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.
30-015-42114

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: 10/21/2020

Additional Operator Remarks

Location of Well

0. SHL: LOT H / 1980 FNL / 750 FEL / TWSP: 23S / RANGE: 30E / SECTION: 23 / LAT: 32.2922858 / LONG: -103.8454072 (TVD: 0 feet, MD: 0 feet)

PPP: LOT P / 1980 FNL / 750 FEL / TWSP: 23S / RANGE: 30E / SECTION: 23 / LAT: 32.29233 / LONG: -103.84541 (TVD: 7570 feet, MD: 8000 feet)

PPP: LOT P / 1980 FNL / 750 FEL / TWSP: 23S / RANGE: 30E / SECTION: 14 / LAT: 32.29233 / LONG: -103.84543 (TVD: 7562 feet, MD: 9300 feet)

PPP: LOT I / 1980 FNL / 750 FEL / TWSP: 23S / RANGE: 30E / SECTION: 11 / LAT: 32.29231 / LONG: -103.84541 (TVD: 7529 feet, MD: 14600 feet)

PPP: LOT H / 1980 FNL / 750 FEL / TWSP: 23S / RANGE: 30E / SECTION: 11 / LAT: 32.31593 / LONG: -103.8455 (TVD: 7521 feet, MD: 15900 feet)

PPP: LOT A / 1980 FNL / 750 FEL / TWSP: 23S / RANGE: 30E / SECTION: 11 / LAT: 32.2922858 / LONG: -103.8454072 (TVD: 7513 feet, MD: 17200 feet)

BHL: LOT A / 100 FNL / 750 FEL / TWSP: 23S / RANGE: 30E / SECTION: 11 / LAT: 32.3265049 / LONG: -103.8453735 (TVD: 7498 feet, MD: 19774 feet)

Review and Appeal Rights

A person contesting a decision shall request a State Director review. This request must be filed within 20 working days of receipt of the Notice with the appropriate State Director (see 43 CFR 3165.3). The State Director review decision may be appealed to the Interior Board of Land Appeals, 801 North Quincy Street, Suite 300, Arlington, VA 22203 (see 43 CFR 3165.4). Contact the above listed Bureau of Land Management office for further information.

District I
1625 N. French Dr., Hobbs, NM 88240
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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
30-015-42114	24750	Forty Niner Ridge Delaware

4 Property Code	5 Property Name	6 Well Number
325945	ROADRUNNER FEDERAL 23 11 HAL	3H

7 OGRID NO.	8 Operator Name	9 Elevation
21712	STRATA PRODUCTION COMPANY	3253'

10 Surface Location

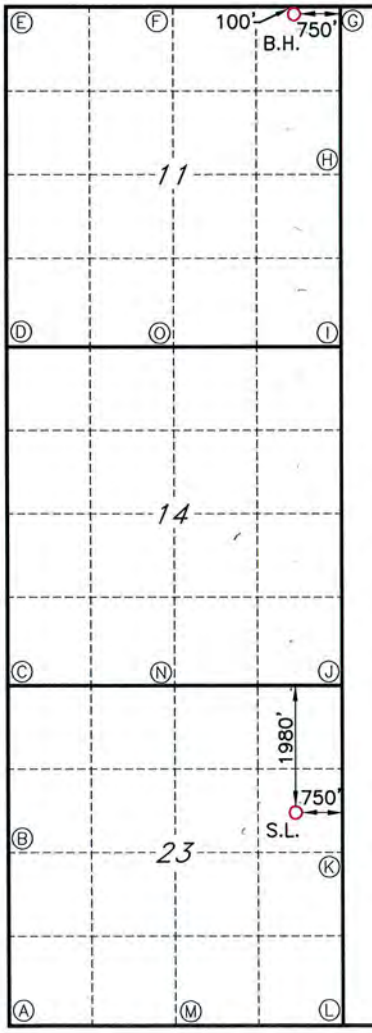
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet From the	East/West line	County
H	23	23S	30E		1980	NORTH	750	EAST	EDDY

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
A	11	23S	30E		100	NORTH	750	EAST	EDDY

12 Dedicated Acres	13 Joint or Infill	14 Consolidation Code	15 Order No.
400			

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
N: 470409.2 – E: 692107.8

LAT: 32.2922858° N
LONG: 103.8454072° W

BOTTOM HOLE
N: 482857.9 – E: 692061.5

LAT: 32.3265049° N
LONG: 103.8453735° W

CORNER DATA
NAD 83 GRID – NM EAST

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

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

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

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

E: FOUND BRASS CAP "1942"
N: 482961.4 – E: 687452.8

F: FOUND BRASS CAP "1942"
N: 482959.5 – E: 690132.2

G: FOUND BRASS CAP "1942"
N: 482957.2 – E: 692811.0

H: FOUND BRASS CAP "1942"
N: 480315.3 – E: 692820.2

I: FOUND BRASS CAP "1942"
N: 477674.0 – E: 692829.2

J: FOUND BRASS CAP "1942"
N: 472390.8 – E: 692844.2

K: FOUND BRASS CAP "1942"
N: 469750.0 – E: 692862.1

L: CALCULATED CORNER
N: 467108.3 – E: 692881.7

M: FOUND BRASS CAP "1942"
N: 467097.4 – E: 690206.2

N: FOUND BRASS CAP "1942"
N: 472383.4 – E: 690160.9

O: FOUND BRASS CAP "1942"
N: 477671.2 – E: 690152.2

17 OPERATOR CERTIFICATION

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

Signature Date 04/16/19

Paul Ragsdale
Printed Name

pragsdale@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.

10-31-2018
Date of Survey

Signature and Seal of Professional Surveyor

ROBERT M. HOWETT NEW MEXICO 19680 PROFESSIONAL SURVEYOR

19680
Certificate Number

REV: NAME CHANGE 1 APR 2019

Job No: LS18101225

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:** 07/29/2022

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
Roadrunner Federal 23 11 HAL #3H		H, Section 23 T23S, R30E	1,980' FNL, 750' FEL	600	1200	2000

IV. Central Delivery Point Name: Roadrunner Federal Com 23 HAL #3H [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
Roadrunner Federal 23 11 HAL #3H		08/13/2023	09/01/2023	09/24/2023	10/07/2023	10/18/2023

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:	Jerry Elgin
Printed Name:	**Jerry Elgin**
Title:	**Vice President Operations**
E-mail Address:	**jelgin@ stratanm. com**
Date:	**09/14/2021**
Phone:	**575-622-127**

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

Description for Sections:

VI. Separation Equipment

VII. Operational Practices

VIII. Best Management Practices

VI. Separation equipment will be sized by stated manufacture daily throughput capacities and anticipated daily production rates to ensure adequate capacity. Closed vent system piping, compression needs and VRU's will be sized to ensure adequate capacity for anticipated production volumes and conditions.

VII. Strata Production Company (SPC) will take following actions to comply with the regulations listed in 19.15.27.8

A. Venting and flaring of natural gas
SPC will maximize the recovery of natural gas by minimizing the waste, as defined by 19.15.2 NMAC, of natural gas through venting and flaring. SPC will ensure that well(s) will be connected to a natural gas gathering system with sufficient capacity to transport natural gas. If there is not adequate takeaway for the gas, well(s) will be shut in until the natural gas gathering system is available.

B. Venting and flaring during drilling operations
All drilling operations will be equipped with a rig flare located at least 100 ft from the nearest surface hole. Rig flare will be utilized to combust any natural gas that is brought to surface during normal drilling operations. In the case of emergency venting or flaring the volumes will be estimated and reported appropriately.

C. Venting and flaring during completion or recompletion operations
During completion operations any natural gas brought to surface will be flared. Immediately following completions operations, all well flow will be directed to permanent separation equipment. Produced natural gas from separation equipment will be sent to sales. It is not anticipated that gas will not meet pipeline standards. However, if natural gas does not meet gathering pipeline quality specifications, SPC will flare the natural gas for 60 days or until the natural gas meets the pipeline quality specifications, whichever is sooner. SPC will ensure that the flare is sized properly and is equipped with automatic igniter or continuous pilot. The gas

sample will be analyzed twice per week and the gas will be routed into a gathering system as soon as it is confirmed to be within pipeline specifications.

D. Venting and flaring during production operations
Natural gas will not be flared with the exceptions and provisions listed in the 19.15.27.8 D. (1) through (4). If there is not adequate takeaway for the separator gas, well(s) will be shut in until the natural gas gathering system is available with exception of emergency or malfunction situations. Venting and/or flaring volumes will be estimated and reported appropriately.

E. Performance standards
SPC will comply with the performance standards requirements and provisions listed in 19.15.27.8 E. (1) through (8). All equipment will be designed and sized to handle maximum anticipated pressures and throughputs to minimize the waste. Production storage tanks constructed after May 25, 2021, will be equipped with automatic gauging system. Flares constructed after May 25, 2021, will be equipped with automatic igniter or continuous pilot. Flares will be located at least 100' from the well and storage tanks unless otherwise approved by the division. SPC will conduct AVO inspections as described in 19.15.27.8 E (5) (a) with frequencies specified in 19.15.27.8 E (5) (b) and (c). All emergencies will be resolved as quickly and safely as feasible to minimize waste.

F. Measurement or estimation of vented and flared natural gas
The volume of natural gas that is vented or flared as the result of malfunction or emergency during drilling and completions operations will be estimated. The volume of natural gas that is vented, flared, or beneficially used during production operations, will be measured or estimated. SPC will install equipment to measure the volume of natural gas flared from existing process piping or a flowline piped from equipment such as high-pressure separators, heater treaters, or vapor recovery units associated with a well or facility associated with a well authorized by an APD issued after May 25, 2021, that has an average daily production greater than 60 mcf per day. If metering is not practicable due to circumstances such as low flow rate or low pressure venting and flaring, SPC will estimate the volume of vented or flared natural gas. Measuring equipment will conform to industry standards and will not be designed or equipped with a manifold that allows the diversion of natural gas around the metering element except for the sole purpose of inspecting and servicing the measurement equipment.

VIII. For maintenance activities involving production equipment and compression, venting will be limited to the depressurization of the subject equipment to ensure safe working conditions. For maintenance of production and compression equipment the associated producing wells will be shut in to eliminate venting. For maintenance of VRU's all gas normally routed to the VRU will be routed to flare to eliminate venting.

District I
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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

QUESTIONS

Operator: STRATA PRODUCTION CO P.O. Box 1030 Roswell, NM 882021030	OGRID: 21712
	Action Number: 48529
	Action Type: [UF-NGMP] NG Management Plan (NGMP)

QUESTIONS

II. Type:	
Original	True
Amendment due to 19.15.27.9.D(6)(a) NMAC	*Not answered.*
Amendment due to 19.15.27.9.D(6)(b) NMAC	*Not answered.*
Other	*Not answered.*
If other, please describe	*Not answered.*

III. Well(s)	
Number of wells identified above	10

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COMMENTS

Action 48529

COMMENTS

Operator: STRATA PRODUCTION CO P.O. Box 1030 Roswell, NM 882021030	OGRID: 21712
	Action Number: 48529
	Action Type: [UF-NGMP] NG Management Plan (NGMP)

COMMENTS

Created By	Comment	Comment Date
kpickford	KP GEO Review 10/21/2021	10/21/2021

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CONDITIONS

Operator: STRATA PRODUCTION CO P.O. Box 1030 Roswell, NM 882021030	OGRID: 21712
	Action Number: 48529
	Action Type: [UF-NGMP] NG Management Plan (NGMP)

CONDITIONS

Created By	Condition	Condition Date
kpickford	None	10/21/2021

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

Drilling Plan Data Report
07/26/2022

APD ID: 10400035720 **Submission Date:** 04/17/2019

Operator Name: STRATA PRODUCTION COMPANY

Well Name: ROADRUNNER FEDERAL 23 11 HAL **Well Number:** 3H

Well Type: OIL 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
331858	RUSTLER	3253	150	150	OTHER, SANDSTONE : Redbeds	USEABLE WATER	N
427229	TOP SALT	2783	470	470	ANHYDRITE, SALT	NONE	N
427230	BASE OF SALT	-406	3659	3659	ANHYDRITE, SALT	NONE	N
427231	LAMAR	-615	3868	3868	ANHYDRITE, LIMESTONE	NONE	N
427245	BONE SPRING	-4485	7738	7738	LIMESTONE, SANDSTONE, SHALE	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:

RR_Fed_23_11_HAL__3H_3M_CHOKE_DIAGRAM_20191203154159.pdf

BOP Diagram Attachment:

RR_Fed_23_11_HAL__3H_BOP_DIAGRAM_20190411121212.pdf

RR_Fed_23_11_HAL___3H_BOPE_DESCRIPTION_20190411121230.pdf

Operator Name: STRATA PRODUCTION COMPANY

Well Name: ROADRUNNER FEDERAL 23 11 HAL **Well Number:** 3H

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	3253	2803	450	H-40	48	ST&C	1.125	1.1	DRY	1.8	DRY	1.8
2	INTERMEDIATE	12.25	9.625	NEW	API	N	0	3800	0	3800	3253	-547	3800	J-55	40	LT&C	1.125	1.1	DRY	1.8	DRY	1.8
3	PRODUCTION	8.75	5.5	NEW	API	N	0	19774	0	7498	3253	-4245	19774	HCP-110	20	BUTT	1.125	1.1	DRY	1.8	DRY	1.8

Casing Attachments

Casing ID: 1 **String** SURFACE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

RR_Fed_23_11_HAL__3H_Casing_Worksheet_20190417105624.pdf

Operator Name: STRATA PRODUCTION COMPANY

Well Name: ROADRUNNER FEDERAL 23 11 HAL **Well Number:** 3H

Casing Attachments

Casing ID: 2 **String** INTERMEDIATE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

RR_Fed_23_11_HAL__3H_Casing_Worksheet_20190417105643.pdf

Casing ID: 3 **String** PRODUCTION

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

RR_Fed_23_11_HAL__3H_Casing_Worksheet_20190417105700.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	450	475	1.32	14.8	627	100	Class C	2% CaCl2
INTERMEDIATE	Lead		0	3800	575	2.07	12.6	1190	100	35/65 Poz/C	5% PF44(BWOW), 6% PF20, 3#/skPF42, 1% PF1, .125#/skPF29, .25#/skPF46
INTERMEDIATE	Tail		0	3800	100	1.32	14.8	132	100	Class C	.2%PF13,

Operator Name: STRATA PRODUCTION COMPANY

Well Name: ROADRUNNER FEDERAL 23 11 HAL **Well Number:** 3H

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
PRODUCTION	Lead		0	19774	2750	2.2	12	6052	50	50/50 Poz H	4.5% Bentonite, 5% bwoc MPA-5, 0.2% bwoc FL-52, 5% bwow Sodium Chloride, 5 lbs/sack LCM-1, 0.005 lbs/sack Static Free, 1 glas/100 sack FP-6L, 0.125 lbs/sack Cello Flake, 106.5% Fresh Water
PRODUCTION	Tail		0	19774	900	1.24	15.6	1116	50	50/50 Poz H	0.3% bwoc FL-52, 0.005, lbs/sack Static Free, 1 gals/100 sack FP-6L, 46.2% Fresh Water

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 rig floor, remote kill line, mud gas separator.

Describe the mud monitoring system utilized: Pason pit level monitors, hourly weight check and viscosity, gel strength and pH, 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
3800	7498	WATER-BASED MUD	9	10	15		8		100000	10	Drill with water based mud using sliders and gel sweeps in the lateral.
0	450	SPUD MUD	8.3	9	7.4		8	10			Spud with fresh water and build mud while drilling.

Operator Name: STRATA PRODUCTION COMPANY

Well Name: ROADRUNNER FEDERAL 23 11 HAL **Well Number:** 3H

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
PRODUCTION	Lead		0	19774	2750	2.2	12	6052	50	50/50 Poz H	4.5% Bentonite, 5% bwoc MPA-5, 0.2% bwoc FL-52, 5% bwow Sodium Chloride, 5 lbs/sack LCM-1, 0.005 lbs/sack Static Free, 1 glas/100 sack FP-6L, 0.125 lbs/sack Cello Flake, 106.5% Fresh Water
PRODUCTION	Tail		0	19774	900	1.24	15.6	1116	50	50/50 Poz H	0.3% bwoc FL-52, 0.005, lbs/sack Static Free, 1 gals/100 sack FP-6L, 46.2% Fresh Water

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 rig floor, remote kill line, mud gas separator.

Describe the mud monitoring system utilized: Pason pit level monitors, hourly weight check and viscosity, gel strength and pH, 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
3800	7498	WATER-BASED MUD	9	10	15		8		100000	10	Drill with water based mud using sliders and gel sweeps in the lateral.
0	450	SPUD MUD	8.3	9	7.4		8	10			Spud with fresh water and build mud while drilling.

Operator Name: STRATA PRODUCTION COMPANY

Well Name: ROADRUNNER FEDERAL 23 11 HAL **Well Number:** 3H

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			8	25	180000		Drill with brine water with LCM and gel sweeps.

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,CBL,CDL,DLL,GR,MUDLOG

Coring operation description for the well:

None

Section 7 - Pressure

Anticipated Bottom Hole Pressure: 2500 **Anticipated Surface Pressure:** 834.59

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

RR_Fed_23_11_HAL__3H___H2S_Plan_20190411124231.doc

Operator Name: STRATA PRODUCTION COMPANY

Well Name: ROADRUNNER FEDERAL 23 11 HAL **Well Number:** 3H

Section 8 - Other Information

Proposed horizontal/directional/multi-lateral plan submission:

Strata_Roadrunner_Federal_23_11_HAL__3H_rev0__10855__20190411120523.pdf
RR_Fed_23_11_HAL__3H_AC_Report_20190411120559.pdf
Roadrunner_Federal_23_11_HAL__3H_rev0.csv_20190411120622.pdf
RR_Fed_23_11_HAL__3H_Wellbore_Diagram_20190417110110.pdf

Other proposed operations facets description:

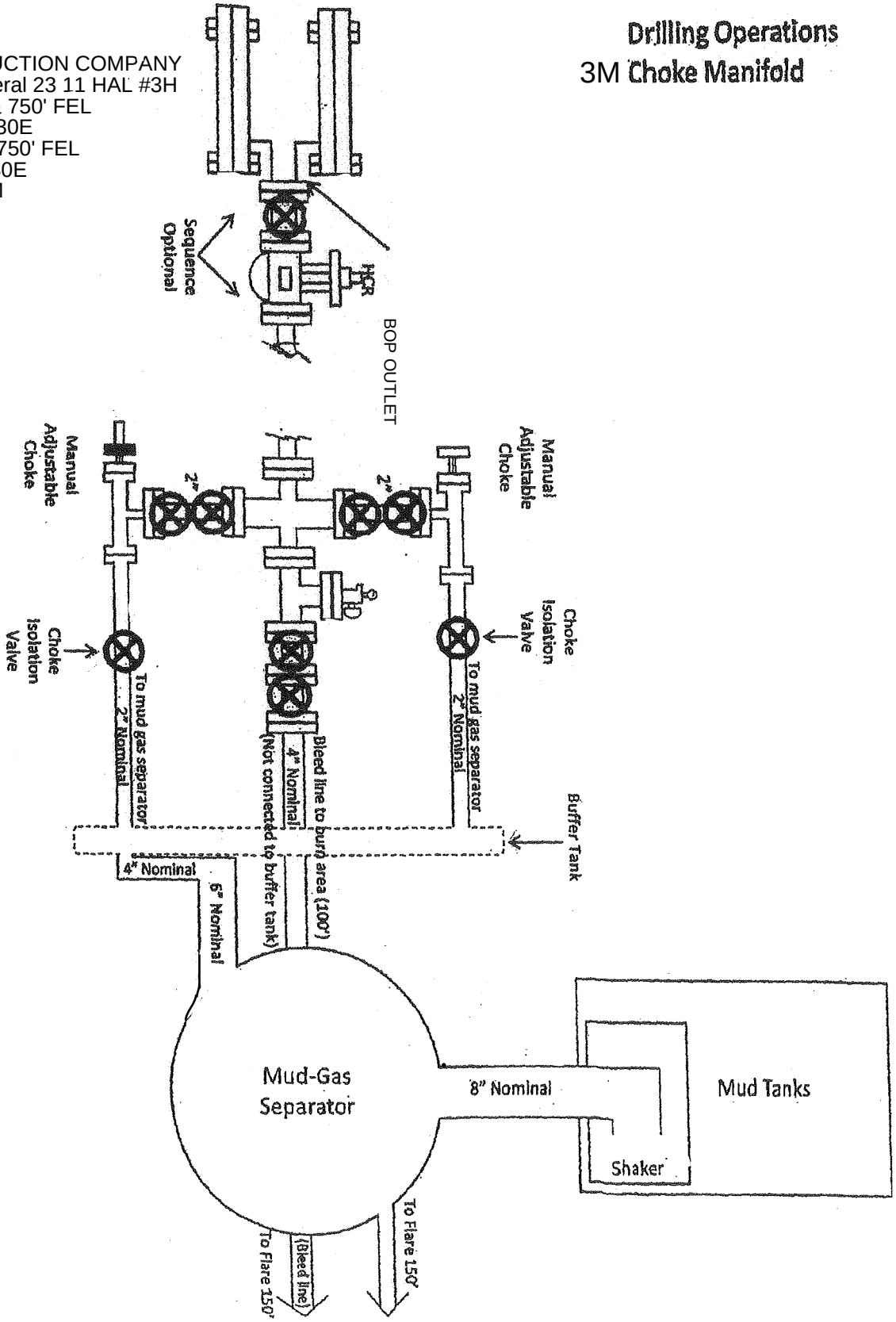
Other proposed operations facets attachment:

RR_Fed_23_11_HAL___3H___Gas_Capture_Plan_20190417110125.pdf

Other Variance attachment:

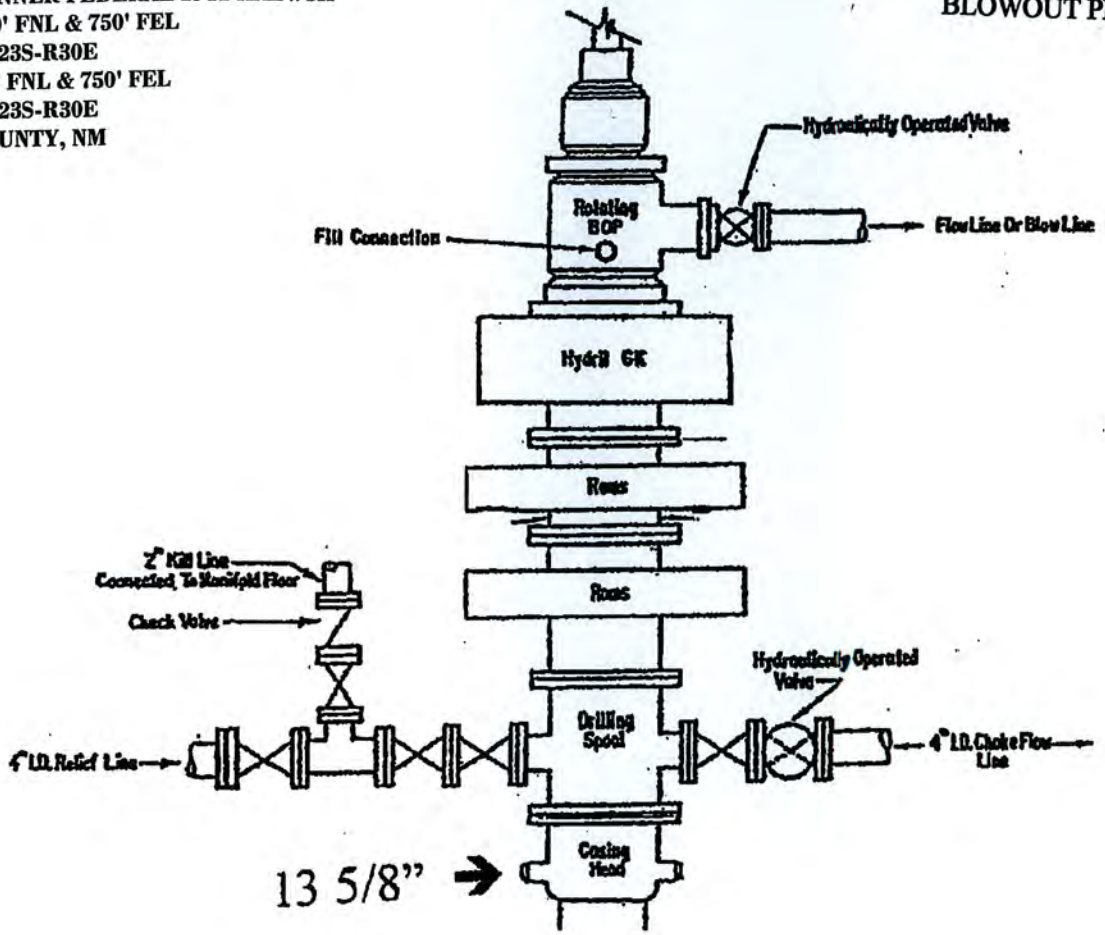
STRATA PRODUCTION COMPANY
Roadrunner Federal 23 11 HAL #3H
SHL:1980' FNL & 750' FEL
Sec. 23 -T23S-R30E
BHL:100' FNL & 750' FEL
Sec. 11-T23S-R30E
Eddy County, NM

Drilling Operations
3M Choke Manifold



STRATA PRODUCTION COMPANY
ROADRUNNER FEDERAL 23 11 HAL #3H
SHL: 1980' FNL & 750' FEL
SEC. 23-T23S-R30E
BHL: 100' FNL & 750' FEL
SEC. 11-T23S-R30E
EDDY COUNTY, NM

3000# PSI WORKING PRESSURE BLOWOUT PREVENTER HOOK-UP



The blowout preventer assembly shall consist of one single type blind ram preventer and one single type pipe ram preventer, both hydraulically operated; a Hydril "GK" preventer, a rotating blowout preventer; valves; chokes and connections, as illustrated. If a tapered drill string is used, a ram preventer must be provided for each size of drill pipe. Casing and tubing rams to fit the preventers are to be available as needed. If correct in size, the flanged outlets of the ram preventer may be used for connecting to the 4-inch I.D. choke flow line and 4-inch I.D. relief line, except when air or gas drilling. All preventer connections are to be open-face flanged.

Minimum operating equipment for the preventers and hydraulically operated valves shall be as follows: (1) Multiple pumps, driven by a continuous source of power, capable of fluid charging the total accumulator volume from the nitrogen precharge pressure to its rated pressure within____ minutes. Also, the pumps are to be connected to the hydraulic operating system which is to be a closed system. (2) Accumulators with a precharge of nitrogen of not less than 750 PSI and connected so as to receive the aforementioned fluid charge. With the charging pumps shut down, the pressurized fluid volume stored in the accumulators must be sufficient to close all the pressure-operated devices simultaneously, within_____ seconds; after closure, the remaining accumulator pressure shall be not less than 1000 PSI with the remaining accumulator fluid volume at least____ percent of the original. (3) When requested, an additional source of power, remote and equivalent, is to be available to operate the above pumps; or there shall be additional pumps operated by separate power and equal in performance capabilities.

The closing manifold and remote closing manifold shall have a separate control for each pressure-operated device. Controls are to be labeled, with control handles indicating open and closed positions. A pressure reducer and regulator must be provided for operating the Hydril preventer. When requested, a second pressure reducer shall be available to limit operating fluid pressures to ram preventers. Gulf Legion No. 38 hydraulic oil, an equivalent or better, is to be used as the fluid to operate the hydraulic equipment.

The choke manifold, choke flow line, relief line, and choke lines are to be supported by metal stands and adequately anchored. The choke flow line, relief line, and choke lines shall be constructed as straight as possible and without sharp bends. Easy and safe access is to be maintained to the choke manifold. If deemed necessary, walkways and stairways shall be erected in and around the choke manifold. All valves are to be selected for operation in the presence of oil, gas, and drilling fluids. The choke flow line valves and relief line valves connected to the drilling spool and all ram type preventers must be equipped with stem extensions, universal joints if needed, and hand wheels which are to extend beyond the edge of the derrick substructure. All other valves are to be equipped with handles.

* To include derrick floor mounted controls.

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.

Strata Production Company

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 Sheriff's Office (Lovington)	**575-396-3611**
New Mexico State Police (Artesia)	**575-748-9718**
New Mexico State Police (Carlsbad)	**575-885-3137**
New Mexico State Police (Hobbs)	**575-392-5588**
New Mexico State Police (Roswell)	**575-622-7200**
Carlsbad Hospital	**575-887-4100**
Lea Regional Hospital (Hobbs)	**575-492-5000**
Jal Medical Center	**575-395-2221**
Eunice Medical Center	**575-394-2112**
Lovington Medical Center	**575-396--2959**
Eastern NM Medical Center (Roswell)	**575-622-8170**
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, ext 18**
Cheyenne Scharf	**307-360-3062**
Rygel Russell	**575-626-1479**

Strata Production Company

Well: Roadrunner Federal 23 11 HAL # 3H
Site: Section 23-T23S-R30E
Project: Eddy County, New Mexico NAD83 NM E
Design: rev0

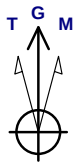
SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Annotation
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	6998.00	0.00	0.00	6998.00	0.00	0.00	0.00	0.00	0.00	KOP Begin 10°/100' build
3	7901.52	90.35	359.79	7570.95	576.47	-2.14	10.00	359.79	576.48	Begin 90.35° lateral
4	19774.08	90.35	359.79	7498.00	12448.72	-46.30	0.00	0.00	12448.81	PBHL/TD 19774.08 MD/7498.00 TVD

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

System Datum: Mean Sea Level
Depth Reference: GL @ 3253.00ft
Surface location

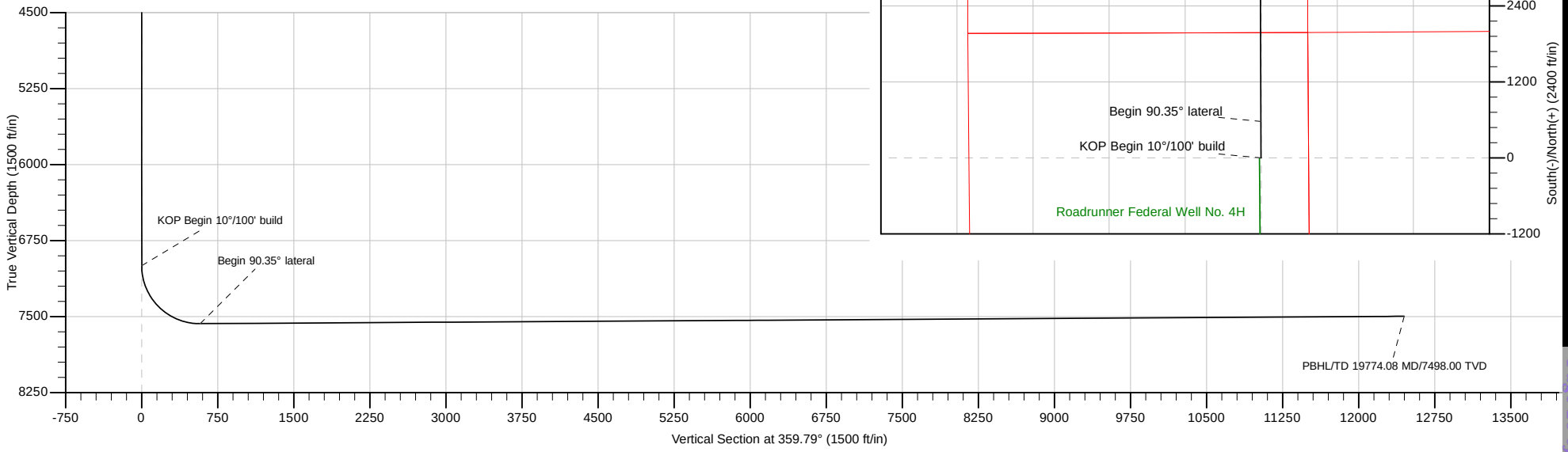
Northing	Easting	Latittude	Longitude
470409.20	692107.80	32.29228580	-103.84540715

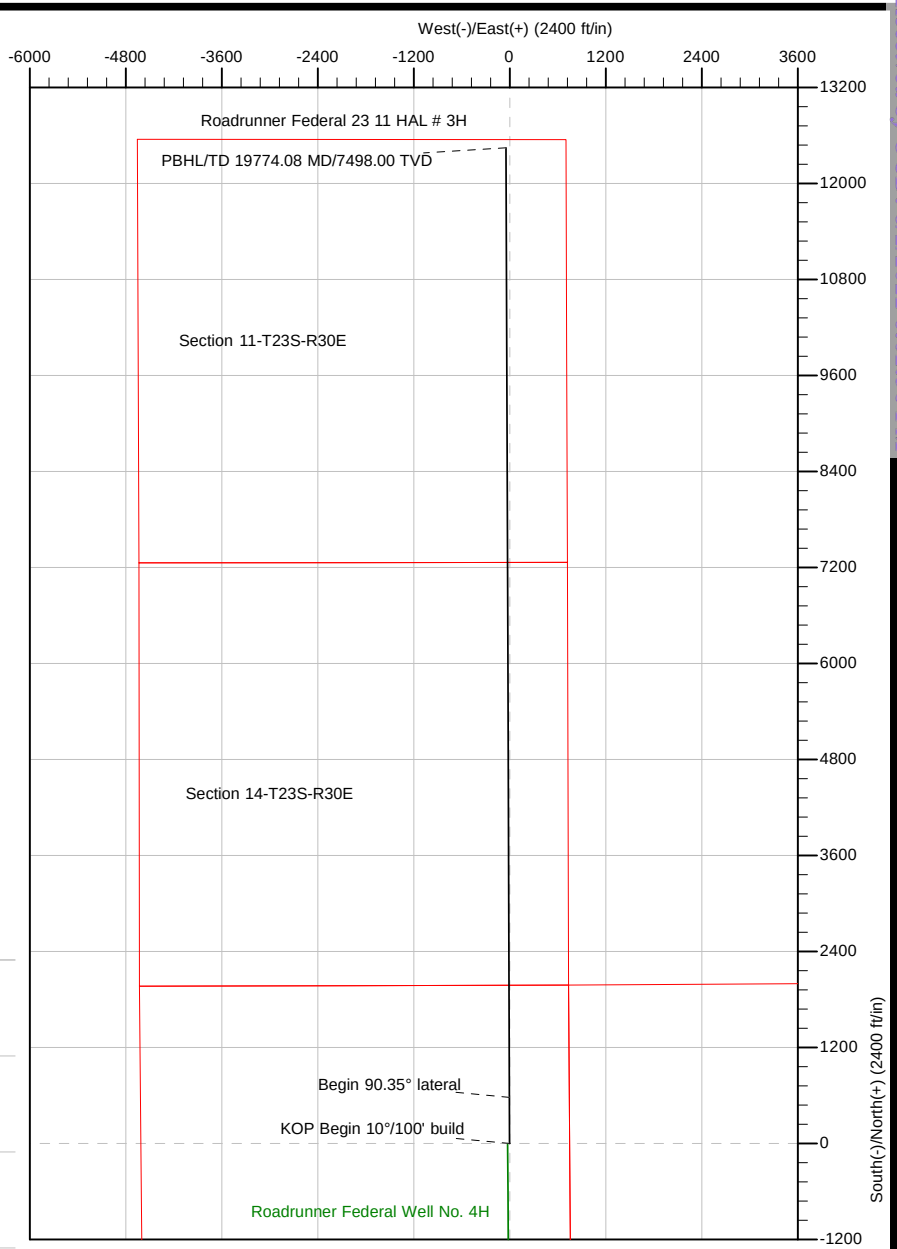


Azimuths to Grid North
True North: -0.26°
Magnetic North: 6.63°

Magnetic Field
Strength: 47767.8snT
Dip Angle: 60.06°
Date: 3/30/2019
Model: IGRF2015

M3P DIRECTIONAL SERVICES





Standard_Report

Company:	Strata Production Company	**Local Co-ordinate Reference:**	Well Roadrunner Federal 23 11 HAL # 3H
Project:	Eddy County, New Mexico NAD83 NM E	**TVD Reference:**	GL @ 3253.00ft
Site:	Section 23-T23S-R30E	**MD Reference:**	GL @ 3253.00ft
Well:	Roadrunner Federal 23 11 HAL # 3H	**North Reference:**	Grid
Wellbore:	Original Hole	**Survey Calculation Method:**	Minimum Curvature
Design:	rev0	**Database:**	DB_Jul2216dt_v14

Project Eddy County, New Mexico NAD83 NM E

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

Site Section 23-T23S-R30E

Site Position:		**Northing:**	469,746.78 usft	**Latitude:**	32.29048875
From:	Map	**Easting:**	690,192.53 usft	**Longitude:**	-103.85161483
Position Uncertainty:	0.00 ft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	0.26 °

Well Roadrunner Federal 23 11 HAL # 3H, Surf loc: 1980 FNL 750 FEL Section 23-T23S-R30E

Well Position	**+N/-S**	0.00 ft	**Northing:**	470,409.20 usft	**Latitude:**	32.29228580
	+E/-W	0.00 ft	**Easting:**	692,107.80 usft	**Longitude:**	-103.84540715
Position Uncertainty		0.00 ft	**Wellhead Elevation:**	ft	**Ground Level:**	3,253.00 ft

Wellbore Original Hole

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	3/30/2019	6.89	60.06	47,767.78442675

Design rev0

Audit Notes:

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

Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	359.79

Survey Tool Program **Date** 11/5/2018

From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.00	19,774.08	rev0 (Original Hole)	MWD	OWSG MWD - Standard

Company:	Strata Production Company	**Local Co-ordinate Reference:**	Well Roadrunner Federal 23 11 HAL # 3H
Project:	Eddy County, New Mexico NAD83 NM E	**TVD Reference:**	GL @ 3253.00ft
Site:	Section 23-T23S-R30E	**MD Reference:**	GL @ 3253.00ft
Well:	Roadrunner Federal 23 11 HAL # 3H	**North Reference:**	Grid
Wellbore:	Original Hole	**Survey Calculation Method:**	Minimum Curvature
Design:	rev0	**Database:**	DB_Jul2216dt_v14

Planned Survey

MD (ft)	Inc (°)	Azi (azimuth) (°)	TVD (ft)	N/S (ft)	E/W (ft)	DLeg (°/100ft)	V. Sec (ft)	Northing (usft)	Easting (usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	470,409.20	692,107.80
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	470,409.20	692,107.80
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	470,409.20	692,107.80
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	470,409.20	692,107.80
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	470,409.20	692,107.80
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	470,409.20	692,107.80
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	470,409.20	692,107.80
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	470,409.20	692,107.80
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	470,409.20	692,107.80
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	470,409.20	692,107.80
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	470,409.20	692,107.80
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	470,409.20	692,107.80
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	470,409.20	692,107.80
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	470,409.20	692,107.80
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	470,409.20	692,107.80
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	470,409.20	692,107.80
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	470,409.20	692,107.80
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	470,409.20	692,107.80
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	470,409.20	692,107.80
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	470,409.20	692,107.80
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	470,409.20	692,107.80
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	470,409.20	692,107.80
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	470,409.20	692,107.80
2,300.00	0.00	0.00	2,300.00	0.00	0.00	0.00	0.00	470,409.20	692,107.80
2,400.00	0.00	0.00	2,400.00	0.00	0.00	0.00	0.00	470,409.20	692,107.80
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	470,409.20	692,107.80
2,600.00	0.00	0.00	2,600.00	0.00	0.00	0.00	0.00	470,409.20	692,107.80

Company:	Strata Production Company	**Local Co-ordinate Reference:**	Well Roadrunner Federal 23 11 HAL # 3H
Project:	Eddy County, New Mexico NAD83 NM E	**TVD Reference:**	GL @ 3253.00ft
Site:	Section 23-T23S-R30E	**MD Reference:**	GL @ 3253.00ft
Well:	Roadrunner Federal 23 11 HAL # 3H	**North Reference:**	Grid
Wellbore:	Original Hole	**Survey Calculation Method:**	Minimum Curvature
Design:	rev0	**Database:**	DB_Jul2216dt_v14

Planned Survey

MD (ft)	Inc (°)	Azi (azimuth) (°)	TVD (ft)	N/S (ft)	E/W (ft)	DLeg (°/100ft)	V. Sec (ft)	Northing (usft)	Easting (usft)
2,700.00	0.00	0.00	2,700.00	0.00	0.00	0.00	0.00	470,409.20	692,107.80
2,800.00	0.00	0.00	2,800.00	0.00	0.00	0.00	0.00	470,409.20	692,107.80
2,900.00	0.00	0.00	2,900.00	0.00	0.00	0.00	0.00	470,409.20	692,107.80
3,000.00	0.00	0.00	3,000.00	0.00	0.00	0.00	0.00	470,409.20	692,107.80
3,100.00	0.00	0.00	3,100.00	0.00	0.00	0.00	0.00	470,409.20	692,107.80
3,200.00	0.00	0.00	3,200.00	0.00	0.00	0.00	0.00	470,409.20	692,107.80
3,300.00	0.00	0.00	3,300.00	0.00	0.00	0.00	0.00	470,409.20	692,107.80
3,400.00	0.00	0.00	3,400.00	0.00	0.00	0.00	0.00	470,409.20	692,107.80
3,500.00	0.00	0.00	3,500.00	0.00	0.00	0.00	0.00	470,409.20	692,107.80
3,600.00	0.00	0.00	3,600.00	0.00	0.00	0.00	0.00	470,409.20	692,107.80
3,700.00	0.00	0.00	3,700.00	0.00	0.00	0.00	0.00	470,409.20	692,107.80
3,800.00	0.00	0.00	3,800.00	0.00	0.00	0.00	0.00	470,409.20	692,107.80
3,900.00	0.00	0.00	3,900.00	0.00	0.00	0.00	0.00	470,409.20	692,107.80
4,000.00	0.00	0.00	4,000.00	0.00	0.00	0.00	0.00	470,409.20	692,107.80
4,100.00	0.00	0.00	4,100.00	0.00	0.00	0.00	0.00	470,409.20	692,107.80
4,200.00	0.00	0.00	4,200.00	0.00	0.00	0.00	0.00	470,409.20	692,107.80
4,300.00	0.00	0.00	4,300.00	0.00	0.00	0.00	0.00	470,409.20	692,107.80
4,400.00	0.00	0.00	4,400.00	0.00	0.00	0.00	0.00	470,409.20	692,107.80
4,500.00	0.00	0.00	4,500.00	0.00	0.00	0.00	0.00	470,409.20	692,107.80
4,600.00	0.00	0.00	4,600.00	0.00	0.00	0.00	0.00	470,409.20	692,107.80
4,700.00	0.00	0.00	4,700.00	0.00	0.00	0.00	0.00	470,409.20	692,107.80
4,800.00	0.00	0.00	4,800.00	0.00	0.00	0.00	0.00	470,409.20	692,107.80
4,900.00	0.00	0.00	4,900.00	0.00	0.00	0.00	0.00	470,409.20	692,107.80
5,000.00	0.00	0.00	5,000.00	0.00	0.00	0.00	0.00	470,409.20	692,107.80
5,100.00	0.00	0.00	5,100.00	0.00	0.00	0.00	0.00	470,409.20	692,107.80
5,200.00	0.00	0.00	5,200.00	0.00	0.00	0.00	0.00	470,409.20	692,107.80
5,300.00	0.00	0.00	5,300.00	0.00	0.00	0.00	0.00	470,409.20	692,107.80

Company:	Strata Production Company	**Local Co-ordinate Reference:**	Well Roadrunner Federal 23 11 HAL # 3H
Project:	Eddy County, New Mexico NAD83 NM E	**TVD Reference:**	GL @ 3253.00ft
Site:	Section 23-T23S-R30E	**MD Reference:**	GL @ 3253.00ft
Well:	Roadrunner Federal 23 11 HAL # 3H	**North Reference:**	Grid
Wellbore:	Original Hole	**Survey Calculation Method:**	Minimum Curvature
Design:	rev0	**Database:**	DB_Jul2216dt_v14

Planned Survey

MD (ft)	Inc (°)	Azi (azimuth) (°)	TVD (ft)	N/S (ft)	E/W (ft)	DLeg (°/100ft)	V. Sec (ft)	Northing (usft)	Easting (usft)
5,400.00	0.00	0.00	5,400.00	0.00	0.00	0.00	0.00	470,409.20	692,107.80
5,500.00	0.00	0.00	5,500.00	0.00	0.00	0.00	0.00	470,409.20	692,107.80
5,600.00	0.00	0.00	5,600.00	0.00	0.00	0.00	0.00	470,409.20	692,107.80
5,700.00	0.00	0.00	5,700.00	0.00	0.00	0.00	0.00	470,409.20	692,107.80
5,800.00	0.00	0.00	5,800.00	0.00	0.00	0.00	0.00	470,409.20	692,107.80
5,900.00	0.00	0.00	5,900.00	0.00	0.00	0.00	0.00	470,409.20	692,107.80
6,000.00	0.00	0.00	6,000.00	0.00	0.00	0.00	0.00	470,409.20	692,107.80
6,100.00	0.00	0.00	6,100.00	0.00	0.00	0.00	0.00	470,409.20	692,107.80
6,200.00	0.00	0.00	6,200.00	0.00	0.00	0.00	0.00	470,409.20	692,107.80
6,300.00	0.00	0.00	6,300.00	0.00	0.00	0.00	0.00	470,409.20	692,107.80
6,400.00	0.00	0.00	6,400.00	0.00	0.00	0.00	0.00	470,409.20	692,107.80
6,500.00	0.00	0.00	6,500.00	0.00	0.00	0.00	0.00	470,409.20	692,107.80
6,600.00	0.00	0.00	6,600.00	0.00	0.00	0.00	0.00	470,409.20	692,107.80
6,700.00	0.00	0.00	6,700.00	0.00	0.00	0.00	0.00	470,409.20	692,107.80
6,800.00	0.00	0.00	6,800.00	0.00	0.00	0.00	0.00	470,409.20	692,107.80
6,900.00	0.00	0.00	6,900.00	0.00	0.00	0.00	0.00	470,409.20	692,107.80
6,998.00	0.00	0.00	6,998.00	0.00	0.00	0.00	0.00	470,409.20	692,107.80
KOP Begin 10°/100' build									
7,000.00	0.20	359.79	7,000.00	0.00	0.00	10.00	0.00	470,409.20	692,107.80
7,100.00	10.20	359.79	7,099.46	9.06	-0.03	10.00	9.06	470,418.26	692,107.77
7,200.00	20.20	359.79	7,195.84	35.24	-0.13	10.00	35.24	470,444.44	692,107.67
7,300.00	30.20	359.79	7,286.21	77.76	-0.29	10.00	77.76	470,486.96	692,107.51
7,400.00	40.20	359.79	7,367.82	135.33	-0.50	10.00	135.33	470,544.53	692,107.30
7,500.00	50.20	359.79	7,438.19	206.20	-0.77	10.00	206.20	470,615.40	692,107.03
7,600.00	60.20	359.79	7,495.19	288.21	-1.07	10.00	288.21	470,697.41	692,106.73
7,700.00	70.20	359.79	7,537.08	378.87	-1.41	10.00	378.88	470,788.07	692,106.39
7,800.00	80.20	359.79	7,562.60	475.43	-1.77	10.00	475.43	470,884.63	692,106.03

Company:	Strata Production Company	**Local Co-ordinate Reference:**	Well Roadrunner Federal 23 11 HAL # 3H
Project:	Eddy County, New Mexico NAD83 NM E	**TVD Reference:**	GL @ 3253.00ft
Site:	Section 23-T23S-R30E	**MD Reference:**	GL @ 3253.00ft
Well:	Roadrunner Federal 23 11 HAL # 3H	**North Reference:**	Grid
Wellbore:	Original Hole	**Survey Calculation Method:**	Minimum Curvature
Design:	rev0	**Database:**	DB_Jul2216dt_v14

Planned Survey

MD (ft)	Inc (°)	Azi (azimuth) (°)	TVD (ft)	N/S (ft)	E/W (ft)	DLeg (°/100ft)	V. Sec (ft)	Northing (usft)	Easting (usft)
7,900.00	90.20	359.79	7,570.95	574.95	-2.14	10.00	574.96	470,984.15	692,105.66
7,901.52	90.35	359.79	7,570.95	576.47	-2.14	10.00	576.48	470,985.67	692,105.66
Begin 90.35° lateral									
8,000.00	90.35	359.79	7,570.34	674.95	-2.51	0.00	674.96	471,084.15	692,105.29
8,100.00	90.35	359.79	7,569.73	774.95	-2.88	0.00	774.95	471,184.15	692,104.92
8,200.00	90.35	359.79	7,569.11	874.95	-3.25	0.00	874.95	471,284.14	692,104.55
8,300.00	90.35	359.79	7,568.50	974.94	-3.63	0.00	974.95	471,384.14	692,104.17
8,400.00	90.35	359.79	7,567.88	1,074.94	-4.00	0.00	1,074.95	471,484.14	692,103.80
8,500.00	90.35	359.79	7,567.27	1,174.94	-4.37	0.00	1,174.95	471,584.14	692,103.43
8,600.00	90.35	359.79	7,566.66	1,274.94	-4.74	0.00	1,274.94	471,684.13	692,103.06
8,700.00	90.35	359.79	7,566.04	1,374.93	-5.11	0.00	1,374.94	471,784.13	692,102.69
8,800.00	90.35	359.79	7,565.43	1,474.93	-5.49	0.00	1,474.94	471,884.13	692,102.31
8,900.00	90.35	359.79	7,564.81	1,574.93	-5.86	0.00	1,574.94	471,984.12	692,101.94
9,000.00	90.35	359.79	7,564.20	1,674.93	-6.23	0.00	1,674.94	472,084.12	692,101.57
9,100.00	90.35	359.79	7,563.58	1,774.92	-6.60	0.00	1,774.94	472,184.12	692,101.20
9,200.00	90.35	359.79	7,562.97	1,874.92	-6.97	0.00	1,874.93	472,284.12	692,100.83
9,300.00	90.35	359.79	7,562.35	1,974.92	-7.35	0.00	1,974.93	472,384.11	692,100.45
9,400.00	90.35	359.79	7,561.74	2,074.92	-7.72	0.00	2,074.93	472,484.11	692,100.08
9,500.00	90.35	359.79	7,561.13	2,174.91	-8.09	0.00	2,174.93	472,584.11	692,099.71
9,600.00	90.35	359.79	7,560.51	2,274.91	-8.46	0.00	2,274.93	472,684.11	692,099.34
9,700.00	90.35	359.79	7,559.90	2,374.91	-8.83	0.00	2,374.92	472,784.10	692,098.97
9,800.00	90.35	359.79	7,559.28	2,474.90	-9.20	0.00	2,474.92	472,884.10	692,098.60
9,900.00	90.35	359.79	7,558.67	2,574.90	-9.58	0.00	2,574.92	472,984.10	692,098.22
10,000.00	90.35	359.79	7,558.05	2,674.90	-9.95	0.00	2,674.92	473,084.09	692,097.85
10,100.00	90.35	359.79	7,557.44	2,774.90	-10.32	0.00	2,774.92	473,184.09	692,097.48
10,200.00	90.35	359.79	7,556.82	2,874.89	-10.69	0.00	2,874.91	473,284.09	692,097.11
10,300.00	90.35	359.79	7,556.21	2,974.89	-11.06	0.00	2,974.91	473,384.09	692,096.74

Company:	Strata Production Company	**Local Co-ordinate Reference:**	Well Roadrunner Federal 23 11 HAL # 3H
Project:	Eddy County, New Mexico NAD83 NM E	**TVD Reference:**	GL @ 3253.00ft
Site:	Section 23-T23S-R30E	**MD Reference:**	GL @ 3253.00ft
Well:	Roadrunner Federal 23 11 HAL # 3H	**North Reference:**	Grid
Wellbore:	Original Hole	**Survey Calculation Method:**	Minimum Curvature
Design:	rev0	**Database:**	DB_Jul2216dt_v14

Planned Survey

MD (ft)	Inc (°)	Azi (azimuth) (°)	TVD (ft)	N/S (ft)	E/W (ft)	DLeg (°/100ft)	V. Sec (ft)	Northing (usft)	Easting (usft)
10,400.00	90.35	359.79	7,555.60	3,074.89	-11.44	0.00	3,074.91	473,484.08	692,096.36
10,500.00	90.35	359.79	7,554.98	3,174.89	-11.81	0.00	3,174.91	473,584.08	692,095.99
10,600.00	90.35	359.79	7,554.37	3,274.88	-12.18	0.00	3,274.91	473,684.08	692,095.62
10,700.00	90.35	359.79	7,553.75	3,374.88	-12.55	0.00	3,374.90	473,784.07	692,095.25
10,800.00	90.35	359.79	7,553.14	3,474.88	-12.92	0.00	3,474.90	473,884.07	692,094.88
10,900.00	90.35	359.79	7,552.52	3,574.88	-13.30	0.00	3,574.90	473,984.07	692,094.50
11,000.00	90.35	359.79	7,551.91	3,674.87	-13.67	0.00	3,674.90	474,084.07	692,094.13
11,100.00	90.35	359.79	7,551.29	3,774.87	-14.04	0.00	3,774.90	474,184.06	692,093.76
11,200.00	90.35	359.79	7,550.68	3,874.87	-14.41	0.00	3,874.90	474,284.06	692,093.39
11,300.00	90.35	359.79	7,550.07	3,974.87	-14.78	0.00	3,974.89	474,384.06	692,093.02
11,400.00	90.35	359.79	7,549.45	4,074.86	-15.16	0.00	4,074.89	474,484.06	692,092.64
11,500.00	90.35	359.79	7,548.84	4,174.86	-15.53	0.00	4,174.89	474,584.05	692,092.27
11,600.00	90.35	359.79	7,548.22	4,274.86	-15.90	0.00	4,274.89	474,684.05	692,091.90
11,700.00	90.35	359.79	7,547.61	4,374.86	-16.27	0.00	4,374.89	474,784.05	692,091.53
11,800.00	90.35	359.79	7,546.99	4,474.85	-16.64	0.00	4,474.88	474,884.04	692,091.16
11,900.00	90.35	359.79	7,546.38	4,574.85	-17.02	0.00	4,574.88	474,984.04	692,090.78
12,000.00	90.35	359.79	7,545.77	4,674.85	-17.39	0.00	4,674.88	475,084.04	692,090.41
12,100.00	90.35	359.79	7,545.15	4,774.85	-17.76	0.00	4,774.88	475,184.04	692,090.04
12,200.00	90.35	359.79	7,544.54	4,874.84	-18.13	0.00	4,874.88	475,284.03	692,089.67
12,300.00	90.35	359.79	7,543.92	4,974.84	-18.50	0.00	4,974.87	475,384.03	692,089.30
12,400.00	90.35	359.79	7,543.31	5,074.84	-18.87	0.00	5,074.87	475,484.03	692,088.93
12,500.00	90.35	359.79	7,542.69	5,174.84	-19.25	0.00	5,174.87	475,584.02	692,088.55
12,600.00	90.35	359.79	7,542.08	5,274.83	-19.62	0.00	5,274.87	475,684.02	692,088.18
12,700.00	90.35	359.79	7,541.46	5,374.83	-19.99	0.00	5,374.87	475,784.02	692,087.81
12,800.00	90.35	359.79	7,540.85	5,474.83	-20.36	0.00	5,474.87	475,884.02	692,087.44
12,900.00	90.35	359.79	7,540.24	5,574.82	-20.73	0.00	5,574.86	475,984.01	692,087.07
13,000.00	90.35	359.79	7,539.62	5,674.82	-21.11	0.00	5,674.86	476,084.01	692,086.69

Company:	Strata Production Company	**Local Co-ordinate Reference:**	Well Roadrunner Federal 23 11 HAL # 3H
Project:	Eddy County, New Mexico NAD83 NM E	**TVD Reference:**	GL @ 3253.00ft
Site:	Section 23-T23S-R30E	**MD Reference:**	GL @ 3253.00ft
Well:	Roadrunner Federal 23 11 HAL # 3H	**North Reference:**	Grid
Wellbore:	Original Hole	**Survey Calculation Method:**	Minimum Curvature
Design:	rev0	**Database:**	DB_Jul2216dt_v14

Planned Survey

MD (ft)	Inc (°)	Azi (azimuth) (°)	TVD (ft)	N/S (ft)	E/W (ft)	DLeg (°/100ft)	V. Sec (ft)	Northing (usft)	Easting (usft)
13,100.00	90.35	359.79	7,539.01	5,774.82	-21.48	0.00	5,774.86	476,184.01	692,086.32
13,200.00	90.35	359.79	7,538.39	5,874.82	-21.85	0.00	5,874.86	476,284.01	692,085.95
13,300.00	90.35	359.79	7,537.78	5,974.81	-22.22	0.00	5,974.86	476,384.00	692,085.58
13,400.00	90.35	359.79	7,537.16	6,074.81	-22.59	0.00	6,074.85	476,484.00	692,085.21
13,500.00	90.35	359.79	7,536.55	6,174.81	-22.97	0.00	6,174.85	476,584.00	692,084.83
13,600.00	90.35	359.79	7,535.93	6,274.81	-23.34	0.00	6,274.85	476,683.99	692,084.46
13,700.00	90.35	359.79	7,535.32	6,374.80	-23.71	0.00	6,374.85	476,783.99	692,084.09
13,800.00	90.35	359.79	7,534.71	6,474.80	-24.08	0.00	6,474.85	476,883.99	692,083.72
13,900.00	90.35	359.79	7,534.09	6,574.80	-24.45	0.00	6,574.84	476,983.99	692,083.35
14,000.00	90.35	359.79	7,533.48	6,674.80	-24.83	0.00	6,674.84	477,083.98	692,082.97
14,100.00	90.35	359.79	7,532.86	6,774.79	-25.20	0.00	6,774.84	477,183.98	692,082.60
14,200.00	90.35	359.79	7,532.25	6,874.79	-25.57	0.00	6,874.84	477,283.98	692,082.23
14,300.00	90.35	359.79	7,531.63	6,974.79	-25.94	0.00	6,974.84	477,383.97	692,081.86
14,400.00	90.35	359.79	7,531.02	7,074.79	-26.31	0.00	7,074.84	477,483.97	692,081.49
14,500.00	90.35	359.79	7,530.40	7,174.78	-26.68	0.00	7,174.83	477,583.97	692,081.12
14,600.00	90.35	359.79	7,529.79	7,274.78	-27.06	0.00	7,274.83	477,683.97	692,080.74
14,700.00	90.35	359.79	7,529.18	7,374.78	-27.43	0.00	7,374.83	477,783.96	692,080.37
14,800.00	90.35	359.79	7,528.56	7,474.78	-27.80	0.00	7,474.83	477,883.96	692,080.00
14,900.00	90.35	359.79	7,527.95	7,574.77	-28.17	0.00	7,574.83	477,983.96	692,079.63
15,000.00	90.35	359.79	7,527.33	7,674.77	-28.54	0.00	7,674.82	478,083.96	692,079.26
15,100.00	90.35	359.79	7,526.72	7,774.77	-28.92	0.00	7,774.82	478,183.95	692,078.88
15,200.00	90.35	359.79	7,526.10	7,874.77	-29.29	0.00	7,874.82	478,283.95	692,078.51
15,300.00	90.35	359.79	7,525.49	7,974.76	-29.66	0.00	7,974.82	478,383.95	692,078.14
15,400.00	90.35	359.79	7,524.88	8,074.76	-30.03	0.00	8,074.82	478,483.94	692,077.77
15,500.00	90.35	359.79	7,524.26	8,174.76	-30.40	0.00	8,174.81	478,583.94	692,077.40
15,600.00	90.35	359.79	7,523.65	8,274.76	-30.78	0.00	8,274.81	478,683.94	692,077.02
15,700.00	90.35	359.79	7,523.03	8,374.75	-31.15	0.00	8,374.81	478,783.94	692,076.65

Company:	Strata Production Company	**Local Co-ordinate Reference:**	Well Roadrunner Federal 23 11 HAL # 3H
Project:	Eddy County, New Mexico NAD83 NM E	**TVD Reference:**	GL @ 3253.00ft
Site:	Section 23-T23S-R30E	**MD Reference:**	GL @ 3253.00ft
Well:	Roadrunner Federal 23 11 HAL # 3H	**North Reference:**	Grid
Wellbore:	Original Hole	**Survey Calculation Method:**	Minimum Curvature
Design:	rev0	**Database:**	DB_Jul2216dt_v14

Planned Survey

MD (ft)	Inc (°)	Azi (azimuth) (°)	TVD (ft)	N/S (ft)	E/W (ft)	DLeg (°/100ft)	V. Sec (ft)	Northing (usft)	Easting (usft)
15,800.00	90.35	359.79	7,522.42	8,474.75	-31.52	0.00	8,474.81	478,883.93	692,076.28
15,900.00	90.35	359.79	7,521.80	8,574.75	-31.89	0.00	8,574.81	478,983.93	692,075.91
16,000.00	90.35	359.79	7,521.19	8,674.74	-32.26	0.00	8,674.80	479,083.93	692,075.54
16,100.00	90.35	359.79	7,520.57	8,774.74	-32.64	0.00	8,774.80	479,183.92	692,075.16
16,200.00	90.35	359.79	7,519.96	8,874.74	-33.01	0.00	8,874.80	479,283.92	692,074.79
16,300.00	90.35	359.79	7,519.35	8,974.74	-33.38	0.00	8,974.80	479,383.92	692,074.42
16,400.00	90.35	359.79	7,518.73	9,074.73	-33.75	0.00	9,074.80	479,483.92	692,074.05
16,500.00	90.35	359.79	7,518.12	9,174.73	-34.12	0.00	9,174.80	479,583.91	692,073.68
16,600.00	90.35	359.79	7,517.50	9,274.73	-34.50	0.00	9,274.79	479,683.91	692,073.30
16,700.00	90.35	359.79	7,516.89	9,374.73	-34.87	0.00	9,374.79	479,783.91	692,072.93
16,800.00	90.35	359.79	7,516.27	9,474.72	-35.24	0.00	9,474.79	479,883.91	692,072.56
16,900.00	90.35	359.79	7,515.66	9,574.72	-35.61	0.00	9,574.79	479,983.90	692,072.19
17,000.00	90.35	359.79	7,515.04	9,674.72	-35.98	0.00	9,674.79	480,083.90	692,071.82
17,100.00	90.35	359.79	7,514.43	9,774.72	-36.35	0.00	9,774.78	480,183.90	692,071.45
17,200.00	90.35	359.79	7,513.82	9,874.71	-36.73	0.00	9,874.78	480,283.89	692,071.07
17,300.00	90.35	359.79	7,513.20	9,974.71	-37.10	0.00	9,974.78	480,383.89	692,070.70
17,400.00	90.35	359.79	7,512.59	10,074.71	-37.47	0.00	10,074.78	480,483.89	692,070.33
17,500.00	90.35	359.79	7,511.97	10,174.71	-37.84	0.00	10,174.78	480,583.89	692,069.96
17,600.00	90.35	359.79	7,511.36	10,274.70	-38.21	0.00	10,274.77	480,683.88	692,069.59
17,700.00	90.35	359.79	7,510.74	10,374.70	-38.59	0.00	10,374.77	480,783.88	692,069.21
17,800.00	90.35	359.79	7,510.13	10,474.70	-38.96	0.00	10,474.77	480,883.88	692,068.84
17,900.00	90.35	359.79	7,509.51	10,574.70	-39.33	0.00	10,574.77	480,983.87	692,068.47
18,000.00	90.35	359.79	7,508.90	10,674.69	-39.70	0.00	10,674.77	481,083.87	692,068.10
18,100.00	90.35	359.79	7,508.29	10,774.69	-40.07	0.00	10,774.77	481,183.87	692,067.73
18,200.00	90.35	359.79	7,507.67	10,874.69	-40.45	0.00	10,874.76	481,283.87	692,067.35
18,300.00	90.35	359.79	7,507.06	10,974.69	-40.82	0.00	10,974.76	481,383.86	692,066.98
18,400.00	90.35	359.79	7,506.44	11,074.68	-41.19	0.00	11,074.76	481,483.86	692,066.61

Company:	Strata Production Company	**Local Co-ordinate Reference:**	Well Roadrunner Federal 23 11 HAL # 3H
Project:	Eddy County, New Mexico NAD83 NM E	**TVD Reference:**	GL @ 3253.00ft
Site:	Section 23-T23S-R30E	**MD Reference:**	GL @ 3253.00ft
Well:	Roadrunner Federal 23 11 HAL # 3H	**North Reference:**	Grid
Wellbore:	Original Hole	**Survey Calculation Method:**	Minimum Curvature
Design:	rev0	**Database:**	DB_Jul2216dt_v14

Planned Survey

MD (ft)	Inc (°)	Azi (azimuth) (°)	TVD (ft)	N/S (ft)	E/W (ft)	DLeg (°/100ft)	V. Sec (ft)	Northing (usft)	Easting (usft)
18,500.00	90.35	359.79	7,505.83	11,174.68	-41.56	0.00	11,174.76	481,583.86	692,066.24
18,600.00	90.35	359.79	7,505.21	11,274.68	-41.93	0.00	11,274.76	481,683.86	692,065.87
18,700.00	90.35	359.79	7,504.60	11,374.68	-42.31	0.00	11,374.75	481,783.85	692,065.49
18,800.00	90.35	359.79	7,503.98	11,474.67	-42.68	0.00	11,474.75	481,883.85	692,065.12
18,900.00	90.35	359.79	7,503.37	11,574.67	-43.05	0.00	11,574.75	481,983.85	692,064.75
19,000.00	90.35	359.79	7,502.76	11,674.67	-43.42	0.00	11,674.75	482,083.84	692,064.38
19,100.00	90.35	359.79	7,502.14	11,774.66	-43.79	0.00	11,774.75	482,183.84	692,064.01
19,200.00	90.35	359.79	7,501.53	11,874.66	-44.17	0.00	11,874.74	482,283.84	692,063.64
19,300.00	90.35	359.79	7,500.91	11,974.66	-44.54	0.00	11,974.74	482,383.84	692,063.26
19,400.00	90.35	359.79	7,500.30	12,074.66	-44.91	0.00	12,074.74	482,483.83	692,062.89
19,500.00	90.35	359.79	7,499.68	12,174.65	-45.28	0.00	12,174.74	482,583.83	692,062.52
19,600.00	90.35	359.79	7,499.07	12,274.65	-45.65	0.00	12,274.74	482,683.83	692,062.15
19,700.00	90.35	359.79	7,498.46	12,374.65	-46.02	0.00	12,374.74	482,783.82	692,061.78
19,774.08	90.35	359.79	7,498.00	12,448.72	-46.30	0.00	12,448.81	482,857.90	692,061.50
PBHL/TD 19774.08 MD/7498.00 TVD									

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	Local Coordinates +E/-W (ft)	Comment
6,998.00	6,998.00	0.00	0.00	KOP Begin 10°/100' build
7,901.52	7,570.95	576.47	-2.14	Begin 90.35° lateral
19,774.08	7,498.00	12,448.72	-46.30	PBHL/TD 19774.08 MD/7498.00 TVD

PECOS DISTRICT
DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	**STRATA PRODUCTION COMPANY**
LEASE NO.:	**NMNM114978**
WELL NAME & NO.:	**ROADRUNNER FED 23 11 HAL 3H**
SURFACE HOLE FOOTAGE:	**1980'/N & 750'/E**
BOTTOM HOLE FOOTAGE	**100'/N & 750'/E**
LOCATION:	**Section 23, T.23 S., R.30 E., NMPM**
COUNTY:	**Eddy County, New Mexico**

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	[x] COM	[ ] Unit

A. HYDROGEN SULFIDE

A Hydrogen Sulfide (H2S) Drilling Plan shall be activated 500 feet prior to drilling into the **Corral Canyon** formation. As a result, the Hydrogen Sulfide area must meet Onshore Order 6 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, please provide measured values and formations to the BLM.

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 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

Approval Date: 10/21/2020

24 hours in the Potash Area 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 or potash. Excess cement calculates to 7%, additional cement might be required.**

❖ In Medium 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.

❖ In R111 Potash Areas if cement does not circulate to surface on the first two salt protection 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 to surface. If cement does not circulate, contact the appropriate BLM office.

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 **3000 (3M)** psi.
   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. 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.
e. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.

JJP07272020

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) 393-3612

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
      - 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.

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:

    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 when specified), 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 plug. However, **no tests** shall commence until the cement has had a minimum of 24 hours setup time, except the casing pressure test can be initiated immediately after bumping the plug (only applies to single stage cement jobs).

    c. The tests shall be done by an independent service company utilizing a test plug not a cup or J-packer. 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. 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.

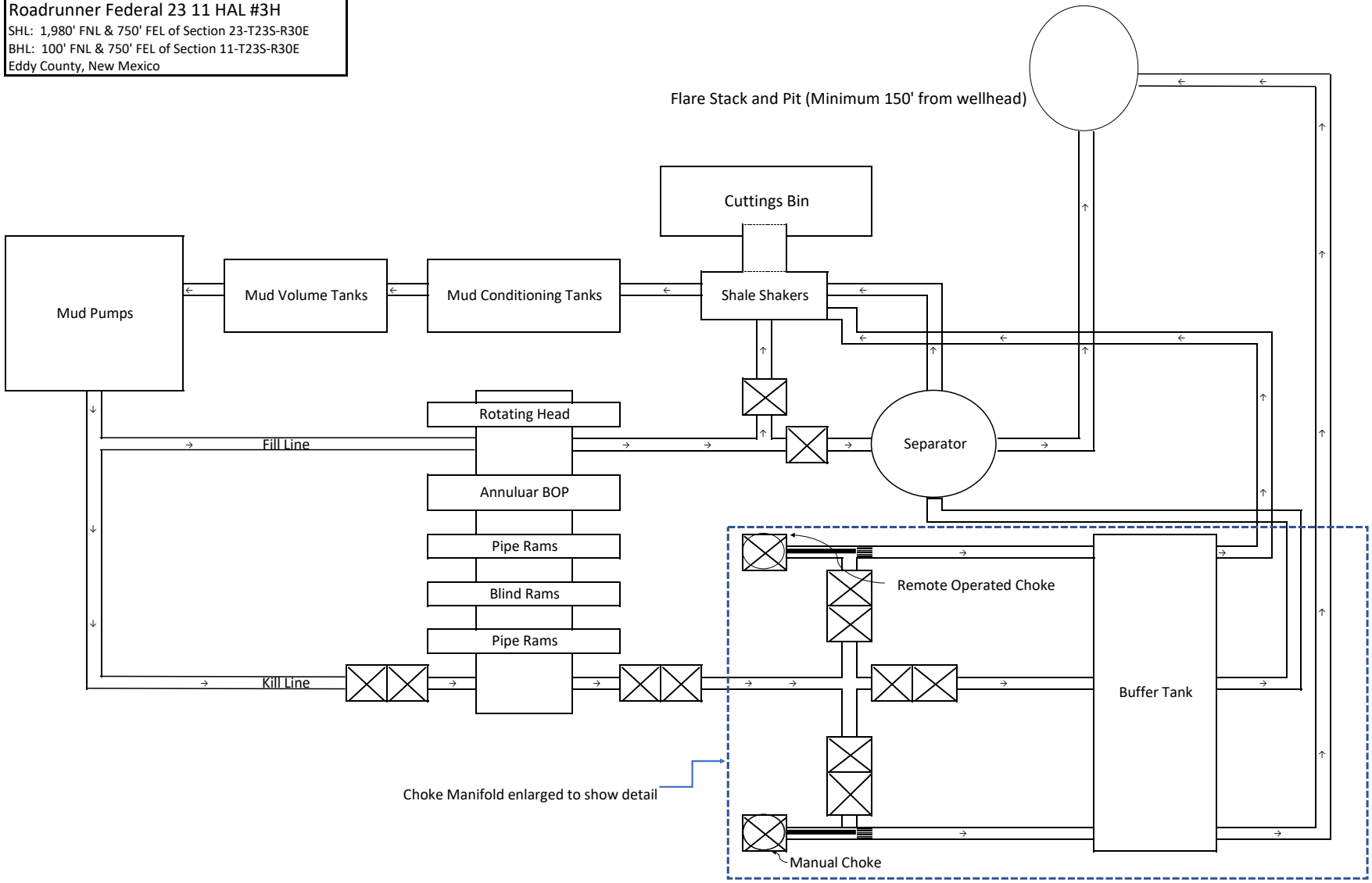
D. WASTE MATERIAL AND FLUIDS

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.

Approval Date: 10/21/2020

Strata Production Company
Roadrunner Federal 23 11 HAL #3H
SHL: 1,980' FNL & 750' FEL of Section 23-T23S-R30E
BHL: 100' FNL & 750' FEL of Section 11-T23S-R30E
Eddy County, New Mexico



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 130888

CONDITIONS

Operator: STRATA PRODUCTION CO P.O. Box 1030 Roswell, NM 882021030	OGRID: 21712
	Action Number: 130888
	Action Type: [C-101] BLM - Federal/Indian Land Lease (Form 3160-3)

CONDITIONS

Created By	Condition	Condition Date
kpickford	Notify OCD 24 hours prior to casing & cement	8/4/2022
kpickford	Will require a File As Drilled C-102 and a Directional Survey with the C-104	8/4/2022
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	8/4/2022
kpickford	Cement is required to circulate on both surface and intermediate1 strings of casing	8/4/2022
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	8/4/2022
kpickford	Must be in compliance with 5.9 for inactive wells prior to C-104 approval and putting the well into production.	8/4/2022