

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 Secretary

Adrienne Sandoval, Division Director
Oil Conservation Division



Notice of C-104 Denial and Request for Information

OCD denies your C-104 – *Request for Allowable and Authorization to Transport* because it is incomplete or conflicts with other information provided to OCD.

The sale or transport of product without a C-104 approved by OCD violates the Oil and Gas Act and the implementing rules, including 19.15.7.15 and 19.15.16.19 NMAC.

To avoid an enforcement action, you must submit the indicated information no later than 30 days after receipt of this notice.

30-015-45641

Test Allowable, New Well and Recompleted Well

Amend C-104

- ☐ C-103 (or BLM equivalent) for all casing strings
 - ☐ Spud Notice
 - ☐ Surface Casing
 - ☐ Intermediate Casing (if applicable)
 - ☐ Additional Intermediate Casing (if applicable)
 - ☐ Production Casing or Liner

☐ Applicable Order (NSL, NSP, Other _____)

☐ Deviation Survey for Vertical Wells

☒ Directional Survey "Certified"

☐ C-102 (As-Drilled Plat for Horizontal Well)

New Well and Recompleted Well Only

☒ C-103 Completion Sundry (or BLM equivalent) Missing

☒ C-105 Completion Report (or BLM equivalent) Amend

☐ All Logs Run on Well

If you have any questions please contact the local OCD District Office

RECEIVED

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Rd., Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals & Natural Resources
DEC 09 2019

Form C-104
Revised August 1, 2011

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Submit one copy to appropriate District Office
DISTRICT IV-ARTESIA O.C.D.

☒ AMENDED REPORT
with corrections

I. REQUEST FOR ALLOWABLE AND AUTHORIZATION TO TRANSPORT

¹ Operator name and Address TAP ROCK OPERATING, LLC 602 PARK POINT DR, STE 200 GOLDEN, CO 80401		² OGRID Number 372043	
⁴ API Number 30-015-45641		⁵ Pool Name PURPLE SAGE WOLFCAMP (GAS)	
⁷ Property Code 323012		⁸ Property Name PLINY THE ELDER FEE	
		⁶ Pool Code 98220	
		⁹ Well Number 202H	
³ Reason for Filing Code/ Effective Date NW 11/23/2019 (connected) / 9/14/19 (ready date)			

II. ¹⁰ Surface Location

Ul or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South Line	Feet from the	East/West line	County
E	4	23S	27E		2276'	North	566'	West	Eddy

¹¹ Bottom Hole Location

Ul or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
E	6	23S	27E	5	1650'	North	200'	West	Eddy

¹² Lse Code P	¹³ Producing Method Code F	¹⁴ Gas Connection Date 11/27/2019	¹⁵ C-129 Permit Number	¹⁶ C-129 Effective Date	¹⁷ C-129 Expiration Date
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III. Oil and Gas Transporters

¹⁸ Transporter OGRID	¹⁹ Transporter Name and Address	²⁰ O/G/W
373554	SALT CREEK MIDSTREAM, LLC 20329 STATE HIGHWAY 249 HOUSTON, TX U.S.A. 77070	O
373554	SALT CREEK MIDSTREAM, LLC 20329 STATE HIGHWAY 249 HOUSTON, TX U.S.A. 77070	G

IV. Well Completion Data

²¹ Spud Date 7/25/2019	²² Ready Date 9/14/2019	²³ TD 19218'	²⁴ PBDT 19160	²⁵ Perforations 9214-18810	²⁶ DHC, MC
²⁷ Hole Size	²⁸ Casing & Tubing Size	²⁹ Depth Set	³⁰ Sacks Cement		
17.5"	13-3/8"	610'	510		
12-1/4"	9-5/8"	2109'	700		
8-3/4"	7-5/8"	8347'	591		
6-3/4"	5-1/2"	8332'	-		
6-3/4"	5"	19179'	1238		

V. Well Test Data

³¹ Date New Oil 9/18/19	³² Gas Delivery Date 11/27/19	³³ Test Date 10/1/19	³⁴ Test Length 24 hrs	³⁵ Tbg. Pressure n/a	³⁶ Csg. Pressure 1305
³⁷ Choke Size 56/64	³⁸ Oil 1919	³⁹ Water 4331	⁴⁰ Gas 4738		⁴¹ Test Method F - Flowing

⁴² I hereby certify that the rules of the Oil Conservation Division have been complied with and that the information given above is true and complete to the best of my knowledge and belief.

Signature: CCC

Printed name: CHRISTIAN COMBS

Title: REGULATORY MANAGER

E-mail Address: ccombs@taprk.com

Date: 10/15/2019
Phone: 720 360 4028

Approved by:

Title:

Approval Date:

OIL CONSERVATION DIVISION

DENIED
See Attached Cover Sheet

RECEIVED

State of New Mexico
Energy, Minerals and Natural Resources

Form C-105

Revised April 3, 2017

Submit To Appropriate District Office
Two Copies
District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Rd., Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

Oil Conservation District of Artesia, N.M. C.D.
1220 South St. Francis Dr.
Santa Fe, NM 87505

1. WELL API NO.

30-015-45641

2. Type of Lease

☐ STATE ☒ FEE ☐ FED/INDIAN
3. State Oil & Gas Lease No.
323012

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

4. Reason for filing:

☒ **COMPLETION REPORT** (Fill in boxes #1 through #31 for State and Fee wells only)

☐ **C-144 CLOSURE ATTACHMENT** (Fill in boxes #1 through #9, #15 Date Rig Released and #32 and/or #33; attach this and the plat to the C-144 closure report in accordance with 19.15.17.13.K NMAC)

7. Type of Completion:

☒ NEW WELL ☐ WORKOVER ☐ DEEPENING ☐ PLUGBACK ☐ DIFFERENT RESERVOIR ☐ OTHER

8. Name of Operator

TAP ROCK OPERATING, LLC

9. OGRID

372043

10. Address of Operator

602 PARK POINT DR, STE 200 GOLDEN, CO 80401

11. Pool name or Wildcat

Purple Sage, Wolfcamp

12. Location	Unit Ltr	Section	Township	Range	Lot	Feet from the	N/S Line	Feet from the	E/W Line	County
Surface:	E	04	23S	27E	-	2276	FNL	566	FWL	EDDY
BH:	E	06	23S	27E	5	1650	FNL	200	FWL	EDDY

13. Date Spudded
7/25/1914. Date T.D. Reached
8/13/1915. Date Rig Released
8/17/1916. Date Completed (Ready to Produce)
9/14/1917. Elevations (DF and RKB,
RT, GR, etc.) 3151 GL18. Total Measured Depth of Well
1921819. Plug Back Measured Depth
N/A20. Was Directional Survey Made?
Yes

21. Type Electric and Other Logs Run

22. Producing Interval(s), of this completion - Top, Bottom, Name
9214 - 18810, Wolfcamp A

23. CASING RECORD (Report all strings set in well)

CASING SIZE	WEIGHT LB./FT.	DEPTH SET	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
13 3/8	54.5	610	17 1/2	510sks	
9 5/8	40	2109	12 1/4	700sks	
7 5/8	29.7	8347	8 3/4	591sks	
5 1/2	20	8332	6 3/4	-	
5	18	19179	6 3/4	1238sks	

24. LINER RECORD

SIZE	TOP	BOTTOM	SACKS CEMENT	SCREEN	SIZE	DEPTH SET	PACKER SET

26. Perforation record (interval, size, and number)
9214 - 18810, 0.4", 119808

27. ACID, SHOT, FRACTURE, CEMENT, SQUEEZE, ETC.

DEPTH INTERVAL

9214 - 18810

AMOUNT AND KIND MATERIAL USED
24,087,340 lbs 100 mesh

28. PRODUCTION

Date First Production ?
9/18/19

Production Method (Flowing, gas lift, pumping - Size and type pump)
Flowing

Well Status (Prod. or Shut-in)
Producing

Date of Test
10/1/19

Hours Tested
24hrs

Choke Size
56/64

Prod'n For Test Period

Oil - Bbl
1919

Gas - MCF
4738

Water - Bbl.
4331

Gas - Oil Ratio
2.47

Flow Tubing Press. 0

Casing Pressure
1305

Calculated 24-Hour Rate

Oil - Bbl.
1919

Gas - MCF
4738

Water - Bbl.
4331

Oil Gravity - API - (Corr.)

29. Disposition of Gas (Sold, used for fuel, vented, etc.)
Sold30. Test Witnessed By
Christian Martinez

31. List Attachments

32. If a temporary pit was used at the well, attach a plat with the location of the temporary pit.

33. Rig Release Date: 8/17/19

34. If an on-site burial was used at the well, report the exact location of the on-site burial:

Latitude

Longitude

NAD83

I hereby certify that the information shown on both sides of this form is true and complete to the best of my knowledge and belief

Signature



Printed

Name John Masenheimer

Title: Operations Technician

Date: 12/4/19

E-mail Address: jmasenheimer@taprk.com

INSTRUCTIONS

This form is to be filed with the appropriate District Office of the Division not later than 20 days after the completion of any newly-drilled or deepened well and not later than 60 days after completion of closure. When submitted as a completion report, this shall be accompanied by one copy of all electrical and radio-activity logs run on the well and a summary of all special tests conducted, including drill stem tests. All depths reported shall be measured depths. In the case of directionally drilled wells, true vertical depths shall also be reported. For multiple completions, items 11, 12 and 26-31 shall be reported for each zone.

INDICATE FORMATION TOPS IN CONFORMANCE WITH GEOGRAPHICAL SECTION OF STATE

Southeastern New Mexico		Northwestern New Mexico	
Top Name	TVD	T. Ojo Alamo	T. Penn A"
CHERRY	2,926'	T. Kirtland	T. Penn. "B"
BRUSHY	3,974'	T. Fruitland	T. Penn. "C"
BONE SPRING	5,494'	T. Pictured Cliffs	T. Penn. "D"
AVALON UPPER	5,579'	T. Cliff House	T. Leadville
AVALON MIDDLE	5,838'	T. Menefee	T. Madison
AVALON LOWER	6,181'	T. Point Lookout	T. Elbert
FIRST BONE SPRING SAND	6,466'	T. Mancos	T. McCracken
SECOND BONE SPRING CARB	6,659'	T. Gallup	T. Ignacio Otzte
SECOND BONE SPRING SAND	6,981'	Base Greenhorn	T. Granite
THIRD BONE SPRING CARB	7,203'	T. Dakota	
THIRD BONE SPRING SAND	8,523'	T. Morrison	
THIRD BONE SPRING W SAND	8,800'	T. Todilto	
WOLFCAMP A X SAND	8,875'	T. Entrada	
WOLFCAMP A Y SAND	8,960'	T. Wingate	
TARGET TOP	8,974'	T. Chinle	
TARGET BASE	8,942'	T. Permian	

OIL OR GAS SANDS OR ZONES

No. 1, from.....to..... No. 3, from.....to.....
 No. 2, from.....to..... No. 4, from.....to.....

IMPORTANT WATER SANDS

Include data on rate of water inflow and elevation to which water rose in hole.

No. 1, from.....to.....feet.....
 No. 2, from.....to.....feet.....
 No. 3, from.....to.....feet.....

LITHOLOGY RECORD (Attach additional sheet if necessary)

From	To	Thickness In Feet	Lithology	From	To	Thickness In Feet	Lithology
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RECEIVED

DEC 09 2019

DISTRICT 7 ARTESIA O.C.D.

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 Fee #202H

OWB

Design: AWB

Standard Survey Report

13 August, 2019

A Certified Directional Survey should be
submitted as required by NMOCD Rule
19.15.16.14 NMAC

 **INTREPID**



Intrepid
Survey Report



Company:	Tap Rock Resources, LLC	Local Co-ordinate Reference:	Well Pliny The Elder Fee #202H
Project:	Eddy County, NM (NAD 83 NME)	TVD Reference:	KB @ 3177.5usft (H&P 245)
Site:	(Pliny The Elder Fee) Sec-4_T-23-S_R-27-E	MD Reference:	KB @ 3177.5usft (H&P 245)
Well:	Pliny The Elder Fee #202H	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 Fee #202H					
Well Position	+N/-S	0.0 usft	Northing:	485,612.00 usft	Latitude:	32° 20' 5.822 N
	+E/-W	0.0 usft	Easting:	581,950.00 usft	Longitude:	104° 12' 6.624 W
Position Uncertainty	0.0 usft	Wellhead Elevation:	usft	Ground Level:	3,151.0 usft	

Wellbore	OWB				
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Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	2019/07/24	7.03	60.04	47,722.76949530

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	269.82

Survey Program	Date	2019/08/13		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
53.1	2,012.0	VES Gyro (OWB)	GYRO-NS	OWSG Gyrocompass Gyro
2,196.0	19,218.0	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
53.1	0.18	351.76	53.1	0.1	0.0	0.0	0.34	0.34	0.00
146.4	0.25	349.08	146.4	0.4	-0.1	0.1	0.08	0.08	-2.87
239.7	0.39	2.87	239.7	0.9	-0.1	0.1	0.17	0.15	14.78
333.0	0.31	84.29	333.0	1.3	0.2	-0.2	0.49	-0.09	87.29
426.2	0.34	137.34	426.2	1.1	0.6	-0.6	0.31	0.03	56.87
519.5	0.76	201.70	519.5	0.3	0.6	-0.6	0.73	0.45	69.00
612.8	1.43	234.58	612.8	-0.9	-0.6	0.6	0.96	0.72	35.25
706.1	1.10	273.62	706.0	-1.5	-2.4	2.5	0.97	-0.35	41.85
799.4	0.69	254.26	799.3	-1.6	-3.9	3.9	0.54	-0.44	-20.75



Intrepid Survey Report



Company:	Tap Rock Resources, LLC	Local Co-ordinate Reference:	Well Pliny The Elder Fee #202H
Project:	Eddy County, NM (NAD 83 NME)	TVD Reference:	KB @ 3177.5usft (H&P 245)
Site:	(Pliny The Elder Fee) Sec-4_T-23-S_R-27-E	MD Reference:	KB @ 3177.5usft (H&P 245)
Well:	Pliny The Elder Fee #202H	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)
892.6	0.54	164.68	892.6	-2.2	-4.3	4.3	0.94	-0.16	-96.03
985.9	0.15	115.99	985.9	-2.7	-4.1	4.1	0.49	-0.42	-52.20
1,079.2	0.37	146.10	1,079.1	-3.0	-3.8	3.8	0.27	0.24	32.28
1,172.5	0.79	97.27	1,172.4	-3.3	-3.0	3.0	0.66	0.45	-52.35
1,265.8	1.20	65.75	1,265.7	-3.0	-1.5	1.5	0.72	0.44	-33.79
1,359.0	1.37	54.69	1,358.9	-2.0	0.3	-0.3	0.32	0.18	-11.86
1,452.3	0.73	91.37	1,452.2	-1.3	1.8	-1.8	0.96	-0.69	39.32
1,545.6	0.64	77.42	1,545.5	-1.2	2.9	-2.9	0.20	-0.10	-14.95
1,638.9	1.40	47.86	1,638.7	-0.3	4.3	-4.3	0.97	0.81	-31.69
1,732.2	1.46	82.09	1,732.0	0.6	6.3	-6.3	0.90	0.06	36.70
1,825.4	1.20	113.57	1,825.2	0.4	8.4	-8.4	0.82	-0.28	33.75
1,918.7	0.81	126.83	1,918.5	-0.4	9.8	-9.8	0.48	-0.42	14.22
2,012.0	0.95	153.12	2,011.8	-1.5	10.7	-10.7	0.45	0.15	28.18
2,196.0	1.93	9.51	2,195.8	0.2	11.9	-11.9	1.50	0.53	-78.05
2,289.0	4.88	330.49	2,288.6	5.2	10.2	-10.2	3.86	3.17	-41.96
2,383.0	6.95	328.29	2,382.1	13.5	5.2	-5.3	2.21	2.20	-2.34
2,476.0	9.10	314.58	2,474.2	23.4	-3.0	2.9	3.08	2.31	-14.74
2,569.0	11.08	304.03	2,565.7	33.6	-15.6	15.5	2.90	2.13	-11.34
2,661.0	11.30	291.99	2,656.0	41.9	-31.3	31.2	2.55	0.24	-13.09
2,754.0	12.09	289.62	2,747.1	48.6	-48.9	48.8	0.99	0.85	-2.55
2,847.0	10.55	296.91	2,838.3	55.7	-65.7	65.5	2.26	-1.66	7.84
2,940.0	10.64	295.59	2,929.7	63.3	-81.0	80.8	0.28	0.10	-1.42
3,034.0	10.81	295.15	3,022.0	70.8	-96.8	96.6	0.20	0.18	-0.47
3,128.0	11.12	296.38	3,114.3	78.6	-112.9	112.7	0.41	0.33	1.31
3,221.0	11.38	296.56	3,205.5	86.6	-129.2	128.9	0.28	0.28	0.19
3,315.0	11.52	295.15	3,297.7	94.8	-146.0	145.7	0.33	0.15	-1.50
3,408.0	11.47	290.76	3,388.8	102.0	-163.0	162.7	0.94	-0.05	-4.72
3,502.0	11.69	291.20	3,480.9	108.8	-180.6	180.3	0.25	0.23	0.47
3,596.0	11.91	288.74	3,572.9	115.3	-198.7	198.3	0.58	0.23	-2.62
3,689.0	11.30	297.97	3,664.0	122.7	-215.8	215.4	2.10	-0.66	9.92
3,783.0	11.82	297.88	3,756.1	131.5	-232.5	232.1	0.55	0.55	-0.10
3,876.0	11.56	296.82	3,847.2	140.2	-249.2	248.8	0.36	-0.28	-1.14
3,969.0	11.65	296.82	3,938.3	148.6	-265.9	265.4	0.10	0.10	0.00
4,063.0	10.81	295.77	4,030.5	156.7	-282.3	281.8	0.92	-0.89	-1.12
4,156.0	10.15	289.53	4,121.9	163.2	-297.9	297.4	1.41	-0.71	-6.71
4,250.0	10.46	297.61	4,214.4	170.0	-313.3	312.7	1.57	0.33	8.60
4,343.0	10.37	297.44	4,305.9	177.7	-328.2	327.6	0.10	-0.10	-0.18
4,437.0	9.49	297.53	4,398.5	185.2	-342.5	342.0	0.94	-0.94	0.10
4,529.0	9.76	297.35	4,489.2	192.3	-356.2	355.6	0.30	0.29	-0.20
4,622.0	10.51	297.53	4,580.7	199.9	-370.7	370.1	0.81	0.81	0.19
4,715.0	9.93	296.30	4,672.2	207.3	-385.4	384.8	0.67	-0.62	-1.32
4,809.0	9.45	290.67	4,764.9	213.6	-399.9	399.2	1.13	-0.51	-5.99
4,902.0	9.23	282.94	4,856.7	218.0	-414.3	413.6	1.37	-0.24	-8.31



Intrepid Survey Report



Company:	Tap Rock Resources, LLC	Local Co-ordinate Reference:	Well Pliny The Elder Fee #202H
Project:	Eddy County, NM (NAD 83 NME)	TVD Reference:	KB @ 3177.5usft (H&P 245)
Site:	(Pliny The Elder Fee) Sec-4_T-23-S_R-27-E	MD Reference:	KB @ 3177.5usft (H&P 245)
Well:	Pliny The Elder Fee #202H	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)
4,994.0	8.92	284.25	4,947.5	221.4	-428.4	427.7	0.40	-0.34	1.42
5,087.0	8.18	286.01	5,039.5	225.0	-441.8	441.1	0.84	-0.80	1.89
5,181.0	5.93	307.46	5,132.8	229.8	-452.1	451.3	3.65	-2.39	22.82
5,275.0	4.18	322.58	5,226.4	235.5	-458.0	457.3	2.32	-1.86	16.09
5,369.0	3.52	324.25	5,320.2	240.6	-461.8	461.0	0.71	-0.70	1.78
5,463.0	3.52	315.54	5,414.0	245.0	-465.5	464.7	0.57	0.00	-9.27
5,556.0	2.07	287.42	5,506.9	247.5	-469.1	468.3	2.10	-1.56	-30.24
5,650.0	1.41	239.43	5,600.9	247.4	-471.7	470.9	1.64	-0.70	-51.05
5,743.0	1.19	253.76	5,693.9	246.6	-473.6	472.8	0.42	-0.24	15.41
5,836.0	0.97	246.20	5,786.8	246.0	-475.3	474.5	0.28	-0.24	-8.13
5,930.0	1.71	10.39	5,880.8	247.0	-475.7	475.0	2.55	0.79	132.12
6,023.0	2.46	6.70	5,973.8	250.4	-475.3	474.5	0.82	0.81	-3.97
6,117.0	2.37	0.28	6,067.7	254.3	-475.0	474.2	0.30	-0.10	-6.83
6,211.0	2.11	336.99	6,161.6	257.9	-475.7	474.9	1.00	-0.28	-24.78
6,304.0	1.67	350.88	6,254.6	260.8	-476.6	475.7	0.68	-0.47	14.94
6,397.0	1.67	2.48	6,347.5	263.5	-476.7	475.9	0.36	0.00	12.47
6,490.0	1.93	347.71	6,440.5	266.4	-477.0	476.1	0.57	0.28	-15.88
6,583.0	2.02	1.33	6,533.4	269.5	-477.3	476.4	0.51	0.10	14.65
6,676.0	1.58	25.86	6,626.4	272.3	-476.7	475.8	0.94	-0.47	26.38
6,769.0	0.84	14.25	6,719.4	274.1	-476.0	475.1	0.83	-0.80	-12.48
6,862.0	1.23	320.99	6,812.3	275.6	-476.4	475.6	1.07	0.42	-57.27
6,956.0	1.36	334.18	6,906.3	277.4	-477.5	476.7	0.34	0.14	14.03
7,049.0	1.14	354.22	6,999.3	279.3	-478.1	477.2	0.52	-0.24	21.55
7,142.0	0.62	303.94	7,092.3	280.5	-478.6	477.7	0.95	-0.56	-54.06
7,236.0	0.88	298.58	7,186.3	281.1	-479.7	478.8	0.29	0.28	-5.70
7,329.0	1.23	293.92	7,279.3	281.8	-481.2	480.3	0.39	0.38	-5.01
7,423.0	1.36	300.95	7,373.2	282.8	-483.1	482.2	0.22	0.14	7.48
7,517.0	1.01	35.61	7,467.2	284.1	-483.6	482.7	1.87	-0.37	100.70
7,611.0	1.10	37.11	7,561.2	285.5	-482.5	481.6	0.10	0.10	1.60
7,704.0	1.19	85.62	7,654.2	286.3	-481.0	480.1	1.02	0.10	52.16
7,797.0	0.97	128.16	7,747.2	285.8	-479.5	478.6	0.87	-0.24	45.74
7,890.0	1.36	151.54	7,840.2	284.4	-478.3	477.4	0.65	0.42	25.14
7,984.0	1.14	168.06	7,934.1	282.5	-477.6	476.7	0.45	-0.23	17.57
8,078.0	1.27	172.37	8,028.1	280.5	-477.3	476.4	0.17	0.14	4.59
8,172.0	1.63	192.94	8,122.1	278.2	-477.4	476.5	0.67	0.38	21.88
8,300.0	1.41	199.00	8,250.0	274.9	-478.3	477.5	0.21	-0.17	4.73
8,386.0	0.84	212.80	8,336.0	273.4	-479.0	478.2	0.73	-0.66	16.05
8,479.0	1.27	204.01	8,429.0	271.9	-479.8	479.0	0.49	0.46	-9.45
8,526.0	9.93	276.34	8,475.8	271.9	-484.1	483.2	20.47	18.43	153.89
8,573.0	16.40	278.72	8,521.5	273.3	-494.7	493.8	13.81	13.77	5.06
8,620.0	20.57	279.95	8,566.1	275.8	-509.4	508.5	8.91	8.87	2.62
8,666.0	22.51	280.56	8,608.9	278.8	-526.0	525.1	4.25	4.22	1.33
8,713.0	24.53	280.04	8,651.9	282.1	-544.4	543.5	4.32	4.30	-1.11



Intrepid Survey Report



Company:	Tap Rock Resources, LLC	Local Co-ordinate Reference:	Well Pliny The Elder Fee #202H
Project:	Eddy County, NM (NAD 83 NME)	TVD Reference:	KB @ 3177.5usft (H&P 245)
Site:	(Pliny The Elder Fee) Sec-4_T-23-S_R-27-E	MD Reference:	KB @ 3177.5usft (H&P 245)
Well:	Pliny The Elder Fee #202H	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)
8,760.0	27.74	280.30	8,694.1	285.8	-564.8	563.9	6.83	6.83	0.55
8,807.0	33.01	276.34	8,734.7	289.1	-588.3	587.4	11.99	11.21	-8.43
8,853.0	39.38	273.18	8,771.8	291.3	-615.4	614.4	14.43	13.85	-6.87
8,900.0	46.24	271.34	8,806.2	292.6	-647.3	646.3	14.83	14.60	-3.91
8,946.0	50.15	270.10	8,836.9	293.0	-681.5	680.6	8.73	8.50	-2.70
8,993.0	53.49	269.93	8,866.0	293.0	-718.5	717.6	7.11	7.11	-0.36
9,040.0	55.60	269.75	8,893.2	292.9	-756.8	755.8	4.50	4.49	-0.38
9,087.0	60.22	270.37	8,918.2	292.9	-796.6	795.6	9.89	9.83	1.32
9,133.0	64.70	271.07	8,939.4	293.5	-837.3	836.4	9.83	9.74	1.52
9,180.0	69.01	271.25	8,957.9	294.3	-880.5	879.6	9.18	9.17	0.38
9,199.0	70.66	271.07	8,964.5	294.7	-898.4	897.4	8.74	8.69	-0.97
FTP @ 9199'MD, 649.6'FSL & 330'FEL									
9,226.0	73.01	270.81	8,972.9	295.1	-924.0	923.1	8.74	8.70	-0.95
9,273.0	77.63	270.54	8,984.8	295.6	-969.5	968.5	9.85	9.83	-0.57
9,320.0	83.34	269.58	8,992.5	295.7	-1,015.8	1,014.9	12.31	12.15	-2.04
9,412.0	91.65	270.98	8,996.6	296.1	-1,107.6	1,106.7	9.16	9.03	1.52
9,505.0	92.18	269.84	8,993.5	296.8	-1,200.6	1,199.6	1.35	0.57	-1.23
9,599.0	89.41	267.56	8,992.2	294.7	-1,294.5	1,293.6	3.82	-2.95	-2.43
9,692.0	89.98	267.20	8,992.6	290.4	-1,387.4	1,386.5	0.72	0.61	-0.39
9,785.0	91.74	267.12	8,991.3	285.8	-1,480.3	1,479.4	1.89	1.89	-0.09
9,879.0	90.42	266.59	8,989.5	280.7	-1,574.1	1,573.3	1.51	-1.40	-0.56
9,972.0	90.11	266.76	8,989.0	275.3	-1,667.0	1,666.1	0.38	-0.33	0.18
10,065.0	92.22	268.61	8,987.2	271.5	-1,759.9	1,759.0	3.02	2.27	1.99
10,159.0	89.76	268.43	8,985.5	269.1	-1,853.8	1,853.0	2.62	-2.62	-0.19
10,252.0	90.51	266.94	8,985.3	265.3	-1,946.7	1,945.9	1.79	0.81	-1.60
10,346.0	91.03	266.94	8,984.1	260.3	-2,040.6	2,039.8	0.55	0.55	0.00
10,439.0	88.26	267.38	8,984.6	255.7	-2,133.5	2,132.7	3.02	-2.98	0.47
10,533.0	89.76	269.31	8,986.3	253.0	-2,227.4	2,226.6	2.60	1.60	2.05
10,626.0	90.59	272.74	8,986.0	254.6	-2,320.4	2,319.6	3.79	0.89	3.69
10,719.0	90.77	275.64	8,984.9	261.4	-2,413.1	2,412.3	3.12	0.19	3.12
10,812.0	93.27	275.64	8,981.6	270.6	-2,505.6	2,504.7	2.69	2.69	0.00
10,906.0	95.08	276.96	8,974.7	280.9	-2,598.8	2,597.9	2.38	1.93	1.40
10,999.0	92.18	274.32	8,968.9	290.0	-2,691.1	2,690.2	4.21	-3.12	-2.84
11,093.0	92.35	272.57	8,965.1	295.6	-2,784.9	2,783.9	1.87	0.18	-1.86
11,186.0	92.92	272.65	8,960.9	299.9	-2,877.7	2,876.7	0.62	0.61	0.09
11,280.0	94.64	272.92	8,954.7	304.4	-2,971.4	2,970.4	1.85	1.83	0.29
11,374.0	92.92	273.62	8,948.5	309.8	-3,065.0	3,064.0	1.97	-1.83	0.74
11,468.0	93.14	273.27	8,943.5	315.4	-3,158.7	3,157.7	0.44	0.23	-0.37
11,561.0	91.60	271.69	8,939.7	319.4	-3,251.5	3,250.5	2.37	-1.66	-1.70
11,654.0	87.74	267.64	8,940.2	318.9	-3,344.5	3,343.5	6.02	-4.15	-4.35
11,747.0	85.41	265.62	8,945.7	313.4	-3,437.2	3,436.2	3.31	-2.51	-2.17
11,841.0	88.18	265.71	8,951.0	306.3	-3,530.7	3,529.8	2.95	2.95	0.10
11,934.0	88.92	265.27	8,953.4	299.0	-3,623.4	3,622.5	0.93	0.80	-0.47
12,027.0	89.58	267.12	8,954.6	292.8	-3,716.2	3,715.3	2.11	0.71	1.99



Intrepid
Survey Report



Company:	Tap Rock Resources, LLC	Local Co-ordinate Reference:	Well Pliny The Elder Fee #202H
Project:	Eddy County, NM (NAD 83 NME)	TVD Reference:	KB @ 3177.5usft (H&P 245)
Site:	(Pliny The Elder Fee) Sec-4_T-23-S_R-27-E	MD Reference:	KB @ 3177.5usft (H&P 245)
Well:	Pliny The Elder Fee #202H	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)
12,121.0	88.97	267.69	8,955.8	288.6	-3,810.1	3,809.2	0.89	-0.65	0.61
12,215.0	91.38	269.75	8,955.5	286.5	-3,904.1	3,903.1	3.37	2.56	2.19
12,308.0	89.19	268.08	8,955.0	284.7	-3,997.0	3,996.1	2.96	-2.35	-1.80
12,402.0	91.82	268.79	8,954.2	282.2	-4,091.0	4,090.1	2.90	2.80	0.76
12,530.0	91.12	267.64	8,950.9	278.2	-4,218.9	4,218.0	1.05	-0.55	-0.90
12,624.0	91.43	267.73	8,948.8	274.4	-4,312.8	4,311.9	0.34	0.33	0.10
12,717.0	90.81	266.85	8,947.0	270.0	-4,405.7	4,404.8	1.16	-0.67	-0.95
12,810.0	90.68	266.59	8,945.8	264.7	-4,498.5	4,497.6	0.31	-0.14	-0.28
12,904.0	90.02	268.26	8,945.2	260.4	-4,592.4	4,591.6	1.91	-0.70	1.78
12,997.0	91.74	269.40	8,943.8	258.5	-4,685.4	4,684.5	2.22	1.85	1.23
13,091.0	89.54	267.82	8,942.7	256.3	-4,779.3	4,778.5	2.88	-2.34	-1.68
13,184.0	89.89	268.00	8,943.2	252.9	-4,872.3	4,871.4	0.42	0.38	0.19
13,278.0	92.62	270.19	8,941.1	251.4	-4,966.2	4,965.4	3.72	2.90	2.33
13,372.0	94.59	269.23	8,935.2	250.9	-5,060.0	5,059.2	2.33	2.10	-1.02
13,466.0	94.02	269.14	8,928.2	249.6	-5,153.7	5,152.9	0.61	-0.61	-0.10
13,559.0	93.32	269.31	8,922.2	248.3	-5,246.5	5,245.7	0.77	-0.75	0.18
13,652.0	93.98	269.84	8,916.3	247.6	-5,339.3	5,338.5	0.91	0.71	0.57
13,746.0	92.09	268.70	8,911.3	246.4	-5,433.2	5,432.4	2.35	-2.01	-1.21
13,839.0	90.02	268.87	8,909.6	244.5	-5,526.2	5,525.4	2.23	-2.23	0.18
13,933.0	91.47	268.79	8,908.4	242.5	-5,620.1	5,619.3	1.54	1.54	-0.09
14,026.0	92.00	268.35	8,905.6	240.2	-5,713.1	5,712.3	0.74	0.57	-0.47
14,120.0	90.59	267.64	8,903.4	236.9	-5,807.0	5,806.2	1.68	-1.50	-0.76
14,213.0	88.00	266.24	8,904.6	232.0	-5,899.8	5,899.1	3.17	-2.78	-1.51
14,307.0	87.87	265.36	8,908.0	225.1	-5,993.5	5,992.8	0.95	-0.14	-0.94
14,400.0	87.38	265.36	8,911.8	217.6	-6,086.1	6,085.4	0.53	-0.53	0.00
14,494.0	86.77	267.91	8,916.6	212.1	-6,179.8	6,179.1	2.79	-0.65	2.71
14,587.0	92.84	270.02	8,916.9	210.4	-6,272.8	6,272.1	6.91	6.53	2.27
14,681.0	91.21	268.70	8,913.6	209.3	-6,366.7	6,366.0	2.23	-1.73	-1.40
14,774.0	90.68	268.08	8,912.1	206.7	-6,459.6	6,459.0	0.88	-0.57	-0.67
14,867.0	90.02	266.76	8,911.5	202.5	-6,552.5	6,551.9	1.59	-0.71	-1.42
14,961.0	91.78	267.12	8,910.0	197.5	-6,646.4	6,645.7	1.91	1.87	0.38
15,055.0	91.25	266.50	8,907.6	192.3	-6,740.2	6,739.6	0.87	-0.56	-0.66
15,148.0	91.91	265.71	8,905.0	186.0	-6,833.0	6,832.3	1.11	0.71	-0.85
15,242.0	92.84	265.71	8,901.1	179.0	-6,926.6	6,926.0	0.99	0.99	0.00
15,336.0	92.09	265.18	8,897.1	171.5	-7,020.2	7,019.7	0.98	-0.80	-0.56
15,430.0	92.04	266.76	8,893.7	164.9	-7,113.9	7,113.4	1.68	-0.05	1.68
15,523.0	91.12	266.24	8,891.1	159.2	-7,206.7	7,206.2	1.14	-0.99	-0.56
15,617.0	93.01	266.68	8,887.7	153.4	-7,300.5	7,300.0	2.06	2.01	0.47
15,710.0	92.35	265.89	8,883.4	147.4	-7,393.2	7,392.7	1.11	-0.71	-0.85
15,804.0	91.12	264.57	8,880.5	139.6	-7,486.8	7,486.3	1.92	-1.31	-1.40
15,898.0	91.74	265.18	8,878.2	131.2	-7,580.4	7,580.0	0.93	0.66	0.65
15,991.0	90.99	265.89	8,876.0	124.0	-7,673.1	7,672.7	1.11	-0.81	0.76
16,084.0	92.22	266.94	8,873.4	118.1	-7,765.9	7,765.5	1.74	1.32	1.13



Intrepid Survey Report



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Project:	Eddy County, NM (NAD 83 NME)	TVD Reference:	KB @ 3177.5usft (H&P 245)
Site:	(Pliny The Elder Fee) Sec-4_T-23-S_R-27-E	MD Reference:	KB @ 3177.5usft (H&P 245)
Well:	Pliny The Elder Fee #202H	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)
16,178.0	92.26	270.10	8,869.7	115.7	-7,859.8	7,859.4	3.36	0.04	3.36
16,272.0	91.74	269.23	8,866.4	115.2	-7,953.7	7,953.3	1.08	-0.55	-0.93
16,367.0	92.44	269.31	8,862.9	114.0	-8,048.6	8,048.2	0.74	0.74	0.08
16,461.0	90.42	269.05	8,860.6	112.6	-8,142.6	8,142.2	2.17	-2.15	-0.28
16,555.0	90.42	269.14	8,859.9	111.1	-8,236.6	8,236.2	0.10	0.00	0.10
16,648.0	91.43	271.42	8,858.4	111.6	-8,329.6	8,329.2	2.68	1.09	2.45
16,741.0	90.55	272.65	8,856.8	114.9	-8,422.5	8,422.1	1.63	-0.95	1.32
16,835.0	92.18	272.48	8,854.6	119.1	-8,516.4	8,515.9	1.74	1.73	-0.18
16,928.0	93.58	272.21	8,849.9	122.9	-8,609.2	8,608.7	1.53	1.51	-0.29
17,022.0	93.14	271.77	8,844.4	126.2	-8,702.9	8,702.5	0.66	-0.47	-0.47
17,116.0	91.69	271.34	8,840.4	128.7	-8,796.8	8,796.4	1.61	-1.54	-0.46
17,209.0	92.79	270.54	8,836.8	130.2	-8,889.7	8,889.3	1.46	1.18	-0.86
17,303.0	90.95	269.75	8,833.7	130.5	-8,983.7	8,983.2	2.13	-1.96	-0.84
17,396.0	92.48	270.10	8,830.9	130.3	-9,076.6	9,076.2	1.69	1.65	0.38
17,490.0	92.84	269.40	8,826.6	129.9	-9,170.5	9,170.1	0.84	0.38	-0.74
17,583.0	92.26	268.52	8,822.4	128.2	-9,263.4	9,263.0	1.13	-0.62	-0.95
17,677.0	90.99	268.17	8,819.8	125.5	-9,357.3	9,356.9	1.40	-1.35	-0.37
17,770.0	93.10	268.08	8,816.4	122.5	-9,450.2	9,449.8	2.27	2.27	-0.10
17,864.0	87.96	266.15	8,815.6	117.8	-9,544.1	9,543.6	5.84	-5.47	-2.05
17,957.0	88.57	266.68	8,818.4	111.9	-9,636.8	9,636.4	0.87	0.66	0.57
18,050.0	90.51	268.43	8,819.1	108.0	-9,729.7	9,729.4	2.81	2.09	1.88
18,143.0	92.44	268.96	8,816.7	105.9	-9,822.7	9,822.3	2.15	2.08	0.57
18,236.0	95.78	269.67	8,810.1	104.8	-9,915.4	9,915.0	3.67	3.59	0.76
18,328.0	94.07	268.17	8,802.2	103.0	-10,007.1	10,006.7	2.47	-1.86	-1.63
18,422.0	91.34	266.76	8,797.7	98.9	-10,100.9	10,100.5	3.27	-2.90	-1.50
18,515.0	90.33	265.53	8,796.4	92.6	-10,193.6	10,193.3	1.71	-1.09	-1.32
18,608.0	94.42	266.94	8,792.5	86.5	-10,286.3	10,286.0	4.65	4.40	1.52
18,702.0	91.52	265.53	8,787.7	80.4	-10,380.0	10,379.7	3.43	-3.09	-1.50
18,795.0	92.75	265.09	8,784.2	72.8	-10,472.6	10,472.3	1.40	1.32	-0.47
18,889.0	92.92	264.66	8,779.5	64.4	-10,566.1	10,565.9	0.49	0.18	-0.46
18,982.0	91.82	264.74	8,775.7	55.8	-10,658.6	10,658.4	1.19	-1.18	0.09
19,059.6	91.71	263.95	8,773.3	48.1	-10,735.8	10,735.6	1.03	-0.14	-1.02
LTP @ 19059.6'MD, 464.9'FSL & 330'FWL									
19,076.0	91.69	263.78	8,772.8	46.4	-10,752.1	10,751.9	1.03	-0.14	-1.02
19,133.0	91.12	263.42	8,771.4	40.0	-10,808.8	10,808.6	1.18	-1.00	-0.63
LAST SVY									
19,218.0	91.12	263.42	8,769.8	30.3	-10,893.2	10,893.0	0.00	0.00	0.00
Projection to TD @ 19218'MD, 447.4'FSL & 172.6'FWL									



Intrepid
Survey Report



Company:	Tap Rock Resources, LLC	Local Co-ordinate Reference:	Well Pliny The Elder Fee #202H
Project:	Eddy County, NM (NAD 83 NME)	TVD Reference:	KB @ 3177.5usft (H&P 245)
Site:	(Pliny The Elder Fee) Sec-4_T-23-S_R-27-E	MD Reference:	KB @ 3177.5usft (H&P 245)
Well:	Pliny The Elder Fee #202H	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 (Pliny The Elder I	-2.60	269.82	8,741.0	54.4	-10,735.8	485,666.40	571,214.16	32° 20' 6.474 N	104° 14' 11.759 W
- actual wellpath misses target center by 32.9usft at 19059.9usft MD (8773.3 TVD, 48.1 N, -10736.1 E)									
- Point									
PBHL (Pliny The Elde	-1.50	267.81	8,785.0	49.4	-10,865.4	485,661.45	571,084.64	32° 20' 6.426 N	104° 14' 13.269 W
- actual wellpath misses target center by 21.6usft at 19187.9usft MD (8770.4 TVD, 33.7 N, -10863.3 E)									
- Rectangle (sides W100.0 H1,347.3 D30.0)									
9000'VS (Pliny The EI	0.00	0.00	8,834.0	120.8	-9,000.4	485,732.82	572,949.60	32° 20' 7.115 N	104° 13' 51.530 W
- actual wellpath misses target center by 9.6usft at 17319.7usft MD (8833.4 TVD, 130.4 N, -9000.4 E)									
- Point									
FTP (Pliny The Elder I	0.00	0.00	9,004.0	285.0	-898.0	485,897.00	581,052.00	32° 20' 8.653 N	104° 12' 17.087 W
- actual wellpath misses target center by 38.8usft at 9210.8usft MD (8968.3 TVD, 294.9 N, -909.6 E)									
- Point									

Design Annotations

Measured Depth	Vertical Depth	Local Coordinates		Comment
(usft)	(usft)	+N/-S (usft)	+E/-W (usft)	
9,199.0	8,964.5	294.7	-898.4	FTP @ 9199'MD, 649.6'FSL & 330'FEL
19,059.6	8,773.3	48.1	-10,735.8	LTP @ 19059.6'MD, 464.9'FSL & 330'FWL
19,133.0	8,771.4	40.0	-10,808.8	LAST SVY
19,218.0	8,769.8	30.3	-10,893.2	Projection to TD @ 19218'MD, 447.4'FSL & 172.6'FWL

Checked By: _____ Approved By: _____ Date: _____