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Phone: (575) 393-6161 Fax: (575) 393-0720
District II
811 S. First St., Artesia, NM 88210
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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

Rec'd 05/08/2020 - NMOCD

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 30-015-46119	² Pool Code 98220	³ Pool Name PURPLE SAGE WOLFCAMP (GAS)
⁴ Property Code 319943	⁵ Property Name CYPRESS 34	⁶ Well Number 233H
⁷ OGRID No. 372043	⁸ Operator Name TAP ROCK OPERATING, LLC.	⁹ Elevation 3093'

¹⁰Surface Location

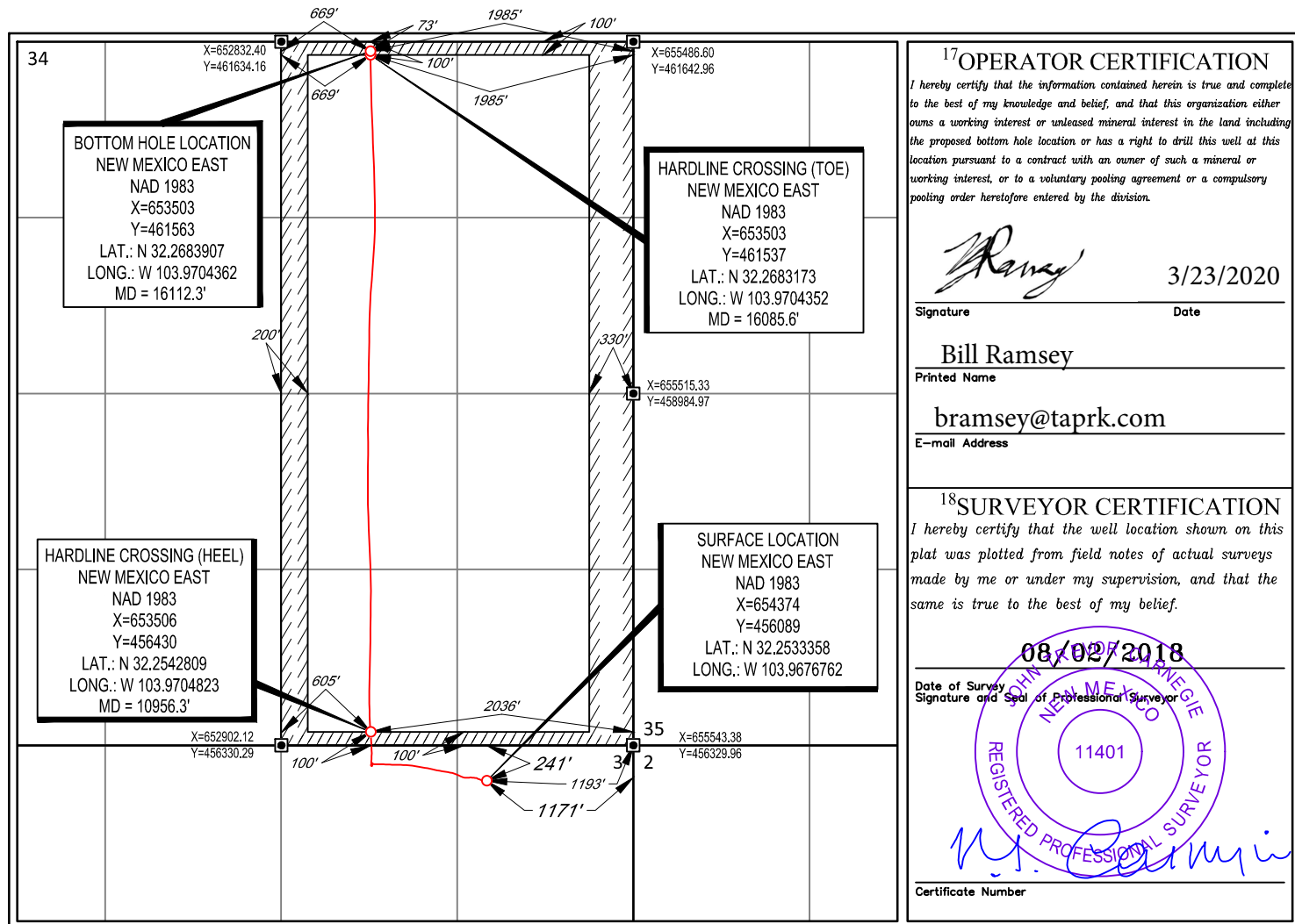
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	3	24-S	29-E	-	241'	NORTH	1171'	EAST	EDDY

¹¹Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
B	34	23-S	29-E	-	73'	NORTH	1985'	EAST	EDDY

¹² Dedicated Acres	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No. NSL 7933
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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.





Tap Rock Resources, LLC

**Eddy County, NM (NAD 83 NME)
(Cypress) Sec-3_T-24-S_R-29-E
Cypress 34 Federal #233H**

OWB

Design: AWB

Standard Survey Report

26 September, 2019





Operator: Taprock Resources LLC
Well Name: Cypress 34 Federal #233H
County: Eddy
State: New Mexico
Rig Name: H&P 388
API Number: 30-015-46119

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: 120' MD – 16113' MD
Projection to Bit: 16180' MD
Dates Performed: 09/08/2019 – 09/27/2019
Type of Survey: MWD

Sincerely,

A handwritten signature in blue ink, appearing to read "Jim", with a stylized flourish at the end.

James Burleson
Vice President of MWD Operations
Intrepid Directional Drilling Specialists



Company:	Tap Rock Resources, LLC	Local Co-ordinate Reference:	Well Cypress 34 Federal #233H
Project:	Eddy County, NM (NAD 83 NME)	TVD Reference:	KB @ 3119.5usft (H&P 245)
Site:	(Cypress) Sec-3_T-24-S_R-29-E	MD Reference:	KB @ 3119.5usft (H&P 245)
Well:	Cypress 34 Federal #233H	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	(Cypress) Sec-3_T-24-S_R-29-E		
Site Position:		Northing:	456,089.00 usft
From:	Map	Easting:	654,400.00 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 15' 12.005 N
		Longitude:	103° 58' 3.336 W
		Grid Convergence:	0.20 °

Well	Cypress 34 Federal #233H		
Well Position	+N/-S	0.0 usft	Northing: 456,089.00 usft
	+E/-W	0.0 usft	Easting: 654,374.00 usft
Position Uncertainty	0.0 usft	Wellhead Elevation:	usft
		Latitude:	32° 15' 12.005 N
		Longitude:	103° 58' 3.639 W
		Ground Level:	3,093.0 usft

Wellbore	OWB				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	08/23/19	6.90	60.00	47,691.72419838

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	359.39	

Survey Program	Date	09/26/19			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
120.0	16,180.0	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
120.0	1.00	186.00	120.0	-1.0	-0.1	-1.0	0.83	0.83	0.00
206.0	0.80	158.00	206.0	-2.3	0.0	-2.3	0.55	-0.23	-32.56
296.0	0.40	334.00	296.0	-2.6	0.1	-2.6	1.33	-0.44	195.56
320.0	0.20	324.61	320.0	-2.5	0.1	-2.5	0.84	-0.82	-39.11
Rustler Anhydrite									
390.0	0.40	173.00	390.0	-2.7	0.0	-2.7	0.84	0.28	-216.64
436.0	0.30	304.00	436.0	-2.8	0.0	-2.8	1.39	-0.22	284.78
509.0	0.31	273.90	509.0	-2.6	-0.4	-2.6	0.22	0.01	-41.23
602.0	0.35	194.71	602.0	-2.9	-0.7	-2.9	0.45	0.04	-85.15
696.0	0.53	194.44	696.0	-3.6	-0.9	-3.6	0.19	0.19	-0.29

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Well:	Cypress 34 Federal #233H	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)
789.0	0.53	186.71	789.0	-4.4	-1.1	-4.4	0.08	0.00	-8.31
883.0	0.48	209.39	883.0	-5.2	-1.3	-5.2	0.22	-0.05	24.13
968.0	1.05	276.09	968.0	-5.4	-2.3	-5.4	1.14	0.67	78.47
1,062.0	2.59	284.71	1,061.9	-4.8	-5.2	-4.8	1.66	1.64	9.17
1,155.0	2.59	287.87	1,154.8	-3.6	-9.2	-3.5	0.15	0.00	3.40
1,248.0	4.04	287.34	1,247.7	-2.0	-14.3	-1.9	1.56	1.56	-0.57
1,342.0	6.11	285.94	1,341.3	0.3	-22.3	0.6	2.21	2.20	-1.49
1,435.0	6.90	283.21	1,433.7	3.0	-32.5	3.3	0.91	0.85	-2.94
1,529.0	6.11	291.04	1,527.1	6.1	-42.7	6.5	1.26	-0.84	8.33
1,622.0	5.27	290.95	1,619.6	9.4	-51.3	9.9	0.90	-0.90	-0.10
1,622.4	5.27	290.95	1,620.0	9.4	-51.3	9.9	0.00	0.00	0.00
Top Salt									
1,716.0	4.79	292.62	1,713.3	12.4	-58.9	13.0	0.54	-0.51	1.78
1,810.0	4.31	291.74	1,807.0	15.2	-65.8	15.9	0.52	-0.51	-0.94
1,903.0	3.96	291.48	1,899.7	17.7	-72.1	18.5	0.38	-0.38	-0.28
1,997.0	3.69	284.36	1,993.5	19.6	-78.0	20.5	0.58	-0.29	-7.57
2,090.0	3.30	275.66	2,086.3	20.7	-83.6	21.5	0.71	-0.42	-9.35
2,184.0	2.77	276.01	2,180.2	21.2	-88.5	22.1	0.56	-0.56	0.37
2,277.0	3.43	276.27	2,273.1	21.7	-93.5	22.7	0.71	0.71	0.28
2,369.0	5.32	276.80	2,364.8	22.5	-100.5	23.6	2.05	2.05	0.58
2,462.0	5.63	277.76	2,457.4	23.6	-109.3	24.8	0.35	0.33	1.03
2,555.0	4.13	270.65	2,550.0	24.3	-117.2	25.5	1.74	-1.61	-7.65
2,649.0	3.38	262.65	2,643.8	24.0	-123.3	25.3	0.97	-0.80	-8.51
2,743.0	4.00	266.16	2,737.6	23.4	-129.3	24.8	0.70	0.66	3.73
2,836.0	5.32	264.49	2,830.3	22.8	-136.9	24.2	1.43	1.42	-1.80
2,929.0	5.89	262.38	2,922.9	21.7	-145.9	23.3	0.65	0.61	-2.27
2,960.3	5.86	266.83	2,954.0	21.4	-149.1	23.0	1.46	-0.10	14.21
Base Salt									
3,054.0	5.98	280.05	3,047.2	22.0	-158.6	23.7	1.46	0.13	14.11
3,117.0	5.27	276.27	3,109.9	22.9	-164.8	24.6	1.27	-1.13	-6.00
3,181.4	5.82	284.52	3,174.0	24.0	-170.9	25.8	1.50	0.86	12.81
Delaware Mountain Gp - Lamar									
3,206.5	6.07	287.31	3,199.0	24.7	-173.4	26.6	1.50	0.97	11.10
Bell Canyon									
3,211.0	6.11	287.78	3,203.5	24.9	-173.8	26.7	1.50	1.00	10.57
3,241.7	6.45	290.29	3,234.0	26.0	-177.0	27.9	1.41	1.09	8.17
Ramsey Sand									
3,304.0	7.16	294.64	3,295.8	28.8	-183.8	30.8	1.41	1.15	6.98
3,398.0	7.52	293.32	3,389.1	33.7	-194.8	35.8	0.42	0.38	-1.40
3,491.0	9.27	294.55	3,481.1	39.2	-207.2	41.4	1.89	1.88	1.32
3,585.0	10.95	292.53	3,573.6	45.8	-222.3	48.1	1.83	1.79	-2.15
3,679.0	11.08	291.48	3,665.9	52.5	-239.0	55.1	0.25	0.14	-1.12
3,772.0	10.90	282.86	3,757.2	57.7	-255.8	60.5	1.78	-0.19	-9.27
3,866.0	10.77	280.75	3,849.5	61.4	-273.1	64.3	0.44	-0.14	-2.24

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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)
3,959.0	10.42	281.02	3,940.9	64.6	-289.9	67.7	0.38	-0.38	0.29
4,053.0	9.10	280.58	4,033.5	67.6	-305.6	70.8	1.41	-1.40	-0.47
4,105.1	9.02	279.11	4,085.0	69.0	-313.7	72.3	0.47	-0.14	-2.82
Cherry Canyon									
4,146.0	8.97	277.94	4,125.4	69.9	-320.0	73.3	0.47	-0.13	-2.86
4,239.0	10.02	277.76	4,217.1	72.0	-335.2	75.6	1.13	1.13	-0.19
4,332.0	11.65	277.59	4,308.5	74.4	-352.5	78.1	1.75	1.75	-0.18
4,425.0	11.60	277.85	4,399.6	76.9	-371.1	80.8	0.08	-0.05	0.28
4,518.0	11.12	287.70	4,490.7	80.9	-388.9	85.0	2.15	-0.52	10.59
4,612.0	11.56	283.57	4,582.9	85.8	-406.7	90.2	0.98	0.47	-4.39
4,706.0	11.38	282.77	4,675.0	90.1	-424.9	94.6	0.26	-0.19	-0.85
4,799.0	11.38	280.75	4,766.2	93.8	-442.8	98.6	0.43	0.00	-2.17
4,892.0	13.89	278.91	4,856.9	97.3	-462.9	102.2	2.73	2.70	-1.98
4,986.0	14.73	280.23	4,948.0	101.2	-485.8	106.3	0.96	0.89	1.40
5,080.0	15.12	279.70	5,038.9	105.3	-509.6	110.8	0.44	0.41	-0.56
5,173.0	15.08	278.03	5,128.6	109.1	-533.6	114.7	0.47	-0.04	-1.80
5,267.0	15.16	277.24	5,219.4	112.3	-557.9	118.3	0.24	0.09	-0.84
5,360.0	13.71	275.66	5,309.4	115.0	-580.9	121.1	1.62	-1.56	-1.70
5,360.6	13.71	275.66	5,310.0	115.0	-581.0	121.1	0.00	0.00	0.00
Brushy Canyon									
5,453.0	13.98	274.07	5,399.7	116.8	-603.1	123.2	0.50	0.29	-1.72
5,546.0	12.75	273.72	5,490.2	118.3	-624.5	124.9	1.33	-1.32	-0.38
5,639.0	11.16	272.75	5,581.2	119.4	-643.8	126.2	1.72	-1.71	-1.04
5,732.0	8.88	268.62	5,672.8	119.7	-659.9	126.7	2.57	-2.45	-4.44
5,826.0	9.01	268.54	5,765.6	119.3	-674.5	126.5	0.14	0.14	-0.09
5,919.0	11.65	271.35	5,857.1	119.3	-691.2	126.7	2.89	2.84	3.02
6,012.0	10.73	274.07	5,948.4	120.2	-709.2	127.7	1.14	-0.99	2.92
6,105.0	9.89	270.91	6,039.9	120.9	-725.9	128.6	1.09	-0.90	-3.40
6,198.0	9.71	271.44	6,131.5	121.2	-741.7	129.1	0.22	-0.19	0.57
6,289.0	10.81	273.28	6,221.0	121.9	-757.9	130.0	1.26	1.21	2.02
6,381.0	9.89	273.99	6,311.5	123.0	-774.4	131.2	1.01	-1.00	0.77
6,471.0	8.53	269.77	6,400.4	123.5	-788.8	131.9	1.69	-1.51	-4.69
6,562.0	8.40	270.21	6,490.4	123.5	-802.1	132.0	0.16	-0.14	0.48
6,654.0	7.34	270.29	6,581.5	123.5	-814.7	132.2	1.15	-1.15	0.09
6,745.0	6.29	267.57	6,671.9	123.3	-825.5	132.1	1.21	-1.15	-2.99
6,838.0	5.32	270.29	6,764.4	123.1	-834.9	132.0	1.08	-1.04	2.92
6,931.0	3.56	278.56	6,857.1	123.6	-842.1	132.6	2.01	-1.89	8.89
7,019.0	2.10	291.03	6,945.0	124.6	-846.3	133.6	1.79	-1.66	14.17
Bone Spring Lime									
7,024.0	2.02	292.27	6,950.0	124.6	-846.5	133.6	1.79	-1.56	24.77
7,074.0	1.97	296.67	7,000.0	125.4	-848.1	134.4	0.32	-0.11	8.79
Upper Avalon									
7,117.0	1.93	300.62	7,043.0	126.1	-849.3	135.1	0.32	-0.08	9.20
7,211.0	1.76	308.70	7,136.9	127.8	-851.8	136.8	0.33	-0.18	8.60

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7,304.0	2.15	325.93	7,229.9	130.1	-853.9	139.2	0.75	0.42	18.53
7,396.0	1.89	290.60	7,321.8	132.1	-856.3	141.2	1.36	-0.28	-38.40
7,434.2	1.16	282.64	7,360.0	132.4	-857.3	141.5	1.98	-1.91	-20.82
Middle Avalon									
7,489.0	0.40	212.99	7,414.8	132.3	-857.9	141.5	1.98	-1.39	-127.14
7,582.0	1.71	176.34	7,507.8	130.7	-858.0	139.8	1.52	1.41	-39.41
7,674.0	1.93	164.56	7,599.7	127.8	-857.5	136.9	0.47	0.24	-12.80
7,767.0	1.45	226.35	7,692.7	125.5	-857.9	134.6	1.92	-0.52	66.44
7,860.0	1.93	245.33	7,785.6	124.0	-860.2	133.2	0.79	0.52	20.41
7,884.4	1.82	240.81	7,810.0	123.7	-860.9	132.8	0.76	-0.46	-18.54
Lower Avalon									
7,954.0	1.58	224.85	7,879.6	122.5	-862.6	131.6	0.76	-0.34	-22.92
8,004.4	1.42	216.09	7,930.0	121.5	-863.4	130.6	0.55	-0.32	-17.37
1st Bone Spring Sand									
8,046.0	1.32	207.45	7,971.6	120.6	-864.0	129.8	0.55	-0.24	-20.79
8,140.0	0.57	153.14	8,065.6	119.2	-864.2	128.4	1.16	-0.80	-57.78
8,233.0	0.66	10.75	8,158.6	119.3	-863.9	128.5	1.25	0.10	-153.11
8,269.4	0.73	37.49	8,195.0	119.7	-863.8	128.9	0.90	0.18	73.36
2nd Bone Spring Carb									
8,327.0	1.05	64.01	8,252.5	120.3	-863.1	129.4	0.90	0.56	46.08
8,420.0	0.70	61.29	8,345.5	120.9	-861.8	130.1	0.38	-0.38	-2.92
8,514.0	0.62	26.05	8,439.5	121.6	-861.1	130.8	0.43	-0.09	-37.49
8,608.0	0.79	226.00	8,533.5	121.6	-861.3	130.8	1.48	0.18	-170.27
8,629.5	0.70	212.96	8,555.0	121.4	-861.5	130.6	0.90	-0.43	-60.74
2nd Bone Spring Sand									
8,701.0	0.75	160.61	8,626.5	120.6	-861.6	129.8	0.90	0.07	-73.19
8,795.0	0.79	152.61	8,720.5	119.5	-861.1	128.6	0.12	0.04	-8.51
8,888.0	1.85	159.11	8,813.5	117.5	-860.2	126.6	1.15	1.14	6.99
8,981.0	1.67	152.17	8,906.4	114.9	-859.1	124.0	0.30	-0.19	-7.46
9,075.0	0.79	120.62	9,000.4	113.4	-857.9	122.5	1.15	-0.94	-33.56
9,124.6	0.57	167.88	9,050.0	112.9	-857.5	122.1	1.17	-0.45	95.32
3rd Bone Spring Carb									
9,169.0	0.79	209.03	9,094.4	112.5	-857.6	121.6	1.17	0.50	92.63
9,262.0	0.22	341.05	9,187.4	112.1	-858.0	121.2	1.02	-0.61	141.96
9,355.0	0.18	186.80	9,280.4	112.1	-858.1	121.2	0.42	-0.04	-165.86
9,448.0	0.40	242.26	9,373.4	111.8	-858.4	120.9	0.36	0.24	59.63
9,542.0	1.01	296.22	9,467.4	112.0	-859.4	121.1	0.89	0.65	57.40
9,637.0	0.75	301.23	9,562.4	112.7	-860.7	121.9	0.29	-0.27	5.27
9,730.0	0.70	246.48	9,655.4	112.8	-861.7	122.0	0.72	-0.05	-58.87
9,824.0	0.48	350.71	9,749.4	112.9	-862.3	122.1	1.00	-0.23	110.88
9,918.0	0.31	302.11	9,843.4	113.5	-862.6	122.6	0.38	-0.18	-51.70
9,934.6	0.29	294.23	9,860.0	113.5	-862.7	122.7	0.27	-0.09	-47.42
3rd Bone Spring Sand									
10,012.0	0.31	254.56	9,937.4	113.5	-863.1	122.7	0.27	0.02	-51.27

Company:	Tap Rock Resources, LLC	Local Co-ordinate Reference:	Well Cypress 34 Federal #233H
Project:	Eddy County, NM (NAD 83 NME)	TVD Reference:	KB @ 3119.5usft (H&P 245)
Site:	(Cypress) Sec-3_T-24-S_R-29-E	MD Reference:	KB @ 3119.5usft (H&P 245)
Well:	Cypress 34 Federal #233H	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)
10,106.0	0.53	231.01	10,031.4	113.2	-863.7	122.4	0.29	0.23	-25.05
10,194.6	0.35	178.60	10,120.0	112.7	-864.0	121.9	0.47	-0.21	-59.14
3rd BS W Sand									
10,199.0	0.35	175.20	10,124.4	112.6	-864.0	121.8	0.47	0.04	-77.62
10,239.6	0.49	215.94	10,165.0	112.4	-864.1	121.6	0.80	0.35	100.28
Wolfcamp A X Sand									
10,272.0	0.70	231.01	10,197.4	112.1	-864.3	121.3	0.80	0.64	46.55
10,344.6	0.53	241.31	10,270.0	111.7	-864.9	120.9	0.27	-0.23	14.18
Wolfcamp A Y Sand									
10,371.0	0.48	246.74	10,296.4	111.6	-865.1	120.8	0.27	-0.20	20.60
10,434.6	1.22	326.38	10,360.0	112.1	-865.8	121.3	1.93	1.17	125.14
Wolfcamp A Lower									
10,464.0	1.76	333.49	10,389.4	112.7	-866.1	121.9	1.93	1.83	24.22
10,511.0	8.35	3.19	10,436.1	116.8	-866.3	126.0	14.63	14.02	63.19
10,559.0	15.60	3.90	10,483.1	126.7	-865.6	135.9	15.11	15.10	1.48
10,606.0	23.38	3.99	10,527.3	142.3	-864.6	151.5	16.55	16.55	0.19
10,619.8	24.19	3.68	10,540.0	147.9	-864.2	157.1	5.96	5.89	-2.22
Wolfcamp B									
10,653.0	26.15	3.02	10,570.0	162.0	-863.4	171.2	5.96	5.90	-2.00
10,700.0	28.57	1.70	10,611.8	183.6	-862.5	192.7	5.31	5.15	-2.81
10,746.0	32.09	1.52	10,651.5	206.8	-861.8	216.0	7.65	7.65	-0.39
10,793.0	34.46	357.92	10,690.7	232.6	-862.0	241.7	6.56	5.04	-7.66
10,840.0	36.75	357.13	10,729.0	259.9	-863.2	269.1	4.97	4.87	-1.68
10,931.0	47.25	355.64	10,796.5	320.6	-867.1	329.8	11.59	11.54	-1.64
10,958.0	53.03	355.69	10,813.8	341.2	-868.6	350.5	21.43	21.43	0.18
FTP @ 10958'MD, 100'FSL & 604.5'FWL									
10,960.0	53.47	355.69	10,815.0	342.8	-868.8	352.1	21.43	21.43	0.16
Wolfcamp B1									
10,978.0	57.32	355.72	10,825.2	357.6	-869.9	366.8	21.43	21.43	0.16
11,025.0	65.32	356.60	10,847.7	398.7	-872.6	408.0	17.10	17.02	1.87
11,072.0	68.97	357.04	10,866.0	441.9	-875.0	451.2	7.81	7.77	0.94
11,119.0	74.29	357.92	10,880.8	486.5	-877.0	495.8	11.46	11.32	1.87
11,166.0	79.82	358.36	10,891.3	532.3	-878.5	541.6	11.80	11.77	0.94
11,213.0	83.96	359.42	10,898.0	578.8	-879.4	588.1	9.09	8.81	2.26
11,309.0	86.37	0.82	10,906.1	674.4	-879.2	683.7	2.90	2.51	1.46
11,403.0	88.57	0.91	10,910.2	768.3	-877.7	777.6	2.34	2.34	0.10
11,496.0	88.66	1.17	10,912.4	861.3	-876.1	870.5	0.30	0.10	0.28
11,590.0	88.57	1.26	10,914.7	955.2	-874.1	964.5	0.14	-0.10	0.10
11,684.0	88.79	0.91	10,916.9	1,049.2	-872.3	1,058.4	0.44	0.23	-0.37
11,777.0	88.00	0.82	10,919.5	1,142.1	-870.9	1,151.3	0.85	-0.85	-0.10
11,871.0	88.40	1.00	10,922.4	1,236.1	-869.4	1,245.3	0.47	0.43	0.19
11,965.0	88.57	0.38	10,924.9	1,330.0	-868.3	1,339.2	0.68	0.18	-0.66
12,059.0	90.95	0.03	10,925.3	1,424.0	-867.9	1,433.2	2.56	2.53	-0.37
12,152.0	90.59	358.89	10,924.1	1,517.0	-868.8	1,526.2	1.29	-0.39	-1.23
12,245.0	90.29	358.10	10,923.4	1,610.0	-871.2	1,619.2	0.91	-0.32	-0.85

Company:	Tap Rock Resources, LLC	Local Co-ordinate Reference:	Well Cypress 34 Federal #233H
Project:	Eddy County, NM (NAD 83 NME)	TVD Reference:	KB @ 3119.5usft (H&P 245)
Site:	(Cypress) Sec-3_T-24-S_R-29-E	MD Reference:	KB @ 3119.5usft (H&P 245)
Well:	Cypress 34 Federal #233H	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)
12,339.0	90.11	357.75	10,923.0	1,703.9	-874.6	1,713.1	0.42	-0.19	-0.37
12,433.0	92.40	357.04	10,921.0	1,797.8	-878.9	1,807.0	2.55	2.44	-0.76
12,524.0	94.68	357.39	10,915.4	1,888.5	-883.3	1,897.8	2.53	2.51	0.38
12,616.0	94.15	358.10	10,908.3	1,980.1	-886.9	1,989.5	0.96	-0.58	0.77
12,710.0	94.11	358.71	10,901.5	2,073.9	-889.5	2,083.2	0.65	-0.04	0.65
12,803.0	92.09	359.24	10,896.5	2,166.7	-891.2	2,176.1	2.25	-2.17	0.57
12,896.0	89.49	1.00	10,895.2	2,259.7	-891.0	2,269.0	3.38	-2.80	1.89
12,990.0	89.80	0.82	10,895.8	2,353.7	-889.5	2,363.0	0.38	0.33	-0.19
13,084.0	90.07	359.94	10,895.9	2,447.7	-888.9	2,457.0	0.98	0.29	-0.94
13,177.0	91.38	359.77	10,894.7	2,540.7	-889.1	2,550.0	1.42	1.41	-0.18
13,271.0	91.21	359.94	10,892.6	2,634.6	-889.4	2,644.0	0.26	-0.18	0.18
13,363.0	90.73	0.82	10,891.0	2,726.6	-888.8	2,735.9	1.09	-0.52	0.96
13,457.0	91.08	0.73	10,889.5	2,820.6	-887.5	2,829.9	0.38	0.37	-0.10
13,551.0	92.22	0.91	10,886.8	2,914.5	-886.1	2,923.8	1.23	1.21	0.19
13,644.0	89.23	1.00	10,885.7	3,007.5	-884.6	3,016.8	3.22	-3.22	0.10
13,738.0	89.80	0.56	10,886.4	3,101.5	-883.3	3,110.7	0.77	0.61	-0.47
13,832.0	90.68	1.26	10,886.1	3,195.5	-881.8	3,204.7	1.20	0.94	0.74
13,926.0	90.81	0.73	10,884.8	3,289.5	-880.2	3,298.7	0.58	0.14	-0.56
14,020.0	91.34	1.00	10,883.1	3,383.4	-878.8	3,392.6	0.63	0.56	0.29
14,113.0	92.62	1.44	10,879.9	3,476.4	-876.8	3,485.5	1.46	1.38	0.47
14,207.0	91.25	2.23	10,876.7	3,570.3	-873.8	3,579.4	1.68	-1.46	0.84
14,301.0	89.45	4.51	10,876.1	3,664.1	-868.3	3,673.1	3.09	-1.91	2.43
14,394.0	88.13	3.81	10,878.1	3,756.8	-861.5	3,765.8	1.61	-1.42	-0.75
14,487.0	87.78	3.99	10,881.4	3,849.5	-855.2	3,858.4	0.42	-0.38	0.19
14,580.0	88.57	4.69	10,884.4	3,942.2	-848.2	3,951.0	1.13	0.85	0.75
14,674.0	88.75	3.28	10,886.5	4,036.0	-841.6	4,044.7	1.51	0.19	-1.50
14,767.0	87.91	1.61	10,889.3	4,128.8	-837.7	4,137.5	2.01	-0.90	-1.80
14,860.0	87.65	359.42	10,892.9	4,221.8	-836.8	4,230.4	2.37	-0.28	-2.35
14,954.0	89.76	358.62	10,895.0	4,315.7	-838.4	4,324.4	2.40	2.24	-0.85
15,047.0	90.64	358.62	10,894.7	4,408.7	-840.7	4,417.4	0.95	0.95	0.00
15,140.0	90.46	359.24	10,893.8	4,501.7	-842.4	4,510.4	0.69	-0.19	0.67
15,234.0	90.55	357.66	10,892.9	4,595.6	-844.9	4,604.4	1.68	0.10	-1.68
15,328.0	90.99	357.75	10,891.7	4,689.5	-848.7	4,698.3	0.48	0.47	0.10
15,421.0	91.12	358.27	10,890.0	4,782.5	-851.9	4,791.3	0.58	0.14	0.56
15,515.0	91.74	357.57	10,887.6	4,876.4	-855.4	4,885.2	0.99	0.66	-0.74
15,608.0	90.11	358.01	10,886.1	4,969.3	-858.9	4,978.2	1.82	-1.75	0.47
15,702.0	89.71	357.66	10,886.3	5,063.2	-862.5	5,072.1	0.57	-0.43	-0.37
15,795.0	90.95	358.36	10,885.7	5,156.2	-865.7	5,165.1	1.53	1.33	0.75
15,889.0	91.78	358.80	10,883.5	5,250.1	-868.0	5,259.1	1.00	0.88	0.47
15,983.0	92.31	359.06	10,880.1	5,344.0	-869.8	5,353.0	0.63	0.56	0.28
16,077.0	93.19	359.24	10,875.6	5,437.9	-871.2	5,446.9	0.96	0.94	0.19
16,086.5	93.22	359.19	10,875.1	5,447.4	-871.3	5,456.4	0.62	0.36	-0.50
LTP @ 16086.5'MD, 100'FNL & 668.9'FWL									

Company:	Tap Rock Resources, LLC	Local Co-ordinate Reference:	Well Cypress 34 Federal #233H
Project:	Eddy County, NM (NAD 83 NME)	TVD Reference:	KB @ 3119.5usft (H&P 245)
Site:	(Cypress) Sec-3_T-24-S_R-29-E	MD Reference:	KB @ 3119.5usft (H&P 245)
Well:	Cypress 34 Federal #233H	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)	
16,113.0	93.32	359.06	10,873.6	5,473.9	-871.7	5,482.8	0.62	0.36	-0.50	
LAST SVY										
16,180.0	93.32	359.06	10,869.7	5,540.7	-872.8	5,549.7	0.00	0.00	0.00	
Projection to TD @ 16180'MD, 6.6'FNL & 668.7'FWL										

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
- hit/miss target										
- Shape										
PBHL (Cypress 34 Fe	0.20	359.39	10,901.0	5,542.0	-897.0	461,631.00	653,477.00	32° 16' 6.878 N	103° 58' 13.867 W	
- actual wellpath misses target center by 39.6usft at 16179.8usft MD (10869.7 TVD, 5540.6 N, -872.8 E)										
- Rectangle (sides W100.0 H5,202.0 D30.0)										
LTP (Cypress 34 Fed	0.00	0.00	10,901.0	5,447.0	-896.0	461,536.00	653,478.00	32° 16' 5.938 N	103° 58' 13.859 W	
- actual wellpath misses target center by 35.7usft at 16085.0usft MD (10875.2 TVD, 5445.9 N, -871.3 E)										
- Point										
FTP (Cypress 34 Fed	0.00	0.01	10,944.0	341.0	-842.0	456,430.00	653,532.00	32° 15' 15.408 N	103° 58' 13.431 W	
- actual wellpath misses target center by 115.8usft at 11018.9usft MD (10845.1 TVD, 393.2 N, -872.3 E)										
- Point										

Company:	Tap Rock Resources, LLC	Local Co-ordinate Reference:	Well Cypress 34 Federal #233H
Project:	Eddy County, NM (NAD 83 NME)	TVD Reference:	KB @ 3119.5usft (H&P 245)
Site:	(Cypress) Sec-3_T-24-S_R-29-E	MD Reference:	KB @ 3119.5usft (H&P 245)
Well:	Cypress 34 Federal #233H	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 (°)
320.0	320.0	Rustler Anhydrite			
1,622.4	1,620.0	Top Salt			
2,960.3	2,954.0	Base Salt			
3,181.4	3,174.0	Delaware Mountain Gp			
3,181.4	3,174.0	Lamar			
3,206.5	3,199.0	Bell Canyon			
3,241.7	3,234.0	Ramsey Sand			
4,105.1	4,085.0	Cherry Canyon			
5,360.6	5,310.0	Brushy Canyon			
7,019.0	6,945.0	Bone Spring Lime			
7,074.0	7,000.0	Upper Avalon			
7,434.2	7,360.0	Middle Avalon			
7,884.4	7,810.0	Lower Avalon			
8,004.4	7,930.0	1st Bone Spring Sand			
8,269.4	8,195.0	2nd Bone Spring Carb			
8,629.5	8,555.0	2nd Bone Spring Sand			
9,124.6	9,050.0	3rd Bone Spring Carb			
9,934.6	9,860.0	3rd Bone Spring Sand			
10,194.6	10,120.0	3rd BS W Sand			
10,239.6	10,165.0	Wolfcamp A X Sand			
10,344.6	10,270.0	Wolfcamp A Y Sand			
10,434.6	10,360.0	Wolfcamp A Lower			
10,619.8	10,540.0	Wolfcamp B			
10,960.0	10,815.0	Wolfcamp B1			

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
10,958.0	10,813.8	341.2	-868.6	FTP @ 10958'MD, 100'FSL & 604.5'FWL
16,086.5	10,875.1	5,447.4	-871.3	LTP @ 16086.5'MD, 100'FNL & 668.9'FWL
16,113.0	10,873.6	5,473.9	-871.7	LAST SVY
16,180.0	10,869.7	5,540.7	-872.8	Projection to TD @ 16180'MD, 6.6'FNL & 668.7'FWL

Checked By: _____ Approved By: _____ Date: _____