Form 3160-3
(October 2024)

FORM APPROVED
OMB No. 1004-0220
Expires: October 31, 2027

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.: NMNM19597

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.: CARDIGAN FED COM 124H

2. Name of Operator: FLAT CREEK RESOURCES LLC

9. API Well No.: 30-015-58518

3a. Address: 777 MAIN STREET, SUITE 3600, FORT WORTH, TX 761

3b. Phone No. *(include area code)*: (817) 310-8570

10. Field and Pool, or Exploratory: WINCHESTER/BONE SPRING WEST

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

At surface: NESW / 2023 FSL / 1865 FWL / LAT 32.6586261 / LONG -104.2348199

At proposed prod. zone: SWSE / 535 FSL / 2638 FEL / LAT 32.6548548 / LONG -104.2664499

11. Sec., T. R. M. or Blk. and Survey or Area: SEC 13/T19S/R27E/NMP

14. Distance in miles and direction from nearest town or post office*: 14 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): 545 feet

16. No of acres in lease: 280

17. Spacing Unit dedicated to this well: 960.0

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.: 30 feet

19. Proposed Depth: 6498 feet / 17364 feet

20. BLM/BIA Bond No. in file: FED: NMB001675

21. Elevations (Show whether DF, KDB, RT, GL, etc.): 3480 feet

22. Approximate date work will start*: 02/01/2027

23. Estimated duration: 60 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)	CORY WALK / Ph: (817) 310-8570	03/27/2026

Title: Permitting Agent

Approved by *(Signature)*	Name *(Printed/Typed)*	Date
(Electronic Submission)	CODY LAYTON / Ph: (575) 234-5959	05/08/2026

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: 05/08/2026

C-102	State of New Mexico Energy, Minerals & Natural Resources Department OIL CONSERVATION DIVISION	Revised July 9, 2024
Submit Electronically Via OCD Permitting		Submittal Type: ☒ Initial Submittal ☐ Amended Report ☐ As Drilled

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
30-015- 58518	97569	WINCHESTER; BONE SPRING, WEST

Property Code	Property Name	Well Number
336864	CARDIGAN FED COM	124H

OGRID No.	Operator Name	Ground Level Elevation
374034	FLAT CREEK RESOURCES, LLC.	3480'

Surface Owner: ☒ State ☐ Fee ☐ Tribal ☐ Federal

Mineral Owner: ☒ State ☐ Fee ☐ Tribal ☒ Federal

Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the N/S	Feet from the E/W	Latitude	Longitude	County
K	13	19-S	27-E	-	2023' S	1865' W	N 32.6586261	W 104.2348199	EDDY

Bottom Hole Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the N/S	Feet from the E/W	Latitude	Longitude	County
O	15	19-S	27-E	-	535' S	2638' E	N 32.6548548	W 104.2664499	EDDY

Dedicated Acres	Infill or Defining Well	Defining Well API	Overlapping Spacing Unit (Y/N)	Consolidated Code
960	Infill	30-015-56003 (132H)	N	C

Order Numbers: will file NSP

Well Setbacks are under Common Ownership: ☒ Yes ☐ No

Kick Off Point (KOP)

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the N/S	Feet from the E/W	Latitude	Longitude	County
N	13	19-S	27-E	-	628' S	2581' W	N 32.6547514	W 104.2324156	EDDY

First Take Point (FTP)

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the N/S	Feet from the E/W	Latitude	Longitude	County
N	13	19-S	27-E	-	627' S	2533' W	N 32.6547519	W 104.2325726	EDDY

Last Take Point (LTP)

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the N/S	Feet from the E/W	Latitude	Longitude	County
O	15	19-S	27-E	-	533' S	2543' E	N 32.6548539	W 104.2661411	EDDY

Unitized Area or Area of Uniform Intrest	Spacing Unity Type	Ground Floor Elevation
Com: NMNM106715633	☒ Horizontal ☐ Vertical	3480'

OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief; and, if the well is a vertical or directional well, 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 a working interest or unleased mineral interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

If this well is a horizontal well, I further certify that this organization has received The consent of at least one lessee or owner of a working interest or unleased mineral interest in each tract (in the target pool or formation) in which any part of the well's completed interval will be located or obtained a compulsory pooling order from the division.

Rodney Littleton April 16, 2026

Signature Date

Rodney Littleton

Print Name

rlittleton@freedomenergy.com

E-mail Address

SURVEYORS 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.

RAMON DOMINGUEZ NEW MEXICO 24508 PROFESSIONAL SURVEYOR

4/16/2026 1:15:38 PM

Signature and Seal of Professional Surveyor Date

Certificate Number

Date of Survey: 12/16/2025

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C-102

Submit Electronically
Via OCD Permitting

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION

Revised July 9, 2024

Submittal Type:
- [X] Initial Submittal
- [ ] Amended Report
- [ ] As Drilled

Property Name and Well Number

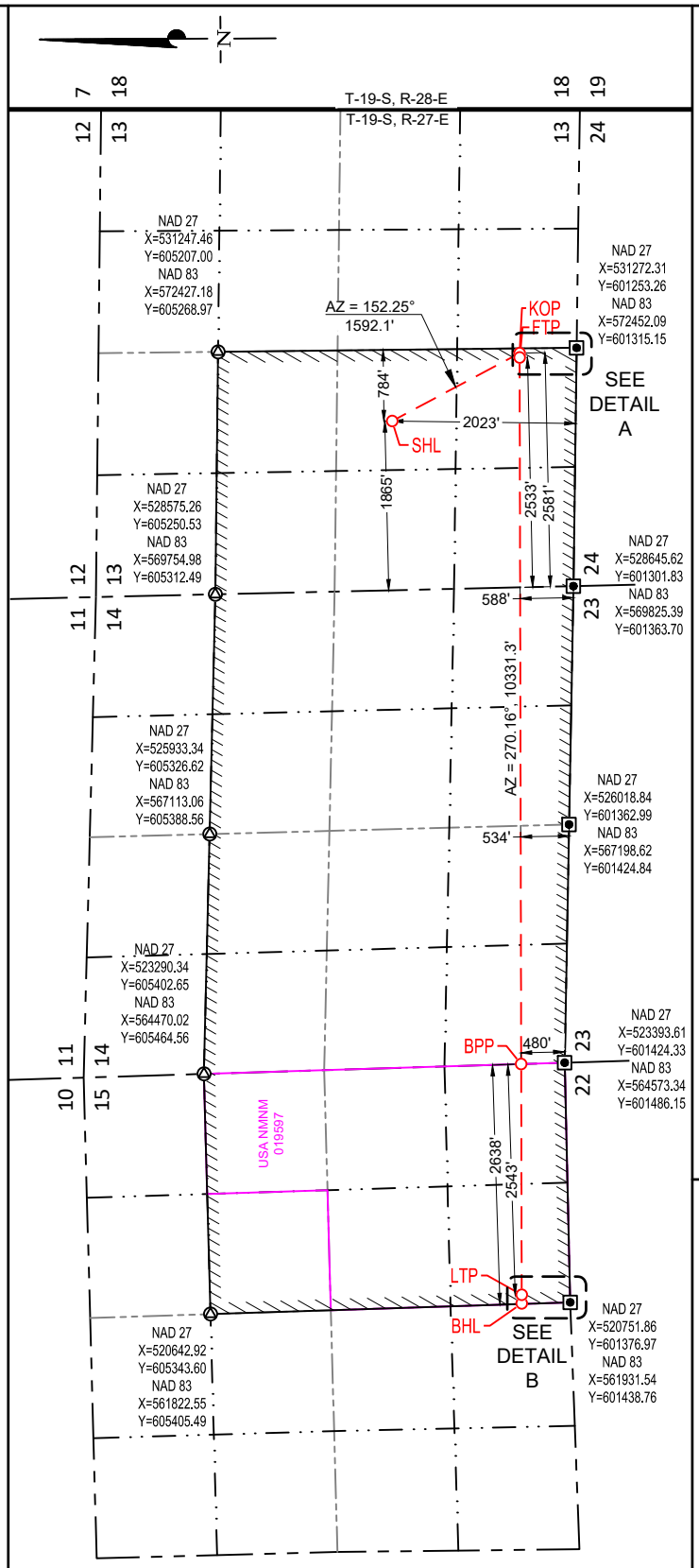
CARDIGAN FED COM 124H

SURFACE LOCATION (SHL)
NEW MEXICO EAST
NAD 1983
X=571655 Y=603353
LAT.: N 32.6586261
LONG.: W 104.2348199
NAD 1927
X=530475 Y=603291
LAT.: N 32.6585099
LONG.: W 104.2343096
2023' FSL 1865' FWL

KICK OFF POINT (KOP)
NEW MEXICO EAST
NAD 1983
X=572396 Y=601944
LAT.: N 32.6547514
LONG.: W 104.2324156
NAD 1927
X=531217 Y=601882
LAT.: N 32.6546352
LONG.: W 104.2319054
628' FSL 2581' FWL

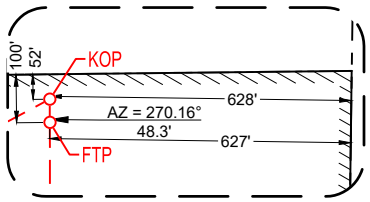
FIRST TAKE POINT (FTP)
NEW MEXICO EAST
NAD 1983
X=572348 Y=601944
LAT.: N 32.6547519
LONG.: W 104.2325726
NAD 1927
X=531168 Y=601883
LAT.: N 32.6546357
LONG.: W 104.2320624
627' FSL 2533' FWL

BLM PERF. POINT (BPP)
NEW MEXICO EAST
NAD 1983
X=564561 Y=601966
LAT.: N 32.6548296
LONG.: W 104.2578752
NAD 1927
X=523381 Y=601904
LAT.: N 32.6547137
LONG.: W 104.2573643
480' FSL 0' FWL

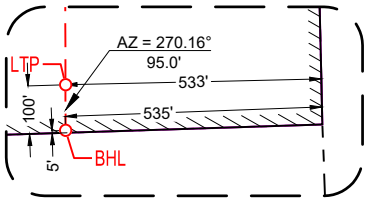


LAST TAKE POINT (LTP)
NEW MEXICO EAST
NAD 1983
X=562017 Y=601973
LAT.: N 32.6548539
LONG.: W 104.2661411
NAD 1927
X=520837 Y=601912
LAT.: N 32.6547381
LONG.: W 104.2656299
533' FSL 2543' FEL

BOTTOM HOLE LOCATION (BHL)
NEW MEXICO EAST
NAD 1983
X=561922 Y=601974
LAT.: N 32.6548548
LONG.: W 104.2664499
NAD 1927
X=520742 Y=601912
LAT.: N 32.6547390
LONG.: W 104.2659387
535' FSL 2638' FEL



DETAIL VIEW A
SCALE: 1" = 400'



DETAIL VIEW B
SCALE: 1" = 400'

SURVEYORS CERTIFICATION

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

12/16/2025
Date of Survey

Signature and Seal of Professional Surveyor:

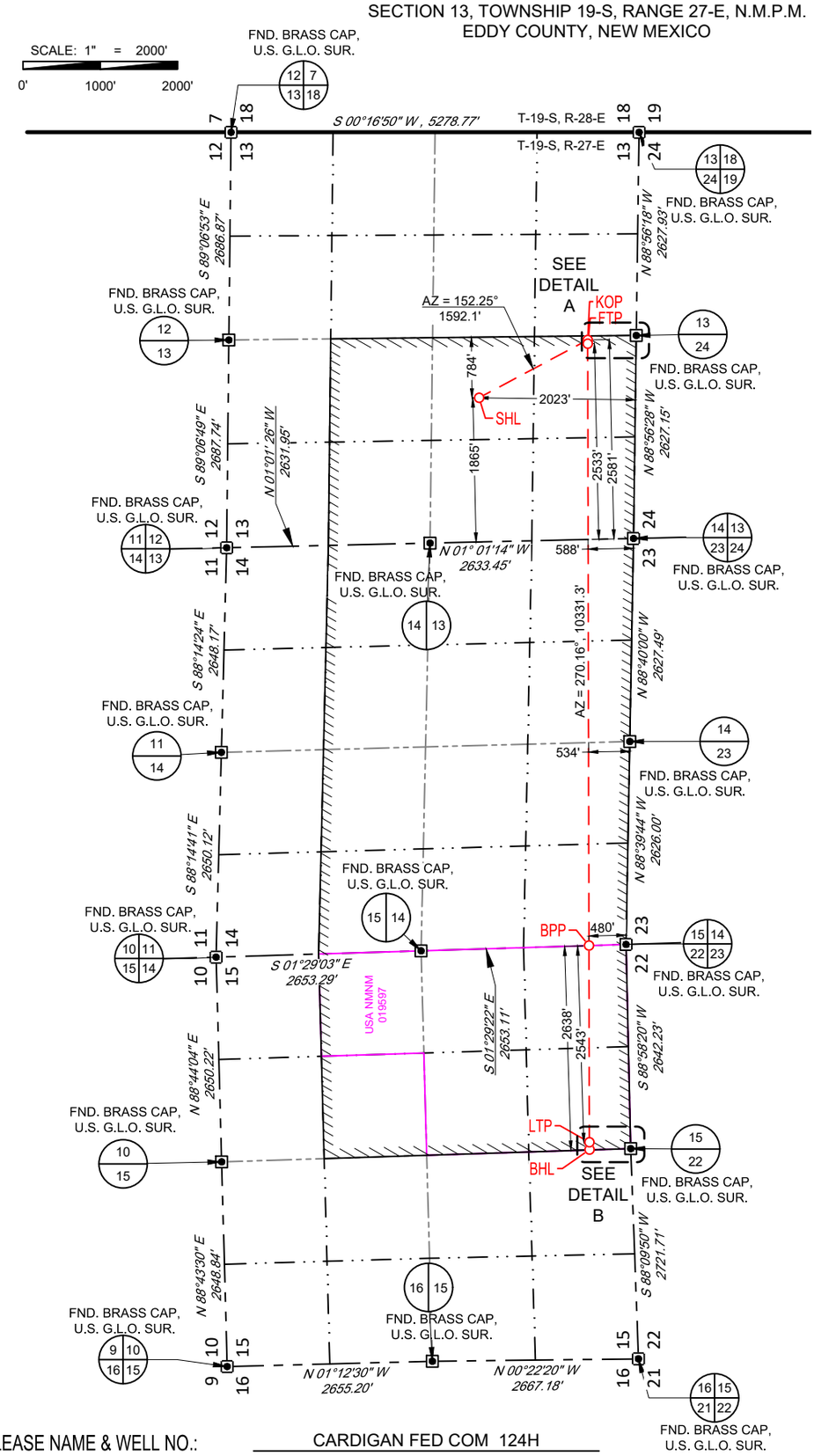
RAMON DOMINGUEZ
NEW MEXICO
24508
PROFESSIONAL SURVEYOR

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FLAT CREEK RESOURCES

SECTION 13, TOWNSHIP 19-S, RANGE 27-E, N.M.P.M.
EDDY COUNTY, NEW MEXICO



SURFACE LOCATION (SHL)
NEW MEXICO EAST
NAD 1983
X=571655 Y=603353
LAT.: N 32.6586261
LONG.: W 104.2348199
2023' FSL 1865' FWL

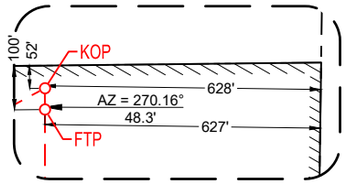
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NEW MEXICO EAST
NAD 1983
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LAT.: N 32.6547514
LONG.: W 104.2324156
628' FSL 2581' FWL

FIRST TAKE POINT (FTP)
NEW MEXICO EAST
NAD 1983
X=572348 Y=601944
LAT.: N 32.6547519
LONG.: W 104.2325726
627' FSL 2533' FWL

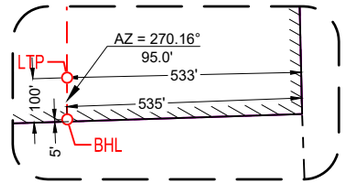
BLM PERF. POINT (BPP)
NEW MEXICO EAST
NAD 1983
X=564561 Y=601966
LAT.: N 32.6548296
LONG.: W 104.2578752
480' FSL 0' FWL

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NEW MEXICO EAST
NAD 1983
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LAT.: N 32.6548539
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BOTTOM HOLE LOCATION (BHL)
NEW MEXICO EAST
NAD 1983
X=561922 Y=601974
LAT.: N 32.6548548
LONG.: W 104.2664499
535' FSL 2638' FEL



DETAIL VIEW A
SCALE: 1" = 400'



DETAIL VIEW B
SCALE: 1" = 400'

LEASE NAME & WELL NO.: CARDIGAN FED COM 124H

SECTION 13 TWP 19-S RGE 27-E SURVEY N.M.P.M.
COUNTY EDDY STATE NM
DESCRIPTION 2023' FSL & 1865' FWL

DISTANCE & DIRECTION

FROM INT. OF NM-529, & US-82W, GO WEST ON US-82W ±18.9 MILES, THENCE LEFT ON ILLINOIS CAMP RD ±9.4 MILES, THENCE RIGHT ON NETHERLIN RD. ±0.2 MILES, THENCE SOUTHWEST (LEFT) ON A PROPOSED RD. ±1510 FEET TO A POINT ±295 FEET SOUTHEAST OF THE LOCATION.

RAMON DOMINGUEZ NEW MEXICO 24508 PROFESSIONAL SURVEYOR

4/16/2026 1:15:39 PM

Ramon A. Dominguez, P.S. No. 24508

ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREON ARE GRID BASED UPON THE NEW MEXICO COORDINATE SYSTEM OF 1983, EAST ZONE, U.S. SURVEY FEET.

THIS EASEMENT/SERVITUDE LOCATION SHOWN HEREON HAS BEEN SURVEYED ON THE GROUND UNDER MY SUPERVISION AND PREPARED ACCORDING TO THE EVIDENCE FOUND AT THE TIME OF SURVEY, AND DATA PROVIDED BY FLAT CREEK RESOURCES, LLC. THIS CERTIFICATION IS MADE AND LIMITED TO THOSE PERSONS OR ENTITIES SHOWN ON THE FACE OF THIS PLAT AND IS NON-TRANSFERABLE. THIS SURVEY IS CERTIFIED FOR THIS TRANSACTION ONLY.

TOPOGRAPHIC
LOYALTY INNOVATION LEGACY
481 WINSCOTT ROAD, Ste. 200 • BENBROOK, TEXAS 76126
TELEPHONE: (817) 744-7512 • FAX (817) 744-7554
TEXAS FIRM REGISTRATION NO. 10042504
WWW.TOPOGRAPHIC.COM

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State of New Mexico
Energy, Minerals and Natural Resources Department

Submit Electronically
Via E-permitting

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

NATURAL GAS MANAGEMENT PLAN

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

Section 1 – Plan Description
Effective May 25, 2021

I. Operator: Flat Creek Resources, LLC **OGRID:** 374034 **Date:** 05 / 11 / 2026

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

If Other, please describe: _____

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

Well Name	API	ULSTR	Footages	Anticipated Oil BBL/D	Anticipated Gas MCF/D	Anticipated Produced Water BBL/D
Cardigan Fed Com 122H		K-13-T19S-R27E	2083' S 1866' W	614	2517	5526
Cardigan Fed Com 123H		K-13-T19S-R27E	2053' S 1866' W	614	2517	5526
Cardigan Fed Com 124H		K-13-T19S-R27E	2023' S 1865' W	614	2517	5526

IV. Central Delivery Point Name: Cardigan Central Tank Battery [See 19.15.27.9(D)(1) NMAC]

V. Anticipated Schedule: Provide the following information for each new or recompleted well or set of wells proposed to be drilled or proposed to be recompleted from a single well pad or connected to a central delivery point.

Well Name	API	Spud Date	TD Reached Date	Completion Commencement Date	Initial Flow Back Date	First Production Date
Cardigan Fed Com 122H		October 1, 2026	October 14, 2026	January 1, 2027	March 1, 2027	March 15, 2027
Cardigan Fed Com 123H		October 2, 2026	October 26, 2026	January 1, 2027	March 1, 2027	March 15, 2027
Cardigan Fed Com 124H		March 3, 2027	November 7, 2026	January 1, 2027	March 1, 2027	March 15, 2027

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

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

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

Section 2 – Enhanced Plan
EFFECTIVE APRIL 1, 2022

Beginning April 1, 2022, an operator that is not in compliance with its statewide natural gas capture requirement for the applicable reporting area must complete this section.

☒ Operator certifies that it is not required to complete this section because Operator is in compliance with its statewide natural gas capture requirement for the applicable reporting area.

IX. Anticipated Natural Gas Production:

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

X. Natural Gas Gathering System (NGGS):

Operator	System	ULSTR of Tie-in	Anticipated Gathering Start Date	Available Maximum Daily Capacity of System Segment Tie-in

XI. Map. ☐ Attach an accurate and legible map depicting the location of the well(s), the anticipated pipeline route(s) connecting the production operations to the existing or planned interconnect of the natural gas gathering system(s), and the maximum daily capacity of the segment or portion of the natural gas gathering system(s) to which the well(s) will be connected.

XII. Line Capacity. The natural gas gathering system ☐ will ☐ will not have capacity to gather 100% of the anticipated natural gas production volume from the well prior to the date of first production.

XIII. Line Pressure. Operator ☐ does ☐ does not anticipate that its existing well(s) connected to the same segment, or portion, of the natural gas gathering system(s) described above will continue to meet anticipated increases in line pressure caused by the new well(s).

☐ Attach Operator's plan to manage production in response to the increased line pressure.

XIV. Confidentiality: ☐ Operator asserts confidentiality pursuant to Section 71-2-8 NMSA 1978 for the information provided in Section 2 as provided in Paragraph (2) of Subsection D of 19.15.27.9 NMAC, and attaches a full description of the specific information for which confidentiality is asserted and the basis for such assertion.

Section 3 - Certifications

Effective May 25, 2021

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

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

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

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

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

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

Section 4 - Notices

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

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

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

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

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

Signature:	Rodney Littleton
Printed Name:	Rodney Littleton
Title:	VP of Drilling
E-mail Address:	rlittleton@freedomenergy.com
Date:	May 11,2026
Phone:	817-310-8578

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

Approved By:	
Title:	
Approval Date:	
Conditions of Approval:	

VI. SEPARATION EQUIPMENT

Flat Creek Resources, LLC, will install:

- four 48” OD x 15’, 500#, 3 phase separators
- one 96” OD x 20’, 250# heater treater
- four 750 BBL water tanks
- three 750 BBL oil tanks
- one 15’6” x 30’, 1000 BBL gun barrel
- one 72” OD x 15’ gas scrubber
- one vapor recovery tower
- one vapor recovery unit
- vapor recovery piping for oil and water tanks

System is designed to capture 120% of the expected gas volume from separation all the way through the vapor recovery equipment.

VII. OPERATIONAL PRACTICES

NMAC 19.15.27.8 (A) Venting & Flaring of Natural Gas

1. Flat Creek Resources will comply with NMAC 19.15.27.8 – venting and flaring of gas during drilling, completion, or production that constitutes waste as defined in 19.15.2 is banned.

NMAC 19.15.27.8 (B) Venting & Flaring During Drilling

1. Flat Creek will combust gas if technically feasible during drilling operations using best industry practices.
2. A flare stack with a 100% capacity for expected volume will be set on the pad greater than 100 feet from the nearest well head and storage tank.
3. In an emergency, Flat Creek will vent the gas in order to avoid substantial impact. Flat Creek will report vented or flared gas to the NMOCD.

NMAC 19.15.27.8 (C) Venting & Flaring During Completion or Recompletion

1. Facilities will be built and ready from the first day of flowback.
2. Test separator will properly separate gas and liquids. Temporary test separator will be used initially to process volumes. In addition, separator will be tied into flowback tanks which will be tied into the gas processing equipment for sale down a pipeline.
3. Should the facility not be ready to process gas or the gas does not meet quality standards then the flowback will be delayed until the facility and pipeline are ready.

NMAC 19.15.27.8 (D) Venting & Flaring During Production

Flat Creek will not vent or flare natural gas except:

1. During and emergency or malfunction.
2. To unload or clean-up liquid holdup in a well to atmospheric pressure, provided
    a. Flat Creek does not vent after the well achieves a stabilized rate and pressure
    b. Flat Creek will be on-site while unloading liquids by manual purging and take all reasonable actions to achieve a stabilized rate and pressure as soon as possible
    c. Flat Creek will optimize the system to minimize gas venting if the well is equipped with a plunger lift or auto control system
    d. Best management practices will be used during downhole well maintenance
3. During the following activities unless prohibited
    a. Gauging or sampling a storage tank or low-pressure production vessel
    b. Loading out liquids from a storage tank
    c. Repair and maintenance
    d. Normal operations of a gas-activated pneumatic controller or pump
    e. Normal operation of a storage tank but not including venting from a thief hatch
    f. Normal operation of a dehydration units
    g. Normal operations of compressors, engines, turbines, valves, flanges, & connectors
    h. During bradenhead, packer leakage test, or production test lasting less than 24 hours
    i. When natural gas does not meet the gathering line specifications

j. Commissioning of pipelines, equipment, or facilities only for as long as necessary to purge introduced impurities

NMAC 19.15.27.8 (E) Performance Standards

1. Flat Creek used a safety factor to design the separation and storage equipment. The equipment will be routed toa vapor recovery system and uses a flare as back up to startup, shutdown, maintenance, or malfunction of the VRU system.
2. Flat Creek will install a flare that will handle the full volume of vapors from the facility in case of VRU failure. It will have an auto-ignition system.
3. Flare stacks will be appropriately sized and designed to ensure proper combustion efficiency
    a. Flare stacks installed or replaced will be equipped with an automatic ignitor or continuous pilot.
    b. Flare stacks will be located greater than 100 feet from well head and storage tanks and securely anchored
4. Flat Creek will conduct an AVO inspection on all components for leaks and defects every week.
5. Flat Creek will make and keep records of AVO inspection available to the NMOCD for at least 5 years.
6. Flat Creek may use a remote or automated monitoring technology to detect leaks and releases in lieu of AVO inspections with prior NMOCD approval.
7. Facilities will be designed to minimize waste.
8. Flat Creek will resolve emergencies as promptly as possible.

NMAC 19.15.27.8 (F) Measuring or Estimating Vented and Flared Natural Gas

1. Flat Creek will have meters on both the low pressure and high-pressure sides of the flares. Volumes will be recorded in the SCADA system.
2. Flat Creek will install equipment to measure the volume of flared natural gas that has an average production of greater than 60 MCFD.
3. Flat Creek's measuring equipment will conform to industry standards.
4. Measurement system will be designed such that it cannot be bypassed except for inspections and servicing the meters.
5. Flat Creek will estimate the volume of vented or flared gas using a methodology that can be independently verified if metering is not practicable due to low flow rate or pressure.
6. Flat Creek will estimate the volume of vented and/or flared gas based on the results of an annual GOR test for wells that do not require measuring equipment reported on form C-116.
7. Flat Creek will install measuring equipment whenever the NMOCD determines that metering is necessary.

VIII. BEST MANAGEMENT PRACTICES

Flat Creek Resources, LLC, will minimize venting during maintenance by:

1. System will be designed and operated to route storage tank and process equipment emissions to the VRU. If the VRU is not operable, then the vapors will be routed to the flare.
2. Scheduling maintenance for multiple tasks to minimize the need for blowdowns.
3. After completion of maintenance, gas will be flared until it meets pipeline specifications.

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

Drilling Plan Data Report
05/09/2026

APD ID: 10400110680
Submission Date: 03/27/2026
Operator Name: FLAT CREEK RESOURCES LLC
Well Name: CARDIGAN FED COM
Well Number: 124H
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
18046381	QUATERNARY	3480	0	0	ALLUVIUM	USEABLE WATER	N
18046377	TANSILL	3278	202	202	LIMESTONE	NONE	N
18046378	YATES	3072	408	408	SANDSTONE	NONE	N
18046379	SEVEN RIVERS	2744	736	736	OTHER : Carbonate	NONE	N
18046380	QUEEN	2155	1325	1326	OTHER : Carbonate	NATURAL GAS, OIL	N
18046383	GRAYBURG	1818	1662	1667	OTHER : Carbonate	NATURAL GAS, OIL	N
18046384	SAN ANDRES	1297	2183	2218	OTHER : Carbonate	NATURAL GAS, OIL	N
18046385	BONE SPRING LIME	166	3314	3433	LIMESTONE	NATURAL GAS, OIL	N
18046382	BONE SPRING 1ST	-1562	5042	5290	SANDSTONE	NATURAL GAS, OIL	N
18046386	BONE SPRING 2ND	-1630	5110	5364	OTHER : Carbonate	NATURAL GAS, OIL	N
18046387	BONE SPRING 2ND	-3142	6622	6920	SANDSTONE	NATURAL GAS, OIL	N
18046388	BONE SPRING 2ND	-3332	6812	7376	SANDSTONE	NATURAL GAS, OIL	Y

Section 2 - Blowout Prevention

Pressure Rating (PSI): 10M
Rating Depth: 20000

Equipment: A 20,000', 10,000 psi BOP stack will consist of a single ram, mud cross and double ram type (10,000 psi WP) preventer, and an annular preventer (5000-psi WP). Both units will be hydraulically operated, and the ram-type will be equipped with blind rams on bottom and drill pipe rams on top. All BOPE will be tested in accordance with 43 CFR 3172. See BOP & Choke diagrams for additional information.
Requesting Variance? YES

Variance request: Variance is requested to use a co-flex line between the BOP and choke manifold (instead of using a 4" OD steel line).

Operator Name: FLAT CREEK RESOURCES LLC

Well Name: CARDIGAN FED COM **Well Number:** 124H

Testing Procedure: 1. Use water to test BOPs. 2. Make up test assembly (test plug) and set in the wellhead profile. Ensure the casing valve is left open. Monitor the casing valve outlet while testing for potential leak past the test plug. 3. Circulate through the choke/kill lines, choke manifold, standpipe manifold, and valves to ensure that all lines are full of water. This will prevent pressure drop (compression) while testing. 4. Line up test unit and test rams, valves and lines as per the chart below. 5. Pressure tests must be low and high, respectively, and the pressure should stabilize with minimum bleed off within 10 minutes. If a test plug is utilized, no bleed-off of pressure is acceptable. For a test not utilizing a test plug, if a decline in pressure of more than 10 percent in 30 minutes occurs, the test shall be considered to have failed. Pressure should be recorded on a chart recorder (add scale to be use) 6. Any equipment that does not pass the pressure test must be reported to the drilling supervisor. Equipment must be repaired and retested. 7. Continue with pressure testing until all equipment has been tested as per the specific rig requirements. 8. Rig down test assembly. 9. All tests and drills to be recorded in the drilling log.

Choke Diagram Attachment:

Choke_Rev_20260313110210.pdf

BOP Diagram Attachment:

10M_BOP_5M_Annular_Diagram_20260313110220.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	14.75	10.75	NEW	API	N	0	400	0	400	3480	3080	400	J-55	45.5	ST&C	11.2	19.1	DRY	44.1	DRY	44.1
2	INTERMEDIATE	9.875	7.625	NEW	API	N	0	3100	0	3004	3480	476	3100	OTHER - P-110 HC	29.7	BUTT	4.6	4.4	DRY	12.9	DRY	12.9
3	PRODUCTION	6.75	5.5	NEW	NON API	N	0	17364	0	6498	3480	-3018	17364	OTHER - P-110 HC	20	OTHER - TCBC-HT	3.5	3.7	DRY	4	DRY	4

Casing Attachments

Operator Name: FLAT CREEK RESOURCES LLC

Well Name: CARDIGAN FED COM **Well Number:** 124H

Casing Attachments

Casing ID: 1 **String** SURFACE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Cardigan_124H_Casing_Design_Assumptions_20260313110257.pdf

Casing ID: 2 **String** INTERMEDIATE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Cardigan_124H_Casing_Design_Assumptions_20260313110326.pdf

Casing ID: 3 **String** PRODUCTION

Inspection Document:

Spec Document:

5.5in_Casing_Spec_20lb_TCBC_HT_20260313110349.pdf

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Cardigan_124H_Casing_Design_Assumptions_20260313110407.pdf

Section 4 - Cement

Operator Name: FLAT CREEK RESOURCES LLC

Well Name: CARDIGAN FED COM **Well Number:** 124H

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
SURFACE	Lead		0	200	135	1.68	12.8	227	100	35/65 Poz Premium C	5% bwow Sodium chloride + 6% bentonite gel + 0.4% CPT-503P + 0.125 lbs/sk Dura fiber
SURFACE	Tail		200	400	170	1.34	14.8	228	100	Class C	1% Calcium chloride + 0.25 lb/sk cellophane flake
INTERMEDIATE	Lead		0	1280	500	1.68	12.8	840	50	35/65 Poz Premium C	5% bwow Sodium chloride + 6% bentonite gel + 0.4% CPT-503P + 0.125 lbs/sk Dura fiber
INTERMEDIATE	Tail		1280	3100	85	1.74	13.5	148	50	Class C	1% calcium chloride + 4% bentonite gel + 0.4% CPT-503P + 0.125 lbs/sk Dura fiber
PRODUCTION	Lead		0	6500	225	2.82	10.4	635	15	Class H	10% bwoc light weight bead + 5% silica fume alternative + 0.2% suspension aid + 0.3% fluid loss additive + 0.3% dispersant + 0.2% cement retarder
PRODUCTION	Tail		6500	17364	735	1.42	13.2	1044	15	35/65 Poz Premium H	0.2% CPT-23

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 43 CFR 3172:

Diagram of the equipment for the circulating system in accordance with 43 CFR 3172:

Describe what will be on location to control well or mitigate other conditions: Sufficient mud materials (e. g., barite, bentonite, LCM) to maintain mud properties and meet minimum lost circulation and weight increase requirements will always be kept on site.
Describe the mud monitoring system utilized: An electronic pit volume totalizer (PVT) mud system will monitor pit volumes for gains or losses, flow rate, pump pressures, and stroke rate.

Circulating Medium Table

Operator Name: FLAT CREEK RESOURCES LLC

Well Name: CARDIGAN FED COM **Well Number:** 124H

Top Depth	Bottom Depth	Mud Type	Min Weight (lbs/gal)	Max Weight (lbs/gal)	Density (lbs/cu ft)	Gel Strength (lbs/100 sqft)	PH	Viscosity (CP)	Salinity (ppm)	Filtration (cc)	Additional Characteristics
0	400	OTHER : Fresh Water Spud Mud	8.8	8.8							
400	3100	OTHER : Cut Brine	10	10							
3100	17364	OTHER : Cut Brine	9.4	9.4							

Section 6 - Test, Logging, Coring

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

Production tests include Gama Ray log and resistivity log. No open and cased hole logs are planned at this time.

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

GAMMA RAY LOG,DUAL INDUCTION/MICRO-RESISTIVITY,

Coring operation description for the well:

No coring operation is planned.

Section 7 - Pressure

Anticipated Bottom Hole Pressure: 3120 **Anticipated Surface Pressure:** 1621

Anticipated Bottom Hole Temperature(F): 114

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

Cardigan_H2S_Plan_20260313110624.pdf

Operator Name: FLAT CREEK RESOURCES LLC

Well Name: CARDIGAN FED COM **Well Number:** 124H

Section 8 - Other Information

Proposed horizontal/directional/multi-lateral plan submission:

Cardigan_124H_Directional_Plan_20260313110709.pdf

Other proposed operations facets description:

Other proposed operations facets attachment:

Cardigan_124H_Drill_Plan_20260313110719.pdf
Cardigan_124H_Anticollision_Report_20260313110725.pdf
BOP_Wellhead_Testing_v2_20260313110737.pdf
Annular_Well_Control_Procedures_20260313110737.pdf
CoFlex_Certs_Rev_20260313110751.pdf
Wellhead_Diagram_20260313110753.pdf
Cardigan_WMP_v2_20260313110802.pdf

Other Variance request(s)?: Y

Other Variance attachment:

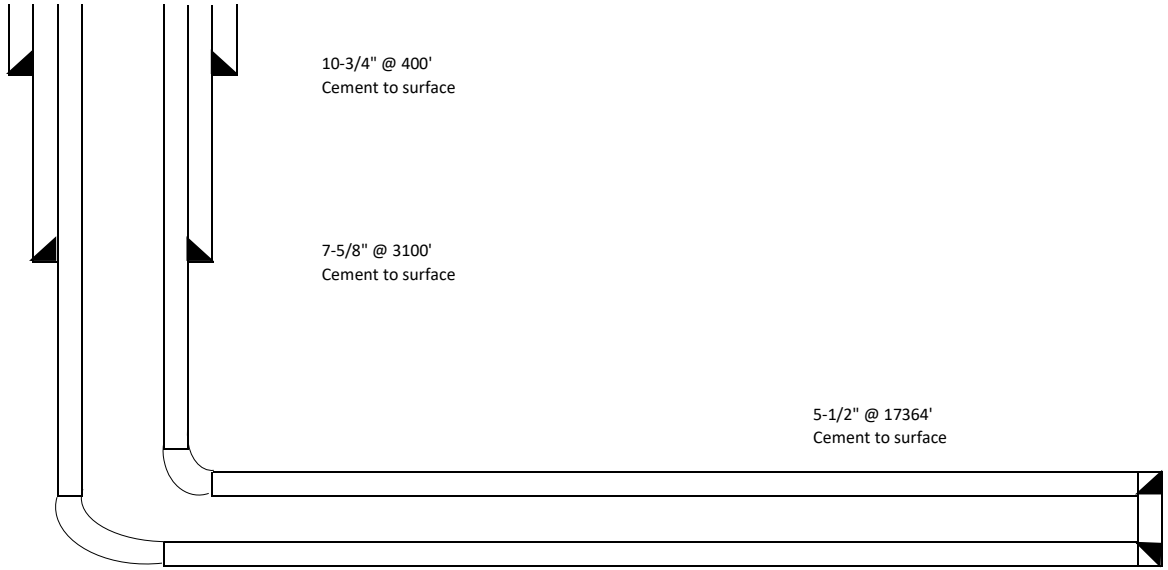
Break_Testing_Variance_Request_20260313110817.pdf

Cardigan BS Fed Com 124H

Surface Hole
Drill 14-3/4" Hole
Run 10-3/4" Casing
Drill w/Freshwater gel mud

Intermediate Hole
Drill 9-7/8" Hole
Run 7-5/8" Casing
Drill w/Cut Brine & sweeps

Production Hole
Drill 6-3/4" Hole
Run 5-1/2" Casing
Drill w/Cut Brine & Sweeps



Freedom Energy

Company: Freedom Energy
Field: Eddy County, NM NAD83
Location: Cardigan Fed Com
Well: Cardigan Fed Com 124H
Wellbore: OH
Plan: Plan 2
GL: GL 3480 + 26.5' KB @ 3506.50usft

Rig:

Azimuths to Grid North
True North: -0.05°
Magnetic North: 6.49°

Magnetic Field
Strength: 47140.4nT
Dip Angle: 60.03°
Date: 1/19/2026
Model: IGRF2025

To convert a Magnetic Direction to a Grid Direction, Add 6.49°

LEGACY DIRECTIONAL

WELL DETAILS: Cardigan Fed Com 124H

GL 3480 + 26.5' KB @ 3506.50usft 3480.00

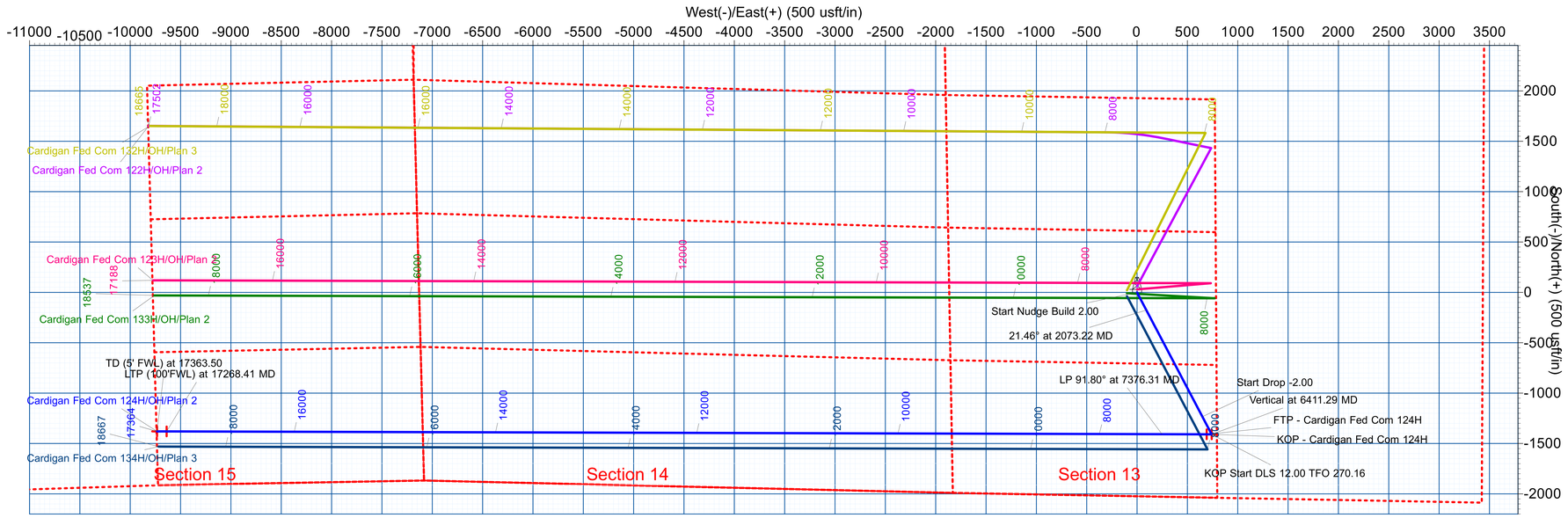
+N/-S	+E/-W	Northing	Easting	Latittude	Longitude	Slot
0.00	0.00	603353.23	571655.18	32.658626	-104.234820	

PROJECT DETAILS: Eddy County, NM NAD83

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

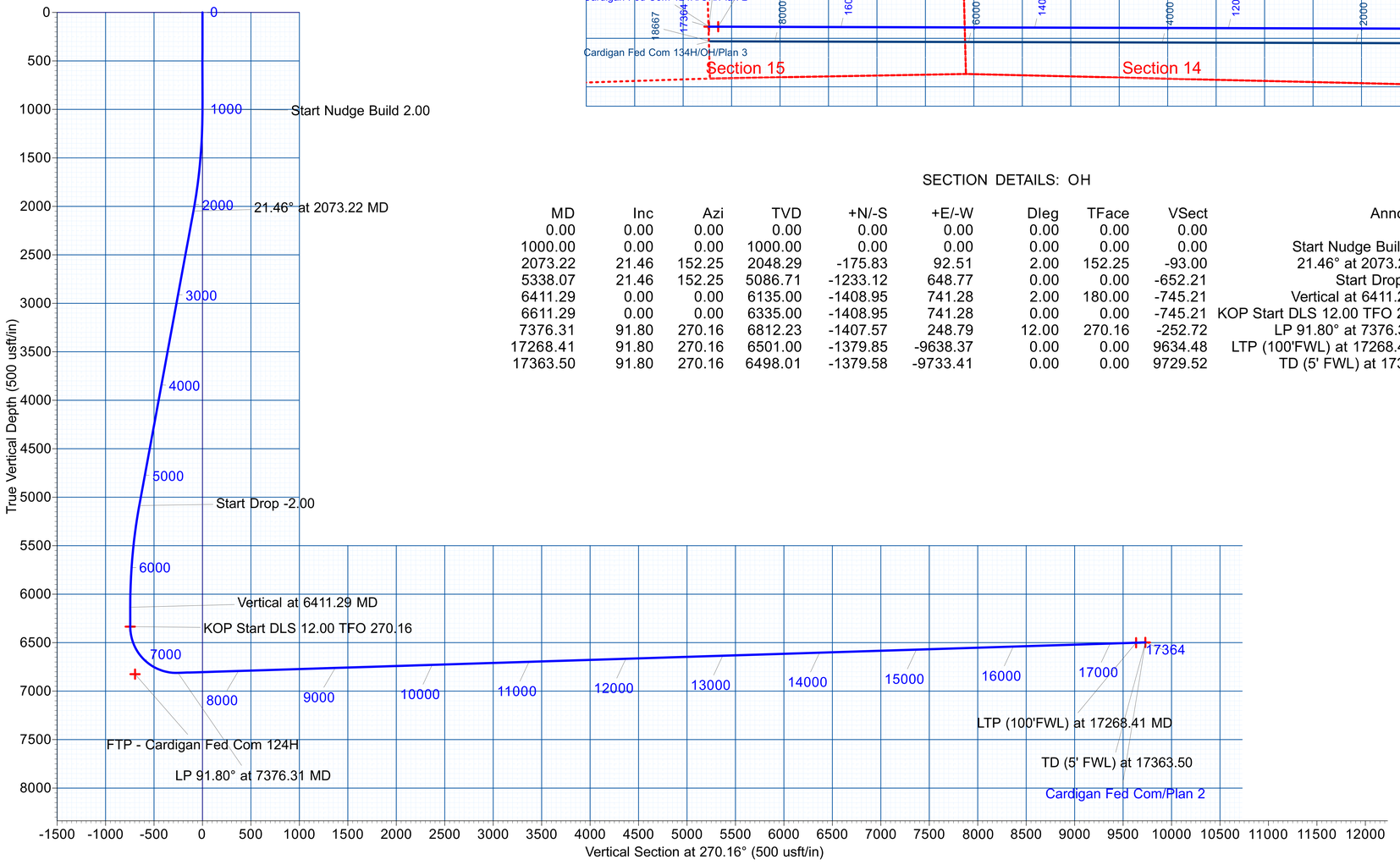
DESIGN TARGET DETAILS

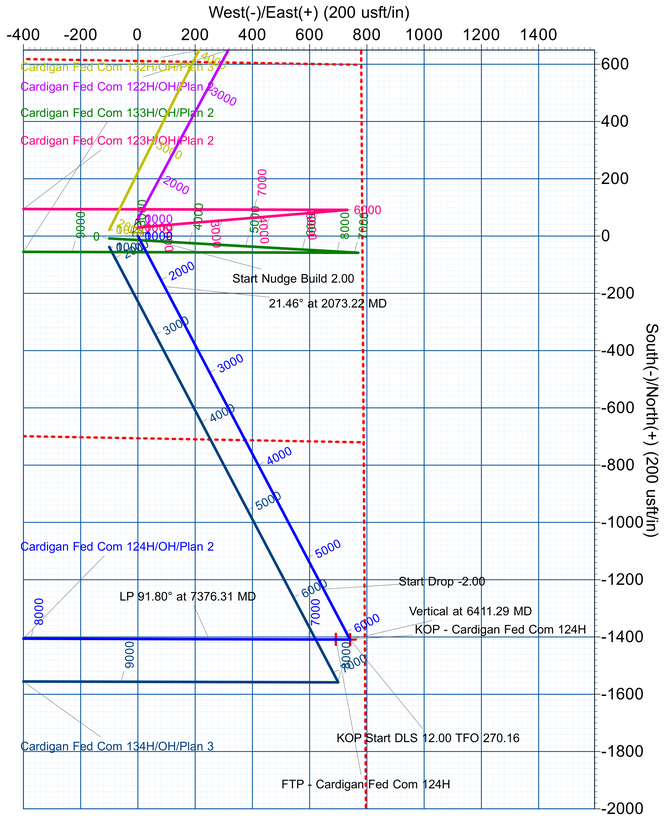
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
KOP - Cardigan Fed Com 124H	6335.00	-1408.95	741.28	601944.28	572396.46	32.654751	-104.232416
BHL - Cardigan Fed Com 124H	6498.01	-1379.56	-9733.41	601973.67	561921.77	32.654855	-104.266450
LTP - Cardigan Fed Com 124H	6501.00	-1379.85	-9638.37	601973.38	562016.81	32.654854	-104.266141
FTP - Cardigan Fed Com 124H	6825.00	-1408.03	691.79	601945.20	572346.97	32.654754	-104.232576



SECTION DETAILS: OH

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Annotation
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1000.00	0.00	0.00	1000.00	0.00	0.00	0.00	0.00	0.00	Start Nudge Build 2.00
2073.22	21.46	152.25	2048.29	-175.83	92.51	2.00	152.25	-93.00	21.46° at 2073.22 MD
5338.07	21.46	152.25	5086.71	-1233.12	648.77	0.00	0.00	-652.21	Start Drop -2.00
6411.29	0.00	0.00	6135.00	-1408.95	741.28	2.00	180.00	-745.21	Vertical at 6411.29 MD
6611.29	0.00	0.00	6335.00	-1408.95	741.28	0.00	0.00	-745.21	KOP Start DLS 12.00 TFO 270.16
7376.31	91.80	270.16	6812.23	-1407.57	248.79	12.00	270.16	-252.72	LP 91.80° at 7376.31 MD
17268.41	91.80	270.16	6501.00	-1379.85	-9638.37	0.00	0.00	9634.48	LTP (100'FWL) at 17268.41 MD
17363.50	91.80	270.16	6498.01	-1379.58	-9733.41	0.00	0.00	9729.52	TD (5' FWL) at 17363.50





Plan: Plan 2 (Cardigan Fed Com 124H/OH)
Created By: Jenise Kirkpatrick Date: 13:48, January 21 2026

Freedom Energy

Eddy County, NM NAD83
Cardigan Fed Com
Cardigan Fed Com 124H

OH

Plan: Plan 2

Standard Planning Report

21 January, 2026

Legacy Directional Drilling

Planning Report

Database:	EDM_WA	**Local Co-ordinate Reference:**	Well Cardigan Fed Com 124H
Company:	Freedom Energy	**TVD Reference:**	GL 3480 + 26.5' KB @ 3506.50usft
Project:	Eddy County, NM NAD83	**MD Reference:**	GL 3480 + 26.5' KB @ 3506.50usft
Site:	Cardigan Fed Com	**North Reference:**	Grid
Well:	Cardigan Fed Com 124H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan 2		

Project Eddy County, 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 Cardigan Fed Com

Site Position:		**Northing:**	603,414.93 usft	**Latitude:**	32.658796
From:	Map	**Easting:**	571,554.75 usft	**Longitude:**	-104.235146
Position Uncertainty:	0.00 usft	**Slot Radius:**	13-3/16 "		

Well Cardigan Fed Com 124H

Well Position	**+N/-S**	0.00 usft	**Northing:**	603,353.23 usft	**Latitude:**	32.658626
	+E/-W	0.00 usft	**Easting:**	571,655.18 usft	**Longitude:**	-104.234820
Position Uncertainty		0.00 usft	**Wellhead Elevation:**	usft	**Ground Level:**	3,480.00 usft
Grid Convergence:		0.05 °				

Wellbore OH

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2025	1/19/2026	6.54	60.03	47,140.37245124

Design Plan 2

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	270.16

Plan Survey Tool Program **Date** 1/21/2026

	Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	17,363.50	Plan 2 (OH)	MWD	
				OWSG MWD - Standard	

Legacy Directional Drilling

Planning Report

Database:	EDM_WA	**Local Co-ordinate Reference:**	Well Cardigan Fed Com 124H
Company:	Freedom Energy	**TVD Reference:**	GL 3480 + 26.5' KB @ 3506.50usft
Project:	Eddy County, NM NAD83	**MD Reference:**	GL 3480 + 26.5' KB @ 3506.50usft
Site:	Cardigan Fed Com	**North Reference:**	Grid
Well:	Cardigan Fed Com 124H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan 2		

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	
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,073.22	21.46	152.25	2,048.29	-175.83	92.51	2.00	2.00	0.00	152.25	
5,338.07	21.46	152.25	5,086.71	-1,233.12	648.77	0.00	0.00	0.00	0.00	
6,411.29	0.00	0.00	6,135.00	-1,408.95	741.28	2.00	-2.00	0.00	180.00	
6,611.29	0.00	0.00	6,335.00	-1,408.95	741.28	0.00	0.00	0.00	0.00	
7,376.31	91.80	270.16	6,812.23	-1,407.57	248.79	12.00	12.00	-11.74	270.16	
17,268.41	91.80	270.16	6,501.00	-1,379.85	-9,638.37	0.00	0.00	0.00	0.00	LTP - Cardigan Fed C
17,363.50	91.80	270.16	6,498.01	-1,379.58	-9,733.41	0.00	0.00	0.00	0.00	BHL - Cardigan Fed C

Legacy Directional Drilling

Planning Report

Database:	EDM_WA	**Local Co-ordinate Reference:**	Well Cardigan Fed Com 124H
Company:	Freedom Energy	**TVD Reference:**	GL 3480 + 26.5' KB @ 3506.50usft
Project:	Eddy County, NM NAD83	**MD Reference:**	GL 3480 + 26.5' KB @ 3506.50usft
Site:	Cardigan Fed Com	**North Reference:**	Grid
Well:	Cardigan Fed Com 124H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan 2		

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
Start Nudge Build 2.00									
1,100.00	2.00	152.25	1,099.98	-1.54	0.81	-0.82	2.00	2.00	0.00
1,200.00	4.00	152.25	1,199.84	-6.18	3.25	-3.27	2.00	2.00	0.00
1,300.00	6.00	152.25	1,299.45	-13.89	7.31	-7.35	2.00	2.00	0.00
1,400.00	8.00	152.25	1,398.70	-24.67	12.98	-13.05	2.00	2.00	0.00
1,500.00	10.00	152.25	1,497.47	-38.52	20.26	-20.37	2.00	2.00	0.00
1,600.00	12.00	152.25	1,595.62	-55.40	29.15	-29.30	2.00	2.00	0.00
1,700.00	14.00	152.25	1,693.06	-75.31	39.62	-39.83	2.00	2.00	0.00
1,800.00	16.00	152.25	1,789.64	-98.21	51.67	-51.95	2.00	2.00	0.00
1,900.00	18.00	152.25	1,885.27	-124.09	65.28	-65.63	2.00	2.00	0.00
2,000.00	20.00	152.25	1,979.82	-152.90	80.44	-80.87	2.00	2.00	0.00
2,073.22	21.46	152.25	2,048.29	-175.83	92.51	-93.00	2.00	2.00	0.00
21.46° at 2073.22 MD									
2,100.00	21.46	152.25	2,073.22	-184.51	97.07	-97.59	0.00	0.00	0.00
2,200.00	21.46	152.25	2,166.28	-216.89	114.11	-114.72	0.00	0.00	0.00
2,300.00	21.46	152.25	2,259.34	-249.28	131.15	-131.85	0.00	0.00	0.00
2,400.00	21.46	152.25	2,352.41	-281.66	148.19	-148.97	0.00	0.00	0.00
2,500.00	21.46	152.25	2,445.47	-314.04	165.23	-166.10	0.00	0.00	0.00
2,600.00	21.46	152.25	2,538.54	-346.43	182.26	-183.23	0.00	0.00	0.00
2,700.00	21.46	152.25	2,631.60	-378.81	199.30	-200.36	0.00	0.00	0.00
2,800.00	21.46	152.25	2,724.67	-411.19	216.34	-217.49	0.00	0.00	0.00
2,900.00	21.46	152.25	2,817.73	-443.58	233.38	-234.61	0.00	0.00	0.00
3,000.00	21.46	152.25	2,910.80	-475.96	250.41	-251.74	0.00	0.00	0.00
3,100.00	21.46	152.25	3,003.86	-508.35	267.45	-268.87	0.00	0.00	0.00
3,200.00	21.46	152.25	3,096.93	-540.73	284.49	-286.00	0.00	0.00	0.00
3,300.00	21.46	152.25	3,189.99	-573.11	301.53	-303.13	0.00	0.00	0.00
3,400.00	21.46	152.25	3,283.05	-605.50	318.57	-320.25	0.00	0.00	0.00
3,500.00	21.46	152.25	3,376.12	-637.88	335.60	-337.38	0.00	0.00	0.00
3,600.00	21.46	152.25	3,469.18	-670.26	352.64	-354.51	0.00	0.00	0.00
3,700.00	21.46	152.25	3,562.25	-702.65	369.68	-371.64	0.00	0.00	0.00
3,800.00	21.46	152.25	3,655.31	-735.03	386.72	-388.77	0.00	0.00	0.00
3,900.00	21.46	152.25	3,748.38	-767.41	403.75	-405.90	0.00	0.00	0.00
4,000.00	21.46	152.25	3,841.44	-799.80	420.79	-423.02	0.00	0.00	0.00
4,100.00	21.46	152.25	3,934.51	-832.18	437.83	-440.15	0.00	0.00	0.00
4,200.00	21.46	152.25	4,027.57	-864.57	454.87	-457.28	0.00	0.00	0.00
4,300.00	21.46	152.25	4,120.64	-896.95	471.91	-474.41	0.00	0.00	0.00
4,400.00	21.46	152.25	4,213.70	-929.33	488.94	-491.54	0.00	0.00	0.00
4,500.00	21.46	152.25	4,306.76	-961.72	505.98	-508.66	0.00	0.00	0.00
4,600.00	21.46	152.25	4,399.83	-994.10	523.02	-525.79	0.00	0.00	0.00
4,700.00	21.46	152.25	4,492.89	-1,026.48	540.06	-542.92	0.00	0.00	0.00
4,800.00	21.46	152.25	4,585.96	-1,058.87	557.09	-560.05	0.00	0.00	0.00
4,900.00	21.46	152.25	4,679.02	-1,091.25	574.13	-577.18	0.00	0.00	0.00
5,000.00	21.46	152.25	4,772.09	-1,123.64	591.17	-594.31	0.00	0.00	0.00

Legacy Directional Drilling

Planning Report

Database:	EDM_WA	**Local Co-ordinate Reference:**	Well Cardigan Fed Com 124H
Company:	Freedom Energy	**TVD Reference:**	GL 3480 + 26.5' KB @ 3506.50usft
Project:	Eddy County, NM NAD83	**MD Reference:**	GL 3480 + 26.5' KB @ 3506.50usft
Site:	Cardigan Fed Com	**North Reference:**	Grid
Well:	Cardigan Fed Com 124H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan 2		

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)
5,100.00	21.46	152.25	4,865.15	-1,156.02	608.21	-611.43	0.00	0.00	0.00
5,200.00	21.46	152.25	4,958.22	-1,188.40	625.25	-628.56	0.00	0.00	0.00
5,300.00	21.46	152.25	5,051.28	-1,220.79	642.28	-645.69	0.00	0.00	0.00
5,338.07	21.46	152.25	5,086.71	-1,233.12	648.77	-652.21	0.00	0.00	0.00
Start Drop -2.00									
5,400.00	20.23	152.25	5,144.59	-1,252.62	659.03	-662.53	2.00	-2.00	0.00
5,500.00	18.23	152.25	5,239.00	-1,281.76	674.36	-677.94	2.00	-2.00	0.00
5,600.00	16.23	152.25	5,334.51	-1,307.96	688.15	-691.80	2.00	-2.00	0.00
5,700.00	14.23	152.25	5,431.00	-1,331.20	700.38	-704.09	2.00	-2.00	0.00
5,800.00	12.23	152.25	5,528.34	-1,351.45	711.03	-714.80	2.00	-2.00	0.00
5,900.00	10.23	152.25	5,626.42	-1,368.68	720.09	-723.91	2.00	-2.00	0.00
6,000.00	8.23	152.25	5,725.12	-1,382.87	727.56	-731.42	2.00	-2.00	0.00
6,100.00	6.23	152.25	5,824.33	-1,394.00	733.41	-737.30	2.00	-2.00	0.00
6,200.00	4.23	152.25	5,923.90	-1,402.06	737.65	-741.57	2.00	-2.00	0.00
6,300.00	2.23	152.25	6,023.74	-1,407.04	740.27	-744.20	2.00	-2.00	0.00
6,400.00	0.23	152.25	6,123.71	-1,408.93	741.27	-745.20	2.00	-2.00	0.00
6,411.29	0.00	0.00	6,135.00	-1,408.95	741.28	-745.21	2.00	-2.00	0.00
Vertical at 6411.29 MD									
6,500.00	0.00	0.00	6,223.71	-1,408.95	741.28	-745.21	0.00	0.00	0.00
6,600.00	0.00	0.00	6,323.71	-1,408.95	741.28	-745.21	0.00	0.00	0.00
6,611.29	0.00	0.00	6,335.00	-1,408.95	741.28	-745.21	0.00	0.00	0.00
KOP Start DLS 12.00 TFO 270.16									
6,625.00	1.65	270.16	6,348.71	-1,408.95	741.08	-745.01	12.00	12.00	0.00
6,650.00	4.65	270.16	6,373.67	-1,408.95	739.71	-743.64	12.00	12.00	0.00
6,675.00	7.65	270.16	6,398.52	-1,408.94	737.04	-740.97	12.00	12.00	0.00
6,700.00	10.65	270.16	6,423.20	-1,408.93	733.06	-736.99	12.00	12.00	0.00
6,725.00	13.65	270.16	6,447.64	-1,408.91	727.80	-731.73	12.00	12.00	0.00
6,750.00	16.65	270.16	6,471.77	-1,408.89	721.27	-725.20	12.00	12.00	0.00
6,775.00	19.65	270.16	6,495.52	-1,408.87	713.49	-717.42	12.00	12.00	0.00
6,800.00	22.65	270.16	6,518.84	-1,408.85	704.47	-708.40	12.00	12.00	0.00
6,825.00	25.65	270.16	6,541.65	-1,408.82	694.24	-698.18	12.00	12.00	0.00
6,850.00	28.65	270.16	6,563.89	-1,408.79	682.84	-686.77	12.00	12.00	0.00
6,875.00	31.65	270.16	6,585.51	-1,408.75	670.29	-674.22	12.00	12.00	0.00
6,900.00	34.65	270.16	6,606.44	-1,408.71	656.62	-660.55	12.00	12.00	0.00
6,925.00	37.65	270.16	6,626.62	-1,408.67	641.87	-645.81	12.00	12.00	0.00
6,950.00	40.65	270.16	6,646.01	-1,408.63	626.09	-630.03	12.00	12.00	0.00
6,975.00	43.65	270.16	6,664.54	-1,408.58	609.32	-613.25	12.00	12.00	0.00
7,000.00	46.65	270.16	6,682.17	-1,408.53	591.60	-595.53	12.00	12.00	0.00
7,025.00	49.65	270.16	6,698.85	-1,408.48	572.98	-576.91	12.00	12.00	0.00
7,050.00	52.65	270.16	6,714.54	-1,408.42	553.52	-557.45	12.00	12.00	0.00
7,075.00	55.65	270.16	6,729.18	-1,408.37	533.25	-537.19	12.00	12.00	0.00
7,100.00	58.65	270.16	6,742.74	-1,408.31	512.26	-516.19	12.00	12.00	0.00
7,125.00	61.65	270.16	6,755.18	-1,408.25	490.58	-494.51	12.00	12.00	0.00
7,150.00	64.65	270.16	6,766.47	-1,408.18	468.27	-472.21	12.00	12.00	0.00
7,175.00	67.65	270.16	6,776.58	-1,408.12	445.41	-449.34	12.00	12.00	0.00
7,200.00	70.65	270.16	6,785.48	-1,408.06	422.05	-425.98	12.00	12.00	0.00
7,225.00	73.65	270.16	6,793.15	-1,407.99	398.26	-402.19	12.00	12.00	0.00
7,250.00	76.65	270.16	6,799.55	-1,407.92	374.10	-378.03	12.00	12.00	0.00
7,275.00	79.65	270.16	6,804.69	-1,407.85	349.64	-353.57	12.00	12.00	0.00
7,300.00	82.65	270.16	6,808.54	-1,407.78	324.94	-328.87	12.00	12.00	0.00
7,325.00	85.65	270.16	6,811.09	-1,407.71	300.07	-304.00	12.00	12.00	0.00
7,350.00	88.65	270.16	6,812.33	-1,407.64	275.10	-279.03	12.00	12.00	0.00
7,376.31	91.80	270.16	6,812.23	-1,407.57	248.79	-252.72	12.00	12.00	0.00

Legacy Directional Drilling

Planning Report

Database:	EDM_WA	**Local Co-ordinate Reference:**	Well Cardigan Fed Com 124H
Company:	Freedom Energy	**TVD Reference:**	GL 3480 + 26.5' KB @ 3506.50usft
Project:	Eddy County, NM NAD83	**MD Reference:**	GL 3480 + 26.5' KB @ 3506.50usft
Site:	Cardigan Fed Com	**North Reference:**	Grid
Well:	Cardigan Fed Com 124H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan 2		

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)
LP 91.80° at 7376.31 MD									
7,400.00	91.80	270.16	6,811.48	-1,407.50	225.12	-229.05	0.00	0.00	0.00
7,500.00	91.80	270.16	6,808.34	-1,407.22	125.17	-129.10	0.00	0.00	0.00
7,600.00	91.80	270.16	6,805.19	-1,406.94	25.22	-29.15	0.00	0.00	0.00
7,700.00	91.80	270.16	6,802.04	-1,406.66	-74.73	70.80	0.00	0.00	0.00
7,800.00	91.80	270.16	6,798.90	-1,406.38	-174.68	170.75	0.00	0.00	0.00
7,900.00	91.80	270.16	6,795.75	-1,406.10	-274.63	270.70	0.00	0.00	0.00
8,000.00	91.80	270.16	6,792.61	-1,405.82	-374.58	370.65	0.00	0.00	0.00
8,100.00	91.80	270.16	6,789.46	-1,405.54	-474.53	470.61	0.00	0.00	0.00
8,200.00	91.80	270.16	6,786.31	-1,405.26	-574.48	570.56	0.00	0.00	0.00
8,300.00	91.80	270.16	6,783.17	-1,404.98	-674.43	670.51	0.00	0.00	0.00
8,400.00	91.80	270.16	6,780.02	-1,404.70	-774.38	770.46	0.00	0.00	0.00
8,500.00	91.80	270.16	6,776.87	-1,404.42	-874.33	870.41	0.00	0.00	0.00
8,600.00	91.80	270.16	6,773.73	-1,404.14	-974.28	970.36	0.00	0.00	0.00
8,700.00	91.80	270.16	6,770.58	-1,403.86	-1,074.23	1,070.31	0.00	0.00	0.00
8,800.00	91.80	270.16	6,767.44	-1,403.58	-1,174.18	1,170.26	0.00	0.00	0.00
8,900.00	91.80	270.16	6,764.29	-1,403.30	-1,274.13	1,270.21	0.00	0.00	0.00
9,000.00	91.80	270.16	6,761.14	-1,403.02	-1,374.08	1,370.16	0.00	0.00	0.00
9,100.00	91.80	270.16	6,758.00	-1,402.74	-1,474.03	1,470.11	0.00	0.00	0.00
9,200.00	91.80	270.16	6,754.85	-1,402.46	-1,573.98	1,570.06	0.00	0.00	0.00
9,300.00	91.80	270.16	6,751.70	-1,402.18	-1,673.93	1,670.01	0.00	0.00	0.00
9,400.00	91.80	270.16	6,748.56	-1,401.90	-1,773.88	1,769.96	0.00	0.00	0.00
9,500.00	91.80	270.16	6,745.41	-1,401.62	-1,873.83	1,869.91	0.00	0.00	0.00
9,600.00	91.80	270.16	6,742.27	-1,401.34	-1,973.78	1,969.86	0.00	0.00	0.00
9,700.00	91.80	270.16	6,739.12	-1,401.06	-2,073.73	2,069.81	0.00	0.00	0.00
9,800.00	91.80	270.16	6,735.97	-1,400.78	-2,173.68	2,169.76	0.00	0.00	0.00
9,900.00	91.80	270.16	6,732.83	-1,400.50	-2,273.63	2,269.71	0.00	0.00	0.00
10,000.00	91.80	270.16	6,729.68	-1,400.22	-2,373.58	2,369.66	0.00	0.00	0.00
10,100.00	91.80	270.16	6,726.54	-1,399.94	-2,473.53	2,469.62	0.00	0.00	0.00
10,200.00	91.80	270.16	6,723.39	-1,399.66	-2,573.48	2,569.57	0.00	0.00	0.00
10,300.00	91.80	270.16	6,720.24	-1,399.38	-2,673.43	2,669.52	0.00	0.00	0.00
10,400.00	91.80	270.16	6,717.10	-1,399.10	-2,773.38	2,769.47	0.00	0.00	0.00
10,500.00	91.80	270.16	6,713.95	-1,398.82	-2,873.33	2,869.42	0.00	0.00	0.00
10,600.00	91.80	270.16	6,710.80	-1,398.54	-2,973.28	2,969.37	0.00	0.00	0.00
10,700.00	91.80	270.16	6,707.66	-1,398.26	-3,073.23	3,069.32	0.00	0.00	0.00
10,800.00	91.80	270.16	6,704.51	-1,397.98	-3,173.18	3,169.27	0.00	0.00	0.00
10,900.00	91.80	270.16	6,701.37	-1,397.70	-3,273.13	3,269.22	0.00	0.00	0.00
11,000.00	91.80	270.16	6,698.22	-1,397.42	-3,373.09	3,369.17	0.00	0.00	0.00
11,100.00	91.80	270.16	6,695.07	-1,397.13	-3,473.04	3,469.12	0.00	0.00	0.00
11,200.00	91.80	270.16	6,691.93	-1,396.85	-3,572.99	3,569.07	0.00	0.00	0.00
11,300.00	91.80	270.16	6,688.78	-1,396.57	-3,672.94	3,669.02	0.00	0.00	0.00
11,400.00	91.80	270.16	6,685.63	-1,396.29	-3,772.89	3,768.97	0.00	0.00	0.00
11,500.00	91.80	270.16	6,682.49	-1,396.01	-3,872.84	3,868.92	0.00	0.00	0.00
11,600.00	91.80	270.16	6,679.34	-1,395.73	-3,972.79	3,968.87	0.00	0.00	0.00
11,700.00	91.80	270.16	6,676.20	-1,395.45	-4,072.74	4,068.82	0.00	0.00	0.00
11,800.00	91.80	270.16	6,673.05	-1,395.17	-4,172.69	4,168.77	0.00	0.00	0.00
11,900.00	91.80	270.16	6,669.90	-1,394.89	-4,272.64	4,268.72	0.00	0.00	0.00
12,000.00	91.80	270.16	6,666.76	-1,394.61	-4,372.59	4,368.67	0.00	0.00	0.00
12,100.00	91.80	270.16	6,663.61	-1,394.33	-4,472.54	4,468.63	0.00	0.00	0.00
12,200.00	91.80	270.16	6,660.46	-1,394.05	-4,572.49	4,568.58	0.00	0.00	0.00
12,300.00	91.80	270.16	6,657.32	-1,393.77	-4,672.44	4,668.53	0.00	0.00	0.00
12,400.00	91.80	270.16	6,654.17	-1,393.49	-4,772.39	4,768.48	0.00	0.00	0.00
12,500.00	91.80	270.16	6,651.03	-1,393.21	-4,872.34	4,868.43	0.00	0.00	0.00
12,600.00	91.80	270.16	6,647.88	-1,392.93	-4,972.29	4,968.38	0.00	0.00	0.00

Legacy Directional Drilling

Planning Report

Database:	EDM_WA	**Local Co-ordinate Reference:**	Well Cardigan Fed Com 124H
Company:	Freedom Energy	**TVD Reference:**	GL 3480 + 26.5' KB @ 3506.50usft
Project:	Eddy County, NM NAD83	**MD Reference:**	GL 3480 + 26.5' KB @ 3506.50usft
Site:	Cardigan Fed Com	**North Reference:**	Grid
Well:	Cardigan Fed Com 124H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan 2		

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)
12,700.00	91.80	270.16	6,644.73	-1,392.65	-5,072.24	5,068.33	0.00	0.00	0.00
12,800.00	91.80	270.16	6,641.59	-1,392.37	-5,172.19	5,168.28	0.00	0.00	0.00
12,900.00	91.80	270.16	6,638.44	-1,392.09	-5,272.14	5,268.23	0.00	0.00	0.00
13,000.00	91.80	270.16	6,635.29	-1,391.81	-5,372.09	5,368.18	0.00	0.00	0.00
13,100.00	91.80	270.16	6,632.15	-1,391.53	-5,472.04	5,468.13	0.00	0.00	0.00
13,200.00	91.80	270.16	6,629.00	-1,391.25	-5,571.99	5,568.08	0.00	0.00	0.00
13,300.00	91.80	270.16	6,625.86	-1,390.97	-5,671.94	5,668.03	0.00	0.00	0.00
13,400.00	91.80	270.16	6,622.71	-1,390.69	-5,771.89	5,767.98	0.00	0.00	0.00
13,500.00	91.80	270.16	6,619.56	-1,390.41	-5,871.84	5,867.93	0.00	0.00	0.00
13,600.00	91.80	270.16	6,616.42	-1,390.13	-5,971.79	5,967.88	0.00	0.00	0.00
13,700.00	91.80	270.16	6,613.27	-1,389.85	-6,071.74	6,067.83	0.00	0.00	0.00
13,800.00	91.80	270.16	6,610.12	-1,389.57	-6,171.69	6,167.78	0.00	0.00	0.00
13,900.00	91.80	270.16	6,606.98	-1,389.29	-6,271.64	6,267.73	0.00	0.00	0.00
14,000.00	91.80	270.16	6,603.83	-1,389.01	-6,371.59	6,367.68	0.00	0.00	0.00
14,100.00	91.80	270.16	6,600.69	-1,388.73	-6,471.54	6,467.63	0.00	0.00	0.00
14,200.00	91.80	270.16	6,597.54	-1,388.45	-6,571.49	6,567.59	0.00	0.00	0.00
14,300.00	91.80	270.16	6,594.39	-1,388.17	-6,671.44	6,667.54	0.00	0.00	0.00
14,400.00	91.80	270.16	6,591.25	-1,387.89	-6,771.39	6,767.49	0.00	0.00	0.00
14,500.00	91.80	270.16	6,588.10	-1,387.61	-6,871.34	6,867.44	0.00	0.00	0.00
14,600.00	91.80	270.16	6,584.95	-1,387.33	-6,971.29	6,967.39	0.00	0.00	0.00
14,700.00	91.80	270.16	6,581.81	-1,387.05	-7,071.24	7,067.34	0.00	0.00	0.00
14,800.00	91.80	270.16	6,578.66	-1,386.77	-7,171.19	7,167.29	0.00	0.00	0.00
14,900.00	91.80	270.16	6,575.52	-1,386.49	-7,271.14	7,267.24	0.00	0.00	0.00
15,000.00	91.80	270.16	6,572.37	-1,386.21	-7,371.09	7,367.19	0.00	0.00	0.00
15,100.00	91.80	270.16	6,569.22	-1,385.93	-7,471.04	7,467.14	0.00	0.00	0.00
15,200.00	91.80	270.16	6,566.08	-1,385.65	-7,570.99	7,567.09	0.00	0.00	0.00
15,300.00	91.80	270.16	6,562.93	-1,385.37	-7,670.94	7,667.04	0.00	0.00	0.00
15,400.00	91.80	270.16	6,559.78	-1,385.09	-7,770.89	7,766.99	0.00	0.00	0.00
15,500.00	91.80	270.16	6,556.64	-1,384.81	-7,870.84	7,866.94	0.00	0.00	0.00
15,600.00	91.80	270.16	6,553.49	-1,384.53	-7,970.79	7,966.89	0.00	0.00	0.00
15,700.00	91.80	270.16	6,550.35	-1,384.24	-8,070.74	8,066.84	0.00	0.00	0.00
15,800.00	91.80	270.16	6,547.20	-1,383.96	-8,170.69	8,166.79	0.00	0.00	0.00
15,900.00	91.80	270.16	6,544.05	-1,383.68	-8,270.64	8,266.74	0.00	0.00	0.00
16,000.00	91.80	270.16	6,540.91	-1,383.40	-8,370.59	8,366.69	0.00	0.00	0.00
16,100.00	91.80	270.16	6,537.76	-1,383.12	-8,470.54	8,466.64	0.00	0.00	0.00
16,200.00	91.80	270.16	6,534.61	-1,382.84	-8,570.49	8,566.60	0.00	0.00	0.00
16,300.00	91.80	270.16	6,531.47	-1,382.56	-8,670.44	8,666.55	0.00	0.00	0.00
16,400.00	91.80	270.16	6,528.32	-1,382.28	-8,770.39	8,766.50	0.00	0.00	0.00
16,500.00	91.80	270.16	6,525.18	-1,382.00	-8,870.34	8,866.45	0.00	0.00	0.00
16,600.00	91.80	270.16	6,522.03	-1,381.72	-8,970.29	8,966.40	0.00	0.00	0.00
16,700.00	91.80	270.16	6,518.88	-1,381.44	-9,070.24	9,066.35	0.00	0.00	0.00
16,800.00	91.80	270.16	6,515.74	-1,381.16	-9,170.19	9,166.30	0.00	0.00	0.00
16,900.00	91.80	270.16	6,512.59	-1,380.88	-9,270.14	9,266.25	0.00	0.00	0.00
17,000.00	91.80	270.16	6,509.45	-1,380.60	-9,370.09	9,366.20	0.00	0.00	0.00
17,100.00	91.80	270.16	6,506.30	-1,380.32	-9,470.04	9,466.15	0.00	0.00	0.00
17,200.00	91.80	270.16	6,503.15	-1,380.04	-9,569.99	9,566.10	0.00	0.00	0.00
17,268.41	91.80	270.16	6,501.00	-1,379.85	-9,638.37	9,634.48	0.00	0.00	0.00
LTP (100'FWL) at 17268.41 MD									
17,300.00	91.80	270.16	6,500.01	-1,379.76	-9,669.94	9,666.05	0.00	0.00	0.00
17,363.50	91.80	270.16	6,498.01	-1,379.58	-9,733.41	9,729.52	0.00	0.00	0.00
TD (5' FWL) at 17363.50									

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Legacy Directional Drilling

Planning Report

Database:	EDM_WA	**Local Co-ordinate Reference:**	Well Cardigan Fed Com 124H
Company:	Freedom Energy	**TVD Reference:**	GL 3480 + 26.5' KB @ 3506.50usft
Project:	Eddy County, NM NAD83	**MD Reference:**	GL 3480 + 26.5' KB @ 3506.50usft
Site:	Cardigan Fed Com	**North Reference:**	Grid
Well:	Cardigan Fed Com 124H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan 2		

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
KOP - Cardigan Fed Cor - plan hits target center - Point	0.00	0.00	6,335.00	-1,408.95	741.28	601,944.28	572,396.46	32.654751	-104.232416
BHL - Cardigan Fed Cor - plan misses target center by 0.02usft at 17363.50usft MD (6498.01 TVD, -1379.58 N, -9733.41 E) - Point	0.00	0.00	6,498.01	-1,379.56	-9,733.41	601,973.67	561,921.77	32.654855	-104.266450
LTP - Cardigan Fed Cor - plan hits target center - Point	0.00	0.00	6,501.00	-1,379.85	-9,638.37	601,973.38	562,016.81	32.654854	-104.266142
FTP - Cardigan Fed Cor - plan misses target center by 173.14usft at 7020.68usft MD (6696.04 TVD, -1408.49 N, 576.26 E) - Point	0.00	0.00	6,825.00	-1,408.03	691.79	601,945.21	572,346.97	32.654754	-104.232577

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
1,000.00	1,000.00	0.00	0.00	Start Nudge Build 2.00
2,073.22	2,048.29	-175.83	92.51	21.46° at 2073.22 MD
5,338.07	5,086.71	-1,233.12	648.77	Start Drop -2.00
6,411.29	6,135.00	-1,408.95	741.28	Vertical at 6411.29 MD
6,611.29	6,335.00	-1,408.95	741.28	KOP Start DLS 12.00 TFO 270.16
7,376.31	6,812.23	-1,407.57	248.79	LP 91.80° at 7376.31 MD
17,268.41	6,501.00	-1,379.85	-9,638.37	LTP (100'FWL) at 17268.41 MD
17,363.50	6,498.01	-1,379.58	-9,733.41	TD (5' FWL) at 17363.50

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PECOS DISTRICT
DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	**Flat Creek Resources LLC**
LOCATION:	Section 13, T.19 S., R.27 E., NMPM
COUNTY:	Eddy County, New Mexico

WELL NAME & NO.:	**Cardigan Fed Com 122H**
ATS/API ID:	**ATS-26-1303**
APD ID:	**10400110664**
Sundry ID:	**N/a**

WELL NAME & NO.:	**Cardigan Fed Com 123H**
ATS/API ID:	**ATS-26-1304**
APD ID:	**10400110677**
Sundry ID:	**N/a**

WELL NAME & NO.:	**Cardigan Fed Com 124H**
ATS/API ID:	**ATS-26-1305**
APD ID:	**10400110680**
Sundry ID:	**N/a**

COA

 Approval Date: 05/08/2026

H2S	No		
Potash	None	None	
Cave/Karst Potential	High		
Cave/Karst Potential	☐ Critical		
Variance	☐ None	☑ Flex Hose	☐ Other
Wellhead	Conventional and Multibowl		
Other	☐ 4 String ☐ 5 String	Capitan Reef None	☐ WIPP
Other	Pilot Hole None	☐ Open Annulus	
Cementing	Contingency Squeeze None	Echo-Meter None	Primary Cement Squeeze None
Special Requirements	☐ Water Disposal/Injection	☑ COM	☐ Unit
Special Requirements	☐ Batch Sundry	Waste Prevention Waste MP	
Special Requirements Variance	☑ BOPE Break Testing ☐ Offline BOPE Testing	☐ Offline Cementing	☐ Casing Clearance

Approval Date: 05/08/2026

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 part 3170 Subpart 3176**, 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 **10-3/4** inch surface casing shall be set at approximately **400 feet** (a minimum of 70 feet into the Rustler Anhydrite and above the salt when present, and below usable fresh water) and cemented to the surface. The surface hole shall be **14 3/4** inch in diameter.

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

2. The minimum required fill of cement behind the **7-5/8** inch intermediate casing is:

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

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

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

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

Cement excess is less than 25%, more cement is required if washout occurs. Adjust cement volume and excess based on a fluid caliper or similar method that reflects the as-drilled size of the wellbore.

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.

Option 1:

a. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **3000 (3M)** psi. **Annular which shall be tested to 2100 (70% Working Pressure) psi.**

b. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the **7-5/8** inch intermediate casing shoe shall be **5000 (5M)** psi.

Option 2:

Operator has proposed a multi-bowl wellhead assembly. This assembly will only be tested when installed on the **10-3/4** inch surface casing. 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 3172.6(b)(9) 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 part 3170 Subpart 3171**
- 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.

BOPE Break Testing Variance (Approved)

- BOPE Break Testing is ONLY permitted for 5M psi MASP or less. **(Annular preventer must be tested to a minimum of 70% of BOPE working pressure and shall be higher than the MASP)**
- While in transfer between wells, the BOPE shall be secured by the hydraulic carrier or cradle.
- Any well control event while drilling require notification to the BLM Petroleum Engineer **(575-706-2779)** prior to the commencement of any BOPE Break Testing operations.
- The BLM is to be contacted 4 hours prior to BOPE tests at:
    - BLM_NM_CFO_DrillingNotifications@BLM.GOV
    - Secondary Contact: 575-361-2822
- As a minimum, a full BOPE test shall be performed at **21**-day intervals.
- In the event any repairs or replacement of the BOPE is required, the BOPE shall test as per **43 CFR part 3170 Subpart 3172**.
- If in the event break testing is not utilized, then a full BOPE test would be conducted.
- The BOPE testing shall be conducted while the rig is stationary.

Intermediate Break Testing Section:

- Variance only pertains to the intermediate hole-sections and no deeper than the Bone Springs formation.
- A full BOPE test is required prior to drilling the first deep intermediate hole section. If any subsequent hole interval is deeper than the first, a full BOPE test will be required. (200’ TVD tolerance between intermediate shoes is allowable).

- Annular preventer to be closed via soft shut-in when utilizing a variable pipe ram.

 Approval Date: 05/08/2026

Hydrogen Sulfide Drilling

Operations Plan

Flat Creek Resources

1 H2S safety instructions to the following:

- Characteristics of H2S
- Physical effects and hazards
- Principal and operation of H2S detectors, warning system and briefing areas
- Evacuation procedures, routes and first aid
- Proper use of safety equipment & life support systems
- Essential personnel meeting medical evaluation criteria will receive additional training on the proper use of 30min pressure demand air packs

2 H2S Detection and Alarm Systems:

- H2S sensor/detectors to be located on the drilling rig floor, in the base of the sub structure / cellar area, on the mud pits in the shale shaker area. Additional H2S detectors may be placed as deemed necessary
- An audio alarm system will be installed on the derrick floor and in the doghouse

3 Windsocks and / Wind Streamers:

- Windsocks at mud pit area should be high enough to be visible
- Windsock on the rig floor and / top of doghouse should be high enough to be visible

4 Condition Flags and Signs:

- Warning sign on access road to location
- Flags to be displayed on sign at entrance to location
    - Green Flag – Normal Safe Operation Condition
    - Yellow Flag – Potential Pressure and Danger
    - Red Flag – Danger (H2S present in dangerous concentrations) Only H2S trained personnel admitted on location

5 Well Control Equipment:

- See Drilling Operations Plan Schematics

6 Communication:

- While working under masks chalkboards will be used for communications
- Hand signals will be used where chalk board is inappropriate
- Two way radio will be used to communicate off location in case of emergency help is required. In most cases cellular telephones will be available at most drilling foreman's trailer or living quarters.

7 Drilling Stem Testing:

- No DST cores are planned at this time

8 Drilling contractor supervisor will be required to be familiar with the effects H2S has on tubulars good and other mechanical equipment

9 If H2S is encountered, mud system will be altered if necessary to maintain control of formation. A mud gas separator will be brought into service along with H2S scavengers if necessary

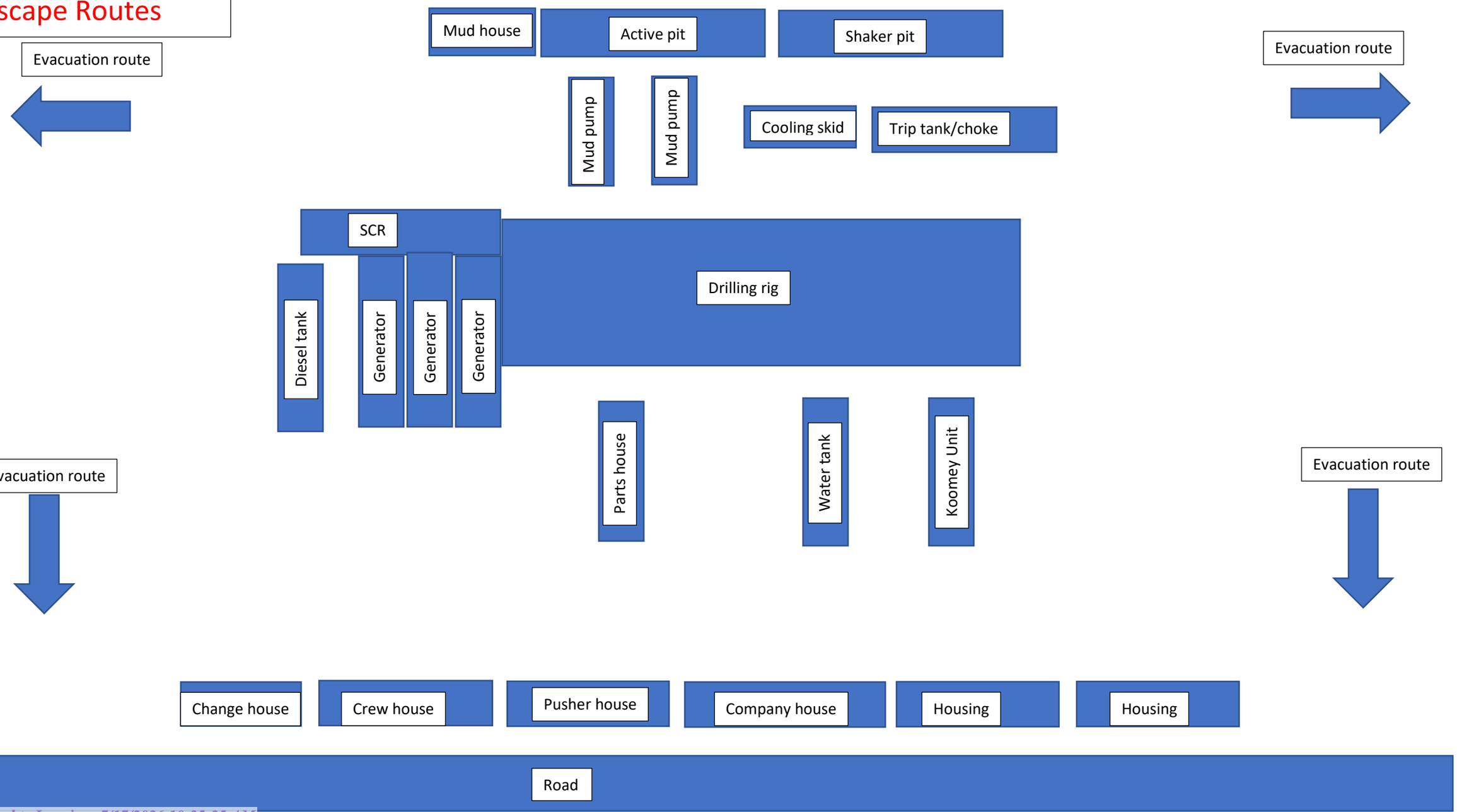
11 Emergency Contacts

Emergency Contacts		
Carlsbad Police Department	575.887.7551	911
Carlsbad Medical Center	575.887.4100	911
Eddy County Fire Service	575.628.5450	911
Eddy County Sherriff	575.887.7551	911
Lea County Fire Service	575.391.2983	911
Lea County Sherriff	575.396.3611	911
Jal Police Department	575.395.2121	911
Jal Fire Department	575.395.2221	911
Flat Creek Resources	817.731.4100	

Wellsite Layout

Escape Routes

Evacuation routes will depend on current wind direction



H2S Radius Map
1 & 2 Mile

18S

18S 28E

19S 27E

19S 28E

20S 27E

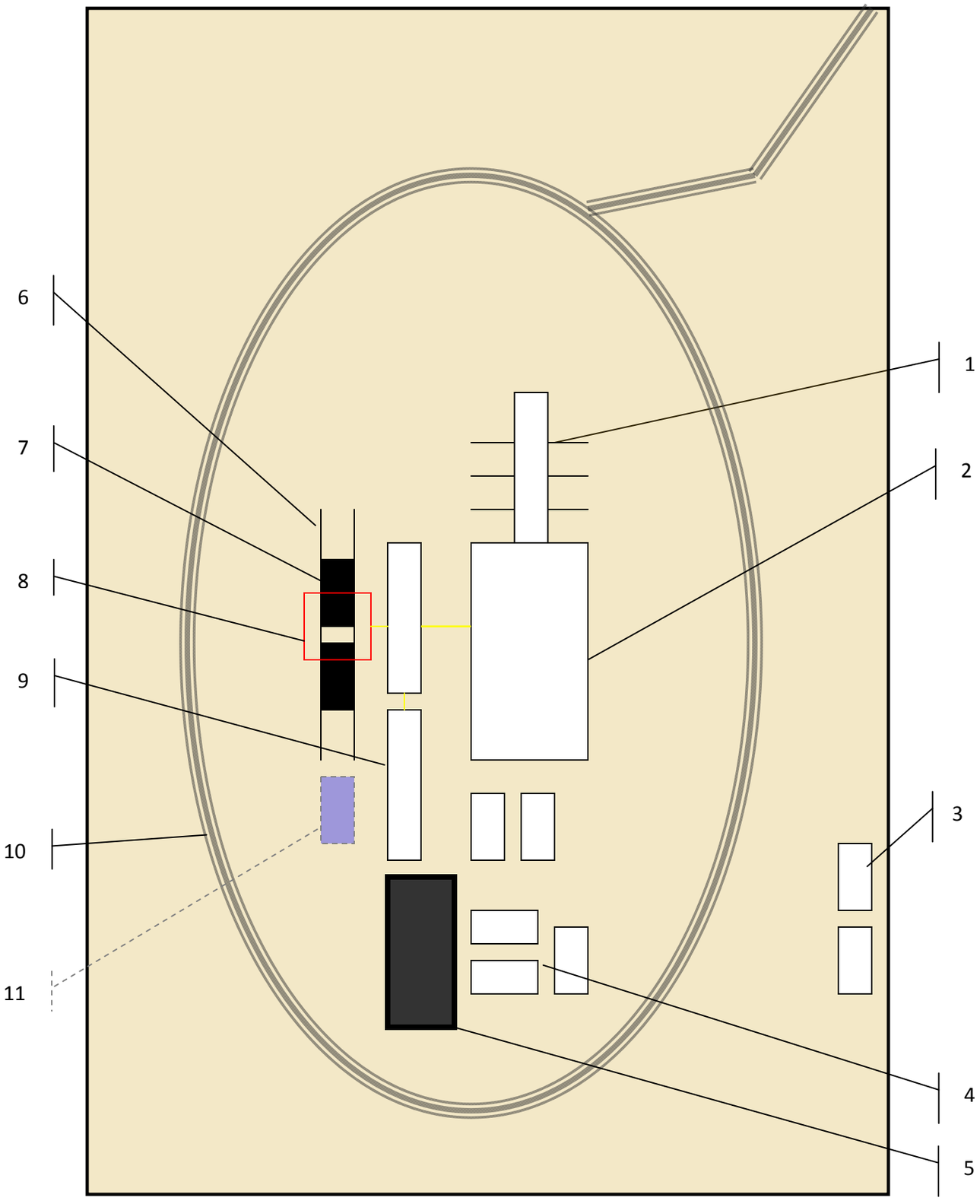
Eddy

FLAT CREEK RESOURCES

- Cardigan Fed Com 132H SHL
- Cardigan Pad
- Township
- Section

Buffers

- 1 mile
- 2 mile



Schematic Closed Loop Drilling Rig*

1. **Pipe Rack**
2. **Drill Rig**
3. **House Trailers/ Offices**
4. **Generator/Fuel/Storage**
5. **Overflow-Frac Tank**
6. **Skids**
7. **Roll Offs**
8. **Hopper or Centrifuge**
9. **Mud Tanks**
10. **Loop Drive**
11. **Generator (only for use with centrifuge)**

***Not drawn to scale: Closed loop system requires at least 30 feet beyond mud tanks. Ideally 60 feet would be available**



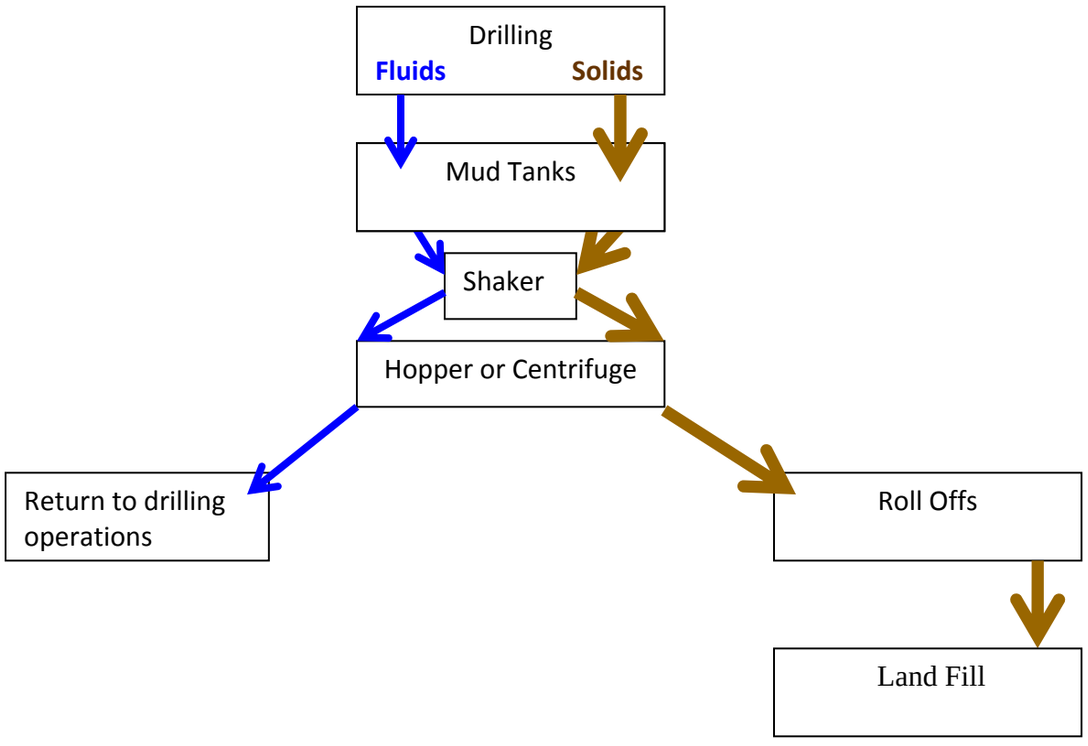
Above: Centrifugal Closed Loop System

PERMITS WEST, INC.
PROVIDING PERMITS for LAND USERS
37Verano Loop, Santa Fe, New Mexico 87508 (505) 466-8120



Closed Loop Drilling System: Mud tanks to right (1)
Hopper in air to settle out solids (2)
Water return pipe (3)
Shaker between hopper and mud tanks (4)
Roll offs on skids (5)

Flow Chart for Drilling Fluids and Solids



Photos Courtesy of Gandy Corporation Oil Field Service

PERMITS WEST, INC.
PROVIDING PERMITS for LAND USERS
37Verano Loop, Santa Fe, New Mexico 87508 (505) 466-8120

Sante Fe Main Office
Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

Online Phone Directory
https://www.emnrd.nm.gov/ocd/contact-us

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

ACKNOWLEDGMENTS

Operator: Flat Creek Resources, LLC 777 Main St. Fort Worth, TX 76102	OGRID: 374034
	Action Number: 583947
	Action Type: [C-101] BLM - Federal/Indian Land Lease (Form 3160-3)

ACKNOWLEDGMENTS

☑	I hereby certify that no additives containing PFAS chemicals will be added to the completion or recompletion of this well.

Sante Fe Main Office
Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

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https://www.emnrd.nm.gov/ocd/contact-us

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

CONDITIONS

Operator: Flat Creek Resources, LLC 777 Main St. Fort Worth, TX 76102	OGRID: 374034
	Action Number: 583947
	Action Type: [C-101] BLM - Federal/Indian Land Lease (Form 3160-3)

CONDITIONS

Created By	Condition	Condition Date
permitsw	Cement is required to circulate on both surface and intermediate1 strings of casing.	5/11/2026
permitsw	If cement does not circulate on any string, a Cement Bond Log (CBL) is required for that string of casing.	5/11/2026
ward.rikala	Notify the OCD 24 hours prior to casing & cement.	7/17/2026
ward.rikala	File As Drilled C-102 and a directional Survey with C-104 completion packet.	7/17/2026
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.	7/17/2026
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.	7/17/2026
ward.rikala	If the method of isolation was not by circulation, a CBL must be performed; if strata isolation is not achieved, then remediation will be required before further operations.	7/17/2026