Form 3160-3 (June 2015) UNITED STATES		OMB No.	PPROVED 1004-0137 uary 31, 2018
DEPARTMENT OF THE IN	5. Lease Serial No.		
BUREAU OF LAND MANA APPLICATION FOR PERMIT TO DI		6. If Indian, Allotee or	r Tribe Name
AFFEIGATION FOR FERMIT TO D			
1a. Type of work: DRILL RE	7. If Unit or CA Agree	ement, Name and No.	
1b. Type of Well: Oil Well Gas Well Ot	her	8. Lease Name and W	Vell No
1c. Type of Completion: Hydraulic Fracturing Sin	ngle Zone Multiple Zone		
2. Name of Operator		9. API Well No. 30.	-015-54120
3a. Address	3b. Phone No. (include area code)	10. Field and Pool, or	Exploratory
4. Location of Well (<i>Report location clearly and in accordance w</i>	ith any State requirements.*)	11. Sec., T. R. M. or E	Blk. and Survey or Area
At surface			
At proposed prod. zone			
14. Distance in miles and direction from nearest town or post offic	ce*	12. County or Parish	13. State
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)	16. No of acres in lease 17. Spaci	ng Unit dedicated to this	s well
 Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 	19. Proposed Depth 20. BLM	/BIA Bond No. in file	
21. Elevations (Show whether DF, KDB, RT, GL, etc.)	22. Approximate date work will start*	23. Estimated duration	n
	24. Attachments	-	
The following, completed in accordance with the requirements of (as applicable)	Onshore Oil and Gas Order No. 1, and the F	Iydraulic Fracturing rul	e per 43 CFR 3162.3-3
1. Well plat certified by a registered surveyor.	4. Bond to cover the operation	is unless covered by an e	existing bond on file (see
 A Drilling Plan. A Surface Use Plan (if the location is on National Forest System SUPO must be filed with the appropriate Forest Service Office) 		rmation and/or plans as n	nay be requested by the
25. Signature	Name (Printed/Typed)	I	Date
Title		I	
Approved by (Signature)	Name (Printed/Typed)	ſ	Date
Title	Office	'	
Application approval does not warrant or certify that the applicant applicant to conduct operations thereon. Conditions of approval, if any, are attached.	t holds legal or equitable title to those rights	in the subject lease whi	ich would entitle the
Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, m of the United States any false, fictitious or fraudulent statements of			y department or agency



(Continued on page 2)

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INSTRUCTIONS

GENERAL: This form is designed for submitting proposals to perform certain well operations, as indicated on Federal and Indian lands and leases for action by appropriate Federal agencies, pursuant to applicable Federal laws and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from local Federal offices.

ITEM I: If the proposal is to redrill to the same reservoir at a different subsurface location or to a new reservoir, use this form with appropriate notations. Consult applicable Federal regulations concerning subsequent work proposals or reports on the well.

ITEM 4: Locations on Federal or Indian land should be described in accordance with Federal requirements. Consult local Federal offices for specific instructions.

ITEM 14: Needed only when location of well cannot readily be found by road from the land or lease description. A plat, or plats, separate or on the reverse side, showing the roads to, and the surveyed location of, the wen, and any other required information, should be furnished when required by Federal agency offices.

ITEMS 15 AND 18: If well is to be, or has been directionany drilled, give distances for subsurface location of hole in any present or objective productive zone.

ITEM 22: Consult applicable Federal regulations, or appropriate officials, concerning approval of the proposal before operations are started.

ITEM 24: If the proposal will involve hydraulic fracturing operations, you must comply with 43 CFR 3162.3-3, including providing information about the protection of usable water. Operators should provide the best available information about all formations containing water and their depths. This information could include data and interpretation of resistivity logs run on nearby wells. Information may also be obtained from state or tribal regulatory agencies and from local BLM offices.

NOTICES

The Privacy Act of 1974 and regulation in 43 CFR 2.48(d) provide that you be furnished the following information in connection with information required by this application.

AUTHORITY: 30 U.S.C. 181 et seq., 25 U.S.C. 396; 43 CFR 3160

PRINCIPAL PURPOSES: The information will be used to: (1) process and evaluate your application for a permit to drill a new oil, gas, or service wen or to reenter a plugged and abandoned well; and (2) document, for administrative use, information for the management, disposal and use of National Resource Lands and resources including (a) analyzing your proposal to discover and extract the Federal or Indian resources encountered; (b) reviewing procedures and equipment and the projected impact on the land involved; and (c) evaluating the effects of the proposed operation on the surface and subsurface water and other environmental impacts.

ROUTINE USE: Information from the record and/or the record win be transferred to appropriate Federal, State, and local or foreign agencies, when relevant to civil, criminal or regulatory investigations or prosecution, in connection with congressional inquiries and for regulatory responsibilities.

EFFECT OF NOT PROVIDING INFORMATION: Filing of this application and disclosure of the information is mandatory only if you elect to initiate a drilling or reentry operation on an oil and gas lease.

The Paperwork Reduction Act of 1995 requires us to inform you that:

The BLM conects this information to anow evaluation of the technical, safety, and environmental factors involved with drilling for oil and/or gas on Federal and Indian oil and gas leases. This information will be used to analyze and approve applications. Response to this request is mandatory only if the operator elects to initiate drilling or reentry operations on an oil and gas lease. The BLM would like you to know that you do not have to respond to this or any other Federal agency-sponsored information collection unless it displays a currently valid OMB control number.

BURDEN HOURS STATEMENT: Public reporting burden for this form is estimated to average 8 hours per response, including the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding the burden estimate or any other aspect of this form to U.S. Department of the Interior, Bureau of Land Management (1004-0137), Bureau Information Conection Clearance Officer (WO-630), 1849 C Street, N.W., Mail Stop 401 LS, Washington, D.C. 20240.

Additional Operator Remarks

Location of Well

0. SHL: LOT 6 / 1800 FSL / 302 FWL / TWSP: 23S / RANGE: 28E / SECTION: 6 / LAT: 32.3321276 / LONG: -104.1339371 (TVD: 0 feet, MD: 0 feet) PPP: LOT 6 / 1980 FSL / 330 FWL / TWSP: 23S / RANGE: 28E / SECTION: 6 / LAT: 32.3326236 / LONG: -104.1338406 (TVD: 9262 feet, MD: 9405 feet) PPP: NESE / 1979 FSL / 1322 FEL / TWSP: 23S / RANGE: 28E / SECTION: 6 / LAT: 32.3327167 / LONG: -104.1222066 (TVD: 9388 feet, MD: 13100 feet) BHL: NESE / 1980 FSL / 330 FEL / TWSP: 23S / RANGE: 28E / SECTION: 5 / LAT: 32.3325912 / LONG: -104.1019301 (TVD: 9495 feet, MD: 19247 feet)

BLM Point of Contact

Name: JORDAN NAVARRETTE Title: LIE Phone: (575) 234-5972 Email: jnavarrette@blm.gov 1625 N. French Dr., Hobbs, NM 88240

811 S. First St., Artesia, NM 88210

Phone: (575) 393-6161 Fax: (575) 393-0720

Phone: (575) 748-1283 Fax: (575) 748-9720

1000 Rio Brazos Road, Aztec, NM 87410

District I

District II

District III

Form C-102

District Office

Revised August 1, 2011

Submit one copy to appropriate

Phone: (505) 334-6178 <u>District IV</u> 1220 S. St. Francis Dr., Phone: (505) 476-3460	Santa Fe, NM	87505		Santa Fe, NM 87505						ENDED REPORT
		V	VELL LC	CATION	N AND ACR	EAGE DEDIC	ATION PLA	Т		
¹ A	PI Number	r		² Pool Code			³ Pool Na	ne		
30-0	015-54	120		98220		PURPLE	SAGE; WO	LFCAN	MP (GA	AS)
⁴ Property C	ode				⁵ Property N	lame			⁶ V	Vell Number
333093	3			DEC	IMUS 5 WX	Y FED COM				2H
⁷ OGRID N	lo.				⁸ Operator 1	Name			9	Elevation
37209	8			MARA	THON OIL	PERMIAN LL	С			3044'
					¹⁰ Surface I	Location				
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East	t/West line	County
L 6	6	23S	28E		1800	SOUTH	302	WE	ST	EDDY
			¹¹ Bo	ttom Hol	e Location If	Different From	Surface			
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East	t/West line	County
Ι	5	23S	28E	28E 1980 SOUTH 330 EAST			ST	EDDY		
¹² Dedicated Acres	¹³ Joint of	r Infill	Consolidation (Code ¹⁵ Or	der No.					
638.14										

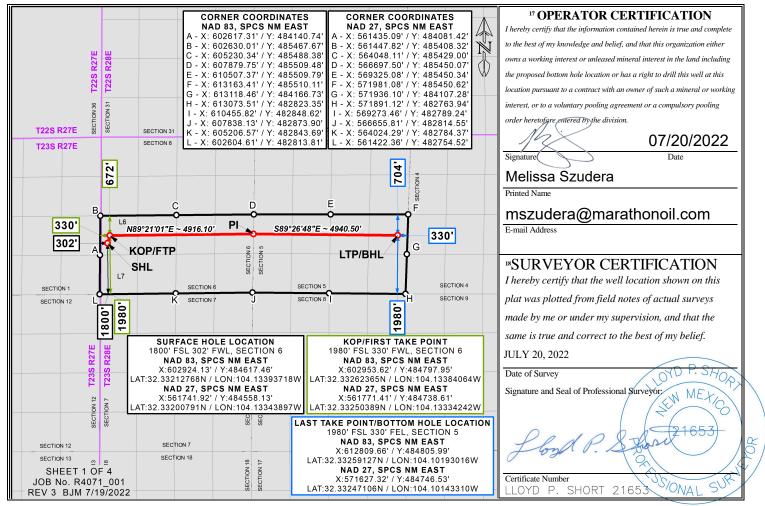
State of New Mexico

OIL CONSERVATION DIVISION

1220 South St. Francis Dr.

Energy, Minerals & Natural Resources Department

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"

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: \square Original \square Amendment due to \square 19.15.27.9.D(6)(a) NMAC \square 19.15.27.9.D(6)(b) NMAC \square 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: \boxtimes 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.

 \boxtimes 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. \Box 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 \Box will \Box 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 \Box does \Box 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: \Box 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:

 \boxtimes 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

 \Box 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. \Box 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. \Box 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.

Batch Drilling Plan

- Marathon Oil Permian LLC. respectfully requests the option to "batch" drill sections of a well with intentions of returning to the well for later completion.
- When it is determined that the use of a "batch" drilling process to increase overall efficiency and reduce rig time on location, the following steps will be utilized to ensure compliant well control before releasing drilling rig during the batch process.
- Succeeding a successful cement job, fluid levels will be monitored in both the annulus and casing string to be verified static.
- A mandrel hanger packoff will be ran and installed in the multi-bowl wellhead isolating and creating a barrier on the annulus. This packoff will be tested to 5,000 PSI validating the seals.
- At this point the well is secure and the drilling adapter will be removed from the wellhead.
- A 13-5/8" 5M temporary abandonment cap will be installed on the wellhead by stud and nut flange. The seals of the TA cap will then be pressure tested to 5,000 PSI.
- The drilling rig will skid to the next well on the pad to continue the batch drilling process.
- When returning to the well with the TA cap, the TA cap will be removed and the BOP will be nippled up on the wellhead.
- A BOP test will then be conducted according to Onshore Order #2 and drilling operations will resume on the subject well.

Request for Surface Rig

 Marathon Oil Permian LLC. Requests the option to contract a surface rig to drill, set surface casing and cement on the subject well. If the timing between rigs is such that Marathon Oil Permian LLC. would not be able to preset the surface section, the primary drilling rig will drill the well in its entirety per the APD. 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

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[See 19.15.27.9(D)(1) NMAC]

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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.

	Λ
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.

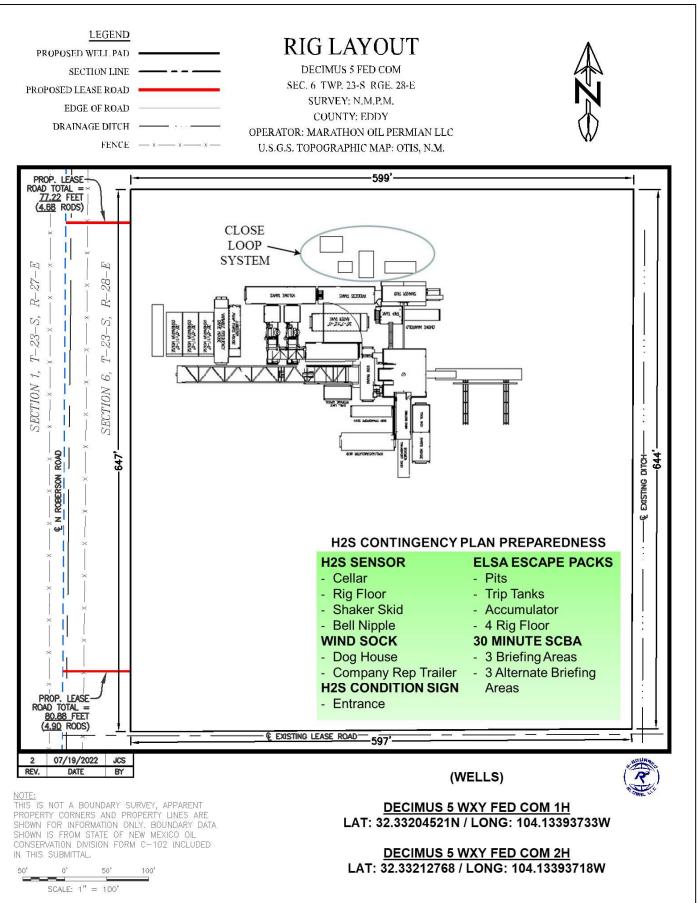
▶ 19.15.27.8 (F) – Measurement or Estimation of Vented and Flared Natural Gas

- 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.

H2S RIG LAYOUT



MARATHON OIL PERMIAN, LLC.



Marathon Oil Permian LLC

Eddy County, NM (NAD27-NME) Decimus 5 WXY Fed Com Decimus 5 WXY Fed Com 2H

OH Plan 1 07-22-22

Anticollision Report

22 July, 2022





PHOENIX TECHNOLOGY SERVICES	A	Marathon Oil Corporation.		
Company: Project: Reference Site: Site Error: Reference Well: Well Error: Reference Wellbore Reference Design:	Marathon Oil Permian LLC Eddy County, NM (NAD27-NME) Decimus 5 WXY Fed Com 0.00 usft Decimus 5 WXY Fed Com 2H 1.00 usft OH Plan 1 07-22-22	Local Co-ordinate Reference: TVD Reference: MD Reference: North Reference: Survey Calculation Method: Output errors are at Database: Offset TVD Reference:	Well Decimus 5 WXY Fed Com 2H RKB @ 3067.60usft (Cactus 169) RKB @ 3067.60usft (Cactus 169) Grid Minimum Curvature 2.00 sigma USA Compass Reference Datum	
Reference Filter type: Interpolation Method: Depth Range: Results Limited by:	Plan 1 07-22-22 NO GLOBAL FILTER: Using user defined selection & filtering criteria MD + Stations Interval 100.00usft Error Model: ISCWSA Unlimited Scan Method: Closest Approach 3D Maximum centre distance of 50.000.00usft Error Surface: Pedal Curve			

Warning Levels Evaluated at: 2.00 Sigma

Survey Tool Program Date 7/22/2022		Date 7/22/2022		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.00	19,247.64	4 Plan 1 07-22-22 (OH)	MWD+HRGM	OWSG MWD + HRGM

Casing Method:

Not applied

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Dista Between Centres (usft)	nce Between Ellipses (usft)	Separation Factor	Warning
Decimus 5 WXY Fed Com						
Decimus 5 WXY Fed Com 1H - OH - Plan 1 07-22-22 Decimus 5 WXY Fed Com 1H - OH - Plan 1 07-22-22	1,300.00 19,247.64	1,300.00 19,303.31	30.00 1,320.34	21.10 857.50	3.371 (2.853 S	,
Larry Wolfish 01-23S-27E RB						
204H - OH / 64293 - Surveys (Patterson 813) 204H - OH / 64293 - Surveys (Patterson 813)	9,054.52 9,100.00	12,663.26 12,662.22	605.28 608.78	527.77 529.92	7.809 (7.720 S	
Maximus 5 WXY Fed Com						
Maximus 5 WXY Fed Com 1H - OH - Plan 1 07-22-22 Maximus 5 WXY Fed Com 1H - OH - Plan 1 07-22-22	8,711.09 19,247.64	8,734.98 19,240.45	1,343.28 1,412.49	1,312.71 950.91	43.935 (3.060 E	
Maximus/Decimus Offsets						
Carrasco 6 Com 1 - OH - Surveys Carrasco 6 Com 1 - OH - Surveys Carrasco 6 Com 2 - OH - Surveys Swearingen A 1 - OH - Surveys Zeus 1 - OH - Surveys Zeus 1 - OH - Surveys Zeus 1 - OH - Surveys	12,306.37 12,400.00 12,830.75 17,652.49 15,041.42 15,100.00 15,200.00	9,346.37 9,348.01 9,420.87 9,413.62 9,414.36 9,413.49 9,408.00	1,138.92 1,142.76 703.30 38.39 1,552.47 1,553.57 1,560.55	856.62 858.61 -39.03 -337.04 1,272.04 1,271.86 1,277.08		SF Level 3, CC, ES, SF Level 3, CC, ES, SF CC ES

Offset Design: Decimus 5 WXY Fed Com - Decimus 5 WXY Fed Com 1H - OH - Plan 1 07-22-22												Offset Site Error:	0.00 usft	
Survey Progra Refer Measured Depth (usft)		MWD+HRGM Off Measured Depth (usft)	set Vertical Depth (usft)	Semi M Reference (usft)	fajor Axis Offset (usft)	Highside Toolface (°)	Offset Wellbo +N/-S (usft)	ore Centre +E/-W (usft)	Dist Between Centres (usft)	Rule Assi tance Between Ellipses (usft)	gned: Minimum Separation (usft)	Separation Factor	Offset Well Error: Warning	1.00 usft
0.00	0.00	0.00	0.00	1.00	1.00	179.982	-30.00	0.01	30.00					
100.00	100.00	100.00	100.00	1.13	1.13	179.982	-30.00	0.01	30.00	27.73	2.27	13.236		
200.00	200.00	200.00	200.00	1.66	1.66	179.982	-30.00	0.01	30.00	26.68	3.32	9.038		
300.00	300.00	300.00	300.00	2.06	2.06	179.982	-30.00	0.01	30.00	25.88	4.12	7.286		
400.00	400.00	400.00	400.00	2.39	2.39	179.982	-30.00	0.01	30.00	25.21	4.79	6.264		
500.00	500.00	500.00	500.00	2.69	2.69	179.982	-30.00	0.01	30.00	24.61	5.38	5.573		
600.00	600.00	600.00	600.00	2.96	2.96	179.982	-30.00	0.01	30.00	24.08	5.92	5.066		
700.00	700.00	700.00	700.00	3.21	3.21	179.982	-30.00	0.01	30.00	23.58	6.42	4.673		
800.00	800.00	800.00	800.00	3.44	3.44	179.982	-30.00	0.01	30.00	23.11	6.89	4.357		
900.00	900.00	900.00	900.00	3.66	3.66	179.982	-30.00	0.01	30.00	22.67	7.33	4.095		

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

Plan 1 07-22-22

PHOENIX TECHNOLOGY SERVICES

Company: Project:

Well Error:

Reference Site: Site Error:

Reference Well:

Reference Wellbore

Reference Design:

Offset Site Error: 0.00 usft

Ant	icollision Report	Marathon Oil Corporation.
Marathon Oil Permian LLC	Local Co-ordinate Reference:	Well Decimus 5 WXY Fed Com 2H
Eddy County, NM (NAD27-NME)	TVD Reference:	RKB @ 3067.60usft (Cactus 169)
Decimus 5 WXY Fed Com	MD Reference:	RKB @ 3067.60usft (Cactus 169)
0.00 usft	North Reference:	Grid
Decimus 5 WXY Fed Com 2H	Survey Calculation Method:	Minimum Curvature
1.00 usft	Output errors are at	2.00 sigma
ОН	Database:	USA Compass

Reference Datum

Offset TVD Reference:

Offset Design: Decimus 5 WXY Fed Com - Decimus 5 WXY Fed Com 1H - OH - Plan 1 07-22-22

urvey Prog		MWD+HRGM		Comilli	laian Avia		Offeret Mallh	ana Cantua	Die	Rule Assi	gned:		Offset Well Error:	1.00
Rete Neasured	rence Vertical	Off Measured	set Vertical	Reference	lajor Axis Offset	Highside	Offset Wellbo	ore Centre	Between	tance Between	Minimum	Separation	Warning	
Depth	Depth	Depth	Depth			Toolface	+N/-S	+E/-W	Centres	Ellipses	Separation	Factor		
(usft)	(usft)	(usft)	(usft)	(usft)	(usft)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)			
1,000.00	1,000.00	1,000.00	1,000.00	3.87	3.87	179.982	-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	179.982	-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	179.982	-30.00	0.01	30.00	21.47	8.53	3.517		
1,300.00	1,300.00	1,300.00	1,300.00	4.45	4.45	179.982	-30.00	0.01	30.00	21.10	8.90	3.371 CC,	ES	
1,400.00	1,399.98	1,398.91	1,398.89	4.73	4.72	-127.476	-31.66	-0.38	32.71	23.34	9.37	3.490		
1,500.00	1,499.84	1,497.33	1,497.17	5.02	4.97	-131.235	-36.61	-1.56	40.98	31.15	9.83	4.168		
1,600.00	1,599.45	1,594.78	1,594.26	5.32	5.24	-134.914	-44.74	-3.49	54.94	44.64	10.30	5.332		
1,700.00	1,698.70	1,690.80	1,689.58	5.63	5.52	-137.670	-55.89	-6.13	74.60	63.80	10.80	6.910		
1,800.00	1,797.47	1,784.96	1,782.64	5.97	5.82	-139.532	-69.84	-9.44	99.82	88.52	11.31	8.830		
1,900.00	1,895.62	1,876.87	1,872.98	6.32	6.13	-140.734	-86.32	-13.35	130.45	118.62	11.83	11.024		
1,900.13	1,895.75	1,876.99	1,873.09	6.32	6.13	-140.735	-86.34	-13.35	130.49	118.66	11.83	11.027		
2,000.00	1,993.44	1,969.99	1,964.09	6.61	6.40	-141.751	-105.07	-17.79	164.31	151.98	12.33	13.326		
2,100.00	2,091.25	2,064.02	2,056.06	6.92	6.67	-142.414	-124.09	-22.30	198.29	185.44	12.86	15.424		
2,200.00	2,189.06	2,158.05	2,148.04	7.25	6.97	-142.884	-143.10	-26.81	232.28	218.87	13.41	17.321		
2,300.00	2,286.88	2,252.08	2,240.02	7.60	7.27	-143.233	-162.12	-31.32	266.29	252.30	13.99	19.031		
2,400.00	2,384.69	2,346.11	2,331.99	7.96	7.59	-143.503	-181.14	-35.83	300.30	285.70	14.60	20.573		
2,500.00	2,482.51	2,440.14	2,423.97	8.33	7.93	-143.719	-200.16	-40.34	334.32	319.09	15.22	21.963		
2,600.00	2,580.32	2,534.17	2,515.94	8.71	8.27	-143.894	-219.18	-44.85	368.33	352.47	15.87	23.216		
2,700.00	2,678.13	2,628.20	2,607.92	9.10	8.63	-144.040	-238.20	-49.36	402.36	385.83	16.53	24.348		
2,781.91	2,758.25	2,705.22	2,683.26	9.41	8.92	-144.142	-253.78	-53.05	430.22	413.16	17.06	25.217		
2,800.00	2,775.96	2,722.25	2,699.91	9.47	8.99	-144.234	-257.22	-53.87	436.34	419.16	17.17	25.409		
2,900.00	2,874.23	2,816.92	2,792.51	9.91	9.36	-144.557	-276.37	-58.41	468.54	450.65	17.88	26.198		
3,000.00	2,973.09	2,912.43	2,885.94	10.34	9.74	-144.606	-295.68	-62.99	498.04	479.45	18.59	26.789		
3,100.00	3,072.42	3,008.67	2,980.07	10.76	10.13	-144.423	-315.15	-67.61	524.84	505.55	19.29	27.209		
3,200.00	3,172.09	3,105.52	3,074.81	11.15	10.53	-144.037	-334.74	-72.25	548.95	528.98	19.97	27.488		
3,300.00	3,271.97	3,202.86	3,170.02	11.50	10.94	-143.464	-354.43	-76.92	570.40	549.77	20.62	27.657		
3,382.04	3,354.00	3,283.00	3,248.41	11.64	11.27	162.873	-370.64	-80.76	586.04	564.98	21.07	27.817		
3,400.00	3,371.96	3,300.57	3,265.60	11.65	11.35	163.057	-374.19	-81.61	589.28	568.14	21.14	27.876		
3,500.00	3,471.96	3,398.38	3,361.28	11.72	11.76	164.040	-393.97	-86.30	607.42	585.81	21.61	28.106		
3,600.00	3,571.96	3,496.20	3,456.96	11.80	12.18	164.967	-413.76	-90.99	625.72	603.63	22.09	28.325		
3,700.00	3,671.96	3,594.02	3,552.64	11.88	12.60	165.842	-433.54	-95.68	644.18	621.60	22.58	28.533		
.,	.,													
3,800.00	3,771.96	3,691.83	3,648.32	11.95	13.03	166.668	-453.33	-100.37	662.77	639.70	23.07	28.730		
3,900.00	3,871.96	3,789.65	3,743.99	12.03	13.46	167.449	-473.11	-105.06	681.49	657.92	23.57	28.918		
4,000.00	3,971.96	3,887.46	3,839.67	12.11	13.89	168.189	-492.90	-109.75	700.32	676.25	24.07	29.096		
4,100.00	4,071.96	3,985.28	3,935.35	12.19	14.32	168.890	-512.68	-114.44	719.26	694.69	24.58	29.267		
4,200.00	4,171.96	4,083.09	4,031.03	12.26	14.76	169.555	-532.46	-119.14	738.30	713.22	25.09	29.429		
4,300.00	4,271.96	4,180.91	4,126.71	12.34	15.19	170.187	-552.25	-123.83	757.44	731.83	25.60	29.584		
4,400.00	4,371.96	4,278.73	4,222.39	12.42	15.63	170.788	-572.03	-128.52	776.66	750.53	26.12	29.732		
4,500.00	4,471.96	4,376.54	4,318.07	12.50	16.07	171.361	-591.82	-133.21	795.95	769.31	26.64	29.873		
4,600.00	4,571.96	4,474.36	4,413.75	12.57	16.51	171.906	-611.60	-137.90	815.32	788.15	27.17	30.009		
4,700.00	4,671.96	4,572.17	4,509.43	12.65	16.95	172.426	-631.38	-142.59	834.76	807.06	27.70	30.139		
4,800.00	4,771.96	4,669.99	4,605.11	12.73	17.40	172.922	-651.17	-147.28	854.26	826.04	28.23	30.263		
4,900.00	4,871.96	4,767.80	4,700.78	12.81	17.84	173.396	-670.95	-151.97	873.83	845.06	28.76	30.383		
5,000.00	4,971.96	4,865.62	4,796.46	12.88	18.29	173.850	-690.74	-156.67	893.44	864.15	29.30	30.498		
5,100.00	5,071.96	4,963.44	4,892.14	12.96	18.73	174.284	-710.52	-161.36	913.11	883.28	29.83	30.608		
5,200.00	5,171.96	5,061.25	4,987.82	13.04	19.18	174.700	-730.31	-166.05	932.83	902.46	30.37	30.714		
5,300.00	5,271.96	5,159.07	5,083.50	13.12	19.63	175.099	-750.09	-170.74	952.59	921.68	30.91	30.816		
5,400.00	5,371.96	5,256.88	5,179.18	13.19	20.08	175.481	-769.87	-175.43	972.39	940.94	31.45	30.915		
5,500.00	5,471.96	5,354.70	5,274.86	13.27	20.53	175.849	-789.66	-180.12	992.24	960.24	32.00	31.010		
5,600.00	5,571.96	5,452.51	5,370.54	13.35	20.98	176.202	-809.44	-184.81	1,012.12	979.58	32.54	31.102		
5,700.00	5,671.96	5,550.33	5,466.22	13.43	21.43	176.541	-829.23	-189.50	1,032.04	998.95	33.09	31.190		
5,800.00	5,771.96	5,648.14	5,561.90	13.51	21.88	176.868	-849.01	-194.19	1,051.99	1,018.36	33.64	31.276		
-									-					

Anticollision Report

Marathon Oil Corporation.	

Offset Site Error: 0.00 usft

Marathon Oil Permian LLC
Eddy County, NM (NAD27-NME)
Decimus 5 WXY Fed Com
0.00 usft
Decimus 5 WXY Fed Com 2H
1.00 usft
OH
Plan 1 07-22-22

Local Co-ordinate Reference: TVD Reference: MD Reference: North Reference: Survey Calculation Method: Output errors are at Database: Offset TVD Reference: Well Decimus 5 WXY Fed Com 2H RKB @ 3067.60usft (Cactus 169) RKB @ 3067.60usft (Cactus 169) Grid Minimum Curvature 2.00 sigma USA Compass Reference Datum

Offset Design: Decimus 5 WXY Fed Com - Decimus 5 WXY Fed Com 1H - OH - Plan 1 07-22-22

urvey Prog		MWD+HRGM Off		Comil	laian Awia		Offeet Wellb	ana Cantua	Die	Rule Assi	gned:		Offset Well Error:	1.00 u
Measured	erence Vertical	Measured	Vertical	Reference	lajor Axis Offset	Highside	Offset Wellb		Between	tance Between	Minimum	Separation	Warning	
Depth	Depth	Depth	Depth			Toolface	+N/-S	+E/-W	Centres	Ellipses	Separation	Factor		
(usft)	(usft)	(usft)	(usft)	(usft)	(usft)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)	04.050		
5,900.00	5,871.96	5,745.96	5,657.58	13.58	22.33	177.182	-868.80	-198.89	1,071.98	1,037.79	34.18	31.358		
6,000.00	5,971.96	5,843.78	5,753.25	13.66	22.79	177.485	-888.58	-203.58	1,091.99	1,057.26	34.73	31.438		
6,100.00	6,071.96	5,941.59	5,848.93	13.74	23.24	177.777	-908.36	-208.27	1,112.03	1,076.75	35.29	31.515		
6,200.00	6,171.96	6,039.41	5,944.61	13.82	23.70	178.059	-928.15	-212.96	1,132.10	1,096.27	35.84	31.590		
6,300.00	6,271.96	6,137.22	6,040.29	13.90	24.15	178.331	-947.93	-217.65	1,152.20	1,115.81	36.39	31.663		
6,400.00	6,371.96	6,235.04	6,135.97	13.98	24.60	178.594	-967.72	-222.34	1,172.32	1,135.37	36.94	31.733		
6,500.00	6,471.96	6,332.85	6,231.65	14.05	25.06	178.848	-987.50	-227.03	1,192.46	1,154.96	37.50	31.801		
6,600.00	6,571.96	6,430.67	6,327.33	14.13	25.52	179.093	-1,007.28	-231.72	1,212.62	1,174.57	38.05	31.867		
6,700.00	6,671.96	6,528.49	6,423.01	14.21	25.97	179.331	-1,027.07	-236.42	1,232.81	1,194.20	38.61	31.931		
6,800.00	6,771.96	6,626.30	6,518.69	14.29	26.43	179.561	-1,046.85	-241.11	1,253.01	1,213.85	39.16	31.993		
6,900.00	6,871.96	6,724.12	6,614.37	14.37	26.88	179.783	-1,066.64	-245.80	1,273.23	1,233.51	39.72	32.055		
-,	-,	-,	-,				.,		.,	.,				
7,000.00	6,971.96	6,850.45	6,738.09	14.45	27.47	-179.947	-1,091.49	-251.69	1,293.07	1,252.64	40.43	31.981		
7,100.00	7,071.96	7,027.65	6,913.11	14.52	28.28	-179.668	-1,118.24	-258.04	1,308.20	1,266.87	41.33	31.652		
7,200.00	7,171.96	7,207.63	7,092.28	14.60	29.01	-179.504	-1,134.59	-261.91	1,317.31	1,275.27	42.04	31.335		
7,300.00	7,271.96	7,389.03	7,273.57	14.68	29.47	-179.450	-1,139.96	-263.18	1,320.28	1,277.90	42.38	31.156		
7,305.19	7,277.16	7,398.46	7,283.00	14.69	29.49	-179.451	-1,139.93	-263.18	1,320.26	1,277.88	42.38	31.151		
7,400.00	7,371.96	7,487.43	7,371.96	14.76	29.48	-179.450	-1,139.96	-263.18	1,320.28	1,277.80	42.48	31.082		
7,500.00	7,471.96	7,587.43	7,471.96	14.84	29.50	-179.450	-1,139.96	-263.18	1,320.28	1,277.70	42.58	31.006		
7,600.00	7,571.96	7,687.43	7,571.96	14.92	29.51	-179.450	-1,139.96	-263.18	1,320.28	1,277.59	42.69	30.931		
7,700.00	7,671.96	7,787.43	7,671.96	15.00	29.53	-179.450	-1,139.96	-263.18	1,320.28	1,277.49	42.79	30.855		
7,800.00	7,771.96	7,887.43	7,771.96	15.08	29.54	-179.450	-1,139.96	-263.18	1,320.28	1,277.38	42.89	30.780		
7 000 00	7 971 06	7 007 40	7 971 06	15 15	20 56	170.450	1 120 06	060.10	1 220 28	1 077 00	42.00	20 705		
7,900.00	7,871.96	7,987.43	7,871.96	15.15	29.56	-179.450	-1,139.96	-263.18	1,320.28	1,277.28	43.00	30.705 30.630		
8,000.00 8,100.00	7,971.96	8,087.43	7,971.96	15.23	29.58	-179.450 -179.450	-1,139.96	-263.18 -263.18	1,320.28 1,320.28	1,277.17	43.10 43.21			
8,200.00	8,071.96 8,171.96	8,187.43 8,287.43	8,071.96	15.31 15.39	29.59		-1,139.96	-263.18	1,320.28	1,277.07		30.556		
			8,171.96		29.61 29.63	-179.450	-1,139.96			1,276.96	43.31 43.42	30.482 30.408		
8,300.00	8,271.96	8,387.43	8,271.96	15.47	29.03	-179.450	-1,139.96	-263.18	1,320.28	1,276.86	43.4Z	30.406		
8,400.00	8,371.96	8,487.43	8,371.96	15.55	29.64	-179.450	-1,139.96	-263.18	1,320.28	1,276.75	43.52	30.334		
8,500.00	8,471.96	8,587.43	8,471.96	15.63	29.66	-179.450	-1,139.96	-263.18	1,320.28	1,276.65	43.63	30.261		
8,600.00	8,571.96	8,687.43	8,571.96	15.71	29.68	-179.450	-1,139.96	-263.18	1,320.28	1,276.54	43.74	30.188		
8,700.00	8,671.96	8,787.43	8,671.96	15.79	29.70	-179.450	-1,139.96	-263.18	1,320.28	1,276.44	43.84	30.115		
8,783.22	8,755.19	8,870.66	8,755.19	15.84	29.71	-179.450	-1,139.96	-263.18	1,320.28	1,276.36	43.91	30.066		
8,800.00	8,771.96	8,887.85	8,772.38	15.84	29.70	90.595	-1,139.96	-262.92	1,320.28	1,276.36	43.91	30.065		
8,850.00	8,821.81	8,939.08	8,823.45	15.81	29.67	90.590	-1,139.96	-259.07	1,320.28	1,276.37	43.91	30.069		
8,900.00	8,871.16	8,990.30	8,873.95	15.77	29.63	90.581	-1,139.95	-250.69	1,320.27	1,276.38	43.89	30.080		
8,950.00	8,919.62	9,041.48	8,923.49	15.73	29.58	90.567	-1,139.94	-237.84	1,320.27	1,276.40	43.87	30.097		
9,000.00	8,966.83	9,092.64	8,971.64	15.68	29.54	90.549	-1,139.92	-220.63	1,320.26	1,276.42	43.84	30.116		
9,050.00	9,012.43	9,143.75	9,018.03	15.63	29.50	90.526	-1,139.90	-199.21	1,320.26	1,276.44	43.82	30.132		
9,100.00	9,056.07	9,194.80	9,062.28	15.59	29.46	90.499	-1,139.88	-173.78	1,320.25	1,276.45	43.80	30.140		
9,150.00	9,097.42	9,245.80	9,104.04	15.56	29.44	90.469	-1,139.86	-144.55	1,320.24	1,276.42	43.82	30.130		
9,200.00	9,136.17	9,296.72	9,142.99	15.55	29.43	90.435	-1,139.83	-111.77	1,320.23	1,276.36	43.87	30.094		
9,250.00	9,172.02	9,347.57	9,178.83	15.56	29.44	90.397	-1,139.80	-75.72	1,320.23	1,276.25	43.98	30.022		
9,300.00	9,204.69	9,398.34	9,211.28	15.60	29.48	90.357	-1,139.76	-36.70	1,320.22	1,276.07	44.15	29.902		
9,350.00	9,204.09	9,398.34 9,449.01	9,240.10	15.68	29.48	90.313	-1,139.73	-30.70	1,320.22	1,275.80	44.13	29.902		
9,400.00	9,259.56	9,449.01	9,240.10	15.83	29.55	90.268	-1,139.69	48.93	1,320.21	1,275.42	44.41	29.485		
9,450.00 9,450.00	9,239.30	9,499.00	9,286.06	16.06	29.83	90.208	-1,139.65	94.83	1,320.20	1,273.42	44.78	29.485		
9,500.00	9,299.10	9,600.47	9,302.88	16.37	30.04	90.171	-1,139.61	142.31	1,320.19	1,274.34	45.84	28.799		
3,000.00	0,200.10	5,500.47	0,002.00	10.07	50.04	55.171	-1,100.01	142.01	1,020.18	1,214.00		20.100		
9,550.00	9,312.73	9,650.75	9,315.45	16.78	30.30	90.120	-1,139.57	190.98	1,320.18	1,273.63	46.55	28.361		
9,600.00	9,322.11	9,700.93	9,323.70	17.27	30.60	90.069	-1,139.52	240.46	1,320.17	1,272.80	47.37	27.868		
9,650.00	9,327.18	9,751.00	9,327.57	17.83	30.95	90.017	-1,139.48	290.37	1,320.17	1,271.87	48.30	27.335		
9,673.22	9,328.06	9,774.23	9,328.06	18.11	31.14	90.000	-1,139.46	313.58	1,320.17	1,271.41	48.76	27.076		
9,700.00	9,328.52	9,801.00	9,328.52	18.45	31.35	90.000	-1,139.44	340.36	1,320.17	1,270.86	49.31	26.775		
9,800.00	9,330.27	9,901.00	9,330.27	19.86	32.25	90.000	-1,139.35	440.34	1,320.16	1,268.57	51.60	25.587		

Anticollision Report

0.00 usft



Offset Site Error:

Company:	Marathon Oil Permian LLC	Local Co-ordinate Reference:	Well Decimus 5 WXY Fed Com 2H
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 2H	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 1H - OH - Plan 1 07-22-22

Survey Progr		0-MWD+HRGM Rule Assigned:							Offset Well Error:	1.00 ust				
Refer Measured	rence Vertical	Off: Measured	set Vertical	Semi M Reference	ajor Axis Offset	Highside	Offset Wellb	ore Centre	Dist Between	tance Between	Minimum	Separation	Warning	
Depth	Depth	Depth	Depth			Toolface	+N/-S	+E/-W	Centres	Ellipses	Separation	Factor		
(usft)	(usft)	(usft)	(usft)	(usft)	(usft)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)			
9,900.00	9,332.01	10,001.00	9,332.01	21.43	33.28	90.000	-1,139.26	540.33	1,320.15	1,265.98	54.18	24.367		
10,000.00	9,333.76	10,101.00	9,333.76	23.13	34.43	90.000	-1,139.18	640.31	1,320.15	1,263.14	57.01	23.156		
10,100.00	9,335.50	10,201.00	9,335.51	24.93	35.68	90.000	-1,139.09	740.30	1,320.14	1,260.09	60.05	21.983		
10,200.00	9,337.25	10,301.00	9,337.25	26.81	37.03	90.000	-1,139.00	840.28	1,320.14	1,256.86	63.28	20.862		
10,300.00	9,339.00	10,401.00	9,339.00	28.75	38.46	90.000	-1,138.92	940.27	1,320.13	1,253.47	66.66	19.805		
10,400.00	9,340.74	10,501.00	9,340.74	30.74	39.98	90.000	-1,138.83	1,040.25	1,320.12	1,249.95	70.17	18.813		
10,500.00	9,342.49	10,601.00	9,342.49	32.78	41.56	90.000	-1,138.74	1,140.24	1,320.12	1,246.32	73.80	17.889		
10,600.00	9,344.23	10,701.00	9,344.23	34.85	43.21	90.000	-1,138.66	1,240.22	1,320.11	1,242.59	77.52	17.029		
10,700.00	9,345.98	10,801.00	9,345.98	36.94	44.91	90.000	-1,138.57	1,340.21	1,320.10	1,238.77	81.33	16.231		
10,800.00	9,347.72	10,901.00	9,347.72	39.07	46.66	90.000	-1,138.48	1,440.19	1,320.10	1,234.88	85.22	15.491		
10,900.00	9,349.47	11,001.00	9,349.47	41.21	48.46	90.000	-1,138.40	1,540.18	1,320.09	1,230.92	89.17	14.804		
11,000.00	9,351.21	11,101.00	9,351.21	43.36	50.30	90.000	-1,138.31	1,640.16	1,320.09	1,226.90	93.18	14.167		
11,100.00	9,352.96	11,201.00	9,352.96	45.54	52.17	90.000	-1,138.22	1,740.14	1,320.08	1,222.83	97.24	13.575		
11,200.00	9,354.70	11,301.00	9,354.70	47.72	54.08	90.000	-1,138.14	1,840.13	1,320.07	1,218.72	101.35	13.025		
11,300.00	9,356.45	11,401.00	9,356.45	49.92	56.02	90.000	-1,138.05	1,940.11	1,320.07	1,214.57	105.50	12.513		
11,400.00	9,358.19	11,501.00	9,358.19	52.13	57.98	90.000	-1,137.96	2,040.10	1,320.06	1,210.38	109.68	12.035		
11,400.00	0,000.10	11,001.00	0,000.10	02.10	07.00	50.000	-1,101.00	2,040.10	1,020.00	1,210.00	100.00	12.000		
11,500.00	9,359.94	11,601.00	9,359.94	54.34	59.97	90.000	-1,137.88	2,140.08	1,320.05	1,206.16	113.90	11.590		
11,600.00	9,361.68	11,701.00	9,361.68	56.56	61.98	90.000	-1,137.79	2,240.07	1,320.05	1,201.91	118.14	11.174		
11,700.00	9,363.43	11,801.00	9,363.43	58.79	64.01	90.000	-1,137.70	2,340.05	1,320.04	1,197.63	122.41	10.784		
11,800.00	9,365.17	11,901.00	9,365.17	61.02	66.05	90.000	-1,137.62	2,440.04	1,320.03	1,193.33	126.70	10.418		
11,900.00	9,366.92	12,001.00	9,366.92	63.26	68.12	90.000	-1,137.53	2,540.02	1,320.03	1,189.01	131.02	10.075		
12,000.00	9,368.66	12,101.00	9,368.66	65.51	70.20	90.000	-1,137.44	2,640.01	1,320.02	1,184.67	135.35	9.753		
12,000.00	9,370.41	12,201.00	9,370.41	67.76	72.29	90.000	-1,137.36	2,739.99	1,320.02	1,180.31	139.70	9.449		
12,200.00	9,372.15	12,301.00	9,372.16	70.01	74.40	90.000	-1,137.27	2,839.98	1,320.01	1,175.94	144.07	9.162		
12,200.00	9,373.90	12,401.00	9,372.10	72.26	76.51	90.000	-1,137.18	2,939.96	1,320.00	1,173.54	148.45	8.892		
12,300.00	9,375.65	12,501.00	9,375.65	74.52	78.64	90.000	-1,137.10	3,039.95	1,320.00	1,167.15	152.85	8.636		
12,400.00	3,575.05	12,501.00	3,575.05	14.52	70.04	30.000	-1,137.10	3,033.35	1,520.00	1,107.15	152.05	0.050		
12,500.00	9,377.39	12,601.00	9,377.39	76.78	80.78	90.000	-1,137.01	3,139.93	1,319.99	1,162.74	157.25	8.394		
12,600.00	9,379.14	12,701.00	9,379.14	79.05	82.92	90.000	-1,136.92	3,239.92	1,319.98	1,158.31	161.67	8.165		
12,700.00	9,380.88	12,801.00	9,380.88	81.31	85.08	90.000	-1,136.84	3,339.90	1,319.98	1,153.88	166.10	7.947		
12,800.00	9,382.63	12,901.00	9,382.63	83.58	87.24	90.000	-1,136.75	3,439.89	1,319.97	1,149.43	170.54	7.740		
12,900.00	9,384.37	13,001.00	9,384.37	85.85	89.41	90.000	-1,136.66	3,539.87	1,319.97	1,144.98	174.99	7.543		
13,000.00	9,386.12	13,101.00	9,386.12	88.13	91.58	90.000	-1,136.58	3,639.85	1,319.96	1,140.52	179.44	7.356		
13,100.00	9,387.86	13,201.00	9,387.86	90.40	93.77	90.000	-1,136.49	3,739.84	1,319.95	1,136.05	183.91	7.177		
13,200.00	9,389.61	13,301.00	9,389.61	92.68	95.96	90.000	-1,136.40	3,839.82	1,319.95	1,131.57	188.38	7.007		
13,300.00	9,391.35	13,401.00	9,391.35	94.95	98.15	90.000	-1,136.32	3,939.81	1,319.94	1,127.09	192.85	6.844		
13,400.00	9,393.10	13,501.00	9,393.10	97.23	100.35	90.000	-1,136.23	4,039.79	1,319.93	1,122.60	197.34	6.689		
		.,	.,				,			,				
13,500.00	9,394.84	13,601.00	9,394.84	99.51	102.55	90.000	-1,136.14	4,139.78	1,319.93	1,118.10	201.83	6.540		
13,600.00	9,396.59	13,701.00	9,396.59	101.80	104.76	90.000	-1,136.06	4,239.76	1,319.92	1,113.60	206.32	6.397		
13,700.00	9,398.33	13,801.00	9,398.33	104.08	106.97	90.000	-1,135.97	4,339.75	1,319.92	1,109.10	210.82	6.261		
13,800.00	9,400.08	13,901.00	9,400.08	106.36	109.19	90.000	-1,135.88	4,439.73	1,319.91	1,104.58	215.32	6.130		
13,900.00	9,401.82	14,001.00	9,401.82	108.65	111.41	90.000	-1,135.79	4,539.72	1,319.90	1,100.07	219.83	6.004		
14.000.00	9.403.57	14,101.00	9,403.57	110.93	113.63	90.000	-1,135.71	4,639.70	1.319.90	1,095.55	224.35	5.883		
14,100.00	9,405.31	14,201.00	9,405.31	113.22	115.86	90.000	-1,135.62	4,739.69	1,319.89	1,091.03	228.86	5.767		
14,200.00	9,407.06	14,301.00	9,407.06	115.50	118.09	90.000	-1,135.53	4,839.67	1,319.88	1,086.50	233.38	5.655		
14,300.00	9,408.80	14,401.00	9,407.00	117.79	120.32	90.000	-1,135.45	4,939.66	1,319.88	1,081.97	237.91	5.548		
14,400.00	9,410.55	14,501.00	9,410.55	120.08	122.55	90.000	-1,135.36	5,039.64	1,319.87	1,007.44	242.44	5.444		
14,500.00	9,412.30	14,601.00	9,412.30	122.37	124.79	90.000	-1,135.27	5,139.63	1,319.86	1,072.90	246.97	5.344		
14,600.00	9,414.04	14,701.00	9,414.04	124.66	127.03	90.000	-1,135.19	5,239.61	1,319.86	1,068.36	251.50	5.248		
14,700.00	9,415.79	14,801.00	9,415.79	126.95	129.27	90.000	-1,135.10	5,339.59	1,319.85	1,063.82	256.04	5.155		
14,800.00	9,417.53	14,901.00	9,417.53	129.24	131.52	90.000	-1,135.01	5,439.58	1,319.85	1,059.27	260.58	5.065		
14,900.00	9,419.28	15,001.00	9,419.28	131.53	133.77	90.000	-1,134.93	5,539.56	1,319.84	1,054.72	265.12	4.978		
15,000.00	9,421.02	15,101.00	9,421.02	133.83	136.01	90.000	-1,134.84	5,639.55	1,319.83	1,050.17	269.66	4.894		
			0, 121.02	.00.00		00.000	.,104.04	0,000.00	.,	.,	200.00			

Anticollision Report

0.00 usft

Marathon Oil
Corporation.

Offset Site Error:

Company:	Marathon Oil Permian LLC	Local Co-ordinate Reference:	Well Decimus 5 WXY Fed Com 2H
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 2H	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 1H - OH - Plan 1 07-22-22

Interference Ofference Semi Mater Adv Ofference Ofference Description Ofference Description <															
Material Vertical Materiano Official Heighting Value Value Behwen <			0-MWD+HRGM									gned:		Offset Well Error:	1.00 usft
Depth Depth Depth Depth Depth Tooltace #V/S Unity Curity Depth Depth 15/1000 0.42277 15.0100 0.4227 15.0100 0.4227 15.0100 0.4227 15.0100 0.4224 15.0110 0.4226 15.0110 0.4226 15.0110 0.4220 15.0110 0.4220 15.0110 0.4220 15.0110 0.4220 15.0110 0.4200 14.020 0.000 -1.1344 6.03944 13.0110 10.155 22.02 4.313 15.0000 0.43224 15.0110 0.4320 140.20 10.134 6.03944 13.0120 10.132 22.02 4.313 15.0000 0.43224 15.0100 0.435.41 16.020 0.435.71 15.0100 0.435.71 15.010 0.435.71 15.010 0.445.71 15.010 0.445.71 15.010 0.445.71 15.010 0.445.71 15.010 0.445.71 15.010 0.445.71 15.010 0.445.71 15.0100 0.445.71 15.010 <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th>Highside</th> <th>Offset Wellbo</th> <th>ore Centre</th> <th></th> <th></th> <th>Minimum</th> <th>Senaration</th> <th>Warning</th> <th></th>							Highside	Offset Wellbo	ore Centre			Minimum	Senaration	Warning	
Outh 15:0000 942451 15:000 942451 15:000 942451 15:000 942451 15:000 942451 15:000 942451 15:000 942420 16:010 14:014 0:000 1:13:146 0:000 1:01:161 0:001 2:77:8 4:725 15:0000 0:42257 14:20 10:000 1:13:144 0:0304 1:31:80 1:02:739 2:24:2 4:51 15:0000 0:43:149 15:010 14:729 10:000 -1:31:44 0:3004 1:31:90 10:012 2:00:7 4:444 15:0000 0:43:49 15:010 14:07 0:000 -1:31:34 0:3044 1:31:077 10:010 0:000 -1:31:34 0:31:07 10:012 2:00:07 4:444 15:0000 0:44:39 1:00:07 10:000 -1:31:36 0:33:41 1:01:07 10:01:2 10:01:2 10:01:2 10:0					Reference	Onset		+N/-S	+E/-W					warning	
15:00:00 44:27 15:07:10 9:42:17 19:12 13:27 9:00:00 -1:14:27 5:79:03 1:31:82 1:41:82 27:27 4:41:3 15:00:00 44:24:5 15:36:10 9:42:36 1:41:41 1:41:27 9:00:00 -1:13:45 1:31:82 1:41:62:2 27:27 4:35:5 15:00:00 44:24:5 15:36:10 9:42:36 1:42:39 1:72:9 0:00:00 -1:13:44 0:13:44 1:31:88 1:00:55:1 20:37:9 22:42 4:51 15:00:00 44:34 15:37:10 9:42:43 1:45:49 1:72:9 0:00:00 -1:13:42 0:33:44 1:31:88 1:02:73 22:42 4:51 15:00:00 44:34 15:37:0 9:43:47 1:51:80 0:00:00 -1:13:28 1:31:87 1:01:82 0:33:44 1:31:87 1:01:82 0:30:69 4:17 15:00:00 44:47 1:51:80 0:00:00 -1:13:88 0:30:41 1:31:87 1:01:82 0:30:69 4:17 15:00:00 0:44:37 1:00:30:00 4:13:1 0:00:00 -1:13:38 1:31:87 1:01					(usft)	(usft)		(usft)	(usft)				, actor		
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$\begin{array}{cccccccccccccccccccccccccccccccccccc$	17,200.00	9,459.42	2 17,301.00	9,459.42	184.35	185.85	90.000	-1,132.93	7,839.21	1,319.69	949.63	370.07	3.566		
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	17.300.00	9.461.10	6 17.401.00	9.461.16	186.65	188.13	90.000	-1.132.85	7.939.20	1.319.69	945.04	374.64	3.523		
17,500.00 9,464.65 17,601.00 9,464.65 191.24 192.68 90.000 -1,132.67 8,139.17 1,319.68 935.87 383.80 3.438 17,600.00 9,468.40 17,711.00 9,466.40 193.54 194.96 90.000 -1,132.59 8.239.15 1,319.67 931.29 388.38 3.398 17,700.00 9,468.14 17,801.00 9,468.94 197.24 90.000 -1,132.50 8,339.14 1,319.66 922.11 397.55 3.320 17,900.00 9,471.63 18,001.00 9,477.38 200.44 201.80 90.000 -1,132.24 8,539.01 1,319.66 97.52 402.13 3.282 18,000.00 9,475.12 18,201.00 9,476.87 207.74 204.08 90.000 -1,132.24 8,539.01 1,319.64 908.34 411.30 3.208 18,200.00 9,476.87 18,301.00 9,476.87 207.35 208.65 90.000 -1,132.07 8,839.05 1,319.63 903.75 415.88 3.173 18,200.00 9,478.81 18,401.00 9,476.87 207.35															
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$\begin{array}{cccccccccccccccccccccccccccccccccccc$	17,700.00	9,468.14	4 17,801.00	9,468.14	195.84	197.24	90.000	-1,132.50	8,339.14	1,319.66	926.70	392.96	3.358		
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	17.800.00	9.469.8	9 17.901.00	9.469.89	198.14	199.52	90.000	-1.132.41	8.439.12	1.319.66	922.11	397.55	3.320		
18,000.00 $9,473.38$ $18,101.00$ $9,473.38$ 202.74 204.08 90.000 $-1,132.24$ $8,639.09$ $1,319.64$ 912.93 406.71 3.245 $18,100.00$ $9,475.12$ $18,201.00$ $9,475.12$ 205.05 206.37 90.000 $-1,132.15$ $8,739.08$ $1,319.64$ 908.34 411.30 3.208 $18,200.00$ $9,476.87$ $18,301.00$ $9,476.87$ 207.35 208.65 90.000 $-1,132.07$ $8,839.06$ $1,319.63$ 903.75 415.88 3.173 $18,300.00$ $9,478.61$ $18,601.00$ $9,476.61$ 209.65 210.93 90.000 $-1,131.89$ $8,939.05$ $1,319.62$ 899.16 420.47 3.138 $18,400.00$ $9,480.36$ $18,501.00$ $9,480.36$ 211.95 213.21 90.000 $-1,131.81$ $9,139.01$ $1,319.61$ 889.97 429.64 3.071 $18,600.00$ $9,482.11$ $18,601.00$ $9,485.60$ 218.85 221.77 90.000 $-1,131.72$ $9,239.00$ $1,319.61$ 889.97 429.64 3.071 $18,600.00$ $9,487.34$ $18,901.00$ $9,487.34$ 220.77 90.000 $-1,131.63$ $9,338.98$ $1,319.60$ 80.79 438.81 3.007 $18,900.00$ $9,487.34$ $18,901.00$ $9,487.34$ $18,901.00$ $9,489.97$ $1,31.46$ $9,538.95$ $1,319.59$ 876.19 443.40 2.976 $18,900.00$ $9,489.03$ $19,01.00$ $9,489.03$ 225.76 <td< td=""><td>17.900.00</td><td>9.471.6</td><td>3 18.001.00</td><td>9.471.63</td><td>200.44</td><td>201.80</td><td>90.000</td><td>-1.132.33</td><td>8.539.11</td><td>1.319.65</td><td>917.52</td><td>402.13</td><td>3.282</td><td></td><td></td></td<>	17.900.00	9.471.6	3 18.001.00	9.471.63	200.44	201.80	90.000	-1.132.33	8.539.11	1.319.65	917.52	402.13	3.282		
18,100.00 9,475.12 18,201.00 9,475.12 205.05 206.37 90.000 -1,132.15 8,739.08 1,319.64 908.34 411.30 3.208 18,200.00 9,476.87 18,301.00 9,476.87 207.35 208.65 90.000 -1,132.07 8,839.06 1,319.63 903.75 415.88 3.173 18,300.00 9,476.81 18,401.00 9,478.61 209.65 210.93 90.000 -1,131.98 8,939.05 1,319.62 899.16 420.47 3.138 18,400.00 9,480.36 18,501.00 9,480.36 211.95 213.21 90.000 -1,131.81 9,139.01 1,319.61 889.97 422.05 3.105 18,500.00 9,482.11 214.25 215.50 90.000 -1,131.81 9,139.01 1,319.61 889.97 429.64 3.071 18,600.00 9,485.60 18,801.00 9,485.60 218.85 20.07 90.000 -1,131.63 9,38.98 1,319.60 880.79 438.81 3.007 18,800.00 9,487.34 18,901.00 9,487.34 221.15 222.35 <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>															
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$\begin{array}{cccccccccccccccccccccccccccccccccccc$			1 18,401.00	9,478.61	209.65	210.93	90.000	-1,131.98		1,319.62	899.16	420.47	3.138		
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18,600.00 9,483.85 18,701.00 9,483.85 216.55 217.78 90.000 -1,131.72 9,239.00 1,319.61 885.38 434.22 3.039 18,700.00 9,485.60 18,801.00 9,485.60 218.85 220.07 90.000 -1,131.63 9,338.98 1,319.60 880.79 438.81 3.007 18,800.00 9,487.34 18,901.00 9,487.34 221.15 222.35 90.000 -1,131.55 9,438.97 1,319.59 876.19 443.40 2.976 18,900.00 9,489.09 19,001.00 9,489.09 223.45 224.64 90.000 -1,131.46 9,538.95 1,319.59 871.60 447.99 2.946 19,000.00 9,490.83 19,101.00 9,490.83 225.76 226.93 90.000 -1,131.29 9,738.92 1,319.57 867.00 452.58 2.916 19,100.00 9,492.58 19,201.00 9,494.32 29,306 231.50 90.000 -1,131.20 9,88.91 1,319.57 857.81 461.76 2.858 19,202.48 9,494.37 19,303.31 9,494.36															
18,700.00 9,485.60 18,801.00 9,485.60 218.85 220.07 90.000 -1,131.63 9,338.98 1,319.60 880.79 438.81 3.007 18,800.00 9,487.34 18,901.00 9,487.34 221.15 222.35 90.000 -1,131.55 9,438.97 1,319.59 876.19 443.40 2.976 18,900.00 9,490.99 19,001.00 9,489.09 223.45 224.64 90.000 -1,131.46 9,538.95 1,319.59 871.60 447.99 2.946 19,000.00 9,490.83 19,101.00 9,490.83 225.76 226.93 90.000 -1,131.37 9,638.94 1,319.58 867.00 452.58 2.916 19,100.00 9,492.58 19,201.00 9,492.58 228.06 229.21 90.000 -1,131.29 9,738.92 1,319.57 862.41 457.17 2.886 19,200.00 9,494.32 19,301.00 9,494.32 230.36 231.50 90.000 -1,131.20 9,838.91 1,319.57 857.81 461.76 2.858 19,202.48 9,494.37 19,303.31 9,494.36															
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18,900.00 9,489.09 19,001.00 9,489.09 223.45 224.64 90.000 -1,131.46 9,538.95 1,319.59 871.60 447.99 2.946 19,000.00 9,490.83 19,101.00 9,490.83 225.76 226.93 90.000 -1,131.37 9,638.94 1,319.58 867.00 452.58 2.916 19,100.00 9,492.58 19,201.00 9,492.58 228.06 229.21 90.000 -1,131.29 9,738.92 1,319.57 862.41 457.17 2.886 19,200.00 9,494.32 19,301.00 9,494.32 230.36 231.50 90.000 -1,131.20 9,838.91 1,319.57 857.81 461.76 2.858 19,202.48 9,494.37 19,303.31 9,494.36 230.42 231.55 90.000 -1,131.20 9,841.21 1,319.57 857.70 461.87 2.857			4 18,901.00	9,487.34	221.15	222.35	90.000		9,438.97		876.19	443.40	2.976		
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19,100.00 9,492.58 19,201.00 9,492.58 228.06 229.21 90.000 -1,131.29 9,738.92 1,319.57 862.41 457.17 2.886 19,200.00 9,494.32 19,301.00 9,494.32 230.36 231.50 90.000 -1,131.29 9,838.91 1,319.57 857.81 461.76 2.858 19,202.48 9,494.37 19,303.31 9,494.36 230.42 231.55 90.000 -1,131.20 9,841.21 1,319.57 857.70 461.87 2.857															
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	19,200.00	9,494.3	2 19,301.00	9,494.32	230.36	231.50	90.000	-1,131.20	9,838.91	1,319.57	857.81	461.76	2.858		
	19,202.48	9,494.3	7 19,303.31	9,494.36	230.42	231.55	90.000	-1,131.20	9,841.21	1,319.57	857.70	461.87	2.857		
ן וס,בדר.טד ס,דסט.רט וס,טטט.טר ס,4ס4.טט בטר.40 בטר.40 סט.000 −ר,רטר.12 א,041.21 ר,320.34 007.00 402.00 ב.000 SF	19,247.64			9,494.36	231.46	231.55	90.000	-1,131.20	9,841.21	1,320.34	857.50	462.85	2.853 SF		
					-		-								

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

Anticollision Report

	(IN)
Marath	nonOil
C	Corporation.

Offset Site Error: 0.00 usft

•			
Company:	Marathon Oil Permian LLC	Local Co-ordinate Reference:	Well Decimus 5 WXY Fed Com 2H
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 2H	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)

pip Depit Depit Depit Depit Depit Pit Pit Pit Pit Pit Pit Pit 0.0 0.0 37.0 7.0 1.0 1.0 1.0 1.0 1.00 4.00	ey Progr Refer	rence	Off			ajor Axis		Offset Wellb	ore Centre	Dist	Rule Assig			Offset Well Error:	1.00
0.00 0.01 17.02 7.69 1.00 1.00 4.422 4.2424 1.10 4.4252 4.4452 4.4452 4.4452 4.4452 4.4452 4.4452 4.4452 4.4452 4.4452 4.4452 4.4452 4.4452 4.4452 4.4452 4.4452 4.4451 <	asured Depth				Reference	Offset		+N/-S	+E/-W					Warning	
1000 1338 103.4 1.13 1.06 1.289 4.3244 1.01 4.402.5 4.402.5 2.08 2.08 5.04 5.05	(usft)				(usft)	(usft)		(usft)	(usft)	(usft)					
11173 1173	0.00	0.00	37.99	7.59	1.00	1.00	-14.282	4,324.83	-1,100.96	4,462.77					
0000 00000 00000	100.00	100.00	133.85	103.44	1.13	1.08	-14.289	4,324.44	-1,101.39	4,462.50	4,460.32	2.18	2,048.781		
9000 9000 91000 91000 9100 <	111.73	111.73	142.13	111.73	1.18	1.10	-14.290	4,324.42	-1,101.46	4,462.49	4,460.26	2.24	1,994.550		
00000 04000 04000 04000 04000 04000 04000 04000 04000 04000 04000 070000 07000 07000 <t< td=""><td>200.00</td><td>200.00</td><td>208.92</td><td>178.51</td><td>1.66</td><td>1.30</td><td>-14.299</td><td>4,324.43</td><td>-1,102.22</td><td>4,462.74</td><td>4,459.86</td><td>2.88</td><td>1,551.665</td><td></td><td></td></t<>	200.00	200.00	208.92	178.51	1.66	1.30	-14.299	4,324.43	-1,102.22	4,462.74	4,459.86	2.88	1,551.665		
B000 B0001 B0104 S70.8 2.69 2.92 14.803 4.21.30 1.108.18 4.401.97 4.456.61 5.06 178.364 B0000 B0100 B7170 7.680.88 2.84 3.19 1.4303 4.31177 1.108.97 4.401.77 4.458.05 6.10 7.894.11 B0000 B0100 B712.8 M0.78 3.44 3.80 1.44.30 4.31127 1.11117 4.458.43 4.451.77 7.68 6.68 697.74 B0000 1.010.01 1.311.80 1.100.28 4.491.24 1.11117 4.456.43 4.417.7 7.68 898.67 B0000 1.970.53 1.879.55 4.26 8.74 1.137.3 4.474.77 1.038.4 4.421.50 4.122.44 4.130.63 4.222.54 4.402.45 4.371.60 1.244 4.310.61 4.271.60 1.108.44 4.361.64 4.371.64 1.161.5 3.581.56 3.391.16 B0000 1.970.47 2.081.57 4.271.64 1.101.64 4.403.14	300.00	300.00	321.03	290.61	2.06	1.64	-14.322	4,324.55	-1,104.09	4,463.28	4,459.66	3.62	1,231.302		
9000 00000 000000 00000 00000 <th< td=""><td>400.00</td><td>400.00</td><td>467.20</td><td>436.75</td><td>2.39</td><td>2.37</td><td>-14.358</td><td>4,323.42</td><td>-1,106.69</td><td>4,462.97</td><td>4,458.57</td><td>4.40</td><td>1,014.265</td><td></td><td></td></th<>	400.00	400.00	467.20	436.75	2.39	2.37	-14.358	4,323.42	-1,106.69	4,462.97	4,458.57	4.40	1,014.265		
Name Name <th< td=""><td>500.00</td><td>500.00</td><td>600.84</td><td>570.36</td><td>2.69</td><td>2.92</td><td>-14.383</td><td>4,321.30</td><td>-1,108.18</td><td>4,461.69</td><td>4,456.61</td><td>5.08</td><td>878.364</td><td></td><td></td></th<>	500.00	500.00	600.84	570.36	2.69	2.92	-14.383	4,321.30	-1,108.18	4,461.69	4,456.61	5.08	878.364		
0000 0000 07.7 1047 1.440 4.317.59 1.111.20 4.46343 4.441.75 6.06 6.07.76 0000 0.000 1.077.7 1.041.70 1.002 3.77 5.93 1.4456 4.451.20 1.4458 4.441.72 1.017.80 4.443.70 <t< td=""><td>600.00</td><td>600.00</td><td>691.37</td><td>660.88</td><td>2.96</td><td>3.19</td><td>-14.393</td><td>4,319.77</td><td>-1,108.59</td><td>4,460.17</td><td>4,454.55</td><td>5.62</td><td>793.610</td><td></td><td></td></t<>	600.00	600.00	691.37	660.88	2.96	3.19	-14.393	4,319.77	-1,108.59	4,460.17	4,454.55	5.62	793.610		
9000 107170 104119 3.68 4.60 1-4465 4.31251 -1,1170 4.45673 4.48.17 7.56 563.38 9000 1,0000 1,3013 1,30228 1,57 5.53 1,4388 4.322.68 1,1118 4.47.05 1,4383 4.427.05 11,58 4.447.05 1,4383 4.47.05 1,4383 4.47.05 1,4383 4.47.05 1,4383 4.47.05 1,4383 4.47.05 1,4383 4.47.05 1,438.33 4.47.05 1,438.33 4.47.05 1,438.33 4.47.05 1,438.33 4.47.05 1,438.33 4.47.05 1,438.33 4.47.05 1,43.03 30.01 0000 1,997.05 1,47.05 4.430.57 4.238.54 4.370.70 1,58.3 30.017 1,58.3 30.017 1,58.3 30.017 1,58.3 30.017 1,58.3 30.017 1,58.3 30.017 1,58.3 34.108 4.14.05 4.332.54 4.370.57 4.34.18 4.14.18 4.00.223 4.321.55 4.31.61 4.55.55	700.00	700.00	767.00	736.50	3.21	3.43	-14.406	4,318.77	-1,109.37	4,459.13	4,453.03	6.10	730.941		
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0000 1.97.00 1.97.05	000.00	1,000.00	1,331.36	1,300.29	3.87	5.93	-14.366	4,302.08	-1,101.88	4,451.09	4,441.32	9.78	455.338		
0000 1.97.00 1.97.05	100.00	1,100.00	1,691.14	1,656.20	4.07	7.92	-13.911	4,274.77	-1,058.75	4,438.91	4,427.05	11.86	374.300		
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9000 1.999.45 2.17.00 2.138.48 5.22 9.66 4.168 4.217.40 -1.003.46 4.365.65 4.341.86 14.71 286.170 90000 1.987.77 2.236.40 2.184.42 5.63 9.77 4.208.47 15.88 2.76.916 90000 1.986.75 2.380.00 2.286.87 6.52 10.18 4.30.23 4.202.23 -986.77 4.289.25 4.277.60 15.85 256.563 90013 1.986.75 2.380.00 2.386.27 6.32 10.18 4.30.23 4.202.23 -986.77 4.289.25 4.277.80 16.15 285.563 90000 1.996.44 2.483.00 2.386.28 6.92 1.245 4.3333 4.173.04 4.288.25 4.277.83 18.83 256.161 90000 2.898.08 2.988.88 2.910.09 7.60 12.93 4.4534 4.193.41 4.946.75 4.284.24 16.65 26.119 90000 2.898.03 3.108.74 4.4534 4.192.45 4.917.53 19.32 217.764 90000 2.898.28 3.108.74	500.00	1,499.84	2,122.79	2,081.92	5.02	9.39	41.303	4,223.28	-1,009.60	4,375.89	4,361.60	14.29	306.307		
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	700.00	4,671.96	5,157.00	5,085.40	12.65	20.90	-7.436	3,897.66	-735.70	3,771.66	3,739.75	31.91	118.203		

7/22/2022 1:25:12PM

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Anticollision Report

Marathon Oil Corporation.

Offset Site Error: 0.00 usft

Company:	Marathon Oil Permian LLC	Local Co-ordinate Reference:	Well Decimus 5 WXY Fed Com 2H
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 2H	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)

rvey Progr Refe	ram: 96- rence	Off	set	Semi N	/lajor Axis		Offset Wellb	ore Centre	Dis	Rule Assi tance	gned:		Offset Well Error:	1.00 u
leasured Depth	Vertical	Measured	Vertical	Reference	Offset	Highside Toolface	+N/-S	+E/-W	Between Centres	Between Ellipses	Minimum	Separation Factor	Warning	
Uepth (usft)	Depth (usft)	Depth (usft)	Depth (usft)	(usft)	(usft)	(°)	(usft)	(usft)	(usft)	Ellipses (usft)	Separation (usft)	Factor		
4,800.00	4,771.96	5,227.98	5,155.74	12.73	21.18	-7.347	3,890.94	-728.95	3,761.03	3,728.76	32.27	116.538		
4,900.00	4,871.96	5,311.01	5,238.06	12.81	21.50	-7.238	3,883.72	-720.89	3,751.12	3,718.45	32.67	114.821		
5,000.00	4,971.96	5,388.93	5,315.38	12.88	21.79	-7.143	3,877.13	-713.83	3,741.58	3,708.54	33.05	113.225		
5,100.00	5,071.96	5,462.90	5,388.86	12.96	22.07	-7.059	3,871.38	-707.56	3,732.79	3,699.38	33.41	111.736		
5,200.00	5,171.96	5,535.00	5,460.53	13.04	22.34	-6.981	3,866.05	-701.81	3,724.51	3,690.75	33.76	110.320		
5,300.00	5,271.96	5,629.00	5,554.05	13.04	22.68	-6.885	3,859.60	-694.78	3,724.31	3,682.61	34.18	108.732		
5,500.00	5,271.90	5,029.00	3,334.03	13.12	22.00	-0.005	3,839.00	-094.70	3,710.79	3,002.01	34.10	106.732		
5,400.00	5,371.96	5,701.03	5,625.75	13.19	22.95	-6.814	3,855.12	-689.62	3,709.69	3,675.16	34.53	107.425		
5,500.00	5,471.96	5,796.44	5,720.75	13.27	23.29	-6.721	3,849.46	-682.89	3,702.96	3,668.00	34.96	105.925		
5,600.00	5,571.96	5,899.22	5,823.15	13.35	23.67	-6.633	3,843.24	-676.46	3,696.21	3,660.80	35.41	104.382		
5,700.00	5,671.96	12,589.00	9,288.86	13.43	67.48	-73.167	320.70	-714.73	3,649.27	3,604.08	45.19	80.755		
5,800.00	5,771.96	12,589.00	9,288.86	13.51	67.48	-73.167	320.70	-714.73	3,550.18	3,504.75	45.43	78.154		
5,900.00	5,871.96	12,589.00	9,288.86	13.58	67.48	-73.167	320.70	-714.73	3,451.14	3,405.47	45.67	75.571		
6,000.00	5,971.96	12,589.00	9,288.86	13.66	67.48	-73.167	320.70	-714.73	3,352.16	3,306.25	45.92	73.005		
6,100.00	6,071.96	12,589.00	9,288.86	13.74	67.48	-73.167	320.70	-714.73	3,253.25	3,207.07	46.17	70.456		
6,200.00	6,171.96	12,609.56	9,289.25	13.82	67.73	-75.573	300.28	-717.06	3,154.29	3,107.75	46.54	67.773		
6,300.00	6,271.96	12,610.85	9,289.28	13.90	67.74	-75.725	298.99	-717.20	3,055.50	3,008.68	46.82	65.258		
6,400.00	6,371.96	12,612.18	9,289.31	13.98	67.76	-75.882	297.67	-717.35	2,956.79	2,909.68	47.11	62.762		
6,500.00	6,471.96	12,613.55	9,289.34	14.05	67.77	-76.043	296.31	-717.51	2,858.17	2,810.76	47.41	60.285		
6,600.00	6,571.96	12,614.96	9,289.37	14.13	67.79	-76.210	294.92	-717.66	2,759.65	2,711.93	47.72	57.827		
6,700.00	6,671.96	12,616.41	9,289.40	14.21	67.81	-76.381	293.47	-717.82	2,661.23	2,613.19	48.05	55.389		
6,800.00	6,771.96	12,617.90	9,289.44	14.29	67.83	-76.558	291.99	-717.99	2,562.94	2,514.56	48.38	52.970		
6,900.00	6,871.96	12,619.44	9,289.47	14.37	67.84	-76.740	290.45	-718.16	2,464.79	2,416.05	48.74	50.572		
7,000.00	6,971.96	12,621.04	9,289.51	14.45	67.86	-76.929	288.87	-718.34	2,366.79	2,317.68	49.11	48.193		
7,100.00	7,071.96	12,622.68	9,289.55	14.52	67.88	-77.124	287.24	-718.52	2,268.96	2,219.45	49.50	45.836		
7,200.00	7,171.96	12,624.38	9,289.59	14.60	67.90	-77.325	285.56	-718.71	2,171.32	2,121.41	49.92	43.499		
7,300.00	7,271.96	12,626.13	9,289.64	14.68	67.92	-77.533	283.81	-718.90	2,073.91	2,023.55	50.36	41.184		
7 400 00	7 271 06	10 607 04	0.000.60	14.76	67.05	77 740	292.04	710.10	1 076 76	1 0 2 5 0 2	50.02	28.800		
7,400.00	7,371.96	12,627.94	9,289.68	14.76	67.95	-77.748	282.01	-719.10	1,976.76	1,925.93	50.83	38.890		
7,500.00	7,471.96	12,629.82	9,289.73	14.84	67.97	-77.971	280.15	-719.31	1,879.90	1,828.56	51.34	36.619		
7,600.00	7,571.96	12,631.76	9,289.78	14.92	67.99	-78.202	278.22	-719.52	1,783.39	1,731.50	51.89	34.371		
7,700.00	7,671.96	12,633.76	9,289.84	15.00	68.01	-78.441	276.23	-719.74	1,687.27	1,634.79	52.49	32.148		
7,800.00	7,771.96	12,635.85	9,289.89	15.08	68.04	-78.689	274.16	-719.97	1,591.64	1,538.49	53.14	29.949		
7,900.00	7,871.96	12,638.01	9,289.95	15.15	68.06	-78.946	272.01	-720.21	1,496.57	1,442.69	53.88	27.778		
8,000.00	7,971.96	12,640.25	9,289.95	15.13	68.09	-79.214		-720.21	1,490.57	1,347.49	54.70	25.636		
							269.79							
8,100.00	8,071.96	12,642.57	9,290.09	15.31	68.12	-79.491	267.47	-720.70	1,308.63	1,253.00	55.62	23.526		
8,200.00	8,171.96	12,644.99	9,290.16	15.39	68.15	-79.780	265.07	-720.96	1,216.09	1,159.40	56.69	21.453		
8,300.00	8,271.96	12,647.51	9,290.23	15.47	68.18	-80.081	262.57	-721.24	1,124.82	1,066.91	57.92	19.422		
8,400.00	8,371.96	12,650.12	9,290.31	15.55	68.21	-80.394	259.97	-721.52	1,035.16	975.81	59.35	17.441		
8,400.00 8,500.00	8,371.96 8,471.96	12,650.12	9,290.31	15.63	68.24	-80.394	259.97	-721.52	947.57	886.52	59.55 61.05	17.441		
8,600.00	8,471.96 8,571.96	12,655.69	9,290.40 9,290.49	15.63	68.28	-80.720	257.20	-721.01	947.57 862.66	799.60	63.07	13.679		
8,700.00	8,671.96	12,658.65 12,661.22	9,290.59	15.79	68.31	-81.415	251.50	-722.43	781.33	715.86	65.47	11.934		
8,783.22	8,755.19	12,001.22	9,290.67	15.84	68.34	-81.723	248.95	-722.71	717.23	649.44	67.80	10.579		
8,800.00	8,771.96	12,661.72	9,290.69	15.84	68.35	-171.992	248.44	-722.76	704.96	636.66	68.30	10.322		
8,850.00	8,821.81	12,662.95	9,290.73	15.81	68.36	-172.724	247.23	-722.89	671.71	601.74	69.96	9.601		
8,900.00	8,871.16	12,663.74	9,290.76	15.77	68.37	-173.212	246.44	-722.03	644.21	572.41	71.79	8.973		
8,950.00	8,919.62	12,664.09	9,290.70 9,290.77	15.77	68.37	-173.511	246.10	-723.01	623.45	549.73	73.72	8.457		
9,000.00	8,966.83	12,663.96	9,290.77	15.68	68.37	-173.651	246.10	-723.00	610.29	534.67	75.62	8.071		
5,000.00	0,000.00	12,000.00	0,200.11	10.00	50.57	-170.001	270.22	120.00	010.20	004.07	10.02	0.071		
9,050.00	9,012.43	12,663.34	9,290.74	15.63	68.37	-173.648	246.84	-722.93	605.32	527.95	77.37	7.824		
9,054.52	9,016.46	12,663.26	9,290.74	15.63	68.37	-173.641	246.92	-722.92	605.28	527.77	77.51	7.809 CC,	ES	
9,100.00	9,056.07	12,662.22	9,290.71	15.59	68.35	-173.503	247.95	-722.81	608.78	529.92	78.86	7.720 SF		
9,150.00	9,097.42	12,660.58	9,290.65	15.56	68.33	-173.205	249.58	-722.64	620.49	540.46	80.03	7.753		
9,200.00	9,136.17	12,658.42	9,290.58	15.55	68.31	-172.732	251.73	-722.41	639.93	559.06	80.87	7.913		
.,	-,	,	2,200.00	10.00	20.01		20110		- 50.00	2 30.00	50.07			
			9,290.49	15.56	68.28	-172.043	254.40	-722.12	666.26	584.84	81.42	8.183		

Anticollision Report

0.00 usft

Marathon Oil Corporation.

Offset Site Error:

Company:	Marathon Oil Permian LLC	Local Co-ordinate Reference:	Well Decimus 5 WXY Fed Com 2H
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 2H	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)

Survey Prog										Rule Assi	gned:		Offset Well Error:	1.00 usft
Refe Measured	rence Vertical	Off Measured	set Vertical	Semi M Reference	lajor Axis Offset	Highside	Offset Wellbo		Dist Between	tance Between	Minimum	Separation	Warning	
Depth	Depth	Depth	Depth			Toolface	+N/-S	+E/-W	Centres	Ellipses	Separation	Factor	5	
(usft)	(usft)	(usft)	(usft)	(usft)	(usft)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)	0.510		
9,300.00	9,204.69	12,652.53	9,290.39	15.60	68.24	-171.068	257.58	-721.78	698.52	616.78	81.74	8.546		
9,350.00 9,400.00	9,233.95 9,259.56	12,648.81 12,644.60	9,290.27 9,290.15	15.68 15.83	68.19 68.14	-169.692 -167.712	261.28 265.46	-721.38 -720.92	735.69 776.80	653.80 694.87	81.89 81.93	8.984 9.482		
9,400.00	9,239.30	12,639.91	9,290.13	16.06	68.09	-164.750	203.40	-720.92	820.97	739.06	81.95	10.023		
9,500.00	9,291.33	12,634.78	9,290.01	16.37	68.03	-160.021	275.22	-719.85	867.41	785.55	81.85	10.023		
9,550.00	9,312.73	12,629.25	9,289.72	16.78	67.96	-151.692	280.71	-719.25	915.44	833.66	81.79	11.193		
0,000.00	0,012.10	12,020.20	0,200.72	10.10	01.00	101.002	200.11	110.20	010.11	000.00	01.10			
9,600.00	9,322.11	12,623.36	9,289.57	17.27	67.89	-134.941	286.56	-718.60	964.49	882.77	81.72	11.802		
9,650.00	9,327.18	12,617.18	9,289.42	17.83	67.82	-100.377	292.71	-717.91	1,014.06	932.40	81.66	12.418		
9,673.22	9,328.06	12,614.22	9,289.35	18.11	67.78	-79.850	295.65	-717.58	1,037.14	955.50	81.63	12.705		
9,700.00	9,328.52	12,610.77	9,289.27	18.45	67.74	-80.098	299.08	-717.19	1,063.74	982.14	81.60	13.036		
9,800.00	9,330.27	12,597.65	9,289.01	19.86	67.59	-80.934	312.10	-715.71	1,163.08	1,081.59	81.49	14.273		
9,900.00	9,332.01	12,584.65	9,288.79	21.43	67.43	-81.633	325.02	-714.23	1,262.41	1,181.02	81.39	15.511		
10,000.00	9,332.01	12,584.05	9,288.62	21.43	67.29	-82.208	337.28	-714.23	1,361.73	1,181.02	81.39	16.747		
10,000.00	9,335.50	12,572.30	9,288.50 9,288.50	23.13	67.14	-82.720	349.66	-712.01	1,461.05	1,230.42	81.24	17.985		
10,100.00	9,335.50 9,337.25	12,559.84	9,288.50 9,288.42	24.93 26.81	66.99	-82.720	362.15	-709.91	1,461.05	1,379.01	81.17	17.965		
10,300.00	9,339.00	12,534.56	9,288.39	28.75	66.84	-83.603	374.77	-708.43	1,659.66	1,578.55	81.10	20.464		
, _ 00.00	2,230.00	,	1,200.00	200	20.07	25.000			.,	.,	51.10			
10,400.00	9,340.74	12,521.74	9,288.40	30.74	66.69	-83.989	387.50	-706.93	1,758.95	1,677.91	81.04	21.704		
10,500.00	9,342.49	12,508.80	9,288.47	32.78	66.54	-84.347	400.35	-705.41	1,858.24	1,777.25	80.99	22.944		
10,600.00	9,344.23	12,495.73	9,288.58	34.85	66.39	-84.680	413.33	-703.87	1,957.53	1,876.58	80.94	24.184		
10,700.00	9,345.98	12,495.00	9,288.59	36.94	66.38	-84.698	414.06	-703.79	2,056.84	1,975.79	81.05	25.377		
10,800.00	9,347.72	12,477.07	9,288.78	39.07	66.17	-85.106	431.86	-701.69	2,156.12	2,075.16	80.96	26.633		
40.000.00	0 0 40 47	40,400,40	0.000.00	44.04	00.07	05 000	440.74	700.00	0.055.40	0 474 40	00.07	07.055		
10,900.00 11,000.00	9,349.47 9,351.21	12,468.13 12,459.38	9,288.88 9,288.97	41.21 43.36	66.07 65.96	-85.289 -85.457	440.74 449.44	-700.66 -699.66	2,255.43 2,354.76	2,174.46 2,273.77	80.97 80.99	27.855 29.075		
11,100.00	9,351.21	12,459.38	9,289.07	45.54	65.86	-85.612	449.44	-698.69	2,354.70	2,273.77	81.01	30.292		
11,200.00	9,354.70	12,442.39	9,289.16	47.72	65.76	-85.754	466.32	-697.75	2,553.47	2,472.43	81.04	31.508		
11,300.00	9,356.45	12,434.15	9,289.25	49.92	65.67	-85.886	474.51	-696.84	2,652.84	2,571.77	81.07	32.721		
11,000.00	0,000.10	12,101.10	0,200.20	10.02	00.07	00.000		000.01	2,002.01	2,07	01.07	02.721		
11,400.00	9,358.19	12,426.07	9,289.34	52.13	65.57	-86.009	482.53	-695.96	2,752.22	2,671.11	81.11	33.932		
11,500.00	9,359.94	12,418.15	9,289.43	54.34	65.48	-86.123	490.41	-695.10	2,851.62	2,770.47	81.15	35.140		
11,600.00	9,361.68	12,400.00	9,289.63	56.56	65.27	-86.365	508.45	-693.16	2,951.06	2,869.95	81.11	36.384		
11,700.00	9,363.43	12,400.00	9,289.63	58.79	65.27	-86.365	508.45	-693.16	3,050.45	2,969.23	81.22	37.559		
11,800.00	9,365.17	12,400.00	9,289.63	61.02	65.27	-86.365	508.45	-693.16	3,149.89	3,068.56	81.32	38.733		
44,000,00	0.000.00	40,400,00	0.000.00	62.00	05.07	00.005	500.45	000.40	0.040.00	0.407.00	04.40	20.000		
11,900.00 12,000.00	9,366.92 9,368.66	12,400.00 12,400.00	9,289.63 9,289.63	63.26	65.27	-86.365 -86.365	508.45	-693.16 -693.16	3,249.36 3,348.86	3,167.93	81.43 81.53	39.906		
12,000.00	9,300.00 9,370.41	12,400.00	9,289.83 9,289.84	65.51 67.76	65.27 65.01	-86.617	508.45 530.07	-690.93	3,348.86	3,267.33 3,366.78	81.48	41.076 42.319		
12,100.00	9,370.41	12,378.27	9,289.84 9,289.89	70.01	64.95	-86.676	535.68	-690.36	3,547.75	3,466.20	81.55	43.504		
12,200.00	9,373.90	12,367.13	9,289.93	72.26	64.88	-86.731	541.15	-689.82	3,647.25	3,565.63	81.62	44.686		
12,000.00	0,010.00	12,007.10	0,200.00	72.20	04.00	-00.701	041.10	000.02	0,047.20	0,000.00	01.02	44.000		
12,400.00	9,375.65	12,361.76	9,289.97	74.52	64.82	-86.783	546.49	-689.30	3,746.76	3,665.07	81.69	45.866		
12,500.00	9,377.39	12,356.53	9,290.00	76.78	64.76	-86.831	551.70	-688.79	3,846.29	3,764.53	81.76	47.042		
12,600.00	9,379.14	12,351.41	9,290.03	79.05	64.70	-86.877	556.79	-688.30	3,945.83	3,863.99	81.84	48.215		
12,700.00	9,380.88	12,346.42	9,290.05	81.31	64.64	-86.920	561.77	-687.83	4,045.37	3,963.46	81.91	49.385		
12,800.00	9,382.63	12,341.54	9,290.07	83.58	64.58	-86.960	566.62	-687.38	4,144.93	4,062.94	81.99	50.552		
10,000,00	0.004.07	10 000 70	0.000.00	05.05	64.50	86.000	E74 07	680.04	4 0 4 4 5 6	4 460 40	00.07	E4 740		
12,900.00	9,384.37	12,336.78	9,290.09	85.85	64.53	-86.999	571.37	-686.94	4,244.50	4,162.42	82.07	51.716		
13,000.00	9,386.12	12,332.12 12,306.00	9,290.10	88.13	64.47	-87.035	576.01	-686.52	4,344.07	4,261.92	82.15	52.877		
13,100.00 13,200.00	9,387.86 9,389.61	12,306.00 12,306.00	9,290.13 9,290.13	90.40 92.68	64.17 64.17	-87.215 -87.215	602.03 602.03	-684.24 -684.24	4,443.77 4,543.32	4,361.63 4,461.08	82.14 82.25	54.101 55.241		
13,200.00	9,309.01 9,391.35	12,306.00	9,290.13 9,290.13	92.66 94.95	64.17	-87.215	602.03	-684.24	4,543.32	4,461.08	82.35	56.379		
10,000.00	0,001.00	12,000.00	0,200.10	34.33	04.17	-07.210	002.00	004.24	7,042.00	4,000.00	02.00	00.010		
13,400.00	9,393.10	12,306.00	9,290.13	97.23	64.17	-87.215	602.03	-684.24	4,742.49	4,660.03	82.46	57.514		
13,500.00	9,394.84	12,306.00	9,290.13	99.51	64.17	-87.215	602.03	-684.24	4,842.10	4,759.54	82.56	58.647		
13,600.00	9,396.59	12,306.00	9,290.13	101.80	64.17	-87.215	602.03	-684.24	4,941.73	4,859.06	82.67	59.776		
13,700.00	9,398.33	12,306.00	9,290.13	104.08	64.17	-87.215	602.03	-684.24	5,041.37	4,958.59	82.78	60.903		
13,800.00	9,400.08	12,306.00	9,290.13	106.36	64.17	-87.215	602.03	-684.24	5,141.02	5,058.14	82.88	62.027		
40.000.00	0.404.00	40.000.00	0.000.10	400.0-	01.17	07.045	~~~~~~	00101	5 0 10 00	E 453 36	60 00	00 1 17		
13,900.00	9,401.82	12,306.00	9,290.13	108.65	64.17	-87.215	602.03	-684.24	5,240.69	5,157.70	82.99	63.147		
			CC - Min	centre to ce	nter dista	nce or cove	ergent point, SF	- min sepa	ration facto	or, ES - mi	n ellipse se	paration		
/22/2022	1.25.12PM	1					Page 9)				C	OMPASS 5000 15	Ruild 03

Anticollision Report

MarathonOil Corporation.

Offset Site Error: 0.00 usft

Company:	Marathon Oil Permian LLC	Local Co-ordinate Reference:	Well Decimus 5 WXY Fed Com 2H
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 2H	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)

Reference easured	Vertical	Off Measured	Vertical	Semi N Reference	lajor Axis Offset	Highside	Offset Wellb	ore Centre +E/-W	Between	tance Between	Minimum	Separation	Warning	
Depth (usft)	Depth (usft)	Depth (usft)	Depth (usft)	(usft)	(usft)	Toolface	+N/-5 (usft)	+E/-VV (usft)	Centres (usft)	Ellipses (usft)	Separation (usft)	Factor		
			9,290.13	110.93	(usit) 64.17	(°)	602.03	-684.24			83.10	64.265		
100.00	9,403.57	12,306.00				-87.215			5,340.37	5,257.27				
100.00	9,405.31	12,306.00	9,290.13	113.22	64.17	-87.215	602.03	-684.24	5,440.07	5,356.86	83.21	65.380		
200.00	9,407.06	12,281.15	9,290.09	115.50	63.88	-87.359	626.79	-682.19	5,539.65	5,456.43	83.23	66.560		
300.00	9,408.80	12,277.24	9,290.07	117.79	63.83	-87.379	630.69	-681.88	5,639.33	5,556.01	83.32	67.679		
400.00	9,410.55	12,273.39	9,290.06	120.08	63.79	-87.399	634.53	-681.58	5,739.01	5,655.59	83.42	68.795		
500.00	9,412.30	12,269.61	9,290.04	122.37	63.74	-87.418	638.30	-681.28	5,838.70	5,755.18	83.52	69.907		
600.00	9,414.04	12,265.90	9,290.02	124.66	63.70	-87.436	642.00	-680.99	5,938.39	5,854.77	83.62	71.015		
700.00	9,415.79	12,262.25	9,290.01	126.95	63.66	-87.453	645.64	-680.71	6,038.09	5,954.37	83.72	72.121		
800.00	9,417.53	12,258.66	9,289.99	129.24	63.62	-87.469	649.21	-680.44	6,137.80	6,053.97	83.82	73.223		
900.00	9,419.28	12,255.14	9,289.96	131.53	63.57	-87.485	652.72	-680.17	6,237.51	6,153.58	83.93	74.321		
000.00	9,421.02	12,251.68	9,289.94	133.83	63.53	-87.500	656.17	-679.92	6,337.22	6,253.19	84.03	75.416		
100.00	9,422.77	12,248.27	9,289.92	136.12	63.49	-87.514	659.57	-679.66	6,436.94	6,352.80	84.14	76.507		
200.00	9,424.51	12,244.93	9,289.90	138.41	63.46	-87.528	662.91	-679.42	6,536.66	6,452.42	84.24	77.595		
300.00	9,426.26	12,241.64	9,289.87	140.71	63.42	-87.542	666.19	-679.18	6,636.39	6,552.05	84.35	78.680		
400.00	9,428.00	12,238.40	9,289.85	143.00	63.38	-87.554	669.42	-678.94	6,736.13	6,651.67	84.45	79.760		
500.00	9,429.75	12,211.00	9,289.59	145.29	63.06	-87.652	696.75	-677.04	6,835.96	6,751.45	84.51	80.893		
600.00	9,431.49	12,211.00	9,289.59	147.59	63.06	-87.652	696.75	-677.04	6,935.68	6,851.05	84.62	81.960		
700.00	9,433.24	12,211.00	9,289.59	149.88	63.06	-87.652	696.75	-677.04	7,035.40	6,950.66	84.74	83.023		
800.00	9,434.98	12,211.00	9,289.59	152.18	63.06	-87.652	696.75	-677.04	7,135.14	7,050.28	84.86	84.083		
900.00	9,436.73	12,207.73	9,289.56	154.47	63.02	-87.662	700.01	-676.81	7,234.88	7,149.91	84.97	85.147		
000.00	9,438.47	12,200.54	9,289.48	156.77	62.94	-87.684	707.18	-676.29	7,334.62	7,249.54	85.07	86.214		
100.00	9,440.22	12.193.35	0.080.40	159.07	62.86	97 706	714.96	-675.78	7,434.36	7 240 49	85.18	87.278		
100.00 200.00	9,440.22 9,441.96	12,193.35	9,289.40 9,289.32	161.36	62.80	-87.706 -87.727	714.36 721.53	-675.27	7,434.30	7,349.18 7,448.81	85.29	88.338		
300.00	9,443.71 9,445.46	12,215.24 12,191.48	9,289.64	163.66 165.96	63.11 62.84	-87.638	692.52	-677.32	7,633.91	7,548.44	85.46 85.54	89.323 90.412		
400.00 500.00	9,443.40 9,447.20	12,191.48	9,289.38 9,289.10	168.26	62.54	-87.712 -87.783	716.22 741.52	-675.71 -673.94	7,733.67 7,833.42	7,648.14 7,747.81	85.62	91.494		
	0 4 40 05	40,400,00		170 55		07.050	700 50	074.00	7 000 40		05 70	00 500		
600.00	9,448.95	12,138.98	9,288.80	170.55	62.23	-87.852	768.58	-671.98	7,933.16	7,847.46	85.70	92.568		
700.00	9,450.69	12,117.00	9,288.56	172.85	61.98	-87.904	790.50	-670.33	8,032.87	7,947.07	85.80	93.624		
800.00	9,452.44	12,109.13	9,288.47	175.15	61.89	-87.922	798.35	-669.74	8,132.58	8,046.67	85.91	94.659		
900.00 000.00	9,454.18 9,455.93	12,102.80 12,096.50	9,288.41 9,288.35	177.45 179.75	61.81 61.74	-87.936 -87.950	804.66 810.95	-669.26 -668.79	8,232.29 8,332.00	8,146.26 8,245.85	86.03 86.15	95.688 96.714		
000.00	0,100.00	12,000.00			01111	01.000	010.00	000.10	0,002.00	0,210.00	00.10	001711		
100.00	9,457.67	12,090.22	9,288.29	182.05	61.67	-87.964	817.21	-668.32	8,431.72	8,345.45	86.27	97.736		
200.00	9,459.42	12,083.97	9,288.23	184.35	61.60	-87.978	823.44	-667.85	8,531.43	8,445.04	86.39	98.754		
300.00	9,461.16	12,077.74	9,288.18	186.65	61.53	-87.992	829.65	-667.38	8,631.15	8,544.63	86.51	99.769		
400.00 500.00	9,462.91 9,464.65	12,071.54 12,065.36	9,288.13 9,288.08	188.94 191.24	61.46 61.39	-88.006 -88.019	835.84 841.99	-666.92 -666.46	8,730.86 8,830.58	8,644.23 8,743.83	86.63 86.75	100.780 101.788		
500.00	9,404.05	12,005.50	9,200.00	191.24	01.59	-00.019	041.99	-000.40	0,030.30	0,743.03	00.75	101.700		
600.00	9,466.40	12,059.21	9,288.03	193.54	61.32	-88.033	848.13	-666.00	8,930.30	8,843.42	86.88	102.792		
700.00	9,468.14	12,053.08	9,287.99	195.84	61.25	-88.047	854.24	-665.55	9,030.02	8,943.02	87.00	103.792		
800.00	9,469.89	12,046.98	9,287.95	198.14	61.18	-88.060	860.32	-665.10	9,129.74	9,042.61	87.13	104.789		
900.00 000.00	9,471.63 9,473.38	12,040.90 12,034.85	9,287.92 9,287.89	200.44 202.74	61.11 61.04	-88.074 -88.087	866.38 872.42	-664.65 -664.21	9,229.46 9,329.19	9,142.21 9,241.81	87.25 87.38	105.782 106.772		
100.00	9,475.12		9,287.83	205.05	60.90	-88.113	884.24	-663.34	9,428.91		87.50	107.758		
200.00	9,476.87	12,023.00	9,287.83	207.35	60.90	-88.113	884.24	-663.34	9,528.64	9,441.01	87.63	108.740		
300.00	9,478.61	12,023.00	9,287.83	209.65	60.90	-88.113	884.24	-663.34	9,628.36	9,540.61	87.75	109.719		
400.00 500.00	9,480.36 9,482.11	12,023.00 12,023.00	9,287.83 9,287.83	211.95 214.25	60.90 60.90	-88.113 -88.113	884.24 884.24	-663.34 -663.34	9,728.10 9,827.84	9,640.22 9,739.83	87.88 88.01	110.694 111.666		
600.00	9,483.85	12,023.00	9,287.83	216.55	60.90	-88.113	884.24	-663.34	9,927.58	9,839.44	88.14	112.634		
700.00	9,485.60	12,023.00	9,287.83	218.85	60.90	-88.113	884.24	-663.34	10,027.33	9,939.06	88.27	113.599		
800.00	9,487.34	12,023.00	9,287.83	221.15	60.90	-88.113	884.24	-663.34	10,127.09	10,038.69	88.40	114.561		
900.00	9,489.09	12,023.00	9,287.83	223.45	60.90	-88.113	884.24	-663.34	10,226.85	10,138.32	88.53	115.519		
000.00	9,490.83	12,023.00	9,287.83	225.76	60.90	-88.113	884.24	-663.34	10,326.61	10,237.95	88.66	116.474		
100.00	9,492.58	12,023.00	9,287.83	228.06	60.90	-88.113	884.24	-663.34	10,426.38	10,337.59	88.79	117.425		

7/22/2022 1:25:12PM

Received by OCD: 8/24/2023 6:46:43 AM

PHOENIX TECHNOLOGY SERVICES

Anticollision Report



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Company:	Marathon Oil Permian LLC	Local Co-ordinate Reference:	Well Decimus 5 WXY Fed Com 2H
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 2H	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 Des	ian: La	rry Wolfish	01-23S-27	′E RB - 204	1H - OH /	64293 - Sur	veys (Pattersor	n 813)						
														Offset Site Error:	0.00 usft
	Survey Progra			4	0			05-11		D'-	Rule Assi	gned:		Offset Well Error:	1.00 usft
	Refer Measured	ence Vertical	Measured	set Vertical	Reference	lajor Axis Offset	Highside	Offset Wellbo	re Centre	Between	ance Between	Minimum	Separation	Warning	
					Reference	Oliset	Toolface	+N/-S	+E/-W		Ellipses			warning	
- 11	Depth	Depth	Depth	Depth						Centres		Separation	Factor		
	(usft)	(usft)	(usft)	(usft)	(usft)	(usft)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)			
	19,200.00	9,494.32	11,993.14	9,287.75	230.36	60.57	-88.181	914.03	-661.21	10,526.05	10,437.13	88.92	118.376		
	19,247.64	9,495.15	11,991.80	9,287.75	231.46	60.55	-88.184	915.36	-661.12	10,573.58	10,484.60	88.98	118.827		

Anticollision Report

MarathonOil Corporation.

Offset Site Error: 0.00 usft

Company:	Marathon Oil Permian LLC	Local Co-ordinate Reference:	Well Decimus 5 WXY Fed Com 2H
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 2H	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 5 WXY Fed Com - Maximus 5 WXY Fed Com 1H - OH - Plan 1 07-22-22

Irvey Progi Refe	ram: 0-N rence	WD+HRGM	set	Semi N	lajor Axis		Offset Wellb	ore Centre	Dist	Rule Assi tance	gned:		Offset Well Error:	1.00
leasured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	+N/-S	+E/-W	Between Centres	Between Ellipses	Minimum Separation	Separation Factor	Warning	
(usft)	(usft)	(usft)	(usft)	(usft)	(usft)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)	ractor		
0.00	0.00	1.00	0.00	1.00	1.00	4.837	1,870.82	158.31	1,877.50					
100.00	100.00	101.00	100.00	1.13	1.14	4.837	1,870.82	158.31	1,877.50	1,875.23	2.27	827.042		
200.00	200.00	201.00	200.00	1.66	1.66	4.837	1,870.82	158.31	1,877.50	1,874.18	3.32	565.037		
300.00	300.00	301.00	300.00	2.06	2.06	4.837	1,870.82	158.31	1,877.50	1,873.38	4.12	455.692		
400.00	400.00	401.00	400.00	2.39	2.40	4.837	1,870.82	158.31	1,877.50	1,872.71	4.79	391.810		
500.00	500.00	501.00	500.00	2.69	2.69	4.837	1,870.82	158.31	1,877.50	1,872.12	5.39	348.633		
600.00	600.00	601.00	600.00	2.96	2.96	4.837	1,870.82	158.31	1,877.50	1,871.58	5.92	316.929		
700.00	700.00	701.00	700.00	3.21	3.21	4.837	1,870.82	158.31	1,877.50	1,871.08	6.42	292.361		
800.00	800.00	801.00	800.00	3.44	3.44	4.837	1,870.82	158.31	1,877.50	1,870.62	6.89	272.591		
900.00	900.00	901.00	900.00	3.66	3.66	4.837	1,870.82	158.31	1,877.50	1,870.18	7.33	256.229		
1,000.00	1,000.00	1,001.00	1,000.00	3.87	3.87	4.837	1,870.82	158.31	1,877.50	1,869.76	7.75	242.390		
1,100.00	1,100.00	1,101.00	1,100.00	4.07	4.07	4.837	1,870.82	158.31	1,877.50	1,869.36	8.15	230.484		
1,200.00	1,200.00	1,201.00	1,200.00	4.26	4.27	4.837	1,870.82	158.31	1,877.50	1,868.97	8.53	220.096		
1,300.00	1,300.00	1,301.90	1,300.90	4.45	4.45	4.837	1,870.82	158.31	1,877.50	1,868.60	8.90	210.872		
1,400.00	1,399.98	1,491.13	1,489.99	4.73	4.96	59.109	1,866.61	153.52	1,874.18	1,864.67	9.51	197.094		
1,500.00	1,499.84	1,678.78	1,676.68	5.02	5.50	59.139	1,854.32	139.52	1,864.34	1,854.23	10.11	184.468		
1,600.00	1,599.45	1,863.35	1,858.72	5.32	6.10	59.194	1,834.39	116.82	1,848.10	1,837.36	10.74	172.083		
1,700.00	1,698.70	1,977.88	1,970.80	5.63	6.45	59.415	1,818.84	99.10	1,827.04	1,815.81	11.23	162.739		
1,800.00	1,797.47	2,075.22	2,066.02	5.97	6.74	59.787	1,805.50	83.89	1,804.16	1,792.47	11.69	154.272		
1,900.00	1,895.62	2,172.12	2,160.80	6.32	7.04	60.293	1,792.21	68.76	1,779.58	1,767.39	12.19	145.995		
1,900.13	1,895.75	2,172.25	2,160.92	6.32	7.04	60.294	1,792.19	68.74	1,779.55	1,767.36	12.19	145.985		
2,000.00	1,993.44	2,268.77	2,255.34	6.61	7.36	60.414	1,778.96	53.66	1,754.16	1,741.47	12.69	138.249		
2,100.00	2,091.25	2,365.42	2,349.88	6.92	7.70	60.537	1,765.71	38.56	1,728.75	1,715.54	13.21	130.873		
2,200.00	2,189.06	2,462.07	2,444.42	7.25	8.04	60.663	1,752.45	23.47	1,703.34	1,689.59	13.75	123.867		
2,300.00	2,286.88	2,558.72	2,538.96	7.60	8.40	60.794	1,739.20	8.37	1,677.95	1,663.63	14.31	117.239		
2,400.00	2,384.69	2,655.37	2,633.50	7.96	8.77	60.929	1,725.95	-6.73	1,652.56	1,637.67	14.89	110.989		
2,500.00	2,482.51	2,752.02	2,728.04	8.33	9.14	61.067	1,712.70	-21.82	1,627.18	1,611.70	15.48	105.105		
2,600.00	2,580.32	2,848.67	2,822.58	8.71	9.53	61.211	1,699.45	-36.92	1,601.81	1,585.72	16.09	99.574		
2,700.00	2,678.13	2,945.32	2,917.11	9.10	9.92	61.358	1,686.20	-52.02	1,576.45	1,559.74	16.70	94.378		
2,781.91	2,758.25	3,024.48	2,994.55	9.41	10.24	61.483	1,675.34	-64.38	1,555.68	1,538.48	17.20	90.450		
2,800.00	2,775.96	3,041.98	3,011.66	9.47	10.31	61.426	1,672.94	-67.11	1,551.12	1,533.82	17.30	89.659		
2,900.00	2,874.23	3,138.97	3,106.54	9.91	10.71	61.065	1,659.65	-82.27	1,526.88	1,508.94	17.94	85.123		
3,000.00	2,074.23	3,136.97	3,201.81	10.34	10.71	60.619	1,659.65	-02.27 -97.48	1,526.66	1,508.94	17.94	81.046		
3,100.00		3,334.07	3,201.31				1,632.90		1,483.37					
3,200.00	3,072.42 3,172.09	3,431.93	3,393.10	10.76 11.15	11.53 11.95	60.086 59.462	1,619.48	-112.74 -128.03	1,464.18	1,464.20 1,444.42	19.17 19.76	77.387 74.112		
3,300.00	3,172.09	3,529.86	3,488.89	11.13	12.37	58.746	1,606.05	-128.03	1,446.79	1,444.42	20.32	71.199		
3,382.04	3,354.00	3,610.15	3,567.42	11.64	12.72	3.828	1,595.04	-155.86	1,433.92	1,413.19	20.74	69.152		
3,400.00	3,371.96	3,627.72	3,584.61	11.65	12.80	3.723	1,592.63	-158.61	1,431.25	1,410.45	20.81	68.791		
3,500.00	3,471.96	3,725.53	3,680.29	11.72	13.22	3.135	1,579.22	-173.89	1,416.47	1,395.21	21.26	66.616		
3,600.00 3,700.00	3,571.96 3,671.96	3,823.35 3,900.00	3,775.97 3,851.11	11.80 11.88	13.64 13.97	2.535 2.081	1,565.81 1,555.84	-189.17 -200.53	1,401.84 1,388.10	1,380.13 1,366.01	21.71 22.09	64.577 62.845		
3,800.00	3,771.96	3,972.46	3,922.49	11.95	14.30	1.702	1,547.63	-209.89	1,376.23	1,353.77	22.46	61.266		
3,900.00	3,871.96	4,046.99	3,996.22	12.03	14.63	1.366	1,540.42	-218.09	1,366.21	1,343.39	22.82	59.860		
4,000.00	3,971.96	4,122.06	4,070.74	12.11	14.95	1.084	1,534.45	-224.90	1,358.03	1,334.87	23.16	58.628		
4,100.00	4,071.96	4,200.00	4,148.33	12.19	15.28	0.854	1,529.61	-230.41	1,351.67	1,328.18	23.49	57.545		
4,200.00	4,171.96	4,273.37	4,221.53	12.26	15.55	0.697	1,526.33	-234.14	1,347.09	1,323.32	23.77	56.674		
4,300.00	4,271.96	4,349.41	4,297.50	12.34	15.81	0.596	1,524.24	-236.53	1,344.30	1,320.27	24.03	55.950		
4,400.00	4,371.96	4,425.56	4,373.64	12.42	15.99	0.560	1,523.48	-237.39	1,343.29	1,319.06	24.23	55.437		
4,435.86	4,407.82	4,459.74	4,407.82	12.45	16.01	0.560	1,523.48	-237.40	1,343.28	1,319.01	24.28	55.335		
4,500.00	4,471.96	4,523.88	4,471.96	12.50	16.03	0.560	1,523.48	-237.40	1,343.28	1,318.92	24.36	55.143		
4,600.00	4,571.96	4,623.88	4,571.96	12.57	16.07	0.560	1,523.48	-237.40	1,343.28	1,318.78	24.51	54.817		
4,700.00	4,671.96	4,723.88	4,671.96	12.65	16.11	0.560	1,523.48	-237.40	1,343.28	1,318.63	24.65	54.493		
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7/22/2022 1:25:12PM

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Anticollision Report

0.00 usft

	Marathon Oil Corporation.
ice:	Well Decimus 5 WXY Fed Com 2H
	RKB @ 3067.60usft (Cactus 169)
	RKB @ 3067.60usft (Cactus 169)

Offset Site Error:

Marathon Oil Permian LLC Company: Project: Eddy County, NM (NAD27-NME) Decimus 5 WXY Fed Com Reference Site: 0.00 usft Site Error: Reference Well: Decimus 5 WXY Fed Com 2H Well Error: 1.00 usft **Reference Wellbore** OH Plan 1 07-22-22 Reference Design:

Local Co-ordinate Reference TVD Reference: MD Reference: North Reference: Survey Calculation Method: Output errors are at Database: Offset TVD Reference:

RKB @ 3067.60usft (Cactus 169) RKB @ 3067.60usft (Cactus 169) Grid Minimum Curvature 2.00 sigma USA Compass Reference Datum

Offset Design: Maximus 5 WXY Fed Com - Maximus 5 WXY Fed Com 1H - OH - Plan 1 07-22-22

Survey Prog	ram: C erence	-MWD+HRGM Off	ent	Som: B	lajor Axis		Offset Wellb	oro Contro	Die	Rule Assi tance	gned:		Offset Well Error:	1.00
Measured	Vertical	Measured	Vertical	Reference	Offset	Highside			Between	Between	Minimum	Separation	Warning	
Depth	Depth	Depth	Depth	((6)	Toolface	+N/-S (usft)	+E/-W (usft)	Centres	Ellipses	Separation	Factor		
(usft)	(usft)	(usft)	(usft)	(usft)	(usft)	(°)			(usft)	(usft)	(usft)	54.474		
4,800.00 4,900.00	4,771.96 4,871.96	4,823.88 4,923.88	4,771.96 4,871.96	12.73 12.81	16.16 16.20	0.560 0.560	1,523.48 1,523.48	-237.40 -237.40	1,343.28 1,343.28	1,318.49 1,318.34	24.80 24.94	54.174 53.858		
5,000.00	4,871.90	4,923.88 5,023.88	4,971.90	12.81	16.25	0.560	1,523.48	-237.40	1,343.28	1,318.20	24.94	53.545		
5,100.00	5,071.96	5,123.88	5,071.96	12.00	16.29	0.560	1,523.48	-237.40	1,343.28	1,318.05	25.23	53.236		
5,200.00	5,171.96	5,223.88	5,171.96	13.04	16.34	0.560	1,523.48	-237.40	1,343.28	1,317.91	25.38	52.929		
5,300.00	5,271.96	5,323.88	5,271.96	13.12	16.38	0.560	1,523.48	-237.40	1,343.28	1,317.76	25.52	52.627		
-,	-,	-,	-,				.,		.,	.,				
5,400.00	5,371.96	5,423.88	5,371.96	13.19	16.43	0.560	1,523.48	-237.40	1,343.28	1,317.61	25.67	52.327		
5,500.00	5,471.96	5,523.88	5,471.96	13.27	16.47	0.560	1,523.48	-237.40	1,343.28	1,317.47	25.82	52.031		
5,600.00	5,571.96	5,623.88	5,571.96	13.35	16.52	0.560	1,523.48	-237.40	1,343.28	1,317.32	25.96	51.737		
5,700.00	5,671.96	5,723.88	5,671.96	13.43	16.57	0.560	1,523.48	-237.40	1,343.28	1,317.17	26.11	51.447		
5,800.00	5,771.96	5,823.88	5,771.96	13.51	16.61	0.560	1,523.48	-237.40	1,343.28	1,317.03	26.26	51.160		
5,900.00	5,871.96	5,923.88	5,871.96	13.58	16.66	0.560	1,523.48	-237.40	1,343.28	1,316.88	26.40	50.875		
6,000.00	5,971.90	6,023.88	5,971.96	13.66	16.71	0.560	1,523.48	-237.40	1,343.28	1,316.73	26.55	50.594		
6,100.00	6,071.96	6,123.88	6,071.96	13.00	16.75	0.560	1,523.48	-237.40	1,343.28	1,316.59	26.70	50.394		
6,200.00	6,171.96	6,223.88	6,171.96	13.82	16.80	0.560	1,523.48	-237.40	1,343.28	1,316.44	26.84	50.040		
6,300.00	6,271.96	6,323.88	6,271.96	13.90	16.85	0.560	1,523.48	-237.40	1,343.28	1,316.29	26.99	49.767		
-,	-,	-,	-,				.,		.,	.,				
6,400.00	6,371.96	6,423.88	6,371.96	13.98	16.90	0.560	1,523.48	-237.40	1,343.28	1,316.15	27.14	49.497		
6,500.00	6,471.96	6,523.88	6,471.96	14.05	16.95	0.560	1,523.48	-237.40	1,343.28	1,316.00	27.29	49.229		
6,600.00	6,571.96	6,623.88	6,571.96	14.13	17.00	0.560	1,523.48	-237.40	1,343.28	1,315.85	27.43	48.964		
6,700.00	6,671.96	6,723.88	6,671.96	14.21	17.05	0.560	1,523.48	-237.40	1,343.28	1,315.70	27.58	48.702		
6,800.00	6,771.96	6,823.88	6,771.96	14.29	17.09	0.560	1,523.48	-237.40	1,343.28	1,315.55	27.73	48.443		
6 000 00	6 974 06	6 000 00	6 971 06	14.97	17 14	0.560	1 500 40	007 40	1 2 4 2 2 0	1 015 11	07.00	49.195		
6,900.00 7,000.00	6,871.96 6,971.96	6,923.88 7,023.88	6,871.96 6,971.96	14.37 14.45	17.14 17.19	0.560 0.560	1,523.48 1,523.48	-237.40 -237.40	1,343.28 1,343.28	1,315.41 1,315.26	27.88 28.03	48.185 47.931		
7,100.00	7,071.96	7,023.88	7,071.96	14.45	17.19	0.560	1,523.48	-237.40	1,343.28	1,315.20	28.03	47.679		
7,200.00	7,171.96	7,223.88	7,171.96	14.60	17.24	0.560	1,523.48	-237.40	1,343.28	1,314.96	28.32	47.429		
7,300.00	7,271.96	7,323.88	7,271.96	14.68	17.34	0.560	1,523.48	-237.40	1,343.28	1,314.81	28.47	47.182		
1,000.00	7,271.00	1,020.00	7,271.00	14.00	17.04	0.000	1,020.40	201.40	1,040.20	1,014.01	20.41	47.102		
7,400.00	7,371.96	7,423.88	7,371.96	14.76	17.40	0.560	1,523.48	-237.40	1,343.28	1,314.67	28.62	46.937		
7,500.00	7,471.96	7,523.88	7,471.96	14.84	17.45	0.560	1,523.48	-237.40	1,343.28	1,314.52	28.77	46.695		
7,600.00	7,571.96	7,623.88	7,571.96	14.92	17.50	0.560	1,523.48	-237.40	1,343.28	1,314.37	28.92	46.455		
7,700.00	7,671.96	7,723.88	7,671.96	15.00	17.55	0.560	1,523.48	-237.40	1,343.28	1,314.22	29.06	46.217		
7,800.00	7,771.96	7,823.88	7,771.96	15.08	17.60	0.560	1,523.48	-237.40	1,343.28	1,314.07	29.21	45.981		
7 000 00	7 974 06	7 000 00	7 971 06	15 15	17.65	0.560	1 500 40	227.40	1 2 4 2 2 0	1 212 02	20.26	45 749		
7,900.00 8,000.00	7,871.96 7,971.96	7,923.88 8,023.88	7,871.96 7,971.96	15.15 15.23	17.65 17.71	0.560 0.560	1,523.48 1,523.48	-237.40 -237.40	1,343.28 1,343.28	1,313.92 1,313.77	29.36 29.51	45.748 45.517		
8,100.00	8,071.96	8,123.88	8,071.96	15.23	17.76	0.560	1,523.48	-237.40	1,343.28	1,313.62	29.66	45.288		
8,200.00	8,171.96	8,223.88	8,171.96	15.39	17.81	0.560	1,523.48	-237.40	1,343.28	1,313.47	29.81	45.061		
8,300.00	8,271.96	8,323.88	8,271.96	15.47	17.86	0.560	1,523.48	-237.40	1,343.28	1,313.32	29.96	44.836		
0,000.00	0,27 1.00	0,020.00	0,271.00	10.11		0.000	1,020110	201110	1,010.20	1,010.02	20.00	11.000		
8,400.00	8,371.96	8,423.88	8,371.96	15.55	17.92	0.560	1,523.48	-237.40	1,343.28	1,313.17	30.11	44.613		
8,500.00	8,471.96	8,523.88	8,471.96	15.63	17.97	0.560	1,523.48	-237.40	1,343.28	1,313.03	30.26	44.392		
8,600.00	8,571.96	8,623.88	8,571.96	15.71	18.02	0.560	1,523.48	-237.40	1,343.28	1,312.88	30.41	44.174		
8,700.00	8,671.96	8,723.88	8,671.96	15.79	18.08	0.560	1,523.48	-237.40	1,343.28	1,312.73	30.56	43.957		
8,711.09	8,683.06	8,734.98	8,683.06	15.79	18.08	0.560	1,523.48	-237.40	1,343.28	1,312.71	30.57	43.935 CC		
0 702 22	8,755.19	9 906 94	0 754 00	15.04	10.10	0.560	1 500 40	007.05	1 2 4 2 20	1 212 62	20.67	42 709		
8,783.22		8,806.81	8,754.89	15.84	18.12	0.562	1,523.48	-237.35	1,343.29	1,312.62	30.67	43.798		
8,800.00 8,850.00	8,771.96 8,821.81	8,822.92 8,870.92	8,771.00 8,818.81	15.84 15.81	18.11 18.08	-89.383 -89.360	1,523.48 1,523.51	-236.92 -232.96	1,343.29 1,343.32	1,312.62 1,312.65	30.67 30.67	43.792 43.797		
8,900.00	8,871.16	8,918.88	8,866.10	15.77	18.00	-89.341	1,523.57	-232.90	1,343.32	1,312.03	30.65	43.831		
8,950.00	8,919.62	8,966.83	8,912.54	15.73	17.91	-89.327	1,523.66	-223.01	1,343.47	1,312.86	30.62	43.882		
2,000.00	5,510.02	0,000.00	0,012.04	10.70		55.0E1	.,520.00	2.0.10	.,010.11	.,0.2.00	30.02	10.002		
9,000.00	8,966.83	9,014.77	8,957.82	15.68	17.81	-89.318	1,523.78	-197.44	1,343.58	1,313.01	30.58	43.941		
9,050.00	9,012.43	9,062.72	9,001.64	15.63	17.72	-89.313	1,523.93	-178.00	1,343.72	1,313.18	30.54	43.995		
9,100.00	9,056.07	9,110.70	9,043.71	15.59	17.63	-89.314	1,524.11	-154.96	1,343.88	1,313.36	30.52	44.030		
9,150.00	9,097.42	9,158.72	9,083.73	15.56	17.55	-89.319	1,524.31	-128.45	1,344.06	1,313.53	30.53	44.026		
9,200.00	9,136.17	9,206.78	9,121.42	15.55	17.48	-89.330	1,524.54	-98.65	1,344.26	1,313.68	30.58	43.959		
0.055.55	0.475.67	0.0	0.455 - 1					<u></u>			<u> </u>	10.55		
9,250.00	9,172.02	9,254.91	9,156.54	15.56	17.43	-89.345	1,524.79	-65.76	1,344.49	1,313.79	30.69	43.804		

Anticollision Report

0.00 usft

Marathon Oil	
Corporation.	

Offset Site Error:

Company:	Marathon Oil Permian LLC	Local Co-ordinate Reference:	Well Decimus 5 WXY Fed Com 2H
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 2H	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 5 WXY Fed Com - Maximus 5 WXY Fed Com 1H - OH - Plan 1 07-22-22

Survey Prog		MWD+HRGM		0	leien fuir		04	Contra		Rule Assi	gned:		Offset Well Error:	1.00 usft
Refe Measured Depth	erence Vertical Depth	Off Measured Depth	set Vertical Depth	Semi M Reference	laior Axis Offset	Highside Toolface	Offset Wellbo	ore Centre +E/-W	Dis Between Centres	tance Between Ellipses	Minimum Separation	Separation Factor	Warning	
(usft)	(usft)	(usft)	(usft)	(usft)	(usft)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)	Factor		
9,300.00	9,204.69	9,303.12	9,188.82	15.60	17.41	-89.365	1,525.06	-29.97	1,344.73	1,313.84	30.89	43.536		
9,350.00	9,233.95	9,351.42	9,218.02	15.68	17.42	-89.390	1,525.36	8.47	1,344.99	1,313.81	31.18	43.133		
9,400.00	9,259.56	9,400.00	9,244.04	15.83	17.47	-89.419	1,525.67	49.49	1,345.26	1,313.67	31.60	42.577		
9,450.00	9,281.33	9,448.33	9,266.37	16.06	17.58	-89.452	1,526.00	92.33	1,345.55	1,313.41	32.14	41.863		
9,500.00	9,299.10	9,496.97	9,285.13	16.37	17.75	-89.490	1,526.34	137.19	1,345.85	1,313.03	32.83	40.999		
9,550.00	9,312.73	9,545.74	9,300.05	16.78	18.00	-89.531	1,526.70	183.60	1,346.16	1,312.51	33.65	40.002		
9,600.00	9,322.11	9,594.66	9,310.99	17.27	18.32	-89.576	1,527.06	231.27	1,346.48	1,311.87	34.61	38.901		
9,650.00	9,327.18	9,643.74	9,317.85	17.83	18.71	-89.624	1,527.43	279.85	1,346.81	1,311.11	35.70	37.729		
9,673.22	9,328.06	9,666.58	9,319.61	18.11	18.92	-89.647	1,527.61	302.62	1,346.96	1,310.72	36.24	37.170		
9,700.00	9,328.52	9,693.03	9,320.53	18.45	19.18	-89.667	1,527.81	329.05	1,347.14	1,310.26	36.88	36.525		
9,800.00	9,330.27	9,793.03	9,322.28	19.86	20.32	-89.667	1,528.57	429.03	1,347.83	1,308.23	39.60	34.037		
0 000 00	0 222 04	0 902 02	0 224 02	01.40	21.66	80.667	1 500 34	E20.01	1 240 51	1 205 97	10.64	21 629		
9,900.00	9,332.01	9,893.02	9,324.02	21.43	21.66	-89.667	1,529.34	529.01	1,348.51	1,305.87	42.64	31.628		
10,000.00	9,333.76	9,993.02	9,325.77	23.13	23.17	-89.667	1,530.10	628.99	1,349.19	1,303.26	45.94	29.371		
10,100.00	9,335.50	10,093.02	9,327.51	24.93	24.82	-89.668	1,530.87	728.97	1,349.88	1,300.43	49.45	27.299		
10,200.00 10,300.00	9,337.25 9,339.00	10,193.02 10,293.01	9,329.26 9,331.01	26.81 28.75	26.57 28.40	-89.668 -89.668	1,531.63 1,532.40	828.95 928.93	1,350.56 1,351.25	1,297.44 1,294.31	53.13 56.94	25.422 23.730		
10,300.00	9,009.00	10,293.01	9,001.01	20.15	∠0.40	-03.000	1,332.40	320.33	1,331.23	1,234.31	30.94	23.130		
10,400.00	9,340.74	10,393.01	9,332.75	30.74	30.31	-89.668	1,533.16	1,028.91	1,351.93	1,291.06	60.87	22.211		
10,500.00	9,342.49	10,493.01	9,334.50	32.78	32.26	-89.668	1,533.93	1,128.88	1,352.62	1,287.73	64.88	20.847		
10,600.00	9,344.23	10,593.01	9,336.24	34.85	34.27	-89.668	1,534.69	1,228.86	1,353.30	1,284.33	68.98	19.620		
10,700.00	9,345.98	10,693.00	9,337.99	36.94	36.31	-89.669	1,535.46	1,328.84	1,353.99	1,280.86	73.13	18.515		
10,800.00	9,347.72	10,793.00	9,339.73	39.07	38.38	-89.669	1,536.22	1,428.82	1,354.67	1,277.34	77.33	17.517		
10,900.00	9,349.47	10,893.00	9,341.48	41.21	40.48	-89.669	1,536.99	1,528.80	1,355.35	1,273.77	81.58	16.613		
11,000.00	9,351.21	10,993.00	9,343.22	43.36	42.60	-89.669	1,537.75	1,628.78	1,356.04	1,270.17	85.87	15.792		
11,100.00	9,352.96	11,093.00	9,344.97	45.54	44.73	-89.669	1,538.52	1,728.76	1,356.72	1,266.53	90.19	15.043		
11,200.00	9,354.70	11,192.99	9,346.71	47.72	46.89	-89.669	1,539.28	1,828.74	1,357.41	1,262.87	94.54	14.359		
11,300.00	9,356.45	11,292.99	9,348.46	49.92	49.06	-89.670	1,540.05	1,928.72	1,358.09	1,259.19	98.91	13.731		
44,400,00	0.050.40	44 000 00	0.050.00	50.40	54.04	00.070	4 5 4 0 0 4	0.000.70	4 050 70	4 055 40	400.00	40.454		
11,400.00	9,358.19	11,392.99	9,350.20	52.13	51.24	-89.670	1,540.81	2,028.70	1,358.78	1,255.48	103.30	13.154		
11,500.00	9,359.94	11,492.99	9,351.95	54.34	53.43	-89.670	1,541.58	2,128.68	1,359.46	1,251.75	107.71	12.622		
11,600.00	9,361.68	11,592.98	9,353.69	56.56	55.63	-89.670	1,542.34	2,228.66	1,360.14	1,248.01	112.13	12.130		
11,700.00	9,363.43	11,692.98 11,792.98	9,355.44	58.79	57.84	-89.670	1,543.11	2,328.64	1,360.83	1,244.25	116.58	11.673		
11,800.00	9,365.17	11,792.90	9,357.18	61.02	60.06	-89.671	1,543.87	2,428.62	1,361.51	1,240.48	121.03	11.249		
11,900.00	9,366.92	11,892.98	9,358.93	63.26	62.28	-89.671	1,544.63	2,528.60	1,362.20	1,236.70	125.50	10.855		
12,000.00	9,368.66	11,992.97	9,360.67	65.51	64.51	-89.671	1,545.40	2,628.58	1,362.88	1,232.91	129.97	10.486		
12,100.00	9,370.41	12,092.97	9,362.42	67.76	66.74	-89.671	1,546.16	2,728.56	1,363.57	1,229.11	134.46	10.141		
12,200.00	9,372.15	12,192.97	9,364.16	70.01	68.98	-89.671	1,546.93	2,828.54	1,364.25	1,225.30	138.95	9.818		
12,300.00	9,373.90	12,292.97	9,365.91	72.26	71.23	-89.671	1,547.69	2,928.52	1,364.94	1,221.49	143.45	9.515		
12,400.00	9,375.65	12,392.96	9,367.65	74.52	73.47	-89.672	1,548.46	3,028.50	1,365.62	1,217.66	147.96	9.230		
12,500.00	9,377.39	12,492.96	9,369.40	76.78	75.72	-89.672	1,549.22	3,128.47	1,366.30	1,213.83	152.47	8.961		
12,600.00	9,379.14	12,592.96	9,371.14	79.05	77.98	-89.672	1,549.99	3,228.45	1,366.99	1,210.00	156.99	8.707		
12,700.00	9,380.88	12,692.96	9,372.89	81.31	80.24	-89.672	1,550.75	3,328.43	1,367.67	1,206.16	161.52	8.468		
12,800.00	9,382.63	12,792.96	9,374.64	83.58	82.50	-89.672	1,551.52	3,428.41	1,368.36	1,202.31	166.05	8.241		
12 000 00	0 204 27	10 000 05	0.276.26	85.85	84.76	00 670	1 550 00	2 520 20	1 200 04	1 109 46	170 50	8.026		
12,900.00	9,384.37	12,892.95	9,376.38			-89.672	1,552.28	3,528.39	1,369.04	1,198.46	170.58			
13,000.00	9,386.12 9,387.86	12,992.95	9,378.13	88.13	87.02	-89.672	1,553.05	3,628.37	1,369.73 1,370.41	1,194.61	175.12	7.822		
13,100.00 13,200.00		13,092.95 13,192.95	9,379.87 9,381.62	90.40 92.68	89.29 91.56	-89.673 -89.673	1,553.81 1,554.58	3,728.35 3,828.33	1,370.41 1,371.10	1,190.75 1,186.89	179.66 184.21	7.628 7.443		
	9,389.61 9 391 35	13,192.95		92.68 94.95	91.56	-89.673 -89.673	1,554.58		1,371.10		184.21	7.443		
13,300.00	9,391.35	13,292.94	9,383.36	94.95	33.03	-03.013	1,000.04	3,928.31	1,3/1./0	1,183.03	100.70	1.200		
13,400.00	9,393.10	13,392.94	9,385.11	97.23	96.10	-89.673	1,556.11	4,028.29	1,372.46	1,179.16	193.31	7.100		
13,500.00	9,394.84	13,492.94	9,386.85	99.51	98.37	-89.673	1,556.87	4,128.27	1,373.15	1,175.29	197.86	6.940		
13,600.00	9,396.59	13,592.94	9,388.60	101.80	100.65	-89.673	1,557.64	4,228.25	1,373.83	1,171.41	202.42	6.787		
13,700.00	9,398.33	13,692.93	9,390.34	104.08	102.93	-89.674	1,558.40	4,328.23	1,374.52	1,167.54	206.98	6.641		
13,800.00	9,400.08	13,792.93	9,392.09	106.36	105.20	-89.674	1,559.17	4,428.21	1,375.20	1,163.66	211.54	6.501		
13,900.00	9,401.82	13,892.93	9,393.83	108.65	107.48	-89.674	1,559.93	4,528.19	1,375.89	1,159.78	216.10	6.367		
			CC - Min	centre to co	nter dieta		rgent point, SF	- min sena	ration facto	r ES - mi	n ellinse so	naration		
2/00/0000	4.05.4051		00 - Will I		nier uista		•			n, ∟o - mi	n embse se			
7/22/2022	1.25.12PN	7					Page 1	4				C	OMPASS 5000 15	Ruild 934

Anticollision Report



Offset Site Error: 0.00 usft

	Company:	Marathon Oil Permian LLC	Local Co-ordinate Reference:	Well Decimus 5 WXY Fed Com 2H
I	Project:	Eddy County, NM (NAD27-NME)	TVD Reference:	RKB @ 3067.60usft (Cactus 169)
I	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 2H	Survey Calculation Method:	Minimum Curvature
1	Well Error:	1.00 usft	Output errors are at	2.00 sigma
	Reference Wellbore	ОН	Database:	USA Compass
	Reference Design:	Plan 1 07-22-22	Offset TVD Reference:	Reference Datum

Offset Design: Maximus 5 WXY Fed Com - Maximus 5 WXY Fed Com 1H - OH - Plan 1 07-22-22

Irvey Prog		/WD+HRGM		0	alor Arris		046-111	ana Cantar		Rule Assi	gned:		Offset Well Error:	1.00 u
Refe Measured	rence Vertical	Off Measured	set Vertical	Semi N Reference	lajor Axis Offset	Highside	Offset Wellb	ore Centre	Dist Between	tance Between	Minimum	Separation	Warning	
Depth	Depth	Depth	Depth			Toolface	+N/-S	+E/-W	Centres	Ellipses	Separation	Factor		
(usft)	(usft)	(usft)	(usft)	(usft)	(usft)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)			
4,000.00	9,403.57	13,992.93	9,395.58	110.93	109.76	-89.674	1,560.70	4,628.17	1,376.57	1,155.90	220.67	6.238		
4,100.00	9,405.31	14,092.92	9,397.32	113.22	112.04	-89.674	1,561.46	4,728.15	1,377.25	1,152.02	225.24	6.115		
4,200.00	9,407.06	14,192.92	9,399.07	115.50	114.33	-89.674	1,562.22	4,828.13	1,377.94	1,148.13	229.81	5.996		
4,300.00	9,408.80	14,292.92	9,400.81	117.79	116.61	-89.675	1,562.99	4,928.11	1,378.62	1,144.24	234.38	5.882		
4,400.00	9,410.55	14,392.92	9,402.56	120.08	118.89	-89.675	1,563.75	5,028.09	1,379.31	1,140.36	238.95	5.772		
4,500.00	9,412.30	14,492.92	9,404.30	122.37	121.18	-89.675	1,564.52	5,128.06	1,379.99	1,136.47	243.53	5.667		
4,600.00	9,414.04	14,592.91	9,406.05	124.66	123.46	-89.675	1,565.28	5,228.04	1,380.68	1,132.57	248.10	5.565		
14,700.00	9,415.79	14,692.91	9,407.79	126.95	125.75	-89.675	1,566.05	5,328.02	1,381.36	1,128.68	252.68	5.467		
4,800.00	9,417.53	14,792.91	9,409.54	129.24	128.04	-89.675	1,566.81	5,428.00	1,382.05	1,124.79	257.26	5.372		
4,900.00	9,419.28	14,892.91	9,411.28	131.53	130.33	-89.676	1,567.58	5,527.98	1,382.73	1,120.89	261.84	5.281		
5,000.00	9,421.02	14,992.90	9,413.03	133.83	132.61	-89.676	1,568.34	5,627.96	1,383.41	1,117.00	266.42	5.193		
15,100.00	9,422.77	15,092.90	9,414.77	136.12	134.90	-89.676	1,569.11	5,727.94	1,384.10	1,113.10	271.00	5.107		
5,200.00	9,424.51	15,192.90	9,416.52	138.41	137.19	-89.676	1,569.87	5,827.92	1,384.78	1,109.20	275.58	5.025		
5,300.00	9,426.26	15,292.90	9,418.27	140.71	139.48	-89.676	1,570.64	5,927.90	1,385.47	1,105.30	280.17	4.945		
5,400.00	9,428.00	15,392.89	9,420.01	143.00	141.77	-89.676	1,571.40	6,027.88	1,386.15	1,101.40	284.75	4.868		
5,500.00	9,429.75	15,492.89	9,421.76	145.29	144.06	-89.677	1,572.17	6,127.86	1,386.84	1,097.50	289.34	4.793		
E 000 00	0.404.46	45 500 00	0.400.50	4 17 50	140.00	00 077	4 570 00	0.007.04	4 007 55	4 000 00	000.00	1 701		
5,600.00	9,431.49	15,592.89	9,423.50	147.59	146.36	-89.677	1,572.93	6,227.84	1,387.52	1,093.60	293.92	4.721		
5,700.00	9,433.24	15,692.89	9,425.25	149.88	148.65	-89.677	1,573.70	6,327.82	1,388.21	1,089.69	298.51	4.650		
5,800.00	9,434.98	15,792.89	9,426.99	152.18	150.94	-89.677	1,574.46	6,427.80	1,388.89	1,085.79	303.10	4.582		
15,900.00	9,436.73	15,892.88	9,428.74	154.47	153.23	-89.677	1,575.23	6,527.78	1,389.57	1,081.89	307.69	4.516		
16,000.00	9,438.47	15,992.88	9,430.48	156.77	155.53	-89.677	1,575.99	6,627.76	1,390.26	1,077.98	312.28	4.452		
6 100 00	0 440 22	16 000 88	0 400 00	150.07	157.00	90.679	1 570 70	6 707 74	1 200 04	1 074 07	216.97	4 200		
16,100.00 16,200.00	9,440.22	16,092.88	9,432.23 9,433.97	159.07	157.82	-89.678	1,576.76 1,577.52	6,727.74	1,390.94	1,074.07	316.87	4.390		
	9,441.96	16,192.88		161.36	160.11	-89.678		6,827.72	1,391.63	1,070.17	321.46	4.329		
6,300.00	9,443.71	16,292.87	9,435.72	163.66	162.41	-89.678	1,578.29	6,927.70	1,392.31	1,066.26	326.05	4.270		
16,400.00	9,445.46	16,392.87	9,437.46	165.96	164.70	-89.678	1,579.05	7,027.68	1,393.00	1,062.35	330.64	4.213		
16,500.00	9,447.20	16,492.87	9,439.21	168.26	167.00	-89.678	1,579.81	7,127.65	1,393.68	1,058.44	335.24	4.157		
16,600.00	9,448.95	16,592.87	9,440.95	170.55	169.29	-89.678	1,580.58	7,227.63	1,394.36	1,054.54	339.83	4.103		
16,700.00	9,448.95 9,450.69	16,692.86		170.35	171.59			7,327.61	1,394.30		344.42	4.103		
			9,442.70			-89.679	1,581.34			1,050.63				
16,800.00	9,452.44	16,792.86	9,444.44	175.15	173.88	-89.679	1,582.11	7,427.59 7,527.57	1,395.73	1,046.72	349.02 353.61	3.999		
16,900.00	9,454.18	16,892.86	9,446.19	177.45	176.18	-89.679	1,582.87		1,396.42	1,042.81		3.949		
17,000.00	9,455.93	16,992.86	9,447.93	179.75	178.48	-89.679	1,583.64	7,627.55	1,397.10	1,038.90	358.21	3.900		
17,100.00	9,457.67	17,092.85	9,449.68	182.05	180.77	-89.679	1,584.40	7,727.53	1,397.79	1,034.99	362.80	3.853		
17,200.00	9,459.42	17,192.85	9,451.42	184.35	183.07	-89.679	1,585.17	7,827.51	1,398.47	1,031.07	367.40	3.806		
17,300.00	9,461.16	17,292.85	9,453.17	186.65	185.37	-89.679	1,585.93	7,927.49	1,399.16	1,027.16	371.99	3.761		
7,400.00	9,462.91	17,392.85	9,454.91	188.94	187.66	-89.680	1,586.70	8,027.47	1,399.84	1,023.25	376.59	3.717		
7,500.00	9,464.65	17,492.85	9,456.66	191.24	189.96	-89.680	1,587.46	8,127.45	1,400.52	1,023.23	381.19	3.674		
7,500.00	9,404.00	17,492.00	9,400.00	191.24	109.90	-09.000	1,567.40	0,127.45	1,400.52	1,019.34	301.19	3.074		
7,600.00	9,466.40	17,592.84	9,458.40	193.54	192.26	-89.680	1,588.23	8,227.43	1,401.21	1,015.42	385.79	3.632		
17,700.00	9,468.14	17,692.84	9,460.15	195.84	194.55	-89.680	1,588.99	8,327.41	1,401.89	1,011.51	390.38	3.591		
7,800.00	9,469.89	17,792.84	9,461.90	198.14	196.85	-89.680	1,589.76	8,427.39	1,402.58	1,007.60	394.98	3.551		
17,900.00	9,471.63	17,892.84	9,463.64	200.44	199.15	-89.680	1,590.52	8,527.37	1,403.26	1,003.68	399.58	3.512		
18,000.00	9,473.38	17,992.83	9,465.39	200.44	201.45	-89.681	1,591.29	8,627.35	1,403.20	999.77	404.18	3.474		
	0,470.00	11,002.00	0,400.00	202.14	201.40	-00.001	1,001.20	0,021.00	1,-100.00	555.11	-04.10	0.474		
18,100.00	9,475.12	18,092.83	9,467.13	205.05	203.75	-89.681	1,592.05	8,727.33	1,404.63	995.85	408.78	3.436		
18,200.00	9,476.87	18,192.83	9,468.88	207.35	206.05	-89.681	1,592.82	8,827.31	1,405.32	991.94	413.38	3.400		
18,300.00	9,478.61	18,292.83	9,470.62	209.65	208.35	-89.681	1,593.58	8,927.29	1,406.00	988.02	417.98	3.364		
18,400.00	9,480.36	18,392.82	9,472.37	211.95	210.64	-89.681	1,594.35	9,027.27	1,406.68	984.11	422.58	3.329		
8,500.00	9,482.11	18,492.82	9,474.11	211.35	210.04	-89.681	1,595.11	9,127.25	1,407.37	980.19	427.18	3.295		
2,000.00	0,102.11	.0,.02.02	0,	217.20	2.2.04	00.001	.,555.11	0,.27.20	.,	000.10		0.200		
18,600.00	9,483.85	18,592.82	9,475.86	216.55	215.24	-89.682	1,595.88	9,227.22	1,408.05	976.28	431.78	3.261		
18,700.00	9,485.60	18,692.82	9,477.60	218.85	217.54	-89.682	1,596.64	9,327.20	1,408.74	972.36	436.38	3.228		
18,800.00	9,487.34	18,792.81	9,479.35	221.15	219.84	-89.682	1,597.40	9,427.18	1,409.42	968.44	440.98	3.196		
18,900.00	9,489.09	18,892.81	9,481.09	223.45	222.14	-89.682	1,598.17	9,527.16	1,410.11	964.53	445.58	3.165		
19,000.00	9,489.09 9,490.83	18,992.81	9,481.09	225.45	222.14	-89.682	1,598.93	9,627.10	1,410.79	960.61	445.58	3.134		
	0,400.00	10,002.01	0,702.04	220.10	224.99	-00.002	1,000.00	0,027.14	1,-10.73	550.01	-50.10	0.104		
		10 000 01	9,484.58	228.06	226.74	-89.682	1,599.70	9,727.12	1,411.47	956.69	454.78	3.104		
9,100.00	9,492.58	19,092.81												

Received by OCD: 8/24/2023 6:46:43 AM

PHOENIX TECHNOLOGY SERVICES

Anticollision Report



•			
Company:	Marathon Oil Permian LLC	Local Co-ordinate Reference:	Well Decimus 5 WXY Fed Com 2H
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 2H	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ОН	Database:	USA Compass
Reference Design:	Plan 1 07-22-22	Offset TVD Reference:	Reference Datum

Offset Des	sian: Ma	Aaximus 5 WXY Fed Com - Maximus 5 WXY Fed Com 1H - OH - Plan 1 07-22-22												
0	<u></u>												Offset Site Error:	0.00 usft
Survey Progr		-MWD+HRGM								Rule Assi	gned:		Offset Well Error:	1.00 usft
Refer	rence	Off	set	Semi M	lajor Axis		Offset Wellbo	ore Centre	Dist	ance				
Measured	Vertical	Measured	Vertical	Reference	Offset	Highside			Between	Between	Minimum	Separation	Warning	
Depth	Depth	Depth	Depth			Toolface	+N/-S	+E/-W	Centres	Ellipses	Separation	Factor		
(usft)	(usft)	(usft)	(usft)	(usft)	(usft)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)			
10 000 00									4 440 40	050 77	450.00	0.074		
19,200.00	9,494.32	19,192.81	9,486.33	230.36	229.04	-89.682	1,600.46	9,827.10	1,412.16	952.77	459.39	3.074		



Anticollision Report



Marathon Oil

Company:	Marathon Oil Permian LLC	Local Co-ordinate Reference:	Well Decimus 5 WXY Fed Com 2H
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 2H	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

Survey Prog		0-INC-ONLY,						_		Rule Assi	gned:		Offset Well Error:	1.00 ust
Refe Measured	erence Vertical	Off Measured	set Vertical	Semi M Reference	lajor Axis Offset	Highside	Offset Wellb	ore Centre	Dist Between	ance Between	Minimum	Separation	Warning	
Depth (usft)	Depth (usft)	Depth (usft)	Depth (usft)	(usft)	(usft)	Toolface (°)	+N/-S (usft)	+E/-W (usft)	Centres (usft)	Ellipses (usft)	Separation (usft)	Factor		
0.00	0.00	0.00	29.60	1.00	1.00	107.980	-956.09	2,946.09	3,097.49					
100.00	100.00	70.40	100.00	1.13	1.26	107.980	-956.09	2,946.09	3,097.35	3,094.96	2.39	1,294.349		
200.00	200.00	170.40	200.00	1.66	2.68	107.980	-956.09	2,946.09	3,097.35	3,093.01	4.34	713.694		
300.00	300.00	270.41	300.00	2.06	4.65	107.980	-956.09	2,946.09	3,097.35	3,090.64	6.71	461.545		
400.00	400.00	370.41	400.00	2.39	7.06	107.980	-956.09	2,946.09	3,097.35	3,087.90	9.45	327.727		
448.09	448.09	418.37	447.96	2.54	8.22	107.970	-955.57	2,946.09	3,097.19	3,086.44	10.75	288.006		
500.00	500.00	468.33	497.91	2.69	9.43	107.972	-955.62	2,946.09	3,097.21	3,085.09	12.12	255.531		
600.00	600.00	564.58	594.16	2.96	11.77	107.979	-956.02	2,946.09	3,097.34	3,082.61	14.73	210.280		
700.00	700.00	670.44	700.00	3.21	13.83	107.980	-956.09	2,946.09	3,097.35	3,080.31	17.04	181.721		
718.67	718.67	688.47	718.03	3.25	14.18	107.974	-955.76	2,946.09	3,097.25	3,079.82	17.43	177.691		
800.00	800.00	765.15	794.71	3.44	15.63	107.978	-955.99	2,946.09	3,097.33	3,078.25	19.08	162.355		
875.20	875.20	845.64	875.18	3.61	17.20	107.975	-955.81	2,946.09	3,097.26	3,076.46	20.81	148.856		
900.00	900.00	867.61	897.14	3.66	17.63	107.975	-955.84	2,946.09	3,097.28	3,075.98	21.29	145.474		
1,000.00	1,000.00	970.48	1,000.00	3.87	20.02	107.980	-956.09	2,946.09	3,097.35	3,073.45	23.90	129.613		
1,100.00	1,100.00	1,070.48	1,100.00	4.07	22.62	107.980	-956.09	2,946.09	3,097.35	3,070.66	26.69	116.046		
1,175.50	1,175.50	1,145.98	1,175.49	4.22	24.58	107.962	-955.06	2,946.09	3,097.03	3,068.24	28.79	107.557		
1,200.00	1,200.00	1,169.65	1,199.16	4.26	25.19	107.962	-955.07	2,946.09	3,097.04	3,067.58	29.46	105.143		
1,300.00	1,300.00	1,266.25	1,295.76	4.45	27.70	107.966	-955.33	2,946.09	3,097.12	3,064.97	32.15	96.341		
1,400.00	1,399.98	1,362.84	1,392.34	4.73	30.20	162.239	-955.93	2,946.09	3,098.97	3,064.04	34.93	88.723		
1,500.00	1,499.84	1,470.37	1,499.84	5.02	32.79	162.242	-956.09	2,946.09	3,104.00	3,066.21	37.79	82.137		
1,600.00	1,599.45	1,569.99	1,599.45	5.32	35.15	162.240	-956.09	2,946.09	3,112.30	3,071.87	40.43	76.974		
1,700.00	1,698.70	1,668.50	1,697.95	5.63	37.48	162.222	-955.26	2,946.09	3,123.66	3,080.59	43.07	72.533		
1,800.00	1,797.47	1,764.85	1,794.31	5.97	39.76	162.218	-955.45	2,946.09	3,138.63	3,092.97	45.66	68.734		
1,900.00	1,895.62	1,860.57	1,890.02	6.32	42.02	162.215	-955.88	2,946.09	3,156.97	3,108.70	48.27	65.408		
1,900.13	1,895.75	1,860.69	1,890.14	6.32	42.02	162.215	-955.88	2,946.09	3,156.99	3,108.72	48.27	65.404		
2,000.00	1,993.44	1,964.02	1,993.44	6.61	44.39	162.339	-956.09	2,946.09	3,176.88	3,125.96	50.92	62.390		
2,100.00	2,091.25	2,061.83	2,091.25	6.92	46.59	162.452	-956.09	2,946.09	3,196.74	3,143.31	53.42	59.837		
2,200.00	2,189.06	2,156.75	2,186.17	7.25	48.73	162.552	-955.60	2,946.09	3,216.46	3,160.58	55.88	57.560		
2,300.00	2,286.88	2,251.04	2,280.45	7.60	50.85	162.665	-956.03	2,946.09	3,236.48	3,178.14	58.34	55.479		
2,400.00	2,384.69	2,355.43	2,384.69	7.96	53.44	162.782	-956.09	2,946.09	3,256.39	3,195.11	61.28	53.142		
2,500.00	2,482.51	2,451.10	2,480.34	8.33	55.91	162.872	-955.19	2,946.09	3,276.01	3,211.90	64.11	51.104		
2,600.00	2,580.32	2,551.19	2,580.32	8.71	58.50	162.996	-956.09	2,946.09	3,296.22	3,229.15	67.07	49.148		
2,700.00	2,678.13	2,649.00	2,678.13	9.10	61.15	163.101	-956.09	2,946.09	3,316.14	3,246.05	70.09	47.312		
2,781.91	2,758.25	2,729.12	2,758.25	9.41	63.31	163.186	-956.09	2,946.09	3,332.48	3,259.92	72.56	45.928		
2,800.00	2,775.96	2,746.83	2,775.96	9.47	63.79	163.225	-956.09	2,946.09	3,336.03	3,262.93	73.10	45.639		
2,900.00	2,874.23	2,841.05	2,870.14	9.91	66.34	163.382	-954.04	2,946.09	3,353.07	3,276.99	76.07	44.077		
3,000.00	2,973.09	2,932.67	2,961.73	10.34	68.82	163.544	-954.68	2,946.09	3,367.71	3,288.75	78.96	42.648		
3,100.00	3,072.42	3,043.49	3,072.42	10.76	71.78	163.693	-956.09	2,946.09	3,379.26	3,296.93	82.33	41.046		
3,200.00	3,172.09	3,143.15	3,172.09	11.15	74.03	163.775	-956.09	2,946.09	3,387.03	3,302.07	84.96	39.865		
3,300.00	3,271.97	3,243.04	3,271.97	11.50	76.29	163.821	-956.09	2,946.09	3,391.45	3,303.89	87.56	38.732		
3,382.04	3,354.00	3,321.52	3,350.43	11.64	78.07	109.552	-954.98	2,946.09	3,392.21	3,302.74	89.47	37.914		
3,400.00	3,371.96	3,338.54	3,367.45	11.65	78.46	109.553	-955.04	2,946.09	3,392.23	3,302.37	89.86	37.750		
3,500.00	3,471.96	3,433.30	3,462.20	11.72	80.60	109.562	-955.63	2,946.09	3,392.44	3,300.36	92.08	36.842		
3,600.00	3,571.96	3,543.12	3,571.96	11.80	82.98	109.570	-956.09	2,946.09	3,392.58	3,298.04	94.54	35.884		
3,700.00	3,671.96	3,643.12	3,671.96	11.88	85.07	109.570	-956.09	2,946.09	3,392.58	3,295.87	96.71	35.079		
3,737.72	3,709.68	3,680.09	3,708.93	11.91	85.85	109.557	-955.28	2,946.09	3,392.31	3,294.80	97.52	34.787		
3,800.00	3,771.96	3,739.23	3,768.06	11.95	87.09	109.559	-955.40	2,946.09	3,392.36	3,293.55	98.80	34.335		
3,900.00	3,871.96	3,834.19	3,863.02	12.03	89.07	109.567	-955.94	2,946.09	3,392.54	3,291.68	100.87	33.634		
3,991.61	3,963.57	3,934.64	3,963.43	12.10	91.03	109.564	-955.73	2,946.09	3,392.46	3,289.56	102.90	32.969		
4,000.00	3,971.96	3,942.12	3,970.91	12.11	91.18	109.564	-955.74	2,946.09	3,392.46	3,289.42	103.05	32.921		
4,100.00	4,071.96	4,043.19	4,071.96	12.19	93.07	109.570	-956.09	2,946.09	3,392.58	3,287.56	105.03	32.302		
4,186.80	4,158.77	4,130.00	4,158.77	12.25	94.61	109.564	-955.71	2,946.09	3,392.46	3,285.83	106.63	31.815		

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Anticollision Report

MarathonOil Corporation.

Offset Site Error: 0.00 usft

Company:	Marathon Oil Permian LLC
Project:	Eddy County, NM (NAD27-NME)
Reference Site:	Decimus 5 WXY Fed Com
Site Error:	0.00 usft
Reference Well:	Decimus 5 WXY Fed Com 2H
Well Error:	1.00 usft
Reference Wellbore	OH
Reference Design:	Plan 1 07-22-22

Local Co-ordinate Reference: TVD Reference: MD Reference: North Reference: Survey Calculation Method: Output errors are at Database: Offset TVD Reference: Well Decimus 5 WXY Fed Com 2H RKB @ 3067.60usft (Cactus 169) RKB @ 3067.60usft (Cactus 169) Grid Minimum Curvature 2.00 sigma USA Compass Reference Datum

Offset Design: Maximus/Decimus Offsets - Carrasco 6 Com 1 - OH - Surveys

Depth (usft) De (u 4,200.00 4, (u 4,200.00 4, (u 4,300.00 4, (u 4,400.00 4, (u 4,400.00 4, (u 4,452.81 4, (u 4,500.00 4, (u 4,600.00 4, (u 4,851.81 4, (u 5,000.00 5, (u 5,100.00 5, (u 5,300.00 5, (u 5,500.00 5, (u 5,600.00 5, (u 5,852.33 5, (u 5,900.00 5, (u 6,000.00 5, (u 6,000.00 5, (u	ce ertical 20pth (usft) 1,171,96 4,271,96 4,371,96 4,424,77 4,424,77 4,424,77 4,427,79 4,571,96 4,571,96 4,523,77 4,871,96 5,071,96 5,771,96 5,771,96	D-INC-ONLY, 1 Offs Measured Depth (usft) 4,142.39 4,236.33 4,343.21 4,396.01 4,441.71 4,538.54 4,643.22 4,743.22 4,743.22 4,743.97 4,842.22 4,940.24			Iaior Axis Offset (usft) 94.83 96.49 98.34 99.25 100.04 101.71 103.67	Highside Toolface (°) 109.564 109.569 109.570 109.564 109.565 109.569	Offset Wellbo +N/-S (usft) -955.72 -956.04 -956.09 -955.76 -955.79	evention of the second	Dist Between Centres (usft) 3,392.46 3,392.57	Rule Assignation of the second	minimum Separation (usft) 106.86 108.60	Separation Factor 31.747 31.240	Offset Well Error: Warning	1.00 usft
Reference Measured Ver Depth Dec (usft) (u 4,200.00 4, 4,300.00 4, 4,400.00 4, 4,452.81 4, 4,500.00 4, 4,500.00 4, 4,600.00 4, 4,700.00 4, 4,851.81 4, 4,900.00 4, 5,000.00 5, 5,200.00 5, 5,300.00 5, 5,500.00 5, 5,500.00 5, 5,700.00 5, 5,800.00 5, 5,852.33 5, 5,900.00 5, 6,000.00 5, 6,000.00 5, 6,000.00 5, 6,000.00 5, 6,000.00 5, 6,000.00 5, 6,000.00 5, 6,100.00 6,	ce ertical Pepth (usft) 4,771.96 4,271.96 4,371.96 4,424.77 4,471.96 4,571.96 4,571.96 4,571.96 4,823.77 4,871.96 5,071.96 5,071.96 5,771.96	Measured Depth (usft) 4,142.39 4,266.33 4,343.21 4,396.01 4,441.71 4,538.54 4,643.22 4,743.22 4,794.97 4,842.22	Vertical Depth (usft) 4,171.16 4,265.10 4,371.96 4,424.77 4,470.46 4,567.29 4,671.96 4,771.96 4,823.72	Reference (usft) 12.26 12.34 12.42 12.46 12.50 12.57 12.65	Offset (usft) 94.83 96.49 98.34 99.25 100.04 101.71	Toolface (°) 109.564 109.569 109.570 109.564 109.565	+N/-S (usft) -955.72 -956.04 -956.09 -955.76	+E/-W (usft) 2,946.09 2,946.09	Between Centres (usft) 3,392.46	Between Ellipses (usft) 3,285.60	Separation (usft) 106.86	Factor 31.747	Warning	
Depth (usft) De (u 4,200.00 4, (u 4,200.00 4, (u 4,300.00 4, (u 4,400.00 4, (u 4,400.00 4, (u 4,452.81 4, (u 4,500.00 4, (u 4,600.00 4, (u 4,851.81 4, (u 5,000.00 5, (u 5,100.00 5, (u 5,300.00 5, (u 5,500.00 5, (u 5,600.00 5, (u 5,852.33 5, (u 5,900.00 5, (u 6,000.00 5, (u 6,000.00 5, (u	Depth (ust) 4,171.96 4,271.96 4,371.96 4,424.77 4,471.96 4,571.96 4,571.96 4,671.96 4,823.77 4,871.96 4,971.96 5,071.96 5,771.96 5,771.96	Depth (usft) 4,142.39 4,236.33 4,343.21 4,396.01 4,441.71 4,538.54 4,643.22 4,743.22 4,743.22 4,794.97 4,842.22	Depth (usft) 4,171.16 4,265.10 4,371.96 4,424.77 4,470.46 4,567.29 4,671.96 4,771.96 4,823.72	(usft) 12.26 12.34 12.42 12.46 12.50 12.57 12.65	(usft) 94.83 96.49 98.34 99.25 100.04 101.71	Toolface (°) 109.564 109.569 109.570 109.564 109.565	(usft) -955.72 -956.04 -956.09 -955.76	(usft) 2,946.09 2,946.09	Centres (usft) 3,392.46	Ellipses (usft) 3,285.60	Separation (usft) 106.86	Factor 31.747		
$\begin{array}{cccccccc} 4,200.00 & 4,\\ 4,300.00 & 4,\\ 4,400.00 & 4,\\ 4,452.81 & 4,\\ 4,500.00 & 4,\\ 4,600.00 & 4,\\ 4,600.00 & 4,\\ 4,800.00 & 4,\\ 4,800.00 & 4,\\ 4,851.81 & 4,\\ 4,900.00 & 4,\\ 5,000.00 & 5,\\ 5,000.00 & 5,\\ 5,300.00 & 5,\\ 5,300.00 & 5,\\ 5,500.00 & 5,\\ 5,500.00 & 5,\\ 5,600.00 & 5,\\ 5,600.00 & 5,\\ 5,800.00 & 5,\\ 5,800.00 & 5,\\ 5,852.33 & 5,\\ 5,900.00 & 5,\\ 6,000.00 & 5,\\ 6,100.00 & 6,\\ 6,200.00 & 6,\\ \end{array}$	4,171.96 4,271.96 4,371.96 4,424.77 4,471.96 4,571.96 4,571.96 4,571.96 4,571.96 4,823.77 4,871.96 4,971.96 5,071.96 5,771.96 5,771.96	4,142,39 4,236,33 4,343,21 4,396,01 4,441,71 4,538,54 4,643,22 4,743,22 4,794,97 4,842,22	4,171.16 4,265.10 4,371.96 4,424.77 4,470.46 4,567.29 4,671.96 4,771.96 4,823.72	12.26 12.34 12.42 12.46 12.50 12.57	94.83 96.49 98.34 99.25 100.04 101.71	109.564 109.569 109.570 109.564 109.565	-955.72 -956.04 -956.09 -955.76	2,946.09 2,946.09	3,392.46	3,285.60	106.86			
$\begin{array}{ccccccc} 4,300.00 & 4,4\\ 4,400.00 & 4,3\\ 4,452.81 & 4,4\\ 4,500.00 & 4,4\\ 4,500.00 & 4,4\\ 4,600.00 & 4,4\\ 4,800.00 & 4,4\\ 4,800.00 & 4,4\\ 5,000.00 & 4,4\\ 5,000.00 & 4,5\\ 5,200.00 & 5,5\\ 5,300.00 & 5,5\\ 5,300.00 & 5,5\\ 5,300.00 & 5,5\\ 5,500.00 & 5,5\\ 5,500.00 & 5,5\\ 5,500.00 & 5,5\\ 5,600.00 & 5,5\\ 5,600.00 & 5,5\\ 5,852.33 & 5,6\\ 5,900.00 & 5,5\\ 6,000.00 & 5,5\\ 6,100.00 & 6,6\\ 6,200.00 & 6,6\\ 6,200.00 & 6,6\\ \end{array}$	4,271.96 4,371.96 4,424.77 4,471.96 4,571.96 4,671.96 4,671.96 4,823.77 4,871.96 4,971.96 5,071.96 5,071.96 5,771.96	4,236.33 4,343.21 4,396.01 4,441.71 4,538.54 4,643.22 4,743.22 4,794.97 4,842.22	4,265.10 4,371.96 4,424.77 4,470.46 4,567.29 4,671.96 4,771.96 4,823.72	12.34 12.42 12.46 12.50 12.57	96.49 98.34 99.25 100.04 101.71	109.569 109.570 109.564 109.565	-956.04 -956.09 -955.76	2,946.09						
$\begin{array}{ccccccc} 4,400.00 & 4,\\ 4,452.81 & 4,\\ 4,500.00 & 4,\\ 4,600.00 & 4,\\ 4,600.00 & 4,\\ 4,801.00 & 4,\\ 4,801.00 & 4,\\ 4,851.81 & 4,8\\ 4,900.00 & 4,\\ 5,000.00 & 5,\\ 5,200.00 & 5,\\ 5,200.00 & 5,\\ 5,300.00 & 5,\\ 5,300.00 & 5,\\ 5,500.00 & 5,\\ 5,500.00 & 5,\\ 5,600.00 & 5,\\ 5,852.33 & 5,\\ 5,900.00 & 5,\\ 5,852.33 & 5,\\ 6,000.00 & 5,\\ 6,100.00 & 6,\\ 6,200.00 & 6,\\ \end{array}$	4,371.96 4,424.77 4,471.96 4,571.96 4,571.96 4,671.96 4,671.96 4,823.77 4,871.96 4,971.96 5,071.96 5,071.96 5,771.96	4,343.21 4,396.01 4,441.71 4,538.54 4,643.22 4,743.22 4,794.97 4,842.22	4,371.96 4,424.77 4,470.46 4,567.29 4,671.96 4,771.96 4,823.72	12.42 12.46 12.50 12.57 12.65	98.34 99.25 100.04 101.71	109.570 109.564 109.565	-956.09 -955.76		3,392.57	3,283.97	109 60	21 240		
$\begin{array}{ccccccc} 4,452,81 & 4,4\\ 4,500.00 & 4,4\\ 4,600.00 & 4,4\\ 4,600.00 & 4,4\\ 4,800.00 & 4,4\\ 4,851.81 & 4,4\\ 4,900.00 & 4,4\\ 5,000.00 & 5,5\\ 5,200.00 & 5,5\\ 5,200.00 & 5,5\\ 5,300.00 & 5,5\\ 5,300.00 & 5,5\\ 5,500.00 & 5,5\\ 5,500.00 & 5,5\\ 5,500.00 & 5,5\\ 5,500.00 & 5,5\\ 5,500.00 & 5,5\\ 5,500.00 & 5,5\\ 5,852.33 & 5,6\\ 5,900.00 & 5,5\\ 6,000.00 & 5,5\\ 6,100.00 & 6,6\\ 6,200.00 & 6,6\\ \end{array}$	4,424.77 4,471.96 4,571.96 4,571.96 4,771.96 4,823.77 4,871.96 4,971.96 5,071.96 5,071.96 5,271.96	4,396.01 4,441.71 4,538.54 4,643.22 4,743.22 4,794.97 4,842.22	4,424.77 4,470.46 4,567.29 4,671.96 4,771.96 4,823.72	12.46 12.50 12.57 12.65	99.25 100.04 101.71	109.564 109.565	-955.76	2,946.09						
4,500.00 4,4 4,600.00 4,1 4,600.00 4,1 4,700.00 4,1 4,800.00 4,1 4,800.00 4,1 4,800.00 4,1 4,900.00 4,1 5,000.00 4,1 5,100.00 5,1 5,200.00 5,2 5,300.00 5,3 5,500.00 5,5 5,600.00 5,5 5,700.00 5,5 5,800.00 5,5 5,852.33 5,1 5,900.00 5,5 6,100.00 6,1 6,200.00 6,2	4,471.96 4,571.96 4,671.96 4,771.96 4,823.77 4,871.96 4,971.96 5,071.96 5,171.96 5,271.96	4,441.71 4,538.54 4,643.22 4,743.22 4,794.97 4,842.22	4,470.46 4,567.29 4,671.96 4,771.96 4,823.72	12.50 12.57 12.65	100.04 101.71	109.565			3,392.58	3,282.06	110.53	30.695		
$\begin{array}{ccccccc} 4,600.00 & 4,4\\ 4,700.00 & 4,4\\ 4,800.00 & 4,4\\ 4,801.81 & 4,8\\ 5,000.00 & 4,4\\ 5,000.00 & 4,4\\ 5,000.00 & 5,5\\ 5,200.00 & 5,5\\ 5,300.00 & 5,5\\ 5,340.97 & 5,5\\ 5,400.00 & 5,5\\ 5,500.00 & 5,5\\ 5,700.00 & 5,5\\ 5,700.00 & 5,5\\ 5,800.00 & 5,5\\ 5,800.00 & 5,5\\ 5,800.00 & 5,5\\ 5,800.00 & 5,5\\ 5,800.00 & 5,5\\ 5,800.00 & 5,5\\ 6,100.00 & 6,6\\ 6,200.00 & 6,6\\ 6,200.00 & 6,6\\ \end{array}$	4,571.96 4,671.96 4,771.96 4,823.77 4,871.96 4,971.96 5,071.96 5,071.96 5,171.96 5,271.96	4,538.54 4,643.22 4,743.22 4,794.97 4,842.22	4,567.29 4,671.96 4,771.96 4,823.72	12.57 12.65	101.71		-955 79	2,946.09	3,392.47	3,280.99	111.48	30.432		
$\begin{array}{rrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrr$	4,671.96 4,771.96 4,823.77 4,871.96 4,971.96 5,071.96 5,171.96 5,271.96	4,643.22 4,743.22 4,794.97 4,842.22	4,671.96 4,771.96 4,823.72	12.65		109.569		2,946.09	3,392.48	3,280.18	112.30	30.208		
4,800.00 4, 4,851.81 4, 4,900.00 4, 5,000.00 4, 5,100.00 5, 5,200.00 5, 5,300.00 5, 5,300.00 5, 5,340.97 5, 5,500.00 5, 5,600.00 5, 5,700.00 5, 5,852.33 5, 5,900.00 5, 6,000.00 5, 6,100.00 6, 6,200.00 6,	4,771.96 4,823.77 4,871.96 4,971.96 5,071.96 5,171.96 5,271.96	4,743.22 4,794.97 4,842.22	4,771.96 4,823.72		102 67		-956.05	2,946.09	3,392.57	3,278.52	114.05	29.746		
4,800.00 4, 4,851.81 4, 4,900.00 4, 5,000.00 4, 5,100.00 5, 5,200.00 5, 5,300.00 5, 5,300.00 5, 5,340.97 5, 5,500.00 5, 5,600.00 5, 5,700.00 5, 5,852.33 5, 5,900.00 5, 6,000.00 5, 6,100.00 6, 6,200.00 6,	4,771.96 4,823.77 4,871.96 4,971.96 5,071.96 5,171.96 5,271.96	4,743.22 4,794.97 4,842.22	4,771.96 4,823.72		103.07	109.570	-956.09	2,946.09	3,392.58	3,276.49	116.10	29.222		
4,900.00 4,4 5,000.00 4,3 5,100.00 5,1 5,200.00 5,2 5,300.00 5,3 5,340.97 5,3 5,400.00 5,3 5,500.00 5,5 5,700.00 5,5 5,700.00 5,5 5,800.00 5,5 5,800.00 5,6 5,800.00 5,6 5,800.00 5,6 6,000.00 5,6 6,000.00 5,6 6,100.00 6,6 6,200.00 6,7	4,871.96 4,971.96 5,071.96 5,171.96 5,271.96	4,842.22			105.56	109.570	-956.09	2,946.09	3,392.58	3,274.52	118.06	28.735		
5,000.00 4,1 5,100.00 5,1 5,200.00 5,2 5,300.00 5,3 5,340.97 5,3 5,400.00 5,3 5,500.00 5,5 5,600.00 5,5 5,700.00 5,5 5,800.00 5,5 5,852.33 5,4 5,900.00 5,5 6,000.00 5,5 6,100.00 6,6 6,200.00 6,7	4,971.96 5,071.96 5,171.96 5,271.96		4,870.96	12.77	106.54	109.561	-955.55	2,946.09	3,392.40	3,273.32	119.08	28.488		
5,100.00 5,1 5,200.00 5, 5,300.00 5, 5,340.97 5, 5,400.00 5, 5,500.00 5, 5,600.00 5, 5,700.00 5, 5,800.00 5, 5,800.00 5, 5,800.00 5, 5,800.00 5, 5,800.00 5, 6,000.00 5, 6,100.00 6, 6,200.00 6,	5,071.96 5,171.96 5,271.96	4,940.24	.,	12.81	107.43	109.561	-955.58	2,946.09	3,392.41	3,272.40	120.01	28.267		
5,200.00 5, 5,300.00 5, 5,340.97 5, 5,400.00 5, 5,500.00 5, 5,600.00 5, 5,700.00 5, 5,700.00 5, 5,800.00 5, 5,800.00 5, 5,800.00 5, 5,800.00 5, 5,800.00 5, 6,000.00 5, 6,000.00 5, 6,100.00 6, 6,200.00 6,	5,171.96 5,271.96		4,968.98	12.88	109.29	109.564	-955.75	2,946.09	3,392.47	3,270.53	121.94	27.820		
5,200.00 5, 5,300.00 5, 5,340.97 5, 5,400.00 5, 5,500.00 5, 5,600.00 5, 5,700.00 5, 5,700.00 5, 5,800.00 5, 5,800.00 5, 5,800.00 5, 5,800.00 5, 5,800.00 5, 6,000.00 5, 6,000.00 5, 6,100.00 6, 6,200.00 6,	5,171.96 5,271.96													
5,300.00 5,340.97 5,340.97 5, 5,400.00 5, 5,600.00 5, 5,700.00 5, 5,700.00 5, 5,800.00 5, 5,700.00 5, 5,800.00 5, 5,800.00 5, 5,800.00 5, 6,000.00 5, 6,000.00 5, 6,100.00 6, 6,200.00 6,	5,271.96	5,043.24	5,071.96	12.96	111.23	109.570	-956.09	2,946.09	3,392.58	3,268.61	123.97	27.366		
5,340.97 5, 5,400.00 5, 5,600.00 5, 5,700.00 5, 5,800.00 5, 5,800.00 5, 5,852.33 5, 5,900.00 5, 6,000.00 5, 6,100.00 6, 6,200.00 6,		5,143.24	5,171.96	13.04	113.19	109.570	-956.09	2,946.09	3,392.58	3,266.58	126.00	26.925		
5,400.00 5, 5,500.00 5, 5,600.00 5, 5,700.00 5, 5,800.00 5, 5,852.33 5, 5,900.00 5, 6,000.00 5, 6,100.00 6, 6,200.00 6,		5,243.24	5,271.96	13.12	115.14	109.570	-956.09	2,946.09	3,392.58	3,264.55	128.03	26.498		
5,500.00 5, 5,600.00 5, 5,700.00 5, 5,800.00 5, 5,852.33 5, 5,900.00 5, 6,000.00 5, 6,100.00 6, 6,200.00 6,	5,312.93	5,284.10	5,312.83	13.15	115.94	109.561	-955.56	2,946.09	3,392.41	3,263.54	128.86	26.326		
5,600.00 5,700.00 5,700.00 5,700.00 5,800.00 5,7852.33 5,900.00 5,1652.33 5,900.00 5,166,000.00 6,000.00 5,6100.00 6,200.00 6,7200.00	5,371.96	5,341.94	5,370.67	13.19	117.07	109.562	-955.60	2,946.09	3,392.42	3,262.38	130.04	26.088		
5,600.00 5,700.00 5,700.00 5,700.00 5,800.00 5,7852.33 5,900.00 5,1652.33 5,900.00 5,166,000.00 6,000.00 5,6100.00 6,200.00 6,7200.00	5,471.96	5,439.93	5,468.66	13.27	118.98	109.565	-955.80	2,946.09	3,392.49	3,260.46	132.03	25.695		
5,700.00 5,1 5,800.00 5,1 5,852.33 5,1 5,900.00 5,6 6,000.00 5,6 6,100.00 6,6 6,200.00 6,2	5,571.96	5,543.27	5,571.96	13.35	121.02	109.570	-956.09	2,946.09	3,392.58	3,258.44	134.14	25.291		
5,852.33 5,4 5,900.00 5,4 6,000.00 5,5 6,100.00 6,4 6,200.00 6,7	5,671.96	5,643.27	5,671.96	13.43	123.03	109.570	-956.09	2,946.09	3,392.58	3,256.34	136.24	24.902		
5,900.00 5,4 6,000.00 5,4 6,100.00 6,1 6,200.00 6,	5,771.96	5,743.27	5,771.96	13.51	125.05	109.570	-956.09	2,946.09	3,392.58	3,254.25	138.33	24.525		
6,000.00 5,9 6,100.00 6,1 6,200.00 6,	5,824.29	5,795.52	5,824.21	13.55	126.10	109.555	-955.20	2,946.09	3,392.28	3,252.86	139.43	24.330		
6,000.00 5,9 6,100.00 6,1 6,200.00 6,														
6,100.00 6,0 6,200.00 6,	5,871.96	5,841.94	5,870.63	13.58	127.04	109.556	-955.23	2,946.09	3,392.29	3,251.89	140.40	24.162		
6,200.00 6,	5,971.96	5,939.30	5,967.99	13.66	129.00	109.559	-955.45	2,946.09	3,392.37	3,249.93	142.44	23.816		
	6,071.96	6,036.66	6,065.34	13.74	130.96	109.567	-955.91	2,946.09	3,392.53	3,248.05	144.48	23.481		
6,300.00 6,3	6,171.96	6,143.30	6,171.96	13.82	133.57	109.570	-956.09	2,946.09	3,392.58	3,245.41	147.17	23.052		
	6,271.96	6,243.30	6,271.96	13.90	136.18	109.570	-956.09	2,946.09	3,392.58	3,242.72	149.86	22.638		
6,386.82 6,3	6,358.79	6,330.12	6,358.78	13.97	138.45	109.560	-955.51	2,946.09	3,392.39	3,240.19	152.20	22.289		
	6,371.96	6,343.05	6,371.71	13.98	138.79	109.560	-955.52	2,946.09	3,392.39	3,239.84	152.55	22.239		
	6,471.96	6,441.21	6,469.87	14.05	141.35	109.562	-955.62	2,946.09	3,392.42	3,237.24	155.19	21.860		
	5,571.96	6,539.37	6,568.03	14.13	143.91	109.566	-955.88	2,946.09	3,392.51	3,234.68	157.83	21.495		
6,697.71 6,6	6,669.67	6,641.15	6,669.56	14.21	146.57	109.561	-955.53	2,946.09	3,392.39	3,231.83	160.56	21.128		
	6,671.96	6,642.60	6,671.01	14.21	146.60	109.561	-955.53	2,946.09	3,392.39	3,231.79	160.60	21.123		
	6,771.96	6,743.60	6,771.96	14.29	148.92	109.570	-956.09	2,946.09	3,392.58	3,229.59	163.00	20.814		
	6,826.71	6,798.32	6,826.68	14.33	150.04	109.562	-955.61	2,946.09	3,392.42	3,228.27	164.16	20.666		
	5,871.96	6,839.83	6,868.19	14.37	150.89	109.563	-955.68	2,946.09	3,392.45	3,227.41	165.04	20.555		
7,000.00 6,9	6,971.96	6,943.63	6,971.96	14.45	153.09	109.570	-956.09	2,946.09	3,392.58	3,225.27	167.32	20.276		
7,100.00 7,0	7,071.96	7,043.63	7,071.96	14.52	155.34	109.570	-956.09	2,946.09	3,392.58	3,222.93	169.65	19.997		
	7,171.96	7,143.63	7,171.96	14.60	157.60	109.570	-956.09	2,946.09	3,392.58	3,220.59	171.99	19.725		
	7,211.97	7,182.60	7,210.92	14.63	158.48	109.552	-955.02	2,946.09	3,392.22	3,219.32	172.90	19.619		
7,300.00 7,2	7,271.96	7,240.30	7,268.62	14.68	159.79	109.554	-955.13	2,946.09	3,392.26	3,218.01	174.25	19.467		
7,400.00 7,3	7,371.96	7,336.49	7,364.80	14.76	161.96	109.561	-955.58	2,946.09	3,392.42	3,215.91	176.50	19.220		
	7,471.96	7,443.73	7,471.96	14.84	164.37	109.570	-956.09	2,946.09	3,392.58	3,213.59	179.00	18.953		
	7,571.96	7,543.73	7,571.96	14.92	166.60	109.570	-956.09	2,946.09	3,392.58	3,211.27	181.31	18.712		
	7,602.12	7,571.77	7,600.00	14.94	167.23	109.558	-955.34	2,946.09	3,392.33	3,210.37	181.96	18.643		
	7,671.96	7,636.05	7,664.27	15.00	168.66	109.562	-955.61	2,946.09	3,392.43	3,208.98	183.45	18.493		
7,800.00 7,3	7,771.96	7,743.80	7,771.96	15.08	171.02	109.570	-956.09	2,946.09	3,392.58	3,206.70	185.89	18.251		
7,871.68 7,8	7,843.64	7,815.48	7,843.64	15.13	172.56	109.559	-955.41	2,946.09	3,392.35	3,204.87	187.48	18.094		
	7,871.96	7,841.26	7,869.42	15.15	173.11	109.559	-955.43	2,946.09	3,392.36	3,204.31	188.06	18.039		
	7,971.96	7,943.85	7,971.96	15.23	175.32	109.570	-956.09	2,946.09	3,392.58	3,202.24	190.35	17.823		
	3,071.96	8,043.85	8,071.96	15.31	177.76	109.570	-956.09	2,946.09	3,392.58	3,199.72	192.86	17.591		
	3,148.56	8,120.45	8,148.56	15.37	179.63	109.557	-955.31	2,946.09	3,392.32	3,197.53	194.79	17.415		
8,200.00 8,		8,142.62	8,170.73	15.39	180.17	109.557	-955.32	2,946.09	3,392.32	3,196.97	195.35	17.365		

Anticollision Report

MarathonOil Corporation.

Offset Site Error: 0.00 usft

Company:	Marathon Oil Permian LLC
Project:	Eddy County, NM (NAD27-NME)
Reference Site:	Decimus 5 WXY Fed Com
Site Error:	0.00 usft
Reference Well:	Decimus 5 WXY Fed Com 2H
Well Error:	1.00 usft
Reference Wellbore	OH
Reference Design:	Plan 1 07-22-22

Local Co-ordinate Reference: TVD Reference: MD Reference: North Reference: Survey Calculation Method: Output errors are at Database: Offset TVD Reference:



Offset Design: Maximus/Decimus Offsets - Carrasco 6 Com 1 - OH - Surveys

urvey Prog		0-INC-ONLY,								Rule Assi	gned:		Offset Well Error:	1.00 u
Refe Measured	erence Vertical	Off Measured	set Vertical	Semi N Reference	lajor Axis Offset	Highside	Offset Wellb	ore Centre	Dis Between	tance Between	Minimum	Separation	Warning	
Depth	Depth	Depth	Depth			Toolface	+N/-S	+E/-W	Centres	Ellipses	Separation	Factor		
(usft)	(usft)	(usft)	(usft)	(usft)	(usft)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)			
8,300.00	8,271.96	8,237.41	8,265.51	15.47	182.48	109.562	-955.64	2,946.09	3,392.44	3,194.70	197.74	17.156		
8,400.00	8,371.96	8,343.97	8,371.96	15.55	185.19	109.570	-956.09	2,946.09	3,392.58	3,192.05	200.53	16.918		
8,500.00	8,471.96	8,443.97	8,471.96	15.63	187.89	109.570	-956.09	2,946.09	3,392.58	3,189.27	203.31	16.687		
8,536.25	8,508.22	8,478.59	8,506.55	15.66	188.82	109.547	-954.66	2,946.09	3,392.10	3,187.83	204.27	16.606		
8,600.00	8,571.96	8,535.54	8,563.49	15.71	190.36	109.551	-954.91	2,946.09	3,392.20	3,186.34	205.86	16.478		
8,700.00	8,671.96	8,644.15	8,671.96	15.79	193.25	109.570	-956.09	2,946.09	3,392.58	3,183.75	208.83	16.245		
8,783.22	8,755.19	8,727.37	8,755.19	15.84	195.28	109.570	-956.09	2,946.09	3,392.58	3,181.66	210.92	16.084		
8,800.00	8,771.96	8,744.15	8,771.96	15.84	195.69	19.625	-956.09	2,946.09	3,392.35	3,181.03	211.32	16.053		
8,850.00	8,821.81	8,793.20	8,820.99	15.81	196.89	19.742	-954.90	2,946.09	3,388.52	3,176.02	212.51	15.946		
8,900.00	8,871.16	8,837.62	8,865.41	15.77	197.98	20.042	-955.03	2,946.09	3,381.06	3,167.51	213.56	15.832		
8,950.00	8,919.62	8,881.27	8,909.05	15.73	199.04	20.518	-955.34	2,946.09	3,369.65	3,155.07	214.58	15.703		
9,000.00	8,966.83	8,923.79	8,951.56	15.68	200.08	21.187	-955.83	2,946.09	3,354.39	3,138.81	215.57	15.560		
9,050.00	9,012.43	8,984.72	9,012.43	15.63	201.49	22.127	-956.09	2,946.09	3,335.19	3,118.24	216.95	15.373		
9,100.00	9,056.07	9,028.36	9,056.07	15.59	202.48	23.281	-956.09	2,946.09	3,312.30	3,094.40	217.90	15.201		
9,150.00	9,097.42	9,069.72	9,097.42	15.56	203.41	24.737	-956.09	2,946.09	3,285.95	3,067.15	218.80	15.018		
9,200.00	9,136.17	9,106.55	9,134.24	15.55	204.25	26.530	-955.33	2,946.09	3,256.08	3,036.48	219.60	14.827		
9,250.00	9,172.02	9,139.54	9,167.23	15.56	204.99	28.775	-955.43	2,946.09	3,223.51	3,003.17	220.33	14.630		
9,300.00	9,204.69	9,169.61	9,197.30	15.60	205.67	31.573	-955.59	2,946.09	3,188.21	2,967.20	221.00	14.426		
9,350.00	9,233.95	9,196.53	9,224.22	15.68	206.28	35.071	-955.79	2,946.09	3,150.46	2,928.85	221.62	14.216		
9,400.00	9,259.56	9,231.92	9,259.56	15.83	207.09	39.670	-956.09	2,946.09	3,110.57	2,888.12	222.46	13.983		
9,450.00	9,281.33	9,253.69	9,281.33	16.06	207.62	45.272	-956.09	2,946.09	3,068.75	2,845.72	223.03	13.759		
	0 000 40	0.074.40	0.000.40	40.07		50.070	050.00	0.040.00	0.005.44	0.004.00	000 50	10 505		
9,500.00	9,299.10 9,312.73	9,271.46 9,285.09	9,299.10 9,312.73	16.37 16.78	208.06 208.40	52.273 60.867	-956.09 -956.09	2,946.09 2,946.09	3,025.41 2,980.92	2,801.88 2,756.97	223.53 223.95	13.535 13.311		
9,550.00 9,600.00	9,312.73	9,205.09	9,312.73	17.27	208.40	71.024	-956.09	2,946.09	2,935.61	2,730.97	223.95	13.088		
9,650.00	9,322.11	9,294.47	9,327.18	17.27	208.03	82.304	-956.09	2,946.09	2,889.84	2,665.29	224.29	12.869		
9,673.22	9,328.06	9,300.42	9,328.06	18.11	208.77	87.690	-956.09	2,946.09	2,868.53	2,643.88	224.65	12.769		
0,010.22	0,020.00	0,000.42	0,020.00	10.11	200.11	01.000	-000.00	2,040.00	2,000.00	2,040.00	224.00	12.700		
9,700.00	9,328.52	9,300.89	9,328.52	18.45	208.78	87.713	-956.09	2,946.09	2,843.97	2,619.23	224.75	12.654		
9,800.00	9,330.27	9,302.63	9,330.27	19.86	208.83	87.801	-956.09	2,946.09	2,752.65	2,527.47	225.18	12.224		
9,900.00	9,332.01	9,304.38	9,332.01	21.43	208.87	87.889	-956.09	2,946.09	2,661.94	2,436.24	225.71	11.794		
10,000.00	9,333.76	9,306.12	9,333.76	23.13	208.91	87.976	-956.09	2,946.09	2,571.93	2,345.59	226.34	11.363		
10,100.00	9,335.50	9,307.87	9,335.50	24.93	208.95	88.064	-956.09	2,946.09	2,482.68	2,255.59	227.09	10.933		
10,200.00	9,337.25	9,309.61	9,337.25	26.81	209.00	88.152	-956.09	2,946.09	2,394.27	2,166.31	227.96	10.503		
10,300.00	9,339.00	9,311.36	9,339.00	28.75	209.04	88.239	-956.09	2,946.09	2,306.82	2,077.84	228.97	10.075		
10,400.00	9,340.74	9,313.10	9,340.74	30.74	209.08	88.327	-956.09	2,946.09	2,220.42	1,990.29	230.13	9.649		
10,500.00	9,342.49	9,314.85	9,342.49	32.78	209.13	88.415	-956.09	2,946.09	2,135.20	1,903.76	231.44	9.226		
10,600.00	9,344.23	9,316.59	9,344.23	34.85	209.17	88.502	-956.09	2,946.09	2,051.32	1,818.40	232.92	8.807		
10,700.00	9,345.98	9,318.34	9,345.98	36.94	209.21	88.590	-956.09	2,946.09	1,968.95	1,734.37	234.58	8.394		
10,800.00	9,347.72	9,320.08	9,347.72	39.07	209.25	88.678	-956.09	2,946.09	1,888.27	1,651.85	236.42	7.987		
10,900.00	9,349.47	9,321.83	9,349.47	41.21	209.30	88.766	-956.09	2,946.09	1,809.53	1,571.05	238.47	7.588		
11,000.00	9,351.21	9,323.57	9,351.21	43.36	209.34	88.853	-956.09	2,946.09	1,732.97	1,492.24	240.73	7.199		
11,100.00	9,352.96	9,325.32	9,352.96	45.54	209.38	88.941	-956.09	2,946.09	1,658.91	1,415.71	243.21	6.821		
11,200.00	9,354.70	9,327.06	9,354.70	47.72	209.43	89.029	-956.09	2,946.09	1,587.70	1,341.79	245.91	6.457		
11,300.00	9,356.45	9,328.81	9,356.45	49.92	209.47	89.117	-956.09	2,946.09	1,519.73	1,270.90	248.83	6.107		
11,400.00	9,358.19	9,330.55	9,358.19	52.13	209.51	89.204	-956.09	2,946.09	1,455.46	1,203.49	251.97	5.776		
11,500.00	9,359.94	9,332.30	9,359.94	54.34	209.55	89.292	-956.09	2,946.09	1,395.40	1,140.09	255.32	5.465		
11,600.00	9,361.68	9,334.05	9,361.68	56.56	209.60	89.380	-956.09	2,946.09	1,340.12	1,081.29	258.83	5.178		
11 700 00	0.000.40	0 205 70	0.262.42	F0 70	200.04	00.400	050.00	0.040.00	1 000 00	1 007 70	000 47	4.040		
11,700.00	9,363.43	9,335.79 9,337.54	9,363.43	58.79 61.02	209.64	89.468	-956.09	2,946.09	1,290.23 1,246.38	1,027.76	262.47	4.916		
11,800.00	9,365.17		9,365.17	61.02	209.68	89.555 89.643	-956.09	2,946.09	1,246.38	980.21	266.17	4.683		
11,900.00 12,000.00	9,366.92 9,368.66	9,339.28 9,341.03	9,366.92 9,368.66	63.26 65.51	209.73 209.77	89.643 89.731	-956.09 -956.09	2,946.09 2,946.09	1,209.22	939.38 906.00	269.84 273.39	4.481 4.314		
12,000.00	9,300.00 9,370.41	9,341.03 9,342.77	9,368.66 9,370.41	67.76	209.77	89.819	-956.09	2,946.09	1,179.39	880.76	275.39	4.314		
,	0,010.41	0,072.11	0,0.0.41	01.10	200.01	00.010	300.00	2,0 10.00	.,	550.10	2.0.10			
2,200.00	9,372.15	9,344.52	9,372.15	70.01	209.85	89.907	-956.09	2,946.09	1,143.87	864.22	279.65	4.090		



Anticollision Report



Marathon Oil

Offset Site Error:

0.00 usft

Company:	Marathon Oil Permian LLC
Project:	Eddy County, NM (NAD27-NME)
Reference Site:	Decimus 5 WXY Fed Com
Site Error:	0.00 usft
Reference Well:	Decimus 5 WXY Fed Com 2H
Well Error:	1.00 usft
Reference Wellbore	OH
Reference Design:	Plan 1 07-22-22

Local Co-ordinate Reference: TVD Reference: MD Reference: North Reference: Survey Calculation Method: Output errors are at Database: Offset TVD Reference: Well Decimus 5 WXY Fed Com 2H RKB @ 3067.60usft (Cactus 169) RKB @ 3067.60usft (Cactus 169) Grid Minimum Curvature 2.00 sigma USA Compass Reference Datum

Offset Design: Maximus/Decimus Offsets - Carrasco 6 Com 1 - OH - Surveys

urvey Prog		0-INC-ONLY,								Rule Assi	gned:		Offset Well Error:	1.00 u
Refe Measured	rence Vertical	Off Measured	set Vertical	Semi M Reference	lajor Axis Offset	Highside	Offset Wellb	ore Centre	Dis Between	tance Between	Minimum	Separation	Warning	
Depth	Depth	Depth	Depth	Reference	Unset	Toolface	+N/-S	+E/-W	Centres	Ellipses	Separation	Factor	warning	
(usft)	(usft)	(usft)	(usft)	(usft)	(usft)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)			
12,300.00	9,373.90	9,346.26	9,373.90	72.26	209.90	89.994	-956.09	2,946.09	1,138.93	856.78	282.16	4.037		
2,306.37	9,374.01	9,346.37	9,374.01	72.41	209.90	90.000	-956.09	2,946.09	1,138.92	856.62	282.30	4.034 CC,	ES	
2,400.00	9,375.65	9,348.01	9,375.65	74.52	209.94	90.082	-956.09	2,946.09	1,142.76	858.61	284.14	4.022 SF		
12,500.00	9,377.39	9,349.75	9,377.39	76.78	209.98	90.170	-956.09	2,946.09	1,155.25	869.68	285.57	4.045		
12,600.00	9,379.14	9,351.50	9,379.14	79.05	210.03	90.258	-956.09	2,946.09	1,176.15	889.70	286.45	4.106		
12,700.00	9,380.88	9,353.24	9,380.88	81.31	210.07	90.346	-956.09	2,946.09	1,205.00	918.19	286.81	4.201		
12,800.00	9,382.63	9,354.99	9,382.63	83.58	210.11	90.433	-956.09	2,946.09	1,241.26	954.54	286.72	4.329		
12,900.00	9,384.37	9,356.73	9,384.37	85.85	210.15	90.521	-956.09	2,946.09	1,284.30	998.05	286.25	4.487		
13,000.00	9,386.12	9,358.48	9,386.12	88.13	210.20	90.609	-956.09	2,946.09	1,333.46	1,047.97	285.49	4.671		
13,100.00	9,387.86	9,360.22	9,387.86	90.40	210.24	90.697	-956.09	2,946.09	1,388.09	1,103.58	284.51	4.879		
13,200.00	9,389.61	9,361.97	9,389.61	92.68	210.28	90.784	-956.09	2,946.09	1,447.58	1,164.20	283.38	5.108		
13,300.00	9,391.35	9,363.71	9,391.35	94.95	210.33	90.872	-956.09	2,946.09	1,511.34	1,229.19	282.14	5.357		
13,400.00	9,393.10	9,365.46	9,393.10	97.23	210.37	90.960	-956.09	2,946.09	1,578.86	1,298.00	280.86	5.621		
13,500.00	9,394.84	9,367.20	9,394.84	99.51	210.41	91.048	-956.09	2,946.09	1,649.69	1,370.12	279.56	5.901		
13,600.00	9,396.59	9,368.95	9,396.59	101.80	210.45	91.135	-956.09	2,946.09	1,723.40	1,445.13	278.27	6.193		
13,700.00	9,398.33	9,370.70	9,398.33	104.08	210.50	91.223	-956.09	2,946.09	1,799.66	1,522.65	277.01	6.497		
13,800.00	9,400.08	9,372.44	9,400.08	106.36	210.54	91.311	-956.09	2,946.09	1,878.14	1,602.36	275.78	6.810		
13,900.00	9,401.82	9,374.19	9,401.82	108.65	210.58	91.399	-956.09	2,946.09	1,958.58	1,683.98	274.60	7.132		
14,000.00	9,403.57	9,375.93	9,403.57	110.93	210.63	91.486	-956.09	2,946.09	2,040.75	1,767.27	273.48	7.462		
14,100.00	9,405.31	9,377.68	9,405.31	113.22	210.67	91.574	-956.09	2,946.09	2,124.45	1,852.04	272.41	7.799		
14,200.00	9,407.06	9,379.42	9,407.06	115.50	210.71	91.662	-956.09	2,946.09	2,209.50	1,938.11	271.39	8.141		
	0 100 00	0 004 47	0 100 00		040 75	04 750	050.00	0.040.00	0 005 70	0.005.00	070.40	0.400		
14,300.00	9,408.80	9,381.17	9,408.80	117.79	210.75	91.750	-956.09	2,946.09	2,295.76	2,025.33	270.43	8.489		
14,400.00	9,410.55	9,382.91	9,410.55	120.08	210.80	91.837	-956.09	2,946.09	2,383.09	2,113.57	269.52	8.842		
14,500.00	9,412.30	9,384.66	9,412.30	122.37	210.84	91.925	-956.09	2,946.09	2,471.38	2,202.71	268.67	9.199		
14,600.00	9,414.04	9,386.40	9,414.04	124.66	210.88	92.013	-956.09	2,946.09	2,560.53	2,292.66	267.86	9.559		
14,700.00	9,415.79	9,388.15	9,415.79	126.95	210.92	92.100	-956.09	2,946.09	2,650.45	2,383.35	267.10	9.923		
	0 117 50	0 000 70	0 117 10	100.01	040.07		055.04	0.040.00	0 7 40 70	0 474 05		10.000		
14,800.00	9,417.53	9,389.79	9,417.42	129.24	210.97	92.184	-955.21	2,946.09	2,740.70	2,474.35	266.36	10.290		
14,900.00	9,419.28	9,391.41	9,419.04	131.53	211.00	92.265	-955.21	2,946.09	2,831.97	2,566.28	265.68	10.659		
15,000.00	9,421.02	9,393.03	9,420.66	133.83	211.04	92.347	-955.21	2,946.09	2,923.80	2,658.75	265.05	11.031		
15,100.00	9,422.77	9,394.65	9,422.28	136.12	211.08	92.428	-955.21	2,946.09	3,016.15	2,751.69	264.46	11.405		
15,200.00	9,424.51	9,396.27	9,423.90	138.41	211.12	92.510	-955.21	2,946.09	3,108.97	2,845.08	263.90	11.781		
45 000 00	0.400.00	0 007 00	0 405 50	4 4 0 7 4	044.40	00 504	055.04	0.040.00	0.000.00	0.000.00	000.07	10.150		
15,300.00	9,426.26	9,397.89	9,425.52	140.71	211.16	92.591	-955.21	2,946.09	3,202.23	2,938.86	263.37	12.159		
15,400.00	9,428.00	9,399.51	9,427.14	143.00	211.20	92.673	-955.21	2,946.09	3,295.88	3,033.00	262.87	12.538		
15,500.00	9,429.75	9,401.13	9,428.76	145.29	211.24	92.754	-955.21	2,946.09	3,389.89	3,127.48	262.41	12.918		
15,600.00	9,431.49	9,402.75	9,430.38	147.59	211.28	92.835	-955.22	2,946.09	3,484.23	3,222.26	261.97	13.300		
15,700.00	9,433.24	9,404.38	9,432.00	149.88	211.32	92.917	-955.22	2,946.09	3,578.88	3,317.32	261.56	13.683		
15,800.00	9,434.98	0.406.00	0 422 62	150.40	011.00	02.009	055.00	2.046.00	3,673.82	3,412.64	061 17	14.067		
15,800.00	9,434.98 9,436.73	9,406.00 9,407.62	9,433.62 9,435.24	152.18 154.47	211.36 211.40	92.998 93.079	-955.22 -955.22	2,946.09 2,946.09	3,673.82	3,412.64 3,508.20	261.17 260.81	14.067 14.451		
16,000.00	9,438.47	9,409.24	9,436.86	156.77	211.44	93.161	-955.22	2,946.09	3,864.45	3,603.98	260.47	14.837		
16,100.00	9,440.22	9,410.86	9,438.49	159.07	211.48	93.242	-955.23	2,946.09	3,960.11	3,699.96	260.15	15.223		
16,200.00	9,441.96	9,412.48	9,440.11	161.36	211.52	93.323	-955.23	2,946.09	4,055.98	3,796.14	259.84	15.609		
16,300.00	9,443.71	9,414.10	9,441.73	163.66	211.56	93.405	-955.23	2,946.09	4,152.04	3,892.48	259.56	15.997		
16,400.00			9,441.73 9,443.35	165.96	211.56	93.405 93.486	-955.23			3,988.99		16.384		
	9,445.46	9,415.72						2,946.09	4,248.29		259.29			
16,500.00	9,447.20	9,417.34 9,418.96	9,444.97	168.26	211.64	93.567	-955.24	2,946.09	4,344.70	4,085.66	259.04	16.772		
16,600.00 16,700.00	9,448.95		9,446.59	170.55	211.68	93.648	-955.24	2,946.09	4,441.27	4,182.47	258.81	17.161		
10,700.00	9,450.69	9,420.58	9,448.21	172.85	211.72	93.730	-955.24	2,946.09	4,537.99	4,279.41	258.59	17.549		
16,800.00	9,452.44	9,422.20	9,449.83	175.15	211.76	93.811	-955.25	2,946.09	4,634.85	4,376.47	258.38	17.938		
16,900.00	9,452.44 9,454.18	9,422.20	9,449.83 9,451.45	175.15	211.70	93.892	-955.25	2,946.09	4,034.85	4,370.47	258.38	18.327		
17,000.00	9,455.93	9,425.44	9,453.07	179.75	211.84	93.973	-955.26	2,946.09	4,828.95	4,570.94	258.01	18.716		
17,100.00	9,457.67	9,427.06	9,454.69	182.05	211.88	94.054	-955.26	2,946.09	4,926.17	4,668.34	257.84	19.106		
17,200.00	9,459.42	9,428.68	9,456.31	184.35	211.92	94.135	-955.26	2,946.09	5,023.51	4,765.83	257.68	19.495		
17,300.00	9,461.16	9,430.30	9,457.93	186.65	211.96	94.216	-955.27	2,946.09	5,120.95	4,863.41	257.53	19.885		
		0,.00.00	0,.01.00	.00.00	2.1.00	0	000.21	2,0 10.00	0,.20.00	.,	201.00	.0.000		



Marathon Oil Permian LLC

Eddy County, NM (NAD27-NME) Decimus 5 WXY Fed Com Decimus 5 WXY Fed Com 2H

OH Plan 1 07-22-22

Anticollision Report

22 July, 2022



PHOENIX



Marathon Oil

TECHNOLOGY SERVICES	~	Theomsion Report	Corporation
Company:	Marathon Oil Permian LLC	Local Co-ordinate Reference:	Well Decimus 5 WXY Fed Com 2H
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 2H	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ОН	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 selec	tion & 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

Survey Tool Program		Date 7/22/2022			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
0.00	19,247.64	Plan 1 07-22-22 (OH)	MWD+HRGM	OWSG MWD + HRGM	

Casing Method:

Not applied

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Dista Between Centres (usft)	nce Between Ellipses (usft)	Separation Factor	Warning
Decimus 5 WXY Fed Com						
Decimus 5 WXY Fed Com 1H - OH - Plan 1 07-22-22 Decimus 5 WXY Fed Com 1H - OH - Plan 1 07-22-22	1,300.00 19,247.64	1,300.00 19,303.31	30.00 1,320.34	21.10 857.50	3.371 CC, ES 2.853 SF	
Larry Wolfish 01-23S-27E RB						
204H - OH / 64293 - Surveys (Patterson 813) 204H - OH / 64293 - Surveys (Patterson 813)	9,054.52 9,100.00	12,663.26 12,662.22	605.28 608.78	527.77 529.92	7.809 CC, ES 7.720 SF	
Maximus 5 WXY Fed Com						
Maximus 5 WXY Fed Com 1H - OH - Plan 1 07-22-22 Maximus 5 WXY Fed Com 1H - OH - Plan 1 07-22-22	8,711.09 19,247.64	8,734.98 19,240.45	1,343.28 1,412.49	1,312.71 950.91	43.935 CC 3.060 ES, SF	
Maximus/Decimus Offsets						
Carrasco 6 Com 1 - OH - Surveys Carrasco 6 Com 1 - OH - Surveys Carrasco 6 Com 2 - OH - Surveys Swearingen A 1 - OH - Surveys Zeus 1 - OH - Surveys Zeus 1 - OH - Surveys Zeus 1 - OH - Surveys	12,306.37 12,400.00 12,830.75 17,652.49 15,041.42 15,100.00 15,200.00	9,346.37 9,348.01 9,420.87 9,413.62 9,414.36 9,413.49 9,408.00	1,138.92 1,142.76 703.30 38.39 1,552.47 1,553.57 1,560.55	856.62 858.61 -39.03 -337.04 1,272.04 1,271.86 1,277.08	4.034 CC, ES 4.022 SF 0.947 Level 3, C 0.102 Level 3, C 5.536 CC 5.515 ES 5.505 SF	

Offset Des	sign: De	cimus 5 W	XY Fed Co	om - Decim	us 5 WXY	Fed Com 1	H - OH - Plan	1 07-22-22						
	-												Offset Site Error:	0.00 usft
Survey Progra Refer Measured		WD+HRGM Offe Measured	set Vertical	Semi M Reference	lajor Axis Offset	Highside	Offset Wellbo	ore Centre	Dist Between	Rule Assi ance Between	gned: Minimum	Separation	Offset Well Error: Warning	1.00 usft
Depth (usft)	Depth (usft)	Depth (usft)	Depth (usft)	(usft)	(usft)	Toolface (°)	+N/-S (usft)	+E/-W (usft)	Centres (usft)	Ellipses (usft)	Separation (usft)	Factor		
0.00	0.00	0.00	0.00	1.00	1.00	179.982	-30.00	0.01	30.00					
100.00	100.00	100.00	100.00	1.13	1.13	179.982	-30.00	0.01	30.00	27.73	2.27	13.236		
200.00	200.00	200.00	200.00	1.66	1.66	179.982	-30.00	0.01	30.00	26.68	3.32	9.038		
300.00	300.00	300.00	300.00	2.06	2.06	179.982	-30.00	0.01	30.00	25.88	4.12	7.286		
400.00	400.00	400.00	400.00	2.39	2.39	179.982	-30.00	0.01	30.00	25.21	4.79	6.264		
500.00	500.00	500.00	500.00	2.69	2.69	179.982	-30.00	0.01	30.00	24.61	5.38	5.573		
600.00	600.00	600.00	600.00	2.96	2.96	179.982	-30.00	0.01	30.00	24.08	5.92	5.066		
700.00	700.00	700.00	700.00	3.21	3.21	179.982	-30.00	0.01	30.00	23.58	6.42	4.673		
800.00	800.00	800.00	800.00	3.44	3.44	179.982	-30.00	0.01	30.00	23.11	6.89	4.357		
900.00	900.00	900.00	900.00	3.66	3.66	179.982	-30.00	0.01	30.00	22.67	7.33	4.095		

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

Anticollision Report

0.00 usft

Marathon Oil
Corporation.

Offset Site Error:

m 2H
69)
69)
03)

Offset Design: Decimus 5 WXY Fed Com - Decimus 5 WXY Fed Com 1H - OH - Plan 1 07-22-22

		/WD+HRGM		0			04	na Cantur		Rule Assi	gned:		Offset Well Error:	1.00 usf
Refer Measured	vence Vertical	Off: Measured	set Vertical	Semi N Reference	lajor Axis Offset	Highside	Offset Wellbo		Dist Between	ance Between	Minimum	Separation	Warning	
Depth	Depth	Depth	Depth			Toolface	+N/-S	+E/-W (usft)	Centres	Ellipses	Separation	Factor		
(usft)	(usft)	(usft)	(usft)	(usft)	(usft)	(°)	(usft)		(usft)	(usft)	(usft)	0.074		
1,000.00	1,000.00	1,000.00	1,000.00	3.87 4.07	3.87	179.982	-30.00	0.01	30.00 30.00	22.25	7.74 8.14	3.874		
1,100.00	1,100.00	1,100.00	1,100.00		4.07	179.982	-30.00	0.01		21.85		3.683		
1,200.00	1,200.00	1,200.00	1,200.00	4.26	4.26	179.982	-30.00	0.01	30.00	21.47	8.53	3.517	0	
1,300.00	1,300.00	1,300.00	1,300.00	4.45	4.45	179.982	-30.00	0.01	30.00	21.10	8.90	3.371 CC, E	5	
1,400.00	1,399.98	1,398.91	1,398.89	4.73	4.72	-127.476	-31.66	-0.38	32.71	23.34	9.37	3.490		
1,500.00	1,499.84	1,497.33	1,497.17	5.02	4.97	-131.235	-36.61	-1.56	40.98	31.15	9.83	4.168		
1,600.00	1,599.45	1,594.78	1,594.26	5.32	5.24	-134.914	-44.74	-3.49	54.94	44.64	10.30	5.332		
1,700.00	1,698.70	1,690.80	1,689.58	5.63	5.52	-137.670	-55.89	-6.13	74.60	63.80	10.80	6.910		
1,800.00	1,797.47	1,784.96	1,782.64	5.97	5.82	-139.532	-69.84	-9.44	99.82	88.52	11.31	8.830		
1,900.00	1,895.62	1,876.87	1,872.98	6.32	6.13	-140.734	-86.32	-13.35	130.45	118.62	11.83	11.024		
1,900.13	1,895.75	1,876.99	1,873.09	6.32	6.13	-140.735	-86.34	-13.35	130.49	118.66	11.83	11.027		
	,	,												
2,000.00	1,993.44	1,969.99	1,964.09	6.61	6.40	-141.751	-105.07	-17.79	164.31	151.98	12.33	13.326		
2,100.00	2,091.25	2,064.02	2,056.06	6.92	6.67	-142.414	-124.09	-22.30	198.29	185.44	12.86	15.424		
2,200.00	2,189.06	2,158.05	2,148.04	7.25	6.97	-142.884	-143.10	-26.81	232.28	218.87	13.41	17.321		
2,300.00	2,286.88	2,252.08	2,240.02	7.60	7.27	-143.233	-162.12	-31.32	266.29	252.30	13.99	19.031		
2,400.00	2,384.69	2,346.11	2,331.99	7.96	7.59	-143.503	-181.14	-35.83	300.30	285.70	14.60	20.573		
0 505 55	0.405		0 405 55									01.000		
2,500.00	2,482.51	2,440.14	2,423.97	8.33	7.93	-143.719	-200.16	-40.34	334.32	319.09	15.22	21.963		
2,600.00	2,580.32	2,534.17	2,515.94	8.71	8.27	-143.894	-219.18	-44.85	368.33	352.47	15.87	23.216		
2,700.00	2,678.13	2,628.20	2,607.92	9.10	8.63	-144.040	-238.20	-49.36	402.36	385.83	16.53	24.348		
2,781.91	2,758.25	2,705.22	2,683.26	9.41	8.92	-144.142	-253.78	-53.05	430.22	413.16	17.06	25.217		
2,800.00	2,775.96	2,722.25	2,699.91	9.47	8.99	-144.234	-257.22	-53.87	436.34	419.16	17.17	25.409		
2,900.00	2,874.23	2,816.92	2,792.51	9.91	9.36	-144.557	-276.37	-58.41	468.54	450.65	17.88	26.198		
3,000.00	2,973.09	2,912.43	2,885.94	10.34	9.74	-144.606	-295.68	-62.99	408.04	430.05	18.59	26.789		
3,100.00	3,072.42	3,008.67	2,980.07	10.34	10.13	-144.423	-315.15	-67.61	524.84	505.55	19.29	27.209		
3,200.00	3,072.42	3,105.52	3,074.81	11.15	10.13	-144.423	-334.74	-72.25	548.95	528.98	19.29	27.488		
3,200.00	3,172.09	3,202.86	3,170.02	11.15	10.53	-143.464	-354.43	-72.23	570.40	549.77	20.62	27.465		
3,300.00	3,271.97	3,202.00	3,170.02	11.50	10.94	-143.404	-334.43	-70.92	570.40	549.77	20.02	21.001		
3,382.04	3,354.00	3,283.00	3,248.41	11.64	11.27	162.873	-370.64	-80.76	586.04	564.98	21.07	27.817		
3,400.00	3,371.96	3,300.57	3,265.60	11.65	11.35	163.057	-374.19	-81.61	589.28	568.14	21.14	27.876		
3,500.00	3,471.96	3,398.38	3,361.28	11.72	11.76	164.040	-393.97	-86.30	607.42	585.81	21.61	28.106		
3,600.00	3,571.96	3,496.20	3,456.96	11.80	12.18	164.967	-413.76	-90.99	625.72	603.63	22.09	28.325		
3,700.00	3,671.96	3,594.02	3,552.64	11.88	12.60	165.842	-433.54	-95.68	644.18	621.60	22.58	28.533		
3,800.00	3,771.96	3,691.83	3,648.32	11.95	13.03	166.668	-453.33	-100.37	662.77	639.70	23.07	28.730		
3,900.00	3,871.96	3,789.65	3,743.99	12.03	13.46	167.449	-473.11	-105.06	681.49	657.92	23.57	28.918		
4,000.00	3,971.96	3,887.46	3,839.67	12.11	13.89	168.189	-492.90	-109.75	700.32	676.25	24.07	29.096		
4,100.00	4,071.96	3,985.28	3,935.35	12.19	14.32	168.890	-512.68	-114.44	719.26	694.69	24.58	29.267		
4,200.00	4,171.96	4,083.09	4,031.03	12.26	14.76	169.555	-532.46	-119.14	738.30	713.22	25.09	29.429		
4 000 00	4 074 00	4.400.07	4 400 74	10.01	45.40	470 107	F50.05	400.00	757 4/	701.00	05.00	00.504		
4,300.00	4,271.96	4,180.91	4,126.71	12.34	15.19	170.187	-552.25	-123.83	757.44	731.83	25.60	29.584		
4,400.00	4,371.96	4,278.73	4,222.39	12.42	15.63	170.788	-572.03	-128.52	776.66	750.53	26.12	29.732		
4,500.00	4,471.96	4,376.54	4,318.07	12.50	16.07	171.361	-591.82	-133.21	795.95	769.31	26.64	29.873		
4,600.00	4,571.96	4,474.36	4,413.75	12.57	16.51	171.906	-611.60	-137.90	815.32	788.15	27.17	30.009		
4,700.00	4,671.96	4,572.17	4,509.43	12.65	16.95	172.426	-631.38	-142.59	834.76	807.06	27.70	30.139		
4,800.00	4,771.96	4,669.99	4,605.11	12.73	17.40	172.922	-651.17	-147.28	854.26	826.04	28.23	30.263		
4,900.00	4,771.90	4,767.80	4,700.78	12.73	17.40	172.922	-670.95	-147.28	873.83	845.06	28.25	30.383		
4,900.00 5,000.00	4,971.90	4,865.62	4,796.46	12.81	18.29	173.850	-690.74	-156.67	893.44	864.15	29.30	30.498		
5,100.00	4,971.90 5,071.96	4,963.44	4,790.40	12.86	18.73	173.830	-710.52	-161.36	913.11	883.28	29.83	30.608		
5,200.00	5,171.96	4,903.44 5,061.25	4,987.82	12.90	19.18	174.204	-730.31	-166.05	932.83	902.46	30.37	30.714		
0,200.00	0,171.00	0,001.20	4,001.02	10.04	13.10	114.100	-750.51	100.00	002.00	552.40	50.57	00.714		
5,300.00	5,271.96	5,159.07	5,083.50	13.12	19.63	175.099	-750.09	-170.74	952.59	921.68	30.91	30.816		
5,400.00	5,371.96	5,256.88	5,179.18	13.19	20.08	175.481	-769.87	-175.43	972.39	940.94	31.45	30.915		
5,500.00	5,471.96	5,354.70	5,274.86	13.27	20.53	175.849	-789.66	-180.12	992.24	960.24	32.00	31.010		
5,600.00	5,571.96	5,452.51	5,370.54	13.35	20.98	176.202	-809.44	-184.81	1,012.12	979.58	32.54	31.102		
5,700.00	5,671.96	5,550.33	5,466.22	13.43	21.43	176.541	-829.23	-189.50	1,032.04	998.95	33.09	31.190		
5,800.00	5,771.96	5,648.14	5,561.90	13.51	21.88	176.868	-849.01	-194.19	1,051.99	1,018.36	33.64	31.276		

7/22/2022 1:25:12PM

Anticollision Report



Offset Site Error: 0.00 usft

Company:	Marathon Oil Permian LLC	Local Co-ordinate Reference:	Well Decimus 5 WXY Fed Com 2H
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 2H	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 1H - OH - Plan 1 07-22-22

urvey Prog	ram: 0-1 erence	WWD+HRGM Off	ent	Somil	lajor Axis		Offset Wellbo	oro Contro	Die	Rule Assi tance	gned:		Offset Well Error:	1.00
Measured	Vertical	Measured	Vertical	Reference	Offset	Highside			Between	Between	Minimum	Separation	Warning	
Depth	Depth	Depth	Depth	((Toolface	+N/-S (usft)	+E/-W (usft)	Centres	Ellipses	Separation	Factor		
(usft)	(usft)	(usft)	(usft)	(usft)	(usft)	(°)			(usft)	(usft)	(usft)	21.259		
5,900.00 6,000.00	5,871.96 5,971.96	5,745.96 5,843.78	5,657.58	13.58	22.33 22.79	177.182	-868.80 -888.58	-198.89 -203.58	1,071.98	1,037.79	34.18 34.73	31.358 31.438		
6,100.00	6,071.96	5,843.78 5,941.59	5,753.25 5,848.93	13.66 13.74	22.79	177.485 177.777	-000.30	-203.56	1,091.99 1,112.03	1,057.26 1,076.75	34.73	31.438		
6,200.00	6,171.96	6,039.41	5,944.61	13.74	23.24	178.059	-928.15	-208.27	1,112.03	1,076.75	35.84	31.515		
5,200.00	6,271.96	6,137.22	6,040.29	13.90	23.70	178.331	-947.93	-212.90	1,152.10	1,115.81	36.39	31.663		
,400.00	6,371.96	6,235.04	6,135.97	13.90	24.15	178.594	-967.72	-217.03	1,172.32	1,135.37	36.94	31.733		
5,400.00	0,571.50	0,200.04	0,155.57	15.50	24.00	170.554	-301.12	-222.04	1,172.02	1,100.07	50.54	51.755		
6,500.00	6,471.96	6,332.85	6,231.65	14.05	25.06	178.848	-987.50	-227.03	1,192.46	1,154.96	37.50	31.801		
6,600.00	6,571.96	6,430.67	6,327.33	14.13	25.52	179.093	-1,007.28	-231.72	1,212.62	1,174.57	38.05	31.867		
6,700.00	6,671.96	6,528.49	6,423.01	14.21	25.97	179.331	-1,027.07	-236.42	1,232.81	1,194.20	38.61	31.931		
6,800.00	6,771.96	6,626.30	6,518.69	14.29	26.43	179.561	-1,046.85	-241.11	1,253.01	1,213.85	39.16	31.993		
6,900.00	6,871.96	6,724.12	6,614.37	14.37	26.88	179.783	-1,066.64	-245.80	1,273.23	1,233.51	39.72	32.055		
7,000.00	6,971.96	6,850.45	6,738.09	14.45	27.47	-179.947	-1,091.49	-251.69	1,293.07	1,252.64	40.43	31.981		
7,100.00	7,071.96	7,027.65	6,913.11	14.52	28.28	-179.668	-1,118.24	-258.04	1,308.20	1,266.87	41.33	31.652		
7,200.00	7,171.96	7,207.63	7,092.28	14.60	29.01	-179.504	-1,134.59	-261.91	1,317.31	1,275.27	42.04	31.335		
7,300.00	7,271.96	7,389.03	7,273.57	14.68	29.47	-179.450	-1,139.96	-263.18	1,320.28	1,277.90	42.38	31.156		
7,305.19	7,277.16	7,398.46	7,283.00	14.69	29.49	-179.451	-1,139.93	-263.18	1,320.26	1,277.88	42.38	31.151		
7,400.00	7,371.96	7,487.43	7,371.96	14.76	29.48	-179.450	-1,139.96	-263.18	1,320.28	1,277.80	42.48	31.082		
7,500.00	7,471.96	7,587.43	7,471.96	14.70	29.40	-179.450	-1,139.96	-263.18	1,320.28	1,277.70	42.48	31.002		
7,600.00	7,571.96	7,687.43	7,571.96	14.92	29.51	-179.450	-1,139.96	-263.18	1,320.28	1,277.59	42.69	30.931		
7,700.00	7,671.96	7,787.43	7,671.96	15.00	29.53	-179.450	-1,139.96	-263.18	1,320.28	1,277.49	42.03	30.855		
7,800.00	7,771.96	7,887.43	7,771.96	15.08	29.54	-179.450	-1,139.96	-263.18	1,320.28	1,277.38	42.89	30.780		
1,000.00	1,111.00	1,001.10	1,111.00	10.00	20.01		1,100.00	200.10	1,020.20	1,211.00	12.00	00.100		
7,900.00	7,871.96	7,987.43	7,871.96	15.15	29.56	-179.450	-1,139.96	-263.18	1,320.28	1,277.28	43.00	30.705		
8,000.00	7,971.96	8,087.43	7,971.96	15.23	29.58	-179.450	-1,139.96	-263.18	1,320.28	1,277.17	43.10	30.630		
8,100.00	8,071.96	8,187.43	8,071.96	15.31	29.59	-179.450	-1,139.96	-263.18	1,320.28	1,277.07	43.21	30.556		
8,200.00	8,171.96	8,287.43	8,171.96	15.39	29.61	-179.450	-1,139.96	-263.18	1,320.28	1,276.96	43.31	30.482		
8,300.00	8,271.96	8,387.43	8,271.96	15.47	29.63	-179.450	-1,139.96	-263.18	1,320.28	1,276.86	43.42	30.408		
8,400.00	8,371.96	8,487.43	8,371.96	15.55	29.64	-179.450	-1,139.96	-263.18	1,320.28	1,276.75	43.52	30.334		
8,500.00	8,471.96	8,587.43	8,471.96	15.63	29.66	-179.450	-1,139.96	-263.18	1,320.28	1,276.65	43.63	30.261		
8,600.00	8,571.96	8,687.43	8,571.96	15.71	29.68	-179.450	-1,139.96	-263.18	1,320.28	1,276.54	43.74	30.188		
8,700.00	8,671.96	8,787.43	8,671.96	15.79	29.70	-179.450	-1,139.96	-263.18	1,320.28	1,276.44	43.84	30.115		
8,783.22	8,755.19	8,870.66	8,755.19	15.84	29.71	-179.450	-1,139.96	-263.18	1,320.28	1,276.36	43.91	30.066		
8,800.00	8,771.96	8,887.85	8,772.38	15.84	29.70	90.595	-1,139.96	-262.92	1,320.28	1,276.36	43.91	30.065		
8,850.00	8,821.81	8,939.08	8,823.45	15.81	29.67	90.590	-1,139.96	-259.07	1,320.28	1,276.37	43.91	30.069		
8,900.00	8,871.16	8,990.30	8,873.95	15.77	29.63	90.581	-1,139.95	-250.69	1,320.27	1,276.38	43.89	30.080		
8,950.00	8,919.62	9,041.48	8,923.49	15.73	29.58	90.567	-1,139.94	-237.84	1,320.27	1,276.40	43.87	30.097		
9,000.00	8,966.83	9,092.64	8,971.64	15.68	29.54	90.549	-1,139.92	-220.63	1,320.26	1,276.42	43.84	30.116		
-,	-,	-,	-,				.,		.,	.,				
9,050.00	9,012.43	9,143.75	9,018.03	15.63	29.50	90.526	-1,139.90	-199.21	1,320.26	1,276.44	43.82	30.132		
9,100.00	9,056.07	9,194.80	9,062.28	15.59	29.46	90.499	-1,139.88	-173.78	1,320.25	1,276.45	43.80	30.140		
9,150.00	9,097.42	9,245.80	9,104.04	15.56	29.44	90.469	-1,139.86	-144.55	1,320.24	1,276.42	43.82	30.130		
9,200.00	9,136.17	9,296.72	9,142.99	15.55	29.43	90.435	-1,139.83	-111.77	1,320.23	1,276.36	43.87	30.094		
9,250.00	9,172.02	9,347.57	9,178.83	15.56	29.44	90.397	-1,139.80	-75.72	1,320.23	1,276.25	43.98	30.022		
0.000.01		0.000 0.0			00.15	oo			1 000 00			00.000		
9,300.00	9,204.69	9,398.34	9,211.28	15.60	29.48	90.357	-1,139.76	-36.70	1,320.22	1,276.07	44.15	29.902		
9,350.00	9,233.95	9,449.01	9,240.10	15.68	29.55	90.313	-1,139.73	4.97	1,320.21	1,275.80	44.41	29.726		
9,400.00	9,259.56	9,499.60	9,265.08	15.83	29.67	90.268	-1,139.69	48.93	1,320.20	1,275.42	44.78	29.485		
9,450.00	9,281.33	9,550.09	9,286.06	16.06	29.83	90.220	-1,139.65	94.83	1,320.19	1,274.94	45.25	29.176		
9,500.00	9,299.10	9,600.47	9,302.88	16.37	30.04	90.171	-1,139.61	142.31	1,320.19	1,274.35	45.84	28.799		
9,550.00	9,312.73	9,650.75	9,315.45	16.78	30.30	90.120	-1,139.57	190.98	1,320.18	1,273.63	46.55	28.361		
9,600.00	9,322.11	9,700.93	9,323.70	17.27	30.60	90.069	-1,139.52	240.46	1,320.17	1,272.80	40.33	27.868		
9,650.00	9,327.18	9,751.00	9,327.57	17.83	30.95	90.003	-1,139.48	290.37	1,320.17	1,271.87	48.30	27.335		
9,673.22	9,328.06	9,774.23	9,328.06	18.11	31.14	90.000	-1,139.46	313.58	1,320.17	1,271.41	48.76	27.076		
9,700.00	9,328.52	9,801.00	9,328.52	18.45	31.35	90.000	-1,139.44	340.36	1,320.17	1,270.86	49.31	26.775		
,	.,	.,	.,				,			,				
9,800.00	9,330.27	9,901.00	9,330.27	19.86	32.25	90.000	-1,139.35	440.34	1,320.16	1,268.57	51.60	25.587		

Anticollision Report



Offset Site Error: 0.00 usft

Company:	Marathon Oil Permian LLC	Local Co-ordinate Reference:	Well Decimus 5 WXY Fed Com 2H
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 2H	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ОН	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 1H - OH - Plan 1 07-22-22

	rence	WWD+HRGM			laior Axis		Offset Wellb	ore Centre		Rule Assi tance		_	Offset Well Error:	1.00
easured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	+N/-S	+E/-W	Between Centres	Between Ellipses	Minimum Separation	Separation Factor	Warning	
(usft)	(usft)	(usft)	(usft)	(usft)	(usft)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)	ractor		
,900.00	9,332.01	10,001.00	9,332.01	21.43	33.28	90.000	-1,139.26	540.33	1,320.15	1,265.98	54.18	24.367		
000.00	9,333.76	10,101.00	9,333.76	23.13	34.43	90.000	-1,139.18	640.31	1,320.15	1,263.14	57.01	23.156		
100.00	9,335.50	10,201.00	9,335.51	24.93	35.68	90.000	-1,139.09	740.30	1,320.14	1,260.09	60.05	21.983		
200.00	9,337.25	10,301.00	9,337.25	26.81	37.03	90.000	-1,139.00	840.28	1,320.14	1,256.86	63.28	20.862		
300.00	9,339.00	10,401.00	9,339.00	28.75	38.46	90.000	-1,138.92	940.27	1,320.13	1,253.47	66.66	19.805		
400.00	9,340.74	10,501.00	9,340.74	30.74	39.98	90.000	-1,138.83	1,040.25	1,320.12	1,249.95	70.17	18.813		
500.00	9,342.49	10 601 00	0 242 40	32.78	41.56	90.000	1 1 2 9 7 4	1 140 04	1 220 12	1,246.32	73.80	17 990		
500.00	9,342.49	10,601.00	9,342.49	34.85	41.56	90.000	-1,138.74	1,140.24	1,320.12		73.60	17.889 17.029		
600.00		10,701.00	9,344.23				-1,138.66	1,240.22	1,320.11	1,242.59				
700.00	9,345.98 9,347.72	10,801.00	9,345.98	36.94	44.91	90.000	-1,138.57	1,340.21	1,320.10 1,320.10	1,238.77	81.33	16.231		
800.00		10,901.00	9,347.72	39.07	46.66	90.000	-1,138.48	1,440.19		1,234.88	85.22	15.491		
900.00	9,349.47	11,001.00	9,349.47	41.21	48.46	90.000	-1,138.40	1,540.18	1,320.09	1,230.92	89.17	14.804		
000.00	9,351.21	11,101.00	9,351.21	43.36	50.30	90.000	-1,138.31	1,640.16	1,320.09	1,226.90	93.18	14.167		
100.00	9,352.96	11,201.00	9,352.96	45.54	52.17	90.000	-1,138.22	1,740.14	1,320.08	1,222.83	97.24	13.575		
200.00	9,354.70	11,301.00	9,354.70	47.72	54.08	90.000	-1,138.14	1,840.13	1,320.07	1,218.72	101.35	13.025		
300.00	9,356.45	11,401.00	9,356.45	49.92	56.02	90.000	-1,138.05	1,940.11	1,320.07	1,214.57	105.50	12.513		
400.00	9,358.19	11,501.00	9,358.19	52.13	57.98	90.000	-1,137.96	2,040.10	1,320.06	1,210.38	109.68	12.035		
500.00	9,359.94	11,601.00	9,359.94	54.34	59.97	90.000	-1,137.88	2,140.08	1,320.05	1,206.16	113.90	11.590		
600.00	9,361.68	11,701.00	9,361.68	56.56	61.98	90.000	-1,137.79	2,240.07	1,320.05	1,201.91	118.14	11.174		
700.00	9,363.43	11,801.00	9,363.43	58.79	64.01	90.000	-1,137.70	2,340.05	1,320.04	1,197.63	122.41	10.784		
800.00	9,365.17	11,901.00	9,365.17	61.02	66.05	90.000	-1,137.62	2,440.04	1,320.03	1,193.33	126.70	10.418		
900.00	9,366.92	12,001.00	9,366.92	63.26	68.12	90.000	-1,137.53	2,540.02	1,320.03	1,189.01	131.02	10.075		
000.00	9,368.66	12,101.00	9,368.66	65.51	70.20	90.000	-1,137.44	2,640.01	1,320.02	1,184.67	135.35	9.753		
100.00	9,370.41	12,201.00	9,370.41	67.76	72.29	90.000	-1,137.36	2,739.99	1,320.02	1,180.31	139.70	9.449		
200.00	9,372.15	12,301.00	9,372.16	70.01	74.40	90.000	-1,137.27	2,839.98	1,320.01	1,175.94	144.07	9.162		
300.00	9,373.90	12,401.00	9,373.90	72.26	76.51	90.000	-1,137.18	2,939.96	1,320.00	1,171.55	148.45	8.892		
400.00	9,375.65	12,501.00	9,375.65	74.52	78.64	90.000	-1,137.10	3,039.95	1,320.00	1,167.15	152.85	8.636		
500.00	9,377.39	12,601.00	9,377.39	76.78	80.78	90.000	-1,137.01	3,139.93	1,319.99	1,162.74	157.25	8.394		
600.00	9,379.14	12,701.00	9,379.14	79.05	82.92	90.000	-1,136.92	3,239.92	1,319.98	1,158.31	161.67	8.165		
700.00	9,380.88	12,801.00	9,380.88	81.31	85.08	90.000	-1,136.84	3,339.90	1,319.98	1,153.88	166.10	7.947		
800.00	9,382.63	12,901.00	9,382.63	83.58	87.24	90.000	-1,136.75	3,439.89	1,319.90	1,149.43	170.54	7.740		
900.00	9,384.37	13,001.00	9,384.37	85.85	89.41	90.000	-1,136.66	3,539.87	1,319.97	1,144.98	174.99	7.543		
000.00	9,386.12	13,101.00	9,386.12	88.13	91.58	90.000	-1,136.58	3,639.85	1,319.96	1,140.52	179.44	7.356		
100.00	9,387.86	13,201.00	9,387.86	90.40	93.77	90.000	-1,136.49	3,739.84	1,319.95	1,136.05	183.91	7.177		
200.00	9,389.61	13,301.00	9,389.61	92.68	95.96	90.000	-1,136.40	3,839.82	1,319.95	1,131.57	188.38	7.007		
300.00 400.00	9,391.35 9,393.10	13,401.00 13,501.00	9,391.35 9,393.10	94.95 97.23	98.15 100.35	90.000 90.000	-1,136.32 -1,136.23	3,939.81 4,039.79	1,319.94 1,319.93	1,127.09 1,122.60	192.85 197.34	6.844 6.689		
100.00	3,335.10	13,301.00	3,335.10	51.25	100.55	30.000	-1,130.23	4,033.13	1,010.00	1,122.00	137.34	0.003		
500.00	9,394.84	13,601.00	9,394.84	99.51	102.55	90.000	-1,136.14	4,139.78	1,319.93	1,118.10	201.83	6.540		
600.00	9,396.59	13,701.00	9,396.59	101.80	104.76	90.000	-1,136.06	4,239.76	1,319.92	1,113.60	206.32	6.397		
700.00	9,398.33	13,801.00	9,398.33	104.08	106.97	90.000	-1,135.97	4,339.75	1,319.92	1,109.10	210.82	6.261		
800.00 900.00	9,400.08 9,401.82	13,901.00 14,001.00	9,400.08 9,401.82	106.36 108.65	109.19 111.41	90.000 90.000	-1,135.88 -1,135.79	4,439.73 4,539.72	1,319.91 1,319.90	1,104.58 1,100.07	215.32 219.83	6.130 6.004		
						00.000	-1,100.10	7,000.12			210.00	0.004		
00.000		14,101.00	9,403.57	110.93	113.63	90.000	-1,135.71	4,639.70	1,319.90	1,095.55	224.35	5.883		
100.00	9,405.31	14,201.00	9,405.31	113.22	115.86	90.000	-1,135.62	4,739.69	1,319.89	1,091.03	228.86	5.767		
200.00	9,407.06	14,301.00	9,407.06	115.50	118.09	90.000	-1,135.53	4,839.67	1,319.88	1,086.50	233.38	5.655		
300.00	9,408.80	14,401.00	9,408.81	117.79	120.32	90.000	-1,135.45	4,939.66	1,319.88	1,081.97	237.91	5.548		
400.00	9,410.55	14,501.00	9,410.55	120.08	122.55	90.000	-1,135.36	5,039.64	1,319.87	1,077.44	242.44	5.444		
500.00	9,412.30	14,601.00	9,412.30	122.37	124.79	90.000	-1,135.27	5,139.63	1,319.86	1,072.90	246.97	5.344		
600.00	9,414.04	14,701.00	9,414.04	124.66	127.03	90.000	-1,135.19	5,239.61	1,319.86	1,068.36	251.50	5.248		
700.00	9,415.79	14,801.00	9,415.79	126.95	129.27	90.000	-1,135.10	5,339.59	1,319.85	1,063.82	256.04	5.155		
800.00	9,417.53	14,901.00	9,417.53	129.24	131.52	90.000	-1,135.01	5,439.58	1,319.85	1,059.27	260.58	5.065		
900.00	9,419.28	15,001.00	9,419.28	131.53	133.77	90.000	-1,134.93	5,539.56	1,319.84	1,054.72	265.12	4.978		
000.00	9,421.02	15,101.00	9,421.02	133.83	136.01	90.000	-1,134.84	5,639.55	1,319.83	1,050.17	269.66	4.894		
,55.00	0,721.02	10,101.00	0,721.02	100.00	100.01	00.000	-1,104.04	0,000.00	1,010.00	1,000.17	200.00	4.004		

7/22/2022 1:25:12PM

Anticollision Report

0.00 usft



Offset Site Error:

Company:	Marathon Oil Permian LLC	Local Co-ordinate Reference:	Well Decimus 5 WXY Fed Com 2H
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 2H	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 1H - OH - Plan 1 07-22-22

Survey Prog		-MWD+HRGM								Rule Assi	gned:		Offset Well Error:	1.00 usft
Refe Measured	rence Vertical	Off Measured	set Vertical	Semi M Reference	Aajor Axis Offset	Highside	Offset Wellb	ore Centre	Dis Between	tance Between	Minimum	Separation	Warning	
Depth	Depth	Depth	Depth	Reference	onset	Toolface	+N/-S	+E/-W	Centres	Ellipses	Separation	Factor	wannig	
(usft)	(usft)	(usft)	(usft)	(usft)	(usft)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)			
15,100.00	9,422.77	15,201.00	9,422.77	136.12	138.27	90.000	-1,134.75	5,739.53	1,319.83	1,045.62	274.21	4.813		
15,200.00	9,424.51	15,301.00	9,424.51	138.41	140.52	90.000	-1,134.67	5,839.52	1,319.82	1,041.06	278.76	4.735		
15,300.00	9,426.26	15,401.00	9,426.26	140.71	142.77	90.000	-1,134.58	5,939.50	1,319.81	1,036.51	283.31	4.659		
15,400.00	9,428.00	15,501.00	9,428.00	143.00	145.03	90.000	-1,134.49	6,039.49	1,319.81	1,030.91	287.86	4.585		
15,500.00	9,429.75	15,601.00	9,429.75	145.29	147.29	90.000	-1,134.41	6,139.47	1,319.80	1,027.39	292.42	4.513		
15,600.00	9,431.49	15,701.00	9,431.49	147.59	149.54	90.000	-1,134.32	6,239.46	1,319.80	1,022.82	296.97	4.444		
15,700.00	9,433.24	15,801.00	9,433.24	149.88	151.81	90.000	-1,134.23	6,339.44	1,319.79	1,018.26	301.53	4.377		
15,800.00	9,434.98	15,901.00	9,434.98	152.18	154.07	90.000	-1,134.15	6,439.43	1,319.78	1,013.69	306.09	4.312		
15,900.00	9,436.73	16,001.00	9,436.73	154.47	156.33	90.000	-1,134.06	6,539.41	1,319.78	1,009.12	310.65	4.248		
16,000.00	9,438.47	16,101.00	9,438.47	156.77	158.59	90.000	-1,133.97	6,639.40	1,319.77	1,004.56	315.21	4.187		
16,100.00	9,440.22	16,201.00	9,440.22	159.07	160.86	90.000	-1,133.89	6,739.38	1,319.76	999.98	319.78	4.127		
16,200.00	9,441.96	16,301.00	9,441.96	161.36	163.13	90.000	-1,133.80	6,839.37	1,319.76	995.41	324.34	4.069		
16,200.00	9,441.90	16,301.00	9,441.96 9,443.71	161.56	165.40	90.000	-1,133.71	6,939.37	1,319.76	995.41 990.84	328.91	4.069		
16,400.00	9,445.46	16,501.00	9,445.46	165.96	167.66	90.000	-1,133.63	7,039.34	1,319.74	986.26	333.48	3.957		
16,500.00	9,447.20	16,601.00	9,447.20	168.26	169.93	90.000	-1,133.54	7,139.32	1,319.74	981.69	338.05	3.904		
16,600.00	9,448.95	16,701.00	9,448.95	170.55	172.21	90.000	-1,133.45	7,239.30	1,319.73	977.11	342.62	3.852		
16,700.00	9,450.69	16,801.00	9,450.69	172.85	174.48	90.000	-1,133.37	7,339.29	1,319.73	972.53	347.19	3.801		
16,800.00	9,452.44	16,901.00	9,452.44	175.15	176.75	90.000	-1,133.28	7,439.27	1,319.72	967.95	351.77	3.752		
16,900.00	9,454.18	17,001.00	9,454.18	177.45	179.02	90.000	-1,133.19	7,539.26	1,319.71	963.37	356.34	3.704		
17,000.00	9,455.93	17,101.00	9,455.93	179.75	181.30	90.000	-1,133.11	7,639.24	1,319.71	958.79	360.91	3.657		
17,100.00	9,457.67	17,201.00	9,457.67	182.05	183.57	90.000	-1,133.02	7,739.23	1,319.70	954.21	365.49	3.611		
47.000.00	0 450 40	47.004.00	0 450 40	404.05	405.05	00.000	4 400 00	7 000 04	4 040 00	040.00	070.07	0.500		
17,200.00	9,459.42	17,301.00	9,459.42	184.35	185.85	90.000	-1,132.93	7,839.21	1,319.69	949.63	370.07	3.566		
17,300.00	9,461.16	17,401.00	9,461.16	186.65	188.13	90.000	-1,132.85	7,939.20	1,319.69	945.04	374.64	3.523		
17,400.00	9,462.91	17,501.00	9,462.91	188.94	190.40	90.000	-1,132.76	8,039.18	1,319.68	940.46	379.22	3.480		
17,500.00	9,464.65	17,601.00	9,464.65	191.24	192.68	90.000	-1,132.67	8,139.17	1,319.68	935.87	383.80	3.438		
17,600.00	9,466.40	17,701.00	9,466.40	193.54	194.96	90.000	-1,132.59	8,239.15	1,319.67	931.29	388.38	3.398		
47 700 00	0 400 44	47.004.00	0.400.44	405.04	407.04	00.000	4 400 50	0.000.44	4 040 00	000 70	202.00	0.050		
17,700.00	9,468.14	17,801.00	9,468.14	195.84	197.24	90.000	-1,132.50	8,339.14	1,319.66	926.70	392.96	3.358		
17,800.00	9,469.89	17,901.00	9,469.89	198.14	199.52	90.000	-1,132.41	8,439.12	1,319.66	922.11	397.55	3.320		
17,900.00	9,471.63	18,001.00	9,471.63	200.44	201.80	90.000	-1,132.33	8,539.11	1,319.65	917.52	402.13	3.282		
18,000.00	9,473.38	18,101.00	9,473.38	202.74	204.08	90.000	-1,132.24	8,639.09	1,319.64	912.93	406.71	3.245		
18,100.00	9,475.12	18,201.00	9,475.12	205.05	206.37	90.000	-1,132.15	8,739.08	1,319.64	908.34	411.30	3.208		
10 000 00	0 470 07	10 204 00	0.470.07	007.05	202.25	00.000	1 400 07	0.000.00	1 940 00	000 75	445.00	0 470		
18,200.00	9,476.87	18,301.00	9,476.87	207.35	208.65	90.000	-1,132.07	8,839.06	1,319.63	903.75	415.88	3.173		
18,300.00	9,478.61	18,401.00	9,478.61	209.65	210.93	90.000	-1,131.98	8,939.05	1,319.62	899.16	420.47	3.138		
18,400.00	9,480.36	18,501.00	9,480.36	211.95	213.21	90.000	-1,131.89	9,039.03	1,319.62	894.57	425.05	3.105		
18,500.00	9,482.11	18,601.00	9,482.11	214.25	215.50	90.000	-1,131.81	9,139.01	1,319.61	889.97	429.64	3.071		
18,600.00	9,483.85	18,701.00	9,483.85	216.55	217.78	90.000	-1,131.72	9,239.00	1,319.61	885.38	434.22	3.039		
18,700.00	9,485.60	18,801.00	9,485.60	218.85	220.07	90.000	-1,131.63	9,338.98	1,319.60	880.79	438.81	3.007		
18,800.00	9,487.34	18,901.00	9,487.34	221.15	222.35	90.000	-1,131.55	9,438.97	1,319.59	876.19	443.40	2.976		
18,900.00	9,489.09	19,001.00	9,489.09	223.45	224.64	90.000	-1,131.46	9,538.95	1,319.59	871.60	447.99	2.946		
19,000.00	9,490.83	19,101.00	9,490.83	225.76	226.93	90.000	-1,131.37	9,638.94	1,319.58	867.00	452.58	2.916		
19,100.00	9,492.58	19,201.00	9,492.58	228.06	229.21	90.000	-1,131.29	9,738.92	1,319.57	862.41	457.17	2.886		
19,200.00	9,494.32	19,301.00	9,494.32	230.36	231.50	90.000	-1,131.20	9,838.91	1,319.57	857.81	461.76	2.858		
19,202.48	9,494.37	19,303.31	9,494.36	230.42	231.55	90.000	-1,131.20	9,841.21	1,319.57	857.70	461.87	2.857		
19,247.64	9,495.15	19,303.31	9,494.36	231.46	231.55	90.000	-1,131.20	9,841.21	1,320.34	857.50	462.85	2.853 SF		

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

Anticollision Report

MarathonOil Corporation.

Offset Site Error: 0.00 usft

Company:	Marathon Oil Permian LLC	Local Co-ordinate Reference:	Well Decimus 5 WXY Fed Com 2H
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 2H	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)

rvey Progr Refe	ram: 96- rence	Off	set	Semi N	lajor Axis		Offset Wellb	ore Centre	Dist	Rule Assi tance	gned:		Offset Well Error:	1.00
leasured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	+N/-S	+E/-W	Between Centres	Between Ellipses	Minimum Separation	Separation Factor	Warning	
(usft)	(usft)	(usft)	(usft)	(usft)	(usft)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)	ractor		
0.00	0.00	37.99	7.59	1.00	1.00	-14.282	4,324.83	-1,100.96	4,462.77					
100.00	100.00	133.85	103.44	1.13	1.08	-14.289	4,324.44	-1,101.39	4,462.50	4,460.32	2.18	2,048.781		
111.73	111.73	142.13	111.73	1.18	1.10	-14.290	4,324.42	-1,101.46	4,462.49	4,460.26	2.24	1,994.550		
200.00	200.00	208.92	178.51	1.66	1.30	-14.299	4,324.43	-1,102.22	4,462.74	4,459.86	2.88	1,551.665		
300.00	300.00	321.03	290.61	2.06	1.64	-14.322	4,324.55	-1,104.09	4,463.28	4,459.66	3.62	1,231.302		
400.00	400.00	467.20	436.75	2.39	2.37	-14.358	4,323.42	-1,106.69	4,462.97	4,458.57	4.40	1,014.265		
500.00	500.00	600.84	570.36	2.69	2.92	-14.383	4,321.30	-1,108.18	4,461.69	4,456.61	5.08	878.364		
600.00	600.00	691.37	660.88	2.96	3.19	-14.393	4,319.77	-1,108.59	4,460.17	4,454.55	5.62	793.610		
700.00	700.00	767.00	736.50	3.21	3.43	-14.406	4,318.77	-1,109.37	4,459.13	4,453.03	6.10	730.941		
800.00	800.00	871.28	840.76	3.44	3.80	-14.430	4,317.59	-1,111.02	4,458.43	4,451.76	6.68	667.754		
900.00	900.00	1,071.79	1,041.19	3.66	4.60	-14.455	4,312.51	-1,111.70	4,455.73	4,448.17	7.56	589.577		
,000.00	1,000.00	1,331.36	1,300.29	3.87	5.93	-14.366	4,302.08	-1,101.88	4,451.09	4,441.32	9.78	455.338		
,100.00	1,100.00	1,691.14	1,656.20	4.07	7.92	-13.911	4,274.77	-1,058.75	4,438.91	4,427.05	11.86	374.300		
1,200.00	1,200.00	1,917.53	1,879.53	4.26	8.74	-13.673	4,247.87	-1,033.42	4,424.26	4,411.32	12.94	341.908		
1,300.00	1,300.00	1,987.00	1,947.98	4.45	8.95	-13.597	4,239.13	-1,025.35	4,409.25	4,395.89	13.36	330.136		
1,400.00	1,399.98	2,060.63	2,020.57	4.73	9.19	40.970	4,230.36	-1,016.67	4,393.54	4,379.70	13.84	317.417		
,500.00	1,499.84	2,122.79	2,081.92	5.02	9.39	41.303	4,223.28	-1,009.60	4,375.89	4,361.60	14.29	306.307		
,600.00	1,599.45	2,177.00	2,135.48	5.32	9.56	41.668	4,217.60	-1,003.46	4,356.57	4,341.86	14.71	296.170		
,700.00	1,698.70	2,236.46	2,194.32	5.63	9.77	42.084	4,211.83	-997.09	4,335.65	4,320.47	15.18	285.624		
,800.00	1,797.47	2,271.00	2,228.54	5.97	9.89	42.476	4,208.67	-993.72	4,313.23	4,297.65	15.58	276.916		
,900.00	1,895.62	2,350.00	2,306.97	6.32	10.18	43.023	4,202.23	-986.77	4,289.29	4,273.13	16.15	265.563		
,900.13	1,895.75	2,350.00	2,306.97	6.32	10.18	43.023	4,202.23	-986.77	4,289.25	4,273.10	16.15	265.555		
,000.00	1,993.44	2,405.59	2,362.24	6.61	10.43	43.181	4,198.22	-982.26	4,265.07	4,248.42	16.65	256.109		
,100.00	2,091.25	2,832.73	2,785.06	6.92	12.45	44.393	4,151.51	-946.75	4,237.71	4,218.88	18.83	225.015		
2,200.00	2,189.06	2,893.00	2,844.39	7.25	12.66	44.583	4,143.04	-940.36	4,206.95	4,187.63	19.32	217.764		
2,300.00	2,286.88	2,968.86	2,919.09	7.60	12.93	44.834	4,132.93	-931.85	4,176.85	4,156.98	19.87	210.254		
2,400.00	2,384.69	3,045.70	2,994.80	7.96	13.19	45.088	4,122.96	-923.38	4,147.22	4,126.81	20.42	203.113		
,500.00	2,482.51	3,108.78	3,057.03	8.33	13.41	45.293	4,114.96	-916.91	4,118.16	4,097.21	20.94	196.622		
,600.00	2,580.32	3,175.00	3,122.49	8.71	13.64	45.507	4,107.25	-910.49	4,090.15	4,068.65	21.50	190.282		
,700.00	2,678.13	3,222.99	3,169.99	9.10	13.81	45.662	4,102.06	-906.02	4,063.03	4,041.03	22.00	184.702		
,781.91	2,758.25	3,280.24	3,226.70	9.41	14.01	45.846	4,096.13	-900.85	4,041.40	4,018.95	22.45	180.023		
,800.00	2,775.96	3,295.09	3,241.42	9.47	14.06	45.824	4,094.62	-899.53	4,036.72	4,014.17	22.54	179.057		
900.00	2,874.23	3,379.24	3,324.83	9.91	14.35	45.712	4,086.20	-892.26	4,012.44	3,989.27	23.17	173.165		
,000.00	2,973.09	3,514.76	3,459.13	10.34	14.83	45.739	4,072.62	-880.37	3,990.71	3,966.77	23.94	166.676		
,100.00	3,072.42	3,648.00	3,590.77	10.76	15.33	45.766	4,057.41	-866.44	3,969.54	3,944.83	24.72	160.609		
,200.00	3,172.09	3,721.67	3,663.57	11.15	15.59	45.651	4,048.98	-858.91	3,951.03	3,925.76	25.26	156.395		
300.00	3,271.97	3,804.29	3,745.31	11.50	15.88	45.565	4,040.13	-850.85	3,935.67	3,909.86	25.81	152.506		
,382.04	3,354.00	3,893.63	3,833.71	11.64	16.20	-8.734	4,030.62	-842.06	3,924.97	3,898.73	26.24	149.595		
,400.00	3,371.96	3,915.55	3,855.40	11.65	16.28	-8.708	4,028.24	-839.91	3,922.76	3,896.45	26.31	149.072		
,500.00 ,600.00	3,471.96 3,571.96	4,025.69 4,128.53	3,964.33 4,066.02	11.72 11.80	16.68 17.05	-8.580 -8.458	4,016.01 4,004.42	-829.23 -819.16	3,910.28 3,897.65	3,883.51 3,870.43	26.78 27.22	146.031 143.183		
500.00	5,571.80		4,000.02				7,004.42					140.100		
,700.00	3,671.96	4,215.00	4,151.51	11.88	17.37	-8.355	3,994.60	-810.73	3,884.97	3,857.35	27.62	140.651		
,800.008,	3,771.96	4,289.48	4,225.23	11.95	17.64	-8.273	3,986.42	-803.94	3,872.80	3,844.81	27.99	138.383		
,900.00	3,871.96	4,359.36	4,294.51	12.03	17.90	-8.204	3,979.28	-798.23	3,861.50	3,833.16	28.33	136.281		
,000.00	3,971.96 4,071.96	4,431.24 4,503.78	4,365.86 4,437.95	12.11 12.19	18.16 18.42	-8.141 -8.083	3,972.36 3,965.83	-792.97 -788.16	3,850.91 3,841.04	3,822.22 3,812.00	28.69 29.04	134.239 132.272		
,	4,071.00	4,000.70	-,-01.00	12.18	10.42		0,000.00	-750.10		0,012.00	20.04	102.212		
,200.00	4,171.96	4,590.00	4,523.66	12.26	18.73	-8.010	3,958.58	-782.20	3,831.73	3,802.30	29.43	130.191		
,300.00	4,271.96	4,836.76	4,768.33	12.34	19.66	-7.759	3,934.01	-761.98	3,820.81	3,790.48	30.33	125.973		
,400.00	4,371.96	4,940.44	4,870.87	12.42	20.05	-7.653	3,921.42	-753.23	3,807.61	3,776.82	30.79	123.661		
,500.00 ,600.00	4,471.96 4,571.96	5,010.84 5,077.26	4,940.54 5,006.37	12.50 12.57	20.32 20.58	-7.582 -7.521	3,913.10 3,905.84	-747.42 -742.42	3,794.81 3,782.94	3,763.66 3,751.43	31.15 31.51	121.812 120.068		
,	.,0. 1.00	0,077.20	0,000.07	12.07	20.00		0,000.04	, r£.7£	0,1 02.04	5,151.40	51.01	.20.000		
700.00	4,671.96	5,157.00	5,085.40	12.65	20.90	-7.436	3,897.66	-735.70	3,771.66	3,739.75	31.91	118.203		

7/22/2022 1:25:12PM

Anticollision Report

Marathon Oil Corporation.

Offset Site Error: 0.00 usft

Company:	Marathon Oil Permian LLC	Local Co-ordinate Reference:	Well Decimus 5 WXY Fed Com 2H
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 2H	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)

urvey Prog									-	Rule Assi	gned:		Offset Well Error:	1.00
Refe Measured	rence Vertical	Off Measured	set Vertical	Semi M Reference	lajor Axis Offset	Highside	Offset Wellb	ore Centre	Dis Between	tance Between	Minimum	Separation	Warning	
Depth	Depth	Depth	Depth		Chicot	Toolface	+N/-S	+E/-W	Centres	Ellipses	Separation	Factor		
(usft)	(usft)	(usft)	(usft)	(usft)	(usft)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)			
1,800.00	4,771.96	5,227.98	5,155.74	12.73	21.18	-7.347	3,890.94	-728.95	3,761.03	3,728.76	32.27	116.538		
,900.00	4,871.96	5,311.01	5,238.06	12.81	21.50	-7.238	3,883.72	-720.89	3,751.12	3,718.45	32.67	114.821		
,000.00	4,971.96	5,388.93	5,315.38	12.88	21.79	-7.143	3,877.13	-713.83	3,741.58	3,708.54	33.05	113.225		
,100.00	5,071.96	5,462.90	5,388.86	12.96	22.07	-7.059	3,871.38	-707.56	3,732.79	3,699.38	33.41	111.736		
,200.00	5,171.96	5,535.00	5,460.53	13.04	22.34	-6.981	3,866.05	-701.81	3,724.51	3,690.75	33.76	110.320		
5,300.00	5,271.96	5,629.00	5,554.05	13.12	22.68	-6.885	3,859.60	-694.78	3,716.79	3,682.61	34.18	108.732		
5,400.00	5,371.96	5,701.03	5,625.75	13.19	22.95	-6.814	3,855.12	-689.62	3,709.69	3,675.16	34.53	107.425		
5,500.00	5,471.96	5,796.44	5,720.75	13.27	23.29	-6.721	3,849.46	-682.89	3,702.96	3,668.00	34.96	105.925		
5,600.00	5,571.96	5,899.22	5,823.15	13.35	23.67	-6.633	3,843.24	-676.46	3,696.21	3,660.80	35.41	104.382		
5,700.00	5,671.96	12,589.00	9,288.86	13.43	67.48	-73.167	320.70	-714.73	3,649.27	3,604.08	45.19	80.755		
5,800.00	5,771.96	12,589.00	9,288.86	13.51	67.48	-73.167	320.70	-714.73	3,550.18	3,504.75	45.43	78.154		
5,900.00	5,871.96	12,589.00	9,288.86	13.58	67.48	-73.167	320.70	-714.73	3,451.14	3,405.47	45.67	75.571		
6,000.00	5,971.96	12,589.00	9,288.86	13.66	67.48	-73.167	320.70	-714.73	3,352.16	3,306.25	45.92	73.005		
6,100.00	6,071.96	12,589.00	9,288.86	13.74	67.48	-73.167	320.70	-714.73	3,253.25	3,207.07	46.17	70.456		
6,200.00	6,171.96	12,609.56	9,289.25	13.82	67.73	-75.573	300.28	-717.06	3,154.29	3,107.75	46.54	67.773		
6,300.00	6,271.96	12,610.85	9,289.28	13.90	67.74	-75.725	298.99	-717.20	3,055.50	3,008.68	46.82	65.258		
6,400.00	6,371.96	12,612.18	9,289.31	13.98	67.76	-75.882	297.67	-717.35	2,956.79	2,909.68	47.11	62.762		
6,500.00	6,471.96	12,613.55	9,289.34	14.05	67.77	-76.043	296.31	-717.51	2,858.17	2,810.76	47.41	60.285		
6,600.00	6,571.96	12,614.96	9,289.37	14.13	67.79	-76.210	294.92	-717.66	2,759.65	2,711.93	47.72	57.827		
6,700.00	6,671.96	12,616.41	9,289.40	14.21	67.81	-76.381	293.47	-717.82	2,661.23	2,613.19	48.05	55.389		
6,800.00	6,771.96	12,617.90	9,289.44	14.29	67.83	-76.558	291.99	-717.99	2,562.94	2,514.56	48.38	52.970		
6,900.00	6,871.96	12,619.44	9,289.47	14.37	67.84	-76.740	290.45	-718.16	2,464.79	2,416.05	48.74	50.572		
7,000.00	6,971.96	12,621.04	9,289.51	14.45	67.86	-76.929	288.87	-718.34	2,366.79	2,317.68	49.11	48.193		
7,100.00	7,071.96	12,622.68	9,289.55	14.52	67.88	-77.124	287.24	-718.52	2,268.96	2,219.45	49.50	45.836		
7,200.00	7,171.96	12,624.38	9,289.59	14.60	67.90	-77.325	285.56	-718.71	2,171.32	2,121.41	49.92	43.499		
7,300.00	7,271.96	12,626.13	9,289.64	14.68	67.92	-77.533	283.81	-718.90	2,073.91	2,023.55	50.36	41.184		
7,400.00	7,371.96	12,627.94	9,289.68	14.76	67.95	-77.748	282.01	-719.10	1,976.76	1,925.93	50.83	38.890		
7,500.00	7,471.96	12,629.82	9,289.73	14.70	67.97	-77.971	280.15	-719.31	1,879.90	1,828.56	51.34	36.619		
7,600.00	7,571.96	12,631.76	9,289.78	14.92	67.99	-78.202	278.22	-719.51	1,783.39	1,731.50	51.89	34.371		
7,700.00	7,671.96	12,633.76	9,289.84	15.00	68.01	-78.441	276.22	-719.32	1,687.27	1,634.79	52.49	32.148		
7,800.00	7,771.96	12,635.85	9,289.89	15.08	68.04	-78.689	274.16	-719.97	1,591.64	1,538.49	53.14	29.949		
		40.000.04	0 000 05	45.45	~~~~~	70.040	070.04	700.04	4 400 57		50.00	07 770		
7,900.00	7,871.96	12,638.01	9,289.95	15.15	68.06	-78.946	272.01	-720.21	1,496.57	1,442.69	53.88	27.778		
8,000.00	7,971.96	12,640.25	9,290.02	15.23	68.09	-79.214	269.79	-720.45	1,402.18	1,347.49	54.70	25.636		
8,100.00	8,071.96	12,642.57	9,290.09	15.31	68.12	-79.491	267.47	-720.70	1,308.63	1,253.00	55.62	23.526		
8,200.00 8,300.00	8,171.96 8,271.96	12,644.99 12,647.51	9,290.16 9,290.23	15.39 15.47	68.15 68.18	-79.780 -80.081	265.07 262.57	-720.96 -721.24	1,216.09 1,124.82	1,159.40 1,066.91	56.69 57.92	21.453 19.422		
0,000.00	0,271.000	12,011.01	0,200.20	10.11	00.10	00.001	202.01		1,121.02	1,000.01	01.02	10.122		
8,400.00	8,371.96	12,650.12	9,290.31	15.55	68.21	-80.394	259.97	-721.52	1,035.16	975.81	59.35	17.441		
8,500.00	8,471.96	12,652.85	9,290.40	15.63	68.24	-80.720	257.26	-721.81	947.57	886.52	61.05	15.521		
8,600.00	8,571.96	12,655.69	9,290.49	15.71	68.28	-81.060	254.44	-722.12	862.66	799.60	63.07	13.679		
8,700.00 8,783.22	8,671.96 8,755.19	12,658.65 12,661.22	9,290.59 9,290.67	15.79 15.84	68.31 68.34	-81.415 -81.723	251.50 248.95	-722.43 -722.71	781.33 717.23	715.86 649.44	65.47 67.80	11.934 10.579		
0,100.22	0,100.18	12,001.22	3,230.07	15.64	00.04	-01.723	240.93	-122.11	111.23	048.44	07.00	10.378		
8,800.00	8,771.96	12,661.72	9,290.69	15.84	68.35	-171.992	248.44	-722.76	704.96	636.66	68.30	10.322		
8,850.00	8,821.81	12,662.95	9,290.73	15.81	68.36	-172.724	247.23	-722.89	671.71	601.74	69.96	9.601		
8,900.00	8,871.16	12,663.74	9,290.76	15.77	68.37	-173.212	246.44	-722.97	644.21	572.41	71.79	8.973		
8,950.00	8,919.62	12,664.09	9,290.77	15.73	68.37	-173.511	246.10	-723.01	623.45	549.73	73.72	8.457		
9,000.00	8,966.83	12,663.96	9,290.77	15.68	68.37	-173.651	246.22	-723.00	610.29	534.67	75.62	8.071		
9,050.00	9,012.43	12,663.34	9,290.74	15.63	68.37	-173.648	246.84	-722.93	605.32	527.95	77.37	7.824		
9,054.52	9,016.46	12,663.26	9,290.74	15.63	68.37	-173.641	246.92	-722.92	605.28	527.77	77.51	7.809 CC,	ES	
9,100.00	9,056.07	12,662.22	9,290.71	15.59	68.35	-173.503	247.95	-722.81	608.78	529.92	78.86	7.720 SF		
9,150.00	9,097.42	12,660.58	9,290.65	15.56	68.33	-173.205	249.58	-722.64	620.49	540.46	80.03	7.753		
9,200.00	9,136.17	12,658.42	9,290.58	15.55	68.31	-172.732	251.73	-722.41	639.93	559.06	80.87	7.913		
9,250.00	9,172.02	12,655.73	9,290.49	15.56	68.28	-172.043	254.40	-722.12	666.26	584.84	81.42	8.183		
-,	5,.72.02	.2,000.10	0,200.40	10.00	55.20		204.40		550.20	554.04	51.72	000		

Anticollision Report



Offset Site Error: 0.00 usft

Company:	Marathon Oil Permian LLC	Local Co-ordinate Reference:	Well Decimus 5 WXY Fed Com 2H
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 2H	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)

urvey Prog Refe	ram: 96- erence	- Off:	set	Semi N	lajor Axis		Offset Wellb	ore Centre	Dist	Rule Assi tance	gned:		Offset Well Error:	1.00 (
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	+N/-S	+E/-W	Between Centres	Between Ellipses	Minimum Separation	Separation Factor	Warning	
(usft)	(usft)	(usft)	(usft)	(usft)	(usft)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)			
9,300.00	9,204.69	12,652.53	9,290.39	15.60	68.24	-171.068	257.58	-721.78	698.52	616.78	81.74	8.546		
9,350.00	9,233.95	12,648.81	9,290.27	15.68	68.19	-169.692	261.28	-721.38	735.69	653.80	81.89	8.984		
9,400.00	9,259.56	12,644.60	9,290.15	15.83	68.14	-167.712	265.46	-720.92	776.80	694.87	81.93	9.482		
9,450.00	9,281.33	12,639.91	9,290.01	16.06	68.09	-164.750	270.12	-720.41	820.97	739.06	81.91	10.023		
9,500.00	9,299.10	12,634.78	9,289.86	16.37	68.03	-160.021	275.22	-719.85	867.41	785.55	81.85	10.597		
9,550.00	9,312.73	12,629.25	9,289.72	16.78	67.96	-151.692	280.71	-719.25	915.44	833.66	81.79	11.193		
9,600.00	9,322.11	12,623.36	9,289.57	17.27	67.89	-134.941	286.56	-718.60	964.49	882.77	81.72	11.802		
9,650.00	9,327.18	12,617.18	9,289.42	17.83	67.82	-100.377	292.71	-717.91	1,014.06	932.40	81.66	12.418		
9,673.22	9,328.06	12,614.22	9,289.35	18.11	67.78	-79.850	295.65	-717.58	1,037.14	955.50	81.63	12.705		
9,700.00	9,328.52	12,610.77	9,289.27	18.45	67.74	-80.098	299.08	-717.19	1,063.74	982.14	81.60	13.036		
9,800.00	9,330.27	12,597.65	9,289.01	19.86	67.59	-80.934	312.10	-715.71	1,163.08	1,081.59	81.49	14.273		
9,900.00	9,332.01	12,584.65	9,288.79	21.43	67.43	-81.633	325.02	-714.23	1,262.41	1,181.02	81.39	15.511		
10,000.00	9,333.76	12,572.30	9,288.62	23.13	67.29	-82.208	337.28	-712.81	1,361.73	1,280.42	81.31	16.747		
10,100.00	9,335.50	12,559.84	9,288.50	24.93	67.14	-82.720	349.66	-711.37	1,461.05	1,379.81	81.24	17.985		
10,200.00	9,337.25	12,547.26	9,288.42	26.81	66.99	-83.182	362.15	-709.91	1,560.35	1,479.19	81.17	19.224		
10,300.00	9,339.00	12,534.56	9,288.39	28.75	66.84	-83.603	374.77	-708.43	1,659.66	1,578.55	81.10	20.464		
	.,		.,	9					,	,				
10,400.00	9,340.74	12,521.74	9,288.40	30.74	66.69	-83.989	387.50	-706.93	1,758.95	1,677.91	81.04	21.704		
0,500.00	9,342.49	12,508.80	9,288.47	32.78	66.54	-84.347	400.35	-705.41	1,858.24	1,777.25	80.99	22.944		
10,600.00	9,344.23	12,495.73	9,288.58	34.85	66.39	-84.680	413.33	-703.87	1,957.53	1,876.58	80.94	24.184		
10,700.00	9,345.98	12,495.00	9,288.59	36.94	66.38	-84.698	414.06	-703.79	2,056.84	1,975.79	81.05	25.377		
10,800.00	9,347.72	12,477.07	9,288.78	39.07	66.17	-85.106	431.86	-701.69	2,156.12	2,075.16	80.96	26.633		
	0.040.47	10 100 10	0.000.00		00.07	05 000	440.74	700.00	0.055.40	0 171 10	00.07	07.055		
10,900.00	9,349.47	12,468.13	9,288.88	41.21	66.07	-85.289	440.74	-700.66	2,255.43	2,174.46	80.97	27.855		
11,000.00	9,351.21	12,459.38	9,288.97	43.36	65.96	-85.457	449.44	-699.66	2,354.76	2,273.77	80.99	29.075		
11,100.00	9,352.96	12,450.80	9,289.07	45.54	65.86	-85.612	457.96	-698.69	2,454.11	2,373.09	81.01	30.292		
11,200.00	9,354.70	12,442.39	9,289.16	47.72	65.76	-85.754	466.32	-697.75	2,553.47	2,472.43	81.04	31.508		
11,300.00	9,356.45	12,434.15	9,289.25	49.92	65.67	-85.886	474.51	-696.84	2,652.84	2,571.77	81.07	32.721		
11,400.00	9,358.19	12,426.07	9,289.34	52.13	65.57	-86.009	482.53	-695.96	2,752.22	2,671.11	81.11	33.932		
11,500.00	9,359.94	12,418.15	9,289.43	54.34	65.48	-86.123	490.41	-695.10	2,851.62	2,770.47	81.15	35.140		
11,600.00	9,361.68	12,400.00	9,289.63	56.56	65.27	-86.365	508.45	-693.16	2,951.06	2,869.95	81.11	36.384		
11,700.00	9,363.43	12,400.00	9,289.63	58.79	65.27	-86.365	508.45	-693.16	3,050.45	2,969.23	81.22	37.559		
11,800.00	9,365.17	12,400.00	9,289.63	61.02	65.27	-86.365	508.45	-693.16	3,149.89	3,068.56	81.32	38.733		
,000.00	0,000.11	12,100.00	0,200.00	01102	00.21	00.000	000.10	000.10	0,110.00	0,000.00	01.02	00.100		
11,900.00	9,366.92	12,400.00	9,289.63	63.26	65.27	-86.365	508.45	-693.16	3,249.36	3,167.93	81.43	39.906		
12,000.00	9,368.66	12,400.00	9,289.63	65.51	65.27	-86.365	508.45	-693.16	3,348.86	3,267.33	81.53	41.076		
12,100.00	9,370.41	12,378.27	9,289.84	67.76	65.01	-86.617	530.07	-690.93	3,448.26	3,366.78	81.48	42.319		
12,200.00	9,372.15	12,372.63	9,289.89	70.01	64.95	-86.676	535.68	-690.36	3,547.75	3,466.20	81.55	43.504		
12,300.00	9,373.90	12,367.13	9,289.93	72.26	64.88	-86.731	541.15	-689.82	3,647.25	3,565.63	81.62	44.686		
		10.05					_ · · · · ·			0.007-07		15		
12,400.00	9,375.65	12,361.76	9,289.97	74.52	64.82	-86.783	546.49	-689.30	3,746.76	3,665.07	81.69	45.866		
12,500.00	9,377.39	12,356.53	9,290.00	76.78	64.76	-86.831	551.70	-688.79	3,846.29	3,764.53	81.76	47.042		
12,600.00	9,379.14	12,351.41	9,290.03	79.05	64.70	-86.877	556.79	-688.30	3,945.83	3,863.99	81.84	48.215		
12,700.00	9,380.88	12,346.42	9,290.05	81.31	64.64	-86.920	561.77	-687.83	4,045.37	3,963.46	81.91	49.385		
12,800.00	9,382.63	12,341.54	9,290.07	83.58	64.58	-86.960	566.62	-687.38	4,144.93	4,062.94	81.99	50.552		
12.900.00	9,384.37	12,336.78	9,290.09	85.85	64.53	-86.999	571.37	-686.94	4,244.50	4,162.42	82.07	51.716		
13,000.00	9,386.12	12,332.12	9,290.10	88.13	64.47	-87.035	576.01	-686.52	4,344.07	4,261.92	82.15	52.877		
13,100.00	9,387.86	12,306.00	9,290.10 9,290.13	90.40	64.17	-87.035	602.03	-684.24	4,443.77	4,201.92	82.13	54.101		
13,200.00	9,389.61	12,306.00	9,290.13	90.40	64.17	-87.215	602.03	-684.24	4,443.77	4,461.08	82.14	55.241		
13,300.00	9,391.35	12,306.00	9,290.13	94.95	64.17	-87.215	602.03	-684.24	4,642.90	4,560.55	82.35	56.379		
,	2,231.00		-,	000			502.00		.,. 12.00	.,250.00	52.00			
13,400.00	9,393.10	12,306.00	9,290.13	97.23	64.17	-87.215	602.03	-684.24	4,742.49	4,660.03	82.46	57.514		
13,500.00	9,394.84	12,306.00	9,290.13	99.51	64.17	-87.215	602.03	-684.24	4,842.10	4,759.54	82.56	58.647		
13,600.00	9,396.59	12,306.00	9,290.13	101.80	64.17	-87.215	602.03	-684.24	4,941.73	4,859.06	82.67	59.776		
13,700.00	9,398.33	12,306.00	9,290.13	104.08	64.17	-87.215	602.03	-684.24	5,041.37	4,958.59	82.78	60.903		
13,800.00	9,400.08	12,306.00	9,290.13	106.36	64.17	-87.215	602.03	-684.24	5,141.02	5,058.14	82.88	62.027		
	0.46	10 000 07	0.000		o · · -	07 5 1 -					<i>~~~~</i>			
3,900.00	9,401.82	12,306.00	9,290.13	108.65	64.17	-87.215	602.03	-684.24	5,240.69	5,157.70	82.99	63.147		

7/22/2022 1:25:12PM

Anticollision Report

MarathonOil Corporation.

Offset Site Error: 0.00 usft

Company:	Marathon Oil Permian LLC	Local Co-ordinate Reference:	Well Decimus 5 WXY Fed Com 2H
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 2H	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)

urvey Progra			aat	Com! I	laior Axis		Official Mall	ara Cantra	D'-	Rule Assi	gned:		Offset Well Error:	1.00 us
Refer Measured Depth	vence Vertical Depth	Off Measured Depth	set Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbo	+E/-W	Dis Between Centres	tance Between Ellipses	Minimum Separation	Separation Factor	Warning	
(usft)	(usft)	(usft)	(usft)	(usft)	(usft)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)	Factor		
14,000.00	9,403.57	12,306.00	9,290.13	110.93	64.17	-87.215	602.03	-684.24	5,340.37	5,257.27	83.10	64.265		
14,100.00	9,405.31	12,306.00	9,290.13	113.22	64.17	-87.215	602.03	-684.24	5,440.07	5,356.86	83.21	65.380		
14,200.00	9,407.06	12,281.15	9,290.09	115.50	63.88	-87.359	626.79	-682.19	5,539.65	5,456.43	83.23	66.560		
14,300.00	9,408.80	12,277.24	9,290.07	117.79	63.83	-87.379	630.69	-681.88	5,639.33	5,556.01	83.32	67.679		
14,400.00	9,410.55	12,273.39	9,290.06	120.08	63.79	-87.399	634.53	-681.58	5,739.01	5,655.59	83.42	68.795		
14,500.00	9,412.30	12,269.61	9,290.04	122.37	63.74	-87.418	638.30	-681.28	5,838.70	5,755.18	83.52	69.907		
14,600.00	9,414.04	12,265.90	9,290.02	124.66	63.70	-87.436	642.00	-680.99	5,938.39	5,854.77	83.62	71.015		
14,700.00	9,415.79	12,262.25	9,290.01	126.95	63.66	-87.453	645.64	-680.71	6,038.09	5,954.37	83.72	72.121		
14,800.00	9,417.53	12,258.66	9,289.99	129.24	63.62	-87.469	649.21	-680.44	6,137.80	6,053.97	83.82	73.223		
14,900.00	9,419.28	12,255.14	9,289.96	131.53	63.57	-87.485	652.72	-680.17	6,237.51	6,153.58	83.93	74.321		
15,000.00	9,421.02	12,251.68	9,289.94	133.83	63.53	-87.500	656.17	-679.92	6,337.22	6,253.19	84.03	75.416		
15,100.00	9,422.77	12,248.27	9,289.92	136.12	63.49	-87.514	659.57	-679.66	6,436.94	6,352.80	84.14	76.507		
15,200.00	9,424.51	12,244.93	9,289.90	138.41	63.46	-87.528	662.91	-679.42	6,536.66	6,452.42	84.24	77.595		
15,300.00	9,426.26	12,241.64	9,289.87	140.71	63.42	-87.542	666.19	-679.18	6,636.39	6,552.05	84.35	78.680		
15,400.00	9,428.00	12,238.40	9,289.85	143.00	63.38	-87.554	669.42	-678.94	6,736.13	6,651.67	84.45	79.760		
15,500.00	9,429.75	12,211.00	9,289.59	145.29	63.06	-87.652	696.75	-677.04	6,835.96	6,751.45	84.51	80.893		
10,000.00	0,420.70	12,211.00	0,200.00	140.20	00.00	-01.002	000.10	-011.04	0,000.00	0,701.40	04.01	00.000		
15,600.00	9,431.49	12,211.00	9,289.59	147.59	63.06	-87.652	696.75	-677.04	6,935.68	6,851.05	84.62	81.960		
15,700.00	9,433.24	12,211.00	9,289.59	149.88	63.06	-87.652	696.75	-677.04	7,035.40	6,950.66	84.74	83.023		
15,800.00	9,434.98	12,211.00	9,289.59	152.18	63.06	-87.652	696.75	-677.04	7,135.14	7,050.28	84.86	84.083		
15,900.00	9,436.73	12,207.73	9,289.56	154.47	63.02	-87.662	700.01	-676.81	7,234.88	7,149.91	84.97	85.147		
16,000.00	9,438.47	12,200.54	9,289.48	156.77	62.94	-87.684	707.18	-676.29	7,334.62	7,249.54	85.07	86.214		
16,100.00	9,440.22	12,193.35	9,289.40	159.07	62.86	-87.706	714.36	-675.78	7,434.36	7,349.18	85.18	87.278		
16,200.00	9,441.96	12,186.16	9,289.32	161.36	62.77	-87.727	721.53	-675.27	7,534.10	7,448.81	85.29	88.338		
16,300.00	9,443.71	12,215.24	9,289.64	163.66	63.11	-87.638	692.52	-677.32	7,633.91	7,548.44	85.46	89.323		
16,400.00	9,445.46	12,191.48	9,289.38	165.96	62.84	-87.712	716.22	-675.71	7,733.67	7,648.14	85.54	90.412		
16,500.00	9,447.20	12,166.12	9,289.10	168.26	62.54	-87.783	741.52	-673.94	7,833.42	7,747.81	85.62	91.494		
16,600.00	9,448.95	12,138.98	9,288.80	170.55	62.23	-87.852	768.58	-671.98	7,933.16	7,847.46	85.70	92.568		
16,700.00	9,450.69	12,117.00	9,288.56	172.85	61.98	-87.904	790.50	-670.33	8,032.87	7,947.07	85.80	93.624		
16,800.00	9,452.44	12,109.13	9,288.47	175.15	61.89	-87.922	798.35	-669.74	8,132.58	8,046.67	85.91	94.659		
16,900.00	9,454.18	12,102.80	9,288.41	177.45	61.81	-87.936	804.66	-669.26	8,232.29	8,146.26	86.03	95.688		
17,000.00	9,455.93	12,096.50	9,288.35	179.75	61.74	-87.950	810.95	-668.79	8,332.00	8,245.85	86.15	96.714		
17 100 00	0 457 67	10,000,00	0.288.20	192.05	61.67	97.064	017.01	669.30	0 404 70	0.245.45	96.07	07 726		
17,100.00 17,200.00	9,457.67 9,459.42	12,090.22 12,083.97	9,288.29 9,288.23	182.05 184.35	61.67 61.60	-87.964 -87.978	817.21 823.44	-668.32 -667.85	8,431.72 8,531.43	8,345.45 8,445.04	86.27 86.39	97.736 98.754		
17,200.00		12,083.97	9,288.23 9,288.18	186.65	61.50	-87.978	829.65	-667.38	8,631.45 8,631.15	8,445.04 8,544.63	86.51	98.754 99.769		
17,400.00	9,461.16 9,462.91	12,071.74	9,288.13	188.94	61.46	-88.006	835.84	-666.92	8,730.86	8,644.23	86.63	100.780		
17,500.00	9,462.91	12,065.36	9,288.08	191.24	61.39	-88.019	841.99	-666.46	8,830.58	8,743.83	86.75	100.788		
17,600.00	9,466.40	12,059.21	9,288.03	193.54	61.32	-88.033	848.13	-666.00	8,930.30	8,843.42	86.88	102.792		
17,700.00	9,468.14	12,053.08	9,287.99	195.84	61.25	-88.047	854.24	-665.55	9,030.02	8,943.02	87.00	103.792		
17,800.00	9,469.89	12,046.98	9,287.95	198.14	61.18	-88.060	860.32	-665.10	9,129.74	9,042.61	87.13	104.789		
17,900.00 18,000.00	9,471.63 9,473.38	12,040.90 12,034.85	9,287.92 9,287.89	200.44 202.74	61.11 61.04	-88.074 -88.087	866.38 872.42	-664.65 -664.21	9,229.46 9,329.19	9,142.21 9,241.81	87.25 87.38	105.782 106.772		
0,000.00	0,110.00	12,001.00	0,201.00	202.7	01.01	00.001	012.12	001.21	0,020.10	0,211.01	01.00	100.112		
18,100.00	9,475.12	12,023.00	9,287.83	205.05	60.90	-88.113	884.24	-663.34	9,428.91	9,341.41	87.50	107.758		
18,200.00	9,476.87	12,023.00	9,287.83	207.35	60.90	-88.113	884.24	-663.34	9,528.64	9,441.01	87.63	108.740		
18,300.00	9,478.61	12,023.00	9,287.83	209.65	60.90	-88.113	884.24	-663.34	9,628.36	9,540.61	87.75	109.719		
18,400.00	9,480.36	12,023.00	9,287.83	211.95	60.90	-88.113	884.24	-663.34	9,728.10	9,640.22	87.88	110.694		
18,500.00	9,482.11	12,023.00	9,287.83	214.25	60.90	-88.113	884.24	-663.34	9,827.84	9,739.83	88.01	111.666		
18,600.00	9,483.85	12,023.00	9,287.83	216.55	60.90	-88.113	884.24	-663.34	9,927.58	9,839.44	88.14	112.634		
18,700.00	9,485.60	12,023.00	9,287.83	218.85	60.90	-88.113	884.24	-663.34	10,027.33	9,939.06	88.27	113.599		
18,800.00	9,487.34	12,023.00	9,287.83	221.15	60.90	-88.113	884.24	-663.34	10,127.09	10,038.69	88.40	114.561		
18,900.00	9,489.09	12,023.00	9,287.83	223.45	60.90	-88.113	884.24	-663.34	10,226.85	10,138.32	88.53	115.519		
19,000.00	9,490.83	12,023.00	9,287.83	225.76	60.90	-88.113	884.24	-663.34	10,326.61	10,237.95	88.66	116.474		
19,100.00	9,492.58	12,023.00	9,287.83	228.06	60.90	-88.113	884.24	-663.34	10,426.38	10,337.59	88.79	117.425		
	0,702.00	12,020.00	0,201.00	220.00	55.50	-00.110	004.24	-000.04	10,420.00	.0,001.00	50.15	117.423		

Received by OCD: 8/24/2023 6:46:43 AM

PHOENIX TECHNOLOGY SERVICES

Anticollision Report



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Company:	Marathon Oil Permian LLC	Local Co-ordinate Reference:	Well Decimus 5 WXY Fed Com 2H
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 2H	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 Des	sign: La	arry Wolfish	y Wolfish 01-23S-27E RB - 204H - OH / 64293 - Surveys (Patterson 813)											0.00 usft
Survey Progr Refer Measured Depth	am: 9 rence Vertical Depth	6- Off Measured Depth	set Vertical Depth	Semi M Reference	laior Axis Offset	Highside Toolface	Offset Wellbo +N/-S	+E/-W	Dis Between Centres	Rule Assi tance Between Ellipses	gned: Minimum Separation	Separation Factor	Offset Well Error: Warning	1.00 usft
(usft)	(usft)	(usft)	(usft)	(usft)	(usft)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)			
19,200.00	9,494.32	11,993.14	9,287.75	230.36	60.57	-88.181	914.03	-661.21	10,526.05	10,437.13	88.92	118.376		
19,247.64	9,495.15	11,991.80	9,287.75	231.46	60.55	-88.184	915.36	-661.12	10,573.58	10,484.60	88.98	118.827		

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation 7/22/2022 1:25:12PM

Anticollision Report

Marat	hon Oil
	Corporation.

Offset Site Error: 0.00 usft

Company:	Marathon Oil Permian LLC	Local Co-ordinate Reference:	Well Decimus 5 WXY Fed Com 2H
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 2H	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 5 WXY Fed Com - Maximus 5 WXY Fed Com 1H - OH - Plan 1 07-22-22

Refe easured Depth	vertical	Off Measured	Vertical	Semi N Reference	lajor Axis Offset	Highside Toolface	Offset Wellbo	ere Centre +E/-W	Dist Between Centres	tance Between Ellipses	Minimum	Separation	Warning	
Jepth (usft)	Depth (usft)	Depth (usft)	Depth (usft)	(usft)	(usft)	(°)	(usft)	(usft)	(usft)	Lilipses (usft)	Separation (usft)	Factor		
0.00	0.00	1.00	0.00	1.00	1.00	4.837	1,870.82	158.31	1,877.50					
100.00	100.00	101.00	100.00	1.13	1.14	4.837	1,870.82	158.31	1,877.50	1,875.23	2.27	827.042		
200.00	200.00	201.00	200.00	1.66	1.66	4.837	1,870.82	158.31	1,877.50	1,874.18	3.32	565.037		
300.00	300.00	301.00	300.00	2.06	2.06	4.837	1,870.82	158.31	1,877.50	1,873.38	4.12	455.692		
400.00	400.00	401.00	400.00	2.39	2.40	4.837	1,870.82	158.31	1,877.50	1,872.71	4.79	391.810		
500.00	500.00	501.00	500.00	2.69	2.69	4.837	1,870.82	158.31	1,877.50	1,872.12	5.39	348.633		
600.00	600.00	601.00	600.00	2.96	2.96	4.837	1,870.82	158.31	1,877.50	1,871.58	5.92	316.929		
700.00	700.00	701.00	700.00	3.21	3.21	4.837	1,870.82	158.31	1,877.50	1,871.08	6.42	292.361		
800.00	800.00	801.00	800.00	3.44	3.44	4.837	1,870.82	158.31	1,877.50	1,870.62	6.89	272.591		
900.00	900.00	901.00	900.00	3.66	3.66	4.837	1,870.82	158.31	1,877.50	1,870.18	7.33	256.229		
000.00	1,000.00	1,001.00	1,000.00	3.87	3.87	4.837	1,870.82	158.31	1,877.50	1,869.76	7.75	242.390		
100.00	1,100.00	1,101.00	1,100.00	4.07	4.07	4.837	1,870.82	158.31	1,877.50	1,869.36	8.15	230.484		
200.00	1,200.00	1,201.00	1,200.00	4.26	4.27	4.837	1,870.82	158.31	1,877.50	1,868.97	8.53	220.096		
300.00	1,300.00	1,301.90	1,300.90	4.45	4.45	4.837	1,870.82	158.31	1,877.50	1,868.60	8.90	210.872		
400.00	1,399.98	1,491.13	1,489.99	4.73	4.96	59.109	1,866.61	153.52	1,874.18	1,864.67	9.51	197.094		
500.00	1,499.84	1,678.78	1,676.68	5.02	5.50	59.139	1,854.32	139.52	1,864.34	1,854.23	10.11	184.468		
600.00	1,599.45	1,863.35	1,858.72	5.32	6.10	59.194	1,834.39	116.82	1,848.10	1,837.36	10.74	172.083		
700.00	1,698.70	1,977.88	1,970.80	5.63	6.45	59.415	1,818.84	99.10	1,827.04	1,815.81	11.23	162.739		
800.00	1,797.47	2,075.22	2,066.02	5.97	6.74	59.787	1,805.50	83.89	1,804.16	1,792.47	11.69	154.272		
900.00	1,895.62	2,172.12	2,160.80	6.32	7.04	60.293	1,792.21	68.76	1,779.58	1,767.39	12.19	145.995		
900.13	1,895.75	2,172.25	2,160.92	6.32	7.04	60.294	1,792.19	68.74	1,779.55	1,767.36	12.19	145.985		
000.00	1,993.44	2,268.77	2,255.34	6.61	7.36	60.414	1,778.96	53.66	1,754.16	1,741.47	12.69	138.249		
100.00	2,091.25	2,365.42	2,349.88	6.92	7.70	60.537	1,765.71	38.56	1,728.75	1,715.54	13.21	130.873		
200.00	2,189.06	2,462.07	2,444.42	7.25	8.04	60.663	1,752.45	23.47	1,703.34	1,689.59	13.75	123.867		
300.00	2,286.88	2,558.72	2,538.96	7.60	8.40	60.794	1,739.20	8.37	1,677.95	1,663.63	14.31	117.239		
400.00	2,384.69	2,655.37	2,633.50	7.96	8.77	60.929	1,725.95	-6.73	1,652.56	1,637.67	14.89	110.989		
,500.00	2,482.51	2,752.02	2,728.04	8.33	9.14	61.067	1,712.70	-21.82	1,627.18	1,611.70	15.48	105.105		
600.00	2,580.32	2,848.67	2,822.58	8.71	9.53	61.211	1,699.45	-36.92	1,601.81	1,585.72	16.09	99.574		
700.00	2,678.13	2,945.32	2,917.11	9.10	9.92	61.358	1,686.20	-52.02	1,576.45	1,559.74	16.70	94.378		
781.91	2,758.25	3,024.48	2,994.55	9.41	10.24	61.483	1,675.34	-64.38	1,555.68	1,538.48	17.20	90.450		
800.00	2,775.96	3,041.98	3,011.66	9.47	10.31	61.426	1,672.94	-67.11	1,551.12	1,533.82	17.30	89.659		
900.00	2,874.23	3,138.97	3,106.54	9.91	10.71	61.065	1,659.65	-82.27	1,526.88	1,508.94	17.94	85.123		
000.00	2,973.09	3,236.37	3,201.81	10.34	11.12	60.619	1,646.29	-97.48	1,504.29	1,485.73	18.56	81.046		
100.00	3,072.42	3,334.07	3,297.37	10.76	11.53	60.086	1,632.90	-112.74	1,483.37	1,464.20	19.17	77.387		
200.00	3,172.09	3,431.93	3,393.10	11.15	11.95	59.462	1,619.48	-128.03	1,464.18	1,444.42	19.76	74.112		
300.00	3,271.97	3,529.86	3,488.89	11.50	12.37	58.746	1,606.05	-143.32	1,446.79	1,426.47	20.32	71.199		
382.04	3,354.00	3,610.15	3,567.42	11.64	12.72	3.828	1,595.04	-155.86	1,433.92	1,413.19	20.74	69.152		
400.00	3,371.96	3,627.72	3,584.61	11.65	12.80	3.723	1,592.63	-158.61	1,431.25	1,410.45	20.81	68.791		
500.00	3,471.96	3,725.53	3,680.29	11.72	13.22	3.135	1,579.22	-173.89	1,416.47	1,395.21	21.26	66.616		
600.00	3,571.96	3,823.35	3,775.97	11.80	13.64	2.535	1,565.81	-189.17	1,401.84	1,380.13	21.71	64.577		
700.00	3,671.96	3,900.00	3,851.11	11.88	13.97	2.081	1,555.84	-200.53	1,388.10	1,366.01	22.09	62.845		
800.00	3,771.96	3,972.46	3,922.49	11.95	14.30	1.702	1,547.63	-209.89	1,376.23	1,353.77	22.46	61.266		
900.00	3,871.96	4,046.99	3,996.22	12.03	14.63	1.366	1,540.42	-218.09	1,366.21	1,343.39	22.82	59.860		
000.00	3,971.96	4,122.06	4,070.74	12.11	14.95	1.084	1,534.45	-224.90	1,358.03	1,334.87	23.16	58.628		
100.00	4,071.96	4,200.00	4,148.33	12.19	15.28	0.854	1,529.61	-230.41	1,351.67	1,328.18	23.49	57.545		
200.00	4,171.96	4,273.37	4,221.53	12.26	15.55	0.697	1,526.33	-234.14	1,347.09	1,323.32	23.77	56.674		
300.00	4,271.96	4,349.41	4,297.50	12.34	15.81	0.596	1,524.24	-236.53	1,344.30	1,320.27	24.03	55.950		
400.00	4,271.96	4,425.56	4,373.64	12.34	15.99	0.560	1,523.48	-237.39	1,343.29	1,319.06	24.03	55.437		
435.86	4,407.82	4,459.74	4,407.82	12.45	16.01	0.560	1,523.48	-237.40	1,343.28	1,319.01	24.28	55.335		
500.00	4,471.96	4,523.88	4,471.96	12.40	16.03	0.560	1,523.48	-237.40	1,343.28	1,318.92	24.36	55.143		
600.00	4,571.96	4,623.88	4,571.96	12.50	16.07	0.560	1,523.48	-237.40	1,343.28	1,318.78	24.50	54.817		
700.00	4 674 00	4 700 00	4 674 00	40.05	10.11	0.500	1 500 40	007 40	1 949 96	1 919 00	04.05	E4 400		
700.00	4,671.96	4,723.88	4,671.96	12.65	16.11	0.560	1,523.48	-237.40	1,343.28	1,318.63	24.65	54.493		

7/22/2022 1:25:12PM

Anticollision Report

0.00 usft

Offset Site Error:

port	MarathonOil
inate Reference:	Well Decimus 5 WXY Fed Com 2H
ce:	RKB @ 3067.60usft (Cactus 169)
e:	RKB @ 3067.60usft (Cactus 169)
nce:	Grid

Marathon Oil Permian LLC Company: Project: Eddy County, NM (NAD27-NME) Decimus 5 WXY Fed Com Reference Site: 0.00 usft Site Error: Reference Well: Decimus 5 WXY Fed Com 2H Well Error: 1.00 usft **Reference Wellbore** OH Plan 1 07-22-22 Reference Design:

Local Co-ordinate Reference TVD Reference: MD Reference: North Reference: Survey Calculation Method: Output errors are at Database: Offset TVD Reference:

RKB @ 3067.60usft (Cactus 169 RKB @ 3067.60usft (Cactus 169 Grid Minimum Curvature 2.00 sigma USA Compass Reference Datum

Offset Design: Maximus 5 WXY Fed Com - Maximus 5 WXY Fed Com 1H - OH - Plan 1 07-22-22

Survey Prog Refe	ram: 0-!	WD+HRGM Off	set	Semil	laior Axis		Offset Wellbo	ore Centre	Die	Rule Assi tance	gned:		Offset Well Error:	1.00
Measured	Vertical	Measured	Vertical	Reference	Offset	Highside			Between	Between	Minimum	Separation	Warning	
Depth	Depth	Depth	Depth	((Toolface	+N/-S (usft)	+E/-W (usft)	Centres	Ellipses	Separation	Factor		
(usft)	(usft)	(usft)	(usft)	(usft)	(usft)	(°)			(usft)	(usft)	(usft)	EA 174		
4,800.00 4,900.00	4,771.96 4,871.96	4,823.88 4,923.88	4,771.96 4,871.96	12.73	16.16	0.560 0.560	1,523.48 1,523.48	-237.40 -237.40	1,343.28 1,343.28	1,318.49	24.80 24.94	54.174 53.858		
4,900.00 5,000.00	4,871.96	4,923.88 5,023.88	4,871.96	12.81 12.88	16.20 16.25	0.560	1,523.48	-237.40	1,343.28	1,318.34 1,318.20	24.94 25.09	53.545		
5,100.00	4,971.90 5,071.96	5,123.88	4,971.90 5,071.96	12.86	16.29	0.560	1,523.48	-237.40	1,343.28	1,318.20	25.23	53.236		
5,200.00	5,171.96	5,223.88	5,171.96	12.90	16.34	0.560	1,523.48	-237.40	1,343.28	1,318.05	25.38	52.929		
5,300.00	5,271.96	5,323.88	5,271.96	13.04	16.34	0.560	1,523.48	-237.40	1,343.28	1,317.31	25.52	52.627		
5,500.00	5,271.90	3,323.00	5,271.90	13.12	10.50	0.500	1,525.46	-237.40	1,343.20	1,317.70	23.32	52.027		
5,400.00	5,371.96	5,423.88	5,371.96	13.19	16.43	0.560	1,523.48	-237.40	1,343.28	1,317.61	25.67	52.327		
5,500.00	5,471.96	5,523.88	5,471.96	13.27	16.47	0.560	1,523.48	-237.40	1,343.28	1,317.47	25.82	52.031		
5,600.00	5,571.96	5,623.88	5,571.96	13.35	16.52	0.560	1,523.48	-237.40	1,343.28	1,317.32	25.96	51.737		
5,700.00	5,671.96	5,723.88	5,671.96	13.43	16.57	0.560	1,523.48	-237.40	1,343.28	1,317.17	26.11	51.447		
5,800.00	5,771.96	5,823.88	5,771.96	13.51	16.61	0.560	1,523.48	-237.40	1,343.28	1,317.03	26.26	51.160		
5,900.00	5,871.96	5,923.88	5,871.96	13.58	16.66	0.560	1,523.48	-237.40	1,343.28	1,316.88	26.40	50.875		
6,000.00	5,971.96	6,023.88	5,971.96	13.66	16.71	0.560	1,523.48	-237.40	1,343.28	1,316.73	26.55	50.594		
6,100.00	6,071.96	6,123.88	6,071.96	13.74	16.75	0.560	1,523.48	-237.40	1,343.28	1,316.59	26.70	50.315		
6,200.00	6,171.96	6,223.88	6,171.96	13.82	16.80	0.560	1,523.48	-237.40	1,343.28	1,316.44	26.84	50.040		
6,300.00	6,271.96	6,323.88	6,271.96	13.90	16.85	0.560	1,523.48	-237.40	1,343.28	1,316.29	26.99	49.767		
6,400.00	6,371.96	6,423.88	6,371.96	13.98	16.90	0.560	1,523.48	-237.40	1,343.28	1,316.15	27.14	49.497		
6,500.00	6,471.96	6,523.88	6,471.96	14.05	16.95	0.560	1,523.48	-237.40	1,343.28	1,316.00	27.29	49.229		
6,600.00	6,571.96	6,623.88	6,571.96	14.13	17.00	0.560	1,523.48	-237.40	1,343.28	1,315.85	27.43	48.964		
6,700.00	6,671.96	6,723.88	6,671.96	14.21	17.05	0.560	1,523.48	-237.40	1,343.28	1,315.70	27.58	48.702		
6,800.00	6,771.96	6,823.88	6,771.96	14.29	17.09	0.560	1,523.48	-237.40	1,343.28	1,315.55	27.73	48.443		
6,900.00	6,871.96	6,923.88	6,871.96	14.37	17.14	0.560	1,523.48	-237.40	1,343.28	1,315.41	27.88	48.185		
7,000.00	6,971.96	7,023.88	6,971.96	14.45	17.19	0.560	1,523.48	-237.40	1,343.28	1,315.26	28.03	47.931		
7,100.00	7,071.96	7,123.88	7,071.96	14.52	17.24	0.560	1,523.48	-237.40	1,343.28	1,315.11	28.17	47.679		
7,200.00	7,171.96	7,223.88	7,171.96	14.60	17.29	0.560	1,523.48	-237.40	1,343.28	1,314.96	28.32	47.429		
7,300.00	7,271.96	7,323.88	7,271.96	14.68	17.34	0.560	1,523.48	-237.40	1,343.28	1,314.81	28.47	47.182		
7 400 00	7 274 06	7 400 00	7 271 06	14.76	17.40	0.560	1 500 40	007.40	1 2 4 2 2 0	1 014 67	29.62	46.027		
7,400.00 7,500.00	7,371.96 7,471.96	7,423.88 7,523.88	7,371.96 7,471.96	14.76 14.84	17.40 17.45	0.560 0.560	1,523.48 1,523.48	-237.40 -237.40	1,343.28 1,343.28	1,314.67 1,314.52	28.62 28.77	46.937 46.695		
7,600.00	7,571.96	7,623.88	7,471.90	14.84	17.45	0.560	1,523.48	-237.40	1,343.28	1,314.32	28.92	46.455		
7,700.00	7,671.96	7,723.88	7,671.96	15.00	17.55	0.560	1,523.48	-237.40	1,343.28	1,314.22	29.06	46.217		
7,800.00	7,771.96	7,823.88	7,771.96	15.08	17.60	0.560	1,523.48	-237.40	1,343.28	1,314.07	29.21	45.981		
1,000.00	1,111.00	1,020.00	1,111.00	10.00		0.000	1,020.10	201110	1,010.20	1,011.01	20.21	10.001		
7,900.00	7,871.96	7,923.88	7,871.96	15.15	17.65	0.560	1,523.48	-237.40	1,343.28	1,313.92	29.36	45.748		
8,000.00	7,971.96	8,023.88	7,971.96	15.23	17.71	0.560	1,523.48	-237.40	1,343.28	1,313.77	29.51	45.517		
8,100.00	8,071.96	8,123.88	8,071.96	15.31	17.76	0.560	1,523.48	-237.40	1,343.28	1,313.62	29.66	45.288		
8,200.00	8,171.96	8,223.88	8,171.96	15.39	17.81	0.560	1,523.48	-237.40	1,343.28	1,313.47	29.81	45.061		
8,300.00	8,271.96	8,323.88	8,271.96	15.47	17.86	0.560	1,523.48	-237.40	1,343.28	1,313.32	29.96	44.836		
0 400 00	0.074.00	0 400 00	0.074.00	45.55	47.00	0.500	4 500 40	007.40	4 0 40 00	4 040 47	20.44	44.040		
8,400.00	8,371.96 8,471.96	8,423.88	8,371.96 8,471.96	15.55 15.63	17.92	0.560	1,523.48	-237.40	1,343.28	1,313.17	30.11	44.613 44.392		
8,500.00 8,600.00	8,471.96 8,571.96	8,523.88 8,623.88	8,471.96 8,571.96	15.63 15.71	17.97 18.02	0.560 0.560	1,523.48 1,523.48	-237.40 -237.40	1,343.28 1,343.28	1,313.03 1,312.88	30.26 30.41	44.392 44.174		
8,600.00	8,571.96 8,671.96	8,623.88	8,571.96	15.71	18.02	0.560	1,523.48	-237.40	1,343.28	1,312.88	30.41	44.174 43.957		
8,700.00	8,683.06	8,734.98	8,683.06	15.79	18.08	0.560	1,523.48	-237.40	1,343.28	1,312.73	30.56	43.937 43.935 CC		
5,7 11.00	0,000.00	0,104.00	0,000.00	15.78	10.00	0.000	1,020.40	201.40	1,040.20	1,012.11	50.57	-0.000 00		
8,783.22	8,755.19	8,806.81	8,754.89	15.84	18.12	0.562	1,523.48	-237.35	1,343.29	1,312.62	30.67	43.798		
8,800.00	8,771.96	8,822.92	8,771.00	15.84	18.11	-89.383	1,523.48	-236.92	1,343.29	1,312.62	30.67	43.792		
8,850.00	8,821.81	8,870.92	8,818.81	15.81	18.08	-89.360	1,523.51	-232.96	1,343.32	1,312.65	30.67	43.797		
8,900.00	8,871.16	8,918.88	8,866.10	15.77	18.00	-89.341	1,523.57	-225.01	1,343.38	1,312.74	30.65	43.831		
8,950.00	8,919.62	8,966.83	8,912.54	15.73	17.91	-89.327	1,523.66	-213.15	1,343.47	1,312.86	30.62	43.882		
0.000.00	0.000.00	0.011.7-	0.057.00	15.05	47.04	00.010	4 500 70	407.44	4 0 40 50	4 040 04	00.50	40.011		
9,000.00	8,966.83	9,014.77	8,957.82	15.68	17.81	-89.318	1,523.78	-197.44	1,343.58	1,313.01	30.58	43.941		
9,050.00	9,012.43	9,062.72	9,001.64	15.63	17.72	-89.313	1,523.93	-178.00	1,343.72	1,313.18	30.54	43.995		
9,100.00	9,056.07	9,110.70	9,043.71	15.59	17.63	-89.314	1,524.11	-154.96	1,343.88	1,313.36	30.52	44.030		
9,150.00 9,200.00	9,097.42 9,136.17	9,158.72 9,206.78	9,083.73 9,121.42	15.56 15.55	17.55 17.48	-89.319 -89.330	1,524.31 1,524.54	-128.45 -98.65	1,344.06 1,344.26	1,313.53 1,313.68	30.53 30.58	44.026 43.959		
3,200.00	3,130.17	9,200.10	ಶ,1∠1.4∠	10.05	17.40	-09.330	1,024.04	-90.00	1,344.20	1,313.00	30.30	40.000		
9,250.00	9,172.02	9,254.91	9,156.54	15.56	17.43	-89.345	1,524.79	-65.76	1,344.49	1,313.79	30.69	43.804		

Company:

Well Error:

Reference Site: Site Error:

Reference Well:

Reference Wellbore

Reference Design:

Project:

Offset Site Error: 0.00 usft

Anti	collision Report	Marathon Oil Corporation.
	Local Co-ordinate Reference:	Well Decimus 5 WXY Fed Com 2H
	TVD Reference:	RKB @ 3067.60usft (Cactus 169)
	MD Reference:	RKB @ 3067.60usft (Cactus 169)
	North Reference:	Grid
	Survey Calculation Method:	Minimum Curvature
	Output errors are at	2.00 sigma

USA Compass

Reference Datum

Offset Design: Maximus 5 WXY Fed Com - Maximus 5 WXY Fed Com 1H - OH - Plan 1 07-22-22

Marathon Oil Permian LLC

0.00 usft

1.00 usft

Plan 1 07-22-22

OH

Eddy County, NM (NAD27-NME) Decimus 5 WXY Fed Com

Decimus 5 WXY Fed Com 2H

urvey Prog		WWD+HRGM	4	0			0.00		Die	Rule Assi	gned:		Offset Well Error:	1.00 u
Refe Measured	rence Vertical	Off Measured	set Vertical	Reference	lajor Axis Offset	Highside	Offset Wellb	ore Centre	Between	tance Between	Minimum	Separation	Warning	
Depth	Depth	Depth	Depth			Toolface	+N/-S	+E/-W	Centres	Ellipses	Separation	Factor		
(usft)	(usft)	(usft)	(usft)	(usft)	(usft)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)			
9,300.00	9,204.69	9,303.12	9,188.82	15.60	17.41	-89.365	1,525.06	-29.97	1,344.73	1,313.84	30.89	43.536		
9,350.00	9,233.95	9,351.42	9,218.02	15.68	17.42	-89.390	1,525.36	8.47	1,344.99	1,313.81	31.18	43.133		
9,400.00	9,259.56	9,400.00	9,244.04	15.83	17.47	-89.419	1,525.67	49.49	1,345.26	1,313.67	31.60	42.577		
9,450.00	9,281.33	9,448.33	9,266.37	16.06	17.58	-89.452	1,526.00	92.33	1,345.55	1,313.41	32.14	41.863		
9,500.00	9,299.10	9,496.97	9,285.13	16.37	17.75	-89.490	1,526.34	137.19	1,345.85	1,313.03	32.83	40.999		
9,550.00	9,312.73	9,545.74	9,300.05	16.78	18.00	-89.531	1,526.70	183.60	1,346.16	1,312.51	33.65	40.002		
9,600.00	9,322.11	9,594.66	9,310.99	17.27	18.32	-89.576	1,527.06	231.27	1,346.48	1,311.87	34.61	38.901		
9,650.00	9,327.18	9,643.74	9,317.85	17.83	18.71	-89.624	1,527.43	279.85	1,346.81	1,311.11	35.70	37.729		
9,673.22	9,328.06	9,666.58	9,319.61	18.11	18.92	-89.647	1,527.61	302.62	1,346.96	1,310.72	36.24	37.170		
9,700.00	9,328.52	9,693.03	9,320.53	18.45	19.18	-89.667	1,527.81	329.05	1,347.14	1,310.26	36.88	36.525		
9,800.00	9,330.27	9,793.03	9,322.28	19.86	20.32	-89.667	1,528.57	429.03	1,347.83	1,308.23	39.60	34.037		
9,900.00	9,332.01	9,893.02	9,324.02	21.43	21.66	-89.667	1,529.34	529.01	1,348.51	1,305.87	42.64	31.628		
10,000.00	9,333.76	9,993.02	9,325.77	23.13	23.17	-89.667	1,530.10	628.99	1,349.19	1,303.26	45.94	29.371		
10,100.00	9,335.50	10,093.02	9,327.51	24.93	24.82	-89.668	1,530.87	728.97	1,349.88	1,300.43	49.45	27.299		
10,200.00	9,337.25	10,193.02	9,329.26	26.81	26.57	-89.668	1,531.63	828.95	1,350.56	1,297.44	53.13	25.422		
10,300.00	9,339.00	10,293.01	9,331.01	28.75	28.40	-89.668	1,532.40	928.93	1,351.25	1,294.31	56.94	23.730		
40,400,00	0.040.74	40.000.04	0 000 75	20.74	00.04	00.000	4 500 40	4 000 04	4 054 00	4 004 00	00.07	00.014		
10,400.00	9,340.74	10,393.01	9,332.75 9,334.50	30.74	30.31	-89.668	1,533.16	1,028.91	1,351.93	1,291.06	60.87	22.211		
10,500.00	9,342.49	10,493.01		32.78	32.26	-89.668	1,533.93	1,128.88	1,352.62	1,287.73	64.88	20.847		
10,600.00	9,344.23	10,593.01	9,336.24	34.85	34.27	-89.668	1,534.69	1,228.86	1,353.30	1,284.33	68.98	19.620		
10,700.00	9,345.98	10,693.00 10,793.00	9,337.99 9,339.73	36.94 39.07	36.31 38.38	-89.669	1,535.46	1,328.84 1,428.82	1,353.99	1,280.86	73.13	18.515		
10,600.00	9,347.72	10,793.00	9,339.73	39.07	30.30	-89.669	1,536.22	1,420.02	1,354.67	1,277.34	77.33	17.517		
10,900.00	9,349.47	10,893.00	9,341.48	41.21	40.48	-89.669	1,536.99	1,528.80	1,355.35	1,273.77	81.58	16.613		
11,000.00	9,351.21	10,993.00	9,343.22	43.36	42.60	-89.669	1,537.75	1,628.78	1,356.04	1,270.17	85.87	15.792		
11,100.00	9,352.96	11,093.00	9,344.97	45.54	44.73	-89.669	1,538.52	1,728.76	1,356.72	1,266.53	90.19	15.043		
11,200.00	9,354.70	11,192.99	9,346.71	47.72	46.89	-89.669	1,539.28	1,828.74	1,357.41	1,262.87	94.54	14.359		
11,300.00	9,356.45	11,292.99	9,348.46	49.92	49.06	-89.670	1,540.05	1,928.72	1,358.09	1,259.19	98.91	13.731		
11,400.00	9,358.19	11,392.99	9,350.20	52.13	51.24	-89.670	1,540.81	2,028.70	1,358.78	1,255.48	103.30	13.154		
11,500.00	9,359.94	11,492.99	9,351.95	54.34	53.43	-89.670	1,541.58	2,128.68	1,359.46	1,251.75	107.71	12.622		
11,600.00	9,361.68	11,592.98	9,353.69	56.56	55.63	-89.670	1,542.34	2,228.66	1,360.14	1,248.01	112.13	12.130		
11,700.00	9,363.43	11,692.98	9,355.44	58.79	57.84	-89.670	1,543.11	2,328.64	1,360.83	1,244.25	116.58	11.673		
11,800.00	9,365.17	11,792.98	9,357.18	61.02	60.06	-89.671	1,543.87	2,428.62	1,361.51	1,240.48	121.03	11.249		
44 000 00	0.000.00	44,000,00	0.050.00	62.00	<u> </u>	00.074	4 5 4 4 6 9	0.500.00	4 000 00	4 000 70	105 50	40.055		
11,900.00	9,366.92	11,892.98	9,358.93	63.26	62.28	-89.671	1,544.63	2,528.60	1,362.20	1,236.70	125.50	10.855		
12,000.00	9,368.66	11,992.97	9,360.67	65.51	64.51	-89.671	1,545.40	2,628.58	1,362.88	1,232.91	129.97	10.486		
12,100.00	9,370.41	12,092.97	9,362.42	67.76	66.74	-89.671	1,546.16	2,728.56	1,363.57	1,229.11	134.46	10.141		
12,200.00 12,300.00	9,372.15 9,373.90	12,192.97 12,292.97	9,364.16 9,365.91	70.01 72.26	68.98 71.23	-89.671 -89.671	1,546.93 1,547.69	2,828.54 2,928.52	1,364.25 1,364.94	1,225.30 1,221.49	138.95 143.45	9.818 9.515		
12,300.00	9,373.90	12,292.97	9,303.91	12.20	71.25	-09.071	1,547.09	2,920.52	1,304.94	1,221.49	143.45	9.515		
12,400.00	9,375.65	12,392.96	9,367.65	74.52	73.47	-89.672	1,548.46	3,028.50	1,365.62	1,217.66	147.96	9.230		
12,500.00	9,377.39	12,492.96	9,369.40	76.78	75.72	-89.672	1,549.22	3,128.47	1,366.30	1,213.83	152.47	8.961		
12,600.00	9,379.14	12,592.96	9,371.14	79.05	77.98	-89.672	1,549.99	3,228.45	1,366.99	1,210.00	156.99	8.707		
12,700.00	9,380.88	12,692.96	9,372.89	81.31	80.24	-89.672	1,550.75	3,328.43	1,367.67	1,206.16	161.52	8.468		
12,800.00	9,382.63	12,792.96	9,374.64	83.58	82.50	-89.672	1,551.52	3,428.41	1,368.36	1,202.31	166.05	8.241		
12,900.00	9,384.37	12,892.95	9,376.38	85.85	84.76	-89.672	1,552.28	3,528.39	1,369.04	1,198.46	170.58	8.026		
13,000.00	9,386.12	12,992.95	9,378.13	88.13	87.02	-89.672	1,553.05	3,628.37	1,369.73	1,194.61	175.12	7.822		
13,100.00	9,387.86	13,092.95	9,379.87	90.40	89.29	-89.673	1,553.81	3,728.35	1,370.41	1,190.75	179.66	7.628		
13,200.00	9,389.61	13,192.95	9,381.62	92.68	91.56	-89.673	1,554.58	3,828.33	1,371.10	1,186.89	184.21	7.443		
13,300.00	9,391.35	13,292.94	9,383.36	94.95	93.83	-89.673	1,555.34	3,928.31	1,371.78	1,183.03	188.75	7.268		
12 400 00	0.202.40	10 000 04	0.205.44	07.00	00.40	90.070	1 550 44	4 000 00	4 970 40	1 170 10	100.04	7 400		
13,400.00	9,393.10	13,392.94	9,385.11	97.23	96.10	-89.673	1,556.11	4,028.29	1,372.46	1,179.16	193.31	7.100		
13,500.00	9,394.84	13,492.94	9,386.85	99.51	98.37	-89.673	1,556.87	4,128.27	1,373.15	1,175.29	197.86	6.940		
13,600.00	9,396.59	13,592.94	9,388.60	101.80	100.65	-89.673	1,557.64	4,228.25	1,373.83	1,171.41	202.42	6.787		
13,700.00	9,398.33	13,692.93	9,390.34	104.08	102.93	-89.674	1,558.40	4,328.23	1,374.52	1,167.54	206.98	6.641 6.501		
13,800.00	9,400.08	13,792.93	9,392.09	106.36	105.20	-89.674	1,559.17	4,428.21	1,375.20	1,163.66	211.54	0.001		
13,900.00	9,401.82	13,892.93	9,393.83	108.65	107.48	-89.674	1,559.93	4,528.19	1,375.89	1,159.78	216.10	6.367		

Database:

Offset TVD Reference:

Anticollision Report

0.00 usft

	Marathon Oil Corporation.
ence:	Well Decimus 5 WXY Fed Com 2H
	RKB @ 3067.60usft (Cactus 169) RKB @ 3067.60usft (Cactus 169)

Offset Site Error:

Marathon Oil Permian LLC Company: Project: Eddy County, NM (NAD27-NME) Decimus 5 WXY Fed Com Reference Site: 0.00 usft Site Error: Reference Well: Decimus 5 WXY Fed Com 2H Well Error: 1.00 usft **Reference Wellbore** OH Plan 1 07-22-22 Reference Design:

Local Co-ordinate Reference TVD Reference: MD Reference: North Reference: Survey Calculation Method: Output errors are at Database: Offset TVD Reference:

RKB @ 3067.60usft (Cactus 169 RKB @ 3067.60usft (Cactus 169 Grid Minimum Curvature 2.00 sigma USA Compass Reference Datum

Offset Design: Maximus 5 WXY Fed Com - Maximus 5 WXY Fed Com 1H - OH - Plan 1 07-22-22

														0.00 ι
urvey Prog		0-MWD+HRGM		• • •			0		-	Rule Assi	gned:		Offset Well Error:	1.00 u
Refe Measured	erence Vertical	Off Measured	set Vertical	Semi N Reference	lajor Axis Offset	Highside	Offset Wellb	ore Centre	Dis Between	tance Between	Minimum	Separation	Warning	
Depth	Depth	Depth	Depth			Toolface	+N/-S	+E/-W	Centres	Ellipses	Separation	Factor	· ·	
(usft)	(usft)	(usft)	(usft)	(usft)	(usft)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)			
4,000.00	9,403.5		9,395.58	110.93	109.76	-89.674	1,560.70	4,628.17	1,376.57	1,155.90	220.67	6.238		
4,100.00	9,405.3		9,397.32	113.22	112.04	-89.674	1,561.46	4,728.15	1,377.25	1,152.02	225.24	6.115		
4,200.00	9,407.0		9,399.07	115.50	114.33	-89.674	1,562.22	4,828.13	1,377.94	1,148.13	229.81	5.996		
4,300.00	9,408.8		9,400.81	117.79	116.61	-89.675	1,562.99	4,928.11	1,378.62	1,144.24	234.38	5.882		
4,400.00	9,410.5 9,412.3		9,402.56 9,404.30	120.08 122.37	118.89 121.18	-89.675 -89.675	1,563.75 1,564.52	5,028.09 5,128.06	1,379.31 1,379.99	1,140.36 1,136.47	238.95 243.53	5.772 5.667		
14,500.00	3,412.3	0 14,432.32	3,404.30	122.57	121.10	-03.075	1,004.02	3,120.00	1,575.55	1,150.47	240.00	5.007		
14,600.00	9,414.0	4 14,592.91	9,406.05	124.66	123.46	-89.675	1,565.28	5,228.04	1,380.68	1,132.57	248.10	5.565		
14,700.00	9,415.7	9 14,692.91	9,407.79	126.95	125.75	-89.675	1,566.05	5,328.02	1,381.36	1,128.68	252.68	5.467		
14,800.00	9,417.5	3 14,792.91	9,409.54	129.24	128.04	-89.675	1,566.81	5,428.00	1,382.05	1,124.79	257.26	5.372		
14,900.00	9,419.2	8 14,892.91	9,411.28	131.53	130.33	-89.676	1,567.58	5,527.98	1,382.73	1,120.89	261.84	5.281		
15,000.00	9,421.0	2 14,992.90	9,413.03	133.83	132.61	-89.676	1,568.34	5,627.96	1,383.41	1,117.00	266.42	5.193		
15,100.00	9,422.7		9,414.77	136.12	134.90	-89.676	1,569.11	5,727.94	1,384.10	1,113.10	271.00	5.107		
15,200.00	9,424.5		9,416.52	138.41	137.19	-89.676	1,569.87	5,827.92	1,384.78	1,109.20	275.58	5.025		
15,300.00	9,426.2		9,418.27	140.71	139.48	-89.676	1,570.64	5,927.90	1,385.47	1,105.30	280.17	4.945		
15,400.00 15,500.00	9,428.0 9,429.7		9,420.01 9,421.76	143.00 145.29	141.77 144.06	-89.676 -89.677	1,571.40 1,572.17	6,027.88 6,127.86	1,386.15 1,386.84	1,101.40 1,097.50	284.75 289.34	4.868 4.793		
15,500.00	9,429.7	5 15,492.09	9,421.70	145.29	144.00	-89.077	1,572.17	0,127.00	1,300.04	1,097.50	209.34	4.795		
15,600.00	9,431.4	9 15,592.89	9,423.50	147.59	146.36	-89.677	1,572.93	6,227.84	1,387.52	1,093.60	293.92	4.721		
15,700.00	9,433.2	4 15,692.89	9,425.25	149.88	148.65	-89.677	1,573.70	6,327.82	1,388.21	1,089.69	298.51	4.650		
15,800.00	9,434.9	8 15,792.89	9,426.99	152.18	150.94	-89.677	1,574.46	6,427.80	1,388.89	1,085.79	303.10	4.582		
15,900.00	9,436.7	3 15,892.88	9,428.74	154.47	153.23	-89.677	1,575.23	6,527.78	1,389.57	1,081.89	307.69	4.516		
16,000.00	9,438.4	7 15,992.88	9,430.48	156.77	155.53	-89.677	1,575.99	6,627.76	1,390.26	1,077.98	312.28	4.452		
16,100.00	9,440.2		9,432.23	159.07	157.82	-89.678	1,576.76	6,727.74	1,390.94	1,074.07	316.87	4.390		
16,200.00	9,441.9		9,433.97	161.36	160.11	-89.678	1,577.52	6,827.72	1,391.63	1,070.17	321.46	4.329		
16,300.00	9,443.7		9,435.72	163.66	162.41	-89.678	1,578.29	6,927.70	1,392.31	1,066.26	326.05	4.270		
16,400.00	9,445.4		9,437.46	165.96	164.70	-89.678	1,579.05	7,027.68	1,393.00	1,062.35	330.64	4.213		
16,500.00	9,447.2	0 16,492.87	9,439.21	168.26	167.00	-89.678	1,579.81	7,127.65	1,393.68	1,058.44	335.24	4.157		
16,600.00	9,448.9	5 16,592.87	9,440.95	170.55	169.29	-89.678	1,580.58	7,227.63	1,394.36	1,054.54	339.83	4.103		
16,700.00	9,450.6	9 16,692.86	9,442.70	172.85	171.59	-89.679	1,581.34	7,327.61	1,395.05	1,050.63	344.42	4.050		
16,800.00	9,452.4	4 16,792.86	9,444.44	175.15	173.88	-89.679	1,582.11	7,427.59	1,395.73	1,046.72	349.02	3.999		
16,900.00	9,454.1	8 16,892.86	9,446.19	177.45	176.18	-89.679	1,582.87	7,527.57	1,396.42	1,042.81	353.61	3.949		
17,000.00	9,455.9	3 16,992.86	9,447.93	179.75	178.48	-89.679	1,583.64	7,627.55	1,397.10	1,038.90	358.21	3.900		
17,100.00	9,457.6		9,449.68	182.05	180.77	-89.679	1,584.40	7,727.53	1,397.79	1,034.99	362.80	3.853		
17,200.00	9,459.4		9,451.42	184.35	183.07	-89.679	1,585.17	7,827.51	1,398.47	1,031.07	367.40	3.806		
17,300.00	9,461.1		9,453.17	186.65	185.37	-89.679	1,585.93	7,927.49	1,399.16	1,027.16	371.99	3.761		
17,400.00 17,500.00	9,462.9 9,464.6		9,454.91 9,456.66	188.94 191.24	187.66 189.96	-89.680 -89.680	1,586.70 1,587.46	8,027.47 8,127.45	1,399.84 1,400.52	1,023.25 1,019.34	376.59 381.19	3.717 3.674		
17,500.00	3,404.0	5 17,432.05	3,430.00	131.24	103.30	-03.000	1,007.40	0,127.40	1,400.52	1,013.34	501.15	5.074		
17,600.00	9,466.4	0 17,592.84	9,458.40	193.54	192.26	-89.680	1,588.23	8,227.43	1,401.21	1,015.42	385.79	3.632		
17,700.00	9,468.1	4 17,692.84	9,460.15	195.84	194.55	-89.680	1,588.99	8,327.41	1,401.89	1,011.51	390.38	3.591		
17,800.00	9,469.8	9 17,792.84	9,461.90	198.14	196.85	-89.680	1,589.76	8,427.39	1,402.58	1,007.60	394.98	3.551		
17,900.00	9,471.6	3 17,892.84	9,463.64	200.44	199.15	-89.680	1,590.52	8,527.37	1,403.26	1,003.68	399.58	3.512		
18,000.00	9,473.3	8 17,992.83	9,465.39	202.74	201.45	-89.681	1,591.29	8,627.35	1,403.95	999.77	404.18	3.474		
10 100 00	0 175 -	40.000.00	0.407.40	005.05	000 75	00.004	4 500 05	0.707.00	4 40 4 00	005.05	400 70	0.400		
18,100.00	9,475.1		9,467.13	205.05	203.75	-89.681	1,592.05	8,727.33	1,404.63	995.85	408.78	3.436		
18,200.00	9,476.8		9,468.88	207.35	206.05	-89.681	1,592.82	8,827.31	1,405.32	991.94	413.38	3.400		
18,300.00 18,400.00	9,478.6		9,470.62 9,472.37	209.65 211.95	208.35 210.64	-89.681 -89.681	1,593.58 1,594.35	8,927.29 9,027.27	1,406.00 1,406.68	988.02	417.98 422.58	3.364 3.329		
18,400.00	9,480.3 9,482.1		9,472.37 9,474.11	211.95	210.64 212.94	-89.681	1,594.35	9,027.27 9,127.25	1,406.68	984.11 980.19	422.58	3.329 3.295		
10,000.00	0,40Z. I	10,492.02	0,474.11	214.20	212.34	-03.001	1,000.11	0,121.20	1,-101.31	300.19	727.10	3.280		
18,600.00	9,483.8	5 18,592.82	9,475.86	216.55	215.24	-89.682	1,595.88	9,227.22	1,408.05	976.28	431.78	3.261		
18,700.00	9,485.6	0 18,692.82	9,477.60	218.85	217.54	-89.682	1,596.64	9,327.20	1,408.74	972.36	436.38	3.228		
18,800.00	9,487.3	4 18,792.81	9,479.35	221.15	219.84	-89.682	1,597.40	9,427.18	1,409.42	968.44	440.98	3.196		
18,900.00	9,489.0	9 18,892.81	9,481.09	223.45	222.14	-89.682	1,598.17	9,527.16	1,410.11	964.53	445.58	3.165		
19,000.00	9,490.8	3 18,992.81	9,482.84	225.76	224.44	-89.682	1,598.93	9,627.14	1,410.79	960.61	450.18	3.134		
10 105 51	o ···· -		0.46	· · · ·				0 767 10						
19,100.00	9,492.5	8 19,092.81	9,484.58	228.06	226.74	-89.682	1,599.70	9,727.12	1,411.47	956.69	454.78	3.104		

7/22/2022 1:25:12PM

Released to Imaging: 8/28/2023 1:56:19 PM

Received by OCD: 8/24/2023 6:46:43 AM

PHOENIX TECHNOLOGY SERVICES

Anticollision Report



•			
Company:	Marathon Oil Permian LLC	Local Co-ordinate Reference:	Well Decimus 5 WXY Fed Com 2H
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 2H	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ОН	Database:	USA Compass
Reference Design:	Plan 1 07-22-22	Offset TVD Reference:	Reference Datum

Offset Des	sian: Ma	aximus 5 W	XY Fed C	om - Maxin	nus 5 WX	Y Fed Com 1	H - OH - Plan	1 07-22-22						
0	<u></u>												Offset Site Error:	0.00 usft
Survey Progr		-MWD+HRGM								Rule Assi	gned:		Offset Well Error:	1.00 usft
Refer	rence	Off	set	Semi M	lajor Axis		Offset Wellbo	ore Centre	Dist	ance				
Measured	Vertical	Measured	Vertical	Reference	Offset	Highside			Between	Between	Minimum	Separation	Warning	
Depth	Depth	Depth	Depth			Toolface	+N/-S	+E/-W	Centres	Ellipses	Separation	Factor		
(usft)	(usft)	(usft)	(usft)	(usft)	(usft)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)			
10 000 00									4 440 40	050 77	450.00	0.074		
19,200.00	9,494.32	19,192.81	9,486.33	230.36	229.04	-89.682	1,600.46	9,827.10	1,412.16	952.77	459.39	3.074		





Marathon Oil Corporation.

Offset Site Error: 0.00 usft

Company:	Marathon Oil Permian LLC	Local Co-ordinate Reference:	Well Decimus 5 WXY Fe
Project:	Eddy County, NM (NAD27-NME)	TVD Reference:	RKB @ 3067.60usft (Cad
Reference Site:	Decimus 5 WXY Fed Com	MD Reference:	RKB @ 3067.60usft (Cad
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Decimus 5 WXY Fed Com 2H	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

Well Decimus 5 WXY Fed Com 2H
RKB @ 3067.60usft (Cactus 169)
RKB @ 3067.60usft (Cactus 169)
Grid
Minimum Curvature
2.00 sigma
USA Compass
Reference Datum

Offset Design: Maximus/Decimus Offsets - Carrasco 6 Com 1 - OH - Surveys

													Offset Site Error:	0.00 L
rvey Progr	ram: 100 rence	D-INC-ONLY, ²			aior Axis		Offset Wellb	oro Contro	Die	Rule Assi tance	gned:		Offset Well Error:	1.00 u
Refei leasured	vertical	Measured	set Vertical	Reference	Offset	Highside			Between	Between	Minimum	Separation	Warning	
Depth (usft)	Depth (usft)	Depth (usft)	Depth (usft)	(usft)	(usft)	Toolface (°)	+N/-S (usft)	+E/-W (usft)	Centres (usft)	Ellipses (usft)	Separation (usft)	Factor		
0.00	0.00	0.00	29.60	1.00	1.00	107.980	-956.09	2,946.09	3,097.49	((1010)			
100.00	100.00	70.40	100.00	1.13	1.26	107.980	-956.09	2,946.09	3,097.35	3,094.96	2.39	1,294.349		
00.00	200.00	170.40	200.00	1.66	2.68	107.980	-956.09	2,946.09	3,097.35	3,093.01	4.34	713.694		
00.00	300.00	270.41	300.00	2.06	4.65	107.980	-956.09	2,946.09	3,097.35	3,090.64	6.71	461.545		
100.00	400.00	370.41	400.00	2.39	7.06	107.980	-956.09	2,946.09	3,097.35	3,087.90	9.45	327.727		
448.09	448.09	418.37	447.96	2.54	8.22	107.970	-955.57	2,946.09	3,097.19	3,086.44	10.75	288.006		
500.00	500.00	468.33	497.91	2.69	9.43	107.972	-955.62	2,946.09	3,097.21	3,085.09	12.12	255.531		
600.00	600.00	564.58	594.16	2.96	11.77	107.979	-956.02	2,946.09	3,097.34	3,082.61	14.73	210.280		
700.00	700.00	670.44	700.00	3.21	13.83	107.980	-956.09	2,946.09	3,097.35	3,080.31	17.04	181.721		
718.67	718.67	688.47	718.03	3.25	14.18	107.974	-955.76	2,946.09	3,097.25	3,079.82	17.43	177.691		
800.00	800.00	765.15	794.71	3.44	15.63	107.978	-955.99	2,946.09	3,097.33	3,078.25	19.08	162.355		
875.20	875.20	845.64	875.18	3.61	17.20	107.975	-955.81	2,946.09	3,097.26	3,076.46	20.81	148.856		
900.00	900.00	867.61	897.14	3.66	17.63	107.975	-955.84	2,946.09	3,097.28	3,075.98	21.29	145.474		
000.00	1,000.00	970.48	1,000.00	3.87	20.02	107.980	-956.09	2,946.09	3,097.35	3,073.45	23.90	129.613		
100.00	1,100.00	1,070.48	1,100.00	4.07	22.62	107.980	-956.09	2,946.09	3,097.35	3,070.66	26.69	116.046		
175.50	1,175.50	1,145.98	1,175.49	4.22	24.58	107.962	-955.06	2,946.09	3,097.03	3,068.24	28.79	107.557		
,200.00	1,200.00	1,169.65	1,199.16	4.26	25.19	107.962	-955.07	2,946.09	3,097.04	3,067.58	29.46	105.143		
300.00	1,300.00	1,266.25	1,295.76	4.45	27.70	107.966	-955.33	2,946.09	3,097.12	3,064.97	32.15	96.341		
400.00	1,399.98	1,362.84	1,392.34	4.73	30.20	162.239	-955.93	2,946.09	3,098.97	3,064.04	34.93	88.723		
500.00	1,499.84	1,470.37	1,499.84	5.02	32.79	162.242	-956.09	2,946.09	3,104.00	3,066.21	37.79	82.137		
600.00	1,599.45	1,569.99	1,599.45	5.32	35.15	162.240	-956.09	2,946.09	3,112.30	3,071.87	40.43	76.974		
700.00	1 609 70	1 669 50	1 607 05	E 63	27.40	160.000	055.06	2.046.00	2 102 66	2 090 50	42.07	70 500		
700.00 800.00	1,698.70 1,797.47	1,668.50 1,764.85	1,697.95 1,794.31	5.63 5.97	37.48 39.76	162.222 162.218	-955.26 -955.45	2,946.09 2,946.09	3,123.66 3,138.63	3,080.59 3,092.97	43.07 45.66	72.533 68.734		
900.00	1,797.47	1,764.65	1,794.31	6.32	42.02	162.216	-955.88	2,946.09	3,156.97	3,108.70	45.00	65.408		
900.00	1,895.02	1,860.69	1,890.02	6.32	42.02	162.215	-955.88	2,946.09	3,156.99	3,108.70	48.27	65.404		
000.00	1,993.44	1,964.02	1,993.44	6.61	42.02	162.339	-956.09	2,946.09	3,176.88	3,125.96	50.92	62.390		
000.00	1,993.44	1,904.02	1,993.44	0.01	44.39	102.339	-950.09	2,940.09	3,170.00	3,123.90	50.92	02.390		
100.00	2,091.25	2,061.83	2,091.25	6.92	46.59	162.452	-956.09	2,946.09	3,196.74	3,143.31	53.42	59.837		
200.00	2,189.06	2,156.75	2,186.17	7.25	48.73	162.552	-955.60	2,946.09	3,216.46	3,160.58	55.88	57.560		
300.00	2,286.88	2,251.04	2,280.45	7.60	50.85	162.665	-956.03	2,946.09	3,236.48	3,178.14	58.34	55.479		
400.00	2,384.69	2,355.43	2,384.69	7.96	53.44	162.782	-956.09	2,946.09	3,256.39	3,195.11	61.28	53.142		
500.00	2,482.51	2,451.10	2,480.34	8.33	55.91	162.872	-955.19	2,946.09	3,276.01	3,211.90	64.11	51.104		
,600.00	2,580.32	2,551.19	2,580.32	8.71	58.50	162.996	-956.09	2,946.09	3,296.22	3,229.15	67.07	49.148		
700.00	2,678.13	2,649.00	2,678.13	9.10	61.15	163.101	-956.09	2,946.09	3,316.14	3,246.05	70.09	47.312		
781.91	2,758.25	2,729.12	2,758.25	9.41	63.31	163.186	-956.09	2,946.09	3,332.48	3,259.92	72.56	45.928		
800.00	2,775.96 2,874.23	2,746.83	2,775.96	9.47	63.79	163.225	-956.09	2,946.09	3,336.03	3,262.93	73.10	45.639		
900.00	2,074.23	2,841.05	2,870.14	9.91	66.34	163.382	-954.04	2,946.09	3,353.07	3,276.99	76.07	44.077		
000.00	2,973.09	2,932.67	2,961.73	10.34	68.82	163.544	-954.68	2,946.09	3,367.71	3,288.75	78.96	42.648		
100.00	3,072.42	3,043.49	3,072.42	10.76	71.78	163.693	-956.09	2,946.09	3,379.26	3,296.93	82.33	41.046		
200.00	3,172.09	3,143.15	3,172.09	11.15	74.03	163.775	-956.09	2,946.09	3,387.03	3,302.07	84.96	39.865		
300.00	3,271.97	3,243.04	3,271.97	11.50	76.29	163.821	-956.09	2,946.09	3,391.45	3,303.89	87.56	38.732		
382.04	3,354.00	3,321.52	3,350.43	11.64	78.07	109.552	-954.98	2,946.09	3,392.21	3,302.74	89.47	37.914		
400.00	3,371.96	3,338.54	3,367.45	11.65	78.46	109.553	-955.04	2,946.09	3,392.23	3,302.37	89.86	37.750		
500.00	3,471.96	3,433.30	3,462.20	11.72	80.60	109.562	-955.63	2,946.09	3,392.44	3,300.36	92.08	36.842		
600.00	3,571.96	3,543.12	3,571.96	11.80	82.98	109.570	-956.09	2,946.09	3,392.58	3,298.04	94.54	35.884		
700.00	3,671.96	3,643.12	3,671.96	11.88	85.07	109.570	-956.09	2,946.09	3,392.58	3,295.87	96.71	35.079		
737.72	3,709.68	3,680.09	3,708.93	11.91	85.85	109.557	-955.28	2,946.09	3,392.31	3,294.80	97.52	34.787		
800.00	3,771.96	3,739.23	3,768.06	11.95	87.09	109.559	-955.40	2,946.09	3,392.36	3,293.55	98.80	34.335		
900.00	3,871.96	3,834.19	3,863.02	12.03	89.07	109.567	-955.94	2,946.09	3,392.54	3,291.68	100.87	33.634		
991.61	3,963.57	3,934.64	3,963.43	12.10	91.03	109.564	-955.73	2,946.09	3,392.46	3,289.56	102.90	32.969		
000.00	3,971.96	3,942.12	3,970.91	12.10	91.18	109.564	-955.74	2,946.09	3,392.46	3,289.42	102.90	32.903		
100.00	4,071.96	4,043.19	4,071.96	12.11	93.07	109.570	-956.09	2,946.09	3,392.58	3,287.56	105.03	32.302		
	,	,	,					,	.,	.,				
186.80	4,158.77	4,130.00	4,158.77	12.25	94.61	109.564	-955.71	2,946.09	3,392.46	3,285.83	106.63	31.815		

7/22/2022 1:25:12PM

Anticollision Report

MarathonOil Corporation

Offset Site Error: 0.00 usft

Company:	Marathon Oil Permian LLC
Project:	Eddy County, NM (NAD27-NME)
Reference Site:	Decimus 5 WXY Fed Com
Site Error:	0.00 usft
Reference Well:	Decimus 5 WXY Fed Com 2H
Well Error:	1.00 usft
Reference Wellbore	ОН
Reference Design:	Plan 1 07-22-22

Local Co-ordinate Reference: TVD Reference: MD Reference: North Reference: Survey Calculation Method: Output errors are at Database: Offset TVD Reference: Well Decimus 5 WXY Fed Com 2H RKB @ 3067.60usft (Cactus 169) RKB @ 3067.60usft (Cactus 169) Grid Minimum Curvature 2.00 sigma USA Compass Reference Datum

Offset Design: Maximus/Decimus Offsets - Carrasco 6 Com 1 - OH - Surveys

													Unset Site Error:	0.00 usit
Survey Prog		100-INC-ONLY,								Rule Assi	gned:		Offset Well Error:	1.00 usft
Refe Measured	erence Vertical	Off Measured	set Vertical	Semi M Reference	Major Axis Offset	Highside	Offset Wellb	ore Centre	Dis Between	tance Between	Minimum	Separation	Warning	
Depth	Depth	Depth	Depth			Toolface	+N/-S	+E/-W	Centres	Ellipses	Separation	Factor	5	
(usft)	(usft)	(usft)	(usft)	(usft)	(usft)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)	o		
4,200.00	4,171.96		4,171.16	12.26	94.83	109.564	-955.72	2,946.09	3,392.46	3,285.60	106.86	31.747		
4,300.00	4,271.96		4,265.10	12.34	96.49	109.569	-956.04	2,946.09	3,392.57	3,283.97	108.60	31.240		
4,400.00	4,371.96		4,371.96	12.42	98.34	109.570	-956.09	2,946.09	3,392.58	3,282.06	110.53	30.695		
4,452.81	4,424.77		4,424.77	12.46	99.25	109.564	-955.76	2,946.09	3,392.47	3,280.99	111.48	30.432		
4,500.00 4,600.00	4,471.96 4,571.96		4,470.46 4,567.29	12.50 12.57	100.04 101.71	109.565 109.569	-955.79 -956.05	2,946.09 2,946.09	3,392.48 3,392.57	3,280.18 3,278.52	112.30 114.05	30.208 29.746		
4,000.00	4,571.90	4,000.04	4,307.29	12.57	101.71	109.509	-930.03	2,940.09	3,392.37	3,270.32	114.05	29.740		
4,700.00	4,671.96	6 4,643.22	4,671.96	12.65	103.67	109.570	-956.09	2,946.09	3,392.58	3,276.49	116.10	29.222		
4,800.00	4,771.96	6 4,743.22	4,771.96	12.73	105.56	109.570	-956.09	2,946.09	3,392.58	3,274.52	118.06	28.735		
4,851.81	4,823.77	7 4,794.97	4,823.72	12.77	106.54	109.561	-955.55	2,946.09	3,392.40	3,273.32	119.08	28.488		
4,900.00	4,871.96	6 4,842.22	4,870.96	12.81	107.43	109.561	-955.58	2,946.09	3,392.41	3,272.40	120.01	28.267		
5,000.00	4,971.96	6 4,940.24	4,968.98	12.88	109.29	109.564	-955.75	2,946.09	3,392.47	3,270.53	121.94	27.820		
5 400 00	5 074 0	5 6 4 6 6 4	5 074 00	10.00		100 570	050.00	0.040.00	0 000 50	0.000.04	400.07	07.000		
5,100.00	5,071.96		5,071.96	12.96	111.23	109.570	-956.09	2,946.09	3,392.58	3,268.61	123.97	27.366		
5,200.00	5,171.96		5,171.96	13.04	113.19	109.570	-956.09	2,946.09	3,392.58	3,266.58	126.00	26.925		
5,300.00 5,340.97	5,271.96 5,312.93		5,271.96 5,312.83	13.12 13.15	115.14 115.94	109.570 109.561	-956.09 -955.56	2,946.09 2,946.09	3,392.58 3,392.41	3,264.55 3,263.54	128.03 128.86	26.498 26.326		
5,400.00	5,371.96		5,370.67	13.19	117.07	109.562	-955.60	2,946.09	3,392.41	3,262.38	130.04	26.088		
0,400.00	0,071.90	5 0,041.04	0,070.07	15.19		100.002	-333.00	2,040.00	0,002.42	0,202.00	100.04	20.000		
5,500.00	5,471.96	5,439.93	5,468.66	13.27	118.98	109.565	-955.80	2,946.09	3,392.49	3,260.46	132.03	25.695		
5,600.00	5,571.96	5,543.27	5,571.96	13.35	121.02	109.570	-956.09	2,946.09	3,392.58	3,258.44	134.14	25.291		
5,700.00	5,671.96	5,643.27	5,671.96	13.43	123.03	109.570	-956.09	2,946.09	3,392.58	3,256.34	136.24	24.902		
5,800.00	5,771.96	5,743.27	5,771.96	13.51	125.05	109.570	-956.09	2,946.09	3,392.58	3,254.25	138.33	24.525		
5,852.33	5,824.29	9 5,795.52	5,824.21	13.55	126.10	109.555	-955.20	2,946.09	3,392.28	3,252.86	139.43	24.330		
5 000 00	5 074 0		5 070 00	10.50	107.01	100 550	055.00	0.040.00		0.054.00				
5,900.00	5,871.96		5,870.63	13.58	127.04	109.556	-955.23	2,946.09	3,392.29	3,251.89	140.40	24.162		
6,000.00	5,971.96		5,967.99	13.66	129.00	109.559	-955.45	2,946.09	3,392.37	3,249.93	142.44	23.816		
6,100.00 6,200.00	6,071.96 6,171.96		6,065.34 6,171.96	13.74 13.82	130.96 133.57	109.567 109.570	-955.91 -956.09	2,946.09 2,946.09	3,392.53 3,392.58	3,248.05 3,245.41	144.48 147.17	23.481 23.052		
6,300.00	6,271.96		6,271.96	13.90	136.18	109.570	-956.09	2,946.09	3,392.58	3,243.41	147.17	22.638		
0,300.00	0,271.90	0,243.30	0,271.90	13.90	130.10	109.570	-930.09	2,940.09	3,392.30	3,242.72	149.00	22.038		
6,386.82	6,358.79	9 6,330.12	6,358.78	13.97	138.45	109.560	-955.51	2,946.09	3,392.39	3,240.19	152.20	22.289		
6,400.00	6,371.96	6,343.05	6,371.71	13.98	138.79	109.560	-955.52	2,946.09	3,392.39	3,239.84	152.55	22.239		
6,500.00	6,471.96	6 6,441.21	6,469.87	14.05	141.35	109.562	-955.62	2,946.09	3,392.42	3,237.24	155.19	21.860		
6,600.00	6,571.96	6,539.37	6,568.03	14.13	143.91	109.566	-955.88	2,946.09	3,392.51	3,234.68	157.83	21.495		
6,697.71	6,669.67	7 6,641.15	6,669.56	14.21	146.57	109.561	-955.53	2,946.09	3,392.39	3,231.83	160.56	21.128		
0 700 00	0.074.00	0.040.00	0.074.04	44.04	440.00	100 501	055 50	0.040.00	0.000.00	0.004.70	400.00	04 400		
6,700.00	6,671.96		6,671.01	14.21	146.60	109.561	-955.53	2,946.09	3,392.39	3,231.79	160.60	21.123		
6,800.00 6,854.75	6,771.96 6,826.7		6,771.96 6,826.68	14.29 14.33	148.92 150.04	109.570 109.562	-956.09 -955.61	2,946.09 2,946.09	3,392.58 3,392.42	3,229.59 3,228.27	163.00 164.16	20.814 20.666		
6,900.00	6,871.96		6,868.19	14.33	150.04	109.563	-955.68	2,946.09	3,392.42	3,220.27	165.04	20.555		
7,000.00	6,971.90		6,971.96	14.37	153.09	109.503	-956.09	2,946.09	3,392.45	3,225.27	167.32	20.335		
1,000.00	0,07 1.00	0,010.00	0,011.00		100.00	100.010	000.00	2,010.00	0,002.00	0,220.21	101.02	20.270		
7,100.00	7,071.96	5 7,043.63	7,071.96	14.52	155.34	109.570	-956.09	2,946.09	3,392.58	3,222.93	169.65	19.997		
7,200.00	7,171.96	6 7,143.63	7,171.96	14.60	157.60	109.570	-956.09	2,946.09	3,392.58	3,220.59	171.99	19.725		
7,240.00	7,211.97	7 7,182.60	7,210.92	14.63	158.48	109.552	-955.02	2,946.09	3,392.22	3,219.32	172.90	19.619		
7,300.00	7,271.96	6 7,240.30	7,268.62	14.68	159.79	109.554	-955.13	2,946.09	3,392.26	3,218.01	174.25	19.467		
7,400.00	7,371.96	5 7,336.49	7,364.80	14.76	161.96	109.561	-955.58	2,946.09	3,392.42	3,215.91	176.50	19.220		
7 500 00	7 474 00	2 7 4 4 9 7 9	7 474 06	14.94	164.97	100 570	056.00	2.046.00	2 202 59	2 212 50	170.00	19.052		
7,500.00	7,471.96		7,471.96	14.84	164.37 166.60	109.570	-956.09	2,946.09	3,392.58	3,213.59	179.00 181.31	18.953 18.712		
7,600.00 7,630.15	7,571.96 7,602.12		7,571.96 7,600.00	14.92 14.94	166.60 167.23	109.570 109.558	-956.09 -955.34	2,946.09 2,946.09	3,392.58 3,392.33	3,211.27 3,210.37	181.31 181.96	18.712		
7,030.15	7,602.12		7,600.00	14.94	167.23	109.558	-955.61	2,946.09	3,392.33	3,210.37	183.45	18.493		
7,800.00	7,071.90		7,771.96	15.08	171.02	109.502	-956.09	2,946.09	3,392.43	3,208.98	185.89	18.251		
.,000.00	.,,,,,	.,,+0.00	.,	10.00	1.02		000.00	2,0 10.00	0,002.00	0,200.70	. 50.00			
7,871.68	7,843.64	4 7,815.48	7,843.64	15.13	172.56	109.559	-955.41	2,946.09	3,392.35	3,204.87	187.48	18.094		
7,900.00	7,871.96	6 7,841.26	7,869.42	15.15	173.11	109.559	-955.43	2,946.09	3,392.36	3,204.31	188.06	18.039		
8,000.00	7,971.96	6 7,943.85	7,971.96	15.23	175.32	109.570	-956.09	2,946.09	3,392.58	3,202.24	190.35	17.823		
8,100.00	8,071.96		8,071.96	15.31	177.76	109.570	-956.09	2,946.09	3,392.58	3,199.72	192.86	17.591		
8,176.60	8,148.56	6 8,120.45	8,148.56	15.37	179.63	109.557	-955.31	2,946.09	3,392.32	3,197.53	194.79	17.415		
0 000 00	0 474 0	0 4 4 0 0 0	0 470 70	45.00	100 17	100 557	055.00	2.040.00	0 000 00	2 400 07	105.05	47.005		
8,200.00	8,171.96	6 8,142.62	8,170.73	15.39	180.17	109.557	-955.32	2,946.09	3,392.32	3,196.97	195.35	17.365		
7/00/2000	4.05.405						rgent point, SF							=

Anticollision Report

0.00 usft

MarathonOil Corporation

Offset Site Error:

Company:	Marathon Oil Permian LLC
Project:	Eddy County, NM (NAD27-NME)
Reference Site:	Decimus 5 WXY Fed Com
Site Error:	0.00 usft
Reference Well:	Decimus 5 WXY Fed Com 2H
Well Error:	1.00 usft
Reference Wellbore	OH
Reference Design:	Plan 1 07-22-22

Local Co-ordinate Reference: TVD Reference: MD Reference: North Reference: Survey Calculation Method: Output errors are at Database: Offset TVD Reference:



Offset Design: Maximus/Decimus Offsets - Carrasco 6 Com 1 - OH - Surveys

Survey Prog	ram: 10 erence	0-INC-ONLY, Off			laior Axis		Offset Wellb	ana Cantua	Die	Rule Assi tance	gned:		Offset Well Error:	1.00 u
Measured	Vertical	Measured	Vertical	Reference	Offset	Highside	Onset wend	bre Centre	Between	Between	Minimum	Separation	Warning	
Depth	Depth	Depth	Depth			Toolface	+N/-S	+E/-W	Centres	Ellipses	Separation	Factor	· ·	
(usft)	(usft)	(usft)	(usft)	(usft)	(usft)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)			
8,300.00	8,271.96	8,237.41	8,265.51	15.47	182.48	109.562	-955.64	2,946.09	3,392.44	3,194.70	197.74	17.156		
8,400.00	8,371.96	8,343.97	8,371.96	15.55	185.19	109.570	-956.09	2,946.09	3,392.58	3,192.05	200.53	16.918		
8,500.00	8,471.96	8,443.97	8,471.96	15.63	187.89	109.570	-956.09	2,946.09	3,392.58	3,189.27	203.31	16.687		
8,536.25	8,508.22	8,478.59	8,506.55	15.66	188.82	109.547	-954.66	2,946.09	3,392.10	3,187.83	204.27	16.606		
8,600.00	8,571.96	8,535.54	8,563.49	15.71	190.36	109.551	-954.91	2,946.09	3,392.20	3,186.34	205.86	16.478		
8,700.00	8,671.96	8,644.15	8,671.96	15.79	193.25	109.570	-956.09	2,946.09	3,392.58	3,183.75	208.83	16.245		
-,	-,	-,	-,					_,	-,	-,				
8,783.22	8,755.19	8,727.37	8,755.19	15.84	195.28	109.570	-956.09	2,946.09	3,392.58	3,181.66	210.92	16.084		
8,800.00	8,771.96	8,744.15	8,771.96	15.84	195.69	19.625	-956.09	2,946.09	3,392.35	3,181.03	211.32	16.053		
8,850.00	8,821.81	8,793.20	8,820.99	15.81	196.89	19.742	-954.90	2,946.09	3,388.52	3,176.02	212.51	15.946		
8,900.00	8,871.16	8,837.62	8,865.41	15.77	197.98	20.042	-955.03	2,946.09	3,381.06	3,167.51	213.56	15.832		
8,950.00	8,919.62	8,881.27	8,909.05	15.73	199.04	20.518	-955.34	2,946.09	3,369.65	3,155.07	214.58	15.703		
0,950.00	0,919.02	0,001.27	0,909.05	15.75	199.04	20.516	-900.04	2,940.09	3,309.05	3,155.07	214.00	15.705		
9,000.00	8,966.83	8,923.79	8,951.56	15.68	200.08	21.187	-955.83	2,946.09	3,354.39	3,138.81	215.57	15.560		
9,050.00	9,012.43	8,984.72	9,012.43	15.63	201.49	22.127	-956.09	2,946.09	3,335.19	3,118.24	216.95	15.373		
					201.43									
9,100.00	9,056.07	9,028.36	9,056.07	15.59		23.281	-956.09	2,946.09	3,312.30	3,094.40	217.90	15.201		
9,150.00	9,097.42	9,069.72	9,097.42	15.56	203.41	24.737	-956.09	2,946.09	3,285.95	3,067.15	218.80	15.018		
9,200.00	9,136.17	9,106.55	9,134.24	15.55	204.25	26.530	-955.33	2,946.09	3,256.08	3,036.48	219.60	14.827		
0.250.00	0 170 00	0 120 54	0 167 00	15 50	204.00	00.775	055 43	2.046.00	2 222 51	2 002 17	220.22	14 620		
9,250.00	9,172.02	9,139.54	9,167.23	15.56	204.99	28.775	-955.43	2,946.09	3,223.51	3,003.17	220.33	14.630		
9,300.00	9,204.69	9,169.61	9,197.30	15.60	205.67	31.573	-955.59	2,946.09	3,188.21	2,967.20	221.00	14.426		
9,350.00	9,233.95	9,196.53	9,224.22	15.68	206.28	35.071	-955.79	2,946.09	3,150.46	2,928.85	221.62	14.216		
9,400.00	9,259.56	9,231.92	9,259.56	15.83	207.09	39.670	-956.09	2,946.09	3,110.57	2,888.12	222.46	13.983		
9,450.00	9,281.33	9,253.69	9,281.33	16.06	207.62	45.272	-956.09	2,946.09	3,068.75	2,845.72	223.03	13.759		
9,500.00	9,299.10	9,271.46	9,299.10	16.37	208.06	52.273	-956.09	2,946.09	3,025.41	2,801.88	223.53	13.535		
9,550.00	9,312.73	9,285.09	9,312.73	16.78	208.40	60.867	-956.09	2,946.09	2,980.92	2,756.97	223.95	13.311		
9,600.00	9,322.11	9,294.47	9,322.11	17.27	208.63	71.024	-956.09	2,946.09	2,935.61	2,711.31	224.29	13.088		
9,650.00	9,327.18	9,299.54	9,327.18	17.83	208.75	82.304	-956.09	2,946.09	2,889.84	2,665.29	224.55	12.869		
9,673.22	9,328.06	9,300.42	9,328.06	18.11	208.77	87.690	-956.09	2,946.09	2,868.53	2,643.88	224.65	12.769		
9,700.00	9,328.52	9,300.89	9,328.52	18.45	208.78	87.713	-956.09	2,946.09	2,843.97	2,619.23	224.75	12.654		
9,800.00	9,330.27	9,302.63	9,330.27	19.86	208.83	87.801	-956.09	2,946.09	2,752.65	2,527.47	225.18	12.224		
9,900.00	9,332.01	9,304.38	9,332.01	21.43	208.87	87.889	-956.09	2,946.09	2,661.94	2,436.24	225.71	11.794		
10,000.00	9,333.76	9,306.12	9,333.76	23.13	208.91	87.976	-956.09	2,946.09	2,571.93	2,345.59	226.34	11.363		
10,100.00	9,335.50	9,307.87	9,335.50	24.93	208.95	88.064	-956.09	2,946.09	2,482.68	2,255.59	227.09	10.933		
10,200.00	9,337.25	9,309.61	9,337.25	26.81	209.00	88.152	-956.09	2,946.09	2,394.27	2,166.31	227.96	10.503		
10,300.00	9,339.00	9,311.36	9,339.00	28.75	209.04	88.239	-956.09	2,946.09	2,306.82	2,077.84	228.97	10.075		
10,400.00	9,340.74	9,313.10	9,340.74	30.74	209.08	88.327	-956.09	2,946.09	2,220.42	1,990.29	230.13	9.649		
10,500.00	9,342.49	9,314.85	9,342.49	32.78	209.13	88.415	-956.09	2,946.09	2,135.20	1,903.76	231.44	9.226		
10,600.00	9,344.23	9,316.59	9,344.23	34.85	209.17	88.502	-956.09	2,946.09	2,051.32	1,818.40	232.92	8.807		
	-,	-,	-,					_,	_,	.,				
10,700.00	9,345.98	9,318.34	9,345.98	36.94	209.21	88.590	-956.09	2,946.09	1,968.95	1,734.37	234.58	8.394		
10,800.00	9,347.72	9,320.08	9,347.72	39.07	209.25	88.678	-956.09	2,946.09	1,888.27	1,651.85	236.42	7.987		
10,900.00	9,349.47	9,321.83	9,349.47	41.21	209.30	88.766	-956.09	2,946.09	1,809.53	1,571.05	238.47	7.588		
11,000.00	9,351.21	9,323.57	9,351.21	43.36	209.34	88.853	-956.09	2,946.09	1,732.97	1,492.24	240.73	7.199		
11,100.00	9,351.21	9,325.37	9,352.96	45.54	209.34	88.941	-956.09	2,946.09	1,658.91	1,492.24	240.73	6.821		
11,100.00	3,332.30	0,020.02	3,332.30	40.04	209.00	00.941	-300.03	2,340.03	1,000.91	1,710.71	240.21	0.021		
11,200.00	9,354.70	9,327.06	9,354.70	47.72	209.43	89.029	-956.09	2,946.09	1,587.70	1,341.79	245.91	6.457		
11,300.00	9,356.45	9,328.81	9,356.45	49.92	209.47	89.117	-956.09	2,946.09	1,519.73	1,270.90	248.83	6.107		
11,400.00	9,358.19	9,320.01	9,358.19	49.92 52.13	209.47	89.204	-956.09	2,946.09	1,455.46	1,203.49	246.65	5.776		
								2,946.09 2,946.09				5.776		
11,500.00	9,359.94	9,332.30	9,359.94	54.34	209.55	89.292	-956.09		1,395.40	1,140.09	255.32			
11,600.00	9,361.68	9,334.05	9,361.68	56.56	209.60	89.380	-956.09	2,946.09	1,340.12	1,081.29	258.83	5.178		
11,700.00	0 363 43	0 335 70	0 363 43	E0 70	200 64	80 469	_056.00	2 0/6 00	1 200 22	1 027 76	262 17	1 016		
	9,363.43	9,335.79	9,363.43	58.79	209.64	89.468	-956.09	2,946.09	1,290.23	1,027.76	262.47	4.916		
11,800.00	9,365.17	9,337.54	9,365.17	61.02	209.68	89.555	-956.09	2,946.09	1,246.38	980.21	266.17	4.683		
11,900.00	9,366.92	9,339.28	9,366.92	63.26	209.73	89.643	-956.09	2,946.09	1,209.22	939.38	269.84	4.481		
12,000.00	9,368.66	9,341.03	9,368.66	65.51	209.77	89.731	-956.09	2,946.09	1,179.39	906.00	273.39	4.314		
12,100.00	9,370.41	9,342.77	9,370.41	67.76	209.81	89.819	-956.09	2,946.09	1,157.46	880.76	276.70	4.183		
12,200.00	9,372.15	9,344.52	9,372.15	70.01	209.85	89.907	-956.09	2,946.09	1,143.87	864.22	279.65	4.090		





Marathon Oil

Offset Site Error: 0.00 usft

Company:	Marathon Oil Permian LLC
Project:	Eddy County, NM (NAD27-NME)
Reference Site:	Decimus 5 WXY Fed Com
Site Error:	0.00 usft
Reference Well:	Decimus 5 WXY Fed Com 2H
Well Error:	1.00 usft
Reference Wellbore	OH
Reference Design:	Plan 1 07-22-22

Local Co-ordinate Reference: TVD Reference: MD Reference: North Reference: Survey Calculation Method: Output errors are at Database: Offset TVD Reference: Well Decimus 5 WXY Fed Com 2H RKB @ 3067.60usft (Cactus 169) RKB @ 3067.60usft (Cactus 169) Grid Minimum Curvature 2.00 sigma USA Compass Reference Datum

Offset Design: Maximus/Decimus Offsets - Carrasco 6 Com 1 - OH - Surveys

Survey Prog	ram: 1 erence	00-INC-ONLY,			laior Avia		Offeet Mellh	oro Contro	Die	Rule Assi	gned:		Offset Well Error:	1.00 usf
Refe Measured	Vertical	Off Measured	set Vertical	Reference	lajor Axis Offset	Highside	Offset Wellb		Between	Between	Minimum	Separation	Warning	
Depth	Depth	Depth	Depth			Toolface	+N/-S	+E/-W	Centres	Ellipses	Separation	Factor	-	
(usft)	(usft)	(usft)	(usft)	(usft)	(usft)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)			
12,300.00	9,373.90	9,346.26	9,373.90	72.26	209.90	89.994	-956.09	2,946.09	1,138.93	856.78	282.16	4.037		
12,306.37	9,374.01	9,346.37	9,374.01	72.41	209.90	90.000	-956.09	2,946.09	1,138.92	856.62	282.30	4.034 CC,	ES	
12,400.00	9,375.65	9,348.01	9,375.65	74.52	209.94	90.082	-956.09	2,946.09	1,142.76	858.61	284.14	4.022 SF		
12,500.00	9,377.39	9,349.75	9,377.39	76.78	209.98	90.170	-956.09	2,946.09	1,155.25	869.68	285.57	4.045		
12,600.00 12,700.00	9,379.14 9,380.88	9,351.50 9,353.24	9,379.14 9,380.88	79.05 81.31	210.03 210.07	90.258 90.346	-956.09 -956.09	2,946.09 2,946.09	1,176.15 1,205.00	889.70 918.19	286.45 286.81	4.106 4.201		
12,700.00	3,500.00	3,333.24	3,500.00	01.01	210.07	30.340	-350.03	2,340.03	1,200.00	310.13	200.01	4.201		
12,800.00	9,382.63	9,354.99	9,382.63	83.58	210.11	90.433	-956.09	2,946.09	1,241.26	954.54	286.72	4.329		
12,900.00	9,384.37	9,356.73	9,384.37	85.85	210.15	90.521	-956.09	2,946.09	1,284.30	998.05	286.25	4.487		
13,000.00	9,386.12	9,358.48	9,386.12	88.13	210.20	90.609	-956.09	2,946.09	1,333.46	1,047.97	285.49	4.671		
13,100.00	9,387.86	9,360.22	9,387.86	90.40	210.24	90.697	-956.09	2,946.09	1,388.09	1,103.58	284.51	4.879		
13,200.00	9,389.61	9,361.97	9,389.61	92.68	210.28	90.784	-956.09	2,946.09	1,447.58	1,164.20	283.38	5.108		
40.000.00	0 004 05	0 000 74	0.004.05	04.05	040.00	00.070	050.00	0.040.00	4 544 04	4 000 40	000.44	5 057		
13,300.00	9,391.35	9,363.71	9,391.35	94.95	210.33	90.872	-956.09	2,946.09	1,511.34	1,229.19	282.14	5.357		
13,400.00	9,393.10	9,365.46	9,393.10	97.23	210.37	90.960	-956.09	2,946.09	1,578.86	1,298.00	280.86	5.621		
13,500.00 13,600.00	9,394.84 9,396.59	9,367.20 9,368.95	9,394.84 9,396.59	99.51 101.80	210.41 210.45	91.048 91.135	-956.09 -956.09	2,946.09 2,946.09	1,649.69 1,723.40	1,370.12 1,445.13	279.56 278.27	5.901 6.193		
13,700.00	9,398.33	9,370.70	9,398.33	101.00	210.45	91.223	-956.09	2,946.09	1,799.66	1,522.65	277.01	6.497		
.0,700.00	0,000.00	3,010.10	0,000.00	104.00	210.00	01.220	-350.03	2,040.00	1,100.00	1,022.00	211.01	0.401		
13,800.00	9,400.08	9,372.44	9,400.08	106.36	210.54	91.311	-956.09	2,946.09	1,878.14	1,602.36	275.78	6.810		
13,900.00	9,401.82	9,374.19	9,401.82	108.65	210.58	91.399	-956.09	2,946.09	1,958.58	1,683.98	274.60	7.132		
14,000.00	9,403.57	9,375.93	9,403.57	110.93	210.63	91.486	-956.09	2,946.09	2,040.75	1,767.27	273.48	7.462		
14,100.00	9,405.31	9,377.68	9,405.31	113.22	210.67	91.574	-956.09	2,946.09	2,124.45	1,852.04	272.41	7.799		
14,200.00	9,407.06	9,379.42	9,407.06	115.50	210.71	91.662	-956.09	2,946.09	2,209.50	1,938.11	271.39	8.141		
	0 400 00	0 004 47	0 100 00	447 70	040 75	04 750	050.00	0.040.00	0 005 70	0.005.00	070.40	0.400		
14,300.00	9,408.80	9,381.17	9,408.80	117.79	210.75	91.750	-956.09	2,946.09	2,295.76	2,025.33	270.43	8.489		
14,400.00	9,410.55	9,382.91	9,410.55	120.08	210.80	91.837	-956.09	2,946.09	2,383.09	2,113.57	269.52	8.842		
14,500.00 14,600.00	9,412.30 9,414.04	9,384.66 9,386.40	9,412.30 9,414.04	122.37 124.66	210.84 210.88	91.925 92.013	-956.09 -956.09	2,946.09 2,946.09	2,471.38 2,560.53	2,202.71 2,292.66	268.67 267.86	9.199 9.559		
14,700.00	9,414.04	9,388.15	9,414.04 9,415.79	124.00	210.88	92.013	-956.09	2,946.09	2,650.45	2,292.00	267.10	9.923		
14,700.00	3,413.73	3,300.13	3,413.73	120.35	210.32	32.100	-350.03	2,340.03	2,000.40	2,000.00	207.10	3.323		
14,800.00	9,417.53	9,389.79	9,417.42	129.24	210.97	92.184	-955.21	2,946.09	2,740.70	2,474.35	266.36	10.290		
14,900.00	9,419.28	9,391.41	9,419.04	131.53	211.00	92.265	-955.21	2,946.09	2,831.97	2,566.28	265.68	10.659		
15,000.00	9,421.02	9,393.03	9,420.66	133.83	211.04	92.347	-955.21	2,946.09	2,923.80	2,658.75	265.05	11.031		
15,100.00	9,422.77	9,394.65	9,422.28	136.12	211.08	92.428	-955.21	2,946.09	3,016.15	2,751.69	264.46	11.405		
15,200.00	9,424.51	9,396.27	9,423.90	138.41	211.12	92.510	-955.21	2,946.09	3,108.97	2,845.08	263.90	11.781		
45 000 00	0 400 00	0 007 00	0 405 50	4 40 74	044.40	00 504	055.04	0.040.00	2 000 00	0.000.00	000.07	40.450		
15,300.00	9,426.26	9,397.89	9,425.52	140.71	211.16	92.591	-955.21	2,946.09	3,202.23	2,938.86	263.37	12.159		
15,400.00 15,500.00	9,428.00 9,429.75	9,399.51	9,427.14 9,428.76	143.00	211.20 211.24	92.673 92.754	-955.21 -955.21	2,946.09 2,946.09	3,295.88 3,389.89	3,033.00	262.87 262.41	12.538 12.918		
15,600.00	9,429.75	9,401.13 9,402.75	9,428.78 9,430.38	145.29 147.59	211.24	92.754 92.835	-955.21	2,946.09	3,484.23	3,127.48 3,222.26	262.41	13.300		
15,700.00	9,431.49	9,402.73 9,404.38	9,430.38	147.59	211.20	92.835	-955.22	2,946.09	3,578.88	3,317.32	261.56	13.683		
10,700.00	0,400.24	0,404.00	0,402.00	140.00	211.02	52.517	-000.22	2,040.00	0,070.00	0,017.02	201.00	10.000		
15,800.00	9,434.98	9,406.00	9,433.62	152.18	211.36	92.998	-955.22	2,946.09	3,673.82	3,412.64	261.17	14.067		
15,900.00	9,436.73	9,407.62	9,435.24	154.47	211.40	93.079	-955.22	2,946.09	3,769.01	3,508.20	260.81	14.451		
16,000.00	9,438.47	9,409.24	9,436.86	156.77	211.44	93.161	-955.22	2,946.09	3,864.45	3,603.98	260.47	14.837		
16,100.00	9,440.22	9,410.86	9,438.49	159.07	211.48	93.242	-955.23	2,946.09	3,960.11	3,699.96	260.15	15.223		
16,200.00	9,441.96	9,412.48	9,440.11	161.36	211.52	93.323	-955.23	2,946.09	4,055.98	3,796.14	259.84	15.609		
16 200 00	0 / 40 74	0 444 40	0 1 1 4 7 9	169.60	214 56	02 405	055 00	2 0/6 00	4 150 04	2 000 40	250 50	15 007		
16,300.00	9,443.71	9,414.10	9,441.73	163.66	211.56	93.405	-955.23	2,946.09	4,152.04	3,892.48	259.56	15.997 16 384		
16,400.00 16,500.00	9,445.46 9,447.20	9,415.72 9,417.34	9,443.35 9,444.97	165.96 168.26	211.60 211.64	93.486 93.567	-955.23 -955.24	2,946.09 2,946.09	4,248.29 4,344.70	3,988.99 4,085.66	259.29 259.04	16.384 16.772		
16,600.00	9,447.20 9,448.95	9,417.34 9,418.96	9,444.97 9,446.59	170.55	211.64	93.648	-955.24 -955.24	2,946.09	4,344.70	4,085.66 4,182.47	259.04	17.161		
16,700.00	9,448.95	9,418.90 9,420.58	9,440.39 9,448.21	170.55	211.00	93.048	-955.24	2,946.09	4,441.27	4,182.47	258.59	17.549		
	0,700.00	0,720.00	0,1.0.21	. 1 2.00	2.1.72	00.100	300.24	2,0 10.00	.,001.00	., 0.71	200.00			
16,800.00	9,452.44	9,422.20	9,449.83	175.15	211.76	93.811	-955.25	2,946.09	4,634.85	4,376.47	258.38	17.938		
16,900.00	9,454.18	9,423.82	9,451.45	177.45	211.80	93.892	-955.25	2,946.09	4,731.84	4,473.65	258.19	18.327		
17,000.00	9,455.93	9,425.44	9,453.07	179.75	211.84	93.973	-955.26	2,946.09	4,828.95	4,570.94	258.01	18.716		
17,100.00	9,457.67	9,427.06	9,454.69	182.05	211.88	94.054	-955.26	2,946.09	4,926.17	4,668.34	257.84	19.106		
17,200.00	9,459.42	9,428.68	9,456.31	184.35	211.92	94.135	-955.26	2,946.09	5,023.51	4,765.83	257.68	19.495		
47 000 00	0 404 40	0 400 00	0.457.00	100.05	044.00	04.040	055.07	0.040.00	F 400.05	4 000 41	057.50	40.005		
17,300.00	9,461.16	9,430.30	9,457.93	186.65	211.96	94.216	-955.27	2,946.09	5,120.95	4,863.41	257.53	19.885		





Marathon Oil Corporation.

Offset Site Error:

0.00 usft

ed Com 2H
ctus 169)
ctus 169)

Offset Design: Maximus/Decimus Offsets - Carrasco 6 Com 1 - OH - Surveys

	rence	100-INC-ONLY, Off	set	Semi I	laior Axis		Offset Wellbo	ore Centre		Rule Assi tance			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	
17,400.00	9.462.9	. ,	9.459.55	188.94	212.00	94.298	-955.27	2,946.09	5.218.48	4.961.08	257.40	20.274		
17,500.00	9,464.6		9,461.17	191.24	212.04	94.379	-955.28	2,946.09	5,316.10	5,058.83	257.27	20.664		
17,600.00	9.466.4		9,462.79	193.54	212.08	94,460	-955.28	2,946.09	5.413.81	5,156,66	257.15	21.053		
17,700.00	9,468,1		9,464,41	195.84	212.12	94,541	-955.29	2.946.09	5.511.60	5.254.56	257.04	21.442		
17,800.00	9,469,8	-,	9,466.03	198.14	212.16	94.622	-955.29	2.946.09	5.609.47	5.352.53	256.94	21.831		
17,900.00	9,471.6		9,467.65	200.44	212.20	94.703	-955.30	2,946.09	5,707.41	5,450.56	256.85	22.221		
,														
18,000.00	9,473.3	9,441.65	9,469.27	202.74	212.24	94.784	-955.31	2,946.09	5,805.43	5,548.66	256.77	22.610		
18,100.00	9,475.1	9,443.27	9,470.89	205.05	212.28	94.865	-955.31	2,946.09	5,903.51	5,646.81	256.69	22.998		
18,200.00	9,476.8	9,444.89	9,472.51	207.35	212.32	94.946	-955.32	2,946.09	6,001.65	5,745.02	256.62	23.387		
18,300.00	9,478.6	9,446.51	9,474.13	209.65	212.36	95.027	-955.32	2,946.09	6,099.85	5,843.29	256.56	23.775		
18,400.00	9,480.3	9,448.13	9,475.75	211.95	212.40	95.107	-955.33	2,946.09	6,198.11	5,941.60	256.51	24.164		
18,500.00	9,482.1	- /	9,477.37	214.25	212.44	95.188	-955.34	2,946.09	6,296.42	6,039.96	256.46	24.552		
18,600.00	9,483.8		9,478.99	216.55	212.48	95.269	-955.34	2,946.09	6,394.78	6,138.37	256.41	24.939		
18,700.00	9,485.6		9,480.61	218.85	212.52	95.350	-955.35	2,946.09	6,493.20	6,236.82	256.38	25.327		
18,800.00	9,487.3	-,	9,482.23	221.15	212.56	95.431	-955.36	2,946.09	6,591.66	6,335.31	256.35	25.714		
18,900.00	9,489.0	9,456.23	9,483.85	223.45	212.60	95.511	-955.36	2,946.09	6,690.16	6,433.84	256.32	26.101		
19,000.00	9.490.8	33 9.457.85	9.485.47	225.76	212.64	95.592	-955.37	2.946.09	6.788.71	6.532.42	256.30	26.487		
19,100.00	9,492.5		9,487.09	228.06	212.68	95.673	-955.38	2,946.09	6.887.31	6,631.02	256.28	26.874		
19,200.00	9,494.3		9.488.71	230.36	212.00	95.754	-955.39	2,946.09	6.985.94	6.729.66	256.27	27.260		
19,247,64	9,495.1	-,	9.489.49	231.46	212.72	95.792	-955.39	2,946.09	7,032.94	6.776.67	256.27	27.444		
10,247.04	0,400.	3,401.00	0,100.40	201.40	2.2.70	00.102	500.00	2,0 10.00	1,002.04	3,110.01	230.21	21.111		





Marathon Oil

Offset Site Error:

0.00 usft

Company:	Marathon Oil Permian LLC	Local Co-ordinate Reference:	Well Decimus 5 WXY Fed Com 2H
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 2H	Survey Calculation Method:	Minimum Curvature
Well Error:	1.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ОН	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

Survey Program: T00=NNC-ONLY. Reference Offset Survey All Reference Survey All Reference Offset Between Between															
Depth (usft) Depth (usft) Depth (usft) Depth (usft) Depth (usft) Toolface (usft) +Nt-S (usft) +E/W (usft) Centres (usft) Ellipses (usft) Separation (usft) Factor 17,400.00 9,462.91 9,459.55 188.94 212.00 94.298 -955.27 2.946.09 5.218.48 4.961.00 257.40 20.274 17,500.00 9,468.45 9,433.54 9,461.17 191.24 212.08 94.460 -955.28 2.946.09 5.511.60 5.257.64 21.042 17,700.00 9,468.41 9,466.41 195.84 212.12 94.401 -955.29 2.946.09 5.511.60 5.257.64 21.442 17,800.00 9,468.41 9,466.03 198.14 212.16 94.622 -955.29 2.946.09 5.071.41 5.450.66 256.77 22.610 18,000.00 9,473.38 9,441.65 9,469.27 202.74 212.24 94.784 -955.31 2.946.09 5.805.43 5.546.66 256.77 22.610 18,000.00 9,	Re	ference	Off	set	Semi M		Higheide	Offset Wellbo	ore Centre		tance	-	Separation		1.00 usft
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	Depth	Depth	Depth	Depth			Toolface			Centres	Ellipses	Separation		warning	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$		9,462.9	9.431.92					-955.27	2.946.09		4.961.08		20.274		
17,600.00 9,466.40 9,435.17 9,462.79 193.54 212.08 94.460 -955.28 2,946.09 5,413.81 5,156.66 257.15 21.053 17,700.00 9,468.14 9,436.79 9,464.41 195.84 212.12 94.541 -955.29 2,946.09 5,611.60 5,254.56 257.04 21.442 17,800.00 9,461.83 9,440.03 9,467.65 200.44 212.20 94.703 -955.30 2,946.09 5,609.47 5,525.85 22.221 18,000.00 9,473.38 9,441.65 9,469.27 202.74 212.24 94.784 -955.31 2,946.09 5,805.43 5,548.66 256.77 22.610 18,100.00 9,475.87 9,448.9 205.05 212.28 94.865 -955.31 2,946.09 5,003.51 5,646.81 256.69 23.387 18,200.00 9,478.61 9,444.51 9,472.51 207.35 212.36 95.027 -955.32 2,946.09 6,001.65 5,745.02 256.66 23.775 18,400.00 9,488.36 9,451.37 9,474.89 9,472.57 211.95													20.664		
17,800.09,469.899,438.419,466.03198.14212.1694.622 -955.29 $2,946.09$ $5,609.47$ $5,352.53$ 256.94 21.831 17,900.009,471.639,440.039,467.65200.44212.2094.703 -955.30 $2,946.09$ $5,707.41$ $5,450.56$ 256.85 22.221 18,000.009,473.389,441.659,469.27202.74212.2494.784 -955.31 $2,946.09$ $5,805.43$ $5,548.66$ 256.77 22.610 18,100.009,475.129,443.279,470.89205.05212.2894.865 -955.31 $2,946.09$ $5,803.43$ $5,548.66$ 256.77 22.610 18,200.009,476.879,444.899,472.51207.35212.3294.946 -955.32 $2,946.09$ $6,001.65$ $5,745.02$ 256.62 23.387 18,300.009,478.619,448.139,475.75211.95212.4095.107 -955.33 $2,946.09$ $6,198.11$ $5,941.60$ 256.51 24.164 18,500.009,482.119,449.759,477.37214.25212.4495.188 -955.34 $2,946.09$ $6,296.42$ $6,039.96$ 256.46 24.552 18,600.009,483.859,451.379,478.619,482.23221.15212.26 95.350 -955.35 $2,946.09$ $6,296.42$ $6,039.96$ 256.45 24.164 18,500.009,487.349,456.619,482.23221.15212.52 95.350 -955.35 $2,946.09$ 6				9,462.79	193.54	212.08		-955.28	2,946.09	5,413.81		257.15	21.053		
17,900.009,471.639,440.039,467.65200.44212.2094.703-955.302,946.095,707.415,450.56256.8522.2118,000.009,473.389,441.659,469.27202.74212.2494.784-955.312,946.095,805.435,548.66256.7722.61018,100.009,475.129,443.279,470.89205.05212.2894.865-955.312,946.096,001.655,745.02256.6223.38718,200.009,476.879,444.899,472.51207.35212.3294.946-955.322,946.096,001.655,745.02256.6223.38718,300.009,480.369,448.139,475.75211.95212.4095.107-955.332,946.096,198.115,941.60256.5124.16418,500.009,482.119,449.759,477.37214.25212.4495.188-955.342,946.096,296.426,039.96256.4624.55218,600.009,483.859,451.379,478.99216.55212.4895.269-955.342,946.096,394.786,138.37256.4124.93918,700.009,485.609,452.999,480.61218.85212.5295.350-955.352,946.096,394.786,138.37256.4124.93918,700.009,485.609,452.399,480.61218.85212.5295.350-955.352,946.096,591.666,335.31256.3525.71418,900.009,488.099,456.23 <td< td=""><td>17,700.00</td><td>9,468.</td><td>14 9,436.79</td><td>9,464.41</td><td>195.84</td><td>212.12</td><td>94.541</td><td>-955.29</td><td>2,946.09</td><td>5,511.60</td><td>5,254.56</td><td>257.04</td><td>21.442</td><td></td><td></td></td<>	17,700.00	9,468.	14 9,436.79	9,464.41	195.84	212.12	94.541	-955.29	2,946.09	5,511.60	5,254.56	257.04	21.442		
18,000.00 9,473.38 9,441.85 9,469.27 202.74 212.24 94.784 -955.31 2,946.09 5,805.43 5,548.66 256.77 22.610 18,100.00 9,475.12 9,443.27 9,470.89 205.05 212.28 94.865 -955.31 2,946.09 5,003.51 5,646.81 256.69 22.998 18,200.00 9,476.87 9,444.89 9,472.51 207.35 212.32 94.946 -955.32 2,946.09 6,001.65 5,745.02 256.62 23.387 18,300.00 9,478.61 9,444.81 9,475.75 211.95 212.40 95.107 -955.33 2,946.09 6,099.85 5,843.29 256.56 23.775 18,400.00 9,482.11 9,449.75 9,477.37 214.25 212.40 95.107 -955.33 2,946.09 6,198.11 5,941.60 256.46 24.552 18,600.00 9,482.11 9,449.75 9,477.37 214.25 212.44 95.188 -955.34 2,946.09 6,394.78 6,138.37 256.41 24.939 18,600.00 9,485.60 9,452.99 9,480.61			9,438.41	9,466.03	198.14	212.16	94.622	-955.29	2,946.09	5,609.47	5,352.53		21.831		
$\begin{array}{cccccccccccccccccccccccccccccccccccc$					200.44								22.221		
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19,100.00 9,492.58 9,459.47 9,487.09 228.06 212.68 95.673 -955.38 2,946.09 6,887.31 6,631.02 256.28 26.874	18,900.00	9,489.0	9,456.23	9,483.85	223.45	212.60	95.511	-955.36	2,946.09	6,690.16	6,433.84	250.32	26.101		
	19,000.00	9,490.8	9,457.85	9,485.47	225.76	212.64	95.592	-955.37	2,946.09	6,788.71	6,532.42	256.30	26.487		
19,200.00 9,494.32 9,461.09 9,488.71 230.36 212.72 95.754 -955.39 2,946.09 6,985.94 6,729.66 256.27 27.260	19,100.00	9,492.	58 9,459.47	9,487.09	228.06	212.68	95.673	-955.38	2,946.09	6,887.31	6,631.02	256.28	26.874		
	19,200.00	9,494.3	9,461.09	9,488.71	230.36	212.72	95.754	-955.39	2,946.09	6,985.94	6,729.66	256.27	27.260		
19,247.64 9,495.15 9,461.86 9,489.49 231.46 212.73 95.792 -955.39 2,946.09 7,032.94 6,776.67 256.27 27.444	19,247.64	9,495.	15 9,461.86	9,489.49	231.46	212.73	95.792	-955.39	2,946.09	7,032.94	6,776.67	256.27	27.444		





Marathon Oil Corporation.

Offset Site Error: 0.00 usft

Company:	Marathon Oil Permian LLC	Local Co-ordinate Reference:	Well Decimus 5 WXY Fed Com 2H
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 2H	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 us
urvey Prog	ram: 19 erence	6-INC-ONLY	ot	Som: B	aior Avia		Offset Wellb	oro Contro	Die	Rule Assig	gned:		Offset Well Error:	1.00 us
Refe Measured	Vertical	Measured	Vertical	Reference	lajor Axis Offset	Highside			Between	Between	Minimum	Separation	Warning	
Depth	Depth	Depth	Depth			Toolface	+N/-S	+E/-W	Centres	Ellipses	Separation	Factor		
(usft)	(usft)	(usft)	(usft)	(usft)	(usft)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)			
0.00 100.00	0.00 100.00	0.00 80.40	19.60 100.00	1.00 1.13	1.00 1.58	98.523 98.523	-520.05 -520.05	3,470.06 3,470.06	3,508.86 3,508.81	3,506.10	2.71	1,292.673		
200.00	200.00	180.40	200.00	1.66	2.92	98.523	-520.05	3,470.06	3,508.81	3,500.10	4.58	765.451		
200.00	200.00	272.02	200.00	2.02	4.51	98.519	-519.80	3,470.06	3,508.77	3,502.24	6.53	537.397		
300.00	300.00	280.05	299.64	2.02	4.65	98.519	-519.81	3,470.06	3,508.77	3,502.24	6.71	523.001		
400.00	400.00	380.43	400.00	2.39	6.62	98.523	-520.05	3,470.06	3,508.81	3,499.79	9.02	389.193		
								-,	.,					
500.00	500.00	480.43	500.00	2.69	8.90	98.523	-520.05	3,470.06	3,508.81	3,497.22	11.59	302.704		
531.77	531.77	511.48	531.04	2.78	9.61	98.511	-519.27	3,470.06	3,508.70	3,496.31	12.39	283.271		
600.00	600.00	577.16	596.72	2.96	11.11	98.515	-519.53	3,470.06	3,508.73	3,494.66	14.07	249.316		
700.00	700.00	680.47	700.00	3.21	13.40	98.523	-520.05	3,470.06	3,508.81	3,492.20	16.61	211.242		
800.00	800.00	780.47	800.00	3.44	15.51	98.523	-520.05	3,470.06	3,508.81	3,489.86	18.95	185.150		
833.31	833.31	813.49	833.03	3.52	16.20	98.518	-519.72	3,470.06	3,508.76	3,489.04	19.72	177.922		
900.00	900.00	879.23	898.76	3.66	17.59	98.520	-519.72	3,470.06	3,508.70	3,489.04	21.25	165.086		
1,000.00	1,000.00	980.49	1,000.00	3.87	19.75	98.523	-520.05	3,470.06	3,508.81	3,485.18	23.63	148.515		
1,100.00	1,100.00	1,080.49	1,100.00	4.07	21.95	98.523	-520.05	3,470.06	3,508.81	3,482.79	26.02	134.841		
1,136.07	1,136.07	1,116.37	1,135.87	4.14	22.74	98.512	-519.36	3,470.06	3,508.71	3,481.83	26.88	130.537		
.,	.,	.,	.,					-,	-,	-,				
1,200.00	1,200.00	1,178.54	1,198.04	4.26	24.10	98.514	-519.49	3,470.06	3,508.73	3,480.36	28.37	123.688		
1,300.00	1,300.00	1,280.54	1,300.00	4.45	26.36	98.523	-520.05	3,470.06	3,508.81	3,478.00	30.81	113.893		
1,400.00	1,399.98	1,380.52	1,399.98	4.73	28.68	152.786	-520.05	3,470.06	3,510.36	3,476.97	33.39	105.131		
1,500.00	1,499.84	1,478.92	1,498.37	5.02	30.96	152.772	-519.43	3,470.06	3,514.93	3,478.99	35.94	97.812		
1,600.00	1,599.45	1,575.74	1,595.18	5.32	33.21	152.771	-519.96	3,470.06	3,522.76	3,484.31	38.45	91.608		
1 700 00	1 000 70	4 070 00	1 000 70	5.00	05.07	450 700	500.05	0 170 00	0 500 00	0 100 10	44.50	05 450		
1,700.00	1,698.70	1,679.32 1,778.20	1,698.70	5.63	35.97	152.766	-520.05	3,470.06	3,533.63	3,492.13	41.50	85.153		
1,800.00	1,797.47		1,797.47	5.97	38.63	152.753	-520.05	3,470.06	3,547.57	3,503.11	44.46	79.792		
1,900.00 1,900.13	1,895.62 1,895.75	1,873.18 1,873.29	1,892.42 1,892.53	6.32 6.32	40.91 40.92	152.717 152.717	-519.26 -519.26	3,470.06 3,470.06	3,564.48 3,564.50	3,517.42	47.06 47.06	75.748 75.744		
2,000.00	1,895.75	1,073.29	1,892.55	6.61	40.92	152.717	-519.26	3,470.06	3,583.18	3,517.44 3,533.42	47.06	72.002		
2,000.00	1,993.44	1,974.23	1,993.44	0.01	43.33	132.880	-520.05	3,470.00	3,303.10	3,333.42	49.70	72.002		
2,100.00	2,091.25	2,070.09	2,089.29	6.92	45.68	153.033	-519.98	3,470.06	3,601.78	3,549.40	52.38	68.768		
2,200.00	2,189.06	2,166.60	2,185.72	7.25	48.61	153.170	-519.42	3,470.06	3,620.31	3,564.70	55.62	65.093		
2,300.00	2,286.88	2,266.00	2,285.01	7.60	51.79	153.322	-519.56	3,470.06	3,638.99	3,579.86	59.13	61.547		
2,400.00	2,384.69	2,357.31	2,376.23	7.96	54.65	153.462	-519.85	3,470.06	3,657.72	3,595.41	62.31	58.699		
2,500.00	2,482.51	2,463.68	2,482.51	8.33	58.05	153.622	-520.05	3,470.06	3,676.44	3,610.38	66.07	55.648		
	0 500 00	0.554.05	0.570.04	0.74		150 710	540.00	0 170 00	0.005.04	0.005.54	00.50	50 4 40		
2,600.00	2,580.32	2,554.85	2,573.64	8.71	61.16	153.743	-519.29	3,470.06	3,695.04	3,625.51	69.53	53.142		
2,700.00 2,781.91	2,678.13 2,758.25	2,659.48 2,739.60	2,678.13 2,758.25	9.10 9.41	64.60 67.17	153.906 154.020	-520.05 -520.05	3,470.06 3,470.06	3,713.91 3,729.28	3,640.57 3,653.08	73.34 76.20	50.638 48.940		
2,781.91	2,756.25	2,759.60	2,756.25	9.41	67.73	154.020	-520.05	3,470.06	3,732.62	3,655.80	76.20	48.587		
2,900.00	2,874.23	2,847.39	2,865.98	9.47	70.62	154.318	-518.87	3,470.06	3,749.10	3,668.98	80.12	46.793		
2,000.00	2,014.20	2,047.00	2,000.00	0.01	10.02	104.010	-010.07	0,470.00	0,140.10	0,000.00	00.12	40.700		
3,000.00	2,973.09	2,954.68	2,973.09	10.34	74.03	154.562	-520.05	3,470.06	3,762.89	3,678.95	83.94	44.829		
3,100.00	3,072.42	3,054.10	3,072.42	10.76	77.36	154.727	-520.05	3,470.06	3,773.35	3,685.70	87.65	43.053		
3,200.00	3,172.09	3,153.77	3,172.09	11.15	81.67	154.842	-520.05	3,470.06	3,780.67	3,688.36	92.32	40.954		
3,300.00	3,271.97	3,245.42	3,263.68	11.50	85.63	154.890	-519.02	3,470.06	3,784.66	3,688.07	96.60	39.179		
3,382.04	3,354.00	3,336.20	3,354.00	11.64	90.08	100.660	-520.05	3,470.06	3,785.91	3,684.74	101.17	37.420		
0.000.07	0.070.05	0.050.00	0 070 77	44.07	04.40	400.040	510 15	0 470 00	0 705 7 .	0.000 54	400.00	07.010		
3,398.97	3,370.93	3,353.00	3,370.77	11.65	91.10	100.646	-519.15	3,470.06	3,785.74	3,683.54	102.20	37.043		
3,400.00	3,371.96	3,353.65 3,454.57	3,371.42	11.65	91.14	100.646	-519.15	3,470.06	3,785.74	3,683.50	102.24	37.029		
3,500.00	3,471.96		3,471.96	11.72	98.23	100.660	-520.05	3,470.06	3,785.91	3,676.50	109.41	34.603		
3,526.60	3,498.56	3,481.08	3,498.35	11.74	100.30	100.627	-517.82	3,470.06	3,785.50	3,674.00	111.49	33.952 32.785		
3,600.00	3,571.96	3,531.53	3,548.70	11.80	104.23	100.639	-518.67	3,470.06	3,785.73	3,670.25	115.47	52.100		
3,700.00	3,671.96	3,655.80	3,671.96	11.88	115.62	100.660	-520.05	3,470.06	3,785.91	3,658.95	126.95	29.821		
3,800.00	3,771.96	3,755.80	3,771.96	11.95	125.27	100.660	-520.05	3,470.06	3,785.91	3,649.22	136.69	27.698		
3,900.00	3,871.96	3,855.80	3,871.96	12.03	134.92	100.660	-520.05	3,470.06	3,785.91	3,639.49	146.42	25.856		
4,000.00	3,971.96	3,955.80	3,971.96	12.11	144.57	100.660	-520.05	3,470.06	3,785.91	3,629.76	156.15	24.245		
4,043.30	4,015.26	3,998.36	4,013.53	12.14	148.68	100.445	-505.64	3,470.06	3,783.27	3,622.98	160.29	23.603		
4,100.00	4,071.96	4,049.91	4,064.96	12.19	153.66	100.449	-505.91	3,470.06	3,783.33	3,618.02	165.31	22.887		

7/22/2022 1:25:12PM

Anticollision Report

Marathon Oil Corporation.

Offset Site Error: 0.00 usft

Company:	Marathon Oil Permian LLC	Local Co-ordinate Reference:
Project:	Eddy County, NM (NAD27-NME)	TVD Reference:
Reference Site:	Decimus 5 WXY Fed Com	MD Reference:
Site Error:	0.00 usft	North Reference:
Reference Well:	Decimus 5 WXY Fed Com 2H	Survey Calculation Method:
Well Error:	1.00 usft	Output errors are at
Reference Wellbore	OH	Database:
Reference Design:	Plan 1 07-22-22	Offset TVD Reference:

Well Decimus 5 WXY Fed Com 2H
RKB @ 3067.60usft (Cactus 169)
RKB @ 3067.60usft (Cactus 169)
Grid
Minimum Curvature
2.00 sigma
USA Compass
Reference Datum

Offset Design: Maximus/Decimus Offsets - Carrasco 6 Com 2 - OH - Surveys

													Offset Site Error:	0.00 us
urvey Prog	ram: 19	96-INC-ONLY Off	ent	Som: B	laior Avia		Offset Wellb	oro Contro	Die	Rule Assi	gned:		Offset Well Error:	1.00 us
Measured	Vertical	Measured	set Vertical	Reference	lajor Axis Offset	Highside	Offset Wellb	ore Centre	Between	Between	Minimum	Separation	Warning	
Depth	Depth	Depth	Depth			Toolface	+N/-S	+E/-W	Centres	Ellipses	Separation	Factor		
(usft)	(usft)	(usft)	(usft)	(usft)	(usft)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)	04 700		
4,200.00	4,171.96	4,141.04	4,155.82	12.26	162.45	100.472	-507.40	3,470.06	3,783.62	3,609.44	174.18	21.723		
4,300.00 4,400.00	4,271.96	4,232.39 4,323.94	4,246.86	12.34	171.27	100.513	-510.20	3,470.06	3,784.18	3,601.11	183.07	20.670		
4,400.00	4,371.96 4,471.96	4,323.94	4,338.02 4,471.96	12.42 12.50	180.11 193.31	100.574 100.660	-514.30 -520.05	3,470.06 3,470.06	3,785.00 3,785.91	3,593.01 3,580.62	191.99 205.29	19.715 18.441		
4,600.00	4,471.90	4,403.08	4,471.90	12.50	202.26	100.660	-520.05	3,470.06	3,785.91	3,571.59	205.29	17.664		
4,681.28	4,653.24	4,645.16	4,652.35	12.64	209.40	100.599	-515.99	3,470.06	3,785.16	3,563.64	221.52	17.087		
.,	.,	.,	.,					-,	-,	-,				
4,700.00	4,671.96	4,658.96	4,666.12	12.65	210.62	100.600	-516.05	3,470.06	3,785.18	3,562.42	222.76	16.992		
4,800.00	4,771.96	4,732.97	4,739.90	12.73	217.17	100.630	-518.07	3,470.06	3,785.68	3,556.30	229.37	16.504		
4,900.00	4,871.96	4,866.65	4,871.96	12.81	229.23	100.660	-520.05	3,470.06	3,785.91	3,544.38	241.53	15.675		
4,954.02	4,925.98	4,920.66	4,925.66	12.85	234.13	100.587	-515.13	3,470.06	3,785.00	3,538.53	246.48	15.356		
5,000.00	4,971.96	4,956.25	4,961.16	12.88	237.36	100.591	-515.40	3,470.06	3,785.07	3,535.33	249.74	15.156		
5,100.00	5,071.96	5,033.98	5,038.62	12.96	244.43	100.628	-517.89	3,470.06	3,785.66	3,528.79	256.87	14.738		
5,200.00	5,171.96	5,146.85	5,149.30	13.04	254.80	100.641	-518.78	3,470.06	3,785.74	3,518.41	267.33	14.161		
5,295.10	5,267.07	5,265.27	5,266.78	13.11	265.92	100.614	-516.94	3,470.06	3,785.34	3,506.80	278.54	13.590		
5,300.00	5,271.96	5,268.53	5,270.04	13.12	266.23	100.614	-516.95	3,470.06	3,785.34	3,506.49	278.85	13.575		
5,400.00	5,371.96	5,371.99	5,371.96	13.19	276.00	100.660	-520.05	3,470.06	3,785.91	3,497.20	288.71	13.113		
5,481.14	5,453.10	5,453.12	5,452.85	13.26	283.79	100.611	-516.78	3,470.06	3,785.30	3,488.74	296.56	12.764		
5,500.00	5,471.96	5,465.64	5,465.35	13.27	285.00	100.612	-516.83	3,470.06	3,785.32	3,487.54	297.78	12.712		
5,600.00	5,571.96	5,573.84	5,571.96	13.35	295.43	100.660	-520.05	3,470.06	3,785.91	3,477.61	308.30	12.280		
5,668.49	5,640.46	5,642.24	5,640.14	13.40	302.12	100.612	-516.81	3,470.06	3,785.31	3,470.27	315.04	12.015		
5,700.00	5,671.96	5,663.11	5,660.94	13.43	304.16	100.614	-516.98	3,470.06	3,785.36	3,468.26	317.10	11.938		
5,800.00	5,771.96	5,775.73	5,771.96	13.51	315.23	100.660	-520.05	3,470.06	3,785.91	3,457.65	328.26	11.533		
5,900.00	5,871.96	5,876.62	5,871.96	13.58	325.04	100.660	-520.05	3,470.06	3,785.91	3,447.76	338.15	11.196		
5,993.21	5,965.17	5,969.15	5,964.11	13.66	333.88	100.583	-514.88	3,470.06	3,784.96	3,437.90	347.05	10.906		
6,000.00	5,971.96	5,974.23	5,969.18	13.66	334.36	100.583	-514.89	3,470.06	3,784.96	3,437.41	347.54	10.891		
6,100.00	6,071.96	6,049.36	6,044.05	13.74	341.53	100.608	-516.54	3,470.06	3,785.36	3,430.58	354.78	10.670		
6,200.00	6,171.96	6,179.37	6,171.96	13.82	354.45	100.660	-520.05	3,470.06	3,785.91	3,418.11	367.80	10.293		
6,300.00	6,271.96	6,279.37	6,271.96	13.90	364.78	100.660	-520.05	3,470.06	3,785.91	3,407.70	378.21	10.010		
6,372.88	6,344.84	6,351.80	6,343.88	13.95	372.27	100.545	-512.36	3,470.06	3,784.50	3,398.75	385.75	9.811		
6,400.00 6,500.00	6,371.96 6,471.96	6,374.70 6,459.38	6,366.74 6,451.19	13.98 14.05	374.63 383.38	100.547 100.570	-512.45 -514.03	3,470.06 3,470.06	3,784.51 3,784.86	3,396.38 3,387.90	388.14 396.96	9.750 9.535		
0,500.00	0,471.90	0,439.30	0,451.19	14.05	303.30	100.570	-514.05	3,470.00	3,704.00	3,307.90	390.90	9.555		
6,600.00	6,571.96	6,544.38	6,535.85	14.13	392.16	100.623	-517.59	3,470.06	3,785.63	3,379.82	405.80	9.329		
6,700.00	6,671.96	6,684.92	6,671.31	14.21	407.47	100.641	-518.78	3,470.06	3,785.67	3,364.46	421.22	8.987		
6,800.00	6,771.96	6,786.25	6,771.96	14.29	417.81	100.660	-520.05	3,470.06	3,785.91	3,354.27	431.64	8.771		
6,828.52	6,800.49	6,813.45	6,798.88	14.31	420.50	100.607	-516.47	3,470.06	3,785.25	3,350.90	434.35	8.715		
6,900.00	6,871.96	6,859.68	6,844.95	14.37	425.07	100.621	-517.42	3,470.06	3,785.52	3,346.56	438.96	8.624		
7 000 00	6 071 06	6 099 73	6 071 06	14.45	427.20	100 660	E20.0E	2 470 06	2 795 04	2 224 52	451.00	0.007		
7,000.00 7,074.57	6,971.96 7,046.54	6,988.73 7,063.76	6,971.96 7,046.36	14.45 14.50	437.39 444.58	100.660 100.644	-520.05 -519.02	3,470.06 3,470.06	3,785.91 3,785.72	3,334.53 3,327.09	451.38 458.63	8.387 8.254		
7,100.00	7,040.34	7,073.86	7,040.30	14.50	444.58	100.646	-519.02	3,470.06	3,785.72	3,326.14	459.63	8.234		
7,200.00	7,171.96	7,189.90	7,171.96	14.60	456.91	100.660	-520.05	3,470.06	3,785.91	3,314.85	471.06	8.037		
7,262.81	7,234.77	7,252.64	7,234.30	14.65	463.04	100.576	-514.40	3,470.06	3,784.87	3,307.63	477.24	7.931		
7,300.00	7,271.96	7,281.12	7,262.70	14.68	465.83	100.578	-514.58	3,470.06	3,784.91	3,304.86	480.05	7.884		
7,400.00	7,371.96	7,358.06	7,339.35	14.76	473.35	100.613	-516.91	3,470.06	3,785.47	3,297.84	487.63	7.763		
7,500.00	7,471.96	7,493.49	7,471.96	14.84	486.36	100.660	-520.05	3,470.06	3,785.91	3,285.16	500.75	7.560		
7,600.00	7,571.96	7,593.49	7,571.96	14.92	495.86	100.660	-520.05	3,470.06	3,785.91	3,275.58	510.33	7.419		
7,636.95	7,608.91	7,628.06	7,606.17	14.95	499.14	100.583	-514.90	3,470.06	3,784.96	3,271.32	513.64	7.369		
7,700.00	7,671.96	7,676.76	7,654.73	15.00	503.77	100.593	-515.59	3,470.06	3,785.13	3,266.82	518.31	7.303		
7,800.00	7,771.96	7,796.31	7,771.96	15.08	515.09	100.660	-520.05	3,470.06	3,785.91	3,256.18	529.73	7.147		
7,844.06	7,816.03	7,839.76	7,815.27	15.11	519.15	100.628	-517.93	3,470.06	3,785.52	3,251.69	533.82	7.091		
7,900.00	7,871.96	7,872.04	7,847.45	15.15	522.17	100.637	-518.51	3,470.06	3,785.70	3,248.83	536.87	7.051		
7,972.36	7,944.33	7,967.97	7,942.37	15.21	531.15	100.630	-518.02	3,470.06	3,785.53	3,239.62	545.92	6.934		
8,000.00	7,971.96	7,984.06	7,958.41	15.23	532.65	100.632	-518.19	3,470.06	3,785.59	3,238.15	547.44	6.915		

7/22/2022 1:25:12PM

Anticollision Report

MarathonOil Corporation.

Offset Site Error: 0.00 usft

Company:	Marathon Oil Permian LLC	Local Co-ordinate Reference:	Well Decimus 5 WXY Fed Com 2H
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 2H	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

rvey Progr		6-INC-ONLY	ent	Som: 1	laior Avia		Offset Wellb	oro Contro	Die	Rule Assi	gned:		Offset Well Error:	1.00 u
Refer leasured	Vertical	Off Measured	Vertical	Reference	lajor Axis Offset	Highside			Between	Between	Minimum	Separation	Warning	
Depth	Depth	Depth	Depth			Toolface	+N/-S	+E/-W	Centres	Ellipses	Separation	Factor		
(usft)	(usft)	(usft)	(usft)	(usft)	(usft)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)	0.700		
8,100.00	8,071.96	8,099.08	8,071.96	15.31	543.27	100.660	-520.05	3,470.06	3,785.91	3,227.77	558.14	6.783		
8,188.20	8,160.17	8,187.76	8,160.11	15.38	550.92	100.646	-519.12	3,470.06	3,785.74	3,219.87	565.87	6.690		
8,200.00	8,171.96	8,192.93	8,165.26	15.39	551.37 561.27	100.646	-519.14	3,470.06	3,785.75	3,219.43	566.32	6.685		
8,300.00	8,271.96	8,300.60	8,271.96	15.47	561.27	100.660	-520.05	3,470.06	3,785.91	3,209.61	576.30	6.569		
8,378.86	8,350.82	8,378.47	8,349.63	15.53	569.12	100.614	-516.96	3,470.06	3,785.34	3,201.12	584.22	6.479		
8,400.00	8,371.96	8,392.54	8,363.66	15.55	570.54	100.615	-517.06	3,470.06	3,785.37	3,199.71	585.66	6.463		
8,500.00	8,471.96	8,501.65	8,471.00	15.63	581.74	100.642	-518.87	3,470.06	3,785.69	3,188.76	596.93	6.342		
8,600.00	8,571.96	8,603.91	8,571.96	15.71	592.30	100.660	-520.05	3,470.06	3,785.91	3,178.33	607.58	6.231		
8,658.61	8,630.57	8,660.73	8,628.63	15.75	597.88	100.627	-517.85	3,470.06	3,785.50	3,172.30	613.20	6.173		
8,700.00	8,671.96	8,684.36	8,652.19	15.79	600.19	100.632	-518.21	3,470.06	3,785.62	3,170.08	615.54	6.150		
8,783.22	8,755.19	8,788.99	8,755.19	15.84	610.47	100.660	-520.05	3,470.06	3,785.91	3,160.03	625.88	6.049		
8,800.00	8,771.96	8,805.76	8,771.96	15.84	612.18	10.711	-520.05	3,470.06	3,785.67	3,158.07	627.59	6.032		
8,850.00	8,821.81	8,853.79	8,819.82	15.81	617.10	10.754	-517.78	3,470.06	3,781.67	3,149.17	632.50	5.979		
8,900.00	8,871.16	8,882.34	8,848.28	15.77	620.03	10.920	-518.29	3,470.06	3,774.00	3,138.61	635.39	5.940		
8,950.00	8,919.62	8,954.83	8,919.62	15.73	626.73	11.235	-520.05	3,470.06	3,762.23	3,120.16	642.07	5.860		
9,000.00	8,966.83	9,002.04	8,966.83	15.68	630.64	11.623	-520.05	3,470.06	3,746.10	3,100.17	645.94	5.799		
9,050.00	9,012.43	9,047.64	9,012.43	15.63	634.41	12.140	-520.05	3,470.06	3,725.99	3,076.33	649.67	5.735		
9,100.00	9,056.07	9,083.30	9,047.60	15.59	637.36	12.698	-514.74	3,470.06	3,701.08	3,048.50	652.57	5.671		
9,150.00	9,097.42	9,113.85	9,078.04	15.56	639.89	13.526	-515.34	3,470.06	3,673.66	3,018.60	655.06	5.608		
9,200.00	9,136.17	9,142.56	9,106.63	15.55	642.26	14.579	-516.36	3,470.06	3,642.93	2,985.54	657.39	5.542		
9,250.00	9,172.02	9,209.24	9,172.02	15.56	647.69	16.149	-520.05	3,470.06	3,609.34	2,946.53	662.81	5.445		
9,300.00	9,204.69	9,241.92	9,204.69	15.60	649.44	17.944	-520.05	3,470.06	3,572.25	2,907.70	664.55	5.375		
9,350.00	9,233.95	9,271.17	9,233.95	15.68	651.01	20.295	-520.05	3,470.06	3,532.52	2,866.42	666.11	5.303		
9,400.00	9,259.56	9,291.32	9,254.03	15.83	652.09	23.338	-518.68	3,470.06	3,490.20	2,823.01	667.18	5.231		
9,450.00	9,281.33	9,307.00	9,269.69	16.06	652.93	27.541	-518.87	3,470.06	3,446.19	2,778.16	668.03	5.159		
9,500.00	9,299.10	9,319.81	9,282.48	16.37	653.62	33.487	-519.13	3,470.06	3,400.54	2,731.82	668.72	5.085		
0 550 00	0 242 72	0.250.24	0 242 72	16 70	CEE 04	42.047	E20.0E	2 470 06	2 252 65	2 692 26	670.20	E 002		
9,550.00	9,312.73 9,322.11	9,350.34 9,359.72	9,312.73 9,322.11	16.78	655.24 655.63	42.947	-520.05	3,470.06	3,353.65	2,683.26	670.39	5.003		
9,600.00				17.27		56.387	-520.05	3,470.06	3,305.66	2,634.85	670.81 671.07	4.928		
9,650.00 9,673.22	9,327.18 9,328.06	9,364.79 9,365.67	9,327.18 9,328.06	17.83 18.11	655.84 655.88	75.316 85.520	-520.05 -520.05	3,470.06 3,470.06	3,257.09 3,234.44	2,586.02 2,563.30	671.14	4.854 4.819		
9,700.00	9,328.52	9,366.13	9,328.52	18.45	655.90	85.558	-520.05	3,470.06	3,208.31	2,537.12	671.19	4.780		
5,700.00	0,020.02	0,000.10	0,020.02	10.40	000.00	00.000	-020.00	0,470.00	0,200.01	2,007.12	011.10	4.700		
9,800.00	9,330.27	9,367.88	9,330.27	19.86	655.97	85.700	-520.05	3,470.06	3,110.84	2,439.43	671.41	4.633		
9,900.00	9,332.01	9,369.62	9,332.01	21.43	656.04	85.841	-520.05	3,470.06	3,013.53	2,341.87	671.66	4.487		
10,000.00	9,333.76	9,371.37	9,333.76	23.13	656.11	85.982	-520.05	3,470.06	2,916.40	2,244.45	671.95	4.340		
10,100.00	9,335.50	9,373.12	9,335.50	24.93	656.18	86.124	-520.05	3,470.06	2,819.47	2,147.18	672.29	4.194		
10,200.00	9,337.25	9,374.86	9,337.25	26.81	656.26	86.265	-520.05	3,470.06	2,722.76	2,050.09	672.67	4.048		
		0.070.04	0 000 00	00.75	050.00	00.407	500.05	0 470 00	0.000.00	4 959 49	070.44			
10,300.00 10,400.00	9,339.00	9,376.61	9,339.00	28.75	656.33	86.407	-520.05	3,470.06	2,626.29 2,530.10	1,953.18	673.11	3.902		
	9,340.74	9,378.35	9,340.74	30.74	656.40	86.549	-520.05	3,470.06	2,530.10	1,856.49	673.61	3.756		
10,500.00	9,342.49	9,380.03	9,342.41	32.78	656.47	86.682	-519.54	3,470.06		1,759.89	674.18	3.610		
10,600.00 10,700.00	9,344.23 9,345.98	9,381.03 9,382.03	9,343.41 9,344.40	34.85 36.94	656.51 656.55	86.763 86.844	-519.54 -519.54	3,470.06 3,470.06	2,338.52 2,243.36	1,663.72 1,567.84	674.80 675.52	3.465 3.321		
10,700.00	3,545.50	3,302.03	3,344.40	30.34	000.00	00.044	-010.04	5,470.00	2,240.00	1,507.04	010.02	5.521		
10,800.00	9,347.72	9,383.03	9,345.40	39.07	656.59	86.925	-519.54	3,470.06	2,148.64	1,472.30	676.33	3.177		
10,900.00	9,349.47	9,384.03	9,346.40	41.21	656.64	87.006	-519.55	3,470.06	2,054.41	1,377.15	677.27	3.033		
11,000.00	9,351.21	9,385.03	9,347.40	43.36	656.68	87.087	-519.55	3,470.06	1,960.76	1,282.43	678.33	2.891		
11,100.00	9,352.96	9,386.02	9,348.39	45.54	656.72	87.168	-519.56	3,470.06	1,867.77	1,188.22	679.55	2.749		
11,200.00	9,354.70	9,387.02	9,349.39	47.72	656.76	87.249	-519.57	3,470.06	1,775.54	1,094.61	680.93	2.608		
	0.055.15	0.000 0.0							1.05		000			
11,300.00	9,356.45	9,388.02	9,350.39	49.92	656.80	87.330	-519.57	3,470.06	1,684.19	1,001.68	682.51	2.468		
11,400.00	9,358.19	9,389.02	9,351.39	52.13	656.84	87.412	-519.58	3,470.06	1,593.88	909.58	684.30	2.329		
11,500.00	9,359.94	9,390.02	9,352.38	54.34	656.88	87.493	-519.59	3,470.06	1,504.80	818.45	686.35	2.192		
11,600.00	9,361.68	9,391.02	9,353.38	56.56	656.92	87.574	-519.60	3,470.06	1,417.17	728.50	688.67	2.058		
11,700.00	9,363.43	9,392.01	9,354.38	58.79	656.97	87.655	-519.62	3,470.06	1,331.29	639.96	691.32	1.926		
11,800.00	9,365.17	9,393.01	9,355.38	61.02	657.01	87.736	-519.63	3,470.06	1,247.50	553.17	694.34	1.797		

7/22/2022 1:25:12PM





Marathon Oil Corporation.

Offset Site Error: 0.00 usft

Company:	Marathon Oil Permian LLC	Local Co-ordinate Reference:	Well Decimus 5 WXY Fed Com 2H
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 2H	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

Interview Open Team Note of team Team <th>Survey Progr</th> <th>ram: 19</th> <th>6-INC-ONLY</th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th>Rule Assi</th> <th>gned:</th> <th></th> <th>Offset Well Error:</th> <th>1.00 usft</th>	Survey Progr	ram: 19	6-INC-ONLY								Rule Assi	gned:		Offset Well Error:	1.00 usft
bypen bypen bypen bypen bypen bypen bypen bypen bypen 130000 134552 134561 03507 0.401	Refer	rence					Highsida	Offset Wellbo	ore Centre			Minimum	Separation	Warning	
intri intri intri intri intri intri intri intri 120000 0.0000					Reference	Unset		+N/-S	+E/-W					warning	
Discole Object	-	-	-	-	(usft)	(usft)		(usft)	(usft)		(usft)	-			
10.000 3.70.4 8.80.7 8.70.7 8.70.7 8.70.7 8.70.8 9.70.80 9.70.80 9.70.8 7.70.	11,900.00	9,366.92	9,394.01	9,356.37	63.26	657.05	87.818	-519.65	3,470.06	1,166.28	468.52	697.76	1.671		
12.200 8.37.1 8.37.2 8.37.2 8.37.2 8.47.2 8.47.00 8.44.4 2.16.0 1.17.1 1.22 Lauel 12.40.00 5.37.6 4.11.61 5.77.2 6.77.2 7.7.4 6.77.2 7.7.4 6.77.2 7.7.4 6.77.2 7.7.4 6.77.2 7.7.4 6.77.2 7.7.4 6.77.2 7.7.4 6.7.2 7.7.7 7.7.4 7.7.7 7.7.4 7.7.7 7.7.4 7.7.7 7.7.4 7.7.7 7.7.4 7.7.7	12,000.00	9,368.66	9,395.01	9,357.37	65.51	657.09	87.899	-519.66	3,470.06	1,088.19	386.56	701.62	1.551		
13.2000 3.733 9.713 9.733 9.713 9.733 72.20 67.72 8.248 -4.200 3.710 81.15 1.225 1.421 1.421 12.2000 3.773 1.411 7.737 1.411 7.737 1.411 7.737 1.411 7.737 1.411 7.737 1.411 7.737 1.411 7.737 1.411 7.737 1.411 7.737 1.411 7.737 1.411 7.737 1.411 7.737 1.411 7.737 1.411 7.737 1.411 7.737 1.411 7.737 1.731 7.777 1.411 7.777 1.411 7.777 1.411 7.777 1.411 7.777 1.741 1.431 <t< td=""><td>12,100.00</td><td>9,370.41</td><td>9,396.01</td><td>9,358.37</td><td>67.76</td><td>657.13</td><td>87.980</td><td>-519.68</td><td>3,470.06</td><td>1,013.95</td><td>307.98</td><td>705.97</td><td>1.436 Level</td><td>3</td><td></td></t<>	12,100.00	9,370.41	9,396.01	9,358.37	67.76	657.13	87.980	-519.68	3,470.06	1,013.95	307.98	705.97	1.436 Level	3	
12.400 9.756 9.713 9.756 7.62 67.73 6.757 7.62 7.72 6.713 6.717 7.61 7.717 6.11 7.73.8 1.72 <th1.72< th=""> <th1.72< th=""> 1.72</th1.72<></th1.72<>	12,200.00	9,372.15	9,397.01	9,359.37	70.01	657.17	88.061	-519.69	3,470.06	944.47	233.68	710.79	1.329 Level	3	
12.500.00 5.377.30 8.475.10 9.377.41 77.77 74.51 77.77 74.77 </td <td>12,300.00</td> <td>9,373.90</td> <td>9,411.61</td> <td>9,373.90</td> <td>72.26</td> <td>657.77</td> <td>89.246</td> <td>-520.05</td> <td>3,470.06</td> <td>881.05</td> <td>164.30</td> <td>716.75</td> <td>1.229 Level</td> <td>3</td> <td></td>	12,300.00	9,373.90	9,411.61	9,373.90	72.26	657.77	89.246	-520.05	3,470.06	881.05	164.30	716.75	1.229 Level	3	
12.000 9.378.1 9.478.4 9.478.4 9.078.4 9.678.4 8.672 6.200.5 9.470.0 7.0.47 7.3.47 1.001.4m.3 12.000 9.382.6 9.415.9 9.382.8 9.382.8 9.382.8 8.388 0.854 9.000 3.470.0 770.9 7.07.9 7.07.8 0.001.40.00.00 0.001.40.00 <	12,400.00	9,375.65	9,413.35	9,375.65	74.52	657.82	89.388	-520.05	3,470.06	824.70	102.33	722.36	1.142 Level	3	
12.000 9.376.1 9.478.4 9.478.4 7.057 9.578.5 9.479.5 9.471.5 9.479.5 9															
127000 0.808.0 4.408.0 0.808.0 41.30 67.66 69.00 -47.00 77.03 -77.01 74.34 0.9041/weils 12.800.0 9.394.10 4.408.0 0.808.10 68.64 80.00 -47.00 70.00 -90.01 74.03 0.9041/weils 0.9041/weils 12.800.0 9.394.71 4.428.0 0.804.12 80.81 0.004 -40.00 74.00 70.03 74.04 0.901.16//mills															
12.800.0 9.82.0 9.82.0 9.82.0 9.82.0 9.82.0 9.42.0 9.82.0 9.42.0 9.82.0 9.42.0 9.82.0 9.42.0 9.82.0 9.42.0 9.84.2 9.82.0 9.42.0 9.84.2 9.82.0 9.47.00 7.0.0 3.0.0 7.0.0 3.0.0 7.0.0 9.87.0 7.0.0 9.87.0 7.0.0 9.87.0 7.0.0 9.87.0 7.0.0 9.87.0 7.0.0 9.87.0 7.0.0 9.87.0 7.0.0 9.87.0 7.0.0 9.87.0 7.0.0 9.87.0 7.0.0 9.87.0 7.0.0 9.87.0 7.0.0 9.87.0 7.0.0 <td></td>															
12.82.75 9.83.81 9.42.07 9.83.81 9.42.0 9.83.81 9.42.0 9.83.81 9.82.0 9.000 -52.00 3.470.00 73.30 73.30 74.23 0.91 Lewil 3. CC.ES.97 12.0000 9.84.77 0.42.20 0.838.67 8.85.0 60.01 0.0016 -52.00 3.470.00 77.307 0.73.37 0.331 77.300 0.75 Lewil 3. 13.0000 9.87.66 0.42.77 1.837.60 60.91 60.91 52.00 3.470.00 77.307 10.30 10.01 Lewil 3. 13.0000 9.84.44 0.42.25 0.83.10 60.23 60.000 52.000 3.470.00 67.73 170.30 77.44 1.322 Lewil 3 13.0000 9.44.44 0.86.5 10.20 5.470.00 10.702.22 13.452 1.23.21 Lewil 3 1.332															
12.0000 9.384.37 0.226 9.384.37 8.038 60.04 9.006 -220.05 3.470.06 773.37 70.37 0.307 74.370 0.307 Lewi3 13.0000 9.386.10 0.472.37 73.37 70.30 71.370 0.371 Lewi3 13.0000 9.386.10 0.472.37 73.387 60.06 62.29 0.025 -20.00 3.470.08 774.31 0.577 1.671 Lewi3 13.0000 9.385.10 0.420.00 73.387 70.38 744.12 Lewi3 13.0000 9.385.10 9.428.4 70.63 744.12 Lewi3 1.671 Lewi3 13.0000 9.385.10 9.40.00 70.38 744.2 L22 Lewi3 13.0000 9.40.64 4.42.25 0.41.48 0.40.65 1.60.41 70.60 3.470.06 1.472.64 1.451 13.0000 9.40.68 9.44.77 0.40.83 0.40.87 1.00.84 4.472.84 1.422 Lewi3 13.0000 9.41.78 9.40.057 10.08 66.85.7 1.378 2.40.06															
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10.000 9.88.12 9.42.02 9.88.12 9.42.02 9.88.12 9.42.02 9.88.12 9.42.02 9.88.12 9.42.02 9.44.00 9.89.12 1.02.00 9.72.07 9.73.06 0.30.0 1.03.00 9.74.12 1.07.02 1.07.12 1.07.02 1.07.12 1.07.02 1.07.12 1.07.02 1.07.12 1.07.02	12 000 00	0 20/ 27	0 422 09	0 204 27	95.95	659.00	00.009	520.05	2 470 06	706 70	26.76	742 46	0.051 000	2	
11 102.00 9.387 88 9.425 7 3.37 38 9.42 0.0 9.381 3 9.42 0.0 9.383 3 9.46 0.0 6.66 3.1 9.12 0.0 9.47 0.0 1.16 0.3 9.14 3 7.24 64 1.34 3 1.43 2 1.49 0.0 1.300.00 9.401 82 9.441 25 9.401 37 10.65 0 665 3 9.12 0.0 3.470 06 1.18 0.3 9.33 3 7.77 4 1.34 2 1.49 0.0 1.45 0.0 1.45 0.0 1.45 0.0 1.45 0.0 1.45 0.0 1.45 0.0 1.45 0.0 1.45 0.0 1.45 0.0 1.45 0.0 1.45 0.0 1.45 0.0 1.45 0.0 1.45 0.0 1.45 0.0 1.45 0.0															
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13.300 9.430 9.420 9.313 9.420 9.313 9.420 9.313 9.420 9.313 9.420 9.313 9.420 9.313 9.420 9.333 1 97.32 8.853 0.050 -520.05 3.470.06 97.75 220.93 77.24 1.322 low13 13.000 9.365.0 9.432.0 3.303.3 101.00 6.85.7 11.23 -520.05 3.470.06 1.475.4 72.46 1.322 low13 13.000 9.400.85 9.441.2 0.303.3 104.06 6.85.7 11.23 -520.05 3.470.06 1.147.14 475.54 72.46 1.543 13.0000 9.401.27 9.441.27 0.401.37 110.22 685.7 11.27 -570.2 3.470.06 1.264.31 671.03 1.771 1.663 14.0000 9.401.27 9.441.27 0.440.57 11.22 685.7 11.26 -517.2 3.470.06 1.264.31 671.33 1.770.2 1.663 14.0000 9.405.8 0.441.57 1.22.6 685.7 1.185 -518.72 3.470.06 1.264.57 71.102<															
13.4000 9.393.10 9.723 658.36 90.899 -520.05 3.470.06 704.75 73.12 1.232 Level 3 13.5000 9.394.48 9.432.55 9.394.54 9.536 658.41 90.951 658.41 90.951 650.05 3.470.06 1042.20 31.46 77.24 1.332 Level 3 13.70000 9.306.33 9.436.04 9.396.59 110.48 658.52 91.236 -520.05 3.470.06 1.107.41 475.54 721.64 1.543 13.9000 9.400.83 9.447.27 9.400.77 11.032 658.62 91.326 -520.05 3.470.06 1.107.41 475.54 721.64 1.699 14.0000 9.405.75 9.444.27 9.404.77 11.322 658.72 91.722 517.72 3.470.06 1.450.74 73.54 71.301 2.299 14.4000 9.410.55 9.445.69 9.408.27 12.00 658.83 92.24 -517.72 3.470.06 1.450.74 73.54 73.54 2.422 14.4000 9.410.55 9.445.69 9.408.27 12.00.6 658.83 92.															
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135000 3.94.48 9.42.25 9.36.48 9.96.1 658.41 90.651 -520.05 3.470.06 77.78 228.93 730.44 1.322 Level 3 1370000 3.363.83 9.480.40 9.365.85 104.08 658.52 91.236 -520.05 3.470.06 1.472.0 1.450 1.452 1.453 138000 9.401.82 4.40.08 106.86 658.52 91.276 -520.05 3.470.06 1.472.0 1.405.0 1.455.0 14.000 9.403.57 4.44.127 4.040.57 11.93 668.86 91.622 -520.05 3.470.06 1.457.4 771.02 1.003 14.000 9.404.57 4.04.43 12.22 668.76 91.666 -517.2 3.470.06 1.450.74 771.02 1.003 14.4000 9.441.57 9.404.87 12.22 668.76 91.666 -517.2 3.470.06 1.452.6 711.02 2.280 14.4000 9.441.57 9.404.37 12.22 668.76 91.951 -517.2 3.470.06 1.405.14 1.435 1.435 14.4000 9	13.400.00	9.393.10	9.430.80	9.393.10	97.23	658.36	90.809	-520.05	3.470.06	904.75	170.63	734.12	1.232 Level	3	
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15,500.009,429.759,458.769,421.04145.29659.2293.083-519.833,470.062,759.912,060.17699.733,94415,600.009,431.499,459.929,422.20147.59659.2693.177-519.843,470.062,856.712,157.49699.224,08615,700.009,433.249,461.089,423.36149.88659.2993.272-519.863,470.062,953.732,254.97698.764.22715,800.009,436.739,472.749,434.98152.18659.6794.355-520.053,470.063,148.342,450.10698.244.50916,000.009,438.479,467.239,438.47156.77659.7194.496-520.053,470.063,441.352,646.02697.534.79316,000.009,441.969,479.729,441.96161.36659.7794.779-520.053,470.063,431.552,646.02697.534.79316,200.009,442.719,481.469,443.71163.66659.8194.920-520.053,470.063,343.552,646.02697.534.79316,000.009,443.219,443.61165.96659.8194.920-520.053,470.063,539.302,842.35696.945.07816,000.009,443.859,486.709,448.95170.55659.9195.202-520.053,470.063,637.342,940.66696.685.22116,000.009,448.859,486.709,448.95170.55<	15,400.00	9,428.00	9,457.60	9,419.88	143.00	659.18	92.989	-519.81	3,470.06	2,663.34	1,963.05	700.29	3.803		
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16,200.00 9,441.96 9,479.72 9,441.96 161.36 659.77 94.779 -520.05 3,470.06 3,539.30 2,842.35 696.94 5.078 16,300.00 9,445.46 9,443.71 163.66 659.81 94.920 -520.05 3,470.06 3,539.30 2,842.35 696.94 5.078 16,400.00 9,445.46 9,445.46 165.96 659.84 95.061 -520.05 3,470.06 3,637.34 2,940.66 696.68 5.221 16,500.00 9,444.95 9,447.20 168.26 659.87 95.202 -520.05 3,470.06 3,735.49 3,039.05 696.44 5.364 16,600.00 9,448.95 9,486.70 9,448.95 170.55 659.91 95.343 -520.05 3,470.06 3,833.73 3,137.51 696.22 5.506 16,700.00 9,450.69 9,488.44 9,450.69 172.85 659.97 95.624 -520.05 3,470.06 3,932.06 3,236.04 696.22 5.649 16,800.00 9,452.44 9,490.19 9,452.44 175.15 659.97 95.624 -520	16,000.00	9,438.47	9,476.23	9,438.47	156.77	659.71	94.496	-520.05	3,470.06	3,245.87	2,548.00	697.87	4.651		
16,300.00 9,443.71 9,443.71 163.66 659.81 94.920 -520.05 3,470.06 3,539.30 2,842.35 696.94 5.078 16,400.00 9,445.46 9,443.71 163.66 659.81 95.061 -520.05 3,470.06 3,637.34 2,940.66 696.68 5.221 16,500.00 9,447.20 9,484.95 9,447.20 168.26 659.87 95.202 -520.05 3,470.06 3,735.49 3,039.05 696.44 5.364 16,600.00 9,448.95 9,448.95 170.55 659.91 95.202 -520.05 3,470.06 3,833.73 3,137.51 696.22 5.506 16,700.00 9,484.95 9,486.70 9,448.95 170.55 659.94 95.484 -520.05 3,470.06 3,932.06 3,236.04 696.22 5.506 16,700.00 9,452.44 9,490.19 9,452.44 175.15 659.97 95.624 -520.05 3,470.06 4,030.48 3,334.63 695.84 5.792 16,800.00 9,454.18 9,491.93 9,454.18 177.45 660.01 95.765 -520	16,100.00	9,440.22	9,477.97	9,440.22	159.07	659.74	94.637	-520.05	3,470.06	3,343.55	2,646.02	697.53	4.793		
16,400.00 9,445.46 9,445.46 165.96 659.84 95.061 -520.05 3,470.06 3,637.34 2,940.66 696.68 5.221 16,500.00 9,447.20 9,484.95 9,447.20 168.26 659.87 95.202 -520.05 3,470.06 3,735.49 3,039.05 696.44 5.364 16,600.00 9,448.95 9,486.70 9,448.95 170.55 659.91 95.343 -520.05 3,470.06 3,833.73 3,137.51 696.22 5.506 16,700.00 9,450.69 9,488.44 9,450.69 172.25 659.94 95.484 -520.05 3,470.06 3,932.06 3,236.04 696.22 5.649 16,700.00 9,452.44 9,490.19 9,452.44 175.15 659.97 95.624 -520.05 3,470.06 4,030.48 3,334.63 695.84 5.792 16,900.00 9,454.18 9,491.93 9,454.18 177.45 660.01 95.765 -520.05 3,470.06 4,128.96 3,433.29 695.68 5.935	16,200.00	9,441.96	9,479.72	9,441.96	161.36	659.77	94.779	-520.05	3,470.06	3,441.36	2,744.14	697.23	4.936		
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16,500.00 9,447.20 9,484.95 9,447.20 168.26 659.87 95.202 -520.05 3,470.06 3,735.49 3,039.05 696.44 5.364 16,600.00 9,448.95 9,486.70 9,448.95 170.55 659.91 95.343 -520.05 3,470.06 3,833.73 3,137.51 696.22 5.506 16,700.00 9,450.69 9,488.44 9,450.69 172.85 659.94 95.484 -520.05 3,470.06 3,932.06 3,236.04 696.02 5.649 16,800.00 9,452.44 9,490.19 9,452.44 175.15 659.97 95.624 -520.05 3,470.06 4,030.48 3,334.63 695.84 5.792 16,900.00 9,454.18 9,491.93 9,454.18 177.45 660.01 95.765 -520.05 3,470.06 4,128.96 3,433.29 695.68 5.935															
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16,900.00 9,454.18 9,491.93 9,454.18 177.45 660.01 95.765 -520.05 3,470.06 4,128.96 3,433.29 695.68 5.935															
	16,800.00	9,452.44	9,490.19	9,452.44	175.15	659.97	95.624	-520.05	3,470.06	4,030.48	3,334.63	695.84	5.792		
	16 000 00	0 /E4 40	0.404.00	0 4E4 49	177 15	660.04	05 705	E00.0E	2 470 00	1 100 00	2 422 20	60F 60	5 025		
CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation	10,900.00	9,404.18	9,491.93	9,404.18	177.45	10.000	90.700	-020.05	3,470.06	4,128.96	3,433.29	80.660	0.930		
				CC - Min	centre to ce	nter dista	nce or cove	rgent point, SF	- min sepa	ration facto	or, ES - mi	n ellipse se	paration		





Marathon Oil

Offset Site Error:

0.00 usft

Company:	Marathon Oil Permian LLC	Local Co-ordinate Reference:	Well Decimus 5 WXY Fed Com 2H
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 2H	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

Survey Progr		6-INC-ONLY								Rule Assi	gned:		Offset Well Error:	1.00 usft
Refer Measured	rence Vertical	Off: Measured	set Vertical	Semi M Reference	laior Axis Offset	Highside	Offset Wellbo	ore Centre	Dist Between	ance Between	Minimum	Separation	Warning	
Depth	Depth	Depth	Depth	Reference	onset	Toolface	+N/-S	+E/-W	Centres	Ellipses	Separation	Factor	warning	
(usft)	(usft)	(usft)	(usft)	(usft)	(usft)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)			
17,000.00	9,455.93	9,493.68	9,455.93	179.75	660.04	95.906	-520.05	3,470.06	4,227.52	3,532.00	695.53	6.078		
17,100.00	9,457.67	9,495.42	9,457.67	182.05	660.07	96.047	-520.05	3,470.06	4,326.14	3,630.76	695.39	6.221		
17,200.00	9,459.42	9,497.17	9,459.42	184.35	660.11	96.187	-520.05	3,470.06	4,424.83	3,729.56	695.26	6.364		
17,300.00	9,461.16	9,498.91	9,461.16	186.65	660.14	96.328	-520.05	3,470.06	4,523.57	3,828.42	695.15	6.507		
17,400.00	9,462.91	9,500.66	9,462.91	188.94	660.17	96.468	-520.05	3,470.06	4,622.37	3,927.31	695.06	6.650		
17,500.00	9,464.65	9,502.41	9,464.65	191.24	660.21	96.608	-520.05	3,470.06	4,721.21	4,026.24	694.97	6.793		
17,600.00	9,466.40	9,503.67	9,465.92	193.54	660.23	96.712	-519.79	3,470.06	4,820.06	4,125.19	694.87	6.937		
17,700.00	9,468.14	9,504.92	9,467.16	195.84	660.25	96.812	-519.79	3,470.06	4,919.00	4,224.20	694.80	7.080		
17,800.00	9,469.89	9,506.16	9,468.40	198.14	660.28	96.912	-519.79	3,470.06	5,017.98	4,323.25	694.73	7.223		
17,900.00	9,471.63	9,507.40	9,469.64	200.44	660.30	97.012	-519.79	3,470.06	5,117.00	4,422.33	694.67	7.366		
18,000.00	9,473.38	9,508.65	9,470.89	202.74	660.32	97.111	-519.80	3,470.06	5,216.05	4,521.43	694.62	7.509		
18,100.00	9,475.12	9,509.89	9,472.13	205.05	660.35	97.211	-519.80	3,470.06	5,315.15	4,620.56	694.58	7.652		
18,200.00	9,476.87	9,511.13	9,473.37	207.35	660.37	97.311	-519.81	3,470.06	5,414.27	4,719.72	694.55	7.795		
18,300.00	9,478.61	9,512.37	9,474.61	209.65	660.40	97.410	-519.81	3,470.06	5,513.42	4,818.90	694.52	7.938		
18,400.00	9,480.36	9,513.62	9,475.86	211.95	660.42	97.510	-519.82	3,470.06	5,612.61	4,918.10	694.50	8.081		
18,500.00	9,482.11	9,514.86	9,477.10	214.25	660.44	97.609	-519.83	3,470.06	5,711.82	5,017.33	694.49	8.224		
18,600.00	9,483.85	9,516.10	9,478.34	216.55	660.47	97.708	-519.84	3,470.06	5,811.06	5,116.57	694.49	8.367		
18,700.00	9,485.60	9,517.34	9,479.58	218.85	660.49	97.808	-519.85	3,470.06	5,910.32	5,215.84	694.49	8.510		
18,800.00	9,487.34	9,518.59	9,480.83	221.15	660.51	97.907	-519.86	3,470.06	6,009.61	5,315.12	694.49	8.653		
18,900.00	9,489.09	9,519.83	9,482.07	223.45	660.54	98.006	-519.87	3,470.06	6,108.92	5,414.42	694.50	8.796		
19,000.00	9,490.83	9,521.07	9,483.31	225.76	660.56	98.105	-519.89	3,470.06	6,208.26	5,513.74	694.52	8.939		
19,100.00	9,492.58	9,522.31	9,484.55	228.06	660.58	98.204	-519.90	3,470.06	6,307.61	5,613.07	694.54	9.082		
19,200.00	9,494.32	9,523.56	9,485.80	230.36	660.61	98.303	-519.91	3,470.06	6,406.98	5,712.42	694.56	9.224		
19,247.64	9,495.15	9,524.15	9,486.39	231.46	660.62	98.350	-519.92	3,470.06	6,454.33	5,759.75	694.58	9.292		

Anticollision Report

Marathon Oil Corporation.

Offset Site Error: 0.00 usft

Company:	Marathon Oil Permian LLC	Local Co-ordinate Reference:	Well Decimus 5 WXY Fed Com 2H
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 2H	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

Reference leasured Vertical Depth Depth (usft) 0.00 0.00 100.00 100.00 200.00 200.00 300.00 300.00 300.00 300.00 400.00 400.00 500.00 500.00 600.00 600.00 700.00 700.00 800.00 800.00 847.19 847.19 900.00 1,000.00 1,000.00 1,000.00 1,300.00 1,309.00 1,300.00 1,309.00 1,400.00 1,599.45 1,700.00 1,698.70 1,800.00 1,797.47 1,900.00 1,993.44 2,000.00 2,189.06 2,700.00 2,884.69 2,000.00 2,286.88 2,400.00 2,884.69 2,500.00 2,758.25 2,800.00 2,775.96 2,900.00 2,874.23 3,000.00 3,172.09 3,1	Measured Depth (usft) 0.00 45.40 145.40 245.40 345.87 445.41 545.42 645.43 746.74 792.63 845.44 945.45 1,045.45 1,045.45 1,145.61 1,245.45 1,345.43 1,445.29 1,544.92 1,644.18 1,742.96 1,841.12 1,841.25 1,938.95 2,038.41 2,134.71 2,234.01	Set Vertical Depth (usft) 54.60 100.00 200.00 300.00 400.46 500.00 600.00 700.00 801.31 847.19 900.00 1,000.00 1,000.00 1,000.00 1,200.17 1,300.00 1,399.98 1,499.84 1,599.45 1,698.70 1,797.47 1,895.62 1,895.75 1,993.44 2,092.85 2,189.12 2,288.39	Semi I Reference (usft) 1.00 1.13 1.66 2.09 2.69 2.96 3.21 3.44 3.555 3.66 3.87 4.07 4.26 4.45 5.02 5.63 5.97 6.32 6.61 6.92 7.25 7.60	Waior Axis Offset (usft) 1.00 1.14 2.04 3.65 5.38 7.17 9.05 11.12 13.23 14.11 15.09 16.94 18.81 20.69 22.56 24.48 26.40 28.31 30.26 32.19 34.12 36.18 38.99 40.65	Highside Toolface (°) 88.442 88.442 88.442 88.442 88.442 88.442 88.442 88.442 88.442 88.442 88.442 88.442 88.442 88.442 88.442 88.442 142.696 142.667 142.619 142.552 142.464 142.355 142.422 142.529 142.612	Offset Wellb +N/-S (usft) 225.52	B Centre +E/-W (usft) 8,290.47 8,290.47 8,290.47 8,290.47 8,290.47 8,290.47 8,290.47 8,290.47 8,290.47 8,290.47 8,290.47 8,290.47 8,290.47 8,290.47 8,290.47 8,290.47 8,290.47 8,290.47 8,290.47 8,290.47 8,290.47 8,290.47 8,290.47 8,290.47 8,290.47 8,290.47 8,290.47 8,290.47 8,290.47 8,290.47 8,290.47 8,290.47 8,290.47 8,290.47	Diss Between Centres (ust) 8,293.71 8,293.53 8,294.92 8,299.08 8,315.73 8,328.20 8,343.42 8,343.44 8,360.03 8,376.66	Rule Assignance Between Ellipses (usft) 8,291.26 8,289.84 8,287.83 8,285.76 8,283.67 8,281.52 8,279.21 8,276.86 8,275.88 8,274.78 8,272.72 8,270.65 8,266.52 8,266.52 8,266.52 8,265.75 8,267.75 8,272.52 8,260.02 8,280.02 8,290.28 8,303.28 8,303.29 8,317.57	aned: Minimum Separation (usft) 2.27 3.70 5.71 7.77 9.86 12.01 14.33 16.67 17.66 18.75 20.81 22.89 24.96 27.01 29.18 31.33 33.50 35.71 37.92 40.14 40.15 42.46	Separation Factor 3.650.495 2,244.421 1,453.611 1,066.879 841.309 690.449 578.571 497.462 469.752 442.326 398.489 362.372 332.313 307.001 284.310 264.873 219.627 207.818 196.870	Offset Well Error: Warning	1.00
leasured (usft) Vertical Depth (usft) Vertical Depth (usft) 0.00 0.00 100.00 100.00 200.00 200.00 300.00 300.00 400.00 500.00 500.00 500.00 600.00 600.00 700.00 700.00 800.00 800.00 847.19 847.19 900.00 1,000.00 1,100.00 1,200.00 1,200.00 1,300.00 1,400.00 1,399.98 1,500.00 1,499.84 1,600.00 1,599.45 1,700.00 1,895.62 1,900.13 1,895.75 2,000.00 2,984.69 2,500.00 2,482.51 2,600.00 2,482.51 2,600.00 2,884.69 2,500.00 2,678.13 2,775.96 2,900.00 3,000.00 3,072.42 3,000.00 3,271.97	Measured Depth (usft) 0.00 45.40 145.40 245.40 345.87 445.41 545.42 645.43 746.74 792.63 845.44 945.45 1,045.45 1,045.45 1,145.61 1,245.45 1,345.43 1,445.29 1,544.92 1,644.18 1,742.96 1,841.12 1,841.25 1,938.95 2,038.41 2,134.71 2,234.01	Vertical Depth (usft) 54.60 100.00 200.00 300.00 400.46 500.00 700.00 801.31 847.19 900.00 1,000.00 1,000.00 1,000.00 1,000.00 1,200.17 1,300.00 1,399.98 1,499.84 1,599.45 1,698.70 1,797.47 1,895.62 1,895.75 1,993.44 2,092.85 2,189.12	Reference (usft) 1.00 1.13 1.66 2.09 2.69 2.96 3.21 3.44 3.55 3.66 3.87 4.07 4.26 4.45 5.02 5.32 5.63 5.97 6.32 6.31 6.32 6.32 6.32 6.32 6.32 6.32 6.32 6.32 6.32 6.32 6.32 6.32 6.32 6.32	Offset (usft) 1.00 1.14 2.04 3.65 5.38 7.17 9.05 11.12 13.23 14.11 15.09 16.94 18.81 20.69 22.56 24.48 26.40 28.31 30.26 32.19 34.12 34.12 36.18 38.39 40.65	Toolface (*) 88.442 88.442 88.442 88.442 88.442 88.442 88.442 88.442 88.442 88.442 88.442 88.442 88.442 88.442 88.442 142.696 142.667 142.667 142.652 142.464 142.355 142.452 142.452 142.529 142.612	+N/-S (usft) 225.52 225.52 225.52 225.52 225.64 225.52	+E/-W (usft) 8,290.47	Between Centres (usft) 8,293.71 8,293.53 8,294.92 8,360.02 8,315.73 8,328.20 8,343.44 8,360.03	Between Ellipses (usft) 8,291.26 8,289.84 8,287.83 8,285.76 8,283.67 8,283.67 8,279.21 8,276.86 8,275.88 8,274.78 8,272.72 8,270.65 8,265.75 8,265.75 8,265.75 8,265.75 8,265.75 8,267.75 8,272.52 8,280.02 8,290.28 8,303.28 8,303.29 8,317.57	Separation (usft) 2.27 3.70 5.71 7.77 9.86 12.01 14.33 16.67 17.66 18.75 20.81 22.89 24.96 27.01 29.18 31.33 33.50 35.71 37.92 40.14 40.15	Factor 3,650.495 2,244.421 1,453.611 1,066.879 841.309 690.449 578.571 497.462 469.752 442.326 398.489 362.372 332.313 307.001 264.873 247.937 232.883 219.627 207.818	Warning	
(usft) (usft) 0.00 0.00 100.00 100.00 200.00 300.00 300.00 300.00 300.00 500.00 500.00 500.00 600.00 600.00 700.00 700.00 847.19 847.19 900.00 1,000.00 1,000.00 1,000.00 1,300.00 1,300.00 1,400.00 1,399.98 1,500.00 1,499.84 1,600.00 1,698.70 1,800.00 1,994.45 1,700.00 1,895.62 1,900.00 2,189.66 2,000.00 2,188.06 2,200.00 2,286.88 2,400.00 2,884.69 2,500.00 2,678.13 2,775.96 2,900.00 3,000.00 2,973.09 3,100.00 3,271.97	(usft) 0.00 45.40 145.40 345.87 445.41 545.42 645.43 746.74 792.63 845.44 945.45 1,045.45 1,045.45 1,345.43 1,445.29 1,544.92 1,644.18 1,742.96 1,841.12 1,841.25 1,938.95 2,038.41 2,134.71 2,234.01	(usft) 54.60 100.00 200.00 300.00 400.46 500.00 600.00 700.00 801.31 847.19 900.00 1,000.00 1,200.17 1,300.00 1,200.17 1,309.98 1,499.84 1,599.45 1,698.70 1,797.47 1,895.62 1,895.75 1,993.44 2,092.85 2,189.12	$\begin{array}{c} 1.00\\ 1.13\\ 1.66\\ 2.06\\ 2.39\\ 2.69\\ 2.96\\ 3.21\\ 3.44\\ 3.55\\ 3.66\\ 3.87\\ 4.07\\ 4.26\\ 4.45\\ 4.73\\ 5.02\\ 5.32\\ 5.63\\ 5.97\\ 6.32\\ 6.61\\ 6.92\\ 7.25\\ \end{array}$	1.00 1.14 2.04 3.65 5.38 7.17 9.05 11.12 13.23 14.11 15.09 16.94 18.81 20.69 22.56 24.48 26.40 28.31 30.26 32.19 34.12 34.12 34.12 36.18 38.39 40.65	(*) 88,442 88,442 88,442 88,442 88,442 88,442 88,442 88,442 88,442 88,442 88,442 88,442 88,442 88,442 88,442 142,696 142,667 142,619 142,552 142,464 142,355 142,452 142,259 142,612	(usft) 225.52 225.52 225.52 225.52 225.64 225.52	(usft) 8,290.47	(usft) 8,293.71 8,293.53 8,294.92 8,315.73 8,328.20 8,343.42 8,343.44 8,360.03	(usft) 8,291.26 8,289.84 8,287.83 8,285.76 8,283.67 8,281.52 8,270.88 8,274.78 8,272.72 8,270.65 8,268.58 8,266.52 8,266.52 8,265.75 8,267.75 8,272.52 8,280.02 8,290.28 8,303.28 8,303.29 8,317.57	(usft) 2.27 3.70 5.71 7.77 9.86 12.01 14.33 16.67 17.66 18.75 20.81 22.89 24.96 27.01 29.18 31.33 33.50 35.71 37.92 40.14 40.15	3,650,495 2,244,421 1,453,611 1,066,879 841,309 690,449 578,571 497,462 469,752 442,326 398,489 362,372 332,313 307,001 284,310 264,873 247,937 232,883 219,627 207,832		
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2,000.00 1,993.44 2,100.00 2,091.25 2,200.00 2,189.06 2,300.00 2,286.88 2,400.00 2,384.69 2,500.00 2,482.51 2,600.00 2,580.32 2,700.00 2,678.13 2,781.91 2,755.96 2,900.00 2,874.23 3,000.00 2,973.09 3,100.00 3,072.42 3,200.00 3,271.97	1,938.95 2,038.41 2,134.71 2,234.01	1,993.44 2,092.85 2,189.12	6.61 6.92 7.25	36.18 38.39 40.65	142.442 142.529 142.612	225.52 225.59	8,290.47 8,290.47	8,360.03	8,317.57				
2,000.00 1,993.44 2,100.00 2,091.25 2,200.00 2,189.06 2,300.00 2,286.88 2,400.00 2,384.69 2,500.00 2,482.51 2,600.00 2,580.32 2,700.00 2,678.13 2,781.91 2,758.25 2,800.00 2,874.23 3,000.00 2,973.09 3,100.00 3,072.42 3,200.00 3,271.97	1,938.95 2,038.41 2,134.71 2,234.01	1,993.44 2,092.85 2,189.12	6.61 6.92 7.25	36.18 38.39 40.65	142.442 142.529 142.612	225.52 225.59	8,290.47 8,290.47	8,360.03	8,317.57				
2,100.00 2,091.25 2,200.00 2,189.06 2,300.00 2,286.88 2,400.00 2,384.69 2,500.00 2,482.51 2,600.00 2,580.32 2,700.00 2,678.13 2,781.91 2,755.25 2,800.00 2,874.23 3,000.00 2,973.09 3,100.00 3,072.42 3,200.00 3,271.97	2,038.41 2,134.71 2,234.01	2,092.85 2,189.12	6.92 7.25	38.39 40.65	142.529 142.612	225.59	8,290.47						
2,200.00 2,189.06 2,300.00 2,286.88 2,400.00 2,384.69 2,500.00 2,482.51 2,600.00 2,580.32 2,700.00 2,678.13 2,781.91 2,758.25 2,800.00 2,874.23 3,000.00 2,973.09 3,100.00 3,072.42 3,200.00 3,271.97	2,134.71 2,234.01	2,189.12	7.25	40.65	142.612				8,331.71	44.95	186.352		
2,300.00 2,286.88 2,400.00 2,384.69 2,500.00 2,482.51 2,600.00 2,580.32 2,700.00 2,678.13 2,781.91 2,758.25 2,800.00 2,874.23 3,000.00 2,973.09 3,100.00 3,072.42 3,200.00 3,271.97	2,234.01						0.290.47	8,393.31	8,345.81	47.50	176.702		
2,500.00 2,482.51 2,600.00 2,580.32 2,700.00 2,678.13 2,781.91 2,758.25 2,800.00 2,775.96 2,900.00 2,874.23 3,000.00 2,973.09 3,100.00 3,072.42 3,200.00 3,172.09 3,300.00 3,271.97					142.099	225.60	8,290.47	8,409.97	8,359.94	50.03	168.095		
2,500.00 2,482.51 2,600.00 2,580.32 2,700.00 2,678.13 2,781.91 2,758.25 2,800.00 2,775.96 2,900.00 2,874.23 3,000.00 2,973.09 3,100.00 3,072.42 3,200.00 3,172.09 3,300.00 3,271.97													
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2,700.00 2,678.13 2,781.91 2,758.25 2,800.00 2,775.96 2,900.00 2,874.23 3,000.00 2,973.09 3,100.00 3,072.42 3,200.00 3,172.09 3,300.00 3,271.97	2,429.01	2,483.37	8.33	46.85	142.868	225.65	8,290.47	8,443.36	8,388.71	54.65	154.506		
2,781.91 2,758.25 2,800.00 2,775.96 2,900.00 2,874.23 3,000.00 2,973.09 3,100.00 3,072.42 3,200.00 3,172.09 3,300.00 3,271.97	2,525.97	2,580.32	8.71	48.79	142.953	225.52	8,290.47	8,460.08	8,403.16	56.92	148.622		
2,800.00 2,775.96 2,900.00 2,874.23 3,000.00 2,973.09 3,100.00 3,072.42 3,200.00 3,172.09 3,300.00 3,271.97	2,624.04	2,678.38	9.10	50.75	143.035	225.87	8,290.47	8,476.82	8,417.60	59.22	143.133		
2,900.00 2,874.23 3,000.00 2,973.09 3,100.00 3,072.42 3,200.00 3,172.09 3,300.00 3,271.97	2,703.93	2,758.25	9.41	52.35	143.105	225.52	8,290.47	8,490.54	8,429.45	61.09	138.987		
2,900.00 2,874.23 3,000.00 2,973.09 3,100.00 3,072.42 3,200.00 3,172.09 3,300.00 3,271.97	2,721.64	2,775.96	9.47	52.70	143.157	225.52	8,290.47	8,493.53	8,432.03	61.50	138.114		
3,000.002,973.093,100.003,072.423,200.003,172.093,300.003,271.97	2,819.91	2,874.23	9.91	54.68	143.411	225.52	8,290.47	8,508.42	8,444.57	63.85	133.249		
3,100.003,072.423,200.003,172.093,300.003,271.97	2,918.99	2,973.31	10.34	56.67	143.614	225.85	8,290.47	8,520.55	8,454.34	66.21	128.685		
3,200.003,172.093,300.003,271.97	3,018.12	3,072.42	10.76	58.66	143.773	225.52	8,290.47	8,529.89	8,461.35	68.55	124.441		
	3,117.79	3,172.09	11.15	60.64	143.882	225.52	8,290.47	8,536.43	8,465.58	70.85	120.487		
	3,217.79	3,272.08	11.50	62.62	143.941	226.02	8,290.47	8,540.16	8,467.03	73.13	116.787		
3,382.04 3,354.00	3,299.96	3,354.25	11.64	64.26	89.695	225.70	8,290.47	8,541.10	8,466.23	74.88	114.068		
3,400.00 3,371.96	3,317.96	3,372.25	11.65	64.61	89.696	225.60	8,290.47	8,541.10	8,465.87	75.24	113.520		
3,445.16 3,417.12	3,362.84	3,417.12	11.68	65.45	89.696	225.52	8,290.47	8,541.10	8,464.99	76.11	112.216		
3,500.00 3,471.96	3,417.69	3,471.96	11.72	66.44	89.696	225.52	8,290.47	8,541.10	8,463.95	77.15	110.703		
3,600.00 3,571.96	3,517.73	3,572.00	11.80	68.26	89.694	225.84	8,290.47	8,541.11	8,462.06	79.05	108.047		
3,700.00 3,671.96	3,617.86	3,672.13	11.88	70.07	89.696	225.61	8,290.47	8,541.10	8,460.16	80.95	105.512		
3,768.78 3,740.74	3,686.47	3,740.74	11.93	71.28	89.696	225.52	8,290.47	8,541.10	8,458.89	82.22	103.886		
3,800.00 3,771.96	3,717.69	3,771.96	11.95	71.83	89.696	225.52	8,290.47	8,541.10	8,458.32	82.78	103.173		
3,900.00 3,871.96	3,817.71	3,871.98	12.03	73.56	89.695	225.67	8,290.47	8,541.10	8,456.50	84.60	100.954		
4,000.00 3,971.96	3,917.78	3,972.05	12.11	75.30	89.696	225.55	8,290.47	8,541.10	8,454.68	86.42	98.827		
4,047.40 4,019.37	3,965.10	4,019.37	12.15	76.13	89.696	225.52	8,290.47	8,541.10	8,453.81	87.30	97.841		
4,100.00 4,071.96		4,071.96	12.19	77.06	89.696	225.52	8,290.47	8,541.10	8,452.83	88.27	96.762		
4,200.00 4,171.96	4,017.69	4,171.98	12.26	78.83	89.695	225.69	8,290.47	8,541.10	8,450.98	90.12	94.775		
4,300.00 4,271.96	4,017.69 4,117.71	4,272.04	12.34	80.60	89.696	225.60	8,290.47	8,541.10	8,449.13	91.97	92.867		
4,400.00 4,371.96	4,017.69		12.42	82.36	89.696	225.52	8,290.47	8,541.10	8,447.29	93.81	91.043		

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Anticollision Report

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MarathonOil Corporation.

Offset Site Error: 0.00 usft

Company:	Marathon Oil Permian LLC
Project:	Eddy County, NM (NAD27-NME)
Reference Site:	Decimus 5 WXY Fed Com
Site Error:	0.00 usft
Reference Well:	Decimus 5 WXY Fed Com 2H
Well Error:	1.00 usft
Reference Wellbore	OH
Reference Design:	Plan 1 07-22-22

Local Co-ordinate Reference: TVD Reference: MD Reference: North Reference: Survey Calculation Method: Output errors are at Database: Offset TVD Reference:



Offset Design: Maximus/Decimus Offsets - Swearingen A 1 - OH - Surveys

Survey Prog		0-INC-ONLY		Sem! P			Officiation	are Contro	D'-	Rule Assig	gned:		Offset Well Error:	1.00 usf
Measured	vertical	Offs Measured	Vertical	Reference	lajor Axis Offset	Highside	Offset Wellb	ore Centre	Between	tance Between	Minimum	Separation	Warning	
Depth	Depth	Depth	Depth			Toolface	+N/-S	+E/-W	Centres	Ellipses	Separation	Factor		
(usft)	(usft)	(usft)	(usft)	(usft)	(usft)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)			
4,500.00	4,471.96	4,417.70	4,471.96	12.50	84.11	89.696	225.52	8,290.47	8,541.10	8,445.45	95.65	89.293		
4,600.00	4,571.96	4,517.76	4,572.03	12.57	85.87	89.696	225.62	8,290.47	8,541.10	8,443.61	97.49	87.608		
4,700.00	4,671.96	4,617.70	4,671.96	12.65	87.62	89.696	225.52	8,290.47	8,541.10	8,441.77	99.33	85.986		
4,800.00	4,771.96	4,717.70	4,771.96	12.73	89.38	89.696	225.52	8,290.47	8,541.10	8,439.93	101.17	84.423		
4,900.00 5,000.00	4,871.96 4,971.96	4,817.76 4,917.70	4,872.02 4,971.96	12.81 12.88	91.14 92.89	89.696 89.696	225.63 225.52	8,290.47 8,290.47	8,541.10 8,541.10	8,438.09 8,436.26	103.01 104.84	82.914 81.467		
3,000.00	4,371.30	4,317.70	4,371.30	12.00	32.03	03.030	220.02	0,230.47	0,041.10	0,430.20	104.04	01.407		
5,100.00	5,071.96	5,017.70	5,071.96	12.96	94.61	89.696	225.52	8,290.47	8,541.10	8,434.45	106.65	80.086		
5,200.00	5,171.96	5,117.74	5,172.00	13.04	96.34	89.695	225.68	8,290.47	8,541.10	8,432.65	108.46	78.751		
5,300.00	5,271.96	5,217.80	5,272.06	13.12	98.06	89.696	225.54	8,290.47	8,541.10	8,430.84	110.27	77.459		
5,344.47	5,316.43	5,262.17	5,316.43	13.15	98.81	89.696	225.52	8,290.47	8,541.10	8,430.06	111.05	76.914		
5,400.00	5,371.96	5,317.71	5,371.96	13.19	99.73	89.696	225.52	8,290.47	8,541.10	8,429.09	112.02	76.250		
E E00.00	E 474.00	E 417 71	E 471.00	10.07	101 20	80.606	225 52	0 200 47	0 544 40	0 407 25	110 70	75.090		
5,500.00	5,471.96	5,417.71	5,471.96	13.27 13.35	101.39	89.696	225.52	8,290.47	8,541.10 8,541.10	8,427.35	113.76	75.082		
5,600.00 5,700.00	5,571.96 5,671.96	5,517.71 5,617.71	5,571.96 5,671.96	13.35	103.05 104.75	89.696 89.696	225.52 225.52	8,290.47 8,290.47	8,541.10	8,425.60 8,423.82	115.50 117.28	73.950 72.824		
5,800.00	5,771.96	5,717.71	5,771.96	13.43	104.75	89.696	225.52	8,290.47	8,541.10	8,423.02	117.28	71.725		
5,900.00	5,871.96	5,817.71	5,871.96	13.58	108.18	89.696	225.52	8,290.47	8,541.10	8,420.23	120.88	70.659		
5,000.00	0,071.00	0,011.11	0,011.00	10.00		00.000	220.02	0,200.77	0,011.10	0,.20.20	.20.00			
6,000.00	5,971.96	5,917.71	5,971.96	13.66	109.90	89.696	225.52	8,290.47	8,541.10	8,418.42	122.68	69.619		
6,100.00	6,071.96	6,017.79	6,072.05	13.74	111.63	89.696	225.54	8,290.47	8,541.10	8,416.61	124.49	68.606		
6,143.81	6,115.77	6,061.52	6,115.77	13.78	112.40	89.696	225.52	8,290.47	8,541.10	8,415.80	125.30	68.165		
6,200.00	6,171.96	6,117.71	6,171.96	13.82	113.39	89.696	225.52	8,290.47	8,541.10	8,414.76	126.34	67.603		
6,300.00	6,271.96	6,217.73	6,271.98	13.90	115.17	89.695	225.69	8,290.47	8,541.10	8,412.91	128.20	66.625		
0 400 00	0.074.00	0.047.70	0.070.04	40.00	440.04	00.000	005 50	0.000.47	0 5 4 4 4 0	0 444 05	400.05	05.074		
6,400.00	6,371.96	6,317.79	6,372.04	13.98	116.94	89.696	225.58	8,290.47	8,541.10	8,411.05	130.05	65.674		
6,500.00 6,600.00	6,471.96 6,571.96	6,417.71 6,517.71	6,471.96 6,571.96	14.05 14.13	118.71 120.50	89.696 89.696	225.52 225.52	8,290.47 8,290.47	8,541.10 8,541.10	8,409.19 8,407.33	131.91 133.78	64.749 63.846		
6,700.00	6,671.96	6,617.77	6,672.02	14.13	120.50	89.696	225.52	8,290.47 8,290.47	8,541.10	8,407.33 8,405.46	135.64	62.968		
6,800.00	6,771.96	6,717.71	6,771.96	14.21	122.26	89.696	225.52	8,290.47	8,541.10	8,403.59	137.51	62.113		
0,000.00	0,771.30	0,717.71	0,771.50	14.25	124.00	03.030	220.02	0,230.47	0,041.10	0,403.33	107.01	02.115		
6,900.00	6,871.96	6,817.71	6,871.96	14.37	125.86	89.696	225.52	8,290.47	8,541.10	8,401.71	139.39	61.275		
7,000.00	6,971.96	6,917.74	6,971.99	14.45	127.66	89.695	225.71	8,290.47	8,541.10	8,399.84	141.27	60.460		
7,100.00	7,071.96	7,017.79	7,072.04	14.52	129.46	89.696	225.60	8,290.47	8,541.10	8,397.95	143.15	59.666		
7,200.00	7,171.96	7,117.72	7,171.96	14.60	131.29	89.696	225.52	8,290.47	8,541.10	8,396.04	145.07	58.877		
7,300.00	7,271.96	7,217.72	7,271.96	14.68	133.16	89.696	225.52	8,290.47	8,541.10	8,394.08	147.02	58.095		
7 400 00	7 074 00		7 070 04	44.70	105.00	00.005	005.00	0.000.17	0 5 4 4 4 0	0 000 40	110.07	57.004		
7,400.00	7,371.96	7,317.77	7,372.01	14.76	135.03	89.695	225.66	8,290.47	8,541.10	8,392.13	148.97	57.334		
7,500.00	7,471.96	7,417.73	7,471.96	14.84	136.90	89.696	225.52	8,290.47	8,541.10	8,390.18	150.93	56.591		
7,600.00	7,571.96 7,671.96	7,517.73	7,571.96	14.92 15.00	138.80 140.70	89.696	225.52	8,290.47	8,541.10 8,541.11	8,388.20	152.91 154.89	55.858 55.143		
7,700.00 7,800.00	7,071.96	7,617.85 7,717.75	7,672.08 7,771.96	15.00	140.70	89.693 89.696	225.95 225.52	8,290.47 8,290.47	8,541.11	8,386.22 8,384.23	154.69	55.145 54.447		
7,000.00	1,111.00	1,111.15	7,771.50	13.00	142.00	03.030	220.02	0,230.47	0,041.10	0,004.20	150.07	54.447		
7,900.00	7,871.96	7,817.75	7,871.96	15.15	144.51	89.696	225.52	8,290.47	8,541.10	8,382.24	158.86	53.764		
8,000.00	7,971.96	7,917.79	7,972.00	15.23	146.42	89.694	225.87	8,290.47	8,541.11	8,380.25	160.86	53.098		
8,100.00	8,071.96	8,017.91	8,072.12	15.31	148.33	89.695	225.65	8,290.47	8,541.10	8,378.25	162.85	52.447		
8,200.00	8,171.96	8,117.77	8,171.96	15.39	150.39	89.696	225.52	8,290.47	8,541.10	8,376.12	164.99	51.768		
8,300.00	8,271.96	8,217.77	8,271.96	15.47	152.52	89.696	225.52	8,290.47	8,541.10	8,373.90	167.21	51.081		
						/								
8,400.00	8,371.96	8,317.80	8,371.99	15.55	154.66	89.691	226.30	8,290.47	8,541.11	8,371.68	169.43	50.412		
8,500.00	8,471.96	8,417.94	8,472.12	15.63	156.80	89.692	226.10	8,290.47	8,541.11	8,369.46	171.65	49.759		
8,600.00	8,571.96	8,518.08	8,572.26	15.71	158.94	89.696	225.62	8,290.47	8,541.10	8,367.23	173.87	49.123		
8,649.84 8,700.00	8,621.81 8,671.96	8,567.69 8,617.85	8,621.81 8,671.96	15.75 15.79	160.06 161.23	89.696 89.696	225.52 225.52	8,290.47 8,290.47	8,541.10 8,541.10	8,366.07 8,364.86	175.03 176.24	48.797 48.463		
0,100.00	0,071.90	0,017.00	0,071.90	15.79	101.23	09.090	223.32	0,290.47	0,041.10	0,304.00	170.24	40.403		
8,783.22	8,755.19	8,701.07	8,755.19	15.84	163.16	89.696	225.52	8,290.47	8,541.10	8,362.87	178.24	47.920		
8,800.00	8,771.96	8,717.84	8,771.95	15.84	163.55	-0.264	226.51	8,290.47	8,540.86	8,362.24	178.62	47.816		
8,850.00	8,821.81	8,767.85	8,821.95	15.81	164.72	-0.266	226.44	8,290.47	8,537.22	8,357.44	179.78	47.487		
8,900.00	8,871.16	8,817.34	8,871.44	15.77	165.87	-0.268	226.21	8,290.47	8,529.25	8,348.33	180.92	47.145		
8,950.00	8,919.62	8,865.96	8,920.05	15.73	167.00	-0.272	225.85	8,290.47	8,517.00	8,334.98	182.02	46.791		
9,000.00	8,966.83	8,912.86	8,966.83	15.68	168.11	-0.278	225.52	8,290.47	8,500.58	8,317.48	183.11	46.424		

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COMPASS 5000.15 Build 93A





Marathon Oil Corporation.

Offset Site Error: 0.00 usft

Company:	Marathon Oil Permian LLC	Local Co-ordinate Reference:	Well Decimus 5 WXY Fed Com 2H
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 2H	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

urvey Prog		0-INC-ONLY								Rule Assi	gned:		Offset Well Error:	1.00 u
Refe Measured	rence Vertical	Off Measured	set Vertical	Semi N Reference	lajor Axis Offset	Highside	Offset Wellb	ore Centre	Dis Between	tance Between	Minimum	Separation	Warning	
Depth	Depth	Depth	Depth			Toolface	+N/-S	+E/-W	Centres	Ellipses	Separation	Factor		
(usft)	(usft)	(usft)	(usft)	(usft)	(usft)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)			
9,050.00	9,012.43	8,958.46	9,012.43	15.63	169.24	-0.290	225.52	8,290.47	8,480.11	8,295.91	184.20	46.036		
9,100.00	9,056.07	9,002.12	9,056.07	15.59	170.32	-0.313	226.39	8,290.47	8,455.75	8,270.49	185.26	45.644		
9,150.00	9,097.42	9,043.84	9,097.78	15.56	171.35	-0.331	226.22	8,290.47	8,427.67	8,241.41	186.26	45.247		
9,200.00	9,136.17	9,082.93	9,136.87	15.55	172.32	-0.353	225.79	8,290.47	8,396.09	8,208.89	187.20	44.850		
9,250.00	9,172.02	9,118.17	9,172.02	15.56	173.20	-0.383	225.52	8,290.47	8,361.25	8,173.20	188.06	44.461		
9,300.00	9,204.69	9,150.85	9,204.69	15.60	174.02	-0.426	225.52	8,290.47	8,323.43	8,134.57	188.86	44.072		
0,000.00	0,204.00	0,100.00	0,204.00	10.00	114.02	-0.420	220.02	0,200.47	0,020.40	0,104.01	100.00	44.072		
9,350.00	9,233.95	9,180.10	9,233.95	15.68	174.75	-0.483	225.52	8,290.47	8,282.90	8,093.32	189.58	43.691		
9,400.00	9,259.56	9,205.71	9,259.56	15.83	175.40	-0.563	225.52	8,290.47	8,239.98	8,049.77	190.21	43.321		
9,450.00	9,281.33	9,227.51	9,281.34	16.06	175.95	-0.697	226.59	8,290.47	8,194.99	8,004.25	190.74	42.963		
9,500.00	9,299.10	9,245.41	9,299.23	16.37	176.40	-0.882	226.55	8,290.47	8,148.27	7,957.09	191.18	42.620		
9,550.00	9,312.73	9,259.14	9,312.96	16.78	176.74	-1.209	226.50	8,290.47	8,100.18	7,908.66	191.52	42.293		
9,000.00	9,312.73	9,239.14	9,312.90	10.76	170.74	-1.209	220.50	0,290.47	0,100.10	7,900.00	191.52	42.293		
9,600.00	9,322.11	9,268.59	9,322.41	17.27	176.98	-1.933	226.44	8,290.47	8,051.09	7,859.33	191.76	41.985		
9,650.00	9,327.18	9,273.70	9,327.52	17.83	177.11	-4.846	226.41	8,290.47	8,001.36	7,809.47	191.89	41.697		
9,673.22	9,328.06	9,274.58	9,328.40	18.11	177.13	-15.790	226.40	8,290.47	7,978.16	7,786.24	191.92	41.571		
9,700.00	9,328.00 9,328.52	9,274.38	9,328.40 9,328.87	18.45	177.13	-15.839	226.40	8,290.47	7,951.38	7,759.45	191.92	41.428		
9,800.00	9,330.27	9,276.81	9,330.63	19.86	177.19	-16.028	226.38	8,290.47	7,851.40	7,659.41	191.99	40.896		
9,900.00	9,332.01	9,278.57	9,332.38	21.43	177.23	-16.220	226.37	8,290.47	7,751.42	7,559.37	192.04	40.363		
10,000.00	9,333.76	9,280.32	9,334.14	23.13	177.28	-16.417	226.36	8,290.47	7,651.43	7,459.33	192.10	39.830		
10,100.00	9,335.50	9,282.08	9,335.90	24.93	177.32	-16.619	226.34	8,290.47	7,551.45	7,359.28	192.17	39.297		
10,200.00	9,337.25	9,283.84	9,337.65	26.81	177.37	-16.825	226.33	8,290.47	7,451.47	7,259.24	192.23	38.763		
10,300.00	9,339.00	9,285.60	9,339.41	28.75	177.41	-17.037	226.31	8,290.47	7,351.48	7,159.19	192.30	38.230		
10 400 00	0 240 74	0.007.05	0 244 47	20.74	177 45	17.050	226.20	8 200 47	7 051 50	7 050 12	102.26	27 607		
10,400.00	9,340.74	9,287.35	9,341.17	30.74	177.45	-17.253	226.29	8,290.47	7,251.50	7,059.13	192.36	37.697		
10,500.00	9,342.49	9,289.11	9,342.93	32.78	177.50	-17.475	226.28	8,290.47	7,151.52	6,959.08	192.44	37.163		
10,600.00	9,344.23	9,290.87	9,344.68	34.85	177.54	-17.703	226.26	8,290.47	7,051.53	6,859.02	192.51	36.630		
10,700.00	9,345.98	9,292.62	9,346.44	36.94	177.59	-17.937	226.24	8,290.47	6,951.55	6,758.97	192.58	36.096		
10,800.00	9,347.72	9,294.38	9,348.20	39.07	177.63	-18.176	226.23	8,290.47	6,851.57	6,658.90	192.66	35.563		
10,900.00	9,349.47	9,296.14	9,349.95	41.21	177.68	-18.422	226.21	8,290.47	6,751.58	6,558.84	192.74	35.029		
11,000.00	9,351.21	9,297.90	9,351.71	43.36	177.72	-18.675	226.19	8,290.47	6,651.60	6,458.78	192.82	34.496		
11,100.00	9,352.96	9,299.65	9,353.47	45.54	177.76	-18.934	226.17	8,290.47	6,551.62	6,358.71	192.91	33.963		
11,200.00	9,354.70	9,301.41	9,355.22	47.72	177.81	-19.200	226.15	8,290.47	6,451.63	6,258.64	192.99	33.429		
11,300.00	9,356.45	9,303.17	9,356.98	49.92	177.85	-19.474	226.13	8,290.47	6,351.65	6,158.57	193.08	32.896		
11,400.00	9,358.19	9,304.93	9,358.74	52.13	177.90	-19.755	226.11	8,290.47	6,251.67	6,058.50	193.17	32.363		
11,500.00	9,359.94	9,306.68	9,360.49	54.34	177.94	-20.045	226.09	8,290.47	6,151.68	5,958.42	193.26	31.831		
11,600.00	9,361.68	9,308.44	9,362.25	56.56	177.99	-20.342	226.07	8,290.47	6,051.70	5,858.34	193.36	31.298		
11,700.00	9,363.43	9,310.20	9,364.01	58.79	178.03	-20.649	226.05	8,290.47	5,951.72	5,758.26	193.45	30.765		
11,800.00	9,365.17	9,311.95	9,365.76	61.02	178.07	-20.964	226.03	8,290.47	5,851.74	5,658.18	193.55	30.233		
11,900.00	9,366.92	9,313.71	9,367.52	63.26	178.12	-21.289	226.00	8,290.47	5,751.75	5,558.10	193.65	29.701		
12,000.00	9,368.66	9,315.47	9,369.28	65.51	178.16	-21.624	225.98	8,290.47	5,651.77	5,458.01	193.76	29.169		
12,100.00	9,370.41	9,317.23	9,371.03	67.76	178.21	-21.969	225.96	8,290.47	5,551.79	5,357.93	193.86	28.638		
12,200.00	9,372.15	9,318.98	9,372.79	70.01	178.25	-22.326	225.93	8,290.47	5,451.80	5,257.84	193.97	28.107		
12,300.00	9,373.90	9,320.74	9,374.54	72.26	178.29	-22.693	225.91	8,290.47	5,351.82	5,157.75	194.08	27.576		
12,400.00	9,375.65	9,322.50	9,376.30	74.52	178.34	-23.072	225.89	8,290.47	5,251.84	5,057.65	194.19	27.045		
12,500.00	9,377.39	9,324.25	9,378.06	76.78	178.38	-23.464	225.86	8,290.47	5,151.86	4,957.56	194.30	26.515		
12,600.00	9,379.14	9,326.01	9,379.81	79.05	178.43	-23.869	225.84	8,290.47	5,051.88	4,857.46	194.41	25.985		
12,700.00	9,380.88	9,327.77	9,381.57	81.31	178.47	-24.287	225.81	8,290.47	4,951.89	4,757.36	194.53	25.456		
12,800.00	9,382.63	9,329.52	9,383.33	83.58	178.52	-24.720	225.78	8,290.47	4,851.91	4,657.26	194.65	24.927		
12,900.00	9,384.37	9,331.28	9,385.08	85.85	178.56	-25.168	225.76	8,290.47	4,751.93	4,557.16	194.77	24.398		
13,000.00	9,386.12	9,333.04	9,386.84	88.13	178.60	-25.631	225.73	8,290.47	4,651.95	4,457.06	194.89	23.870		
13,100.00	9,387.86	9,334.79	9,388.59	90.40	178.65	-26.111	225.70	8,290.47	4,551.97	4,356.95	195.01	23.342		
13,200.00	9,389.61	9,336.55	9,390.35	92.68	178.69	-26.609	225.67	8,290.47	4,451.99	4,256.85	195.14	22.814		
13,300.00	9,391.35	9,338.31	9,392.11	94.95	178.74	-27.125	225.65	8,290.47	4,352.00	4,156.74	195.27	22.288		
.,	2,201.00	2,200.01	-,	0 1.00		0		-,	.,	.,		00		
13,400.00	9,393.10	9,340.06	9,393.86	97.23	178.78	-27.660	225.62	8,290.47	4,252.02	4,056.63	195.39	21.761		

Anticollision Report

Marathon Oil Corporation.

Company:	Marathon Oil Permian LLC	Local Co-ordinat
Project:	Eddy County, NM (NAD27-NME)	TVD Reference:
Reference Site:	Decimus 5 WXY Fed Com	MD Reference:
Site Error:	0.00 usft	North Reference:
Reference Well:	Decimus 5 WXY Fed Com 2H	Survey Calculation
Well Error:	1.00 usft	Output errors are
Reference Wellbore	OH	Database:
Reference Design:	Plan 1 07-22-22	Offset TVD Refer

ate Reference: e: tion Method: re at erence:

Well Decimus 5 WXY Fed Com 2H RKB @ 3067.60usft (Cactus 169) RKB @ 3067.60usft (Cactus 169) Grid Minimum Curvature 2.00 sigma USA Compass Reference Datum

Offset Design: Maximus/Decimus Offsets - Swearingen A 1 - OH - Surveys

	sign: Ma												Offset Site Error:	0.00 usft
Survey Progra Refere		D-INC-ONLY	eot	Som: B	laior Axis		Offset Wellbo	oro Contro	Diet	Rule Assi	gned:		Offset Well Error:	1.00 usft
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	+N/-S	+E/-W	Between Centres	Between Ellipses	Minimum Separation	Separation Factor	Warning	
(usft)	(usft)	(usft)	(usft)	(usft)	(usft)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)	04.005		
13,500.00	9,394.84	9,341.82	9,395.62	99.51	178.83	-28.216	225.59	8,290.47	4,152.04	3,956.52	195.53	21.235		
13,600.00	9,396.59	9,343.58	9,397.37	101.80	178.87	-28.793	225.56	8,290.47	4,052.06	3,856.40	195.66	20.710		
13,700.00	9,398.33	9,345.33	9,399.13	104.08	178.91	-29.393	225.53	8,290.47	3,952.08	3,756.29	195.79	20.185		
13,800.00	9,400.08	9,346.38	9,400.08	106.36	178.94	-29.731	225.52	8,290.47	3,852.10	3,656.19	195.91	19.663		
13,900.00 14,000.00	9,401.82 9,403.57	9,348.13 9,349.87	9,401.82 9,403.57	108.65 110.93	178.99 179.03	-30.384 -31.064	225.52 225.52	8,290.47 8,290.47	3,752.12 3,652.14	3,556.08 3,455.96	196.05 196.19	19.139 18.616		
,	-,	-,	-,					-,	-,					
14,100.00	9,405.31	9,351.62	9,405.31	113.22	179.08	-31.772	225.52	8,290.47	3,552.16	3,355.84	196.33	18.093		
14,200.00	9,407.06	9,353.36	9,407.06	115.50	179.12	-32.509	225.52	8,290.47	3,452.18	3,255.71	196.47	17.571		
14,300.00	9,408.80	9,355.11	9,408.80	117.79	179.17	-33.277	225.52	8,290.47	3,352.21	3,155.59	196.62	17.049		
14,400.00	9,410.55	9,356.85	9,410.55	120.08	179.21	-34.077	225.52	8,290.47	3,252.23	3,055.46	196.76	16.529		
14,500.00	9,412.30	9,358.60	9,412.30	122.37	179.26	-34.912	225.52	8,290.47	3,152.25	2,955.34	196.91	16.008		
14,600.00	9,414.04	9,360.34	9,414.04	124.66	179.30	-35.784	225.52	8,290.47	3,052.27	2,855.21	197.06	15.489		
14,700.00	9,415.79	9,362.09	9,415.79	126.95	179.35	-36.694	225.52	8,290.47	2,952.30	2,755.08	197.22	14.970		
14,800.00	9,417.53	9,363.83	9,417.53	129.24	179.39	-37.644	225.52	8,290.47	2,852.32	2,654.95	197.37	14.452		
14,900.00	9,419.28	9,365.58	9,419.28	131.53	179.44	-38.637	225.52	8,290.47	2,752.35	2,554.82	197.53	13.934		
15,000.00	9,421.02	9,367.32	9,421.02	133.83	179.48	-39.675	225.52	8,290.47	2,652.37	2,454.68	197.69	13.417		
15,100.00	9,422.77	9,369.07	9,422.77	136.12	179.53	-40.761	225.52	8,290.47	2,552.40	2,354.55	197.85	12.901		
15,200.00	9,424.51	9,370.82	9,424.51	138.41	179.57	-41.896	225.52	8,290.47	2,452.42	2,254.41	198.01	12.385		
15,300.00	9,426.26	9,372.56	9,426.26	140.71	179.62	-43.084	225.52	8,290.47	2,352.45	2,154.27	198.18	11.870		
15,400.00	9,428.00	9,374.31	9,428.00	143.00	179.66	-44.327	225.52	8,290.47	2,252.48	2,054.13	198.35	11.356		
15,500.00	9,429.75	9,376.05	9,429.75	145.29	179.71	-45.628	225.52	8,290.47	2,152.51	1,953.99	198.52	10.843		
45 000 00				447.50	170 75	40.000	005 50	0.000.17	0 050 54	4 050 04	400 70	10.000		
15,600.00	9,431.49	9,377.80	9,431.49	147.59	179.75	-46.989	225.52	8,290.47	2,052.54	1,853.84	198.70	10.330		
15,700.00	9,433.24	9,379.54	9,433.24	149.88	179.80	-48.414	225.52	8,290.47	1,952.58	1,753.70	198.88	9.818		
15,800.00	9,434.98	9,381.29	9,434.98	152.18	179.84	-49.904	225.52	8,290.47	1,852.61	1,653.55	199.07	9.307		
15,900.00 16,000.00	9,436.73 9,438.47	9,383.03 9,384.78	9,436.73 9,438.47	154.47 156.77	179.89 179.93	-51.462 -53.091	225.52 225.52	8,290.47 8,290.47	1,752.65 1,652.69	1,553.39 1,453.23	199.26 199.46	8.796 8.286		
10,000.00	9,430.47	9,304.70	9,430.47	150.77	179.93	-55.091	220.02	0,290.47	1,052.09	1,400.20	199.40	0.200		
16,100.00	9,440.22	9,386.52	9,440.22	159.07	179.98	-54.793	225.52	8,290.47	1,552.73	1,353.07	199.67	7.777		
16,200.00	9,441.96	9,388.27	9,441.96	161.36	180.02	-56.569	225.52	8,290.47	1,452.78	1,252.90	199.89	7.268		
16,300.00	9,443.71	9,390.01	9,443.71	163.66	180.07	-58.420	225.52	8,290.47	1,352.84	1,152.71	200.12	6.760		
16,400.00	9,445.46	9,391.76	9,445.46	165.96	180.11	-60.349	225.52	8,290.47	1,252.89	1,052.52	200.38	6.253		
16,500.00	9,447.20	9,393.50	9,447.20	168.26	180.16	-62.354	225.52	8,290.47	1,152.96	952.30	200.66	5.746		
16,600.00	9,448.95	9,395.25	9,448.95	170.55	180.20	-64.435	225.52	8,290.47	1,053.04	852.06	200.98	5.240		
16,700.00	9,450.69	9,396.99	9,450.69	172.85	180.25	-66.592	225.52	8,290.47	953.13	751.78	201.35	4.734		
16,800.00	9,452.44	9,398.74	9,452.44	175.15	180.30	-68.821	225.52	8,290.47	853.23	651.43	201.80	4.228		
16,900.00	9,454.18	9,400.48	9,454.18	177.45	180.34	-71.119	225.52	8,290.47	753.36	550.99	202.37	3.723		
17,000.00	9,455.93	9,402.23	9,455.93	179.75	180.39	-73.482	225.52	8,290.47	653.53	450.39	203.13	3.217		
17,100.00	0 157 67	0 402 07	0 157 67	190 DF	180 42	-75 004	225 52	8 200 47	552 74	340 50	204 24	2 711		
	9,457.67	9,403.97 9,405,72	9,457.67	182.05 184.35	180.43	-75.904	225.52	8,290.47 8 290.47	553.74 454.05	349.50 248.07	204.24 205.98	2.711 2.204		
17,200.00 17,300.00	9,459.42 9,461.16	9,405.72 9,407.47	9,459.42 9,461.16	184.35 186.65	180.48 180.52	-78.379 -80.898	225.52 225.52	8,290.47 8,290.47	454.05 354.53	248.07 145.50	205.98	2.204		
17,300.00	9,461.16 9,462.91	9,407.47	9,461.16 9,462.91	188.94	180.52	-83.453	225.52	8,290.47	255.36	40.16	209.03	1.090 1.187 Leve	13	
17,400.00	9,462.91 9,464.65	9,409.21 9,410.96	9,462.91 9,464.65	100.94	180.57	-86.035	225.52	8,290.47	157.23	-73.73	215.20	0.681 Leve		
,250.00	2, 22, 100	2,	2, 22 1.00					-,				2.301 2010	-	
17,600.00	9,466.40	9,412.70	9,466.40	193.54	180.66	-88.633	225.52	8,290.47	65.03	-230.57	295.60	0.220 Leve		
17,652.49	9,467.31	9,413.62	9,467.31	194.75	180.68	-90.000	225.52	8,290.47	38.39	-337.04	375.43		13, CC, ES, SF	
17,700.00	9,468.14	9,414.45	9,468.14	195.84	180.70	-91.237	225.52	8,290.47	61.07	-244.46	305.54	0.200 Leve		
17,800.00	9,469.89	9,416.19	9,469.89	198.14	180.75	-93.835	225.52	8,290.47	152.40	-83.17	235.56	0.647 Leve		
17,900.00	9,471.63	9,417.94	9,471.63	200.44	180.79	-96.418	225.52	8,290.47	250.43	31.50	218.93	1.144 Leve	13	
18,000.00	9,473.38	9,419.68	9,473.38	202.74	180.84	-98.975	225.52	8,290.47	349.57	137.03	212.53	1.645		
18,100.00	9,475.12	9,421.43	9,475.12	205.05	180.88	-101.497	225.52	8,290.47	449.08	239.61	209.47	2.144		
18,200.00	9,476.87	9,423.17	9,476.87	207.35	180.93	-103.974	225.52	8,290.47	548.76	340.94	207.82	2.641		
18,300.00	9,478.61	9,424.92	9,478.61	209.65	180.97	-106.399	225.52	8,290.47	648.54	441.68	206.87	3.135		
18,400.00	9,480.36	9,426.66	9,480.36	211.95	181.02	-108.765	225.52	8,290.47	748.38	542.08	206.30	3.628		
18,500.00	9,482.11	9,428.41	9,482.11	214.25	181.06	-111.066	225.52	8,290.47	848.24	642.29	205.96	4.119		
10.000.00	0,402.11	0,420.41	0,402.11	Z14.Z0	101.00	-111.000	220.02	0,200.47	0+0.24	072.23	200.00	4.113		

7/22/2022 1:25:12PM

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Marathon Oil Corporation.

Company:	Marathon Oil Permian LLC	Local Co-ordinate Reference:	Well Decimus 5 WXY Fed Com 2H
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 2H	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	
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Offset Des	sign: Wa	axiinus/Dec		tis - Swear	IngenAi	- Off - Surv	7Eys						Offset Site Error:	0.00 usft
Survey Progr Refer Measured Depth (usft)		40-INC-ONLY Off Measured Depth (usft)	set Vertical Depth (usft)	Semi M Reference (usft)	laior Axis Offset (usft)	Highside Toolface (°)	Offset Wellbo +N/-S (usft)	ore Centre +E/-W (usft)	Dis Between Centres (usft)	Rule Assi tance Between Ellipses (usft)	gned: Minimum Separation (usft)	Separation Factor	Offset Well Error: Warning	1.00 usft
18,600.00	9,483.85	9,430.15	9,483.85	216.55	181.11	-113.299	225.52	8,290.47	948.14	742.37	205.76	4.608		
18,700.00	9,485.60	9,431.90	9,485.60	218.85	181.15	-115.459	225.52	8,290.47	1,048.05	842.38	205.66	5.096		
18,800.00	9,487.34	9,433.64	9,487.34	221.15	181.20	-117.544	225.52	8,290.47	1,147.97	942.34	205.63	5.583		
18,900.00	9,489.09	9,435.39	9,489.09	223.45	181.24	-119.553	225.52	8,290.47	1,247.90	1,042.26	205.65	6.068		
19,000.00	9,490.83	9,437.13	9,490.83	225.76	181.29	-121.485	225.52	8,290.47	1,347.85	1,142.15	205.70	6.553		
19,100.00	9,492.58	9,438.88	9,492.58	228.06	181.33	-123.341	225.52	8,290.47	1,447.79	1,242.02	205.77	7.036		
19,200.00	9,494.32	9,440.63	9,494.32	230.36	181.38	-125.120	225.52	8,290.47	1,547.74	1,341.88	205.87	7.518		
19,247.64	9,495.15	9,441.46	9,495.15	231.46	181.40	-125.942	225.52	8,290.47	1,595.36	1,389.45	205.92	7.748		

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation 7/22/2022 1:25:12PM

Anticollision Report

Marathon Oil Corporation.

Company:	Marathon Oil Permian LLC	Local Co-ordinate Reference:	Well Decimus 5 WXY Fed Com 2H
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 2H	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 De	sign: M	aximus/Dec	imus Offse	ets - Zeus ′	1 - OH - S	urveys							Offset Site Error:	0.00 usft
Survey Prog		17-INC-ONLY, 6						. .		Rule Assi	gned:		Offset Well Error:	1.00 usit
Refe Measured Depth (usft)	rence Vertical Depth (usft)	Off Measured Depth (usft)	set Vertical Depth (usft)	Semi M Reference (usft)	/lajor Axis Offset (usft)	Highside Toolface (°)	Offset Wellb +N/-S (usft)	ore Centre +E/-W (usft)	Dist Between Centres (usft)	tance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
0.00	0.00	0.00	33.60	1.00	1.00	72.535	1,816.54	5,773.72	6,052.83					
100.00	100.00	66.40	100.00	1.13	1.19	72.535	1,816.54	5,773.72	6,052.74	6,050.42	2.32	2,609.421		
200.00	200.00	166.40	200.00	1.66	2.49	72.535	1,816.54	5,773.72	6,052.74	6,048.59	4.15	1,458.560		
300.00 400.00	300.00 400.00	269.23	302.83 400.00	2.06 2.39	4.79 7.03	72.532 72.535	1,816.92 1,816.54	5,773.72 5,773.72	6,052.85 6,052.74	6,046.00 6,043.31	6.85	883.555 642.147		
400.00 500.00	500.00	366.42 466.42	400.00 500.00	2.59	9.33	72.535	1,816.54	5,773.72	6,052.74	6,043.31	9.43 12.02	503.561		
		500.00		0.00	44.00	70 500	4 0 4 7 0 7	5 770 70	0.050.00		11.05	110.050		
600.00 700.00	600.00 700.00	569.03 676.62	602.61 710.19	2.96 3.21	11.69 14.18	72.530 72.534	1,817.07 1,816.69	5,773.72 5,773.72	6,052.90 6,052.79	6,038.24 6,035.41	14.65 17.39	413.059 348.146		
789.98	789.98	756.43	789.98	3.42	15.87	72.535	1,816.54	5,773.72	6,052.73	6,033.45	19.29	313.812		
800.00	800.00	766.45	800.00	3.44	16.07	72.535	1,816.54	5,773.72	6,052.74	6,033.22	19.52	310.151		
900.00	900.00	866.89	900.44	3.66	18.12	72.530	1,817.07	5,773.72	6,052.90	6,031.11	21.78	277.876		
1,000.00	1,000.00	974.94	1,008.48	3.87	20.32	72.533	1,816.80	5,773.72	6,052.82	6,028.63	24.19	250.169		
1,100.00	1,100.00	1,066.48	1,100.00	4.07	22.12	72.535	1,816.54	5,773.72	6,052.74	6,026.55	26.19	231.121		
1,200.00	1,200.00	1,166.80	1,200.32	4.26	24.00	72.531	1,817.01	5,773.72	6,052.88	6,024.61	28.27	214.147		
1,300.00	1,300.00	1,275.95	1,309.47	4.45	26.05	72.534	1,816.72	5,773.72	6,052.80	6,022.30	30.50	198.447		
1,308.04	1,308.04	1,284.73	1,318.24	4.47	26.22	126.798	1,816.67	5,773.72	6,052.79	6,022.11	30.69	197.255		
1,400.00	1,399.98	1,366.48	1,399.98	4.73	27.71	126.795	1,816.54	5,773.72	6,053.78	6,021.41	32.38	186.980		
1,500.00	1,499.84	1,470.32	1,503.82	5.02	29.60	126.785	1,816.72	5,773.72	6,056.98	6,022.50	34.47	175.713		
1,600.00	1,599.45	1,565.96	1,599.45	5.32	31.39	126.767	1,816.54	5,773.72	6,062.15	6,025.67	36.48	166.163		
1,700.00	1,698.70	1,665.23	1,698.70	5.63	33.44	126.741	1,816.54	5,773.72	6,069.48	6,030.72	38.76	156.607		
1,800.00	1,797.47	1,766.50	1,799.94	5.97	35.78	126.707	1,816.85	5,773.72	6,079.00	6,037.67	41.33	147.089		
1,900.00	1,895.62	1,868.56	1,901.95	6.32	38.33	126.669	1,816.96	5,773.72	6,090.57	6,046.44	44.12	138.033		
1,900.13	1,895.75	1,868.89	1,902.28	6.32	38.33	126.669	1,816.96	5,773.72	6,090.58	6,046.45	44.13	138.006		
2,000.00	1,993.44	1,960.09	1,993.44	6.61	40.72	126.816	1,816.54	5,773.72	6,103.06	6,056.30	46.76	130.530		
2,100.00	2,091.25	2,057.98	2,091.25	6.92	43.40	126.970	1,816.54	5,773.72	6,115.72	6,066.04	49.68	123.094		
2,200.00	2,189.06	2,155.86	2,189.06	7.25	46.42	127.123	1,816.54	5,773.72	6,128.42	6,075.46	52.96	115.716		
2,300.00	2,286.88	2,253.79	2,286.88	7.60	49.42	127.276	1,816.54	5,773.72	6,141.17	6,084.93	56.24	109.191		
2,400.00	2,384.69	2,351.69	2,384.69	7.96	52.26	127.428	1,816.54	5,773.72	6,153.97	6,094.61	59.36	103.670		
2,500.00	2,482.51	2,449.52	2,482.51	8.33	54.37	127.579	1,816.54	5,773.72	6,166.80	6,105.04	61.76	99.853		
2,600.00 2,700.00	2,580.32 2,678.13	2,547.35 2,645.19	2,580.32 2,678.13	8.71 9.10	56.47 58.76	127.730 127.880	1,816.54 1,816.54	5,773.72 5,773.72	6,179.68 6,192.61	6,115.52 6,125.85	64.16 66.76	96.315 92.760		
2,781.91	2,758.25	2,725.31	2,758.25	9.41	60.61	128.003	1,816.54	5,773.72	6,203.22	6,134.37	68.86	90.089		
2,800.00	2,775.96	2,746.60	2,779.54	9.47	61.10	128.064	1,817.35	5,773.72	6,205.75	6,136.36	69.39	89.428		
2,900.00 3,000.00	2,874.23 2,973.09	2,865.41 2,940.21	2,898.33 2,973.09	9.91 10.34	63.86 65.36	128.412 128.637	1,816.36 1,816.54	5,773.72 5,773.72	6,217.08 6,226.50	6,144.60 6,152.21	72.48 74.29	85.776 83.812		
3,100.00	3,072.42	3,044.82	3,077.70	10.34	67.50	128.832	1,817.08	5,773.72	6,233.91	6,157.18	74.29	81.242		
3,200.00	3,172.09	3,139.23	3,172.09	11.15	69.45	128.970	1,816.54	5,773.72	6,238.86	6,159.92	78.94	79.031		
3,300.00	3,271.97	3,239.12	3,271.97	11.50	71.56	129.048	1,816.54	5,773.72	6,241.76	6,160.47	81.29	76.785		
3,382.04 3,400.00	3,354.00 3,371.96	3,321.50 3,340.60	3,354.35 3,373.44	11.64 11.65	73.29 73.70	74.799 74.799	1,817.14 1,817.13	5,773.72 5,773.72	6,242.66 6,242.66	6,159.53 6,159.12	83.13 83.54	75.093 74.726		
3,500.00	3,471.96		3,479.73	11.72	75.94	74.802	1,816.83	5,773.72	6,242.58	6,156.71	85.88	72.693		
	0.574.00	0 500 45	0.574.00	11.00	77.05	74.004	1 0 1 0 5 1	5 770 70	0.040.50	0 454 00	07.00	74 007		
3,600.00 3,700.00	3,571.96 3,671.96	3,539.15 3,642.66	3,571.96 3,675.46	11.80 11.88	77.85 79.95	74.804 74.800	1,816.54 1,817.02	5,773.72 5,773.72	6,242.50 6,242.63	6,154.63 6,152.57	87.88 90.06	71.037 69.315		
3,800.00	3,771.96		3,771.96	11.95	81.90	74.804	1,816.54	5,773.72	6,242.50	6,150.40	92.10	67.781		
3,900.00	3,871.96	3,839.18	3,871.96	12.03	83.84	74.804	1,816.54	5,773.72	6,242.50	6,148.37	94.13	66.317		
4,000.00	3,971.96		3,979.69	12.11	85.93	74.802	1,816.74	5,773.72	6,242.56	6,146.24	96.32	64.814		
4,100.00	4,071.96	4,039.20	4,071.96	12.19	87.74	74.804	1,816.54	5,773.72	6,242.50	6,144.30	98.21	63.565		
4,100.00	4,071.90		4,071.90	12.19	89.72	74.804	1,817.01	5,773.72	6,242.50	6,142.34	100.28	62.252		
4,300.00	4,271.96		4,281.30	12.34	91.84	74.803	1,816.66	5,773.72	6,242.54	6,140.05	102.49	60.908		
4,327.75	4,299.71	4,278.55	4,311.30	12.36	92.43	74.805	1,816.47	5,773.72	6,242.49	6,139.39	103.10	60.545		
4,400.00	4,371.96	4,339.23	4,371.96	12.42	93.62	74.804	1,816.54	5,773.72	6,242.50	6,138.15	104.36	59.819		
4,500.00	4,471.96	4,441.75	4,474.48	12.50	95.63	74.800	1,816.98	5,773.72	6,242.62	6,136.16	106.46	58.640		

Anticollision Report

0.00 usft

Marathon Oil Corporation.

Offset Site Error:

Company:	Marathon Oil Permian LLC	Loca
Project:	Eddy County, NM (NAD27-NME)	TVD
Reference Site:	Decimus 5 WXY Fed Com	MD R
Site Error:	0.00 usft	North
Reference Well:	Decimus 5 WXY Fed Com 2H	Surve
Well Error:	1.00 usft	Outp
Reference Wellbore	OH	Datal
Reference Design:	Plan 1 07-22-22	Offse

al Co-ordinate Reference: Reference: Reference: th Reference: vey Calculation Method: out errors are at base: et TVD Reference:

Well Decimus 5 WXY Fed Com 2H RKB @ 3067.60usft (Cactus 169) RKB @ 3067.60usft (Cactus 169) Grid Minimum Curvature 2.00 sigma USA Compass Reference Datum

Offset Design: Maximus/Decimus Offsets - Zeus 1 - OH - Surveys

													Offset Site Error:	
urvey Progr		7-INC-ONLY, 6		0			0.00	O t	Die	Rule Assi	gned:		Offset Well Error:	1.00 usf
Measured	rence Vertical	Off: Measured	set Vertical	Reference	lajor Axis Offset	Highside	Offset Wellb	ore Centre	Between	tance Between	Minimum	Separation	Warning	
Depth	Depth	Depth	Depth			Toolface	+N/-S	+E/-W	Centres	Ellipses	Separation	Factor	-	
(usft)	(usft)	(usft)	(usft)	(usft)	(usft)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)			
4,600.00	4,571.96	4,549.96	4,582.68	12.57	97.75	74.804	1,816.55	5,773.72	6,242.51	6,133.84	108.67	57.446		
4,610.66	4,582.62	4,561.49	4,594.22	12.58	97.98	74.805	1,816.47	5,773.72	6,242.49	6,133.59	108.90	57.321		
4,700.00	4,671.96 4,771.96	4,639.25 4,742.48	4,671.96 4,775.18	12.65 12.73	99.51 101.54	74.804 74.800	1,816.54	5,773.72 5,773.72	6,242.50 6,242.62	6,131.99 6,129.99	110.51 112.63	56.487 55.425		
4,800.00 4,900.00	4,771.96	4,742.48	4,775.18	12.73	101.54	74.800	1,816.99 1,816.52	5,773.72	6,242.62	6,129.99	112.03	55.425 54.357		
4,906.70	4,878.67	4,857.52	4,883.00	12.81	103.80	74.804	1,816.47	5,773.72	6,242.31	6,127.50	114.04	54.337		
4,000.10	4,010.01	4,007.02	4,000.22	12.01	100.00	14.000	1,010.47	0,110.12	0,242.40	0,127.00	114.00	04.207		
5,000.00	4,971.96	4,939.28	4,971.96	12.88	105.34	74.804	1,816.54	5,773.72	6,242.50	6,125.89	116.61	53.533		
5,100.00	5,071.96	5,041.89	5,074.57	12.96	107.28	74.800	1,817.03	5,773.72	6,242.63	6,123.99	118.64	52.619		
5,200.00	5,171.96	5,149.21	5,181.88	13.04	109.31	74.803	1,816.62	5,773.72	6,242.53	6,121.77	120.76	51.695		
5,221.32	5,193.28	5,172.09	5,204.76	13.06	109.74	74.805	1,816.47	5,773.72	6,242.49	6,121.28	121.21	51.502		
5,300.00	5,271.96	5,239.30	5,271.96	13.12	111.00	74.804	1,816.54	5,773.72	6,242.50	6,119.96	122.54	50.943		
E 400.00	E 274.00	E 244 00	E 272 90	12.10	110.00	74 900	1 916 92	E 770 70	6 040 59	6 119 04	104 54	50 104		
5,400.00	5,371.96	5,341.22 5,446.52	5,373.89 5,479.19	13.19 13.27	112.92	74.802	1,816.83	5,773.72	6,242.58	6,118.04	124.54 126.61	50.124 49.305		
5,500.00 5,505.28	5,471.96 5,477.25	5,446.52	5,479.19 5,484.75	13.27	114.90 115.00	74.804 74.804	1,816.54 1,816.51	5,773.72	6,242.51 6,242.50	6,115.89 6,115.78	126.01	49.305		
5,505.28 5,600.00	5,571.96	5,452.09	5,464.75 5,571.96	13.20	116.73	74.804	1,816.54	5,773.72 5,773.72	6,242.50	6,113.98	128.53	49.262		
5,700.00	5,671.96	5,642.99	5,675.63	13.43	118.77	74.804	1,816.97	5,773.72	6,242.50	6,111.96	120.55	47.779		
0,100.00	0,071.00	0,042.00	0,010.00	10.40	110.77	14.000	1,010.07	0,110.12	0,242.02	0,111.00	100.00	-1.110		
5,800.00	5,771.96	5,750.83	5,783.47	13.51	120.89	74.805	1,816.47	5,773.72	6,242.49	6,109.63	132.87	46.983		
5,816.60	5,788.56	5,755.94	5,788.56	13.52	120.98	74.804	1,816.54	5,773.72	6,242.50	6,109.54	132.96	46.949		
5,900.00	5,871.96	5,839.76	5,872.38	13.58	122.53	74.801	1,816.86	5,773.72	6,242.59	6,107.99	134.60	46.380		
6,000.00	5,971.96	5,939.35	5,971.96	13.66	124.43	74.804	1,816.54	5,773.72	6,242.50	6,105.92	136.58	45.705		
6,100.00	6,071.96	6,039.42	6,072.03	13.74	126.97	74.802	1,816.78	5,773.72	6,242.56	6,103.36	139.20	44.846		
6,200.00	6,171.96	6,146.61	6,179.22	13.82	129.68	74.804	1,816.54	5,773.72	6,242.51	6,100.51	142.00	43.961		
6,219.85	6,191.81	6,159.31	6,191.81	13.83	130.00	74.804	1,816.54	5,773.72	6,242.50	6,100.17	142.33	43.858		
6,300.00	6,271.96	6,243.03	6,275.54	13.90	131.54	74.803	1,816.64	5,773.72	6,242.53	6,098.57	143.95	43.365		
6,400.00	6,371.96	6,339.47	6,371.96	13.98	133.39	74.804	1,816.54	5,773.72	6,242.50	6,096.62	145.88	42.791		
6,500.00	6,471.96	6,439.47	6,471.96	14.05	136.13	74.804	1,816.54	5,773.72	6,242.50	6,093.81	148.69	41.983		
6,600.00	6,571.96	6,745.61	6,776.62	14.13	145.58	74.916	1,803.59	5,772.51	6,241.31	6,083.21	158.10	39.476		
6,700.00	6,671.96	6,783.46	6,814.20	14.21	145.58	74.957	1,799.03	5,772.68	6,238.56	6,080.33	158.23	39.428		
6,800.00	6,771.96	6,825.00	6,855.45	14.29	145.58	75.001	1,794.16	5,773.25	6,236.78	6,078.45	158.34	39.390		
6,900.00	6,871.96	6,963.05	6,992.82	14.37	145.58	75.125	1,780.73	5,775.06	6,235.68	6,077.26	158.42	39.362		
7,000.00	6,971.96	7,180.84	7,210.18	14.45	145.59	75.229	1,768.06	5,771.40	6,232.29	6,073.85	158.44	39.335		
7,100.00	7,071.96	7,278.58	7,307.83	14.52	145.59	75.252	1,764.76	5,768.51	6,228.56	6,070.03	158.53	39.289		
7,200.00	7,171.96	7,421.35	7,450.44	14.60	145.59	75.279	1,760.35	5,763.69	6,224.54	6,065.96	158.59	39.250		
7,300.00	7,271.96	7,487.00	7,516.03	14.68	145.59	75.284	1,759.15	5,761.20	6,220.39	6,061.69	158.70	39.195		
7,400.00 7,500.00	7,371.96 7,471.96	7,550.00 7,703.21	7,578.99 7,732.11	14.76 14.84	145.59 145.60	75.280 75.276	1,759.06 1,758.14	5,758.88 5,753.84	6,216.78 6,213.68	6,057.96 6,054.81	158.82 158.87	39.143 39.112		
7,500.00	7,471.90	7,703.21	1,132.11	14.04	145.00	15.210	1,750.14	5,755.04	0,213.00	0,004.01	130.07	39.112		
7,600.00	7,571.96	7,805.00	7,833.81	14.92	145.60	75.274	1,757.32	5,749.64	6,209.48	6,050.52	158.96	39.064		
7,700.00	7,671.96	7,858.25	7,887.02	15.00	145.60	75.273	1,756.91	5,747.78	6,205.78	6,046.70	159.08	39.010		
7,800.00	7,771.96	8,014.19	8,042.82	15.08	145.61	75.266	1,755.93	5,741.24	6,201.39	6,042.26	159.13	38.971		
7,900.00	7,871.96	8,105.15	8,133.70	15.15	145.61	75.266	1,754.98	5,737.33	6,196.98	6,037.75	159.23	38.920		
8,000.00	7,971.96	8,163.53	8,192.03	15.23	145.62	75.265	1,754.41	5,735.10	6,193.06	6,033.71	159.35	38.865		
8,100.00	8,071.96	8,305.00	8,333.38	15.31	145.62	75.275	1,751.95	5,729.80	6,188.92	6,029.52	159.41	38.825		
8,200.00	8,171.96	8,368.00	8,396.32	15.39	145.63	75.282	1,750.58	5,727.66	6,185.05	6,025.52	159.53	38.771		
8,300.00	8,271.96	8,462.00	8,490.26	15.47	145.63	75.278	1,750.12	5,724.27	6,181.44	6,021.81	159.62	38.725		
8,400.00	8,371.96	8,652.58	8,680.64	15.55	145.65	75.279	1,747.87	5,716.04	6,176.77	6,017.14	159.64	38.693		
8,500.00	8,471.96	8,734.70	8,762.66	15.63	145.65	75.287	1,746.05	5,712.45	6,171.97	6,012.22	159.75	38.636		
8,600.00	8,571.96	8,871.69	8,899.48	15.71	145.66	75.290	1,744.05	5,705.92	6,167.00	6,007.20	159.80	38.592		
8,700.00	8,671.96	8,950.46	8,978.14	15.79	145.67	75.286	1,743.34	5,701.89	6,161.83	6,001.91	159.92	38.532		
8,783.22	8,755.19	9,026.29	9,053.88	15.84	145.67	75.284	1,742.69	5,698.29	6,157.82	5,997.83	159.99	38.489		
8,800.00	8,771.96	9,071.67	9,099.20	15.84	145.68	-14.702	1,742.32	5,695.97	6,156.70	5,996.74	159.96	38.489		
8,850.00	8,821.81	9,113.18	9,140.66	15.81	145.68	-14.869	1,742.02	5,693.81	6,150.57	5,990.59	159.98	38.445		
	0.074.40	9,229.31	9,256.60	15.77	145.69	-15.201	1,740.99	5,687.33	6,140.18	5,980.27	159.91	38.399		
8,900.00	8,871.16	3,223.51	0,200.00				1,1 10:00	0,001.00	0,110.10	-,				

Anticollision Report

MarathonOil Corporation.

Offset Site Error: 0.00 usft

Company:	Marathon Oil Permian LLC
Project:	Eddy County, NM (NAD27-NME)
Reference Site:	Decimus 5 WXY Fed Com
Site Error:	0.00 usft
Reference Well:	Decimus 5 WXY Fed Com 2H
Well Error:	1.00 usft
Reference Wellbore	OH
Reference Design:	Plan 1 07-22-22

Local Co-ordinate Reference: TVD Reference: MD Reference: North Reference: Survey Calculation Method: Output errors are at Database: Offset TVD Reference: Well Decimus 5 WXY Fed Com 2H RKB @ 3067.60usft (Cactus 169) RKB @ 3067.60usft (Cactus 169) Grid Minimum Curvature 2.00 sigma USA Compass Reference Datum

Offset Design: Maximus/Decimus Offsets - Zeus 1 - OH - Surveys

													Offset Site Error:	0.00 us
urvey Prog		117-INC-ONLY, 6								Rule Assi	gned:		Offset Well Error:	1.00 us
Refe Measured	erence Vertical	Off Measured	set Vertical	Semi M Reference	laior Axis Offset	Highside	Offset Wellb	ore Centre	Dis Between	tance Between	Minimum	Separation	Warning	
Depth	Depth	Depth	Depth			Toolface	+N/-S	+E/-W	Centres	Ellipses	Separation	Factor		
(usft)	(usft)	(usft)	(usft)	(usft)	(usft)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)			
8,950.00	8,919.62		9,288.68	15.73	145.69	-15.633	1,740.45	5,685.40	6,125.35	5,965.43	159.92	38.302		
9,000.00	8,966.83		9,309.19	15.68	145.69	-16.201	1,740.10	5,684.27	6,106.76	5,946.82	159.95	38.180		
9,050.00	9,012.43		9,328.35	15.63	145.70	-16.932	1,739.73	5,683.30	6,084.54	5,924.57	159.96	38.037		
9,100.00	9,056.07		9,367.32	15.59	145.70	-17.892	1,738.88	5,681.48	6,058.80	5,898.85	159.96	37.877		
9,150.00 9,200.00	9,097.42 9,136.17		9,397.07 9,414.82	15.56 15.55	145.70 145.70	-19.092 -20.576	1,738.21 1,737.81	5,680.09 5,679.31	6,029.61 5,997.27	5,869.65 5,837.30	159.96 159.97	37.694 37.490		
3,200.00	3,130.17	3,301.11	3,414.02	15.55	145.70	-20.570	1,707.01	5,075.51	5,551.21	5,057.50	155.57	57.450		
9,250.00	9,172.02	9,408.00	9,435.03	15.56	145.71	-22.467	1,737.45	5,678.48	5,962.07	5,802.09	159.98	37.268		
9,300.00	9,204.69	9,417.94	9,444.96	15.60	145.71	-24.839	1,737.32	5,678.09	5,924.22	5,764.23	160.00	37.027		
9,350.00	9,233.95	9,439.00	9,466.01	15.68	145.71	-27.982	1,737.14	5,677.28	5,884.00	5,723.99	160.01	36.774		
9,400.00	9,259.56	9,461.30	9,488.29	15.83	145.71	-32.161	1,737.03	5,676.42	5,841.65	5,681.63	160.02	36.507		
9,450.00	9,281.33	9,488.13	9,515.10	16.06	145.71	-37.881	1,736.92	5,675.34	5,797.45	5,637.43	160.03	36.228		
0 500 00	0 000 11	0 500 50	0 500 45	10.07		45.050	4 700 07	5 074 50		5 504 70	100.05	05.007		
9,500.00	9,299.10		9,533.45	16.37	145.71	-45.650	1,736.87	5,674.58	5,751.77	5,591.72	160.05	35.937		
9,550.00	9,312.73		9,543.34	16.78	145.72	-56.184	1,736.83	5,674.18	5,704.97	5,544.88	160.08	35.638		
9,600.00	9,322.11 9,327.18		9,549.63	17.27 17.83	145.72 145.72	-70.103 -86.775	1,736.80	5,673.92 5,673.81	5,657.40 5,609.44	5,497.28 5,449.26	160.12 160.17	35.332 35.021		
9,650.00 9,673.22	9,327.10		9,552.25 9,552.20	17.65	145.72	-94.808	1,736.79 1,736.79	5,673.81	5,587.13	5,426.93	160.20	34.876		
3,073.22	3,320.00	3,323.21	3,332.20	10.11	140.72	-34.000	1,750.75	5,075.02	5,507.15	5,420.35	100.20	54.070		
9,700.00	9,328.52	9,524.74	9,551.68	18.45	145.72	-94.789	1,736.79	5,673.84	5,561.42	5,401.18	160.23	34.709		
9,800.00	9,330.27	9,522.77	9,549.71	19.86	145.72	-94.716	1,736.80	5,673.92	5,465.49	5,305.11	160.38	34.079		
9,900.00	9,332.01	9,520.78	9,547.72	21.43	145.72	-94.643	1,736.81	5,674.00	5,369.71	5,209.14	160.56	33.443		
10,000.00	9,333.76	9,518.76	9,545.70	23.13	145.72	-94.569	1,736.82	5,674.08	5,274.08	5,113.29	160.79	32.801		
10,100.00	9,335.50	9,516.72	9,543.66	24.93	145.72	-94.494	1,736.83	5,674.16	5,178.62	5,017.56	161.06	32.153		
10,200.00	9,337.25		9,541.59	26.81	145.72	-94.418	1,736.84	5,674.25	5,083.33	4,921.95	161.38	31.498		
	9,339.00		9,539.50	28.75	145.72	-94.342	1,736.85	5,674.33	4,988.23	4,826.47	161.75	30.838		
10,400.00 10,500.00	9,340.74 9,342.49		9,537.38 9,535.24	30.74 32.78	145.72 145.71	-94.264 -94.185	1,736.86 1,736.86	5,674.42 5,674.51	4,893.32 4,798.62	4,731.14 4,635.96	162.18 162.65	30.173 29.502		
10,600.00	9,342.48		9,533.07 9,533.07	34.85	145.71	-94.105	1,736.87	5,674.60	4,798.02	4,540.95	163.18	29.302		
10,000.00	9,344.20	9,500.12	9,555.07	34.05	145.71	-94.105	1,730.07	5,074.00	4,704.13	4,540.95	103.10	20.021		
10,700.00	9,345.98	9,504.51	9,531.46	36.94	145.71	-94.046	1,736.87	5,674.67	4,609.88	4,446.10	163.77	28.148		
10,800.00	9,347.72	9,501.59	9,528.55	39.07	145.71	-93.939	1,736.88	5,674.79	4,515.87	4,351.44	164.42	27.465		
10,900.00	9,349.47	9,498.72	9,525.68	41.21	145.71	-93.833	1,736.89	5,674.91	4,422.12	4,256.99	165.14	26.779		
11,000.00	9,351.21	9,495.89	9,522.85	43.36	145.71	-93.729	1,736.90	5,675.02	4,328.65	4,162.74	165.91	26.090		
11,100.00	9,352.96	9,493.09	9,520.06	45.54	145.71	-93.627	1,736.90	5,675.14	4,235.48	4,068.73	166.75	25.400		
	0 05 1 7		0 5 4 7 0 4	47 70		00 505	4 700 04	5 075 05	4 4 4 9 9 9	0.074.00	407.00	04 700		
11,200.00	9,354.70		9,517.31	47.72	145.71	-93.525	1,736.91	5,675.25	4,142.63	3,974.96	167.66	24.708		
11,300.00 11,400.00	9,356.45 9,358.19		9,514.60 9,511.93	49.92 52.13	145.71 145.71	-93.426 -93.327	1,736.92 1,736.93	5,675.36 5,675.47	4,050.11 3,957.96	3,881.47 3,788.26	168.64 169.70	24.016 23.324		
11,500.00	9,359.94		9,509.29	54.34	145.71	-93.230	1,736.93	5,675.58	3,866.19	3,695.37	170.82	22.632		
11,600.00	9,361.68		9,506.69	56.56	145.71	-93.134	1,736.95	5,675.69	3,774.84	3,602.81	170.02	21.942		
,000.00	0,001.00	0,110112	0,000.00	00.00		00.101	1,100.00	0,070.00	0,111.01	0,002.01	112.00	21.012		
11,700.00	9,363.43	9,477.16	9,504.13	58.79	145.71	-93.040	1,736.96	5,675.79	3,683.94	3,510.62	173.32	21.255		
11,800.00	9,365.17	9,474.63	9,501.60	61.02	145.71	-92.947	1,736.97	5,675.89	3,593.52	3,418.82	174.70	20.569		
11,900.00	9,366.92	9,472.18	9,499.16	63.26	145.71	-92.857	1,736.98	5,675.99	3,503.62	3,327.45	176.17	19.888		
12,000.00	9,368.66	9,469.61	9,496.59	65.51	145.71	-92.762	1,736.99	5,676.09	3,414.28	3,236.55	177.73	19.210		
12,100.00	9,370.41	9,467.07	9,494.05	67.76	145.71	-92.669	1,737.00	5,676.19	3,325.55	3,146.15	179.40	18.538		
12 200 00	0 272 45	0 /6/ 50	0 /01 55	70.04	1/5 71	-02 576	1 727 01	5 676 20	3 727 17	3 056 21	191 16	17 971		
12,200.00 12,300.00	9,372.15 9,373.90		9,491.55 9,489.08	70.01 72.26	145.71 145.71	-92.576 -92.485	1,737.01 1,737.02	5,676.29 5,676.39	3,237.47 3,150.10	3,056.31 2,967.06	181.16 183.04	17.871 17.210		
12,300.00	9,375.65		9,489.08 9,486.64	72.20	145.71	-92.395	1,737.02	5,676.49	3,063.50	2,907.00	185.04	16.556		
12,500.00	9,377.39		9,484.23	76.78	145.71	-92.306	1,737.05	5,676.58	2,977.74	2,790.59	187.15	15.911		
12,600.00	9,379.14		9,481.86	79.05	145.71	-92.219	1,737.06	5,676.67	2,892.89	2,703.50	189.40	15.274		
,	2,510.1-	2,101.00	2, 201.00				.,	-, 0.07	_,_ 52.00	_,. 55.65	. 50.10			
12,700.00	9,380.88	9,452.52	9,479.51	81.31	145.71	-92.132	1,737.07	5,676.76	2,809.04	2,617.26	191.78	14.647		
12,800.00	9,382.63	9,450.20	9,477.20	83.58	145.71	-92.047	1,737.08	5,676.85	2,726.28	2,531.97	194.30	14.031		
12,900.00	9,384.37		9,474.91	85.85	145.71	-91.963	1,737.10	5,676.94	2,644.70	2,447.72	196.98	13.426		
13,000.00	9,386.12		9,472.66	88.13	145.71	-91.880	1,737.11	5,677.03	2,564.43	2,364.61	199.82	12.834		
13,100.00	9,387.86	9,443.43	9,470.43	90.40	145.71	-91.797	1,737.12	5,677.11	2,485.58	2,282.77	202.82	12.255		
13.200.00	0.200.04	0.444.00	9,468.23	92.68	145.71	-91.716	1,737.13	5,677.20	2,408.31	2,202.32	205.99	11 604		
10,200.00	9,389.61	9,441.23	3,400.23	92.08	140.71	-91./10	1,131.13	0,077.20	∠,400.31	2,202.32	200.99	11.691		

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Anticollision Report

MarathonOil Corporation.

Offset Site Error: 0.00 usft

Project: Eddy County, NM (NAD27-NME) Reference Site: Decimus 5 WXY Fed Com Site Error: 0.00 usft Reference Well: Decimus 5 WXY Fed Com 2H Well Error: 1.00 usft
Site Error: 0.00 usft Reference Well: Decimus 5 WXY Fed Com 2H
Reference Well: Decimus 5 WXY Fed Com 2H
Well Error: 1.00 usft
Reference Wellbore OH
Reference Design: Plan 1 07-22-22

Local Co-ordinate Reference: TVD Reference: MD Reference: North Reference: Survey Calculation Method: Output errors are at Database: Offset TVD Reference: Well Decimus 5 WXY Fed Com 2H RKB @ 3067.60usft (Cactus 169) RKB @ 3067.60usft (Cactus 169) Grid Minimum Curvature 2.00 sigma USA Compass Reference Datum

Offset Design: Maximus/Decimus Offsets - Zeus 1 - OH - Surveys

														0.00 (
urvey Prog		117-INC-ONLY, 6								Rule Assi	gned:		Offset Well Error:	1.00 (
Refe Measured	erence Vertical	Off Measured	set Vertical	Semi M Reference	lajor Axis Offset	Highside	Offset Wellb	ore Centre	Dis Between	tance Between	Minimum	Separation	Warning	
Depth	Depth	Depth	Depth			Toolface	+N/-S	+E/-W	Centres	Ellipses	Separation	Factor		
(usft)	(usft)	(usft)	(usft)	(usft)	(usft)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)			
3,300.00	9,391.38		9,466.06	94.95	145.71	-91.636	1,737.14	5,677.28	2,332.76	2,123.42	209.34	11.143		
3,400.00	9,393.10		9,466.01	97.23	145.71	-91.634	1,737.14	5,677.28	2,259.12	2,046.25	212.87	10.613		
3,500.00	9,394.84		9,466.01	99.51	145.71	-91.634	1,737.14	5,677.28	2,187.56	1,970.98	216.58	10.100		
3,600.00	9,396.59		9,466.01	101.80	145.71	-91.634	1,737.14	5,677.28	2,118.31	1,897.84	220.48	9.608		
3,700.00	9,398.33		9,460.59	104.08	145.71	-91.434	1,737.18	5,677.49	2,051.59	1,827.03	224.56	9.136		
3,800.00	9,400.08	9,432.20	9,459.21	106.36	145.71	-91.383	1,737.19	5,677.54	1,987.67	1,758.86	228.81	8.687		
13,900.00	9,401.82	9,430.81	9,457.82	108.65	145.71	-91.332	1,737.20	5,677.60	1,926.81	1,693.60	233.21	8.262		
14,000.00	9,403.57		9,456.42	110.93	145.71	-91.280	1,737.21	5,677.65	1,869.33	1,631.58	237.75	7.863		
14,100.00	9,405.3		9,455.02	113.22	145.71	-91.228	1,737.22	5,677.70	1,815.53	1,573.15	242.39	7.490		
14,200.00	9,407.06	9,426.59	9,453.60	115.50	145.71	-91.176	1,737.23	5,677.76	1,765.77	1,518.68	247.09	7.146		
14,300.00	9,408.80	9,425.16	9,452.18	117.79	145.71	-91.124	1,737.25	5,677.81	1,720.38	1,468.57	251.81	6.832		
14,400.00	9,410.55		9,450.75	120.08	145.71	-91.071	1,737.26	5,677.87	1,679.72	1,423.24	256.48	6.549		
14,500.00	9,412.30		9,449.31	122.37	145.71	-91.018	1,737.28	5,677.92	1,644.14	1,383.11	261.04	6.299		
14,600.00	9,414.04		9,447.87	124.66	145.71	-90.964	1,737.29	5,677.98	1,613.99	1,348.58	265.40	6.081		
14,700.00	9,415.79		9,446.42	126.95	145.71	-90.911	1,737.31	5,678.04	1,589.56	1,320.06	269.50	5.898		
14,800.00	9,417.53	3 9,417.93	9,444.95	129.24	145.71	-90.857	1,737.32	5,678.09	1,571.12	1,297.87	273.25	5.750		
14,900.00	9,419.28	9,416.46	9,443.48	131.53	145.71	-90.802	1,737.34	5,678.15	1,558.89	1,282.32	276.57	5.636		
15,000.00	9,421.02		9,442.00	133.83	145.71	-90.748	1,737.36	5,678.21	1,553.02	1,273.61	279.41	5.558		
15,041.42	9,421.74	9,414.36	9,441.39	134.78	145.71	-90.725	1,737.37	5,678.23	1,552.47	1,272.04	280.43	5.536 CC		
15,100.00	9,422.77	9,413.49	9,440.52	136.12	145.71	-90.693	1,737.38	5,678.27	1,553.57	1,271.86	281.71	5.515 ES		
15,200.00	9,424.5	1 9,408.00	9,435.03	138.41	145.71	-90.490	1,737.45	5,678.48	1,560.55	1,277.08	283.47	5.505 SF		
15,300.00	9,426.26		9,435.03	140.71	145.71	-90.490	1,737.45	5,678.48	1,573.85	1,289.21	284.64	5.529		
15,400.00	9,428.00		9,435.03	143.00	145.71	-90.490	1,737.45	5,678.48	1,593.33	1,308.07	285.26	5.586		
15,500.00	9,429.75		9,435.03	145.29	145.71	-90.490	1,737.45	5,678.48	1,618.76	1,333.41	285.35	5.673		
15,600.00 15,700.00	9,431.49 9,433.24		9,435.03 9,435.03	147.59 149.88	145.71 145.71	-90.490 -90.490	1,737.45	5,678.48 5,678.48	1,649.87 1,686.34	1,364.89 1,402.17	284.98 284.18	5.790 5.934		
15,700.00	9,433.24	,408.00	9,433.03	149.00	145.71	-90.490	1,737.45	5,076.46	1,000.34	1,402.17	204.10	5.934		
15,800.00	9,434.98	9,402.51	9,429.55	152.18	145.70	-90.288	1,737.54	5,678.70	1,727.83	1,444.80	283.04	6.105		
15,900.00	9,436.73	9,400.79	9,427.83	154.47	145.70	-90.224	1,737.57	5,678.77	1,774.00	1,492.41	281.59	6.300		
16,000.00	9,438.47	9,399.03	9,426.07	156.77	145.70	-90.159	1,737.60	5,678.84	1,824.48	1,544.57	279.90	6.518		
16,100.00	9,440.22	9,397.22	9,424.26	159.07	145.70	-90.093	1,737.63	5,678.91	1,878.92	1,600.89	278.04	6.758		
16,200.00	9,441.96	9,395.36	9,422.41	161.36	145.70	-90.024	1,737.66	5,678.99	1,937.01	1,660.97	276.04	7.017		
16 200 00	0 442 7	0 202 46	0 400 51	163.66	145 70	80.054	1 727 70	E 670 07	1 009 40	1 704 45	272 OF	7 205		
16,300.00	9,443.7		9,420.51	163.66	145.70	-89.954	1,737.70	5,679.07	1,998.40	1,724.45	273.95	7.295		
16,400.00 16,500.00	9,445.46 9,447.20		9,418.55 9,416.55	165.96 168.26	145.70 145.70	-89.882 -89.808	1,737.73 1,737.77	5,679.15 5,679.23	2,062.82 2,129.99	1,791.01 1,860.33	271.81 269.65	7.589 7.899		
16,600.00	9,447.20		9,410.33 9,414.49	170.55	145.70	-89.732	1,737.82	5,679.32	2,129.99	1,932.16	267.49	8.223		
16,700.00	9,440.90		9,414.49 9,412.38	170.55	145.70	-89.654	1,737.82	5,679.41	2,199.04	2,006.22	265.35	8.561		
	0,100.00	0,000.02	0,112.00	112.00		00.001	1,101.00	0,070.11	2,271.07	2,000.22	200.00	0.001		
16,800.00	9,452.44	9,383.15	9,410.20	175.15	145.70	-89.574	1,737.91	5,679.51	2,345.55	2,082.31	263.24	8.910		
16,900.00	9,454.18	9,380.91	9,407.97	177.45	145.70	-89.491	1,737.96	5,679.60	2,421.40	2,160.21	261.18	9.271		
17,000.00	9,455.93	9,380.56	9,407.62	179.75	145.70	-89.478	1,737.96	5,679.62	2,498.94	2,239.77	259.17	9.642		
17,100.00	9,457.67	9,376.42	9,403.48	182.05	145.70	-89.326	1,738.06	5,679.80	2,578.03	2,320.80	257.23	10.022		
17,200.00	9,459.42	9,372.13	9,399.20	184.35	145.70	-89.168	1,738.16	5,679.99	2,658.53	2,403.17	255.36	10.411		
17 200 00	0 /64 4/	0.007.00	0 204 77	100 05	145 70	00.004	1 700 07	E 690 40	2740.20	2 400 70	0E0 EE	10 000		
17,300.00	9,461.16		9,394.77	186.65	145.70	-89.004	1,738.27	5,680.19	2,740.30	2,486.76	253.55	10.808		
17,400.00 17,500.00	9,462.9 ⁴ 9,464.65		9,390.18 9,385.44	188.94 191.24	145.70 145.70	-88.835 -88.660	1,738.37 1,738.48	5,680.40 5,680.62	2,823.25 2,907.26	2,571.45 2,657.14	251.80 250.13	11.212 11.623		
17,600.00	9,464.65		9,385.44 9,380.52	191.24	145.70	-88.479	1,738.59	5,680.82 5,680.85	2,907.26	2,057.14 2,743.74	248.52	12.040		
17,700.00	9,468.14		9,380.32 9,375.41	195.84	145.70	-88.291	1,738.70	5,681.09	3,078.15	2,743.74	246.98	12.463		
,. 20.00	2,100.1	2,010.01	-,				.,	2,231.00	-,	_,,	0.00			
17,800.00	9,469.89	9,345.00	9,372.11	198.14	145.70	-88.169	1,738.77	5,681.25	3,164.86	2,919.37	245.49	12.892		
17,900.00	9,471.63	9,345.00	9,372.11	200.44	145.70	-88.169	1,738.77	5,681.25	3,252.34	3,008.27	244.06	13.326		
18,000.00	9,473.38	9,339.38	9,366.49	202.74	145.70	-87.962	1,738.90	5,681.52	3,340.51	3,097.81	242.71	13.764		
18,100.00	9,475.12		9,364.17	205.05	145.70	-87.877	1,738.95	5,681.63	3,429.33	3,187.93	241.40	14.206		
18,200.00	9,476.87	9,334.76	9,361.88	207.35	145.70	-87.792	1,738.99	5,681.74	3,518.75	3,278.61	240.15	14.653		
10 200 00	0 470 0	1 9,332.49	0.250.64	200 65	145 70	07 700	1 720 04	E 604 04	2 609 70	2 260 70	220 05	15 100		
18,300.00	9,478.61	ı 9,332.49	9,359.61	209.65	145.70	-87.709	1,739.04	5,681.84	3,608.73	3,369.78	238.95	15.103		





Com	npany:	Marathon Oil Permian LLC	Local Co-ordinate Reference:	Well Decimus 5 WXY Fed Com 2H
Proje	ect:	Eddy County, NM (NAD27-NME)	TVD Reference:	RKB @ 3067.60usft (Cactus 169)
Refe	erence Site:	Decimus 5 WXY Fed Com	MD Reference:	RKB @ 3067.60usft (Cactus 169)
Site	Error:	0.00 usft	North Reference:	Grid
Refe	erence Well:	Decimus 5 WXY Fed Com 2H	Survey Calculation Method:	Minimum Curvature
Well	Error:	1.00 usft	Output errors are at	2.00 sigma
Refe	erence Wellbore	OH	Database:	USA Compass
Refe	erence Design:	Plan 1 07-22-22	Offset TVD Reference:	Reference Datum

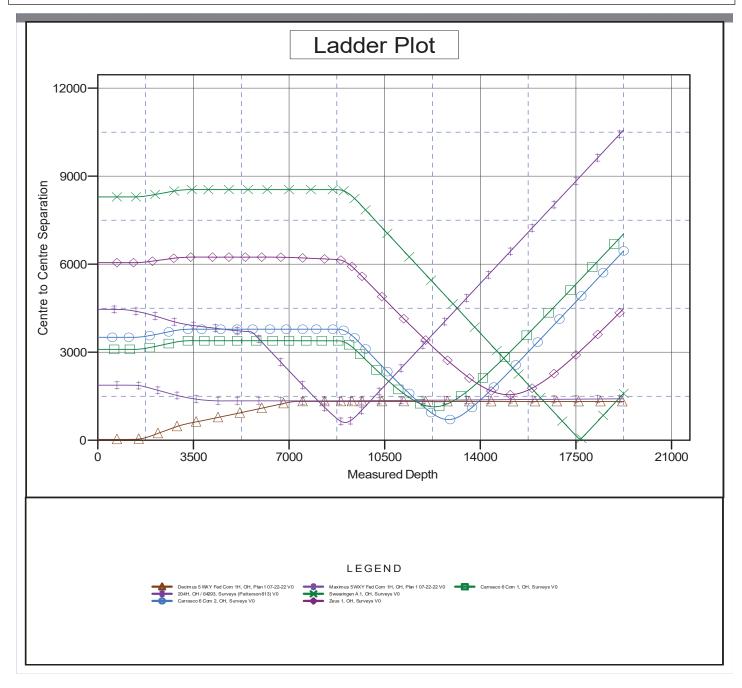
Offset Des	sign: Ma	aximus/Dec	imus Offse	ets - Zeus 1	1 - OH - S	urveys							Offset Site Error:	0.00 usft
Survey Progr Refer	ence	117-INC-ONLY, 6668-MWD Offset		Semi Major Axis			Offset Wellbo	ore Centre	Rule Assigned: Distance			Offset Well Error:	1.00 usft	
Measured Depth (usft)	Vertical Depth (usft)	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	
18,400.00	9,480.36	9,330.25	9,357.37	211.95	145.70	-87.626	1,739.09	5,681.95	3,699.21	3,461.42	237.80	15.556		
18,500.00	9,482.11	9,328.03	9,355.16	214.25	145.70	-87.545	1,739.14	5,682.05	3,790.18	3,553.48	236.70	16.013		
18,600.00	9,483.85	9,325.84	9,352.97	216.55	145.70	-87.464	1,739.19	5,682.15	3,881.58	3,645.94	235.64	16.472		
18,700.00	9,485.60	9,323.68	9,350.81	218.85	145.70	-87.385	1,739.24	5,682.25	3,973.40	3,738.77	234.63	16.935		
18,800.00	9,487.34	9,321.54	9,348.67	221.15	145.70	-87.306	1,739.28	5,682.35	4,065.60	3,831.94	233.66	17.400		
18,900.00	9,489.09	9,303.52	9,330.68	223.45	145.70	-86.645	1,739.66	5,683.21	4,158.16	3,925.40	232.76	17.864		
19,000.00	9,490.83	9,300.35	9,327.52	225.76	145.70	-86.529	1,739.73	5,683.36	4,251.05	4,019.18	231.87	18.334		
19,100.00	9,492.58	9,245.03	9,272.29	228.06	145.69	-84.508	1,740.72	5,686.38	4,344.24	4,113.13	231.11	18.798		
19,200.00	9,494.32	9,241.21	9,268.47	230.36	145.69	-84.369	1,740.79	5,686.62	4,437.69	4,207.40	230.29	19.270		
19,247.64	9,495.15	9,239.39	9,266.66	231.46	145.69	-84.303	1,740.82	5,686.73	4,482.30	4,252.39	229.91	19.496		

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation 7/22/2022 1:25:12PM



Anticollision Report

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 2H Coordinate System is US State Plane 1927 (Exact solution), New Mexico East 300 Grid Convergence at Surface is: 0.107°



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

7/22/2022 1:25:12PM

PHOENIX TECHNOLOGY SERVICES

Company:	Marathon Oil Permian LLC
Project:	Eddy County, NM (NAD27-NME)
Reference Site:	Decimus 5 WXY Fed Com
Site Error:	0.00 usft
Reference Well:	Decimus 5 WXY Fed Com 2H
Well Error:	1.00 usft
Reference Wellbore	OH
Reference Design:	Plan 1 07-22-22

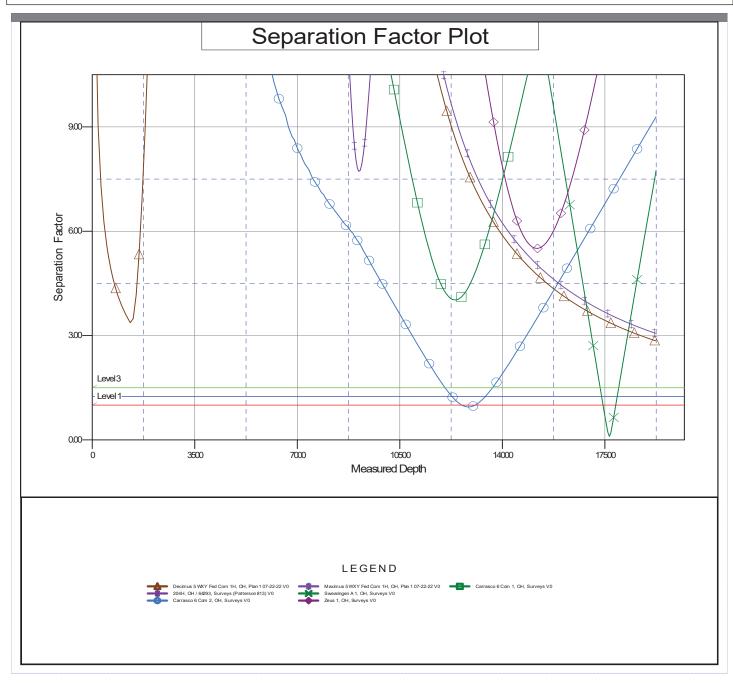
Anticollision Report



- Local Co-ordinate Reference: **TVD Reference:** MD Reference: North Reference: Survey Calculation Method: Output errors are at Database: Offset TVD Reference:
- Well Decimus 5 WXY Fed Com 2H RKB @ 3067.60usft (Cactus 169) RKB @ 3067.60usft (Cactus 169) Grid Minimum Curvature 2.00 sigma **USA** Compass **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

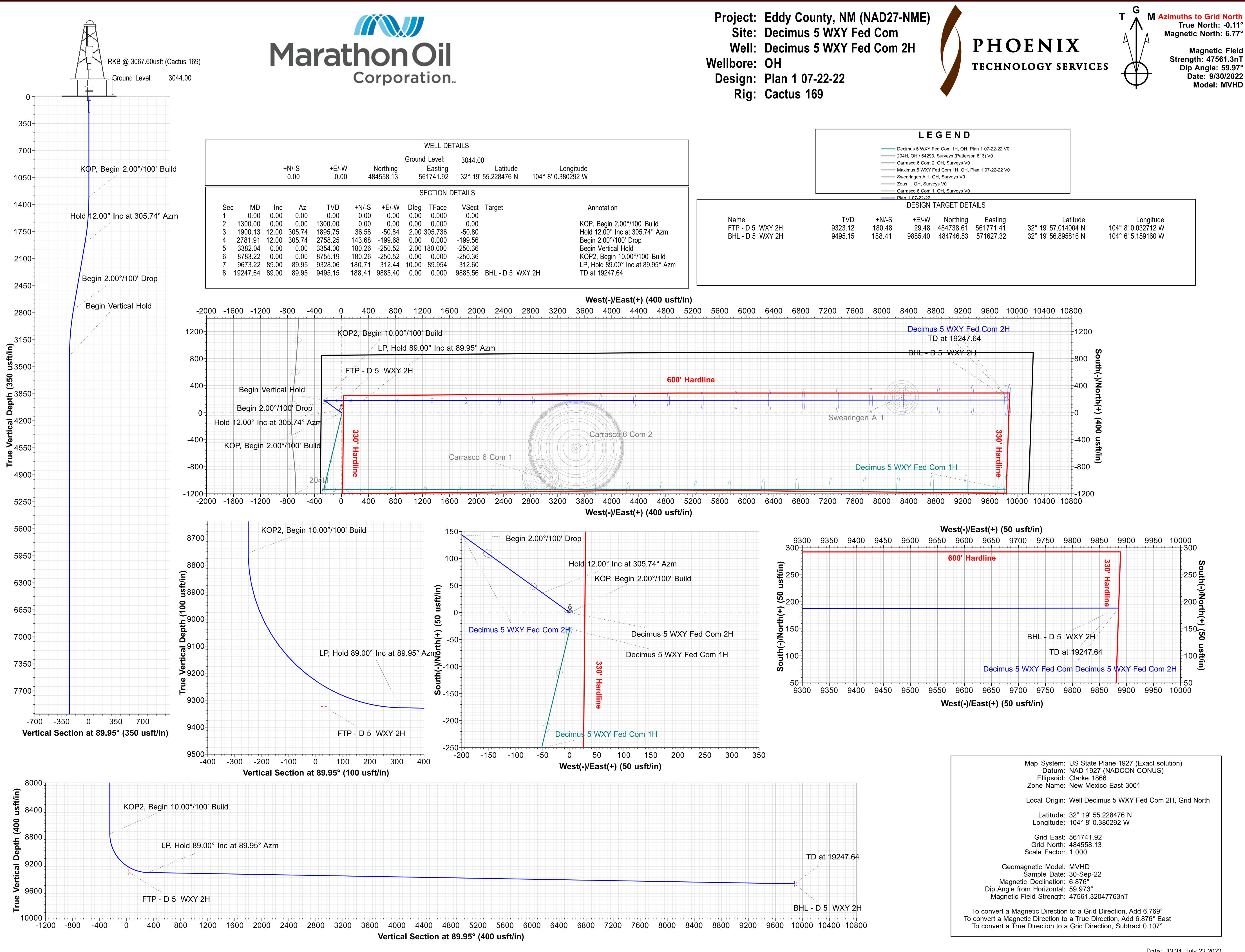
Coordinates are relative to: Decimus 5 WXY Fed Com 2H Coordinate System is US State Plane 1927 (Exact solution), New Mexico East 300 Grid Convergence at Surface is: 0.107°



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

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Magnetic North: 6.77° **Magnetic Field** Strength: 47561.3nT Dip Angle: 59.97° Date: 9/30/2022 Model: MVHD

Datum: Ellipsoid: (US State Plane 1927 (Exact solution) NAD 1927 (NADCON CONUS) Clarke 1866 New Mexico East 3001
Local Origin:	Well Decimus 5 WXY Fed Com 2H, Grid North
	32° 19' 55.228476 N 104° 8' 0.380292 W
Grid East: Grid North: Scale Factor:	484558.13
Geomagnetic Model: Sample Date: Magnetic Declination: Dip Angle from Horizontal: Magnetic Field Strength:	30-Sep-22 6.876° 59.973°
vert a Magnetic Direction to	to a Grid Direction, Add 6.769° a True Direction, Add 6.876° East Grid Direction, Subtract 0.107°



Marathon Oil Permian LLC

Eddy County, NM (NAD27-NME) Decimus 5 WXY Fed Com Decimus 5 WXY Fed Com 2H

OH

Plan: Plan 1 07-22-22

Standard Planning Report

22 July, 2022



Re

PHOENIX TECHNOLOGY SERVICES				Planning Repo	ort		Marathon Oil Corporation		
Database: Company: Project: Site: Well: Wellbore: Design:	Decimus 5 W	Permian LLC NM (NAD27-I XY Fed Com XY Fed Com 2	,	TVD Referen MD Referenc North Refere	e:	RKB @ 3067.60 RKB @ 3067.60 Grid	Well Decimus 5 WXY Fed Com 2H RKB @ 3067.60usft (Cactus 169) RKB @ 3067.60usft (Cactus 169) Grid Minimum Curvature		
Project	Eddy County,	NM (NAD27-N	ME)						
	US State Plane NAD 1927 (NAE New Mexico Ea	CON CONUS		System Datum	:	Mean Sea Level			
Site	Decimus 5 WX	(Y Fed Com							
Site Position: From: Position Uncertainty:	Мар	0.00 usft	Northing: Easting: Slot Radius:	561,74	3.13 usftLatitud1.94 usftLongitu3-3/16 "Grid Co		32° 19' 54.931620 N 104° 8' 0.380832 W 0.107 °		
Well	Decimus 5 WX	Y Fed Com 2H	1						
Well Position Position Uncertainty	+N/-S +E/-W	30.00 usft -0.01 usft 1.00 usft	Northing: Easting: Wellhead Ele		484,558.13 usft 561,741.93 usft	Latitude: Longitude: Ground Level:	32° 19' 55.228476 N 104° 8' 0.380292 W 3,044.00 usft		
Wellbore	ОН								
Magnetics	Model Na	me	Sample Date	Declinatio (°)	1	Dip Angle (°)	Field Strength (nT)		
		MVHD	9/30/2022		6.876	59.973	47,561.32047763		
Design	Plan 1 07-22-2	22							
Audit Notes:									
Version:			Phase:	PLAN	Tie On Dep	oth:	0.00		
Vertical Section:			rom (TVD) usft)	+N/-S (usft)	+E/-W (usft)		ection (°)		
		(0.00	0.00	0.00	89	9.95		
Plan Survey Tool Pro	gram	Date 7/22/	2022						
Depth From	Depth To (usft)	Survey (Wellb	ore)	Tool Name	Rema	arks			
(usft)									

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	
1,900.13	12.00	305.74	1,895.75	36.58	-50.84	2.00	2.00	0.00	305.736	
2,781.91	12.00	305.74	2,758.25	143.68	-199.68	0.00	0.00	0.00	0.000	
3,382.04	0.00	0.00	3,354.00	180.26	-250.52	2.00	-2.00	0.00	180.000	
8,783.22	0.00	0.00	8,755.19	180.26	-250.52	0.00	0.00	0.00	0.000	
9,673.22	89.00	89.95	9,328.06	180.71	312.44	10.00	10.00	0.00	89.954	
19,247.64	89.00	89.95	9,495.15	188.41	9,885.40	0.00	0.00	0.00	0.000	BHL - D 5 WXY 2H

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Planning Report

Page 78 of 128 MarathonOil Corporation.

Database:	USA Compass	Local Co-ordinate Reference:	Well Decimus 5 WXY Fed Com 2H
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 2H	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
1,300.00		0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
	n 2.00°/100' Build								
1,400.00		305.74	1,399.98	1.02	-1.42	-1.42	2.00	2.00	0.00
1,500.00	4.00	305.74	1,499.84	4.08	-5.66	-5.66	2.00	2.00	0.00
1,600.00	6.00	305.74	1,599.45	9.17	-12.74	-12.73	2.00	2.00	0.00
1,700.00	8.00	305.74	1.698.70	16.28	-22.63	-22.62	2.00	2.00	0.00
1,800.00		305.74	1,030.70	25.42	-35.33	-35.31	2.00	2.00	0.00
1,900.00		305.74	1,895.62	36.56	-50.82	-50.78	2.00	2.00	0.00
1,900.13		305.74	1,895.75	36.58	-50.84	-50.80	2.00	2.00	0.00
	° Inc at 305.74° Az		1,000110	00100	00101	00100	2.00	2.00	0.00
2,000.00	12.00	305.74	1,993.44	48.71	-67.70	-67.65	0.00	0.00	0.00
2,100.00		305.74	2,091.25	60.85	-84.58	-84.52	0.00	0.00	0.00
2,200.00		305.74	2,189.06	73.00	-101.46	-101.39	0.00	0.00	0.00
2,300.00		305.74	2,286.88	85.15	-118.34	-118.26	0.00	0.00	0.00
2,400.00		305.74	2,384.69	97.29	-135.22	-135.13	0.00	0.00	0.00
2,500.00	12.00	305.74	2,482.51	109.44	-152.10	-152.00	0.00	0.00	0.00
2,600.00	12.00	305.74	2,580.32	121.58	-168.98	-168.87	0.00	0.00	0.00
2,700.00		305.74	2,678.13	133.73	-185.86	-185.74	0.00	0.00	0.00
2,781.91	12.00	305.74	2,758.25	143.68	-199.68	-199.56	0.00	0.00	0.00
Begin 2.00	°/100' Drop								
2,800.00		305.74	2.775.96	145.84	-202.69	-202.56	2.00	-2.00	0.00
2,900.00		305.74	2,874.23	156.63	-217.68	-217.54	2.00	-2.00	0.00
3,000.00		305.74	2,973.09	165.40	-229.87	-229.73	2.00	-2.00	0.00
3,100.00		305.74	3,072.42	172.15	-239.26	-239.11	2.00	-2.00	0.00
3,200.00		305.74	3,172.09	176.88	-245.83	-245.67	2.00	-2.00	0.00
3,300.00		305.74	3,271.97	179.57	-249.56	-249.41	2.00	-2.00	0.00
3,382.04		0.00	3,354.00	180.26	-250.52	-250.36	2.00	-2.00	0.00
Begin Verti	ical Hold								
8,783.22	0.00	0.00	8,755.19	180.26	-250.52	-250.36	0.00	0.00	0.00
KOP2, Beg	in 10.00°/100' Bui	ld							
8,800.00		89.95	8,771.96	180.26	-250.27	-250.12	10.00	10.00	0.00
8,900.00		89.95	8,871.16	180.27	-238.66	-238.50	10.00	10.00	0.00
9,000.00		89.95	8,966.83	180.29	-210.00	-209.84	10.00	10.00	0.00
9,100.00		89.95	9,056.07	180.33	-165.16	-165.00	10.00	10.00	0.00
9,200.00		89.95	9,136.17	180.37	-105.50	-105.34 -32.68	10.00 10.00	10.00	0.00
9,300.00 9,400.00		89.95 89.95	9,204.69 9,259.56	180.43 180.50	-32.84 50.61	-32.68 50.77	10.00	10.00 10.00	0.00 0.00
9,400.00	71.68	89.95 89.95	9,259.56 9,299.10	180.50	142.32	50.77 142.48	10.00	10.00	0.00
9,500.00	81.68	89.95 89.95	9,299.10 9,322.11	180.65	239.51	239.67	10.00	10.00	0.00
,									
9,673.22	89.00	89.95	9,328.06	180.71	312.44	312.60	10.00	10.00	0.00
LP, Hold 89	9.00° Inc at 89.95°	Azm							
9,700.00	89.00	89.95	9,328.52	180.73	339.21	339.37	0.00	0.00	0.00
9,800.00		89.95	9,330.27	180.81	439.20	439.36	0.00	0.00	0.00
9,900.00	89.00	89.95	9,332.01	180.89	539.18	539.34	0.00	0.00	0.00
10,000.00	89.00	89.95	9,333.76	180.97	639.17	639.33	0.00	0.00	0.00
10,100.00	89.00	89.95	9,335.50	181.05	739.15	739.31	0.00	0.00	0.00
10,200.00		89.95	9,337.25	181.13	839.14	839.29	0.00	0.00	0.00
10,300.00		89.95	9,339.00	181.21	939.12	939.28	0.00	0.00	0.00
10,400.00		89.95	9,340.74	181.29	1,039.11	1,039.26	0.00	0.00	0.00
10,500.00		89.95	9,342.49	181.37	1,139.09	1,139.25	0.00	0.00	0.00
10,600.00		89.95	9,344.23	181.45	1,239.08	1,239.23	0.00	0.00	0.00
10,700.00	89.00	89.95	9,345.98	181.53	1,339.06	1,339.22	0.00	0.00	0.00

7/22/2022 1:27:14PM

COMPASS 5000.15 Build 93A

.



Planning Report

Page 79 of 128 MarathonOil Corporation.

Database:	USA Compass	Local Co-ordinate Reference:	Well Decimus 5 WXY Fed Com 2H
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 2H	Survey Calculation Method:	Minimum Curvature
Wellbore:	ОН		
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)
10,800.00	89.00	89.95	9,347.72	181.61	1,439.05	1,439.20	0.00	0.00	0.00
10,900.00	89.00	89.95	9,349.47	181.70	1,539.03	1,539.19	0.00	0.00	0.00
11,000.00	89.00	89.95	9,351.21	181.78	1,639.02	1,639.17	0.00	0.00	0.00
11,100.00	89.00	89.95	9,352.96	181.86	1,739.00	1,739.16	0.00	0.00	0.00
11,200.00	89.00	89.95	9,354.70	181.94	1,838.98	1,839.14	0.00	0.00	0.00
11,300.00	89.00	89.95	9,356.45	182.02	1,938.97	1,939.13	0.00	0.00	0.00
11,400.00	89.00	89.95	9,358.19	182.10	2,038.95	2,039.11	0.00	0.00	0.00
11,500.00	89.00	89.95	9,359.94	182.18	2,138.94	2,139.10	0.00	0.00	0.00
11,600.00	89.00	89.95	9,361.68	182.26	2,238.92	2,239.08	0.00	0.00	0.00
11,700.00	89.00	89.95	9,363.43	182.34	2,338.91	2,339.07	0.00	0.00	0.00
11,800.00	89.00	89.95	9,365.17	182.42	2,438.89	2,439.05	0.00	0.00	0.00
11,900.00	89.00	89.95	9,366.92	182.50	2,538.88	2,539.04	0.00	0.00	0.00
12,000.00	89.00	89.95	9,368.66	182.58	2,638.86	2,639.02	0.00	0.00	0.00
12,100.00	89.00	89.95	9,370.41	182.66	2,738.85	2,739.01	0.00	0.00	0.00
12,200.00	89.00	89.95	9,372.15	182.74	2,838.83	2,838.99	0.00	0.00	0.00
12,300.00	89.00	89.95	9,373.90	182.82	2,938.82	2,938.98	0.00	0.00	0.00
12,400.00	89.00	89.95	9,375.65	182.90	3,038.80	3,038.96	0.00	0.00	0.00
12,500.00	89.00	89.95	9,377.39	182.98	3,138.79	3,138.94	0.00	0.00	0.00
12,600.00	89.00	89.95	9,379.14	183.06	3,238.77	3,238.93	0.00	0.00	0.00
12,700.00	89.00	89.95	9,380.88	183.14	3,338.76	3,338.91	0.00	0.00	0.00
12,800.00	89.00	89.95	9,382.63	183.22	3,438.74	3,438.90	0.00	0.00	0.00
12,900.00	89.00	89.95	9,384.37	183.30	3,538.73	3,538.88	0.00	0.00	0.00
13,000.00	89.00	89.95	9,386.12	183.38	3,638.71	3,638.87	0.00	0.00	0.00
13,100.00	89.00	89.95	9,387.86	183.46	3,738.69	3,738.85	0.00	0.00	0.00
13,200.00	89.00	89.95	9,389.61	183.54	3,838.68	3,838.84	0.00	0.00	0.00
13,300.00	89.00	89.95	9,391.35	183.62	3,938.66	3,938.82	0.00	0.00	0.00
13,400.00	89.00	89.95	9,393.10	183.71	4,038.65	4,038.81	0.00	0.00	0.00
13,500.00	89.00	89.95	9,394.84	183.79	4,138.63	4,138.79	0.00	0.00	0.00
13,600.00	89.00	89.95	9,396.59	183.87	4,238.62	4,238.78	0.00	0.00	0.00
13,700.00	89.00	89.95	9,398.33	183.95	4,338.60	4,338.76	0.00	0.00	0.00
13,800.00	89.00	89.95	9,400.08	184.03	4,438.59	4,438.75	0.00	0.00	0.00
13,900.00	89.00	89.95	9,401.82	184.11	4,538.57	4,538.73	0.00	0.00	0.00
14,000.00	89.00	89.95	9,403.57	184.19	4,638.56	4,638.72	0.00	0.00	0.00
14,100.00	89.00	89.95	9,405.31	184.27	4,738.54	4,738.70	0.00	0.00	0.00
14,200.00	89.00	89.95	9,407.06	184.35	4,838.53	4,838.69	0.00	0.00	0.00
14,300.00	89.00	89.95	9,408.80	184.43	4,938.51	4,938.67	0.00	0.00	0.00
14,400.00	89.00	89.95	9,410.55	184.51	5,038.50	5,038.66	0.00	0.00	0.00
14,500.00	89.00	89.95	9,412.30	184.59	5,138.48	5,138.64	0.00	0.00	0.00
14,600.00	89.00	89.95	9,414.04	184.67	5,238.47	5,238.62	0.00	0.00	0.00
14,700.00	89.00	89.95	9,415.79	184.75	5,338.45	5,338.61	0.00	0.00	0.00
14,800.00	89.00	89.95	9,417.53	184.83	5,438.44	5,438.59	0.00	0.00	0.00
14,900.00	89.00	89.95	9,419.28	184.91	5,538.42	5,538.58	0.00	0.00	0.00
15,000.00	89.00	89.95	9,421.02	184.99	5,638.40	5,638.56	0.00	0.00	0.00
15,100.00	89.00	89.95	9,422.77	185.07	5,738.39	5,738.55	0.00	0.00	0.00
15,200.00	89.00	89.95	9,424.51	185.15	5,838.37	5,838.53	0.00	0.00	0.00
15,300.00	89.00	89.95	9,426.26	185.23	5,938.36	5,938.52	0.00	0.00	0.00
15,400.00	89.00	89.95	9,428.00	185.31	6,038.34	6,038.50	0.00	0.00	0.00
15,500.00	89.00	89.95	9,429.75	185.39	6,138.33	6,138.49	0.00	0.00	0.00
15,600.00	89.00	89.95	9,431.49	185.47	6,238.31	6,238.47	0.00	0.00	0.00
15,700.00	89.00	89.95	9,433.24	185.55	6,338.30	6,338.46	0.00	0.00	0.00
15,800.00	89.00	89.95	9,434.98	185.63	6,438.28	6,438.44	0.00	0.00	0.00
15,900.00	89.00	89.95	9,436.73	185.71	6,538.27	6,538.43	0.00	0.00	0.00
16,000.00	89.00	89.95	9,438.47	185.80	6,638.25	6,638.41	0.00	0.00	0.00
10,000.00									

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COMPASS 5000.15 Build 93A



Planning Report

Page 80 of 128 MarathonOil Corporation.

Database:	USA Compass	Local Co-ordinate Reference:	Well Decimus 5 WXY Fed Com 2H
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 2H	Survey Calculation Method:	Minimum Curvature
Wellbore:	ОН		
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)
16,200.00	89.00	89.95	9,441.96	185.96	6,838.22	6,838.38	0.00	0.00	0.00
16,300.00	89.00	89.95	9,443.71	186.04	6,938.21	6,938.37	0.00	0.00	0.00
16,400.00	89.00	89.95	9,445.46	186.12	7,038.19	7,038.35	0.00	0.00	0.00
16,500.00	89.00	89.95	9,447.20	186.20	7,138.18	7,138.34	0.00	0.00	0.00
16,600.00	89.00	89.95	9,448.95	186.28	7,238.16	7,238.32	0.00	0.00	0.00
16,700.00	89.00	89.95	9,450.69	186.36	7,338.15	7,338.31	0.00	0.00	0.00
16,800.00	89.00	89.95	9,452.44	186.44	7,438.13	7,438.29	0.00	0.00	0.00
16,900.00	89.00	89.95	9,454.18	186.52	7,538.11	7,538.27	0.00	0.00	0.00
17,000.00	89.00	89.95	9,455.93	186.60	7,638.10	7,638.26	0.00	0.00	0.00
17,100.00	89.00	89.95	9,457.67	186.68	7,738.08	7,738.24	0.00	0.00	0.00
17,200.00	89.00	89.95	9,459.42	186.76	7,838.07	7,838.23	0.00	0.00	0.00
17,300.00	89.00	89.95	9,461.16	186.84	7,938.05	7,938.21	0.00	0.00	0.00
17,400.00	89.00	89.95	9,462.91	186.92	8,038.04	8,038.20	0.00	0.00	0.00
17,500.00	89.00	89.95	9,464.65	187.00	8,138.02	8,138.18	0.00	0.00	0.00
17,600.00	89.00	89.95	9,466.40	187.08	8,238.01	8,238.17	0.00	0.00	0.00
17,700.00	89.00	89.95	9,468.14	187.16	8,337.99	8,338.15	0.00	0.00	0.00
17,800.00	89.00	89.95	9,469.89	187.24	8,437.98	8,438.14	0.00	0.00	0.00
17,900.00	89.00	89.95	9,471.63	187.32	8,537.96	8,538.12	0.00	0.00	0.00
18,000.00	89.00	89.95	9,473.38	187.40	8,637.95	8,638.11	0.00	0.00	0.00
18,100.00	89.00	89.95	9,475.12	187.48	8,737.93	8,738.09	0.00	0.00	0.00
18,200.00	89.00	89.95	9,476.87	187.56	8,837.92	8,838.08	0.00	0.00	0.00
18,300.00	89.00	89.95	9,478.61	187.64	8,937.90	8,938.06	0.00	0.00	0.00
18,400.00	89.00	89.95	9,480.36	187.72	9,037.89	9,038.05	0.00	0.00	0.00
18,500.00	89.00	89.95	9,482.11	187.80	9,137.87	9,138.03	0.00	0.00	0.00
18,600.00	89.00	89.95	9,483.85	187.89	9,237.86	9,238.02	0.00	0.00	0.00
18,700.00	89.00	89.95	9,485.60	187.97	9,337.84	9,338.00	0.00	0.00	0.00
18,800.00	89.00	89.95	9,487.34	188.05	9,437.82	9,437.99	0.00	0.00	0.00
18,900.00	89.00	89.95	9,489.09	188.13	9,537.81	9,537.97	0.00	0.00	0.00
19,000.00	89.00	89.95	9,490.83	188.21	9,637.79	9,637.95	0.00	0.00	0.00
19,100.00	89.00	89.95	9,492.58	188.29	9,737.78	9,737.94	0.00	0.00	0.00
19,200.00	89.00	89.95	9,494.32	188.37	9,837.76	9,837.92	0.00	0.00	0.00
19,247.64	89.00	89.95	9,495.15	188.41	9,885.40	9,885.56	0.00	0.00	0.00
TD at 19247.0	6 A								

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 2H - plan misses target - Point	0.00 center by 66.2	0.00 26usft at 940	9,323.12 5.77usft MD	180.48 (9262.27 TVD	29.48 9, 180.50 N, 5	484,738.61 5.70 E)	561,771.41	32° 19' 57.014004 N	104° 8' 0.032712 W
BHL - D 5 WXY 2H - plan hits target cer - Point	0.00 nter	0.00	9,495.15	188.41	9,885.40	484,746.53	571,627.33	32° 19' 56.895816 N	104° 6' 5.159160 W

PHOENIX TECHNOLOGY SERVICE	15		MarathonO	
Database: Company: Project: Site: Well: Wellbore: Design:	Eddy Coun Decimus 5	Dil Permian LLC ty, NM (NAD27-NME) WXY Fed Com WXY Fed Com 2H	Local Co-ordinate Reference TVD Reference: MD Reference: North Reference: Survey Calculation Method:	Well Decimus 5 WXY Fed Com 2H RKB @ 3067.60usft (Cactus 169) RKB @ 3067.60usft (Cactus 169) Grid Minimum Curvature
Casing Points	Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Hole Diameter Diameter (") (")
Plan Annotations	19,247.64	9,495.15 20" Ca	ng	20 24

Measured	Vertical	Local Coor	dinates	
Depth (usft)	Depth (usft)	+N/-S (usft)	+E/-W (usft)	Comment
1,300.00	1,300.00	0.00	0.00	KOP, Begin 2.00°/100' Build
1,900.13	1,895.75	36.58	-50.84	Hold 12.00° Inc at 305.74° Azm
2,781.91	2,758.25	143.68	-199.68	Begin 2.00°/100' Drop
3,382.04	3,354.00	180.26	-250.52	Begin Vertical Hold
8,783.22	8,755.19	180.26	-250.52	KOP2, Begin 10.00°/100' Build
9,673.22	9,328.06	180.71	312.44	LP, Hold 89.00° Inc at 89.95° Azm
19,247.64	9,495.15	188.41	9,885.40	TD at 19247.64

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MARATHON OIL PERMIAN, LLC. DRILLING AND OPERATIONS PLAN

Marathon Oil

WELL NAME & NUMBER:	DECIMUS 5 WXY FED COM 2H							
LOCATION:	SECTION	SECTION 6		235	RANGE	28E		
		EDDY	COUNTY,		NEW MEXICO			

Section 1:

GEOLOGICAL FORMATIONS

Name of Surface Formation: Elevation: Permian 3044 *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	2723	Salt/Anhydrite	Brine	No
Castile	845	875	2199	Salt/Anhydrite	Brine	No
Base of Salt (BX)	2123	2153	921	Anhydrite	Brine	No
Lamar	2368	2398	676	Sandstone/Shale	None	No
Bell Canyon	2453	2483	591	Sandstone	Oil	No
Cherry Canyon	3167	3197	-123	Sandstone	Oil	No
Brushy Canyon	4309	4339	-1265	Sandstone	Oil	No
Bone Spring Lime	5809	5839	-2765	Limestone	None	No
Upper Avalon Shale	5849	5879	-2805	Shale	Oil	Yes
1st Bone Spring Sand	6820	6850	-3776	Sandstone	Oil	Yes
2nd Bone Spring Carbonate	7120	7150	-4076	Limestone/Shale	None	No
2nd Bone Spring Sand	7565	7595	-4521	Sandstone	Oil	Yes
3rd Bone Spring Carbonate	7776	7806	-4732	Limestone	Oil	No
3rd Bone Spring Sand	8894	8924	-5850	Sandstone	Oil	Yes
Wolfcamp	9191	9221	-6147	Sandstone/Shale/Carbonates	Natural Gas / Oil	Yes
Wolfcamp X Sand	9220	9250	-6176	Sandstone/Shale/Carbonates	Natural Gas / Oil	Yes
Wolfcamp Y Sand	9285	9315	-6241	Sandstone/Shale/Carbonates	Natural Gas / Oil	Yes
Wolfcamp A	9335	9365	-6291	Sandstone/Shale/Carbonates	Natural Gas / Oil	Yes
Wolfcamp B	9546	9576	-6502	Sandstone/Shale/Carbonates	Natural Gas / Oil	Possible
Wolfcamp C	9789	9819	-6745	Sandstone/Shale/Carbonates	Natural Gas / Oil	Yes
Wolfcamp D	10062	10092	-7018	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 5M 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.

Drilling & Operations Plan - Page 2 of 3

Marathon Oil Permian LLC.
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 (Ibs/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	3044	2594	54.5	J55	BTC	1.00	1.15	BUOY	1.30	BUOY	1.30
Intermediate	12.25	9.625	0	2413	0	2383	3044	661	40	P110HC	BTC	1.00	1.15	BUOY	1.30	BUOY	1.30
Production	8.75	5.5	0	19247	0	9495	3044	-6451	23	P110HC	TLW	1.00	1.15	BUOY	1.30	BUOY	1.30
•	All ca	sing strings	will be tes	ted in acco	rdance with	n Onshore (Dil and Gas	Order #2 II	I.B.1.h				Safety	Factors wi	ll 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?	

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CEMENT PROGRAM

String Type	Lead/Tail	Top MD	Bottom MD	Quantity (sks)	Yield (ft³/sks)	Density (ppg)	Slurry Volume (ft³)	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	19247	3261	1.68	13	5478	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? Pilot Hole Depth:	No N/A			Plugging	N/A		
KOP Depth:	N/A						
Plug Top	Plug Bottom	Excess (%)	Quantity (sx)	Density (ppg)	Yield (ft3/sks)	Water gal/sk	Slurry Description and Cement Type

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Drilling & Operations Plan - Page 3 of 3

Marathon Oil Permian LLC.
Section 5:

CIRCULATING MEDIUM

Mud System Type: Will an air or gas system be used? Closed 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	19247	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.

ANTICIPATED PRESSURE	
6172 PSI	
195 °F	
No	
No	
	195 °F 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.

1. DRILLING WELL CONTROL PLAN

1.1 WELL CONTROL - CERTIFICATIONS

Required IADC/IWCF Well Control Certifications Supervisor Level:

Any personnel who supervises or operates the BOP must possess a valid current IADC training certification and photo identification. This would include the onsite drilling supervisor, tool pusher/rig manager, driller, and any personnel that will be acting in these capacities. Another example of this may be a wireline or snubbing crew rigged up on the rig to assist the rig, the operator of each system must also have a valid control certification for their level of operation.

BLM recognizes IADC training as the industry approved <u>accredite</u>d training. Online selfcertifications will not be acceptable. Enforcement actions for the lack of a valid Supervisory Level certificate shall be prompt action to correct the deficiency. **Enforcement actions include but are not limited to immediate replacement of personnel lacking certifications, drilling operations being shut down or installment of a 10M annular.**

IADC Driller Level for all Drillers and general knowledge for the Assistant Driller, Derrick Hands, Floor Hands and Motor Hands is recognized by the BLM; however, a Driller Level certification will need to be presented only if acting in a temporary Driller Level certification capacity.

Well Control-Position/Roles

IADC Well control training and certification is targeted toward each role, e.g., Supervisor Level toward those who direct, Driller Level to those who act, Introductory to those who need to know.

• Supervisor Level

- o Specifies and has oversight that the correct actions are carried out
- Role is to supervise well control equipment, training, testing, and well control events
- o Directs the testing of BOP and other well control equipment
- o Regularly direct well control crew drills
- Land based rigs usually runs the choke during a well kill operation
- Due to role on the rig, training and certification is targeted more toward management of well control and managing an influx out of the well

• Driller Level

- o Performs an action to prevent or respond to well control accident
- Role is to monitor the well via electronic devices while drilling and detect unplanned influxes
- Assist with the testing of BOP and other well control equipment
- Regularly assist with well control crew drills
- When influx is detected, responsible to close the BOP
- Due to role on the rig, training and certification is targeted more toward monitoring and shutting the well in (closing the BOP) when an influx is detected

(Well Control-Positions/Roles Continued)

Derrick Hand, Assistant Driller Introductory Level

- Role is to assist Driller with kick detection by physically monitoring the well at the mixing pits/tanks
- Regularly record mud weights/viscosity for analysis by the Supervisor level and mud engineer so pre-influx signs can be detected
- Mix required kill fluids as directed by Supervisor or Driller
- Due to role on the rig, training and certification is targeted more toward monitoring for influxes, either via mud samples or visual signs on the pits/tanks
- Motorman, Floor Hand Introductory Level
 - Role is to assist the Supervisor, Driller, or Derrick Hand with detecting influxes
 - \circ $\;$ Be certain all valves are aligned for proper well control as directed by Supervisor
 - o Perform Supervisor or Driller assigned tasks during a well control event
 - Due to role on the rig, training and certification is targeted more toward monitoring for influxes

1.2 WELL CONTROL-COMPONENT AND PREVENTER COMPATIBILITY CHECKLIST

The table below, which covers the drilling and casing of the 10M Stack portion of the well, outlines the tubulars and the compatible preventers in use. This table, combined with the mud program, documents that two barriers to flow can be maintained at all times, independent of the rating of the annular preventer.

Component	OD	Preventer	RWP
Drill pipe	4″	Upper and Lower	10M
		3.5-5.5" VBRs	
HWDP	4″	Upper and Lower	10M
		3.5-5.5" VBRs	
Drill collars and MWD tools	4.75-5″	Upper and Lower	10M
		3.5-5.5" VBRs	
Mud Motor	4.75-5.25"	Upper and Lower	10M
		3.5-5.5" VBRs	
Production casing	4.5″	Upper and Lower	10M
		3.5-5.5" VBRs	
ALL	0-13-5/8"	Annular	5M
Open-hole	-	Blind Rams	10M

• Example 6-1/8" Production hole section, 10M requirement

• VBR = Variable Bore Ram. Compatible range listed in chart.

1.3 WELL CONTROL-BOP TESTING

BOP Test will be completed per Onshore Oil and Gas Order #2 Well Control requirements. The 5M Annular Preventer on a required 10M BOP stack will be tested to 70 % of rated working

pressure including a 10 minute low pressure test. Pressure shall be maintained at least 10 minutes.

1.4 WELL CONTROL - DRILLS

The following drills are conducted and recorded in the Daily Drilling Report and the Contractor's reporting system while engaged in drilling operations:

Туре	Frequency	Objective	Comments
Shallow gas kick drill - drilling	Once per well with crew on tour	Response training to a shallow gas influx	To be done prior to drilling surface hole if shallow gas is noted
Kick drill - drilling	Once per week per crew	Response training to an influx while drilling (bit on bottom)	Only one kick drill per week per crew is required,
Kick drill - tripping	Once per week per crew	Response training to an influx while tripping (bit off bottom). Practice stabbing TIW valve	alternating between drilling and tripping.

1.5 WELL CONTROL – MONITORING

- Drilling operations which utilize static fluid levels in the wellbore as the active barrier element, a means of accurately monitoring fill-up and displacement volumes during trips are available to the driller and operator. A recirculating trip tank is installed and equipped with a volume indicator easily read from the driller's / operator's position. This data is recorded on a calibrated chart recorder or digitally. The actual volumes are compared to the calculated volumes.
- The On-Site Supervisor ensures hole-filling and pit monitoring procedures are established and documented for every rig operation.
- The well is kept full of fluid with a known density and monitored at all times even when out of the hole.
- Flow checks are a minimum of 15 minutes.
- A flow check is made:
 - In the event of a drilling break.
 - After indications of down hole gains or losses.
 - Prior to all trips out of the hole.
 - After pulling into the casing shoe.
 - Before the BHA enters the BOP stack.
 - If trip displacement is incorrect.

Well Control-Monitoring (Continued)

- Prior to dropping a survey instrument.
- Prior to dropping a core ball.

- After a well kill operation.
- When the mud density is reduced in the well.
- Flow checks may be made at any time at the sole discretion of the driller or his designate. The Onsite Supervisor ensures that personnel are aware of this authority and the authority to close the well in immediately without further consultation.
- Record slow circulating rates (SCR) after each crew change, bit trip, and 500' of new hole drilled and after any variance greater than 0.2 ppg in MW. Slow pump rate recordings should include return flow percent, TVD, MD & pressure. SCR's will be done on all pumps at 30, 40 & 50 SPM. Pressures will be recorded at the choke panel. SCR will be recorded in the IADC daily report and ORB Wellview daily report
- Drilling blind (i.e. without returns) is permissible only in known lithology where the absence of hydrocarbons has been predetermined and written approval of the Drilling Manager.
- All open hole logs to be run with pack-off or lubricator.
- The Drilling Contractor has a fully working pit level totalizer / monitoring system with read out for the driller and an audible alarm set to 10 BBL gain / loss volume. Systems are selectable to enable monitoring of all pits in use. Pit volumes are monitored at all times, especially when transferring fluids. Both systems data is recorded on a calibrated chart recorder or electronically.
- The Drilling Contractor has a fully working return mud flow indicator with drillers display and an audible alarm, and is adjustable to record any variance in return volumes.

1.6 WELL CONTROL – SHUT IN

- The "hard shut in" method (i.e. against a closed choke using either an annular or ram type preventer) is the Company standard.
- The HCR(s) or failsafe valves are left closed during drilling to prevent any erosion and buildup of solids. The adjustable choke should also be left closed.
- The rig specific shut in procedure, the BOP configuration along with space-out position for the tool joints is posted in the Driller's control cabin or doghouse.
- No well kill operation commences until there is a plan agreed by the Superintendent, On-Site Supervisor and the Drilling Manager.
- During a well kill by circulation, constant bottom hole pressure is maintained throughout.
- Kill sheets are maintained by the Driller and posted in the Driller's control cabin or doghouse. The sheet is updated at a minimum every 500 feet.

2. SHUT-IN PROCEDURES:

2.1 PROCEDURE WHILE DRILLING

• Sound alarm (alert crew)

- Space out drill string Stop rotating, pick the drill string up off bottom, and space out to ensure no tool joint is located in the BOP element selected for initial closure.
- Shut down pumps (stop pumps and observe well.)
- Shut-in Well If flow is suspected or confirmed, close uppermost applicable BOP element. (HCR and choke will already be in the closed position.)
 - **Note:** Either the uppermost pipe ram or annular preventer can be used.
- Confirm shut-in
- Notify toolpusher/company representative
- Gather all relevant data required:
 - o SIDPP and SICP
 - Hole Depth and Hole TVD
 - o Pit gain
 - o Time
 - o Kick Volume
 - o Pipe depth
 - o MW in, MW out
 - SPR's (Slow Pump Rate's)
- Regroup and identify forward plan (let well stabilize, update kill sheet, inventory mud additives and mud volumes on location)
- Company Representative, Drilling Superintendent, Drilling Engineer and Drilling Manager will discuss well control kill method to be utilized. A verbal Risk Assessment and preferred kill method will be finalized. Initial Risk Assessment will be finalized within 1 hour of initial shut in.
- No well kill operation commences until there is a plan agreed by the Superintendent, On-Site Supervisor and the Drilling Contractor PIC.
- Recheck all pressures and fluid volume on accumulator unit
- If pressure has built or is anticipated during the kill to reach 1,000 psi or greater, the annular preventer will not be used as the primary pressure control device and operations will swap to the upper BOP pipe ram.

2.2 PROCEDURE WHILE TRIPPING

- Sound alarm (alert crew)
- Stab full opening safety valve in the drill string and close.
- Space out drill string (ensure no tool joint is located in the BOP element selected for initial closure).
- Shut down pumps (stop pumps and observe well.)
- Shut-in Well If flow is suspected or confirmed, close uppermost applicable BOP element. (HCR and choke will already be in the closed position.)
 - **Note:** Either the uppermost pipe ram or annular preventer can be used.
- Confirm shut-in
- Notify tool pusher/company representative
- Gather all relevant data required:
 - o SIDPP and SICP
 - \circ $\,$ Hole Depth and Hole TVD $\,$
 - o Pit gain

Procedure While Tripping (Continued)

- o Time
- o Kick Volume
- o Pipe depth

- o MW in, MW out
- SPR's (Slow Pump Rate's)
- Regroup and identify forward plan (let well stabilize, update kill sheet, inventory mud additives and mud volumes on location)
- Company Representative, Drilling Superintendent, Drilling Engineer and Drilling Manager will discuss well control kill method to be utilized. A verbal Risk Assessment and preferred kill method will be finalized. Initial Risk Assessment will be finalized within 1 hour of initial shut in.
- <u>No well kill operation commences until there is a plan agreed by the Superintendent, On-Site</u> <u>Supervisor and the Drilling Contractor PIC</u>.
- Recheck all pressures and fluid volume on accumulator unit
- If pressure has built or is anticipated during the kill to reach 1,000 psi or greater, the annular preventer will not be used as the primary pressure control device and operations will swap to the upper BOP pipe ram.

2.3 PROCEDURE WHILE RUNNING CASING

- Sound alarm (alert crew)
- Stab crossover and full opening safety valve and close
- Space out casing (ensure no coupling is located in the BOP element selected for initial closure).
- Shut down pumps (stop pumps and observe well.)
- Shut-in Well If flow is suspected or confirmed, close uppermost applicable BOP element. (HCR and choke will already be in the closed position.)
 - **Note:** Either the uppermost pipe ram or annular preventer can be used.
- Confirm shut-in
- Notify tool pusher/company representative
- Gather all relevant data required:
 - o SIDPP and SICP
 - Hole Depth and Hole TVD
 - o Pit gain
 - o Time
 - o Kick Volume
 - o Pipe depth
 - o MW in, MW out
 - SPR's (Slow Pump Rate's)
- Regroup and identify forward plan (let well stabilize, update kill sheet, inventory mud additives and mud volumes on location)
- Company Representative, Drilling Superintendent, Drilling Engineer and Drilling Manager will discuss well control kill method to be utilized. A verbal Risk Assessment and preferred kill method will be finalized. Initial Risk Assessment will be finalized within 1 hour of initial shut in.
- No well kill operation commences until there is a plan agreed by the Superintendent, On-Site Supervisor and the Drilling Contractor PIC.
- Recheck all pressures and fluid volume on accumulator unit
- If pressure has built or is anticipated during the kill to reach 1,000 psi or greater, the annular preventer will not be used as the primary pressure control device and operations will swap to the upper BOP pipe ram.

2.4 PROCEDURE WITH NO PIPE IN HOLE (OPEN HOLE)

- Sound alarm (alert crew)
- Shut-in with blind rams or BSR. (HCR and choke will already be in the closed position.)
- Confirm shut-in

- Notify toolpusher/company representative
- Gather all relevant data required:
 - o Shut-In Pressure
 - Hole Depth and Hole TVD
 - o Pit gain
 - o Time
 - o Kick Volume
 - o MW in, MW out
 - SPR's (Slow Pump Rate's)
- Regroup and identify forward plan (let well stabilize, update kill sheet, inventory mud additives and mud volumes on location)
- Company Representative, Drilling Superintendent, Drilling Engineer and Drilling Manager will discuss well control kill method to be utilized. A verbal Risk Assessment and preferred kill method will be finalized. Initial Risk Assessment will be finalized within 1 hour of initial shut in.
- No well kill operation commences until there is a plan agreed by the Superintendent, On-Site Supervisor and the Drilling Contractor PIC.
- Recheck all pressures and fluid volume on accumulator unit.

2.5 PROCEDURE WHILE PULLING BHA THRU STACK

- PRIOR to pulling last joint of drill pipe thru the stack.
- Perform flow check, if flowing.
- Sound alarm (alert crew).
- Stab full opening safety valve and close
- Space out drill string with tool joint just beneath the upper pipe ram.
- Shut-in using upper pipe ram. (HCR and choke will already be in the closed position).
- Confirm shut-in.
- Notify toolpusher/company representative
 - Read and record the following:
 - SIDPP and SICP
 - o Pit gain
 - o Time
 - Regroup and identify forward plan
- With BHA in the stack and compatible ram preventer and pipe combo immediately available.
 - Sound alarm (alert crew)
 - Stab crossover and full opening safety valve and close
 - Space out drill string with upset just beneath the compatible pipe ram.
 - Shut-in using compatible pipe ram. (HCR and choke will already be in the closed position.)
 - Confirm shut-in
 - Notify toolpusher/company representative
 - Read and record the following:
 - o SIDPP and SICP
 - o Pit gain

Procedures While Pulling BHA thru Stack (Continued)

- o Time
- Regroup and identify forward plan

- With BHA in the stack and <u>NO</u> compatible ram preventer and pipe combo immediately available.
 - Sound alarm (alert crew)
 - If possible to pick up high enough, pull string clear of the stack and follow "Open Hole" scenario.
 - If impossible to pick up high enough to pull the string clear of the stack:
 - Stab crossover, make up one joint/stand of drill pipe, and full opening safety valve and close
 - Space out drill string with tool joint just beneath the upper pipe ram.
 - Shut-in using upper pipe ram. (HCR and choke will already be in the closed position.)
 - Confirm shut-in
 - Notify toolpusher/company representative
 - Read and record the following:
 - o SIDPP and SICP
 - o Pit gain
 - o Time

.

PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	
LEASE NO.:	NMNM138828
LOCATION:	Section 00, T.00 S, R.00 E., NMPM
COUNTY:	Eddy County, New Mexico
WELL NAME & NO.:	
SURFACE HOLE FOOTAGE:	00'/S & 00'/W
BOTTOM HOLE FOOTAGE:	00'/S & 00'/E

COA

H ₂ S	C Yes	💽 No		
Potash / WIPP	None	C Secretary	C R-111-P	□ WIPP
Cave / Karst	C Low	Medium	🖸 High	Critical
Wellhead	C Conventional	Multibowl	C Both	C Diverter
Cementing	Primary Squeeze	🗖 Cont. Squeeze	EchoMeter	DV Tool
Special Req	Break Testing	🗖 Water Disposal	COM	🗖 Unit
Variance	Flex Hose	Casing Clearance	🗖 Pilot Hole	Capitan Reef
Variance	□ Four-String	□ Offline Cementing	🗖 Fluid-Filled	Open Annulus
🗖 Batch APD / Sundry				

A. HYDROGEN SULFIDE

Hydrogen Sulfide (H2S) monitors shall be installed prior to drilling out the surface shoe. If H2S is detected in concentrations greater than 100 ppm, the Hydrogen Sulfide area must meet all requirements from **43 CFR 3176**, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, provide measured values and formations to the BLM.

B. CASING

- 1. The **13-3/8** inch surface casing shall be set at approximately **275** feet (a minimum of 70 feet (Eddy County) into the Rustler Anhydrite, above the salt, and below usable fresh water) and cemented to the surface.
 - a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
 - b. Wait on cement (WOC) time for a primary cement job will be a minimum of <u>8</u> <u>hours</u> or 500 pounds compressive strength, whichever is greater. (This is to include the lead cement)

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- c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
- d. If cement falls back, remedial cementing will be done prior to drilling out that string.
- 2. The minimum required fill of cement behind the **9-5/8** inch intermediate casing is:

• Cement to surface. If cement does not circulate see B.1.a, c-d above. Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst.

- In <u>Medium Cave/Karst Areas</u> if cement does not circulate to surface on the first two casing strings, the cement on the 3rd casing string must come to surface.
- 3. The minimum required fill of cement behind the 5-1/2 inch production casing is:
 - Cement should tie-back at least **200 feet** into previous casing string. Operator shall provide method of verification.

Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst.

C. PRESSURE CONTROL

- 1. Variance approved to use flex line from BOP to choke manifold. Manufacturer's specification to be readily available. No external damage to flex line. Flex line to be installed as straight as possible (no hard bends).
 - 2. Operator has proposed a multi-bowl wellhead assembly. This assembly will only be tested when installed on the surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the casing shoe shall be **5000 (5M)** psi
 - a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
 - b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
 - c. Manufacturer representative shall install the test plug for the initial BOP test.
 - d. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
 - e. Whenever any seal subject to test pressure is broken, all the tests in 43 CFR 3172 must be followed.

Approval Date: 08/18/2023

D. SPECIAL REQUIREMENT (S)

Communitization Agreement

- The operator will submit a Communitization Agreement to the Santa Fe Office, 301 Dinosaur Trail Santa Fe, New Mexico 87508, at least 90 days before the anticipated date of first production from a well subject to a spacing order issued by the New Mexico Oil Conservation Division. The Communitization Agreement will include the signatures of all working interest owners in all Federal and Indian leases subject to the Communitization Agreement (i.e., operating rights owners and lessees of record), or certification that the operator has obtained the written signatures of all such owners and will make those signatures available to the BLM immediately upon request.
- The operator will submit an as-drilled survey well plat of the well completion, but are not limited to, those specified in 43 CFR 3171 and 3172.
- If the operator does not comply with this condition of approval, the BLM may take enforcement actions that include, but are not limited to, those specified in 43 CFR 3163.1.
- In addition, the well sign shall include the surface and bottom hole lease numbers. <u>When the Communitization Agreement number is known, it shall also be on the sign.</u>

GENERAL REQUIREMENTS

The BLM is to be notified in advance for a representative to witness:

- a. Spudding well (minimum of 24 hours)
- b. Setting and/or Cementing of all casing strings (minimum of 4 hours)
- c. BOPE tests (minimum of 4 hours)

Eddy County

Email **or** call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220, **BLM_NM_CFO_DrillingNotifications@BLM.GOV** (575) 361-2822

- Lea County Call the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240, (575) 689-5981
- 1. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.
 - a. In the event the operator has proposed to drill multiple wells utilizing a skid/walking rig. Operator shall secure the wellbore on the current well, after installing and testing the wellhead, by installing a blind flange of like pressure

rating to the wellhead and a pressure gauge that can be monitored while drilling is performed on the other well(s).

- b. When the operator proposes to set surface casing with Spudder Rig
 - Notify the BLM when moving in and removing the Spudder Rig.
 - Notify the BLM when moving in the 2nd Rig. Rig to be moved in within 90 days of notification that Spudder Rig has left the location.
 - BOP/BOPE test to be conducted per **43 CFR part 3170 Subpart 3172** as soon as 2nd Rig is rigged up on well.
- 2. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works are located, this does not include the dog house or stairway area.
- 3. The record of the drilling rate along with the GR/N well log run from TD to surface (horizontal well vertical portion of hole) shall be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.

A. CASING

- 1. Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size or are Non-API. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#). Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.). The initial wellhead installed on the well will remain on the well with spools used as needed.
- <u>Wait on cement (WOC) for Potash Areas:</u> After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi for all cement blends, 2) until cement has been in place at least <u>24 hours</u>. WOC time will be recorded in the driller's log. The casing intergrity test can be done (prior to the cement setting up) immediately after bumping the plug.
- 3. <u>Wait on cement (WOC) for Water Basin:</u> After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi at the shoe, 2) until cement has been in place at least <u>8 hours</u>. WOC time will be recorded in the driller's log. See individual casing strings for details regarding lead cement slurry requirements. The casing integrity test can be done (prior to the cement setting up) immediately after bumping the plug.

- 4. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. Have well specific cement details onsite prior to pumping the cement for each casing string.
- 5. No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.
- 6. On that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Formation at the shoe shall be tested to a minimum of the mud weight equivalent anticipated to control the formation pressure to the next casing depth or at total depth of the well. This test shall be performed before drilling more than 20 feet of new hole.
- 7. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.
- 8. Whenever a casing string is cemented in the R-111-P potash area, the NMOCD requirements shall be followed.
- B. PRESSURE CONTROL
- All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in 43 CFR part 3170 Subpart 3172 and API STD 53 Sec. 5.3.
- 2. If a variance is approved for a flexible hose to be installed from the BOP to the choke manifold, the following requirements apply: The flex line must meet the requirements of API 16C. Check condition of flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor.
- 3. 5M or higher system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.
- 4. If the operator has proposed a multi-bowl wellhead assembly in the APD. The following requirements must be met:

- a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
- b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
- c. Manufacturer representative shall install the test plug for the initial BOP test.
- d. Whenever any seal subject to test pressure is broken, all the tests in 43
 CFR part 3170 Subpart 3172 must be followed.
- e. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
- 5. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
 - a. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including lead cement), whichever is greater. However, if the float does not hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).
 - b. In potash areas, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. For all casing strings, casing cut-off and BOP installation can be initiated at twelve hours after bumping the cement plug. The BOPE test can be initiated after bumping the cement plug with the casing valve open. (only applies to single stage cement jobs, prior to the cement setting up.)
 - c. The tests shall be done by an independent service company utilizing a test plug not a cup or J-packer and can be initiated immediately with the casing valve open. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to 43 CFR part 3170 Subpart 3172 with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for water basin (8 hours) or potash (24 hours) or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).
 - d. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE.

If a linear chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2 hour clock. If a twelve hour or twenty-four hour chart is used, tester shall make a notation that it is run with a two hour clock.

- e. The results of the test shall be reported to the appropriate BLM office.
- f. All tests are required to be recorded on a calibrated test chart. A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.
- g. The BOP/BOPE test shall include a low-pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug. This test shall be performed prior to the test at full stack pressure.
- h. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the Wolfcamp formation if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days. This test does not exclude the test prior to drilling out the casing shoe as per 43 CFR part 3170 Subpart 3172.

C. DRILLING MUD

Mud system monitoring equipment, with derrick floor indicators and visual and audio alarms, shall be operating before drilling into the Wolfcamp formation, and shall be used until production casing is run and cemented.

D. WASTE MATERIAL AND FLUIDS

All waste (i.e. drilling fluids, trash, salts, chemicals, sewage, gray water, etc.) created as a result of drilling operations and completion operations shall be safely contained and disposed of properly at a waste disposal facility. No waste material or fluid shall be disposed of on the well location or surrounding area.

Porto-johns and trash containers will be on-location during fracturing operations or any other crew-intensive operations.

ZS 8/10/2023

Approval Date: 08/18/2023

Drilling Operations H2S Contingency Plan



Marathon Oil Permian, LLC. 4111 South Tidwell Rd Carlsbad, NM 88220 575-323-9441

MARATHON OIL PERMIAN, LLC.

EMERGENCY MEDICAL PROCEDURES DO NOT PANIC REMAIN CALM-THINK

- 1. HOLD YOUR BREATH. (DO NOT INHALE, STOP BREATHING)
- 2. PUT ON BREATHING APPARATUS. (NOTE: DO NOT ATTEMPT RESCUE UNTIL YOU HAVE PUT ON BREATHING APPARATUS.)
- 3. REMOVE VICTIM (S) TO FRESH AIR AS QUICKLY AS POSSIBLE.
- 4. BE SURE YOU HAVE MOVED VICTIM OUT OF CONTAMINATED AREA BEFORE REMOVING YOUR RESPIRATOR.
- 5. APPLY MOUTH-TO-MOUTH ARTIFICIAL RESPIRATION, WHICH IS MORE EFFECTIVE, WHILE SOMEONE ELSE GETS THE OXYGEN RESUSCITATOR. RENDER OXYGEN RESUSCITATION ONLY IF PORPERLY TRAINED IN ITS USE.
- 6. PROVIDE FOR PROMPT TRANSPORTATION TO HOSPITAL AND CONTUNUE GIVING ARTIFICIAL RESPIRATION IF NEEDED.
- 7. HOSPITAL (S) OR MEDICAL FACILITIES NEED TO BE INFORMED BEFOREHAND, OF THE POSSIBILITY OF H2S GAS POISONING, NO MATTER HOW REMOTE THE POSSIBLITY IS.

Lea Regional Medical Center	(575)492-5000
5419 N Lovington Hwy, Hobbs, NM 88240	
AMBULANCE	911
FIRE DEPARTMENT- HOBBS, NM	(575) 397-9308
POLICE - HOBBS, NM	(575) 397-9265

8. NOTIFY EMERGENCY-ROOM PERSONEL THAT THE VICTIM (S) HAVE POSSIBLY BEEN EXPOSED TO H2S GAS POISONING.

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INTRODUCTION

H2S DRILLING OPERATIONS PLAN

Action Plan for Accidental Release of H2S written specifically for:

Marathon Oil Permian, LLC.

4111 South Tidwell Rd Carlsbad, NM 88220 575-323-9441

Information, provisions and practices, as set forth in this plan, may be subject to revision and/or updating.

November 1st, 2021

MARATHON OIL PERMIAN, LLC.

H2S CONTINGENCY PLAN

Marathon Oil Permian, LLC. 4111 South Tidwell Rd Carlsbad, NM 88220

PAD NAME: **DECIMUS 5 FED COM 535-1**

PAD LOCATION: SEC 6, TWN 23S, RNG 28E, EDDY COUNTY, NEW MEXICO LATITUDE: 32.33212768, LONGITUDE: -104.13393718

WELLS: DECIMUS 5 WXY FED COM 1H DECIMUS 5 WXY FED COM 2H

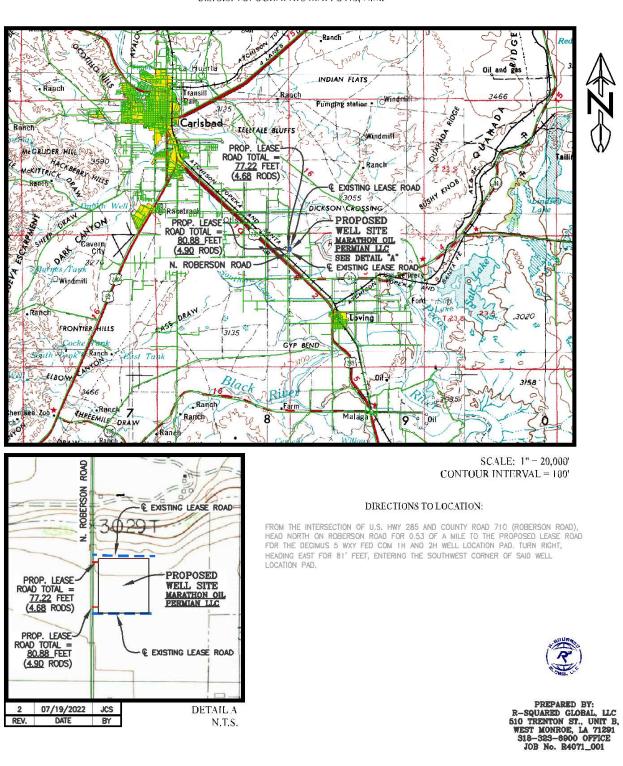
PURPOSE OF PLAN: The purpose of this plan is to safeguard the lives of the public, contract personnel and company personnel in the event of equipment failure or disasters during drilling or completion operations in formations that may contain Hydrogen Sulfide Gas, H2S.

As a precautionary measure, this Drilling Plan has been prepared to assure the safety of all concerned, should a disaster occur. However, the Oil Company Representative may have specified materials and practices for the drilling or completion of this well, which supersede the minimum requirements as outlined in this plan.

DRIVING DIRECTIONS

VICINITY AND EXISTING ROADS MAP

DECIMUS 5 FED COM SEC. 6 TWP. 23-S RGE. 28-E SURVEY: N.M.P.M. COUNTY: EDDY OPERATOR: MARATHON OIL PERMIAN LLC U.S.G.S. TOPOGRAPHIC MAP: OTIS, N.M.



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PLAN DEFINITIONS

For the purpose of this plan the following definitions are to be referred to:

Controlled Release – Any release that is planned and occurs during normal operations. A controlled release is managed per the procedures outlined in this section.

Uncontrolled Release – Any release that is unplanned and not immediately contained utilizing established shut-in procedures. An uncontrolled release is normally associated with a loss of well control.

SCBA – (Self Contained Breathing Apparatus) – A full-face mask respirator with a supplied positive pressure air source.

Donned SCBA – When it is required per this plan to "**don**" a SCBA, personnel will be 100% masked up and be on supplied breathing air.

SCBA On Person – When it is required per this plan to have SCBA "on person", personnel will be required to wear the SCBA equipment - but not be masked up.

"Qualified Buddy" – Person who has been fit tested and is trained and is familiar with the requirements of donning an SCBA. This person will provide immediate assistance to another person who may be utilizing an SCBA or SkaPack in an IDLH atmosphere in the event of an emergency situation.

In Scope Personnel – Rig Personnel who will be working or otherwise present in potential H2S release areas, including the rig floor, cellar, pits, and shaker areas. This would not include 3rd party contractors who do not have a function, besides evacuating the rig, during an emergency condition such as during a well control event or H2S / LEL alarm. All qualified personnel that have a function to shut a well in during an emergency will be considered In-Scope per this plan.

Out of Scope Personnel - All personnel that are not in scope will be Out of Scope per the definition of this plan

H2S Office - On-site office trailer space or vehicle that will be designated as the H2S office.

Marathon H2S Plan Custodian - Marathon HES Advisor, Supervisor or Technician that has been specifically assigned per the authorization page of this plan to maintain this document.

SAFETY EQUIPMENT

All H2S related Safety Equipment must be installed, tested and Operational at a depth of 500 fee above, or 3 days prior to penetrating the first zone expected to contain H2S.

<u>QTY</u>	EQUIPMENT
6 each	30-minute self-contained breathing apparatus
6 each	ELSA Escape Packs
1 Lot	Sufficient low-pressure airline hose with quick connects
1	6 Channel fixed H2S monitor
4	H2S Sensors (Loc determined at rig up – General: Cellar, Shale
	Shaker, floor/driller area)
4	Explosion proof Alarm Station (1-Drill Floor, 1- Pits/Shakers,
	1- Generators, 1 Quarters area)
10	Personal H2S Monitors
1	Gastec pump type gas detector
Set	Various range of H2s & SO2 detector tubes
2 each	Windsocks w/frames and poles
1 Set	H2S and briefing area signs
1 Set	Well condition signs and flags
1	Flare Gun & Flares

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TYPE OF EQUIPMENT AND STORAGE LOCATIONS

- There will be six 30-minute self-contained breathing apparatus on location. They
 will be positioned as follows: Two at Briefing Area #1 Two at Briefing Area#2,
 Two at rig dog house. SCBA Facepieces will be equipped with voice amplifiers
 for effective means of communication when using protective breathing apparatus.
- 2. There will be six Escape-type packs on location. One for the Derrickman. One on the Shaker. One at the bottom of rig dog house stairway and spares.
- 3. A Gastec, pump type, gas detector with low and high range detector tubes for H2S and SO2 will be located in the doghouse
- 4. Two Briefing Areas will be designated at opposite ends of the location.
- 5. The Briefing Area most upwind is designated as the Safety Briefing Area #1.In an emergency, personnel must assemble at this upwind area for instructions from their supervisor.
- 6. The H2S 'Safety" trailer provided by Total Safety, Inc. will contain a cascade system of at least 5 each -300 C.F. air cylinders that will provide a continuous airsupply to air lines located on the rig. Note: This trailer will <u>**Only**</u> be provided if H2S conditions require the use of the Air Trailer. (If Required)
- 7. Two windsocks will be installed so as to be visible from all parts of the location.
- 8. A well condition warning sign will be displayed at the location entrance to advise of current operating conditions. The condition signs must be at least 200'from the entrance but not more than 500' away.
- 9. A list of emergency telephone numbers will be kept on rig floor, tool pusher's trailer, the Oil Company's trailer and in the "safety" trailer (if Provided).

- 10. The primary means of communication will be cell phones.
- 11. A barricade will be available to block the entrance to location should an emergency occur. In most cases the use of a vehicle is used to block the entrance.
- 12. A 6-channel H2S monitor will be located in the doghouse. The 3 sensors will beinstalled: one on the shale shaker, one at the Cellar, one at the rig floor.
- 13. An undulating high and low pitch siren and light will be installed on the derrick"A" leg.
- 14. If H2S concentration reach 10 ppm an explosion-proof bug blower (fan) will beinstalled under the rig floor to disperse possible accumulations of H2S.
- 15. Any time it is necessary to flare gas containing H2S, a Sulfur Dioxide monitor, or Detector tubes will be used to determine SO2 concentrations.
- 16. A flare gun with flares will also be provided in the event it is necessary to ignite the well from a safe distance.

OPERATING PROCEDURES

BLOWOUT PREVENTION MEASURES DURING DRILLING

1. Blowout Prevention Requirements:

All BOP equipment shall meet the American Petroleum Institute specifications as to materials acceptable for H2S service and tested accordingly (or to BLM specifications).

2. Drilling String Requirements:

All drill string components are to be of material that meets the American Petroleum Institute's specifications for H2S service. All drill string components should be inspected to IADC critical service specifications prior to running in well.

GAS MONITORING EQUIPMENT

1. A continuous H2S detection system, consisting of three H2S detectors and an audible/visual warning system will be in operating during all phases of this H2S Drilling Operations Plan. The detection system will be adjusted and calibrated such that an H2S exposure of 10 ppm or higher (at any sensor) will trigger the audible and visual portion (wailing or yelping siren) of the warning system (i.e. H2S continually present at or above threshold levels) a trained operator or H2S supervisor will monitor the H2S detection system.

2. When approaching or completing H2S formations, crewmembers may attach personnel H2S monitors to their person.

3. Hand held H2S sampling gas detectors will be used to check areas not covered by automatic monitoring equipment.

CREW TRAINING AND PROTECTION

1. All personal working at the well site will be properly trained in accordance with the general training requirements outlined in the API Recommended Practices for Safe Drilling of Wells Containing H2S. The training will cover, but will not be limited to, the following:

- a. General information of H2S AND SO2 GAS
- b. Hazards of these gases
- c. Safety equipment on location
- d. Proper use and care of personal protective equipment
- e. Operational procedures in dealing with H2S gas
- f. Evacuation procedures
- g. First aid, reviving an H2S victim, toxicity, etc.
- h. Designated Safe Briefing Areas
- i. Buddy System
- j. Regulations
- k. Review of Drilling Operations Plan

2. Initial training shall be completed when drilling reaches, a depth of 500' above or 3 days prior to penetrating (whichever comes first) the first zone containing or expected to contain H2S. It must also include a review of the site specific Drilling Operations Plan and, if applicable, the Public Protections Plan.

3. Weekly H2S and well control drills for all personnel on each working crew shall be conducted.

4. All training sessions and drills shall be recorded on the driller's log or its equivalent.

5. Safety Equipment:

As outlined in the Safety Equipment index, H2S safety protection equipment will be available to/or assigned each person on location.

6. One person (by job title) shall be designated and identified to all on-site personnel as the person primarily responsible for the overall operation of the on-site safety and training programs. This will be the PIC

METALLURGICAL CONSIDERATONS

1. Steel drill pipe used in H2S environments should have yield strength of 95,000psi or less because of potential embrittlement problems. Must conform to the current National Association of Corrosion Engineers (NACE) Standard MR-0175-90, Material Requirement, Sulfide Stress Cracking Resistant Metallica Material for Oil Field Equipment. Drill stem joints near the top of the drill string are normally under the highest stress levels during drilling and do not have the protection of elevated down hole temperatures. These factors should be considered in design of the drill string. Precautions should be taken to minimize drill string stress caused by conditions such as excessive dogleg severity, improper torque, whip, abrasive wear or tool joints and joint imbalance. American Petroleum Institute, Bulletin RR 7G, will be used as a guideline for drill string precautions.

2. Corrosion inhibitors may be applied to the drill pipe or to the mud system as an additional safeguard.

3. Blowout preventors should meet or exceed the recommendations for H2S service as set forth in the latest edition of API RI 53.

MUD PROGRAM AND TREATING

1. It is of utmost importance that the mud be closely monitored for detection of H2S and reliability of the H2S treating chemicals.

2. Identification and analysis of sulfides in the mud and mud filtrates will be carried out per operators prescribed procedures.

3. The mud system will be pre-treated with Zinc Carbonate, Ironite Sponge or similar chemicals of H2S control prior to drilling into the H2s bearing formation. Sufficient quantities of corrosion inhibitor should be on location to treat the drill string during Drill Stem Test Operations. Additionally, Aqua Ammonia should be on hand to treat the drill string for crew protection, should H2S be encountered while tripping string following drill stem testing

WELL CONTROL EQUIPMENT

1. Flare System

a. A flare system shall be designed and installed to safely gather and burn H2S Bearing gas.

1. Flare lines shall be located as far from the operating site as feasible and in a manner to compensate for wind changes.

2. The flare line mouth shall be located not less then 150' from wellbore.

3. Flare lines shall be straight unless targeted with running tees.

4. Flare Gun & Flares to ignite the well

2. Remote Controlled Choke

a. A remote controlled choke shall be installed for all H2S drilling and where feasible for completion operations. A remote controlled valve may be used in lieu of this requirement for completions operations.

3. Mud-gas separators and rotating heads shall be installed and operable for all exploratory wells.

OPERATING CONDITIONS

A Well Condition Sign and Flag will be posted on all access roads to the location. The sign shall be legible and large enough to be read by all persons entering the well site and be placed a minimum of 200' but no more than 500' from the well site which allows vehicles to turn around at a safe distance prior to reaching the site.

DEFINITION OF WARNING FLAGS

- Condition: GREEN-NORMAL OPERATIONS Any operation where the possibility of encountering H2S exists but no H2S has been detected.
- 2. Condition:

YELLOW-POTENTIAL DANGER, CAUTION Any operation where the possibility of encountering H2S exists and in all situations where concentrations of H2S are detected in the air below the threshold level (10ppm)

a. Cause of condition:

*Circulating up drill breaks

*Trip gas after trip

*Circulating out gas on choke

*Poisonous gas present, but below threshold

- concentrations
- *Drill stem test
- b. Safety Action:
 *Check safety equipment and keep it with you
 *Be alert for a change in condition
 *Follow instructions
- 3. Condition:

RED-EXTREME DANGER

Presence of H2S at or greater than 10ppm. Breathing apparatus must be worn.

a. Safety action:

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*MASK UP. All personal will have protective breathing equipment with them. All nonessential personnel will move to the Safe Briefing Area and stay there until instructed to do otherwise. All essential Qualified Personnel, using the "Buddy System" (those necessary to maintain control of the well) will don breathing apparatus to perform operations related to well control.

The decision to ignite the well is the responsibility of the operator's on-site representative and should be made only as a last resort, when it is clear that:

*human life is endangered

*there is no hope of controlling the well under prevailing conditions

Order evacuation of local people within the danger zone. Request help from local authorities, State Police, Sheriff's Dept. and Service Representative.

<u>CIRCULATING OUT KICK</u> (WAIT AND WEIGHT METHOD)

If it is suspected that H2S is present with the gas whenever a kick is taken, the wait and weight method of eliminating gas and raising the mud will be followed.

- 1. Wait and Weight Method:
 - a. The wait and Weight Method is:

*increase density of mud in pits to 'kill' weight mud.

*open choke and bring pump to initial circulating pressure by holding casing pressure at original valve until pump is up to predetermined speed.

*when initial circulating pressure is obtained on drill pipe, zero pump stroke counter and record time.

*reduce drill pipe pressure from initial circulating pressure to final circulating pressure by using pump strokes and/or time according to graph

*when 'kill' weight mud is at the bit, hold final circulating pressure until kill weight mud is to surface.

b. If a kick has occurred, the standard blowout procedure will be followed and the wait and weight method will be used to kill the well. When the well has been put on the choke and circulation has been established, the following safety procedure must be established.

*determine when gas is anticipated to reach surface.

*all non-essential personnel must be moved to safe briefing area

*all remaining personnel will check out and keep with them their protective breathing apparatus.

*mud men will see that the proper amount of H2S scavenging chemical is in the mud and record times checked

*make sure ignition flare is burning and valves are open to designated flare stacks

CORING OPERATIONS IN H2S BEARING ZONES

1. Personal protective breathing apparatus will be worn from 10 to 15 stands in advance of retrieving the core barrel. Cores to be transported should be sealed and marked to the presence of H2S.

a. Yellow Caution Flag will be flown at the well condition sign.

b. The "NO SMOKING" rule will be enforced

DRILL STEM TESTING OF H2S ZONES

- 1. The DST subsurface equipment will be suitable for H2S service as recommended by the API
- 2. Drill stem testing of H2S zone will be conducted in daylight hours
- 3. All non-essential personnel will be moved to an established safe areaor off location
- 4. The "NO SMOKING" rule will be enforced
- 5. DST fluids will be circulated through a remote-controlled choke and aseparator to permit flaring of gas. A continuous pilot light will be used.
- 6. A yellow or red flag will be flown at entrance to location dependingon present gas condition
- 7. If warranted, the use of Aqua Ammonia for neutralizing the toxicity of H2S from drill string
 - a. During drill stem tests adequate Filming Amine for H2S corrosion and Aqua Ammonia for neutralizing H2S should beon location.
- 8. On completion of DST, if H2S contaminated formation fluids or gases are present in drill string, floor workers will be masked up before test valve is removed from drill string and continue "mask on" conditions until such time that readings in the work area do notexceed 10ppm of H2S gas.

EMERGENCY PROCEDURES

SOUNDING ALARM

In case of an alarm the crews will muster up at the designated area. Total Safety will be dispatched with (2) HES Techs who are to go in under protective breathing air and check the alarm readings and sniff ambient air for the presence of H2S.

By no means are the Co. Rep or HES Advisor to go in under air with the HES Tech. If there is another method in place where the Rig Manager is to go in with the Tech we need to ensure that the rig company has cleared them and that they are properly trained.

1. The fact is to be instilled in the minds of all rig personnel that the sounding alarm means only one thing: <u>H2S IS PRESENT</u>. Everyone is to proceed to his assigned station and the contingency plan is put into effect.

DRILLING CREW ACTIONS

- 1. All personnel will don their protective breathing apparatus. The driller will take necessary precautions as indicated in operating procedures.
- 2. The Buddy system will be implemented. All personnel will act upon directions from the operator's on-site representative.
- 3. If there are non-essential personnel on location, they will move off location.
- 4. Entrance to the location will be patrolled, and the proper well condition flag will be displayed at the entrance to the location.

RESPONSIBILITIES OF PERSONNEL

In order to assure the proper execution of this plan, it is essential that one person be responsible for and in complete charge of implementing these procedures. The responsibility will be as follows:

- 1. The operator's on-site representative or his assistant
- 2. Contract Tool Pusher

STEPS TO BE TAKEN

In the event of an accidental release of a potentially hazardous volume of H2S, the following steps will be taken:

- 1. Contact by the quickest means of communications: the main offices of Oil Company & Contractor as listed on the preceding page.
- 2. An assigned crewmember will blockade the entrance to the location. No unauthorized personnel will be allowed entry into the location.
- 3. The operator's on-site representative will remain on location and attempt to regain control of the well.
- 4. The drilling company's rig superintendent will begin evacuation of those persons in immediate danger. He will begin by telephoning residents in the danger zone. In the event of no contact by telephoning, the tool pusher will proceed at once to each dwelling for a person-to-person contact. In the event the tool pusher cannot leave the location, he will assign a responsible crewmember to proceed in the evacuation off local residents. Upon arrival, the Sheriff's Department and TOTAL SAFETY personnel will aid in further evacuation.

LEAK IGNITION

Leak Ignition procedure: (used to ignite a leak in the event it becomes necessary to protect the public)

- 1. Two men, the operator's on-site representative and the contractor's rig superintendent or TOTAL SAFETY's representative(s), wearing self-contained pressure demand air masks must determine the perimeter of the flammable area. This should be done with one man using an H2S detector and the other one using a flammable gas detector. The flammable perimeter should be established at 30% to 40% of the lower flammable limits.
- 2. After the flammable perimeter has been established and all employees and citizens have been removed from the area, the ignition team should move to the up-wind area of the leak perimeter and fire a flare into the area if the leak isn't ignited on the first attempt, move in 20 to 30 feet and fire again. Continue moving in and firing until the leak is ignited or the flammable gas detector indicates the ignition

team is moving into the hazardous area. If trouble is incurred in igniting the leak by firing toward the leak, try firing 40 degrees to 90 degrees to each side of the area where you have been firing. If still no ignition is accomplished ignite the copper line burner and push it into the leak area. This should accomplish ignition. If ignition is not possible due to the makeup of the gas, the toxic leak perimeter must be established and maintained to insure evacuation is completed and continue until the emergency is secure.

- 3. The following equipment and man-power will be required to support the ignition team:
 - a. one flare gun with flares
 - b. four pressure demand air packs
 - c. two nylon ropes tied to the ignition team
 - d. two men in a clear area equipped with air packs
 - e. portable propane bottle with copper line
- 4. The person with the final authority to ignite the well.

GENERAL EQUIPMENT

- 1. Two areas on the location will be designated as Briefing Areas. The one that is upwind from the well will be designated a the "Safe Briefing Area"
- 2. In the case of an emergency, personnel will assemble in the upwind area as per prior instructions from the operator's representative.
- 3. The H2S "Safety" trailer provide by TOTAL SAFETY will contain 10 air cylinders, a resuscitator, one 30-minute air pack and will have a windsock.
- 4. Two other windsocks will be installed.
- 5. A condition warning sign will be displayed at the location entrance.
- 6. A list of emergency telephone numbers will be kept on the rig floor, tool pusher's trailer and the Oil Company's trailer.
- 7. Two barricades will be available to block the entrance to location.
- 8. An undulating high and low pitch siren will be installed.
- 9. A telephone line or mobile phone will be available at the well site for incoming and outgoing communications.

CRITICAL OPERATIONS

These guidelines will be implemented during H2S alarms on drilling locations with the intent of minimizing catastrophic damage of "<u>critical</u> <u>tasks</u>" <u>ONLY</u> and exposure of field personnel (e.g. cement in the stack). We will wait on Total Safety (or H2S Safety Company) for all other alarm events that aren't defined as "critical".

1.) H2S alarm sounds, crews secure well, and muster based off of wind direction. MOC Operation, MOC Safety, and H2S service company notification will be made and representative from the H2S Service Company is in route to location.

2.) Two qualified in scope personnel will don SCBA, utilizing the "buddy system", and respond to area of H2S alarm location to verify the presence of H2S utilizing hand held four gas analyzer or other approved and provided method.

3.) If no H2S is found, the "all clear" will be authorized by the Marathon Oil Drilling Superintendent and HES to resume operations. H2S service company will still be required to respond.

Note: Personnel will return to muster area awaiting H2S service company and additional equipment if H2S is verified.

Note: Personnel will be trained annually on H2S and the elements of this guideline. The MOC HES Advisor and Co Man will receive hands on training from a H2S service company field tech, on how to properly identify the location of the alarming sensor, and the proper method for checking the alarmed area.

APPENDICES

EMERGENCY & MEDICAL FACILITIES:

	Marathon Oil Corp	oration Emergency Numbers	;
Eric Pulpan	Drilling Manager	epulpan@marathonoil.com	713-296-2985
Allen Livingston	Drilling Superintendent	alivingston@marathonoil.com	
Joshua Love	Drilling Superintendent	jlove@marathonoil.com	405-657-6126
Matt McGaugh	Drilling Engineer	jmmcgaugh@marathonoil.com	713-397-6190
Court Nelson	Drilling Engineer	cnelson1@marathonoil.com	406-565-0604
Scott Schmidt	Drilling Engineer	sschmidt1@marathonoil.com	
Don Eynon	Drilling Engineer	deenyon@marathonoil.com	713-296-3265
Joe Olivas	HES Professional	jolivas@marathonoil.com	713-296-3999
Jeremy Wilson	Lead HES Advisor	pbcomphes2@marathonoil.com	940-507-1991
Scott Doughty	Lead HES Advisor	pbcomphes2@marathonoil.com	281-772-0843
Cactus Rig 169	Company Man	cactus169@marathonoil.com	
Cactus Rig 170	Company Man	cactus170@marathonoil.com	
Cactus Rig 171	Company Man	cactus171@marathonoil.com	

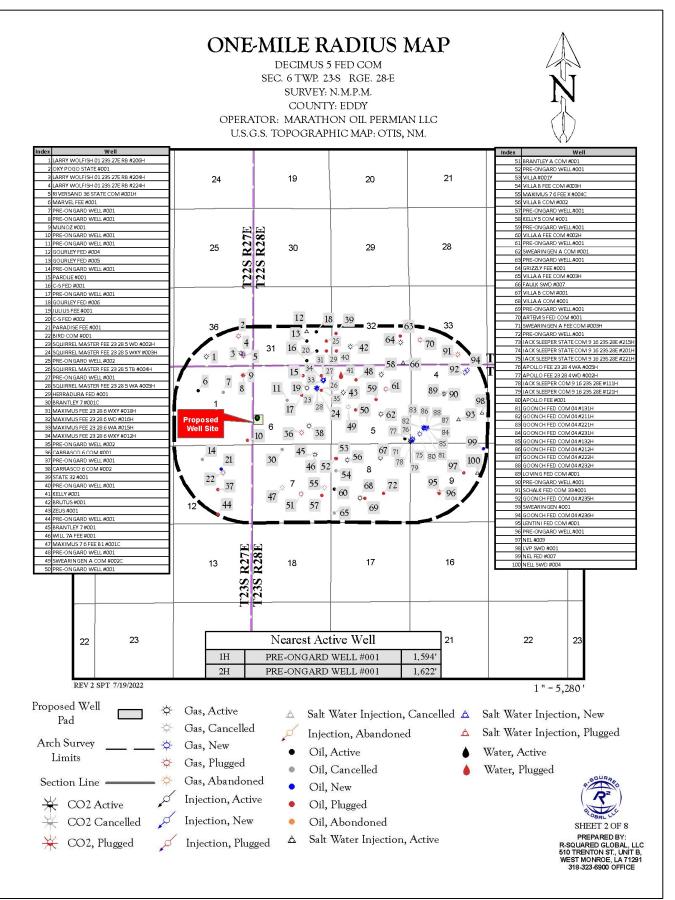
Emergency Services Area Numbers: Or Call 911					
Sheriff (Eddy County, NM)	575-887-7551	New Mexico Poison Control	800-222-1222		
Sheriff (Lea County, NM)	575-396-3611	Border Patrol (Las Cruces, NM)	575-528-6600		
New Mexico State Police	575-392- 5580/5588	Energy Minerals & Natural Resources Dept.	575-748-1283		
Carlsbad Medical Center	575-887-4100	Environmental Health Dept.	505-476-8600		
Lea Regional Medical Center	575-492-5000	OSHA (Santa Fe, NM)	505-827-2855		
Police (Carlsbad, NM)	575-885-2111				
Police (Hobbs, NM)	575-392-9265				
Fire (Carlsbad, NM)	575-885-3124				
Fire (Hobbs, NM)	575-397-9308				
Ambulance Service	911	TOTAL SAFETY H2S – SAFETY SERVICES	432-561-5049		

For Life Flight, 1st dial "911" They will determine nearest helicopter and confirm the need for helicopter.

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ONE MILE RADIUS



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ADDITIONAL INFORMATION

A. <u>HYDROGEN SULFIDE ESSAY</u>

A deadly enemy of those people employed in the petroleum industry, this gas can paralyze or kill quickly. At least part of the answer lies in <u>education</u> in the hazards, symptoms, characteristics, safe practices, treatment, and the proper use of personal protective equipment.

B. HYDROGEN SULFIDE HAZARDS

The principal hazard to personnel is asphyxiation or poisoning by inhalation. Hydrogen Sulfide is a colorless, flammable gas having an offensive odor and a sweetish taste. It is highly toxic and doubly hazardous because it is heavier than air (specific gravity = 1.19). It's offensive odor, like that of a rotten egg, has been used as an indicator by many old timers in the oil field, but is not a reliable warning of the presence of gas in a dangerous concentration because people differ greatly I their ability to detect smells. Where high concentrations are encountered, the olfactory nerves are rapidly paralyzed, diluting the sense of smell as a warning indicator. A concentration of a few hundredths of one percent higher than that causing irritation can cause asphyxia and death-in other words there is a very narrow margin between conscious ness and unconsciousness, and between unconsciousness and death.

Where high concentrations cause respiratory paralysis, spontaneous breathing does not return unless artificial respiration is applies. Although breathing is paralyzed the heart may continue beating for ten minutes after the attack.

C. PHYSIOLOGICAL SYSTEMS

<u>ACUTE</u>: results in almost instantaneous asphyxia, with seeming respiratory paralysis acute poisoning, or strangulation, may occur after even a few seconds inhalation of high concentration and results in panting respiration, pallor, cramps, paralysis and almost immediate loss of consciousness with extreme rapidity from respiratory and cardiac paralysis. One breath of a sufficiently high concentration may have this result. SUBACUTE: RESULTS IN IRRITATION, PRINCIPALLY OF THE EYES, PERSISTENT COUGH, TIGHTENING OR BURNING IN THE CHEST AND SKIN IRRITATION FOLOWED BY DEPRESSION OF THE CENTRAL NERVOUS SYSTEM. The eye irritation ranges in severity from mild conjunctivitis to swelling and bulging of the conjunctiva photophobia (abnormal intolerance of light) and temporary blindness.

D. TREATMENT

- 1. Victim should be removed to fresh air immediately by rescuers wearing respiratory protective equipment. Protect yourself while rescuing.
- 2. If the victim is not breathing, begin immediately to apply artificial respiration. (See other chart for the chances for life after breathing has stopped.) If a resuscitator is available let another employee get it and prepare for use.
- 3. Treat for shock, keep victim warm and comfortable
- 4. Call a doctor, in all cases, victims of poisoning should be attended by a physician.

E. CHARACTERISTICS OF H2S

- 1. Extremely Toxic (refer to chart for toxicity of Hydrogen Sulfide).
- 2. Heavier than air. Specific gravity= 1.19.
- 3. Colorless, has odor of rotten eggs.
- 4. Burns with a blue flame and produces sulfur Dioxide (SO2) gas, which is very irritating to eyes and lungs. The SO2 is also toxic and can cause serious injury.
- 5. H2S is almost as toxic as hydrogen cyanide.
- 6. H2S forms explosive mixture, with air between 4.3% and 46% by volume.
- 7. Between 5 and 6 times as toxic as carbon monoxide.
- 8. Produces irritation to eyes, throat, and respiratory tract.
- 9. Threshold Limit Value (TLV) maximum of eight hours exposure without protective respiratory equipment-10ppm.

F. <u>SAFE PRACTICES</u>

If you are faced with an H2S problem in your operations, the following safe practices are recommended:

- 1. Be absolutely sure all concerned are familiar with the hazards concerning H2S and how to avoid it.
- 2. All employees should know how to operate and maintain respiration equipment.
- 3. Be able to give and demonstrate artificial respiration.
- 4. Post areas where there is poisonous gas with suitable warning signs.
- 5. Be sure all new employees are thoroughly schooled before they are sent to the field-tomorrow may be too late.
- 6. Teach men to avoid gas whenever possible-work on the windward side, have fresh air mask available.
- 7. Never let bad judgment guide you-wear respiratory equipment when gauging tanks, etc. Never try to hold your breath in order to enter a contaminated atmosphere.
- 8. In areas of high concentration, a two-man operation is preferred.
- 9. Never enter a tank, cellar or other enclosed place where gas can accumulate without proper respiratory protective equipment and a safety belt secured to a lifeline held by another person outside.
- 10. Always check out danger areas first with H2S detectors before allowing anyone to enter. <u>DO NOT TRY TO DETERMINE</u> <u>THE PRESENCE OF GAS BY its ODOR.</u>
- 11. Wear proper respiratory equipment for the job at hand. Never take a chance with equipment with which you are unfamiliar. If in doubt, consult your supervisor.
- 12.Carry out practice drills every month with emergency and maintenance breathing air equipment. Telling or showing a group how to operate equipment is not enough-make them show you.
- 13. Maximum care should be taken to prevent the escape of fumes into the air of working places by leaks, etc.
- 14. Communication such as radio and telephones should be provided for those people employed where H2S may be present.

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H2S Per Cent (PPM)**	0 - 2 Minutes	0 - 15 Minutes	15 - 30 Minutes	30 Minutes to l hour	1 - 4 Hours	4 - 8 Hours	4 - 48 Hours
0.005 (50) 0.010 (100)				Mild Conjunctiv- ities; respiratory <u>tract irritation</u>			
0.010 (100) 0.015 (150)			<u>Disturbed</u> respiration; pain in eyes; sleepiness	Throat	Salivation & mucous dis- charge; sharp pain in eyes; coughing	Increased symptoms*	Hemorrhage & death*
$\begin{array}{c cccc} 0.015 & (150) \\ 0.020 & (200) \\ \end{array}$		Loss of sense of smell	<u>Throat&eye</u> irritation	Throat & eye irritation	Difficult breathing; blurred vision;	Serious irritating effects	Hemorrhage & death*
0. 02s·			Painful	Light- shy;	<u>light</u> <u>& shy</u>		
(250) 0.035 (350)	Irritation of eyes; loss of sense of smell	Irritation of eyes	secretion of tears; weari- ness	& nasal catarrh; pain in eyes; difficult breathin g	Hemorrhage & death		
<u>0.035 (350</u>)		Irritation of eyes; loss of sense of smell	respiration	Increased irritation of eyes and nasal tract; dull pain head; weariness; light shy	Dizziness weak- ness; increased irritation; death		
0.050 (500)	Coughing collapse & unconscious- ness	Respiratory disturbances; irritation of eyes; collapse	palpitation	Severe pain in eyes and head dizziness; trem- bling of extre- ities; great weakness & death*			
0.060 (600) 0.070 (700) 0.808 (800) 0.100 (1000) 0.150 (1500)	Collapse * unconscious- ness; death*	co-llapse* unconscious- ness; death*					

TOXICITY OF HYDROGEN SULFIDE TO MEN

*Data secured from experiments of dogs which have susceptibility similar to men. **PPM - parts per million

MARATHON OIL PERMIAN, LLC.

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

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

District III

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

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

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

CONDITIONS

Operator:	OGRID:
MARATHON OIL PERMIAN LLC	372098
990 Town & Country Blvd.	Action Number:
Houston, TX 77024	256969
	Action Type:
	[C-101] BLM - Federal/Indian Land Lease (Form 3160-3)

CONDITIONS

CONDITIONS		
Created By	Condition	Condition Date
ward.rikala	Notify OCD 24 hours prior to casing & cement	8/28/2023
ward.rikala	Will require a File As Drilled C-102 and a Directional Survey with the C-104	8/28/2023
ward.rikala	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	8/28/2023
ward.rikala	Cement is required to circulate on both surface and intermediate1 strings of casing	8/28/2023
ward.rikala	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	8/28/2023

CONDITIONS

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Action 256969