

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

Form C-101
August 1, 2011

Permit 322297

APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE

1. Operator Name and Address MARATHON OIL PERMIAN LLC 990 Town & Country Blvd. Houston, TX 77024		2. OGRID Number 372098
		3. API Number 30-015-49788
4. Property Code 333093	5. Property Name DECIMUS 5 WXY FED COM	6. Well No. 001H

7. Surface Location

UL - Lot L	Section 6	Township 23S	Range 28E	Lot Idn	Feet From 1770	N/S Line S	Feet From 303	E/W Line W	County Eddy
---------------	--------------	-----------------	--------------	---------	-------------------	---------------	------------------	---------------	----------------

8. Proposed Bottom Hole Location

UL - Lot P	Section 5	Township 23S	Range 28E	Lot Idn P	Feet From 660	N/S Line S	Feet From 330	E/W Line E	County Eddy
---------------	--------------	-----------------	--------------	--------------	------------------	---------------	------------------	---------------	----------------

9. Pool Information

PURPLE SAGE;WOLFCAMP (GAS)	98220
----------------------------	-------

Additional Well Information

11. Work Type New Well	12. Well Type GAS	13. Cable/Rotary	14. Lease Type Private	15. Ground Level Elevation 3044
16. Multiple N	17. Proposed Depth 19303	18. Formation Wolfcamp	19. Contractor	20. Spud Date 1/1/2023
Depth to Ground water		Distance from nearest fresh water well		Distance to nearest surface water

☒ We will be using a closed-loop system in lieu of lined pits

21. Proposed Casing and Cement Program

Type	Hole Size	Casing Size	Casing Weight/ft	Setting Depth	Sacks of Cement	Estimated TOC
Surf	17.5	13.375	54.5	450	281	0
Int1	12.25	9.625	40	2383	503	0
Prod	8.75	5.5	40	19303	3271	0

Casing/Cement Program: Additional Comments

See Other Supporting Documents PDF attachments for additional Casing and Cement Details.
--

22. Proposed Blowout Prevention Program

Type	Working Pressure	Test Pressure	Manufacturer
Annular	5000	5000	Cactus

23. I hereby certify that the information given above is true and complete to the best of my knowledge and belief. I further certify I have complied with 19.15.14.9 (A) NMAC <input checked="" type="checkbox"/> and/or 19.15.14.9 (B) NMAC <input checked="" type="checkbox"/> if applicable.	OIL CONSERVATION DIVISION	
Signature:		
Printed Name: Electronically filed by Melissa Szudera	Approved By: Katherine Pickford	
Title: Regulatory Compliance Representative	Title: Geoscientist	
Email Address: mszudera@marathonoil.com	Approved Date: 8/1/2022	Expiration Date: 8/1/2024
Date: 7/28/2022	Phone: 713-296-3179	Conditions of Approval Attached

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 30-015-49788	² Pool Code 98220	³ Pool Name PURPLE SAGE; WOLFCAMP (GAS)
⁴ Property Code 333093	⁵ Property Name DECIMUS 5 WXY FED COM	⁶ Well Number 1H
⁷ OGRID No. 372098	⁸ Operator Name MARATHON OIL PERMIAN LLC	⁹ Elevation 3044'

¹⁰ Surface Location

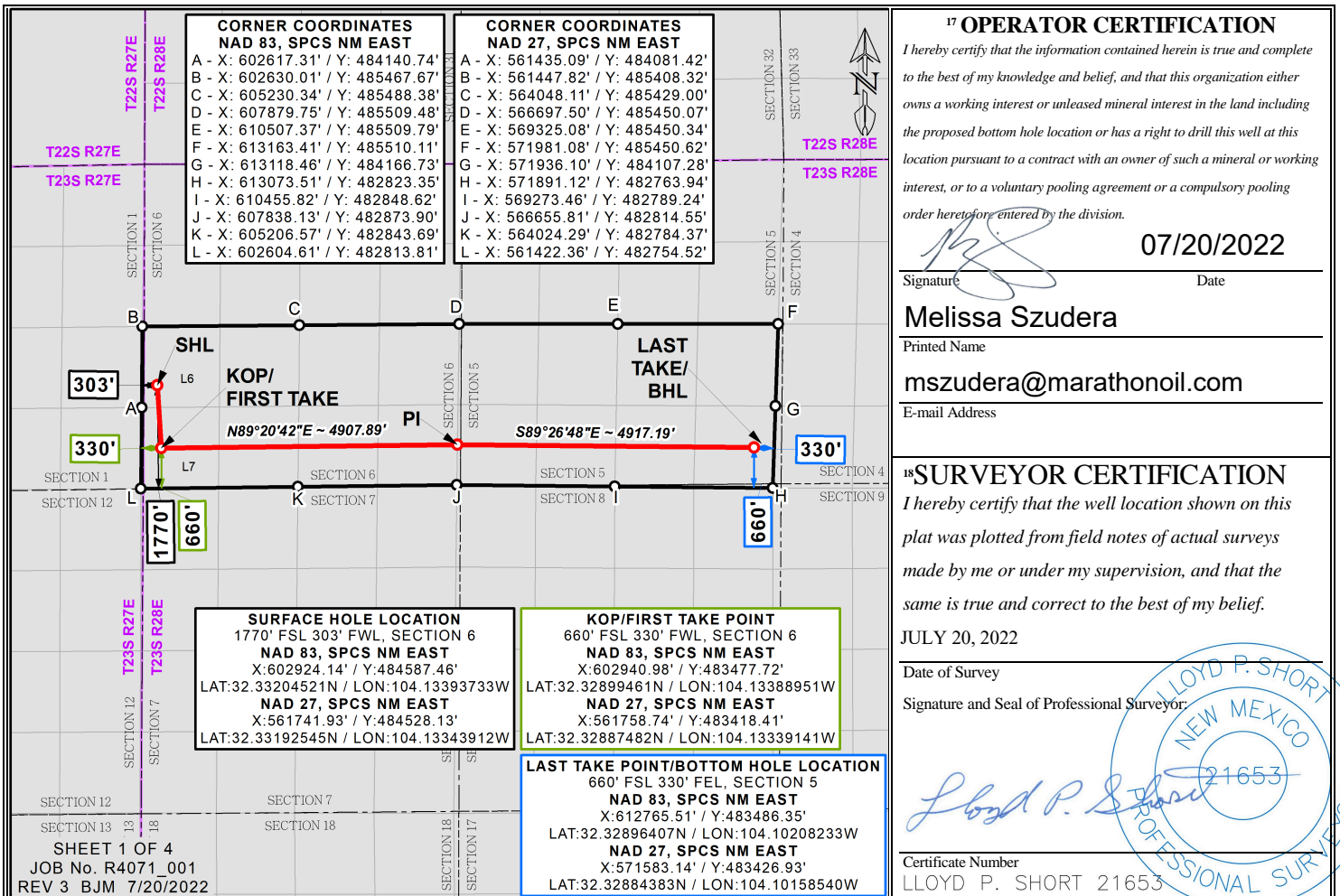
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
L 6	6	23S	28E		1770	SOUTH	303	WEST	EDDY

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	5	23S	28E		660	SOUTH	330	EAST	EDDY

¹² Dedicated Acres 638.14	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
--	-------------------------------	----------------------------------	-------------------------

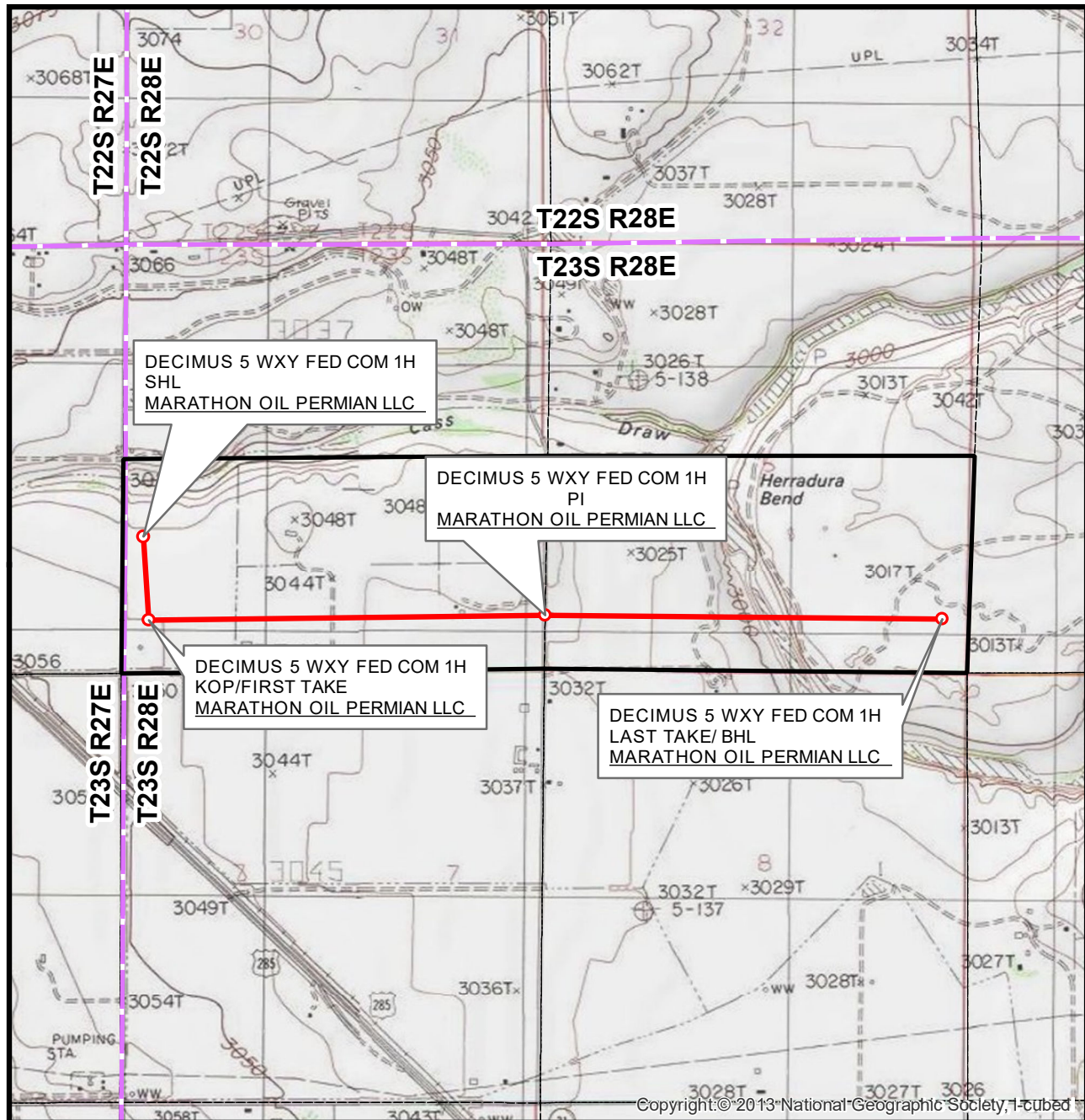
No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.



Distances/areas relative to NAD 83 Combined Scale Factor: 0.999913443 Convergence Angle: 00°06'24.26278"

☐ Horizontal Spacing Unit

LOCATION VERIFICATION MAP



SEC. 6 TWP. 23-S RGE. 28-E
 SURVEY: N.M.P.M.
 COUNTY: EDDY
 OPERATOR: MARATHON OIL PERMIAN LLC
 DESCRIPTION: 1770' FSL & 303' FWL
 ELEVATION: 3044'
 LEASE: DECIMUS 5 FED COM
 U.S.G.S. TOPOGRAPHIC MAP: OTIS, NM.

1" = 2,000'
 CONTOUR INTERVAL = 10'



SHEET 2 OF 4

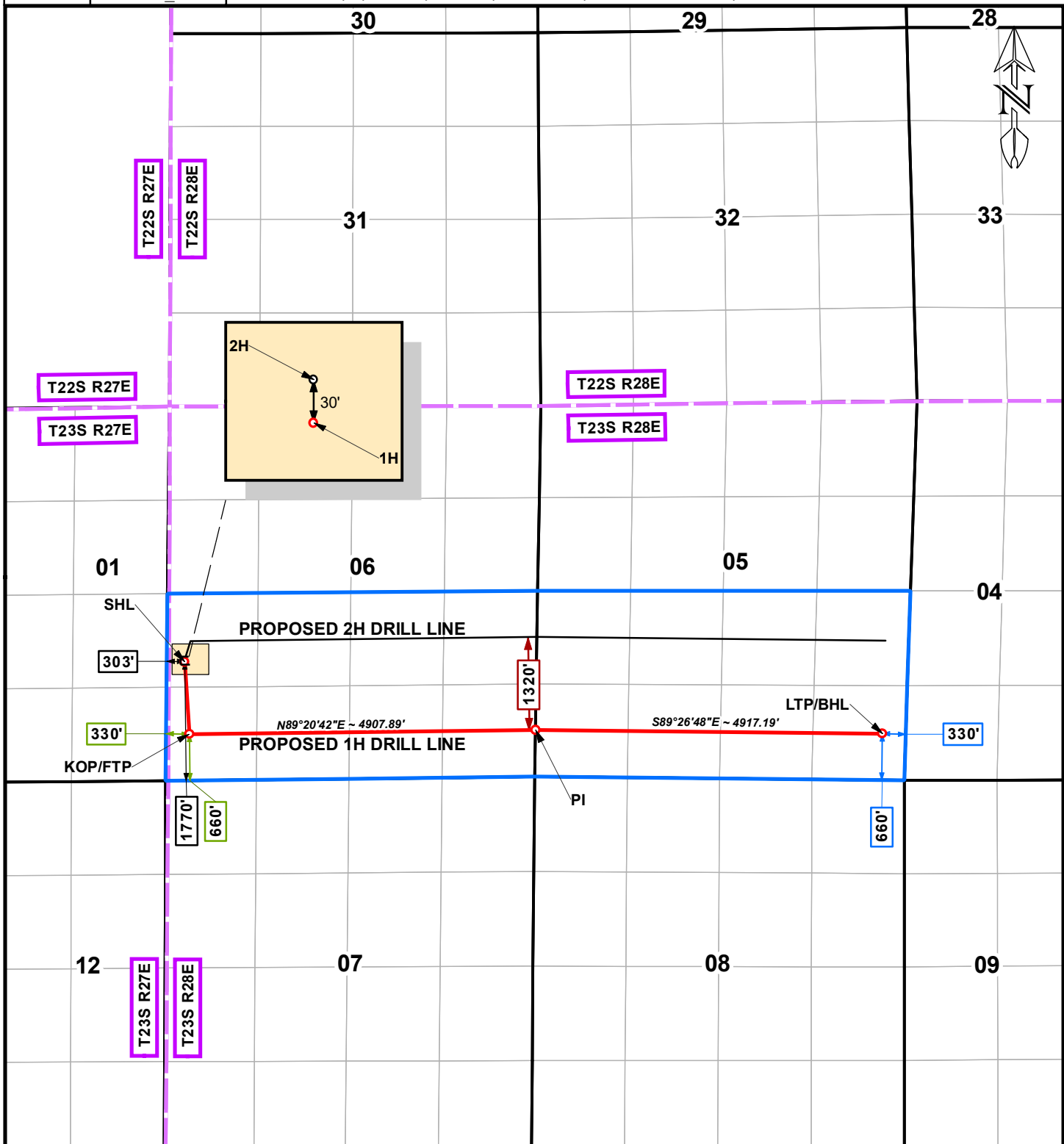
PREPARED BY:
 R-SQUARED GLOBAL, LLC
 1309 LOUISVILLE AVENUE, MONROE, LA 71201
 318-323-6900 OFFICE
 JOB No. R4071_001

1 " = 1 MILE



PREPARED BY:
R-SQUARED GLOBAL, LLC
1309 LOUISVILLE AVENUE, MONROE, LA 71201
318-323-6900 OFFICE
JOB No. R4071 001

JOB No. R4071_001 SECTIONS 5, 6, T-23-S, R-28-E, N.M.P.M., EDDY COUNTY, NEW MEXICO



1,000 0 1,000 2,000

1 inch = 2,000 feet

LEGEND

- SUBJECT WELL / DRILL LINE
- SURVEY/SECTION LINE
- LEASE LINE
- OTHER WELLS / DRILL LINES
- TOWNSHIP / RANGE LINE
- DRILL LINE HOLES



WELL NAME

DECIMUS 5 WXY
FED COM 1H

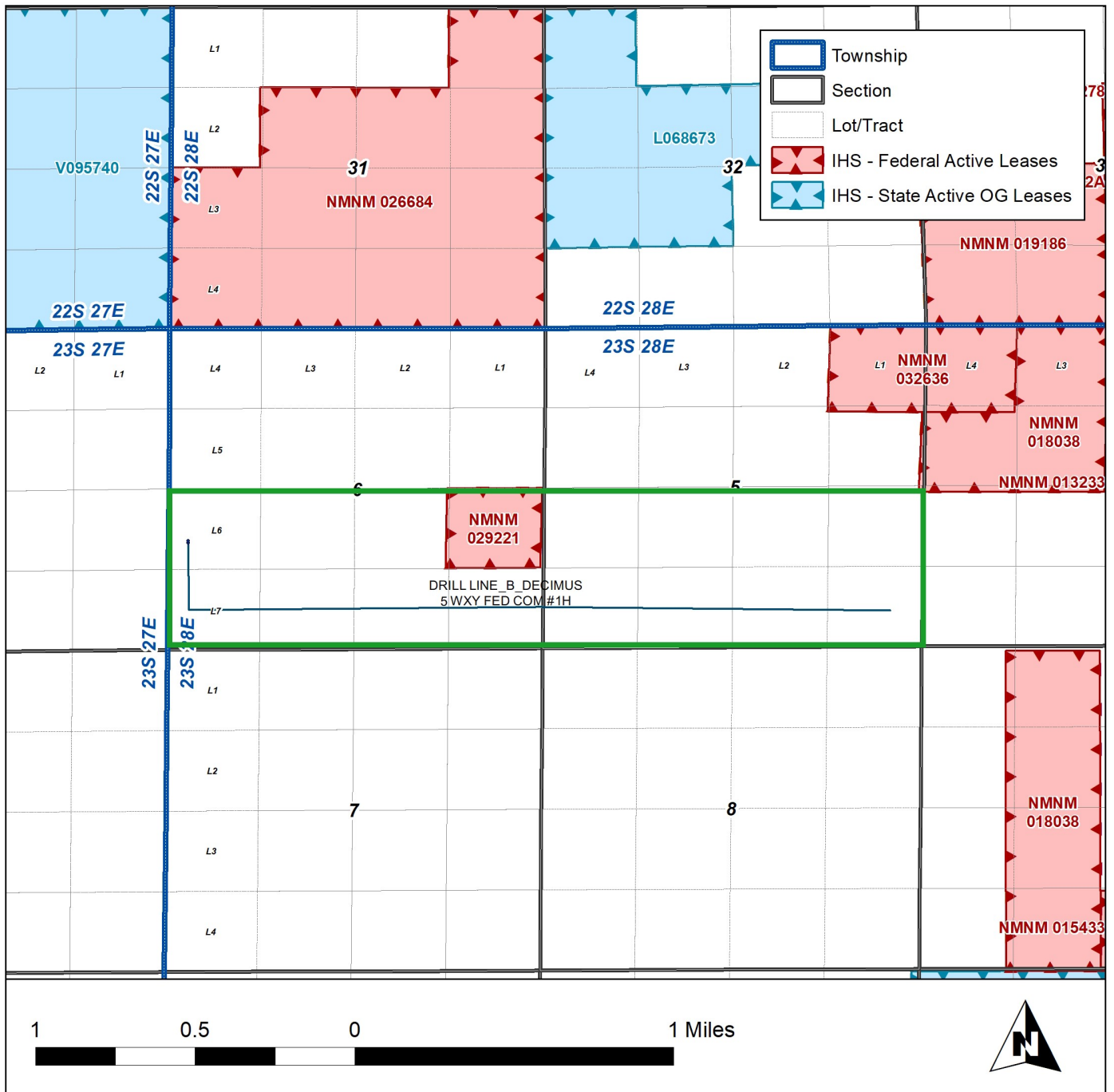
DATE SURVEYED: 7/14/2022

3	7/19/2022	GENERAL REVISIONS		BJM	MWS
REV.	DATE	DESCRIPTION		BY	CHKD
SHEET 4 OF 4		510 TRENTON ST., UNIT B WEST MONROE, LA 71291 (318) 323-6900			
DRAWN BY: BJM					
DATE DRAWN: 7/15/2022					
CHECKED BY: MWS					

MARATHON OIL PERMIAN, LLC.

LEASE OWNERSHIP MAP

DECIMUS 5 WXY FED COM 1H



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

Form APD Conditions

Permit 322297

PERMIT CONDITIONS OF APPROVAL

Operator Name and Address: MARATHON OIL PERMIAN LLC [372098] 990 Town & Country Blvd. Houston, TX 77024	API Number: 30-015-49788
	Well: DECIMUS 5 WXY FED COM #001H

OCD Reviewer	Condition
kpickford	Notify OCD 24 hours prior to casing & cement
kpickford	Will require a File As Drilled C-102 and a Directional Survey with the C-104
kpickford	The Operator is to notify NMOCD by sundry (Form C-103) within ten (10) days of the well being spud
kpickford	Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string
kpickford	Cement is required to circulate on both surface and intermediate1 strings of casing
kpickford	Oil base muds are not to be used until fresh water zones are cased and cemented providing isolation from the oil or diesel. This includes synthetic oils. Oil based mud, drilling fluids and solids must be contained in a steel closed loop system

State of New Mexico
Energy, Minerals and Natural Resources Department

Submit Electronically
Via E-permitting

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

NATURAL GAS MANAGEMENT PLAN

This Natural Gas Management Plan must be submitted with each Application for Permit to Drill (APD) for a new or recompleted well.

Section 1 – Plan Description

Effective May 25, 2021

I. Operator: MARATHON OIL PERMIAN, LLC. **OGRID:** 372098 **Date:** 07 / 26 / 2022

II. Type: ☒ Original ☐ Amendment due to ☐ 19.15.27.9.D(6)(a) NMAC ☐ 19.15.27.9.D(6)(b) NMAC ☐ Other.

If Other, please describe: _____

III. Well(s): Provide the following information for each new or recompleted well or set of wells proposed to be drilled or proposed to be recompleted from a single well pad or connected to a central delivery point.

Well Name	API	ULSTR	Footages	Anticipated Oil BBL/D	Anticipated Gas MCF/D	Anticipated Produced Water BBL/D
DECIMUS 5 WXY FED COM 1H		L6-6-23S-28E	1770 FSL 303 FWL	1736	6400	6465
DECIMUS 5 WXY FED COM 2H		L6-6-23S-28E	1800 FSL 302 FWL	1736	3742	6465

IV. Central Delivery Point Name: DECIMUS 5 FED COM CTB [See 19.15.27.9(D)(1) NMAC]

V. Anticipated Schedule: Provide the following information for each new or recompleted well or set of wells proposed to be drilled or proposed to be recompleted from a single well pad or connected to a central delivery point.

Well Name	API	Spud Date	TD Reached Date	Completion Commencement Date	Initial Flow Back Date	First Production Date
DECIMUS 5 WXY FED COM 1H		3/13/2023	4/2/2023	10/7/2023	11/11/2023	11/11/2023
DECIMUS 5 WXY FED COM 2H		3/14/2023	4/22/2023	10/12/2023	11/11/2023	11/11/2023

VI. Separation Equipment: ☒ Attach a complete description of how Operator will size separation equipment to optimize gas capture.

VII. Operational Practices: ☒ Attach a complete description of the actions Operator will take to comply with the requirements of Subsection A through F of 19.15.27.8 NMAC.

VIII. Best Management Practices: ☒ Attach a complete description of Operator's best management practices to minimize venting during active and planned maintenance.

Section 2 – Enhanced Plan

EFFECTIVE APRIL 1, 2022

Beginning April 1, 2022, an operator that is not in compliance with its statewide natural gas capture requirement for the applicable reporting area must complete this section.

☒ Operator certifies that it is not required to complete this section because Operator is in compliance with its statewide natural gas capture requirement for the applicable reporting area.

IX. Anticipated Natural Gas Production:

Well	API	Anticipated Average Natural Gas Rate MCF/D	Anticipated Volume of Natural Gas for the First Year MCF

X. Natural Gas Gathering System (NGGS):

Operator	System	ULSTR of Tie-in	Anticipated Gathering Start Date	Available Maximum Daily Capacity of System Segment Tie-in

XI. Map. ☐ Attach an accurate and legible map depicting the location of the well(s), the anticipated pipeline route(s) connecting the production operations to the existing or planned interconnect of the natural gas gathering system(s), and the maximum daily capacity of the segment or portion of the natural gas gathering system(s) to which the well(s) will be connected.

XII. Line Capacity. The natural gas gathering system ☐ will ☐ will not have capacity to gather 100% of the anticipated natural gas production volume from the well prior to the date of first production.

XIII. Line Pressure. Operator ☐ does ☐ does not anticipate that its existing well(s) connected to the same segment, or portion, of the natural gas gathering system(s) described above will continue to meet anticipated increases in line pressure caused by the new well(s).

☐ Attach Operator's plan to manage production in response to the increased line pressure.

XIV. Confidentiality: ☐ Operator asserts confidentiality pursuant to Section 71-2-8 NMSA 1978 for the information provided in Section 2 as provided in Paragraph (2) of Subsection D of 19.15.27.9 NMAC, and attaches a full description of the specific information for which confidentiality is asserted and the basis for such assertion.

Section 3 - Certifications

Effective May 25, 2021

Operator certifies that, after reasonable inquiry and based on the available information at the time of submittal:

☒ Operator will be able to connect the well(s) to a natural gas gathering system in the general area with sufficient capacity to transport one hundred percent of the anticipated volume of natural gas produced from the well(s) commencing on the date of first production, taking into account the current and anticipated volumes of produced natural gas from other wells connected to the pipeline gathering system; or

☐ Operator will not be able to connect to a natural gas gathering system in the general area with sufficient capacity to transport one hundred percent of the anticipated volume of natural gas produced from the well(s) commencing on the date of first production, taking into account the current and anticipated volumes of produced natural gas from other wells connected to the pipeline gathering system.

If Operator checks this box, Operator will select one of the following:

Well Shut-In. ☐ Operator will shut-in and not produce the well until it submits the certification required by Paragraph (4) of Subsection D of 19.15.27.9 NMAC; or

Venting and Flaring Plan. ☐ Operator has attached a venting and flaring plan that evaluates and selects one or more of the potential alternative beneficial uses for the natural gas until a natural gas gathering system is available, including:

- (a) power generation on lease;
- (b) power generation for grid;
- (c) compression on lease;
- (d) liquids removal on lease;
- (e) reinjection for underground storage;
- (f) reinjection for temporary storage;
- (g) reinjection for enhanced oil recovery;
- (h) fuel cell production; and
- (i) other alternative beneficial uses approved by the division.

Section 4 - Notices

1. If, at any time after Operator submits this Natural Gas Management Plan and before the well is spud:

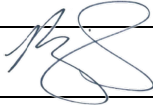
(a) Operator becomes aware that the natural gas gathering system it planned to connect the well(s) to has become unavailable or will not have capacity to transport one hundred percent of the production from the well(s), no later than 20 days after becoming aware of such information, Operator shall submit for OCD's approval a new or revised venting and flaring plan containing the information specified in Paragraph (5) of Subsection D of 19.15.27.9 NMAC; or

(b) Operator becomes aware that it has, cumulatively for the year, become out of compliance with its baseline natural gas capture rate or natural gas capture requirement, no later than 20 days after becoming aware of such information, Operator shall submit for OCD's approval a new or revised Natural Gas Management Plan for each well it plans to spud during the next 90 days containing the information specified in Paragraph (2) of Subsection D of 19.15.27.9 NMAC, and shall file an update for each Natural Gas Management Plan until Operator is back in compliance with its baseline natural gas capture rate or natural gas capture requirement.

2. OCD may deny or conditionally approve an APD if Operator does not make a certification, fails to submit an adequate venting and flaring plan which includes alternative beneficial uses for the anticipated volume of natural gas produced, or if OCD determines that Operator will not have adequate natural gas takeaway capacity at the time a well will be spud.

I certify that, after reasonable inquiry, the statements in and attached to this Natural Gas Management Plan are true and correct to the best of my knowledge and acknowledge that a false statement may be subject to civil and criminal penalties under the Oil and Gas Act.

Signature:



Printed Name:

Melissa Szudera

Title:

Sr. Regulatory Compliance Representative

E-mail Address:

mszudera@marathonoil.com

Date:

07/26/2022

Phone:

713-296-3179

OIL CONSERVATION DIVISION**(Only applicable when submitted as a standalone form)**

Approved By:

Title:

Approval Date:

Conditions of Approval:

APPENDIX

Section 1 - Parts VI, VII, and VIII

VI. Separation Equipment: ☒ Attach a complete description of how Operator will size separation equipment to optimize gas capture.

- Separation equipment is sized to allow for retention time and velocity to adequately separate oil, gas, and water at anticipated peak rates.
- All central tank battery equipment is designed to efficiently capture the remaining gas from the liquid phase.
- Valves and meters are designed to service without flow interruption or venting of gas.

VII. Operational Practices: ☒ Attach a complete description of the actions Operator will take to comply with the requirements of Subsection A through F of 19.15.27.8 NMAC.

◆ **19.15.27.8 (A) – Venting and Flaring Of Natural Gas**

- Marathon Oil Permian's field operations are designed with the goal of minimizing flaring and preventing venting of natural gas. If capturing the gas is not possible then the gas is combusted/flared using properly sized flares or combustors in accordance with state air permit rules.

◆ **19.15.27.8 (B) – Venting and Flaring During Drilling Operations**

- A properly-sized flare stack will be located at a minimum 100' from the nearest surface hole location on the pad.
- All natural gas produced during drilling operations will be flared. Venting will only occur if there is an equipment malfunction and/or to avoid risk of an immediate and substantial adverse impact on safety, public health, or the environment.

◆ **19.15.27.8 (C) – Venting and Flaring During Completion or Recompletion Operations**

- During all phases of flowback, wells will flow through a sand separator, or other appropriate flowback separation equipment, and the well stream will be directed to a central tank battery (CTB) through properly sized flowlines.
- The CTB will have properly sized separation equipment for maximum anticipated flow rates.
- Multiple stages of separation will be used to separate gas from liquids. All gas will be routed to a sales outlet. Fluids will be routed to tanks equipped with a closed loop system that will recover any residual gas from the tanks and route such gas to a sales outlet.

◆ **19.15.27.8 (D) – Venting and Flaring During Production Operations**

- During production, the well stream will be routed to the CTB where multiple stages of separation will separate gas from liquids. All gas will be routed to a sales outlet. Fluids will be routed to tanks equipped with a closed loop system that will recover any residual gas from the tanks and route such gas to a sales outlet, minimizing tank emissions.
- Flares are equipped with auto-ignition systems and continuous pilot operations.
- Automatic gauging equipment is installed on all tanks.

◆ **19.15.27.8 (E) – Performance Standards**

- Production equipment will be designed to handle maximum anticipated rates and pressure.
- Automatic gauging equipment is installed on all tanks to minimize venting.
- All flared gas will be combusted in a flare stack that is properly sized and designed to ensure proper combustion.
- Flares are equipped with continuous pilots and auto-ignitors along with remote monitoring of the pilot status.
- Weekly AVOs and monthly LDAR inspections will be performed on all wells and facilities that produce more than 60 MCFD.
- Gas/H₂S detectors will be installed throughout the facilities and wellheads to detect leaks and enable timely repairs.

◆ 19.15.27.8 (F) – Measurement or Estimation of Vented and Flared Natural Gas

- All high pressure flared gas is measured by equipment conforming to API 14.10.
- No meter bypasses are installed.
- When metering is not practical due to low pressure/low rate, the vented or flared volume will be estimated through flare flow curves with the assistance of air emissions consultants, as necessary.

VIII. Best Management Practices: ☒ Attach a complete description of Operator's best management practices to minimize venting during active and planned maintenance.

- Marathon Oil Permian will use best management practices to vent as minimally as possible during well intervention operations and downhole well maintenance.
- All natural gas is routed into the gas gathering system and directed to one of Marathon Oil Permian's multiple gas sales outlets.
- All venting events will be recorded and all start-up, shutdown, maintenance logs will be kept for control equipment.
- All control equipment will be maintained to provide highest run-time possible.
- All procedures are drafted to keep venting and flaring to the absolute minimum.

MARATHON OIL PERMIAN, LLC.
DRILLING AND OPERATIONS PLAN



WELL NAME & NUMBER:

DECIMUS 5 WXY FED COM 1H

LOCATION:

SECTION **6** TOWNSHIP **23S** RANGE **28E**
EDDY COUNTY, **NEW MEXICO**

Section 1:**GEOLOGICAL FORMATIONS**

Name of Surface Formation:

Permian

Elevation:

3045 feet

Estimated Tops of Important Geological Markers:

Formation	TVD (ft)	MD (ft)	Elevation (ft SS)	Lithologies	Mineral Resources	Producing Formation?
Rustler	N/A	N/A	N/A	Anhydrite	Brine	No
Salado	321	351	2724	Salt/Anhydrite	Brine	No
Castile	845	875	2200	Salt/Anhydrite	Brine	No
Base of Salt (BX)	2123	2153	922	Anhydrite	Brine	No
Lamar	2368	2398	677	Sandstone/Shale	None	No
Bell Canyon	2453	2483	592	Sandstone	Oil	No
Cherry Canyon	3167	3197	-122	Sandstone	Oil	No
Brushy Canyon	4309	4339	-1264	Sandstone	Oil	No
Bone Spring Lime	5809	5839	-2764	Limestone	None	No
Upper Avalon Shale	5849	5879	-2804	Shale	Oil	Yes
1st Bone Spring Sand	6820	6850	-3775	Sandstone	Oil	Yes
2nd Bone Spring Carbonate	7120	7150	-4075	Limestone/Shale	None	No
2nd Bone Spring Sand	7565	7595	-4520	Sandstone	Oil	Yes
3rd Bone Spring Carbonate	7776	7806	-4731	Limestone	Oil	No
3rd Bone Spring Sand	8894	8924	-5849	Sandstone	Oil	Yes
Wolfcamp	9191	9221	-6146	Sandstone/Shale/Carbonates	Natural Gas / Oil	Yes
Wolfcamp X Sand	9220	9250	-6175	Sandstone/Shale/Carbonates	Natural Gas / Oil	Yes
Wolfcamp Y Sand	9285	9315	-6240	Sandstone/Shale/Carbonates	Natural Gas / Oil	Yes
Wolfcamp A	9335	9365	-6290	Sandstone/Shale/Carbonates	Natural Gas / Oil	Yes
Wolfcamp B	9546	9576	-6501	Sandstone/Shale/Carbonates	Natural Gas / Oil	Possible
Wolfcamp C	9789	9819	-6744	Sandstone/Shale/Carbonates	Natural Gas / Oil	Yes
Wolfcamp D	10062	10092	-7017	Sandstone/Shale/Carbonates	Natural Gas / Oil	Yes

Section 2:**BLOWOUT PREVENTER TESTING PROCEDURE**

Pressure Rating (PSI):

10M

Rating Depth:

10000

Equipment:

13 5/8 BOP Annular (5,000 psi WP) and BOP Stack (10,000 psi WP) will be installed and tested before drilling all holes.

Requesting Variance?

Yes

Variance Request:

A variance is requested for the use of a flexible choke line from the BOP to Choke Manifold. See attached for specs and hydrostatic test chart.

Testing Procedure:

BOP/BOPE will be tested to 250 psi low and a high of 100% WP for the Annular and 5,000psi for the BOP Stacking before drilling 12.25" intermediate hole, 10,000psi for the BOP Stacking before drilling the 8.75" production hole. Testing will be conducted by an independent service company per Onshore Order 2 requirements. The System may be upgraded to a higher pressure but still tested to the working pressure listed in the Equipment Description above. If the system is upgraded all the components installed will be functional and tested.

Pipe rams will be operationally checked each 24 hour period. Blind rams will be operationally checked on each trip out of the hole. These checks will be noted on the daily tour sheets. Other accessories to the BOP equipment will include a Kelly cock, full opening safety valve / inside BOP and choke lines and choke manifold. See attached schematics.

Formation integrity test will be performed per Onshore Order #2. On Exploratory wells or on that portion of any well approved for a SM BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.i. A multibowl wellhead is being used. The BOP will be tested per Onshore Order #2 after installation on the surface casing which will cover testing requirements for a maximum of 30 days. If any seal subject to test pressure is broken the system must be tested. See attached schematic.

Marathon Oil Permian LLC.

Drilling & Operations Plan - Page 2 of 3

Section 3:**CASING PROGRAM**

String Type	Hole Size	Casing Size	Top Set MD	Bottom Set MD	Top Set TVD	Bottom Set TVD	Top Set MSL	Bottom Set MSL	Weight (lbs/ft)	Grade	Joint Type	Collapse SF	Burst SF	Joint SF Type	Joint SF	Body SF Type	Body SF
Surface	17.5	13.375	0	450	0	450	3045	2595	54.5	J55	BTC	1.00	1.15	BUOY	1.30	BUOY	1.30
Intermediate	12.25	9.625	0	2413	0	2383	3045	662	40	P110HC	BTC	1.00	1.15	BUOY	1.30	BUOY	1.30
Production	8.75	5.5	0	19303	0	9494	3045	-6449	23	P110HC	TLW	1.00	1.15	BUOY	1.30	BUOY	1.30
All casing strings will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.h												Safety Factors will Meet or Exceed					

Casing Condition: New
Casing Standard: API
Tapered String? No

Yes or No

Is casing new? If used, attach certification as required in Onshore Order #1.	Yes
Does casing meet API specifications? If no, attach casing specification sheet.	Yes
Is premium or uncommon casing planned? If yes attach casing specification sheet.	No
Does the above casing design meet or exceed BLM's minimum standards? If not provide justification (loading assumptions, casing design criteria).	Yes
Will the intermediate pipe be kept at a minimum 1/3 fluid filled to avoid approaching the collapse pressure rating of the casing?	Yes
Is well located within Capitan Reef?	No
If yes, does production casing cement tie back a minimum of 50' above the Reef?	
Is proposed well within the designated four string boundary?	
Is well located in R-111-P and SOPA?	No
If yes, are the first three strings cemented to surface?	
Is the second string set 100' to 600' below the base of salt?	
Is well located in SOPA but not in R-111-P?	No
If yes, are the first 2 strings cemented to surface and third string cement tied back 500' into previous casing?	
Is well located in high Cave/Karst?	No
If yes, are there two strings cemented to surface?	
If yes, is there a contingency casing if lost circulation occurs?	
Is well located in critical Cave/Karst?	No
If yes, are there three strings cemented to surface?	

Section 4:**CEMENT PROGRAM**

String Type	Lead/Tail	Top MD	Bottom MD	Quantity (sks)	Yield (ft ³ /sks)	Density (ppg)	Slurry Volume (ft ³)	Excess (%)	Cement Type	Additives
Surface	Lead	0	150	84	2.12	12.5	179	25	Class C	Extender, Accelerator, LCM
Surface	Tail	150	450	197	1.32	14.8	260	25	Class C	Accelerator
Intermediate	Lead	0	1913	356	2.18	12.4	777	25	Class C	Extender, Accelerator, LCM
Intermediate	Tail	1913	2413	147	1.33	14.8	196	25	Class C	Retarder
Production	Tail	2113	19303	3271	1.68	13	5496	25	Class H	Retarder, Extender, Fluid Loss, Suspension Agent

Stage tool depth(s) will be adjusted based on hole conditions and cement volumes will be adjusted proportionally. Stage tool will be set a minimum of 50 feet below previous casing and a minimum of 200 feet above current shoe. Lab reports with the 500 psi compressive strength time for the cement will be onsite for review.

Pilot Hole? No
Pilot Hole Depth: N/A
KOP Depth: N/A
Plugging Procedure for Pilot Hole: N/A

Plug Top	Plug Bottom	Excess (%)	Quantity (sx)	Density (ppg)	Yield (ft ³ /sks)	Water gal/sk	Slurry Description and Cement Type

Marathon Oil Permian LLC.

Drilling & Operations Plan - Page 3 of 3

Section 5:**CIRCULATING MEDIUM**

Mud System Type: Closed
Will an air or gas system be used? No

Describe what will be on location to control well or mitigate other conditions:

The necessary mud products for additional weight and fluid loss control will be on location at all times.

Describe the mud monitoring system utilized:

Losses or gains in the mud system will be monitored visually/manually as well as with an electronic PVT.

Circulating Medium Table:

Top Depth	Bottom Depth	Mud Type	Min. Weight (ppg)	Max Weight (ppg)
0	450	Water Based Mud	8.4	8.8
450	2413	Brine or Oil Based Mud	9.2	10.2
2413	19303	Oil Based Mud	10.5	12.5

Section 6:**TESTING, LOGGING, CORING****List of production tests including testing procedures, equipment and safety measures:**

GR from TD to surface (horizontal well - vertical portion of hole).

List of open and cased hole logs run in the well:

GR while drilling from Intermediate casing shoe to TD.

Coring operation description for the well:

Run gamma-ray (GR) and corrected neutron log (CNL) or analogous to surface for future development of the area, one per shared well pad not to exceed 200' radial distance.

Section 7:**ANTICIPATED PRESSURE**

Anticipated Bottom Hole Pressure: 6171 PSI
Anticipated Bottom Hole Temperature: 195 °F
Anticipated Abnormal Pressure? No
Anticipated Abnormal Temperature? No

Potential Hazards:

H2S detection equipment will be in operation after drilling out the surface casing shoe until the production casing has been cemented. Breathing equipment will be on location from drilling out the surface shoe until production casing is cemented. If H2S is encountered the operator will comply with Onshore Order #6. Adequate flare lines will be installed off the mud/gas separator where gas may be flared safely. All personnel will be familiar with all aspects of safe operation of equipment being used to drill this well. See attached H2S Contingency Plan.

Section 8:**OTHER INFORMATION****Auxiliary Well Control and Monitoring Equipment:**

A Kelly cock will be in the drill string at all times. A full opening drill pipe stabbing valve having the appropriate connections will be on the rig floor unobstructed and readily accessible at all times.

Hydrogen Sulfide detection equipment will be in operation after drilling out the surface casing shoe until the production casing is cemented. Breathing equipment will be on location upon drilling the surface casing shoe until total depth is reached. If Hydrogen Sulfide is encountered, measured amounts and formations will be reported to the BLM.

Anticipated Starting Date and Duration of Operations:

Road and location construction will begin after the BLM has approved the APD. Anticipated spud date will be as soon as possible after BLM approval and as soon as a rig will be available. Move in operations and drilling is expected to take 30 days.



Marathon Oil Permian LLC

Eddy County, NM (NAD27-NME)

Decimus 5 WXY Fed Com

Decimus 5 WXY Fed Com 1H

OH

Plan 1 07-22-22

Anticollision Report

22 July, 2022





Anticollision Report



Company:	Marathon Oil Permian LLC	Local Co-ordinate Reference:	Well Decimus 5 WXY Fed Com 1H
Project:	Eddy County, NM (NAD27-NME)	TVD Reference:	RKB @ 3067.60usft (Cactus 169)
Reference Site:	Decimus 5 WXY Fed Com	MD Reference:	RKB @ 3067.60usft (Cactus 169)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Decimus 5 WXY Fed Com 1H	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	USA Compass
Reference Design:	Plan 1 07-22-22	Offset TVD Reference:	Reference Datum

Reference	Plan 1 07-22-22		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	MD + Stations Interval 100.00usft	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum centre distance of 50,000.00usft	Error Surface:	Pedal Curve
Warning Levels Evaluated at:	2.00 Sigma	Casing Method:	Not applied

Survey Tool Program	Date	7/22/2022		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.00	19,303.31	Plan 1 07-22-22 (OH)	MWD+HRGM	OWSG MWD + HRGM

Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
Decimus 5 WXY Fed Com						
Decimus 5 WXY Fed Com 2H - OH - Plan 1 07-22-22	1,300.00	1,300.00	30.00	21.10	3.371	CC, ES
Decimus 5 WXY Fed Com 2H - OH - Plan 1 07-22-22	19,303.31	19,202.39	1,319.57	857.70	2.857	SF
Larry Wolfish 01-23S-27E RB						
204H - OH / 64293 - Surveys (Patterson 813)	9,155.18	14,061.90	550.27	451.82	5.589	CC, ES
204H - OH / 64293 - Surveys (Patterson 813)	9,200.00	14,062.24	553.84	452.96	5.490	SF
Maximus/Decimus Offsets						
Carrasco 6 Com 1 - OH - Surveys	12,407.30	9,346.37	181.09	-105.14	0.633	Level 3, CC, ES, SF
Carrasco 6 Com 2 - OH - Surveys	12,931.72	9,420.87	616.67	-129.01	0.827	Level 3, CC, ES, SF
Swearingen A 1 - OH - Surveys	17,753.50	9,413.62	1,358.06	981.34	3.605	CC, ES
Swearingen A 1 - OH - Surveys	17,800.00	9,414.43	1,358.85	981.40	3.600	SF

Offset Design:	Decimus 5 WXY Fed Com - Decimus 5 WXY Fed Com 2H - OH - Plan 1 07-22-22												Offset Site Error:	0.00 usft
Survey Program:	0-MWD+HRGM												Offset Well Error:	1.00 usft
Reference	Offset	Semi Major Axis	Highside	Offset Wellbore Centre	Rule Assigned:	Distance	Minimum Separation	Separation Factor	Warning					
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
0.00	0.00	0.00	0.00	1.00	1.00	-0.018	30.00	-0.01	30.00					
100.00	100.00	100.00	100.00	1.13	1.13	-0.018	30.00	-0.01	30.00	27.73	2.27	13.236		
200.00	200.00	200.00	200.00	1.66	1.66	-0.018	30.00	-0.01	30.00	26.68	3.32	9.038		
300.00	300.00	300.00	300.00	2.06	2.06	-0.018	30.00	-0.01	30.00	25.88	4.12	7.286		
400.00	400.00	400.00	400.00	2.39	2.39	-0.018	30.00	-0.01	30.00	25.21	4.79	6.264		
423.56	423.56	423.56	423.56	2.46	2.46	-0.018	30.00	-0.01	30.00	25.07	4.93	6.088		
500.00	500.00	500.00	500.00	2.69	2.69	-0.018	30.00	-0.01	30.00	24.61	5.38	5.573		
524.13	524.13	524.13	524.13	2.76	2.76	-0.018	30.00	-0.01	30.00	24.49	5.51	5.442		
600.00	600.00	600.00	600.00	2.96	2.96	-0.018	30.00	-0.01	30.00	24.08	5.92	5.066		
633.33	633.33	633.33	633.33	3.04	3.04	-0.018	30.00	-0.01	30.00	23.91	6.09	4.928		
700.00	700.00	700.00	700.00	3.21	3.21	-0.018	30.00	-0.01	30.00	23.58	6.42	4.673		
800.00	800.00	800.00	800.00	3.44	3.44	-0.018	30.00	-0.01	30.00	23.11	6.89	4.357		
900.00	900.00	900.00	900.00	3.66	3.66	-0.018	30.00	-0.01	30.00	22.67	7.33	4.095		
1,000.00	1,000.00	1,000.00	1,000.00	3.87	3.87	-0.018	30.00	-0.01	30.00	22.25	7.74	3.874		
1,100.00	1,100.00	1,100.00	1,100.00	4.07	4.07	-0.018	30.00	-0.01	30.00	21.85	8.14	3.683		
1,200.00	1,200.00	1,200.00	1,200.00	4.26	4.26	-0.018	30.00	-0.01	30.00	21.47	8.53	3.517		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	Marathon Oil Permian LLC	Local Co-ordinate Reference:	Well Decimus 5 WXY Fed Com 1H
Project:	Eddy County, NM (NAD27-NME)	TVD Reference:	RKB @ 3067.60usft (Cactus 169)
Reference Site:	Decimus 5 WXY Fed Com	MD Reference:	RKB @ 3067.60usft (Cactus 169)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Decimus 5 WXY Fed Com 1H	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	USA Compass
Reference Design:	Plan 1 07-22-22	Offset TVD Reference:	Reference Datum

Offset Design: Decimus 5 WXY Fed Com - Decimus 5 WXY Fed Com 2H - OH - Plan 1 07-22-22													Offset Site Error: 0.00 usft
Survey Program: 0-MWD+HRGM													Offset Well Error: 1.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
1,300.00	1,300.00	1,300.00	1,300.00	4.45	4.45	-0.018	30.00	-0.01	30.00	21.10	8.90	3.371	CC, ES
1,400.00	1,399.98	1,399.31	1,399.29	4.72	4.73	164.882	31.00	-1.41	32.72	23.35	9.38	3.490	
1,500.00	1,499.84	1,498.12	1,497.96	4.98	5.01	161.015	34.00	-5.57	41.02	31.18	9.84	4.169	
1,600.00	1,599.45	1,595.96	1,595.43	5.26	5.31	157.167	38.92	-12.41	55.04	44.72	10.32	5.333	
1,700.00	1,698.70	1,692.35	1,691.12	5.55	5.61	154.178	45.66	-21.78	74.78	63.96	10.82	6.913	
1,800.00	1,797.47	1,786.87	1,784.53	5.87	5.92	152.012	54.10	-33.51	100.10	88.77	11.33	8.834	
1,899.87	1,895.50	1,879.01	1,875.07	6.20	6.25	150.432	64.06	-47.34	130.81	118.95	11.86	11.027	
1,900.00	1,895.62	1,879.12	1,875.19	6.20	6.25	150.430	64.07	-47.36	130.85	118.99	11.86	11.030	
2,000.00	1,993.44	1,972.41	1,966.45	6.48	6.53	149.460	75.35	-63.05	164.74	152.38	12.36	13.332	
2,100.00	2,091.25	2,066.44	2,058.42	6.78	6.82	148.800	86.78	-78.92	198.71	185.83	12.88	15.428	
2,200.00	2,189.07	2,160.47	2,150.40	7.10	7.12	148.333	98.20	-94.79	232.71	219.27	13.43	17.323	
2,300.00	2,286.89	2,254.50	2,242.37	7.43	7.44	147.985	109.62	-110.66	266.71	252.70	14.01	19.031	
2,400.00	2,384.70	2,348.53	2,334.35	7.78	7.77	147.715	121.04	-126.54	300.72	286.10	14.62	20.571	
2,500.00	2,482.52	2,442.56	2,426.32	8.14	8.11	147.500	132.46	-142.41	334.74	319.50	15.24	21.959	
2,600.00	2,580.33	2,536.59	2,518.29	8.52	8.47	147.325	143.88	-158.28	368.76	352.87	15.89	23.211	
2,700.00	2,678.15	2,630.62	2,610.27	8.90	8.83	147.180	155.30	-174.15	402.78	386.23	16.55	24.342	
2,800.00	2,775.96	2,724.65	2,702.24	9.29	9.19	147.057	166.72	-190.03	436.80	419.59	17.22	25.372	
2,900.00	2,873.78	2,824.34	2,799.82	9.69	9.57	146.969	178.65	-206.60	470.61	452.67	17.93	26.240	
3,000.00	2,971.60	2,934.45	2,908.24	10.10	10.06	147.124	189.87	-222.20	502.02	483.24	18.78	26.729	
3,100.00	3,069.41	3,046.65	3,019.37	10.51	10.53	147.546	198.80	-234.61	530.45	510.84	19.61	27.049	
3,200.00	3,167.23	3,160.63	3,132.81	10.92	10.99	148.208	205.26	-243.59	555.84	535.43	20.41	27.235	
3,300.00	3,265.04	3,276.07	3,248.06	11.34	11.41	149.093	209.11	-248.94	578.20	557.03	21.16	27.323	
3,400.00	3,362.86	3,390.89	3,362.86	11.77	11.64	150.173	210.25	-250.53	597.54	575.78	21.77	27.453	
3,500.00	3,460.67	3,488.71	3,460.67	12.20	11.71	151.131	210.25	-250.53	615.76	593.52	22.23	27.694	
3,600.00	3,558.49	3,586.53	3,558.49	12.63	11.79	152.033	210.25	-250.53	634.13	611.42	22.71	27.917	
3,700.00	3,656.31	3,684.34	3,656.31	13.07	11.87	152.885	210.25	-250.53	652.65	629.45	23.20	28.131	
3,800.00	3,754.12	3,782.16	3,754.12	13.50	11.94	153.690	210.25	-250.53	671.30	647.61	23.69	28.334	
3,900.00	3,851.94	3,879.97	3,851.94	13.94	12.02	154.452	210.25	-250.53	690.07	665.88	24.19	28.528	
4,000.00	3,949.75	3,977.79	3,949.75	14.39	12.09	155.174	210.25	-250.53	708.96	684.27	24.69	28.714	
4,100.00	4,047.57	4,075.60	4,047.57	14.83	12.17	155.858	210.25	-250.53	727.95	702.75	25.20	28.891	
4,200.00	4,145.38	4,173.42	4,145.38	15.28	12.24	156.508	210.25	-250.53	747.03	721.32	25.71	29.061	
4,300.00	4,243.20	4,271.24	4,243.20	15.73	12.32	157.126	210.25	-250.53	766.20	739.98	26.22	29.224	
4,400.00	4,341.02	4,369.05	4,341.02	16.18	12.39	157.713	210.25	-250.53	785.46	758.72	26.73	29.380	
4,500.00	4,438.83	4,466.87	4,438.83	16.63	12.47	158.273	210.25	-250.53	804.79	777.54	27.25	29.529	
4,600.00	4,536.65	4,564.68	4,536.65	17.08	12.55	158.806	210.25	-250.53	824.19	796.42	27.78	29.673	
4,700.00	4,634.46	4,662.50	4,634.46	17.53	12.62	159.315	210.25	-250.53	843.66	815.36	28.30	29.811	
4,800.00	4,732.28	4,760.31	4,732.28	17.99	12.70	159.802	210.25	-250.53	863.19	834.36	28.83	29.943	
4,900.00	4,830.09	4,858.13	4,830.09	18.44	12.77	160.266	210.25	-250.53	882.78	853.42	29.36	30.071	
5,000.00	4,927.91	4,955.95	4,927.91	18.90	12.85	160.711	210.25	-250.53	902.42	872.53	29.89	30.194	
5,100.00	5,025.72	5,053.76	5,025.72	19.36	12.92	161.137	210.25	-250.53	922.11	891.69	30.42	30.312	
5,200.00	5,123.54	5,151.58	5,123.54	19.82	13.00	161.545	210.25	-250.53	941.85	910.89	30.96	30.426	
5,300.00	5,221.36	5,249.39	5,221.36	20.28	13.08	161.936	210.25	-250.53	961.63	930.14	31.49	30.536	
5,400.00	5,319.17	5,347.21	5,319.17	20.74	13.15	162.311	210.25	-250.53	981.45	949.42	32.03	30.643	
5,500.00	5,416.99	5,445.02	5,416.99	21.20	13.23	162.672	210.25	-250.53	1,001.31	968.75	32.57	30.745	
5,600.00	5,514.80	5,542.84	5,514.80	21.66	13.31	163.019	210.25	-250.53	1,021.21	988.11	33.11	30.845	
5,700.00	5,612.62	5,640.66	5,612.62	22.12	13.38	163.352	210.25	-250.53	1,041.15	1,007.50	33.65	30.941	
5,800.00	5,710.43	5,738.47	5,710.43	22.58	13.46	163.673	210.25	-250.53	1,061.12	1,026.92	34.19	31.034	
5,900.00	5,808.25	5,836.29	5,808.25	23.05	13.53	163.982	210.25	-250.53	1,081.11	1,046.38	34.74	31.124	
6,000.00	5,906.07	5,934.10	5,906.07	23.51	13.61	164.280	210.25	-250.53	1,101.14	1,065.86	35.28	31.211	
6,100.00	6,003.88	6,031.92	6,003.88	23.98	13.69	164.568	210.25	-250.53	1,121.20	1,085.37	35.83	31.295	
6,200.00	6,101.70	6,129.73	6,101.70	24.44	13.76	164.845	210.25	-250.53	1,141.28	1,104.90	36.37	31.377	
6,300.00	6,199.51	6,227.55	6,199.51	24.91	13.84	165.113	210.25	-250.53	1,161.38	1,124.46	36.92	31.457	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	Marathon Oil Permian LLC	Local Co-ordinate Reference:	Well Decimus 5 WXY Fed Com 1H
Project:	Eddy County, NM (NAD27-NME)	TVD Reference:	RKB @ 3067.60usft (Cactus 169)
Reference Site:	Decimus 5 WXY Fed Com	MD Reference:	RKB @ 3067.60usft (Cactus 169)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Decimus 5 WXY Fed Com 1H	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	USA Compass
Reference Design:	Plan 1 07-22-22	Offset TVD Reference:	Reference Datum

Offset Design: Decimus 5 WXY Fed Com - Decimus 5 WXY Fed Com 2H - OH - Plan 1 07-22-22													Offset Site Error: 0.00 usft
Survey Program: 0-MWD+HRGM													Offset Well Error: 1.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
6,400.00	6,297.33	6,325.37	6,297.33	25.37	13.92	165.371	210.25	-250.53	1,181.51	1,144.04	37.47	31.534	
6,500.00	6,395.14	6,423.18	6,395.14	25.84	13.99	165.621	210.25	-250.53	1,201.66	1,163.65	38.02	31.609	
6,600.00	6,492.96	6,521.00	6,492.96	26.31	14.07	165.863	210.25	-250.53	1,221.84	1,183.27	38.57	31.682	
6,700.00	6,590.78	6,618.81	6,590.78	26.77	14.15	166.097	210.25	-250.53	1,242.03	1,202.91	39.12	31.753	
6,785.59	6,674.50	6,702.54	6,674.50	27.17	14.21	166.291	210.25	-250.53	1,259.33	1,219.75	39.58	31.816	
6,800.00	6,688.60	6,716.64	6,688.60	27.23	14.22	166.337	210.25	-250.53	1,262.21	1,222.55	39.66	31.827	
6,900.00	6,786.85	6,814.89	6,786.85	27.71	14.30	166.619	210.25	-250.53	1,280.29	1,240.08	40.21	31.837	
7,000.00	6,885.69	6,913.73	6,885.69	28.16	14.38	166.842	210.25	-250.53	1,295.04	1,254.29	40.75	31.782	
7,100.00	6,985.00	7,013.04	6,985.00	28.59	14.46	167.010	210.25	-250.53	1,306.42	1,265.16	41.26	31.665	
7,200.00	7,084.66	7,112.70	7,084.66	28.98	14.53	167.126	210.25	-250.53	1,314.42	1,272.69	41.73	31.496	
7,300.00	7,184.54	7,212.58	7,184.54	29.33	14.61	167.192	210.25	-250.53	1,319.03	1,276.87	42.16	31.286	
7,385.47	7,270.00	7,298.04	7,270.00	29.47	14.68	0.550	210.25	-250.53	1,320.28	1,277.90	42.37	31.158	
7,400.00	7,284.53	7,312.57	7,284.53	29.47	14.69	0.550	210.25	-250.53	1,320.28	1,277.89	42.39	31.149	
7,500.00	7,384.53	7,412.57	7,384.53	29.48	14.77	0.550	210.25	-250.53	1,320.28	1,277.79	42.49	31.073	
7,600.00	7,484.53	7,512.57	7,484.53	29.50	14.85	0.550	210.25	-250.53	1,320.28	1,277.68	42.59	30.997	
7,700.00	7,584.53	7,612.57	7,584.53	29.51	14.93	0.550	210.25	-250.53	1,320.28	1,277.58	42.70	30.921	
7,800.00	7,684.53	7,712.57	7,684.53	29.53	15.01	0.550	210.25	-250.53	1,320.28	1,277.47	42.80	30.846	
7,900.00	7,784.53	7,812.57	7,784.53	29.55	15.09	0.550	210.25	-250.53	1,320.28	1,277.37	42.91	30.771	
8,000.00	7,884.53	7,912.57	7,884.53	29.56	15.16	0.550	210.25	-250.53	1,320.28	1,277.26	43.01	30.696	
8,100.00	7,984.53	8,012.57	7,984.53	29.58	15.24	0.550	210.25	-250.53	1,320.28	1,277.16	43.12	30.621	
8,200.00	8,084.53	8,112.57	8,084.53	29.60	15.32	0.550	210.25	-250.53	1,320.28	1,277.06	43.22	30.547	
8,300.00	8,184.53	8,212.57	8,184.53	29.61	15.40	0.550	210.25	-250.53	1,320.28	1,276.95	43.33	30.472	
8,400.00	8,284.53	8,312.57	8,284.53	29.63	15.48	0.550	210.25	-250.53	1,320.28	1,276.84	43.43	30.399	
8,500.00	8,384.53	8,412.57	8,384.53	29.65	15.56	0.550	210.25	-250.53	1,320.28	1,276.74	43.54	30.325	
8,600.00	8,484.53	8,512.57	8,484.53	29.66	15.64	0.550	210.25	-250.53	1,320.28	1,276.63	43.64	30.252	
8,700.00	8,584.53	8,612.57	8,584.53	29.68	15.72	0.550	210.25	-250.53	1,320.28	1,276.53	43.75	30.178	
8,800.00	8,684.53	8,712.57	8,684.53	29.70	15.79	0.550	210.25	-250.53	1,320.28	1,276.42	43.85	30.107	
8,870.41	8,754.95	8,782.98	8,754.95	29.71	15.84	0.550	210.25	-250.53	1,320.28	1,276.36	43.91	30.066	
8,900.00	8,784.52	8,811.88	8,783.83	29.70	15.83	-89.402	210.25	-249.81	1,320.28	1,276.36	43.91	30.065	
8,950.00	8,834.28	8,860.72	8,832.45	29.66	15.80	-89.408	210.26	-245.29	1,320.27	1,276.37	43.91	30.070	
9,000.00	8,883.43	8,909.57	8,880.51	29.62	15.76	-89.418	210.26	-236.65	1,320.27	1,276.38	43.89	30.083	
9,050.00	8,931.61	8,958.45	8,927.69	29.58	15.72	-89.432	210.27	-223.94	1,320.27	1,276.40	43.86	30.100	
9,100.00	8,978.44	9,007.35	8,973.64	29.53	15.67	-89.451	210.29	-207.25	1,320.26	1,276.43	43.84	30.118	
9,150.00	9,023.57	9,056.30	9,018.04	29.49	15.63	-89.474	210.30	-186.68	1,320.26	1,276.44	43.81	30.133	
9,200.00	9,066.65	9,105.29	9,060.56	29.46	15.59	-89.501	210.32	-162.37	1,320.25	1,276.44	43.81	30.139	
9,250.00	9,107.37	9,154.33	9,100.89	29.43	15.56	-89.531	210.35	-134.48	1,320.24	1,276.42	43.82	30.127	
9,300.00	9,145.40	9,203.44	9,138.73	29.43	15.55	-89.565	210.37	-103.21	1,320.23	1,276.36	43.88	30.090	
9,350.00	9,180.46	9,252.61	9,173.81	29.44	15.56	-89.602	210.40	-68.77	1,320.22	1,276.24	43.98	30.016	
9,400.00	9,212.28	9,301.86	9,205.84	29.48	15.60	-89.643	210.43	-31.39	1,320.22	1,276.06	44.16	29.896	
9,450.00	9,240.62	9,351.19	9,234.60	29.56	15.69	-89.686	210.46	8.67	1,320.21	1,275.79	44.42	29.720	
9,500.00	9,265.27	9,400.60	9,259.84	29.67	15.83	-89.731	210.50	51.13	1,320.20	1,275.42	44.78	29.481	
9,550.00	9,286.03	9,450.00	9,281.33	29.83	16.06	-89.779	210.53	95.59	1,320.19	1,274.94	45.25	29.176	
9,600.00	9,302.75	9,499.70	9,299.00	30.04	16.37	-89.828	210.57	142.03	1,320.19	1,274.35	45.84	28.802	
9,650.00	9,315.30	9,549.40	9,312.59	30.29	16.77	-89.878	210.61	189.82	1,320.18	1,273.64	46.54	28.366	
9,700.00	9,323.58	9,599.19	9,321.99	30.60	17.26	-89.930	210.65	238.70	1,320.17	1,272.82	47.36	27.877	
9,750.00	9,327.54	9,649.09	9,327.13	30.95	17.82	-89.982	210.69	288.32	1,320.17	1,271.89	48.28	27.345	
9,760.41	9,327.82	9,659.50	9,327.65	31.03	17.95	-89.993	210.70	298.71	1,320.17	1,271.69	48.48	27.230	
9,800.00	9,328.51	9,699.08	9,328.51	31.34	18.44	-90.000	210.73	338.28	1,320.17	1,270.88	49.29	26.786	
9,900.00	9,330.25	9,799.08	9,330.25	32.24	19.85	-90.000	210.81	438.27	1,320.16	1,268.59	51.57	25.598	
10,000.00	9,332.00	9,899.08	9,332.00	33.27	21.42	-90.000	210.89	538.25	1,320.15	1,266.00	54.15	24.378	
10,100.00	9,333.74	9,999.08	9,333.74	34.41	23.12	-90.000	210.97	638.24	1,320.15	1,263.17	56.98	23.168	
10,200.00	9,335.49	10,099.08	9,335.49	35.67	24.91	-90.000	211.05	738.22	1,320.14	1,260.12	60.02	21.994	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	Marathon Oil Permian LLC	Local Co-ordinate Reference:	Well Decimus 5 WXY Fed Com 1H
Project:	Eddy County, NM (NAD27-NME)	TVD Reference:	RKB @ 3067.60usft (Cactus 169)
Reference Site:	Decimus 5 WXY Fed Com	MD Reference:	RKB @ 3067.60usft (Cactus 169)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Decimus 5 WXY Fed Com 1H	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	USA Compass
Reference Design:	Plan 1 07-22-22	Offset TVD Reference:	Reference Datum

Offset Design: Decimus 5 WXY Fed Com - Decimus 5 WXY Fed Com 2H - OH - Plan 1 07-22-22												Offset Site Error: 0.00 usft
Survey Program: 0-MWD+HRGM												Offset Well Error: 1.00 usft
Reference		Offset		Semi Major Axis			Offset Wellbore Centre		Distance		Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)		
10,300.00	9,337.23	10,199.08	9,337.23	37.01	26.79	-90.000	211.13	838.21	1,320.14	1,256.89	63.25	20.873
10,400.00	9,338.98	10,299.08	9,338.98	38.45	28.73	-90.000	211.21	938.19	1,320.13	1,253.51	66.62	19.814
10,500.00	9,340.72	10,399.08	9,340.72	39.96	30.73	-90.000	211.29	1,038.18	1,320.12	1,249.99	70.14	18.823
10,600.00	9,342.47	10,499.08	9,342.47	41.55	32.76	-90.000	211.37	1,138.16	1,320.12	1,246.36	73.76	17.897
10,700.00	9,344.21	10,599.08	9,344.21	43.19	34.83	-90.000	211.45	1,238.15	1,320.11	1,242.63	77.49	17.037
10,800.00	9,345.96	10,699.08	9,345.96	44.89	36.92	-90.000	211.53	1,338.13	1,320.10	1,238.81	81.30	16.238
10,900.00	9,347.70	10,799.08	9,347.71	46.64	39.05	-90.000	211.61	1,438.12	1,320.10	1,234.92	85.18	15.497
11,000.00	9,349.45	10,899.08	9,349.45	48.44	41.19	-90.000	211.69	1,538.10	1,320.09	1,230.96	89.13	14.810
11,100.00	9,351.19	10,999.08	9,351.20	50.28	43.34	-90.000	211.77	1,638.08	1,320.09	1,226.94	93.14	14.172
11,200.00	9,352.94	11,099.08	9,352.94	52.15	45.52	-90.000	211.85	1,738.07	1,320.08	1,222.87	97.21	13.580
11,300.00	9,354.69	11,199.08	9,354.69	54.06	47.70	-90.000	211.93	1,838.05	1,320.07	1,218.76	101.31	13.030
11,400.00	9,356.43	11,299.08	9,356.43	56.00	49.90	-90.000	212.01	1,938.04	1,320.07	1,214.61	105.46	12.517
11,500.00	9,358.18	11,399.08	9,358.18	57.96	52.10	-90.000	212.09	2,038.02	1,320.06	1,210.42	109.64	12.040
11,600.00	9,359.92	11,499.08	9,359.92	59.95	54.32	-90.000	212.17	2,138.01	1,320.05	1,206.20	113.86	11.594
11,700.00	9,361.67	11,599.08	9,361.67	61.96	56.54	-90.000	212.25	2,237.99	1,320.05	1,201.95	118.10	11.177
11,800.00	9,363.41	11,699.08	9,363.41	63.99	58.77	-90.000	212.33	2,337.98	1,320.04	1,197.67	122.37	10.787
11,900.00	9,365.16	11,799.08	9,365.16	66.03	61.00	-90.000	212.42	2,437.96	1,320.03	1,193.37	126.66	10.422
12,000.00	9,366.90	11,899.08	9,366.90	68.10	63.24	-90.000	212.50	2,537.95	1,320.03	1,189.05	130.98	10.078
12,100.00	9,368.65	11,999.08	9,368.65	70.18	65.49	-90.000	212.58	2,637.93	1,320.02	1,184.71	135.31	9.756
12,200.00	9,370.39	12,099.08	9,370.39	72.27	67.73	-90.000	212.66	2,737.92	1,320.02	1,180.35	139.66	9.452
12,300.00	9,372.14	12,199.08	9,372.14	74.37	69.99	-90.000	212.74	2,837.90	1,320.01	1,175.98	144.03	9.165
12,400.00	9,373.88	12,299.08	9,373.88	76.49	72.24	-90.000	212.82	2,937.89	1,320.00	1,171.59	148.41	8.894
12,500.00	9,375.63	12,399.08	9,375.63	78.62	74.50	-90.000	212.90	3,037.87	1,320.00	1,167.19	152.80	8.638
12,600.00	9,377.37	12,499.08	9,377.37	80.75	76.76	-90.000	212.98	3,137.86	1,319.99	1,162.78	157.21	8.396
12,700.00	9,379.12	12,599.08	9,379.12	82.90	79.03	-90.000	213.06	3,237.84	1,319.98	1,158.35	161.63	8.167
12,800.00	9,380.86	12,699.08	9,380.87	85.06	81.29	-90.000	213.14	3,337.83	1,319.98	1,153.92	166.06	7.949
12,900.00	9,382.61	12,799.08	9,382.61	87.22	83.56	-90.000	213.22	3,437.81	1,319.97	1,149.48	170.50	7.742
13,000.00	9,384.35	12,899.08	9,384.36	89.39	85.83	-90.000	213.30	3,537.79	1,319.97	1,145.02	174.94	7.545
13,100.00	9,386.10	12,999.08	9,386.10	91.56	88.11	-90.000	213.38	3,637.78	1,319.96	1,140.56	179.40	7.358
13,200.00	9,387.84	13,099.08	9,387.85	93.75	90.38	-90.000	213.46	3,737.76	1,319.95	1,136.09	183.86	7.179
13,300.00	9,389.59	13,199.08	9,389.59	95.93	92.66	-90.000	213.54	3,837.75	1,319.95	1,131.61	188.33	7.009
13,400.00	9,391.34	13,299.08	9,391.34	98.13	94.93	-90.000	213.62	3,937.73	1,319.94	1,127.13	192.81	6.846
13,500.00	9,393.08	13,399.08	9,393.08	100.33	97.21	-90.000	213.70	4,037.72	1,319.93	1,122.64	197.29	6.690
13,600.00	9,394.83	13,499.08	9,394.83	102.53	99.49	-90.000	213.78	4,137.70	1,319.93	1,118.14	201.78	6.541
13,700.00	9,396.57	13,599.08	9,396.57	104.74	101.77	-90.000	213.86	4,237.69	1,319.92	1,113.64	206.28	6.399
13,800.00	9,398.32	13,699.08	9,398.32	106.95	104.06	-90.000	213.94	4,337.67	1,319.92	1,109.14	210.78	6.262
13,900.00	9,400.06	13,799.08	9,400.06	109.16	106.34	-90.000	214.02	4,437.66	1,319.91	1,104.63	215.28	6.131
14,000.00	9,401.81	13,899.08	9,401.81	111.38	108.62	-90.000	214.10	4,537.64	1,319.90	1,100.11	219.79	6.005
14,100.00	9,403.55	13,999.08	9,403.55	113.61	110.91	-90.000	214.18	4,637.63	1,319.90	1,095.59	224.30	5.884
14,200.00	9,405.30	14,099.08	9,405.30	115.83	113.20	-90.000	214.26	4,737.61	1,319.89	1,091.07	228.82	5.768
14,300.00	9,407.04	14,199.08	9,407.04	118.06	115.48	-90.000	214.34	4,837.60	1,319.88	1,086.54	233.34	5.656
14,400.00	9,408.79	14,299.08	9,408.79	120.30	117.77	-90.000	214.42	4,937.58	1,319.88	1,082.01	237.86	5.549
14,500.00	9,410.53	14,399.08	9,410.53	122.53	120.06	-90.000	214.51	5,037.57	1,319.87	1,077.48	242.39	5.445
14,600.00	9,412.28	14,499.08	9,412.28	124.77	122.35	-90.000	214.59	5,137.55	1,319.86	1,072.94	246.92	5.345
14,700.00	9,414.02	14,599.08	9,414.02	127.01	124.64	-90.000	214.67	5,237.54	1,319.86	1,068.40	251.46	5.249
14,800.00	9,415.77	14,699.08	9,415.77	129.25	126.93	-90.000	214.75	5,337.52	1,319.85	1,063.86	255.99	5.156
14,900.00	9,417.51	14,799.08	9,417.52	131.50	129.22	-90.000	214.83	5,437.50	1,319.85	1,059.31	260.53	5.066
15,000.00	9,419.26	14,899.08	9,419.26	133.74	131.51	-90.000	214.91	5,537.49	1,319.84	1,054.76	265.07	4.979
15,100.00	9,421.00	14,999.08	9,421.01	135.99	133.80	-90.000	214.99	5,637.47	1,319.83	1,050.21	269.62	4.895
15,200.00	9,422.75	15,099.08	9,422.75	138.24	136.10	-90.000	215.07	5,737.46	1,319.83	1,045.66	274.17	4.814
15,300.00	9,424.49	15,199.08	9,424.50	140.50	138.39	-90.000	215.15	5,837.44	1,319.82	1,041.11	278.71	4.735
15,400.00	9,426.24	15,299.08	9,426.24	142.75	140.68	-90.000	215.23	5,937.43	1,319.81	1,036.55	283.26	4.659

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	Marathon Oil Permian LLC	Local Co-ordinate Reference:	Well Decimus 5 WXY Fed Com 1H
Project:	Eddy County, NM (NAD27-NME)	TVD Reference:	RKB @ 3067.60usft (Cactus 169)
Reference Site:	Decimus 5 WXY Fed Com	MD Reference:	RKB @ 3067.60usft (Cactus 169)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Decimus 5 WXY Fed Com 1H	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	USA Compass
Reference Design:	Plan 1 07-22-22	Offset TVD Reference:	Reference Datum

Offset Design: Decimus 5 WXY Fed Com - Decimus 5 WXY Fed Com 2H - OH - Plan 1 07-22-22													Offset Site Error: 0.00 usft
Survey Program: 0-MWD+HRGM													Offset Well Error: 1.00 usft
Reference		Offset		Semi Major Axis			Offset Wellbore Centre		Distance		Minimum	Separation	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Separation (usft)	Factor	
15,500.00	9,427.99	15,399.08	9,427.99	145.01	142.98	-90.000	215.31	6,037.41	1,319.81	1,031.99	287.82	4.586	
15,600.00	9,429.73	15,499.08	9,429.73	147.26	145.27	-90.000	215.39	6,137.40	1,319.80	1,027.43	292.37	4.514	
15,700.00	9,431.48	15,599.08	9,431.48	149.52	147.57	-90.000	215.47	6,237.38	1,319.80	1,022.87	296.93	4.445	
15,800.00	9,433.22	15,699.08	9,433.22	151.78	149.86	-90.000	215.55	6,337.37	1,319.79	1,018.30	301.49	4.378	
15,900.00	9,434.97	15,799.08	9,434.97	154.04	152.16	-90.000	215.63	6,437.35	1,319.78	1,013.74	306.05	4.312	
16,000.00	9,436.71	15,899.08	9,436.71	156.31	154.45	-90.000	215.71	6,537.34	1,319.78	1,009.17	310.61	4.249	
16,100.00	9,438.46	15,999.08	9,438.46	158.57	156.75	-90.000	215.79	6,637.32	1,319.77	1,004.60	315.17	4.187	
16,200.00	9,440.20	16,099.08	9,440.20	160.84	159.05	-90.000	215.87	6,737.31	1,319.76	1,000.03	319.74	4.128	
16,300.00	9,441.95	16,199.08	9,441.95	163.10	161.34	-90.000	215.95	6,837.29	1,319.76	995.46	324.30	4.070	
16,400.00	9,443.69	16,299.08	9,443.69	165.37	163.64	-90.000	216.03	6,937.28	1,319.75	990.88	328.87	4.013	
16,500.00	9,445.44	16,399.08	9,445.44	167.64	165.94	-90.000	216.11	7,037.26	1,319.74	986.31	333.44	3.958	
16,600.00	9,447.18	16,499.08	9,447.18	169.91	168.24	-90.000	216.19	7,137.25	1,319.74	981.73	338.01	3.904	
16,700.00	9,448.93	16,599.08	9,448.93	172.18	170.53	-90.000	216.27	7,237.23	1,319.73	977.16	342.58	3.852	
16,800.00	9,450.67	16,699.08	9,450.67	174.45	172.83	-90.000	216.35	7,337.21	1,319.73	972.58	347.15	3.802	
16,900.00	9,452.42	16,799.08	9,452.42	176.73	175.13	-90.000	216.43	7,437.20	1,319.72	968.00	351.72	3.752	
17,000.00	9,454.16	16,899.08	9,454.17	179.00	177.43	-90.000	216.52	7,537.18	1,319.71	963.42	356.30	3.704	
17,100.00	9,455.91	16,999.08	9,455.91	181.28	179.73	-90.000	216.60	7,637.17	1,319.71	958.84	360.87	3.657	
17,200.00	9,457.65	17,099.08	9,457.66	183.55	182.03	-90.000	216.68	7,737.15	1,319.70	954.25	365.45	3.611	
17,300.00	9,459.40	17,199.08	9,459.40	185.83	184.32	-90.000	216.76	7,837.14	1,319.69	949.67	370.02	3.567	
17,400.00	9,461.14	17,299.08	9,461.15	188.10	186.62	-90.000	216.84	7,937.12	1,319.69	945.09	374.60	3.523	
17,500.00	9,462.89	17,399.08	9,462.89	190.38	188.92	-90.000	216.92	8,037.11	1,319.68	940.50	379.18	3.480	
17,600.00	9,464.64	17,499.08	9,464.64	192.66	191.22	-90.000	217.00	8,137.09	1,319.68	935.92	383.76	3.439	
17,700.00	9,466.38	17,599.08	9,466.38	194.94	193.52	-90.000	217.08	8,237.08	1,319.67	931.33	388.34	3.398	
17,800.00	9,468.13	17,699.08	9,468.13	197.22	195.82	-90.000	217.16	8,337.06	1,319.66	926.74	392.92	3.359	
17,900.00	9,469.87	17,799.08	9,469.87	199.50	198.12	-90.000	217.24	8,437.05	1,319.66	922.15	397.50	3.320	
18,000.00	9,471.62	17,899.08	9,471.62	201.78	200.42	-90.000	217.32	8,537.03	1,319.65	917.57	402.08	3.282	
18,100.00	9,473.36	17,999.08	9,473.36	204.06	202.72	-90.000	217.40	8,637.02	1,319.64	912.98	406.67	3.245	
18,200.00	9,475.11	18,099.08	9,475.11	206.34	205.02	-90.000	217.48	8,737.00	1,319.64	908.39	411.25	3.209	
18,300.00	9,476.85	18,199.08	9,476.85	208.62	207.33	-90.000	217.56	8,836.99	1,319.63	903.79	415.84	3.173	
18,400.00	9,478.60	18,299.08	9,478.60	210.91	209.63	-90.000	217.64	8,936.97	1,319.62	899.20	420.42	3.139	
18,500.00	9,480.34	18,399.08	9,480.34	213.19	211.93	-90.000	217.72	9,036.96	1,319.62	894.61	425.01	3.105	
18,600.00	9,482.09	18,499.08	9,482.09	215.48	214.23	-90.000	217.80	9,136.94	1,319.61	890.02	429.59	3.072	
18,700.00	9,483.83	18,599.08	9,483.83	217.76	216.53	-90.000	217.88	9,236.92	1,319.61	885.43	434.18	3.039	
18,800.00	9,485.58	18,699.08	9,485.58	220.04	218.83	-90.000	217.96	9,336.91	1,319.60	880.83	438.77	3.008	
18,900.00	9,487.32	18,799.08	9,487.32	222.33	221.13	-90.000	218.04	9,436.89	1,319.59	876.24	443.36	2.976	
19,000.00	9,489.07	18,899.08	9,489.07	224.62	223.43	-90.000	218.12	9,536.88	1,319.59	871.64	447.94	2.946	
19,100.00	9,490.81	18,999.08	9,490.82	226.90	225.74	-90.000	218.20	9,636.86	1,319.58	867.05	452.53	2.916	
19,200.00	9,492.56	19,099.08	9,492.56	229.19	228.04	-90.000	218.28	9,736.85	1,319.57	862.45	457.12	2.887	
19,300.00	9,494.30	19,199.08	9,494.31	231.48	230.34	-90.000	218.36	9,836.83	1,319.57	857.85	461.71	2.858	
19,303.31	9,494.36	19,202.39	9,494.36	231.55	230.42	-90.000	218.37	9,840.14	1,319.57	857.70	461.87	2.857 SF	



Anticollision Report



Company:	Marathon Oil Permian LLC	Local Co-ordinate Reference:	Well Decimus 5 WXY Fed Com 1H
Project:	Eddy County, NM (NAD27-NME)	TVD Reference:	RKB @ 3067.60usft (Cactus 169)
Reference Site:	Decimus 5 WXY Fed Com	MD Reference:	RKB @ 3067.60usft (Cactus 169)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Decimus 5 WXY Fed Com 1H	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	USA Compass
Reference Design:	Plan 1 07-22-22	Offset TVD Reference:	Reference Datum

Offset Design: Larry Wolfish 01-23S-27E RB - 204H - OH / 64293 - Surveys (Patterson 813)													Offset Site Error: 0.00 usft
Survey Program: 96-													Offset Well Error: 1.00 usft
Rule Assigned:													Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.00	0.00	38.07	7.67	1.00	1.00	-14.188	4,354.83	-1,100.97	4,491.85				
100.00	100.00	133.91	103.50	1.13	1.08	-14.195	4,354.44	-1,101.40	4,491.58	4,489.40	2.18	2,062.099	
111.84	111.84	142.25	111.85	1.18	1.10	-14.195	4,354.42	-1,101.47	4,491.57	4,489.33	2.24	2,007.014	
200.00	200.00	208.88	178.47	1.66	1.30	-14.205	4,354.43	-1,102.22	4,491.81	4,488.94	2.88	1,561.984	
300.00	300.00	321.18	290.76	2.06	1.65	-14.228	4,354.55	-1,104.10	4,492.35	4,488.73	3.62	1,239.329	
400.00	400.00	467.76	437.31	2.39	2.37	-14.263	4,353.41	-1,106.71	4,492.03	4,487.63	4.40	1,020.661	
500.00	500.00	601.34	570.86	2.69	2.92	-14.288	4,351.29	-1,108.19	4,490.75	4,485.67	5.08	883.990	
600.00	600.00	691.70	661.21	2.96	3.19	-14.298	4,349.77	-1,108.60	4,489.23	4,483.61	5.62	798.744	
700.00	700.00	767.00	736.50	3.21	3.43	-14.311	4,348.77	-1,109.38	4,488.19	4,482.09	6.10	735.791	
800.00	800.00	873.10	842.58	3.44	3.81	-14.336	4,347.57	-1,111.05	4,487.49	4,480.81	6.68	671.604	
900.00	900.00	1,072.64	1,042.04	3.66	4.61	-14.360	4,342.48	-1,111.71	4,484.77	4,477.21	7.56	593.225	
1,000.00	1,000.00	1,334.22	1,303.14	3.87	5.94	-14.269	4,331.93	-1,101.71	4,480.09	4,470.31	9.79	457.807	
1,100.00	1,100.00	1,693.49	1,658.52	4.07	7.93	-13.815	4,304.54	-1,058.45	4,467.81	4,455.94	11.87	376.378	
1,200.00	1,200.00	1,920.23	1,882.20	4.26	8.75	-13.578	4,277.51	-1,033.13	4,453.07	4,440.12	12.95	343.904	
1,300.00	1,300.00	1,987.00	1,947.98	4.45	8.95	-13.506	4,269.13	-1,025.36	4,438.10	4,424.74	13.36	332.283	
1,400.00	1,399.98	2,063.64	2,023.53	4.72	9.20	153.366	4,260.01	-1,016.33	4,425.28	4,411.42	13.86	319.289	
1,500.00	1,499.84	2,125.66	2,084.75	4.98	9.40	153.534	4,252.96	-1,009.28	4,416.22	4,401.92	14.30	308.782	
1,600.00	1,599.45	2,177.00	2,135.48	5.26	9.56	153.661	4,247.59	-1,003.47	4,411.24	4,396.51	14.73	299.545	
1,672.01	1,670.96	2,225.21	2,183.17	5.47	9.73	153.755	4,242.89	-998.25	4,410.17	4,395.07	15.10	292.128	
1,700.00	1,698.70	2,241.44	2,199.25	5.55	9.79	153.782	4,241.37	-996.60	4,410.33	4,395.10	15.23	289.525	
1,800.00	1,797.47	2,294.88	2,252.23	5.87	9.98	153.852	4,236.59	-991.53	4,413.55	4,397.82	15.73	280.646	
1,899.87	1,895.50	2,350.00	2,306.97	6.20	10.18	153.894	4,232.22	-986.78	4,421.04	4,404.79	16.25	272.053	
1,900.00	1,895.62	2,350.00	2,306.97	6.20	10.18	153.894	4,232.22	-986.78	4,421.05	4,404.80	16.25	272.048	
2,000.00	1,993.44	2,417.69	2,374.27	6.48	10.48	154.030	4,227.36	-981.30	4,431.00	4,414.18	16.82	263.374	
2,100.00	2,091.25	2,854.46	2,806.45	6.78	12.53	154.869	4,178.38	-944.54	4,435.66	4,416.55	19.11	232.165	
2,200.00	2,189.07	2,923.95	2,874.86	7.10	12.77	155.019	4,168.88	-936.91	4,438.81	4,419.14	19.66	225.739	
2,300.00	2,286.89	3,004.09	2,953.79	7.43	13.05	155.196	4,158.34	-927.91	4,442.50	4,422.23	20.27	219.152	
2,400.00	2,384.70	3,081.00	3,029.62	7.78	13.31	155.360	4,148.43	-919.72	4,446.66	4,425.79	20.87	213.021	
2,500.00	2,482.52	3,135.37	3,083.30	8.14	13.50	155.472	4,141.76	-914.29	4,451.63	4,430.20	21.43	207.749	
2,600.00	2,580.33	3,191.42	3,138.74	8.52	13.70	155.586	4,135.45	-908.96	4,457.66	4,435.67	22.00	202.659	
2,700.00	2,678.15	3,269.00	3,215.56	8.90	13.97	155.741	4,127.27	-901.86	4,464.54	4,441.89	22.65	197.149	
2,800.00	2,775.96	3,342.38	3,288.29	9.29	14.22	155.885	4,119.86	-895.42	4,471.97	4,448.69	23.27	192.141	
2,900.00	2,873.78	3,433.78	3,378.90	9.69	14.53	156.061	4,110.81	-887.63	4,479.72	4,455.75	23.97	186.856	
3,000.00	2,971.60	3,638.19	3,581.08	10.10	15.29	156.482	4,088.57	-867.49	4,486.21	4,461.09	25.12	178.593	
3,100.00	3,069.41	3,704.28	3,646.37	10.51	15.53	156.620	4,080.91	-860.66	4,492.11	4,466.35	25.76	174.389	
3,200.00	3,167.23	3,776.41	3,717.73	10.92	15.78	156.768	4,073.09	-853.58	4,498.84	4,472.42	26.42	170.281	
3,300.00	3,265.04	3,879.01	3,819.25	11.34	16.15	156.977	4,062.20	-843.50	4,505.88	4,478.68	27.19	165.705	
3,400.00	3,362.86	3,995.17	3,934.15	11.77	16.57	157.212	4,049.43	-832.18	4,512.60	4,484.59	28.02	161.059	
3,500.00	3,460.67	4,100.26	4,038.07	12.20	16.95	157.422	4,037.61	-821.97	4,519.15	4,490.34	28.81	156.850	
3,600.00	3,558.49	4,202.74	4,139.39	12.63	17.33	157.628	4,025.99	-811.92	4,525.65	4,496.05	29.60	152.881	
3,700.00	3,656.31	4,268.21	4,204.16	13.07	17.57	157.756	4,018.68	-805.82	4,532.48	4,502.22	30.26	149.765	
3,800.00	3,754.12	4,331.22	4,266.60	13.50	17.79	157.872	4,012.10	-800.47	4,540.17	4,509.25	30.92	146.853	
3,900.00	3,851.94	4,402.00	4,336.83	13.94	18.05	157.997	4,005.12	-795.05	4,548.61	4,517.01	31.60	143.962	
4,000.00	3,949.75	4,466.86	4,401.25	14.39	18.28	158.105	3,999.10	-790.56	4,557.75	4,525.49	32.25	141.313	
4,100.00	4,047.57	4,541.64	4,475.58	14.83	18.55	158.227	3,992.59	-785.65	4,567.56	4,534.61	32.95	138.632	
4,200.00	4,145.38	4,732.76	4,665.36	15.28	19.26	158.564	3,975.46	-770.89	4,577.34	4,543.25	34.09	134.266	
4,300.00	4,243.20	4,917.83	4,848.51	15.73	19.97	158.898	3,954.15	-755.14	4,583.90	4,548.66	35.23	130.097	
4,400.00	4,341.02	4,992.08	4,921.96	16.18	20.25	159.029	3,945.26	-748.93	4,590.40	4,554.45	35.95	127.686	
4,500.00	4,438.83	5,062.00	4,991.24	16.63	20.52	159.148	3,937.46	-743.56	4,597.75	4,561.09	36.66	125.432	
4,600.00	4,536.65	5,125.99	5,054.68	17.08	20.78	159.259	3,930.78	-738.48	4,605.80	4,568.46	37.35	123.328	
4,700.00	4,634.46	5,195.56	5,123.61	17.53	21.05	159.391	3,923.92	-732.09	4,614.40	4,576.34	38.06	121.254	
4,800.00	4,732.28	13,911.00	9,297.49	17.99	84.59	140.141	-965.81	-681.13	4,606.61	4,554.25	52.36	87.985	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	Marathon Oil Permian LLC	Local Co-ordinate Reference:	Well Decimus 5 WXY Fed Com 1H
Project:	Eddy County, NM (NAD27-NME)	TVD Reference:	RKB @ 3067.60usft (Cactus 169)
Reference Site:	Decimus 5 WXY Fed Com	MD Reference:	RKB @ 3067.60usft (Cactus 169)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Decimus 5 WXY Fed Com 1H	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	USA Compass
Reference Design:	Plan 1 07-22-22	Offset TVD Reference:	Reference Datum

Offset Design: Larry Wolfish 01-23S-27E RB - 204H - OH / 64293 - Surveys (Patterson 813)													Offset Site Error:	0.00 usft
Survey Program: 96-									Rule Assigned:				Offset Well Error:	1.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance			Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)		Separation Factor	
4,900.00	4,830.09	13,911.00	9,297.49	18.44	84.59	140.141	-965.81	-681.13	4,507.75	4,455.16	52.58	85.726		
5,000.00	4,927.91	13,911.00	9,297.49	18.90	84.59	140.141	-965.81	-681.13	4,408.94	4,356.12	52.82	83.477		
5,100.00	5,025.72	13,936.73	9,295.86	19.36	84.94	139.249	-991.46	-680.02	4,310.06	4,256.90	53.16	81.080		
5,200.00	5,123.54	13,945.04	9,295.35	19.82	85.05	138.943	-999.75	-679.71	4,211.26	4,157.83	53.43	78.813		
5,300.00	5,221.36	13,953.49	9,294.85	20.28	85.16	138.623	-1,008.18	-679.43	4,112.50	4,058.78	53.71	76.562		
5,400.00	5,319.17	13,962.07	9,294.34	20.74	85.27	138.288	-1,016.74	-679.17	4,013.76	3,959.76	54.00	74.326		
5,500.00	5,416.99	13,970.79	9,293.83	21.20	85.39	137.937	-1,025.44	-678.94	3,915.06	3,860.77	54.29	72.107		
5,600.00	5,514.80	13,979.66	9,293.33	21.66	85.51	137.568	-1,034.29	-678.73	3,816.39	3,761.80	54.59	69.905		
5,700.00	5,612.62	14,005.00	9,291.93	22.12	85.85	136.451	-1,059.59	-678.31	3,717.82	3,662.86	54.96	67.649		
5,800.00	5,710.43	14,005.00	9,291.93	22.58	85.85	136.451	-1,059.59	-678.31	3,619.18	3,563.95	55.24	65.521		
5,900.00	5,808.25	14,005.00	9,291.93	23.05	85.85	136.451	-1,059.59	-678.31	3,520.62	3,465.09	55.53	63.405		
6,000.00	5,906.07	14,005.00	9,291.93	23.51	85.85	136.451	-1,059.59	-678.31	3,422.14	3,366.32	55.82	61.302		
6,100.00	6,003.88	14,005.00	9,291.93	23.98	85.85	136.451	-1,059.59	-678.31	3,323.75	3,267.62	56.13	59.212		
6,200.00	6,101.70	14,005.00	9,291.93	24.44	85.85	136.451	-1,059.59	-678.31	3,225.46	3,169.01	56.45	57.136		
6,300.00	6,199.51	14,005.00	9,291.93	24.91	85.85	136.451	-1,059.59	-678.31	3,127.28	3,070.50	56.78	55.073		
6,400.00	6,297.33	14,005.00	9,291.93	25.37	85.85	136.451	-1,059.59	-678.31	3,029.22	2,972.09	57.13	53.024		
6,500.00	6,395.14	14,005.00	9,291.93	25.84	85.85	136.451	-1,059.59	-678.31	2,931.29	2,873.80	57.49	50.990		
6,600.00	6,492.96	14,005.00	9,291.93	26.31	85.85	136.451	-1,059.59	-678.31	2,833.51	2,775.64	57.86	48.970		
6,700.00	6,590.78	14,005.00	9,291.93	26.77	85.85	136.451	-1,059.59	-678.31	2,735.88	2,677.63	58.25	46.965		
6,785.59	6,674.50	14,043.15	9,290.59	27.17	86.35	134.603	-1,097.71	-677.82	2,651.49	2,592.79	58.69	45.175		
6,800.00	6,688.60	14,043.89	9,290.58	27.23	86.36	133.620	-1,098.46	-677.81	2,637.42	2,578.66	58.75	44.889		
6,900.00	6,786.85	14,048.69	9,290.51	27.71	86.43	125.978	-1,103.26	-677.74	2,539.53	2,480.36	59.17	42.917		
7,000.00	6,885.69	14,052.77	9,290.48	28.16	86.48	116.876	-1,107.33	-677.68	2,441.37	2,381.78	59.59	40.970		
7,100.00	6,985.00	14,056.05	9,290.46	28.59	86.53	106.503	-1,110.62	-677.64	2,343.04	2,283.04	60.00	39.049		
7,200.00	7,084.66	14,058.47	9,290.45	28.98	86.56	95.439	-1,113.03	-677.60	2,244.66	2,184.24	60.42	37.153		
7,300.00	7,184.54	14,059.93	9,290.45	29.33	86.58	84.542	-1,114.49	-677.58	2,146.36	2,085.52	60.83	35.282		
7,385.47	7,270.00	14,060.35	9,290.45	29.47	86.58	-90.685	-1,114.91	-677.57	2,062.52	2,001.32	61.20	33.702		
7,400.00	7,284.53	14,060.35	9,290.45	29.47	86.58	-90.685	-1,114.92	-677.57	2,048.28	1,987.02	61.26	33.435		
7,500.00	7,384.53	14,060.37	9,290.45	29.48	86.58	-90.688	-1,114.94	-677.57	1,950.46	1,888.74	61.72	31.604		
7,600.00	7,484.53	14,060.39	9,290.45	29.50	86.58	-90.691	-1,114.96	-677.57	1,852.86	1,790.65	62.21	29.783		
7,700.00	7,584.53	14,060.42	9,290.45	29.51	86.58	-90.694	-1,114.98	-677.57	1,755.54	1,692.78	62.76	27.973		
7,800.00	7,684.53	14,060.44	9,290.45	29.53	86.58	-90.697	-1,115.00	-677.57	1,658.53	1,595.17	63.36	26.176		
7,900.00	7,784.53	14,060.47	9,290.45	29.55	86.58	-90.700	-1,115.03	-677.57	1,561.90	1,497.86	64.04	24.390		
8,000.00	7,884.53	14,060.49	9,290.45	29.56	86.58	-90.704	-1,115.06	-677.57	1,465.73	1,400.92	64.80	22.619		
8,100.00	7,984.53	14,060.52	9,290.45	29.58	86.59	-90.709	-1,115.09	-677.57	1,370.10	1,304.42	65.67	20.862		
8,200.00	8,084.53	14,060.56	9,290.45	29.60	86.59	-90.713	-1,115.12	-677.57	1,275.14	1,208.46	66.69	19.122		
8,300.00	8,184.53	14,060.59	9,290.45	29.61	86.59	-90.718	-1,115.16	-677.57	1,181.02	1,113.15	67.87	17.401		
8,400.00	8,284.53	14,060.63	9,290.45	29.63	86.59	-90.724	-1,115.20	-677.57	1,087.94	1,018.66	69.28	15.704		
8,500.00	8,384.53	14,060.68	9,290.45	29.65	86.59	-90.730	-1,115.24	-677.57	996.21	925.23	70.98	14.035		
8,600.00	8,484.53	14,060.73	9,290.45	29.66	86.59	-90.736	-1,115.29	-677.57	906.23	833.17	73.06	12.404		
8,700.00	8,584.53	14,060.78	9,290.45	29.68	86.59	-90.744	-1,115.34	-677.57	818.57	742.95	75.63	10.824		
8,800.00	8,684.53	14,060.84	9,290.45	29.70	86.59	-90.753	-1,115.41	-677.57	734.08	655.25	78.83	9.312		
8,870.41	8,754.95	14,060.89	9,290.45	29.71	86.59	-90.759	-1,115.45	-677.57	677.13	595.58	81.55	8.303		
8,900.00	8,784.52	14,060.92	9,290.45	29.70	86.59	179.329	-1,115.48	-677.57	654.48	571.62	82.86	7.899		
8,950.00	8,834.28	14,061.00	9,290.45	29.66	86.59	179.373	-1,115.57	-677.57	620.03	534.58	85.45	7.256		
9,000.00	8,883.43	14,061.14	9,290.45	29.62	86.59	179.395	-1,115.70	-677.56	591.36	502.93	88.43	6.687		
9,050.00	8,931.61	14,061.32	9,290.46	29.58	86.60	179.400	-1,115.89	-677.56	569.58	477.90	91.68	6.213		
9,100.00	8,978.44	14,061.57	9,290.46	29.53	86.60	179.390	-1,116.13	-677.56	555.66	460.66	95.00	5.849		
9,150.00	9,023.57	14,061.87	9,290.46	29.49	86.60	179.364	-1,116.43	-677.55	550.32	452.18	98.15	5.607		
9,155.18	9,028.13	14,061.90	9,290.46	29.49	86.60	179.360	-1,116.47	-677.55	550.27	451.82	98.45	5.589 CC, ES		
9,200.00	9,066.65	14,062.24	9,290.46	29.46	86.61	179.321	-1,116.80	-677.55	553.84	452.96	100.89	5.490 SF		
9,250.00	9,107.37	14,062.67	9,290.46	29.43	86.61	179.260	-1,117.23	-677.54	566.03	462.96	103.07	5.491		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	Marathon Oil Permian LLC	Local Co-ordinate Reference:	Well Decimus 5 WXY Fed Com 1H
Project:	Eddy County, NM (NAD27-NME)	TVD Reference:	RKB @ 3067.60usft (Cactus 169)
Reference Site:	Decimus 5 WXY Fed Com	MD Reference:	RKB @ 3067.60usft (Cactus 169)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Decimus 5 WXY Fed Com 1H	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	USA Compass
Reference Design:	Plan 1 07-22-22	Offset TVD Reference:	Reference Datum

Offset Design: Larry Wolfish 01-23S-27E RB - 204H - OH / 64293 - Surveys (Patterson 813)												Offset Site Error:	0.00 usft
Survey Program: 96-												Offset Well Error:	1.00 usft
Rule Assigned:												Warning	
Measured Depth (usft)	Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
9,300.00	9,145.40	14,063.17	9,290.46	29.43	86.62	179.175	-1,117.73	-677.53	586.27	481.59	104.68	5.601	
9,350.00	9,180.46	14,063.73	9,290.46	29.44	86.63	179.060	-1,118.30	-677.53	613.60	507.84	105.76	5.802	
9,400.00	9,212.28	14,064.36	9,290.46	29.48	86.64	178.903	-1,118.93	-677.52	646.94	540.52	106.42	6.079	
9,450.00	9,240.62	14,065.06	9,290.47	29.56	86.65	178.684	-1,119.62	-677.51	685.18	578.39	106.79	6.416	
9,500.00	9,265.27	14,065.80	9,290.47	29.67	86.66	178.370	-1,120.36	-677.49	727.29	620.30	106.98	6.798	
9,550.00	9,286.03	14,066.59	9,290.48	29.83	86.67	177.891	-1,121.15	-677.48	772.33	665.26	107.07	7.213	
9,600.00	9,302.75	14,067.40	9,290.48	30.04	86.68	177.082	-1,121.96	-677.47	819.51	712.40	107.10	7.652	
9,650.00	9,315.30	14,068.23	9,290.49	30.29	86.69	175.450	-1,122.80	-677.46	868.15	761.03	107.12	8.104	
9,700.00	9,323.58	14,069.06	9,290.50	30.60	86.70	170.508	-1,123.63	-677.45	917.68	810.54	107.14	8.566	
9,750.00	9,327.54	14,069.87	9,290.50	30.95	86.71	79.663	-1,124.44	-677.43	967.61	860.46	107.16	9.030	
9,760.41	9,327.82	14,070.04	9,290.51	31.03	86.71	35.189	-1,124.60	-677.43	978.02	870.86	107.16	9.127	
9,800.00	9,328.51	14,070.66	9,290.51	31.34	86.72	36.361	-1,125.23	-677.42	1,017.60	910.42	107.18	9.494	
9,900.00	9,330.25	14,072.26	9,290.53	32.24	86.74	39.204	-1,126.82	-677.40	1,117.57	1,010.33	107.23	10.422	
10,000.00	9,332.00	14,073.88	9,290.55	33.27	86.76	41.879	-1,128.44	-677.37	1,217.54	1,110.26	107.29	11.348	
10,100.00	9,333.74	14,075.52	9,290.58	34.41	86.78	44.392	-1,130.08	-677.35	1,317.52	1,210.18	107.34	12.274	
10,200.00	9,335.49	14,077.19	9,290.60	35.67	86.81	46.749	-1,131.75	-677.32	1,417.50	1,310.10	107.40	13.199	
10,300.00	9,337.23	14,078.88	9,290.63	37.01	86.83	48.957	-1,133.44	-677.30	1,517.48	1,410.02	107.45	14.122	
10,400.00	9,338.98	14,080.60	9,290.67	38.45	86.85	51.024	-1,135.15	-677.27	1,617.46	1,509.94	107.51	15.044	
10,500.00	9,340.72	14,082.34	9,290.70	39.96	86.88	52.961	-1,136.90	-677.24	1,717.44	1,609.86	107.57	15.965	
10,600.00	9,342.47	14,084.11	9,290.74	41.55	86.90	54.775	-1,138.67	-677.21	1,817.42	1,709.78	107.64	16.885	
10,700.00	9,344.21	14,085.91	9,290.79	43.19	86.92	56.474	-1,140.47	-677.19	1,917.40	1,809.70	107.70	17.803	
10,800.00	9,345.96	14,087.74	9,290.84	44.89	86.95	58.071	-1,142.29	-677.16	2,017.38	1,909.61	107.77	18.720	
10,900.00	9,347.70	14,089.59	9,290.89	46.64	86.97	59.568	-1,144.15	-677.13	2,117.37	2,009.53	107.84	19.635	
11,000.00	9,349.45	14,091.48	9,290.95	48.44	87.00	60.975	-1,146.03	-677.10	2,217.35	2,109.44	107.91	20.548	
11,100.00	9,351.19	14,093.39	9,291.01	50.28	87.02	62.299	-1,147.95	-677.06	2,317.33	2,209.35	107.98	21.460	
11,200.00	9,352.94	14,095.34	9,291.07	52.15	87.05	63.547	-1,149.89	-677.03	2,417.32	2,309.26	108.06	22.371	
11,300.00	9,354.69	14,097.32	9,291.14	54.06	87.07	64.723	-1,151.87	-677.00	2,517.30	2,409.16	108.13	23.279	
11,400.00	9,356.43	14,099.33	9,291.22	56.00	87.10	65.835	-1,153.88	-676.97	2,617.28	2,509.07	108.21	24.186	
11,500.00	9,358.18	14,101.60	9,291.31	57.96	87.13	66.999	-1,156.15	-676.93	2,717.27	2,608.96	108.30	25.090	
11,600.00	9,359.92	14,104.07	9,291.41	59.95	87.16	68.156	-1,158.62	-676.89	2,817.25	2,708.85	108.39	25.991	
11,700.00	9,361.67	14,106.63	9,291.50	61.96	87.20	69.251	-1,161.17	-676.84	2,917.23	2,808.74	108.49	26.889	
11,800.00	9,363.41	14,109.28	9,291.60	63.99	87.23	70.290	-1,163.81	-676.80	3,017.21	2,908.62	108.59	27.786	
11,900.00	9,365.16	14,112.02	9,291.70	66.03	87.27	71.274	-1,166.56	-676.75	3,117.20	3,008.50	108.69	28.679	
12,000.00	9,366.90	14,114.87	9,291.81	68.10	87.31	72.208	-1,169.41	-676.70	3,217.18	3,108.38	108.80	29.570	
12,100.00	9,368.65	14,117.83	9,291.91	70.18	87.35	73.094	-1,172.37	-676.64	3,317.16	3,208.25	108.91	30.458	
12,200.00	9,370.39	14,120.91	9,292.02	72.27	87.39	73.935	-1,175.44	-676.58	3,417.14	3,308.11	109.03	31.343	
12,300.00	9,372.14	14,124.11	9,292.13	74.37	87.43	74.735	-1,178.64	-676.52	3,517.12	3,407.97	109.14	32.224	
12,400.00	9,373.88	14,127.45	9,292.24	76.49	87.47	75.495	-1,181.97	-676.46	3,617.10	3,507.83	109.27	33.103	
12,500.00	9,375.63	14,130.92	9,292.35	78.62	87.52	76.218	-1,185.44	-676.39	3,717.08	3,607.68	109.40	33.978	
12,600.00	9,377.37	14,134.54	9,292.46	80.75	87.57	76.906	-1,189.06	-676.31	3,817.06	3,707.53	109.53	34.850	
12,700.00	9,379.12	14,138.32	9,292.58	82.90	87.62	77.561	-1,192.83	-676.23	3,917.03	3,807.36	109.67	35.717	
12,800.00	9,380.86	14,142.26	9,292.69	85.06	87.67	78.185	-1,196.78	-676.15	4,017.01	3,907.20	109.81	36.581	
12,900.00	9,382.61	14,146.39	9,292.81	87.22	87.73	78.779	-1,200.90	-676.06	4,116.98	4,007.02	109.96	37.441	
13,000.00	9,384.35	14,150.71	9,292.93	89.39	87.78	79.346	-1,205.22	-675.96	4,216.96	4,106.84	110.11	38.296	
13,100.00	9,386.10	14,155.24	9,293.05	91.56	87.84	79.885	-1,209.74	-675.85	4,316.93	4,206.66	110.27	39.147	
13,200.00	9,387.84	14,159.99	9,293.16	93.75	87.91	80.400	-1,214.49	-675.74	4,416.90	4,306.46	110.44	39.993	
13,300.00	9,389.59	14,164.97	9,293.28	95.93	87.97	80.891	-1,219.47	-675.62	4,516.87	4,406.26	110.62	40.834	
13,400.00	9,391.34	14,170.22	9,293.40	98.13	88.04	81.358	-1,224.71	-675.49	4,616.84	4,506.05	110.80	41.670	
13,500.00	9,393.08	14,175.74	9,293.52	100.33	88.11	81.804	-1,230.23	-675.35	4,716.81	4,605.83	110.99	42.499	
13,600.00	9,394.83	14,181.56	9,293.64	102.53	88.19	82.229	-1,236.05	-675.20	4,816.78	4,705.59	111.18	43.323	
13,700.00	9,396.57	14,187.70	9,293.75	104.74	88.27	82.634	-1,242.19	-675.03	4,916.74	4,805.35	111.39	44.140	
13,800.00	9,398.32	14,194.22	9,293.86	106.95	88.36	83.021	-1,248.70	-674.85	5,016.70	4,905.10	111.61	44.950	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	Marathon Oil Permian LLC	Local Co-ordinate Reference:	Well Decimus 5 WXY Fed Com 1H
Project:	Eddy County, NM (NAD27-NME)	TVD Reference:	RKB @ 3067.60usft (Cactus 169)
Reference Site:	Decimus 5 WXY Fed Com	MD Reference:	RKB @ 3067.60usft (Cactus 169)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Decimus 5 WXY Fed Com 1H	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	USA Compass
Reference Design:	Plan 1 07-22-22	Offset TVD Reference:	Reference Datum

Offset Design: Larry Wolfish 01-23S-27E RB - 204H - OH / 64293 - Surveys (Patterson 813)												Offset Site Error:	0.00 usft
Survey Program: 96-												Offset Well Error:	1.00 usft
Rule Assigned:												Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference	Offset	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
13,900.00	9,400.06	14,201.62	9,293.98	109.16	88.46	83.418	-1,256.10	-674.64	5,116.66	5,004.82	111.84	45.748	
14,000.00	9,401.81	14,209.52	9,294.12	111.38	88.56	83.805	-1,264.00	-674.41	5,216.62	5,104.53	112.10	46.537	
14,100.00	9,403.55	14,173.02	9,293.27	113.61	88.08	81.499	-1,227.52	-675.33	5,316.55	5,205.22	111.33	47.754	
14,200.00	9,405.30	14,227.06	9,294.48	115.83	88.80	84.548	-1,281.53	-673.86	5,416.53	5,303.88	112.65	48.085	
14,300.00	9,407.04	14,236.83	9,294.69	118.06	88.93	84.907	-1,291.29	-673.54	5,516.48	5,403.53	112.95	48.842	
14,400.00	9,408.79	14,247.36	9,294.95	120.30	89.07	85.259	-1,301.81	-673.19	5,616.42	5,503.15	113.27	49.586	
14,500.00	9,410.53	14,258.75	9,295.24	122.53	89.22	85.605	-1,313.19	-672.79	5,716.36	5,602.75	113.61	50.316	
14,600.00	9,412.28	14,271.11	9,295.58	124.77	89.38	85.945	-1,325.54	-672.34	5,816.29	5,702.31	113.98	51.030	
14,700.00	9,414.02	14,284.58	9,295.99	127.01	89.56	86.281	-1,338.99	-671.82	5,916.22	5,801.85	114.37	51.727	
14,800.00	9,415.77	14,299.29	9,296.46	129.25	89.76	86.614	-1,353.68	-671.24	6,016.14	5,901.34	114.80	52.403	
14,900.00	9,417.51	14,259.97	9,295.43	131.50	89.24	85.683	-1,314.40	-672.63	6,116.00	6,002.05	113.95	53.675	
15,000.00	9,419.26	14,263.30	9,295.51	133.74	89.28	85.774	-1,317.73	-672.52	6,215.95	6,101.84	114.10	54.476	
15,100.00	9,421.00	14,325.64	9,297.06	135.99	90.11	87.066	-1,380.00	-670.14	6,315.89	6,200.21	115.68	54.598	
15,200.00	9,422.75	14,440.85	9,297.48	138.24	91.66	87.990	-1,495.04	-664.16	6,415.79	6,297.15	118.64	54.077	
15,300.00	9,424.49	14,446.84	9,297.47	140.50	91.74	88.019	-1,501.03	-663.80	6,515.61	6,396.73	118.87	54.811	
15,400.00	9,426.24	14,452.84	9,297.46	142.75	91.82	88.046	-1,507.02	-663.43	6,615.43	6,496.32	119.11	55.541	
15,500.00	9,427.99	14,458.84	9,297.45	145.01	91.90	88.073	-1,513.00	-663.07	6,715.25	6,595.90	119.35	56.267	
15,600.00	9,429.73	14,464.83	9,297.44	147.26	91.98	88.099	-1,518.99	-662.70	6,815.07	6,695.49	119.58	56.990	
15,700.00	9,431.48	14,470.83	9,297.43	149.52	92.06	88.124	-1,524.97	-662.34	6,914.89	6,795.07	119.82	57.710	
15,800.00	9,433.22	14,476.83	9,297.43	151.78	92.14	88.149	-1,530.96	-661.97	7,014.71	6,894.65	120.06	58.427	
15,900.00	9,434.97	14,481.00	9,297.42	154.04	92.20	88.166	-1,535.12	-661.72	7,114.53	6,994.28	120.25	59.163	
16,000.00	9,436.71	14,481.00	9,297.42	156.31	92.20	88.166	-1,535.12	-661.72	7,214.35	7,094.01	120.34	59.950	
16,100.00	9,438.46	14,481.00	9,297.42	158.57	92.20	88.166	-1,535.12	-661.72	7,314.18	7,193.76	120.43	60.736	
16,200.00	9,440.20	14,481.00	9,297.42	160.84	92.20	88.166	-1,535.12	-661.72	7,414.01	7,293.50	120.51	61.521	
16,300.00	9,441.95	14,481.00	9,297.42	163.10	92.20	88.166	-1,535.12	-661.72	7,513.85	7,393.25	120.60	62.303	
16,400.00	9,443.69	14,481.00	9,297.42	165.37	92.20	88.166	-1,535.12	-661.72	7,613.69	7,493.00	120.69	63.084	
16,500.00	9,445.44	14,481.00	9,297.42	167.64	92.20	88.166	-1,535.12	-661.72	7,713.54	7,592.76	120.78	63.864	
16,600.00	9,447.18	14,481.00	9,297.42	169.91	92.20	88.166	-1,535.12	-661.72	7,813.39	7,692.52	120.87	64.642	
16,700.00	9,448.93	14,481.00	9,297.42	172.18	92.20	88.166	-1,535.12	-661.72	7,913.24	7,792.28	120.96	65.419	
16,800.00	9,450.67	14,481.00	9,297.42	174.45	92.20	88.166	-1,535.12	-661.72	8,013.10	7,892.05	121.06	66.194	
16,900.00	9,452.42	14,481.00	9,297.42	176.73	92.20	88.166	-1,535.12	-661.72	8,112.96	7,991.81	121.15	66.967	
17,000.00	9,454.16	14,481.00	9,297.42	179.00	92.20	88.166	-1,535.12	-661.72	8,212.83	8,091.58	121.24	67.738	
17,100.00	9,455.91	14,481.00	9,297.42	181.28	92.20	88.166	-1,535.12	-661.72	8,312.69	8,191.36	121.34	68.508	
17,200.00	9,457.65	14,481.00	9,297.42	183.55	92.20	88.166	-1,535.12	-661.72	8,412.56	8,291.13	121.43	69.277	
17,300.00	9,459.40	14,481.00	9,297.42	185.83	92.20	88.166	-1,535.12	-661.72	8,512.44	8,390.91	121.53	70.043	
17,400.00	9,461.14	14,481.00	9,297.42	188.10	92.20	88.166	-1,535.12	-661.72	8,612.32	8,490.69	121.63	70.808	
17,500.00	9,462.89	14,481.00	9,297.42	190.38	92.20	88.166	-1,535.12	-661.72	8,712.19	8,590.47	121.73	71.572	
17,600.00	9,464.64	14,481.00	9,297.42	192.66	92.20	88.166	-1,535.12	-661.72	8,812.08	8,690.25	121.83	72.333	
17,700.00	9,466.38	14,481.00	9,297.42	194.94	92.20	88.166	-1,535.12	-661.72	8,911.96	8,790.04	121.93	73.093	
17,800.00	9,468.13	14,481.00	9,297.42	197.22	92.20	88.166	-1,535.12	-661.72	9,011.85	8,889.82	122.03	73.851	
17,900.00	9,469.87	14,481.00	9,297.42	199.50	92.20	88.166	-1,535.12	-661.72	9,111.74	8,989.61	122.13	74.608	
18,000.00	9,471.62	14,481.00	9,297.42	201.78	92.20	88.166	-1,535.12	-661.72	9,211.63	9,089.40	122.23	75.363	
18,100.00	9,473.36	14,481.00	9,297.42	204.06	92.20	88.166	-1,535.12	-661.72	9,311.53	9,189.19	122.33	76.116	
18,200.00	9,475.11	14,481.00	9,297.42	206.34	92.20	88.166	-1,535.12	-661.72	9,411.42	9,288.99	122.44	76.867	
18,300.00	9,476.85	14,481.00	9,297.42	208.62	92.20	88.166	-1,535.12	-661.72	9,511.32	9,388.78	122.54	77.617	
18,400.00	9,478.60	14,481.00	9,297.42	210.91	92.20	88.166	-1,535.12	-661.72	9,611.22	9,488.58	122.65	78.365	
18,500.00	9,480.34	14,481.00	9,297.42	213.19	92.20	88.166	-1,535.12	-661.72	9,711.13	9,588.37	122.75	79.111	
18,600.00	9,482.09	14,481.00	9,297.42	215.48	92.20	88.166	-1,535.12	-661.72	9,811.03	9,688.17	122.86	79.855	
18,700.00	9,483.83	14,481.00	9,297.42	217.76	92.20	88.166	-1,535.12	-661.72	9,910.94	9,787.97	122.97	80.597	
18,800.00	9,485.58	14,481.00	9,297.42	220.04	92.20	88.166	-1,535.12	-661.72	10,010.85	9,887.77	123.08	81.338	
18,900.00	9,487.32	14,481.00	9,297.42	222.33	92.20	88.166	-1,535.12	-661.72	10,110.76	9,987.57	123.19	82.077	
19,000.00	9,489.07	14,481.00	9,297.42	224.62	92.20	88.166	-1,535.12	-661.72	10,210.67	10,087.38	123.30	82.814	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	Marathon Oil Permian LLC	Local Co-ordinate Reference:	Well Decimus 5 WXY Fed Com 1H
Project:	Eddy County, NM (NAD27-NME)	TVD Reference:	RKB @ 3067.60usft (Cactus 169)
Reference Site:	Decimus 5 WXY Fed Com	MD Reference:	RKB @ 3067.60usft (Cactus 169)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Decimus 5 WXY Fed Com 1H	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	USA Compass
Reference Design:	Plan 1 07-22-22	Offset TVD Reference:	Reference Datum

Offset Design: Larry Wolfish 01-23S-27E RB - 204H - OH / 64293 - Surveys (Patterson 813)													Offset Site Error: 0.00 usft
Survey Program: 96-													Offset Well Error: 1.00 usft
Reference	Rule Assigned:												Warning
Measured Depth (usft)	Vertical Depth (usft)	Offset Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis Reference (usft)	Offset (usft)	Highside Toolface (")	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Distance Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
19,100.00	9,490.81	14,481.00	9,297.42	226.90	92.20	88.166	-1,535.12	-661.72	10,310.59	10,187.18	123.41	83.550	
19,200.00	9,492.56	14,481.00	9,297.42	229.19	92.20	88.166	-1,535.12	-661.72	10,410.50	10,286.98	123.52	84.283	
19,300.00	9,494.30	14,481.00	9,297.42	231.48	92.20	88.166	-1,535.12	-661.72	10,510.42	10,386.79	123.63	85.015	
19,303.31	9,494.36	14,481.00	9,297.42	231.55	92.20	88.166	-1,535.12	-661.72	10,513.72	10,390.09	123.63	85.039	



Anticollision Report



Company:	Marathon Oil Permian LLC	Local Co-ordinate Reference:	Well Decimus 5 WXY Fed Com 1H
Project:	Eddy County, NM (NAD27-NME)	TVD Reference:	RKB @ 3067.60usft (Cactus 169)
Reference Site:	Decimus 5 WXY Fed Com	MD Reference:	RKB @ 3067.60usft (Cactus 169)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Decimus 5 WXY Fed Com 1H	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	USA Compass
Reference Design:	Plan 1 07-22-22	Offset TVD Reference:	Reference Datum

Offset Design: Maximus/Decimus Offsets - Carrasco 6 Com 1 - OH - Surveys													Offset Site Error: 0.00 usft
Survey Program: 100-INC-ONLY, 12200-INC-ONLY													Offset Well Error: 1.00 usft
Reference	Offset	Semi Major Axis		Distance		Rule Assigned:		Warning					
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.00	0.00	0.00	29.60	1.00	1.00	107.450	-926.09	2,946.08	3,088.36				
100.00	100.00	70.40	100.00	1.13	1.26	107.450	-926.09	2,946.08	3,088.21	3,085.82	2.39	1,290.531	
200.00	200.00	170.40	200.00	1.66	2.68	107.450	-926.09	2,946.08	3,088.21	3,083.87	4.34	711.588	
300.00	300.00	270.41	300.00	2.06	4.65	107.450	-926.09	2,946.08	3,088.21	3,081.50	6.71	460.183	
400.00	400.00	370.41	400.00	2.39	7.06	107.450	-926.09	2,946.08	3,088.21	3,078.76	9.45	326.760	
448.09	448.09	418.37	447.96	2.54	8.22	107.441	-925.57	2,946.08	3,088.06	3,077.30	10.75	287.159	
500.00	500.00	468.39	497.98	2.69	9.43	107.442	-925.63	2,946.08	3,088.07	3,075.95	12.12	254.746	
600.00	600.00	564.76	594.34	2.96	11.77	107.449	-926.03	2,946.08	3,088.20	3,073.47	14.73	209.598	
700.00	700.00	670.44	700.00	3.21	13.83	107.450	-926.09	2,946.08	3,088.21	3,071.17	17.04	181.185	
718.62	718.62	688.45	718.01	3.25	14.18	107.444	-925.76	2,946.08	3,088.11	3,070.68	17.43	177.172	
800.00	800.00	765.31	794.87	3.44	15.64	107.449	-926.00	2,946.08	3,088.19	3,069.11	19.08	161.850	
875.19	875.19	845.63	875.17	3.61	17.20	107.445	-925.81	2,946.08	3,088.13	3,067.32	20.81	148.419	
900.00	900.00	867.69	897.22	3.66	17.63	107.446	-925.84	2,946.08	3,088.14	3,066.85	21.29	145.035	
1,000.00	1,000.00	970.48	1,000.00	3.87	20.02	107.450	-926.09	2,946.08	3,088.21	3,064.32	23.90	129.231	
1,100.00	1,100.00	1,070.48	1,100.00	4.07	22.62	107.450	-926.09	2,946.08	3,088.21	3,061.52	26.69	115.704	
1,175.49	1,175.49	1,145.98	1,175.49	4.22	24.58	107.432	-925.06	2,946.08	3,087.91	3,059.11	28.79	107.240	
1,200.00	1,200.00	1,169.67	1,199.18	4.26	25.19	107.432	-925.07	2,946.08	3,087.91	3,058.45	29.46	104.830	
1,300.00	1,300.00	1,266.38	1,295.89	4.45	27.70	107.437	-925.33	2,946.08	3,087.99	3,055.84	32.15	96.046	
1,400.00	1,399.98	1,363.09	1,392.59	4.72	30.21	-85.922	-925.93	2,946.08	3,088.05	3,053.23	34.82	88.682	
1,500.00	1,499.84	1,470.37	1,499.84	4.98	32.79	-86.028	-926.09	2,946.08	3,087.72	3,050.18	37.54	82.247	
1,600.00	1,599.45	1,569.99	1,599.45	5.26	35.15	-86.201	-926.09	2,946.08	3,087.13	3,047.09	40.04	77.106	
1,700.00	1,698.70	1,668.55	1,698.01	5.55	37.48	-86.453	-925.27	2,946.08	3,086.10	3,043.59	42.51	72.596	
1,800.00	1,797.47	1,765.16	1,794.61	5.87	39.76	-86.747	-925.46	2,946.08	3,085.22	3,040.27	44.95	68.643	
1,899.87	1,895.50	1,861.15	1,890.60	6.20	42.04	-87.098	-925.89	2,946.08	3,084.31	3,036.93	47.38	65.098	
1,900.00	1,895.62	1,861.27	1,890.72	6.20	42.04	-87.098	-925.89	2,946.08	3,084.30	3,036.92	47.38	65.094	
2,000.00	1,993.44	1,964.02	1,993.44	6.48	44.39	-87.491	-926.09	2,946.08	3,083.36	3,033.45	49.91	61.776	
2,100.00	2,091.25	2,061.84	2,091.25	6.78	46.59	-87.869	-926.09	2,946.08	3,082.50	3,030.20	52.30	58.936	
2,200.00	2,189.07	2,157.37	2,186.79	7.10	48.74	-88.246	-925.61	2,946.08	3,081.65	3,027.00	54.65	56.386	
2,300.00	2,286.89	2,252.59	2,282.00	7.43	50.89	-88.606	-926.04	2,946.08	3,081.19	3,024.18	57.00	54.051	
2,400.00	2,384.70	2,355.44	2,384.70	7.78	53.44	-89.002	-926.09	2,946.08	3,080.76	3,020.98	59.78	51.536	
2,500.00	2,482.52	2,451.69	2,480.93	8.14	55.93	-89.390	-925.19	2,946.08	3,080.24	3,017.75	62.49	49.294	
2,536.61	2,518.33	2,483.63	2,512.87	8.28	56.75	-89.511	-925.34	2,946.08	3,080.21	3,016.81	63.40	48.586	
2,600.00	2,580.33	2,551.20	2,580.33	8.52	58.50	-89.759	-926.09	2,946.08	3,080.30	3,015.00	65.30	47.174	
2,663.83	2,642.77	2,613.64	2,642.77	8.76	60.19	-90.000	-926.09	2,946.08	3,080.27	3,013.13	67.14	45.881	
2,700.00	2,678.15	2,649.01	2,678.15	8.90	61.15	-90.137	-926.09	2,946.08	3,080.28	3,012.10	68.18	45.179	
2,800.00	2,775.96	2,746.83	2,775.96	9.29	63.79	-90.515	-926.09	2,946.08	3,080.40	3,009.33	71.07	43.344	
2,843.62	2,818.63	2,789.49	2,818.59	9.47	64.95	-90.718	-923.95	2,946.08	3,080.03	3,007.70	72.33	42.583	
2,900.00	2,873.78	2,842.20	2,871.28	9.69	66.37	-90.920	-924.05	2,946.08	3,080.22	3,006.33	73.90	41.683	
3,000.00	2,971.60	2,935.90	2,964.96	10.10	68.90	-91.270	-924.71	2,946.08	3,080.78	3,004.10	76.68	40.175	
3,100.00	3,069.41	3,040.48	3,069.41	10.51	71.71	-91.649	-926.09	2,946.08	3,081.60	3,001.86	79.75	38.642	
3,200.00	3,167.23	3,138.29	3,167.23	10.92	73.92	-92.027	-926.09	2,946.08	3,082.28	3,000.06	82.22	37.486	
3,300.00	3,265.04	3,236.11	3,265.04	11.34	76.14	-92.405	-926.09	2,946.08	3,083.11	2,998.40	84.71	36.398	
3,400.00	3,362.86	3,331.90	3,360.81	11.77	78.31	-92.793	-925.02	2,946.08	3,083.87	2,996.73	87.14	35.388	
3,500.00	3,460.67	3,427.29	3,456.20	12.20	80.47	-93.151	-925.59	2,946.08	3,085.08	2,995.51	89.58	34.440	
3,600.00	3,558.49	3,529.64	3,558.49	12.63	82.70	-93.536	-926.09	2,946.08	3,086.41	2,994.32	92.09	33.516	
3,700.00	3,656.31	3,627.46	3,656.31	13.07	84.75	-93.913	-926.09	2,946.08	3,087.79	2,993.37	94.42	32.704	
3,800.00	3,754.12	3,723.98	3,752.81	13.50	86.77	-94.297	-925.36	2,946.08	3,089.20	2,992.48	96.72	31.940	
3,900.00	3,851.94	3,819.80	3,848.63	13.94	88.77	-94.657	-925.84	2,946.08	3,090.93	2,991.92	99.01	31.218	
4,000.00	3,949.75	3,920.96	3,949.75	14.39	90.77	-95.040	-926.09	2,946.08	3,092.77	2,991.47	101.30	30.532	
4,100.00	4,047.57	4,018.80	4,047.57	14.83	92.64	-95.416	-926.09	2,946.08	3,094.70	2,991.24	103.46	29.912	
4,200.00	4,145.38	4,116.61	4,145.38	15.28	94.37	-95.790	-926.09	2,946.08	3,096.78	2,991.29	105.48	29.358	
4,300.00	4,243.20	4,212.65	4,241.42	15.73	96.07	-96.161	-925.91	2,946.08	3,098.97	2,991.49	107.48	28.833	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	Marathon Oil Permian LLC	Local Co-ordinate Reference:	Well Decimus 5 WXY Fed Com 1H
Project:	Eddy County, NM (NAD27-NME)	TVD Reference:	RKB @ 3067.60usft (Cactus 169)
Reference Site:	Decimus 5 WXY Fed Com	MD Reference:	RKB @ 3067.60usft (Cactus 169)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Decimus 5 WXY Fed Com 1H	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	USA Compass
Reference Design:	Plan 1 07-22-22	Offset TVD Reference:	Reference Datum

Offset Design: Maximus/Decimus Offsets - Carrasco 6 Com 1 - OH - Surveys													Offset Site Error: 0.00 usft
Survey Program: 100-INC-ONLY, 12200-INC-ONLY													Offset Well Error: 1.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
4,400.00	4,341.02	4,312.26	4,341.02	16.18	97.81	-96.538	-926.09	2,946.08	3,101.34	2,991.83	109.51	28.320	
4,500.00	4,438.83	4,409.94	4,438.83	16.63	99.49	-96.916	-925.77	2,946.08	3,103.79	2,992.29	111.50	27.837	
4,600.00	4,536.65	4,506.87	4,536.63	17.08	101.16	-97.282	-925.94	2,946.08	3,106.44	2,992.96	113.47	27.376	
4,700.00	4,634.46	4,605.72	4,634.46	17.53	102.97	-97.655	-926.09	2,946.08	3,109.21	2,993.63	115.58	26.901	
4,800.00	4,732.28	4,703.53	4,732.28	17.99	104.81	-98.026	-926.09	2,946.08	3,112.11	2,994.38	117.73	26.433	
4,900.00	4,830.09	4,801.31	4,830.05	18.44	106.66	-98.406	-925.56	2,946.08	3,115.10	2,995.21	119.89	25.983	
5,000.00	4,927.91	4,898.72	4,927.46	18.90	108.50	-98.773	-925.66	2,946.08	3,118.28	2,996.24	122.04	25.551	
5,100.00	5,025.72	4,996.20	5,024.94	19.36	110.34	-99.136	-925.93	2,946.08	3,121.61	2,997.41	124.20	25.134	
5,200.00	5,123.54	5,094.81	5,123.54	19.82	112.24	-99.504	-926.09	2,946.08	3,125.06	2,998.64	126.41	24.721	
5,300.00	5,221.36	5,192.63	5,221.36	20.28	114.15	-99.871	-926.09	2,946.08	3,128.63	2,999.99	128.64	24.320	
5,400.00	5,319.17	5,290.41	5,319.14	20.74	116.06	-100.247	-925.57	2,946.08	3,132.31	3,001.44	130.87	23.934	
5,500.00	5,416.99	5,388.00	5,416.72	21.20	117.97	-100.610	-925.67	2,946.08	3,136.16	3,003.06	133.10	23.562	
5,600.00	5,514.80	5,485.65	5,514.37	21.66	119.88	-100.970	-925.95	2,946.08	3,140.15	3,004.82	135.33	23.203	
5,700.00	5,612.62	5,583.92	5,612.62	22.12	121.83	-101.333	-926.09	2,946.08	3,144.26	3,006.64	137.62	22.848	
5,800.00	5,710.43	5,681.74	5,710.43	22.58	123.81	-101.696	-926.09	2,946.08	3,148.50	3,008.58	139.92	22.502	
5,900.00	5,808.25	5,779.55	5,808.25	23.05	125.78	-102.058	-926.09	2,946.08	3,152.87	3,010.65	142.22	22.169	
6,000.00	5,906.07	5,877.30	5,905.99	23.51	127.75	-102.434	-925.28	2,946.08	3,157.36	3,012.83	144.53	21.846	
6,100.00	6,003.88	5,975.14	6,003.83	23.98	129.72	-102.788	-925.60	2,946.08	3,162.00	3,015.17	146.83	21.535	
6,200.00	6,101.70	6,073.03	6,101.70	24.44	131.74	-103.139	-926.09	2,946.08	3,166.76	3,017.58	149.18	21.227	
6,300.00	6,199.51	6,170.85	6,199.51	24.91	134.29	-103.497	-926.09	2,946.08	3,171.65	3,019.57	152.08	20.856	
6,400.00	6,297.33	6,268.66	6,297.33	25.37	136.84	-103.854	-926.09	2,946.08	3,176.67	3,021.70	154.97	20.498	
6,500.00	6,395.14	6,366.52	6,395.18	25.84	139.40	-104.220	-925.53	2,946.08	3,181.82	3,023.95	157.87	20.155	
6,600.00	6,492.96	6,464.49	6,493.15	26.31	141.96	-104.573	-925.67	2,946.08	3,187.10	3,026.32	160.78	19.823	
6,700.00	6,590.78	6,562.53	6,591.19	26.77	144.52	-104.922	-925.96	2,946.08	3,192.49	3,028.81	163.68	19.504	
6,785.59	6,674.50	6,646.43	6,674.84	27.17	146.70	-105.231	-925.54	2,946.08	3,197.23	3,031.07	166.16	19.242	
6,800.00	6,688.60	6,661.53	6,689.93	27.23	147.10	-105.299	-925.64	2,946.08	3,198.02	3,031.42	166.60	19.196	
6,900.00	6,786.85	6,758.49	6,786.85	27.71	149.23	-105.699	-926.09	2,946.08	3,203.05	3,034.00	169.05	18.947	
7,000.00	6,885.69	6,858.10	6,886.46	28.16	151.26	-106.044	-925.76	2,946.08	3,207.25	3,035.88	171.37	18.715	
7,100.00	6,985.00	6,956.67	6,985.00	28.59	153.38	-106.299	-926.09	2,946.08	3,210.51	3,036.78	173.73	18.480	
7,200.00	7,084.66	7,056.33	7,084.66	28.98	155.63	-106.483	-926.09	2,946.08	3,212.83	3,036.65	176.18	18.236	
7,300.00	7,184.54	7,156.21	7,184.54	29.33	157.89	-106.590	-926.09	2,946.08	3,214.18	3,035.60	178.58	17.998	
7,385.47	7,270.00	7,242.24	7,270.56	29.47	159.83	86.704	-925.14	2,946.08	3,214.60	3,034.02	180.58	17.802	
7,400.00	7,284.53	7,256.87	7,285.19	29.47	160.16	86.705	-925.19	2,946.08	3,214.59	3,033.69	180.91	17.769	
7,500.00	7,384.53	7,357.55	7,385.86	29.48	162.43	86.714	-925.72	2,946.08	3,214.56	3,031.37	183.20	17.547	
7,600.00	7,484.53	7,456.30	7,484.53	29.50	164.65	86.721	-926.09	2,946.08	3,214.54	3,029.11	185.43	17.336	
7,700.00	7,584.53	7,556.43	7,584.65	29.51	166.88	86.707	-925.32	2,946.08	3,214.59	3,026.91	187.68	17.128	
7,800.00	7,684.53	7,657.89	7,686.11	29.53	169.15	86.715	-925.78	2,946.08	3,214.56	3,024.60	189.96	16.922	
7,900.00	7,784.53	7,756.36	7,784.53	29.55	171.29	86.721	-926.09	2,946.08	3,214.54	3,022.43	192.12	16.732	
8,000.00	7,884.53	7,857.04	7,885.20	29.56	173.45	86.710	-925.48	2,946.08	3,214.58	3,020.28	194.30	16.545	
8,100.00	7,984.53	7,956.41	7,984.53	29.58	175.63	86.721	-926.09	2,946.08	3,214.54	3,018.05	196.49	16.360	
8,200.00	8,084.53	8,056.41	8,084.53	29.60	178.07	86.721	-926.09	2,946.08	3,214.54	3,015.60	198.94	16.158	
8,300.00	8,184.53	8,156.74	8,184.85	29.61	180.51	86.708	-925.34	2,946.08	3,214.59	3,013.18	201.41	15.961	
8,400.00	8,284.53	8,257.67	8,285.78	29.63	182.97	86.715	-925.77	2,946.08	3,214.56	3,010.68	203.89	15.766	
8,500.00	8,384.53	8,356.54	8,384.53	29.65	185.53	86.721	-926.09	2,946.08	3,214.54	3,008.08	206.46	15.570	
8,600.00	8,484.53	8,456.54	8,484.53	29.66	188.23	86.721	-926.09	2,946.08	3,214.54	3,005.37	209.18	15.368	
8,700.00	8,584.53	8,556.44	8,586.39	29.68	190.98	86.704	-925.12	2,946.08	3,214.60	3,002.65	211.95	15.167	
8,800.00	8,684.53	8,656.72	8,684.53	29.70	193.56	86.721	-926.09	2,946.08	3,214.54	3,000.00	214.55	14.983	
8,870.41	8,754.95	8,727.13	8,754.95	29.71	195.28	86.721	-926.09	2,946.08	3,214.54	2,998.27	216.27	14.864	
8,900.00	8,784.52	8,756.70	8,784.52	29.70	196.00	-3.234	-926.09	2,946.08	3,213.78	2,996.80	216.98	14.811	
8,950.00	8,834.28	8,806.85	8,834.64	29.66	197.22	-3.287	-924.92	2,946.08	3,209.10	2,990.90	218.20	14.707	
9,000.00	8,883.43	8,856.94	8,884.72	29.62	198.45	-3.346	-925.15	2,946.08	3,200.03	2,980.63	219.40	14.585	
9,050.00	8,931.61	8,906.04	8,933.81	29.58	199.65	-3.434	-925.61	2,946.08	3,186.70	2,966.13	220.57	14.447	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	Marathon Oil Permian LLC	Local Co-ordinate Reference:	Well Decimus 5 WXY Fed Com 1H
Project:	Eddy County, NM (NAD27-NME)	TVD Reference:	RKB @ 3067.60usft (Cactus 169)
Reference Site:	Decimus 5 WXY Fed Com	MD Reference:	RKB @ 3067.60usft (Cactus 169)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Decimus 5 WXY Fed Com 1H	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	USA Compass
Reference Design:	Plan 1 07-22-22	Offset TVD Reference:	Reference Datum

Offset Design: Maximus/Decimus Offsets - Carrasco 6 Com 1 - OH - Surveys													Offset Site Error:	0.00 usft
Survey Program:		100-INC-ONLY, 12200-INC-ONLY						Rule Assigned:				Offset Well Error:	1.00 usft	
Reference	Offset	Reference	Offset	Reference	Offset	Highside Toolface (°)	Offset Wellbore Centre		Distance		Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
9,100.00	8,978.44	8,950.73	8,978.44	29.53	200.72	-3.557	-926.09	2,946.08	3,169.23	2,947.61	221.62	14.300		
9,150.00	9,023.57	8,995.86	9,023.57	29.49	201.74	-3.733	-926.09	2,946.08	3,147.78	2,925.16	222.62	14.140		
9,200.00	9,066.65	9,038.95	9,066.65	29.46	202.72	-3.961	-926.09	2,946.08	3,122.48	2,898.91	223.57	13.966		
9,250.00	9,107.37	9,079.66	9,107.37	29.43	203.64	-4.253	-926.09	2,946.08	3,093.54	2,869.06	224.48	13.781		
9,300.00	9,145.40	9,118.18	9,145.87	29.43	204.51	-4.649	-925.36	2,946.08	3,061.20	2,835.87	225.34	13.585		
9,350.00	9,180.46	9,153.75	9,181.44	29.44	205.31	-5.135	-925.50	2,946.08	3,025.63	2,799.50	226.13	13.380		
9,400.00	9,212.28	9,186.04	9,213.73	29.48	206.04	-5.773	-925.71	2,946.08	2,987.14	2,760.29	226.85	13.168		
9,450.00	9,240.62	9,214.80	9,242.48	29.56	206.69	-6.633	-925.97	2,946.08	2,946.03	2,718.53	227.50	12.949		
9,500.00	9,265.27	9,237.63	9,265.27	29.67	207.23	-7.829	-926.09	2,946.08	2,902.62	2,674.58	228.04	12.728		
9,550.00	9,286.03	9,258.39	9,286.03	29.83	207.74	-9.605	-926.09	2,946.08	2,857.24	2,628.68	228.56	12.501		
9,600.00	9,302.75	9,275.11	9,302.75	30.04	208.15	-12.426	-926.09	2,946.08	2,810.23	2,581.24	228.99	12.272		
9,650.00	9,315.30	9,287.66	9,315.30	30.29	208.46	-17.482	-926.09	2,946.08	2,761.95	2,532.63	229.32	12.044		
9,700.00	9,323.58	9,295.94	9,323.58	30.60	208.66	-28.624	-926.09	2,946.08	2,712.77	2,483.22	229.55	11.818		
9,750.00	9,327.54	9,299.90	9,327.54	30.95	208.76	-62.408	-926.09	2,946.08	2,663.05	2,433.37	229.68	11.594		
9,760.41	9,327.82	9,300.18	9,327.82	31.03	208.77	-75.691	-926.09	2,946.08	2,652.67	2,422.97	229.70	11.548		
9,800.00	9,328.51	9,300.87	9,328.51	31.34	208.78	-75.897	-926.09	2,946.08	2,613.18	2,383.43	229.75	11.374		
9,900.00	9,330.25	9,302.61	9,330.25	32.24	208.83	-76.417	-926.09	2,946.08	2,513.45	2,283.57	229.88	10.934		
10,000.00	9,332.00	9,304.36	9,332.00	33.27	208.87	-76.940	-926.09	2,946.08	2,413.73	2,183.72	230.02	10.494		
10,100.00	9,333.74	9,306.10	9,333.74	34.41	208.91	-77.465	-926.09	2,946.08	2,314.04	2,083.88	230.17	10.054		
10,200.00	9,335.49	9,307.85	9,335.49	35.67	208.95	-77.992	-926.09	2,946.08	2,214.38	1,984.05	230.33	9.614		
10,300.00	9,337.23	9,309.59	9,337.23	37.01	209.00	-78.521	-926.09	2,946.08	2,114.74	1,884.24	230.50	9.174		
10,400.00	9,338.98	9,311.34	9,338.98	38.45	209.04	-79.053	-926.09	2,946.08	2,015.14	1,784.44	230.70	8.735		
10,500.00	9,340.72	9,313.09	9,340.72	39.96	209.08	-79.586	-926.09	2,946.08	1,915.58	1,684.67	230.91	8.296		
10,600.00	9,342.47	9,314.83	9,342.47	41.55	209.13	-80.121	-926.09	2,946.08	1,816.07	1,584.92	231.15	7.857		
10,700.00	9,344.21	9,316.58	9,344.21	43.19	209.17	-80.658	-926.09	2,946.08	1,716.61	1,485.20	231.41	7.418		
10,800.00	9,345.96	9,318.32	9,345.96	44.89	209.21	-81.196	-926.09	2,946.08	1,617.22	1,385.51	231.71	6.980		
10,900.00	9,347.70	9,320.07	9,347.70	46.64	209.25	-81.736	-926.09	2,946.08	1,517.91	1,285.86	232.04	6.541		
11,000.00	9,349.45	9,321.81	9,349.45	48.44	209.30	-82.277	-926.09	2,946.08	1,418.69	1,186.25	232.43	6.104		
11,100.00	9,351.19	9,323.56	9,351.19	50.28	209.34	-82.820	-926.09	2,946.08	1,319.58	1,086.70	232.88	5.666		
11,200.00	9,352.94	9,325.30	9,352.94	52.15	209.38	-83.364	-926.09	2,946.08	1,220.62	987.21	233.41	5.229		
11,300.00	9,354.69	9,327.05	9,354.69	54.06	209.43	-83.910	-926.09	2,946.08	1,121.84	887.80	234.04	4.793		
11,400.00	9,356.43	9,328.79	9,356.43	56.00	209.47	-84.456	-926.09	2,946.08	1,023.29	788.48	234.81	4.358		
11,500.00	9,358.18	9,330.54	9,358.18	57.96	209.51	-85.003	-926.09	2,946.08	925.05	689.28	235.77	3.924		
11,600.00	9,359.92	9,332.28	9,359.92	59.95	209.55	-85.552	-926.09	2,946.08	827.24	590.25	236.99	3.491		
11,700.00	9,361.67	9,334.03	9,361.67	61.96	209.60	-86.101	-926.09	2,946.08	730.00	491.43	238.57	3.060		
11,800.00	9,363.41	9,335.77	9,363.41	63.99	209.64	-86.651	-926.09	2,946.08	633.63	392.93	240.70	2.632		
11,900.00	9,365.16	9,337.52	9,365.16	66.03	209.68	-87.201	-926.09	2,946.08	538.57	294.90	243.67	2.210		
12,000.00	9,366.90	9,339.26	9,366.90	68.10	209.73	-87.752	-926.09	2,946.08	445.68	197.71	247.97	1.797		
12,100.00	9,368.65	9,341.01	9,368.65	70.18	209.77	-88.304	-926.09	2,946.08	356.64	102.20	254.44	1.402 Level 3		
12,200.00	9,370.39	9,342.75	9,370.39	72.27	209.81	-88.856	-926.09	2,946.08	275.23	10.91	264.31	1.041 Level 3		
12,300.00	9,372.14	9,344.50	9,372.14	74.37	209.85	-89.408	-926.09	2,946.08	210.48	-67.28	277.76	0.758 Level 3		
12,400.00	9,373.88	9,346.24	9,373.88	76.49	209.90	-89.960	-926.09	2,946.08	181.23	-105.05	286.28	0.633 Level 3		
12,407.30	9,374.01	9,346.37	9,374.01	76.65	209.90	-90.000	-926.09	2,946.08	181.09	-105.14	286.23	0.633 Level 3, CC, ES, SF		
12,500.00	9,375.63	9,347.99	9,375.63	78.62	209.94	-90.512	-926.09	2,946.08	203.43	-73.78	277.21	0.734 Level 3		
12,600.00	9,377.37	9,349.74	9,377.37	80.75	209.98	-91.064	-926.09	2,946.08	264.42	2.13	262.29	1.008 Level 3		
12,700.00	9,379.12	9,351.48	9,379.12	82.90	210.03	-91.616	-926.09	2,946.08	344.15	92.65	251.51	1.368 Level 3		
12,800.00	9,380.86	9,353.23	9,380.86	85.06	210.07	-92.167	-926.09	2,946.08	432.39	187.63	244.76	1.767		
12,900.00	9,382.61	9,354.97	9,382.61	87.22	210.11	-92.718	-926.09	2,946.08	524.86	284.32	240.54	2.182		
13,000.00	9,384.35	9,356.72	9,384.35	89.39	210.15	-93.269	-926.09	2,946.08	619.66	381.84	237.82	2.606		
13,100.00	9,386.10	9,358.46	9,386.10	91.56	210.20	-93.819	-926.09	2,946.08	715.88	479.85	236.03	3.033		
13,200.00	9,387.84	9,360.21	9,387.84	93.75	210.24	-94.368	-926.09	2,946.08	813.01	578.18	234.83	3.462		
13,300.00	9,389.59	9,361.95	9,389.59	95.93	210.28	-94.917	-926.09	2,946.08	910.75	676.76	234.00	3.892		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	Marathon Oil Permian LLC	Local Co-ordinate Reference:	Well Decimus 5 WXY Fed Com 1H
Project:	Eddy County, NM (NAD27-NME)	TVD Reference:	RKB @ 3067.60usft (Cactus 169)
Reference Site:	Decimus 5 WXY Fed Com	MD Reference:	RKB @ 3067.60usft (Cactus 169)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Decimus 5 WXY Fed Com 1H	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	USA Compass
Reference Design:	Plan 1 07-22-22	Offset TVD Reference:	Reference Datum

Offset Design: Maximus/Decimus Offsets - Carrasco 6 Com 1 - OH - Surveys													Offset Site Error: 0.00 usft
Survey Program: 100-INC-ONLY, 12200-INC-ONLY													Offset Well Error: 1.00 usft
Reference	Offset	Semi Major Axis		Rule Assigned:		Distance		Warning					
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
13,400.00	9,391.34	9,363.70	9,391.34	98.13	210.32	-95.464	-926.09	2,946.08	1,008.94	775.51	233.42	4.322	
13,500.00	9,393.08	9,365.44	9,393.08	100.33	210.37	-96.011	-926.09	2,946.08	1,107.44	874.42	233.03	4.752	
13,600.00	9,394.83	9,367.19	9,394.83	102.53	210.41	-96.556	-926.09	2,946.08	1,206.19	973.44	232.75	5.182	
13,700.00	9,396.57	9,368.93	9,396.57	104.74	210.45	-97.101	-926.09	2,946.08	1,305.13	1,072.56	232.57	5.612	
13,800.00	9,398.32	9,370.68	9,398.32	106.95	210.50	-97.644	-926.09	2,946.08	1,404.22	1,171.76	232.45	6.041	
13,900.00	9,400.06	9,372.42	9,400.06	109.16	210.54	-98.185	-926.09	2,946.08	1,503.42	1,271.04	232.39	6.469	
14,000.00	9,401.81	9,374.17	9,401.81	111.38	210.58	-98.725	-926.09	2,946.08	1,602.73	1,370.37	232.36	6.898	
14,100.00	9,403.55	9,375.91	9,403.55	113.61	210.62	-99.264	-926.09	2,946.08	1,702.11	1,469.75	232.36	7.325	
14,200.00	9,405.30	9,377.66	9,405.30	115.83	210.67	-99.801	-926.09	2,946.08	1,801.56	1,569.17	232.39	7.752	
14,300.00	9,407.04	9,379.40	9,407.04	118.06	210.71	-100.336	-926.09	2,946.08	1,901.06	1,668.63	232.43	8.179	
14,400.00	9,408.79	9,381.15	9,408.79	120.30	210.75	-100.870	-926.09	2,946.08	2,000.61	1,768.13	232.49	8.605	
14,500.00	9,410.53	9,382.89	9,410.53	122.53	210.80	-101.401	-926.09	2,946.08	2,100.21	1,867.65	232.56	9.031	
14,600.00	9,412.28	9,384.64	9,412.28	124.77	210.84	-101.931	-926.09	2,946.08	2,199.84	1,967.20	232.64	9.456	
14,700.00	9,414.02	9,386.39	9,414.02	127.01	210.88	-102.458	-926.09	2,946.08	2,299.50	2,066.77	232.73	9.881	
14,800.00	9,415.77	9,388.13	9,415.77	129.25	210.92	-102.983	-926.09	2,946.08	2,399.18	2,166.36	232.83	10.305	
14,900.00	9,417.51	9,389.89	9,417.52	131.50	210.97	-103.446	-925.21	2,946.08	2,498.96	2,266.02	232.94	10.728	
15,000.00	9,419.26	9,391.66	9,419.29	133.74	211.01	-103.971	-925.21	2,946.08	2,598.69	2,365.64	233.04	11.151	
15,100.00	9,421.00	9,393.43	9,421.06	135.99	211.05	-104.494	-925.21	2,946.08	2,698.44	2,465.28	233.16	11.573	
15,200.00	9,422.75	9,395.19	9,422.82	138.24	211.10	-105.014	-925.21	2,946.08	2,798.20	2,564.93	233.27	11.995	
15,300.00	9,424.49	9,396.96	9,424.59	140.50	211.14	-105.532	-925.21	2,946.08	2,897.98	2,664.59	233.40	12.417	
15,400.00	9,426.24	9,398.73	9,426.36	142.75	211.18	-106.047	-925.22	2,946.08	2,997.78	2,764.26	233.52	12.837	
15,500.00	9,427.99	9,400.50	9,428.12	145.01	211.23	-106.559	-925.22	2,946.08	3,097.58	2,863.94	233.65	13.258	
15,600.00	9,429.73	9,402.26	9,429.89	147.26	211.27	-107.069	-925.22	2,946.08	3,197.40	2,963.62	233.78	13.677	
15,700.00	9,431.48	9,404.03	9,431.66	149.52	211.31	-107.576	-925.22	2,946.08	3,297.23	3,063.32	233.91	14.096	
15,800.00	9,433.22	9,405.80	9,433.42	151.78	211.36	-108.081	-925.22	2,946.08	3,397.06	3,163.02	234.04	14.515	
15,900.00	9,434.97	9,407.56	9,435.19	154.04	211.40	-108.582	-925.22	2,946.08	3,496.91	3,262.73	234.18	14.933	
16,000.00	9,436.71	9,409.33	9,436.96	156.31	211.44	-109.081	-925.23	2,946.08	3,596.76	3,362.44	234.32	15.350	
16,100.00	9,438.46	9,411.10	9,438.72	158.57	211.49	-109.576	-925.23	2,946.08	3,696.62	3,462.16	234.46	15.767	
16,200.00	9,440.20	9,412.86	9,440.49	160.84	211.53	-110.069	-925.23	2,946.08	3,796.49	3,561.89	234.60	16.183	
16,300.00	9,441.95	9,414.63	9,442.26	163.10	211.57	-110.558	-925.24	2,946.08	3,896.36	3,661.62	234.74	16.598	
16,400.00	9,443.69	9,416.40	9,444.02	165.37	211.62	-111.045	-925.24	2,946.08	3,996.24	3,761.35	234.89	17.013	
16,500.00	9,445.44	9,418.16	9,445.79	167.64	211.66	-111.528	-925.24	2,946.08	4,096.12	3,861.09	235.03	17.428	
16,600.00	9,447.18	9,419.93	9,447.56	169.91	211.70	-112.008	-925.25	2,946.08	4,196.01	3,960.83	235.18	17.842	
16,700.00	9,448.93	9,421.70	9,449.32	172.18	211.75	-112.485	-925.25	2,946.08	4,295.90	4,060.57	235.33	18.255	
16,800.00	9,450.67	9,423.46	9,451.09	174.45	211.79	-112.959	-925.25	2,946.08	4,395.80	4,160.32	235.48	18.667	
16,900.00	9,452.42	9,425.23	9,452.86	176.73	211.84	-113.429	-925.26	2,946.08	4,495.70	4,260.07	235.63	19.079	
17,000.00	9,454.16	9,427.00	9,454.62	179.00	211.88	-113.897	-925.26	2,946.08	4,595.61	4,359.82	235.79	19.491	
17,100.00	9,455.91	9,428.76	9,456.39	181.28	211.92	-114.360	-925.27	2,946.08	4,695.51	4,459.58	235.94	19.901	
17,200.00	9,457.65	9,430.53	9,458.16	183.55	211.97	-114.821	-925.27	2,946.08	4,795.43	4,559.33	236.09	20.311	
17,300.00	9,459.40	9,432.30	9,459.92	185.83	212.01	-115.278	-925.28	2,946.08	4,895.34	4,659.09	236.25	20.721	
17,400.00	9,461.14	9,434.06	9,461.69	188.10	212.05	-115.732	-925.28	2,946.08	4,995.26	4,758.85	236.41	21.130	
17,500.00	9,462.89	9,435.83	9,463.46	190.38	212.10	-116.183	-925.29	2,946.08	5,095.18	4,858.61	236.57	21.538	
17,600.00	9,464.64	9,437.60	9,465.22	192.66	212.14	-116.630	-925.29	2,946.08	5,195.10	4,958.37	236.72	21.946	
17,700.00	9,466.38	9,439.36	9,466.99	194.94	212.18	-117.073	-925.30	2,946.08	5,295.02	5,058.14	236.88	22.353	
17,800.00	9,468.13	9,441.13	9,468.76	197.22	212.23	-117.513	-925.31	2,946.08	5,394.95	5,157.90	237.05	22.759	
17,900.00	9,469.87	9,442.90	9,470.52	199.50	212.27	-117.950	-925.31	2,946.08	5,494.88	5,257.67	237.21	23.165	
18,000.00	9,471.62	9,444.66	9,472.29	201.78	212.31	-118.384	-925.32	2,946.08	5,594.81	5,357.44	237.37	23.570	
18,100.00	9,473.36	9,446.43	9,474.06	204.06	212.36	-118.813	-925.33	2,946.08	5,694.74	5,457.21	237.53	23.974	
18,200.00	9,475.11	9,448.20	9,475.82	206.34	212.40	-119.240	-925.33	2,946.08	5,794.68	5,556.98	237.70	24.378	
18,300.00	9,476.85	9,449.96	9,477.59	208.62	212.44	-119.663	-925.34	2,946.08	5,894.61	5,656.75	237.86	24.781	
18,400.00	9,478.60	9,451.73	9,479.35	210.91	212.49	-120.082	-925.35	2,946.08	5,994.55	5,756.52	238.03	25.184	
18,500.00	9,480.34	9,453.50	9,481.12	213.19	212.53	-120.498	-925.36	2,946.08	6,094.49	5,856.29	238.20	25.586	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	Marathon Oil Permian LLC	Local Co-ordinate Reference:	Well Decimus 5 WXY Fed Com 1H
Project:	Eddy County, NM (NAD27-NME)	TVD Reference:	RKB @ 3067.60usft (Cactus 169)
Reference Site:	Decimus 5 WXY Fed Com	MD Reference:	RKB @ 3067.60usft (Cactus 169)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Decimus 5 WXY Fed Com 1H	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	USA Compass
Reference Design:	Plan 1 07-22-22	Offset TVD Reference:	Reference Datum

Offset Design: Maximus/Decimus Offsets - Carrasco 6 Com 1 - OH - Surveys														Offset Site Error:	0.00 usft
Survey Program: 100-INC-ONLY, 12200-INC-ONLY														Offset Well Error:	1.00 usft
Reference	Offset	Semi Major Axis		Offset Wellbore Centre		Distance		Rule Assigned:		Warning					
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
18,600.00	9,482.09	9,455.26	9,482.89	215.48	212.57	-120.911	-925.36	2,946.08	6,194.43	5,956.06	238.37	25.987			
18,700.00	9,483.83	9,457.03	9,484.65	217.76	212.62	-121.320	-925.37	2,946.08	6,294.37	6,055.84	238.53	26.388			
18,800.00	9,485.58	9,458.80	9,486.42	220.04	212.66	-121.725	-925.38	2,946.08	6,394.32	6,155.61	238.70	26.788			
18,900.00	9,487.32	9,460.56	9,488.19	222.33	212.70	-122.127	-925.39	2,946.08	6,494.26	6,255.39	238.87	27.187			
19,000.00	9,489.07	9,462.33	9,489.95	224.62	212.75	-122.526	-925.40	2,946.08	6,594.21	6,355.16	239.05	27.586			
19,100.00	9,490.81	9,464.10	9,491.72	226.90	212.79	-122.921	-925.41	2,946.08	6,694.15	6,454.94	239.22	27.984			
19,200.00	9,492.56	9,465.86	9,493.49	229.19	212.83	-123.313	-925.41	2,946.08	6,794.10	6,554.71	239.39	28.381			
19,300.00	9,494.30	9,467.63	9,495.25	231.48	212.88	-123.702	-925.42	2,946.08	6,894.05	6,654.49	239.56	28.778			
19,303.31	9,494.36	9,467.69	9,495.31	231.55	212.88	-123.714	-925.42	2,946.08	6,897.36	6,657.79	239.57	28.791			



Anticollision Report



Company:	Marathon Oil Permian LLC	Local Co-ordinate Reference:	Well Decimus 5 WXY Fed Com 1H
Project:	Eddy County, NM (NAD27-NME)	TVD Reference:	RKB @ 3067.60usft (Cactus 169)
Reference Site:	Decimus 5 WXY Fed Com	MD Reference:	RKB @ 3067.60usft (Cactus 169)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Decimus 5 WXY Fed Com 1H	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	USA Compass
Reference Design:	Plan 1 07-22-22	Offset TVD Reference:	Reference Datum

Offset Design: Maximus/Decimus Offsets - Carrasco 6 Com 2 - OH - Surveys													Offset Site Error: 0.00 usft
Survey Program: 196-INC-ONLY													Offset Well Error: 1.00 usft
Reference	Offset	Rule Assigned:											
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference	Offset	Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
							+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
0.00	0.00	0.00	19.60	1.00	1.00	98.038	-490.06	3,470.05	3,504.54				
100.00	100.00	80.40	100.00	1.13	1.58	98.038	-490.06	3,470.05	3,504.48	3,501.77	2.71	1,291.078	
200.00	200.00	180.40	200.00	1.66	2.92	98.038	-490.06	3,470.05	3,504.48	3,499.90	4.58	764.507	
291.60	291.60	272.01	291.60	2.02	4.51	98.034	-489.81	3,470.05	3,504.45	3,497.92	6.53	536.751	
300.00	300.00	280.07	299.66	2.06	4.65	98.034	-489.81	3,470.05	3,504.45	3,497.74	6.71	522.328	
400.00	400.00	380.43	400.00	2.39	6.62	98.038	-490.06	3,470.05	3,504.48	3,495.46	9.02	388.713	
500.00	500.00	480.43	500.00	2.69	8.90	98.038	-490.06	3,470.05	3,504.48	3,492.89	11.59	302.330	
531.75	531.75	511.50	531.06	2.78	9.61	98.026	-489.28	3,470.05	3,504.37	3,491.98	12.39	282.915	
600.00	600.00	577.35	596.90	2.96	11.12	98.030	-489.53	3,470.05	3,504.41	3,490.33	14.08	248.935	
700.00	700.00	680.47	700.00	3.21	13.40	98.038	-490.06	3,470.05	3,504.48	3,487.87	16.61	210.981	
800.00	800.00	780.47	800.00	3.44	15.51	98.038	-490.06	3,470.05	3,504.48	3,485.53	18.95	184.921	
833.30	833.30	813.50	833.03	3.52	16.21	98.033	-489.72	3,470.05	3,504.43	3,484.71	19.72	177.701	
900.00	900.00	879.30	898.83	3.66	17.59	98.035	-489.82	3,470.05	3,504.45	3,483.19	21.26	164.871	
1,000.00	1,000.00	980.49	1,000.00	3.87	19.75	98.038	-490.06	3,470.05	3,504.48	3,480.85	23.63	148.332	
1,100.00	1,100.00	1,080.49	1,100.00	4.07	21.95	98.038	-490.06	3,470.05	3,504.48	3,478.46	26.02	134.674	
1,136.06	1,136.06	1,116.37	1,135.87	4.14	22.74	98.027	-489.36	3,470.05	3,504.38	3,477.50	26.88	130.376	
1,200.00	1,200.00	1,178.65	1,198.15	4.26	24.11	98.029	-489.49	3,470.05	3,504.40	3,476.03	28.37	123.525	
1,300.00	1,300.00	1,280.54	1,300.00	4.45	26.36	98.038	-490.06	3,470.05	3,504.48	3,473.67	30.81	113.753	
1,400.00	1,399.98	1,380.52	1,399.98	4.72	28.68	-95.326	-490.06	3,470.05	3,504.64	3,471.35	33.29	105.276	
1,500.00	1,499.84	1,479.03	1,498.48	4.98	30.97	-95.410	-489.43	3,470.05	3,505.05	3,469.33	35.72	98.134	
1,600.00	1,599.45	1,576.17	1,595.61	5.26	33.22	-95.521	-489.96	3,470.05	3,505.95	3,467.84	38.11	91.992	
1,700.00	1,698.70	1,679.32	1,698.70	5.55	35.97	-95.699	-490.06	3,470.05	3,507.17	3,466.16	41.00	85.537	
1,800.00	1,797.47	1,778.20	1,797.47	5.87	38.63	-95.918	-490.06	3,470.05	3,508.77	3,464.95	43.81	80.083	
1,899.87	1,895.50	1,873.72	1,892.97	6.20	40.93	-96.185	-489.26	3,470.05	3,510.72	3,464.45	46.27	75.876	
1,900.00	1,895.62	1,873.83	1,893.08	6.20	40.93	-96.186	-489.26	3,470.05	3,510.72	3,464.45	46.27	75.871	
2,000.00	1,993.44	1,974.24	1,993.44	6.48	43.35	-96.511	-490.06	3,470.05	3,513.17	3,464.30	48.87	71.889	
2,100.00	2,091.25	2,070.73	2,089.93	6.78	45.69	-96.837	-489.99	3,470.05	3,515.63	3,464.23	51.40	68.404	
2,200.00	2,189.07	2,167.72	2,186.85	7.10	48.65	-97.172	-489.43	3,470.05	3,518.16	3,463.61	54.55	64.490	
2,300.00	2,286.89	2,266.69	2,285.70	7.43	51.82	-97.502	-489.56	3,470.05	3,520.89	3,462.95	57.94	60.770	
2,400.00	2,384.70	2,360.56	2,379.48	7.78	54.75	-97.811	-489.90	3,470.05	3,523.76	3,462.67	61.09	57.681	
2,500.00	2,482.52	2,463.70	2,482.52	8.14	58.05	-98.153	-490.06	3,470.05	3,526.72	3,462.10	64.63	54.571	
2,600.00	2,580.33	2,558.27	2,577.05	8.52	61.27	-98.481	-489.34	3,470.05	3,529.74	3,461.65	68.09	51.839	
2,700.00	2,678.15	2,659.49	2,678.15	8.90	64.60	-98.807	-490.06	3,470.05	3,532.99	3,461.32	71.66	49.299	
2,800.00	2,775.96	2,757.31	2,775.96	9.29	67.73	-99.132	-490.06	3,470.05	3,536.30	3,461.25	75.05	47.119	
2,900.00	2,873.78	2,852.31	2,870.90	9.69	70.78	-99.466	-488.93	3,470.05	3,539.66	3,461.30	78.35	45.175	
3,000.00	2,971.60	2,953.18	2,971.60	10.10	73.99	-99.782	-490.06	3,470.05	3,543.28	3,461.45	81.83	43.302	
3,100.00	3,069.41	3,051.09	3,069.41	10.51	77.23	-100.106	-490.06	3,470.05	3,546.95	3,461.61	85.34	41.563	
3,200.00	3,167.23	3,148.91	3,167.23	10.92	81.46	-100.429	-490.06	3,470.05	3,550.73	3,460.89	89.84	39.521	
3,300.00	3,265.04	3,245.09	3,263.35	11.34	85.62	-100.762	-489.02	3,470.05	3,554.59	3,460.31	94.28	37.701	
3,400.00	3,362.86	3,345.06	3,362.86	11.77	90.62	-101.074	-490.06	3,470.05	3,558.65	3,459.09	99.56	35.743	
3,500.00	3,460.67	3,443.28	3,460.67	12.20	97.35	-101.395	-490.06	3,470.05	3,562.79	3,456.21	106.58	33.427	
3,600.00	3,558.49	3,538.36	3,555.52	12.63	104.76	-101.723	-488.92	3,470.05	3,567.02	3,452.74	114.28	31.213	
3,700.00	3,656.31	3,640.15	3,656.31	13.07	114.11	-102.035	-490.06	3,470.05	3,571.41	3,447.49	123.92	28.820	
3,800.00	3,754.12	3,737.96	3,754.12	13.50	123.55	-102.354	-490.06	3,470.05	3,575.90	3,442.24	133.66	26.754	
3,900.00	3,851.94	3,835.78	3,851.94	13.94	132.99	-102.672	-490.06	3,470.05	3,580.50	3,437.09	143.40	24.968	
4,000.00	3,949.75	3,933.59	3,949.75	14.39	142.43	-102.989	-490.06	3,470.05	3,585.21	3,432.06	153.15	23.410	
4,100.00	4,047.57	4,031.91	4,047.00	14.83	151.92	-103.528	-475.77	3,470.05	3,590.13	3,427.18	162.95	22.032	
4,200.00	4,145.38	4,131.63	4,146.44	15.28	161.54	-103.826	-477.19	3,470.05	3,595.13	3,422.24	172.89	20.795	
4,300.00	4,243.20	4,232.28	4,246.75	15.73	171.26	-104.102	-480.20	3,470.05	3,600.20	3,417.29	182.91	19.683	
4,400.00	4,341.02	4,333.82	4,347.85	16.18	181.06	-104.354	-484.83	3,470.05	3,605.32	3,412.30	193.03	18.678	
4,500.00	4,438.83	4,430.55	4,438.83	16.63	190.36	-104.564	-490.06	3,470.05	3,610.48	3,407.84	202.64	17.817	
4,600.00	4,536.65	4,529.18	4,536.65	17.08	199.14	-104.876	-490.06	3,470.05	3,615.87	3,404.14	211.73	17.077	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	Marathon Oil Permian LLC	Local Co-ordinate Reference:	Well Decimus 5 WXY Fed Com 1H
Project:	Eddy County, NM (NAD27-NME)	TVD Reference:	RKB @ 3067.60usft (Cactus 169)
Reference Site:	Decimus 5 WXY Fed Com	MD Reference:	RKB @ 3067.60usft (Cactus 169)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Decimus 5 WXY Fed Com 1H	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	USA Compass
Reference Design:	Plan 1 07-22-22	Offset TVD Reference:	Reference Datum

Offset Design: Maximus/Decimus Offsets - Carrasco 6 Com 2 - OH - Surveys													Offset Site Error:	0.00 usft
Survey Program:		196-INC-ONLY					Rule Assigned:				Offset Well Error:	1.00 usft		
Reference	Offset	Semi Major Axis		Offset Wellbore Centre		Distance				Warning				
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
4,700.00	4,634.46	4,627.00	4,634.46	17.53	207.79	-105.188	-490.06	3,470.05	3,621.38	3,400.67	220.71	16.408		
4,800.00	4,732.28	4,733.35	4,740.27	17.99	217.20	-105.554	-488.09	3,470.05	3,627.09	3,396.64	230.45	15.739		
4,900.00	4,830.09	4,824.78	4,830.09	18.44	225.42	-105.808	-490.06	3,470.05	3,632.72	3,393.72	238.99	15.200		
5,000.00	4,927.91	4,922.79	4,927.78	18.90	234.33	-106.192	-485.13	3,470.05	3,638.82	3,390.59	248.23	14.659		
5,100.00	5,025.72	5,032.34	5,036.99	19.36	244.28	-106.494	-487.81	3,470.05	3,644.65	3,386.13	258.51	14.099		
5,200.00	5,123.54	5,120.91	5,123.54	19.82	252.40	-106.731	-490.06	3,470.05	3,650.55	3,383.58	266.97	13.674		
5,300.00	5,221.36	5,219.63	5,221.36	20.28	261.62	-107.036	-490.06	3,470.05	3,656.71	3,380.19	276.52	13.224		
5,400.00	5,319.17	5,331.90	5,333.19	20.74	272.20	-107.407	-488.56	3,470.05	3,663.11	3,375.67	287.44	12.744		
5,500.00	5,416.99	5,417.02	5,416.99	21.20	280.33	-107.645	-490.06	3,470.05	3,669.35	3,373.44	295.90	12.400		
5,600.00	5,514.80	5,535.38	5,534.81	21.66	291.69	-108.021	-489.26	3,470.05	3,675.95	3,368.34	307.62	11.950		
5,700.00	5,612.62	5,614.50	5,612.62	22.12	299.41	-108.249	-490.06	3,470.05	3,682.42	3,366.75	315.67	11.665		
5,800.00	5,710.43	5,740.02	5,737.51	22.58	311.68	-108.628	-490.36	3,470.05	3,689.18	3,360.89	328.29	11.238		
5,900.00	5,808.25	5,812.28	5,808.25	23.05	318.86	-108.849	-490.06	3,470.05	3,695.91	3,360.09	335.82	11.006		
6,000.00	5,906.07	5,910.72	5,906.07	23.51	328.30	-109.148	-490.06	3,470.05	3,702.81	3,357.21	345.60	10.714		
6,100.00	6,003.88	6,020.31	6,015.12	23.98	338.76	-109.547	-485.58	3,470.05	3,710.34	3,353.91	356.43	10.410		
6,200.00	6,101.70	6,149.19	6,143.25	24.44	351.06	-109.822	-493.01	3,470.05	3,716.81	3,347.74	369.07	10.071		
6,300.00	6,199.51	6,206.92	6,199.51	24.91	357.30	-110.037	-490.06	3,470.05	3,724.13	3,348.47	375.67	9.913		
6,400.00	6,297.33	6,304.73	6,297.33	25.37	367.41	-110.331	-490.06	3,470.05	3,731.45	3,345.32	386.13	9.664		
6,500.00	6,395.14	6,411.84	6,403.78	25.84	378.47	-110.756	-482.90	3,470.05	3,739.83	3,342.27	397.57	9.407		
6,600.00	6,492.96	6,528.42	6,519.96	26.31	390.51	-111.045	-486.77	3,470.05	3,746.93	3,336.96	409.97	9.140		
6,700.00	6,590.78	6,603.43	6,590.78	26.77	398.39	-111.206	-490.06	3,470.05	3,753.99	3,335.79	418.20	8.977		
6,785.59	6,674.50	6,688.15	6,674.50	27.17	407.82	-111.454	-490.06	3,470.05	3,760.59	3,332.65	427.93	8.788		
6,800.00	6,688.60	6,702.31	6,688.60	27.23	409.36	-111.516	-490.06	3,470.05	3,761.69	3,332.17	429.52	8.758		
6,900.00	6,786.85	6,801.14	6,786.85	27.71	419.28	-111.905	-490.06	3,470.05	3,768.67	3,328.89	439.78	8.569		
7,000.00	6,885.69	6,900.69	6,885.69	28.16	429.12	-112.222	-490.06	3,470.05	3,774.41	3,324.48	449.93	8.389		
7,100.00	6,985.00	7,001.86	6,985.00	28.59	438.63	-112.468	-490.06	3,470.05	3,778.88	3,319.18	459.70	8.220		
7,200.00	7,084.66	7,102.59	7,084.66	28.98	448.37	-112.641	-490.06	3,470.05	3,782.04	3,312.38	469.66	8.053		
7,300.00	7,184.54	7,202.48	7,184.54	29.33	458.14	-112.741	-490.06	3,470.05	3,783.87	3,304.28	479.59	7.890		
7,385.47	7,270.00	7,302.70	7,284.21	29.47	467.94	80.496	-484.97	3,470.05	3,785.22	3,295.75	489.47	7.733		
7,400.00	7,284.53	7,323.35	7,304.78	29.47	469.95	80.505	-485.54	3,470.05	3,785.16	3,293.67	491.48	7.701		
7,500.00	7,384.53	7,466.16	7,446.69	29.48	483.92	80.641	-494.65	3,470.05	3,784.12	3,278.71	505.41	7.487		
7,507.32	7,391.85	7,476.64	7,457.06	29.48	484.94	80.656	-495.67	3,470.05	3,784.01	3,277.58	506.43	7.472		
7,600.00	7,484.53	7,506.05	7,484.53	29.50	487.55	80.572	-490.06	3,470.05	3,784.36	3,275.27	509.09	7.434		
7,700.00	7,584.53	7,606.05	7,584.53	29.51	497.05	80.572	-490.06	3,470.05	3,784.36	3,265.75	518.61	7.297		
7,800.00	7,684.53	7,740.34	7,718.07	29.53	509.81	80.542	-488.04	3,470.05	3,784.84	3,253.45	531.39	7.123		
7,900.00	7,784.53	7,808.88	7,784.53	29.55	516.27	80.572	-490.06	3,470.05	3,784.36	3,246.50	537.86	7.036		
8,000.00	7,884.53	7,910.00	7,884.53	29.56	525.72	80.572	-490.06	3,470.05	3,784.36	3,237.03	547.33	6.914		
8,100.00	7,984.53	8,010.31	7,984.53	29.58	535.11	80.572	-490.06	3,470.05	3,784.36	3,227.63	556.73	6.797		
8,200.00	8,084.53	8,111.65	8,084.53	29.60	544.35	80.572	-490.06	3,470.05	3,784.36	3,218.37	565.99	6.686		
8,300.00	8,184.53	8,220.00	8,191.93	29.61	553.70	80.572	-490.06	3,470.05	3,784.37	3,209.00	575.37	6.577		
8,335.99	8,220.53	8,248.60	8,220.53	29.62	556.34	80.572	-490.06	3,470.05	3,784.36	3,206.35	578.00	6.547		
8,400.00	8,284.53	8,313.16	8,284.53	29.63	562.53	80.572	-490.06	3,470.05	3,784.36	3,200.15	584.21	6.478		
8,500.00	8,384.53	8,445.28	8,416.22	29.65	575.87	80.552	-488.69	3,470.05	3,784.72	3,187.15	597.56	6.334		
8,600.00	8,484.53	8,515.26	8,484.53	29.66	583.19	80.572	-490.06	3,470.05	3,784.36	3,179.46	604.90	6.256		
8,700.00	8,584.53	8,616.48	8,584.53	29.68	593.54	80.572	-490.06	3,470.05	3,784.36	3,169.09	615.27	6.151		
8,800.00	8,684.53	8,716.87	8,684.53	29.70	603.38	80.572	-490.06	3,470.05	3,784.36	3,159.23	625.13	6.054		
8,870.41	8,754.95	8,788.75	8,754.95	29.71	610.44	80.572	-490.06	3,470.05	3,784.36	3,152.16	632.20	5.986		
8,900.00	8,784.52	8,818.32	8,784.52	29.70	613.47	-9.392	-490.06	3,470.05	3,783.61	3,148.40	635.21	5.956		
8,950.00	8,834.28	8,902.23	8,868.09	29.66	622.07	-9.507	-489.15	3,470.05	3,779.21	3,135.44	643.77	5.870		
9,000.00	8,883.43	8,918.64	8,883.43	29.62	623.74	-9.656	-490.06	3,470.05	3,769.96	3,124.56	645.41	5.841		
9,050.00	8,931.61	8,966.82	8,931.61	29.58	627.72	-9.922	-490.06	3,470.05	3,756.82	3,107.47	649.35	5.786		
9,100.00	8,978.44	9,013.65	8,978.44	29.53	631.60	-10.291	-490.06	3,470.05	3,739.59	3,086.41	653.18	5.725		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	Marathon Oil Permian LLC	Local Co-ordinate Reference:	Well Decimus 5 WXY Fed Com 1H
Project:	Eddy County, NM (NAD27-NME)	TVD Reference:	RKB @ 3067.60usft (Cactus 169)
Reference Site:	Decimus 5 WXY Fed Com	MD Reference:	RKB @ 3067.60usft (Cactus 169)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Decimus 5 WXY Fed Com 1H	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	USA Compass
Reference Design:	Plan 1 07-22-22	Offset TVD Reference:	Reference Datum

Offset Design: Maximus/Decimus Offsets - Carrasco 6 Com 2 - OH - Surveys													Offset Site Error:	0.00 usft
Survey Program:		196-INC-ONLY					Rule Assigned:		Offset Well Error:		1.00 usft			
Reference	Offset	Reference	Offset	Semi Major Axis	Offset	Highside Toolface	Offset Wellbore Centre		Distance		Minimum Separation	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Separation (usft)			
9,150.00	9,023.57	9,058.78	9,023.57	29.49	635.33	-10.780	-490.06	3,470.05	3,718.40	3,061.52	656.88	5.661		
9,200.00	9,066.65	9,123.19	9,087.35	29.46	640.66	-11.531	-485.63	3,470.05	3,694.22	3,032.03	662.18	5.579		
9,250.00	9,107.37	9,185.53	9,149.35	29.43	645.82	-12.351	-488.68	3,470.05	3,665.30	2,998.01	667.29	5.493		
9,300.00	9,145.40	9,243.99	9,207.32	29.43	650.65	-13.383	-493.37	3,470.05	3,632.82	2,960.76	672.06	5.406		
9,350.00	9,180.46	9,217.68	9,180.46	29.44	648.14	-14.563	-490.06	3,470.05	3,597.75	2,928.15	669.60	5.373		
9,400.00	9,212.28	9,249.51	9,212.28	29.48	649.85	-16.277	-490.06	3,470.05	3,559.78	2,888.47	671.31	5.303		
9,450.00	9,240.62	9,278.14	9,240.86	29.56	651.38	-18.587	-488.63	3,470.05	3,519.49	2,846.62	672.87	5.231		
9,500.00	9,265.27	9,316.19	9,278.86	29.67	653.43	-21.812	-489.05	3,470.05	3,476.64	2,801.69	674.95	5.151		
9,550.00	9,286.03	9,348.29	9,310.92	29.83	655.15	-26.373	-490.04	3,470.05	3,431.79	2,755.08	676.71	5.071		
9,600.00	9,302.75	9,374.17	9,336.73	30.04	656.54	-33.131	-491.25	3,470.05	3,385.32	2,707.17	678.15	4.992		
9,650.00	9,315.30	9,352.91	9,315.30	30.29	655.35	-42.023	-490.06	3,470.05	3,337.81	2,660.77	677.04	4.930		
9,700.00	9,323.58	9,361.19	9,323.58	30.60	655.69	-57.288	-490.06	3,470.05	3,289.38	2,611.91	677.47	4.855		
9,750.00	9,327.54	9,365.15	9,327.54	30.95	655.85	-79.588	-490.06	3,470.05	3,240.45	2,562.71	677.73	4.781		
9,760.41	9,327.82	9,365.43	9,327.82	31.03	655.87	-84.872	-490.06	3,470.05	3,230.23	2,552.46	677.77	4.766		
9,800.00	9,328.51	9,366.12	9,328.51	31.34	655.89	-84.936	-490.06	3,470.05	3,191.38	2,513.50	677.89	4.708		
9,900.00	9,330.25	9,367.86	9,330.25	32.24	655.97	-85.097	-490.06	3,470.05	3,093.34	2,415.14	678.21	4.561		
10,000.00	9,332.00	9,369.61	9,332.00	33.27	656.04	-85.258	-490.06	3,470.05	2,995.43	2,316.88	678.56	4.414		
10,100.00	9,333.74	9,371.35	9,333.74	34.41	656.11	-85.419	-490.06	3,470.05	2,897.66	2,218.73	678.94	4.268		
10,200.00	9,335.49	9,373.10	9,335.49	35.67	656.18	-85.580	-490.06	3,470.05	2,800.05	2,120.70	679.35	4.122		
10,300.00	9,337.23	9,374.84	9,337.23	37.01	656.26	-85.741	-490.06	3,470.05	2,702.61	2,022.81	679.80	3.976		
10,400.00	9,338.98	9,376.59	9,338.98	38.45	656.33	-85.902	-490.06	3,470.05	2,605.36	1,925.06	680.30	3.830		
10,500.00	9,340.72	9,378.33	9,340.72	39.96	656.40	-86.064	-490.06	3,470.05	2,508.33	1,827.48	680.85	3.684		
10,600.00	9,342.47	9,380.33	9,342.70	41.55	656.48	-86.250	-489.54	3,470.05	2,411.67	1,730.21	681.46	3.539		
10,700.00	9,344.21	9,385.53	9,347.90	43.19	656.70	-86.730	-489.56	3,470.05	2,315.16	1,632.87	682.28	3.393		
10,800.00	9,345.96	9,390.72	9,353.09	44.89	656.91	-87.210	-489.60	3,470.05	2,218.95	1,535.77	683.17	3.248		
10,900.00	9,347.70	9,395.92	9,358.28	46.64	657.13	-87.691	-489.68	3,470.05	2,123.08	1,438.94	684.14	3.103		
11,000.00	9,349.45	9,401.12	9,363.47	48.44	657.34	-88.172	-489.78	3,470.05	2,027.61	1,342.40	685.21	2.959		
11,100.00	9,351.19	9,406.31	9,368.66	50.28	657.56	-88.654	-489.91	3,470.05	1,932.59	1,246.22	686.38	2.816		
11,200.00	9,352.94	9,411.51	9,373.85	52.15	657.77	-89.135	-490.07	3,470.05	1,838.10	1,150.43	687.67	2.673		
11,300.00	9,354.69	9,416.70	9,379.03	54.06	657.99	-89.616	-490.26	3,470.05	1,744.22	1,055.12	689.10	2.531		
11,400.00	9,356.43	9,421.89	9,384.21	56.00	658.20	-90.098	-490.48	3,470.05	1,651.05	960.35	690.70	2.390		
11,500.00	9,358.18	9,395.82	9,358.18	57.96	657.12	-87.680	-490.06	3,470.05	1,558.67	867.54	691.13	2.255		
11,600.00	9,359.92	9,397.57	9,359.92	59.95	657.19	-87.842	-490.06	3,470.05	1,467.38	774.38	693.00	2.117		
11,700.00	9,361.67	9,399.31	9,361.67	61.96	657.27	-88.004	-490.06	3,470.05	1,377.30	682.16	695.13	1.981		
11,800.00	9,363.41	9,401.06	9,363.41	63.99	657.34	-88.166	-490.06	3,470.05	1,288.67	591.11	697.56	1.847		
11,900.00	9,365.16	9,402.81	9,365.16	66.03	657.41	-88.328	-490.06	3,470.05	1,201.83	501.48	700.34	1.716		
12,000.00	9,366.90	9,404.55	9,366.90	68.10	657.48	-88.490	-490.06	3,470.05	1,117.19	413.66	703.53	1.588		
12,100.00	9,368.65	9,406.30	9,368.65	70.18	657.56	-88.652	-490.06	3,470.05	1,035.29	328.11	707.18	1.464 Level 3		
12,200.00	9,370.39	9,408.05	9,370.39	72.27	657.63	-88.814	-490.06	3,470.05	956.83	245.50	711.33	1.345 Level 3		
12,300.00	9,372.14	9,409.79	9,372.14	74.37	657.70	-88.976	-490.06	3,470.05	882.74	166.72	716.02	1.233 Level 3		
12,400.00	9,373.88	9,411.59	9,373.88	76.49	657.77	-89.138	-490.06	3,470.05	814.20	92.98	721.22	1.129 Level 3		
12,500.00	9,375.63	9,413.33	9,375.63	78.62	657.82	-89.300	-490.06	3,470.05	752.73	25.92	726.81	1.036 Level 3		
12,600.00	9,377.37	9,415.08	9,377.37	80.75	657.88	-89.462	-490.06	3,470.05	700.20	-32.34	732.54	0.956 Level 3		
12,700.00	9,379.12	9,416.82	9,379.12	82.90	657.93	-89.624	-490.06	3,470.05	658.75	-79.20	737.95	0.893 Level 3		
12,800.00	9,380.86	9,418.57	9,380.86	85.06	657.98	-89.786	-490.06	3,470.05	630.58	-111.83	742.40	0.849 Level 3		
12,900.00	9,382.61	9,420.31	9,382.61	87.22	658.04	-89.949	-490.06	3,470.05	617.48	-127.73	745.21	0.829 Level 3		
12,931.72	9,383.16	9,420.87	9,383.16	87.91	658.05	-90.000	-490.06	3,470.05	616.67	-129.01	745.68	0.827 Level 3, CC, ES, SF		
13,000.00	9,384.35	9,422.06	9,384.35	89.39	658.09	-90.111	-490.06	3,470.05	620.44	-125.51	745.95	0.832 Level 3		
13,100.00	9,386.10	9,423.80	9,386.10	91.56	658.14	-90.273	-490.06	3,470.05	639.21	-105.39	744.60	0.858 Level 3		
13,200.00	9,387.84	9,425.55	9,387.84	93.75	658.20	-90.435	-490.06	3,470.05	672.49	-69.13	741.62	0.907 Level 3		
13,300.00	9,389.59	9,427.30	9,389.59	95.93	658.25	-90.597	-490.06	3,470.05	718.24	-19.38	737.62	0.974 Level 3		
13,400.00	9,391.34	9,429.04	9,391.34	98.13	658.31	-90.759	-490.06	3,470.05	774.28	41.08	733.20	1.056 Level 3		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	Marathon Oil Permian LLC	Local Co-ordinate Reference:	Well Decimus 5 WXY Fed Com 1H
Project:	Eddy County, NM (NAD27-NME)	TVD Reference:	RKB @ 3067.60usft (Cactus 169)
Reference Site:	Decimus 5 WXY Fed Com	MD Reference:	RKB @ 3067.60usft (Cactus 169)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Decimus 5 WXY Fed Com 1H	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	USA Compass
Reference Design:	Plan 1 07-22-22	Offset TVD Reference:	Reference Datum

Offset Design: Maximus/Decimus Offsets - Carrasco 6 Com 2 - OH - Surveys													Offset Site Error: 0.00 usft
Survey Program: 196-INC-ONLY													Offset Well Error: 1.00 usft
Reference		Offset		Semi Major Axis			Offset Wellbore Centre		Distance		Rule Assigned:		Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
13,500.00	9,393.08	9,430.79	9,393.08	100.33	658.36	-90.921	-490.06	3,470.05	838.53	109.76	728.77	1.151	Level 3
13,600.00	9,394.83	9,432.53	9,394.83	102.53	658.41	-91.083	-490.06	3,470.05	909.26	184.68	724.58	1.255	Level 3
13,700.00	9,396.57	9,434.28	9,396.57	104.74	658.47	-91.245	-490.06	3,470.05	985.07	264.33	720.74	1.367	Level 3
13,800.00	9,398.32	9,436.02	9,398.32	106.95	658.52	-91.407	-490.06	3,470.05	1,064.88	347.58	717.30	1.485	Level 3
13,900.00	9,400.06	9,437.77	9,400.06	109.16	658.57	-91.569	-490.06	3,470.05	1,147.86	433.60	714.25	1.607	
14,000.00	9,401.81	9,439.51	9,401.81	111.38	658.63	-91.731	-490.06	3,470.05	1,233.36	521.80	711.56	1.733	
14,100.00	9,403.55	9,441.26	9,403.55	113.61	658.68	-91.893	-490.06	3,470.05	1,320.89	611.70	709.19	1.863	
14,200.00	9,405.30	9,444.21	9,406.50	115.83	658.77	-92.165	-489.73	3,470.05	1,410.23	703.06	707.16	1.994	
14,300.00	9,407.04	9,447.33	9,409.62	118.06	658.87	-92.455	-489.74	3,470.05	1,500.77	795.40	705.37	2.128	
14,400.00	9,408.79	9,450.46	9,412.74	120.30	658.96	-92.744	-489.75	3,470.05	1,592.44	888.65	703.79	2.263	
14,500.00	9,410.53	9,453.58	9,415.86	122.53	659.06	-93.034	-489.78	3,470.05	1,685.06	982.66	702.40	2.399	
14,600.00	9,412.28	9,456.70	9,418.99	124.77	659.16	-93.323	-489.81	3,470.05	1,778.47	1,077.30	701.17	2.536	
14,700.00	9,414.02	9,459.83	9,422.11	127.01	659.25	-93.612	-489.84	3,470.05	1,872.56	1,172.47	700.09	2.675	
14,800.00	9,415.77	9,462.95	9,425.23	129.25	659.35	-93.901	-489.89	3,470.05	1,967.23	1,268.11	699.12	2.814	
14,900.00	9,417.51	9,466.07	9,428.35	131.50	659.44	-94.189	-489.94	3,470.05	2,062.40	1,364.13	698.27	2.954	
15,000.00	9,419.26	9,469.19	9,431.47	133.74	659.54	-94.478	-490.00	3,470.05	2,158.01	1,460.50	697.51	3.094	
15,100.00	9,421.00	9,472.31	9,434.59	135.99	659.64	-94.766	-490.06	3,470.05	2,253.99	1,557.15	696.84	3.235	
15,200.00	9,422.75	9,475.44	9,437.71	138.24	659.73	-95.055	-490.14	3,470.05	2,350.31	1,654.07	696.24	3.376	
15,300.00	9,424.49	9,478.56	9,440.83	140.50	659.83	-95.343	-490.21	3,470.05	2,446.92	1,751.21	695.71	3.517	
15,400.00	9,426.24	9,481.68	9,443.94	142.75	659.93	-95.630	-490.30	3,470.05	2,543.79	1,848.55	695.24	3.659	
15,500.00	9,427.99	9,485.71	9,447.99	145.01	659.43	-94.157	-490.06	3,470.05	2,640.90	1,946.65	694.25	3.804	
15,600.00	9,429.73	9,487.45	9,449.73	147.26	659.49	-94.318	-490.06	3,470.05	2,738.22	2,044.38	693.84	3.946	
15,700.00	9,431.48	9,489.20	9,451.48	149.52	659.54	-94.479	-490.06	3,470.05	2,835.73	2,142.25	693.48	4.089	
15,800.00	9,433.22	9,490.95	9,453.22	151.78	659.59	-94.640	-490.06	3,470.05	2,933.40	2,240.25	693.15	4.232	
15,900.00	9,434.97	9,492.72	9,454.97	154.04	659.64	-94.801	-490.06	3,470.05	3,031.22	2,338.37	692.85	4.375	
16,000.00	9,436.71	9,494.46	9,456.71	156.31	659.67	-94.962	-490.06	3,470.05	3,129.18	2,436.61	692.57	4.518	
16,100.00	9,438.46	9,496.21	9,458.46	158.57	659.71	-95.123	-490.06	3,470.05	3,227.27	2,534.95	692.32	4.662	
16,200.00	9,440.20	9,497.95	9,460.20	160.84	659.74	-95.284	-490.06	3,470.05	3,325.46	2,633.37	692.10	4.805	
16,300.00	9,441.95	9,499.70	9,461.95	163.10	659.77	-95.444	-490.06	3,470.05	3,423.77	2,731.87	691.90	4.948	
16,400.00	9,443.69	9,481.45	9,443.69	165.37	659.81	-95.605	-490.06	3,470.05	3,522.16	2,830.44	691.72	5.092	
16,500.00	9,445.44	9,483.19	9,445.44	167.64	659.84	-95.766	-490.06	3,470.05	3,620.64	2,929.09	691.56	5.235	
16,600.00	9,447.18	9,484.94	9,447.18	169.91	659.87	-95.926	-490.06	3,470.05	3,719.21	3,027.79	691.42	5.379	
16,700.00	9,448.93	9,486.68	9,448.93	172.18	659.91	-96.086	-490.06	3,470.05	3,817.84	3,126.55	691.30	5.523	
16,800.00	9,450.67	9,488.43	9,450.67	174.45	659.94	-96.247	-490.06	3,470.05	3,916.55	3,225.36	691.19	5.666	
16,900.00	9,452.42	9,490.17	9,452.42	176.73	659.97	-96.407	-490.06	3,470.05	4,015.32	3,324.22	691.10	5.810	
17,000.00	9,454.16	9,491.92	9,454.16	179.00	660.01	-96.567	-490.06	3,470.05	4,114.14	3,423.13	691.02	5.954	
17,100.00	9,455.91	9,493.66	9,455.91	181.28	660.04	-96.727	-490.06	3,470.05	4,213.03	3,522.07	690.95	6.097	
17,200.00	9,457.65	9,495.41	9,457.65	183.55	660.07	-96.887	-490.06	3,470.05	4,311.96	3,621.06	690.90	6.241	
17,300.00	9,459.40	9,497.15	9,459.40	185.83	660.11	-97.046	-490.06	3,470.05	4,410.94	3,720.08	690.86	6.385	
17,400.00	9,461.14	9,498.90	9,461.14	188.10	660.14	-97.206	-490.06	3,470.05	4,509.96	3,819.14	690.82	6.528	
17,500.00	9,462.89	9,500.64	9,462.89	190.38	660.17	-97.366	-490.06	3,470.05	4,609.03	3,918.23	690.80	6.672	
17,600.00	9,464.64	9,502.39	9,464.64	192.66	660.21	-97.525	-490.06	3,470.05	4,708.13	4,017.35	690.79	6.816	
17,700.00	9,466.38	9,505.02	9,466.38	194.94	660.26	-97.682	-489.79	3,470.05	4,807.31	4,116.51	690.80	6.959	
17,800.00	9,468.13	9,507.71	9,469.95	197.22	660.31	-98.007	-489.80	3,470.05	4,906.48	4,215.66	690.82	7.102	
17,900.00	9,469.87	9,510.40	9,472.64	199.50	660.36	-98.251	-489.81	3,470.05	5,005.69	4,314.84	690.85	7.246	
18,000.00	9,471.62	9,513.09	9,475.33	201.78	660.41	-98.496	-489.82	3,470.05	5,104.93	4,414.04	690.88	7.389	
18,100.00	9,473.36	9,515.78	9,478.02	204.06	660.46	-98.740	-489.84	3,470.05	5,204.19	4,513.27	690.92	7.532	
18,200.00	9,475.11	9,518.47	9,480.71	206.34	660.51	-98.984	-489.86	3,470.05	5,303.48	4,612.51	690.97	7.675	
18,300.00	9,476.85	9,521.15	9,483.39	208.62	660.56	-99.228	-489.89	3,470.05	5,402.80	4,711.78	691.02	7.819	
18,400.00	9,478.60	9,523.84	9,486.08	210.91	660.61	-99.472	-489.92	3,470.05	5,502.14	4,811.06	691.08	7.962	
18,500.00	9,480.34	9,526.53	9,488.77	213.19	660.66	-99.715	-489.95	3,470.05	5,601.50	4,910.36	691.14	8.105	
18,600.00	9,482.09	9,529.22	9,491.45	215.48	660.72	-99.958	-489.99	3,470.05	5,700.89	5,009.68	691.21	8.248	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	Marathon Oil Permian LLC	Local Co-ordinate Reference:	Well Decimus 5 WXY Fed Com 1H
Project:	Eddy County, NM (NAD27-NME)	TVD Reference:	RKB @ 3067.60usft (Cactus 169)
Reference Site:	Decimus 5 WXY Fed Com	MD Reference:	RKB @ 3067.60usft (Cactus 169)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Decimus 5 WXY Fed Com 1H	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	USA Compass
Reference Design:	Plan 1 07-22-22	Offset TVD Reference:	Reference Datum

Offset Design: Maximus/Decimus Offsets - Carrasco 6 Com 2 - OH - Surveys													Offset Site Error: 0.00 usft
Survey Program: 196-INC-ONLY													Offset Well Error: 1.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Rule Assigned:		Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
18,700.00	9,483.83	9,531.91	9,494.14	217.76	660.77	-100.200	-490.04	3,470.05	5,800.29	5,109.01	691.28	8.391	
18,800.00	9,485.58	9,534.59	9,496.83	220.04	660.82	-100.442	-490.08	3,470.05	5,899.72	5,208.35	691.36	8.533	
18,900.00	9,487.32	9,537.28	9,499.51	222.33	660.87	-100.684	-490.14	3,470.05	5,999.16	5,307.72	691.44	8.676	
19,000.00	9,489.07	9,539.97	9,502.20	224.62	660.92	-100.926	-490.19	3,470.05	6,098.62	5,407.09	691.53	8.819	
19,100.00	9,490.81	9,542.65	9,504.88	226.90	660.97	-101.167	-490.25	3,470.05	6,198.10	5,506.48	691.62	8.962	
19,200.00	9,492.56	9,545.34	9,507.57	229.19	661.02	-101.408	-490.31	3,470.05	6,297.59	5,605.88	691.71	9.104	
19,300.00	9,494.30	9,532.07	9,494.30	231.48	660.77	-100.215	-490.06	3,470.05	6,397.11	5,705.57	691.53	9.251	
19,303.31	9,494.36	9,532.13	9,494.36	231.55	660.77	-100.220	-490.06	3,470.05	6,400.40	5,708.86	691.54	9.255	



Anticollision Report



Company:	Marathon Oil Permian LLC	Local Co-ordinate Reference:	Well Decimus 5 WXY Fed Com 1H
Project:	Eddy County, NM (NAD27-NME)	TVD Reference:	RKB @ 3067.60usft (Cactus 169)
Reference Site:	Decimus 5 WXY Fed Com	MD Reference:	RKB @ 3067.60usft (Cactus 169)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Decimus 5 WXY Fed Com 1H	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	USA Compass
Reference Design:	Plan 1 07-22-22	Offset TVD Reference:	Reference Datum

Offset Design: Maximus/Decimus Offsets - Swearingen A 1 - OH - Surveys													Offset Site Error: 0.00 usft
Survey Program: 140-INC-ONLY													Offset Well Error: 1.00 usft
Rule Assigned:													
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.00	0.00	0.00	54.60	1.00	1.00	88.235	255.51	8,290.46	8,294.57				
100.00	100.00	45.40	100.00	1.13	1.14	88.235	255.51	8,290.46	8,294.39	8,292.12	2.27	3,650.873	
200.00	200.00	145.40	200.00	1.66	2.04	88.235	255.51	8,290.46	8,294.39	8,290.70	3.70	2,244.654	
300.00	300.00	245.40	300.00	2.06	3.65	88.235	255.51	8,290.46	8,294.39	8,288.69	5.71	1,453.762	
400.00	400.00	345.93	400.53	2.39	5.38	88.234	255.64	8,290.46	8,294.40	8,286.62	7.77	1,066.834	
500.00	500.00	445.41	500.00	2.69	7.17	88.235	255.51	8,290.46	8,294.39	8,284.53	9.86	841.396	
600.00	600.00	545.42	600.00	2.96	9.05	88.235	255.51	8,290.46	8,294.39	8,282.38	12.01	690.521	
700.00	700.00	645.43	700.00	3.21	11.12	88.232	255.89	8,290.46	8,294.40	8,280.07	14.33	578.631	
800.00	800.00	746.92	801.49	3.44	13.23	88.234	255.59	8,290.46	8,294.40	8,277.72	16.68	497.405	
847.05	847.05	792.49	847.05	3.55	14.11	88.235	255.51	8,290.46	8,294.39	8,276.74	17.65	469.875	
900.00	900.00	845.44	900.00	3.66	15.09	88.235	255.51	8,290.46	8,294.39	8,275.64	18.75	442.372	
1,000.00	1,000.00	945.45	1,000.00	3.87	16.94	88.235	255.51	8,290.46	8,294.39	8,273.58	20.81	398.530	
1,100.00	1,100.00	1,045.45	1,100.00	4.07	18.81	88.235	255.51	8,290.46	8,294.39	8,271.51	22.89	362.409	
1,200.00	1,200.00	1,145.64	1,200.19	4.26	20.69	88.234	255.66	8,290.46	8,294.40	8,269.44	24.96	332.342	
1,300.00	1,300.00	1,245.45	1,300.00	4.45	22.56	88.235	255.51	8,290.46	8,294.39	8,267.38	27.01	307.033	
1,400.00	1,399.98	1,345.43	1,399.98	4.72	24.48	-105.108	255.51	8,290.46	8,294.85	8,265.75	29.10	285.056	
1,500.00	1,499.84	1,445.29	1,499.84	4.98	26.40	-105.116	255.51	8,290.46	8,296.21	8,265.05	31.16	266.243	
1,600.00	1,599.45	1,544.92	1,599.45	5.26	28.31	-105.130	255.51	8,290.46	8,298.50	8,265.27	33.23	249.760	
1,700.00	1,698.70	1,644.18	1,698.70	5.55	30.26	-105.149	255.51	8,290.46	8,301.70	8,266.38	35.32	235.019	
1,800.00	1,797.47	1,742.96	1,797.47	5.87	32.19	-105.172	255.51	8,290.46	8,305.84	8,268.42	37.42	221.957	
1,899.87	1,895.50	1,841.00	1,895.50	6.20	34.12	-105.198	255.51	8,290.46	8,310.92	8,271.39	39.53	210.264	
1,900.00	1,895.62	1,841.12	1,895.62	6.20	34.12	-105.198	255.51	8,290.46	8,310.93	8,271.40	39.53	210.250	
2,000.00	1,993.44	1,938.95	1,993.44	6.48	36.18	-105.334	255.51	8,290.46	8,316.51	8,274.74	41.78	199.075	
2,100.00	2,091.25	2,040.70	2,095.15	6.78	38.44	-105.475	255.57	8,290.46	8,322.15	8,277.91	44.24	188.123	
2,200.00	2,189.07	2,134.81	2,189.22	7.10	40.65	-105.606	255.75	8,290.46	8,327.84	8,281.18	46.66	178.486	
2,300.00	2,286.89	2,237.20	2,291.58	7.43	42.95	-105.746	255.56	8,290.46	8,333.56	8,284.39	49.17	169.468	
2,400.00	2,384.70	2,330.33	2,384.70	7.78	44.85	-105.874	255.51	8,290.46	8,339.34	8,288.03	51.31	162.544	
2,500.00	2,482.52	2,431.48	2,485.84	8.14	46.90	-106.013	255.62	8,290.46	8,345.17	8,291.57	53.60	155.690	
2,600.00	2,580.33	2,525.99	2,580.33	8.52	48.79	-106.142	255.51	8,290.46	8,351.04	8,295.30	55.74	149.823	
2,700.00	2,678.15	2,625.10	2,679.44	8.90	50.77	-106.281	255.86	8,290.46	8,356.98	8,299.01	57.97	144.156	
2,800.00	2,775.96	2,721.64	2,775.96	9.29	52.70	-106.411	255.51	8,290.46	8,362.93	8,302.77	60.16	139.005	
2,900.00	2,873.78	2,819.46	2,873.78	9.69	54.67	-106.544	255.51	8,290.46	8,368.95	8,306.55	62.40	134.124	
3,000.00	2,971.60	2,919.18	2,973.50	10.10	56.67	-106.683	255.85	8,290.46	8,375.03	8,310.36	64.67	129.494	
3,100.00	3,069.41	3,015.11	3,069.41	10.51	58.60	-106.811	255.51	8,290.46	8,381.12	8,314.25	66.87	125.327	
3,200.00	3,167.23	3,112.93	3,167.23	10.92	60.54	-106.945	255.51	8,290.46	8,387.28	8,318.18	69.10	121.380	
3,300.00	3,265.04	3,211.97	3,266.27	11.34	62.51	-107.083	256.02	8,290.46	8,393.52	8,322.17	71.35	117.633	
3,400.00	3,362.86	3,312.20	3,366.49	11.77	64.50	-107.216	255.63	8,290.46	8,399.75	8,326.11	73.63	114.074	
3,500.00	3,460.67	3,406.40	3,460.67	12.20	66.24	-107.343	255.51	8,290.46	8,406.04	8,330.37	75.67	111.091	
3,600.00	3,558.49	3,504.55	3,558.82	12.63	68.02	-107.478	255.85	8,290.46	8,412.41	8,334.67	77.74	108.207	
3,700.00	3,656.31	3,604.28	3,658.56	13.07	69.83	-107.612	255.66	8,290.46	8,418.79	8,338.94	79.85	105.430	
3,800.00	3,754.12	3,699.85	3,754.12	13.50	71.52	-107.740	255.51	8,290.46	8,425.21	8,343.37	81.84	102.945	
3,900.00	3,851.94	3,797.78	3,852.05	13.94	73.22	-107.873	255.67	8,290.46	8,431.71	8,347.86	83.85	100.561	
4,000.00	3,949.75	3,896.71	3,950.98	14.39	74.93	-108.005	255.58	8,290.46	8,438.24	8,352.36	85.87	98.265	
4,100.00	4,047.57	3,993.30	4,047.57	14.83	76.63	-108.135	255.51	8,290.46	8,444.81	8,356.93	87.88	96.097	
4,200.00	4,145.38	4,091.12	4,145.38	15.28	78.36	-108.266	255.51	8,290.46	8,451.43	8,361.51	89.92	93.990	
4,300.00	4,243.20	4,189.91	4,244.18	15.73	80.11	-108.399	255.64	8,290.46	8,458.11	8,366.13	91.98	91.958	
4,400.00	4,341.02	4,286.75	4,341.02	16.18	81.81	-108.528	255.51	8,290.46	8,464.81	8,370.81	94.00	90.049	
4,500.00	4,438.83	4,384.57	4,438.83	16.63	83.53	-108.659	255.51	8,290.46	8,471.57	8,375.54	96.04	88.211	
4,600.00	4,536.65	4,483.16	4,537.42	17.08	85.26	-108.791	255.66	8,290.46	8,478.39	8,380.31	98.09	86.437	
4,700.00	4,634.46	4,580.20	4,634.46	17.53	86.97	-108.920	255.51	8,290.46	8,485.23	8,385.12	100.11	84.757	
4,800.00	4,732.28	4,678.02	4,732.28	17.99	88.68	-109.050	255.51	8,290.46	8,492.13	8,389.97	102.15	83.131	
4,900.00	4,830.09	4,776.43	4,830.69	18.44	90.41	-109.181	255.67	8,290.46	8,499.09	8,394.88	104.21	81.560	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	Marathon Oil Permian LLC	Local Co-ordinate Reference:	Well Decimus 5 WXY Fed Com 1H
Project:	Eddy County, NM (NAD27-NME)	TVD Reference:	RKB @ 3067.60usft (Cactus 169)
Reference Site:	Decimus 5 WXY Fed Com	MD Reference:	RKB @ 3067.60usft (Cactus 169)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Decimus 5 WXY Fed Com 1H	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	USA Compass
Reference Design:	Plan 1 07-22-22	Offset TVD Reference:	Reference Datum

Offset Design: Maximus/Decimus Offsets - Swearingen A 1 - OH - Surveys													Offset Site Error:	0.00 usft
Survey Program:		140-INC-ONLY										Offset Well Error:	1.00 usft	
Reference		Offset		Semi Major Axis			Offset Wellbore Centre		Rule Assigned:				Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
5,000.00	4,927.91	4,875.57	4,929.83	18.90	92.16	-109.312	255.54	8,290.46	8,506.06	8,399.78	106.27	80.038		
5,100.00	5,025.72	4,971.47	5,025.72	19.36	93.81	-109.439	255.51	8,290.46	8,513.09	8,404.83	108.26	78.636		
5,200.00	5,123.54	5,069.42	5,123.68	19.82	95.50	-109.569	255.70	8,290.46	8,520.19	8,409.91	110.28	77.261		
5,300.00	5,221.36	5,168.51	5,222.76	20.28	97.21	-109.700	255.62	8,290.46	8,527.30	8,414.98	112.32	75.922		
5,400.00	5,319.17	5,264.91	5,319.17	20.74	98.85	-109.826	255.51	8,290.46	8,534.45	8,420.17	114.29	74.675		
5,500.00	5,416.99	5,362.73	5,416.99	21.20	100.48	-109.955	255.51	8,290.46	8,541.67	8,425.42	116.24	73.481		
5,600.00	5,514.80	5,460.54	5,514.80	21.66	102.10	-110.083	255.51	8,290.46	8,548.92	8,430.72	118.20	72.326		
5,700.00	5,612.62	5,558.36	5,612.62	22.12	103.73	-110.211	255.51	8,290.46	8,556.22	8,436.06	120.17	71.203		
5,800.00	5,710.43	5,656.18	5,710.43	22.58	105.41	-110.339	255.51	8,290.46	8,563.57	8,441.39	122.18	70.090		
5,900.00	5,808.25	5,753.99	5,808.25	23.05	107.09	-110.467	255.51	8,290.46	8,570.95	8,446.76	124.19	69.013		
6,000.00	5,906.07	5,851.81	5,906.07	23.51	108.76	-110.595	255.51	8,290.46	8,578.39	8,452.18	126.21	67.970		
6,100.00	6,003.88	5,949.92	6,004.18	23.98	110.46	-110.723	255.61	8,290.46	8,585.88	8,457.63	128.24	66.950		
6,200.00	6,101.70	6,047.44	6,101.70	24.44	112.15	-110.849	255.51	8,290.46	8,593.38	8,463.11	130.27	65.964		
6,300.00	6,199.51	6,145.26	6,199.51	24.91	113.88	-110.976	255.51	8,290.46	8,600.95	8,468.60	132.35	64.987		
6,400.00	6,297.33	6,243.99	6,298.25	25.37	115.63	-111.105	255.67	8,290.46	8,608.58	8,474.14	134.44	64.033		
6,500.00	6,395.14	6,343.52	6,397.77	25.84	117.39	-111.233	255.53	8,290.46	8,616.21	8,479.66	136.55	63.101		
6,600.00	6,492.96	6,438.71	6,492.96	26.31	119.09	-111.356	255.51	8,290.46	8,623.90	8,485.31	138.59	62.228		
6,700.00	6,590.78	6,536.81	6,591.06	26.77	120.84	-111.483	255.70	8,290.46	8,631.66	8,490.98	140.68	61.357		
6,785.59	6,674.50	6,621.96	6,676.21	27.17	122.35	-111.592	255.63	8,290.46	8,638.31	8,495.82	142.49	60.626		
6,800.00	6,688.60	6,636.30	6,690.55	27.23	122.61	-111.631	255.61	8,290.46	8,639.42	8,496.63	142.79	60.506		
6,900.00	6,786.85	6,732.60	6,786.85	27.71	124.33	-111.871	255.51	8,290.46	8,646.39	8,501.56	144.83	59.698		
7,000.00	6,885.69	6,831.44	6,885.69	28.16	126.11	-112.069	255.51	8,290.46	8,652.12	8,505.22	146.90	58.898		
7,100.00	6,985.00	6,931.64	6,985.89	28.59	127.91	-112.224	255.70	8,290.46	8,658.58	8,507.63	148.95	58.118		
7,200.00	7,084.66	7,032.92	7,087.17	28.98	129.73	-112.332	255.57	8,290.46	8,659.68	8,508.70	150.98	57.358		
7,300.00	7,184.54	7,130.30	7,184.54	29.33	131.53	-112.393	255.51	8,290.46	8,661.47	8,508.53	152.94	56.634		
7,385.47	7,270.00	7,215.75	7,270.00	29.47	133.12	80.930	255.51	8,290.46	8,661.95	8,507.36	154.59	56.030		
7,400.00	7,284.53	7,230.29	7,284.53	29.47	133.40	80.930	255.51	8,290.46	8,661.95	8,507.09	154.86	55.933		
7,500.00	7,384.53	7,331.98	7,386.23	29.48	135.30	80.929	255.64	8,290.46	8,661.97	8,505.19	156.78	55.249		
7,600.00	7,484.53	7,430.30	7,484.53	29.50	137.14	80.930	255.51	8,290.46	8,661.95	8,503.31	158.64	54.601		
7,700.00	7,584.53	7,530.30	7,584.53	29.51	139.04	80.930	255.51	8,290.46	8,661.95	8,501.40	160.55	53.951		
7,800.00	7,684.53	7,634.60	7,688.82	29.53	141.02	80.927	255.90	8,290.46	8,662.02	8,499.47	162.55	53.288		
7,900.00	7,784.53	7,730.32	7,784.53	29.55	142.84	80.930	255.51	8,290.46	8,661.95	8,497.57	164.38	52.693		
8,000.00	7,884.53	7,830.32	7,884.53	29.56	144.75	80.930	255.51	8,290.46	8,661.95	8,495.64	166.31	52.083		
8,100.00	7,984.53	7,932.01	7,986.23	29.58	146.69	80.928	255.85	8,290.46	8,662.01	8,493.74	168.27	51.477		
8,200.00	8,084.53	8,035.68	8,089.89	29.60	148.67	80.930	255.59	8,290.46	8,661.97	8,491.70	170.27	50.872		
8,257.38	8,141.91	8,087.72	8,141.91	29.61	149.74	80.930	255.51	8,290.46	8,661.95	8,490.61	171.35	50.551		
8,300.00	8,184.53	8,130.34	8,184.53	29.61	150.65	80.930	255.51	8,290.46	8,661.95	8,489.69	172.27	50.282		
8,400.00	8,284.53	8,230.34	8,284.53	29.63	152.79	80.930	255.51	8,290.46	8,661.95	8,487.53	174.42	49.661		
8,500.00	8,384.53	8,331.74	8,385.93	29.65	154.96	80.925	256.28	8,290.46	8,662.08	8,485.47	176.61	49.047		
8,600.00	8,484.53	8,435.61	8,489.79	29.66	157.18	80.927	256.03	8,290.46	8,662.04	8,483.19	178.85	48.433		
8,700.00	8,584.53	8,539.48	8,593.66	29.68	159.40	80.930	255.48	8,290.46	8,661.95	8,480.87	181.08	47.834		
8,704.58	8,589.12	8,544.24	8,598.42	29.68	159.50	80.930	255.45	8,290.46	8,661.95	8,480.76	181.19	47.807		
8,800.00	8,684.53	8,630.41	8,684.53	29.70	161.52	80.930	255.51	8,290.46	8,661.95	8,478.73	183.22	47.275		
8,870.41	8,754.95	8,700.83	8,754.95	29.71	163.16	80.930	255.51	8,290.46	8,661.95	8,477.09	184.87	46.855		
8,900.00	8,784.52	8,731.56	8,785.66	29.70	163.87	-9.039	256.50	8,290.46	8,661.36	8,475.79	185.56	46.676		
8,950.00	8,834.28	8,785.76	8,839.86	29.66	165.13	-9.119	256.37	8,290.46	8,656.64	8,469.84	186.80	46.343		
9,000.00	8,883.43	8,839.30	8,893.40	29.62	166.38	-9.274	256.06	8,290.46	8,647.64	8,459.63	188.00	45.997		
9,050.00	8,931.61	8,891.79	8,945.88	29.58	167.60	-9.510	255.60	8,290.46	8,634.41	8,445.23	189.18	45.641		
9,100.00	8,978.44	8,924.47	8,978.44	29.53	168.40	-9.833	255.51	8,290.46	8,617.13	8,427.20	189.93	45.369		
9,150.00	9,023.57	8,969.60	9,023.57	29.49	169.51	-10.267	255.51	8,290.46	8,595.92	8,404.90	191.01	45.002		
9,200.00	9,066.65	9,016.69	9,070.64	29.46	170.68	-10.837	256.36	8,290.46	8,571.03	8,378.89	192.15	44.607		
9,250.00	9,107.37	9,070.21	9,124.15	29.43	172.00	-11.564	255.96	8,290.46	8,542.36	8,348.91	193.44	44.159		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	Marathon Oil Permian LLC	Local Co-ordinate Reference:	Well Decimus 5 WXY Fed Com 1H
Project:	Eddy County, NM (NAD27-NME)	TVD Reference:	RKB @ 3067.60usft (Cactus 169)
Reference Site:	Decimus 5 WXY Fed Com	MD Reference:	RKB @ 3067.60usft (Cactus 169)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Decimus 5 WXY Fed Com 1H	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	USA Compass
Reference Design:	Plan 1 07-22-22	Offset TVD Reference:	Reference Datum

Offset Design: Maximus/Decimus Offsets - Swearingen A 1 - OH - Surveys													Offset Site Error:	0.00 usft
Survey Program:		140-INC-ONLY					Rule Assigned:				Offset Well Error:	1.00 usft		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
9,300.00	9,145.40	9,120.22	9,174.13	29.43	173.24	-12.491	255.12	8,290.46	8,510.23	8,315.57	194.66	43.718		
9,350.00	9,180.46	9,126.61	9,180.46	29.44	173.41	-13.627	255.51	8,290.46	8,475.08	8,280.26	194.82	43.503		
9,400.00	9,212.28	9,158.43	9,212.28	29.48	174.21	-15.149	255.51	8,290.46	8,437.03	8,241.42	195.61	43.131		
9,450.00	9,240.62	9,186.78	9,240.62	29.56	174.92	-17.168	255.51	8,290.46	8,396.40	8,200.07	196.33	42.766		
9,500.00	9,265.27	9,211.42	9,265.27	29.67	175.54	-19.921	255.51	8,290.46	8,353.49	8,156.52	196.97	42.409		
9,550.00	9,286.03	9,234.41	9,288.24	29.83	176.12	-23.852	256.58	8,290.46	8,308.80	8,111.22	197.58	42.052		
9,600.00	9,302.75	9,255.17	9,308.99	30.04	176.64	-29.703	256.51	8,290.46	8,262.33	8,064.18	198.15	41.698		
9,650.00	9,315.30	9,270.75	9,324.57	30.29	177.04	-38.953	256.42	8,290.46	8,214.60	8,016.00	198.59	41.364		
9,700.00	9,323.58	9,281.04	9,334.86	30.60	177.30	-54.316	256.35	8,290.46	8,165.98	7,967.06	198.92	41.052		
9,750.00	9,327.54	9,285.95	9,339.77	30.95	177.42	-78.647	256.30	8,290.46	8,116.84	7,917.73	199.12	40.764		
9,760.41	9,327.82	9,286.30	9,340.11	31.03	177.43	-84.653	256.30	8,290.46	8,106.58	7,907.44	199.14	40.707		
9,800.00	9,328.51	9,287.15	9,340.97	31.34	177.45	-84.689	256.29	8,290.46	8,067.56	7,868.33	199.23	40.493		
9,900.00	9,330.25	9,289.32	9,343.14	32.24	177.50	-84.779	256.27	8,290.46	7,969.02	7,769.55	199.47	39.951		
10,000.00	9,332.00	9,291.49	9,345.30	33.27	177.56	-84.870	256.25	8,290.46	7,870.52	7,670.80	199.72	39.409		
10,100.00	9,333.74	9,293.65	9,347.47	34.41	177.61	-84.960	256.23	8,290.46	7,772.05	7,572.07	199.97	38.865		
10,200.00	9,335.49	9,295.82	9,349.63	35.67	177.67	-85.051	256.21	8,290.46	7,673.62	7,473.37	200.25	38.321		
10,300.00	9,337.23	9,297.99	9,351.80	37.01	177.72	-85.141	256.19	8,290.46	7,575.23	7,374.70	200.53	37.775		
10,400.00	9,338.98	9,300.15	9,353.96	38.45	177.78	-85.232	256.16	8,290.46	7,476.89	7,276.05	200.83	37.229		
10,500.00	9,340.72	9,302.32	9,356.13	39.96	177.83	-85.322	256.14	8,290.46	7,378.59	7,177.44	201.15	36.682		
10,600.00	9,342.47	9,304.48	9,358.29	41.55	177.89	-85.413	256.11	8,290.46	7,280.33	7,078.85	201.48	36.134		
10,700.00	9,344.21	9,306.65	9,360.46	43.19	177.94	-85.504	256.09	8,290.46	7,182.12	6,980.30	201.83	35.585		
10,800.00	9,345.96	9,308.81	9,362.62	44.89	177.99	-85.594	256.06	8,290.46	7,083.97	6,881.78	202.19	35.036		
10,900.00	9,347.70	9,310.98	9,364.79	46.64	178.05	-85.685	256.04	8,290.46	6,985.86	6,783.29	202.57	34.486		
11,000.00	9,349.45	9,313.15	9,366.95	48.44	178.10	-85.776	256.01	8,290.46	6,887.81	6,684.84	202.97	33.935		
11,100.00	9,351.19	9,315.31	9,369.12	50.28	178.16	-85.866	255.98	8,290.46	6,789.81	6,586.43	203.38	33.384		
11,200.00	9,352.94	9,317.48	9,371.28	52.15	178.21	-85.957	255.95	8,290.46	6,691.87	6,488.05	203.82	32.832		
11,300.00	9,354.69	9,319.64	9,373.45	54.06	178.27	-86.048	255.92	8,290.46	6,594.00	6,389.72	204.27	32.280		
11,400.00	9,356.43	9,321.81	9,375.61	56.00	178.32	-86.139	255.89	8,290.46	6,496.19	6,291.44	204.75	31.727		
11,500.00	9,358.18	9,323.97	9,377.78	57.96	178.38	-86.230	255.86	8,290.46	6,398.44	6,193.19	205.25	31.174		
11,600.00	9,359.92	9,326.14	9,379.94	59.95	178.43	-86.320	255.83	8,290.46	6,300.77	6,095.00	205.77	30.621		
11,700.00	9,361.67	9,328.31	9,382.11	61.96	178.49	-86.411	255.80	8,290.46	6,203.17	5,996.86	206.31	30.068		
11,800.00	9,363.41	9,330.47	9,384.27	63.99	178.54	-86.502	255.77	8,290.46	6,105.64	5,898.77	206.87	29.514		
11,900.00	9,365.16	9,332.64	9,386.44	66.03	178.59	-86.593	255.73	8,290.46	6,008.20	5,800.73	207.46	28.960		
12,000.00	9,366.90	9,334.80	9,388.60	68.10	178.65	-86.684	255.70	8,290.46	5,910.84	5,702.76	208.08	28.406		
12,100.00	9,368.65	9,336.97	9,390.77	70.18	178.70	-86.775	255.66	8,290.46	5,813.57	5,604.84	208.73	27.853		
12,200.00	9,370.39	9,339.13	9,392.93	72.27	178.76	-86.866	255.63	8,290.46	5,716.39	5,506.99	209.40	27.299		
12,300.00	9,372.14	9,341.30	9,395.10	74.37	178.81	-86.957	255.59	8,290.46	5,619.32	5,409.21	210.10	26.746		
12,400.00	9,373.88	9,343.46	9,397.26	76.49	178.87	-87.048	255.56	8,290.46	5,522.34	5,311.51	210.83	26.193		
12,500.00	9,375.63	9,345.63	9,399.42	78.62	178.92	-87.139	255.52	8,290.46	5,425.48	5,213.88	211.60	25.640		
12,600.00	9,377.37	9,347.79	9,401.59	80.75	178.98	-87.230	255.48	8,290.46	5,328.73	5,116.33	212.40	25.088		
12,700.00	9,379.12	9,349.96	9,403.75	82.90	179.03	-87.321	255.44	8,290.46	5,232.10	5,018.87	213.23	24.537		
12,800.00	9,380.86	9,352.12	9,405.92	85.06	179.08	-87.412	255.40	8,290.46	5,135.60	4,921.49	214.10	23.986		
12,900.00	9,382.61	9,354.29	9,408.08	87.22	179.14	-87.503	255.36	8,290.46	5,039.23	4,824.22	215.02	23.437		
13,000.00	9,384.35	9,356.45	9,410.24	89.39	179.19	-87.594	255.32	8,290.46	4,943.01	4,727.05	215.97	22.888		
13,100.00	9,386.10	9,358.62	9,412.41	91.56	179.25	-87.685	255.28	8,290.46	4,846.95	4,629.98	216.96	22.340		
13,200.00	9,387.84	9,360.78	9,414.57	93.75	179.30	-87.776	255.24	8,290.46	4,751.04	4,533.03	218.00	21.793		
13,300.00	9,389.59	9,362.95	9,416.73	95.93	179.36	-87.867	255.20	8,290.46	4,655.30	4,436.21	219.09	21.248		
13,400.00	9,391.34	9,365.11	9,418.90	98.13	179.41	-87.958	255.15	8,290.46	4,559.75	4,339.52	220.23	20.704		
13,500.00	9,393.08	9,367.27	9,421.06	100.33	179.47	-88.049	255.11	8,290.46	4,464.39	4,242.97	221.42	20.162		
13,600.00	9,394.83	9,369.44	9,423.22	102.53	179.52	-88.140	255.06	8,290.46	4,369.24	4,146.57	222.67	19.622		
13,700.00	9,396.57	9,371.60	9,425.39	104.74	179.57	-88.231	255.02	8,290.46	4,274.31	4,050.33	223.98	19.083		
13,800.00	9,398.32	9,373.77	9,427.55	106.95	179.63	-88.322	254.97	8,290.46	4,179.61	3,954.26	225.35	18.547		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	Marathon Oil Permian LLC	Local Co-ordinate Reference:	Well Decimus 5 WXY Fed Com 1H
Project:	Eddy County, NM (NAD27-NME)	TVD Reference:	RKB @ 3067.60usft (Cactus 169)
Reference Site:	Decimus 5 WXY Fed Com	MD Reference:	RKB @ 3067.60usft (Cactus 169)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Decimus 5 WXY Fed Com 1H	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	USA Compass
Reference Design:	Plan 1 07-22-22	Offset TVD Reference:	Reference Datum

Offset Design: Maximus/Decimus Offsets - Swearingen A 1 - OH - Surveys												Offset Site Error:	0.00 usft
Survey Program: 140-INC-ONLY												Offset Well Error:	1.00 usft
Reference												Rule Assigned:	
Measured Depth (usft)												Warning	
Vertical Depth (usft)													
Offset													
Measured Depth (usft)													
Vertical Depth (usft)													
Semi Major Axis													
Reference													
Offset													
Highside Toolface (°)													
Offset Wellbore Centre													
+N/-S (usft)													
+E/-W (usft)													
Distance													
Between Centres (usft)													
Between Ellipses (usft)													
Minimum Separation (usft)													
Separation Factor													
13,900.00	9,400.06	9,346.36	9,400.06	109.16	178.94	-87.165	255.51	8,290.46	4,085.25	3,859.28	225.98	18.078	
14,000.00	9,401.81	9,348.11	9,401.81	111.38	178.99	-87.239	255.51	8,290.46	3,991.09	3,763.62	227.48	17.545	
14,100.00	9,403.55	9,349.86	9,403.55	113.61	179.03	-87.312	255.51	8,290.46	3,897.22	3,668.17	229.05	17.015	
14,200.00	9,405.30	9,351.60	9,405.30	115.83	179.08	-87.386	255.51	8,290.46	3,803.66	3,572.96	230.70	16.487	
14,300.00	9,407.04	9,353.35	9,407.04	118.06	179.12	-87.459	255.51	8,290.46	3,710.44	3,478.00	232.44	15.963	
14,400.00	9,408.79	9,355.09	9,408.79	120.30	179.17	-87.533	255.51	8,290.46	3,617.58	3,383.30	234.27	15.442	
14,500.00	9,410.53	9,356.84	9,410.53	122.53	179.21	-87.606	255.51	8,290.46	3,525.11	3,288.91	236.20	14.924	
14,600.00	9,412.28	9,358.58	9,412.28	124.77	179.26	-87.680	255.51	8,290.46	3,433.06	3,194.82	238.23	14.410	
14,700.00	9,414.02	9,360.33	9,414.02	127.01	179.30	-87.753	255.51	8,290.46	3,341.46	3,101.09	240.38	13.901	
14,800.00	9,415.77	9,362.07	9,415.77	129.25	179.35	-87.827	255.51	8,290.46	3,250.36	3,007.73	242.64	13.396	
14,900.00	9,417.51	9,363.82	9,417.51	131.50	179.39	-87.900	255.51	8,290.46	3,159.80	2,914.78	245.02	12.896	
15,000.00	9,419.26	9,365.56	9,419.26	133.74	179.44	-87.974	255.51	8,290.46	3,069.82	2,822.28	247.54	12.401	
15,100.00	9,421.00	9,367.31	9,421.00	135.99	179.48	-88.047	255.51	8,290.46	2,980.48	2,730.27	250.21	11.912	
15,200.00	9,422.75	9,369.05	9,422.75	138.24	179.53	-88.121	255.51	8,290.46	2,891.84	2,638.81	253.03	11.429	
15,300.00	9,424.49	9,370.80	9,424.49	140.50	179.57	-88.194	255.51	8,290.46	2,803.96	2,547.94	256.01	10.952	
15,400.00	9,426.24	9,372.54	9,426.24	142.75	179.62	-88.268	255.51	8,290.46	2,716.91	2,457.74	259.17	10.483	
15,500.00	9,427.99	9,374.29	9,427.99	145.01	179.66	-88.341	255.51	8,290.46	2,630.79	2,368.27	262.52	10.021	
15,600.00	9,429.73	9,376.03	9,429.73	147.26	179.71	-88.415	255.51	8,290.46	2,545.68	2,279.61	266.07	9.568	
15,700.00	9,431.48	9,377.78	9,431.48	149.52	179.75	-88.489	255.51	8,290.46	2,461.69	2,191.86	269.83	9.123	
15,800.00	9,433.22	9,379.52	9,433.22	151.78	179.80	-88.562	255.51	8,290.46	2,378.94	2,105.12	273.81	8.688	
15,900.00	9,434.97	9,381.27	9,434.97	154.04	179.84	-88.636	255.51	8,290.46	2,297.55	2,019.52	278.04	8.264	
16,000.00	9,436.71	9,383.01	9,436.71	156.31	179.89	-88.709	255.51	8,290.46	2,217.69	1,935.19	282.51	7.850	
16,100.00	9,438.46	9,384.76	9,438.46	158.57	179.93	-88.783	255.51	8,290.46	2,139.52	1,852.29	287.23	7.449	
16,200.00	9,440.20	9,386.51	9,440.20	160.84	179.98	-88.856	255.51	8,290.46	2,063.24	1,771.01	292.23	7.060	
16,300.00	9,441.95	9,388.25	9,441.95	163.10	180.02	-88.930	255.51	8,290.46	1,989.06	1,691.57	297.49	6.686	
16,400.00	9,443.69	9,390.00	9,443.69	165.37	180.07	-89.004	255.51	8,290.46	1,917.22	1,614.20	303.02	6.327	
16,500.00	9,445.44	9,391.74	9,445.44	167.64	180.11	-89.077	255.51	8,290.46	1,848.00	1,539.20	308.81	5.984	
16,600.00	9,447.18	9,393.49	9,447.18	169.91	180.16	-89.151	255.51	8,290.46	1,781.71	1,466.88	314.83	5.659	
16,700.00	9,448.93	9,395.23	9,448.93	172.18	180.20	-89.224	255.51	8,290.46	1,718.68	1,397.61	321.07	5.353	
16,800.00	9,450.67	9,396.98	9,450.67	174.45	180.25	-89.298	255.51	8,290.46	1,659.28	1,331.82	327.47	5.067	
16,900.00	9,452.42	9,398.72	9,452.42	176.73	180.29	-89.372	255.51	8,290.46	1,603.92	1,269.96	333.96	4.803	
17,000.00	9,454.16	9,400.47	9,454.16	179.00	180.34	-89.445	255.51	8,290.46	1,553.03	1,212.56	340.47	4.561	
17,100.00	9,455.91	9,402.21	9,455.91	181.28	180.39	-89.519	255.51	8,290.46	1,507.07	1,160.17	346.90	4.344	
17,200.00	9,457.65	9,403.96	9,457.65	183.55	180.43	-89.593	255.51	8,290.46	1,466.49	1,113.39	353.10	4.153	
17,300.00	9,459.40	9,405.70	9,459.40	185.83	180.48	-89.666	255.51	8,290.46	1,431.76	1,072.82	358.94	3.989	
17,400.00	9,461.14	9,407.45	9,461.14	188.10	180.52	-89.740	255.51	8,290.46	1,403.30	1,039.05	364.25	3.853	
17,500.00	9,462.89	9,409.19	9,462.89	190.38	180.57	-89.813	255.51	8,290.46	1,381.51	1,012.61	368.89	3.745	
17,600.00	9,464.64	9,410.94	9,464.64	192.66	180.61	-89.887	255.51	8,290.46	1,366.70	993.99	372.71	3.667	
17,700.00	9,466.38	9,412.68	9,466.38	194.94	180.66	-89.961	255.51	8,290.46	1,359.11	983.52	375.59	3.619	
17,753.50	9,467.31	9,413.62	9,467.31	196.16	180.68	-90.000	255.51	8,290.46	1,358.06	981.34	376.72	3.605 CC, ES	
17,800.00	9,468.13	9,414.43	9,468.13	197.22	180.70	-90.034	255.51	8,290.46	1,358.85	981.40	377.45	3.600 SF	
17,900.00	9,469.87	9,416.17	9,469.87	199.50	180.75	-90.108	255.51	8,290.46	1,365.93	987.67	378.27	3.611	
18,000.00	9,471.62	9,417.92	9,471.62	201.78	180.79	-90.181	255.51	8,290.46	1,380.24	1,002.19	378.05	3.651	
18,100.00	9,473.36	9,419.66	9,473.36	204.06	180.84	-90.255	255.51	8,290.46	1,401.55	1,024.68	376.87	3.719	
18,200.00	9,475.11	9,421.41	9,475.11	206.34	180.88	-90.329	255.51	8,290.46	1,429.55	1,054.72	374.84	3.814	
18,300.00	9,476.85	9,423.16	9,476.85	208.62	180.93	-90.402	255.51	8,290.46	1,463.86	1,091.79	372.07	3.934	
18,400.00	9,478.60	9,424.90	9,478.60	210.91	180.97	-90.476	255.51	8,290.46	1,504.05	1,135.34	368.71	4.079	
18,500.00	9,480.34	9,426.65	9,480.34	213.19	181.02	-90.550	255.51	8,290.46	1,549.65	1,184.75	364.90	4.247	
18,600.00	9,482.09	9,428.39	9,482.09	215.48	181.06	-90.623	255.51	8,290.46	1,600.21	1,239.44	360.77	4.436	
18,700.00	9,483.83	9,430.14	9,483.83	217.76	181.11	-90.697	255.51	8,290.46	1,655.27	1,298.84	356.43	4.644	
18,800.00	9,485.58	9,431.88	9,485.58	220.04	181.15	-90.770	255.51	8,290.46	1,714.39	1,362.42	351.98	4.871	
18,900.00	9,487.32	9,433.63	9,487.32	222.33	181.20	-90.844	255.51	8,290.46	1,777.18	1,429.69	347.50	5.114	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	Marathon Oil Permian LLC	Local Co-ordinate Reference:	Well Decimus 5 WXY Fed Com 1H
Project:	Eddy County, NM (NAD27-NME)	TVD Reference:	RKB @ 3067.60usft (Cactus 169)
Reference Site:	Decimus 5 WXY Fed Com	MD Reference:	RKB @ 3067.60usft (Cactus 169)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Decimus 5 WXY Fed Com 1H	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	USA Compass
Reference Design:	Plan 1 07-22-22	Offset TVD Reference:	Reference Datum

Offset Design: Maximus/Decimus Offsets - Swearingen A 1 - OH - Surveys													Offset Site Error: 0.00 usft
Survey Program: 140-INC-ONLY							Rule Assigned:						Offset Well Error: 1.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Distance Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
19,000.00	9,489.07	9,435.37	9,489.07	224.62	181.24	-90.918	255.51	8,290.46	1,843.26	1,500.21	343.05	5.373	
19,100.00	9,490.81	9,437.12	9,490.81	226.90	181.29	-90.991	255.51	8,290.46	1,912.28	1,573.60	338.68	5.646	
19,200.00	9,492.56	9,438.86	9,492.56	229.19	181.33	-91.065	255.51	8,290.46	1,983.95	1,649.51	334.43	5.932	
19,300.00	9,494.30	9,440.61	9,494.30	231.48	181.38	-91.138	255.51	8,290.46	2,057.97	1,727.65	330.32	6.230	
19,303.31	9,494.36	9,440.67	9,494.36	231.55	181.38	-91.141	255.51	8,290.46	2,060.46	1,730.27	330.19	6.240	



Anticollision Report



Company:	Marathon Oil Permian LLC	Local Co-ordinate Reference:	Well Decimus 5 WXY Fed Com 1H
Project:	Eddy County, NM (NAD27-NME)	TVD Reference:	RKB @ 3067.60usft (Cactus 169)
Reference Site:	Decimus 5 WXY Fed Com	MD Reference:	RKB @ 3067.60usft (Cactus 169)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Decimus 5 WXY Fed Com 1H	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	USA Compass
Reference Design:	Plan 1 07-22-22	Offset TVD Reference:	Reference Datum

Reference Depths are relative to RKB @ 3067.60usft (Cactus 169)

Offset Depths are relative to Offset Datum

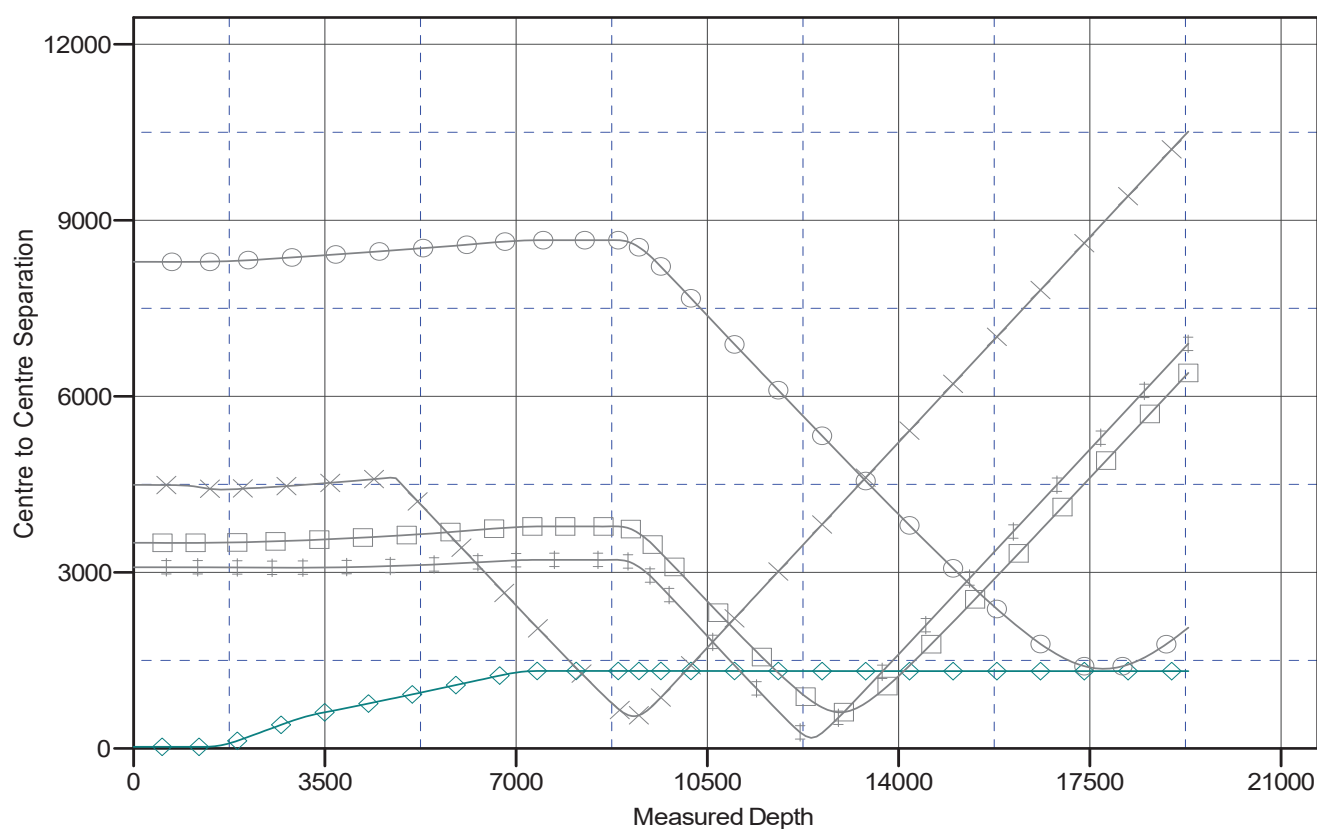
Central Meridian is 104° 19' 60.000000 W

Coordinates are relative to: Decimus 5 WXY Fed Com 1H

Coordinate System is US State Plane 1927 (Exact solution), New Mexico East 300

Grid Convergence at Surface is: 0.107°

Ladder Plot



LEGEND



CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	Marathon Oil Permian LLC	Local Co-ordinate Reference:	Well Decimus 5 WXY Fed Com 1H
Project:	Eddy County, NM (NAD27-NME)	TVD Reference:	RKB @ 3067.60usft (Cactus 169)
Reference Site:	Decimus 5 WXY Fed Com	MD Reference:	RKB @ 3067.60usft (Cactus 169)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Decimus 5 WXY Fed Com 1H	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	USA Compass
Reference Design:	Plan 1 07-22-22	Offset TVD Reference:	Reference Datum

Reference Depths are relative to RKB @ 3067.60usft (Cactus 169)

Offset Depths are relative to Offset Datum

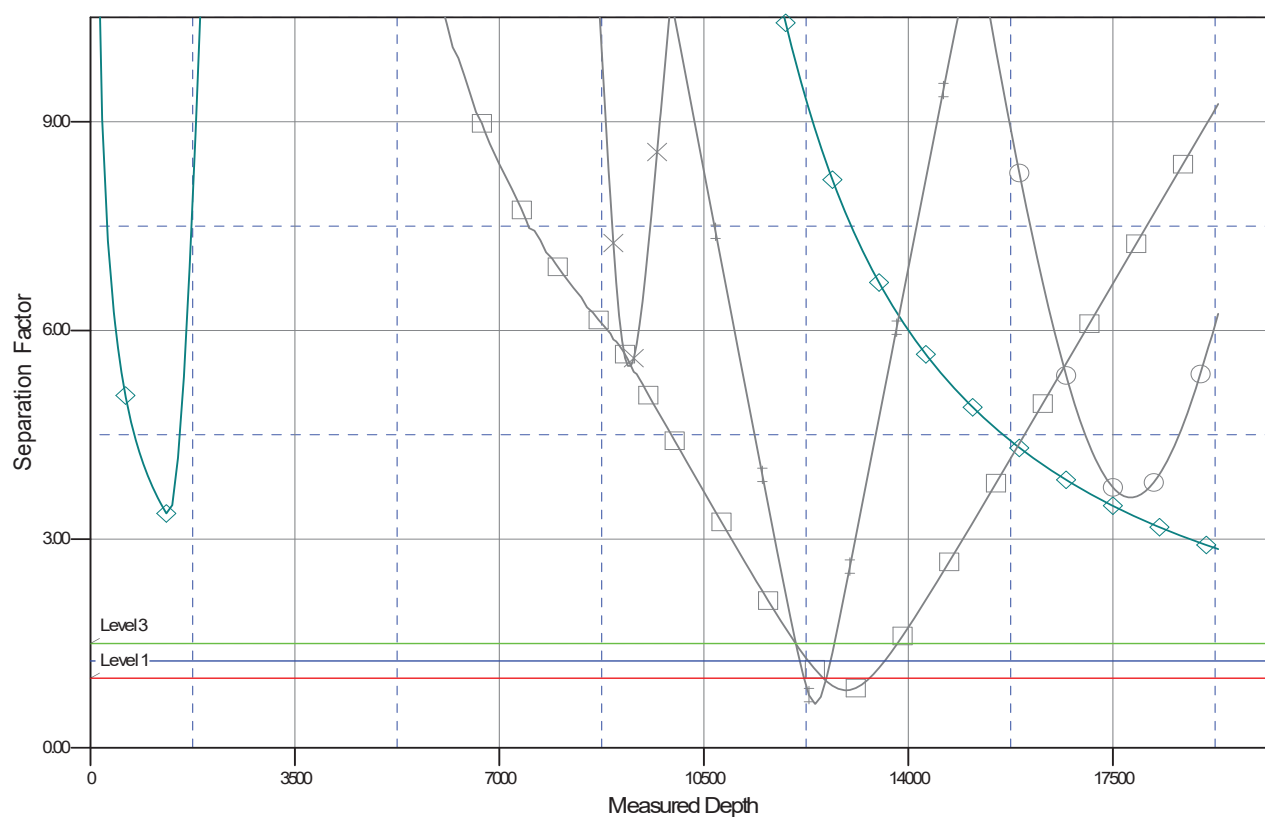
Central Meridian is 104° 19' 60.000000 W

Coordinates are relative to: Decimus 5 WXY Fed Com 1H

Coordinate System is US State Plane 1927 (Exact solution), New Mexico East 300

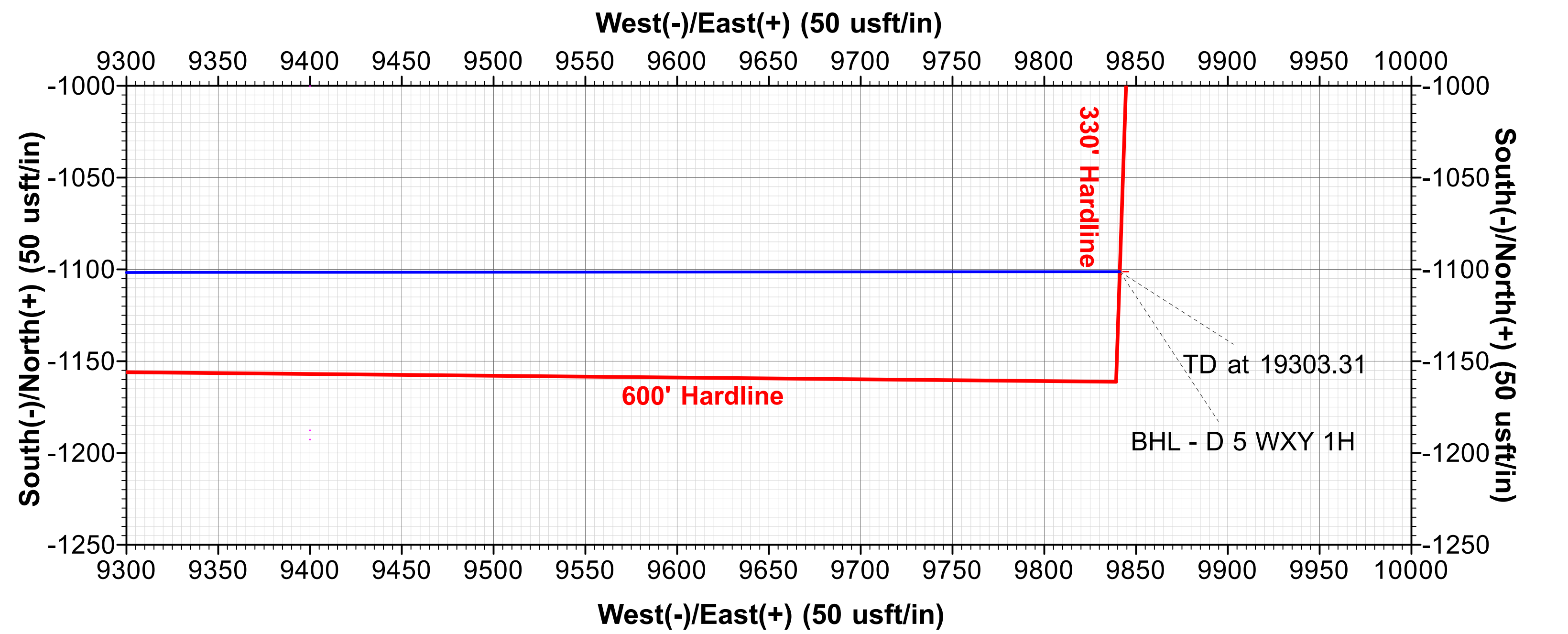
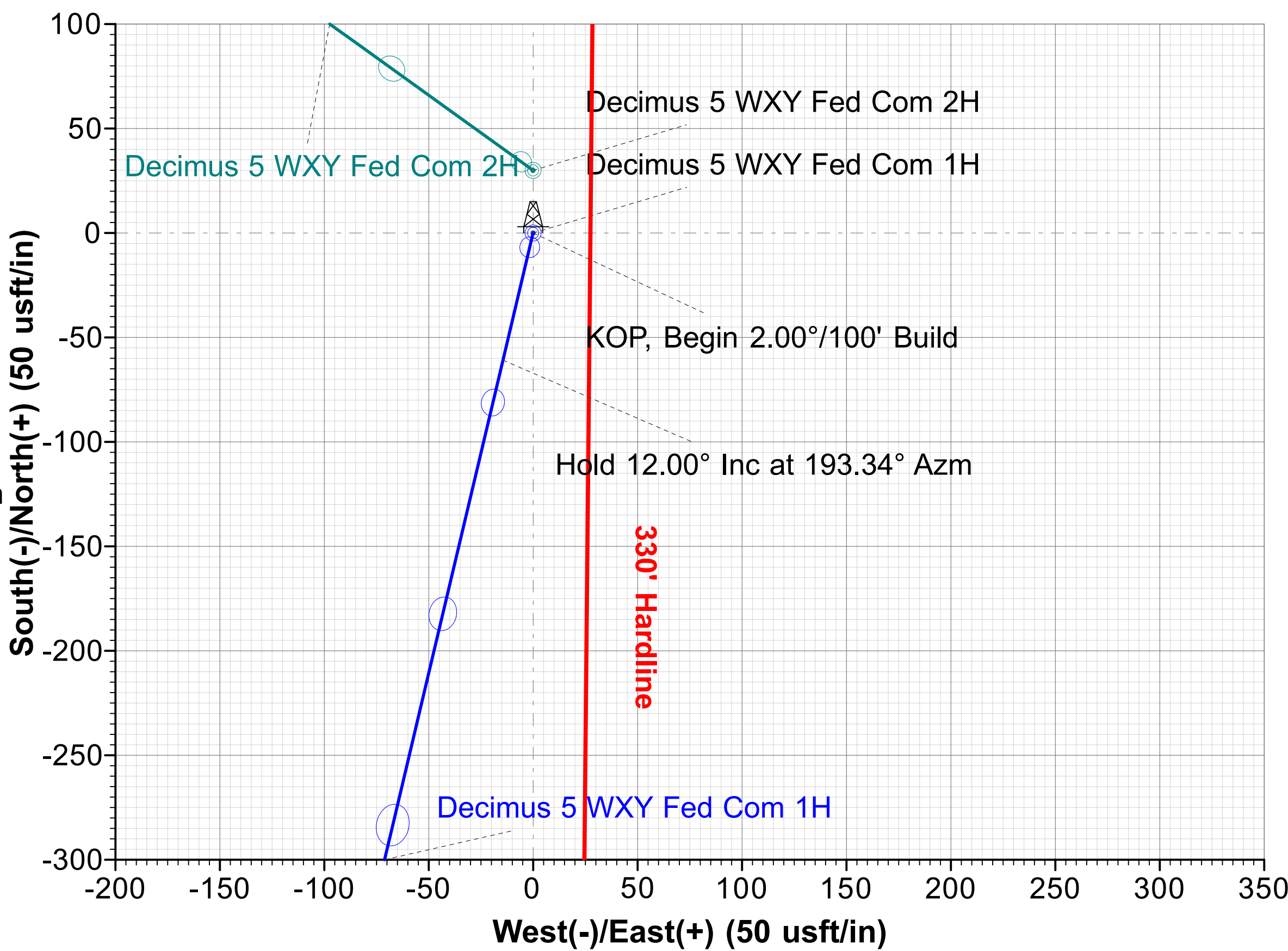
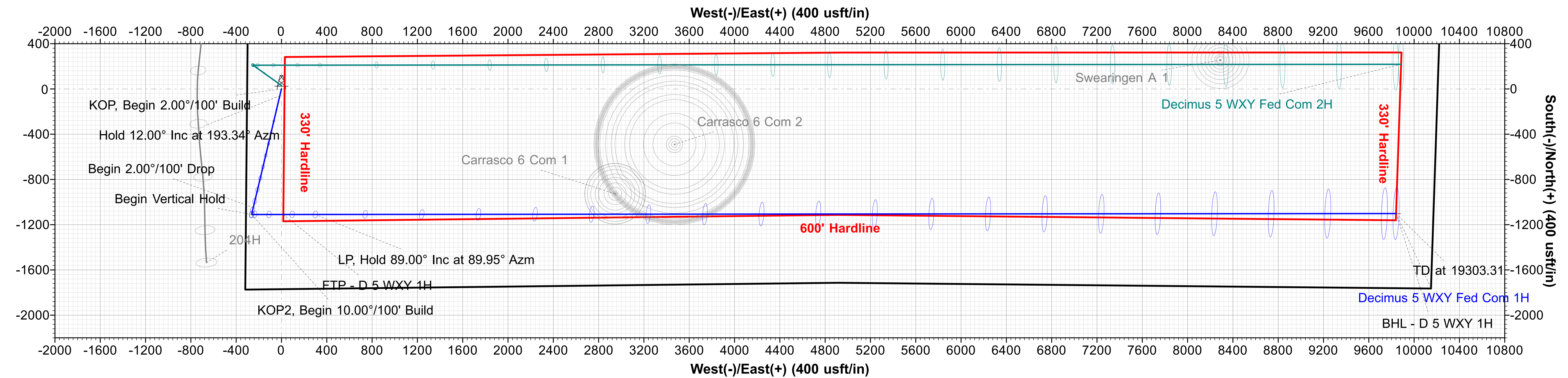
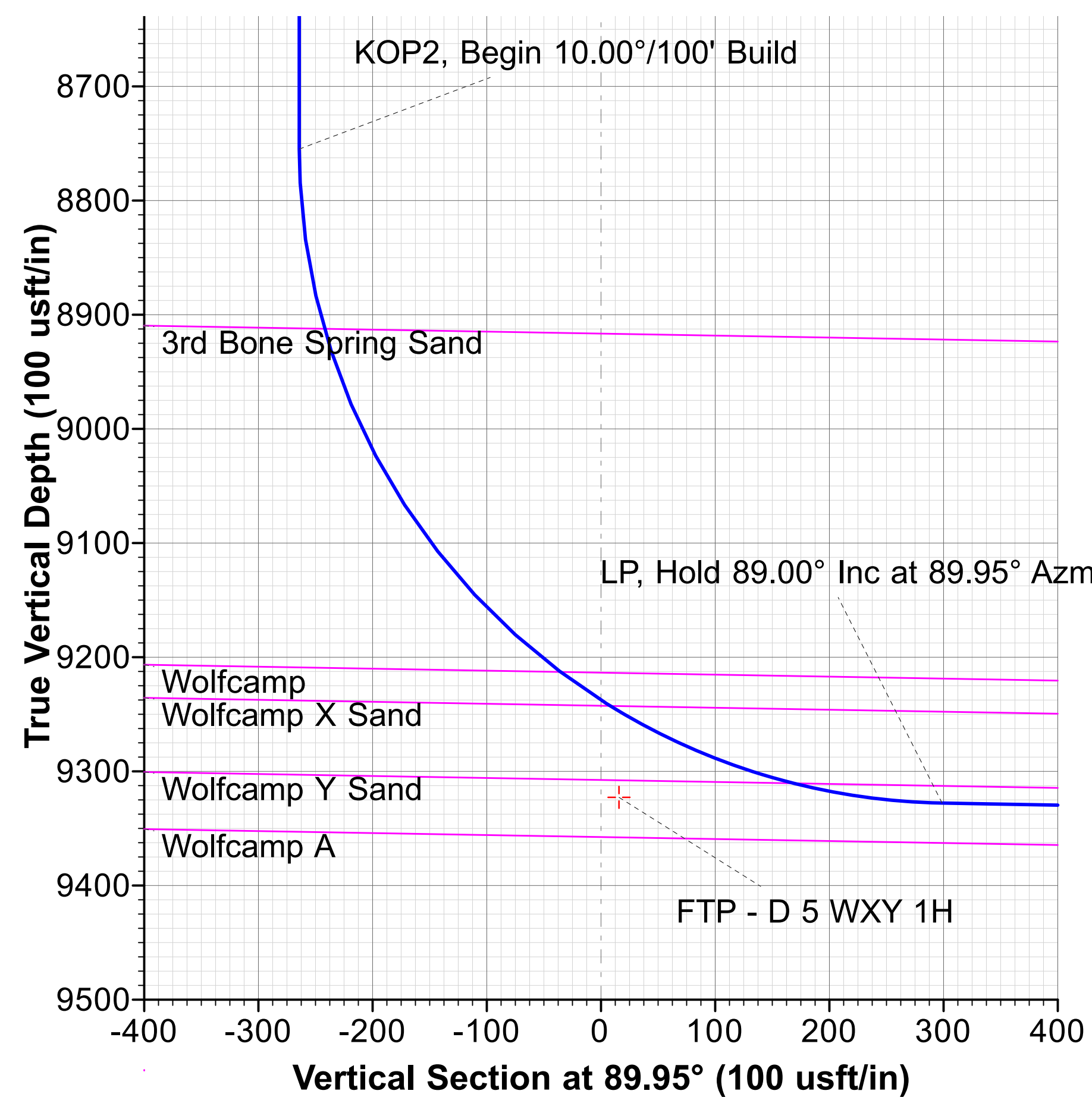
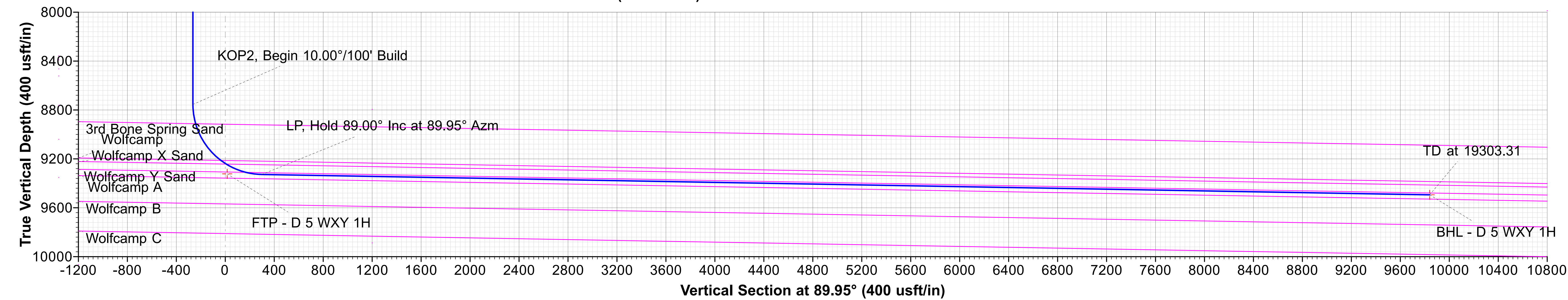
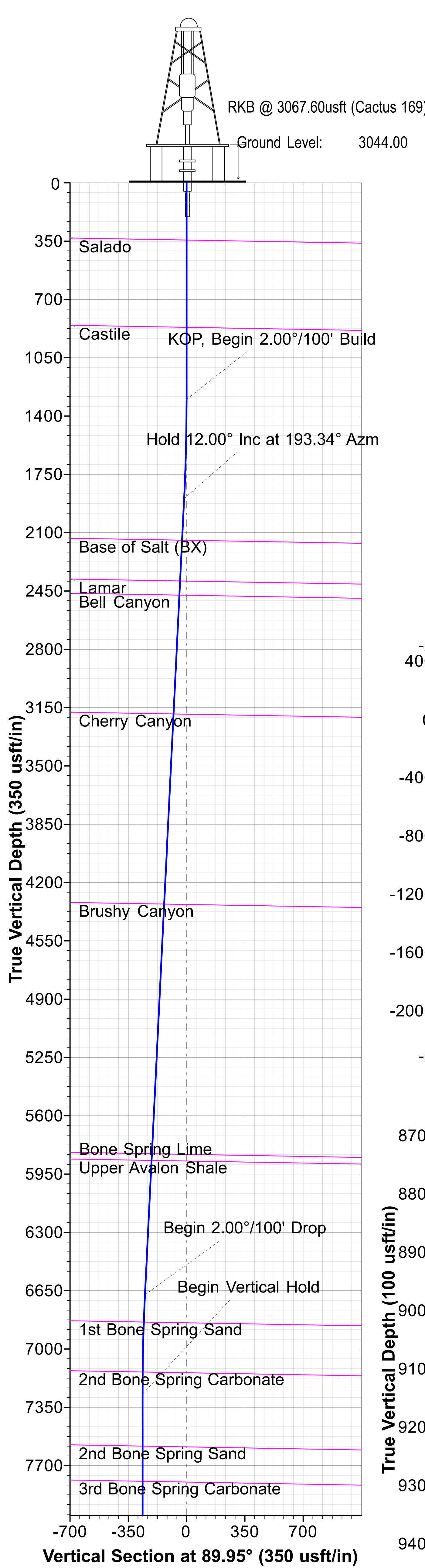
Grid Convergence at Surface is: 0.107°

Separation Factor Plot



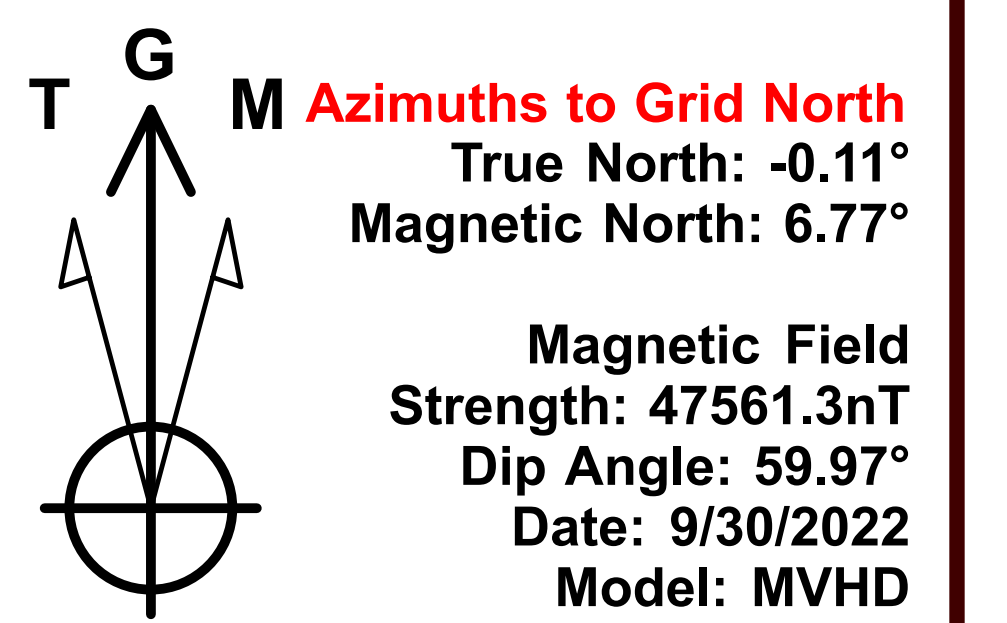
LEGEND





WELL DETAILS											
				Ground Level: 3044.00							
		+N/-S 0.00		+E/-W 0.00		Northing 484528.13		Easting 561741.93		Latitude 32° 19' 54.931620 N	
										Longitude 104° 8' 0.380832 W	
SECTION DETAILS											
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target	Annotation
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00		
2	1300.00	0.00	0.00	1300.00	0.00	0.00	0.00	0.000	0.00		KOP, Begin 2.00°/100' Build
3	1899.87	12.00	193.34	1895.50	-60.89	-14.44	2.00	193.340	-14.49		Hold 12.00° Inc at 193.34° Azm
4	6785.59	12.00	193.34	6674.50	-1049.07	-248.76	0.00	0.000	-249.67		Begin 2.00°/100' Drop
5	7385.47	0.00	0.00	7270.00	-1109.96	-263.19	2.00	180.000	-264.16		Begin Vertical Hold
6	8870.41	0.00	0.00	8754.94	-1109.96	-263.19	0.00	0.000	-264.16		KOP2, Begin 10.00°/100' Build
7	9760.41	89.00	89.95	9327.82	-1109.47	299.76	10.00	89.950	298.80		LP, Hold 89.00° Inc at 89.95° Azm
8	19303.31	89.00	89.95	9494.36	-1101.20	9841.20	0.00	0.000	9840.24	BHL - D 5 WXY 1H	TD at 19303.31

Project: Eddy County, NM (NAD27-NME)
Site: Decimus 5 WXY Fed Com
Well: Decimus 5 WXY Fed Com 1H
Wellbore: OH
Design: Plan 1 07-22-22
Rig: Cactus 169



LEGEND									
—	204H, OH / 64293, Surveys (Patterson 813) V0								
—	Decimus 5 WXY Fed Com 2H, OH, Plan 1 07-22-22 V0								
—	Carrasco 6 Com 2, OH, Surveys V0								
—	Swearingen A 1, OH, Surveys V0								
—	Carrasco 6 Com 1, OH, Surveys V0								
—	Plan 1 07-22-22								

DESIGN TARGET DETAILS							
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
FTP - D 5 WXY 1H	9322.88	-1109.72	16.81	483418.41	561758.74	32° 19' 43.949352 N	104° 8' 0.209076 W
BHL - D 5 WXY 1H	9494.36	-1101.20	9841.20	483426.93	571583.14	32° 19' 43.837788 N	104° 6' 5.707440 W

Map System: US State Plane 1927 (Exact solution)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone Name: New Mexico East 3001

Local Origin: Well Decimus 5 WXY Fed Com 1H, Grid North

Latitude: 32° 19' 54.931620 N
Longitude: 104° 8' 0.380832 W

Grid East: 561741.93
Grid North: 484528.13
Scale Factor: 1.000

Geomagnetic Model: MVHD
Sample Date: 30-Sep-22
Magnetic Declination: 6.875°
Dip Angle from Horizontal: 59.973°
Magnetic Field Strength: 47561.30294485nT

To convert a Magnetic Direction to a Grid Direction, Add 6.769°
To convert a Magnetic Direction to a True Direction, Add 6.875° East
To convert a True Direction to a Grid Direction, Subtract 0.107°



Marathon Oil Permian LLC

Eddy County, NM (NAD27-NME)

Decimus 5 WXY Fed Com

Decimus 5 WXY Fed Com 1H

OH

Plan: Plan 1 07-22-22

Standard Planning Report

22 July, 2022





Planning Report



Database:	USA Compass	Local Co-ordinate Reference:	Well Decimus 5 WXY Fed Com 1H
Company:	Marathon Oil Permian LLC	TVD Reference:	RKB @ 3067.60usft (Cactus 169)
Project:	Eddy County, NM (NAD27-NME)	MD Reference:	RKB @ 3067.60usft (Cactus 169)
Site:	Decimus 5 WXY Fed Com	North Reference:	Grid
Well:	Decimus 5 WXY Fed Com 1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan 1 07-22-22		

Project	Eddy 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		Decimus 5 WXY Fed Com			
Site Position: From:	Map	Northing:	484,528.13 usft	Latitude:	32° 19' 54.931620 N
		Easting:	561,741.94 usft	Longitude:	104° 8' 0.380832 W
		Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "

Well	Decimus 5 WXY Fed Com 1H					
Well Position	+N/-S	0.00 usft	Northing:	484,528.13 usft	Latitude:	32° 19' 54.931620 N
	+E/-W	0.00 usft	Easting:	561,741.94 usft	Longitude:	104° 8' 0.380832 W
Position Uncertainty		1.00 usft	Wellhead Elevation:		Ground Level:	3,044.00 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	MVHD	9/30/2022	6.875	59.973	47,561.30294485

Design	Plan 1 07-22-22			
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	89.95

Plan Survey Tool Program	Date	7/22/2022		
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	19,303.31	Plan 1 07-22-22 (OH)	MWD+HRGM
				OWSG MWD + HRGM

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.000	
1,899.87	12.00	193.34	1,895.50	-60.89	-14.44	2.00	2.00	0.00	193.340	
6,785.59	12.00	193.34	6,674.50	-1,049.07	-248.76	0.00	0.00	0.00	0.000	
7,385.47	0.00	0.00	7,270.00	-1,109.96	-263.19	2.00	-2.00	0.00	180.000	
8,870.41	0.00	0.00	8,754.95	-1,109.96	-263.19	0.00	0.00	0.00	0.000	
9,760.41	89.00	89.95	9,327.82	-1,109.47	299.76	10.00	10.00	0.00	89.950	
19,303.31	89.00	89.95	9,494.36	-1,101.20	9,841.20	0.00	0.00	0.00	0.000	BHL - D 5 WXY 1H



Planning Report



Database:	USA Compass	Local Co-ordinate Reference:	Well Decimus 5 WXY Fed Com 1H
Company:	Marathon Oil Permian LLC	TVD Reference:	RKB @ 3067.60usft (Cactus 169)
Project:	Eddy County, NM (NAD27-NME)	MD Reference:	RKB @ 3067.60usft (Cactus 169)
Site:	Decimus 5 WXY Fed Com	North Reference:	Grid
Well:	Decimus 5 WXY Fed Com 1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan 1 07-22-22		

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
343.60	0.00	0.00	343.60	0.00	0.00	0.00	0.00	0.00	0.00
Salado									
867.60	0.00	0.00	867.60	0.00	0.00	0.00	0.00	0.00	0.00
Castile									
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
KOP, Begin 2.00°/100' Build									
1,400.00	2.00	193.34	1,399.98	-1.70	-0.40	-0.40	2.00	2.00	0.00
1,500.00	4.00	193.34	1,499.84	-6.79	-1.61	-1.62	2.00	2.00	0.00
1,600.00	6.00	193.34	1,599.45	-15.27	-3.62	-3.63	2.00	2.00	0.00
1,700.00	8.00	193.34	1,698.70	-27.13	-6.43	-6.46	2.00	2.00	0.00
1,800.00	10.00	193.34	1,797.47	-42.35	-10.04	-10.08	2.00	2.00	0.00
1,899.87	12.00	193.34	1,895.50	-60.89	-14.44	-14.49	2.00	2.00	0.00
Hold 12.00° Inc at 193.34° Azm									
1,900.00	12.00	193.34	1,895.62	-60.91	-14.44	-14.50	0.00	0.00	0.00
2,000.00	12.00	193.34	1,993.44	-81.14	-19.24	-19.31	0.00	0.00	0.00
2,100.00	12.00	193.34	2,091.25	-101.37	-24.04	-24.12	0.00	0.00	0.00
2,155.08	12.00	193.34	2,145.13	-112.51	-26.68	-26.78	0.00	0.00	0.00
Base of Salt (BX)									
2,200.00	12.00	193.34	2,189.07	-121.59	-28.83	-28.94	0.00	0.00	0.00
2,300.00	12.00	193.34	2,286.89	-141.82	-33.63	-33.75	0.00	0.00	0.00
2,400.00	12.00	193.34	2,384.70	-162.04	-38.42	-38.57	0.00	0.00	0.00
2,405.34	12.00	193.34	2,389.92	-163.12	-38.68	-38.82	0.00	0.00	0.00
Lamar									
2,492.16	12.00	193.34	2,474.85	-180.68	-42.84	-43.00	0.00	0.00	0.00
Bell Canyon									
2,500.00	12.00	193.34	2,482.52	-182.27	-43.22	-43.38	0.00	0.00	0.00
2,600.00	12.00	193.34	2,580.33	-202.50	-48.02	-48.19	0.00	0.00	0.00
2,700.00	12.00	193.34	2,678.15	-222.72	-52.81	-53.01	0.00	0.00	0.00
2,800.00	12.00	193.34	2,775.96	-242.95	-57.61	-57.82	0.00	0.00	0.00
2,900.00	12.00	193.34	2,873.78	-263.17	-62.40	-62.63	0.00	0.00	0.00
3,000.00	12.00	193.34	2,971.60	-283.40	-67.20	-67.45	0.00	0.00	0.00
3,100.00	12.00	193.34	3,069.41	-303.63	-72.00	-72.26	0.00	0.00	0.00
3,200.00	12.00	193.34	3,167.23	-323.85	-76.79	-77.07	0.00	0.00	0.00
3,221.48	12.00	193.34	3,188.24	-328.20	-77.82	-78.11	0.00	0.00	0.00
Cherry Canyon									
3,300.00	12.00	193.34	3,265.04	-344.08	-81.59	-81.89	0.00	0.00	0.00
3,400.00	12.00	193.34	3,362.86	-364.30	-86.38	-86.70	0.00	0.00	0.00
3,500.00	12.00	193.34	3,460.67	-384.53	-91.18	-91.52	0.00	0.00	0.00
3,600.00	12.00	193.34	3,558.49	-404.76	-95.98	-96.33	0.00	0.00	0.00
3,700.00	12.00	193.34	3,656.31	-424.98	-100.77	-101.14	0.00	0.00	0.00
3,800.00	12.00	193.34	3,754.12	-445.21	-105.57	-105.96	0.00	0.00	0.00
3,900.00	12.00	193.34	3,851.94	-465.43	-110.36	-110.77	0.00	0.00	0.00
4,000.00	12.00	193.34	3,949.75	-485.66	-115.16	-115.58	0.00	0.00	0.00
4,100.00	12.00	193.34	4,047.57	-505.89	-119.96	-120.40	0.00	0.00	0.00
4,200.00	12.00	193.34	4,145.38	-526.11	-124.75	-125.21	0.00	0.00	0.00
4,300.00	12.00	193.34	4,243.20	-546.34	-129.55	-130.02	0.00	0.00	0.00
4,387.98	12.00	193.34	4,329.26	-564.13	-133.77	-134.26	0.00	0.00	0.00
Brushy Canyon									
4,400.00	12.00	193.34	4,341.02	-566.56	-134.34	-134.84	0.00	0.00	0.00
4,500.00	12.00	193.34	4,438.83	-586.79	-139.14	-139.65	0.00	0.00	0.00
4,600.00	12.00	193.34	4,536.65	-607.02	-143.94	-144.47	0.00	0.00	0.00
4,700.00	12.00	193.34	4,634.46	-627.24	-148.73	-149.28	0.00	0.00	0.00



Planning Report



Database:	USA Compass	Local Co-ordinate Reference:	Well Decimus 5 WXY Fed Com 1H
Company:	Marathon Oil Permian LLC	TVD Reference:	RKB @ 3067.60usft (Cactus 169)
Project:	Eddy County, NM (NAD27-NME)	MD Reference:	RKB @ 3067.60usft (Cactus 169)
Site:	Decimus 5 WXY Fed Com	North Reference:	Grid
Well:	Decimus 5 WXY Fed Com 1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan 1 07-22-22		

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)
4,800.00	12.00	193.34	4,732.28	-647.47	-153.53	-154.09	0.00	0.00	0.00
4,900.00	12.00	193.34	4,830.09	-667.69	-158.32	-158.91	0.00	0.00	0.00
5,000.00	12.00	193.34	4,927.91	-687.92	-163.12	-163.72	0.00	0.00	0.00
5,100.00	12.00	193.34	5,025.72	-708.15	-167.92	-168.53	0.00	0.00	0.00
5,200.00	12.00	193.34	5,123.54	-728.37	-172.71	-173.35	0.00	0.00	0.00
5,300.00	12.00	193.34	5,221.36	-748.60	-177.51	-178.16	0.00	0.00	0.00
5,400.00	12.00	193.34	5,319.17	-768.82	-182.30	-182.97	0.00	0.00	0.00
5,500.00	12.00	193.34	5,416.99	-789.05	-187.10	-187.79	0.00	0.00	0.00
5,600.00	12.00	193.34	5,514.80	-809.28	-191.90	-192.60	0.00	0.00	0.00
5,700.00	12.00	193.34	5,612.62	-829.50	-196.69	-197.42	0.00	0.00	0.00
5,800.00	12.00	193.34	5,710.43	-849.73	-201.49	-202.23	0.00	0.00	0.00
5,900.00	12.00	193.34	5,808.25	-869.95	-206.28	-207.04	0.00	0.00	0.00
5,920.16	12.00	193.34	5,827.97	-874.03	-207.25	-208.01	0.00	0.00	0.00
Bone Spring Lime									
5,961.02	12.00	193.34	5,867.93	-882.30	-209.21	-209.98	0.00	0.00	0.00
Upper Avalon Shale									
6,000.00	12.00	193.34	5,906.07	-890.18	-211.08	-211.86	0.00	0.00	0.00
6,100.00	12.00	193.34	6,003.88	-910.41	-215.88	-216.67	0.00	0.00	0.00
6,200.00	12.00	193.34	6,101.70	-930.63	-220.67	-221.48	0.00	0.00	0.00
6,300.00	12.00	193.34	6,199.51	-950.86	-225.47	-226.30	0.00	0.00	0.00
6,400.00	12.00	193.34	6,297.33	-971.08	-230.26	-231.11	0.00	0.00	0.00
6,500.00	12.00	193.34	6,395.14	-991.31	-235.06	-235.92	0.00	0.00	0.00
6,600.00	12.00	193.34	6,492.96	-1,011.54	-239.86	-240.74	0.00	0.00	0.00
6,700.00	12.00	193.34	6,590.78	-1,031.76	-244.65	-245.55	0.00	0.00	0.00
6,785.59	12.00	193.34	6,674.50	-1,049.07	-248.76	-249.67	0.00	0.00	0.00
Begin 2.00°/100' Drop									
6,800.00	11.71	193.34	6,688.60	-1,051.95	-249.44	-250.36	2.00	-2.00	0.00
6,900.00	9.71	193.34	6,786.85	-1,070.03	-253.73	-254.66	2.00	-2.00	0.00
6,951.94	8.67	193.34	6,838.12	-1,078.11	-255.64	-256.58	2.00	-2.00	0.00
1st Bone Spring Sand									
7,000.00	7.71	193.34	6,885.69	-1,084.77	-257.22	-258.17	2.00	-2.00	0.00
7,100.00	5.71	193.34	6,985.00	-1,096.13	-259.92	-260.87	2.00	-2.00	0.00
7,200.00	3.71	193.34	7,084.66	-1,104.12	-261.81	-262.77	2.00	-2.00	0.00
7,253.42	2.64	193.34	7,138.00	-1,107.00	-262.49	-263.46	2.00	-2.00	0.00
2nd Bone Spring Carbonate									
7,300.00	1.71	193.34	7,184.54	-1,108.72	-262.90	-263.87	2.00	-2.00	0.00
7,385.47	0.00	0.00	7,270.00	-1,109.96	-263.19	-264.16	2.00	-2.00	195.00
Begin Vertical Hold									
7,698.46	0.00	0.00	7,582.99	-1,109.96	-263.19	-264.16	0.00	0.00	0.00
2nd Bone Spring Sand									
7,909.46	0.00	0.00	7,793.99	-1,109.96	-263.19	-264.16	0.00	0.00	0.00
3rd Bone Spring Carbonate									
8,870.41	0.00	0.00	8,754.95	-1,109.96	-263.19	-264.16	0.00	0.00	0.00
KOP2, Begin 10.00°/100' Build									
8,900.00	2.96	89.95	8,784.52	-1,109.96	-262.43	-263.40	10.00	10.00	0.00
9,000.00	12.96	89.95	8,883.43	-1,109.95	-248.60	-249.57	10.00	10.00	0.00
9,029.89	15.95	89.95	8,912.37	-1,109.94	-241.14	-242.11	10.00	10.00	0.00
3rd Bone Spring Sand									
9,100.00	22.96	89.95	8,978.44	-1,109.92	-217.81	-218.78	10.00	10.00	0.00
9,200.00	32.96	89.95	9,066.65	-1,109.88	-170.98	-171.95	10.00	10.00	0.00
9,300.00	42.96	89.95	9,145.40	-1,109.83	-109.55	-110.52	10.00	10.00	0.00
9,400.00	52.96	89.95	9,212.28	-1,109.77	-35.38	-36.35	10.00	10.00	0.00



Planning Report



Database:	USA Compass	Local Co-ordinate Reference:	Well Decimus 5 WXY Fed Com 1H
Company:	Marathon Oil Permian LLC	TVD Reference:	RKB @ 3067.60usft (Cactus 169)
Project:	Eddy County, NM (NAD27-NME)	MD Reference:	RKB @ 3067.60usft (Cactus 169)
Site:	Decimus 5 WXY Fed Com	North Reference:	Grid
Well:	Decimus 5 WXY Fed Com 1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan 1 07-22-22		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
9,401.17	53.08	89.95	9,212.98	-1,109.76	-34.45	-35.42	10.00	10.00	0.00	
Wolfcamp										
9,454.02	58.36	89.95	9,242.74	-1,109.73	9.21	8.24	10.00	10.00	0.00	
Wolfcamp X Sand										
9,500.00	62.96	89.95	9,265.27	-1,109.69	49.28	48.31	10.00	10.00	0.00	
9,600.00	72.96	89.95	9,302.75	-1,109.61	141.85	140.88	10.00	10.00	0.00	
9,629.03	75.86	89.95	9,310.55	-1,109.59	169.81	168.84	10.00	10.00	0.00	
Wolfcamp Y Sand										
9,700.00	82.96	89.95	9,323.58	-1,109.53	239.53	238.56	10.00	10.00	0.00	
9,760.41	89.00	89.95	9,327.82	-1,109.47	299.76	298.80	10.00	10.00	0.00	
LP, Hold 89.00° Inc at 89.95° Azm										
9,800.00	89.00	89.95	9,328.51	-1,109.44	339.34	338.38	0.00	0.00	0.00	
9,900.00	89.00	89.95	9,330.25	-1,109.35	439.33	438.36	0.00	0.00	0.00	
10,000.00	89.00	89.95	9,332.00	-1,109.27	539.31	538.35	0.00	0.00	0.00	
10,100.00	89.00	89.95	9,333.74	-1,109.18	639.30	638.33	0.00	0.00	0.00	
10,200.00	89.00	89.95	9,335.49	-1,109.09	739.28	738.32	0.00	0.00	0.00	
10,300.00	89.00	89.95	9,337.23	-1,109.01	839.27	838.30	0.00	0.00	0.00	
10,400.00	89.00	89.95	9,338.98	-1,108.92	939.25	938.28	0.00	0.00	0.00	
10,500.00	89.00	89.95	9,340.72	-1,108.83	1,039.24	1,038.27	0.00	0.00	0.00	
10,600.00	89.00	89.95	9,342.47	-1,108.75	1,139.22	1,138.25	0.00	0.00	0.00	
10,700.00	89.00	89.95	9,344.21	-1,108.66	1,239.21	1,238.24	0.00	0.00	0.00	
10,800.00	89.00	89.95	9,345.96	-1,108.57	1,339.19	1,338.22	0.00	0.00	0.00	
10,900.00	89.00	89.95	9,347.70	-1,108.49	1,439.18	1,438.21	0.00	0.00	0.00	
11,000.00	89.00	89.95	9,349.45	-1,108.40	1,539.16	1,538.19	0.00	0.00	0.00	
11,100.00	89.00	89.95	9,351.19	-1,108.31	1,639.15	1,638.18	0.00	0.00	0.00	
11,200.00	89.00	89.95	9,352.94	-1,108.23	1,739.13	1,738.16	0.00	0.00	0.00	
11,300.00	89.00	89.95	9,354.69	-1,108.14	1,839.12	1,838.15	0.00	0.00	0.00	
11,400.00	89.00	89.95	9,356.43	-1,108.05	1,939.10	1,938.13	0.00	0.00	0.00	
11,500.00	89.00	89.95	9,358.18	-1,107.97	2,039.09	2,038.12	0.00	0.00	0.00	
11,600.00	89.00	89.95	9,359.92	-1,107.88	2,139.07	2,138.10	0.00	0.00	0.00	
11,700.00	89.00	89.95	9,361.67	-1,107.79	2,239.05	2,238.09	0.00	0.00	0.00	
11,800.00	89.00	89.95	9,363.41	-1,107.71	2,339.04	2,338.07	0.00	0.00	0.00	
11,900.00	89.00	89.95	9,365.16	-1,107.62	2,439.02	2,438.06	0.00	0.00	0.00	
12,000.00	89.00	89.95	9,366.90	-1,107.53	2,539.01	2,538.04	0.00	0.00	0.00	
12,100.00	89.00	89.95	9,368.65	-1,107.45	2,638.99	2,638.03	0.00	0.00	0.00	
12,200.00	89.00	89.95	9,370.39	-1,107.36	2,738.98	2,738.01	0.00	0.00	0.00	
12,300.00	89.00	89.95	9,372.14	-1,107.27	2,838.96	2,838.00	0.00	0.00	0.00	
12,400.00	89.00	89.95	9,373.88	-1,107.19	2,938.95	2,937.98	0.00	0.00	0.00	
12,500.00	89.00	89.95	9,375.63	-1,107.10	3,038.93	3,037.97	0.00	0.00	0.00	
12,600.00	89.00	89.95	9,377.37	-1,107.01	3,138.92	3,137.95	0.00	0.00	0.00	
12,700.00	89.00	89.95	9,379.12	-1,106.93	3,238.90	3,237.93	0.00	0.00	0.00	
12,800.00	89.00	89.95	9,380.86	-1,106.84	3,338.89	3,337.92	0.00	0.00	0.00	
12,900.00	89.00	89.95	9,382.61	-1,106.75	3,438.87	3,437.90	0.00	0.00	0.00	
13,000.00	89.00	89.95	9,384.35	-1,106.67	3,538.86	3,537.89	0.00	0.00	0.00	
13,100.00	89.00	89.95	9,386.10	-1,106.58	3,638.84	3,637.87	0.00	0.00	0.00	
13,200.00	89.00	89.95	9,387.84	-1,106.49	3,738.83	3,737.86	0.00	0.00	0.00	
13,300.00	89.00	89.95	9,389.59	-1,106.41	3,838.81	3,837.84	0.00	0.00	0.00	
13,400.00	89.00	89.95	9,391.34	-1,106.32	3,938.80	3,937.83	0.00	0.00	0.00	
13,500.00	89.00	89.95	9,393.08	-1,106.23	4,038.78	4,037.81	0.00	0.00	0.00	
13,600.00	89.00	89.95	9,394.83	-1,106.15	4,138.76	4,137.80	0.00	0.00	0.00	
13,700.00	89.00	89.95	9,396.57	-1,106.06	4,238.75	4,237.78	0.00	0.00	0.00	
13,800.00	89.00	89.95	9,398.32	-1,105.97	4,338.73	4,337.77	0.00	0.00	0.00	
13,900.00	89.00	89.95	9,400.06	-1,105.89	4,438.72	4,437.75	0.00	0.00	0.00	



Planning Report



Database:	USA Compass	Local Co-ordinate Reference:	Well Decimus 5 WXY Fed Com 1H
Company:	Marathon Oil Permian LLC	TVD Reference:	RKB @ 3067.60usft (Cactus 169)
Project:	Eddy County, NM (NAD27-NME)	MD Reference:	RKB @ 3067.60usft (Cactus 169)
Site:	Decimus 5 WXY Fed Com	North Reference:	Grid
Well:	Decimus 5 WXY Fed Com 1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan 1 07-22-22		

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)
14,000.00	89.00	89.95	9,401.81	-1,105.80	4,538.70	4,537.74	0.00	0.00	0.00
14,100.00	89.00	89.95	9,403.55	-1,105.71	4,638.69	4,637.72	0.00	0.00	0.00
14,200.00	89.00	89.95	9,405.30	-1,105.63	4,738.67	4,737.71	0.00	0.00	0.00
14,300.00	89.00	89.95	9,407.04	-1,105.54	4,838.66	4,837.69	0.00	0.00	0.00
14,400.00	89.00	89.95	9,408.79	-1,105.45	4,938.64	4,937.68	0.00	0.00	0.00
14,500.00	89.00	89.95	9,410.53	-1,105.37	5,038.63	5,037.66	0.00	0.00	0.00
14,600.00	89.00	89.95	9,412.28	-1,105.28	5,138.61	5,137.65	0.00	0.00	0.00
14,700.00	89.00	89.95	9,414.02	-1,105.19	5,238.60	5,237.63	0.00	0.00	0.00
14,800.00	89.00	89.95	9,415.77	-1,105.11	5,338.58	5,337.61	0.00	0.00	0.00
14,900.00	89.00	89.95	9,417.51	-1,105.02	5,438.57	5,437.60	0.00	0.00	0.00
15,000.00	89.00	89.95	9,419.26	-1,104.93	5,538.55	5,537.58	0.00	0.00	0.00
15,100.00	89.00	89.95	9,421.00	-1,104.85	5,638.54	5,637.57	0.00	0.00	0.00
15,200.00	89.00	89.95	9,422.75	-1,104.76	5,738.52	5,737.55	0.00	0.00	0.00
15,300.00	89.00	89.95	9,424.49	-1,104.67	5,838.50	5,837.54	0.00	0.00	0.00
15,400.00	89.00	89.95	9,426.24	-1,104.58	5,938.49	5,937.52	0.00	0.00	0.00
15,500.00	89.00	89.95	9,427.99	-1,104.50	6,038.47	6,037.51	0.00	0.00	0.00
15,600.00	89.00	89.95	9,429.73	-1,104.41	6,138.46	6,137.49	0.00	0.00	0.00
15,700.00	89.00	89.95	9,431.48	-1,104.32	6,238.44	6,237.48	0.00	0.00	0.00
15,800.00	89.00	89.95	9,433.22	-1,104.24	6,338.43	6,337.46	0.00	0.00	0.00
15,900.00	89.00	89.95	9,434.97	-1,104.15	6,438.41	6,437.45	0.00	0.00	0.00
16,000.00	89.00	89.95	9,436.71	-1,104.06	6,538.40	6,537.43	0.00	0.00	0.00
16,100.00	89.00	89.95	9,438.46	-1,103.98	6,638.38	6,637.42	0.00	0.00	0.00
16,200.00	89.00	89.95	9,440.20	-1,103.89	6,738.37	6,737.40	0.00	0.00	0.00
16,300.00	89.00	89.95	9,441.95	-1,103.80	6,838.35	6,837.39	0.00	0.00	0.00
16,400.00	89.00	89.95	9,443.69	-1,103.72	6,938.34	6,937.37	0.00	0.00	0.00
16,500.00	89.00	89.95	9,445.44	-1,103.63	7,038.32	7,037.36	0.00	0.00	0.00
16,600.00	89.00	89.95	9,447.18	-1,103.54	7,138.31	7,137.34	0.00	0.00	0.00
16,700.00	89.00	89.95	9,448.93	-1,103.46	7,238.29	7,237.33	0.00	0.00	0.00
16,800.00	89.00	89.95	9,450.67	-1,103.37	7,338.28	7,337.31	0.00	0.00	0.00
16,900.00	89.00	89.95	9,452.42	-1,103.28	7,438.26	7,437.30	0.00	0.00	0.00
17,000.00	89.00	89.95	9,454.16	-1,103.20	7,538.25	7,537.28	0.00	0.00	0.00
17,100.00	89.00	89.95	9,455.91	-1,103.11	7,638.23	7,637.26	0.00	0.00	0.00
17,200.00	89.00	89.95	9,457.65	-1,103.02	7,738.21	7,737.25	0.00	0.00	0.00
17,300.00	89.00	89.95	9,459.40	-1,102.94	7,838.20	7,837.23	0.00	0.00	0.00
17,400.00	89.00	89.95	9,461.14	-1,102.85	7,938.18	7,937.22	0.00	0.00	0.00
17,500.00	89.00	89.95	9,462.89	-1,102.76	8,038.17	8,037.20	0.00	0.00	0.00
17,600.00	89.00	89.95	9,464.64	-1,102.68	8,138.15	8,137.19	0.00	0.00	0.00
17,700.00	89.00	89.95	9,466.38	-1,102.59	8,238.14	8,237.17	0.00	0.00	0.00
17,800.00	89.00	89.95	9,468.13	-1,102.50	8,338.12	8,337.16	0.00	0.00	0.00
17,900.00	89.00	89.95	9,469.87	-1,102.42	8,438.11	8,437.14	0.00	0.00	0.00
18,000.00	89.00	89.95	9,471.62	-1,102.33	8,538.09	8,537.13	0.00	0.00	0.00
18,100.00	89.00	89.95	9,473.36	-1,102.24	8,638.08	8,637.11	0.00	0.00	0.00
18,200.00	89.00	89.95	9,475.11	-1,102.16	8,738.06	8,737.10	0.00	0.00	0.00
18,300.00	89.00	89.95	9,476.85	-1,102.07	8,838.05	8,837.08	0.00	0.00	0.00
18,400.00	89.00	89.95	9,478.60	-1,101.98	8,938.03	8,937.07	0.00	0.00	0.00
18,500.00	89.00	89.95	9,480.34	-1,101.90	9,038.02	9,037.05	0.00	0.00	0.00
18,600.00	89.00	89.95	9,482.09	-1,101.81	9,138.00	9,137.04	0.00	0.00	0.00
18,700.00	89.00	89.95	9,483.83	-1,101.72	9,237.99	9,237.02	0.00	0.00	0.00
18,800.00	89.00	89.95	9,485.58	-1,101.64	9,337.97	9,337.01	0.00	0.00	0.00
18,900.00	89.00	89.95	9,487.32	-1,101.55	9,437.96	9,436.99	0.00	0.00	0.00
19,000.00	89.00	89.95	9,489.07	-1,101.46	9,537.94	9,536.98	0.00	0.00	0.00
19,100.00	89.00	89.95	9,490.81	-1,101.38	9,637.92	9,636.96	0.00	0.00	0.00
19,200.00	89.00	89.95	9,492.56	-1,101.29	9,737.91	9,736.94	0.00	0.00	0.00
19,300.00	89.00	89.95	9,494.30	-1,101.20	9,837.89	9,836.93	0.00	0.00	0.00



Planning Report



Database:	USA Compass	Local Co-ordinate Reference:	Well Decimus 5 WXY Fed Com 1H
Company:	Marathon Oil Permian LLC	TVD Reference:	RKB @ 3067.60usft (Cactus 169)
Project:	Eddy County, NM (NAD27-NME)	MD Reference:	RKB @ 3067.60usft (Cactus 169)
Site:	Decimus 5 WXY Fed Com	North Reference:	Grid
Well:	Decimus 5 WXY Fed Com 1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan 1 07-22-22		

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)
19,303.31	89.00	89.95	9,494.36	-1,101.20	9,841.20	9,840.24	0.00	0.00	0.00
TD at 19303.31									

Design Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
FTP - D 5 WXY 1H - plan misses target center by 66.13usft at 9499.92usft MD (9265.23 TVD, -1109.69 N, 49.21 E) - Point	0.00	0.00	9,322.88	-1,109.72	16.81	483,418.41	561,758.74	32° 19' 43.949352 N	104° 8' 0.209076 W
BHL - D 5 WXY 1H - plan hits target center - Point	0.00	0.00	9,494.36	-1,101.20	9,841.20	483,426.93	571,583.14	32° 19' 43.837788 N	104° 6' 5.707440 W

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")	
19,303.31	9,494.36	20" Casing	20	24	

Formations					
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
343.60	343.60	Salado		1.000	89.95
867.60	867.60	Castile		1.000	89.95
2,155.08	2,145.13	Base of Salt (BX)		1.000	89.95
2,405.34	2,389.92	Lamar		1.000	89.95
2,492.16	2,474.85	Bell Canyon		1.000	89.95
3,221.48	3,188.24	Cherry Canyon		1.000	89.95
4,387.98	4,329.26	Brushy Canyon		1.000	89.95
5,920.16	5,827.97	Bone Spring Lime		1.000	89.95
5,961.02	5,867.93	Upper Avalon Shale		1.000	89.95
6,951.94	6,838.12	1st Bone Spring Sand		1.000	89.95
7,253.42	7,138.00	2nd Bone Spring Carbonate		1.000	89.95
7,698.46	7,582.99	2nd Bone Spring Sand		1.000	89.95
7,909.46	7,793.99	3rd Bone Spring Carbonate		1.000	89.95
9,029.89	8,912.37	3rd Bone Spring Sand		1.000	89.95
9,401.17	9,212.98	Wolfcamp		1.000	89.95
9,454.02	9,242.74	Wolfcamp X Sand		1.000	89.95
9,629.03	9,310.55	Wolfcamp Y Sand		1.000	89.95



Planning Report



Database:	USA Compass	Local Co-ordinate Reference:	Well Decimus 5 WXY Fed Com 1H
Company:	Marathon Oil Permian LLC	TVD Reference:	RKB @ 3067.60usft (Cactus 169)
Project:	Eddy County, NM (NAD27-NME)	MD Reference:	RKB @ 3067.60usft (Cactus 169)
Site:	Decimus 5 WXY Fed Com	North Reference:	Grid
Well:	Decimus 5 WXY Fed Com 1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan 1 07-22-22		

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
1,300.00	1,300.00	0.00	0.00	KOP, Begin 2.00°/100' Build
1,899.87	1,895.50	-60.89	-14.44	Hold 12.00° Inc at 193.34° Azm
6,785.59	6,674.50	-1,049.07	-248.76	Begin 2.00°/100' Drop
7,385.47	7,270.00	-1,109.96	-263.19	Begin Vertical Hold
8,870.41	8,754.95	-1,109.96	-263.19	KOP2, Begin 10.00°/100' Build
9,760.41	9,327.82	-1,109.47	299.76	LP, Hold 89.00° Inc at 89.95° Azm
19,303.31	9,494.36	-1,101.20	9,841.20	TD at 19303.31