

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 RT (110,000 bbls oil / 270,000 mcf gas)
⁴ API Number 30 - 015-46147~9	⁵ Pool Name Purple Sage; Wolfcamp (Gas)	⁶ Pool Code 98220
⁷ Property Code 325773	⁸ Property Name Mazer Rackham 20 WB Federal Com	⁹ Well Number 4H

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
A	20	26S	29E		965	NORTH	600	EAST	EDDY

¹¹ Bottom Hole Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	20	26S	29E		284	SOUTH	662	EAST	EDDY
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				

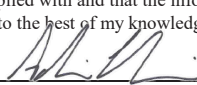
III. Oil and Gas Transporters

¹⁸ Transporter OGRID	¹⁹ Transporter Name and Address	²⁰ O/G/W
373554	SALT CREEK MIDSTREAM, LLC 5825 N SAM HOUSTON PKWY W, SUITE 150, HOUSTON, TX 77086	O/G
371643	SOLARIS WATER MIDSTREAM, LLC 907 TRADEWINDS BLVD, SUITE B, MIDLAND, TX 79706	W

IV. Well Completion Data

²¹ Spud Date 12/26/2019	²² Ready Date 7/18/2022	²³ TD 14642'	²⁴ PBDT 14586'	²⁵ Perforations 10127' - 14521'	²⁶ DHC, MC
²⁷ Hole Size	²⁸ Casing & Tubing Size	²⁹ Depth Set	³⁰ Sacks Cement		
17.5"	13.375", 54.5#, J55, STC	437'	455		
12.25"	9.625", 40#, J55, LTC	2854'	990		
8.75"	7", 29#, P110, Roughneck	9225'	970		
6.125"	4.5", 13.5#, P110, Roughneck	8847' - 14632'	555		

V. Well Test Data

³¹ Date New Oil	³² Gas Delivery Date	³³ Test Date	³⁴ Test Length	³⁵ Tbg. Pressure	³⁶ Csg. Pressure
³⁷ Choke Size	³⁸ Oil	³⁹ Water	⁴⁰ Gas		⁴¹ Test Method
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: John Garcia		
Title: Regulatory Compliance Representative			Title:		
E-mail Address: acovarrubias@marathonoil.com			Approval Date: 9/16/22		
Date: 08/08/2022		RT expires 90 days from ready date			
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: (575) 748-1283 Fax: (575) 748-9720
District III
 1000 Rio Brazos Road, Aztec, NM 87410
 Phone: (505) 334-6178 Fax: (505) 334-6170
District IV
 1220 S. St. Francis Dr., Santa Fe, NM 87505
 Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
 Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
 1220 South St. Francis Dr.
 Santa Fe, NM 87505

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION AS-DRILLED PLAT

¹ API Number 30-015-46149	² Pool Code 98220	³ Pool Name PURPLE SAGE; WOLFCAMP (GAS)
⁴ Property Code 325773	Property Name MAZER RACKHAM 20 WB FED COM	⁶ Well Number 4H
⁷ OGRID No. 372098	⁸ Operator Name MARATHON OIL PERMIAN LLC	⁹ Elevation 2872'

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
A	20	26S	29E		965	NORTH	600	EAST	EDDY

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
P	20	26S	29E		284	SOUTH	662	EAST	EDDY

¹² Dedicated Acres 320.0	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.

CORNER COORDINATES NAD 83, SPCS NM EAST A - X: 642562.49' / Y: 374173.92' B - X: 642535.61' / Y: 376817.53' C - X: 645175.01' / Y: 376837.52' D - X: 645193.17' / Y: 374202.36' E - X: 645293.57' / Y: 371608.28' F - X: 642590.08' / Y: 371460.95' CORNER COORDINATES NAD 27, SPCS NM EAST A - X: 601376.95' / Y: 374116.43' B - X: 601350.13' / Y: 376759.99' C - X: 603989.47' / Y: 376779.95' D - X: 604007.56' / Y: 374144.84' E - X: 604107.90' / Y: 371550.82' F - X: 601404.47' / Y: 371403.51' SURFACE HOLE LOCATION 965' FNL 600' FEL, SECTION 20 0' MEASURED DEPTH IN FEET NAD 83, SPCS NM EAST X: 644581.28' / Y: 375867.74' LAT: 32.03290271N / LON: 104.00015785W NAD 27, SPCS NM EAST X: 603395.73' / Y: 375810.18' LAT: 32.03277771N / LON: 103.99967509W KICK OFF POINT/FIRST TAKE POINT 330' FNL 553' FEL, SECTION 20 9922' MEASURED DEPTH IN FEET NAD 83, SPCS NM EAST X: 644623.95' / Y: 376503.34' LAT: 32.03464959N / LON: 104.00001382W NAD 27, SPCS NM EAST X: 603438.41' / Y: 376445.78' LAT: 32.03452461N / LON: 103.99958101W LAST TAKE POINT 330' FSL 660' FEL, SECTION 20 14596' MEASURED DEPTH IN FEET NAD 83, SPCS NM EAST X: 644621.53' / Y: 371902.20' LAT: 32.02200133N / LON: 104.00006744W NAD 27, SPCS NM EAST X: 603435.88' / Y: 371844.73' LAT: 32.02187620N / LON: 103.99958505W BOTTOM HOLE LOCATION 284' FSL 662' FEL, SECTION 20 14642' MEASURED DEPTH IN FEET NAD 83, SPCS NM EAST X: 644621.16' / Y: 371856.20' LAT: 32.02187489N / LON: 104.00006909W NAD 27, SPCS NM EAST X: 603435.51' / Y: 371798.73' LAT: 32.02174975N / LON: 103.99958671W SHEET 1 OF 1 JOB No. R3893_025 REV 0 WM 6/13/2022	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 _____ Printed Name _____ 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 _____ Signature and Seal of Professional Surveyor: _____ Certificate Number _____ PRELIMINARY DOCUMENT IS NOT TO BE USED FOR CONSTRUCTION, BIDDING, RECORDATION, CONVEYANCE, SALE OF THE LANDS FOR THE ISSUANCE OF A PERMIT.
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Distances/areas relative to NAD 83 Combined Scale Factor: 0.99978647 Convergence Angle: 00°10'35.39608"



Marathon Oil Permian LLC

Eddy County, New Mexico (NAD 27)

Sec 20, T26S, R29E

Mazer Rackham 20 WB Fed Com #4H

Wellbore #1

Design: Wellbore #1

QES Survey Report

28 February, 2020





QES Survey Report



Company:	Marathon Oil Permian LLC	Local Co-ordinate Reference:	Well Mazer Rackham 20 WB Fed Com #4H
Project:	Eddy County, New Mexico (NAD 27)	TVD Reference:	WELL @ 2896.8usft (PD #101)
Site:	Sec 20, T26S, R29E	MD Reference:	WELL @ 2896.8usft (PD #101)
Well:	Mazer Rackham 20 WB Fed Com #4H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.1 Single User Db

Project	Eddy County, New Mexico (NAD 27)		
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	Sec 20, T26S, R29E		
Site Position:		Northing:	375,810.09 usft
From:	Map	Easting:	603,425.73 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 1' 57.998 N
		Longitude:	103° 59' 58.482 W
		Grid Convergence:	0.18 °

Well	Mazer Rackham 20 WB Fed Com #4H		
Well Position	+N/-S	0.0 usft	Northing:
	+E/-W	0.0 usft	Easting:
Position Uncertainty	0.0 usft	Wellhead Elevation:	usft
		Latitude:	32° 1' 58.000 N
		Longitude:	103° 59' 58.830 W
		Ground Level:	2,871.8 usft

Wellbore	Wellbore #1		
Magnetics	Model Name	Sample Date	Declination
			(°)
	HDGM2020	2/12/2020	6.78
			Dip Angle
			(°)
			59.65
			Field Strength
			(nT)
			47,736.70000000

Design	Wellbore #1		
Audit Notes:			
Version:	1.0	Phase:	ACTUAL
		Tie On Depth:	0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(usft)	(usft)	(usft)
	0.0	0.0	0.0
			Direction
			(°)
			179.56

Survey Program	Date	2/28/2020		
From	To	Survey (Wellbore)	Tool Name	Description
(usft)	(usft)			
78.0	407.0	Surface Surveys (Wellbore #1)	MWD	OWSG MWD - Standard
520.0	14,642.0	QES MWD Surveys (Wellbore #1)	MWD	OWSG MWD - Standard

Survey									
Measured	Inclination	Azimuth	Vertical	+N/-S	+E/-W	Vertical	Dogleg	Build	Turn
Depth	(°)	(°)	Depth	(usft)	(usft)	Section	Rate	Rate	Rate
(usft)			(usft)			(usft)	(°/100usft)	(°/100usft)	(°/100usft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
78.0	1.00	283.00	78.0	0.2	-0.7	-0.2	1.28	1.28	0.00
162.0	1.10	32.90	162.0	1.0	-0.9	-1.0	2.05	0.12	130.83
217.0	1.20	37.30	217.0	1.9	-0.3	-1.9	0.24	0.18	8.00
305.0	0.90	28.42	305.0	3.2	0.6	-3.2	0.39	-0.34	-10.09
Tie-in @ 407.0' MD / 406.9' TVD									
407.0	0.90	21.20	406.9	4.7	1.3	-4.7	0.11	0.00	-7.08
520.0	1.01	22.43	519.9	6.4	2.0	-6.4	0.10	0.10	1.09
614.0	0.48	11.88	613.9	7.6	2.4	-7.6	0.58	-0.56	-11.22
708.0	0.13	59.87	707.9	8.0	2.5	-8.0	0.43	-0.37	51.05



QES
Survey Report



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Site:	Sec 20, T26S, R29E	MD Reference:	WELL @ 2896.8usft (PD #101)
Well:	Mazer Rackham 20 WB Fed Com #4H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.1 Single User Db

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
802.0	0.26	161.56	801.9	7.9	2.7	-7.9	0.33	0.14	108.18
896.0	0.84	175.36	895.9	7.0	2.8	-7.0	0.63	0.62	14.68
990.0	1.01	188.72	989.9	5.5	2.7	-5.5	0.29	0.18	14.21
1,084.0	0.75	186.35	1,083.9	4.1	2.5	-4.0	0.28	-0.28	-2.52
1,178.0	0.53	185.29	1,177.9	3.0	2.4	-3.0	0.23	-0.23	-1.13
1,271.0	0.57	172.64	1,270.9	2.1	2.5	-2.1	0.14	0.04	-13.60
1,365.0	0.75	178.35	1,364.9	1.0	2.5	-1.0	0.20	0.19	6.07
1,459.0	1.93	8.10	1,458.9	2.0	2.8	-2.0	2.84	1.26	-181.12
1,553.0	5.19	6.52	1,552.7	7.8	3.5	-7.8	3.47	3.47	-1.68
1,643.0	7.43	8.63	1,642.1	17.6	4.8	-17.5	2.50	2.49	2.34
1,733.0	9.05	3.45	1,731.2	30.4	6.1	-30.4	1.98	1.80	-5.76
1,822.0	9.23	1.07	1,819.1	44.5	6.7	-44.5	0.47	0.20	-2.67
1,912.0	8.40	1.86	1,908.0	58.3	7.0	-58.3	0.93	-0.92	0.88
2,002.0	7.60	3.01	1,997.1	70.8	7.5	-70.8	0.91	-0.89	1.28
2,091.0	8.44	2.74	2,085.2	83.2	8.2	-83.2	0.94	0.94	-0.30
2,181.0	8.84	5.56	2,174.2	96.7	9.2	-96.6	0.65	0.44	3.13
2,270.0	8.53	358.79	2,262.2	110.1	9.7	-110.0	1.20	-0.35	-7.61
2,360.0	8.62	356.85	2,351.2	123.5	9.2	-123.5	0.34	0.10	-2.16
2,449.0	8.35	1.16	2,439.2	136.6	8.9	-136.6	0.78	-0.30	4.84
2,539.0	7.60	6.35	2,528.4	149.1	9.7	-149.0	1.15	-0.83	5.77
2,629.0	7.65	357.12	2,617.6	161.0	10.1	-160.9	1.36	0.06	-10.26
2,718.0	8.00	349.30	2,705.7	173.0	8.6	-172.9	1.26	0.39	-8.79
2,803.0	7.69	350.97	2,789.9	184.4	6.6	-184.4	0.45	-0.36	1.96
2,892.0	7.12	353.87	2,878.2	195.8	5.1	-195.7	0.77	-0.64	3.26
2,982.0	8.92	5.99	2,967.3	208.3	5.2	-208.2	2.73	2.00	13.47
3,071.0	9.01	6.35	3,055.2	222.1	6.7	-222.0	0.12	0.10	0.40
3,161.0	8.92	5.12	3,144.1	236.0	8.1	-236.0	0.24	-0.10	-1.37
3,249.0	8.88	5.20	3,231.1	249.6	9.4	-249.5	0.05	-0.05	0.09
3,339.0	8.75	4.59	3,320.0	263.3	10.5	-263.2	0.18	-0.14	-0.68
3,429.0	8.44	3.97	3,409.0	276.7	11.5	-276.6	0.36	-0.34	-0.69
3,518.0	10.15	3.01	3,496.8	291.1	12.4	-291.0	1.93	1.92	-1.08
3,607.0	10.95	1.86	3,584.3	307.4	13.1	-307.3	0.93	0.90	-1.29
3,697.0	10.15	0.63	3,672.8	323.8	13.5	-323.7	0.92	-0.89	-1.37
3,786.0	10.11	359.67	3,760.4	339.5	13.5	-339.4	0.19	-0.04	-1.08
3,876.0	9.71	357.91	3,849.1	355.0	13.2	-354.9	0.56	-0.44	-1.96
3,966.0	9.63	358.35	3,937.8	370.1	12.7	-370.0	0.12	-0.09	0.49
4,056.0	9.54	357.47	4,026.5	385.1	12.1	-385.0	0.19	-0.10	-0.98
4,145.0	9.14	356.24	4,114.4	399.5	11.4	-399.4	0.50	-0.45	-1.38
4,235.0	8.62	355.71	4,203.3	413.3	10.4	-413.2	0.58	-0.58	-0.59
4,325.0	8.40	354.57	4,292.3	426.6	9.3	-426.5	0.31	-0.24	-1.27
4,414.0	9.10	1.78	4,380.3	440.1	8.9	-440.0	1.46	0.79	8.10
4,504.0	9.58	6.79	4,469.1	454.7	10.0	-454.6	1.05	0.53	5.57
4,594.0	8.97	6.79	4,557.9	469.1	11.7	-469.0	0.68	-0.68	0.00



QES Survey Report



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Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.1 Single User Db

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,683.0	8.75	4.76	4,645.8	482.7	13.1	-482.6	0.43	-0.25	-2.28
4,773.0	8.31	3.97	4,734.8	496.0	14.1	-495.9	0.51	-0.49	-0.88
4,863.0	9.71	2.39	4,823.7	510.1	14.8	-510.0	1.58	1.56	-1.76
4,953.0	9.85	1.86	4,912.4	525.4	15.4	-525.2	0.18	0.16	-0.59
5,042.0	8.66	359.75	5,000.3	539.7	15.6	-539.5	1.39	-1.34	-2.37
5,132.0	8.18	355.27	5,089.3	552.8	15.1	-552.7	0.90	-0.53	-4.98
5,222.0	8.44	358.08	5,178.3	565.8	14.3	-565.7	0.54	0.29	3.12
5,311.0	8.66	356.77	5,266.3	579.0	13.7	-578.9	0.33	0.25	-1.47
5,401.0	9.01	4.15	5,355.3	592.8	13.9	-592.7	1.32	0.39	8.20
5,490.0	7.96	2.30	5,443.3	605.9	14.6	-605.8	1.22	-1.18	-2.08
5,580.0	9.63	4.94	5,532.2	619.7	15.5	-619.5	1.91	1.86	2.93
5,670.0	9.05	4.41	5,621.1	634.2	16.7	-634.1	0.65	-0.64	-0.59
Cross 330' HL@ 5677.5' MD / 5628.5' TVD									
5,677.5	9.15	4.43	5,628.5	635.4	16.8	-635.3	1.39	1.39	0.23
5,759.0	10.29	4.59	5,708.8	649.1	17.9	-649.0	1.39	1.39	0.20
5,849.0	10.02	2.39	5,797.4	665.0	18.8	-664.8	0.53	-0.30	-2.44
5,939.0	9.63	0.81	5,886.1	680.3	19.3	-680.1	0.53	-0.43	-1.76
6,028.0	9.19	358.79	5,973.9	694.9	19.2	-694.7	0.62	-0.49	-2.27
6,118.0	9.58	9.60	6,062.7	709.4	20.3	-709.2	2.00	0.43	12.01
6,207.0	8.92	10.57	6,150.5	723.5	22.8	-723.3	0.76	-0.74	1.09
6,297.0	8.35	9.16	6,239.5	736.8	25.1	-736.6	0.68	-0.63	-1.57
6,386.0	8.66	5.99	6,327.5	749.9	26.9	-749.6	0.63	0.35	-3.56
6,476.0	10.81	5.03	6,416.2	765.0	28.3	-764.8	2.40	2.39	-1.07
6,566.0	9.89	3.62	6,504.7	781.1	29.5	-780.9	1.06	-1.02	-1.57
6,655.0	8.84	0.19	6,592.6	795.6	30.1	-795.3	1.34	-1.18	-3.85
6,744.0	8.31	2.48	6,680.6	808.9	30.4	-808.6	0.71	-0.60	2.57
6,834.0	6.99	0.37	6,769.8	820.8	30.7	-820.6	1.50	-1.47	-2.34
6,923.0	5.54	358.96	6,858.2	830.6	30.6	-830.3	1.64	-1.63	-1.58
7,013.0	4.57	353.78	6,947.9	838.5	30.2	-838.2	1.19	-1.08	-5.76
7,102.0	4.97	20.32	7,036.6	845.6	31.1	-845.3	2.50	0.45	29.82
7,191.0	4.57	34.03	7,125.3	852.2	34.4	-851.9	1.35	-0.45	15.40
7,281.0	3.91	33.15	7,215.0	857.7	38.1	-857.4	0.74	-0.73	-0.98
7,370.0	2.81	25.86	7,303.9	862.2	40.7	-861.9	1.32	-1.24	-8.19
7,460.0	3.30	15.14	7,393.7	866.7	42.4	-866.3	0.83	0.54	-11.91
7,549.0	3.30	41.94	7,482.6	871.1	44.8	-870.7	1.72	0.00	30.11
7,639.0	2.33	99.33	7,572.5	872.7	48.3	-872.3	3.15	-1.08	63.77
7,728.0	2.02	107.86	7,661.4	871.9	51.6	-871.5	0.50	-0.35	9.58
7,818.0	1.23	103.20	7,751.4	871.2	54.0	-870.8	0.89	-0.88	-5.18
7,907.0	1.19	87.56	7,840.4	871.0	55.9	-870.6	0.37	-0.04	-17.57
7,996.0	0.79	84.04	7,929.4	871.1	57.4	-870.7	0.45	-0.45	-3.96
8,086.0	0.48	111.99	8,019.4	871.1	58.4	-870.6	0.48	-0.34	31.06
8,176.0	0.35	151.98	8,109.4	870.7	58.9	-870.2	0.34	-0.14	44.43
8,265.0	0.62	226.07	8,198.4	870.1	58.6	-869.6	0.70	0.30	83.25
8,355.0	1.23	219.48	8,288.3	869.0	57.7	-868.5	0.69	0.68	-7.32



QES
Survey Report



Company:	Marathon Oil Permian LLC	Local Co-ordinate Reference:	Well Mazer Rackham 20 WB Fed Com #4H
Project:	Eddy County, New Mexico (NAD 27)	TVD Reference:	WELL @ 2896.8usft (PD #101)
Site:	Sec 20, T26S, R29E	MD Reference:	WELL @ 2896.8usft (PD #101)
Well:	Mazer Rackham 20 WB Fed Com #4H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.1 Single User Db

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
8,444.0	1.36	223.26	8,377.3	867.5	56.3	-867.1	0.17	0.15	4.25
8,534.0	1.36	225.63	8,467.3	866.0	54.8	-865.5	0.06	0.00	2.63
8,623.0	1.05	207.88	8,556.3	864.5	53.7	-864.1	0.54	-0.35	-19.94
8,713.0	1.01	195.84	8,646.3	863.0	53.1	-862.6	0.24	-0.04	-13.38
8,802.0	1.10	201.99	8,735.2	861.5	52.6	-861.1	0.16	0.10	6.91
8,892.0	1.05	198.21	8,825.2	859.9	52.0	-859.5	0.10	-0.06	-4.20
8,981.0	1.01	198.65	8,914.2	858.4	51.5	-858.0	0.05	-0.04	0.49
9,071.0	1.01	210.52	9,004.2	857.0	50.8	-856.5	0.23	0.00	13.19
9,160.0	0.79	216.49	9,093.2	855.8	50.1	-855.4	0.27	-0.25	6.71
9,207.0	0.79	222.03	9,140.2	855.3	49.7	-854.9	0.16	0.00	11.79
9,360.0	0.62	187.40	9,293.2	853.7	48.8	-853.3	0.29	-0.11	-22.63
9,455.0	0.79	180.90	9,388.2	852.5	48.8	-852.1	0.20	0.18	-6.84
9,550.0	10.55	184.06	9,482.6	843.2	48.1	-842.8	10.28	10.27	3.33
9,645.0	28.84	176.06	9,571.7	811.4	49.1	-811.0	19.42	19.25	-8.42
9,739.0	37.58	180.81	9,650.3	760.0	50.3	-759.6	9.69	9.30	5.05
9,834.0	43.91	182.92	9,722.2	698.0	48.2	-697.6	6.82	6.66	2.22
Cross 330' HL@ 9922.2' MD / 9784.3' TVD									
9,922.2	46.67	187.05	9,784.3	635.6	42.7	-635.3	4.57	3.13	4.68
9,928.0	46.86	187.31	9,788.2	631.4	42.1	-631.1	4.57	3.22	4.45
10,023.0	52.92	187.05	9,849.4	559.4	33.1	-559.1	6.38	6.38	-0.27
10,117.0	60.40	186.26	9,901.0	481.4	24.0	-481.2	7.99	7.96	-0.84
10,211.0	67.03	188.46	9,942.6	397.9	13.2	-397.8	7.36	7.05	2.34
10,306.0	73.54	188.63	9,974.7	309.5	-0.1	-309.5	6.85	6.85	0.18
10,400.0	78.42	189.42	9,997.4	219.5	-14.4	-219.6	5.26	5.19	0.84
10,495.0	82.73	190.30	10,013.0	127.2	-30.5	-127.4	4.63	4.54	0.93
10,589.0	88.66	186.87	10,020.0	34.5	-44.4	-34.9	7.28	6.31	-3.65
10,706.0	90.68	185.56	10,020.7	-81.8	-57.1	81.3	2.06	1.73	-1.12
10,801.0	91.56	180.55	10,018.9	-176.6	-62.2	176.1	5.35	0.93	-5.27
10,895.0	90.11	180.02	10,017.5	-270.6	-62.6	270.1	1.64	-1.54	-0.56
10,990.0	89.19	178.61	10,018.1	-365.6	-61.5	365.1	1.77	-0.97	-1.48
11,084.0	89.67	179.23	10,019.0	-459.5	-59.7	459.1	0.83	0.51	0.66
11,178.0	87.91	178.79	10,021.0	-553.5	-58.1	553.0	1.93	-1.87	-0.47
11,272.0	87.56	179.49	10,024.7	-647.4	-56.7	647.0	0.83	-0.37	0.74
11,367.0	90.07	177.38	10,026.7	-742.3	-54.1	741.9	3.45	2.64	-2.22
11,461.0	91.47	178.79	10,025.4	-836.3	-51.0	835.9	2.11	1.49	1.50
11,555.0	88.53	177.47	10,025.4	-930.2	-47.9	929.8	3.43	-3.13	-1.40
11,649.0	90.11	175.10	10,026.5	-1,024.0	-41.8	1,023.7	3.03	1.68	-2.52
11,743.0	87.21	172.37	10,028.7	-1,117.4	-31.6	1,117.1	4.24	-3.09	-2.90
11,837.0	89.27	177.56	10,031.6	-1,211.0	-23.3	1,210.7	5.94	2.19	5.52
11,932.0	93.14	180.72	10,029.6	-1,305.9	-21.9	1,305.7	5.26	4.07	3.33
12,026.0	91.87	179.32	10,025.5	-1,399.8	-21.9	1,399.6	2.01	-1.35	-1.49
12,121.0	91.34	180.02	10,022.8	-1,494.8	-21.4	1,494.6	0.92	-0.56	0.74
12,215.0	92.09	180.90	10,020.0	-1,588.7	-22.1	1,588.5	1.23	0.80	0.94



QES Survey Report



Company:	Marathon Oil Permian LLC	Local Co-ordinate Reference:	Well Mazer Rackham 20 WB Fed Com #4H
Project:	Eddy County, New Mexico (NAD 27)	TVD Reference:	WELL @ 2896.8usft (PD #101)
Site:	Sec 20, T26S, R29E	MD Reference:	WELL @ 2896.8usft (PD #101)
Well:	Mazer Rackham 20 WB Fed Com #4H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.1 Single User Db

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
12,310.0	92.66	181.16	10,016.1	-1,683.6	-23.8	1,683.4	0.66	0.60	0.27	
12,405.0	92.18	182.04	10,012.1	-1,778.5	-26.5	1,778.2	1.05	-0.51	0.93	
12,500.0	91.69	181.25	10,008.9	-1,873.4	-29.2	1,873.1	0.98	-0.52	-0.83	
12,594.0	92.04	181.42	10,005.8	-1,967.3	-31.4	1,967.0	0.41	0.37	0.18	
12,688.0	90.11	180.72	10,004.0	-2,061.3	-33.2	2,061.0	2.18	-2.05	-0.74	
12,783.0	91.47	177.29	10,002.7	-2,156.2	-31.5	2,155.9	3.88	1.43	-3.61	
12,877.0	91.65	176.77	10,000.2	-2,250.1	-26.6	2,249.8	0.59	0.19	-0.55	
12,971.0	91.78	176.77	9,997.4	-2,343.9	-21.3	2,343.7	0.14	0.14	0.00	
13,065.0	89.89	175.45	9,996.0	-2,437.7	-15.0	2,437.5	2.45	-2.01	-1.40	
13,159.0	89.71	175.62	9,996.3	-2,531.4	-7.6	2,531.2	0.26	-0.19	0.18	
13,254.0	88.04	173.69	9,998.2	-2,625.9	1.2	2,625.9	2.69	-1.76	-2.03	
13,348.0	89.80	177.12	10,000.0	-2,719.6	8.7	2,719.6	4.10	1.87	3.65	
13,443.0	88.48	175.71	10,001.4	-2,814.4	14.7	2,814.4	2.03	-1.39	-1.48	
13,538.0	91.03	176.68	10,001.8	-2,909.2	21.0	2,909.3	2.87	2.68	1.02	
13,633.0	91.38	175.98	9,999.8	-3,004.0	27.0	3,004.1	0.82	0.37	-0.74	
13,727.0	91.56	175.01	9,997.4	-3,097.6	34.4	3,097.8	1.05	0.19	-1.03	
13,822.0	92.44	178.26	9,994.1	-3,192.4	40.0	3,192.6	3.54	0.93	3.42	
13,915.0	90.95	175.36	9,991.3	-3,285.2	45.2	3,285.5	3.50	-1.60	-3.12	
14,010.0	91.56	178.35	9,989.2	-3,380.0	50.4	3,380.3	3.21	0.64	3.15	
14,105.0	92.40	182.57	9,985.9	-3,474.9	49.6	3,475.2	4.53	0.88	4.44	
14,199.0	91.21	181.16	9,983.0	-3,568.8	46.6	3,569.1	1.96	-1.27	-1.50	
14,293.0	90.77	180.11	9,981.4	-3,662.8	45.5	3,663.1	1.21	-0.47	-1.12	
14,389.0	91.74	179.67	9,979.3	-3,758.8	45.7	3,759.0	1.11	1.01	-0.46	
14,484.0	93.54	183.18	9,974.9	-3,853.7	43.4	3,853.9	4.15	1.89	3.69	
14,577.0	90.20	180.46	9,971.8	-3,946.5	40.4	3,946.7	4.63	-3.59	-2.92	
14,589.0	90.02	180.46	9,971.8	-3,958.5	40.3	3,958.7	1.50	-1.50	0.00	
Cross 330' HL@ 14596.0' MD / 9971.8' TVD										
14,596.0	90.02	180.46	9,971.8	-3,965.5	40.2	3,965.7	0.00	0.00	0.00	
TD @ 14642.0' MD / 9971.8' TVD										
14,642.0	90.02	180.46	9,971.8	-4,011.5	39.9	4,011.7	0.00	0.00	0.00	

Design Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
407.0	406.9	4.7	1.3	Tie-in @ 407.0' MD / 406.9' TVD	
5,677.5	5,628.5	635.4	16.8	Cross 330' HL@ 5677.5' MD / 5628.5' TVD	
9,922.2	9,784.3	635.6	42.7	Cross 330' HL@ 9922.2' MD / 9784.3' TVD	
14,596.0	9,971.8	-3,965.5	40.2	Cross 330' HL@ 14596.0' MD / 9971.8' TVD	
14,642.0	9,971.8	-4,011.5	39.9	TD @ 14642.0' MD / 9971.8' TVD	

District I

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

District II

811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720

District III

1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170

District IV

1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 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 132292

ACKNOWLEDGMENTS

Operator: MARATHON OIL PERMIAN LLC 990 Town & Country Blvd. Houston, TX 77024	OGRID: 372098
	Action Number: 132292
	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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Energy, Minerals and Natural Resources
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1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 132292

CONDITIONS

Operator: MARATHON OIL PERMIAN LLC 990 Town & Country Blvd. Houston, TX 77024	OGRID: 372098
	Action Number: 132292
	Action Type: [C-104] Completion Packet (C-104C)

CONDITIONS

Created By	Condition	Condition Date
jagarcia	None	9/16/2022