

HOBBS OCEAN
FEB - 7 2019
RECEIVED

Customer: TAPROCK
 Well: Cosmo K #133H
 Field/Block: Wolfcamp
 Co./Parish: Jal
 State: NM

PGS Job #: LMN 5178718
 MWD Operator: Mike Bostic
 Directional Driller: John Penny
 Date of First Survey: 06/25/18
 Date of Last Survey: 09/04/18



Total Correction: 6.19

Vertical Section Plane: 359.44

Nominal Dip Angle: 59.85

Magnetic Field Strength: 47963.6

	<i>MD</i>	<i>INC</i>	<i>AZM</i>	<i>T.V.D</i>	<i>V. SECT</i>	<i>+N/-S</i>	<i>+E/-W</i>	<i>DIST</i>	<i>ANGLE</i>	<i>DLS</i>	<i>TEMP(F°)</i>	<i>SHK/VIB</i>	<i>DATE</i>	<i>TIME</i>	<i>FLOW</i>
0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					
1	33.97	0.01	88.18	33.97	0.00	0.00	0.00	0.00	88.18	0.03			GYRO SURVEY		
2	128.40	0.38	91.04	128.40	-0.01	-0.01	0.32	0.32	90.94	0.39			GYRO SURVEY		
3	222.83	0.69	79.47	222.83	0.08	0.09	1.20	1.20	85.56	0.35			GYRO SURVEY		
4	317.26	0.65	56.30	317.25	0.47	0.49	2.20	2.26	77.35	0.29			GYRO SURVEY		
5	411.69	0.51	43.07	411.67	1.07	1.10	2.93	3.13	69.48	0.20			GYRO SURVEY		
6	506.12	0.67	46.65	506.10	1.75	1.78	3.62	4.04	63.78	0.17			GYRO SURVEY		
7	600.55	0.51	35.33	600.52	2.46	2.51	4.27	4.95	59.57	0.21			GYRO SURVEY		
8	694.98	0.59	29.16	694.95	3.23	3.27	4.75	5.77	55.41	0.11			GYRO SURVEY		
9	789.41	1.69	40.14	789.36	4.70	4.76	5.88	7.57	51.00	1.18			GYRO SURVEY		
10	883.84	2.19	47.14	883.74	6.97	7.05	8.10	10.74	48.95	0.58			GYRO SURVEY		
11	978.27	2.45	48.19	978.09	9.52	9.63	10.93	14.56	48.62	0.28			GYRO SURVEY		
12	1072.70	2.65	42.46	1072.42	12.45	12.58	13.91	18.75	47.86	0.34			GYRO SURVEY		
13	1167.13	2.32	37.69	1166.77	15.54	15.71	16.55	22.82	46.50	0.41			GYRO SURVEY		
14	1261.56	1.57	29.20	1261.14	18.17	18.35	18.35	25.95	45.00	0.85			GYRO SURVEY		
15	1355.99	1.15	2.14	1355.54	20.24	20.42	19.01	27.91	42.95	0.80			GYRO SURVEY		
16	1450.42	1.90	10.59	1449.94	22.72	22.91	19.34	29.98	40.17	0.83			GYRO SURVEY		
17	1544.85	1.86	12.21	1544.32	25.75	25.95	19.95	32.73	37.56	0.07			GYRO SURVEY		
18	1639.28	2.04	22.56	1638.70	28.79	29.00	20.92	35.75	35.81	0.42			GYRO SURVEY		
19	1733.71	1.92	30.39	1733.07	31.69	31.91	22.36	38.97	35.02	0.31			GYRO SURVEY		
20	1828.14	1.86	48.32	1827.45	34.06	34.30	24.31	42.04	35.33	0.63			GYRO SURVEY		
21	1922.57	2.00	50.65	1921.83	36.10	36.36	26.73	45.13	36.32	0.17			GYRO SURVEY		
22	2017.00	2.29	55.55	2016.19	38.18	38.47	29.56	48.52	37.53	0.36			GYRO SURVEY		
23	2111.43	2.03	60.29	2110.55	40.05	40.37	32.57	51.87	38.89	0.33			GYRO SURVEY		
24	2205.86	1.98	66.82	2204.92	41.49	41.84	35.52	54.88	40.33	0.25			GYRO SURVEY		
25	2300.29	1.14	84.15	2299.32	42.20	42.58	37.95	57.04	41.71	1.01			GYRO SURVEY		
26	2394.72	1.00	85.88	2393.73	42.34	42.73	39.71	58.33	42.90	0.15			GYRO SURVEY		
27	2489.15	0.98	92.20	2488.15	42.35	42.76	41.34	59.47	44.03	0.12			GYRO SURVEY		

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28	2583.58	1.15	101.43	2582.56	42.12	42.54	43.07	60.54	45.36	0.26			GYRO SURVEY		
29	2678.01	1.35	148.03	2676.97	40.97	41.41	44.59	60.85	47.12	1.07			GYRO SURVEY		
30	2772.44	1.44	155.67	2771.37	38.94	39.39	45.67	60.31	49.22	0.22			GYRO SURVEY		
31	2866.87	1.59	158.13	2865.77	36.63	37.09	46.65	59.59	51.51	0.17			GYRO SURVEY		
32	2961.30	1.49	153.02	2960.17	34.31	34.78	47.69	59.02	53.90	0.18			GYRO SURVEY		
33	3055.73	1.54	177.23	3054.56	31.94	32.42	48.31	58.18	56.14	0.67			GYRO SURVEY		
34	3150.16	2.74	211.00	3148.93	28.75	29.21	47.21	55.52	58.25	1.79			GYRO SURVEY		
35	3244.59	3.40	228.70	3243.23	25.00	25.43	43.94	50.77	59.94	1.22			GYRO SURVEY		
36	3339.02	4.20	227.14	3337.45	20.85	21.23	39.30	44.67	61.62	0.85			GYRO SURVEY		
37	3433.45	5.07	230.78	3431.57	15.91	16.24	33.54	37.26	64.16	0.97			GYRO SURVEY		
38	3527.88	5.08	232.74	3525.63	10.81	11.07	26.98	29.16	67.68	0.18			GYRO SURVEY		
39	3622.31	4.92	235.79	3619.70	6.07	6.26	20.30	21.24	72.85	0.33			GYRO SURVEY		
40	3716.74	4.50	228.52	3713.81	1.39	1.53	14.17	14.26	83.83	0.77			GYRO SURVEY		
41	3811.17	4.01	226.63	3807.98	-3.28	-3.19	9.00	9.55	109.50	0.54			GYRO SURVEY		
42	3905.60	3.81	210.39	3902.19	-8.21	-8.16	5.01	9.58	148.45	1.19			GYRO SURVEY		
43	4000.03	5.20	198.60	3996.33	-14.94	-14.92	2.06	15.07	172.14	1.76			GYRO SURVEY		
44	4094.46	5.97	200.92	4090.31	-23.56	-23.57	-1.06	23.59	182.57	0.85			GYRO SURVEY		
45	4188.89	7.24	215.40	4184.12	-32.94	-33.00	-6.26	33.59	190.74	2.21			GYRO SURVEY		
46	4283.32	7.52	217.69	4277.77	-42.61	-42.75	-13.48	44.82	197.51	0.43			GYRO SURVEY		
47	4377.75	7.90	230.58	4371.35	-51.54	-51.76	-22.28	56.35	203.29	1.87			GYRO SURVEY		
48	4472.18	8.92	240.63	4464.77	-59.14	-59.47	-33.67	68.34	209.52	1.89			GYRO SURVEY		
49	4566.61	9.26	250.68	4558.02	-65.11	-65.57	-47.22	80.81	215.76	1.72			GYRO SURVEY		
50	4661.04	8.44	260.91	4651.33	-68.58	-69.18	-61.23	92.39	221.51	1.88			GYRO SURVEY		
51	4755.47	7.91	263.08	4744.80	-70.33	-71.06	-74.53	102.97	226.36	0.65			GYRO SURVEY		
52	4849.90	4.29	250.38	4838.68	-72.20	-73.03	-84.31	111.54	229.10	4.07			GYRO SURVEY		
53	4944.33	4.06	240.06	4932.87	-74.99	-75.88	-90.53	118.13	230.03	0.83			GYRO SURVEY		
54	5038.76	5	236.60	5026.94	-79.25	-80.21	-97.45	126.21	230.55	1.93			GYRO SURVEY		

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55	5133.19	6.02	236.34	5120.86	-84.57	-85.60	-105.60	135.94	230.97	0.17			GYRO SURVEY		
56	5227.62	6.60	228.76	5214.72	-90.81	-91.93	-113.80	146.29	231.07	1.07			GYRO SURVEY		
57	5322.05	7.24	221.53	5308.46	-98.76	-99.96	-121.83	157.59	230.63	1.14			GYRO SURVEY		
58	5416.48	7.26	220.72	5402.14	-107.66	-108.93	-129.67	169.35	229.97	0.11			GYRO SURVEY		
59	5510.91	7.40	221.67	5495.80	-116.65	-118.00	-137.60	181.27	229.39	0.20			GYRO SURVEY		
60	5605.34	7.51	221.12	5589.43	-125.76	-127.19	-145.70	193.41	228.88	0.14			GYRO SURVEY		
61	5699.77	7.60	220.58	5683.04	-135.07	-136.58	-153.82	205.71	228.40	0.12			GYRO SURVEY		
62	5794.20	7.62	219.09	5776.64	-144.60	-146.18	-161.83	218.08	227.91	0.21			GYRO SURVEY		
63	5888.63	7.66	218.04	5870.23	-154.33	-156.00	-169.66	230.48	227.40	0.15			GYRO SURVEY		
64	5983.06	7.73	217.66	5963.81	-164.24	-165.98	-177.42	242.96	226.91	0.09			GYRO SURVEY		
65	6077.49	7.69	216.35	6057.39	-174.28	-176.10	-185.04	255.44	226.42	0.19			GYRO SURVEY		
66	6171.92	7.04	215.98	6151.04	-183.98	-185.87	-192.19	267.36	225.96	0.69			GYRO SURVEY		
67	6266.35	6.37	220.63	6244.82	-192.58	-194.53	-199.00	278.28	225.65	0.91			GYRO SURVEY		
68	6360.78	6.25	219.34	6338.68	-200.46	-202.48	-205.67	288.61	225.45	0.20			GYRO SURVEY		
69	6455.21	6.28	217.77	6432.54	-208.46	-210.54	-212.09	298.85	225.21	0.18			GYRO SURVEY		
70	6549.64	6.30	217.27	6526.41	-216.60	-218.74	-218.39	309.10	224.95	0.06			GYRO SURVEY		
71	6644.07	6.23	216.01	6620.27	-224.81	-227.01	-224.54	319.30	224.69	0.16			GYRO SURVEY		
72	6738.50	6.37	214.93	6714.13	-233.19	-235.45	-230.55	329.53	224.40	0.19			GYRO SURVEY		
73	6832.93	6.27	212.06	6807.99	-241.80	-244.12	-236.29	339.74	224.07	0.35			GYRO SURVEY		
74	6927.36	6.01	215.55	6901.88	-250.13	-252.51	-241.90	349.68	223.77	0.48			GYRO SURVEY		
75	7021.79	5.95	213.57	6995.79	-258.18	-260.61	-247.48	359.39	223.52	0.23			GYRO SURVEY		
76	7116.22	5.78	213.17	7089.73	-266.18	-268.67	-252.79	368.90	223.26	0.19			GYRO SURVEY		
77	7210.65	5.64	209.52	7183.69	-274.15	-276.69	-257.68	378.09	222.96	0.41			GYRO SURVEY		
78	7305.08	4.12	203.44	7277.78	-281.27	-283.84	-261.31	385.81	222.63	1.70			GYRO SURVEY		
79	7399.51	3.57	212.45	7371.99	-286.83	-289.43	-264.24	391.91	222.39	0.86			GYRO SURVEY		
80	7493.94	2.65	220.12	7466.28	-290.95	-293.58	-267.22	396.98	222.31	1.07			GYRO SURVEY		
81	7588.37	1.96	249.65	7560.64	-293.16	-295.81	-270.14	400.60	222.40	1.43			GYRO SURVEY		

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82	7682.80	1.59	265.83	7655.03	-293.79	-296.47	-272.96	402.99	222.64	0.66			GYRO SURVEY		
83	7777.23	0.80	281.47	7749.43	-293.73	-296.43	-274.92	404.29	222.84	0.90			GYRO SURVEY		
84	7871.66	0.59	288.24	7843.86	-293.44	-296.15	-276.02	404.84	222.99	0.24			GYRO SURVEY		
85	7966.09	0.31	200.33	7938.29	-293.52	-296.24	-276.58	405.28	223.03	0.70			GYRO SURVEY		
86	8060.52	0.22	110.34	8032.71	-293.82	-296.54	-276.49	405.44	223.00	0.40			GYRO SURVEY		
87	8154.95	0.49	82.77	8127.14	-293.84	-296.55	-275.92	405.06	222.94	0.33			GYRO SURVEY		
88	8249.38	0.64	74.13	8221.57	-293.65	-296.36	-275.02	404.30	222.86	0.18			GYRO SURVEY		
89	8343.81	0.71	66.92	8315.99	-293.29	-295.98	-273.97	403.32	222.79	0.12			GYRO SURVEY		
90	8438.24	0.84	58.68	8410.41	-292.71	-295.39	-272.84	402.12	222.73	0.18			GYRO SURVEY		
91	8532.67	0.92	50.60	8504.83	-291.88	-294.55	-271.66	400.70	222.69	0.16			GYRO SURVEY		
92	8627.10	1.15	48.46	8599.25	-290.79	-293.44	-270.37	399.01	222.66	0.25			GYRO SURVEY		
93	8721.53	1.02	50.01	8693.66	-289.63	-292.27	-269.02	397.23	222.63	0.14			GYRO SURVEY		
94	8815.96	0.90	51.27	8788.08	-288.64	-291.27	-267.79	395.67	222.60	0.13			GYRO SURVEY		
95	8910.39	0.88	66.56	8882.49	-287.90	-290.52	-266.55	394.27	222.54	0.25			GYRO SURVEY		
96	9004.82	1.06	71.06	8976.91	-287.34	-289.95	-265.06	392.84	222.43	0.21			GYRO SURVEY		
97	9099.25	0.84	84.61	9071.33	-287.01	-289.60	-263.54	391.56	222.30	0.33			GYRO SURVEY		
98	9193.68	0.63	108.73	9165.75	-287.12	-289.70	-262.36	390.84	222.17	0.39			GYRO SURVEY		
99	9288.11	0.70	118.39	9260.17	-287.57	-290.14	-261.36	390.50	222.01	0.14			GYRO SURVEY		
100	9382.54	0.95	181.84	9354.60	-288.63	-291.20	-260.88	390.96	221.86	0.95			GYRO SURVEY		
101	9476.97	1.30	234.95	9449.01	-290.02	-292.59	-261.78	392.61	221.82	1.12			GYRO SURVEY		
102	9571.40	1.76	239.01	9543.41	-291.36	-293.96	-263.90	395.04	221.92	0.50			GYRO SURVEY		
103	9665.83	2.05	242.97	9637.78	-292.85	-295.47	-266.65	398.00	222.07	0.34			GYRO SURVEY		
104	9760.26	2.48	240.54	9732.14	-294.59	-297.24	-269.93	401.52	222.24	0.47			GYRO SURVEY		
105	9854.69	3.18	236.06	9826.45	-297.02	-299.71	-273.88	406.00	222.42	0.78			GYRO SURVEY		
106	9949.12	3.78	238.22	9920.71	-300.07	-302.81	-278.70	411.55	222.63	0.65			GYRO SURVEY		
107	10043.55	3.58	245.53	10014.95	-302.88	-305.67	-284.03	417.26	222.90	0.54			GYRO SURVEY		
108	10137.98	3.01	242.26	10109.22	-305.21	-308.05	-288.91	422.33	223.16	0.64			GYRO SURVEY		

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109	10232.41	1.80	240.93	10203.56	-307.05	-309.92	-292.40	426.09	223.33	1.28					GYRO SURVEY
110	10326.84	0.83	288.72	10297.97	-307.53	-310.42	-294.35	427.79	223.48	1.47					GYRO SURVEY
111	10421.27	0.73	313.48	10392.39	-306.89	-309.79	-295.43	428.07	223.64	0.37					GYRO SURVEY
112	10515.70	0.69	303.95	10486.82	-306.15	-309.06	-296.34	428.17	223.80	0.13					GYRO SURVEY
113	10610.13	0.63	277.91	10581.24	-305.75	-308.67	-297.32	428.58	223.93	0.32					GYRO SURVEY
114	10704.56	0.81	271.59	10675.66	-305.65	-308.58	-298.51	429.33	224.05	0.21					GYRO SURVEY
115	10798.99	0.99	279.70	10770.08	-305.48	-308.42	-299.98	430.24	224.20	0.23					GYRO SURVEY
116	10893.42	1.23	282.24	10864.49	-305.11	-308.07	-301.77	431.25	224.41	0.26					GYRO SURVEY
117	10987.85	1.45	290.45	10958.90	-304.45	-307.44	-303.88	432.28	224.67	0.31					GYRO SURVEY
118	11082.28	1.45	299.49	11053.30	-303.43	-306.43	-306.04	433.08	224.96	0.24					GYRO SURVEY
119	11176.71	1.15	301.78	11147.70	-302.32	-305.35	-307.89	433.62	225.24	0.32					GYRO SURVEY
120	11271.14	0.93	313.38	11,242.12	-301.28	-304.32	-309.25	433.87	225.46	0.32					GYRO SURVEY
121	11365.57	0.78	299.07	11,336.54	-300.43	-303.48	-310.37	434.08	225.64	0.28					GYRO SURVEY
122	11460.00	0.85	282.84	11,430.96	-299.95	-303.01	-311.61	434.65	225.80	0.25					GYRO SURVEY
123	11508.00	0.83	272.88	11478.95	-299.85	-302.92	-312.31	435.08	225.87	0.31					LAST GYRO SURVEY
124	11,671	1.8	248.9	11641.91	-300.68	-303.78	-315.87	438.24	226.12	0.67	131 °F	Green	08/24/18	06:02	345 (gpm)
125	11,718	6.6	345.1	11688.80	-298.32	-301.43	-317.26	437.62	226.47	14.95	136 °F	Green	08/24/18	07:32	345 (gpm)
126	11,765	12.2	350.1	11735.15	-290.79	-293.92	-318.81	433.62	227.33	12.03	138 °F	Green	08/24/18	09:09	345 (gpm)
127	11,812	16.7	352.8	11780.65	-279.18	-282.32	-320.51	427.12	228.62	9.68	140 °F	Green	08/24/18	11:11	324 (gpm)
128	11,860	18.5	3.6	11826.42	-264.73	-267.88	-320.90	418.01	230.15	7.75	140 °F	Green	08/24/18	12:36	324 (gpm)
129	11,908	24.6	8.3	11871.04	-247.24	-250.37	-318.97	405.50	231.87	13.20	142 °F	Green	08/24/18	13:58	324 (gpm)
130	11,954	30.1	6.2	11911.89	-226.31	-229.42	-316.34	390.77	234.05	12.14	142 °F	Green	08/24/18	15:58	324 (gpm)
131	12,001	32.8	1.7	11951.98	-201.88	-204.97	-314.69	375.56	236.92	7.61	142 °F	Green	08/24/18	17:20	324 (gpm)
132	12,048	35.9	358.5	11990.79	-175.37	-178.46	-314.68	361.76	240.44	7.63	145 °F	Green	08/24/18	18:44	324 (gpm)
133	12,095	41.1	354.9	12027.56	-146.17	-149.27	-316.41	349.85	244.74	12.04	145 °F	Green	08/24/18	19:54	324 (gpm)
134	12,143	47.0	356.3	12062.04	-112.89	-116.01	-318.95	339.39	250.01	12.46	147 °F	Green	08/24/18	20:57	324 (gpm)
135	12,190	52.2	358.0	12092.50	-77.14	-80.28	-320.71	330.60	255.95	11.40	147 °F	Green	08/24/18	22:02	324 (gpm)

Customer: TAPROCK
 Well: Cosmo K #133H
 Field/Block: Wolfcamp
 Co./Parish: Jal
 State: NM

PGS Job #: LMN 5178718
 MWD Operator: Mike Bostic
 Directional Driller: John Penny
 Date of First Survey: 06/25/18
 Date of Last Survey: 09/04/18



Total Correction: 6.19

Vertical Section Plane: 359.44

Nominal Dip Angle: 59.85

Magnetic Field Strength: 47963.6

	MD	INC	AZM	T.V.D	V. SECT	+N/-S	+E/-W	DIST	ANGLE	DLS	TEMP(F°)	SHK/VIB	DATE	TIME	FLOW
136	12,238	55.6	358.0	12120.77	-38.37	-41.52	-322.06	324.73	262.65	7.08	153 °F	Green	08/24/18	22:54	324 (gpm)
137	12,285	57.3	357.9	12146.75	0.78	-2.38	-323.46	323.47	269.58	3.62	153 °F	Green	08/24/18	23:49	324 (gpm)
138	12,332	61.4	359.4	12170.70	41.20	38.03	-324.40	326.62	276.69	9.14	153 °F	Green	08/25/18	00:40	324 (gpm)
139	12,379	66.7	359.5	12191.26	83.45	80.28	-324.81	334.58	283.88	11.28	153 °F	Green	08/25/18	01:26	324 (gpm)
140	12,427	71.0	359.2	12208.58	128.20	125.03	-325.32	348.52	291.02	8.98	153 °F	Green	08/25/18	02:08	324 (gpm)
141	12,474	73.8	358.9	12222.79	173.00	169.82	-326.06	367.63	297.51	5.99	153 °F	Green	08/25/18	02:55	324 (gpm)
142	12,521	75.9	358.1	12235.07	218.36	215.17	-327.25	391.65	303.33	4.76	154 °F	Green	08/25/18	03:45	324 (gpm)
143	12,568	79.0	358.7	12245.28	264.22	261.02	-328.53	419.60	308.47	6.71	154 °F	Green	08/25/18	04:36	324 (gpm)
144	12,616	82.9	0.9	12252.83	311.61	308.41	-328.69	450.73	313.18	9.30	154 °F	Green	08/25/18	05:30	324 (gpm)
145	12,710	90.1	1.4	12258.57	405.33	402.16	-326.81	518.20	320.90	7.68	151 °F	Green	08/26/18	00:00	350 (gpm)
146	12,804	91.6	0.1	12257.17	499.29	496.13	-325.58	593.42	326.73	2.11	151 °F	Green	08/26/18	00:50	350 (gpm)
147	12,899	92.8	359.3	12253.53	594.22	591.06	-326.07	675.04	331.12	1.52	154 °F	Green	08/26/18	01:52	350 (gpm)
148	12,994	94.3	357.0	12247.64	689.00	685.82	-329.13	760.71	334.36	2.89	154 °F	Green	08/26/18	02:36	350 (gpm)
149	13,088	94.6	357.6	12240.35	782.65	779.43	-333.55	847.80	336.83	0.71	154 °F	Green	08/26/18	04:26	350 (gpm)
150	13,183	93.1	358.3	12233.97	877.40	874.15	-336.94	936.84	338.92	1.74	158 °F	Green	08/26/18	05:55	350 (gpm)
151	13,277	91.7	359.0	12230.04	971.31	968.04	-339.15	1,025.73	340.69	1.66	158 °F	Green	08/26/18	07:40	350 (gpm)
152	13,371	92.3	359.3	12226.75	1,065.25	1,061.97	-340.54	1,115.24	342.22	0.71	158 °F	Green	08/26/18	09:30	350 (gpm)
153	13,465	89.5	359.4	12225.28	1,159.23	1,155.94	-341.61	1,205.36	343.54	2.98	162 °F	Green	08/26/18	11:19	350 (gpm)
154	13,560	89.0	359.8	12226.52	1,254.22	1,250.93	-342.27	1,296.91	344.70	0.67	162 °F	Green	08/26/18	13:21	350 (gpm)
155	13,653	88.3	2.0	12228.71	1,347.16	1,343.89	-340.81	1,386.43	345.77	2.48	166 °F	Green	08/26/18	15:16	350 (gpm)
156	13,748	88.3	4.3	12231.53	1,441.91	1,438.70	-335.59	1,477.32	346.87	2.42	166 °F	Green	08/26/18	18:29	350 (gpm)
157	13,840	85.7	6.0	12236.35	1,533.32	1,530.19	-327.35	1,564.81	347.92	3.38	170 °F	Green	08/26/18	19:56	350 (gpm)
158	13,936	86.9	5.5	12242.54	1,628.53	1,625.51	-317.75	1,656.27	348.94	1.35	170 °F	Green	08/26/18	20:51	350 (gpm)
159	14,031	87.3	6.3	12247.35	1,722.81	1,719.88	-308.00	1,747.24	349.85	0.94	172 °F	Green	08/26/18	23:22	350 (gpm)
160	14,125	87.7	7.4	12251.45	1,815.93	1,813.12	-296.80	1,837.25	350.70	1.24	172 °F	Green	08/27/18	00:34	350 (gpm)
161	14,220	88.3	6.1	12254.76	1,910.10	1,907.40	-285.64	1,928.67	351.48	1.51	172 °F	Green	08/27/18	02:06	350 (gpm)
162	14,314	89.7	5.8	12256.40	2,003.48	2,000.88	-275.90	2,019.81	352.15	1.52	172 °F	Green	08/27/18	04:58	350 (gpm)

Customer: TAPROCK
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 Date of First Survey: 06/25/18
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Total Correction: 6.19

Vertical Section Plane: 359.44

Nominal Dip Angle: 59.85

Magnetic Field Strength: 47963.6

	<i>MD</i>	<i>INC</i>	<i>AZM</i>	<i>T.V.D</i>	<i>V. SECT</i>	<i>+N/-S</i>	<i>+E/-W</i>	<i>DIST</i>	<i>ANGLE</i>	<i>DLS</i>	<i>TEMP(F°)</i>	<i>SHK/VIB</i>	<i>DATE</i>	<i>TIME</i>	<i>FLOW</i>
163	14,408	89.2	4.2	12257.31	2,097.03	2,094.51	-267.71	2,111.55	352.72	1.78	171 °F	Green	08/27/18	05:16	350 (gpm)
164	14,502	86.8	2.7	12260.59	2,190.73	2,188.28	-262.05	2,203.91	353.17	3.01	171 °F	Green	08/27/18	08:49	350 (gpm)
165	14,597	92.1	3.6	12261.50	2,285.49	2,283.09	-256.83	2,297.49	353.58	5.66	171 °F	Green	08/27/18	16:25	350 (gpm)
166	14,618	92.1	4.0	12260.73	2,306.42	2,304.03	-255.44	2,318.15	353.67	1.90	158 °F	Green	08/28/18	15:49	350 (gpm)
167	14,712	90.8	3.2	12258.35	2,400.14	2,397.81	-249.54	2,410.76	354.06	1.62	158 °F	Green	08/28/18	18:53	350 (gpm)
168	14,807	84.5	2.0	12262.24	2,494.87	2,492.59	-245.24	2,504.62	354.38	6.75	162 °F	Green	08/28/18	21:08	350 (gpm)
169	14,901	80.9	1.1	12274.19	2,588.02	2,585.77	-242.71	2,597.14	354.64	3.95	165 °F	Green	08/28/18	22:30	350 (gpm)
170	14,996	82.1	358.2	12288.23	2,681.97	2,679.72	-243.29	2,690.74	354.81	3.27	165 °F	Green	08/29/18	00:47	350 (gpm)
171	15,089	81.6	356.4	12301.42	2,773.96	2,771.67	-247.63	2,782.71	354.89	1.99	165 °F	Green	08/29/18	03:19	350 (gpm)
172	15,184	82.4	352.7	12314.64	2,867.67	2,865.30	-256.56	2,876.77	354.88	3.95	162 °F	Green	08/29/18	07:07	302 (gpm)
173	15,278	85.1	350.4	12324.88	2,960.22	2,957.72	-270.30	2,970.04	354.78	3.76	162 °F	Green	08/29/18	11:25	302 (gpm)
174	15,373	93.2	349.8	12326.28	3,053.87	3,051.21	-286.61	3,064.64	354.63	8.55	169 °F	Green	08/29/18	13:58	302 (gpm)
175	15,467	94.5	351.0	12319.97	3,146.49	3,143.68	-302.25	3,158.18	354.51	1.88	169 °F	Green	08/29/18	17:15	302 (gpm)
176	15,561	92.9	356.1	12313.90	3,239.76	3,236.86	-312.78	3,251.94	354.48	5.68	171 °F	Green	08/29/18	20:54	302 (gpm)
177	15,655	95.7	358.3	12306.85	3,333.41	3,330.47	-317.37	3,345.55	354.56	3.78	172 °F	Green	08/29/18	22:55	302 (gpm)
178	15,750	93.8	1.9	12298.99	3,428.06	3,425.12	-317.20	3,439.78	354.71	4.27	172 °F	Green	09/01/18	03:01	302 (gpm)
179	15,844	93.3	2.1	12293.17	3,521.78	3,518.88	-313.92	3,532.86	354.90	0.57	172 °F	Green	09/01/18	06:32	302 (gpm)
180	15,938	92.0	0.0	12288.82	3,615.64	3,612.76	-312.20	3,626.22	355.06	2.63	174 °F	Green	09/01/18	08:32	302 (gpm)
181	16,032	92.0	358.5	12285.54	3,709.58	3,706.69	-313.43	3,719.92	355.17	1.59	176 °F	Green	09/01/18	10:28	302 (gpm)
182	16,126	90.1	355.5	12283.82	3,803.46	3,800.53	-318.35	3,813.84	355.21	3.78	174 °F	Green	09/01/18	12:56	302 (gpm)
183	16,221	95.9	358.5	12278.84	3,898.19	3,895.22	-323.32	3,908.62	355.26	6.87	176 °F	Green	09/01/18	15:17	302 (gpm)
184	16,315	90.0	357.0	12274.01	3,991.98	3,988.98	-327.01	4,002.36	355.31	6.48	176 °F	Green	09/01/18	18:10	302 (gpm)
185	16,409	95.2	357.8	12269.75	4,085.80	4,082.75	-331.27	4,096.17	355.36	5.60	176 °F	Green	09/01/18	21:59	302 (gpm)
186	16,503	96.4	358.5	12260.25	4,179.29	4,176.22	-334.29	4,189.58	355.42	1.48	176 °F	Green	09/02/18	02:59	302 (gpm)
187	16,597	89.8	0.2	12255.17	4,273.09	4,270.02	-335.35	4,283.17	355.51	7.25	171 °F	Green	09/02/18	06:05	302 (gpm)
188	16,691	85.6	2.7	12258.94	4,366.93	4,363.89	-332.97	4,376.57	355.64	5.20	172 °F	Green	09/02/18	10:28	302 (gpm)
189	16,786	83.3	1.1	12268.13	4,461.39	4,458.38	-329.84	4,470.56	355.77	2.94	165 °F	Green	09/02/18	16:34	302 (gpm)

Customer: TAPROCK
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Total Correction: 6.19

Vertical Section Plane: 359.44

Nominal Dip Angle: 59.85

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	MD	INC	AZM	T.V.D	V. SECT	+N/-S	+E/-W	DIST	ANGLE	DLS	TEMP(F°)	SHK/VIB	DATE	TIME	FLOW
190	16,887	89.5	355.7	12274.47	4,562.09	4,559.05	-332.66	4,571.18	355.83	8.13	167 °F	Green	09/02/18	15:37	302 (gpm)
191	16,981	90.6	351.6	12274.39	4,655.59	4,652.46	-343.06	4,665.09	355.78	4.52	172 °F	Green	09/02/18	18:51	302 (gpm)
192	17,073	98.6	354.0	12267.01	4,746.59	4,743.35	-354.55	4,756.59	355.73	9.08	172 °F	Green	09/02/18	23:04	302 (gpm)
193	17,170	95.8	356.4	12254.86	4,842.55	4,839.24	-362.60	4,852.80	355.71	3.79	172 °F	Green	09/03/18	01:32	302 (gpm)
194	17,265	95.1	357.7	12245.83	4,937.03	4,933.68	-367.46	4,947.34	355.74	1.55	174 °F	Green	09/03/18	06:36	345 (gpm)
195	17,359	91.7	359.3	12240.26	5,030.84	5,027.46	-369.92	5,041.06	355.79	4.00	174 °F	Green	09/03/18	09:59	304 (gpm)
196	17,453	91.4	359.0	12237.72	5,124.80	5,121.42	-371.31	5,134.86	355.85	0.45	180 °F	Green	09/03/18	11:34	304 (gpm)
197	17,548	88.5	358.5	12237.80	5,219.79	5,216.39	-373.38	5,229.73	355.91	3.10	178 °F	Green	09/03/18	14:53	304 (gpm)
198	17,642	90.0	359.5	12,239	5,313.77	5,310.36	-375.02	5,323.59	355.96	1.92	176 °F	Green	09/03/18	17:12	304 (gpm)
199	17,736	88.8	0.8	12,240	5,407.76	5,404.35	-374.78	5,417.33	356.03	1.88	180 °F	Green	09/03/18	19:36	304 (gpm)
200	17,831	86.8	358.9	12,244	5,502.67	5,499.27	-375.03	5,512.04	356.10	2.90	180 °F	Green	09/03/18	22:41	304 (gpm)
201	17,925	91.8	1.4	12,245	5,596.62	5,593.23	-374.78	5,605.77	356.17	5.95	180 °F	Green	09/04/18	01:36	280 (gpm)
202	18,019	90.2	2.2	12,243	5,690.52	5,687.16	-371.83	5,699.30	356.26	1.90	180 °F	Green	09/04/18	05:05	280 (gpm)
203	18,114	88.3	1.8	12,244	5,785.42	5,782.09	-368.51	5,793.82	356.35	2.04	180 °F	Green	09/04/18	09:01	302 (gpm)
204	18,208	89.1	1.6	12,247	5,879.32	5,876.03	-365.72	5,887.40	356.44	0.88	183 °F	Green	09/04/18	11:18	302 (gpm)
205	18,303	89.6	0.2	12,248	5,974.28	5,971.00	-364.23	5,982.10	356.51	1.56	183 °F	Green	09/04/18	12:49	302 (gpm)
206	18,398	85.2	357.1	12,252	6,069.14	6,065.85	-366.46	6,076.91	356.54	5.66	185 °F	Green	09/04/18	16:42	302 (gpm)
207	18,492	84.3	356.4	12,261	6,162.64	6,159.30	-371.77	6,170.51	356.55	1.21	185 °F	Green	09/04/18	18:13	302 (gpm)
TD	18,530	84.3	356.0	12,264	6,200.39	6,197.03	-374.27	6,208.32	356.54	1.05	185 °F	Green	09/04/18	18:57	302 (gpm)