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. 30-015-55363

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: 08/02/2024**

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 |
|---|---|---|
| 30-015-55363 | 24750 | FORTY NINER RIDGE DELAWARE |

| 4 Property Code | 5 Property Name | 6 Well Number |
|---|---|---|
| 21712 28510 | FORTY NINER RIDGE UNIT | 56H |

| 7 OGRID NO. | 8 Operator Name | 9 Elevation |
|---|---|---|
| 21712 | STRATA PRODUCTION COMPANY | 3159' |

## 10 Surface Location

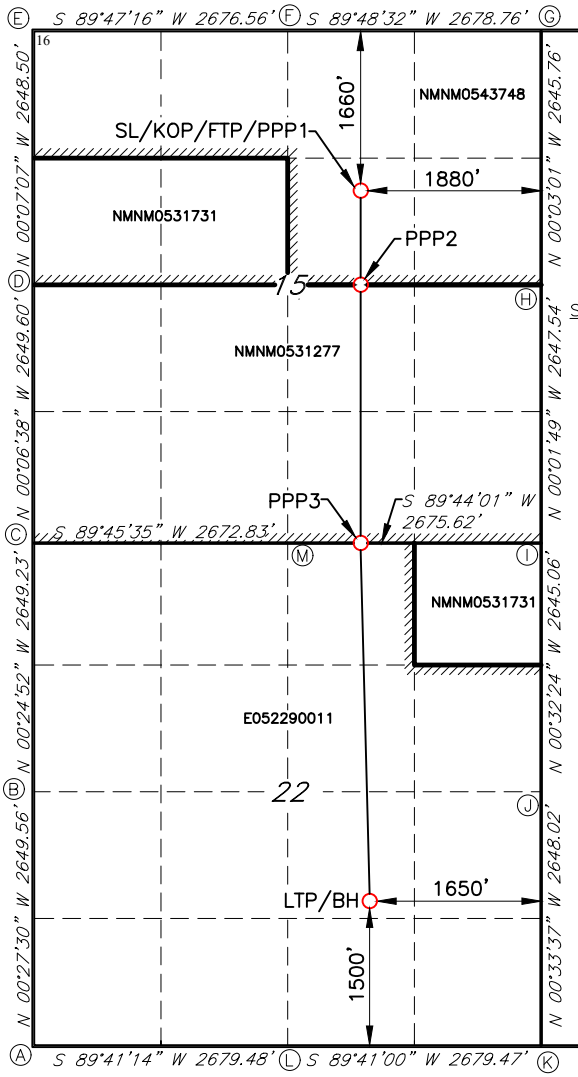
| UL or lot no. | Section | Township | Range | Lot Idn | Feet from the | North/South line | Feet From the | East/West line | County |
|---|---|---|---|---|---|---|---|---|---|
| G | 15 | 23S | 30E | | 1660 | NORTH | 1880 | EAST | EDDY |

## 11 Bottom Hole Location If Different From Surface

| UL or lot no. | Section | Township | Range | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County |
|---|---|---|---|---|---|---|---|---|---|
| J | 22 | 23S | 30E | | 1500 | SOUTH | 1650 | EAST | EDDY |

| 12 Dedicated Acres | 13 Joint or Infill | 14 Consolidation Code | 15 Order No. |
|---|---|---|---|
| 240 | | | |

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




GEODETIC DATA
NAD 83 GRID – NM EAST

SURFACE LOCATION (SL)/ KICK OFF POINT (KOP)/
FIRST TAKE POINT (FTP)/
PROPOSED PENETRATION POINT 1 (PPP1)
N: 476002.7 – E: 685597.7

LAT: 32.3077408° N
LONG: 103.8663960° W

PROPOSED PENETRATION POINT 2 (PPP2)
2647' FNL & 1835' FEL SEC. 15
N: 475016.0 – E: 685643.5

LAT: 32.3050281° N
LON: 103.8662615° W

PROPOSED PENETRATION POINT 3 (PPP3)
0' FSL & 1745' FEL
N: 472368.4–E: 685735.0

LAT: 32.2977492° N
LON: 103.8660028° W

LAST TAKE POINT (LTP)/BOTTOM HOLE (BH)
N: 468575.3 – E: 685866.0

LAT: 32.2873212° N
LONG: 103.8656322° W

## 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.*

Jerry Elgin — 08/14/2023
Signature — Date

Jerry Elgin, VP of Operations
Printed Name

jelgin@stratanm.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.*

07/11/2023
Date of Survey

Signature and Seal of Professional Surveyor:

DALE E. BELL
NEW MEXICO
14400
PROFESSIONAL SURVEYOR

14400 — 08/03/2023
Certificate Number

Job No.: LS23020166

District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
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1220 South St. Francis Dr.
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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 |
|---|---|---|
| | 24750 | FORTY NINER RIDGE DELAWARE |

| 4 Property Code | 5 Property Name | 6 Well Number |
|---|---|---|
| | FORTY NINER RIDGE UNIT | 56H |

| 7 OGRID NO. | 8 Operator Name | 9 Elevation |
|---|---|---|
| 21712 | STRATA PRODUCTION COMPANY | 3159' |

## 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 |
|---|---|---|---|---|---|---|---|---|---|
| G | 15 | 23S | 30E | | 1660 | NORTH | 1880 | EAST | EDDY |

## 11 Bottom Hole Location If Different From Surface

| UL or lot no. | Section | Township | Range | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County |
|---|---|---|---|---|---|---|---|---|---|
| J | 22 | 23S | 30E | | 1500 | SOUTH | 1650 | EAST | EDDY |

| 12 Dedicated Acres | 13 Joint or Infill | 14 Consolidation Code | 15 Order No. |
|---|---|---|---|
| 240 | | | |

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

16

CORNER DATA
NAD 83 GRID – NM EAST

A: FOUND BRASS CAP "1942"
N: 467055.4 – E: 682172.6

B: FOUND BRASS CAP "1942"
N: 469704.3 – E: 682151.4

C: FOUND BRASS CAP "1942"
N: 472352.8 – E: 682132.3

D: FOUND BRASS CAP "1942"
N: 475001.9 – E: 682127.2

E: FOUND BRASS CAP "1942"
N: 477649.8 – E: 682121.7

F: FOUND BRASS CAP "1942"
N: 477659.7 – E: 684797.6

G: FOUND BRASS CAP "1942"
N: 477668.6 – E: 687475.8

H: FOUND BRASS CAP "1942"
N: 475023.4 – E: 687478.1

I: FOUND BRASS CAP "1942"
N: 472376.5 – E: 687479.5

J: FOUND BRASS CAP "1942"
N: 469732.1 – E: 687504.4

K: FOUND BRASS CAP "1942"
N: 467084.8 – E: 687530.3

L: FOUND BRASS CAP "1942"
N: 467070.0 – E: 684851.5

M: FOUND BRASS CAP "1942"
N: 472364.0 – E: 684804.5

## 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.*

Jerry Elgin — 08/14/2023
Signature — Date

Jerry Elgin, VP of Operations
Printed Name

jelgin@stratanm.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.*

07/11/2023
Date of Survey

Signature and Seal of Professional Surveyor:

DALE E. BELL
NEW MEXICO
14400
PROFESSIONAL SURVEYOR

14400 — 08/03/2023
Certificate Number

Job No.: LS23020166

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:** Strata Production Company **OGRID:** 21712 **Date:** 08 / 25 / 23

**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 |
|---|---|---|---|---|---|---|
| Forty Niner Ridge Unit | | Sec 15-T23S-R30E | 1,660' FNL & | 800 | 1,200 | 2,200 |
| #56H | | | 1,880' FEL | | | |

**IV. Central Delivery Point Name:** Common Tank Battery #3 [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 |
|---|---|---|---|---|---|---|
| Forty Niner Ridge Unit | | 10/30/2024 | 11/30/2024 | 12/7/2024 | 12/12/2024 | 12/17/2024 |
| #56H | | | | | | |

**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 |
|---|---|---|---|
| Forty Niner Ridge Unit #56H | | 1,200 | 400,000 |
| | | | |

**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 |
|---|---|---|---|---|
| Strata Production Co. | Forty Niner Ridge | Sec 30-T23S-R30E | 12/17/2024 | 15,000,000 |
| | | | | |

**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: | Jerry Elgin |
| Title: | Vice President Operations |
| E-mail Address: | jelgin@stratanm.com |
| Date: | 08/25/2023 |
| Phone: | 575-622-1127, ext 18 |

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

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

**Strata Production Company**
**Natural Gas Management Plan**

**Forty Niner Ridge Unit #56H**
**Section 15-T23S-R30E**
**Eddy County, New Mexico**

**Attachment to NMOCD Form NGMP**

## VI. Separation Equipment

Well site separation equipment consists of a 4' X 15' X 500 psi WP 2 phase separator at the well site in Section 30-T23S-R31E to separate the gas from the oil and water and a 6' X 20' X 250 psi 3 phase separator that separates any residual gas, water, and oil. The gas is routed to a gas gathering line that connects to Strata's corridor through the field to Common Tank Battery 2 in the SWNW of Section 23-T23S-R30E where the gas goes through a 2 phase separator to remove any residual liquids, then through a compressor and into an interconnect with Enterprise GD LLC located in the NENE of Section 22-T23S-R30E (all in Eddy County, NM).

The oil and water are routed to Common Tank Battery 3 in the NENE of Section 22-T23S-R30E where the oil goes through a separator to remove any residual gas then through a heater treater to remove any residual water. The oil is then stored in 500 bbl steel tanks at the battery. The facility separator, heater treater, and tanks are tied into a vapor recover system so any liberated gas is routed into the gas gathering line.

## VII. Strata Production Company will take the following actions to comply with regulations outlined in 19.15.27.8.

### A. Venting and Flaring of Natural Gas

Strata will maximize recovery of natural gas by minimizing the waste, as defined in 19.15.2 NMAC, of natural gas through venting and flaring. Strata will be connected to natural gas gathering systems with sufficient capacity to transport its produced natural gas. If there is inadequate capacity to transport the gas, the well(s) will be shut in until there is adequate capacity or other arrangements can be made to avoid waste.

### B. Venting and Flaring During Drilling Operations

Drilling rigs shall be equipped with a rig flare located at least 100 ft from the well. The flare will be utilized to combust any natural gas produced through drilling operations. Should gas be flared, an estimated volume will be reported as required by statutes. Gas will not be flared during normal drilling operations.

### C. Venting and Flaring During Completion Operations

Natural gas produced during completion operations will be flared. All gas produced will be directed to permanent separation equipment and into sales as soon as practical. If natural gas does not meet pipeline specifications, Strata may flare the gas for up to 60 days or until the gas meets pipeline specifications, whichever is sooner. Strata will properly size the flare which will be equipped with automatic ignition source. The gas will be sampled no less than twice per week and the gas will be routed through Strata's gathering system as soon as it meets pipeline specifications.

**D. Venting and Flaring During Production Operations**

Natural gas will not be flared during normal production operations except as is allowed under 19.15.27.8 D (1)-(4). If capacity is inadequate, well(s) will be shut in until there is adequate capacity or other arrangements can be made to avoid waste except during emergency or malfunction situations. Flared volumes will be reported as required by statutes.

**E. Performance Standards**

Strata will comply with the performance standards per 19.15.27.8 E (1)-(8). All equipment will be designed to accommodate anticipated volumes and pressures. Storage tanks will be equipped with automatic gauging equipment connected to Strata's SCADA system. Flares will be located at least 100 ft from wells and storage tanks and will be equipped with automatic ignition sources. Strata will conduct AVO inspections to comply with 19.15.27.8 E (5) (a) and 19.15.27.8 E (5) (b)-(c). Any emergency situations resulting in flaring will be resolved to minimize waste.

**F. Measurement of Vented and Flared Natural Gas**

Gas flared as the result of emergency of malfunction will be metered. Gas used beneficially during production operations will be metered or estimated. Should metering be impractical due to equipment malfunction or low flow, Strata will estimate the volume of gas vented or flared. All metering equipment will conform to industry standards and will not be equipped with a bypass around metering equipment except for the sole purpose of inspecting or servicing the metering equipment.

## VIII. Maintenance Activities

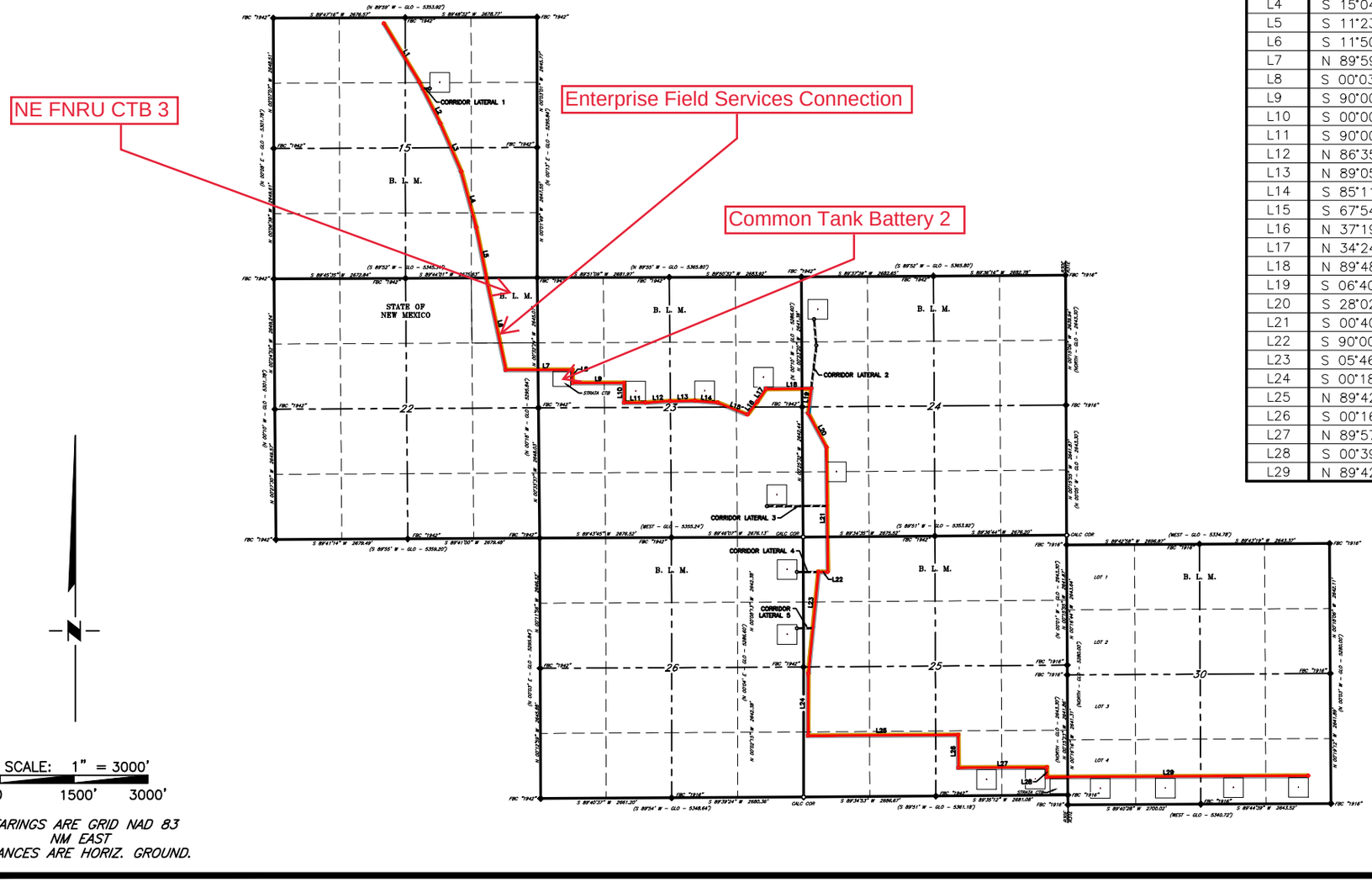
For maintenance activities involving production equipment and compression, venting will be limited to depressurization of the equipment to provide safe working conditions. In the event maintenance is required on pressurized equipment, associated producing wells will be shut in to minimize waste. Gas normally routed through a vapor recovery unit may be routed to flares to avoid venting for the maintenance of VRU's and associated equipment.

# STRATA PRODUCTION COMPANY

## PROPOSED MAIN CORRIDOR FOR THE STRATA WELL LOCATIONS

### SECTIONS 15, 22, 23, 24, 26 & 25, T23S, R30E, &
### SECTION 30, T23S, R31E
### N. M. P. M., EDDY CO., NEW MEXICO






| LINE TABLE | | |
|---|---|---|
| LINE | BEARING | LENGTH |
| L1 | S 31°10'54" E | 1,393.05' |
| L2 | S 26°50'18" E | 940.07' |
| L3 | S 23°25'43" E | 1,068.15' |
| L4 | S 15°04'07" E | 1,172.60' |
| L5 | S 11°23'46" E | 1,045.11' |
| L6 | S 11°50'29" E | 1,917.56' |
| L7 | N 89°59'28" E | 1,355.67' |
| L8 | S 00°03'54" W | 266.11' |
| L9 | S 90°00'00" E | 1,052.12' |
| L10 | S 00°00'00" E | 400.00' |
| L11 | S 90°00'00" E | 435.01' |
| L12 | N 86°35'57" E | 501.54' |
| L13 | N 89°05'05" E | 505.83' |
| L14 | S 85°11'20" E | 461.01' |
| L15 | S 67°54'39" E | 648.93' |
| L16 | N 37°19'53" E | 334.18' |
| L17 | N 34°24'00" E | 314.74' |
| L18 | N 89°48'35" E | 916.97' |
| L19 | S 06°40'55" W | 505.50' |
| L20 | S 28°02'19" E | 779.64' |
| L21 | S 00°40'33" E | 2,533.37' |
| L22 | S 90°00'00" W | 188.59' |
| L23 | S 05°46'06" W | 2,078.49' |
| L24 | S 00°18'48" W | 1,259.84' |
| L25 | N 89°42'50" E | 3,053.28' |
| L26 | S 00°16'48" E | 664.28' |
| L27 | N 89°57'10" E | 1,796.25' |
| L28 | S 00°39'28" E | 195.02' |
| L29 | N 89°42'06" E | 5,307.92' |

SCALE: 1" = 3000'
DATE: 5/22/2019
SURVEYED BY: BK/AS
DRAWN BY: GA
APPROVED BY: RMH
SHEET: 1 OF 12

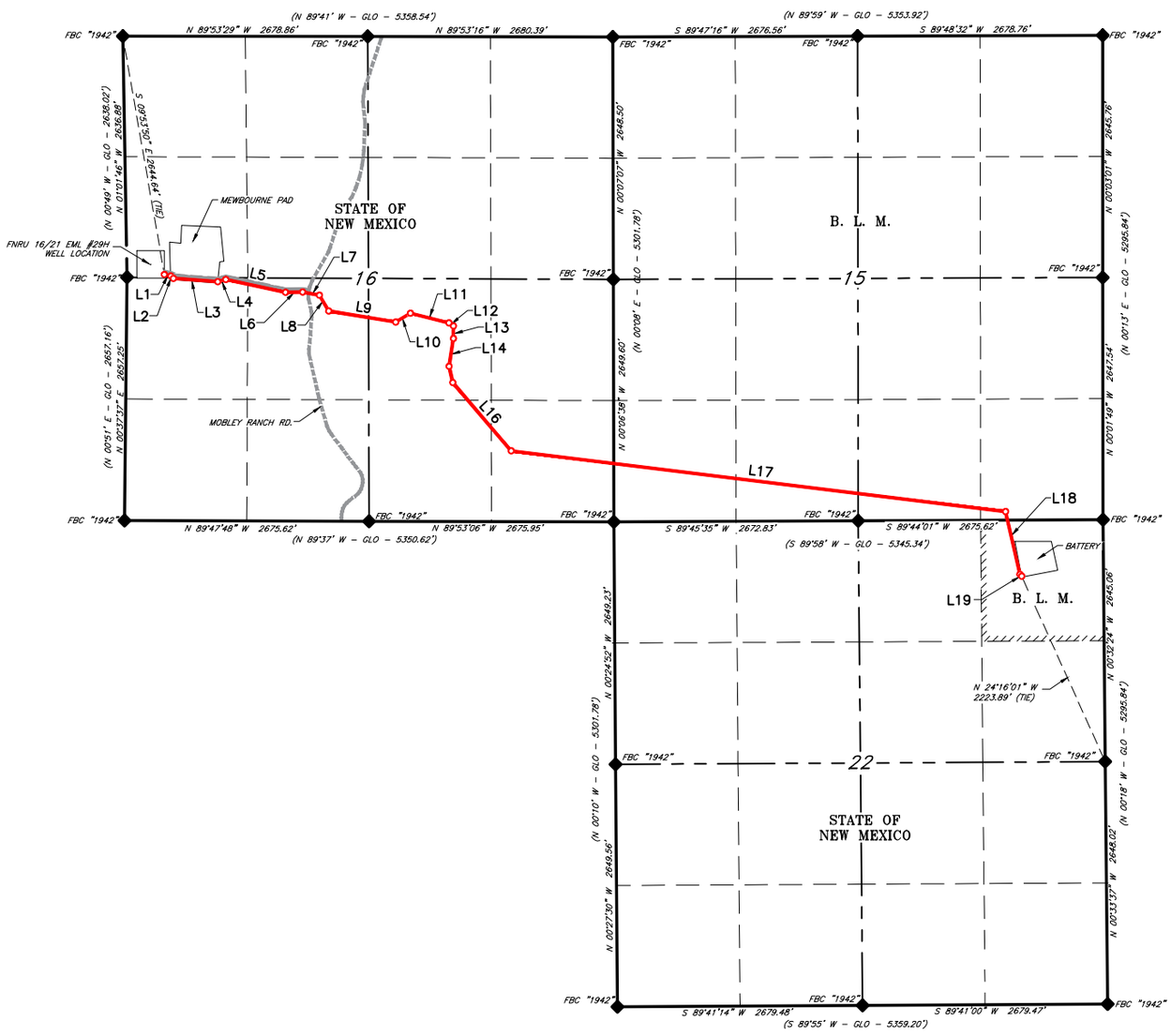
RRC

701 S. CECIL ST., HOBBS, NM 88240 (575) 964-8200

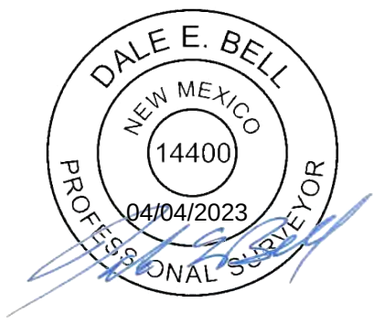
| NO. | REVISION | DATE |
|---|---|---|
| | | |

JOB NO.: LS19050633
DWG. NO.: 19050633-1

# STRATA PRODUCTION COMPANY
## FNRU 16-21 EML #29H PIPELINE & ELECTRIC LINE
### SECTIONS 15, 16 & 22, T23S, R30E
### N. M. P. M., EDDY CO., NEW MEXICO




| LINE TABLE | | |
|---|---|---|
| LINE | BEARING | LENGTH |
| L1 | S 76°53'01" E | 71.90' |
| L2 | S 48°02'23" E | 38.69' |
| L3 | S 85°40'26" E | 487.02' |
| L4 | N 74°43'52" E | 90.73' |
| L5 | S 77°58'08" E | 667.50' |
| L6 | N 89°09'42" E | 187.18' |
| L7 | S 79°18'09" E | 186.64' |
| L8 | S 30°23'57" E | 200.40' |
| L9 | S 80°39'54" E | 743.03' |
| L10 | N 59°03'16" E | 187.49' |
| L11 | S 75°56'28" E | 434.59' |
| L12 | S 55°28'08" E | 59.57' |
| L13 | S 00°01'28" E | 136.55' |
| L14 | S 08°58'43" W | 308.42' |
| L15 | S 12°58'10" E | 182.16' |
| L16 | S 40°32'54" E | 982.04' |
| L17 | S 83°00'39" E | 5,446.36' |
| L18 | S 12°50'37" E | 704.53' |
| L19 | S 44°05'06" E | 28.02' |




SCALE: 1" = 1800'
0 900' 1800'

BEARINGS ARE GRID NAD 83 NM EAST
DISTANCES ARE HORIZ. GROUND.

LEGEND
( ) RECORD DATA - GLO
◆ FOUND MONUMENT AS NOTED
PROPOSED UTILITY EASEMENT
EXISTING ACCESS ROAD
MOBLEY RANCH RD.

| NO. | REVISION | DATE |
|---|---|---|
| | | |
| | | |
| 1 | REROUTE | 3/23/23 |
| JOB NO.: LS23030268R | | |
| DWG. NO.: 23030268R-1 | | |

RRC ENERGY SERVICES, LLC.
701 S. CECIL ST., HOBBS, NM 88240 (575) 964-8200

| |
|---|
| SCALE: 1" = 1800' |
| DATE: 03/08/2023 |
| SURVEYED BY: JF/GA |
| DRAWN BY: LM |
| APPROVED BY: DEB |
| SHEET: 1 OF 5 |

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

# Drilling Plan Data Report
07/25/2024

**APD ID:** 10400093933 **Submission Date:** 10/24/2023

**Operator Name:** STRATA PRODUCTION COMPANY

**Well Name:** FORTY NINER RIDGE UNIT **Well Number:** 56H

**Well Type:** OIL WELL **Well Work Type:** Drill

## Section 1 - Geologic Formations

| Formation ID | Formation Name | Elevation | True Vertical | Measured Depth | Lithologies | Mineral Resources | Producing Formatio |
|---|---|---|---|---|---|---|---|
| 12224565 | RUSTLER | 3159 | 80 | 80 | SALT | NONE | N |
| 12224566 | SALADO | 2641 | 518 | 518 | SALT | NONE | N |
| 12224567 | BASE OF SALT | -430 | 3589 | 3589 | SALT | NONE | N |
| 12224568 | LAMAR | -470 | 3629 | 3629 | LIMESTONE, SHALE | NATURAL GAS, OIL | Y |
| 12224569 | BELL CANYON | -498 | 3657 | 3657 | LIMESTONE, SANDSTONE, SILTSTONE | NATURAL GAS, OIL | Y |
| 12224570 | CHERRY CANYON | -1424 | 4583 | 4583 | LIMESTONE, SANDSTONE, SILTSTONE | NATURAL GAS, OIL | Y |
| 12224571 | BRUSHY CANYON | -2701 | 5860 | 5860 | LIMESTONE, SANDSTONE, SILTSTONE | NATURAL GAS, OIL | Y |
| 12224572 | BONE SPRING | -4365 | 7524 | 7524 | LIMESTONE, SANDSTONE, SILTSTONE | NATURAL GAS, OIL | N |

## Section 2 - Blowout Prevention

**Pressure Rating (PSI):** 3M **Rating Depth:** 7700

**Equipment:** Annular, Blind Rams, Double Rams, Mud Gas Separator, Remote kill line and other equipment as listed on 3M attachment.
**Requesting Variance?** NO

**Variance request:**

**Testing Procedure:** BOPE will be tested by an independent service company to 250# psi low pressure and 3000# psi high pressure per Onshore Oil and Gas Order 2 requirements.
**Choke Diagram Attachment:**

Forty_Niner_Ridge_Unit__56H_Choke_Diagram_20230817153744.pdf

**BOP Diagram Attachment:**

Forty_Niner_Ridge_Unit__56H_BOPE_Description_20230817153809.pdf

Forty_Niner_Ridge_Unit__56H_BOPE_20230817153810.pdf

**Operator Name:** STRATA PRODUCTION COMPANY

**Well Name:** FORTY NINER RIDGE UNIT **Well Number:** 56H

## 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 | 17.5 | 13.375 | NEW | API | N | 0 | 450 | 0 | 450 | 3159 | 2709 | 450 | H-40 | 48 | ST&C | 3.95 | 7.39 | DRY | 14.9 | DRY | 25 |
| 2 | INTERMEDIATE | 12.25 | 9.625 | NEW | API | N | 0 | 3800 | 0 | 3800 | 3159 | -641 | 3800 | N-80 | 43.5 | LT&C | 1.56 | 2 | DRY | 2.73 | DRY | 4.66 |
| 3 | PRODUCTION | 8.5 | 7.0 | NEW | API | Y | 0 | 6500 | 0 | 6500 | 3159 | -3341 | 6500 | HCP-110 | 29 | LT&C | 3.02 | 3.32 | DRY | 2.32 | DRY | 2.7 |
| 4 | PRODUCTION | 8.5 | 5.0 | NEW | API | Y | 6500 | 14258 | 6900 | 7026 | -3741 | -3867 | 7758 | HCP-110 | 20 | OTHER - DWC-IC | 3.64 | 3.13 | DRY | 4.13 | DRY | 4.3 |

**Casing Attachments**

**Casing ID:** 1 **String** SURFACE

**Inspection Document:**

**Spec Document:**

**Tapered String Spec:**

**Casing Design Assumptions and Worksheet(s):**

Forty_Niner_Ridge_Unit__56H_Casing_Worksheet_20231023163033.pdf

**Operator Name:** STRATA PRODUCTION COMPANY

**Well Name:** FORTY NINER RIDGE UNIT **Well Number:** 56H

**Casing Attachments**

**Casing ID:** 2 **String** INTERMEDIATE

**Inspection Document:**

**Spec Document:**

**Tapered String Spec:**

**Casing Design Assumptions and Worksheet(s):**

Forty_Niner_Ridge_Unit__56H_Casing_Worksheet_20231023163213.pdf

**Casing ID:** 3 **String** PRODUCTION

**Inspection Document:**

**Spec Document:**

**Tapered String Spec:**

Forty_Niner_Ridge_Unit__56H_Tapered_String_20231023163249.pdf

**Casing Design Assumptions and Worksheet(s):**

Forty_Niner_Ridge_Unit__56H_Casing_Worksheet_20231023163307.pdf

**Casing ID:** 4 **String** PRODUCTION

**Inspection Document:**

**Spec Document:**

**Tapered String Spec:**

Forty_Niner_Ridge_Unit__56H_Tapered_String_20231023163403.pdf

**Casing Design Assumptions and Worksheet(s):**

Forty_Niner_Ridge_Unit__56H_Casing_Worksheet_20231023163421.pdf

## Section 4 - Cement

**Operator Name:** STRATA PRODUCTION COMPANY

**Well Name:** FORTY NINER RIDGE UNIT **Well Number:** 56H

| String Type | Lead/Tail | Stage Tool Depth | Top MD | Bottom MD | Quantity(sx) | Yield | Density | Cu Ft | Excess% | Cement type | Additives |
|---|---|---|---|---|---|---|---|---|---|---|---|
| PRODUCTION | Lead | | 0 | 0 | 200 | 2.51 | 11 | 505 | 100 | Class H | None |
| PRODUCTION | Tail | | 5200 | 14258 | 1693 | 1.43 | 13.2 | 2428 | 25 | Class H | Salt, gel, extender, LCM |
| SURFACE | Lead | | 0 | 450 | 469 | 1.33 | 14.8 | 625 | 100 | Class C | CaCl, LCM |
| INTERMEDIATE | Lead | | 0 | 3300 | 813 | 1.91 | 12.9 | 1550 | 50 | Class C | Salt, gel, extender, LCM |
| INTERMEDIATE | Tail | | 3300 | 3800 | 194 | 1.33 | 14.8 | 258 | 65 | Class C | Salt, LCM |
| PRODUCTION | Lead | | 2800 | 5200 | 238 | 1.34 | 14.8 | 328 | 50 | Class C | None |

## 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:** Kelly cock in the drill string, a full opening drill pipe stabbing valve on a rig floor, remote kill line, and mud gas separator.

**Describe the mud monitoring system utilized:** Pason pit level monitors, hourly weight check, viscosity, gel strength and pH, and solids control.

## 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 | 450 | WATER-BASED MUD | 8.5 | 8.9 | | | 10 | | | | Spud with fresh water and build mud while drilling. |

**Operator Name:** STRATA PRODUCTION COMPANY

**Well Name:** FORTY NINER RIDGE UNIT **Well Number:** 56H

| 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 450 | 3800 | SALT SATURATED | 10 | 10.5 | | | 10 | | | | - Drill with brine water with LCM and gel sweeps. |
| 3800 | 14258 | WATER-BASED MUD | 8.5 | 9.5 | | | 10 | | | | Drill with water based mud using sliders and gel sweeps in the lateral. |

## 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:**

CALIPER,COMPENSATED DENSILOG,DUAL LATERAL LOG/MICRO-SPHERICALLY FOCUSED,GAMMA RAY LOG,CEMENT BOND LOG,MUD LOG/GEOLOGICAL LITHOLOGY LOG,

**Coring operation description for the well:**

None

## Section 7 - Pressure

**Anticipated Bottom Hole Pressure:** 3360 **Anticipated Surface Pressure:** 1814

**Anticipated Bottom Hole Temperature(F):** 125

**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**

Forty_Niner_Ridge_Unit__56H_H2S_Plan_20230817144654.pdf

**Operator Name:** STRATA PRODUCTION COMPANY

**Well Name:** FORTY NINER RIDGE UNIT **Well Number:** 56H

## Section 8 - Other Information

**Proposed horizontal/directional/multi-lateral plan submission:**

FNRU_56H_Preliminary_Directional_Plan.2_20231023164622.pdf

FNRU__56H_WBD_Permitting_20231023164628.pdf

**Other proposed operations facets description:**

**Other proposed operations facets attachment:**

NGMP_Form_Forty_Niner_Ridge_Unit_20231023163932.pdf

**Other Variance attachment:**

Strata Production Company
Forty-Niner Ridge Unit #36H
Section 22-T23S-R30E
SHL: 1660' FNL and 1880' FEL of Section 15
BHL: 1500' FSL and 1650' FEL of Section 22
Eddy County, NM



| # | MD (ft) | Inclination | Azimuth (d | TVD (ft) | DX (ft) | DY (ft) | X (ft) | Y (ft) | Subsea (ft) | Segment Le | Segment In | Offset |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 0 | 0 | 0 | 0 | 0 | 685597.7 | 476002.7 | 3159 | 0 | 0 | 0 |
| | 110.89 | 0.01483 | 271.4581 | 110.89 | -0.01 | 0 | 685597.6 | 476002.7 | 3048.11 | 110.89 | 0.00742 | 0.01 |
| | 201.98 | 0.02706 | 271.458 | 201.98 | -0.05 | 0 | 685597.6 | 476002.7 | 2957.02 | 91.09 | 0.02095 | 0.05 |
| | 309.71 | 0.04153 | 271.458 | 309.71 | -0.11 | 0 | 685597.5 | 476002.7 | 2849.29 | 107.73 | 0.0343 | 0.11 |
| | 398.19 | 0.05345 | 271.458 | 398.19 | -0.19 | 0 | 685597.5 | 476002.7 | 2760.81 | 88.48 | 0.04749 | 0.19 |
| | 502.8 | 0.06752 | 271.458 | 502.8 | -0.3 | 0.01 | 685597.4 | 476002.7 | 2656.2 | 104.61 | 0.06049 | 0.3 |
| | 605.73 | 0.08137 | 271.458 | 605.73 | -0.43 | 0.01 | 685597.2 | 476002.7 | 2553.27 | 102.93 | 0.07445 | 0.43 |
| | 706.98 | 0.09494 | 271.4579 | 706.98 | -0.59 | 0.01 | 685597.1 | 476002.7 | 2452.02 | 101.25 | 0.08815 | 0.59 |
| | 806.56 | 0.10826 | 271.4579 | 806.56 | -0.76 | 0.02 | 685596.9 | 476002.7 | 2352.44 | 99.58 | 0.1016 | 0.76 |
| | 904.49 | 0.12125 | 271.4579 | 904.49 | -0.96 | 0.02 | 685596.7 | 476002.7 | 2254.51 | 97.93 | 0.11475 | 0.96 |
| | 1000.77 | 0.13396 | 271.4579 | 1000.77 | -1.17 | 0.03 | 685596.5 | 476002.7 | 2158.23 | 96.28 | 0.12761 | 1.17 |
| | 1095.42 | 0.14631 | 271.4578 | 1095.42 | -1.4 | 0.04 | 685596.3 | 476002.8 | 2063.59 | 94.64 | 0.14014 | 1.4 |
| | 1188.44 | 0.15833 | 271.4578 | 1188.43 | -1.65 | 0.04 | 685596 | 476002.8 | 1970.57 | 93.02 | 0.15232 | 1.65 |
| | 1294.92 | 0.17186 | 271.4577 | 1294.92 | -1.96 | 0.05 | 685595.7 | 476002.8 | 1864.09 | 106.48 | 0.1651 | 1.96 |
| | 1399.22 | 0.18484 | 271.4577 | 1399.21 | -2.28 | 0.06 | 685595.4 | 476002.8 | 1759.79 | 104.3 | 0.17835 | 2.28 |
| | 1486.89 | 0.19547 | 271.4577 | 1486.89 | -2.57 | 0.07 | 685595.1 | 476002.8 | 1672.11 | 87.67 | 0.19015 | 2.57 |
| | 1587.18 | 0.20733 | 271.4576 | 1587.18 | -2.93 | 0.07 | 685594.7 | 476002.8 | 1571.82 | 100.29 | 0.2014 | 2.93 |
| | 1685.33 | 0.21844 | 271.4576 | 1685.33 | -3.29 | 0.08 | 685594.4 | 476002.8 | 1473.67 | 98.15 | 0.21289 | 3.29 |
| | 1794.92 | 0.23034 | 271.4575 | 1794.91 | -3.72 | 0.09 | 685593.9 | 476002.8 | 1364.09 | 109.58 | 0.22439 | 3.72 |
| | 1888.55 | 0.23975 | 271.4574 | 1888.54 | -4.1 | 0.1 | 685593.6 | 476002.8 | 1270.46 | 93.63 | 0.23505 | 4.1 |
| | 1993 | 0.24968 | 271.4574 | 1993 | -4.55 | 0.12 | 685593.1 | 476002.8 | 1166 | 104.46 | 0.24472 | 4.55 |
| | 2082.19 | 0.2571 | 271.4573 | 2082.18 | -4.94 | 0.13 | 685592.7 | 476002.8 | 1076.82 | 89.19 | 0.25339 | 4.94 |
| | 2181.61 | 0.26473 | 271.4572 | 2181.6 | -5.4 | 0.14 | 685592.3 | 476002.9 | 977.4 | 99.42 | 0.26091 | 5.4 |
| | 2278.37 | 0.27053 | 271.4571 | 2278.36 | -5.85 | 0.15 | 685591.8 | 476002.9 | 880.64 | 96.76 | 0.26763 | 5.85 |
| | 2384.09 | 0.27568 | 271.457 | 2384.08 | -6.35 | 0.16 | 685591.3 | 476002.9 | 774.92 | 105.72 | 0.2731 | 6.35 |
| | 2486.52 | 0.27813 | 271.4568 | 2486.51 | -6.85 | 0.17 | 685590.8 | 476002.9 | 672.49 | 102.43 | 0.27691 | 6.85 |
| | 2574.83 | 0.27873 | 271.4566 | 2574.82 | -7.28 | 0.19 | 685590.4 | 476002.9 | 584.18 | 88.31 | 0.27843 | 7.28 |
| | 2681.64 | 0.27635 | 271.4564 | 2681.63 | -7.79 | 0.2 | 685589.9 | 476002.9 | 477.37 | 106.81 | 0.27754 | 7.8 |
| | 2774.41 | 0.271 | 271.4561 | 2774.39 | -8.24 | 0.21 | 685589.4 | 476002.9 | 384.61 | 92.76 | 0.27368 | 8.24 |
| | 2873.78 | 0.26169 | 271.4558 | 2873.76 | -8.7 | 0.22 | 685589 | 476002.9 | 285.24 | 99.37 | 0.26634 | 8.7 |
| | 2978.65 | 0.24591 | 271.4552 | 2978.63 | -9.16 | 0.23 | 685588.5 | 476002.9 | 180.37 | 104.87 | 0.2538 | 9.16 |
| | 3070 | 0.22624 | 271.4545 | 3069.99 | -9.54 | 0.24 | 685588.1 | 476003 | 89.01 | 91.35 | 0.23608 | 9.54 |
| | 3174.69 | 0.19584 | 271.4533 | 3174.67 | -9.92 | 0.25 | 685587.7 | 476003 | -15.67 | 104.69 | 0.21104 | 9.93 |
| | 3274.07 | 0.15478 | 271.451 | 3274.05 | -10.23 | 0.26 | 685587.4 | 476003 | -115.05 | 99.38 | 0.17531 | 10.23 |
| | 3368.21 | 0.10392 | 271.4459 | 3368.19 | -10.44 | 0.27 | 685587.2 | 476003 | -209.19 | 94.15 | 0.12935 | 10.44 |
| | 3471.55 | 0.02802 | 271.4046 | 3471.53 | -10.56 | 0.27 | 685587.1 | 476003 | -312.53 | 103.34 | 0.06597 | 10.56 |
| | 3568.02 | 0.06962 | 91.4836 | 3568 | -10.52 | 0.27 | 685587.1 | 476003 | -409 | 96.47 | 0.0208 | 10.53 |
| | 3670.02 | 0.21004 | 91.4683 | 3670 | -10.27 | 0.26 | 685587.4 | 476003 | -511 | 102 | 0.13983 | 10.28 |
| | 3763.41 | 0.39666 | 91.46465 | 3763.39 | -9.78 | 0.25 | 685587.9 | 476003 | -604.39 | 93.39 | 0.30335 | 9.78 |
| | 3863.4 | 0.67917 | 91.46289 | 3863.37 | -8.84 | 0.22 | 685588.8 | 476002.9 | -704.37 | 99.99 | 0.53792 | 8.85 |
| | 3964.78 | 1.14434 | 91.46183 | 3964.74 | -7.23 | 0.18 | 685590.4 | 476002.9 | -805.74 | 101.38 | 0.91176 | 7.23 |
| | 4061.87 | 1.9172 | 91.46117 | 4061.79 | -4.64 | 0.12 | 685593 | 476002.8 | -902.79 | 97.09 | 1.53077 | 4.64 |
| | 4159.19 | 3.54694 | 91.46066 | 4159 | 0 | 0 | 685597.7 | 476002.7 | -1000 | 97.32 | 2.73207 | 0 |
| | 4256.4 | 6.22257 | 91.46055 | 4255.85 | 8.27 | -0.21 | 685605.9 | 476002.5 | -1096.85 | 97.21 | 4.88475 | 8.28 |
| | 4353.23 | 7.94843 | 91.46051 | 4351.93 | 20.21 | -0.52 | 685617.9 | 476002.2 | -1192.93 | 96.83 | 7.08551 | 20.22 |
| | 4449.88 | 9.27752 | 91.46049 | 4447.5 | 34.68 | -0.89 | 685632.3 | 476001.8 | -1288.5 | 96.66 | 8.61295 | 34.7 |
| | 4551.51 | 9.99857 | 91.46049 | 4547.69 | 51.69 | -1.32 | 685649.3 | 476001.4 | -1388.69 | 101.62 | 9.63807 | 51.71 |
| | 4644.06 | 10.56034 | 91.46048 | 4638.75 | 68.2 | -1.74 | 685665.9 | 476001 | -1479.75 | 92.55 | 10.27942 | 68.23 |
| | 4745.71 | 10.79375 | 91.46048 | 4738.65 | 87.03 | -2.22 | 685684.7 | 476000.5 | -1579.65 | 101.65 | 10.67708 | 87.06 |
| | 4840.85 | 11.04962 | 91.46047 | 4832.06 | 105.05 | -2.68 | 685702.7 | 476000 | -1673.06 | 95.14 | 10.92166 | 105.08 |
| | 4935.13 | 11.06176 | 91.46047 | 4924.59 | 123.12 | -3.14 | 685720.8 | 475999.6 | -1765.59 | 94.28 | 11.05571 | 123.16 |
| | 5036.68 | 11.18794 | 91.46047 | 5024.23 | 142.71 | -3.64 | 685740.4 | 475999.1 | -1865.23 | 101.55 | 11.12483 | 142.76 |
| | 5135.72 | 11.10691 | 91.46047 | 5121.4 | 161.85 | -4.13 | 685759.5 | 475998.6 | -1962.4 | 99.04 | 11.14742 | 161.91 |
| | 5230.64 | 11.16851 | 91.46047 | 5214.53 | 180.18 | -4.59 | 685777.8 | 475998.1 | -2055.53 | 94.92 | 11.13771 | 180.24 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 5331.31 | 11.04465 | 91.46047 | 5313.32 | 199.57 | -5.09 | 685797.2 | 475997.6 | -2154.32 | 100.68 | 11.10662 | 199.63 |
| 5425.86 | 11.07802 | 91.46047 | 5406.11 | 217.7 | -5.55 | 685815.4 | 475997.2 | -2247.11 | 94.54 | 11.06128 | 217.77 |
| 5525.35 | 10.93554 | 91.46048 | 5503.78 | 236.69 | -6.04 | 685834.3 | 475996.7 | -2344.78 | 99.49 | 11.00677 | 236.77 |
| 5616.62 | 10.95873 | 91.46048 | 5593.38 | 254.02 | -6.48 | 685851.7 | 475996.2 | -2434.38 | 91.27 | 10.94718 | 254.1 |
| 5711.95 | 10.81132 | 91.46048 | 5687 | 272.01 | -6.94 | 685869.7 | 475995.8 | -2528 | 95.33 | 10.88499 | 272.1 |
| 5811.47 | 10.82436 | 91.46048 | 5784.75 | 290.69 | -7.41 | 685888.3 | 475995.3 | -2625.75 | 99.52 | 10.81787 | 290.78 |
| 5915.3 | 10.66851 | 91.46048 | 5886.76 | 310.04 | -7.91 | 685907.7 | 475994.8 | -2727.76 | 103.83 | 10.74643 | 310.14 |
| 6007.83 | 10.68571 | 91.46048 | 5977.68 | 327.18 | -8.34 | 685924.8 | 475994.4 | -2818.68 | 92.53 | 10.67713 | 327.28 |
| 6103.7 | 10.53595 | 91.46048 | 6071.91 | 344.83 | -8.79 | 685942.5 | 475993.9 | -2912.91 | 95.87 | 10.61082 | 344.94 |
| 6202.99 | 10.54972 | 91.46048 | 6169.53 | 362.99 | -9.26 | 685960.6 | 475993.5 | -3010.53 | 99.29 | 10.54281 | 363.11 |
| 6288.4 | 10.40898 | 91.46048 | 6253.52 | 378.52 | -9.65 | 685976.2 | 475993.1 | -3094.52 | 85.42 | 10.47937 | 378.64 |
| 6394.18 | 10.42056 | 91.46048 | 6357.55 | 397.63 | -10.14 | 685995.3 | 475992.6 | -3198.55 | 105.77 | 10.41478 | 397.76 |
| 6485.1 | 10.27864 | 91.46048 | 6447 | 413.96 | -10.56 | 686011.6 | 475992.2 | -3288 | 90.93 | 10.34958 | 414.1 |
| 6578.61 | 10.30097 | 91.46048 | 6539 | 430.66 | -10.98 | 686028.3 | 475991.7 | -3380 | 93.51 | 10.28982 | 430.8 |
| 6611.61 | 10.44286 | 117.0624 | 6571.48 | 436.28 | -12.42 | 686033.9 | 475990.3 | -3412.48 | 33 | 10.11957 | 436.45 |
| 6644.94 | 12.51847 | 138.7324 | 6604.16 | 441.35 | -16.51 | 686039 | 475986.2 | -3445.16 | 33.34 | 11.28293 | 441.66 |
| 6677.72 | 15.711 | 152.645 | 6635.95 | 445.74 | -23.12 | 686043.4 | 475979.6 | -3476.95 | 32.77 | 14.01613 | 446.34 |
| 6711.08 | 19.57524 | 161.6546 | 6667.74 | 449.57 | -32.45 | 686047.2 | 475970.3 | -3508.74 | 33.37 | 17.59257 | 450.74 |
| 6744.15 | 23.58355 | 167.4223 | 6698.49 | 452.76 | -44.17 | 686050.4 | 475958.5 | -3539.49 | 33.07 | 21.55473 | 454.91 |
| 6777.05 | 27.65157 | 171.3809 | 6728.15 | 455.34 | -58.15 | 686053 | 475944.6 | -3569.15 | 32.9 | 25.60419 | 459.03 |
| 6809.86 | 31.60195 | 174.1799 | 6756.67 | 457.35 | -74.23 | 686055 | 475928.5 | -3597.67 | 32.81 | 29.61962 | 463.34 |
| 6842.66 | 35.48431 | 176.262 | 6784 | 458.84 | -92.29 | 686056.5 | 475910.4 | -3625 | 32.8 | 33.53884 | 468.03 |
| 6875.49 | 39.18685 | 177.8268 | 6810.1 | 459.86 | -112.17 | 686057.5 | 475890.5 | -3651.1 | 32.83 | 37.33287 | 473.34 |
| 6908.38 | 42.79958 | 179.0446 | 6834.92 | 460.44 | -133.73 | 686058.1 | 475869 | -3675.92 | 32.89 | 40.99123 | 479.47 |
| 6941.33 | 46.23419 | 180 | 6858.41 | 460.63 | -156.83 | 686058.3 | 475845.9 | -3699.41 | 32.95 | 44.51643 | 486.59 |
| 6974.34 | 49.59678 | 180.7216 | 6880.53 | 460.47 | -181.32 | 686058.1 | 475821.4 | -3721.53 | 33.01 | 47.91451 | 494.88 |
| 7007.37 | 52.80939 | 181.3244 | 6901.23 | 460.01 | -207.06 | 686057.7 | 475795.7 | -3742.23 | 33.04 | 51.20321 | 504.46 |
| 7040.41 | 55.98442 | 181.7554 | 6920.46 | 459.28 | -233.91 | 686056.9 | 475768.8 | -3761.46 | 33.04 | 54.39614 | 515.42 |
| 7073.4 | 59.04935 | 182.1161 | 6938.18 | 458.34 | -261.72 | 686056 | 475741 | -3779.18 | 32.99 | 57.51711 | 527.8 |
| 7106.3 | 62.11931 | 182.3442 | 6954.33 | 457.23 | -290.35 | 686054.9 | 475712.4 | -3795.33 | 32.9 | 60.58411 | 541.63 |
| 7140.03 | 65.21651 | 182.5303 | 6969.29 | 455.94 | -320.55 | 686053.6 | 475682.2 | -3810.29 | 33.73 | 63.66813 | 557.35 |
| 7172.56 | 68.27576 | 182.5959 | 6982.13 | 454.6 | -350.4 | 686052.3 | 475652.3 | -3823.13 | 32.53 | 66.74611 | 573.98 |
| 7205.79 | 71.41442 | 182.6284 | 6993.58 | 453.18 | -381.56 | 686050.8 | 475621.2 | -3834.58 | 33.23 | 69.84498 | 592.42 |
| 7238.66 | 74.66605 | 182.5489 | 7003.17 | 451.76 | -412.97 | 686049.4 | 475589.7 | -3844.17 | 32.87 | 73.04055 | 612.07 |
| 7271.11 | 77.96637 | 182.4347 | 7010.84 | 450.39 | -444.47 | 686048 | 475558.2 | -3851.84 | 32.46 | 76.31609 | 632.77 |
| 7304.03 | 81.54678 | 182.2016 | 7016.7 | 449.08 | -476.83 | 686046.7 | 475525.9 | -3857.7 | 32.91 | 79.75621 | 655.01 |
| 7337.31 | 85.36652 | 181.9111 | 7020.49 | 447.9 | -509.86 | 686045.6 | 475492.9 | -3861.49 | 33.28 | 83.45634 | 678.65 |
| 7369.95 | 89.4661 | 181.4865 | 7021.96 | 446.93 | -542.45 | 686044.6 | 475460.3 | -3862.96 | 32.65 | 87.4167 | 702.85 |
| 7479.76 | 89.46722 | 181.4864 | 7022.98 | 444.08 | -652.21 | 686041.7 | 475350.5 | -3863.98 | 109.8 | 89.46671 | 789.04 |
| 7579.57 | 89.46822 | 181.4864 | 7023.91 | 441.49 | -751.99 | 686039.1 | 475250.7 | -3864.91 | 99.82 | 89.46776 | 872.01 |
| 7679.39 | 89.46919 | 181.4864 | 7024.83 | 438.9 | -851.77 | 686036.6 | 475150.9 | -3865.83 | 99.82 | 89.4686 | 958.2 |
| 7779.21 | 89.47014 | 181.4863 | 7025.76 | 436.31 | -951.56 | 686034 | 475051.2 | -3866.76 | 99.82 | 89.46972 | 1046.82 |
| 7879.03 | 89.47108 | 181.4863 | 7026.68 | 433.73 | -1051.34 | 686031.4 | 474951.4 | -3867.68 | 99.82 | 89.47056 | 1137.29 |
| 7978.85 | 89.47198 | 181.4863 | 7027.6 | 431.14 | -1151.12 | 686028.8 | 474851.6 | -3868.6 | 99.82 | 89.4714 | 1229.21 |
| 8078.67 | 89.47286 | 181.4862 | 7028.52 | 428.55 | -1250.9 | 686026.2 | 474751.8 | -3869.52 | 99.82 | 89.47252 | 1322.27 |
| 8178.49 | 89.47372 | 181.4862 | 7029.44 | 425.96 | -1350.68 | 686023.6 | 474652 | -3870.44 | 99.82 | 89.47337 | 1416.26 |
| 8278.31 | 89.47456 | 181.4862 | 7030.35 | 423.37 | -1450.47 | 686021 | 474552.3 | -3871.35 | 99.82 | 89.47421 | 1510.99 |
| 8378.13 | 89.47537 | 181.4861 | 7031.27 | 420.78 | -1550.25 | 686018.4 | 474452.5 | -3872.27 | 99.82 | 89.47477 | 1606.34 |
| 8477.95 | 89.47617 | 181.4861 | 7032.18 | 418.19 | -1650.03 | 686015.8 | 474352.7 | -3873.18 | 99.82 | 89.47589 | 1702.2 |
| 8577.77 | 89.47694 | 181.4861 | 7033.09 | 415.6 | -1749.81 | 686013.3 | 474252.9 | -3874.09 | 99.82 | 89.47645 | 1798.49 |
| 8677.59 | 89.47769 | 181.486 | 7034 | 413.02 | -1849.59 | 686010.7 | 474153.1 | -3875 | 99.82 | 89.47729 | 1895.15 |
| 8777.41 | 89.47842 | 181.486 | 7034.91 | 410.43 | -1949.37 | 686008.1 | 474053.3 | -3875.91 | 99.82 | 89.47813 | 1992.11 |
| 8877.23 | 89.47912 | 181.486 | 7035.82 | 407.84 | -2049.16 | 686005.5 | 473953.6 | -3876.82 | 99.82 | 89.47869 | 2089.35 |
| 8977.05 | 89.4798 | 181.486 | 7036.73 | 405.25 | -2148.94 | 686002.9 | 473853.8 | -3877.73 | 99.82 | 89.47953 | 2186.82 |
| 9076.87 | 89.48046 | 181.4859 | 7037.63 | 402.66 | -2248.72 | 686000.3 | 473754 | -3878.63 | 99.82 | 89.48009 | 2284.49 |
| 9176.69 | 89.48109 | 181.4859 | 7038.54 | 400.07 | -2348.5 | 685997.7 | 473654.2 | -3879.54 | 99.82 | 89.48093 | 2382.34 |
| 9276.51 | 89.48171 | 181.4859 | 7039.44 | 397.49 | -2448.28 | 685995.1 | 473554.4 | -3880.44 | 99.82 | 89.48121 | 2480.34 |
| 9376.33 | 89.4823 | 181.4859 | 7040.35 | 394.9 | -2548.07 | 685992.6 | 473454.6 | -3881.35 | 99.82 | 89.48205 | 2578.49 |
| 9476.15 | 89.48287 | 181.4858 | 7041.25 | 392.31 | -2647.85 | 685990 | 473354.9 | -3882.25 | 99.82 | 89.48261 | 2676.75 |
| 9575.97 | 89.48341 | 181.4858 | 7042.15 | 389.72 | -2747.63 | 685987.4 | 473255.1 | -3883.15 | 99.82 | 89.48318 | 2775.13 |
| 9675.79 | 89.48395 | 181.4858 | 7043.05 | 387.13 | -2847.41 | 685984.8 | 473155.3 | -3884.05 | 99.82 | 89.48374 | 2873.61 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 9775.61 | 89.48444 | 181.4858 | 7043.95 | 384.54 | -2947.19 | 685982.2 | 473055.5 | -3884.95 | 99.82 | 89.48402 | 2972.18 |
| 9875.43 | 89.48492 | 181.4858 | 7044.84 | 381.96 | -3046.98 | 685979.6 | 472955.7 | -3885.84 | 99.82 | 89.48486 | 3070.82 |
| 9975.25 | 89.48538 | 181.4857 | 7045.74 | 379.37 | -3146.76 | 685977 | 472856 | -3886.74 | 99.82 | 89.48514 | 3169.54 |
| 10075.07 | 89.48582 | 181.4857 | 7046.64 | 376.78 | -3246.54 | 685974.4 | 472756.2 | -3887.64 | 99.82 | 89.4857 | 3268.33 |
| 10174.88 | 89.48623 | 181.4857 | 7047.53 | 374.19 | -3346.32 | 685971.8 | 472656.4 | -3888.53 | 99.82 | 89.48598 | 3367.18 |
| 10274.7 | 89.48663 | 181.4857 | 7048.43 | 371.6 | -3446.11 | 685969.3 | 472556.6 | -3889.43 | 99.82 | 89.48626 | 3466.08 |
| 10374.52 | 89.48698 | 181.4857 | 7049.32 | 369.02 | -3545.89 | 685966.7 | 472456.8 | -3890.32 | 99.82 | 89.48682 | 3565.04 |
| 10474.34 | 89.48734 | 181.4857 | 7050.21 | 366.43 | -3645.67 | 685964.1 | 472357 | -3891.21 | 99.82 | 89.4871 | 3664.04 |
| 10574.16 | 89.48766 | 181.4856 | 7051.11 | 363.84 | -3745.45 | 685961.5 | 472257.3 | -3892.11 | 99.82 | 89.48766 | 3763.08 |
| 10673.98 | 89.48796 | 181.4856 | 7052 | 361.25 | -3845.23 | 685958.9 | 472157.5 | -3893 | 99.82 | 89.48766 | 3862.17 |
| 10773.8 | 89.48823 | 181.4856 | 7052.89 | 358.67 | -3945.02 | 685956.3 | 472057.7 | -3893.89 | 99.82 | 89.48822 | 3961.29 |
| 10873.62 | 89.48849 | 181.4856 | 7053.78 | 356.08 | -4044.8 | 685953.7 | 471957.9 | -3894.78 | 99.82 | 89.48822 | 4060.44 |
| 10973.44 | 89.48872 | 181.4856 | 7054.67 | 353.49 | -4144.58 | 685951.1 | 471858.1 | -3895.67 | 99.82 | 89.48878 | 4159.63 |
| 11073.26 | 89.48894 | 181.4856 | 7055.56 | 350.9 | -4244.36 | 685948.6 | 471758.4 | -3896.56 | 99.82 | 89.48878 | 4258.84 |
| 11173.08 | 89.48912 | 181.4856 | 7056.45 | 348.31 | -4344.14 | 685946 | 471658.6 | -3897.45 | 99.82 | 89.48906 | 4358.09 |
| 11272.9 | 89.48929 | 181.4856 | 7057.34 | 345.73 | -4443.93 | 685943.4 | 471558.8 | -3898.34 | 99.82 | 89.48906 | 4457.35 |
| 11372.72 | 89.48943 | 181.4856 | 7058.23 | 343.14 | -4543.71 | 685940.8 | 471459 | -3899.23 | 99.82 | 89.48934 | 4556.65 |
| 11472.54 | 89.48956 | 181.4856 | 7059.12 | 340.55 | -4643.49 | 685938.2 | 471359.2 | -3900.12 | 99.82 | 89.48962 | 4655.96 |
| 11572.36 | 89.48965 | 181.4856 | 7060.01 | 337.96 | -4743.27 | 685935.6 | 471259.4 | -3901.01 | 99.82 | 89.48962 | 4755.3 |
| 11672.18 | 89.48973 | 181.4856 | 7060.9 | 335.38 | -4843.05 | 685933 | 471159.7 | -3901.9 | 99.82 | 89.48962 | 4854.65 |
| 11772 | 89.48978 | 181.4856 | 7061.79 | 332.79 | -4942.84 | 685930.4 | 471059.9 | -3902.79 | 99.82 | 89.4899 | 4954.03 |
| 11871.82 | 89.48981 | 181.4856 | 7062.68 | 330.2 | -5042.62 | 685927.9 | 470960.1 | -3903.68 | 99.82 | 89.48962 | 5053.42 |
| 11971.64 | 89.48981 | 181.4856 | 7063.57 | 327.61 | -5142.4 | 685925.3 | 470860.3 | -3904.57 | 99.82 | 89.4899 | 5152.83 |
| 12071.46 | 89.48981 | 181.4856 | 7064.46 | 325.02 | -5242.18 | 685922.7 | 470760.5 | -3905.46 | 99.82 | 89.4899 | 5252.25 |
| 12171.28 | 89.48977 | 181.4856 | 7065.35 | 322.44 | -5341.97 | 685920.1 | 470660.8 | -3906.35 | 99.82 | 89.48962 | 5351.69 |
| 12271.1 | 89.48972 | 181.4856 | 7066.23 | 319.85 | -5441.75 | 685917.5 | 470561 | -3907.23 | 99.82 | 89.4899 | 5451.14 |
| 12370.92 | 89.48963 | 181.4856 | 7067.12 | 317.26 | -5541.53 | 685914.9 | 470461.2 | -3908.12 | 99.82 | 89.48962 | 5550.6 |
| 12470.74 | 89.48953 | 181.4856 | 7068.01 | 314.67 | -5641.31 | 685912.3 | 470361.4 | -3909.01 | 99.82 | 89.48962 | 5650.08 |
| 12570.56 | 89.4894 | 181.4856 | 7068.9 | 312.09 | -5741.09 | 685909.7 | 470261.6 | -3909.9 | 99.82 | 89.48934 | 5749.57 |
| 12670.38 | 89.48926 | 181.4856 | 7069.79 | 309.5 | -5840.88 | 685907.2 | 470161.8 | -3910.79 | 99.82 | 89.48934 | 5849.07 |
| 12760.21 | 89.4891 | 181.4856 | 7070.59 | 307.17 | -5930.68 | 685904.8 | 470072 | -3911.59 | 89.84 | 89.48928 | 5938.63 |
| 12860.03 | 89.48891 | 181.4856 | 7071.48 | 304.58 | -6030.46 | 685902.2 | 469972.3 | -3912.48 | 99.82 | 89.48906 | 6038.15 |
| 12959.85 | 89.48869 | 181.4856 | 7072.37 | 301.99 | -6130.24 | 685899.6 | 469872.5 | -3913.37 | 99.82 | 89.48878 | 6137.68 |
| 13059.67 | 89.48846 | 181.4856 | 7073.26 | 299.41 | -6230.03 | 685897.1 | 469772.7 | -3914.26 | 99.82 | 89.4885 | 6237.22 |
| 13159.49 | 89.4882 | 181.4856 | 7074.16 | 296.82 | -6329.81 | 685894.5 | 469672.9 | -3915.16 | 99.82 | 89.48822 | 6336.76 |
| 13259.31 | 89.48793 | 181.4856 | 7075.05 | 294.23 | -6429.59 | 685891.9 | 469573.1 | -3916.05 | 99.82 | 89.48822 | 6436.32 |
| 13359.13 | 89.48762 | 181.4856 | 7075.94 | 291.64 | -6529.37 | 685889.3 | 469473.3 | -3916.94 | 99.82 | 89.48766 | 6535.88 |
| 13458.95 | 89.4873 | 181.4857 | 7076.83 | 289.05 | -6629.15 | 685886.7 | 469373.6 | -3917.83 | 99.82 | 89.48766 | 6635.45 |
| 13558.77 | 89.48695 | 181.4857 | 7077.73 | 286.47 | -6728.94 | 685884.1 | 469273.8 | -3918.73 | 99.82 | 89.4871 | 6735.03 |
| 13658.59 | 89.48659 | 181.4857 | 7078.62 | 283.88 | -6828.72 | 685881.5 | 469174 | -3919.62 | 99.82 | 89.48654 | 6834.62 |
| 13758.41 | 89.48618 | 181.4857 | 7079.52 | 281.29 | -6928.5 | 685878.9 | 469074.2 | -3920.52 | 99.82 | 89.48654 | 6934.21 |
| 13858.23 | 89.48578 | 181.4857 | 7080.41 | 278.7 | -7028.28 | 685876.4 | 468974.4 | -3921.41 | 99.82 | 89.48598 | 7033.81 |
| 13958.05 | 89.48534 | 181.4857 | 7081.31 | 276.11 | -7128.06 | 685873.8 | 468874.7 | -3922.31 | 99.82 | 89.48542 | 7133.41 |
| 14057.87 | 89.48488 | 181.4858 | 7082.2 | 273.53 | -7227.85 | 685871.2 | 468774.9 | -3923.2 | 99.82 | 89.48514 | 7233.02 |
| 14157.69 | 89.48439 | 181.4858 | 7083.1 | 270.94 | -7327.63 | 685868.6 | 468675.1 | -3924.1 | 99.82 | 89.48486 | 7332.64 |
| 14257.51 | 89.48389 | 181.4858 | 7084 | 268.35 | -7427.41 | 685866 | 468575.3 | -3925 | 99.82 | 89.48402 | 7432.26 |

# PECOS DISTRICT
# DRILLING CONDITIONS OF APPROVAL

| | |
|---|---|
| **OPERATOR'S NAME:** | Strata Production Company |
| **WELL NAME & NO.:** | Forty Niner Ridge Unit 56H |
| **LOCATION:** | Sec 22-23S-30E-NMP |
| **COUNTY:** | Eddy County, New Mexico |

COA

| | | | | |
|---|---|---|---|---|
| **$H_2S$** | ○ No | | ○ Yes | |
| **Potash / WIPP** | ○ None | ○ Secretary | ◉ R-111-Q | ☐ Open Annulus |
| | 3-String Design: Intermediate Casing Designed for Frac Loads | | | ☐ WIPP |
| **Cave / Karst** | ○ Low | ◉ Medium | ○ High | ○ Critical |
| **Wellhead** | ◉ Conventional | ○ Multibowl | ○ Both | ○ Diverter |
| **Cementing** | ☐ Primary Squeeze | ☐ Cont. Squeeze | ☐ EchoMeter | ☐ DV Tool |
| **Special Req** | ☐ Capitan Reef | ☐ Water Disposal | ☐ COM | ☑ Unit |
| **Waste Prev.** | ○ Self-Certification | ○ Waste Man. Plan | ◉ APD Submitted prior to 06/10/2024 | |
| **Additional Language** | ☐ Flex Hose | ☐ Casing Clearance | ☐ Pilot Hole | ☐ Break Testing |
| | ☐ Four-String | ☐ Offline Cementing | ☐ Fluid-Filled | |

## 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 43 CFR 3176 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, provide measured values and formations to the BLM.

***APD is within the R-111-Q defined boundary. Operator must follow all procedures and requirements listed within the updated order.***

## B. CASING

1. The **13-3/8** inch surface casing shall be set at approximately **450** feet (a minimum of 70 feet (Eddy County) into the Rustler Anhydrite, above the salt, and below usable fresh water) 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.





**Approval Date: 08/02/2024**

b. Wait on cement (WOC) time for a primary cement job will be a minimum of **8 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 **9-5/8** 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, Capitan Reef, or potash.**

3. The minimum required fill of cement behind the **5-1/2** inch production casing is:

- Cement should tie-back **500 feet** into the previous casing but not higher than USGS Marker Bed No. 126. **Operator must verify top of cement per R-111-Q requirements.** Submit results to the BLM. If cement does not circulate, contact the appropriate BLM office. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst, Capitan Reef, or potash.**

## C. PRESSURE CONTROL

1. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **3000 (3M)** psi.

## D. SPECIAL REQUIREMENT (S)

**Unit Wells**

The well sign for a unit well shall include the unit number in addition to the surface and bottom hole lease numbers. This also applies to participating area numbers. If a participating area has not been established, the operator can use the general unit designation, but will replace the unit number with the participating area number when the sign is replaced.

**Commercial Well Determination**

A commercial well determination shall be submitted after production has been established for at least six months.




**Approval Date: 08/02/2024**

# 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)

**Contact Eddy County Petroleum Engineering Inspection Staff:**
Email or call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220;
**BLM_NM_CFO_DrillingNotifications@BLM.GOV**; (575) 361-2822

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
        i. Notify the BLM when moving in and removing the Spudder Rig.
        ii. 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.
        iii. BOP/BOPE test to be conducted per **43 CFR 3172** 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. For intervals in which cement to surface is required, cement to surface should be verified with a visual check and density or pH check to differentiate cement from spacer and drilling mud. The results should be documented in the driller's log and daily reports.

## 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 of both lead and tail cement, 2) until cement has been in place at least 8 hours. WOC time will be recorded in the driller's log. The casing integrity 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 integrity test can be done (prior to the cement setting up) immediately after bumping the plug.
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-Q 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 **43 CFR 3172**.
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:
    i. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
    ii. 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.
    iii. Manufacturer representative shall install the test plug for the initial BOP test.
    iv. Whenever any seal subject to test pressure is broken, all the tests in 43 CFR 3172.6(b)(9) must be followed.
    v. 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.
    i. 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).
    ii. 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.)

iii. 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 **43 CFR 3172** 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 8 hours or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).

iv. 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. 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.

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

vi. 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.

vii. 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.

viii. 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 **43 CFR 3172**.

**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.

**Strata Production Company**
Forty Niner Ridge Unit #56H
Section 15-T23S-R30E
SHL: 1,660' FNL & 1,880' FEL of Sec 15
BHL: 1,500' FSL & 1,650' FEL of Sec 22
Eddy County, NM

## HYDROGEN SULFIDE DRILLING OPERATIONS PLAN

### I. HYDROGEN SULFIDE TRAINING

All personnel, whether regularly assigned, contracted, or employed on an unscheduled basis, will receive training from a qualified instructor in the following areas prior to commencing drilling operations on this well:

A. The hazards and characteristics of hydrogen sulfide ($H_2S$).

B. The proper use and maintenance of personal protective equipment and life support systems.

C. The proper use of $H_2S$ detectors, alarms, warning systems, briefing areas, evacuation procedures, and prevailing winds.

D. The proper techniques for first aid and rescue procedures.

In addition, supervisory personnel will be trained in the following areas:

A. The effects of $H_2S$ on metal components. If high tensile tubulars are to be used, personnel will be trained in their special maintenance requirements.

B. Corrective action and shut-in procedures when drilling or reworking a well and blowout prevention and well control procedures.

C. The contents and requirements of the $H_2S$ Drilling Operations Plan and the Public Protection Plan.

There will be an initial training session just prior to encountering a known or probable $H_2S$ zone (within 3 days or 500 feet) and weekly $H_2S$ and well control drills for all personnel in each crew. The initial training session shall include a review of the site specific $H_2S$ Drilling Operations Plan and the Public Protection Plan. This plan shall be available at the well site. All personnel will be required to carry documentation that they have received the proper training.

## II. $H_2S$ SAFETY EQUIPMENT AND SYSTEMS

Note: All $H_2S$ safety equipment and systems will be installed, tested, and operational when drilling reaches a depth of 500 feet above, or three days prior to penetrating the first zone containing or reasonably expected to contain $H_2S$.

A. Well Control Equipment:
All BOP and BOP equipment is shown in the attachments.
Flare line.
Choke manifold with a remotely operated choke as shown in Attachment #5.
Blind rams and pipe rams to accommodate all pipe sizes with properly sized closing unit.
Auxiliary equipment to include annular preventer, mud-gas separator, rotating head.

B. Protective equipment for essential personnel:
Mark II Surviveair 30-minute units located in the dog house and at briefing areas.

C. $H_2S$ detection and monitoring equipment:

2 - portable $H_2S$ monitor positioned on location for best coverage and response. These units have warning lights and audible sirens when $H_2S$ levels of 20 ppm are reached.

D. Visual warning systems:

Caution/Danger signs shall be posted on roads providing direct access to location. Signs will be painted a high visibility yellow with black lettering of sufficient size to be readable at a reasonable distance from the immediate location. Bilingual signs will be used, when appropriate.

Wind Direction indicators as seen in the H2S Well Site Diagram.

E. Mud Program: The mud program has been designed to minimize the volume of $H_2S$ circulated to the surface.

F. Metallurgy:
All drill strings, casings, tubing, wellhead, blowout preventers, drilling spool, kill lines, choke manifold and lines, and valves shall be suitable for $H_2S$ service.

G. Communication:
Company vehicles equipped with cellular telephone.

# W A R N I N G

**YOU ARE ENTERING AN $H_2S$ AREA**
**AUTHORIZED PERSONNEL ONLY**

1. *BEARDS OR CONTACT LENSES NOT ALLOWED*
2. *HARD HATS REQUIRED*
3. *SMOKING IN DESIGNATED AREAS ONLY*
4. *BE WIND CONSCIOUS AT ALL TIMES*
5. *CK WITH STRATA FOREMAN AT MAIN OFFICE*

STRATA PRODUCTION COMPANY

575-622-1127 EXT 18
575-626-7909

## EMERGENCY NUMBERS

**911 Must have Correct County & State & Directions to your location**

| | | |
|---|---|---|
| **Eddy County Sheriff's Office** | | **575-887-7551** |
| **Lea County Sherrif's Office** | **(Lovington)** | **575-396-3611** |
| **New Mexico State Police** | **(Roswell)** | **575-622-7200** |
| **Eastern NM Medical Center** | **(Roswell)** | **575-622-8170** |
| **Lea Regional Hospital** | **(Hobbs)** | **575-492-5000** |
| **Carlsbad Hospital** | | **575-887-4100** |
| **Carlsbad Fire Department** | | **575-885-3125** |
| **Ambulance Service** | | **575-885-2111** |

| | |
|---|---|
| **BLM Carlsbad** | **575-234-5972** |
| **BLM Hobbs** | **575-393-3612** |
| **NMOCD Hobbs** | **575-393-6161** |
| **Mosaic Potash Carlsbad** | **575-887-2871** |

| | |
|---|---|
| **Strata Office** | **575-622-1127** |
| **Jerry Elgin** | **575-622-1127 x18** |
| **Cheyenne Scharf** | **307-360-3062** |
| **Rygel Russell** | **575-626-1479** |
| **Pilar Mendoza** | **575-626-8161** |
| **Mitch Krakauskas** | **575-622-1127 x23** |

STRATA PRODUCTION COMPANY
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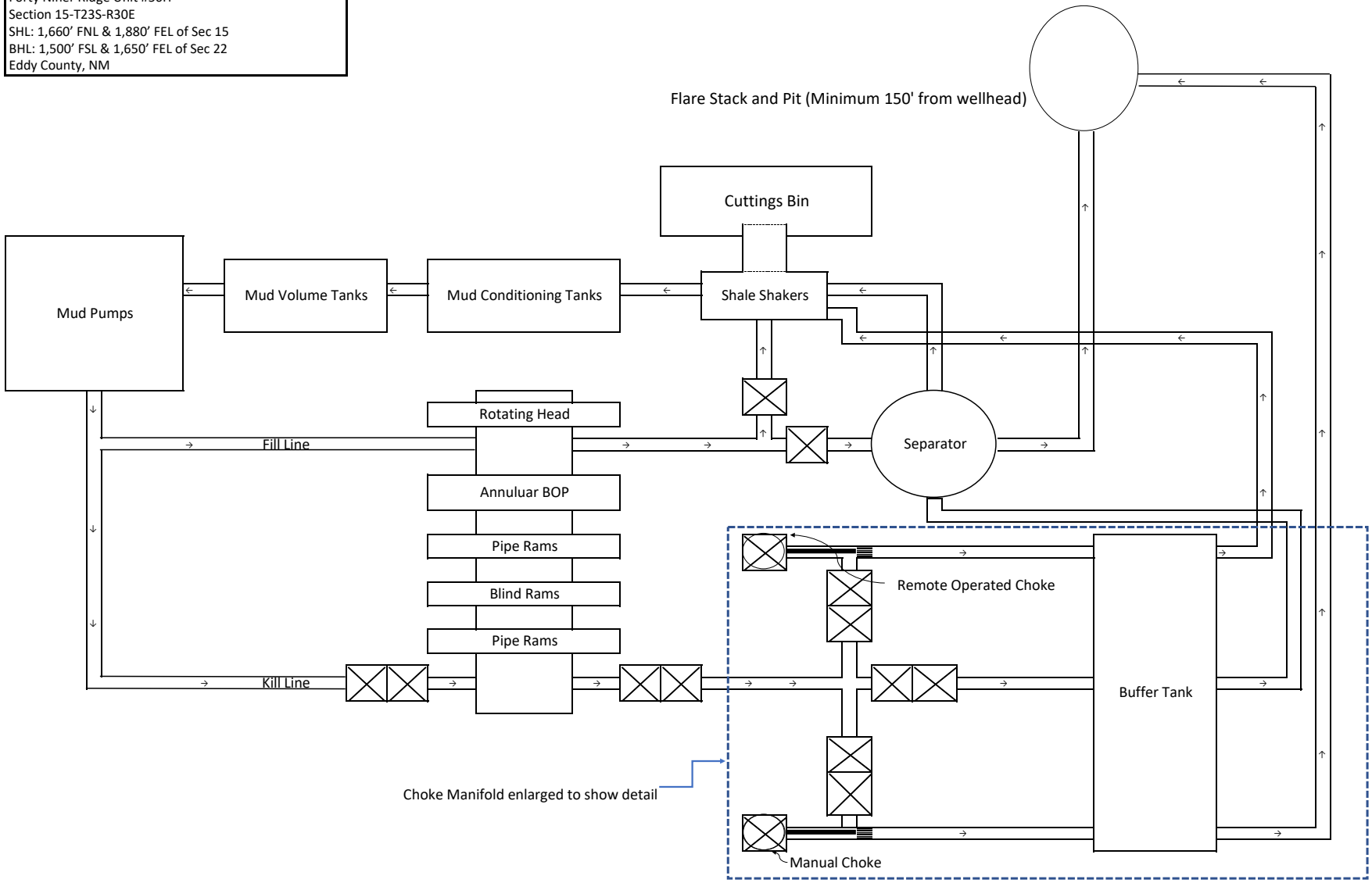
Eddy County, NM



**STRATA PRODUCTION COMPANY**

Forty Niner Ridge Unit #56H
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Eddy County, NM

# BLOWOUT PREVENTER EQUIPMENT DESCRIPTION

***All equipment should be at least 3,000 psi WP or higher unless otherwise specified.***

1. Bell Nipple.
2. Hydril bag type preventer.
3. Ram type pressure operated blowout preventer with blind rams.
4. Flanged spool with one 3" and one 2" (minimum) outlet.
5. 2" (minimum) flanged plug or gate valve.
6. 2"x 2"x 2" (minimum) flanged.
7. 3" gate valve.
8. Ram type pressure operated blowout preventer with pipe rams.
9. Flanged type casing head with one side outlet.
10. 2" threaded (or flanged) plug or gate valve. Flanged on 5000# WP, threaded on 3000# WP or less.
11. 3" flanged spacer spool.
12. 3"x 2" x 2"x 2" flanged cross.
13. 2" flanged plug or gate valve.
14. 2" flanged adjustable choke.
15. 2" threaded flange.
16. 2" XXH Nipple.
17. 2" forged steel 90 Ell.
18. Cameron (or equal) threaded pressure gauge.
19. Threaded flange.
20. 2" flanged tee.
21. 2" flanged plug or gate valve.
22. 2 ½" pipe, 300' to pit, anchored.
23. 2 ½" SE valve.
24. 2 ½" line to steel pit or separator.

**NOTES:**

1). Items 3, 4, and 8 may be replaced with double ram type preventer with side outlets between the rams.

2). The two valves next to the stack on the fill and kill line to be closed unless drill string is being pulled.

3). Kill line is for emergency use only. This connection shall not be used for filling.

4). Replacement pipe rams and blind rams shall always be on location.

5). Only type U, LSW and QRC ram type preventers with secondary seals are acceptable for 5000 psi WP and higher BOP stacks.

6). Type E ram-type BOP's with factory modified side outlets may be used on 3000 psi or lower WP BOP stacks.

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

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

CONDITIONS

Action 370404

## CONDITIONS

| | |
|---|---|
| Operator:<br>STRATA PRODUCTION CO<br>P.O. Box 1030<br>Roswell, NM 882021030 | OGRID:<br>21712 |
| | Action Number:<br>370404 |
| | Action Type:<br>[C-101] BLM - Federal/Indian Land Lease (Form 3160-3) |

**CONDITIONS**

| Created By | Condition | Condition Date |
|---|---|---|
| ward.rikala | Notify OCD 24 hours prior to casing & cement | 8/27/2024 |
| ward.rikala | Will require a File As Drilled C-102 and a Directional Survey with the C-104 | 8/27/2024 |
| ward.rikala | Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string | 8/27/2024 |
| ward.rikala | Cement is required to circulate on both surface and intermediate1 strings of casing | 8/27/2024 |
| ward.rikala | If cement does not circulate on any string, a CBL is required for that string of casing | 8/27/2024 |
| ward.rikala | Oil base muds are not to be used until fresh water zones are cased and cemented providing isolation from the oil or diesel. This includes synthetic oils. Oil based mud, drilling fluids and solids must be contained in a steel closed loop system | 8/27/2024 |
| ward.rikala | This well can not be produced until the operator is in compliance with Rule 5.9. | 8/27/2024 |
| ward.rikala | The operator must comply with all of the requirements of R-111-Q. | 8/27/2024 |