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.: NMLC062376

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.: TICKETY BOO 2109 FED COM 123H

2. Name of Operator: NOVO OIL AND GAS NORTHERN DELAWARE LLC

9. API Well No.: 30-015-54930

3a. Address: 228 ST. CHARLES AVENUE, SUITE 912, NEW ORLEANS

3b. Phone No. *(include area code)*: (504) 523-1831

10. Field and Pool, or Exploratory: HACKBERRY/BONE SPRING, NW

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*

At surface: SENW / 1590 FNL / 1892 FWL / LAT 32.6487759 / LONG -103.97942

At proposed prod. zone: NENW / 10 FNL / 2310 FWL / LAT 32.6821215 / LONG -103.9780441

11. Sec., T. R. M. or Blk. and Survey or Area: SEC 21/T19S/R30E/NMP

14. Distance in miles and direction from nearest town or post office*: 12 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): 748 feet

16. No of acres in lease:

17. Spacing Unit dedicated to this well: 720.0

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

19. Proposed Depth: 8288 feet / 20487 feet

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

21. Elevations (Show whether DF, KDB, RT, GL, etc.): 3315 feet

22. Approximate date work will start*: 02/01/2024

23. Estimated duration: 90 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	Name *(Printed/Typed)*	Date
(Electronic Submission)	BRIAN WOOD / Ph: (405) 404-0414	06/05/2023

Title: Permitting Agent

Approved by *(Signature)*	Name *(Printed/Typed)*	Date
(Electronic Submission)	CODY LAYTON / Ph: (575) 234-5959	03/05/2024

Title	Office
Assistant Field Manager Lands & Minerals	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: 03/05/2024

INSTRUCTIONS

GENERAL: This form is designed for submitting proposals to perform certain well operations, as indicated on Federal and Indian lands and leases for action by appropriate Federal agencies, pursuant to applicable Federal laws and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from local Federal offices.

ITEM I: If the proposal is to redrill to the same reservoir at a different subsurface location or to a new reservoir, use this form with appropriate notations. Consult applicable Federal regulations concerning subsequent work proposals or reports on the well.

ITEM 4: Locations on Federal or Indian land should be described in accordance with Federal requirements. Consult local Federal offices for specific instructions.

ITEM 14: Needed only when location of well cannot readily be found by road from the land or lease description. A plat, or plats, separate or on the reverse side, showing the roads to, and the surveyed location of, the wen, and any other required information, should be furnished when required by Federal agency offices.

ITEMS 15 AND 18: If well is to be, or has been directionany drilled, give distances for subsurface location of hole in any present or objective productive zone.

ITEM 22: Consult applicable Federal regulations, or appropriate officials, concerning approval of the proposal before operations are started.

ITEM 24: If the proposal will involve hydraulic fracturing operations, you must comply with 43 CFR 3162.3-3, including providing information about the protection of usable water. Operators should provide the best available information about all formations containing water and their depths. This information could include data and interpretation of resistivity logs run on nearby wells. Information may also be obtained from state or tribal regulatory agencies and from local BLM offices.

NOTICES

The Privacy Act of 1974 and regulation in 43 CFR 2.48(d) provide that you be furnished the following information in connection with information required by this application.

AUTHORITY: 30 U.S.C. 181 et seq., 25 U.S.C. 396; 43 CFR 3160

PRINCIPAL PURPOSES: The information will be used to: (1) process and evaluate your application for a permit to drill a new oil, gas, or service wen or to reenter a plugged and abandoned well; and (2) document, for administrative use, information for the management, disposal and use of National Resource Lands and resources including (a) analyzing your proposal to discover and extract the Federal or Indian resources encountered; (b) reviewing procedures and equipment and the projected impact on the land involved; and (c) evaluating the effects of the proposed operation on the surface and subsurface water and other environmental impacts.

ROUTINE USE: Information from the record and/or the record win be transferred to appropriate Federal, State, and local or foreign agencies, when relevant to civil, criminal or regulatory investigations or prosecution, in connection with congressional inquiries and for regulatory responsibilities.

EFFECT OF NOT PROVIDING INFORMATION: Filing of this application and disclosure of the information is mandatory only if you elect to initiate a drilling or reentry operation on an oil and gas lease.

The Paperwork Reduction Act of 1995 requires us to inform you that:
The BLM conects this information to anow evaluation of the technical, safety, and environmental factors involved with drilling for oil and/or gas on Federal and Indian oil and gas leases. This information will be used to analyze and approve applications. Response to this request is mandatory only if the operator elects to initiate drilling or reentry operations on an oil and gas lease. The BLM would like you to know that you do not have to respond to this or any other Federal agency-sponsored information collection unless it displays a currently valid OMB control number.

BURDEN HOURS STATEMENT: Public reporting burden for this form is estimated to average 8 hours per response, including the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding the burden estimate or any other aspect of this form to U.S. Department of the Interior, Bureau of Land Management (1004-0137), Bureau Information Conection Clearance Officer (WO-630), 1849 C Street, N.W., Mail Stop 401 LS, Washington, D.C. 20240.

(Continued on page 3)

Approval Date: 03/05/2024

Additional Operator Remarks

Location of Well

0. SHL: SENW / 1590 FNL / 1892 FWL / TWSP: 19S / RANGE: 30E / SECTION: 21 / LAT: 32.6487759 / LONG: -103.97942 (TVD: 0 feet, MD: 0 feet)

PPP: SESW / 0 FNL / 2310 FWL / TWSP: 19S / RANGE: 30E / SECTION: 9 / LAT: 32.6676513 / LONG: -103.9780523 (TVD: 8324 feet, MD: 15226 feet)

PPP: SESW / 0 FNL / 2310 FWL / TWSP: 19S / RANGE: 30E / SECTION: 16 / LAT: 32.653145 / LONG: -103.9780604 (TVD: 8361 feet, MD: 9959 feet)

PPP: NENW / 1220 FNL / 2310 FWL / TWSP: 19S / RANGE: 30E / SECTION: 21 / LAT: 32.6497924 / LONG: -103.9780623 (TVD: 8370 feet, MD: 8725 feet)

BHL: NENW / 10 FNL / 2310 FWL / TWSP: 19S / RANGE: 30E / SECTION: 9 / LAT: 32.6821215 / LONG: -103.9780441 (TVD: 8288 feet, MD: 20487 feet)

BLM Point of Contact

Name: TENILLE C MOLINA
Title: Land Law Examiner
Phone: (575) 234-2224
Email: TCMOLINA@BLM.GOV

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- 54930	97020	HACKBERRY; BONE SPRING, NW

[4] Property Code	[5] Property Name	[6] Well Number
335711	TICKETY BOO 2109 FED COM	123H

[7] OGRID No.	[8] Operator Name	[9] Elevation
372920	NOVO OIL & GAS NORTHERN DELAWARE, LLC	3314.7

[10] Surface Location

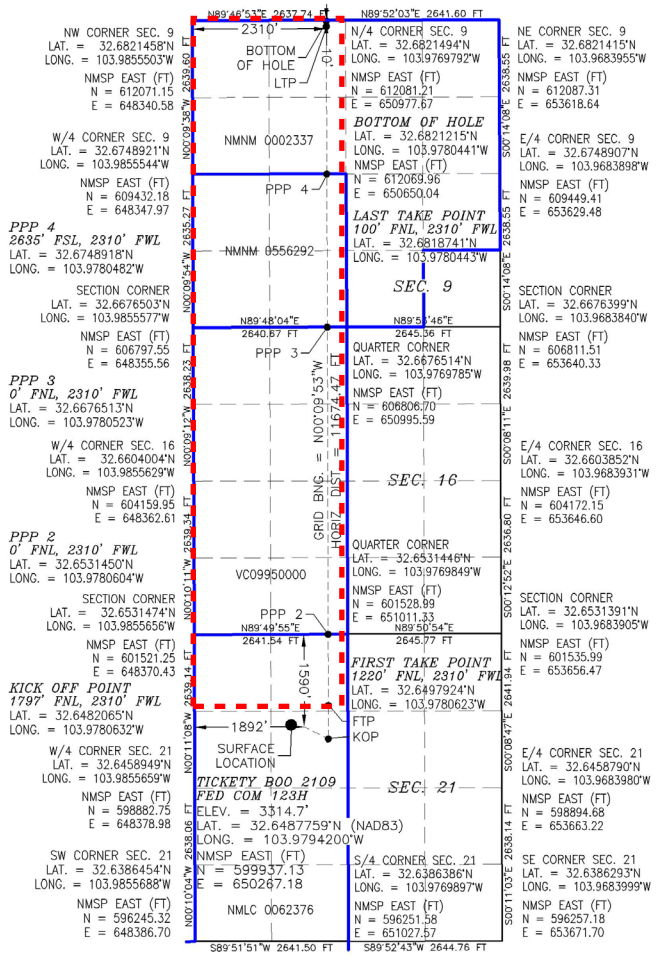
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
F	21	19 S	30 E		1590	NORTH	1892	WEST	EDDY

[11] Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
C	9	19 S	30 E		10	NORTH	2310	WEST	EDDY

[12] Dedicated Acres	[13] Joint or Infill	[14] Consolidation Code	[15] Order No.
720			

No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.



[17] OPERATOR CERTIFICATION

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

Cory Walk — 05-03-2023

Signature — Date

Cory Walk

Printed Name

cory@permitswest.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.

MARCH 30, 2023

Date of Survey

Signature and Seal of Professional Surveyor:

Certificate Number: ELIMON F. JARAMILLO, LS 12797

SURVEY NO. 9542A

State of New Mexico
Energy, Minerals and Natural Resources Department

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: NOVO Oil & Gas Northern Delaware, LLC **OGRID:** 372920 **Date:** 3/12/2024

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	Anticipated Gas	Anticipated Prod Water
Tickety Boo 2109 Fed Com 131H		F-21-T19S-R30E	1649' FNL - 1705' FWL	1600 BOPD	1900 MCFD	4700 BWPD
Tickety Boo 2109 Fed Com 132H		F-21-T19S-R30E	1677' FNL - 1733' FWL	1600 BOPD	1900 MCFD	4700 BWPD
Tickety Boo 2109 Fed Com 133H		F-21-T19S-R30E	1706' FNL – 1760' FWL	1600 BOPD	1900 MCFD	4700 BWPD

SEE ATTACHMENT

IV. Central Delivery Point Name: Tickety Boo 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 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
Tickety Boo 2109 Fed Com 131H		6/11/2025	6/30/2025	8/1/2025	10/1/2025	10/1/2025
Tickety Boo 2109 Fed Com 132H		6/11/2025	6/30/2025	8/1/2025	10/1/2025	10/1/2025
Tickety Boo 2109 Fed Com 133H		6/11/2025	6/30/2025	8/1/2025	10/1/2025	10/1/2025

SEE ATTACHMENT

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

VII. Operations 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.

WELL NAME & NUMBER	API	UL/SECT/T/R	FOOTAGES	ANTICIPATED OIL BBL/D	ANTICIPATED GAS MCF/D	ANTICIPATED WATER BBL/D
Tickety Boo 2109 Fed Com 121H				1400	1900	4700
Tickety Boo 2109 Fed Com 122H				1400	1900	4700
Tickety Boo 2109 Fed Com 123H				1400	1900	4700
Tickety Boo 2109 Fed Com 111H				1400	1900	4700
Tickety Boo 2109 Fed Com 112H				1400	1900	4700
Tickety Boo 2109 Fed Com 113H				1400	1900	4700

WELL NAME & NUMBER	API	SPUD	TD	COMPLETION DATE	FLOWBACK DATE	FIRST PRODUCTION
Tickety Boo 2109 Fed Com 121H		6/11/2025	6/30/2025	8/1/2025	10/1/2025	10/1/2025
Tickety Boo 2109 Fed Com 122H		6/11/2025	6/30/2025	8/1/2025	10/1/2025	10/1/2025
Tickety Boo 2109 Fed Com 123H		6/11/2025	6/30/2025	8/1/2025	10/1/2025	10/1/2025
Tickety Boo 2109 Fed Com 111H		6/11/2025	6/30/2025	8/1/2025	10/1/2025	10/1/2025
Tickety Boo 2109 Fed Com 112H		6/11/2025	6/30/2025	8/1/2025	10/1/2025	10/1/2025
Tickety Boo 2109 Fed Com 113H		6/11/2025	6/30/2025	8/1/2025	10/1/2025	10/1/2025

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 Name	API	Anticipated Average Natural Gas Rate	Anticipated Volume of Natural Gas for the First Year

X. Natural Gas Gathering System (NGGS):

Operator	System	ULSTR of Tie-in	Anticipated Gathering Start Date	Available Volume of Natural Gas for the First Year

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 system(s) to which the well(s) will be connected.

XII. Line Capacity. 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 attached 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, not 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 and update for each Natural Gas Management Plan until the Operator is back in compliance with its baseline natural gas capture rate or natural gas capture requirement.
   - **(c)** OCD may deny or conditionally approve and 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, 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:	Jennifer Elrod
Printed Name:	JENNIFER ELROD
Title:	SR. REGULATORY ANALYST
E-mail Address:	jennifer.elrod@permres.com
Date:	3/14/2024
Phone:	(940)452-6214

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

Permian Resources Operating, LLC (372165)
NOVO Oil & Gas Northern Delaware, LLC

Natural Gas Management Plan Descriptions

VI. Separation Equipment:

Permian Resources Operating, LLC (Permian) utilizes a production forecast from our Reservoir Engineering team to appropriately size each permanent, 3-phase separator and heater treater utilized for production operations. Our goal is to maintain 5 minutes of retention time in the test vessel and 20 minutes in the heater treater at peak production rates. The gas produced is routed from the separator to the gas sales line.

VII. Operational Practices:

Drilling

During Permian's drilling operations it is uncommon for venting or flaring to occur. If flaring is needed due to safety concerns, gas will be routed to a flare and volumes will be estimated.

Flowback

During completion/recompletion flowback operations, after separation flowback begins and as soon as it is technically feasible, Permian routes gas though a permanent separator and the controlled facility where the gas is either sold or flared through a high-pressure flare if needed.

Production

Per 19.15.27.8.D, Permian's facilities are designed to minimize waste. Our produced gas will only be vented or flared in an emergency or malfunction situation, except as allowed for normal operations noted in 19.15.27.8.D(2) & (4). All gas that is flared is metered. All gas that may be vented will be estimated.

Performance Standards

Permian utilizes a production forecast from our Reservoir Engineering team to appropriately size each permanent, 3-phase separator and heater treater utilized for production operations.

All of Permian's permanent storage tanks associated with production operations which are routed to a flare or control device are equipped with an automatic gauging system.

All of Permian's flare stacks, both currently installed and for future installation, are:

1) Appropriately sized and designed to ensure proper combustion effciency.

2)Equipped with an automatic ignitor or continuous pilot.

3) Anchored and located at least 100 feet from the well and storage tanks.

Permian's field operations and HSE teams have implemented an AVO inspection schedule that adheres to the requirements of 19.15.27.8.E(5).

All of our operations and facilities are designed to minimize waste. We routinely employ the following methods and practices:

- Closed-loop systems
- Enclosed and properly sized tanks

- Vapor recovery units to maximize recovery of low-pressure gas streams and potential unauthorized emissions
- Low-emitting or electric engines whenever practical
- Combustors and flare stacks in the event of a malfunction or emergency
- Routine facility inspections to identify leaking components, functioning control devices, such as flares and combustors, and repair / replacement of malfunctioning components where applicable

Measurement or estimation

Permian measures or estimates the volumes of natural gas vented, flared and/or beneficially used for all of our drilling, completing and producing wells. We utilize accepted industry standards and methodology which can be independently verified. Annual GOR testing is completed on our wells and will be submitted as required by the OCD. None of our equipment is designed to allow diversion around metering elements except during inspection, maintenance and repair operations.

VIII. Best Management Practices:

Permian Resources utilizes the following BMPs to minimize venting during active and planned maintenance activities:

- Use a closed-loop process wherever possible during planned maintenance activities, such as blowdowns, liquid removal, and work over operations.
- Employ low-emitting or electric engines for equipment, such as compressors
- Adhere to a strict preventative maintenance program which includes routine facility inspections, identification of component malfunctions, and repairing or replacing components such as hatches, seals, valves, etc. where applicable
- Utilize vapor recovery units (VRU's) to maximize recovery of volumes of low-pressure gas streams and potential unauthorized emissions
- Route low pressure gas and emissions streams to a combustion device to prevent venting where necessary

Enhanced Natural Gas Management Plan

Operator's Plan to Manage Production in Response to Increased Line Pressure

Permian Resources Operating, LLC (Permian) anticipates that its existing wells connected to the same portion of the natural gas gathering system will continue to meet anticipated increases in line pressure caused by the new wells. Permian will actively monitor line pressure throughout the field and will make necessary adjustments to existing production separators' pressures to send gas to sales. Permian also plans to implement automated alarms on all flare meters to alert of flaring events as they occur. The alarms will send notifications to field operations and engineering staff via text message and email at every occurrence of flaring. In addition, Permian plans to implement automated alarms on all flare meters to alert of any continuous flaring event that has continued for at least 4 hours. The alarms will send notifications to field operations and engineering management. Permian personnel will promptly respond to these alarms, communicate with midstream partners, and take the appropriate action to reduce flaring caused by high line pressure from new well production.

Operator Name: NOVO OIL AND GAS NORTHERN DELAWARE LLC

Well Name: TICKETY BOO 2109 FED COM **Well Number:** 123H

will be on site when testing the BOP.

Testing Procedure: All casing strings will be tested in accordance with 43 CFR 3172. The BOP system will be isolated with a test plug and tested by an independent tester to 250 psi low and 5,000 psi high for 10 minutes. The Surface Casing will be pressure tested to 250 psi low and 1500 psi high. Intermediate Casing will be pressure tested to 250 psi low and (.22 psi x Shoe TVD, which is equivalent to 660 psi OR 1,500 psi, whichever is higher) for 30 minutes

Choke Diagram Attachment:

Choke_5M_v2_20230816102346.pdf

BOP Diagram Attachment:

BOP_5M_20230511091406.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	17.5	13.375	NEW	API	N	0	265	0	265	3315	3050	265	J-55	54.5	BUTT	9.31	25.43	DRY	60.2	DRY	64.1
2	INTERMEDIATE	12.25	8.625	NEW	NON API	N	0	2015	0	2015	3311	1300	2015	HCL-80	32	OTHER - BTC SPL CC	3.79	7.45	DRY	11.34	DRY	11.59
3	INTERMEDIATE	9.875	8.625	NEW	NON API	N	0	4175	0	4175	3315	-860	4175	L-80	32	OTHER - EHC MO-FXL	3.26	2.35	DRY	5.64	DRY	3.9
4	PRODUCTION	7.875	5.5	NEW	NON API	N	0	20486	0	8370	3311	-5055	20486	OTHER	20	OTHER - GBCD	2.68	3.83	DRY	3.38	DRY	3.38

Casing Attachments

Operator Name: NOVO OIL AND GAS NORTHERN DELAWARE LLC

Well Name: TICKETY BOO 2109 FED COM **Well Number:** 123H

Casing Attachments

Casing ID: 1 **String** SURFACE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Tickety_Boo_Fed_Com_2109_123H_casing_assumptions_20231212113718.pdf

Casing ID: 2 **String** INTERMEDIATE

Inspection Document:

Spec Document:

cid2907AACC_F198_48B7_9704_F3D6BE2363B6_20231212114245.pdf

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Tickety_Boo_Fed_Com_2109_123H_casing_assumptions_20231212114329.pdf

Casing ID: 3 **String** INTERMEDIATE

Inspection Document:

Spec Document:

CDS_FXL_8_625_32_BMP_L80EHC_Feb04_2022_20231212114503.pdf

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Tickety_Boo_Fed_Com_2109_123H_casing_assumptions_20231212114543.pdf

Operator Name: NOVO OIL AND GAS NORTHERN DELAWARE LLC

Well Name: TICKETY BOO 2109 FED COM **Well Number:** 123H

Casing Attachments

Casing ID: 4 **String** PRODUCTION

Inspection Document:

Spec Document:

550_20_HCP110_125k_Min_GBCD_Butt_6.300_20231212113856.pdf

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Tickety_Boo_Fed_Com_2109_123H_casing_assumptions_20231212113951.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
SURFACE	Lead		0	265	210	1.34	14.8	281	50	None	None
INTERMEDIATE	Lead		0	1515	220	2	12.7	440	50	Class C	Fluid Loss, Retarder, LCM, Possibly Beads
INTERMEDIATE	Tail		1515	2015	110	1.34	14.8	147	50	Class C	Fluid Loss, Retarder, LCM
INTERMEDIATE	Lead	2070	0	1570	100	3.24	10.3	324	50	CLASS C	FLUID LOSS, RETARDER, LCM, BEADS
INTERMEDIATE	Tail		1570	2070	80	1.34	14.8	107	50	CLASS C	FLUID LOSS, RETARDER, LCM
INTERMEDIATE	Lead	2070	2070	3675	110	2	12.5	220	50	CLASS C	FLUID LOSS, REGARTDER, LCM, BEADS, DISPERCENT
INTERMEDIATE	Tail		3675	4175	60	1.35	14.8	81	50	CLASS C	FLUID LOSS, DISPERCENT, RETARDER
PRODUCTION	Lead		1619	7820	580	2.34	12.5	1357	40	Class H	Fluid Loss, Retarder, LCM
PRODUCTION	Tail		7820	20486	1600	1.86	13.4	2976	35	Class H	Fluid Loss, Retarder, LCM

Operator Name: NOVO OIL AND GAS NORTHERN DELAWARE LLC

Well Name: TICKETY BOO 2109 FED COM **Well Number:** 123H

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: All necessary mud products (barite, bentonite, LCM) to control weight and fluid loss will be on site at all times. Mud program may change due to hole conditions.

Describe the mud monitoring system utilized: An electronic PVT mud system will monitor flow rate, pump pressure, stroke rate, and volume.

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
4175	20486	OIL-BASED MUD	9	9.5							VIS: 45-65
0	265	WATER-BASED MUD	8.6	8.8							VIS: 28 - 34
265	2015	OTHER : SATURATED BRINE	9.8	10.2							VIS: 28-34
2015	4175	OTHER : FRESHWATER	8.4	8.6							VIS: 28-34

Section 6 - Test, Logging, Coring

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

GAMMA RAY LOG AND DIRECTIONAL SURVEY WILL BE RAN

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

GAMMA RAY LOG,DIRECTIONAL SURVEY,

Coring operation description for the well:

No core or drill stem test is planned.

Operator Name: NOVO OIL AND GAS NORTHERN DELAWARE LLC

Well Name: TICKETY BOO 2109 FED COM **Well Number:** 123H

Section 7 - Pressure

Anticipated Bottom Hole Pressure: 5679 **Anticipated Surface Pressure:** 3837

Anticipated Bottom Hole Temperature(F): 215

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

ESTE_Lea_County_H2S_plan_20231212130114.pdf

Section 8 - Other Information

Proposed horizontal/directional/multi-lateral plan submission:

TB_123H_Directional_Plan_20230511091802.pdf

Other proposed operations facets description:

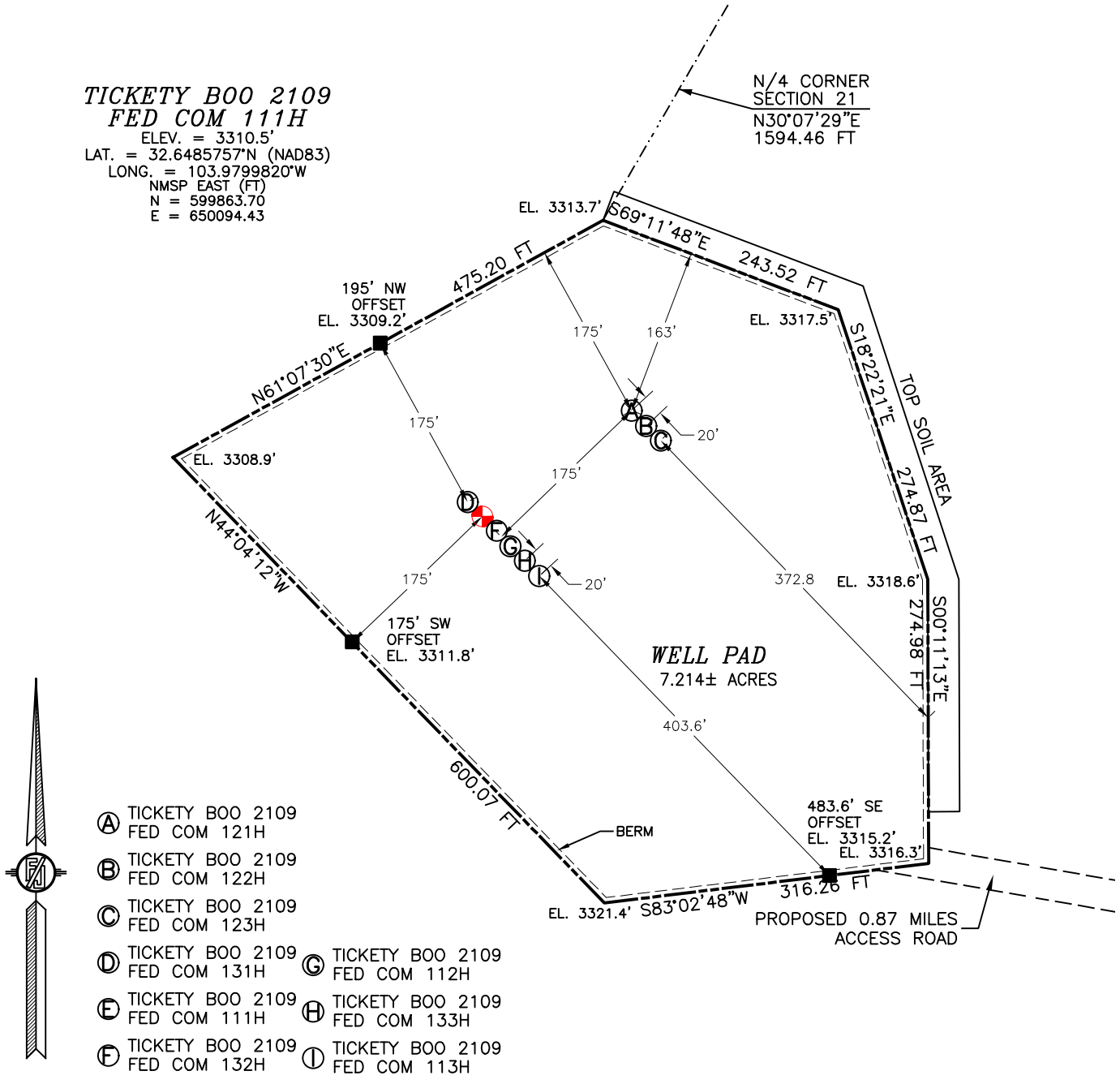
Other proposed operations facets attachment:

CoFlex_Certs_RDC_20230511091849.pdf
TB_123H_Anticollision_Report_20230511091916.pdf
Speedhead_Specs_3string_20230511091928.pdf
Alternative_Casing_Spec_Request_20230511091943.pdf
Tickety_Boo_Fed_Com_2109_123H_APD_20231212130156.pdf

Other Variance attachment:

Casing_Cement_Variance_20230511091954.pdf

SECTION 21, TOWNSHIP 19 SOUTH, RANGE 30 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO
SITE MAP



DIRECTIONS TO LOCATION
FROM THE INTERSECTION OF ST. ROAD 360 (BLUESTEM) & CR. 235 (CURRY COMB), GO NORTH ON ST. ROAD 360 APPROX. 3.7 MILES TO A 2-TRACK ROAD AND ROAD SURVEY ON LEFT (WEST), TURN RIGHT AND FOLOW 2-TRACK ROAD AND ROAD SURVEY WEST APPROX. 0.3 MILES, TURN LEFT (SOUTH) AND CONTINUE FOLLOWING 2-TRACK ROAD AND ROAD SURVEY SOUTH APPROX. 0.4 MILES, TURN RIGHT (WEST), AND FOLLOW ROAD SURVEY APPROX. 679' TO THE SOUTHEAST PAD CORNER FOR THIS LOCATION.

I, FILIMON F. JARAMILLO, A NEW MEXICO REGISTERED PROFESSIONAL SURVEYOR CERTIFY THAT I DIRECTED AND WAS RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY WAS MADE ON THE GROUND AND TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THIS SURVEY AND PLAT MEET THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO.

FILIMON F. JARAMILLO NMPS 12797

NOVO OIL & GAS NORTHERN DELAWARE, LLC
TICKETY BOO 2109 FED COM 111H
LOCATED 1663 FT. FROM THE NORTH LINE AND 1719 FT. FROM THE WEST LINE OF SECTION 21, TOWNSHIP 19 SOUTH, RANGE 30 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO

MARCH 29, 2023

SURVEY NO. 9544A

MADRON SURVEYING, INC. 301 SOUTH CANAL (575) 234-3341 CARLSBAD, NEW MEXICO

TICKETY-BOO-2109-FED-COM-123H

WELL DETAILS: TICKETY-BOO-2109-FED-COM-123H
Plan 1

+N/-S	+E/-W	Northing	GL Elev (ft).: Easting	3314.70 Latitude	Longitude
0.00	0.00	599937.12	650267.18	32.64877591	-103.97941997

SECTION DETAILS

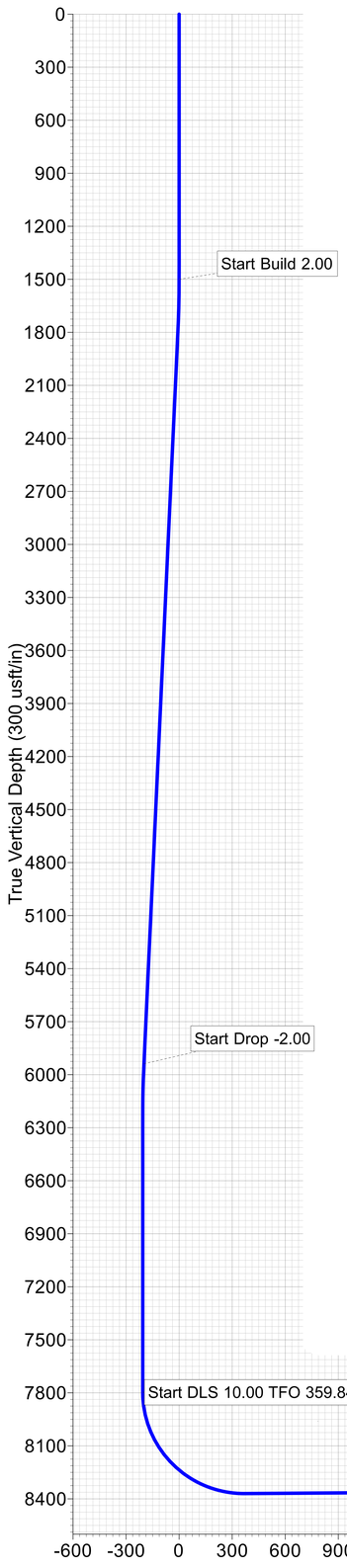
MD	Inc	Azi	TVD	+N/-S	+E/-W	DIeg	TFace	VSect
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1500.00	0.00	0.00	1500.00	0.00	0.00	0.00	0.00	0.00
1799.82	6.00	116.19	1799.28	-6.92	14.07	2.00	116.19	-6.92
5962.04	6.00	116.19	5938.72	-198.84	404.23	0.00	0.00	-198.84
6261.87	0.00	0.00	6238.00	-205.76	418.30	2.00	180.00	-205.76
7820.93	0.00	0.00	7797.06	-205.76	418.30	0.00	0.00	-205.76
8724.92	90.40	359.84	8370.00	371.19	416.64	10.00	359.84	371.19
20486.90	90.40	359.84	8288.00	12132.83	382.86	0.00	0.00	12132.83

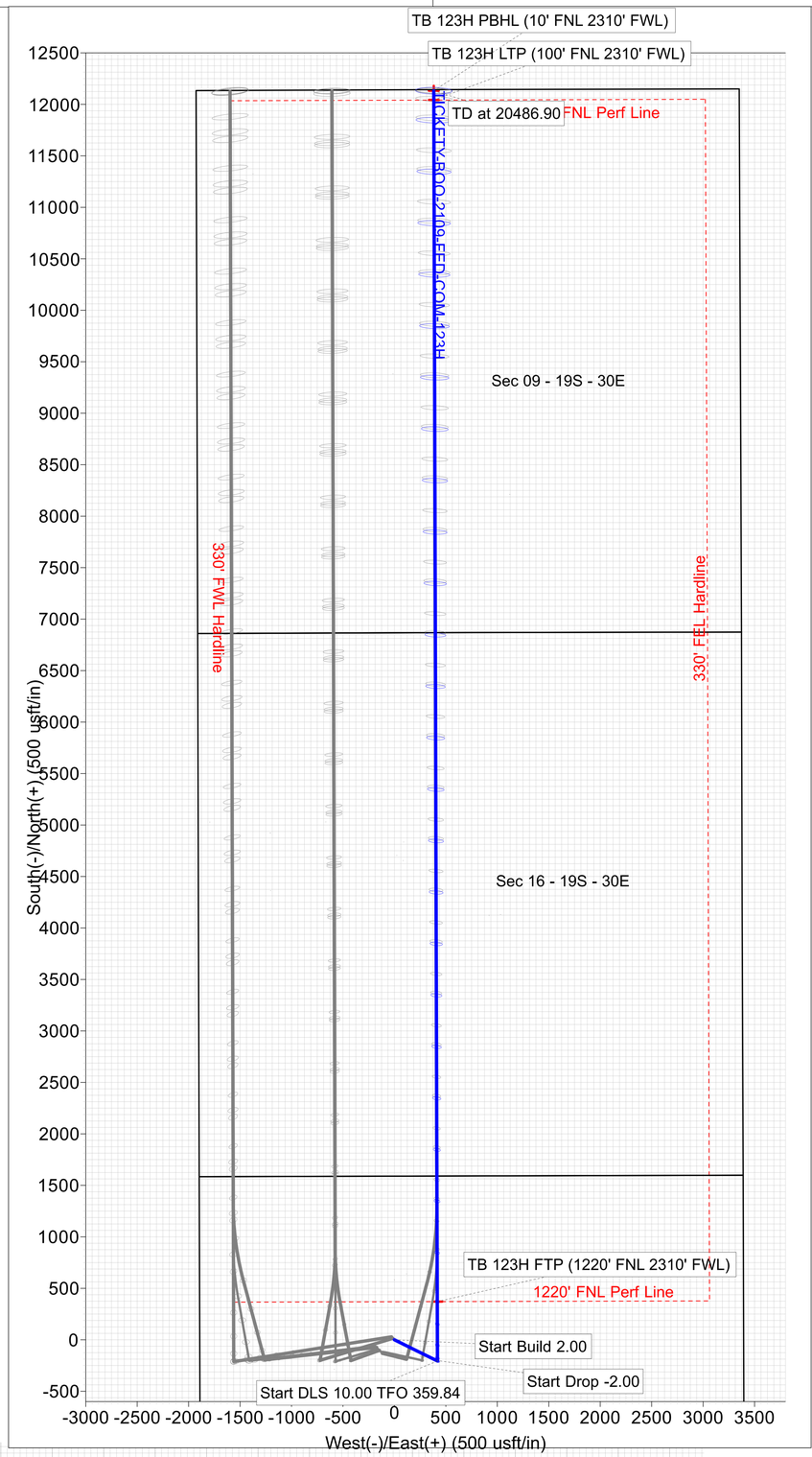
Project: EDDY CO., NM (NAD83)
Site: SEC 21-T19S-30E
Well: TICKETY-BOO-2109-FED-COM-123H
Wellbore: Wellbore #1
Design: Plan 1

T G M

Azimuths to Grid North
True North: -0.19°
Magnetic North: 6.74°

Magnetic Field
Strength: 47619.2nT
Dip Angle: 60.31°
Date: 10/24/2022
Model: USER DEFINED





NOVO Oil & Gas

EDDY CO., NM (NAD83)
SEC 21-T19S-30E
TICKETY-BOO-FED-COM-2109-123H

Wellbore #1

Plan: Plan 1

Standard Planning Report

25 October, 2022

SB DIRECTIONAL

Planning Report

NOVO

Database:	1 - EDM Production	**Local Co-ordinate Reference:**	Well TICKETY-BOO-FED-COM-2109-123H
Company:	NOVO Oil & Gas	**TVD Reference:**	RKB 25' + 3314.7' GL @ 3339.70usft
Project:	EDDY CO., NM (NAD83)	**MD Reference:**	RKB 25' + 3314.7' GL @ 3339.70usft
Site:	SEC 21-T19S-30E	**North Reference:**	Grid
Well:	TICKETY-BOO-FED-COM-2109-123H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan 1		

Project EDDY CO., NM (NAD83)

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

Site SEC 21-T19S-30E

Site Position:		**Northing:**	599,863.70 usft	**Latitude:**	32.64857569
From:	Map	**Easting:**	650,094.43 usft	**Longitude:**	-103.97998202
Position Uncertainty:	0.00 usft	**Slot Radius:**	13-3/16 "		

Well TICKETY-BOO-FED-COM-2109-123H

Well Position	**+N/-S**	0.00 usft	**Northing:**	599,937.13 usft	**Latitude:**	32.64877594
	+E/-W	0.00 usft	**Easting:**	650,267.18 usft	**Longitude:**	-103.97941997
Position Uncertainty		0.50 usft	**Wellhead Elevation:**	usft	**Ground Level:**	3,314.70 usft
Grid Convergence:		0.19 °				

Wellbore Wellbore #1

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	User Defined	10/24/2022	6.93	60.31	47,619.20000000

Design Plan 1

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	0.00

Plan Survey Tool Program **Date** 10/25/2022

	Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	20,486.41	Plan 1 (Wellbore #1)	MWD+HRGM	
				OWSG MWD + HRGM	

Plan Sections

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,799.82	6.00	116.19	1,799.28	-6.92	14.07	2.00	2.00	0.00	116.19	
5,962.04	6.00	116.19	5,938.72	-198.84	404.23	0.00	0.00	0.00	0.00	
6,261.87	0.00	0.00	6,238.00	-205.76	418.30	2.00	-2.00	0.00	180.00	
7,820.93	0.00	0.00	7,797.06	-205.76	418.30	0.00	0.00	0.00	0.00	
8,724.92	90.40	359.84	8,370.00	371.19	416.64	10.00	10.00	-0.02	359.84	
20,486.90	90.40	359.84	8,288.00	12,132.83	382.86	0.00	0.00	0.00	0.00	

SB DIRECTIONAL

Planning Report

NOVO

Database:	1 - EDM Production	**Local Co-ordinate Reference:**	Well TICKETY-BOO-FED-COM-2109-123H
Company:	NOVO Oil & Gas	**TVD Reference:**	RKB 25' + 3314.7' GL @ 3339.70usft
Project:	EDDY CO., NM (NAD83)	**MD Reference:**	RKB 25' + 3314.7' GL @ 3339.70usft
Site:	SEC 21-T19S-30E	**North Reference:**	Grid
Well:	TICKETY-BOO-FED-COM-2109-123H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan 1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	2.00	116.19	1,599.98	-0.77	1.57	-0.77	2.00	2.00	0.00
1,700.00	4.00	116.19	1,699.84	-3.08	6.26	-3.08	2.00	2.00	0.00
1,799.82	6.00	116.19	1,799.28	-6.92	14.07	-6.92	2.00	2.00	0.00
1,900.00	6.00	116.19	1,898.90	-11.54	23.46	-11.54	0.00	0.00	0.00
2,000.00	6.00	116.19	1,998.36	-16.15	32.83	-16.15	0.00	0.00	0.00
2,100.00	6.00	116.19	2,097.81	-20.76	42.20	-20.76	0.00	0.00	0.00
2,200.00	6.00	116.19	2,197.26	-25.37	51.58	-25.37	0.00	0.00	0.00
2,300.00	6.00	116.19	2,296.72	-29.98	60.95	-29.98	0.00	0.00	0.00
2,400.00	6.00	116.19	2,396.17	-34.59	70.33	-34.59	0.00	0.00	0.00
2,500.00	6.00	116.19	2,495.62	-39.20	79.70	-39.20	0.00	0.00	0.00
2,600.00	6.00	116.19	2,595.07	-43.82	89.07	-43.82	0.00	0.00	0.00
2,700.00	6.00	116.19	2,694.53	-48.43	98.45	-48.43	0.00	0.00	0.00
2,800.00	6.00	116.19	2,793.98	-53.04	107.82	-53.04	0.00	0.00	0.00
2,900.00	6.00	116.19	2,893.43	-57.65	117.20	-57.65	0.00	0.00	0.00
3,000.00	6.00	116.19	2,992.89	-62.26	126.57	-62.26	0.00	0.00	0.00
3,100.00	6.00	116.19	3,092.34	-66.87	135.94	-66.87	0.00	0.00	0.00
3,200.00	6.00	116.19	3,191.79	-71.48	145.32	-71.48	0.00	0.00	0.00
3,300.00	6.00	116.19	3,291.24	-76.09	154.69	-76.09	0.00	0.00	0.00
3,400.00	6.00	116.19	3,390.70	-80.70	164.07	-80.70	0.00	0.00	0.00
3,500.00	6.00	116.19	3,490.15	-85.31	173.44	-85.31	0.00	0.00	0.00
3,600.00	6.00	116.19	3,589.60	-89.93	182.82	-89.93	0.00	0.00	0.00
3,700.00	6.00	116.19	3,689.06	-94.54	192.19	-94.54	0.00	0.00	0.00
3,800.00	6.00	116.19	3,788.51	-99.15	201.56	-99.15	0.00	0.00	0.00
3,900.00	6.00	116.19	3,887.96	-103.76	210.94	-103.76	0.00	0.00	0.00
4,000.00	6.00	116.19	3,987.41	-108.37	220.31	-108.37	0.00	0.00	0.00
4,100.00	6.00	116.19	4,086.87	-112.98	229.69	-112.98	0.00	0.00	0.00
4,200.00	6.00	116.19	4,186.32	-117.59	239.06	-117.59	0.00	0.00	0.00
4,300.00	6.00	116.19	4,285.77	-122.20	248.43	-122.20	0.00	0.00	0.00
4,400.00	6.00	116.19	4,385.23	-126.81	257.81	-126.81	0.00	0.00	0.00
4,500.00	6.00	116.19	4,484.68	-131.43	267.18	-131.43	0.00	0.00	0.00
4,600.00	6.00	116.19	4,584.13	-136.04	276.56	-136.04	0.00	0.00	0.00
4,700.00	6.00	116.19	4,683.58	-140.65	285.93	-140.65	0.00	0.00	0.00
4,800.00	6.00	116.19	4,783.04	-145.26	295.30	-145.26	0.00	0.00	0.00
4,900.00	6.00	116.19	4,882.49	-149.87	304.68	-149.87	0.00	0.00	0.00
5,000.00	6.00	116.19	4,981.94	-154.48	314.05	-154.48	0.00	0.00	0.00
5,100.00	6.00	116.19	5,081.40	-159.09	323.43	-159.09	0.00	0.00	0.00
5,200.00	6.00	116.19	5,180.85	-163.70	332.80	-163.70	0.00	0.00	0.00
5,300.00	6.00	116.19	5,280.30	-168.31	342.17	-168.31	0.00	0.00	0.00

Planning Report

Database:	1 - EDM Production	**Local Co-ordinate Reference:**	Well TICKETY-BOO-FED-COM-2109-123H
Company:	NOVO Oil & Gas	**TVD Reference:**	RKB 25' + 3314.7' GL @ 3339.70usft
Project:	EDDY CO., NM (NAD83)	**MD Reference:**	RKB 25' + 3314.7' GL @ 3339.70usft
Site:	SEC 21-T19S-30E	**North Reference:**	Grid
Well:	TICKETY-BOO-FED-COM-2109-123H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan 1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,400.00	6.00	116.19	5,379.75	-172.92	351.55	-172.92	0.00	0.00	0.00
5,500.00	6.00	116.19	5,479.21	-177.54	360.92	-177.54	0.00	0.00	0.00
5,600.00	6.00	116.19	5,578.66	-182.15	370.30	-182.15	0.00	0.00	0.00
5,700.00	6.00	116.19	5,678.11	-186.76	379.67	-186.76	0.00	0.00	0.00
5,800.00	6.00	116.19	5,777.57	-191.37	389.04	-191.37	0.00	0.00	0.00
5,900.00	6.00	116.19	5,877.02	-195.98	398.42	-195.98	0.00	0.00	0.00
5,962.04	6.00	116.19	5,938.72	-198.84	404.23	-198.84	0.00	0.00	0.00
6,000.00	5.24	116.19	5,976.50	-200.48	407.57	-200.48	2.00	-2.00	0.00
6,100.00	3.24	116.19	6,076.22	-203.74	414.20	-203.74	2.00	-2.00	0.00
6,200.00	1.24	116.19	6,176.14	-205.47	417.70	-205.47	2.00	-2.00	0.00
6,261.87	0.00	0.00	6,238.00	-205.76	418.30	-205.76	2.00	-2.00	0.00
6,300.00	0.00	0.00	6,276.13	-205.76	418.30	-205.76	0.00	0.00	0.00
6,400.00	0.00	0.00	6,376.13	-205.76	418.30	-205.76	0.00	0.00	0.00
6,500.00	0.00	0.00	6,476.13	-205.76	418.30	-205.76	0.00	0.00	0.00
6,600.00	0.00	0.00	6,576.13	-205.76	418.30	-205.76	0.00	0.00	0.00
6,700.00	0.00	0.00	6,676.13	-205.76	418.30	-205.76	0.00	0.00	0.00
6,800.00	0.00	0.00	6,776.13	-205.76	418.30	-205.76	0.00	0.00	0.00
6,900.00	0.00	0.00	6,876.13	-205.76	418.30	-205.76	0.00	0.00	0.00
7,000.00	0.00	0.00	6,976.13	-205.76	418.30	-205.76	0.00	0.00	0.00
7,100.00	0.00	0.00	7,076.13	-205.76	418.30	-205.76	0.00	0.00	0.00
7,200.00	0.00	0.00	7,176.13	-205.76	418.30	-205.76	0.00	0.00	0.00
7,300.00	0.00	0.00	7,276.13	-205.76	418.30	-205.76	0.00	0.00	0.00
7,400.00	0.00	0.00	7,376.13	-205.76	418.30	-205.76	0.00	0.00	0.00
7,500.00	0.00	0.00	7,476.13	-205.76	418.30	-205.76	0.00	0.00	0.00
7,600.00	0.00	0.00	7,576.13	-205.76	418.30	-205.76	0.00	0.00	0.00
7,700.00	0.00	0.00	7,676.13	-205.76	418.30	-205.76	0.00	0.00	0.00
7,800.00	0.00	0.00	7,776.13	-205.76	418.30	-205.76	0.00	0.00	0.00
7,820.93	0.00	0.00	7,797.06	-205.76	418.30	-205.76	0.00	0.00	0.00
7,850.00	2.91	359.84	7,826.12	-205.02	418.30	-205.02	10.00	10.00	0.00
7,900.00	7.91	359.84	7,875.88	-200.31	418.28	-200.31	10.00	10.00	0.00
7,950.00	12.91	359.84	7,925.04	-191.28	418.26	-191.28	10.00	10.00	0.00
8,000.00	17.91	359.84	7,973.23	-178.00	418.22	-178.00	10.00	10.00	0.00
8,050.00	22.91	359.84	8,020.08	-160.57	418.17	-160.57	10.00	10.00	0.00
8,100.00	27.91	359.84	8,065.23	-139.13	418.11	-139.13	10.00	10.00	0.00
8,150.00	32.91	359.84	8,108.34	-113.83	418.04	-113.83	10.00	10.00	0.00
8,200.00	37.91	359.84	8,149.08	-84.87	417.95	-84.87	10.00	10.00	0.00
8,250.00	42.91	359.84	8,187.14	-52.47	417.86	-52.47	10.00	10.00	0.00
8,300.00	47.91	359.84	8,222.23	-16.88	417.76	-16.88	10.00	10.00	0.00
8,350.00	52.91	359.84	8,254.09	21.64	417.65	21.64	10.00	10.00	0.00
8,400.00	57.91	359.84	8,282.46	62.79	417.53	62.79	10.00	10.00	0.00
8,450.00	62.91	359.84	8,307.15	106.25	417.40	106.25	10.00	10.00	0.00
8,500.00	67.91	359.84	8,327.95	151.70	417.27	151.70	10.00	10.00	0.00
8,550.00	72.91	359.84	8,344.71	198.79	417.14	198.79	10.00	10.00	0.00
8,600.00	77.91	359.84	8,357.30	247.16	417.00	247.16	10.00	10.00	0.00
8,650.00	82.91	359.84	8,365.63	296.45	416.86	296.45	10.00	10.00	0.00
8,700.00	87.91	359.84	8,369.64	346.27	416.71	346.27	10.00	10.00	0.00
8,724.92	90.40	359.84	8,370.00	371.19	416.64	371.19	10.00	10.00	0.00
8,800.00	90.40	359.84	8,369.48	446.26	416.43	446.26	0.00	0.00	0.00
8,900.00	90.40	359.84	8,368.78	546.26	416.14	546.26	0.00	0.00	0.00
9,000.00	90.40	359.84	8,368.09	646.26	415.85	646.26	0.00	0.00	0.00
9,100.00	90.40	359.84	8,367.39	746.26	415.57	746.26	0.00	0.00	0.00
9,200.00	90.40	359.84	8,366.69	846.25	415.28	846.25	0.00	0.00	0.00
9,300.00	90.40	359.84	8,365.99	946.25	414.99	946.25	0.00	0.00	0.00
9,400.00	90.40	359.84	8,365.30	1,046.25	414.70	1,046.25	0.00	0.00	0.00

Planning Report

Database:	1 - EDM Production	**Local Co-ordinate Reference:**	Well TICKETY-BOO-FED-COM-2109-123H
Company:	NOVO Oil & Gas	**TVD Reference:**	RKB 25' + 3314.7' GL @ 3339.70usft
Project:	EDDY CO., NM (NAD83)	**MD Reference:**	RKB 25' + 3314.7' GL @ 3339.70usft
Site:	SEC 21-T19S-30E	**North Reference:**	Grid
Well:	TICKETY-BOO-FED-COM-2109-123H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan 1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
9,500.00	90.40	359.84	8,364.60	1,146.24	414.42	1,146.24	0.00	0.00	0.00
9,600.00	90.40	359.84	8,363.90	1,246.24	414.13	1,246.24	0.00	0.00	0.00
9,700.00	90.40	359.84	8,363.21	1,346.24	413.84	1,346.24	0.00	0.00	0.00
9,800.00	90.40	359.84	8,362.51	1,446.24	413.55	1,446.24	0.00	0.00	0.00
9,900.00	90.40	359.84	8,361.81	1,546.23	413.27	1,546.23	0.00	0.00	0.00
10,000.00	90.40	359.84	8,361.11	1,646.23	412.98	1,646.23	0.00	0.00	0.00
10,100.00	90.40	359.84	8,360.42	1,746.23	412.69	1,746.23	0.00	0.00	0.00
10,200.00	90.40	359.84	8,359.72	1,846.22	412.41	1,846.22	0.00	0.00	0.00
10,300.00	90.40	359.84	8,359.02	1,946.22	412.12	1,946.22	0.00	0.00	0.00
10,400.00	90.40	359.84	8,358.33	2,046.22	411.83	2,046.22	0.00	0.00	0.00
10,500.00	90.40	359.84	8,357.63	2,146.22	411.54	2,146.22	0.00	0.00	0.00
10,600.00	90.40	359.84	8,356.93	2,246.21	411.26	2,246.21	0.00	0.00	0.00
10,700.00	90.40	359.84	8,356.23	2,346.21	410.97	2,346.21	0.00	0.00	0.00
10,800.00	90.40	359.84	8,355.54	2,446.21	410.68	2,446.21	0.00	0.00	0.00
10,900.00	90.40	359.84	8,354.84	2,546.21	410.40	2,546.21	0.00	0.00	0.00
11,000.00	90.40	359.84	8,354.14	2,646.20	410.11	2,646.20	0.00	0.00	0.00
11,100.00	90.40	359.84	8,353.45	2,746.20	409.82	2,746.20	0.00	0.00	0.00
11,200.00	90.40	359.84	8,352.75	2,846.20	409.53	2,846.20	0.00	0.00	0.00
11,300.00	90.40	359.84	8,352.05	2,946.19	409.25	2,946.19	0.00	0.00	0.00
11,400.00	90.40	359.84	8,351.35	3,046.19	408.96	3,046.19	0.00	0.00	0.00
11,500.00	90.40	359.84	8,350.66	3,146.19	408.67	3,146.19	0.00	0.00	0.00
11,600.00	90.40	359.84	8,349.96	3,246.19	408.39	3,246.19	0.00	0.00	0.00
11,700.00	90.40	359.84	8,349.26	3,346.18	408.10	3,346.18	0.00	0.00	0.00
11,800.00	90.40	359.84	8,348.56	3,446.18	407.81	3,446.18	0.00	0.00	0.00
11,900.00	90.40	359.84	8,347.87	3,546.18	407.52	3,546.18	0.00	0.00	0.00
12,000.00	90.40	359.84	8,347.17	3,646.17	407.24	3,646.17	0.00	0.00	0.00
12,100.00	90.40	359.84	8,346.47	3,746.17	406.95	3,746.17	0.00	0.00	0.00
12,200.00	90.40	359.84	8,345.78	3,846.17	406.66	3,846.17	0.00	0.00	0.00
12,300.00	90.40	359.84	8,345.08	3,946.17	406.37	3,946.17	0.00	0.00	0.00
12,400.00	90.40	359.84	8,344.38	4,046.16	406.09	4,046.16	0.00	0.00	0.00
12,500.00	90.40	359.84	8,343.68	4,146.16	405.80	4,146.16	0.00	0.00	0.00
12,600.00	90.40	359.84	8,342.99	4,246.16	405.51	4,246.16	0.00	0.00	0.00
12,700.00	90.40	359.84	8,342.29	4,346.15	405.23	4,346.15	0.00	0.00	0.00
12,800.00	90.40	359.84	8,341.59	4,446.15	404.94	4,446.15	0.00	0.00	0.00
12,900.00	90.40	359.84	8,340.90	4,546.15	404.65	4,546.15	0.00	0.00	0.00
13,000.00	90.40	359.84	8,340.20	4,646.15	404.36	4,646.15	0.00	0.00	0.00
13,100.00	90.40	359.84	8,339.50	4,746.14	404.08	4,746.14	0.00	0.00	0.00
13,200.00	90.40	359.84	8,338.80	4,846.14	403.79	4,846.14	0.00	0.00	0.00
13,300.00	90.40	359.84	8,338.11	4,946.14	403.50	4,946.14	0.00	0.00	0.00
13,400.00	90.40	359.84	8,337.41	5,046.13	403.22	5,046.13	0.00	0.00	0.00
13,500.00	90.40	359.84	8,336.71	5,146.13	402.93	5,146.13	0.00	0.00	0.00
13,600.00	90.40	359.84	8,336.02	5,246.13	402.64	5,246.13	0.00	0.00	0.00
13,700.00	90.40	359.84	8,335.32	5,346.13	402.35	5,346.13	0.00	0.00	0.00
13,800.00	90.40	359.84	8,334.62	5,446.12	402.07	5,446.12	0.00	0.00	0.00
13,900.00	90.40	359.84	8,333.92	5,546.12	401.78	5,546.12	0.00	0.00	0.00
14,000.00	90.40	359.84	8,333.23	5,646.12	401.49	5,646.12	0.00	0.00	0.00
14,100.00	90.40	359.84	8,332.53	5,746.11	401.20	5,746.11	0.00	0.00	0.00
14,200.00	90.40	359.84	8,331.83	5,846.11	400.92	5,846.11	0.00	0.00	0.00
14,300.00	90.40	359.84	8,331.13	5,946.11	400.63	5,946.11	0.00	0.00	0.00
14,400.00	90.40	359.84	8,330.44	6,046.11	400.34	6,046.11	0.00	0.00	0.00
14,500.00	90.40	359.84	8,329.74	6,146.10	400.06	6,146.10	0.00	0.00	0.00
14,600.00	90.40	359.84	8,329.04	6,246.10	399.77	6,246.10	0.00	0.00	0.00
14,700.00	90.40	359.84	8,328.35	6,346.10	399.48	6,346.10	0.00	0.00	0.00
14,800.00	90.40	359.84	8,327.65	6,446.09	399.19	6,446.09	0.00	0.00	0.00

SB DIRECTIONAL

Planning Report

NOVO

Database:	1 - EDM Production	**Local Co-ordinate Reference:**	Well TICKETY-BOO-FED-COM-2109-123H
Company:	NOVO Oil & Gas	**TVD Reference:**	RKB 25' + 3314.7' GL @ 3339.70usft
Project:	EDDY CO., NM (NAD83)	**MD Reference:**	RKB 25' + 3314.7' GL @ 3339.70usft
Site:	SEC 21-T19S-30E	**North Reference:**	Grid
Well:	TICKETY-BOO-FED-COM-2109-123H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan 1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
14,900.00	90.40	359.84	8,326.95	6,546.09	398.91	6,546.09	0.00	0.00	0.00
15,000.00	90.40	359.84	8,326.25	6,646.09	398.62	6,646.09	0.00	0.00	0.00
15,100.00	90.40	359.84	8,325.56	6,746.09	398.33	6,746.09	0.00	0.00	0.00
15,200.00	90.40	359.84	8,324.86	6,846.08	398.05	6,846.08	0.00	0.00	0.00
15,300.00	90.40	359.84	8,324.16	6,946.08	397.76	6,946.08	0.00	0.00	0.00
15,400.00	90.40	359.84	8,323.47	7,046.08	397.47	7,046.08	0.00	0.00	0.00
15,500.00	90.40	359.84	8,322.77	7,146.07	397.18	7,146.07	0.00	0.00	0.00
15,600.00	90.40	359.84	8,322.07	7,246.07	396.90	7,246.07	0.00	0.00	0.00
15,700.00	90.40	359.84	8,321.37	7,346.07	396.61	7,346.07	0.00	0.00	0.00
15,800.00	90.40	359.84	8,320.68	7,446.07	396.32	7,446.07	0.00	0.00	0.00
15,900.00	90.40	359.84	8,319.98	7,546.06	396.03	7,546.06	0.00	0.00	0.00
16,000.00	90.40	359.84	8,319.28	7,646.06	395.75	7,646.06	0.00	0.00	0.00
16,100.00	90.40	359.84	8,318.59	7,746.06	395.46	7,746.06	0.00	0.00	0.00
16,200.00	90.40	359.84	8,317.89	7,846.05	395.17	7,846.05	0.00	0.00	0.00
16,300.00	90.40	359.84	8,317.19	7,946.05	394.89	7,946.05	0.00	0.00	0.00
16,400.00	90.40	359.84	8,316.49	8,046.05	394.60	8,046.05	0.00	0.00	0.00
16,500.00	90.40	359.84	8,315.80	8,146.05	394.31	8,146.05	0.00	0.00	0.00
16,600.00	90.40	359.84	8,315.10	8,246.04	394.02	8,246.04	0.00	0.00	0.00
16,700.00	90.40	359.84	8,314.40	8,346.04	393.74	8,346.04	0.00	0.00	0.00
16,800.00	90.40	359.84	8,313.71	8,446.04	393.45	8,446.04	0.00	0.00	0.00
16,900.00	90.40	359.84	8,313.01	8,546.03	393.16	8,546.03	0.00	0.00	0.00
17,000.00	90.40	359.84	8,312.31	8,646.03	392.88	8,646.03	0.00	0.00	0.00
17,100.00	90.40	359.84	8,311.61	8,746.03	392.59	8,746.03	0.00	0.00	0.00
17,200.00	90.40	359.84	8,310.92	8,846.03	392.30	8,846.03	0.00	0.00	0.00
17,300.00	90.40	359.84	8,310.22	8,946.02	392.01	8,946.02	0.00	0.00	0.00
17,400.00	90.40	359.84	8,309.52	9,046.02	391.73	9,046.02	0.00	0.00	0.00
17,500.00	90.40	359.84	8,308.82	9,146.02	391.44	9,146.02	0.00	0.00	0.00
17,600.00	90.40	359.84	8,308.13	9,246.01	391.15	9,246.01	0.00	0.00	0.00
17,700.00	90.40	359.84	8,307.43	9,346.01	390.86	9,346.01	0.00	0.00	0.00
17,800.00	90.40	359.84	8,306.73	9,446.01	390.58	9,446.01	0.00	0.00	0.00
17,900.00	90.40	359.84	8,306.04	9,546.01	390.29	9,546.01	0.00	0.00	0.00
18,000.00	90.40	359.84	8,305.34	9,646.00	390.00	9,646.00	0.00	0.00	0.00
18,100.00	90.40	359.84	8,304.64	9,746.00	389.72	9,746.00	0.00	0.00	0.00
18,200.00	90.40	359.84	8,303.94	9,846.00	389.43	9,846.00	0.00	0.00	0.00
18,300.00	90.40	359.84	8,303.25	9,945.99	389.14	9,945.99	0.00	0.00	0.00
18,400.00	90.40	359.84	8,302.55	10,045.99	388.85	10,045.99	0.00	0.00	0.00
18,500.00	90.40	359.84	8,301.85	10,145.99	388.57	10,145.99	0.00	0.00	0.00
18,600.00	90.40	359.84	8,301.16	10,245.99	388.28	10,245.99	0.00	0.00	0.00
18,700.00	90.40	359.84	8,300.46	10,345.98	387.99	10,345.98	0.00	0.00	0.00
18,800.00	90.40	359.84	8,299.76	10,445.98	387.71	10,445.98	0.00	0.00	0.00
18,900.00	90.40	359.84	8,299.06	10,545.98	387.42	10,545.98	0.00	0.00	0.00
19,000.00	90.40	359.84	8,298.37	10,645.97	387.13	10,645.97	0.00	0.00	0.00
19,100.00	90.40	359.84	8,297.67	10,745.97	386.84	10,745.97	0.00	0.00	0.00
19,200.00	90.40	359.84	8,296.97	10,845.97	386.56	10,845.97	0.00	0.00	0.00
19,300.00	90.40	359.84	8,296.28	10,945.97	386.27	10,945.97	0.00	0.00	0.00
19,400.00	90.40	359.84	8,295.58	11,045.96	385.98	11,045.96	0.00	0.00	0.00
19,500.00	90.40	359.84	8,294.88	11,145.96	385.69	11,145.96	0.00	0.00	0.00
19,600.00	90.40	359.84	8,294.18	11,245.96	385.41	11,245.96	0.00	0.00	0.00
19,700.00	90.40	359.84	8,293.49	11,345.96	385.12	11,345.96	0.00	0.00	0.00
19,800.00	90.40	359.84	8,292.79	11,445.95	384.83	11,445.95	0.00	0.00	0.00
19,900.00	90.40	359.84	8,292.09	11,545.95	384.55	11,545.95	0.00	0.00	0.00
20,000.00	90.40	359.84	8,291.39	11,645.95	384.26	11,645.95	0.00	0.00	0.00
20,100.00	90.40	359.84	8,290.70	11,745.94	383.97	11,745.94	0.00	0.00	0.00
20,200.00	90.40	359.84	8,290.00	11,845.94	383.68	11,845.94	0.00	0.00	0.00

Planning Report

Database:	1 - EDM Production	**Local Co-ordinate Reference:**	Well TICKETY-BOO-FED-COM-2109-123H
Company:	NOVO Oil & Gas	**TVD Reference:**	RKB 25' + 3314.7' GL @ 3339.70usft
Project:	EDDY CO., NM (NAD83)	**MD Reference:**	RKB 25' + 3314.7' GL @ 3339.70usft
Site:	SEC 21-T19S-30E	**North Reference:**	Grid
Well:	TICKETY-BOO-FED-COM-2109-123H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan 1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
20,300.00	90.40	359.84	8,289.30	11,945.94	383.40	11,945.94	0.00	0.00	0.00
20,400.00	90.40	359.84	8,288.61	12,045.94	383.11	12,045.94	0.00	0.00	0.00
20,486.90	90.40	359.84	8,288.00	12,132.83	382.86	12,132.83	0.00	0.00	0.00

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
TB 123H PBHL (10' FNL - plan misses target center by 8288.00usft at 20486.90usft MD (8288.00 TVD, 12132.83 N, 382.86 E) - Point	0.00	0.00	0.00	12,132.83	382.86	612,069.96	650,650.04	32.68212147	-103.97804414
TB 123H LTP (100' FNL - plan misses target center by 8288.43usft at 20454.69usft MD (8288.22 TVD, 12100.62 N, 382.95 E) - Point	0.00	0.00	0.00	12,042.83	383.11	611,979.97	650,650.30	32.68187410	-103.97804430
TB 123H FTP (1220' FN - plan misses target center by 558.00usft at 0.00usft MD (0.00 TVD, 0.00 N, 0.00 E) - Point	0.00	0.00	0.00	371.19	416.64	600,308.32	650,683.82	32.64979240	-103.97806230

Casing Points

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
20,486.90	8,288.00	20" Casing	20	24

PECOS DISTRICT
SURFACE USE
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	Novo Oil & Gas Northern Delaware, LLC.
LEASE NO.:	NMLC062376
COUNTY:	Eddy

Wells:
Tickety Boo 2109 Fed Com 111H
Surface Hole Location: 1663' FNL & 1719' FWL, Section 21, T. 19 S., R. 30 E.
Bottom Hole Location: 10' FNL & 330' FWL, Section 9, T. 19 S, R 30 E.

Tickety Boo 2109 Fed Com 112H
Surface Hole Location: 1692' FNL & 1746' FWL, Section 21, T. 19 S., R. 30 E.
Bottom Hole Location: 10' FNL & 1320' FWL, Section 9, T. 19 S, R 30 E.

Tickety Boo 2109 Fed Com 113H
Surface Hole Location: 1721' FNL & 1774' FWL, Section 21, T. 19 S., R. 30 E.
Bottom Hole Location: 10' FNL & 2310' FWL, Section 9, T. 19 S, R 30 E.

Tickety Boo 2109 Fed Com 121H
Surface Hole Location: 1561' FNL & 1864' FWL, Section 21, T. 19 S., R. 30 E.
Bottom Hole Location: 10' FNL & 330' FWL, Section 9, T. 19 S, R 30 E.

Tickety Boo 2109 Fed Com 122H
Surface Hole Location: 1576' FNL & 1878' FWL, Section 21, T. 19 S., R. 30 E.
Bottom Hole Location: 10' FSL & 1320' FWL, Section 9, T. 19 S, R 30 E.

Tickety Boo 2109 Fed Com 123H
Surface Hole Location: 1590' FNL & 1892' FWL, Section 21, T. 19 S., R. 30 E.
Bottom Hole Location: 10' FNL & 2310' FWL, Section 9, T. 19 S, R 30 E.

Tickety Boo 2109 Fed Com 131H
Surface Hole Location: 1649' FNL & 1705' FWL, Section 21, T. 19 S., R. 30 E.
Bottom Hole Location: 10' FNL & 330' FWL, Section 9, T. 19 S, R 30 E.

Tickety Boo 2109 Fed Com 132H
Surface Hole Location: 1677' FNL & 1733' FWL, Section 21, T. 19 S., R. 30 E.
Bottom Hole Location: 10' FNL & 1320' FEL, Section 9, T. 19 S, R 30 E.

Tickety Boo 2109 Fed Com 133H
Surface Hole Location: 1706' FNL & 1760' FWL, Section 21, T. 19 S., R. 30 E.
Bottom Hole Location: 10' FNL & 2310' FWL, Section 9, T. 19 S, R 30 E.

 Approval Date: 03/05/2024

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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.

I. GENERAL PROVISIONS

The approval of the Application For Permit To Drill (APD) is in compliance with all applicable laws and regulations: 43 Code of Federal Regulations 3160, the lease terms, Onshore Oil and Gas Orders, Notices To Lessees, New Mexico Oil Conservation Division (NMOCD) Rules, National Historical Preservation Act As Amended, and instructions and orders of the Authorized Officer. Any request for a variance shall be submitted to the Authorized Officer on Form 3160-5, Sundry Notices and Report on Wells.

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. An evaluation of the discovery will be made by the Authorized Officer to determine appropriate actions to prevent the loss of significant cultural or scientific values. 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.

The holder is hereby obligated to comply with procedures established in the Native American Graves Protection and Repatriation Act (NAGPRA) to protect such cultural items as human remains, associated funerary objects, sacred objects, and objects of cultural patrimony discovered inadvertently during the course of project implementation. In the event that any of the cultural items listed above are discovered during the course of project work, the proponent shall immediately halt the disturbance and contact the BLM within 24 hours for instructions. The proponent or initiator of any project shall be held responsible for protecting, evaluating, reporting, excavating, treating, and disposing of these cultural items according to the procedures established by the BLM in consultation with Indian Tribes."

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. An evaluation of the discovery will be made by the Authorized Officer to determine appropriate actions to prevent the loss of significant cultural or scientific values. 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 well pad(s) 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 ROW 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.

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 linear surface disturbance activities will avoid sinkholes and other karst features to lessen the possibility of encountering near surface voids during construction, minimize changes to runoff, and prevent untimely leaks and spills from entering the karst drainage system.
- 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:

- Closed loop system using steel tanks - all fluids and cuttings will be hauled off-site and disposed of properly at an authorized site
- Rotary drilling with fresh water where cave or karst features are expected to prevent contamination of freshwater aquifers.
- Directional drilling is only allowed at depths greater than 100 feet below the cave occurrence zone to prevent additional impacts resulting from directional drilling.
- Lost circulation zones will be logged and reported in the drilling report so BLM can assess the situation and work with the operator on corrective actions.
- Additional drilling, casing, and cementing procedures to protect cave zones and fresh water aquifers. See drilling COAs.

Production Mitigation

In order to mitigate the impacts from production activities and due to the nature of karst terrane, the following Conditions of Approval will apply to this APD:

- Tank battery locations and facilities will be bermed and lined with a 20 mil thick permanent liner that has a 4 oz. felt backing, or equivalent, to prevent tears or punctures. Tank battery berms must be large enough to contain 1 ½ times the content of the largest tank.
- Development and implementation of a leak detection system to provide an early alert to operators when a leak has occurred.
- Automatic shut off, check values, or similar systems will be installed for pipelines and tanks to minimize the effects of catastrophic line failures used in production or drilling.

Residual and Cumulative Mitigation

The operator will perform annual pressure monitoring on all casing annuli and reported in a sundry notice. If the test results indicated a casing failure has occurred, remedial action will be taken to correct the problem to the BLM’s approval.

Plugging and Abandonment Mitigation

Upon well abandonment in high cave karst areas additional plugging conditions of approval may be required. The BLM will assess the situation and work with the operator to ensure proper plugging of the wellbore.

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, Shale Green from the BLM Standard Environmental Color Chart (CC-001: June 2008).

Short-term mitigation measures include painting all above-ground structures that are not subject to safety requirements (including meter housing) Shale Green, which is a flat non-reflective paint color listed in the BLM Standard Environmental Color Chart (CC-001: June 2013). Long-term mitigation measures include the removal of wells and associated infrastructure following abandonment (end of cost-effective production). Previously impacted areas will be reclaimed by removing structures and caliche pads, returning disturbed areas to natural grade, and revegetating with an approved BLM seed mixture; thereby eliminating visual impacts.

Texas Hornshell Mussel

Oil and Gas Zone D - CCA Boundary requirements.

- Implement erosion control measures in accordance with the Reasonable and Prudent Practices for Stabilization (“RAPPS”)
- Comply with SPCC requirements in accordance with 40 CFR Part 112;
- Comply with the United States Army Corp of Engineers (USACE) Nationwide 12 General Permit, where applicable;
- Utilize technologies (like underground borings for pipelines), where feasible;
- Educate personnel, agents, contractors, and subcontractors about the requirements of conservation measures, COAs, Stips and provide direction in accordance with the Permit.

Potash Resources
Lessees must comply with the 2012Secretarial Potash Order. The Order is designed to manage the efficient development of oil, gas, and potash resources. Section 6 of the Order provides general provisions which must be followed to minimize conflict between the industries and ensure the safety of operations.

To minimize impacts to potash resources, the proposed well is confined within the boundaries of the established Batwing Drill Island within the Tickety Boo Development Area.

The Batwing Drill Island is designated for Shallow APDs(All Formations above the base of the Second Bone Spring Sandstone Only). No wells on this drill island are acceptable below 8,526 feet.

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 (root zone) from the entire well pad area and stockpile the topsoil along the edge of the well pad as depicted in the APD. The root zone is typically six (6) inches in depth. 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 six inches) 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

Road Width
The access road shall have a driving surface that creates the smallest possible surface disturbance and does not exceed fourteen (14) feet in width. The maximum width of surface disturbance, when constructing the access road, shall not exceed twenty-five (25) feet.

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.

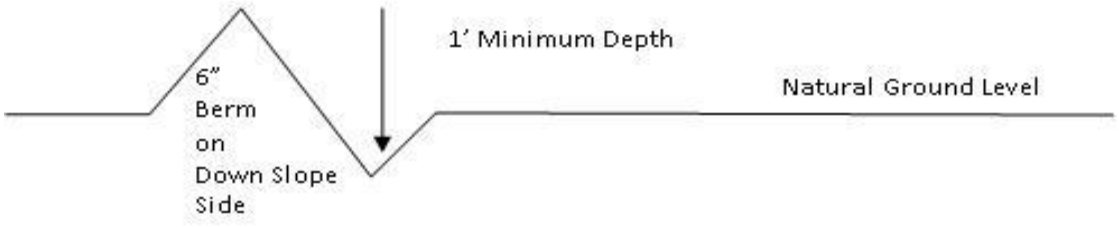
Ditching
Ditching shall be required on both sides of the road.

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.

Drainage
Drainage control systems shall be constructed on the entire length of road (e.g. ditches, sidehill outsloping and insloping, lead-off ditches, culvert installation, and low water crossings).

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 (in %);

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

Cattle guards
An appropriately sized cattle guard sufficient to carry out the project shall be installed and maintained at fence/road crossings. Any existing cattle guards on the access road route 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 cattle guards that are in place and are utilized during lease operations.

Fence Requirement
Where entry is granted across a fence line, the fence shall be braced and tied off on both sides of the passageway prior to cutting. The operator shall notify the private surface landowner or the grazing allotment holder prior to crossing any fences.

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

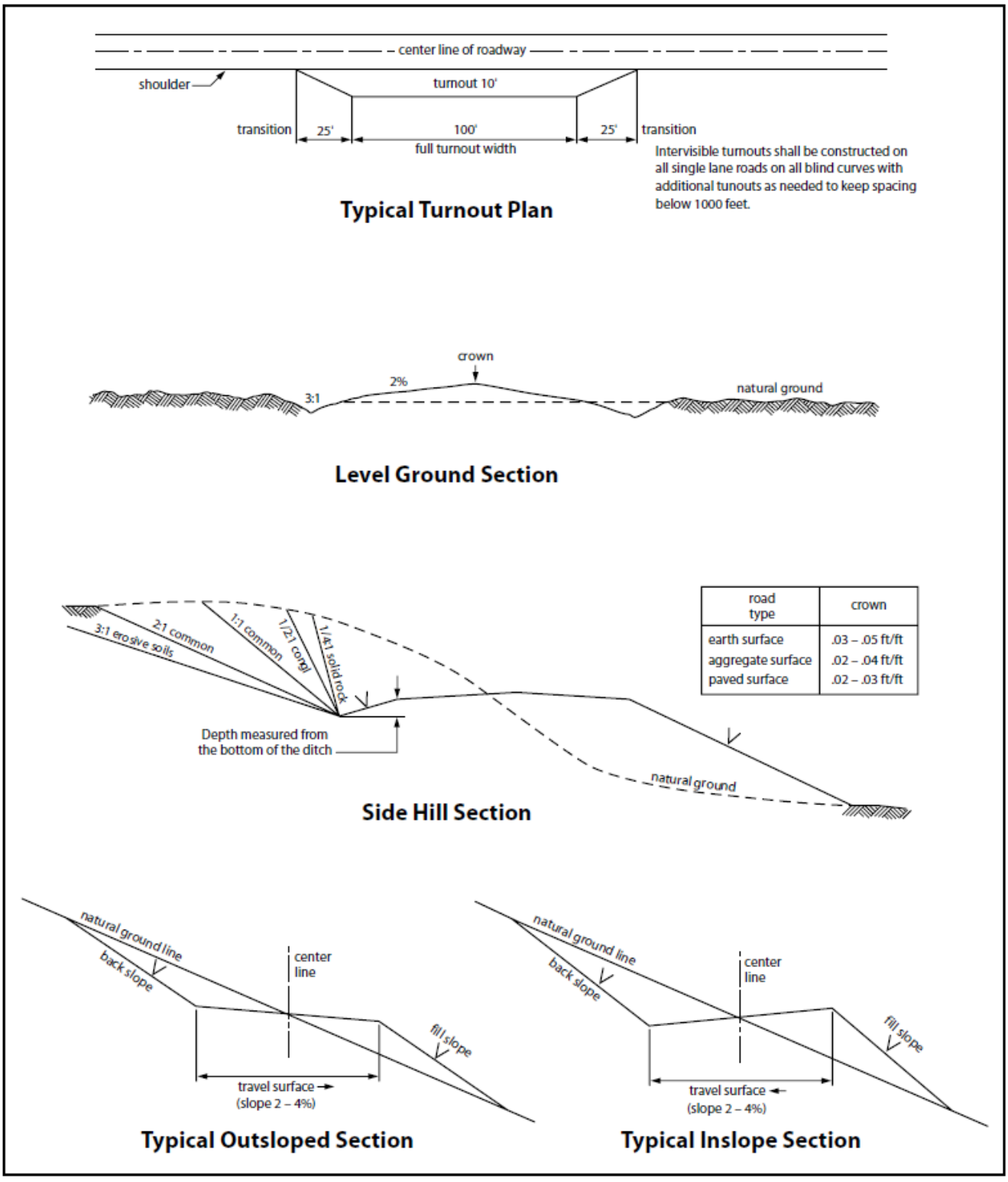


Figure 1. Cross-sections and plans for typical road sections representative of BLM resource or FS local and higher-class roads.

Approval Date: 03/05/2024

VII. PRODUCTION (POST DRILLING)

A. WELL STRUCTURES & FACILITIES

Placement of Production Facilities
Production facilities should be placed on the well pad to allow for maximum interim recontouring and revegetation of the well location.

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. The operator will design, construct, and maintain all secondary containment systems to prevent wildlife and livestock exposure to harmful substances. At a minimum, the operator will install effective wildlife and livestock exclosure systems such as fencing, netting, expanded metal mesh, lids, and grate covers. Use a maximum netting mesh size of 1 ½ inches.

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.

Containment Structures
Proposed production facilities such as storage tanks and other vessels will have a secondary containment structure that is constructed to hold the capacity of 1.5 times the largest tank, plus freeboard to account for precipitation, unless more stringent protective requirements are deemed necessary.

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

B. PIPELINES

- The BLM, Carlsbad Field Office, will be informed immediately if any subsurface drainage channels, passages, or voids are intersected by trenching, and no pipe will be laid in the trench at that point until clearance has been issued by the Authorized Officer.
- If a void is encountered alignments may be rerouted to avoid the karst feature and lessen; the potential of subsidence or collapse of karst features, buildup of toxic or combustible gas, or other possible impacts to cave and karst resources from the buried pipeline.
- Special restoration stipulations or realignment may be required at such intersections, if any.
- A leak detection plan **will be submitted to the BLM Carlsbad Field Office for approval** prior to pipeline installation. The method could incorporate gauges to detect pressure drops, situating values 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.
- Regular monitoring is required to quickly identify leaks for their immediate and proper treatment.
- All spills or leaks will be reported to the BLM immediately for their immediate and proper treatment.

BURIED PIPELINE STIPULATIONS

A copy of the application (Grant, APD, or Sundry Notice) and attachments, including conditions of approval, survey plat and/or map, will be on location during construction. BLM personnel may request to you a copy of your permit during construction to ensure compliance with all stipulations.

Holder agrees to comply with the following stipulations to the satisfaction of the Authorized Officer:

1. The Holder shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of public lands under this grant.

2. The Holder shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, the holder shall comply with the Toxic Substances Control Act of 1976 as amended, 15 USC 2601 et seq. (1982) with regards to any toxic substances that are used, generated by or stored on the right-of-way or on facilities authorized under this right-of-way grant. (See 40 CFR Part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193.) Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation, and Liability Act, section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the authorized officer concurrent with the filing of the reports to the involved Federal agency or State government.

3. The holder agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the

Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601, et seq. or the Resource Conservation and Recovery Act, 42 U.S.C.6901, et seq.) on the Right-of-Way (unless the release or threatened release is wholly unrelated to the Right-of-Way holder's activity on the Right-of-Way), or resulting from the activity of the Right-of-Way holder on the Right-of-Way. This agreement applies without regard to whether a release is caused by the holder, its agent, or unrelated third parties.

4. 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 holder, regardless of fault. Upon failure of holder 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 he deems 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 holder. Such action by the Authorized Officer shall not relieve holder of any responsibility as provided herein.

5. All construction and maintenance activity will be confined to the authorized right-of-way.

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

7. The maximum allowable disturbance for construction in this right-of-way will be **30** feet:

- Blading of vegetation within the right-of-way 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*.)

- Clearing of brush species within the right-of-way 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.*)

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

8. 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.

9. The holder shall minimize disturbance to existing fences and other improvements on public lands. The holder is required to promptly repair improvements to at least their former state. Functional use of these improvements will be maintained at all times. The holder will contact the owner of any improvements prior to disturbing them. When necessary to pass through a fence line, the fence shall be braced on both sides of the passageway prior to cutting of the fence. No permanent gates will be allowed unless approved by the Authorized Officer.

10. Vegetation, soil, and rocks left as a result of construction or maintenance activity will be randomly scattered on this right-of-way and will not be left in rows, piles, or berms, unless otherwise approved by the Authorized Officer. The entire right-of-way 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.

11. In those areas where erosion control structures are required to stabilize soil conditions, the holder will install such structures as are suitable for the specific soil conditions being encountered and which are in accordance with sound resource management practices.

12. The holder will reseed all disturbed areas. Seeding will be done according to the attached seeding requirements, using the following seed mix.

☐**Seed Mixture 1**
☒**Seed Mixture 2**
☐**Seed Mixture 2/LPC**
☐**Seed Mixture 3**
☐**Seed Mixture 4**
☐**Seed Mixture Aplomado Falcon Mixture**

13. All above-ground structures not subject to safety requirements shall be painted by the holder to blend with the natural color of the landscape. The paint used shall be color which simulates "Standard Environmental Colors" – **Shale Green**, Munsell Soil Color No. 5Y 4/2.

14. The pipeline will be identified by signs at the point of origin and completion of the right-of-way and at all road crossings. At a minimum, signs will state the holder's name, 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.

15. 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 holder before maintenance begins. The holder 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.

16. 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. An evaluation of the discovery will be made by the Authorized Officer to determine appropriate actions to prevent the loss of significant cultural or scientific values. 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 Stipulation 17 for more information.

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.

17. The holder is hereby obligated to comply with procedures established in the Native American Graves Protection and Repatriation Act (NAGPRA) to protect such cultural items as human remains, associated funerary objects, sacred objects, and objects of cultural patrimony discovered inadvertently during the course of project implementation. In the event that any of the cultural items listed above are discovered during the course of project work, the proponent shall immediately halt the disturbance and contact the BLM within 24 hours for instructions. The proponent or initiator of any project shall be held responsible for protecting, evaluating, reporting, excavating, treating, and disposing of these cultural items according to the procedures established by the BLM in consultation with Indian Tribes."

18. 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. An evaluation of the discovery will be made by the Authorized Officer to determine appropriate actions to prevent the loss of significant cultural or scientific values. 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.

19. 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 associated roads, 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.

20. 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.

21. Special Stipulations:

Karst:

- The BLM, Carlsbad Field Office, will be informed immediately if any subsurface drainage channels, passages, or voids are intersected by trenching, and no pipe will be laid in the trench at that point until clearance has been issued by the Authorized Officer.
- If a void is encountered alignments may be rerouted to avoid the karst feature and lessen; the potential of subsidence or collapse of karst features, buildup of toxic or combustible gas, or other possible impacts to cave and karst resources from the buried pipeline.
- Special restoration stipulations or realignment may be required at such intersections, if any.
- A leak detection plan **will be submitted to the BLM Carlsbad Field Office for approval** prior to pipeline installation. The method could incorporate gauges to detect pressure drops, situating values 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.
- Regular monitoring is required to quickly identify leaks for their immediate and proper treatment.
- All spills or leaks will be reported to the BLM immediately for their immediate and proper treatment.

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 is important to increasing the success of revegetating the site. 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.

Seed Mixture 2, for Sandy Sites

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
Sand dropseed (Sporobolus cryptandrus)	1.0
Sand love grass (Eragrostis trichodes)	1.0
Plains bristlegrass (Setaria macrostachya)	2.0

*Pounds of pure live seed:

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

PECOS DISTRICT
DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	NOVO Oil & Gas Northern Delaware
WELL NAME & NO.:	Tickety Boo 2109 Fed Com 123H
LOCATION:	Sec 21-19S-30E-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**				

Gamma ray and neutron logs are required for this area from the deepest well on each pad from surface to TVD. Data density is extremely low and there are no good correlation wells to use. Picks are only from Petra contours and are subject to change with better information.

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 **13-3/8** inch surface casing shall be set at approximately **400 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. ***Set depth adjusted per BLM geologist.***

    a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
    b. Wait on cement (WOC) time for a primary cement job will be a minimum of **24**

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hours in the Potash Area or 500 pounds compressive strength, whichever is greater. (This is to include the lead cement)

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

2. The minimum required fill of cement behind the **10-3/4** inch intermediate casing **(*set at 2,014 ft per BLM geologist*)** 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 R111 Potash Areas if cement does not circulate to surface on the first two salt protection casing strings, the cement on the 3rd casing salt string must come to surface.

❖ **Special Capitan Reef requirements.** If lost circulation (50% or greater) occurs below the Base of the Salt, the operator shall do the following:

- Switch to freshwater mud to protect the Capitan Reef and use freshwater mud until setting the intermediate casing. The appropriate BLM office is to be notified for a PET to witness the switch to fresh water.

- Daily drilling reports from the Base of the Salt to the setting of the intermediate casing are to be submitted to the BLM CFO engineering staff via e-mail by 0800 hours each morning. Any lost circulation encountered is to be recorded on these drilling reports. The daily drilling report should show mud volume per shift/tour. Failure to submit these reports will result in an Incidence of Non-Compliance being issued for failure to comply with the Conditions of Approval. If not already planned, the operator shall run a caliper survey for the intermediate well bore and submit to the appropriate BLM office.

3. The minimum required fill of cement behind the **8-5/8** inch intermediate casing **(*set at 3,700 ft per BLM geologist*)** is:

The operator has proposed to set the DV tool at **2070'**. This is below the Salado and is an acceptable set point. Operator may adjust depth of DV tool if it remains below the Salado and cement volumes are adjusted accordingly. The DV tool may be cancelled if cement circulates to surface on the first stage.

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

b. Second stage above DV tool:
   - Cement to surface. If cement does not circulate 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.**

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

   - Cement should tie-back at least **50 feet** on top of Capitan Reef top or **500 feet** into the previous casing, whichever is greater. 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.**

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. Operator has proposed a multi-bowl wellhead assembly. 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.
   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. 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.
   e. Whenever any seal subject to test pressure is broken, all the tests in 43 CFR 3172 must be followed.

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.

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H_2S Drilling Operations Plan

a. All personnel will be trained in H_2S working conditions as required by Onshore Order 6 before drilling out of the surface casing.

b. Two briefing areas will be established. Each will be at least 150' from the wellhead, perpendicular from one another, and easily entered and exited. See H_2S page 5 for more details.

c. H_2S Safety Equipment/Systems:

i. Well Control Equipment

- Flare line will be $\geq$150' from the wellhead and ignited by a pilot light.
- Beware of SO_2 created by flaring.
- Choke manifold will include a remotely operated choke.
- Mud gas separator

ii. Protective Equipment for Essential Personnel

- Every person on site will be required to wear a personal H_2S and SO_2 monitor at all times while on site. Monitors will not be worn on hard hats. Monitors will be worn on the front of the chest.
- One self-contained breathing apparatus (SCBA) 30-minute rescue pack will be at each briefing area. Two 30-minute SCBA packs will be stored in the safety trailer.
- Four work/escape packs will be on the rig floor. Each pack will have a long enough hose to allow unimpaired work activity.
- Four emergency escape packs will be in the doghouse for emergency evacuation.
- Hand signals will be used when wearing protective breathing apparatus.
- Stokes litter or stretcher
- Two full OSHA compliant body harnesses
- A 100-foot long x 5/8" OSHA compliant rope
- One 20-pound ABC fire extinguisher

iii. H_2S Detection & Monitoring Equipment

- Every person on site will be required to wear a personal H_2S and SO_2 monitor at all times while on site. Monitors will not be worn on hard hats. Monitors will be worn on the front of the chest.
- A stationary detector with three sensors will be in the doghouse.
- Sensors will be installed on the rig floor, bell nipple, and at the end of the flow line or where drilling fluids are discharged.
- Visual alarm will be triggered at 10 ppm.
- Audible alarm will be triggered at 10 ppm.
- Calibration will occur at least every 30 days. Gas sample tubes will be kept in the safety trailer.

iv. Visual Warning System

- Color-coded H_2S condition sign will be set at the entrance to the pad.
- Color-coded condition flag will be installed to indicate current H_2S conditions.
- Two wind socks will be installed that will be visible from all sides.

v. Mud Program

- A water based mud with a pH of $\geq$10 will be maintained to control corrosion, H_2S gas returns to the surface, and minimize sulfide stress cracking and embrittlement.
- Drilling mud containing H_2S gas will be degassed at an optimum location for the rig configuration.
- This gas will be piped into the flare system.
- Enough mud additives will be on location to scavenge and/or neutralize H_2S where formation pressures are unknown.

vi. Metallurgy

- All equipment that has the potential to be exposed to H_2S will be suitable for H_2S service.
- Equipment that will meet these metallurgical standards include the drill string, casing, wellhead, BOP assembly, casing head and spool, rotating head, kill lines, choke, choke manifold and lines, valves, mud-gas separators, DST tools, test units, tubing, flanges, and other related equipment (elastomer packings and seals).

vii. Communication from well site

- Cell phones and/or two-way radios will be used to communicate from the well site.

d. A remote-controlled choke, mud-gas separator, and a rotating head will be installed before drilling or testing any formation expected to contain H_2S.

Company Personnel to be Notified

Kurt Shipley, Vice-President - Operations	Office: (405) 609-1596

Local & County Agencies

Loving Fire Department	911 or (575) 745-3600
Eddy County Sheriff (Carlsbad)	911 (575) 887-7551
Eddy County Emergency Management (Carlsbad)	(575) 887-9511
Carlsbad Medical Center Hospital	(575) 887-4100
Eddy County South Road Department (Carlsbad)	(575) 885-4835

State Agencies

NM State Police (Carlsbad)	(575) 885-3138
NM Oil Conservation (Artesia)	(575) 748-1283
NM Oil Conservation (Santa Fe)	(505) 476-3440
NM Dept. of Transportation (Roswell)	(575) 637-7201

Federal Agencies

BLM Carlsbad Field Office	(575) 706-2779
On-Call (Eddy County)	(575) 361-2822
On-Call (Lea County)	(575) 689-5981
National Response Center	(800) 424-8802
US EPA Region 6 (Dallas)	(800) 887-6063
	(214) 665-6444

Residents within 2 miles: none

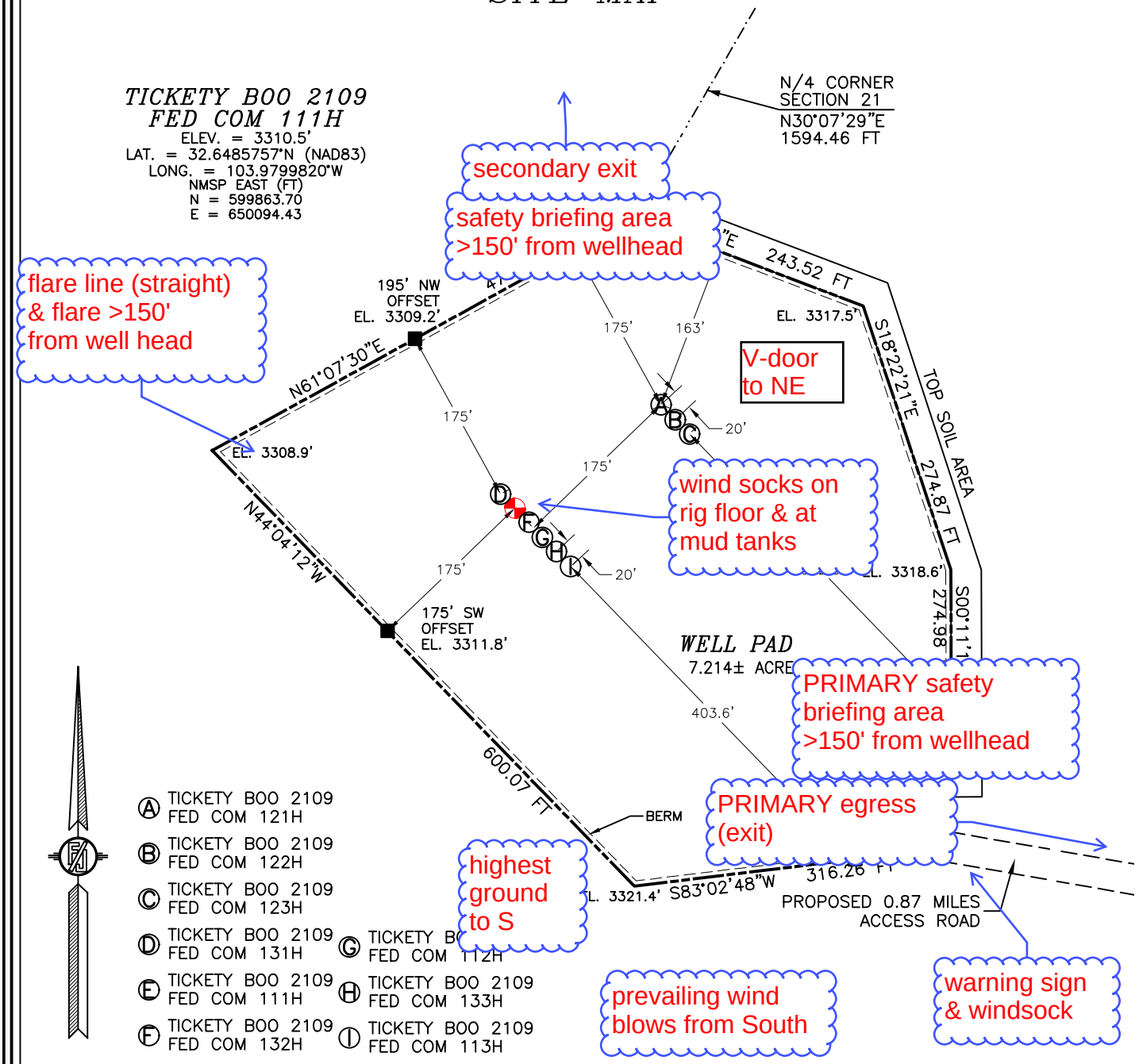
Air Evacuation

Med Flight Air Ambulance (Albuquerque)	(800) 842-4431
Lifeguard (Albuquerque)	(888) 866-7256

Veterinarians

Desert Willow Veterinary Services (Carlsbad)	(575) 885-3399
Animal Care Center (Carlsbad)	(575) 885-5352

SECTION 21, TOWNSHIP 19 SOUTH, RANGE 30 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO
SITE MAP



010 50 100 200
SCALE 1" = 100'

DIRECTIONS TO LOCATION
FROM THE INTERSECTION OF ST. ROAD 360 (BLUESTEM) & CR. 235 (CURRY COMB), GO NORTH ON ST. ROAD 360 APPROX. 3.7 MILES TO A 2-TRACK ROAD AND ROAD SURVEY ON LEFT (WEST), TURN RIGHT AND FOLOW 2-TRACK ROAD AND ROAD SURVEY WEST APPROX. 0.3 MILES, TURN LEFT (SOUTH) AND CONTINUE FOLLOWING 2-TRACK ROAD AND ROAD SURVEY SOUTH APPROX. 0.4 MILES, TURN RIGHT (WEST), AND FOLLOW ROAD SURVEY APPROX. 679' TO THE SOUTHEAST PAD CORNER FOR THIS LOCATION.

I, FILIMON F. JARAMILLO, A NEW MEXICO REGISTERED PROFESSIONAL SURVEYOR CERTIFY THAT I DIRECTED AND WAS RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY WAS PERFORMED ACCORDING TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THIS SURVEY AND PLAT MEET THE MINIMUM STANDARDS OF SURVEYING IN NEW MEXICO.

FILIMON F. JARAMILLO NMPS 12797

NEW MEXICO PROFESSIONAL SURVEYOR

NOVO OIL & GAS NORTHERN DELAWARE, LLC
TICKETY BOO 2109 FED COM 111H
LOCATED 1663 FT. FROM THE NORTH LINE
AND 1719 FT. FROM THE WEST LINE OF
SECTION 21, TOWNSHIP 19 SOUTH,
RANGE 30 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO

MARCH 29, 2023

SURVEY NO. 9544A

MADRON SURVEYING, INC. 301 SOUTH CANAL (575) 234-3341 CARLSBAD, NEW MEXICO

NOVO OIL & GAS NORTHERN DELAWARE, LLC plans to operate a Closed Loop System.

Operator Name: NOVO OIL AND GAS NORTHERN DELAWARE LLC

Well Name: TICKETY BOO 2109 FED COM **Well Number:** 121H

Is the proposed well in an area containing other mineral resources? USEABLE WATER,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:** TICKETY BOO FED COM **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: 12 Miles **Distance to nearest well:** 20 FT **Distance to lease line:** 776 FT

Reservoir well spacing assigned acres Measurement: 720 Acres

Well plat: TB_121H_C102_20230510141605.pdf

Well work start Date: 02/01/2024 **Duration:** 90 DAYS

Section 3 - Well Location Table

Survey Type: RECTANGULAR

Describe Survey Type:

Datum: NAD83 **Vertical Datum:** NAVD88

Survey number: 12797 **Reference Datum:** KELLY BUSHING

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	1561	FNL	1864	FWL	19S	30E	21	Aliquot SENW	32.648858	-103.9795109	EDDY	NEW MEXICO	NEW MEXICO	F	NMLC062376	3314	0	0	Y
KOP Leg #1	1797	FNL	330	FWL	19S	30E	21	Aliquot SWNW	32.648208	-103.9844946	EDDY	NEW MEXICO	NEW MEXICO	F	NMLC062376	-4438	7998	7752	Y
PPP Leg #1-1	1220	FNL	330	FWL	19S	30E	21	Aliquot NWNW	32.649795	-103.9844938	EDDY	NEW MEXICO	NEW MEXICO	F	NMLC062376	-5011	8902	8325	Y

Operator Name: NOVO OIL AND GAS NORTHERN DELAWARE LLC

Well Name: TICKETY BOO 2109 FED COM **Well Number:** 121H

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	0	FNL	330	FWL	19S	30E	16	Aliquot SWSW	32.6531471	-103.9844922	EDDY	NEW MEXICO	NEW MEXICO	S	STATE	-5002	10134	8316	Y
PPP Leg #1-3	0	FNL	330	FWL	19S	30E	9	Aliquot SWSW	32.6676505	-103.9844851	EDDY	NEW MEXICO	NEW MEXICO	F	NMNM 556292	-4965	15401	8279	Y
EXIT Leg #1	10	FNL	330	FWL	19S	30E	9	Aliquot NWNW	32.6821188	-103.9844778	EDDY	NEW MEXICO	NEW MEXICO	F	NMNM 02337	-4928	20662	8242	Y
BHL Leg #1	10	FNL	330	FWL	19S	30E	9	Aliquot NWNW	32.6821188	-103.9844778	EDDY	NEW MEXICO	NEW MEXICO	F	NMNM 02337	-4928	20662	8242	Y

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

Drilling Plan Data Report
03/09/2024

APD ID: 10400092226 **Submission Date:** 06/05/2023

Operator Name: NOVO OIL AND GAS NORTHERN DELAWARE LLC

Well Name: TICKETY BOO 2109 FED COM **Well Number:** 121H

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
13035046	QUATERNARY	3314	0	0	OTHER : None	USEABLE WATER	N
13035047	RUSTLER ANHYDRITE	3075	239	239	ANHYDRITE	NONE	N
13035048	TOP SALT	2975	339	339	SALT	NONE	N
13035049	YATES	1750	1564	1564	SANDSTONE, SHALE	NONE	N
13035050	CAPITAN REEF	1195	2119	2119	DOLOMITE, LIMESTONE	NONE	N
13035051	CHERRY CANYON	-785	4099	4099	SANDSTONE, SHALE, SILTSTONE	NATURAL GAS, OIL	N
13035052	BRUSHY CANYON	-1655	4969	4969	SANDSTONE, SHALE, SILTSTONE	NATURAL GAS, OIL	N
13035053	BONE SPRING LIME	-2600	5914	5914	LIMESTONE, SHALE	NATURAL GAS, OIL	N
13035055	BONE SPRING 1ST	-3960	7274	7274	SANDSTONE, SHALE, SILTSTONE	NATURAL GAS, OIL	N
13035044	BONE SPRING 2ND	-4310	7624	7624	LIMESTONE, SHALE	NATURAL GAS, OIL	N
13035045	BONE SPRING 2ND	-4875	8189	8189	SANDSTONE, SHALE, SILTSTONE	NATURAL GAS, OIL	Y

Section 2 - Blowout Prevention

Pressure Rating (PSI): 5M **Rating Depth:** 15000

Equipment: A 13.625" 5M Blowout Preventer system will be installed on a multi-bowl (speed head) wellhead with a 13.625" flanged casing spool. Top flange of casing spool will be set in a cellar below ground level. BOP system will consist of a single pipe ram on the bottom, mud cross double pipe ram with blind rams on bottom and pipe rams on top, and annular preventer. Blowout preventer will be installed on top of the 13.375" surface casing and will remain installed to TD of the well. Wellhead, blowout preventer, and choke manifold diagram are included.

Requesting Variance? YES

Variance request: Variance is requested to use a co-flex hose between the BOP system and choke manifold. A typical co-flex pressure test certificate is attached. An equipment specific co-flex pressure test certificate

BOP SHEET

Annular Preventer
13-3/8 2,500 PSI WP

Ram Preventers
13-3/8" 5,000 PSI WP Double Ram
13-3/8" 5,000 PSI WP Single Ram

Test the pipe rams, blind rams, floor valves (IBOP and/or upper Kelly valve), choke lines and manifold to 250 psi/5,000 psi with a test plug and a test pump.

Test the annular to 250 psi/2,500 psi with same as above.

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 323504

CONDITIONS

Operator: NOVO OIL & GAS NORTHERN DELAWARE, LLC 300 N. Marienfeld St Ste 1000 Midland, TX 79701	OGRID: 372920
	Action Number: 323504
	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	4/10/2024
ward.rikala	Will require a File As Drilled C-102 and a Directional Survey with the C-104	4/10/2024
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	4/10/2024
ward.rikala	Cement is required to circulate on both surface and intermediate1 strings of casing	4/10/2024
ward.rikala	If cement does not circulate on any string, a CBL is required for that string of casing	4/10/2024
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	4/10/2024