

**BEFORE THE OIL CONSERVATION DIVISION
EXAMINER HEARING – JULY 11, 2024**

CASE NO. 24517

ROCHE #101H

ROCHE #102H

ROCHE #103H

EDDY COUNTY, NEW MEXICO



SILVERBACK
EXPLORATION

**STATE OF NEW MEXICO
DEPARTMENT OF ENERGY, MINERALS AND NATURAL RESOURCES**

**APPLICATION OF SILVERBACK, LLC
FOR COMPULSORY POOLING,
EDDY COUNTY, NEW MEXICO**

CAUSE NO. 24517

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EXHIBIT A

COMPULSORY POOLING CHECKLIST

COMPULSORY POOLING APPLICATION CHECKLIST

ALL INFORMATION IN THE APPLICATION MUST BE SUPPORTED BY SIGNED AFFIDAVITS

Case:	APPLICANT'S RESPONSE
Date	
Applicant	Silverback Operating II, LLC
Designated Operator & OGRID (affiliation if applicable)	Silverback Operating II, LLC (OGRID No. 330968)
Applicant's Counsel:	Benjamin B. Holliday
Case Title:	Application of Silverback Operating II, LLC for Compulsory Pooling creating standard 320-acre, more or less, horizontal spacing unit covering S/2 S/2 of Section 2 & N/2 N/2 of Section 11-T19S-R25E, N.M.P.M., Eddy County, New Mexico
Entries of Appearance/Intervenors:	No additional entries of appearance.
Well Family	Roche #101H, Roche 102H, and Roche #103H
Formation/Pool	
Formation Name(s) or Vertical Extent:	Atoka; Glorieta-Yeso (#3250)
Primary Product (Oil or Gas):	Oil
Pooling this vertical extent:	Yeso
Pool Name and Pool Code (Only if NSP is requested):	N/a
Well Location Setback Rules (Only if NSP is Requested):	n/a
Spacing Unit	
Type (Horizontal/Vertical)	Horizontal
Size (Acres)	320 acres, more or less, covering S/2 S/2 of Section 2 & N/2 N/2 of Section 11 T19S-R25E. N.M.P.M., Eddy County, New Mexico
Building Blocks:	quarter - quarter: Three (3) lease tracts make up the S/2 S/2 of Section 2 portion of the unit: S/2 SE/4, SE/4 SW/4, SW/4 SW/4 Section 11 portion of unit (2) lease tracts: N/2 NW/4 & NW/4 NE/4, NE/4 NE/4
Orientation:	West / East - Laydown
Description: TRS/County	Township 19 South, Range 25 East. N.M.P.M., Eddy County, New Mexico
Standard Horizontal Well Spacing Unit (Y/N), If No, describe and is approval of non-standard unit requested in this application?	Yes
Other Situations	
Depth Severance: Y/N. If yes, description	No depth severance within the targeted formation.
Proximity Tracts: If yes, description	Yes; the completed interval of the Roche #102H well will be located within 330' of the quarter-quarter section line separating the S/2 S/2 of Section 2 & N/2 N/2 of Section 11 to allow the creation of a 320-acre standard horizontal spacing unit

Proximity Defining Well: if yes, description	Roche #102H (see below for description information)
Applicant's Ownership in Each Tract	Exhibit A-4
Well(s)	
Name & API (if assigned), surface and bottom hole location, footages, completion target, orientation, completion status (standard or non-standard)	see below
Well #1	Roche #101H (API No. 30-015-54391) SHL: 165' FSL & 427' FWL of Section 1-T19S-R25E FTP: 680' FSL & 100' FEL of Section 11-T19S-R25E BHL: 680' FSL & 100' FWL of Section 11-T19S-R25E Target: Yeso Orientation: Horizontal Completion status: Standard TMD: 8,596'; TVD: 2,753'; LL: 5,555'
Well #2	Roche #102H (API No.: 30-015-54390) - Defining Well SHL: 185' FSL & 427' FWL of Section 1-T19S-R25E FTP: 120' FSL & 100' FEL of Section 2-T19S-R25E BHL: 120' FSL & 100' FWL of Section 2-T19S-R25E Target: Yeso Orientation: horizontal Completion status: standard TMD: 8,122'; TVD: 2,458'; LL: 5,529'
Well #3	Roche #103H (API No.: 30-015-54388) SHL: 205' FSL & 427' FWL of Section 1-T19S-R25E FTP: 920' FSL & 100' FEL of Section 2-T19S-R25E BHL: 920' FSL & 100' FWL of Section 2-T19S-R25E Target: Yeso Orientation: horizontal Completion status: standard TMD: 8,384'; TVD: 2,589'; LL: 5,547'
Horizontal Well First and Last Take Points	Exhibit A-3
Completion Target (Formation, TVD and MD)	Exhibit A-3
AFE Capex and Operating Costs	
Drilling Supervision/Month \$	\$8,000.00
Production Supervision/Month \$	\$800.00
Justification for Supervision Costs	Exhibit A
Requested Risk Charge	200%
Notice of Hearing	
Proposed Notice of Hearing	Exhibit A-1
Proof of Mailed Notice of Hearing (20 days before hearing)	Exhibit C-1, C-2, and C-3
Proof of Published Notice of Hearing (10 days before hearing)	Exhibit C-4

EXHIBIT A-1

APPLICATION & PROPOSED NOTICE OF HEARING

STATE OF NEW MEXICO
DEPARTMENT OF ENERGY, MINERALS AND NATURAL RESOURCES

APPLICATION OF SILVERBACK, LLC
FOR COMPULSORY POOLING,
EDDY COUNTY, NEW MEXICO

CASE NO. _____

APPLICATION

Pursuant to NMSA § 70-2-17, Silverback Operating II, LLC (“Applicant”) (OGRID No. 330968), through its undersigned attorney, hereby files this Application with the Oil Conservation Division of the State of New Mexico (“Division”) for an order (1) creating a 320-acre, more or less, standard horizontal well spacing unit comprised of the S2 S2 of Section 2, and the N2 N2 of Section 11, both located in Township 19 South, Range 25 East, NMPM, Eddy County, New Mexico (“Unit”), and (2) pooling all uncommitted interest within the Atoka Glorieta Yeso Formation, designated as an oil pool (Pool Code 3250), underlying said Unit. In support of its Application, Applicant states the following:

1. Applicant is a working interest owner in the Unit and has the right to drill thereon.
2. Applicant seeks to dedicate the above-referenced Unit to the following wells, referred to collectively as the Wells:
 - a. **Roche #101H**, API No. 30-015-54391 which is an oil well that will be horizontally drilled from a surface hole location in the SW4 of Section 1, Township 19 South, Range 25 East, being approximately 165 feet FSL, and approximately 427 feet FWL of Section 1, Township 19 South, Range 25 East, to a bottom hole location in the NW4 of Section 11, Township 19 South, Range 25 East, being approximately 680 feet FSL, and approximately 100 feet FWL of Section 11, Township 19 South, Range 25 East;
 - b. **Roche #102H**, API No. 30-015-54390 which is an oil well that will be horizontally drilled from a surface hole location in the SW4 of Section 1, Township 19 South, Range 25 East, being approximately 185 feet FSL, and approximately 427 feet FWL of Section 1, Township 19 South, Range 25 East, to a bottom hole location in the SW4 of Section 2, Township 19 South, Range 25 East, being approximately

120 feet FSL, and approximately 100 feet FWL of Section 2, Township 19 South, Range 25 East;

- c. **Roche #103H**, API No. 30-015-54388 which is an oil well that will be horizontally drilled from a surface hole location in the SW4 of Section 1, Township 19 South, Range 25 East, being approximately 205 feet FSL, and approximately 427 feet FWL of Section 1, Township 19 South, Range 25 East, to a bottom hole location in the SW4 of Section 2, Township 19 South, Range 25 East, being approximately 920 feet FSL, and approximately 100 feet FWL of Section 2, Township 19 South, Range 25 East;
3. The completed interval of the Wells will be orthodox and remain within 330-feet of the adjoining quarter-quarter section (or equivalent) tracts to allow inclusion of these proximity tracts within the proposed Unit under NMAC 19.15.16.15(B)(1)(6).
4. Applicant has undertaken diligent, good-faith efforts to obtain voluntary agreements from all interest owners to participate in the drilling of the Wells but has been unable to obtain voluntary agreements from all interest owners.
5. The approval of this Unit and pooling of uncommitted interests within the Unit will avoid the drilling of unnecessary wells, prevent waste, and protect correlative rights.
6. In order to allow Applicant to obtain its just and fair share of the oil and gas underlying the subject lands, all uncommitted interests in the Unit should be pooled and Applicant should be designated the operator of the Wells and Unit.

WHEREFORE, Applicant requests this Application be set for hearing June 6, 2024, and that after notice and hearing, the Division enter an order

- A. Pooling all uncommitted interests in the Unit;
- B. Approving the Wells in the Unit;
- C. Designating Applicant as operator of the Unit and the Wells;
- D. Authorizing Applicant to recover its costs of drilling, equipping and completing the Wells;
- E. Approving the actual operating charges and costs of supervision while drilling and after completion, together with a provision adjusting the rates pursuant to the COPAS accounting procedures; and

- F. Imposing a 200% penalty for the risk assumed by Applicant in drilling and completing the Wells against any working interest owner who does not voluntarily participate in the drilling of the Wells.

Respectfully submitted,

HOLLIDAY ENERGY LAW GROUP, PC

/s/ Benjamin B. Holliday

Benjamin B. Holliday

107 Katherine Court, Suite 100

San Antonio, Texas 78209

Phone: (210) 469-3197

ben@theenergylawgroup.com

ben-svc@theenergylawgroup.com

Counsel for Silverback Operating II, LLC

Application of Silverback Operating II, LLC for Compulsory Pooling, Eddy County, New Mexico. Applicant seeks an order pooling all uncommitted interests in the Atoka Glorieta Yeso Formation underlying a 320-acre, more or less, standard horizontal spacing unit comprised of the S2S2 of Section 2, and the N2N2 of Section 11, both located in Township 19 South, Range 25 East, NMMP, Eddy County, New Mexico (“Unit”). The Unit will be dedicated to the following wells:

Roche #101H well (“101H Well”), which is an oil well that will be horizontally drilled from a surface hole location in the surface location a surface hole location in the SW4 of Section 1, Township 19 South, Range 25 East, being approximately 165 feet FSL, and approximately 427 feet FWL of Section 1, Township 19 South, Range 25 East, to a bottom hole location in the NW4 of Section 11, Township 19 South, Range 25 East, being approximately 680 feet FSL, and approximately 100 feet FWL of Section 11, Township 19 South, Range 25 East.

Roche #102H well (“102H Well”), which is an oil well that will be horizontally drilled from a surface hole location in the SW4 of Section 1, Township 19 South, Range 25 East, being approximately 185 feet FSL, and approximately 427 feet FWL of Section 1, Township 19 South, Range 25 East, to a bottom hole location in the SW4 of Section 2, Township 19 South, Range 25 East, being approximately 120 feet FSL, and approximately 100 feet FWL of Section 2, Township 19 South, Range 25 East;

Roche #103H well (“103H Well”) which is an oil well that will be horizontally drilled from a surface hole location in the SW4 of Section 1, Township 19 South, Range 25 East, being approximately 205 feet FSL, and approximately 427 feet FWL of Section 1, Township 19 South, Range 25 East, to a bottom hole location in the SW4 of Section 2, Township 19 South, Range 25 East, being approximately 920 feet FSL, and approximately 100 feet FWL of Section 2, Township 19 South, Range 25 East;

The 101H Well, 102H Well, and 103H Wells are referred to collectively herein as the “Wells.” The completed interval of the Wells will be orthodox. Also, to be considered will be the cost of drilling and completing the Wells and the allocation of the cost, the designation of Applicant as the operator of the Wells, and a 200% charge for the risk involved in drilling and completing the Wells. The Wells are located approximately 11 miles South of Artesia, New Mexico.

EXHIBIT A-2

SELF-AFFIRMED STATEMENT OF LARRY K. COSHOW, LANDMAN

**STATE OF NEW MEXICO
DEPARTMENT OF ENERGY, MINERALS AND NATURAL RESOURCES**

**APPLICATION OF SILVERBACK, LLC
FOR COMPULSORY POOLING,
EDDY COUNTY, NEW MEXICO**

CASE NO. 24517

AFFIDAVIT OF LARRY COSHOW

Larry Coshow, being first duly sworn and upon oath, deposes and states as follows:

1. My name is Larry Coshow, and I am a landman with Silverback Operating II, LLC (“Silverback”). I have previously testified before the Oil Conservation Division (“Division”) as an expert witness in petroleum land matters. My credentials have been made a matter of record and I have been recognized by the Division as an expert witness.

2. I am submitting this affidavit in support of Silverback’s application in the above-referenced case pursuant to 19.15.14.12(A)(1) NMAC.

3. I am familiar with the application filed by Silverback in this case, and I am familiar with the status of the lands in the subject area. Copies of Silverback’s Application and the Proposed Hearing Notice are attached as Silverback Exhibit A-1.

4. None of the parties to be pooled in this case have indicated opposition to this matter proceeding by affidavit to the Division, and therefore I do not expect any opposition at the hearing.

5. In this case, Silverback seeks an order pooling all uncommitted interest owners in the following spacing unit:

- a. The proposed spacing unit is a 320-acre, more or less, standard horizontal spacing unit in the Atoka Glorieta Yeso Formation, Pool Code 3250, comprised of the S2 S/2 of Section 2, and the N/2 N/2 of Section 11, both located in Township 19 South, Range 25 East, NMPM, Eddy County, New Mexico (“Spacing Unit”). The Spacing

Unit includes proximity tracts, and the defining well for proximity tract purposes is the Roche #102H. The completed interval of the Roche #102H well is within 330 feet of the adjoining quarter-quarter section line separating the S/2 S/2 of Section 2 and N/2 N/2 of Section 11 to allow inclusion of those tracts within the proposed 320-acre horizontal spacing unit under NMAC 19.15.16.15B(1)(b).

- b. The Spacing Unit will be initially dedicated to the following wells (collectively the “Wells”):
- i. **Roche #101H**, API No. 30-015-54391 which is an oil well that will be horizontally drilled from the surface hole location in the SW/4 of Section 1, Township 19 South, Range 25 East, being approximately 165 feet FSL, and approximately 427 feet FWL of Section 1, Township 19 South, Range 25 East, with a first take-point located 680 feet FSL and 100 feet FEL of Section 11, Township 19 South, Range 25 East, to a bottom hole location in the NW/4 of Section 11, Township 19 South, Range 25 East, being approximately 680 feet FSL, and approximately 100 feet FWL of Section 11, Township 19 South, Range 25 East;
 - ii. **Roche #102H**, API No. 30-015-54390 which is an oil well that will be horizontally drilled from a surface hole location in the SW/4 of Section 1, Township 19 South, Range 25 East, being approximately 185 feet FSL, and approximately 427 feet FWL of Section 1, Township 19 South, Range 25 East, with a first take-point located 120 feet FSL and 100 feet FEL of Section 2, Township 19 South, Range 25 East, to a bottom hole location in the SW/4 of Section 2, Township 19 South, Range 25 East, being

approximately 120 feet FSL, and approximately 100 feet FWL of Section 2, Township 19 South, Range 25 East;

- iii. **Roche #103H**, API No. 30-015-54388 which is an oil well that will be horizontally drilled from a surface hole location in the SW/4 of Section 1, Township 19 South, Range 25 East, being approximately 205 feet FSL, and approximately 427 feet FWL of Section 1, Township 19 South, Range 25 East, with a first take-point located 920 feet FSL and 100 feet FEL of Section 2, Township 19 South, Range 25 East, to a bottom hole location in the SW/4 of Section 2, Township 19 South, Range 25 East, being approximately 920 feet FSL, and approximately 100 feet FWL of Section 2, Township 19 South, Range 25 East.

6. Silverback Exhibit B-1 contains a general location map outlining the Spacing Unit being pooled in Case No. 24517 in relation to the surrounding area in Eddy County. The acreage in the Spacing Unit does not contain any state lands.

7. Silverback Exhibit A-3 contains the form C-102s for the Wells. The Oil Conservation Division has placed the Wells in the Atoka Glorieta Yeso Formation, Pool Code 3250. The location of each of the Wells is orthodox and meets the Division's offset requirements.

8. There are no depth severances in the Atoka Glorieta Yeso Formation underlying the subject acreage.

9. Silverback Exhibit A-4 contains a plat outlining the Spacing Unit being pooled in Case No. 24517. This Exhibit also identifies each tract number, tract percentage interest, and State Lease numbers.

10. Silverback Exhibit A-5 provides a Unit Recap depicting ownership totals for the proposed Roche HSU, including the Spacing Unit percentage interest for the interest owners being pooled and their last known addresses. The unleased mineral interest owners that remain to be pooled in this case are marked in yellow. In compiling these addresses, I conducted a diligent search of the public records in Eddy County, New Mexico, where the wells are located, phone directories, internet databases, and performed internet searches to locate the contact information for parties entitled to notification.

11. Silverback sent both lease offers and well proposal letters for the Wells, together with corresponding AFEs, to the uncommitted interest owners in this case. Silverback Exhibit A-6 is a sample of the well proposal letter, along with the AFEs, sent to these uncommitted interest owners. The estimated costs of the Wells set forth in the AFEs are fair, reasonable, and comparable to the costs of other wells of similar depths and lengths drilled in this area of New Mexico.

12. All parties Silverback seeks to pool were locatable, notice was provided, and various of the parties returned green cards; see Silverback Exhibit C-3 for proof of mailing. Out of an abundance of caution, Silverback caused notice to be published more than ten (10) business days prior to the compulsory pooling hearing in the Carlsbad Current Argus in accordance with 19.15.4.12(B) NMAC; Silverback Exhibit C-4 contains a copy of the legal advertisement, as well as the affidavit of publication. I provided the law firm of Holliday Energy Law Group, PC, with the name and addresses for all uncommitted interests.

13. Silverback requests overhead and administrative rates of \$8,000/month for drilling each well and \$800/month for producing each well. These rates are fair and comparable to the rates charged by other operators for wells of this type in this area of New Mexico. Silverback

respectfully requests that these administrative and overhead costs be incorporated into any orders entered by the Division in this case.

14. Silverback requests the maximum cost, plus 200% risk charge, be assessed against the non-consenting working interest owners.

15. Silverback requests that it be designated operator of the unit and Wells.

16. Silverback has been able to locate contact information for all interest owners that it seeks to pool and has undertaken good faith efforts to reach an agreement with the locatable uncommitted interest owners. Silverback Exhibit A-7 contains a chronology of the contacts with the interest owners that Silverback seeks to pool. Silverback has made a good faith effort to obtain voluntary joinder of the interest owners in the Wells through either lease or joint operating agreement.

17. The interest owners being pooled either have been contacted regarding the Wells or have been provided notice by publication as set forth above, but in either case have failed or refused to voluntarily commit their interest in the Wells. If a mutually agreeable Joint Operating Agreement is reached between Silverback and an interest owner, I will inform the Division that Silverback is no longer seeking to pool that party, and Silverback requests that the voluntary agreement become operative and supersede the Division's order for said parties, except to the extent that the Division deems it necessary to maintain spacing criteria for the purpose of conservation, the prevention of waste, and the protection of correlative rights.

18. Silverback Exhibits A-1 through A-7 were either prepared by me or compiled under my direction and supervision.

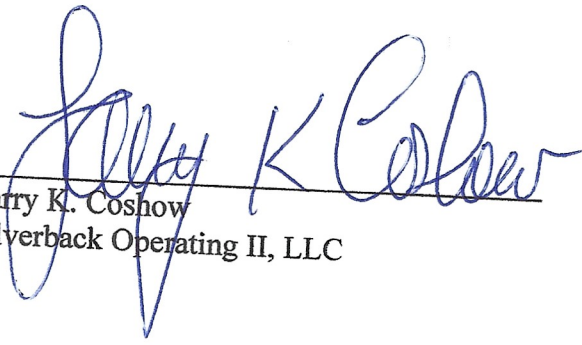
19. The granting of this application is in the best interest of conservation, the prevention of waste, and the protection of correlative rights, and will avoid the drilling of unnecessary wells.

20. I swear that to the best of my knowledge and belief, all of the matters set forth herein and in the exhibits are true, correct, and accurate.

[Remainder of the page intentionally left blank.]

FURTHER AFFIANT SAYETH NOT.

Dated this 1st day of July, 2024.


Larry K. Coshow
Silverback Operating II, LLC

STATE OF OKLAHOMA)
)
COUNTY OF OKLAHOMA)

SUBSCRIBED AND SWORN to before me this 1st day of July, 2024, by Larry K. Coshow, Landman for Silverback Operating II, LLC.

Witness my hand and official seal.

BRANDI D. HERNANDEZ
NOTARY PUBLIC-STATE OF OKLAHOMA
COMMISSION EXPIRES: 06/23/2027
COMMISSION # 15005723


Notary Public, State of Oklahoma

EXHIBIT A-3

C-102s

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 354188

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 30-015-54391
4. Property Code 335016	5. Property Name Roche	6. Well No. 101H

7. Surface Location

UL - Lot M	Section 1	Township 19S	Range 25E	Lot Idn	Feet From 165	N/S Line S	Feet From 427	E/W Line W	County Eddy
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8. Proposed Bottom Hole Location

UL - Lot D	Section 11	Township 19S	Range 25E	Lot Idn D	Feet From 680	N/S Line N	Feet From 100	E/W Line W	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 3415
16. Multiple N	17. Proposed Depth 8596	18. Formation Yeso	19. Contractor	20. Spud Date 2/7/2024
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	3590	190	0
Prod	8.75	5.5	20	8596	1552	2365

Casing/Cement Program: Additional Comments

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22. Proposed Blowout Prevention Program

Type Double Ram	Working Pressure 5000	Test Pressure 5000	Manufacturer Shaffer
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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.	OIL CONSERVATION DIVISION
Signature:	
Printed Name: Electronically filed by Matthew Alley	Approved By: Ward Rikala
Title: Chief Financial Officer	Title:
Email Address: malley@silverbackexp.com	Approved Date: 11/29/2023 Expiration Date: 11/29/2025
Date: 11/16/2023 Phone: 303-513-0990	Conditions of Approval Attached

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 APD Conditions
 Permit 354188

PERMIT CONDITIONS OF APPROVAL

Operator Name and Address: Silverback Operating II, LLC [330968] 19707 IH10 West, Suite 201 San Antonio, TX 78256	API Number: 30-015-54391
	Well: Roche #101H

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

Submit Electronically
 Via E-permitting

Oil Conservation Division
 1220 South St. Francis Dr.
 Santa Fe, NM 87505

NATURAL GAS MANAGEMENT PLAN

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

Section 1 – Plan Description Effective May 25, 2021

I. Operator: Silverback Operating II, LLC. **OGRID:** 330968 **Date:** 11 / 16 / 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
See Attached						

IV. Central Delivery Point Name: Roche 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
See Attached						

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
See Attached			

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
See Attached				

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: <i>Fatma Abdallah</i>
Printed Name: Fatma Abdallah
Title: Regulatory Manager
E-mail Address: fabdallah@silverbackexp.com
Date: 11/16/23
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 including a low probably, high volume production case (approximately 75% higher than type curve or most likely amount of production). 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. The high volume case was used to size equipment, piping and instrumentation. Equipment sizing is based on drop settlement and limits the amount of carry over to the gas phase.

Each well has a dedicated 3 phase separator and gas from that separator is taken directly to gas sales. 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 flare. 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 flare which is sized to accommodate peak expected production volume. Flash volumes were estimated using the high volume case and process modeling software.

Operational Practices

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 will only occur during 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:

- Power generation on lease – Natural gas driven gen set to produce power required to run supply well pad electrical loads
- Compression on lease – gas lift or gas compression as required
- 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 flare.

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

Section 1-Plan Description -III. Wells

Well Name	API	ULSTR	Footages	Anticipated Oil BBL/D	Anticipated Gas MCF/D	Anticipated Produced Water BBL/D
Roche 101	Pending	M-1-19S-25E	165' FSL & 427' FWL	515	440	3000
Roche 102	Pending	M-1-19S-25E	185' FSL & 427' FWL	515	440	3000
Roche 103	Pending	M-1-19S-25E	205' FSL & 427' FWL	515	440	3000

V. Anticipated Schedule

Well Name	API	Spud date	TD Reached Date	Completion Commencement Date	Initial Flow Back Date	First Production Date
Roche 101	Pending	2/7/2024	4/22/2024	5/18/2024	6/9/2024	6/9/2024
Roche 102	Pending	2/12/2024	5/1/2024	5/18/2024	6/10/2024	6/10/2024
Roche 103	Pending	2/17/2024	5/11/2024	5/18/2024	6/11/2024	6/11/2024

Section 2- Enhanced Plan

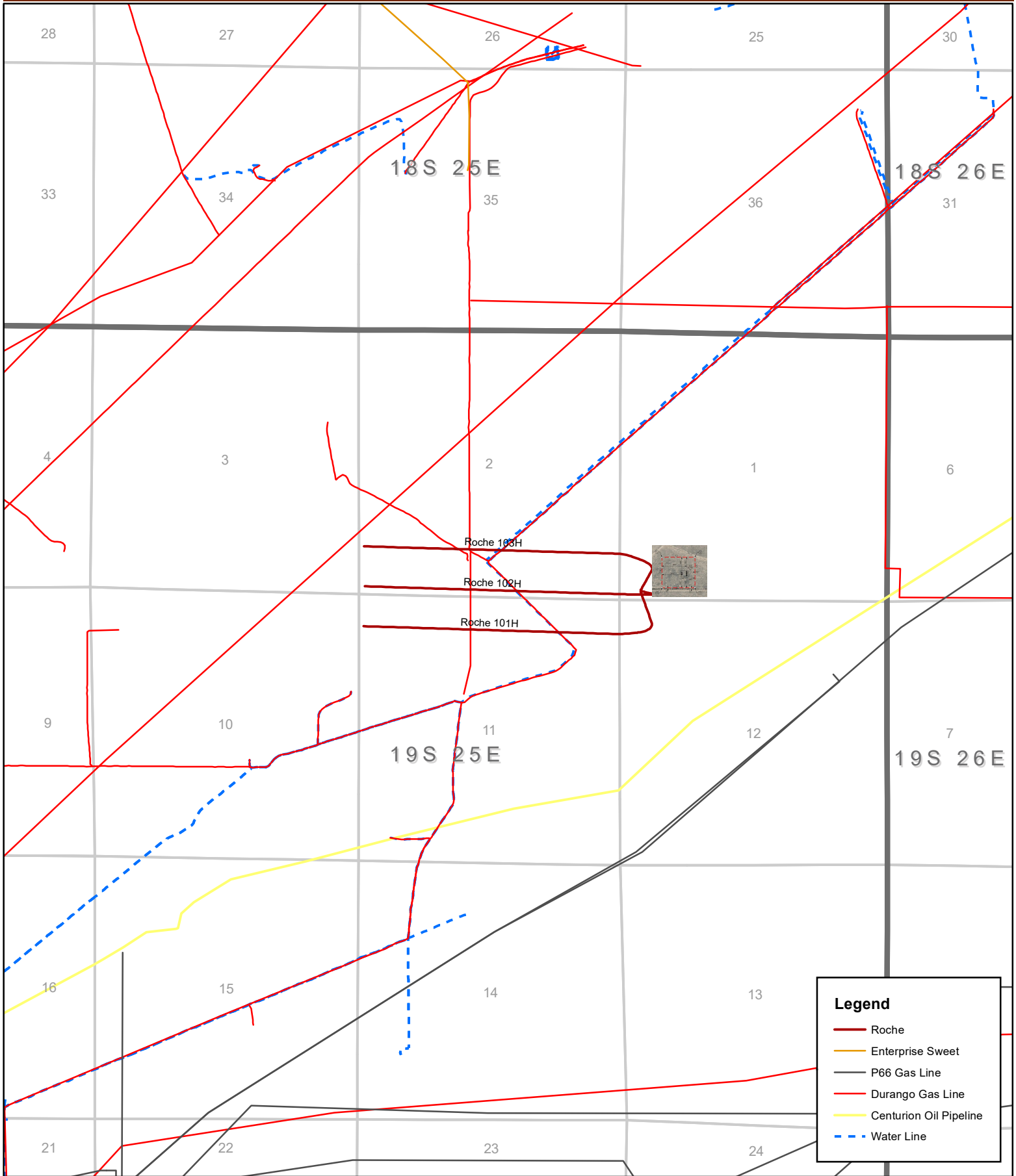
IX. Anticipated Natural Gas Production

Well	API	Anticipated Average Natural Gas Rate MCF/D	Anticipated Volume of Natural Gas for the First Year MCF
Roche 101	Pending	440	160600
Roche 102	Pending	440	160600
Roche 103	Pending	440	160600

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
Silverback Operating II, LLC	Roche CTB	M-1-19S-25E	6/9/2024	170000

Silverback Exploration Roche



Legend

- Roche
- Enterprise Sweet
- P66 Gas Line
- Durango Gas Line
- Centurion Oil Pipeline
- - - Water Line



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 #

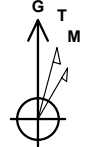
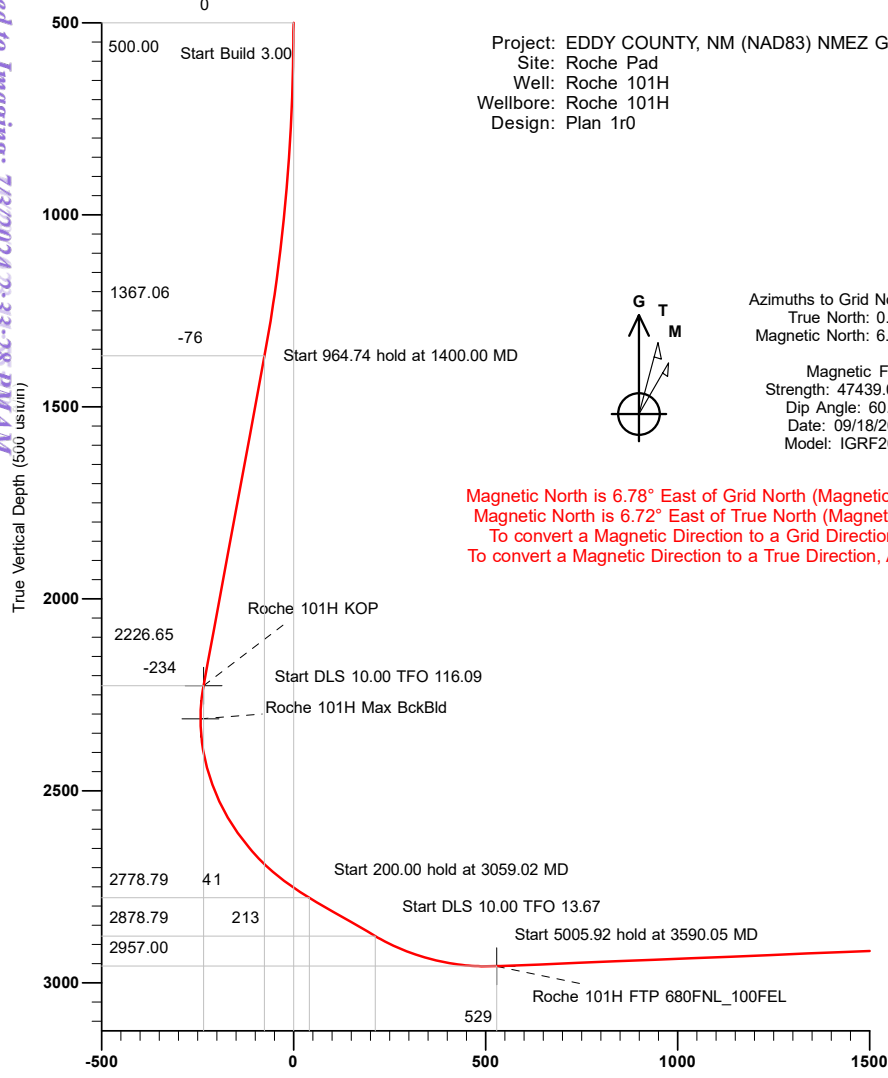
Operator Name:	Property Name:	Well Number
----------------	----------------	-------------

Estimated Formation Tops

Formation:	Top:	Formation:	Top:

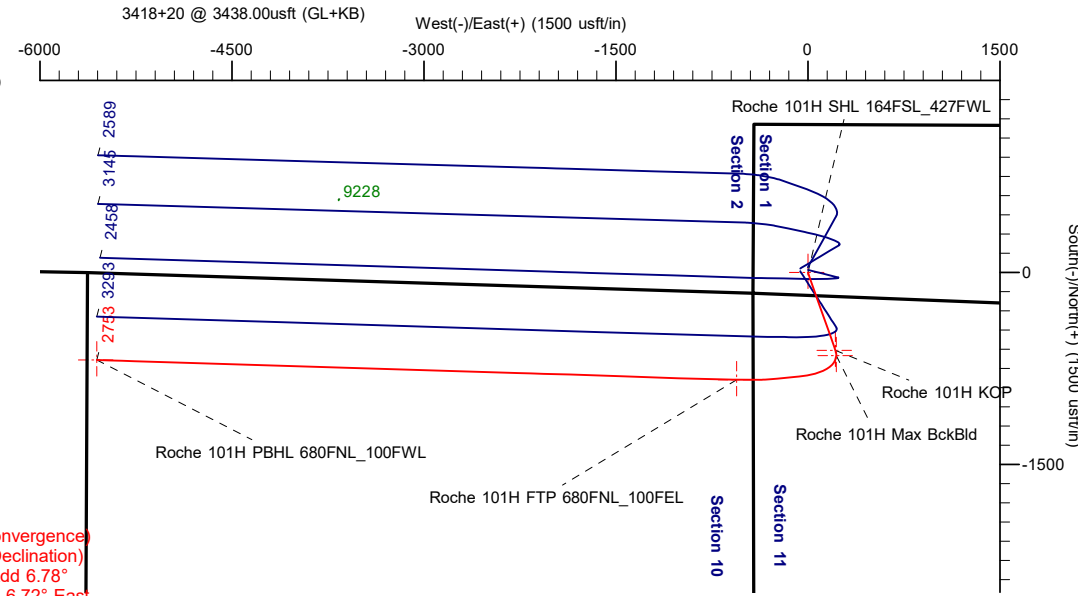
SILVERBACK EXPLORATION

Project: EDDY COUNTY, NM (NAD83) NMEZ GRID
 Site: Roche Pad
 Well: Roche 101H
 Wellbore: Roche 101H
 Design: Plan 1r0



Azimuths to Grid North
 True North: 0.06°
 Magnetic North: 6.78°
 Magnetic Field
 Strength: 47439.0nT
 Dip Angle: 60.11°
 Date: 09/18/2023
 Model: IGRF2020

Magnetic North is 6.78° East of Grid North (Magnetic Convergence)
 Magnetic North is 6.72° East of True North (Magnetic Declination)
 To convert a Magnetic Direction to a Grid Direction, Add 6.78°
 To convert a Magnetic Direction to a True Direction, Add 6.72° East

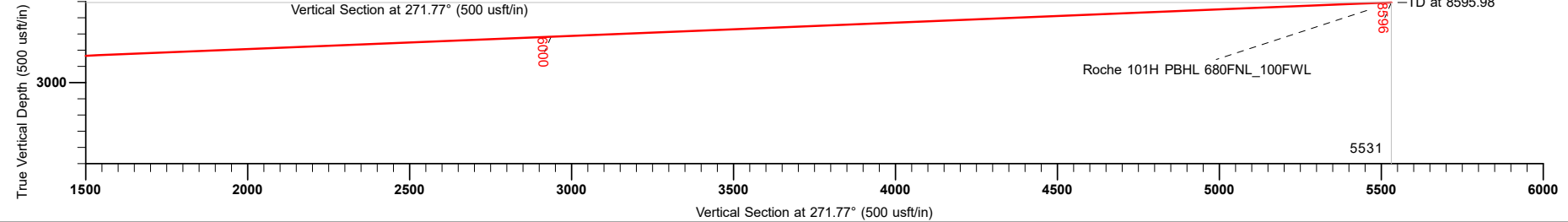


DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
Roche 101H SHL 164FSL_427FWL	0.00	0.00	0.00	612170.50	506767.20	Point
Roche 101H KOP	2226.65	-609.08	215.69	611561.42	506982.89	Point
Roche 101H Max BckBld	2312.71	-649.11	222.34	611521.39	506989.54	Point
Roche 101H PBHL 680FNL_100FWL	2753.00	-684.60	-5554.80	611485.90	501212.40	Point
Roche 101H FTP 680FNL_100FEL	2957.00	-838.70	-555.50	611331.80	506211.70	Point

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	V Sect	Annotation
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Start Build 3.00
2	500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	Start DLS 10.00 TFO 116.09
3	1400.00	27.00	160.50	1367.06	-196.22	69.49	3.00	160.50	-75.51	Start 964.74 hold at 1400.00 MD
4	2364.74	27.00	160.50	2226.65	-609.08	215.69	0.00	0.00	-234.40	Start DLS 10.00 TFO 116.09
5	3059.02	60.00	264.35	2778.79	-812.80	-66.25	10.00	116.09	41.11	Start 200.00 hold at 3059.02 MD
6	3259.02	60.00	264.35	2878.79	-829.85	-238.61	0.00	0.00	212.87	Start DLS 10.00 TFO 13.67
7	3590.05	92.34	271.77	2957.00	-839.11	-555.42	10.00	13.67	529.24	Start 5005.92 hold at 3590.05 MD
8	8595.98	92.34	271.77	2753.00	-684.60	-5554.80	0.00	0.00	5531.00	TD at 8595.98



Plan: Plan 1r0 (Roche 101H/Roche 101H)
 Created By: Mekka Williams
 eSomina Well Design
 mekka@esominawelldesign.com
 17:43, September 20, 2023

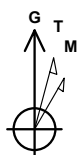
PRIME SOLUTIONS SERVICES



SILVERBACK EXPLORATION

3418+20 @ 3438.00usft (GL+KB)

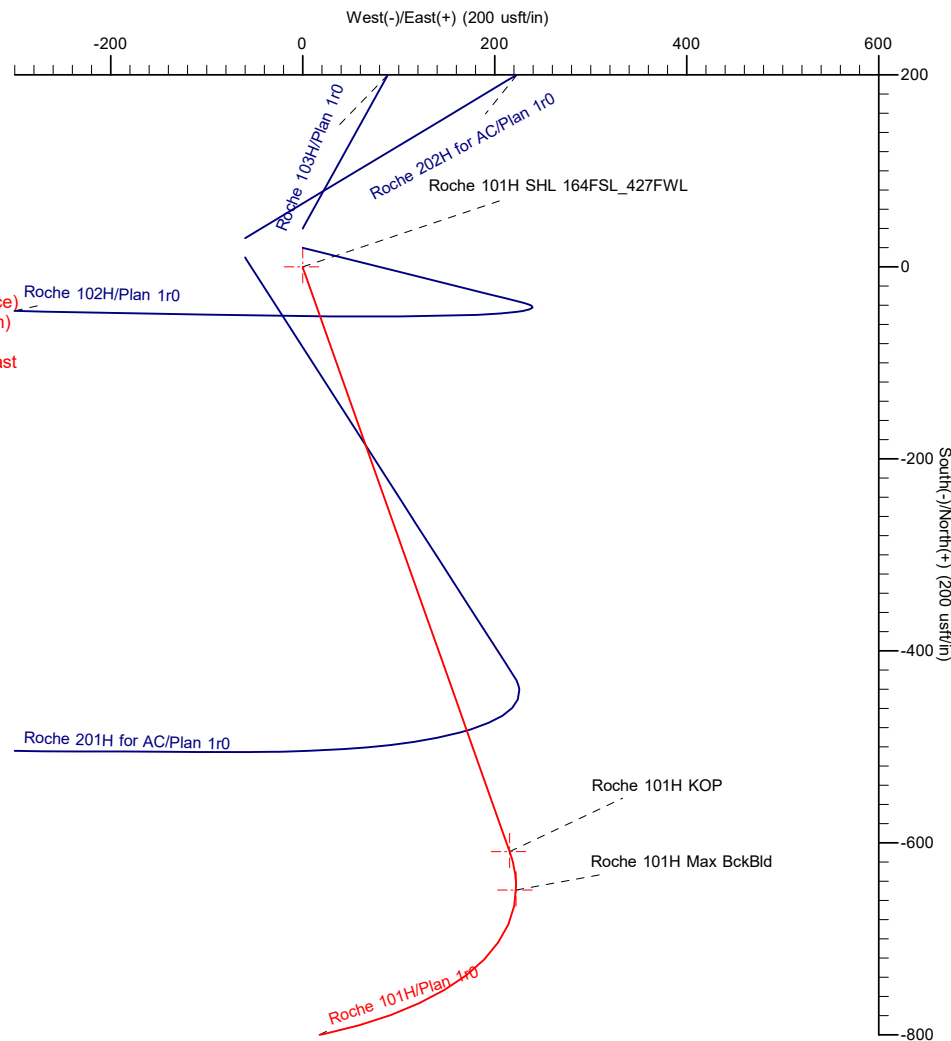
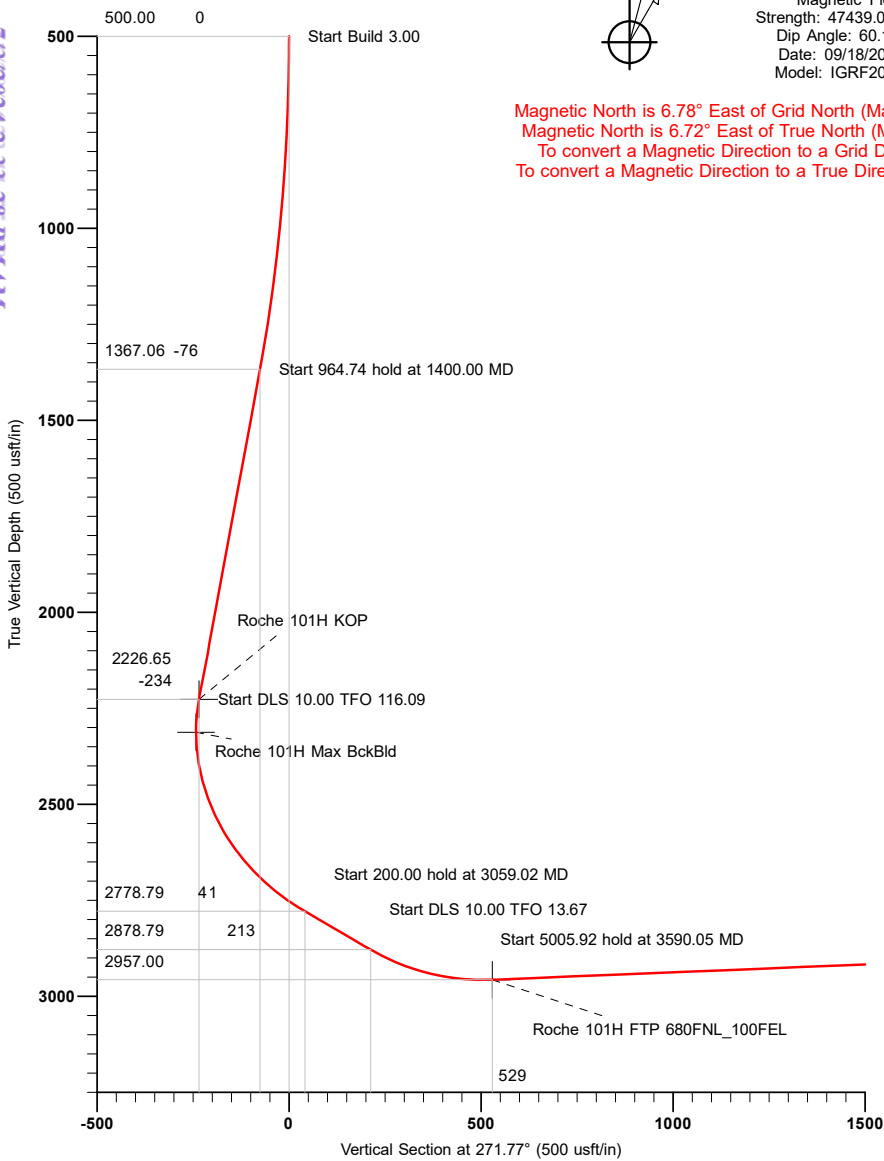
Project: EDDY COUNTY, NM (NAD83) NMEZ GRID
 Site: Roche Pad
 Well: Roche 101H
 Wellbore: Roche 101H
 Design: Plan 1r0



Azimuths to Grid North
 True North: 0.06°
 Magnetic North: 6.78°

Magnetic Field
 Strength: 47439.0nT
 Dip Angle: 60.11°
 Date: 09/18/2023
 Model: IGRF2020

Magnetic North is 6.78° East of Grid North (Magnetic Convergence)
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 To convert a Magnetic Direction to a Grid Direction, Add 6.78°
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DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
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Roche 101H PBHL 680FNL_100FWL	2753.00	-684.60	-554.80	611485.90	501212.40	Point
Roche 101H FTP 680FNL_100FEL	2957.00	-838.70	-555.50	611331.80	506211.70	Point

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Annotation
1	0.00	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	0.00	Start Build 3.00
3	1400.00	27.00	160.50	1367.06	-196.22	69.49	3.00	160.50	-75.51	Start 964.74 hold at 1400.00 MD
4	2364.74	27.00	160.50	2226.65	-609.08	215.69	0.00	0.00	-234.40	Start DLS 10.00 TFO 116.09
5	3059.02	60.00	264.35	2778.79	-812.80	-66.25	10.00	116.09	41.11	Start 200.00 hold at 3059.02 MD
6	3259.02	60.00	264.35	2878.79	-829.85	-238.61	0.00	0.00	212.87	Start DLS 10.00 TFO 13.67
7	3590.05	92.34	271.77	2957.00	-839.11	-555.42	10.00	13.67	529.24	Start 5005.92 hold at 3590.05 MD
8	8595.98	92.34	271.77	2753.00	-684.60	-555.48	0.00	0.00	5531.00	TD at 8595.98

Plan: Plan 1r0 (Roche 101H/Roche 101H)
 Created By: Mekka Williams
 eSomina Well Design
 mekka@esominawelldesign.com
 17:48, September 20, 2024

PRIME SOLUTIONS SERVICES



SILVERBACK EXPLORATION

EDDY COUNTY, NM (NAD83) NMEZ GRID

Roche Pad

Roche 101H

Roche 101H

Plan: Plan 1r0

Standard Planning Report

18 September, 2023

Planning Report

Database:	PRIME_EDM	Local Co-ordinate Reference:	Well Roche 101H
Company:	SILVERBACK EXPLORATION	TVD Reference:	3418+20 @ 3438.00usft (GL+KB)
Project:	EDDY COUNTY, NM (NAD83) NMEZ GRID	MD Reference:	3418+20 @ 3438.00usft (GL+KB)
Site:	Roche Pad	North Reference:	Grid
Well:	Roche 101H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Roche 101H		
Design:	Plan 1r0		

Project	EDDY COUNTY, NM (NAD83) NMEZ GRID		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site	Roche Pad				
Site Position:		Northing:	612,210.50 usft	Latitude:	32.6829605
From:	Map	Easting:	506,767.20 usft	Longitude:	-104.4456955
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	-0.06 °

Well	Roche 101H					
Well Position	+N/-S	-40.00 usft	Northing:	612,170.50 usft	Latitude:	32.6828506
	+E/-W	0.00 usft	Easting:	506,767.20 usft	Longitude:	-104.4456954
Position Uncertainty		0.00 usft	Wellhead Elevation:		Ground Level:	3,418.00 usft

Wellbore	Roche 101H				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2020	09/18/23	6.72	60.11	47,438.95834047

Design	Plan 1r0			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	271.77

Plan Survey Tool Program	Date	09/18/23			
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks	
1	0.00	8,595.98	Plan 1r0 (Roche 101H)	MWD	
				OWSG MWD - Standard	

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,400.00	27.00	160.50	1,367.06	-196.22	69.49	3.00	3.00	0.00	160.50	
2,364.74	27.00	160.50	2,226.65	-609.08	215.69	0.00	0.00	0.00	0.00	
3,059.02	60.00	264.35	2,778.80	-812.80	-66.25	10.00	4.75	14.96	116.09	
3,259.02	60.00	264.35	2,878.80	-829.85	-238.61	0.00	0.00	0.00	0.00	
3,590.05	92.34	271.77	2,957.00	-839.11	-555.42	10.00	9.77	2.24	13.67	
8,595.98	92.34	271.77	2,753.00	-684.60	-5,554.80	0.00	0.00	0.00	0.00	Roche 101H PBHL 6E

Planning Report

Database:	PRIME_EDM	Local Co-ordinate Reference:	Well Roche 101H
Company:	SILVERBACK EXPLORATION	TVD Reference:	3418+20 @ 3438.00usft (GL+KB)
Project:	EDDY COUNTY, NM (NAD83) NMEZ GRID	MD Reference:	3418+20 @ 3438.00usft (GL+KB)
Site:	Roche Pad	North Reference:	Grid
Well:	Roche 101H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Roche 101H		
Design:	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	0.00
100.00	0.00	0.00	100.00	0.00	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	0.00
300.00	0.00	0.00	300.00	0.00	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	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Start Build 3.00										
600.00	3.00	160.50	599.95	-2.47	0.87	-0.95	3.00	3.00	3.00	0.00
700.00	6.00	160.50	699.63	-9.86	3.49	-3.80	3.00	3.00	3.00	0.00
800.00	9.00	160.50	798.77	-22.16	7.85	-8.53	3.00	3.00	3.00	0.00
900.00	12.00	160.50	897.08	-39.34	13.93	-15.14	3.00	3.00	3.00	0.00
1,000.00	15.00	160.50	994.31	-61.34	21.72	-23.61	3.00	3.00	3.00	0.00
1,100.00	18.00	160.50	1,090.18	-88.11	31.20	-33.91	3.00	3.00	3.00	0.00
1,200.00	21.00	160.50	1,184.43	-119.58	42.34	-46.02	3.00	3.00	3.00	0.00
1,300.00	24.00	160.50	1,276.81	-155.65	55.12	-59.90	3.00	3.00	3.00	0.00
1,400.00	27.00	160.50	1,367.06	-196.22	69.49	-75.51	3.00	3.00	3.00	0.00
Start 964.74 hold at 1400.00 MD										
1,500.00	27.00	160.50	1,456.16	-239.02	84.64	-91.98	0.00	0.00	0.00	0.00
1,600.00	27.00	160.50	1,545.26	-281.81	99.80	-108.45	0.00	0.00	0.00	0.00
1,700.00	27.00	160.50	1,634.36	-324.61	114.95	-124.92	0.00	0.00	0.00	0.00
1,800.00	27.00	160.50	1,723.46	-367.40	130.10	-141.39	0.00	0.00	0.00	0.00
1,900.00	27.00	160.50	1,812.56	-410.20	145.26	-157.86	0.00	0.00	0.00	0.00
2,000.00	27.00	160.50	1,901.66	-452.99	160.41	-174.33	0.00	0.00	0.00	0.00
2,100.00	27.00	160.50	1,990.76	-495.79	175.57	-190.80	0.00	0.00	0.00	0.00
2,200.00	27.00	160.50	2,079.86	-538.58	190.72	-207.27	0.00	0.00	0.00	0.00
2,300.00	27.00	160.50	2,168.96	-581.38	205.88	-223.74	0.00	0.00	0.00	0.00
2,364.74	27.00	160.50	2,226.65	-609.08	215.69	-234.40	0.00	0.00	0.00	0.00
Start DLS 10.00 TFO 116.09										
2,400.00	25.63	167.84	2,258.26	-624.09	219.97	-239.14	10.00	-3.88	20.81	
2,500.00	24.08	191.49	2,349.22	-665.33	220.46	-240.91	10.00	-1.55	23.65	
2,600.00	26.28	214.56	2,439.93	-703.65	203.80	-225.43	10.00	2.20	23.08	
2,700.00	31.46	232.41	2,527.64	-737.88	170.48	-193.19	10.00	5.18	17.84	
2,800.00	38.42	245.02	2,609.68	-766.99	121.52	-145.15	10.00	6.96	12.61	
2,900.00	46.35	254.08	2,683.55	-790.09	58.40	-82.78	10.00	7.94	9.06	
3,000.00	54.84	260.96	2,747.02	-806.48	-16.95	-7.97	10.00	8.48	6.87	
3,059.02	60.00	264.35	2,778.80	-812.80	-66.25	41.11	10.00	8.75	5.75	
Start 200.00 hold at 3059.02 MD										
3,100.00	60.00	264.35	2,799.29	-816.29	-101.57	76.31	0.00	0.00	0.00	
3,200.00	60.00	264.35	2,849.29	-824.82	-187.75	162.18	0.00	0.00	0.00	
3,259.02	60.00	264.35	2,878.80	-829.85	-238.61	212.87	0.00	0.00	0.00	
Start DLS 10.00 TFO 13.67										
3,300.00	63.99	265.43	2,898.04	-833.07	-274.64	248.78	10.00	9.73	2.63	
3,400.00	73.74	267.79	2,934.05	-838.52	-367.64	341.56	10.00	9.76	2.36	
3,500.00	83.52	269.92	2,953.74	-840.44	-465.53	439.35	10.00	9.78	2.13	
3,590.05	92.34	271.77	2,957.00	-839.11	-555.42	529.24	10.00	9.79	2.05	
Start 5005.92 hold at 3590.05 MD										
3,600.00	92.34	271.77	2,956.59	-838.81	-565.36	539.18	0.00	0.00	0.00	
3,700.00	92.34	271.77	2,952.52	-835.72	-665.22	639.09	0.00	0.00	0.00	
3,800.00	92.34	271.77	2,948.44	-832.63	-765.09	739.01	0.00	0.00	0.00	
3,900.00	92.34	271.77	2,944.37	-829.55	-864.96	838.93	0.00	0.00	0.00	
4,000.00	92.34	271.77	2,940.29	-826.46	-964.83	938.84	0.00	0.00	0.00	
4,100.00	92.34	271.77	2,936.22	-823.37	-1,064.70	1,038.76	0.00	0.00	0.00	
4,200.00	92.34	271.77	2,932.14	-820.29	-1,164.57	1,138.68	0.00	0.00	0.00	

Planning Report

Database:	PRIME_EDM	Local Co-ordinate Reference:	Well Roche 101H
Company:	SILVERBACK EXPLORATION	TVD Reference:	3418+20 @ 3438.00usft (GL+KB)
Project:	EDDY COUNTY, NM (NAD83) NMEZ GRID	MD Reference:	3418+20 @ 3438.00usft (GL+KB)
Site:	Roche Pad	North Reference:	Grid
Well:	Roche 101H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Roche 101H		
Design:	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)
4,300.00	92.34	271.77	2,928.07	-817.20	-1,264.44	1,238.60	0.00	0.00	0.00
4,400.00	92.34	271.77	2,923.99	-814.11	-1,364.31	1,338.51	0.00	0.00	0.00
4,500.00	92.34	271.77	2,919.92	-811.03	-1,464.18	1,438.43	0.00	0.00	0.00
4,600.00	92.34	271.77	2,915.84	-807.94	-1,564.05	1,538.35	0.00	0.00	0.00
4,700.00	92.34	271.77	2,911.77	-804.85	-1,663.92	1,638.26	0.00	0.00	0.00
4,800.00	92.34	271.77	2,907.69	-801.77	-1,763.79	1,738.18	0.00	0.00	0.00
4,900.00	92.34	271.77	2,903.62	-798.68	-1,863.66	1,838.10	0.00	0.00	0.00
5,000.00	92.34	271.77	2,899.54	-795.59	-1,963.52	1,938.01	0.00	0.00	0.00
5,100.00	92.34	271.77	2,895.46	-792.51	-2,063.39	2,037.93	0.00	0.00	0.00
5,200.00	92.34	271.77	2,891.39	-789.42	-2,163.26	2,137.85	0.00	0.00	0.00
5,300.00	92.34	271.77	2,887.31	-786.33	-2,263.13	2,237.76	0.00	0.00	0.00
5,400.00	92.34	271.77	2,883.24	-783.25	-2,363.00	2,337.68	0.00	0.00	0.00
5,500.00	92.34	271.77	2,879.16	-780.16	-2,462.87	2,437.60	0.00	0.00	0.00
5,600.00	92.34	271.77	2,875.09	-777.07	-2,562.74	2,537.52	0.00	0.00	0.00
5,700.00	92.34	271.77	2,871.01	-773.99	-2,662.61	2,637.43	0.00	0.00	0.00
5,800.00	92.34	271.77	2,866.94	-770.90	-2,762.48	2,737.35	0.00	0.00	0.00
5,900.00	92.34	271.77	2,862.86	-767.81	-2,862.35	2,837.27	0.00	0.00	0.00
6,000.00	92.34	271.77	2,858.79	-764.73	-2,962.22	2,937.18	0.00	0.00	0.00
6,100.00	92.34	271.77	2,854.71	-761.64	-3,062.09	3,037.10	0.00	0.00	0.00
6,200.00	92.34	271.77	2,850.64	-758.55	-3,161.96	3,137.02	0.00	0.00	0.00
6,300.00	92.34	271.77	2,846.56	-755.47	-3,261.82	3,236.93	0.00	0.00	0.00
6,400.00	92.34	271.77	2,842.49	-752.38	-3,361.69	3,336.85	0.00	0.00	0.00
6,500.00	92.34	271.77	2,838.41	-749.29	-3,461.56	3,436.77	0.00	0.00	0.00
6,600.00	92.34	271.77	2,834.34	-746.21	-3,561.43	3,536.69	0.00	0.00	0.00
6,700.00	92.34	271.77	2,830.26	-743.12	-3,661.30	3,636.60	0.00	0.00	0.00
6,800.00	92.34	271.77	2,826.19	-740.03	-3,761.17	3,736.52	0.00	0.00	0.00
6,900.00	92.34	271.77	2,822.11	-736.95	-3,861.04	3,836.44	0.00	0.00	0.00
7,000.00	92.34	271.77	2,818.04	-733.86	-3,960.91	3,936.35	0.00	0.00	0.00
7,100.00	92.34	271.77	2,813.96	-730.77	-4,060.78	4,036.27	0.00	0.00	0.00
7,200.00	92.34	271.77	2,809.89	-727.69	-4,160.65	4,136.19	0.00	0.00	0.00
7,300.00	92.34	271.77	2,805.81	-724.60	-4,260.52	4,236.10	0.00	0.00	0.00
7,400.00	92.34	271.77	2,801.74	-721.51	-4,360.39	4,336.02	0.00	0.00	0.00
7,500.00	92.34	271.77	2,797.66	-718.43	-4,460.26	4,435.94	0.00	0.00	0.00
7,600.00	92.34	271.77	2,793.59	-715.34	-4,560.13	4,535.85	0.00	0.00	0.00
7,700.00	92.34	271.77	2,789.51	-712.26	-4,659.99	4,635.77	0.00	0.00	0.00
7,800.00	92.34	271.77	2,785.44	-709.17	-4,759.86	4,735.69	0.00	0.00	0.00
7,900.00	92.34	271.77	2,781.36	-706.08	-4,859.73	4,835.61	0.00	0.00	0.00
8,000.00	92.34	271.77	2,777.29	-703.00	-4,959.60	4,935.52	0.00	0.00	0.00
8,100.00	92.34	271.77	2,773.21	-699.91	-5,059.47	5,035.44	0.00	0.00	0.00
8,200.00	92.34	271.77	2,769.14	-696.82	-5,159.34	5,135.36	0.00	0.00	0.00
8,300.00	92.34	271.77	2,765.06	-693.74	-5,259.21	5,235.27	0.00	0.00	0.00
8,400.00	92.34	271.77	2,760.99	-690.65	-5,359.08	5,335.19	0.00	0.00	0.00
8,500.00	92.34	271.77	2,756.91	-687.56	-5,458.95	5,435.11	0.00	0.00	0.00
8,595.98	92.34	271.77	2,753.00	-684.60	-5,554.80	5,531.00	0.00	0.00	0.00
TD at 8595.98									

Planning Report

Database:	PRIME_EDM	Local Co-ordinate Reference:	Well Roche 101H
Company:	SILVERBACK EXPLORATION	TVD Reference:	3418+20 @ 3438.00usft (GL+KB)
Project:	EDDY COUNTY, NM (NAD83) NMEZ GRID	MD Reference:	3418+20 @ 3438.00usft (GL+KB)
Site:	Roche Pad	North Reference:	Grid
Well:	Roche 101H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Roche 101H		
Design:	Plan 1r0		

Design Targets										
Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	
- hit/miss target	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)			
- Shape										
Roche 101H SHL 164FS - plan hits target center - Point	0.00	360.00	0.00	0.00	0.00	612,170.50	506,767.20	32.6828506	-104.4456954	
Roche 101H KOP - plan hits target center - Point	0.00	360.00	2,226.65	-609.08	215.69	611,561.42	506,982.89	32.6811770	-104.4449923	
Roche 101H Max BckBlk - plan misses target center by 0.01usft at 2460.01usft MD (2312.72 TVD, -649.12 N, 222.34 E) - Point	0.00	360.00	2,312.71	-649.11	222.34	611,521.39	506,989.54	32.6810670	-104.4449705	
Roche 101H PBHL 680F - plan hits target center - Point	0.00	360.00	2,753.00	-684.60	-5,554.80	611,485.90	501,212.40	32.6809513	-104.4637471	
Roche 101H FTP 680FN - plan misses target center by 0.41usft at 3590.14usft MD (2956.99 TVD, -839.11 N, -555.51 E) - Point	0.00	360.00	2,957.00	-838.70	-555.50	611,331.80	506,211.70	32.6805436	-104.4474980	

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment	
		+N/-S (usft)	+E/-W (usft)		
500.00	500.00	0.00	0.00	Start Build 3.00	
1,400.00	1,367.06	-196.22	69.49	Start 964.74 hold at 1400.00 MD	
2,364.74	2,226.65	-609.08	215.69	Start DLS 10.00 TFO 116.09	
3,059.02	2,778.80	-812.80	-66.25	Start 200.00 hold at 3059.02 MD	
3,259.02	2,878.80	-829.85	-238.61	Start DLS 10.00 TFO 13.67	
3,590.05	2,957.00	-839.11	-555.42	Start 5005.92 hold at 3590.05 MD	
8,595.98	2,753.00	-684.60	-5,554.80	TD at 8595.98	

SILVERBACK EXPLORATION

EDDY COUNTY, NM (NAD83) NMEZ GRID

Roche Pad

Roche 101H

Roche 101H

Plan 1r0

Anticollision Report

18 September, 2023

Anticollision Report

Company:	SILVERBACK EXPLORATION	Local Co-ordinate Reference:	Well Roche 101H
Project:	EDDY COUNTY, NM (NAD83) NMEZ GRID	TVD Reference:	3418+20 @ 3438.00usft (GL+KB)
Reference Site:	Roche Pad	MD Reference:	3418+20 @ 3438.00usft (GL+KB)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Roche 101H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Roche 101H	Database:	PRIME_EDM
Reference Design:	Plan 1r0	Offset TVD Reference:	Reference Datum

Reference	Plan 1r0		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	MD Interval 100.00usft	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum ellipse separation of 0.00 usft	Error Surface:	Pedal Curve
Warning Levels Evaluated at:	2.00 Sigma	Casing Method:	Not applied

Survey Tool Program	Date	09/18/23		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.00	8,595.98	Plan 1r0 (Roche 101H)	MWD	OWSG MWD - Standard

Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation	Warning
Offset Well - Wellbore - Design						
Roche Pad						
Rio Penasco KD Com 1 - Rio Penasco KD Com 1 - Rio						Out of range
Roche 102H - Roche 102H - Plan 1r0	500.00	500.00	20.00	16.05	5.062	CC, ES
Roche 102H - Roche 102H - Plan 1r0	8,595.98	8,111.80	852.62	590.81	3.257	SF
Roche 103H - Roche 103H - Plan 1r0	500.00	500.00	40.00	36.05	10.125	CC, ES
Roche 103H - Roche 103H - Plan 1r0	700.00	694.67	58.79	50.14	6.800	SF
Roche 201H - Roche 201H for AC - Plan 1r0	1,064.16	1,073.46	47.80	35.96	4.036	CC
Roche 201H - Roche 201H for AC - Plan 1r0	1,100.00	1,109.17	48.14	35.48	3.802	ES
Roche 201H - Roche 201H for AC - Plan 1r0	1,200.00	1,208.49	53.11	38.01	3.517	SF
Roche 202H - Roche 202H for AC - Plan 1r0	500.00	500.00	67.08	63.75	20.151	CC
Roche 202H - Roche 202H for AC - Plan 1r0	600.00	601.75	67.66	62.99	14.478	ES
Roche 202H - Roche 202H for AC - Plan 1r0	800.00	801.22	80.03	71.62	9.518	SF

Offset Design													Offset Site Error:	0.00 usft
Roche Pad - Roche 102H - Roche 102H - Plan 1r0													Offset Well Error:	0.00 usft
Survey Program: 0-MWD														
Reference		Offset		Semi Major Axis			Distance			Minimum Separation		Separation Factor		Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
0.00	0.00	0.00	0.00	0.00	0.00	0.00	20.00	0.00	20.00	19.52	0.48	41.677		
100.00	100.00	100.00	100.00	0.31	0.31	0.00	20.00	0.00	20.00	18.47	1.53	13.112		
200.00	200.00	200.00	200.00	0.95	0.95	0.00	20.00	0.00	20.00	17.61	2.39	8.358		
300.00	300.00	300.00	300.00	1.46	1.46	0.00	20.00	0.00	20.00	16.81	3.19	6.277		
400.00	400.00	400.00	400.00	1.89	1.89	0.00	20.00	0.00	20.00	16.05	3.95	5.062	CC, ES	
500.00	500.00	500.00	500.00	2.31	2.31	0.00	20.00	0.00	20.00	16.87	5.02	4.359		
600.00	599.95	600.19	600.15	2.71	2.99	-156.09	19.36	2.55	21.90	20.97	7.16	3.931		
700.00	699.63	700.02	699.65	4.58	4.69	-146.66	17.47	10.15	28.13	31.01	8.41	4.687		
800.00	798.77	799.11	797.89	5.92	5.99	-137.90	14.35	22.68	39.42	46.41	9.45	5.909		
900.00	897.08	897.26	894.42	7.01	6.67	-131.74	10.06	39.87	55.86	65.81	10.54	7.242		
1,000.00	994.31	995.11	990.34	7.97	6.84	-129.96	5.38	58.64	76.36	88.45	11.74	8.534		
1,100.00	1,090.18	1,092.19	1,085.50	8.81	7.04	-131.03	0.74	77.26	100.19	114.50	13.01	9.800		
1,200.00	1,184.43	1,188.23	1,179.64	9.59	7.26	-133.21	-3.85	95.67	127.51	144.28	14.32	11.076		
1,300.00	1,276.81	1,282.96	1,272.50	10.30	7.49	-135.71	-8.38	113.84	158.60	178.05	15.63	12.393		
1,400.00	1,367.06	1,376.12	1,363.83	10.96	7.72	-138.20	-12.84	131.71	193.68	214.37	16.66	13.865		
1,500.00	1,456.16	1,468.42	1,454.30	11.31	7.96	-140.89	-17.25	149.41	231.04					

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company:	SILVERBACK EXPLORATION	Local Co-ordinate Reference:	Well Roche 101H
Project:	EDDY COUNTY, NM (NAD83) NMEZ GRID	TVD Reference:	3418+20 @ 3438.00usft (GL+KB)
Reference Site:	Roche Pad	MD Reference:	3418+20 @ 3438.00usft (GL+KB)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Roche 101H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Roche 101H	Database:	PRIME_EDM
Reference Design:	Plan 1r0	Offset TVD Reference:	Reference Datum

Offset Design													Roche Pad - Roche 102H - Roche 102H - Plan 1r0	Offset Site Error:	0.00 usft
Survey Program: 0-MWD														Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
1,600.00	1,545.26	1,560.71	1,544.78	11.52	8.21	-142.84	-21.67	167.11	268.72	251.20	17.52	15.338			
1,700.00	1,634.36	1,653.01	1,635.25	11.75	8.47	-144.30	-26.08	184.81	306.60	288.24	18.35	16.707			
1,800.00	1,723.46	1,745.30	1,725.73	12.00	8.74	-145.45	-30.49	202.51	344.61	325.44	19.17	17.976			
1,900.00	1,812.56	1,837.60	1,816.20	12.27	9.01	-146.37	-34.91	220.21	382.72	362.74	19.98	19.152			
2,000.00	1,901.66	1,935.47	1,912.54	12.58	9.42	-147.52	-39.50	236.56	420.58	399.72	20.87	20.157			
2,100.00	1,990.76	2,035.59	2,012.45	12.93	9.98	-150.53	-43.63	237.88	456.95	435.17	21.77	20.986			
2,200.00	2,079.86	2,127.38	2,102.99	13.34	10.99	-154.73	-46.74	223.80	493.49	471.03	22.46	21.973			
2,300.00	2,168.96	2,207.84	2,179.66	13.83	11.65	-159.25	-48.88	199.71	532.64	509.71	22.93	23.231			
2,400.00	2,258.26	2,276.96	2,242.30	14.42	12.13	-171.86	-50.24	170.61	576.19	552.95	23.24	24.794			
2,500.00	2,349.22	2,342.40	2,297.99	15.26	12.54	-158.25	-51.10	136.31	622.07	598.66	23.41	26.571			
2,600.00	2,439.93	2,406.85	2,348.67	15.99	12.89	130.15	-51.54	96.55	667.14	643.52	23.62	28.244			
2,700.00	2,527.64	2,470.73	2,394.18	16.73	13.18	108.59	-51.56	51.78	709.18	685.26	23.91	29.655			
2,800.00	2,609.68	2,534.27	2,434.25	17.44	13.43	93.55	-51.17	2.51	746.55	722.23	24.32	30.701			
2,900.00	2,683.55	2,599.46	2,469.46	18.09	13.63	83.21	-50.36	-52.31	778.01	753.10	24.91	31.233			
3,000.00	2,747.02	2,696.20	2,517.83	18.68	13.83	76.33	-48.90	-136.07	800.41	773.95	26.46	30.248			
3,100.00	2,799.29	2,794.89	2,567.17	19.18	14.25	74.00	-47.41	-221.53	812.06	783.69	28.37	28.623			
3,200.00	2,849.29	2,860.83	2,596.67	19.70	14.79	73.88	-46.28	-280.44	823.73	794.07	29.66	27.776			
3,300.00	2,898.04	2,925.16	2,618.75	20.40	15.59	72.30	-44.94	-340.82	838.76	807.62	31.14	26.936			
3,400.00	2,934.05	2,988.79	2,633.79	21.39	16.57	70.01	-43.41	-402.59	850.63	817.61	33.02	25.765			
3,500.00	2,953.74	3,050.00	2,641.72	22.58	17.64	68.81	-41.76	-463.24	857.47	822.33	35.14	24.400			
3,600.00	2,956.59	3,115.85	2,642.97	23.97	18.87	68.57	-39.80	-529.01	859.12	821.50	37.62	22.836			
3,700.00	2,952.52	3,215.85	2,639.28	25.52	20.87	68.60	-36.71	-628.90	858.98	817.79	41.19	20.855			
3,800.00	2,948.44	3,315.85	2,635.58	27.23	22.97	68.62	-33.62	-728.78	858.85	813.89	44.95	19.105			
3,900.00	2,944.37	3,415.85	2,631.89	29.06	25.14	68.65	-30.53	-828.66	858.72	809.85	48.87	17.572			
4,000.00	2,940.29	3,515.85	2,628.19	30.99	27.36	68.67	-27.43	-928.55	858.58	805.68	52.90	16.230			
4,100.00	2,936.22	3,615.85	2,624.50	33.00	29.62	68.69	-24.34	-1,028.43	858.45	801.43	57.02	15.055			
4,200.00	2,932.14	3,715.85	2,620.80	35.06	31.91	68.72	-21.25	-1,128.31	858.32	797.10	61.21	14.021			
4,300.00	2,928.07	3,815.85	2,617.11	37.18	34.23	68.74	-18.16	-1,228.20	858.18	792.72	65.47	13.108			
4,400.00	2,923.99	3,915.85	2,613.41	39.34	36.57	68.76	-15.06	-1,328.08	858.05	788.28	69.77	12.298			
4,500.00	2,919.92	4,015.85	2,609.72	41.53	38.92	68.79	-11.97	-1,427.96	857.92	783.81	74.11	11.576			
4,600.00	2,915.84	4,115.85	2,606.02	43.76	41.28	68.81	-8.88	-1,527.85	857.79	779.29	78.49	10.928			
4,700.00	2,911.77	4,215.85	2,602.33	46.01	43.65	68.84	-5.79	-1,627.73	857.65	774.76	82.90	10.346			
4,800.00	2,907.69	4,315.85	2,598.63	48.28	46.04	68.86	-2.69	-1,727.61	857.52	770.19	87.33	9.820			
4,900.00	2,903.62	4,415.85	2,594.94	50.56	48.43	68.88	0.40	-1,827.50	857.39	765.61	91.78	9.342			
5,000.00	2,899.54	4,515.84	2,591.24	52.87	50.83	68.91	3.49	-1,927.38	857.26	761.01	96.25	8.906			
5,100.00	2,895.46	4,615.84	2,587.55	55.18	53.23	68.93	6.58	-2,027.26	857.13	756.39	100.74	8.508			
5,200.00	2,891.39	4,715.84	2,583.85	57.51	55.64	68.95	9.68	-2,127.14	857.00	751.75	105.24	8.143			
5,300.00	2,887.31	4,815.84	2,580.15	59.85	58.05	68.98	12.77	-2,227.03	856.86	747.11	109.76	7.807			
5,400.00	2,883.24	4,915.84	2,576.46	62.20	60.47	69.00	15.86	-2,326.91	856.73	742.45	114.28	7.497			
5,500.00	2,879.16	5,015.84	2,572.76	64.56	62.89	69.03	18.95	-2,426.79	856.60	737.78	118.82	7.209			
5,600.00	2,875.09	5,115.84	2,569.07	66.92	65.31	69.05	22.05	-2,526.68	856.47	733.10	123.37	6.942			
5,700.00	2,871.01	5,215.84	2,565.37	69.30	67.74	69.07	25.14	-2,626.56	856.34	728.42	127.92	6.694			
5,800.00	2,866.94	5,315.84	2,561.68	71.67	70.16	69.10	28.23	-2,726.44	856.21	723.73	132.48	6.463			
5,900.00	2,862.86	5,415.84	2,557.98	74.06	72.59	69.12	31.32	-2,826.33	856.08	719.03	137.05	6.246			
6,000.00	2,858.79	5,515.84	2,554.29	76.44	75.03	69.15	34.42	-2,926.21	855.95	714.32	141.63	6.044			
6,100.00	2,854.71	5,615.84	2,550.59	78.84	77.46	69.17	37.51	-3,026.09	855.82	709.61	146.21	5.853			
6,200.00	2,850.64	5,715.84	2,546.90	81.23	79.89	69.19	40.60	-3,125.98	855.69	704.89	150.80	5.674			
6,300.00	2,846.56	5,815.84	2,543.20	83.63	82.33	69.22	43.69	-3,225.86	855.56	700.17	155.39	5.506			
6,400.00	2,842.49	5,915.83	2,539.51	86.04	84.77	69.24	46.79	-3,325.74	855.43	695.44	159.99	5.347			
6,500.00	2,838.41	6,015.83	2,535.81	88.44	87.21	69.27	49.88	-3,425.62	855.30	690.71	164.59	5.196			
6,600.00	2,834.34	6,115.83	2,532.12	90.85	89.65	69.29	52.97	-3,525.51	855.17	685.97	169.20	5.054			
6,700.00	2,830.26	6,215.83	2,528.42	93.26	92.09	69.31	56.06	-3,625.39	855.04	681.23	173.81	4.919			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company:	SILVERBACK EXPLORATION	Local Co-ordinate Reference:	Well Roche 101H
Project:	EDDY COUNTY, NM (NAD83) NMEZ GRID	TVD Reference:	3418+20 @ 3438.00usft (GL+KB)
Reference Site:	Roche Pad	MD Reference:	3418+20 @ 3438.00usft (GL+KB)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Roche 101H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Roche 101H	Database:	PRIME_EDM
Reference Design:	Plan 1r0	Offset TVD Reference:	Reference Datum

Offset Design													Roche Pad - Roche 102H - Roche 102H - Plan 1r0	Offset Site Error:	0.00 usft
Survey Program: 0-MWD														Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Distance							Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
6,800.00	2,826.19	6,315.83	2,524.73	95.68	94.53	69.34	59.16	-3,725.27	854.91	676.49	178.43	4.791			
6,900.00	2,822.11	6,415.83	2,521.03	98.09	96.97	69.36	62.25	-3,825.16	854.78	671.74	183.04	4.670			
7,000.00	2,818.04	6,515.83	2,517.34	100.51	99.42	69.39	65.34	-3,925.04	854.65	666.99	187.67	4.554			
7,100.00	2,813.96	6,615.83	2,513.64	102.93	101.86	69.41	68.43	-4,024.92	854.53	662.23	192.29	4.444			
7,200.00	2,809.89	6,715.83	2,509.95	105.36	104.31	69.43	71.53	-4,124.81	854.40	657.48	196.92	4.339			
7,300.00	2,805.81	6,815.83	2,506.25	107.78	106.75	69.46	74.62	-4,224.69	854.27	652.72	201.55	4.238			
7,400.00	2,801.74	6,915.83	2,502.55	110.20	109.20	69.48	77.71	-4,324.57	854.14	647.95	206.19	4.143			
7,500.00	2,797.66	7,015.83	2,498.86	112.63	111.65	69.51	80.80	-4,424.46	854.01	643.19	210.82	4.051			
7,600.00	2,793.59	7,115.83	2,495.16	115.06	114.09	69.53	83.90	-4,524.34	853.89	638.42	215.46	3.963			
7,700.00	2,789.51	7,215.83	2,491.47	117.49	116.54	69.55	86.99	-4,624.22	853.76	633.65	220.11	3.879			
7,800.00	2,785.44	7,315.82	2,487.77	119.92	118.99	69.58	90.08	-4,724.11	853.63	628.88	224.75	3.798			
7,900.00	2,781.36	7,415.82	2,484.08	122.35	121.44	69.60	93.17	-4,823.99	853.50	624.10	229.40	3.721			
8,000.00	2,777.29	7,515.82	2,480.38	124.78	123.89	69.63	96.27	-4,923.87	853.38	619.33	234.05	3.646			
8,100.00	2,773.21	7,615.82	2,476.69	127.22	126.34	69.65	99.36	-5,023.75	853.25	614.55	238.70	3.575			
8,200.00	2,769.14	7,715.82	2,472.99	129.65	128.79	69.67	102.45	-5,123.64	853.12	609.77	243.36	3.506			
8,300.00	2,765.06	7,815.82	2,469.30	132.09	131.24	69.70	105.55	-5,223.52	852.99	604.98	248.01	3.439			
8,400.00	2,760.99	7,915.82	2,465.60	134.53	133.69	69.72	108.64	-5,323.40	852.87	600.20	252.67	3.375			
8,500.00	2,756.91	8,015.82	2,461.91	136.96	136.14	69.75	111.73	-5,423.29	852.74	595.41	257.33	3.314			
8,595.98	2,753.00	8,111.80	2,458.36	139.30	138.49	69.77	114.70	-5,519.15	852.62	590.81	261.81	3.257 SF			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company:	SILVERBACK EXPLORATION	Local Co-ordinate Reference:	Well Roche 101H
Project:	EDDY COUNTY, NM (NAD83) NMEZ GRID	TVD Reference:	3418+20 @ 3438.00usft (GL+KB)
Reference Site:	Roche Pad	MD Reference:	3418+20 @ 3438.00usft (GL+KB)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Roche 101H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Roche 101H	Database:	PRIME_EDM
Reference Design:	Plan 1r0	Offset TVD Reference:	Reference Datum

Offset Design													Roche Pad - Roche 103H - Roche 103H - Plan 1r0	Offset Site Error:	0.00 usft
Survey Program: 0-MWD														Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
0.00	0.00	0.00	0.00	0.00	0.00	0.00	40.00	0.00	40.00						
100.00	100.00	100.00	100.00	0.31	0.31	0.00	40.00	0.00	40.00	39.52	0.48	83.353			
200.00	200.00	200.00	200.00	0.95	0.95	0.00	40.00	0.00	40.00	38.47	1.53	26.224			
300.00	300.00	300.00	300.00	1.46	1.46	0.00	40.00	0.00	40.00	37.61	2.39	16.717			
400.00	400.00	400.00	400.00	1.89	1.89	0.00	40.00	0.00	40.00	36.81	3.19	12.554			
500.00	500.00	500.00	500.00	2.31	2.31	0.00	40.00	0.00	40.00	36.05	3.95	10.125 CC, ES			
600.00	599.95	597.98	597.94	2.71	3.35	-159.99	42.20	1.22	44.71	39.21	5.50	8.125			
700.00	699.63	694.67	694.33	4.58	4.95	-158.91	48.67	4.81	58.79	50.14	8.65	6.800 SF			
800.00	798.77	788.84	787.74	5.92	6.16	-157.88	59.07	10.57	82.02	71.12	10.90	7.525			
900.00	897.08	879.40	876.91	7.01	7.13	-157.03	72.85	18.21	114.07	101.38	12.69	8.988			
1,000.00	994.31	965.45	960.85	7.97	7.94	-156.31	89.36	27.36	154.48	140.31	14.17	10.902			
1,100.00	1,090.18	1,046.27	1,038.85	8.81	8.64	-155.63	107.86	37.62	202.69	187.28	15.40	13.158			
1,200.00	1,184.43	1,121.38	1,110.48	9.59	9.21	-154.95	127.63	48.58	258.11	241.70	16.41	15.730			
1,300.00	1,276.81	1,192.03	1,177.00	10.30	9.56	-154.20	148.43	60.11	320.08	302.91	17.17	18.647			
1,400.00	1,367.06	1,266.68	1,246.97	10.96	9.69	-153.59	171.19	72.72	386.55	368.72	17.84	21.669			
1,500.00	1,456.16	1,339.71	1,315.41	11.31	9.83	-154.18	193.45	85.06	454.80	436.50	18.30	24.854			
1,600.00	1,545.26	1,412.73	1,383.86	11.52	9.98	-154.62	215.72	97.40	523.06	504.38	18.68	28.007			
1,700.00	1,634.36	1,485.76	1,452.31	11.75	10.14	-154.96	237.98	109.74	591.33	572.25	19.08	30.990			
1,800.00	1,723.46	1,558.79	1,520.75	12.00	10.31	-155.22	260.24	122.08	659.62	640.11	19.51	33.806			
1,900.00	1,812.56	1,631.81	1,589.20	12.27	10.49	-155.44	282.51	134.42	727.91	707.94	19.96	36.464			
2,000.00	1,901.66	1,704.84	1,657.65	12.58	10.67	-155.62	304.77	146.76	796.20	775.77	20.43	38.968			
2,100.00	1,990.76	1,777.87	1,726.09	12.93	10.86	-155.77	327.03	159.11	864.50	843.58	20.92	41.318			
2,200.00	2,079.86	1,850.89	1,794.54	13.34	11.06	-155.90	349.30	171.45	932.80	911.37	21.43	43.526			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company:	SILVERBACK EXPLORATION	Local Co-ordinate Reference:	Well Roche 101H
Project:	EDDY COUNTY, NM (NAD83) NMEZ GRID	TVD Reference:	3418+20 @ 3438.00usft (GL+KB)
Reference Site:	Roche Pad	MD Reference:	3418+20 @ 3438.00usft (GL+KB)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Roche 101H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Roche 101H	Database:	PRIME_EDM
Reference Design:	Plan 1r0	Offset TVD Reference:	Reference Datum

Offset Design													Roche Pad - Roche 201H - Roche 201H for AC - Plan 1r0	Offset Site Error:	0.00 usft	
Survey Program: 0-MWD														Offset Well Error:	0.00 usft	
Reference				Offset		Semi Major Axis			Distance							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Centre +E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning			
0.00	0.00	0.00	0.00	0.00	0.00	-80.54	10.00	-60.00	60.83							
100.00	100.00	100.00	100.00	0.31	0.31	-80.54	10.00	-60.00	60.83	60.40	0.43	142.475				
200.00	200.00	200.00	200.00	0.95	0.95	-80.54	10.00	-60.00	60.83	59.45	1.38	44.143				
300.00	300.00	300.00	300.00	1.46	1.46	-80.54	10.00	-60.00	60.83	58.63	2.20	27.681				
400.00	400.00	400.00	400.00	1.89	1.89	-80.54	10.00	-60.00	60.83	57.86	2.96	20.520				
500.00	500.00	500.00	500.00	2.31	2.31	-80.54	10.00	-60.00	60.83	57.12	3.71	16.390				
600.00	599.95	602.18	602.13	2.71	2.66	119.27	7.70	-58.52	60.30	55.51	4.79	12.591				
700.00	699.63	704.33	703.94	4.58	4.60	120.24	0.81	-54.10	58.73	52.46	6.27	9.368				
800.00	798.77	806.42	805.11	5.92	5.97	121.97	-10.64	-46.75	56.16	48.48	7.68	7.311				
900.00	897.08	908.43	905.33	7.01	7.04	124.65	-26.61	-36.50	52.66	43.49	9.17	5.744				
1,000.00	994.31	1,009.46	1,003.56	7.97	7.44	128.93	-46.45	-23.76	48.74	38.13	10.61	4.593				
1,064.16	1,055.99	1,073.46	1,065.66	8.51	7.56	134.04	-59.48	-15.39	47.80	35.96	11.84	4.036 CC				
1,100.00	1,090.18	1,109.17	1,100.31	8.81	7.63	137.69	-66.75	-10.73	48.14	35.48	12.66	3.802 ES				
1,200.00	1,184.43	1,208.49	1,196.67	9.59	7.84	149.44	-86.97	2.25	53.11	38.01	15.10	3.517 SF				
1,300.00	1,276.81	1,307.13	1,292.39	10.30	8.07	160.43	-107.05	15.15	64.82	47.60	17.23	3.763				
1,400.00	1,367.06	1,404.84	1,387.19	10.96	8.30	168.61	-126.94	27.92	83.27	64.44	18.83	4.423				
1,500.00	1,456.16	1,501.99	1,481.45	11.31	8.55	174.02	-146.72	40.61	105.34	85.59	19.75	5.333				
1,600.00	1,545.26	1,599.13	1,575.72	11.52	8.81	177.55	-166.50	53.31	128.01	107.62	20.38	6.280				
1,700.00	1,634.36	1,696.28	1,669.98	11.75	9.09	-179.98	-186.27	66.01	151.00	130.02	20.97	7.200				
1,800.00	1,723.46	1,793.43	1,764.24	12.00	9.37	-178.17	-206.05	78.70	174.18	152.63	21.55	8.081				
1,900.00	1,812.56	1,890.57	1,858.50	12.27	9.67	-176.78	-225.83	91.40	197.49	175.35	22.14	8.920				
2,000.00	1,901.66	1,987.72	1,952.76	12.58	9.98	-175.69	-245.61	104.10	220.89	198.15	22.74	9.713				
2,100.00	1,990.76	2,084.87	2,047.02	12.93	10.30	-174.80	-265.38	116.79	244.35	220.99	23.36	10.462				
2,200.00	2,079.86	2,182.01	2,141.28	13.34	10.64	-174.08	-285.16	129.49	267.85	243.86	23.99	11.165				
2,300.00	2,168.96	2,279.16	2,235.54	13.83	11.01	-173.46	-304.94	142.19	291.39	266.75	24.64	11.827				
2,400.00	2,258.26	2,376.34	2,329.84	14.42	11.39	179.90	-324.72	154.89	314.61	289.31	25.30	12.437				
2,500.00	2,349.22	2,473.06	2,423.68	15.26	11.79	159.39	-344.41	167.53	333.67	307.64	26.03	12.819				
2,600.00	2,439.93	2,566.70	2,514.54	15.99	12.21	141.96	-363.47	179.77	349.08	322.23	26.86	12.999				
2,700.00	2,527.64	2,654.42	2,599.65	16.73	12.61	131.31	-381.33	191.23	364.34	336.71	27.63	13.186				
2,800.00	2,609.68	2,733.54	2,676.43	17.44	12.98	126.22	-397.44	201.57	383.97	355.64	28.33	13.554				
2,900.00	2,683.55	2,801.68	2,742.54	18.09	13.31	123.73	-411.31	210.48	412.41	383.45	28.96	14.241				
3,000.00	2,747.02	2,856.75	2,795.97	18.68	13.58	121.31	-422.52	217.67	452.63	423.11	29.51	15.336				
3,100.00	2,799.29	2,915.05	2,852.67	19.18	13.88	123.13	-434.30	224.30	504.93	474.78	30.15	16.745				
3,200.00	2,849.29	3,038.48	2,973.62	19.70	14.56	135.27	-457.30	220.02	562.86	531.69	31.16	18.061				
3,300.00	2,898.04	3,292.59	3,206.71	20.40	16.00	146.62	-492.25	130.76	613.02	582.24	30.77	19.920				
3,400.00	2,934.05	3,596.78	3,406.83	21.39	17.29	148.88	-505.19	-93.52	640.13	610.94	29.18	21.935				
3,500.00	2,953.74	3,691.39	3,454.13	22.58	17.62	147.69	-504.90	-175.46	668.67	638.55	30.13	22.196				
3,600.00	2,956.59	4,127.25	3,564.23	23.97	22.58	150.80	-497.91	-588.02	697.10	664.18	32.92	21.176				
3,700.00	2,952.52	4,227.24	3,558.78	25.52	24.32	150.75	-494.83	-687.81	695.90	661.06	34.83	19.978				
3,800.00	2,948.44	4,327.23	3,553.33	27.23	26.19	150.69	-491.75	-787.60	694.69	657.83	36.86	18.846				
3,900.00	2,944.37	4,427.22	3,547.88	29.06	28.15	150.64	-488.67	-887.40	693.49	654.50	38.99	17.787				
4,000.00	2,940.29	4,527.21	3,542.43	30.99	30.18	150.58	-485.59	-987.19	692.29	651.09	41.20	16.803				
4,100.00	2,936.22	4,627.20	3,536.98	33.00	32.28	150.53	-482.51	-1,086.99	691.09	647.61	43.48	15.893				
4,200.00	2,932.14	4,727.19	3,531.53	35.06	34.43	150.47	-479.43	-1,186.78	689.89	644.06	45.83	15.053				
4,300.00	2,928.07	4,827.18	3,526.08	37.18	36.61	150.41	-476.35	-1,286.58	688.69	640.46	48.23	14.279				
4,400.00	2,923.99	4,927.17	3,520.63	39.34	38.83	150.36	-473.27	-1,386.37	687.49	636.81	50.68	13.565				
4,500.00	2,919.92	5,027.16	3,515.19	41.53	41.08	150.30	-470.19	-1,486.16	686.29	633.12	53.17	12.907				
4,600.00	2,915.84	5,127.15	3,509.74	43.76	43.35	150.24	-467.11	-1,585.96	685.10	629.39	55.70	12.299				
4,700.00	2,911.77	5,227.14	3,504.29	46.01	45.63	150.19	-464.03	-1,685.75	683.90	625.63	58.27	11.737				
4,800.00	2,907.69	5,327.13	3,498.84	48.28	47.94	150.13	-460.95	-1,785.55	682.70	621.84	60.86	11.217				
4,900.00	2,903.62	5,427.12	3,493.39	50.56	50.26	150.07	-457.87	-1,885.34	681.51	618.02	63.49	10.735				
5,000.00	2,899.54	5,527.11	3,487.94	52.87	52.59	150.02	-454.79	-1,985.14	680.31	614.18	66.13	10.287				

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company:	SILVERBACK EXPLORATION	Local Co-ordinate Reference:	Well Roche 101H
Project:	EDDY COUNTY, NM (NAD83) NMEZ GRID	TVD Reference:	3418+20 @ 3438.00usft (GL+KB)
Reference Site:	Roche Pad	MD Reference:	3418+20 @ 3438.00usft (GL+KB)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Roche 101H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Roche 101H	Database:	PRIME_EDM
Reference Design:	Plan 1r0	Offset TVD Reference:	Reference Datum

Offset Design													Roche Pad - Roche 201H - Roche 201H for AC - Plan 1r0	Offset Site Error:	0.00 usft
Survey Program: 0-MWD														Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
5,100.00	2,895.46	5,627.10	3,482.49	55.18	54.93	149.96	-451.71	-2,084.93	679.12	610.31	68.81	9.870			
5,200.00	2,891.39	5,727.09	3,477.04	57.51	57.29	149.90	-448.63	-2,184.73	677.93	606.43	71.50	9.482			
5,300.00	2,887.31	5,827.08	3,471.59	59.85	59.65	149.84	-445.55	-2,284.52	676.73	602.52	74.21	9.119			
5,400.00	2,883.24	5,927.07	3,466.14	62.20	62.02	149.78	-442.47	-2,384.31	675.54	598.60	76.95	8.779			
5,500.00	2,879.16	6,027.07	3,460.69	64.56	64.39	149.72	-439.38	-2,484.11	674.35	594.66	79.70	8.462			
5,600.00	2,875.09	6,127.06	3,455.24	66.92	66.77	149.67	-436.30	-2,583.90	673.16	590.70	82.46	8.163			
5,700.00	2,871.01	6,227.05	3,449.79	69.30	69.16	149.61	-433.22	-2,683.70	671.97	586.72	85.25	7.883			
5,800.00	2,866.94	6,327.04	3,444.34	71.67	71.55	149.55	-430.14	-2,783.49	670.78	582.74	88.04	7.619			
5,900.00	2,862.86	6,427.03	3,438.89	74.06	73.94	149.49	-427.06	-2,883.29	669.59	578.74	90.86	7.370			
6,000.00	2,858.79	6,527.02	3,433.44	76.44	76.34	149.43	-423.98	-2,983.08	668.41	574.72	93.68	7.135			
6,100.00	2,854.71	6,627.01	3,427.99	78.84	78.75	149.37	-420.90	-3,082.87	667.22	570.70	96.52	6.913			
6,200.00	2,850.64	6,727.00	3,422.54	81.23	81.15	149.31	-417.82	-3,182.67	666.03	566.66	99.37	6.702			
6,300.00	2,846.56	6,826.99	3,417.09	83.63	83.56	149.25	-414.74	-3,282.46	664.85	562.61	102.24	6.503			
6,400.00	2,842.49	6,926.98	3,411.64	86.04	85.97	149.19	-411.66	-3,382.26	663.66	558.55	105.12	6.314			
6,500.00	2,838.41	7,026.97	3,406.19	88.44	88.39	149.13	-408.58	-3,482.05	662.48	554.47	108.01	6.134			
6,600.00	2,834.34	7,126.96	3,400.74	90.85	90.80	149.07	-405.50	-3,581.85	661.29	550.39	110.91	5.963			
6,700.00	2,830.26	7,226.95	3,395.29	93.26	93.22	149.00	-402.42	-3,681.64	660.11	546.29	113.82	5.800			
6,800.00	2,826.19	7,326.94	3,389.84	95.68	95.64	148.94	-399.34	-3,781.44	658.93	542.19	116.74	5.644			
6,900.00	2,822.11	7,426.93	3,384.39	98.09	98.06	148.88	-396.26	-3,881.23	657.75	538.08	119.67	5.496			
7,000.00	2,818.04	7,526.92	3,378.94	100.51	100.49	148.82	-393.18	-3,981.02	656.57	533.95	122.62	5.355			
7,100.00	2,813.96	7,626.91	3,373.49	102.93	102.91	148.76	-390.10	-4,080.82	655.39	529.82	125.57	5.219			
7,200.00	2,809.89	7,726.90	3,368.04	105.36	105.34	148.70	-387.02	-4,180.61	654.21	525.67	128.54	5.090			
7,300.00	2,805.81	7,826.89	3,362.59	107.78	107.77	148.63	-383.94	-4,280.41	653.03	521.52	131.51	4.966			
7,400.00	2,801.74	7,926.89	3,357.14	110.20	110.20	148.57	-380.86	-4,380.20	651.86	517.36	134.50	4.847			
7,500.00	2,797.66	8,026.88	3,351.69	112.63	112.63	148.51	-377.78	-4,480.00	650.68	513.19	137.49	4.732			
7,600.00	2,793.59	8,126.87	3,346.24	115.06	115.06	148.44	-374.70	-4,579.79	649.50	509.00	140.50	4.623			
7,700.00	2,789.51	8,226.86	3,340.79	117.49	117.49	148.38	-371.62	-4,679.58	648.33	504.81	143.52	4.517			
7,800.00	2,785.44	8,326.85	3,335.35	119.92	119.92	148.32	-368.54	-4,779.38	647.16	500.62	146.54	4.416			
7,900.00	2,781.36	8,426.84	3,329.90	122.35	122.36	148.25	-365.45	-4,879.17	645.98	496.41	149.58	4.319			
8,000.00	2,777.29	8,526.83	3,324.45	124.78	124.79	148.19	-362.37	-4,978.97	644.81	492.19	152.62	4.225			
8,100.00	2,773.21	8,626.82	3,319.00	127.22	127.23	148.13	-359.29	-5,078.76	643.64	487.97	155.67	4.135			
8,200.00	2,769.14	8,726.81	3,313.55	129.65	129.67	148.06	-356.21	-5,178.56	642.47	483.73	158.74	4.047			
8,300.00	2,765.06	8,826.80	3,308.10	132.09	132.10	148.00	-353.13	-5,278.35	641.30	479.49	161.81	3.963			
8,400.00	2,760.99	8,926.79	3,302.65	134.53	134.54	147.93	-350.05	-5,378.15	640.13	475.24	164.89	3.882			
8,500.00	2,756.91	9,026.78	3,297.20	136.96	136.77	147.87	-346.97	-5,477.94	638.96	471.12	167.84	3.807			
8,584.45	2,753.47	9,103.79	3,293.00	139.02	138.04	147.82	-344.60	-5,554.80	638.02	468.18	169.84	3.757			
8,595.98	2,753.00	9,103.79	3,293.00	139.30	138.04	147.82	-344.60	-5,554.80	638.12	468.30	169.82	3.758			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company:	SILVERBACK EXPLORATION	Local Co-ordinate Reference:	Well Roche 101H
Project:	EDDY COUNTY, NM (NAD83) NMEZ GRID	TVD Reference:	3418+20 @ 3438.00usft (GL+KB)
Reference Site:	Roche Pad	MD Reference:	3418+20 @ 3438.00usft (GL+KB)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Roche 101H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Roche 101H	Database:	PRIME_EDM
Reference Design:	Plan 1r0	Offset TVD Reference:	Reference Datum

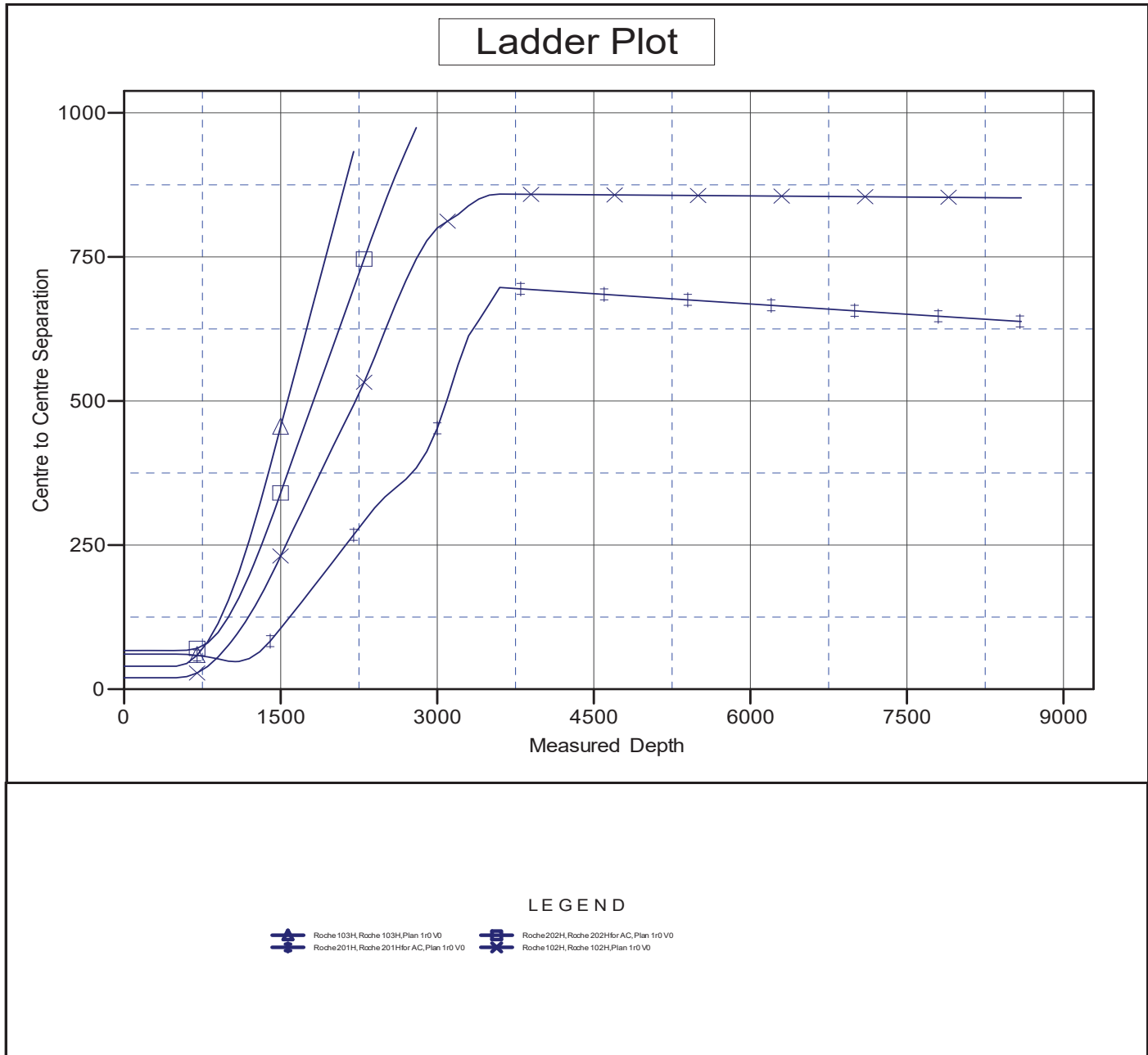
Offset Design													Roche Pad - Roche 202H - Roche 202H for AC - Plan 1r0	Offset Site Error:	0.00 usft
Survey Program: 0-MWD														Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
0.00	0.00	0.00	0.00	0.00	0.00	-63.43	30.00	-60.00	67.08						
100.00	100.00	100.00	100.00	0.31	0.31	-63.43	30.00	-60.00	67.08	66.75	0.33	200.579			
200.00	200.00	200.00	200.00	0.95	0.95	-63.43	30.00	-60.00	67.08	65.95	1.13	59.496			
300.00	300.00	300.00	300.00	1.46	1.46	-63.43	30.00	-60.00	67.08	65.21	1.87	35.787			
400.00	400.00	400.00	400.00	1.89	1.89	-63.43	30.00	-60.00	67.08	64.48	2.60	25.755			
500.00	500.00	500.00	500.00	2.31	2.31	-63.43	30.00	-60.00	67.08	63.75	3.33	20.151 CC			
600.00	599.95	601.75	601.70	2.71	3.36	139.55	31.40	-57.68	67.66	62.99	4.67	14.478 ES			
700.00	699.63	702.48	702.10	4.58	5.02	149.36	35.52	-50.81	70.81	64.01	6.81	10.404			
800.00	798.77	801.22	799.97	5.92	6.25	162.90	42.21	-39.68	80.03	71.62	8.41	9.518 SF			
900.00	897.08	897.54	894.88	7.01	6.48	175.69	50.69	-25.57	98.34	88.41	9.93	9.907			
1,000.00	994.31	992.48	988.38	7.97	6.66	-175.69	59.18	-11.44	125.14	113.66	11.48	10.902			
1,100.00	1,090.18	1,085.91	1,080.39	8.81	6.87	-170.31	67.53	2.47	158.58	145.75	12.83	12.358			
1,200.00	1,184.43	1,177.58	1,170.66	9.59	7.08	-166.99	75.73	16.11	197.54	183.53	14.01	14.097			
1,300.00	1,276.81	1,267.23	1,258.95	10.30	7.30	-164.91	83.75	29.45	241.43	226.35	15.08	16.008			
1,400.00	1,367.06	1,354.62	1,345.01	10.96	7.52	-163.59	91.57	42.46	289.89	273.82	16.07	18.037			
1,500.00	1,456.16	1,440.79	1,429.87	11.31	7.75	-163.12	99.27	55.29	340.58	323.82	16.76	20.322			
1,600.00	1,545.26	1,526.97	1,514.74	11.52	7.99	-162.77	106.98	68.12	391.27	373.95	17.32	22.591			
1,700.00	1,634.36	1,613.14	1,599.61	11.75	8.23	-162.50	114.69	80.94	441.98	424.08	17.90	24.695			
1,800.00	1,723.46	1,699.32	1,684.47	12.00	8.48	-162.28	122.39	93.77	492.69	474.20	18.49	26.645			
1,900.00	1,812.56	1,785.49	1,769.34	12.27	8.73	-162.10	130.10	106.60	543.40	524.30	19.10	28.450			
2,000.00	1,901.66	1,871.67	1,854.20	12.58	8.99	-161.96	137.81	119.42	594.12	574.40	19.72	30.123			
2,100.00	1,990.76	1,957.84	1,939.07	12.93	9.26	-161.84	145.51	132.25	644.84	624.48	20.36	31.673			
2,200.00	2,079.86	2,044.02	2,023.94	13.34	9.53	-161.73	153.22	145.08	695.56	674.55	21.01	33.110			
2,300.00	2,168.96	2,130.19	2,108.80	13.83	9.81	-161.64	160.93	157.90	746.28	724.62	21.67	34.444			
2,400.00	2,258.26	2,216.41	2,193.71	14.42	10.09	-170.08	168.64	170.74	796.87	774.54	22.33	35.688			
2,500.00	2,349.22	2,302.38	2,278.37	15.26	10.38	164.14	176.33	183.53	845.44	822.46	22.98	36.797			
2,600.00	2,439.93	2,385.80	2,360.53	15.99	10.67	140.39	183.79	195.95	891.01	867.41	23.60	37.751			
2,700.00	2,527.64	2,464.16	2,437.69	16.73	10.94	122.90	190.80	207.61	933.76	909.59	24.17	38.632			
2,800.00	2,609.68	2,535.05	2,507.51	17.44	11.19	111.26	197.14	218.16	974.33	949.67	24.66	39.504			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company:	SILVERBACK EXPLORATION	Local Co-ordinate Reference:	Well Roche 101H
Project:	EDDY COUNTY, NM (NAD83) NMEZ GRID	TVD Reference:	3418+20 @ 3438.00usft (GL+KB)
Reference Site:	Roche Pad	MD Reference:	3418+20 @ 3438.00usft (GL+KB)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Roche 101H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Roche 101H	Database:	PRIME_EDM
Reference Design:	Plan 1r0	Offset TVD Reference:	Reference Datum

Reference Depths are relative to 3418+20 @ 3438.00usft (GL+KB) Coordinates are relative to: Roche 101H
 Offset Depths are relative to Offset Datum Coordinate System is US State Plane 1983, New Mexico Eastern Zone
 Central Meridian is -104.3333333 Grid Convergence at Surface is: -0.06°



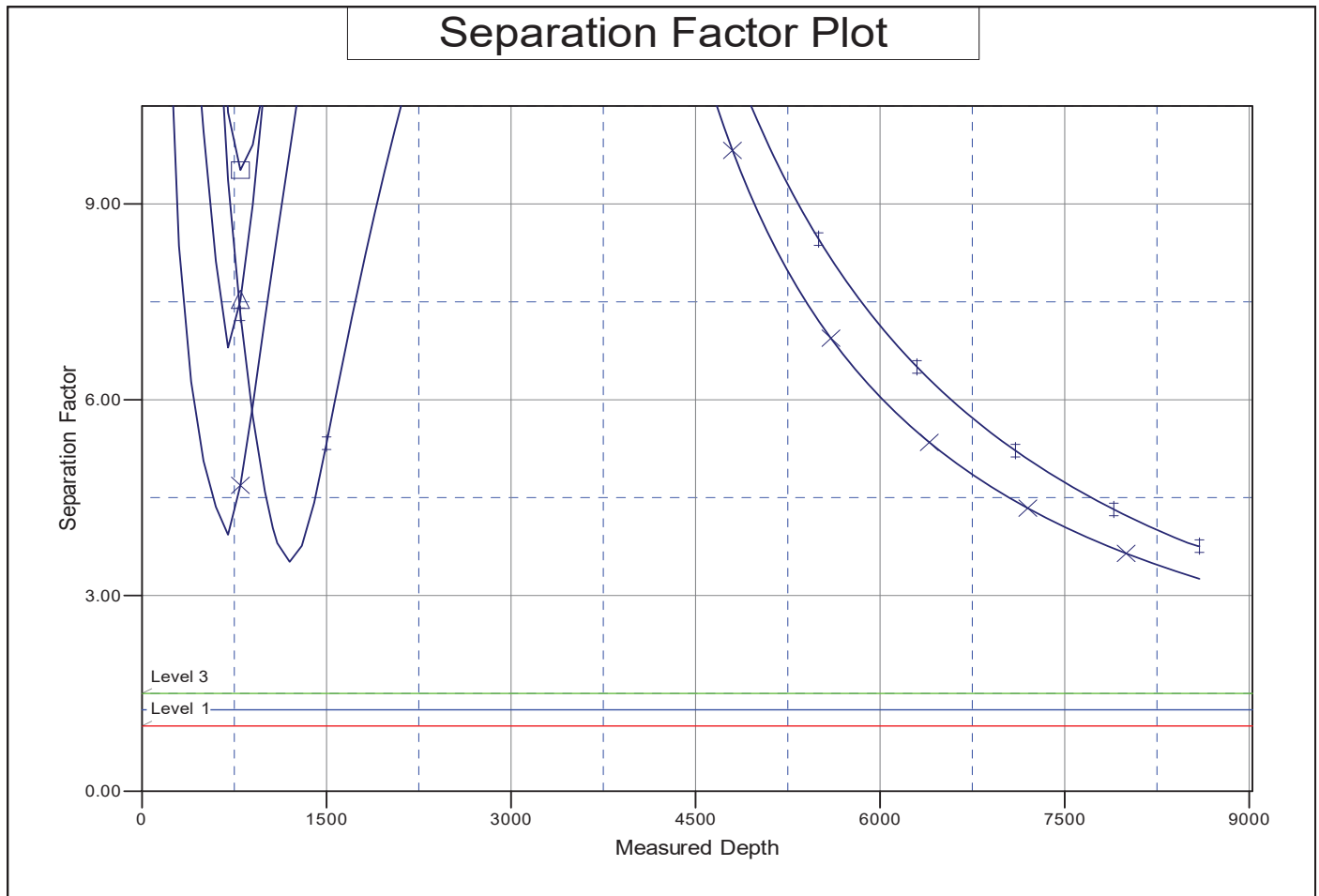
CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	SILVERBACK EXPLORATION	Local Co-ordinate Reference:	Well Roche 101H
Project:	EDDY COUNTY, NM (NAD83) NMEZ GRID	TVD Reference:	3418+20 @ 3438.00usft (GL+KB)
Reference Site:	Roche Pad	MD Reference:	3418+20 @ 3438.00usft (GL+KB)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Roche 101H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Roche 101H	Database:	PRIME_EDM
Reference Design:	Plan 1r0	Offset TVD Reference:	Reference Datum

Reference Depths are relative to 3418+20 @ 3438.00usft (GL+KB)
 Offset Depths are relative to Offset Datum
 Central Meridian is -104.3333333

Coordinates are relative to: Roche 101H
 Coordinate System is US State Plane 1983, New Mexico Eastern Zone
 Grid Convergence at Surface is: -0.06°



LEGEND

 Roche 103H, Roche 103H, Plan 1r0 V0 Roche 201H, Roche 201H for AC, Plan 1r0 V0	 Roche 202H, Roche 202H for AC, Plan 1r0 V0 Roche 102H, Roche 102H, Plan 1r0 V0
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CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

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 354402

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 30-015-54390
4. Property Code 335016	5. Property Name Roche	6. Well No. 102H

7. Surface Location

UL - Lot M	Section 1	Township 19S	Range 25E	Lot Idn	Feet From 185	N/S Line S	Feet From 427	E/W Line W	County Eddy
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8. Proposed Bottom Hole Location

UL - Lot M	Section 2	Township 19S	Range 25E	Lot Idn M	Feet From 120	N/S Line S	Feet From 100	E/W Line W	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 3416
16. Multiple N	17. Proposed Depth 8122	18. Formation Yeso	19. Contractor	20. Spud Date 2/12/2024
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	1260	279	0
Prod	8.75	7	32	3115	151	0
Prod	8.75	5.5	20	8122	1554	1882

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: 11/16/2023	OIL CONSERVATION DIVISION Approved By: Ward Rikala Title: _____ Approved Date: 11/29/2023 Expiration Date: 11/29/2025 Conditions of Approval Attached
Phone: 303-513-0990	

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

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

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

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-015 -54390	² Pool Code 50270	³ Pool Name Penasco Draw, SA-YESO
⁴ Property Code 335016	⁵ Property Name ROCHE	⁶ Well Number 102H
⁷ OGRID No. 330968	⁸ Operator Name SILVERBACK OPERATING II, LLC	⁹ Elevation 3,416'

¹⁰ Surface Location

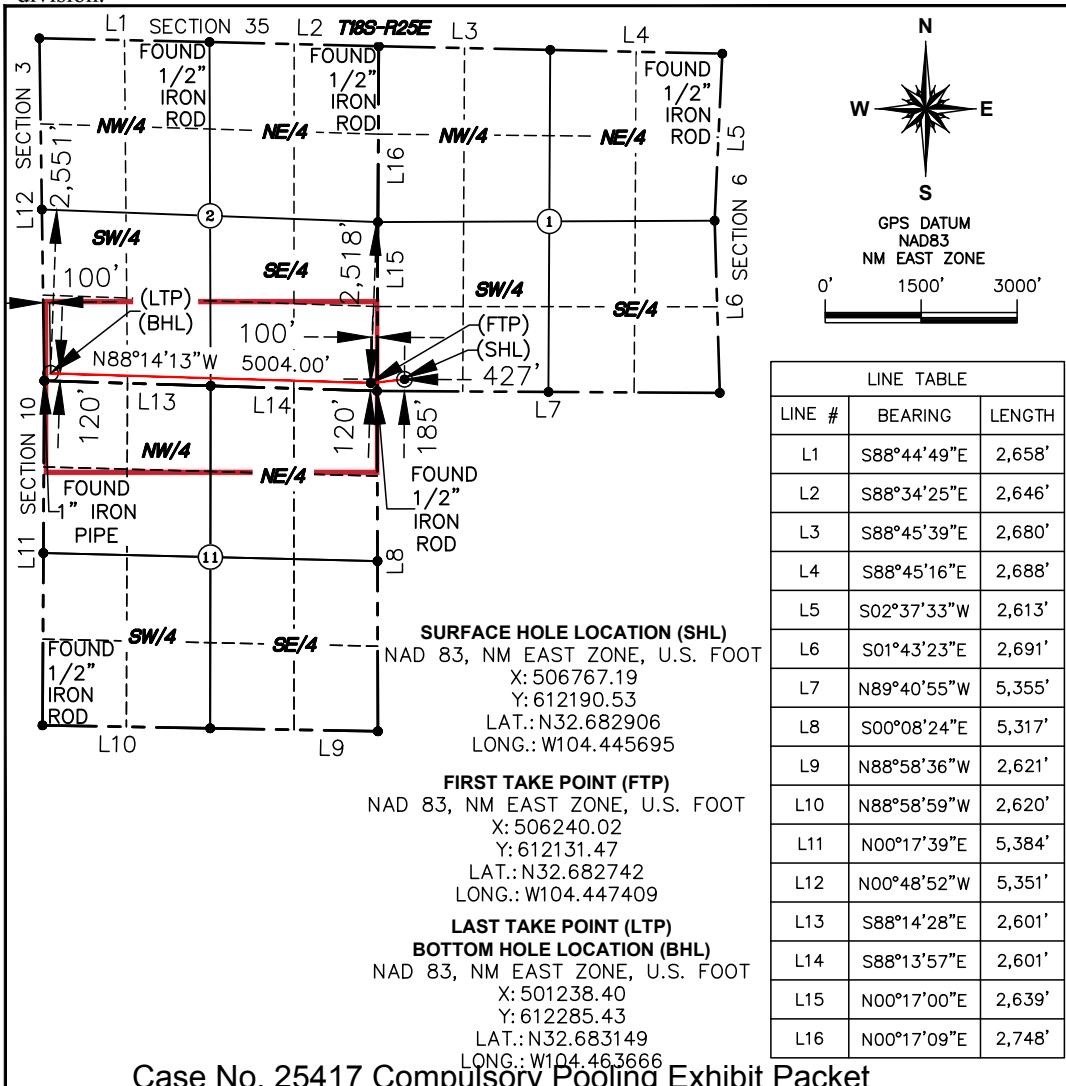
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
M	1	19-S	25-E		185'	SOUTH	427'	WEST	EDDY

¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
M	2	19-S	25-E		120'	SOUTH	100'	WEST	EDDY

¹² Dedicated Acres 320	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
--------------------------------------	-------------------------------	----------------------------------	-------------------------

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.



LINE #	BEARING	LENGTH
L1	S88°44'49"E	2,658'
L2	S88°34'25"E	2,646'
L3	S88°45'39"E	2,680'
L4	S88°45'16"E	2,688'
L5	S02°37'33"W	2,613'
L6	S01°43'23"E	2,691'
L7	N89°40'55"W	5,355'
L8	S00°08'24"E	5,317'
L9	N88°58'36"W	2,621'
L10	N88°58'59"W	2,620'
L11	N00°17'39"E	5,384'
L12	N00°48'52"W	5,351'
L13	S88°14'28"E	2,601'
L14	S88°13'57"E	2,601'
L15	N00°17'00"E	2,639'
L16	N00°17'09"E	2,748'

¹⁷ OPERATOR CERTIFICATION

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

Fatma Abdallah 11/14/2023
Signature Date

Fatma Abdallah
Printed Name
fabdallah@silverbackexp.com
E-mail Address

¹⁸ SURVEYOR CERTIFICATION

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

11/13/23
Date of Survey
Signature and Seal of Professional Surveyor

MATTHEW C. BISSETT
NEW MEXICO
20450
PROFESSIONAL SURVEYOR
20450
Certificate Number
Page 49 of 198

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

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 811 S. First St., Artesia, NM 88210
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 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 APD Comments

Permit 354402

PERMIT COMMENTS

Operator Name and Address: Silverback Operating II, LLC [330968] 19707 IH10 West, Suite 201 San Antonio, TX 78256	API Number: 30-015-54390
	Well: Roche #102H

Created By	Comment	Comment Date
fabdallah	Roche 102H will be the defining well.	11/16/2023

District I
 1625 N. French Dr., Hobbs, NM 88240
 Phone:(575) 393-6161 Fax:(575) 393-0720
District II
 811 S. First St., Artesia, NM 88210
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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 APD Conditions

Permit 354402

PERMIT CONDITIONS OF APPROVAL

Operator Name and Address: Silverback Operating II, LLC [330968] 19707 IH10 West, Suite 201 San Antonio, TX 78256	API Number: 30-015-54390
	Well: Roche #102H

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

Submit Electronically
Via E-permitting

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

NATURAL GAS MANAGEMENT PLAN

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

Section 1 – Plan Description Effective May 25, 2021

I. Operator: Silverback Operating II, LLC. **OGRID:** 330968 **Date:** 11 / 16 / 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
See Attached						

IV. Central Delivery Point Name: Roche 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
See Attached						

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.

IX.

X.

XI.

XII.

XIII.

XIV.

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: <i>Fatma Abdallah</i>
Printed Name: Fatma Abdallah
Title: Regulatory Manager
E-mail Address: fabdallah@silverbackexp.com
Date: 11/16/23
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 including a low probably, high volume production case (approximately 75% higher than type curve or most likely amount of production). 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. The high volume case was used to size equipment, piping and instrumentation. Equipment sizing is based on drop settlement and limits the amount of carry over to the gas phase.

Each well has a dedicated 3 phase separator and gas from that separator is taken directly to gas sales. 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 flare. 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 flare which is sized to accommodate peak expected production volume. Flash volumes were estimated using the high volume case and process modeling software.

Operational Practices

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 will only occur during 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:

- Power generation on lease – Natural gas driven gen set to produce power required to run supply well pad electrical loads
- Compression on lease – gas lift or gas compression as required
- 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 flare.

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

Section 1-Plan Description -III. Wells

Well Name	API	ULSTR	Footages	Anticipated Oil BBL/D	Anticipated Gas MCF/D	Anticipated Produced Water BBL/D
Roche 101	Pending	M-1-19S-25E	165' FSL & 427' FWL	515	440	3000
Roche 102	Pending	M-1-19S-25E	185' FSL & 427' FWL	515	440	3000
Roche 103	Pending	M-1-19S-25E	205' FSL & 427' FWL	515	440	3000

V. Anticipated Schedule

Well Name	API	Spud date	TD Reached Date	Completion Commencement Date	Initial Flow Back Date	First Production Date
Roche 101	Pending	2/7/2024	4/22/2024	5/18/2024	6/9/2024	6/9/2024
Roche 102	Pending	2/12/2024	5/1/2024	5/18/2024	6/10/2024	6/10/2024
Roche 103	Pending	2/17/2024	5/11/2024	5/18/2024	6/11/2024	6/11/2024

Section 2- Enhanced Plan

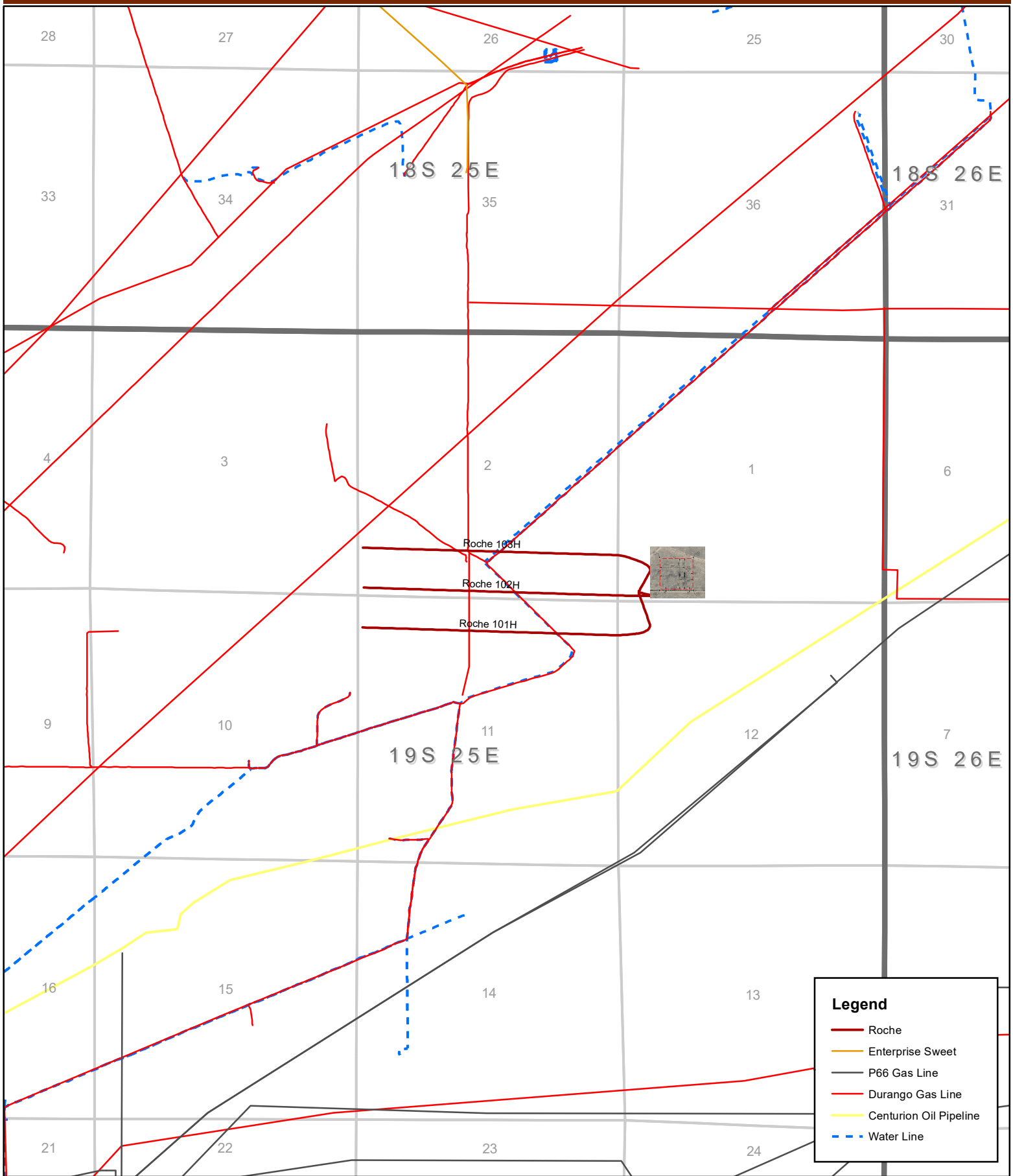
IX. Anticipated Natural Gas Production

Well	API	Anticipated Average Natural Gas Rate MCF/D	Anticipated Volume of Natural Gas for the First Year MCF
Roche 101	Pending	440	160600
Roche 102	Pending	440	160600
Roche 103	Pending	440	160600

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
Silverback Operating II, LLC	Roche CTB	M-1-19S-25E	6/9/2024	1890 MCF/D

Silverback Exploration Roche



Legend

- Roche
- Enterprise Sweet
- P66 Gas Line
- Durango Gas Line
- Centurion Oil Pipeline
- - - Water Line



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 #

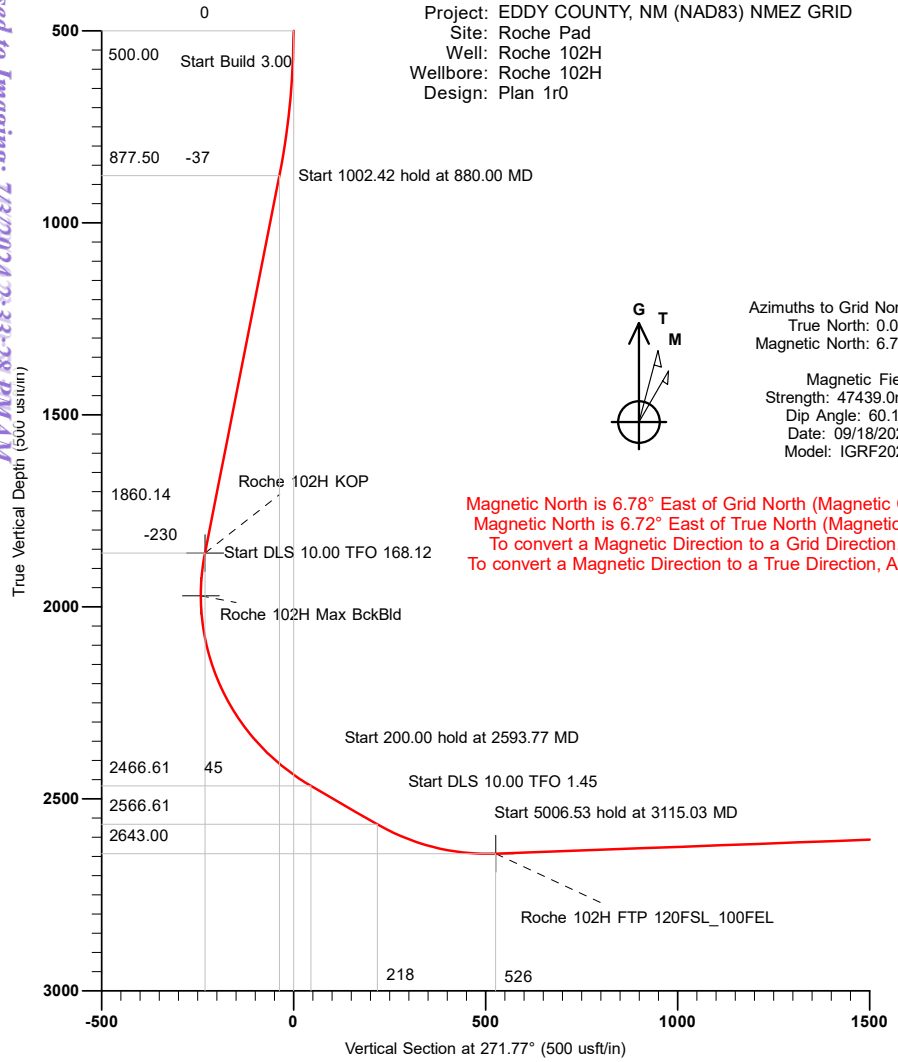
Operator Name:	Property Name:	Well Number
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Estimated Formation Tops

Formation:	Top:	Formation:	Top:

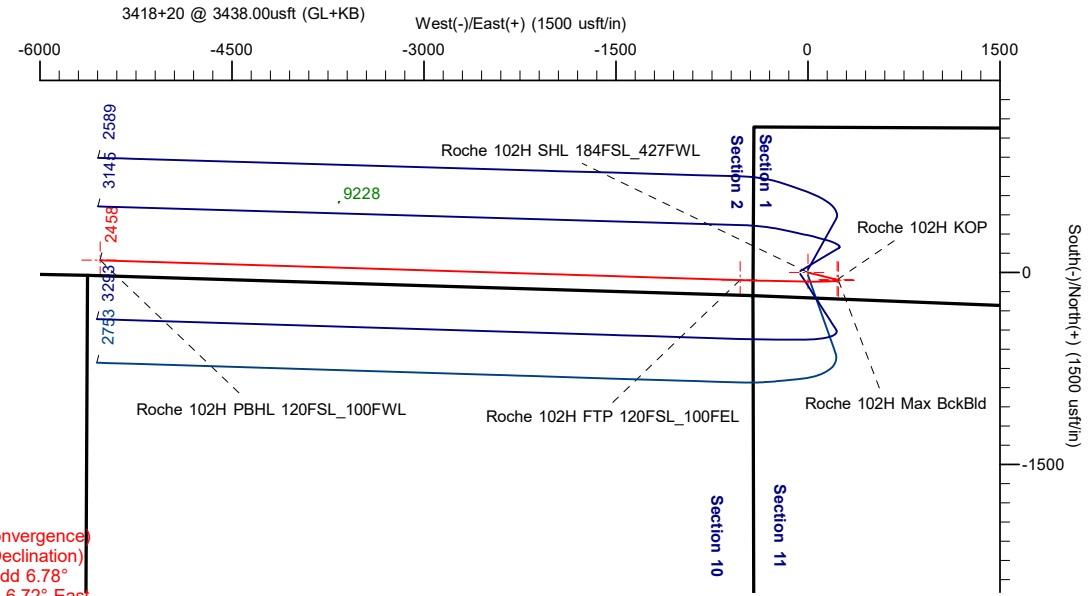
SILVERBACK EXPLORATION

Project: EDDY COUNTY, NM (NAD83) NMEZ GRID
 Site: Roche Pad
 Well: Roche 102H
 Wellbore: Roche 102H
 Design: Plan 1r0



Magnetic North is 6.78° East of Grid North (Magnetic Convergence)
 Magnetic North is 6.72° East of True North (Magnetic Declination)
 To convert a Magnetic Direction to a Grid Direction, Add 6.78°
 To convert a Magnetic Direction to a True Direction, Add 6.72° East

Azimuths to Grid North
 True North: 0.06°
 Magnetic North: 6.78°
 Magnetic Field
 Strength: 47439.0nT
 Dip Angle: 60.11°
 Date: 09/18/2023
 Model: IGRF2020

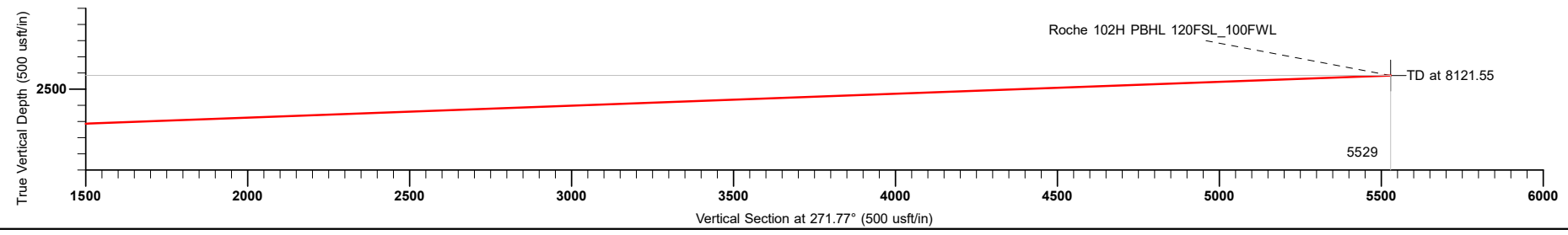


DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
Roche 102H SHL 184FSL_427FWL	0.00	0.00	0.00	612190.50	506767.20	Point
Roche 102H KOP	1860.14	-57.05	228.81	612133.45	506996.01	Point
Roche 102H Max BckBld	1971.92	-62.04	239.45	612128.46	507006.65	Point
Roche 102H PBHL 120FSL_100FWL	2458.00	95.00	-5528.90	612285.50	501238.30	Point
Roche 102H FTP 120FSL_100FEL	2643.00	-59.10	-528.70	612131.40	506238.50	Point

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	V Sect	Annotation
1	0.00	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	0.00	Start Build 3.00
3	880.00	11.40	104.00	877.50	-9.12	36.56	3.00	104.00	-36.82	Start 1002.42 hold at 880.00 MD
4	1882.42	11.40	104.00	1860.14	-57.05	228.81	0.00	0.00	-230.46	Start DLS 10.00 TFO 168.12
5	2593.77	60.00	271.00	2466.61	-70.45	-47.37	10.00	168.12	45.17	Start 200.00 hold at 2593.77 MD
6	2793.77	60.00	271.00	2566.61	-67.42	-220.55	0.00	0.00	218.36	Start DLS 10.00 TFO 1.45
7	3115.03	92.12	271.77	2643.00	-59.83	-528.19	10.00	1.45	526.09	Start 5006.53 hold at 3115.03 MD
8	8121.55	92.12	271.77	2458.00	95.00	-5528.90	0.00	0.00	5529.20	TD at 8121.55



Plan: Plan 1r0 (Roche 102H/Roche 102H)
 Created By: Mekka Williams
 eSomina Well Design
 mekka@esominawelldesign.com
 17:51, September 2, 2024

PRIME SOLUTIONS SERVICES



SILVERBACK EXPLORATION

3418+20 @ 3438.00usft (GL+KB)

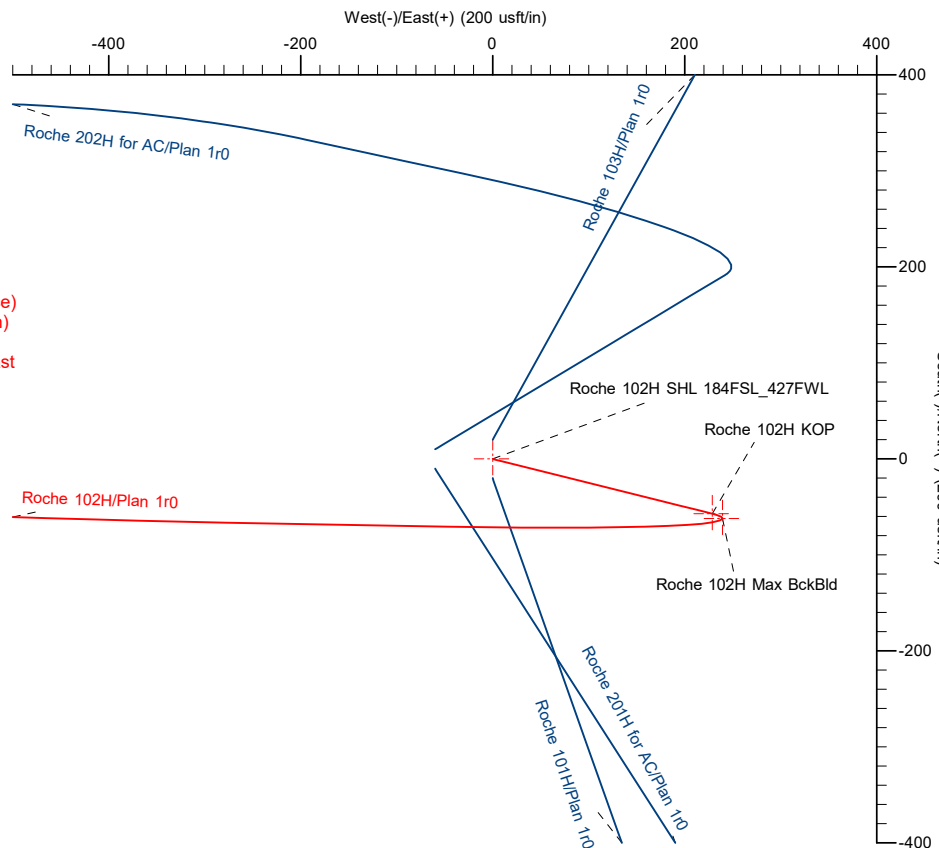
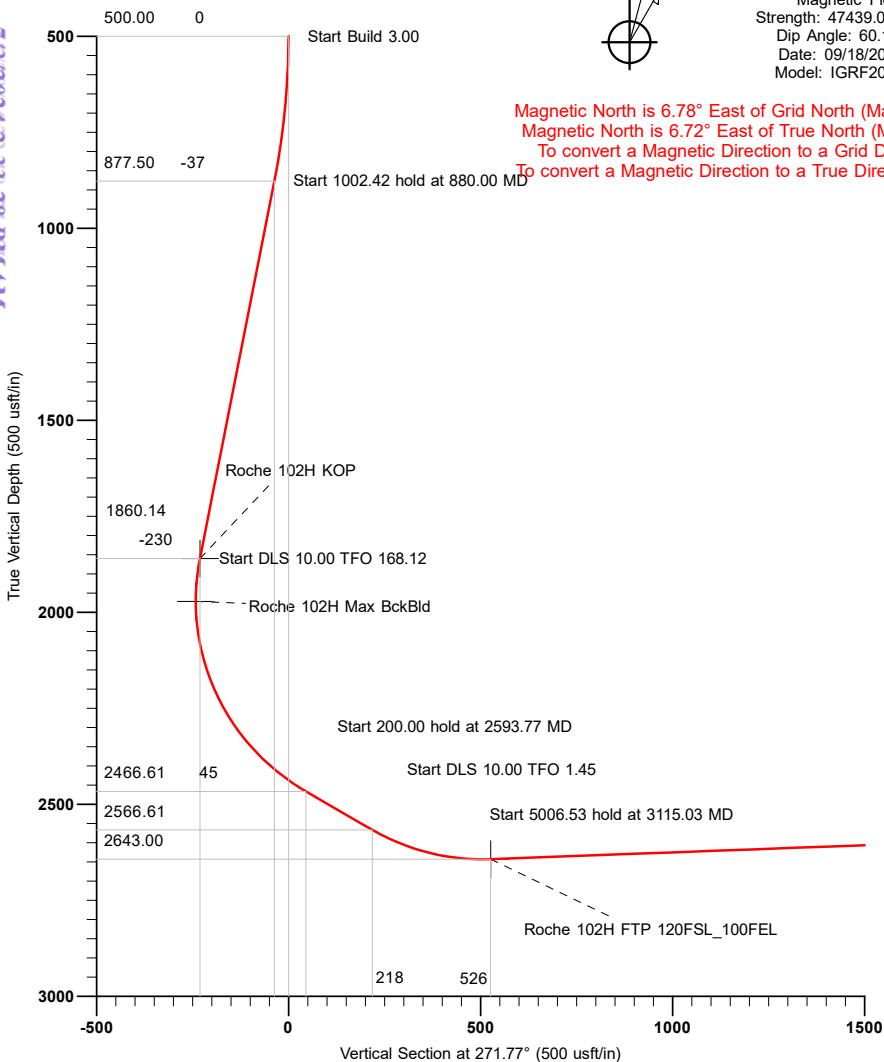
Project: EDDY COUNTY, NM (NAD83) NMEZ GRID
 Site: Roche Pad
 Well: Roche 102H
 Wellbore: Roche 102H
 Design: Plan 1r0



Azimuths to Grid North
 True North: 0.06°
 Magnetic North: 6.78°

Magnetic Field
 Strength: 47439.0nT
 Dip Angle: 60.11°
 Date: 09/18/2023
 Model: IGRF2020

Magnetic North is 6.78° East of Grid North (Magnetic Convergence)
 Magnetic North is 6.72° East of True North (Magnetic Declination)
 To convert a Magnetic Direction to a Grid Direction, Add 6.78°
 To convert a Magnetic Direction to a True Direction, Add 6.72° East



DESIGN TARGET DETAILS

Name	TVD	+N-S	+E-W	Northing	Easting	Shape
Roche 102H SHL 184FSL_427FWL	0.00	0.00	0.00	612190.50	506767.20	Point
Roche 102H KOP	1860.14	-57.05	228.81	612133.45	506996.01	Point
Roche 102H Max BckBld	1971.92	-62.04	239.45	612128.46	507006.65	Point
Roche 102H PBHL 120FSL_100FWL	2458.00	95.00	-5528.90	612285.50	501238.30	Point
Roche 102H FTP 120FSL_100FEL	2643.00	-59.10	-528.70	612131.40	506238.50	Point

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N-S	+E-W	Dleg	TFace	Vsect	Annotation
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	Start Build 3.00
3	880.00	11.40	104.00	877.50	-9.12	36.56	3.00	104.00	-36.82	Start 1002.42 hold at 880.00 MD
4	1882.42	11.40	104.00	1860.14	-57.05	228.81	0.00	0.00	-230.46	Start DLS 10.00 TFO 168.12
5	2593.77	60.00	271.00	2466.61	-70.45	-47.37	10.00	168.12	45.17	Start 200.00 hold at 2593.77 MD
6	2793.77	60.00	271.00	2566.61	-67.42	-220.55	0.00	0.00	218.36	Start DLS 10.00 TFO 1.45
7	3115.03	92.12	271.77	2643.00	-59.83	-528.19	10.00	1.45	526.09	Start 5006.53 hold at 3115.03 MD
8	8121.55	92.12	271.77	2458.00	95.00	-5528.90	0.00	0.00	5529.20	TD at 8121.55

Plan: Plan 1r0 (Roche 102H/Roche 102H)
 Created By: Mekka Williams
 eSomina Well Design
 mekka@esominawelldesign.com
 17:56, September 20, 2024

PRIME SOLUTIONS SERVICES



SILVERBACK EXPLORATION

EDDY COUNTY, NM (NAD83) NMEZ GRID

Roche Pad

Roche 102H

Roche 102H

Plan: Plan 1r0

Standard Planning Report

18 September, 2023

Planning Report

Database:	PRIME_EDM	Local Co-ordinate Reference:	Well Roche 102H
Company:	SILVERBACK EXPLORATION	TVD Reference:	3418+20 @ 3438.00usft (GL+KB)
Project:	EDDY COUNTY, NM (NAD83) NMEZ GRID	MD Reference:	3418+20 @ 3438.00usft (GL+KB)
Site:	Roche Pad	North Reference:	Grid
Well:	Roche 102H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Roche 102H		
Design:	Plan 1r0		

Project	EDDY COUNTY, NM (NAD83) NMEZ GRID		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site	Roche Pad				
Site Position:		Northing:	612,210.50 usft	Latitude:	32.6829605
From:	Map	Easting:	506,767.20 usft	Longitude:	-104.4456955
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	-0.06 °

Well	Roche 102H					
Well Position	+N/-S	-20.00 usft	Northing:	612,190.50 usft	Latitude:	32.6829055
	+E/-W	0.00 usft	Easting:	506,767.20 usft	Longitude:	-104.4456955
Position Uncertainty		0.00 usft	Wellhead Elevation:		Ground Level:	3,418.00 usft

Wellbore	Roche 102H				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2020	09/18/23	6.72	60.11	47,438.99067150

Design	Plan 1r0			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	271.77

Plan Survey Tool Program	Date	09/18/23		
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	8,121.55	Plan 1r0 (Roche 102H)	MWD OWSG MWD - Standard

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00	
880.00	11.40	104.00	877.50	-9.12	36.56	3.00	3.00	0.00	104.00	
1,882.42	11.40	104.00	1,860.14	-57.05	228.81	0.00	0.00	0.00	0.00	
2,593.77	60.00	271.00	2,466.61	-70.45	-47.37	10.00	6.83	23.48	168.12	
2,793.77	60.00	271.00	2,566.61	-67.42	-220.55	0.00	0.00	0.00	0.00	
3,115.03	92.12	271.77	2,643.00	-59.83	-528.19	10.00	10.00	0.24	1.45	
8,121.56	92.12	271.77	2,458.00	95.00	-5,528.90	0.00	0.00	0.00	0.00	Roche 102H PBHL 12

Planning Report

Database:	PRIME_EDM	Local Co-ordinate Reference:	Well Roche 102H
Company:	SILVERBACK EXPLORATION	TVD Reference:	3418+20 @ 3438.00usft (GL+KB)
Project:	EDDY COUNTY, NM (NAD83) NMEZ GRID	MD Reference:	3418+20 @ 3438.00usft (GL+KB)
Site:	Roche Pad	North Reference:	Grid
Well:	Roche 102H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Roche 102H		
Design:	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	0.00
100.00	0.00	0.00	100.00	0.00	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	0.00
300.00	0.00	0.00	300.00	0.00	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	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Start Build 3.00										
600.00	3.00	104.00	599.95	-0.63	2.54	-2.56	3.00	3.00	3.00	0.00
700.00	6.00	104.00	699.63	-2.53	10.15	-10.22	3.00	3.00	3.00	0.00
800.00	9.00	104.00	798.77	-5.69	22.82	-22.98	3.00	3.00	3.00	0.00
880.00	11.40	104.00	877.50	-9.12	36.56	-36.82	3.00	3.00	3.00	0.00
Start 1002.42 hold at 880.00 MD										
900.00	11.40	104.00	897.10	-10.07	40.40	-40.69	0.00	0.00	0.00	0.00
1,000.00	11.40	104.00	995.13	-14.85	59.57	-60.00	0.00	0.00	0.00	0.00
1,100.00	11.40	104.00	1,093.16	-19.64	78.75	-79.32	0.00	0.00	0.00	0.00
1,200.00	11.40	104.00	1,191.18	-24.42	97.93	-98.64	0.00	0.00	0.00	0.00
1,300.00	11.40	104.00	1,289.21	-29.20	117.11	-117.96	0.00	0.00	0.00	0.00
1,400.00	11.40	104.00	1,387.24	-33.98	136.29	-137.27	0.00	0.00	0.00	0.00
1,500.00	11.40	104.00	1,485.27	-38.76	155.47	-156.59	0.00	0.00	0.00	0.00
1,600.00	11.40	104.00	1,583.29	-43.54	174.65	-175.91	0.00	0.00	0.00	0.00
1,700.00	11.40	104.00	1,681.32	-48.33	193.82	-195.22	0.00	0.00	0.00	0.00
1,800.00	11.40	104.00	1,779.35	-53.11	213.00	-214.54	0.00	0.00	0.00	0.00
1,882.42	11.40	104.00	1,860.14	-57.05	228.81	-230.46	0.00	0.00	0.00	0.00
Start DLS 10.00 TFO 168.12										
1,900.00	9.69	106.15	1,877.42	-57.88	231.92	-233.59	10.00	-9.75	12.24	
2,000.00	2.41	196.69	1,976.92	-62.24	239.41	-241.22	10.00	-7.28	90.54	
2,100.00	10.85	260.08	2,076.23	-65.89	229.52	-231.44	10.00	8.44	63.39	
2,200.00	20.72	266.17	2,172.35	-68.70	202.53	-204.55	10.00	9.88	6.09	
2,300.00	30.68	268.41	2,262.35	-70.59	159.27	-161.37	10.00	9.95	2.24	
2,400.00	40.65	269.63	2,343.49	-71.51	101.05	-103.21	10.00	9.98	1.22	
2,500.00	50.63	270.43	2,413.32	-71.43	29.64	-31.83	10.00	9.98	0.80	
2,593.77	60.00	271.00	2,466.61	-70.45	-47.37	45.17	10.00	9.99	0.61	
Start 200.00 hold at 2593.77 MD										
2,600.00	60.00	271.00	2,469.73	-70.35	-52.77	50.57	0.00	0.00	0.00	
2,700.00	60.00	271.00	2,519.73	-68.84	-139.36	137.17	0.00	0.00	0.00	
2,793.77	60.00	271.00	2,566.61	-67.42	-220.55	218.36	0.00	0.00	0.00	
Start DLS 10.00 TFO 1.45										
2,800.00	60.62	271.02	2,569.70	-67.33	-225.97	223.78	10.00	10.00	0.29	
2,900.00	70.62	271.28	2,610.92	-65.49	-316.92	314.74	10.00	10.00	0.27	
3,000.00	80.62	271.52	2,635.73	-63.12	-413.63	411.48	10.00	10.00	0.23	
3,100.00	90.62	271.74	2,643.36	-60.29	-513.17	511.07	10.00	10.00	0.22	
3,115.03	92.12	271.77	2,643.00	-59.83	-528.19	526.09	10.00	10.00	0.22	
Start 5006.53 hold at 3115.03 MD										
3,200.00	92.12	271.77	2,639.86	-57.20	-613.06	611.00	0.00	0.00	0.00	
3,300.00	92.12	271.77	2,636.17	-54.11	-712.95	710.93	0.00	0.00	0.00	
3,400.00	92.12	271.77	2,632.47	-51.02	-812.83	810.87	0.00	0.00	0.00	
3,500.00	92.12	271.77	2,628.78	-47.92	-912.71	910.80	0.00	0.00	0.00	
3,600.00	92.12	271.77	2,625.08	-44.83	-1,012.60	1,010.73	0.00	0.00	0.00	
3,700.00	92.12	271.77	2,621.39	-41.74	-1,112.48	1,110.66	0.00	0.00	0.00	
3,800.00	92.12	271.77	2,617.69	-38.65	-1,212.37	1,210.59	0.00	0.00	0.00	
3,900.00	92.12	271.77	2,614.00	-35.55	-1,312.25	1,310.52	0.00	0.00	0.00	
4,000.00	92.12	271.77	2,610.30	-32.46	-1,412.13	1,410.46	0.00	0.00	0.00	
4,100.00	92.12	271.77	2,606.61	-29.37	-1,512.02	1,510.39	0.00	0.00	0.00	

Planning Report

Database:	PRIME_EDM	Local Co-ordinate Reference:	Well Roche 102H
Company:	SILVERBACK EXPLORATION	TVD Reference:	3418+20 @ 3438.00usft (GL+KB)
Project:	EDDY COUNTY, NM (NAD83) NMEZ GRID	MD Reference:	3418+20 @ 3438.00usft (GL+KB)
Site:	Roche Pad	North Reference:	Grid
Well:	Roche 102H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Roche 102H		
Design:	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)	
4,200.00	92.12	271.77	2,602.91	-26.28	-1,611.90	1,610.32	0.00	0.00	0.00	
4,300.00	92.12	271.77	2,599.22	-23.18	-1,711.78	1,710.25	0.00	0.00	0.00	
4,400.00	92.12	271.77	2,595.52	-20.09	-1,811.67	1,810.18	0.00	0.00	0.00	
4,500.00	92.12	271.77	2,591.83	-17.00	-1,911.55	1,910.11	0.00	0.00	0.00	
4,600.00	92.12	271.77	2,588.13	-13.91	-2,011.44	2,010.05	0.00	0.00	0.00	
4,700.00	92.12	271.77	2,584.44	-10.81	-2,111.32	2,109.98	0.00	0.00	0.00	
4,800.00	92.12	271.77	2,580.74	-7.72	-2,211.20	2,209.91	0.00	0.00	0.00	
4,900.00	92.12	271.77	2,577.04	-4.63	-2,311.09	2,309.84	0.00	0.00	0.00	
5,000.00	92.12	271.77	2,573.35	-1.54	-2,410.97	2,409.77	0.00	0.00	0.00	
5,100.00	92.12	271.77	2,569.65	1.56	-2,510.85	2,509.71	0.00	0.00	0.00	
5,200.00	92.12	271.77	2,565.96	4.65	-2,610.74	2,609.64	0.00	0.00	0.00	
5,300.00	92.12	271.77	2,562.26	7.74	-2,710.62	2,709.57	0.00	0.00	0.00	
5,400.00	92.12	271.77	2,558.57	10.83	-2,810.51	2,809.50	0.00	0.00	0.00	
5,500.00	92.12	271.77	2,554.87	13.93	-2,910.39	2,909.43	0.00	0.00	0.00	
5,600.00	92.12	271.77	2,551.18	17.02	-3,010.27	3,009.36	0.00	0.00	0.00	
5,700.00	92.12	271.77	2,547.48	20.11	-3,110.16	3,109.30	0.00	0.00	0.00	
5,800.00	92.12	271.77	2,543.79	23.20	-3,210.04	3,209.23	0.00	0.00	0.00	
5,900.00	92.12	271.77	2,540.09	26.30	-3,309.93	3,309.16	0.00	0.00	0.00	
6,000.00	92.12	271.77	2,536.40	29.39	-3,409.81	3,409.09	0.00	0.00	0.00	
6,100.00	92.12	271.77	2,532.70	32.48	-3,509.69	3,509.02	0.00	0.00	0.00	
6,200.00	92.12	271.77	2,529.01	35.58	-3,609.58	3,608.95	0.00	0.00	0.00	
6,300.00	92.12	271.77	2,525.31	38.67	-3,709.46	3,708.89	0.00	0.00	0.00	
6,400.00	92.12	271.77	2,521.62	41.76	-3,809.34	3,808.82	0.00	0.00	0.00	
6,500.00	92.12	271.77	2,517.92	44.85	-3,909.23	3,908.75	0.00	0.00	0.00	
6,600.00	92.12	271.77	2,514.23	47.95	-4,009.11	4,008.68	0.00	0.00	0.00	
6,700.00	92.12	271.77	2,510.53	51.04	-4,109.00	4,108.61	0.00	0.00	0.00	
6,800.00	92.12	271.77	2,506.83	54.13	-4,208.88	4,208.54	0.00	0.00	0.00	
6,900.00	92.12	271.77	2,503.14	57.22	-4,308.76	4,308.48	0.00	0.00	0.00	
7,000.00	92.12	271.77	2,499.44	60.32	-4,408.65	4,408.41	0.00	0.00	0.00	
7,100.00	92.12	271.77	2,495.75	63.41	-4,508.53	4,508.34	0.00	0.00	0.00	
7,200.00	92.12	271.77	2,492.05	66.50	-4,608.42	4,608.27	0.00	0.00	0.00	
7,300.00	92.12	271.77	2,488.36	69.59	-4,708.30	4,708.20	0.00	0.00	0.00	
7,400.00	92.12	271.77	2,484.66	72.69	-4,808.18	4,808.13	0.00	0.00	0.00	
7,500.00	92.12	271.77	2,480.97	75.78	-4,908.07	4,908.07	0.00	0.00	0.00	
7,600.00	92.12	271.77	2,477.27	78.87	-5,007.95	5,008.00	0.00	0.00	0.00	
7,700.00	92.12	271.77	2,473.58	81.96	-5,107.83	5,107.93	0.00	0.00	0.00	
7,800.00	92.12	271.77	2,469.88	85.06	-5,207.72	5,207.86	0.00	0.00	0.00	
7,900.00	92.12	271.77	2,466.19	88.15	-5,307.60	5,307.79	0.00	0.00	0.00	
8,000.00	92.12	271.77	2,462.49	91.24	-5,407.49	5,407.72	0.00	0.00	0.00	
8,100.00	92.12	271.77	2,458.80	94.33	-5,507.37	5,507.66	0.00	0.00	0.00	
8,121.56	92.12	271.77	2,458.00	95.00	-5,528.90	5,529.20	0.00	0.00	0.00	
TD at 8121.55										

Planning Report

Database:	PRIME_EDM	Local Co-ordinate Reference:	Well Roche 102H
Company:	SILVERBACK EXPLORATION	TVD Reference:	3418+20 @ 3438.00usft (GL+KB)
Project:	EDDY COUNTY, NM (NAD83) NMEZ GRID	MD Reference:	3418+20 @ 3438.00usft (GL+KB)
Site:	Roche Pad	North Reference:	Grid
Well:	Roche 102H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Roche 102H		
Design:	Plan 1r0		

Design Targets										
Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	
- hit/miss target	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)			
- Shape										
Roche 102H SHL 184FS - plan hits target center - Point	0.00	0.00	0.00	0.00	0.00	612,190.50	506,767.20	32.6829055	-104.4456955	
Roche 102H KOP - plan hits target center - Point	0.00	360.00	1,860.14	-57.05	228.81	612,133.45	506,996.01	32.6827494	-104.4449516	
Roche 102H Max BckBlk - plan misses target center by 0.01usft at 1995.01usft MD (1971.93 TVD, -62.04 N, 239.45 E) - Point	0.00	360.00	1,971.92	-62.04	239.45	612,128.46	507,006.65	32.6827357	-104.4449170	
Roche 102H PBHL 120F - plan hits target center - Point	0.00	360.00	2,458.00	95.00	-5,528.90	612,285.50	501,238.30	32.6831493	-104.4636661	
Roche 102H FTP 120FS - plan misses target center by 0.71usft at 3115.56usft MD (2642.98 TVD, -59.81 N, -528.72 E) - Point	0.00	360.00	2,643.00	-59.10	-528.70	612,131.40	506,238.50	32.6827416	-104.4474137	

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment	
500.00	500.00	0.00	0.00	Start Build 3.00	
880.00	877.50	-9.12	36.56	Start 1002.42 hold at 880.00 MD	
1,882.42	1,860.14	-57.05	228.81	Start DLS 10.00 TFO 168.12	
2,593.77	2,466.61	-70.45	-47.37	Start 200.00 hold at 2593.77 MD	
2,793.77	2,566.61	-67.42	-220.55	Start DLS 10.00 TFO 1.45	
3,115.03	2,643.00	-59.83	-528.19	Start 5006.53 hold at 3115.03 MD	
8,121.56	2,458.00	95.00	-5,528.90	TD at 8121.55	

SILVERBACK EXPLORATION

EDDY COUNTY, NM (NAD83) NMEZ GRID

Roche Pad

Roche 102H

Roche 102H

Plan 1r0

Anticollision Report

18 September, 2023

Anticollision Report

Company:	SILVERBACK EXPLORATION	Local Co-ordinate Reference:	Well Roche 102H
Project:	EDDY COUNTY, NM (NAD83) NMEZ GRID	TVD Reference:	3418+20 @ 3438.00usft (GL+KB)
Reference Site:	Roche Pad	MD Reference:	3418+20 @ 3438.00usft (GL+KB)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Roche 102H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Roche 102H	Database:	PRIME_EDM
Reference Design:	Plan 1r0	Offset TVD Reference:	Reference Datum

Reference	Plan 1r0		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	MD Interval 100.00usft	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum ellipse separation of 0.00 usft	Error Surface:	Pedal Curve
Warning Levels Evaluated at:	2.00 Sigma	Casing Method:	Not applied

Survey Tool Program	Date	09/18/23		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.00	8,121.55	Plan 1r0 (Roche 102H)	MWD	OWSG MWD - Standard

Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation	Warning
Offset Well - Wellbore - Design						
Roche Pad						
Rio Penasco KD Com 1 - Rio Penasco KD Com 1 - Rio	6,271.58	2,543.47	513.91	379.35	3.819	CC
Rio Penasco KD Com 1 - Rio Penasco KD Com 1 - Rio	6,300.00	2,542.42	514.69	378.91	3.791	ES, SF
Roche 101H - Roche 101H - Plan 1r0	500.00	500.00	20.00	16.05	5.062	CC, ES
Roche 101H - Roche 101H - Plan 1r0	8,122.27	8,595.98	852.68	590.55	3.253	SF
Roche 103H - Roche 103H - Plan 1r0	500.00	500.00	20.00	16.05	5.062	CC, ES
Roche 103H - Roche 103H - Plan 1r0	8,122.27	8,348.49	810.45	536.76	2.961	SF
Roche 201H - Roche 201H for AC - Plan 1r0	500.00	500.00	60.83	56.65	14.565	CC, ES
Roche 201H - Roche 201H for AC - Plan 1r0	8,122.27	9,103.79	953.50	798.29	6.143	SF
Roche 202H - Roche 202H for AC - Plan 1r0	500.00	500.00	60.83	57.12	16.390	CC
Roche 202H - Roche 202H for AC - Plan 1r0	700.00	704.62	63.59	54.81	7.245	ES
Roche 202H - Roche 202H for AC - Plan 1r0	8,122.27	8,951.03	805.61	642.36	4.935	SF

Offset Design												Reference	Roche Pad - Rio Penasco KD Com 1 - Rio Penasco KD Com 1 - Rio Penasco KD Com 1 AsDrilled		Offset Site Error:	0.00 usft	
Survey Program:												90-DIPMETER				Offset Well Error:	0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning				
		Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)							
5,500.00	2,554.87	2,571.98	2,554.87	74.64	47.41	93.17	551.45	-3,665.17	926.62	848.82	77.80	11.911					
5,600.00	2,551.18	2,568.29	2,551.18	77.07	47.36	92.76	551.45	-3,665.17	845.28	762.70	82.58	10.236					
5,700.00	2,547.48	2,564.59	2,547.48	79.51	47.31	92.35	551.45	-3,665.17	768.35	680.00	88.35	8.696					
5,800.00	2,543.79	2,560.89	2,543.79	81.94	47.26	91.94	551.45	-3,665.17	697.27	602.01	95.26	7.319					
5,900.00	2,540.09	2,557.20	2,540.09	84.38	47.22	91.53	551.45	-3,665.17	634.02	530.64	103.38	6.133					
6,000.00	2,536.40	2,553.50	2,536.40	86.82	47.17	91.12	551.45	-3,665.17	581.17	468.67	112.50	5.166					
6,100.00	2,532.70	2,549.81	2,532.70	89.26	47.12	90.71	551.45	-3,665.17	541.76	419.86	121.90	4.444					
6,200.00	2,529.01	2,546.11	2,529.01	91.70	47.08	90.29	551.45	-3,665.17	518.86	388.65	130.21	3.985					
6,271.58	2,526.36	2,543.47	2,526.36	93.45	47.04	90.00	551.45	-3,665.17	513.91	379.35	134.55	3.819	CC				
6,300.00	2,525.31	2,542.42	2,525.31	94.14	47.03	89.88	551.45	-3,665.17	514.69	378.91	135.78	3.791	ES, SF				
6,400.00	2,521.62	2,538.72	2,521.62	96.59	46.98	89.47	551.45	-3,665.17	529.69	392.08	137.61	3.849					
6,500.00	2,517.92	2,535.03	2,517.92	99.03	46.93	89.06	551.45	-3,665.17	562.32	426.38	135.94	4.137					
6,600.00	2,514.23	2,531.33	2,514.23	101.47	46.89	88.65	551.45	-3,665.17	609.77	477.91	131.86	4.624					
6,700.00	2,510.53	2,527.64	2,510.53	103.92	46.84	88.24	551.45	-3,665.17	668.88	542.28	126.60	5.284					
6,800.00	2,506.83	2,523.94	2,506.83	106.37	46.79	87.83	551.45	-3,665.17	736.85	615.81	121.03	6.088					
6,900.00	2,503.14	2,520.25	2,503.14	108.81	46.75	87.41	551.45	-3,665.17	811.46	695.78	115.68	7.015					

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company:	SILVERBACK EXPLORATION	Local Co-ordinate Reference:	Well Roche 102H
Project:	EDDY COUNTY, NM (NAD83) NMEZ GRID	TVD Reference:	3418+20 @ 3438.00usft (GL+KB)
Reference Site:	Roche Pad	MD Reference:	3418+20 @ 3438.00usft (GL+KB)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Roche 102H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Roche 102H	Database:	PRIME_EDM
Reference Design:	Plan 1r0	Offset TVD Reference:	Reference Datum

Offset Design													Roche Pad - Rio Penasco KD Com 1 - Rio Penasco KD Com 1 - Rio Penasco KD Com 1 AsDrilled	Offset Site Error:	0.00 usft
Survey Program: 90-DIPMETER														Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
7,000.00	2,499.44	2,516.55	2,499.44	111.26	46.70	87.00	551.45	-3,665.17	891.05	780.28	110.77	8.044			
7,100.00	2,495.75	2,512.86	2,495.75	113.71	46.65	86.59	551.45	-3,665.17	974.39	868.03	106.36	9.161			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company:	SILVERBACK EXPLORATION	Local Co-ordinate Reference:	Well Roche 102H
Project:	EDDY COUNTY, NM (NAD83) NMEZ GRID	TVD Reference:	3418+20 @ 3438.00usft (GL+KB)
Reference Site:	Roche Pad	MD Reference:	3418+20 @ 3438.00usft (GL+KB)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Roche 102H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Roche 102H	Database:	PRIME_EDM
Reference Design:	Plan 1r0	Offset TVD Reference:	Reference Datum

Offset Design													Roche Pad - Roche 101H - Roche 101H - Plan 1r0	Offset Site Error:	0.00 usft
Survey Program: 0-MWD														Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
0.00	0.00	0.00	0.00	0.00	0.00	180.00	-20.00	0.00	20.00						
100.00	100.00	100.00	100.00	0.31	0.31	180.00	-20.00	0.00	20.00	19.52	0.48	41.677			
200.00	200.00	200.00	200.00	0.95	0.95	180.00	-20.00	0.00	20.00	18.47	1.53	13.112			
300.00	300.00	300.00	300.00	1.46	1.46	180.00	-20.00	0.00	20.00	17.61	2.39	8.358			
400.00	400.00	400.00	400.00	1.89	1.89	180.00	-20.00	0.00	20.00	16.81	3.19	6.277			
500.00	500.00	500.00	500.00	2.31	2.31	180.00	-20.00	0.00	20.00	16.05	3.95	5.062	CC, ES		
600.00	599.95	598.96	598.92	2.99	2.71	80.29	-22.42	0.86	21.87	16.86	5.02	4.361			
700.00	699.63	697.57	697.22	4.69	4.53	89.46	-29.62	3.41	28.02	20.91	7.12	3.938			
800.00	798.77	795.47	794.29	6.00	5.86	97.87	-41.50	7.61	39.16	30.81	8.35	4.688			
900.00	897.10	892.35	889.59	6.67	6.93	103.66	-57.86	13.41	55.39	46.01	9.38	5.905			
1,000.00	995.13	988.14	982.85	6.85	7.85	105.29	-78.49	20.71	75.57	65.13	10.43	7.243			
1,100.00	1,093.16	1,082.56	1,073.57	7.06	8.67	104.05	-103.10	29.43	98.91	87.35	11.56	8.557			
1,200.00	1,191.18	1,175.18	1,161.20	7.29	9.39	101.68	-131.33	39.42	125.51	112.78	12.73	9.862			
1,300.00	1,289.21	1,265.62	1,245.28	7.53	10.05	98.96	-162.73	50.54	155.54	141.64	13.90	11.189			
1,400.00	1,387.24	1,353.58	1,325.45	7.78	10.65	96.24	-196.83	62.62	189.12	174.08	15.04	12.570			
1,500.00	1,485.27	1,442.41	1,404.85	8.05	11.10	93.66	-234.37	75.91	225.96	209.86	16.11	14.029			
1,600.00	1,583.29	1,534.71	1,487.08	8.32	11.38	91.64	-273.87	89.90	263.61	246.57	17.03	15.477			
1,700.00	1,681.32	1,627.00	1,569.32	8.61	11.58	90.11	-313.37	103.89	301.46	283.62	17.85	16.891			
1,800.00	1,779.35	1,719.30	1,651.55	8.90	11.80	88.93	-352.87	117.87	339.46	320.81	18.65	18.197			
1,900.00	1,877.42	1,811.59	1,733.79	9.19	12.03	86.53	-392.36	131.86	377.52	358.07	19.45	19.406			
2,000.00	1,976.92	1,903.25	1,815.45	9.66	12.28	-2.42	-431.59	145.75	413.83	393.49	20.34	20.345			
2,100.00	2,076.23	1,991.80	1,894.35	10.75	12.55	-66.12	-469.48	159.17	448.24	427.23	21.01	21.339			
2,200.00	2,172.35	2,074.55	1,968.09	11.59	12.83	-73.50	-504.90	171.71	482.64	461.06	21.58	22.361			
2,300.00	2,262.35	2,148.99	2,034.42	12.29	13.12	-77.08	-536.75	182.99	519.44	497.33	22.11	23.489			
2,400.00	2,343.49	2,212.86	2,091.32	12.85	13.40	-78.85	-564.09	192.67	560.90	538.24	22.67	24.744			
2,500.00	2,413.32	2,264.22	2,137.08	13.30	13.64	-78.68	-586.07	200.45	608.55	585.23	23.32	26.097			
2,600.00	2,469.73	2,301.54	2,170.33	13.63	13.84	-76.64	-602.03	206.11	662.83	638.75	24.08	27.531			
2,700.00	2,519.73	2,332.32	2,197.76	13.84	14.01	-79.61	-615.21	210.77	724.41	699.52	24.89	29.099			
2,800.00	2,569.70	2,363.07	2,225.16	14.28	14.18	-81.89	-628.37	215.43	792.66	766.95	25.71	30.836			
2,900.00	2,610.92	3,125.69	2,812.13	15.25	19.30	-108.67	-838.48	-123.71	821.78	790.79	31.00	26.513			
3,000.00	2,635.73	3,221.24	2,859.91	16.76	19.83	-108.38	-846.63	-206.06	840.97	807.60	33.37	25.202			
3,100.00	2,643.36	3,531.80	2,955.98	18.57	23.01	-111.34	-860.20	-497.24	858.98	822.19	36.79	23.349			
3,200.00	2,639.86	3,685.29	2,953.12	20.54	25.29	-111.41	-856.17	-650.54	859.00	818.38	40.62	21.148			
3,300.00	2,636.17	3,785.29	2,949.04	22.62	26.98	-111.38	-853.09	-750.41	858.87	814.51	44.36	19.363			
3,400.00	2,632.47	3,885.29	2,944.97	24.79	28.79	-111.36	-850.00	-850.27	858.74	810.48	48.25	17.797			
3,500.00	2,628.78	3,985.29	2,940.89	27.00	30.71	-111.33	-846.91	-950.14	858.60	806.34	52.27	16.428			
3,600.00	2,625.08	4,085.29	2,936.82	29.26	32.70	-111.31	-843.83	-1,050.01	858.47	802.10	56.37	15.228			
3,700.00	2,621.39	4,185.29	2,932.74	31.55	34.76	-111.29	-840.74	-1,149.88	858.34	797.78	60.56	14.174			
3,800.00	2,617.69	4,285.29	2,928.67	33.86	36.87	-111.26	-837.65	-1,249.75	858.20	793.40	64.80	13.243			
3,900.00	2,614.00	4,385.29	2,924.59	36.19	39.02	-111.24	-834.57	-1,349.62	858.07	788.97	69.10	12.418			
4,000.00	2,610.30	4,485.29	2,920.51	38.54	41.21	-111.22	-831.48	-1,449.49	857.94	784.50	73.44	11.683			
4,100.00	2,606.61	4,585.29	2,916.44	40.90	43.43	-111.19	-828.39	-1,549.35	857.81	780.00	77.81	11.025			
4,200.00	2,602.91	4,685.29	2,912.36	43.28	45.67	-111.17	-825.31	-1,649.22	857.67	775.46	82.21	10.433			
4,300.00	2,599.22	4,785.29	2,908.29	45.66	47.94	-111.14	-822.22	-1,749.09	857.54	770.90	86.64	9.898			
4,400.00	2,595.52	4,885.29	2,904.21	48.05	50.23	-111.12	-819.13	-1,848.96	857.41	766.32	91.09	9.413			
4,500.00	2,591.83	4,985.28	2,900.14	50.45	52.53	-111.10	-816.05	-1,948.83	857.28	761.72	95.56	8.972			
4,600.00	2,588.13	5,085.28	2,896.06	52.85	54.84	-111.07	-812.96	-2,048.70	857.15	757.11	100.04	8.568			
4,700.00	2,584.44	5,185.28	2,891.99	55.26	57.17	-111.05	-809.87	-2,148.57	857.02	752.47	104.54	8.198			
4,800.00	2,580.74	5,285.28	2,887.91	57.67	59.51	-111.02	-806.79	-2,248.43	856.88	747.83	109.05	7.857			
4,900.00	2,577.04	5,385.28	2,883.84	60.08	61.86	-111.00	-803.70	-2,348.30	856.75	743.17	113.58	7.543			
5,000.00	2,573.35	5,485.28	2,879.76	62.50	64.21	-110.98	-800.61	-2,448.17	856.62	738.51	118.11	7.252			
5,100.00	2,569.65	5,585.28	2,875.69	64.93	66.58	-110.95	-797.53	-2,548.04	856.49	733.83	122.66	6.983			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company:	SILVERBACK EXPLORATION	Local Co-ordinate Reference:	Well Roche 102H
Project:	EDDY COUNTY, NM (NAD83) NMEZ GRID	TVD Reference:	3418+20 @ 3438.00usft (GL+KB)
Reference Site:	Roche Pad	MD Reference:	3418+20 @ 3438.00usft (GL+KB)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Roche 102H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Roche 102H	Database:	PRIME_EDM
Reference Design:	Plan 1r0	Offset TVD Reference:	Reference Datum

Offset Design													Roche Pad - Roche 101H - Roche 101H - Plan 1r0	Offset Site Error:	0.00 usft
Survey Program: 0-MWD														Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
5,200.00	2,565.96	5,685.28	2,871.61	67.35	68.95	-110.93	-794.44	-2,647.91	856.36	729.15	127.21	6.732			
5,300.00	2,562.26	5,785.28	2,867.54	69.78	71.32	-110.91	-791.35	-2,747.78	856.23	724.46	131.77	6.498			
5,400.00	2,558.57	5,885.28	2,863.46	72.21	73.71	-110.88	-788.27	-2,847.64	856.10	719.76	136.34	6.279			
5,500.00	2,554.87	5,985.28	2,859.39	74.64	76.09	-110.86	-785.18	-2,947.51	855.97	715.05	140.92	6.074			
5,600.00	2,551.18	6,085.28	2,855.31	77.07	78.48	-110.83	-782.10	-3,047.38	855.84	710.34	145.50	5.882			
5,700.00	2,547.48	6,185.28	2,851.24	79.51	80.88	-110.81	-779.01	-3,147.25	855.71	705.62	150.09	5.701			
5,800.00	2,543.79	6,285.27	2,847.16	81.94	83.28	-110.79	-775.92	-3,247.12	855.58	700.90	154.68	5.531			
5,900.00	2,540.09	6,385.27	2,843.09	84.38	85.68	-110.76	-772.84	-3,346.99	855.45	696.17	159.28	5.371			
6,000.00	2,536.40	6,485.27	2,839.01	86.82	88.09	-110.74	-769.75	-3,446.86	855.32	691.44	163.88	5.219			
6,100.00	2,532.70	6,585.27	2,834.94	89.26	90.50	-110.71	-766.66	-3,546.72	855.19	686.71	168.48	5.076			
6,200.00	2,529.01	6,685.27	2,830.86	91.70	92.91	-110.69	-763.58	-3,646.59	855.06	681.97	173.09	4.940			
6,300.00	2,525.31	6,785.27	2,826.79	94.14	95.32	-110.67	-760.49	-3,746.46	854.93	677.22	177.71	4.811			
6,400.00	2,521.62	6,885.27	2,822.71	96.59	97.74	-110.64	-757.40	-3,846.33	854.80	672.48	182.33	4.688			
6,500.00	2,517.92	6,985.27	2,818.64	99.03	100.16	-110.62	-754.32	-3,946.20	854.67	667.73	186.95	4.572			
6,600.00	2,514.23	7,085.27	2,814.56	101.47	102.58	-110.59	-751.23	-4,046.07	854.55	662.97	191.57	4.461			
6,700.00	2,510.53	7,185.27	2,810.49	103.92	105.00	-110.57	-748.14	-4,145.94	854.42	658.22	196.20	4.355			
6,800.00	2,506.83	7,285.27	2,806.41	106.37	107.42	-110.55	-745.06	-4,245.80	854.29	653.46	200.83	4.254			
6,900.00	2,503.14	7,385.27	2,802.34	108.81	109.85	-110.52	-741.97	-4,345.67	854.16	648.69	205.47	4.157			
7,000.00	2,499.44	7,485.27	2,798.26	111.26	112.27	-110.50	-738.88	-4,445.54	854.03	643.93	210.10	4.065			
7,100.00	2,495.75	7,585.27	2,794.19	113.71	114.70	-110.47	-735.80	-4,545.41	853.90	639.16	214.74	3.976			
7,200.00	2,492.05	7,685.26	2,790.11	116.15	117.13	-110.45	-732.71	-4,645.28	853.78	634.39	219.38	3.892			
7,300.00	2,488.36	7,785.26	2,786.04	118.60	119.56	-110.43	-729.62	-4,745.15	853.65	629.62	224.03	3.810			
7,400.00	2,484.66	7,885.26	2,781.96	121.05	121.99	-110.40	-726.54	-4,845.02	853.52	624.85	228.68	3.732			
7,500.00	2,480.97	7,985.26	2,777.89	123.50	124.43	-110.38	-723.45	-4,944.88	853.39	620.07	233.33	3.658			
7,600.00	2,477.27	8,085.26	2,773.81	125.95	126.86	-110.35	-720.36	-5,044.75	853.27	615.29	237.98	3.585			
7,700.00	2,473.58	8,185.26	2,769.74	128.40	129.29	-110.33	-717.28	-5,144.62	853.14	610.51	242.63	3.516			
7,800.00	2,469.88	8,285.26	2,765.66	130.85	131.73	-110.31	-714.19	-5,244.49	853.01	605.72	247.29	3.449			
7,900.00	2,466.19	8,385.26	2,761.59	133.30	134.17	-110.28	-711.10	-5,344.36	852.89	600.94	251.95	3.385			
8,000.00	2,462.49	8,485.26	2,757.51	135.75	136.60	-110.26	-708.02	-5,444.23	852.76	596.15	256.61	3.323			
8,100.00	2,458.80	8,585.26	2,753.44	138.20	139.04	-110.23	-704.93	-5,544.10	852.63	591.36	261.27	3.263			
8,111.80	2,458.36	8,595.98	2,753.00	138.49	139.30	-110.23	-704.60	-5,554.80	852.62	590.82	261.80	3.257			
8,122.27	2,457.97	8,595.98	2,753.00	138.74	139.30	-110.23	-704.60	-5,554.80	852.68	590.55	262.13	3.253 SF			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company:	SILVERBACK EXPLORATION	Local Co-ordinate Reference:	Well Roche 102H
Project:	EDDY COUNTY, NM (NAD83) NMEZ GRID	TVD Reference:	3418+20 @ 3438.00usft (GL+KB)
Reference Site:	Roche Pad	MD Reference:	3418+20 @ 3438.00usft (GL+KB)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Roche 102H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Roche 102H	Database:	PRIME_EDM
Reference Design:	Plan 1r0	Offset TVD Reference:	Reference Datum

Offset Design													Roche Pad - Roche 103H - Roche 103H - Plan 1r0	Offset Site Error:	0.00 usft
Survey Program: 0-MWD														Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
0.00	0.00	0.00	0.00	0.00	0.00	0.00	20.00	0.00	20.00						
100.00	100.00	100.00	100.00	0.31	0.31	0.00	20.00	0.00	20.00	19.52	0.48	41.677			
200.00	200.00	200.00	200.00	0.95	0.95	0.00	20.00	0.00	20.00	18.47	1.53	13.112			
300.00	300.00	300.00	300.00	1.46	1.46	0.00	20.00	0.00	20.00	17.61	2.39	8.358			
400.00	400.00	400.00	400.00	1.89	1.89	0.00	20.00	0.00	20.00	16.81	3.19	6.277			
500.00	500.00	500.00	500.00	2.31	2.31	0.00	20.00	0.00	20.00	16.05	3.95	5.062	CC, ES		
600.00	599.95	598.99	598.95	2.99	3.36	-107.09	22.24	1.24	22.94	17.91	5.03	4.559			
700.00	699.63	697.40	697.04	4.69	5.00	-112.84	28.91	4.94	31.98	25.07	6.91	4.630			
800.00	798.77	794.63	793.47	6.00	6.23	-117.36	39.84	11.00	47.33	38.88	8.45	5.601			
900.00	897.10	890.19	887.48	6.67	7.24	-120.16	54.74	19.26	68.85	59.28	9.57	7.196			
1,000.00	995.13	984.08	978.91	6.85	8.12	-120.55	73.37	29.58	94.58	84.19	10.39	9.101			
1,100.00	1,093.16	1,076.12	1,067.42	7.06	8.89	-119.17	95.42	41.81	123.56	112.27	11.29	10.947			
1,200.00	1,191.18	1,165.95	1,152.54	7.29	9.46	-117.15	120.52	55.72	155.83	143.70	12.13	12.851			
1,300.00	1,289.21	1,258.78	1,239.56	7.53	9.68	-115.15	148.78	71.39	190.35	177.48	12.87	14.795			
1,400.00	1,387.24	1,352.44	1,327.35	7.78	9.86	-113.74	177.34	87.21	225.06	211.47	13.59	16.564			
1,500.00	1,485.27	1,446.11	1,415.14	8.05	10.06	-112.71	205.89	103.04	259.85	245.53	14.32	18.146			
1,600.00	1,583.29	1,539.77	1,502.93	8.32	10.27	-111.92	234.45	118.87	294.70	279.63	15.07	19.561			
1,700.00	1,681.32	1,633.43	1,590.72	8.61	10.49	-111.29	263.00	134.70	329.59	313.76	15.82	20.827			
1,800.00	1,779.35	1,727.09	1,678.50	8.90	10.73	-110.79	291.56	150.53	364.51	347.91	16.60	21.962			
1,900.00	1,877.42	1,820.76	1,766.30	9.19	10.98	-113.09	320.11	166.35	399.41	382.04	17.37	22.999			
2,000.00	1,976.92	1,913.95	1,853.64	9.66	11.24	155.05	348.52	182.10	432.68	414.41	18.27	23.682			
2,100.00	2,076.23	2,004.26	1,938.28	10.75	11.51	92.30	376.05	197.36	464.08	445.00	19.08	24.318			
2,200.00	2,172.35	2,088.93	2,017.64	11.59	11.78	87.95	401.87	211.67	495.43	475.85	19.57	25.313			
2,300.00	2,262.35	2,165.24	2,089.24	12.29	12.04	87.58	425.25	223.93	529.15	509.19	19.97	26.504			
2,400.00	2,343.49	2,241.88	2,161.59	12.85	12.61	87.86	449.97	228.23	566.76	546.22	20.53	27.604			
2,500.00	2,413.32	2,326.01	2,240.35	13.30	13.46	88.46	478.49	221.26	607.50	585.80	21.70	28.001			
2,600.00	2,469.73	2,422.31	2,327.54	13.63	14.22	89.74	512.13	198.47	650.10	626.53	23.57	27.582			
2,700.00	2,519.73	2,546.70	2,431.65	13.84	14.91	95.56	555.66	146.73	692.54	666.90	25.64	27.015			
2,800.00	2,569.70	2,710.12	2,546.34	14.28	15.86	98.87	609.80	44.55	729.54	701.82	27.72	26.320			
2,900.00	2,610.92	2,844.26	2,617.83	15.25	16.90	96.80	649.37	-61.65	759.10	729.06	30.04	25.267			
3,000.00	2,635.73	2,936.37	2,663.88	16.76	17.75	95.34	675.80	-136.92	789.54	757.05	32.48	24.307			
3,100.00	2,643.36	3,184.30	2,761.95	18.57	20.82	98.34	734.83	-355.13	819.30	782.54	36.76	22.288			
3,200.00	2,639.86	3,426.23	2,775.29	20.54	24.66	99.50	752.83	-594.83	821.47	779.48	41.99	19.563			
3,300.00	2,636.17	3,526.23	2,771.53	22.62	26.39	99.50	755.70	-694.72	821.25	775.30	45.95	17.872			
3,400.00	2,632.47	3,626.23	2,767.78	24.79	28.23	99.50	758.58	-794.61	821.03	770.95	50.07	16.397			
3,500.00	2,628.78	3,726.23	2,764.02	27.00	30.16	99.49	761.46	-894.50	820.80	766.49	54.31	15.112			
3,600.00	2,625.08	3,826.23	2,760.26	29.26	32.16	99.49	764.33	-994.39	820.58	761.93	58.65	13.991			
3,700.00	2,621.39	3,926.23	2,756.50	31.55	34.22	99.49	767.21	-1,094.27	820.35	757.29	63.06	13.009			
3,800.00	2,617.69	4,026.23	2,752.74	33.86	36.33	99.49	770.08	-1,194.16	820.13	752.60	67.53	12.144			
3,900.00	2,614.00	4,126.23	2,748.99	36.19	38.48	99.49	772.96	-1,294.05	819.91	747.85	72.06	11.379			
4,000.00	2,610.30	4,226.23	2,745.23	38.54	40.67	99.49	775.84	-1,393.94	819.68	743.06	76.62	10.698			
4,100.00	2,606.61	4,326.23	2,741.47	40.90	42.89	99.48	778.71	-1,493.82	819.46	738.24	81.22	10.090			
4,200.00	2,602.91	4,426.23	2,737.71	43.28	45.13	99.48	781.59	-1,593.71	819.23	733.39	85.84	9.543			
4,300.00	2,599.22	4,526.23	2,733.95	45.66	47.39	99.48	784.46	-1,693.60	819.01	728.52	90.49	9.051			
4,400.00	2,595.52	4,626.23	2,730.20	48.05	49.68	99.48	787.34	-1,793.49	818.79	723.62	95.16	8.604			
4,500.00	2,591.83	4,726.23	2,726.44	50.45	51.98	99.48	790.22	-1,893.37	818.56	718.71	99.85	8.198			
4,600.00	2,588.13	4,826.23	2,722.68	52.85	54.29	99.47	793.09	-1,993.26	818.34	713.78	104.55	7.827			
4,700.00	2,584.44	4,926.23	2,718.92	55.26	56.62	99.47	795.97	-2,093.15	818.11	708.84	109.27	7.487			
4,800.00	2,580.74	5,026.23	2,715.17	57.67	58.95	99.47	798.84	-2,193.04	817.89	703.89	114.00	7.174			
4,900.00	2,577.04	5,126.23	2,711.41	60.08	61.30	99.47	801.72	-2,292.93	817.67	698.93	118.74	6.886			
5,000.00	2,573.35	5,226.23	2,707.65	62.50	63.66	99.47	804.60	-2,392.81	817.44	693.95	123.49	6.620			
5,100.00	2,569.65	5,326.23	2,703.89	64.93	66.02	99.47	807.47	-2,492.70	817.22	688.97	128.25	6.372			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company:	SILVERBACK EXPLORATION	Local Co-ordinate Reference:	Well Roche 102H
Project:	EDDY COUNTY, NM (NAD83) NMEZ GRID	TVD Reference:	3418+20 @ 3438.00usft (GL+KB)
Reference Site:	Roche Pad	MD Reference:	3418+20 @ 3438.00usft (GL+KB)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Roche 102H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Roche 102H	Database:	PRIME_EDM
Reference Design:	Plan 1r0	Offset TVD Reference:	Reference Datum

Offset Design													Roche Pad - Roche 103H - Roche 103H - Plan 1r0	Offset Site Error:	0.00 usft
Survey Program: 0-MWD														Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Distance							Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
5,200.00	2,565.96	5,426.23	2,700.13	67.35	68.39	99.46	810.35	-2,592.59	816.99	683.99	133.01	6.142			
5,300.00	2,562.26	5,526.23	2,696.38	69.78	70.76	99.46	813.22	-2,692.48	816.77	678.99	137.78	5.928			
5,400.00	2,558.57	5,626.23	2,692.62	72.21	73.15	99.46	816.10	-2,792.36	816.55	673.99	142.56	5.728			
5,500.00	2,554.87	5,726.23	2,688.86	74.64	75.53	99.46	818.98	-2,892.25	816.32	668.99	147.34	5.540			
5,600.00	2,551.18	5,826.23	2,685.10	77.07	77.92	99.46	821.85	-2,992.14	816.10	663.98	152.12	5.365			
5,700.00	2,547.48	5,926.23	2,681.34	79.51	80.32	99.45	824.73	-3,092.03	815.88	658.96	156.92	5.199			
5,800.00	2,543.79	6,026.22	2,677.59	81.94	82.72	99.45	827.60	-3,191.92	815.65	653.94	161.71	5.044			
5,900.00	2,540.09	6,126.22	2,673.83	84.38	85.12	99.45	830.48	-3,291.80	815.43	648.92	166.51	4.897			
6,000.00	2,536.40	6,226.22	2,670.07	86.82	87.53	99.45	833.36	-3,391.69	815.20	643.89	171.31	4.759			
6,100.00	2,532.70	6,326.22	2,666.31	89.26	89.94	99.45	836.23	-3,491.58	814.98	638.86	176.12	4.628			
6,200.00	2,529.01	6,426.22	2,662.55	91.70	92.35	99.45	839.11	-3,591.47	814.76	633.83	180.92	4.503			
6,300.00	2,525.31	6,526.22	2,658.80	94.14	94.76	99.44	841.98	-3,691.35	814.53	628.80	185.73	4.385			
6,400.00	2,521.62	6,626.22	2,655.04	96.59	97.18	99.44	844.86	-3,791.24	814.31	623.76	190.55	4.274			
6,500.00	2,517.92	6,726.22	2,651.28	99.03	99.59	99.44	847.74	-3,891.13	814.08	618.72	195.36	4.167			
6,600.00	2,514.23	6,826.22	2,647.52	101.47	102.01	99.44	850.61	-3,991.02	813.86	613.68	200.18	4.066			
6,700.00	2,510.53	6,926.22	2,643.77	103.92	104.44	99.44	853.49	-4,090.90	813.64	608.64	205.00	3.969			
6,800.00	2,506.83	7,026.22	2,640.01	106.37	106.86	99.43	856.36	-4,190.79	813.41	603.59	209.82	3.877			
6,900.00	2,503.14	7,126.22	2,636.25	108.81	109.29	99.43	859.24	-4,290.68	813.19	598.55	214.64	3.789			
7,000.00	2,499.44	7,226.22	2,632.49	111.26	111.71	99.43	862.12	-4,390.57	812.96	593.50	219.47	3.704			
7,100.00	2,495.75	7,326.22	2,628.73	113.71	114.14	99.43	864.99	-4,490.46	812.74	588.45	224.29	3.624			
7,200.00	2,492.05	7,426.22	2,624.98	116.15	116.57	99.43	867.87	-4,590.34	812.52	583.40	229.12	3.546			
7,300.00	2,488.36	7,526.22	2,621.22	118.60	119.00	99.42	870.74	-4,690.23	812.29	578.34	233.95	3.472			
7,400.00	2,484.66	7,626.22	2,617.46	121.05	121.43	99.42	873.62	-4,790.12	812.07	573.29	238.78	3.401			
7,500.00	2,480.97	7,726.22	2,613.70	123.50	123.87	99.42	876.50	-4,890.01	811.84	568.24	243.61	3.333			
7,600.00	2,477.27	7,826.22	2,609.94	125.95	126.30	99.42	879.37	-4,989.89	811.62	563.18	248.44	3.267			
7,700.00	2,473.58	7,926.22	2,606.19	128.40	128.73	99.42	882.25	-5,089.78	811.40	558.12	253.27	3.204			
7,800.00	2,469.88	8,026.22	2,602.43	130.85	131.17	99.42	885.12	-5,189.67	811.17	553.06	258.11	3.143			
7,900.00	2,466.19	8,126.22	2,598.67	133.30	133.61	99.41	888.00	-5,289.56	810.95	548.01	262.94	3.084			
8,000.00	2,462.49	8,226.22	2,594.91	135.75	136.04	99.41	890.88	-5,389.44	810.73	542.95	267.78	3.028			
8,100.00	2,458.80	8,326.22	2,591.15	138.20	138.48	99.41	893.75	-5,489.33	810.50	537.89	272.62	2.973			
8,122.27	2,457.97	8,348.49	2,590.32	138.74	139.02	99.41	894.39	-5,511.58	810.45	536.76	273.69	2.961 SF			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company:	SILVERBACK EXPLORATION	Local Co-ordinate Reference:	Well Roche 102H
Project:	EDDY COUNTY, NM (NAD83) NMEZ GRID	TVD Reference:	3418+20 @ 3438.00usft (GL+KB)
Reference Site:	Roche Pad	MD Reference:	3418+20 @ 3438.00usft (GL+KB)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Roche 102H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Roche 102H	Database:	PRIME_EDM
Reference Design:	Plan 1r0	Offset TVD Reference:	Reference Datum

Offset Design													Roche Pad - Roche 201H - Roche 201H for AC - Plan 1r0	Offset Site Error:	0.00 usft
Survey Program: 0-MWD														Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
0.00	0.00	0.00	0.00	0.00	0.00	-99.46	-10.00	-60.00	60.83						
100.00	100.00	100.00	100.00	0.31	0.31	-99.46	-10.00	-60.00	60.83	60.30	0.53	115.303			
200.00	200.00	200.00	200.00	0.95	0.95	-99.46	-10.00	-60.00	60.83	59.17	1.66	36.651			
300.00	300.00	300.00	300.00	1.46	1.46	-99.46	-10.00	-60.00	60.83	58.25	2.57	23.637			
400.00	400.00	400.00	400.00	1.89	1.89	-99.46	-10.00	-60.00	60.83	57.43	3.39	17.923			
500.00	500.00	500.00	500.00	2.31	2.31	-99.46	-10.00	-60.00	60.83	56.65	4.18	14.565 CC, ES			
600.00	599.95	601.23	601.19	2.99	2.65	155.22	-12.26	-58.55	62.20	56.73	5.47	11.363			
700.00	699.63	702.24	701.86	4.69	4.57	151.61	-19.00	-54.22	66.48	59.41	7.07	9.398			
800.00	798.77	802.78	801.51	6.00	5.93	146.56	-30.15	-47.06	74.09	65.95	8.14	9.106			
900.00	897.10	902.65	899.67	6.67	7.01	141.05	-45.59	-37.15	85.33	76.61	8.72	9.787			
1,000.00	995.13	1,001.67	996.00	6.85	7.43	134.84	-64.87	-24.78	98.07	88.95	9.11	10.761			
1,100.00	1,093.16	1,100.26	1,091.67	7.06	7.61	129.55	-84.94	-11.89	111.73	102.01	9.71	11.504			
1,200.00	1,191.18	1,198.86	1,187.33	7.29	7.82	125.43	-105.01	1.00	126.12	115.67	10.46	12.062			
1,300.00	1,289.21	1,297.45	1,283.00	7.53	8.04	122.17	-125.08	13.88	141.03	129.75	11.27	12.512			
1,400.00	1,387.24	1,396.05	1,378.67	7.78	8.28	119.53	-145.15	26.77	156.29	144.16	12.13	12.885			
1,500.00	1,485.27	1,494.65	1,474.33	8.05	8.53	117.36	-165.23	39.65	171.83	158.81	13.02	13.202			
1,600.00	1,583.29	1,593.24	1,570.00	8.32	8.80	115.56	-185.30	52.54	187.57	173.65	13.92	13.475			
1,700.00	1,681.32	1,691.84	1,665.67	8.61	9.07	114.03	-205.37	65.43	203.46	188.62	14.84	13.714			
1,800.00	1,779.35	1,790.43	1,761.33	8.90	9.36	112.73	-225.44	78.31	219.47	203.71	15.76	13.926			
1,900.00	1,877.42	1,889.04	1,857.01	9.19	9.66	109.65	-245.52	91.20	235.43	218.74	16.69	14.110			
2,000.00	1,976.92	1,987.45	1,952.50	9.66	9.98	16.91	-265.55	104.06	245.46	227.79	17.67	13.888			
2,100.00	2,076.23	2,083.26	2,045.46	10.75	10.30	-52.24	-285.06	116.58	248.47	229.93	18.54	13.404			
2,200.00	2,172.35	2,173.57	2,133.09	11.59	10.61	-66.91	-303.44	128.39	249.29	229.91	19.38	12.864			
2,300.00	2,262.35	2,255.62	2,212.70	12.29	10.92	-78.95	-320.14	139.11	255.24	235.03	20.21	12.626			
2,400.00	2,343.49	2,326.93	2,281.90	12.85	11.19	-88.81	-334.66	148.43	274.38	253.18	21.20	12.940			
2,500.00	2,413.32	2,385.33	2,338.56	13.30	11.43	-94.94	-346.55	156.06	311.87	289.55	22.31	13.976			
2,600.00	2,469.73	2,429.08	2,381.01	13.63	11.61	-96.67	-355.46	161.78	367.68	344.36	23.32	15.766			
2,700.00	2,519.73	2,465.97	2,416.81	13.84	11.76	-102.95	-362.97	166.60	436.71	412.63	24.08	18.132			
2,800.00	2,569.70	2,502.83	2,452.57	14.28	11.92	-107.88	-370.47	171.42	513.35	488.68	24.67	20.809			
2,900.00	2,610.92	2,530.57	2,479.49	15.25	12.05	-97.89	-376.12	175.04	596.48	571.35	25.13	23.737			
3,000.00	2,635.73	2,541.52	2,490.11	16.76	12.09	-81.24	-378.35	176.47	684.69	659.25	25.43	26.921			
3,100.00	2,643.36	2,535.34	2,484.11	18.57	12.07	-60.58	-377.09	175.67	774.74	749.15	25.59	30.270			
3,200.00	2,639.86	2,518.26	2,467.54	20.54	11.99	-55.37	-373.61	173.44	865.10	839.45	25.64	33.736			
3,300.00	2,636.17	2,500.99	2,450.78	22.62	11.92	-52.89	-370.10	171.18	957.02	931.36	25.66	37.298			
5,100.00	2,569.65	6,116.52	3,455.81	64.93	66.52	-152.60	-456.63	-2,573.39	999.56	927.39	72.17	13.850			
5,200.00	2,565.96	6,216.51	3,450.36	67.35	68.91	-152.56	-453.55	-2,673.18	998.01	923.20	74.81	13.341			
5,300.00	2,562.26	6,316.49	3,444.91	69.78	71.30	-152.51	-450.47	-2,772.97	996.45	918.99	77.46	12.864			
5,400.00	2,558.57	6,416.48	3,439.46	72.21	73.69	-152.46	-447.39	-2,872.76	994.90	914.77	80.12	12.417			
5,500.00	2,554.87	6,516.46	3,434.02	74.64	76.09	-152.41	-444.31	-2,972.54	993.34	910.55	82.80	11.997			
5,600.00	2,551.18	6,616.45	3,428.57	77.07	78.49	-152.37	-441.23	-3,072.33	991.79	906.31	85.48	11.602			
5,700.00	2,547.48	6,716.43	3,423.12	79.51	80.90	-152.32	-438.15	-3,172.12	990.24	902.06	88.18	11.230			
5,800.00	2,543.79	6,816.41	3,417.67	81.94	83.31	-152.27	-435.07	-3,271.91	988.69	897.81	90.88	10.879			
5,900.00	2,540.09	6,916.40	3,412.22	84.38	85.72	-152.22	-431.99	-3,371.70	987.14	893.54	93.59	10.547			
6,000.00	2,536.40	7,016.38	3,406.77	86.82	88.13	-152.18	-428.91	-3,471.49	985.59	889.27	96.32	10.233			
6,100.00	2,532.70	7,116.37	3,401.32	89.26	90.55	-152.13	-425.83	-3,571.27	984.04	884.99	99.05	9.935			
6,200.00	2,529.01	7,216.35	3,395.87	91.70	92.96	-152.08	-422.75	-3,671.06	982.49	880.70	101.79	9.652			
6,300.00	2,525.31	7,316.34	3,390.42	94.14	95.38	-152.03	-419.67	-3,770.85	980.94	876.40	104.54	9.383			
6,400.00	2,521.62	7,416.32	3,384.97	96.59	97.81	-151.98	-416.59	-3,870.64	979.40	872.10	107.30	9.128			
6,500.00	2,517.92	7,516.31	3,379.52	99.03	100.23	-151.93	-413.51	-3,970.43	977.85	867.78	110.07	8.884			
6,600.00	2,514.23	7,616.29	3,374.07	101.47	102.65	-151.88	-410.43	-4,070.22	976.31	863.46	112.84	8.652			
6,700.00	2,510.53	7,716.28	3,368.62	103.92	105.08	-151.83	-407.35	-4,170.01	974.76	859.14	115.63	8.430			
6,800.00	2,506.83	7,816.26	3,363.17	106.37	107.51	-151.79	-404.27	-4,269.79	973.22	854.80	118.42	8.219			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company:	SILVERBACK EXPLORATION	Local Co-ordinate Reference:	Well Roche 102H
Project:	EDDY COUNTY, NM (NAD83) NMEZ GRID	TVD Reference:	3418+20 @ 3438.00usft (GL+KB)
Reference Site:	Roche Pad	MD Reference:	3418+20 @ 3438.00usft (GL+KB)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Roche 102H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Roche 102H	Database:	PRIME_EDM
Reference Design:	Plan 1r0	Offset TVD Reference:	Reference Datum

Offset Design													Roche Pad - Roche 201H - Roche 201H for AC - Plan 1r0	Offset Site Error:	0.00 usft
Survey Program: 0-MWD														Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
6,900.00	2,503.14	7,916.24	3,357.72	108.81	109.94	-151.74	-401.18	-4,369.58	971.67	850.46	121.22	8.016			
7,000.00	2,499.44	8,016.23	3,352.27	111.26	112.37	-151.69	-398.10	-4,469.37	970.13	846.11	124.02	7.822			
7,100.00	2,495.75	8,116.21	3,346.83	113.71	114.80	-151.64	-395.02	-4,569.16	968.59	841.75	126.84	7.636			
7,200.00	2,492.05	8,216.20	3,341.38	116.15	117.23	-151.59	-391.94	-4,668.95	967.05	837.39	129.66	7.458			
7,300.00	2,488.36	8,316.18	3,335.93	118.60	119.66	-151.54	-388.86	-4,768.74	965.51	833.02	132.49	7.287			
7,400.00	2,484.66	8,416.17	3,330.48	121.05	122.10	-151.49	-385.78	-4,868.52	963.97	828.64	135.33	7.123			
7,500.00	2,480.97	8,516.15	3,325.03	123.50	124.53	-151.44	-382.70	-4,968.31	962.43	824.26	138.17	6.965			
7,600.00	2,477.27	8,616.14	3,319.58	125.95	126.97	-151.39	-379.62	-5,068.10	960.89	819.87	141.02	6.814			
7,700.00	2,473.58	8,716.12	3,314.13	128.40	129.41	-151.33	-376.54	-5,167.89	959.35	815.47	143.88	6.668			
7,800.00	2,469.88	8,816.11	3,308.68	130.85	131.84	-151.28	-373.46	-5,267.68	957.82	811.07	146.75	6.527			
7,900.00	2,466.19	8,916.09	3,303.23	133.30	134.28	-151.23	-370.38	-5,367.47	956.28	806.66	149.63	6.391			
8,000.00	2,462.49	9,016.08	3,297.78	135.75	136.59	-151.18	-367.30	-5,467.26	954.75	802.33	152.42	6.264			
8,100.00	2,458.80	9,103.79	3,293.00	138.20	138.04	-151.14	-364.60	-5,554.80	953.29	798.51	154.79	6.159			
8,102.36	2,458.71	9,103.79	3,293.00	138.26	138.04	-151.14	-364.60	-5,554.80	953.29	798.45	154.83	6.157			
8,122.27	2,457.97	9,103.79	3,293.00	138.74	138.04	-151.14	-364.60	-5,554.80	953.50	798.29	155.21	6.143 SF			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company:	SILVERBACK EXPLORATION	Local Co-ordinate Reference:	Well Roche 102H
Project:	EDDY COUNTY, NM (NAD83) NMEZ GRID	TVD Reference:	3418+20 @ 3438.00usft (GL+KB)
Reference Site:	Roche Pad	MD Reference:	3418+20 @ 3438.00usft (GL+KB)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Roche 102H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Roche 102H	Database:	PRIME_EDM
Reference Design:	Plan 1r0	Offset TVD Reference:	Reference Datum

Offset Design													Roche Pad - Roche 202H - Roche 202H for AC - Plan 1r0	Offset Site Error:	0.00 usft
Survey Program: 0-MWD														Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
0.00	0.00	0.00	0.00	0.00	0.00	-80.54	10.00	-60.00	60.83						
100.00	100.00	100.00	100.00	0.31	0.31	-80.54	10.00	-60.00	60.83	60.40	0.43	142.475			
200.00	200.00	200.00	200.00	0.95	0.95	-80.54	10.00	-60.00	60.83	59.45	1.38	44.143			
300.00	300.00	300.00	300.00	1.46	1.46	-80.54	10.00	-60.00	60.83	58.63	2.20	27.681			
400.00	400.00	400.00	400.00	1.89	1.89	-80.54	10.00	-60.00	60.83	57.86	2.96	20.520			
500.00	500.00	500.00	500.00	2.31	2.31	-80.54	10.00	-60.00	60.83	57.12	3.71	16.390	CC		
600.00	599.95	602.44	602.39	2.99	3.37	177.32	11.41	-57.65	61.43	55.73	5.70	10.778			
700.00	699.63	704.62	704.23	4.69	5.05	-177.36	15.64	-50.61	63.59	54.81	8.78	7.245	ES		
800.00	798.77	806.29	804.98	6.00	6.27	-169.41	22.62	-38.99	68.27	57.60	10.67	6.399			
900.00	897.10	905.91	903.12	6.67	6.49	-161.27	31.43	-24.33	77.12	66.06	11.07	6.969			
1,000.00	995.13	1,004.87	1,000.58	6.85	6.69	-155.30	40.29	-9.60	88.63	77.48	11.14	7.953			
1,100.00	1,093.16	1,103.84	1,098.04	7.06	6.91	-150.73	49.14	5.13	100.86	89.42	11.44	8.816			
1,200.00	1,191.18	1,202.80	1,195.50	7.29	7.14	-147.17	57.99	19.86	113.59	101.72	11.87	9.568			
1,300.00	1,289.21	1,301.77	1,292.96	7.53	7.39	-144.33	66.84	34.60	126.67	114.27	12.40	10.212			
1,400.00	1,387.24	1,400.73	1,390.42	7.78	7.65	-142.02	75.69	49.33	140.00	126.99	13.01	10.762			
1,500.00	1,485.27	1,499.70	1,487.88	8.05	7.91	-140.12	84.54	64.06	153.51	139.85	13.67	11.232			
1,600.00	1,583.29	1,598.66	1,585.35	8.32	8.19	-138.52	93.39	78.79	167.17	152.80	14.37	11.635			
1,700.00	1,681.32	1,697.63	1,682.81	8.61	8.47	-137.17	102.24	93.52	180.93	165.83	15.10	11.983			
1,800.00	1,779.35	1,796.59	1,780.27	8.90	8.77	-136.00	111.09	108.25	194.77	178.92	15.86	12.284			
1,900.00	1,877.42	1,895.57	1,877.74	9.19	9.07	-137.24	119.95	122.98	208.54	191.93	16.61	12.553			
2,000.00	1,976.92	1,994.28	1,974.95	9.66	9.37	135.23	128.77	137.67	216.43	198.97	17.46	12.394			
2,100.00	2,076.23	2,090.28	2,069.50	10.75	9.68	78.90	137.36	151.96	217.64	199.34	18.31	11.888			
2,157.82	2,132.38	2,143.41	2,121.82	11.23	9.85	80.16	142.11	159.87	217.36	198.92	18.44	11.788			
2,200.00	2,172.35	2,180.67	2,158.51	11.59	9.97	83.10	145.44	165.42	217.77	199.31	18.46	11.797			
2,300.00	2,262.35	2,262.69	2,239.29	12.29	10.25	92.40	152.78	177.62	225.31	206.89	18.42	12.232			
2,400.00	2,343.49	2,333.86	2,309.37	12.85	10.49	101.08	159.14	188.22	248.93	230.07	18.86	13.197			
2,500.00	2,413.32	2,392.00	2,366.63	13.30	10.69	106.19	164.34	196.87	292.81	272.84	19.97	14.663			
2,600.00	2,469.73	2,435.38	2,409.36	13.63	10.84	106.86	168.22	203.33	355.18	333.98	21.19	16.758			
2,700.00	2,519.73	2,471.87	2,445.29	13.84	10.97	113.57	171.49	208.76	429.52	407.34	22.18	19.367			
2,800.00	2,569.70	2,508.33	2,481.19	14.28	11.10	118.67	174.75	214.19	510.07	487.15	22.92	22.254			
2,900.00	2,610.92	2,535.55	2,508.00	15.25	11.19	107.16	177.18	218.24	596.55	573.06	23.49	25.392			
3,000.00	2,635.73	2,545.80	2,518.09	16.76	11.23	86.92	178.10	219.76	687.91	664.02	23.88	28.804			
3,100.00	2,643.36	2,538.75	2,511.15	18.57	11.20	61.69	177.47	218.71	780.81	756.69	24.12	32.371			
3,200.00	2,639.86	2,520.71	2,493.39	20.54	11.14	55.65	175.86	216.03	873.59	849.34	24.25	36.025			
3,300.00	2,636.17	4,136.86	3,403.25	22.62	25.32	150.78	376.62	-741.73	880.20	851.37	28.83	30.526			
3,400.00	2,632.47	4,236.84	3,397.88	24.79	27.34	150.74	379.50	-841.53	878.64	847.61	31.03	28.312			
3,500.00	2,628.78	4,336.83	3,392.52	27.00	29.42	150.70	382.38	-941.33	877.08	843.76	33.32	26.320			
3,600.00	2,625.08	4,436.81	3,387.15	29.26	31.55	150.66	385.26	-1,041.13	875.53	839.84	35.69	24.533			
3,700.00	2,621.39	4,536.80	3,381.79	31.55	33.73	150.61	388.15	-1,140.93	873.97	835.85	38.11	22.931			
3,800.00	2,617.69	4,636.79	3,376.43	33.86	35.94	150.57	391.03	-1,240.73	872.41	831.82	40.59	21.493			
3,900.00	2,614.00	4,736.77	3,371.06	36.19	38.18	150.53	393.91	-1,340.53	870.85	827.74	43.11	20.200			
4,000.00	2,610.30	4,836.76	3,365.70	38.54	40.45	150.49	396.79	-1,440.33	869.30	823.63	45.67	19.035			
4,100.00	2,606.61	4,936.74	3,360.33	40.90	42.74	150.45	399.68	-1,540.13	867.74	819.48	48.26	17.981			
4,200.00	2,602.91	5,036.73	3,354.97	43.28	45.04	150.40	402.56	-1,639.93	866.19	815.31	50.88	17.025			
4,300.00	2,599.22	5,136.71	3,349.61	45.66	47.36	150.36	405.44	-1,739.73	864.63	811.11	53.52	16.155			
4,400.00	2,595.52	5,236.70	3,344.24	48.05	49.69	150.32	408.32	-1,839.53	863.08	806.89	56.19	15.361			
4,500.00	2,591.83	5,336.69	3,338.88	50.45	52.04	150.27	411.21	-1,939.34	861.52	802.65	58.87	14.634			
4,600.00	2,588.13	5,436.67	3,333.51	52.85	54.39	150.23	414.09	-2,039.14	859.97	798.39	61.58	13.966			
4,700.00	2,584.44	5,536.66	3,328.15	55.26	56.75	150.19	416.97	-2,138.94	858.41	794.12	64.30	13.351			
4,800.00	2,580.74	5,636.64	3,322.79	57.67	59.12	150.14	419.85	-2,238.74	856.86	789.83	67.03	12.783			
4,900.00	2,577.04	5,736.63	3,317.42	60.08	61.50	150.10	422.74	-2,338.54	855.31	785.53	69.78	12.257			
5,000.00	2,573.35	5,836.62	3,312.06	62.50	63.88	150.06	425.62	-2,438.34	853.76	781.21	72.54	11.769			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company:	SILVERBACK EXPLORATION	Local Co-ordinate Reference:	Well Roche 102H
Project:	EDDY COUNTY, NM (NAD83) NMEZ GRID	TVD Reference:	3418+20 @ 3438.00usft (GL+KB)
Reference Site:	Roche Pad	MD Reference:	3418+20 @ 3438.00usft (GL+KB)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Roche 102H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Roche 102H	Database:	PRIME_EDM
Reference Design:	Plan 1r0	Offset TVD Reference:	Reference Datum

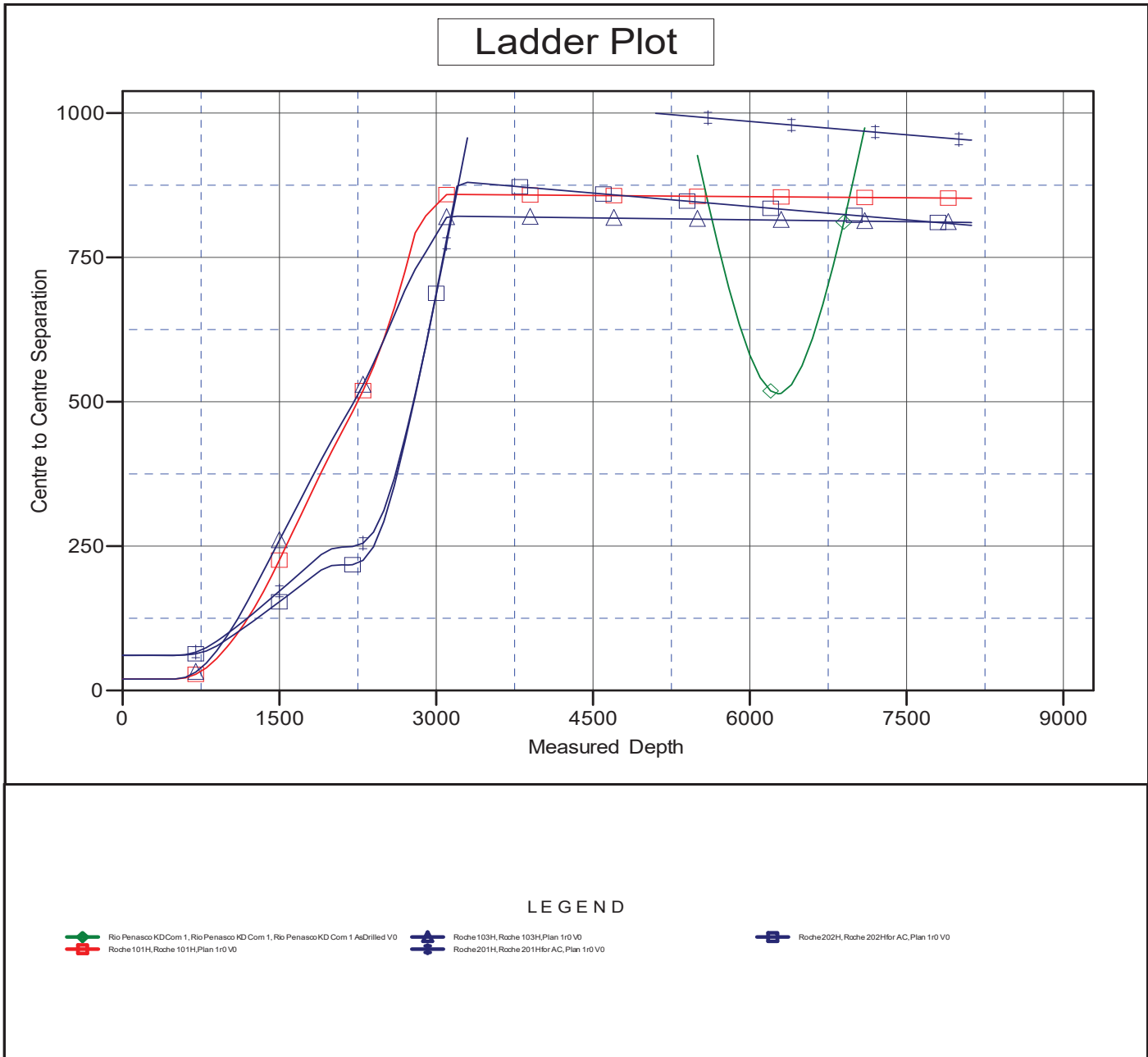
Offset Design													Roche Pad - Roche 202H - Roche 202H for AC - Plan 1r0	Offset Site Error:	0.00 usft
Survey Program: 0-MWD														Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
5,100.00	2,569.65	5,936.60	3,306.69	64.93	66.27	150.01	428.50	-2,538.14	852.21	776.89	75.32	11.315			
5,200.00	2,565.96	6,036.59	3,301.33	67.35	68.66	149.97	431.39	-2,637.94	850.66	772.55	78.11	10.891			
5,300.00	2,562.26	6,136.57	3,295.97	69.78	71.06	149.92	434.27	-2,737.74	849.11	768.20	80.90	10.495			
5,400.00	2,558.57	6,236.56	3,290.60	72.21	73.46	149.88	437.15	-2,837.54	847.56	763.84	83.71	10.125			
5,500.00	2,554.87	6,336.54	3,285.24	74.64	75.86	149.83	440.03	-2,937.34	846.01	759.48	86.53	9.777			
5,600.00	2,551.18	6,436.53	3,279.88	77.07	78.27	149.79	442.92	-3,037.14	844.46	755.10	89.36	9.450			
5,700.00	2,547.48	6,536.52	3,274.51	79.51	80.68	149.74	445.80	-3,136.94	842.91	750.72	92.19	9.143			
5,800.00	2,543.79	6,636.50	3,269.15	81.94	83.09	149.70	448.68	-3,236.74	841.36	746.32	95.04	8.853			
5,900.00	2,540.09	6,736.49	3,263.78	84.38	85.51	149.65	451.56	-3,336.54	839.81	741.92	97.90	8.579			
6,000.00	2,536.40	6,836.47	3,258.42	86.82	87.93	149.61	454.45	-3,436.34	838.27	737.51	100.76	8.320			
6,100.00	2,532.70	6,936.46	3,253.06	89.26	90.35	149.56	457.33	-3,536.14	836.72	733.09	103.63	8.074			
6,200.00	2,529.01	7,036.45	3,247.69	91.70	92.77	149.52	460.21	-3,635.94	835.18	728.67	106.51	7.841			
6,300.00	2,525.31	7,136.43	3,242.33	94.14	95.19	149.47	463.09	-3,735.74	833.63	724.23	109.40	7.620			
6,400.00	2,521.62	7,236.42	3,236.96	96.59	97.62	149.43	465.98	-3,835.54	832.09	719.79	112.29	7.410			
6,500.00	2,517.92	7,336.40	3,231.60	99.03	100.04	149.38	468.86	-3,935.34	830.54	715.35	115.20	7.210			
6,600.00	2,514.23	7,436.39	3,226.24	101.47	102.47	149.33	471.74	-4,035.14	829.00	710.89	118.11	7.019			
6,700.00	2,510.53	7,536.37	3,220.87	103.92	104.90	149.29	474.63	-4,134.94	827.46	706.43	121.03	6.837			
6,800.00	2,506.83	7,636.36	3,215.51	106.37	107.33	149.24	477.51	-4,234.74	825.91	701.96	123.95	6.663			
6,900.00	2,503.14	7,736.35	3,210.14	108.81	109.76	149.19	480.39	-4,334.54	824.37	697.49	126.89	6.497			
7,000.00	2,499.44	7,836.33	3,204.78	111.26	112.19	149.14	483.27	-4,434.34	822.83	693.00	129.83	6.338			
7,100.00	2,495.75	7,936.32	3,199.42	113.71	114.63	149.10	486.16	-4,534.14	821.29	688.51	132.78	6.186			
7,200.00	2,492.05	8,036.30	3,194.05	116.15	117.06	149.05	489.04	-4,633.94	819.75	684.02	135.73	6.039			
7,300.00	2,488.36	8,136.29	3,188.69	118.60	119.50	149.00	491.92	-4,733.74	818.21	679.52	138.69	5.899			
7,400.00	2,484.66	8,236.28	3,183.32	121.05	121.93	148.95	494.80	-4,833.54	816.67	675.01	141.66	5.765			
7,500.00	2,480.97	8,336.26	3,177.96	123.50	124.37	148.91	497.69	-4,933.34	815.13	670.49	144.64	5.636			
7,600.00	2,477.27	8,436.25	3,172.60	125.95	126.81	148.86	500.57	-5,033.14	813.60	665.97	147.62	5.511			
7,700.00	2,473.58	8,536.23	3,167.23	128.40	129.25	148.81	503.45	-5,132.94	812.06	661.44	150.62	5.392			
7,800.00	2,469.88	8,636.22	3,161.87	130.85	131.69	148.76	506.33	-5,232.74	810.52	656.91	153.61	5.276			
7,900.00	2,466.19	8,736.20	3,156.50	133.30	134.13	148.71	509.22	-5,332.54	808.99	652.37	156.62	5.165			
8,000.00	2,462.49	8,836.19	3,151.14	135.75	136.57	148.66	512.10	-5,432.34	807.45	647.82	159.63	5.058			
8,100.00	2,458.80	8,936.18	3,145.78	138.20	139.01	148.61	514.98	-5,532.14	805.92	643.27	162.65	4.955			
8,122.27	2,457.97	8,951.03	3,144.98	138.74	139.37	148.61	515.41	-5,546.97	805.61	642.36	163.25	4.935 SF			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company:	SILVERBACK EXPLORATION	Local Co-ordinate Reference:	Well Roche 102H
Project:	EDDY COUNTY, NM (NAD83) NMEZ GRID	TVD Reference:	3418+20 @ 3438.00usft (GL+KB)
Reference Site:	Roche Pad	MD Reference:	3418+20 @ 3438.00usft (GL+KB)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Roche 102H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Roche 102H	Database:	PRIME_EDM
Reference Design:	Plan 1r0	Offset TVD Reference:	Reference Datum

Reference Depths are relative to 3418+20 @ 3438.00usft (GL+KB) Coordinates are relative to: Roche 102H
 Offset Depths are relative to Offset Datum Coordinate System is US State Plane 1983, New Mexico Eastern Zone
 Central Meridian is -104.3333333 Grid Convergence at Surface is: -0.06°



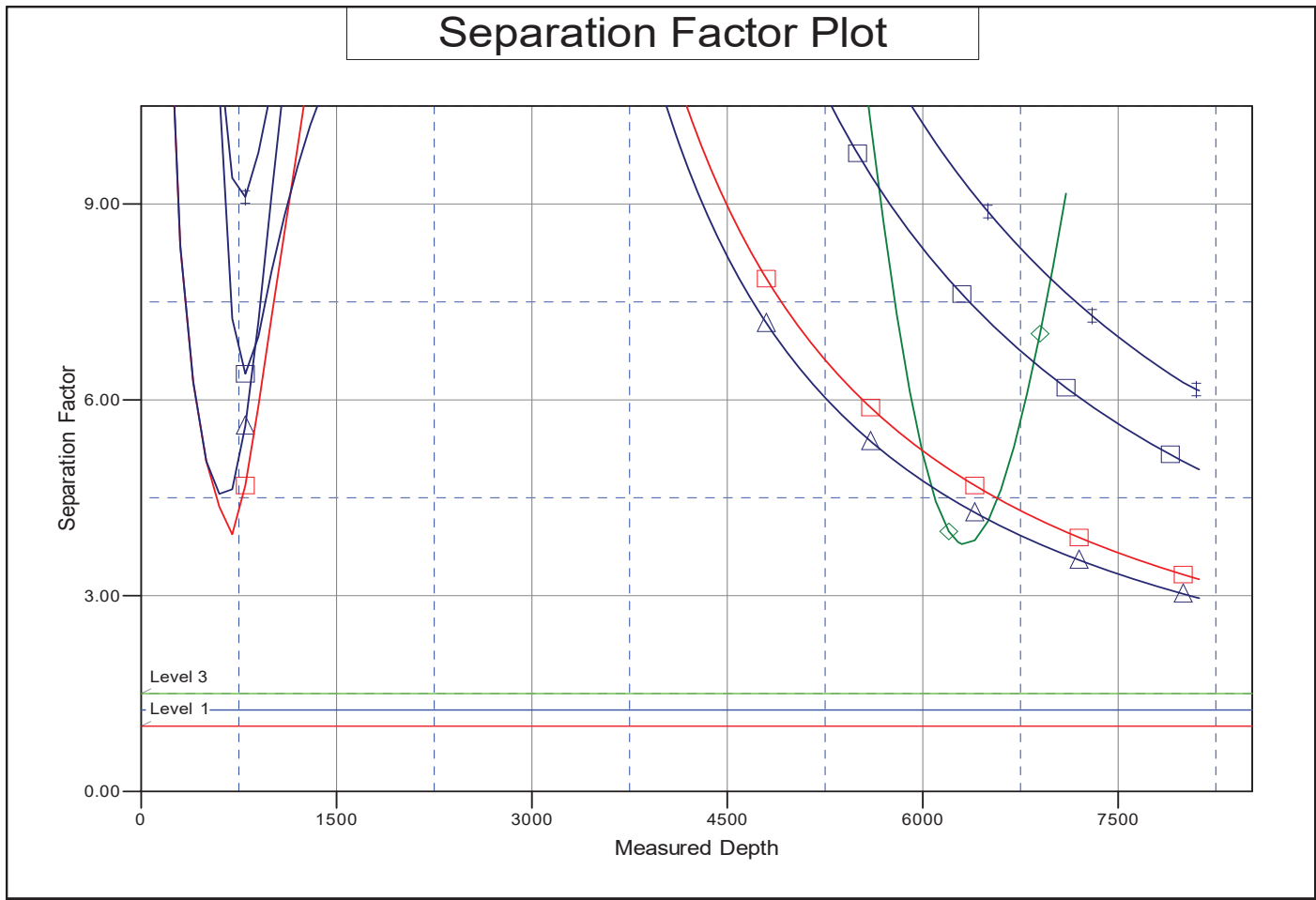
CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company:	SILVERBACK EXPLORATION	Local Co-ordinate Reference:	Well Roche 102H
Project:	EDDY COUNTY, NM (NAD83) NMEZ GRID	TVD Reference:	3418+20 @ 3438.00usft (GL+KB)
Reference Site:	Roche Pad	MD Reference:	3418+20 @ 3438.00usft (GL+KB)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Roche 102H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Roche 102H	Database:	PRIME_EDM
Reference Design:	Plan 1r0	Offset TVD Reference:	Reference Datum

Reference Depths are relative to 3418+20 @ 3438.00usft (GL+KB)
 Offset Depths are relative to Offset Datum
 Central Meridian is -104.3333333

Coordinates are relative to: Roche 102H
 Coordinate System is US State Plane 1983, New Mexico Eastern Zone
 Grid Convergence at Surface is: -0.06°



LEGEND

Rio Penasco KD Com 1, Rio Penasco KD Com 1, Rio Penasco KD Com 1 AsDrilled V0	Roche 103H, Roche 103H, Plan 1r0 V0 Roche 201H, Roche 201H for AC, Plan 1r0 V0	Roche 202H, Roche 202H for AC, Plan 1r0 V0
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CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

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

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

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

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

Form C-101
August 1, 2011
Permit 354408

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 30-015-54388
4. Property Code 335016	5. Property Name Roche	6. Well No. 103H

7. Surface Location

UL - Lot M	Section 1	Township 19S	Range 25E	Lot Idn	Feet From 205	N/S Line S	Feet From 427	E/W Line W	County Eddy
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8. Proposed Bottom Hole Location

UL - Lot M	Section 2	Township 19S	Range 25E	Lot Idn M	Feet From 920	N/S Line S	Feet From 100	E/W Line W	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 3416
16. Multiple N	17. Proposed Depth 8384	18. Formation Yeso	19. Contractor	20. Spud Date 2/17/2024
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	1270	281	0
Prod	8.75	7	32	3354	172	0
Prod	8.75	5.5	20	8384	1557	2138

Casing/Cement Program: Additional Comments

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22. Proposed Blowout Prevention Program

Type Double Ram	Working Pressure 5000	Test Pressure 5000	Manufacturer Shaffer
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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: 11/17/2023	OIL CONSERVATION DIVISION Approved By: Ward Rikala Title: _____ Approved Date: 11/29/2023 Expiration Date: 11/29/2025 Conditions of Approval Attached
Phone: 303-513-0990	

District I
1625 N. French Dr., Hobbs, NM 88240
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District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

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

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

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-015 -54388	² Pool Code 50270	³ Pool Name Penasco Draw, SA-YES0
⁴ Property Code 335016	⁵ Property Name ROCHE	
⁷ OGRID No. 330968	⁸ Operator Name SILVERBACK OPERATING II, LLC	⁶ Well Number 103H
		⁹ Elevation 3,416'

¹⁰ Surface Location

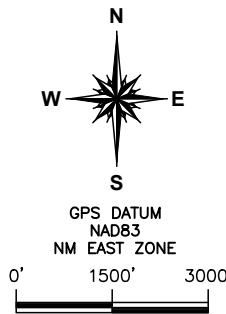
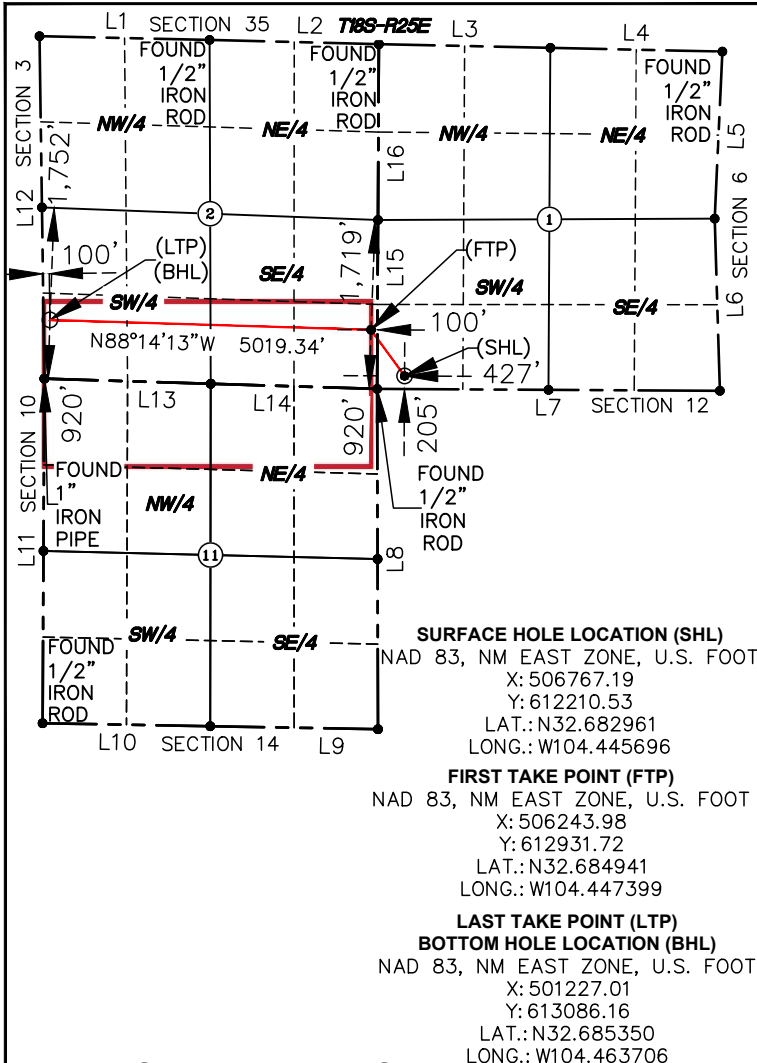
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
M	1	19-S	25-E		205'	SOUTH	427'	WEST	EDDY

¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
M	2	19-S	25-E		920'	SOUTH	100'	WEST	EDDY

¹² Dedicated Acres 320	¹³ Joint or Infill Infill	¹⁴ Consolidation Code	¹⁵ Order No.
--------------------------------------	---	----------------------------------	-------------------------

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.



LINE TABLE		
LINE #	BEARING	LENGTH
L1	S88°44'49\"E	2,658'
L2	S88°34'25\"E	2,646'
L3	S88°45'39\"E	2,680'
L4	S88°45'16\"E	2,688'
L5	S02°37'33\"W	2,613'
L6	S01°43'23\"E	2,691'
L7	N89°40'55\"W	5,355'
L8	S00°08'24\"E	5,317'
L9	N88°58'36\"W	2,621'
L10	N88°58'59\"W	2,620'
L11	N00°17'39\"E	5,384'
L12	N00°48'52\"W	5,351'
L13	S88°14'28\"E	2,601'
L14	S88°13'57\"E	2,601'
L15	N00°17'00\"E	2,639'
L16	N00°17'09\"E	2,748'

¹⁷ OPERATOR CERTIFICATION

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

Fatma Abdallah 11/14/2023
Signature Date

Fatma Abdallah

Printed Name

fabdallah@silverbackexp.com

E-mail Address

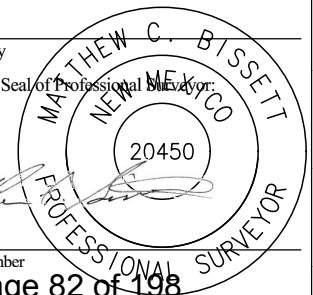
¹⁸ SURVEYOR CERTIFICATION

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

11/13/23

Date of Survey

Signature and Seal of Professional Surveyor



20450

Certificate Number

District I
 1625 N. French Dr., Hobbs, NM 88240
 Phone:(575) 393-6161 Fax:(575) 393-0720
District II
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 Phone:(575) 748-1283 Fax:(575) 748-9720
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State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

Form APD Conditions
 Permit 354408

PERMIT CONDITIONS OF APPROVAL

Operator Name and Address: Silverback Operating II, LLC [330968] 19707 IH10 West, Suite 201 San Antonio, TX 78256	API Number: 30-015-54388
	Well: Roche #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

Submit Electronically
 Via E-permitting

Oil Conservation Division
 1220 South St. Francis Dr.
 Santa Fe, NM 87505

NATURAL GAS MANAGEMENT PLAN

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

Section 1 – Plan Description Effective May 25, 2021

I. Operator: Silverback Operating II, LLC. **OGRID:** 330968 **Date:** 11 / 16 / 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
See Attached						

IV. Central Delivery Point Name: Roche 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
See Attached						

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.

IX.

X.

XI.

XII.

XIII.

XIV.

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: <i>Fatma Abdallah</i>
Printed Name: Fatma Abdallah
Title: Regulatory Manager
E-mail Address: fabdallah@silverbackexp.com
Date: 11/16/23
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 including a low probably, high volume production case (approximately 75% higher than type curve or most likely amount of production). 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. The high volume case was used to size equipment, piping and instrumentation. Equipment sizing is based on drop settlement and limits the amount of carry over to the gas phase.

Each well has a dedicated 3 phase separator and gas from that separator is taken directly to gas sales. 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 flare. 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 flare which is sized to accommodate peak expected production volume. Flash volumes were estimated using the high volume case and process modeling software.

Operational Practices

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 will only occur during 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:

- Power generation on lease – Natural gas driven gen set to produce power required to run supply well pad electrical loads
- Compression on lease – gas lift or gas compression as required
- 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 flare.

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

Section 1-Plan Description -III. Wells

Well Name	API	ULSTR	Footages	Anticipated Oil BBL/D	Anticipated Gas MCF/D	Anticipated Produced Water BBL/D
Roche 101	Pending	M-1-19S-25E	165' FSL & 427' FWL	515	440	3000
Roche 102	Pending	M-1-19S-25E	185' FSL & 427' FWL	515	440	3000
Roche 103	Pending	M-1-19S-25E	205' FSL & 427' FWL	515	440	3000

V. Anticipated Schedule

Well Name	API	Spud date	TD Reached Date	Completion Commencement Date	Initial Flow Back Date	First Production Date
Roche 101	Pending	2/7/2024	4/22/2024	5/18/2024	6/9/2024	6/9/2024
Roche 102	Pending	2/12/2024	5/1/2024	5/18/2024	6/10/2024	6/10/2024
Roche 103	Pending	2/17/2024	5/11/2024	5/18/2024	6/11/2024	6/11/2024

Section 2- Enhanced Plan

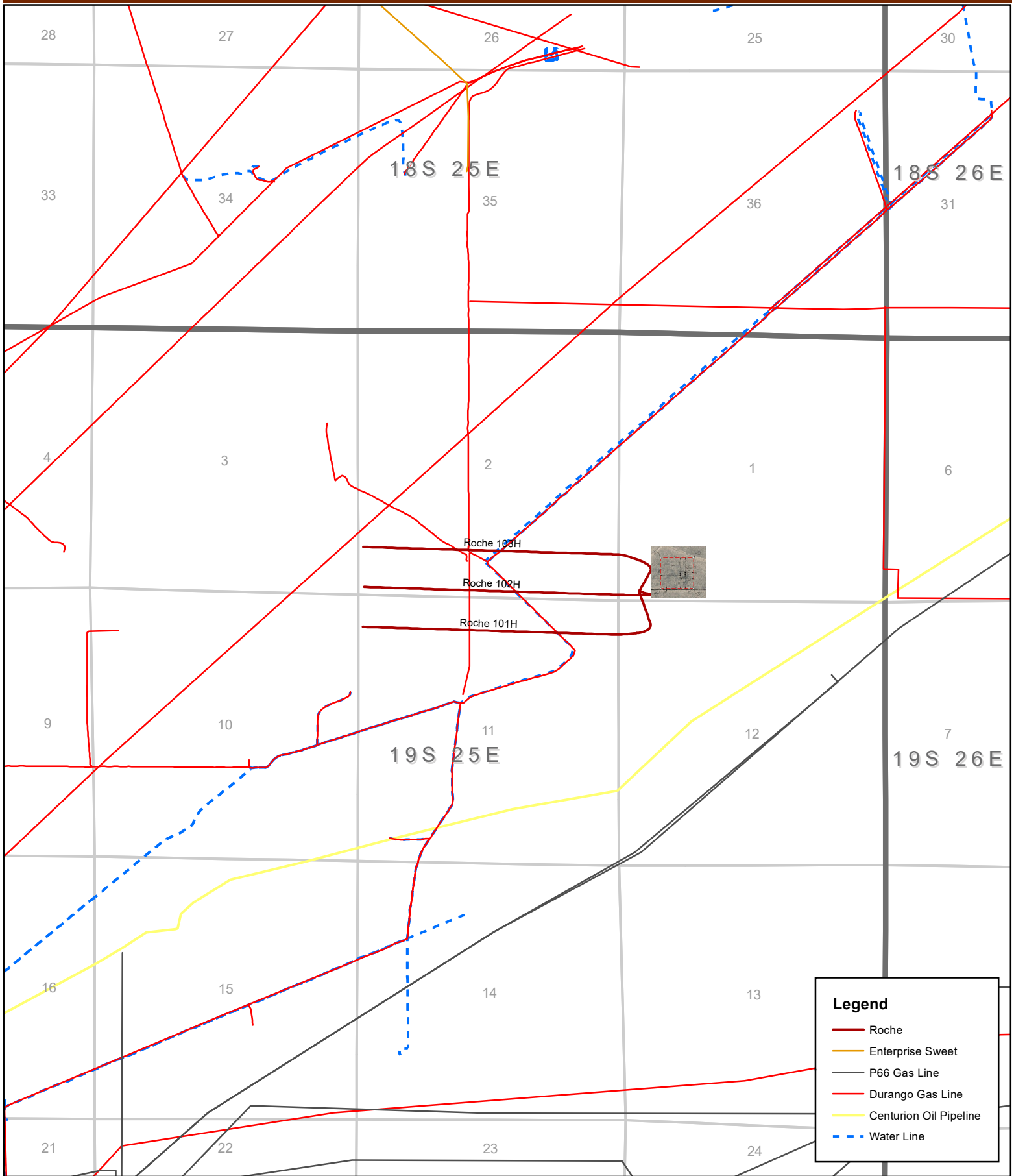
IX. Anticipated Natural Gas Production

Well	API	Anticipated Average Natural Gas Rate MCF/D	Anticipated Volume of Natural Gas for the First Year MCF
Roche 101	Pending	440	160600
Roche 102	Pending	440	160600
Roche 103	Pending	440	160600

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
Silverback Operating II, LLC	Roche CTB	M-1-19S-25E	6/9/2024	1890 MCF/D

Silverback Exploration Roche



Legend

- Roche
- Enterprise Sweet
- P66 Gas Line
- Durango Gas Line
- Centurion Oil Pipeline
- Water Line



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.

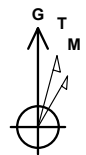
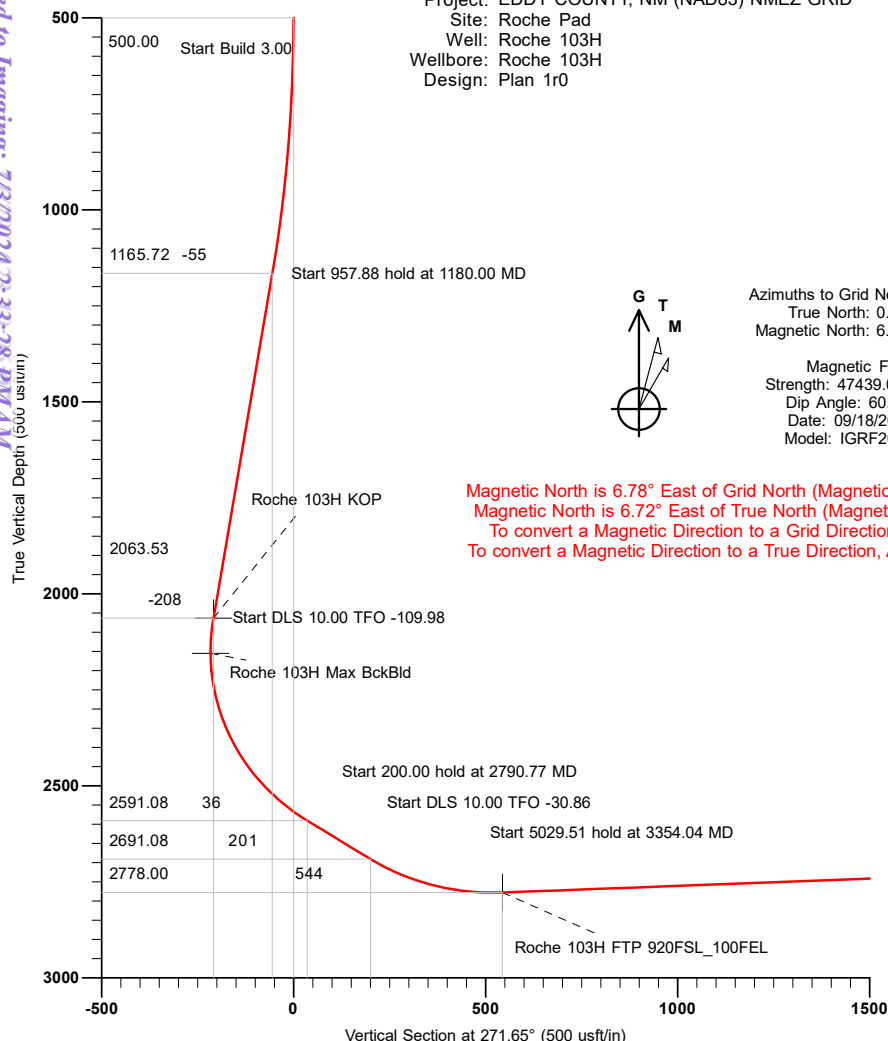
API #		
Operator Name:		Property Name:
		Well Number

Estimated Formation Tops

Formation:	Top:	Formation:	Top:

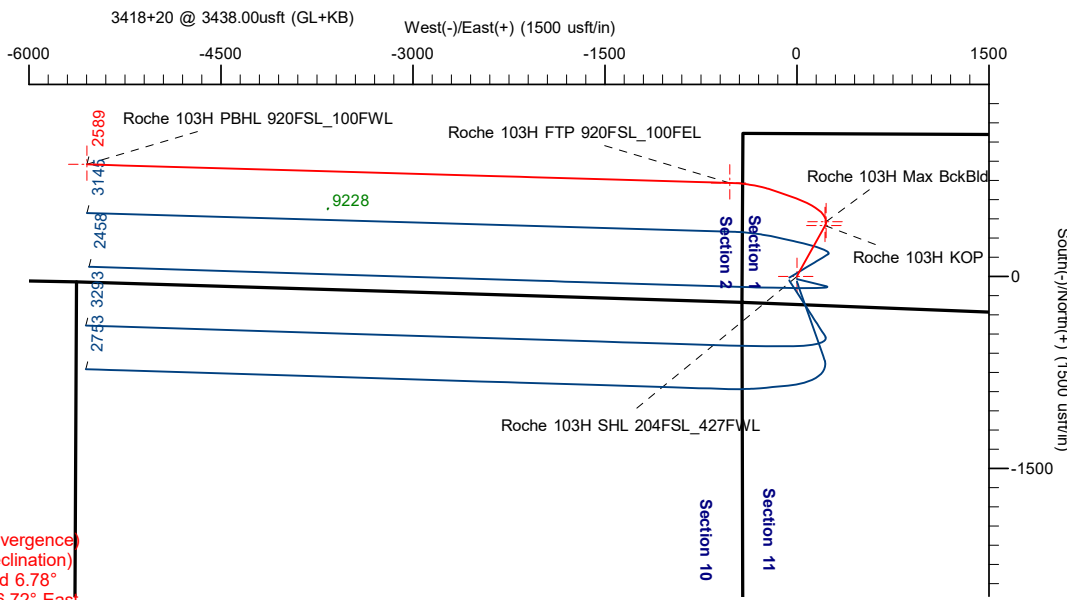
SILVERBACK EXPLORATION

Project: EDDY COUNTY, NM (NAD83) NMEZ GRID
 Site: Roche Pad
 Well: Roche 103H
 Wellbore: Roche 103H
 Design: Plan 1r0



Azimuths to Grid North
 True North: 0.06°
 Magnetic North: 6.78°
 Magnetic Field
 Strength: 47439.0nT
 Dip Angle: 60.11°
 Date: 09/18/2023
 Model: IGRF2020

Magnetic North is 6.78° East of Grid North (Magnetic Convergence)
 Magnetic North is 6.72° East of True North (Magnetic Declination)
 To convert a Magnetic Direction to a Grid Direction, Add 6.78°
 To convert a Magnetic Direction to a True Direction, Add 6.72° East

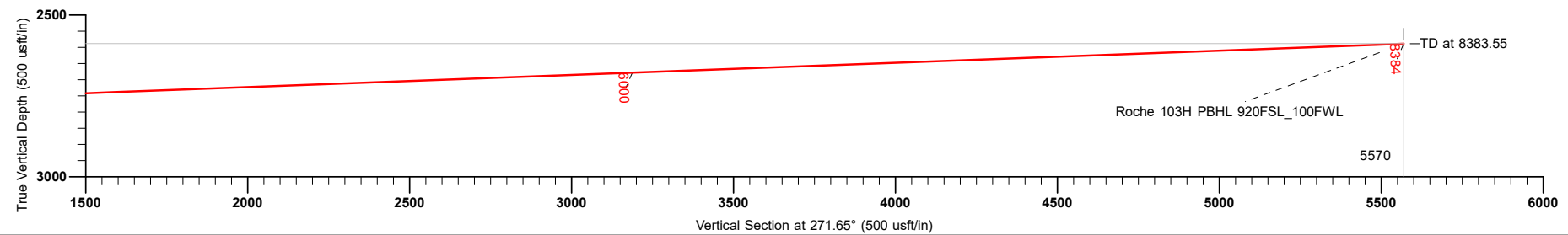


DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
Roche 103H SHL 204FSL_427FWL	0.00	0.00	0.00	612210.50	506767.20	Point
Roche 103H KOP	2063.64	396.83	219.97	612607.33	506987.17	Point
Roche 103H Max BckBld	2155.10	427.70	228.25	612638.20	506995.45	Point
Roche 103H PBHL 920FSL_100FEL	2589.00	875.40	-5546.60	613085.90	501220.60	Point
Roche 103H FTP 920FSL_100FEL	2778.00	730.70	-523.60	612941.20	506243.60	Point

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	V Sect	Annotation
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Start Build 3.00
2	500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	Start 957.88 hold at 1180.00 MD
3	1180.00	20.40	29.00	1165.72	104.76	58.07	3.00	29.00	-55.03	Start DLS 10.00 TFO -109.98
4	2137.88	20.40	29.00	2063.53	396.79	219.94	0.00	0.00	-208.43	Start 200.00 hold at 2790.77 MD
5	2790.77	60.00	289.35	2591.08	614.02	-17.95	10.00	-109.98	35.62	Start DLS 10.00 TFO -30.86
6	2990.77	60.00	289.35	2691.08	671.41	-181.37	0.00	0.00	200.62	Start 5029.51 hold at 3354.04 MD
7	3354.04	92.15	271.65	2778.00	730.75	-522.72	10.00	-30.86	543.55	TD at 8383.55
8	8383.55	92.15	271.65	2589.00	875.40	-5546.60	0.00	0.00	5569.51	



Plan: Plan 1r0 (Roche 103H/Roche 103H)
 Created By: Mekka Williams
 eSomina Well Design
 mekka@esominawelldesign.com
 18:02, September 2023

PRIME SOLUTIONS SERVICES



SILVERBACK EXPLORATION

3418+20 @ 3438.00usft (GL+KB)

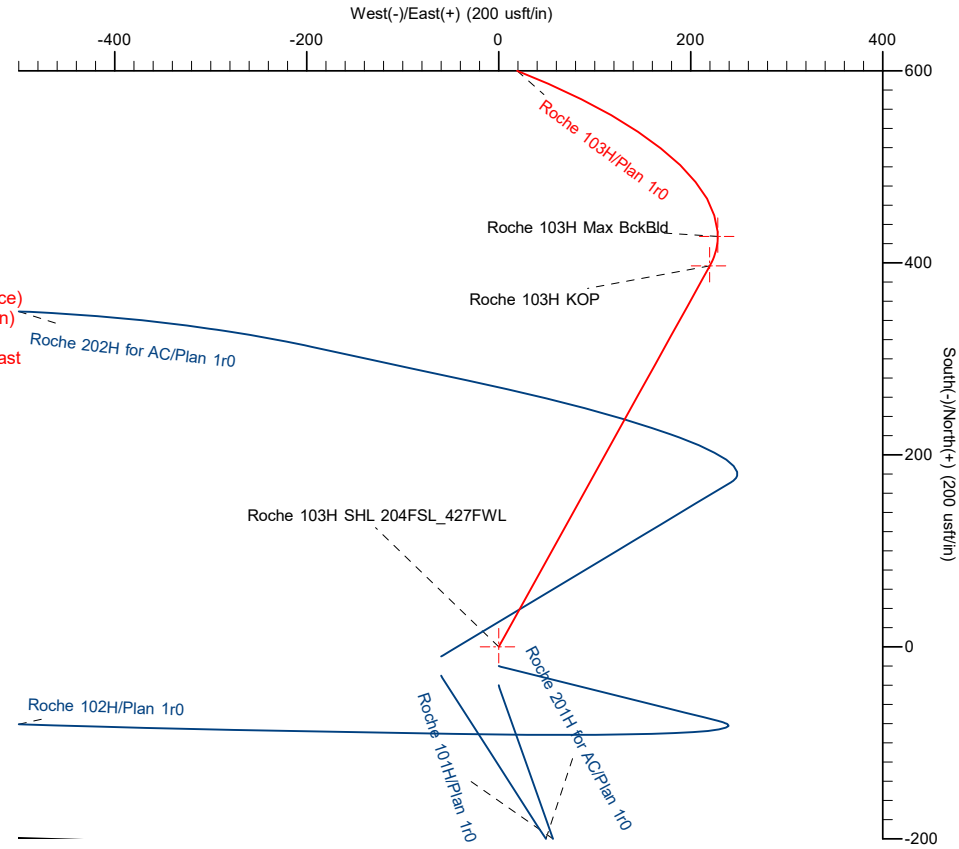
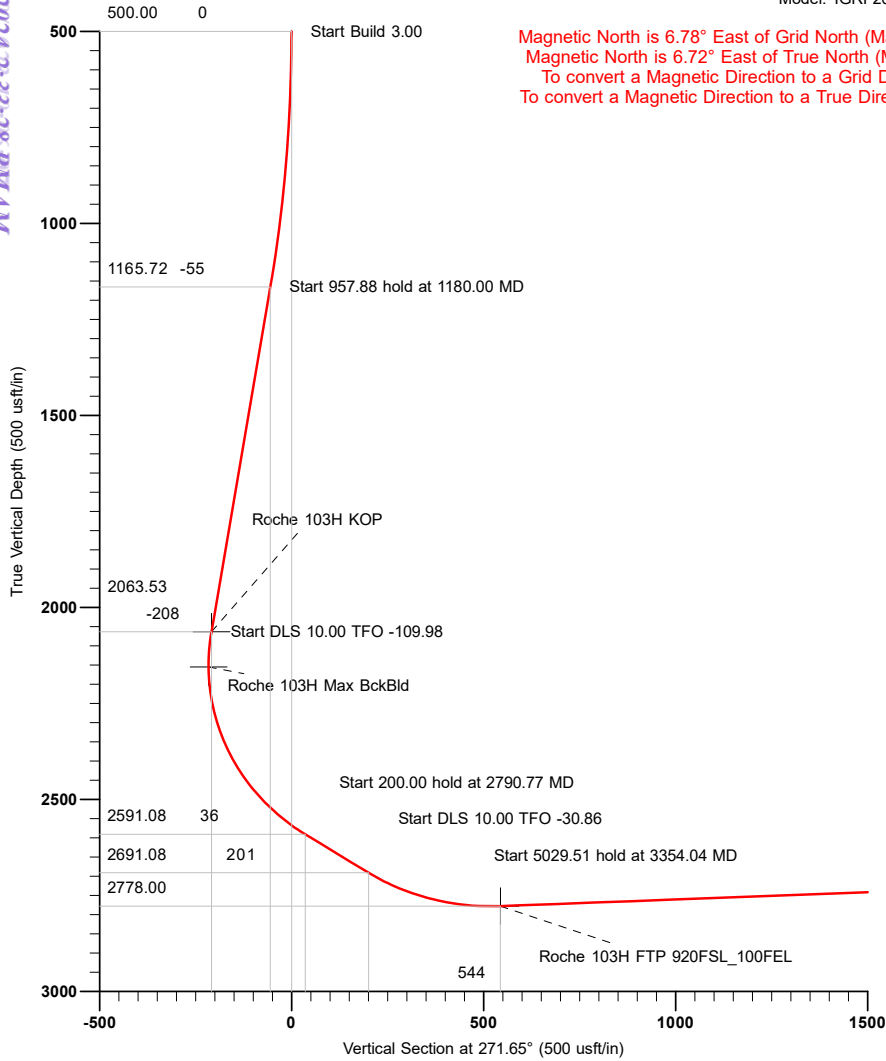
Project: EDDY COUNTY, NM (NAD83) NMEZ GRID
 Site: Roche Pad
 Well: Roche 103H
 Wellbore: Roche 103H
 Design: Plan 1r0



Azimuths to Grid North
 True North: 0.06°
 Magnetic North: 6.78°

Magnetic Field
 Strength: 47439.0nT
 Dip Angle: 60.11°
 Date: 09/18/2023
 Model: IGRF2020

Magnetic North is 6.78° East of Grid North (Magnetic Convergence)
 Magnetic North is 6.72° East of True North (Magnetic Declination)
 To convert a Magnetic Direction to a Grid Direction, Add 6.78°
 To convert a Magnetic Direction to a True Direction, Add 6.72° East



DESIGN TARGET DETAILS

Name	TVD	+N-S	+E-W	Northing	Easting	Shape
Roche 103H SHL 204FSL_427FWL	0.00	0.00	0.00	612210.50	506767.20	Point
Roche 103H KOP	2063.64	396.83	219.97	612607.33	506987.17	Point
Roche 103H Max BckBld	2155.10	427.70	228.25	612638.20	506995.45	Point
Roche 103H PBHL 920FSL_100FWL	2589.00	875.40	-5546.60	613085.90	501220.60	Point
Roche 103H FTP 920FSL_100FEL	2778.00	730.70	-523.60	612941.20	506243.60	Point

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N-S	+E-W	Dleg	TFace	Vsect	Annotation
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	Start Build 3.00
3	1180.00	20.40	29.00	1165.72	104.76	58.07	3.00	29.00	-55.03	Start 957.88 hold at 1180.00 MD
4	2137.88	20.40	29.00	2063.53	396.79	219.94	0.00	0.00	-208.43	Start DLS 10.00 TFO -109.98
5	2790.77	60.00	289.35	2591.08	614.02	-17.95	10.00	-109.98	35.62	Start 200.00 hold at 2790.77 MD
6	2990.77	60.00	289.35	2691.08	671.41	-181.37	0.00	0.00	200.62	Start DLS 10.00 TFO -30.86
7	3354.04	92.15	271.65	2778.00	730.75	-522.72	10.00	-30.86	543.55	Start 5029.51 hold at 3354.04 MD
8	8383.55	92.15	271.65	2589.00	875.40	-5546.60	0.00	0.00	5569.51	TD at 8383.55

Plan: Plan 1r0 (Roche 103H/Roche 103H)
 Created By: Mekka Williams
 eSomina Well Design
 mekka@esominawelldesign.com
 18:05, September 18, 2024

PRIME SOLUTIONS SERVICES



Released to Imaging: 7/3/2024 2:33:28 PM AM

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SILVERBACK EXPLORATION

EDDY COUNTY, NM (NAD83) NMEZ GRID

Roche Pad

Roche 103H

Roche 103H

Plan: Plan 1r0

Standard Planning Report

18 September, 2023

Planning Report

Database:	PRIME_EDM	Local Co-ordinate Reference:	Well Roche 103H
Company:	SILVERBACK EXPLORATION	TVD Reference:	3418+20 @ 3438.00usft (GL+KB)
Project:	EDDY COUNTY, NM (NAD83) NMEZ GRID	MD Reference:	3418+20 @ 3438.00usft (GL+KB)
Site:	Roche Pad	North Reference:	Grid
Well:	Roche 103H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Roche 103H		
Design:	Plan 1r0		

Project	EDDY COUNTY, NM (NAD83) NMEZ GRID		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site	Roche Pad				
Site Position:		Northing:	612,210.50 usft	Latitude:	32.6829605
From:	Map	Easting:	506,767.20 usft	Longitude:	-104.4456955
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	-0.06 °

Well	Roche 103H					
Well Position	+N/-S	0.00 usft	Northing:	612,210.50 usft	Latitude:	32.6829605
	+E/-W	0.00 usft	Easting:	506,767.20 usft	Longitude:	-104.4456955
Position Uncertainty		0.00 usft	Wellhead Elevation:		Ground Level:	3,418.00 usft

Wellbore	Roche 103H				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2020	09/18/23	6.72	60.11	47,439.02300251

Design	Plan 1r0			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	271.65

Plan Survey Tool Program	Date	09/18/23		
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	8,383.55	Plan 1r0 (Roche 103H)	MWD OWSG MWD - Standard

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,180.00	20.40	29.00	1,165.72	104.76	58.07	3.00	3.00	0.00	29.00	
2,137.88	20.40	29.00	2,063.53	396.79	219.94	0.00	0.00	0.00	0.00	
2,790.77	60.00	289.35	2,591.08	614.02	-17.95	10.00	6.07	-15.26	-109.98	
2,990.77	60.00	289.35	2,691.08	671.41	-181.37	0.00	0.00	0.00	0.00	
3,354.04	92.15	271.65	2,778.00	730.75	-522.72	10.00	8.85	-4.87	-30.86	
8,383.55	92.15	271.65	2,589.00	875.40	-5,546.60	0.00	0.00	0.00	0.00	Roche 103H PBHL 92

Planning Report

Database:	PRIME_EDM	Local Co-ordinate Reference:	Well Roche 103H
Company:	SILVERBACK EXPLORATION	TVD Reference:	3418+20 @ 3438.00usft (GL+KB)
Project:	EDDY COUNTY, NM (NAD83) NMEZ GRID	MD Reference:	3418+20 @ 3438.00usft (GL+KB)
Site:	Roche Pad	North Reference:	Grid
Well:	Roche 103H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Roche 103H		
Design:	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	0.00
100.00	0.00	0.00	100.00	0.00	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	0.00
300.00	0.00	0.00	300.00	0.00	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	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Start Build 3.00										
600.00	3.00	29.00	599.95	2.29	1.27	-1.20	3.00	3.00	3.00	0.00
700.00	6.00	29.00	699.63	9.15	5.07	-4.81	3.00	3.00	3.00	0.00
800.00	9.00	29.00	798.77	20.57	11.40	-10.80	3.00	3.00	3.00	0.00
900.00	12.00	29.00	897.08	36.50	20.23	-19.17	3.00	3.00	3.00	0.00
1,000.00	15.00	29.00	994.31	56.92	31.55	-29.90	3.00	3.00	3.00	0.00
1,100.00	18.00	29.00	1,090.18	81.76	45.32	-42.94	3.00	3.00	3.00	0.00
1,180.00	20.40	29.00	1,165.72	104.76	58.07	-55.03	3.00	3.00	3.00	0.00
Start 957.88 hold at 1180.00 MD										
1,200.00	20.40	29.00	1,184.47	110.86	61.45	-58.23	0.00	0.00	0.00	0.00
1,300.00	20.40	29.00	1,278.20	141.35	78.35	-74.25	0.00	0.00	0.00	0.00
1,400.00	20.40	29.00	1,371.93	171.84	95.25	-90.26	0.00	0.00	0.00	0.00
1,500.00	20.40	29.00	1,465.65	202.32	112.15	-106.28	0.00	0.00	0.00	0.00
1,600.00	20.40	29.00	1,559.38	232.81	129.05	-122.29	0.00	0.00	0.00	0.00
1,700.00	20.40	29.00	1,653.11	263.30	145.95	-138.31	0.00	0.00	0.00	0.00
1,800.00	20.40	29.00	1,746.84	293.78	162.85	-154.32	0.00	0.00	0.00	0.00
1,900.00	20.40	29.00	1,840.57	324.27	179.75	-170.33	0.00	0.00	0.00	0.00
2,000.00	20.40	29.00	1,934.29	354.76	196.64	-186.35	0.00	0.00	0.00	0.00
2,100.00	20.40	29.00	2,028.02	385.24	213.54	-202.36	0.00	0.00	0.00	0.00
2,137.88	20.40	29.00	2,063.53	396.79	219.94	-208.43	0.00	0.00	0.00	0.00
Start DLS 10.00 TFO -109.98										
2,200.00	19.15	10.94	2,122.04	416.28	227.13	-215.05	10.00	-2.01	-29.07	
2,300.00	21.05	342.07	2,216.17	449.56	224.71	-211.67	10.00	1.90	-28.87	
2,400.00	26.68	321.42	2,307.74	484.29	205.13	-191.10	10.00	5.63	-20.65	
2,500.00	34.25	308.42	2,393.97	519.42	168.99	-153.97	10.00	7.57	-13.01	
2,600.00	42.73	299.85	2,472.22	553.88	117.38	-101.39	10.00	8.48	-8.57	
2,700.00	51.67	293.71	2,540.13	586.62	51.88	-34.97	10.00	8.94	-6.14	
2,790.77	60.00	289.35	2,591.08	614.02	-17.95	35.62	10.00	9.18	-4.81	
Start 200.00 hold at 2790.77 MD										
2,800.00	60.00	289.35	2,595.70	616.67	-25.49	43.23	0.00	0.00	0.00	0.00
2,900.00	60.00	289.35	2,645.70	645.36	-107.20	125.73	0.00	0.00	0.00	0.00
2,990.77	60.00	289.35	2,691.08	671.41	-181.37	200.62	0.00	0.00	0.00	0.00
Start DLS 10.00 TFO -30.86										
3,000.00	60.79	288.81	2,695.64	674.03	-188.95	208.28	10.00	8.60	-5.88	
3,100.00	69.51	283.39	2,737.65	699.01	-276.05	296.06	10.00	8.72	-5.41	
3,200.00	78.37	278.57	2,765.30	717.21	-370.27	390.77	10.00	8.86	-4.82	
3,300.00	87.31	274.05	2,777.75	728.07	-468.77	489.54	10.00	8.94	-4.52	
3,354.04	92.15	271.65	2,778.00	730.75	-522.72	543.55	10.00	8.96	-4.44	
Start 5029.51 hold at 3354.04 MD										
3,400.00	92.15	271.65	2,776.28	732.07	-568.63	589.48	0.00	0.00	0.00	0.00
3,500.00	92.15	271.65	2,772.52	734.95	-668.52	689.41	0.00	0.00	0.00	0.00
3,600.00	92.15	271.65	2,768.76	737.82	-768.41	789.33	0.00	0.00	0.00	0.00
3,700.00	92.15	271.65	2,765.00	740.70	-868.30	889.26	0.00	0.00	0.00	0.00
3,800.00	92.15	271.65	2,761.25	743.58	-968.18	989.19	0.00	0.00	0.00	0.00
3,900.00	92.15	271.65	2,757.49	746.45	-1,068.07	1,089.12	0.00	0.00	0.00	0.00
4,000.00	92.15	271.65	2,753.73	749.33	-1,167.96	1,189.05	0.00	0.00	0.00	0.00
4,100.00	92.15	271.65	2,749.97	752.20	-1,267.85	1,288.98	0.00	0.00	0.00	0.00

Planning Report

Database:	PRIME_EDM	Local Co-ordinate Reference:	Well Roche 103H
Company:	SILVERBACK EXPLORATION	TVD Reference:	3418+20 @ 3438.00usft (GL+KB)
Project:	EDDY COUNTY, NM (NAD83) NMEZ GRID	MD Reference:	3418+20 @ 3438.00usft (GL+KB)
Site:	Roche Pad	North Reference:	Grid
Well:	Roche 103H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Roche 103H		
Design:	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)	
4,200.00	92.15	271.65	2,746.21	755.08	-1,367.74	1,388.91	0.00	0.00	0.00	
4,300.00	92.15	271.65	2,742.46	757.96	-1,467.62	1,488.84	0.00	0.00	0.00	
4,400.00	92.15	271.65	2,738.70	760.83	-1,567.51	1,588.77	0.00	0.00	0.00	
4,500.00	92.15	271.65	2,734.94	763.71	-1,667.40	1,688.70	0.00	0.00	0.00	
4,600.00	92.15	271.65	2,731.18	766.58	-1,767.29	1,788.63	0.00	0.00	0.00	
4,700.00	92.15	271.65	2,727.42	769.46	-1,867.18	1,888.56	0.00	0.00	0.00	
4,800.00	92.15	271.65	2,723.67	772.34	-1,967.06	1,988.49	0.00	0.00	0.00	
4,900.00	92.15	271.65	2,719.91	775.21	-2,066.95	2,088.42	0.00	0.00	0.00	
5,000.00	92.15	271.65	2,716.15	778.09	-2,166.84	2,188.35	0.00	0.00	0.00	
5,100.00	92.15	271.65	2,712.39	780.96	-2,266.73	2,288.28	0.00	0.00	0.00	
5,200.00	92.15	271.65	2,708.64	783.84	-2,366.62	2,388.20	0.00	0.00	0.00	
5,300.00	92.15	271.65	2,704.88	786.72	-2,466.50	2,488.13	0.00	0.00	0.00	
5,400.00	92.15	271.65	2,701.12	789.59	-2,566.39	2,588.06	0.00	0.00	0.00	
5,500.00	92.15	271.65	2,697.36	792.47	-2,666.28	2,687.99	0.00	0.00	0.00	
5,600.00	92.15	271.65	2,693.60	795.34	-2,766.17	2,787.92	0.00	0.00	0.00	
5,700.00	92.15	271.65	2,689.85	798.22	-2,866.06	2,887.85	0.00	0.00	0.00	
5,800.00	92.15	271.65	2,686.09	801.10	-2,965.94	2,987.78	0.00	0.00	0.00	
5,900.00	92.15	271.65	2,682.33	803.97	-3,065.83	3,087.71	0.00	0.00	0.00	
6,000.00	92.15	271.65	2,678.57	806.85	-3,165.72	3,187.64	0.00	0.00	0.00	
6,100.00	92.15	271.65	2,674.81	809.72	-3,265.61	3,287.57	0.00	0.00	0.00	
6,200.00	92.15	271.65	2,671.06	812.60	-3,365.50	3,387.50	0.00	0.00	0.00	
6,300.00	92.15	271.65	2,667.30	815.48	-3,465.38	3,487.43	0.00	0.00	0.00	
6,400.00	92.15	271.65	2,663.54	818.35	-3,565.27	3,587.36	0.00	0.00	0.00	
6,500.00	92.15	271.65	2,659.78	821.23	-3,665.16	3,687.29	0.00	0.00	0.00	
6,600.00	92.15	271.65	2,656.02	824.10	-3,765.05	3,787.22	0.00	0.00	0.00	
6,700.00	92.15	271.65	2,652.27	826.98	-3,864.94	3,887.15	0.00	0.00	0.00	
6,800.00	92.15	271.65	2,648.51	829.86	-3,964.82	3,987.07	0.00	0.00	0.00	
6,900.00	92.15	271.65	2,644.75	832.73	-4,064.71	4,087.00	0.00	0.00	0.00	
7,000.00	92.15	271.65	2,640.99	835.61	-4,164.60	4,186.93	0.00	0.00	0.00	
7,100.00	92.15	271.65	2,637.23	838.48	-4,264.49	4,286.86	0.00	0.00	0.00	
7,200.00	92.15	271.65	2,633.48	841.36	-4,364.38	4,386.79	0.00	0.00	0.00	
7,300.00	92.15	271.65	2,629.72	844.24	-4,464.26	4,486.72	0.00	0.00	0.00	
7,400.00	92.15	271.65	2,625.96	847.11	-4,564.15	4,586.65	0.00	0.00	0.00	
7,500.00	92.15	271.65	2,622.20	849.99	-4,664.04	4,686.58	0.00	0.00	0.00	
7,600.00	92.15	271.65	2,618.45	852.87	-4,763.93	4,786.51	0.00	0.00	0.00	
7,700.00	92.15	271.65	2,614.69	855.74	-4,863.82	4,886.44	0.00	0.00	0.00	
7,800.00	92.15	271.65	2,610.93	858.62	-4,963.70	4,986.37	0.00	0.00	0.00	
7,900.00	92.15	271.65	2,607.17	861.49	-5,063.59	5,086.30	0.00	0.00	0.00	
8,000.00	92.15	271.65	2,603.41	864.37	-5,163.48	5,186.23	0.00	0.00	0.00	
8,100.00	92.15	271.65	2,599.66	867.25	-5,263.37	5,286.16	0.00	0.00	0.00	
8,200.00	92.15	271.65	2,595.90	870.12	-5,363.26	5,386.09	0.00	0.00	0.00	
8,300.00	92.15	271.65	2,592.14	873.00	-5,463.14	5,486.02	0.00	0.00	0.00	
8,383.55	92.15	271.65	2,589.00	875.40	-5,546.60	5,569.51	0.00	0.00	0.00	
TD at 8383.55										

Planning Report

Database:	PRIME_EDM	Local Co-ordinate Reference:	Well Roche 103H
Company:	SILVERBACK EXPLORATION	TVD Reference:	3418+20 @ 3438.00usft (GL+KB)
Project:	EDDY COUNTY, NM (NAD83) NMEZ GRID	MD Reference:	3418+20 @ 3438.00usft (GL+KB)
Site:	Roche Pad	North Reference:	Grid
Well:	Roche 103H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Roche 103H		
Design:	Plan 1r0		

Design Targets										
Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	
- hit/miss target	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)			
- Shape										
Roche 103H SHL 204FS - plan hits target center - Point	0.00	360.00	0.00	0.00	0.00	612,210.50	506,767.20	32.6829605	-104.4456955	
Roche 103H KOP - plan misses target center by 0.01usft at 2138.00usft MD (2063.64 TVD, 396.83 N, 219.97 E) - Point	0.00	0.00	2,063.64	396.83	219.97	612,607.33	506,987.17	32.6840519	-104.4449819	
Roche 103H Max BckBlk - plan misses target center by 0.02usft at 2234.98usft MD (2155.08 TVD, 427.69 N, 228.25 E) - Point	0.00	360.00	2,155.10	427.70	228.25	612,638.20	506,995.45	32.6841368	-104.4449551	
Roche 103H PBHL 920F - plan hits target center - Point	0.00	360.00	2,589.00	875.40	-5,546.60	613,085.90	501,220.60	32.6853493	-104.4637268	
Roche 103H FTP 920FS - plan misses target center by 0.08usft at 3354.91usft MD (2777.97 TVD, 730.78 N, -523.60 E) - Point	0.00	360.00	2,778.00	730.70	-523.60	612,941.20	506,243.60	32.6849675	-104.4473999	

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment	
		+N/-S (usft)	+E/-W (usft)		
500.00	500.00	0.00	0.00	Start Build 3.00	
1,180.00	1,165.72	104.76	58.07	Start 957.88 hold at 1180.00 MD	
2,137.88	2,063.53	396.79	219.94	Start DLS 10.00 TFO -109.98	
2,790.77	2,591.08	614.02	-17.95	Start 200.00 hold at 2790.77 MD	
2,990.77	2,691.08	671.41	-181.37	Start DLS 10.00 TFO -30.86	
3,354.04	2,778.00	730.75	-522.72	Start 5029.51 hold at 3354.04 MD	
8,383.55	2,589.00	875.40	-5,546.60	TD at 8383.55	

SILVERBACK EXPLORATION

EDDY COUNTY, NM (NAD83) NMEZ GRID

Roche Pad

Roche 103H

Roche 103H

Plan 1r0

Anticollision Report

18 September, 2023

Anticollision Report

Company:	SILVERBACK EXPLORATION	Local Co-ordinate Reference:	Well Roche 103H
Project:	EDDY COUNTY, NM (NAD83) NMEZ GRID	TVD Reference:	3418+20 @ 3438.00usft (GL+KB)
Reference Site:	Roche Pad	MD Reference:	3418+20 @ 3438.00usft (GL+KB)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Roche 103H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Roche 103H	Database:	PRIME_EDM
Reference Design:	Plan 1r0	Offset TVD Reference:	Reference Datum

Reference	Plan 1r0		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	MD Interval 100.00usft	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum ellipse separation of 0.00 usft	Error Surface:	Pedal Curve
Warning Levels Evaluated at:	2.00 Sigma	Casing Method:	Not applied

Survey Tool Program	Date	09/18/23		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.00	8,383.55	Plan 1r0 (Roche 103H)	MWD	OWSG MWD - Standard

Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation	Warning
Offset Well - Wellbore - Design						
Roche Pad						
Rio Penasco KD Com 1 - Rio Penasco KD Com 1 - Rio	6,491.69	2,676.99	289.07	152.76	2.121	CC, ES, SF
Roche 101H - Roche 101H - Plan 1r0	500.00	500.00	40.00	36.05	10.125	CC, ES
Roche 101H - Roche 101H - Plan 1r0	700.00	694.40	58.76	50.13	6.810	SF
Roche 102H - Roche 102H - Plan 1r0	500.00	500.00	20.00	16.05	5.062	CC, ES
Roche 102H - Roche 102H - Plan 1r0	8,348.48	8,122.27	810.45	536.76	2.961	SF
Roche 201H - Roche 201H for AC - Plan 1r0	500.00	500.00	67.08	62.60	14.950	CC, ES
Roche 201H - Roche 201H for AC - Plan 1r0	800.00	795.76	91.52	81.40	9.045	SF
Roche 202H - Roche 202H for AC - Plan 1r0	893.11	901.99	51.38	38.09	3.865	CC
Roche 202H - Roche 202H for AC - Plan 1r0	900.00	908.84	51.40	38.00	3.835	ES
Roche 202H - Roche 202H for AC - Plan 1r0	1,000.00	1,008.10	55.35	40.69	3.776	SF

Offset Design													Offset Site Error:	0.00 usft
Roche Pad - Rio Penasco KD Com 1 - Rio Penasco KD Com 1 - Rio Penasco KD Com 1 AsDrilled													Offset Well Error:	0.00 usft
Survey Program: 90-DIPMETER														
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
5,600.00	2,693.60	2,710.20	2,693.09	72.52	49.17	-96.51	531.99	-3,665.17	936.78	856.98	79.80	11.739		
5,700.00	2,689.85	2,706.48	2,689.36	74.91	49.12	-95.78	532.00	-3,665.17	842.29	759.28	83.01	10.146		
5,800.00	2,686.09	2,702.75	2,685.64	77.30	49.08	-95.05	532.01	-3,665.17	749.22	662.20	87.01	8.610		
5,900.00	2,682.33	2,699.02	2,681.91	79.69	49.03	-94.31	532.01	-3,665.17	658.16	566.10	92.06	7.150		
6,000.00	2,678.57	2,695.30	2,678.19	82.09	48.98	-93.58	532.02	-3,665.17	570.07	471.61	98.47	5.789		
6,100.00	2,674.81	2,691.57	2,674.46	84.49	48.93	-92.84	532.02	-3,665.17	486.59	379.98	106.61	4.564		
6,200.00	2,671.06	2,687.85	2,670.74	86.90	48.89	-92.11	532.03	-3,665.17	410.52	293.87	116.66	3.519		
6,300.00	2,667.30	2,684.12	2,667.01	89.30	48.84	-91.37	532.03	-3,665.17	346.78	219.05	127.73	2.715		
6,400.00	2,663.54	2,680.40	2,663.29	91.71	48.79	-90.63	532.03	-3,665.17	303.25	167.03	136.22	2.226		
6,491.69	2,660.09	2,676.99	2,659.88	93.93	48.75	-89.96	532.04	-3,665.17	289.07	152.76	136.31	2.121	CC, ES, SF	
6,500.00	2,659.78	2,676.68	2,659.57	94.13	48.74	-89.90	532.04	-3,665.17	289.19	153.36	135.84	2.129		
6,600.00	2,656.02	2,672.96	2,655.85	96.54	48.70	-89.16	532.04	-3,665.17	308.67	183.51	125.16	2.466		
6,700.00	2,652.27	2,669.24	2,652.13	98.96	48.65	-88.42	532.04	-3,665.17	356.22	245.29	110.94	3.211		
6,800.00	2,648.51	2,665.52	2,648.41	101.38	48.60	-87.69	532.04	-3,665.17	422.48	323.84	98.63	4.283		
6,900.00	2,644.75	2,661.80	2,644.69	103.80	48.55	-86.95	532.04	-3,665.17	500.05	410.73	89.32	5.598		
7,000.00	2,640.99	2,658.08	2,640.97	106.22	48.51	-86.22	532.04	-3,665.17	584.45	501.99	82.46	7.088		
7,100.00	2,637.23	2,654.34	2,637.23	108.65	48.46	-85.49	531.45	-3,665.17	673.39	595.97	77.42	8.698		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company:	SILVERBACK EXPLORATION	Local Co-ordinate Reference:	Well Roche 103H
Project:	EDDY COUNTY, NM (NAD83) NMEZ GRID	TVD Reference:	3418+20 @ 3438.00usft (GL+KB)
Reference Site:	Roche Pad	MD Reference:	3418+20 @ 3438.00usft (GL+KB)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Roche 103H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Roche 103H	Database:	PRIME_EDM
Reference Design:	Plan 1r0	Offset TVD Reference:	Reference Datum

Offset Design													Roche Pad - Rio Penasco KD Com 1 - Rio Penasco KD Com 1 - Rio Penasco KD Com 1 AsDrilled	Offset Site Error:	0.00 usft
Survey Program: 90-DIPMETER														Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
7,200.00	2,633.48	2,650.58	2,633.48	111.08	48.41	-84.75	531.45	-3,665.17	764.81	691.26	73.55	10.399			
7,300.00	2,629.72	2,646.83	2,629.72	113.50	48.36	-84.02	531.45	-3,665.17	858.13	787.57	70.56	12.162			
7,400.00	2,625.96	2,643.07	2,625.96	115.93	48.31	-83.28	531.45	-3,665.17	952.79	884.58	68.21	13.968			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company:	SILVERBACK EXPLORATION	Local Co-ordinate Reference:	Well Roche 103H
Project:	EDDY COUNTY, NM (NAD83) NMEZ GRID	TVD Reference:	3418+20 @ 3438.00usft (GL+KB)
Reference Site:	Roche Pad	MD Reference:	3418+20 @ 3438.00usft (GL+KB)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Roche 103H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Roche 103H	Database:	PRIME_EDM
Reference Design:	Plan 1r0	Offset TVD Reference:	Reference Datum

Offset Design													Roche Pad - Roche 101H - Roche 101H - Plan 1r0	Offset Site Error:	0.00 usft
Survey Program: 0-MWD														Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
0.00	0.00	0.00	0.00	0.00	0.00	180.00	-40.00	0.00	40.00						
100.00	100.00	100.00	100.00	0.31	0.31	180.00	-40.00	0.00	40.00	39.52	0.48	83.353			
200.00	200.00	200.00	200.00	0.95	0.95	180.00	-40.00	0.00	40.00	38.47	1.53	26.224			
300.00	300.00	300.00	300.00	1.46	1.46	180.00	-40.00	0.00	40.00	37.61	2.39	16.717			
400.00	400.00	400.00	400.00	1.89	1.89	180.00	-40.00	0.00	40.00	36.81	3.19	12.554			
500.00	500.00	500.00	500.00	2.31	2.31	180.00	-40.00	0.00	40.00	36.05	3.95	10.125 CC, ES			
600.00	599.95	597.85	597.80	3.37	2.70	151.45	-42.36	0.84	44.71	39.20	5.51	8.118			
700.00	699.63	694.40	694.07	5.04	4.47	152.34	-49.32	3.30	58.76	50.13	8.63	6.810 SF			
800.00	798.77	788.44	787.35	6.29	5.76	153.07	-60.49	7.26	81.96	71.06	10.91	7.516			
900.00	897.08	878.89	876.41	7.34	6.78	153.47	-75.31	12.50	113.97	101.25	12.73	8.956			
1,000.00	994.31	964.84	960.26	8.26	7.63	153.58	-93.06	18.79	154.32	140.08	14.24	10.837			
1,100.00	1,090.18	1,045.57	1,038.18	9.09	8.35	153.46	-112.96	25.84	202.47	186.95	15.52	13.044			
1,200.00	1,184.47	1,120.65	1,109.79	9.57	8.97	153.33	-134.23	33.37	257.75	241.30	16.46	15.663			
1,300.00	1,278.20	1,191.47	1,176.46	9.75	9.52	153.58	-156.71	41.33	317.11	300.02	17.09	18.556			
1,400.00	1,371.93	1,258.84	1,239.03	9.96	10.00	153.55	-180.25	49.66	379.08	361.42	17.66	21.462			
1,500.00	1,465.65	1,322.86	1,297.64	10.18	10.45	153.37	-204.53	58.26	443.46	425.27	18.20	24.370			
1,600.00	1,559.38	1,383.64	1,352.45	10.41	10.85	153.11	-229.28	67.03	510.09	491.40	18.69	27.287			
1,700.00	1,653.11	1,452.69	1,414.01	10.66	11.14	152.79	-258.77	77.47	578.29	559.08	19.21	30.106			
1,800.00	1,746.84	1,525.72	1,479.07	10.92	11.36	152.51	-290.02	88.54	646.57	626.86	19.71	32.811			
1,900.00	1,840.57	1,598.75	1,544.14	11.20	11.51	152.28	-321.28	99.60	714.86	694.71	20.14	35.493			
2,000.00	1,934.29	1,671.77	1,609.21	11.50	11.68	152.10	-352.53	110.67	783.15	762.55	20.60	38.016			
2,100.00	2,028.02	1,744.80	1,674.28	11.82	11.86	151.94	-383.78	121.74	851.45	830.37	21.08	40.394			
2,200.00	2,122.04	1,817.34	1,738.91	12.22	12.05	174.39	-414.82	132.73	920.02	898.47	21.55	42.685			
2,300.00	2,216.17	1,886.61	1,800.63	13.21	12.24	-150.41	-444.47	143.23	989.24	967.25	22.00	44.975			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company:	SILVERBACK EXPLORATION	Local Co-ordinate Reference:	Well Roche 103H
Project:	EDDY COUNTY, NM (NAD83) NMEZ GRID	TVD Reference:	3418+20 @ 3438.00usft (GL+KB)
Reference Site:	Roche Pad	MD Reference:	3418+20 @ 3438.00usft (GL+KB)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Roche 103H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Roche 103H	Database:	PRIME_EDM
Reference Design:	Plan 1r0	Offset TVD Reference:	Reference Datum

Offset Design													Roche Pad - Roche 102H - Roche 102H - Plan 1r0	Offset Site Error:	0.00 usft
Survey Program: 0-MWD														Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Distance							Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
0.00	0.00	0.00	0.00	0.00	0.00	180.00	-20.00	0.00	20.00						
100.00	100.00	100.00	100.00	0.31	0.31	180.00	-20.00	0.00	20.00	19.52	0.48	41.677			
200.00	200.00	200.00	200.00	0.95	0.95	180.00	-20.00	0.00	20.00	18.47	1.53	13.112			
300.00	300.00	300.00	300.00	1.46	1.46	180.00	-20.00	0.00	20.00	17.61	2.39	8.358			
400.00	400.00	400.00	400.00	1.89	1.89	180.00	-20.00	0.00	20.00	16.81	3.19	6.277			
500.00	500.00	500.00	500.00	2.31	2.31	180.00	-20.00	0.00	20.00	16.05	3.95	5.062	CC, ES		
600.00	599.95	599.65	599.60	3.37	2.98	147.81	-20.63	2.52	22.95	17.91	5.04	4.554			
700.00	699.63	698.69	698.33	5.04	4.66	141.81	-22.50	10.02	32.06	25.12	6.94	4.621			
800.00	798.77	796.56	795.37	6.29	5.96	136.91	-25.56	22.30	47.52	39.01	8.51	5.585			
900.00	897.08	892.93	890.17	7.34	6.66	133.64	-29.73	39.04	69.20	59.53	9.67	7.153			
1,000.00	994.31	989.43	984.77	8.26	6.83	133.00	-34.35	57.55	95.37	84.82	10.55	9.040			
1,100.00	1,090.18	1,084.86	1,078.32	9.09	7.03	134.12	-38.91	75.85	125.03	113.52	11.52	10.857			
1,200.00	1,184.47	1,179.00	1,170.59	9.57	7.24	136.01	-43.41	93.90	158.26	145.86	12.40	12.760			
1,300.00	1,278.20	1,272.66	1,262.41	9.75	7.46	137.99	-47.89	111.87	192.83	179.70	13.14	14.680			
1,400.00	1,371.93	1,366.32	1,354.22	9.96	7.70	139.37	-52.37	129.83	227.55	213.68	13.87	16.406			
1,500.00	1,465.65	1,459.98	1,446.04	10.18	7.94	140.38	-56.85	147.79	262.34	247.73	14.61	17.955			
1,600.00	1,559.38	1,553.64	1,537.85	10.41	8.19	141.15	-61.33	165.76	297.20	281.83	15.36	19.343			
1,700.00	1,653.11	1,647.31	1,629.67	10.66	8.45	141.77	-65.81	183.72	332.09	315.96	16.13	20.588			
1,800.00	1,746.84	1,740.97	1,721.48	10.92	8.73	142.26	-70.28	201.68	367.01	350.10	16.91	21.707			
1,900.00	1,840.57	1,834.63	1,813.30	11.20	9.00	142.67	-74.76	219.65	401.95	384.26	17.69	22.720			
2,000.00	1,934.29	1,933.51	1,910.59	11.50	9.41	143.35	-79.41	236.36	436.63	418.05	18.57	23.508			
2,100.00	2,028.02	2,035.27	2,012.13	11.82	9.98	145.94	-83.62	237.90	469.76	450.29	19.47	24.122			
2,200.00	2,122.04	2,130.05	2,105.59	12.22	11.02	168.79	-86.82	223.18	503.39	483.24	20.15	24.986			
2,300.00	2,216.17	2,220.14	2,191.06	13.21	11.74	-157.17	-89.15	195.09	540.11	519.56	20.56	26.276			
2,400.00	2,307.74	2,307.14	2,268.46	14.08	12.33	-131.89	-90.69	155.59	578.45	557.11	21.34	27.109			
2,500.00	2,393.97	2,392.13	2,337.49	14.67	12.81	-114.99	-91.48	106.13	616.71	594.50	22.21	27.766			
2,600.00	2,472.22	2,475.99	2,397.70	15.20	13.20	-103.36	-91.54	47.88	653.41	630.39	23.03	28.375			
2,700.00	2,540.13	2,559.38	2,448.54	15.79	13.51	-95.06	-90.91	-18.14	687.27	663.31	23.96	28.687			
2,800.00	2,595.70	2,650.04	2,494.75	16.52	13.72	-89.69	-89.60	-96.10	716.93	691.57	25.35	28.276			
2,900.00	2,645.70	2,746.23	2,542.84	17.39	14.00	-89.87	-88.14	-179.39	744.19	716.97	27.22	27.336			
3,000.00	2,695.64	2,835.03	2,585.94	18.42	14.55	-89.42	-86.75	-256.99	771.65	742.36	29.30	26.337			
3,100.00	2,737.65	2,916.87	2,616.29	19.64	15.48	-84.89	-85.13	-332.91	795.51	763.85	31.66	25.125			
3,200.00	2,765.30	3,000.00	2,635.73	21.04	16.76	-82.04	-83.12	-413.63	811.91	777.47	34.45	23.571			
3,300.00	2,777.75	3,082.32	2,643.28	22.59	18.24	-80.67	-80.82	-495.51	820.42	782.93	37.49	21.883			
3,400.00	2,776.28	3,175.61	2,640.77	24.22	20.05	-80.50	-77.96	-588.70	821.53	780.50	41.03	20.023			
3,500.00	2,772.52	3,275.61	2,637.07	25.92	22.11	-80.51	-74.86	-688.58	821.31	776.36	44.95	18.274			
3,600.00	2,768.76	3,375.61	2,633.38	27.73	24.26	-80.51	-71.77	-788.47	821.08	772.05	49.03	16.746			
3,700.00	2,765.00	3,475.61	2,629.68	29.64	26.46	-80.51	-68.68	-888.35	820.86	767.61	53.24	15.417			
3,800.00	2,761.25	3,575.61	2,625.98	31.62	28.71	-80.51	-65.59	-988.23	820.63	763.08	57.56	14.257			
3,900.00	2,757.49	3,675.61	2,622.29	33.67	30.99	-80.51	-62.49	-1,088.12	820.41	758.46	61.95	13.242			
4,000.00	2,753.73	3,775.61	2,618.59	35.77	33.30	-80.51	-59.40	-1,188.00	820.19	753.77	66.41	12.350			
4,100.00	2,749.97	3,875.61	2,614.90	37.91	35.62	-80.52	-56.31	-1,287.88	819.96	749.04	70.92	11.561			
4,200.00	2,746.21	3,975.61	2,611.20	40.09	37.97	-80.52	-53.22	-1,387.77	819.74	744.26	75.48	10.861			
4,300.00	2,742.46	4,075.61	2,607.51	42.30	40.33	-80.52	-50.12	-1,487.65	819.51	739.45	80.07	10.235			
4,400.00	2,738.70	4,175.61	2,603.81	44.54	42.70	-80.52	-47.03	-1,587.53	819.29	734.61	84.69	9.674			
4,500.00	2,734.94	4,275.61	2,600.12	46.80	45.08	-80.52	-43.94	-1,687.42	819.07	729.74	89.33	9.169			
4,600.00	2,731.18	4,375.61	2,596.42	49.07	47.47	-80.53	-40.85	-1,787.30	818.84	724.85	94.00	8.711			
4,700.00	2,727.42	4,475.61	2,592.73	51.37	49.86	-80.53	-37.75	-1,887.19	818.62	719.94	98.68	8.296			
4,800.00	2,723.67	4,575.60	2,589.03	53.68	52.26	-80.53	-34.66	-1,987.07	818.40	715.02	103.38	7.916			
4,900.00	2,719.91	4,675.60	2,585.34	56.00	54.67	-80.53	-31.57	-2,086.95	818.17	710.08	108.09	7.569			
5,000.00	2,716.15	4,775.60	2,581.64	58.34	57.08	-80.53	-28.48	-2,186.84	817.95	705.13	112.82	7.250			
5,100.00	2,712.39	4,875.60	2,577.95	60.68	59.50	-80.53	-25.38	-2,286.72	817.72	700.17	117.56	6.956			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company:	SILVERBACK EXPLORATION	Local Co-ordinate Reference:	Well Roche 103H
Project:	EDDY COUNTY, NM (NAD83) NMEZ GRID	TVD Reference:	3418+20 @ 3438.00usft (GL+KB)
Reference Site:	Roche Pad	MD Reference:	3418+20 @ 3438.00usft (GL+KB)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Roche 103H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Roche 103H	Database:	PRIME_EDM
Reference Design:	Plan 1r0	Offset TVD Reference:	Reference Datum

Offset Design													Roche Pad - Roche 102H - Roche 102H - Plan 1r0	Offset Site Error:	0.00 usft
Survey Program: 0-MWD														Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Distance							Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
5,200.00	2,708.64	4,975.60	2,574.25	63.04	61.91	-80.54	-22.29	-2,386.60	817.50	695.20	122.30	6.684			
5,300.00	2,704.88	5,075.60	2,570.56	65.40	64.34	-80.54	-19.20	-2,486.49	817.28	690.22	127.06	6.432			
5,400.00	2,701.12	5,175.60	2,566.86	67.77	66.76	-80.54	-16.10	-2,586.37	817.05	685.23	131.82	6.198			
5,500.00	2,697.36	5,275.60	2,563.17	70.14	69.19	-80.54	-13.01	-2,686.25	816.83	680.24	136.59	5.980			
5,600.00	2,693.60	5,375.60	2,559.47	72.52	71.62	-80.54	-9.92	-2,786.14	816.60	675.24	141.36	5.777			
5,700.00	2,689.85	5,475.60	2,555.77	74.91	74.05	-80.55	-6.83	-2,886.02	816.38	670.24	146.14	5.586			
5,800.00	2,686.09	5,575.60	2,552.08	77.30	76.48	-80.55	-3.73	-2,985.90	816.16	665.23	150.93	5.408			
5,900.00	2,682.33	5,675.60	2,548.38	79.69	78.91	-80.55	-0.64	-3,085.79	815.93	660.21	155.72	5.240			
6,000.00	2,678.57	5,775.60	2,544.69	82.09	81.35	-80.55	2.45	-3,185.67	815.71	655.19	160.51	5.082			
6,100.00	2,674.81	5,875.60	2,540.99	84.49	83.79	-80.55	5.54	-3,285.56	815.48	650.17	165.31	4.933			
6,200.00	2,671.06	5,975.60	2,537.30	86.90	86.23	-80.56	8.64	-3,385.44	815.26	645.15	170.11	4.792			
6,300.00	2,667.30	6,075.60	2,533.60	89.30	88.67	-80.56	11.73	-3,485.32	815.04	640.12	174.92	4.660			
6,400.00	2,663.54	6,175.60	2,529.91	91.71	91.11	-80.56	14.82	-3,585.21	814.81	635.09	179.72	4.534			
6,500.00	2,659.78	6,275.60	2,526.21	94.13	93.55	-80.56	17.91	-3,685.09	814.59	630.06	184.53	4.414			
6,600.00	2,656.02	6,375.60	2,522.52	96.54	95.99	-80.56	21.01	-3,784.97	814.36	625.02	189.35	4.301			
6,700.00	2,652.27	6,475.60	2,518.82	98.96	98.43	-80.56	24.10	-3,884.86	814.14	619.98	194.16	4.193			
6,800.00	2,648.51	6,575.60	2,515.13	101.38	100.88	-80.57	27.19	-3,984.74	813.92	614.94	198.98	4.091			
6,900.00	2,644.75	6,675.60	2,511.43	103.80	103.32	-80.57	30.28	-4,084.62	813.69	609.90	203.80	3.993			
7,000.00	2,640.99	6,775.60	2,507.74	106.22	105.77	-80.57	33.38	-4,184.51	813.47	604.85	208.62	3.899			
7,100.00	2,637.23	6,875.60	2,504.04	108.65	108.22	-80.57	36.47	-4,284.39	813.25	599.81	213.44	3.810			
7,200.00	2,633.48	6,975.60	2,500.35	111.08	110.66	-80.57	39.56	-4,384.28	813.02	594.76	218.26	3.725			
7,300.00	2,629.72	7,075.60	2,496.65	113.50	113.11	-80.58	42.65	-4,484.16	812.80	589.71	223.09	3.643			
7,400.00	2,625.96	7,175.60	2,492.96	115.93	115.56	-80.58	45.75	-4,584.04	812.57	584.66	227.92	3.565			
7,500.00	2,622.20	7,275.60	2,489.26	118.36	118.01	-80.58	48.84	-4,683.93	812.35	579.61	232.74	3.490			
7,600.00	2,618.45	7,375.60	2,485.57	120.79	120.45	-80.58	51.93	-4,783.81	812.13	574.55	237.57	3.418			
7,700.00	2,614.69	7,475.60	2,481.87	123.23	122.90	-80.58	55.02	-4,883.69	811.90	569.50	242.40	3.349			
7,800.00	2,610.93	7,575.60	2,478.17	125.66	125.35	-80.58	58.12	-4,983.58	811.68	564.44	247.24	3.283			
7,900.00	2,607.17	7,675.60	2,474.48	128.10	127.80	-80.59	61.21	-5,083.46	811.45	559.39	252.07	3.219			
8,000.00	2,603.41	7,775.60	2,470.78	130.53	130.25	-80.59	64.30	-5,183.34	811.23	554.33	256.90	3.158			
8,100.00	2,599.66	7,875.60	2,467.09	132.97	132.70	-80.59	67.39	-5,283.23	811.01	549.27	261.74	3.099			
8,200.00	2,595.90	7,975.60	2,463.39	135.40	135.15	-80.59	70.49	-5,383.11	810.78	544.21	266.57	3.042			
8,300.00	2,592.14	8,075.60	2,459.70	137.84	137.61	-80.59	73.58	-5,482.99	810.56	539.15	271.41	2.986			
8,348.48	2,590.32	8,122.27	2,457.97	139.02	138.74	-80.60	75.02	-5,529.61	810.45	536.76	273.69	2.961 SF			
8,383.55	2,589.00	8,122.27	2,457.97	139.88	138.74	-80.60	75.02	-5,529.61	811.21	537.28	273.93	2.961			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company:	SILVERBACK EXPLORATION	Local Co-ordinate Reference:	Well Roche 103H
Project:	EDDY COUNTY, NM (NAD83) NMEZ GRID	TVD Reference:	3418+20 @ 3438.00usft (GL+KB)
Reference Site:	Roche Pad	MD Reference:	3418+20 @ 3438.00usft (GL+KB)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Roche 103H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Roche 103H	Database:	PRIME_EDM
Reference Design:	Plan 1r0	Offset TVD Reference:	Reference Datum

Offset Design													Roche Pad - Roche 201H - Roche 201H for AC - Plan 1r0	Offset Site Error:	0.00 usft
Survey Program: 0-MWD														Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
0.00	0.00	0.00	0.00	0.00	0.00	-116.57	-30.00	-60.00	67.08						
100.00	100.00	100.00	100.00	0.31	0.31	-116.57	-30.00	-60.00	67.08	66.49	0.59	113.596			
200.00	200.00	200.00	200.00	0.95	0.95	-116.57	-30.00	-60.00	67.08	65.24	1.84	36.478			
300.00	300.00	300.00	300.00	1.46	1.46	-116.57	-30.00	-60.00	67.08	64.26	2.82	23.810			
400.00	400.00	400.00	400.00	1.89	1.89	-116.57	-30.00	-60.00	67.08	63.40	3.68	18.243			
500.00	500.00	500.00	500.00	2.31	2.31	-116.57	-30.00	-60.00	67.08	62.60	4.49	14.950	CC, ES		
600.00	599.95	600.17	600.13	3.37	2.63	-148.93	-32.21	-58.58	69.08	63.30	5.78	11.942			
700.00	699.63	699.14	698.78	5.04	4.52	-157.70	-38.73	-54.40	76.35	68.41	7.94	9.614			
800.00	798.77	795.76	794.58	6.29	5.84	-168.55	-49.23	-47.65	91.52	81.40	10.12	9.045	SF		
900.00	897.08	889.01	886.32	7.34	6.87	-178.36	-63.22	-38.67	116.32	104.15	12.17	9.557			
1,000.00	994.31	978.53	973.54	8.26	7.38	173.99	-80.15	-27.80	150.81	137.14	13.66	11.038			
1,100.00	1,090.18	1,068.29	1,060.64	9.09	7.55	168.74	-98.43	-16.07	192.63	177.93	14.71	13.100			
1,200.00	1,184.47	1,155.96	1,145.71	9.57	7.73	165.52	-116.28	-4.61	239.70	224.31	15.39	15.574			
1,300.00	1,278.20	1,242.91	1,230.07	9.75	7.92	163.65	-133.98	6.75	288.52	272.70	15.82	18.234			
1,400.00	1,371.93	1,329.86	1,314.44	9.96	8.12	162.31	-151.68	18.12	337.51	321.23	16.28	20.726			
1,500.00	1,465.65	1,416.80	1,398.80	10.18	8.33	161.31	-169.38	29.48	386.61	369.83	16.77	23.051			
1,600.00	1,559.38	1,503.75	1,483.17	10.41	8.56	160.54	-187.08	40.84	435.77	418.49	17.28	25.213			
1,700.00	1,653.11	1,590.70	1,567.53	10.66	8.79	159.92	-204.78	52.21	484.98	467.16	17.82	27.215			
1,800.00	1,746.84	1,677.64	1,651.89	10.92	9.03	159.42	-222.48	63.57	534.23	515.85	18.38	29.068			
1,900.00	1,840.57	1,764.59	1,736.26	11.20	9.28	159.00	-240.18	74.93	583.50	564.54	18.96	30.781			
2,000.00	1,934.29	1,851.53	1,820.62	11.50	9.55	158.64	-257.88	86.30	632.79	613.24	19.55	32.365			
2,100.00	2,028.02	1,938.48	1,904.98	11.82	9.82	158.34	-275.58	97.66	682.10	661.93	20.16	33.829			
2,200.00	2,122.04	2,025.16	1,989.09	12.22	10.10	178.32	-293.23	108.99	731.46	710.70	20.77	35.221			
2,300.00	2,216.17	2,109.41	2,070.83	13.21	10.39	-150.62	-310.38	120.00	780.77	759.39	21.38	36.526			
2,400.00	2,307.74	2,188.63	2,147.70	14.08	10.67	-128.76	-326.51	130.35	829.82	807.57	22.25	37.296			
2,500.00	2,393.97	2,260.42	2,217.36	14.67	10.93	-115.05	-341.12	139.74	878.96	855.93	23.03	38.165			
2,600.00	2,472.22	2,322.59	2,277.68	15.20	11.18	-105.85	-353.78	147.86	928.77	905.21	23.56	39.427			
2,700.00	2,540.13	2,373.25	2,326.84	15.79	11.38	-98.78	-364.09	154.48	979.73	955.83	23.91	40.984			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company:	SILVERBACK EXPLORATION	Local Co-ordinate Reference:	Well Roche 103H
Project:	EDDY COUNTY, NM (NAD83) NMEZ GRID	TVD Reference:	3418+20 @ 3438.00usft (GL+KB)
Reference Site:	Roche Pad	MD Reference:	3418+20 @ 3438.00usft (GL+KB)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Roche 103H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Roche 103H	Database:	PRIME_EDM
Reference Design:	Plan 1r0	Offset TVD Reference:	Reference Datum

Offset Design													Roche Pad - Roche 202H - Roche 202H for AC - Plan 1r0	Offset Site Error:	0.00 usft
Survey Program: 0-MWD														Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
0.00	0.00	0.00	0.00	0.00	0.00	-99.46	-10.00	-60.00	60.83						
100.00	100.00	100.00	100.00	0.31	0.31	-99.46	-10.00	-60.00	60.83	60.30	0.53	115.303			
200.00	200.00	200.00	200.00	0.95	0.95	-99.46	-10.00	-60.00	60.83	59.17	1.66	36.651			
300.00	300.00	300.00	300.00	1.46	1.46	-99.46	-10.00	-60.00	60.83	58.25	2.57	23.637			
400.00	400.00	400.00	400.00	1.89	1.89	-99.46	-10.00	-60.00	60.83	57.43	3.39	17.923			
500.00	500.00	500.00	500.00	2.31	2.31	-99.46	-10.00	-60.00	60.83	56.65	4.18	14.565			
600.00	599.95	603.03	602.98	3.37	3.38	-129.53	-8.57	-57.62	59.96	53.82	6.14	9.770			
700.00	699.63	705.94	705.54	5.04	5.07	-132.89	-4.29	-50.49	57.47	48.21	9.26	6.205			
800.00	798.77	808.60	807.25	6.29	6.28	-139.11	2.81	-38.68	53.80	41.98	11.82	4.550			
893.11	890.34	901.99	899.25	7.27	6.49	-148.09	11.08	-24.91	51.38	38.09	13.29	3.865 CC			
900.00	897.08	908.84	906.00	7.34	6.50	-148.88	11.70	-23.89	51.40	38.00	13.40	3.835 ES			
1,000.00	994.31	1,008.10	1,003.75	8.26	6.70	-161.02	20.57	-9.12	55.35	40.69	14.66	3.776 SF			
1,100.00	1,090.18	1,106.78	1,100.94	9.09	6.92	-171.81	29.40	5.57	66.61	51.14	15.47	4.306			
1,200.00	1,184.47	1,204.65	1,197.32	9.57	7.15	-179.39	38.15	20.14	84.61	68.80	15.81	5.351			
1,300.00	1,278.20	1,302.19	1,293.38	9.75	7.39	-175.77	46.88	34.66	105.19	89.26	15.92	6.605			
1,400.00	1,371.93	1,399.74	1,389.44	9.96	7.64	-172.52	55.60	49.18	126.25	110.08	16.18	7.804			
1,500.00	1,465.65	1,497.29	1,485.51	10.18	7.91	-170.21	64.32	63.70	147.60	131.07	16.53	8.928			
1,600.00	1,559.38	1,594.83	1,581.57	10.41	8.18	-168.47	73.05	78.22	169.11	152.15	16.96	9.970			
1,700.00	1,653.11	1,692.38	1,677.64	10.66	8.46	-167.13	81.77	92.74	190.74	173.29	17.46	10.927			
1,800.00	1,746.84	1,789.92	1,773.70	10.92	8.75	-166.07	90.50	107.26	212.45	194.46	18.00	11.804			
1,900.00	1,840.57	1,887.47	1,869.77	11.20	9.04	-165.20	99.22	121.77	234.22	215.64	18.58	12.607			
2,000.00	1,934.29	1,985.02	1,965.83	11.50	9.35	-164.48	107.95	136.29	256.03	236.84	19.19	13.340			
2,100.00	2,028.02	2,082.56	2,061.89	11.82	9.66	-163.87	116.67	150.81	277.87	258.04	19.83	14.009			
2,200.00	2,122.04	2,179.95	2,157.80	12.22	9.97	-178.92	125.38	165.31	299.54	279.09	20.46	14.643			
2,300.00	2,216.17	2,275.27	2,251.67	13.21	10.29	-153.41	133.90	179.50	320.85	299.83	21.02	15.266			
2,400.00	2,307.74	2,365.64	2,340.67	14.08	10.60	-137.94	141.99	192.95	344.10	322.27	21.83	15.761			
2,500.00	2,393.97	2,448.32	2,422.09	14.67	10.88	-130.62	149.38	205.25	372.87	350.22	22.65	16.462			
2,600.00	2,472.22	2,520.78	2,493.46	15.20	11.14	-126.96	155.86	216.04	410.61	387.27	23.34	17.593			
2,700.00	2,540.13	2,580.84	2,552.60	15.79	11.36	-123.81	161.23	224.98	459.42	435.49	23.93	19.197			
2,800.00	2,595.70	2,626.73	2,597.80	16.52	11.52	-120.17	165.34	231.81	519.52	495.16	24.36	21.327			
2,900.00	2,645.70	2,666.38	2,636.84	17.39	11.67	-124.91	168.88	237.71	588.28	563.68	24.60	23.917			
3,000.00	2,695.64	2,773.49	2,742.78	18.42	12.24	-134.46	179.26	248.64	662.19	636.68	25.51	25.956			
3,100.00	2,737.65	3,413.22	3,256.02	19.64	15.08	-149.15	283.47	-59.69	698.71	671.42	27.29	25.603			
3,200.00	2,765.30	3,510.13	3,304.48	21.04	15.35	-147.23	301.20	-141.73	718.34	689.75	28.59	25.127			
3,300.00	2,777.75	3,838.93	3,414.02	22.59	19.86	-149.30	346.51	-444.37	742.31	710.34	31.96	23.225			
3,400.00	2,776.28	4,008.54	3,410.13	24.22	22.85	-149.07	352.92	-613.65	739.97	704.59	35.38	20.917			
3,500.00	2,772.52	4,108.52	3,404.77	25.92	24.76	-149.01	355.80	-713.45	738.59	701.25	37.33	19.785			
3,600.00	2,768.76	4,208.51	3,399.40	27.73	26.76	-148.94	358.68	-813.25	737.20	697.79	39.42	18.703			
3,700.00	2,765.00	4,308.50	3,394.04	29.64	28.82	-148.88	361.56	-913.06	735.82	694.21	41.61	17.685			
3,800.00	2,761.25	4,408.49	3,388.67	31.62	30.94	-148.81	364.45	-1,012.86	734.44	690.55	43.89	16.735			
3,900.00	2,757.49	4,508.47	3,383.31	33.67	33.11	-148.75	367.33	-1,112.66	733.06	686.82	46.24	15.852			
4,000.00	2,753.73	4,608.46	3,377.95	35.77	35.31	-148.69	370.21	-1,212.46	731.68	683.01	48.67	15.034			
4,100.00	2,749.97	4,708.45	3,372.58	37.91	37.54	-148.62	373.09	-1,312.26	730.30	679.15	51.15	14.276			
4,200.00	2,746.21	4,808.43	3,367.22	40.09	39.80	-148.56	375.98	-1,412.06	728.92	675.23	53.69	13.576			
4,300.00	2,742.46	4,908.42	3,361.85	42.30	42.08	-148.49	378.86	-1,511.86	727.55	671.27	56.28	12.928			
4,400.00	2,738.70	5,008.41	3,356.49	44.54	44.38	-148.42	381.74	-1,611.67	726.17	667.27	58.90	12.328			
4,500.00	2,734.94	5,108.39	3,351.13	46.80	46.70	-148.36	384.63	-1,711.47	724.80	663.23	61.57	11.772			
4,600.00	2,731.18	5,208.38	3,345.76	49.07	49.03	-148.29	387.51	-1,811.27	723.42	659.16	64.27	11.257			
4,700.00	2,727.42	5,308.37	3,340.40	51.37	51.37	-148.23	390.39	-1,911.07	722.05	655.06	66.99	10.778			
4,800.00	2,723.67	5,408.36	3,335.03	53.68	53.72	-148.16	393.27	-2,010.87	720.68	650.93	69.75	10.332			
4,900.00	2,719.91	5,508.34	3,329.67	56.00	56.08	-148.09	396.16	-2,110.67	719.31	646.77	72.54	9.916			
5,000.00	2,716.15	5,608.33	3,324.31	58.34	58.45	-148.02	399.04	-2,210.47	717.94	642.59	75.35	9.529			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company:	SILVERBACK EXPLORATION	Local Co-ordinate Reference:	Well Roche 103H
Project:	EDDY COUNTY, NM (NAD83) NMEZ GRID	TVD Reference:	3418+20 @ 3438.00usft (GL+KB)
Reference Site:	Roche Pad	MD Reference:	3418+20 @ 3438.00usft (GL+KB)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Roche 103H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Roche 103H	Database:	PRIME_EDM
Reference Design:	Plan 1r0	Offset TVD Reference:	Reference Datum

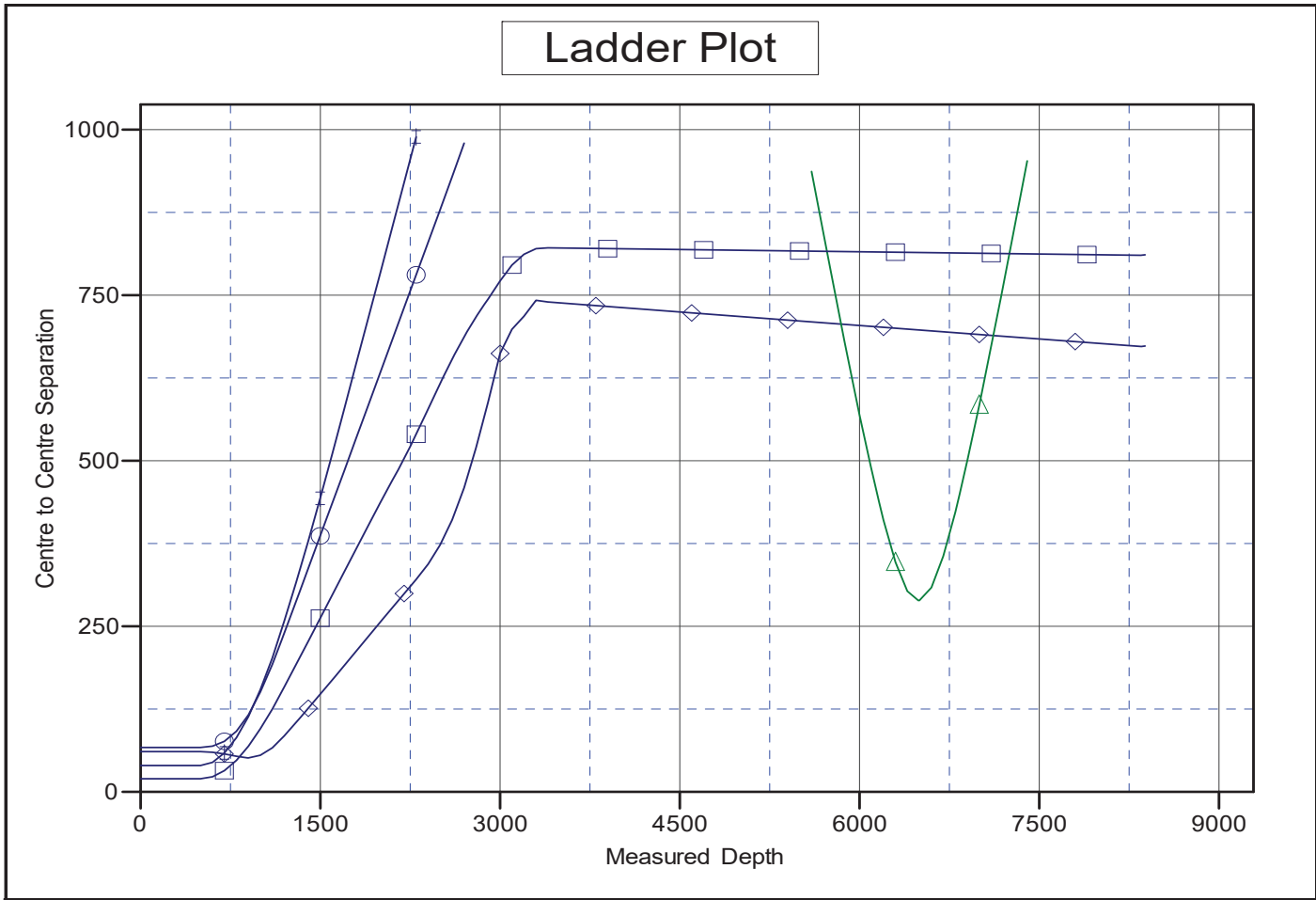
Offset Design													Roche Pad - Roche 202H - Roche 202H for AC - Plan 1r0	Offset Site Error:	0.00 usft
Survey Program: 0-MWD														Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
5,100.00	2,712.39	5,708.32	3,318.94	60.68	60.82	-147.96	401.92	-2,310.28	716.57	638.39	78.18	9.166			
5,200.00	2,708.64	5,808.30	3,313.58	63.04	63.20	-147.89	404.80	-2,410.08	715.20	634.17	81.03	8.826			
5,300.00	2,704.88	5,908.29	3,308.21	65.40	65.59	-147.82	407.69	-2,509.88	713.83	629.93	83.90	8.508			
5,400.00	2,701.12	6,008.28	3,302.85	67.77	67.98	-147.75	410.57	-2,609.68	712.47	625.68	86.79	8.209			
5,500.00	2,697.36	6,108.27	3,297.49	70.14	70.38	-147.68	413.45	-2,709.48	711.10	621.40	89.70	7.927			
5,600.00	2,693.60	6,208.25	3,292.12	72.52	72.78	-147.62	416.33	-2,809.28	709.74	617.11	92.63	7.662			
5,700.00	2,689.85	6,308.24	3,286.76	74.91	75.18	-147.55	419.22	-2,909.09	708.38	612.80	95.57	7.412			
5,800.00	2,686.09	6,408.23	3,281.39	77.30	77.59	-147.48	422.10	-3,008.89	707.02	608.48	98.53	7.175			
5,900.00	2,682.33	6,508.21	3,276.03	79.69	80.00	-147.41	424.98	-3,108.69	705.66	604.15	101.51	6.952			
6,000.00	2,678.57	6,608.20	3,270.67	82.09	82.41	-147.34	427.87	-3,208.49	704.30	599.80	104.50	6.740			
6,100.00	2,674.81	6,708.19	3,265.30	84.49	84.82	-147.27	430.75	-3,308.29	702.94	595.44	107.50	6.539			
6,200.00	2,671.06	6,808.17	3,259.94	86.90	87.24	-147.20	433.63	-3,408.09	701.58	591.06	110.52	6.348			
6,300.00	2,667.30	6,908.16	3,254.57	89.30	89.66	-147.13	436.51	-3,507.89	700.22	586.68	113.55	6.167			
6,400.00	2,663.54	7,008.15	3,249.21	91.71	92.08	-147.06	439.40	-3,607.70	698.87	582.28	116.59	5.994			
6,500.00	2,659.78	7,108.14	3,243.85	94.13	94.50	-146.99	442.28	-3,707.50	697.51	577.87	119.65	5.830			
6,600.00	2,656.02	7,208.12	3,238.48	96.54	96.93	-146.91	445.16	-3,807.30	696.16	573.44	122.72	5.673			
6,700.00	2,652.27	7,308.11	3,233.12	98.96	99.36	-146.84	448.04	-3,907.10	694.81	569.01	125.80	5.523			
6,800.00	2,648.51	7,408.10	3,227.75	101.38	101.78	-146.77	450.93	-4,006.90	693.46	564.56	128.89	5.380			
6,900.00	2,644.75	7,508.08	3,222.39	103.80	104.21	-146.70	453.81	-4,106.70	692.11	560.11	132.00	5.243			
7,000.00	2,640.99	7,608.07	3,217.03	106.22	106.64	-146.62	456.69	-4,206.50	690.76	555.64	135.12	5.112			
7,100.00	2,637.23	7,708.06	3,211.66	108.65	109.07	-146.55	459.58	-4,306.31	689.41	551.16	138.25	4.987			
7,200.00	2,633.48	7,808.05	3,206.30	111.08	111.51	-146.48	462.46	-4,406.11	688.06	546.67	141.39	4.866			
7,300.00	2,629.72	7,908.03	3,200.93	113.50	113.94	-146.41	465.34	-4,505.91	686.72	542.17	144.55	4.751			
7,400.00	2,625.96	8,008.02	3,195.57	115.93	116.37	-146.33	468.22	-4,605.71	685.37	537.66	147.71	4.640			
7,500.00	2,622.20	8,108.01	3,190.21	118.36	118.81	-146.26	471.11	-4,705.51	684.03	533.15	150.89	4.533			
7,600.00	2,618.45	8,207.99	3,184.84	120.79	121.24	-146.18	473.99	-4,805.31	682.69	528.62	154.07	4.431			
7,700.00	2,614.69	8,307.98	3,179.48	123.23	123.68	-146.11	476.87	-4,905.11	681.35	524.08	157.27	4.332			
7,800.00	2,610.93	8,407.97	3,174.11	125.66	126.12	-146.03	479.75	-5,004.92	680.01	519.53	160.48	4.237			
7,900.00	2,607.17	8,507.96	3,168.75	128.10	128.56	-145.96	482.64	-5,104.72	678.67	514.97	163.70	4.146			
8,000.00	2,603.41	8,607.94	3,163.39	130.53	131.00	-145.88	485.52	-5,204.52	677.33	510.40	166.94	4.057			
8,100.00	2,599.66	8,707.93	3,158.02	132.97	133.44	-145.81	488.40	-5,304.32	676.00	505.82	170.18	3.972			
8,200.00	2,595.90	8,807.92	3,152.66	135.40	135.88	-145.73	491.28	-5,404.12	674.66	501.23	173.43	3.890			
8,300.00	2,592.14	8,907.90	3,147.29	137.84	138.32	-145.65	494.17	-5,503.92	673.33	496.63	176.70	3.811			
8,352.14	2,590.18	8,951.03	3,144.98	139.11	139.37	-145.62	495.41	-5,546.97	672.69	494.57	178.12	3.777			
8,383.55	2,589.00	8,951.03	3,144.98	139.88	139.37	-145.62	495.41	-5,546.97	673.43	495.49	177.94	3.785			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company:	SILVERBACK EXPLORATION	Local Co-ordinate Reference:	Well Roche 103H
Project:	EDDY COUNTY, NM (NAD83) NMEZ GRID	TVD Reference:	3418+20 @ 3438.00usft (GL+KB)
Reference Site:	Roche Pad	MD Reference:	3418+20 @ 3438.00usft (GL+KB)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Roche 103H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Roche 103H	Database:	PRIME_EDM
Reference Design:	Plan 1r0	Offset TVD Reference:	Reference Datum

Reference Depths are relative to 3418+20 @ 3438.00usft (GL+KB) Coordinates are relative to: Roche 103H
 Offset Depths are relative to Offset Datum Coordinate System is US State Plane 1983, New Mexico Eastern Zone
 Central Meridian is -104.3333333 Grid Convergence at Surface is: -0.06°



LEGEND

Roche201H, Roche 201Hbr AC, Plan 1r0 V0	Rio Penasco KD Com 1, Rio Penasco KD Com 1, Rio Penasco KD Com 1 AsDrilled V0	Roche102H, Roche 102H, Plan 1r0 V0
Roche202H, Roche 202Hbr AC, Plan 1r0 V0	Roche101H, Roche 101H, Plan 1r0 V0	

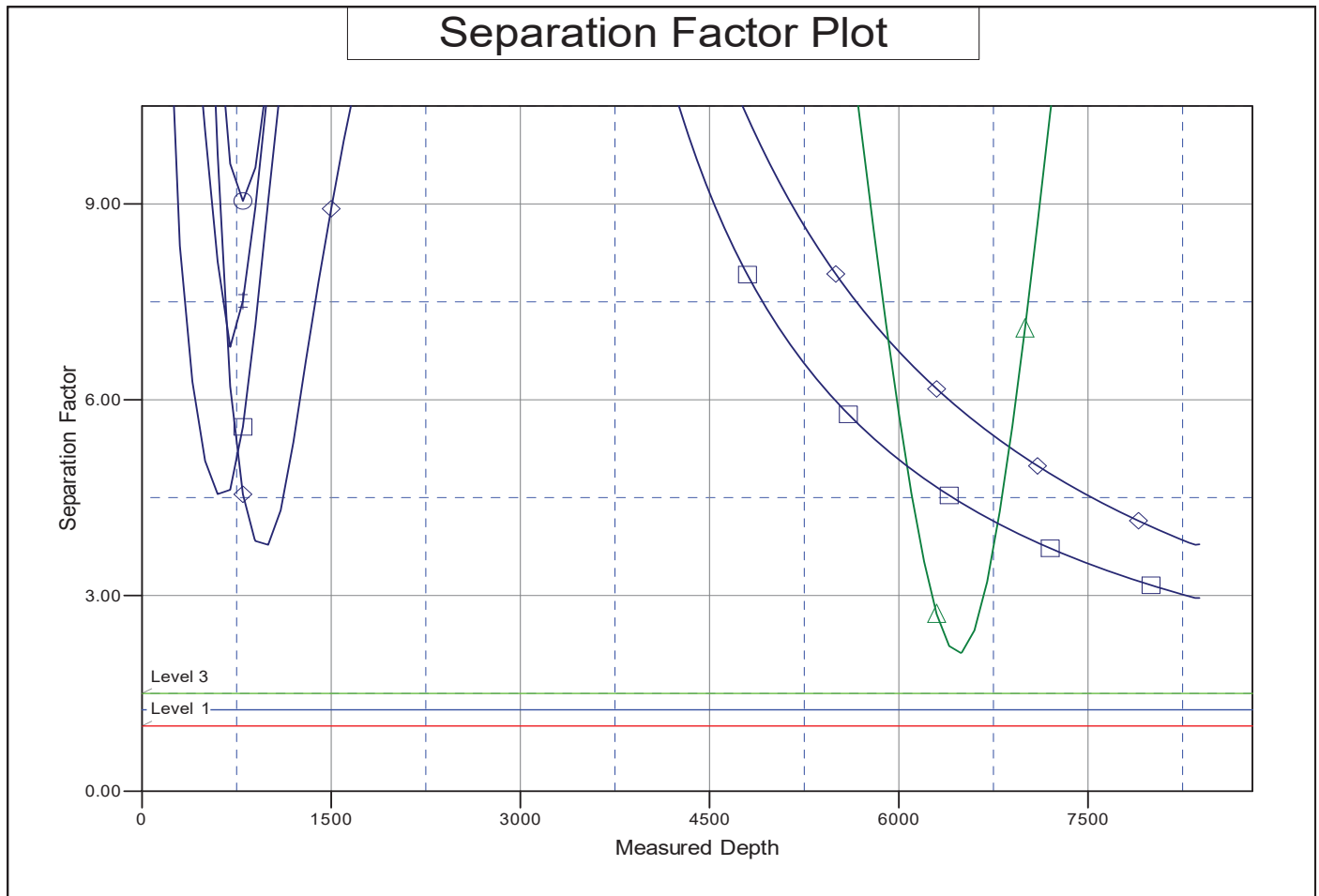
CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company:	SILVERBACK EXPLORATION	Local Co-ordinate Reference:	Well Roche 103H
Project:	EDDY COUNTY, NM (NAD83) NMEZ GRID	TVD Reference:	3418+20 @ 3438.00usft (GL+KB)
Reference Site:	Roche Pad	MD Reference:	3418+20 @ 3438.00usft (GL+KB)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Roche 103H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Roche 103H	Database:	PRIME_EDM
Reference Design:	Plan 1r0	Offset TVD Reference:	Reference Datum

Reference Depths are relative to 3418+20 @ 3438.00usft (GL+KB)
 Offset Depths are relative to Offset Datum
 Central Meridian is -104.3333333

Coordinates are relative to: Roche 103H
 Coordinate System is US State Plane 1983, New Mexico Eastern Zone
 Grid Convergence at Surface is: -0.06°



LEGEND

Roche 201H, Roche 201Hbr AC, Plan 1r0 V0	Rio Penasco KD Com 1, Rio Penasco KD Com 1, Rio Penasco KD Com 1 As Drilled V0	Roche 102H, Roche 102H, Plan 1r0 V0
Roche 202H, Roche 202Hbr AC, Plan 1r0 V0	Roche 101H, Roche 101H, Plan 1r0 V0	

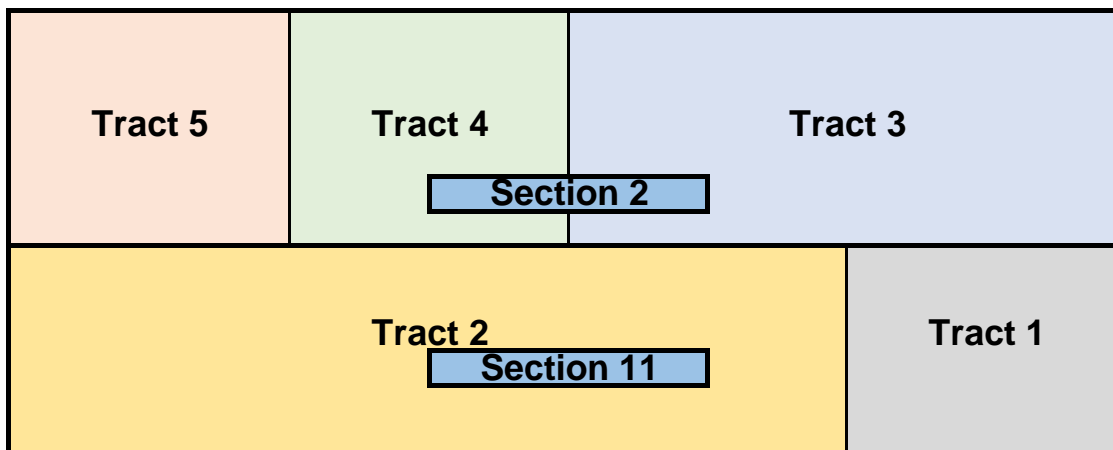
CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

EXHIBIT A-4

PLAT OF TRACTS, TRACT OWNERSHIP, APPLICABLE LEASE NUMBERS

Exhibit "A-4"
Case No. 24517
Silverback Operating II, LLC - Applicant

TRACT MAP WITH MINERAL INTEREST OWNERS



S/2 S/2 of Section 2, Township 19 South, Range 25 East & N/2 N/2 of Section 11, Township 19 South, Range 25 East, NMPM, Eddy County, New Mexico (320.00 Unit)	
Tract 1:	Five (5) Mineral Interest Owners who are leased and interest is HBP; there are five (5) Mineral Interest Owners who are unleased and OPEN of record and named respondents hereunder: Meridian 102, LP - 0.9843750 NA; Michael Harrison Moore - 0.656250 NA; Schelro, Ltd. - 0.281250 NA; Ryan Moore SSMT GST Exempt Trust - 0.164063 NA; and Ryan Moore SSMT Non-exempt Trust - 0.164063 NA. All WI have signed JOA aptpg SB Operator
Tract 2:	All sixteen (16) Mineral Interest Owners are leased and interest is HBP. All WI owners have signed JOA appointing Silverback as Operator.
Tract 3:	All four (4) Mineral Interest Owners are leased and interest is HBP. All WI owners have signed a JOA appointing Silverback as Operator.
Tract 4:	All fourteen (14) Mineral Interest Owners who are all leased and interest is HBP. All WI owners have signed a JOA appointing Silverback as Operator.
Tract 5:	All fourteen (14) Mineral Interest Owners who are all leased and interest is HBP. All WI owners have signed a JOA appointing Silverback as Operator.

**Case No. 24517 by Silverback Operating I
 Roche Unit**

Plat prepared by : Larry K. Coshow, CPL
 Date: July 1, 2024



Exhibit A-4

Proposed Roche HSU

320 acres, S2S2 Section 2, N2N2 Section 11

Township 19 South

Range 25 East

Eddy County, NM

**There are no State or Federal leases in the proposed Roche HSU*

Proposed Roche HSU Tract Ownership

Tract 1: NE4 NE4 Section 11, T19S, R25E

Interest Type	Owner Name	Net Acres	WI	NRI + LR
WI	Silverback Operating II, et al.	37.750000	0.94375000	0.94375000
ULMO	Meridian 102, LP (Unleased)	0.984375	0.02460938	0.02460938
ULMO	Michael Harrison Moore (Unleased)	0.656250	0.01640625	0.01640625
ULMO	Schlero, Ltd. (Unleased)	0.281250	0.00703125	0.00703125
ULMO	Ryan Moore SSMTT GST Exempt Trust (Unleased)	0.164063	0.00410156	0.00410156
ULMO	Ryan Moore SSMTT GST Non-Exempt Trust (Unleased)	0.164062	0.00410156	0.00410156
	Totals	40.00	1.00000000	1.00000000

Above represents the total acreage to be pooled in proposed Roche HSU

Total 2.25 acres in NE4NE4 Section 11

Tract 2: N/2 NW4, and NW4 NE4, Section 11, T19S, R25E

Interest Type	Owner Name	Net Acres	WI	NRI + LR
WI	Silverback Operating II, et al.	120.00	1.00000000	1.00000000
	Totals	120.00	1.00000000	1.00000000

*All mineral interest owners are leased and all WI owners have signed JOA appointing Silverback Operating II as Operator.

Tract 3: S/2 SE/4, Section 2, T19S, R25E

Interest Type	Owner Name	Net Acres	WI	NRI + LR
WI	Silverback Operating II, et al.	80.00	1.00000000	1.00000000
	Totals	80.00	1.00000000	1.00000000

*All mineral interest owners are leased and all WI owners have signed JOA appointing Silverback Operating II as Operator.

Tract 4: SE/4 SW/4, Section 2, T19S, R25E

Interest Type	Owner Name	Net Acres	WI	NRI + LR
WI	Silverback Operating II, et al.	40.00	1.00000000	1.00000000
	Totals	40.00	1.00000000	1.00000000

*All mineral interest owners are leased and all WI owners have signed JOA appointing Silverback Operating II as Operator.

Tract 5: SW/4 SW/4, Section 2, T19S, R25E

Interest Type	Owner Name	Net Acres	WI	NRI + LR
WI	Silverback Operating II, et al.	40.00	1.00000000	1.00000000
	Totals	40.00	1.00000000	1.00000000

*All mineral interest owners are leased and all WI owners have signed JOA appointing Silverback Operating II as Operator.

EXHIBIT A-5

UNIT RECAP, POOLED PARTIES HIGHLIGHTED

Proposed Roche HSU
320 acres, S2S2 Section 2, N2N2 Section 11
Township 19 South
Range 25 East
Eddy County, NM

Ownership Recap

Interest Type	Owner Name	Net Acres	WI	NRI + LR
WI	Silverback Operating II, et al.	317.75	0.99573729	0.99573729
ULMO	Meridian 102, LP (Unleased)	0.98	0.00030762	0.00030762
ULMO	Michael Harrison Moore (Unleased)	0.67	0.00205078	0.00205078
ULMO	Schlero, Ltd. (Unleased)	0.28	0.00087891	0.00087891
ULMO	Ryan Moore SSMTT GST Exempt Trust (Unleased)	0.16	0.00051270	0.00051270
ULMO	Ryan Moore SSMTT GST Non-Exempt Trust (Unleased)	0.16	0.00051270	0.00051270
	Totals	320.00	1.00000000	1.00000000

Total acreage to be pooled = 2.25 acres in NE4NE4 Section 11

EXHIBIT A-6

SAMPLE WELL PROPOSAL LETTER & AFES

February 17, 2024

VIA CERTIFIED MAIL/RETURN RECEIPT AND E-MAIL:

E-Mail: Jim Ball – jimb@yatesholdings.com



BALL OIL & GAS, LLC
P.O. BOX 1401
ROSWELL, NEW MEXICO 88202-1401

RE: Horizontal Well Proposals
Silverback Operating II, LLC: Roche #101H, Roche #102H and Roche #103H
S/2 S/2 of Section 2-T19S-R25E & N/2 N/2 of Section 11-T19S-R25E
Eddy County, New Mexico

Dear Working Interest Owner,

Silverback Operating II, LLC ("SILVERBACK"), an affiliate of Silverback New Mexico, LLC, hereby proposes to drill and complete the Roche #101H, Roche #102H and Roche #103H wells to the approximate total vertical depths as referenced below as horizontal Yeso wells (the "Subject Wells") at the following proposed locations (subject to change upon staking and survey).

Roche #101H - Horizontal Yeso Well, Eddy County, NM (Paddock Target)

- Proposed Surface Hole Location: 165' FSL & 427' FWL, Section 1-T19S-R25E
- Proposed First Take Point: 680' FNL & 100' FEL, Section 11-T19S-R25E
- Proposed Bottom Hole Location; 680' FNL & 100' FWL, Section 11-T19S-R25E
- PROJECTED MD/TVD: 8,596' / 2,753' Lateral length: 5,555'

Roche #102H- Horizontal Yeso Well, Eddy County, NM (Paddock Target)

- Proposed Surface Hole Location: 185' FSL & 427' FWL, Section 1-T19S-R25E
- Proposed First Take Point: 120' FSL & 100' FEL, Section 2-T19S-R25E
- Proposed Bottom Hole Location: 120' FSL & 100' FWL, Section 2-T19S-R25E
- PROJECTED MD/TVD: 8,122' / 2,458' Lateral length: 5,529'

19707 IH 10 West, Suite 201, San Antonio, Texas 78257-1748
Phone: (405) 312-3930 Email: lcshow@silverbackexp.com

Roche #103H- Horizontal Yeso Well, Eddy County, NM (Paddock Target)

- Proposed Surface Hole Location: 205' FSL & 427' FWL, Section 1-T19S-R25E
- Proposed First Take Point: 920' FSL & 100' FEL, Section 2-T19S-R25E
- Proposed Bottom Hole Location: 920' FSL & 100' FWL, Section 2-T19S-R25E
- PROJECTED MD/TVD: 8,384' / 2,589' Lateral Length: 5,547'

SILVERBACK proposes to form a Drilling Spacing Unit ("DSU") covering the S/2 S/2 of Section 2-T19S-R25E and the N/2 N/2 of Section 11-T19S-R25E, Eddy County, New Mexico, containing 320.00 acres of land, more or less. The existing Yeso wells in this area are in the Penasco Draw, SA-Yeso Pool (50270), from the surface to the base of the Yeso formation. In this 320.00-acre DSU SILVERBACK plans to drill the **Roche #101H, Roche #102H and Roche #103H** wells in this Yeso Pool.

It is known that the proposed DSU lands are governed by Joint Operating Agreement dated July 1, 1978 ("JOA 1978"), covering all of Section 2 and the N/2 of Section 11-T19S-R25E, Eddy County, NM (among other lands thereto) from the surface to a depth of 5,500' below the surface. Under the proposed DSU there are 312.75 net acres (97.7734375%) of the mineral/leasehold interest is subject to this JOA 1978 and approximately 7.25 net acres (2.265625%) is owned by unleased mineral interest owners.

The attached AFEs are an estimate only and those parties electing to participate in the Subject Wells shall be responsible for their share of actual well costs, whether more or less than those shown on the enclosed AFEs. Your estimated working interest in the proposed 320-acre DSU is shown below.

SILVERBACK respectfully requests that you select one (1) of the following two (2) options regarding your unleased mineral interest in each of the Subject Wells:

- **Option 1:** Participate in the drilling and completion of the proposed Subject Well(s) under terms and conditions under JOA 1978 by signing before a Notary Public the attached Limited Joinder of Rio Penasco Working Interest Unit Operating Agreement dated July 1, 1978 ("Limited Joinder"), for such limited purpose to join the JOA 1978 and as to each well(s) only that you elect to participate with your interest; or
- **Option 2:** Not participate in the proposed well(s) and agree to lease your unleased mineral interest to SILVERBACK for a bonus consideration of \$750/acre for an 18-month period with a 1/5th (20%) royalty rate limited from the surface of the earth down to the stratigraphic equivalent of the base of the Yeso formation.

Should you elect **Option 1**, the said election will be pursuant to the terms and conditions of JOA 1978 and execution of the aforementioned Limited Joinder. SILVERBACK is asking the unleased mineral owners wishing to participate with our interest in the Subject Well(s) to agree to the Limited Joinder in lieu of SILVERBACK filing a Compulsory Pooling application/order. Should you elect **Option 2** under the terms outlined above, SILVERBACK asks that you review and execute the attached Oil and Gas Lease before a Notary Public evidencing your agreement to lease your unleased mineral interest to SILVERBACK and return one (1) original executed copy to SILVERBACK.

SILVERBACK looks forward to collaborating with you on this matter. However, if an agreement cannot be reached within thirty (30) days of the receipt date of this proposal, please be advised SILVERBACK may apply to the New Mexico Oil Conservation Division for additional Compulsory Pooling of any uncommitted interest owners into a spacing unit for the proposed wells.

Please indicate your elections as to each of the Subject Wells in the spaces provided below and execute and return one (1) copy of this letter (together with a signed copy of each AFE for any well(s) you elect to participate in) to the undersigned within thirty (30) days of receipt of this proposal.

Should you have any questions regarding this proposal, please contact Larry K. Coshow at 405-312-3930 or lcoshow@silverbackexp.com. Thank you very much for your assistance and cooperation.

Sincerely,

SILVERBACK NEW MEXICO, LLC


Larry K. Coshow, CPL
Contract Landman

Enclosures
Exhibit "A"
AFEs

Ball Oil & Gas, LLC owns 0.989583 net acres or 0.309245% Working Interest in the proposed 320-acre DSU covering the S/2 S/2 of Section 2 and N/2 N/2 of Section 11-T19S-R25E.

February 17, 2024

Roche #101H

_____ **Option 1)** *The undersigned elects to participate in the drilling and completion of the Roche #101H well with its unleased mineral interest and has no objection to drilling of said well and agrees to the formation of the DSU and to the terms of the existing operating agreements and Joinder Agreement as detailed in this proposal, with the cost and maintenance of all surface facilities, including any shared well pads, being reapportioned between each well drilled in the DSU.*

_____ **Option 2)** *The undersigned elects not to participate with its unleased mineral interest in the drilling and completion of the Roche #101H but has no objection to drilling of said well and agrees to the formation of the DSU by SILVERBACK. Undersigned agrees to lease its unleased mineral interest to SILVERBACK for a bonus consideration of \$750/acre for an 18-month period with a 1/5th (20%) royalty rate limited from the surface of the earth down to the stratigraphic equivalent of the base of the Yeso formation.*

Should you elect to participate, please also indicate your Well Insurance election below. If you elect to obtain individual Well Insurance coverage, please provide SILVERBACK with a copy of your Certificate of Insurance.

Well Insurance:

_____ *The undersigned requests Well Insurance coverage provided by Silverback Energy Partners.*

_____ *The undersigned elects to obtain individual Well Insurance coverage.*

Agreed to and Accepted this _____ day of _____, 2024.

Company/Individual: _____

By: _____

Name: _____

Title: _____

February 7, 2024

Roche #102H

_____ **Option 1)** *The undersigned elects to participate in the drilling and completion of the Roche #102H well with its unleased mineral interest and has no objection to drilling of said well and agrees to the formation of the DSU and to the terms of the existing operating agreements and Joinder Agreement as detailed in this proposal, with the cost and maintenance of all surface facilities, including any shared well pads, being reapportioned between each well drilled in the DSU.*

_____ **Option 2)** *The undersigned elects not to participate with its unleased mineral interest in the drilling and completion of the Roche #102H but has no objection to drilling of said well and agrees to the formation of the DSU by SILVERBACK. Undersigned agrees to lease its unleased mineral interest to SILVERBACK for a bonus consideration of \$750/acre for an 18-month period with a 1/5th (20%) royalty rate limited from the surface of the earth down to the stratigraphic equivalent of the base of the Yeso formation.*

Should you elect to participate, please also indicate your Well Insurance election below. If you elect to obtain individual Well Insurance coverage, please provide SILVERBACK with a copy of your Certificate of Insurance.

Well Insurance:

_____ *The undersigned requests Well Insurance coverage provided by Silverback Energy Partners.*

_____ *The undersigned elects to obtain individual Well Insurance coverage.*

Agreed to and Accepted this _____ day of _____, 2024.

Company/Individual: _____

By: _____

Name: _____

Title: _____

February 7, 2024

Roche #103H

_____ **Option 1)** The undersigned elects to participate in the drilling and completion of the Roche #103H well with its unleased mineral interest and has no objection to drilling of said well and agrees to the formation of the DSU and to the terms of the existing operating agreements and Joinder Agreement as detailed in this proposal, with the cost and maintenance of all surface facilities, including any shared well pads, being reapportioned between each well drilled in the DSU.

_____ **Option 2)** The undersigned elects not to participate with its unleased mineral interest in the drilling and completion of the Roche #103H but has no objection to drilling of said well and agrees to the formation of the DSU by SILVERBACK. Undersigned agrees to lease its unleased mineral interest to SILVERBACK for a bonus consideration of \$750/acre for an 18-month period with a 1/5th (20%) royalty rate limited from the surface of the earth down to the stratigraphic equivalent of the base of the Yeso formation.

Should you elect to participate, please also indicate your Well Insurance election below. If you elect to obtain individual Well Insurance coverage, please provide SILVERBACK with a copy of your Certificate of Insurance.

Well Insurance:

_____ The undersigned requests Well Insurance coverage provided by Silverback Energy Partners.

_____ The undersigned elects to obtain individual Well Insurance coverage.

Agreed to and Accepted this _____ day of _____, 2024.

Company/Individual: _____

By: _____

Name: _____

Title: _____

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

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

District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

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

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

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-015 -54391		² Pool Code 50270		³ Pool Name Penasco Draw, SA-YESO	
⁴ Property Code 335016		⁵ Property Name ROCHE			⁶ Well Number 101H
⁷ GRID No. 330968		⁸ Operator Name SILVERBACK OPERATING II, LLC			⁹ Elevation 3,415'

¹⁰ Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
M	1	19-S	25-E		165'	SOUTH	427'	WEST	EDDY

¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
D	11	19-S	25-E		680'	NORTH	100'	WEST	EDDY

¹² Dedicated Acres 320	¹³ Joint or Infill Infill	¹⁴ Consolidation Code	¹⁵ Order No.
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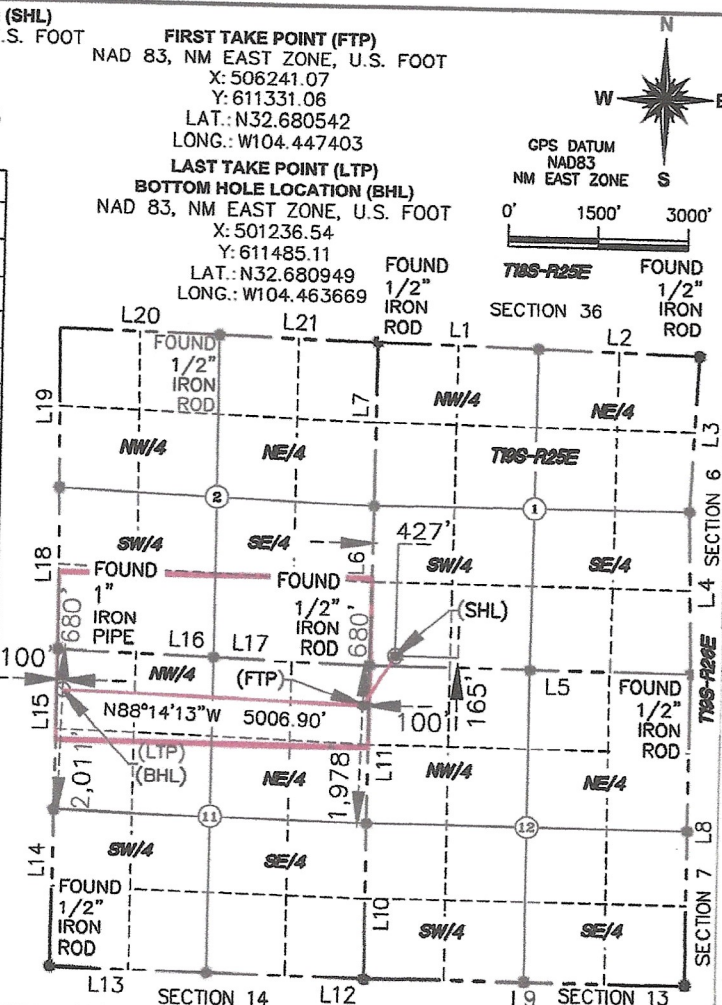
No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

SURFACE HOLE LOCATION (SHL)
NAD 83, NM EAST ZONE, U.S. FOOT
X: 506767.19
Y: 612170.53
LAT.: N32.682851
LONG.: W104.445695

FIRST TAKE POINT (FTP)
NAD 83, NM EAST ZONE, U.S. FOOT
X: 506241.07
Y: 611331.06
LAT.: N32.680542
LONG.: W104.447403

LAST TAKE POINT (LTP)
NAD 83, NM EAST ZONE, U.S. FOOT
X: 501236.54
Y: 611485.11
LAT.: N32.680949
LONG.: W104.463669

LINE #	BEARING	LENGTH
L1	S88°45'39"E	2,680'
L2	S88°45'16"E	2,688'
L3	S02°37'33"W	2,613'
L4	S01°43'23"E	2,691'
L5	N89°40'55"W	5,355'
L6	N00°17'00"E	2,639'
L7	N00°17'09"E	2,748'
L8	S00°06'06"E	5,273'
L9	S89°51'13"W	5,351'
L10	N00°08'24"W	2,658'
L11	N00°08'24"W	2,658'
L12	N88°58'36"W	2,621'
L13	N88°58'59"W	2,620'
L14	N00°17'39"E	2,692'
L15	N00°17'39"E	2,692'
L16	S88°14'28"E	2,601'
L17	S88°13'57"E	2,601'
L18	N00°48'52"W	2,676'
L19	N00°48'52"W	2,676'
L20	S88°44'49"E	2,658'
L21	S88°34'25"E	2,646'



¹⁷ OPERATOR CERTIFICATION
I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Fatma Abdallah 11/14/2023
Signature Date

Fatma Abdallah
Printed Name

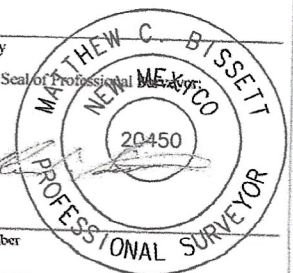
fabdallah@silverbackexp.com
E-mail Address

¹⁸ SURVEYOR CERTIFICATION
I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

11/13/23
Date of Survey

Matthew C. Bissett
Signature and Seal of Professional Surveyor

20450
Certificate Number



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

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¹ API Number 30-015 -54390	² Pool Code 50270	³ Pool Name Penasco Draw, SA-YESO
⁴ Property Code 335016	⁵ Property Name ROCHE	⁶ Well Number 102H
⁷ OGRID No. 330968	⁸ Operator Name SILVERBACK OPERATING II, LLC	⁹ Elevation 3,416'

¹⁰ Surface Location

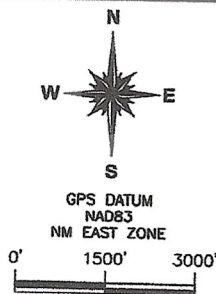
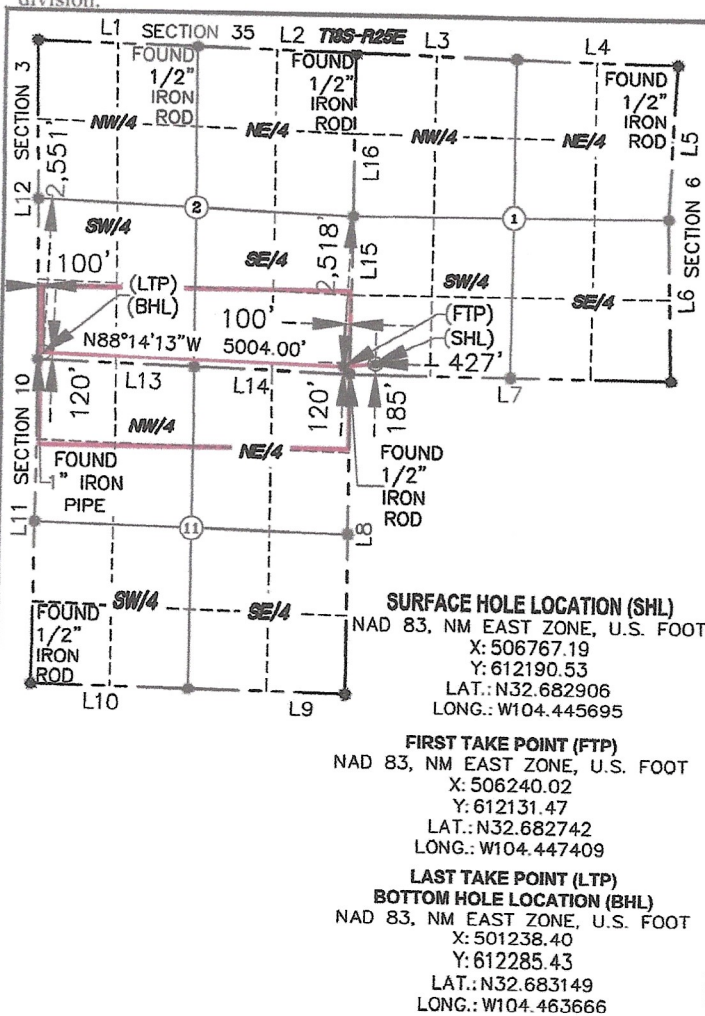
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
M	1	19-S	25-E		185'	SOUTH	427'	WEST	EDDY

¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
M	2	19-S	25-E		120'	SOUTH	100'	WEST	EDDY

¹² Dedicated Acres 320	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ 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.



¹⁷ OPERATOR CERTIFICATION

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

Fatma Abdallah 11/14/2023
Signature Date

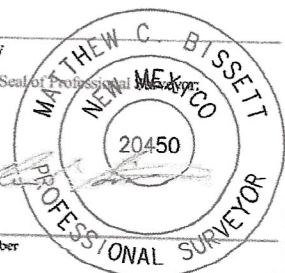
Fatma Abdallah
Printed Name
fabdallah@silverbackexp.com
E-mail Address

¹⁸ SURVEYOR CERTIFICATION

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

11/13/23
Date of Survey

Signature and Seal of Professional Surveyor



20450
Certificate Number

LINE #	BEARING	LENGTH
L1	S88°44'49"E	2,658'
L2	S88°34'25"E	2,646'
L3	S88°45'39"E	2,680'
L4	S88°45'16"E	2,688'
L5	S02°37'33"W	2,613'
L6	S01°43'23"E	2,691'
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L14	S88°13'57"E	2,601'
L15	N00°17'00"E	2,639'
L16	N00°17'09"E	2,748'

SURFACE HOLE LOCATION (SHL)
NAD 83, NM EAST ZONE, U.S. FOOT
X: 506767.19
Y: 612190.53
LAT.: N32.682906
LONG.: W104.445695

FIRST TAKE POINT (FTP)
NAD 83, NM EAST ZONE, U.S. FOOT
X: 506240.02
Y: 612131.47
LAT.: N32.682742
LONG.: W104.447409

LAST TAKE POINT (LTP)
BOTTOM HOLE LOCATION (BHL)
NAD 83, NM EAST ZONE, U.S. FOOT
X: 501238.40
Y: 612285.43
LAT.: N32.683149
LONG.: W104.463666

Received by OCD: 11/17/2023 7:52:18 AM

Page 2 of 30

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⁴ Property Code 335016	⁵ Property Name ROCHE	
⁷ OGRID No. 330968	⁸ Operator Name SILVERBACK OPERATING II, LLC	⁶ Well Number 103H ⁹ Elevation 3,416'

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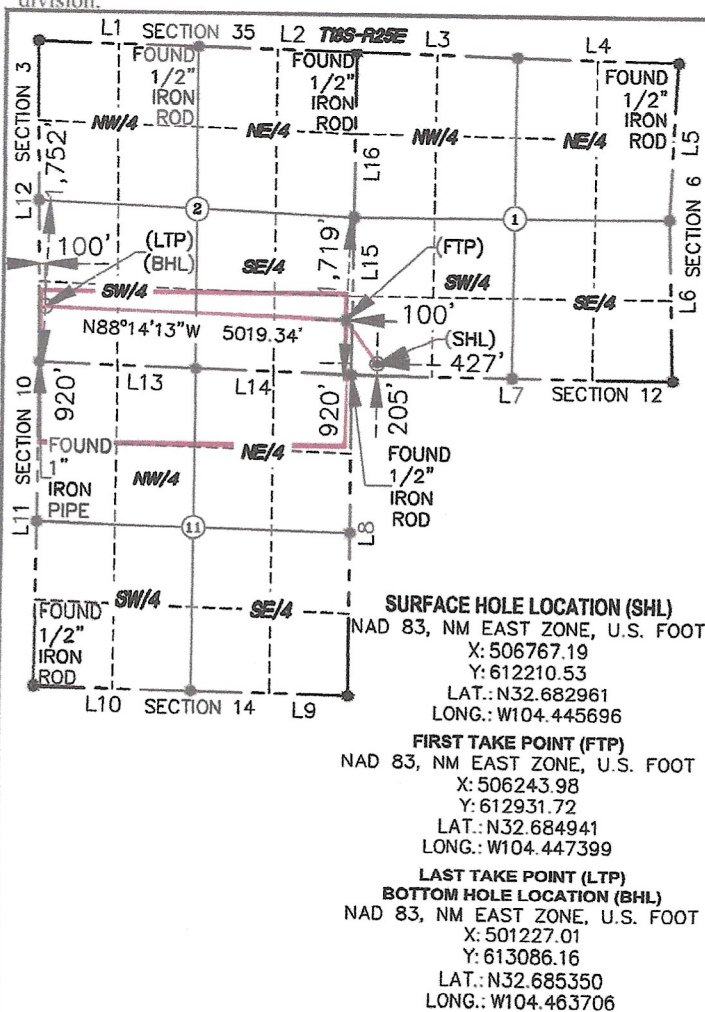
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
M	1	19-S	25-E		205'	SOUTH	427'	WEST	EDDY

¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
M	2	19-S	25-E		920'	SOUTH	100'	WEST	EDDY

¹² Dedicated Acres 320	¹³ Joint or Infill Infill	¹⁴ Consolidation Code	¹⁵ Order No.
--------------------------------------	---	----------------------------------	-------------------------

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.



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L2	S88°34'25"E	2,646'
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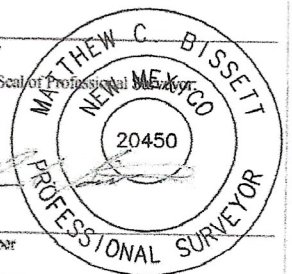
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Fatma Abdallah 11/14/2023
Signature Date

Fatma Abdallah
Printed Name
fabdallah@silverbackexp.com
E-mail Address

¹⁸ SURVEYOR CERTIFICATION
I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

11/13/23
Date of Survey
Signature and Seal of Professional Surveyor
20450
Certificate Number





Authority for Expenditure - Artesia

D&C AFE #: 10020D
Facilities AFE #: 10020F

Date: January 25, 2024

Lease: Roche
Well No: 101H
County: Eddy
State: NM
SHL: Sec: 1, T-19S, R-25E; 165 FSL, 427 FWL
BHL: Sec: 11, T-19S, R-25E; 680 FNL, 100 FWL

Target: Paddock
Projected MD/TVD: 8595 / 2753
Spud to TD: 7.4 days
Lateral Length: 5,005
Stages: 25
Proppant/ft: 1250

Project Description:

The proposed AFE is for the Roche 101H, a single, 1 section Paddock horizontal well to be drilled in Eddy County, NM. The well is a 2 string casing design consisting of the following: 12.25" surface hole drilled on FRESH to 1250' and 9.625" 36# J-55 BTC casing set and cemented in place; 8.75" production hole will then be drilled on Cut Brine to TD at 8595' and a split string of 7" 32# L-80 HC PIXS and 5.5" 20# L-80 HC PIXS string of casing will be set and cemented in place. There will be 5005' of treatable lateral and the completions design will consist of +/-25 stages at 1250 lbs/ft & 2000 gals/ft.

	<u>TOTAL</u>
DRILLING:	\$1,882,590
COMPLETIONS:	\$2,394,194
FACILITIES:	<u>\$746,800</u>
COMPLETED WELL COST:	<u>\$5,023,584</u>

OPERATOR APPROVAL:

Signature: _____
Name: Stephen A. Lipari

Date: _____
Title: C.E.O.

Signature: _____
Name: David Frye

Date: _____
Title: C.C.O.

Signature: _____
Name: Matt Alley

Date: _____
Title: C.F.O.

Signature: _____
Name: Gene Colgan

Date: _____
Title: V.P. Exploration

Signature: _____
Name: Braden Harris

Date: _____
Title: V.P. Operations

JOINT INTEREST APPROVAL:

Company: _____ Working Interest: _____
 Signature: _____ Date: _____
 By: _____
 Title: _____

Roche 101H D&C AFE #10020D

TANGIBLE D&C COSTS				Dry Hole	Completion	Total
Tangible Drilling				\$ 312,704	\$ -	\$ 312,704
850.015	Surface Casing:	9.625" 36# J-55 BTC	\$ 39,721	\$ -	\$ 39,721	
850.020	Intermediate Casing:	0	\$ -	\$ -	\$ -	
850.025	Production Casing:	7" 32# L-80 HC PIXS x 5.5" 20# L-80 HC PIXS	\$ 217,520	\$ -	\$ 217,520	
850.145	Wellhead Equipment:		\$ 55,464	\$ -	\$ 55,464	
Tangible Completion				\$ -	\$ 232,787	\$ 232,787
860.145	Wellhead:		\$ -	\$ 28,748	\$ 28,748	
860.140	Tubing:	2-7/8" L-80 MAJORPACK	\$ -	\$ 67,006	\$ 67,006	
860.166	Artificial Lift:	ESP	\$ -	\$ 137,033	\$ 137,033	
TOTAL TANGIBLE D&C COSTS >>>				\$ 312,704	\$ 232,787	\$ 545,491

INTANGIBLE D&C COSTS				Dry Hole	Completion	Total
Intangible Drilling				\$ 1,569,886	\$ -	\$ 1,569,886
830.010	Permitting, Licenses, etc.:		\$ 2,158	\$ -	\$ 2,158	
830.020	Staking & Survey:		\$ 10,790	\$ -	\$ 10,790	
830.025	Locations & Roads:		\$ 94,715	\$ -	\$ 94,715	
830.030	Damages, ROW:		\$ 37,765	\$ -	\$ 37,765	
830.035	Rig Move:		\$ 108,619	\$ -	\$ 108,619	
830.040	Drilling Daywork:	(\$18000 / day)	\$ 271,268	\$ -	\$ 271,268	
830.045	Footage Contract:		\$ -	\$ -	\$ -	
830.050	Conductor:		\$ 25,530	\$ -	\$ 25,530	
830.055	Directional:		\$ 156,397	\$ -	\$ 156,397	
830.060	Bits & BHA:		\$ 50,174	\$ -	\$ 50,174	
830.065	Fuel/Power:		\$ 70,434	\$ -	\$ 70,434	
830.070	Mud - Drill Water:		\$ 39,322	\$ -	\$ 39,322	
830.075	Mud & Chemicals:		\$ 35,290	\$ -	\$ 35,290	
830.080	Mudlogging:		\$ 11,178	\$ -	\$ 11,178	
830.085	Geo-Steering:		\$ -	\$ -	\$ -	
830.090	Coring & Analysis:		\$ -	\$ -	\$ -	
830.095	Open Hole Logging:		\$ -	\$ -	\$ -	
830.100	Cement Float Equip, etc:		\$ 17,304	\$ -	\$ 17,304	
830.105	Transportation:		\$ 12,948	\$ -	\$ 12,948	
830.110	Casing Crew and Equip.		\$ 23,199	\$ -	\$ 23,199	
830.115	Company Supervision:		\$ 4,800	\$ -	\$ 4,800	
830.120	Contract Labor:		\$ 28,162	\$ -	\$ 28,162	
830.125	Equipment Rental:		\$ 47,276	\$ -	\$ 47,276	
830.130	Mancamp:		\$ 29,113	\$ -	\$ 29,113	
830.135	Solids Control/Closed Loop:		\$ 42,087	\$ -	\$ 42,087	
830.140	Mud - Auxillary:		\$ 19,857	\$ -	\$ 19,857	
830.145	Cementing:		\$ 86,320	\$ -	\$ 86,320	
830.150	Miscellaneous:		\$ -	\$ -	\$ -	
830.155	Disposal:		\$ 43,160	\$ -	\$ 43,160	
830.160	Mud - Diesel:		\$ -	\$ -	\$ -	
830.170	Inspection & Repair:		\$ 18,343	\$ -	\$ 18,343	
830.175	Supervision - Contract		\$ 66,492	\$ -	\$ 66,492	
830.180	Drilling Overhead:		\$ 2,828	\$ -	\$ 2,828	
830.190	Legal Title Services:		\$ 10,790	\$ -	\$ 10,790	
830.190	Legal Title Services:		\$ 32,370	\$ -	\$ 32,370	

830.200	Contingency: (0%)	\$ 143,626	\$ -	\$ 143,626
830.205	Safety & Environmental:	\$ 7,108	\$ -	\$ 7,108
830.210	Roustabout Services:	\$ 6,914	\$ -	\$ 6,914
830.215	Mud Brine:	\$ 13,549	\$ -	\$ 13,549
Intangible Completion		\$ -	\$ 2,161,407	\$ 2,161,407
840.025	Location & Roads:	\$ -	\$ 1,241	\$ 1,241
840.156	Stimulation: (120 bbls/min)	\$ -	\$ 369,018	\$ 369,018
840.050	Proppant: (1250 lbs/ft)	\$ -	\$ 316,889	\$ 316,889
840.070	Water: (2000 gal/ft)	\$ -	\$ 287,001	\$ 287,001
840.071	Water Transfer:	\$ -	\$ 32,370	\$ 32,370
840.055	Chemicals:	\$ -	\$ 158,195	\$ 158,195
840.035	Pump Down Services:	\$ -	\$ 45,102	\$ 45,102
840.145	Wireline/Perforating:	\$ -	\$ 149,442	\$ 149,442
840.126	Bits/Tools/Plugs/Stabilizers:	\$ -	\$ 19,422	\$ 19,422
840.090	Rental Equipment - Surface:	\$ -	\$ 176,244	\$ 176,244
840.091	Mancamp:	\$ -	\$ 21,399	\$ 21,399
840.125	Equipment Rentals:	\$ -	\$ 39,373	\$ 39,373
840.107	Disposal:	\$ -	\$ 21,580	\$ 21,580
840.065	Fuel, Power:	\$ -	\$ 209,300	\$ 209,300
840.140	Cased Hole Logs & Surveys	\$ -	\$ -	\$ -
840.120	Contract Labor:	\$ -	\$ 11,276	\$ 11,276
840.130	Completions Rig:	\$ -	\$ 98,189	\$ 98,189
840.177	Consulting Services:	\$ -	\$ 82,867	\$ 82,867
840.175	Company Supervision:	\$ -	\$ 3,884	\$ 3,884
840.135	Coil Tubing Unit	\$ -	\$ -	\$ -
840.160	Well Testing:	\$ -	\$ 101,966	\$ 101,966
840.108	Transportation:	\$ -	\$ 1,295	\$ 1,295
840.166	Safety & Environmental:	\$ -	\$ 7,014	\$ 7,014
840.180	Completions Overhead:	\$ -	\$ 8,342	\$ 8,342
840.190	Miscellaneous:	\$ -	\$ -	\$ -
840.200	Contingency: (0%)	\$ -	\$ -	\$ -
TOTAL INTANGIBLE D&C COSTS >>>		\$ 1,569,886	\$ 2,161,407	\$ 3,731,293
TOTAL D&C COSTS >>>		\$ 1,882,590	\$ 2,394,194	\$ 4,276,784
		Dry Hole	Completion	Total

This Authority For Expenditure is based on cost estimates. Billing will reflect your proportionate share of the actual invoice costs.

Roche 101H Facilities AFE #10020F

TANGIBLE FACILITIES COSTS		Facilities	Total
Tangible Facilities		\$ 491,200	\$ 491,200
865.005	Vessels:	\$ 132,200	\$ 132,200
865.010	Electrical OH/Transformers:	\$ 8,300	\$ 8,300
865.015	Pipe/Valves/Fittings	\$ 49,000	\$ 49,000
865.020	Instrumentation/Meters/Specialty Items	\$ 39,700	\$ 39,700
865.025	LACT Unit:	\$ 70,000	\$ 70,000
865.030	Tanks:	\$ 63,300	\$ 63,300
865.035	Instrumentation/Electrical Materials:	\$ 49,000	\$ 49,000
865.040	Containment:	\$ 21,300	\$ 21,300
865.045	Pump/Supplies:	\$ 13,000	\$ 13,000
865.050	Pipelines:	\$ -	\$ -
865.055	Flowlines:	\$ 6,700	\$ 6,700
865.065	Flare/Combustor	\$ 23,700	\$ 23,700
865.070	Air Compression	\$ 6,700	\$ 6,700
865.075	Instrument/Electrical Panels	\$ 8,300	\$ 8,300
865.190	Miscellaneous:	\$ -	\$ -
865.200	Contingency:	\$ -	\$ -
TOTAL TANGIBLE FACILITIES COSTS >>>		\$ 491,200	\$ 491,200
INTANGIBLE FACILITIES COSTS		Facilities	Total
Intangible Facilities		\$ 255,600	\$ 255,600
845.005	Title Work/Permit Fees:	\$ -	\$ -
845.008	Staking & Surveying	\$ 5,300	\$ 5,300
845.010	Roads/Location:	\$ -	\$ -
845.015	Damages/ROW:	\$ -	\$ -
845.025	Air Compression Pooling	\$ 3,000	\$ 3,000
845.025	Contract Labor: Pipeline/Flowline:	\$ 10,000	\$ 10,000

845.030	Contract Labor Automation/Electrical	\$ 68,400	\$ 68,400
845.035	Contract Labor Engineer/Technical:	\$ 15,000	\$ 15,000
845.040	Contract Labor Mechanical	\$ 113,500	\$ 113,500
845.045	Facility Pad:	\$ -	\$ -
845.050	Transportation/Trucking:	\$ 3,300	\$ 3,300
845.055	Miscellaneous:	\$ -	\$ -
845.060	Equipment Rentals:	\$ 5,000	\$ 5,000
845.065	Contract Labor - Commissioning:	\$ 8,300	\$ 8,300
845.070	Nondestructive Examination:	\$ 500	\$ 500
845.080	Supervision:	\$ 23,300	\$ 23,300
845.200	Contingency:	\$ -	\$ -
TOTAL INTANGIBLE FACILITIES COSTS >>>		\$ 255,600	\$ 255,600
TOTAL FACILITIES COSTS >>>		\$ 746,800	\$ 746,800
		Facilities	Total

This Authority For Expenditure is based on cost estimates. Billing will reflect your proportionate share of the actual invoice costs.



Authority for Expenditure - Artesia

D&C AFE #: 10021D
Facilities AFE #: 10021F

Date: January 25, 2024

Lease: Roche
Well No: 102H
County: Eddy
State: NM
SHL: Sec: 1, T-19S, R-25E; 185 FSL, 427 FWL
BHL: Sec: 2, T-19S, R-25E; 120 FSL, 100 FWL

Target: Paddock
Projected MD/TVD: 8121 / 2458
Spud to TD: 9.6 days
Lateral Length: 5,006
Stages: 25
Proppant/ft: 1250

Project Description:

The proposed AFE is for the Roche 102H, a single, 1 section Paddock horizontal well to be drilled in Eddy County, NM. The well is a 2 string casing design consisting of the following: 12.25" surface hole drilled on FRESH to 1250' and 9.625" 36# J-55 BTC casing set and cemented in place; 8.75" production hole will then be drilled on Cut Brine to TD at 8121' and a split string of 7" 32# L-80 HC PIXS and 5.5" 20# L-80 HC PIXS string of casing will be set and cemented in place. There will be 5006' of treatable lateral and the completions design will consist of +/-25 stages at 1250 lbs/ft & 2000 gals/ft.

	<u>TOTAL</u>
DRILLING:	\$1,843,934
COMPLETIONS:	\$2,394,194
FACILITIES:	<u>\$746,800</u>
COMPLETED WELL COST:	\$4,984,928

OPERATOR APPROVAL:

Signature: _____
Name: Stephen A. Lipari

Date: _____
Title: C.E.O.

Signature: _____
Name: David Frye

Date: _____
Title: C.C.O.

Signature: _____
Name: Matt Alley

Date: _____
Title: C.F.O.

Signature: _____
Name: Gene Colgan

Date: _____
Title: V.P. Exploration

Signature: _____
Name: Braden Harris

Date: _____
Title: V.P. Operations

JOINT INTEREST APPROVAL:

Company: _____ Working Interest: _____

Signature: _____ Date: _____

By: _____

Title: _____

Roche 102H D&C AFE #10021D

TANGIBLE D&C COSTS				Dry Hole	Completion	Total
Tangible Drilling				\$ 297,762	\$ -	\$ 297,762
850.015	Surface Casing:	9.625" 36# J-55 BTC	\$ 39,721	\$ -	\$ 39,721	
850.020	Intermediate Casing:	0	\$ -	\$ -	\$ -	
850.025	Production Casing:	7" 32# L-80 HC PIXS x 5.5" 20# L-80 HC PIXS	\$ 202,578	\$ -	\$ 202,578	
850.145	Wellhead Equipment:		\$ 55,464	\$ -	\$ 55,464	
Tangible Completion				\$ -	\$ 232,787	\$ 232,787
860.145	Wellhead:		\$ -	\$ 28,748	\$ 28,748	
860.140	Tubing:	2-7/8" L-80 MAJORPACK	\$ -	\$ 67,006	\$ 67,006	
860.166	Artificial Lift:	ESP	\$ -	\$ 137,033	\$ 137,033	
TOTAL TANGIBLE D&C COSTS >>>				\$ 297,762	\$ 232,787	\$ 530,549

INTANGIBLE D&C COSTS				Dry Hole	Completion	Total
Intangible Drilling				\$ 1,546,172	\$ -	\$ 1,546,172
830.010	Permitting, Licenses, etc.:		\$ 2,158	\$ -	\$ 2,158	
830.020	Staking & Survey:		\$ 10,790	\$ -	\$ 10,790	
830.025	Locations & Roads:		\$ 94,715	\$ -	\$ 94,715	
830.030	Damages, ROW:		\$ 37,765	\$ -	\$ 37,765	
830.035	Rig Move:		\$ 108,619	\$ -	\$ 108,619	
830.040	Drilling Daywork:	(\$18000 / day)	\$ 262,412	\$ -	\$ 262,412	
830.045	Footage Contract:		\$ -	\$ -	\$ -	
830.050	Conductor:		\$ 25,530	\$ -	\$ 25,530	
830.055	Directional:		\$ 152,909	\$ -	\$ 152,909	
830.060	Bits & BHA:		\$ 50,174	\$ -	\$ 50,174	
830.065	Fuel/Power:		\$ 68,413	\$ -	\$ 68,413	
830.070	Mud - Drill Water:		\$ 39,303	\$ -	\$ 39,303	
830.075	Mud & Chemicals:		\$ 34,972	\$ -	\$ 34,972	
830.080	Mudlogging:		\$ 11,178	\$ -	\$ 11,178	
830.085	Geo-Steering:		\$ -	\$ -	\$ -	
830.090	Coring & Analysis:		\$ -	\$ -	\$ -	
830.095	Open Hole Logging:		\$ -	\$ -	\$ -	
830.100	Cement Float Equip, etc:		\$ 17,191	\$ -	\$ 17,191	
830.105	Transportation:		\$ 12,948	\$ -	\$ 12,948	
830.110	Casing Crew and Equip.		\$ 23,199	\$ -	\$ 23,199	
830.115	Company Supervision:		\$ 4,800	\$ -	\$ 4,800	
830.120	Contract Labor:		\$ 28,162	\$ -	\$ 28,162	
830.125	Equipment Rental:		\$ 45,906	\$ -	\$ 45,906	
830.130	Mancamp:		\$ 27,992	\$ -	\$ 27,992	
830.135	Solids Control/Closed Loop:		\$ 40,894	\$ -	\$ 40,894	
830.140	Mud - Auxillary:		\$ 19,619	\$ -	\$ 19,619	
830.145	Cementing:		\$ 86,320	\$ -	\$ 86,320	
830.150	Miscellaneous:		\$ -	\$ -	\$ -	
830.155	Disposal:		\$ 43,160	\$ -	\$ 43,160	
830.160	Mud - Diesel:		\$ -	\$ -	\$ -	
830.170	Inspection & Repair:		\$ 18,343	\$ -	\$ 18,343	
830.175	Supervision - Contract		\$ 64,748	\$ -	\$ 64,748	
830.180	Drilling Overhead:		\$ 2,734	\$ -	\$ 2,734	
830.190	Insurance:		\$ 10,790	\$ -	\$ 10,790	
830.195	Services:		\$ 32,370	\$ -	\$ 32,370	

	830.200	Contingency: (0%)	\$	141,470	\$	-	\$	141,470
	830.205	Safety & Environmental:	\$	7,069	\$	-	\$	7,069
	830.210	Roustabout Services:	\$	6,863	\$	-	\$	6,863
	830.215	Mud Brine:	\$	12,656	\$	-	\$	12,656
Intangible Completion			\$	-	\$	2,161,407	\$	2,161,407
	840.025	Location & Roads:	\$	-	\$	1,241	\$	1,241
	840.156	Stimulation: (120 bbls/min)	\$	-	\$	369,018	\$	369,018
	840.050	Proppant: (1250 lbs/ft)	\$	-	\$	316,889	\$	316,889
	840.070	Water: (2000 gal/ft)	\$	-	\$	287,001	\$	287,001
	840.071	Water Transfer:	\$	-	\$	32,370	\$	32,370
	840.055	Chemicals:	\$	-	\$	158,195	\$	158,195
	840.035	Pump Down Services:	\$	-	\$	45,102	\$	45,102
	840.145	Wireline/Perforating:	\$	-	\$	149,442	\$	149,442
	840.126	Bits/Tools/Plugs/Stabilizers:	\$	-	\$	19,422	\$	19,422
	840.090	Rental Equipment - Surface:	\$	-	\$	176,244	\$	176,244
	840.091	Mancamp:	\$	-	\$	21,399	\$	21,399
	840.125	Equipment Rentals:	\$	-	\$	39,373	\$	39,373
	840.107	Disposal:	\$	-	\$	21,580	\$	21,580
	840.065	Fuel, Power:	\$	-	\$	209,300	\$	209,300
	840.140	Cased Hole Logs & Surveys	\$	-	\$	-	\$	-
	840.120	Contract Labor:	\$	-	\$	11,276	\$	11,276
	840.130	Completions Rig:	\$	-	\$	98,189	\$	98,189
	840.177	Consulting Services:	\$	-	\$	82,867	\$	82,867
	840.175	Company Supervision:	\$	-	\$	3,884	\$	3,884
	840.135	Coil Tubing Unit	\$	-	\$	-	\$	-
	840.160	Well Testing:	\$	-	\$	101,966	\$	101,966
	840.108	Transportation:	\$	-	\$	1,295	\$	1,295
	840.166	Safety & Environmental:	\$	-	\$	7,014	\$	7,014
	840.180	Completions Overhead:	\$	-	\$	8,342	\$	8,342
	840.190	Miscellaneous:	\$	-	\$	-	\$	-
	840.200	Contingency: (0%)	\$	-	\$	-	\$	-
TOTAL INTANGIBLE D&C COSTS >>>			\$	1,546,172	\$	2,161,407	\$	3,707,579
TOTAL D&C COSTS >>>			\$	1,843,934	\$	2,394,194	\$	4,238,128
				Dry Hole		Completion		Total

This Authority For Expenditure is based on cost estimates. Billing will reflect your proportionate share of the actual invoice costs.

Roche 102H Facilities AFE #10021F

TANGIBLE FACILITIES COSTS			Facilities	Total
Tangible Facilities			\$	491,200
	865.005	Vessels:	\$	132,200
	865.010	Electircal OH/Transformers:	\$	8,300
	865.015	Pipe/Valves/Fittings	\$	49,000
	865.020	Instrumentation/Meters/Specialty Items	\$	39,700
	865.025	LACT Unit:	\$	70,000
	865.030	Tanks:	\$	63,300
	865.035	Instrumentation/Electrical Materials:	\$	49,000
	865.040	Containment:	\$	21,300
	865.045	Pump/Supplies:	\$	13,000
	865.050	Pipelines:	\$	-
	865.055	Flowlines:	\$	6,700
	865.065	Flare/Combustor	\$	23,700
	865.070	Air Compression	\$	6,700
	865.075	Instrument/Electrical Panel	\$	8,300
	865.190	Miscellaneous:	\$	-
	865.200	Continegnecy:	\$	-
TOTAL TANGIBLE FACILITIES COSTS >>>			\$	491,200
INTANGIBLE FACILITES COSTS			Facilities	Total
Intangible Facilities			\$	255,600
	845.005	Title Work/Permit Fees:	\$	-
	845.008	Staking & Surveying	\$	5,300
	845.010	Roads/Location:	\$	-
	845.015	Damages/ROW:	\$	-
	845.020	Air Permit/Environmental:	\$	3,000
	845.025	Contract Labor Pipeline/Flowline:	\$	10,000

845.030	Contract Labor Automation/Electrical	\$68,400	\$ 68,400
845.035	Contract Labor Engineer/Technical:	\$15,000	\$ 15,000
845.040	Contract Labor Mechanical	\$113,500	\$ 113,500
845.045	Facility Pad:	\$ -	\$ -
845.050	Transportation/Trucking:	\$3,300	\$ 3,300
845.055	Miscellaneous:	\$ -	\$ -
845.060	Equipment Rentals:	\$5,000	\$ 5,000
845.065	Contract Labor - Commissioning:	\$8,300	\$ 8,300
845.070	Nondestructive Examination:	\$500	\$ 500
845.080	Supervision:	\$23,300	\$ 23,300
845.200	Contingency:		
TOTAL INTANGIBLE FACILITIES COSTS >>>		\$ 255,600	\$ 255,600
TOTAL FACILITIES COSTS >>>		\$ 746,800	\$ 746,800
		Facilities	Total

This Authority For Expenditure is based on cost estimates. Billing will reflect your proportionate share of the actual invoice costs.



Authority for Expenditure - Artesia

D&C AFE #: 10022D
Facilities AFE #: 10022F

Date: January 25, 2024

Lease: Roche
Well No: 103H
County: Eddy
State: NM
SHL: Sec: 1, T-19S, R-25E; 205 FSL, 427 FWL
BHL: Sec: 2, T-19S, R-25E; 920 FSL, 100 FWL

Target: Paddock
Projected MD/TVD: 8383 / 2589
Spud to TD: 9.8 days
Lateral Length: 5,029
Stages: 25
Proppant/ft: 1250

Project Description:

The proposed AFE is for the Roche 103H, a single, 1 section Paddock horizontal well to be drilled in Eddy County, NM. The well is a 2 string casing design consisting of the following: 12.25" surface hole drilled on FRESH to 1250' and 9.625" 36# J-55 BTC casing set and cemented in place; 8.75" production hole will then be drilled on Cut Brine to TD at 8383' and a split string of 7" 32# L-80 HC PIXS and 5.5" 20# L-80 HC PIXS string of casing will be set and cemented in place. There will be 5029' of treatable lateral and the completions design will consist of +/-25 stages at 1250 lbs/ft & 2000 gals/ft.

	<u>TOTAL</u>
DRILLING:	\$1,864,175
COMPLETIONS:	\$2,394,194
FACILITIES:	<u>\$746,800</u>
COMPLETED WELL COST:	\$5,005,169

OPERATOR APPROVAL:

Signature: _____
Name: Stephen A. Lipari

Date: _____
Title: C.E.O.

Signature: _____
Name: David Frye

Date: _____
Title: C.C.O.

Signature: _____
Name: Matt Alley

Date: _____
Title: C.F.O.

Signature: _____
Name: Gene Colgan

Date: _____
Title: V.P. Exploration

Signature: _____
Name: Braden Harris

Date: _____
Title: V.P. Operations

JOINT INTEREST APPROVAL:

Company: _____ Working Interest: _____

Signature: _____ Date: _____

By: _____

Title: _____

Roche 103H D&C AFE #10022D

TANGIBLE D&C COSTS				Dry Hole	Completion	Total
Tangible Drilling				\$ 305,424	\$ -	\$ 305,424
850.015	Surface Casing:	9.625" 36# J-55 BTC	\$ 39,721	\$ -	\$ 39,721	
850.020	Intermediate Casing:	0	\$ -	\$ -	\$ -	
850.025	Production Casing:	7" 32# L-80 HC PIXS x 5.5" 20# L-80 HC PIXS	\$ 210,240	\$ -	\$ 210,240	
850.145	Wellhead Equipment:		\$ 55,464	\$ -	\$ 55,464	
Tangible Completion				\$ -	\$ 232,787	\$ 232,787
860.145	Wellhead:		\$ -	\$ 28,748	\$ 28,748	
860.140	Tubing:	2-7/8" L-80 MAJORPACK	\$ -	\$ 67,006	\$ 67,006	
860.166	Artificial Lift:	ESP	\$ -	\$ 137,033	\$ 137,033	
TOTAL TANGIBLE D&C COSTS >>>				\$ 305,424	\$ 232,787	\$ 538,211

INTANGIBLE D&C COSTS				Dry Hole	Completion	Total
Intangible Drilling				\$ 1,558,751	\$ -	\$ 1,558,751
830.010	Permitting, Licenses, etc.:		\$ 2,158	\$ -	\$ 2,158	
830.020	Staking & Survey:		\$ 10,790	\$ -	\$ 10,790	
830.025	Locations & Roads:		\$ 94,715	\$ -	\$ 94,715	
830.030	Damages, ROW:		\$ 37,765	\$ -	\$ 37,765	
830.035	Rig Move:		\$ 108,619	\$ -	\$ 108,619	
830.040	Drilling Daywork:	(\$18000 / day)	\$ 267,146	\$ -	\$ 267,146	
830.045	Footage Contract:		\$ -	\$ -	\$ -	
830.050	Conductor:		\$ 25,530	\$ -	\$ 25,530	
830.055	Directional:		\$ 154,774	\$ -	\$ 154,774	
830.060	Bits & BHA:		\$ 50,174	\$ -	\$ 50,174	
830.065	Fuel/Power:		\$ 69,493	\$ -	\$ 69,493	
830.070	Mud - Drill Water:		\$ 39,314	\$ -	\$ 39,314	
830.075	Mud & Chemicals:		\$ 35,142	\$ -	\$ 35,142	
830.080	Mudlogging:		\$ 11,178	\$ -	\$ 11,178	
830.085	Geo-Steering:		\$ -	\$ -	\$ -	
830.090	Coring & Analysis:		\$ -	\$ -	\$ -	
830.095	Open Hole Logging:		\$ -	\$ -	\$ -	
830.100	Cement Float Equip, etc:		\$ 17,266	\$ -	\$ 17,266	
830.105	Transportation:		\$ 12,948	\$ -	\$ 12,948	
830.110	Casing Crew and Equip.		\$ 23,199	\$ -	\$ 23,199	
830.115	Company Supervision:		\$ 4,800	\$ -	\$ 4,800	
830.120	Contract Labor:		\$ 28,162	\$ -	\$ 28,162	
830.125	Equipment Rental:		\$ 46,503	\$ -	\$ 46,503	
830.130	Mancamp:		\$ 28,245	\$ -	\$ 28,245	
830.135	Solids Control/Closed Loop:		\$ 41,532	\$ -	\$ 41,532	
830.140	Mud - Auxillary:		\$ 19,746	\$ -	\$ 19,746	
830.145	Cementing:		\$ 86,320	\$ -	\$ 86,320	
830.150	Miscellaneous:		\$ -	\$ -	\$ -	
830.155	Disposal:		\$ 43,160	\$ -	\$ 43,160	
830.160	Mud - Diesel:		\$ -	\$ -	\$ -	
830.170	Inspection & Repair:		\$ 18,343	\$ -	\$ 18,343	
830.175	Supervision - Contract		\$ 65,680	\$ -	\$ 65,680	
830.180	Drilling Overhead:		\$ 2,784	\$ -	\$ 2,784	
830.190	Insurance:		\$ 10,790	\$ -	\$ 10,790	
830.190	Legal Title Services:		\$ 32,370	\$ -	\$ 32,370	

	830.200	Contingency: (0%)	\$ 142,614	\$ -	\$ 142,614
	830.205	Safety & Environmental:	\$ 7,090	\$ -	\$ 7,090
	830.210	Roustabout Services:	\$ 6,890	\$ -	\$ 6,890
	830.215	Mud Brine:	\$ 13,511	\$ -	\$ 13,511
Intangible Completion			\$ -	\$ 2,161,407	\$ 2,161,407
	840.025	Location & Roads:	\$ -	\$ 1,241	\$ 1,241
	840.156	Stimulation: (120 bbls/min)	\$ -	\$ 369,018	\$ 369,018
	840.050	Proppant: (1250 lbs/ft)	\$ -	\$ 316,889	\$ 316,889
	840.070	Water: (2000 gal/ft)	\$ -	\$ 287,001	\$ 287,001
	840.071	Water Transfer:	\$ -	\$ 32,370	\$ 32,370
	840.055	Chemicals:	\$ -	\$ 158,195	\$ 158,195
	840.035	Pump Down Services:	\$ -	\$ 45,102	\$ 45,102
	840.145	Wireline/Perforating:	\$ -	\$ 149,442	\$ 149,442
	840.126	Bits/Tools/Plugs/Stabilizers:	\$ -	\$ 19,422	\$ 19,422
	840.090	Rental Equipment - Surface:	\$ -	\$ 176,244	\$ 176,244
	840.091	Mancamp:	\$ -	\$ 21,399	\$ 21,399
	840.125	Equipment Rentals:	\$ -	\$ 39,373	\$ 39,373
	840.107	Disposal:	\$ -	\$ 21,580	\$ 21,580
	840.065	Fuel, Power:	\$ -	\$ 209,300	\$ 209,300
	840.140	Cased Hole Logs & Surveys	\$ -	\$ -	\$ -
	840.120	Contract Labor:	\$ -	\$ 11,276	\$ 11,276
	840.130	Completions Rig:	\$ -	\$ 98,189	\$ 98,189
	840.177	Consulting Services:	\$ -	\$ 82,867	\$ 82,867
	840.175	Company Supervision:	\$ -	\$ 3,884	\$ 3,884
	840.135	Coil Tubing Unit	\$ -	\$ -	\$ -
	840.160	Well Testing:	\$ -	\$ 101,966	\$ 101,966
	840.108	Transportation:	\$ -	\$ 1,295	\$ 1,295
	840.166	Safety & Environmental:	\$ -	\$ 7,014	\$ 7,014
	840.180	Completions Overhead:	\$ -	\$ 8,342	\$ 8,342
	840.190	Miscellaneous:	\$ -	\$ -	\$ -
	840.200	Contingency: (0%)	\$ -	\$ -	\$ -
TOTAL INTANGIBLE D&C COSTS >>>			\$ 1,558,751	\$ 2,161,407	\$ 3,720,158
TOTAL D&C COSTS >>>			\$ 1,864,175	\$ 2,394,194	\$ 4,258,369
			Dry Hole	Completion	Total

This Authority For Expenditure is based on cost estimates. Billing will reflect your proportionate share of the actual invoice costs.

Roche 103H Facilities AFE #10022F

TANGIBLE FACILITIES COSTS			Facilities	Total
Tangible Facilities			\$ 491,200	\$ 491,200
	865.005	Vessels:	\$132,200	\$ 132,200
	865.010	Electrical OH/Transformers:	\$8,300	\$ 8,300
	865.015	Pipe/Valves/Fittings	\$49,000	\$ 49,000
	865.020	Instrumentation/Meters/Specialty Items	\$39,700	\$ 39,700
	865.025	LACT Unit:	\$70,000	\$ 70,000
	865.030	Tanks:	\$63,300	\$ 63,300
	865.035	Instrumentation/Electrical Materials:	\$49,000	\$ 49,000
	865.040	Containment:	\$21,300	\$ 21,300
	865.045	Pump/Supplies:	\$13,000	\$ 13,000
	865.050	Pipelines:	\$ -	\$ -
	865.055	Flowlines:	\$6,700	\$ 6,700
	865.065	Flare/Combustor	\$23,700	\$ 23,700
	865.070	Air Compression	\$6,700	\$ 6,700
	865.075	Instrument/Electrical Panel	\$8,300	\$ 8,300
	865.190	Miscellaneous:	\$ -	\$ -
	865.200	Contingency:	\$ -	\$ -
TOTAL TANGIBLE FACILITIES COSTS >>>			\$ 491,200	\$ 491,200
INTANGIBLE FACILITIES COSTS			Facilities	Total
Intangible Facilities			\$ 255,600	\$ 255,600
	845.005	Title Work/Permit Fees:	\$ -	\$ -
	845.008	Staking & Surveying	\$5,300	\$ 5,300
	845.010	Roads/Location:	\$ -	\$ -
	845.015	Damages/ROW:	\$ -	\$ -
	845.020	Well Permit/Environmental	\$3,000	\$ 3,000
	845.025	Contract Labor Pipeline/Flowline:	\$10,000	\$ 10,000

845.030	Contract Labor Automation/Electrical	\$68,400	\$ 68,400
845.035	Contract Labor Engineer/Technical:	\$15,000	\$ 15,000
845.040	Contract Labor Mechanical	\$113,500	\$ 113,500
845.045	Facility Pad:	\$ -	\$ -
845.050	Transportation/Trucking:	\$3,300	\$ 3,300
845.055	Miscellaneous:	\$ -	\$ -
845.060	Equipment Rentals:	\$5,000	\$ 5,000
845.065	Contract Labor - Commissioning:	\$8,300	\$ 8,300
845.070	Nondestructive Examination:	\$500	\$ 500
845.080	Supervision:	\$23,300	\$ 23,300
845.200	Contingency:		
TOTAL INTANGIBLE FACILITIES COSTS >>>		\$ 255,600	\$ 255,600
TOTAL FACILITIES COSTS >>>		\$ 746,800	\$ 746,800
		Facilities	Total

This Authority For Expenditure is based on cost estimates. Billing will reflect your proportionate share of the actual invoice costs.



Authority for Expenditure - Artesia

D&C AFE #: 10020D
Facilities AFE #: 10020F

Date: January 25, 2024

Lease: Roche
Well No: 101H
County: Eddy
State: NM
SHL: Sec: 1, T-19S, R-25E; 165 FSL, 427 FWL
BHL: Sec: 11, T-19S, R-25E; 680 FNL, 100 FWL

Target: Paddock
Projected MD/TVD: 8595 / 2753
Spud to TD: 7.4 days
Lateral Length: 5,005
Stages: 25
Proppant/ft: 1250

Project Description:

The proposed AFE is for the Roche 101H, a single, 1 section Paddock horizontal well to be drilled in Eddy County, NM. The well is a 2 string casing design consisting of the following: 12.25" surface hole drilled on FRESH to 1250' and 9.625" 36# J-55 BTC casing set and cemented in place; 8.75" production hole will then be drilled on Cut Brine to TD at 8595' and a split string of 7" 32# L-80 HC PIXS and 5.5" 20# L-80 HC PIXS string of casing will be set and cemented in place. There will be 5005' of treatable lateral and the completions design will consist of +/-25 stages at 1250 lbs/ft & 2000 gals/ft.

Table with 2 columns: Category and TOTAL. Rows include DRILLING (\$1,882,590), COMPLETIONS (\$2,394,194), FACILITIES (\$746,800), and COMPLETED WELL COST (\$5,023,584).

OPERATOR APPROVAL:

Signature: _____
Name: Stephen A. Lipari

Date: _____
Title: C.E.O.

Signature: _____
Name: David Frye

Date: _____
Title: C.C.O.

Signature: _____
Name: Matt Alley

Date: _____
Title: C.F.O.

Signature: _____
Name: Gene Colgan

Date: _____
Title: V.P. Exploration

Signature: _____
Name: Braden Harris

Date: _____
Title: V.P. Operations

JOINT INTEREST APPROVAL:

Company: _____ Working Interest: _____
 Signature: _____ Date: _____
 By: _____
 Title: _____

Roche 101H D&C AFE #10020D

TANGIBLE D&C COSTS			Dry Hole	Completion	Total
Tangible Drilling			\$ 312,704	\$ -	\$ 312,704
850.015	Surface Casing:	9.625" 36# J-55 BTC	\$ 39,721	\$ -	\$ 39,721
850.020	Intermediate Casing:	0	\$ -	\$ -	\$ -
850.025	Production Casing:	7" 32# L-80 HC PIXS x 5.5" 20# L-80 HC PIXS	\$ 217,520	\$ -	\$ 217,520
850.145	Wellhead Equipment:		\$ 55,464	\$ -	\$ 55,464
Tangible Completion			\$ -	\$ 232,787	\$ 232,787
860.145	Wellhead:		\$ -	\$ 28,748	\$ 28,748
860.140	Tubing:	2-7/8"L-80 MAJORPACK	\$ -	\$ 67,006	\$ 67,006
860.166	Artificial Lift:	ESP	\$ -	\$ 137,033	\$ 137,033
TOTAL TANGIBLE D&C COSTS >>>			\$ 312,704	\$ 232,787	\$ 545,491

INTANGIBLE D&C COSTS			Dry Hole	Completion	Total
Intangible Drilling			\$ 1,569,886	\$ -	\$ 1,569,886
830.010	Permitting, Licenses, etc.:		\$ 2,158	\$ -	\$ 2,158
830.020	Staking & Survey:		\$ 10,790	\$ -	\$ 10,790
830.025	Locations & Roads:		\$ 94,715	\$ -	\$ 94,715
830.030	Damages, ROW:		\$ 37,765	\$ -	\$ 37,765
830.035	Rig Move:		\$ 108,619	\$ -	\$ 108,619
830.040	Drilling Daywork:	(\$18000 / day)	\$ 271,268	\$ -	\$ 271,268
830.045	Footage Contract:		\$ -	\$ -	\$ -
830.050	Conductor:		\$ 25,530	\$ -	\$ 25,530
830.055	Directional:		\$ 156,397	\$ -	\$ 156,397
830.060	Bits & BHA:		\$ 50,174	\$ -	\$ 50,174
830.065	Fuel/Power:		\$ 70,434	\$ -	\$ 70,434
830.070	Mud - Drill Water:		\$ 39,322	\$ -	\$ 39,322
830.075	Mud & Chemicals:		\$ 35,290	\$ -	\$ 35,290
830.080	Mudlogging:		\$ 11,178	\$ -	\$ 11,178
830.085	Geo-Steering:		\$ -	\$ -	\$ -
830.090	Coring & Analysis:		\$ -	\$ -	\$ -
830.095	Open Hole Logging:		\$ -	\$ -	\$ -
830.100	Cement Float Equip, etc:		\$ 17,304	\$ -	\$ 17,304
830.105	Transportation:		\$ 12,948	\$ -	\$ 12,948
830.110	Casing Crew and Equip.		\$ 23,199	\$ -	\$ 23,199
830.115	Company Supervision:		\$ 4,800	\$ -	\$ 4,800
830.120	Contract Labor:		\$ 28,162	\$ -	\$ 28,162
830.125	Equipment Rental:		\$ 47,276	\$ -	\$ 47,276
830.130	Mancamp:		\$ 29,113	\$ -	\$ 29,113
830.135	Solids Control/Closed Loop:		\$ 42,087	\$ -	\$ 42,087
830.140	Mud - Auxillary:		\$ 19,857	\$ -	\$ 19,857
830.145	Cementing:		\$ 86,320	\$ -	\$ 86,320
830.150	Miscellaneous:		\$ -	\$ -	\$ -
830.155	Disposal:		\$ 43,160	\$ -	\$ 43,160
830.160	Mud - Diesel:		\$ -	\$ -	\$ -
830.170	Inspection & Repair:		\$ 18,343	\$ -	\$ 18,343
830.175	Supervision - Contract		\$ 66,492	\$ -	\$ 66,492
830.180	Drilling Overhead:		\$ 2,828	\$ -	\$ 2,828
830.185	Insurance:		\$ 10,790	\$ -	\$ 10,790
830.190	Legal, Title Services:		\$ 32,370	\$ -	\$ 32,370

	830.200	Contingency: (0%)	\$ 143,626	\$ -	\$ 143,626
	830.205	Safety & Environmental:	\$ 7,108	\$ -	\$ 7,108
	830.210	Roustabout Services:	\$ 6,914	\$ -	\$ 6,914
	830.215	Mud Brine:	\$ 13,549	\$ -	\$ 13,549
Intangible Completion			\$ -	\$ 2,161,407	\$ 2,161,407
	840.025	Location & Roads:	\$ -	\$ 1,241	\$ 1,241
	840.156	Stimulation: (120 bbls/min)	\$ -	\$ 369,018	\$ 369,018
	840.050	Proppant: (1250 lbs/ft)	\$ -	\$ 316,889	\$ 316,889
	840.070	Water: (2000 gal/ft)	\$ -	\$ 287,001	\$ 287,001
	840.071	Water Transfer:	\$ -	\$ 32,370	\$ 32,370
	840.055	Chemicals:	\$ -	\$ 158,195	\$ 158,195
	840.035	Pump Down Services:	\$ -	\$ 45,102	\$ 45,102
	840.145	Wireline/Perforating:	\$ -	\$ 149,442	\$ 149,442
	840.126	Bits/Tools/Plugs/Stabilizers:	\$ -	\$ 19,422	\$ 19,422
	840.090	Rental Equipment - Surface:	\$ -	\$ 176,244	\$ 176,244
	840.091	Mancamp:	\$ -	\$ 21,399	\$ 21,399
	840.125	Equipment Rentals:	\$ -	\$ 39,373	\$ 39,373
	840.107	Disposal:	\$ -	\$ 21,580	\$ 21,580
	840.065	Fuel, Power:	\$ -	\$ 209,300	\$ 209,300
	840.140	Cased Hole Logs & Surveys	\$ -	\$ -	\$ -
	840.120	Contract Labor:	\$ -	\$ 11,276	\$ 11,276
	840.130	Completions Rig:	\$ -	\$ 98,189	\$ 98,189
	840.177	Consulting Services:	\$ -	\$ 82,867	\$ 82,867
	840.175	Company Supervision:	\$ -	\$ 3,884	\$ 3,884
	840.135	Coil Tubing Unit	\$ -	\$ -	\$ -
	840.160	Well Testing:	\$ -	\$ 101,966	\$ 101,966
	840.108	Transportation:	\$ -	\$ 1,295	\$ 1,295
	840.166	Safety & Environmental:	\$ -	\$ 7,014	\$ 7,014
	840.180	Completions Overhead:	\$ -	\$ 8,342	\$ 8,342
	840.190	Miscellaneous:	\$ -	\$ -	\$ -
	840.200	Contingency: (0%)	\$ -	\$ -	\$ -
TOTAL INTANGIBLE D&C COSTS >>>			\$ 1,569,886	\$ 2,161,407	\$ 3,731,293
TOTAL D&C COSTS >>>			\$ 1,882,590	\$ 2,394,194	\$ 4,276,784
			Dry Hole	Completion	Total

This Authority For Expenditure is based on cost estimates. Billing will reflect your proportionate share of the actual invoice costs.

Roche 101H Facilities AFE #10020F

TANGIBLE FACILITIES COSTS			Facilities	Total
Tangible Facilities			\$ 491,200	\$ 491,200
	865.005	Vessels:	\$ 132,200	\$ 132,200
	865.010	Electrical OH/Transformers:	\$ 8,300	\$ 8,300
	865.015	Pipe/Valves/Fittings	\$ 49,000	\$ 49,000
	865.020	Instrumentation/Meters/Specialty Items	\$ 39,700	\$ 39,700
	865.025	LACT Unit:	\$ 70,000	\$ 70,000
	865.030	Tanks:	\$ 63,300	\$ 63,300
	865.035	Instrumentation/Electrical Materials:	\$ 49,000	\$ 49,000
	865.040	Containment:	\$ 21,300	\$ 21,300
	865.045	Pump/Supplies:	\$ 13,000	\$ 13,000
	865.050	Pipelines:	\$ -	\$ -
	865.055	Flowlines:	\$ 6,700	\$ 6,700
	865.065	Flare/Combustor	\$ 23,700	\$ 23,700
	865.070	Air Compression	\$ 6,700	\$ 6,700
	865.075	Instrument/Electrical Panels	\$ 8,300	\$ 8,300
	865.190	Miscellaneous:	\$ -	\$ -
	865.200	Contingency:	\$ -	\$ -
TOTAL TANGIBLE FACILITIES COSTS >>>			\$ 491,200	\$ 491,200
INTANGIBLE FACILITIES COSTS			Facilities	Total
Intangible Facilities			\$ 255,600	\$ 255,600
	845.005	Title Work/Permit Fees:	\$ -	\$ -
	845.008	Staking & Surveying	\$ 5,300	\$ 5,300
	845.010	Roads/Location:	\$ -	\$ -
	845.015	Damages/ROW:	\$ -	\$ -
	845.020	Air Permit/Environmental	\$ 3,000	\$ 3,000
	845.025	Contingency:	\$ 10,000	\$ 10,000

845.030	Contract Labor Automation/Electrical	\$ 68,400	\$ 68,400
845.035	Contract Labor Engineer/Technical:	\$ 15,000	\$ 15,000
845.040	Contract Labor Mechanical	\$ 113,500	\$ 113,500
845.045	Facility Pad:	\$ -	\$ -
845.050	Transportation/Trucking:	\$ 3,300	\$ 3,300
845.055	Miscellaneous:	\$ -	\$ -
845.060	Equipment Rentals:	\$ 5,000	\$ 5,000
845.065	Contract Labor - Commissioning:	\$ 8,300	\$ 8,300
845.070	Nondestructive Examination:	\$ 500	\$ 500
845.080	Supervision:	\$ 23,300	\$ 23,300
845.200	Contingency:	\$ -	\$ -
TOTAL INTANGIBLE FACILITIES COSTS >>>		\$ 255,600	\$ 255,600
TOTAL FACILITES COSTS >>>		\$ 746,800	\$ 746,800
		Facilities	Total

This Authority For Expenditure is based on cost estimates. Billing will reflect your proportionate share of the actual invoice costs.



Authority for Expenditure - Artesia

D&C AFE #: 10021D
Facilities AFE #: 10021F

Date: January 25, 2024

Lease: Roche
Well No: 102H
County: Eddy
State: NM
SHL: Sec: 1, T-19S, R-25E; 185 FSL, 427 FWL
BHL: Sec: 2, T-19S, R-25E; 120 FSL, 100 FWL

Target: Paddock
Projected MD/TVD: 8121 / 2458
Spud to TD: 9.6 days
Lateral Length: 5,006
Stages: 25
Proppant/ft: 1250

Project Description:

The proposed AFE is for the Roche 102H, a single, 1 section Paddock horizontal well to be drilled in Eddy County, NM. The well is a 2 string casing design consisting of the following: 12.25" surface hole drilled on FRESH to 1250' and 9.625" 36# J-55 BTC casing set and cemented in place; 8.75" production hole will then be drilled on Cut Brine to TD at 8121' and a split string of 7" 32# L-80 HC PIXS and 5.5" 20# L-80 HC PIXS string of casing will be set and cemented in place. There will be 5006' of treatable lateral and the completions design will consist of +/-25 stages at 1250 lbs/ft & 2000 gals/ft.

Table with 2 columns: Category and TOTAL. Rows include DRILLING (\$1,843,934), COMPLETIONS (\$2,394,194), FACILITIES (\$746,800), and COMPLETED WELL COST (\$4,984,928).

OPERATOR APPROVAL:

Signature: _____
Name: Stephen A. Lipari

Date: _____
Title: C.E.O.

Signature: _____
Name: David Frye

Date: _____
Title: C.C.O.

Signature: _____
Name: Matt Alley

Date: _____
Title: C.F.O.

Signature: _____
Name: Gene Colgan

Date: _____
Title: V.P. Exploration

Signature: _____
Name: Braden Harris

Date: _____
Title: V.P. Operations

JOINT INTEREST APPROVAL:

Company: _____

Working Interest: _____

Signature: _____

Date: _____

By: _____

Title: _____

Roche 102H D&C AFE #10021D

TANGIBLE D&C COSTS			Dry Hole	Completion	Total
Tangible Drilling			\$ 297,762	\$ -	\$ 297,762
850.015	Surface Casing:	9.625" 36# J-55 BTC	\$ 39,721	\$ -	\$ 39,721
850.020	Intermediate Casing:	0	\$ -	\$ -	\$ -
850.025	Production Casing:	7" 32# L-80 HC PIXS x 5.5" 20# L-80 HC PIXS	\$ 202,578	\$ -	\$ 202,578
850.145	Wellhead Equipment:		\$ 55,464	\$ -	\$ 55,464
Tangible Completion			\$ -	\$ 232,787	\$ 232,787
860.145	Wellhead:		\$ -	\$ 28,748	\$ 28,748
860.140	Tubing:	2-7/8"L-80 MAJORPACK	\$ -	\$ 67,006	\$ 67,006
860.166	Artificial Lift:	ESP	\$ -	\$ 137,033	\$ 137,033
TOTAL TANGIBLE D&C COSTS >>>			\$ 297,762	\$ 232,787	\$ 530,549

INTANGIBLE D&C COSTS			Dry Hole	Completion	Total
Intangible Drilling			\$ 1,546,172	\$ -	\$ 1,546,172
830.010	Permitting, Licenses, etc.:		\$ 2,158	\$ -	\$ 2,158
830.020	Staking & Survey:		\$ 10,790	\$ -	\$ 10,790
830.025	Locations & Roads:		\$ 94,715	\$ -	\$ 94,715
830.030	Damages, ROW:		\$ 37,765	\$ -	\$ 37,765
830.035	Rig Move:		\$ 108,619	\$ -	\$ 108,619
830.040	Drilling Daywork:	(\$18000 / day)	\$ 262,412	\$ -	\$ 262,412
830.045	Footage Contract:		\$ -	\$ -	\$ -
830.050	Conductor:		\$ 25,530	\$ -	\$ 25,530
830.055	Directional:		\$ 152,909	\$ -	\$ 152,909
830.060	Bits & BHA:		\$ 50,174	\$ -	\$ 50,174
830.065	Fuel/Power:		\$ 68,413	\$ -	\$ 68,413
830.070	Mud - Drill Water:		\$ 39,303	\$ -	\$ 39,303
830.075	Mud & Chemicals:		\$ 34,972	\$ -	\$ 34,972
830.080	Mudlogging:		\$ 11,178	\$ -	\$ 11,178
830.085	Geo-Steering:		\$ -	\$ -	\$ -
830.090	Coring & Analysis:		\$ -	\$ -	\$ -
830.095	Open Hole Logging:		\$ -	\$ -	\$ -
830.100	Cement Float Equip, etc:		\$ 17,191	\$ -	\$ 17,191
830.105	Transportation:		\$ 12,948	\$ -	\$ 12,948
830.110	Casing Crew and Equip.		\$ 23,199	\$ -	\$ 23,199
830.115	Company Supervision:		\$ 4,800	\$ -	\$ 4,800
830.120	Contract Labor:		\$ 28,162	\$ -	\$ 28,162
830.125	Equipment Rental:		\$ 45,906	\$ -	\$ 45,906
830.130	Mancamp:		\$ 27,992	\$ -	\$ 27,992
830.135	Solids Control/Closed Loop:		\$ 40,894	\$ -	\$ 40,894
830.140	Mud - Auxillary:		\$ 19,619	\$ -	\$ 19,619
830.145	Cementing:		\$ 86,320	\$ -	\$ 86,320
830.150	Miscellaneous:		\$ -	\$ -	\$ -
830.155	Disposal:		\$ 43,160	\$ -	\$ 43,160
830.160	Mud - Diesel:		\$ -	\$ -	\$ -
830.170	Inspection & Repair:		\$ 18,343	\$ -	\$ 18,343
830.175	Supervision - Contract		\$ 64,748	\$ -	\$ 64,748
830.180	Drilling Overhead:		\$ 2,734	\$ -	\$ 2,734
830.185	Insurance:		\$ 10,790	\$ -	\$ 10,790
830.190	Legal, Title Services:		\$ 32,370	\$ -	\$ 32,370

	830.200	Contingency: (0%)	\$	141,470	\$	-	\$	141,470
	830.205	Safety & Environmental:	\$	7,069	\$	-	\$	7,069
	830.210	Roustabout Services:	\$	6,863	\$	-	\$	6,863
	830.215	Mud Brine:	\$	12,656	\$	-	\$	12,656
Intangible Completion			\$	-	\$	2,161,407	\$	2,161,407
	840.025	Location & Roads:	\$	-	\$	1,241	\$	1,241
	840.156	Stimulation: (120 bbls/min)	\$	-	\$	369,018	\$	369,018
	840.050	Proppant: (1250 lbs/ft)	\$	-	\$	316,889	\$	316,889
	840.070	Water: (2000 gal/ft)	\$	-	\$	287,001	\$	287,001
	840.071	Water Transfer:	\$	-	\$	32,370	\$	32,370
	840.055	Chemicals:	\$	-	\$	158,195	\$	158,195
	840.035	Pump Down Services:	\$	-	\$	45,102	\$	45,102
	840.145	Wireline/Perforating:	\$	-	\$	149,442	\$	149,442
	840.126	Bits/Tools/Plugs/Stabilizers:	\$	-	\$	19,422	\$	19,422
	840.090	Rental Equipment - Surface:	\$	-	\$	176,244	\$	176,244
	840.091	Mancamp:	\$	-	\$	21,399	\$	21,399
	840.125	Equipment Rentals:	\$	-	\$	39,373	\$	39,373
	840.107	Disposal:	\$	-	\$	21,580	\$	21,580
	840.065	Fuel, Power:	\$	-	\$	209,300	\$	209,300
	840.140	Cased Hole Logs & Surveys	\$	-	\$	-	\$	-
	840.120	Contract Labor:	\$	-	\$	11,276	\$	11,276
	840.130	Completions Rig:	\$	-	\$	98,189	\$	98,189
	840.177	Consulting Services:	\$	-	\$	82,867	\$	82,867
	840.175	Company Supervision:	\$	-	\$	3,884	\$	3,884
	840.135	Coil Tubing Unit	\$	-	\$	-	\$	-
	840.160	Well Testing:	\$	-	\$	101,966	\$	101,966
	840.108	Transportation:	\$	-	\$	1,295	\$	1,295
	840.166	Safety & Environmental:	\$	-	\$	7,014	\$	7,014
	840.180	Completions Overhead:	\$	-	\$	8,342	\$	8,342
	840.190	Miscellaneous:	\$	-	\$	-	\$	-
	840.200	Contingency: (0%)	\$	-	\$	-	\$	-
TOTAL INTANGIBLE D&C COSTS >>>			\$	1,546,172	\$	2,161,407	\$	3,707,579
TOTAL D&C COSTS >>>			\$	1,843,934	\$	2,394,194	\$	4,238,128
				Dry Hole		Completion		Total

This Authority For Expenditure is based on cost estimates. Billing will reflect your proportionate share of the actual invoice costs.

Roche 102H Facilities AFE #10021F

TANGIBLE FACILITIES COSTS			Facilities	Total
Tangible Facilities			\$	491,200
	865.005	Vessels:	\$132,200	\$ 132,200
	865.010	Electrical OH/Transformers:	\$8,300	\$ 8,300
	865.015	Pipe/Valves/Fittings	\$49,000	\$ 49,000
	865.020	Instrumentation/Meters/Specialty Items	\$39,700	\$ 39,700
	865.025	LACT Unit:	\$70,000	\$ 70,000
	865.030	Tanks:	\$63,300	\$ 63,300
	865.035	Instrumentation/Electrical Materials:	\$49,000	\$ 49,000
	865.040	Containment:	\$21,300	\$ 21,300
	865.045	Pump/Supplies:	\$13,000	\$ 13,000
	865.050	Pipelines:	\$ -	\$ -
	865.055	Flowlines:	\$6,700	\$ 6,700
	865.065	Flare/Combustor	\$23,700	\$ 23,700
	865.070	Air Compression	\$6,700	\$ 6,700
	865.075	Instrument/Electrical Panel	\$8,300	\$ 8,300
	865.190	Miscellaneous:	\$ -	\$ -
	865.200	Contingency:		
TOTAL TANGIBLE FACILITIES COSTS >>>			\$	491,200
INTANGIBLE FACILITIES COSTS			Facilities	Total
Intangible Facilities			\$	255,600
	845.005	Title Work/Permit Fees:	\$ -	\$ -
	845.008	Staking & Surveying	\$5,300	\$ 5,300
	845.010	Roads/Location:		
	845.015	Damages/ROW:	\$ -	\$ -
	845.020	Air Permit/Environmental	\$3,000	\$ 3,000
	845.025	Contract Labor/Permitting	\$10,000	\$ 10,000

845.030	Contract Labor Automation/Electrical	\$68,400	\$ 68,400
845.035	Contract Labor Engineer/Technical:	\$15,000	\$ 15,000
845.040	Contract Labor Mechanical	\$113,500	\$ 113,500
845.045	Facility Pad:	\$ -	\$ -
845.050	Transportation/Trucking:	\$3,300	\$ 3,300
845.055	Miscellaneous:	\$ -	\$ -
845.060	Equipment Rentals:	\$5,000	\$ 5,000
845.065	Contract Labor - Commissioning:	\$8,300	\$ 8,300
845.070	Nondestructive Examination:	\$500	\$ 500
845.080	Supervision:	\$23,300	\$ 23,300
845.200	Contingency:		
TOTAL INTANGIBLE FACILITIES COSTS >>>		\$ 255,600	\$ 255,600
TOTAL FACILITES COSTS >>>		\$ 746,800	\$ 746,800
		Facilities	Total

This Authority For Expenditure is based on cost estimates. Billing will reflect your proportionate share of the actual invoice costs.



Authority for Expenditure - Artesia

D&C AFE #: 10022D
Facilities AFE #: 10022F

Date: January 25, 2024

Lease: Roche
Well No: 103H
County: Eddy
State: NM
SHL: Sec: 1, T-19S, R-25E; 205 FSL, 427 FWL
BHL: Sec: 2, T-19S, R-25E; 920 FSL, 100 FWL

Target: Paddock
Projected MD/TVD: 8383 / 2589
Spud to TD: 9.8 days
Lateral Length: 5,029
Stages: 25
Proppant/ft: 1250

Project Description:

The proposed AFE is for the Roche 103H, a single, 1 section Paddock horizontal well to be drilled in Eddy County, NM. The well is a 2 string casing design consisting of the following: 12.25" surface hole drilled on FRESH to 1250' and 9.625" 36# J-55 BTC casing set and cemented in place; 8.75" production hole will then be drilled on Cut Brine to TD at 8383' and a split string of 7" 32# L-80 HC PIXS and 5.5" 20# L-80 HC PIXS string of casing will be set and cemented in place. There will be 5029' of treatable lateral and the completions design will consist of +/-25 stages at 1250 lbs/ft & 2000 gals/ft.

Table with 2 columns: Category and Amount. Rows include DRILLING (\$1,864,175), COMPLETIONS (\$2,394,194), FACILITIES (\$746,800), and COMPLETED WELL COST (\$5,005,169).

OPERATOR APPROVAL:

Signature: _____
Name: Stephen A. Lipari

Date: _____
Title: C.E.O.

Signature: _____
Name: David Frye

Date: _____
Title: C.C.O.

Signature: _____
Name: Matt Alley

Date: _____
Title: C.F.O.

Signature: _____
Name: Gene Colgan

Date: _____
Title: V.P. Exploration

Signature: _____
Name: Braden Harris

Date: _____
Title: V.P. Operations

JOINT INTEREST APPROVAL:

Company: _____ Working Interest: _____

Signature: _____ Date: _____

By: _____

Title: _____

Roche 103H D&C AFE #10022D

TANGIBLE D&C COSTS			Dry Hole	Completion	Total
Tangible Drilling			\$ 305,424	\$ -	\$ 305,424
850.015	Surface Casing:	9.625" 36# J-55 BTC	\$ 39,721	\$ -	\$ 39,721
850.020	Intermediate Casing:	0	\$ -	\$ -	\$ -
850.025	Production Casing:	7" 32# L-80 HC PIXS x 5.5" 20# L-80 HC PIXS	\$ 210,240	\$ -	\$ 210,240
850.145	Wellhead Equipment:		\$ 55,464	\$ -	\$ 55,464
Tangible Completion			\$ -	\$ 232,787	\$ 232,787
860.145	Wellhead:		\$ -	\$ 28,748	\$ 28,748
860.140	Tubing:	2-7/8"L-80 MAJORPACK	\$ -	\$ 67,006	\$ 67,006
860.166	Artificial Lift:	ESP	\$ -	\$ 137,033	\$ 137,033
TOTAL TANGIBLE D&C COSTS >>>			\$ 305,424	\$ 232,787	\$ 538,211

INTANGIBLE D&C COSTS			Dry Hole	Completion	Total
Intangible Drilling			\$ 1,558,751	\$ -	\$ 1,558,751
830.010	Permitting, Licenses, etc.:		\$ 2,158	\$ -	\$ 2,158
830.020	Staking & Survey:		\$ 10,790	\$ -	\$ 10,790
830.025	Locations & Roads:		\$ 94,715	\$ -	\$ 94,715
830.030	Damages, ROW:		\$ 37,765	\$ -	\$ 37,765
830.035	Rig Move:		\$ 108,619	\$ -	\$ 108,619
830.040	Drilling Daywork:	(\$18000 / day)	\$ 267,146	\$ -	\$ 267,146
830.045	Footage Contract:		\$ -	\$ -	\$ -
830.050	Conductor:		\$ 25,530	\$ -	\$ 25,530
830.055	Directional:		\$ 154,774	\$ -	\$ 154,774
830.060	Bits & BHA:		\$ 50,174	\$ -	\$ 50,174
830.065	Fuel/Power:		\$ 69,493	\$ -	\$ 69,493
830.070	Mud - Drill Water:		\$ 39,314	\$ -	\$ 39,314
830.075	Mud & Chemicals:		\$ 35,142	\$ -	\$ 35,142
830.080	Mudlogging:		\$ 11,178	\$ -	\$ 11,178
830.085	Geo-Steering:		\$ -	\$ -	\$ -
830.090	Coring & Analysis:		\$ -	\$ -	\$ -
830.095	Open Hole Logging:		\$ -	\$ -	\$ -
830.100	Cement Float Equip, etc:		\$ 17,266	\$ -	\$ 17,266
830.105	Transportation:		\$ 12,948	\$ -	\$ 12,948
830.110	Casing Crew and Equip.		\$ 23,199	\$ -	\$ 23,199
830.115	Company Supervision:		\$ 4,800	\$ -	\$ 4,800
830.120	Contract Labor:		\$ 28,162	\$ -	\$ 28,162
830.125	Equipment Rental:		\$ 46,503	\$ -	\$ 46,503
830.130	Mancamp:		\$ 28,245	\$ -	\$ 28,245
830.135	Solids Control/Closed Loop:		\$ 41,532	\$ -	\$ 41,532
830.140	Mud - Auxillary:		\$ 19,746	\$ -	\$ 19,746
830.145	Cementing:		\$ 86,320	\$ -	\$ 86,320
830.150	Miscellaneous:		\$ -	\$ -	\$ -
830.155	Disposal:		\$ 43,160	\$ -	\$ 43,160
830.160	Mud - Diesel:		\$ -	\$ -	\$ -
830.170	Inspection & Repair:		\$ 18,343	\$ -	\$ 18,343
830.175	Supervision - Contract		\$ 65,680	\$ -	\$ 65,680
830.180	Drilling Overhead:		\$ 2,784	\$ -	\$ 2,784
830.185	Insurance:		\$ 10,790	\$ -	\$ 10,790
830.190	Legal, Title Services:		\$ 32,370	\$ -	\$ 32,370

	830.200	Contingency: (0%)	\$	142,614	\$	-	\$	142,614
	830.205	Safety & Environmental:	\$	7,090	\$	-	\$	7,090
	830.210	Roustabout Services:	\$	6,890	\$	-	\$	6,890
	830.215	Mud Brine:	\$	13,511	\$	-	\$	13,511
Intangible Completion			\$	-	\$	2,161,407	\$	2,161,407
	840.025	Location & Roads:	\$	-	\$	1,241	\$	1,241
	840.156	Stimulation: (120 bbls/min)	\$	-	\$	369,018	\$	369,018
	840.050	Proppant: (1250 lbs/ft)	\$	-	\$	316,889	\$	316,889
	840.070	Water: (2000 gal/ft)	\$	-	\$	287,001	\$	287,001
	840.071	Water Transfer:	\$	-	\$	32,370	\$	32,370
	840.055	Chemicals:	\$	-	\$	158,195	\$	158,195
	840.035	Pump Down Services:	\$	-	\$	45,102	\$	45,102
	840.145	Wireline/Perforating:	\$	-	\$	149,442	\$	149,442
	840.126	Bits/Tools/Plugs/Stabilizers:	\$	-	\$	19,422	\$	19,422
	840.090	Rental Equipment - Surface:	\$	-	\$	176,244	\$	176,244
	840.091	Mancamp:	\$	-	\$	21,399	\$	21,399
	840.125	Equipment Rentals:	\$	-	\$	39,373	\$	39,373
	840.107	Disposal:	\$	-	\$	21,580	\$	21,580
	840.065	Fuel, Power:	\$	-	\$	209,300	\$	209,300
	840.140	Cased Hole Logs & Surveys	\$	-	\$	-	\$	-
	840.120	Contract Labor:	\$	-	\$	11,276	\$	11,276
	840.130	Completions Rig:	\$	-	\$	98,189	\$	98,189
	840.177	Consulting Services:	\$	-	\$	82,867	\$	82,867
	840.175	Company Supervision:	\$	-	\$	3,884	\$	3,884
	840.135	Coil Tubing Unit	\$	-	\$	-	\$	-
	840.160	Well Testing:	\$	-	\$	101,966	\$	101,966
	840.108	Transportation:	\$	-	\$	1,295	\$	1,295
	840.166	Safety & Environmental:	\$	-	\$	7,014	\$	7,014
	840.180	Completions Overhead:	\$	-	\$	8,342	\$	8,342
	840.190	Miscellaneous:	\$	-	\$	-	\$	-
	840.200	Contingency: (0%)	\$	-	\$	-	\$	-
TOTAL INTANGIBLE D&C COSTS >>>			\$	1,558,751	\$	2,161,407	\$	3,720,158
TOTAL D&C COSTS >>>			\$	1,864,175	\$	2,394,194	\$	4,258,369
				Dry Hole		Completion		Total

This Authority For Expenditure is based on cost estimates. Billing will reflect your proportionate share of the actual invoice costs.

Roche 103H Facilities AFE #10022F

TANGIBLE FACILITIES COSTS			Facilities	Total
Tangible Facilities			\$	491,200
	865.005	Vessels:	\$	132,200
	865.010	Electrical OH/Transformers:	\$	8,300
	865.015	Pipe/Valves/Fittings	\$	49,000
	865.020	Instrumentation/Meters/Specialty Items	\$	39,700
	865.025	LACT Unit:	\$	70,000
	865.030	Tanks:	\$	63,300
	865.035	Instrumentation/Electrical Materials:	\$	49,000
	865.040	Containment:	\$	21,300
	865.045	Pump/Supplies:	\$	13,000
	865.050	Pipelines:	\$	-
	865.055	Flowlines:	\$	6,700
	865.065	Flare/Combustor	\$	23,700
	865.070	Air Compression	\$	6,700
	865.075	Instrument/Electrical Panel	\$	8,300
	865.190	Miscellaneous:	\$	-
	865.200	Contingency:	\$	-
TOTAL TANGIBLE FACILITIES COSTS >>>			\$	491,200
INTANGIBLE FACILITIES COSTS			Facilities	Total
Intangible Facilities			\$	255,600
	845.005	Title Work/Permit Fees:	\$	-
	845.008	Staking & Surveying	\$	5,300
	845.010	Roads/Location:	\$	-
	845.015	Damages/ROW:	\$	-
	845.020	Air Permit/Environmental	\$	3,000
	845.025	Contract Labor/Permitting	\$	10,000

845.030	Contract Labor Automation/Electrical	\$68,400	\$ 68,400
845.035	Contract Labor Engineer/Technical:	\$15,000	\$ 15,000
845.040	Contract Labor Mechanical	\$113,500	\$ 113,500
845.045	Facility Pad:	\$ -	\$ -
845.050	Transportation/Trucking:	\$3,300	\$ 3,300
845.055	Miscellaneous:	\$ -	\$ -
845.060	Equipment Rentals:	\$5,000	\$ 5,000
845.065	Contract Labor - Commissioning:	\$8,300	\$ 8,300
845.070	Nondestructive Examination:	\$500	\$ 500
845.080	Supervision:	\$23,300	\$ 23,300
845.200	Contingency:		
TOTAL INTANGIBLE FACILITIES COSTS >>>		\$ 255,600	\$ 255,600
TOTAL FACILITES COSTS >>>		\$ 746,800	\$ 746,800
		Facilities	Total

This Authority For Expenditure is based on cost estimates. Billing will reflect your proportionate share of the actual invoice costs.

EXHIBIT A-7

DETAILED SUMMARY OF CHRONOLOGY OF CONTACTS

EXHIBIT "A-7"
Case No. 24517
Silverback Operating II, LLC - Applicant

CHRONOLOGY OF CONTACTS

Company / Individual MIO Owner	NA	Notice Letter Sent	Return / Received	STATUS
Meridian 102, LP	0.984375	2/23/24	2/23/2024 - sent well proposal letter via certified mail; green card receipt received 2/26/2024; numerous calls and e-mails with company landman; spoke couple of times on the phone and no internal approvals yet sent copy of OGL form; still considering lease offer and maybe possible participation with interest as WIO.	UNLEASED
Michael Harrison Moore	0.656250	2/23/24	2/23/2024 - sent well proposal letter via certified mail; green card receipt received 2/25/2024; numerous calls and e-mails with KIO; spoke couple of times on the phone and no decision yet; sent copy of OGL form.	UNLEASED
Schelro, Ltd.	0.281250	2/23/24	2/23/2024 - sent well proposal letter via certified mail; green card receipt received 2/26/2024; numerous calls and e-mails with KIO; spoke couple of times on the phone and no decision yet; sent copy of OGL form.	UNLEASED
Ryan Moore SSMTT GST Exempt Trust	0.164063	2/23/24	2/23/2024 - sent well proposal letter via certified mail; green card receipt received 2/27/2024; numerous calls and e-mails with company landman; sent copy of OGL form; still considering lease offer and maybe	UNLEASED

			possible participation with interest as WIO.	
Ryan Moore SSMTT GST Nonexempt Trust	0.164062	2/23/24	2/23/2024 - sent well proposal letter via certified mail; green card receipt received 2/27/2024; numerous calls and e-mails with company landman; sent copy of OGL form; still considering lease offer and maybe possible participation with interest as WIO.	UNLEASED
	2.250000	TOTAL AMOUNT BEING POOLED CASE NO. 24517		

The subject MIO's unleased interest is located in the NE/4 NE/4 of Section 11-T19S-R25E, Eddy County, New Mexico

EXHIBIT B

SELF-AFFIRMED STATEMENT OF NATE GILBERTSON, GEOLOGIST

**STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION**

**APPLICATION OF SILVERBACK OPERATING II, LLC,
FOR A HORIZONTAL SPACING UNIT AND
COMPULSORY POOLING, EDDY COUNTY, NEW MEXICO**

Case No. 24517

SELF-AFFIRMED STATEMENT OF NATHANIEL GILBERTSON

Nathaniel Gilbertson, of lawful age and being first duly sworn, declares as follows:

1. My name is Nathaniel Gilbertson, and I am employed by Silverback Operating II, LLC (“Silverback”) as a petroleum geologist.
2. I have previously testified before the Oil Conservation Division (“Division”) as an expert witness in petroleum geology. My credentials have been made a matter of record and I have been recognized by the Division as an expert witness.
3. I am familiar with the applications filed by Silverback in these consolidated cases, and I have conducted a geologic study of the Yeso formation underlying the subject area.
4. The initial targets for Silverback’s proposed Roche Unit wells in Section 2 and Section 11 of T19S-R25E are intervals within the Yeso formation.
5. **Silverback Exhibit B-1** is a location map that shows the location of the proposed horizontal well spacing unit, the path of the proposed/drilled wellbores and offsetting wellbores. Marked on the map is the location of the four wells in Cross Section A-A’ of Exhibit B-3. These wells penetrate the targeted interval, are of good quality, and are representative of the geology in the subject area.
6. **Silverback Exhibit B-2** is a subsea structure map of the top of the Glorieta/Yeso with a 25-foot contour interval. The Yeso Formation structure is dipping to the southeast. The formation appears consistent across the proposed spacing unit. I do not observe any faulting,

pinchouts, or other geologic impediments to horizontal drilling within the proposed spacing unit. This map also shows line B-B' which is depicted in a gun barrel diagram in Exhibit B-4. I have also included an additional West to East lateral trajectory cross-section illustrating Silverback's intended development in the Yeso formation across the proposed spacing unit, which shows line C-C'.

7. **Silverback Exhibit B-3** is a structural cross-section that I prepared with data from open-hole logs collected over the target formation in the representative wells denoted from A to A' (Exhibit B-1). For each well in the cross-section, the exhibit shows the following logs: gamma ray, deep resistivity, neutron porosity and bulk density. The targeted zone for each well is labeled and marked on the cross-section. The logs in the cross-section demonstrate that the targeted zones are continuous and consistent through the proposed spacing unit.

8. **Silverback Exhibit B-4** is a gun barrel diagram from B to B' illustrating Silverback's intended development in the Yeso formation across the proposed spacing unit. Each proposed or existing well is identified relative to the different intervals within the Yeso formation.

9. **Silverback Exhibit B-5** is a gross isopach map depicting the thickness of the targeted Yeso Formation with a 100-foot contour interval. The Yeso Formation is thickening to the southeast within the proposed spacing unit.

10. Silverback has procedures in place to assess the risk of damaging existing vertical wells and the risk of existing wellbores acting as conduits for completion fluids to reach the surface during hydraulic fracturing operations. These procedures are reviewed and enhanced continually based on observations and data from on-going operations.

11. Silverback has examined the Division's records for each well in the proposed Horizontal Spacing Unit and reviewed the drilling, completion, recompletion(s) and abandonment

of those wellbores. Based on the information recorded with the Division Silverback has estimated the risk of hydraulic fracture fluids communicating with each wellbore and the ability to contain any communication within that wellbore. Based on the risk assessment Silverback has determined necessary pre-operation preparation for each operated wellbore, including, but not limited to, shutting-in producing wells, plugging and abandoning high-risk wellbores, and modifying or skipping completion stages in close proximity to offset wellbores. Operated wells are monitored during hydraulic fracturing operations and design changes, including, but not limited to, reducing pump-rate, ending stages early and removing stages if offset wells exhibit unexpected pressure increases. Silverback personnel visually monitor plugged and abandoned wellbores on reclaimed locations during hydraulic fracturing operations for any potential signs of communication. Silverback provides 30-day notice prior to commencing hydraulic fracturing operations to operators of any wellbore within the proposed Horizontal Spacing Unit.

12. **Silverback Exhibit B-6** illustrates the existing wellbores within the proposed Horizontal Spacing Unit. The total depth drilled, as reported to the Division, is listed below each well symbol. Wellbores drilled sufficiently deep to penetrate the top of the Yeso Formation are noted with a red box around the well symbol.

13. There are two active wells within the planned Horizontal Spacing Unit that have a total depth sufficient to penetrate the top of the Yeso Formation. The Rio Penasco 'KD' Com: 1 is completed in the Morrow and operated by Silverback. The Rio Penasco 'KD' Com: 3 is completed in the Morrow and Strawn formations and is operated by Wildcat Energy, LLC. Silverback notified Wildcat Energy, LLC on five separate occasions (01/29/2024, 02/15/2024, 02/28/2024, 03/28/2024 and 06/18/2024) of its planned operations and requested they secure their wellbore. Silverback will provide Wildcat Energy, LLC 30-day notice prior to commencing

hydraulic fracturing operations at the Roche Unit. Silverback intends to not complete portions of laterals that are adjacent to the active wellbores. It is my opinion that Silverback's intended development poses low risk for damage to existing wellbores and reduced risk of existing wellbores acting as a conduit for completion fluids to reach the surface during hydraulic fracturing operations, enabling Silverback to be a prudent operator in this area of the Yeso formation.

14. In my opinion, the East-West orientation of the proposed wells is the preferred orientation for horizontal well development in this area and is appropriate to efficiently and effectively develop the subject acreage.

15. Based on my geologic study of the area, the targeted interval underlying the proposed spacing unit is suitable for development by horizontal wells and tracts comprising the proposed spacing unit will contribute more or less equally to the production of the wells.

16. The granting of this application is in the best interest of conservation, the prevention of waste and the protection of correlative rights and will avoid the drilling of unnecessary wells.

17. **Silverback Exhibits B-1** through **B-6** were either prepared by me or compiled under my direction and supervision.

18. The foregoing is true to the best of my knowledge and belief.

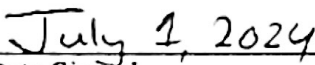
[Signature page follows]

Signature page of Self-Affirmed Statement of Nathaniel Gilbertson:

I understand that this Self-Affirmed Statement will be used as written testimony before the Division in Case No. 24517 and affirm that my testimony herein is true and correct, to the best of my knowledge and belief and made under penalty of perjury under the laws of the State of New Mexico.



Nathaniel Gilbertson

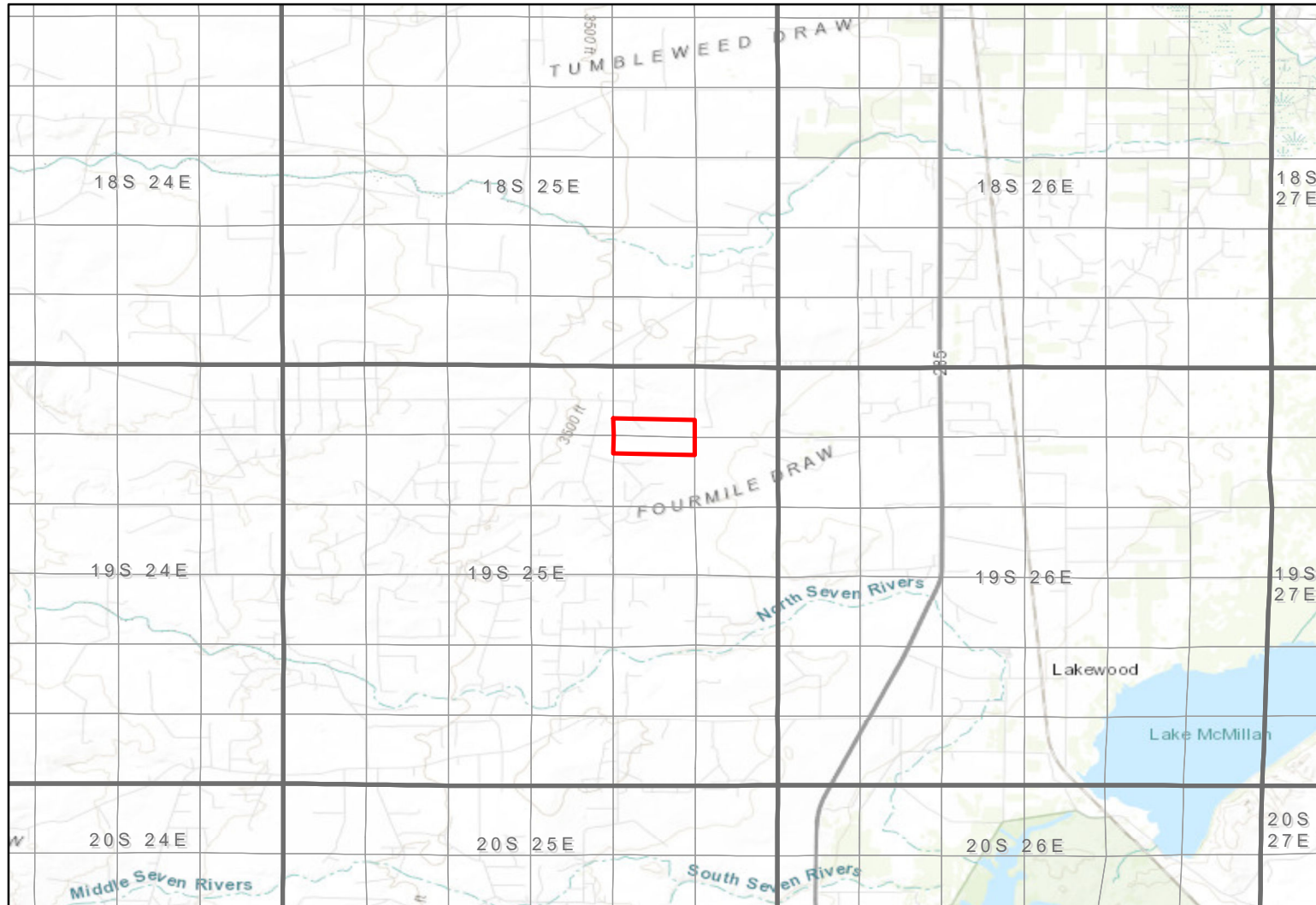


Date Signed

EXHIBIT B-1

LOCATION MAP

Roche Unit Location Map



Case No. 24517
Roche - Exhibit

EXHIBIT B-2

SUBSEA STRUCTURE MAP, CROSS-SECTION MAP

Exhibit B-2: Structure Map: Glorieta (TVDSS)

(Case No. 24517)

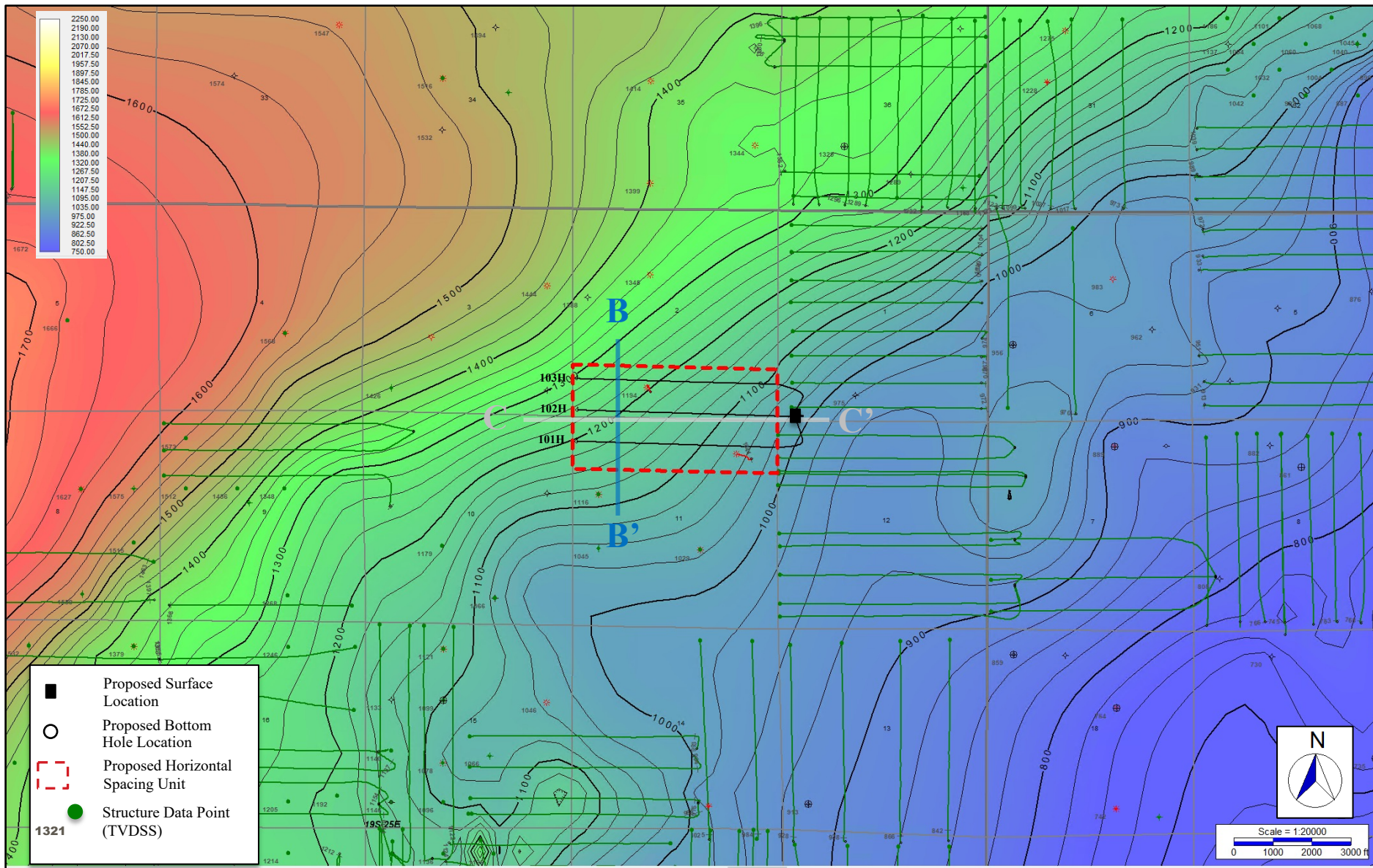


Exhibit B-2: Proposed Well Trajectories C-C' (TVD)



(Case No. 24517)

WEST
C

EAST
C'

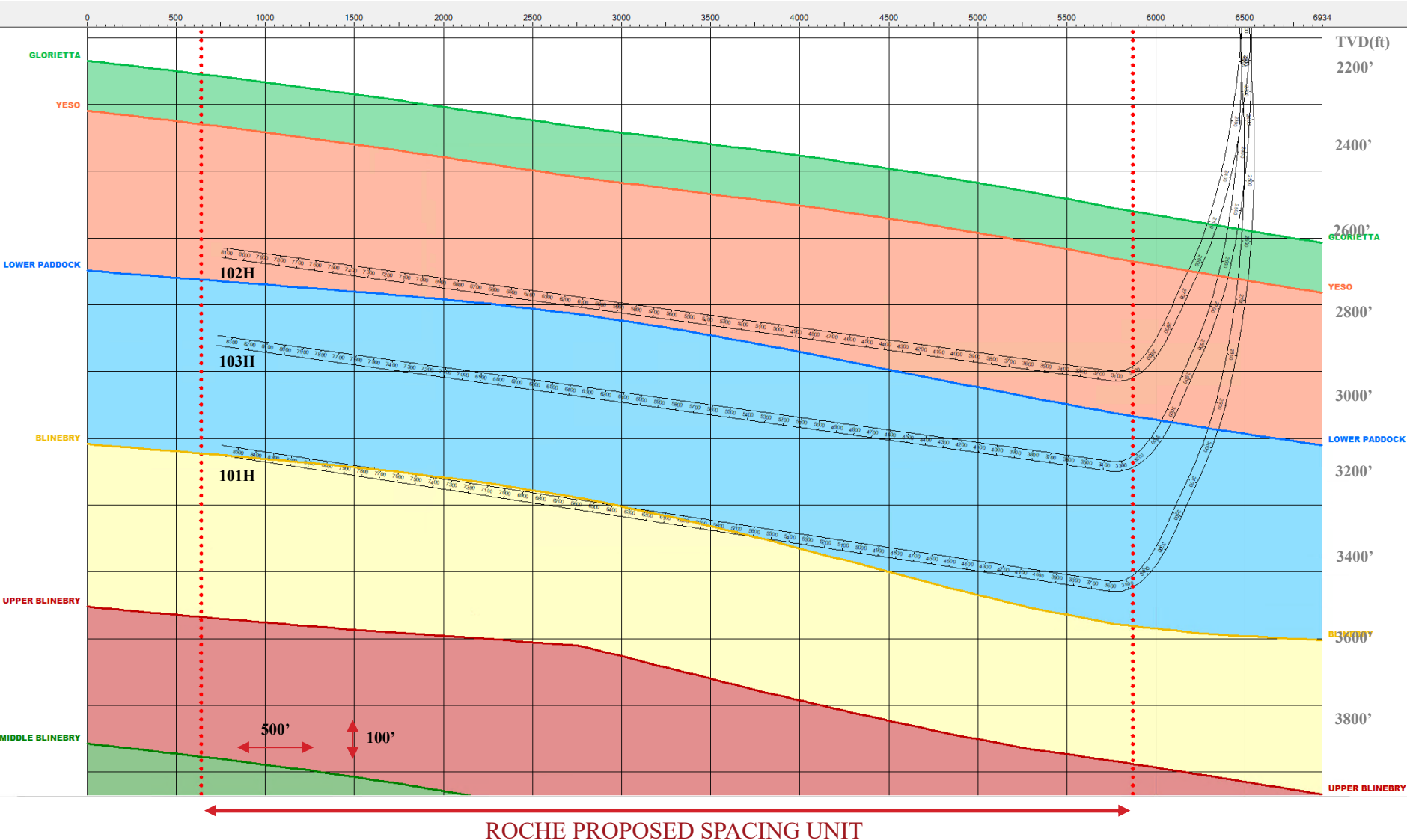


EXHIBIT B-3

STRATIGRAPHICAL CROSS SECTION

Exhibit B-3: Structural Cross Section A – A' (TVDSS)

(Case No. 24517)

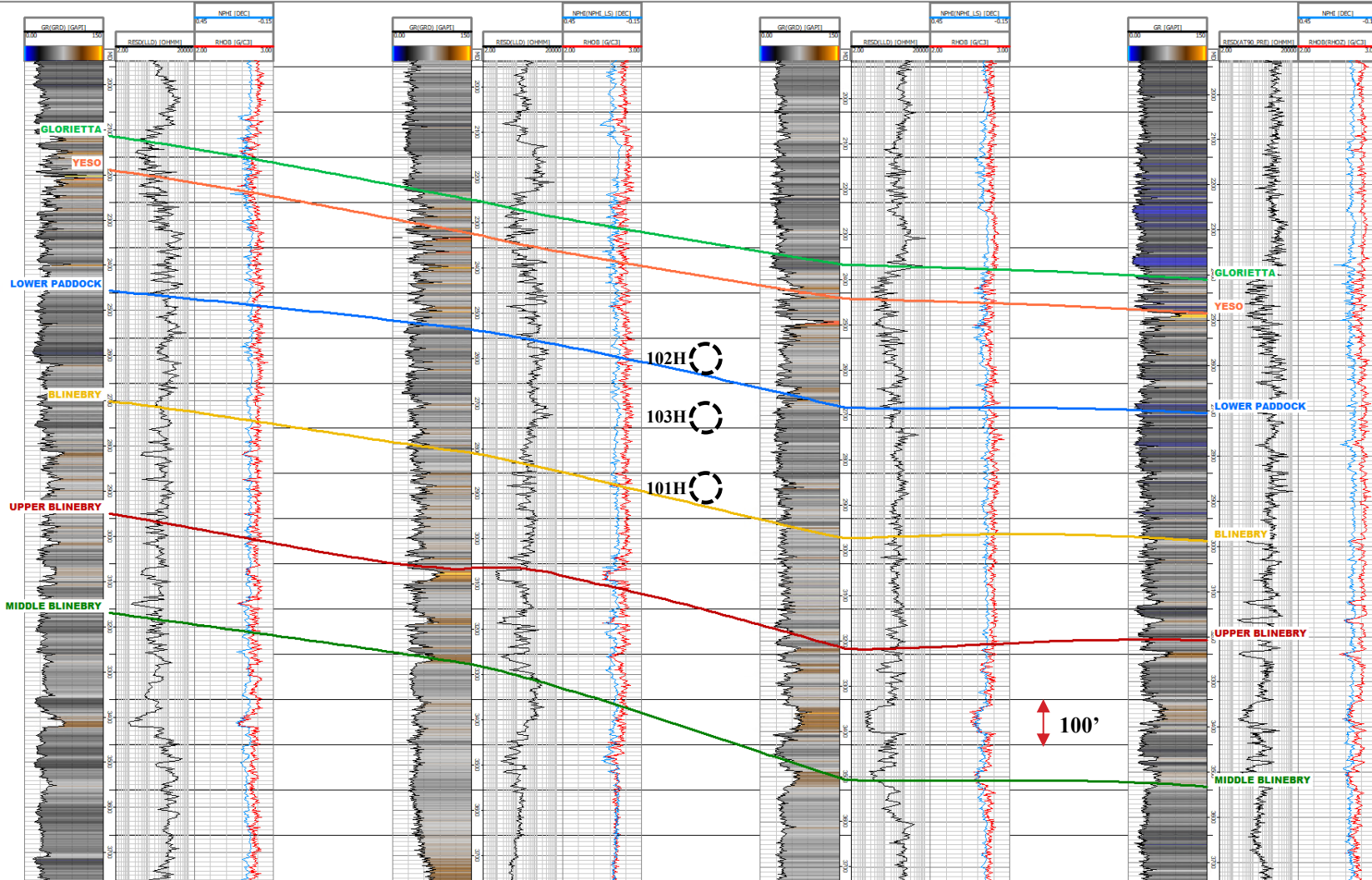
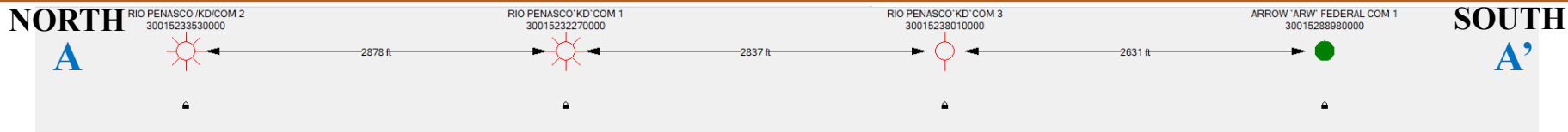


EXHIBIT B-4

GUNBARREL DIAGRAM

Exhibit B-4: Gun Barrel Diagram B-B' (TVD)

(Case No. 24517)

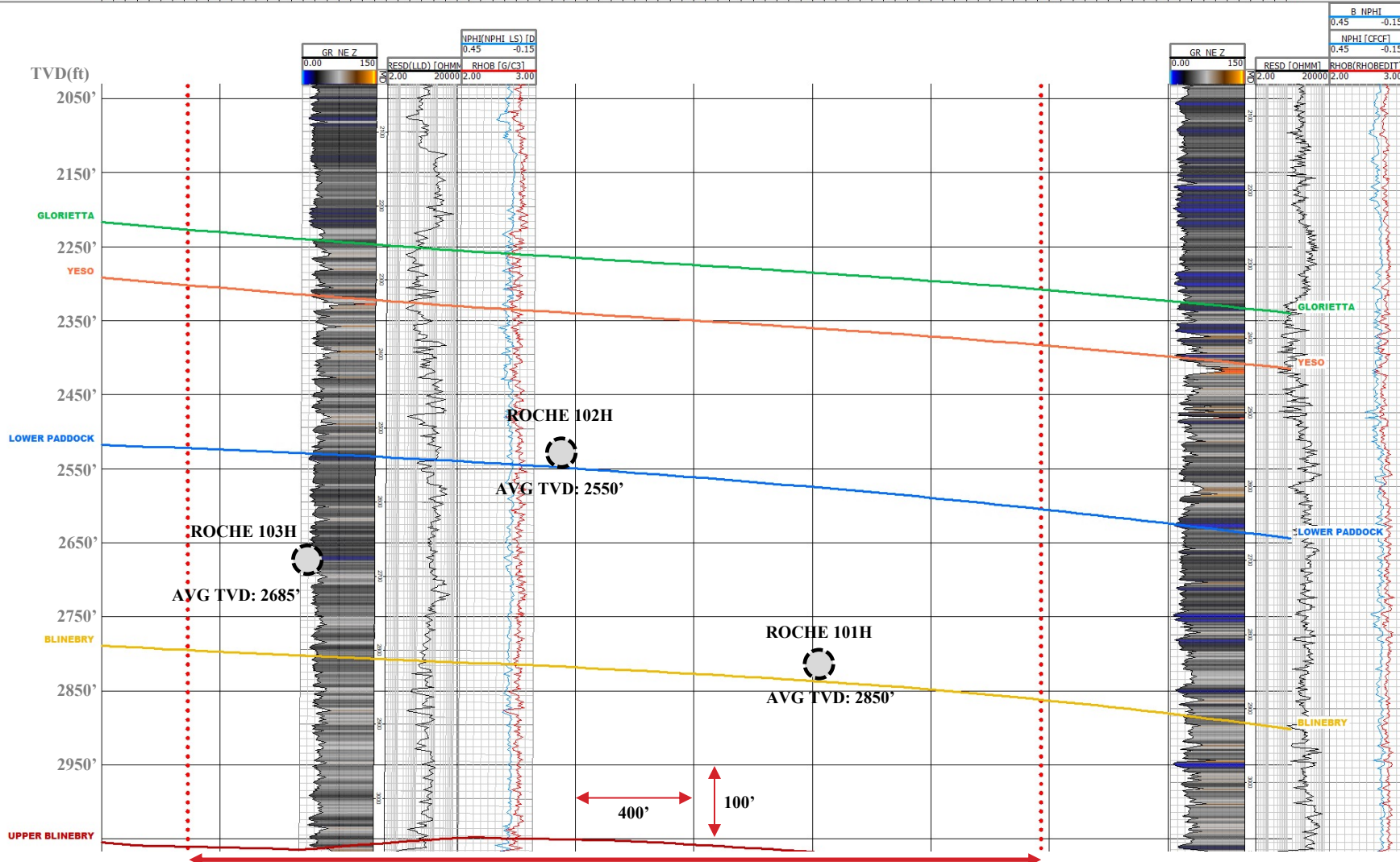
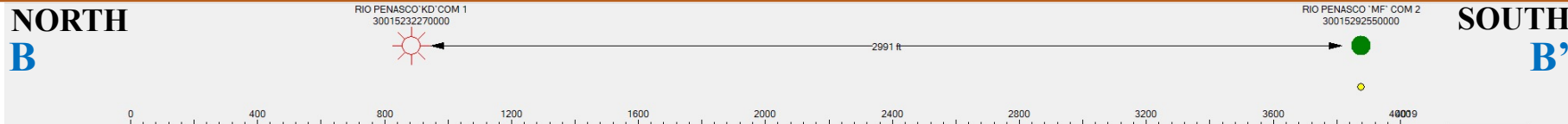


EXHIBIT B-5

GROSS ISOPACH MAP

Exhibit B-5: Gross Interval Isopach: Yeso



(Case No. 24517)

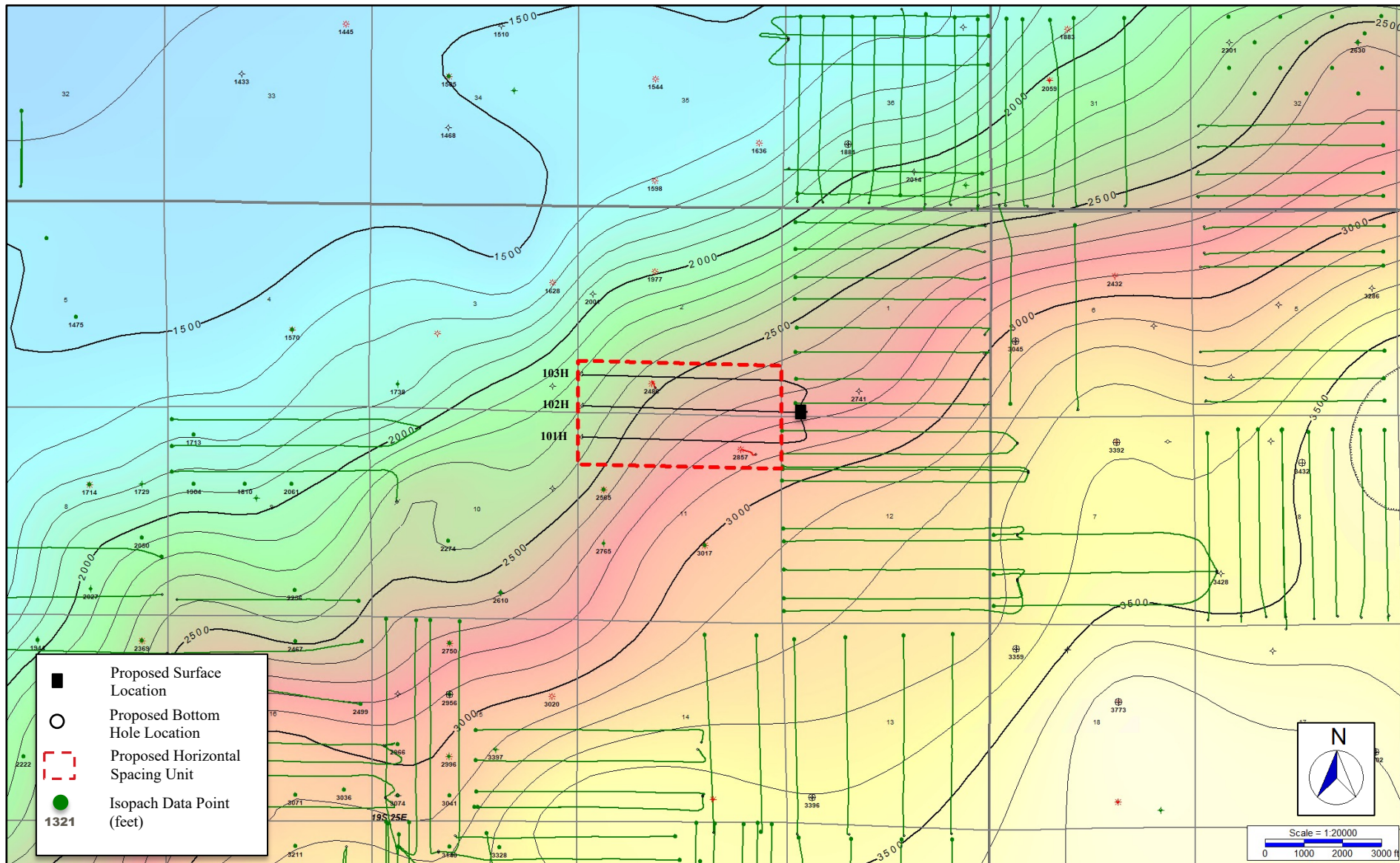


EXHIBIT B-6

EXISTING WELLS IN PROPOSED HSU

Exhibit B-6: Existing wells in proposed HSU



(Case No. 24517)

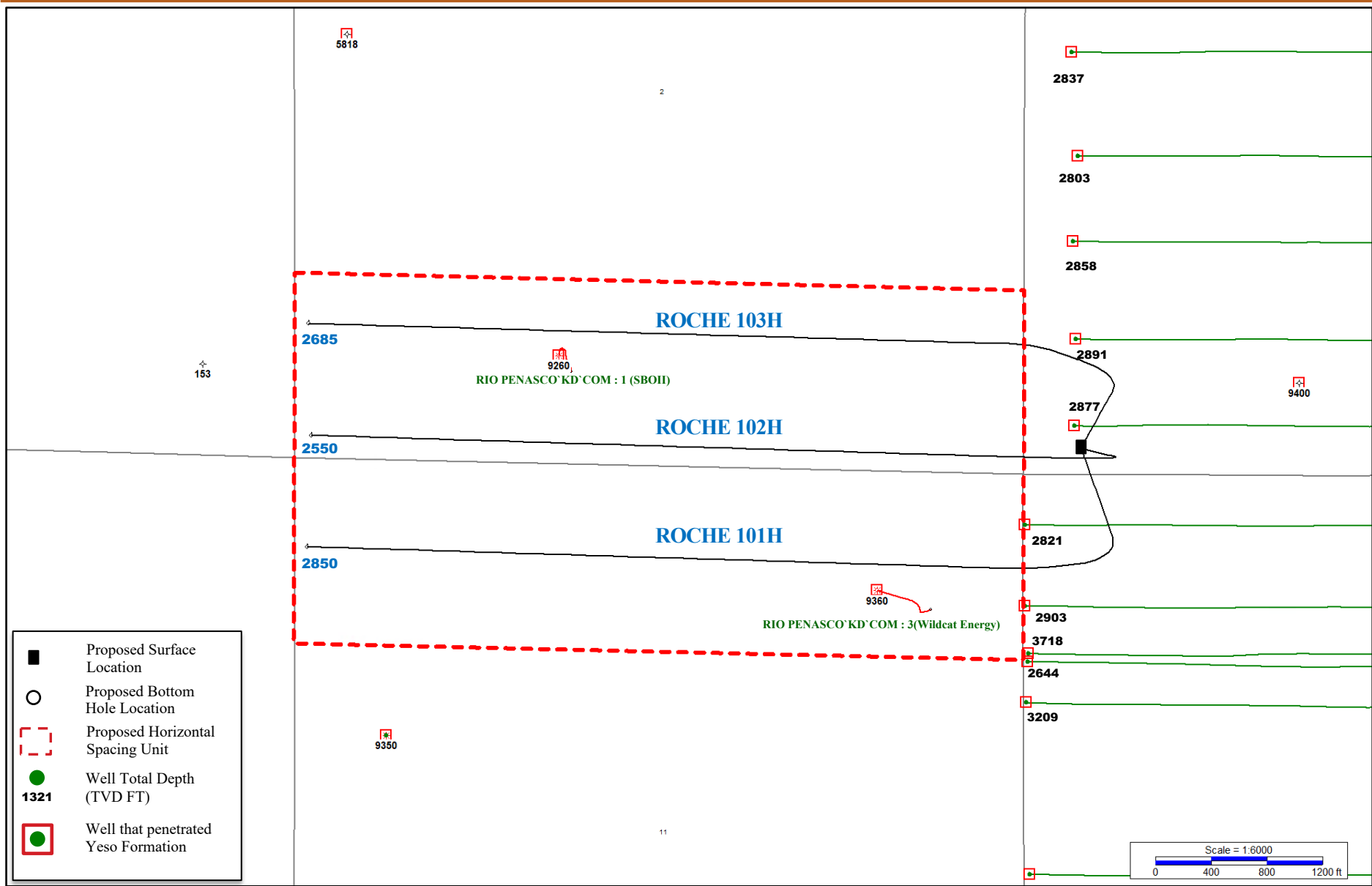


EXHIBIT C

AFFIDAVIT OF BENJAMIN B. HOLLIDAY, ATTORNEY

**STATE OF NEW MEXICO
DEPARTMENT OF ENERGY, MINERALS AND NATURAL RESOURCES**

**APPLICATION OF SILVERBACK, LLC
FOR COMPULSORY POOLING,
EDDY COUNTY, NEW MEXICO**

CASE NO. 24517

AFFIDAVIT

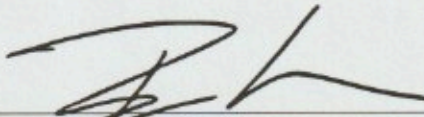
STATE OF TEXAS §
 §
COUNTY OF BEXAR §

I, Benjamin B. Holliday, attorney for SILVERBACK OPERATING II, LLC. (“Silverback”), the Applicant in the above-captioned matters, being first duly sworn, states the following:

I caused notice of the applications and continuance filed in this case to be sent by certified mail through the United States Postal Service on June 20, 2024, to all the interest owners sought to be pooled in these proceedings. Evidence of mailing to all such owners is attached hereto as Exhibit “C-1.” I have also included as Exhibit “C-2” a chart depicting the manner and dates that notice was provided to all parties that Silverback seeks to pool in this matter. Copies of the certified mail receipts and all green-cards that we have received in return have been attached as Exhibit “C-3.”

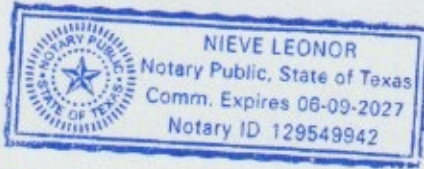
Out of an abundance of caution, notice was also directed to all such owners by publication in the Carlsbad Current Argus on June 25, 2024, which is reflected in the Affidavit of Publication attached hereto as Exhibit “C-4.” Exhibit “C-4” demonstrates to my satisfaction that those owners who did not receive personal notice through the certified mailing were properly served by publication.

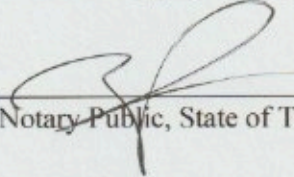
Silverback has conducted a good faith, diligent effort to find the names and correct addresses for the interest owners entitled to received notice of the Applications filed herein.



BENJAMIN B. HOLLIDAY
Counsel for Silverback Operating II, LLC

SUBSCRIBED AND SWORN to before me this 2nd day of July, 2024.





Notary Public, State of Texas

EXHIBIT C-1

SAMPLE NOTICE LETTER TO ALL INTERESTED PARTIES



HOLLIDAY ENERGY LAW GROUP

June 19, 2024

VIA U.S. CERTIFIED MAIL, RETURN RECEIPT REQUESTED

TO: ALL INTEREST OWNERS ON ATTACHED LIST

RE: Case No. 24517 – Application of Silverback Operating II, LLC for Compulsory Pooling, Eddy County, NM – Roche 101H, 102H, 103H, and 104H Wells

Dear Interest Owner:

This will advise that pursuant to NMSA 1978 § 70-2-17, Silverback Operating II, LLC (“Silverback”) has filed an application with the New Mexico Oil Conservation Division for an order regarding the proposed wells described below. You are receiving this notice because you may have an interest in this well.

Case No. 24517. Application of Silverback Operating II, LLC for Compulsory Pooling, Eddy County, New Mexico. Applicant in the above-styled cause seeks an order from the Division pooling all uncommitted interest within the Atoka Glorieta Yeso Formation, designated as an oil pool (Pool Code 3250), into a standard 320-acre, more or less, horizontal well spacing unit comprised of the S2 S2 of Section 2, and the N2 N2 of Section 11, both located in Township 19 South, Range 25 East, NMPM, Eddy County, New Mexico (“Unit”). The HSU is to be dedicated to the following wells (collectively the “Wells”):

1. **Roche #101H**, API No. 30-015-54391 which is an oil well that will be horizontally drilled from a surface hole location in the SW4 of Section 1, Township 19 South, Range 25 East, being approximately 165 feet FSL, and approximately 427 feet FWL of Section 1, Township 19 South, Range 25 East, to a bottom hole location in the NW4 of Section 11, Township 19 South, Range 25 East, being approximately 680

- feet FSL, and approximately 100 feet FWL of Section 11, Township 19 South, Range 25 East;
2. **Roche #102H**, API No. 30-015-54390 which is an oil well that will be horizontally drilled from a surface hole location in the SW4 of Section 1, Township 19 South, Range 25 East, being approximately 185 feet FSL, and approximately 427 feet FWL of Section 1, Township 19 South, Range 25 East, to a bottom hole location in the SW4 of Section 2, Township 19 South, Range 25 East, being approximately 120 feet FSL, and approximately 100 feet FWL of Section 2, Township 19 South, Range 25 East;
 3. **Roche #103H**, API No. 30-015-54388 which is an oil well that will be horizontally drilled from a surface hole location in the SW4 of Section 1, Township 19 South, Range 25 East, being approximately 205 feet FSL, and approximately 427 feet FWL of Section 1, Township 19 South, Range 25 East, to a bottom hole location in the SW4 of Section 2, Township 19 South, Range 25 East, being approximately 920 feet FSL, and approximately 100 feet FWL of Section 2, Township 19 South, Range 25 East;

The first and last takepoints for the Wells meet the setback requirements set forth in the statewide rules for horizontal oil wells, and the completed laterals for Wells will comply with the standard setbacks. Also to be considered will be the cost of drilling and completing the Wells and the allocation of costs, the designation of Silverback as operator of the Wells, and a 200% charge for the risk involved in drilling and completing the wells.

The attached Application has been set for a hearing at 8:15am on July 11, 2024, before a Division Examiner at the New Mexico Oil Conservation Division. Hearings will be conducted both in person, and remotely. To participate in the electronic hearing, see the instructions posted on the docket for the hearing date: <https://www.emnrd.nm.gov/ocd/hearing-info/>. You are not required to attend this hearing, but as an owner of an interest that may be affected, you may appear and present testimony.

Failure to appear at that time and become a party of record will preclude you from challenging this application at a later time. If you intend to present testimony or evidence at the hearing, you must enter your appearance by July 3, 2024, and serve the Division, counsel for Applicant, and other parties with a pre-hearing statement by July 4, 2023, in accordance with Division Rule 19.15.4.13. Please note that July 4, 2024 is a federal holiday, and you may wish to submit any pre-hearing statements on July 3, 2024.

Please feel free to contact me if you have any questions about this Application.

Regards,

Benjamin Holliday

Holliday ENERGY Law Group

107 Katherine Court, Suite 101

San Antonio, Texas 78209

O: 210.469.3187 **M:** 210.219.9126

E: ben@theenergylawgroup.com

W: theENERGYlawgroup.com

ATTACHED OWNER LIST

<u>Owner</u>	<u>Address</u>
MERIDAIN 102, LP	16400 DALLAS PARKWAY, SUITE 400 DALLAS, TEXAS 75248-2643
MICHAEL HARRISON MOORE	P.O. BOX 202652 DALLAS, TEXAS 75320-2652
SCHELRO, LTD.	6510 SOUTH ACADEMY BLVD., Ste. 292A, COLORADO SPRINGS, COLORADO 80906-7601
RYAN MOORE SSMTT GST EXEMPT TRUST	P.O. BOX 471458 FORT WORTH, TEXAS 76147-1376
RYAN MOORE SSMTT NONEXEMPT TRUST	P.O. BOX 471458 FORT WORTH, TEXAS 76147-1376

**STATE OF NEW MEXICO
DEPARTMENT OF ENERGY, MINERALS AND NATURAL RESOURCES**

**APPLICATION OF SILVERBACK, LLC
FOR COMPULSORY POOLING,
EDDY COUNTY, NEW MEXICO**

CASE NO. _____

APPLICATION

Pursuant to NMSA § 70-2-17, Silverback Operating II, LLC (“Applicant”) (OGRID No. 330968), through its undersigned attorney, hereby files this Application with the Oil Conservation Division of the State of New Mexico (“Division”) for an order (1) creating a 320-acre, more or less, standard horizontal well spacing unit comprised of the S2 S2 of Section 2, and the N2 N2 of Section 11, both located in Township 19 South, Range 25 East, NMPM, Eddy County, New Mexico (“Unit”), and (2) pooling all uncommitted interest within the Atoka Glorieta Yeso Formation, designated as an oil pool (Pool Code 3250), underlying said Unit. In support of its Application, Applicant states the following:

1. Applicant is a working interest owner in the Unit and has the right to drill thereon.
2. Applicant seeks to dedicate the above-referenced Unit to the following wells, referred to collectively as the Wells:
 - a. **Roche #101H**, API No. 30-015-54391 which is an oil well that will be horizontally drilled from a surface hole location in the SW4 of Section 1, Township 19 South, Range 25 East, being approximately 165 feet FSL, and approximately 427 feet FWL of Section 1, Township 19 South, Range 25 East, to a bottom hole location in the NW4 of Section 11, Township 19 South, Range 25 East, being approximately 680 feet FSL, and approximately 100 feet FWL of Section 11, Township 19 South, Range 25 East;
 - b. **Roche #102H**, API No. 30-015-54390 which is an oil well that will be horizontally drilled from a surface hole location in the SW4 of Section 1, Township 19 South, Range 25 East, being approximately 185 feet FSL, and approximately 427 feet FWL of Section 1, Township 19 South, Range 25 East, to a bottom hole location in the SW4 of Section 2, Township 19 South, Range 25 East, being approximately

120 feet FSL, and approximately 100 feet FWL of Section 2, Township 19 South, Range 25 East;

- c. **Roche #103H**, API No. 30-015-54388 which is an oil well that will be horizontally drilled from a surface hole location in the SW4 of Section 1, Township 19 South, Range 25 East, being approximately 205 feet FSL, and approximately 427 feet FWL of Section 1, Township 19 South, Range 25 East, to a bottom hole location in the SW4 of Section 2, Township 19 South, Range 25 East, being approximately 920 feet FSL, and approximately 100 feet FWL of Section 2, Township 19 South, Range 25 East;
3. The completed interval of the Wells will be orthodox and remain within 330-feet of the adjoining quarter-quarter section (or equivalent) tracts to allow inclusion of these proximity tracts within the proposed Unit under NMAC 19.15.16.15(B)(1)(6).
4. Applicant has undertaken diligent, good-faith efforts to obtain voluntary agreements from all interest owners to participate in the drilling of the Wells but has been unable to obtain voluntary agreements from all interest owners.
5. The approval of this Unit and pooling of uncommitted interests within the Unit will avoid the drilling of unnecessary wells, prevent waste, and protect correlative rights.
6. In order to allow Applicant to obtain it's just and fair share of the oil and gas underlying the subject lands, all uncommitted interests in the Unit should be pooled and Applicant should be designated the operator of the Wells and Unit.

WHEREFORE, Applicant requests this Application be set for hearing June 6, 2024, and that after notice and hearing, the Division enter an order

- A. Pooling all uncommitted interests in the Unit;
- B. Approving the Wells in the Unit;
- C. Designating Applicant as operator of the Unit and the Wells;
- D. Authorizing Applicant to recover its costs of drilling, equipping and completing the Wells;
- E. Approving the actual operating charges and costs of supervision while drilling and after completion, together with a provision adjusting the rates pursuant to the COPAS accounting procedures; and

- F. Imposing a 200% penalty for the risk assumed by Applicant in drilling and completing the Wells against any working interest owner who does not voluntarily participate in the drilling of the Wells.

Respectfully submitted,

HOLLIDAY ENERGY LAW GROUP, PC

/s/ Benjamin B. Holliday

Benjamin B. Holliday

107 Katherine Court, Suite 100

San Antonio, Texas 78209

Phone: (210) 469-3197

ben@theenergylawgroup.com

ben-svc@theenergylawgroup.com

Counsel for Silverback Operating II, LLC

STATE OF NEW MEXICO
DEPARTMENT OF ENERGY, MINERALS AND NATURAL RESOURCES

APPLICATION OF SILVERBACK, LLC
FOR COMPULSORY POOLING,
EDDY COUNTY, NEW MEXICO

CASE NO. 24517

SILVERBACK OPERATING II, LLC.'S MOTION FOR CONTINUANCE

Silverback Operating II, LLC requests that the Division continue Case No. 24517 to the July 11, 2024 hearing docket.

Respectfully submitted,

HOLLIDAY ENERGY LAW GROUP, PC

/s/ Benjamin B. Holliday

Benjamin B. Holliday

107 Katherine Court, Suite 101

San Antonio, Texas 78209

Phone: (210) 469-3197

ben@theenergylawgroup.com

ben-svc@theenergylawgroup.com

Counsel for Silverback Operating II, LLC

EXHIBIT C-2


CHART OF NOTICE TO ALL INTERESTED PARTIES

NOTICE OF HEARING TO UNCOMMITTED OWNERS


Uncommitted Owner	Date Notice Sent	Green Card Returned?
MERIDAIN 102, LP 16400 DALLAS PARKWAY, SUITE 400 DALLAS, TEXAS 75248-2643	June 20, 2024	No
MICHAEL HARRISON MOORE P.O. BOX 202652 DALLAS, TEXAS 75320-2652	June 20, 2024	No
SCHELRO, LTD. 6510 SOUTH ACADEMY BLVD., SUITE 292A COLORADO SPRINGS, COLORADO 80906-7601	June 20, 2024	Yes
RYAN MOORE SSMTT GST EXEMPT TRUST P.O. BOX 471458 FORT WORTH, TEXAS 76147- 1376	June 20, 2024	Yes
RYAN MOORE SSMTT NONEXEMPT TRUST P.O. BOX 471458 FORT WORTH, TEXAS 76147- 1376	June 20, 2024	Yes

EXHIBIT C-3

COPIES OF CERTIFIED MAIL RECEIPTS & RETURNS

SENDER: COMPLETE THIS SECTION	COMPLETE THIS SECTION ON DELIVERY
<ul style="list-style-type: none"> Complete items 1, 2, and 3. Print your name and address on the reverse so that we can return the card to you. Attach this card to the back of the mailpiece, or on the front if space permits. 	<p>A. Signature <input checked="" type="checkbox"/> Agent <input type="checkbox"/> Addressee</p> <p>X <i>[Signature]</i></p>
<p>1. Article Addressed to: <i>Exempt Trust</i></p> <p><i>Ryan more SSMTT GST</i> <i>P.O. Box 471458</i> <i>Fort Worth, TX 76147</i></p>  <p>9590 9402 8174 3030 9764 11</p>	<p>B. Received by (Printed Name) <i>Kristen Rodrian</i> C. Date of Delivery <i>6/25/24</i></p> <p>D. Is delivery address different from item 1? <input type="checkbox"/> Yes <input type="checkbox"/> No If YES, enter delivery address below:</p>
<p>2. Article Number (Transfer from service label)</p> <p>9589 0710 5270 1968 4069 55</p>	<p>3. Service Type</p> <ul style="list-style-type: none"> <input type="checkbox"/> Adult Signature <input type="checkbox"/> Adult Signature Restricted Delivery <input type="checkbox"/> Certified Mail® <input type="checkbox"/> Certified Mail Restricted Delivery <input type="checkbox"/> Collect on Delivery <input type="checkbox"/> Collect on Delivery Restricted Delivery <input type="checkbox"/> Registered Mail™ <input type="checkbox"/> Registered Mail Restricted Delivery <input type="checkbox"/> Signature Confirmation™ <input type="checkbox"/> Signature Confirmation Restricted Delivery
<p>PS Form 3811, July 2020 PSN 7530-02-000-9053 Domestic Return Receipt</p>	

U.S. Postal Service™ CERTIFIED MAIL® RECEIPT <i>Domestic Mail Only</i>																			
For delivery information, visit our website at www.usps.com ®. Fort Worth, TX 76147																			
<table border="1"> <tr> <td>Certified Mail Fee</td> <td>\$4.40</td> </tr> <tr> <td>Extra Services & Fees (check box, add fee as appropriate)</td> <td>\$3.65</td> </tr> <tr> <td><input type="checkbox"/> Return Receipt (hardcopy)</td> <td>\$0.00</td> </tr> <tr> <td><input type="checkbox"/> Return Receipt (electronic)</td> <td>\$0.00</td> </tr> <tr> <td><input type="checkbox"/> Certified Mail Restricted Delivery</td> <td>\$0.00</td> </tr> <tr> <td><input type="checkbox"/> Adult Signature Required</td> <td>\$0.00</td> </tr> <tr> <td><input type="checkbox"/> Adult Signature Restricted Delivery</td> <td>\$0.00</td> </tr> <tr> <td>Postage</td> <td>\$1.63</td> </tr> <tr> <td>Total Postage and Fees</td> <td>\$9.68</td> </tr> </table>	Certified Mail Fee	\$4.40	Extra Services & Fees (check box, add fee as appropriate)	\$3.65	<input type="checkbox"/> Return Receipt (hardcopy)	\$0.00	<input type="checkbox"/> Return Receipt (electronic)	\$0.00	<input type="checkbox"/> Certified Mail Restricted Delivery	\$0.00	<input type="checkbox"/> Adult Signature Required	\$0.00	<input type="checkbox"/> Adult Signature Restricted Delivery	\$0.00	Postage	\$1.63	Total Postage and Fees	\$9.68	<p>0209 08</p> <p>Postmark Here</p> <p>06/20/2024</p>
Certified Mail Fee	\$4.40																		
Extra Services & Fees (check box, add fee as appropriate)	\$3.65																		
<input type="checkbox"/> Return Receipt (hardcopy)	\$0.00																		
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<input type="checkbox"/> Certified Mail Restricted Delivery	\$0.00																		
<input type="checkbox"/> Adult Signature Required	\$0.00																		
<input type="checkbox"/> Adult Signature Restricted Delivery	\$0.00																		
Postage	\$1.63																		
Total Postage and Fees	\$9.68																		
Sent To <i>Ryan more SSMTT GST</i> Street and Apt. No., or PO Box No. <i>P.O. Box 471458</i> City, State, ZIP+4® <i>Fort Worth TX 76147</i> PS Form 3800, January 2023 PSN 7530-02-000-9047. See Reverse for Instructions																			

COMPLETE THIS SECTION	COMPLETE THIS SECTION ON DELIVERY
<ul style="list-style-type: none"> Complete items 1, 2, and 3. Print your name and address on the reverse so that we can return the card to you. Attach this card to the back of the mailpiece, or on the front if space permits. 	<p>A. Signature <input checked="" type="checkbox"/> Agent <input type="checkbox"/> Addressee</p> <p>B. Received by (Printed Name) C. Date of Delivery</p> <p>D. Is delivery address different from item 1? <input type="checkbox"/> Yes If YES, enter delivery address below: <input checked="" type="checkbox"/> No</p>
<p>1. Article Addressed to:</p> <p>Sche Leo LTD 6510 South Academy Blvd. Ste. 292A Colorado Springs, Colorado 80906</p>  <p>9590 9402 8174 3030 9764 28</p>	<p>3. Service Type</p> <ul style="list-style-type: none"> <input type="checkbox"/> Priority Mail Express® <input type="checkbox"/> Adult Signature <input type="checkbox"/> Registered Mail™ <input type="checkbox"/> Adult Signature Restricted Delivery <input type="checkbox"/> Registered Mail Restricted Delivery <input type="checkbox"/> Certified Mail® <input type="checkbox"/> Certified Mail Restricted Delivery <input type="checkbox"/> Signature Confirmation™ <input type="checkbox"/> Collect on Delivery <input type="checkbox"/> Signature Confirmation Restricted Delivery <input type="checkbox"/> Collect on Delivery Restricted Delivery <input type="checkbox"/> Registered Mail Restricted Delivery (over \$500)
<p>2. Article Number (Transfer from service label)</p> <p>9589 0710 5270 1968 4069 48</p>	
<p>PS Form 3811, July 2020 PSN 7530-02-000-9053</p>	<p>Domestic Return Receipt</p>

U.S. Postal Service™ CERTIFIED MAIL® RECEIPT Domestic Mail Only	
For delivery information, visit our website at www.usps.com ®.	
COLORADO SPRINGS, CO 80906	
OFFICIAL USE	
Certified Mail Fee \$4.40 \$3.65 Extra Services & Fees (check box, add fee as appropriate)	0209 08 Postmark Here
<input type="checkbox"/> Return Receipt (hardcopy) \$0.00 <input type="checkbox"/> Return Receipt (electronic) \$0.00 <input type="checkbox"/> Certified Mail Restricted Delivery \$0.00 <input type="checkbox"/> Adult Signature Required \$0.00 <input type="checkbox"/> Adult Signature Restricted Delivery \$	06/20/2024
Postage \$1.63 Total Postage and Fees \$7.03	
Sent To Sche Leo LTD Street and Apt. No., or PO Box No. 6510 South Academy Blvd, 292A City, State, ZIP+4® Colorado Springs Colorado 80906	
PS Form 3800, January 2023 PSN 7530-02-000-9047 See Reverse for Instructions	

- Complete items 1, 2, and 3.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Non Exempt
 Ryan Moore SSM TT
 P.O. Box 471458
 Fort Worth, TX 76147



9590 9402 8174 3030 9764 04

2. Article Number (Transfer from service label)

9589 0710 5270 1968 4069 62

PS Form 3811, July 2020 PSN 7530-02-000-9053

A. Signature Agent
 Addressee

B. Received by (Printed Name)

Kristen Bodley

C. Date of Delivery

6/25/24

D. Is delivery address different from item 1? Yes
 If YES, enter delivery address below: No

3. Service Type
- Priority Mail Express®
 - Adult Signature
 - Adult Signature Restricted Delivery
 - Certified Mail®
 - Certified Mail Restricted Delivery
 - Collect on Delivery
 - Collect on Delivery Restricted Delivery
 - Registered Mail™
 - Registered Mail Restricted Delivery
 - Signature Confirmation™
 - Signature Confirmation Restricted Delivery

Domestic Return Receipt

U.S. Postal Service™
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For delivery information, visit our website at www.usps.com®.

Fort Worth, TX 76147

OFFICIAL USE

Certified Mail Fee	\$4.40	0209
Extra Services & Fees (check box, add fee as appropriate)	\$2.65	08
<input type="checkbox"/> Return Receipt (hardcopy)	\$0.00	
<input type="checkbox"/> Return Receipt (electronic)	\$0.00	
<input type="checkbox"/> Certified Mail Restricted Delivery	\$0.00	
<input type="checkbox"/> Adult Signature Required	\$0.00	
<input type="checkbox"/> Adult Signature Restricted Delivery	\$0.00	
Postage	\$1.63	
Total Postage and Fees	\$9.68	06/20/2024

Sent To: Ryan Moore, SSM TT - Non Exempt ^{last}

Street and Apt. No., or PO Box No.: P.O. Box 471458

City, State, ZIP+4®: Fort Worth, TX 76147

PS Form 3800, January 2023 PSN 7530-02-000-9047 See Reverse for Instructions

7019 0140 0000 3531 9485

U.S. Postal Service™
CERTIFIED MAIL® RECEIPT
 Domestic Mail Only

For delivery information, visit our website at www.usps.com®.

Dallas, TX 75248

OFFICIAL USE

Certified Mail Fee	\$4.40	0209 08
Extra Services & Fees (check box, add fee as appropriate)	\$3.65	
<input type="checkbox"/> Return Receipt (hardcopy)	\$0.00	Postmark Here
<input type="checkbox"/> Return Receipt (electronic)	\$0.00	
<input type="checkbox"/> Certified Mail Restricted Delivery	\$0.00	
<input type="checkbox"/> Adult Signature Required	\$0.00	
<input type="checkbox"/> Adult Signature Restricted Delivery	\$0.00	
Postage	\$1.63	06/20/2024
Total Postage and Fees	\$9.68	

Sent To
 Meridam 102 LP
 Street and Apt. No., or PO Box No.
 16400 Dallas PKWY, Ste 400
 City, State, ZIP+4®
 Dallas, TX 75248

PS Form 3800, April 2015 PSN 7530-02-000-0047 See Reverse for Instructions

7019 0140 0000 3531 9492

U.S. Postal Service™
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 Domestic Mail Only

For delivery information, visit our website at www.usps.com®.

Dallas, TX 75220

OFFICIAL USE

Certified Mail Fee	\$4.40	0209 08
Extra Services & Fees (check box, add fee as appropriate)	\$3.65	
<input type="checkbox"/> Return Receipt (hardcopy)	\$0.00	Postmark Here
<input type="checkbox"/> Return Receipt (electronic)	\$0.00	
<input type="checkbox"/> Certified Mail Restricted Delivery	\$0.00	
<input type="checkbox"/> Adult Signature Required	\$0.00	
<input type="checkbox"/> Adult Signature Restricted Delivery	\$0.00	
Postage	\$1.63	06/20/2024
Total Postage and Fees	\$9.68	

Sent To
 Michael H. Moore
 Street and Apt. No., or PO Box No.
 P.O. Box 202652
 City, State, ZIP+4®
 Dallas, TX 75220

PS Form 3800, April 2015 PSN 7530-02-000-0047 See Reverse for Instructions

EXHIBIT C-4

AFFIDAVIT OF PUBLICATION FOR 06/25/2024



PO Box 631667 Cincinnati, OH 45263-1667

AFFIDAVIT OF PUBLICATION

Christina Mendez
Holliday Energy Law Group
Po Box 90029
San Antonio TX 78209-9029

STATE OF WISCONSIN, COUNTY OF BROWN

The Carlsbad Current Argus, a newspaper published in the city of Carlsbad, Eddy County, State of New Mexico, and personal knowledge of the facts herein state and that the notice hereto annexed was Published in said newspapers in the issue:

06/25/2024

and that the fees charged are legal.
Sworn to and subscribed before on 06/25/2024

Keegan Moran

Legal Clerk

Kathleen Allen

Notary, State of WI, County of Brown

1-7-25

My commission expires

Publication Cost:	\$216.20	
Tax Amount:	\$15.99	
Payment Cost:	\$232.19	
Order No:	10306573	# of Copies:
Customer No:	1360068	0
PO #:	Case No. 24517	

THIS IS NOT AN INVOICE!

Please do not use this form for payment remittance.

KATHLEEN ALLEN
Notary Public
State of Wisconsin

This is to notify the following entities, individuals, their heirs, personal representatives, trustees, successors or assigns, and any other uncommitted mineral owners: Meridain, LP, Michael Harrison Moore, Schlero, Ltd., Ryan Moore SSMTT GST Exempt Trust, and Ryan Moore SSMTT Nonexempt Trust, that Case No. 24517, Application of Silverback Operating II, LLC for the Compulsory Pooling of the S2 S2 of Section 2, and the N2N2 of Section 11, both located in Township 19 South, Range 25 East, NMPM, Eddy County, New Mexico, as to the Atoka Glorieta Yeso Formation is set for hearing on Thursday, July 11, 2024 at 8:15 a.m. before a Division Examiner at the New Mexico Oil Conservation Division. Hearing may be viewed online by going to <https://www.emnrd.nm.gov/ocd/hearing-info/>. Applicant's attorney is Benjamin Holliday, Holliday Energy Law Group, 107 Katherine Court, Suite 101, San Antonio, TX 78209, ben@theenergylawgroup.com, and the Application is on behalf of Silverback Operating II, LLC, whose address is 19707 West IH 10, Suite 201, San Antonio, Texas, 78257. Applicant seeks an order pooling all uncommitted interests in the Atoka Glorieta Yeso Formation underlying a 320-acre, more or less, standard horizontal spacing unit comprised of the S2 S2 of Section 2, and the N2N2 of Section 11, both located in Township 19 South, Range 25 East, NMPM, Eddy County, New Mexico ("Unit"). The Unit will be dedicated to the following wells: Roche Unit 101H well ("101H Well"), which is an oil well that will be horizontally drilled from a surface hole location in the surface location a surface hole location in the SW4 of Section 1, Township 19 South, Range 25 East, being approximately 165 feet FSL, and approximately 427 feet FWL of Section 1, Township 19 South, Range 25 East, to a bottom hole location in the NW4 of Section 11, Township 19 South, Range 25 East, being approximately 680 feet FSL, and approximately 100 feet FWL of Section 11, Township 19 South, Range 25 East. Roche Unit 102H well ("102H Well"), which is an oil well that will be horizontally drilled from a surface hole location in the SW4 of Section 1, Township 19 South, Range 25 East, being approximately 185 feet FSL, and approximately 427 feet FWL of Section 1, Township 19 South, Range 25 East, to a bottom hole location in the SW4 of Section 2, Township 19 South, Range 25 East, being approximately 120 feet FSL, and approximately 100 feet FWL of Section 2, Township 19 South, Range 25 East; Roche Unit 103H well ("103H Well") which is an oil well that will be horizontally drilled from a surface hole location in the SW4 of Section 1, Town-

ship 19 South, Range 25 East, being approximately 205 feet FSL, and approximately 427 feet FWL of Section 1, Township 19 South, Range 25 East, to a bottom hole location in the SW4 of Section 2, Township 19 South, Range 25 East, being approximately 920 feet FSL, and approximately 100 feet FWL of Section 2, Township 19 South, Range 25 East. The 101H Well, 102H Well, and 103H Wells are referred to collectively herein as the "Wells." The completed interval of the Wells will be orthodox. Also, to be considered will be the cost of drilling and completing the Wells and the allocation of the cost, the designation of Applicant as the operator of the Wells, and a 200% charge for the risk involved in drilling and completing the Wells. The Wells are located approximately 11 miles South of Artesia, New Mexico.
Current Argus 6/25/2024
10306573