Form 3160-3
(June 2015)

FORM APPROVED
OMB No. 1004-0137
Expires: January 31, 2018

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.

6. If Indian, Allotee or Tribe Name

1a. Type of work: ☐ DRILL ☐ REENTER

1b. Type of Well: ☐ Oil Well ☐ Gas Well ☐ Other

1c. Type of Completion: ☐ Hydraulic Fracturing ☐ Single Zone ☐ Multiple Zone

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

8. Lease Name and Well No.

2. Name of Operator

9. API Well No.
30-015-53607

3a. Address	3b. Phone No. *(include area code)*	10. Field and Pool, or Exploratory

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*

At surface

At proposed prod. zone

11. Sec., T. R. M. or Blk. and Survey or Area

14. Distance in miles and direction from nearest town or post office*	12. County or Parish	13. State

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)	16. No of acres in lease	17. Spacing Unit dedicated to this well

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	19. Proposed Depth	20. BLM/BIA Bond No. in file

21. Elevations (Show whether DF, KDB, RT, GL, etc.)	22. Approximate date work will start*	23. Estimated duration

24. Attachments

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

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

25. Signature	Name *(Printed/Typed)*	Date

Title

Approved by *(Signature)*	Name *(Printed/Typed)*	Date

Title	Office

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

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

APPROVED WITH CONDITIONS

(Continued on page 2)

*(Instructions on page 2)

Approval Date: 03/15/2023

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

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

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

[1] API Number	[2] Pool Code	[3] Pool Name
30-015-53607	98220	PURPLE SAGE; WOLFCAMP

[4] Property Code	[5] Property Name	[6] Well Number
333861	CLETUS 28 21 WCB FED COM	8H

[7] OGRID No.	[8] Operator Name	[9] Elevation
331165	EARTHSTONE OPERATING, LLC	3373.6

[10] Surface Location

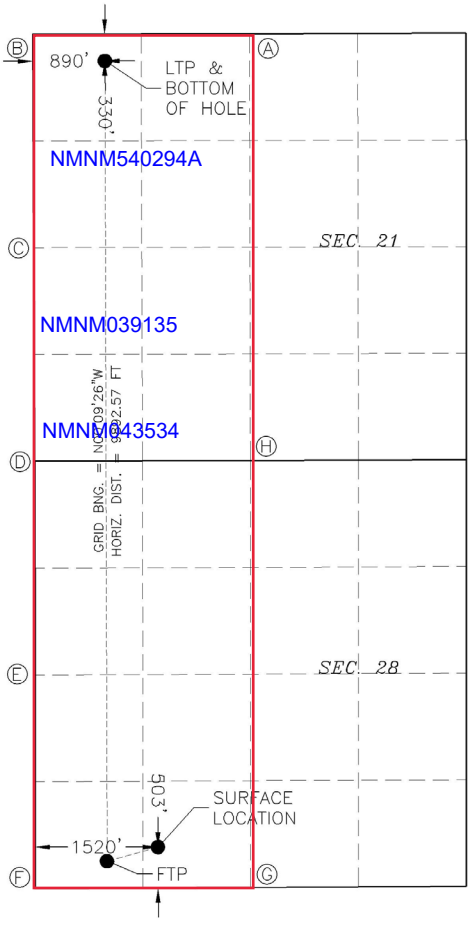
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
N	28	23 S	26 E		503	SOUTH	1520	WEST	EDDY

[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
D	21	23 S	26 E		330	NORTH	890	WEST	EDDY

[12] Dedicated Acres	[13] Joint or Infill	[14] Consolidation Code	[15] Order No.
640			

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.



CLETUS 28-21 FED WCB COM 8H
EL. = 3373.6'

GEODETIC COORDINATES NAD 27 NMSP EAST	GEODETIC COORDINATES NAD 83 NMSP EAST
SURFACE LOCATION	SURFACE LOCATION
N.= 461643.43	N.= 461701.34
E.= 509849.05	E.= 551031.00
LAT. = 32.2691706°N	LAT. = 32.2692878°N
LONG. = 104.3014682°W	LONG. = 104.3019708°W
FIRST TAKE POINT	FIRST TAKE POINT
330' FSL, 890' FWL	330' FSL, 890' FWL
NAD 27 NMSP EAST	NAD 83 NMSP EAST
N.= 461467.94	N.= 461525.83
E.= 509219.38	E.= 550401.33
LAT. = 32.2686887°N	LAT. = 32.2688058°N
LONG. = 104.3035056°W	LONG. = 104.3040082°W
LAST TAKE POINT & BOTTOM OF HOLE	LAST TAKE POINT & BOTTOM OF HOLE
NAD 27 NMSP EAST	NAD 83 NMSP EAST
N.= 471357.72	N.= 471415.89
E.= 509192.47	E.= 550374.21
LAT. = 32.2958754°N	LAT. = 32.2959925°N
LONG. = 104.3035838°W	LONG. = 104.3040872°W

CORNER COORDINATES TABLE
NAD 27 NMSP EAST

A	N.= 471691.95	E.= 510976.36
B	N.= 471685.48	E.= 508301.30
C	N.= 469048.38	E.= 508312.56
D	N.= 466410.31	E.= 508322.91
E	N.= 463767.20	E.= 508326.76
F	N.= 461134.54	E.= 508330.02
G	N.= 461144.99	E.= 510991.49
H	N.= 466418.83	E.= 510990.05

CORNER COORDINATES TABLE
NAD 83 NMSP EAST

A	N.= 471750.17	E.= 552158.11
B	N.= 471743.64	E.= 549483.02
C	N.= 469106.46	E.= 549494.33
D	N.= 466468.32	E.= 549504.75
E	N.= 463825.13	E.= 549508.66
F	N.= 461192.40	E.= 549511.96
G	N.= 461202.91	E.= 552173.47
H	N.= 466476.90	E.= 552171.91

[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.

Jennifer Elrod 12/20/2022
Signature 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.

NOVEMBER 8, 2022
Date of Survey

Signature and Seal of Professional Surveyor:

Certificate Number: FILIMON F. JARAMILLO, PLS 12797
SURVEY NO. 9446B

Intent [X] As Drilled [ ]

API #

Operator Name:	Property Name:	Well Number
EARTHSTONE OPERATING, LLC	CLETUS 28-21 FED WCB COM	8H

Kick Off Point (KOP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
N	28	23S	26E		503	SOUTH	1520	WEST	EDDY

Latitude	Longitude	NAD
32.2692878	104.3019708	83

First Take Point (FTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
M	28	23S	26E		330	SOUTH	890	WEST	EDDY

Latitude	Longitude	NAD
32.2688058	104.3040082	83

Last Take Point (LTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
D	21	23S	26E		330	NORTH	890	WEST	EDDY

Latitude	Longitude	NAD
32.2959925	104.3040872	83

Is this well the defining well for the Horizontal Spacing Unit? NO

Is this well an infill well? YES

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
EARTHSTONE OPERATING, LLC	CLETUS 28-21 FED WCA COM	5H

KZ 06/29/2018

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:** _05/03/2022

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
CLETUS 28-21 FED WCA COM 5H		N-28-23S-26E		1500	3500	7500
CLETUS 28-21 FED WCA COM 6H		N-28-23S-26E		1500	3500	7500
CLETUS 28-21 FED WCB COM 7H		N-28-23S-26E		1500	3500	7500
CLETUS 28-21 FED WCB COM 8H		N-28-23S-26E		1500	3500	7500

IV. Central Delivery Point Name: __CLETUS 28-21 FED COM WEST BATTERY_____ [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
CLETUS 28-21 FED WCA COM 5H		06/01/2023	06/26/2022	11/01/2023	12/01/2023	12/03/2023
CLETUS 28-21 FED WCA COM 6H		06/28/2023	07/22/2023	11/01/2023	12/01/2023	12/03/2023
CLETUS 28-21 FED WCB COM 7H		07/24/2023	08/19/2023	11/01/2023	12/01/2023	12/03/2023
CLETUS 28-21 FED WCB COM 8H		08/21/2023	09/18/2023	11/01/2023	12/01/2023	12/03/2023

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:	Jennifer Elrod
Printed Name:	JENNIFER ELROD
Title:	SR. REGULATORY TECH
E-mail Address:	JELROD@EARTHSTONEENERGY.COM
Date:	05/03/2022
Phone:	(940)452-6214

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

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

EARTHSTONE OPEARATING, LLC
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, CEH 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.

Operator Name: EARTHSTONE OPERATING LLC

Well Name: CLETUS 28-21 FED WCB COM **Well Number:** 8H

with same as above.

Choke Diagram Attachment:

5M_Choke_Manifold_Diagram_20220901150121.pdf

BOP Diagram Attachment:

5M__BOP_Diagram_2__20220901150132.pdf

Section 3 - Casing

Casing ID	String Type	Hole Size	Csg Size	Condition	Standard	Tapered String	Top Set MD	Bottom Set MD	Top Set TVD	Bottom Set TVD	Top Set MSL	Bottom Set MSL	Calculated casing length MD	Grade	Weight	Joint Type	Collapse SF	Burst SF	Joint SF Type	Joint SF	Body SF Type	Body SF
1	SURFACE	14.75	10.75	NEW	API	N	0	500	0	500	3376	2876	500	J-55	45.5	BUTT	9.13	15.65	DRY	34.99	DRY	31.43
2	INTERMEDIATE	9.875	8.625	NEW	API	N	0	1750	0	1750	3728	1626	1750	L-80	32	OTHER - HC MO-FXL	8.83	6.35	DRY	9.3	DRY	13.46
3	PRODUCTION	7.875	5.5	NEW	API	N	0	19398	0	9099	3724	-5723	19398	P-110	20	OTHER - RY VARN AC	2.96	2.81	DRY	3.52	DRY	3.52

Casing Attachments

Casing ID: 1 **String** SURFACE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Casing_Calculator___3_String_Cletus_28_12_Fed_WCB_Com_8H_20220901150429.pdf

Operator Name: EARTHSTONE OPERATING LLC

Well Name: CLETUS 28-21 FED WCB COM **Well Number:** 8H

Casing Attachments

Casing ID: 2 **String** INTERMEDIATE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Casing_Calculator___3_String_Cletus_28_12_Fed_WCB_Com_8H_20220901150412.pdf

Casing ID: 3 **String** PRODUCTION

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Casing_Calculator___3_String_Cletus_28_12_Fed_WCB_Com_8H_20220901150331.pdf

Section 4 - Cement

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
SURFACE	Lead		0	500	370	1.35	14.8	500	75	Class C	Sodium Metasilicate, Defoamer, KCL
INTERMEDIATE	Lead		0	1250	60	3.6	10.3	216	50	C	Sodium Metasilicate, Defoamer, KCL, Kol-Seal, Cellophane Flakes, ROF SealCheck
INTERMEDIATE	Tail		1250	1750	100	1.35	14.8	135	35	C	Fluid Loss, Dispercent, Retarder

Operator Name: EARTHSTONE OPERATING LLC

Well Name: CLETUS 28-21 FED WCB COM **Well Number:** 8H

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
PRODUCTION	Lead		1250	7636	480	2.93	11.3	1406	25	Class H	Bentonite, Compressive Strength Enhancer, Silica Fume Alternative, Fluid Loss, Defoamer, Sodium Metasilicate, Retarder
PRODUCTION	Tail		7636	19398	1870	1.2	14.5	2244	25	Class H	Fluid Loss, Suspension Agent, Retarder, Defoamer, Dispersant

Section 5 - Circulating Medium

Mud System Type: Closed

Will an air or gas system be Used? NO

Description of the equipment for the circulating system in accordance with Onshore Order #2:

Diagram of the equipment for the circulating system in accordance with Onshore Order #2:

Describe what will be on location to control well or mitigate other conditions: Sufficient mud materials to maintain mud properties and meet minimum lost circulation and weight increase requirements will be kept on location at all times.

Describe the mud monitoring system utilized: Pason PVT system will be in place throughout the well as well as visual checks

Circulating Medium Table

Top Depth	Bottom Depth	Mud Type	Min Weight (lbs/gal)	Max Weight (lbs/gal)	Density (lbs/cu ft)	Gel Strength (lbs/100 sqft)	PH	Viscosity (CP)	Salinity (ppm)	Filtration (cc)	Additional Characteristics
0	500	SPUD MUD	8.5	9.2							38-40 VIS 8-10 PV 8-10 YP
1750	19398	OIL-BASED MUD	9.3	9.5							15-20 PV 8-12 YP
500	1750	SALT SATURATED	9.8	10.2							28-32 VIS 1-3 PV 1-3 YP

Operator Name: EARTHSTONE OPERATING LLC

Well Name: CLETUS 28-21 FED WCB COM **Well Number:** 8H

Section 6 - Test, Logging, Coring

List of production tests including testing procedures, equipment and safety measures:

None

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

CEMENT BOND LOG,DIRECTIONAL SURVEY,GAMMA RAY LOG,MEASUREMENT WHILE DRILLING,

Coring operation description for the well:

None

Section 7 - Pressure

Anticipated Bottom Hole Pressure: 4826 **Anticipated Surface Pressure:** 2816

Anticipated Bottom Hole Temperature(F): 163

Anticipated abnormal pressures, temperatures, or potential geologic hazards? NO

Describe:

Contingency Plans geoharzards description:

Contingency Plans geohazards

Hydrogen Sulfide drilling operations plan required? YES

Hydrogen sulfide drilling operations

ESTE_Eddy_County_H2S_plan_20220831115233.pdf

Section 8 - Other Information

Proposed horizontal/directional/multi-lateral plan submission:

Earthstone___Cletus_28_21_Fed_WCB_COM_8H___Plan__1_Report_20220901150736.pdf
Earthstone___Cletus_28_21_Fed_WCB_COM_8H___Plan__1_20220901150737.pdf
Earthstone___Cletus_28_21_Fed_WCB_COM_8H___Plan__1_AC_Report_20220901150737.pdf

Other proposed operations facets description:

Other proposed operations facets attachment:

5.50_20__VAHC_P110_RY_VARN_AC__6.300_Cplg__20220826122958.pdf
CDS_FXL_8_625_32_BMP_L80EHC_Feb04_2022_20220826123028.pdf
Cletus_28_21_Fed_WCB_Com_8H___WBD_Update_20220901150755.pdf

Other Variance attachment:

CACTUS_WELLHEAD_3STRING_20220826123017.pdf
Cactus_Speed_Head_Installation_Procedure_20210329145801.pdf
Cactus_Speed_Head_Pressure_Testing_Statement_20210329145801.pdf
Choke_Hose_M55_1_07102017_145204_66_1225_04_14_2014__20210329145801.pdf

Planning Report

Database:	LEAM Multi_User Db	**Local Co-ordinate Reference:**	Well Cletus 28-21 Fed WCB COM 8H
Company:	Earthstone Operating, LLC	**TVD Reference:**	GE 3376.5' + KB 27.5' @ 3404.00usft
Project:	Eddy County, NM (NAD 27)	**MD Reference:**	GE 3376.5' + KB 27.5' @ 3404.00usft
Site:	Cletus 28-21 Pad	**North Reference:**	Grid
Well:	Cletus 28-21 Fed WCB COM 8H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Project Eddy County, NM (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 Cletus 28-21 Pad

Site Position:		**Northing:**	461,340.73 usft	**Latitude:**	32° 16' 6.02 N
From:	Map	**Easting:**	509,909.39 usft	**Longitude:**	104° 18' 4.58 W
Position Uncertainty:	0.00 usft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	0.02 °

Well Cletus 28-21 Fed WCB COM 8H

Well Position	**+N/-S**	-0.27 usft	**Northing:**	461,340.46 usft	**Latitude:**	32° 16' 6.02 N
	+E/-W	-60.02 usft	**Easting:**	509,849.37 usft	**Longitude:**	104° 18' 5.28 W
Position Uncertainty		0.00 usft	**Wellhead Elevation:**		**Ground Level:**	3,376.50 usft

Wellbore OH

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM_FILE	8/15/2022	6.98	59.85	47,527.30000000

Design 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	359.84

Plan Survey Tool Program **Date** 7/6/2022

	Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	19,398.59	Plan #1 (OH)	OWSG_Rev2_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	0.00	
2,600.00	0.00	0.00	2,600.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,958.25	7.16	231.86	2,957.32	-13.82	-17.59	2.00	2.00	0.00	231.86	
8,562.79	7.16	231.86	8,518.09	-445.52	-567.40	0.00	0.00	0.00	0.00	
9,508.72	90.19	359.84	9,132.00	127.48	-629.99	10.00	8.78	13.53	127.75	FTP (Cletus 8H)
19,398.59	90.19	359.84	9,099.00	10,017.26	-656.90	0.00	0.00	0.00	0.00	LTP/PBHL (Cletus 8H

Planning Report

Database:	LEAM Multi_User Db	**Local Co-ordinate Reference:**	Well Cletus 28-21 Fed WCB COM 8H
Company:	Earthstone Operating, LLC	**TVD Reference:**	GE 3376.5' + KB 27.5' @ 3404.00usft
Project:	Eddy County, NM (NAD 27)	**MD Reference:**	GE 3376.5' + KB 27.5' @ 3404.00usft
Site:	Cletus 28-21 Pad	**North Reference:**	Grid
Well:	Cletus 28-21 Fed WCB COM 8H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SHL (Cletus 8H)									
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
1,654.00	0.00	0.00	1,654.00	0.00	0.00	0.00	0.00	0.00	0.00
Lamar									
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
1,869.00	0.00	0.00	1,869.00	0.00	0.00	0.00	0.00	0.00	0.00
Bell Canyon									
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00
2,300.00	0.00	0.00	2,300.00	0.00	0.00	0.00	0.00	0.00	0.00
2,400.00	0.00	0.00	2,400.00	0.00	0.00	0.00	0.00	0.00	0.00
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00
2,578.00	0.00	0.00	2,578.00	0.00	0.00	0.00	0.00	0.00	0.00
Cherry Canyon									
2,600.00	0.00	0.00	2,600.00	0.00	0.00	0.00	0.00	0.00	0.00
2,700.00	2.00	231.86	2,699.98	-1.08	-1.37	-1.07	2.00	2.00	0.00
2,800.00	4.00	231.86	2,799.84	-4.31	-5.49	-4.29	2.00	2.00	0.00
2,900.00	6.00	231.86	2,899.45	-9.69	-12.34	-9.66	2.00	2.00	0.00
2,958.25	7.16	231.86	2,957.32	-13.82	-17.59	-13.77	2.00	2.00	0.00
3,000.00	7.16	231.86	2,998.74	-17.03	-21.69	-16.97	0.00	0.00	0.00
3,100.00	7.16	231.86	3,097.96	-24.73	-31.50	-24.65	0.00	0.00	0.00
3,200.00	7.16	231.86	3,197.18	-32.44	-41.31	-32.32	0.00	0.00	0.00
3,300.00	7.16	231.86	3,296.40	-40.14	-51.12	-40.00	0.00	0.00	0.00
3,400.00	7.16	231.86	3,395.62	-47.84	-60.93	-47.68	0.00	0.00	0.00
3,500.00	7.16	231.86	3,494.84	-55.55	-70.74	-55.35	0.00	0.00	0.00
3,600.00	7.16	231.86	3,594.06	-63.25	-80.55	-63.03	0.00	0.00	0.00
3,627.16	7.16	231.86	3,621.00	-65.34	-83.21	-65.11	0.00	0.00	0.00
Brushy Canyon									
3,700.00	7.16	231.86	3,693.27	-70.95	-90.36	-70.70	0.00	0.00	0.00
3,800.00	7.16	231.86	3,792.49	-78.65	-100.17	-78.38	0.00	0.00	0.00
3,900.00	7.16	231.86	3,891.71	-86.36	-109.98	-86.06	0.00	0.00	0.00
4,000.00	7.16	231.86	3,990.93	-94.06	-119.79	-93.73	0.00	0.00	0.00
4,100.00	7.16	231.86	4,090.15	-101.76	-129.60	-101.41	0.00	0.00	0.00
4,200.00	7.16	231.86	4,189.37	-109.47	-139.41	-109.09	0.00	0.00	0.00

Planning Report

Database:	LEAM Multi_User Db	**Local Co-ordinate Reference:**	Well Cletus 28-21 Fed WCB COM 8H
Company:	Earthstone Operating, LLC	**TVD Reference:**	GE 3376.5' + KB 27.5' @ 3404.00usft
Project:	Eddy County, NM (NAD 27)	**MD Reference:**	GE 3376.5' + KB 27.5' @ 3404.00usft
Site:	Cletus 28-21 Pad	**North Reference:**	Grid
Well:	Cletus 28-21 Fed WCB COM 8H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,300.00	7.16	231.86	4,288.59	-117.17	-149.22	-116.76	0.00	0.00	0.00
4,400.00	7.16	231.86	4,387.81	-124.87	-159.03	-124.44	0.00	0.00	0.00
4,500.00	7.16	231.86	4,487.03	-132.57	-168.84	-132.11	0.00	0.00	0.00
4,600.00	7.16	231.86	4,586.25	-140.28	-178.65	-139.79	0.00	0.00	0.00
4,700.00	7.16	231.86	4,685.47	-147.98	-188.46	-147.47	0.00	0.00	0.00
4,800.00	7.16	231.86	4,784.69	-155.68	-198.27	-155.14	0.00	0.00	0.00
4,900.00	7.16	231.86	4,883.90	-163.38	-208.08	-162.82	0.00	0.00	0.00
5,000.00	7.16	231.86	4,983.12	-171.09	-217.89	-170.49	0.00	0.00	0.00
5,100.00	7.16	231.86	5,082.34	-178.79	-227.70	-178.17	0.00	0.00	0.00
5,200.00	7.16	231.86	5,181.56	-186.49	-237.51	-185.85	0.00	0.00	0.00
5,242.77	7.16	231.86	5,224.00	-189.79	-241.71	-189.13	0.00	0.00	0.00
Top BSPG Lime									
5,300.00	7.16	231.86	5,280.78	-194.20	-247.32	-193.52	0.00	0.00	0.00
5,400.00	7.16	231.86	5,380.00	-201.90	-257.13	-201.20	0.00	0.00	0.00
5,500.00	7.16	231.86	5,479.22	-209.60	-266.94	-208.87	0.00	0.00	0.00
5,600.00	7.16	231.86	5,578.44	-217.30	-276.75	-216.55	0.00	0.00	0.00
5,700.00	7.16	231.86	5,677.66	-225.01	-286.56	-224.23	0.00	0.00	0.00
5,800.00	7.16	231.86	5,776.88	-232.71	-296.37	-231.90	0.00	0.00	0.00
5,900.00	7.16	231.86	5,876.10	-240.41	-306.18	-239.58	0.00	0.00	0.00
6,000.00	7.16	231.86	5,975.31	-248.12	-315.99	-247.25	0.00	0.00	0.00
6,100.00	7.16	231.86	6,074.53	-255.82	-325.80	-254.93	0.00	0.00	0.00
6,142.80	7.16	231.86	6,117.00	-259.11	-330.00	-258.22	0.00	0.00	0.00
1st BSPG Ss									
6,200.00	7.16	231.86	6,173.75	-263.52	-335.61	-262.61	0.00	0.00	0.00
6,300.00	7.16	231.86	6,272.97	-271.22	-345.42	-270.28	0.00	0.00	0.00
6,369.57	7.16	231.86	6,342.00	-276.58	-352.24	-275.62	0.00	0.00	0.00
2nd BSPG Carb									
6,400.00	7.16	231.86	6,372.19	-278.93	-355.23	-277.96	0.00	0.00	0.00
6,470.36	7.16	231.86	6,442.00	-284.35	-362.13	-283.36	0.00	0.00	0.00
2nd BSPG Ss									
6,500.00	7.16	231.86	6,471.41	-286.63	-365.04	-285.63	0.00	0.00	0.00
6,600.00	7.16	231.86	6,570.63	-294.33	-374.85	-293.31	0.00	0.00	0.00
6,700.00	7.16	231.86	6,669.85	-302.03	-384.66	-300.99	0.00	0.00	0.00
6,710.23	7.16	231.86	6,680.00	-302.82	-385.66	-301.77	0.00	0.00	0.00
3rd BSPG Carb									
6,800.00	7.16	231.86	6,769.07	-309.74	-394.47	-308.66	0.00	0.00	0.00
6,900.00	7.16	231.86	6,868.29	-317.44	-404.28	-316.34	0.00	0.00	0.00
7,000.00	7.16	231.86	6,967.51	-325.14	-414.09	-324.02	0.00	0.00	0.00
7,100.00	7.16	231.86	7,066.72	-332.85	-423.90	-331.69	0.00	0.00	0.00
7,200.00	7.16	231.86	7,165.94	-340.55	-433.71	-339.37	0.00	0.00	0.00
7,300.00	7.16	231.86	7,265.16	-348.25	-443.52	-347.04	0.00	0.00	0.00
7,400.00	7.16	231.86	7,364.38	-355.95	-453.33	-354.72	0.00	0.00	0.00
7,500.00	7.16	231.86	7,463.60	-363.66	-463.14	-362.40	0.00	0.00	0.00
7,600.00	7.16	231.86	7,562.82	-371.36	-472.95	-370.07	0.00	0.00	0.00
7,700.00	7.16	231.86	7,662.04	-379.06	-482.76	-377.75	0.00	0.00	0.00
7,800.00	7.16	231.86	7,761.26	-386.77	-492.57	-385.42	0.00	0.00	0.00
7,900.00	7.16	231.86	7,860.48	-394.47	-502.38	-393.10	0.00	0.00	0.00
8,000.00	7.16	231.86	7,959.70	-402.17	-512.19	-400.78	0.00	0.00	0.00
8,100.00	7.16	231.86	8,058.92	-409.87	-522.00	-408.45	0.00	0.00	0.00
8,200.00	7.16	231.86	8,158.13	-417.58	-531.81	-416.13	0.00	0.00	0.00
8,280.49	7.16	231.86	8,238.00	-423.78	-539.70	-422.31	0.00	0.00	0.00
3rd BSPG Ss									
8,300.00	7.16	231.86	8,257.35	-425.28	-541.62	-423.80	0.00	0.00	0.00

Planning Report

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Project:	Eddy County, NM (NAD 27)	**MD Reference:**	GE 3376.5' + KB 27.5' @ 3404.00usft
Site:	Cletus 28-21 Pad	**North Reference:**	Grid
Well:	Cletus 28-21 Fed WCB COM 8H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
8,400.00	7.16	231.86	8,356.57	-432.98	-551.43	-431.48	0.00	0.00	0.00
8,500.00	7.16	231.86	8,455.79	-440.69	-561.24	-439.16	0.00	0.00	0.00
8,562.79	7.16	231.86	8,518.09	-445.52	-567.40	-443.98	0.00	0.00	0.00
8,600.00	5.70	262.97	8,555.08	-447.18	-571.06	-445.63	10.00	-3.94	83.60
8,650.00	7.12	307.28	8,604.79	-445.61	-575.99	-444.04	10.00	2.83	88.62
8,651.22	7.19	308.05	8,606.00	-445.52	-576.11	-443.95	10.00	6.10	63.60
Wolfcamp									
8,700.00	10.89	328.82	8,654.18	-439.69	-580.90	-438.11	10.00	7.59	42.58
8,750.00	15.38	338.70	8,702.87	-429.46	-585.76	-427.87	10.00	8.97	19.76
8,800.00	20.10	344.11	8,750.48	-415.01	-590.52	-413.41	10.00	9.45	10.82
8,850.00	24.93	347.51	8,796.66	-396.45	-595.16	-394.83	10.00	9.66	6.80
8,900.00	29.81	349.87	8,841.05	-373.91	-599.62	-372.28	10.00	9.77	4.70
8,950.00	34.73	351.60	8,883.31	-347.57	-603.89	-345.92	10.00	9.83	3.48
9,000.00	39.66	352.96	8,923.13	-317.62	-607.93	-315.97	10.00	9.87	2.71
9,050.00	44.61	354.06	8,960.20	-284.31	-611.71	-282.64	10.00	9.89	2.20
9,100.00	49.56	354.98	8,994.23	-247.87	-615.19	-246.19	10.00	9.91	1.84
9,150.00	54.52	355.77	9,024.98	-208.58	-618.36	-206.90	10.00	9.92	1.59
9,200.00	59.49	356.48	9,052.20	-166.76	-621.18	-165.07	10.00	9.93	1.40
9,250.00	64.45	357.11	9,075.69	-122.71	-623.65	-121.01	10.00	9.94	1.27
9,300.00	69.43	357.69	9,095.27	-76.76	-625.73	-75.06	10.00	9.94	1.17
9,350.00	74.40	358.24	9,110.79	-29.28	-627.41	-27.57	10.00	9.95	1.09
9,375.06	76.89	358.50	9,117.00	-5.01	-628.10	-3.30	10.00	9.95	1.05
Wolfcamp B									
9,400.00	79.37	358.76	9,122.13	19.38	-628.68	21.10	10.00	9.95	1.03
9,450.00	84.35	359.26	9,129.20	68.86	-629.53	70.57	10.00	9.95	1.01
9,500.00	89.32	359.76	9,131.96	118.76	-629.96	120.48	10.00	9.95	0.99
9,508.72	90.19	359.84	9,132.00	127.48	-629.99	129.19	10.00	9.95	0.99
Target LP - FTP (Cletus 8H)									
9,600.00	90.19	359.84	9,131.70	218.76	-630.24	220.48	0.00	0.00	0.00
9,700.00	90.19	359.84	9,131.36	318.76	-630.51	320.48	0.00	0.00	0.00
9,800.00	90.19	359.84	9,131.03	418.76	-630.78	420.48	0.00	0.00	0.00
9,900.00	90.19	359.84	9,130.69	518.76	-631.05	520.48	0.00	0.00	0.00
10,000.00	90.19	359.84	9,130.36	618.76	-631.33	620.48	0.00	0.00	0.00
10,100.00	90.19	359.84	9,130.03	718.76	-631.60	720.47	0.00	0.00	0.00
10,200.00	90.19	359.84	9,129.69	818.76	-631.87	820.47	0.00	0.00	0.00
10,300.00	90.19	359.84	9,129.36	918.76	-632.14	920.47	0.00	0.00	0.00
10,400.00	90.19	359.84	9,129.03	1,018.76	-632.42	1,020.47	0.00	0.00	0.00
10,500.00	90.19	359.84	9,128.69	1,118.76	-632.69	1,120.47	0.00	0.00	0.00
10,600.00	90.19	359.84	9,128.36	1,218.75	-632.96	1,220.47	0.00	0.00	0.00
10,700.00	90.19	359.84	9,128.03	1,318.75	-633.23	1,320.47	0.00	0.00	0.00
10,800.00	90.19	359.84	9,127.69	1,418.75	-633.50	1,420.47	0.00	0.00	0.00
10,900.00	90.19	359.84	9,127.36	1,518.75	-633.78	1,520.47	0.00	0.00	0.00
11,000.00	90.19	359.84	9,127.02	1,618.75	-634.05	1,620.47	0.00	0.00	0.00
11,100.00	90.19	359.84	9,126.69	1,718.75	-634.32	1,720.47	0.00	0.00	0.00
11,200.00	90.19	359.84	9,126.36	1,818.75	-634.59	1,820.47	0.00	0.00	0.00
11,300.00	90.19	359.84	9,126.02	1,918.75	-634.86	1,920.47	0.00	0.00	0.00
11,400.00	90.19	359.84	9,125.69	2,018.75	-635.14	2,020.47	0.00	0.00	0.00
11,500.00	90.19	359.84	9,125.36	2,118.75	-635.41	2,120.47	0.00	0.00	0.00
11,600.00	90.19	359.84	9,125.02	2,218.74	-635.68	2,220.47	0.00	0.00	0.00
11,700.00	90.19	359.84	9,124.69	2,318.74	-635.95	2,320.47	0.00	0.00	0.00
11,800.00	90.19	359.84	9,124.35	2,418.74	-636.22	2,420.47	0.00	0.00	0.00
11,900.00	90.19	359.84	9,124.02	2,518.74	-636.50	2,520.46	0.00	0.00	0.00
12,000.00	90.19	359.84	9,123.69	2,618.74	-636.77	2,620.46	0.00	0.00	0.00

Planning Report

Database:	LEAM Multi_User Db	**Local Co-ordinate Reference:**	Well Cletus 28-21 Fed WCB COM 8H
Company:	Earthstone Operating, LLC	**TVD Reference:**	GE 3376.5' + KB 27.5' @ 3404.00usft
Project:	Eddy County, NM (NAD 27)	**MD Reference:**	GE 3376.5' + KB 27.5' @ 3404.00usft
Site:	Cletus 28-21 Pad	**North Reference:**	Grid
Well:	Cletus 28-21 Fed WCB COM 8H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
12,100.00	90.19	359.84	9,123.35	2,718.74	-637.04	2,720.46	0.00	0.00	0.00
12,200.00	90.19	359.84	9,123.02	2,818.74	-637.31	2,820.46	0.00	0.00	0.00
12,300.00	90.19	359.84	9,122.69	2,918.74	-637.59	2,920.46	0.00	0.00	0.00
12,400.00	90.19	359.84	9,122.35	3,018.74	-637.86	3,020.46	0.00	0.00	0.00
12,500.00	90.19	359.84	9,122.02	3,118.74	-638.13	3,120.46	0.00	0.00	0.00
12,600.00	90.19	359.84	9,121.69	3,218.74	-638.40	3,220.46	0.00	0.00	0.00
12,700.00	90.19	359.84	9,121.35	3,318.73	-638.67	3,320.46	0.00	0.00	0.00
12,800.00	90.19	359.84	9,121.02	3,418.73	-638.95	3,420.46	0.00	0.00	0.00
12,900.00	90.19	359.84	9,120.68	3,518.73	-639.22	3,520.46	0.00	0.00	0.00
13,000.00	90.19	359.84	9,120.35	3,618.73	-639.49	3,620.46	0.00	0.00	0.00
13,100.00	90.19	359.84	9,120.02	3,718.73	-639.76	3,720.46	0.00	0.00	0.00
13,200.00	90.19	359.84	9,119.68	3,818.73	-640.03	3,820.46	0.00	0.00	0.00
13,300.00	90.19	359.84	9,119.35	3,918.73	-640.31	3,920.46	0.00	0.00	0.00
13,400.00	90.19	359.84	9,119.02	4,018.73	-640.58	4,020.46	0.00	0.00	0.00
13,500.00	90.19	359.84	9,118.68	4,118.73	-640.85	4,120.46	0.00	0.00	0.00
13,600.00	90.19	359.84	9,118.35	4,218.73	-641.12	4,220.46	0.00	0.00	0.00
13,700.00	90.19	359.84	9,118.01	4,318.73	-641.39	4,320.45	0.00	0.00	0.00
13,800.00	90.19	359.84	9,117.68	4,418.72	-641.67	4,420.45	0.00	0.00	0.00
13,900.00	90.19	359.84	9,117.35	4,518.72	-641.94	4,520.45	0.00	0.00	0.00
14,000.00	90.19	359.84	9,117.01	4,618.72	-642.21	4,620.45	0.00	0.00	0.00
14,100.00	90.19	359.84	9,116.68	4,718.72	-642.48	4,720.45	0.00	0.00	0.00
14,200.00	90.19	359.84	9,116.35	4,818.72	-642.75	4,820.45	0.00	0.00	0.00
14,300.00	90.19	359.84	9,116.01	4,918.72	-643.03	4,920.45	0.00	0.00	0.00
14,400.00	90.19	359.84	9,115.68	5,018.72	-643.30	5,020.45	0.00	0.00	0.00
14,500.00	90.19	359.84	9,115.35	5,118.72	-643.57	5,120.45	0.00	0.00	0.00
14,600.00	90.19	359.84	9,115.01	5,218.72	-643.84	5,220.45	0.00	0.00	0.00
14,700.00	90.19	359.84	9,114.68	5,318.72	-644.12	5,320.45	0.00	0.00	0.00
14,800.00	90.19	359.84	9,114.34	5,418.72	-644.39	5,420.45	0.00	0.00	0.00
14,900.00	90.19	359.84	9,114.01	5,518.71	-644.66	5,520.45	0.00	0.00	0.00
15,000.00	90.19	359.84	9,113.68	5,618.71	-644.93	5,620.45	0.00	0.00	0.00
15,100.00	90.19	359.84	9,113.34	5,718.71	-645.20	5,720.45	0.00	0.00	0.00
15,200.00	90.19	359.84	9,113.01	5,818.71	-645.48	5,820.45	0.00	0.00	0.00
15,300.00	90.19	359.84	9,112.68	5,918.71	-645.75	5,920.45	0.00	0.00	0.00
15,400.00	90.19	359.84	9,112.34	6,018.71	-646.02	6,020.45	0.00	0.00	0.00
15,500.00	90.19	359.84	9,112.01	6,118.71	-646.29	6,120.44	0.00	0.00	0.00
15,600.00	90.19	359.84	9,111.68	6,218.71	-646.56	6,220.44	0.00	0.00	0.00
15,700.00	90.19	359.84	9,111.34	6,318.71	-646.84	6,320.44	0.00	0.00	0.00
15,800.00	90.19	359.84	9,111.01	6,418.71	-647.11	6,420.44	0.00	0.00	0.00
15,900.00	90.19	359.84	9,110.67	6,518.71	-647.38	6,520.44	0.00	0.00	0.00
16,000.00	90.19	359.84	9,110.34	6,618.70	-647.65	6,620.44	0.00	0.00	0.00
16,100.00	90.19	359.84	9,110.01	6,718.70	-647.92	6,720.44	0.00	0.00	0.00
16,200.00	90.19	359.84	9,109.67	6,818.70	-648.20	6,820.44	0.00	0.00	0.00
16,300.00	90.19	359.84	9,109.34	6,918.70	-648.47	6,920.44	0.00	0.00	0.00
16,400.00	90.19	359.84	9,109.01	7,018.70	-648.74	7,020.44	0.00	0.00	0.00
16,500.00	90.19	359.84	9,108.67	7,118.70	-649.01	7,120.44	0.00	0.00	0.00
16,600.00	90.19	359.84	9,108.34	7,218.70	-649.29	7,220.44	0.00	0.00	0.00
16,700.00	90.19	359.84	9,108.00	7,318.70	-649.56	7,320.44	0.00	0.00	0.00
16,800.00	90.19	359.84	9,107.67	7,418.70	-649.83	7,420.44	0.00	0.00	0.00
16,900.00	90.19	359.84	9,107.34	7,518.70	-650.10	7,520.44	0.00	0.00	0.00
17,000.00	90.19	359.84	9,107.00	7,618.69	-650.37	7,620.44	0.00	0.00	0.00
17,100.00	90.19	359.84	9,106.67	7,718.69	-650.65	7,720.44	0.00	0.00	0.00
17,200.00	90.19	359.84	9,106.34	7,818.69	-650.92	7,820.44	0.00	0.00	0.00
17,300.00	90.19	359.84	9,106.00	7,918.69	-651.19	7,920.43	0.00	0.00	0.00
17,400.00	90.19	359.84	9,105.67	8,018.69	-651.46	8,020.43	0.00	0.00	0.00

Planning Report

Database:	LEAM Multi_User Db	**Local Co-ordinate Reference:**	Well Cletus 28-21 Fed WCB COM 8H
Company:	Earthstone Operating, LLC	**TVD Reference:**	GE 3376.5' + KB 27.5' @ 3404.00usft
Project:	Eddy County, NM (NAD 27)	**MD Reference:**	GE 3376.5' + KB 27.5' @ 3404.00usft
Site:	Cletus 28-21 Pad	**North Reference:**	Grid
Well:	Cletus 28-21 Fed WCB COM 8H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
17,500.00	90.19	359.84	9,105.34	8,118.69	-651.73	8,120.43	0.00	0.00	0.00
17,600.00	90.19	359.84	9,105.00	8,218.69	-652.01	8,220.43	0.00	0.00	0.00
17,700.00	90.19	359.84	9,104.67	8,318.69	-652.28	8,320.43	0.00	0.00	0.00
17,800.00	90.19	359.84	9,104.33	8,418.69	-652.55	8,420.43	0.00	0.00	0.00
17,900.00	90.19	359.84	9,104.00	8,518.69	-652.82	8,520.43	0.00	0.00	0.00
18,000.00	90.19	359.84	9,103.67	8,618.69	-653.09	8,620.43	0.00	0.00	0.00
18,100.00	90.19	359.84	9,103.33	8,718.68	-653.37	8,720.43	0.00	0.00	0.00
18,200.00	90.19	359.84	9,103.00	8,818.68	-653.64	8,820.43	0.00	0.00	0.00
18,300.00	90.19	359.84	9,102.67	8,918.68	-653.91	8,920.43	0.00	0.00	0.00
18,400.00	90.19	359.84	9,102.33	9,018.68	-654.18	9,020.43	0.00	0.00	0.00
18,500.00	90.19	359.84	9,102.00	9,118.68	-654.45	9,120.43	0.00	0.00	0.00
18,600.00	90.19	359.84	9,101.66	9,218.68	-654.73	9,220.43	0.00	0.00	0.00
18,700.00	90.19	359.84	9,101.33	9,318.68	-655.00	9,320.43	0.00	0.00	0.00
18,800.00	90.19	359.84	9,101.00	9,418.68	-655.27	9,420.43	0.00	0.00	0.00
18,900.00	90.19	359.84	9,100.66	9,518.68	-655.54	9,520.43	0.00	0.00	0.00
19,000.00	90.19	359.84	9,100.33	9,618.68	-655.82	9,620.43	0.00	0.00	0.00
19,100.00	90.19	359.84	9,100.00	9,718.68	-656.09	9,720.42	0.00	0.00	0.00
19,200.00	90.19	359.84	9,099.66	9,818.67	-656.36	9,820.42	0.00	0.00	0.00
19,300.00	90.19	359.84	9,099.33	9,918.67	-656.63	9,920.42	0.00	0.00	0.00
19,398.59	90.19	359.84	9,099.00	10,017.26	-656.90	10,019.01	0.00	0.00	0.00
LTP/PBHL (Cletus 8H)									

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,654.00	1,654.00	Lamar			
1,869.00	1,869.00	Bell Canyon			
2,578.00	2,578.00	Cherry Canyon			
3,627.16	3,621.00	Brushy Canyon			
5,242.77	5,224.00	Top BSPG Lime			
6,142.80	6,117.00	1st BSPG Ss			
6,369.57	6,342.00	2nd BSPG Carb			
6,470.36	6,442.00	2nd BSPG Ss			
6,710.23	6,680.00	3rd BSPG Carb			
8,280.49	8,238.00	3rd BSPG Ss			
8,651.22	8,606.00	Wolfcamp			
9,375.06	9,117.00	Wolfcamp B			
9,508.72	9,132.00	Target LP			

Earthstone Operating, LLC

Project: Eddy County, NM (NAD 27)
Site: Cletus 28-21 Pad
Well: Cletus 28-21 Fed WCB COM 8H
Wellbore: OH
Design: Plan #1

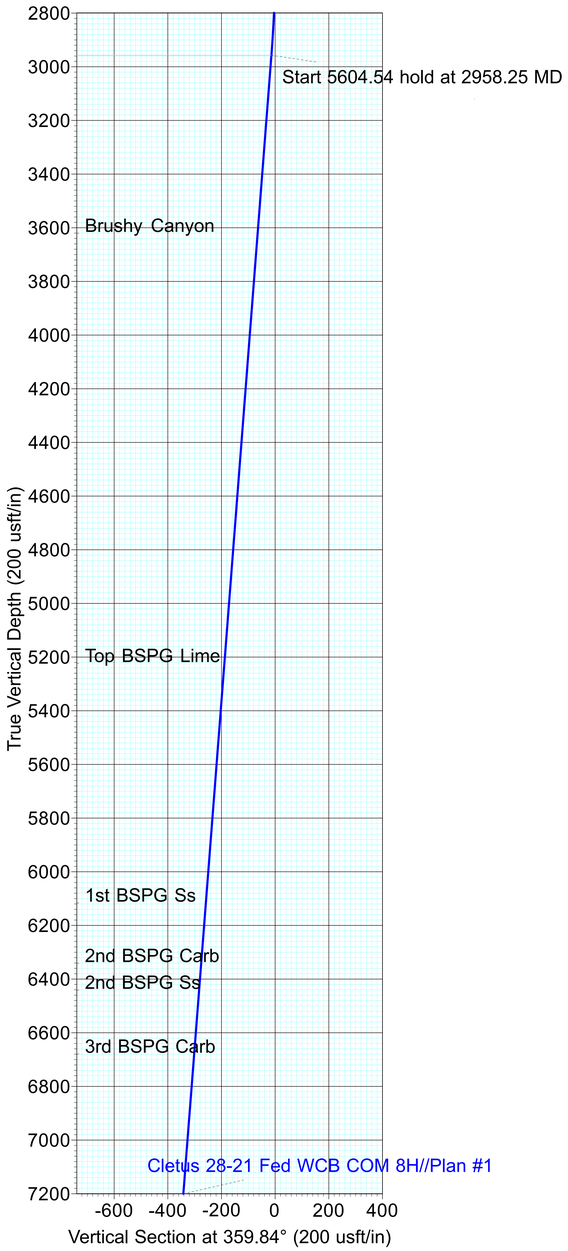
EARTHSTONE Energy, Inc.

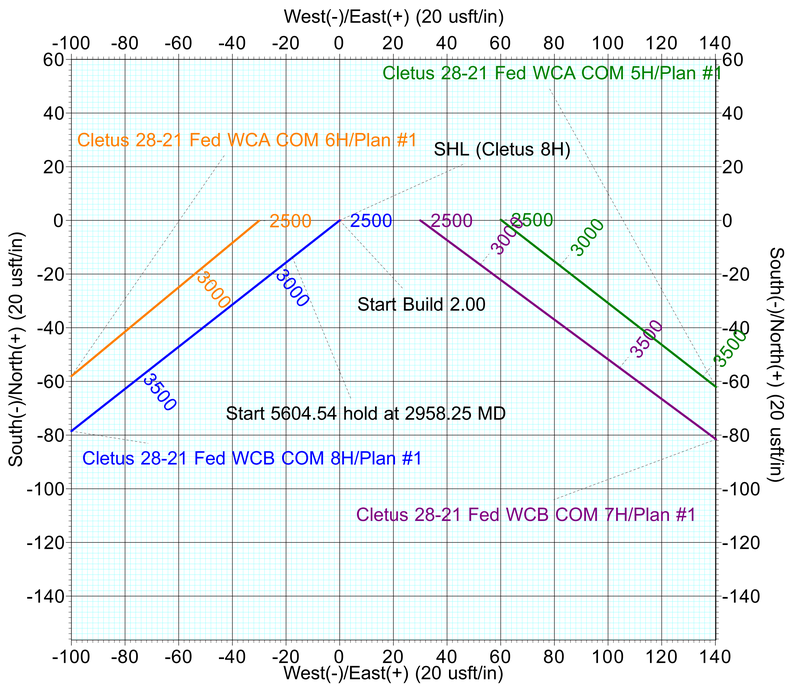
T G M

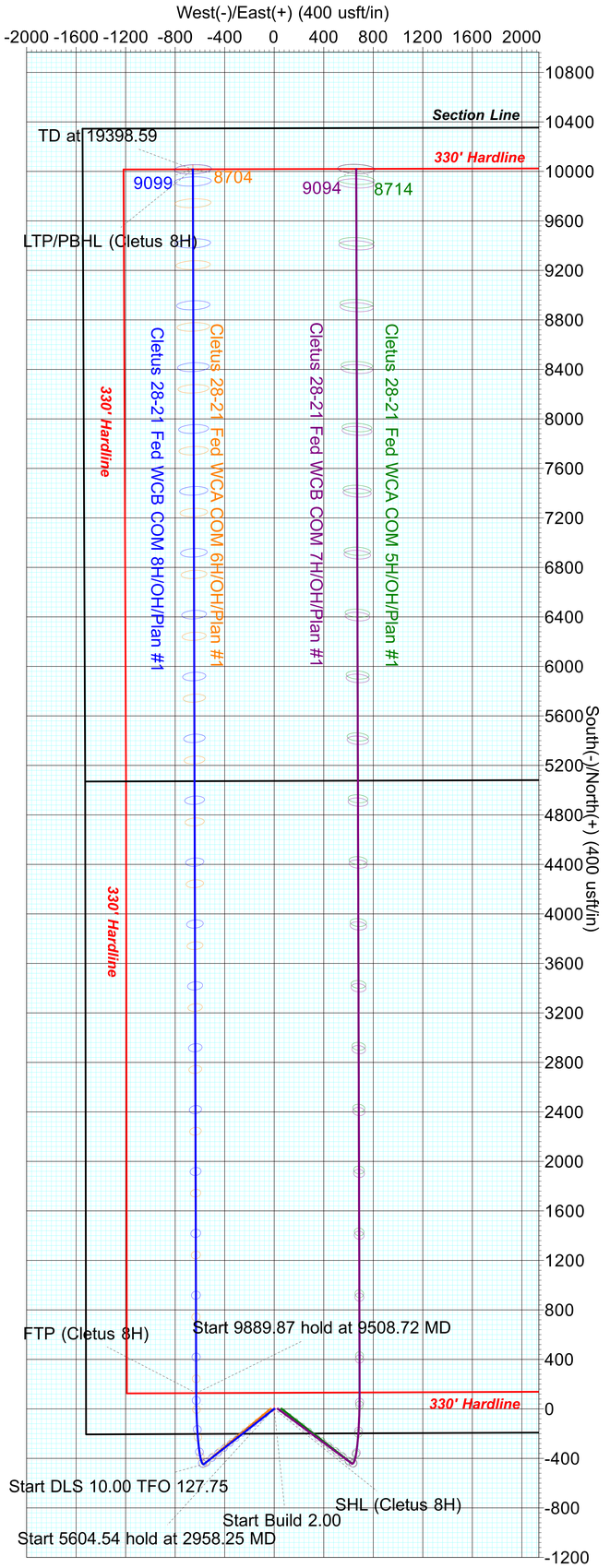
Azimuths to Grid North
True North: -0.02°
Magnetic North: 6.97°

Magnetic Field
Strength: 47527.3nT
Dip Angle: 59.85°
Date: 8/15/2022
Model: HDGM_FILE

Geodetic System: US State Plane 1927 (Exact solution)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: New Mexico East 3001
Referenced TVD: GE 3376.5' + KB 27.5' @ 3404.00usft





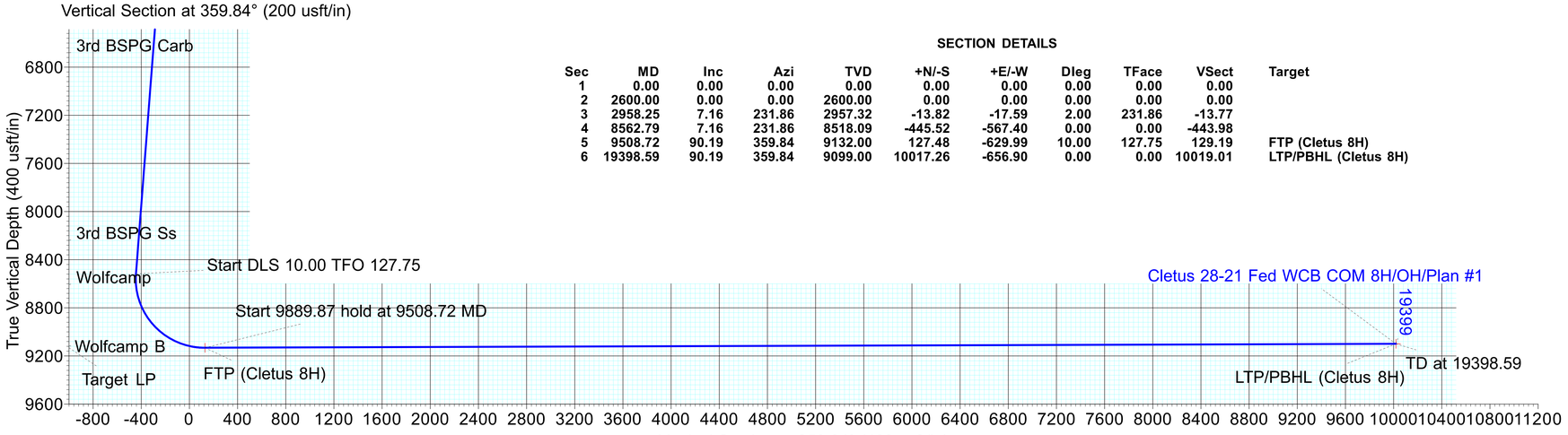


DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
SHL (Cletus 8H)	0.00	0.00	0.00	461340.46	509849.37	32° 16' 6.02 N	104° 18' 5.28 W
LTP/PBHL (Cletus 8H)	9099.00	10017.26	-656.90	471357.72	509192.47	32° 17' 45.15 N	104° 18' 12.90 W
FTP (Cletus 8H)	9132.00	127.48	-629.99	461467.94	509219.38	32° 16' 7.28 N	104° 18' 12.62 W

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DIeg	TFace	VSect	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	2600.00	0.00	0.00	2600.00	0.00	0.00	0.00	0.00	0.00	
3	2958.25	7.16	231.86	2957.32	-13.82	-17.59	2.00	231.86	-13.77	
4	8562.79	7.16	231.86	8518.09	-445.52	-567.40	0.00	0.00	-443.98	
5	9508.72	90.19	359.84	9132.00	127.48	-629.99	10.00	127.75	129.19	FTP (Cletus 8H)
6	19398.59	90.19	359.84	9099.00	10017.26	-656.90	0.00	0.00	10019.01	LTP/PBHL (Cletus 8H)



LEAM Drilling Services

Plan: Plan #1 (Cletus 28-21 Fed WCB COM 8H/OH)
Created By: Pete Broussard
Date: 10:09, July 07 2022

PECOS DISTRICT
DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	**Earthstone**
LEASE NO.:	**NMNM092900**
LOCATION:	Section 28, T.23 S., R.26 E., NMPM
COUNTY:	Eddy County, New Mexico

WELL NAME & NO.:	Cletus 28-21 Fed WCB Com 8H
SURFACE HOLE FOOTAGE:	503'/S & 1520'/W
BOTTOM HOLE FOOTAGE	330'/N & 890'/W

COA

H2S	○ Yes	◉ No	
Potash	◉ None	○ Secretary	○ R-111-P
Cave/Karst Potential	○ Low	○ Medium	◉ High
Cave/Karst Potential	○ Critical		
Variance	○ None	◉ Flex Hose	○ Other
Wellhead	○ Conventional	◉ Multibowl	○ Both
Other	☐ 4 String Area	☐ Capitan Reef	☐ WIPP
Other	☐ Fluid Filled	☐ Cement Squeeze	☐ Pilot Hole
Special Requirements	☐ Water Disposal	☑ COM	☐ Unit

A. HYDROGEN SULFIDE

Hydrogen Sulfide (H2S) monitors shall be installed prior to drilling out the surface shoe. If H2S is detected in concentrations greater than 100 ppm, the Hydrogen Sulfide area shall meet Onshore Order 6 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, provide measured values and formations to the BLM.

B. CASING

1. The **10-3/4** inch surface casing shall be set at approximately **400** feet (a minimum of 70 feet (Eddy County) into the Rustler Anhydrite and above the salt) and cemented to the surface.

    a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
    b. Wait on cement (WOC) time for a primary cement job will be a minimum of **8**

Approval Date: 03/15/2023

hours or 500 pounds compressive strength, whichever is greater. (This is to include the lead cement)

c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
d. If cement falls back, remedial cementing will be done prior to drilling out that string.

2. The minimum required fill of cement behind the **8-5/8** inch intermediate casing is:
   - Cement to surface. If cement does not circulate see B.1.a, c-d above.

Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst.

❖ In High Cave/Karst Areas if cement does not circulate to surface on the first two casing strings, the cement on the 3rd casing string must come to surface.

3. The minimum required fill of cement behind the **5-1/2** inch production casing is:
   - Cement should tie-back at least **200 feet** into previous casing string. Operator shall provide method of verification. **Excess calcaltes to 21%. Additional cement maybe requried.**

C. PRESSURE CONTROL

1. Variance approved to use flex line from BOP to choke manifold. Manufacturer's specification to be readily available. No external damage to flex line. Flex line to be installed as straight as possible (no hard bends).

2. Operator has proposed a multi-bowl wellhead assembly. This assembly will only be tested when installed on the surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **5000 (5M)** psi. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
   a. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
   b. Manufacturer representative shall install the test plug for the initial BOP test.
   c. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
   d. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.

Approval Date: 03/15/2023

D. SPECIAL REQUIREMENT (S)

Communitization Agreement

- The operator will submit a Communitization Agreement to the Santa Fe Office, 301 Dinosaur Trail Santa Fe, New Mexico 87508, at least 90 days before the anticipated date of first production from a well subject to a spacing order issued by the New Mexico Oil Conservation Division. The Communitization Agreement will include the signatures of all working interest owners in all Federal and Indian leases subject to the Communitization Agreement (i.e., operating rights owners and lessees of record), or certification that the operator has obtained the written signatures of all such owners and will make those signatures available to the BLM immediately upon request.
- If the operator does not comply with this condition of approval, the BLM may take enforcement actions that include, but are not limited to, those specified in 43 CFR 3163.1.
- In addition, the well sign shall include the surface and bottom hole lease numbers. When the Communitization Agreement number is known, it shall also be on the sign.

GENERAL REQUIREMENTS

The BLM is to be notified in advance for a representative to witness:

a. Spudding well (minimum of 24 hours)
b. Setting and/or Cementing of all casing strings (minimum of 4 hours)
c. BOPE tests (minimum of 4 hours)

☒ Eddy County
Call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220, (575) 361-2822

☒ Lea County
Call the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240, (575) 689-5981

1. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.

   a. In the event the operator has proposed to drill multiple wells utilizing a skid/walking rig. Operator shall secure the wellbore on the current well, after installing and testing the wellhead, by installing a blind flange of like pressure rating to the wellhead and a pressure gauge that can be monitored while drilling is performed on the other well(s).
   b. When the operator proposes to set surface casing with Spudder Rig

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- Notify the BLM when moving in and removing the Spudder Rig.
- Notify the BLM when moving in the 2nd Rig. Rig to be moved in within 90 days of notification that Spudder Rig has left the location.
- BOP/BOPE test to be conducted per Onshore Oil and Gas Order No. 2 as soon as 2nd Rig is rigged up on well.

2. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works are located, this does not include the dog house or stairway area.

3. The record of the drilling rate along with the GR/N well log run from TD to surface (horizontal well – vertical portion of hole) shall be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.

A. CASING

1. Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size or are Non-API. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#). Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.). The initial wellhead installed on the well will remain on the well with spools used as needed.

2. Wait on cement (WOC) for Potash Areas: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi for all cement blends, 2) until cement has been in place at least 24 hours. WOC time will be recorded in the driller's log. The casing intergrity test can be done (prior to the cement setting up) immediately after bumping the plug.

3. Wait on cement (WOC) for Water Basin: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi at the shoe, 2) until cement has been in place at least 8 hours. WOC time will be recorded in the driller's log. See individual casing strings for details regarding lead cement slurry requirements. The casing intergrity test can be done (prior to the cement setting up) immediately after bumping the plug.

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4. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. Have well specific cement details onsite prior to pumping the cement for each casing string.

5. No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.

6. On that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Formation at the shoe shall be tested to a minimum of the mud weight equivalent anticipated to control the formation pressure to the next casing depth or at total depth of the well. This test shall be performed before drilling more than 20 feet of new hole.

7. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.

8. Whenever a casing string is cemented in the R-111-P potash area, the NMOCD requirements shall be followed.

B. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17.

2. If a variance is approved for a flexible hose to be installed from the BOP to the choke manifold, the following requirements apply: The flex line must meet the requirements of API 16C. Check condition of flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor.

3. 5M or higher system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.

4. If the operator has proposed a multi-bowl wellhead assembly in the APD. The following requirements must be met:

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a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
c. Manufacturer representative shall install the test plug for the initial BOP test.
d. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.
e. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.

5. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.

a. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including lead cement), whichever is greater. However, if the float does not hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).

b. In potash areas, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. For all casing strings, casing cut-off and BOP installation can be initiated at twelve hours after bumping the cement plug. The BOPE test can be initiated after bumping the cement plug with the casing valve open. (only applies to single stage cement jobs, prior to the cement setting up.)

c. The tests shall be done by an independent service company utilizing a test plug not a cup or J-packer and can be initiated immediately with the casing valve open. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to Onshore Order 2 with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for water basin (8 hours) or potash (24 hours) or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).

d. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE.

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If a linear chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2 hour clock. If a twelve hour or twenty-four hour chart is used, tester shall make a notation that it is run with a two hour clock.

e. The results of the test shall be reported to the appropriate BLM office.

f. All tests are required to be recorded on a calibrated test chart. A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.

g. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug. This test shall be performed prior to the test at full stack pressure.

h. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the Wolfcamp formation if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days. This test does not exclude the test prior to drilling out the casing shoe as per Onshore Order No. 2.

C. DRILLING MUD

Mud system monitoring equipment, with derrick floor indicators and visual and audio alarms, shall be operating before drilling into the Wolfcamp formation, and shall be used until production casing is run and cemented.

D. WASTE MATERIAL AND FLUIDS

All waste (i.e. drilling fluids, trash, salts, chemicals, sewage, gray water, etc.) created as a result of drilling operations and completion operations shall be safely contained and disposed of properly at a waste disposal facility. No waste material or fluid shall be disposed of on the well location or surrounding area.

Porto-johns and trash containers will be on-location during fracturing operations or any other crew-intensive operations.
ZS031323

 Approval Date: 03/15/2023

Earthstone Operating, LLC

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

H2S Contingency Plan

Eddy 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	Chemical	Specific	Threshold	Hazardous	Lethal

Name	Formula	Gravity	Limit	Limit	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 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

Earthstone Operating, LLC plans to operate a Closed Loop System.

Operator Name: EARTHSTONE OPERATING LLC

Well Name: CLETUS 28-21 FED WCB COM **Well Number:** 8H

Is the proposed well in an area containing other mineral resources? USEABLE WATER,NATURAL GAS,OIL

Is the proposed well in a Helium production area? N **Use Existing Well Pad?** N **New surface disturbance?**

Type of Well Pad: MULTIPLE WELL **Multiple Well Pad Name:** CLETUS 28-21 WEST PAD **Number:** WC 5H,6H,7H,8H

Well Class: HORIZONTAL **Number of Legs:** 1

Well Work Type: Drill

Well Type: CONVENTIONAL GAS WELL

Describe Well Type:

Well sub-Type: INFILL

Describe sub-type:

Distance to town: 2 Miles **Distance to nearest well:** 30 FT **Distance to lease line:** 330 FT

Reservoir well spacing assigned acres Measurement: 640 Acres

Well plat: CLETUS_28_21_FED_WCB_COM_8H_REVISED_APD_C102_06272022_20221220125244.pdf

Well work start Date: 06/01/2023 **Duration:** 30 DAYS

Section 3 - Well Location Table

Survey Type: RECTANGULAR

Describe Survey Type:

Datum: NAD27 **Vertical Datum:** NGVD29

Survey number: 9446B **Reference Datum:** GROUND LEVEL

Wellbore	NS-Foot	NS Indicator	EW-Foot	EW Indicator	Twsp	Range	Section	Aliquot/Lot/Tract	Latitude	Longitude	County	State	Meridian	Lease Type	Lease Number	Elevation	MD	TVD	Will this well produce from this
SHL Leg #1	503	FSL	1520	FWL	23S	26E	28	Aliquot SESW	32.2691706	-104.3014682	EDDY	NEW MEXICO	NEW MEXICO	S	STATE	3376	0	0	Y
KOP Leg #1	503	FSL	1520	FWL	23S	26E	28	Aliquot SESW	32.2691706	-104.3014682	EDDY	NEW MEXICO	NEW MEXICO	S	STATE	-5142	8562	8518	Y
PPP Leg #1-1	330	FSL	890	FWL	23S	26E	28	Aliquot SWSW	32.2686887	-104.3035056	EDDY	NEW MEXICO	NEW MEXICO	S	STATE	-5756	9508	9132	Y

Operator Name: EARTHSTONE OPERATING LLC

Well Name: CLETUS 28-21 FED WCB COM **Well Number:** 8H

Wellbore	NS-Foot	NS Indicator	EW-Foot	EW Indicator	Twsp	Range	Section	Aliquot/Lot/Tract	Latitude	Longitude	County	State	Meridian	Lease Type	Lease Number	Elevation	MD	TVD	Will this well produce from this
PPP Leg #1-2	100	FSL	890	FWL	23S	26E	21	Aliquot SWSW	32.282279	-104.30345	EDDY	NEW MEXICO	NEW MEXICO	F	NMNM 435340	-5740	14238	9116	Y
PPP Leg #1-3	1420	FSL	890	FWL	23S	26E	21	Aliquot NWSW	32.285905	-104.30355	EDDY	NEW MEXICO	NEW MEXICO	F	NMNM 039135	-5736	15568	9112	Y
EXIT Leg #1	330	FNL	890	FWL	23S	26E	21	Aliquot NWNW	32.295874	-104.3035838	EDDY	NEW MEXICO	NEW MEXICO	F	NMNM 540294A	-5723	19398	9099	Y
BHL Leg #1	330	FNL	890	FWL	23S	26E	21	Aliquot NWNW	32.295874	-104.3035838	EDDY	NEW MEXICO	NEW MEXICO	F	NMNM 540294A	-5723	19398	9099	Y

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

Drilling Plan Data Report
03/15/2023

APD ID: 10400087827
Submission Date: 09/01/2022
Operator Name: EARTHSTONE OPERATING LLC
Well Name: CLETUS 28-21 FED WCB COM
Well Number: 8H
Well Type: CONVENTIONAL GAS WELL
Well Work Type: Drill

Highlighted data reflects the most recent changes

Show Final Text

Section 1 - Geologic Formations

Formation ID	Formation Name	Elevation	True Vertical	Measured Depth	Lithologies	Mineral Resources	Producing Formatio
9126351	LAMAR	3376	1615	1615	LIMESTONE	USEABLE WATER	N
9126353	BELL CANYON	1546	1830	1830	SANDSTONE, SHALE, SILTSTONE	NATURAL GAS, OIL	N
9126356	CHERRY CANYON	837	2539	2539	SANDSTONE, SHALE, SILTSTONE	NATURAL GAS, OIL	N
9126357	BRUSHY CANYON	-206	3582	3582	SANDSTONE, SHALE, SILTSTONE	NATURAL GAS, OIL	N
9126358	BONE SPRING LIME	-1809	5185	5185	LIMESTONE, SHALE	NATURAL GAS, OIL	N
9126361	BONE SPRING 1ST	-2702	6078	6078	SANDSTONE, SHALE, SILTSTONE	NATURAL GAS, OIL	N
9126362	BONE SPRING 2ND	-3027	6403	6403	SANDSTONE, SHALE, SILTSTONE	NATURAL GAS, OIL	N
9126363	BONE SPRING 3RD	-4823	8199	8199	SANDSTONE, SHALE, SILTSTONE	NATURAL GAS, OIL	N
9126364	WOLFCAMP	-5158	8534	8534	LIMESTONE, SHALE, SILTSTONE	NATURAL GAS, OIL	N
9126365	WOLFCAMP	-5719	9095	9095	LIMESTONE, SHALE, SILTSTONE	NATURAL GAS, OIL	Y

Section 2 - Blowout Prevention

Pressure Rating (PSI): 5M
Rating Depth: 12000

Equipment: Rotating Head, remote kill line, mud-gas sperator

Requesting Variance? YES

Variance request: WE PROPOSE UTILIZING A CACTUS SPEED HEAD MULTI-BOWL WELLHEAD FOR THIS WELL. PLEASE SEE ATTACHED DIAGRAM AND PRESSURE TESTING STATEMENT. ALSO WE REQUEST TO USE A FLEX CHOKE HOSE; PLEASE SEE ATTACHMENT. Earthstone Operating LLC respectfully proposes that if cement is not returned to surface during the primary cement job on the 8-5/8" Intermediate casing, a planned Bradenhead job will be conducted immediately after the primary cement job.
Testing Procedure: BOP will be tested by an independent service company to 250 psi low and 5000 psi high, per onshore order 2. BOP testing procedure -N/U the rigs BOP. Use 3rd party testers to perform the following: -Test the pipe rams, blind rams, floor valves (IBOP and/or upper Kelly valve), choke lines and manifold to 250 psi/5,000 psi with a test plug and a test pump. -Test the Hydril annular to 250 psi/2,500 psi

BOP SHEET

Annular Preventer
13-3/8 2,500 PSI WP

Ram Preventers
13-3/8" 5,000 PSI WP Double Ram
13-3/8" 5,000 PSI WP Single Ram

Test the pipe rams, blind rams, floor valves (IBOP and/or upper Kelly valve), choke lines and manifold to 250 psi/5,000 psi with a test plug and a test pump.

Test the annular to 250 psi/2,500 psi with same as above.

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

Operator:	OGRID:
Earthstone Operating, LLC 1400 Woodloch Forest; Ste 300 The Woodlands, TX 77380	331165
	Action Number: 197686
	Action Type: [C-101] BLM - Federal/Indian Land Lease (Form 3160-3)

CONDITIONS

Created By	Condition	Condition Date
kpickford	Will require a name change complying with OCD policy prior to putting the well into production.	3/17/2023
kpickford	Notify OCD 24 hours prior to casing & cement	3/17/2023
kpickford	Will require a File As Drilled C-102 and a Directional Survey with the C-104	3/17/2023
kpickford	Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string	3/17/2023
kpickford	Cement is required to circulate on both surface and intermediate1 strings of casing	3/17/2023
kpickford	Oil base muds are not to be used until fresh water zones are cased and cemented providing isolation from the oil or diesel. This includes synthetic oils. Oil based mud, drilling fluids and solids must be contained in a steel closed loop system	3/17/2023