation Method	<u>Minimum Curvature</u>
Well:	<u>University 5-38 #2H</u>	Mag (Grid):	<u>8.16°</u>	Proposed Azimuth	<u>166.94</u>
Location:	<u>Andrews County, Tx</u>	Dir Driller:	<u>Aaron Lee</u>	Depth Reference	<u>25'</u>
Rig:	<u>Scandrill Discoverer</u>	FST:	<u>Joey V.</u>	Tie Into:	<u>Assumed Vertical</u>
Job Date:	<u>8/25/2019 - 10/29/2019</u>				

Survey Number	Survey Depth (ft)	Inclination (deg)	Azimuth (deg)	Course Length (ft)	True Vertical Depth (ft)	Vertical Section (ft)	Coordinates		Closure		Dogleg Severity (d/100')	Build Rate (d/100')	Walk Rate (d/100')
							N/S (ft)	E/W (ft)	Distance (ft)	Direction Azimuth			
179	16487	90.51	168.91	95	9602.54	6920.93	6618.09 S	2097.71 E	6942.59	162.41	1.34	1.31	-0.28
180	16581	90.37	167.86	94	9601.82	7014.89	6710.16 S	2116.64 E	7036.08	162.49	1.13	-0.15	-1.12
181	16676	89.76	167.24	95	9601.71	7109.89	6802.92 S	2137.12 E	7130.71	162.56	0.92	-0.64	-0.65
182	16771	90.20	167.50	95	9601.74	7204.88	6895.62 S	2157.89 E	7225.38	162.62	0.54	0.46	0.27
183	16865	90.11	165.92	94	9601.49	7298.88	6987.10 S	2179.50 E	7319.14	162.68	1.68	-0.10	-1.68
184	16959	89.76	165.04	94	9601.59	7392.85	7078.10 S	2203.07 E	7413.03	162.71	1.01	-0.37	-0.94
185	17054	91.78	167.51	95	9600.32	7487.82	7170.37 S	2225.60 E	7507.83	162.76	3.36	2.13	2.60
186	17149	88.35	168.47	95	9600.21	7582.79	7263.27 S	2245.37 E	7602.42	162.82	3.75	-3.61	1.01
187	17243	88.09	167.33	94	9603.13	7676.73	7355.14 S	2265.06 E	7696.01	162.88	1.24	-0.28	-1.21
188	17338	89.80	168.12	95	9604.88	7771.70	7447.95 S	2285.25 E	7790.65	162.94	1.98	1.80	0.83
189	17433	89.63	167.77	95	9605.35	7866.68	7540.85 S	2305.09 E	7885.30	163.00	0.41	-0.18	-0.37
190	17527	90.07	169.35	94	9605.60	7960.64	7632.98 S	2323.74 E	7978.86	163.07	1.74	0.47	1.68
191	17621	90.20	168.47	94	9605.37	8054.59	7725.22 S	2341.82 E	8072.37	163.14	0.95	0.14	-0.94
192	17716	89.63	168.30	95	9605.52	8149.56	7818.28 S	2360.95 E	8166.98	163.20	0.63	-0.60	-0.18
193	17810	91.38	170.41	94	9604.69	8243.46	7910.65 S	2378.31 E	8260.43	163.27	2.92	1.86	2.24
194	17904	91.69	169.88	94	9602.17	8337.28	8003.23 S	2394.39 E	8353.73	163.34	0.65	0.33	-0.56
195	17999	92.22	169.18	95	9598.93	8432.12	8096.59 S	2411.64 E	8448.12	163.41	0.92	0.56	-0.74
196	18093	91.38	167.24	94	9595.98	8526.05	8188.56 S	2430.84 E	8541.75	163.47	2.25	-0.89	-2.06
197	18188	92.40	167.07	95	9592.84	8621.00	8281.13 S	2451.95 E	8636.50	163.51	1.09	1.07	-0.18
198	18282	92.40	167.15	94	9588.91	8714.91	8372.68 S	2472.90 E	8730.23	163.55	0.09	0.00	0.09
199	18377	91.08	165.66	95	9586.02	8809.86	8464.97 S	2495.22 E	8825.07	163.58	2.09	-1.39	-1.57
200	18472	90.15	164.69	95	9585.00	8904.81	8556.80 S	2519.52 E	8920.02	163.59	1.41	-0.98	-1.02
201	18566	89.05	167.15	94	9585.66	8998.78	8647.96 S	2542.39 E	9013.93	163.62	2.87	-1.17	2.62
202	18661	90.99	168.21	95	9585.62	9093.77	8740.77 S	2562.66 E	9108.69	163.66	2.33	2.04	1.12
203	18756	85.32	168.74	95	9588.68	9188.65	8833.77 S	2581.62 E	9203.27	163.71	5.99	-5.97	0.56
204	18851	86.24	166.63	95	9595.67	9283.37	8926.32 S	2601.83 E	9297.78	163.75	2.42	0.97	-2.22
205	18945	92.22	165.92	94	9596.94	9377.32	9017.59 S	2624.12 E	9391.64	163.77	6.41	6.36	-0.76
206	19040	91.91	167.15	95	9593.51	9472.25	9109.92 S	2646.23 E	9486.47	163.80	1.33	-0.33	1.29
207	19135	86.77	167.07	95	9594.61	9567.21	9202.49 S	2667.41 E	9581.27	163.84	5.41	-5.41	-0.08
208	19229	86.33	166.80	94	9600.26	9661.04	9293.89 S	2688.62 E	9674.97	163.87	0.55	-0.47	-0.29
209	19323	88.44	166.98	94	9604.55	9754.94	9385.34 S	2709.92 E	9768.73	163.89	2.25	2.24	0.19
210	19418	88.53	166.89	95	9607.06	9849.90	9477.84 S	2731.39 E	9863.57	163.92	0.13	0.09	-0.09
211	19512	90.51	167.77	94	9607.85	9943.89	9569.55 S	2752.00 E	9957.40	163.96	2.31	2.11	0.94
212	19607	90.24	166.89	95	9607.23	10038.89	9662.23 S	2772.84 E	10052.23	163.99	0.97	-0.28	-0.93
213	19702	90.24	164.96	95	9606.83	10133.87	9754.37 S	2795.94 E	10147.17	164.01	2.03	0.00	-2.03
214	19796	91.96	165.84	94	9605.03	10227.81	9845.32 S	2819.63 E	10241.12	164.02	2.06	1.83	0.94



PO Box 4482, Midland, TX 79704 | 972-505-0433

MWD Survey Certification

State of Texas
County of Andrews

I, Dustin Trevino, certify that: I am employed by True Shot, LLC.; that I did on the day(s) of 8/25/2019 through 10/29/2019 conduct or supervise the taking of MWD surveys from a depth of 144 feet to a depth of 20318 feet, that the data is true, correct, complete and within the limitations of the tool as set forth by True Shot, LLC; that I am authorized and qualified to make this report; that these surveys were conducted at the request of Piedra Operating, LLC. for the University 5-38 2H (API No. 42-003-48038, Permit No. 850696), located in Andrews County, Texas; and that I have reviewed this report and find that it conforms to the principles and procedures as set forth by True Shot, LLC.

A handwritten signature in black ink, appearing to read 'Dustin Trevino', is written over a horizontal line.

11/6/2019

Dustin Trevino
President

Cc: Piedra Operating, LLC.