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

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

Form C-101
August 1, 2011

Permit 364030

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

1. Operator Name and Address	2. OGRID Number
MR NM Operating LLC 5950 Berkshire Lane Dallas, TX 75225	330506
	3. API Number 30-015-55550

4. Property Code	5. Property Name	6. Well No.
333215	Sheep Dog State Com	002H

7. Surface Location

UL - Lot	Section	Township	Range	Lot Idn	Feet From	N/S Line	Feet From	E/W Line	County
L	11	17S	27E		2240	S	299	W	Eddy

8. Proposed Bottom Hole Location

UL - Lot	Section	Township	Range	Lot Idn	Feet From	N/S Line	Feet From	E/W Line	County
H	11	17S	27E	H	2416	N	100	E	Eddy

9. Pool Information

HART CANYON; ABO	97450

Additional Well Information

11. Work Type	12. Well Type	13. Cable/Rotary	14. Lease Type	15. Ground Level Elevation
New Well	OIL		State	3406
16. Multiple	**17. Proposed Depth**	**18. Formation**	**19. Contractor**	**20. Spud Date**
N	11765	Abo		6/1/2024
Depth to Ground water		Distance from nearest fresh water well		Distance to nearest surface water

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

21. Proposed Casing and Cement Program

Type	Hole Size	Casing Size	Casing Weight/ft	Setting Depth	Sacks of Cement	Estimated TOC
Surf	12.25	9.625	36	1300	431	0
Prod	8.75	5.5	20	11765	1788	0

Casing/Cement Program: Additional Comments

22. Proposed Blowout Prevention Program

Type	Working Pressure	Test Pressure	Manufacturer
Double Ram	3000	3000	TBD

23. I hereby certify that the information given above is true and complete to the best of my knowledge and belief. **I further certify I have complied with 19.15.14.9 (A) NMAC ☒ and/or 19.15.14.9 (B) NMAC ☒, if applicable.** Signature:		**OIL CONSERVATION DIVISION**	
Printed Name:	Electronically filed by Ben T Barr	Approved By:	Ward Rikala
Title:	Vice President	Title:	Petroleum Specialist Supervisor
Email Address:	ben@cypressnr.com	Approved Date:	10/23/2024 Expiration Date: 10/23/2026
Date:	4/19/2024 Phone: 469-906-2004	Conditions of Approval Attached	

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District IV
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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	[2]Pool Code	[3]Pool Name
30-015-55550	97450	HART CANYON; ABO

[4]Property Code	[5]Property Name	[6]Well Number
333215	SHEEP DOG STATE COM	2H

[7]OGRID No.	[8]Operator Name	[9]Elevation
330506	MR NM OPERATING LLC	3406'

[10]Surface Location

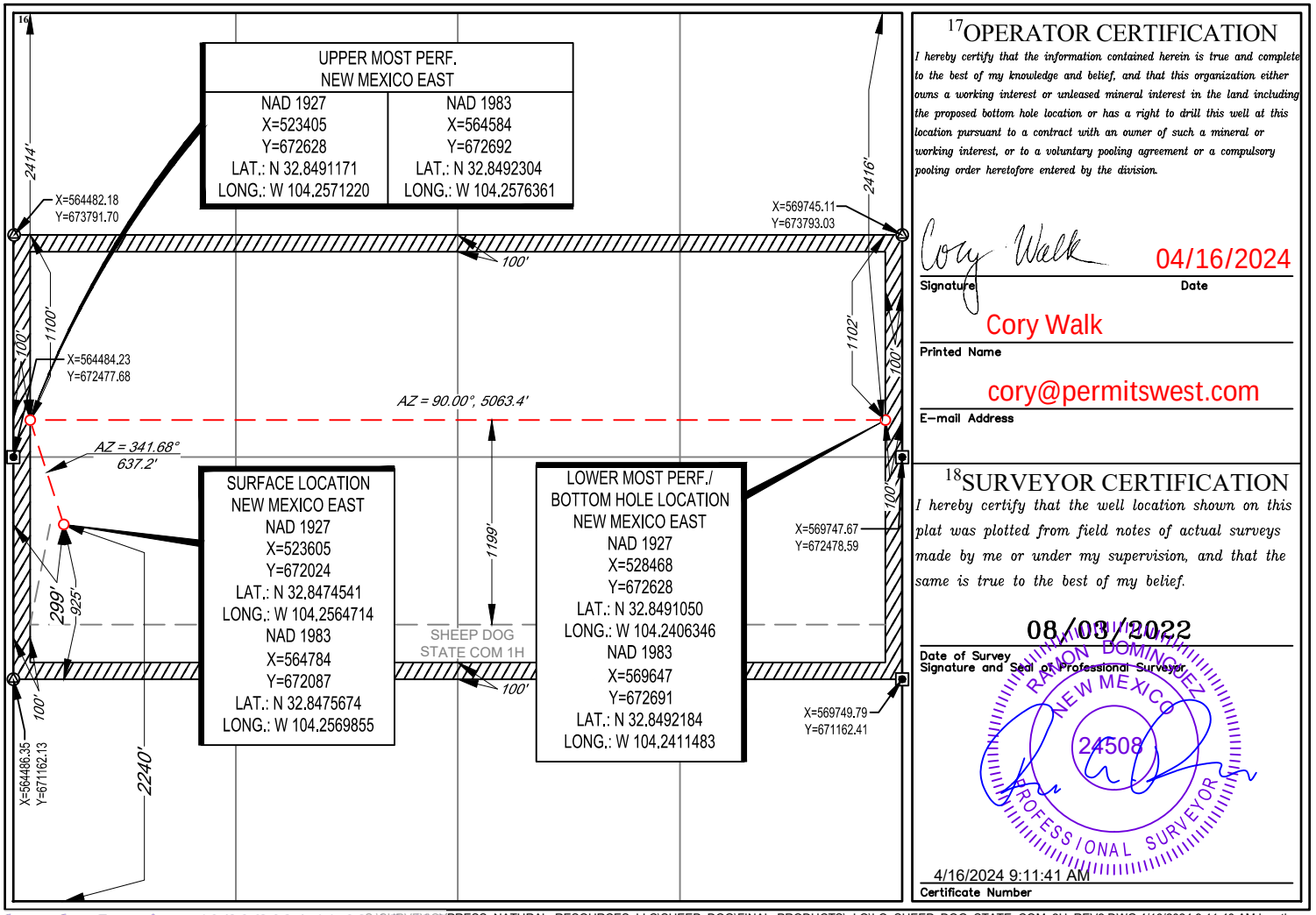
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
L	11	17-S	27-E	-	2240'	SOUTH	299'	WEST	EDDY

[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
H	11	17-S	27-E	-	2416'	NORTH	100'	EAST	EDDY

[12]Dedicated Acres	[13]Joint or Infill	[14]Consolidation Code	[15]Order No.
320.00			

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.



[17]OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Cory Walk — 04/16/2024
Signature — Date

Cory Walk
Printed Name

cory@permitswest.com
E-mail Address

[18]SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true to the best of my belief.

08/03/2022
Date of Survey
Signature and Seal of Professional Surveyor

RAMON DOMINGUEZ
NEW MEXICO
24508
PROFESSIONAL SURVEYOR

4/16/2024 9:11:41 AM
Certificate Number

S:\SURVEY\XPRESS_NATURAL_RESOURCES_LLC\SHEEP_DOG\FINAL_PRODUCTS_LO\LO_SHEEP_DOG_STATE_COM_2H_REV2.DWG 4/16/2024 9:11:40 AM kmatheny

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

Form APD Conditions

Permit 364030

PERMIT CONDITIONS OF APPROVAL

Operator Name and Address:	API Number:
MR NM Operating LLC [330506] 5950 Berkshire Lane Dallas, TX 75225	30-015-55550
	Well: Sheep Dog State Com #002H

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

PATRIOT DRILLING SERVICES

Mr NM Operating LLC
Well Name: Sheep Dog State 2H
Project: Eddy County, NM
Wellbore: Wellbore #1
Plan: Prelim Plan #1

Map System:	US State Plane 1983
Datum:	North American Datum 1983
Ellipsoid:	GRS 1980
Zone Name:	New Mexico Eastern Zone
Latitude:	32.84756828
Longitude:	-104.25698590
Grid East:	564784.00
Grid North:	672087.00
Scale Factor:	1.000
Geomagnetic Model:	IGRF2020
Sample Date:	10-Apr-24
Magnetic Declination:	6.58°
Dip Angle from Horizontal:	60.27°
Magnetic Field Strength:	47497.42152027nT

To convert a Magnetic Direction to a Grid Direction, Add 6.54°

SURFACE LOCATION — Ground Elevation: 3406.00 KB @ 3426.00usft

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	672087.00	564784.00	32.84756828	-104.25698590

TARGET LOCATIONS

Name	TVD	+N/-S	+E/-W	Northing	Easting
VP (Sheep Dog State 2H)	5278.06	605.00	-922.48	672692.00	563861.52
FTP (Sheep Dog State 2H)	6122.00	605.00	-200.00	672692.00	564584.00
PBHL (Sheep Dog State 2H)	6198.88	604.00	4863.00	672691.00	569647.00

Azimuths to Grid North
True North: -0.04°
Magnetic North: 6.54°

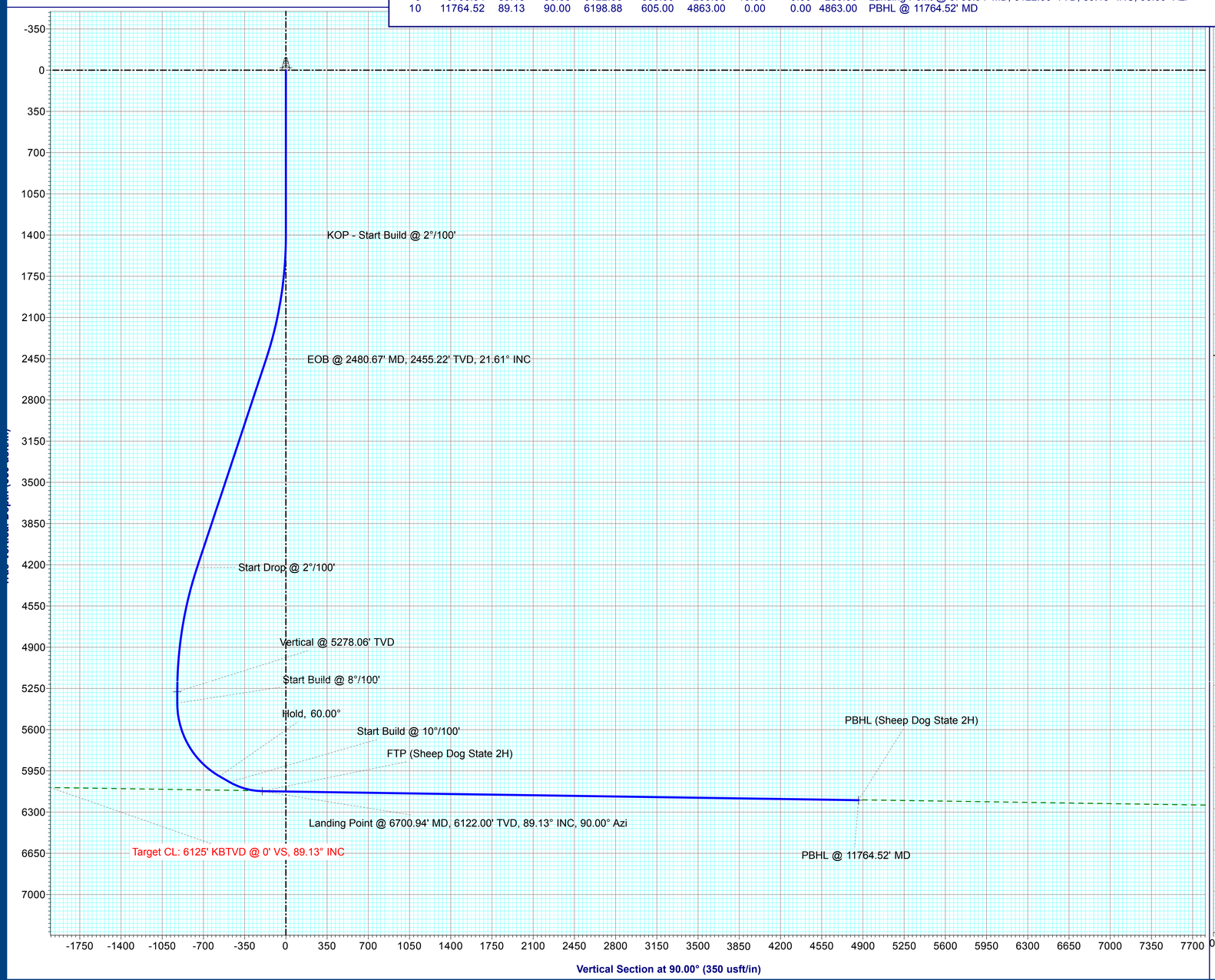
Magnetic Field
Strength: 47497.4nT
Dip Angle: 60.27°
Date: 4/10/2024
Model: IGRF2020

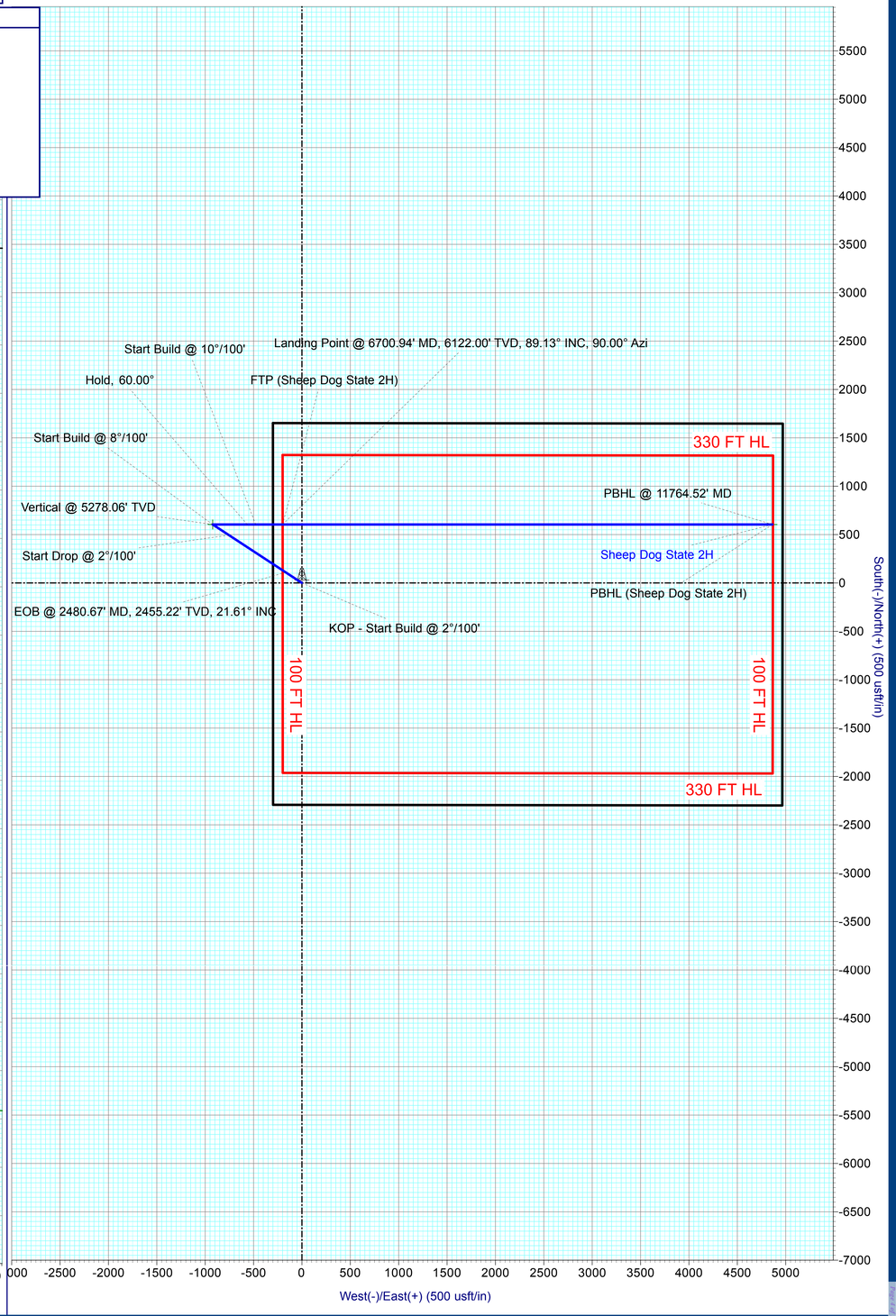
Well Planning: Jerry Howard

17:00, April 10 2024

SECTION DETAILS:

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Annotation
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	1400.00	0.00	0.00	1400.00	0.00	0.00	0.00	0.00	0.00	KOP - Start Build @ 2°/100'
3	2480.67	21.61	303.26	2455.23	110.46	-168.43	2.00	303.26	-168.43	EOB @ 2480.67' MD, 2455.22' TVD, 21.61° INC
4	4381.97	21.61	303.26	4222.84	494.54	-754.05	0.00	0.00	-754.05	Start Drop @ 2°/100'
5	5462.64	0.00	0.00	5278.06	605.00	-922.48	2.00	180.00	-922.48	Vertical @ 5278.06' TVD
6	5559.64	0.00	0.00	5375.06	605.00	-922.48	0.00	0.00	-922.48	Start Build @ 8°/100'
7	6309.64	60.00	90.00	5995.30	605.00	-564.38	8.00	90.00	-564.38	Hold, 60.00°
8	6409.64	60.00	90.00	6045.30	605.00	-477.78	0.00	0.00	-477.78	Start Build @ 10°/100'
9	6700.94	89.13	90.00	6122.00	605.00	-200.00	10.00	0.00	-200.00	Landing Point @ 6700.94' MD, 6122.00' TVD, 89.13° INC, 90.00° Azi
10	11764.52	89.13	90.00	6198.88	605.00	4863.00	0.00	0.00	4863.00	PBHL @ 11764.52' MD





Mr NM Operating LLC

Eddy County, NM
Sheep Dog State
Sheep Dog State 2H

Wellbore #1

Plan: Prelim Plan #1

Standard Planning Report - Geographic

10 April, 2024

PATRIOT DRILLING SERVICES

Planning Report - Geographic

Database:	EDM 5000.15 Single User Db	**Local Co-ordinate Reference:**	Well Sheep Dog State 2H
Company:	Mr NM Operating LLC	**TVD Reference:**	KB @ 3426.00usft
Project:	Eddy County, NM	**MD Reference:**	KB @ 3426.00usft
Site:	Sheep Dog State	**North Reference:**	Grid
Well:	Sheep Dog State 2H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Prelim Plan #1		

Project Eddy County, NM

Map System:	US State Plane 1983	**System Datum:**	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site Sheep Dog State

Site Position:		**Northing:**	672,087.00 usft	**Latitude:**	32.84756828
From:	Map	**Easting:**	564,784.00 usft	**Longitude:**	-104.25698591
Position Uncertainty:	0.00 usft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	0.04 °

Well Sheep Dog State 2H

Well Position	**+N/-S**	0.00 usft	**Northing:**	672,087.00 usft	**Latitude:**	32.84756828
	+E/-W	0.00 usft	**Easting:**	564,784.00 usft	**Longitude:**	-104.25698591
Position Uncertainty		0.00 usft	**Wellhead Elevation:**		**Ground Level:**	3,406.00 usft

Wellbore Wellbore #1

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2020	4/10/2024	6.58	60.27	47,497.42152028

Design Prelim Plan #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	90.00

Plan Survey Tool Program **Date** 4/10/2024

	Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	11,764.52	Prelim Plan #1 (Wellbore #1)	MWD+IGRF OWSG MWD + IGRF or WMM	

PATRIOT DRILLING SERVICES

Planning Report - Geographic

Database:	EDM 5000.15 Single User Db	**Local Co-ordinate Reference:**	Well Sheep Dog State 2H
Company:	Mr NM Operating LLC	**TVD Reference:**	KB @ 3426.00usft
Project:	Eddy County, NM	**MD Reference:**	KB @ 3426.00usft
Site:	Sheep Dog State	**North Reference:**	Grid
Well:	Sheep Dog State 2H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Prelim Plan #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	0.00	
1,400.00	0.00	0.01	1,400.00	0.00	0.00	0.00	0.00	0.00	0.01	
2,480.67	21.61	303.26	2,455.23	110.46	-168.43	2.00	2.00	0.00	303.26	
4,381.97	21.61	303.26	4,222.84	494.54	-754.05	0.00	0.00	0.00	0.00	
5,462.64	0.00	0.00	5,278.06	605.00	-922.48	2.00	-2.00	0.00	180.00	VP (Sheep Dog State
5,559.64	0.00	0.00	5,375.06	605.00	-922.48	0.00	0.00	0.00	0.00	
6,309.64	60.00	90.00	5,995.30	605.00	-564.38	8.00	8.00	0.00	90.00	
6,409.64	60.00	90.00	6,045.30	605.00	-477.78	0.00	0.00	0.00	0.00	
6,700.94	89.13	90.00	6,122.00	605.00	-200.00	10.00	10.00	0.00	0.00	FTP (Sheep Dog Stat
11,764.52	89.13	90.00	6,198.88	605.00	4,863.00	0.00	0.00	0.00	0.00	PBHL (Sheep Dog St

PATRIOT DRILLING SERVICES

Planning Report - Geographic

Database:	EDM 5000.15 Single User Db	**Local Co-ordinate Reference:**	Well Sheep Dog State 2H
Company:	Mr NM Operating LLC	**TVD Reference:**	KB @ 3426.00usft
Project:	Eddy County, NM	**MD Reference:**	KB @ 3426.00usft
Site:	Sheep Dog State	**North Reference:**	Grid
Well:	Sheep Dog State 2H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Prelim Plan #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
0.00	0.00	0.00	0.00	0.00	0.00	672,087.00	564,784.00	32.84756828	-104.25698591
100.00	0.00	0.00	100.00	0.00	0.00	672,087.00	564,784.00	32.84756828	-104.25698591
200.00	0.00	0.00	200.00	0.00	0.00	672,087.00	564,784.00	32.84756828	-104.25698591
300.00	0.00	0.00	300.00	0.00	0.00	672,087.00	564,784.00	32.84756828	-104.25698591
400.00	0.00	0.00	400.00	0.00	0.00	672,087.00	564,784.00	32.84756828	-104.25698591
500.00	0.00	0.00	500.00	0.00	0.00	672,087.00	564,784.00	32.84756828	-104.25698591
600.00	0.00	0.00	600.00	0.00	0.00	672,087.00	564,784.00	32.84756828	-104.25698591
700.00	0.00	0.00	700.00	0.00	0.00	672,087.00	564,784.00	32.84756828	-104.25698591
800.00	0.00	0.00	800.00	0.00	0.00	672,087.00	564,784.00	32.84756828	-104.25698591
900.00	0.00	0.00	900.00	0.00	0.00	672,087.00	564,784.00	32.84756828	-104.25698591
1,000.00	0.00	0.00	1,000.00	0.00	0.00	672,087.00	564,784.00	32.84756828	-104.25698591
1,100.00	0.00	0.00	1,100.00	0.00	0.00	672,087.00	564,784.00	32.84756828	-104.25698591
1,200.00	0.00	0.00	1,200.00	0.00	0.00	672,087.00	564,784.00	32.84756828	-104.25698591
1,300.00	0.00	0.00	1,300.00	0.00	0.00	672,087.00	564,784.00	32.84756828	-104.25698591
1,400.00	0.00	0.00	1,400.00	0.00	0.00	672,087.00	564,784.00	32.84756828	-104.25698591
KOP - Start Build @ 2°/100'									
1,500.00	2.00	303.26	1,499.98	0.96	-1.46	672,087.95	564,782.54	32.84757091	-104.25699066
1,600.00	4.00	303.26	1,599.84	3.83	-5.84	672,090.82	564,778.17	32.84757881	-104.25700490
1,700.00	6.00	303.26	1,699.45	8.61	-13.12	672,095.60	564,770.88	32.84759196	-104.25702862
1,800.00	8.00	303.26	1,798.70	15.29	-23.31	672,102.28	564,760.69	32.84761035	-104.25706178
1,900.00	10.00	303.26	1,897.47	23.87	-36.39	672,110.86	564,747.61	32.84763396	-104.25710436
2,000.00	12.00	303.26	1,995.62	34.33	-52.35	672,121.33	564,731.65	32.84766275	-104.25715629
2,100.00	14.00	303.26	2,093.06	46.67	-71.16	672,133.66	564,712.84	32.84769670	-104.25721751
2,200.00	16.00	303.26	2,189.64	60.86	-92.80	672,147.86	564,691.20	32.84773575	-104.25728794
2,300.00	18.00	303.26	2,285.27	76.90	-117.25	672,163.89	564,666.76	32.84777987	-104.25736751
2,400.00	20.00	303.26	2,379.82	94.75	-144.47	672,181.74	564,639.53	32.84782900	-104.25745611
2,480.67	21.61	303.26	2,455.23	110.46	-168.43	672,197.46	564,615.57	32.84787224	-104.25753410
EOB @ 2480.67' MD, 2455.22' TVD, 21.61° INC									
2,500.00	21.61	303.26	2,473.19	114.37	-174.38	672,201.36	564,609.62	32.84788298	-104.25755348
2,600.00	21.61	303.26	2,566.16	134.57	-205.19	672,221.56	564,578.82	32.84793857	-104.25765372
2,700.00	21.61	303.26	2,659.13	154.77	-235.99	672,241.76	564,548.02	32.84799415	-104.25775397
2,800.00	21.61	303.26	2,752.10	174.97	-266.79	672,261.96	564,517.22	32.84804973	-104.25785422
2,900.00	21.61	303.26	2,845.07	195.17	-297.59	672,282.17	564,486.41	32.84810532	-104.25795447
3,000.00	21.61	303.26	2,938.04	215.37	-328.39	672,302.37	564,455.61	32.84816090	-104.25805472
3,100.00	21.61	303.26	3,031.01	235.57	-359.19	672,322.57	564,424.81	32.84821649	-104.25815497
3,200.00	21.61	303.26	3,123.98	255.77	-389.99	672,342.77	564,394.01	32.84827207	-104.25825522
3,300.00	21.61	303.26	3,216.95	275.97	-420.79	672,362.97	564,363.21	32.84832766	-104.25835547
3,400.00	21.61	303.26	3,309.91	296.17	-451.59	672,383.17	564,332.41	32.84838324	-104.25845572
3,500.00	21.61	303.26	3,402.88	316.37	-482.39	672,403.37	564,301.61	32.84843882	-104.25855597
3,600.00	21.61	303.26	3,495.85	336.57	-513.20	672,423.57	564,270.81	32.84849441	-104.25865622
3,700.00	21.61	303.26	3,588.82	356.77	-544.00	672,443.77	564,240.01	32.84854999	-104.25875647
3,800.00	21.61	303.26	3,681.79	376.98	-574.80	672,463.97	564,209.21	32.84860557	-104.25885672
3,900.00	21.61	303.26	3,774.76	397.18	-605.60	672,484.17	564,178.40	32.84866116	-104.25895697
4,000.00	21.61	303.26	3,867.73	417.38	-636.40	672,504.37	564,147.60	32.84871674	-104.25905722
4,100.00	21.61	303.26	3,960.70	437.58	-667.20	672,524.57	564,116.80	32.84877232	-104.25915747
4,200.00	21.61	303.26	4,053.67	457.78	-698.00	672,544.77	564,086.00	32.84882791	-104.25925772
4,300.00	21.61	303.26	4,146.64	477.98	-728.80	672,564.97	564,055.20	32.84888349	-104.25935797
4,381.97	21.61	303.26	4,222.84	494.54	-754.05	672,581.53	564,029.95	32.84892905	-104.25944014
Start Drop @ 2°/100'									
4,400.00	21.25	303.26	4,239.62	498.15	-759.56	672,585.14	564,024.44	32.84893899	-104.25945808
4,500.00	19.25	303.26	4,333.44	517.13	-788.50	672,604.13	563,995.50	32.84899123	-104.25955229
4,600.00	17.25	303.26	4,428.40	534.31	-814.69	672,621.30	563,969.31	32.84903849	-104.25963753
4,700.00	15.25	303.26	4,524.40	549.66	-838.10	672,636.65	563,945.91	32.84908072	-104.25971370
4,800.00	13.25	303.26	4,621.32	563.16	-858.68	672,650.15	563,925.32	32.84911787	-104.25978070

PATRIOT DRILLING SERVICES

Planning Report - Geographic

Database:	EDM 5000.15 Single User Db	**Local Co-ordinate Reference:**	Well Sheep Dog State 2H
Company:	Mr NM Operating LLC	**TVD Reference:**	KB @ 3426.00usft
Project:	Eddy County, NM	**MD Reference:**	KB @ 3426.00usft
Site:	Sheep Dog State	**North Reference:**	Grid
Well:	Sheep Dog State 2H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Prelim Plan #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
4,900.00	11.25	303.26	4,719.03	574.80	-876.43	672,661.79	563,907.57	32.84914989	-104.25983846
5,000.00	9.25	303.26	4,817.43	584.56	-891.31	672,671.55	563,892.69	32.84917675	-104.25988690
5,100.00	7.25	303.26	4,916.39	592.43	-903.31	672,679.42	563,880.69	32.84919841	-104.25992597
5,200.00	5.25	303.26	5,015.79	598.40	-912.42	672,685.40	563,871.58	32.84921484	-104.25995561
5,300.00	3.25	303.26	5,115.51	602.47	-918.62	672,689.46	563,865.38	32.84922603	-104.25997579
5,400.00	1.25	303.26	5,215.43	604.62	-921.91	672,691.62	563,862.09	32.84923197	-104.25998649
5,462.64	0.00	0.00	5,278.06	605.00	-922.48	672,692.00	563,861.52	32.84923300	-104.25998835
Vertical @ 5278.06' TVD - VP (Sheep Dog State 2H)									
5,500.00	0.00	0.00	5,315.42	605.00	-922.48	672,692.00	563,861.52	32.84923300	-104.25998835
5,559.64	0.00	0.00	5,375.06	605.00	-922.48	672,692.00	563,861.52	32.84923300	-104.25998835
Start Build @ 8°/100'									
5,600.00	3.23	90.00	5,415.40	605.00	-921.34	672,692.00	563,862.66	32.84923300	-104.25998465
5,700.00	11.23	90.00	5,514.53	605.00	-908.77	672,692.00	563,875.23	32.84923297	-104.25994371
5,800.00	19.23	90.00	5,610.94	605.00	-882.52	672,692.00	563,901.48	32.84923292	-104.25985824
5,900.00	27.23	90.00	5,702.76	605.00	-843.11	672,692.00	563,940.89	32.84923285	-104.25972991
6,000.00	35.23	90.00	5,788.20	605.00	-791.31	672,692.00	563,992.69	32.84923275	-104.25956122
6,100.00	43.23	90.00	5,865.60	605.00	-728.12	672,692.00	564,055.88	32.84923263	-104.25935546
6,200.00	51.23	90.00	5,933.45	605.00	-654.77	672,692.00	564,129.23	32.84923248	-104.25911661
6,300.00	59.23	90.00	5,990.43	605.00	-572.69	672,692.00	564,211.31	32.84923233	-104.25884934
6,309.64	60.00	90.00	5,995.30	605.00	-564.38	672,692.00	564,219.62	32.84923231	-104.25882228
Hold, 60.00°									
6,400.00	60.00	90.00	6,040.49	605.00	-486.12	672,692.00	564,297.88	32.84923216	-104.25856745
6,409.64	60.00	90.00	6,045.30	605.00	-477.78	672,692.00	564,306.22	32.84923214	-104.25854027
Start Build @ 10°/100'									
6,500.00	69.04	90.00	6,084.14	605.00	-396.29	672,692.00	564,387.71	32.84923198	-104.25827492
6,600.00	79.04	90.00	6,111.61	605.00	-300.27	672,692.00	564,483.73	32.84923179	-104.25796225
6,700.00	89.04	90.00	6,121.99	605.00	-200.94	672,692.00	564,583.07	32.84923160	-104.25763879
6,700.94	89.13	90.00	6,122.00	605.00	-200.00	672,692.00	564,584.00	32.84923160	-104.25763574
Landing Point @ 6700.94' MD, 6122.00' TVD, 89.13° INC, 90.00° Azi - FTP (Sheep Dog State 2H)									
6,800.00	89.13	90.00	6,123.50	605.00	-100.95	672,692.00	564,683.06	32.84923140	-104.25731320
6,900.00	89.13	90.00	6,125.02	605.00	-0.96	672,692.00	564,783.04	32.84923120	-104.25698760
7,000.00	89.13	90.00	6,126.54	605.00	99.03	672,692.00	564,883.03	32.84923100	-104.25666201
7,100.00	89.13	90.00	6,128.06	605.00	199.02	672,692.00	564,983.02	32.84923080	-104.25633642
7,200.00	89.13	90.00	6,129.58	605.00	299.01	672,692.00	565,083.01	32.84923060	-104.25601083
7,300.00	89.13	90.00	6,131.10	605.00	399.00	672,692.00	565,183.00	32.84923040	-104.25568524
7,400.00	89.13	90.00	6,132.61	605.00	498.98	672,692.00	565,282.99	32.84923020	-104.25535964
7,500.00	89.13	90.00	6,134.13	605.00	598.97	672,692.00	565,382.97	32.84923000	-104.25503405
7,600.00	89.13	90.00	6,135.65	605.00	698.96	672,692.00	565,482.96	32.84922979	-104.25470846
7,700.00	89.13	90.00	6,137.17	605.00	798.95	672,692.00	565,582.95	32.84922959	-104.25438287
7,800.00	89.13	90.00	6,138.69	605.00	898.94	672,692.00	565,682.94	32.84922938	-104.25405727
7,900.00	89.13	90.00	6,140.21	605.00	998.93	672,692.00	565,782.93	32.84922918	-104.25373168
8,000.00	89.13	90.00	6,141.72	605.00	1,098.91	672,692.00	565,882.92	32.84922897	-104.25340609
8,100.00	89.13	90.00	6,143.24	605.00	1,198.90	672,692.00	565,982.91	32.84922876	-104.25308050
8,200.00	89.13	90.00	6,144.76	605.00	1,298.89	672,692.00	566,082.89	32.84922855	-104.25275490
8,300.00	89.13	90.00	6,146.28	605.00	1,398.88	672,692.00	566,182.88	32.84922834	-104.25242931
8,400.00	89.13	90.00	6,147.80	605.00	1,498.87	672,692.00	566,282.87	32.84922813	-104.25210372
8,500.00	89.13	90.00	6,149.32	605.00	1,598.86	672,692.00	566,382.86	32.84922792	-104.25177813
8,600.00	89.13	90.00	6,150.84	605.00	1,698.85	672,692.00	566,482.85	32.84922770	-104.25145254
8,700.00	89.13	90.00	6,152.35	605.00	1,798.83	672,692.00	566,582.84	32.84922749	-104.25112694
8,800.00	89.13	90.00	6,153.87	605.00	1,898.82	672,692.00	566,682.83	32.84922728	-104.25080135
8,900.00	89.13	90.00	6,155.39	605.00	1,998.81	672,692.00	566,782.81	32.84922706	-104.25047576
9,000.00	89.13	90.00	6,156.91	605.00	2,098.80	672,692.00	566,882.80	32.84922685	-104.25015017
9,100.00	89.13	90.00	6,158.43	605.00	2,198.79	672,692.00	566,982.79	32.84922663	-104.24982457
9,200.00	89.13	90.00	6,159.95	605.00	2,298.78	672,692.00	567,082.78	32.84922641	-104.24949898

PATRIOT DRILLING SERVICES

Planning Report - Geographic

Database:	EDM 5000.15 Single User Db	**Local Co-ordinate Reference:**	Well Sheep Dog State 2H
Company:	Mr NM Operating LLC	**TVD Reference:**	KB @ 3426.00usft
Project:	Eddy County, NM	**MD Reference:**	KB @ 3426.00usft
Site:	Sheep Dog State	**North Reference:**	Grid
Well:	Sheep Dog State 2H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Prelim Plan #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
9,300.00	89.13	90.00	6,161.46	605.00	2,398.76	672,692.00	567,182.77	32.84922619	-104.24917339
9,400.00	89.13	90.00	6,162.98	605.00	2,498.75	672,692.00	567,282.76	32.84922597	-104.24884780
9,500.00	89.13	90.00	6,164.50	605.00	2,598.74	672,692.00	567,382.74	32.84922575	-104.24852221
9,600.00	89.13	90.00	6,166.02	605.00	2,698.73	672,692.00	567,482.73	32.84922553	-104.24819661
9,700.00	89.13	90.00	6,167.54	605.00	2,798.72	672,692.00	567,582.72	32.84922531	-104.24787102
9,800.00	89.13	90.00	6,169.06	605.00	2,898.71	672,692.00	567,682.71	32.84922509	-104.24754543
9,900.00	89.13	90.00	6,170.57	605.00	2,998.70	672,692.00	567,782.70	32.84922486	-104.24721984
10,000.00	89.13	90.00	6,172.09	605.00	3,098.68	672,692.00	567,882.69	32.84922464	-104.24689425
10,100.00	89.13	90.00	6,173.61	605.00	3,198.67	672,692.00	567,982.68	32.84922441	-104.24656865
10,200.00	89.13	90.00	6,175.13	605.00	3,298.66	672,692.00	568,082.66	32.84922419	-104.24624306
10,300.00	89.13	90.00	6,176.65	605.00	3,398.65	672,692.00	568,182.65	32.84922396	-104.24591747
10,400.00	89.13	90.00	6,178.17	605.00	3,498.64	672,692.00	568,282.64	32.84922373	-104.24559188
10,500.00	89.13	90.00	6,179.68	605.00	3,598.63	672,692.00	568,382.63	32.84922350	-104.24526628
10,600.00	89.13	90.00	6,181.20	605.00	3,698.61	672,692.00	568,482.62	32.84922327	-104.24494069
10,700.00	89.13	90.00	6,182.72	605.00	3,798.60	672,692.00	568,582.61	32.84922304	-104.24461510
10,800.00	89.13	90.00	6,184.24	605.00	3,898.59	672,692.00	568,682.59	32.84922281	-104.24428951
10,900.00	89.13	90.00	6,185.76	605.00	3,998.58	672,692.00	568,782.58	32.84922258	-104.24396392
11,000.00	89.13	90.00	6,187.28	605.00	4,098.57	672,692.00	568,882.57	32.84922235	-104.24363832
11,100.00	89.13	90.00	6,188.79	605.00	4,198.56	672,692.00	568,982.56	32.84922211	-104.24331273
11,200.00	89.13	90.00	6,190.31	605.00	4,298.55	672,692.00	569,082.55	32.84922188	-104.24298714
11,300.00	89.13	90.00	6,191.83	605.00	4,398.53	672,692.00	569,182.54	32.84922164	-104.24266155
11,400.00	89.13	90.00	6,193.35	605.00	4,498.52	672,692.00	569,282.53	32.84922141	-104.24233596
11,500.00	89.13	90.00	6,194.87	605.00	4,598.51	672,692.00	569,382.51	32.84922117	-104.24201036
11,600.00	89.13	90.00	6,196.39	605.00	4,698.50	672,692.00	569,482.50	32.84922093	-104.24168477
11,700.00	89.13	90.00	6,197.90	605.00	4,798.49	672,692.00	569,582.49	32.84922069	-104.24135918
11,764.52	89.13	90.00	6,198.88	605.00	4,863.00	672,692.00	569,647.00	32.84922054	-104.24114911
PBHL @ 11764.52' MD - PBHL (Sheep Dog State 2H)									

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 (Sheep Dog State 2H - plan hits target center - Point	0.00	0.00	5,278.06	605.00	-922.48	672,692.00	563,861.52	32.84923300	-104.25998835
FTP (Sheep Dog State 2 - plan hits target center - Point	0.00	0.07	6,122.00	605.00	-200.00	672,692.00	564,584.00	32.84923160	-104.25763574
PBHL (Sheep Dog State - plan misses target center by 1.00usft at 11764.52usft MD (6198.88 TVD, 605.00 N, 4863.00 E) - Point	0.00	0.07	6,198.88	604.00	4,863.00	672,691.00	569,647.00	32.84921779	-104.24114911

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
6,641.92	6,118.07	Target CL: 6125' KBTVD @ 0' VS, 89.13		0.87	90.00

Planning Report - Geographic

Database:	EDM 5000.15 Single User Db	**Local Co-ordinate Reference:**	Well Sheep Dog State 2H
Company:	Mr NM Operating LLC	**TVD Reference:**	KB @ 3426.00usft
Project:	Eddy County, NM	**MD Reference:**	KB @ 3426.00usft
Site:	Sheep Dog State	**North Reference:**	Grid
Well:	Sheep Dog State 2H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Prelim Plan #1		

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
1,400.00	1,400.00	0.00	0.00	KOP - Start Build @ 2°/100'
2,480.67	2,455.23	110.46	-168.43	EOB @ 2480.67' MD, 2455.22' TVD, 21.61° INC
4,381.97	4,222.84	494.54	-754.05	Start Drop @ 2°/100'
5,462.64	5,278.06	605.00	-922.48	Vertical @ 5278.06' TVD
5,559.64	5,375.06	605.00	-922.48	Start Build @ 8°/100'
6,309.64	5,995.30	605.00	-564.38	Hold, 60.00°
6,409.64	6,045.30	605.00	-477.78	Start Build @ 10°/100'
6,700.94	6,122.00	605.00	-200.00	Landing Point @ 6700.94' MD, 6122.00' TVD, 89.13° INC, 90.00° Azi
11,764.52	6,198.88	605.00	4,863.00	PBHL @ 11764.52' MD

a

State of New Mexico
Energy, Minerals and Natural Resources Department

Submit Electronically
Via E-permitting

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

NATURAL GAS MANAGEMENT PLAN

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

Section 1 – Plan Description

Effective May 25, 2021

I. Operator: MR NM OPERATING **OGRID:** 330506 **Date:** 4-11-24

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

If Other, please describe: _____

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

Well Name	API	ULSTR	Footages	Anticipated Oil BBL/D	Anticipated Gas MCF/D	Anticipated Produced Water BBL/D
Sheep Dog State 2H	30-15-	L-11-17S-27E	2240 FSL & 299 FWL	350	750	1,500

IV. Central Delivery Point Name: Frontier Field Services, LLC in P-10-17S-27E [See 19.15.27.9(D)(1) NMAC]

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

Well Name	API	Spud Date	TD Reached Date	Completion Commencement Date	Initial Flow Back Date	First Production Date
Sheep Dog State 2H	30-015-	7-15-24	8-1-24	8-15-24	9-15-24	10-1-24

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

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

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

Section 2 – Enhanced Plan
EFFECTIVE APRIL 1, 2022

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

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

IX. Anticipated Natural Gas Production:

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

X. Natural Gas Gathering System (NGGS):

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

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

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

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

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

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

Section 3 - Certifications

Effective May 25, 2021

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

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

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

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

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

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

Section 4 - Notices

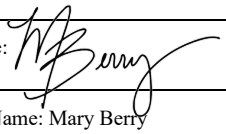
1. If, at any time after Operator submits this Natural Gas Management Plan and before the well is spud:

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

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

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

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

Signature: 
Printed Name: Mary Berry
Title: Manager
E-mail Address: mg@cypressnr.com
Date: 4-19-2024
Phone: 469-344-2646

OIL CONSERVATION DIVISION **(Only applicable when submitted as a standalone form)**
Approved By:
Title:
Approval Date:
Conditions of Approval:

MR NM Operating, LLC Natural Gas Management Plan

VI. Separation Equipment

Separation equipment will be built on the Picard 4H pad. The anticipated production rates from the Picard 4H will be accounted for during design/construction to ensure sufficient capacity exists at the surface to capture all produced fluids.

VII. Operational Practices

MR NM Operating, LLC will take the following actions outlined below to comply with 19.15.27.8 NMAC

A. MR NM Operating, LLC plans to maximize recovery of natural gas and minimize waste thru venting/flaring

B. MR NM Operating, LLC plans to flare during drilling operations from a location exceeding 100' away from the SHL. The flare will be used to combust natural gas brought to the surface during normal drilling operations. Safety will remain priority #1, and MR NM Operating, LLC will account and report appropriately pertaining to any potential emergency.

C. MR NM Operating, LLC plans flare any natural gas brought to the surface during normal completions operations. During flowback, fluids will immediately flow thru a separator on location. Gas will not be flared/vented unless there's a safety concern with pressures at the surface. Gas is expected to meet pipeline standards; if not, MR NM Operating, LLC will flare for the allowed 60 days or less until the gas meets quality specifications. MR NM Operating, LLC plans to sample the produced gas at a reasonable frequency or upon request from regulatory bodies.

D. MR NM Operating, LLC does not plan to flare or vent natural gas except during the situations outlined in 19.15.27.8 D. (1-4).

E. MR NM Operating, LLC will comply with standards outlined in 19.15.27.8 E. (1-8). EOG Resources, Inc. will conduct AVO inspections as described in 19.15.27.8 E (5) (a) with frequencies specified in 19.15.27.8 E (5) (b) and (c). All emergencies will be resolved as quickly and safely as feasible to minimize waste.

F. The volume of natural gas that is vented or flared as the result of malfunction or emergency during drilling and completions operations will be estimated. The volume of natural gas that is vented, flared, or beneficially used during production operations, will be measured, or estimated. If metering is not practicable due to circumstances such as low flow rate or low pressure venting and flaring, EOG Resources, Inc. will estimate the volume of vented or flared natural gas. Measuring equipment will conform to industry standards and will not be designed or equipped with a manifold that allows the diversion of natural gas around the metering element except for the sole purpose of inspecting and servicing the measurement equipment.

VIII. Best Management Practices

Pressure maintenance at surface is vital to maintain safe working conditions; venting will be utilized only to depressurize our surface equipment. When maintaining surface or downhole equipment associated with the current production, the well will be shut-in to eliminate venting. If maintenance work takes place on the gas gathering side, gas will route to the flare to eliminate venting.