

Form 3160-5
(June 2019)UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENTFORM APPROVED
OMB No. 1004-0137
Expires: October 31, 2021**SUNDRY NOTICES AND REPORTS ON WELLS**
Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.5. Lease Serial No. **NMNM138836**

6. If Indian, Allottee or Tribe Name

SUBMIT IN TRIPLICATE - Other instructions on page 2

1. Type of Well

☐ Oil Well ☒ Gas Well ☐ Other2. Name of Operator **MARATHON OIL PERMIAN LLC**3a. Address **990 TOWN & COUNTRY BLVD, HOUSTON, TX** 3b. Phone No. (include area code)
(713) 296-21134. Location of Well (Footage, Sec., T., R., M., or Survey Description)
SEC 20/T26S/R29E/NMP

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

8. Well Name and No. **MAZER RACKHAM 20 WD FED CO**9. API Well No. **3001553409**

10. Field and Pool or Exploratory Area

11. Country or Parish, State
EDDY/NM**12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT OR OTHER DATA**

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

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

Marathon Oil Permian respectfully requests approval to change the APD for the Mazer Rackham 20 WD Fed Com #2H as follows:

SHL: Approved: 288' FSL & 1510' FEL, Sec. 20, 26S, 29E

Proposed: 689' FSL & 1525' FEL, Sec. 20, 26S, 29E

BHL: Approved: 330' FNL & 330' FEL, Sec. 20, 26S, 29E

Proposed: 330' FNL & 1650' FEL, Sec. 17, 26S, 29E

Attached drill plans include changes to the casing and cement design for the well.

Well Name & # change: From: Mazer Rackham 20 WD Fed Com #2H to Blue Ridge WC Federal Com 702H.

Please see attached supporting documents: C102, Directional Plans, Drill Plans, Well Pad diagram. (Well Pad expansion requested sundry:

Continued on page 3 additional information

14. I hereby certify that the foregoing is true and correct. Name (Printed/Typed) TERRI STATHEM / Ph: (713) 296-2113	Title Regulatory Compliance Manager
Signature (Electronic Submission)	Date 12/01/2023

THE SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by CHRISTOPHER WALLS / Ph: (575) 234-2234 / Approved	Title Petroleum Engineer	Date 12/15/2023
Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.	Office CARLSBAD	

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

(Instructions on page 2)

GENERAL INSTRUCTIONS

This form is designed for submitting proposals to perform certain well operations and reports of such operations when completed as indicated on Federal and Indian lands pursuant to applicable Federal law 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, are either shown below, will be issued by or may be obtained from the local Federal office.

SPECIFIC INSTRUCTIONS

Item 4 - Locations on Federal or Indian land should be described in accordance with Federal requirements. Consult the local Federal office for specific instructions.

Item 13: Proposals to abandon a well and subsequent reports of abandonment should include such special information as is required by the local Federal office. In addition, such proposals and reports should include reasons for the abandonment; data on any former or present productive zones or other zones with present significant fluid contents not sealed off by cement or otherwise; depths (top and bottom) and method of placement of cement plugs; mud or other material placed below, between and above plugs; amount, size, method of parting of any casing, liner or tubing pulled and the depth to the top of any tubing left in the hole; method of closing top of well and date well site conditioned for final inspection looking for approval of the abandonment. 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 the 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., 351 et seq., 25 U.S.C. 396; 43 CFR 3160.

PRINCIPAL PURPOSE: The information is used to: (1) Evaluate, when appropriate, approve applications, and report completion of subsequent well operations, on a Federal or Indian lease; and (2) document for administrative use, information for the management, disposal and use of National Resource lands and resources, such as: (a) evaluating the equipment and procedures to be used during a proposed subsequent well operation and reviewing the completed well operations for compliance with the approved plan; (b) requesting and granting approval to perform those actions covered by 43 CFR 3162.3-2, 3162.3-3, and 3162.3-4; (c) reporting the beginning or resumption of production, as required by 43 CFR 3162.4-1(c) and (d) analyzing future applications to drill or modify operations in light of data obtained and methods used.

ROUTINE USES: Information from the record and/or the record will be transferred to appropriate Federal, State, local or foreign agencies, when relevant to civil, criminal or regulatory investigations or prosecutions in connection with congressional inquiries or to consumer reporting agencies to facilitate collection of debts owed the Government.

EFFECT OF NOT PROVIDING THE INFORMATION: Filing of this notice and report and disclosure of the information is mandatory for those subsequent well operations specified in 43 CFR 3162.3-2, 3162.3-3, 3162.3-4.

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

The BLM collects this information to evaluate proposed and/or completed subsequent well operations on Federal or Indian oil and gas leases.

Response to this request is mandatory.

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 Collection Clearance Officer (WO-630), 1849 C St., N.W., Mail Stop 401 LS, Washington, D.C. 20240

Additional Information

Additional Remarks

2753371

Location of Well

0. SHL: SWSE / 288 FSL / 1510 FEL / TWSP: 26S / RANGE: 29E / SECTION: 20 / LAT: 32.0217661 / LONG: -104.0028017 (TVD: 0 feet, MD: 0 feet)

PPP: SESE / 330 FSL / 330 FEL / TWSP: 26S / RANGE: 29E / SECTION: 20 / LAT: 32.0220477 / LONG: -103.9990033 (TVD: 10597 feet, MD: 10743 feet)

PPP: NESE / 2610 FSL / 330 FEL / TWSP: 26S / RANGE: 29E / SECTION: 20 / LAT: 32.0283124 / LONG: -103.9992648 (TVD: 10761 feet, MD: 13146 feet)

BHL: NENE / 330 FNL / 330 FEL / TWSP: 26S / RANGE: 29E / SECTION: 20 / LAT: 32.0346523 / LONG: -103.999293 (TVD: 10753 feet, MD: 15439 feet)

CONFIDENTIAL

Well Name: Blue Ridge WC FED COM	Well Location: T26S / R29E / SEC 20 / SWSE /	County or Parish/State:
Well Number: 702H	Type of Well: CONVENTIONAL GAS WELL	Allottee or Tribe Name:
Lease Number: NMNM138836	Unit or CA Name:	Unit or CA Number:
US Well Number: 3001553409	Well Status: Approved Application for Permit to Drill	Operator: MARATHON OIL PERMIAN LLC

Notice of Intent

Sundry ID: 2763991

Type of Submission: Notice of Intent

Type of Action: APD Change

Date Sundry Submitted: 12/01/2023

Time Sundry Submitted: 06:26

Date proposed operation will begin: 12/06/2023

Procedure Description: Marathon Oil Permian respectfully requests approval to change the APD for the Mazer Rackham 20 WD Fed Com #2H as follows: SHL: Approved: 288' FSL & 1510' FEL, Sec. 20, 26S, 29E Proposed: 689' FSL & 1525' FEL, Sec. 20, 26S, 29E BHL: Approved: 330' FNL & 330' FEL, Sec. 20, 26S, 29E Proposed: 330' FNL & 1650' FEL, Sec. 17, 26S, 29E Attached drill plans include changes to the casing and cement design for the well. Well Name & # change: From: Mazer Rackham 20 WD Fed Com #2H to Blue Ridge WC Federal Com 702H. Please see attached supporting documents: C102, Directional Plans, Drill Plans, Well Pad diagram. (Well Pad expansion requested sundry: 2753371

NOI Attachments

Procedure Description

Blue_Ridge_WC_Federal_Com_702H_Drill_Plan_20231201062522.pdf

Blue_Ridge_WC_Federal_Com_702H_Dir_Plan_20231201062512.pdf

Blue_Ridge_WC_Federal_Com_702H_AC_20231201062457.pdf

BLUE_RIDGE_FED_Well_pad_diagram_20231201062448.pdf

BLUE_RIDGE_WC_FEDERAL_COM_702H_C102_20231201062434.pdf

Well Name: Blue Ridge WC	FED COM	Well Location: T26S / R29E / SEC 20 / SWSE /	County or Parish/State:
Well Number: 702H	Type of Well: CONVENTIONAL GAS WELL	Allottee or Tribe Name:	
Lease Number: NMNM138836	Unit or CA Name:	Unit or CA Number:	
US Well Number: 3001553409	Well Status: Approved Application for Permit to Drill	Operator: MARATHON OIL PERMIAN LLC	

Conditions of Approval

Specialist Review

Blue_Ridge_WC_Fed_Com_701H_COA_20231204033726.pdf

Operator

I certify that the foregoing is true and correct. 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. Electronic submission of Sundry Notices through this system satisfies regulations requiring a

Operator Electronic Signature: TERRI STATHEM

Signed on: DEC 01, 2023 06:25 AM

Name: MARATHON OIL PERMIAN LLC

Title: Regulatory Compliance Manager

Street Address: 990 TOWN & COUNTRY BLVD

City: HOUSTON

State: TX

Phone: (713) 296-2113

Email address: TSTATHEM@MARATHONOIL.COM

Field

Representative Name:

Street Address:

City:

State:

Zip:

Phone:

Email address:

BLM Point of Contact

BLM POC Name: CHRISTOPHER WALLS

BLM POC Title: Petroleum Engineer

BLM POC Phone: 5752342234

BLM POC Email Address: cwalls@blm.gov

Disposition: Approved

Disposition Date: 12/14/2023

Signature: Chris Walls

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 30-015-53409	² Pool Code 98220	³ Pool Name PURPLE SAGE; WOLFCAMP (GAS)
⁴ Property Code	⁵ Property Name BLUE RIDGE WC FEDERAL COM	⁶ Well Number 702H
⁹ OGRID No. 372098	⁸ Operator Name MARATHON OIL PERMIAN LLC	⁷ Elevation 2899'

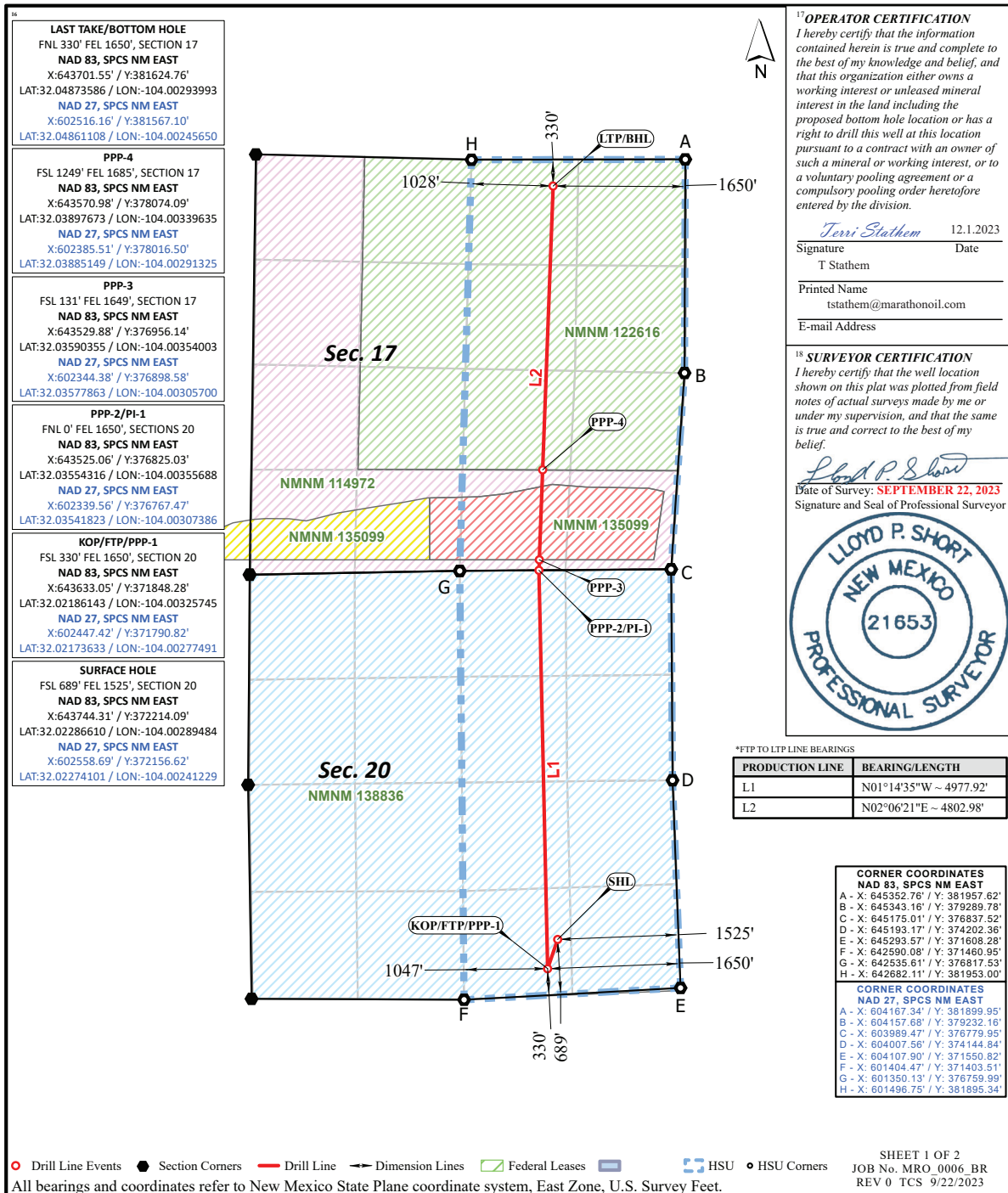
¹⁰ Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
O	20	26S	29E		689'	SOUTH	1525'	EAST	EDDY

¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
B	17	26S	29E		330'	NORTH	1650'	EAST	EDDY
¹² Dedicated Acres 640.00	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.						

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



MARATHON OIL PERMIAN, LLC.
DRILLING AND OPERATIONS PLAN



WELL NAME & NUMBER:

BLUE RIDGE BS FEDERAL COM 702H

LOCATION:

SECTION **20** TOWNSHIP **26S** RANGE **29E**
EDDY COUNTY, **NEW MEXICO**

Section 1:**GEOLOGICAL FORMATIONS**

Name of Surface Formation: Permian
 Elevation: 2899 feet

Estimated Tops of Important Geological Markers:

Formation	TVD (ft)	MD (ft)	Elevation (ft SS)	Lithologies	Mineral Resources	Producing Formation?
Rustler	391	418	2508	Anhydrite	Brine	No
Salado	813	840	2086	Salt/Anhydrite	Brine	No
Castile	1059	1086	1840	Salt/Anhydrite	Brine	No
Base of Salt (BX)	2617	2644	282	Salt/Anhydrite	Brine	No
Lamar	2805	2832	94	Sandstone/Shale	None	No
Bell Canyon	2860	2887	39	Sandstone	Oil	No
Cherry Canyon	3925	3952	-1026	Sandstone	Oil	No
Brushy Canyon	5015	5042	-2116	Sandstone	Oil	No
Bone Spring Lime	6580	6607	-3681	Limestone	None	No
Upper Avalon Shale	6865	6892	-3966	Shale	Oil	Yes
1st Bone Spring Sand	7479	7506	-4580	Sandstone	Oil	Yes
2nd Bone Spring Carbonate	7762	7789	-4863	Limestone/Shale	None	No
2nd Bone Spring Sand	8258	8285	-5359	Sandstone	Oil	Yes
3rd Bone Spring Carbonate	8660	8687	-5761	Limestone	Oil	No
3rd Bone Spring Sand	9356	9383	-6457	Sandstone	Oil	Yes
Wolfcamp	9707	9734	-6808	Sandstone/Shale/Carbonates	Natural Gas / Oil	Yes
Wolfcamp A	9845	9872	-6946	Sandstone/Shale/Carbonates	Natural Gas / Oil	Yes
Wolfcamp B	10182	10209	-7283	Sandstone/Shale/Carbonates	Natural Gas / Oil	No
Wolfcamp C	10495	10522	-7596	Sandstone/Shale/Carbonates	Natural Gas / Oil	No
Wolfcamp D	11019	11046	-8120	Sandstone/Shale/Carbonates	Natural Gas / Oil	No

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 the intermediate hole, 10,000psi for the BOP Stacking before drilling the 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.

Marathon Oil Permian LLC.

Drilling & Operations Plan - Page 2 of 4

Section 3:**CASING PROGRAM**

String Type	Hole Size	Casing Size	Top Set MD	Bottom Set MD	Top Set TVD	Bottom Set TVD	Top Set MSL	Bottom Set MSL	Weight (lbs/ft)	Grade	Joint Type	Collapse SF	Burst SF	Joint SF Type	Joint SF	Body SF Type	Body SF
Surface	17.5	13.375	0	488	0	461	2899	2438	54.5	J55	BTC	5.22	1.81	BUOY	4.52	BUOY	4.52
Intermediate	12.25	9.625	0	9182	0	9152	2899	-6253	40	P110HC	BTC	1.20	1.42	BUOY	2.44	BUOY	2.44
Production	8.75	5.5	0	19390	0	9825	2899	-6926	23	P110HC	TLW	2.53	1.26	BUOY	2.22	BUOY	2.22
All casing strings will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.h												Safety Factors will Meet or Exceed					

Casing Condition: New

Casing Standard: API

Tapered String? No

Yes or No

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

Section 4:**CEMENT PROGRAM**

String Type	Lead/Tail	Top MD	Bottom MD	Quantity (sks)	Yield (ft³/sks)	Density (ppg)	Slurry Volume (ft³)	Excess (%)	Cement Type	Additives
Surface	Lead	0	338	161	2.12	12.5	342	25	Class C	Extender, Accelerator, LCM
Surface	Tail	338	488	99	1.32	14.8	130	25	Class C	Accelerator
Intermediate	Lead	0	8682	1573	2.18	12.4	3429	25	Class C	Extender, Accelerator, LCM
Intermediate	Tail	8682	9182	147	1.33	14.8	196	25	Class C	Retarder
Production	Tail	8882	19390	2016	1.68	13	3386	25	Class H	Retarder, Extender, Fluid Loss, Suspension Agent

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

Pilot Hole? No

Plugging Procedure for Pilot Hole: N/A

Pilot Hole Depth: 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

Marathon Oil Permian LLC.

Drilling & Operations Plan - Page 3 of 4

Section 5:**CIRCULATING MEDIUM**

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

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

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

Describe the mud monitoring system utilized:

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

Circulating Medium Table:

Top Depth	Bottom Depth	Mud Type	Min. Weight (ppg)	Max Weight (ppg)
0	488	Water Based Mud	8.4	8.8
488	9182	Brine or Oil Based Mud	9.2	10.2
9182	19390	Oil Based Mud	10.5	12.5

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

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

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

GR while drilling from Intermediate casing shoe to TD.

Coring operation description for the well:

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

Section 7:**ANTICIPATED PRESSURE**

Anticipated Bottom Hole Pressure: 6386 PSI
Anticipated Bottom Hole Temperature: 195 °F
Anticipated Abnormal Pressure? No
Anticipated Abnormal Temperature? No

Potential Hazards:

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

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

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

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

Anticipated Starting Date and Duration of Operations:

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



MarathonOil Corporation.

Company: Marathon Oil
Well: Blue Ridge WC Federal Com 702H
County: Eddy County, New Mexico (NAD 27)
Rig: Precision 580
Wellbore: Wellbore #1
Design: Design #1
Date: 16:58, October 30 2023

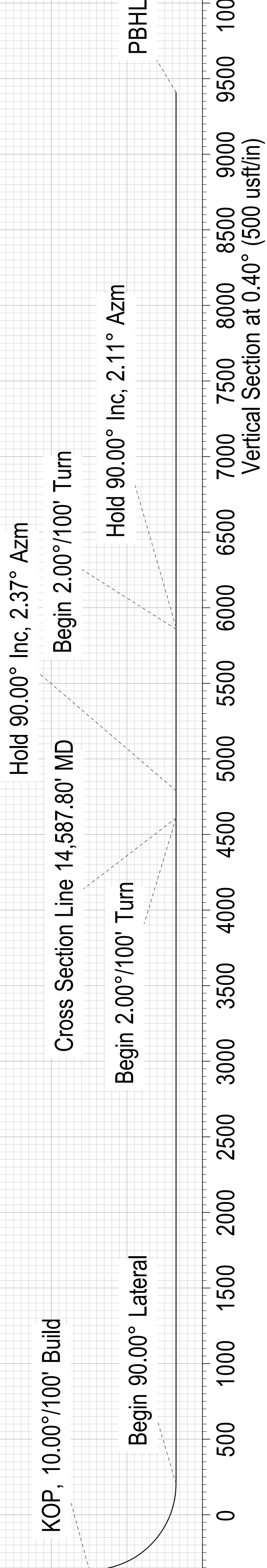
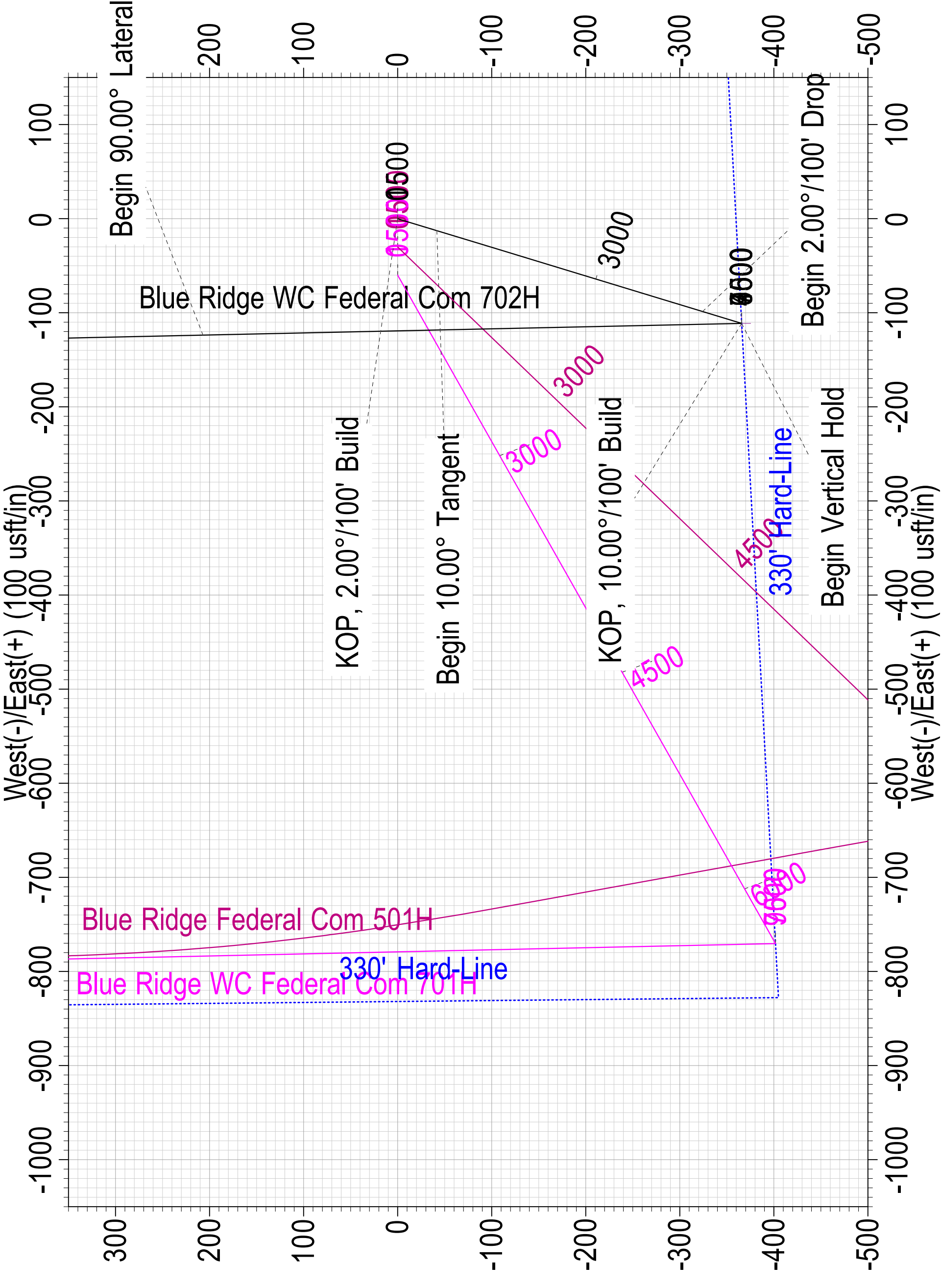
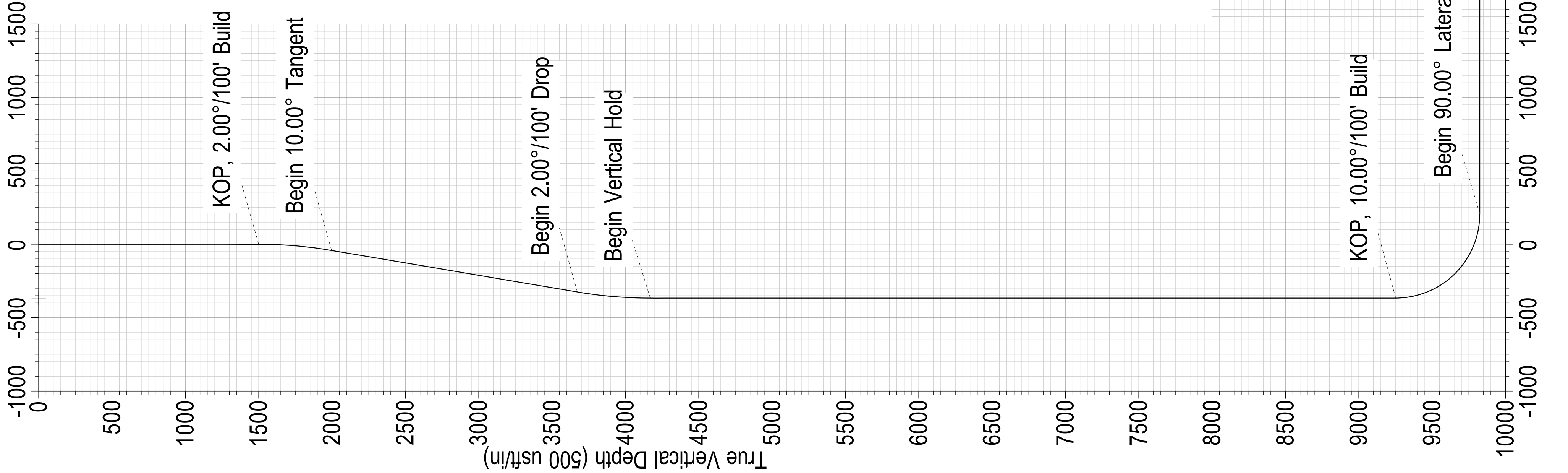
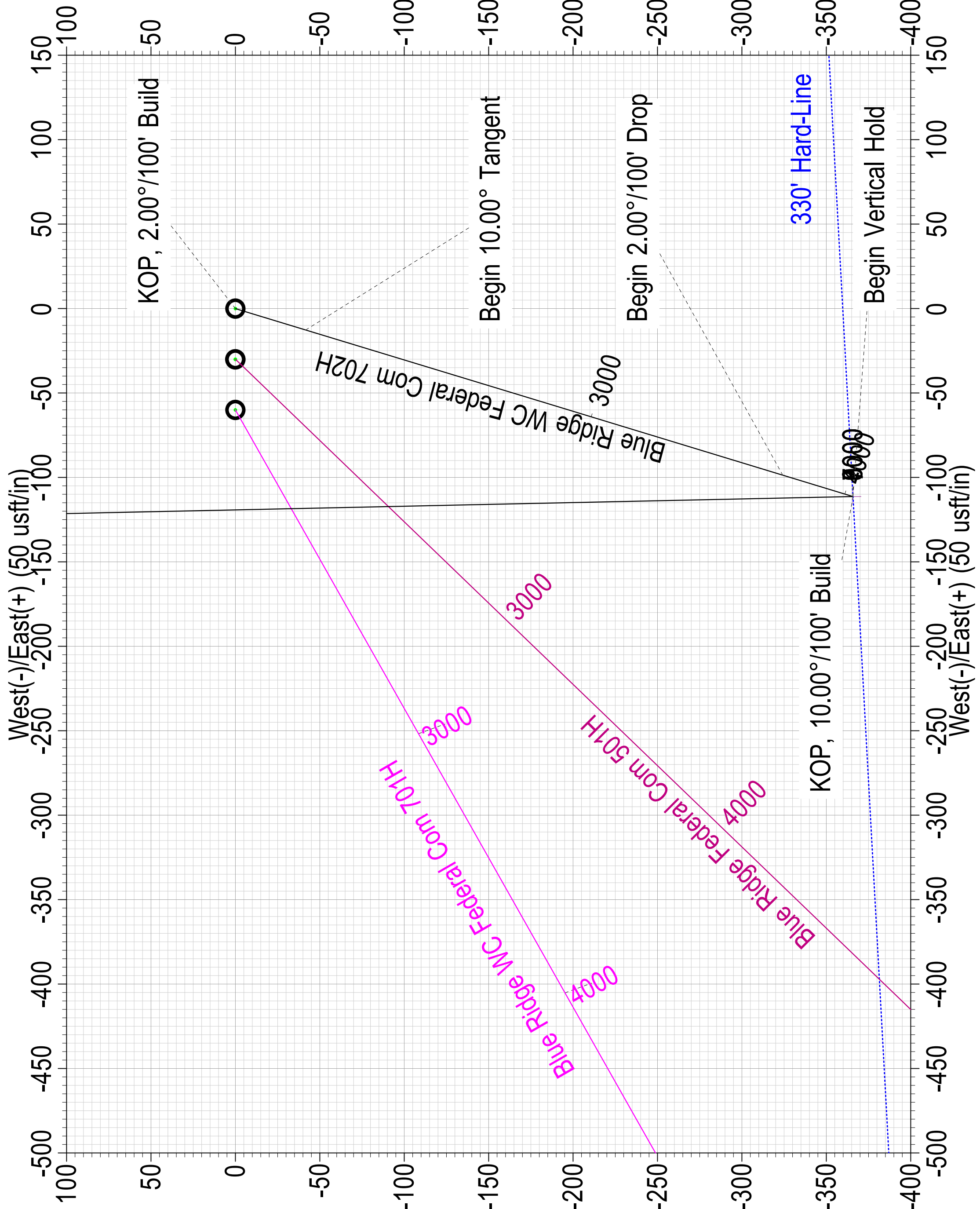
Geodetic System: US State Plane 1927 (Exact solution)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: New Mexico East 3001
System Datum: Mean Sea Level

WELL DETAILS: Blue Ridge WC Federal Com 702H

GL @	2899.00	WELL @ 2922.50usft (Precision 580)	Latitude	Longitude
+N/S	+E/W	Northing	Easting	104° 0' 8.684 W
0.00	0.00	372156.62	602558.69	

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Annotation
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	KOP, 2.00°/100' Build
1500.00	0.00	0.00	1500.00	0.00	0.00	0.00	0.000	0.00	Begin 10.00° Tangent
1999.91	10.00	196.92	1997.37	-41.62	2.00	196.919	-41.71	0.00	Begin 2.00°/100' Drop
3700.99	10.00	196.92	3672.63	-324.18	0.00	0.000	-324.86	0.00	Begin Vertical Hold
4200.90	0.00	0.00	4170.00	-365.80	-111.27	2.00	180.000	-366.57	KOP, 10.00°/100' Build
9282.94	0.00	0.00	9252.04	-365.80	-111.27	0.00	0.000	-366.57	KOP, 10.00°/100' Lateral
10182.94	90.00	358.76	9825.00	207.02	-123.68	10.00	358.758	206.15	Begin 90.00° Tangent
14537.81	90.00	358.76	9825.00	4610.85	-219.13	0.00	0.000	4609.21	Cross Section Line 14,587.80' MD
14768.25	90.00	2.37	9825.00	4791.26	-217.36	2.00	90.000	4789.62	Hold 90.00° Inc, 2.37° Azm
15837.78	90.00	2.37	9825.00	5859.88	-173.18	0.00	0.000	5858.53	Begin 2.00°/100' Turn
15850.81	90.00	2.11	9825.00	5872.89	-172.67	2.00	-90.000	5871.54	Hold 90.00° Inc, 2.11° Azm
19390.79	90.00	2.11	9825.00	9410.48	-42.53	0.00	0.000	9409.95	PBHL

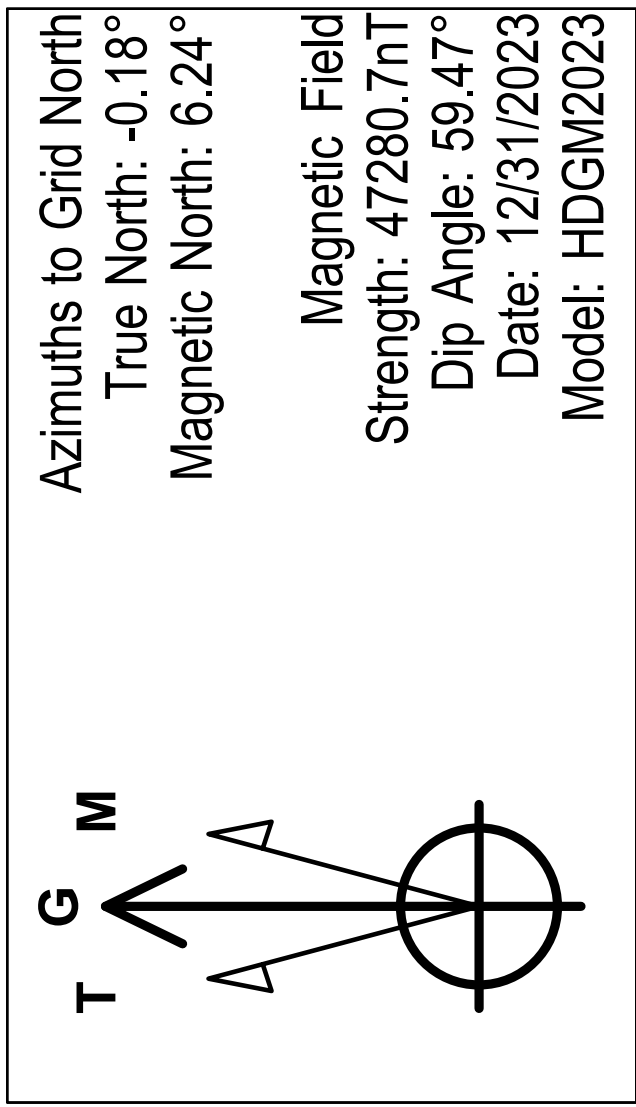


DESIGN TARGET DETAILS

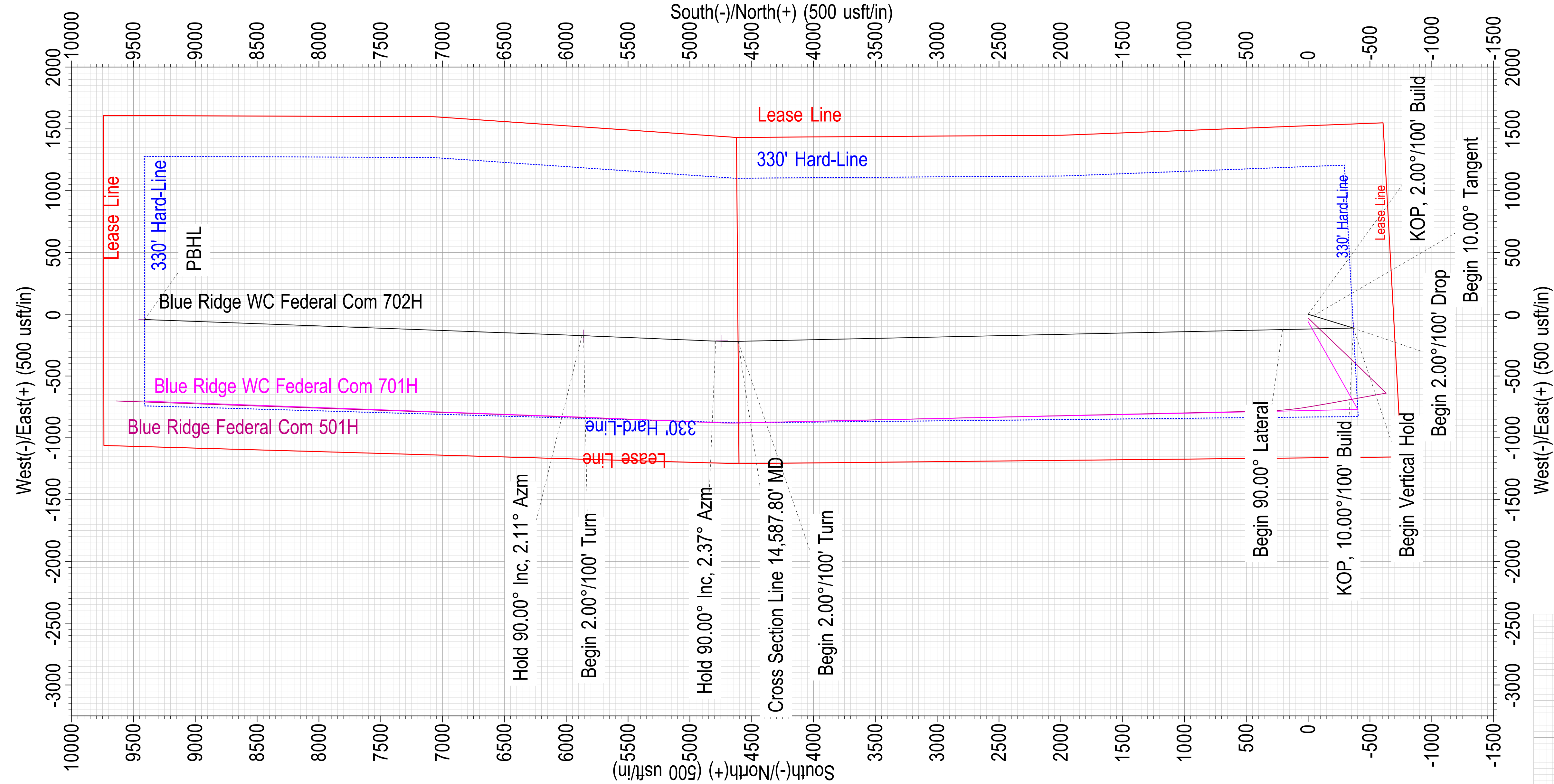
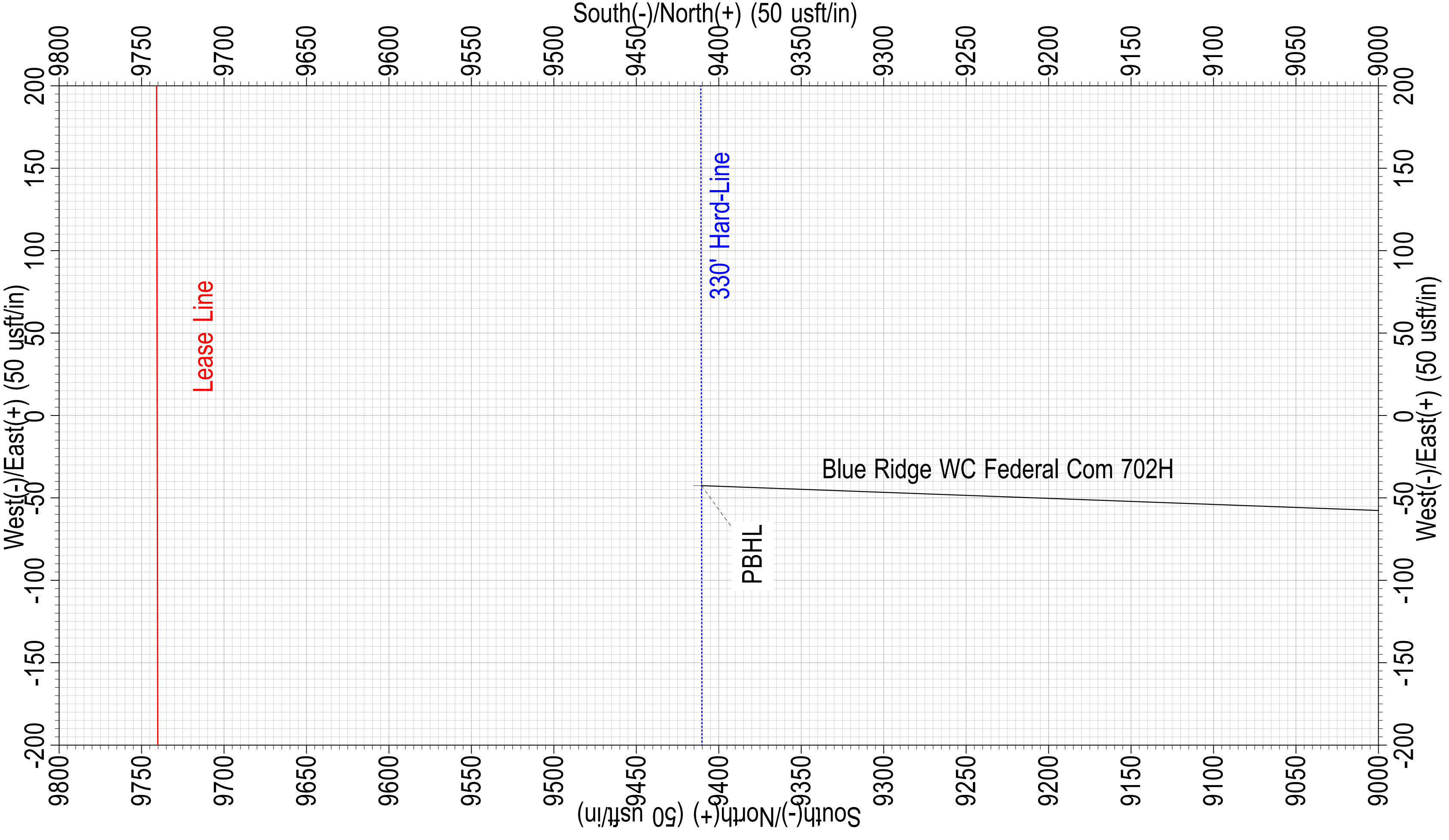
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
KOP/ITP/PPP-1_B.R.F.C. 702H	0.00	-365.80	-111.27	371790.82	602447.42	32° 1' 18.251 N	104° 0' 9.990 W
LTP/PBHL_B.R.F.C. 702H	9825.00	9410.48	-42.53	381567.10	602516.16	32° 2' 55.000 N	104° 0' 8.843 W
PPP-2/PL-1_B.R.F.C. 702H	9825.00	4610.85	-219.13	376767.47	602339.56	32° 2' 7.506 N	104° 0' 11.066 W
PPP-3_B.R.F.C. 702H	9825.00	4741.96	-214.31	376898.58	602344.38	32° 2' 8.803 N	104° 0' 11.005 W
PPP-4_B.R.F.C. 702H	9825.00	5859.88	-173.18	378016.50	602385.51	32° 2' 19.865 N	104° 0' 10.488 W

SURVEY PROGRAM

Depth From	Depth To	Survey/Plan	Tool
0.00	19390.79	Design #1 (Wellbore #1)	MWD+IFR1+FDIR



To convert a Magnetic Direction to a Grid Direction, Add 6.241°
To convert a Magnetic Direction to a True Direction, Add 6.417° East
To convert a True Direction to a Grid Direction, Subtract 0.175°





Marathon Oil

**Eddy County, New Mexico (NAD 27)
Blue Ridge (501H, 701H, 702H)
Blue Ridge WC Federal Com 702H**

Wellbore #1

Plan: Design #1

Standard Planning Report

31 October, 2023





MS Directional Planning Report



Database:	EDM 5000.15 Conroe DB	Local Co-ordinate Reference:	Well Blue Ridge WC Federal Com 702H
Company:	Marathon Oil	TVD Reference:	WELL @ 2922.50usft (Precision 580)
Project:	Eddy County, New Mexico (NAD 27)	MD Reference:	WELL @ 2922.50usft (Precision 580)
Site:	Blue Ridge (501H, 701H, 702H)	North Reference:	Grid
Well:	Blue Ridge WC Federal Com 702H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Project	Eddy County, New Mexico (NAD 27)		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Site	Blue Ridge (501H, 701H, 702H)		
Site Position:		Northing:	372,156.62 usft
From:	Map	Easting:	602,528.68 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 1' 21.869 N
		Longitude:	104° 0' 9.033 W

Well	Blue Ridge WC Federal Com 702H					
Well Position	+N/-S	0.00 usft	Northing:	372,156.62 usft	Latitude:	32° 1' 21.868 N
	+E/-W	0.00 usft	Easting:	602,558.69 usft	Longitude:	104° 0' 8.684 W
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	2,899.00 usft
Grid Convergence:	0.175 °					

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM2023	12/31/2023	6.417	59.467	47,280.70

Design	Design #1				
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	0.40	

Plan Survey Tool Program	Date	10/30/2023			
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks	
1	0.00	19,390.79	Design #1 (Wellbore #1)	MWD+IFR1+FDIR	
				OWSG MWD + IFR1 + FDIR	



MS Directional Planning Report



Database:	EDM 5000.15 Conroe DB	Local Co-ordinate Reference:	Well Blue Ridge WC Federal Com 702H
Company:	Marathon Oil	TVD Reference:	WELL @ 2922.50usft (Precision 580)
Project:	Eddy County, New Mexico (NAD 27)	MD Reference:	WELL @ 2922.50usft (Precision 580)
Site:	Blue Ridge (501H, 701H, 702H)	North Reference:	Grid
Well:	Blue Ridge WC Federal Com 702H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

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	
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.000	
1,999.91	10.00	196.92	1,997.37	-41.62	-12.66	2.00	2.00	0.00	196.919	
3,700.99	10.00	196.92	3,672.63	-324.18	-98.61	0.00	0.00	0.00	0.000	
4,200.90	0.00	0.00	4,170.00	-365.80	-111.27	2.00	-2.00	0.00	180.000	
9,282.94	0.00	0.00	9,252.04	-365.80	-111.27	0.00	0.00	0.00	0.000	
10,182.94	90.00	358.76	9,825.00	207.02	-123.68	10.00	10.00	0.00	358.758	
14,587.80	90.00	358.76	9,825.00	4,610.85	-219.13	0.00	0.00	0.00	0.000	PPP-2/PI-1_B.R.F.C
14,768.25	90.00	2.37	9,825.00	4,791.26	-217.36	2.00	0.00	2.00	90.000	
15,837.78	90.00	2.37	9,825.00	5,859.88	-173.18	0.00	0.00	0.00	0.000	PPP-4_B.R.F.C. 70
15,850.81	90.00	2.11	9,825.00	5,872.89	-172.67	2.00	0.00	-2.00	-90.000	
19,390.79	90.00	2.11	9,825.00	9,410.48	-42.53	0.00	0.00	0.00	0.000	LTP/PBHL_B.R.F.C



MS Directional Planning Report



Database:	EDM 5000.15 Conroe DB	Local Co-ordinate Reference:	Well Blue Ridge WC Federal Com 702H
Company:	Marathon Oil	TVD Reference:	WELL @ 2922.50usft (Precision 580)
Project:	Eddy County, New Mexico (NAD 27)	MD Reference:	WELL @ 2922.50usft (Precision 580)
Site:	Blue Ridge (501H, 701H, 702H)	North Reference:	Grid
Well:	Blue Ridge WC Federal Com 702H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

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
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
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
KOP, 2.00°/100' Build									
1,600.00	2.00	196.92	1,599.98	-1.67	-0.51	-1.67	2.00	2.00	0.00
1,700.00	4.00	196.92	1,699.84	-6.68	-2.03	-6.69	2.00	2.00	0.00
1,800.00	6.00	196.92	1,799.45	-15.01	-4.57	-15.05	2.00	2.00	0.00
1,900.00	8.00	196.92	1,898.70	-26.67	-8.11	-26.73	2.00	2.00	0.00
1,999.91	10.00	196.92	1,997.37	-41.62	-12.66	-41.71	2.00	2.00	0.00
Begin 10.00° Tangent									
2,100.00	10.00	196.92	2,095.95	-58.25	-17.72	-58.37	0.00	0.00	0.00
2,200.00	10.00	196.92	2,194.43	-74.86	-22.77	-75.02	0.00	0.00	0.00
2,300.00	10.00	196.92	2,292.91	-91.47	-27.82	-91.66	0.00	0.00	0.00
2,400.00	10.00	196.92	2,391.39	-108.08	-32.88	-108.31	0.00	0.00	0.00
2,500.00	10.00	196.92	2,489.87	-124.69	-37.93	-124.95	0.00	0.00	0.00
2,600.00	10.00	196.92	2,588.35	-141.30	-42.98	-141.60	0.00	0.00	0.00
2,700.00	10.00	196.92	2,686.83	-157.91	-48.03	-158.24	0.00	0.00	0.00
2,800.00	10.00	196.92	2,785.32	-174.52	-53.09	-174.89	0.00	0.00	0.00
2,900.00	10.00	196.92	2,883.80	-191.13	-58.14	-191.53	0.00	0.00	0.00
3,000.00	10.00	196.92	2,982.28	-207.74	-63.19	-208.18	0.00	0.00	0.00
3,100.00	10.00	196.92	3,080.76	-224.35	-68.24	-224.82	0.00	0.00	0.00
3,200.00	10.00	196.92	3,179.24	-240.96	-73.30	-241.47	0.00	0.00	0.00
3,300.00	10.00	196.92	3,277.72	-257.57	-78.35	-258.11	0.00	0.00	0.00
3,400.00	10.00	196.92	3,376.20	-274.18	-83.40	-274.76	0.00	0.00	0.00
3,500.00	10.00	196.92	3,474.69	-290.79	-88.45	-291.40	0.00	0.00	0.00
3,600.00	10.00	196.92	3,573.17	-307.40	-93.51	-308.05	0.00	0.00	0.00
3,700.99	10.00	196.92	3,672.63	-324.18	-98.61	-324.86	0.00	0.00	0.00
Begin 2.00°/100' Drop									
3,800.00	8.02	196.92	3,770.41	-339.01	-103.12	-339.72	2.00	-2.00	0.00
3,900.00	6.02	196.92	3,869.65	-350.70	-106.68	-351.43	2.00	-2.00	0.00
4,000.00	4.02	196.92	3,969.26	-359.06	-109.22	-359.82	2.00	-2.00	0.00
4,100.00	2.02	196.92	4,069.12	-364.10	-110.75	-364.86	2.00	-2.00	0.00
4,200.90	0.00	0.00	4,170.00	-365.80	-111.27	-366.57	2.00	-2.00	0.00
Begin Vertical Hold									
4,300.00	0.00	0.00	4,269.10	-365.80	-111.27	-366.57	0.00	0.00	0.00
4,400.00	0.00	0.00	4,369.10	-365.80	-111.27	-366.57	0.00	0.00	0.00
4,500.00	0.00	0.00	4,469.10	-365.80	-111.27	-366.57	0.00	0.00	0.00
4,600.00	0.00	0.00	4,569.10	-365.80	-111.27	-366.57	0.00	0.00	0.00
4,700.00	0.00	0.00	4,669.10	-365.80	-111.27	-366.57	0.00	0.00	0.00
4,800.00	0.00	0.00	4,769.10	-365.80	-111.27	-366.57	0.00	0.00	0.00
4,900.00	0.00	0.00	4,869.10	-365.80	-111.27	-366.57	0.00	0.00	0.00



MS Directional Planning Report



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Company:	Marathon Oil	TVD Reference:	WELL @ 2922.50usft (Precision 580)
Project:	Eddy County, New Mexico (NAD 27)	MD Reference:	WELL @ 2922.50usft (Precision 580)
Site:	Blue Ridge (501H, 701H, 702H)	North Reference:	Grid
Well:	Blue Ridge WC Federal Com 702H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

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)
5,000.00	0.00	0.00	4,969.10	-365.80	-111.27	-366.57	0.00	0.00	0.00
5,100.00	0.00	0.00	5,069.10	-365.80	-111.27	-366.57	0.00	0.00	0.00
5,200.00	0.00	0.00	5,169.10	-365.80	-111.27	-366.57	0.00	0.00	0.00
5,300.00	0.00	0.00	5,269.10	-365.80	-111.27	-366.57	0.00	0.00	0.00
5,400.00	0.00	0.00	5,369.10	-365.80	-111.27	-366.57	0.00	0.00	0.00
5,500.00	0.00	0.00	5,469.10	-365.80	-111.27	-366.57	0.00	0.00	0.00
5,600.00	0.00	0.00	5,569.10	-365.80	-111.27	-366.57	0.00	0.00	0.00
5,700.00	0.00	0.00	5,669.10	-365.80	-111.27	-366.57	0.00	0.00	0.00
5,800.00	0.00	0.00	5,769.10	-365.80	-111.27	-366.57	0.00	0.00	0.00
5,900.00	0.00	0.00	5,869.10	-365.80	-111.27	-366.57	0.00	0.00	0.00
6,000.00	0.00	0.00	5,969.10	-365.80	-111.27	-366.57	0.00	0.00	0.00
6,100.00	0.00	0.00	6,069.10	-365.80	-111.27	-366.57	0.00	0.00	0.00
6,200.00	0.00	0.00	6,169.10	-365.80	-111.27	-366.57	0.00	0.00	0.00
6,300.00	0.00	0.00	6,269.10	-365.80	-111.27	-366.57	0.00	0.00	0.00
6,400.00	0.00	0.00	6,369.10	-365.80	-111.27	-366.57	0.00	0.00	0.00
6,500.00	0.00	0.00	6,469.10	-365.80	-111.27	-366.57	0.00	0.00	0.00
6,600.00	0.00	0.00	6,569.10	-365.80	-111.27	-366.57	0.00	0.00	0.00
6,700.00	0.00	0.00	6,669.10	-365.80	-111.27	-366.57	0.00	0.00	0.00
6,800.00	0.00	0.00	6,769.10	-365.80	-111.27	-366.57	0.00	0.00	0.00
6,900.00	0.00	0.00	6,869.10	-365.80	-111.27	-366.57	0.00	0.00	0.00
7,000.00	0.00	0.00	6,969.10	-365.80	-111.27	-366.57	0.00	0.00	0.00
7,100.00	0.00	0.00	7,069.10	-365.80	-111.27	-366.57	0.00	0.00	0.00
7,200.00	0.00	0.00	7,169.10	-365.80	-111.27	-366.57	0.00	0.00	0.00
7,300.00	0.00	0.00	7,269.10	-365.80	-111.27	-366.57	0.00	0.00	0.00
7,400.00	0.00	0.00	7,369.10	-365.80	-111.27	-366.57	0.00	0.00	0.00
7,500.00	0.00	0.00	7,469.10	-365.80	-111.27	-366.57	0.00	0.00	0.00
7,600.00	0.00	0.00	7,569.10	-365.80	-111.27	-366.57	0.00	0.00	0.00
7,700.00	0.00	0.00	7,669.10	-365.80	-111.27	-366.57	0.00	0.00	0.00
7,800.00	0.00	0.00	7,769.10	-365.80	-111.27	-366.57	0.00	0.00	0.00
7,900.00	0.00	0.00	7,869.10	-365.80	-111.27	-366.57	0.00	0.00	0.00
8,000.00	0.00	0.00	7,969.10	-365.80	-111.27	-366.57	0.00	0.00	0.00
8,100.00	0.00	0.00	8,069.10	-365.80	-111.27	-366.57	0.00	0.00	0.00
8,200.00	0.00	0.00	8,169.10	-365.80	-111.27	-366.57	0.00	0.00	0.00
8,300.00	0.00	0.00	8,269.10	-365.80	-111.27	-366.57	0.00	0.00	0.00
8,400.00	0.00	0.00	8,369.10	-365.80	-111.27	-366.57	0.00	0.00	0.00
8,500.00	0.00	0.00	8,469.10	-365.80	-111.27	-366.57	0.00	0.00	0.00
8,600.00	0.00	0.00	8,569.10	-365.80	-111.27	-366.57	0.00	0.00	0.00
8,700.00	0.00	0.00	8,669.10	-365.80	-111.27	-366.57	0.00	0.00	0.00
8,800.00	0.00	0.00	8,769.10	-365.80	-111.27	-366.57	0.00	0.00	0.00
8,900.00	0.00	0.00	8,869.10	-365.80	-111.27	-366.57	0.00	0.00	0.00
9,000.00	0.00	0.00	8,969.10	-365.80	-111.27	-366.57	0.00	0.00	0.00
9,100.00	0.00	0.00	9,069.10	-365.80	-111.27	-366.57	0.00	0.00	0.00
9,200.00	0.00	0.00	9,169.10	-365.80	-111.27	-366.57	0.00	0.00	0.00
9,282.94	0.00	0.00	9,252.04	-365.80	-111.27	-366.57	0.00	0.00	0.00
KOP, 10.00°/100' Build									
9,300.00	1.71	358.76	9,269.10	-365.55	-111.28	-366.31	10.00	10.00	0.00
9,350.00	6.71	358.76	9,318.95	-361.88	-111.35	-362.65	10.00	10.00	0.00
9,400.00	11.71	358.76	9,368.29	-353.89	-111.53	-354.66	10.00	10.00	0.00
9,450.00	16.71	358.76	9,416.74	-341.62	-111.79	-342.40	10.00	10.00	0.00
9,500.00	21.71	358.76	9,463.95	-325.18	-112.15	-325.96	10.00	10.00	0.00
9,550.00	26.71	358.76	9,509.53	-304.69	-112.59	-305.47	10.00	10.00	0.00
9,600.00	31.71	358.76	9,553.16	-280.31	-113.12	-281.09	10.00	10.00	0.00
9,650.00	36.71	358.76	9,594.50	-252.22	-113.73	-253.01	10.00	10.00	0.00



MS Directional Planning Report



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Company:	Marathon Oil	TVD Reference:	WELL @ 2922.50usft (Precision 580)
Project:	Eddy County, New Mexico (NAD 27)	MD Reference:	WELL @ 2922.50usft (Precision 580)
Site:	Blue Ridge (501H, 701H, 702H)	North Reference:	Grid
Well:	Blue Ridge WC Federal Com 702H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
9,700.00	41.71	358.76	9,633.23	-220.63	-114.42	-221.42	10.00	10.00	0.00
9,750.00	46.71	358.76	9,669.07	-185.79	-115.17	-186.59	10.00	10.00	0.00
9,800.00	51.71	358.76	9,701.72	-147.96	-115.99	-148.76	10.00	10.00	0.00
9,850.00	56.71	358.76	9,730.96	-107.42	-116.87	-108.23	10.00	10.00	0.00
9,900.00	61.71	358.76	9,756.55	-64.49	-117.80	-65.32	10.00	10.00	0.00
9,950.00	66.71	358.76	9,778.30	-19.50	-118.78	-20.33	10.00	10.00	0.00
10,000.00	71.71	358.76	9,796.04	27.22	-119.79	26.38	10.00	10.00	0.00
10,050.00	76.71	358.76	9,809.65	75.30	-120.83	74.46	10.00	10.00	0.00
10,100.00	81.71	358.76	9,819.01	124.39	-121.89	123.54	10.00	10.00	0.00
10,150.00	86.71	358.76	9,824.05	174.11	-122.97	173.24	10.00	10.00	0.00
10,182.94	90.00	358.76	9,825.00	207.02	-123.68	206.15	10.00	10.00	0.00
Begin 90.00° Lateral									
10,200.00	90.00	358.76	9,825.00	224.08	-124.05	223.21	0.00	0.00	0.00
10,300.00	90.00	358.76	9,825.00	324.05	-126.22	323.16	0.00	0.00	0.00
10,400.00	90.00	358.76	9,825.00	424.03	-128.39	423.12	0.00	0.00	0.00
10,500.00	90.00	358.76	9,825.00	524.01	-130.55	523.08	0.00	0.00	0.00
10,600.00	90.00	358.76	9,825.00	623.98	-132.72	623.04	0.00	0.00	0.00
10,700.00	90.00	358.76	9,825.00	723.96	-134.89	723.00	0.00	0.00	0.00
10,800.00	90.00	358.76	9,825.00	823.94	-137.06	822.96	0.00	0.00	0.00
10,900.00	90.00	358.76	9,825.00	923.91	-139.22	922.92	0.00	0.00	0.00
11,000.00	90.00	358.76	9,825.00	1,023.89	-141.39	1,022.88	0.00	0.00	0.00
11,100.00	90.00	358.76	9,825.00	1,123.87	-143.56	1,122.84	0.00	0.00	0.00
11,200.00	90.00	358.76	9,825.00	1,223.84	-145.72	1,222.80	0.00	0.00	0.00
11,300.00	90.00	358.76	9,825.00	1,323.82	-147.89	1,322.75	0.00	0.00	0.00
11,400.00	90.00	358.76	9,825.00	1,423.80	-150.06	1,422.71	0.00	0.00	0.00
11,500.00	90.00	358.76	9,825.00	1,523.77	-152.22	1,522.67	0.00	0.00	0.00
11,600.00	90.00	358.76	9,825.00	1,623.75	-154.39	1,622.63	0.00	0.00	0.00
11,700.00	90.00	358.76	9,825.00	1,723.72	-156.56	1,722.59	0.00	0.00	0.00
11,800.00	90.00	358.76	9,825.00	1,823.70	-158.72	1,822.55	0.00	0.00	0.00
11,900.00	90.00	358.76	9,825.00	1,923.68	-160.89	1,922.51	0.00	0.00	0.00
12,000.00	90.00	358.76	9,825.00	2,023.65	-163.06	2,022.47	0.00	0.00	0.00
12,100.00	90.00	358.76	9,825.00	2,123.63	-165.22	2,122.43	0.00	0.00	0.00
12,200.00	90.00	358.76	9,825.00	2,223.61	-167.39	2,222.38	0.00	0.00	0.00
12,300.00	90.00	358.76	9,825.00	2,323.58	-169.56	2,322.34	0.00	0.00	0.00
12,400.00	90.00	358.76	9,825.00	2,423.56	-171.72	2,422.30	0.00	0.00	0.00
12,500.00	90.00	358.76	9,825.00	2,523.54	-173.89	2,522.26	0.00	0.00	0.00
12,600.00	90.00	358.76	9,825.00	2,623.51	-176.06	2,622.22	0.00	0.00	0.00
12,700.00	90.00	358.76	9,825.00	2,723.49	-178.22	2,722.18	0.00	0.00	0.00
12,800.00	90.00	358.76	9,825.00	2,823.47	-180.39	2,822.14	0.00	0.00	0.00
12,900.00	90.00	358.76	9,825.00	2,923.44	-182.56	2,922.10	0.00	0.00	0.00
13,000.00	90.00	358.76	9,825.00	3,023.42	-184.73	3,022.06	0.00	0.00	0.00
13,100.00	90.00	358.76	9,825.00	3,123.40	-186.89	3,122.02	0.00	0.00	0.00
13,200.00	90.00	358.76	9,825.00	3,223.37	-189.06	3,221.97	0.00	0.00	0.00
13,300.00	90.00	358.76	9,825.00	3,323.35	-191.23	3,321.93	0.00	0.00	0.00
13,400.00	90.00	358.76	9,825.00	3,423.33	-193.39	3,421.89	0.00	0.00	0.00
13,500.00	90.00	358.76	9,825.00	3,523.30	-195.56	3,521.85	0.00	0.00	0.00
13,600.00	90.00	358.76	9,825.00	3,623.28	-197.73	3,621.81	0.00	0.00	0.00
13,700.00	90.00	358.76	9,825.00	3,723.26	-199.89	3,721.77	0.00	0.00	0.00
13,800.00	90.00	358.76	9,825.00	3,823.23	-202.06	3,821.73	0.00	0.00	0.00
13,900.00	90.00	358.76	9,825.00	3,923.21	-204.23	3,921.69	0.00	0.00	0.00
14,000.00	90.00	358.76	9,825.00	4,023.18	-206.39	4,021.65	0.00	0.00	0.00
14,100.00	90.00	358.76	9,825.00	4,123.16	-208.56	4,121.60	0.00	0.00	0.00
14,200.00	90.00	358.76	9,825.00	4,223.14	-210.73	4,221.56	0.00	0.00	0.00
14,300.00	90.00	358.76	9,825.00	4,323.11	-212.89	4,321.52	0.00	0.00	0.00



MS Directional Planning Report



Database:	EDM 5000.15 Conroe DB	Local Co-ordinate Reference:	Well Blue Ridge WC Federal Com 702H
Company:	Marathon Oil	TVD Reference:	WELL @ 2922.50usft (Precision 580)
Project:	Eddy County, New Mexico (NAD 27)	MD Reference:	WELL @ 2922.50usft (Precision 580)
Site:	Blue Ridge (501H, 701H, 702H)	North Reference:	Grid
Well:	Blue Ridge WC Federal Com 702H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
14,400.00	90.00	358.76	9,825.00	4,423.09	-215.06	4,421.48	0.00	0.00	0.00
14,500.00	90.00	358.76	9,825.00	4,523.07	-217.23	4,521.44	0.00	0.00	0.00
14,587.80	90.00	358.76	9,825.00	4,610.85	-219.13	4,609.21	0.00	0.00	0.00
Cross Section Line 14,587.80' MD - Begin 2.00°/100' Turn									
14,600.00	90.00	359.00	9,825.00	4,623.04	-219.37	4,621.40	2.00	0.00	2.00
14,700.00	90.00	1.00	9,825.00	4,723.04	-219.36	4,721.39	2.00	0.00	2.00
14,768.25	90.00	2.37	9,825.00	4,791.26	-217.36	4,789.62	2.00	0.00	2.00
Hold 90.00° Inc, 2.37° Azm									
14,800.00	90.00	2.37	9,825.00	4,822.98	-216.05	4,821.36	0.00	0.00	0.00
14,900.00	90.00	2.37	9,825.00	4,922.90	-211.92	4,921.30	0.00	0.00	0.00
15,000.00	90.00	2.37	9,825.00	5,022.81	-207.79	5,021.24	0.00	0.00	0.00
15,100.00	90.00	2.37	9,825.00	5,122.73	-203.65	5,121.18	0.00	0.00	0.00
15,200.00	90.00	2.37	9,825.00	5,222.64	-199.52	5,221.12	0.00	0.00	0.00
15,300.00	90.00	2.37	9,825.00	5,322.55	-195.39	5,321.06	0.00	0.00	0.00
15,400.00	90.00	2.37	9,825.00	5,422.47	-191.26	5,421.00	0.00	0.00	0.00
15,500.00	90.00	2.37	9,825.00	5,522.38	-187.13	5,520.94	0.00	0.00	0.00
15,600.00	90.00	2.37	9,825.00	5,622.30	-183.00	5,620.88	0.00	0.00	0.00
15,700.00	90.00	2.37	9,825.00	5,722.21	-178.87	5,720.82	0.00	0.00	0.00
15,800.00	90.00	2.37	9,825.00	5,822.13	-174.74	5,820.77	0.00	0.00	0.00
15,837.78	90.00	2.37	9,825.00	5,859.88	-173.18	5,858.53	0.00	0.00	0.00
Begin 2.00°/100' Turn									
15,850.81	90.00	2.11	9,825.00	5,872.89	-172.67	5,871.54	2.00	0.00	-2.00
Hold 90.00° Inc, 2.11° Azm									
15,900.00	90.00	2.11	9,825.00	5,922.05	-170.86	5,920.72	0.00	0.00	0.00
16,000.00	90.00	2.11	9,825.00	6,021.98	-167.19	6,020.67	0.00	0.00	0.00
16,100.00	90.00	2.11	9,825.00	6,121.92	-163.51	6,120.63	0.00	0.00	0.00
16,200.00	90.00	2.11	9,825.00	6,221.85	-159.83	6,220.58	0.00	0.00	0.00
16,300.00	90.00	2.11	9,825.00	6,321.78	-156.16	6,320.54	0.00	0.00	0.00
16,400.00	90.00	2.11	9,825.00	6,421.71	-152.48	6,420.49	0.00	0.00	0.00
16,500.00	90.00	2.11	9,825.00	6,521.65	-148.81	6,520.45	0.00	0.00	0.00
16,600.00	90.00	2.11	9,825.00	6,621.58	-145.13	6,620.40	0.00	0.00	0.00
16,700.00	90.00	2.11	9,825.00	6,721.51	-141.45	6,720.36	0.00	0.00	0.00
16,800.00	90.00	2.11	9,825.00	6,821.44	-137.78	6,820.32	0.00	0.00	0.00
16,900.00	90.00	2.11	9,825.00	6,921.38	-134.10	6,920.27	0.00	0.00	0.00
17,000.00	90.00	2.11	9,825.00	7,021.31	-130.42	7,020.23	0.00	0.00	0.00
17,100.00	90.00	2.11	9,825.00	7,121.24	-126.75	7,120.18	0.00	0.00	0.00
17,200.00	90.00	2.11	9,825.00	7,221.17	-123.07	7,220.14	0.00	0.00	0.00
17,300.00	90.00	2.11	9,825.00	7,321.11	-119.39	7,320.09	0.00	0.00	0.00
17,400.00	90.00	2.11	9,825.00	7,421.04	-115.72	7,420.05	0.00	0.00	0.00
17,500.00	90.00	2.11	9,825.00	7,520.97	-112.04	7,520.01	0.00	0.00	0.00
17,600.00	90.00	2.11	9,825.00	7,620.90	-108.37	7,619.96	0.00	0.00	0.00
17,700.00	90.00	2.11	9,825.00	7,720.84	-104.69	7,719.92	0.00	0.00	0.00
17,800.00	90.00	2.11	9,825.00	7,820.77	-101.01	7,819.87	0.00	0.00	0.00
17,900.00	90.00	2.11	9,825.00	7,920.70	-97.34	7,919.83	0.00	0.00	0.00
18,000.00	90.00	2.11	9,825.00	8,020.63	-93.66	8,019.78	0.00	0.00	0.00
18,100.00	90.00	2.11	9,825.00	8,120.57	-89.98	8,119.74	0.00	0.00	0.00
18,200.00	90.00	2.11	9,825.00	8,220.50	-86.31	8,219.69	0.00	0.00	0.00
18,300.00	90.00	2.11	9,825.00	8,320.43	-82.63	8,319.65	0.00	0.00	0.00
18,400.00	90.00	2.11	9,825.00	8,420.36	-78.95	8,419.61	0.00	0.00	0.00
18,500.00	90.00	2.11	9,825.00	8,520.29	-75.28	8,519.56	0.00	0.00	0.00
18,600.00	90.00	2.11	9,825.00	8,620.23	-71.60	8,619.52	0.00	0.00	0.00
18,700.00	90.00	2.11	9,825.00	8,720.16	-67.93	8,719.47	0.00	0.00	0.00
18,800.00	90.00	2.11	9,825.00	8,820.09	-64.25	8,819.43	0.00	0.00	0.00



MS Directional Planning Report

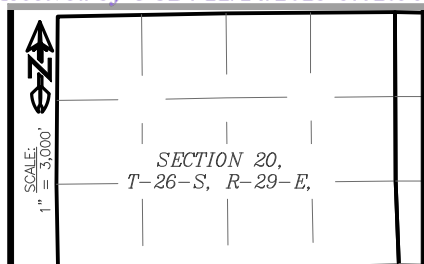


Database:	EDM 5000.15 Conroe DB	Local Co-ordinate Reference:	Well Blue Ridge WC Federal Com 702H
Company:	Marathon Oil	TVD Reference:	WELL @ 2922.50usft (Precision 580)
Project:	Eddy County, New Mexico (NAD 27)	MD Reference:	WELL @ 2922.50usft (Precision 580)
Site:	Blue Ridge (501H, 701H, 702H)	North Reference:	Grid
Well:	Blue Ridge WC Federal Com 702H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

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)
18,900.00	90.00	2.11	9,825.00	8,920.02	-60.57	8,919.38	0.00	0.00	0.00
19,000.00	90.00	2.11	9,825.00	9,019.96	-56.90	9,019.34	0.00	0.00	0.00
19,100.00	90.00	2.11	9,825.00	9,119.89	-53.22	9,119.30	0.00	0.00	0.00
19,200.00	90.00	2.11	9,825.00	9,219.82	-49.54	9,219.25	0.00	0.00	0.00
19,300.00	90.00	2.11	9,825.00	9,319.75	-45.87	9,319.21	0.00	0.00	0.00
19,390.79	90.00	2.11	9,825.00	9,410.48	-42.53	9,409.95	0.00	0.00	0.00
PBHL									

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
KOP/FTP/PPP-1_B.R - hit/miss target - Shape - Point	0.00	0.00	0.00	-365.80	-111.27	371,790.82	602,447.42	32° 1' 18.251 N	104° 0' 9.990 W
- plan misses target center by 382.35usft at 0.00usft MD (0.00 TVD, 0.00 N, 0.00 E)									
LTP/PBHL_B.R.F.C. 7 - plan hits target center - Point	0.00	0.00	9,825.00	9,410.48	-42.53	381,567.10	602,516.16	32° 2' 55.000 N	104° 0' 8.843 W
PPP-3_B.R.F.C. 702H - plan misses target center by 4.66usft at 14719.06usft MD (9825.00 TVD, 4742.10 N, -218.97 E) - Point	0.00	0.00	9,825.00	4,741.96	-214.31	376,898.58	602,344.38	32° 2' 8.803 N	104° 0' 11.005 W
PPP-4_B.R.F.C. 702H - plan hits target center - Point	0.00	0.00	9,825.00	5,859.88	-173.18	378,016.50	602,385.51	32° 2' 19.865 N	104° 0' 10.488 W
PPP-2/PI-1_B.R.F.C. - plan hits target center - Point	0.00	0.00	9,825.00	4,610.85	-219.13	376,767.47	602,339.56	32° 2' 7.506 N	104° 0' 11.066 W

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Comment
1,500.00	1,500.00	0.00	0.00	KOP, 2.00°/100' Build
1,999.91	1,997.37	-41.62	-12.66	Begin 10.00° Tangent
3,700.99	3,672.63	-324.18	-98.61	Begin 2.00°/100' Drop
4,200.90	4,170.00	-365.80	-111.27	Begin Vertical Hold
9,282.94	9,252.04	-365.80	-111.27	KOP, 10.00°/100' Build
10,182.94	9,825.00	207.02	-123.68	Begin 90.00° Lateral
14,587.80	9,825.00	4,610.85	-219.13	Cross Section Line 14,587.80' MD
14,587.80	9,825.00	4,610.85	-219.13	Begin 2.00°/100' Turn
14,768.25	9,825.00	4,791.26	-217.36	Hold 90.00° Inc, 2.37° Azm
15,837.78	9,825.00	5,859.88	-173.18	Begin 2.00°/100' Turn
15,850.81	9,825.00	5,872.89	-172.67	Hold 90.00° Inc, 2.11° Azm
19,390.79	9,825.00	9,410.48	-42.53	PBHL



WELL PAD LOCATION PLAT

BLUE RIDGE FEDERAL COM

SEC. 20 TWP. 26-S RGE. 29-E

SURVEY: N.M.P.M.

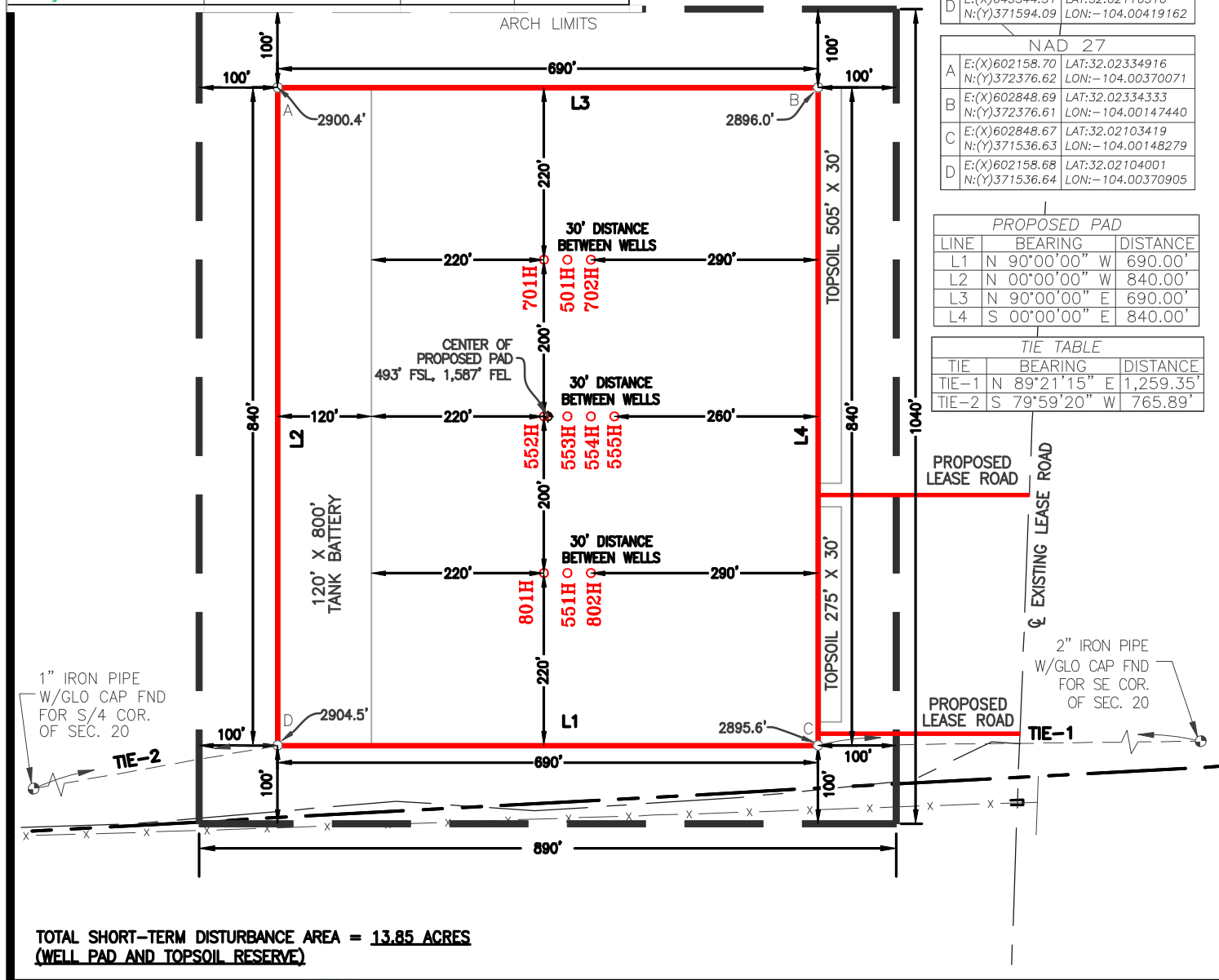
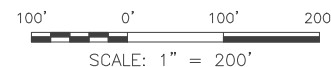
COUNTY: EDDY

OPERATOR: MARATHON OIL PERMIAN LLC

MAP: RED BLUFF, N.M.



Well Name	FKA Well Name	SHL Sec. 20	BHL Sec. 17
Blue Ridge WC Federal Com 801H	Mazer Rackham 20 WA Fed Com 14H	293' FSL 1600' FEL	330' FNL 2310' FEL
Blue Ridge BS Federal Com 551H	Mazer Rackham 20 WB Fed Com 13H	291' FSL 1570' FEL	100' FNL 1320' FEL
Blue Ridge WC Federal Com 802H	Mazer Rackham 20 WA Fed Com 9H	290' FSL 1540' FEL	330' FNL 660' FEL
Blue Ridge BS Federal Com 552H		493' FSL 1592' FEL	TBD
Blue Ridge BS Federal Com 553H		491' FSL 1562' FEL	TBD
Blue Ridge BS Federal Com 554H		490' FSL 1532' FEL	TBD
Blue Ridge BS Federal Com 555H		488' FSL 1502' FEL	TBD
Blue Ridge WC Federal Com 701H	Blue Ridge 20-17 Fed Com 1H	692' FSL 1585' FEL	330' FNL 2310' FEL
Blue Ridge BS Federal Com 501H	Blue Ridge 20-17 Fed Com 2H	691' FSL 1555' FEL	100' FNL 2310' FEL
Blue Ridge WC Federal Com 702H	Mazer Rackham 20 WD Fed Com 2H	689' FSL 1525' FEL	330' FNL 1650' FEL



TOTAL SHORT-TERM DISTURBANCE AREA = 13.85 ACRES
(WELL PAD AND TOPSOIL RESERVE)

SEPTEMBER 22, 2023

NOTE:

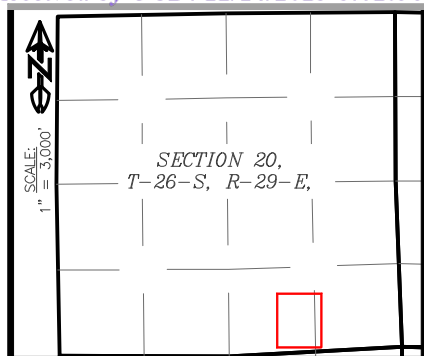
THIS IS NOT A BOUNDARY SURVEY, APPARENT PROPERTY CORNERS AND
PROPERTY LINES ARE SHOWN FOR INFORMATION ONLY. BOUNDARY DATA
SHOWN IS FROM STATE OF NEW MEXICO OIL CONSERVATION DIVISION FORM
C-102 INCLUDED IN THIS SUBMITTAL.

I, LLOYD P. SHORT, NEW MEXICO PROFESSIONAL SURVEYOR NO. 21653, DO HEREBY CERTIFY THAT THIS EASEMENT SURVEY PLAT AND THE ACTUAL SURVEY ON THE GROUND UPON WHICH IT IS BASED WERE PERFORMED BY ME OR UNDER MY DIRECT SUPERVISION; THAT I AM RESPONSIBLE FOR THIS SURVEY; THAT THIS SURVEY MEETS THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO; AND THAT IT IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. I FURTHER CERTIFY THAT THIS SURVEY IS NOT A LAND DIVISION OR SUBDIVISION AS DEFINED IN THE NEW MEXICO SUBDIVISION ACT AND THAT THIS INSTRUMENT IS AN EASEMENT SURVEY PLAT CROSSING AN EXISTING TRACT OR TRACTS.

0	08/07/2023	DEF
REV.	DATE	BY

SHEET 2 OF 5

**PREPARED BY:
DELTA FIELD SERVICES, LLC
510 TRENTON ST.
WEST MONROE, LA 71291
318-323-6900 OFFICE
JOB No. MRO 0006 BR**



WELL PAD LOCATION PLAT

BLUE RIDGE FEDERAL COM

SEC. 20 TWP. 26-S RGE. 29-E

SURVEY: N.M.P.M.

COUNTY: EDDY

OPERATOR: MARATHON OIL PERMIAN LLC

U.S.G.S. TOPOGRAPHIC MAP: RED BLUFF, N.M.

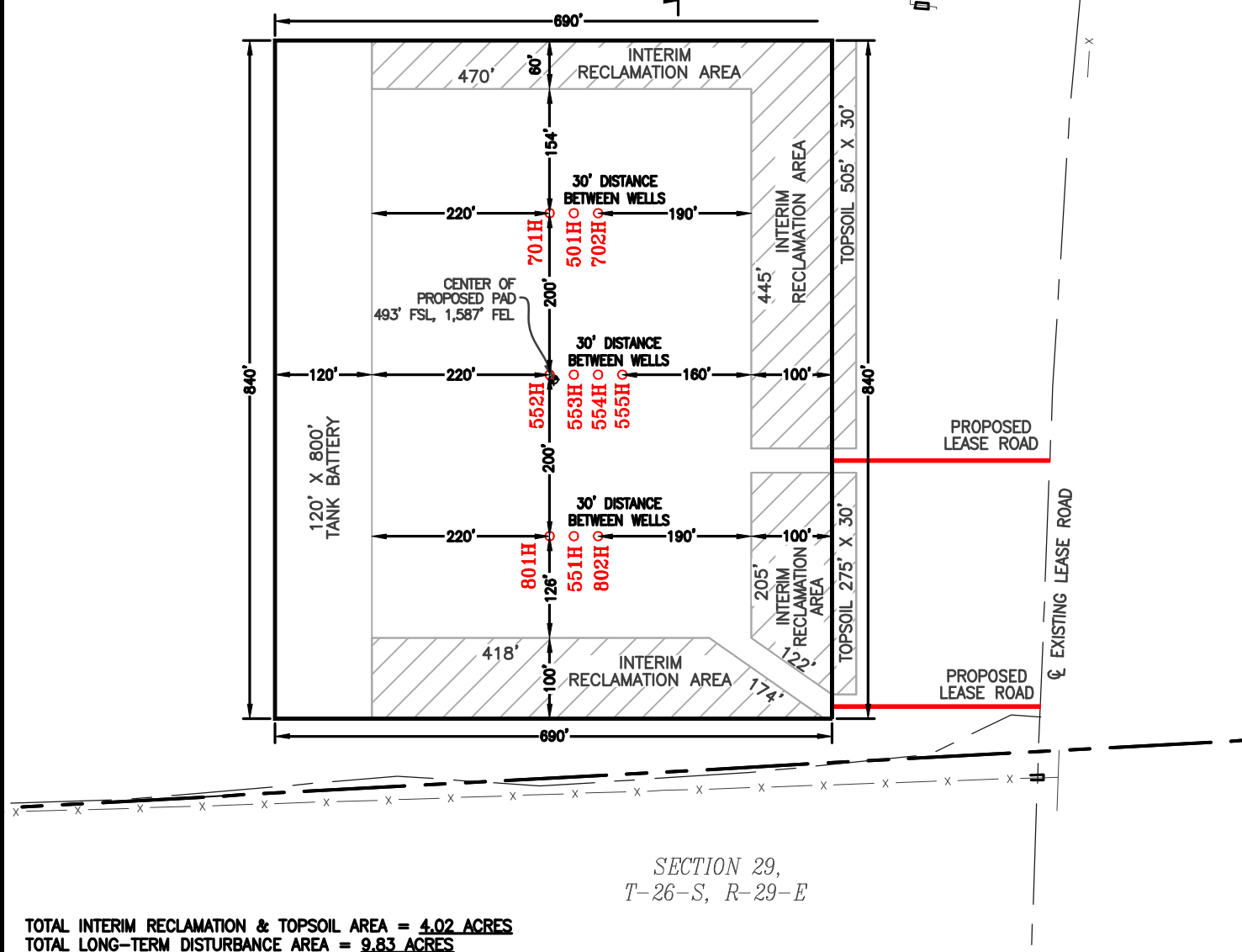


100' 0' 100' 200'

SCALE: 1" = 200'

Blue Ridge WC Federal Com 702H (Previously Mazer Rackham 20 WA Fed Com 14H)
 Blue Ridge WC Federal Com 701H (Previously Mazer Rackham 20 WB Fed Com 13H)
 Blue Ridge BS Federal Com 501H (Previously Mazer Rackham 20 WA Fed Com 9H)
 Blue Ridge WC Federal Com 801H (Previously Blue Ridge 20-17 WA Fed Com 2H)
 Blue Ridge BS Federal Com 551H (Previously Blue Ridge 20-17 WA Fed Com 1H)
 Blue Ridge WC Federal Com 802H (Previously Mazer Rackham 20 WD Fed Com 2H)

SECTION 20,
T-26-S, R-29-E



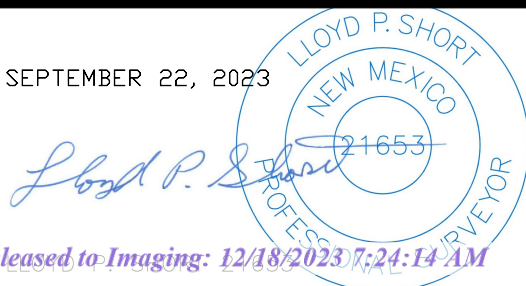
NOTE:

THIS IS NOT A BOUNDARY SURVEY, APPARENT PROPERTY CORNERS AND PROPERTY LINES ARE SHOWN FOR INFORMATION ONLY. BOUNDARY DATA SHOWN IS FROM STATE OF NEW MEXICO OIL CONSERVATION DIVISION FORM C-102 INCLUDED IN THIS SUBMITTAL.

I, LLOYD P. SHORT, NEW MEXICO PROFESSIONAL SURVEYOR NO. 21653, DO HEREBY CERTIFY THAT THIS EASEMENT SURVEY PLAT AND THE ACTUAL SURVEY ON THE GROUND UPON WHICH IT IS BASED WERE PERFORMED BY ME OR UNDER MY DIRECT SUPERVISION; THAT I AM RESPONSIBLE FOR THIS SURVEY; THAT THIS SURVEY MEETS THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO; AND THAT IT IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. I FURTHER CERTIFY THAT THIS SURVEY IS NOT A LAND DIVISION OR SUBDIVISION AS DEFINED IN THE NEW MEXICO SUBDIVISION ACT AND THAT THIS INSTRUMENT IS AN EASEMENT SURVEY PLAT CROSSING AN EXISTING TRACT OR TRACTS.

0	08/07/2023	DEF
REV.	DATE	BY

SEPTEMBER 22, 2023



SHEET 3 OF 5

PREPARED BY:
 DELTA FIELD SERVICES, LLC
 510 TRENTON ST.
 WEST MONROE, LA 71291
 318-323-6900 OFFICE
 JOB No. MRO_0006_BR

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS

Action 294940

CONDITIONS

Operator: MARATHON OIL PERMIAN LLC 990 Town & Country Blvd. Houston, TX 77024	OGRID: 372098
	Action Number: 294940
	Action Type: [C-103] NOI Change of Plans (C-103A)

CONDITIONS

Created By	Condition	Condition Date
ward.rikala	All original COA's still apply.	12/18/2023