

District I

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

District II

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

District III

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

District IV

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

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

Form C-101
August 1, 2011

Permit 357762

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

1. Operator Name and Address Silverback Operating II, LLC 19707 IH10 West, Suite 201 San Antonio, TX 78256		2. OGRID Number 330968
		3. API Number 30-015-54714
4. Property Code 335331	5. Property Name GUSHWA	6. Well No. 103H

7. Surface Location

UL - Lot D	Section 36	Township 18S	Range 25E	Lot Idn D	Feet From 1040	N/S Line N	Feet From 1210	E/W Line W	County Eddy
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8. Proposed Bottom Hole Location

UL - Lot A	Section 34	Township 18S	Range 25E	Lot Idn A	Feet From 350	N/S Line N	Feet From 1260	E/W Line E	County Eddy
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9. Pool Information

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

11. Work Type New Well	12. Well Type OIL	13. Cable/Rotary	14. Lease Type Private	15. Ground Level Elevation 3476
16. Multiple N	17. Proposed Depth 9490	18. Formation Yeso	19. Contractor	20. Spud Date 10/12/2024
Depth to Ground water		Distance from nearest fresh water well		Distance to nearest surface water

☒ We will be using a closed-loop system in lieu of lined pits**21. Proposed Casing and Cement Program**

Type	Hole Size	Casing Size	Casing Weight/ft	Setting Depth	Sacks of Cement	Estimated TOC
Surf	12.25	9.625	36	1291	286	0
Prod	8.75	7	32	3050	174	0
Prod	8.75	5.5	20	9490	1884	2173

Casing/Cement Program: Additional Comments

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22. Proposed Blowout Prevention Program

Type	Working Pressure	Test Pressure	Manufacturer
Double Ram	5000	5000	Shaffer

23. I hereby certify that the information given above is true and complete to the best of my knowledge and belief. I further certify I have complied with 19.15.14.9 (A) NMAC ☒ and/or 19.15.14.9 (B) NMAC ☒ if applicable. Signature: Printed Name: Electronically filed by Matthew Alley Title: Chief Financial Officer Email Address: malley@silverbackexp.com Date: 1/16/2024	OIL CONSERVATION DIVISION	
	Approved By: Dean McClure	
	Title: Petroleum Specialist - A	
	Approved Date: 2/7/2024	Expiration Date: 2/7/2026
Phone: 303-513-0990	Conditions of Approval Attached	

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

Form APD Conditions
Permit 357762

PERMIT CONDITIONS OF APPROVAL

Operator Name and Address: Silverback Operating II, LLC [330968] 19707 IH10 West, Suite 201 San Antonio, TX 78256	API Number: 30-015-54714
	Well: GUSHWA #103H

OCD Reviewer	Condition
dmcclure	Notify OCD 24 hours prior to casing & cement
dmcclure	Will require a File As Drilled C-102 and a Directional Survey with the C-104
dmcclure	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
dmcclure	Cement is required to circulate on both surface and production strings of casing
dmcclure	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
dmcclure	The Operator is to notify NMOCDD by sundry (Form C-103) within ten (10) days of the well being spud
dmcclure	If cement does not circulate on any string, a CBL is required for that string of casing
dmcclure	Well is within the designated area within 19.15.39.11.A. NMAC and shall be drilled and operated in accordance with 19.15.39.11 NMAC (Special Provisions for a Selected Area of the Roswell Artesian Basin).
dmcclure	Will require a administrative order for non-standard location prior to placing the well on production

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

Submit Electronically
Via E-permitting

NATURAL GAS MANAGEMENT PLAN

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

Section 1 – Plan Description

Effective May 25, 2021

I. Operator: Silverback Operating II, LLC **OGRID:** 330968 **Date:** 12 / 28 / 2023

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
Gushwa 101H	30-015	E-36-18S-25E	2355' FNL & 1120' FWL	515	440	3000
Gushwa 102H	30-015	D-36-18S-25E	1080' FNL & 1211' FWL	515	440	3000
Gushwa 103H	30-015	D-36-18S-25E	1040' FNL & 1210' FWL	515	440	3000

IV. Central Delivery Point Name: RRG [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
Gushwa 101H	30-015	9/19/2024	9/29/2024	11/11/2024	12/22/2024	12/22/2024
Gushwa 102H	30-015	10/1/2024	10/11/2024	11/21/2024	12/24/2024	12/24/2024
Gushwa 103H	30-015	10/12/2024	10/22/2024	11/21/2024	12/25/2024	12/25/2024

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

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

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

Section 3 - Certifications

Effective May 25, 2021

Operator certifies that, after reasonable inquiry and based on the available information at the time of submittal:

☒ Operator will be able to connect the well(s) to a natural gas gathering system in the general area with sufficient capacity to transport one hundred percent of the anticipated volume of natural gas produced from the well(s) commencing on the date of first production, taking into account the current and anticipated volumes of produced natural gas from other wells connected to the pipeline gathering system; or

☐ Operator will not be able to connect to a natural gas gathering system in the general area with sufficient capacity to transport one hundred percent of the anticipated volume of natural gas produced from the well(s) commencing on the date of first production, taking into account the current and anticipated volumes of produced natural gas from other wells connected to the pipeline gathering system.

If Operator checks this box, Operator will select one of the following:

Well Shut-In. ☐ Operator will shut-in and not produce the well until it submits the certification required by Paragraph (4) of Subsection D of 19.15.27.9 NMAC; or

Venting and Flaring Plan. ☐ Operator has attached a venting and flaring plan that evaluates and selects one or more of the potential alternative beneficial uses for the natural gas until a natural gas gathering system is available, including:

- (a) power generation on lease;
- (b) power generation for grid;
- (c) compression on lease;
- (d) liquids removal on lease;
- (e) reinjection for underground storage;
- (f) reinjection for temporary storage;
- (g) reinjection for enhanced oil recovery;
- (h) fuel cell production; and
- (i) other alternative beneficial uses approved by the division.

Section 4 - Notices

1. If, at any time after Operator submits this Natural Gas Management Plan and before the well is spud:

(a) Operator becomes aware that the natural gas gathering system it planned to connect the well(s) to has become unavailable or will not have capacity to transport one hundred percent of the production from the well(s), no later than 20 days after becoming aware of such information, Operator shall submit for OCD's approval a new or revised venting and flaring plan containing the information specified in Paragraph (5) of Subsection D of 19.15.27.9 NMAC; or

(b) Operator becomes aware that it has, cumulatively for the year, become out of compliance with its baseline natural gas capture rate or natural gas capture requirement, no later than 20 days after becoming aware of such information, Operator shall submit for OCD's approval a new or revised Natural Gas Management Plan for each well it plans to spud during the next 90 days containing the information specified in Paragraph (2) of Subsection D of 19.15.27.9 NMAC, and shall file an update for each Natural Gas Management Plan until Operator is back in compliance with its baseline natural gas capture rate or natural gas capture requirement.

2. OCD may deny or conditionally approve an APD if Operator does not make a certification, fails to submit an adequate venting and flaring plan which includes alternative beneficial uses for the anticipated volume of natural gas produced, or if OCD determines that Operator will not have adequate natural gas takeaway capacity at the time a well will be spud.

I certify that, after reasonable inquiry, the statements in and attached to this Natural Gas Management Plan are true and correct to the best of my knowledge and acknowledge that a false statement may be subject to civil and criminal penalties under the Oil and Gas Act.

Signature: <i>Fatma Abdallah</i>
Printed Name: Fatma Abdallah
Title: Regulatory Manager
E-mail Address: fabdallah@silverbackexp.com
Date: 12/29/2022
Phone: 210-585-3316
OIL CONSERVATION DIVISION (Only applicable when submitted as a standalone form)
Approved By:
Title:
Approval Date:
Conditions of Approval:

Separation Equipment

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

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

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

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

Venting and Flaring

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

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

Best Management Practices

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

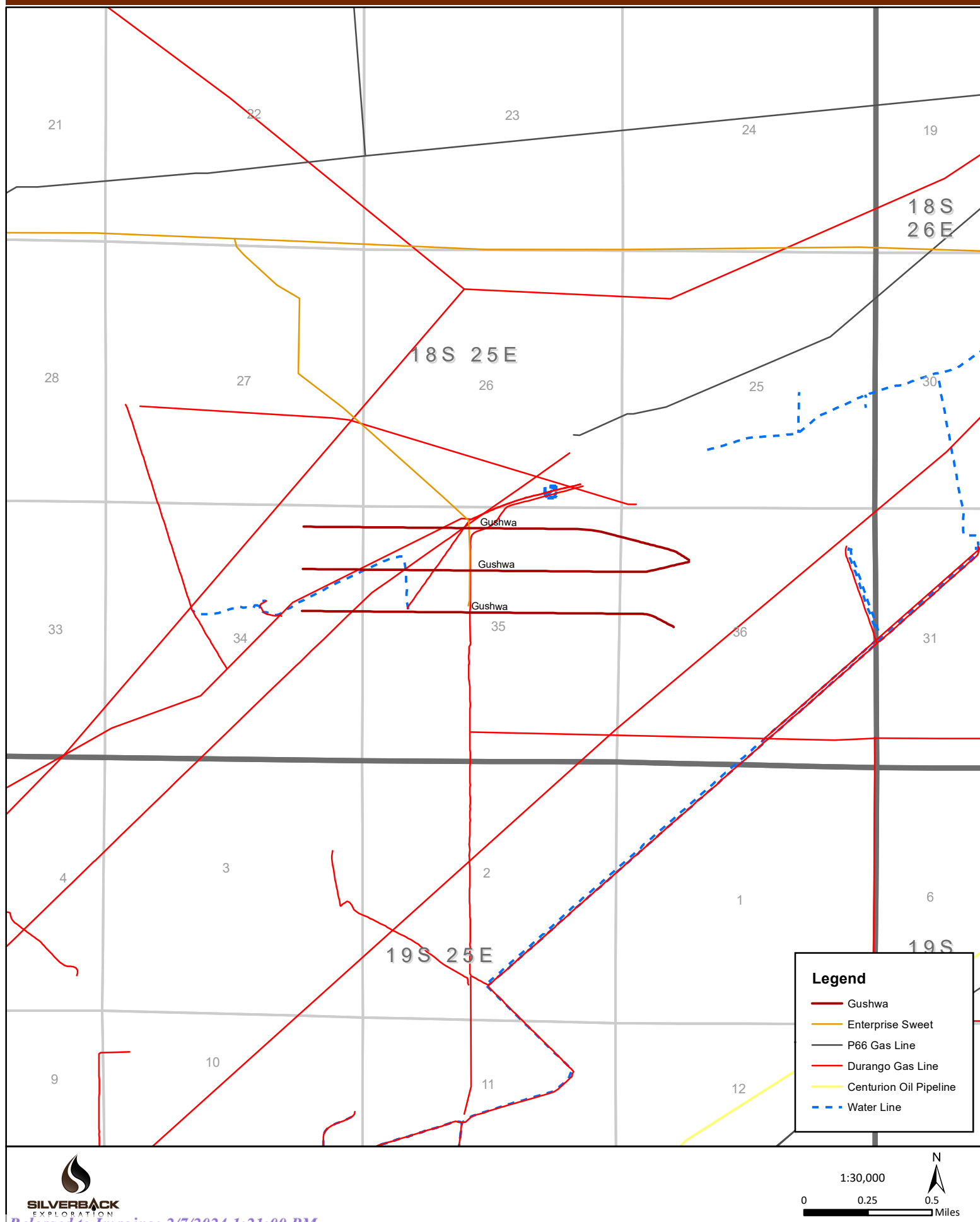
If the main gas outlet becomes unavailable and pressure increases on the outlet sales line, produced gas will be routed directly to the facility flare. The facility control system will alert personnel to the need for maintenance and appropriate response to the temporary flaring event.

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

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

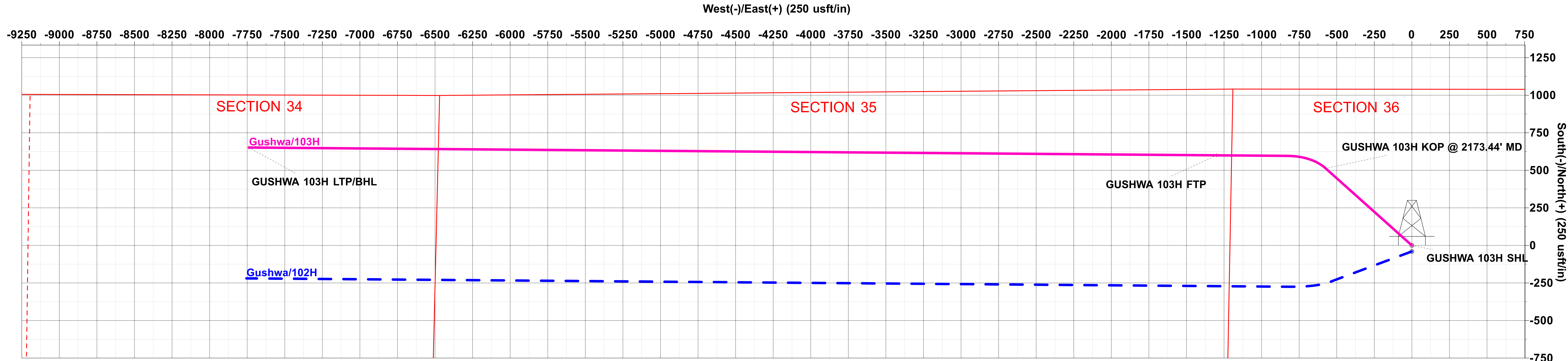
For maintenance activities, Silverback will utilize the facility flare to blowdown equipment and piping whenever practical to minimize venting

Silverback Exploration: Gushwa





Project: EDDY COUNTY, NM (NAD 83 - NME)
Site: Gushwa
Well: 103H
Wellbore: OH
Design: Plan 2r0



WELL DETAILS: 103H

Rig Name:		TBD RKB = 16.2' @ 3491.85usft (TBD)			
		Ground Level: 3475.65			
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	621597.31	507655.38	32.7087645	-104.4428402

SECTION DETAILS

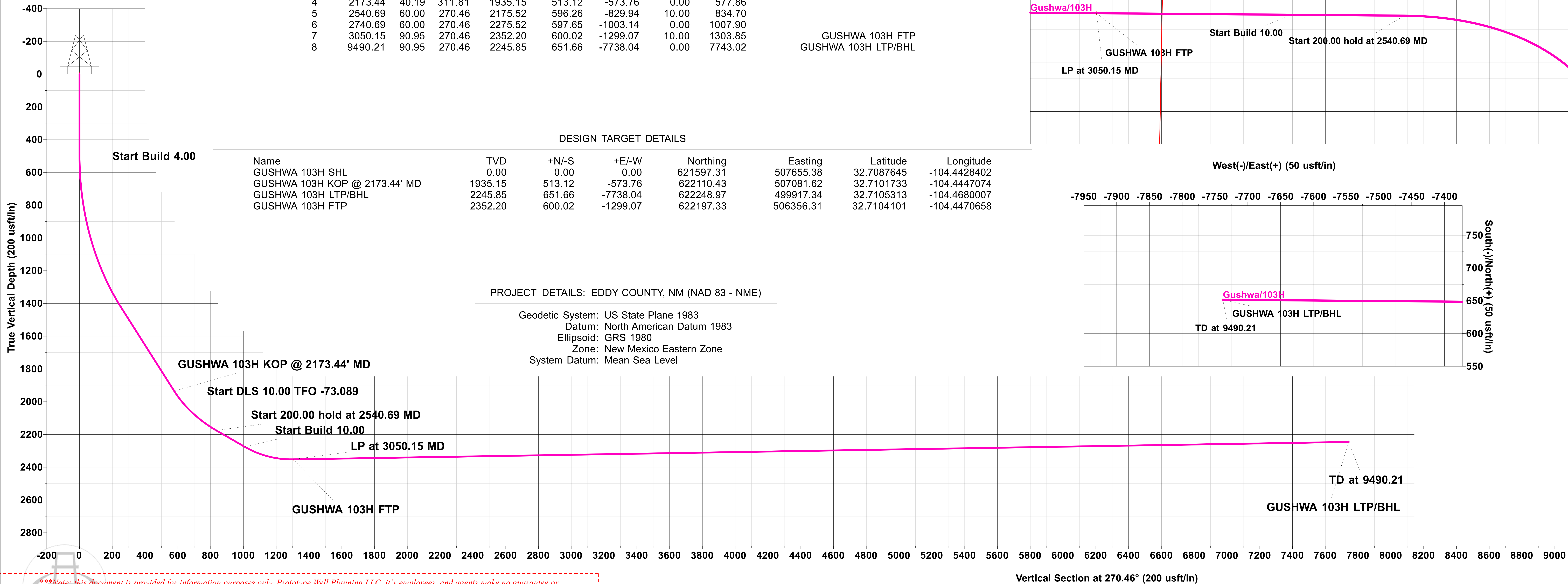
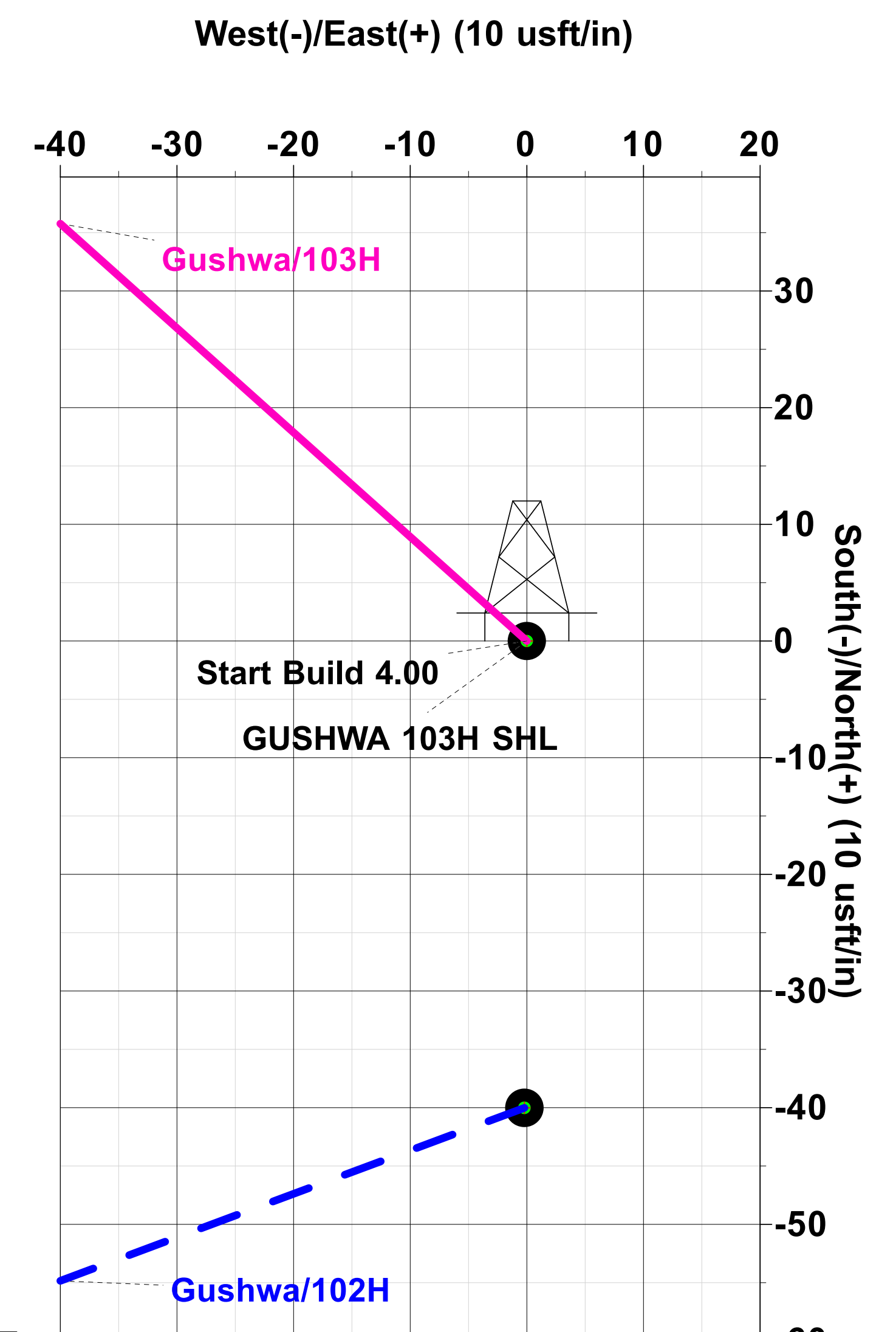
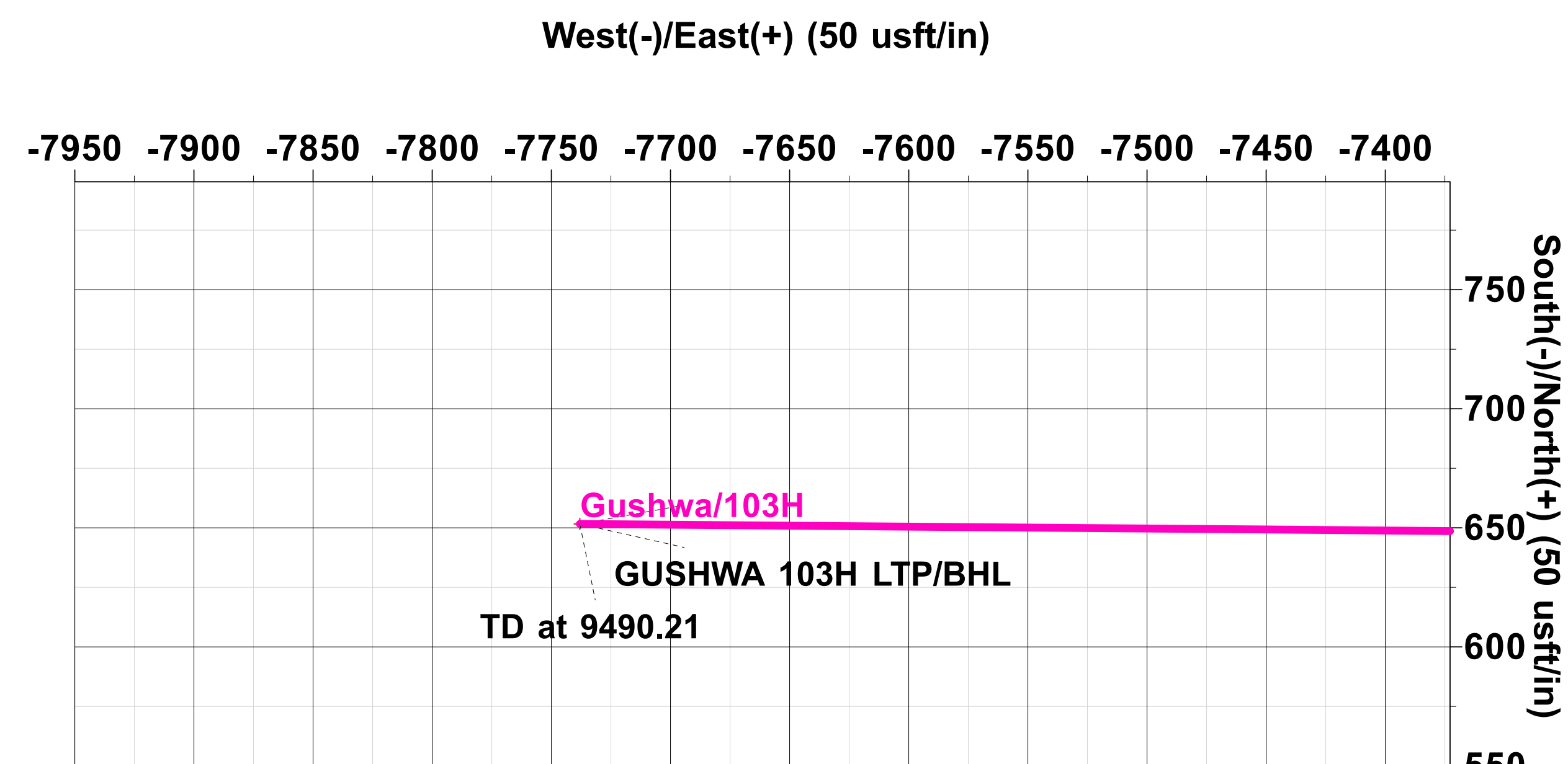
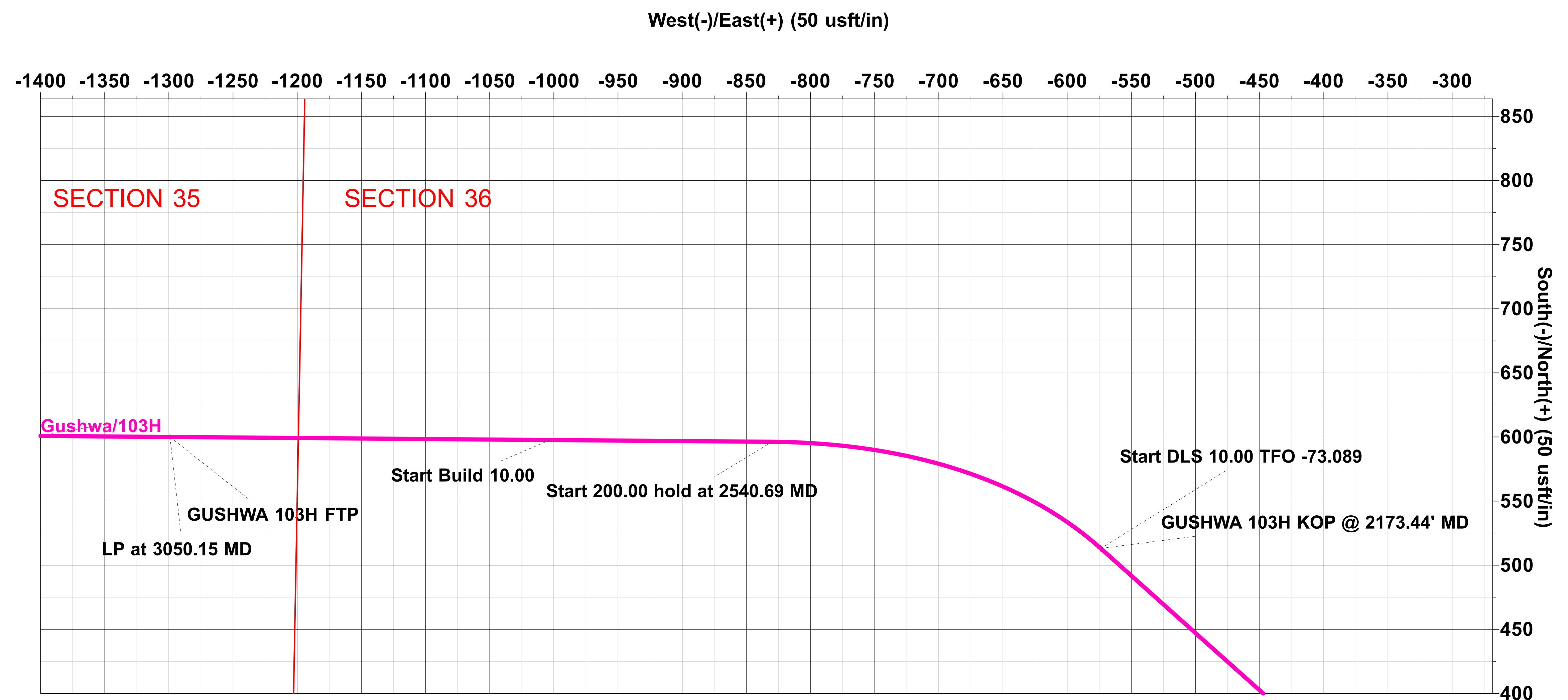
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	VSect	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	
3	1504.84	40.19	311.81	1424.43	225.47	-252.12	4.00	253.92	
4	2173.44	40.19	311.81	1935.15	513.12	-573.76	0.00	577.86	
5	2540.69	60.00	270.46	2175.52	596.26	-829.94	10.00	834.70	
6	2740.69	60.00	270.46	2275.52	597.65	-1003.14	0.00	1007.90	
7	3050.15	90.95	270.46	2352.20	600.02	-1299.07	10.00	1303.85	GUSHWA 103H FTP
8	9490.21	90.95	270.46	2245.85	651.66	-7738.04	0.00	7743.02	GUSHWA 103H LTP/BHL

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
GUSHWA 103H SHL	0.00	0.00	0.00	621597.31	507655.38	32.7087645	-104.4428402
GUSHWA 103H KOP @ 2173.44' MD	1935.15	513.12	-573.76	622110.43	507081.62	32.7101733	-104.4447074
GUSHWA 103H LTP/BHL	2245.85	651.66	-7738.04	622248.97	499917.34	32.7105313	-104.4680007
GUSHWA 103H FTP	2352.20	600.02	-1299.07	622197.33	506356.31	32.7104101	-104.4470658

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

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



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Plan: Plan 2r0 (103H/OH)

Created By: PROTOTYPE WELL PLANNING / Date: 14:51, December 19 2023



SILVERBACK EXPLORATION

EDDY COUNTY, NM (NAD 83 - NME)

Gushwa

103H

OH

Plan: Plan 2r0

Standard Planning Report

19 December, 2023



Planning Report

Database:	EDM 5000.1.13 Single User Db	Local Co-ordinate Reference:	Well 103H
Company:	SILVERBACK EXPLORATION	TVD Reference:	RKB = 16.2' @ 3491.85usft (TBD)
Project:	EDDY COUNTY, NM (NAD 83 - NME)	MD Reference:	RKB = 16.2' @ 3491.85usft (TBD)
Site:	Gushwa	North Reference:	Grid
Well:	103H	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	Gushwa			
Site Position:		Northing:	621,567.80 usft	Latitude: 32.7086840
From:	Map	Easting:	507,856.10 usft	Longitude: -104.4421875
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence: -0.059 °

Well	103H			
Well Position	+N/-S	29.51 usft	Northing:	621,597.31 usft
	+E/-W	-200.72 usft	Easting:	507,655.38 usft
Position Uncertainty	0.00 usft		Wellhead Elevation:	0.00 usft
			Ground Level:	3,475.65 usft

Design	Plan 2r0			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction
	(usft)	(usft)	(usft)	(°)
	0.00	0.00	0.00	270.46

Plan Sections										
Measured	Inclination	Azimuth	Vertical	+N/-S	+E/-W	Dogleg	Build	Turn	TFO	Target
Depth	(°)	(°)	Depth	(usft)	(usft)	Rate	Rate	Rate	(°)	
(usft)			(usft)			(°/100usft)	(°/100usft)	(°/100usft)		
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	
1,504.84	40.19	311.81	1,424.43	225.47	-252.12	4.00	4.00	0.00	311.807	
2,173.44	40.19	311.81	1,935.15	513.12	-573.76	0.00	0.00	0.00	0.000	
2,540.69	60.00	270.46	2,175.52	596.26	-829.94	10.00	5.39	-11.26	-73.089	
2,740.69	60.00	270.46	2,275.52	597.65	-1,003.14	0.00	0.00	0.00	0.000	
3,050.15	90.95	270.46	2,352.20	600.02	-1,299.07	10.00	10.00	0.00	0.000	GUSHWA 103H FT
9,490.21	90.95	270.46	2,245.85	651.66	-7,738.04	0.00	0.00	0.00	0.000	GUSHWA 103H LTI



Planning Report

Database:	EDM 5000.1.13 Single User Db	Local Co-ordinate Reference:	Well 103H
Company:	SILVERBACK EXPLORATION	TVD Reference:	RKB = 16.2' @ 3491.85usft (TBD)
Project:	EDDY COUNTY, NM (NAD 83 - NME)	MD Reference:	RKB = 16.2' @ 3491.85usft (TBD)
Site:	Gushwa	North Reference:	Grid
Well:	103H	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
GUSHWA 103H 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	4.00	311.81	599.92	2.33	-2.60	2.62	4.00	4.00	0.00
700.00	8.00	311.81	699.35	9.29	-10.39	10.47	4.00	4.00	0.00
800.00	12.00	311.81	797.81	20.87	-23.33	23.50	4.00	4.00	0.00
900.00	16.00	311.81	894.82	36.99	-41.36	41.66	4.00	4.00	0.00
1,000.00	20.00	311.81	989.91	57.59	-64.39	64.85	4.00	4.00	0.00
1,100.00	24.00	311.81	1,082.61	82.55	-92.31	92.97	4.00	4.00	0.00
1,200.00	28.00	311.81	1,172.47	111.77	-124.98	125.87	4.00	4.00	0.00
1,300.00	32.00	311.81	1,259.05	145.09	-162.24	163.40	4.00	4.00	0.00
1,400.00	36.00	311.81	1,341.94	182.36	-203.91	205.37	4.00	4.00	0.00
1,504.84	40.19	311.81	1,424.43	225.47	-252.12	253.92	4.00	4.00	0.00
1,600.00	40.19	311.81	1,497.12	266.41	-297.90	300.03	0.00	0.00	0.00
1,700.00	40.19	311.81	1,573.50	309.43	-346.00	348.48	0.00	0.00	0.00
1,800.00	40.19	311.81	1,649.89	352.46	-394.11	396.93	0.00	0.00	0.00
1,900.00	40.19	311.81	1,726.28	395.48	-442.21	445.37	0.00	0.00	0.00
2,000.00	40.19	311.81	1,802.67	438.50	-490.32	493.82	0.00	0.00	0.00
2,100.00	40.19	311.81	1,879.05	481.52	-538.43	542.27	0.00	0.00	0.00
2,173.44	40.19	311.81	1,935.15	513.12	-573.76	577.86	0.00	0.00	0.00
GUSHWA 103H KOP @ 2173.44' MD									
2,200.00	41.03	307.93	1,955.32	524.19	-587.02	591.21	10.00	3.15	-14.58
2,250.00	42.94	301.02	1,992.50	543.07	-614.58	618.92	10.00	3.82	-13.82
2,300.00	45.24	294.64	2,028.43	559.26	-645.33	649.80	10.00	4.59	-12.78
2,350.00	47.86	288.77	2,062.83	572.63	-679.04	683.61	10.00	5.25	-11.73
2,400.00	50.76	283.39	2,095.44	583.08	-715.45	720.10	10.00	5.79	-10.75
2,450.00	53.88	278.46	2,126.01	590.54	-754.28	759.00	10.00	6.25	-9.87
2,500.00	57.19	273.91	2,154.31	594.95	-795.24	800.00	10.00	6.62	-9.09
2,540.69	60.00	270.46	2,175.52	596.26	-829.94	834.70	10.00	6.90	-8.48
2,600.00	60.00	270.46	2,205.17	596.67	-881.30	886.06	0.00	0.00	0.00
2,700.00	60.00	270.46	2,255.17	597.36	-967.90	972.66	0.00	0.00	0.00
2,740.69	60.00	270.46	2,275.52	597.65	-1,003.14	1,007.90	0.00	0.00	0.00
2,750.00	60.93	270.46	2,280.10	597.71	-1,011.24	1,016.00	10.00	10.00	0.00
2,800.00	65.93	270.46	2,302.46	598.07	-1,055.94	1,060.71	10.00	10.00	0.00
2,850.00	70.93	270.46	2,320.84	598.44	-1,102.42	1,107.19	10.00	10.00	0.00
2,900.00	75.93	270.46	2,335.09	598.83	-1,150.33	1,155.10	10.00	10.00	0.00
2,950.00	80.93	270.46	2,345.12	599.22	-1,199.30	1,204.07	10.00	10.00	0.00
3,000.00	85.93	270.46	2,350.83	599.62	-1,248.95	1,253.73	10.00	10.00	0.00
3,050.15	90.95	270.46	2,352.20	600.02	-1,299.07	1,303.85	10.00	10.00	0.00
GUSHWA 103H FTP									
3,100.00	90.95	270.46	2,351.38	600.42	-1,348.91	1,353.68	0.00	0.00	0.00
3,200.00	90.95	270.46	2,349.73	601.22	-1,448.89	1,453.67	0.00	0.00	0.00
3,300.00	90.95	270.46	2,348.07	602.02	-1,548.87	1,553.66	0.00	0.00	0.00
3,400.00	90.95	270.46	2,346.42	602.83	-1,648.86	1,653.64	0.00	0.00	0.00
3,500.00	90.95	270.46	2,344.77	603.63	-1,748.84	1,753.63	0.00	0.00	0.00
3,600.00	90.95	270.46	2,343.12	604.43	-1,848.82	1,853.62	0.00	0.00	0.00
3,700.00	90.95	270.46	2,341.47	605.23	-1,948.81	1,953.60	0.00	0.00	0.00
3,800.00	90.95	270.46	2,339.82	606.03	-2,048.79	2,053.59	0.00	0.00	0.00
3,900.00	90.95	270.46	2,338.17	606.83	-2,148.77	2,153.58	0.00	0.00	0.00



Planning Report

Database:	EDM 5000.1.13 Single User Db	Local Co-ordinate Reference:	Well 103H
Company:	SILVERBACK EXPLORATION	TVD Reference:	RKB = 16.2' @ 3491.85usft (TBD)
Project:	EDDY COUNTY, NM (NAD 83 - NME)	MD Reference:	RKB = 16.2' @ 3491.85usft (TBD)
Site:	Gushwa	North Reference:	Grid
Well:	103H	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)
4,000.00	90.95	270.46	2,336.51	607.64	-2,248.76	2,253.56	0.00	0.00	0.00
4,100.00	90.95	270.46	2,334.86	608.44	-2,348.74	2,353.55	0.00	0.00	0.00
4,200.00	90.95	270.46	2,333.21	609.24	-2,448.72	2,453.53	0.00	0.00	0.00
4,300.00	90.95	270.46	2,331.56	610.04	-2,548.71	2,553.52	0.00	0.00	0.00
4,400.00	90.95	270.46	2,329.91	610.84	-2,648.69	2,653.51	0.00	0.00	0.00
4,500.00	90.95	270.46	2,328.26	611.65	-2,748.67	2,753.49	0.00	0.00	0.00
4,600.00	90.95	270.46	2,326.61	612.45	-2,848.66	2,853.48	0.00	0.00	0.00
4,700.00	90.95	270.46	2,324.95	613.25	-2,948.64	2,953.47	0.00	0.00	0.00
4,800.00	90.95	270.46	2,323.30	614.05	-3,048.62	3,053.45	0.00	0.00	0.00
4,900.00	90.95	270.46	2,321.65	614.85	-3,148.60	3,153.44	0.00	0.00	0.00
5,000.00	90.95	270.46	2,320.00	615.65	-3,248.59	3,253.43	0.00	0.00	0.00
5,100.00	90.95	270.46	2,318.35	616.46	-3,348.57	3,353.41	0.00	0.00	0.00
5,200.00	90.95	270.46	2,316.70	617.26	-3,448.55	3,453.40	0.00	0.00	0.00
5,300.00	90.95	270.46	2,315.05	618.06	-3,548.54	3,553.38	0.00	0.00	0.00
5,400.00	90.95	270.46	2,313.40	618.86	-3,648.52	3,653.37	0.00	0.00	0.00
5,500.00	90.95	270.46	2,311.74	619.66	-3,748.50	3,753.36	0.00	0.00	0.00
5,600.00	90.95	270.46	2,310.09	620.47	-3,848.49	3,853.34	0.00	0.00	0.00
5,700.00	90.95	270.46	2,308.44	621.27	-3,948.47	3,953.33	0.00	0.00	0.00
5,800.00	90.95	270.46	2,306.79	622.07	-4,048.45	4,053.32	0.00	0.00	0.00
5,900.00	90.95	270.46	2,305.14	622.87	-4,148.44	4,153.30	0.00	0.00	0.00
6,000.00	90.95	270.46	2,303.49	623.67	-4,248.42	4,253.29	0.00	0.00	0.00
6,100.00	90.95	270.46	2,301.84	624.48	-4,348.40	4,353.28	0.00	0.00	0.00
6,200.00	90.95	270.46	2,300.18	625.28	-4,448.39	4,453.26	0.00	0.00	0.00
6,300.00	90.95	270.46	2,298.53	626.08	-4,548.37	4,553.25	0.00	0.00	0.00
6,400.00	90.95	270.46	2,296.88	626.88	-4,648.35	4,653.23	0.00	0.00	0.00
6,500.00	90.95	270.46	2,295.23	627.68	-4,748.34	4,753.22	0.00	0.00	0.00
6,600.00	90.95	270.46	2,293.58	628.48	-4,848.32	4,853.21	0.00	0.00	0.00
6,700.00	90.95	270.46	2,291.93	629.29	-4,948.30	4,953.19	0.00	0.00	0.00
6,800.00	90.95	270.46	2,290.28	630.09	-5,048.28	5,053.18	0.00	0.00	0.00
6,900.00	90.95	270.46	2,288.62	630.89	-5,148.27	5,153.17	0.00	0.00	0.00
7,000.00	90.95	270.46	2,286.97	631.69	-5,248.25	5,253.15	0.00	0.00	0.00
7,100.00	90.95	270.46	2,285.32	632.49	-5,348.23	5,353.14	0.00	0.00	0.00
7,200.00	90.95	270.46	2,283.67	633.30	-5,448.22	5,453.13	0.00	0.00	0.00
7,300.00	90.95	270.46	2,282.02	634.10	-5,548.20	5,553.11	0.00	0.00	0.00
7,400.00	90.95	270.46	2,280.37	634.90	-5,648.18	5,653.10	0.00	0.00	0.00
7,500.00	90.95	270.46	2,278.72	635.70	-5,748.17	5,753.09	0.00	0.00	0.00
7,600.00	90.95	270.46	2,277.06	636.50	-5,848.15	5,853.07	0.00	0.00	0.00
7,700.00	90.95	270.46	2,275.41	637.31	-5,948.13	5,953.06	0.00	0.00	0.00
7,800.00	90.95	270.46	2,273.76	638.11	-6,048.12	6,053.04	0.00	0.00	0.00
7,900.00	90.95	270.46	2,272.11	638.91	-6,148.10	6,153.03	0.00	0.00	0.00
8,000.00	90.95	270.46	2,270.46	639.71	-6,248.08	6,253.02	0.00	0.00	0.00
8,100.00	90.95	270.46	2,268.81	640.51	-6,348.07	6,353.00	0.00	0.00	0.00
8,200.00	90.95	270.46	2,267.16	641.31	-6,448.05	6,452.99	0.00	0.00	0.00
8,300.00	90.95	270.46	2,265.50	642.12	-6,548.03	6,552.98	0.00	0.00	0.00
8,400.00	90.95	270.46	2,263.85	642.92	-6,648.01	6,652.96	0.00	0.00	0.00
8,500.00	90.95	270.46	2,262.20	643.72	-6,748.00	6,752.95	0.00	0.00	0.00
8,600.00	90.95	270.46	2,260.55	644.52	-6,847.98	6,852.94	0.00	0.00	0.00
8,700.00	90.95	270.46	2,258.90	645.32	-6,947.96	6,952.92	0.00	0.00	0.00
8,800.00	90.95	270.46	2,257.25	646.13	-7,047.95	7,052.91	0.00	0.00	0.00
8,900.00	90.95	270.46	2,255.60	646.93	-7,147.93	7,152.89	0.00	0.00	0.00
9,000.00	90.95	270.46	2,253.95	647.73	-7,247.91	7,252.88	0.00	0.00	0.00
9,100.00	90.95	270.46	2,252.29	648.53	-7,347.90	7,352.87	0.00	0.00	0.00
9,200.00	90.95	270.46	2,250.64	649.33	-7,447.88	7,452.85	0.00	0.00	0.00
9,300.00	90.95	270.46	2,248.99	650.13	-7,547.86	7,552.84	0.00	0.00	0.00



Planning Report

Database:	EDM 5000.1.13 Single User Db	Local Co-ordinate Reference:	Well 103H
Company:	SILVERBACK EXPLORATION	TVD Reference:	RKB = 16.2' @ 3491.85usft (TBD)
Project:	EDDY COUNTY, NM (NAD 83 - NME)	MD Reference:	RKB = 16.2' @ 3491.85usft (TBD)
Site:	Gushwa	North Reference:	Grid
Well:	103H	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)
9,400.00	90.95	270.46	2,247.34	650.94	-7,647.85	7,652.83	0.00	0.00	0.00
9,490.21	90.95	270.46	2,245.85	651.66	-7,738.04	7,743.02	0.00	0.00	0.00
GUSHWA 103H LTP/BHL									

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
GUSHWA 103H SHL	0.00	360.00	0.00	0.00	0.00	621,597.31	507,655.38	32.7087646	-104.4428402
- plan hits target center									
- Point									
GUSHWA 103H KOP	0.00	0.00	1,935.15	513.12	-573.76	622,110.43	507,081.62	32.7101733	-104.4447074
- plan hits target center									
- Point									
GUSHWA 103H LTP/E	0.00	360.00	2,245.85	651.66	-7,738.04	622,248.97	499,917.34	32.7105313	-104.4680007
- plan hits target center									
- Point									
GUSHWA 103H FTP	0.00	360.00	2,352.20	600.02	-1,299.07	622,197.33	506,356.31	32.7104101	-104.4470658
- plan hits target center									
- Point									

Intent ☐ As Drilled ☐

API #									
Operator Name:				Property Name:				Well Number	

Kick Off Point (KOP)

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

First Take Point (FTP)

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

Last Take Point (LTP)

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

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

Is this well an infill well? ☐

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

API #									
Operator Name:				Property Name:				Well Number	

Estimated Formation Tops

Formation:	Top:	Formation:	Top: