Form 3160-3
(June 2015)

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.
NMNM023855B

6. If Indian, Allotee or Tribe Name

1a. Type of work: ☑ DRILL ☐ REENTER

1b. Type of Well: ☑ Oil Well ☐ Gas Well ☐ Other

1c. Type of Completion: ☐ Hydraulic Fracturing ☑ Single Zone ☐ Multiple Zone

7. If Unit or CA Agreement, Name and No.

8. Lease Name and Well No.
POLO AOP FEDERAL COM
201H

2. Name of Operator
SILVERBACK OPERATING II LLC

9. API Well No.
30-015-55199

3a. Address
19707 IH 10 WEST SUITE 201, SAN ANTONIO, TX 7825

3b. Phone No. *(include area code)*
(303) 585-3316

10. Field and Pool, or Exploratory
N. SEVEN RIVERS/GLORIETA YESO

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*
At surface SESE / 757 FSL / 237 FEL / LAT 32.670108 / LONG -104.464834
At proposed prod. zone SWSW / 673 FSL / 100 FWL / LAT 32.670103 / LONG -104.480968

11. Sec., T. R. M. or Blk. and Survey or Area
SEC 10/T19S/R25E/NMP

14. Distance in miles and direction from nearest town or post office*
20 miles

12. County or Parish
EDDY

13. State
NM

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)
237 feet

16. No of acres in lease

17. Spacing Unit dedicated to this well
320.0

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.
20 feet

19. Proposed Depth
3432 feet / 9433 feet

20. BLM/BIA Bond No. in file
FED: NMB002001

21. Elevations (Show whether DF, KDB, RT, GL, etc.)
3451 feet

22. Approximate date work will start*
10/15/2023

23. Estimated duration
30 days

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, and the Hydraulic Fracturing rule per 43 CFR 3162.3-3 (as applicable)

1. Well plat certified by a registered surveyor.
2. A Drilling Plan.
3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office).
4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator certification.
6. Such other site specific information and/or plans as may be requested by the BLM.

25. Signature
(Electronic Submission)

Name *(Printed/Typed)*
KALEN MELTON / Ph: (303) 585-3316

Date
08/18/2023

Title
PERMITTING SPECIALIST

Approved by *(Signature)*
(Electronic Submission)

Name *(Printed/Typed)*
CODY LAYTON / Ph: (575) 234-5959

Date
04/29/2024

Title
Assistant Field Manager Lands & Minerals

Office
Carlsbad Field Office

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.
Conditions of approval, if any, are attached.

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

APPROVED WITH CONDITIONS

(Continued on page 2)

*(Instructions on page 2)

Approval Date: 04/29/2024

Confidential

Released to Imaging: 6/21/2024 8:18:12 AM

Received by OCD: 5/28/2024 2:57:38 PM

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

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

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

[1] API Number	[2] Pool Code	[3] Pool Name
30-015-55199	97565	N SEVEN RIVERS GLORIETA-YESO

[4] Property Code	[5] Property Name	[6] Well Number
331992	POLO AOP FEDERAL COM	201H

[7] OGRID No.	[8] Operator Name	[9] Elevation
330968	SILVERBACK OPERATING II, LLC	3451.4'

[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
P	10	19S	25E		757	SOUTH	237	EAST	EDDY

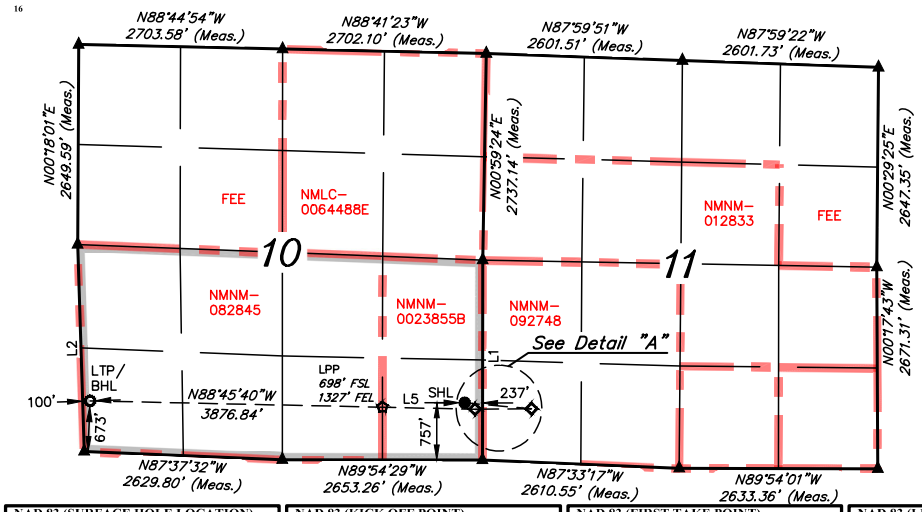
[11] Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
M	10	19S	25E		673	SOUTH	100	WEST	EDDY

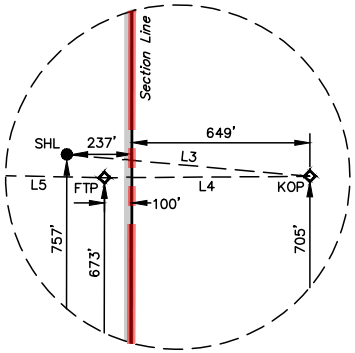
[12] Dedicated Acres	[13] Joint or Infill	[14] Consolidation Code	[15] Order No.
320			

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.

[16]



LINE TABLE		
LINE	DIRECTION	LENGTH
L1	N00°03'59"E	2647.99'
L2	N01°49'05"W	2744.21'
L3	S84°52'31"E	889.40'
L4	S89°36'15"W	748.99'
L5	N88°45'40"W	1227.15'



Detail "A"
No Scale

NAD 83 (SURFACE HOLE LOCATION)	NAD 83 (KICK OFF POINT)	NAD 83 (FIRST TAKE POINT)	NAD 83 (LPP)	NAD 83 (LTP/BHL)
LATITUDE = 32°40'12.39" (32.670108°)	LATITUDE = 32°40'11.65" (32.669903°)	LATITUDE = 32°40'11.56" (32.669878°)	LATITUDE = 32°40'11.76" (32.669932°)	LATITUDE = 32°40'12.37" (32.670103°)
LONGITUDE = -104°27'53.40" (-104.464834°)	LONGITUDE = -104°27'43.04" (-104.461954°)	LONGITUDE = -104°27'51.80" (-104.464388°)	LONGITUDE = -104°28'06.15" (-104.468374°)	LONGITUDE = -104°28'51.49" (-104.480968°)
NAD 27 (SURFACE HOLE LOCATION)	**NAD 27 (KICK OFF POINT)**	**NAD 27 (FIRST TAKE POINT)**	**NAD 27 (LPP)**	**NAD 27 (LTP/BHL)**
LATITUDE = 32°40'11.98" (32.669995°)	LATITUDE = 32°40'11.24" (32.669790°)	LATITUDE = 32°40'11.15" (32.669764°)	LATITUDE = 32°40'11.35" (32.669819°)	LATITUDE = 32°40'11.96" (32.669990°)
LONGITUDE = -104°27'51.53" (-104.464314°)	LONGITUDE = -104°27'41.17" (-104.461435°)	LONGITUDE = -104°27'49.92" (-104.463868°)	LONGITUDE = -104°28'04.28" (-104.467854°)	LONGITUDE = -104°28'49.61" (-104.480448°)
STATE PLANE NAD 83 (N.M. EAST)	**STATE PLANE NAD 83 (N.M. EAST)**	**STATE PLANE NAD 83 (N.M. EAST)**	**STATE PLANE NAD 83 (N.M. EAST)**	**STATE PLANE NAD 83 (N.M. EAST)**
N: 607541.46' E: 500873.13'	N: 607465.79' E: 501759.08'	N: 607457.45' E: 501010.33'	N: 607478.77' E: 499783.68'	N: 607546.15' E: 495908.43'
STATE PLANE NAD 27 (N.M. EAST)	**STATE PLANE NAD 27 (N.M. EAST)**	**STATE PLANE NAD 27 (N.M. EAST)**	**STATE PLANE NAD 27 (N.M. EAST)**	**STATE PLANE NAD 27 (N.M. EAST)**
N: 607480.13' E: 459694.65'	N: 607404.45' E: 460580.58'	N: 607396.12' E: 459831.85'	N: 607417.45' E: 458605.22'	N: 607484.87' E: 454730.03'

NOTE:
- Distances referenced on plat to section lines are perpendicular.
- Basis of Bearings is a Transverse Mercator Projection with a Central Meridian of W103°53'00" (NAD 83)

● = SURFACE HOLE LOCATION
◇ = KICK OFF POINT/FIRST TAKE POINTS
⬠ = LEASE PENETRATION POINT
⬡ = LAST TAKE POINT/ BOTTOM HOLE LOCATION
▲ = SECTION CORNER LOCATED
= LEASE LINE
= UNIT BOUNDARY

2000' 1000' 0' 2000'
SCALE
DRAWN BY: Z.L. 06-06-23
REV.: 3 Z.L. 12-04-23
(ADD KOP)

[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 12/13/202
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.

May 26, 2023
Date of Survey
Signature and Seal of Professional Surveyor:

PAUL BUCHELE
NEW MEXICO
23782
12-04-23
PROFESSIONAL SURVEYOR

Certificate Number:

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:** ___/___/ 2024

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: Polo Federal Com 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:	Fatma Abdallah
Printed Name:	Fatma Abdallah
Title:	Regulatory Manager
E-mail Address:	fabdallah@silverbackexp.com
Date:	
Phone:	210-585-3316

OIL CONSERVATION DIVISION (Only applicable when submitted as a standalone form)
Approved By:
Title:
Approval Date:
Conditions of Approval:

Section 1-Plan Description -III. Wells

Well Name	API	ULSTR	Footages	Anticipated Oil BBL/D	Anticipated Gas MCF/D	Anticipated Produced Water BBL/D
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]

V. Anticipated Schedule

[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]

Section 2- Enhanced Plan

[redacted]s Production

Well	API	Anticipated Average Natural Gas Rate MCF/D	Anticipated Volume of Natural Gas for the First Year MCF
[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]

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
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]

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

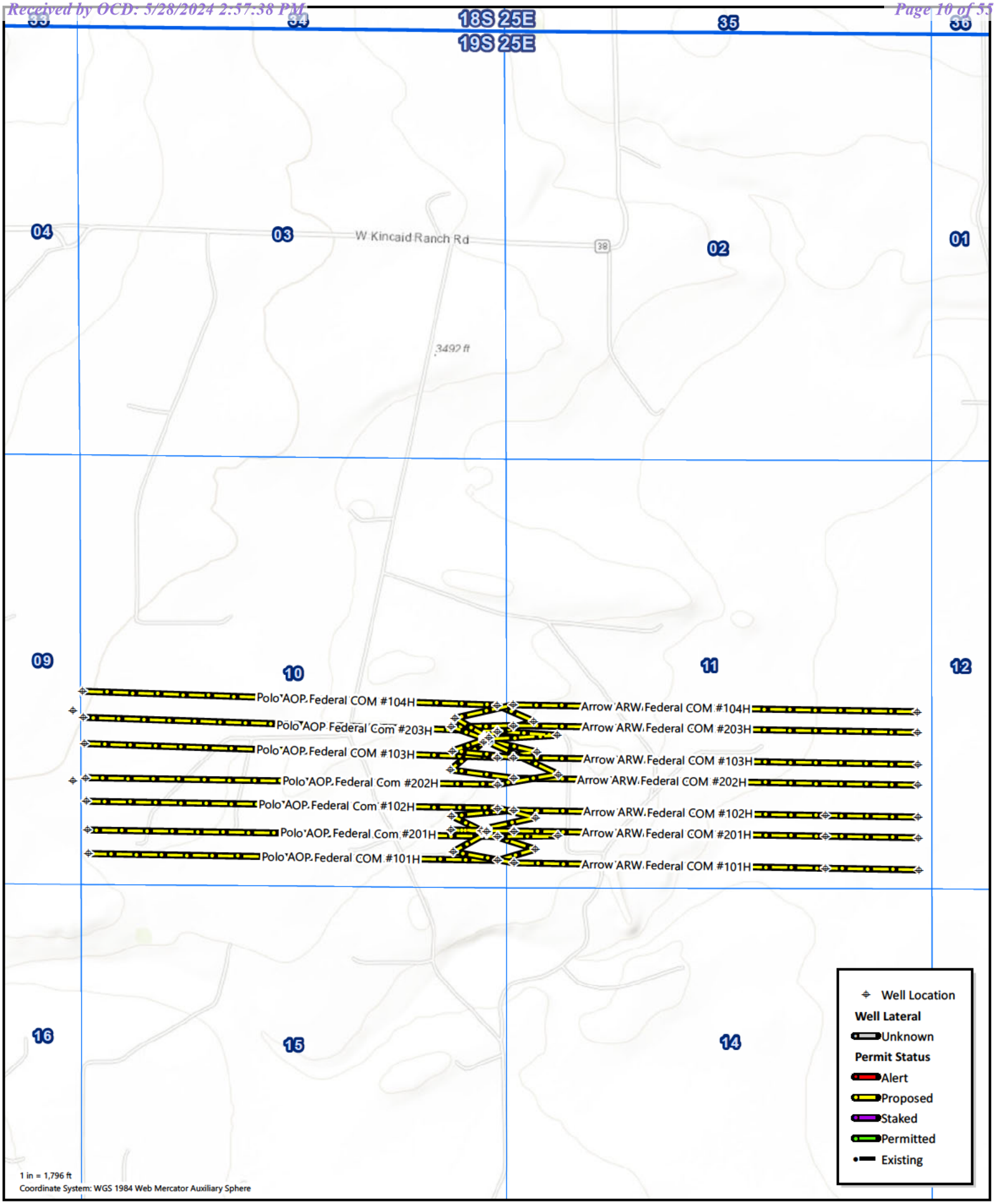
Silverback Operating II, LLC will ensure pipeline connectivity before producing hydrocarbons and will operate a closed vent vapor capture system that is designed to capture all associated and evolved gas during normal operation. Venting will only occur during maintenance activities or equipment failure 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



REAGAN SMITH

Well Lateral Plat
Polo Federal Development
Silverback Operating, LLC
Sections 10 & 11 - T19S - R25E, Eddy County, New Mexico

This map is a user generated static output from Reagan Smith and is for reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable.

N

Author: MM

Date: 5/13/2024

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

Drilling Plan Data Report
05/02/2024

APD ID: 10400093919
Submission Date: 08/18/2023
Operator Name: SILVERBACK OPERATING II LLC
Well Name: POLO AOP FEDERAL COM
Well Number: 201H
Well Type: OIL WELL
Well Work Type: Drill

Highlighted data reflects the most recent changes

Show Final Text

Section 1 - Geologic Formations

Formation ID	Formation Name	Elevation	True Vertical	Measured Depth	Lithologies	Mineral Resources	Producing Formatio
13333080	PERMIAN	3541	0	0	ALLUVIUM	NONE	N
13333081	SAN ANDRES	2749	792	793	DOLOMITE, LIMESTONE	NATURAL GAS, OIL	N
13333082	GLORIETA	1199	2342	2522	DOLOMITE	NATURAL GAS, OIL	N
13333083	PADDOCK	1129	2412	2603	DOLOMITE, SILTSTONE	NATURAL GAS, OIL	N
13333079	BLINEBRY	647	2894	3123	DOLOMITE, SILTSTONE	NATURAL GAS, OIL	Y

Section 2 - Blowout Prevention

Pressure Rating (PSI): 5M
Rating Depth: 3612

Equipment: Five thousand (5M) psi working pressure Blind Rams and Pipe Rams and a five thousand (5M) psi Annular Preventer will be installed on all casing. Two (2) chokes - one (1) hydraulic and one (1) manual - will be used.

Requesting Variance? YES

Variance request: (1) A variance to complete this well closer than 200' from the spacing unit or lease boundary is requested. (2) A variance to the requirement of a rigid steel line connecting to the choke manifold is requested. Specifications for the flex hose are provided with the choke schematic exhibit.
Testing Procedure: A third party testing company will conduct pressure tests and record prior to drilling out below casing shoes. The BOP, Choke, Choke Manifold, Top Drive Valves and Floor Safety Valves will be tested to 3,500 psi prior to drilling below the surface casing shoe and to 100% full working pressure (5,000 psi). The Annular Preventer will be tested to 3,500 psi prior to drilling below the surface casing shoe and to 100% working pressure (5,000 psi).

Choke Diagram Attachment:

Choke___Kill_Hose_Specs_20231219090925.pdf

Hose_Cert_of_Conformance_20231219090930.pdf

Hose_Cert_of_Compliance_20231219090934.pdf

Hose_Pressure_Test_Cert_20231219090938.pdf

Hose_Test_Report_20231219090941.pdf

Akita_519___BOP_20231219090945.pdf

Released to Imaging: 6/21/2024 8:18:12 AM

Operator Name: SILVERBACK OPERATING II LLC

Well Name: POLO AOP FEDERAL COM **Well Number:** 201H

Choke___Kill_Hose_Specs_20231219090925.pdf

Hose_Cert_of_Conformance_20231219090930.pdf

Hose_Cert_of_Compliance_20231219090934.pdf

Hose_Pressure_Test_Cert_20231219090938.pdf

Hose_Test_Report_20231219090941.pdf

Akita_519___BOP_20231219090945.pdf

BOP Diagram Attachment:

Akita_519___BOP_20231219090948.pdf

Section 3 - Casing

Casing ID	String Type	Hole Size	Csg Size	Condition	Standard	Tapered String	Top Set MD	Bottom Set MD	Top Set TVD	Bottom Set TVD	Top Set MSL	Bottom Set MSL	Calculated casing length MD	Grade	Weight	Joint Type	Collapse SF	Burst SF	Joint SF Type	Joint SF	Body SF Type	Body SF
1	SURFACE	12.25	9.625	NEW	API	N	0	1271	0	1250	3451	2201	1271	J-55	36	BUTT	3.19	2.23	BUOY	14.66	BUOY	14.66
2	PRODUCTION	8.75	7.0	NEW	API	N	0	4327	0	3612	3549	-161	4327	HCL-80	32	OTHER - PIXS	4.52	2.02	BUOY	7.78	BUOY	7.78
3	PRODUCTION	8.75	5.5	NEW	API	N	4327	9433	3612	3612	-161	-161	5106	HCL-80	20	OTHER - PIXS	6.14	2.48	BUOY	99.99	BUOY	99.99

Casing Attachments

CONFIDENTIAL

Operator Name: SILVERBACK OPERATING II LLC

Well Name: POLO AOP FEDERAL COM **Well Number:** 201H

Casing Attachments

Casing ID: 1 **String** SURFACE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Data_Sheet_9.625_36lb_J55_20230815070615.pdf

Drilling_Gen_Info_Pg_1_20230817132835.pdf

Drilling_Gen_Info_Pg_2_20230817132839.pdf

Drilling_Formations_20230817132845.pdf

Drilling_Safety_Factors_20230817132851.pdf

Drilling_Casing_20230817132857.pdf

Casing ID: 2 **String** PRODUCTION

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Data_Sheet___Paragon_PIXS___7_x_453__32.00___HC_L80_20230815070719.pdf

CONFIDENTIAL

Operator Name: SILVERBACK OPERATING II LLC

Well Name: POLO AOP FEDERAL COM **Well Number:** 201H

Casing Attachments

Casing ID: 3 **String** PRODUCTION

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Data_Sheet___Paragon_PIXS___5.5_x_361__20.00___HC_L80_20230815070937.pdf

Section 4 - Cement

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
PRODUCTION	Lead		0	0	0	0	0	0	0	N/A	N/A
PRODUCTION	Tail		2774	9433	1590	1.15	14.8	1828.5	20	Class C	50% B_Poz + 50% Class C + 0.1% FR- 5 0.4% CFL-316 + 0.05% C-37 + 0.005 GPS NoFoam V1A
SURFACE	Lead		0	971	264	2.3	12.5	607.2	100	Class C	5% Salt + 2% Extender + 3pps Kolseal + 5 pps Pumice + 0.125 pps Cellophane
SURFACE	Tail		971	1271	84	1.34	14.8	112.56	20	Class C	2% CaCl2
PRODUCTION	Lead		0	2774	223	2.81	11.5	626.63	50	Class C	50% B_Poz + 50% Class C + 10% Gel + 5% SALT + 0.5% SMS + 0.4% FR-5 + 0.1% SA- 1 + 3 pps Gilsonite + 0.25PPS Pol-E-Flake + 0.005GPS NoFoam V1A

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CONFIDENTIAL

Operator Name: SILVERBACK OPERATING II LLC

Well Name: POLO AOP FEDERAL COM **Well Number:** 201H

Section 5 - Circulating Medium

Mud System Type: Closed

Will an air or gas system be Used? NO

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

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

Describe what will be on location to control well or mitigate other conditions: Mud weight increases at shoe depths are for pressure control. Mud weight increase in the curve and lateral section of the hole are for hole stability, not pressure control. Mud weight assumptions for casing load designs exceed anticipated maximum mud weight for balanced drilling in all hole sections. Expected mud weights in producing formation will be 0.5 to 1.0 ppg greater than formation pressure (i.e. overbalanced drilling). An industry accepted medium will be stored on location in the event that there is a loss of circulation in the well bore.
Describe the mud monitoring system utilized: The mud system will run as a closed loop system with PVT monitoring. All drill cuttings and liquid mud will be hauled to an approved site for disposal or soil farmed upon receiving appropriate approval.

Circulating Medium Table

Top Depth	Bottom Depth	Mud Type	Min Weight (lbs/gal)	Max Weight (lbs/gal)	Density (lbs/cu ft)	Gel Strength (lbs/100 sqft)	PH	Viscosity (CP)	Salinity (ppm)	Filtration (cc)	Additional Characteristics
0	1271	WATER-BASED MUD	8.4	9.5							
0	9433	SALT SATURATED	8.9	9.1							

Section 6 - Test, Logging, Coring

List of production tests including testing procedures, equipment and safety measures:

The operator will comply with the BLM's logging requirements as stated in the COAs.

List of open and cased hole logs run in the well:

GAMMA RAY LOG,CEMENT BOND LOG,MEASUREMENT WHILE DRILLING,SPONTANEOUS POTENTIAL LOG,MUD LOG/GEOLOGICAL LITHOLOGY LOG,
Coring operation description for the well:

None planned

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Operator Name: SILVERBACK OPERATING II LLC

Well Name: POLO AOP FEDERAL COM **Well Number:** 201H

Section 7 - Pressure

Anticipated Bottom Hole Pressure: 1700 **Anticipated Surface Pressure:** 905

Anticipated Bottom Hole Temperature(F): 101

Anticipated abnormal pressures, temperatures, or potential geologic hazards? NO

Describe:

Contingency Plans geoharzards description:

Contingency Plans geohazards

Hydrogen Sulfide drilling operations plan required? YES

Hydrogen sulfide drilling operations

Silverback_H2S_plan_20230815092333.pdf

Section 8 - Other Information

Proposed horizontal/directional/multi-lateral plan submission:

Polo_AOP_Federal_Com_201H_Plan_2r0_20230817133632.pdf

Other proposed operations facets description:

Other proposed operations facets attachment:

Drilling_WBD_20230817133639.pdf

Other Variance attachment:

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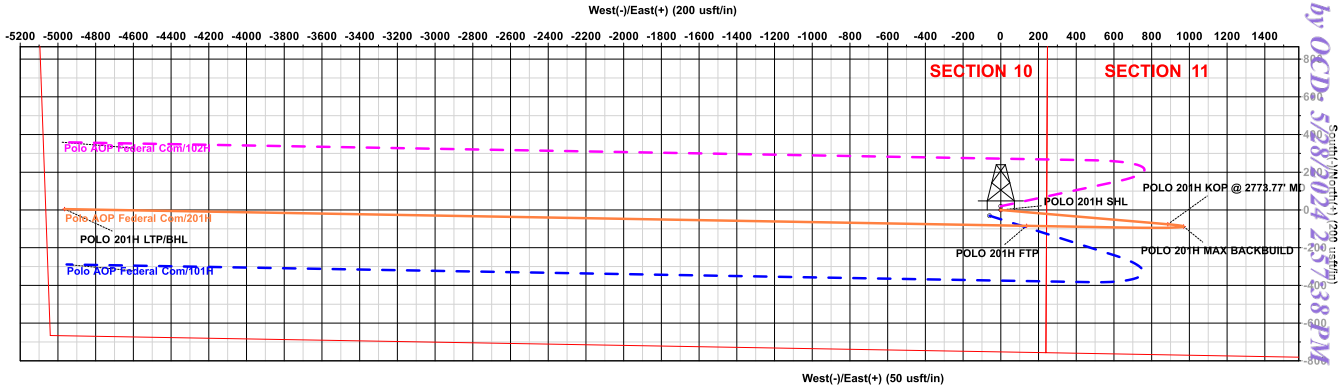
Received by OCD: 5/28/2024 2:57:38 PM

SILVERBACK EXPLORATION

Project: EDDY COUNTY, NM (NAD 83 - NME)
Site: Polo AOP Federal Com
Well: 201H
Wellbore: OH
Design: Plan 2r0



WELL DETAILS: 201H

Rig Name: AKITA 517 RKB = 16.2' @ 3467.50usft (AKITA 517)
Ground Level: 3451.30

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	607541.46	500873.13	32.6701081	-104.4648339

SECTION DETAILS

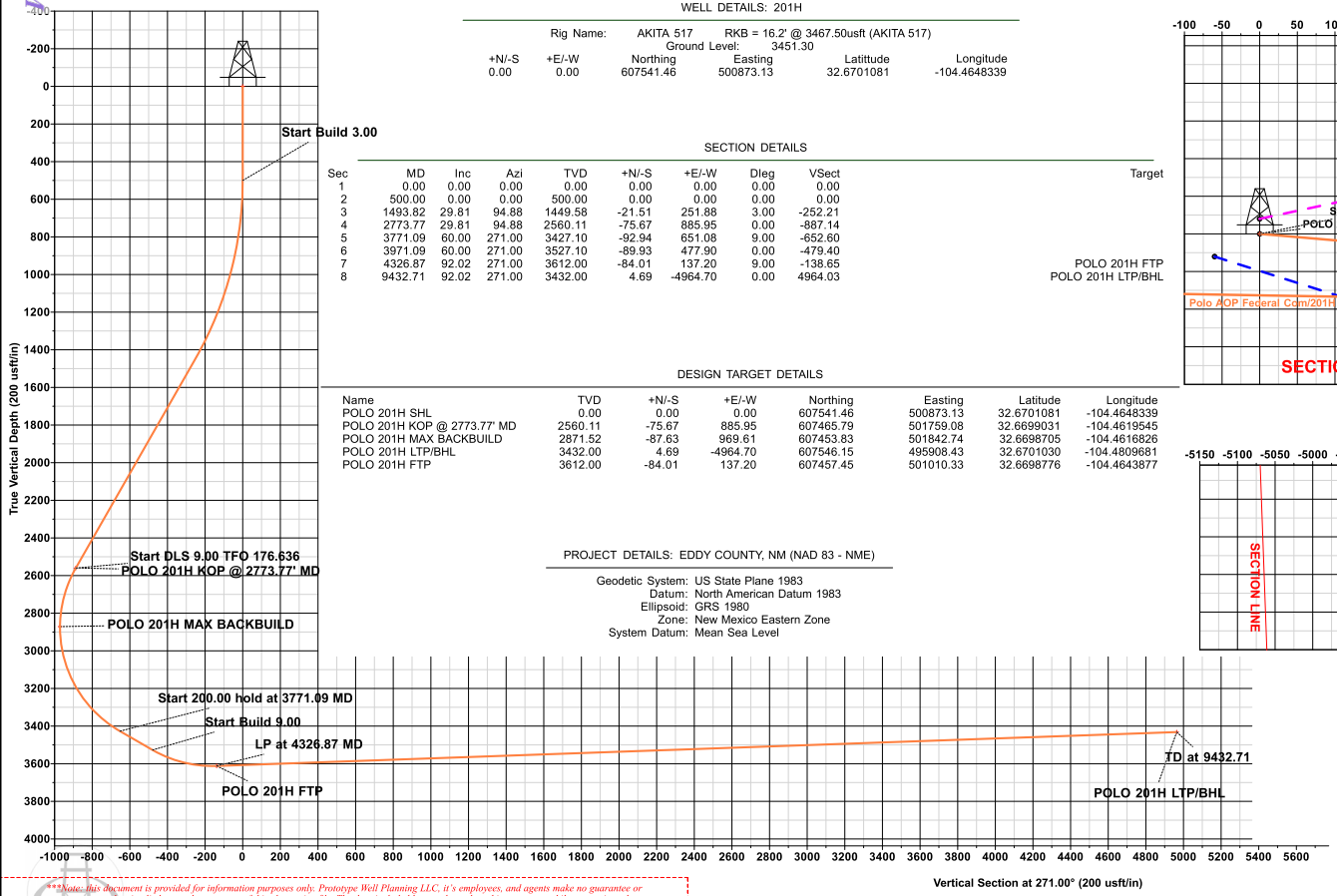
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	VSect	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	
3	1493.82	29.81	94.88	1449.58	-21.51	251.88	3.00	-252.21	
4	2773.77	29.81	94.88	2560.11	-75.67	885.95	0.00	-887.14	
5	3771.09	60.00	271.00	3427.10	-92.94	651.08	9.00	-652.60	
6	3971.09	60.00	271.00	3527.10	-89.93	477.90	0.00	-479.40	
7	4326.87	92.02	271.00	3612.00	-84.01	137.20	9.00	-138.65	POLO 201H FTP
8	9432.71	92.02	271.00	3432.00	4.69	-4964.70	0.00	4964.03	POLO 201H LTP/BHL

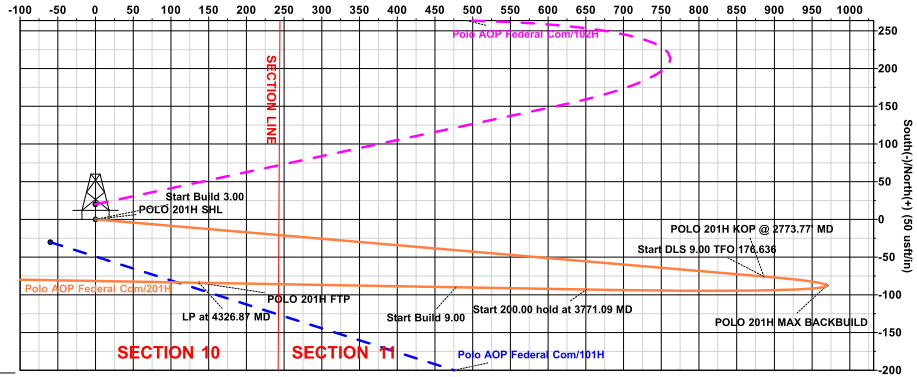
DESIGN TARGET DETAILS

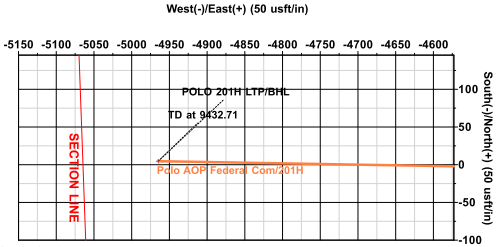
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
POLO 201H SHL	0.00	0.00	0.00	607541.46	500873.13	32.6701081	-104.4648339
POLO 201H KOP @ 2773.77' MD	2560.11	-75.67	885.95	607465.79	501759.08	32.6699031	-104.4619545
POLO 201H MAX BACKBUILD	2871.52	-87.63	969.61	607453.83	501842.74	32.6698705	-104.4616826
POLO 201H LTP/BHL	3432.00	4.69	-4964.70	607546.15	495908.43	32.6701030	-104.4809681
POLO 201H FTP	3612.00	-84.01	137.20	607457.45	501010.33	32.6698776	-104.4643877

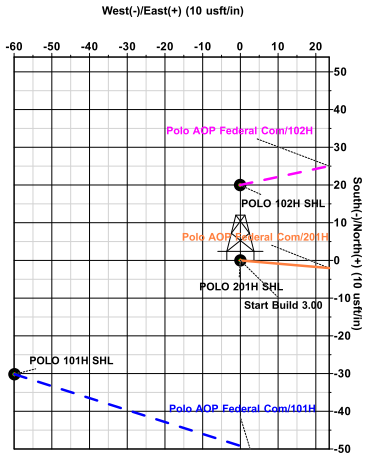
PROJECT DETAILS: EDDY COUNTY, NM (NAD 83 - NME)

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









Plan: Plan 2r0 (201H/OH)

Created By: PROTOTYPE WELL PLANNING / Date: 15:44, August 02 2023

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SILVERBACK EXPLORATION

EDDY COUNTY, NM (NAD 83 - NME)
Polo AOP Federal Com
201H

OH

Plan: Plan 2r0

Standard Planning Report

02 August, 2023

SILVERBACK EXPLORATION

Planning Report

Database:	EDM 5000.1.13 Single User Db	**Local Co-ordinate Reference:**	Well 201H
Company:	SILVERBACK EXPLORATION	**TVD Reference:**	RKB = 16.2' @ 3467.50usft (AKITA 517)
Project:	EDDY COUNTY, NM (NAD 83 - NME)	**MD Reference:**	RKB = 16.2' @ 3467.50usft (AKITA 517)
Site:	Polo AOP Federal Com	**North Reference:**	Grid
Well:	201H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan 2r0		

Project EDDY COUNTY, NM (NAD 83 - NME)

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

Site Polo AOP Federal Com

Site Position:		**Northing:**	607,419.80 usft	**Latitude:**	32.6697734
From:	Map	**Easting:**	500,782.40 usft	**Longitude:**	-104.4651283
Position Uncertainty:	0.00 usft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	-0.071 °

Well 201H

Well Position	**+N/-S**	121.66 usft	**Northing:**	607,541.46 usft	**Latitude:**	32.6701081
	+E/-W	90.73 usft	**Easting:**	500,873.13 usft	**Longitude:**	-104.4648339
Position Uncertainty		0.00 usft	**Wellhead Elevation:**	0.00 usft	**Ground Level:**	3,451.30 usft

Wellbore OH

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2020	08/02/23	6.743	60.104	47,443

Design Plan 2r0

Audit Notes:

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

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	271.00

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	0.000	
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.000	
1,493.82	29.81	94.88	1,449.58	-21.51	251.88	3.00	3.00	0.00	94.882	
2,773.77	29.81	94.88	2,560.11	-75.67	885.95	0.00	0.00	0.00	0.000	
3,771.09	60.00	271.00	3,427.10	-92.94	651.08	9.00	3.03	17.66	176.636	
3,971.09	60.00	271.00	3,527.10	-89.93	477.90	0.00	0.00	0.00	0.000	
4,326.87	92.02	271.00	3,612.00	-84.01	137.20	9.00	9.00	0.00	0.000	POLO 201H FTP
9,432.71	92.02	271.00	3,432.00	4.69	-4,964.70	0.00	0.00	0.00	0.000	POLO 201H LTP/BI

SILVERBACK EXPLORATION

Planning Report

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Project:	EDDY COUNTY, NM (NAD 83 - NME)	**MD Reference:**	RKB = 16.2' @ 3467.50usft (AKITA 517)
Site:	Polo AOP Federal Com	**North Reference:**	Grid
Well:	201H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan 2r0		

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
POLO 201H SHL									
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	3.00	94.88	599.95	-0.22	2.61	-2.61	3.00	3.00	0.00
700.00	6.00	94.88	699.63	-0.89	10.42	-10.44	3.00	3.00	0.00
800.00	9.00	94.88	798.77	-2.00	23.43	-23.46	3.00	3.00	0.00
900.00	12.00	94.88	897.08	-3.55	41.58	-41.64	3.00	3.00	0.00
1,000.00	15.00	94.88	994.31	-5.54	64.84	-64.93	3.00	3.00	0.00
1,100.00	18.00	94.88	1,090.18	-7.95	93.14	-93.26	3.00	3.00	0.00
1,200.00	21.00	94.88	1,184.43	-10.79	126.39	-126.56	3.00	3.00	0.00
1,300.00	24.00	94.88	1,276.81	-14.05	164.52	-164.74	3.00	3.00	0.00
1,400.00	27.00	94.88	1,367.06	-17.71	207.41	-207.68	3.00	3.00	0.00
1,493.82	29.81	94.88	1,449.58	-21.51	251.88	-252.21	3.00	3.00	0.00
1,500.00	29.81	94.88	1,454.93	-21.77	254.94	-255.28	0.00	0.00	0.00
1,600.00	29.81	94.88	1,541.70	-26.00	304.48	-304.88	0.00	0.00	0.00
1,700.00	29.81	94.88	1,628.46	-30.24	354.01	-354.49	0.00	0.00	0.00
1,800.00	29.81	94.88	1,715.23	-34.47	403.55	-404.09	0.00	0.00	0.00
1,900.00	29.81	94.88	1,801.99	-38.70	453.09	-453.70	0.00	0.00	0.00
2,000.00	29.81	94.88	1,888.75	-42.93	502.63	-503.31	0.00	0.00	0.00
2,100.00	29.81	94.88	1,975.52	-47.16	552.17	-552.91	0.00	0.00	0.00
2,200.00	29.81	94.88	2,062.28	-51.39	601.71	-602.52	0.00	0.00	0.00
2,300.00	29.81	94.88	2,149.04	-55.62	651.25	-652.12	0.00	0.00	0.00
2,400.00	29.81	94.88	2,235.81	-59.85	700.79	-701.73	0.00	0.00	0.00
2,500.00	29.81	94.88	2,322.57	-64.08	750.33	-751.33	0.00	0.00	0.00
2,600.00	29.81	94.88	2,409.34	-68.31	799.87	-800.94	0.00	0.00	0.00
2,700.00	29.81	94.88	2,496.10	-72.54	849.41	-850.54	0.00	0.00	0.00
2,773.77	29.81	94.88	2,560.11	-75.67	885.95	-887.14	0.00	0.00	0.00
POLO 201H KOP @ 2773.77' MD									
2,800.00	27.46	95.18	2,583.13	-76.77	898.47	-899.68	9.00	-8.98	1.15
2,850.00	22.97	95.91	2,628.35	-78.81	919.67	-920.91	9.00	-8.98	1.46
2,900.00	18.48	96.97	2,675.10	-80.78	937.25	-938.52	9.00	-8.97	2.12
2,950.00	14.01	98.68	2,723.09	-82.66	951.11	-952.41	9.00	-8.95	3.42
3,000.00	9.56	101.95	2,772.03	-84.43	961.16	-962.49	9.00	-8.90	6.53
3,050.00	5.19	110.72	2,821.60	-86.09	967.34	-968.69	9.00	-8.74	17.54
3,100.00	1.72	168.12	2,871.52	-87.63	969.61	-970.99	9.00	-6.93	114.82
POLO 201H MAX BACKBUILD									
3,150.00	4.42	249.75	2,921.46	-89.03	967.95	-969.36	9.00	5.39	163.26
3,200.00	8.75	261.03	2,971.12	-90.29	962.39	-963.82	9.00	8.66	22.54
3,250.00	13.19	264.81	3,020.19	-91.40	952.95	-954.40	9.00	8.89	7.56
3,300.00	17.67	266.70	3,068.38	-92.35	939.68	-941.15	9.00	8.94	3.79
3,350.00	22.15	267.85	3,115.38	-93.14	922.68	-924.17	9.00	8.97	2.29
3,400.00	26.64	268.63	3,160.90	-93.77	902.05	-903.55	9.00	8.98	1.55
3,450.00	31.13	269.19	3,204.67	-94.22	877.91	-879.42	9.00	8.98	1.13
3,500.00	35.62	269.63	3,246.42	-94.49	850.41	-851.93	9.00	8.99	0.87
3,550.00	40.12	269.98	3,285.88	-94.60	819.73	-821.25	9.00	8.99	0.70
3,600.00	44.61	270.27	3,322.81	-94.52	786.04	-787.57	9.00	8.99	0.58
3,650.00	49.11	270.51	3,356.99	-94.27	749.57	-751.10	9.00	8.99	0.49
3,700.00	53.61	270.73	3,388.20	-93.84	710.53	-712.06	9.00	8.99	0.43
3,750.00	58.10	270.92	3,416.26	-93.25	669.16	-670.69	9.00	8.99	0.38

SILVERBACK EXPLORATION

Planning Report

Database:	EDM 5000.1.13 Single User Db	**Local Co-ordinate Reference:**	Well 201H
Company:	SILVERBACK EXPLORATION	**TVD Reference:**	RKB = 16.2' @ 3467.50usft (AKITA 517)
Project:	EDDY COUNTY, NM (NAD 83 - NME)	**MD Reference:**	RKB = 16.2' @ 3467.50usft (AKITA 517)
Site:	Polo AOP Federal Com	**North Reference:**	Grid
Well:	201H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan 2r0		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
3,771.09	60.00	271.00	3,427.10	-92.94	651.08	-652.60	9.00	8.99	0.36
3,800.00	60.00	271.00	3,441.56	-92.51	626.04	-627.56	0.00	0.00	0.00
3,900.00	60.00	271.00	3,491.56	-91.00	539.45	-540.96	0.00	0.00	0.00
3,971.09	60.00	271.00	3,527.10	-89.93	477.90	-479.40	0.00	0.00	0.00
4,000.00	62.60	271.00	3,540.99	-89.49	452.54	-454.04	9.00	9.00	0.00
4,050.00	67.10	271.00	3,562.23	-88.71	407.30	-408.79	9.00	9.00	0.00
4,100.00	71.60	271.00	3,579.86	-87.89	360.53	-362.01	9.00	9.00	0.00
4,150.00	76.10	271.00	3,593.76	-87.06	312.53	-314.00	9.00	9.00	0.00
4,200.00	80.60	271.00	3,603.85	-86.21	263.58	-265.04	9.00	9.00	0.00
4,250.00	85.10	271.00	3,610.07	-85.34	213.98	-215.44	9.00	9.00	0.00
4,300.00	89.60	271.00	3,612.38	-84.48	164.06	-165.51	9.00	9.00	0.00
4,326.87	92.02	271.00	3,612.00	-84.01	137.20	-138.65	9.00	9.00	0.00
POLO 201H FTP									
4,400.00	92.02	271.00	3,609.42	-82.74	64.12	-65.56	0.00	0.00	0.00
4,500.00	92.02	271.00	3,605.90	-81.00	-35.80	34.38	0.00	0.00	0.00
4,600.00	92.02	271.00	3,602.37	-79.27	-135.72	134.32	0.00	0.00	0.00
4,700.00	92.02	271.00	3,598.85	-77.53	-235.65	234.26	0.00	0.00	0.00
4,800.00	92.02	271.00	3,595.32	-75.79	-335.57	334.19	0.00	0.00	0.00
4,900.00	92.02	271.00	3,591.79	-74.05	-435.49	434.13	0.00	0.00	0.00
5,000.00	92.02	271.00	3,588.27	-72.32	-535.41	534.07	0.00	0.00	0.00
5,100.00	92.02	271.00	3,584.74	-70.58	-635.34	634.01	0.00	0.00	0.00
5,200.00	92.02	271.00	3,581.22	-68.84	-735.26	733.95	0.00	0.00	0.00
5,300.00	92.02	271.00	3,577.69	-67.10	-835.18	833.88	0.00	0.00	0.00
5,400.00	92.02	271.00	3,574.17	-65.37	-935.10	933.82	0.00	0.00	0.00
5,500.00	92.02	271.00	3,570.64	-63.63	-1,035.03	1,033.76	0.00	0.00	0.00
5,600.00	92.02	271.00	3,567.12	-61.89	-1,134.95	1,133.70	0.00	0.00	0.00
5,700.00	92.02	271.00	3,563.59	-60.16	-1,234.87	1,233.63	0.00	0.00	0.00
5,800.00	92.02	271.00	3,560.07	-58.42	-1,334.80	1,333.57	0.00	0.00	0.00
5,900.00	92.02	271.00	3,556.54	-56.68	-1,434.72	1,433.51	0.00	0.00	0.00
6,000.00	92.02	271.00	3,553.02	-54.94	-1,534.64	1,533.45	0.00	0.00	0.00
6,100.00	92.02	271.00	3,549.49	-53.21	-1,634.56	1,633.39	0.00	0.00	0.00
6,200.00	92.02	271.00	3,545.97	-51.47	-1,734.49	1,733.32	0.00	0.00	0.00
6,300.00	92.02	271.00	3,542.44	-49.73	-1,834.41	1,833.26	0.00	0.00	0.00
6,400.00	92.02	271.00	3,538.91	-48.00	-1,934.33	1,933.20	0.00	0.00	0.00
6,500.00	92.02	271.00	3,535.39	-46.26	-2,034.25	2,033.14	0.00	0.00	0.00
6,600.00	92.02	271.00	3,531.86	-44.52	-2,134.18	2,133.08	0.00	0.00	0.00
6,700.00	92.02	271.00	3,528.34	-42.78	-2,234.10	2,233.01	0.00	0.00	0.00
6,800.00	92.02	271.00	3,524.81	-41.05	-2,334.02	2,332.95	0.00	0.00	0.00
6,900.00	92.02	271.00	3,521.29	-39.31	-2,433.95	2,432.89	0.00	0.00	0.00
7,000.00	92.02	271.00	3,517.76	-37.57	-2,533.87	2,532.83	0.00	0.00	0.00
7,100.00	92.02	271.00	3,514.24	-35.83	-2,633.79	2,632.76	0.00	0.00	0.00
7,200.00	92.02	271.00	3,510.71	-34.10	-2,733.71	2,732.70	0.00	0.00	0.00
7,300.00	92.02	271.00	3,507.19	-32.36	-2,833.64	2,832.64	0.00	0.00	0.00
7,400.00	92.02	271.00	3,503.66	-30.62	-2,933.56	2,932.58	0.00	0.00	0.00
7,500.00	92.02	271.00	3,500.14	-28.89	-3,033.48	3,032.52	0.00	0.00	0.00
7,600.00	92.02	271.00	3,496.61	-27.15	-3,133.40	3,132.45	0.00	0.00	0.00
7,700.00	92.02	271.00	3,493.08	-25.41	-3,233.33	3,232.39	0.00	0.00	0.00
7,800.00	92.02	271.00	3,489.56	-23.67	-3,333.25	3,332.33	0.00	0.00	0.00
7,900.00	92.02	271.00	3,486.03	-21.94	-3,433.17	3,432.27	0.00	0.00	0.00
8,000.00	92.02	271.00	3,482.51	-20.20	-3,533.10	3,532.21	0.00	0.00	0.00
8,100.00	92.02	271.00	3,478.98	-18.46	-3,633.02	3,632.14	0.00	0.00	0.00
8,200.00	92.02	271.00	3,475.46	-16.72	-3,732.94	3,732.08	0.00	0.00	0.00
8,300.00	92.02	271.00	3,471.93	-14.99	-3,832.86	3,832.02	0.00	0.00	0.00
8,400.00	92.02	271.00	3,468.41	-13.25	-3,932.79	3,931.96	0.00	0.00	0.00

SILVERBACK EXPLORATION

Planning Report

Database:	EDM 5000.1.13 Single User Db	**Local Co-ordinate Reference:**	Well 201H
Company:	SILVERBACK EXPLORATION	**TVD Reference:**	RKB = 16.2' @ 3467.50usft (AKITA 517)
Project:	EDDY COUNTY, NM (NAD 83 - NME)	**MD Reference:**	RKB = 16.2' @ 3467.50usft (AKITA 517)
Site:	Polo AOP Federal Com	**North Reference:**	Grid
Well:	201H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan 2r0		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
8,500.00	92.02	271.00	3,464.88	-11.51	-4,032.71	4,031.89	0.00	0.00	0.00
8,600.00	92.02	271.00	3,461.36	-9.78	-4,132.63	4,131.83	0.00	0.00	0.00
8,700.00	92.02	271.00	3,457.83	-8.04	-4,232.55	4,231.77	0.00	0.00	0.00
8,800.00	92.02	271.00	3,454.31	-6.30	-4,332.48	4,331.71	0.00	0.00	0.00
8,900.00	92.02	271.00	3,450.78	-4.56	-4,432.40	4,431.65	0.00	0.00	0.00
9,000.00	92.02	271.00	3,447.25	-2.83	-4,532.32	4,531.58	0.00	0.00	0.00
9,100.00	92.02	271.00	3,443.73	-1.09	-4,632.25	4,631.52	0.00	0.00	0.00
9,200.00	92.02	271.00	3,440.20	0.65	-4,732.17	4,731.46	0.00	0.00	0.00
9,300.00	92.02	271.00	3,436.68	2.38	-4,832.09	4,831.40	0.00	0.00	0.00
9,400.00	92.02	271.00	3,433.15	4.12	-4,932.01	4,931.33	0.00	0.00	0.00
9,432.71	92.02	271.00	3,432.00	4.69	-4,964.70	4,964.03	0.00	0.00	0.00
POLO 201H LTP/BHL									

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
POLO 201H SHL - plan hits target center - Point	0.00	360.00	0.00	0.00	0.00	607,541.46	500,873.13	32.6701081	-104.4648339
POLO 201H KOP @ 2 - plan hits target center - Point	0.00	0.00	2,560.11	-75.67	885.95	607,465.80	501,759.09	32.6699031	-104.4619544
POLO 201H MAX BA - plan hits target center - Point	0.00	0.00	2,871.52	-87.63	969.61	607,453.84	501,842.74	32.6698705	-104.4616825
POLO 201H LTP/BHL - plan hits target center - Point	0.00	360.00	3,432.00	4.69	-4,964.70	607,546.15	495,908.43	32.6701031	-104.4809681
POLO 201H FTP - plan hits target center - Point	0.00	360.00	3,612.00	-84.01	137.20	607,457.45	501,010.33	32.6698777	-104.4643877

PECOS DISTRICT
SURFACE USE
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	Silverback Operating LLC
LEASE NO.:	NMNM125008, NMNM023855B, NMNM092748
COUNTY:	Eddy County

Wells:

Barbara Pad 1
Barbara 17 Federal Com 101H
Surface Hole Location: 337' FSL & 421' FEL, Section 18, T. 19 S., R. 25 E.
Bottom Hole Location: 350' FSL & 100' FEL, Section 17, T. 19 S, R 25 E.

Barbara 17 Federal Com 201H
Surface Hole Location: 377' FSL & 421' FEL, Section 18, T. 19 S., R. 25 E.
Bottom Hole Location: 729' FSL & 100' FEL, Section 17, T. 19 S, R 25 E.

Barbara 18 Federal Com 101H
Surface Hole Location: 357' FSL & 421' FEL, Section 18, T. 19 S., R. 25 E.
Bottom Hole Location: 350' FSL & 100' FEL, Section 18, T. 19 S, R 25 E.

Barbara 18 Federal Com 201H
Surface Hole Location: 397' FSL & 422' FEL, Section 18, T. 19 S., R. 25 E.
Bottom Hole Location: 607' FSL & 100' FWL, Section 18, T. 19 S, R 25 E.

Barbara Well Pad 2:
Barbara 17 Federal Com 102H
Surface Hole Location: 1185' FSL & 145' FWL, Section 17, T. 19 S., R. 25 E.
Bottom Hole Location: 975' FSL & 100' FEL, Section 17, T. 19 S, R 25 E.

Barbara 17 Federal Com 202H
Surface Hole Location: 1245' FSL & 155' FWL, Section 17, T. 19 S., R. 25 E.
Bottom Hole Location: 1389' FSL & 100' FEL, Section 17, T. 19 S, R 25 E.

Barbara 18 Federal Com 102H
Surface Hole Location: 1185' FSL & 165' FWL, Section 17, T. 19 S., R. 25 E.
Bottom Hole Location: 1004' FSL & 100' FWL, Section 18, T. 19 S, R 25 E.

Barbara 18 Federal Com 202H
Surface Hole Location: 1245' FSL & 175' FWL, Section 17, T. 19 S., R. 25 E.
Bottom Hole Location: 1261' FSL & 100' FWL, Section 18, T. 19 S, R 25 E.

Barbara Well Pad 3
Barbara 17 Federal Com 103H
Surface Hole Location: 1798' FSL & 638' FEL, Section 18, T. 19 S., R. 25 E.
Bottom Hole Location: 1600' FSL & 100' FEL, Section 17, T. 19 S, R 25 E.

Barbara 17 Federal Com 203H
Surface Hole Location: 1808' FSL & 655' FEL, Section 18, T. 19 S., R. 25 E.
Bottom Hole Location: 2052' FSL & 100' FEL, Section 17, T. 19 S, R 25 E.

Barbara 18 Federal Com 104H
Surface Hole Location: 1833' FSL & 581' FEL, Section 18, T. 19 S., R. 25 E.

Bottom Hole Location: 2313' FSL & 100' FWL, Section 18, T. 19 S, R 25 E.

Barbara 18 Federal Com 103H
Surface Hole Location: 1787' FSL & 620' FEL, Section 18, T. 19 S., R. 25 E.
Bottom Hole Location: 1659' FSL & 100' FWL, Section 18, T. 19 S, R 25 E.

Barbara 18 Federal Com 203H
Surface Hole Location: 1844' FSL & 598' FEL, Section 18, T. 19 S., R. 25 E.
Bottom Hole Location: 1915' FSL & 100' FWL, Section 18, T. 19 S, R 25 E.

Barbara Well Pad 4:
Barbara 17 Federal Com 105H
Surface Hole Location: 2419' FNL & 275' FEL, Section 18, T. 19 S., R. 25 E.
Bottom Hole Location: 2416' FNL & 100' FEL, Section 17, T. 19 S, R 25 E.

Barbara 17 Federal Com 106H
Surface Hole Location: 2389' FNL & 215' FEL, Section 18, T. 19 S., R. 25 E.
Bottom Hole Location: 1791' FNL & 100' FEL, Section 17, T. 19 S, R 25 E.

Barbara 17 Federal Com 204H
Surface Hole Location: 2439' FNL & 275' FEL, Section 18, T. 19 S., R. 25 E.
Bottom Hole Location: 2547' FNL & 100' FEL, Section 17, T. 19 S, R 25 E.

Barbara 17 Federal Com 205H
Surface Hole Location: 2399' FNL & 272' FEL, Section 18, T. 19 S., R. 25 E.
Bottom Hole Location: 1884' FNL & 100' FEL, Section 17, T. 19 S, R 25 E.

Barbara 18 Federal Com 204H
Surface Hole Location: 2449' FNL & 215' FEL, Section 18, T. 19 S., R. 25 E.
Bottom Hole Location: 2569' FSL & 100' FWL, Section 18, T. 19 S, R 25 E.

Barbara 18 Federal Com 205H
Surface Hole Location: 2409' FNL & 215' FEL, Section 18, T. 19 S., R. 25 E.
Bottom Hole Location: 2055' FNL & 100' FWL, Section 18, T. 19 S, R 25 E.

Barbara Well Pad 5 (fee-fee-fed):
Barbara 17 Federal Com 206H
Surface Hole Location: 969' FNL & 375' FEL, Section 18, T. 19 S., R. 25 E.
Bottom Hole Location: 1199' FNL & 100' FEL, Section 17, T. 19 S, R 25 E.

Barbara 18 Federal Com 106H
Surface Hole Location: 1019' FNL & 331' FEL, Section 18, T. 19 S., R. 25 E.
Bottom Hole Location: 1659' FNL & 100' FWL, Section 18, T. 19 S, R 25 E.

Barbara 18 Federal Com 107H
Surface Hole Location: 1000' FNL & 323' FEL, Section 18, T. 19 S., R. 25 E.
Bottom Hole Location: 1004' FNL & 100' FWL, Section 18, T. 19 S, R 25 E.

Barbara 18 Federal Com 108H
Surface Hole Location: 982' FNL & 316' FEL, Section 18, T. 19 S., R. 25 E.
Bottom Hole Location: 350' FNL & 100' FWL, Section 18, T. 19 S, R 25 E.

Barbara 18 Federal Com 206H
Surface Hole Location: 987' FNL & 383' FEL, Section 18, T. 19 S., R. 25 E.
Bottom Hole Location: 1401' FNL & 100' FWL, Section 18, T. 19 S, R 25 E.

Barbara 18 Federal Com 207H
Surface Hole Location: 950' FNL & 367' FEL, Section 18, T. 19 S., R. 25 E.
Bottom Hole Location: 747' FNL & 100' FWL, Section 18, T. 19 S, R 25 E.

Barbara Well Pad 6 (fee-fee-fed):
Barbara 17 Federal Com 105H
Surface Hole Location: 2419' FNL, 275' FEL, Section 18, T. 19 S., R. 25 E.
Bottom Hole Location: 350' FNL & 100' FEL, Section 17, T. 19 S, R 25 E.

Barbara 17 Federal Com 106H
Surface Hole Location: 2389' FNL & 215' FEL, Section 18, T. 19 S., R. 25 E.
Bottom Hole Location: 1791' FNL & 100' FEL, Section 17, T. 19 S, R 25 E.

Polo Pad 1
Arrow ARW Federal Com 101H
Surface Hole Location: 717' FSL & 237' FEL, Section 10, T. 19 S., R. 25 E.
Bottom Hole Location: 350' FSL & 100' FEL, Section 11, T. 19 S, R 25 E.

Arrow ARW Federal Com 102H
Surface Hole Location: 747' FSL & 237' FEL, Section 10, T. 19 S., R. 25 E.
Bottom Hole Location: 1002' FSL & 100' FEL, Section 11, T. 19 S, R 25 E.

Arrow ARW Federal Com 201H
Surface Hole Location: 737' FSL & 237' FEL, Section 10, T. 19 S., R. 25 E.
Bottom Hole Location: 746' FSL & 100' FEL, Section 11, T. 19 S, R 25 E.

Polo AOP Federal Com 101H
Surface Hole Location: 727' FSL & 297' FEL, Section 10, T. 19 S., R. 25 E.
Bottom Hole Location: 380' FSL & 100' FWL, Section 10, T. 19 S, R 25 E.

Polo AOP Federal Com 102H
Surface Hole Location: 777' FSL & 237' FEL, Section 10, T. 19 S., R. 25 E.
Bottom Hole Location: 1027' FSL & 100' FWL, Section 10, T. 19 S, R 25 E.

Polo AOP Federal Com 101H
Surface Hole Location: 757' FSL & 237' FEL, Section 10, T. 19 S., R. 25 E.
Bottom Hole Location: 673' FSL & 100' FWL, Section 10, T. 19 S, R 25 E.

Polo Pad 2
Arrow ARW Federal Com 103H
Surface Hole Location: 1871' FSL & 266' FEL, Section 10, T. 19 S., R. 25 E.
Bottom Hole Location: 1654' FSL & 100' FEL, Section 11, T. 19 S, R 25 E.

Arrow ARW Federal Com 104H
Surface Hole Location: 1901' FSL & 206' FEL, Section 10, T. 19 S., R. 25 E.
Bottom Hole Location: 2306' FSL & 100' FEL, Section 11, T. 19 S, R 25 E.

Arrow ARW Federal Com 202H
Surface Hole Location: 1851' FSL & 266' FEL, Section 10, T. 19 S., R. 25 E.
Bottom Hole Location: 1398' FSL & 100' FEL, Section 11, T. 19 S, R 25 E.

Arrow ARW Federal Com 203H
Surface Hole Location: 1891' FSL & 266' FEL, Section 10, T. 19 S., R. 25 E.
Bottom Hole Location: 2050' FSL & 100' FEL, Section 11, T. 19 S, R 25 E.

Polo AOP Federal Com 103H

Surface Hole Location: 1861' FSL & 206' FEL, Section 10, T. 19 S., R. 25 E.
Bottom Hole Location: 1740' FSL & 100' FWL, Section 10, T. 19 S, R 25 E.

Polo AOP Federal Com 104H
Surface Hole Location: 1911' FSL & 266' FEL, Section 10, T. 19 S., R. 25 E.
Bottom Hole Location: 2387' FSL & 100' FWL, Section 10, T. 19 S, R 25 E.

Polo AOP Federal Com 202H
Surface Hole Location: 1841' FSL & 206' FEL, Section 10, T. 19 S., R. 25 E.
Bottom Hole Location: 1319' FSL & 100' FWL, Section 10, T. 19 S, R 25 E.

Polo AOP Federal Com 203H
Surface Hole Location: 1881' FSL & 206' FEL, Section 10, T. 19 S., R. 25 E.
Bottom Hole Location: 2064' FSL & 100' FWL, Section 10, T. 19 S, R 25 E.

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Standard Conditions of Approval (COA) apply to this APD. If any deviations to these standards exist or special COAs are required, the section with the deviation or requirement will be checked below.

☐ **General Provisions**
☐ **Permit Expiration**
☐ **Archaeology, Paleontology, and Historical Sites**
☐ **Noxious Weeds**
☒ **Special Requirements**
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- Cave/Karst
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- Special Status Plant Species
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☐ **Construction**
- Notification
- Topsoil
- Closed Loop System
- Federal Mineral Material Pits
- Well Pads
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☐ **Road Section Diagram**
☒ **Production (Post Drilling)**
- Well Structures & Facilities
- Pipelines
- Electric Lines

☐ **Interim Reclamation**
☐ **Final Abandonment & Reclamation**

II. PERMIT EXPIRATION

If the permit terminates prior to drilling and drilling cannot be commenced within 60 days after expiration, an operator is required to submit Form 3160-5, Sundry Notices and Reports on Wells, requesting surface reclamation requirements for any surface disturbance. However, if the operator will be able to initiate drilling within 60 days after the expiration of the permit, the operator must have set the conductor pipe in order to allow for an extension of 60 days beyond the expiration date of the APD. (Filing of a Sundry Notice is required for this 60 day extension.)

III. ARCHAEOLOGICAL, PALEONTOLOGY & HISTORICAL SITES

Any cultural resource (historic or prehistoric site or object) discovered by the holder, or any person working on the holder's behalf, on public or Federal land shall be immediately reported to the Authorized Officer. The holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. The holder will be responsible for the cost of evaluation and any decision as to the proper mitigation measures will be made by the Authorized Officer after consulting with the holder.

OR

If the entire project is covered under the Permian Basin Programmatic Agreement (cultural resources only):

The proponent has contributed funds commensurate to the undertaking into an account for offsite mitigation. Participation in the PA serves as mitigation for the effects of this project on cultural resources. If any human skeletal remains, funerary objects, sacred objects, or objects of cultural patrimony are discovered at any time during construction, all construction activities shall halt and the BLM will be notified as soon as possible within 24 hours. Work shall not resume until a Notice to Proceed is issued by the BLM. See information below discussing NAGPRA.

If the proposed project is split between a Class III inventory and a Permian Basin Programmatic Agreement contribution, the portion of the project covered under Class III inventory should default to the first paragraph stipulations.

Any paleontological resource (historic or prehistoric site or object) discovered by the holder, or any person working on the holder's behalf, on public or Federal land shall be immediately reported to the Authorized Officer. The holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. The holder will be responsible for the cost of evaluation and any decision as to the proper mitigation measures will be made by the Authorized Officer after consulting with the holder.

IV. NOXIOUS WEEDS

The operator shall be held responsible if noxious weeds become established within the areas of operations. Weed control shall be required on the disturbed land where noxious weeds exist, which includes the roads, pads, associated pipeline corridor, and adjacent land affected by the establishment of weeds due to this action. The operator shall consult with the Authorized Officer for acceptable weed control methods, which include following EPA and BLM requirements and policies.

V. SPECIAL REQUIREMENT(S)

WATERSHED:
The entire **Barbara well pad 4** will be bermed to prevent oil, salt, and other chemical contaminants from leaving the well pad. The compacted berm shall be constructed at a minimum of 12 inches

with impermeable mineral material (e.g. caliche). Topsoil shall not be used to construct the berm. No water flow from the uphill side(s) of the pad shall be allowed to enter the well pad. The integrity of the berm shall be maintained around the surfaced pad throughout the life of the well and around the downsized pad after interim reclamation has been completed. Any water erosion that may occur due to the construction of the well pad during the life of the well will be quickly corrected and proper measures will be taken to prevent future erosion. Stockpiling of topsoil is required. The topsoil shall be stockpiled in an appropriate location to prevent loss of soil due to water or wind erosion and not used for berming or erosion control. If fluid collects within the bermed area, the fluid must be vacuumed into a safe container and disposed of properly at a state approved facility.

TANK BATTERY:
Tank battery locations will be lined and bermed. A 20 mil permanent liner will be installed with a 4 oz. felt backing to prevent tears or punctures. Tank battery berms must be large enough to contain 1 ½ times the content of the largest tank or 24 hour production, whichever is greater. Automatic shut off, check valves, or similar systems will be installed for tanks to minimize the effects of catastrophic line failures used in production or drilling.

BURIED/SURFACE LINE(S):
When crossing ephemeral drainages the pipeline(s) will be buried to a minimum depth of 48 inches from the top of pipe to ground level. Erosion control methods such as gabions and/or rock aprons should be placed on both up and downstream sides of the pipeline crossing. In addition, curled (weed free) wood/straw fiber wattles/logs and/or silt fences should be placed on the downstream side for sediment control during construction and maintained until soils and vegetation have stabilized. Water bars should be placed within the corridor to divert and dissipate surface runoff. A pipeline access road is not permitted to cross these ephemeral drainages. Traffic should be diverted to a preexisting route. Additional seeding may be required in floodplains and drainages to restore energy dissipating vegetation.

Prior to pipeline installation/construction a leak detection plan will be developed. The method(s) could incorporate gauges to detect pressure drops, situating valves and lines so they can be visually inspected periodically or installing electronic sensors to alarm when a leak is present. The leak detection plan will incorporate an automatic shut off system that will be installed for proposed pipelines to minimize the effects of an undesirable event.

ELECTRIC LINE(S):
Any water erosion that may occur due to the construction of overhead electric line and during the life of the power line will be quickly corrected and proper measures will be taken to prevent future erosion.

CAVE/KARST:

Construction Mitigation

In order to mitigate the impacts from construction activities on cave and karst resources, the following Conditions of Approval will apply to this APD or project:

General Construction:

- No blasting
- The BLM, Carlsbad Field Office, will be informed immediately if any subsurface drainage channels, cave passages, or voids are penetrated during construction, and no additional construction shall occur until clearance has been issued by the Authorized Officer.
- All spills or leaks will be reported to the BLM immediately for their immediate and proper treatment.

Pad Construction:

- The pad will be constructed and leveled by adding the necessary fill and caliche – no blasting.
- The entire perimeter of the well pad will be bermed to prevent oil, salt, and other chemical contaminants from leaving the well pad.
- The compacted berm shall be constructed at a minimum of 12 inches high with impermeable mineral material (e.g., caliche).
- No water flow from the uphill side(s) of the pad shall be allowed to enter the well pad.
- The topsoil stockpile shall be located outside the bermed well pad.
- Topsoil, either from the well pad or surrounding area, shall not be used to construct the berm.
- No storm drains, tubing or openings shall be placed in the berm.
- If fluid collects within the bermed area, the fluid must be vacuumed into a safe container and disposed of properly at a state approved facility.
- The integrity of the berm shall be maintained around the surfaced pad throughout the life of the well and around the downsized pad after interim reclamation has been completed.
- Any access road entering the well pad shall be constructed so that the integrity of the berm height surrounding the well pad is not compromised (i.e. an access road crossing the berm cannot be lower than the berm height).
- Following a rain event, all fluids will vacuumed off of the pad and hauled off-site and disposed at a proper disposal facility.

Road Construction:

- Turnout ditches and drainage leadoffs will not be constructed in such a manner as to alter the natural flow of water into or out of cave or karst features.
- Special restoration stipulations or realignment may be required if subsurface features are discovered during construction.

Buried Pipeline/Cable Construction:

- Rerouting of the buried line(s) may be required if a subsurface void is encountered during construction to minimize the potential subsidence/collapse of the feature(s) as well as the possibility of leaks/spills entering the karst drainage system.

Powerline Construction:

- Smaller powerlines will be routed around sinkholes and other karst features to avoid or lessen the possibility of encountering near surface voids and to minimize changes to runoff or possible leaks and spills from entering karst systems.
- Larger powerlines will adjust their pole spacing to avoid cave and karst features.
- Special restoration stipulations or realignment may be required if subsurface voids are encountered.

Surface Flowlines Installation:

- Flowlines will be routed around sinkholes and other karst features to minimize the possibility of leaks/spills from entering the karst drainage system.

Drilling Mitigation

Federal regulations and standard Conditions of Approval applied to all APDs require that adequate measures are taken to prevent contamination to the environment. Due to the extreme sensitivity of the cave and karst resources in this project area, the following additional Conditions of Approval will be added to this APD.

To prevent cave and karst resource contamination the following will be required:

- Rotary drilling with fresh water where cave or karst features are expected to prevent contamination of freshwater aquifers.

RANGE:

Cattleguards
Where a permanent cattlegaurd is approved, an appropriately sized cattleguard(s) sufficient to carry out the project shall be installed and maintained at fence crossing(s). Any existing cattleguard(s) on the access road shall be repaired or replaced if they are damaged or have deteriorated beyond practical use. The operator shall be responsible for the condition of the existing cattleguard(s) that are in place and are utilized during lease operations. A gate shall be constructed on one side of the cattleguard and fastened securely to H-braces.

Fence Requirement
Where entry granted across a fence line, the fence must be braced and tied off on both sides of the passageway prior to cutting. Once the work is completed, the fence will be restored to its prior condition, or better. The operator shall notify the private surface landowner or the grazing allotment holder prior to crossing any fence(s).

Livestock Watering Requirement
Any damage to structures that provide water to livestock throughout the life of the well, caused by operations from the well site, must be immediately corrected by the operator. The operator must notify the BLM office (575-234-5972) and the private surface landowner or the grazing allotment holder if any damage occurs to structures that provide water to livestock.

VRM IV:

Above-ground structures including meter housing that are not subject to safety requirements are painted a flat non-reflective paint color, **Covert Green** from the BLM Standard Environmental Color Chart (CC-001: June 2008).

VI. CONSTRUCTION

A. NOTIFICATION

The BLM shall administer compliance and monitor construction of the access road and well pad. Notify the Carlsbad Field Office at (575) 234-5909 at least 3 working days prior to commencing construction of the access road and/or well pad.

When construction operations are being conducted on this well, the operator shall have the approved APD and Conditions of Approval (COA) on the well site and they shall be made available upon request by the Authorized Officer.

B. TOPSOIL

The operator shall strip the top portion of the soil (A horizon) from the entire well pad area. The Barbara pads will have 5 inches of topsoil removed and hauled off site. The polo pads will have 4 inches All the stockpiled topsoil will be redistributed over the interim reclamation areas. Topsoil shall not be used for berming the pad or facilities. For final reclamation, the topsoil shall be spread over the entire pad area for seeding preparation.

Other subsoil (below 4 and 5 inches depending on location) stockpiles must be completely segregated from the topsoil stockpile. Large rocks or subsoil clods (not evident in the surrounding terrain) must be buried within the approved area for interim and final reclamation.

C. CLOSED LOOP SYSTEM

Tanks are required for drilling operations: No Pits.

The operator shall properly dispose of drilling contents at an authorized disposal site.

D. FEDERAL MINERAL MATERIALS PIT

Payment shall be made to the BLM prior to removal of any federal mineral materials. Call the Carlsbad Field Office at (575) 234-5972.

E. WELL PAD SURFACING

Surfacing of the well pad is not required.

If the operator elects to surface the well pad, the surfacing material may be required to be removed at the time of reclamation. The well pad shall be constructed in a manner which creates the smallest possible surface disturbance, consistent with safety and operational needs.

F. EXCLOSURE FENCING (CELLARS & PITS)

Exclosure Fencing
The operator will install and maintain exclosure fencing for all open well cellars to prevent access to public, livestock, and large forms of wildlife before and after drilling operations until the pit is free of fluids and the operator initiates backfilling. (For examples of exclosure fencing design, refer to BLM's Oil and Gas Gold Book, Exclosure Fence Illustrations, Figure 1, Page 18.)

G. ON LEASE ACCESS ROADS

Surfacing
Surfacing material is not required on the new access road driving surface. If the operator elects to surface the new access road or pad, the surfacing material may be required to be removed at the time of reclamation.

Where possible, no improvements should be made on the unsurfaced access road other than to remove vegetation as necessary, road irregularities, safety issues, or to fill low areas that may sustain standing water.

The Authorized Officer reserves the right to require surfacing of any portion of the access road at any time deemed necessary. Surfacing may be required in the event the road deteriorates, erodes, road traffic increases, or it is determined to be beneficial for future field development. The surfacing depth and type of material will be determined at the time of notification.

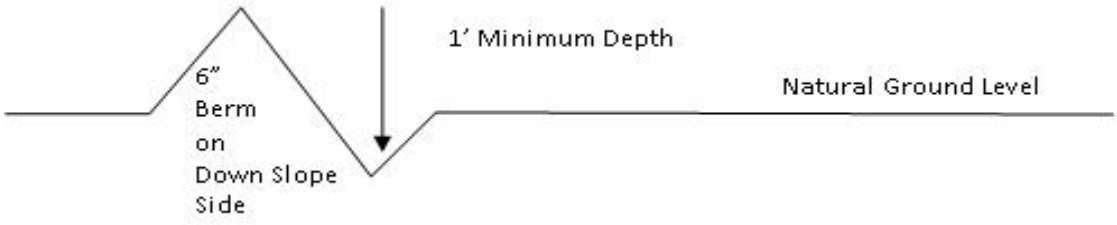
Crowning
Crowning shall be done on the access road driving surface. The road crown shall have a grade of approximately 2% (i.e., a 1" crown on a 14' wide road). The road shall conform to Figure 1; cross section and plans for typical road construction.

Ditching
Ditching shall be required on both sides of the road.

Turnouts
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall conform to Figure 1; cross section and plans for typical road construction.

A typical lead-off ditch has a minimum depth of 1 foot below and a berm of 6 inches above natural ground level. The berm shall be on the down-slope side of the lead-off ditch.

Cross Section of a Typical Lead-off Ditch



All lead-off ditches shall be graded to drain water with a 1 percent minimum to 3 percent maximum ditch slope. The spacing interval are variable for lead-off ditches and shall be determined according to the formula for spacing intervals of lead-off ditches, but may be amended depending upon existing soil types and centerline road slope ;

Formula for Spacing Interval of Lead-off Ditches

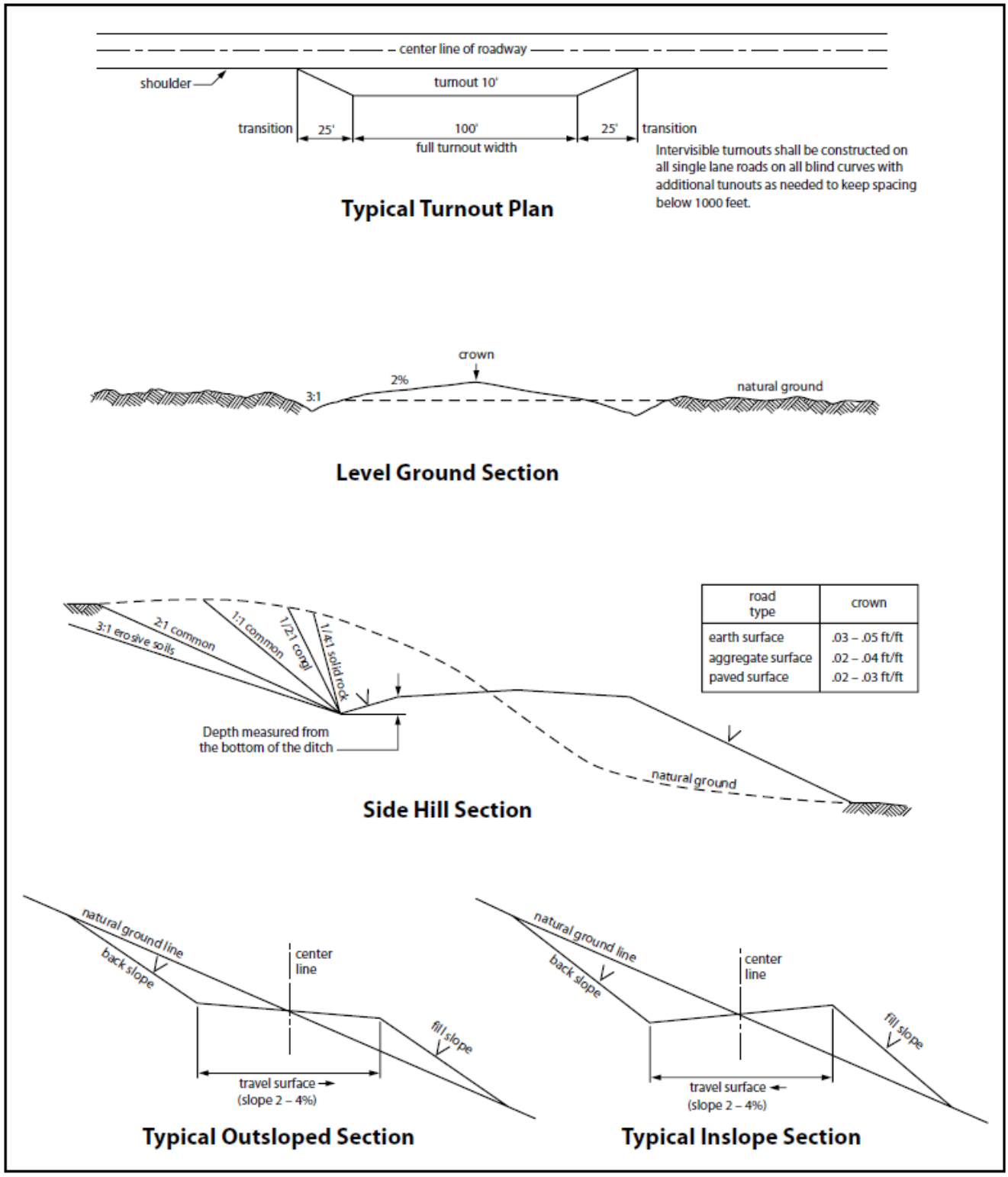
Example - On a 4% road slope that is 400 feet long, the water flow shall drain water into a lead-off ditch. Spacing interval shall be determined by the following formula:

400 foot road with 4% road slope: $\frac{400'}{4\%} + 100' = 200'$ lead-off ditch interval

Public Access
Public access on this road shall not be restricted by the operator without specific written approval granted by the Authorized Officer.

Construction Steps

1. Salvage topsoil
2. Construct road
3. Redistribute topsoil
4. Revegetate slopes



road type	crown
earth surface	.03 – .05 ft/ft
aggregate surface	.02 – .04 ft/ft
paved surface	.02 – .03 ft/ft

Figure 1. Cross-sections and plans for typical road sections representative of BLM resource or FS local and higher-class roads.

VII. PRODUCTION (POST DRILLING)

A. WELL STRUCTURES & FACILITIES

Exclosure Netting (Open-top Tanks)
Immediately following active drilling or completion operations, the operator will take actions necessary to prevent wildlife and livestock access, including avian wildlife, to all open-topped tanks that contain or have the potential to contain salinity sufficient to cause harm to wildlife or livestock, hydrocarbons, or Resource Conservation and Recovery Act of 1976-exempt hazardous substances. At a minimum, the operator will net, screen, or cover open-topped tanks to exclude wildlife and livestock and prevent mortality. If the operator uses netting, the operator will cover and secure the open portion of the tank to prevent wildlife entry. The operator will net, screen, or cover the tanks until the operator removes the tanks from the location or the tanks no longer contain substances that could be harmful to wildlife or livestock. Use a maximum netting mesh size of 1 ½ inches. The netting must not be in contact with fluids and must not have holes or gaps.

Chemical and Fuel Secondary Containment and Exclosure Screening
The operator will prevent all hazardous, poisonous, flammable, and toxic substances from coming into contact with soil and water. At a minimum, the operator will install and maintain an impervious secondary containment system for any tank or barrel containing hazardous, poisonous, flammable, or toxic substances sufficient to contain the contents of the tank or barrel and any drips, leaks, and anticipated precipitation. The operator will dispose of fluids within the containment system that do not meet applicable state or U. S. Environmental Protection Agency livestock water standards in accordance with state law; the operator must not drain the fluids to the soil or ground.

Open-Vent Exhaust Stack Exclosures
The operator will construct, modify, equip, and maintain all open-vent exhaust stacks on production equipment to prevent birds and bats from entering, and to discourage perching, roosting, and nesting. (*Recommended exclosure structures on open-vent exhaust stacks are in the shape of a cone*.) Production equipment includes, but may not be limited to, tanks, heater-treaters, separators, dehydrators, flare stacks, in-line units, and compressor mufflers.

BURIED PIPELINES

1. If, during any phase of the construction, operation, maintenance, or termination of the pipeline, any oil or other pollutant should be discharged from the pipeline system, impacting Federal lands, the control and total removal, disposal, and cleaning up of such oil or other pollutant, wherever found, shall be the responsibility of the operator, regardless of fault. Upon failure of the operator to control, dispose of, or clean up such discharge on or affecting Federal lands, or to repair all damages resulting therefrom, on the Federal lands, the Authorized Officer may take such measures as they deem necessary to control and clean up the discharge and restore the area, including where appropriate, the aquatic environment and fish and wildlife habitats, at the full expense of the operator. Such action by the Authorized Officer shall not relieve the operator of any responsibility as provided herein.

2. The pipeline will be buried with a minimum cover of **36** inches between the top of the pipe and ground level.

3. Blading of vegetation within the corridor will be allowed: maximum width of blading operations will not exceed **20** feet. The trench is included in this area. (*Blading is defined as the complete removal of brush and ground vegetation*.)

4. Clearing of brush species within the corridor will be allowed: maximum width of clearing operations will not exceed **30** feet. The trench and bladed area are included in this area. (*Clearing is defined as the removal of brush while leaving ground vegetation (grasses, weeds, etc.) intact. Clearing is best accomplished by holding the blade 4 to 6 inches above the ground surface.*)

5.The remaining area of the corridor (if any) shall only be disturbed by compressing the vegetation. (*Compressing can be caused by vehicle tires, placement of equipment, etc.*)

6. The holder shall stockpile an adequate amount of topsoil where blading is allowed. The topsoil to be stripped is approximately ___6___ inches in depth. The topsoil will be segregated from other spoil piles from trench construction. The topsoil will be evenly distributed over the bladed area for the preparation of seeding.

7. Vegetation, soil, and rocks left as a result of construction or maintenance activity will be randomly scattered on this pipeline corridor and will not be left in rows, piles, or berms, unless otherwise approved by the Authorized Officer. The entire pipeline coridor shall be recontoured to match the surrounding landscape. The backfilled soil shall be compacted and a 6 inch berm will be left over the ditch line to allow for settling back to grade.

8. The pipeline will be identified by signs at the point of origin and completion of the coridor and at all road crossings. At a minimum, signs will state the operator's name, well number or BLM serial number, and the product being transported. All signs and information thereon will be posted in a permanent, conspicuous manner, and will be maintained in a legible condition for the life of the pipeline.

9. The holder shall not use the pipeline route as a road for purposes other than routine maintenance as determined necessary by the Authorized Officer in consultation with the operator before maintenance begins. The operator will take whatever steps are necessary to ensure that the pipeline route is not used as a roadway. As determined necessary during the life of the pipeline, the Authorized Officer may ask the holder to construct temporary deterrence structures.

10. Escape Ramps - The operator will construct and maintain pipeline/utility trenches [that are not otherwise fenced, screened, or netted] to prevent livestock, wildlife, and humans from becoming entrapped. At a minimum, the operator will construct and maintain escape ramps, ladders, or other methods of avian and terrestrial wildlife escape in the trenches according to the following criteria:

a. Any trench left open for eight (8) hours or less is not required to have escape ramps; however, before the trench is backfilled, the contractor/operator shall inspect the trench for wildlife, remove all trapped wildlife, and release them at least 100 yards from the trench.
b. For trenches left open for eight (8) hours or more, earthen escape ramps (built at no more than a 30 degree slope and spaced no more than 500 feet apart) shall be placed in the trench.

VIII. INTERIM RECLAMATION

During the life of the development, all disturbed areas not needed for active support of production operations should undergo interim reclamation in order to minimize the environmental impacts of development on other resources and uses.

Within six (6) months of well completion, operators should work with BLM surface management specialists (Jim Amos: 575-234-5909) to devise the best strategies to reduce the size of the

location. Interim reclamation should allow for remedial well operations, as well as safe and efficient removal of oil and gas.

During reclamation, the removal of caliche and any other surface material is required. Removed caliche that is free of contaminants may be used for road repairs, fire walls or for building other roads and locations. In order to operate the well or complete workover operations, it may be necessary to drive, park and operate on restored interim vegetation within the previously disturbed area. Disturbing revegetated areas for production or workover operations will be allowed. If there is significant disturbance and loss of vegetation, the area will need to be revegetated. Communicate with the appropriate BLM office for any exceptions/exemptions if needed.

All disturbed areas after they have been satisfactorily prepared need to be reseeded with the seed mixture provided below.

Upon completion of interim reclamation, the operator shall submit a Sundry Notices and Reports on Wells, Subsequent Report of Reclamation (Form 3160-5).

IX. FINAL ABANDONMENT & RECLAMATION

At final abandonment, well locations, production facilities, and access roads must undergo "final" reclamation so that the character and productivity of the land are restored.

Earthwork for final reclamation must be completed within six (6) months of well plugging. All pads, pits, facility locations and roads must be reclaimed to a satisfactory revegetated, safe, and stable condition, unless an agreement is made with the landowner or BLM to keep the road and/or pad intact.

After all disturbed areas have been satisfactorily prepared, these areas need to be revegetated with the seed mixture provided below. Seeding should be accomplished by drilling on the contour whenever practical or by other approved methods. Seeding may need to be repeated until revegetation is successful, as determined by the BLM.

Operators shall contact a BLM surface protection specialist prior to surface abandonment operations for site specific objectives (Jim Amos: 575-234-5909).

Ground-level Abandoned Well Marker to avoid raptor perching: Upon the plugging and subsequent abandonment of the well, the well marker will be installed at ground level on a plate containing the pertinent information for the plugged well.

The operator is required to conduct soil “grab” testing near the plugged well head and at a randomly selected location on the pad to be reclaimed prior to conducting final reclamation. If it is determined that the surface soils do not be NMOCD’s standards for contaminants, then the operator will submit a sundry notice to the BLM detailing the remediation plan to be conducted on the location prior to reclamation activities.

Hummocks or mogul-like features must be created across the location to prevent erosion, allow for ponding of water, and to protect seeds from wind.

FOR POLO WELL PADS
Seed Mixture 1 for Loamy Sites

Holder shall seed all disturbed areas with the seed mixture listed below. The seed mixture shall be planted in the amounts specified in pounds of pure live seed (PLS)* per acre. There shall be no primary or secondary noxious weeds in the seed mixture. Seed shall be tested and the viability testing of seed will be done in accordance with State law(s) and within nine (9) months prior to purchase. Commercial seed shall be either certified or registered seed. The seed container shall be tagged in accordance with State law(s) and available for inspection by the Authorized Officer.

Seed shall be planted using a drill equipped with a depth regulator to ensure proper depth regulator to ensure proper depth of planting where drilling is possible. The seed mixture shall be evenly and uniformly planted over the disturbed area (small/heavier seeds have a tendency to drop the bottom of the drill and are planted first). Holder shall take appropriate measures to ensure this does not occur. Where drilling is not possible, seed shall be broadcast and the area shall be raked or chained to cover the seed. When broadcasting the seed, the pounds per acre shall be doubled. The seeding shall be repeated until a satisfactory stand is established as determined by the Authorized Officer. Evaluation of growth may not be made before completion of at least one full growing season after seeding.

Species to be planted in pounds of pure live seed* per acre:

Species	lb/acre
Plains lovegrass (Eragrostis intermedia)	0.5
Sand dropseed (Sporobolus cryptandrus)	1.0
Sideoats grama (Bouteloua curtipendula)	5.0
Plains bristlegrass (Setaria macrostachya)	2.0

*Pounds of pure live seed:

Pounds of seed **x** percent purity **x** percent germination = pounds pure live seed

FOR BARBARA WELL PADS
Aplomado Falcon Habitat Seed Mixture

The holder shall seed all disturbed areas with the seed mixture listed below. The seed mixture shall be planted in the amounts specified in pounds of pure live seed (PLS)* per acre. There shall be no primary or secondary noxious weeds in the seed mixture. Seed will be tested and the viability testing of seed will be done in accordance with State law (s) and within nine (9) months prior to purchase. Commercial seed will be either certified or registered seed. The seed container will be tagged in accordance with State law(s) and available for inspection by the authorized officer.

Seed will be planted using a drill equipped with a depth regulator to ensure proper depth of planting where drilling is possible. The seed mixture will be evenly and uniformly planted over the disturbed area (smaller/heavier seeds have a tendency to drop the bottom of the drill and are planted first). The holder shall take appropriate measures to ensure this does not occur. Where drilling is not possible, seed will be broadcast and the area shall be raked or chained to cover the seed. When broadcasting the seed, the pounds per acre are to be doubled. The seeding will be repeated until a satisfactory stand is established as determined by the authorized officer. Evaluation of growth will not be made before completion of at least one full growing season after seeding.

Species to be planted in pounds of pure live seed* per acre:

Species lb/acre

Buffalograss (Buchloe dactyloides) ---------- 4 lbs/acre
Blue grama (Bouteloua gracilis) ---------- 1 lb/acre
Cane bluestem (Bothriochloa barbinodis) ---------- 5 lbs/acre
Sideoats grama (Bouteloua curtipendula) ---------- 5 lbs/acre
Plains bristlegrass (Setaria macrostachya) ---------- 6 lbs/acre

*Pounds of pure live seed:

Pounds of seed x percent purity x percent germination = pounds pure live seed

PECOS DISTRICT
DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	Silverback Operating II LLC
WELL NAME & NO.:	Polo AOP Federal Com 201H
LOCATION:	Sec 10-19S-25E-NMP
COUNTY:	Eddy County, New Mexico

COA

H_2S	◉ No	○ Yes		
Potash / WIPP	◉ None	○ Secretary	○ R-111-P	☐ WIPP
Cave / Karst	○ Low	◉ Medium	○ High	○ Critical
Wellhead	◉ Conventional	○ Multibowl	○ Both	○ Diverter
Cementing	☐ Primary Squeeze	☐ Cont. Squeeze	☐ EchoMeter	☐ DV Tool
Special Req	☐ Break Testing	☐ Water Disposal	☑ COM	☐ Unit
Variance	☑ Flex Hose	☐ Casing Clearance	☐ Pilot Hole	☐ Capitan Reef
Variance	☐ Four-String	☐ Offline Cementing	☐ Fluid-Filled	☐ Open Annulus
		☐ **Batch APD / Sundry**		

A. HYDROGEN SULFIDE

Hydrogen Sulfide (H2S) monitors shall be installed prior to drilling out the surface shoe. If H2S is detected in concentrations greater than 100 ppm, the Hydrogen Sulfide area shall meet 43 CFR 3176 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, provide measured values and formations to the BLM.

B. CASING

1. The **9-5/8** inch surface casing shall be set at approximately 1250 feet (a minimum of 70 feet (Eddy County) into the Rustler Anhydrite, above the salt, and below usable fresh water) and cemented to the surface.

    a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
    b. Wait on cement (WOC) time for a primary cement job will be a minimum of **8 hours** or 500 pounds compressive strength, whichever is greater. (This is to include the lead cement)
    c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.

d. If cement falls back, remedial cementing will be done prior to drilling out that string.

2. The minimum required fill of cement behind the **7** inch intermediate casing is:

   - Cement to surface. If cement does not circulate see B.1.a, c-d above. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst, Capitan Reef, or potash.**

❖ In Medium Cave/Karst Areas if cement does not circulate to surface on the first two casing strings, the cement on the 3rd casing string must come to surface.

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

   - Cement should tie-back at least **200 feet** into previous casing string. Operator shall provide method of verification. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst, Capitan Reef, or potash.**

C. PRESSURE CONTROL

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

2. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **5000 (5M)** psi.

D. SPECIAL REQUIREMENT (S)

Communitization Agreement

- The operator will submit a Communitization Agreement to the Santa Fe Office, 301 Dinosaur Trail Santa Fe, New Mexico 87508, at least 90 days before the anticipated date of first production from a well subject to a spacing order issued by the New Mexico Oil Conservation Division. The Communitization Agreement will include the signatures of all working interest owners in all Federal and Indian leases subject to the Communitization Agreement (i.e., operating rights owners and lessees of record), or certification that the operator has obtained the written signatures of all such owners and will make those signatures available to the BLM immediately upon request.
- The operator will submit an as-drilled survey well plat of the well completion, but are not limited to, those specified in 43 CFR 3171 and 3172.
- If the operator does not comply with this condition of approval, the BLM may take enforcement actions that include, but are not limited to, those specified in 43 CFR 3163.1.
- In addition, the well sign shall include the surface and bottom hole lease numbers. When the Communitization Agreement number is known, it shall also be on the sign.

GENERAL REQUIREMENTS

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

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

Eddy County (API No. / US Well No. contains 30-015-#####)
Email **or** call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220,
BLM_NM_CFO_DrillingNotifications@blm.gov; (575) 361-2822

Lea County (API No. / US Well No. contains 30-025-#####)
Call the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240; (575) 689-5981

1. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.
   a. In the event the operator has proposed to drill multiple wells utilizing a skid/walking rig. Operator shall secure the wellbore on the current well, after installing and testing the wellhead, by installing a blind flange of like pressure rating to the wellhead and a pressure gauge that can be monitored while drilling is performed on the other well(s).
   b. When the operator proposes to set surface casing with Spudder Rig
      - Notify the BLM when moving in and removing the Spudder Rig.
      - Notify the BLM when moving in the 2nd Rig. Rig to be moved in within 90 days of notification that Spudder Rig has left the location.
      - BOP/BOPE test to be conducted per **43 CFR part 3170 Subpart 3172** as soon as 2nd Rig is rigged up on well.
2. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works are located, this does not include the dog house or stairway area.
3. The record of the drilling rate along with the GR/N well log run from TD to surface (horizontal well – vertical portion of hole) shall be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.

A. CASING

1. Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size or are Non-API. The Operator can exchange the

components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#). Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.). The initial wellhead installed on the well will remain on the well with spools used as needed.

2. **Wait on cement (WOC) for Potash Areas:** After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi for all cement blends, 2) until cement has been in place at least 24 hours. WOC time will be recorded in the driller's log. The casing intergrity test can be done (prior to the cement setting up) immediately after bumping the plug.
3. **Wait on cement (WOC) for Water Basin:** After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi at the shoe, 2) until cement has been in place at least 8 hours. WOC time will be recorded in the driller's log. See individual casing strings for details regarding lead cement slurry requirements. The casing integrity test can be done (prior to the cement setting up) immediately after bumping the plug.
4. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. Have well specific cement details onsite prior to pumping the cement for each casing string.
5. No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.
6. On that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Formation at the shoe shall be tested to a minimum of the mud weight equivalent anticipated to control the formation pressure to the next casing depth or at total depth of the well. This test shall be performed before drilling more than 20 feet of new hole.
7. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.
8. Whenever a casing string is cemented in the R-111-P potash area, the NMOCD requirements shall be followed.

B. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in **43 CFR part 3170 Subpart 3172** and **API STD 53 Sec. 5.3**.

2. If a variance is approved for a flexible hose to be installed from the BOP to the choke manifold, the following requirements apply: The flex line must meet the requirements of API 16C. Check condition of flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor.
3. 5M or higher system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.
4. If the operator has proposed a multi-bowl wellhead assembly in the APD. The following requirements must be met:
    a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
    b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
    c. Manufacturer representative shall install the test plug for the initial BOP test.
    d. Whenever any seal subject to test pressure is broken, all the tests in **43 CFR part 3170 Subpart 3172** must be followed.
    e. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
5. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
    a. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including lead cement), whichever is greater. However, if the float does not hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).
    b. In potash areas, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. For all casing strings, casing cut-off and BOP installation can be initiated at twelve hours after bumping the cement plug. The BOPE test can be initiated after bumping

the cement plug with the casing valve open. (only applies to single stage cement jobs, prior to the cement setting up.)

c. The tests shall be done by an independent service company utilizing a test plug not a cup or J-packer and can be initiated immediately with the casing valve open. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to **43 CFR part 3170 Subpart 3172** with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for water basin (8 hours) or potash (24 hours) or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).
d. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2 hour clock. If a twelve hour or twenty-four hour chart is used, tester shall make a notation that it is run with a two hour clock.
e. The results of the test shall be reported to the appropriate BLM office.
f. All tests are required to be recorded on a calibrated test chart. A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.
g. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug. This test shall be performed prior to the test at full stack pressure.
h. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the Wolfcamp formation if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days. This test does not exclude the test prior to drilling out the casing shoe as per **43 CFR part 3170 Subpart 3172**.

C. **DRILLING MUD:** Mud system monitoring equipment, with derrick floor indicators and visual and audio alarms, shall be operating before drilling into the Wolfcamp formation, and shall be used until production casing is run and cemented.

D. **WASTE MATERIAL AND FLUIDS:** All waste (i.e. drilling fluids, trash, salts, chemicals, sewage, gray water, etc.) created as a result of drilling operations and completion operations shall be safely contained and disposed of properly at a waste disposal facility. No waste material or fluid shall be disposed of on the well location or surrounding area. Porto-johns and trash containers will be on-location during fracturing operations or any other crew-intensive operations.

Silverback Operating II, LLC
HYDROGEN SULFIDE (H2S) CONTINGENCY PLAN
Polo AOP Federal Pad 1
Assumed 100 ppm ROE = 3000'

100 ppm H2S concentration shall trigger activation of this plan.

This is an open drilling site. H2S monitoring equipment and emergency response equipment will be rigged up and in use when the company drills out from under surface casing. H2S monitors, warning signs, wind indicators and flags will be in use.

1. All personnel shall receive proper H2S training in accordance with Onshore Order 6 111.C.3.a

2. Briefing Area: Two perpendicular areas will be designated by signs and readily accessible.

3. Required Emergency Equipment:
   - 3.1. Well control equipment
     - 3.1.1. Flare line 150' from wellhead to be ignited by flare gun.
     - 3.1.2. Choke manifold with a remotely operated choke.
     - 3.1.3. Mud/Gas Separator.
   - 3.2. Protective Equipment for essential personnel.
     - 3.2.1. Breathing apparatus:
     - 3.2.2. Rescue Packs (SCBA) - 1 unit shall be placed at each briefing area. 2 units shall be stored in the safety trailer.
     - 3.2.3. Work/Escape packs - 4 packs shall be stored on the rig floor with sufficient air hose not to restrict work activity.
     - 3.2.4. Emergency Escape Packs - 4 packs shall be stored in the doghouse for emergency evacuation.
   - 3.3. Auxiliary Rescue Equipment:
     - 3.3.1. Stretcher
     - 3.3.2. Two OSHA full body harness
     - 3.3.3. 100 ft. 5/8" OSHA approved rope
     - 3.3.4. One 20# class ABC fire extinguisher
   - 3.4. H2S detection and monitoring Equipment:
     - 3.4.1. The stationary detector with three sensors will be placed in the upper doghouse, set to visually alarm@ 10 ppm and audible@ 14 ppm. Calibrate a minimum of every 30 days or as needed. The sensors will be placed in the following places: Rig floor, Bell nipple, end of flare line or where well bore fluid is being discharged (Gas sample tubes will be stored in the safety trailer).
   - 3.5. Visual warning systems.
     - 3.5.1. One color code condition sign will be placed at the entrance to the site reflecting the possible conditions at the site.

3.5.2. A colored condition flag will be on display, reflecting the current condition, at the drilling site.
3.5.3. Two windsocks will be placed in strategic locations, visible from all angles.
3.6. Mud Program:
3.6.1. The mud program has been designated to minimize the volume of H2S circulated to surface. The operator will have the necessary mud products to minimize hazards while drilling in H2S bearing zones.
3.7. Metallurgy:
3.7.1. All drill strings, casings, tubing, wellhead, blowout preventer, drilling spool, kill lines, choke manifold and lines, shall be suitable for H2S service.
3.7.2. All elastomers used for packing and seals shall be H2S trim.
3.8. Communication:
3.8.1. Communication will be via two-way radio located in company vehicles. Cell phones and landlines where available.

H2S Operations

Though no H2S is anticipated during the drilling operation, this contingency plan will provide for methods to ensure the well is kept under control in the event an H2S reading of 100 ppm or more is encountered. Once personnel are safe and the proper protective gear is in place and on personnel, the operator and rig crew essential personnel will ensure the well is under control, suspend drilling operations and shut-in the well (unless pressure build up or other operational situations dictate suspending operations will prevent well control), increase the mud weight and circulate all gas from the hole utilizing the mud/gas separator downstream of the choke, the choke manifold and the emergency flare system located 150' from the well. Bring the mud system into compliance and the H2S level below 10 ppm, then notify all emergency officers that drilling ahead is practical and safe. Proceed with drilling ahead only after all provisions of Onshore Order 6, Section 111.C. have been satisfied.

Ignition of Gas source

Should control of the well be considered lost and ignition considered, take care to protect against exposure to Sulfur Dioxide (SO_2). Intentional ignition must be coordinated with the NMOCD and local officials. Additionally, the NM State Police may become involved. NM State Police shall be the Incident Command on scene of any major release. Take care to protect downwind whenever this is an ignition of the gas.

Characteristics of H2S and s02

Common Name	Chemical Formula	Specific Gravity	Threshold Limit	Hazardous Limit	Lethal Concentration
Hydrogen Sulfide	H_2S	1.189 Air= I	10 ppm	100 ppm/hr	600 ppm
Sulfur Dioxide	SO_2	2.21 Air= I	2 ppm	N/A	1000 ppm

Contacting Authorities

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

Public Safety	
Eddy County Sheriff	(575) 887-7551
Carlsbad Fire Department	(575) 885-3125
Artesia General Hospital	(575) 748-3333
Ambulance	911
Department of Public Safety	(392) 392-5588
Oil Conservation Division	(575) 748-1823
New Mexico Energy, Minerals & Natural Resources Department	(575) 748-1283
Bureau of Land Management	
BLM Engineer On-Call	575-706-2779
BLM Eddy County PET On-Call	575-361-2822
BLM Hobbs County On-Call	575-689-5981
Silverback Operating II, LLC	
Drilling Manager	Stephen Martinez- 406-600-3310
Drilling Engineer	
Operations Manager	Wade Chapman- 361-215-2373
Company Representative	Fatma Abdallah- 832-506-7262
Drilling Contractor	
Tool Pusher	
Relief Tool Pusher	
Drilling Manager	
Silverback Operating II, LLC Safety	
EHS Coordinator	Mark Ritchie- 713-553-8320
Field Safety Technician	

Operator Name: SILVERBACK OPERATING II LLC

Well Name: POLO AOP FEDERAL COM **Well Number:** 201H

New water well casing? **Used casing source:**

Drilling method: **Drill material:**

Grout material: **Grout depth:**

Casing length (ft.): **Casing top depth (ft.):**

Well Production type: **Completion Method:**

Water well additional information:

State appropriation permit:

Additional information attachment:

Section 6 - Construction Materials

Using any construction materials: YES

Construction Materials description: Location will be graded and leveled with existing soil at proposed site. Construction material, such as gravel, rock, crushed stone and caliche, for both the road and well pad will be obtained from a private source in the NE/4-SE/4 of Sec. 7-19S-25E.
Construction Materials source location

CMP___Polo_Pads_1_2_DRAFT_08102023_20230815101744.pdf

Section 7 - Methods for Handling

Waste type: DRILLING

Waste content description: Drilling mud and cuttings

Amount of waste: 7000 barrels

Waste disposal frequency : One Time Only

Safe containment description: Drilling mud and cuttings will be contained in a closed system. During drilling activities trenches will surround all pumps, motors, and rig such that runoff will be directed to a sump area on the well site and pumped into a haul off tank.
Safe containmant attachment:

Waste disposal type: HAUL TO COMMERCIAL FACILITY **Disposal location ownership:** COMMERCIAL
Disposal type description:

Disposal location description: Trucked to NMOCD approved disposal facility.

Waste type: COMPLETIONS/STIMULATION

Waste content description: Water associated with completion of the well.

Amount of waste: 3000 barrels

Waste disposal frequency : One Time Only

Safe containment description: Completion water will be held in permanent above ground storage tanks on the well pad. The tank(s) will be contained by appropriate secondary containment according to the SPCC plan.
Safe containmant attachment:

Waste disposal type: HAUL TO COMMERCIAL FACILITY **Disposal location ownership:** COMMERCIAL

Operator Name: SILVERBACK OPERATING II LLC

Well Name: POLO AOP FEDERAL COM **Well Number:** 201H

Disposal type description:

Disposal location description: Trucked to NMOCD approved disposal facility.

Waste type: SEWAGE

Waste content description: Sewage associated with active drilling and completions operations.

Amount of waste: 65 gallons

Waste disposal frequency : Weekly

Safe containment description: All sewage will be held in onsite portable restrooms.

Safe containmant attachment:

Waste disposal type: HAUL TO COMMERCIAL FACILITY **Disposal location ownership:** COMMERCIAL

Disposal type description:

Disposal location description: All waste will be hauled to an appropriate disposal facility by a third-party contractor - Carlsbad Wastewater Treatment Facility in Eddy County, NM, or an alternative comparable site determined by the third-party contractor.

Waste type: GARBAGE

Waste content description: Garbage produced during drilling and completions.

Amount of waste: 100 pounds

Waste disposal frequency : Weekly

Safe containment description: All garbage will be contained in trash cans or dumpsters onsite.

Safe containmant attachment:

Waste disposal type: HAUL TO COMMERCIAL FACILITY **Disposal location ownership:** COMMERCIAL

Disposal type description:

Disposal location description: All waste will be hauled to an appropriate disposal facility by a third-party contractor - Sandpoint Landfill in Eddy County, NM, or an alternative comparable site determined by the third-party contractor.

Waste type: PRODUCED WATER

Waste content description: Water produced from the target formation.

Amount of waste: 200 barrels

Waste disposal frequency : Weekly

Safe containment description: Water produced form target formation will be held in permanent above ground storage tanks on the well pad. The tank(s) will be contained by appropriate secondary containment according to the SPCC plan.

Safe containmant attachment:

Waste disposal type: HAUL TO COMMERCIAL FACILITY **Disposal location ownership:** COMMERCIAL

Disposal type description:

Disposal location description: Trucked to NMOCD approved disposal facility

Operator Name: SILVERBACK OPERATING II LLC

Well Name: POLO AOP FEDERAL COM **Well Number:** 201H

Reserve Pit

Reserve Pit being used? NO

Temporary disposal of produced water into reserve pit? NO

Reserve pit length (ft.) **Reserve pit width (ft.)**

Reserve pit depth (ft.) **Reserve pit volume (cu. yd.)**

Is at least 50% of the reserve pit in cut?

Reserve pit liner

Reserve pit liner specifications and installation description

Cuttings Area

Cuttings Area being used? NO

Are you storing cuttings on location? N

Description of cuttings location

Cuttings area length (ft.) **Cuttings area width (ft.)**

Cuttings area depth (ft.) **Cuttings area volume (cu. yd.)**

Is at least 50% of the cuttings area in cut?

WCuttings area liner

Cuttings area liner specifications and installation description

Section 8 - Ancillary

Are you requesting any Ancillary Facilities?: N

Ancillary Facilities

Comments:

Section 9 - Well Site

Well Site Layout Diagram:

Polo_Pad_1_Well_Pad_20230815102113.pdf

Comments:

Operator Name: SILVERBACK OPERATING II LLC

Well Name: POLO AOP FEDERAL COM **Well Number:** 201H

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

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

Type of Well Pad: MULTIPLE WELL **Multiple Well Pad Name:** Polo/Arrow Federal Pad **Number:** 1

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

Well Work Type: Drill

Well Type: OIL WELL

Describe Well Type:

Well sub-Type: INFILL

Describe sub-type:

Distance to town: 20 Miles **Distance to nearest well:** 20 FT **Distance to lease line:** 237 FT

Reservoir well spacing assigned acres Measurement: 320 Acres

Well plat: POLO_AOP_FED_COM_201H_REV._12_11_2023_20231219090511.pdf

Well work start Date: 10/15/2023 **Duration:** 30 DAYS

Section 3 - Well Location Table

Survey Type: RECTANGULAR

Describe Survey Type:

Datum: NAD83 **Vertical Datum:** NAVD88

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

Wellbore	NS-Foot	NS Indicator	EW-Foot	EW Indicator	Twsp	Range	Section	Aliquot/Lot/Tract	Latitude	Longitude	County	State	Meridian	Lease Type	Lease Number	Elevation	MD	TVD	Will this well produce from this
SHL Leg #1	757	FSL	237	FEL	19S	25E	10	Aliquot SESE	32.670108	-104.464834	EDDY	NEW MEXICO	NEW MEXICO	F	NMNM 023855B	3451	0	0	N
KOP Leg #1	705	FSL	649	FWL	19S	25E	11	Aliquot SWSW	32.669903	-104.461954	EDDY	NEW MEXICO	NEW MEXICO	F	NMNM 92748	891	2774	2560	N
PPP Leg #1-1	673	FSL	100	FEL	19S	25E	10	Aliquot SESE	32.669878	-104.464388	EDDY	NEW MEXICO	NEW MEXICO	F	NMNM 023855B	-161	4327	3612	Y

CONFIDENTIAL

Operator Name: SILVERBACK OPERATING II LLC

Well Name: POLO AOP FEDERAL COM **Well Number:** 201H

Wellbore	NS-Foot	NS Indicator	EW-Foot	EW Indicator	Twsp	Range	Section	Aliquot/Lot/Tract	Latitude	Longitude	County	State	Meridian	Lease Type	Lease Number	Elevation	MD	TVD	Will this well produce from this
PPP Leg #1-2	698	FSL	1327	FEL	19S	25E	10	Aliquot SWSE	32.669932	-104.468374	EDDY	NEW MEXICO	NEW MEXICO	F	NMNM 82845	-116	5600	3567	Y
EXIT Leg #1	673	FSL	100	FWL	19S	25E	10	Aliquot SWSW	32.670103	-104.480968	EDDY	NEW MEXICO	NEW MEXICO	F	NMNM 82845	19	9433	3432	Y
BHL Leg #1	673	FSL	100	FWL	19S	25E	10	Aliquot SWSW	32.670103	-104.480968	EDDY	NEW MEXICO	NEW MEXICO	F	NMNM 82845	19	9433	3432	Y

CONFIDENTIAL

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

Drilling Plan Data Report
05/02/2024

APD ID: 10400093919
Submission Date: 08/18/2023
Operator Name: SILVERBACK OPERATING II LLC
Well Name: POLO AOP FEDERAL COM
Well Number: 201H
Well Type: OIL WELL
Well Work Type: Drill

Highlighted data reflects the most recent changes

Show Final Text

Section 1 - Geologic Formations

Formation ID	Formation Name	Elevation	True Vertical	Measured Depth	Lithologies	Mineral Resources	Producing Formatio
13333080	PERMIAN	3541	0	0	ALLUVIUM	NONE	N
13333081	SAN ANDRES	2749	792	793	DOLOMITE, LIMESTONE	NATURAL GAS, OIL	N
13333082	GLORIETA	1199	2342	2522	DOLOMITE	NATURAL GAS, OIL	N
13333083	PADDOCK	1129	2412	2603	DOLOMITE, SILTSTONE	NATURAL GAS, OIL	N
13333079	BLINEBRY	647	2894	3123	DOLOMITE, SILTSTONE	NATURAL GAS, OIL	Y

Section 2 - Blowout Prevention

Pressure Rating (PSI): 5M
Rating Depth: 3612

Equipment: Five thousand (5M) psi working pressure Blind Rams and Pipe Rams and a five thousand (5M) psi Annular Preventer will be installed on all casing. Two (2) chokes - one (1) hydraulic and one (1) manual - will be used.

Requesting Variance? YES

Variance request: (1) A variance to complete this well closer than 200' from the spacing unit or lease boundary is requested. (2) A variance to the requirement of a rigid steel line connecting to the choke manifold is requested. Specifications for the flex hose are provided with the choke schematic exhibit.
Testing Procedure: A third party testing company will conduct pressure tests and record prior to drilling out below casing shoes. The BOP, Choke, Choke Manifold, Top Drive Valves and Floor Safety Valves will be tested to 3,500 psi prior to drilling below the surface casing shoe and to 100% full working pressure (5,000 psi). The Annular Preventer will be tested to 3,500 psi prior to drilling below the surface casing shoe and to 100% working pressure (5,000 psi).

Choke Diagram Attachment:

Choke___Kill_Hose_Specs_20231219090925.pdf

Hose_Cert_of_Conformance_20231219090930.pdf

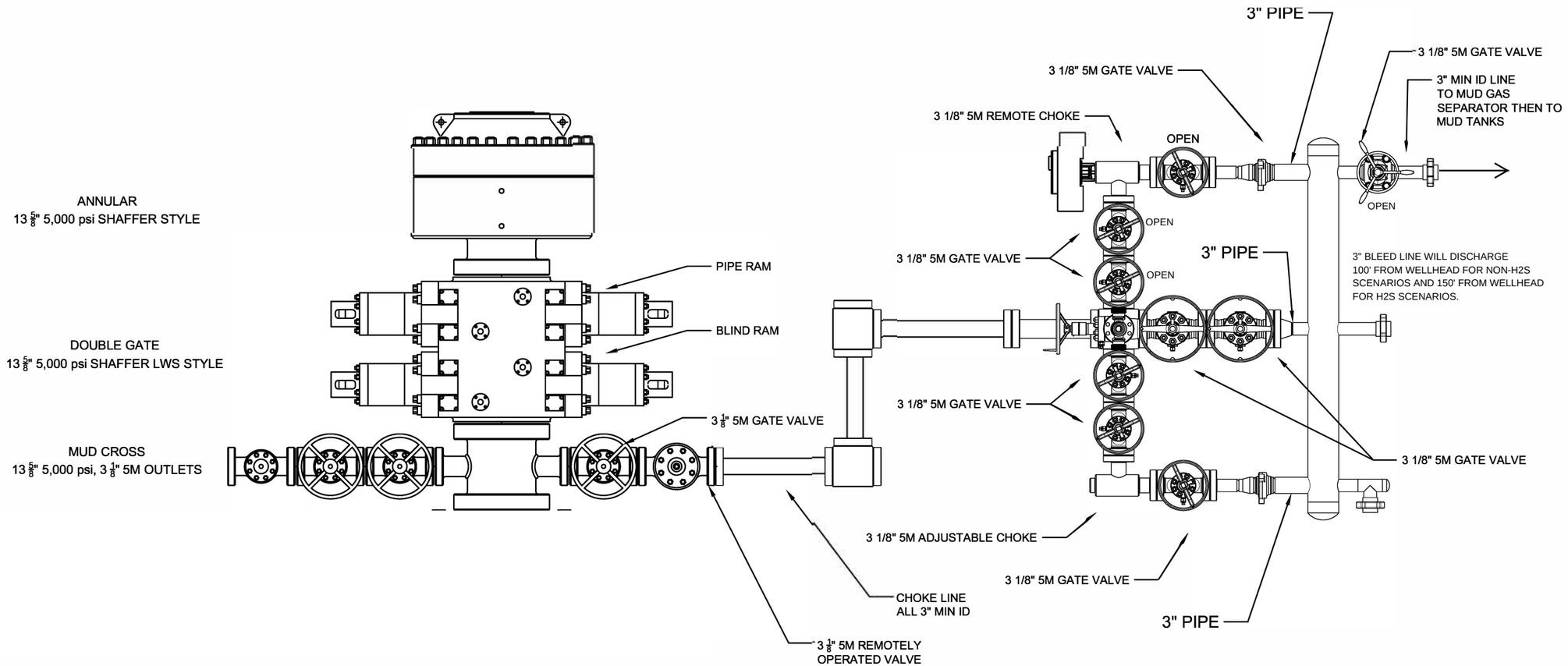
Hose_Cert_of_Compliance_20231219090934.pdf

Hose_Pressure_Test_Cert_20231219090938.pdf

Hose_Test_Report_20231219090941.pdf

Akita_519___BOP_20231219090945.pdf

Released to Imaging: 6/21/2024 8:18:12 AM



Notes

No.	Revision	Date

AKITA DRILLING LTD.
2302 8th Street, Nisku Alberta
T9E 7Z2 Tel: (780) 955-6700

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Date	Scale
10/5/2023	NTS
Dwn / Chk'd By: KR	File Name
Project: R519	

RIG 519 BOP SCHEMATIC

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS

Action 348549

CONDITIONS

Operator: Silverback Operating II, LLC 19707 IH10 West, Suite 201 San Antonio, TX 78256	OGRID: 330968
	Action Number: 348549
	Action Type: [C-101] BLM - Federal/Indian Land Lease (Form 3160-3)

CONDITIONS

Created By	Condition	Condition Date
ward.rikala	Notify OCD 24 hours prior to casing & cement	6/21/2024
ward.rikala	Will require a File As Drilled C-102 and a Directional Survey with the C-104	6/21/2024
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	6/21/2024
ward.rikala	Cement is required to circulate on both surface and intermediate1 strings of casing	6/21/2024
ward.rikala	If cement does not circulate on any string, a CBL is required for that string of casing	6/21/2024
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	6/21/2024