

**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**

Form C-101  
August 1, 2011

Permit 357764

**APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE**

1. Operator Name and Address Silverback Operating II, LLC 19707 IH10 West, Suite 201 San Antonio, TX 78256		2. OGRID Number 330968
		3. API Number 30-015-54743
4. Property Code 335065	5. Property Name RIVER ROCK	6. Well No. 103H

**7. Surface Location**

UL - Lot E	Section 36	Township 18S	Range 25E	Lot Idn	Feet From 2375	N/S Line N	Feet From 1121	E/W Line W	County Eddy
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**8. Proposed Bottom Hole Location**

UL - Lot J	Section 34	Township 18S	Range 25E	Lot Idn J	Feet From 2166	N/S Line S	Feet From 2595	E/W Line E	County Eddy
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**9. Pool Information**

PENASCO DRAW;SA-YESO (ASSOC)	50270
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**Additional Well Information**

11. Work Type New Well	12. Well Type OIL	13. Cable/Rotary	14. Lease Type Private	15. Ground Level Elevation 3493
16. Multiple N	17. Proposed Depth 11150	18. Formation Yeso	19. Contractor	20. Spud Date 6/23/2024
Depth to Ground water		Distance from nearest fresh water well		Distance to nearest surface water

☒ We will be using a closed-loop system in lieu of lined pits

**21. Proposed Casing and Cement Program**

Type	Hole Size	Casing Size	Casing Weight/ft	Setting Depth	Sacks of Cement	Estimated TOC
Surf	12.25	9.625	36	1271	282	0
Prod	8.75	7	32	3358	183	0
Prod	8.75	5.5	20	11150	2282	2283

**Casing/Cement Program: Additional Comments**

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**22. Proposed Blowout Prevention Program**

Type	Working Pressure	Test Pressure	Manufacturer
Double Ram	5000	5000	Shaffer

23. I hereby certify that the information given above is true and complete to the best of my knowledge and belief. I further certify I have complied with 19.15.14.9 (A) NMAC <input checked="" type="checkbox"/> and/or 19.15.14.9 (B) NMAC <input checked="" type="checkbox"/> if applicable.  Signature: Printed Name: Electronically filed by Matthew Alley Title: Chief Financial Officer Email Address: malley@silverbackexp.com Date: 1/16/2024	<b>OIL CONSERVATION DIVISION</b>  Approved By: Ward Rikala Title: Approved Date: 2/14/2024 Expiration Date: 2/14/2026 Conditions of Approval Attached
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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 30-015 -54743	<sup>2</sup> Pool Code 50270	<sup>3</sup> Pool Name PENASCO DRAW;SA-YESO (ASSOC)
<sup>4</sup> Property Code 335065	<sup>5</sup> Property Name RIVER ROCK	<sup>6</sup> Well Number 103H
<sup>7</sup> OGRID No. 330968	<sup>8</sup> Operator Name SILVERBACK OPERATING II, LLC	<sup>9</sup> Elevation 3492.90'

<sup>10</sup> Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
E	36	18-S	25-E		2,375'	NORTH	1,121'	WEST	EDDY

<sup>11</sup> Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
J	34	18-S	25-E		2,166'	SOUTH	2,595'	EAST	EDDY

<sup>12</sup> Dedicated Acres 480	<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code	<sup>15</sup> Order No.
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No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

## SURFACE HOLE LOCATION (SHL)

NAD 83, NM EAST ZONE, U.S. FOOT  
X: 507540.97  
Y: 620261.94  
LAT.: N32.705094  
LONG.: W104.443208

## FIRST TAKE POINT (FTP)

NAD 83, NM EAST ZONE, U.S. FOOT  
X: 506307.16  
Y: 619579.20  
LAT.: N32.703213  
LONG.: W104.447217

## LAST TAKE POINT (LTP)

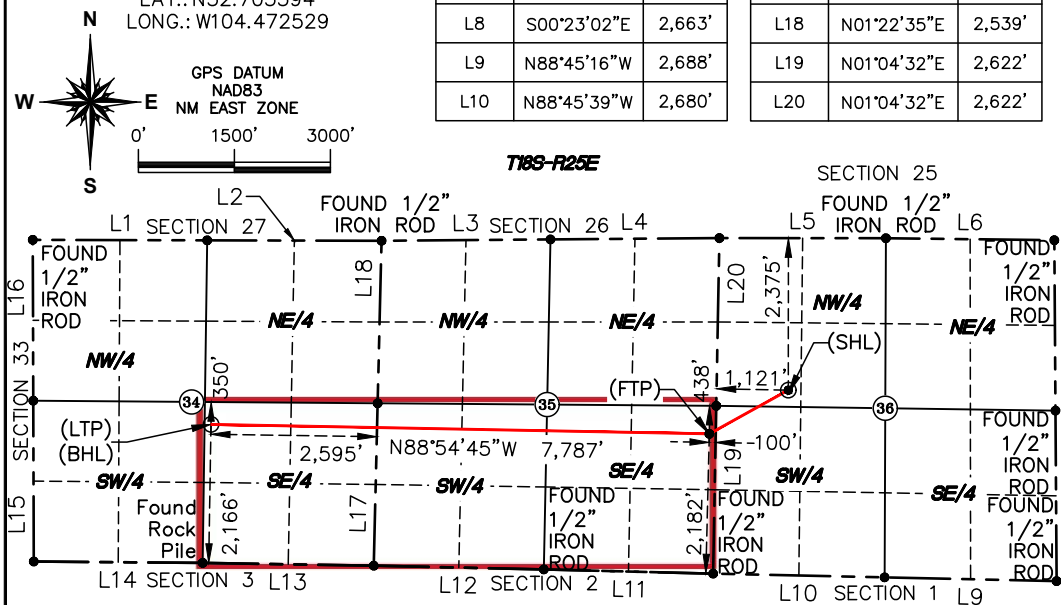
## BOTTOM HOLE LOCATION (BHL)

NAD 83, NM EAST ZONE, U.S. FOOT  
X: 498521.30  
Y: 619727.00  
LAT.: N32.703594  
LONG.: W104.472529

LINE TABLE		
LINE #	BEARING	LENGTH
L1	S89°50'58"E	2,725'
L2	S89°50'58"E	2,725'
L3	N89°32'17"E	2,639'
L4	N89°32'17"E	2,639'
L5	S89°56'59"E	2,602'
L6	S89°19'27"E	2,631'
L7	S00°23'02"E	2,663'
L8	S00°23'02"E	2,663'
L9	N88°45'16"W	2,688'
L10	N88°45'39"W	2,680'

LINE TABLE		
LINE #	BEARING	LENGTH
L11	N88°34'25"W	2,646'
L12	N88°44'49"W	2,658'
L13	N89°03'43"W	2,673'
L14	N89°32'03"W	2,639'
L15	N00°11'04"W	2,513'
L16	N00°11'04"W	2,513'
L17	N01°22'35"E	2,539'
L18	N01°22'35"E	2,539'
L19	N01°04'32"E	2,622'
L20	N01°04'32"E	2,622'

T18S-R25E

<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.

Fatma Abdallah 12/28/2023  
Signature Date

Fatma Abdallah

Printed Name

fabdallah@silverbackexp.com  
E-mail Address

<sup>18</sup> SURVEYOR CERTIFICATION

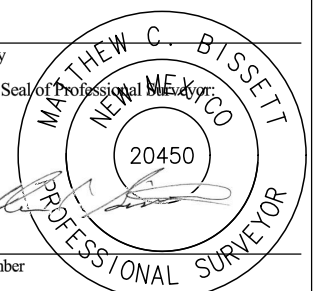
I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

12/15/23

Date of Survey

Signature and Seal of Professional Surveyor

20450  
Certificate Number



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Form APD Conditions  
Permit 357764

PERMIT CONDITIONS OF APPROVAL

Operator Name and Address: Silverback Operating II, LLC [330968] 19707 IH10 West, Suite 201 San Antonio, TX 78256		API Number: 30-015-54743
		Well: RIVER ROCK #103H
OCD Reviewer	Condition	
ward.rikala	Notify OCD 24 hours prior to casing & cement	
ward.rikala	Will require a File As Drilled C-102 and a Directional Survey with the C-104	
ward.rikala	Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string	
ward.rikala	Cement is required to circulate on both surface and intermediate1 strings of casing	
ward.rikala	If cement does not circulate on any string, a CBL is required for that string of casing	
ward.rikala	Oil base muds are not to be used until fresh water zones are cased and cemented providing isolation from the oil or diesel. This includes synthetic oils. Oil based mud, drilling fluids and solids must be contained in a steel closed loop system	
ward.rikala	The Operator is to notify NMOCD by sundry (Form C-103) within ten (10) days of the well being spud	

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:** Silverback Operating II, LLC **OGRID:** 330968 **Date:** 12/ 28 / 23

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

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

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

Well Name	API	ULSTR	Footages	Anticipated Oil BBL/D	Anticipated Gas MCF/D	Anticipated Produced Water BBL/D
River Rock 101H	30-015	M-36-18S-25E	801' FSL & 1035' FWL	515	440	3000
River Rock 102H	30-015	M-36-18S-25E	821' FSL & 1035' FWL	515	440	3000
River Rock 103H	30-015	E-36-18S-25E	2375' FNL & 1121' FWL	515	440	3000

**IV. Central Delivery Point Name:** RRG CTB [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
River Rock 101H	30-015	5/15/2024	7/24/2024	10/1/2024	11/15/2024	11/15/2024
River Rock 102H	30-015	5/20/2024	8/6/2024	10/1/2024	11/16/2024	11/16/2024
River Rock 103H	30-015	06/23/2024	09/06/2024	11/11/2024	12/21/2024	12/21/2024

**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
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#### **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: *Fatma Abdallah*

Printed Name: Fatma Abdallah

Title: Regulatory Manager

E-mail Address: fabdallah@silverbackexp.com

Date: 12/28/2023

Phone: 210-585-3316

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

Approved By:

Title:

Approval Date:

Conditions of Approval:

## Separation Equipment

Silverback Operating II (LLC) has sampled existing producing wells and performed laboratory testing to determine composition. Performance of existing producing wells was analyzed to predict expected production volumes. Production composition and the volumes were utilized as inputs to a process model which predicts relative amounts of gas, oil and water throughout the process. Equipment sizing is based on drop settlement and limits the amount of carry over between production phases.

Each well is brought to a manifold that will convey production to a bulk or a test separator. Gas from the separator is taken through a gas scrubber and onto the gas sales pipeline. Facility piping and pipeline were sized to allow peak volumes to flow with minimal pressure loss and deliver to midstream gatherer at an acceptable pressure. Water is conveyed directly to tankage.

Oil from 3 phase separators is comingled and conveyed to a heated separator for enhanced liquid-liquid separation and degassing. Vapors from the heater treater are routed to a Vapor Recovery Unit (VRU).

Oil and water storage tanks vapor outlets are common and utilize a closed vent vapor system to ensure all working & breathing and flashing losses are routed to the Vapor Recovery Unit (VRU). Site VRUs are sized to accommodate peak expected production volume. Gas from the VRU discharge is combined with 1<sup>st</sup> stage separation gas and sent to sales.

## Venting and Flaring

Silverback Operating II, LLC will ensure pipeline connectivity before producing hydrocarbons and will operate a closed vent vapor capture system that is designed to capture all associated and evolved gas during normal operation. Venting or flaring will only occur during start up and shut down, maintenance activities or equipment failure or upset. Silverback may utilize the following from list A-I of Section 3 for its operations to minimize flaring:

- a) Power generation on lease – Natural gas driven gen set to produce power required to run supply well pad electrical loads
- b) Compression on lease – gas lift or gas compression as required
- c) Liquids removal on lease – gas pressure will be used to convey fluids as needed

## Best Management Practices

Silverback utilizes automate engineering controls included in facility design to minimize venting and flaring. Additionally, operational best practices support minimization of flare and venting as described below.

If the main gas outlet becomes unavailable and pressure increases on the outlet sales line, produced gas will be routed directly to the facility flare. The facility control system will alert personnel to the need for maintenance and appropriate response to the temporary flaring event.

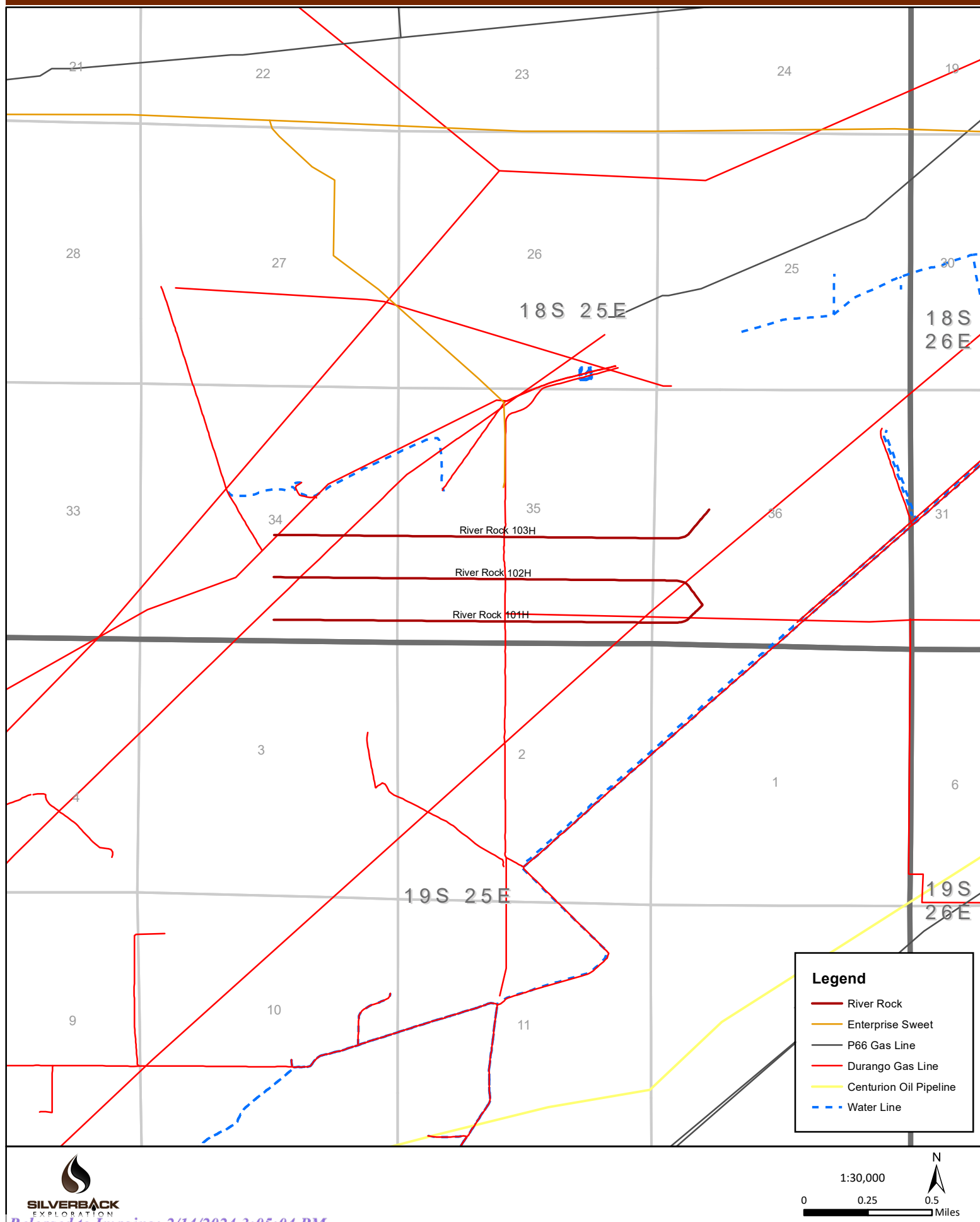
The facility design includes a closed vent vapor capture system to route flash or evolved



from the heater treater and tanks to the Vapor Recovery Unit (VRU) Compressor. If the VRU requires planned or unplanned maintenance, vapors will automatically be routed to the facility flare.

For maintenance activities, Silverback will utilize the facility flare to blowdown equipment and piping whenever practical to minimize venting

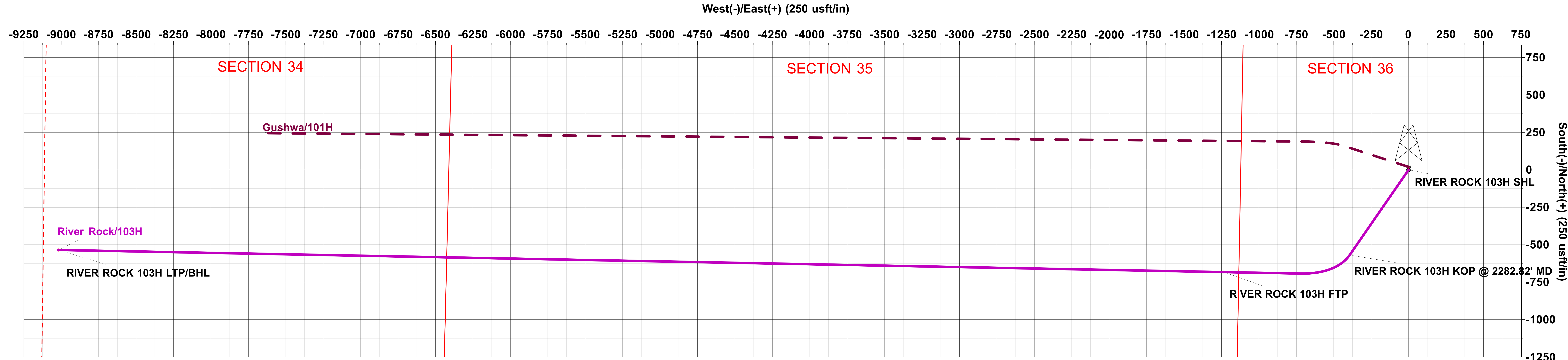
# Silverback Exploration River Rock



SILVERBACK  
EXPLORATION



Project: EDDY COUNTY, NM (NAD 83 - NME)  
Site: River Rock  
Well: 103H  
Wellbore: OH  
Design: Plan 1r0



#### WELL DETAILS: 103H

Rig Name:		TBD      RKB = 16.2' @ 3509.10usft (TBD)			
Ground Level:		3492.90			
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	620261.94	507540.97	32.7050937	-104.4432077

#### SECTION DETAILS

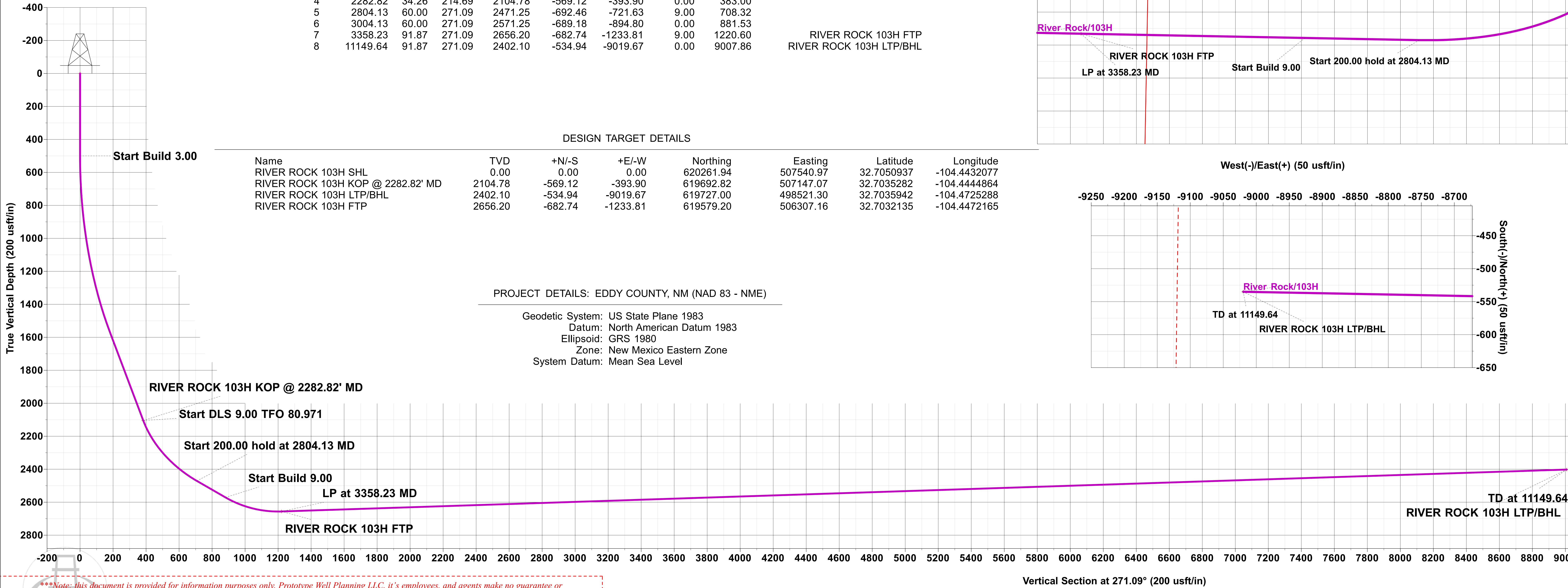
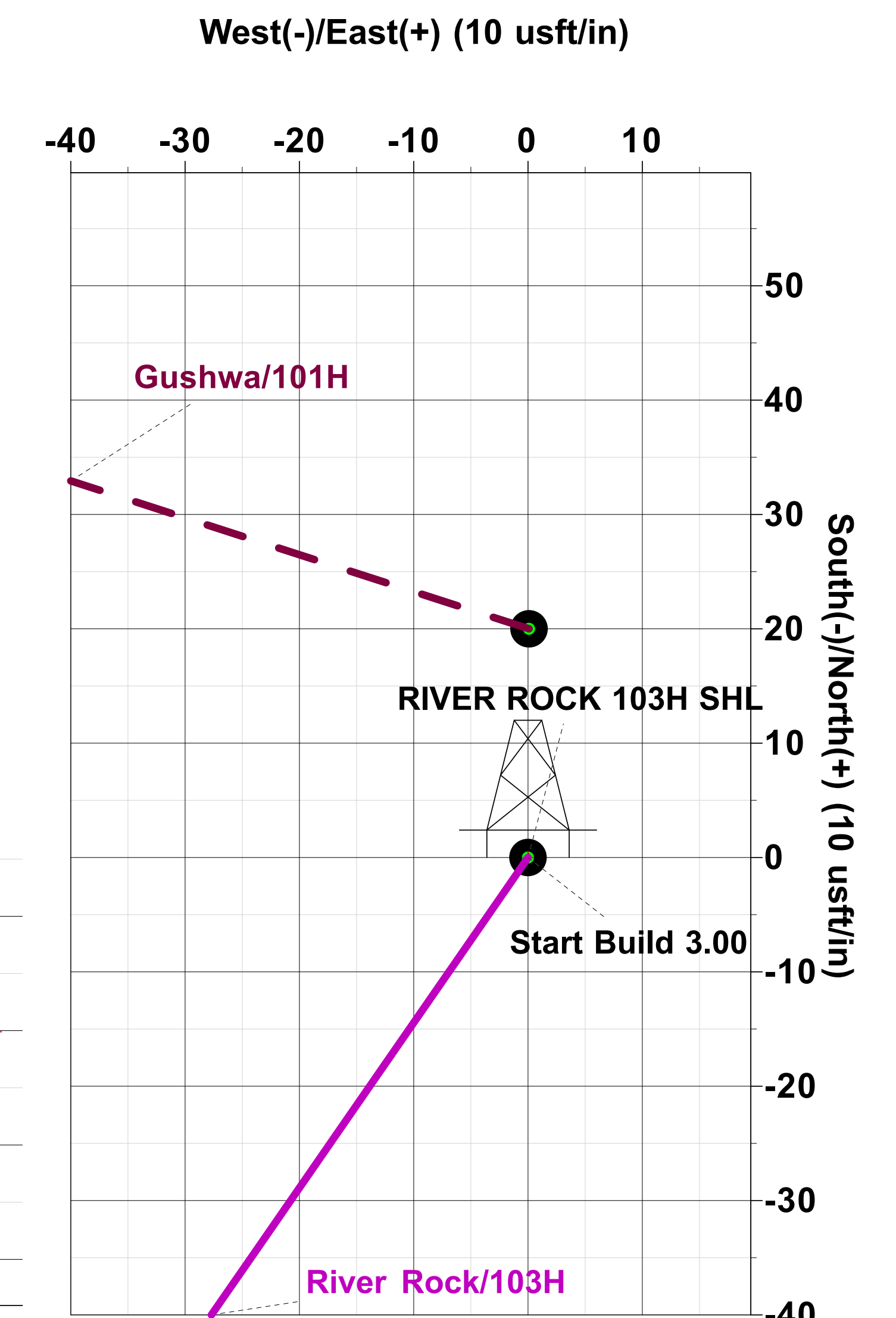
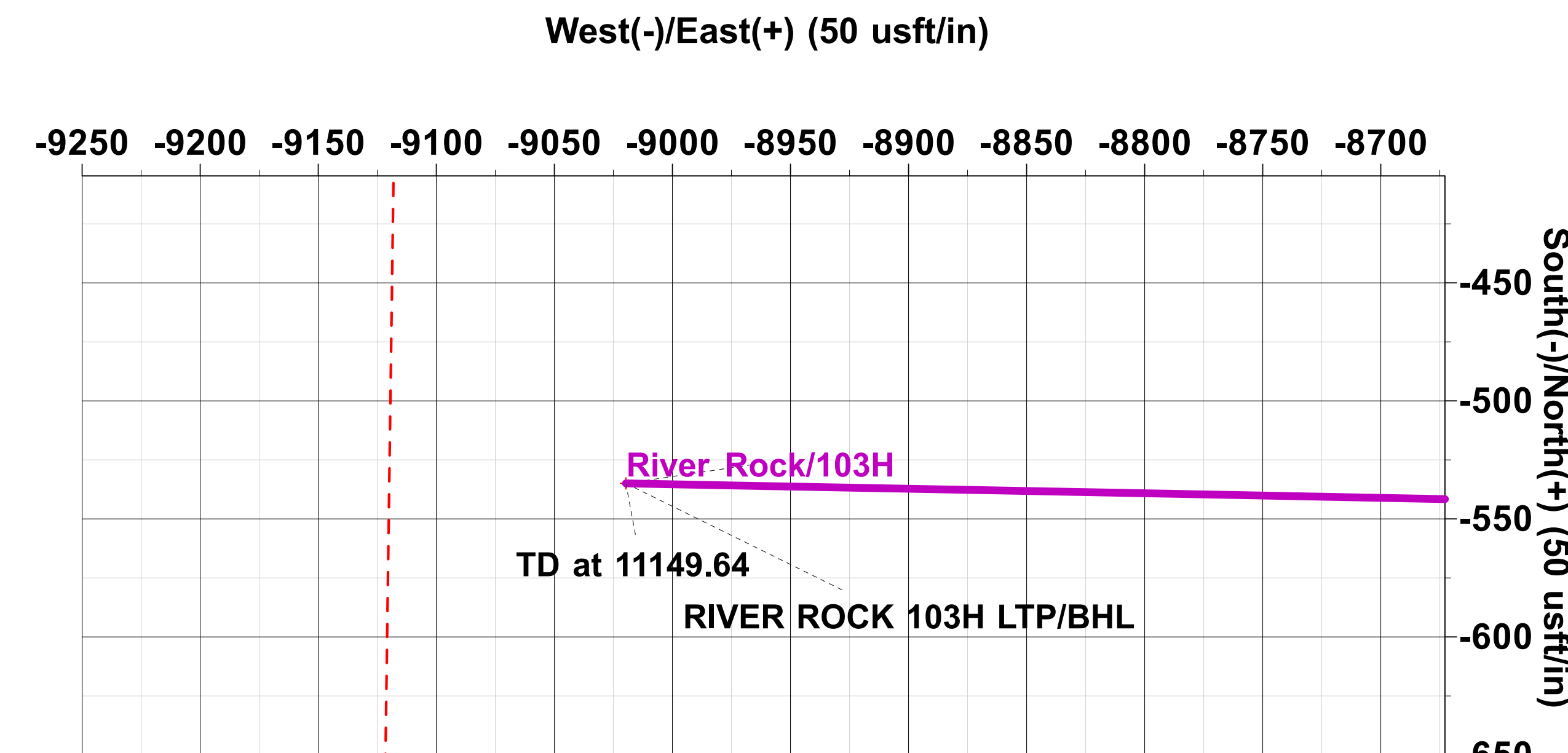
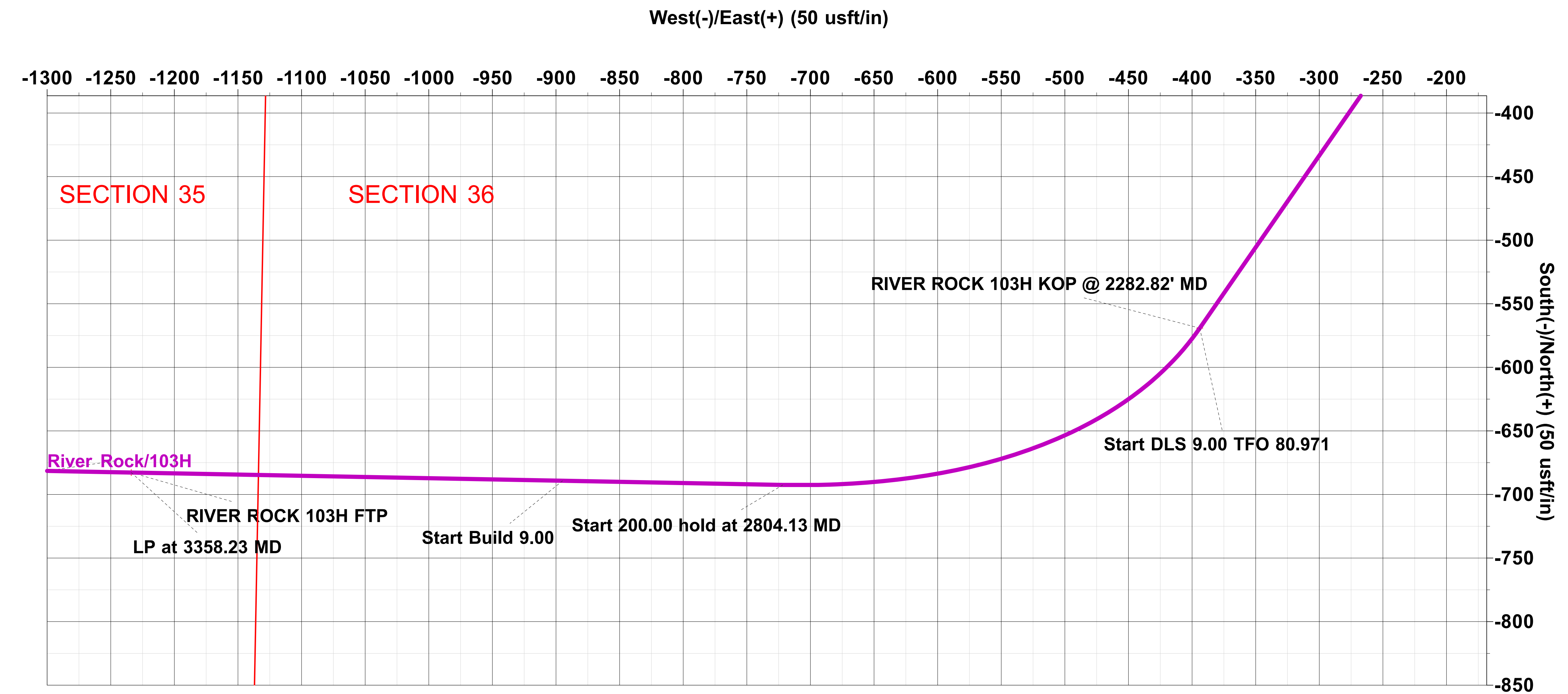
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	Vsect	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	
3	1642.03	34.26	214.69	1575.18	-272.49	-188.60	3.00	183.38	
4	2282.82	34.26	214.69	2104.78	-569.12	-393.90	0.00	383.00	
5	2804.13	60.00	271.09	2471.25	-692.46	-721.63	9.00	708.32	
6	3004.13	60.00	271.09	2571.25	-689.18	-894.80	0.00	881.53	
7	3358.23	91.87	271.09	2656.20	-682.74	-1233.81	9.00	1220.60	RIVER ROCK 103H FTP
8	11149.64	91.87	271.09	2402.10	-534.94	-9019.67	0.00	9007.86	RIVER ROCK 103H LTP/BHL

#### DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
RIVER ROCK 103H SHL	0.00	0.00	0.00	620261.94	507540.97	32.7050937	-104.4432077
RIVER ROCK 103H KOP @ 2282.82' MD	2104.78	-569.12	-393.90	619692.82	507147.07	32.7035282	-104.4444864
RIVER ROCK 103H LTP/BHL	2402.10	-534.94	-9019.67	619727.00	498521.30	32.7035942	-104.4725288
RIVER ROCK 103H FTP	2656.20	-682.74	-1233.81	619579.20	506307.16	32.7032135	-104.4472165

#### PROJECT DETAILS: EDDY COUNTY, NM (NAD 83 - NME)

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



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Plan: Plan 1r0 (103H/OH)

Created By: PROTOTYPE WELL PLANNING / Date: 14:22, December 19 2023





# **SILVERBACK EXPLORATION**

**EDDY COUNTY, NM (NAD 83 - NME)**

**River Rock**

**103H**

**OH**

**Plan: Plan 1r0**

## **Standard Planning Report**

**19 December, 2023**



## Planning Report

<b>Database:</b>	EDM 5000.1.13 Single User Db	<b>Local Co-ordinate Reference:</b>	Well 103H
<b>Company:</b>	SILVERBACK EXPLORATION	<b>TVD Reference:</b>	RKB = 16.2' @ 3509.10usft (TBD)
<b>Project:</b>	EDDY COUNTY, NM (NAD 83 - NME)	<b>MD Reference:</b>	RKB = 16.2' @ 3509.10usft (TBD)
<b>Site:</b>	River Rock	<b>North Reference:</b>	Grid
<b>Well:</b>	103H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan 1r0		

<b>Project</b>	EDDY COUNTY, NM (NAD 83 - NME)		
<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		

Site		River Rock			
Site Position:		Northing:	618,173.76 usft	Latitude:	32.6993536
From:	Map	Easting:	507,416.27 usft	Longitude:	-104.4436060
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	-0.060 °

Well	103H					
Well Position	+N/-S	2,088.18 usft	Northing:	620,261.94 usft	Latitude:	32.7050937
	+E/-W	124.70 usft	Easting:	507,540.97 usft	Longitude:	-104.4432077
Position Uncertainty		0.00 usft	Wellhead Elevation:	0.00 usft	Ground Level:	3,492.90 usft

Design	Plan 1r0			
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	271.09

<b>Plan Sections</b>										
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	0.000	
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.000	
1,642.03	34.26	214.69	1,575.18	-272.49	-188.60	3.00	3.00	0.00	214.688	
2,282.82	34.26	214.69	2,104.78	-569.12	-393.90	0.00	0.00	0.00	0.000	
2,804.13	60.00	271.09	2,471.25	-692.46	-721.63	9.00	4.94	10.82	80.971	
3,004.13	60.00	271.09	2,571.25	-689.18	-894.80	0.00	0.00	0.00	0.000	
3,358.23	91.87	271.09	2,656.20	-682.74	-1,233.81	9.00	9.00	0.00	0.000	RIVER ROCK 103H
11,149.64	91.87	271.09	2,402.10	-534.94	-9,019.67	0.00	0.00	0.00	0.000	RIVER ROCK 103H



## Planning Report

<b>Database:</b>	EDM 5000.1.13 Single User Db	<b>Local Co-ordinate Reference:</b>	Well 103H
<b>Company:</b>	SILVERBACK EXPLORATION	<b>TVD Reference:</b>	RKB = 16.2' @ 3509.10usft (TBD)
<b>Project:</b>	EDDY COUNTY, NM (NAD 83 - NME)	<b>MD Reference:</b>	RKB = 16.2' @ 3509.10usft (TBD)
<b>Site:</b>	River Rock	<b>North Reference:</b>	Grid
<b>Well:</b>	103H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan 1r0		

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
<b>RIVER ROCK 103H SHL</b>									
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	3.00	214.69	599.95	-2.15	-1.49	1.45	3.00	3.00	0.00
700.00	6.00	214.69	699.63	-8.60	-5.95	5.79	3.00	3.00	0.00
800.00	9.00	214.69	798.77	-19.33	-13.38	13.01	3.00	3.00	0.00
900.00	12.00	214.69	897.08	-34.32	-23.75	23.09	3.00	3.00	0.00
1,000.00	15.00	214.69	994.31	-53.51	-37.04	36.01	3.00	3.00	0.00
1,100.00	18.00	214.69	1,090.18	-76.86	-53.20	51.73	3.00	3.00	0.00
1,200.00	21.00	214.69	1,184.43	-104.31	-72.19	70.20	3.00	3.00	0.00
1,300.00	24.00	214.69	1,276.81	-135.77	-93.97	91.37	3.00	3.00	0.00
1,400.00	27.00	214.69	1,367.06	-171.16	-118.47	115.19	3.00	3.00	0.00
1,500.00	30.00	214.69	1,454.93	-210.39	-145.62	141.59	3.00	3.00	0.00
1,600.00	33.00	214.69	1,540.18	-253.35	-175.35	170.50	3.00	3.00	0.00
1,642.03	34.26	214.69	1,575.18	-272.49	-188.60	183.38	3.00	3.00	0.00
1,700.00	34.26	214.69	1,623.09	-299.33	-207.17	201.44	0.00	0.00	0.00
1,800.00	34.26	214.69	1,705.74	-345.62	-239.21	232.59	0.00	0.00	0.00
1,900.00	34.26	214.69	1,788.39	-391.91	-271.25	263.74	0.00	0.00	0.00
2,000.00	34.26	214.69	1,871.03	-438.20	-303.29	294.90	0.00	0.00	0.00
2,100.00	34.26	214.69	1,953.68	-484.49	-335.33	326.05	0.00	0.00	0.00
2,200.00	34.26	214.69	2,036.33	-530.78	-367.36	357.20	0.00	0.00	0.00
2,282.82	34.26	214.69	2,104.78	-569.12	-393.90	383.00	0.00	0.00	0.00
<b>RIVER ROCK 103H KOP @ 2282.82' MD</b>									
2,300.00	34.53	217.38	2,118.96	-576.96	-399.61	388.56	9.00	1.58	15.68
2,350.00	35.65	224.97	2,159.89	-598.54	-418.52	407.06	9.00	2.24	15.17
2,400.00	37.22	232.08	2,200.13	-618.16	-440.76	428.92	9.00	3.13	14.22
2,450.00	39.18	238.63	2,239.44	-635.68	-466.18	454.01	9.00	3.92	13.11
2,500.00	41.47	244.62	2,277.57	-651.00	-494.64	482.17	9.00	4.59	11.97
2,550.00	44.05	250.05	2,314.29	-664.04	-525.95	513.22	9.00	5.15	10.87
2,600.00	46.86	254.99	2,349.38	-674.70	-559.93	546.99	9.00	5.62	9.87
2,650.00	49.86	259.47	2,382.60	-682.92	-596.36	583.26	9.00	6.01	8.97
2,700.00	53.03	263.57	2,413.77	-688.65	-635.01	621.80	9.00	6.32	8.19
2,750.00	56.32	267.33	2,442.69	-691.86	-675.66	662.38	9.00	6.58	7.52
2,804.13	60.00	271.09	2,471.25	-692.46	-721.63	708.32	9.00	6.80	6.94
2,900.00	60.00	271.09	2,519.18	-690.89	-804.63	791.34	0.00	0.00	0.00
3,004.13	60.00	271.09	2,571.25	-689.18	-894.80	881.53	0.00	0.00	0.00
3,050.00	64.13	271.09	2,592.73	-688.41	-935.30	922.04	9.00	9.00	0.00
3,100.00	68.63	271.09	2,612.76	-687.54	-981.09	967.84	9.00	9.00	0.00
3,150.00	73.13	271.09	2,629.14	-686.64	-1,028.32	1,015.07	9.00	9.00	0.00
3,200.00	77.63	271.09	2,641.75	-685.72	-1,076.67	1,063.44	9.00	9.00	0.00
3,250.00	82.13	271.09	2,650.54	-684.79	-1,125.88	1,112.64	9.00	9.00	0.00
3,300.00	86.63	271.09	2,655.44	-683.84	-1,175.61	1,162.39	9.00	9.00	0.00
3,350.00	91.13	271.09	2,656.42	-682.90	-1,225.58	1,212.37	9.00	9.00	0.00
3,358.23	91.87	271.09	2,656.20	-682.74	-1,233.81	1,220.60	9.00	9.00	0.00
<b>RIVER ROCK 103H FTP</b>									
3,400.00	91.87	271.09	2,654.84	-681.95	-1,275.55	1,262.34	0.00	0.00	0.00
3,500.00	91.87	271.09	2,651.58	-680.05	-1,375.48	1,362.29	0.00	0.00	0.00
3,600.00	91.87	271.09	2,648.32	-678.15	-1,475.40	1,462.24	0.00	0.00	0.00
3,700.00	91.87	271.09	2,645.05	-676.26	-1,575.33	1,562.18	0.00	0.00	0.00



## Planning Report

<b>Database:</b>	EDM 5000.1.13 Single User Db	<b>Local Co-ordinate Reference:</b>	Well 103H
<b>Company:</b>	SILVERBACK EXPLORATION	<b>TVD Reference:</b>	RKB = 16.2' @ 3509.10usft (TBD)
<b>Project:</b>	EDDY COUNTY, NM (NAD 83 - NME)	<b>MD Reference:</b>	RKB = 16.2' @ 3509.10usft (TBD)
<b>Site:</b>	River Rock	<b>North Reference:</b>	Grid
<b>Well:</b>	103H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan 1r0		

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)	
3,800.00	91.87	271.09	2,641.79	-674.36	-1,675.26	1,662.13	0.00	0.00	0.00	
3,900.00	91.87	271.09	2,638.53	-672.46	-1,775.19	1,762.08	0.00	0.00	0.00	
4,000.00	91.87	271.09	2,635.27	-670.57	-1,875.12	1,862.02	0.00	0.00	0.00	
4,100.00	91.87	271.09	2,632.01	-668.67	-1,975.05	1,961.97	0.00	0.00	0.00	
4,200.00	91.87	271.09	2,628.75	-666.77	-2,074.98	2,061.92	0.00	0.00	0.00	
4,300.00	91.87	271.09	2,625.49	-664.88	-2,174.91	2,161.87	0.00	0.00	0.00	
4,400.00	91.87	271.09	2,622.23	-662.98	-2,274.84	2,261.81	0.00	0.00	0.00	
4,500.00	91.87	271.09	2,618.96	-661.08	-2,374.76	2,361.76	0.00	0.00	0.00	
4,600.00	91.87	271.09	2,615.70	-659.18	-2,474.69	2,461.71	0.00	0.00	0.00	
4,700.00	91.87	271.09	2,612.44	-657.29	-2,574.62	2,561.65	0.00	0.00	0.00	
4,800.00	91.87	271.09	2,609.18	-655.39	-2,674.55	2,661.60	0.00	0.00	0.00	
4,900.00	91.87	271.09	2,605.92	-653.49	-2,774.48	2,761.55	0.00	0.00	0.00	
5,000.00	91.87	271.09	2,602.66	-651.60	-2,874.41	2,861.49	0.00	0.00	0.00	
5,100.00	91.87	271.09	2,599.40	-649.70	-2,974.34	2,961.44	0.00	0.00	0.00	
5,200.00	91.87	271.09	2,596.13	-647.80	-3,074.27	3,061.39	0.00	0.00	0.00	
5,300.00	91.87	271.09	2,592.87	-645.91	-3,174.19	3,161.33	0.00	0.00	0.00	
5,400.00	91.87	271.09	2,589.61	-644.01	-3,274.12	3,261.28	0.00	0.00	0.00	
5,500.00	91.87	271.09	2,586.35	-642.11	-3,374.05	3,361.23	0.00	0.00	0.00	
5,600.00	91.87	271.09	2,583.09	-640.21	-3,473.98	3,461.17	0.00	0.00	0.00	
5,700.00	91.87	271.09	2,579.83	-638.32	-3,573.91	3,561.12	0.00	0.00	0.00	
5,800.00	91.87	271.09	2,576.57	-636.42	-3,673.84	3,661.07	0.00	0.00	0.00	
5,900.00	91.87	271.09	2,573.31	-634.52	-3,773.77	3,761.01	0.00	0.00	0.00	
6,000.00	91.87	271.09	2,570.04	-632.63	-3,873.70	3,860.96	0.00	0.00	0.00	
6,100.00	91.87	271.09	2,566.78	-630.73	-3,973.63	3,960.91	0.00	0.00	0.00	
6,200.00	91.87	271.09	2,563.52	-628.83	-4,073.55	4,060.85	0.00	0.00	0.00	
6,300.00	91.87	271.09	2,560.26	-626.94	-4,173.48	4,160.80	0.00	0.00	0.00	
6,400.00	91.87	271.09	2,557.00	-625.04	-4,273.41	4,260.75	0.00	0.00	0.00	
6,500.00	91.87	271.09	2,553.74	-623.14	-4,373.34	4,360.69	0.00	0.00	0.00	
6,600.00	91.87	271.09	2,550.48	-621.24	-4,473.27	4,460.64	0.00	0.00	0.00	
6,700.00	91.87	271.09	2,547.22	-619.35	-4,573.20	4,560.59	0.00	0.00	0.00	
6,800.00	91.87	271.09	2,543.95	-617.45	-4,673.13	4,660.54	0.00	0.00	0.00	
6,900.00	91.87	271.09	2,540.69	-615.55	-4,773.06	4,760.48	0.00	0.00	0.00	
7,000.00	91.87	271.09	2,537.43	-613.66	-4,872.98	4,860.43	0.00	0.00	0.00	
7,100.00	91.87	271.09	2,534.17	-611.76	-4,972.91	4,960.38	0.00	0.00	0.00	
7,200.00	91.87	271.09	2,530.91	-609.86	-5,072.84	5,060.32	0.00	0.00	0.00	
7,300.00	91.87	271.09	2,527.65	-607.97	-5,172.77	5,160.27	0.00	0.00	0.00	
7,400.00	91.87	271.09	2,524.39	-606.07	-5,272.70	5,260.22	0.00	0.00	0.00	
7,500.00	91.87	271.09	2,521.13	-604.17	-5,372.63	5,360.16	0.00	0.00	0.00	
7,600.00	91.87	271.09	2,517.86	-602.28	-5,472.56	5,460.11	0.00	0.00	0.00	
7,700.00	91.87	271.09	2,514.60	-600.38	-5,572.49	5,560.06	0.00	0.00	0.00	
7,800.00	91.87	271.09	2,511.34	-598.48	-5,672.41	5,660.00	0.00	0.00	0.00	
7,900.00	91.87	271.09	2,508.08	-596.58	-5,772.34	5,759.95	0.00	0.00	0.00	
8,000.00	91.87	271.09	2,504.82	-594.69	-5,872.27	5,859.90	0.00	0.00	0.00	
8,100.00	91.87	271.09	2,501.56	-592.79	-5,972.20	5,959.84	0.00	0.00	0.00	
8,200.00	91.87	271.09	2,498.30	-590.89	-6,072.13	6,059.79	0.00	0.00	0.00	
8,300.00	91.87	271.09	2,495.03	-589.00	-6,172.06	6,159.74	0.00	0.00	0.00	
8,400.00	91.87	271.09	2,491.77	-587.10	-6,271.99	6,259.68	0.00	0.00	0.00	
8,500.00	91.87	271.09	2,488.51	-585.20	-6,371.92	6,359.63	0.00	0.00	0.00	
8,600.00	91.87	271.09	2,485.25	-583.31	-6,471.85	6,459.58	0.00	0.00	0.00	
8,700.00	91.87	271.09	2,481.99	-581.41	-6,571.77	6,559.52	0.00	0.00	0.00	
8,800.00	91.87	271.09	2,478.73	-579.51	-6,671.70	6,659.47	0.00	0.00	0.00	
8,900.00	91.87	271.09	2,475.47	-577.61	-6,771.63	6,759.42	0.00	0.00	0.00	
9,000.00	91.87	271.09	2,472.21	-575.72	-6,871.56	6,859.37	0.00	0.00	0.00	
9,100.00	91.87	271.09	2,468.94	-573.82	-6,971.49	6,959.31	0.00	0.00	0.00	



## Planning Report

<b>Database:</b>	EDM 5000.1.13 Single User Db	<b>Local Co-ordinate Reference:</b>	Well 103H
<b>Company:</b>	SILVERBACK EXPLORATION	<b>TVD Reference:</b>	RKB = 16.2' @ 3509.10usft (TBD)
<b>Project:</b>	EDDY COUNTY, NM (NAD 83 - NME)	<b>MD Reference:</b>	RKB = 16.2' @ 3509.10usft (TBD)
<b>Site:</b>	River Rock	<b>North Reference:</b>	Grid
<b>Well:</b>	103H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan 1r0		

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)
9,200.00	91.87	271.09	2,465.68	-571.92	-7,071.42	7,059.26	0.00	0.00	0.00
9,300.00	91.87	271.09	2,462.42	-570.03	-7,171.35	7,159.21	0.00	0.00	0.00
9,400.00	91.87	271.09	2,459.16	-568.13	-7,271.28	7,259.15	0.00	0.00	0.00
9,500.00	91.87	271.09	2,455.90	-566.23	-7,371.20	7,359.10	0.00	0.00	0.00
9,600.00	91.87	271.09	2,452.64	-564.34	-7,471.13	7,459.05	0.00	0.00	0.00
9,700.00	91.87	271.09	2,449.38	-562.44	-7,571.06	7,558.99	0.00	0.00	0.00
9,800.00	91.87	271.09	2,446.12	-560.54	-7,670.99	7,658.94	0.00	0.00	0.00
9,900.00	91.87	271.09	2,442.85	-558.65	-7,770.92	7,758.89	0.00	0.00	0.00
10,000.00	91.87	271.09	2,439.59	-556.75	-7,870.85	7,858.83	0.00	0.00	0.00
10,100.00	91.87	271.09	2,436.33	-554.85	-7,970.78	7,958.78	0.00	0.00	0.00
10,200.00	91.87	271.09	2,433.07	-552.95	-8,070.71	8,058.73	0.00	0.00	0.00
10,300.00	91.87	271.09	2,429.81	-551.06	-8,170.63	8,158.67	0.00	0.00	0.00
10,400.00	91.87	271.09	2,426.55	-549.16	-8,270.56	8,258.62	0.00	0.00	0.00
10,500.00	91.87	271.09	2,423.29	-547.26	-8,370.49	8,358.57	0.00	0.00	0.00
10,600.00	91.87	271.09	2,420.03	-545.37	-8,470.42	8,458.51	0.00	0.00	0.00
10,700.00	91.87	271.09	2,416.76	-543.47	-8,570.35	8,558.46	0.00	0.00	0.00
10,800.00	91.87	271.09	2,413.50	-541.57	-8,670.28	8,658.41	0.00	0.00	0.00
10,900.00	91.87	271.09	2,410.24	-539.68	-8,770.21	8,758.35	0.00	0.00	0.00
11,000.00	91.87	271.09	2,406.98	-537.78	-8,870.14	8,858.30	0.00	0.00	0.00
11,100.00	91.87	271.09	2,403.72	-535.88	-8,970.07	8,958.25	0.00	0.00	0.00
11,149.64	91.87	271.09	2,402.10	-534.94	-9,019.67	9,007.86	0.00	0.00	0.00
RIVER ROCK 103H LTP/BHL									

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									
RIVER ROCK 103H S	0.00	360.00	0.00	0.00	0.00	620,261.94	507,540.97	32.7050937	-104.4432077
- plan hits target center									
- Point									
RIVER ROCK 103H K	0.00	0.00	2,104.78	-569.12	-393.90	619,692.83	507,147.07	32.7035283	-104.4444863
- plan hits target center									
- Point									
RIVER ROCK 103H L	0.00	0.00	2,402.10	-534.94	-9,019.67	619,727.00	498,521.30	32.7035942	-104.4725288
- plan hits target center									
- Point									
RIVER ROCK 103H F	0.00	360.00	2,656.20	-682.74	-1,233.81	619,579.20	506,307.16	32.7032135	-104.4472165
- plan hits target center									
- Point									



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	

Estimated Formation Tops

Formation:	Top:	Formation:	Top: