

Form 3160-5
(June 2015)UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENTCarlsbad Field Office
OCD Artesia
APPROVED
GAD No. 4004-0137
Expires: January 31, 2018
No. NMNM138836**SUNDRY NOTICES AND REPORTS ON WELLS**
Do not use this form for proposals to drill or to re-enter an abandoned well. Use form 3160-3 (APD) for such proposals.**SUBMIT IN TRIPLICATE - Other instructions on page 2**

1. Type of Well ☐ Oil Well ☒ Gas Well ☐ Other		7. If Unit or CA/Agreement, Name and/or No.
2. Name of Operator MARATHON OIL PERMIAN LLC Contact: MELISSA SZUDERA E-Mail: mszudera@marathonoil.com		8. Well Name and No. MAZER RACKHAM 20 WA FED COM 6H
3a. Address 5555 SAN FELIPE ST HOUSTON, TX 77056	3b. Phone No. (include area code) Ph: 713-296-3179	9. API Well No. 30-015-46147-00-X1
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) Sec 20 T26S R29E NENE 965FNL 600FEL 32.032902 N Lat, 104.000160 W Lon		10. Field and Pool or Exploratory Area PURPLE SAGE-WOLFCAMP (GAS)
		11. County or Parish, State EDDY COUNTY, NM

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
☒ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☐ Subsequent Report	☐ Alter Casing	☐ Hydraulic Fracturing	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☒ Other
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	Change to Original A PD
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.

Marathon Oil Permian LLC requests to make the following changes to the approved APD:

Change hole location:
SHL:
From: 965 FNL 600 FEL
To: 965 FNL 630 FEL

RECEIVED

GC 11/7/19
Accepted for record - NMOCD

NOV 05 2019

Please see attachments.

DISTRICT//ARTESIAO.C.D.

Engineering okay, no additional CoA. DR 10/03
Approved. No new surface disturbance. DOI-BLM-NM-9020-2019-0585-EA. CLR 10-23-20

14. I hereby certify that the foregoing is true and correct.

Electronic Submission #479470 verified by the BLM Well Information System
For MARATHON OIL PERMIAN LLC, sent to the Carlsbad
Committed to AFMSS for processing by JUANA MEDRANO on 08/21/2019 (19JM0091SE)

Name (Printed/Typed)	MELISSA SZUDERA	Title	REGULATORY COMPLIANCE REP
Signature	(Electronic Submission)	Date	08/20/2019

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By	<i>Cordell Luth</i>	Title	AFM-1 & M	Date	10/24/2019
Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.		Office	CFD		

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)

**** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ****

11-22-19
RUP NOT Entered
Need C102 + LAT

Form 3160-5
(June 2015)UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENTFORM APPROVED
OMB NO. 1004-0137
Expires: January 31, 2018**SUNDRY NOTICES AND REPORTS ON WELLS**
Do not use this form for proposals to drill or to re-enter an
abandoned well. Use form 3160-3 (APD) for such proposals.5. Lease Serial No.
NMNM138836

6. If Indian, Allottee or Tribe Name

7. If Unit or CA/Agreement, Name and/or No.

8. Well Name and No.
MAZER RACKHAM 20 WA FED COM 6H9. API Well No.
30-015-46147-00-X110. Field and Pool or Exploratory Area
PURPLE SAGE-WOLFCAMP (GAS)11. County or Parish, State
EDDY COUNTY, NM**SUBMIT IN TRIPLICATE - Other instructions on page 2**

1. Type of Well

☐ Oil Well ☒ Gas Well ☐ Other

2. Name of Operator

MARATHON OIL PERMIAN LLC

Contact: MELISSA SZUDERA

E-Mail: mszudera@marathonoil.com

3a. Address

5555 SAN FELIPE ST
HOUSTON, TX 77056

3b. Phone No. (include area code)

Ph: 713-296-3179

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

Sec 20 T26S R29E NENE 965FNL 630FEL
32.032902 N Lat, 104.000160 W Lon

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
☒ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☐ Subsequent Report	☐ Alter Casing	☐ Hydraulic Fracturing	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☒ Other
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	Change to Original A
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	PD

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Please see attachments.

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Electronic Submission #479470 verified by the BLM Well Information System
For MARATHON OIL PERMIAN LLC, sent to the Carlsbad
Committed to AFMSS for processing by JUANA MEDRANO on 08/21/2019 (19JM0091SE)

Name (Printed/Typed) MELISSA SZUDERA

Title REGULATORY COMPLIANCE REP

Signature (Electronic Submission)

Date 08/20/2019

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By CODY LAYTON

Title ASSIST FIELD MANAGER LANDS MINERALS

Date 10/24/2019

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Office Carlsbad

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)

**** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ****

Revisions to Operator-Submitted EC Data for Sundry Notice #479470

	Operator Submitted	BLM Revised (AFMSS)
Sundry Type:	APDCH NOI	APDCH NOI
Lease:	NMNM138836	NMNM138836
Agreement:		
Operator:	MARATHON OIL PERMIAN LLC 5555 SAN FELIPE ST HOUSTON, TX 77056 Ph: 713-296-3179	MARATHON OIL PERMIAN LLC 5555 SAN FELIPE ST HOUSTON, TX 77056 Ph: 713.629 6600
Admin Contact:	MELISSA SZUDERA REGULATORY COMPLIANCE REP E-Mail: mszudera@marathonoil.com Ph: 713-296-3179	MELISSA SZUDERA REGULATORY COMPLIANCE REP E-Mail: mszudera@marathonoil.com Ph: 713-296-3179
Tech Contact:	MELISSA SZUDERA REGULATORY COMPLIANCE REP E-Mail: mszudera@marathonoil.com Ph: 713-296-3179	MELISSA SZUDERA REGULATORY COMPLIANCE REP E-Mail: mszudera@marathonoil.com Ph: 713-296-3179
Location: State: County:	NM EDDY	NM EDDY
Field/Pool:	PURPLE SAGE; WOLFCAMP	PURPLE SAGE-WOLFCAMP (GAS)
Well/Facility:	MAZER RACKHAM 20 WA FEDERAL CO 6H Sec 20 T26S R29E Mer NMP NENE 965FNL 600FEL	MAZER RACKHAM 20 WA FED COM 6H Sec 20 T26S R29E NENE 965FNL 630FEL 32.032902 N Lat, 104.000160 W Lon

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 Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

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

Form C-102
Revised August 1, 2011
Submit one copy to appropriate
District Office
☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number	² Pool Code 98220	³ Pool Name PURPLE SAGE; WOLFCAMP (GAS)
⁴ Property Code	⁵ Property Name MAZER RACKHAM 20 WA FED COM	⁶ Well Number 6H
⁷ OGRID No. 372098	⁸ Operator Name MARATHON OIL PERMIAN LLC	⁹ Elevation 2872'

¹⁰ Surface Location

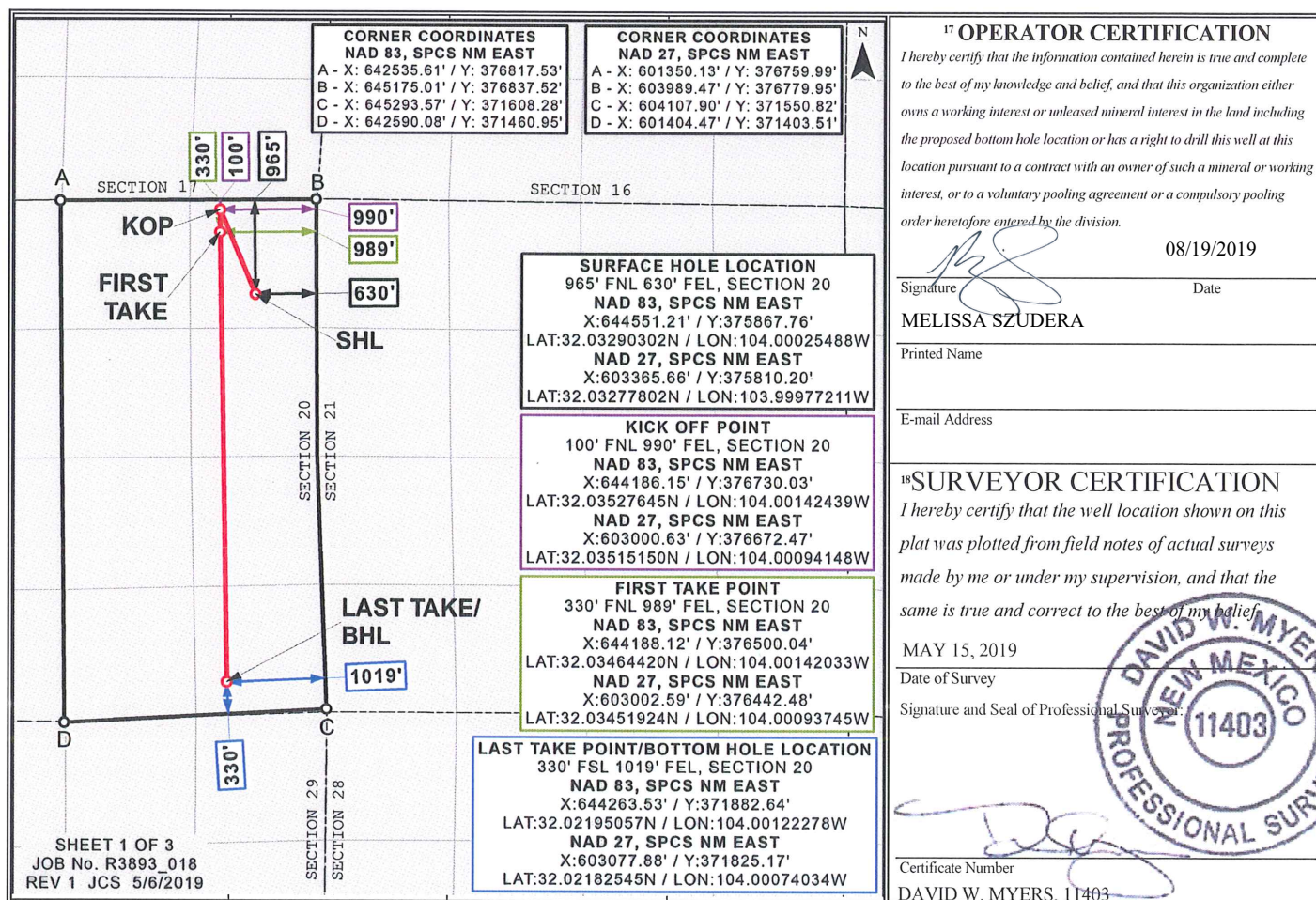
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	20	26S	29E		965	NORTH	630	EAST	EDDY

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		330	SOUTH	1019	EAST	EDDY

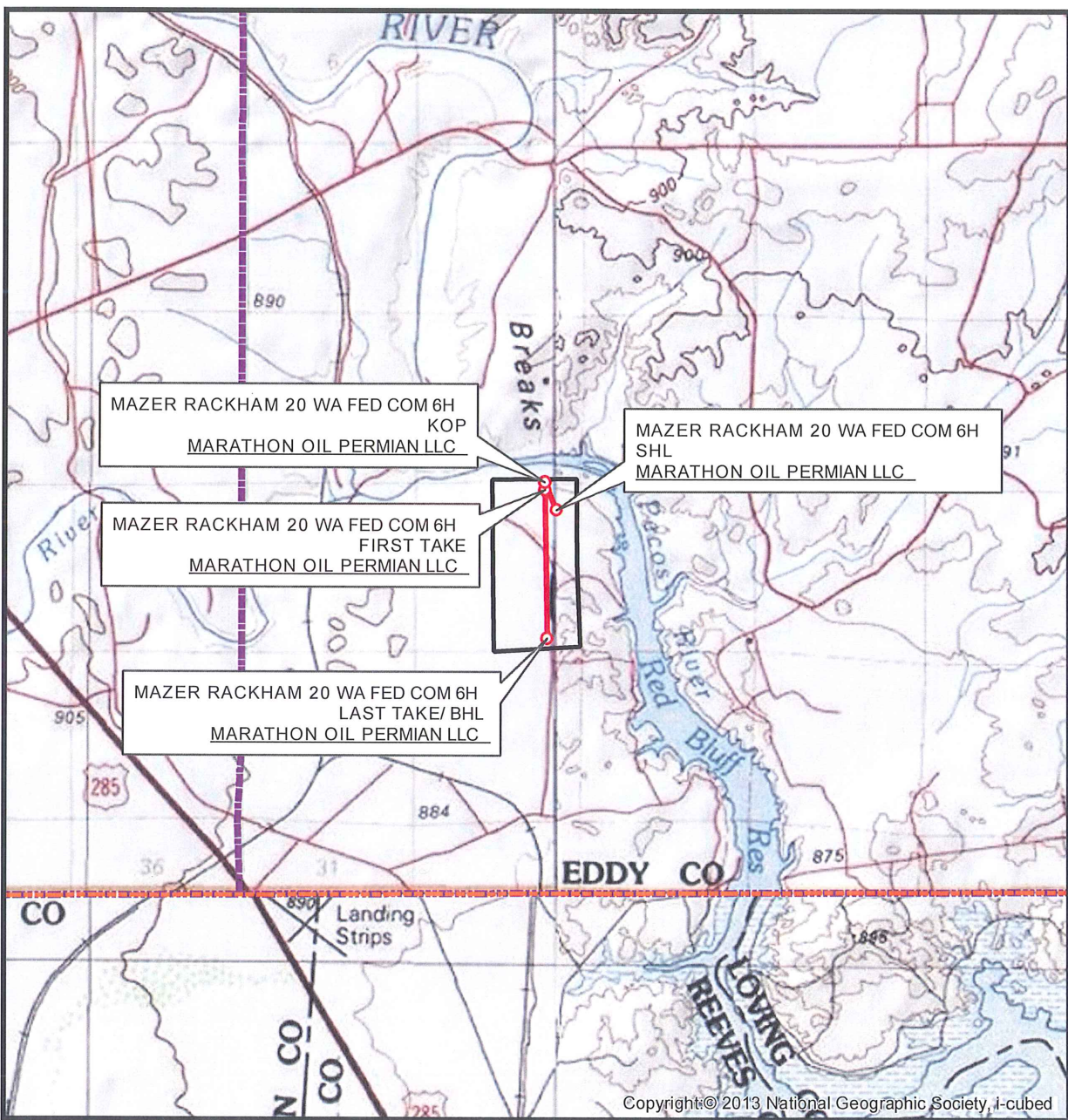
¹² Dedicated Acres 320.0	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
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No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.



Distances/areas relative to NAD 83 Combined Scale Factor: 0.99978647 Convergence: 00°10'35.39608"

LOCATION VERIFICATION MAP



SEC. 20 TWP. 26-S RGE. 29-E
 SURVEY: N.M.P.M.
 COUNTY: EDDY
 OPERATOR: MARATHON OIL PERMIAN LLC
 DESCRIPTION: 965' FNL & 630' FEL
 ELEVATION: 2872'
 LEASE: MAZER RACKHAM 20 FED COM
 U.S.G.S. TOPOGRAPHIC MAP: RED BLUFF, NM, TX.

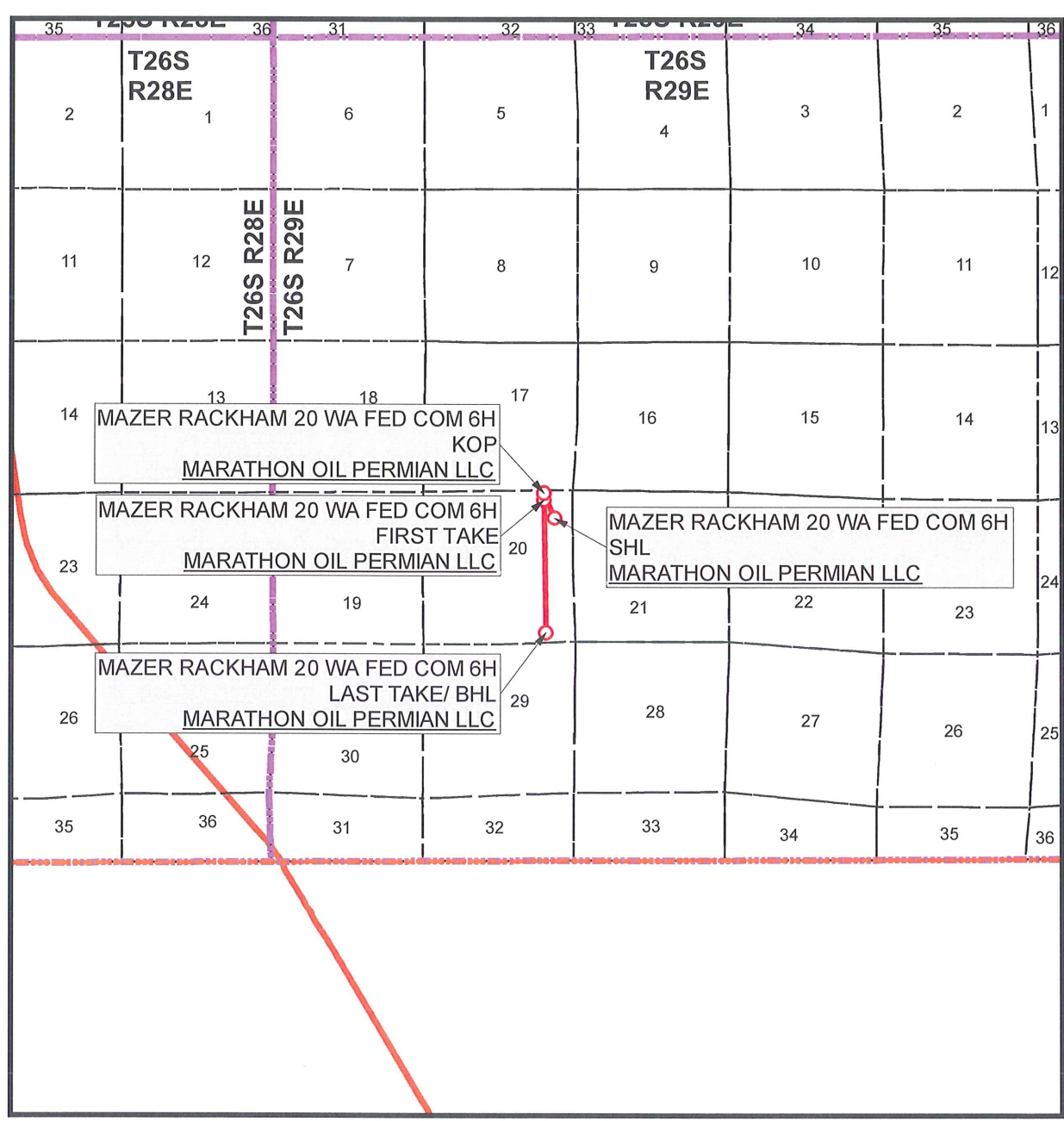
1" = 5,000'
 CONTOUR INTERVAL = 20'



SHEET 2 OF 3

PREPARED BY:
 R-SQUARED GLOBAL, LLC
 1309 LOUISVILLE AVENUE, MONROE, LA 71201
 318-323-6900 OFFICE
 JOB No. R3893_018

VICINITY MAP



SEC. 20 TWP. 26-S RGE. 29-E
SURVEY: N.M.P.M.
COUNTY: EDDY
OPERATOR: MARATHON OIL PERMIAN LLC
DESCRIPTION: 965' FNL & 630' FEL
ELEVATION: 2872'
LEASE: MAZER RACKHAM 20 FED COM
U.S.G.S. TOPOGRAPHIC MAP: RED BLUFF, NM, TX.

1" = 1 MILE



SHEET 3 OF 3

PREPARED BY:
R-SQUARED GLOBAL, LLC
1309 LOUISVILLE AVENUE, MONROE, LA 71201
318-323-6900 OFFICE
JOB No. R3893_018



Marathon Oil
Eddy County, NM
Mazer Rackham 20 (1-4-5-6-8)
WA FED No. 6H
Prelim Plan C
GL: 2872' + KB: 25' (Prec594)



US State Plane 1927 (Exact solution)
NAD 1927 (NADCON CONUS)
Clarke 1866
New Mexico East 3001
Mean Sea Level

RKB Elevation: Well @ 2897.00usft (GL: 2872' + KB: 25' (Prec594))

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	375810.20	603365.66	32.032778	-103.999772	

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	VSect
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	2000.00	0.00	0.00	2000.00	0.00	0.00	0.00	0.00
3	2500.00	10.00	337.06	2497.47	40.08	-16.97	2.00	-40.34
4	7390.97	10.00	337.06	7314.13	822.19	-348.06	0.00	-827.62
5	7890.97	0.00	0.00	7811.59	862.27	-365.03	2.00	-867.96
6	9377.37	0.00	0.00	9298.00	862.27	-365.03	0.00	-867.96
7	10275.47	89.81	179.09	9870.95	291.29	-355.93	10.00	-296.91
8	14552.36	89.81	179.09	9885.20	-3985.03	-287.78	0.00	3979.96

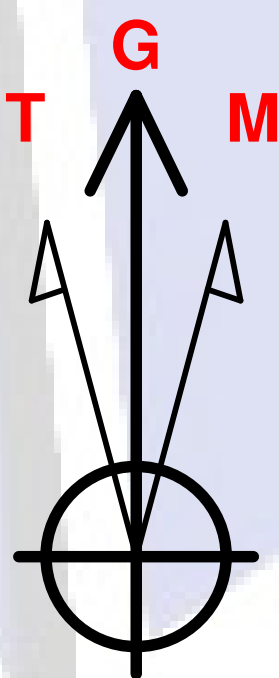
WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N/-S	+E/-W	Northing	Easting
[MazerRack#6H]FTP	0.00	632.28	-363.07	376442.48	603002.59
[MazerRack#6H]KOP	9298.00	862.27	-365.03	376672.47	603000.63
[MazerRack#6H]LTP/BHL	9885.20	-3985.03	-287.78	371825.17	603077.88

Azimuth Corrections

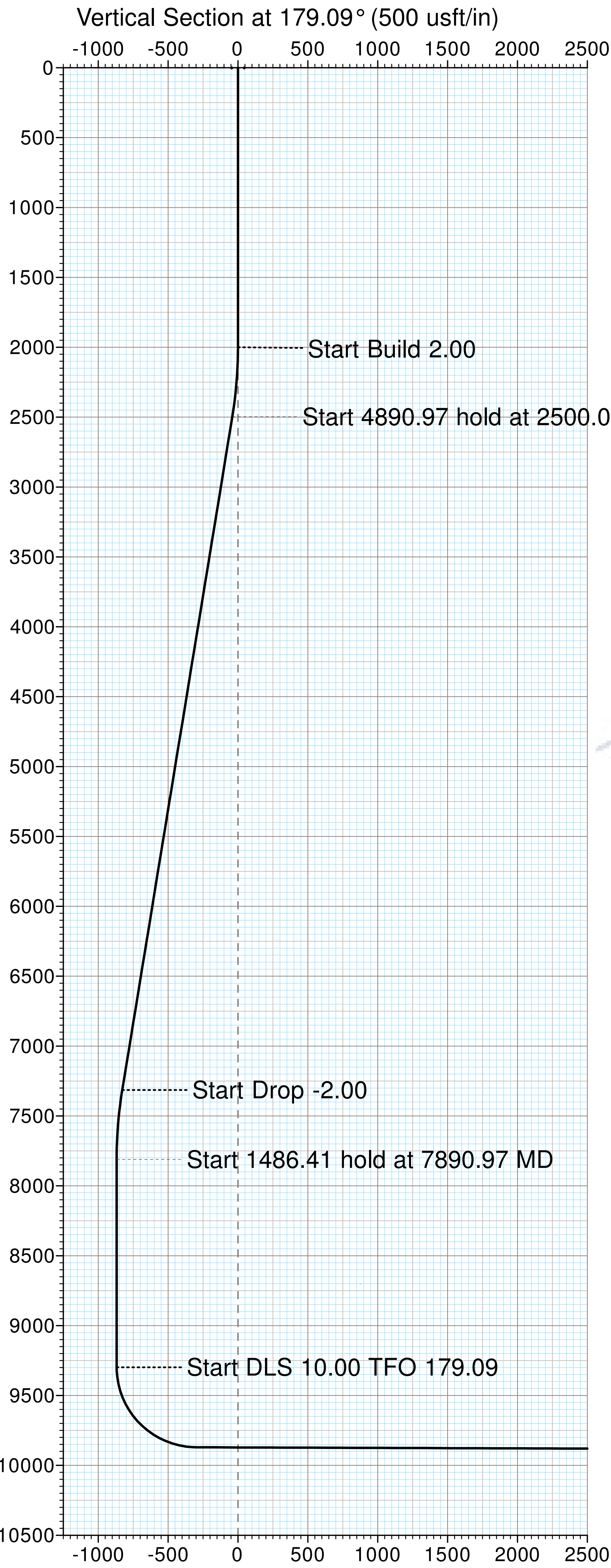
Total Magnetic Corr. (M to G): 6.72°

Declination (M to T): 6.90° East

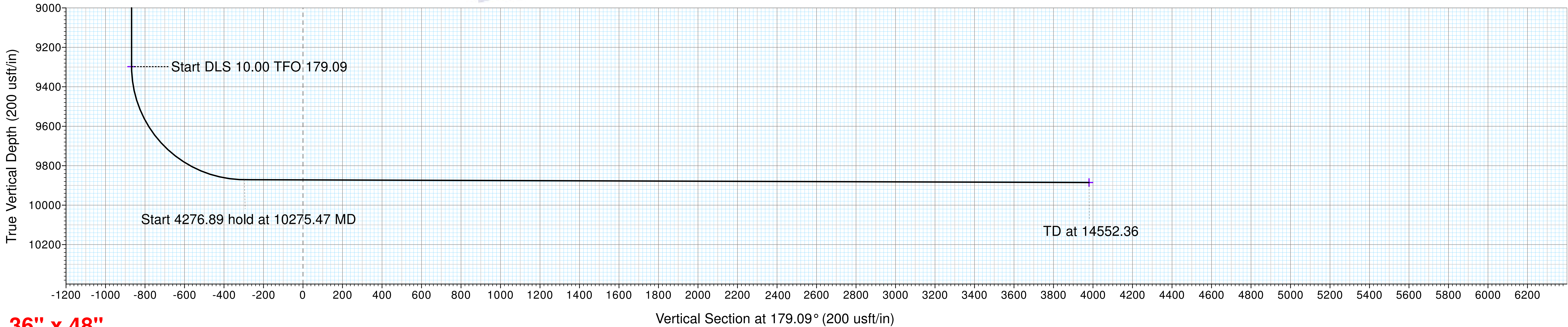


Azimuths to Grid North
True North: -0.18°
Magnetic North: 6.72°

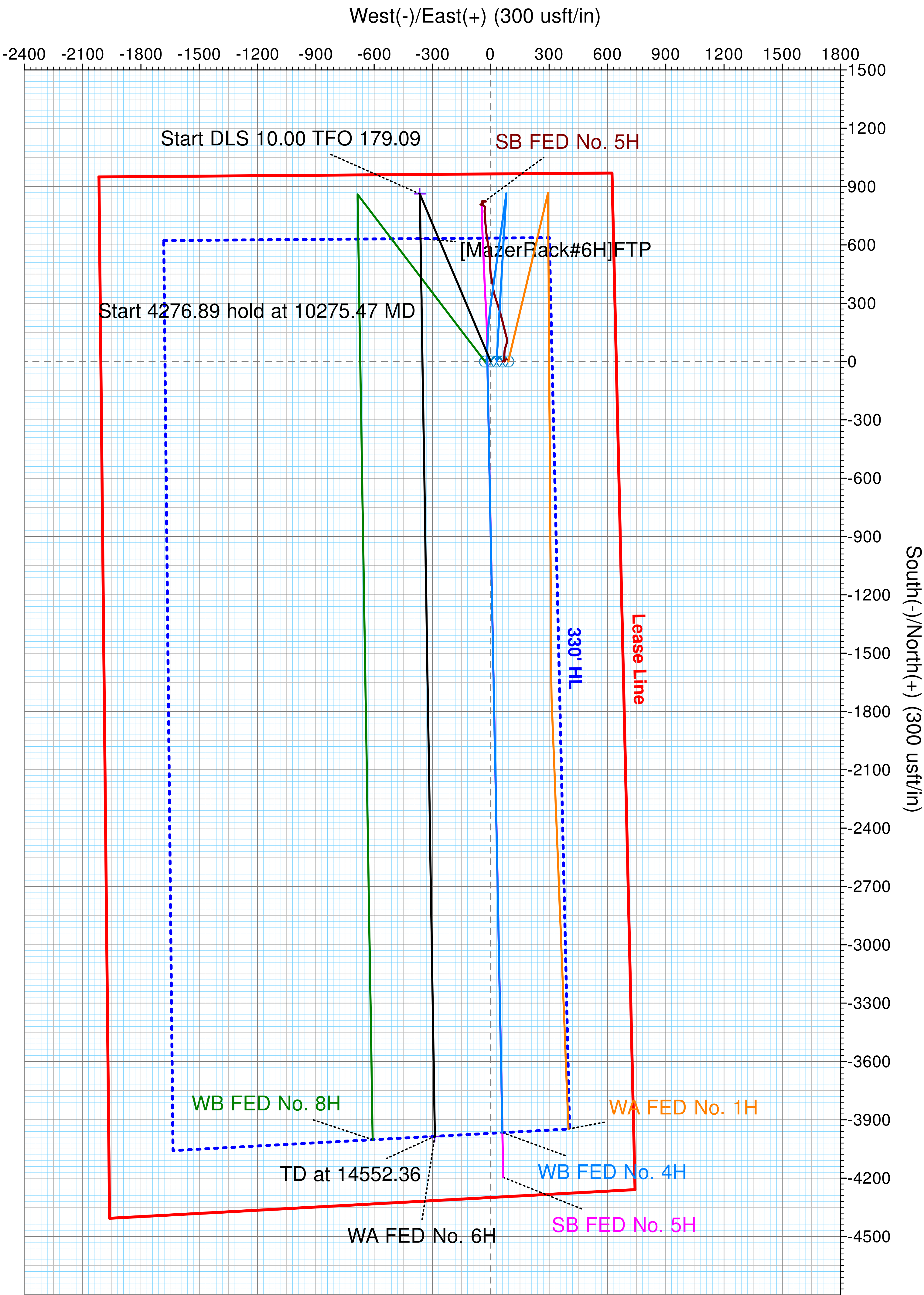
Magnetic Field
Strength: 47858.4snT
Dip Angle: 59.68°
Date: 12/14/2018
Model: HDGM



Target: 9872' TVD @ 0' VS :: 89.81° INC



36" x 48"





Pro Directional Survey Report



Company:	Marathon Oil	Local Co-ordinate Reference:	Well WA FED No. 6H
Project:	Eddy County, NM	TVD Reference:	Well @ 2897.00usft (GL: 2872' + KB: 25' (Prec594))
Site:	Mazer Rackham 20 (1-4-5-6-8)	MD Reference:	Well @ 2897.00usft (GL: 2872' + KB: 25' (Prec594))
Well:	WA FED No. 6H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Prelim Plan C	Database:	WellPlanner1

Project	Eddy County, NM		
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	Mazer Rackham 20 (1-4-5-6-8)					
Site Position:		Northing:	375,810.18 usft	Latitude:	32.032778	
From:	Map	Easting:	603,395.73 usft	Longitude:	-103.999675	
Position Uncertainty:		0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.18 °

Well	WA FED No. 6H					
Well Position	+N/-S	0.00 usft	Northing:	375,810.20 usft	Latitude:	32.032778
	+E/-W	0.00 usft	Easting:	603,365.66 usft	Longitude:	-103.999772
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	2,872.00 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	12/14/2018	6.90	59.68	47,858.40

Design	Prelim Plan C				
Audit Notes:					
Version:	Phase:	PLAN	Tie On Depth:	0.00	
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.00	0.00	0.00	179.09	

Survey Tool Program	Date	7/21/2019			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
0.00	1,850.00	Prelim Plan C (OH)	MWD+HDGM	OWSG MWD + HRGM	
1,850.00	5,400.00	Prelim Plan C (OH)	MWD+HDGM	OWSG MWD + HRGM	
5,400.00	10,000.00	Prelim Plan C (OH)	MWD+HDGM	OWSG MWD + HRGM	
10,000.00	14,552.36	Prelim Plan C (OH)	MWD+HDGM	OWSG MWD + HRGM	

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)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
[MazerRack#6H]FTP										
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00	



Pro Directional Survey Report



Company:	Marathon Oil	Local Co-ordinate Reference:	Well WA FED No. 6H
Project:	Eddy County, NM	TVD Reference:	Well @ 2897.00usft (GL: 2872' + KB: 25' (Prec594))
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Well:	WA FED No. 6H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Prelim Plan C	Database:	WellPlanner1

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)
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00
2,100.00	2.00	337.06	2,099.98	1.61	-0.68	-1.62	2.00	2.00	0.00
2,200.00	4.00	337.06	2,199.84	6.43	-2.72	-6.47	2.00	2.00	0.00
2,300.00	6.00	337.06	2,299.45	14.45	-6.12	-14.55	2.00	2.00	0.00
2,400.00	8.00	337.06	2,398.70	25.67	-10.87	-25.84	2.00	2.00	0.00
2,500.00	10.00	337.06	2,497.47	40.08	-16.97	-40.34	2.00	2.00	0.00
2,600.00	10.00	337.06	2,595.95	56.07	-23.74	-56.44	0.00	0.00	0.00
2,700.00	10.00	337.06	2,694.43	72.06	-30.51	-72.54	0.00	0.00	0.00
2,800.00	10.00	337.06	2,792.91	88.05	-37.28	-88.63	0.00	0.00	0.00
2,900.00	10.00	337.06	2,891.39	104.04	-44.05	-104.73	0.00	0.00	0.00
3,000.00	10.00	337.06	2,989.87	120.03	-50.81	-120.83	0.00	0.00	0.00
3,100.00	10.00	337.06	3,088.35	136.02	-57.58	-136.92	0.00	0.00	0.00
3,200.00	10.00	337.06	3,186.83	152.02	-64.35	-153.02	0.00	0.00	0.00
3,300.00	10.00	337.06	3,285.31	168.01	-71.12	-169.12	0.00	0.00	0.00
3,400.00	10.00	337.06	3,383.79	184.00	-77.89	-185.21	0.00	0.00	0.00
3,500.00	10.00	337.06	3,482.27	199.99	-84.66	-201.31	0.00	0.00	0.00
3,600.00	10.00	337.06	3,580.75	215.98	-91.43	-217.40	0.00	0.00	0.00
3,700.00	10.00	337.06	3,679.23	231.97	-98.20	-233.50	0.00	0.00	0.00
3,800.00	10.00	337.06	3,777.72	247.96	-104.97	-249.60	0.00	0.00	0.00
3,900.00	10.00	337.06	3,876.20	263.95	-111.74	-265.69	0.00	0.00	0.00
4,000.00	10.00	337.06	3,974.68	279.94	-118.51	-281.79	0.00	0.00	0.00
4,100.00	10.00	337.06	4,073.16	295.93	-125.28	-297.89	0.00	0.00	0.00
4,200.00	10.00	337.06	4,171.64	311.93	-132.05	-313.98	0.00	0.00	0.00
4,300.00	10.00	337.06	4,270.12	327.92	-138.82	-330.08	0.00	0.00	0.00
4,400.00	10.00	337.06	4,368.60	343.91	-145.59	-346.18	0.00	0.00	0.00
4,500.00	10.00	337.06	4,467.08	359.90	-152.36	-362.27	0.00	0.00	0.00
4,600.00	10.00	337.06	4,565.56	375.89	-159.13	-378.37	0.00	0.00	0.00



Pro Directional Survey Report



Company:	Marathon Oil	Local Co-ordinate Reference:	Well WA FED No. 6H
Project:	Eddy County, NM	TVD Reference:	Well @ 2897.00usft (GL: 2872' + KB: 25' (Prec594))
Site:	Mazer Rackham 20 (1-4-5-6-8)	MD Reference:	Well @ 2897.00usft (GL: 2872' + KB: 25' (Prec594))
Well:	WA FED No. 6H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Prelim Plan C	Database:	WellPlanner1

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)	
4,700.00	10.00	337.06	4,664.04	391.88	-165.90	-394.47	0.00	0.00	0.00	
4,800.00	10.00	337.06	4,762.52	407.87	-172.67	-410.56	0.00	0.00	0.00	
4,900.00	10.00	337.06	4,861.00	423.86	-179.44	-426.66	0.00	0.00	0.00	
5,000.00	10.00	337.06	4,959.48	439.85	-186.21	-442.75	0.00	0.00	0.00	
5,100.00	10.00	337.06	5,057.97	455.84	-192.98	-458.85	0.00	0.00	0.00	
5,200.00	10.00	337.06	5,156.45	471.83	-199.74	-474.95	0.00	0.00	0.00	
5,300.00	10.00	337.06	5,254.93	487.83	-206.51	-491.04	0.00	0.00	0.00	
5,400.00	10.00	337.06	5,353.41	503.82	-213.28	-507.14	0.00	0.00	0.00	
5,500.00	10.00	337.06	5,451.89	519.81	-220.05	-523.24	0.00	0.00	0.00	
5,600.00	10.00	337.06	5,550.37	535.80	-226.82	-539.33	0.00	0.00	0.00	
5,700.00	10.00	337.06	5,648.85	551.79	-233.59	-555.43	0.00	0.00	0.00	
5,800.00	10.00	337.06	5,747.33	567.78	-240.36	-571.53	0.00	0.00	0.00	
5,900.00	10.00	337.06	5,845.81	583.77	-247.13	-587.62	0.00	0.00	0.00	
6,000.00	10.00	337.06	5,944.29	599.76	-253.90	-603.72	0.00	0.00	0.00	
6,100.00	10.00	337.06	6,042.77	615.75	-260.67	-619.82	0.00	0.00	0.00	
6,200.00	10.00	337.06	6,141.25	631.74	-267.44	-635.91	0.00	0.00	0.00	
6,300.00	10.00	337.06	6,239.73	647.73	-274.21	-652.01	0.00	0.00	0.00	
6,400.00	10.00	337.06	6,338.22	663.73	-280.98	-668.10	0.00	0.00	0.00	
6,500.00	10.00	337.06	6,436.70	679.72	-287.75	-684.20	0.00	0.00	0.00	
6,600.00	10.00	337.06	6,535.18	695.71	-294.52	-700.30	0.00	0.00	0.00	
6,700.00	10.00	337.06	6,633.66	711.70	-301.29	-716.39	0.00	0.00	0.00	
6,800.00	10.00	337.06	6,732.14	727.69	-308.06	-732.49	0.00	0.00	0.00	
6,900.00	10.00	337.06	6,830.62	743.68	-314.83	-748.59	0.00	0.00	0.00	
7,000.00	10.00	337.06	6,929.10	759.67	-321.60	-764.68	0.00	0.00	0.00	
7,100.00	10.00	337.06	7,027.58	775.66	-328.37	-780.78	0.00	0.00	0.00	
7,200.00	10.00	337.06	7,126.06	791.65	-335.14	-796.88	0.00	0.00	0.00	
7,300.00	10.00	337.06	7,224.54	807.64	-341.90	-812.97	0.00	0.00	0.00	
7,390.97	10.00	337.06	7,314.13	822.19	-348.06	-827.62	0.00	0.00	0.00	
7,400.00	9.82	337.06	7,323.03	823.62	-348.67	-829.06	2.00	-2.00	0.00	
7,500.00	7.82	337.06	7,421.84	837.74	-354.65	-843.27	2.00	-2.00	0.00	
7,600.00	5.82	337.06	7,521.13	848.67	-359.27	-854.27	2.00	-2.00	0.00	
7,700.00	3.82	337.06	7,620.77	856.41	-362.55	-862.06	2.00	-2.00	0.00	
7,800.00	1.82	337.06	7,720.64	860.94	-364.47	-866.62	2.00	-2.00	0.00	
7,890.97	0.00	0.00	7,811.59	862.27	-365.03	-867.96	2.00	-2.00	0.00	
7,900.00	0.00	0.00	7,820.63	862.27	-365.03	-867.96	0.00	0.00	0.00	
8,000.00	0.00	0.00	7,920.63	862.27	-365.03	-867.96	0.00	0.00	0.00	
8,100.00	0.00	0.00	8,020.63	862.27	-365.03	-867.96	0.00	0.00	0.00	
8,200.00	0.00	0.00	8,120.63	862.27	-365.03	-867.96	0.00	0.00	0.00	
8,300.00	0.00	0.00	8,220.63	862.27	-365.03	-867.96	0.00	0.00	0.00	
8,400.00	0.00	0.00	8,320.63	862.27	-365.03	-867.96	0.00	0.00	0.00	
8,500.00	0.00	0.00	8,420.63	862.27	-365.03	-867.96	0.00	0.00	0.00	
8,600.00	0.00	0.00	8,520.63	862.27	-365.03	-867.96	0.00	0.00	0.00	



Pro Directional Survey Report



Company:	Marathon Oil	Local Co-ordinate Reference:	Well WA FED No. 6H
Project:	Eddy County, NM	TVD Reference:	Well @ 2897.00usft (GL: 2872' + KB: 25' (Prec594))
Site:	Mazer Rackham 20 (1-4-5-6-8)	MD Reference:	Well @ 2897.00usft (GL: 2872' + KB: 25' (Prec594))
Well:	WA FED No. 6H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Prelim Plan C	Database:	WellPlanner1

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)	
8,700.00	0.00	0.00	8,620.63	862.27	-365.03	-867.96	0.00	0.00	0.00	
8,800.00	0.00	0.00	8,720.63	862.27	-365.03	-867.96	0.00	0.00	0.00	
8,900.00	0.00	0.00	8,820.63	862.27	-365.03	-867.96	0.00	0.00	0.00	
9,000.00	0.00	0.00	8,920.63	862.27	-365.03	-867.96	0.00	0.00	0.00	
9,100.00	0.00	0.00	9,020.63	862.27	-365.03	-867.96	0.00	0.00	0.00	
9,200.00	0.00	0.00	9,120.63	862.27	-365.03	-867.96	0.00	0.00	0.00	
9,300.00	0.00	0.00	9,220.63	862.27	-365.03	-867.96	0.00	0.00	0.00	
9,377.37	0.00	0.00	9,298.00	862.27	-365.03	-867.96	0.00	0.00	0.00	
[MazerRack#6H]KOP										
9,400.00	2.26	179.09	9,320.62	861.82	-365.02	-867.51	10.00	10.00	0.00	
9,450.00	7.26	179.09	9,370.43	857.67	-364.96	-863.36	10.00	10.00	0.00	
9,500.00	12.26	179.09	9,419.69	849.20	-364.82	-854.89	10.00	10.00	0.00	
9,550.00	17.26	179.09	9,468.03	836.46	-364.62	-842.15	10.00	10.00	0.00	
9,600.00	22.26	179.09	9,515.07	819.57	-364.35	-825.25	10.00	10.00	0.00	
9,650.00	27.26	179.09	9,560.45	798.63	-364.02	-804.31	10.00	10.00	0.00	
9,700.00	32.26	179.09	9,603.85	773.82	-363.62	-779.50	10.00	10.00	0.00	
9,750.00	37.26	179.09	9,644.91	745.33	-363.17	-751.00	10.00	10.00	0.00	
9,800.00	42.26	179.09	9,683.33	713.36	-362.66	-719.03	10.00	10.00	0.00	
9,850.00	47.26	179.09	9,718.82	678.17	-362.10	-683.83	10.00	10.00	0.00	
9,900.00	52.26	179.09	9,751.11	640.02	-361.49	-645.68	10.00	10.00	0.00	
9,950.00	57.26	179.09	9,779.95	599.20	-360.84	-604.85	10.00	10.00	0.00	
10,000.00	62.26	179.09	9,805.12	556.02	-360.15	-561.67	10.00	10.00	0.00	
10,050.00	67.26	179.09	9,826.43	510.81	-359.43	-516.45	10.00	10.00	0.00	
10,100.00	72.26	179.09	9,843.72	463.92	-358.68	-469.56	10.00	10.00	0.00	
10,150.00	77.26	179.09	9,856.86	415.70	-357.91	-421.33	10.00	10.00	0.00	
10,200.00	82.26	179.09	9,865.74	366.51	-357.13	-372.14	10.00	10.00	0.00	
10,250.00	87.26	179.09	9,870.30	316.75	-356.34	-322.36	10.00	10.00	0.00	
10,275.47	89.81	179.09	9,870.95	291.29	-355.93	-296.91	10.00	10.00	0.00	
10,300.00	89.81	179.09	9,871.04	266.76	-355.54	-272.37	0.00	0.00	0.00	
10,400.00	89.81	179.09	9,871.37	166.78	-353.95	-172.38	0.00	0.00	0.00	
10,500.00	89.81	179.09	9,871.70	66.79	-352.35	-72.38	0.00	0.00	0.00	
10,600.00	89.81	179.09	9,872.04	-33.20	-350.76	27.62	0.00	0.00	0.00	
10,700.00	89.81	179.09	9,872.37	-133.19	-349.17	127.62	0.00	0.00	0.00	
10,800.00	89.81	179.09	9,872.70	-233.17	-347.57	227.62	0.00	0.00	0.00	
10,900.00	89.81	179.09	9,873.04	-333.16	-345.98	327.62	0.00	0.00	0.00	
11,000.00	89.81	179.09	9,873.37	-433.15	-344.39	427.62	0.00	0.00	0.00	
11,100.00	89.81	179.09	9,873.70	-533.13	-342.79	527.62	0.00	0.00	0.00	
11,200.00	89.81	179.09	9,874.03	-633.12	-341.20	627.62	0.00	0.00	0.00	
11,300.00	89.81	179.09	9,874.37	-733.11	-339.60	727.62	0.00	0.00	0.00	
11,400.00	89.81	179.09	9,874.70	-833.09	-338.01	827.62	0.00	0.00	0.00	
11,500.00	89.81	179.09	9,875.03	-933.08	-336.42	927.62	0.00	0.00	0.00	
11,600.00	89.81	179.09	9,875.37	-1,033.07	-334.82	1,027.62	0.00	0.00	0.00	



Pro Directional Survey Report



Company:	Marathon Oil	Local Co-ordinate Reference:	Well WA FED No. 6H
Project:	Eddy County, NM	TVD Reference:	Well @ 2897.00usft (GL: 2872' + KB: 25' (Prec594))
Site:	Mazer Rackham 20 (1-4-5-6-8)	MD Reference:	Well @ 2897.00usft (GL: 2872' + KB: 25' (Prec594))
Well:	WA FED No. 6H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Prelim Plan C	Database:	WellPlanner1

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)
11,700.00	89.81	179.09	9,875.70	-1,133.05	-333.23	1,127.62	0.00	0.00	0.00
11,800.00	89.81	179.09	9,876.03	-1,233.04	-331.64	1,227.62	0.00	0.00	0.00
11,900.00	89.81	179.09	9,876.37	-1,333.03	-330.04	1,327.62	0.00	0.00	0.00
12,000.00	89.81	179.09	9,876.70	-1,433.01	-328.45	1,427.62	0.00	0.00	0.00
12,100.00	89.81	179.09	9,877.03	-1,533.00	-326.86	1,527.62	0.00	0.00	0.00
12,200.00	89.81	179.09	9,877.37	-1,632.99	-325.26	1,627.61	0.00	0.00	0.00
12,300.00	89.81	179.09	9,877.70	-1,732.97	-323.67	1,727.61	0.00	0.00	0.00
12,400.00	89.81	179.09	9,878.03	-1,832.96	-322.08	1,827.61	0.00	0.00	0.00
12,500.00	89.81	179.09	9,878.36	-1,932.95	-320.48	1,927.61	0.00	0.00	0.00
12,600.00	89.81	179.09	9,878.70	-2,032.93	-318.89	2,027.61	0.00	0.00	0.00
12,700.00	89.81	179.09	9,879.03	-2,132.92	-317.30	2,127.61	0.00	0.00	0.00
12,800.00	89.81	179.09	9,879.36	-2,232.91	-315.70	2,227.61	0.00	0.00	0.00
12,900.00	89.81	179.09	9,879.70	-2,332.89	-314.11	2,327.61	0.00	0.00	0.00
13,000.00	89.81	179.09	9,880.03	-2,432.88	-312.52	2,427.61	0.00	0.00	0.00
13,100.00	89.81	179.09	9,880.36	-2,532.87	-310.92	2,527.61	0.00	0.00	0.00
13,200.00	89.81	179.09	9,880.70	-2,632.85	-309.33	2,627.61	0.00	0.00	0.00
13,300.00	89.81	179.09	9,881.03	-2,732.84	-307.74	2,727.61	0.00	0.00	0.00
13,400.00	89.81	179.09	9,881.36	-2,832.83	-306.14	2,827.61	0.00	0.00	0.00
13,500.00	89.81	179.09	9,881.70	-2,932.81	-304.55	2,927.61	0.00	0.00	0.00
13,600.00	89.81	179.09	9,882.03	-3,032.80	-302.96	3,027.61	0.00	0.00	0.00
13,700.00	89.81	179.09	9,882.36	-3,132.79	-301.36	3,127.61	0.00	0.00	0.00
13,800.00	89.81	179.09	9,882.69	-3,232.77	-299.77	3,227.61	0.00	0.00	0.00
13,900.00	89.81	179.09	9,883.03	-3,332.76	-298.18	3,327.61	0.00	0.00	0.00
14,000.00	89.81	179.09	9,883.36	-3,432.75	-296.58	3,427.60	0.00	0.00	0.00
14,100.00	89.81	179.09	9,883.69	-3,532.73	-294.99	3,527.60	0.00	0.00	0.00
14,200.00	89.81	179.09	9,884.03	-3,632.72	-293.39	3,627.60	0.00	0.00	0.00
14,300.00	89.81	179.09	9,884.36	-3,732.71	-291.80	3,727.60	0.00	0.00	0.00
14,400.00	89.81	179.09	9,884.69	-3,832.69	-290.21	3,827.60	0.00	0.00	0.00
14,500.00	89.81	179.09	9,885.03	-3,932.68	-288.61	3,927.60	0.00	0.00	0.00
14,552.36	89.81	179.09	9,885.20	-3,985.03	-287.78	3,979.96	0.00	0.00	0.00
[MazerRack#6H]LTP/BHL									



Pro Directional Survey Report



Company:	Marathon Oil	Local Co-ordinate Reference:	Well WA FED No. 6H
Project:	Eddy County, NM	TVD Reference:	Well @ 2897.00usft (GL: 2872' + KB: 25' (Prec594))
Site:	Mazer Rackham 20 (1-4-5-6-8)	MD Reference:	Well @ 2897.00usft (GL: 2872' + KB: 25' (Prec594))
Well:	WA FED No. 6H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Prelim Plan C	Database:	WellPlanner1

Design Targets									
Target Name									
- hit/miss target	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- Shape	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)		
[MazerRack#6H]FTP	0.00	0.00	0.00	632.28	-363.07	376,442.48	603,002.59	32.034519	-104.000938
- plan misses target center by 729.11usft at 0.00usft MD (0.00 TVD, 0.00 N, 0.00 E)									
- Point									
[MazerRack#6H]KOP	0.00	0.00	9,298.00	862.27	-365.03	376,672.47	603,000.63	32.035152	-104.000942
- plan hits target center									
- Point									
[MazerRack#6H]LTP/BH	0.00	0.00	9,885.20	-3,985.03	-287.78	371,825.17	603,077.88	32.021826	-104.000741
- plan hits target center									
- Point									

Checked By: _____	Approved By: _____	Date: _____
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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

CONDITIONS

Action 145564

CONDITIONS

Operator: MARATHON OIL PERMIAN LLC 990 Town & Country Blvd. Houston, TX 77024	OGRID: 372098
	Action Number: 145564
	Action Type: [C-103] NOI Change of Plans (C-103A)

CONDITIONS

Created By	Condition	Condition Date
kpickford	Adhere to previous NMOCD Conditions of Approval	9/22/2022