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 341912

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

1. Operator Name and Address	2. OGRID Number
Earthstone Operating, LLC 1400 Woodloch Forest; Ste 300 The Woodlands, TX 77380	331165
	3. API Number 30-025-51635

4. Property Code	5. Property Name	6. Well No.
334165	ESCOPETA 2 STATE	113H

7. Surface Location

UL - Lot	Section	Township	Range	Lot Idn	Feet From	N/S Line	Feet From	E/W Line	County
H	2	21S	34E	16	5117	N	1131	E	Lea

8. Proposed Bottom Hole Location

UL - Lot	Section	Township	Range	Lot Idn	Feet From	N/S Line	Feet From	E/W Line	County
B	2	21S	34E	2	50	N	198	E	Lea

9. Pool Information

GRAMA RIDGE;BONE SPRING, NORTH	28434

Additional Well Information

11. Work Type	12. Well Type	13. Cable/Rotary	14. Lease Type	15. Ground Level Elevation
New Well	OIL		State	3703
16. Multiple	**17. Proposed Depth**	**18. Formation**	**19. Contractor**	**20. Spud Date**
N	15128	1st Bone Spring Sand		12/1/2023
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	14.75	10.75	45.5	1963	600	0
Int1	9.875	8.625	32	5838	1000	0
Prod	7.875	5.5	20	15128	1200	5338

Casing/Cement Program: Additional Comments

22. Proposed Blowout Prevention Program

Type	Working Pressure	Test Pressure	Manufacturer
Double Ram	5000	5000	CAMERON

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 Charlotte Stilwell	Approved By:	Paul F Kautz	
Title:	Production Analyst Supervisor	Title:	Geologist	
Email Address:	charlotte@earthstoneenergy.com	Approved Date:	6/21/2023	Expiration Date: 6/21/2025
Date:	6/12/2023 Phone: 281-771-3065	Conditions of Approval Attached		

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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	[2] Pool Code	[3] Pool Name
30-025-51635	28434	GRAMA RIDGE; BONE SPRING, NORTH

[4] Property Code	[5] Property Name	[6] Well Number
334165	ESCOPETA 2 STATE	113H

[7] OGRID No.	[8] Operator Name	[9] Elevation
331165	EARTHSTONE OPERATING, LLC	3703.5

[10] Surface Location

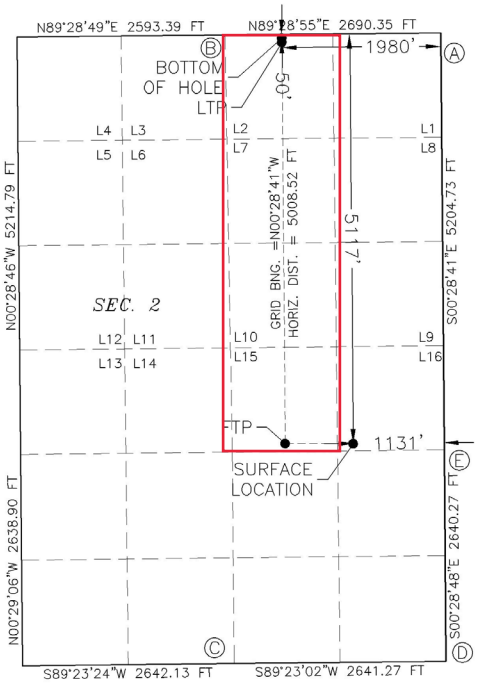
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
16	2	21 S	34 E		5117	NORTH	1131	EAST	LEA

[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
2	2	21 S	34 E		50	NORTH	1980	EAST	LEA

[12] Dedicated Acres	[13] Joint or Infill	[14] Consolidation Code	[15] Order No.
157.73			

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.



ESCOPETA 2 STATE 113H
EL. = 3703.5

GEODETIC COORDINATES
NAD 27 NMSP EAST
SURFACE LOCATION
N.= 549750.68
E.= 776854.92
LAT. = 32.5081691°N
LONG. = 103.4352650°W

GEODETIC COORDINATES
NAD 83 NMSP EAST
SURFACE LOCATION
N.= 549812.59
E.= 818037.32
LAT. = 32.5082930°N
LONG. = 103.4357474°W

FIRST TAKE POINT
5109' FNL, 1980' FEL
NAD 27 NMSP EAST
N.= 549751.57
E.= 776006.11
LAT. = 32.5081911°N
LONG. = 103.4380180°W

FIRST TAKE POINT
5109' FNL, 1980' FEL
NAD 83 NMSP EAST
N.= 549813.48
E.= 817188.49
LAT. = 32.5083151°N
LONG. = 103.4385006°W

LAST TAKE POINT
100' FNL, 1980' FEL
NAD 27 NMSP EAST
N.= 554758.80
E.= 775964.49
LAT. = 32.5219546°N
LONG. = 103.4380166°W

LAST TAKE POINT
100' FNL, 1980' FEL
NAD 83 NMSP EAST
N.= 554820.85
E.= 817146.70
LAT. = 32.5220785°N
LONG. = 103.4384998°W

BOTTOM OF HOLE
NAD 27 NMSP EAST
N.= 554808.79
E.= 775964.08
LAT. = 32.5220921°N
LONG. = 103.4380166°W

BOTTOM OF HOLE
NAD 83 NMSP EAST
N.= 554870.84
E.= 817146.29
LAT. = 32.5222159°N
LONG. = 103.4384998°W

CORNER COORDINATES TABLE
NAD 27 NMSP EAST
A – N.= 554876.69 E.= 777943.14
B – N.= 554852.36 E.= 775253.50
C – N.= 547005.30 E.= 775367.88
D – N.= 547033.69 E.= 778008.41
E – N.= 549673.29 E.= 777986.39

CORNER COORDINATES TABLE
NAD 83 NMSP EAST
A – N.= 554938.73 E.= 819125.40
B – N.= 554914.40 E.= 816435.69
C – N.= 547067.15 E.= 816550.33
D – N.= 547095.54 E.= 819190.94
E – N.= 549735.20 E.= 819168.83

[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.

Signature 05/31/2023 Date

JENNIFER ELROD
Printed Name

JELROD@EARTHSTONEENERGY.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 and correct to the best of my belief.

MAY 31, 2023
Date of Survey

Signature and Seal of Professional Surveyor:

Certificate Number: FERMIN F. JARAMILLO, LS 12797

SURVEY NO. 9720A

Intent [X] As Drilled [ ]

API #

Operator Name:	Property Name:	Well Number
EARTHSTONE OPERATING, LLC	ESCOPETA 2 STATE	113H

Kick Off Point (KOP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
	2	21S	34E	16	5117	NORTH	1131	EAST	LEA

Latitude	Longitude	NAD
32.5082930	103.4357474	83

First Take Point (FTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
	2	21S	34E	15	5109	NORTH	1980	EAST	LEA

Latitude	Longitude	NAD
32.5083151	103.4385006	83

Last Take Point (LTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
	2	21S	34E	2	100	NORTH	1980	EAST	LEA

Latitude	Longitude	NAD
32.5220785	103.4384998	83

Is this well the defining well for the Horizontal Spacing Unit? [YES]

Is this well an infill well? [NO]

If infill is yes please provide API if available, Operator Name and well number for Defining well for Horizontal Spacing Unit.

API #

Operator Name:	Property Name:	Well Number

KZ 06/29/2018

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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 341912

PERMIT CONDITIONS OF APPROVAL

Operator Name and Address:	API Number:
Earthstone Operating, LLC [331165] 1400 Woodloch Forest; Ste 300 The Woodlands, TX 77380	30-025-51635
	Well: ESCOPETA 2 STATE #113H

OCD Reviewer	Condition
pkautz	Notify OCD 24 hours prior to casing & cement
pkautz	Will require a File As Drilled C-102 and a Directional Survey with the C-104
pkautz	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
pkautz	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
pkautz	Cement is required to circulate on both surface and intermediate1 strings of casing
pkautz	The Operator is to notify NMOCD by sundry (Form C-103) within ten (10) days of the well being spud

EARTHSTONE Energy, Inc.

Project: Lea County, NM (Nad 83 NME)
Site: Escopeta 2 State
Well: Escopeta 2 State 113H
Wellbore: OH
Design: Plan 1 05-15-23
Rig: TBD

PHOENIX TECHNOLOGY SERVICES

Azimuths to Grid North
True North: -0.48°
Magnetic North: 5.78°

Magnetic Field
Strength: 47657.9nT
Dip Angle: 60.26°
Date: 8/11/2023
Model: MVHD

WELL DETAILS

Ground Level 3703.50

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	549812.59	818037.32	32° 30' 29.854905 N	103° 26' 8.690769 W

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSect	Target	Annotation
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00		
2	1600.00	0.00	0.00	1600.00	0.00	0.00	0.00	0.000	0.00		KOP, Begin 2.00°/100' Build
3	2300.02	14.00	235.74	2293.08	-47.91	-70.34	2.00	235.741	-47.32		Hold 14.00° Inc at 235.74° Azm
4	5465.84	14.00	235.74	5364.85	-479.07	-703.35	0.00	0.000	-473.16		Begin 1.00°/100' Drop
5	6865.88	0.00	0.00	6751.00	-574.88	-844.03	1.00	180.000	-567.79		Begin Vertical Hold
6	9167.93	0.00	0.00	9053.05	-574.88	-844.03	0.00	0.000	-567.79		KOP2, Begin 10.00°/100' Build
7	10070.76	90.28	359.52	9626.00	0.89	-848.83	10.00	359.522	8.00	FTP - Escopeta 2 State 113H	LP, Hold 90.28° Inc at 359.52° Azm
8	15128.36	90.28	359.52	9601.00	5058.25	-891.03	0.00	0.000	5065.54	BHL - Escopeta 2 State 113H	TD at 15128.36

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
BHL - Escopeta 2 State 113H	9601.00	5058.25	-891.03	554870.84	817146.29	32° 31' 19.977349 N	103° 26' 18.599269 W
LTP - Escopeta 2 State 113H	9601.24	5008.26	-890.62	554820.85	817146.70	32° 31' 19.482695 N	103° 26' 18.599383 W
FTP - Escopeta 2 State 113H	9626.00	0.89	-848.83	549813.48	817188.49	32° 30' 29.934318 N	103° 26' 18.602302 W

Map System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone Name: New Mexico Eastern Zone

Local Origin: Well Escopeta 2 State 113H, Grid North

Latitude: 32° 30' 29.854905 N
Longitude: 103° 26' 8.690769 W

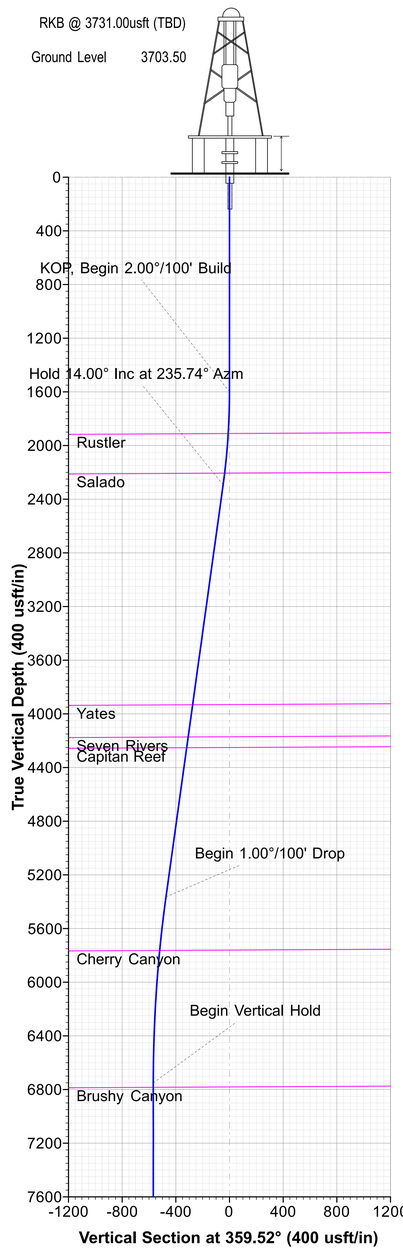
Grid East: 818037.32
Grid North: 549812.59
Scale Factor: 1.000

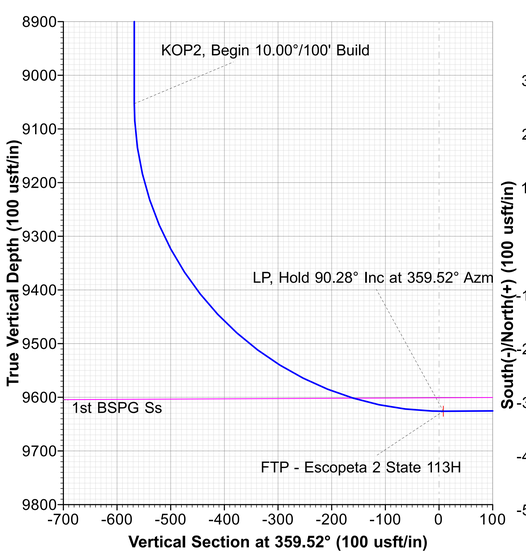
Geomagnetic Model: MVHD
Sample Date: 11-Aug-23
Magnetic Declination: 6.261°
Dip Angle from Horizontal: 60.258°
Magnetic Field Strength: 47657.86937443nT

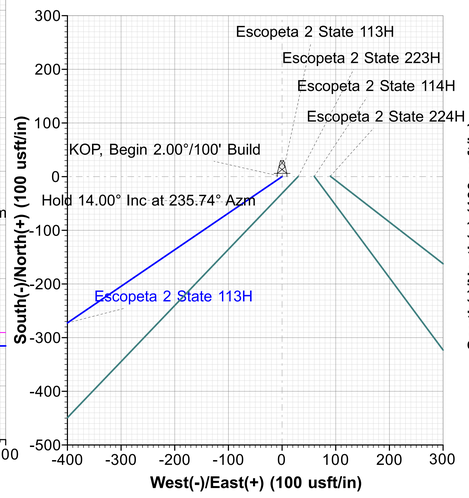
To convert a Magnetic Direction to a Grid Direction, Add 5.779°
To convert a Magnetic Direction to a True Direction, Add 6.261° East
To convert a True Direction to a Grid Direction, Subtract 0.482°

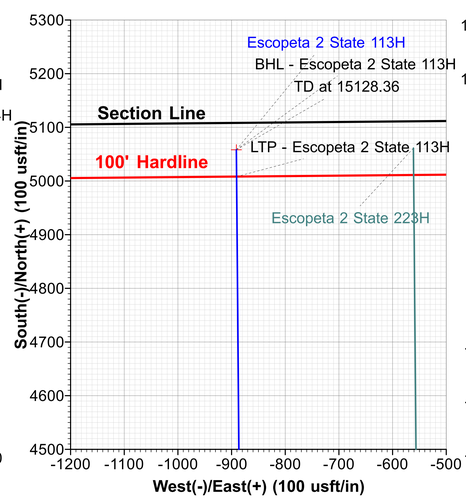
FORMATION TOP DETAILS

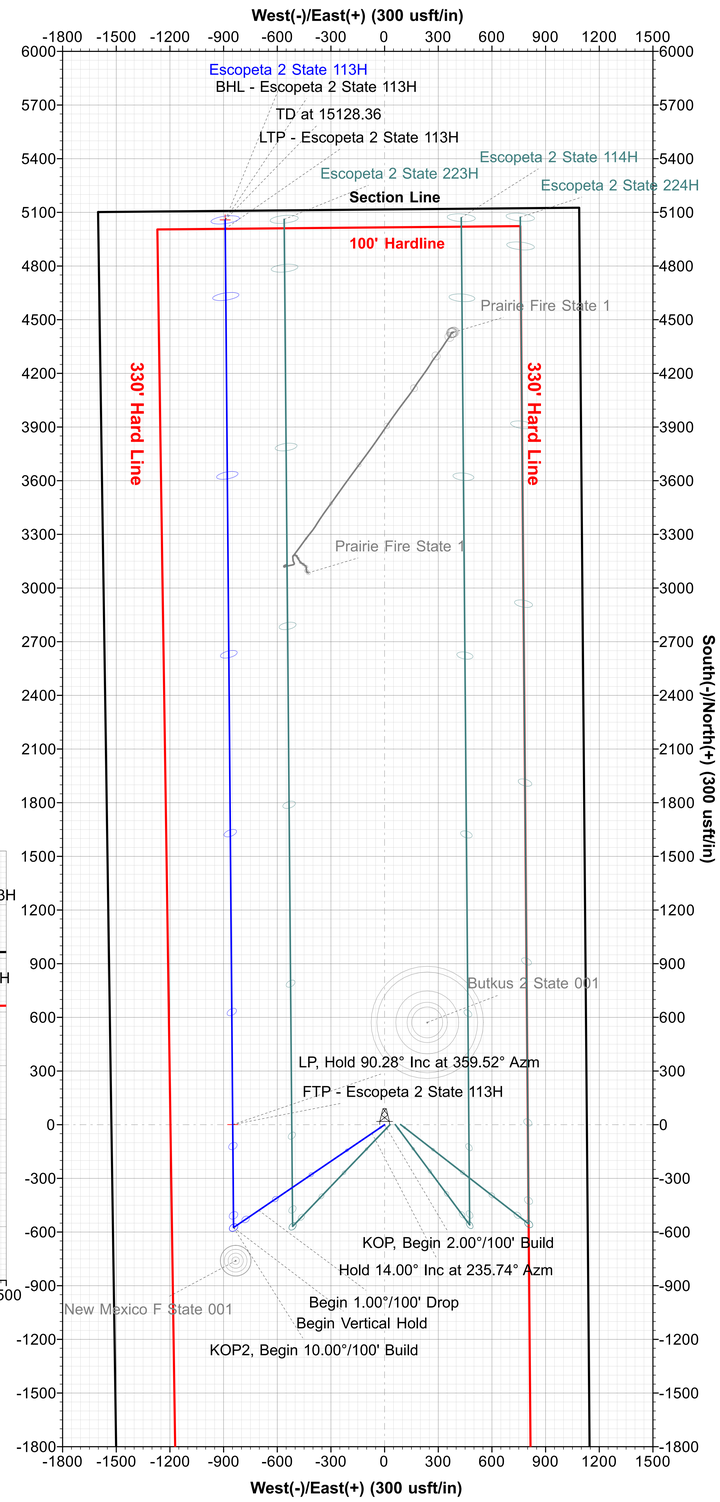
TVDPath	MDPath	Formation
1911.05	1911.66	Rustler
2206.18	2210.79	Salado
3932.34	3989.47	Yates
4172.50	4236.99	Seven Rivers
4252.56	4319.49	Capitan Reef
5763.54	5873.47	Cherry Canyon
6783.77	6898.66	Brushy Canyon
8033.77	8148.66	Top BSPG Lime
9601.78	9900.72	1st BSPG Ss

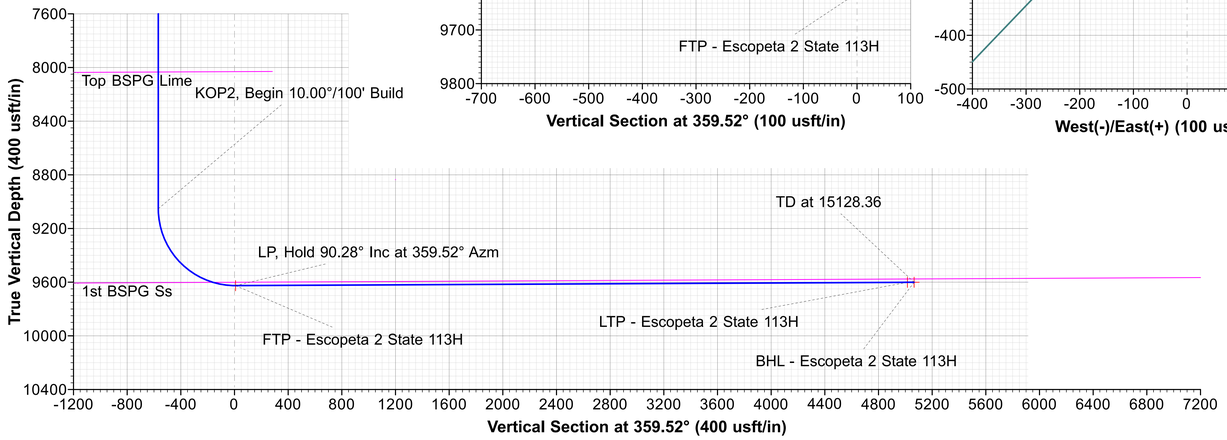












Date: 10:18, June 01 2023

PHOENIX
TECHNOLOGY SERVICES

Earthstone Operating, LLC

Lea County, NM (Nad 83 NME)
Escopeta 2 State
Escopeta 2 State 113H

OH

Plan: Plan 1 05-15-23

Standard Planning Report

01 June, 2023

EARTHSTONE
Energy, Inc.

PHOENIX TECHNOLOGY SERVICES

Phoenix
Planning Report

EARTHSTONE Energy, Inc.

Database:	USAEDMDB	**Local Co-ordinate Reference:**	Well Escopeta 2 State 113H
Company:	Earthstone Operating, LLC	**TVD Reference:**	RKB @ 3731.00usft (TBD)
Project:	Lea County, NM (Nad 83 NME)	**MD Reference:**	RKB @ 3731.00usft (TBD)
Site:	Escopeta 2 State	**North Reference:**	Grid
Well:	Escopeta 2 State 113H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan 1 05-15-23		

Project Lea County, NM (Nad 83 NME)

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

Site Escopeta 2 State

Site Position:		**Northing:**	549,812.59 usft	**Latitude:**	32° 30' 29.854905 N
From:	Map	**Easting:**	818,037.32 usft	**Longitude:**	103° 26' 8.690769 W
Position Uncertainty:	0.00 usft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	0.482 °

Well Escopeta 2 State 113H

Well Position	**+N/-S**	0.00 usft	**Northing:**	549,812.59 usft	**Latitude:**	32° 30' 29.854905 N
	+E/-W	0.00 usft	**Easting:**	818,037.32 usft	**Longitude:**	103° 26' 8.690769 W
Position Uncertainty		0.00 usft	**Wellhead Elevation:**		**Ground Level:**	3,703.50 usft

Wellbore OH

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	MVHD	8/11/23	6.261	60.258	47,657.86937443

Design Plan 1 05-15-23

Audit Notes:

Version:		**Phase:**	PLAN	**Tie On Depth:**	0.00

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	359.52

Plan Survey Tool Program **Date** 5/15/23

	Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	15,128.36	Plan 1 05-15-23 (OH)	MWD+HRGM	
				OWSG MWD + HRGM	

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	
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.000	
2,300.02	14.00	235.74	2,293.08	-47.91	-70.34	2.00	2.00	0.00	235.741	
5,465.84	14.00	235.74	5,364.85	-479.07	-703.35	0.00	0.00	0.00	0.000	
6,865.88	0.00	0.01	6,751.00	-574.88	-844.03	1.00	-1.00	0.00	180.000	
9,167.93	0.00	0.01	9,053.05	-574.88	-844.03	0.00	0.00	0.00	0.000	
10,070.76	90.28	359.52	9,626.00	0.89	-848.83	10.00	0.00	0.00	359.522	FTP - Escopeta 2 S
15,128.36	90.28	359.52	9,601.00	5,058.25	-891.03	0.00	0.00	0.00	0.000	BHL - Escopeta 2 S

PHOENIX TECHNOLOGY SERVICES

Phoenix

Planning Report

EARTHSTONE Energy, Inc.

Database:	USAEDMDB	**Local Co-ordinate Reference:**	Well Escopeta 2 State 113H
Company:	Earthstone Operating, LLC	**TVD Reference:**	RKB @ 3731.00usft (TBD)
Project:	Lea County, NM (Nad 83 NME)	**MD Reference:**	RKB @ 3731.00usft (TBD)
Site:	Escopeta 2 State	**North Reference:**	Grid
Well:	Escopeta 2 State 113H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan 1 05-15-23		

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
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
KOP, Begin 2.00°/100' Build									
1,700.00	2.00	235.74	1,699.98	-0.98	-1.44	-0.97	2.00	2.00	0.00
1,800.00	4.00	235.74	1,799.84	-3.93	-5.77	-3.88	2.00	2.00	0.00
1,900.00	6.00	235.74	1,899.45	-8.83	-12.97	-8.73	2.00	2.00	0.00
1,911.66	6.23	235.74	1,911.05	-9.53	-14.00	-9.42	2.00	2.00	0.00
Rustler									
2,000.00	8.00	235.74	1,998.70	-15.69	-23.04	-15.50	2.00	2.00	0.00
2,100.00	10.00	235.74	2,097.47	-24.50	-35.97	-24.20	2.00	2.00	0.00
2,200.00	12.00	235.74	2,195.62	-35.24	-51.74	-34.81	2.00	2.00	0.00
2,210.79	12.22	235.74	2,206.18	-36.52	-53.61	-36.07	2.00	2.00	0.00
Salado									
2,300.00	14.00	235.74	2,293.06	-47.90	-70.33	-47.31	2.00	2.00	0.00
2,300.02	14.00	235.74	2,293.08	-47.91	-70.34	-47.32	2.00	2.00	0.00
Hold 14.00° Inc at 235.74° Azm									
2,400.00	14.00	235.74	2,390.08	-61.52	-90.33	-60.76	0.00	0.00	0.00
2,500.00	14.00	235.74	2,487.11	-75.14	-110.32	-74.22	0.00	0.00	0.00
2,600.00	14.00	235.74	2,584.14	-88.76	-130.32	-87.67	0.00	0.00	0.00
2,700.00	14.00	235.74	2,681.17	-102.38	-150.31	-101.12	0.00	0.00	0.00
2,800.00	14.00	235.74	2,778.20	-116.00	-170.31	-114.57	0.00	0.00	0.00
2,900.00	14.00	235.74	2,875.23	-129.62	-190.30	-128.02	0.00	0.00	0.00
3,000.00	14.00	235.74	2,972.26	-143.24	-210.30	-141.47	0.00	0.00	0.00
3,100.00	14.00	235.74	3,069.29	-156.86	-230.29	-154.92	0.00	0.00	0.00
3,200.00	14.00	235.74	3,166.32	-170.48	-250.29	-168.37	0.00	0.00	0.00
3,300.00	14.00	235.74	3,263.35	-184.10	-270.29	-181.83	0.00	0.00	0.00
3,400.00	14.00	235.74	3,360.38	-197.72	-290.28	-195.28	0.00	0.00	0.00
3,500.00	14.00	235.74	3,457.41	-211.33	-310.28	-208.73	0.00	0.00	0.00
3,600.00	14.00	235.74	3,554.44	-224.95	-330.27	-222.18	0.00	0.00	0.00
3,700.00	14.00	235.74	3,651.47	-238.57	-350.27	-235.63	0.00	0.00	0.00
3,800.00	14.00	235.74	3,748.50	-252.19	-370.26	-249.08	0.00	0.00	0.00
3,900.00	14.00	235.74	3,845.53	-265.81	-390.26	-262.53	0.00	0.00	0.00
3,989.47	14.00	235.74	3,932.34	-278.00	-408.15	-274.57	0.00	0.00	0.00
Yates									
4,000.00	14.00	235.74	3,942.55	-279.43	-410.25	-275.98	0.00	0.00	0.00
4,100.00	14.00	235.74	4,039.58	-293.05	-430.25	-289.43	0.00	0.00	0.00
4,200.00	14.00	235.74	4,136.61	-306.67	-450.24	-302.89	0.00	0.00	0.00
4,236.99	14.00	235.74	4,172.50	-311.71	-457.64	-307.86	0.00	0.00	0.00
Seven Rivers									
4,300.00	14.00	235.74	4,233.64	-320.29	-470.24	-316.34	0.00	0.00	0.00
4,319.49	14.00	235.74	4,252.56	-322.94	-474.14	-318.96	0.00	0.00	0.00
Capitan Reef									
4,400.00	14.00	235.74	4,330.67	-333.91	-490.23	-329.79	0.00	0.00	0.00
4,500.00	14.00	235.74	4,427.70	-347.53	-510.23	-343.24	0.00	0.00	0.00
4,600.00	14.00	235.74	4,524.73	-361.15	-530.23	-356.69	0.00	0.00	0.00
4,700.00	14.00	235.74	4,621.76	-374.76	-550.22	-370.14	0.00	0.00	0.00
4,800.00	14.00	235.74	4,718.79	-388.38	-570.22	-383.59	0.00	0.00	0.00
4,900.00	14.00	235.74	4,815.82	-402.00	-590.21	-397.04	0.00	0.00	0.00
5,000.00	14.00	235.74	4,912.85	-415.62	-610.21	-410.50	0.00	0.00	0.00
5,100.00	14.00	235.74	5,009.88	-429.24	-630.20	-423.95	0.00	0.00	0.00
5,200.00	14.00	235.74	5,106.91	-442.86	-650.20	-437.40	0.00	0.00	0.00
5,300.00	14.00	235.74	5,203.94	-456.48	-670.19	-450.85	0.00	0.00	0.00
5,400.00	14.00	235.74	5,300.97	-470.10	-690.19	-464.30	0.00	0.00	0.00

PHOENIX TECHNOLOGY SERVICES

Phoenix

Planning Report

EARTHSTONE Energy, Inc.

Database:	USAEDMDB	**Local Co-ordinate Reference:**	Well Escopeta 2 State 113H
Company:	Earthstone Operating, LLC	**TVD Reference:**	RKB @ 3731.00usft (TBD)
Project:	Lea County, NM (Nad 83 NME)	**MD Reference:**	RKB @ 3731.00usft (TBD)
Site:	Escopeta 2 State	**North Reference:**	Grid
Well:	Escopeta 2 State 113H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan 1 05-15-23		

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)
5,465.84	14.00	235.74	5,364.85	-479.07	-703.35	-473.16	0.00	0.00	0.00
Begin 1.00°/100' Drop									
5,500.00	13.66	235.74	5,398.02	-483.66	-710.10	-477.70	1.00	-1.00	0.00
5,600.00	12.66	235.74	5,495.39	-496.48	-728.92	-490.35	1.00	-1.00	0.00
5,700.00	11.66	235.74	5,593.15	-508.33	-746.32	-502.06	1.00	-1.00	0.00
5,800.00	10.66	235.74	5,691.26	-519.23	-762.32	-512.82	1.00	-1.00	0.00
5,873.47	9.92	235.74	5,763.54	-526.62	-773.17	-520.12	1.00	-1.00	0.00
Cherry Canyon									
5,900.00	9.66	235.74	5,789.69	-529.16	-776.90	-522.63	1.00	-1.00	0.00
6,000.00	8.66	235.74	5,888.41	-538.12	-790.05	-531.48	1.00	-1.00	0.00
6,100.00	7.66	235.74	5,987.40	-546.11	-801.78	-539.37	1.00	-1.00	0.00
6,200.00	6.66	235.74	6,086.62	-553.12	-812.08	-546.30	1.00	-1.00	0.00
6,300.00	5.66	235.74	6,186.04	-559.16	-820.95	-552.26	1.00	-1.00	0.00
6,400.00	4.66	235.74	6,285.63	-564.22	-828.38	-557.26	1.00	-1.00	0.00
6,500.00	3.66	235.74	6,385.37	-568.31	-834.37	-561.30	1.00	-1.00	0.00
6,600.00	2.66	235.74	6,485.22	-571.41	-838.93	-564.36	1.00	-1.00	0.00
6,700.00	1.66	235.74	6,585.14	-573.53	-842.04	-566.45	1.00	-1.00	0.00
6,800.00	0.66	235.74	6,685.12	-574.67	-843.71	-567.58	1.00	-1.00	0.00
6,865.88	0.00	0.00	6,751.00	-574.88	-844.03	-567.79	1.00	-1.00	0.00
Begin Vertical Hold									
6,898.66	0.00	0.00	6,783.77	-574.88	-844.03	-567.79	0.00	0.00	0.00
Brushy Canyon									
8,148.66	0.00	0.00	8,033.77	-574.88	-844.03	-567.79	0.00	0.00	0.00
Top BSPG Lime									
9,167.93	0.00	0.00	9,053.05	-574.88	-844.03	-567.79	0.00	0.00	0.00
KOP2, Begin 10.00°/100' Build									
9,200.00	3.21	359.52	9,085.10	-573.98	-844.03	-566.89	10.00	10.00	0.00
9,300.00	13.21	359.52	9,183.95	-559.73	-844.15	-552.63	10.00	10.00	0.00
9,400.00	23.21	359.52	9,278.83	-528.52	-844.41	-521.43	10.00	10.00	0.00
9,500.00	33.21	359.52	9,366.84	-481.32	-844.81	-474.22	10.00	10.00	0.00
9,600.00	43.21	359.52	9,445.32	-419.55	-845.32	-412.45	10.00	10.00	0.00
9,700.00	53.21	359.52	9,511.88	-345.09	-845.94	-337.99	10.00	10.00	0.00
9,800.00	63.21	359.52	9,564.50	-260.20	-846.65	-253.10	10.00	10.00	0.00
9,900.00	73.21	359.52	9,601.57	-167.47	-847.43	-160.37	10.00	10.00	0.00
9,900.72	73.28	359.52	9,601.78	-166.78	-847.43	-159.68	10.00	10.00	0.00
1st BSPG Ss									
10,000.00	83.21	359.52	9,621.99	-69.71	-848.24	-62.60	10.00	10.00	0.00
10,070.76	90.28	359.52	9,626.00	0.89	-848.83	8.00	10.00	10.00	0.00
LP, Hold 90.28° Inc at 359.52° Azm									
10,100.00	90.28	359.52	9,625.86	30.13	-849.07	37.24	0.00	0.00	0.00
10,200.00	90.28	359.52	9,625.36	130.12	-849.91	137.24	0.00	0.00	0.00
10,300.00	90.28	359.52	9,624.87	230.12	-850.74	237.24	0.00	0.00	0.00
10,400.00	90.28	359.52	9,624.37	330.11	-851.58	337.24	0.00	0.00	0.00
10,500.00	90.28	359.52	9,623.88	430.11	-852.41	437.23	0.00	0.00	0.00
10,600.00	90.28	359.52	9,623.38	530.10	-853.25	537.23	0.00	0.00	0.00
10,700.00	90.28	359.52	9,622.89	630.10	-854.08	637.23	0.00	0.00	0.00
10,800.00	90.28	359.52	9,622.40	730.09	-854.91	737.23	0.00	0.00	0.00
10,900.00	90.28	359.52	9,621.90	830.09	-855.75	837.23	0.00	0.00	0.00
11,000.00	90.28	359.52	9,621.41	930.08	-856.58	937.23	0.00	0.00	0.00
11,100.00	90.28	359.52	9,620.91	1,030.08	-857.42	1,037.23	0.00	0.00	0.00
11,200.00	90.28	359.52	9,620.42	1,130.08	-858.25	1,137.23	0.00	0.00	0.00
11,300.00	90.28	359.52	9,619.92	1,230.07	-859.09	1,237.22	0.00	0.00	0.00
11,400.00	90.28	359.52	9,619.43	1,330.07	-859.92	1,337.22	0.00	0.00	0.00

PHOENIX TECHNOLOGY SERVICES

Phoenix

Planning Report

EARTHSTONE Energy, Inc.

Database:	USAEDMDB	**Local Co-ordinate Reference:**	Well Escopeta 2 State 113H
Company:	Earthstone Operating, LLC	**TVD Reference:**	RKB @ 3731.00usft (TBD)
Project:	Lea County, NM (Nad 83 NME)	**MD Reference:**	RKB @ 3731.00usft (TBD)
Site:	Escopeta 2 State	**North Reference:**	Grid
Well:	Escopeta 2 State 113H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan 1 05-15-23		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
11,500.00	90.28	359.52	9,618.94	1,430.06	-860.76	1,437.22	0.00	0.00	0.00
11,600.00	90.28	359.52	9,618.44	1,530.06	-861.59	1,537.22	0.00	0.00	0.00
11,700.00	90.28	359.52	9,617.95	1,630.05	-862.42	1,637.22	0.00	0.00	0.00
11,800.00	90.28	359.52	9,617.45	1,730.05	-863.26	1,737.22	0.00	0.00	0.00
11,900.00	90.28	359.52	9,616.96	1,830.04	-864.09	1,837.22	0.00	0.00	0.00
12,000.00	90.28	359.52	9,616.46	1,930.04	-864.93	1,937.22	0.00	0.00	0.00
12,100.00	90.28	359.52	9,615.97	2,030.03	-865.76	2,037.21	0.00	0.00	0.00
12,200.00	90.28	359.52	9,615.48	2,130.03	-866.60	2,137.21	0.00	0.00	0.00
12,300.00	90.28	359.52	9,614.98	2,230.02	-867.43	2,237.21	0.00	0.00	0.00
12,400.00	90.28	359.52	9,614.49	2,330.02	-868.26	2,337.21	0.00	0.00	0.00
12,500.00	90.28	359.52	9,613.99	2,430.01	-869.10	2,437.21	0.00	0.00	0.00
12,600.00	90.28	359.52	9,613.50	2,530.01	-869.93	2,537.21	0.00	0.00	0.00
12,700.00	90.28	359.52	9,613.00	2,630.00	-870.77	2,637.21	0.00	0.00	0.00
12,800.00	90.28	359.52	9,612.51	2,730.00	-871.60	2,737.21	0.00	0.00	0.00
12,900.00	90.28	359.52	9,612.02	2,830.00	-872.44	2,837.20	0.00	0.00	0.00
13,000.00	90.28	359.52	9,611.52	2,929.99	-873.27	2,937.20	0.00	0.00	0.00
13,100.00	90.28	359.52	9,611.03	3,029.99	-874.11	3,037.20	0.00	0.00	0.00
13,200.00	90.28	359.52	9,610.53	3,129.98	-874.94	3,137.20	0.00	0.00	0.00
13,300.00	90.28	359.52	9,610.04	3,229.98	-875.77	3,237.20	0.00	0.00	0.00
13,400.00	90.28	359.52	9,609.54	3,329.97	-876.61	3,337.20	0.00	0.00	0.00
13,500.00	90.28	359.52	9,609.05	3,429.97	-877.44	3,437.20	0.00	0.00	0.00
13,600.00	90.28	359.52	9,608.55	3,529.96	-878.28	3,537.20	0.00	0.00	0.00
13,700.00	90.28	359.52	9,608.06	3,629.96	-879.11	3,637.19	0.00	0.00	0.00
13,800.00	90.28	359.52	9,607.57	3,729.95	-879.95	3,737.19	0.00	0.00	0.00
13,900.00	90.28	359.52	9,607.07	3,829.95	-880.78	3,837.19	0.00	0.00	0.00
14,000.00	90.28	359.52	9,606.58	3,929.94	-881.62	3,937.19	0.00	0.00	0.00
14,100.00	90.28	359.52	9,606.08	4,029.94	-882.45	4,037.19	0.00	0.00	0.00
14,200.00	90.28	359.52	9,605.59	4,129.93	-883.28	4,137.19	0.00	0.00	0.00
14,300.00	90.28	359.52	9,605.09	4,229.93	-884.12	4,237.19	0.00	0.00	0.00
14,400.00	90.28	359.52	9,604.60	4,329.92	-884.95	4,337.19	0.00	0.00	0.00
14,500.00	90.28	359.52	9,604.11	4,429.92	-885.79	4,437.19	0.00	0.00	0.00
14,600.00	90.28	359.52	9,603.61	4,529.92	-886.62	4,537.18	0.00	0.00	0.00
14,700.00	90.28	359.52	9,603.12	4,629.91	-887.46	4,637.18	0.00	0.00	0.00
14,800.00	90.28	359.52	9,602.62	4,729.91	-888.29	4,737.18	0.00	0.00	0.00
14,900.00	90.28	359.52	9,602.13	4,829.90	-889.12	4,837.18	0.00	0.00	0.00
15,000.00	90.28	359.52	9,601.63	4,929.90	-889.96	4,937.18	0.00	0.00	0.00
15,100.00	90.28	359.52	9,601.14	5,029.89	-890.79	5,037.18	0.00	0.00	0.00
15,128.36	90.28	359.52	9,601.00	5,058.25	-891.03	5,065.54	0.00	0.00	0.00
TD at 15128.36									

PHOENIX TECHNOLOGY SERVICES

Phoenix
Planning Report

EARTHSTONE Energy, Inc.

Database:	USAEDMDB	**Local Co-ordinate Reference:**	Well Escopeta 2 State 113H
Company:	Earthstone Operating, LLC	**TVD Reference:**	RKB @ 3731.00usft (TBD)
Project:	Lea County, NM (Nad 83 NME)	**MD Reference:**	RKB @ 3731.00usft (TBD)
Site:	Escopeta 2 State	**North Reference:**	Grid
Well:	Escopeta 2 State 113H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan 1 05-15-23		

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
BHL - Escopeta 2 Stat - plan hits target center - Point	0.00	0.00	9,601.00	5,058.25	-891.03	554,870.84	817,146.29	32° 31' 19.977349 N	3° 26' 18.599269 W
LTP - Escopeta 2 Stat - plan misses target center by 0.01usft at 15078.37usft MD (9601.25 TVD, 5008.26 N, -890.61 E) - Point	0.00	0.00	9,601.24	5,008.26	-890.62	554,820.85	817,146.70	32° 31' 19.482695 N	3° 26' 18.599383 W
FTP - Escopeta 2 Stat - plan hits target center - Point	0.00	0.00	9,626.00	0.89	-848.83	549,813.48	817,188.49	32° 30' 29.934319 N	3° 26' 18.602302 W

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,911.66	1,911.05	Rustler		-0.280	359.52
2,210.79	2,206.18	Salado		-0.280	359.52
3,989.47	3,932.34	Yates		-0.280	359.52
4,236.99	4,172.50	Seven Rivers		-0.280	359.52
4,319.49	4,252.56	Capitan Reef		-0.280	359.52
5,873.47	5,763.54	Cherry Canyon		-0.280	359.52
6,898.66	6,783.77	Brushy Canyon		-0.280	359.52
8,148.66	8,033.77	Top BSPG Lime		-0.280	359.52
9,900.72	9,601.78	1st BSPG Ss		-0.280	359.52

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
1,600.00	1,600.00	0.00	0.00	KOP, Begin 2.00°/100' Build
2,300.02	2,293.08	-47.91	-70.34	Hold 14.00° Inc at 235.74° Azm
5,465.84	5,364.85	-479.07	-703.35	Begin 1.00°/100' Drop
6,865.88	6,751.00	-574.88	-844.03	Begin Vertical Hold
9,167.93	9,053.05	-574.88	-844.03	KOP2, Begin 10.00°/100' Build
10,070.76	9,626.00	0.89	-848.83	LP, Hold 90.28° Inc at 359.52° Azm
15,128.36	9,601.00	5,058.25	-891.03	TD at 15128.36

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: EARTHSTONE OPERATING, LLC **OGRID:** 331165 **Date:** 05/31/2023

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
SEE ATTACHED						

IV. Central Delivery Point Name: _____ [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
SEE ATTACHED						

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.

WELL NAME	API	UL/SECT/T/R	FOOTAGES	ANTICIPATED OIL BBL/D	ANTICIPATED GAS MCF/D	ANTICIPATED WATER BBL/D
ESCOPETA 2 STATE 113H		LOT 16-2-21S-34E	264 FNL, 1918 FWL	700 BBL/D	1200 MCF/D	2600 BBL/D
ESCOPETA 2 STATE 223H		LOT 16-2-21S-34E	264 FNL, 1948 FWL	700 BBL/D	1200 MCF/D	2600 BBL/D
ESCOPETA 2 STATE 114H		LOT 16-2-21S-34E	264 FNL, 2008 FWL	700 BBL/D	1200 MCF/D	2600 BBL/D
ESCOPETA 2 STATE 224H		LOT 16-2-21S-34E	264 FNL, 1978 FWL	700 BBL/D	1200 MCF/D	2600 BBL/D
WELL NAME	API	SPUD	TD	COMPLETION DATE	FLOW BACK DATE	FIRST PRODUCTION
ESCOPETA 2 STATE 113H		23-Mar-24	7-Apr-24	9-Nov-24	3-Jan-25	4-Jan-25
ESCOPETA 2 STATE 223H		8-Apr-24	23-Apr-24	9-Nov-24	3-Jan-25	4-Jan-25
ESCOPETA 2 STATE 114H		24-Apr-24	9-May-24	9-Nov-24	3-Jan-25	4-Jan-25
ESCOPETA 2 STATE 224H		10-May-24	25-May-24	9-Nov-24	3-Jan-25	4-Jan-25

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:	JENNIFER ELROD
Title:	SR. REGULATORY ANALYST
E-mail Address:	JELROD@EARTHSTONEENERGY.COM
Date:	05/31/2023
Phone:	(940)452-6214

OIL CONSERVATION DIVISION
(Only applicable when submitted as a standalone form)

Approved By:	
Title:	
Approval Date:	
Conditions of Approval:	

ESTE Natural Gas Management
Plan Items VI-VIII

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

- Separation equipment will be sized to provide adequate separation for anticipated rates.
- Adequate separation relates to retention time for Liquid – Liquid separation and velocity for Gas-Liquid separation.
- Collection systems are appropriately sized to handle facility production rates on all (3) phases.
- Ancillary equipment and metering are selected to be serviced without flow interruptions or the need to release gas from the well.

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

Drilling Operations

- All flare stacks will be properly sized. The flare stacks will be located at a minimum 100' from the nearest surface hole location on the pad.
- All-natural gas produced during drilling operations will be flared, unless there is an equipment malfunction and/or to avoid risk of an immediate and substantial adverse impact on safety and the environment, at which point the gas will be vented.

Completions/Recompletions Operations

- New wells will not be flowed back until they are connected to a properly sized gathering system.
- The facility will be built/sized for maximum anticipated flowrates and pressures to minimize waste.
- For flowback operations, multiple stages of separation will be used as well as excess VRU and blowers to make sure waste is minimized off the storage tanks and facility.
- During initial flowback, the well stream will be routed to separation equipment.
- At an existing facility, when necessary, post separation natural gas will be flared until it meets pipeline specifications, at which point it will be turned into a collection system.
- At a new facility, post separation natural gas will be vented until storage tanks can safely function, at which point it will be flared until it meets pipeline spec.

Production Operations

- Weekly AVOs will be performed on all facilities.
- All flares will be equipped with auto-ignition systems and continuous pilot operations.
- After a well is stabilized from liquid unloading, the well will be turned back into the collection system.
- All tanks will have sight glasses installed, but no electronic gauging equipment.
- Leaking thief hatches found during AVOs will be cleaned and properly re-sealed.
- There will be no gas re-injection for underground storage, temporary storage, or for enhanced oil recovery; however, gas injection will be used for gas lift applications in which the gas would be circulated through a closed loop system.
- If H2S is encountered, gas will be treated to pipeline spec to avoid shut-in's and/or flaring.

Performance Standards

- Production equipment will be designed to handle maximum anticipated rates and pressure.

- All flared gas will be combusted in a flare stack that is properly sized and designed to ensure proper combustion.
- Weekly AVOs will be performed on all wells and facilities that produce more than 50 MCFPD.

Measurement & Estimation

- All volume that is flared or vented that is not measured will be estimated.
- All measurement equipment for flared volumes will conform to API 14.10.
- No meter bypasses with be installed.
- When metering is not practical due to low pressure/low rate, the vented or flared volume will be estimated.

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

- During downhole well maintenance, ESTE will use best management practices to vent as minimally as possible.
- After downhole well maintenance, natural gas will be flared until it reaches pipeline specification.

Earthstone Operating, LLC

1400 Woodloch Forest Drive, Suite 300
The Woodlands, TX 77380
Phone: (281) 298-4246
Fax: (832) 823-0478

H2S Contingency Plan

Lea County, NM

Escape

Crews shall escape upwind of escaping gas in the event of an emergency release of gas. Escape can be facilitated from the location entrance road. Crew should then block entrance to the location from the lease road so as not to allow anyone traversing into a hazardous area. The blockade should be at a safe distance outside of the ROE. There are NO homes or buildings in or near the ROE.

Assumed 100 ppm ROE = 3000'
100 ppm H2S concentration shall trigger activation of this plan

Emergency Procedures

In the event of a release of gas containing H2S, the first responder(s) must:

« Isolate the area and prevent entry by other persons into the 100 ppm ROE.
« Evacuate any public places encompassed by the 100 ppm ROE.
« Be equipped with H2S monitors and air packs in order to control the release.
« Use the "buddy system" to ensure no injuries occur during the response.
« Take precautions to avoid personal injury during this operation.
« Contact operator and/or local officials to aid in operation. See list of phone numbers attached.
« Have received training
in the: Detection of
H2S, and
Measures for protection against the gas,
Equipment used for protection and emergency response.

Ignition of Gas Source

Should control of the well be considered lost and ignition considered, take care to protect against exposure to Sulfur Dioxide (S02). Intentional ignition must be coordinated with the NMOCD and local officials. Additionally, the NM State Police may become involved. NM State Police shall be the Incident Command on scene of any major release. Take care to protect downwind whenever there is an ignition of the gas.

Characteristics of H2S and SO,

Common Name	Chemical Formula	Specific Gravity	Threshold Limit	Hazardous Limit	Lethal Concentration
Hydrogen Sulfide	H2S	1.189 Air=1	10 ppm	100 ppm/hr	600 ppm
Sulfur Dioxide	SO2	2.21 Air=1	2 ppm	N/A	1000 ppm

Contacting Authorities

Earthstone Operating, LLC personnel must liaise with local and state agencies to ensure **a** proper response to a major release. Additionally, the OCD must be notified of the release as soon **as** possible but no later than 4 hours. Agencies will ask for information such as type and volume of release, wind direction, location of release, etc. Be prepared with all information available including directions to sit e. The following call list of essential and potential responders has been prepared for use during a release Earthstone Operating, LLC response must be in coordination with the State of New Mexico's "Hazardous Materials Emergency Response Plan" (HMERP).

Hydrogen Sulfide Drilling Operations Plan

1. All Company and Contract personnel admitted on location must be trained by a qualified H2S safety instructor to the following:
   A. Characteristics of H2S
   B. Physical effects and hazards
   C. Principal and operation of H2S detectors, warning system and briefing areas.
   D. Evacuation procedure, routes and first aid.
   E. Proper use of safety equipment & life support systems
   F. Essential personnel meeting Medical Evaluation criteria will receive additional training on the proper use of 30-minute pressure demand air packs.
2. H2S Detection and Alarm Systems:
   a. H2S sensors/detectors to be located on the drilling rig floor, in the base of the sub structure/cellar area, on the mud pits in the shale shaker area. Additional H2S detectors may play placed as deemed necessary.
   b. An audio alarm system will be installed on the derrick floor and in the top doghouse.
3. Windsock and/or wind streamers:
   a. Windsock at mudpit area should be high enough to be visible.
   b. Windsock on the rig floor and/ or top doghouse should be high enough to be visible.
4. Condition Flags and Signs
   a. Warning sign on access road to location.
   b. Flags to be displayed on sign at entrance to location. Green flag indicates normal safe condition. Yellow flag indicates potential

pressure and danger. Red flag indicates danger (H2S present in dangerous concentration). Only H2S trained and certified personnel admitted to location.

5. Well control equipment:
   a. See exhibit BOP and Choke Diagrams

6. Communication:
   a. While working under masks chalkboards will be used for communication.
   b. Hand signals will be used where chalk board is inappropriate.
   c. Two-way radio will be used to communicate off location in case of emergency help is required. In most cases, cellular telephones will be available at most drilling foreman's trailer or living quarters.

7. Drill stem Testing:
   No DSTs are planned at this time.

8. Drilling contractor supervisor will be required to be familiar with the effects H2S has on tubular goods and other mechanical equipment.
9. If H25 is encountered, mud system will be altered if necessary to maintain control of formation. A mud gas separator will be brought into service along with H2S scavengers if necessary.

Emergency Assistance Telephone List

Earthstone Operating, LLC

The Woodlands Office (Headquarters): 281-298-4246

Midland Office: 432-686-1100

Vice President of Drilling-Nick Goree	Office: 281-771-3201
	Cell: 405-488-7164
Sr. Drilling Engineer/Superintendent- Ben Taylor	Cell: 432-978-3029
Production Superintendent-Paul Martinez	Cell: 325-206-1722

Public Safety:			**911 or**
Lea County Sheriff's Department		Number:	(575)396-3611
Lea County Emergency Management-Lorenzo Velasquez		Number:	(575)391-2983
Lea County Fire Marshal			
Lorenzo Velasquez, Director		Number:	(575)391-2983
Jeff Broom, Deputy Fire Marshal		Number:	(575)391-2988
Fire Department:			
Knowles Fire Department		Number:	(505)392-2810
City of Hobbs Fire Department		Number:	(505)397-9308
Jal Volunteer Fire Department		Number:	(505)395-2221
Lovington Fire Department		Number:	(575)396-2359
Maljamar Fire Department		Number:	(505)676-4100
Tatum Volunteer Fire Department		Number:	(505)398-3473
Eunice Fire Department		Number:	(575)394-3258
Hospital: Lea Regional Medical Center		Number:	(575)492-5000
AirMed: Medevac		Number:	(888)303-9112
Dept. of Public Safety		Number:	(505)827-9000
New Mexico OCD-Dist. 1-Hobbs-	Office	Number:	(575)393-6161
	Emergency	Number:	(575)370-3186
Lea County Road Department		Number:	(575)391-2940
NMDOT		Number:	(505)827-5100
Bureau of Land Management			
Pecos District Office		Number:	(575)627-0272
Carlsbad Field Office		Number:	(575)234-5972
Hobbs Field Station		Number:	(575)393-3612

Outland 2 State 113H

Casing and Cement

String	Hole Size	Csg OD	PPF	Depth	Sx Cement	TOC
Surface	14 ¾”	10 ¾”	45.5#	1,963’	600	0’
Intermediate	9 7/8”	8-5/8”	32#	5838’	1000	0’
Production	7-7/8”	5-1/2”	20#	15128’	1200	5,338’

Well Plan

Drill 14-3/4” hole to ~1,963’ w/ fresh water. Run 10-3/4” 45.5# J-55 BTC casing to TD and cement to surface in one stage.

Drill 9-7/8” hole to ~5,838’ with saturated Brine. Run 8-5/8 32# L-80 MO-FXL to TD and cement to surface in two stages. DVT will be placed at 4,178’ MD.

Drill 7-7/8” vertical hole, curve & lateral to 15,128’ with OBM. Run 5-1/2” 20# P110 BTC casing from TD to surface and cement to 5338’ in one stage.

Well Control

Type	Working Pressure	Test Pressure	Manufacture
Double Ram	5000 psi	5000 psi	Cameron