

Form 3160-3  
(June 2015)UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

## APPLICATION FOR PERMIT TO DRILL OR REENTER

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

1a. Type of work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. NMNM114978
1b. Type of Well: <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other		6. If Indian, Allottee or Tribe Name
1c. Type of Completion: <input type="checkbox"/> Hydraulic Fracturing <input type="checkbox"/> Single Zone <input checked="" type="checkbox"/> Multiple Zone		7. If Unit or CA Agreement, Name and No.
2. Name of Operator STRATA PRODUCTION COMPANY		8. Lease Name and Well No. ROADRUNNER FEDERAL 23 11 GBL  4H
3a. Address P O BOX 1030, ROSWELL, NM 88202-1030	3b. Phone No. (include area code) (575) 622-1127	9. API Well No. <b>30-015-53206</b>
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface SWNE / 2310 FNL / 2055 FEL / LAT 32.2913853 / LONG -103.849627 At proposed prod. zone NWNE / 100 FNL / 2310 FEL / LAT 32.326528 / LONG -103.850423		10. Field and Pool, or Exploratory FORTY NINER RIDGE UNIT/DELAWARE
11. Sec., T. R. M. or Blk. and Survey or Area SEC 23/T23S/R30E/NMP		
14. Distance in miles and direction from nearest town or post office* 19 miles		12. County or Parish EDDY
13. State NM		
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 2055 feet	16. No of acres in lease	17. Spacing Unit dedicated to this well 400.0
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 1208 feet	19. Proposed Depth 7609 feet / 20191 feet	20. BLM/BIA Bond No. in file FED: NM1538
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3249 feet	22. Approximate date work will start* 02/23/2023	23. Estimated duration 60 days
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.   | 4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above). |
| 2. A Drilling Plan.  | 5. Operator certification.  |
| 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). | 6. Such other site specific information and/or plans as may be requested by the BLM.            |

25. Signature (Electronic Submission)	Name (Printed/Typed) SHAMMY DENNIS / Ph: (575) 622-1127	Date 09/25/2019
Title Administrative Support		
Approved by (Signature) (Electronic Submission)	Name (Printed/Typed) CODY LAYTON / Ph: (575) 234-5959	Date 12/14/2022
Title Assistant Field Manager Lands & Minerals		
Office Carlsbad Field Office		

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Conditions of approval, if any, are attached.

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

**APPROVED WITH CONDITIONS**

Approval Date: 12/14/2022

(Continued on page 2)

\*(Instructions on page 2)

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

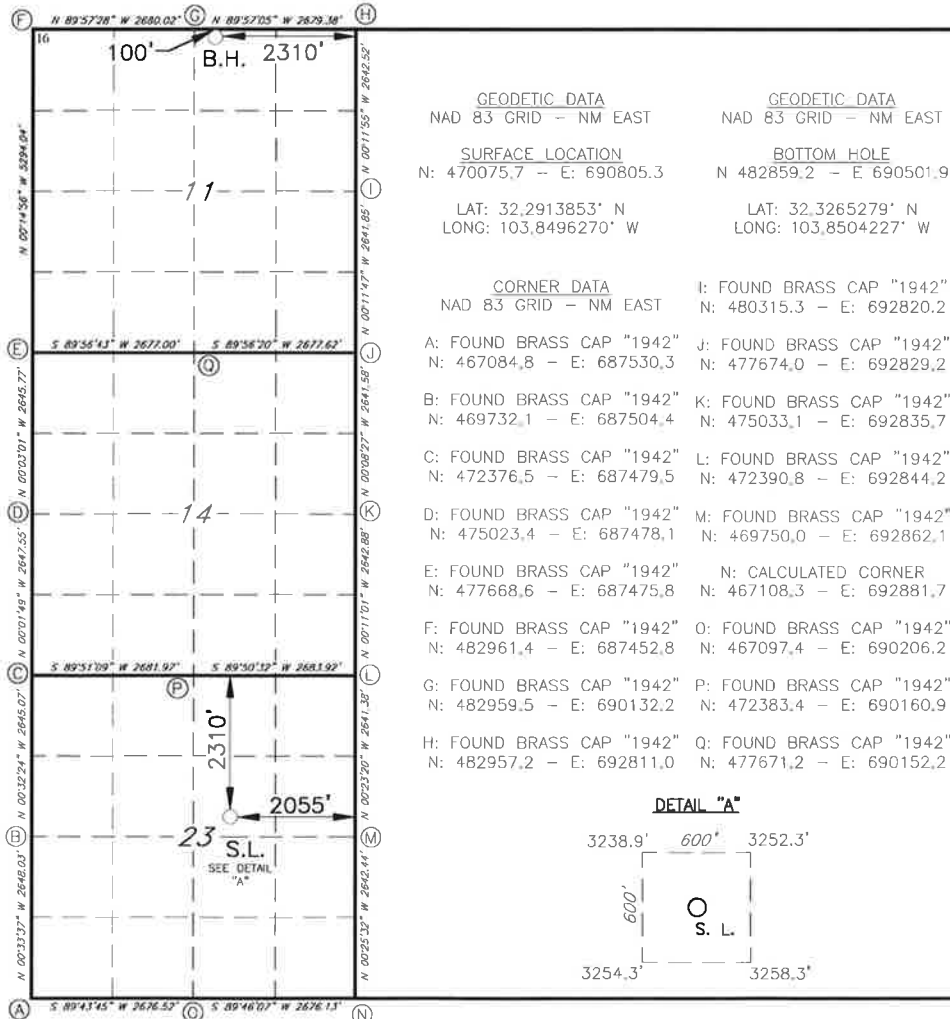
Form C-102  
Revised August 1, 2011  
Submit one copy to appropriate  
District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

<sup>1</sup> API Number <b>30-015-53206</b>		<sup>2</sup> Pool Code <b>24750</b>		<sup>3</sup> Pool Name <b>FORTY NINER RIDGE DELAWARE</b>					
<sup>4</sup> Property Code <b>333637</b>		<sup>5</sup> Property Name <b>ROADRUNNER FED COM 23 11 GBL</b>						<sup>6</sup> Well Number <b>4H</b>	
<sup>7</sup> GRID NO. <b>21712</b>		<sup>8</sup> Operator Name <b>STRATA PRODUCTION COMPANY</b>						<sup>9</sup> Elevation <b>3249'</b>	
<sup>10</sup> Surface Location									
UL or lot no. <b>G</b>	Section <b>23</b>	Township <b>23S</b>	Range <b>30E</b>	Lot Idn	Feet from the <b>2310</b>	North/South line <b>NORTH</b>	Feet From the <b>2055</b>	East/West line <b>EAST</b>	County <b>EDDY</b>
<sup>11</sup> Bottom Hole Location If Different From Surface									
UL or lot no. <b>B</b>	Section <b>11</b>	Township <b>23S</b>	Range <b>30E</b>	Lot Idn	Feet from the <b>100</b>	North/South line <b>NORTH</b>	Feet from the <b>2310</b>	East/West line <b>EAST</b>	County <b>EDDY</b>
<sup>12</sup> Dedicated Acres <b>400</b>		<sup>13</sup> Joint or Infill		<sup>14</sup> Consolidation Code		<sup>15</sup> Order No.			

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.



<sup>17</sup> OPERATOR CERTIFICATION

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

Signature Jerry Elgin Date June 29, 2022  
Printed Name Jerry Elgin, VP Productions  
E-mail Address jelgin@stratanm.com

<sup>18</sup> 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.

09/09/2019

Date of Survey

Signature and Seal of Professional Surveyor

19680

Certificate Number

REV: MOVE SL & BH 5/17/22

Job No.: LS21121271

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

Submit Electronically  
Via E-permitting

## NATURAL GAS MANAGEMENT PLAN

This Natural Gas Management Plan must be submitted with each Application for Permit to Drill (APD) for a new or recompleted well.

### Section 1 – Plan Description Effective May 25, 2021

**I. Operator:** Strata Production Company **OGRID:** 21712 **Date:** 09 / 14 / 2021

**II. Type:** ☒ Original ☐ Amendment due to ☐ 19.15.27.9.D(6)(a) NMAC ☐ 19.15.27.9.D(6)(b) NMAC ☐ Other.

If Other, please describe: \_\_\_\_\_

**III. Well(s):** Provide the following information for each new or recompleted well or set of wells proposed to be drilled or proposed to be recompleted from a single well pad or connected to a central delivery point.

Well Name	API	ULSTR	Footages	Anticipated Oil BBL/D	Anticipated Gas MCF/D	Anticipated Produced Water BBL/D
Roadrunner Federal PAD 7H		SEC 25 / T23S / R30E	830 FSL/660 FEL	550	300	950

**IV. Central Delivery Point Name:** Roadrunner Federal PAD 7H [See 19.15.27.9(D)(1) NMAC]

**V. Anticipated Schedule:** Provide the following information for each new or recompleted well or set of wells proposed to be drilled or proposed to be recompleted from a single well pad or connected to a central delivery point.

Well Name	API	Spud Date	TD Reached Date	Completion Commencement Date	Initial Flow Back Date	First Production Date
Roadrunner Federal PAD 7H		01/05/2022	01/23/2022	02/02/2022	02/08/2022	02/11/2022

**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.



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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: <i>Jerry Elgin</i>
Printed Name: <b>Jerry Elgin</b>
Title: <b>Vice President Operations</b>
E-mail Address: <b>jelgin@stratanm.com</b>
Date: <b>09/14/2021</b>
Phone: <b>575-622-127</b>
<b>OIL CONSERVATION DIVISION</b> <b>(Only applicable when submitted as a standalone form)</b>
Approved By:
Title:
Approval Date:
Conditions of Approval:

## Strata Production Company Natural Gas Management Plan

### Description for Sections:

- VI. Separation Equipment
- VII. Operational Practices
- VIII. Best Management Practices

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

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

A. Venting and flaring of natural gas

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

B. Venting and flaring during drilling operations

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

C. Venting and flaring during completion or recompletion operations

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

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

**D. Venting and flaring during production operations**

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

**E. Performance standards**

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

**F. Measurement or estimation of vented and flared natural gas**

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

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



Strata Production Company  
**Roadrunner Fed Com 23 11 GBL #4H**

SHL: 2310' FNL & 2055' FEL of Sec 23

BHL: 100' FNL & 2310' FEL of Sec 11

Sec 23-T23S-R30E

Eddy County, NM

<u>Hole Size</u>	<u>Casing Interval</u>		<u>Csg Size</u>	<u>Weight</u>	<u>Grade</u>	<u>Connection</u>	<u>SF Collapse</u>	<u>SF Burst</u>	<u>SF Joint Tension</u>	<u>SF Body Tension</u>
	<u>From</u>	<u>To</u>								
17.5	0	450	13.375	48	API	STC	3.95	7.39	14.9	25.05
12.25	0	4,200	9.625	40	API	LTC	1.41	1.81	3.80	2.70
8.75	0	20,191	5.5	20	API	Buttress	1.27	1.20	1.62	1.65
<b>BLM Minimum SF</b>							<b>1.125</b>	<b>1.00</b>	<b>1.60</b>	<b>1.60</b>

	Y or N
Is casing new? If used, attach certificate as required in Onshore Order #1.	Y
Is casing API approved? If no, attach casing specification sheet.	Y
Is premium or uncommon casing planned? If yes, attach casing specification sheet.	N
Does the above casing design meet or exceed BLM's minimum standards? If not, provide justifications (loading assumptions, casing design criteria).	Y
Will the pipe be kept at a minimum of 1/3 fluid filled to avoid approaching the collapse pressure rating of the casing?	Y
Is well located within Capitan Reef?	N
If yes, does production casing cement tie back a minimum of 50' above the Reef?	NA
Is well within the designated 4 string boundary?	NA
Is well located in SOPA but not in R-111-P?	N
If yes, are the first 2 strings cemented to surface and 3rd string cement tied back 500' into previous casing?	NA
Is well located in R-111-P and SOPA?	Y
If yes, are the first 3 strings cemented to the surface?	Y
Is 2nd string set 100' to 600' below the base of salt?	Y
Is well located in high Cave/Karst?	Y
If yes, are there two strings cemented to the surface?	Y
If yes, is there a contingency casing if lost circulation occurs?	
Is well located in critical Cave/Karst?	N
If yes, are there three strings cemented to surface?	NA

Strata Production Company

Company: Strata Production Company  
Well: Roadrunner Fed Com 23 11 GBL #4H  
County: Eddy County, New Mexico (NAD 83)  
Rig: Norton 2  
Wellbore: Wellbore #1  
Design: Design #1  
Date: 14:48, June 24 2022

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



To convert a Magnetic Direction to a Grid Direction, Add 6.342°  
To convert a Magnetic Direction to a True Direction, Add 6.600° East  
To convert a True Direction to a Grid Direction, Subtract 0.258°

WELL DETAILS: Roadrunner Fed Com 23 11 GBL #4H

		GL @ 3249.00	WELL @ 3266.00usft (Norton 2)			
		Northing	Easting	Latitude	Longitude	
+N/-S	+E/-W	470075.70	690805.30	32° 17' 28.987 N	103° 50' 58.657 W	
0.00	0.00					

DESIGN TARGET DETAILS

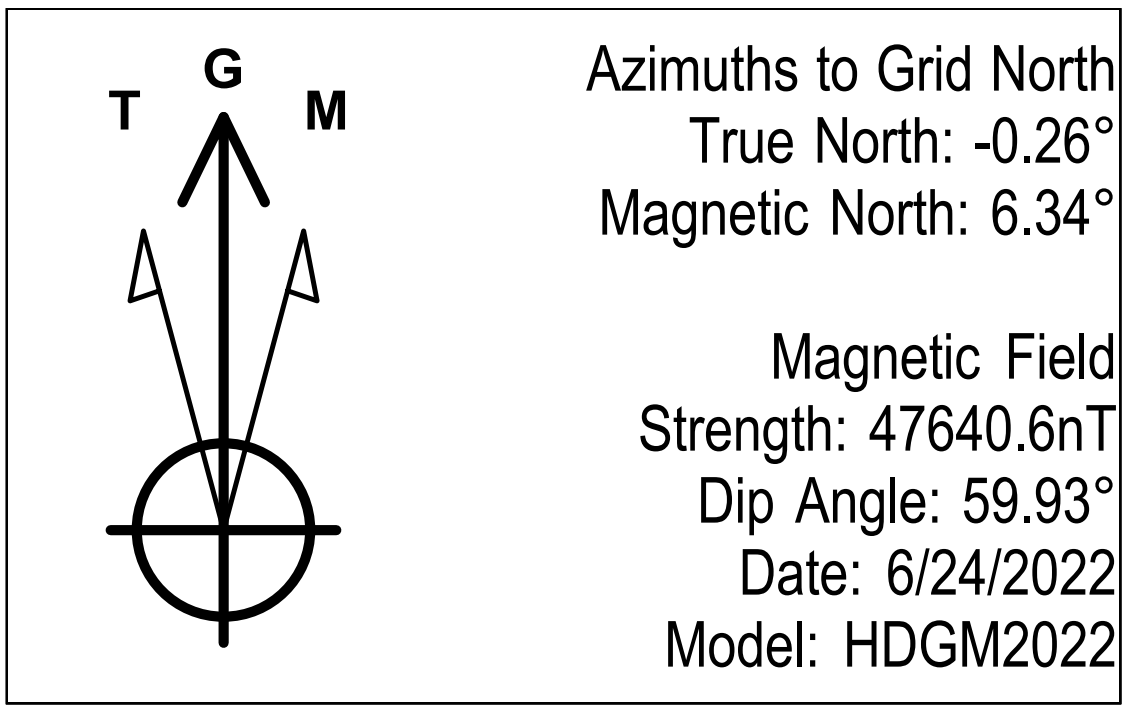
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
PBHL - RR Fed Com 23 11 GBL #4H	7609.00	12783.50	-303.40	482859.20	690501.90	32° 19' 35.501 N	103° 51' 1.521 W

SECTION DETAILS

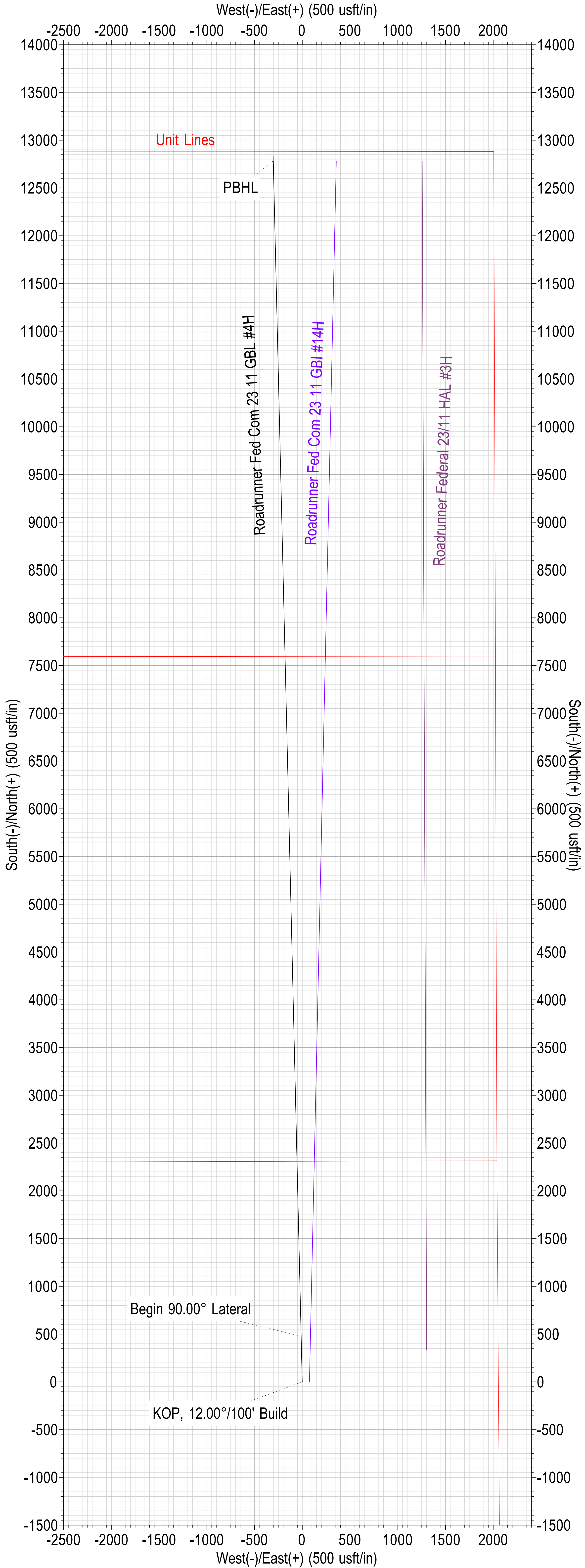
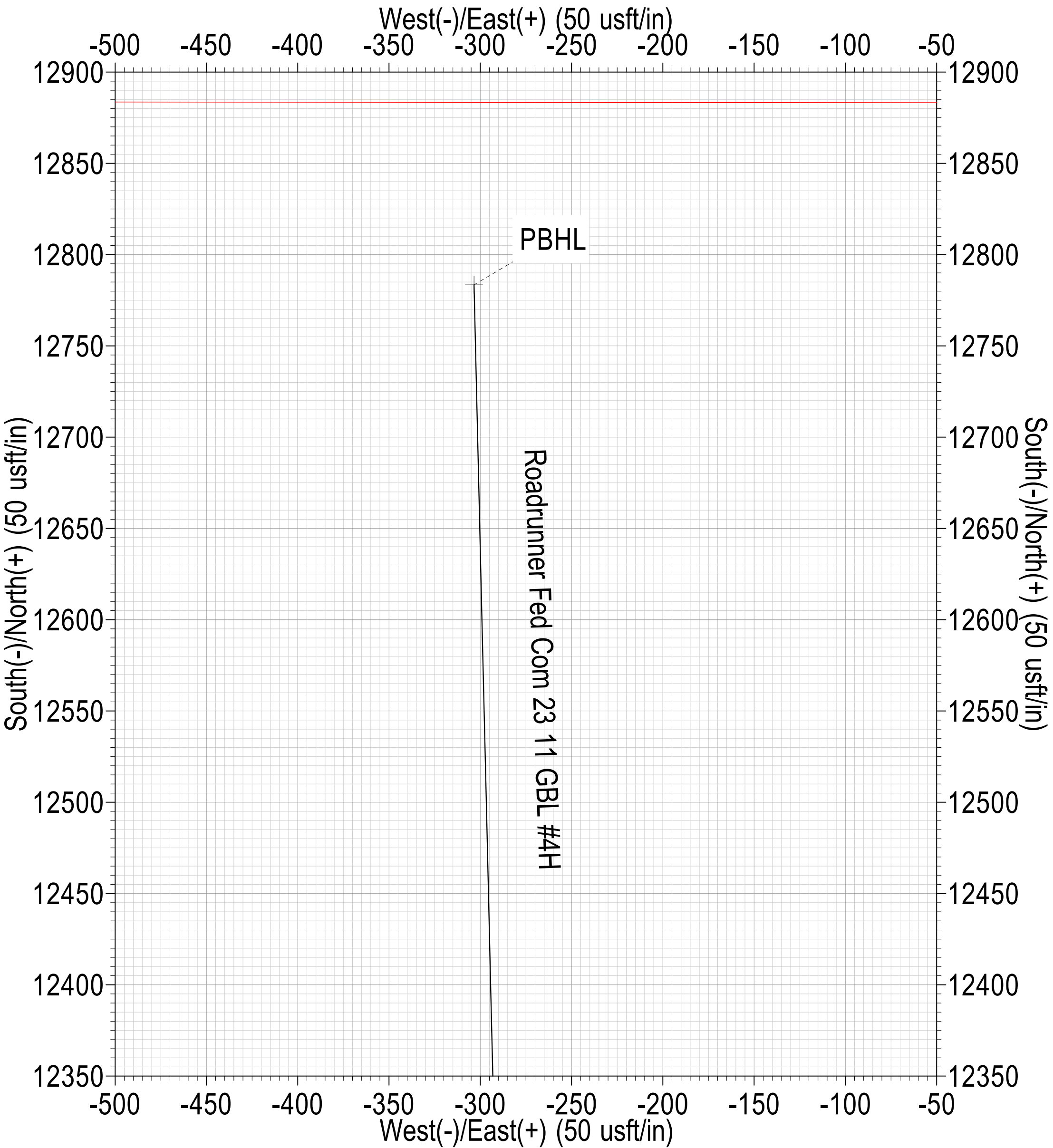
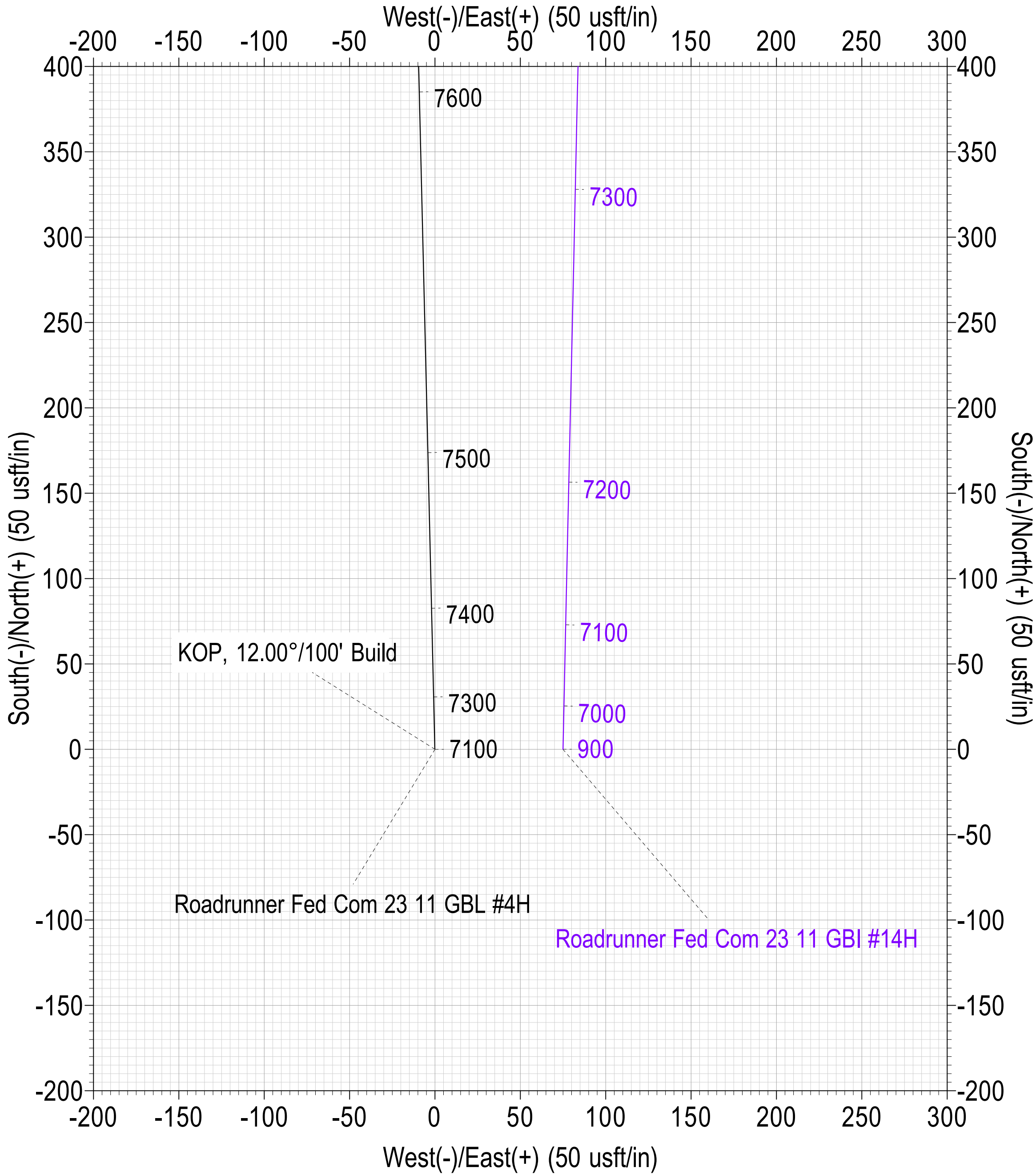
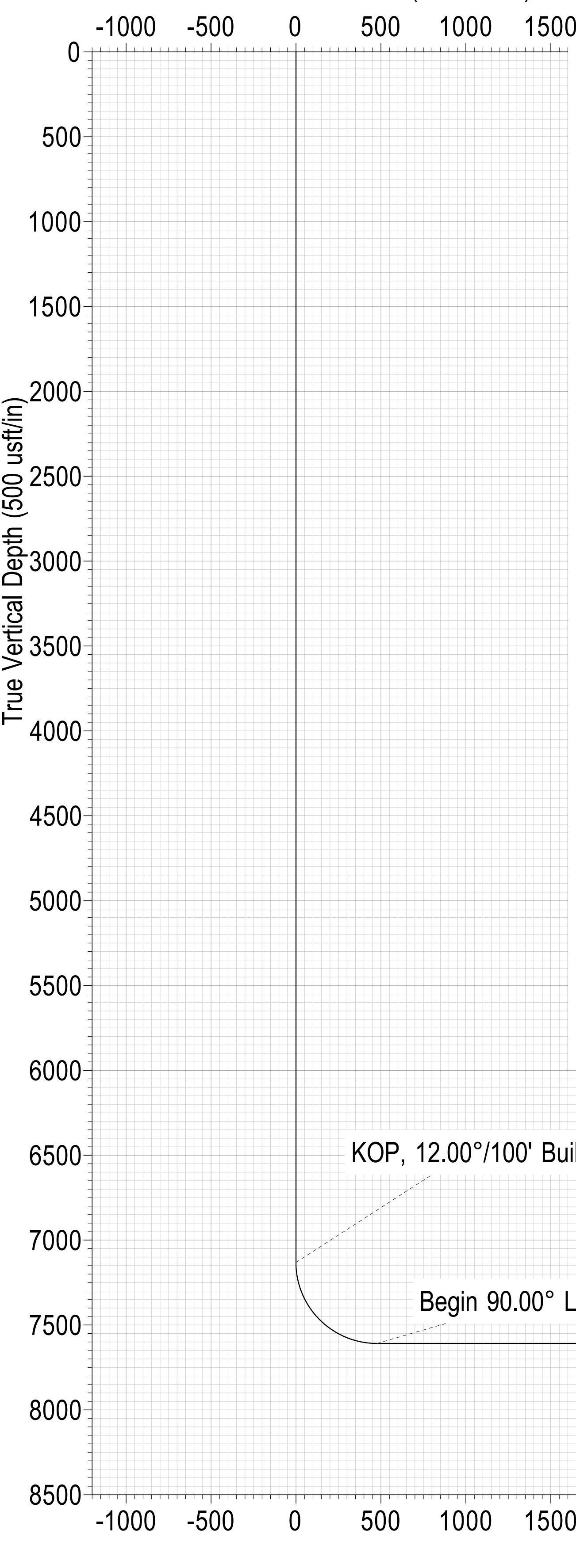
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Annotation
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	
7131.54	0.00	0.00	7131.54	0.00	0.00	0.00	0.000	0.00	KOP, 12.00°/100' Build
7881.54	90.00	358.64	7609.00	477.33	-11.33	12.00	358.640	477.46	Begin 90.00° Lateral
20191.17	90.00	358.64	7609.00	12783.50	-303.40	0.00	0.000	12787.10	PBHL

SURVEY PROGRAM

Depth From	Depth To	Survey/Plan	Tool
0.00	20191.17	Design #1 (Wellbore #1)	MWD+HRGM



Vertical Section at 358.64° (500 usft/in)



# Strata Production Company

## Strata Production Company

Eddy County, New Mexico (NAD 83)  
Roadrunner Fed Com 23 11 GBI #14H  
Roadrunner Fed Com 23 11 GBL #4H

Wellbore #1

Plan: Design #1

## Standard Planning Report

24 June, 2022





## Strata Production Company

MS Directional  
Planning Report

<b>Database:</b>	EDM 5000.15 Conroe DB	<b>Local Co-ordinate Reference:</b>	Well Roadrunner Fed Com 23 11 GBL #4H
<b>Company:</b>	Strata Production Company	<b>TVD Reference:</b>	WELL @ 3266.00usft (Norton 2)
<b>Project:</b>	Eddy County, New Mexico (NAD 83)	<b>MD Reference:</b>	WELL @ 3266.00usft (Norton 2)
<b>Site:</b>	Roadrunner Fed Com 23 11 GBL #14H	<b>North Reference:</b>	Grid
<b>Well:</b>	Roadrunner Fed Com 23 11 GBL #4H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1		

<b>Project</b>	Eddy County, New Mexico (NAD 83)		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		
<b>Map Zone:</b>	New Mexico Eastern Zone		

<b>Site</b>	Roadrunner Fed Com 23 11 GBL #14H		
<b>Site Position:</b>		<b>Northing:</b>	470,075.70 usft
<b>From:</b>	Map	<b>Easting:</b>	690,805.30 usft
<b>Position Uncertainty:</b>	0.00 usft	<b>Slot Radius:</b>	13-3/16 "
		<b>Latitude:</b>	32° 17' 28.987 N
		<b>Longitude:</b>	103° 50' 58.657 W

<b>Well</b>	Roadrunner Fed Com 23 11 GBL #4H		
<b>Well Position</b>	<b>+N/-S</b>	0.00 usft	<b>Northing:</b> 470,075.70 usft
	<b>+E/-W</b>	0.00 usft	<b>Easting:</b> 690,805.30 usft
<b>Position Uncertainty</b>	0.00 usft	<b>Wellhead Elevation:</b>	usft
<b>Grid Convergence:</b>	0.258 °	<b>Ground Level:</b>	3,249.00 usft

<b>Wellbore</b>	Wellbore #1				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	HDGM2022	6/24/2022	6.600	59.933	47,640.60

<b>Design</b>	Design #1				
<b>Audit Notes:</b>					
<b>Version:</b>	<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	0.00	
<b>Vertical Section:</b>	<b>Depth From (TVD) (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Direction (°)</b>	
	0.00	0.00	0.00	358.64	

<b>Plan Survey Tool Program</b>	<b>Date</b>	6/24/2022			
<b>Depth From (usft)</b>	<b>Depth To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Remarks</b>	
1	0.00	20,191.17	Design #1 (Wellbore #1)	MWD+HRGM	
				OWSG MWD + HRGM	

<b>Plan Sections</b>											
<b>Measured Depth (usft)</b>	<b>Inclination (°)</b>	<b>Azimuth (°)</b>	<b>Vertical Depth (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Dogleg Rate (°/100usft)</b>	<b>Build Rate (°/100usft)</b>	<b>Turn Rate (°/100usft)</b>	<b>TFO (°)</b>	<b>Target</b>	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000		
7,131.54	0.00	0.00	7,131.54	0.00	0.00	0.00	0.00	0.00	0.000		
7,881.54	90.00	358.64	7,609.00	477.33	-11.33	12.00	12.00	0.00	358.640		
20,191.17	90.00	358.64	7,609.00	12,783.50	-303.40	0.00	0.00	0.00	0.000	PBHL - RR Fed Coi	

## Strata Production Company

MS Directional  
Planning Report

<b>Database:</b>	EDM 5000.15 Conroe DB	<b>Local Co-ordinate Reference:</b>	Well Roadrunner Fed Com 23 11 GBL #4H
<b>Company:</b>	Strata Production Company	<b>TVD Reference:</b>	WELL @ 3266.00usft (Norton 2)
<b>Project:</b>	Eddy County, New Mexico (NAD 83)	<b>MD Reference:</b>	WELL @ 3266.00usft (Norton 2)
<b>Site:</b>	Roadrunner Fed Com 23 11 GBL #14H	<b>North Reference:</b>	Grid
<b>Well:</b>	Roadrunner Fed Com 23 11 GBL #4H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00
2,300.00	0.00	0.00	2,300.00	0.00	0.00	0.00	0.00	0.00	0.00
2,400.00	0.00	0.00	2,400.00	0.00	0.00	0.00	0.00	0.00	0.00
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00
2,600.00	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
3,400.00	0.00	0.00	3,400.00	0.00	0.00	0.00	0.00	0.00	0.00
3,500.00	0.00	0.00	3,500.00	0.00	0.00	0.00	0.00	0.00	0.00
3,600.00	0.00	0.00	3,600.00	0.00	0.00	0.00	0.00	0.00	0.00
3,700.00	0.00	0.00	3,700.00	0.00	0.00	0.00	0.00	0.00	0.00
3,800.00	0.00	0.00	3,800.00	0.00	0.00	0.00	0.00	0.00	0.00
3,900.00	0.00	0.00	3,900.00	0.00	0.00	0.00	0.00	0.00	0.00
4,000.00	0.00	0.00	4,000.00	0.00	0.00	0.00	0.00	0.00	0.00
4,100.00	0.00	0.00	4,100.00	0.00	0.00	0.00	0.00	0.00	0.00
4,200.00	0.00	0.00	4,200.00	0.00	0.00	0.00	0.00	0.00	0.00
4,300.00	0.00	0.00	4,300.00	0.00	0.00	0.00	0.00	0.00	0.00
4,400.00	0.00	0.00	4,400.00	0.00	0.00	0.00	0.00	0.00	0.00
4,500.00	0.00	0.00	4,500.00	0.00	0.00	0.00	0.00	0.00	0.00
4,600.00	0.00	0.00	4,600.00	0.00	0.00	0.00	0.00	0.00	0.00
4,700.00	0.00	0.00	4,700.00	0.00	0.00	0.00	0.00	0.00	0.00
4,800.00	0.00	0.00	4,800.00	0.00	0.00	0.00	0.00	0.00	0.00
4,900.00	0.00	0.00	4,900.00	0.00	0.00	0.00	0.00	0.00	0.00
5,000.00	0.00	0.00	5,000.00	0.00	0.00	0.00	0.00	0.00	0.00
5,100.00	0.00	0.00	5,100.00	0.00	0.00	0.00	0.00	0.00	0.00
5,200.00	0.00	0.00	5,200.00	0.00	0.00	0.00	0.00	0.00	0.00
5,300.00	0.00	0.00	5,300.00	0.00	0.00	0.00	0.00	0.00	0.00



## Strata Production Company

MS Directional  
Planning Report

<b>Database:</b>	EDM 5000.15 Conroe DB	<b>Local Co-ordinate Reference:</b>	Well Roadrunner Fed Com 23 11 GBL #4H
<b>Company:</b>	Strata Production Company	<b>TVD Reference:</b>	WELL @ 3266.00usft (Norton 2)
<b>Project:</b>	Eddy County, New Mexico (NAD 83)	<b>MD Reference:</b>	WELL @ 3266.00usft (Norton 2)
<b>Site:</b>	Roadrunner Fed Com 23 11 GBL #14H	<b>North Reference:</b>	Grid
<b>Well:</b>	Roadrunner Fed Com 23 11 GBL #4H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,400.00	0.00	0.00	5,400.00	0.00	0.00	0.00	0.00	0.00	0.00
5,500.00	0.00	0.00	5,500.00	0.00	0.00	0.00	0.00	0.00	0.00
5,600.00	0.00	0.00	5,600.00	0.00	0.00	0.00	0.00	0.00	0.00
5,700.00	0.00	0.00	5,700.00	0.00	0.00	0.00	0.00	0.00	0.00
5,800.00	0.00	0.00	5,800.00	0.00	0.00	0.00	0.00	0.00	0.00
5,900.00	0.00	0.00	5,900.00	0.00	0.00	0.00	0.00	0.00	0.00
6,000.00	0.00	0.00	6,000.00	0.00	0.00	0.00	0.00	0.00	0.00
6,100.00	0.00	0.00	6,100.00	0.00	0.00	0.00	0.00	0.00	0.00
6,200.00	0.00	0.00	6,200.00	0.00	0.00	0.00	0.00	0.00	0.00
6,300.00	0.00	0.00	6,300.00	0.00	0.00	0.00	0.00	0.00	0.00
6,400.00	0.00	0.00	6,400.00	0.00	0.00	0.00	0.00	0.00	0.00
6,500.00	0.00	0.00	6,500.00	0.00	0.00	0.00	0.00	0.00	0.00
6,600.00	0.00	0.00	6,600.00	0.00	0.00	0.00	0.00	0.00	0.00
6,700.00	0.00	0.00	6,700.00	0.00	0.00	0.00	0.00	0.00	0.00
6,800.00	0.00	0.00	6,800.00	0.00	0.00	0.00	0.00	0.00	0.00
6,900.00	0.00	0.00	6,900.00	0.00	0.00	0.00	0.00	0.00	0.00
7,000.00	0.00	0.00	7,000.00	0.00	0.00	0.00	0.00	0.00	0.00
7,100.00	0.00	0.00	7,100.00	0.00	0.00	0.00	0.00	0.00	0.00
7,131.54	0.00	0.00	7,131.54	0.00	0.00	0.00	0.00	0.00	0.00
<b>KOP, 12.00°/100' Build</b>									
7,150.00	2.22	358.64	7,150.00	0.36	-0.01	0.36	12.00	12.00	0.00
7,175.00	5.22	358.64	7,174.94	1.98	-0.05	1.98	12.00	12.00	0.00
7,200.00	8.22	358.64	7,199.77	4.90	-0.12	4.90	12.00	12.00	0.00
7,225.00	11.22	358.64	7,224.40	9.12	-0.22	9.12	12.00	12.00	0.00
7,250.00	14.22	358.64	7,248.79	14.62	-0.35	14.62	12.00	12.00	0.00
7,275.00	17.22	358.64	7,272.85	21.39	-0.51	21.39	12.00	12.00	0.00
7,300.00	20.22	358.64	7,296.53	29.40	-0.70	29.41	12.00	12.00	0.00
7,325.00	23.22	358.64	7,319.75	38.65	-0.92	38.66	12.00	12.00	0.00
7,350.00	26.22	358.64	7,342.46	49.10	-1.17	49.11	12.00	12.00	0.00
7,375.00	29.22	358.64	7,364.59	60.72	-1.44	60.74	12.00	12.00	0.00
7,400.00	32.22	358.64	7,386.08	73.49	-1.74	73.51	12.00	12.00	0.00
7,425.00	35.22	358.64	7,406.87	87.36	-2.07	87.38	12.00	12.00	0.00
7,450.00	38.22	358.64	7,426.91	102.30	-2.43	102.33	12.00	12.00	0.00
7,475.00	41.22	358.64	7,446.14	118.27	-2.81	118.30	12.00	12.00	0.00
7,500.00	44.22	358.64	7,464.50	135.22	-3.21	135.26	12.00	12.00	0.00
7,525.00	47.22	358.64	7,481.95	153.11	-3.63	153.15	12.00	12.00	0.00
7,550.00	50.22	358.64	7,498.45	171.89	-4.08	171.94	12.00	12.00	0.00
7,575.00	53.22	358.64	7,513.94	191.50	-4.55	191.56	12.00	12.00	0.00
7,600.00	56.22	358.64	7,528.37	211.90	-5.03	211.96	12.00	12.00	0.00
7,625.00	59.22	358.64	7,541.73	233.03	-5.53	233.10	12.00	12.00	0.00
7,650.00	62.22	358.64	7,553.95	254.83	-6.05	254.90	12.00	12.00	0.00
7,675.00	65.22	358.64	7,565.02	277.23	-6.58	277.31	12.00	12.00	0.00
7,700.00	68.22	358.64	7,574.90	300.19	-7.12	300.27	12.00	12.00	0.00
7,725.00	71.22	358.64	7,583.57	323.63	-7.68	323.72	12.00	12.00	0.00
7,750.00	74.22	358.64	7,591.00	347.49	-8.25	347.59	12.00	12.00	0.00
7,775.00	77.22	358.64	7,597.16	371.71	-8.82	371.81	12.00	12.00	0.00
7,800.00	80.22	358.64	7,602.06	396.21	-9.40	396.33	12.00	12.00	0.00
7,825.00	83.22	358.64	7,605.66	420.94	-9.99	421.06	12.00	12.00	0.00
7,850.00	86.22	358.64	7,607.96	445.83	-10.58	445.95	12.00	12.00	0.00
7,875.00	89.22	358.64	7,608.96	470.80	-11.17	470.93	12.00	12.00	0.00
7,881.54	90.00	358.64	7,609.00	477.33	-11.33	477.46	12.00	12.00	0.00
<b>Begin 90.00° Lateral</b>									
7,900.00	90.00	358.64	7,609.00	495.79	-11.77	495.93	0.00	0.00	0.00

## Strata Production Company

MS Directional  
Planning Report

<b>Database:</b>	EDM 5000.15 Conroe DB	<b>Local Co-ordinate Reference:</b>	Well Roadrunner Fed Com 23 11 GBL #4H
<b>Company:</b>	Strata Production Company	<b>TVD Reference:</b>	WELL @ 3266.00usft (Norton 2)
<b>Project:</b>	Eddy County, New Mexico (NAD 83)	<b>MD Reference:</b>	WELL @ 3266.00usft (Norton 2)
<b>Site:</b>	Roadrunner Fed Com 23 11 GBL #14H	<b>North Reference:</b>	Grid
<b>Well:</b>	Roadrunner Fed Com 23 11 GBL #4H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
8,000.00	90.00	358.64	7,609.00	595.76	-14.14	595.93	0.00	0.00	0.00
8,100.00	90.00	358.64	7,609.00	695.73	-16.51	695.93	0.00	0.00	0.00
8,200.00	90.00	358.64	7,609.00	795.71	-18.89	795.93	0.00	0.00	0.00
8,300.00	90.00	358.64	7,609.00	895.68	-21.26	895.93	0.00	0.00	0.00
8,400.00	90.00	358.64	7,609.00	995.65	-23.63	995.93	0.00	0.00	0.00
8,500.00	90.00	358.64	7,609.00	1,095.62	-26.00	1,095.93	0.00	0.00	0.00
8,600.00	90.00	358.64	7,609.00	1,195.59	-28.38	1,195.93	0.00	0.00	0.00
8,700.00	90.00	358.64	7,609.00	1,295.56	-30.75	1,295.93	0.00	0.00	0.00
8,800.00	90.00	358.64	7,609.00	1,395.54	-33.12	1,395.93	0.00	0.00	0.00
8,900.00	90.00	358.64	7,609.00	1,495.51	-35.49	1,495.93	0.00	0.00	0.00
9,000.00	90.00	358.64	7,609.00	1,595.48	-37.87	1,595.93	0.00	0.00	0.00
9,100.00	90.00	358.64	7,609.00	1,695.45	-40.24	1,695.93	0.00	0.00	0.00
9,200.00	90.00	358.64	7,609.00	1,795.42	-42.61	1,795.93	0.00	0.00	0.00
9,300.00	90.00	358.64	7,609.00	1,895.40	-44.98	1,895.93	0.00	0.00	0.00
9,400.00	90.00	358.64	7,609.00	1,995.37	-47.36	1,995.93	0.00	0.00	0.00
9,500.00	90.00	358.64	7,609.00	2,095.34	-49.73	2,095.93	0.00	0.00	0.00
9,600.00	90.00	358.64	7,609.00	2,195.31	-52.10	2,195.93	0.00	0.00	0.00
9,700.00	90.00	358.64	7,609.00	2,295.28	-54.48	2,295.93	0.00	0.00	0.00
9,800.00	90.00	358.64	7,609.00	2,395.26	-56.85	2,395.93	0.00	0.00	0.00
9,900.00	90.00	358.64	7,609.00	2,495.23	-59.22	2,495.93	0.00	0.00	0.00
10,000.00	90.00	358.64	7,609.00	2,595.20	-61.59	2,595.93	0.00	0.00	0.00
10,100.00	90.00	358.64	7,609.00	2,695.17	-63.97	2,695.93	0.00	0.00	0.00
10,200.00	90.00	358.64	7,609.00	2,795.14	-66.34	2,795.93	0.00	0.00	0.00
10,300.00	90.00	358.64	7,609.00	2,895.11	-68.71	2,895.93	0.00	0.00	0.00
10,400.00	90.00	358.64	7,609.00	2,995.09	-71.08	2,995.93	0.00	0.00	0.00
10,500.00	90.00	358.64	7,609.00	3,095.06	-73.46	3,095.93	0.00	0.00	0.00
10,600.00	90.00	358.64	7,609.00	3,195.03	-75.83	3,195.93	0.00	0.00	0.00
10,700.00	90.00	358.64	7,609.00	3,295.00	-78.20	3,295.93	0.00	0.00	0.00
10,800.00	90.00	358.64	7,609.00	3,394.97	-80.58	3,395.93	0.00	0.00	0.00
10,900.00	90.00	358.64	7,609.00	3,494.95	-82.95	3,495.93	0.00	0.00	0.00
11,000.00	90.00	358.64	7,609.00	3,594.92	-85.32	3,595.93	0.00	0.00	0.00
11,100.00	90.00	358.64	7,609.00	3,694.89	-87.69	3,695.93	0.00	0.00	0.00
11,200.00	90.00	358.64	7,609.00	3,794.86	-90.07	3,795.93	0.00	0.00	0.00
11,300.00	90.00	358.64	7,609.00	3,894.83	-92.44	3,895.93	0.00	0.00	0.00
11,400.00	90.00	358.64	7,609.00	3,994.80	-94.81	3,995.93	0.00	0.00	0.00
11,500.00	90.00	358.64	7,609.00	4,094.78	-97.18	4,095.93	0.00	0.00	0.00
11,600.00	90.00	358.64	7,609.00	4,194.75	-99.56	4,195.93	0.00	0.00	0.00
11,700.00	90.00	358.64	7,609.00	4,294.72	-101.93	4,295.93	0.00	0.00	0.00
11,800.00	90.00	358.64	7,609.00	4,394.69	-104.30	4,395.93	0.00	0.00	0.00
11,900.00	90.00	358.64	7,609.00	4,494.66	-106.68	4,495.93	0.00	0.00	0.00
12,000.00	90.00	358.64	7,609.00	4,594.64	-109.05	4,595.93	0.00	0.00	0.00
12,100.00	90.00	358.64	7,609.00	4,694.61	-111.42	4,695.93	0.00	0.00	0.00
12,200.00	90.00	358.64	7,609.00	4,794.58	-113.79	4,795.93	0.00	0.00	0.00
12,300.00	90.00	358.64	7,609.00	4,894.55	-116.17	4,895.93	0.00	0.00	0.00
12,400.00	90.00	358.64	7,609.00	4,994.52	-118.54	4,995.93	0.00	0.00	0.00
12,500.00	90.00	358.64	7,609.00	5,094.50	-120.91	5,095.93	0.00	0.00	0.00
12,600.00	90.00	358.64	7,609.00	5,194.47	-123.28	5,195.93	0.00	0.00	0.00
12,700.00	90.00	358.64	7,609.00	5,294.44	-125.66	5,295.93	0.00	0.00	0.00
12,800.00	90.00	358.64	7,609.00	5,394.41	-128.03	5,395.93	0.00	0.00	0.00
12,900.00	90.00	358.64	7,609.00	5,494.38	-130.40	5,495.93	0.00	0.00	0.00
13,000.00	90.00	358.64	7,609.00	5,594.35	-132.77	5,595.93	0.00	0.00	0.00
13,100.00	90.00	358.64	7,609.00	5,694.33	-135.15	5,695.93	0.00	0.00	0.00
13,200.00	90.00	358.64	7,609.00	5,794.30	-137.52	5,795.93	0.00	0.00	0.00
13,300.00	90.00	358.64	7,609.00	5,894.27	-139.89	5,895.93	0.00	0.00	0.00

## Strata Production Company

MS Directional  
Planning Report

<b>Database:</b>	EDM 5000.15 Conroe DB	<b>Local Co-ordinate Reference:</b>	Well Roadrunner Fed Com 23 11 GBL #4H
<b>Company:</b>	Strata Production Company	<b>TVD Reference:</b>	WELL @ 3266.00usft (Norton 2)
<b>Project:</b>	Eddy County, New Mexico (NAD 83)	<b>MD Reference:</b>	WELL @ 3266.00usft (Norton 2)
<b>Site:</b>	Roadrunner Fed Com 23 11 GBL #14H	<b>North Reference:</b>	Grid
<b>Well:</b>	Roadrunner Fed Com 23 11 GBL #4H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
13,400.00	90.00	358.64	7,609.00	5,994.24	-142.27	5,995.93	0.00	0.00	0.00
13,500.00	90.00	358.64	7,609.00	6,094.21	-144.64	6,095.93	0.00	0.00	0.00
13,600.00	90.00	358.64	7,609.00	6,194.19	-147.01	6,195.93	0.00	0.00	0.00
13,700.00	90.00	358.64	7,609.00	6,294.16	-149.38	6,295.93	0.00	0.00	0.00
13,800.00	90.00	358.64	7,609.00	6,394.13	-151.76	6,395.93	0.00	0.00	0.00
13,900.00	90.00	358.64	7,609.00	6,494.10	-154.13	6,495.93	0.00	0.00	0.00
14,000.00	90.00	358.64	7,609.00	6,594.07	-156.50	6,595.93	0.00	0.00	0.00
14,100.00	90.00	358.64	7,609.00	6,694.04	-158.87	6,695.93	0.00	0.00	0.00
14,200.00	90.00	358.64	7,609.00	6,794.02	-161.25	6,795.93	0.00	0.00	0.00
14,300.00	90.00	358.64	7,609.00	6,893.99	-163.62	6,895.93	0.00	0.00	0.00
14,400.00	90.00	358.64	7,609.00	6,993.96	-165.99	6,995.93	0.00	0.00	0.00
14,500.00	90.00	358.64	7,609.00	7,093.93	-168.37	7,095.93	0.00	0.00	0.00
14,600.00	90.00	358.64	7,609.00	7,193.90	-170.74	7,195.93	0.00	0.00	0.00
14,700.00	90.00	358.64	7,609.00	7,293.88	-173.11	7,295.93	0.00	0.00	0.00
14,800.00	90.00	358.64	7,609.00	7,393.85	-175.48	7,395.93	0.00	0.00	0.00
14,900.00	90.00	358.64	7,609.00	7,493.82	-177.86	7,495.93	0.00	0.00	0.00
15,000.00	90.00	358.64	7,609.00	7,593.79	-180.23	7,595.93	0.00	0.00	0.00
15,100.00	90.00	358.64	7,609.00	7,693.76	-182.60	7,695.93	0.00	0.00	0.00
15,200.00	90.00	358.64	7,609.00	7,793.74	-184.97	7,795.93	0.00	0.00	0.00
15,300.00	90.00	358.64	7,609.00	7,893.71	-187.35	7,895.93	0.00	0.00	0.00
15,400.00	90.00	358.64	7,609.00	7,993.68	-189.72	7,995.93	0.00	0.00	0.00
15,500.00	90.00	358.64	7,609.00	8,093.65	-192.09	8,095.93	0.00	0.00	0.00
15,600.00	90.00	358.64	7,609.00	8,193.62	-194.47	8,195.93	0.00	0.00	0.00
15,700.00	90.00	358.64	7,609.00	8,293.59	-196.84	8,295.93	0.00	0.00	0.00
15,800.00	90.00	358.64	7,609.00	8,393.57	-199.21	8,395.93	0.00	0.00	0.00
15,900.00	90.00	358.64	7,609.00	8,493.54	-201.58	8,495.93	0.00	0.00	0.00
16,000.00	90.00	358.64	7,609.00	8,593.51	-203.96	8,595.93	0.00	0.00	0.00
16,100.00	90.00	358.64	7,609.00	8,693.48	-206.33	8,695.93	0.00	0.00	0.00
16,200.00	90.00	358.64	7,609.00	8,793.45	-208.70	8,795.93	0.00	0.00	0.00
16,300.00	90.00	358.64	7,609.00	8,893.43	-211.07	8,895.93	0.00	0.00	0.00
16,400.00	90.00	358.64	7,609.00	8,993.40	-213.45	8,995.93	0.00	0.00	0.00
16,500.00	90.00	358.64	7,609.00	9,093.37	-215.82	9,095.93	0.00	0.00	0.00
16,600.00	90.00	358.64	7,609.00	9,193.34	-218.19	9,195.93	0.00	0.00	0.00
16,700.00	90.00	358.64	7,609.00	9,293.31	-220.56	9,295.93	0.00	0.00	0.00
16,800.00	90.00	358.64	7,609.00	9,393.28	-222.94	9,395.93	0.00	0.00	0.00
16,900.00	90.00	358.64	7,609.00	9,493.26	-225.31	9,495.93	0.00	0.00	0.00
17,000.00	90.00	358.64	7,609.00	9,593.23	-227.68	9,595.93	0.00	0.00	0.00
17,100.00	90.00	358.64	7,609.00	9,693.20	-230.06	9,695.93	0.00	0.00	0.00
17,200.00	90.00	358.64	7,609.00	9,793.17	-232.43	9,795.93	0.00	0.00	0.00
17,300.00	90.00	358.64	7,609.00	9,893.14	-234.80	9,895.93	0.00	0.00	0.00
17,400.00	90.00	358.64	7,609.00	9,993.12	-237.17	9,995.93	0.00	0.00	0.00
17,500.00	90.00	358.64	7,609.00	10,093.09	-239.55	10,095.93	0.00	0.00	0.00
17,600.00	90.00	358.64	7,609.00	10,193.06	-241.92	10,195.93	0.00	0.00	0.00
17,700.00	90.00	358.64	7,609.00	10,293.03	-244.29	10,295.93	0.00	0.00	0.00
17,800.00	90.00	358.64	7,609.00	10,393.00	-246.66	10,395.93	0.00	0.00	0.00
17,900.00	90.00	358.64	7,609.00	10,492.98	-249.04	10,495.93	0.00	0.00	0.00
18,000.00	90.00	358.64	7,609.00	10,592.95	-251.41	10,595.93	0.00	0.00	0.00
18,100.00	90.00	358.64	7,609.00	10,692.92	-253.78	10,695.93	0.00	0.00	0.00
18,200.00	90.00	358.64	7,609.00	10,792.89	-256.16	10,795.93	0.00	0.00	0.00
18,300.00	90.00	358.64	7,609.00	10,892.86	-258.53	10,895.93	0.00	0.00	0.00
18,400.00	90.00	358.64	7,609.00	10,992.83	-260.90	10,995.93	0.00	0.00	0.00
18,500.00	90.00	358.64	7,609.00	11,092.81	-263.27	11,095.93	0.00	0.00	0.00
18,600.00	90.00	358.64	7,609.00	11,192.78	-265.65	11,195.93	0.00	0.00	0.00
18,700.00	90.00	358.64	7,609.00	11,292.75	-268.02	11,295.93	0.00	0.00	0.00

## Strata Production Company

MS Directional  
Planning Report

<b>Database:</b>	EDM 5000.15 Conroe DB	<b>Local Co-ordinate Reference:</b>	Well Roadrunner Fed Com 23 11 GBL #4H
<b>Company:</b>	Strata Production Company	<b>TVD Reference:</b>	WELL @ 3266.00usft (Norton 2)
<b>Project:</b>	Eddy County, New Mexico (NAD 83)	<b>MD Reference:</b>	WELL @ 3266.00usft (Norton 2)
<b>Site:</b>	Roadrunner Fed Com 23 11 GBL #14H	<b>North Reference:</b>	Grid
<b>Well:</b>	Roadrunner Fed Com 23 11 GBL #4H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
18,800.00	90.00	358.64	7,609.00	11,392.72	-270.39	11,395.93	0.00	0.00	0.00	
18,900.00	90.00	358.64	7,609.00	11,492.69	-272.76	11,495.93	0.00	0.00	0.00	
19,000.00	90.00	358.64	7,609.00	11,592.67	-275.14	11,595.93	0.00	0.00	0.00	
19,100.00	90.00	358.64	7,609.00	11,692.64	-277.51	11,695.93	0.00	0.00	0.00	
19,200.00	90.00	358.64	7,609.00	11,792.61	-279.88	11,795.93	0.00	0.00	0.00	
19,300.00	90.00	358.64	7,609.00	11,892.58	-282.26	11,895.93	0.00	0.00	0.00	
19,400.00	90.00	358.64	7,609.00	11,992.55	-284.63	11,995.93	0.00	0.00	0.00	
19,500.00	90.00	358.64	7,609.00	12,092.52	-287.00	12,095.93	0.00	0.00	0.00	
19,600.00	90.00	358.64	7,609.00	12,192.50	-289.37	12,195.93	0.00	0.00	0.00	
19,700.00	90.00	358.64	7,609.00	12,292.47	-291.75	12,295.93	0.00	0.00	0.00	
19,800.00	90.00	358.64	7,609.00	12,392.44	-294.12	12,395.93	0.00	0.00	0.00	
19,900.00	90.00	358.64	7,609.00	12,492.41	-296.49	12,495.93	0.00	0.00	0.00	
20,000.00	90.00	358.64	7,609.00	12,592.38	-298.86	12,595.93	0.00	0.00	0.00	
20,100.00	90.00	358.64	7,609.00	12,692.36	-301.24	12,695.93	0.00	0.00	0.00	
20,191.17	90.00	358.64	7,609.00	12,783.50	-303.40	12,787.10	0.00	0.00	0.00	
PBHL										

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
- hit/miss target										
- Shape										
PBHL - RR Fed Com :	0.00	0.00	7,609.00	12,783.50	-303.40	482,859.20	690,501.90	32° 19' 35.501 N	103° 51' 1.521 W	
- plan hits target center										
- Point										

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
7,131.54	7,131.54	0.00	0.00	KOP, 12.00°/100' Build	
7,881.54	7,609.00	477.33	-11.33	Begin 90.00° Lateral	
20,191.17	7,609.00	12,783.50	-303.40	PBHL	

## PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

<b>OPERATOR'S NAME:</b>	Strata Production Company
<b>WELL NAME &amp; NO.:</b>	Roadrunner Fed Com 23 11 GBI 04H
<b>LOCATION:</b>	Sec 23-23S-30E-NMP
<b>COUNTY:</b>	Eddy County, New Mexico

COA

H2S	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
Potash	<input type="radio"/> None	<input type="radio"/> Secretary	<input checked="" type="radio"/> R-111-P
Cave/Karst Potential	<input checked="" type="radio"/> Low	<input type="radio"/> Medium	<input type="radio"/> High
Cave/Karst Potential	<input type="radio"/> Critical		
Variance	<input checked="" type="radio"/> None	<input type="radio"/> Flex Hose	<input type="radio"/> Other
Wellhead	<input checked="" type="radio"/> Conventional	<input type="radio"/> Multibowl	<input type="radio"/> Both
Other	<input type="checkbox"/> 4 String Area	<input type="checkbox"/> Capitan Reef	<input type="checkbox"/> WIPP
Other	<input checked="" type="checkbox"/> Fluid Filled	<input type="checkbox"/> Cement Squeeze	<input type="checkbox"/> Pilot Hole
Special Requirements	<input type="checkbox"/> Water Disposal	<input type="checkbox"/> COM	<input type="checkbox"/> Unit

### A. HYDROGEN SULFIDE

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

### B. CASING

1. The **13-3/8** inch surface casing shall be set at approximately 450 feet (a minimum of 70 feet (Eddy County) into the Rustler Anhydrite and above the salt) and cemented to the surface.
  - a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
  - b. Wait on cement (WOC) time for a primary cement job will be a minimum of **24 hours in the Potash Area** or 500 pounds compressive strength, whichever is greater. (This is to include the lead cement)



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

**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 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.**

❖ In R111 Potash Areas if cement does not circulate to surface on the first two salt protection casing strings, the cement on the 3rd casing string must come to surface.

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

Operator has proposed a DV tool, the depth may be adjusted as long as the cement is changed proportionally. The DV tool may be cancelled if cement circulates to surface on the first stage.

- a. First stage to DV tool: Cement to circulate. If cement does not circulate off the DV tool, contact the appropriate BLM office before proceeding with second stage cement job.
- b. Second stage above DV tool:
  - Cement to surface. If cement does not circulate, contact the appropriate BLM office.

## **C. PRESSURE CONTROL**

1. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **2000 (2M)** psi.
2. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the intermediate casing shoe shall be **3000 (3M)** psi.

## **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 2<sup>nd</sup> 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 integrity test can be done (prior to the cement setting up) immediately after bumping the plug.
3. Wait on cement (WOC) for Water Basin: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi at the shoe, 2) until cement has been in place at least 8 hours. WOC time will be recorded in the driller's log. See individual casing strings for details regarding lead cement slurry requirements. The casing integrity test can be done (prior to the cement setting up) immediately after bumping the plug.
4. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. Have well specific cement details onsite prior to pumping the cement for each casing string.
5. No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.
6. On that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Formation at the shoe shall be tested to a minimum of the mud weight equivalent anticipated to control the formation pressure to the next casing depth or at total depth of the well. This test shall be performed before drilling more than 20 feet of new hole.
7. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.
8. Whenever a casing string is cemented in the R-111-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.

Strata Production Company

**Roadrunner Fed Com 23 11 GBL #4H**

SHL: 2310' FNL & 2055' FEL of Sec 23

BHL: 100' FNL & 2310' FEL of Sec 11

Sec 23-T23S-R30E

Eddy County, NM

## **HYDROGEN SULFIDE DRILLING OPERATIONS PLAN**

### **I. HYDROGEN SULFIDE TRAINING**

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

- A. The hazards and characteristics of hydrogen sulfide (H<sub>2</sub>S).
- B. The proper use and maintenance of personal protective equipment and life support systems.
- C. The proper use of H<sub>2</sub>S detectors, alarms, warning systems, briefing areas, evacuation procedures, and prevailing winds.
- D. The proper techniques for first aid and rescue procedures.

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

- A. The effects of H<sub>2</sub>S on metal components. If high tensile tubulars are to be used, personnel will be trained in their special maintenance requirements.
- B. Corrective action and shut-in procedures when drilling or reworking a well and blowout prevention and well control procedures.
- C. The contents and requirements of the H<sub>2</sub>S Drilling Operations Plan and the Public Protection Plan.

There will be an initial training session just prior to encountering a known or probable H<sub>2</sub>S zone (within 3 days or 500 feet) and weekly H<sub>2</sub>S and well control drills for all personnel in each crew. The initial training session shall include a review of the site specific H<sub>2</sub>S Drilling Operations Plan and the Public Protection Plan. This plan shall be available at the well site. All personnel will be required to carry documentation that they have received the proper training.

## **II. H<sub>2</sub>S SAFETY EQUIPMENT AND SYSTEMS**

Note: All H<sub>2</sub>S safety equipment and systems will be installed, tested, and operational when drilling reaches a depth of 500 feet above, or three days prior to penetrating the first zone containing or reasonably expected to contain H<sub>2</sub>S.

- A. Well Control Equipment:
  - All BOP and BOP equipment is shown in the attachments.
  - Flare line.
  - Choke manifold with a remotely operated choke as shown in Attachment #5.
  - Blind rams and pipe rams to accommodate all pipe sizes with properly sized closing unit.
  - Auxiliary equipment to include annular preventer, mud-gas separator, rotating head.
- B. Protective equipment for essential personnel:
  - Mark II Surviveair 30-minute units located in the dog house and at briefing areas.
- C. H<sub>2</sub>S detection and monitoring equipment:
  - 2 - portable H<sub>2</sub>S monitor positioned on location for best coverage and response. These units have warning lights and audible sirens when H<sub>2</sub>S levels of 20 ppm are reached.
- D. Visual warning systems:
  - Caution/Danger signs shall be posted on roads providing direct access to location. Signs will be painted a high visibility yellow with black lettering of sufficient size to be readable at a reasonable distance from the immediate location. Bilingual signs will be used, when appropriate.
  - Wind Direction indicators as seen in the H<sub>2</sub>S Well Site Diagram.

- E. Mud Program: The mud program has been designed to minimize the volume of H<sub>2</sub>S circulated to the surface.
- F. Metallurgy:  
All drill strings, casings, tubing, wellhead, blowout preventers, drilling spool, kill lines, choke manifold and lines, and valves shall be suitable for H<sub>2</sub>S service.
- G. Communication:  
Company vehicles equipped with cellular telephone.

# **W A R N I N G**

**YOU ARE ENTERING AN H<sub>2</sub>S AREA  
AUTHORIZED PERSONNEL ONLY**

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

**STRATA PRODUCTION COMPANY**

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

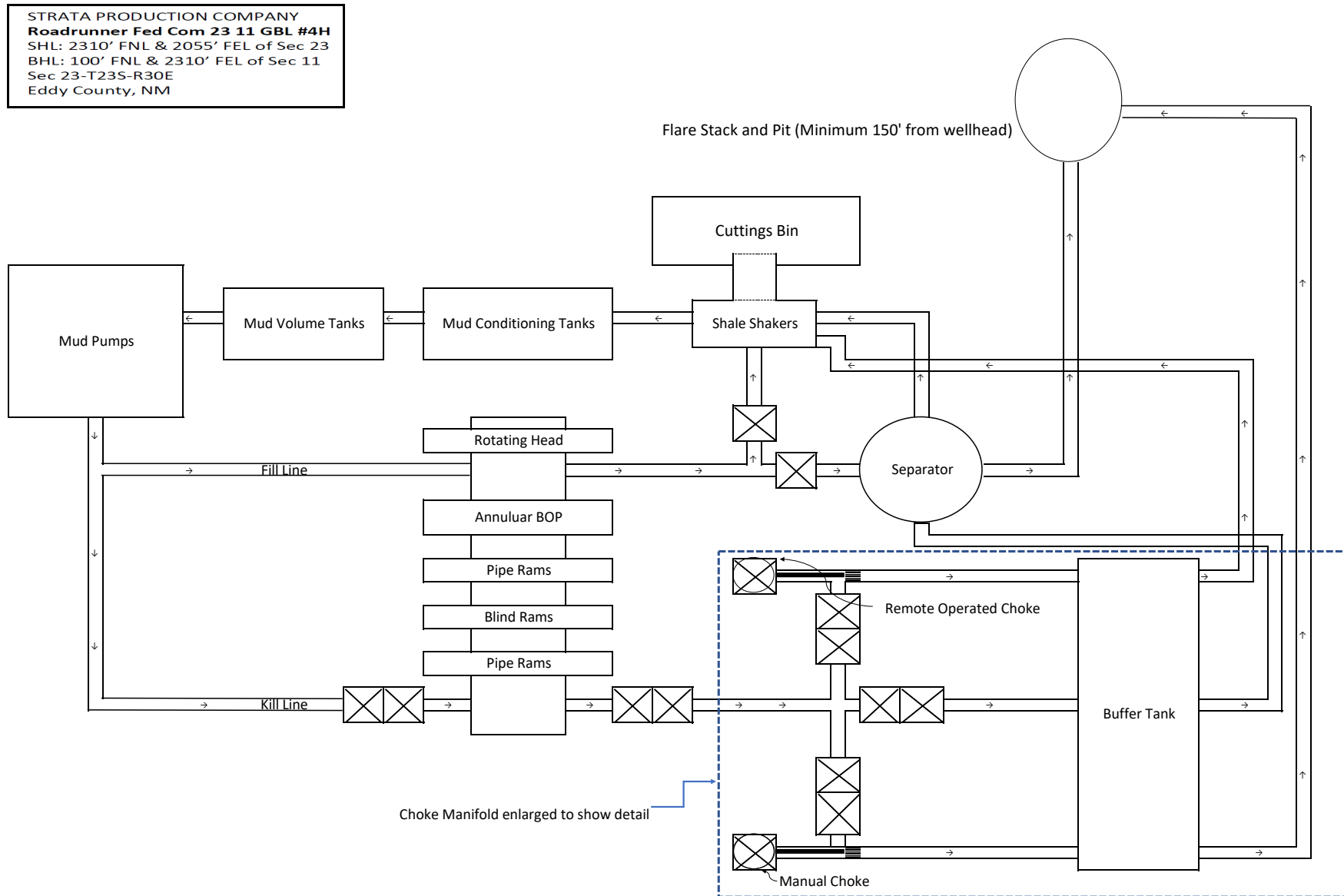
**EMERGENCY NUMBERS****911    Must have Correct County & State & Directions to your location**

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

<b>BLM Carlsbad</b>	<b>575-234-5972</b>
<b>BLM Hobbs</b>	<b>575-393-3612</b>
<b>NMOCD Hobbs</b>	<b>575-393-6161</b>
<b>Mosaic Potash Carlsbad</b>	<b>575-887-2871</b>

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





STRATA PRODUCTION COMPANY  
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 Eddy County, NM

Formation ID	Formation Name	Elevation	True Vertical	Measured Depth	Lithologies	Mineral Resources	Producing Formatio
533485	RUSTLER	3249	386	386	ANHYDRITE	NONE	N
533486	TOP SALT	2693	556	556	SALT	NONE	N
533487	BASE OF SALT	-322	3571	3571	SALT	NONE	N
533488	LAMAR	-547	3796	3796	LIMESTONE	NONE	N
8824780	BELL CANYON	-610	3859	3859	SANDSTONE	NATURAL GAS, OIL	Y
8824781	CHERRY CANYON	-1494	4743	4743	LIMESTONE, SANDSTONE, SILTSTONE	NATURAL GAS, OIL	Y
8824782	BRUSHY CANYON	-2907	6156	6156	LIMESTONE, SANDSTONE, SILTSTONE	NATURAL GAS, OIL	Y
533489	BONE SPRING	-4428	7677	7677	LIMESTONE, SHALE	NATURAL GAS, OIL	N

**Roadrunner Fed Com 23 11 GBL #4H**

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Sec 23-T23S-R30E

Eddy County, NM

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

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

**NOTES:**

- 1). Items 3, 4, and 8 may be replaced with double ram type preventer with side outlets between the rams.
- 2). The two valves next to the stack on the fill and kill line to be closed unless drill string is being pulled.
- 3). Kill line is for emergency use only. This connection shall not be used for filling.
- 4). Replacement pipe rams and blind rams shall always be on location.
- 5). Only type U, LSW and QRC ram type preventers with secondary seals are acceptable for 5000 psi WP and higher BOP stacks.
- 6). Type E ram-type BOP's with factory modified side outlets may be used on 3000 psi or lower WP BOP stacks.

**District I**

1625 N. French Dr., Hobbs, NM 88240  
Phone:(575) 393-6161 Fax:(575) 393-0720

**District II**

811 S. First St., Artesia, NM 88210  
Phone:(575) 748-1283 Fax:(575) 748-9720

**District III**

1000 Rio Brazos Rd., Aztec, NM 87410  
Phone:(505) 334-6178 Fax:(505) 334-6170

**District IV**

1220 S. St Francis Dr., Santa Fe, NM 87505  
Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS

Action 168847

**CONDITIONS**

Operator: STRATA PRODUCTION CO P.O. Box 1030 Roswell, NM 882021030	OGRID: 21712
	Action Number: 168847
	Action Type: [C-101] BLM - Federal/Indian Land Lease (Form 3160-3)

**CONDITIONS**

Created By	Condition	Condition Date
kpickford	Will require a name change complying with OCD policy prior to putting the well into production.	1/6/2023
kpickford	Notify OCD 24 hours prior to casing & cement	1/6/2023
kpickford	Will require a File As Drilled C-102 and a Directional Survey with the C-104	1/6/2023
kpickford	Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string	1/6/2023
kpickford	Cement is required to circulate on both surface and intermediate1 strings of casing	1/6/2023
kpickford	Oil base muds are not to be used until fresh water zones are cased and cemented providing isolation from the oil or diesel. This includes synthetic oils. Oil based mud, drilling fluids and solids must be contained in a steel closed loop system	1/6/2023