

District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720
District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources
Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

EMNRD-OCD ARTESIA
REC'D: 06/15/2020
FORM C-102
Revised August 1, 2011
Submit one copy to appropriate
District Office

☒ AMENDED REPORT
AS DRILLED

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-015-46467		² Pool Code 98220		³ Pool Name Purple Sage, Wolfcamp	
⁴ Property Code 326330		⁵ Property Name WTG FED COM			⁶ Well Number 215H
⁷ OGRID No. #372043		⁸ Operator Name TAP ROCK OPERATING, LLC.			⁹ Elevation 2884'

¹⁰Surface Location

UL or lot no. D	Section 27	Township 26-S	Range 29-E	Lot Idn -	Feet from the 495'	North/South line NORTH	Feet from the 445'	East/West line WEST	County EDDY
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¹¹Bottom Hole Location If Different From Surface

UL or lot no. 9	Section 34	Township 26-S	Range 29-E	Lot Idn -	Feet from the 30'	North/South line SOUTH	Feet from the 970'	East/West line WEST	County EDDY
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¹² Dedicated Acres	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
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No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

SURFACE LOCATION NEW MEXICO EAST NAD 1983 X=651105 Y=371035 LAT.: N 32.0195597 LONG.: W 103.9791558		HARDLINE CROSSING (HEEL) NEW MEXICO EAST NAD 1983 X=651577 Y=371165 LAT.: N 32.0199148 LONG.: W 103.9776335 MD = 10165.6'		17 OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division. <i>CCC</i> 3/11/2020 Signature Date CHRISTIANCOMBS Printed Name ccombs@taprk.com E-mail Address	
HARDLINE CROSSING (TOE) NEW MEXICO EAST NAD 1983 X=651492 Y=364055 LAT.: N 32.0003704 LONG.: W 103.9779805 MD = 17321.0'		BOTTOM HOLE LOCATION NEW MEXICO EAST NAD 1983 X=651492 Y=363986 LAT.: N 32.0001793 LONG.: W 103.9779843 MD = 17390.5'		18 SURVEYOR CERTIFICATION I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true to the best of my belief. 12/05/2018 Date of Survey <i>[Signature]</i> Signature and Seal of Professional Surveyor REGISTERED PROFESSIONAL SURVEYOR 11401 <i>[Signature]</i> Certificate Number	



Tap Rock Resources, LLC

**Eddy County, NM (NAD 83 NME)
(WTG Fed) Sec-27_T26-S_R-29-E
WTG Fed Com #215H**

OWB

Design: AWB

Standard Survey Report

24 January, 2020





Operator: Tap Rock Resources LLC
Well Name: WTG Fed Com #215H
County: Eddy
State: New Mexico
Rig Name: H&P 388
API: 30-015-46467

Intrepid Directional Drilling Specialists certifies that the surveys performed on the above referenced well are true and correct MWD surveys, data provided as follows:

Surveyor: Intrepid Directional Drilling Specialists
Survey Depths: 180' MD – 17,322' MD
Projection to Bit: 17,392' MD
Dates Performed: 12/09/2019 – 1/22/2020
Type of Survey: MWD

Sincerely,

A handwritten signature in blue ink, appearing to read "James Burleson".

James Burleson
Vice President of MWD Operations
Intrepid Directional Drilling Specialists



Company:	Tap Rock Resources, LLC	Local Co-ordinate Reference:	Well WTG Fed Com #215H
Project:	Eddy County, NM (NAD 83 NME)	TVD Reference:	KB @ 2910.5usft (H&P 388)
Site:	(WTG Fed) Sec-27_T26-S_R-29-E	MD Reference:	KB @ 2910.5usft (H&P 388)
Well:	WTG Fed Com #215H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	AWB	Database:	EDM 5000.15 Single User Db

Project	Eddy County, NM (NAD 83 NME)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site	(WTG Fed) Sec-27_T26-S_R-29-E		
Site Position:		Northing:	371,035.00 usft
From:	Map	Easting:	651,080.00 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 1' 10.419 N
		Longitude:	103° 58' 45.255 W
		Grid Convergence:	0.19 °

Well	WTG Fed Com #215H		
Well Position	+N/-S	0.0 usft	Northing:
	+E/-W	0.0 usft	Easting:
Position Uncertainty	0.0 usft	Wellhead Elevation:	usft
		Latitude:	32° 1' 10.419 N
		Longitude:	103° 58' 44.964 W
		Ground Level:	2,884.0 usft

Wellbore	OWB				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	12/13/19	6.86	59.78	47,522.49839371

Design	AWB				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.0	0.0	0.0	181.14	

Survey Program	Date	01/24/20			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
180.0	17,392.0	Intrepid MWD (OWB)	MWD	OWSG MWD - Standard	

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
180.0	0.62	271.57	180.0	0.0	-1.0	0.0	0.34	0.34	0.00
332.0	1.71	190.63	332.0	-2.2	-2.2	2.2	1.13	0.72	-53.25
345.0	1.83	193.16	345.0	-2.6	-2.3	2.6	1.10	0.92	19.37
Rustler Anhydrite									
365.0	2.02	196.43	365.0	-3.2	-2.5	3.3	1.10	0.95	16.40
528.0	3.47	192.03	527.8	-10.8	-4.3	10.9	0.90	0.89	-2.70
623.0	2.51	193.09	622.6	-15.6	-5.4	15.7	1.01	-1.01	1.12
718.0	0.79	127.43	717.6	-18.1	-5.3	18.2	2.42	-1.81	-69.12
813.0	1.10	78.83	812.6	-18.3	-3.9	18.4	0.87	0.33	-51.16
908.0	0.92	17.22	907.6	-17.4	-2.8	17.4	1.10	-0.19	-64.85

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Well:	WTG Fed Com #215H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	AWB	Database:	EDM 5000.15 Single User Db

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
976.0	0.92	3.77	975.6	-16.3	-2.6	16.4	0.32	0.00	-19.78
1,071.0	2.42	18.10	1,070.5	-13.6	-1.9	13.7	1.63	1.58	15.08
1,166.0	3.16	29.87	1,165.4	-9.5	0.0	9.5	0.98	0.78	12.39
1,261.0	2.90	29.87	1,260.3	-5.1	2.5	5.1	0.27	-0.27	0.00
1,285.8	2.87	31.35	1,285.0	-4.0	3.1	4.0	0.32	-0.11	5.96
Top Salt									
1,356.0	2.81	35.67	1,355.2	-1.1	5.1	1.0	0.32	-0.09	6.16
1,450.0	2.46	25.57	1,449.1	2.6	7.3	-2.7	0.62	-0.37	-10.74
1,545.0	3.60	43.06	1,543.9	6.6	10.2	-6.8	1.53	1.20	18.41
1,640.0	4.04	48.33	1,638.7	11.0	14.7	-11.3	0.59	0.46	5.55
1,735.0	3.74	47.36	1,733.5	15.3	19.5	-15.7	0.32	-0.32	-1.02
1,830.0	3.60	55.19	1,828.3	19.1	24.2	-19.6	0.55	-0.15	8.24
1,925.0	2.99	47.63	1,923.1	22.5	28.5	-23.0	0.79	-0.64	-7.96
2,019.0	3.69	41.04	2,017.0	26.4	32.3	-27.0	0.85	0.74	-7.01
2,121.0	3.69	41.47	2,118.8	31.3	36.6	-32.1	0.03	0.00	0.42
2,215.0	3.43	49.65	2,212.6	35.4	40.8	-36.2	0.61	-0.28	8.70
2,310.0	3.82	65.64	2,307.4	38.6	45.8	-39.5	1.14	0.41	16.83
2,405.0	3.34	63.18	2,402.2	41.1	51.2	-42.1	0.53	-0.51	-2.59
2,499.0	4.40	66.26	2,496.0	43.8	56.9	-44.9	1.15	1.13	3.28
2,594.0	5.93	54.48	2,590.6	48.1	64.3	-49.4	1.95	1.61	-12.40
2,638.6	5.63	57.56	2,635.0	50.6	68.0	-52.0	0.96	-0.66	6.90
Base Salt									
2,689.0	5.32	61.43	2,685.2	53.1	72.1	-54.5	0.96	-0.62	7.69
2,783.0	4.22	60.28	2,778.8	56.9	79.0	-58.4	1.17	-1.17	-1.22
2,878.0	6.20	35.50	2,873.4	62.8	85.0	-64.5	3.11	2.08	-26.08
2,879.6	6.20	35.50	2,875.0	62.9	85.1	-64.6	0.00	0.00	0.00
Delaware Mountain Gp									
2,909.7	6.13	36.23	2,905.0	65.6	87.0	-67.3	0.34	-0.22	2.43
Lamar - Bell Canyon									
2,950.0	6.05	37.19	2,945.0	69.0	89.5	-70.8	0.32	-0.20	2.37
Ramsey Sand									
3,052.0	5.85	39.72	3,046.5	77.3	96.1	-79.2	0.32	-0.20	2.48
3,147.0	6.95	40.07	3,140.9	85.4	102.9	-87.4	1.16	1.16	0.37
3,242.0	9.67	44.38	3,234.9	95.5	112.2	-97.7	2.94	2.86	4.54
3,337.0	11.82	47.01	3,328.2	107.8	124.9	-110.3	2.32	2.26	2.77
3,431.0	11.91	46.05	3,420.2	121.1	138.9	-123.9	0.23	0.10	-1.02
3,526.0	12.13	45.08	3,513.1	135.0	153.0	-138.0	0.31	0.23	-1.02
3,621.0	12.70	45.34	3,605.9	149.4	167.5	-152.7	0.60	0.60	0.27
3,686.7	12.82	44.73	3,670.0	159.6	177.8	-163.1	0.28	0.19	-0.93
Cherry Canyon									
3,716.0	12.88	44.46	3,698.5	164.3	182.4	-167.9	0.28	0.19	-0.92
3,810.0	12.00	43.50	3,790.3	178.8	196.4	-182.7	0.96	-0.94	-1.02
3,905.0	12.44	42.18	3,883.2	193.6	210.1	-197.7	0.55	0.46	-1.39
4,000.0	12.48	41.21	3,975.9	208.9	223.7	-213.3	0.22	0.04	-1.02

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Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,094.0	13.23	41.74	4,067.6	224.6	237.6	-229.2	0.81	0.80	0.56
4,188.0	13.49	49.56	4,159.1	239.7	253.1	-244.7	1.94	0.28	8.32
4,283.0	13.41	48.33	4,251.4	254.2	269.7	-259.5	0.31	-0.08	-1.29
4,378.0	11.12	53.52	4,344.3	267.0	285.3	-272.6	2.67	-2.41	5.46
4,472.0	11.78	51.23	4,436.4	278.4	300.1	-284.3	0.85	0.70	-2.44
4,567.0	11.08	53.87	4,529.5	289.8	315.0	-296.0	0.92	-0.74	2.78
4,662.0	9.89	56.77	4,622.9	299.7	329.2	-306.2	1.37	-1.25	3.05
4,757.0	10.24	56.42	4,716.5	308.8	343.1	-315.6	0.37	0.37	-0.37
4,851.0	10.46	56.50	4,808.9	318.2	357.2	-325.2	0.23	0.23	0.09
4,946.0	8.70	58.17	4,902.6	326.7	370.5	-334.0	1.88	-1.85	1.76
5,040.0	7.08	60.11	4,995.7	333.3	381.5	-340.9	1.75	-1.72	2.06
5,054.4	7.07	60.28	5,010.0	334.2	383.1	-341.8	0.16	-0.05	1.19
Brushy Canyon									
5,135.0	7.03	61.25	5,090.0	339.1	391.7	-346.8	0.16	-0.05	1.20
5,230.0	6.86	61.60	5,184.3	344.5	401.8	-352.5	0.18	-0.18	0.37
5,325.0	6.51	61.87	5,278.7	349.8	411.5	-357.9	0.37	-0.37	0.28
5,420.0	6.68	61.07	5,373.0	355.0	421.1	-363.3	0.20	0.18	-0.84
5,515.0	5.98	59.49	5,467.5	360.2	430.2	-368.7	0.76	-0.74	-1.66
5,610.0	5.01	60.81	5,562.0	364.7	438.1	-373.4	1.03	-1.02	1.39
5,704.0	4.62	62.22	5,655.7	368.5	445.0	-377.3	0.43	-0.41	1.50
5,799.0	4.00	61.78	5,750.4	371.8	451.3	-380.7	0.65	-0.65	-0.46
5,894.0	4.04	62.39	5,845.2	375.0	457.2	-384.0	0.06	0.04	0.64
5,989.0	3.96	64.06	5,939.9	377.9	463.1	-387.1	0.15	-0.08	1.76
6,084.0	4.09	61.95	6,034.7	381.0	469.1	-390.2	0.21	0.14	-2.22
6,179.0	3.82	64.41	6,129.5	383.9	474.9	-393.3	0.34	-0.28	2.59
6,273.0	3.34	71.36	6,223.3	386.2	480.4	-395.6	0.69	-0.51	7.39
6,368.0	2.95	76.89	6,318.2	387.6	485.4	-397.2	0.52	-0.41	5.82
6,463.0	2.55	87.27	6,413.1	388.2	489.8	-397.9	0.67	-0.42	10.93
6,558.0	2.11	89.99	6,508.0	388.3	493.7	-398.1	0.48	-0.46	2.86
6,600.1	1.95	93.35	6,550.0	388.3	495.2	-398.1	0.48	-0.38	8.00
Bone Spring Lime									
6,652.0	1.76	98.34	6,601.9	388.1	496.9	-397.9	0.48	-0.36	9.60
6,718.1	1.90	107.02	6,668.0	387.7	498.9	-397.5	0.47	0.22	13.13
Upper Avalon									
6,747.0	1.98	110.38	6,696.9	387.4	499.8	-397.2	0.47	0.26	11.63
6,841.0	1.89	123.65	6,790.8	385.9	502.7	-395.9	0.49	-0.10	14.12
6,936.0	1.71	146.24	6,885.8	383.9	504.8	-393.9	0.76	-0.19	23.78
7,031.0	2.37	150.20	6,980.7	381.0	506.5	-391.0	0.71	0.69	4.17
7,102.3	2.29	161.52	7,052.0	378.4	507.7	-388.4	0.65	-0.11	15.87
Middle Avalon									
7,125.0	2.29	165.22	7,074.6	377.5	508.0	-387.5	0.65	-0.02	16.33
7,220.0	2.15	211.72	7,169.6	374.2	507.5	-384.2	1.85	-0.15	48.95
7,304.5	2.61	250.23	7,254.0	372.2	504.9	-382.1	1.93	0.54	45.58
Lower Avalon									

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Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
7,315.0	2.73	253.73	7,264.5	372.0	504.4	-382.0	1.93	1.15	33.28
7,409.0	3.38	261.99	7,358.4	371.0	499.5	-380.9	0.83	0.69	8.79
7,503.0	4.04	275.79	7,452.2	370.9	493.5	-380.7	1.18	0.70	14.68
7,596.1	4.82	279.76	7,545.0	371.9	486.3	-381.5	0.90	0.84	4.27
1st Bone Spring Sand									
7,598.0	4.84	279.83	7,546.9	372.0	486.2	-381.6	0.90	0.85	3.56
7,693.0	3.56	285.28	7,641.6	373.4	479.4	-382.9	1.41	-1.35	5.74
7,788.0	2.51	304.27	7,736.5	375.4	474.8	-384.7	1.52	-1.11	19.99
7,882.0	1.76	314.29	7,830.4	377.5	472.1	-386.9	0.89	-0.80	10.66
7,884.6	1.73	314.26	7,833.0	377.6	472.0	-386.9	1.16	-1.16	-1.16
2nd Bone Spring Carb									
7,977.0	0.66	311.39	7,925.4	378.9	470.6	-388.2	1.16	-1.16	-3.11
8,072.0	0.35	260.85	8,020.4	379.2	469.9	-388.5	0.54	-0.33	-53.20
8,146.6	0.15	332.73	8,095.0	379.3	469.7	-388.5	0.45	-0.27	96.34
2nd Bone Spring Sand									
8,167.0	0.18	3.07	8,115.4	379.3	469.7	-388.6	0.45	0.17	148.78
8,261.0	0.70	51.41	8,209.4	379.8	470.1	-389.1	0.63	0.55	51.43
8,356.0	1.54	116.09	8,304.4	379.6	471.7	-388.9	1.47	0.88	68.08
8,451.0	3.38	143.08	8,399.3	376.8	474.5	-386.2	2.24	1.94	28.41
8,545.0	3.16	153.10	8,493.1	372.3	477.4	-381.7	0.65	-0.23	10.66
8,640.0	2.81	152.57	8,588.0	367.9	479.6	-377.4	0.37	-0.37	-0.56
8,735.0	2.15	127.70	8,682.9	364.8	482.1	-374.3	1.31	-0.69	-26.18
8,753.1	2.08	126.01	8,701.0	364.4	482.7	-373.9	0.52	-0.39	-9.33
3rd Bone Spring Carb									
8,830.0	1.80	117.41	8,777.9	363.0	484.9	-372.6	0.52	-0.36	-11.18
8,924.0	0.88	87.62	8,871.8	362.3	486.9	-371.9	1.20	-0.98	-31.69
9,019.0	0.79	98.08	8,966.8	362.3	488.3	-371.9	0.19	-0.09	11.01
9,114.0	1.10	142.72	9,061.8	361.4	489.5	-371.1	0.81	0.33	46.99
9,209.0	1.14	154.50	9,156.8	359.9	490.4	-369.6	0.25	0.04	12.40
9,303.0	0.97	169.71	9,250.8	358.2	491.0	-367.9	0.35	-0.18	16.18
9,398.0	1.05	176.65	9,345.8	356.6	491.2	-366.3	0.15	0.08	7.31
9,417.2	1.10	172.45	9,365.0	356.2	491.2	-365.9	0.48	0.26	-21.86
3rd Bone Spring Sand									
9,461.0	1.23	164.26	9,408.8	355.4	491.4	-365.1	0.48	0.30	-18.70
9,618.0	1.58	169.00	9,565.7	351.6	492.3	-361.3	0.23	0.22	3.02
9,713.0	6.55	172.96	9,660.4	344.9	493.2	-354.7	5.24	5.23	4.17
9,727.7	8.93	178.19	9,675.0	343.0	493.3	-352.7	16.87	16.19	35.58
3rd BS W Sand									
9,807.0	22.15	186.67	9,751.2	321.9	491.8	-331.6	16.87	16.67	10.69
9,821.9	22.92	186.70	9,765.0	316.2	491.1	-325.9	5.19	5.19	0.22
Wolfcamp A X Sand									
9,902.0	27.08	186.85	9,837.6	282.6	487.1	-292.2	5.19	5.19	0.18
9,938.5	27.86	188.36	9,870.0	265.9	484.9	-275.5	2.87	2.13	4.14
Wolfcamp A Y Sand									
9,997.0	29.14	190.63	9,921.4	238.4	480.3	-247.9	2.87	2.19	3.88

Company:	Tap Rock Resources, LLC	Local Co-ordinate Reference:	Well WTG Fed Com #215H
Project:	Eddy County, NM (NAD 83 NME)	TVD Reference:	KB @ 2910.5usft (H&P 388)
Site:	(WTG Fed) Sec-27_T26-S_R-29-E	MD Reference:	KB @ 2910.5usft (H&P 388)
Well:	WTG Fed Com #215H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	AWB	Database:	EDM 5000.15 Single User Db

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
10,061.4	37.91	186.94	9,975.0	203.3	475.0	-212.7	13.99	13.63	-5.73
Wolfcamp A Lower									
10,091.0	41.98	185.70	9,997.7	184.4	472.9	-193.7	13.99	13.73	-4.18
10,166.9	49.15	177.97	10,050.8	130.3	471.4	-139.7	11.91	9.45	-10.18
FTP @ 10166.9'MD, 100'FNL & 912.8'FWL									
10,186.0	51.03	176.30	10,063.1	115.7	472.1	-125.0	11.91	9.83	-8.77
10,281.0	56.44	175.33	10,119.3	39.3	477.7	-48.8	5.75	5.69	-1.02
10,376.0	65.89	180.61	10,165.1	-43.7	480.5	34.2	11.07	9.95	5.56
10,471.0	80.44	187.11	10,192.5	-134.1	474.2	124.7	16.65	15.32	6.84
10,565.0	82.64	183.86	10,206.4	-226.7	465.3	217.4	4.14	2.34	-3.46
10,596.5	84.11	182.68	10,210.0	-257.9	463.5	248.6	5.98	4.68	-3.75
Wolfcamp B									
10,657.0	86.95	180.43	10,214.7	-318.2	461.9	308.9	5.98	4.69	-3.72
10,752.0	87.65	179.02	10,219.2	-413.1	462.3	403.8	1.66	0.74	-1.48
10,846.0	87.82	179.02	10,222.9	-507.0	463.9	497.7	0.18	0.18	0.00
10,941.0	89.54	179.90	10,225.1	-602.0	464.8	592.6	2.03	1.81	0.93
11,036.0	91.34	180.17	10,224.4	-696.9	464.8	687.6	1.92	1.89	0.28
11,131.0	91.56	180.87	10,222.0	-791.9	463.9	782.5	0.77	0.23	0.74
11,225.0	92.75	181.40	10,218.4	-885.8	462.1	876.5	1.39	1.27	0.56
11,320.0	91.43	181.48	10,215.0	-980.7	459.7	971.4	1.39	-1.39	0.08
11,414.0	91.21	182.01	10,212.8	-1,074.7	456.8	1,065.4	0.61	-0.23	0.56
11,508.0	90.33	181.22	10,211.5	-1,168.6	454.2	1,159.3	1.26	-0.94	-0.84
11,603.0	90.86	182.19	10,210.5	-1,263.6	451.3	1,254.3	1.16	0.56	1.02
11,697.0	90.46	183.15	10,209.5	-1,357.5	447.0	1,348.3	1.11	-0.43	1.02
11,792.0	91.21	184.65	10,208.1	-1,452.2	440.5	1,443.2	1.77	0.79	1.58
11,886.0	89.45	181.66	10,207.5	-1,546.1	435.3	1,537.1	3.69	-1.87	-3.18
11,981.0	89.93	181.84	10,208.0	-1,641.0	432.4	1,632.1	0.54	0.51	0.19
12,076.0	90.15	181.57	10,208.0	-1,736.0	429.6	1,727.1	0.37	0.23	-0.28
12,171.0	89.85	183.07	10,208.0	-1,830.9	425.8	1,822.1	1.61	-0.32	1.58
12,266.0	89.27	182.89	10,208.7	-1,925.8	420.8	1,917.0	0.64	-0.61	-0.19
12,361.0	88.79	182.01	10,210.3	-2,020.7	416.8	2,012.0	1.06	-0.51	-0.93
12,455.0	88.22	182.45	10,212.8	-2,114.6	413.1	2,105.9	0.77	-0.61	0.47
12,550.0	88.88	181.66	10,215.2	-2,209.5	409.7	2,200.9	1.08	0.69	-0.83
12,644.0	88.57	180.34	10,217.3	-2,303.4	408.1	2,294.9	1.44	-0.33	-1.40
12,738.0	89.63	180.17	10,218.7	-2,397.4	407.6	2,388.8	1.14	1.13	-0.18
12,833.0	91.47	180.61	10,217.8	-2,492.4	407.0	2,483.8	1.99	1.94	0.46
12,927.0	91.69	180.08	10,215.2	-2,586.4	406.4	2,577.8	0.61	0.23	-0.56
13,022.0	92.84	180.61	10,211.5	-2,681.3	405.9	2,672.7	1.33	1.21	0.56
13,117.0	92.00	179.90	10,207.5	-2,776.2	405.4	2,767.6	1.16	-0.88	-0.75
13,211.0	93.01	180.17	10,203.4	-2,870.1	405.4	2,861.5	1.11	1.07	0.29
13,305.0	91.69	178.85	10,199.5	-2,964.0	406.2	2,955.4	1.99	-1.40	-1.40
13,400.0	92.40	179.46	10,196.1	-3,058.9	407.6	3,050.2	0.99	0.75	0.64
13,494.0	89.80	176.39	10,194.3	-3,152.8	411.0	3,144.0	4.28	-2.77	-3.27
13,589.0	89.01	176.74	10,195.3	-3,247.7	416.7	3,238.7	0.91	-0.83	0.37

Company:	Tap Rock Resources, LLC	Local Co-ordinate Reference:	Well WTG Fed Com #215H
Project:	Eddy County, NM (NAD 83 NME)	TVD Reference:	KB @ 2910.5usft (H&P 388)
Site:	(WTG Fed) Sec-27_T26-S_R-29-E	MD Reference:	KB @ 2910.5usft (H&P 388)
Well:	WTG Fed Com #215H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	AWB	Database:	EDM 5000.15 Single User Db

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
13,684.0	89.67	177.18	10,196.4	-3,342.5	421.7	3,333.5	0.83	0.69	0.46
13,778.0	93.98	180.43	10,193.4	-3,436.4	423.7	3,427.3	5.74	4.59	3.46
13,873.0	92.04	180.43	10,188.4	-3,531.3	423.0	3,522.2	2.04	-2.04	0.00
13,967.0	90.20	180.96	10,186.6	-3,625.3	421.8	3,616.2	2.04	-1.96	0.56
14,062.0	89.49	181.92	10,186.8	-3,720.2	419.4	3,711.1	1.26	-0.75	1.01
14,157.0	89.10	182.45	10,188.0	-3,815.2	415.8	3,806.1	0.69	-0.41	0.56
14,251.0	88.44	182.89	10,190.0	-3,909.0	411.4	3,900.1	0.84	-0.70	0.47
14,345.0	88.57	183.24	10,192.5	-4,002.9	406.4	3,994.0	0.40	0.14	0.37
14,440.0	87.56	183.15	10,195.7	-4,097.7	401.1	4,088.9	1.07	-1.06	-0.09
14,534.0	89.67	181.13	10,198.0	-4,191.6	397.6	4,182.8	3.11	2.24	-2.15
14,629.0	88.75	180.96	10,199.3	-4,286.5	395.9	4,277.8	0.98	-0.97	-0.18
14,724.0	90.02	180.25	10,200.3	-4,381.5	394.9	4,372.8	1.53	1.34	-0.75
14,818.0	89.19	180.17	10,200.9	-4,475.5	394.5	4,466.8	0.89	-0.88	-0.09
14,913.0	89.76	180.17	10,201.8	-4,570.5	394.2	4,561.8	0.60	0.60	0.00
15,008.0	89.85	180.69	10,202.1	-4,665.5	393.5	4,656.8	0.56	0.09	0.55
15,103.0	90.99	180.34	10,201.4	-4,760.5	392.7	4,751.7	1.26	1.20	-0.37
15,197.0	91.69	179.90	10,199.2	-4,854.5	392.5	4,845.7	0.88	0.74	-0.47
15,292.0	91.03	179.64	10,197.0	-4,949.4	392.9	4,940.6	0.75	-0.69	-0.27
15,387.0	90.42	179.64	10,195.8	-5,044.4	393.5	5,035.6	0.64	-0.64	0.00
15,482.0	89.93	179.38	10,195.5	-5,139.4	394.3	5,130.6	0.58	-0.52	-0.27
15,576.0	89.93	179.81	10,195.6	-5,233.4	394.9	5,224.5	0.46	0.00	0.46
15,671.0	90.59	180.52	10,195.2	-5,328.4	394.7	5,319.5	1.02	0.69	0.75
15,766.0	89.98	180.17	10,194.7	-5,423.4	394.1	5,414.5	0.74	-0.64	-0.37
15,860.0	90.51	180.61	10,194.3	-5,517.4	393.5	5,508.5	0.73	0.56	0.47
15,955.0	90.95	180.34	10,193.1	-5,612.4	392.7	5,603.5	0.54	0.46	-0.28
16,049.0	90.55	179.99	10,191.9	-5,706.4	392.4	5,697.5	0.57	-0.43	-0.37
16,144.0	89.89	179.73	10,191.5	-5,801.4	392.6	5,792.4	0.75	-0.69	-0.27
16,238.0	89.19	179.73	10,192.2	-5,895.4	393.1	5,886.4	0.74	-0.74	0.00
16,332.0	89.89	180.25	10,193.0	-5,989.4	393.1	5,980.4	0.93	0.74	0.55
16,427.0	91.34	180.17	10,192.0	-6,084.4	392.7	6,075.4	1.53	1.53	-0.08
16,521.0	91.21	179.90	10,189.9	-6,178.4	392.7	6,169.3	0.32	-0.14	-0.29
16,616.0	90.90	179.64	10,188.1	-6,273.3	393.1	6,264.3	0.43	-0.33	-0.27
16,711.0	91.82	179.81	10,185.9	-6,368.3	393.5	6,359.2	0.98	0.97	0.18
16,806.0	92.92	180.43	10,182.0	-6,463.2	393.3	6,454.1	1.33	1.16	0.65
16,901.0	92.48	180.78	10,177.5	-6,558.1	392.3	6,549.0	0.59	-0.46	0.37
16,995.0	92.00	180.96	10,173.8	-6,652.0	390.9	6,642.9	0.55	-0.51	0.19
17,090.0	92.04	180.61	10,170.5	-6,747.0	389.6	6,737.9	0.37	0.04	-0.37
17,185.0	91.69	180.34	10,167.4	-6,841.9	388.8	6,832.8	0.47	-0.37	-0.28
17,279.0	89.45	180.87	10,166.4	-6,935.9	387.8	6,926.8	2.45	-2.38	0.56
17,322.0	89.36	180.78	10,166.9	-6,978.9	387.2	6,969.8	0.30	-0.21	-0.21
LAST SVY									
17,322.8	89.36	180.78	10,166.9	-6,979.7	387.2	6,970.6	0.00	0.00	0.00
LTP @ 17322.8'MD, 100'FSL & 971'FWL									

Company:	Tap Rock Resources, LLC	Local Co-ordinate Reference:	Well WTG Fed Com #215H
Project:	Eddy County, NM (NAD 83 NME)	TVD Reference:	KB @ 2910.5usft (H&P 388)
Site:	(WTG Fed) Sec-27_T26-S_R-29-E	MD Reference:	KB @ 2910.5usft (H&P 388)
Well:	WTG Fed Com #215H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	AWB	Database:	EDM 5000.15 Single User Db

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
17,392.0	89.36	180.78	10,167.7	-7,048.9	386.2	7,039.8	0.00	0.00	0.00
Projection to TD @ 17392'MD, 30.9'FSL & 969.8FWL									

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
LTP (WTG Fed Com # - hit/miss target - Shape - Point	0.00	0.00	10,164.0	-6,980.0	362.0	364,055.00	651,467.00	32° 0' 1.331 N	103° 58' 41.026 W
- actual wellpath misses target center by 25.3usft at 17322.8usft MD (10166.9 TVD, -6979.7 N, 387.2 E)									
PBHL (WTG Fed Corr - actual wellpath misses target center by 35.8usft at 17392.0usft MD (10167.7 TVD, -7048.9 N, 386.2 E) - Rectangle (sides W100.0 H2,288.1 D30.0)	-0.40	179.84	10,164.0	-7,075.0	362.0	363,960.00	651,467.00	32° 0' 0.391 N	103° 58' 41.030 W
P.I. (WTG Fed Com # - actual wellpath misses target center by 41.2usft at 15130.1usft MD (10200.9 TVD, -4787.6 N, 392.5 E) - Rectangle (sides W100.0 H4,917.0 D30.0)	-0.40	181.73	10,180.0	-4,787.0	357.0	366,248.00	651,462.00	32° 0' 23.034 N	103° 58' 41.000 W
FTP (WTG Fed Com # - actual wellpath misses target center by 129.8usft at 10266.1usft MD (10111.0 TVD, 51.6 N, 476.7 E) - Point	0.00	0.00	10,212.0	128.0	505.0	371,163.00	651,610.00	32° 1' 11.669 N	103° 58' 39.094 W

Company:	Tap Rock Resources, LLC	Local Co-ordinate Reference:	Well WTG Fed Com #215H
Project:	Eddy County, NM (NAD 83 NME)	TVD Reference:	KB @ 2910.5usft (H&P 388)
Site:	(WTG Fed) Sec-27_T26-S_R-29-E	MD Reference:	KB @ 2910.5usft (H&P 388)
Well:	WTG Fed Com #215H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	AWB	Database:	EDM 5000.15 Single User Db

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
345.0	345.0	Rustler Anhydrite			
1,285.8	1,285.0	Top Salt			
2,638.6	2,635.0	Base Salt			
2,879.6	2,875.0	Delaware Mountain Gp			
2,909.7	2,905.0	Lamar			
2,909.7	2,905.0	Bell Canyon			
2,950.0	2,945.0	Ramsey Sand			
3,686.7	3,670.0	Cherry Canyon			
5,054.4	5,010.0	Brushy Canyon			
6,600.1	6,550.0	Bone Spring Lime			
6,718.1	6,668.0	Upper Avalon			
7,102.3	7,052.0	Middle Avalon			
7,304.5	7,254.0	Lower Avalon			
7,596.1	7,545.0	1st Bone Spring Sand			
7,884.6	7,833.0	2nd Bone Spring Carb			
8,146.6	8,095.0	2nd Bone Spring Sand			
8,753.1	8,701.0	3rd Bone Spring Carb			
9,417.2	9,365.0	3rd Bone Spring Sand			
9,727.7	9,675.0	3rd BS W Sand			
9,821.9	9,765.0	Wolfcamp A X Sand			
9,938.5	9,870.0	Wolfcamp A Y Sand			
10,061.4	9,975.0	Wolfcamp A Lower			
10,596.5	10,210.0	Wolfcamp B			

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
10,166.9	10,050.8	130.3	471.4	FTP @ 10166.9'MD, 100'FNL & 912.8'FWL
17,322.0	10,166.9	-6,978.9	387.2	LAST SVY
17,322.8	10,166.9	-6,979.7	387.2	LTP @ 17322.8'MD, 100'FSL & 971'FWL
17,392.0	10,167.7	-7,048.9	386.2	Projection to TD @ 17392'MD, 30.9'FSL & 969.8'FWL

Checked By: _____ Approved By: _____ Date: _____