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.

[333733]

2. Name of Operator

[373013]

9. API Well No. **30-025-50981**

3a. Address	3b. Phone No. *(include area code)*	10. Field and Pool, or Exploratory **[49685]**

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.

NGMP Rec 01/09/2023

KZ
01/23/2023

NGMP Rec 01/09/2023

APPROVED WITH CONDITIONS

(Continued on page 2)

*(Instructions on page 2)

Approval Date: 01/06/2023

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

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

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

1 API Number	2 Pool Code	3 Pool Name
30-025-50981	49685	PEARL; BONE SPRING, SOUTH

4 Property Code	5 Property Name	6 Well Number
333733	ZEUS 2-11 FED 2BS COM	4H

7 OGRID NO.	8 Operator Name	9 Elevation
373013	RIDGE RUNNER RESOURCES OPERATING, LLC	3681'

10 Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet From the	East/West line	County
N	35	19S	35E		140	SOUTH	1370	WEST	LEA

11 Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
N	11	20S	35E		100	SOUTH	2310	WEST	LEA

12 Dedicated Acres	13 Joint or Infill	14 Consolidation Code	15 Order No.
320.63			

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

GEODETIC DATA
NAD 83 GRID – NM EAST

SURFACE LOCATION (SL)
KICK OFF POINT (KOP)
N: 586817.5 – E: 818854.6

LAT: 32.6099791 N
LONG: 103.4320803 W

FIRST TAKE POINT (FTP)
100' FNL & 2310' FWL SEC.2
N: 586585.1 – E: 819796.3

LAT: 32.6093183° N
LONG: 103.4290288° W

LAST TAKE POINT (LTP)
100' FSL & 2310' FWL SEC.11
N: 576190.9 – E: 819890.3

LAT: 32.5807488° N
LONG: 103.4290107° W

BOTTOM HOLE (BH)
N: 576190.9 – E: 819890.3

LAT: 32.5807488° N
LONG: 103.4290107° W

CORNER DATA
NAD 83 GRID – NM EAST

A: FOUND BRASS CAP "1912"
N: 576065.1 – E: 817581.6

B: FOUND BRASS CAP "1912"
N: 578707.2 – E: 817561.4

C: CALCULATED CORNER
N: 581353.5 – E: 817538.5

D: CALCULATED CORNER
N: 586666.6 – E: 817485.8

E: FOUND 1/2" REBAR
N: 589303.7 – E: 817468.4

F: FOUND 1/2" REBAR
N: 591953.6 – E: 817452.0

G: FOUND 1/2" REBAR
N: 591998.3 – E: 822749.4

H: CALCULATED CORNER
N: 586708.9 – E: 822778.4

I: FOUND BRASS CAP "1912"
N: 584049.0 – E: 822803.3

J: FOUND 3" PIPE
N: 581407.5 – E: 822825.5

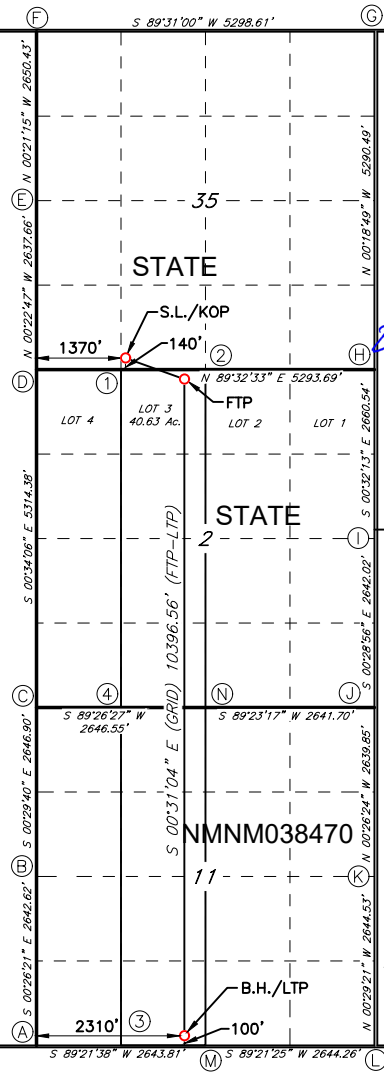
K: FOUND BRASS CAP "1912"
N: 578768.3 – E: 822845.8

L: FOUND BRASS CAP "1912"
N: 576124.3 – E: 822868.4

M: FOUND BRASS CAP "1912"
N: 576094.6 – E: 820224.8

N: FOUND BRASS CAP "1912"
N: 581379.3 – E: 820184.5

CALCULATED POINTS
1: N: 586677.2 – E: 818809.0
2: N: 586687.7 – E: 820132.1
3: N: 576079.9 – E: 818903.2
4: N: 581366.4 – E: 818861.5



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.

Brad Grandstaff 12/04/2022
Signature Date

BRAD GRANDSTAFF
Printed Name

BGRANDSTAFF@3ROPERATING.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.

11/14/2022
Date of Survey

Signature and Seal of Professional Surveyor:

DALE E. BELL
NEW MEXICO
14400
11/17/2022
PROFESSIONAL SURVEYOR

14400
Certificate Number

REV: SHL MOVE – 11/14/22

Job No: LS21060594R

Intent ☐ As Drilled ☐

API #		
Operator Name:	Property Name:	Well Number

Kick Off Point (KOP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
Latitude					Longitude				NAD

First Take Point (FTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
Latitude					Longitude				NAD

Last Take Point (LTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
Latitude					Longitude				NAD

Is this well the defining well for the Horizontal Spacing Unit? ☐

Is this well an infill well? ☐

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

API #		
Operator Name:	Property Name:	Well Number

KZ 06/29/2018

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: RIDGE RUNNER RESOURCES OPERATING, LLC_ **OGRID:** _373013_____ **Date:** _07_/_24__/_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
ZEUS 2-11 FED 2BS Com 3H		N-35-19S-35E	140 FSL, 1340 FWL	1200	1500	5000
ZEUS 2-11 FED 2BS Com 4H	30-025-50981	N-35-19S-35E	140 FSL, 1370 FWL	1200	1500	5000

IV. Central Delivery Point Name: _ZEUS 2-11 FED COM WEST PAD_____ [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
ZEUS 2-11 FED 2BS Com 3H		01/01/2023	01/28/2023	04/01/2023	04/10/2023	04/12/2023
ZEUS 2-11 FED 2BS Com 4H	30-025-50981	02/01/2023	02/28/2023	04/01/2023	04/10/2023	04/12/2023

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:	Brian Cassens
Printed Name:	BRIAN CASSENS
Title:	CEO
E-mail Address:	BCASSENS@3ROperating.com
Date:	07/24/2022
Phone:	970-985-8245

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

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

RRR Natural Gas Management Plan
Items VI-VIII

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

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

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

Drilling Operations

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

Completions/Recompletions Operations

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

Production Operations

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

Performance Standards

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

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

Measurement & Estimation

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

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

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

Operator Name: RIDGE RUNNER RESOURCES OPERATING LLC

Well Name: ZEUS 2-11 FED 2BS COM **Well Number:** 4H

Testing Procedure: BOP will be tested by an independent service company to 250 psi low and 5000 psi high, per onshore order 2. Pipe rams will be operationally checked each 24 hour period. Blind rams will be operationally checked each trip out of the hole.

Choke Diagram Attachment:

5M_Choke_Manifold_Diagram_20220724114202.pdf

BOP Diagram Attachment:

5M__BOP_Diagram_2__20221018081749.pdf

Section 3 - Casing

Casing ID	String Type	Hole Size	Csg Size	Condition	Standard	Tapered String	Top Set MD	Bottom Set MD	Top Set TVD	Bottom Set TVD	Top Set MSL	Bottom Set MSL	Calculated casing length MD	Grade	Weight	Joint Type	Collapse SF	Burst SF	Joint SF Type	Joint SF	Body SF Type	Body SF
1	SURFACE	17.5	13.375	NEW	API	N	0	2000	0	2000	3682	1682	2000	J-55	54.5	BUTT	1.29	3.13	DRY	8.34	DRY	7.83
2	INTERMEDIATE	12.25	9.625	NEW	API	N	0	5800	0	5800	3680	-2118	5800	J-55	40	LT&C	1.67	1.28	DRY	2.24	DRY	2.72
3	PRODUCTION	8.75	5.5	NEW	API	N	0	20522	0	10302	3680	-6620	20522	P-110	20	BUTT	2.56	2.25	DRY	3.24	DRY	3.11

Casing Attachments

Casing ID: 1 **String** SURFACE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Casing_Calculator__ZEUS_2_11_FED_2BS_COM_4H_20221205113040.pdf

Operator Name: RIDGE RUNNER RESOURCES OPERATING LLC

Well Name: ZEUS 2-11 FED 2BS COM **Well Number:** 4H

Casing Attachments

Casing ID: 2 **String** INTERMEDIATE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Casing_Calculator__ZEUS_2_11_FED_2BS_COM_4H_20221205113021.pdf

Casing ID: 3 **String** PRODUCTION

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Casing_Calculator__ZEUS_2_11_FED_2BS_COM_4H_20221205113002.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	1300	940	1.94	12.8	1824	100	CLASS C	Sodium Metasilicate, Defoamer, KCL
SURFACE	Tail		1300	2000	390	1.34	14.8	523	100	CLASS C	NONE
INTERMEDIATE	Lead		0	4800	1500	2.43	11.5	3645	200	CLASS C	Sodium Metasilicate, Defoamer, KCL, Kol-Seal, Cellophane Flakes, ROF SealCheck
INTERMEDIATE	Tail		4800	5800	400	1.33	14.8	532	200	CLASS C	RETARDER, FLUID LOSS, DISPERCENT

Operator Name: RIDGE RUNNER RESOURCES OPERATING LLC

Well Name: ZEUS 2-11 FED 2BS COM **Well Number:** 4H

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
PRODUCTION	Lead		4800	8700	426	2.91	11.3	1241	25	CLASS H	Bentonite, Compressive Strength Enhancer, Silica Fume Alternative, Fluid Loss, Defoamer, Sodium Metasilicate, Retarder
PRODUCTION	Tail		8700	20522	2318	1.61	13.2	3732	25	CLASS H	DISPERCENT, FLUID LOSS, SUSPENSION AGENT, RETARDER, DEFOAMER

Section 5 - Circulating Medium

Mud System Type: Closed

Will an air or gas system be Used? NO

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

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

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

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

Circulating Medium Table

Top Depth	Bottom Depth	Mud Type	Min Weight (lbs/gal)	Max Weight (lbs/gal)	Density (lbs/cu ft)	Gel Strength (lbs/100 sqft)	PH	Viscosity (CP)	Salinity (ppm)	Filtration (cc)	Additional Characteristics
0	2000	SPUD MUD	8.5	9.2							38-40 Vis 8-10 PV 8-10 YP
2000	5800	SALT SATURATED	9.8	10.2							28-32 VIS 1-3 PV 1-3 YP
5800	20522	OIL-BASED MUD	9	9.5							15-20 PV 8-12 YP

3R Operating, LLC

Zeus 2-11 Fed 2BS 4H
Lea County, NM

To:	Ridge Runner Holdings, LLC	**Date:**	11/9/22
From:	Brad Grandstaff	**DHC:**	
Subject:	Zeus2-11 Fed 2BS 4H Drilling Program	**CWC:**	
County:	Lea County, NM	**WI:**	
Elevation:	GL = 3,681', KB = 3,712' (31')	**AFE #:**	
Target Line:	10,300' TVD @ 0' VS and 90° Inc.	**API #:**	
Target Interval:	5' Up/ 5' Down, 50' Left/50' Right of plan	**TD (TVD/MD):**	~10,300'/20,522'
SHL:	140' FSL & 1,370' FWL of Section 35 T19S R35E		
BHL:	100' FSL & 2310' FWL of Section 11 T20S R35E		
TWP/RNG	Township 19S, Range 35E		

Federal Casing Requirements: The surface casing must be set at approximately 2,000' in a competent bed below the top of the Rustler Anhydrite. If salt is encountered, set casing at least 25 feet above the salt. The intermediate string is to be set at approximately 5,800' TVD.

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

a) Spudding a well (minimum of 24 hours)
b) Cementing of all casing strings (minimum of 4 hours)
c) BOPE tests (minimum of 4 hours)
    a. Hobbs Field Office: (575) 393-3612
    b. If leaving a message, include API number and call back number

General:
This well will be drilled as a horizontal Second Bone Spring well.

After preparing location the rig will move in and drill a 17.5" surface hole to ~2,000' TVD. 13 3/8" 54.5# J55 BTC casing will be run to TD and cemented back to surface; there will be NO DV tool.

A 12-1/4" hole will then be drilled out from underneath the surface casing to ~5,800' TVD on Saturated Brine. At casing point a 9-5/8" 40# J-55 LTC will be set and cemented back to surface. This will be a one-stage cement job (if losses occur, 2-stage cement job with an ACP/DV tool @ ~3,900' MD/TVD).

An 8-3/4" hole will be drilled to KOP of 9,794' MD / 9,729' TVD. We will drill a curve on 10°/100' DLS's to land point (LP = ~10,300' TVD).

After landing the curve we will drill an 8-1/2" hole to ~10,635' vertical section. 5 ½", 20#, P-110, BTC casing will be run to TD and cemented to 4,800' TVD, 1000' above the second intermediate casing shoe at a depth of 5,800'.

Geology:

FORMATION	MD	TVD	Minerals	LITHOLOGY
Rustler		1890	Water	Anhy
Salado		2160	None	Salt
Yates		3750	NatGas/Oil	Sand & Shale
Seven Rivers		4020	NatGas/Oil	Anhy & Dolo
Queen		4700	NatGas/Oil	Dolo & Sand
Lamar-Bell Canyon		5660	NatGasOil	Lime, Sand & Shale
Cherry Canyon		6890	NatGas/Oil	Sand & Shale
Brushy Canyon		7790	NatGas/Oil	Lime, Sand & Shale
Bone Spring Lime		8030	NatGas/Oil	Lime & Shale
Avalon		8205	NatGas/Oil	Lime & Shale
1st Bone Spring Sand		9380	NatGas/Oil	Lime, Sand & Shale
2nd Bone Spring Sand (Producing Zone)		10030	NatGas/Oil	Lime, Sand & Shale
3rd Bone Spring Sand		11050	NatGas/Oil	Lime, Sand & Shale
Wolfcamp		11110	NatGas/Oil	Lime, Sand & Shale
Cisco (Penn)		11660	NatGas/Oil	Lime & Shale
Strawn		12050	NatGas/Oil	Lime

(Tops From Controll Well, API#; 3002534807. Located @; S2M / T20S / R35E)

ATTENTION DRILLING FOREMEN:
KEEP THE HOLE FULL AT ALL TIMES. FOLLOW A STRICT FILL-UP SCHEDULE ON ALL TRIPS.

Below are several orders you are expected to understand and follow. The items listed on this page and the next are required practices and procedure. The only reason you may have for not following one of the items listed below is direct orders from the Ridge Runner Drilling Department.

- Always record communication with regulatory agencies in the body of your daily report. Note cement returns to surface in the body of the daily report. Notify the State:
  - **24 hours before you spud.**
  - **4 hours before Setting and/or Cementing of all casing strings.**
  - **4 hours before any BOP test.**
  - **If cement does not circulate to surface on the surface casing or intermediate, contact the BLM immediately following the cement job.**
    - **Hobbs Field Office: (575) 393-3612**
  - **If losses occur, notify the BLM Office**
    - **Emergency Line (575) 234-5972**

- Take surveys at least every 500' on the surface, intermediate, and pilot holes.
- Caliper every tool run in the hole and ensure your BHA data in WEnergy is filled out for fishing purposes.
- If the rig is equipped with an Iron Roughneck instruct the crew daily of proper make-up procedure and warn them of false make-up torque readings.
- Accurately record all costs in WEnergy associated with drilling the well including mobilization costs and location costs. All invoices/field tickets need to include well name and number, date of service, cost, AFE #, and company man's signature.
- Never pick up off bottom without first letting all the torque out of the drill string. Remind the drillers of this daily.
- If you are PDC drilling in the vertical hole or curve and you have a pump go down PU off bottom and fix the pump. Do not attempt to drill ahead with one pump without speaking to RR Management.
- Closely monitor drag trends and make clean-up runs as the hole dictates.
- Circulate 2 BU's assuming 30% washout before every trip.
- Do not transfer casing from well to well. Return any extra joints and cutoffs you have to Sooner. Keep thread protectors on any unused pipe.
- Double check your hydraulics prior to picking up each bit. Run the smallest jets possible to maximize your SPP, HSI, JIF, and HHP (minimum jet size = 10). If you need to blank a jet on a TCI only plug the jet opposite the #1 cone.
- Instruct all crew members of your preferred shut-in procedure in the event of a kick. Every crew member needs to know how to operate the accumulator, don't assume they already know.
  - Perform a BOP drill at each crew hitch change.
  - The TIW valve wrench must be kept on the floor at all times.
- Completely fill out the casing/cementing reports. Note centralizer number, placement, and type. Ensure your casing tally and detail is accurate including weight, grade, threads, and cost. Also, include casing detail in the body of the daily report.

- Update mud inventory and costs daily, including delivery charges.
    - If daily mud costs do not match the mud company's, get with the mud engineer and figure it out.
- When building curves, do not rotate until inclination is 65°.
- When tripping in through the curve, high side the motor and wash when needed. If the motor stalls out PU and continue to wash. Get rough with washing before resorting to reaming.
    - If reaming is needed ream at a faster ROP than you drilled the interval to ensure we don't sidetrack the well.
- Keep the hole full during every trip. Follow a strict fill-up schedule.
- Always test the water to be used for cementing for compatibility.
- Pump cement jobs at 5 BPM max unless orders dictate otherwise.
- Reciprocate casing during cement jobs when possible.
- Know OD/ID, Fishing Necks of all tools downhole and on surface.
- American Safety Services will supply the rig with H2S monitoring equipment. Check with them on how often their equipment needs to be tested.

Spill Reporting Guidelines:

1. Notify the OCD – call one of the following numbers, depending on County. Tell them we have had a spill. Give the location of the spill. Report the Date & Time it was discovered. RR Management will get more detailed information from you to report the following day.

    a. District 1 – Lea County – 575-393-6161
    b. District 2 – Eddy County – 575-748-1283

2. RR Management will need to know the specific calculations of how the volume of the spill was determined. If you are just calculating by the size of the area, they are asking for specific dimensions (Length X Width X Depth) and estimated porosity for depth of infiltration calculations of the release volume. Or if it's meter readings, waste manifests, etc., I will need that information to provide with my initial reporting paperwork that is due within 2 weeks of date of discovery.

3. RR Management will also need a dated photo of the area once the initial cleanup is complete.

Bit Program

Bit #	Size	Interval	Mfg	Type	Model
1	17-1/2"	0' – 2,000'	NOV	PDC	TK 69
2	12-1/4	2,000' – 5,800'	Ulterra	PDC	CF 719
3	8-3/4"	5,800' – 9,794'	NOV	PDC	DSC 616M-X24
4	8-3/4"	9,794' – 10,694'	HDBS	PDC	GTD 64 MBUO
5	8-1/2"	10,694' – 20,522'	Ulterra	PDC	SDL 616

BHA Detail

BHA #	Interval	Description
1	0' – 2,000'	Bit #2, 8" Motor - 6/7, 4.0 Stage 1.75° Fixed Bend, (1) 8" NMDC, UBHO, (1) 8" NMDC, (2) 8" DC, Shock Sub, (18) 6-1/2" DCs
2	2,000' – 5,800'	Bit #3, 8" Motor - 6/7, 4.0 stage, 1.83° Fixed Bend, (1) 8" NMDC, UBHO, (1) 8" NMDC, (2) 8" DC, Shock Sub, (18) 8" DC's
3	5,800' – 9,794'	Bit #4, 8" Motor - 6/7, 4.0 stage, 1.83° Fixed Bend, (1) 8" NMDC, UBHO, (1) 8" NMDC, (2) 8" DC, Shock Sub, (18) 8" DC's
4	9,794' – 10,694'	Bit #5, 6-3/4" Motor - 6/7, 5.0 stage, 2.0° Fixed Bend, (1) 6-3/4" NMDC, UBHO, (1) NMFC
5	10,694' – 20,522'	Bit #6, 6-3/4" RSS, Motor, 7/8, 5.0 stage, 0.29 rev/gal, (1) Stab, (1) 6-5/8" UBHO, (1) 6-3/4" NMDC, (1) NMFC

***Have a gauge ring on the rig to ensure that all bits and stabilizers are gauge.**

Directional Program

Pilot Hole TD	KOP	Land Point	TD
NA			

Mud Program (Water Base) - Nova

Hole Section	Type	MW	Vis	PV	YP	Cl – ppm
Surface	FW Spud Mud	8.5 – 9.2	38-40	8-10	8-10	1-5k
Intermediate (2,000' – 5,800')	Brine	9.8-10.2	28-32	1-3	1-3	186k

Mud Program (Oil Base) - Nova

Hole Section	Type	MW	ES	PV	YP	OWR
Prod/Curve/Lateral	Oil Base	9.0 – 9.5	500	15-20	8-12	75/25

Top-Hole Casing Program

Type	Description	Depth	Burst	Collapse	Cost/ft
Surface	13-3/8", 54.5#, J55, BTC	2,000'	2,730 psi	1,130 psi	
Intermediate	9-5/8", 40#, J55, LTC	5,800'	3,950 psi	2,570 psi	

Production Casing Program

Type	Description	Depth	Burst	Collapse	Tension
Production	5-1/2", 20#, P-110, BTC	20,522' MD	12,640 psi	11,080 psi	641K lbs
Marker Joint	**Cost/ft**				
~11,000' MD					

***Note that all burst and collapse ratings are shown at 100%**

Surface Casing Cement Program

Type	Description	Pump Time	Amount		TOC
Lead	12.8 ppg, 1.94 cuft/sk, Class C	6 ½ hrs	940 sks		Surface
Tail	14.8 ppg, 1.34 cuft/sk, Class C	3 ½ hrs	390 sks		1,300'

***100% Excess**

Intermediate 1 Casing Cement Program

Stage 1

Type	Description	Pump Time	Amount		TOC
Lead	11.5 ppg, 2.43 cuft/sk, 50/50 Class C	4 ½ hrs	1,500 sks		Surface
Tail	14.8 ppg, 1.33 cuft/sk, Class C	3 ½ hrs	400 sks		4,800'

***200% Excess**

Production Casing Cement Program

Type	Description	Pump Time	Amount		TOC
Scav	10.5 ppg, 2.00 cuft/sk, 100% Poz Plus – Recovery Fluid for OBM	7 hrs +	672 sks		Surf
Lead	11.3 ppg, 2.91 cuft/sk, 50% Class H / 50% Poz	5 ½ hrs	426 sks		4,800'
Tail	13.2 ppg, 1.61 cuft/sk, 76% Class H / 24% Poz	4 ½ hrs	2,318 sks		8,700'

***25% excess in OH**

17.5" Surface Hole:

1) Prep location, drill mouse and rat hole, MIRU

2) Spud well with BHA #1 (see page 5). Drill to surface casing TD.
   a) Caliper every tool run in the hole and ensure your BHA data in the report is filled out.
   b) Drill ahead to Surface TD on freshwater spud mud. Pump sweeps as needed (every 90'-120').
   c) Send all surveys to RR Management.
   d) Short trip to the BHA (if needed). Strap out of the hole.

3) Rig up casing crew and run 13-3/8", 54.5#, J55, BTC to TD as follows:
   a) Guide Shoe (thread lock)
   b) 1-jt casing (thread lock)
   c) Float Collar (thread lock, both ends)
   d) Casing to surface (13-3/8",54.5#, J55, BTC)
   e) Centralize 10' above the float shoe, each of the next 3 joints above the float collar, and every 3rd joint to surface.
   f) Follow the reporting requirements described above.
   g) Chain down/secure casing to keep from lifting during cement job.

4) Rig up cementers to cement casing a few feet off bottom. This will be a 1-stage cement job. Make sure all slurries have adequate pump time. Watch for cement returns and record in the report.
   a) Always test the water to be used for cementing for compatibility.
   b) Always have a field blend test run on all slurries to ensure adequate pump time and correct rheological properties. Email a copy of the test results to RR Management.
   c) Copies of the cement tests must be on location prior to pumping the job.
   d) Collect wet and dry samples.
   e) Pump entire job at no more than 5 bpm.
   f) Note returns in the report. WOC 8 hours.
   g) Note: If cement does not circulate to surface, we must run a temperature survey or CBL to determine cement tops before topping out.

5) Weld on Atlas 13 5/8" x 5k speed head so that top flange is @ ground level.

6) N/U the rig's BOP. Use testers to perform the following:
   a) Test the pipe rams, blind rams, floor valves (IBOP and/or upper Kelly valve), choke lines and manifold to 250 psi/5,000 psi with a test plug and a test pump.
   b) Test the annular to 250 psi/2,500 psi with same as above. Record in the report.
   c) Install the wear bushing and prepare to trip in the hole.

12.25" Intermediate Hole:

1) TIH with BHA #2 (see page 5). Drill to Intermediate Casing TD.
   a) Caliper every tool run in the hole and ensure your BHA data in the report is filled out.
   b) TIH to the casing shoe and test the casing and pipe rams to 80% for 30 min. Record this on your daily report.
   c) Slowly drill the float equipment.
   d) Drill ahead to Intermediate TD on Saturated Brine.
      i) Pump 30 – 40 bbls of 50 – 60 vis sweeps (Salt Gel Pills) as needed (every 90'-180').
      ii) Periodically sweep the hole with Ground Paper to aid in seepage control and hole cleaning.
      iii) PHPA should be used to flocculate fine solids and keep the fluid clean – pump 1-2 gallons every 90 – 180' directly down drill pipe to aid in hole cleaning.
   d) Send all surveys to RR Management.
   e) Short trip to the BHA (if needed). Strap out of the hole.

2) Rig up casing crew and run 9-5/8", 40# J55 LTC to TD as follows:
   a) Float Shoe (thread lock)
   b) 1-jt casing (thread lock)
   c) Float Collar (thread lock, both ends)
   d) Casing to Mandrel Hanger at surface. **(If losses occur in Capitan, run DV tool/ACP at ~3900')**
   e) Run one single-bow centralizer on the shoe joint, one above the float collar, and one every 3rd joint to inside the surface casing shoe.
   f) Utilize a landing joint to land the last joint of casing/mandrel inside the Atlas speed head. Run the assembly per the procedure sent with the drilling procedure. Also, we will need an Atlas Wellhead hand on location for running.
   g) Dope the pin and box with Best-O-Life 2000.

3) Rig up cementers to cement casing a few feet off bottom. This will be a 1-stage cement job **(If losses occur in Capitan, 2-stage cement job)**. Make sure all slurries have adequate pump time. Watch for cement returns and record in the report.
   a) Always test the water to be used for cementing for compatibility.
   b) Always have a field blend test run on all slurries to ensure adequate pump time and correct rheological properties. Email a copy of the test results to RR Management.
   c) Copies of the cement tests must be on location prior to pumping the job.
   d) Collect wet and dry samples.
   e) Pump entire job at no more than 5 bpm.
   f) Note returns in the report. WOC 8 hours.

8.75" Vertical Hole/Curve/Lateral:

1) TIH with BHA #3 (see page 5)
   a) TIH to the casing shoe and test the casing and pipe rams to 1,500 psi for 30 min. Record this on your daily report.
   b) Slowly drill the float equipment.
   c) Turn on gamma for this section.
   d) Turn on unmanned Pason Gas detector above the Bone Spring.
   e) Drill ahead to KOP on OBM. Build mud system as dictated by the mud program.
   f) Take MWD surveys every 100'. If inclination starts building (+/-2°), discuss with RR Management for adjusting survey frequency.
   g) At TD, circulate the hole clean and short trip if necessary. Discuss the procedure for cleanup with RR Management.
   h) Strap out of the hole. Keep the hole full.
   e) Send all surveys to RR Management.

2) TIH with BHA #4 (see page 5).
   a) Caliper every tool run in the hole and ensure your BHA data in the report is filled out.
   b) Drill ahead to Land Point on Oil Base Mud. Refer to program.
   c) TIH and begin to drill the curve. Aim to get 12°/100' BUR's. Take surveys every 30' in the curve/every 90' in the lateral. Have the MWD hand email the surveys to RR Management.
   d) Continue drilling ahead to Landing Point of Curve.
   e) At LP, continue drilling ahead to TD, following the directional plan.

3) TIH with BHA #5 (see page 5).
   a) Caliper every tool run in the hole and ensure your BHA data in the report is filled out.
   b) Drill ahead to TD on Oil Bas Mud. Build mud system as dictated by the mud program.
   c) Take surveys every 90' while drilling the lateral. Have the MWD hand email the surveys to RR Management.

4) At TD circulate the hole clean following K&M's recommended cleanup practices.
   a) Ensure RSS steering ratio is set to zero
   b) Perform a clean-up cycle totaling 6 bottoms-up or shakers are clean using >80 rpm and >420 gpm (or parameters as instructed)
      i) Pick up at ~1 ft/min to circulate one bottoms-up over the length of the stand (1 bottoms-up = ~60 minutes @ 600 gpm)
      ii) Rack back the stand after bottoms-up
      iii) Repeat process, racking back a stand after each bottoms-up
   c) Once shakers indicate clean hole, trip out on elevators
      i) Pull 5-10 stands wet on elevators.
         (1) To mitigate the risk of swab induced instability on the trip out, the mud weight could be increased slightly to help compensate for swab loads.
         (2) Pulling speed is not limited by swab load (swab loads insensitive to trip speed in this section). Any speed that allows the driller to effectively respond to changing hole conditions is recommended.

(3) Be aware that weight transfer to the bit in sliding mode likely doesn't exist below ~14,000'. If the string pulls tight and rotation is unable to be established, the string is stuck.

ii) If hole conditions are good, pump dry-job and continue trip out on elevators to surface.
(1) Optional: perform final clean-up cycle at base of curve
(2) Exercise caution while pulling BHA into 9⅝" casing shoe

5) Rig up casing crew to run 5 ½", 20#, HCP-110, Intrepid SP casing as follows:
a) Float Shoe (thread lock)
b) Float Collar (thread lock, both ends)
c) Casing to floatation collar. Run the system per the running procedure.
d) Casing to Marker joint.
e) Marker joint will be set ~100' above KOP.
f) Casing to Surface
g) Run one Composite Body Centralizer every joint through the lateral and to 1,000' above the curve and then one Bow Spring Centralizer every 4th joint from that point to inside the intermediate casing.
h) Note location of centralizers in report.
i) Have INTREPID SP thread rep on location for the casing run. Have the rep notate optimum make up torque. Dope the pin and box with Best-O-Life 2000.

6) Rig up cementers to cement casing a few feet off bottom. This job is to include a wet shoe. **See procedure below.**
a) Request a cement program (10% excess) prior to pumping the job. Cement top to be ~1000' inside intermediate casing – scavenger/OBM to surface. Ensure that the expected cement pump time is listed and email to RR Management.
b) Collect wet and dry samples.
c) Be sure to displace with water, NOT MUD. Water to include 0.4 lbs/1000-gal's biocide.
d) Pump entire job at no more than 5 bpm. If lost returns occur, slow pump rate down to 1-2 bpm and maintain for remainder of job. Be sure to note losses in the report.
e) Follow the same reporting requirements described above.

Wet shoe procedure

i) Release air from floatation collar.
ii) Drop bottom wiper plug as normal prior to pumping cement.
iii) Pump cement per normal schedule.
iv) Behind cement drop top wiper plug. Plug should rupture at 1,500 psi
v) Pump 3 bbls of sugar water immediately after top wiper plug.
vi) Drop 2nd top wiper plug. Plug should rupture at 3,000 psi.
vii) Pump 7 bbls of sugar water immediately after 2nd top wiper plug.
viii) Continue displacement at a rate of no more than ~5 bpm.
ix) Slow down to ~1-2 bpm 10 bbls before expected plug landing.
x) Bump plug to 500 psi over landing lift pressure.
xi) Bleed off pressure and check floats. Record volume returned.
xii) If floats do not hold, pressure back up to bump pressure.

xiii) Walk pressure up to rupture plug. Watch for plug rupture at ~3000 psi. As soon as pressure drop occurs, pump 1 bbl and stop displacement.

xiv) If floats held begin normal post cement job activities. If floats did not hold bleed pressure to 500 psi and hold for 4 hours. **DO NOT BLEED BACK MORE VOLUME THAN OVERDISPLACED.**

7) Set casing in the slips with as cemented weight. ND BOP's and NU tree or dry hole flange. Test head to 2,500 psi. Follow the same reporting requirements described above.

8) Clean the tanks and release the rig. **Ensure that the location is clean and in good condition when the rig leaves.**

Ridge Runner

Lea County, NM (N83-NME)
Zeus 2-11
(04) Zeus 2-11 Fed 2BS Com 4H - Slot Zeus 4H

Permit

Plan: APD-Rev01

Standard Planning Report

22 November, 2022

Planning Report

Database:	TAZTS01	**Local Co-ordinate Reference:**	Well (04) Zeus 2-11 Fed 2BS Com 4H - Slot Zeus 4H
Company:	Ridge Runner	**TVD Reference:**	3681+25 @ 3706.00usft
Project:	Lea County, NM (N83-NME)	**MD Reference:**	3681+25 @ 3706.00usft
Site:	Zeus 2-11	**North Reference:**	Grid
Well:	(04) Zeus 2-11 Fed 2BS Com 4H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Permit		
Design:	APD-Rev01		

Project Lea County, NM (N83-NME)

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

Site Zeus 2-11

Site Position:		**Northing:**	586,817.50 usft	**Latitude:**	32.60997911
From:	Map	**Easting:**	818,854.60 usft	**Longitude:**	-103.43208039
Position Uncertainty:	0.00 usft	**Slot Radius:**	13-3/16 "		

Well (04) Zeus 2-11 Fed 2BS Com 4H - Slot Zeus 4H

Well Position	**+N/-S**	0.00 usft	**Northing:**	586,817.50 usft	**Latitude:**	32.60997911
	+E/-W	0.00 usft	**Easting:**	818,854.60 usft	**Longitude:**	-103.43208039
Position Uncertainty		0.00 usft	**Wellhead Elevation:**	usft	**Ground Level:**	3,681.00 usft
Grid Convergence:		0.49 °				

Wellbore Permit

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2020	11/22/2022	6.34	60.22	47,584.14239092

Design APD-Rev01

Audit Notes:

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

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	179.48

Plan Survey Tool Program **Date** 11/22/2022

	Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	20,522.42	APD-Rev01 (Permit)	OWSG MWD Rev 5	
				OWSG MWD - Standard	

Planning Report

Database:	TAZTS01	**Local Co-ordinate Reference:**	Well (04) Zeus 2-11 Fed 2BS Com 4H - Slot Zeus 4H
Company:	Ridge Runner	**TVD Reference:**	3681+25 @ 3706.00usft
Project:	Lea County, NM (N83-NME)	**MD Reference:**	3681+25 @ 3706.00usft
Site:	Zeus 2-11	**North Reference:**	Grid
Well:	(04) Zeus 2-11 Fed 2BS Com 4H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Permit		
Design:	APD-Rev01		

Plan Sections

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
3,370.00	0.00	0.00	3,370.00	0.00	0.00	0.00	0.00	0.00	0.00	
3,964.88	8.92	105.49	3,962.48	-12.34	44.55	1.50	1.50	0.00	105.49	
8,999.90	8.92	105.49	8,936.56	-220.89	797.18	0.00	0.00	0.00	0.00	
9,594.78	0.00	89.49	9,529.04	-233.23	841.73	1.50	-1.50	0.00	180.00	00-EON(Zeus-4H)
9,794.78	0.00	89.49	9,729.04	-233.23	841.73	0.00	0.00	0.00	89.49	
10,694.78	90.00	172.00	10,302.00	-800.61	921.47	10.00	10.00	0.00	172.00	
11,068.58	90.00	179.48	10,302.00	-1,173.11	949.23	2.00	0.00	2.00	90.00	
20,522.46	90.00	179.48	10,302.00	-10,626.60	1,035.70	0.00	0.00	0.00	0.00	03-PBHL(Zeus-4H)

Planning Report

Database:	TAZTS01	**Local Co-ordinate Reference:**	Well (04) Zeus 2-11 Fed 2BS Com 4H - Slot Zeus 4H
Company:	Ridge Runner	**TVD Reference:**	3681+25 @ 3706.00usft
Project:	Lea County, NM (N83-NME)	**MD Reference:**	3681+25 @ 3706.00usft
Site:	Zeus 2-11	**North Reference:**	Grid
Well:	(04) Zeus 2-11 Fed 2BS Com 4H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Permit		
Design:	APD-Rev01		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
1,892.00	0.00	0.00	1,892.00	0.00	0.00	0.00	0.00	0.00	0.00
Rustler									
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00
2,162.00	0.00	0.00	2,162.00	0.00	0.00	0.00	0.00	0.00	0.00
Salado									
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00
2,300.00	0.00	0.00	2,300.00	0.00	0.00	0.00	0.00	0.00	0.00
2,400.00	0.00	0.00	2,400.00	0.00	0.00	0.00	0.00	0.00	0.00
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00
2,600.00	0.00	0.00	2,600.00	0.00	0.00	0.00	0.00	0.00	0.00
2,700.00	0.00	0.00	2,700.00	0.00	0.00	0.00	0.00	0.00	0.00
2,800.00	0.00	0.00	2,800.00	0.00	0.00	0.00	0.00	0.00	0.00
2,900.00	0.00	0.00	2,900.00	0.00	0.00	0.00	0.00	0.00	0.00
3,000.00	0.00	0.00	3,000.00	0.00	0.00	0.00	0.00	0.00	0.00
3,100.00	0.00	0.00	3,100.00	0.00	0.00	0.00	0.00	0.00	0.00
3,200.00	0.00	0.00	3,200.00	0.00	0.00	0.00	0.00	0.00	0.00
3,300.00	0.00	0.00	3,300.00	0.00	0.00	0.00	0.00	0.00	0.00
3,370.00	0.00	0.00	3,370.00	0.00	0.00	0.00	0.00	0.00	0.00
3,400.00	0.45	105.49	3,400.00	-0.03	0.11	0.03	1.50	1.50	0.00
3,500.00	1.95	105.49	3,499.97	-0.59	2.13	0.61	1.50	1.50	0.00
3,600.00	3.45	105.49	3,599.86	-1.85	6.67	1.91	1.50	1.50	0.00
3,700.00	4.95	105.49	3,699.59	-3.80	13.73	3.93	1.50	1.50	0.00
3,752.64	5.74	105.49	3,752.00	-5.11	18.45	5.28	1.50	1.50	0.00
Yates									
3,800.00	6.45	105.49	3,799.09	-6.46	23.30	6.67	1.50	1.50	0.00
3,900.00	7.95	105.49	3,898.30	-9.80	35.38	10.12	1.50	1.50	0.00
3,964.88	8.92	105.49	3,962.48	-12.34	44.55	12.75	1.50	1.50	0.00
4,000.00	8.92	105.49	3,997.17	-13.80	49.80	14.25	0.00	0.00	0.00
4,025.13	8.92	105.49	4,022.00	-14.84	53.56	15.33	0.00	0.00	0.00
Seven Rivers									
4,100.00	8.92	105.49	4,095.96	-17.94	64.75	18.53	0.00	0.00	0.00
4,200.00	8.92	105.49	4,194.75	-22.08	79.70	22.80	0.00	0.00	0.00

Planning Report

Database:	TAZTS01	**Local Co-ordinate Reference:**	Well (04) Zeus 2-11 Fed 2BS Com 4H - Slot Zeus 4H
Company:	Ridge Runner	**TVD Reference:**	3681+25 @ 3706.00usft
Project:	Lea County, NM (N83-NME)	**MD Reference:**	3681+25 @ 3706.00usft
Site:	Zeus 2-11	**North Reference:**	Grid
Well:	(04) Zeus 2-11 Fed 2BS Com 4H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Permit		
Design:	APD-Rev01		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,300.00	8.92	105.49	4,293.54	-26.22	94.64	27.08	0.00	0.00	0.00
4,400.00	8.92	105.49	4,392.33	-30.37	109.59	31.36	0.00	0.00	0.00
4,500.00	8.92	105.49	4,491.12	-34.51	124.54	35.64	0.00	0.00	0.00
4,600.00	8.92	105.49	4,589.91	-38.65	139.49	39.91	0.00	0.00	0.00
4,700.00	8.92	105.49	4,688.70	-42.79	154.44	44.19	0.00	0.00	0.00
4,713.46	8.92	105.49	4,702.00	-43.35	156.45	44.77	0.00	0.00	0.00
Queen									
4,800.00	8.92	105.49	4,787.49	-46.93	169.38	48.47	0.00	0.00	0.00
4,900.00	8.92	105.49	4,886.28	-51.08	184.33	52.75	0.00	0.00	0.00
5,000.00	8.92	105.49	4,985.07	-55.22	199.28	57.02	0.00	0.00	0.00
5,100.00	8.92	105.49	5,083.86	-59.36	214.23	61.30	0.00	0.00	0.00
5,200.00	8.92	105.49	5,182.65	-63.50	229.17	65.58	0.00	0.00	0.00
5,300.00	8.92	105.49	5,281.44	-67.64	244.12	69.86	0.00	0.00	0.00
5,400.00	8.92	105.49	5,380.23	-71.78	259.07	74.13	0.00	0.00	0.00
5,500.00	8.92	105.49	5,479.02	-75.93	274.02	78.41	0.00	0.00	0.00
5,600.00	8.92	105.49	5,577.81	-80.07	288.97	82.69	0.00	0.00	0.00
5,700.00	8.92	105.49	5,676.60	-84.21	303.91	86.96	0.00	0.00	0.00
5,800.00	8.92	105.49	5,775.39	-88.35	318.86	91.24	0.00	0.00	0.00
5,900.00	8.92	105.49	5,874.18	-92.49	333.81	95.52	0.00	0.00	0.00
6,000.00	8.92	105.49	5,972.97	-96.64	348.76	99.80	0.00	0.00	0.00
6,100.00	8.92	105.49	6,071.76	-100.78	363.71	104.07	0.00	0.00	0.00
6,200.00	8.92	105.49	6,170.55	-104.92	378.65	108.35	0.00	0.00	0.00
6,247.02	8.92	105.49	6,217.00	-106.87	385.68	110.36	0.00	0.00	0.00
Delaware									
6,300.00	8.92	105.49	6,269.34	-109.06	393.60	112.63	0.00	0.00	0.00
6,400.00	8.92	105.49	6,368.13	-113.20	408.55	116.91	0.00	0.00	0.00
6,500.00	8.92	105.49	6,466.92	-117.34	423.50	121.18	0.00	0.00	0.00
6,600.00	8.92	105.49	6,565.71	-121.49	438.45	125.46	0.00	0.00	0.00
6,700.00	8.92	105.49	6,664.50	-125.63	453.39	129.74	0.00	0.00	0.00
6,800.00	8.92	105.49	6,763.29	-129.77	468.34	134.01	0.00	0.00	0.00
6,900.00	8.92	105.49	6,862.07	-133.91	483.29	138.29	0.00	0.00	0.00
7,000.00	8.92	105.49	6,960.86	-138.05	498.24	142.57	0.00	0.00	0.00
7,100.00	8.92	105.49	7,059.65	-142.20	513.18	146.85	0.00	0.00	0.00
7,200.00	8.92	105.49	7,158.44	-146.34	528.13	151.12	0.00	0.00	0.00
7,300.00	8.92	105.49	7,257.23	-150.48	543.08	155.40	0.00	0.00	0.00
7,400.00	8.92	105.49	7,356.02	-154.62	558.03	159.68	0.00	0.00	0.00
7,500.00	8.92	105.49	7,454.81	-158.76	572.98	163.96	0.00	0.00	0.00
7,600.00	8.92	105.49	7,553.60	-162.90	587.92	168.23	0.00	0.00	0.00
7,700.00	8.92	105.49	7,652.39	-167.05	602.87	172.51	0.00	0.00	0.00
7,800.00	8.92	105.49	7,751.18	-171.19	617.82	176.79	0.00	0.00	0.00
7,900.00	8.92	105.49	7,849.97	-175.33	632.77	181.07	0.00	0.00	0.00
8,000.00	8.92	105.49	7,948.76	-179.47	647.72	185.34	0.00	0.00	0.00
8,094.38	8.92	105.49	8,042.00	-183.38	661.82	189.38	0.00	0.00	0.00
Bone Spring									
8,100.00	8.92	105.49	8,047.55	-183.61	662.66	189.62	0.00	0.00	0.00
8,200.00	8.92	105.49	8,146.34	-187.76	677.61	193.90	0.00	0.00	0.00
8,300.00	8.92	105.49	8,245.13	-191.90	692.56	198.17	0.00	0.00	0.00
8,400.00	8.92	105.49	8,343.92	-196.04	707.51	202.45	0.00	0.00	0.00
8,500.00	8.92	105.49	8,442.71	-200.18	722.45	206.73	0.00	0.00	0.00
8,600.00	8.92	105.49	8,541.50	-204.32	737.40	211.01	0.00	0.00	0.00
8,700.00	8.92	105.49	8,640.29	-208.46	752.35	215.28	0.00	0.00	0.00
8,800.00	8.92	105.49	8,739.08	-212.61	767.30	219.56	0.00	0.00	0.00

Planning Report

Database:	TAZTS01	**Local Co-ordinate Reference:**	Well (04) Zeus 2-11 Fed 2BS Com 4H - Slot Zeus 4H
Company:	Ridge Runner	**TVD Reference:**	3681+25 @ 3706.00usft
Project:	Lea County, NM (N83-NME)	**MD Reference:**	3681+25 @ 3706.00usft
Site:	Zeus 2-11	**North Reference:**	Grid
Well:	(04) Zeus 2-11 Fed 2BS Com 4H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Permit		
Design:	APD-Rev01		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
8,900.00	8.92	105.49	8,837.87	-216.75	782.25	223.84	0.00	0.00	0.00
8,999.90	8.92	105.49	8,936.56	-220.89	797.18	228.11	0.00	0.00	0.00
9,100.00	7.42	105.49	9,035.64	-224.69	810.89	232.04	1.50	-1.50	0.00
9,200.00	5.92	105.49	9,134.96	-227.79	822.09	235.24	1.50	-1.50	0.00
9,300.00	4.42	105.49	9,234.55	-230.19	830.77	237.72	1.50	-1.50	0.00
9,400.00	2.92	105.49	9,334.34	-231.90	836.95	239.49	1.50	-1.50	0.00
9,447.71	2.21	105.49	9,382.00	-232.47	839.00	240.08	1.50	-1.50	0.00
1st Bone Spring Sand									
9,500.00	1.42	105.49	9,434.27	-232.92	840.60	240.54	1.50	-1.50	0.00
9,594.78	0.00	0.00	9,529.04	-233.23	841.73	240.86	1.50	-1.50	-111.29
100FLL: 9594.78' MD/240.86VS - 00-EON(Zeus-4H)									
9,600.00	0.00	0.00	9,534.26	-233.23	841.73	240.86	0.00	0.00	0.00
9,700.00	0.00	0.00	9,634.26	-233.23	841.73	240.86	0.00	0.00	0.00
9,794.78	0.00	0.00	9,729.04	-233.23	841.73	240.86	0.00	0.00	0.00
KOP: 9594.78' MD/240.86' VS/9529.04' TVD									
9,800.00	0.52	172.00	9,734.26	-233.25	841.73	240.88	10.00	10.00	0.00
9,850.00	5.52	172.00	9,784.17	-235.86	842.10	243.50	10.00	10.00	0.00
9,900.00	10.52	172.00	9,833.67	-242.77	843.07	250.41	10.00	10.00	0.00
9,950.00	15.52	172.00	9,882.37	-253.92	844.64	261.58	10.00	10.00	0.00
10,000.00	20.52	172.00	9,929.90	-269.24	846.79	276.91	10.00	10.00	0.00
10,050.00	25.52	172.00	9,975.90	-288.59	849.51	296.29	10.00	10.00	0.00
10,100.00	30.52	172.00	10,020.03	-311.85	852.78	319.58	10.00	10.00	0.00
10,114.00	31.92	172.00	10,032.00	-319.04	853.79	326.77	10.00	10.00	0.00
2nd Bone Spring Sand									
10,150.00	35.52	172.00	10,061.94	-338.82	856.57	346.58	10.00	10.00	0.00
10,200.00	40.52	172.00	10,101.31	-369.31	860.86	377.11	10.00	10.00	0.00
10,250.00	45.52	172.00	10,137.86	-403.08	865.60	410.92	10.00	10.00	0.00
01-FTP(Zeus-4H)									
10,300.00	50.52	172.00	10,171.29	-439.88	870.77	447.76	10.00	10.00	0.00
10,350.00	55.52	172.00	10,201.35	-479.42	876.33	487.35	10.00	10.00	0.00
10,400.00	60.52	172.00	10,227.82	-521.41	882.23	529.39	10.00	10.00	0.00
10,450.00	65.52	172.00	10,250.50	-565.52	888.43	573.56	10.00	10.00	0.00
10,500.00	70.52	172.00	10,269.21	-611.42	894.88	619.52	10.00	10.00	0.00
10,550.00	75.52	172.00	10,283.80	-658.76	901.53	666.91	10.00	10.00	0.00
10,600.00	80.52	172.00	10,294.18	-707.18	908.34	715.39	10.00	10.00	0.00
10,650.00	85.52	172.00	10,300.25	-756.31	915.24	764.59	10.00	10.00	0.00
10,694.78	90.00	172.00	10,302.00	-800.61	921.47	808.94	10.00	10.00	0.00
EOC: 10694.78' MD/808.94' VS/10302.00' TVD - 00-LP(Zeus-4H)									
10,700.00	90.00	172.10	10,302.00	-805.78	922.19	814.12	2.00	0.00	2.00
10,800.00	90.00	174.10	10,302.00	-905.05	934.20	913.49	2.00	0.00	2.00
10,900.00	90.00	176.10	10,302.00	-1,004.68	942.73	1,013.20	2.00	0.00	2.00
11,000.00	90.00	178.10	10,302.00	-1,104.55	947.78	1,113.10	2.00	0.00	2.00
11,068.58	90.00	179.48	10,302.00	-1,173.11	949.23	1,181.68	2.00	0.00	2.00
11,100.00	90.00	179.48	10,302.00	-1,204.53	949.52	1,213.10	0.00	0.00	0.00
11,200.00	90.00	179.48	10,302.00	-1,304.53	950.43	1,313.10	0.00	0.00	0.00
11,300.00	90.00	179.48	10,302.00	-1,404.52	951.35	1,413.10	0.00	0.00	0.00
11,400.00	90.00	179.48	10,302.00	-1,504.52	952.26	1,513.10	0.00	0.00	0.00
11,500.00	90.00	179.48	10,302.00	-1,604.51	953.18	1,613.10	0.00	0.00	0.00
11,600.00	90.00	179.48	10,302.00	-1,704.51	954.09	1,713.10	0.00	0.00	0.00
11,700.00	90.00	179.48	10,302.00	-1,804.51	955.01	1,813.10	0.00	0.00	0.00
11,800.00	90.00	179.48	10,302.00	-1,904.50	955.92	1,913.10	0.00	0.00	0.00
11,900.00	90.00	179.48	10,302.00	-2,004.50	956.83	2,013.10	0.00	0.00	0.00

Planning Report

Database:	TAZTS01	**Local Co-ordinate Reference:**	Well (04) Zeus 2-11 Fed 2BS Com 4H - Slot Zeus 4H
Company:	Ridge Runner	**TVD Reference:**	3681+25 @ 3706.00usft
Project:	Lea County, NM (N83-NME)	**MD Reference:**	3681+25 @ 3706.00usft
Site:	Zeus 2-11	**North Reference:**	Grid
Well:	(04) Zeus 2-11 Fed 2BS Com 4H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Permit		
Design:	APD-Rev01		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
12,000.00	90.00	179.48	10,302.00	-2,104.49	957.75	2,113.10	0.00	0.00	0.00
12,100.00	90.00	179.48	10,302.00	-2,204.49	958.66	2,213.10	0.00	0.00	0.00
12,200.00	90.00	179.48	10,302.00	-2,304.48	959.58	2,313.10	0.00	0.00	0.00
12,300.00	90.00	179.48	10,302.00	-2,404.48	960.49	2,413.10	0.00	0.00	0.00
12,400.00	90.00	179.48	10,302.00	-2,504.48	961.41	2,513.10	0.00	0.00	0.00
12,500.00	90.00	179.48	10,302.00	-2,604.47	962.32	2,613.10	0.00	0.00	0.00
12,600.00	90.00	179.48	10,302.00	-2,704.47	963.24	2,713.10	0.00	0.00	0.00
12,700.00	90.00	179.48	10,302.00	-2,804.46	964.15	2,813.10	0.00	0.00	0.00
12,800.00	90.00	179.48	10,302.00	-2,904.46	965.07	2,913.10	0.00	0.00	0.00
12,900.00	90.00	179.48	10,302.00	-3,004.46	965.98	3,013.10	0.00	0.00	0.00
13,000.00	90.00	179.48	10,302.00	-3,104.45	966.90	3,113.10	0.00	0.00	0.00
13,100.00	90.00	179.48	10,302.00	-3,204.45	967.81	3,213.10	0.00	0.00	0.00
13,200.00	90.00	179.48	10,302.00	-3,304.44	968.73	3,313.10	0.00	0.00	0.00
13,300.00	90.00	179.48	10,302.00	-3,404.44	969.64	3,413.10	0.00	0.00	0.00
13,400.00	90.00	179.48	10,302.00	-3,504.43	970.55	3,513.10	0.00	0.00	0.00
13,500.00	90.00	179.48	10,302.00	-3,604.43	971.47	3,613.10	0.00	0.00	0.00
13,600.00	90.00	179.48	10,302.00	-3,704.43	972.38	3,713.10	0.00	0.00	0.00
13,700.00	90.00	179.48	10,302.00	-3,804.42	973.30	3,813.10	0.00	0.00	0.00
13,800.00	90.00	179.48	10,302.00	-3,904.42	974.21	3,913.10	0.00	0.00	0.00
13,900.00	90.00	179.48	10,302.00	-4,004.41	975.13	4,013.10	0.00	0.00	0.00
14,000.00	90.00	179.48	10,302.00	-4,104.41	976.04	4,113.10	0.00	0.00	0.00
14,100.00	90.00	179.48	10,302.00	-4,204.40	976.96	4,213.10	0.00	0.00	0.00
14,200.00	90.00	179.48	10,302.00	-4,304.40	977.87	4,313.10	0.00	0.00	0.00
14,300.00	90.00	179.48	10,302.00	-4,404.40	978.79	4,413.10	0.00	0.00	0.00
14,400.00	90.00	179.48	10,302.00	-4,504.39	979.70	4,513.10	0.00	0.00	0.00
14,500.00	90.00	179.48	10,302.00	-4,604.39	980.62	4,613.10	0.00	0.00	0.00
14,600.00	90.00	179.48	10,302.00	-4,704.38	981.53	4,713.10	0.00	0.00	0.00
14,700.00	90.00	179.48	10,302.00	-4,804.38	982.45	4,813.10	0.00	0.00	0.00
14,800.00	90.00	179.48	10,302.00	-4,904.38	983.36	4,913.10	0.00	0.00	0.00
14,900.00	90.00	179.48	10,302.00	-5,004.37	984.27	5,013.10	0.00	0.00	0.00
15,000.00	90.00	179.48	10,302.00	-5,104.37	985.19	5,113.10	0.00	0.00	0.00
15,100.00	90.00	179.48	10,302.00	-5,204.36	986.10	5,213.10	0.00	0.00	0.00
15,200.00	90.00	179.48	10,302.00	-5,304.36	987.02	5,313.10	0.00	0.00	0.00
15,300.00	90.00	179.48	10,302.00	-5,404.35	987.93	5,413.10	0.00	0.00	0.00
15,337.17	90.00	179.48	10,302.00	-5,441.52	988.27	5,450.27	0.00	0.00	0.00
Exit 1202902D/C - Entry NM038470 OG Lse									
15,400.00	90.00	179.48	10,302.00	-5,504.35	988.85	5,513.10	0.00	0.00	0.00
15,500.00	90.00	179.48	10,302.00	-5,604.35	989.76	5,613.10	0.00	0.00	0.00
15,600.00	90.00	179.48	10,302.00	-5,704.34	990.68	5,713.10	0.00	0.00	0.00
15,700.00	90.00	179.48	10,302.00	-5,804.34	991.59	5,813.10	0.00	0.00	0.00
15,800.00	90.00	179.48	10,302.00	-5,904.33	992.51	5,913.10	0.00	0.00	0.00
15,900.00	90.00	179.48	10,302.00	-6,004.33	993.42	6,013.10	0.00	0.00	0.00
16,000.00	90.00	179.48	10,302.00	-6,104.33	994.34	6,113.10	0.00	0.00	0.00
16,100.00	90.00	179.48	10,302.00	-6,204.32	995.25	6,213.10	0.00	0.00	0.00
16,200.00	90.00	179.48	10,302.00	-6,304.32	996.16	6,313.10	0.00	0.00	0.00
16,300.00	90.00	179.48	10,302.00	-6,404.31	997.08	6,413.10	0.00	0.00	0.00
16,400.00	90.00	179.48	10,302.00	-6,504.31	997.99	6,513.10	0.00	0.00	0.00
16,500.00	90.00	179.48	10,302.00	-6,604.30	998.91	6,613.10	0.00	0.00	0.00
16,600.00	90.00	179.48	10,302.00	-6,704.30	999.82	6,713.10	0.00	0.00	0.00
16,700.00	90.00	179.48	10,302.00	-6,804.30	1,000.74	6,813.10	0.00	0.00	0.00
16,800.00	90.00	179.48	10,302.00	-6,904.29	1,001.65	6,913.10	0.00	0.00	0.00
16,900.00	90.00	179.48	10,302.00	-7,004.29	1,002.57	7,013.10	0.00	0.00	0.00

Planning Report

Database:	TAZTS01	**Local Co-ordinate Reference:**	Well (04) Zeus 2-11 Fed 2BS Com 4H - Slot Zeus 4H
Company:	Ridge Runner	**TVD Reference:**	3681+25 @ 3706.00usft
Project:	Lea County, NM (N83-NME)	**MD Reference:**	3681+25 @ 3706.00usft
Site:	Zeus 2-11	**North Reference:**	Grid
Well:	(04) Zeus 2-11 Fed 2BS Com 4H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Permit		
Design:	APD-Rev01		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
17,000.00	90.00	179.48	10,302.00	-7,104.28	1,003.48	7,113.10	0.00	0.00	0.00
17,100.00	90.00	179.48	10,302.00	-7,204.28	1,004.40	7,213.10	0.00	0.00	0.00
17,200.00	90.00	179.48	10,302.00	-7,304.28	1,005.31	7,313.10	0.00	0.00	0.00
17,300.00	90.00	179.48	10,302.00	-7,404.27	1,006.23	7,413.10	0.00	0.00	0.00
17,400.00	90.00	179.48	10,302.00	-7,504.27	1,007.14	7,513.10	0.00	0.00	0.00
17,500.00	90.00	179.48	10,302.00	-7,604.26	1,008.06	7,613.10	0.00	0.00	0.00
17,600.00	90.00	179.48	10,302.00	-7,704.26	1,008.97	7,713.10	0.00	0.00	0.00
17,700.00	90.00	179.48	10,302.00	-7,804.25	1,009.88	7,813.10	0.00	0.00	0.00
17,800.00	90.00	179.48	10,302.00	-7,904.25	1,010.80	7,913.10	0.00	0.00	0.00
17,900.00	90.00	179.48	10,302.00	-8,004.25	1,011.71	8,013.10	0.00	0.00	0.00
18,000.00	90.00	179.48	10,302.00	-8,104.24	1,012.63	8,113.10	0.00	0.00	0.00
18,100.00	90.00	179.48	10,302.00	-8,204.24	1,013.54	8,213.10	0.00	0.00	0.00
18,200.00	90.00	179.48	10,302.00	-8,304.23	1,014.46	8,313.10	0.00	0.00	0.00
18,300.00	90.00	179.48	10,302.00	-8,404.23	1,015.37	8,413.10	0.00	0.00	0.00
18,400.00	90.00	179.48	10,302.00	-8,504.23	1,016.29	8,513.10	0.00	0.00	0.00
18,500.00	90.00	179.48	10,302.00	-8,604.22	1,017.20	8,613.10	0.00	0.00	0.00
18,600.00	90.00	179.48	10,302.00	-8,704.22	1,018.12	8,713.10	0.00	0.00	0.00
18,700.00	90.00	179.48	10,302.00	-8,804.21	1,019.03	8,813.10	0.00	0.00	0.00
18,800.00	90.00	179.48	10,302.00	-8,904.21	1,019.95	8,913.10	0.00	0.00	0.00
18,900.00	90.00	179.48	10,302.00	-9,004.20	1,020.86	9,013.10	0.00	0.00	0.00
19,000.00	90.00	179.48	10,302.00	-9,104.20	1,021.77	9,113.10	0.00	0.00	0.00
19,100.00	90.00	179.48	10,302.00	-9,204.20	1,022.69	9,213.10	0.00	0.00	0.00
19,200.00	90.00	179.48	10,302.00	-9,304.19	1,023.60	9,313.10	0.00	0.00	0.00
19,300.00	90.00	179.48	10,302.00	-9,404.19	1,024.52	9,413.10	0.00	0.00	0.00
19,400.00	90.00	179.48	10,302.00	-9,504.18	1,025.43	9,513.10	0.00	0.00	0.00
19,500.00	90.00	179.48	10,302.00	-9,604.18	1,026.35	9,613.10	0.00	0.00	0.00
19,600.00	90.00	179.48	10,302.00	-9,704.17	1,027.26	9,713.10	0.00	0.00	0.00
19,700.00	90.00	179.48	10,302.00	-9,804.17	1,028.18	9,813.10	0.00	0.00	0.00
19,800.00	90.00	179.48	10,302.00	-9,904.17	1,029.09	9,913.10	0.00	0.00	0.00
19,900.00	90.00	179.48	10,302.00	-10,004.16	1,030.01	10,013.10	0.00	0.00	0.00
20,000.00	90.00	179.48	10,302.00	-10,104.16	1,030.92	10,113.10	0.00	0.00	0.00
20,100.00	90.00	179.48	10,302.00	-10,204.15	1,031.84	10,213.10	0.00	0.00	0.00
20,200.00	90.00	179.48	10,302.00	-10,304.15	1,032.75	10,313.10	0.00	0.00	0.00
20,300.00	90.00	179.48	10,302.00	-10,404.15	1,033.67	10,413.10	0.00	0.00	0.00
20,400.00	90.00	179.48	10,302.00	-10,504.14	1,034.58	10,513.10	0.00	0.00	0.00
20,500.00	90.00	179.48	10,302.00	-10,604.14	1,035.49	10,613.10	0.00	0.00	0.00
20,522.46	90.00	179.48	10,302.00	-10,626.60	1,035.70	10,635.56	0.00	0.00	0.00

TD: 20522.46' MD/10635.56' VS/10302.00' TVD - 03-PBHL(Zeus-4H) - 02-LTP(Zeus-4H)

Planning Report

Database:	TAZTS01	**Local Co-ordinate Reference:**	Well (04) Zeus 2-11 Fed 2BS Com 4H - Slot Zeus 4H
Company:	Ridge Runner	**TVD Reference:**	3681+25 @ 3706.00usft
Project:	Lea County, NM (N83-NME)	**MD Reference:**	3681+25 @ 3706.00usft
Site:	Zeus 2-11	**North Reference:**	Grid
Well:	(04) Zeus 2-11 Fed 2BS Com 4H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Permit		
Design:	APD-Rev01		

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
00-EON(Zeus-4H) - plan hits target center - Point	0.00	0.00	9,529.04	-233.23	841.73	586,584.27	819,696.33	32.60931846	-103.42935356
00-LP(Zeus-4H) - plan hits target center - Point	0.00	0.00	10,302.00	-800.61	921.47	586,016.89	819,776.07	32.60775722	-103.42911029
03-PBHL(Zeus-4H) - plan hits target center - Point	0.00	0.00	10,302.00	-10,626.60	1,035.70	576,190.90	819,890.30	32.58074878	-103.42901067
02-LTP(Zeus-4H) - plan hits target center - Point	0.00	0.00	10,302.00	-10,626.60	1,035.70	576,190.90	819,890.30	32.58074878	-103.42901067
01-FTP(Zeus-4H) - plan misses target center by 248.73usft at 10250.00usft MD (10137.86 TVD, -403.08 N, 865.60 E) - Point	0.00	0.00	10,302.00	-232.40	941.70	586,585.10	819,796.30	32.60931841	-103.42902891

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,892.00	1,892.00	Rustler			
2,162.00	2,162.00	Salado			
3,752.64	3,752.00	Yates			
4,025.13	4,022.00	Seven Rivers			
4,713.46	4,702.00	Queen			
6,247.02	6,217.00	Delaware			
8,094.38	8,042.00	Bone Spring			
9,447.71	9,382.00	1st Bone Spring Sand			
10,114.00	10,032.00	2nd Bone Spring Sand			

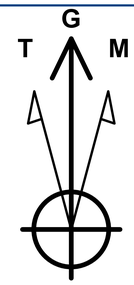
Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
9,594.78	9,529.04	-233.23	841.73	100FLL: 9594.78' MD/240.86VS
9,794.78	9,729.04	-233.23	841.73	KOP: 9594.78' MD/240.86' VS/9529.04' TVD
10,694.78	10,302.00	-800.61	921.47	EOC: 10694.78' MD/808.94' VS/10302.00' TVD
15,337.17	10,302.00	-5,441.52	988.27	Exit 1202902D/C
15,337.17	10,302.00	-5,441.52	988.27	Entry NM038470 OG Lse
20,522.46	10,302.00	-10,626.60	1,035.70	TD: 20522.46' MD/10635.56' VS/10302.00' TVD

Ridge Runner Resources
Site: Zeus 2-11
Well: (04) Zeus 2-11 Fed 2BS Com 4H
Wellbore: Permit
Plan: APD-Rev01

WELL DETAILS: (04) Zeus 2-11 Fed 2BS Com 4H

Northing	Easting	Latittude	Longitude	Slot
586817.50	818854.60	32.60997912	-103.43208039	Zeus 4H



Azimuths to Grid North
True North: -0.49°
Magnetic North: 5.85°

Magnetic Field
Strength: 47584.1nT
Dip Angle: 60.22°
Date: 11/22/2022
Model: IGRF2020

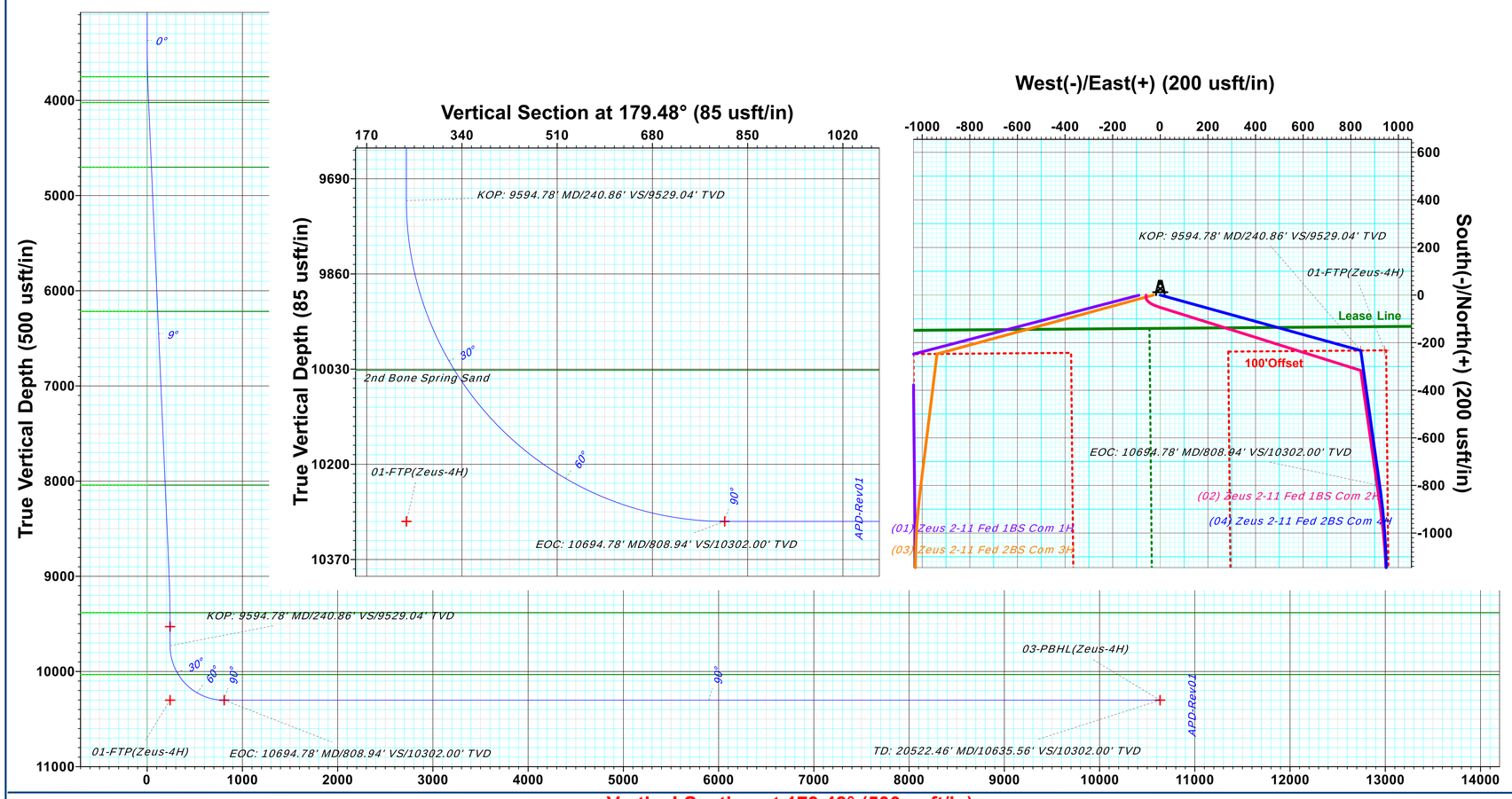
PROJECT DETAILS: Lea County, NM (N83-NME)
Well Name: (04) Zeus 2-11 Fed 2BS Com 4H
Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: New Mexico Eastern Zone
System Datum: Mean Sea Level
Local North: Grid
KB Elevation: 3681+25 @ 3706.00usft
Elevation: 3681.00

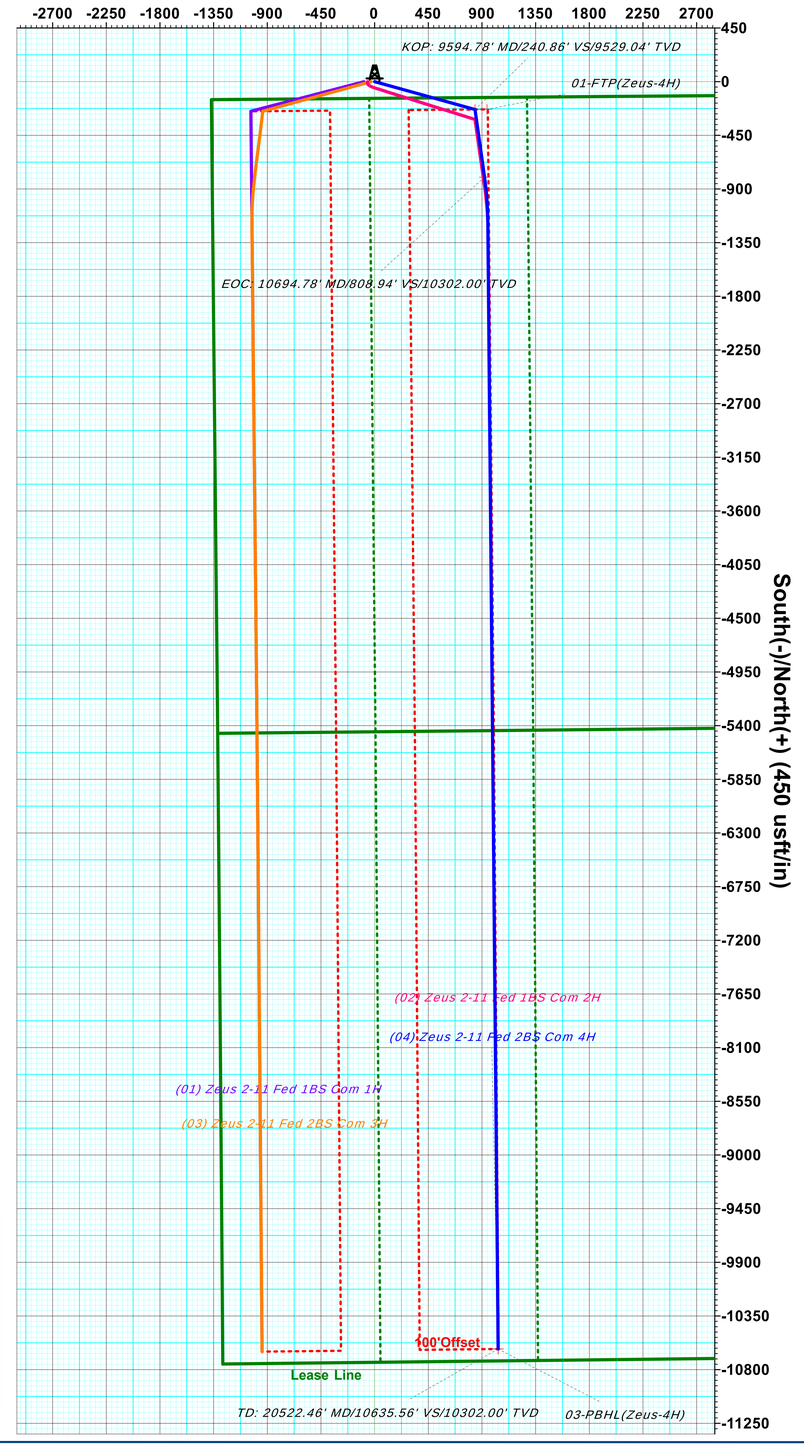
FORMATION TOP DETAILS

TVDPath	MDPath	Formation
1892.00	1892.00	Rustler
2162.00	2162.00	Salado
3752.00	3752.64	Yates
4022.00	4025.13	Seven Rivers
4702.00	4713.46	Queen
6217.00	6247.02	Delaware
8042.00	8094.38	Bone Spring
9382.00	9447.71	1st Bone Spring Sand
10032.00	10114.00	2nd Bone Spring Sand

Section Details

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	3370.00	0.00	0.00	3370.00	0.00	0.00	0.00	0.00	0.00
3	3964.88	8.92	105.49	3962.48	-12.34	44.55	1.50	105.49	12.75
4	8999.90	8.92	105.49	8936.56	-220.89	797.18	0.00	0.00	228.11
5	9594.78	0.00	89.49	9529.04	-233.23	841.73	1.50	180.00	240.86
6	9794.78	0.00	89.49	9729.04	-233.23	841.73	0.00	89.49	240.86
7	10694.78	90.00	172.00	10302.00	-800.61	921.47	10.00	172.00	808.94
8	11068.58	90.00	179.48	10302.00	-1173.11	949.23	2.00	90.00	1181.68
9	20522.46	90.00	179.48	10302.00	-10626.60	1035.70	0.00	0.00	10635.56





Plan: APD-Rev01 ((04) Zeus 2-11 Fed 2BS Com 4H/Permit)
Created By: Adrian Castro Date: 15:55, November 22 2022

PECOS DISTRICT
DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	**Ridge Runner Resources Operating LLC**
LEASE NO.:	**NMNM038470**
WELL NAME & NO.:	Zeus 2-11 Federal 2BS Com 4H
SURFACE HOLE FOOTAGE:	140'/S & 1370'/W
BOTTOM HOLE FOOTAGE	100'/S & 2310'/W
LOCATION:	Section 35, T.19 S., R.35 E., NMPM
COUNTY:	Lea 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	☑ COM	☐ Unit

A. HYDROGEN SULFIDE

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

B. CASING

1. The **13-3/8 inch** surface casing shall be set at approximately **2000 feet** (a minimum of **25 feet (Lea County)** into the Rustler Anhydrite and above the salt) and cemented to the surface.

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

b. Wait on cement (WOC) time for a primary cement job will be a minimum of **8 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.

Intermediate casing must be kept fluid filled to meet BLM minimum collapse requirement.

2. The minimum required fill of cement behind the **9-5/8 inch** intermediate casing and shall be set at approximately **5800 feet** 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.

3. The minimum required fill of cement behind the **5-1/2 inch** production casing with a tie-back into the previous casing at approximately **4800 feet** is:

- Cement should tie-back at least **200 feet** into previous casing string. Operator shall provide method of verification.

C. PRESSURE CONTROL

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

2. Operator has proposed a multi-bowl wellhead assembly. This assembly will only be tested when installed on the surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **5000 (5M) psi**.

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.

D. SPECIAL REQUIREMENT (S)

Communitization Agreement

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

GENERAL REQUIREMENTS

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

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

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

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

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

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

Ridge Runner Resources, LLC

1004 N . Big Spring Street,

Suite 325

Midland, TX 79701

H2S Contingency Plan

Lea County, NM

Escape

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

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

Emergency Procedures

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

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

  in the: Detection of

  H2S, and

  Measures for protection against the gas,

  Equipment used for protection and emergency response.

Ignition of Gas Source

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

Characteristics of H2S and SO,

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

Contacting Authorities

3 Bear Field Services personnel must liaise with local and state agencies to ensure **a** proper response to a major release. Additionally, the OCD must be notified of the release as soon **as** possible but no later than 4 hours. Agencies will ask for information such as type and volume of release, wind direction, location of release, etc. Be prepared with all information available including directions to sit e. The following call list of essential and potential responders has been prepared for use during a release. 3 Bear Field Services, LLC response must be in coordination with the State of New Mexico's "Hazardous Materials Emergency Response Plan" (HMERP).

Hydrogen Sulfide Drilling Operations Plan

1. All Company and Contract personnel admitted on location must be trained by a qualified H2S safety instructor to the following:
   A. Characteristics of H2S
   B. Physical effects and hazards
   C. Principal and operation of H2S detectors, warning system and briefing areas.
   D. Evacuation procedure, routes and first aid.
   E. Proper use of safety equipment & life support systems
   F. Essential personnel meeting Medical Evaluation criteria will receive additional training on the proper use of 30-minute pressure demand air packs.

2. H2S Detection and Alarm Systems:
   a. H2S sensors/detectors to be located on the drilling rig floor, in the base of the sub structure/cellar area, on the mud pits in the shale shaker area. Additional H2S detectors may play placed as deemed necessary.
   b. An audio alarm system will be installed on the derrick floor and in the top doghouse.

3. Windsock and/or wind streamers:
   a. Windsock at mudpit area should be high enough to be visible.
   b. Windsock on the rig floor and/ or top doghouse should be high enough to be visible.

4. Condition Flags and Signs
   a. Warning sign on access road to location.
   b. Flags to be displayed on sign at entrance to location. Green flag indicates normal safe condition. Yellow flag indicates potential pressure and danger. Red flag indicates danger (H2S present in dangerous concentration). Only H2S trained and certified personnel

admitted to location.

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

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

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

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

Emergency Assistance Telephone List

Ridge Runner Resources, LLC

Ridge Runner Resources, LLC	Office:	(432)686-2973
CEO-Brian Cassens	Office:	(817)953-0480
Drilling Superintendent-Russell Simons	Cell:	(830)285-7501
Production Superintendent-Paul Martinez	Cell:	(325)206-1722

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

Ridge Runner Resources Operating, LLC plans to operate a Closed Loop System.

Operator Name: RIDGE RUNNER RESOURCES OPERATING LLC

Well Name: ZEUS 2-11 FED 2BS COM **Well Number:** 4H

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

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

Type of Well Pad: MULTIPLE WELL **Multiple Well Pad Name:** ZEUS 2-11 FED COM WEST PAD **Number:** 1H,2H,3H,4H

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

Well Work Type: Drill

Well Type: OIL WELL

Describe Well Type:

Well sub-Type: INFILL

Describe sub-type:

Distance to town: 5 Miles **Distance to nearest well:** 30 FT **Distance to lease line:** 100 FT

Reservoir well spacing assigned acres Measurement: 320 Acres

Well plat: ZEUS_2_11_FED_2BS_COM__4H_REVISED_C102_20221220075049.pdf

Well work start Date: 12/31/2022 **Duration:** 30 DAYS

Section 3 - Well Location Table

Survey Type: RECTANGULAR

Describe Survey Type:

Datum: NAD83 **Vertical Datum:** NAVD88

Survey number: 14440 **Reference Datum:** GROUND LEVEL

Wellbore	NS-Foot	NS Indicator	EW-Foot	EW Indicator	Twsp	Range	Section	Aliquot/Lot/Tract	Latitude	Longitude	County	State	Meridian	Lease Type	Lease Number	Elevation	MD	TVD	Will this well produce from this
SHL Leg #1	140	FSL	1370	FWL	19S	35E	35	Aliquot SESW	32.6099791	-103.4320803	LEA	NEW MEXICO	NEW MEXICO	S	STATE	3682	0	0	Y
KOP Leg #1	140	FSL	1370	FWL	19S	35E	35	Aliquot SESW	32.6099791	-103.4320803	LEA	NEW MEXICO	NEW MEXICO	S	STATE	-5847	9594	9529	Y

Operator Name: RIDGE RUNNER RESOURCES OPERATING LLC

Well Name: ZEUS 2-11 FED 2BS COM **Well Number:** 4H

Wellbore	NS-Foot	NS Indicator	EW-Foot	EW Indicator	Twsp	Range	Section	Aliquot/Lot/Tract	Latitude	Longitude	County	State	Meridian	Lease Type	Lease Number	Elevation	MD	TVD	Will this well produce from this
PPP Leg #1-1	100	FNL	2310	FWL	20S	35E	2	Lot 3	32.6093183	-103.4290288	LEA	NEW MEXICO	NEW MEXICO	S	STATE	-6620	10694	10302	Y
EXIT Leg #1	100	FSL	2310	FWL	20S	35E	11	Aliquot SESW	32.5807488	-103.4290107	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 038470	-6620	20522	10302	Y
BHL Leg #1	100	FSL	2310	FWL	20S	35E	11	Aliquot SESW	32.5807488	-103.4290107	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 038470	-6620	20522	10302	Y

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

Drilling Plan Data Report
01/08/2023

APD ID: 10400086900 **Submission Date:** 07/25/2022

Operator Name: RIDGE RUNNER RESOURCES OPERATING LLC

Well Name: ZEUS 2-11 FED 2BS COM **Well Number:** 4H

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
8941974	RUSTLER	3680	1890	1890	ANHYDRITE	USEABLE WATER	N
8941975	SALADO	1520	2160	2160	SALT	NONE	N
8941976	YATES	-70	3750	3750	SANDSTONE, SHALE	NATURAL GAS, OIL	N
8941977	SEVEN RIVERS	-340	4020	4020	ANHYDRITE, DOLOMITE	NATURAL GAS, OIL	N
8941978	QUEEN	-1020	4700	4700	DOLOMITE, SANDSTONE	NATURAL GAS, OIL	N
8941979	BELL CANYON	-1980	5660	5660	LIMESTONE, SANDSTONE, SHALE	NATURAL GAS, OIL	N
8941980	CHERRY CANYON	-3210	6890	6890	SANDSTONE, SHALE	NATURAL GAS, OIL	N
8941981	BRUSHY CANYON	-4110	7790	7790	LIMESTONE, SANDSTONE, SHALE	NATURAL GAS, OIL	N
8941982	BONE SPRING LIME	-4350	8030	8030	LIMESTONE, SHALE	NATURAL GAS, OIL	N
8941983	AVALON SAND	-4525	8205	8205	LIMESTONE, SHALE	NATURAL GAS, OIL	N
8941984	BONE SPRING 1ST	-5700	9380	9380	LIMESTONE, SANDSTONE, SHALE	NATURAL GAS, OIL	N
8941985	BONE SPRING 2ND	-6350	10030	10030	LIMESTONE, SANDSTONE, SHALE	NATURAL GAS, OIL	Y

Section 2 - Blowout Prevention

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

Equipment: Rotating head, Remote Kill Line, Mud-Gas Seperator

Requesting Variance? YES

Variance request: We propose utilizing a cactus speed head for this well. Please see attached diagram and pressure testing statement. Also we request to use a co flex hose. Please find attached information regarding co flex hose.

Operator Name: RIDGE RUNNER RESOURCES OPERATING LLC

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

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

Requesting Variance? YES

Variance request: We propose utilizing a cactus speed head for this well. Please see attached diagram and pressure testing statement. Also we request to use a co flex hose. Please find attached information regarding co flex hose.

Testing Procedure: BOP will be tested by an independent service company to 250 psi low and 5000 psi high, per onshore order 2. Pipe rams will be operationally checked each 24 hour period. Blind rams will be operationally checked each trip out of the hole.

Choke Diagram Attachment:

5M_Choke_Manifold_Diagram_20220906162728.pdf

BOP Diagram Attachment:

5M__BOP_Diagram_2__20220906162737.pdf

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 174021

CONDITIONS

Operator: Ridge Runner Resources Operating, LLC 4000 N Big Spring Ste 210 Midland, TX 79705	OGRID: 373013
	Action Number: 174021
	Action Type: [C-101] BLM - Federal/Indian Land Lease (Form 3160-3)

CONDITIONS

Created By	Condition	Condition Date
pkautz	ALL WELLS PART OF THE SAME PROPERTY (LEASE, UNIT OR COM) MUST HAVE THE SAME PROPERTY NAME. FEDERAL UNIT AND FEDERAL COM MUST BE AT THE END OF THE NAME. SUBMIT SUNDRY PRIOR TO SPUD CHANGE ALL WELLS ON THIS PROPERTY TO ONE COMMON NAME.	1/23/2023
pkautz	Will require a File As Drilled C-102 and a Directional Survey with the C-104	1/23/2023
pkautz	Oil base muds are not to be used until fresh water zones are cased and cemented providing isolation from the oil or diesel. This includes synthetic oils. Oil based mud, drilling fluids and solids must be contained in a steel closed loop system	1/23/2023
pkautz	Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string	1/23/2023
pkautz	Cement is required to circulate on both surface and intermediate1 strings of casing	1/23/2023