

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 ResourcesForm C-104
Revised August 1, 2011Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Submit one copy to appropriate District Office

☐ AMENDED REPORT**I. REQUEST FOR ALLOWABLE AND AUTHORIZATION TO TRANSPORT**

¹ Operator name and Address Marathon Oil Permian LLC 990 Town & Country Blvd. Houston, TX 77024		² OGRID Number 372098
		³ Reason for Filing Code/ Effective Date NW / Effective 9/5/2022
⁴ API Number 30 - 025-46132	⁵ Pool Name Hardin Tank; Wolfcamp	⁶ Pool Code 96658
⁷ Property Code 332998	⁸ Property Name Thunderbird 1-36 WA Federal Com	⁹ Well Number 18H

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
P	1	26S	34E		869	SOUTH	1205	EAST	LEA

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
A	36	25S	34E		102	NORTH	696	EAST	LEA
¹² Lse Code F	¹³ Producing Method Code F	¹⁴ Gas Connection Date	¹⁵ C-129 Permit Number	¹⁶ C-129 Effective Date	¹⁷ C-129 Expiration Date				

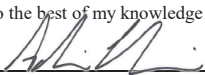
III. Oil and Gas Transporters

¹⁸ Transporter OGRID	¹⁹ Transporter Name and Address	²⁰ O/G/W
371960	Lucid Energy Delaware, LLC 201 S Fourth Street P.O. Box 158, Artesia, NM 88210	G
329971	Oryx Delaware Oil Transport LLC 4000 N Big Spring St. Suite 500, Midland, TX 79705	O
371643	Solaris Water Midstream, LLC 97 Tradewinds Blvd, Suite B, Midland, TX 79706	W

IV. Well Completion Data

²¹ Spud Date 4/9/2022	²² Ready Date 9/2/2022	²³ TD 22926'	²⁴ PBDT 22906'	²⁵ Perforations 12,463' - 22,897'	²⁶ DHC, MC
²⁷ Hole Size	²⁸ Casing & Tubing Size	²⁹ Depth Set	³⁰ Sacks Cement		
17-1/2"	13-3/8", 54.5#, J55, BTC	1163'	1045		
12-1/4"	9-5/8", 40#, P110, BTC	11884'	2360		
8-3/4"	5-1/2", 23#, P110, TLW	22911'	5960		

V. Well Test Data

³¹ Date New Oil 9/5/2022	³² Gas Delivery Date 9/5/2022	³³ Test Date 9/22/2022	³⁴ Test Length 24 hrs	³⁵ Tbg. Pressure	³⁶ Csg. Pressure 2838
³⁷ Choke Size 38/64	³⁸ Oil 3118	³⁹ Water 9680	⁴⁰ Gas 4536		⁴¹ Test Method 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: 			OIL CONSERVATION DIVISION		
Printed name: Adrian Covarrubias			Approved by: PATRICIA MARTINEZ		
Title: Regulatory Professional			Title: PETROLEUM SPECIALIST		
E-mail Address: acovarrubias@marathonoil.com			Approval Date: 3/1/2023		
Date: 10/14/2022		Phone: 713-296-3368			

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: (505) 748-1283 Fax: (505) 334-6170
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

Revised August 1, 2011
 Submit one copy to appropriate
 District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION AS-DRILLED PLAT

¹ API Number 30-025-46132	² Pool Code 96658	³ Pool Name HARDIN TANK; WOLFCAMP
⁴ Property Code 332998	Property Name THUNDERBIRD 1-36 WA FED COM	
⁷ OGRID No. 372098	⁸ Operator Name MARATHON OIL PERMIAN LLC.	⁶ Well Number 18H
		⁹ Elevation 3281'

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
P	1	26S	34E		869	SOUTH	1205	EAST	LEA
¹¹ Bottom 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
A	36	25S	34E		102	NORTH	696	EAST	LEA
¹² Dedicated Acres 320.0	¹³ Joint or Infill	¹⁴ Consolidation Code		¹⁵ Order No.					

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.

		CORNER COORDINATES NAD 83, SPCS NM EAST A - X: 824430.84' / Y: 391274.07' B - X: 824408.28' / Y: 393913.64' C - X: 824384.75' / Y: 396553.24' D - X: 824360.23' / Y: 399191.31' E - X: 825680.67' / Y: 399198.85' F - X: 825705.52' / Y: 396561.84' G - X: 825728.39' / Y: 393922.74' H - X: 82571.40' / Y: 391282.17' I - X: 825774.41' / Y: 388641.60' J - X: 824453.40' / Y: 388634.50'
		CORNER COORDINATES NAD 27, SPCS NM EAST A - X: 783243.41' / Y: 391216.49' B - X: 783220.97' / Y: 393855.99' C - X: 783197.56' / Y: 396495.51' D - X: 783173.17' / Y: 399133.52' E - X: 784493.59' / Y: 399141.04' F - X: 784518.32' / Y: 396504.11' G - X: 784541.07' / Y: 393865.08' H - X: 784563.96' / Y: 391224.58' I - X: 784586.85' / Y: 388584.08' J - X: 783265.85' / Y: 388576.99'
		BOTTOM HOLE LOCATION 102' FNL 696' FEL, SECTION 36 22926' MEASURED DEPTH IN FEET NAD 83, SPCS NM EAST X: 824985.72' / Y: 399092.80' LAT: 32.09387397N / LON: 103.41738651W NAD 27, SPCS NM EAST X: 783798.64' / Y: 399035.01' LAT: 32.09374813N / LON: 103.41692165W
		LAST TAKE POINT 131' FNL 698' FEL, SECTION 36 22897' MEASURED DEPTH IN FEET NAD 83, SPCS NM EAST X: 824983.99' / Y: 399064.12' LAT: 32.09379516N / LON: 103.41739290W NAD 27, SPCS NM EAST X: 783796.91' / Y: 399006.32' LAT: 32.09366932N / LON: 103.41692804W
		FIRST TAKE POINT 105' FSL 736' FEL, SECTION 1 12463' MEASURED DEPTH IN FEET NAD 83, SPCS NM EAST X: 825037.90' / Y: 388742.54' LAT: 32.06542384N / LON: 103.41750176W NAD 27, SPCS NM EAST X: 783850.35' / Y: 388685.02' LAT: 32.06529785N / LON: 103.41703855W
		KICK OFF POINT 100' FSL 735' FEL, SECTION 1 12453' MEASURED DEPTH IN FEET NAD 83, SPCS NM EAST X: 825038.94' / Y: 388737.65' LAT: 32.06541037N / LON: 103.41749855W NAD 27, SPCS NM EAST X: 783851.38' / Y: 388680.13' LAT: 32.06528438N / LON: 103.41703535W
		SURFACE HOLE LOCATION 869' FSL 1205' FEL, SECTION 1 0' MEASURED DEPTH IN FEET NAD 83, SPCS NM EAST X: 824561.58' / Y: 389504.37' LAT: 32.06752893N / LON: 103.41901840W NAD 27, SPCS NM EAST X: 783374.07' / Y: 389446.84' LAT: 32.06740297N / LON: 103.41855502W

17 OPERATOR 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.
 Signature: Date: 10/14/2022
 Printed Name: Adrian Covarrubias
 E-mail Address:

18 SURVEYOR CERTIFICATION
 I hereby certify that the well surface location shown on this plat was plotted from field notes of the as-staked surveys made by me or under my supervision, and that the same is true and correct to the best of my belief. Data used for underground measurements were provided by others for reference only and does not constitute field measurements performed by R-Squared Global.
 Date of Survey: OCTOBER 13, 2022
 Signature and Seal of Professional Surveyor:
 Certificate Number: DAVID W. MYERS 11403

Distances/areas relative to NAD 83 Combined Scale Factor: 0.99985058 Convergence Angle: 00°29'34.80475"



Marathon Oil Permian LLC

Lea County, NM (NAD27 NME)

Thunderbird 1

Thunderbird 1 WA Federal 18H

OH / 69484

Design: Surveys Cactus 169)

Standard Survey Report

31 May, 2022





Phoenix Survey Report



Company:	Marathon Oil Permian LLC	Local Co-ordinate Reference:	Well Thunderbird 1 WA Federal 18H
Project:	Lea County, NM (NAD27 NME)	TVD Reference:	RKB @ 3304.60usft (Cactus 169)
Site:	Thunderbird 1	MD Reference:	RKB @ 3304.60usft (Cactus 169)
Well:	Thunderbird 1 WA Federal 18H	North Reference:	Grid
Wellbore:	OH / 69484	Survey Calculation Method:	Minimum Curvature
Design:	Surveys Cactus 169)	Database:	USA Compass

Project	Lea County, NM (NAD27 NME)		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Site	Thunderbird 1		
Site Position:		Northing:	389,429.57 usft
From:	Map	Easting:	783,349.48 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 4' 2.481899 N
		Longitude:	103° 25' 7.085457 W
		Grid Convergence:	0.486 °

Well	Thunderbird 1 WA Federal 18H		
Well Position	+N/-S	0.00 usft	Northing: 389,446.83 usft
	+E/-W	0.00 usft	Easting: 783,374.06 usft
Position Uncertainty	1.00 usft	Wellhead Elevation:	usft
		Latitude:	32° 4' 2.650692 N
		Longitude:	103° 25' 6.798072 W
		Ground Level:	3,281.00 usft

Wellbore	OH / 69484				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IFR	4/11/2022	6.330	59.640	47,462.00000000

Design	Surveys Cactus 169)				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.00	0.00	0.00	359.50	

Survey Program	Date	5/31/2022			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
161.00	22,926.00	Phoenix MWD Surveys (OH / 69484)	MWD+HRGM	OWSG MWD + HRGM	

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)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
161.00	0.13	82.38	161.00	0.02	0.18	0.02	0.08	0.08	0.00	
First Phoenix MWD Survey										
231.00	0.20	103.44	231.00	0.01	0.38	0.00	0.13	0.10	30.09	
319.00	0.35	126.37	319.00	-0.19	0.74	-0.20	0.21	0.17	26.06	
409.00	0.34	102.28	409.00	-0.41	1.23	-0.42	0.16	-0.01	-26.77	
503.00	0.21	51.00	503.00	-0.36	1.63	-0.37	0.28	-0.14	-54.55	
594.00	0.23	120.39	594.00	-0.35	1.92	-0.36	0.28	0.02	76.25	
685.00	0.47	191.21	684.99	-0.81	2.01	-0.82	0.49	0.26	77.82	
775.00	0.65	207.69	774.99	-1.62	1.70	-1.63	0.27	0.20	18.31	
864.00	0.77	220.92	863.98	-2.52	1.07	-2.53	0.23	0.13	14.87	



Phoenix Survey Report



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Site:	Thunderbird 1	MD Reference:	RKB @ 3304.60usft (Cactus 169)
Well:	Thunderbird 1 WA Federal 18H	North Reference:	Grid
Wellbore:	OH / 69484	Survey Calculation Method:	Minimum Curvature
Design:	Surveys Cactus 169)	Database:	USA Compass

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)
955.00	0.74	212.00	954.98	-3.48	0.36	-3.48	0.13	-0.03	-9.80
1,045.00	0.82	222.81	1,044.97	-4.44	-0.39	-4.44	0.19	0.09	12.01
1,096.00	0.82	210.87	1,095.96	-5.03	-0.82	-5.02	0.33	0.00	-23.41
1,224.00	0.67	208.04	1,223.95	-6.47	-1.64	-6.46	0.12	-0.12	-2.21
1,319.00	1.71	174.15	1,318.93	-8.37	-1.76	-8.36	1.28	1.09	-35.67
1,413.00	2.32	168.30	1,412.87	-11.63	-1.23	-11.62	0.68	0.65	-6.22
1,508.00	4.02	151.22	1,507.72	-16.43	0.76	-16.44	2.03	1.79	-17.98
1,602.00	5.52	150.09	1,601.40	-23.24	4.60	-23.28	1.60	1.60	-1.20
1,696.00	5.42	149.78	1,694.97	-30.99	9.09	-31.07	0.11	-0.11	-0.33
1,791.00	5.85	150.98	1,789.51	-39.11	13.70	-39.22	0.47	0.45	1.26
1,885.00	6.06	150.39	1,883.00	-47.61	18.47	-47.77	0.23	0.22	-0.63
1,980.00	6.48	149.13	1,977.43	-56.57	23.70	-56.77	0.47	0.44	-1.33
2,074.00	6.80	148.25	2,070.80	-65.85	29.35	-66.11	0.36	0.34	-0.94
2,169.00	7.20	146.90	2,165.09	-75.62	35.56	-75.93	0.46	0.42	-1.42
2,263.00	7.70	146.92	2,258.30	-85.84	42.22	-86.20	0.53	0.53	0.02
2,358.00	8.17	145.91	2,352.39	-96.76	49.47	-97.19	0.52	0.49	-1.06
2,452.00	8.58	145.86	2,445.39	-108.09	57.15	-108.59	0.44	0.44	-0.05
2,546.00	8.98	145.25	2,538.29	-119.92	65.27	-120.49	0.44	0.43	-0.65
2,641.00	9.44	144.51	2,632.06	-132.36	74.02	-133.00	0.50	0.48	-0.78
2,735.00	9.95	143.01	2,724.72	-145.12	83.38	-145.85	0.61	0.54	-1.60
2,830.00	10.47	141.79	2,818.21	-158.46	93.66	-159.27	0.59	0.55	-1.28
2,924.00	9.47	146.44	2,910.80	-171.62	103.22	-172.51	1.36	-1.06	4.95
3,019.00	9.05	150.89	3,004.56	-184.66	111.17	-185.62	0.87	-0.44	4.68
3,113.00	9.59	149.82	3,097.32	-197.89	118.70	-198.91	0.60	0.57	-1.14
3,207.00	10.02	149.85	3,189.94	-211.73	126.75	-212.82	0.46	0.46	0.03
3,302.00	8.86	149.78	3,283.66	-225.19	134.58	-226.36	1.22	-1.22	-0.07
3,396.00	8.03	148.72	3,376.64	-237.06	141.63	-238.29	0.90	-0.88	-1.13
3,491.00	8.54	145.21	3,470.64	-248.52	149.10	-249.82	0.76	0.54	-3.69
3,585.00	8.89	143.47	3,563.56	-260.09	157.41	-261.46	0.47	0.37	-1.85
3,680.00	9.15	142.86	3,657.38	-272.01	166.34	-273.45	0.29	0.27	-0.64
3,774.00	9.09	144.54	3,750.20	-284.02	175.16	-285.54	0.29	-0.06	1.79
3,869.00	9.50	144.63	3,843.95	-296.52	184.05	-298.12	0.43	0.43	0.09
3,963.00	9.64	144.59	3,936.64	-309.26	193.10	-310.94	0.15	0.15	-0.04
4,058.00	9.36	148.46	4,030.34	-322.33	201.75	-324.08	0.73	-0.29	4.07
4,152.00	9.10	149.19	4,123.12	-335.23	209.56	-337.05	0.30	-0.28	0.78
4,247.00	9.28	150.39	4,216.90	-348.34	217.19	-350.22	0.28	0.19	1.26
4,341.00	9.42	150.87	4,309.65	-361.65	224.68	-363.60	0.17	0.15	0.51
4,435.00	9.69	150.76	4,402.35	-375.27	232.29	-377.29	0.29	0.29	-0.12
4,530.00	9.86	150.86	4,495.97	-389.35	240.15	-391.44	0.18	0.18	0.11
4,624.00	10.29	149.31	4,588.52	-403.60	248.36	-405.76	0.54	0.46	-1.65
4,719.00	10.96	147.80	4,681.89	-418.54	257.50	-420.77	0.76	0.71	-1.59
4,813.00	9.80	154.77	4,774.35	-433.34	265.67	-435.64	1.82	-1.23	7.41
4,908.00	9.16	158.63	4,868.06	-447.70	271.88	-450.05	0.95	-0.67	4.06



Phoenix Survey Report



Company:	Marathon Oil Permian LLC	Local Co-ordinate Reference:	Well Thunderbird 1 WA Federal 18H
Project:	Lea County, NM (NAD27 NME)	TVD Reference:	RKB @ 3304.60usft (Cactus 169)
Site:	Thunderbird 1	MD Reference:	RKB @ 3304.60usft (Cactus 169)
Well:	Thunderbird 1 WA Federal 18H	North Reference:	Grid
Wellbore:	OH / 69484	Survey Calculation Method:	Minimum Curvature
Design:	Surveys Cactus 169)	Database:	USA Compass

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)
5,002.00	9.80	155.95	4,960.77	-461.97	277.86	-464.38	0.83	0.68	-2.85
5,096.00	9.11	155.50	5,053.50	-476.05	284.21	-478.51	0.74	-0.73	-0.48
5,191.00	7.90	154.52	5,147.45	-488.79	290.14	-491.30	1.28	-1.27	-1.03
5,285.00	7.80	154.77	5,240.57	-500.39	295.63	-502.95	0.11	-0.11	0.27
5,380.00	7.45	153.74	5,334.73	-511.74	301.11	-514.35	0.40	-0.37	-1.08
5,474.00	7.33	153.11	5,427.95	-522.56	306.52	-525.21	0.15	-0.13	-0.67
5,569.00	7.62	153.49	5,522.14	-533.60	312.07	-536.30	0.31	0.31	0.40
5,663.00	7.87	153.15	5,615.28	-544.92	317.76	-547.67	0.27	0.27	-0.36
5,758.00	8.05	153.53	5,709.37	-556.67	323.66	-559.48	0.20	0.19	0.40
5,852.00	8.28	154.06	5,802.42	-568.65	329.55	-571.51	0.26	0.24	0.56
5,947.00	8.35	152.86	5,896.42	-580.94	335.69	-583.85	0.20	0.07	-1.26
6,041.00	8.52	152.81	5,989.40	-593.21	341.99	-596.17	0.18	0.18	-0.05
6,136.00	9.70	147.54	6,083.20	-606.22	349.50	-609.25	1.52	1.24	-5.55
6,230.00	9.86	146.83	6,175.84	-619.64	358.15	-622.74	0.21	0.17	-0.76
6,325.00	9.83	155.53	6,269.44	-633.83	365.96	-637.00	1.56	-0.03	9.16
6,419.00	9.71	145.59	6,362.09	-647.68	373.77	-650.91	1.80	-0.13	-10.57
6,514.00	9.94	144.73	6,455.69	-660.98	383.03	-664.30	0.29	0.24	-0.91
6,608.00	10.10	144.24	6,548.26	-674.29	392.53	-677.69	0.19	0.17	-0.52
6,703.00	10.24	144.32	6,641.77	-687.91	402.32	-691.39	0.15	0.15	0.08
6,797.00	10.30	144.22	6,734.26	-701.51	412.11	-705.08	0.07	0.06	-0.11
6,892.00	10.42	144.02	6,827.71	-715.36	422.12	-719.01	0.13	0.13	-0.21
6,986.00	10.56	144.10	6,920.14	-729.21	432.17	-732.96	0.15	0.15	0.09
7,081.00	9.77	143.42	7,013.65	-742.74	442.08	-746.57	0.84	-0.83	-0.72
7,175.00	8.32	146.37	7,106.48	-754.80	450.60	-758.71	1.62	-1.54	3.14
7,270.00	6.52	152.30	7,200.68	-765.30	456.91	-769.26	2.06	-1.89	6.24
7,364.00	4.81	161.82	7,294.22	-773.77	460.62	-777.76	2.07	-1.82	10.13
7,459.00	3.71	162.80	7,388.95	-780.50	462.77	-784.50	1.16	-1.16	1.03
7,553.00	3.56	161.46	7,482.77	-786.17	464.60	-790.19	0.18	-0.16	-1.43
7,648.00	3.31	158.26	7,577.59	-791.51	466.55	-795.55	0.33	-0.26	-3.37
7,743.00	2.13	151.90	7,672.49	-795.62	468.40	-799.67	1.28	-1.24	-6.69
7,837.00	1.53	142.60	7,766.44	-798.15	469.99	-802.22	0.71	-0.64	-9.89
7,932.00	1.57	147.37	7,861.40	-800.26	471.46	-804.34	0.14	0.04	5.02
8,026.00	1.55	141.73	7,955.37	-802.34	472.94	-806.44	0.16	-0.02	-6.00
8,120.00	1.55	141.22	8,049.33	-804.33	474.52	-808.44	0.01	0.00	-0.54
8,215.00	1.54	142.66	8,144.30	-806.35	476.10	-810.47	0.04	-0.01	1.52
8,310.00	1.64	145.27	8,239.26	-808.48	477.65	-812.62	0.13	0.11	2.75
8,404.00	1.68	147.47	8,333.22	-810.75	479.16	-814.90	0.08	0.04	2.34
8,521.00	0.92	146.14	8,450.19	-812.97	480.60	-817.13	0.65	-0.65	-1.14
8,616.00	0.95	151.36	8,545.18	-814.30	481.41	-818.47	0.10	0.03	5.49
8,710.00	1.12	147.85	8,639.16	-815.76	482.27	-819.93	0.19	0.18	-3.73
8,805.00	1.11	152.06	8,734.15	-817.36	483.19	-821.54	0.09	-0.01	4.43
8,899.00	1.11	152.65	8,828.13	-818.97	484.04	-823.16	0.01	0.00	0.63
8,994.00	1.13	151.37	8,923.11	-820.61	484.91	-824.81	0.03	0.02	-1.35



Phoenix Survey Report



Company:	Marathon Oil Permian LLC	Local Co-ordinate Reference:	Well Thunderbird 1 WA Federal 18H
Project:	Lea County, NM (NAD27 NME)	TVD Reference:	RKB @ 3304.60usft (Cactus 169)
Site:	Thunderbird 1	MD Reference:	RKB @ 3304.60usft (Cactus 169)
Well:	Thunderbird 1 WA Federal 18H	North Reference:	Grid
Wellbore:	OH / 69484	Survey Calculation Method:	Minimum Curvature
Design:	Surveys Cactus 169)	Database:	USA Compass

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)
9,088.00	1.11	155.20	9,017.09	-822.25	485.74	-826.46	0.08	-0.02	4.07
9,183.00	1.21	154.50	9,112.07	-823.99	486.55	-828.20	0.11	0.11	-0.74
9,277.00	1.17	154.28	9,206.05	-825.75	487.40	-829.97	0.04	-0.04	-0.23
9,371.00	1.15	152.31	9,300.03	-827.45	488.25	-831.68	0.05	-0.02	-2.10
9,466.00	1.12	151.74	9,395.02	-829.11	489.14	-833.35	0.03	-0.03	-0.60
9,560.00	1.19	152.69	9,489.00	-830.79	490.02	-835.03	0.08	0.07	1.01
9,655.00	1.35	148.26	9,583.97	-832.62	491.06	-836.87	0.20	0.17	-4.66
9,750.00	1.24	152.30	9,678.95	-834.48	492.13	-838.74	0.15	-0.12	4.25
9,844.00	1.24	148.32	9,772.93	-836.24	493.13	-840.52	0.09	0.00	-4.23
9,939.00	1.16	154.41	9,867.91	-837.99	494.09	-842.27	0.16	-0.08	6.41
10,033.00	1.35	157.95	9,961.88	-839.87	494.91	-844.16	0.22	0.20	3.77
10,128.00	1.28	154.69	10,056.86	-841.87	495.79	-846.16	0.11	-0.07	-3.43
10,223.00	1.24	151.88	10,151.84	-843.73	496.73	-848.04	0.08	-0.04	-2.96
10,317.00	1.19	149.70	10,245.81	-845.47	497.70	-849.78	0.07	-0.05	-2.32
10,411.00	1.13	149.74	10,339.79	-847.12	498.66	-851.44	0.06	-0.06	0.04
10,506.00	1.10	152.47	10,434.78	-848.73	499.55	-853.06	0.06	-0.03	2.87
10,600.00	1.14	135.01	10,528.76	-850.20	500.63	-854.53	0.36	0.04	-18.57
10,695.00	0.72	116.08	10,623.75	-851.13	501.83	-855.47	0.54	-0.44	-19.93
10,789.00	0.04	162.45	10,717.74	-851.42	502.37	-855.77	0.74	-0.72	49.33
10,884.00	0.22	221.89	10,812.74	-851.58	502.26	-855.94	0.21	0.19	62.57
10,978.00	0.49	169.49	10,906.74	-852.11	502.22	-856.46	0.42	0.29	-55.74
11,073.00	0.44	147.29	11,001.74	-852.82	502.49	-857.17	0.20	-0.05	-23.37
11,168.00	0.40	154.93	11,096.74	-853.43	502.82	-857.78	0.07	-0.04	8.04
11,262.00	0.45	127.69	11,190.73	-853.95	503.26	-858.31	0.22	0.05	-28.98
11,357.00	0.60	138.25	11,285.73	-854.55	503.88	-858.91	0.19	0.16	11.12
11,451.00	0.59	185.55	11,379.73	-855.40	504.16	-859.77	0.51	-0.01	50.32
11,546.00	0.64	205.07	11,474.72	-856.37	503.89	-860.73	0.23	0.05	20.55
11,640.00	0.60	211.66	11,568.71	-857.26	503.41	-861.62	0.09	-0.04	7.01
11,734.00	1.07	177.27	11,662.70	-858.56	503.19	-862.91	0.71	0.50	-36.59
11,829.00	1.45	187.50	11,757.68	-860.63	503.08	-864.99	0.46	0.40	10.77
11,836.00	1.45	186.83	11,764.68	-860.81	503.06	-865.17	0.24	0.00	-9.57
11,906.00	1.55	196.60	11,834.66	-862.60	502.68	-866.95	0.39	0.14	13.96
12,001.00	1.52	311.71	11,929.64	-862.99	501.37	-867.33	2.73	-0.03	121.17
12,096.00	1.57	319.17	12,024.60	-861.17	499.58	-865.49	0.22	0.05	7.85
12,190.00	6.36	349.75	12,118.36	-855.06	497.81	-859.38	5.40	5.10	32.53
12,285.00	16.81	348.19	12,211.29	-836.39	494.05	-840.67	11.00	11.00	-1.64
12,379.00	25.74	343.42	12,298.81	-803.45	485.43	-807.66	9.67	9.50	-5.07
12,474.00	35.44	350.74	12,380.51	-756.37	475.08	-760.49	10.92	10.21	7.71
12,569.00	44.01	354.02	12,453.52	-696.24	467.20	-700.29	9.28	9.02	3.45
12,663.00	56.16	353.89	12,513.72	-624.68	459.61	-628.67	12.93	12.93	-0.14
12,758.00	61.69	355.75	12,562.74	-543.68	452.31	-547.61	6.06	5.82	1.96
12,852.00	70.52	359.95	12,600.80	-457.90	449.19	-461.81	10.24	9.39	4.47
12,946.00	75.83	359.72	12,627.99	-367.96	448.93	-371.86	5.65	5.65	-0.24
13,041.00	81.47	359.81	12,646.68	-274.86	448.55	-278.76	5.94	5.94	0.09



Phoenix Survey Report



Company:	Marathon Oil Permian LLC	Local Co-ordinate Reference:	Well Thunderbird 1 WA Federal 18H
Project:	Lea County, NM (NAD27 NME)	TVD Reference:	RKB @ 3304.60usft (Cactus 169)
Site:	Thunderbird 1	MD Reference:	RKB @ 3304.60usft (Cactus 169)
Well:	Thunderbird 1 WA Federal 18H	North Reference:	Grid
Wellbore:	OH / 69484	Survey Calculation Method:	Minimum Curvature
Design:	Surveys Cactus 169)	Database:	USA Compass

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
13,135.00	88.44	1.35	12,654.94	-181.29	449.50	-185.20	7.59	7.41	1.64
13,159.00	88.54	1.66	12,655.58	-157.30	450.14	-161.23	1.36	0.42	1.29
13,253.00	89.53	3.68	12,657.16	-63.42	454.51	-67.39	2.39	1.05	2.15
13,348.00	90.15	3.87	12,657.42	31.37	460.77	27.35	0.68	0.65	0.20
13,442.00	89.95	2.86	12,657.34	125.20	466.29	121.13	1.10	-0.21	-1.07
13,537.00	89.42	1.68	12,657.87	220.13	470.05	216.02	1.36	-0.56	-1.24
13,632.00	89.79	4.18	12,658.52	314.99	474.90	310.84	2.66	0.39	2.63
13,727.00	90.73	6.95	12,658.09	409.53	484.11	405.29	3.08	0.99	2.92
13,821.00	89.90	9.16	12,657.57	502.60	497.29	498.24	2.51	-0.88	2.35
13,916.00	88.98	10.71	12,658.50	596.17	513.67	591.66	1.90	-0.97	1.63
14,010.00	86.82	6.05	12,661.95	689.07	527.36	684.44	5.46	-2.30	-4.96
14,105.00	86.25	358.79	12,667.70	783.75	531.37	779.08	7.65	-0.60	-7.64
14,199.00	89.85	358.85	12,670.89	877.66	529.43	873.00	3.83	3.83	0.06
14,294.00	89.56	358.15	12,671.38	972.62	526.94	967.99	0.80	-0.31	-0.74
14,389.00	90.55	356.76	12,671.29	1,067.52	522.73	1,062.92	1.80	1.04	-1.46
14,483.00	90.13	355.88	12,670.73	1,161.33	516.69	1,156.77	1.04	-0.45	-0.94
14,578.00	90.86	353.31	12,669.91	1,255.89	507.75	1,251.41	2.81	0.77	-2.71
14,672.00	92.09	355.63	12,667.49	1,349.42	498.69	1,345.01	2.79	1.31	2.47
14,767.00	91.84	354.48	12,664.24	1,444.01	490.51	1,439.67	1.24	-0.26	-1.21
14,861.00	93.24	355.21	12,660.07	1,537.53	482.07	1,533.26	1.68	1.49	0.78
14,956.00	93.68	356.45	12,654.34	1,632.10	475.17	1,627.89	1.38	0.46	1.31
15,051.00	94.48	356.86	12,647.58	1,726.70	469.64	1,722.54	0.95	0.84	0.43
15,145.00	94.39	359.66	12,640.31	1,820.37	466.80	1,816.22	2.97	-0.10	2.98
15,240.00	92.74	0.35	12,634.40	1,915.18	466.81	1,911.03	1.88	-1.74	0.73
15,335.00	91.63	0.98	12,630.78	2,010.10	467.91	2,005.94	1.34	-1.17	0.66
15,429.00	87.06	0.56	12,631.85	2,104.06	469.17	2,099.89	4.88	-4.86	-0.45
15,524.00	87.23	0.70	12,636.58	2,198.94	470.22	2,194.75	0.23	0.18	0.15
15,618.00	89.01	1.40	12,639.67	2,292.87	471.94	2,288.66	2.03	1.89	0.74
15,713.00	88.76	0.28	12,641.52	2,387.84	473.33	2,383.62	1.21	-0.26	-1.18
15,807.00	87.43	359.49	12,644.64	2,481.78	473.14	2,477.56	1.65	-1.41	-0.84
15,902.00	88.16	356.85	12,648.30	2,576.65	470.11	2,572.45	2.88	0.77	-2.78
15,997.00	92.12	357.77	12,648.07	2,671.53	465.65	2,667.36	4.28	4.17	0.97
16,091.00	89.22	357.06	12,646.97	2,765.42	461.41	2,761.28	3.18	-3.09	-0.76
16,186.00	92.35	358.86	12,645.66	2,860.33	458.03	2,856.23	3.80	3.29	1.89
16,280.00	88.41	0.94	12,645.04	2,954.31	457.87	2,950.20	4.74	-4.19	2.21
16,375.00	88.02	358.32	12,648.00	3,049.25	457.26	3,045.14	2.79	-0.41	-2.76
16,469.00	92.29	358.77	12,647.75	3,143.20	454.87	3,139.11	4.57	4.54	0.48
16,564.00	90.44	359.81	12,645.48	3,238.16	453.69	3,234.07	2.23	-1.95	1.09
16,658.00	88.96	0.55	12,645.98	3,332.15	453.99	3,328.06	1.76	-1.57	0.79
16,753.00	87.60	359.61	12,648.83	3,427.11	454.12	3,423.01	1.74	-1.43	-0.99
16,848.00	87.19	0.28	12,653.14	3,522.01	454.03	3,517.91	0.83	-0.43	0.71
16,942.00	89.05	357.47	12,656.23	3,615.92	452.18	3,611.84	3.58	1.98	-2.99
17,037.00	93.01	356.54	12,654.52	3,710.76	447.22	3,706.72	4.28	4.17	-0.98



Phoenix Survey Report



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Project:	Lea County, NM (NAD27 NME)	TVD Reference:	RKB @ 3304.60usft (Cactus 169)
Site:	Thunderbird 1	MD Reference:	RKB @ 3304.60usft (Cactus 169)
Well:	Thunderbird 1 WA Federal 18H	North Reference:	Grid
Wellbore:	OH / 69484	Survey Calculation Method:	Minimum Curvature
Design:	Surveys Cactus 169)	Database:	USA Compass

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)
17,131.00	93.62	356.49	12,649.09	3,804.43	441.52	3,800.43	0.65	0.65	-0.05
17,226.00	93.97	357.35	12,642.80	3,899.08	436.43	3,895.13	0.98	0.37	0.91
17,320.00	92.24	355.94	12,637.71	3,992.78	430.93	3,988.86	2.37	-1.84	-1.50
17,415.00	94.59	358.92	12,632.05	4,087.50	426.68	4,083.62	3.99	2.47	3.14
17,509.00	94.02	1.28	12,624.99	4,181.22	426.84	4,177.34	2.58	-0.61	2.51
17,604.00	91.75	2.63	12,620.21	4,276.04	430.08	4,272.12	2.78	-2.39	1.42
17,698.00	91.67	2.27	12,617.40	4,369.91	434.10	4,365.96	0.39	-0.09	-0.38
17,793.00	91.64	2.04	12,614.66	4,464.80	437.67	4,460.82	0.24	-0.03	-0.24
17,887.00	91.04	0.33	12,612.46	4,558.75	439.61	4,554.74	1.93	-0.64	-1.82
17,982.00	90.78	359.14	12,610.95	4,653.74	439.17	4,649.73	1.28	-0.27	-1.25
18,076.00	89.88	359.83	12,610.41	4,747.73	438.33	4,743.73	1.21	-0.96	0.73
18,171.00	91.33	1.45	12,609.41	4,842.72	439.39	4,838.70	2.29	1.53	1.71
18,265.00	92.00	2.10	12,606.68	4,936.63	442.30	4,932.58	0.99	0.71	0.69
18,360.00	90.72	1.69	12,604.42	5,031.55	445.44	5,027.47	1.41	-1.35	-0.43
18,455.00	91.64	2.79	12,602.47	5,126.45	449.15	5,122.34	1.51	0.97	1.16
18,549.00	91.83	3.22	12,599.62	5,220.28	454.07	5,216.12	0.50	0.20	0.46
18,644.00	91.27	1.85	12,597.05	5,315.15	458.27	5,310.95	1.56	-0.59	-1.44
18,738.00	90.35	358.00	12,595.72	5,409.12	458.15	5,404.92	4.21	-0.98	-4.10
18,833.00	91.29	356.22	12,594.36	5,503.99	453.36	5,499.82	2.12	0.99	-1.87
18,927.00	90.02	354.15	12,593.29	5,597.64	445.47	5,593.54	2.58	-1.35	-2.20
19,022.00	92.29	353.71	12,591.37	5,692.08	435.43	5,688.07	2.43	2.39	-0.46
19,116.00	92.27	353.04	12,587.63	5,785.38	424.59	5,781.46	0.71	-0.02	-0.71
19,211.00	96.23	355.93	12,580.59	5,879.65	415.49	5,875.80	5.16	4.17	3.04
19,305.00	97.70	356.24	12,569.19	5,972.74	409.11	5,968.94	1.60	1.56	0.33
19,400.00	95.78	358.04	12,558.04	6,066.96	404.41	6,063.20	2.76	-2.02	1.89
19,494.00	94.29	0.10	12,549.79	6,160.57	402.89	6,156.82	2.70	-1.59	2.19
19,588.00	90.76	0.91	12,545.65	6,254.46	403.72	6,250.70	3.85	-3.76	0.86
19,682.00	90.02	2.52	12,545.01	6,348.42	406.53	6,344.63	1.88	-0.79	1.71
19,777.00	91.61	359.57	12,543.66	6,443.38	408.27	6,439.57	3.53	1.67	-3.11
19,872.00	90.62	358.00	12,541.81	6,538.33	406.25	6,534.54	1.95	-1.04	-1.65
19,966.00	90.95	357.55	12,540.52	6,632.25	402.60	6,628.49	0.59	0.35	-0.48
20,061.00	88.68	356.20	12,540.83	6,727.10	397.43	6,723.38	2.78	-2.39	-1.42
20,155.00	91.33	356.11	12,540.82	6,820.88	391.12	6,817.21	2.82	2.82	-0.10
20,250.00	92.23	357.29	12,537.87	6,915.68	385.66	6,912.05	1.56	0.95	1.24
20,344.00	93.17	357.48	12,533.44	7,009.47	381.37	7,005.88	1.02	1.00	0.20
20,438.00	93.23	359.12	12,528.20	7,103.28	378.59	7,099.71	1.74	0.06	1.74
20,533.00	92.00	0.36	12,523.86	7,198.18	378.16	7,194.61	1.84	-1.29	1.31
20,627.00	88.36	0.98	12,523.57	7,292.16	379.26	7,288.57	3.93	-3.87	0.66
20,722.00	89.21	1.46	12,525.58	7,387.11	381.28	7,383.50	1.03	0.89	0.51
20,817.00	88.94	1.37	12,527.11	7,482.07	383.63	7,478.44	0.30	-0.28	-0.09
20,911.00	88.82	0.61	12,528.95	7,576.04	385.25	7,572.39	0.82	-0.13	-0.81
21,006.00	88.27	0.24	12,531.36	7,671.00	385.95	7,667.34	0.70	-0.58	-0.39
21,100.00	87.94	0.04	12,534.47	7,764.95	386.18	7,761.29	0.41	-0.35	-0.21



Phoenix Survey Report



Company:	Marathon Oil Permian LLC	Local Co-ordinate Reference:	Well Thunderbird 1 WA Federal 18H
Project:	Lea County, NM (NAD27 NME)	TVD Reference:	RKB @ 3304.60usft (Cactus 169)
Site:	Thunderbird 1	MD Reference:	RKB @ 3304.60usft (Cactus 169)
Well:	Thunderbird 1 WA Federal 18H	North Reference:	Grid
Wellbore:	OH / 69484	Survey Calculation Method:	Minimum Curvature
Design:	Surveys Cactus 169)	Database:	USA Compass

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)
21,195.00	89.53	0.11	12,536.57	7,859.93	386.31	7,856.26	1.68	1.67	0.07
21,289.00	87.39	358.76	12,539.10	7,953.88	385.38	7,950.21	2.69	-2.28	-1.44
21,384.00	89.53	358.62	12,541.65	8,048.82	383.21	8,045.16	2.26	2.25	-0.15
21,478.00	92.09	358.08	12,540.32	8,142.76	380.50	8,139.13	2.78	2.72	-0.57
21,573.00	91.92	358.04	12,537.00	8,237.65	377.29	8,234.04	0.18	-0.18	-0.04
21,667.00	92.52	359.50	12,533.35	8,331.55	375.27	8,327.96	1.68	0.64	1.55
21,762.00	94.00	0.63	12,527.95	8,426.39	375.38	8,422.80	1.96	1.56	1.19
21,856.00	90.55	0.82	12,524.22	8,520.30	376.57	8,516.69	3.68	-3.67	0.20
21,950.00	88.94	0.63	12,524.64	8,614.29	377.76	8,610.66	1.72	-1.71	-0.20
22,045.00	90.33	3.25	12,525.24	8,709.22	380.97	8,705.56	3.12	1.46	2.76
22,139.00	89.90	3.13	12,525.06	8,803.07	386.21	8,799.37	0.47	-0.46	-0.13
22,234.00	88.88	2.04	12,526.07	8,897.97	390.49	8,894.22	1.57	-1.07	-1.15
22,328.00	90.65	1.07	12,526.45	8,991.93	393.04	8,988.16	2.15	1.88	-1.03
22,423.00	94.71	1.75	12,522.01	9,086.77	395.37	9,082.98	4.33	4.27	0.72
22,517.00	92.60	3.51	12,516.02	9,180.48	399.68	9,176.64	2.92	-2.24	1.87
22,611.00	92.27	4.05	12,512.03	9,274.19	405.87	9,270.29	0.67	-0.35	0.57
22,706.00	91.53	3.52	12,508.88	9,368.93	412.14	9,364.97	0.96	-0.78	-0.56
22,801.00	92.26	3.51	12,505.73	9,463.69	417.96	9,459.69	0.77	0.77	-0.01
22,870.00	92.41	2.58	12,502.92	9,532.54	421.62	9,528.50	1.36	0.22	-1.35
Final Phoenix MWD Survey									
22,926.00	92.41	2.58	12,500.57	9,588.43	424.14	9,584.37	0.00	0.00	0.00
Projection to TD									

Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
161.00	161.00	0.02	0.18	First Phoenix MWD Survey
22,870.00	12,502.92	9,532.54	421.62	Final Phoenix MWD Survey
22,926.00	12,500.57	9,588.43	424.14	Projection to TD

Office
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 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. 30-025-46132
5. Indicate Type of Lease STATE ☐ FEE ☐
6. State Oil & Gas Lease No.
7. Lease Name or Unit Agreement Name Thunderbird 1-36 WA Federal Com
8. Well Number 18H
9. OGRID Number 372098
10. Pool name or Wildcat Hardin Tank; Wolfcamp
4. Well Location Unit Letter <u>P</u> : <u>869</u> feet from the <u>South</u> line and <u>1205</u> feet from the <u>East</u> line Section <u>1</u> Township <u>26S</u> Range <u>34E</u> NMPM County <u>Lea</u>
11. Elevation (Show whether DR, RKB, RT, GR, etc.) 3281' GR

SUNDRY NOTICES AND REPORTS ON WELLS

(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)

1. Type of Well: Oil Well ☒ Gas Well ☐ Other

2. Name of Operator
Marathon Oil Permian LLC

3. Address of Operator
990 Town & Country Blvd. Houston, TX 77024

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: ☐

SUBSEQUENT REPORT OF:

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

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.

6/7/2022 - Start frac prep operations
 6/10/2022 - Pressure test production casing to 13,000 psi for 30 min, held good test.
 8/10/2022 - Rig Up, and prep equipment.
 8/12/2022 - Start frac stages 1-42 with 2 shots per foot for a total of 1008 shots, 0.41" in size using 24,231,351 lbs of proppant and 634,823 bbls of brackish water. Total interval from 12,463' to 22,897'.
 8/27/2022 - Finish last stage frac. Rig down.
 9/2/2022 - Ready to produce.
 9/5/2022 - Open well, start flowback operations. Turn to production.

Marathon Oil Permian LLC requests a tubing exception for this well.

Spud Date:

4/9/2022

Rig Release Date:

5/29/2022

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

SIGNATURE



TITLE

Regulatory Compliance Representative

DATE

10/10/2022

Type or print name

Adrian Covarrubias

E-mail address:

acovarrubias@marathonoil.com

PHONE:

713-296-3368

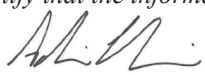
For State Use Only

APPROVED BY:

TITLE

DATE

Conditions of Approval (if any):

Submit To Appropriate District Office Two Copies <u>District I</u> 1625 N. French Dr., Hobbs, NM 88240 <u>District II</u> 811 S. First St., Artesia, NM 88210 <u>District III</u> 1000 Rio Brazos Rd., Aztec, NM 87410 <u>District IV</u> 1220 S. St. Francis Dr., Santa Fe, NM 87505		State of New Mexico Energy, Minerals and Natural Resources Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505			Form C-105 Revised April 3, 2017					
WELL COMPLETION OR RECOMPLETION REPORT AND LOG								1. WELL API NO. 30-025-46132		
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)								5. Lease Name or Unit Agreement Name Thunderbird 1-36 WA Fed Com		
								6. Well Number: 18H		
7. Type of Completion: ☒ NEW WELL ☐ WORKOVER ☐ DEEPENING ☐ PLUGBACK ☐ DIFFERENT RESERVOIR ☐ OTHER										
8. Name of Operator Marathon Oil Permian LLC						9. OGRID 372098				
10. Address of Operator 990 Town & Country Blvd. Houston, TX 77024						11. Pool name or Wildcat Hardin Tank; Wolfcamp				
12. Location	Unit Ltr	Section	Township	Range	Lot	Feet from the	N/S Line	Feet from the	E/W Line	County
Surface:	P	1	26S	34E		869	SOUTH	1205	EAST	LEA
BH:	A	36	25S	34E		102	NORTH	696	EAST	LEA
13. Date Spudded 4/9/2022	14. Date T.D. Reached 5/25/2022		15. Date Rig Released 5/29/2022		16. Date Completed (Ready to Produce) 9/2/2022			17. Elevations (DF and RKB, RT, GR, etc.) 3281'		
18. Total Measured Depth of Well 22926'			19. Plug Back Measured Depth 22906'		20. Was Directional Survey Made? Yes			21. Type Electric and Other Logs Run GR		
22. Producing Interval(s), of this completion - Top, Bottom, Name 12,463' - 22,897'; Wolfcamp										
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#, J55, BTC		1163'		17-1/2"		1045		
9-5/8"		40#, P110, BTC		11884'		12-1/4"		2360		
5-1/2"		23#, P110, TLW		22911'		8-3/4"		5960		
24. LINER RECORD						25. TUBING RECORD				
SIZE	TOP	BOTTOM	SACKS CEMENT	SCREEN	SIZE	DEPTH SET	PACKER SET			
26. Perforation record (interval, size, and number) 12463' - 22897'; 0.41"; 1008 shots						27. ACID, SHOT, FRACTURE, CEMENT, SQUEEZE, ETC.				
						DEPTH INTERVAL		AMOUNT AND KIND MATERIAL USED		
						12463' - 22897'		24,231,351 lbs proppant		
						12463' - 22897'		26,662,566 gal brackish water		
28. PRODUCTION										
Date First Production 9/5/2022		Production Method (Flowing, gas lift, pumping - Size and type pump) Flowing				Well Status (Prod. or Shut-in) Producing				
Date of Test 9/22/2022	Hours Tested 24	Choke Size 38/64	Prod'n For Test Period	Oil - Bbl 3118	Gas - MCF 4536	Water - Bbl. 9680	Gas - Oil Ratio			
Flow Tubing Press.	Casing Pressure 2838	Calculated 24-Hour Rate	Oil - Bbl.	Gas - MCF	Water - Bbl.	Oil Gravity - API - (Corr.)				
29. Disposition of Gas (Sold, used for fuel, vented, etc.) Sold								30. Test Witnessed By		
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:		
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 Adrian Covarrubias			Title Regulatory Compliance Rep			Date 10/11/2022	
E-mail Address acovarrubias@marathonoil.com										

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.

Southeastern New Mexico		Northwestern New Mexico	
T. Anhy	T. Canyon 5432'	T. Ojo Alamo	T. Penn A"
T. Salt 1583'	T. Strawn	T. Kirtland	T. Penn. "B"
B. Salt 5402'	T. Atoka	T. Fruitland	T. Penn. "C"
T. Yates	T. Miss	T. Pictured Cliffs	T. Penn. "D"
T. 7 Rivers	T. Devonian	T. Cliff House	T. Leadville
T. Queen	T. Silurian	T. Menefee	T. Madison
T. Grayburg	T. Montoya	T. Point Lookout	T. Elbert
T. San Andres	T. Simpson	T. Mancos	T. McCracken
T. Glorieta	T. McKee	T. Gallup	T. Ignacio Otzte
T. Paddock	T. Ellenburger	Base Greenhorn	T. Granite
T. Blinebry	T. Gr. Wash	T. Dakota	
T. Tubb	T. Delaware Sand	T. Morrison	
T. Drinkard	T. Bone Springs 9221'	T. Todilto	
T. Abo	T. Rustler 1150'	T. Entrada	
T. Wolfcamp 12672'	T. Castile 3858'	T. Wingate	
T. Penn	T. Lamar 5414'	T. Chinle	
T. Cisco (Bough C)	T.	T. Permian	

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

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.....

From	To	Thickness In Feet	Lithology



Wellbore Schematic

Well Name: THUNDERBIRD 1 WA FEDERAL 18H

State/Province NEW MEXICO	Country UNITED STATES	Field Name JABALINA SOUTHWEST	Latitude (°) 32.06748220	Longitude (°) -103.41909840	North/South Distance (ft) 852.0	North/South Reference FSL
API/ IPO UWI	KB-Ground Distance (ft)	KB-Mud Line Distance (ft)	Ground Elevation (ft)	Drilling Rig Spud Date	Well Original Completion Date	Well First Production Date

HORIZONTAL, THUNDERBIRD 1 WA FEDERAL 18H, 9/27/2022 3:11:10 PM

MD (ftKB)	Incl (°)	TVD (ftKB)	Vertical schematic (actual)			
23.6	0.1	23.6				
24.9	0.1	24.9				
1,117.5	0.8	1,117.4				
1,162.7	0.7	1,162.7				
11,795.3	1.3	11,724.0				
12,049.9	1.5	11,978.5				
12,691.9	57.8	12,528.7				
12,960.0	76.7	12,630.7				
13,439.0	90.0	12,657.3				
13,707.0	90.5	12,658.2				
14,186.0	89.4	12,670.5				
14,454.1	90.3	12,670.9				
14,933.1	93.6	12,655.7				
15,200.1	93.4	12,636.9				
15,679.1	88.8	12,640.9				
15,946.9	90.0	12,648.2				
16,425.9	90.3	12,647.9				
16,693.9	88.4	12,647.1				
17,172.9	93.8	12,646.3				
17,440.0	94.4	12,630.2				
17,919.0	91.0	12,612.0				
18,057.7	90.1	12,610.5				
18,417.0	91.3	12,603.2				
18,685.0	90.9	12,596.5				
19,164.0	94.3	12,584.1				
19,431.1	95.3	12,555.3				
19,910.1	90.8	12,541.3				
20,178.1	91.5	12,540.1				
20,657.2	88.6	12,524.2				
20,924.9	88.7	12,529.3				
21,403.9	90.1	12,541.4				
21,670.9	92.6	12,533.1				
22,149.9	89.8	12,525.2				
22,418.0	94.5	12,522.2				
22,865.2	92.4	12,503.1				
22,905.8	92.4	12,501.4				

District I
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District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

ACKNOWLEDGMENTS

Action 150900

ACKNOWLEDGMENTS

Operator: MARATHON OIL PERMIAN LLC 990 Town & Country Blvd. Houston, TX 77024	OGRID: 372098
	Action Number: 150900
	Action Type: [C-104] Completion Packet (C-104C)

ACKNOWLEDGMENTS

☒	I hereby certify that the required Water Use Report has been, or will be, submitted for this wells completion.
☒	I hereby certify that the required FracFocus disclosure has been, or will be, submitted for this wells completion.

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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 150900

CONDITIONS

Operator: MARATHON OIL PERMIAN LLC 990 Town & Country Blvd. Houston, TX 77024	OGRID: 372098
	Action Number: 150900
	Action Type: [C-104] Completion Packet (C-104C)

CONDITIONS

Created By	Condition	Condition Date
plmartinez	File 3160-4 Completion Report within 10 days to NMOCD after BLM approval.	3/1/2023