

Submit 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. 30-025-48724
5. Indicate Type of Lease STATE ☐ FEE ☒
6. State Oil & Gas Lease No.
7. Lease Name or Unit Agreement Name Cosmo K Fee
8. Well Number 223H
9. OGRID Number 372043
10. Pool name or Wildcat WC-025 G-09 S243532M;WOLFBONE
4. Well Location Unit Letter <u>G</u> : <u>2384</u> feet from the <u>North</u> line and <u>2071</u> feet from the <u>East</u> line Section <u>33</u> Township <u>24S</u> Range <u>35E</u> NMPM County <u>LEA</u>
11. Elevation (Show whether DR, RKB, RT, GR, etc.) 3288 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: Sidetrack ☒

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.

After 2 unsuccessful fishing attempts for a parted motor down hole, Tap Rock operating, LLC has decided to proceed with a sidetrack on the Cosmo K Fee 223H. Tap Rock plans to pull back, set a cased hole whipstock inside the 7-5/8" casing (shoe depth of 12,335') and mill a window to begin new sidetrack. Please see the attached drill plan for the new sidetrack.

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

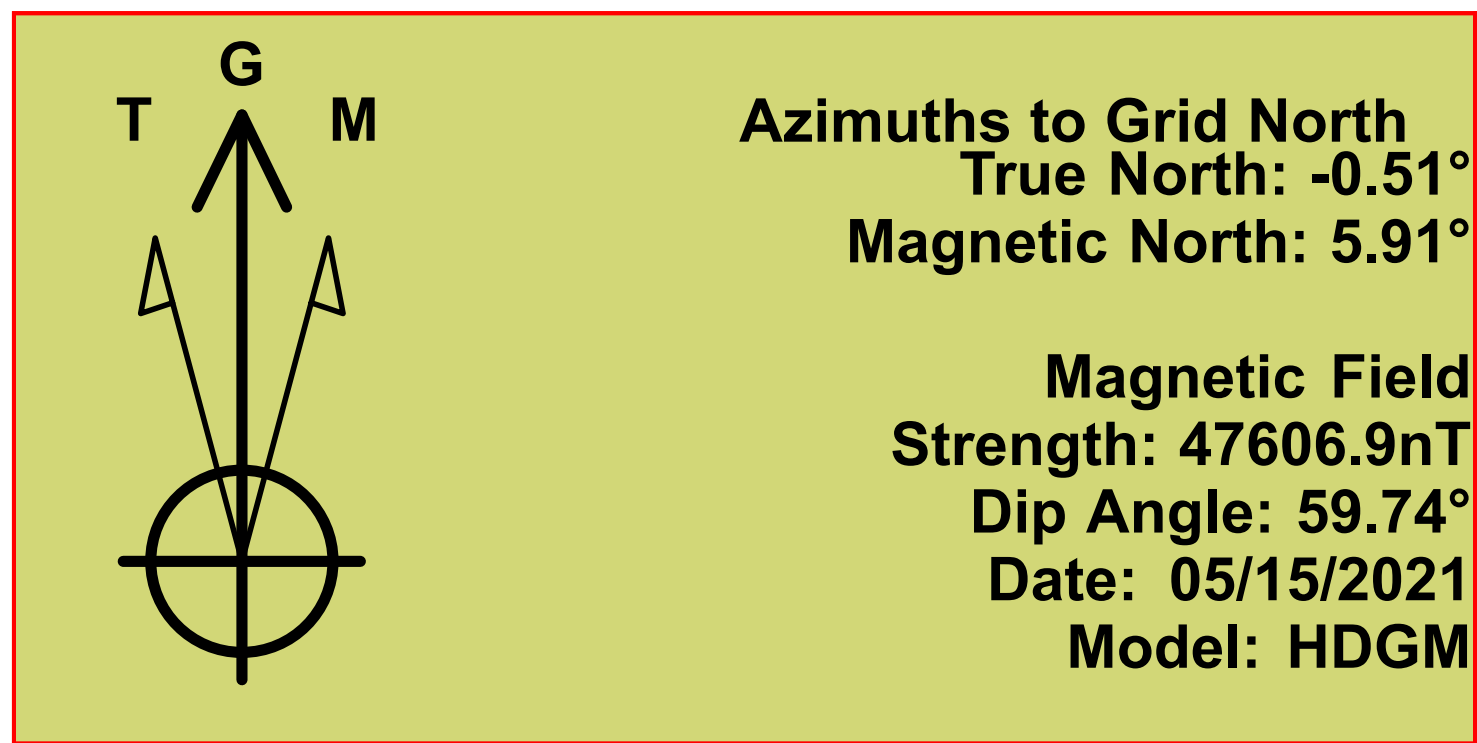
SIGNATURE Bill Ramsey TITLE Regulatory Analyst DATE 5/24/2021

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

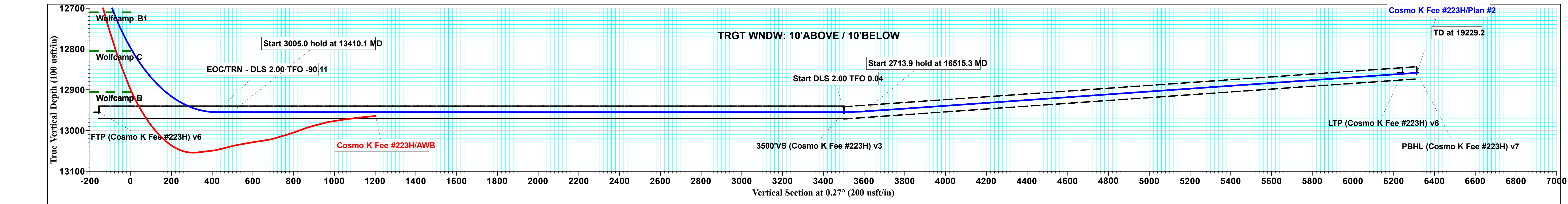
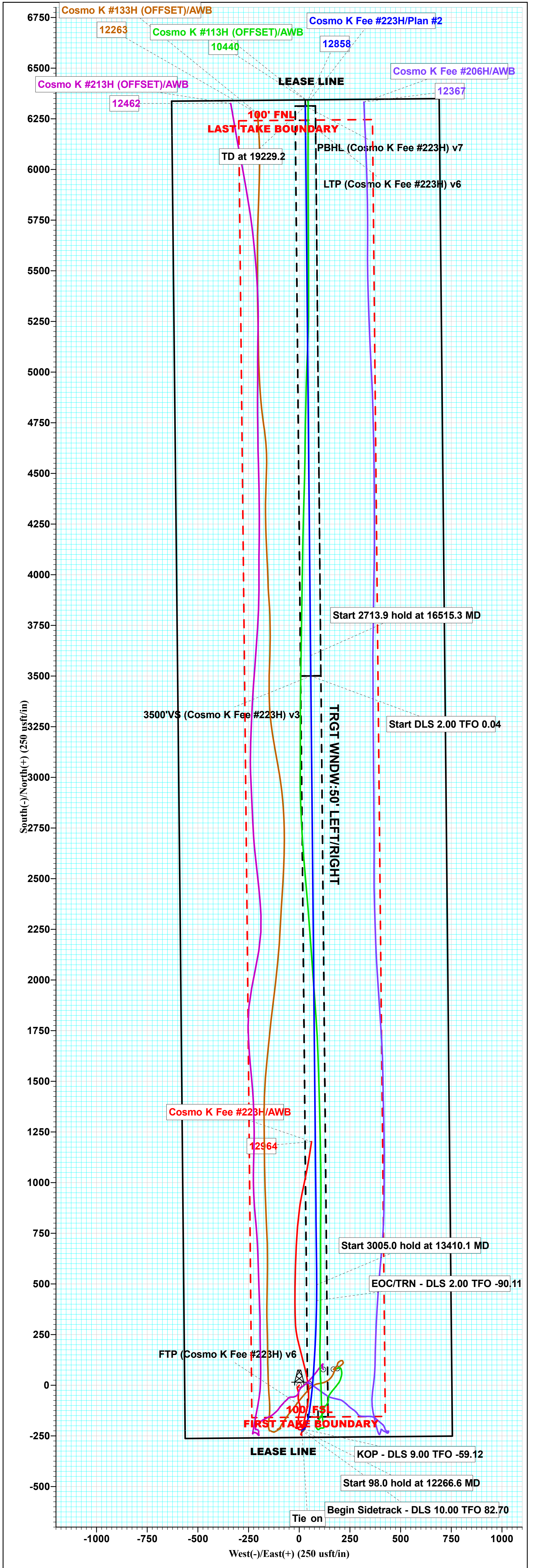
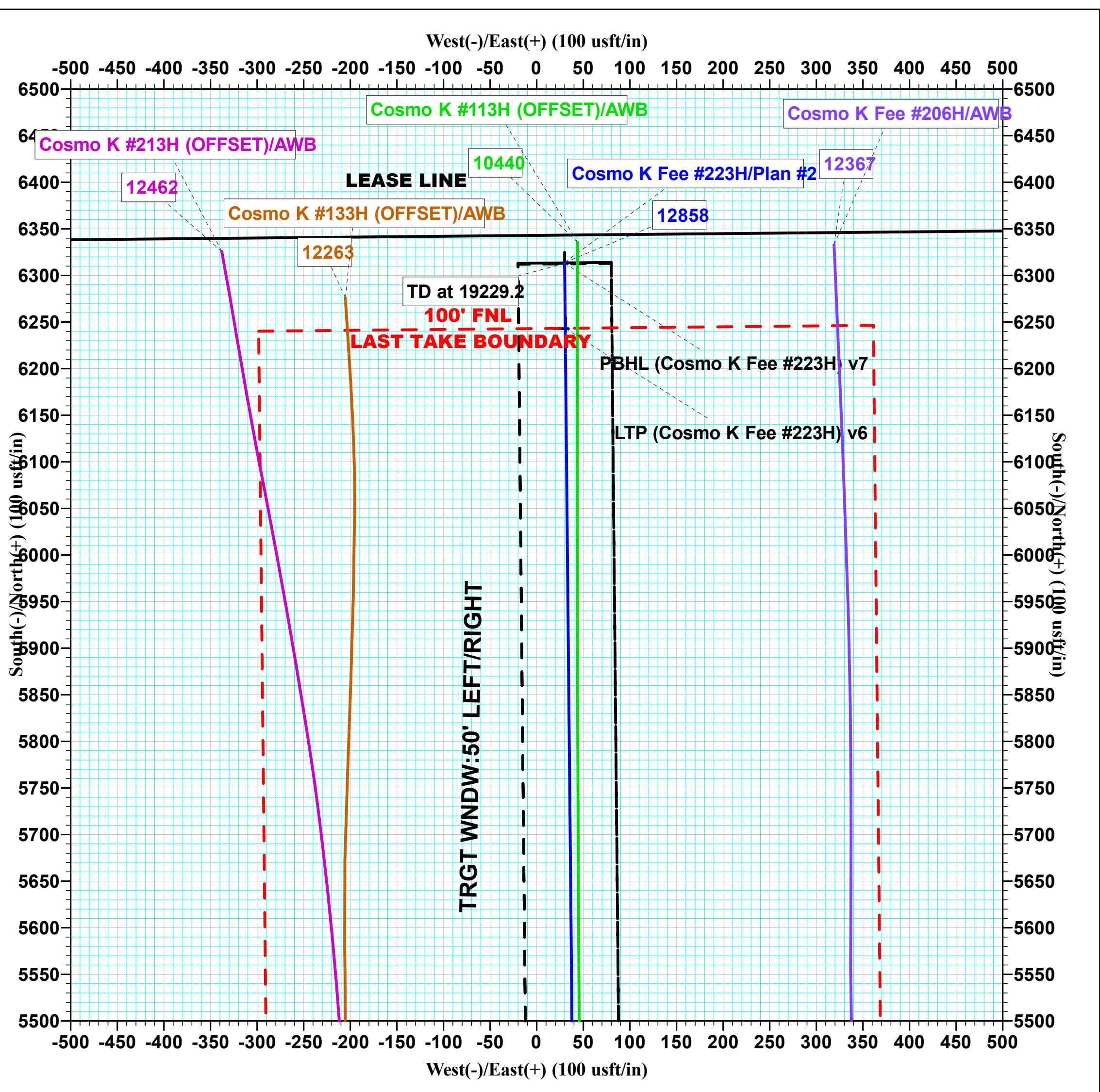
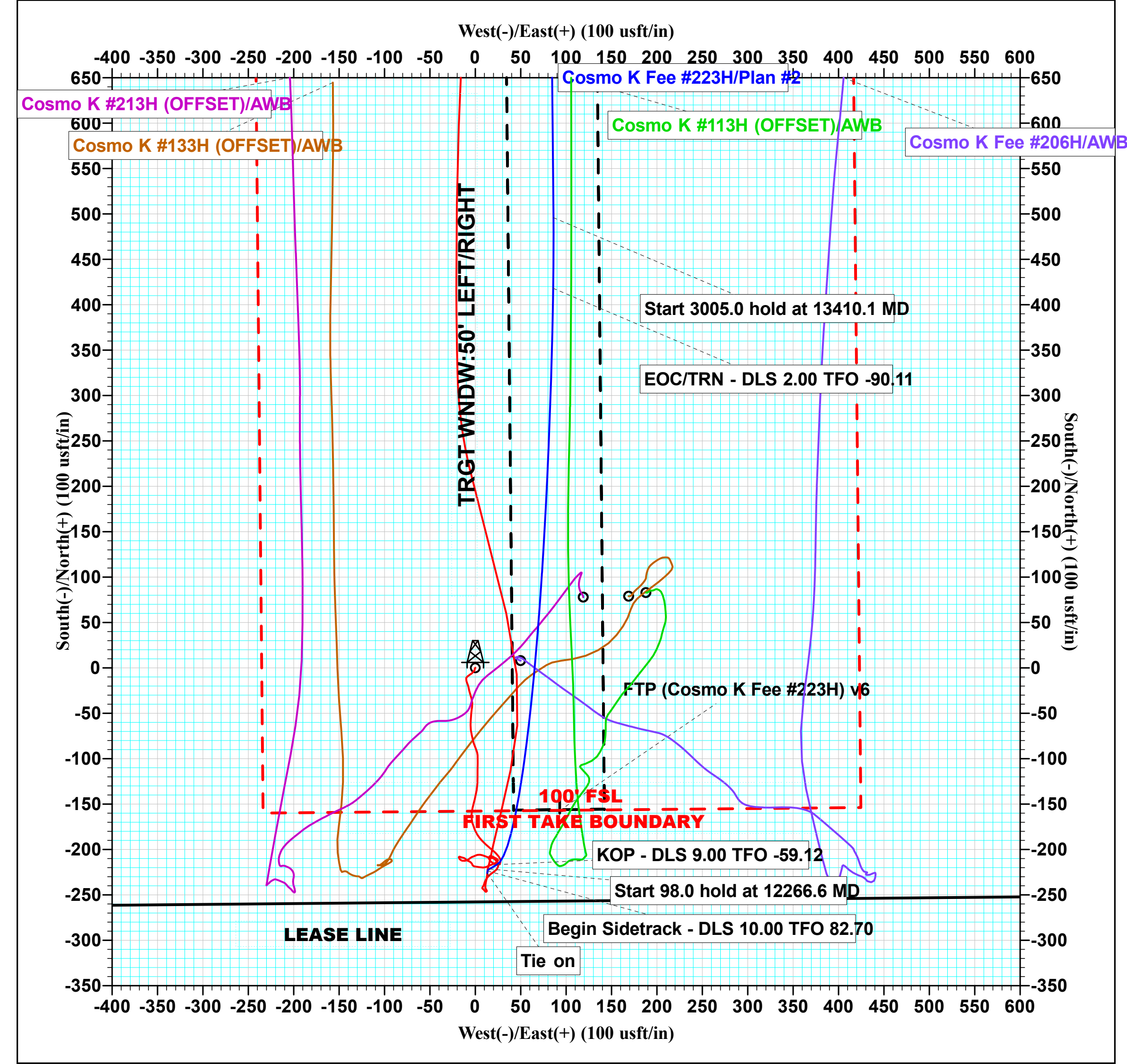
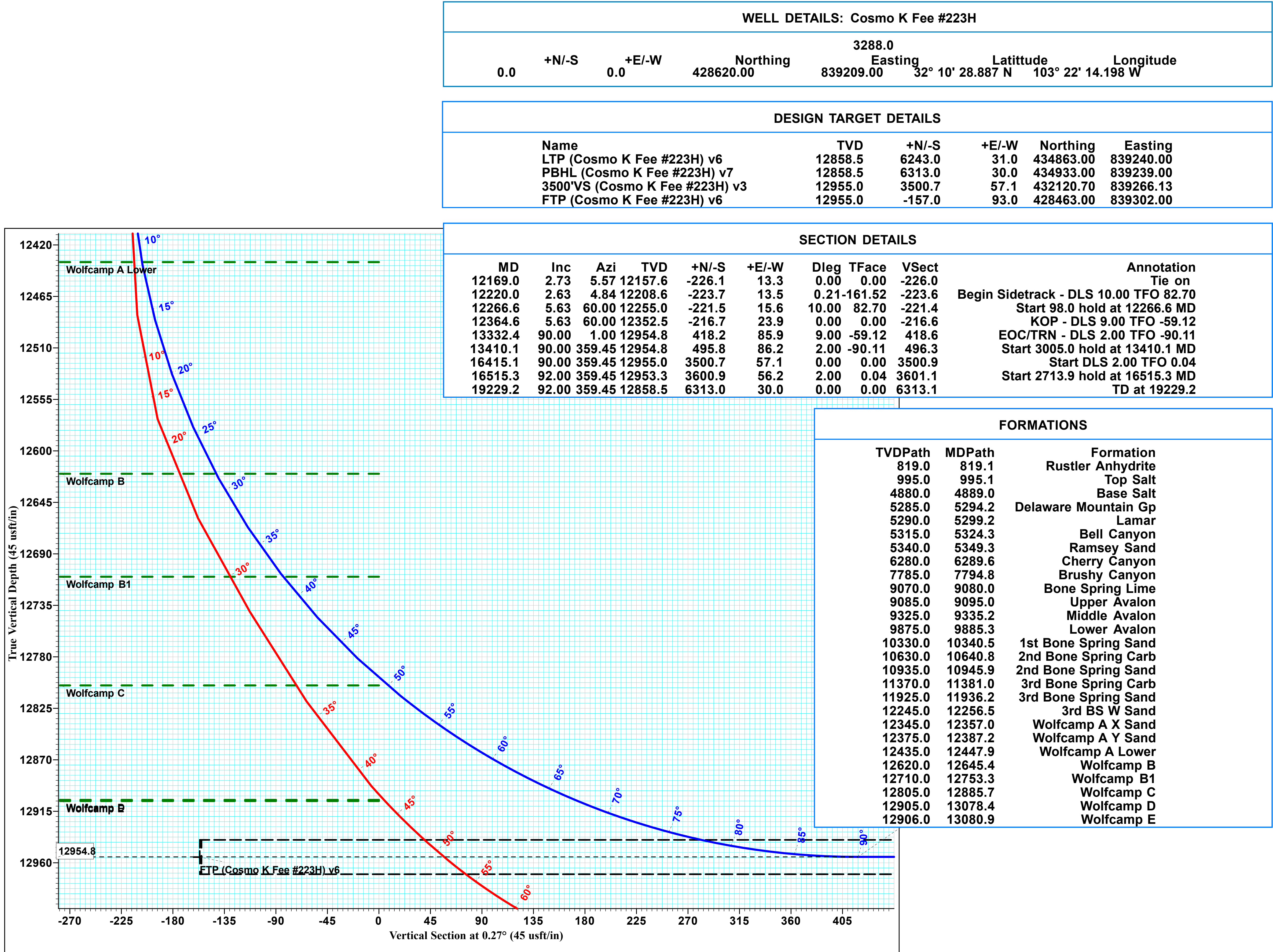
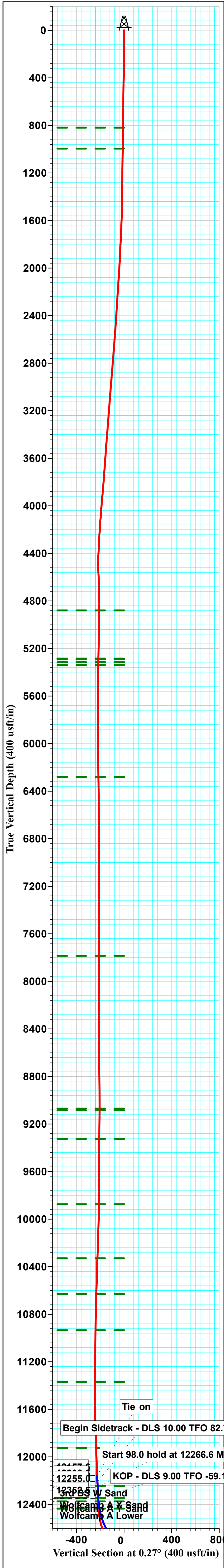
For State Use Only

APPROVED BY: P. Kautz TITLE _____ DATE _____

Conditions of Approval (if any): _____



Tap Rock Resources, LLC
Project: Lea County, NM (NAD 83 NME)
Site: (Cosmo) Sec-33_T-24-S_R-35-E
Well: Cosmo K Fee #223H
Wellbore: ST01
Design: Plan #2
Lat: 32° 10' 28.887 N
Long: 103° 22' 14.198 W
Pad GL: 3288.0
KB: KB @ 3314.0usft (H&P 466)





Tap Rock Resources, LLC

**Lea County, NM (NAD 83 NME)
(Cosmo) Sec-33_T-24-S_R-35-E
Cosmo K Fee #223H**

ST01

Plan: Plan #2

Standard Planning Report

22 May, 2021





Intrepid Planning Report



Database:	EDM 5000.15 Single User Db	Local Co-ordinate Reference:	Well Cosmo K Fee #223H
Company:	Tap Rock Resources, LLC	TVD Reference:	KB @ 3314.0usft (H&P 466)
Project:	Lea County, NM (NAD 83 NME)	MD Reference:	KB @ 3314.0usft (H&P 466)
Site:	(Cosmo) Sec-33_T-24-S_R-35-E	North Reference:	Grid
Well:	Cosmo K Fee #223H	Survey Calculation Method:	Minimum Curvature
Wellbore:	ST01		
Design:	Plan #2		

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	(Cosmo) Sec-33_T-24-S_R-35-E		
Site Position:		Northing:	428,628.00 usft
From:	Map	Easting:	839,259.00 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 10' 28.961 N
		Longitude:	103° 22' 13.615 W
		Grid Convergence:	0.51 °

Well	Cosmo K Fee #223H		
Well Position	+N/-S	-8.0 usft	Northing: 428,620.00 usft
	+E/-W	-50.0 usft	Easting: 839,209.00 usft
Position Uncertainty	0.0 usft	Wellhead Elevation:	Latitude: 32° 10' 28.887 N
			Longitude: 103° 22' 14.198 W
			Ground Level: 3,288.0 usft

Wellbore	ST01				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	05/15/21	6.42	59.74	47,606.89684137

Design	Plan #2			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	12,169.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	0.27

Plan Survey Tool Program	Date	05/22/21		
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1 12,169.0	19,229.2	Plan #2 (ST01)	MWD	
			OWSG MWD - Standard	

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
12,169.0	2.73	5.57	12,157.6	-226.1	13.3	0.00	0.00	0.00	0.00	
12,220.0	2.63	4.84	12,208.6	-223.7	13.5	0.21	-0.20	-1.43	-161.52	
12,266.6	5.63	60.00	12,255.0	-221.5	15.6	10.00	6.44	118.46	82.70	
12,364.6	5.63	60.00	12,352.5	-216.7	23.9	0.00	0.00	0.00	0.00	
13,332.4	90.00	1.00	12,954.8	418.2	85.9	9.00	8.72	-6.10	-59.12	
13,410.1	90.00	359.45	12,954.8	495.8	86.2	2.00	0.00	-2.00	-90.11	
16,415.1	90.00	359.45	12,955.0	3,500.7	57.1	0.00	0.00	0.00	0.00	3500'VS (Cosmo K
16,515.3	92.00	359.45	12,953.3	3,600.9	56.2	2.00	2.00	0.00	0.04	
19,229.2	92.00	359.45	12,858.5	6,313.0	30.0	0.00	0.00	0.00	0.00	PBHL (Cosmo K Fe



Intrepid Planning Report



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Project:	Lea County, NM (NAD 83 NME)	MD Reference:	KB @ 3314.0usft (H&P 466)
Site:	(Cosmo) Sec-33_T-24-S_R-35-E	North Reference:	Grid
Well:	Cosmo K Fee #223H	Survey Calculation Method:	Minimum Curvature
Wellbore:	ST01		
Design:	Plan #2		

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
146.0	0.22	237.95	146.0	-0.1	-0.2	-0.1	0.15	0.15	0.00
236.0	0.79	188.64	236.0	-0.9	-0.5	-0.9	0.74	0.63	-54.79
330.0	1.01	193.74	330.0	-2.3	-0.8	-2.3	0.25	0.23	5.43
421.0	1.23	230.66	421.0	-3.7	-1.7	-3.7	0.81	0.24	40.57
511.0	1.45	216.15	510.9	-5.2	-3.1	-5.2	0.45	0.24	-16.12
602.0	1.10	243.58	601.9	-6.5	-4.6	-6.6	0.76	-0.38	30.14
692.0	1.19	229.34	691.9	-7.5	-6.1	-7.6	0.33	0.10	-15.82
786.0	0.79	241.47	785.9	-8.5	-7.4	-8.5	0.48	-0.43	12.90
880.0	1.19	223.27	879.9	-9.5	-8.6	-9.5	0.54	0.43	-19.36
942.0	0.97	224.06	941.9	-10.4	-9.4	-10.4	0.36	-0.35	1.27
1,047.0	0.88	176.43	1,046.9	-11.8	-10.0	-11.8	0.72	-0.09	-45.36
1,140.0	0.88	174.76	1,139.8	-13.2	-9.9	-13.3	0.03	0.00	-1.80
1,235.0	0.92	164.12	1,234.8	-14.7	-9.6	-14.7	0.18	0.04	-11.20
1,329.0	0.92	158.06	1,328.8	-16.1	-9.1	-16.1	0.10	0.00	-6.45
1,423.0	0.92	161.66	1,422.8	-17.5	-8.6	-17.6	0.06	0.00	3.83
1,517.0	0.62	157.62	1,516.8	-18.7	-8.2	-18.7	0.32	-0.32	-4.30
1,610.0	2.20	167.46	1,609.8	-20.9	-7.6	-21.0	1.71	1.70	10.58
1,705.0	2.77	166.41	1,704.7	-24.9	-6.7	-25.0	0.60	0.60	-1.11
1,799.0	2.81	163.77	1,798.6	-29.3	-5.5	-29.4	0.14	0.04	-2.81
1,892.0	2.81	161.40	1,891.5	-33.7	-4.1	-33.7	0.12	0.00	-2.55
1,986.0	3.25	179.59	1,985.3	-38.5	-3.4	-38.6	1.12	0.47	19.35
2,080.0	3.91	186.97	2,079.1	-44.4	-3.7	-44.4	0.85	0.70	7.85
2,174.0	3.82	185.66	2,172.9	-50.7	-4.4	-50.7	0.13	-0.10	-1.39
2,268.0	3.74	183.46	2,266.7	-56.9	-4.9	-56.9	0.18	-0.09	-2.34
2,363.0	3.38	180.91	2,361.5	-62.8	-5.2	-62.8	0.41	-0.38	-2.68
2,457.0	3.91	173.00	2,455.3	-68.7	-4.8	-68.7	0.78	0.56	-8.41
2,552.0	4.66	167.46	2,550.1	-75.7	-3.6	-75.7	0.90	0.79	-5.83
2,647.0	4.53	162.45	2,644.8	-83.0	-1.6	-83.0	0.44	-0.14	-5.27
2,740.0	4.62	157.09	2,737.5	-90.0	1.0	-90.0	0.47	0.10	-5.76
2,834.0	4.62	177.39	2,831.2	-97.3	2.6	-97.2	1.73	0.00	21.60
2,928.0	4.79	182.32	2,924.9	-105.0	2.6	-104.9	0.47	0.18	5.24
3,022.0	4.62	179.94	3,018.5	-112.7	2.5	-112.7	0.28	-0.18	-2.53
3,116.0	4.57	179.50	3,112.2	-120.2	2.5	-120.2	0.07	-0.05	-0.47
3,211.0	4.26	182.32	3,207.0	-127.5	2.4	-127.5	0.40	-0.33	2.97
3,305.0	4.48	191.55	3,300.7	-134.6	1.5	-134.6	0.78	0.23	9.82
3,399.0	4.66	191.72	3,394.4	-141.9	0.0	-141.9	0.19	0.19	0.18
3,493.0	4.57	195.24	3,488.1	-149.3	-1.8	-149.3	0.32	-0.10	3.74
3,587.0	4.31	190.58	3,581.8	-156.4	-3.4	-156.4	0.47	-0.28	-4.96
3,681.0	3.96	183.63	3,675.6	-163.1	-4.2	-163.1	0.65	-0.37	-7.39
3,776.0	4.48	164.12	3,770.3	-169.9	-3.4	-169.9	1.60	0.55	-20.54
3,870.0	5.41	157.97	3,864.0	-177.6	-0.8	-177.6	1.14	0.99	-6.54
3,965.0	5.93	144.96	3,958.5	-185.7	3.7	-185.7	1.46	0.55	-13.69
4,059.0	6.64	132.66	4,051.9	-193.4	10.5	-193.3	1.62	0.76	-13.09
4,154.0	6.42	129.76	4,146.3	-200.5	18.6	-200.4	0.42	-0.23	-3.05
4,248.0	4.35	140.30	4,239.9	-206.6	24.9	-206.5	2.43	-2.20	11.21
4,342.0	3.47	165.53	4,333.7	-212.1	27.9	-212.0	2.03	-0.94	26.84
4,435.0	2.64	227.32	4,426.6	-216.3	27.1	-216.2	3.46	-0.89	66.44
4,531.0	4.00	289.72	4,522.4	-216.7	22.3	-216.5	3.78	1.42	65.00
4,625.0	3.82	317.05	4,616.2	-213.3	17.1	-213.2	1.97	-0.19	29.07
4,720.0	2.11	349.57	4,711.1	-209.2	14.6	-209.1	2.46	-1.80	34.23
4,815.0	2.20	82.38	4,806.1	-207.3	16.1	-207.2	3.29	0.09	97.69
4,910.0	2.59	120.88	4,901.0	-208.1	19.7	-208.0	1.71	0.41	40.53
5,004.0	2.15	116.75	4,994.9	-210.0	23.1	-209.9	0.50	-0.47	-4.39



Intrepid Planning Report



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Well:	Cosmo K Fee #223H	Survey Calculation Method:	Minimum Curvature
Wellbore:	ST01		
Design:	Plan #2		

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)
5,098.0	1.54	168.34	5,088.9	-212.0	25.0	-211.9	1.81	-0.65	54.88
5,193.0	1.89	244.63	5,183.8	-214.0	23.8	-213.8	2.25	0.37	80.31
5,286.0	2.20	243.40	5,276.8	-215.4	20.8	-215.3	0.34	0.33	-1.32
5,380.0	1.85	249.11	5,370.7	-216.8	17.8	-216.7	0.43	-0.37	6.07
5,473.0	2.07	244.28	5,463.7	-218.0	14.9	-218.0	0.30	0.24	-5.19
5,568.0	2.07	250.87	5,558.6	-219.3	11.7	-219.3	0.25	0.00	6.94
5,662.0	1.63	272.49	5,652.6	-219.8	8.8	-219.8	0.87	-0.47	23.00
5,757.0	1.36	274.25	5,747.5	-219.7	6.3	-219.7	0.29	-0.28	1.85
5,851.0	1.49	282.95	5,841.5	-219.3	4.0	-219.3	0.27	0.14	9.26
5,946.0	1.85	272.67	5,936.4	-219.0	1.3	-219.0	0.49	0.38	-10.82
6,040.0	1.45	289.54	6,030.4	-218.5	-1.4	-218.5	0.67	-0.43	17.95
6,135.0	0.88	335.69	6,125.4	-217.4	-2.8	-217.5	1.11	-0.60	48.58
6,230.0	1.14	335.25	6,220.4	-215.9	-3.5	-215.9	0.27	0.27	-0.46
6,325.0	0.92	302.46	6,315.4	-214.7	-4.6	-214.7	0.65	-0.23	-34.52
6,419.0	0.88	319.87	6,409.4	-213.7	-5.7	-213.7	0.29	-0.04	18.52
6,515.0	1.10	288.14	6,505.3	-212.8	-7.0	-212.9	0.61	0.23	-33.05
6,609.0	0.88	298.77	6,599.3	-212.2	-8.5	-212.3	0.30	-0.23	11.31
6,704.0	0.92	311.87	6,694.3	-211.4	-9.7	-211.4	0.22	0.04	13.79
6,799.0	1.05	313.80	6,789.3	-210.2	-10.9	-210.3	0.14	0.14	2.03
6,894.0	1.14	288.31	6,884.3	-209.3	-12.4	-209.4	0.52	0.09	-26.83
6,989.0	1.10	285.68	6,979.3	-208.8	-14.2	-208.9	0.07	-0.04	-2.77
7,082.0	0.66	269.77	7,072.3	-208.6	-15.6	-208.6	0.54	-0.47	-17.11
7,177.0	0.70	317.32	7,167.2	-208.1	-16.5	-208.2	0.58	0.04	50.05
7,271.0	0.53	253.33	7,261.2	-207.8	-17.3	-207.9	0.71	-0.18	-68.07
7,367.0	0.13	175.99	7,357.2	-208.1	-17.8	-208.2	0.54	-0.42	-80.56
7,462.0	0.40	221.34	7,452.2	-208.4	-18.0	-208.5	0.34	0.28	47.74
7,556.0	0.04	40.20	7,546.2	-208.7	-18.2	-208.7	0.47	-0.38	190.28
7,651.0	0.53	157.09	7,641.2	-209.0	-18.0	-209.1	0.58	0.52	123.04
7,745.0	0.35	143.56	7,735.2	-209.7	-17.6	-209.8	0.22	-0.19	-14.39
7,839.0	0.75	158.50	7,829.2	-210.5	-17.2	-210.6	0.45	0.43	15.89
7,934.0	0.79	111.21	7,924.2	-211.3	-16.4	-211.4	0.65	0.04	-49.78
8,028.0	0.75	139.34	8,018.2	-212.0	-15.4	-212.1	0.40	-0.04	29.93
8,122.0	0.84	78.17	8,112.2	-212.3	-14.3	-212.4	0.86	0.10	-65.07
8,216.0	0.75	102.95	8,206.2	-212.3	-13.0	-212.4	0.37	-0.10	26.36
8,310.0	0.97	92.76	8,300.2	-212.5	-11.6	-212.5	0.28	0.23	-10.84
8,404.0	1.41	68.06	8,394.2	-212.1	-9.8	-212.1	0.71	0.47	-26.28
8,498.0	1.49	60.94	8,488.1	-211.1	-7.6	-211.1	0.21	0.09	-7.57
8,593.0	1.63	44.24	8,583.1	-209.5	-5.6	-209.5	0.50	0.15	-17.58
8,685.0	1.27	69.73	8,675.1	-208.2	-3.7	-208.2	0.79	-0.39	27.71
8,780.0	1.36	73.33	8,770.0	-207.5	-1.7	-207.5	0.13	0.09	3.79
8,874.0	1.41	59.71	8,864.0	-206.6	0.4	-206.6	0.35	0.05	-14.49
8,958.0	1.36	79.13	8,948.0	-205.9	2.3	-205.9	0.56	-0.06	23.12
9,052.0	1.27	92.05	9,042.0	-205.7	4.4	-205.7	0.33	-0.10	13.74
9,080.0	1.36	95.39	9,070.0	-205.8	5.0	-205.8	0.41	0.31	11.91
Bone Spring Lime									
9,095.0	1.41	97.00	9,085.0	-205.8	5.4	-205.8	0.41	0.32	10.76
Upper Avalon									
9,147.0	1.58	101.81	9,136.9	-206.0	6.7	-206.0	0.41	0.34	9.25
9,242.0	1.89	110.60	9,231.9	-206.9	9.5	-206.8	0.43	0.33	9.25
9,335.2	2.19	110.51	9,325.0	-208.0	12.6	-208.0	0.33	0.33	-0.09
Middle Avalon									
9,337.0	2.20	110.51	9,326.8	-208.1	12.7	-208.0	0.33	0.33	-0.08
9,432.0	0.88	121.58	9,421.8	-209.1	15.0	-209.0	1.42	-1.39	11.65



Intrepid Planning Report



Database:	EDM 5000.15 Single User Db	Local Co-ordinate Reference:	Well Cosmo K Fee #223H
Company:	Tap Rock Resources, LLC	TVD Reference:	KB @ 3314.0usft (H&P 466)
Project:	Lea County, NM (NAD 83 NME)	MD Reference:	KB @ 3314.0usft (H&P 466)
Site:	(Cosmo) Sec-33_T-24-S_R-35-E	North Reference:	Grid
Well:	Cosmo K Fee #223H	Survey Calculation Method:	Minimum Curvature
Wellbore:	ST01		
Design:	Plan #2		

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)
9,525.0	0.40	78.17	9,514.8	-209.4	15.9	-209.3	0.70	-0.52	-46.68
9,620.0	0.62	92.67	9,609.8	-209.3	16.7	-209.3	0.27	0.23	15.26
9,714.0	1.01	92.05	9,703.8	-209.4	18.1	-209.3	0.41	0.41	-0.66
9,809.0	1.19	105.68	9,798.8	-209.7	19.9	-209.6	0.33	0.19	14.35
9,885.3	1.48	133.35	9,875.0	-210.6	21.3	-210.5	0.91	0.38	36.29
Lower Avalon									
9,903.0	1.58	138.02	9,892.7	-210.9	21.7	-210.8	0.91	0.58	26.31
9,997.0	1.89	142.41	9,986.7	-213.1	23.5	-213.0	0.36	0.33	4.67
10,091.0	1.71	161.93	10,080.7	-215.7	24.9	-215.5	0.68	-0.19	20.77
10,185.0	2.15	185.57	10,174.6	-218.8	25.1	-218.6	0.96	0.47	25.15
10,281.0	2.55	224.77	10,270.5	-222.1	23.5	-221.9	1.69	0.42	40.83
10,340.5	2.59	232.70	10,330.0	-223.8	21.4	-223.7	0.60	0.07	13.32
1st Bone Spring Sand									
10,376.0	2.64	237.25	10,365.4	-224.7	20.1	-224.6	0.60	0.14	12.84
10,470.0	2.81	231.27	10,459.3	-227.4	16.5	-227.3	0.35	0.18	-6.36
10,564.0	2.51	215.71	10,553.2	-230.5	13.5	-230.4	0.83	-0.32	-16.55
10,640.8	2.00	211.71	10,630.0	-233.0	11.8	-232.9	0.69	-0.66	-5.20
2nd Bone Spring Carb									
10,658.0	1.89	210.53	10,647.2	-233.5	11.5	-233.4	0.69	-0.65	-6.90
10,752.0	1.67	194.71	10,741.1	-236.1	10.4	-236.1	0.57	-0.23	-16.83
10,848.0	1.32	199.72	10,837.1	-238.5	9.7	-238.5	0.39	-0.36	5.22
10,942.0	0.44	219.23	10,931.1	-239.8	9.1	-239.8	0.98	-0.94	20.76
10,945.9	0.45	218.50	10,935.0	-239.9	9.0	-239.8	0.38	0.36	-18.57
2nd Bone Spring Sand									
11,037.0	0.79	209.04	11,026.1	-240.7	8.5	-240.6	0.38	0.37	-10.39
11,130.0	0.97	203.32	11,119.0	-242.0	7.9	-241.9	0.22	0.19	-6.15
11,224.0	1.19	126.51	11,213.0	-243.3	8.4	-243.2	1.44	0.23	-81.71
11,319.0	1.85	143.82	11,308.0	-245.1	10.1	-245.1	0.84	0.69	18.22
11,381.0	1.32	123.77	11,370.0	-246.3	11.2	-246.3	1.23	-0.86	-32.32
3rd Bone Spring Carb									
11,415.0	1.14	106.03	11,404.0	-246.6	11.9	-246.6	1.23	-0.52	-52.22
11,508.0	1.45	3.63	11,497.0	-245.7	12.9	-245.6	2.18	0.33	-110.11
11,603.0	1.01	288.31	11,591.9	-244.2	12.1	-244.2	1.62	-0.46	-79.28
11,697.0	1.63	351.59	11,685.9	-242.7	11.2	-242.6	1.58	0.66	67.32
11,792.0	2.51	6.71	11,780.9	-239.3	11.2	-239.2	1.08	0.93	15.92
11,886.0	1.89	10.49	11,874.8	-235.7	11.7	-235.6	0.68	-0.66	4.02
11,936.2	1.58	14.47	11,925.0	-234.2	12.0	-234.1	0.65	-0.61	7.91
3rd Bone Spring Sand									
11,981.0	1.32	19.54	11,969.7	-233.1	12.4	-233.1	0.65	-0.59	11.34
12,075.0	2.33	4.95	12,063.7	-230.2	12.9	-230.1	1.17	1.07	-15.52
12,169.0	2.73	5.57	12,157.6	-226.1	13.3	-226.0	0.43	0.43	0.66
12,200.0	2.67	5.13	12,188.6	-224.6	13.4	-224.5	0.21	-0.20	-1.41
12,220.0	2.63	4.84	12,208.6	-223.7	13.5	-223.6	0.21	-0.20	-1.46
12,250.0	4.23	49.53	12,238.5	-222.3	14.4	-222.2	10.00	5.34	148.98
12,256.5	4.76	54.38	12,245.0	-222.0	14.8	-221.9	10.00	8.13	74.35
3rd BS W Sand									
12,266.6	5.63	60.00	12,255.0	-221.5	15.6	-221.4	10.00	8.63	55.96
12,300.0	5.63	60.00	12,288.3	-219.8	18.4	-219.7	0.00	0.00	0.00
12,357.0	5.63	60.00	12,345.0	-217.0	23.2	-216.9	0.00	0.00	0.00
Wolfcamp A X Sand									
12,364.6	5.63	60.00	12,352.5	-216.7	23.9	-216.6	0.00	0.00	0.00
12,387.2	6.90	45.30	12,375.0	-215.2	25.8	-215.0	9.00	5.61	-65.01
Wolfcamp A Y Sand									



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Planned Survey									
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12,400.0	7.76	39.30	12,387.7	-213.9	26.9	-213.8	9.00	6.75	-46.79
12,447.9	11.46	25.64	12,435.0	-207.1	31.0	-207.0	9.00	7.70	-28.49
Wolfcamp A Lower									
12,450.0	11.62	25.25	12,437.0	-206.8	31.2	-206.6	9.00	8.16	-18.94
12,500.0	15.82	18.35	12,485.6	-195.7	35.5	-195.6	9.00	8.40	-13.81
12,550.0	20.15	14.31	12,533.1	-180.9	39.8	-180.7	9.00	8.65	-8.07
12,600.0	24.54	11.67	12,579.4	-162.4	44.0	-162.2	9.00	8.77	-5.29
12,645.4	28.55	9.93	12,620.0	-142.5	47.8	-142.2	9.00	8.84	-3.82
Wolfcamp B									
12,650.0	28.96	9.78	12,624.0	-140.3	48.2	-140.1	9.00	8.86	-3.27
12,700.0	33.40	8.36	12,666.8	-114.7	52.2	-114.5	9.00	8.88	-2.84
12,750.0	37.85	7.24	12,707.4	-85.9	56.2	-85.6	9.00	8.91	-2.24
12,753.3	38.14	7.18	12,710.0	-83.9	56.4	-83.6	9.00	8.92	-2.00
Wolfcamp B1									
12,800.0	42.31	6.33	12,745.7	-53.9	60.0	-53.6	9.00	8.92	-1.82
12,850.0	46.78	5.55	12,781.3	-19.1	63.6	-18.8	9.00	8.93	-1.54
12,885.7	49.97	5.07	12,805.0	7.5	66.0	7.8	9.00	8.94	-1.36
Wolfcamp C									
12,900.0	51.25	4.89	12,814.1	18.5	67.0	18.8	9.00	8.95	-1.27
12,950.0	55.72	4.30	12,843.8	58.6	70.2	58.9	9.00	8.95	-1.17
13,000.0	60.20	3.77	12,870.3	100.8	73.2	101.2	9.00	8.96	-1.06
13,050.0	64.68	3.29	12,893.4	145.1	75.9	145.4	9.00	8.96	-0.97
13,078.3	67.22	3.03	12,905.0	170.9	77.3	171.3	9.00	8.96	-0.91
Wolfcamp D									
13,080.9	67.46	3.01	12,906.0	173.3	77.5	173.7	9.00	8.96	-0.89
Wolfcamp E									
13,100.0	69.16	2.84	12,913.0	191.0	78.4	191.4	9.00	8.96	-0.88
13,150.0	73.65	2.42	12,929.0	238.3	80.6	238.7	9.00	8.96	-0.84
13,200.0	78.13	2.02	12,941.2	286.8	82.4	287.2	9.00	8.97	-0.81
13,250.0	82.61	1.63	12,949.5	336.0	84.0	336.4	9.00	8.97	-0.78
13,300.0	87.10	1.25	12,954.0	385.8	85.2	386.2	9.00	8.97	-0.76
13,332.4	90.00	1.00	12,954.8	418.2	85.9	418.6	9.00	8.97	-0.76
13,400.0	90.00	359.65	12,954.8	485.8	86.3	486.2	2.00	0.00	-2.00
13,410.1	90.00	359.45	12,954.8	495.8	86.2	496.3	2.00	0.00	-2.00
13,500.0	90.00	359.45	12,954.8	585.8	85.3	586.2	0.00	0.00	0.00
13,600.0	90.00	359.45	12,954.8	685.8	84.3	686.2	0.00	0.00	0.00
13,700.0	90.00	359.45	12,954.9	785.8	83.4	786.1	0.00	0.00	0.00
13,800.0	90.00	359.45	12,954.9	885.7	82.4	886.1	0.00	0.00	0.00
13,900.0	90.00	359.45	12,954.9	985.7	81.4	986.1	0.00	0.00	0.00
14,000.0	90.00	359.45	12,954.9	1,085.7	80.5	1,086.1	0.00	0.00	0.00
14,100.0	90.00	359.45	12,954.9	1,185.7	79.5	1,186.1	0.00	0.00	0.00
14,200.0	90.00	359.45	12,954.9	1,285.7	78.5	1,286.1	0.00	0.00	0.00
14,300.0	90.00	359.45	12,954.9	1,385.7	77.6	1,386.1	0.00	0.00	0.00
14,400.0	90.00	359.45	12,954.9	1,485.7	76.6	1,486.1	0.00	0.00	0.00
14,500.0	90.00	359.45	12,954.9	1,585.7	75.6	1,586.1	0.00	0.00	0.00
14,600.0	90.00	359.45	12,954.9	1,685.7	74.7	1,686.0	0.00	0.00	0.00
14,700.0	90.00	359.45	12,954.9	1,785.7	73.7	1,786.0	0.00	0.00	0.00
14,800.0	90.00	359.45	12,954.9	1,885.7	72.7	1,886.0	0.00	0.00	0.00
14,900.0	90.00	359.45	12,954.9	1,985.7	71.8	1,986.0	0.00	0.00	0.00
15,000.0	90.00	359.45	12,954.9	2,085.7	70.8	2,086.0	0.00	0.00	0.00
15,100.0	90.00	359.45	12,954.9	2,185.7	69.8	2,186.0	0.00	0.00	0.00
15,200.0	90.00	359.45	12,954.9	2,285.7	68.9	2,286.0	0.00	0.00	0.00
15,300.0	90.00	359.45	12,954.9	2,385.7	67.9	2,386.0	0.00	0.00	0.00



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Project:	Lea County, NM (NAD 83 NME)	MD Reference:	KB @ 3314.0usft (H&P 466)
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Wellbore:	ST01		
Design:	Plan #2		

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)	
15,400.0	90.00	359.45	12,954.9	2,485.7	66.9	2,486.0	0.00	0.00	0.00	
15,500.0	90.00	359.45	12,955.0	2,585.7	66.0	2,586.0	0.00	0.00	0.00	
15,600.0	90.00	359.45	12,955.0	2,685.7	65.0	2,685.9	0.00	0.00	0.00	
15,700.0	90.00	359.45	12,955.0	2,785.7	64.0	2,785.9	0.00	0.00	0.00	
15,800.0	90.00	359.45	12,955.0	2,885.7	63.1	2,885.9	0.00	0.00	0.00	
15,900.0	90.00	359.45	12,955.0	2,985.7	62.1	2,985.9	0.00	0.00	0.00	
16,000.0	90.00	359.45	12,955.0	3,085.6	61.1	3,085.9	0.00	0.00	0.00	
16,100.0	90.00	359.45	12,955.0	3,185.6	60.2	3,185.9	0.00	0.00	0.00	
16,200.0	90.00	359.45	12,955.0	3,285.6	59.2	3,285.9	0.00	0.00	0.00	
16,300.0	90.00	359.45	12,955.0	3,385.6	58.2	3,385.9	0.00	0.00	0.00	
16,400.0	90.00	359.45	12,955.0	3,485.6	57.3	3,485.9	0.00	0.00	0.00	
16,415.1	90.00	359.45	12,955.0	3,500.7	57.1	3,500.9	0.00	0.00	0.00	
16,500.0	91.70	359.45	12,953.7	3,585.6	56.3	3,585.8	2.00	2.00	0.00	
16,515.3	92.00	359.45	12,953.3	3,600.9	56.2	3,601.1	2.00	2.00	0.00	
16,600.0	92.00	359.45	12,950.3	3,685.5	55.3	3,685.8	0.00	0.00	0.00	
16,700.0	92.00	359.45	12,946.8	3,785.5	54.4	3,785.7	0.00	0.00	0.00	
16,800.0	92.00	359.45	12,943.3	3,885.4	53.4	3,885.6	0.00	0.00	0.00	
16,900.0	92.00	359.45	12,939.8	3,985.3	52.5	3,985.6	0.00	0.00	0.00	
17,000.0	92.00	359.45	12,936.3	4,085.3	51.5	4,085.5	0.00	0.00	0.00	
17,100.0	92.00	359.45	12,932.8	4,185.2	50.5	4,185.4	0.00	0.00	0.00	
17,200.0	92.00	359.45	12,929.3	4,285.2	49.6	4,285.3	0.00	0.00	0.00	
17,300.0	92.00	359.45	12,925.9	4,385.1	48.6	4,385.3	0.00	0.00	0.00	
17,400.0	92.00	359.45	12,922.4	4,485.0	47.6	4,485.2	0.00	0.00	0.00	
17,500.0	92.00	359.45	12,918.9	4,585.0	46.7	4,585.1	0.00	0.00	0.00	
17,600.0	92.00	359.45	12,915.4	4,684.9	45.7	4,685.1	0.00	0.00	0.00	
17,700.0	92.00	359.45	12,911.9	4,784.8	44.7	4,785.0	0.00	0.00	0.00	
17,800.0	92.00	359.45	12,908.4	4,884.8	43.8	4,884.9	0.00	0.00	0.00	
17,900.0	92.00	359.45	12,904.9	4,984.7	42.8	4,984.8	0.00	0.00	0.00	
18,000.0	92.00	359.45	12,901.4	5,084.6	41.8	5,084.8	0.00	0.00	0.00	
18,100.0	92.00	359.45	12,897.9	5,184.6	40.9	5,184.7	0.00	0.00	0.00	
18,200.0	92.00	359.45	12,894.4	5,284.5	39.9	5,284.6	0.00	0.00	0.00	
18,300.0	92.00	359.45	12,890.9	5,384.4	39.0	5,384.6	0.00	0.00	0.00	
18,400.0	92.00	359.45	12,887.4	5,484.4	38.0	5,484.5	0.00	0.00	0.00	
18,500.0	92.00	359.45	12,884.0	5,584.3	37.0	5,584.4	0.00	0.00	0.00	
18,600.0	92.00	359.45	12,880.5	5,684.2	36.1	5,684.3	0.00	0.00	0.00	
18,700.0	92.00	359.45	12,877.0	5,784.2	35.1	5,784.3	0.00	0.00	0.00	
18,800.0	92.00	359.45	12,873.5	5,884.1	34.1	5,884.2	0.00	0.00	0.00	
18,900.0	92.00	359.45	12,870.0	5,984.0	33.2	5,984.1	0.00	0.00	0.00	
19,000.0	92.00	359.45	12,866.5	6,084.0	32.2	6,084.1	0.00	0.00	0.00	
19,100.0	92.00	359.45	12,863.0	6,183.9	31.2	6,184.0	0.00	0.00	0.00	
19,200.0	92.00	359.45	12,859.5	6,283.8	30.3	6,283.9	0.00	0.00	0.00	
19,229.2	92.00	359.45	12,858.5	6,313.0	30.0	6,313.1	0.00	0.00	0.00	



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Wellbore:	ST01		
Design:	Plan #2		

Design Targets

Target Name

- hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
PBHL (Cosmo K Fee #223H) - plan hits target center - Rectangle (sides W100.0 H2,814.1 D30.0)	-2.00	359.45	12,858.5	6,313.0	30.0	434,933.00	839,239.00	32° 11' 31.349 N	103° 22' 13.191 W
LTP (Cosmo K Fee #223H) - plan misses target center by 2.5usft at 19159.2usft MD (12860.9 TVD, 6243.1 N, 30.7 E) - Point	0.00	0.00	12,858.5	6,243.0	31.0	434,863.00	839,240.00	32° 11' 30.657 N	103° 22' 13.187 W
FTP (Cosmo K Fee #223H) - plan misses target center by 223.0usft at 12864.8usft MD (12791.3 TVD, -8.2 N, 64.6 E) - Point	0.00	0.00	12,955.0	-157.0	93.0	428,463.00	839,302.00	32° 10' 27.325 N	103° 22' 13.132 W
3500'VS (Cosmo K Fee #223H) - plan hits target center - Rectangle (sides W100.0 H3,657.0 D30.0)	0.00	359.45	12,955.0	3,500.7	57.1	432,120.70	839,266.13	32° 11' 3.520 N	103° 22' 13.168 W

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
819.1	819.0	Rustler Anhydrite			
995.1	995.0	Top Salt			
4,889.0	4,880.0	Base Salt			
5,294.2	5,285.0	Delaware Mountain Gp			
5,299.2	5,290.0	Lamar			
5,324.3	5,315.0	Bell Canyon			
5,349.3	5,340.0	Ramsey Sand			
6,289.6	6,280.0	Cherry Canyon			
7,794.8	7,785.0	Brushy Canyon			
9,080.0	9,070.0	Bone Spring Lime			
9,095.0	9,085.0	Upper Avalon			
9,335.2	9,325.0	Middle Avalon			
9,885.3	9,875.0	Lower Avalon			
10,340.5	10,330.0	1st Bone Spring Sand			
10,640.8	10,630.0	2nd Bone Spring Carb			
10,945.9	10,935.0	2nd Bone Spring Sand			
11,381.0	11,370.0	3rd Bone Spring Carb			
11,936.2	11,925.0	3rd Bone Spring Sand			
12,256.5	12,245.0	3rd BS W Sand			
12,357.0	12,345.0	Wolfcamp A X Sand			
12,387.2	12,375.0	Wolfcamp A Y Sand			
12,447.9	12,435.0	Wolfcamp A Lower			
12,645.4	12,620.0	Wolfcamp B			
12,753.3	12,710.0	Wolfcamp B1			
12,885.7	12,805.0	Wolfcamp C			
13,078.3	12,905.0	Wolfcamp D			
13,080.9	12,906.0	Wolfcamp E			



Intrepid Planning Report



Database:	EDM 5000.15 Single User Db	Local Co-ordinate Reference:	Well Cosmo K Fee #223H
Company:	Tap Rock Resources, LLC	TVD Reference:	KB @ 3314.0usft (H&P 466)
Project:	Lea County, NM (NAD 83 NME)	MD Reference:	KB @ 3314.0usft (H&P 466)
Site:	(Cosmo) Sec-33_T-24-S_R-35-E	North Reference:	Grid
Well:	Cosmo K Fee #223H	Survey Calculation Method:	Minimum Curvature
Wellbore:	ST01		
Design:	Plan #2		

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
12,169.0	12,157.6	-226.1	13.3	Tie on
12,220.0	12,208.6	-223.7	13.5	Begin Sidetrack - DLS 10.00 TFO 82.70
12,266.6	12,255.0	-221.5	15.6	Start 98.0 hold at 12266.6 MD
12,364.6	12,352.5	-216.7	23.9	KOP - DLS 9.00 TFO -59.12
13,332.4	12,954.8	418.2	85.9	EOC/TRN - DLS 2.00 TFO -90.11
13,410.1	12,954.8	495.8	86.2	Start 3005.0 hold at 13410.1 MD
16,415.1	12,955.0	3,500.7	57.1	Start DLS 2.00 TFO 0.04
16,515.3	12,953.3	3,600.9	56.2	Start 2713.9 hold at 16515.3 MD
19,229.2	12,858.5	6,313.0	30.0	TD at 19229.2

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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 29199

CONDITIONS

Operator: TAP ROCK OPERATING, LLC 523 Park Point Drive Golden, CO 80401	OGRID: 372043
	Action Number: 29199
	Action Type: [C-103] NOI Change of Plans (C-103A)

CONDITIONS

Created By	Condition	Condition Date
pkautz	None	8/4/2021