

11/19/2020

State of New Mexico
Energy, Minerals and Natural Resources Department

Michelle Lujan Grisham
Governor

Sarah Cottrell Propst
Cabinet Secretary

Todd E. Leahy, JD, PhD
Deputy Cabinet Secretary

Adrienne E. Sandoval, Director
Oil Conservation Division



September 21, 2020

Ms. Kaitlyn A. Luck
kaluck@hollandhart.com

NON-STANDARD LOCATION

Administrative Order NSL-8076

Tap Rock Operating LLC. [OGRID 372043]
Cypress 34 Federal Well No. 212H
API No. 30-015-46824

Proposed Location

	<u>Footages</u>	<u>Unit/Lot</u>	<u>Sec.</u>	<u>Twsp</u>	<u>Range</u>	<u>County</u>
Surface	646 FNL & 2579 FEL	B	34	23S	29E	Eddy
First Take Point	100 FNL & 1650 FWL	C	34	23S	29E	Eddy
Last Take Point	100 FNL & 1650 FWL	N	34	23S	29E	Eddy
Terminus	30 FSL & 1650 FWL	N	34	23S	29E	Eddy

Proposed Horizontal Gas Units

<u>Description</u>	<u>Acres</u>	<u>Pool</u>	<u>Pool Code</u>
W/2 of Section 34	320	Purple Sage; Wolfcamp (GAS)	98220

Reference is made to your application received on August 26, 2020.

You have requested to complete this horizontal well as a gas well described above in the referenced pool or formation. This well is governed by special rules for the Purple Sage; Wolfcamp (Gas) Pool of and provides for 320-acre units, with wells located at least 330 feet from a unit outer boundary.

This well's completed interval is as close as 100 feet to the northern and southern edge of the boundary line. Encroachment will impact the following tract.

Section 27, encroachment to the SW/4
Section 3, 24S 29E encroachment to the NW/4

The Division understands you have given notice of this application to all operators or owners who are "affected persons," as defined in Paragraph (8) Subsection A of 19.15.2.7 NMAC, in all adjoining units towards which the proposed location encroaches.

Division understands you are seeking this unorthodox location due to its preferred well spacing plan for horizontal wells in the area and thereby prevent waste within the Wolfcamp formation underlying the W/2 of Section 34.

Your application has been filed under 19.15.16.15(C)(6) NMAC, 19.15.15.13 NMAC and 19.15.4.12 (A)(2) NMAC.

Per Subsection B of 19.15.15.13 NMAC, **Division approves this unorthodox location.**

The above approvals are subject to your following all other applicable Division rules.

Jurisdiction of this case is retained for the entry of further orders as Division deems necessary.



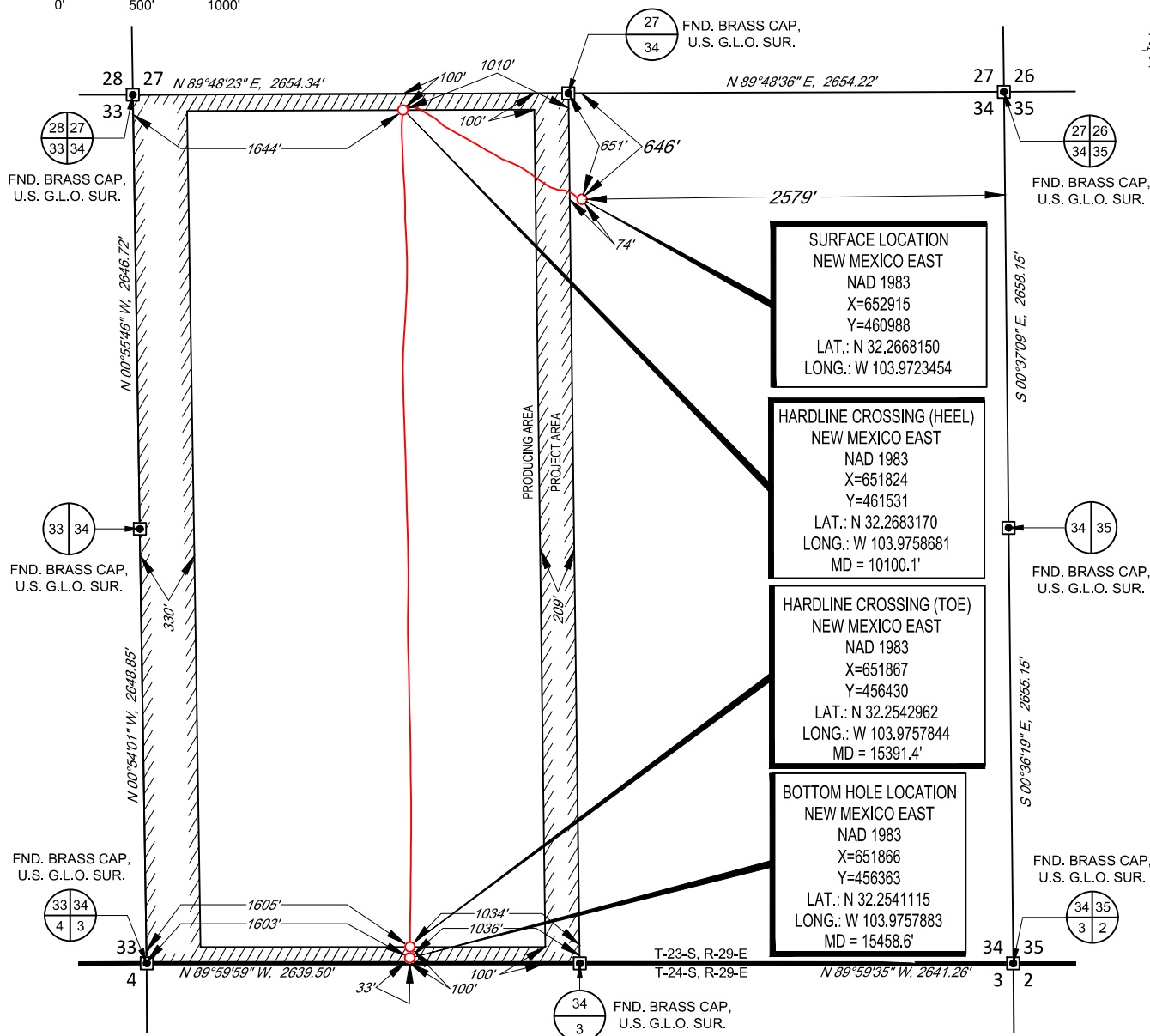
ADRIENNE E. SANDOVAL
Division Director

AES/lrl

cc: Oil Conservation Division – Artesia District Office
Bureau of Land Management – Carlsbad Field Office

SCALE: 1" = 1000'
0' 500' 1000'

SECTION 34, TOWNSHIP 23-S, RANGE 29-E, N.M.P.M.
EDDY COUNTY, NEW MEXICO



LEASE NAME & WELL NO.: CYPRESS 34 212H
SECTION 34 TWP 23-S RGE 29-E SURVEY N.M.P.M.
COUNTY EDDY STATE NM ELEVATION 3047'
DESCRIPTION 646' FNL & 2579' FEL



TOPOGRAPHIC
LOYALTY INNOVATION LEGACY

1400 EVERMAN PARKWAY, Ste. 146 • FT. WORTH, TEXAS 76140
TELEPHONE: (817) 744-7512 • FAX (817) 744-7554
2903 NORTH BIG SPRING • MIDLAND, TEXAS 79705
TELEPHONE: (432) 682-1653 OR (800) 767-1653 • FAX (432) 682-1743
WWW.TOPOGRAPHIC.COM

INTERNAL
PRE-COMPLETION
PLAT

CYPRESS 34 212H PRE-COMPLETION	REVISION:	
	INT	DATE
DATE: 09/14/2020		
FILE: C_CYPRESS_34_FEDERAL_212H		
DRAWN BY: A.V.F.		
SHEET: 1 OF 1		

NOTES:

1. ORIGINAL DOCUMENT SIZE: 8.5" X 11"
2. ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREIN ARE GRID BASED UPON THE NEW MEXICO COORDINATE SYSTEM OF 1983, EAST ZONE, U.S. SURVEY FEET.
3. THIS WELL LOCATION SHOWN HEREON HAS BEEN SURVEYED ON THE GROUND UNDER MY SUPERVISION AND PREPARED ACCORDING TO THE EVIDENCE FOUND AT THE TIME OF SURVEY, AND DATA PROVIDED BY TAP ROCK OPERATING, LLC. THIS CERTIFICATION IS MADE AND LIMITED TO THOSE PERSONS OR ENTITIES SHOWN ON THE FACE OF THIS PLAT AND IS NON-TRANSFERABLE. THIS SURVEY IS CERTIFIED FOR THIS TRANSACTION ONLY.



Tap Rock Resources, LLC

**Eddy County, NM (NAD 83 NME)
(Cypress) Sec-3_T-24-S_R-29-E
Cypress 34 Federal #212H**

OWB

Design: AWB

Standard Survey Report

10 September, 2020





Operator: Taprock Resources LLC
Well Name: Cypress 34 Fed Com #212H
County: Eddy
State: New Mexico
Rig Name: H&P 388
API: 30-015-46824

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 – 15,390' MD
Projection to Bit: 15,460' MD
Dates Performed: 08/03/2020 – 09/09/2020
Type of Survey: MWD

Sincerely,

A handwritten signature in blue ink, appearing to read "JB", with a stylized flourish extending to the right.

James Burleson
Vice President of MWD Operations
Intrepid Directional Drilling Specialists



Company:	Tap Rock Resources, LLC	Local Co-ordinate Reference:	Well Cypress 34 Federal #212H
Project:	Eddy County, NM (NAD 83 NME)	TVD Reference:	KB @ 3073.0usft (H&P 388)
Site:	(Cypress) Sec-3_T-24-S_R-29-E	MD Reference:	KB @ 3073.0usft (H&P 388)
Well:	Cypress 34 Federal #212H	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 #212H		
Well Position	+N/-S	0.0 usft	Northing:
	+E/-W	0.0 usft	Easting:
Position Uncertainty		0.0 usft	Wellhead Elevation:
			Latitude:
			Longitude:
			Ground Level:

Wellbore	OWB		
Magnetics	Model Name	Sample Date	Declination (°)
	HDGM	2020/08/05	6.85
			Dip Angle (°)
			59.96
			Field Strength (nT)
			47,806.83121287

Design	AWB		
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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	179.09

Survey Program	Date	2020/09/10		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
180.0	15,460.0	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	0.97	229.46	180.0	-1.0	-1.2	1.0	0.54	0.54	0.00
241.0	0.88	182.18	241.0	-1.8	-1.6	1.8	1.22	-0.15	-77.51
273.0	0.62	180.36	273.0	-2.2	-1.6	2.2	0.81	-0.81	-5.69
Rustler Anhydrite									
323.0	0.22	168.91	323.0	-2.6	-1.6	2.6	0.81	-0.80	-22.91
412.0	0.62	259.87	412.0	-2.8	-2.0	2.8	0.74	0.45	102.20
500.0	0.40	288.00	500.0	-2.8	-2.8	2.8	0.37	-0.25	31.97
594.0	0.62	322.36	594.0	-2.3	-3.4	2.3	0.39	0.23	36.55
633.0	0.43	318.63	633.0	-2.0	-3.6	2.0	0.50	-0.49	-9.56

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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)
Top Salt									
685.0	0.18	301.27	685.0	-1.9	-3.8	1.8	0.50	-0.48	-33.40
777.0	0.22	284.83	777.0	-1.7	-4.1	1.7	0.08	0.04	-17.87
867.0	0.53	332.29	867.0	-1.3	-4.5	1.2	0.46	0.34	52.73
960.0	0.40	9.82	960.0	-0.6	-4.6	0.5	0.35	-0.14	40.35
1,054.0	0.48	304.52	1,054.0	-0.1	-4.9	0.0	0.51	0.09	-69.47
1,149.0	0.48	228.14	1,149.0	-0.1	-5.5	0.0	0.62	0.00	-80.40
1,244.0	0.53	233.68	1,244.0	-0.6	-6.2	0.5	0.07	0.05	5.83
1,338.0	0.79	242.47	1,337.9	-1.2	-7.1	1.1	0.30	0.28	9.35
1,433.0	1.32	236.14	1,432.9	-2.1	-8.6	2.0	0.57	0.56	-6.66
1,528.0	0.92	239.39	1,527.9	-3.1	-10.1	2.9	0.43	-0.42	3.42
1,622.0	1.10	262.25	1,621.9	-3.6	-11.7	3.4	0.47	0.19	24.32
1,717.0	1.54	284.75	1,716.9	-3.4	-13.8	3.2	0.71	0.46	23.68
1,812.0	2.37	299.86	1,811.8	-2.1	-16.8	1.8	1.02	0.87	15.91
1,906.0	4.13	305.31	1,905.7	0.8	-21.2	-1.2	1.90	1.87	5.80
2,001.0	4.79	310.23	2,000.4	5.4	-27.0	-5.8	0.80	0.69	5.18
2,096.0	4.75	321.31	2,095.0	11.0	-32.5	-11.5	0.97	-0.04	11.66
2,190.0	4.66	327.55	2,188.7	17.3	-37.0	-17.8	0.55	-0.10	6.64
2,285.0	5.58	315.68	2,283.4	23.8	-42.3	-24.5	1.47	0.97	-12.49
2,380.0	7.82	302.85	2,377.7	30.6	-50.9	-31.4	2.82	2.36	-13.51
2,475.0	7.78	297.58	2,471.8	37.1	-62.1	-38.1	0.75	-0.04	-5.55
2,569.0	7.52	294.59	2,565.0	42.6	-73.3	-43.8	0.51	-0.28	-3.18
2,664.0	11.21	290.20	2,658.7	48.4	-87.6	-49.8	3.95	3.88	-4.62
2,759.0	10.11	283.16	2,752.1	53.5	-104.4	-55.1	1.79	-1.16	-7.41
2,853.0	8.79	269.28	2,844.8	55.3	-119.6	-57.2	2.79	-1.40	-14.77
2,876.5	8.93	270.85	2,868.0	55.3	-123.2	-57.2	1.20	0.61	6.70
Base Salt									
2,948.0	9.41	275.34	2,938.6	55.9	-134.6	-58.0	1.20	0.67	6.27
3,043.0	9.80	287.91	3,032.3	59.1	-150.1	-61.5	2.24	0.41	13.23
3,089.3	8.69	287.25	3,078.0	61.4	-157.1	-63.8	2.40	-2.39	-1.43
Delaware Mountain Gp									
3,094.4	8.57	287.16	3,083.0	61.6	-157.9	-64.1	2.40	-2.39	-1.63
Lamar									
3,126.0	7.82	286.59	3,114.3	62.9	-162.2	-65.5	2.40	-2.38	-1.82
3,134.8	7.77	286.46	3,123.0	63.2	-163.3	-65.8	0.62	-0.59	-1.48
Bell Canyon									
3,165.0	7.59	286.00	3,153.0	64.4	-167.2	-67.0	0.62	-0.59	-1.52
Ramsey Sand									
3,215.0	7.30	285.19	3,202.5	66.1	-173.4	-68.8	0.62	-0.58	-1.62
3,309.0	9.10	292.13	3,295.6	70.5	-186.1	-73.4	2.18	1.91	7.38
3,404.0	12.13	301.01	3,388.9	78.4	-201.6	-81.6	3.62	3.19	9.35
3,499.0	13.49	303.64	3,481.6	89.7	-219.4	-93.2	1.56	1.43	2.77
3,594.0	14.02	304.70	3,573.9	102.4	-238.1	-106.2	0.62	0.56	1.12
3,688.0	14.33	305.58	3,665.0	115.7	-256.9	-119.7	0.40	0.33	0.94

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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)
3,783.0	14.77	305.75	3,756.9	129.6	-276.3	-133.9	0.47	0.46	0.18
3,878.0	15.74	306.10	3,848.6	144.2	-296.5	-148.9	1.03	1.02	0.37
3,973.0	14.24	305.22	3,940.4	158.6	-316.5	-163.6	1.60	-1.58	-0.93
4,042.7	13.75	304.64	4,008.0	168.2	-330.3	-173.5	0.73	-0.70	-0.83
Cherry Canyon									
4,067.0	13.58	304.43	4,031.6	171.5	-335.0	-176.8	0.73	-0.70	-0.87
4,162.0	14.24	304.52	4,123.8	184.4	-353.9	-190.0	0.70	0.69	0.09
4,257.0	13.32	300.57	4,216.1	196.6	-372.9	-202.5	1.38	-0.97	-4.16
4,352.0	12.00	294.59	4,308.8	206.3	-391.3	-212.5	1.96	-1.39	-6.29
4,446.0	9.63	292.83	4,401.1	213.4	-407.5	-219.8	2.55	-2.52	-1.87
4,541.0	8.53	291.07	4,494.9	219.0	-421.4	-225.7	1.19	-1.16	-1.85
4,636.0	8.40	290.37	4,588.9	224.0	-434.4	-230.8	0.17	-0.14	-0.74
4,730.0	8.18	291.16	4,681.9	228.8	-447.1	-235.8	0.26	-0.23	0.84
4,825.0	8.22	291.25	4,775.9	233.7	-459.7	-240.9	0.04	0.04	0.09
4,920.0	8.44	291.87	4,869.9	238.7	-472.5	-246.2	0.25	0.23	0.65
5,014.0	8.44	298.63	4,962.9	244.6	-485.0	-252.3	1.05	0.00	7.19
5,109.0	8.75	301.18	5,056.8	251.7	-497.3	-259.5	0.52	0.33	2.68
5,204.0	8.84	300.48	5,150.7	259.1	-509.8	-267.2	0.15	0.09	-0.74
5,216.4	8.85	300.48	5,163.0	260.1	-511.4	-268.2	0.04	0.04	0.00
Brushy Canyon									
5,298.0	8.88	300.48	5,243.6	266.5	-522.2	-274.7	0.04	0.04	0.00
5,393.0	8.97	299.34	5,337.4	273.8	-535.0	-282.3	0.21	0.09	-1.20
5,488.0	8.66	297.93	5,431.3	280.8	-547.8	-289.5	0.40	-0.33	-1.48
5,582.0	8.18	297.93	5,524.3	287.2	-560.0	-296.1	0.51	-0.51	0.00
5,677.0	7.65	297.49	5,618.4	293.3	-571.5	-302.4	0.56	-0.56	-0.46
5,772.0	8.79	300.13	5,712.4	299.9	-583.4	-309.1	1.26	1.20	2.78
5,867.0	9.27	301.80	5,806.3	307.6	-596.2	-317.0	0.58	0.51	1.76
5,904.2	9.02	301.57	5,843.0	310.7	-601.2	-320.2	0.69	-0.68	-0.62
Bone Spring Lime									
5,962.0	8.62	301.18	5,900.1	315.3	-608.8	-324.9	0.69	-0.68	-0.67
6,057.0	8.13	300.48	5,994.1	322.4	-620.7	-332.2	0.53	-0.52	-0.74
6,151.0	8.84	299.51	6,087.1	329.3	-632.7	-339.3	0.77	0.76	-1.03
6,246.0	9.98	299.07	6,180.8	336.9	-646.2	-347.1	1.20	1.20	-0.46
6,341.0	10.07	300.92	6,274.3	345.2	-660.6	-355.6	0.35	0.09	1.95
6,435.0	11.12	299.95	6,366.7	353.9	-675.5	-364.6	1.13	1.12	-1.03
6,530.0	11.82	298.46	6,459.8	363.1	-692.0	-374.1	0.80	0.74	-1.57
6,625.0	11.21	298.11	6,552.9	372.1	-708.7	-383.3	0.65	-0.64	-0.37
6,720.0	11.30	299.51	6,646.1	381.0	-724.9	-392.5	0.30	0.09	1.47
6,814.0	10.90	299.07	6,738.3	389.9	-740.7	-401.6	0.43	-0.43	-0.47
6,909.0	10.68	298.63	6,831.6	398.5	-756.3	-410.4	0.25	-0.23	-0.46
6,991.8	10.45	300.16	6,913.0	405.9	-769.5	-418.1	0.44	-0.27	1.85
Upper Avalon									
7,004.0	10.42	300.39	6,925.0	407.0	-771.4	-419.2	0.44	-0.27	1.89
7,099.0	9.80	300.83	7,018.6	415.5	-785.8	-428.0	0.66	-0.65	0.46

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7,193.0	8.79	297.14	7,111.3	422.9	-799.0	-435.6	1.25	-1.07	-3.93
7,288.0	9.32	298.81	7,205.1	429.9	-812.2	-442.8	0.62	0.56	1.76
7,367.0	9.87	300.23	7,283.0	436.4	-823.7	-449.4	0.76	0.70	1.80
Middle Avalon									
7,382.0	9.98	300.48	7,297.8	437.7	-825.9	-450.8	0.76	0.71	1.68
7,477.0	9.76	303.55	7,391.4	446.4	-839.7	-459.6	0.60	-0.23	3.23
7,572.0	8.88	311.38	7,485.2	455.7	-851.9	-469.1	1.62	-0.93	8.24
7,667.0	9.32	311.64	7,579.0	465.6	-863.2	-479.3	0.47	0.46	0.27
7,752.2	9.36	311.80	7,663.0	474.8	-873.5	-488.6	0.05	0.04	0.19
Lower Avalon									
7,761.0	9.36	311.82	7,671.7	475.8	-874.6	-489.6	0.05	0.04	0.19
7,856.0	9.10	312.17	7,765.5	486.0	-885.9	-500.0	0.28	-0.27	0.37
7,914.3	10.03	304.90	7,823.0	492.0	-893.5	-506.1	2.61	1.59	-12.46
1st Bone Spring Sand									
7,951.0	10.68	301.01	7,859.1	495.5	-899.0	-509.8	2.61	1.78	-10.61
8,046.0	10.90	299.07	7,952.4	504.4	-914.4	-518.9	0.45	0.23	-2.04
8,140.0	9.98	300.21	8,044.8	512.9	-929.2	-527.6	1.00	-0.98	1.21
8,204.1	9.26	301.92	8,108.0	518.4	-938.4	-533.2	1.21	-1.12	2.68
2nd Bone Spring Carb									
8,235.0	8.92	302.85	8,138.6	521.0	-942.5	-535.9	1.21	-1.11	2.99
8,330.0	9.85	301.97	8,232.3	529.3	-955.6	-544.4	0.99	0.98	-0.93
8,424.0	10.02	299.69	8,324.9	537.6	-969.5	-552.9	0.46	0.18	-2.43
8,518.5	9.54	298.73	8,418.0	545.4	-983.5	-561.0	0.53	-0.51	-1.02
2nd Bone Spring Sand									
8,519.0	9.54	298.72	8,418.5	545.5	-983.6	-561.0	0.53	-0.50	-1.07
8,614.0	8.26	295.64	8,512.3	552.2	-996.6	-568.0	1.44	-1.35	-3.24
8,708.0	8.00	284.83	8,605.4	556.8	-1,009.1	-572.8	1.65	-0.28	-11.50
8,803.0	8.88	279.38	8,699.4	559.7	-1,022.7	-575.9	1.25	0.93	-5.74
8,898.0	7.78	280.70	8,793.4	562.1	-1,036.2	-578.5	1.18	-1.16	1.39
8,992.0	7.12	283.16	8,886.6	564.6	-1,048.2	-581.2	0.78	-0.70	2.62
9,069.0	6.69	283.38	8,963.0	566.7	-1,057.2	-583.4	0.56	-0.56	0.28
3rd Bone Spring Carb									
9,087.0	6.59	283.43	8,980.9	567.2	-1,059.2	-584.0	0.56	-0.56	0.30
9,182.0	5.67	276.48	9,075.4	569.0	-1,069.2	-585.9	1.24	-0.97	-7.32
9,276.0	4.26	269.10	9,169.0	569.5	-1,077.3	-586.5	1.64	-1.50	-7.85
9,371.0	2.90	287.91	9,263.8	570.2	-1,083.1	-587.3	1.87	-1.43	19.80
9,466.0	2.33	289.41	9,358.7	571.5	-1,087.2	-588.7	0.60	-0.60	1.58
9,561.0	2.02	272.18	9,453.7	572.2	-1,090.7	-589.5	0.76	-0.33	-18.14
9,655.0	0.48	231.13	9,547.6	572.1	-1,092.6	-589.3	1.80	-1.64	-43.67
9,750.0	0.57	132.34	9,642.6	571.5	-1,092.6	-588.8	0.84	0.09	-103.99
9,814.0	0.31	116.52	9,706.6	571.2	-1,092.2	-588.5	0.44	-0.41	-24.72
9,870.4	0.37	102.48	9,763.0	571.1	-1,091.9	-588.4	0.18	0.11	-24.91
3rd Bone Spring Sand									
9,893.0	0.40	98.15	9,785.6	571.1	-1,091.8	-588.3	0.18	0.13	-19.13
9,908.0	0.53	85.32	9,800.6	571.1	-1,091.6	-588.3	1.11	0.87	-85.53

Company:	Tap Rock Resources, LLC	Local Co-ordinate Reference:	Well Cypress 34 Federal #212H
Project:	Eddy County, NM (NAD 83 NME)	TVD Reference:	KB @ 3073.0usft (H&P 388)
Site:	(Cypress) Sec-3_T-24-S_R-29-E	MD Reference:	KB @ 3073.0usft (H&P 388)
Well:	Cypress 34 Federal #212H	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)
10,003.0	7.12	177.52	9,895.4	565.2	-1,090.9	-582.5	7.54	6.94	97.05
10,098.0	19.25	179.89	9,987.7	543.6	-1,090.7	-560.8	12.78	12.77	2.49
10,100.4	19.45	180.17	9,990.0	542.8	-1,090.7	-560.0	9.26	8.41	11.67
FTP @ 10100.4'MD, 100'FNL & 1009.4'FEL									
10,152.1	23.88	185.08	10,038.0	523.7	-1,091.6	-541.0	9.26	8.57	9.51
3rd BS W Sand									
10,190.9	27.29	187.76	10,073.0	507.1	-1,093.5	-524.4	9.26	8.77	6.90
Wolfcamp A X Sand									
10,193.0	27.47	187.89	10,074.9	506.1	-1,093.6	-523.4	9.26	8.83	6.06
10,288.0	36.70	180.86	10,155.3	455.9	-1,097.1	-473.3	10.47	9.72	-7.40
10,323.2	39.40	180.25	10,183.0	434.2	-1,097.3	-451.6	7.75	7.68	-1.72
Wolfcamp A Y Sand									
10,383.0	44.00	179.37	10,227.6	394.5	-1,097.1	-411.8	7.75	7.69	-1.48
10,478.0	54.15	176.11	10,289.8	322.9	-1,094.2	-340.2	10.99	10.68	-3.43
10,501.1	56.08	176.63	10,303.0	304.0	-1,093.0	-321.3	8.57	8.37	2.27
Wolfcamp A Lower									
10,573.0	62.11	178.13	10,339.9	242.4	-1,090.2	-259.6	8.57	8.38	2.08
10,668.0	68.97	176.64	10,379.2	156.0	-1,086.2	-173.3	7.36	7.22	-1.57
10,763.0	76.09	176.20	10,407.7	65.6	-1,080.5	-82.8	7.51	7.49	-0.46
10,858.0	80.26	180.16	10,427.2	-27.3	-1,077.6	10.1	5.99	4.39	4.17
10,953.0	93.32	178.13	10,432.5	-121.9	-1,076.2	104.8	13.91	13.75	-2.14
11,010.0	95.30	177.08	10,428.2	-178.7	-1,073.8	161.6	3.93	3.47	-1.84
11,105.0	95.82	176.90	10,419.0	-273.1	-1,068.8	256.1	0.58	0.55	-0.19
11,201.0	94.07	179.01	10,410.8	-368.7	-1,065.4	351.7	2.85	-1.82	2.20
11,294.0	91.82	180.77	10,406.0	-461.5	-1,065.3	444.6	3.07	-2.42	1.89
11,387.0	90.68	181.91	10,403.9	-554.5	-1,067.4	537.5	1.73	-1.23	1.23
11,480.0	89.80	183.14	10,403.6	-647.4	-1,071.5	630.3	1.63	-0.95	1.32
11,576.0	90.29	183.76	10,403.5	-743.2	-1,077.3	726.0	0.82	0.51	0.65
11,671.0	89.93	183.23	10,403.3	-838.0	-1,083.1	820.7	0.67	-0.38	-0.56
11,766.0	88.75	182.97	10,404.4	-932.9	-1,088.2	915.5	1.27	-1.24	-0.27
11,861.0	86.46	179.37	10,408.4	-1,027.8	-1,090.2	1,010.3	4.49	-2.41	-3.79
11,956.0	87.47	179.28	10,413.4	-1,122.6	-1,089.1	1,105.2	1.07	1.06	-0.09
12,051.0	87.34	178.13	10,417.7	-1,217.5	-1,086.9	1,200.1	1.22	-0.14	-1.21
12,147.0	89.19	177.26	10,420.6	-1,313.4	-1,083.1	1,296.0	2.13	1.93	-0.91
12,242.0	89.05	178.40	10,422.1	-1,408.3	-1,079.5	1,391.0	1.21	-0.15	1.20
12,337.0	88.35	178.40	10,424.2	-1,503.2	-1,076.8	1,485.9	0.74	-0.74	0.00
12,433.0	89.05	178.40	10,426.4	-1,599.2	-1,074.1	1,581.9	0.73	0.73	0.00
12,528.0	89.32	178.49	10,427.7	-1,694.1	-1,071.5	1,676.9	0.30	0.28	0.09
12,623.0	89.63	178.31	10,428.6	-1,789.1	-1,068.9	1,771.9	0.38	0.33	-0.19
12,718.0	89.93	178.22	10,429.0	-1,884.0	-1,066.0	1,866.9	0.33	0.32	-0.09
12,813.0	89.98	178.31	10,429.1	-1,979.0	-1,063.1	1,961.9	0.11	0.05	0.09
12,908.0	90.64	178.75	10,428.5	-2,074.0	-1,060.7	2,056.9	0.83	0.69	0.46
13,003.0	92.00	179.01	10,426.4	-2,168.9	-1,058.9	2,151.8	1.46	1.43	0.27
13,098.0	93.32	179.19	10,421.9	-2,263.8	-1,057.4	2,246.7	1.40	1.39	0.19

Company:	Tap Rock Resources, LLC	Local Co-ordinate Reference:	Well Cypress 34 Federal #212H
Project:	Eddy County, NM (NAD 83 NME)	TVD Reference:	KB @ 3073.0usft (H&P 388)
Site:	(Cypress) Sec-3_T-24-S_R-29-E	MD Reference:	KB @ 3073.0usft (H&P 388)
Well:	Cypress 34 Federal #212H	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)
13,193.0	91.16	180.07	10,418.2	-2,358.7	-1,056.7	2,341.6	2.45	-2.27	0.93
13,288.0	91.03	181.12	10,416.4	-2,453.7	-1,057.7	2,436.6	1.11	-0.14	1.11
13,383.0	88.44	181.12	10,416.9	-2,548.7	-1,059.6	2,531.5	2.73	-2.73	0.00
13,478.0	87.82	179.19	10,420.0	-2,643.6	-1,059.8	2,626.4	2.13	-0.65	-2.03
13,573.0	88.88	178.66	10,422.7	-2,738.6	-1,058.1	2,721.4	1.25	1.12	-0.56
13,666.0	89.76	178.66	10,423.8	-2,831.5	-1,055.9	2,814.4	0.95	0.95	0.00
13,757.0	90.95	178.93	10,423.2	-2,922.5	-1,054.0	2,905.4	1.34	1.31	0.30
13,852.0	90.33	178.57	10,422.2	-3,017.5	-1,051.9	3,000.4	0.75	-0.65	-0.38
13,947.0	90.33	178.66	10,421.6	-3,112.4	-1,049.6	3,095.4	0.09	0.00	0.09
14,041.0	89.67	178.57	10,421.6	-3,206.4	-1,047.3	3,189.4	0.71	-0.70	-0.10
14,136.0	90.99	179.10	10,421.1	-3,301.4	-1,045.4	3,284.4	1.50	1.39	0.56
14,231.0	90.07	179.19	10,420.2	-3,396.4	-1,044.0	3,379.4	0.97	-0.97	0.09
14,326.0	89.76	179.19	10,420.3	-3,491.4	-1,042.6	3,474.4	0.33	-0.33	0.00
14,417.0	88.57	178.93	10,421.7	-3,582.3	-1,041.2	3,565.3	1.34	-1.31	-0.29
14,512.0	89.89	179.28	10,422.9	-3,677.3	-1,039.7	3,660.3	1.44	1.39	0.37
14,608.0	92.22	180.42	10,421.2	-3,773.3	-1,039.4	3,756.3	2.70	2.43	1.19
14,703.0	93.36	180.51	10,416.6	-3,868.2	-1,040.2	3,851.2	1.20	1.20	0.09
14,799.0	91.21	180.51	10,412.7	-3,964.1	-1,041.0	3,947.1	2.24	-2.24	0.00
14,894.0	91.30	180.77	10,410.6	-4,059.1	-1,042.1	4,042.0	0.29	0.09	0.27
14,986.0	89.36	180.51	10,410.1	-4,151.0	-1,043.1	4,134.0	2.13	-2.11	-0.28
15,081.0	87.12	180.60	10,413.0	-4,246.0	-1,044.0	4,228.9	2.36	-2.36	0.09
15,176.0	89.49	180.42	10,415.8	-4,340.9	-1,044.9	4,323.8	2.50	2.49	-0.19
15,269.0	90.68	180.86	10,415.7	-4,433.9	-1,045.9	4,416.8	1.36	1.28	0.47
15,364.0	90.51	180.86	10,414.7	-4,528.9	-1,047.4	4,511.7	0.18	-0.18	0.00
15,390.0	90.73	180.86	10,414.4	-4,554.9	-1,047.7	4,537.7	0.85	0.85	0.00
LAST SVY									
15,392.8	90.73	180.86	10,414.4	-4,557.7	-1,047.8	4,540.5	0.00	0.00	0.00
LTP @ 15392.8'MD, 100'FSL & 1033.5'FEL									
15,460.0	90.73	180.86	10,413.5	-4,624.9	-1,048.8	4,607.7	0.00	0.00	0.00
Projection to TD @ 15460'MD, 32.8'FSL & 1035.4'FEL									

Company:	Tap Rock Resources, LLC	Local Co-ordinate Reference:	Well Cypress 34 Federal #212H
Project:	Eddy County, NM (NAD 83 NME)	TVD Reference:	KB @ 3073.0usft (H&P 388)
Site:	(Cypress) Sec-3_T-24-S_R-29-E	MD Reference:	KB @ 3073.0usft (H&P 388)
Well:	Cypress 34 Federal #212H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	AWB	Database:	EDM 5000.15 Single User Db

Design Targets

Target Name	- hit/miss target	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- Shape		(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)		
LTP (Cypress 34 Fed	- actual wellpath misses target center by 44.1usft at 15392.4usft MD (10414.4 TVD, -4557.3 N, -1047.8 E)	0.00	0.00	10,419.7	-4,558.0	-1,004.0	456,430.00	651,911.00	32° 15' 15.462 N	103° 58' 32.308 W
- Point										
PBHL (Cypress 34 Fe	- actual wellpath misses target center by 46.3usft at 15460.0usft MD (10413.5 TVD, -4624.9 N, -1048.8 E)	-0.30	179.09	10,419.7	-4,628.0	-1,003.0	456,360.00	651,912.00	32° 15' 14.769 N	103° 58' 32.299 W
- Rectangle (sides W100.0 H3,111.5 D30.0)										
1500'VS (Cypress 34	- actual wellpath misses target center by 26.6usft at 12351.6usft MD (10424.6 TVD, -1517.8 N, -1076.4 E)	0.00	179.09	10,436.0	-1,516.9	-1,052.3	459,471.10	651,862.66	32° 15' 45.558 N	103° 58' 32.753 W
- Rectangle (sides W100.0 H2,061.0 D30.0)										
FTP (Cypress 34 Fed	- actual wellpath misses target center by 253.4usft at 10407.8usft MD (10245.1 TVD, 376.8 N, -1096.8 E)	0.00	0.00	10,436.0	543.0	-1,085.0	461,531.00	651,830.00	32° 16' 5.943 N	103° 58' 33.054 W
- Point										

Formations

Measured Depth	Vertical Depth	Name	Lithology	Dip	Dip Direction
(usft)	(usft)			(°)	(°)
273.0	273.0	Rustler Anhydrite			
633.0	633.0	Top Salt			
2,876.5	2,868.0	Base Salt			
3,089.3	3,078.0	Delaware Mountain Gp			
3,094.4	3,083.0	Lamar			
3,134.8	3,123.0	Bell Canyon			
3,165.0	3,153.0	Ramsey Sand			
4,042.7	4,008.0	Cherry Canyon			
5,216.4	5,163.0	Brushy Canyon			
5,904.2	5,843.0	Bone Spring Lime			
6,991.8	6,913.0	Upper Avalon			
7,367.0	7,283.0	Middle Avalon			
7,752.2	7,663.0	Lower Avalon			
7,914.3	7,823.0	1st Bone Spring Sand			
8,204.1	8,108.0	2nd Bone Spring Carb			
8,518.5	8,418.0	2nd Bone Spring Sand			
9,069.0	8,963.0	3rd Bone Spring Carb			
9,870.4	9,763.0	3rd Bone Spring Sand			
10,152.1	10,038.0	3rd BS W Sand			
10,190.9	10,073.0	Wolfcamp A X Sand			
10,323.2	10,183.0	Wolfcamp A Y Sand			
10,501.1	10,303.0	Wolfcamp A Lower			



Company:	Tap Rock Resources, LLC	Local Co-ordinate Reference:	Well Cypress 34 Federal #212H
Project:	Eddy County, NM (NAD 83 NME)	TVD Reference:	KB @ 3073.0usft (H&P 388)
Site:	(Cypress) Sec-3_T-24-S_R-29-E	MD Reference:	KB @ 3073.0usft (H&P 388)
Well:	Cypress 34 Federal #212H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	AWB	Database:	EDM 5000.15 Single User Db

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
10,100.4	9,990.0	542.8	-1,090.7	FTP @ 10100.4'MD, 100'FNL & 1009.4'FEL
15,390.0	10,414.4	-4,554.9	-1,047.7	LAST SVY
15,392.8	10,414.4	-4,557.7	-1,047.8	LTP @ 15392.8'MD, 100'FSL & 1033.5'FEL
15,460.0	10,413.5	-4,624.9	-1,048.8	Projection to TD @ 15460'MD, 32.8'FSL & 1035.4'FEL

Checked By: _____ Approved By: _____ Date: _____