

Form 3160-3
(June 2015)FORM APPROVED
OMB No. 1004-0137
Expires: January 31, 2018

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of work: ☐ DRILL ☐ REENTER 1b. Type of Well: ☐ Oil Well ☐ Gas Well ☐ Other 1c. Type of Completion: ☐ Hydraulic Fracturing ☐ Single Zone ☐ Multiple Zone		5. Lease Serial No. 6. If Indian, Allottee or Tribe Name 7. If Unit or CA Agreement, Name and No. 8. Lease Name and Well No.
2. Name of Operator		9. API Well No. 30 015 48289
3a. Address	3b. Phone No. (include area code)	10. Field and Pool, or Exploratory
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface At proposed prod. zone		11. Sec., T. R. M. or Blk. and Survey or Area
14. Distance in miles and direction from nearest town or post office*		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. Spacing Unit dedicated to this well
18. 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
24. Attachments		

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, and the Hydraulic Fracturing rule per 43 CFR 3162.3-3 (as applicable)

- | | |
|---|---|
| 1. Well plat certified by a registered surveyor.
2. A Drilling Plan.
3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office). | 4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator certification.
6. Such other site specific information and/or plans as may be requested by the BLM. |
|---|---|

25. Signature	Name (Printed/Typed)	Date
Title		
Approved by (Signature)	Name (Printed/Typed)	Date
Title		
Office		

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

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

(Continued on page 2)

*(Instructions on page 2)



Approval Date: 04/13/2021

District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720
District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

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

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30 015 48289	² Pool Code 98220	³ Pool Name PURPLE SAGE; WOLF CAMP (GAS)
⁴ Property Code 318232	⁵ Property Name KYLE 34 WD FEDERAL COM	⁶ Well Number 9H
⁷ OGRID No. 372098	⁸ Operator Name MARATHON OIL PERMIAN LLC	⁹ Elevation 2999'

¹⁰ Surface Location

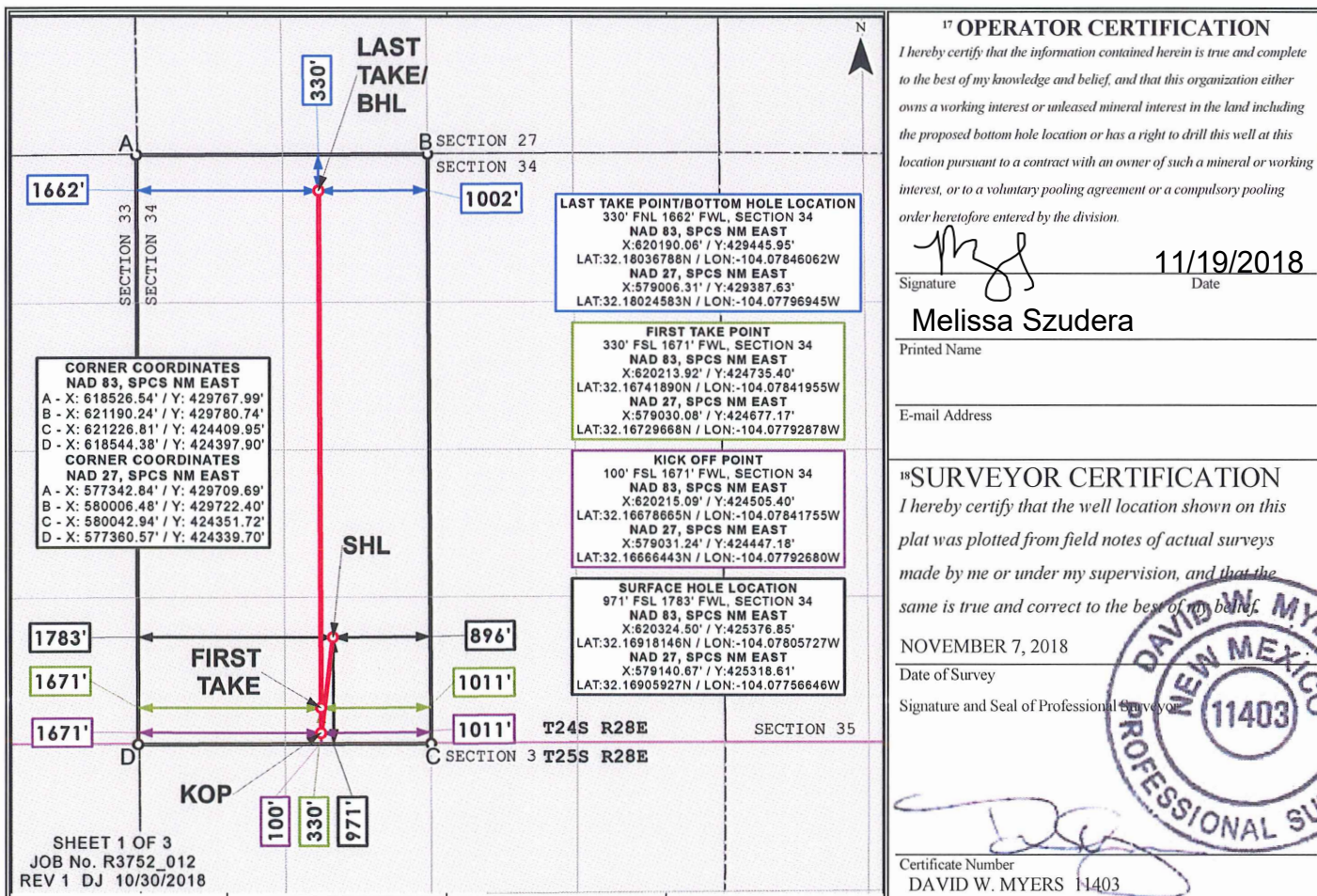
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
N	34	24S	28E		971	SOUTH	1783	WEST	EDDY

¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
C	34	24S	28E		330	NORTH	1662	WEST	EDDY

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



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

Submit Original
to Appropriate
District Office

GAS CAPTURE PLAN

Date: November 28, 2018

☒ Original Operator & OGRID No.: Marathon Oil Permian LLC. 372098
☐ Amended - Reason for Amendment: _____

This Gas Capture Plan outlines actions to be taken by the Operator to reduce well/production facility flaring/venting for new completion (new drill, recomplete to new zone, re-frac) activity.

Note: Form C-129 must be submitted and approved prior to exceeding 60 days allowed by Rule (Subsection A of 19.15.18.12 NMAC).

Well(s)/Production Facility – Name of facility

The well(s) that will be located at the production facility are shown in the table below.

Well Name	API	Well Location (ULSTR)	Footages	Expected MCF/D	Flared or Vented	Comments
KYLE 34 WD FEDERAL 4H		N-34-24S-28E	971' FSL 1753' FWL	2100	Flared	
KYLE 34 WD FEDERAL 9H		N-34-24S-28E	971' FSL 1783' FWL	2100	Flared	
KYLE 34 WD FEDERAL 22H		N-34-24S-28E	971' FSL 1813' FWL	2100	Flared	

Gathering System and Pipeline Notification

Well(s) will be connected to a production facility after flowback operations are complete, if gas transporter system is in place. The gas produced from production facility is dedicated to Crestwood Equity Partners and will be connected to Crestwood Equity Partners low pressure gathering system located in Eddy County, New Mexico. It will require 1 mile of pipeline to connect the facility to low pressure gathering system. Marathon provides (periodically) to Crestwood Equity Partners a drilling, completion and estimated first production date for wells that are scheduled to be drilled in the foreseeable future. In addition, Marathon and Crestwood Equity Partners have periodic conference calls to discuss changes to drilling and completion schedules. Gas from these wells will be processed at Willow Lake System Processing Plant located in Eddy County, New Mexico. The actual flow of the gas will be based on compression operating parameters and gathering system pressures.

Flowback Strategy

After the fracture treatment/completion operations, well(s) will be produced to temporary production tanks and gas will be flared or vented. During flowback, the fluids and sand content will be monitored. When the produced fluids contain minimal sand, the wells will be turned to production facilities. Gas sales should start as soon as the wells start flowing through the production facilities, unless there are operational issues on Crestwood Equity Partners system at that time. Based on current information, it is Marathon's belief the system can take this gas upon completion of the well(s).

Safety requirements during cleanout operations from the use of underbalanced air cleanout systems may necessitate that sand and non-pipeline quality gas be vented and/or flared rather than sold on a temporary basis.

Alternatives to Reduce Flaring

Below are alternatives considered from a conceptual standpoint to reduce the amount of gas flared.

- Power Generation – On lease
 - Only a portion of gas is consumed operating the generator, remainder of gas will be flared
- Compressed Natural Gas – On lease
 - Gas flared would be minimal, but might be uneconomical to operate when gas volume declines
- NGL Removal – On lease
 - Plants are expensive, residue gas is still flared, and uneconomical to operate when gas volume declines



U.S. Department of the Interior
BUREAU OF LAND MANAGEMENT

Drilling Plan Data Report

04/14/2021

APD ID: 10400036492

Submission Date: 11/20/2018

Highlighted data
reflects the most
recent changes

Operator Name: MARATHON OIL PERMIAN LLC

Well Name: KYLE 34 WD FEDERAL COM

Well Number: 9H

[Show Final Text](#)

Well Type: CONVENTIONAL GAS WELL

Well Work Type: Drill

Section 1 - Geologic Formations

Formation ID	Formation Name	Elevation	True Vertical Depth	Measured Depth	Lithologies	Mineral Resources	Producing Formation
344570	SALADO	2992	686	686	ANHYDRITE, DOLOMITE, SALT	OTHER : Brine	N
344584	CASTILE	2038	954	954	SALT	OTHER : Brine	N
344585	BASE OF SALT	522	2470	2480	LIMESTONE, SALT, SANDSTONE	OTHER : Brine	N
344574	LAMAR	383	2609	2621	SANDSTONE, SHALE	OIL	N
344575	BELL CANYON	328	2664	2677	SANDSTONE, SHALE	OIL	N
344592	CHERRY CANYON	-509	3501	3527	LIMESTONE, SANDSTONE	NATURAL GAS, OIL	N
344577	BRUSHY CANYON	-1737	4729	4774	OTHER : Sands/Carbonate	OIL	N
344578	BONE SPRING	-3336	6328	6397	OTHER : Sands/Carbonate	OIL	N
344591	WOLFCAMP	-6549	9541	9615	OTHER, SANDSTONE, SHALE : Carbonates	OIL	Y

Section 2 - Blowout Prevention

Pressure Rating (PSI): 10M

Rating Depth: 15152

Equipment: 13 5/8 5M Annular, 10M pipe ram, and 10M double ram will be installed and tested for each of the 12 ¼, 8 ¾ and 6 1/8 hole sections.

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. BOP variance is requested for the annular to be 5000 psi on 10000 psi BOP stack.

Testing Procedure: - BOP/BOPE will be tested by an independent service company to 250 psi low and the high pressure indicated above per Onshore Order 2 requirements. The System may be upgraded to a higher pressure but still tested to the working pressure listed in the table attached. If the system is upgraded all the components installed will be functional and tested. The Annular will be tested to 70% of 5000 working pressure (see attached BOP plan). The working pressure of 10000 for the single Pipe Ram and Double Ram (Pipe & Blind) will be tested to 10000 psi. - 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

Operator Name: MARATHON OIL PERMIAN LLC**Well Name:** KYLE 34 WD FEDERAL COM**Well Number:** 9H

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.

Choke Diagram Attachment:

DRILL_2_Contitech_Hose_SN_663393_20180806101451.pdf

DRILL_2_Choke_Line_Flex_III_Rig_20180806101431.pdf

DRILL_2_Choke_Line_Test_Chart_SN_63393_20180806101517.pdf

10M.THREE_CHOKE_MANIFOLD.BLM_20181114090309.pdf

BOP Diagram Attachment:

DRILL_2_BOP_WH_TH_DESIGN__2_DRAWING_20181114090359.pdf

DRILL_2_BOP_Well_Control_Plan__Permian_20181114090349.pdf

DRIL_2_BOP_10M_Flex.BOPE_x_5M_ANNULAR.BLM_20181114090340.pdf

Section 3 - Casing

Casing ID	String Type	Hole Size	Csg Size	Condition	Standard	Tapered String	Top Set MD	Bottom Set MD	Top Set TVD	Bottom Set TVD	Top Set MSL	Bottom Set MSL	Calculated casing length MD	Grade	Weight	Joint Type	Collapse SF	Burst SF	Joint SF Type	Joint SF	Body SF Type	Body SF
1	SURFACE	17.5	13.375	NEW	API	N	0	450	0	450	2999	2549	450	J-55	54.5	ST&C	5.52	2.5	BUOY	2.5	BUOY	2.5
2	INTERMEDIATE	12.25	9.625	NEW	API	N	0	2630	0	2618	2998	380	2630	J-55	40	LT&C	1.74	1.15	BUOY	2.19	BUOY	2.19
3	PRODUCTION	8.75	7.0	NEW	API	N	0	9750	0	9676	2999	-6677	9750	P-110	29	BUTT	2.21	1.18	BUOY	1.9	BUOY	1.9
4	LINER	6.125	4.5	NEW	API	N	9400	15460	9326	10683	-6327	-7684	6060	P-110	13.5	BUTT	1.33	1.56	BUOY	1.88	BUOY	1.88

Casing Attachments

Operator Name: MARATHON OIL PERMIAN LLC**Well Name:** KYLE 34 WD FEDERAL COM**Well Number:** 9H**Casing Attachments**

Casing ID: 1 **String Type:** SURFACE**Inspection Document:****Spec Document:****Tapered String Spec:****Casing Design Assumptions and Worksheet(s):**Surface_20181119074835.pdf

Casing ID: 2 **String Type:** INTERMEDIATE**Inspection Document:****Spec Document:****Tapered String Spec:****Casing Design Assumptions and Worksheet(s):**Intermediate_20181119074929.pdf

Casing ID: 3 **String Type:** PRODUCTION**Inspection Document:****Spec Document:****Tapered String Spec:****Casing Design Assumptions and Worksheet(s):**Intermediate_II_20181119075018.pdf

Operator Name: MARATHON OIL PERMIAN LLC

Well Name: KYLE 34 WD FEDERAL COM

Well Number: 9H

Casing Attachments

Casing ID: 4 String Type: LINER

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Liner_20181119075136.pdf

Section 4 - Cement

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
SURFACE	Lead		0	0	0	0	0	0	0	no lead tail only	NA
SURFACE	Tail		0	450	458	1.33	14.8	625	100	Class C	0.02 Gal/Sk Defoamer + 0.5% Extender + 1% Accelerator
LINER	Lead		0	0	0	0	0	0	0	NO LEAD	0
LINER	Tail		9450	15460	603	1.22	14.5	736	30	CLASS H	0.1% retarder + 3.5% extender + 0.3% fluid loss + 0.1% Dispersant
INTERMEDIATE	Lead		0	1600	507	1.75	12.8	877	75	Class C	0.02 Gal/Sk Defoamer + 0.5% Extender + 1% Accelerator
INTERMEDIATE	Tail		1600	2630	364	1.33	14.8	484	50	Class C	0.3 % Retarder
PRODUCTION	Lead		2330	8700	603	2.7	11	1628	70	Class C	0.85% retarder + 10% extender + 0.02 gal/sk defoamer + 2.0% Extender + 0.15% Viscosifier
PRODUCTION	Tail		8700	9750	188	1.09	15.6	205	30	Class H	3% extender + 0.15% Dispersant + 0.03 gal/sk retarder

Operator Name: MARATHON OIL PERMIAN LLC**Well Name:** KYLE 34 WD FEDERAL COM**Well Number:** 9H**Section 5 - Circulating Medium****Mud System Type:** Closed**Will an air or gas system be Used?** NO**Description of the equipment for the circulating system in accordance with Onshore Order #2:****Diagram of the equipment for the circulating system in accordance with Onshore Order #2:****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 (lbs/gal)	Max Weight (lbs/gal)	Density (lbs/cu ft)	Gel Strength (lbs/100 sqft)	PH	Viscosity (CP)	Salinity (ppm)	Filtration (cc)	Additional Characteristics
9750	15460	OIL-BASED MUD	11.5	13							
450	2630	SALT SATURATED	9.9	10.2							
0	450	WATER-BASED MUD	8.4	8.8							
2630	9750	OTHER : Cut Brine	8.8	9.4							

Section 6 - Test, Logging, Coring**List of production tests including testing procedures, equipment and safety measures:**

None planned

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

GR

Coring operation description for the well:

None Planned.

Operator Name: MARATHON OIL PERMIAN LLC**Well Name:** KYLE 34 WD FEDERAL COM**Well Number:** 9H

Section 7 - Pressure

Anticipated Bottom Hole Pressure: 7221**Anticipated Surface Pressure:** 4870.74**Anticipated Bottom Hole Temperature(F):** 195**Anticipated abnormal pressures, temperatures, or potential geologic hazards?** NO**Describe:****Contingency Plans geohazards description:****Contingency Plans geohazards attachment:****Hydrogen Sulfide drilling operations plan required?** YES**Hydrogen sulfide drilling operations plan:**

DRILL_7_Marathon_Carlsbad_KYLE_34_FED_4h_9H_22h_Contingency_Plan_110918_20181114092611.pdf

DRILL_7_H2S_Contingency_Plan_Summary_20181119083218.pdf

DRILL_7_Pad_Flex_III_20181119083230.pdf

Section 8 - Other Information

Proposed horizontal/directional/multi-lateral plan submission:

DRILL_8_INFO_Marathon_Kyle34WDFed_4H_PrelimB_WPReport_20181114110221.pdf

Kyle_lease_surface_map_20181114110245.pdf

DRILL_8_INFO_Marathon_Kyle34WDFed_4H_PrelimB_36x48WM_20181114110212.pdf

DRILL_8_FACET_KYLE_34_WD_FED_9H_DRILLING_PLAN_20181119075455.pdf

Other proposed operations facets description:

- 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.

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.
- No abnormal temperatures or pressures are anticipated. All personnel will be familiar with all aspects of safe operation of equipment being used to drill this well. Adequate flare lines will be installed off the mud/gas separator where gas may be flared safely.
- No losses are anticipated at this time.
- All personnel will be familiar with all aspects of safe operation of equipment being used to drill this well.
- Adequate flare lines will be installed off the mud/gas separator where gas may be flared safely.

Other proposed operations facets attachment:

DRILL_8_Batch_Drilling_Plan_and_Surface_Rig_Request_20180628132936.pdf

Other Variance attachment:

Operator Name: MARATHON OIL PERMIAN LLC

Well Name: KYLE 34 WD FEDERAL COM

Well Number: 9H

DRILL_8_Batch_Drilling_Plan_and_Surface_Rig_Request_20180627112019.pdf

CONFIDENTIAL



Pro Directional Survey Report



Company:	Marathon Oil	Local Co-ordinate Reference:	Well No. 4H
Project:	Eddy County, NM	TVD Reference:	Well @ 3024.50usft (GL: 2998' + KB: 26.5' (H&P498))
Site:	Kyle 34 WD Fed Com (4-9-22)	MD Reference:	Well @ 3024.50usft (GL: 2998' + KB: 26.5' (H&P498))
Well:	No. 4H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Prelim Plan B	Database:	WellPlanner1

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

Site	Kyle 34 WD Fed Com (4-9-22)								
Site Position:		Northing:	425,318.54	usft	Latitude:	32.169059			
From:	Map	Easting:	579,110.76	usft	Longitude:	-104.077663			
Position Uncertainty:		0.00	usft	Slot Radius:	13-3/16	"	Grid Convergence:	0.14	°

Well	No. 4H					
Well Position	+N/-S	0.00 usft	Northing:	425,318.54 usft	Latitude:	32.169059
	+E/-W	0.00 usft	Easting:	579,110.76 usft	Longitude:	-104.077663
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	2,998.00 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	10/29/2018	7.15	59.92	47,934.60

Design	Prelim Plan B				
Audit Notes:					
Version:	Phase:	PLAN	Tie On Depth:	0.00	
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.00	0.00	0.00	359.71	

Survey Tool Program	Date	11/7/2018			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
0.00	1,150.00	Prelim Plan B (OH)	MWD+IFR1	OWSG MWD + IFR1	
1,150.00	5,400.00	Prelim Plan B (OH)	MWD+IFR1	OWSG MWD + IFR1	
5,400.00	10,000.00	Prelim Plan B (OH)	MWD+IFR1	OWSG MWD + IFR1	
10,000.00	15,146.73	Prelim Plan B (OH)	MWD+IFR1	OWSG MWD + IFR1	

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
[Kyle34WD#4H]FTP									
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00



Pro Directional Survey Report



Company:	Marathon Oil	Local Co-ordinate Reference:	Well No. 4H
Project:	Eddy County, NM	TVD Reference:	Well @ 3024.50usft (GL: 2998' + KB: 26.5' (H&P498))
Site:	Kyle 34 WD Fed Com (4-9-22)	MD Reference:	Well @ 3024.50usft (GL: 2998' + KB: 26.5' (H&P498))
Well:	No. 4H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Prelim Plan B	Database:	WellPlanner1

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	2.00	216.21	1,299.98	-1.41	-1.03	-1.40	2.00	2.00	0.00
1,400.00	4.00	216.21	1,399.84	-5.63	-4.12	-5.61	2.00	2.00	0.00
1,500.00	6.00	216.21	1,499.45	-12.66	-9.27	-12.61	2.00	2.00	0.00
1,600.00	8.00	216.21	1,598.70	-22.49	-16.47	-22.41	2.00	2.00	0.00
1,700.00	10.00	216.21	1,697.47	-35.11	-25.71	-34.98	2.00	2.00	0.00
1,800.00	10.00	216.21	1,795.95	-49.12	-35.97	-48.94	0.00	0.00	0.00
1,900.00	10.00	216.21	1,894.43	-63.14	-46.23	-62.90	0.00	0.00	0.00
2,000.00	10.00	216.21	1,992.91	-77.15	-56.49	-76.86	0.00	0.00	0.00
2,100.00	10.00	216.21	2,091.39	-91.16	-66.75	-90.82	0.00	0.00	0.00
2,200.00	10.00	216.21	2,189.87	-105.17	-77.01	-104.77	0.00	0.00	0.00
2,300.00	10.00	216.21	2,288.35	-119.18	-87.27	-118.73	0.00	0.00	0.00
2,400.00	10.00	216.21	2,386.83	-133.19	-97.53	-132.69	0.00	0.00	0.00
2,500.00	10.00	216.21	2,485.31	-147.20	-107.79	-146.65	0.00	0.00	0.00
2,600.00	10.00	216.21	2,583.79	-161.21	-118.05	-160.61	0.00	0.00	0.00
2,700.00	10.00	216.21	2,682.27	-175.22	-128.31	-174.57	0.00	0.00	0.00
2,800.00	10.00	216.21	2,780.75	-189.23	-138.56	-188.52	0.00	0.00	0.00
2,900.00	10.00	216.21	2,879.23	-203.24	-148.82	-202.48	0.00	0.00	0.00
3,000.00	10.00	216.21	2,977.72	-217.25	-159.08	-216.44	0.00	0.00	0.00
3,100.00	10.00	216.21	3,076.20	-231.26	-169.34	-230.40	0.00	0.00	0.00
3,200.00	10.00	216.21	3,174.68	-245.27	-179.60	-244.36	0.00	0.00	0.00
3,300.00	10.00	216.21	3,273.16	-259.28	-189.86	-258.31	0.00	0.00	0.00
3,400.00	10.00	216.21	3,371.64	-273.29	-200.12	-272.27	0.00	0.00	0.00
3,500.00	10.00	216.21	3,470.12	-287.30	-210.38	-286.23	0.00	0.00	0.00
3,600.00	10.00	216.21	3,568.60	-301.31	-220.64	-300.19	0.00	0.00	0.00
3,700.00	10.00	216.21	3,667.08	-315.32	-230.90	-314.15	0.00	0.00	0.00
3,800.00	10.00	216.21	3,765.56	-329.33	-241.16	-328.10	0.00	0.00	0.00
3,900.00	10.00	216.21	3,864.04	-343.34	-251.42	-342.06	0.00	0.00	0.00
4,000.00	10.00	216.21	3,962.52	-357.35	-261.67	-356.02	0.00	0.00	0.00
4,100.00	10.00	216.21	4,061.00	-371.36	-271.93	-369.98	0.00	0.00	0.00
4,200.00	10.00	216.21	4,159.48	-385.37	-282.19	-383.94	0.00	0.00	0.00
4,300.00	10.00	216.21	4,257.97	-399.38	-292.45	-397.89	0.00	0.00	0.00
4,400.00	10.00	216.21	4,356.45	-413.39	-302.71	-411.85	0.00	0.00	0.00
4,500.00	10.00	216.21	4,454.93	-427.40	-312.97	-425.81	0.00	0.00	0.00
4,600.00	10.00	216.21	4,553.41	-441.41	-323.23	-439.77	0.00	0.00	0.00



Pro Directional Survey Report



Company:	Marathon Oil	Local Co-ordinate Reference:	Well No. 4H
Project:	Eddy County, NM	TVD Reference:	Well @ 3024.50usft (GL: 2998' + KB: 26.5' (H&P498))
Site:	Kyle 34 WD Fed Com (4-9-22)	MD Reference:	Well @ 3024.50usft (GL: 2998' + KB: 26.5' (H&P498))
Well:	No. 4H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Prelim Plan B	Database:	WellPlanner1

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
4,700.00	10.00	216.21	4,651.89	-455.42	-333.49	-453.73	0.00	0.00	0.00	
4,800.00	10.00	216.21	4,750.37	-469.43	-343.75	-467.69	0.00	0.00	0.00	
4,900.00	10.00	216.21	4,848.85	-483.44	-354.01	-481.64	0.00	0.00	0.00	
5,000.00	10.00	216.21	4,947.33	-497.45	-364.27	-495.60	0.00	0.00	0.00	
5,100.00	10.00	216.21	5,045.81	-511.46	-374.53	-509.56	0.00	0.00	0.00	
5,200.00	10.00	216.21	5,144.29	-525.47	-384.78	-523.52	0.00	0.00	0.00	
5,300.00	10.00	216.21	5,242.77	-539.48	-395.04	-537.48	0.00	0.00	0.00	
5,400.00	10.00	216.21	5,341.25	-553.49	-405.30	-551.43	0.00	0.00	0.00	
5,500.00	10.00	216.21	5,439.73	-567.50	-415.56	-565.39	0.00	0.00	0.00	
5,600.00	10.00	216.21	5,538.22	-581.51	-425.82	-579.35	0.00	0.00	0.00	
5,700.00	10.00	216.21	5,636.70	-595.52	-436.08	-593.31	0.00	0.00	0.00	
5,800.00	10.00	216.21	5,735.18	-609.53	-446.34	-607.27	0.00	0.00	0.00	
5,900.00	10.00	216.21	5,833.66	-623.54	-456.60	-621.22	0.00	0.00	0.00	
6,000.00	10.00	216.21	5,932.14	-637.55	-466.86	-635.18	0.00	0.00	0.00	
6,100.00	10.00	216.21	6,030.62	-651.56	-477.12	-649.14	0.00	0.00	0.00	
6,200.00	10.00	216.21	6,129.10	-665.57	-487.38	-663.10	0.00	0.00	0.00	
6,300.00	10.00	216.21	6,227.58	-679.58	-497.64	-677.06	0.00	0.00	0.00	
6,400.00	10.00	216.21	6,326.06	-693.59	-507.90	-691.01	0.00	0.00	0.00	
6,500.00	10.00	216.21	6,424.54	-707.60	-518.15	-704.97	0.00	0.00	0.00	
6,600.00	10.00	216.21	6,523.02	-721.61	-528.41	-718.93	0.00	0.00	0.00	
6,700.00	10.00	216.21	6,621.50	-735.63	-538.67	-732.89	0.00	0.00	0.00	
6,800.00	10.00	216.21	6,719.99	-749.64	-548.93	-746.85	0.00	0.00	0.00	
6,900.00	10.00	216.21	6,818.47	-763.65	-559.19	-760.81	0.00	0.00	0.00	
7,000.00	10.00	216.21	6,916.95	-777.66	-569.45	-774.76	0.00	0.00	0.00	
7,100.00	10.00	216.21	7,015.43	-791.67	-579.71	-788.72	0.00	0.00	0.00	
7,200.00	10.00	216.21	7,113.91	-805.68	-589.97	-802.68	0.00	0.00	0.00	
7,300.00	10.00	216.21	7,212.39	-819.69	-600.23	-816.64	0.00	0.00	0.00	
7,400.00	10.00	216.21	7,310.87	-833.70	-610.49	-830.60	0.00	0.00	0.00	
7,437.04	10.00	216.21	7,347.34	-838.89	-614.29	-835.77	0.00	0.00	0.00	
7,500.00	8.74	216.21	7,409.47	-847.16	-620.34	-844.01	2.00	-2.00	0.00	
7,600.00	6.74	216.21	7,508.55	-858.02	-628.30	-854.83	2.00	-2.00	0.00	
7,700.00	4.74	216.21	7,608.04	-866.09	-634.21	-862.87	2.00	-2.00	0.00	
7,800.00	2.74	216.21	7,707.82	-871.36	-638.06	-868.12	2.00	-2.00	0.00	
7,900.00	0.74	216.21	7,807.77	-873.81	-639.86	-870.56	2.00	-2.00	0.00	
7,937.04	0.00	0.00	7,844.81	-874.00	-640.00	-870.75	2.00	-2.00	0.00	
8,000.00	0.00	0.00	7,907.77	-874.00	-640.00	-870.75	0.00	0.00	0.00	
8,100.00	0.00	0.00	8,007.77	-874.00	-640.00	-870.75	0.00	0.00	0.00	
8,200.00	0.00	0.00	8,107.77	-874.00	-640.00	-870.75	0.00	0.00	0.00	
8,300.00	0.00	0.00	8,207.77	-874.00	-640.00	-870.75	0.00	0.00	0.00	
8,400.00	0.00	0.00	8,307.77	-874.00	-640.00	-870.75	0.00	0.00	0.00	
8,500.00	0.00	0.00	8,407.77	-874.00	-640.00	-870.75	0.00	0.00	0.00	
8,600.00	0.00	0.00	8,507.77	-874.00	-640.00	-870.75	0.00	0.00	0.00	



Pro Directional Survey Report



Company:	Marathon Oil	Local Co-ordinate Reference:	Well No. 4H
Project:	Eddy County, NM	TVD Reference:	Well @ 3024.50usft (GL: 2998' + KB: 26.5' (H&P498))
Site:	Kyle 34 WD Fed Com (4-9-22)	MD Reference:	Well @ 3024.50usft (GL: 2998' + KB: 26.5' (H&P498))
Well:	No. 4H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Prelim Plan B	Database:	WellPlanner1

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
8,700.00	0.00	0.00	8,607.77	-874.00	-640.00	-870.75	0.00	0.00	0.00	
8,800.00	0.00	0.00	8,707.77	-874.00	-640.00	-870.75	0.00	0.00	0.00	
8,900.00	0.00	0.00	8,807.77	-874.00	-640.00	-870.75	0.00	0.00	0.00	
9,000.00	0.00	0.00	8,907.77	-874.00	-640.00	-870.75	0.00	0.00	0.00	
9,100.00	0.00	0.00	9,007.77	-874.00	-640.00	-870.75	0.00	0.00	0.00	
9,200.00	0.00	0.00	9,107.77	-874.00	-640.00	-870.75	0.00	0.00	0.00	
9,300.00	0.00	0.00	9,207.77	-874.00	-640.00	-870.75	0.00	0.00	0.00	
9,400.00	0.00	0.00	9,307.77	-874.00	-640.00	-870.75	0.00	0.00	0.00	
9,500.00	0.00	0.00	9,407.77	-874.00	-640.00	-870.75	0.00	0.00	0.00	
9,600.00	0.00	0.00	9,507.77	-874.00	-640.00	-870.75	0.00	0.00	0.00	
9,700.00	0.00	0.00	9,607.77	-874.00	-640.00	-870.75	0.00	0.00	0.00	
9,800.00	0.00	0.00	9,707.77	-874.00	-640.00	-870.75	0.00	0.00	0.00	
9,873.23	0.00	0.00	9,781.00	-874.00	-640.00	-870.75	0.00	0.00	0.00	
[Kyle34WD#4H]KOP										
9,900.00	2.68	351.65	9,807.76	-873.38	-640.09	-870.13	10.00	10.00	0.00	
9,950.00	7.68	351.65	9,857.54	-868.92	-640.75	-865.66	10.00	10.00	0.00	
10,000.00	12.68	351.65	9,906.74	-860.18	-642.03	-856.92	10.00	10.00	0.00	
10,050.00	17.68	351.65	9,954.98	-847.23	-643.93	-843.96	10.00	10.00	0.00	
10,100.00	22.68	351.65	10,001.90	-830.17	-646.43	-826.89	10.00	10.00	0.00	
10,150.00	27.68	351.65	10,047.13	-809.14	-649.52	-805.84	10.00	10.00	0.00	
10,200.00	32.68	351.65	10,090.34	-784.28	-653.17	-780.96	10.00	10.00	0.00	
10,250.00	37.68	351.65	10,131.20	-755.79	-657.35	-752.45	10.00	10.00	0.00	
10,300.00	42.68	351.65	10,169.39	-723.88	-662.03	-720.52	10.00	10.00	0.00	
10,350.00	47.68	351.65	10,204.62	-688.80	-667.18	-685.42	10.00	10.00	0.00	
10,400.00	52.68	351.65	10,236.63	-650.82	-672.76	-647.41	10.00	10.00	0.00	
10,450.00	57.68	351.65	10,265.18	-610.22	-678.72	-606.78	10.00	10.00	0.00	
10,500.00	62.68	351.65	10,290.04	-567.32	-685.01	-563.84	10.00	10.00	0.00	
10,550.00	67.68	351.65	10,311.02	-522.43	-691.60	-518.92	10.00	10.00	0.00	
10,600.00	72.68	351.65	10,327.97	-475.91	-698.43	-472.37	10.00	10.00	0.00	
10,650.00	77.68	351.65	10,340.76	-428.10	-705.45	-424.52	10.00	10.00	0.00	
10,700.00	82.68	351.65	10,349.28	-379.37	-712.60	-375.76	10.00	10.00	0.00	
10,750.00	87.68	351.65	10,353.49	-330.09	-719.83	-326.44	10.00	10.00	0.00	
10,773.23	90.00	351.65	10,353.96	-307.12	-723.20	-303.45	10.00	10.00	0.00	
10,800.00	90.00	352.45	10,353.96	-280.60	-726.91	-276.92	3.00	0.00	3.00	
10,900.00	90.00	355.45	10,353.96	-181.17	-737.44	-177.43	3.00	0.00	3.00	
11,000.00	90.00	358.45	10,353.96	-81.32	-742.75	-77.56	3.00	0.00	3.00	
11,041.79	90.00	359.71	10,353.96	-39.54	-743.43	-35.77	3.00	0.00	3.00	
11,100.00	90.00	359.71	10,353.96	18.67	-743.72	22.44	0.00	0.00	0.00	
11,200.00	90.00	359.71	10,353.96	118.67	-744.23	122.44	0.00	0.00	0.00	
11,300.00	90.00	359.71	10,353.96	218.67	-744.75	222.44	0.00	0.00	0.00	
11,400.00	90.00	359.71	10,353.96	318.67	-745.26	322.44	0.00	0.00	0.00	
11,500.00	90.00	359.71	10,353.96	418.67	-745.77	422.44	0.00	0.00	0.00	



Pro Directional Survey Report



Company:	Marathon Oil	Local Co-ordinate Reference:	Well No. 4H
Project:	Eddy County, NM	TVD Reference:	Well @ 3024.50usft (GL: 2998' + KB: 26.5' (H&P498))
Site:	Kyle 34 WD Fed Com (4-9-22)	MD Reference:	Well @ 3024.50usft (GL: 2998' + KB: 26.5' (H&P498))
Well:	No. 4H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Prelim Plan B	Database:	WellPlanner1

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
11,600.00	90.00	359.71	10,353.96	518.66	-746.28	522.44	0.00	0.00	0.00
11,700.00	90.00	359.71	10,353.97	618.66	-746.79	622.44	0.00	0.00	0.00
11,800.00	90.00	359.71	10,353.97	718.66	-747.30	722.44	0.00	0.00	0.00
11,900.00	90.00	359.71	10,353.97	818.66	-747.82	822.44	0.00	0.00	0.00
12,000.00	90.00	359.71	10,353.97	918.66	-748.33	922.44	0.00	0.00	0.00
12,100.00	90.00	359.71	10,353.97	1,018.66	-748.84	1,022.44	0.00	0.00	0.00
12,200.00	90.00	359.71	10,353.97	1,118.66	-749.35	1,122.44	0.00	0.00	0.00
12,300.00	90.00	359.71	10,353.97	1,218.66	-749.86	1,222.44	0.00	0.00	0.00
12,400.00	90.00	359.71	10,353.97	1,318.65	-750.37	1,322.44	0.00	0.00	0.00
12,500.00	90.00	359.71	10,353.97	1,418.65	-750.89	1,422.44	0.00	0.00	0.00
12,600.00	90.00	359.71	10,353.97	1,518.65	-751.40	1,522.44	0.00	0.00	0.00
12,700.00	90.00	359.71	10,353.98	1,618.65	-751.91	1,622.44	0.00	0.00	0.00
12,800.00	90.00	359.71	10,353.98	1,718.65	-752.42	1,722.44	0.00	0.00	0.00
12,900.00	90.00	359.71	10,353.98	1,818.65	-752.93	1,822.44	0.00	0.00	0.00
13,000.00	90.00	359.71	10,353.98	1,918.65	-753.44	1,922.44	0.00	0.00	0.00
13,100.00	90.00	359.71	10,353.98	2,018.65	-753.96	2,022.44	0.00	0.00	0.00
13,200.00	90.00	359.71	10,353.98	2,118.64	-754.47	2,122.44	0.00	0.00	0.00
13,300.00	90.00	359.71	10,353.98	2,218.64	-754.98	2,222.44	0.00	0.00	0.00
13,400.00	90.00	359.71	10,353.98	2,318.64	-755.49	2,322.44	0.00	0.00	0.00
13,500.00	90.00	359.71	10,353.98	2,418.64	-756.00	2,422.44	0.00	0.00	0.00
13,600.00	90.00	359.71	10,353.98	2,518.64	-756.51	2,522.44	0.00	0.00	0.00
13,700.00	90.00	359.71	10,353.99	2,618.64	-757.03	2,622.44	0.00	0.00	0.00
13,800.00	90.00	359.71	10,353.99	2,718.64	-757.54	2,722.44	0.00	0.00	0.00
13,900.00	90.00	359.71	10,353.99	2,818.63	-758.05	2,822.44	0.00	0.00	0.00
14,000.00	90.00	359.71	10,353.99	2,918.63	-758.56	2,922.44	0.00	0.00	0.00
14,100.00	90.00	359.71	10,353.99	3,018.63	-759.07	3,022.44	0.00	0.00	0.00
14,200.00	90.00	359.71	10,353.99	3,118.63	-759.58	3,122.44	0.00	0.00	0.00
14,300.00	90.00	359.71	10,353.99	3,218.63	-760.09	3,222.44	0.00	0.00	0.00
14,400.00	90.00	359.71	10,353.99	3,318.63	-760.61	3,322.44	0.00	0.00	0.00
14,500.00	90.00	359.71	10,353.99	3,418.63	-761.12	3,422.44	0.00	0.00	0.00
14,600.00	90.00	359.71	10,353.99	3,518.63	-761.63	3,522.44	0.00	0.00	0.00
14,700.00	90.00	359.71	10,354.00	3,618.62	-762.14	3,622.44	0.00	0.00	0.00
14,800.00	90.00	359.71	10,354.00	3,718.62	-762.65	3,722.44	0.00	0.00	0.00
14,900.00	90.00	359.71	10,354.00	3,818.62	-763.16	3,822.44	0.00	0.00	0.00
15,000.00	90.00	359.71	10,354.00	3,918.62	-763.68	3,922.44	0.00	0.00	0.00
15,100.00	90.00	359.71	10,354.00	4,018.62	-764.19	4,022.44	0.00	0.00	0.00
15,147.32	90.00	359.71	10,354.00	4,065.94	-764.43	4,069.76	0.00	0.00	0.00

[Kyle34WD#4H]LTP/BHL



Pro Directional Survey Report



Company:	Marathon Oil	Local Co-ordinate Reference:	Well No. 4H
Project:	Eddy County, NM	TVD Reference:	Well @ 3024.50usft (GL: 2998' + KB: 26.5' (H&P498))
Site:	Kyle 34 WD Fed Com (4-9-22)	MD Reference:	Well @ 3024.50usft (GL: 2998' + KB: 26.5' (H&P498))
Well:	No. 4H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Prelim Plan B	Database:	WellPlanner1

Design Targets									
Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- hit/miss target	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)		
- Shape									
[Kyle34WD#4H]FTP	0.00	0.00	0.00	-644.32	-740.66	424,674.22	578,370.10	32.167293	-104.080062
- plan misses target center by 981.70usft at 0.00usft MD (0.00 TVD, 0.00 N, 0.00 E)									
- Point									
[Kyle34WD#4H]KOP	0.00	0.00	9,781.00	-874.00	-640.00	424,444.54	578,470.76	32.166661	-104.079738
- plan hits target center									
- Point									
[Kyle34WD#4H]LTP/BHI	0.00	0.00	10,354.0	4,065.94	-764.43	429,384.48	578,346.33	32.180242	-104.080103
			0						
- plan hits target center									
- Point									

Checked By: _____ Approved By: _____ Date: _____



Marathon Oil
Eddy County, NM
Kyle 34 WD Fed Com (4-9-22)
No. 4H
Prelim Plan B
GL: 2998' + KB: 26.5' (H&P498)

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

RKB Elevation: Well @ 3024.50usft (GL: 2998' + KB: 26.5' (H&P498))

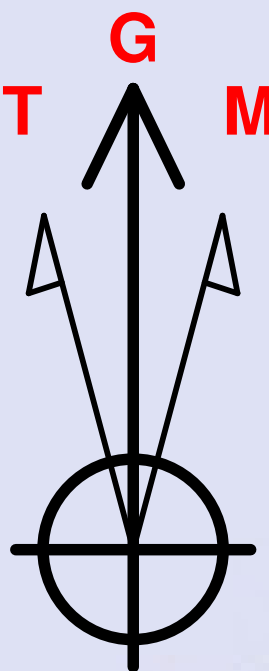
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	425318.54	579110.76	32.169059	-104.077663	

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	VSect
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	1200.00	0.00	0.00	1200.00	0.00	0.00	0.00	0.00
3	1700.00	10.00	216.21	1697.47	-35.11	-25.71	2.00	-34.98
4	7437.04	10.00	216.21	7347.34	-838.89	-614.29	0.00	-835.77
5	7937.04	0.00	0.00	7844.81	-874.00	-640.00	2.00	-870.75
6	9873.23	0.00	0.00	9781.00	-874.00	-640.00	0.00	-870.75
7	10773.23	90.00	351.65	10353.96	-307.12	-723.20	10.00	-303.45
8	11041.79	90.00	359.71	10353.96	-39.54	-743.43	3.00	-35.77
9	15147.32	90.00	359.71	10354.00	4065.94	-764.43	0.00	4069.76

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N/-S	+E/-W	Northing	Easting
[Kyle34WD#4H]FTP	0.00	-644.32	-740.66	424674.22	578370.10
[Kyle34WD#4H]KOP	9781.00	-874.00	-640.00	424444.54	578470.76
[Kyle34WD#4H]LTP/BHL	10354.00	4065.94	-764.43	429384.48	578346.33

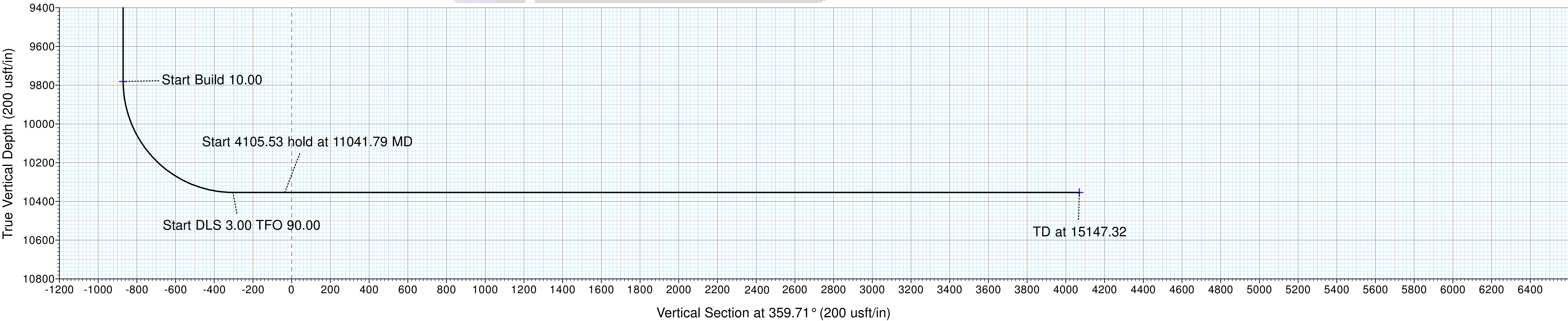


Azimuths to Grid North
True North: -0.14°
Magnetic North: 7.01°

Magnetic Field
Strength: 47934.6snT
Dip Angle: 59.92°
Date: 10/29/2018
Model: HDGM

Target Line: 10354' TVD @ 0° VS: 90° INC

Azimuth Corrections
Total Magnetic Corr. (M to G): 7.01°
Declination (M to T): 7.15° East



36" x 48"



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

COMMENTS

Action 27110

COMMENTS

Operator: MARATHON OIL PERMIAN LLC 5555 San Felipe St. Permian Regulatory Team Houston, TX77056		OGRID: 372098	Action Number: 27110	Action Type: FORM 3160-3
Created By kpickford	Comment KP GEO Review 5/10/2021		Comment Date 05/10/2021	

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1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 27110

CONDITIONS OF APPROVAL

Operator:		OGRID:	Action Number:	Action Type:
MARATHON OIL PERMIAN LLC	5555 San Felipe St.	372098	27110	FORM 3160-3
Permian Regulatory Team	Houston, TX77056			

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