

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

FORM C-102

Revised August 1, 2011

Submit one copy to appropriate

District Office

RECEIVED

☒ AMENDED REPORT
☒ AS DRILLED

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number	² Pool Code	³ Pool Name
⁴ Property Code	⁵ Property Name PLINY THE ELDER 23S27E0506	⁶ Well Number 201H
⁷ GRID No.	⁸ Operator Name TAP ROCK OPERATING, LLC.	⁹ Elevation 3150'

¹⁰Surface Location

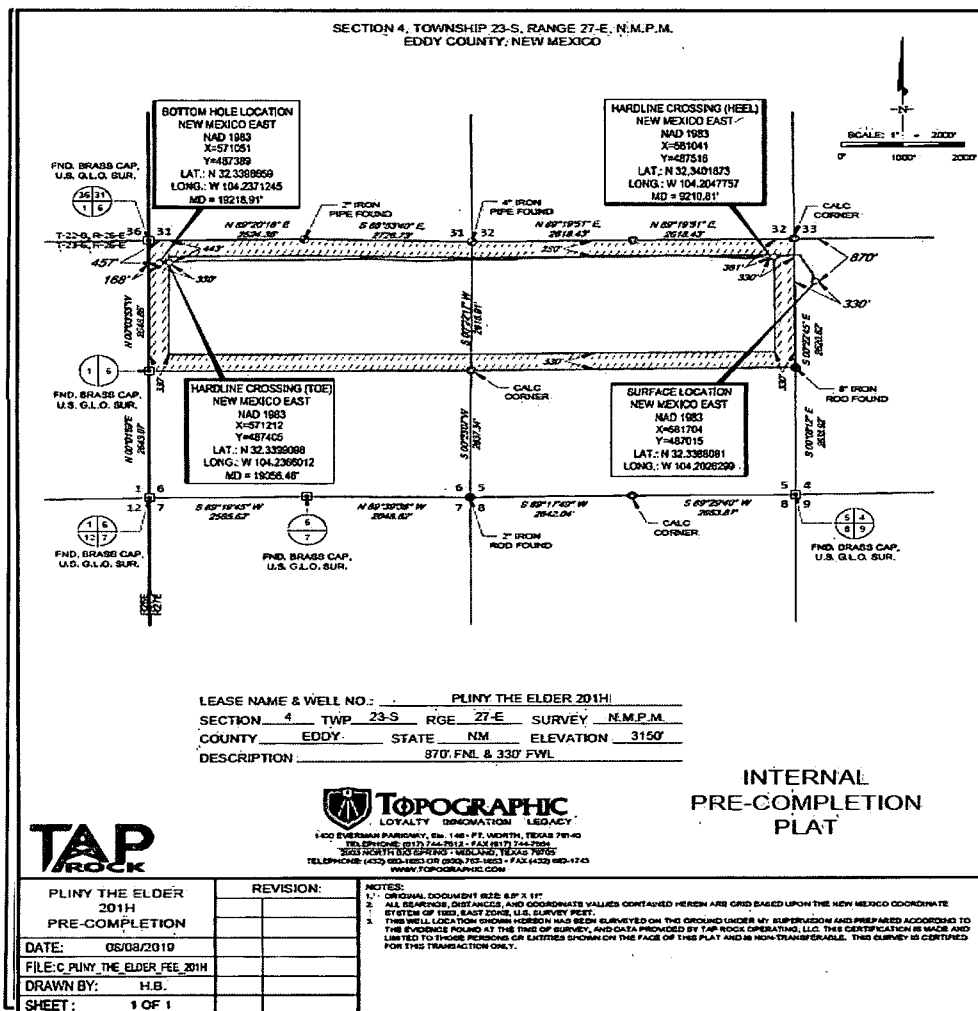
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
4	4	23-S	27-E	-	870'	NORTH	330'	WEST	EDDY

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
4	6	23-S	27-E	-	383'	NORTH	200'	WEST	EDDY

¹² Dedicated Acres 635.88	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.



¹⁷OPERATOR 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 undivided 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.

Signature: *Rachelle Reese* Date: 6/1/18

Printed Name: Rachelle Reese

E-mail Address: rreese@taprock.com

¹⁸SURVEYOR 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.

Date of Survey: 05/07/2018
Signature and Seal of Professional Surveyor

Stan W. Lloyd
Certificate Number



NM OIL CONSERVATION
ARTESIA DISTRICT

OCT 17 2019

RECEIVED

Tap Rock Resources, LLC

Eddy County, NM (NAD 83 NME)

(Pliny The Elder Fee) Sec-4_T-23-S_R-27-E

Pliny The Elder #201H

OWB

Design: AWB

Standard Survey Report

19 July, 2019

INTREPID



Intrepid
Survey Report



Company:	Tap Rock Resources, LLC	Local Co-ordinate Reference:	Well Pliny The Elder #201H
Project:	Eddy County, NM (NAD 83 NME)	TVD Reference:	KB @ 3176.5usft
Site:	(Pliny The Elder Fee) Sec-4_T-23-S_R-27-E	MD Reference:	KB @ 3176.5usft
Well:	Pliny The Elder #201H	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	(Pliny The Elder Fee) Sec-4_T-23-S_R-27-E		
Site Position:	Northing:	485,612.00 usft	Latitude: 32° 20' 5.822 N
From: Map	Easting:	581,950.00 usft	Longitude: 104° 12' 6.624 W
Position Uncertainty: 0.0 usft	Slot Radius: 13-3/16 "	Grid Convergence: 0.07 °	

Well	Pliny The Elder #201H		
Well Position +N/-S	0.0 usft	Northing: 487,015.00 usft	Latitude: 32° 20' 19.709 N
+E/-W	0.0 usft	Easting: 581,704.00 usft	Longitude: 104° 12' 9.471 W
Position Uncertainty 0.0 usft	Wellhead Elevation: usft	Ground Level: 3,150.0 usft	

Wellbore	OWB		
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Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	06/28/19	7.04	60.04	47,732.26330272

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	269.64

Survey Program	Date	07/19/19		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
157.0	569.0	MWD (OWB)	MWD	OWSG MWD - Standard
679.0	19,220.0	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
157.0	0.60	63.10	157.0	0.4	0.7	-0.7	0.38	0.38	0.00
247.0	0.70	92.60	247.0	0.6	1.7	-1.7	0.38	0.11	32.78
339.0	1.00	354.70	339.0	1.3	2.2	-2.2	1.41	0.33	-106.41
428.0	1.20	30.10	428.0	2.9	2.6	-2.6	0.78	0.22	39.78
518.0	1.90	12.60	517.9	5.2	3.4	-3.4	0.93	0.78	-19.44
569.0	1.80	344.30	568.9	6.8	3.4	-3.4	1.78	-0.20	-55.49
679.0	2.46	326.19	678.8	10.4	1.6	-1.6	0.85	0.60	-16.46
772.0	2.95	322.94	771.7	14.0	-1.0	0.9	0.55	0.53	-3.49
864.0	3.47	328.21	863.6	18.2	-3.9	3.8	0.65	0.57	5.73



Intrepid
Survey Report



Company:	Tap Rock Resources, LLC	Local Co-ordinate Reference:	Well Pliny The Elder #201H
Project:	Eddy County, NM (NAD 83 NME)	TVD Reference:	KB @ 3176.5usft
Site:	(Pliny The Elder Fee) Sec-4_T-23-S_R-27-E	MD Reference:	KB @ 3176.5usft
Well:	Pliny The Elder #201H	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)
959.0	4.48	330.14	958.4	23.9	-7.2	7.1	1.07	1.06	2.03
1,054.0	4.70	327.16	1,053.1	30.4	-11.2	11.0	0.34	0.23	-3.14
1,148.0	4.88	324.78	1,146.7	36.9	-15.6	15.4	0.29	0.19	-2.53
1,243.0	4.22	330.85	1,241.4	43.2	-19.6	19.4	0.86	-0.69	6.39
1,338.0	3.91	333.57	1,336.2	49.2	-22.8	22.5	0.38	-0.33	2.86
1,432.0	3.16	332.08	1,430.0	54.3	-25.4	25.1	0.80	-0.80	-1.59
1,622.0	3.52	1.08	1,619.7	64.8	-27.7	27.3	0.90	0.19	15.26
1,716.0	5.36	2.14	1,713.4	72.1	-27.5	27.1	1.96	1.96	1.13
1,811.0	4.92	0.91	1,808.0	80.6	-27.3	26.8	0.48	-0.46	-1.29
1,906.0	4.13	3.89	1,902.7	88.1	-27.0	26.5	0.87	-0.83	3.14
2,000.0	3.65	2.93	1,996.5	94.4	-26.6	26.0	0.52	-0.51	-1.02
2,084.0	3.16	8.11	2,080.4	99.4	-26.2	25.5	0.69	-0.58	6.17
2,198.0	2.51	9.78	2,194.2	105.0	-25.3	24.6	0.57	-0.57	1.46
2,292.0	3.91	355.98	2,288.1	110.2	-25.2	24.5	1.69	1.49	-14.68
2,384.0	5.98	347.99	2,379.7	118.0	-26.4	25.6	2.37	2.25	-8.68
2,477.0	8.09	340.60	2,472.0	128.9	-29.6	28.8	2.46	2.27	-7.95
2,570.0	8.97	337.79	2,564.0	141.8	-34.5	33.6	1.05	0.95	-3.02
2,663.0	8.70	338.49	2,655.9	155.1	-39.8	38.8	0.31	-0.29	0.75
2,756.0	9.19	334.19	2,747.8	168.3	-45.6	44.6	0.89	0.53	-4.62
2,850.0	9.19	332.25	2,840.6	181.7	-52.4	51.2	0.33	0.00	-2.06
2,942.0	9.05	330.85	2,931.4	194.5	-59.3	58.1	0.29	-0.15	-1.52
3,036.0	9.23	330.41	3,024.2	207.5	-66.6	65.3	0.21	0.19	-0.47
3,129.0	9.32	330.67	3,116.0	220.6	-74.0	72.6	0.11	0.10	0.28
3,223.0	9.19	330.32	3,208.8	233.7	-81.5	80.0	0.15	-0.14	-0.37
3,317.0	9.05	331.20	3,301.6	246.7	-88.7	87.2	0.21	-0.15	0.94
3,411.0	8.75	331.64	3,394.4	259.5	-95.7	94.1	0.33	-0.32	0.47
3,503.0	8.92	330.06	3,485.4	271.8	-102.6	100.9	0.32	0.18	-1.72
3,596.0	8.97	330.76	3,577.2	284.4	-109.7	107.9	0.13	0.05	0.75
3,689.0	9.05	330.06	3,669.1	297.1	-116.9	115.0	0.15	0.09	-0.75
3,782.0	9.14	330.41	3,760.9	309.8	-124.2	122.3	0.11	0.10	0.38
3,874.0	9.05	330.06	3,851.7	322.5	-131.4	129.4	0.11	-0.10	-0.38
3,967.0	9.14	329.09	3,943.6	335.1	-138.9	136.8	0.19	0.10	-1.04
4,060.0	8.13	326.72	4,035.5	347.0	-146.3	144.1	1.15	-1.09	-2.55
4,154.0	7.82	326.19	4,128.6	357.9	-153.5	151.2	0.34	-0.33	-0.56
4,247.0	8.22	330.32	4,220.7	368.9	-160.3	158.0	0.75	0.43	4.44
4,341.0	8.09	330.23	4,313.8	380.5	-166.9	164.5	0.14	-0.14	-0.10
4,435.0	7.25	328.91	4,406.9	391.3	-173.3	170.8	0.91	-0.89	-1.40
4,529.0	7.34	330.58	4,500.2	401.6	-179.3	176.7	0.25	0.10	1.78
4,623.0	8.18	337.61	4,593.3	413.0	-184.8	182.2	1.35	0.89	7.48
4,717.0	7.78	334.01	4,686.4	424.9	-190.1	187.4	0.68	-0.43	-3.83
4,811.0	7.08	332.43	4,779.6	435.8	-195.6	192.8	0.78	-0.74	-1.68
4,905.0	7.08	330.76	4,872.9	446.0	-201.1	198.3	0.22	0.00	-1.78
4,999.0	7.91	332.52	4,966.1	456.8	-206.9	204.0	0.92	0.88	1.87



Intrepid
Survey Report



Company:	Tap Rock Resources, LLC	Local Co-ordinate Reference:	Well Pliny The Elder #201H
Project:	Eddy County, NM (NAD 83 NME)	TVD Reference:	KB @ 3176.5usft
Site:	(Pliny The Elder Fee) Sec-4_T-23-S_R-27-E	MD Reference:	KB @ 3176.5usft
Well:	Pliny The Elder #201H	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)	
5,093.0	7.38	332.78	5,059.2	467.9	-212.6	209.7	0.57	-0.56	0.28	
5,187.0	6.51	331.02	5,152.5	477.9	-218.0	215.0	0.95	-0.93	-1.87	
5,281.0	5.85	329.97	5,246.0	486.7	-223.0	219.9	0.71	-0.70	-1.12	
5,376.0	5.49	328.12	5,340.5	494.7	-227.8	224.7	0.42	-0.38	-1.95	
5,470.0	5.05	329.62	5,434.1	502.1	-232.3	229.1	0.49	-0.47	1.60	
5,563.0	3.47	325.75	5,526.9	508.0	-235.9	232.7	1.73	-1.70	-4.16	
5,657.0	3.38	335.77	5,620.7	512.9	-238.6	235.4	0.64	-0.10	10.66	
5,750.0	2.29	344.82	5,713.6	517.2	-240.3	237.0	1.26	-1.17	9.73	
5,843.0	2.11	341.39	5,806.5	520.6	-241.3	238.0	0.24	-0.19	-3.69	
5,937.0	1.67	338.93	5,900.5	523.5	-242.3	239.0	0.48	-0.47	-2.62	
6,030.0	1.49	347.02	5,993.4	525.9	-243.1	239.8	0.31	-0.19	8.70	
6,124.0	1.67	351.06	6,087.4	528.5	-243.6	240.3	0.23	0.19	4.30	
6,218.0	1.10	28.06	6,181.4	530.6	-243.4	240.0	1.10	-0.61	39.36	
6,312.0	0.75	62.43	6,275.4	531.7	-242.4	239.1	0.68	-0.37	36.56	
6,405.0	0.79	56.01	6,368.4	532.4	-241.3	238.0	0.10	0.04	-6.90	
6,498.0	1.36	61.11	6,461.3	533.2	-239.8	236.5	0.62	0.61	5.48	
6,592.0	1.14	59.35	6,555.3	534.3	-238.0	234.7	0.24	-0.23	-1.87	
6,686.0	0.70	57.07	6,649.3	535.1	-236.8	233.4	0.47	-0.47	-2.43	
6,779.0	1.67	52.32	6,742.3	536.2	-235.2	231.8	1.05	1.04	-5.11	
6,873.0	2.51	51.62	6,836.2	538.3	-232.5	229.1	0.89	0.89	-0.74	
6,966.0	1.41	50.56	6,929.2	540.3	-230.0	226.6	1.18	-1.18	-1.14	
7,060.0	1.41	28.15	7,023.1	542.0	-228.6	225.2	0.58	0.00	-23.84	
7,153.0	1.32	24.90	7,116.1	544.0	-227.6	224.2	0.13	-0.10	-3.49	
7,246.0	1.45	24.55	7,209.1	546.1	-226.7	223.2	0.14	0.14	-0.38	
7,340.0	0.13	142.50	7,303.1	547.1	-226.1	222.7	1.61	-1.40	125.48	
7,434.0	0.22	215.71	7,397.1	546.8	-226.1	222.7	0.23	0.10	77.88	
7,527.0	0.53	156.38	7,490.1	546.3	-226.1	222.6	0.49	0.33	-63.80	
7,621.0	1.14	130.81	7,584.1	545.3	-225.2	221.8	0.75	0.65	-27.20	
7,714.0	1.36	164.73	7,677.0	543.6	-224.2	220.8	0.82	0.24	36.47	
7,808.0	1.19	135.64	7,771.0	541.8	-223.2	219.8	0.70	-0.18	-30.95	
7,902.0	1.05	73.15	7,865.0	541.4	-221.7	218.3	1.24	-0.15	-66.48	
7,995.0	1.23	349.39	7,958.0	542.6	-221.1	217.7	1.64	0.19	-90.06	
8,089.0	2.33	0.73	8,051.9	545.5	-221.3	217.8	1.22	1.17	12.06	
8,182.0	0.79	263.52	8,144.9	547.3	-221.9	218.4	2.74	-1.66	-104.53	
8,276.0	0.88	219.23	8,238.9	546.7	-223.0	219.5	0.68	0.10	-47.12	
8,397.0	0.70	170.80	8,359.9	545.3	-223.4	220.0	0.55	-0.15	-40.02	
8,490.0	6.07	257.37	8,452.7	543.6	-228.1	224.7	6.53	5.77	93.09	
8,537.0	13.80	271.26	8,499.0	543.2	-236.2	232.8	17.10	16.45	29.55	
8,584.0	16.84	272.05	8,544.3	543.6	-248.6	245.2	6.48	6.47	1.68	
8,631.0	19.69	270.29	8,588.9	543.9	-263.3	259.9	6.18	6.06	-3.74	
8,677.0	22.68	268.09	8,631.8	543.6	-279.9	276.5	6.72	6.50	-4.78	
8,724.0	27.12	265.10	8,674.4	542.4	-299.7	296.3	9.82	9.45	-6.36	
8,771.0	31.12	261.59	8,715.5	539.7	-322.4	319.0	9.25	8.51	-7.47	



Intrepid
Survey Report



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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)
8,864.0	38.07	261.50	8,792.0	531.9	-374.6	371.2	7.47	7.47	-0.10
8,911.0	45.14	261.68	8,827.1	527.4	-405.4	402.1	15.04	15.04	0.38
8,957.0	50.51	263.43	8,858.0	523.0	-439.2	435.9	12.01	11.67	3.80
9,004.0	53.45	262.82	8,887.0	518.5	-476.0	472.7	6.34	6.26	-1.30
9,051.0	58.29	262.91	8,913.3	513.7	-514.6	511.3	10.30	10.30	0.19
9,098.0	65.49	264.75	8,935.4	509.3	-555.8	552.5	15.70	15.32	3.91
9,144.0	72.31	266.07	8,952.0	505.9	-598.5	595.3	15.07	14.83	2.87
9,191.0	76.79	265.46	8,964.5	502.5	-643.7	640.5	9.61	9.53	-1.30
9,210.9	78.34	265.27	8,968.8	500.9	-663.0	659.9	7.82	7.77	-0.94
FTP @ 9210.9'MD, 361.4'FNL & 330'FEL									
9,238.0	80.44	265.02	8,973.8	498.7	-689.6	686.4	7.82	7.77	-0.93
9,331.0	88.57	266.60	8,982.7	491.9	-781.8	778.7	8.90	8.74	1.70
9,425.0	90.90	267.39	8,983.1	487.0	-875.7	872.6	2.62	2.48	0.84
9,519.0	90.68	267.92	8,981.8	483.2	-969.6	966.5	0.61	-0.23	0.56
9,612.0	90.99	267.65	8,980.5	479.6	-1,062.5	1,059.5	0.44	0.33	-0.29
9,706.0	92.97	270.64	8,977.2	478.2	-1,156.4	1,153.4	3.81	2.11	3.18
9,799.0	90.29	272.14	8,974.6	480.4	-1,249.4	1,246.3	3.30	-2.88	1.61
9,892.0	87.34	273.81	8,976.5	485.2	-1,342.2	1,339.1	3.64	-3.17	1.80
9,986.0	87.60	273.10	8,980.7	490.9	-1,435.9	1,432.8	0.80	0.28	-0.76
10,080.0	88.22	272.66	8,984.1	495.6	-1,529.8	1,526.6	0.81	0.66	-0.47
10,173.0	91.56	272.05	8,984.3	499.4	-1,622.7	1,619.5	3.65	3.59	-0.66
10,266.0	91.82	273.81	8,981.5	504.2	-1,715.5	1,712.3	1.91	0.28	1.89
10,360.0	91.03	273.45	8,979.2	510.2	-1,809.3	1,806.0	0.92	-0.84	-0.38
10,453.0	91.69	273.28	8,977.0	515.6	-1,902.1	1,898.8	0.73	0.71	-0.18
10,547.0	91.69	271.52	8,974.2	519.5	-1,996.0	1,992.7	1.87	0.00	-1.87
10,640.0	91.03	271.08	8,972.0	521.7	-2,088.9	2,085.6	0.85	-0.71	-0.47
10,733.0	90.90	270.64	8,970.4	523.0	-2,181.9	2,178.6	0.49	-0.14	-0.47
10,827.0	92.35	270.91	8,967.8	524.3	-2,275.8	2,272.5	1.57	1.54	0.29
10,921.0	92.84	268.80	8,963.5	524.1	-2,369.7	2,366.4	2.30	0.52	-2.24
11,014.0	93.71	267.57	8,958.2	521.1	-2,462.5	2,459.2	1.62	0.94	-1.32
11,108.0	94.64	266.86	8,951.3	516.6	-2,556.2	2,552.9	1.24	0.99	-0.76
11,202.0	88.35	267.92	8,948.9	512.3	-2,650.0	2,646.7	6.79	-6.69	1.13
11,296.0	91.08	268.97	8,949.4	509.8	-2,744.0	2,740.7	3.11	2.90	1.12
11,390.0	90.42	269.94	8,948.1	508.9	-2,837.9	2,834.7	1.25	-0.70	1.03
11,484.0	92.26	270.03	8,945.9	508.8	-2,931.9	2,928.7	1.96	1.96	0.10
11,578.0	89.05	269.85	8,944.9	508.7	-3,025.9	3,022.6	3.42	-3.41	-0.19
11,671.0	89.01	269.15	8,946.4	507.9	-3,118.9	3,115.6	0.75	-0.04	-0.75
11,765.0	90.81	270.47	8,946.6	507.6	-3,212.9	3,209.6	2.37	1.91	1.40
11,858.0	91.60	270.99	8,944.6	508.8	-3,305.8	3,302.6	1.02	0.85	0.56
11,952.0	88.62	269.24	8,944.4	509.0	-3,399.8	3,396.6	3.68	-3.17	-1.86
11,981.0	89.10	269.15	8,945.0	508.6	-3,428.8	3,425.6	1.68	1.66	-0.31
12,074.0	91.38	269.15	8,944.6	507.2	-3,521.8	3,518.5	2.45	2.45	0.00
12,167.0	89.27	269.41	8,944.1	506.0	-3,614.8	3,611.5	2.29	-2.27	0.28
12,260.0	89.76	269.24	8,944.9	504.9	-3,707.8	3,704.5	0.56	0.53	-0.18



Intrepid
Survey Report



Company:	Tap Rock Resources, LLC	Local Co-ordinate Reference:	Well Pliny The Elder #201H
Project:	Eddy County, NM (NAD 83 NME)	TVD Reference:	KB @ 3176.5usft
Site:	(Pliny The Elder Fee) Sec-4_T-23-S_R-27-E	MD Reference:	KB @ 3176.5usft
Well:	Pliny The Elder #201H	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)	
12,354.0	89.76	268.18	8,945.3	502.8	-3,801.8	3,798.5	1.13	0.00	-1.13	
12,448.0	89.10	267.04	8,946.2	498.9	-3,895.7	3,892.5	1.40	-0.70	-1.21	
12,541.0	91.12	266.69	8,946.0	493.8	-3,988.5	3,985.3	2.20	2.17	-0.38	
12,634.0	89.05	265.28	8,945.9	487.3	-4,081.3	4,078.1	2.69	-2.23	-1.52	
12,727.0	89.98	265.98	8,946.7	480.2	-4,174.0	4,170.9	1.25	1.00	0.75	
12,821.0	88.75	266.95	8,947.7	474.4	-4,267.8	4,264.8	1.67	-1.31	1.03	
12,913.0	93.01	269.50	8,946.3	471.6	-4,359.7	4,356.7	5.40	4.63	2.77	
13,006.0	93.80	269.76	8,940.8	471.0	-4,452.6	4,449.5	0.89	0.85	0.28	
13,099.0	92.31	268.80	8,935.8	469.8	-4,545.4	4,542.4	1.91	-1.60	-1.03	
13,193.0	92.00	268.71	8,932.3	467.8	-4,639.3	4,636.3	0.34	-0.33	-0.10	
13,286.0	88.48	266.60	8,931.9	464.0	-4,732.2	4,729.2	4.41	-3.78	-2.27	
13,379.0	87.34	265.98	8,935.3	458.0	-4,825.0	4,822.0	1.40	-1.23	-0.67	
13,472.0	87.47	266.69	8,939.5	452.0	-4,917.7	4,914.8	0.78	0.14	0.76	
13,565.0	89.49	267.65	8,942.0	447.4	-5,010.5	5,007.6	2.40	2.17	1.03	
13,659.0	88.35	268.36	8,943.8	444.2	-5,104.5	5,101.6	1.43	-1.21	0.76	
13,753.0	88.53	269.94	8,946.3	442.8	-5,198.4	5,195.5	1.69	0.19	1.68	
13,846.0	88.84	269.59	8,948.5	442.4	-5,291.4	5,288.5	0.50	0.33	-0.38	
13,940.0	88.48	270.91	8,950.7	442.8	-5,385.4	5,382.5	1.46	-0.38	1.40	
14,033.0	87.56	270.11	8,953.9	443.6	-5,478.3	5,475.4	1.31	-0.99	-0.86	
14,126.0	92.66	269.85	8,953.7	443.6	-5,571.3	5,568.4	5.49	5.48	-0.28	
14,219.0	92.48	269.06	8,949.5	442.7	-5,664.2	5,661.3	0.87	-0.19	-0.85	
14,313.0	93.10	268.44	8,944.9	440.7	-5,758.0	5,755.2	0.93	0.66	-0.66	
14,406.0	93.71	267.48	8,939.4	437.3	-5,850.8	5,848.0	1.22	0.66	-1.03	
14,500.0	92.00	266.77	8,934.7	432.6	-5,944.6	5,941.7	1.97	-1.82	-0.76	
14,593.0	89.80	266.69	8,933.3	427.3	-6,037.4	6,034.6	2.37	-2.37	-0.09	
14,687.0	89.67	266.07	8,933.7	421.4	-6,131.2	6,128.5	0.67	-0.14	-0.66	
14,781.0	88.57	265.37	8,935.2	414.4	-6,224.9	6,222.2	1.39	-1.17	-0.74	
14,875.0	92.57	266.16	8,934.2	407.4	-6,318.7	6,316.0	4.34	4.26	0.84	
14,969.0	95.47	271.61	8,927.6	405.6	-6,412.4	6,409.7	6.55	3.09	5.80	
15,062.0	96.66	275.48	8,917.8	411.3	-6,504.7	6,501.9	4.33	1.28	4.16	
15,156.0	96.79	275.12	8,906.8	419.9	-6,597.6	6,594.8	0.40	0.14	-0.38	
15,249.0	92.70	273.98	8,899.1	427.3	-6,690.0	6,687.2	4.56	-4.40	-1.23	
15,343.0	92.09	274.60	8,895.2	434.3	-6,783.6	6,780.8	0.92	-0.65	0.66	
15,436.0	94.33	274.16	8,890.0	441.4	-6,876.2	6,873.3	2.45	2.41	-0.47	
15,530.0	90.33	275.48	8,886.1	449.3	-6,969.8	6,966.8	4.48	-4.26	1.40	
15,624.0	92.57	271.96	8,883.8	455.4	-7,063.5	7,060.5	4.44	2.38	-3.74	
15,718.0	92.18	271.43	8,879.9	458.2	-7,157.4	7,154.4	0.70	-0.41	-0.56	
15,812.0	91.12	270.55	8,877.2	459.8	-7,251.3	7,248.3	1.47	-1.13	-0.94	
15,907.0	93.67	270.47	8,873.2	460.6	-7,346.3	7,343.2	2.69	2.68	-0.08	
16,001.0	90.68	269.24	8,869.6	460.4	-7,440.2	7,437.1	3.44	-3.18	-1.31	
16,095.0	91.12	269.50	8,868.1	459.4	-7,534.2	7,531.1	0.54	0.47	0.28	
16,189.0	90.07	268.80	8,867.2	458.0	-7,628.1	7,625.1	1.34	-1.12	-0.74	
16,282.0	91.69	267.98	8,865.7	455.4	-7,721.1	7,718.1	1.95	1.74	-0.88	



Intrepid
Survey Report



Company:	Tap Rock Resources, LLC	Local Co-ordinate Reference:	Well Pliny The Elder #201H
Project:	Eddy County, NM (NAD 83 NME)	TVD Reference:	KB @ 3176.5usft
Site:	(Pliny The Elder Fee) Sec-4_T-23-S_R-27-E	MD Reference:	KB @ 3176.5usft
Well:	Pliny The Elder #201H	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)	
16,376.0	92.13	268.09	8,862.6	452.1	-7,815.0	7,812.0	0.48	0.47	0.12	
16,470.0	91.25	267.48	8,859.8	448.5	-7,908.9	7,905.9	1.14	-0.94	-0.65	
16,563.0	91.65	268.01	8,857.5	444.9	-8,001.8	7,998.8	0.71	0.43	0.57	
16,657.0	90.59	268.53	8,855.6	442.0	-8,095.7	8,092.8	1.26	-1.13	0.55	
16,750.0	90.64	268.53	8,854.6	439.6	-8,188.7	8,185.7	0.05	0.05	0.00	
16,843.0	94.37	268.09	8,850.6	436.9	-8,281.5	8,278.6	4.04	4.01	-0.47	
16,937.0	93.93	268.09	8,843.8	433.8	-8,375.2	8,372.3	0.47	-0.47	0.00	
17,031.0	92.00	268.71	8,838.9	431.2	-8,469.1	8,466.2	2.16	-2.05	0.66	
17,125.0	92.97	269.06	8,834.8	429.3	-8,562.9	8,560.1	1.10	1.03	0.37	
17,219.0	92.97	270.11	8,830.0	428.6	-8,656.8	8,654.0	1.12	0.00	1.12	
17,312.0	93.58	269.94	8,824.7	428.7	-8,749.7	8,746.8	0.68	0.66	-0.18	
17,406.0	95.47	270.20	8,817.2	428.8	-8,843.4	8,840.5	2.03	2.01	0.28	
17,500.0	93.10	269.94	8,810.2	428.9	-8,937.1	8,934.2	2.54	-2.52	-0.28	
17,593.0	92.44	269.50	8,805.7	428.5	-9,030.0	9,027.1	0.85	-0.71	-0.47	
17,686.0	92.35	269.76	8,801.8	427.9	-9,122.9	9,120.0	0.30	-0.10	0.28	
17,779.0	94.55	269.76	8,796.2	427.5	-9,215.7	9,212.9	2.37	2.37	0.00	
17,873.0	94.02	269.41	8,789.2	426.8	-9,309.5	9,306.6	0.68	-0.56	-0.37	
17,965.0	91.91	269.06	8,784.5	425.6	-9,401.3	9,398.5	2.32	-2.29	-0.38	
18,058.0	92.75	270.11	8,780.7	424.9	-9,494.2	9,491.4	1.45	0.90	1.13	
18,151.0	92.13	269.41	8,776.7	424.5	-9,587.2	9,584.3	1.00	-0.67	-0.75	
18,245.0	92.75	269.15	8,772.7	423.3	-9,681.1	9,678.2	0.72	0.66	-0.28	
18,338.0	92.57	268.27	8,768.4	421.2	-9,773.9	9,771.1	0.96	-0.19	-0.95	
18,431.0	92.57	270.47	8,764.2	420.2	-9,866.8	9,864.0	2.36	0.00	2.37	
18,525.0	93.36	267.04	8,759.4	418.2	-9,960.7	9,957.8	3.74	0.84	-3.65	
18,617.0	93.32	267.39	8,754.0	413.7	-10,052.4	10,049.6	0.38	-0.04	0.38	
18,710.0	90.86	267.57	8,750.6	409.6	-10,145.2	10,142.5	2.65	-2.65	0.19	
18,803.0	90.81	267.04	8,749.3	405.2	-10,238.1	10,235.4	0.57	-0.05	-0.57	
18,896.0	90.55	266.95	8,748.2	400.4	-10,331.0	10,328.3	0.30	-0.28	-0.10	
18,990.0	89.63	266.16	8,748.0	394.7	-10,424.8	10,422.1	1.29	-0.98	-0.84	
19,057.2	89.21	265.16	8,748.7	389.6	-10,491.8	10,489.2	1.61	-0.62	-1.49	
LTP @ 19057.2'MD, 443'FNL & 330'FWL										
19,132.0	88.75	264.05	8,750.0	382.6	-10,566.3	10,563.7	1.61	-0.62	-1.49	
LAST SVY										
19,220.0	88.75	264.05	8,751.9	373.5	-10,653.8	10,651.2	0.00	0.00	0.00	
Projection to TD @ 19220'MD, 457'FNL & 168'FWL										



Intrepid
Survey Report



Company:	Tap Rock Resources, LLC	Local Co-ordinate Reference:	Well Pliny The Elder #201H
Project:	Eddy County, NM (NAD 83 NME)	TVD Reference:	KB @ 3176.5usft
Site:	(Pliny The Elder Fee) Sec-4_T-23-S_R-27-E	MD Reference:	KB @ 3176.5usft
Well:	Pliny The Elder #201H	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)		
PBHL (Pliny The Elde	-2.21	269.94	8,759.0	448.0	-10,622.0	487,463.00	571,082.00	32° 20' 24.254 N	104° 14' 13.281 W
- actual wellpath misses target center by 71.3usft at 19180.8usft MD (8751.1 TVD, 377.6 N, -10614.8 E)									
- Rectangle (sides W100.0 H3,621.2 D30.0)									
LTP (Pliny The Elder;	0.00	0.00	8,760.0	448.0	-10,492.0	487,463.00	571,212.00	32° 20' 24.252 N	104° 14' 11.766 W
- actual wellpath misses target center by 59.3usft at 19053.1usft MD (8748.6 TVD, 390.0 N, -10487.7 E)									
- Point									
7000'VS (Pliny The El	-0.90	269.64	8,898.0	470.5	-7,003.1	487,485.54	574,700.90	32° 20' 24.443 N	104° 13' 31.097 W
- actual wellpath misses target center by 22.1usft at 15564.3usft MD (8885.7 TVD, 452.2 N, -7004.0 E)									
- Rectangle (sides W100.0 H6,340.0 D30.0)									
FTP (Pliny The Elder;	0.00	0.00	8,999.0	510.0	-663.0	487,525.00	581,041.00	32° 20' 24.764 N	104° 12' 17.192 W
- actual wellpath misses target center by 31.1usft at 9215.7usft MD (8969.7 TVD, 500.6 N, -667.7 E)									
- Point									

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		
		+N/-S (usft)	+E/-W (usft)	Comment
9,210.9	8,968.8	500.9	-663.0	FTP @ 9210.9'MD, 361.4'FNL & 330'FEL
19,057.2	8,748.7	389.6	-10,491.8	LTP @ 19057.2'MD, 443'FNL & 330'FWL
19,132.0	8,750.0	382.6	-10,566.3	LAST SVY
19,220.0	8,751.9	373.5	-10,653.8	Projection to TD @ 19220'MD, 457'FNL & 168'FWL

Checked By: _____ Approved By: _____ Date: _____