

Office
 District I – (575) 393-6161
 1625 N. French Dr., Hobbs, NM 88240
 District II – (575) 748-1283
 811 S. First St., Artesia, NM 88210
 District III – (505) 334-6178
 1000 Rio Brazos Rd., Aztec, NM 87410
 District IV – (505) 476-3460
 1220 S. St. Francis Dr., Santa Fe, NM
 87505

State of New Mexico
 Energy, Minerals and Natural Resources

Form C-103
 Revised July 18, 2013

OIL CONSERVATION DIVISION
 1220 South St. Francis Dr.
 Santa Fe, NM 87505

WELL API NO. 30-025-50620
5. Indicate Type of Lease STATE ☒ FEE ☐
6. State Oil & Gas Lease No. LG14876
7. Lease Name or Unit Agreement Name Grama Ridge 116 35 SB State Com
8. Well Number 203H
9. OGRID Number 372098
10. Pool name or Wildcat Grama Ridge; Bone Spring, NE

SUNDRY NOTICES AND REPORTS ON WELLS (DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)	
1. Type of Well: Oil Well ☒ Gas Well ☐ Other ☐	
2. Name of Operator Marathon Oil Permian LLC	
3. Address of Operator 990 Town & Country Blvd. Houston, TX 77024	
4. Well Location Unit Letter <u>B</u> : <u>403</u> feet from the <u>NORTH</u> line and <u>1565</u> feet from the <u>EAST</u> line Section <u>35</u> Township <u>21S</u> Range <u>34E</u> NMPM County <u>LEA</u>	
11. Elevation (Show whether DR, RKB, RT, GR, etc.) 3679' GL	

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:	SUBSEQUENT REPORT OF:
PERFORM REMEDIAL WORK ☐	REMEDIAL WORK ☐
TEMPORARILY ABANDON ☐	ALTERING CASING ☐
PULL OR ALTER CASING ☐	COMMENCE DRILLING OPNS. ☐
DOWNHOLE COMMINGLE ☐	P AND A ☐
CLOSED-LOOP SYSTEM ☐	CASING/CEMENT JOB ☐
OTHER: ☐	OTHER: ☐

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 19.15.7.14 NMAC. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

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

Change Casing and Cement Program:
 See Attached Drilling Plan and Directional Survey

Spud Date:

Rig Release Date:

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE Adrian Covarrubias TITLE Regulatory Compliance Representative DATE 1/18/2023

Type or print name Adrian Covarrubias E-mail address: acovarrubias@marathonoil.com PHONE: 713-296-3368

For State Use Only

APPROVED BY: _____ TITLE _____ DATE _____

Conditions of Approval (if any):

MarathonOil
Corporation.

Company: Marathon Oil
Well: Grama Ridge 116 35 SB State Com #203H
County: Lea County, New Mexico (NAD 27)
Rig: Cactus 171
Wellbore: Wellbore #1
Design: Design #5
Date: 12:37, January 11 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

Target Line: 10,385' TVD @ 0° VS; 89.7° INC

SURVEY PROGRAM			
Depth From	Depth To	Survey/Plan	Tool
0.00	20687.98	Design #5 (Wellbore #1)	MWD+HRGM+FDIR

WELL DETAILS: Grama Ridge 116 35 SB State Com #203H									
		GL @ 3679.00	Well @ 3704.00usft (Cactus 171)						
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude				
0.00	0.00	525486.88	776623.46	32° 26' 29.343 N	103° 26' 12.037 W				
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	
1900.00	0.00	0.00	1900.00	0.00	0.00	0.00	0.000	0.00	Begin 2.00°/100' Build
2511.31	12.23	71.15	2506.68	20.99	61.49	2.00	71.151	-20.54	Begin 12.23° Tangent
6488.14	12.23	71.15	6393.32	293.09	858.51	0.00	0.000	-286.79	Begin 2.00°/100' Drop
7099.46	0.00	0.00	7000.00	314.08	920.00	2.00	180.000	-307.33	Begin Vertical Hold
9912.88	0.00	0.00	9813.42	314.08	920.00	0.00	0.000	-307.33	Begin 10.00°/100' Build & Turn
10809.88	89.70	178.60	10386.37	-255.71	933.97	10.00	178.595	262.55	Begin 89.70° Lateral
12138.59	89.70	178.60	10393.33	-1584.00	966.55	0.00	0.000	1591.04	Begin 2.00°/100' Turn
12568.83	89.70	187.20	10395.59	-2013.28	944.82	2.00	90.023	2020.15	Begin 2.00°/100' Turn
12949.85	89.70	179.58	10397.58	-2393.35	922.31	2.00	-90.017	2400.05	Hold 179.58° Azm
16306.64	89.70	179.58	10415.14	-5750.00	946.95	0.00	0.000	5756.79	Begin 2.00°/100' Turn
16423.69	89.70	181.92	10415.75	-5867.03	945.42	2.00	90.063	5873.80	Hold 181.92° Azm
17532.80	89.70	181.92	10421.60	-6975.50	908.25	0.00	0.000	6981.97	Begin 2.00°/100' Turn
18028.81	89.70	172.00	10424.21	-7470.19	934.52	2.00	-90.015	7476.84	Begin 2.00°/100' Turn
18408.02	89.70	179.58	10426.20	-7848.09	962.32	2.00	90.008	7854.94	Hold 179.58° Azm
20687.98	89.70	179.58	10438.07	-10127.97	978.87	0.00	0.000	10134.87	PBHL

Name

KOP - Grama Ridge 203H

LTP/PBHL v5 - Grama Ridge 203H

T1 v5 - Grama Ridge 203H

T2 v5 - Grama Ridge 203H

T3 v5 - Grama Ridge 203H

VP v5 - Grama Ridge 203H

TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
9813.42	314.08	920.00	525800.96	777543.46	32° 26' 32.374 N	103° 26' 1.272 W
10438.07	-10127.97	978.87	515358.91	777602.33	32° 24' 49.047 N	103° 26' 1.611 W
10393.33	-1584.00	966.55	523902.88	777590.01	32° 26' 13.589 N	103° 26' 0.915 W
10415.14	-5750.00	946.95	519736.88	777570.41	32° 25' 32.369 N	103° 26' 1.553 W
10421.60	-6975.50	908.25	518511.38	777531.74	32° 25' 30.246 N	103° 26' 2.125 W
7000.00	314.08	920.00	525800.96	777543		

TGM

Azimuths to Grid North

True North: -0.48°

Magnetic North: 5.85°

Magnetic Field

Strength: 47670.5nT

Dip Angle: 60.12°

Date: 2/15/2023

Model: HDGM2023

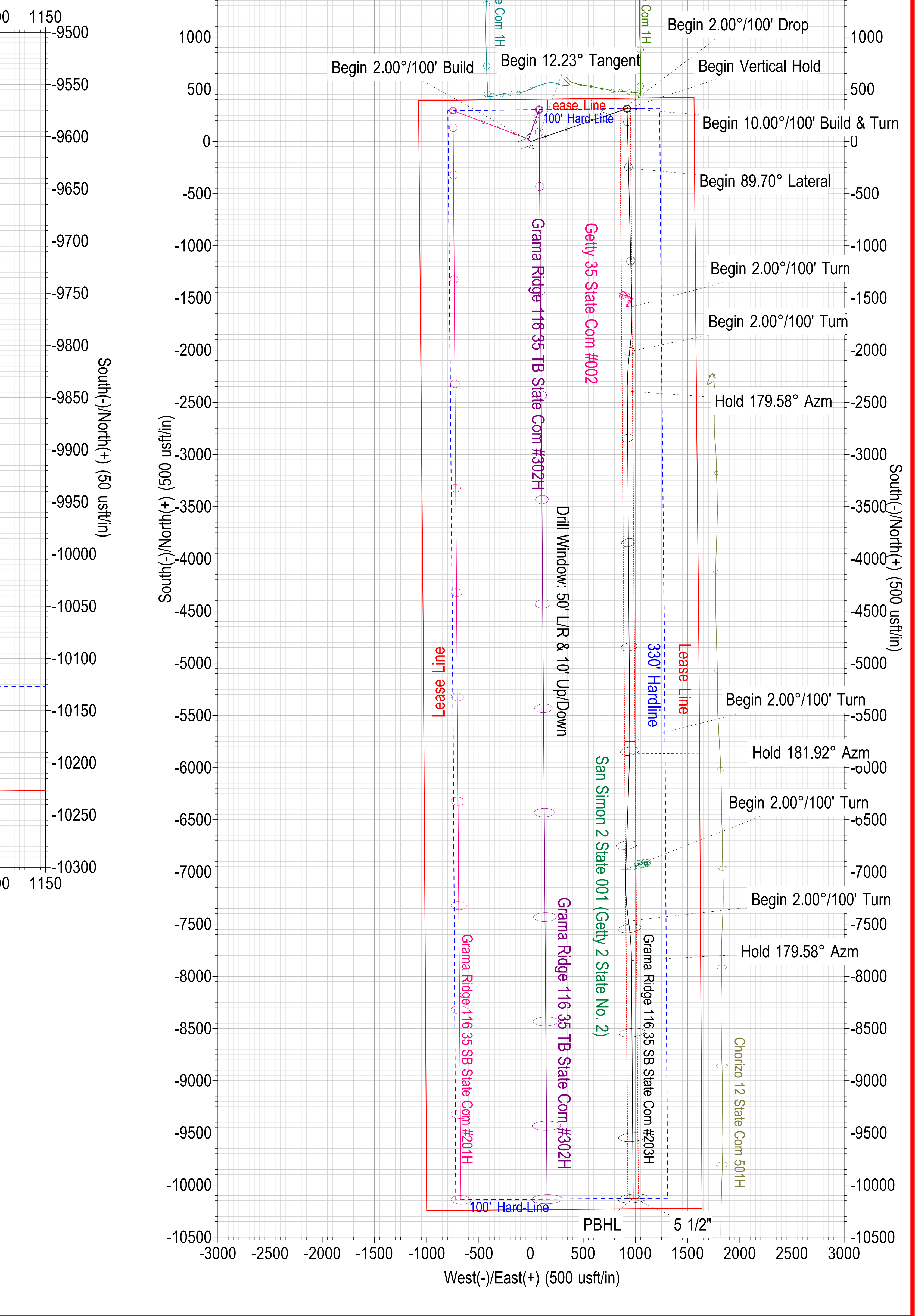
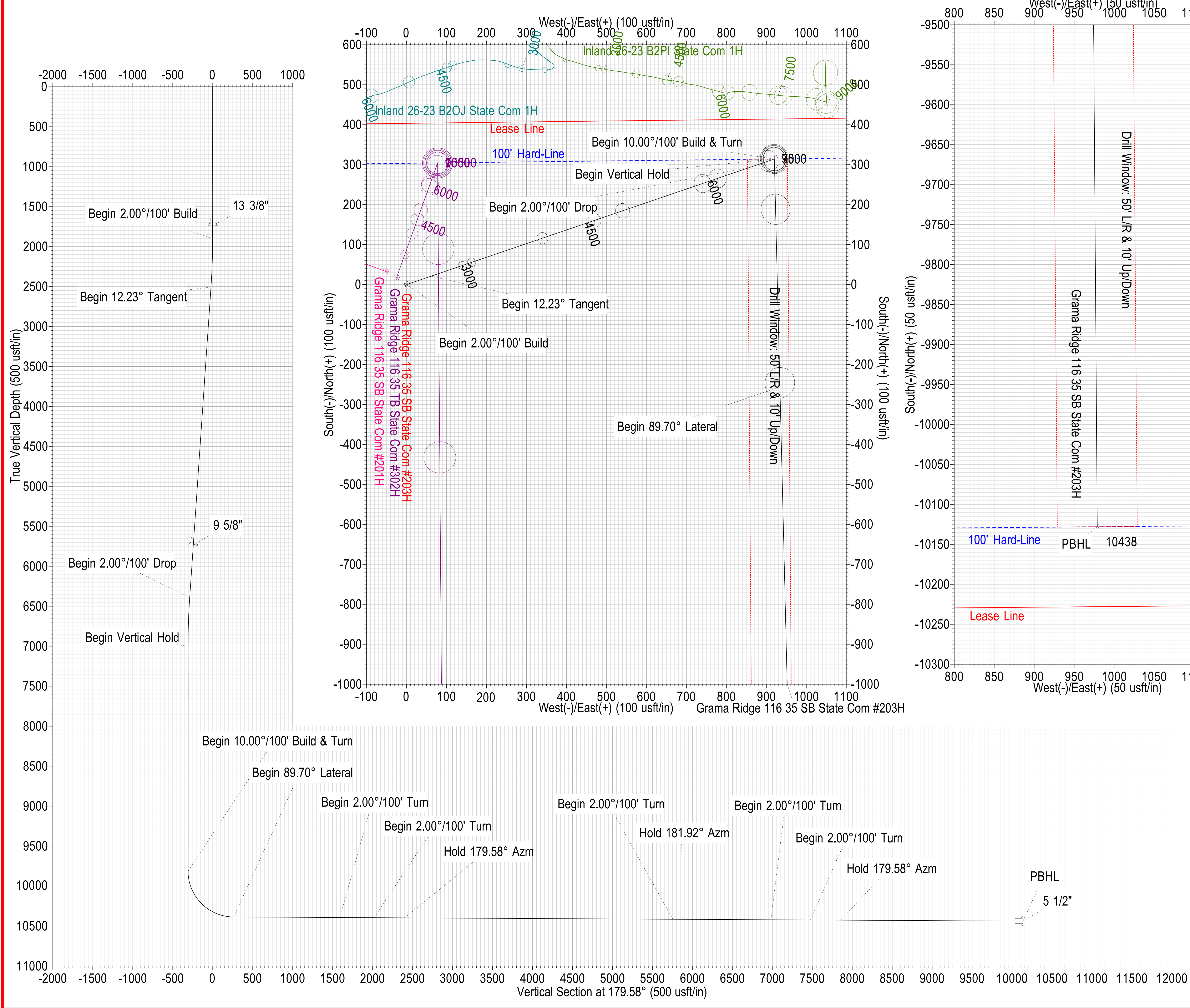
MS

Directional

To convert a Magnetic Direction to a Grid Direction, Add 5.852°

To convert a Magnetic Direction to a True Direction, Add 6.333° East

To convert a True Direction to a Grid Direction, Subtract 0.481°





Marathon Oil

Lea County, New Mexico (NAD 27)

Grama Ridge 116 35 SB State Com (201H, 203H, 302H)

Grama Ridge 116 35 SB State Com #203H

Wellbore #1

Plan: Design #5

Standard Planning Report

16 January, 2023





MS Directional Planning Report



Database:	EDM 5000.15 Conroe DB	Local Co-ordinate Reference:	Well Grama Ridge 116 35 SB State Com #203H
Company:	Marathon Oil	TVD Reference:	Well @ 3704.00usft (Cactus 171)
Project:	Lea County, New Mexico (NAD 27)	MD Reference:	Well @ 3704.00usft (Cactus 171)
Site:	Grama Ridge 116 35 SB State Com (201H, 203H, 302H)	North Reference:	Grid
Well:	Grama Ridge 116 35 SB State Com #203H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #5		

Project	Lea 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	Grama Ridge 116 35 SB State Com (201H, 203H, 302H)		
Site Position:		Northing:	525,519.11 usft
From:	Map	Easting:	776,572.84 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "
		Latitude:	32.441574
		Longitude:	-103.436841

Well	Grama Ridge 116 35 SB State Com #203H					
Well Position	+N/-S	0.00 usft	Northing:	525,486.88 usft	Latitude:	32.441484
	+E/-W	0.00 usft	Easting:	776,623.46 usft	Longitude:	-103.436677
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	3,679.00 usft
Grid Convergence:		0.481 °				

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM2023	2/15/2023	6.333	60.117	47,670.50

Design	Design #5				
Audit Notes:					
Version:	Phase:	PLAN	Tie On Depth:	0.00	
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.00	0.00	0.00	179.58	

Plan Survey Tool Program	Date	1/16/2023			
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks	
1	0.00	20,687.98	Design #5 (Wellbore #1)	MWD+HRGM+FDIR	
				OWSG MWD + HRGM + F	



MS Directional Planning Report



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Company:	Marathon Oil	TVD Reference:	Well @ 3704.00usft (Cactus 171)
Project:	Lea County, New Mexico (NAD 27)	MD Reference:	Well @ 3704.00usft (Cactus 171)
Site:	Grama Ridge 116 35 SB State Com (201H, 203H, 302H)	North Reference:	Grid
Well:	Grama Ridge 116 35 SB State Com #203H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #5		

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		
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.000		
2,511.31	12.23	71.15	2,506.68	20.99	61.49	2.00	2.00	0.00	71.151		
6,488.14	12.23	71.15	6,393.32	293.09	858.51	0.00	0.00	0.00	0.000		
7,099.46	0.00	0.00	7,000.00	314.08	920.00	2.00	-2.00	0.00	180.000	VP v5 - Grama Ridg	
9,912.88	0.00	0.00	9,813.42	314.08	920.00	0.00	0.00	0.00	0.000		
10,809.88	89.70	178.60	10,386.37	-255.71	933.97	10.00	10.00	0.00	178.595		
12,138.59	89.70	178.60	10,393.33	-1,584.00	966.55	0.00	0.00	0.00	0.000	T1 v5 - Grama Ridg	
12,568.83	89.70	187.20	10,395.59	-2,013.28	944.82	2.00	0.00	2.00	90.023		
12,949.85	89.70	179.58	10,397.58	-2,393.35	922.31	2.00	0.00	-2.00	-90.017		
16,306.64	89.70	179.58	10,415.14	-5,750.00	946.95	0.00	0.00	0.00	0.000	T2 v5 - Grama Ridg	
16,423.69	89.70	181.92	10,415.75	-5,867.03	945.42	2.00	0.00	2.00	90.063		
17,532.80	89.70	181.92	10,421.60	-6,975.50	908.25	0.00	0.00	0.00	0.000	T3 v5 - Grama Ridg	
18,028.81	89.70	172.00	10,424.21	-7,470.19	934.52	2.00	0.00	-2.00	-90.015		
18,408.02	89.70	179.58	10,426.20	-7,848.09	962.32	2.00	0.00	2.00	90.008		
20,687.98	89.70	179.58	10,438.07	-10,127.97	978.87	0.00	0.00	0.00	0.000	LTP/PBHL v5 - Grai	



MS Directional Planning Report



Database:	EDM 5000.15 Conroe DB	Local Co-ordinate Reference:	Well Grama Ridge 116 35 SB State Com #203H
Company:	Marathon Oil	TVD Reference:	Well @ 3704.00usft (Cactus 171)
Project:	Lea County, New Mexico (NAD 27)	MD Reference:	Well @ 3704.00usft (Cactus 171)
Site:	Grama Ridge 116 35 SB State Com (201H, 203H, 302H)	North Reference:	Grid
Well:	Grama Ridge 116 35 SB State Com #203H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #5		

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
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,739.00	0.00	0.00	1,739.00	0.00	0.00	0.00	0.00	0.00	0.00
13 3/8"									
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00
Begin 2.00°/100' Build									
2,000.00	2.00	71.15	1,999.98	0.56	1.65	-0.55	2.00	2.00	0.00
2,100.00	4.00	71.15	2,099.84	2.25	6.60	-2.21	2.00	2.00	0.00
2,200.00	6.00	71.15	2,199.45	5.07	14.85	-4.96	2.00	2.00	0.00
2,300.00	8.00	71.15	2,298.70	9.01	26.38	-8.81	2.00	2.00	0.00
2,400.00	10.00	71.15	2,397.47	14.06	41.19	-13.76	2.00	2.00	0.00
2,500.00	12.00	71.15	2,495.62	20.23	59.25	-19.79	2.00	2.00	0.00
2,511.31	12.23	71.15	2,506.68	20.99	61.49	-20.54	2.00	2.00	0.00
Begin 12.23° Tangent									
2,600.00	12.23	71.15	2,593.36	27.06	79.27	-26.48	0.00	0.00	0.00
2,700.00	12.23	71.15	2,691.09	33.90	99.31	-33.17	0.00	0.00	0.00
2,800.00	12.23	71.15	2,788.82	40.74	119.35	-39.87	0.00	0.00	0.00
2,900.00	12.23	71.15	2,886.56	47.59	139.39	-46.56	0.00	0.00	0.00
3,000.00	12.23	71.15	2,984.29	54.43	159.43	-53.26	0.00	0.00	0.00
3,100.00	12.23	71.15	3,082.02	61.27	179.47	-59.95	0.00	0.00	0.00
3,200.00	12.23	71.15	3,179.75	68.11	199.52	-66.65	0.00	0.00	0.00
3,300.00	12.23	71.15	3,277.48	74.95	219.56	-73.34	0.00	0.00	0.00
3,400.00	12.23	71.15	3,375.22	81.80	239.60	-80.04	0.00	0.00	0.00
3,500.00	12.23	71.15	3,472.95	88.64	259.64	-86.73	0.00	0.00	0.00
3,600.00	12.23	71.15	3,570.68	95.48	279.68	-93.43	0.00	0.00	0.00
3,700.00	12.23	71.15	3,668.41	102.32	299.72	-100.12	0.00	0.00	0.00
3,800.00	12.23	71.15	3,766.14	109.16	319.76	-106.82	0.00	0.00	0.00
3,900.00	12.23	71.15	3,863.87	116.01	339.81	-113.51	0.00	0.00	0.00
4,000.00	12.23	71.15	3,961.61	122.85	359.85	-120.21	0.00	0.00	0.00
4,100.00	12.23	71.15	4,059.34	129.69	379.89	-126.90	0.00	0.00	0.00
4,200.00	12.23	71.15	4,157.07	136.53	399.93	-133.60	0.00	0.00	0.00
4,300.00	12.23	71.15	4,254.80	143.37	419.97	-140.29	0.00	0.00	0.00
4,400.00	12.23	71.15	4,352.53	150.22	440.01	-146.99	0.00	0.00	0.00
4,500.00	12.23	71.15	4,450.27	157.06	460.05	-153.68	0.00	0.00	0.00
4,600.00	12.23	71.15	4,548.00	163.90	480.10	-160.38	0.00	0.00	0.00



MS Directional Planning Report



Database:	EDM 5000.15 Conroe DB	Local Co-ordinate Reference:	Well Grama Ridge 116 35 SB State Com #203H
Company:	Marathon Oil	TVD Reference:	Well @ 3704.00usft (Cactus 171)
Project:	Lea County, New Mexico (NAD 27)	MD Reference:	Well @ 3704.00usft (Cactus 171)
Site:	Grama Ridge 116 35 SB State Com (201H, 203H, 302H)	North Reference:	Grid
Well:	Grama Ridge 116 35 SB State Com #203H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #5		

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	12.23	71.15	4,645.73	170.74	500.14	-167.07	0.00	0.00	0.00
4,800.00	12.23	71.15	4,743.46	177.58	520.18	-173.77	0.00	0.00	0.00
4,900.00	12.23	71.15	4,841.19	184.43	540.22	-180.46	0.00	0.00	0.00
5,000.00	12.23	71.15	4,938.93	191.27	560.26	-187.16	0.00	0.00	0.00
5,100.00	12.23	71.15	5,036.66	198.11	580.30	-193.85	0.00	0.00	0.00
5,200.00	12.23	71.15	5,134.39	204.95	600.35	-200.55	0.00	0.00	0.00
5,300.00	12.23	71.15	5,232.12	211.79	620.39	-207.24	0.00	0.00	0.00
5,400.00	12.23	71.15	5,329.85	218.64	640.43	-213.94	0.00	0.00	0.00
5,500.00	12.23	71.15	5,427.59	225.48	660.47	-220.63	0.00	0.00	0.00
5,600.00	12.23	71.15	5,525.32	232.32	680.51	-227.33	0.00	0.00	0.00
5,700.00	12.23	71.15	5,623.05	239.16	700.55	-234.02	0.00	0.00	0.00
5,800.00	12.23	71.15	5,720.78	246.00	720.59	-240.72	0.00	0.00	0.00
5,814.55	12.23	71.15	5,735.00	247.00	723.51	-241.69	0.00	0.00	0.00
9 5/8"									
5,900.00	12.23	71.15	5,818.51	252.85	740.64	-247.41	0.00	0.00	0.00
6,000.00	12.23	71.15	5,916.24	259.69	760.68	-254.11	0.00	0.00	0.00
6,100.00	12.23	71.15	6,013.98	266.53	780.72	-260.80	0.00	0.00	0.00
6,200.00	12.23	71.15	6,111.71	273.37	800.76	-267.50	0.00	0.00	0.00
6,300.00	12.23	71.15	6,209.44	280.21	820.80	-274.19	0.00	0.00	0.00
6,400.00	12.23	71.15	6,307.17	287.06	840.84	-280.89	0.00	0.00	0.00
6,488.14	12.23	71.15	6,393.32	293.09	858.51	-286.79	0.00	0.00	0.00
Begin 2.00°/100' Drop									
6,500.00	11.99	71.15	6,404.91	293.89	860.86	-287.57	2.00	-2.00	0.00
6,600.00	9.99	71.15	6,503.07	300.05	878.90	-293.60	2.00	-2.00	0.00
6,700.00	7.99	71.15	6,601.84	305.10	893.69	-298.54	2.00	-2.00	0.00
6,800.00	5.99	71.15	6,701.09	309.03	905.20	-302.38	2.00	-2.00	0.00
6,900.00	3.99	71.15	6,800.71	311.84	913.43	-305.13	2.00	-2.00	0.00
7,000.00	1.99	71.15	6,900.56	313.52	918.37	-306.78	2.00	-2.00	0.00
7,099.46	0.00	0.00	7,000.00	314.08	920.00	-307.33	2.00	-2.00	0.00
Begin Vertical Hold									
7,200.00	0.00	0.00	7,100.54	314.08	920.00	-307.33	0.00	0.00	0.00
7,300.00	0.00	0.00	7,200.54	314.08	920.00	-307.33	0.00	0.00	0.00
7,400.00	0.00	0.00	7,300.54	314.08	920.00	-307.33	0.00	0.00	0.00
7,500.00	0.00	0.00	7,400.54	314.08	920.00	-307.33	0.00	0.00	0.00
7,600.00	0.00	0.00	7,500.54	314.08	920.00	-307.33	0.00	0.00	0.00
7,700.00	0.00	0.00	7,600.54	314.08	920.00	-307.33	0.00	0.00	0.00
7,800.00	0.00	0.00	7,700.54	314.08	920.00	-307.33	0.00	0.00	0.00
7,900.00	0.00	0.00	7,800.54	314.08	920.00	-307.33	0.00	0.00	0.00
8,000.00	0.00	0.00	7,900.54	314.08	920.00	-307.33	0.00	0.00	0.00
8,100.00	0.00	0.00	8,000.54	314.08	920.00	-307.33	0.00	0.00	0.00
8,200.00	0.00	0.00	8,100.54	314.08	920.00	-307.33	0.00	0.00	0.00
8,300.00	0.00	0.00	8,200.54	314.08	920.00	-307.33	0.00	0.00	0.00
8,400.00	0.00	0.00	8,300.54	314.08	920.00	-307.33	0.00	0.00	0.00
8,500.00	0.00	0.00	8,400.54	314.08	920.00	-307.33	0.00	0.00	0.00
8,600.00	0.00	0.00	8,500.54	314.08	920.00	-307.33	0.00	0.00	0.00
8,700.00	0.00	0.00	8,600.54	314.08	920.00	-307.33	0.00	0.00	0.00
8,800.00	0.00	0.00	8,700.54	314.08	920.00	-307.33	0.00	0.00	0.00
8,900.00	0.00	0.00	8,800.54	314.08	920.00	-307.33	0.00	0.00	0.00
9,000.00	0.00	0.00	8,900.54	314.08	920.00	-307.33	0.00	0.00	0.00
9,100.00	0.00	0.00	9,000.54	314.08	920.00	-307.33	0.00	0.00	0.00
9,200.00	0.00	0.00	9,100.54	314.08	920.00	-307.33	0.00	0.00	0.00
9,300.00	0.00	0.00	9,200.54	314.08	920.00	-307.33	0.00	0.00	0.00



MS Directional Planning Report



Database:	EDM 5000.15 Conroe DB	Local Co-ordinate Reference:	Well Grama Ridge 116 35 SB State Com #203H
Company:	Marathon Oil	TVD Reference:	Well @ 3704.00usft (Cactus 171)
Project:	Lea County, New Mexico (NAD 27)	MD Reference:	Well @ 3704.00usft (Cactus 171)
Site:	Grama Ridge 116 35 SB State Com (201H, 203H, 302H)	North Reference:	Grid
Well:	Grama Ridge 116 35 SB State Com #203H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #5		

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)
9,400.00	0.00	0.00	9,300.54	314.08	920.00	-307.33	0.00	0.00	0.00
9,500.00	0.00	0.00	9,400.54	314.08	920.00	-307.33	0.00	0.00	0.00
9,600.00	0.00	0.00	9,500.54	314.08	920.00	-307.33	0.00	0.00	0.00
9,700.00	0.00	0.00	9,600.54	314.08	920.00	-307.33	0.00	0.00	0.00
9,800.00	0.00	0.00	9,700.54	314.08	920.00	-307.33	0.00	0.00	0.00
9,900.00	0.00	0.00	9,800.54	314.08	920.00	-307.33	0.00	0.00	0.00
9,912.88	0.00	0.00	9,813.42	314.08	920.00	-307.33	0.00	0.00	0.00
Begin 10.00°/100' Build & Turn									
9,950.00	3.71	178.60	9,850.52	312.88	920.03	-306.13	10.00	10.00	0.00
10,000.00	8.71	178.60	9,900.21	307.47	920.16	-300.72	10.00	10.00	0.00
10,050.00	13.71	178.60	9,949.24	297.76	920.40	-291.00	10.00	10.00	0.00
10,100.00	18.71	178.60	9,997.24	283.80	920.74	-277.05	10.00	10.00	0.00
10,150.00	23.71	178.60	10,043.83	265.72	921.19	-258.96	10.00	10.00	0.00
10,200.00	28.71	178.60	10,088.68	243.65	921.73	-236.89	10.00	10.00	0.00
10,250.00	33.71	178.60	10,131.43	217.76	922.36	-210.99	10.00	10.00	0.00
10,300.00	38.71	178.60	10,171.76	188.24	923.09	-181.47	10.00	10.00	0.00
10,350.00	43.71	178.60	10,209.36	155.32	923.89	-148.54	10.00	10.00	0.00
10,400.00	48.71	178.60	10,243.95	119.24	924.78	-112.46	10.00	10.00	0.00
10,450.00	53.71	178.60	10,275.26	80.29	925.73	-73.51	10.00	10.00	0.00
10,500.00	58.71	178.60	10,303.06	38.76	926.75	-31.97	10.00	10.00	0.00
10,550.00	63.71	178.60	10,327.13	-5.03	927.83	11.83	10.00	10.00	0.00
10,600.00	68.71	178.60	10,347.29	-50.75	928.95	57.56	10.00	10.00	0.00
10,650.00	73.71	178.60	10,363.39	-98.06	930.11	104.88	10.00	10.00	0.00
10,700.00	78.71	178.60	10,375.30	-146.59	931.30	153.41	10.00	10.00	0.00
10,750.00	83.71	178.60	10,382.93	-195.97	932.51	202.80	10.00	10.00	0.00
10,800.00	88.71	178.60	10,386.24	-245.83	933.73	252.67	10.00	10.00	0.00
10,809.88	89.70	178.60	10,386.37	-255.71	933.97	262.55	10.00	10.00	0.00
Begin 89.70° Lateral									
10,900.00	89.70	178.60	10,386.85	-345.80	936.18	352.65	0.00	0.00	0.00
11,000.00	89.70	178.60	10,387.37	-445.77	938.64	452.64	0.00	0.00	0.00
11,100.00	89.70	178.60	10,387.89	-545.74	941.09	552.62	0.00	0.00	0.00
11,200.00	89.70	178.60	10,388.42	-645.71	943.54	652.60	0.00	0.00	0.00
11,300.00	89.70	178.60	10,388.94	-745.67	945.99	752.59	0.00	0.00	0.00
11,400.00	89.70	178.60	10,389.46	-845.64	948.44	852.57	0.00	0.00	0.00
11,500.00	89.70	178.60	10,389.99	-945.61	950.89	952.56	0.00	0.00	0.00
11,600.00	89.70	178.60	10,390.51	-1,045.58	953.35	1,052.54	0.00	0.00	0.00
11,700.00	89.70	178.60	10,391.03	-1,145.55	955.80	1,152.52	0.00	0.00	0.00
11,800.00	89.70	178.60	10,391.56	-1,245.52	958.25	1,252.51	0.00	0.00	0.00
11,900.00	89.70	178.60	10,392.08	-1,345.49	960.70	1,352.49	0.00	0.00	0.00
12,000.00	89.70	178.60	10,392.60	-1,445.45	963.15	1,452.48	0.00	0.00	0.00
12,100.00	89.70	178.60	10,393.13	-1,545.42	965.60	1,552.46	0.00	0.00	0.00
12,138.59	89.70	178.60	10,393.33	-1,584.00	966.55	1,591.04	0.00	0.00	0.00
Begin 2.00°/100' Turn									
12,200.00	89.70	179.82	10,393.65	-1,645.40	967.40	1,652.45	2.00	0.00	2.00
12,300.00	89.70	181.82	10,394.18	-1,745.39	965.96	1,752.42	2.00	0.00	2.00
12,400.00	89.70	183.82	10,394.70	-1,845.26	961.04	1,852.25	2.00	0.00	2.00
12,500.00	89.70	185.82	10,395.23	-1,944.90	952.63	1,951.83	2.00	0.00	2.00
12,568.83	89.70	187.20	10,395.59	-2,013.28	944.82	2,020.15	2.00	0.00	2.00
Begin 2.00°/100' Turn									
12,600.00	89.70	186.58	10,395.75	-2,044.22	941.08	2,051.07	2.00	0.00	-2.00
12,700.00	89.70	184.58	10,396.27	-2,143.75	931.37	2,150.51	2.00	0.00	-2.00



MS Directional Planning Report



Database:	EDM 5000.15 Conroe DB	Local Co-ordinate Reference:	Well Grama Ridge 116 35 SB State Com #203H
Company:	Marathon Oil	TVD Reference:	Well @ 3704.00usft (Cactus 171)
Project:	Lea County, New Mexico (NAD 27)	MD Reference:	Well @ 3704.00usft (Cactus 171)
Site:	Grama Ridge 116 35 SB State Com (201H, 203H, 302H)	North Reference:	Grid
Well:	Grama Ridge 116 35 SB State Com #203H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #5		

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)
12,800.00	89.70	182.58	10,396.80	-2,243.54	925.13	2,250.27	2.00	0.00	-2.00
12,900.00	89.70	180.58	10,397.32	-2,343.50	922.38	2,350.20	2.00	0.00	-2.00
12,949.85	89.70	179.58	10,397.58	-2,393.35	922.31	2,400.05	2.00	0.00	-2.00
Hold 179.58° Azm									
13,000.00	89.70	179.58	10,397.85	-2,443.50	922.68	2,450.19	0.00	0.00	0.00
13,100.00	89.70	179.58	10,398.37	-2,543.49	923.41	2,550.19	0.00	0.00	0.00
13,200.00	89.70	179.58	10,398.89	-2,643.49	924.15	2,650.19	0.00	0.00	0.00
13,300.00	89.70	179.58	10,399.42	-2,743.48	924.88	2,750.19	0.00	0.00	0.00
13,400.00	89.70	179.58	10,399.94	-2,843.48	925.61	2,850.19	0.00	0.00	0.00
13,500.00	89.70	179.58	10,400.46	-2,943.48	926.35	2,950.19	0.00	0.00	0.00
13,600.00	89.70	179.58	10,400.98	-3,043.47	927.08	3,050.19	0.00	0.00	0.00
13,700.00	89.70	179.58	10,401.51	-3,143.47	927.82	3,150.18	0.00	0.00	0.00
13,800.00	89.70	179.58	10,402.03	-3,243.46	928.55	3,250.18	0.00	0.00	0.00
13,900.00	89.70	179.58	10,402.55	-3,343.46	929.28	3,350.18	0.00	0.00	0.00
14,000.00	89.70	179.58	10,403.08	-3,443.46	930.02	3,450.18	0.00	0.00	0.00
14,100.00	89.70	179.58	10,403.60	-3,543.45	930.75	3,550.18	0.00	0.00	0.00
14,200.00	89.70	179.58	10,404.12	-3,643.45	931.49	3,650.18	0.00	0.00	0.00
14,300.00	89.70	179.58	10,404.65	-3,743.44	932.22	3,750.18	0.00	0.00	0.00
14,400.00	89.70	179.58	10,405.17	-3,843.44	932.95	3,850.18	0.00	0.00	0.00
14,500.00	89.70	179.58	10,405.69	-3,943.44	933.69	3,950.17	0.00	0.00	0.00
14,600.00	89.70	179.58	10,406.21	-4,043.43	934.42	4,050.17	0.00	0.00	0.00
14,700.00	89.70	179.58	10,406.74	-4,143.43	935.16	4,150.17	0.00	0.00	0.00
14,800.00	89.70	179.58	10,407.26	-4,243.42	935.89	4,250.17	0.00	0.00	0.00
14,900.00	89.70	179.58	10,407.78	-4,343.42	936.62	4,350.17	0.00	0.00	0.00
15,000.00	89.70	179.58	10,408.31	-4,443.42	937.36	4,450.17	0.00	0.00	0.00
15,100.00	89.70	179.58	10,408.83	-4,543.41	938.09	4,550.17	0.00	0.00	0.00
15,200.00	89.70	179.58	10,409.35	-4,643.41	938.83	4,650.16	0.00	0.00	0.00
15,300.00	89.70	179.58	10,409.88	-4,743.40	939.56	4,750.16	0.00	0.00	0.00
15,400.00	89.70	179.58	10,410.40	-4,843.40	940.30	4,850.16	0.00	0.00	0.00
15,500.00	89.70	179.58	10,410.92	-4,943.39	941.03	4,950.16	0.00	0.00	0.00
15,600.00	89.70	179.58	10,411.44	-5,043.39	941.76	5,050.16	0.00	0.00	0.00
15,700.00	89.70	179.58	10,411.97	-5,143.39	942.50	5,150.16	0.00	0.00	0.00
15,800.00	89.70	179.58	10,412.49	-5,243.38	943.23	5,250.16	0.00	0.00	0.00
15,900.00	89.70	179.58	10,413.01	-5,343.38	943.97	5,350.15	0.00	0.00	0.00
16,000.00	89.70	179.58	10,413.54	-5,443.37	944.70	5,450.15	0.00	0.00	0.00
16,100.00	89.70	179.58	10,414.06	-5,543.37	945.43	5,550.15	0.00	0.00	0.00
16,200.00	89.70	179.58	10,414.58	-5,643.37	946.17	5,650.15	0.00	0.00	0.00
16,306.64	89.70	179.58	10,415.14	-5,750.00	946.95	5,756.79	0.00	0.00	0.00
Begin 2.00°/100' Turn									
16,400.00	89.70	181.45	10,415.63	-5,843.35	946.11	5,850.13	2.00	0.00	2.00
16,423.69	89.70	181.92	10,415.75	-5,867.03	945.42	5,873.80	2.00	0.00	2.00
Hold 181.92° Azm									
16,500.00	89.70	181.92	10,416.16	-5,943.30	942.86	5,950.05	0.00	0.00	0.00
16,600.00	89.70	181.92	10,416.68	-6,043.24	939.51	6,049.97	0.00	0.00	0.00
16,700.00	89.70	181.92	10,417.21	-6,143.18	936.16	6,149.88	0.00	0.00	0.00
16,800.00	89.70	181.92	10,417.74	-6,243.13	932.81	6,249.80	0.00	0.00	0.00
16,900.00	89.70	181.92	10,418.27	-6,343.07	929.46	6,349.71	0.00	0.00	0.00
17,000.00	89.70	181.92	10,418.79	-6,443.01	926.10	6,449.63	0.00	0.00	0.00
17,100.00	89.70	181.92	10,419.32	-6,542.95	922.75	6,549.54	0.00	0.00	0.00
17,200.00	89.70	181.92	10,419.85	-6,642.90	919.40	6,649.46	0.00	0.00	0.00
17,300.00	89.70	181.92	10,420.37	-6,742.84	916.05	6,749.37	0.00	0.00	0.00
17,400.00	89.70	181.92	10,420.90	-6,842.78	912.70	6,849.29	0.00	0.00	0.00



MS Directional Planning Report



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Company:	Marathon Oil	TVD Reference:	Well @ 3704.00usft (Cactus 171)
Project:	Lea County, New Mexico (NAD 27)	MD Reference:	Well @ 3704.00usft (Cactus 171)
Site:	Grama Ridge 116 35 SB State Com (201H, 203H, 302H)	North Reference:	Grid
Well:	Grama Ridge 116 35 SB State Com #203H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #5		

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)
17,500.00	89.70	181.92	10,421.43	-6,942.72	909.35	6,949.20	0.00	0.00	0.00
17,532.80	89.70	181.92	10,421.60	-6,975.50	908.25	6,981.97	0.00	0.00	0.00
Begin 2.00°/100' Turn									
17,600.00	89.70	180.58	10,421.95	-7,042.69	906.79	7,049.14	2.00	0.00	-2.00
17,700.00	89.70	178.58	10,422.48	-7,142.68	907.53	7,149.14	2.00	0.00	-2.00
17,800.00	89.70	176.58	10,423.01	-7,242.58	911.75	7,249.07	2.00	0.00	-2.00
17,900.00	89.70	174.58	10,423.54	-7,342.28	919.47	7,348.82	2.00	0.00	-2.00
18,000.00	89.70	172.58	10,424.06	-7,441.64	930.65	7,448.26	2.00	0.00	-2.00
18,028.81	89.70	172.00	10,424.21	-7,470.19	934.52	7,476.84	2.00	0.00	-2.00
Begin 2.00°/100' Turn									
18,100.00	89.70	173.42	10,424.59	-7,540.80	943.55	7,547.52	2.00	0.00	2.00
18,200.00	89.70	175.42	10,425.11	-7,640.32	953.27	7,647.11	2.00	0.00	2.00
18,300.00	89.70	177.42	10,425.63	-7,740.12	959.50	7,746.95	2.00	0.00	2.00
18,408.02	89.70	179.58	10,426.20	-7,848.09	962.32	7,854.94	2.00	0.00	2.00
Hold 179.58° Azm									
18,500.00	89.70	179.58	10,426.67	-7,940.07	962.99	7,946.92	0.00	0.00	0.00
18,600.00	89.70	179.58	10,427.20	-8,040.07	963.72	8,046.92	0.00	0.00	0.00
18,700.00	89.70	179.58	10,427.72	-8,140.07	964.44	8,146.92	0.00	0.00	0.00
18,800.00	89.70	179.58	10,428.24	-8,240.06	965.17	8,246.92	0.00	0.00	0.00
18,900.00	89.70	179.58	10,428.76	-8,340.06	965.89	8,346.91	0.00	0.00	0.00
19,000.00	89.70	179.58	10,429.28	-8,440.05	966.62	8,446.91	0.00	0.00	0.00
19,100.00	89.70	179.58	10,429.80	-8,540.05	967.35	8,546.91	0.00	0.00	0.00
19,200.00	89.70	179.58	10,430.32	-8,640.05	968.07	8,646.91	0.00	0.00	0.00
19,300.00	89.70	179.58	10,430.84	-8,740.04	968.80	8,746.91	0.00	0.00	0.00
19,400.00	89.70	179.58	10,431.36	-8,840.04	969.52	8,846.91	0.00	0.00	0.00
19,500.00	89.70	179.58	10,431.88	-8,940.03	970.25	8,946.91	0.00	0.00	0.00
19,600.00	89.70	179.58	10,432.40	-9,040.03	970.97	9,046.90	0.00	0.00	0.00
19,700.00	89.70	179.58	10,432.92	-9,140.03	971.70	9,146.90	0.00	0.00	0.00
19,800.00	89.70	179.58	10,433.45	-9,240.02	972.43	9,246.90	0.00	0.00	0.00
19,900.00	89.70	179.58	10,433.97	-9,340.02	973.15	9,346.90	0.00	0.00	0.00
20,000.00	89.70	179.58	10,434.49	-9,440.01	973.88	9,446.90	0.00	0.00	0.00
20,100.00	89.70	179.58	10,435.01	-9,540.01	974.60	9,546.90	0.00	0.00	0.00
20,200.00	89.70	179.58	10,435.53	-9,640.01	975.33	9,646.90	0.00	0.00	0.00
20,300.00	89.70	179.58	10,436.05	-9,740.00	976.05	9,746.89	0.00	0.00	0.00
20,400.00	89.70	179.58	10,436.57	-9,840.00	976.78	9,846.89	0.00	0.00	0.00
20,500.00	89.70	179.58	10,437.09	-9,939.99	977.51	9,946.89	0.00	0.00	0.00
20,600.00	89.70	179.58	10,437.61	-10,039.99	978.23	10,046.89	0.00	0.00	0.00
20,687.98	89.70	179.58	10,438.07	-10,127.97	978.87	10,134.87	0.00	0.00	0.00
PBHL - 5 1/2"									



MS Directional Planning Report



Database:	EDM 5000.15 Conroe DB	Local Co-ordinate Reference:	Well Grama Ridge 116 35 SB State Com #203H
Company:	Marathon Oil	TVD Reference:	Well @ 3704.00usft (Cactus 171)
Project:	Lea County, New Mexico (NAD 27)	MD Reference:	Well @ 3704.00usft (Cactus 171)
Site:	Grama Ridge 116 35 SB State Com (201H, 203H, 302H)	North Reference:	Grid
Well:	Grama Ridge 116 35 SB State Com #203H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #5		

Design Targets

Target Name

- hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
VP v5 - Grama Ridge - plan hits target center - Point	0.00	0.00	7,000.00	314.08	920.00	525,800.96	777,543.46	32.442326	-103.433687
KOP - Grama Ridge 2 - plan hits target center - Point	0.00	0.00	9,813.42	314.08	920.00	525,800.96	777,543.46	32.442326	-103.433687
T1 v5 - Grama Ridge - plan hits target center - Point	0.00	0.00	10,393.33	-1,584.00	966.55	523,902.88	777,590.01	32.437108	-103.433588
T2 v5 - Grama Ridge - plan hits target center - Point	0.00	0.00	10,415.14	-5,750.00	946.95	519,736.88	777,570.41	32.425658	-103.433765
T3 v5 - Grama Ridge - plan hits target center - Point	0.00	0.00	10,421.60	-6,975.50	908.25	518,511.38	777,531.71	32.422291	-103.433924
LTP/PBHL v5 - Grama - plan hits target center - Point	0.00	0.00	10,438.07	-10,127.97	978.87	515,358.91	777,602.33	32.413624	-103.433781

Casing Points

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
1,739.00	1,739.00	13 3/8"	13-3/8	17-1/2
5,814.55	5,735.00	9 5/8"	9-5/8	12-1/4
20,687.98	10,438.07	5 1/2"	5-1/2	6

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	+E/-W (usft)	Comment
1,900.00	1,900.00	0.00	0.00	Begin 2.00°/100' Build
2,511.31	2,506.68	20.99	61.49	Begin 12.23° Tangent
6,488.14	6,393.32	293.09	858.51	Begin 2.00°/100' Drop
7,099.46	7,000.00	314.08	920.00	Begin Vertical Hold
9,912.88	9,813.42	314.08	920.00	Begin 10.00°/100' Build & Turn
10,809.88	10,386.37	-255.71	933.97	Begin 89.70° Lateral
12,138.59	10,393.33	-1,584.00	966.55	Begin 2.00°/100' Turn
12,568.83	10,395.59	-2,013.28	944.82	Begin 2.00°/100' Turn
12,949.85	10,397.58	-2,393.35	922.31	Hold 179.58° Azm
16,306.64	10,415.14	-5,750.00	946.95	Begin 2.00°/100' Turn
16,423.69	10,415.75	-5,867.03	945.42	Hold 181.92° Azm
17,532.80	10,421.60	-6,975.50	908.25	Begin 2.00°/100' Turn
18,028.81	10,424.21	-7,470.19	934.52	Begin 2.00°/100' Turn
18,408.02	10,426.20	-7,848.09	962.32	Hold 179.58° Azm
20,687.98	10,438.07	-10,127.97	978.87	PBHL

MARATHON OIL PERMIAN LLC

DRILLING AND OPERATIONS PLAN

PAD NAME: Gramma Ridge 116 35 State Com 201H, 302H, 203H

STATE: NEW MEXICO **COUNTY:** LEA

Well	Gramma Ridge 116 35 SB State Com 203H
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1. CASING PROGRAM

203H

String Type	Hole Size	Csg Size	Top Set MD	Bottom Set MD	Weight (lbs/ft)	Grade
Surface	<u>17 1/2</u>	<u>13 3/8</u>	<u>0</u>	<u>1,739</u>	<u>54.5</u>	<u>J55</u>
Intermediate I	<u>12 1/4</u>	<u>9 5/8</u>	<u>0</u>	<u>5,729</u>	<u>40</u>	<u>P110</u>
Production csg	<u>8 3/4</u>	<u>5 1/2</u>	<u>0</u>	<u>10,806</u>	<u>23</u>	<u>P110</u>
Production csg	<u>8 1/2</u>	<u>5 1/2</u>	<u>10,806</u>	<u>20,688</u>	<u>23</u>	<u>P110</u>

2. CEMENT PROGRAM:

203H

String Type	Top MD	Bottom MD	Quantity (sx)
Surface	0	1,739	1452
Intermediate I	0	5,729	1002
Production 8.75"	5,229	9,409	705
Production 8.5"	9,409	20,688	1973

3. PRESSURE CONTROL EQUIPMENT

BOP installed and tested before drilling which hole?	Size?	Min. Required WP	Type	✓	Tested to:
12 ¼"	13 5/8	5000	Annular	x	50% of working pressure
			Blind Ram	X	5000
			Pipe Ram	X	
			Pipe Ram	X	
8 ¾" & 8 ½"	13 5/8	5000	5M Annular	x	50% of working pressure
			Blind Ram	x	5000
			Pipe Ram	x	
			Pipe Ram	x	

4. MUD PROGRAM:

Hole Section	Mud Type
<u>Surface</u>	<u>Water Based Mud</u>
<u>Intermediate 1</u>	<u>Brine</u>
<u>Production</u>	<u>Cut Brine / OBM</u>

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 177033

CONDITIONS

Operator: MARATHON OIL PERMIAN LLC 990 Town & Country Blvd. Houston, TX 77024	OGRID: 372098
	Action Number: 177033
	Action Type: [C-103] NOI Change of Plans (C-103A)

CONDITIONS

Created By	Condition	Condition Date
pkautz	None	1/18/2023