

Submit a Copy To Appropriate District
Office
District I – (575) 393-6161
1625 N. French Dr., Hobbs, NM 88240
District II – (575) 748-1283
811 S. First St., Artesia, NM 88210
District III – (505) 334-6178
1000 Rio Brazos Rd., Aztec, NM 87410
District IV – (505) 476-3460
1220 S. St. Francis Dr., Santa Fe, NM
87505

State of New Mexico
Energy, Minerals and Natural Resources

Form C-103
Revised July 18, 2013

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

WELL API NO. 30-025-48279
5. Indicate Type of Lease STATE ☐ FEE ☒
6. State Oil & Gas Lease No.
7. Lease Name or Unit Agreement Name Mandelbaum Fee
8. Well Number 137H
9. OGRID Number 372043
10. Pool name or Wildcat Antelope Ridge; Wolfcamp
4. Well Location Unit Letter <u>N</u> : 1030 feet from the <u>South</u> line and 2635 feet from the <u>West</u> line Section <u>11</u> Township <u>24S</u> Range <u>34E</u> NMPM County <u>LEA</u>
11. Elevation (Show whether DR, RKB, RT, GR, etc.) 3486 GR

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK ☐ PLUG AND ABANDON ☐
TEMPORARILY ABANDON ☐ CHANGE PLANS ☒
PULL OR ALTER CASING ☐ MULTIPLE COMPL ☐
DOWNHOLE COMMINGLE ☐
CLOSED-LOOP SYSTEM ☐
OTHER: Change Directional Plans ☒

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐ ALTERING CASING ☐
COMMENCE DRILLING OPNS. ☐ P AND A ☐
CASING/CEMENT JOB ☐
OTHER: ☐

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 19.15.7.14 NMAC. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

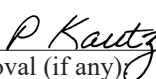
Tap Rock Operating LLC, is requesting permission to change the drilling plans for the Mandelbaum Fee 137H. The change in drill plan will deepen the total vertical depth from the previously permitted Bone spring to the targeted Wolfcamp formation. Please see the attached drill plan for more details.

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE  TITLE Regulatory Analyst DATE 6/1/2021

Type or print name Bill Ramsey E-mail address: bramsey@taprk.com PHONE: 720-238-2787

For State Use Only

APPROVED BY:  TITLE _____ DATE 06/04/2021
Conditions of Approval (if any) _____

District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720

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Phone: (575) 748-1283 Fax: (575) 748-9720

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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

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-025-48279		² Pool Code 2220	³ Pool Name ANTELOPE RIDGE: WOLFCAMP	
⁴ Property Code 329919	⁵ Property Name MANDELBAUM FEE			⁶ Well Number 137H
⁷ OGRID No. #372043	⁸ Operator Name TAP ROCK OPERATING, LLC.			⁹ Elevation 3486'

¹⁰Surface Location

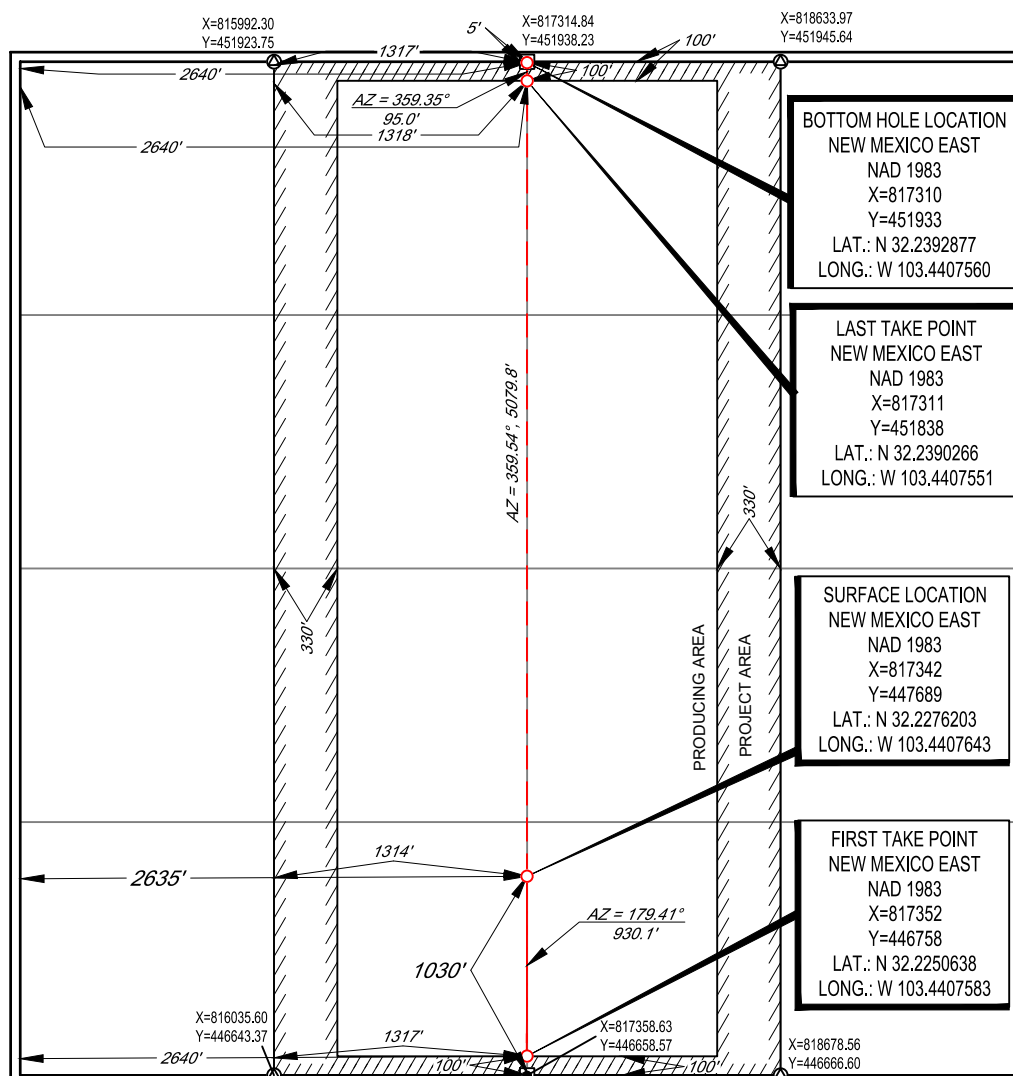
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
N	11	24-S	34-E	—	1030'	SOUTH	2635'	WEST	LEA

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
C	11	24-S	34-E	-	5'	NORTH	2640'	WEST	LEA

¹² Dedicated Acres 320	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 unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Raney

6/2/2021

Signature _____

Date _____

Bill Ramsey

Printed Name _____

bramsey@taprk.com

E-mail Address

18 SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true to the best of my belief.

11/16/2020

Date of Survey 11/1/2011

Date of Survey _____
Signature and Seal of Professional Surveyor _____

Signature and Seal

10

Certificate Number



Tap Rock Resources, LLC

**Lea County, NM (NAD 83 NME)
(Mandelbaum Fee) Sec-11_T-24-S_R-34-E
Mandelbaum Fee #137H**

OWB

Plan: Plan #4

Standard Planning Report

10 March, 2021





Intrepid Planning Report



Database:	EDM 5000.15 Single User Db	Local Co-ordinate Reference:	Well Mandelbaum Fee #137H
Company:	Tap Rock Resources, LLC	TVD Reference:	KB @ 3512.0usft (H&P 425)
Project:	Lea County, NM (NAD 83 NME)	MD Reference:	KB @ 3512.0usft (H&P 425)
Site:	(Mandelbaum Fee) Sec-11_T-24-S_R-34-E	North Reference:	Grid
Well:	Mandelbaum Fee #137H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	Plan #4		

Project	Lea 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	(Mandelbaum Fee) Sec-11_T-24-S_R-34-E		
Site Position:		Northing:	447,689.00 usft
From:	Map	Easting:	817,367.00 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 13' 39.436 N
		Longitude:	103° 26' 26.465 W
		Grid Convergence:	0.48 °

Well	Mandelbaum Fee #137H		
Well Position	+N/-S	0.0 usft	Northing:
	+E/-W	-25.0 usft	Easting:
Position Uncertainty	0.0 usft		Wellhead Elevation:
			Latitude:
			Longitude:
			Ground Level:

Wellbore	OWB				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	02/04/21	6.44	59.81	47,675.72027799

Design	Plan #4				
Audit Notes:					
Version:	Phase:	PLAN	Tie On Depth:	11,591.0	
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.0	0.0	0.0	359.54	

Plan Survey Tool Program	Date	03/10/21			
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks	
1	190.0	11,591.0	Intrepid MWD (OWB)	MWD	
			OWSG MWD - Standard		
2	11,591.0	17,316.6	Plan #4 (OWB)	MWD	
			OWSG MWD - Standard		



Intrepid Planning Report



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Well:	Mandelbaum Fee #137H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	Plan #4		

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
11,591.0	1.89	337.92	11,520.3	-931.1	128.1	0.00	0.00	0.00	0.00	
11,658.0	1.89	337.92	11,587.3	-929.1	127.2	0.00	0.00	0.00	0.00	
11,793.8	1.89	337.92	11,723.0	-924.9	125.6	0.00	0.00	0.00	0.00	
12,760.5	98.50	351.97	12,271.3	-274.7	28.7	10.00	9.99	1.45	13.99	
13,134.7	98.50	359.54	12,215.9	94.1	1.3	2.00	0.00	2.02	89.44	
15,735.3	98.50	359.54	11,831.5	2,666.0	-19.3	0.00	0.00	0.00	0.00	
15,910.3	95.00	359.54	11,811.0	2,839.8	-20.7	2.00	-2.00	0.00	180.00	
16,502.7	95.00	359.54	11,759.3	3,429.9	-25.5	0.00	0.00	0.00	0.00	
16,652.6	92.00	359.54	11,750.2	3,579.5	-26.7	2.00	-2.00	0.00	179.98	
17,317.5	92.00	359.54	11,726.9	4,244.0	-32.0	0.00	0.00	0.00	0.00	PBHL (Mandelbaun



Intrepid Planning Report



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Site:	(Mandelbaum Fee) Sec-11_T-24-S_R-34-E	North Reference:	Grid
Well:	Mandelbaum Fee #137H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	Plan #4		

Planned 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
190.0	1.10	52.72	190.0	1.1	1.5	1.1	0.58	0.58	0.00
237.0	1.23	89.02	237.0	1.4	2.3	1.4	1.57	0.28	77.23
327.0	1.45	79.00	327.0	1.6	4.4	1.6	0.36	0.24	-11.13
414.0	1.27	98.51	413.9	1.7	6.4	1.6	0.57	-0.21	22.43
505.0	0.53	109.76	504.9	1.4	7.8	1.3	0.83	-0.81	12.36
690.0	0.97	44.90	689.9	2.2	9.7	2.1	0.48	0.24	-35.06
781.0	1.01	49.03	780.9	3.3	10.9	3.2	0.09	0.04	4.54
871.0	0.75	112.22	870.9	3.6	12.0	3.5	1.05	-0.29	70.21
961.0	1.23	63.70	960.9	3.8	13.4	3.7	1.03	0.53	-53.91
1,050.0	0.53	98.95	1,049.9	4.1	14.7	4.0	0.96	-0.79	39.61
1,133.0	0.66	75.57	1,132.9	4.2	15.5	4.1	0.33	0.16	-28.17
1,228.0	3.47	146.15	1,227.8	2.0	17.7	1.8	3.48	2.96	74.29
1,323.0	5.10	133.84	1,322.5	-3.4	22.3	-3.5	1.96	1.72	-12.96
1,417.0	6.55	141.22	1,416.0	-10.4	28.7	-10.7	1.73	1.54	7.85
1,512.0	8.00	143.51	1,510.3	-20.0	36.0	-20.3	1.56	1.53	2.41
1,607.0	8.26	154.41	1,604.3	-31.4	42.9	-31.8	1.64	0.27	11.47
1,701.0	8.84	158.19	1,697.3	-44.2	48.5	-44.6	0.86	0.62	4.02
1,796.0	10.68	180.60	1,790.9	-59.8	51.1	-60.2	4.41	1.94	23.59
1,890.0	11.74	184.82	1,883.1	-78.1	50.2	-78.5	1.43	1.13	4.49
1,985.0	11.08	183.94	1,976.3	-96.8	48.8	-97.2	0.72	-0.69	-0.93
2,080.0	11.25	186.49	2,069.5	-115.1	47.1	-115.5	0.55	0.18	2.68
2,175.0	10.90	187.10	2,162.7	-133.2	45.0	-133.6	0.39	-0.37	0.64
2,270.0	10.59	188.77	2,256.0	-150.8	42.5	-151.1	0.46	-0.33	1.76
2,365.0	10.59	187.45	2,349.4	-168.1	40.1	-168.4	0.26	0.00	-1.39
2,459.0	8.79	185.17	2,442.1	-183.8	38.3	-184.1	1.96	-1.91	-2.43
2,554.0	8.70	181.83	2,536.0	-198.2	37.4	-198.5	0.54	-0.09	-3.52
2,648.0	8.70	183.85	2,628.9	-212.4	36.7	-212.7	0.33	0.00	2.15
2,743.0	8.26	185.26	2,722.8	-226.4	35.6	-226.6	0.51	-0.46	1.48
2,838.0	8.66	184.29	2,816.8	-240.3	34.4	-240.5	0.45	0.42	-1.02
2,933.0	8.53	183.59	2,910.7	-254.4	33.5	-254.7	0.18	-0.14	-0.74
3,028.0	8.44	185.08	3,004.7	-268.4	32.4	-268.7	0.25	-0.09	1.57
3,121.0	7.96	182.44	3,096.8	-281.7	31.5	-281.9	0.66	-0.52	-2.84
3,215.0	7.82	180.16	3,189.9	-294.5	31.2	-294.8	0.36	-0.15	-2.43
3,309.0	7.69	182.09	3,283.0	-307.2	31.0	-307.5	0.31	-0.14	2.05
3,404.0	7.56	178.75	3,377.2	-319.8	30.9	-320.1	0.49	-0.14	-3.52
3,498.0	7.08	176.82	3,470.4	-331.8	31.3	-332.0	0.57	-0.51	-2.05
3,592.0	6.55	173.04	3,563.7	-342.9	32.3	-343.1	0.74	-0.56	-4.02
3,685.0	5.41	171.46	3,656.2	-352.5	33.6	-352.8	1.24	-1.23	-1.70
3,779.0	5.41	165.83	3,749.8	-361.2	35.3	-361.5	0.56	0.00	-5.99
3,872.0	6.11	163.37	3,842.3	-370.2	37.8	-370.5	0.80	0.75	-2.65
3,967.0	7.56	160.65	3,936.7	-380.9	41.3	-381.2	1.56	1.53	-2.86
4,061.0	7.34	162.23	4,029.9	-392.5	45.2	-392.8	0.32	-0.23	1.68
4,154.0	7.08	164.34	4,122.1	-403.6	48.6	-404.0	0.40	-0.28	2.27
4,248.0	6.73	160.74	4,215.4	-414.4	52.0	-414.8	0.59	-0.37	-3.83
4,342.0	8.04	164.08	4,308.7	-425.9	55.6	-426.4	1.47	1.39	3.55
4,436.0	8.26	165.66	4,401.7	-438.8	59.1	-439.3	0.33	0.23	1.68
4,529.0	8.40	161.88	4,493.7	-451.7	62.8	-452.2	0.61	0.15	-4.06
4,622.0	8.79	162.49	4,585.7	-465.0	67.1	-465.5	0.43	0.42	0.66
4,716.0	10.20	175.59	4,678.4	-480.1	69.9	-480.7	2.74	1.50	13.94
4,810.0	9.54	172.69	4,771.0	-496.1	71.5	-496.7	0.88	-0.70	-3.09
4,904.0	9.36	162.23	4,863.8	-511.1	74.8	-511.7	1.83	-0.19	-11.13
4,997.0	9.71	156.78	4,955.5	-525.6	80.2	-526.2	1.04	0.38	-5.86
5,092.0	8.84	172.86	5,049.2	-540.2	84.3	-540.8	2.87	-0.92	16.93



Intrepid Planning Report



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Wellbore:	OWB		
Design:	Plan #4		

Planned 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)
5,186.0	7.78	183.24	5,142.3	-553.7	84.8	-554.3	1.95	-1.13	11.04
5,280.0	6.81	198.00	5,235.5	-565.3	82.8	-566.0	2.24	-1.03	15.70
5,374.0	6.59	195.10	5,328.9	-575.8	79.6	-576.5	0.43	-0.23	-3.09
5,467.0	5.98	197.83	5,421.3	-585.6	76.8	-586.2	0.73	-0.66	2.94
5,561.0	6.29	192.46	5,514.8	-595.3	74.2	-595.9	0.69	0.33	-5.71
5,654.0	7.34	182.36	5,607.1	-606.2	72.8	-606.8	1.71	1.13	-10.86
5,748.0	6.95	183.24	5,700.4	-617.9	72.2	-618.4	0.43	-0.41	0.94
5,842.0	7.52	173.92	5,793.6	-629.7	72.6	-630.2	1.39	0.61	-9.91
5,936.0	7.38	172.69	5,886.8	-641.8	74.0	-642.4	0.23	-0.15	-1.31
6,030.0	7.56	170.67	5,980.0	-653.9	75.8	-654.5	0.34	0.19	-2.15
6,124.0	7.47	170.58	6,073.2	-666.0	77.8	-666.6	0.10	-0.10	-0.10
6,218.0	7.08	162.84	6,166.5	-677.6	80.5	-678.2	1.12	-0.41	-8.23
6,312.0	6.42	163.64	6,259.8	-688.1	83.7	-688.8	0.71	-0.70	0.85
6,405.0	6.11	170.23	6,352.3	-698.0	86.0	-698.7	0.84	-0.33	7.09
6,499.0	6.15	171.02	6,445.7	-707.9	87.6	-708.6	0.10	0.04	0.84
6,593.0	6.07	169.61	6,539.2	-717.8	89.3	-718.5	0.18	-0.09	-1.50
6,686.0	5.49	167.77	6,631.7	-727.0	91.1	-727.7	0.65	-0.62	-1.98
6,780.0	5.85	167.33	6,725.3	-736.0	93.1	-736.8	0.39	0.38	-0.47
6,874.0	6.11	163.81	6,818.8	-745.5	95.6	-746.3	0.48	0.28	-3.74
6,967.0	6.20	164.60	6,911.2	-755.1	98.3	-755.9	0.13	0.10	0.85
7,061.0	6.42	166.98	7,004.7	-765.1	100.8	-765.9	0.36	0.23	2.53
7,154.0	7.74	172.60	7,096.9	-776.4	102.8	-777.2	1.60	1.42	6.04
7,249.0	7.43	173.13	7,191.1	-788.8	104.3	-789.7	0.33	-0.33	0.56
7,342.0	7.21	172.07	7,283.4	-800.6	105.9	-801.4	0.28	-0.24	-1.14
7,436.0	7.08	165.57	7,376.6	-812.0	108.1	-812.9	0.87	-0.14	-6.91
7,529.0	6.99	166.98	7,468.9	-823.1	110.8	-824.0	0.21	-0.10	1.52
7,623.0	8.44	161.70	7,562.1	-835.2	114.3	-836.1	1.72	1.54	-5.62
7,717.0	8.18	160.47	7,655.1	-848.1	118.7	-849.0	0.34	-0.28	-1.31
7,812.0	7.87	161.70	7,749.2	-860.6	123.0	-861.6	0.37	-0.33	1.29
7,822.9	7.87	161.90	7,760.0	-862.1	123.5	-863.0	0.26	0.00	1.87
Brushy Canyon									
7,906.0	7.87	163.46	7,842.3	-872.9	126.8	-873.9	0.26	0.00	1.87
8,001.0	8.09	163.99	7,936.4	-885.6	130.5	-886.6	0.24	0.23	0.56
8,095.0	7.52	165.57	8,029.5	-897.9	133.9	-898.9	0.65	-0.61	1.68
8,190.0	7.16	167.24	8,123.7	-909.7	136.7	-910.7	0.44	-0.38	1.76
8,285.0	6.46	162.41	8,218.0	-920.5	139.7	-921.6	0.95	-0.74	-5.08
8,380.0	5.98	166.98	8,312.5	-930.5	142.4	-931.6	0.73	-0.51	4.81
8,475.0	5.19	167.24	8,407.0	-939.5	144.5	-940.6	0.83	-0.83	0.27
8,570.0	4.57	165.83	8,501.7	-947.3	146.3	-948.5	0.66	-0.65	-1.48
8,664.0	3.91	166.54	8,595.4	-954.1	148.0	-955.2	0.70	-0.70	0.76
8,759.0	3.34	164.78	8,690.2	-959.9	149.5	-961.1	0.61	-0.60	-1.85
8,853.0	3.03	153.44	8,784.1	-964.8	151.3	-965.9	0.75	-0.33	-12.06
8,948.0	2.77	152.74	8,879.0	-969.1	153.5	-970.3	0.28	-0.27	-0.74
9,043.0	2.29	157.84	8,973.9	-972.9	155.3	-974.1	0.56	-0.51	5.37
9,137.0	2.33	156.52	9,067.8	-976.3	156.7	-977.6	0.07	0.04	-1.40
9,209.2	1.66	141.16	9,140.0	-978.5	158.0	-979.7	1.18	-0.93	-21.26
Bone Spring Lime									
9,232.0	1.49	133.67	9,162.7	-979.0	158.4	-980.2	1.18	-0.75	-32.93
9,234.3	1.48	134.07	9,165.0	-979.0	158.4	-980.2	0.76	-0.61	17.58
Upper Avalon									
9,327.0	1.01	158.89	9,257.7	-980.6	159.6	-981.9	0.76	-0.50	26.77
9,421.0	0.66	146.58	9,351.7	-981.8	160.2	-983.1	0.42	-0.37	-13.10
9,484.3	0.51	230.32	9,415.0	-982.3	160.2	-983.6	1.25	-0.24	132.30



Intrepid Planning Report



Database:	EDM 5000.15 Single User Db	Local Co-ordinate Reference:	Well Mandelbaum Fee #137H
Company:	Tap Rock Resources, LLC	TVD Reference:	KB @ 3512.0usft (H&P 425)
Project:	Lea County, NM (NAD 83 NME)	MD Reference:	KB @ 3512.0usft (H&P 425)
Site:	(Mandelbaum Fee) Sec-11_T-24-S_R-34-E	North Reference:	Grid
Well:	Mandelbaum Fee #137H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	Plan #4		

Planned 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)
Middle Avalon									
9,515.0	0.79	254.08	9,445.7	-982.5	159.9	-983.7	1.25	0.91	77.38
9,608.0	2.24	283.17	9,538.7	-982.2	157.5	-983.4	1.72	1.56	31.28
9,702.0	1.67	280.44	9,632.6	-981.5	154.3	-982.8	0.61	-0.61	-2.90
9,796.0	1.85	294.33	9,726.6	-980.7	151.6	-981.9	0.49	0.19	14.78
9,889.0	1.63	291.60	9,819.5	-979.6	149.0	-980.7	0.25	-0.24	-2.94
9,894.5	1.60	293.02	9,825.0	-979.5	148.9	-980.7	0.87	-0.47	26.03
Lower Avalon									
9,984.0	1.36	322.19	9,914.5	-978.2	147.1	-979.3	0.87	-0.27	32.58
10,079.0	1.80	317.44	10,009.5	-976.2	145.4	-977.3	0.48	0.46	-5.00
10,173.0	1.67	323.16	10,103.4	-974.0	143.5	-975.1	0.23	-0.14	6.09
10,239.6	2.39	338.04	10,170.0	-971.9	142.4	-973.1	1.33	1.08	22.34
1st Bone Spring Sand									
10,268.0	2.73	341.88	10,198.4	-970.8	142.0	-971.9	1.33	1.19	13.53
10,362.0	3.08	355.24	10,292.2	-966.1	141.1	-967.2	0.81	0.37	14.21
10,456.0	3.21	350.05	10,386.1	-961.0	140.4	-962.1	0.33	0.14	-5.52
10,551.0	3.38	356.47	10,480.9	-955.6	139.8	-956.7	0.43	0.18	6.76
10,610.2	3.21	1.08	10,540.0	-952.2	139.7	-953.3	0.53	-0.29	7.80
2nd Bone Spring Carb									
10,646.0	3.12	4.11	10,575.8	-950.2	139.8	-951.3	0.53	-0.25	8.44
10,740.0	3.65	348.73	10,669.6	-944.7	139.4	-945.8	1.11	0.56	-16.36
10,815.5	2.73	356.86	10,745.0	-940.6	138.8	-941.7	1.35	-1.21	10.76
2nd Bone Spring Sand									
10,835.0	2.51	359.90	10,764.5	-939.7	138.8	-940.8	1.35	-1.15	15.60
10,929.0	1.67	304.35	10,858.4	-936.8	137.7	-937.9	2.22	-0.89	-59.10
11,023.0	1.05	312.35	10,952.4	-935.5	135.9	-936.6	0.69	-0.66	8.51
11,118.0	1.05	261.11	11,047.4	-935.0	134.4	-936.1	0.96	0.00	-53.94
11,200.6	0.98	248.99	11,130.0	-935.4	133.0	-936.4	0.27	-0.09	-14.67
3rd Bone Spring Carb									
11,213.0	0.97	247.04	11,142.4	-935.5	132.8	-936.5	0.27	-0.06	-15.76
11,308.0	0.66	275.26	11,237.4	-935.8	131.5	-936.8	0.52	-0.33	29.71
11,402.0	1.01	301.62	11,331.4	-935.3	130.3	-936.3	0.54	0.37	28.04
11,497.0	1.49	338.27	11,426.3	-933.7	129.1	-934.7	0.96	0.51	38.58
11,591.0	1.89	337.92	11,520.3	-931.1	128.1	-932.1	0.43	0.43	-0.37
11,600.0	1.89	337.92	11,529.3	-930.8	128.0	-931.8	0.00	0.00	0.00
11,658.0	1.89	337.92	11,587.3	-929.1	127.2	-930.1	0.00	0.00	0.00
11,700.0	1.89	337.92	11,629.2	-927.8	126.7	-928.8	0.00	0.00	0.00
11,720.8	1.89	337.92	11,650.0	-927.1	126.5	-928.1	0.00	0.00	0.00
3rd Bone Spring Sand									
11,793.8	1.89	337.92	11,723.0	-924.9	125.6	-925.9	0.00	0.00	0.00
11,800.0	2.49	341.35	11,729.2	-924.7	125.5	-925.7	10.00	9.78	55.60
11,850.0	7.47	348.42	11,779.0	-920.5	124.5	-921.4	10.00	9.94	14.12
11,900.0	12.46	349.84	11,828.2	-912.0	122.9	-912.9	10.00	9.99	2.84
11,950.0	17.46	350.45	11,876.5	-899.3	120.7	-900.2	10.00	10.00	1.23
11,985.5	21.01	350.71	11,910.0	-887.7	118.8	-888.7	10.00	10.00	0.74
3rd BS W Sand									
12,000.0	22.46	350.80	11,923.5	-882.4	117.9	-883.3	10.00	10.00	0.58
12,050.0	27.46	351.03	11,968.8	-861.6	114.6	-862.5	10.00	10.00	0.45
12,074.2	29.87	351.11	11,990.0	-850.2	112.8	-851.0	10.00	10.00	0.35
Wolfcamp A X Sand									
12,100.0	32.45	351.19	12,012.1	-836.9	110.7	-837.8	10.00	10.00	0.30
12,150.0	37.45	351.31	12,053.1	-808.6	106.4	-809.5	10.00	10.00	0.24
12,165.2	38.97	351.34	12,065.0	-799.4	105.0	-800.2	10.00	10.00	0.21



Intrepid Planning Report



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Project:	Lea County, NM (NAD 83 NME)	MD Reference:	KB @ 3512.0usft (H&P 425)
Site:	(Mandelbaum Fee) Sec-11_T-24-S_R-34-E	North Reference:	Grid
Well:	Mandelbaum Fee #137H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	Plan #4		

Planned 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)
Wolfcamp A Y Sand									
12,200.0	42.45	351.41	12,091.4	-776.9	101.5	-777.7	10.00	10.00	0.19
12,240.1	46.46	351.47	12,120.0	-749.1	97.4	-749.9	10.00	10.00	0.16
Wolfcamp A Lower									
12,250.0	47.45	351.49	12,126.8	-742.0	96.3	-742.7	10.00	10.00	0.15
12,300.0	52.45	351.55	12,158.9	-704.1	90.7	-704.8	10.00	10.00	0.14
12,350.0	57.45	351.61	12,187.6	-663.7	84.7	-664.3	10.00	10.00	0.12
12,400.0	62.45	351.67	12,212.6	-620.9	78.4	-621.5	10.00	10.00	0.11
12,450.0	67.45	351.72	12,233.8	-576.0	71.8	-576.6	10.00	10.00	0.10
12,500.0	72.45	351.76	12,250.9	-529.6	65.1	-530.1	10.00	10.00	0.09
12,550.0	77.45	351.80	12,263.9	-481.8	58.2	-482.3	10.00	10.00	0.09
12,582.0	80.66	351.83	12,270.0	-450.7	53.7	-451.1	10.00	10.00	0.08
Wolfcamp B									
12,600.0	82.45	351.84	12,272.6	-433.1	51.2	-433.5	10.00	10.00	0.08
12,650.0	87.45	351.88	12,277.0	-383.8	44.1	-384.1	10.00	10.00	0.08
12,700.0	92.45	351.92	12,277.1	-334.3	37.1	-334.6	10.00	10.00	0.08
12,750.0	97.45	351.96	12,272.8	-285.0	30.1	-285.2	10.00	10.00	0.08
12,760.5	98.50	351.97	12,271.3	-274.7	28.7	-274.9	10.00	10.00	0.08
12,800.0	98.51	352.77	12,265.5	-236.0	23.5	-236.2	2.00	0.02	2.02
12,900.0	98.52	354.79	12,250.7	-137.7	12.8	-137.8	2.00	0.01	2.02
13,000.0	98.52	356.82	12,235.9	-39.1	5.5	-39.1	2.00	0.00	2.02
13,100.0	98.51	358.84	12,221.0	59.8	1.8	59.8	2.00	-0.01	2.02
13,134.7	98.50	359.54	12,215.9	94.1	1.3	94.0	2.00	-0.02	2.02
13,200.0	98.50	359.54	12,206.3	158.7	0.8	158.7	0.00	0.00	0.00
13,300.0	98.50	359.54	12,191.5	257.6	0.0	257.6	0.00	0.00	0.00
13,400.0	98.50	359.54	12,176.7	356.5	-0.8	356.5	0.00	0.00	0.00
13,500.0	98.50	359.54	12,161.9	455.4	-1.6	455.4	0.00	0.00	0.00
13,600.0	98.50	359.54	12,147.1	554.3	-2.4	554.3	0.00	0.00	0.00
13,700.0	98.50	359.54	12,132.4	653.2	-3.2	653.2	0.00	0.00	0.00
13,800.0	98.50	359.54	12,117.6	752.1	-4.0	752.1	0.00	0.00	0.00
13,900.0	98.50	359.54	12,102.8	851.0	-4.8	851.0	0.00	0.00	0.00
14,000.0	98.50	359.54	12,088.0	949.9	-5.6	949.9	0.00	0.00	0.00
14,100.0	98.50	359.54	12,073.2	1,048.8	-6.4	1,048.8	0.00	0.00	0.00
14,200.0	98.50	359.54	12,058.5	1,147.7	-7.2	1,147.7	0.00	0.00	0.00
14,300.0	98.50	359.54	12,043.7	1,246.5	-7.9	1,246.6	0.00	0.00	0.00
14,400.0	98.50	359.54	12,028.9	1,345.4	-8.7	1,345.5	0.00	0.00	0.00
14,500.0	98.50	359.54	12,014.1	1,444.3	-9.5	1,444.4	0.00	0.00	0.00
14,600.0	98.50	359.54	11,999.3	1,543.2	-10.3	1,543.3	0.00	0.00	0.00
14,700.0	98.50	359.54	11,984.6	1,642.1	-11.1	1,642.2	0.00	0.00	0.00
14,800.0	98.50	359.54	11,969.8	1,741.0	-11.9	1,741.1	0.00	0.00	0.00
14,900.0	98.50	359.54	11,955.0	1,839.9	-12.7	1,840.0	0.00	0.00	0.00
15,000.0	98.50	359.54	11,940.2	1,938.8	-13.5	1,938.9	0.00	0.00	0.00
15,100.0	98.50	359.54	11,925.4	2,037.7	-14.3	2,037.8	0.00	0.00	0.00
15,200.0	98.50	359.54	11,910.6	2,136.6	-15.1	2,136.7	0.00	0.00	0.00
15,300.0	98.50	359.54	11,895.9	2,235.5	-15.9	2,235.6	0.00	0.00	0.00
15,400.0	98.50	359.54	11,881.1	2,334.4	-16.7	2,334.5	0.00	0.00	0.00
15,500.0	98.50	359.54	11,866.3	2,433.3	-17.5	2,433.4	0.00	0.00	0.00
15,600.0	98.50	359.54	11,851.5	2,532.2	-18.3	2,532.3	0.00	0.00	0.00
15,700.0	98.50	359.54	11,836.7	2,631.1	-19.1	2,631.2	0.00	0.00	0.00
15,735.3	98.50	359.54	11,831.5	2,666.0	-19.3	2,666.1	0.00	0.00	0.00
15,800.0	97.21	359.54	11,822.7	2,730.1	-19.9	2,730.2	2.00	-2.00	0.00
15,900.0	95.21	359.54	11,811.9	2,829.5	-20.7	2,829.6	2.00	-2.00	0.00
15,910.3	95.00	359.54	11,811.0	2,839.8	-20.7	2,839.8	2.00	-2.00	0.00



Intrepid Planning Report



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Project:	Lea County, NM (NAD 83 NME)	MD Reference:	KB @ 3512.0usft (H&P 425)
Site:	(Mandelbaum Fee) Sec-11_T-24-S_R-34-E	North Reference:	Grid
Well:	Mandelbaum Fee #137H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	Plan #4		

Planned 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)	
16,000.0	95.00	359.54	11,803.1	2,929.1	-21.5	2,929.2	0.00	0.00	0.00	
16,100.0	95.00	359.54	11,794.4	3,028.8	-22.3	3,028.8	0.00	0.00	0.00	
16,200.0	95.00	359.54	11,785.7	3,128.4	-23.1	3,128.5	0.00	0.00	0.00	
16,300.0	95.00	359.54	11,777.0	3,228.0	-23.9	3,228.1	0.00	0.00	0.00	
16,400.0	95.00	359.54	11,768.3	3,327.6	-24.7	3,327.7	0.00	0.00	0.00	
16,502.7	95.00	359.54	11,759.3	3,429.9	-25.5	3,430.0	0.00	0.00	0.00	
16,600.0	93.05	359.54	11,752.5	3,527.0	-26.3	3,527.1	2.00	-2.00	0.00	
16,652.6	92.00	359.54	11,750.2	3,579.5	-26.7	3,579.6	2.00	-2.00	0.00	
16,700.0	92.00	359.54	11,748.5	3,626.9	-27.1	3,627.0	0.00	0.00	0.00	
16,800.0	92.00	359.54	11,745.0	3,726.8	-27.9	3,726.9	0.00	0.00	0.00	
16,900.0	92.00	359.54	11,741.5	3,826.8	-28.7	3,826.9	0.00	0.00	0.00	
17,000.0	92.00	359.54	11,738.0	3,926.7	-29.5	3,926.8	0.00	0.00	0.00	
17,100.0	92.00	359.54	11,734.5	4,026.6	-30.3	4,026.7	0.00	0.00	0.00	
17,200.0	92.00	359.54	11,731.1	4,126.6	-31.1	4,126.7	0.00	0.00	0.00	
17,300.0	92.00	359.54	11,727.6	4,226.5	-31.9	4,226.6	0.00	0.00	0.00	
17,317.5	92.00	359.54	11,726.9	4,244.0	-32.0	4,244.1	0.00	0.00	0.00	

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 (Mandelbaum F - plan hits target center - Rectangle (sides W100.0 H745.0 D30.0))	-2.00	359.54	11,726.9	4,244.0	-32.0	451,933.00	817,310.00	32° 14' 21.434 N	103° 26' 26.718 W	
LTP (Mandelbaum Fe - plan misses target center by 17.0usft at 17221.9usft MD (11730.3 TVD, 4148.4 N, -31.2 E) - Point	0.00	0.00	11,747.3	4,149.0	-31.0	451,838.00	817,311.00	32° 14' 20.494 N	103° 26' 26.715 W	
3500*VS (Mandelbaur - plan misses target center by 1.1usft at 16573.0usft MD (11754.1 TVD, 3500.0 N, -26.0 E) - Rectangle (sides W100.0 H767.4 D30.0))	-5.00	359.54	11,752.9	3,499.9	-26.1	451,188.90	817,315.93	32° 14' 14.071 N	103° 26' 26.721 W	
2500*VS (Mandelbaur - plan misses target center by 1.7usft at 15820.1usft MD (11820.2 TVD, 2750.1 N, -20.0 E) - Rectangle (sides W100.0 H3,681.0 D30.0))	-8.50	359.54	11,818.6	2,749.9	-20.1	450,438.90	817,321.91	32° 14' 6.649 N	103° 26' 26.724 W	
FTP (Mandelbaum Fe - plan misses target center by 169.5usft at 12144.5usft MD (12048.7 TVD, -811.9 N, 106.9 E) - Point	0.00	0.00	12,120.6	-931.0	10.0	446,758.00	817,352.00	32° 13' 30.225 N	103° 26' 26.729 W	



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Project:	Lea County, NM (NAD 83 NME)	MD Reference:	KB @ 3512.0usft (H&P 425)
Site:	(Mandelbaum Fee) Sec-11_T-24-S_R-34-E	North Reference:	Grid
Well:	Mandelbaum Fee #137H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	Plan #4		

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,030.1	1,030.0	Rustler Anhydrite			
1,220.2	1,220.0	Top Salt			
5,092.8	5,050.0	Base Salt			
5,455.6	5,410.0	Delaware Mountain Gp			
5,465.7	5,420.0	Lamar			
5,485.8	5,440.0	Ramsey Sand			
5,510.9	5,465.0	Bell Canyon			
6,377.6	6,325.0	Cherry Canyon			
7,822.9	7,760.0	Brushy Canyon			
9,209.2	9,140.0	Bone Spring Lime			
9,234.3	9,165.0	Upper Avalon			
9,484.3	9,415.0	Middle Avalon			
9,894.5	9,825.0	Lower Avalon			
10,239.6	10,170.0	1st Bone Spring Sand			
10,610.2	10,540.0	2nd Bone Spring Carb			
10,815.5	10,745.0	2nd Bone Spring Sand			
11,200.6	11,130.0	3rd Bone Spring Carb			
11,720.8	11,650.0	3rd Bone Spring Sand			
11,985.5	11,910.0	3rd BS W Sand			
12,074.2	11,990.0	Wolfcamp A X Sand			
12,165.2	12,065.0	Wolfcamp A Y Sand			
12,240.1	12,120.0	Wolfcamp A Lower			
12,582.0	12,270.0	Wolfcamp B			

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
11,591.0	11,520.3	-931.1	128.1	Tie on
11,658.0	11,587.3	-929.1	127.2	Csg Pt - 135.8 hold at 11658.0 MD
11,793.8	11,723.0	-924.9	125.6	KOP - DLS 10.00 TFO 13.99
12,760.5	12,271.3	-274.7	28.7	EOC.TRN - DLS 2.00 TFO 89.44
13,134.7	12,215.9	94.1	1.3	Start 2600.6 hold at 13134.7 MD
15,735.3	11,831.5	2,666.0	-19.3	Start DLS 2.00 TFO 180.00
15,910.3	11,811.0	2,839.8	-20.7	Start 592.4 hold at 15910.3 MD
16,502.7	11,759.3	3,429.9	-25.5	Start DLS 2.00 TFO 179.98
16,652.6	11,750.2	3,579.5	-26.7	Start 664.9 hold at 16652.6 MD
17,317.5	11,726.9	4,244.0	-32.0	TD at 17317.5

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State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 30311

CONDITIONS

Operator: TAP ROCK OPERATING, LLC 523 Park Point Drive Golden, CO 80401	OGRID: 372043
	Action Number: 30311
	Action Type: [C-103] NOI Change of Plans (C-103A)

CONDITIONS

Created By	Condition	Condition Date
pkautz	None	6/4/2021