

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**

**\*Please refer to most recently approved NOI appended to this application for updated changes to well**

1a. Type of work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. NMNM0475051
1b. Type of Well: <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other		6. If Indian, Allottee or Tribe Name
1c. Type of Completion: <input type="checkbox"/> Hydraulic Fracturing <input checked="" type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		7. If Unit or CA Agreement, Name and No.
2. Name of Operator FLAT CREEK RESOURCES LLC		8. Lease Name and Well No. JURNEGAN BS FED COM <del>007H</del> <b>010H</b>
3a. Address 777 MAIN STREET, SUITE 3600, FORT WORTH, TX 761	3b. Phone No. (include area code) (817) 310-8570	9. API Well No. <b>30-015-58068</b>
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface SWSW / 1069 FSL / 781 FWL / LAT 32.1985893 / LONG -104.2870267 At proposed prod. zone NESE / 1790 FSL / 15 FEL / LAT 32.2004582 / LONG -104.2554084		10. Field and Pool, or Exploratory WILLOW LAKE/BONE SPRING WEST
14. Distance in miles and direction from nearest town or post office* 5 miles		11. Sec., T. R. M. or Blk. and Survey or Area SEC 22/T24S/R26E/NMP
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 781 feet		12. County or Parish EDDY
16. No of acres in lease		13. State NM
17. Spacing Unit dedicated to this well 640.0		
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 30 feet		20. BLM/BIA Bond No. in file FED: NMB001675
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3334 feet	22. Approximate date work will start* 11/01/2025	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.   | 4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above). |
| 2. A Drilling Plan.  | 5. Operator certification.  |
| 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). | 6. Such other site specific information and/or plans as may be requested by the BLM.            |

25. Signature (Electronic Submission)	Name (Printed/Typed) CORY WALK / Ph: (817) 310-8570	Date 03/24/2025
Title Permitting Agent		
Approved by (Signature) (Electronic Submission)	Name (Printed/Typed) CODY LAYTON / Ph: (575) 234-5959	Date 10/14/2025
Title 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.



(Continued on page 2)

\*(Instructions on page 2)

<b>C-102</b> Submit Electronically Via OCD Permitting	State of New Mexico Energy, Minerals & Natural Resources Department <b>OIL CONSERVATION DIVISION</b>		Revised July 9, 2024
	Submittal Type:	<input checked="" type="checkbox"/> Initial Submittal	
		<input type="checkbox"/> Amended Report <input type="checkbox"/> As Drilled	

\*Please refer to most recently approved NOI appended to this application for the C-102 and Plat

**WELL LOCATION AND ACREAGE DEDICATION PLAT**

API Number <b>30-015-</b>	Pool Code <b>96415</b>	Pool Name <b>WILLOW LAKE; BONE SPRING, WEST</b>
Property Code	Property Name <b>JURNEGAN BS FED COM</b>	Well Number <b>7H</b>
OGRID No. <b>374034</b>	Operator Name <b>FLAT CREEK RESOURCES, LLC.</b>	Ground Level Elevation <b>3335'</b>
Surface Owner: <input type="checkbox"/> State <input type="checkbox"/> Fee <input type="checkbox"/> Tribal <input checked="" type="checkbox"/> Federal		Mineral Owner: <input type="checkbox"/> State <input checked="" type="checkbox"/> Fee <input type="checkbox"/> Tribal <input checked="" type="checkbox"/> 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
M	22	24-S	26-E	-	1069' S	781' W	N 32.1985893	W 104.2870267	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
I	23	24-S	26-E	-	1790' S	15' E	N 32.2004582	W 104.2554084	EDDY

Dedicated Acres <b>640</b>	Infill or Defining Well	Defining Well API	Overlapping Spacing Unit (Y/N)	Consolidated Code
Order Numbers			Well Setbacks are under Common Ownership: <input type="checkbox"/> Yes <input type="checkbox"/> 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
L	22	24-S	26-E	-	1790' S	15' W	N 32.2005551	W 104.2894907	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
L	22	24-S	26-E	-	1789' S	100' W	N 32.2005544	W 104.2892159	EDDY

**Last Take Point (LTP)**

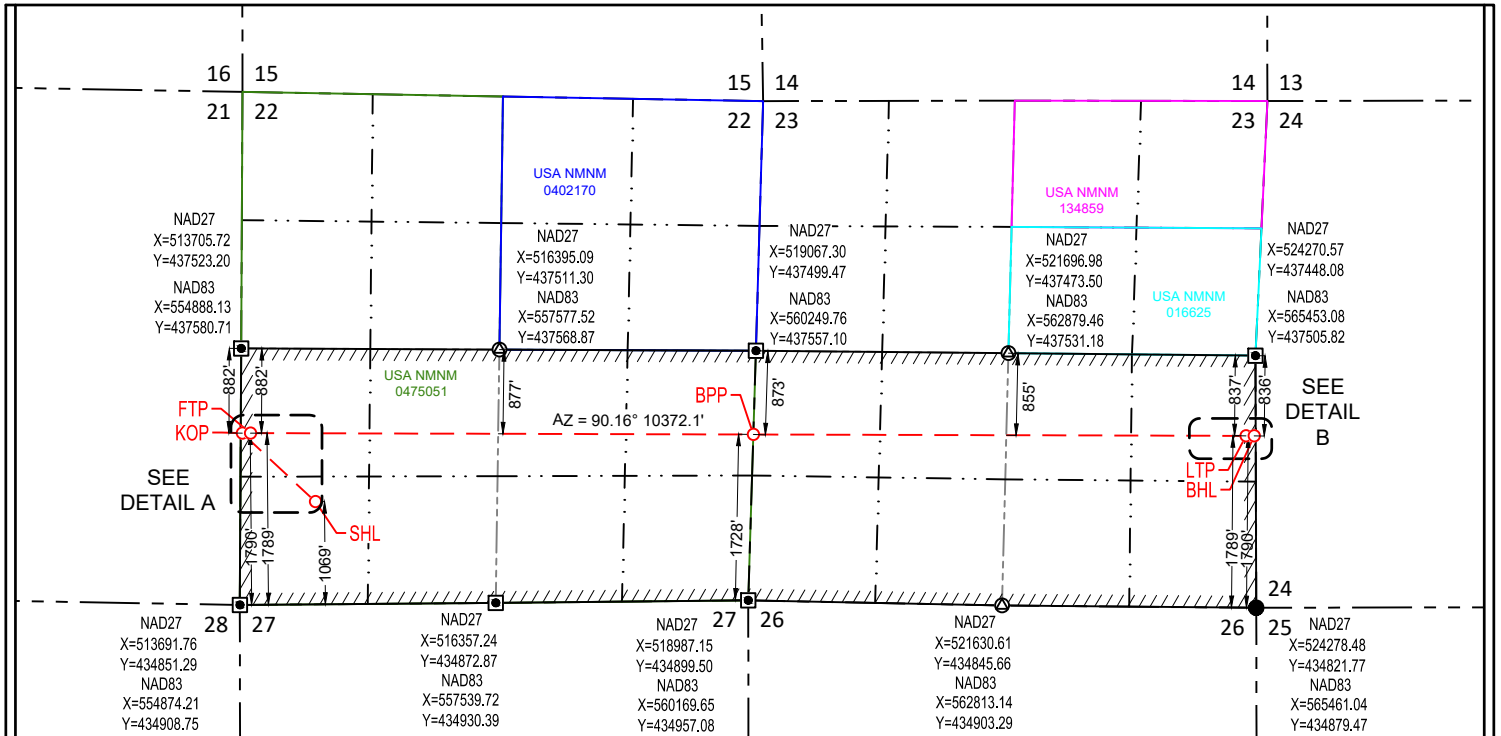
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the N/S	Feet from the E/W	Latitude	Longitude	County
I	23	24-S	26-E	-	1789' S	100' E	N 32.2004590	W 104.2556832	EDDY

Unitized Area or Area of Uniform Interest	Spacing Unity Type <input checked="" type="checkbox"/> Horizontal <input type="checkbox"/> Vertical	Ground Floor Elevation ----
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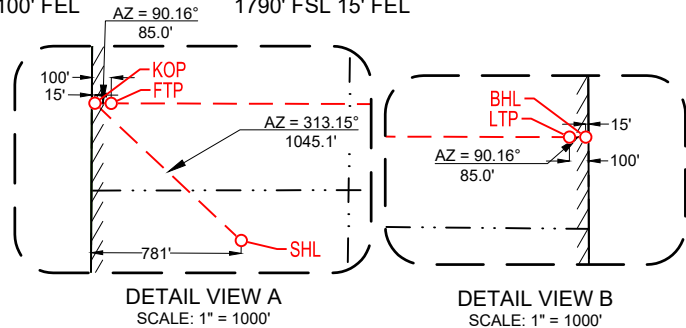
<b>OPERATOR CERTIFICATION</b> <i>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and, if the well is a vertical or directional well, that this organization either owns a working interest or unleased mineral interest in the land including 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.</i>  <i>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.</i>		<b>SURVEYORS CERTIFICATION</b> <i>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.</i>	
Signature: <u>Rodney Littleton</u> Date: <u>3/5/2025</u>		 3/5/2025 9:15:25 AM	
Print Name: <u>Rodney Littleton</u>		Signature and Seal of Professional Surveyor: _____      Date: _____	
E-mail Address: <u>rlittleton@freedomenergy.com</u>		Certificate Number: _____	Date of Survey: <u>10/29/2024</u>

S:\SURVEY\PLAT\_CREAGE\_RESOURCES\JURNEGAN\_BS\_FED\_COM\_7H\_0502.dwg (JURNEGAN\_BS\_FED\_COM\_7H\_0502.dwg) 3/30/2025 11:41 AM

<p><b>C-102</b></p> <p>Submit Electronically Via OCD Permitting</p>	<p>State of New Mexico Energy, Minerals &amp; Natural Resources Department <b>OIL CONSERVATION DIVISION</b></p>	<p>Revised July 9, 2024</p>
<p>Property Name and Well Number</p> <p style="text-align: center;"><b>JURNEGAN BS FED COM 7H</b></p>		<p>Submittal Type:</p> <p><input checked="" type="checkbox"/> Initial Submittal</p> <p><input type="checkbox"/> Amended Report</p> <p><input type="checkbox"/> As Drilled</p>



SURFACE LOCATION (SHL)	KICK OFF POINT (KOP)	FIRST TAKE POINT (FTP)	BLM PERF. POINT (BPP)
NEW MEXICO EAST NAD 1983 X=515661 Y=435984 LAT.: N 32.1985893 LONG.: W 104.2870267 NAD 1927 X=514479 Y=435927 LAT.: N 32.1984709 LONG.: W 104.2865264 1069' FSL 781' FWL	NEW MEXICO EAST NAD 1983 X=554899 Y=436699 LAT.: N 32.2005551 LONG.: W 104.2894907 NAD 1927 X=513716 Y=436642 LAT.: N 32.2004368 LONG.: W 104.2889903 1790' FSL 15' FWL	NEW MEXICO EAST NAD 1983 X=554984 Y=436699 LAT.: N 32.2005544 LONG.: W 104.2892159 NAD 1927 X=513801 Y=436641 LAT.: N 32.2004361 LONG.: W 104.2887155 1789' FSL 100' FWL	NEW MEXICO EAST NAD 1983 X=560223 Y=436684 LAT.: N 32.2005073 LONG.: W 104.2722772 NAD 1927 X=519040 Y=436627 LAT.: N 32.2003886 LONG.: W 104.2717774 1728' FSL 0' FWL
LAST TAKE POINT (LTP)	BOTTOM HOLE LOCATION (BHL)		
NEW MEXICO EAST NAD 1983 X=565356 Y=436670 LAT.: N 32.2004590 LONG.: W 104.2556832 NAD 1927 X=524173 Y=436612 LAT.: N 32.2003400 LONG.: W 104.2551839 1789' FSL 100' FEL	NEW MEXICO EAST NAD 1983 X=565441 Y=436670 LAT.: N 32.2004582 LONG.: W 104.2554084 NAD 1927 X=524258 Y=436612 LAT.: N 32.2003391 LONG.: W 104.2549091 1790' FSL 15' FEL		



**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.

10/29/2024

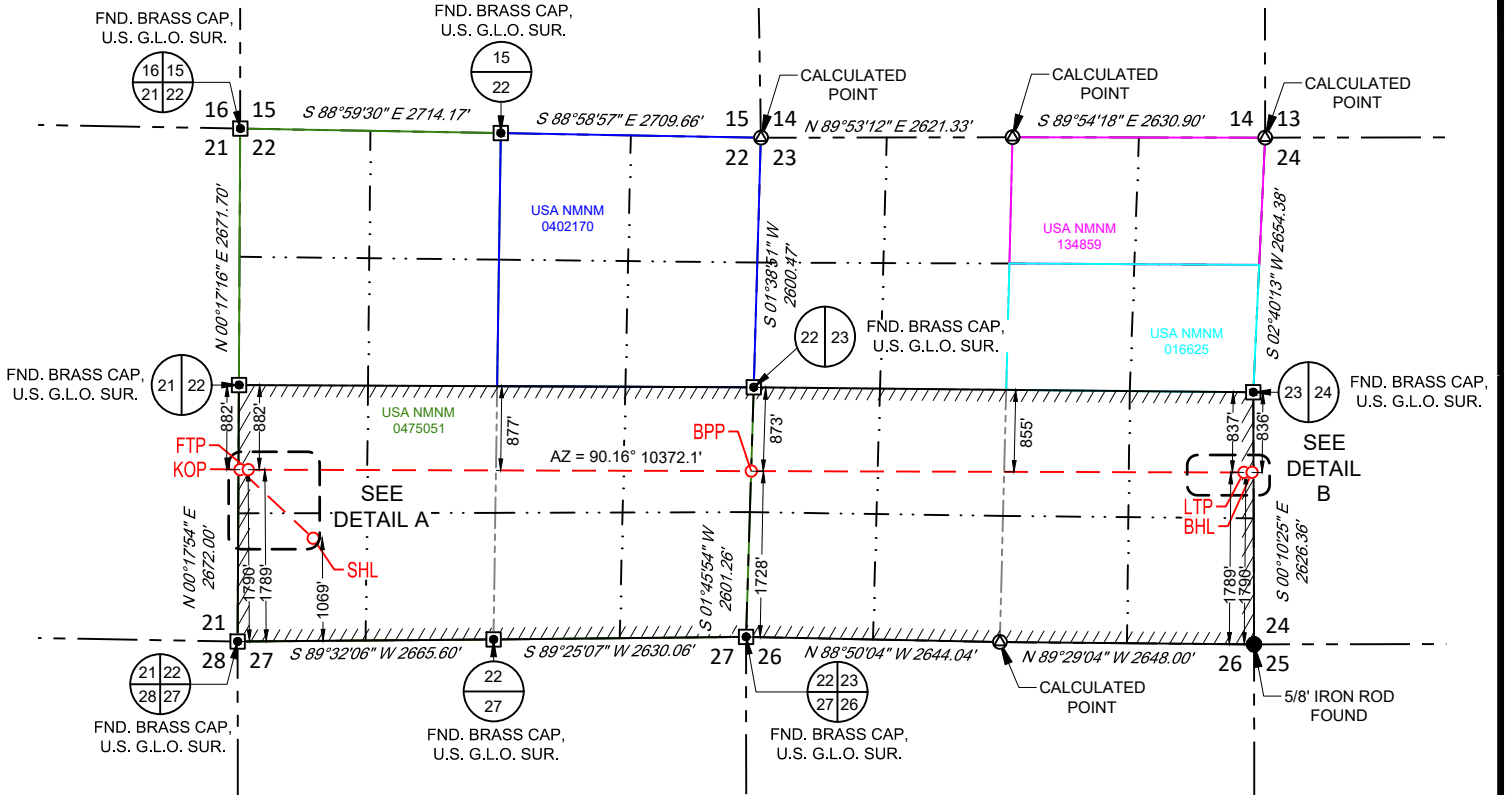
Date of Survey  
Signature and Seal of Professional Surveyor:

3/5/2025 9:15:26 AM

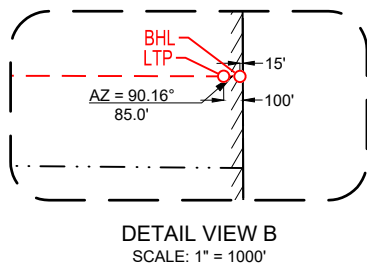
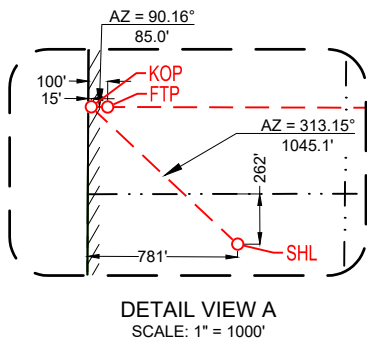
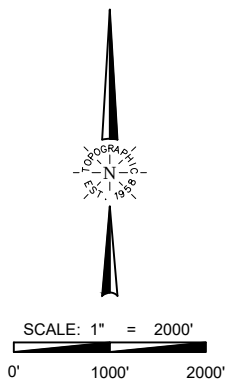


FLAT CREEK  
RESOURCES

SECTION 22, TOWNSHIP 24-S, RANGE 26-E, N.M.P.M.  
EDDY COUNTY, NEW MEXICO



SURFACE LOCATION (SHL)	KICK OFF POINT (KOP)	FIRST TAKE POINT (FTP)
NEW MEXICO EAST NAD 1983 X=555661 Y=435984 LAT.: N 32.1985893 LONG.: W 104.2870267 1069' FSL 781' FWL	NEW MEXICO EAST NAD 1983 X=554899 Y=436699 LAT.: N 32.2005551 LONG.: W 104.2894907 1790' FSL 15' FWL	NEW MEXICO EAST NAD 1983 X=554984 Y=436699 LAT.: N 32.2005544 LONG.: W 104.2892159 1789' FSL 100' FWL
BLM PERF. POINT (BPP)	LAST TAKE POINT (LTP)	BOTTOM HOLE LOCATION (BHL)
NEW MEXICO EAST NAD 1983 X=560223 Y=436684 LAT.: N 32.2005073 LONG.: W 104.2722772 1728' FSL 0' FWL	NEW MEXICO EAST NAD 1983 X=565356 Y=436670 LAT.: N 32.2004590 LONG.: W 104.2556832 1789' FSL 100' FEL	NEW MEXICO EAST NAD 1983 X=565441 Y=436670 LAT.: N 32.2004582 LONG.: W 104.2554084 1790' FSL 15' FEL



LEASE NAME & WELL NO.: JURNEGAN BS FED COM 7H

SECTION 22 TWP 24-S RGE 26-E SURVEY N.M.P.M.  
 COUNTY EDDY STATE NM  
 DESCRIPTION 1069' FSL & 781' 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 LEASE  
RD. ±7489 FEET, THENCE NORTH (RIGHT) ON A PROPOSED ROAD ±32  
FEET TO A POINT ±381 FEET SOUTHEAST OF THE LOCATION.



3/5/2025 9:15:27 AM  
 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 WINSOTT ROAD, Ste. 200 • BENBROOK, TEXAS 76126  
 TELEPHONE: (817) 744-7512 • FAX (817) 744-7554  
 2903 NORTH BIG SPRING • MIDLAND, TEXAS 79705  
 TELEPHONE: (432) 682-1653 OR (800) 767-1653 • FAX (432) 682-1743  
 WWW.TOPOGRAPHIC.COM

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:** 03 / 11 / 2025

**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
Jurnegan BS Fed Com 3H		M-22-24S-26E	1106' S 773' W	1500	3200	3500
Jurnegan BS Fed Com 4H		M-22-24S-26E	1087' S 757' W	1500	3200	3500
Jurnegan BS Fed Com 7H		M-22-24S-26E	1069' S 781' W	750	2300	1950
Jurnegan BS Fed Com 8H		M-22-24S-26E	1050' S 805' W	750	2300	1950

**IV. Central Delivery Point Name:** Jurnegan South Pad 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
Jurnegan BS Fed Com 3H		July 1,2026	July 15,2026	Sept. 1, 2026	Oct. 1, 2026	Oct. 15, 2026
Jurnegan BS Fed Com 4H		July 2,2026	July 30,2026	Sept. 1, 2026	Oct. 1, 2026	Oct. 15, 2026
Jurnegan BS Fed Com 7H		July 1, 2027	July 15, 2027	Sept. 1, 2027	Oct. 1, 2027	Oct. 15, 2027
Jurnegan BS Fed Com 8H		July 2, 2027	July 30, 2027	Sept. 1, 2027	Oct. 1, 2027	Oct. 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:	<i>Rodney Littleton</i>
Printed Name:	Rodney Littleton
Title:	VP of Drilling
E-mail Address:	rlittleton@freedomenergy.com
Date:	March 12, 2025
Phone:	817-310-8570

**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 to a 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.



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

# Drilling Plan Data Report

10/15/2025

APD ID: 10400104125

Submission Date: 03/24/2025

Highlighted data reflects the most recent changes

Operator Name: FLAT CREEK RESOURCES LLC

Well Name: JURNEGAN BS FED COM

Well Number: 007H

Well Type: OIL WELL

Well Work Type: Drill

[Show Final Text](#)

## Section 1 - Geologic Formations

Formation ID	Formation Name	Elevation	True Vertical	Measured Depth	Lithologies	Mineral Resources	Producing Formatio
16590587	QUATERNARY	3334	0	0	OTHER : None	NONE	N
16590588	UNKNOWN	3308	26	26	ALLUVIUM	USEABLE WATER	N
16590589	RUSTLER ANHYDRITE	3104	230	230	ANHYDRITE	NONE	N
16590586	TOP SALT	2134	1200	1200	SALT	NONE	N
16590590	BASE OF SALT	1834	1500	1500	SALT	NONE	N
16590591	LAMAR	1534	1800	1800	LIMESTONE	NONE	N
16590592	BELL CANYON	1435	1899	1900	SANDSTONE	NONE	N
16590593	CHERRY CANYON	653	2681	2700	SANDSTONE	NONE	N
16590598	BRUSHY CANYON	-315	3649	3700	SANDSTONE	NONE	N
16590583	BONE SPRING LIME	-2004	5338	5400	LIMESTONE	NATURAL GAS, OIL	N
16590595	BONE SPRING 1ST	-2842	6176	6300	SANDSTONE	NATURAL GAS, OIL	N
16590596	BONE SPRING 2ND	-3042	6376	6500	SHALE	NATURAL GAS, OIL	N
16590597	BONE SPRING 2ND	-3242	6576	6700	SANDSTONE	NATURAL GAS, OIL	N
16590584	BONE SPRING 3RD	-3642	6976	7100	LIMESTONE	NATURAL GAS, OIL	N
16590585	BONE SPRING 3RD	-4076	7410	7550	LIMESTONE, OTHER : Lower	NATURAL GAS, OIL	Y

## Section 2 - Blowout Prevention

**Operator Name:** FLAT CREEK RESOURCES LLC

**Well Name:** JURNEGAN BS FED COM

**Well Number:** 007H

**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.

**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).

**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\_20250319122516.pdf

Choke\_Rev\_20250919093204.pdf

**BOP Diagram Attachment:**

10M\_BOP\_5M\_Annular\_Diagram\_20250319122525.pdf

10M\_BOP\_5M\_Annular\_Diagram\_20250919093215.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	3334	2934	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	1780	0	1778	3329	1556	1780	OTHER - P-110 HC	29.7	BUTT	7.7	7.4	DRY	12.9	DRY	12.9
3	PRODUCTION	6.75	5.5	NEW	NON API	N	0	18085	0	7860	3329	-4526	18085	OTHER - P-110 HC	20	OTHER - TCBC-HT	3.1	3.2	DRY	4.2	DRY	4.2

**Operator Name:** FLAT CREEK RESOURCES LLC

**Well Name:** JURNEGAN BS FED COM

**Well Number:** 007H

**Casing Attachments**

---

**Casing ID:** 1                    **String**      SURFACE

**Inspection Document:**

**Spec Document:**

**Tapered String Spec:**

**Casing Design Assumptions and Worksheet(s):**

Jurnegan\_BS\_7H\_Casing\_Design\_Assumptions\_20250319122551.pdf

Jurnegan\_BS\_7H\_Casing\_Design\_Assumptions\_20250919093235.pdf

---

**Casing ID:** 2                    **String**      INTERMEDIATE

**Inspection Document:**

**Spec Document:**

**Tapered String Spec:**

**Casing Design Assumptions and Worksheet(s):**

Jurnegan\_BS\_7H\_Casing\_Design\_Assumptions\_20250319122608.pdf

Jurnegan\_BS\_7H\_Casing\_Design\_Assumptions\_20250919093249.pdf

---

**Casing ID:** 3                    **String**      PRODUCTION

**Inspection Document:**

**Spec Document:**

5.5in\_Casing\_Spec\_20lb\_TCBC\_HT\_20250319122639.pdf

5.5in\_Casing\_Spec\_20lb\_TCBC\_HT\_20250919093305.pdf

**Tapered String Spec:**

**Casing Design Assumptions and Worksheet(s):**

Jurnegan\_BS\_7H\_Casing\_Design\_Assumptions\_20250319122705.pdf

Jurnegan\_BS\_7H\_Casing\_Design\_Assumptions\_20250919093320.pdf

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Operator Name: FLAT CREEK RESOURCES LLC

Well Name: JURNEGAN BS FED COM

Well Number: 007H

## 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	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	250	1.68	12.8	420	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	1780	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	1808 5	785	1.42	13.2	1115	15	35/65 Poz Premium H	0.2% CPT-23

**Operator Name:** FLAT CREEK RESOURCES LLC

**Well Name:** JURNEGAN BS FED COM

**Well Number:** 007H

### 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

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							
1780	1808 5	OTHER : Cut Brine	9.4	9.4							
400	1780	OTHER : Cut Brine	10	10							

### 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:**

POROSITY-RESISTIVITY LOG,

**Coring operation description for the well:**

No coring operation is planned.

**Operator Name:** FLAT CREEK RESOURCES LLC

**Well Name:** JURNEGAN BS FED COM

**Well Number:** 007H

### Section 7 - Pressure

**Anticipated Bottom Hole Pressure:** 3524

**Anticipated Surface Pressure:** 1795

**Anticipated Bottom Hole Temperature(F):** 170

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

**Describe:**

**Contingency Plans geohazards description:**

**Contingency Plans geohazards**

**Hydrogen Sulfide drilling operations plan required?** YES

**Hydrogen sulfide drilling operations**

Jurnegan\_South\_H2S\_Plan\_20250319122833.pdf

Jurnegan\_South\_H2S\_Plan\_20250919093338.pdf

### Section 8 - Other Information

**Proposed horizontal/directional/multi-lateral plan submission:**

Jurnegan\_BS\_7H\_Directional\_Plan\_20250319122848.pdf

Jurnegan\_BS\_7H\_Directional\_Plan\_20250919093401.pdf

**Other proposed operations facets description:**

**Other proposed operations facets attachment:**

Jurnegan\_BS\_7H\_Anticollision\_Report\_20250319122906.pdf

CoFlex\_Certs\_Rev\_20250319122918.pdf

BOP\_Wellhead\_Testing\_v2\_20250319122928.pdf

Wellhead\_Diagram\_20250319122940.pdf

Jurnegan\_South\_WMP\_20250319122953.pdf

Jurnegan\_BS\_7H\_Drill\_Plan\_20250319155234.pdf

Jurnegan\_BS\_7H\_Drill\_Plan\_20250919093416.pdf

Jurnegan\_BS\_7H\_Anticollision\_Report\_20250919093432.pdf

CoFlex\_Certs\_Rev\_20250919093443.pdf

Wellhead\_Diagram\_20250919093524.pdf

BOP\_Wellhead\_Testing\_v2\_20250919093535.pdf

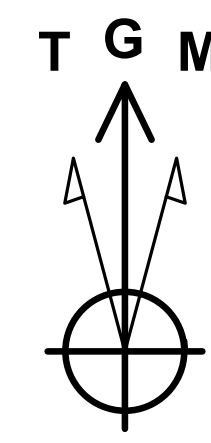
Jurnegan\_South\_WMP\_20250919093553.pdf

**Other Variance request(s)?:** N

**Other Variance attachment:**



Company: Freedom Energy  
 Field: Eddy County, NM NAD83  
 Location: Jurnegan  
 Well: Jurnegan BS Fed Com 7H  
 OH  
 Plan: Plan 1  
 GL 3332' + 26.5' KB @ 3358.50usft



Azimuths to Grid North  
 True North: -0.02°  
 Magnetic North: 6.43°

Magnetic Field  
 Strength: 47042.5nT  
 Dip Angle: 59.66°  
 Date: 12/17/2024  
 Model: IGRF2020

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

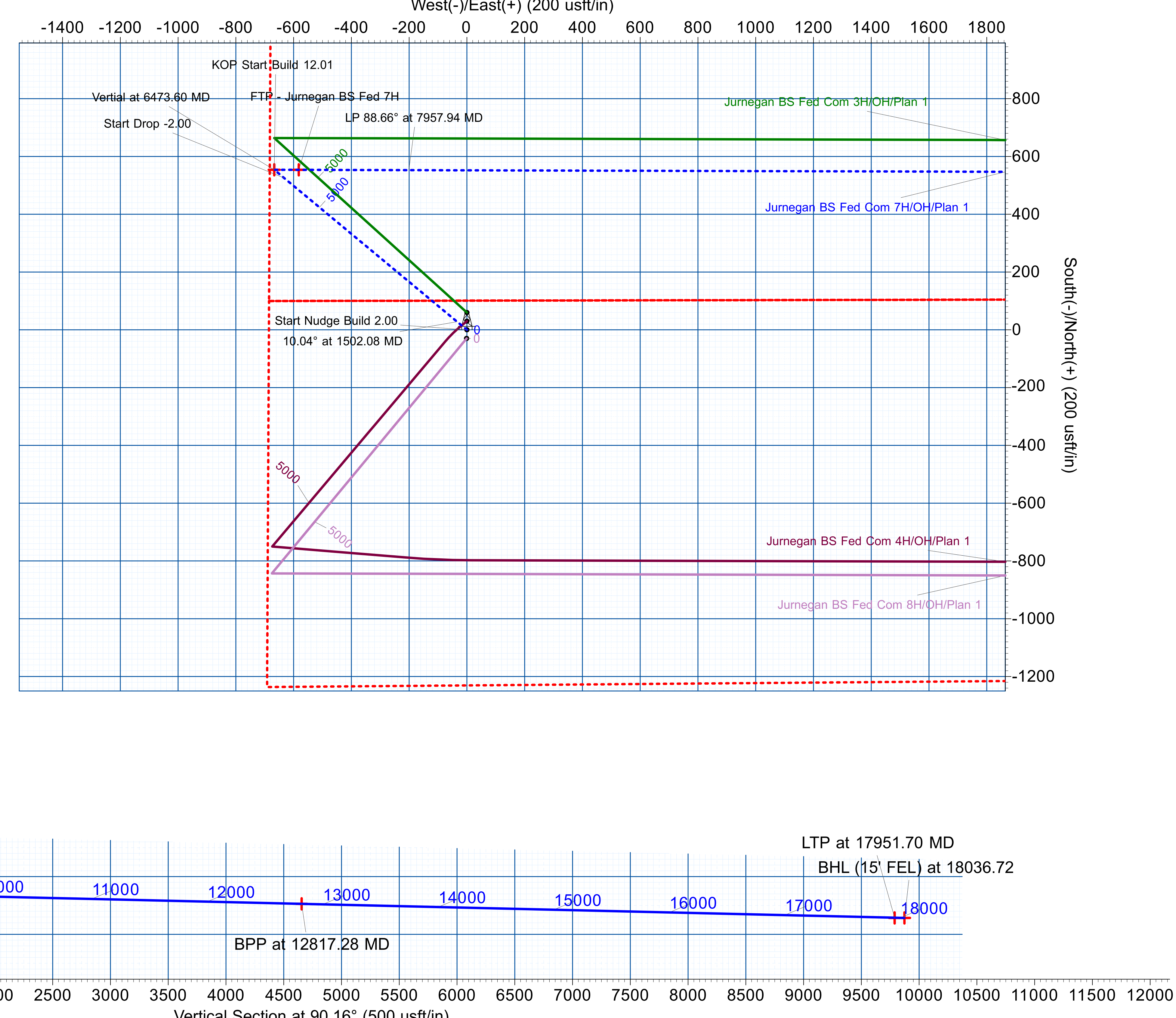
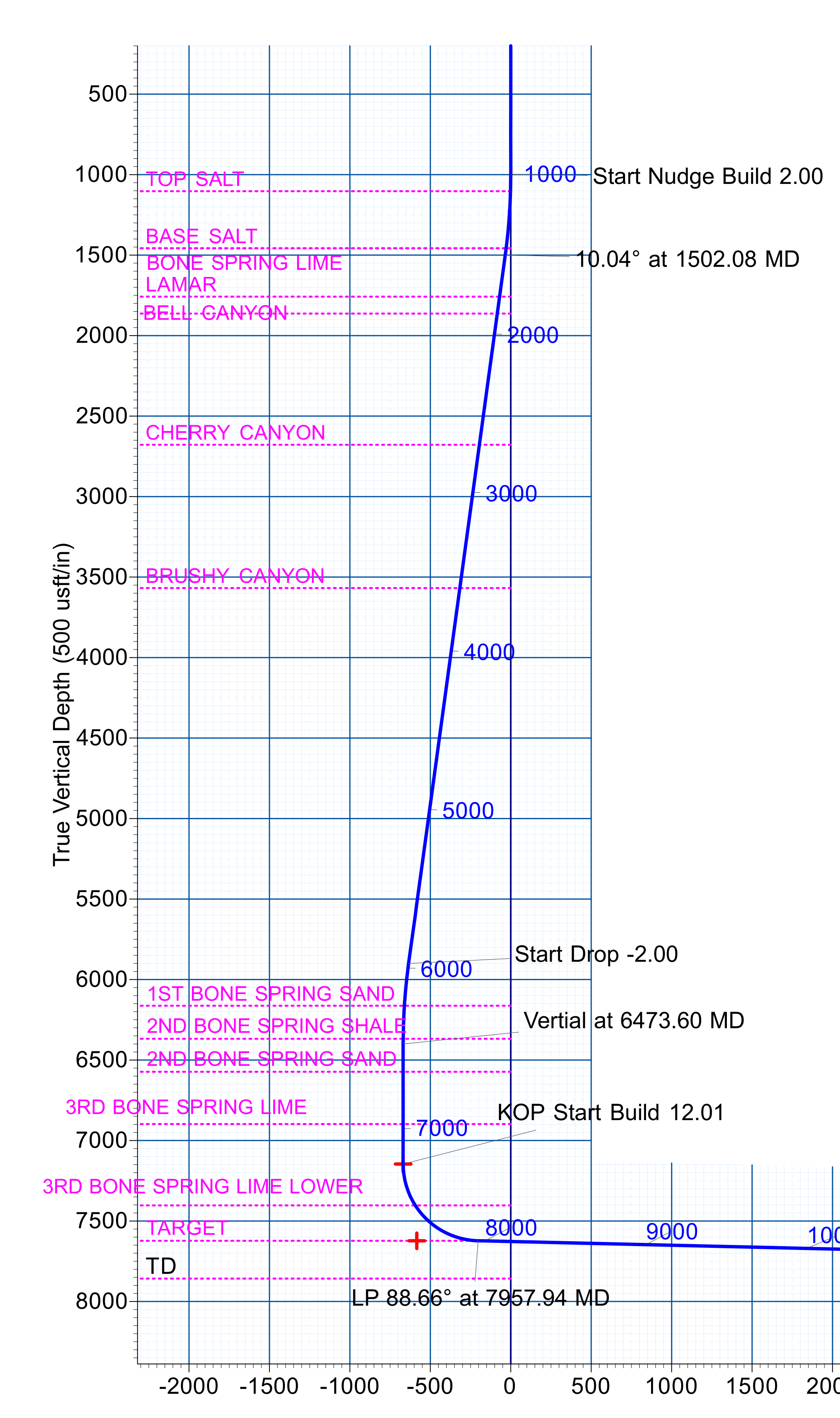
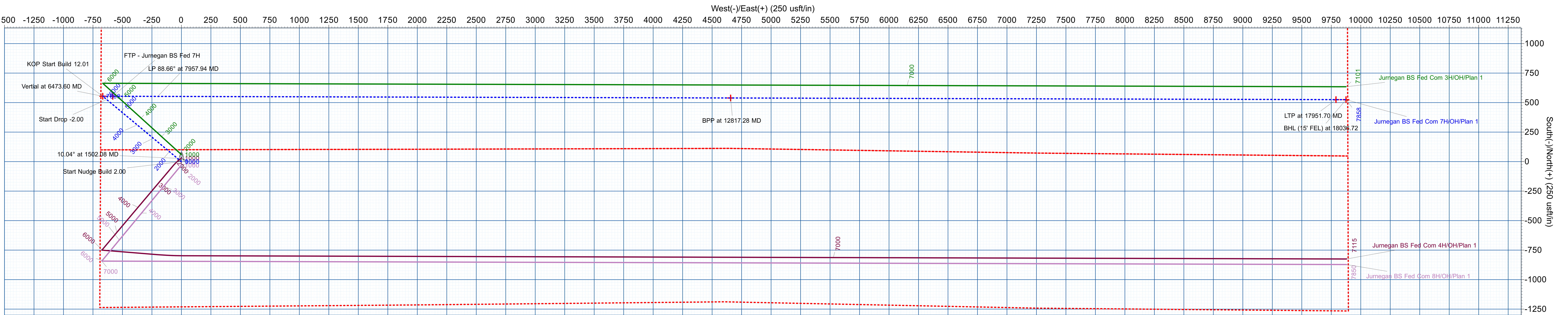


WELL DETAILS: Jurnegan BS Fed Com 7H

+N/-S	+E/-W	GL 3332' + 26.5' KB @ 3358.50usft	3332.00
0.00	0.00	Northing	Easting
436145.00	555566.00	Latitude	Longitude
		32.199031	-104.287334

## Rig: H&P 651

To convert a Magnetic Direction to a Grid Direction, Add 6.43°



DESIGN TARGET DETAILS							
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
KOP - Jurnegan BS Fed 7H	7146.00	554.00	-667.00	436699.00	554899.00	32.200555	-104.289489
FTP - Jurnegan BS Fed 7H	7623.00	554.00	-682.00	436699.00	554984.00	32.200555	-104.289214
BPP - Jurnegan BS Fed 7H	7736.31	539.00	4657.00	436684.00	560223.00	32.200507	-104.272277
BHL (15' FEL) at 18036.72	7858.00	525.00	9875.00	436670.00	565441.00	32.200459	-104.255407
LTP - Jurnegan BS Fed 7H	7858.00	525.00	9790.00	436670.00	565356.00	32.200459	-104.255682

SECTION DETAILS									
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	1000.00	0.00	0.00	1000.00	0.00	0.00	0.00	0.00	0.00
3	1502.08	10.04	309.71	1499.51	28.04	-33.76	2.00	309.71	-33.84
4	5971.52	10.04	309.71	5900.49	525.96	-633.24	0.00	0.00	-634.71
5	6473.60	0.00	0.00	6400.00	554.00	-667.00	2.00	180.00	-668.54
6	7219.60	0.00	0.00	7146.00	554.00	-667.00	0.00	0.00	-668.54
7	7957.94	88.66	90.16	7623.00	552.72	-201.00	12.01	90.16	-202.54
8	12817.28	88.66	90.16	7736.31	539.36	4657.00	0.00	0.00	4655.48
9	17951.70	88.66	90.16	7856.03	525.24	9790.00	0.00	0.00	9788.50
10	18036.72	88.66	90.16	7858.01	525.00	9875.00	0.00	0.00	9873.50

FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
30.00	30.00	SALADO
1103.00	1103.02	TOP SALT
1458.00	1459.97	BASE SALT
1458.00	1459.97	BONE SPRING LIME
1758.00	1764.59	LAMAR
1863.00	1871.22	BELL CANYON
2678.00	2698.90	CHERRY CANYON
3568.00	3602.74	BRUSHY CANYON
6163.00	6236.33	1ST BONE SPRING SAND
6368.00	6441.60	2ND BONE SPRING SHALE
6573.00	6646.60	2ND BONE SPRING SAND
6898.00	6971.60	3RD BONE SPRING LIME
7403.00	7491.00	3RD BONE SPRING LIME LOWER
7823.00	7857.94	TARGET
7858.00	18036.33	TD

# Freedom Energy

Eddy County, NM NAD83

Jurnegan

Jurnegan BS Fed Com 7H

OH

\*Please refer to most recently approved NOI appended to this application for the directional plan

Plan: Plan 1

## Standard Planning Report

26 December, 2024

### Legacy Directional Drilling

#### Planning Report

<b>Database:</b>	EDM_WA	<b>Local Co-ordinate Reference:</b>	Well Jurnegan BS Fed Com 7H
<b>Company:</b>	Freedom Energy	<b>TVD Reference:</b>	GL 3332' + 26.5' KB @ 3358.50usft
<b>Project:</b>	Eddy County, NM NAD83	<b>MD Reference:</b>	GL 3332' + 26.5' KB @ 3358.50usft
<b>Site:</b>	Jurnegan	<b>North Reference:</b>	Grid
<b>Well:</b>	Jurnegan BS Fed Com 7H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan 1		

<b>Project</b>	Eddy County, NM NAD83		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		
<b>Map Zone:</b>	New Mexico Eastern Zone		

<b>Site</b>	Jurnegan				
<b>Site Position:</b>		<b>Northing:</b>	439,291.00 usft	<b>Latitude:</b>	32.207680
<b>From:</b>	Map	<b>Easting:</b>	555,610.00 usft	<b>Longitude:</b>	-104.287187
<b>Position Uncertainty:</b>	0.00 usft	<b>Slot Radius:</b>	13-3/16 "		

<b>Well</b>	Jurnegan BS Fed Com 7H					
<b>Well Position</b>	<b>+N/-S</b>	0.00 usft	<b>Northing:</b>	436,145.00 usft	<b>Latitude:</b>	32.199032
	<b>+E/-W</b>	0.00 usft	<b>Easting:</b>	555,566.00 usft	<b>Longitude:</b>	-104.287334
<b>Position Uncertainty</b>		0.00 usft	<b>Wellhead Elevation:</b>	usft	<b>Ground Level:</b>	3,332.00 usft
<b>Grid Convergence:</b>		0.02 °				

<b>Wellbore</b>	OH				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination</b>	<b>Dip Angle</b>	<b>Field Strength</b>
			(°)	(°)	(nT)
	IGRF2020	12/17/2024	6.46	59.66	47,042.54798776

<b>Design</b>	Plan 1			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	0.00
<b>Vertical Section:</b>	<b>Depth From (TVD)</b>	<b>+N/-S</b>	<b>+E/-W</b>	<b>Direction</b>
	(usft)	(usft)	(usft)	(°)
	0.00	0.00	0.00	90.16

<b>Plan Survey Tool Program</b>	<b>Date</b>	12/26/2024		
<b>Depth From</b>	<b>Depth To</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Remarks</b>
(usft)	(usft)			
1	0.00	18,036.71 Plan 1 (OH)	MWD	
			OWSG MWD - Standard	

### Legacy Directional Drilling Planning Report

<b>Database:</b>	EDM_WA	<b>Local Co-ordinate Reference:</b>	Well Jurnegan BS Fed Com 7H
<b>Company:</b>	Freedom Energy	<b>TVD Reference:</b>	GL 3332' + 26.5' KB @ 3358.50usft
<b>Project:</b>	Eddy County, NM NAD83	<b>MD Reference:</b>	GL 3332' + 26.5' KB @ 3358.50usft
<b>Site:</b>	Jurnegan	<b>North Reference:</b>	Grid
<b>Well:</b>	Jurnegan BS Fed Com 7H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan 1		

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	
1,502.08	10.04	309.71	1,499.51	28.04	-33.76	2.00	2.00	0.00	309.71	
5,971.52	10.04	309.71	5,900.49	525.96	-633.24	0.00	0.00	0.00	0.00	
6,473.60	0.00	0.00	6,400.00	554.00	-667.00	2.00	-2.00	0.00	180.00	
7,219.60	0.00	0.00	7,146.00	554.00	-667.00	0.00	0.00	0.00	0.00	
7,957.94	88.66	90.16	7,623.00	552.72	-201.00	12.01	12.01	0.00	90.16	
12,817.28	88.66	90.16	7,736.31	539.36	4,657.00	0.00	0.00	0.00	0.00	BPP - Jurnegan BS F
17,951.70	88.66	90.16	7,856.03	525.24	9,790.00	0.00	0.00	0.00	0.00	LTP - Jurnegan BS Fe
18,036.72	88.66	90.16	7,858.01	525.00	9,875.00	0.00	0.00	0.00	0.00	BHL - Jurnegan BS Fi

### Legacy Directional Drilling

#### Planning Report

<b>Database:</b>	EDM_WA	<b>Local Co-ordinate Reference:</b>	Well Jurnegan BS Fed Com 7H
<b>Company:</b>	Freedom Energy	<b>TVD Reference:</b>	GL 3332' + 26.5' KB @ 3358.50usft
<b>Project:</b>	Eddy County, NM NAD83	<b>MD Reference:</b>	GL 3332' + 26.5' KB @ 3358.50usft
<b>Site:</b>	Jurnegan	<b>North Reference:</b>	Grid
<b>Well:</b>	Jurnegan BS Fed Com 7H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	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	0.00
30.00	0.00	0.00	30.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>SALADO</b>										
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	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	0.00
800.00	0.00	0.00	800.00	0.00	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	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Start Nudge Build 2.00</b>										
1,100.00	2.00	309.71	1,099.98	1.12	-1.34	-1.35	2.00	2.00	0.00	0.00
1,103.02	2.06	309.71	1,103.00	1.18	-1.42	-1.43	2.00	2.00	0.00	0.00
<b>TOP SALT</b>										
1,200.00	4.00	309.71	1,199.84	4.46	-5.37	-5.38	2.00	2.00	0.00	0.00
1,300.00	6.00	309.71	1,299.45	10.03	-12.07	-12.10	2.00	2.00	0.00	0.00
1,400.00	8.00	309.71	1,398.70	17.81	-21.45	-21.50	2.00	2.00	0.00	0.00
1,459.97	9.20	309.71	1,458.00	23.54	-28.35	-28.41	2.00	2.00	0.00	0.00
<b>BASE SALT - BONE SPRING LIME</b>										
1,502.08	10.04	309.71	1,499.51	28.04	-33.76	-33.84	2.00	2.00	0.00	0.00
<b>10.04° at 1502.08 MD</b>										
1,600.00	10.04	309.71	1,595.93	38.95	-46.89	-47.00	0.00	0.00	0.00	0.00
1,700.00	10.04	309.71	1,694.40	50.09	-60.31	-60.45	0.00	0.00	0.00	0.00
1,764.59	10.04	309.71	1,758.00	57.28	-68.97	-69.13	0.00	0.00	0.00	0.00
<b>LAMAR</b>										
1,800.00	10.04	309.71	1,792.87	61.23	-73.72	-73.89	0.00	0.00	0.00	0.00
1,871.22	10.04	309.71	1,863.00	69.16	-83.27	-83.46	0.00	0.00	0.00	0.00
<b>BELL CANYON</b>										
1,900.00	10.04	309.71	1,891.34	72.37	-87.13	-87.33	0.00	0.00	0.00	0.00
2,000.00	10.04	309.71	1,989.81	83.51	-100.54	-100.78	0.00	0.00	0.00	0.00
2,100.00	10.04	309.71	2,088.27	94.65	-113.96	-114.22	0.00	0.00	0.00	0.00
2,200.00	10.04	309.71	2,186.74	105.79	-127.37	-127.67	0.00	0.00	0.00	0.00
2,300.00	10.04	309.71	2,285.21	116.93	-140.78	-141.11	0.00	0.00	0.00	0.00
2,400.00	10.04	309.71	2,383.68	128.07	-154.20	-154.55	0.00	0.00	0.00	0.00
2,500.00	10.04	309.71	2,482.15	139.21	-167.61	-168.00	0.00	0.00	0.00	0.00
2,600.00	10.04	309.71	2,580.62	150.35	-181.02	-181.44	0.00	0.00	0.00	0.00
2,698.90	10.04	309.71	2,678.00	161.37	-194.29	-194.74	0.00	0.00	0.00	0.00
<b>CHERRY CANYON</b>										
2,700.00	10.04	309.71	2,679.08	161.49	-194.43	-194.89	0.00	0.00	0.00	0.00
2,800.00	10.04	309.71	2,777.55	172.64	-207.85	-208.33	0.00	0.00	0.00	0.00
2,900.00	10.04	309.71	2,876.02	183.78	-221.26	-221.77	0.00	0.00	0.00	0.00
3,000.00	10.04	309.71	2,974.49	194.92	-234.67	-235.22	0.00	0.00	0.00	0.00
3,100.00	10.04	309.71	3,072.96	206.06	-248.09	-248.66	0.00	0.00	0.00	0.00
3,200.00	10.04	309.71	3,171.42	217.20	-261.50	-262.11	0.00	0.00	0.00	0.00
3,300.00	10.04	309.71	3,269.89	228.34	-274.91	-275.55	0.00	0.00	0.00	0.00
3,400.00	10.04	309.71	3,368.36	239.48	-288.33	-288.99	0.00	0.00	0.00	0.00
3,500.00	10.04	309.71	3,466.83	250.62	-301.74	-302.44	0.00	0.00	0.00	0.00
3,600.00	10.04	309.71	3,565.30	261.76	-315.15	-315.88	0.00	0.00	0.00	0.00
3,602.75	10.04	309.71	3,568.00	262.07	-315.52	-316.25	0.00	0.00	0.00	0.00
<b>BRUSHY CANYON</b>										

### Legacy Directional Drilling

#### Planning Report

<b>Database:</b>	EDM_WA	<b>Local Co-ordinate Reference:</b>	Well Jurnegan BS Fed Com 7H
<b>Company:</b>	Freedom Energy	<b>TVD Reference:</b>	GL 3332' + 26.5' KB @ 3358.50usft
<b>Project:</b>	Eddy County, NM NAD83	<b>MD Reference:</b>	GL 3332' + 26.5' KB @ 3358.50usft
<b>Site:</b>	Jurnegan	<b>North Reference:</b>	Grid
<b>Well:</b>	Jurnegan BS Fed Com 7H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	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)
3,700.00	10.04	309.71	3,663.77	272.90	-328.56	-329.33	0.00	0.00	0.00
3,800.00	10.04	309.71	3,762.23	284.04	-341.98	-342.77	0.00	0.00	0.00
3,900.00	10.04	309.71	3,860.70	295.18	-355.39	-356.21	0.00	0.00	0.00
4,000.00	10.04	309.71	3,959.17	306.32	-368.80	-369.66	0.00	0.00	0.00
4,100.00	10.04	309.71	4,057.64	317.46	-382.22	-383.10	0.00	0.00	0.00
4,200.00	10.04	309.71	4,156.11	328.60	-395.63	-396.55	0.00	0.00	0.00
4,300.00	10.04	309.71	4,254.57	339.74	-409.04	-409.99	0.00	0.00	0.00
4,400.00	10.04	309.71	4,353.04	350.88	-422.45	-423.43	0.00	0.00	0.00
4,500.00	10.04	309.71	4,451.51	362.03	-435.87	-436.88	0.00	0.00	0.00
4,600.00	10.04	309.71	4,549.98	373.17	-449.28	-450.32	0.00	0.00	0.00
4,700.00	10.04	309.71	4,648.45	384.31	-462.69	-463.77	0.00	0.00	0.00
4,800.00	10.04	309.71	4,746.92	395.45	-476.11	-477.21	0.00	0.00	0.00
4,900.00	10.04	309.71	4,845.38	406.59	-489.52	-490.65	0.00	0.00	0.00
5,000.00	10.04	309.71	4,943.85	417.73	-502.93	-504.10	0.00	0.00	0.00
5,100.00	10.04	309.71	5,042.32	428.87	-516.35	-517.54	0.00	0.00	0.00
5,200.00	10.04	309.71	5,140.79	440.01	-529.76	-530.98	0.00	0.00	0.00
5,300.00	10.04	309.71	5,239.26	451.15	-543.17	-544.43	0.00	0.00	0.00
5,400.00	10.04	309.71	5,337.72	462.29	-556.58	-557.87	0.00	0.00	0.00
5,500.00	10.04	309.71	5,436.19	473.43	-570.00	-571.32	0.00	0.00	0.00
5,600.00	10.04	309.71	5,534.66	484.57	-583.41	-584.76	0.00	0.00	0.00
5,700.00	10.04	309.71	5,633.13	495.71	-596.82	-598.20	0.00	0.00	0.00
5,800.00	10.04	309.71	5,731.60	506.85	-610.24	-611.65	0.00	0.00	0.00
5,900.00	10.04	309.71	5,830.07	517.99	-623.65	-625.09	0.00	0.00	0.00
5,971.52	10.04	309.71	5,900.49	525.96	-633.24	-634.71	0.00	0.00	0.00
<b>Start Drop -2.00</b>									
6,000.00	9.47	309.71	5,928.56	529.04	-636.95	-638.43	2.00	-2.00	0.00
6,100.00	7.47	309.71	6,027.46	538.46	-648.29	-649.79	2.00	-2.00	0.00
6,200.00	5.47	309.71	6,126.82	545.66	-656.96	-658.48	2.00	-2.00	0.00
6,236.33	4.75	309.71	6,163.00	547.73	-659.45	-660.97	2.00	-2.00	0.00
<b>1ST BONE SPRING SAND</b>									
6,300.00	3.47	309.71	6,226.51	550.64	-662.96	-664.49	2.00	-2.00	0.00
6,400.00	1.47	309.71	6,326.41	553.40	-666.27	-667.82	2.00	-2.00	0.00
6,441.60	0.64	309.71	6,368.00	553.89	-666.86	-668.41	2.00	-2.00	0.00
<b>2ND BONE SPRING SHALE</b>									
6,473.60	0.00	0.00	6,400.00	554.00	-667.00	-668.54	2.00	-2.00	0.00
<b>Vertical at 6473.60 MD</b>									
6,500.00	0.00	0.00	6,426.40	554.00	-667.00	-668.54	0.00	0.00	0.00
6,600.00	0.00	0.00	6,526.40	554.00	-667.00	-668.54	0.00	0.00	0.00
6,646.60	0.00	0.00	6,573.00	554.00	-667.00	-668.54	0.00	0.00	0.00
<b>2ND BONE SPRING SAND</b>									
6,700.00	0.00	0.00	6,626.40	554.00	-667.00	-668.54	0.00	0.00	0.00
6,800.00	0.00	0.00	6,726.40	554.00	-667.00	-668.54	0.00	0.00	0.00
6,900.00	0.00	0.00	6,826.40	554.00	-667.00	-668.54	0.00	0.00	0.00
6,971.60	0.00	0.00	6,898.00	554.00	-667.00	-668.54	0.00	0.00	0.00
<b>3RD BONE SPRING LIME</b>									
7,000.00	0.00	0.00	6,926.40	554.00	-667.00	-668.54	0.00	0.00	0.00
7,100.00	0.00	0.00	7,026.40	554.00	-667.00	-668.54	0.00	0.00	0.00
7,200.00	0.00	0.00	7,126.40	554.00	-667.00	-668.54	0.00	0.00	0.00
7,219.60	0.00	0.00	7,146.00	554.00	-667.00	-668.54	0.00	0.00	0.00
<b>KOP Start Build 12.01</b>									
7,225.00	0.65	90.16	7,151.40	554.00	-666.97	-668.51	12.01	12.01	0.00
7,250.00	3.65	90.16	7,176.38	554.00	-666.03	-667.58	12.01	12.01	0.00
7,275.00	6.65	90.16	7,201.28	553.99	-663.79	-665.33	12.01	12.01	0.00

### Legacy Directional Drilling

#### Planning Report

<b>Database:</b>	EDM_WA	<b>Local Co-ordinate Reference:</b>	Well Jurnegan BS Fed Com 7H
<b>Company:</b>	Freedom Energy	<b>TVD Reference:</b>	GL 3332' + 26.5' KB @ 3358.50usft
<b>Project:</b>	Eddy County, NM NAD83	<b>MD Reference:</b>	GL 3332' + 26.5' KB @ 3358.50usft
<b>Site:</b>	Jurnegan	<b>North Reference:</b>	Grid
<b>Well:</b>	Jurnegan BS Fed Com 7H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	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)
7,300.00	9.66	90.16	7,226.02	553.98	-660.24	-661.79	12.01	12.01	0.00
7,325.00	12.66	90.16	7,250.55	553.97	-655.40	-656.95	12.01	12.01	0.00
7,350.00	15.66	90.16	7,274.79	553.95	-649.29	-650.84	12.01	12.01	0.00
7,375.00	18.66	90.16	7,298.67	553.93	-641.92	-643.46	12.01	12.01	0.00
7,400.00	21.66	90.16	7,322.14	553.91	-633.30	-634.84	12.01	12.01	0.00
7,425.00	24.67	90.16	7,345.12	553.88	-623.47	-625.01	12.01	12.01	0.00
7,450.00	27.67	90.16	7,367.55	553.85	-612.44	-613.99	12.01	12.01	0.00
7,475.00	30.67	90.16	7,389.38	553.82	-600.26	-601.80	12.01	12.01	0.00
7,491.00	32.59	90.16	7,403.00	553.79	-591.87	-593.41	12.01	12.01	0.00
<b>3RD BONE SPRING LIME LOWER</b>									
7,500.00	33.67	90.16	7,410.54	553.78	-586.95	-588.49	12.01	12.01	0.00
7,525.00	36.67	90.16	7,430.97	553.74	-572.55	-574.09	12.01	12.01	0.00
7,550.00	39.68	90.16	7,450.62	553.70	-557.10	-558.64	12.01	12.01	0.00
7,575.00	42.68	90.16	7,469.44	553.65	-540.64	-542.19	12.01	12.01	0.00
7,600.00	45.68	90.16	7,487.36	553.60	-523.22	-524.77	12.01	12.01	0.00
7,625.00	48.68	90.16	7,504.35	553.55	-504.89	-506.43	12.01	12.01	0.00
7,650.00	51.68	90.16	7,520.36	553.50	-485.69	-487.23	12.01	12.01	0.00
7,675.00	54.69	90.16	7,535.34	553.45	-465.67	-467.22	12.01	12.01	0.00
7,700.00	57.69	90.16	7,549.25	553.39	-444.90	-446.45	12.01	12.01	0.00
7,725.00	60.69	90.16	7,562.05	553.33	-423.44	-424.98	12.01	12.01	0.00
7,750.00	63.69	90.16	7,573.71	553.27	-401.33	-402.87	12.01	12.01	0.00
7,775.00	66.70	90.16	7,584.20	553.21	-378.63	-380.18	12.01	12.01	0.00
7,800.00	69.70	90.16	7,593.49	553.14	-355.43	-356.97	12.01	12.01	0.00
7,825.00	72.70	90.16	7,601.54	553.08	-331.76	-333.31	12.01	12.01	0.00
7,850.00	75.70	90.16	7,608.35	553.01	-307.71	-309.25	12.01	12.01	0.00
7,875.00	78.70	90.16	7,613.89	552.94	-283.33	-284.88	12.01	12.01	0.00
7,900.00	81.71	90.16	7,618.14	552.88	-258.70	-260.24	12.01	12.01	0.00
7,925.00	84.71	90.16	7,621.10	552.81	-233.88	-235.42	12.01	12.01	0.00
7,950.00	87.71	90.16	7,622.75	552.74	-208.94	-210.48	12.01	12.01	0.00
7,957.94	88.66	90.16	7,623.00	552.72	-201.00	-202.54	12.01	12.01	0.00
<b>LP 88.66° at 7957.94 MD - TARGET</b>									
8,000.00	88.66	90.16	7,623.98	552.60	-158.95	-160.50	0.00	0.00	0.00
8,100.00	88.66	90.16	7,626.31	552.33	-58.98	-60.52	0.00	0.00	0.00
8,200.00	88.66	90.16	7,628.64	552.05	40.99	39.45	0.00	0.00	0.00
8,300.00	88.66	90.16	7,630.98	551.78	140.96	139.42	0.00	0.00	0.00
8,400.00	88.66	90.16	7,633.31	551.50	240.94	239.40	0.00	0.00	0.00
8,500.00	88.66	90.16	7,635.64	551.23	340.91	339.37	0.00	0.00	0.00
8,600.00	88.66	90.16	7,637.97	550.95	440.88	439.34	0.00	0.00	0.00
8,700.00	88.66	90.16	7,640.30	550.68	540.85	539.31	0.00	0.00	0.00
8,800.00	88.66	90.16	7,642.63	550.40	640.83	639.29	0.00	0.00	0.00
8,900.00	88.66	90.16	7,644.97	550.13	740.80	739.26	0.00	0.00	0.00
9,000.00	88.66	90.16	7,647.30	549.85	840.77	839.23	0.00	0.00	0.00
9,100.00	88.66	90.16	7,649.63	549.58	940.74	939.21	0.00	0.00	0.00
9,200.00	88.66	90.16	7,651.96	549.30	1,040.72	1,039.18	0.00	0.00	0.00
9,300.00	88.66	90.16	7,654.29	549.03	1,140.69	1,139.15	0.00	0.00	0.00
9,400.00	88.66	90.16	7,656.62	548.75	1,240.66	1,239.12	0.00	0.00	0.00
9,500.00	88.66	90.16	7,658.96	548.48	1,340.63	1,339.10	0.00	0.00	0.00
9,600.00	88.66	90.16	7,661.29	548.20	1,440.61	1,439.07	0.00	0.00	0.00
9,700.00	88.66	90.16	7,663.62	547.93	1,540.58	1,539.04	0.00	0.00	0.00
9,800.00	88.66	90.16	7,665.95	547.65	1,640.55	1,639.01	0.00	0.00	0.00
9,900.00	88.66	90.16	7,668.28	547.38	1,740.52	1,738.99	0.00	0.00	0.00
10,000.00	88.66	90.16	7,670.62	547.10	1,840.50	1,838.96	0.00	0.00	0.00
10,100.00	88.66	90.16	7,672.95	546.83	1,940.47	1,938.93	0.00	0.00	0.00
10,200.00	88.66	90.16	7,675.28	546.55	2,040.44	2,038.91	0.00	0.00	0.00

### Legacy Directional Drilling

#### Planning Report

<b>Database:</b>	EDM_WA	<b>Local Co-ordinate Reference:</b>	Well Jurnegan BS Fed Com 7H
<b>Company:</b>	Freedom Energy	<b>TVD Reference:</b>	GL 3332' + 26.5' KB @ 3358.50usft
<b>Project:</b>	Eddy County, NM NAD83	<b>MD Reference:</b>	GL 3332' + 26.5' KB @ 3358.50usft
<b>Site:</b>	Jurnegan	<b>North Reference:</b>	Grid
<b>Well:</b>	Jurnegan BS Fed Com 7H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	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)	
10,300.00	88.66	90.16	7,677.61	546.28	2,140.41	2,138.88	0.00	0.00	0.00	
10,400.00	88.66	90.16	7,679.94	546.00	2,240.39	2,238.85	0.00	0.00	0.00	
10,500.00	88.66	90.16	7,682.27	545.73	2,340.36	2,338.82	0.00	0.00	0.00	
10,600.00	88.66	90.16	7,684.61	545.45	2,440.33	2,438.80	0.00	0.00	0.00	
10,700.00	88.66	90.16	7,686.94	545.18	2,540.30	2,538.77	0.00	0.00	0.00	
10,800.00	88.66	90.16	7,689.27	544.90	2,640.28	2,638.74	0.00	0.00	0.00	
10,900.00	88.66	90.16	7,691.60	544.63	2,740.25	2,738.72	0.00	0.00	0.00	
11,000.00	88.66	90.16	7,693.93	544.35	2,840.22	2,838.69	0.00	0.00	0.00	
11,100.00	88.66	90.16	7,696.26	544.08	2,940.19	2,938.66	0.00	0.00	0.00	
11,200.00	88.66	90.16	7,698.60	543.80	3,040.16	3,038.63	0.00	0.00	0.00	
11,300.00	88.66	90.16	7,700.93	543.53	3,140.14	3,138.61	0.00	0.00	0.00	
11,400.00	88.66	90.16	7,703.26	543.25	3,240.11	3,238.58	0.00	0.00	0.00	
11,500.00	88.66	90.16	7,705.59	542.98	3,340.08	3,338.55	0.00	0.00	0.00	
11,600.00	88.66	90.16	7,707.92	542.70	3,440.05	3,438.53	0.00	0.00	0.00	
11,700.00	88.66	90.16	7,710.25	542.43	3,540.03	3,538.50	0.00	0.00	0.00	
11,800.00	88.66	90.16	7,712.59	542.15	3,640.00	3,638.47	0.00	0.00	0.00	
11,900.00	88.66	90.16	7,714.92	541.88	3,739.97	3,738.44	0.00	0.00	0.00	
12,000.00	88.66	90.16	7,717.25	541.60	3,839.94	3,838.42	0.00	0.00	0.00	
12,100.00	88.66	90.16	7,719.58	541.33	3,939.92	3,938.39	0.00	0.00	0.00	
12,200.00	88.66	90.16	7,721.91	541.05	4,039.89	4,038.36	0.00	0.00	0.00	
12,300.00	88.66	90.16	7,724.24	540.78	4,139.86	4,138.34	0.00	0.00	0.00	
12,400.00	88.66	90.16	7,726.58	540.50	4,239.83	4,238.31	0.00	0.00	0.00	
12,500.00	88.66	90.16	7,728.91	540.23	4,339.81	4,338.28	0.00	0.00	0.00	
12,600.00	88.66	90.16	7,731.24	539.95	4,439.78	4,438.25	0.00	0.00	0.00	
12,700.00	88.66	90.16	7,733.57	539.68	4,539.75	4,538.23	0.00	0.00	0.00	
12,800.00	88.66	90.16	7,735.90	539.40	4,639.72	4,638.20	0.00	0.00	0.00	
12,817.28	88.66	90.16	7,736.31	539.36	4,657.00	4,655.48	0.00	0.00	0.00	
<b>BPP at 12817.28 MD</b>										
12,900.00	88.66	90.16	7,738.24	539.13	4,739.70	4,738.17	0.00	0.00	0.00	
13,000.00	88.66	90.16	7,740.57	538.85	4,839.67	4,838.15	0.00	0.00	0.00	
13,100.00	88.66	90.16	7,742.90	538.58	4,939.64	4,938.12	0.00	0.00	0.00	
13,200.00	88.66	90.16	7,745.23	538.30	5,039.61	5,038.09	0.00	0.00	0.00	
13,300.00	88.66	90.16	7,747.56	538.03	5,139.59	5,138.06	0.00	0.00	0.00	
13,400.00	88.66	90.16	7,749.89	537.75	5,239.56	5,238.04	0.00	0.00	0.00	
13,500.00	88.66	90.16	7,752.23	537.48	5,339.53	5,338.01	0.00	0.00	0.00	
13,600.00	88.66	90.16	7,754.56	537.20	5,439.50	5,437.98	0.00	0.00	0.00	
13,700.00	88.66	90.16	7,756.89	536.93	5,539.48	5,537.95	0.00	0.00	0.00	
13,800.00	88.66	90.16	7,759.22	536.65	5,639.45	5,637.93	0.00	0.00	0.00	
13,900.00	88.66	90.16	7,761.55	536.38	5,739.42	5,737.90	0.00	0.00	0.00	
14,000.00	88.66	90.16	7,763.88	536.10	5,839.39	5,837.87	0.00	0.00	0.00	
14,100.00	88.66	90.16	7,766.22	535.83	5,939.37	5,937.85	0.00	0.00	0.00	
14,200.00	88.66	90.16	7,768.55	535.55	6,039.34	6,037.82	0.00	0.00	0.00	
14,300.00	88.66	90.16	7,770.88	535.28	6,139.31	6,137.79	0.00	0.00	0.00	
14,400.00	88.66	90.16	7,773.21	535.00	6,239.28	6,237.76	0.00	0.00	0.00	
14,500.00	88.66	90.16	7,775.54	534.73	6,339.26	6,337.74	0.00	0.00	0.00	
14,600.00	88.66	90.16	7,777.87	534.45	6,439.23	6,437.71	0.00	0.00	0.00	
14,700.00	88.66	90.16	7,780.21	534.18	6,539.20	6,537.68	0.00	0.00	0.00	
14,800.00	88.66	90.16	7,782.54	533.90	6,639.17	6,637.66	0.00	0.00	0.00	
14,900.00	88.66	90.16	7,784.87	533.63	6,739.14	6,737.63	0.00	0.00	0.00	
15,000.00	88.66	90.16	7,787.20	533.35	6,839.12	6,837.60	0.00	0.00	0.00	
15,100.00	88.66	90.16	7,789.53	533.08	6,939.09	6,937.57	0.00	0.00	0.00	
15,200.00	88.66	90.16	7,791.86	532.80	7,039.06	7,037.55	0.00	0.00	0.00	
15,300.00	88.66	90.16	7,794.20	532.53	7,139.03	7,137.52	0.00	0.00	0.00	
15,400.00	88.66	90.16	7,796.53	532.25	7,239.01	7,237.49	0.00	0.00	0.00	

### Legacy Directional Drilling

#### Planning Report

<b>Database:</b>	EDM_WA	<b>Local Co-ordinate Reference:</b>	Well Jurnegan BS Fed Com 7H
<b>Company:</b>	Freedom Energy	<b>TVD Reference:</b>	GL 3332' + 26.5' KB @ 3358.50usft
<b>Project:</b>	Eddy County, NM NAD83	<b>MD Reference:</b>	GL 3332' + 26.5' KB @ 3358.50usft
<b>Site:</b>	Jurnegan	<b>North Reference:</b>	Grid
<b>Well:</b>	Jurnegan BS Fed Com 7H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	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)
15,500.00	88.66	90.16	7,798.86	531.98	7,338.98	7,337.47	0.00	0.00	0.00
15,600.00	88.66	90.16	7,801.19	531.70	7,438.95	7,437.44	0.00	0.00	0.00
15,700.00	88.66	90.16	7,803.52	531.43	7,538.92	7,537.41	0.00	0.00	0.00
15,800.00	88.66	90.16	7,805.86	531.15	7,638.90	7,637.38	0.00	0.00	0.00
15,900.00	88.66	90.16	7,808.19	530.88	7,738.87	7,737.36	0.00	0.00	0.00
16,000.00	88.66	90.16	7,810.52	530.60	7,838.84	7,837.33	0.00	0.00	0.00
16,100.00	88.66	90.16	7,812.85	530.33	7,938.81	7,937.30	0.00	0.00	0.00
16,200.00	88.66	90.16	7,815.18	530.05	8,038.79	8,037.28	0.00	0.00	0.00
16,300.00	88.66	90.16	7,817.51	529.78	8,138.76	8,137.25	0.00	0.00	0.00
16,400.00	88.66	90.16	7,819.85	529.50	8,238.73	8,237.22	0.00	0.00	0.00
16,500.00	88.66	90.16	7,822.18	529.23	8,338.70	8,337.19	0.00	0.00	0.00
16,600.00	88.66	90.16	7,824.51	528.95	8,438.68	8,437.17	0.00	0.00	0.00
16,700.00	88.66	90.16	7,826.84	528.68	8,538.65	8,537.14	0.00	0.00	0.00
16,800.00	88.66	90.16	7,829.17	528.40	8,638.62	8,637.11	0.00	0.00	0.00
16,900.00	88.66	90.16	7,831.50	528.13	8,738.59	8,737.08	0.00	0.00	0.00
17,000.00	88.66	90.16	7,833.84	527.85	8,838.57	8,837.06	0.00	0.00	0.00
17,100.00	88.66	90.16	7,836.17	527.58	8,938.54	8,937.03	0.00	0.00	0.00
17,200.00	88.66	90.16	7,838.50	527.30	9,038.51	9,037.00	0.00	0.00	0.00
17,300.00	88.66	90.16	7,840.83	527.03	9,138.48	9,136.98	0.00	0.00	0.00
17,400.00	88.66	90.16	7,843.16	526.75	9,238.46	9,236.95	0.00	0.00	0.00
17,500.00	88.66	90.16	7,845.49	526.48	9,338.43	9,336.92	0.00	0.00	0.00
17,600.00	88.66	90.16	7,847.83	526.20	9,438.40	9,436.89	0.00	0.00	0.00
17,700.00	88.66	90.16	7,850.16	525.93	9,538.37	9,536.87	0.00	0.00	0.00
17,800.00	88.66	90.16	7,852.49	525.65	9,638.35	9,636.84	0.00	0.00	0.00
17,900.00	88.66	90.16	7,854.82	525.38	9,738.32	9,736.81	0.00	0.00	0.00
17,951.70	88.66	90.16	7,856.03	525.24	9,790.00	9,788.50	0.00	0.00	0.00
<b>LTP at 17951.70 MD</b>									
18,000.00	88.66	90.16	7,857.15	525.10	9,838.29	9,836.79	0.00	0.00	0.00
18,036.33	88.66	90.16	7,858.00	525.00	9,874.61	9,873.10	0.00	0.00	0.00
<b>TD</b>									
18,036.72	88.66	90.16	7,858.01	525.00	9,875.00	9,873.50	0.00	0.00	0.00
<b>BHL (15' FEL) at 18036.72</b>									

### Legacy Directional Drilling

#### Planning Report

<b>Database:</b>	EDM_WA	<b>Local Co-ordinate Reference:</b>	Well Jurnegan BS Fed Com 7H
<b>Company:</b>	Freedom Energy	<b>TVD Reference:</b>	GL 3332' + 26.5' KB @ 3358.50usft
<b>Project:</b>	Eddy County, NM NAD83	<b>MD Reference:</b>	GL 3332' + 26.5' KB @ 3358.50usft
<b>Site:</b>	Jurnegan	<b>North Reference:</b>	Grid
<b>Well:</b>	Jurnegan BS Fed Com 7H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan 1		

Design Targets									
Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- hit/miss target	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)		
- Shape									
KOP - Jurnegan BS Fed - plan hits target center - Point	0.00	0.00	7,146.00	554.00	-667.00	436,699.00	554,899.00	32.200555	-104.289489
FTP - Jurnegan BS Fed - plan misses target center by 140.37usft at 7641.74usft MD (7515.19 TVD, 553.52 N, -492.12 E) - Point	0.00	0.00	7,623.00	554.00	-582.00	436,699.00	554,984.00	32.200555	-104.289215
BPP - Jurnegan BS Fed - plan misses target center by 0.36usft at 12817.28usft MD (7736.31 TVD, 539.36 N, 4657.00 E) - Point	0.00	0.00	7,736.31	539.00	4,657.00	436,684.00	560,223.00	32.200507	-104.272277
LTP - Jurnegan BS Fed - plan misses target center by 1.99usft at 17951.74usft MD (7856.03 TVD, 525.24 N, 9790.05 E) - Point	0.00	0.00	7,858.00	525.00	9,790.00	436,670.00	565,356.00	32.200459	-104.255682
BHL - Jurnegan BS Fed - plan misses target center by 0.01usft at 18036.72usft MD (7858.01 TVD, 525.00 N, 9875.00 E) - Point	0.00	0.00	7,858.00	525.00	9,875.00	436,670.00	565,441.00	32.200459	-104.255407

Formations						
Measured Depth	Vertical Depth	Name	Lithology	Dip	Dip Direction	
(usft)	(usft)			(°)	(°)	
30.00	30.00	SALADO				
1,103.02	1,103.00	TOP SALT				
1,459.97	1,458.00	BASE SALT				
1,459.97	1,458.00	BONE SPRING LIME				
1,764.59	1,758.00	LAMAR				
1,871.22	1,863.00	BELL CANYON				
2,698.90	2,678.00	CHERRY CANYON				
3,602.75	3,568.00	BRUSHY CANYON				
6,236.33	6,163.00	1ST BONE SPRING SAND				
6,441.60	6,368.00	2ND BONE SPRING SHALE				
6,646.60	6,573.00	2ND BONE SPRING SAND				
6,971.60	6,898.00	3RD BONE SPRING LIME				
7,491.00	7,403.00	3RD BONE SPRING LIME LOWER				
7,957.94	7,623.00	TARGET				
18,036.33	7,858.00	TD				

### Legacy Directional Drilling Planning Report

<b>Database:</b>	EDM_WA	<b>Local Co-ordinate Reference:</b>	Well Jurnegan BS Fed Com 7H
<b>Company:</b>	Freedom Energy	<b>TVD Reference:</b>	GL 3332' + 26.5' KB @ 3358.50usft
<b>Project:</b>	Eddy County, NM NAD83	<b>MD Reference:</b>	GL 3332' + 26.5' KB @ 3358.50usft
<b>Site:</b>	Jurnegan	<b>North Reference:</b>	Grid
<b>Well:</b>	Jurnegan BS Fed Com 7H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan 1		

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
1,000.00	1,000.00	0.00	0.00	Start Nudge Build 2.00
1,502.08	1,499.51	28.04	-33.76	10.04° at 1502.08 MD
5,971.52	5,900.49	525.96	-633.24	Start Drop -2.00
6,473.60	6,400.00	554.00	-667.00	Vertical at 6473.60 MD
7,219.60	7,146.00	554.00	-667.00	KOP Start Build 12.01
7,957.94	7,623.00	552.72	-201.00	LP 88.66° at 7957.94 MD
12,817.28	7,736.31	539.36	4,657.00	BPP at 12817.28 MD
17,951.70	7,856.03	525.24	9,790.00	LTP at 17951.70 MD
18,036.72	7,858.01	525.00	9,875.00	BHL (15' FEL) at 18036.72

\*Please refer to the appended approved NOI for additional or updated COAs for this well.

**PECOS DISTRICT  
DRILLING CONDITIONS OF APPROVAL**

<b>OPERATOR'S NAME:</b>	Flat Creek Resources LLC
<b>LOCATION:</b>	Section 22, T.24 S., R.26 E., NMPM
<b>COUNTY:</b>	Eddy County, New Mexico

<b>WELL NAME &amp; NO.:</b>	Jurnegan BS Fed Com 1H
<b>ATS/API ID:</b>	ATS-25-1275
<b>APD ID:</b>	10400104086
<b>Sundry ID:</b>	N/a

<b>WELL NAME &amp; NO.:</b>	Jurnegan BS Fed Com 2H
<b>ATS/API ID:</b>	ATS-25-1276
<b>APD ID:</b>	10400104092
<b>Sundry ID:</b>	N/a

<b>WELL NAME &amp; NO.:</b>	Jurnegan BS Fed Com 3H
<b>ATS/API ID:</b>	ATS-25-1280
<b>APD ID:</b>	10400104123
<b>Sundry ID:</b>	N/a

<b>WELL NAME &amp; NO.:</b>	Jurnegan BS Fed Com 4H
<b>ATS/API ID:</b>	ATS-25-1281
<b>APD ID:</b>	10400104124
<b>Sundry ID:</b>	N/a

<b>WELL NAME &amp; NO.:</b>	Jurnegan BS Fed Com 5H
<b>ATS/API ID:</b>	ATS-25-1277
<b>APD ID:</b>	10400104093
<b>Sundry ID:</b>	N/a

<b>WELL NAME &amp; NO.:</b>	Jurnegan BS Fed Com 6H
<b>ATS/API ID:</b>	ATS-25-1279
<b>APD ID:</b>	10400104102
<b>Sundry ID:</b>	N/a

<b>WELL NAME &amp; NO.:</b>	Jurnegan BS Fed Com 7H
<b>ATS/API ID:</b>	ATS-25-1282
<b>APD ID:</b>	10400104125
<b>Sundry ID:</b>	N/a

<b>WELL NAME &amp; NO.:</b> <b>ATS/API ID:</b> <b>APD ID:</b> <b>Sundry ID:</b>	<b>Jurnegan BS Fed Com 8H</b> <b>ATS-25-1283</b> <b>10400104126</b> <b>N/a</b>
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<b>WELL NAME &amp; NO.:</b> <b>ATS/API ID:</b> <b>APD ID:</b> <b>Sundry ID:</b>	<b>Jurnegan WC Fed Com 1H</b> <b>ATS-25-1284</b> <b>10400104103</b> <b>N/a</b>
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<b>WELL NAME &amp; NO.:</b> <b>ATS/API ID:</b> <b>APD ID:</b> <b>Sundry ID:</b>	<b>Jurnegan WC Fed Com 2H</b> <b>ATS-25-1285</b> <b>10400104109</b> <b>N/a</b>
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COA

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

## A. HYDROGEN SULFIDE

Hydrogen Sulfide (H<sub>2</sub>S) monitors shall be installed prior to drilling out the surface shoe. If H<sub>2</sub>S 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 **150 feet** (a minimum of **70 feet (Eddy County)** 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 Critical Cave/Karst Areas cement must come to surface on the first three casing strings.
3. The minimum required fill of cement behind the **5-1/2** inch production casing is:
  - Cement to surface. If cement does not circulate, contact the appropriate BLM office. 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.
- 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.

## 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

**EMAIL** or call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220,

[BLM\\_NM\\_CFO\\_DrillingNotifications@BLM.GOV](mailto:BLM_NM_CFO_DrillingNotifications@BLM.GOV)

(575) 361-2822

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 2<sup>nd</sup> 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.

### 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 of both lead and tail cement, 2) until cement has been in place at least 8 hours. WOC time will be recorded in the driller's log. The casing integrity 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 3172.6(b)(9) 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 8 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.

Long Vo (LVO) 4/30/2025

## 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 Windssocks and / Wind Streamers:

- Windssocks at mud pit area should be high enough to be visible
- Windssock 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

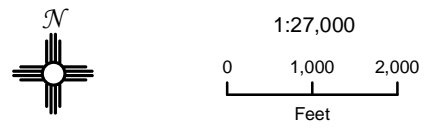
<b>Emergency Contacts</b>		
Carlsbad Police Department	575.887.7551	911
Carlsbad Medical Center	575.887.4100	911
Eddy County Fire Service	575.628.5450	911
Eddy County Sherriff	575.887.7551	911
Lea County Fire Service	575.391.2983	911
Lea County Sherriff	575.396.3611	911
Jal Police Department	575.395.2121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

# Flat Creek Resources, LLC

## Jurnegan Fed Com - South Pad H2S Map

Section 22, Township 24S, Range 26E  
Eddy County, New Mexico

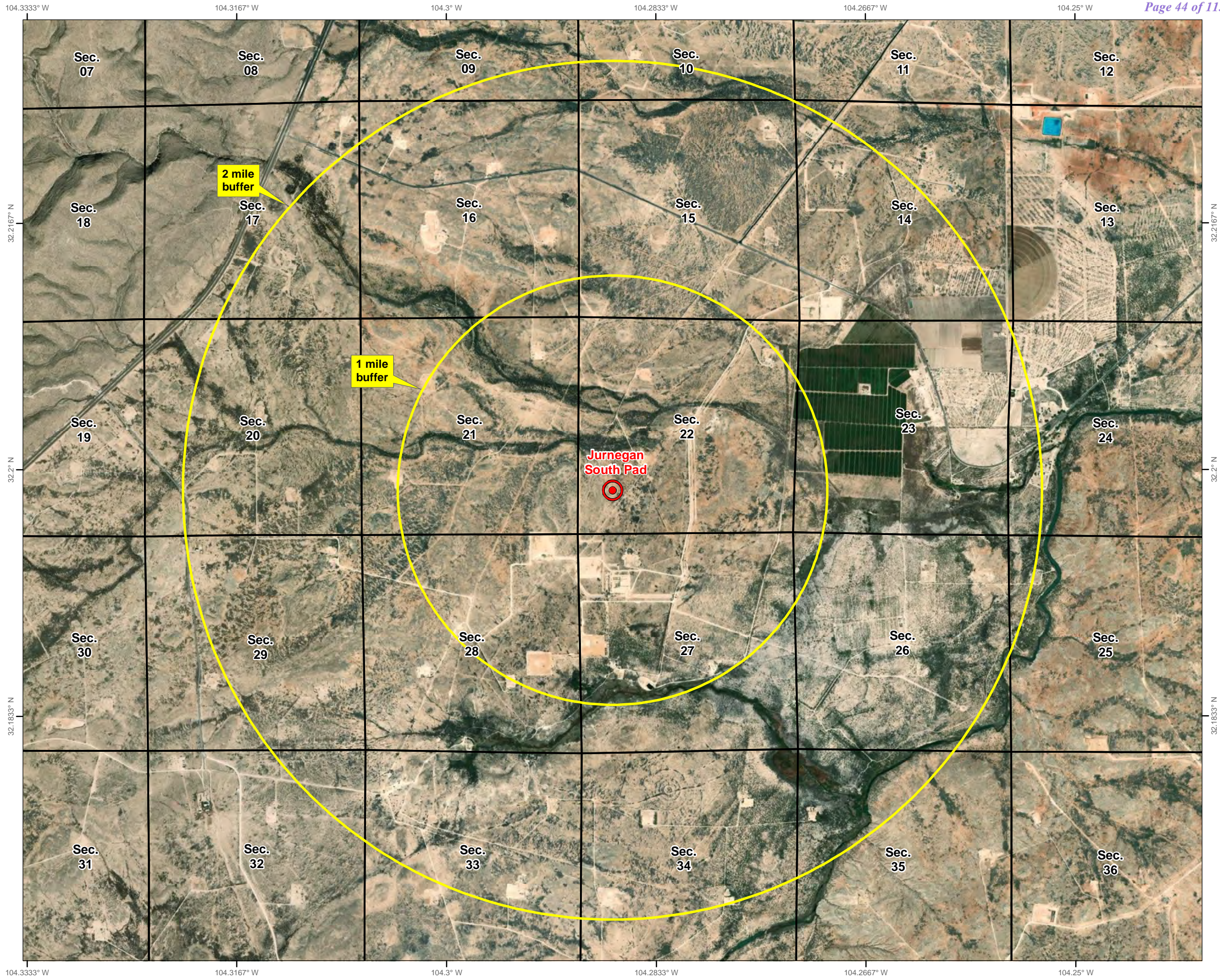
 Pad Center Point



NAD 1983 New Mexico State Plane East  
FIPS 3001 Feet









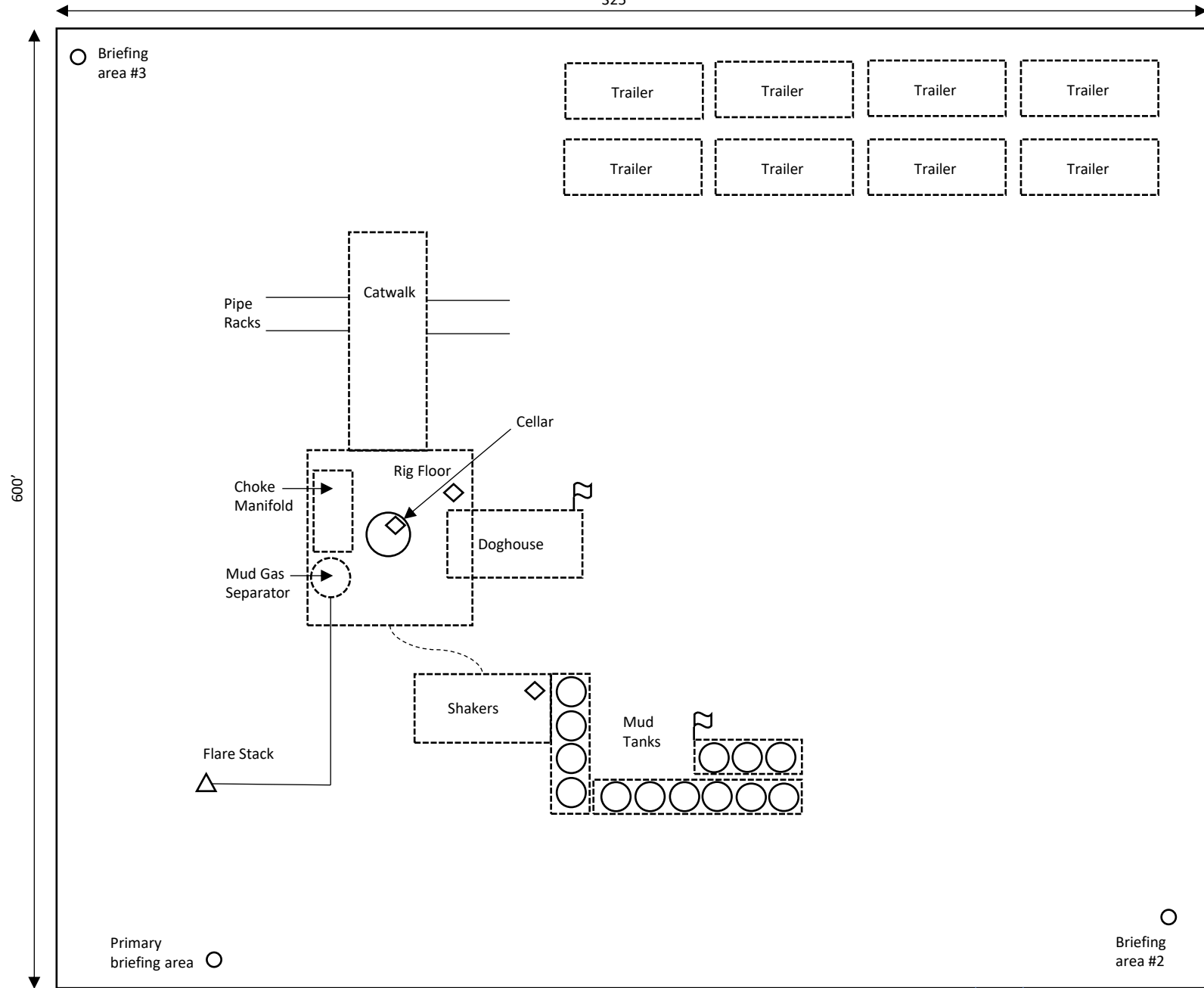
Prepared by Permits West, Inc., Mar. 13, 2025  
for Flat Creek Resources, LLC



Rig Diagram  
Jurnegan South Pad  
Tap Rock Operating, LLC  
22-24S-26E  
Eddy County, NM

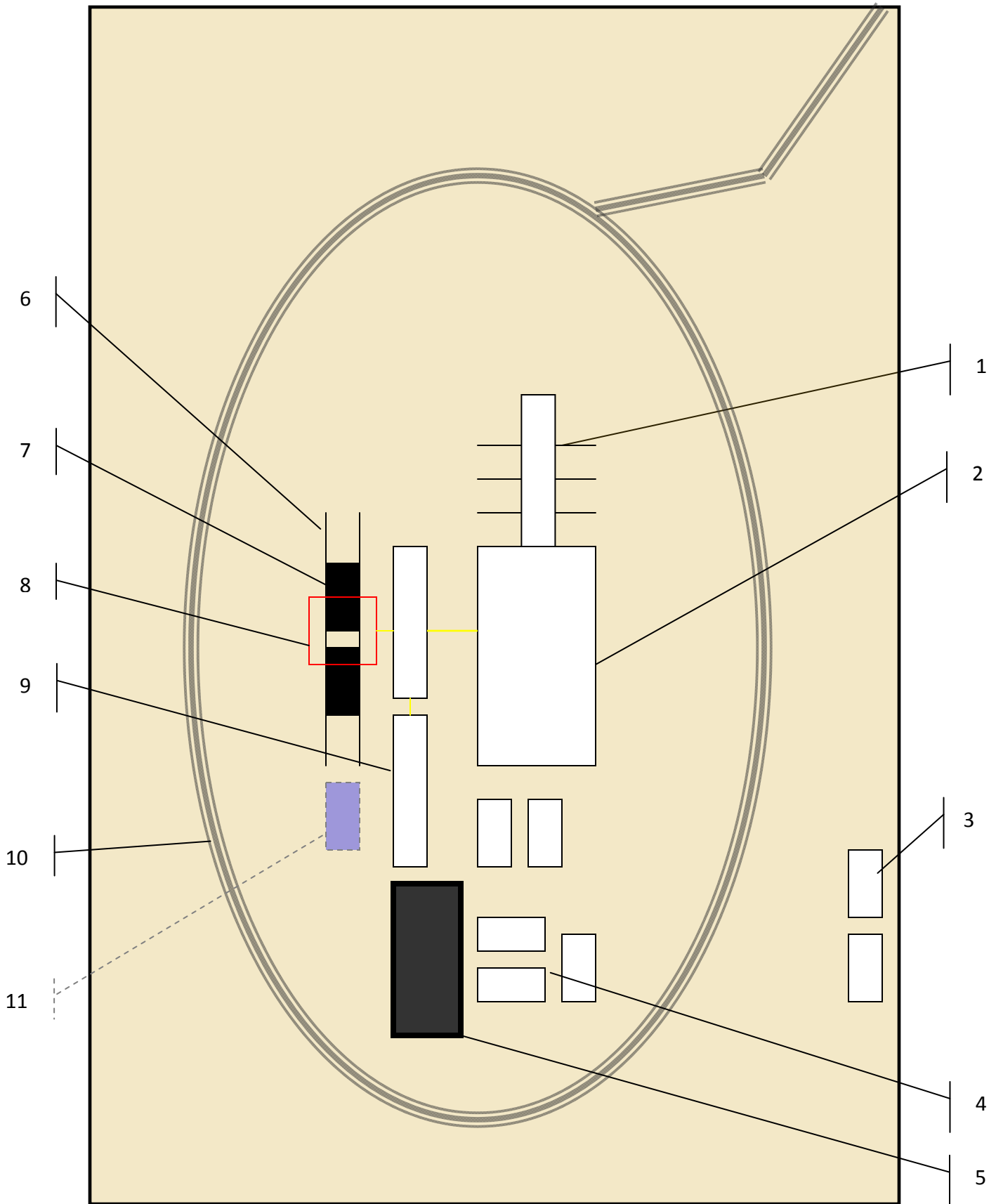


-  Briefing Area
-  Current Well
-  Flare Stack
-  H2S Monitor
-  Wind Indicator
-  Mud Gas Separator



Access Road  
 Condition Warning Sign

Access Road  
 Condition Warning Sign



### 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



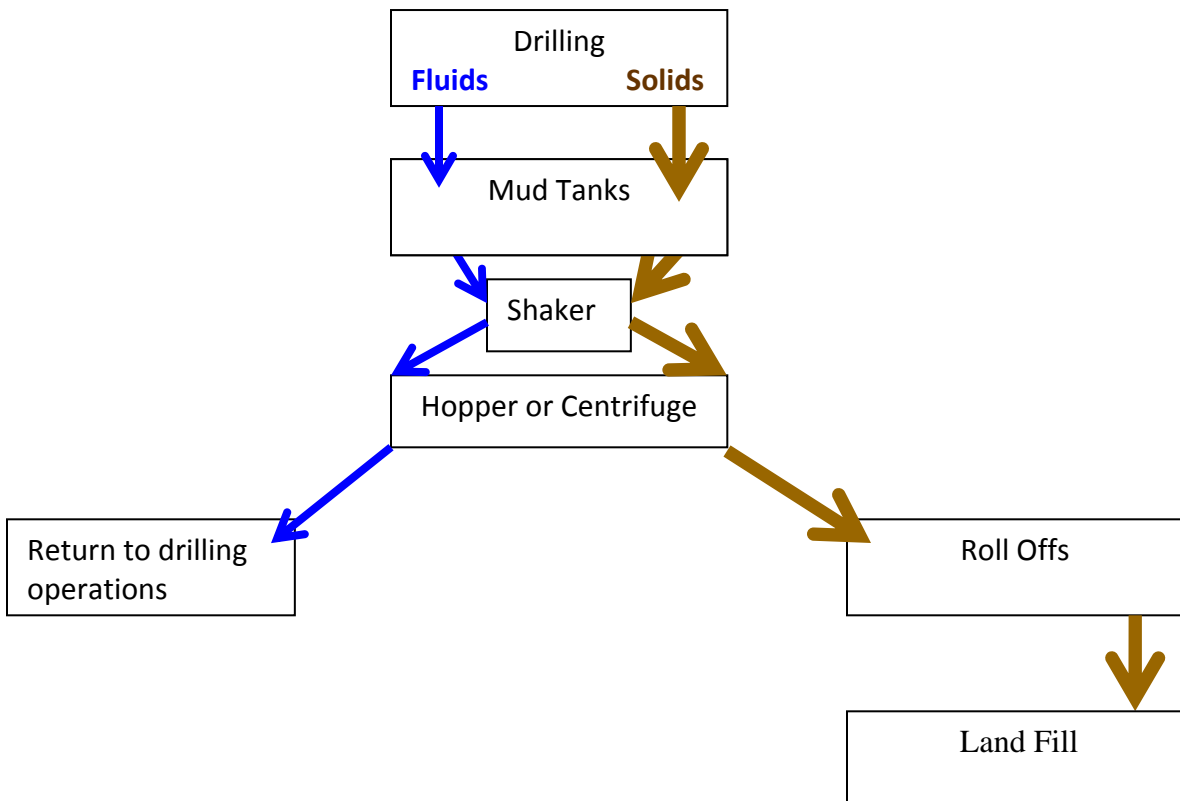
Above: Centrifugal Closed Loop System

**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



Type text here

Form 3160-5  
(October 2024)

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

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

**SUNDRY NOTICES AND REPORTS ON WELLS**  
**Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.**

5. Lease Serial No.	NMNM0475051
6. If Indian, Allottee or Tribe Name	

**SUBMIT IN TRIPLICATE** - Other instructions on page 2

1. Type of Well <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other	
2. Name of Operator FLAT CREEK RESOURCES LLC	
3a. Address 777 MAIN STREET, SUITE 3600, FORT WORTH	3b. Phone No. (include area code) (817) 310-8570
4. Location of Well (Footage, Sec., T.,R.,M., or Survey Description) SEC 22/T24S/R26E/NMP	

7. If Unit of CA/Agreement, Name and/or No.	
8. Well Name and No. JURNEGAN BS FED COM/007H	<b>NEW WELL #010H</b>
9. API Well No.	<b>30-015-58068</b>
10. Field and Pool or Exploratory Area	WILLOW LAKE/BONE SPRING WEST
11. Country or Parish, State	EDDY/NM

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Hydraulic Fracturing	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input type="checkbox"/> Other
	<input checked="" type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplate horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be perfonned or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has detennined that the site is ready for final inspection.)

Flat Creek Resources, LLC would like to request a change to the Well Name, SHL, target formation, and a variance on Break Testing the BOP. The well name will change from Jurnegan BS Fed Com 7H to Jurnegan BS Fed Com 10H. The Surface Hole Location will move from 1069' FSL & 781' FWL, Section 22, T. 24S, R. 26E, SWSW (32.1985893, -104.2870267) to 1016' FSL & 931' FWL, Section 22, T. 24S, R. 26E, SWSW (32.1984473, -104.2865434). The target formation will change from the Third Bone Spring Lime to the Second Bone Spring Shale. Please see attached C102 plat, NSL approval, Break Testing procedure, drill plan, directional plan and anticollision report for more detailed information. APD ID 10400104125.

14. I hereby certify that the foregoing is true and correct. Name (Printed/Typed) CORY WALK / Ph: (505) 466-8120	Title Permitting Agent
Signature (Electronic Submission)	Date 02/09/2026

**THE SPACE FOR FEDERAL OR STATE OFFICE USE**

Approved by CHRISTOPHER WALLS / Ph: (575) 234-2234 / Approved	Title Petroleum Engineer	Date 02/18/2026
Conditions of approval, if any, are attached. Approval of this notice 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.	Office CARLSBAD	

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.

(Instructions on page 2)

Jurnegan BS Fed Com 10H

10 3/4		surface csg in a		14 3/4		inch hole.		Design Factors				Surface	
Segment	#/ft	Grade		Coupling	Joint	Collapse	Burst	Length	B@s	a-B	a-C	Weight	
"A"	45.50		j 55	stc	72.23	30.48	3.88	150	52	6.72	58.76	6,825	
"B"				stc				0				0	
w/8.4#/g mud, 30min Sfc Csg Test psig: 1,500								Totals:	150			6,825	
Comparison of Proposed to Minimum Required Cement Volumes Tail Cmt does not circ to sfc.													
Hole Size	Annular Volume	1 Stage Cmt Sx	1 Stage CuFt Cmt	Min Cu Ft	1 Stage % Excess	Drilling Mud Wt	Calc MASP	Req'd BOPE				Min Dist Hole-Cplg	
14 3/4	0.5563	305	455	83	445	8.80	532	2M				1.50	

The plot (pipe racks 3 or 4) as per D.3.1.3(D.4), not found

7 5/8		casing inside the		10 3/4		Design Factors				Int 1		
Segment	#/ft	Grade		Coupling	Body	Collapse	Burst	Length	B@s	a-B	a-C	Weight
"A"	29.70		p 110	btc	17.79	5.79	2.92	1,780	10	5.31	10.05	52,866
"B"								0				0
w/8.4#/g mud, 30min Sfc Csg Test psig: 1,500								Totals:	1,780			52,866
The cement volume(s) are intended to achieve a top of 0 ft from surface or a 150 overlap.												
Hole Size	Annular Volume	1 Stage Cmt Sx	1 Stage CuFt Cmt	Min Cu Ft	1 Stage % Excess	Drilling Mud Wt	Calc MASP	Req'd BOPE				Min Dist Hole-Cplg
9 7/8	0.2148	335	568	383	48	10.00	1783	2M				0.69
r D V Tool(s):								sum of sx	Σ CuFt			Σ%excess
t by stage % :								#VALUE!	#VALUE!	335	568	48
Class 'C' tail cmt yld > 1.35												

5 1/2		casing inside the		7 5/8		Design Factors				Prod 1		
Segment	#/ft	Grade		Coupling	Joint	Collapse	Burst	Length	B@s	a-B	a-C	Weight
"A"	20.00		hcp 110	tcbc-ht	4.51	3.54	3.7	17,076	4	6.73	6.45	341,520
"B"								0				0
"C"								0				0
"D"								0				0
w/8.4#/g mud, 30min Sfc Csg Test psig: 1,500								Totals:	17,076			341,520
The cement volume(s) are intended to achieve a top of 0 ft from surface or a 1780 overlap.												
Hole Size	Annular Volume	1 Stage Cmt Sx	1 Stage CuFt Cmt	Min Cu Ft	1 Stage % Excess	Drilling Mud Wt	Calc MASP	Req'd BOPE				Min Dist Hole-Cplg
6 3/4	0.0835	1010	1749	1443	21	9.40						0.43
Class 'C' tail cmt yld > 1.35												

#N/A		0		5 1/2		Design Factors				<Choose Casing>		
Segment	#/ft	Grade		Coupling	#N/A	Collapse	Burst	Length	B@s	a-B	a-C	Weight
"A"				0.00				0				0
"B"				0.00				0				0
w/8.4#/g mud, 30min Sfc Csg Test psig:								Totals:	0			0
Cmt vol calc below includes this csg, TOC intended #N/A ft from surface or a #N/A overlap.												
Hole Size	Annular Volume	1 Stage Cmt Sx	1 Stage CuFt Cmt	Min Cu Ft	1 Stage % Excess	Drilling Mud Wt	Calc MASP	Req'd BOPE				Min Dist Hole-Cplg
0		#N/A	#N/A	0	#N/A							
#N/A Capitan Reef est top XXXX.												

## PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

<b>OPERATOR'S NAME:</b>	Flat Creek Resources LLC
<b>LOCATION:</b>	Section 22, T.24 S., R.26 E., NMPM
<b>COUNTY:</b>	Eddy County, New Mexico

<b>WELL NAME &amp; NO.:</b>	Jurnegan BS Fed Com 10H
<b>ATS/API ID:</b>	ATS-25-1282
<b>APD ID:</b>	10400104125
<b>Sundry ID:</b>	N/a

COA

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

## A. HYDROGEN SULFIDE

Hydrogen Sulfide (H<sub>2</sub>S) monitors shall be installed prior to drilling out the surface shoe. If H<sub>2</sub>S 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 **150 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 shall be set at approximately **1780 feet** is:
  - Cement to surface. If cement does not circulate see B.1.a, c-d above.
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.  
**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.
- 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 **(575-361-2822 Eddy County)** 4 hours prior to BOPE tests.
- 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).

## 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

**EMAIL** or call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220,

[BLM\\_NM\\_CFO\\_DrillingNotifications@BLM.GOV](mailto:BLM_NM_CFO_DrillingNotifications@BLM.GOV)

(575) 361-2822

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 2<sup>nd</sup> 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.

### 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 of both lead and tail cement, 2) until cement has been in place at least 8 hours. WOC time will be recorded in the driller's log. The casing integrity 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. Acceptable Method of Cement Verifications:
  - a. Observing cement circulated to surface.
  - b. Cement bond log (CBL).
  - c. Temperature log within 8-10 hours after completing the cement job.
  - d. Echometer (if a second-stage bradenhead squeeze is being used).
5. 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.
6. No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.
7. 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.
8. 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.
9. 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 3172.6(b)(9) 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 8 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.

Long Vo (LVO) 2/12/2026

<b>C-102</b> Submit Electronically Via OCD Permitting	State of New Mexico Energy, Minerals & Natural Resources Department <b>OIL CONSERVATION DIVISION</b>		Revised July 9, 2024	
	Submittal Type:	<input type="checkbox"/> Initial Submittal		
		<input checked="" type="checkbox"/> Amended Report		
			<input type="checkbox"/> As Drilled	

**WELL LOCATION AND ACREAGE DEDICATION PLAT**

API Number <b>30-015-58068</b>	Pool Code <b>96415</b>	Pool Name <b>WILLOW LAKE; BONE SPRING, WEST</b>
Property Code <b>339064</b>	Property Name <b>JURNEGAN BS FED COM</b>	Well Number <b>10H</b>
OGRID No. <b>374034</b>	Operator Name <b>FLAT CREEK RESOURCES, LLC.</b>	Ground Level Elevation <b>3329'</b>
Surface Owner: <input type="checkbox"/> State <input type="checkbox"/> Fee <input type="checkbox"/> Tribal <input checked="" type="checkbox"/> Federal		Mineral Owner: <input type="checkbox"/> State <input checked="" type="checkbox"/> Fee <input type="checkbox"/> Tribal <input checked="" type="checkbox"/> 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
M	22	24-S	26-E	-	1016' S	931' W	N 32.1984473	W 104.2865434	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
I	23	24-S	26-E	-	2525' S	15' E	N 32.2024791	W 104.2554141	EDDY

Dedicated Acres <b>640</b>	Infill or Defining Well <b>Infill</b>	Defining Well API <b>30-015-xxxxx (3H)</b>	Overlapping Spacing Unit (Y/N) <b>N</b>	Consolidated Code <b>C</b>
Order Numbers <b>NSL-9223</b>			Well Setbacks are under Common Ownership: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> 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
L	22	24-S	26-E	-	2525' S	44' W	N 32.2025762	W 104.2893826	EDDY

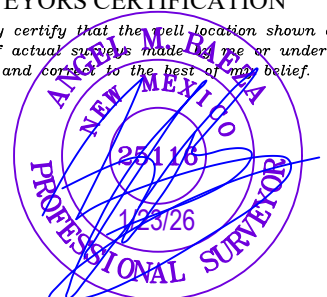
**First Take Point (FTP)**

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the N/S	Feet from the E/W	Latitude	Longitude	County
L	22	24-S	26-E	-	2524' S	100' W	N 32.2025757	W 104.2892025	EDDY

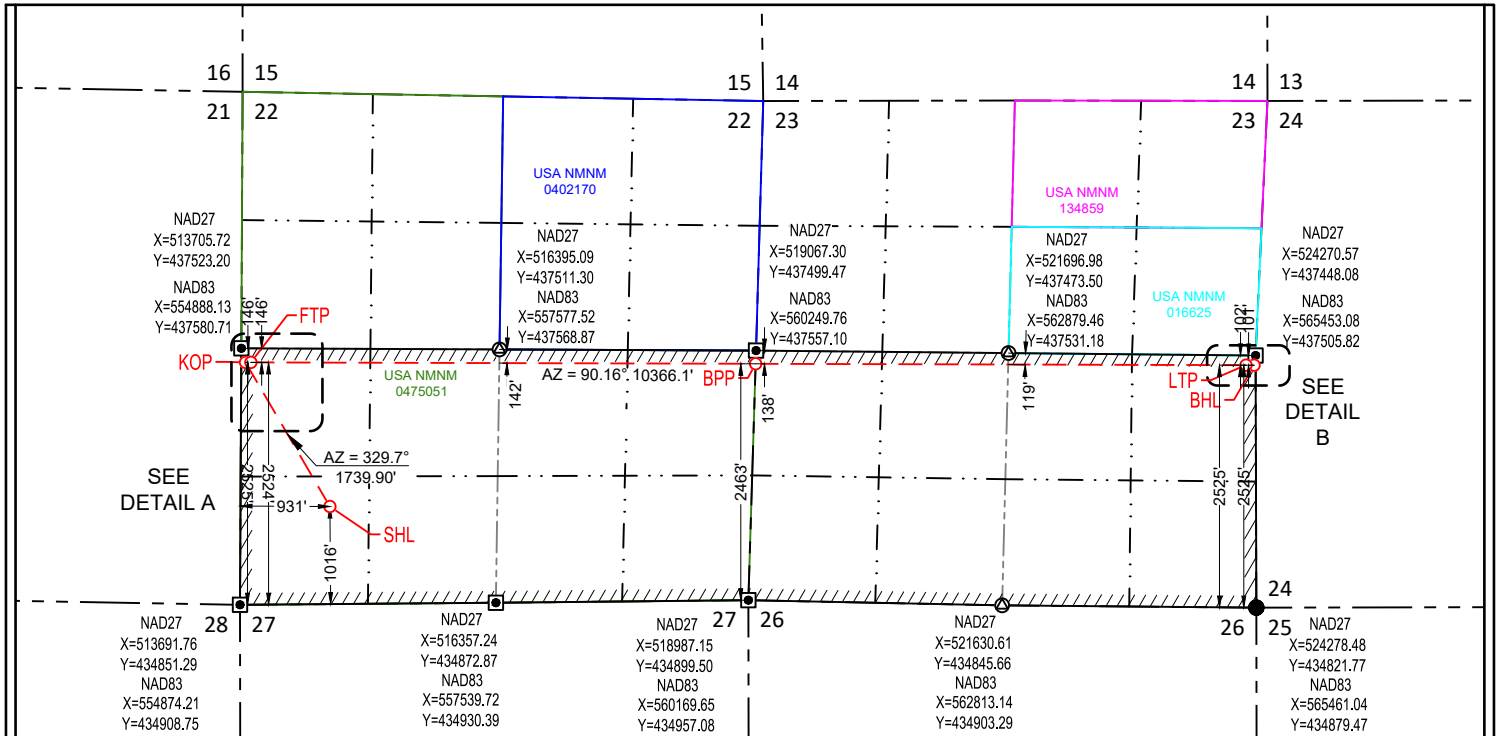
**Last Take Point (LTP)**

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the N/S	Feet from the E/W	Latitude	Longitude	County
I	23	24-S	26-E	-	2525' S	100' E	N 32.2024800	W 104.2556889	EDDY

Unitized Area or Area of Uniform Intrest <b>pending (com)</b>	Spacing Unity Type <input checked="" type="checkbox"/> Horizontal <input type="checkbox"/> Vertical	Ground Floor Elevation <b>3329'</b>
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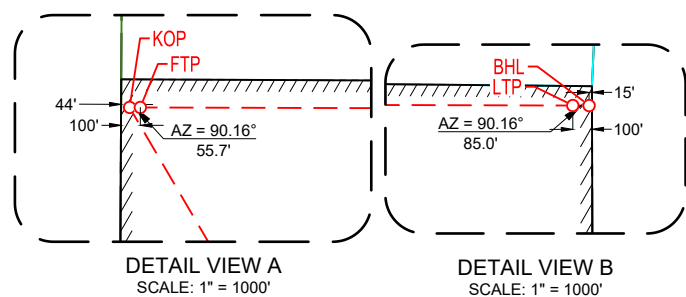
<b>OPERATOR CERTIFICATION</b> <i>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief; and, if the well is a vertical or directional well, that this organization either owns a working interest or unleased mineral interest in the land including 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.</i>  <i>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.</i>  <b>Rodney Littleton</b> January 26, 2026		<b>SURVEYORS CERTIFICATION</b> <i>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.</i>  	
Signature <b>Rodney Littleton</b>		Signature and Seal of Professional Surveyor	
Date <b>January 26, 2026</b>		Date	
Print Name <b>rlittleton@freedomenergy.com</b>		Certificate Number	Date of Survey <b>10/29/2024</b>
E-mail Address			

<p><b>C-102</b></p> <p>Submit Electronically Via OCD Permitting</p>	<p>State of New Mexico Energy, Minerals &amp; Natural Resources Department <b>OIL CONSERVATION DIVISION</b></p>	<p>Revised July 9, 2024</p>		
		<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:15%; vertical-align: top;"> <p>Submittal Type:</p> </td> <td> <input type="checkbox"/> Initial Submittal  <input checked="" type="checkbox"/> Amended Report  <input type="checkbox"/> As Drilled                 </td> </tr> </table>	<p>Submittal Type:</p>	<input type="checkbox"/> Initial Submittal <input checked="" type="checkbox"/> Amended Report <input type="checkbox"/> As Drilled
<p>Submittal Type:</p>	<input type="checkbox"/> Initial Submittal <input checked="" type="checkbox"/> Amended Report <input type="checkbox"/> As Drilled			
<p>Property Name and Well Number</p> <p><b>JURNEGAN BS FED COM 10H</b></p>				



SURFACE LOCATION (SHL)	KICK OFF POINT (KOP)	FIRST TAKE POINT (FTP)	BLM PERF. POINT (BPP)
NEW MEXICO EAST NAD 1983 X=555810 Y=435933 LAT.: N 32.1984473 LONG.: W 104.2865434 NAD 1927 X=514628 Y=435875 LAT.: N 32.1983289 LONG.: W 104.2860432 1016' FSL 931' FWL	NEW MEXICO EAST NAD 1983 X=554932 Y=437434 LAT.: N 32.2025762 LONG.: W 104.2893826 NAD 1927 X=513749 Y=437377 LAT.: N 32.2024579 LONG.: W 104.2888822 2525' FSL 44' FWL	NEW MEXICO EAST NAD 1983 X=554987 Y=437434 LAT.: N 32.2025757 LONG.: W 104.2892025 NAD 1927 X=513805 Y=437377 LAT.: N 32.2024574 LONG.: W 104.2887021 2524' FSL 100' FWL	NEW MEXICO EAST NAD 1983 X=560246 Y=437419 LAT.: N 32.2025282 LONG.: W 104.2722026 NAD 1927 X=519063 Y=437362 LAT.: N 32.2024096 LONG.: W 104.2717028 2463' FSL 0' FWL

LAST TAKE POINT (LTP)	BOTTOM HOLE LOCATION (BHL)
NEW MEXICO EAST NAD 1983 X=565353 Y=437405 LAT.: N 32.2024800 LONG.: W 104.2556889 NAD 1927 X=524171 Y=437347 LAT.: N 32.2023609 LONG.: W 104.2551896 2525' FSL 100' FEL	NEW MEXICO EAST NAD 1983 X=565438 Y=437405 LAT.: N 32.2024791 LONG.: W 104.2554141 NAD 1927 X=524256 Y=437347 LAT.: N 32.2023601 LONG.: W 104.2549148 2525' FSL 15' FEL



**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.  
10/29/2024  
Date of Survey  
Signature and Seal of Professional Surveyor:

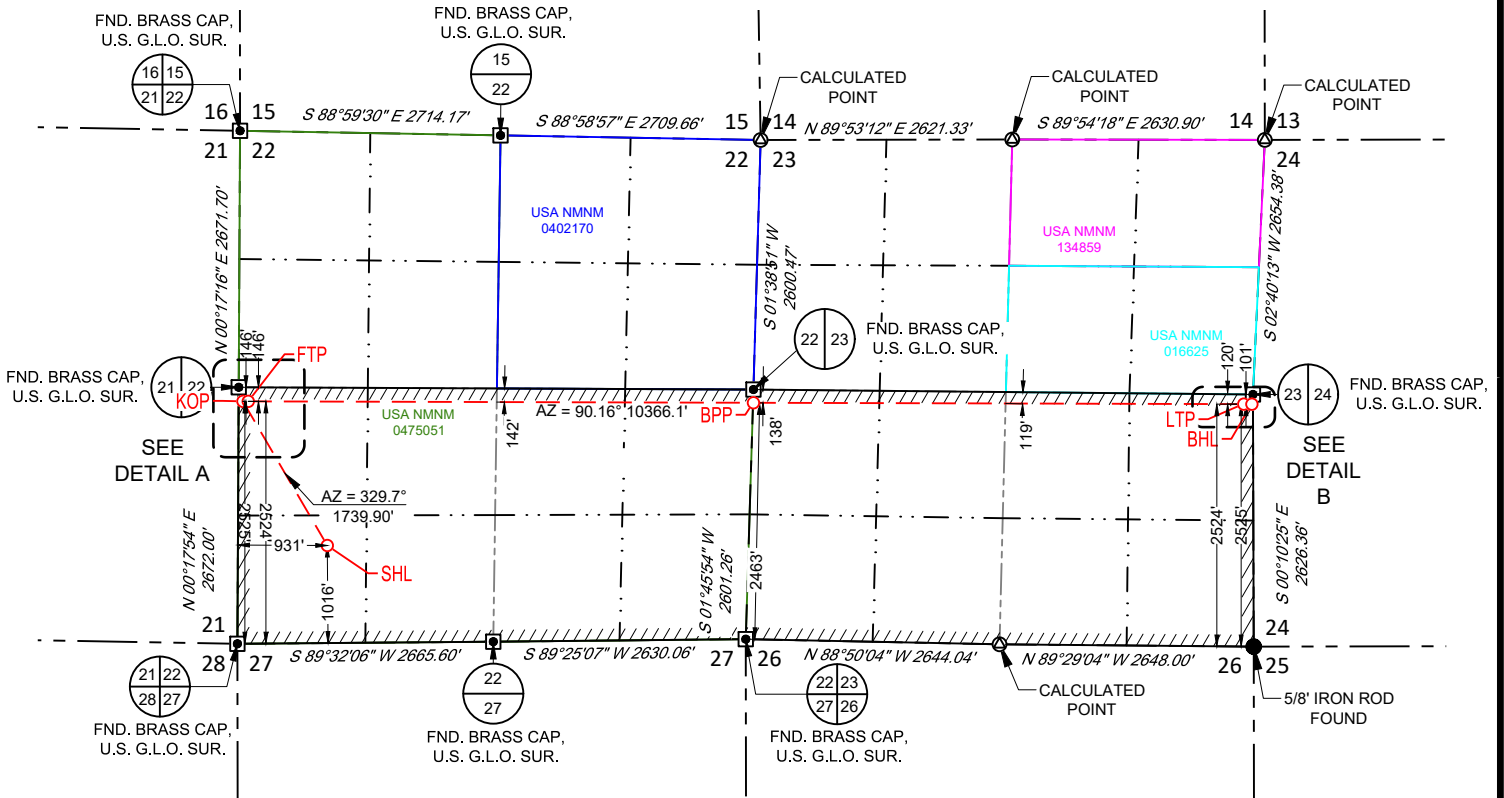


S:\SURVEY\AT\_CHEEK\_RESOURCES\LCURNEGAN\_22-046-SEE-FINAL\_PRODUCT\800\_JURNEGAN\_BS\_FED\_COM\_09\_REV.MXD MATTHEW MORAN 10/29/2024 3:01 PM

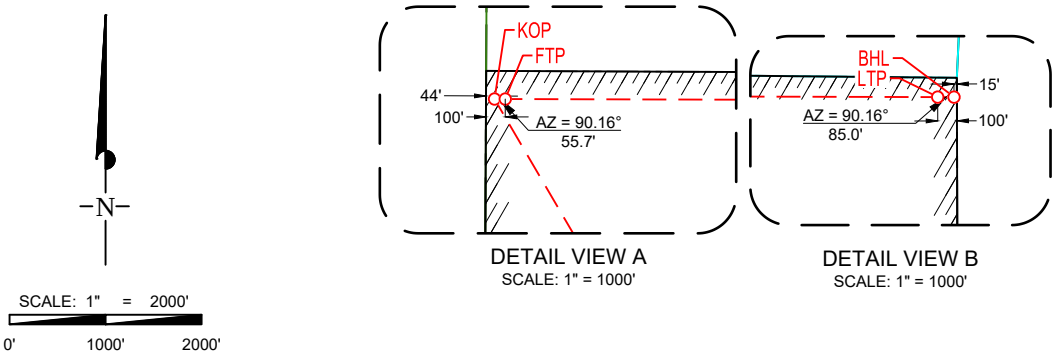


**FLAT CREEK**  
RESOURCES

SECTION 22, TOWNSHIP 24-S, RANGE 26-E, N.M.P.M.  
EDDY COUNTY, NEW MEXICO



<p><b>SURFACE LOCATION (SHL)</b>                  NEW MEXICO EAST                  NAD 1983                  X=555810 Y=435933                  LAT.: N 32.1984473                  LONG.: W 104.2865434                  1016' FSL 931' FWL</p>	<p><b>KICK OFF POINT (KOP)</b>                  NEW MEXICO EAST                  NAD 1983                  X=554932 Y=437434                  LAT.: N 32.2025762                  LONG.: W 104.2893826                  2525' FSL 44' FWL</p>	<p><b>FIRST TAKE POINT (FTP)</b>                  NEW MEXICO EAST                  NAD 1983                  X=554987 Y=437434                  LAT.: N 32.2025757                  LONG.: W 104.2892025                  2524' FSL 100' FWL</p>
<p><b>BLM PERF. POINT (BPP)</b>                  NEW MEXICO EAST                  NAD 1983                  X=560246 Y=437419                  LAT.: N 32.2025282                  LONG.: W 104.2722026                  2463' FSL 0' FWL</p>	<p><b>LAST TAKE POINT (LTP)</b>                  NEW MEXICO EAST                  NAD 1983                  X=565353 Y=437405                  LAT.: N 32.2024800                  LONG.: W 104.2556889                  2525' FSL 100' FEL</p>	<p><b>BOTTOM HOLE LOCATION (BHL)</b>                  NEW MEXICO EAST                  NAD 1983                  X=565438 Y=437405                  LAT.: N 32.2024791                  LONG.: W 104.2554141                  2525' FSL 15' FEL</p>



LEASE NAME & WELL NO.: JURNEGAN BS FED COM 10H

SECTION 22 TWP 24-S RGE 26-E SURVEY N.M.P.M.  
 COUNTY EDDY STATE NM  
 DESCRIPTION 1016' FSL & 931' 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 LEASE  
RD. ±7489 FEET, THENCE NORTH (RIGHT) ON A PROPOSED ROAD ±32  
FEET TO A POINT ±381 FEET SOUTHEAST OF THE LOCATION.



Angel M. Baeza, P.S. No. 25116

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 WINSOTT ROAD, Ste. 200 • BENBROOK, TEXAS 76126  
 TELEPHONE: (817) 744-7512 • FAX (817) 744-7554  
 2903 NORTH BIG SPRING • MIDLAND, TEXAS 79705  
 TELEPHONE: (432) 682-1653 OR (800) 767-1653 • FAX (432) 682-1743  
 WWW.TOPOGRAPHIC.COM



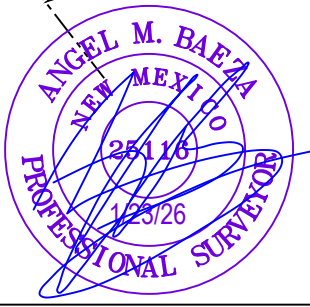
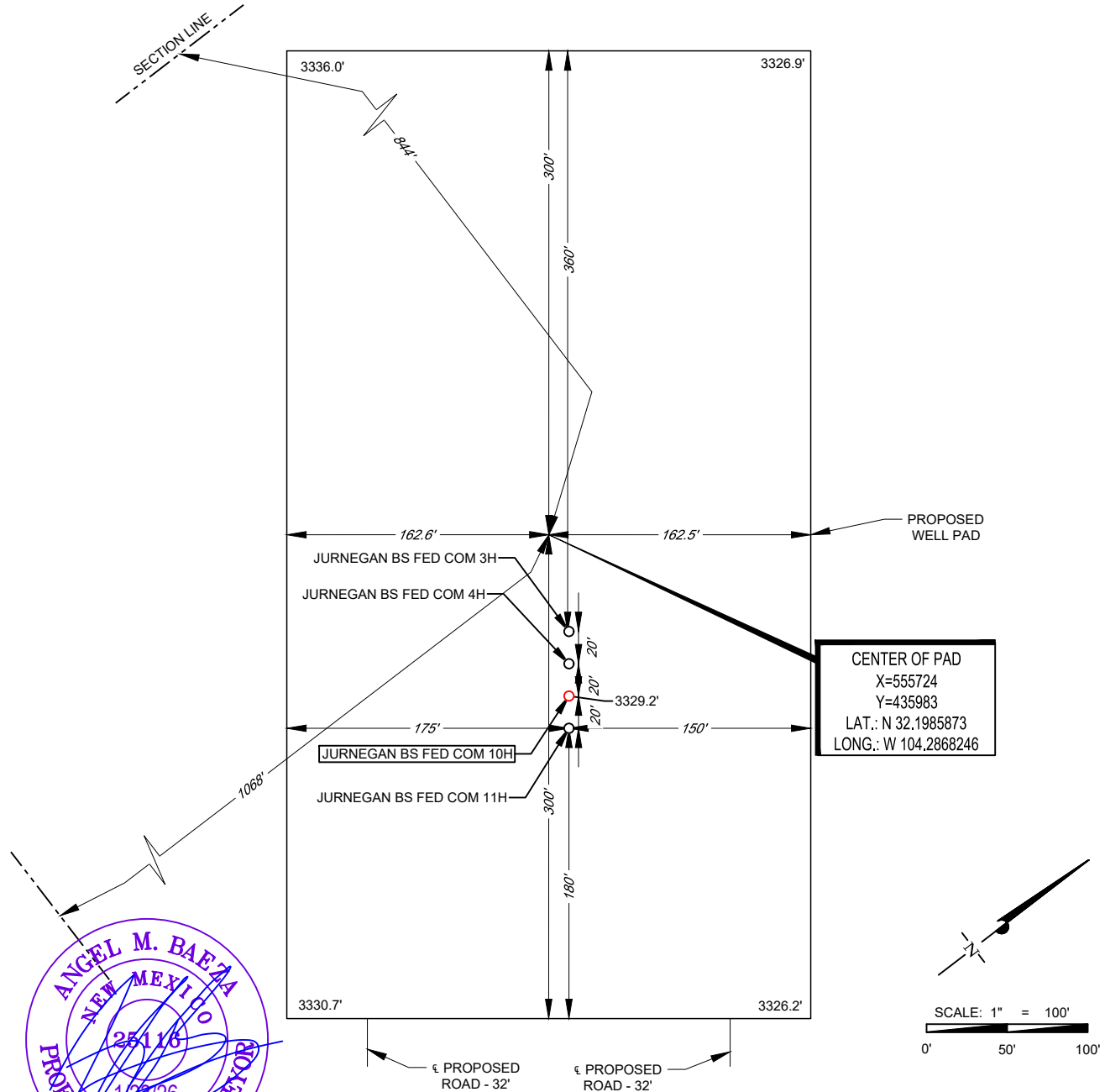
FLAT CREEK RESOURCES

DETAIL VIEW SCALE: 1" = 100'

LEGEND

- SECTION LINE
- PROPOSED ROAD

SECTION 22, TOWNSHIP 24-S, RANGE 26-E, N.M.P.M. EDDY COUNTY, NEW MEXICO



Angel M. Baeza, P.S. No. 25116

LEASE NAME & WELL NO.: JURNEGAN BS FED COM 10H  
 10H LATITUDE N 32.1984473 10H LONGITUDE W 104.2865434

CENTER OF PAD IS 1068' FSL & 844' FWL

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. ELEVATIONS USED ARE NAVD88, OBTAINED THROUGH AN OPUS SOLUTION.

THIS PROPOSED PAD SITE 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. ONLY THE DATA SHOWN ABOVE IS BEING CERTIFIED TO, ALL OTHER INFORMATION WAS INTENTIONALLY OMITTED. THIS PLAT IS ONLY INTENDED TO BE USED FOR A PERMIT AND IS NOT A BOUNDARY SURVEY. 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.

ORIGINAL DOCUMENT SIZE: 8.5" X 11"



481 WINSOTT ROAD, Ste. 200 • BENBROOK, TEXAS 76126  
 TELEPHONE: (817) 744-7512 • FAX (817) 744-7554  
 2903 NORTH BIG SPRING • MIDLAND, TEXAS 79705  
 TELEPHONE: (432) 682-1653 OR (800) 767-1653 • FAX (432) 682-1743  
 WWW.TOPOGRAPHIC.COM

State of New Mexico  
Energy, Minerals and Natural Resources Department

**Michelle Lujan Grisham**  
Governor

**Erin Taylor**  
Acting Cabinet Secretary

**Ben Shelton**  
Deputy Secretary

**Albert C.S. Chang**  
Division Director  
Oil Conservation Division



Mike Gregory  
[mgregory@freedomenergy.com](mailto:mgregory@freedomenergy.com)

**ADMINISTRATIVE NON-STANDARD LOCATION**

**Administrative Order NSL – 9223**

**Flat Creek Resources, Inc. [OGRID 374034]  
Jurnegan BS Federal Com Well No. 10H  
API No. 30-015-PENDING**

Reference is made to your application received on December 16<sup>th</sup>, 2025.

**Proposed Location**

	<b>Footages</b>	<b>Unit/Lot</b>	<b>Sec.</b>	<b>Twsp</b>	<b>Range</b>	<b>County</b>
Surface	1016 FSL & 931 FWL	M	22	24S	26E	Eddy
First Take Point	2570 FSL & 100 FWL	L	22	24S	26E	Eddy
Last Take Point	2526 FSL & 100 FEL	I	23	24S	26E	Eddy
Terminus	2526 FSL & 15 FEL	I	23	24S	26E	Eddy

**Proposed Horizontal Spacing Unit**

<b>Description</b>	<b>Acres</b>	<b>Pool</b>	<b>Pool Code</b>
S/2 Section 22	640	Willow Lake; Bone Spring, West	96415
S/2 Section 23			

You have requested to drill this horizontal well at an unorthodox well location described above in the referenced pool or formation. 19.15.16.15(B)(1)(a) NMAC governs this proposed well and provides that the operator dedicate a horizontal well at a standard horizontal spacing unit that comprises of one or more contiguous tracts that the horizontal well's completed interval penetrates, each of which consists of a governmental quarter - quarter section or equivalent. 19.15.16.15(C)(1)(a) NMAC governs the distance in the horizontal plane from any point in the

Administrative Order NSL – 9223  
Flat Creek Resources, LLC  
Page 2 of 2

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completed interval to any outer boundary of the horizontal spacing unit, measured along a line perpendicular to the completed interval or to the tangent thereof, shall be a minimum of 330 feet for an **oil** well. 19.15.16.15(C)(1)(b) NMAC governs the first and last take point of a horizontal well shall be no closer than 100 feet for a well within the horizontal plane, to any outer boundary of the horizontal spacing unit.

The request to deviate from an orthodox location has met all requirements of 19.15.16.15 (C)(5)(a) NMAC. It is understood that you are seeking this exception in order to create a non-standard location, comprised of Take Points referenced above, within the described Horizontal Spacing Unit.

This well's completed interval is as close as 100 - 114 feet to the northern edge of the horizontal spacing unit. Encroachment will impact the following tracts.

Section 22, encroachment to the N/2  
Section 23, encroachment to the N/2

The Division understands you have given notice of this application to all operators or owners who are "affected persons," as defined in 19.15.2.7(A)(8) NMAC, in all adjoining units towards which the proposed location encroaches.

The Division understands you are seeking this unorthodox location to allow for efficient well spacing within the Bone Spring formation underlying the S/2 of Section 22 and the S/2 of Section 23, thereby preventing waste.

Your application has been filed under 19.15.16.15(C)(6) NMAC, 19.15.15.13 NMAC and 19.15.4.12 (A)(2) NMAC.

Per 19.15.15.13 (B) NMAC, **Division approves this unorthodox location.**

Reference this NSL order number on the As Drilled C-102 submitted with the Authorization to Transport, to place this well into production.

The above approvals are subject to your following all other applicable Division rules.

Jurisdiction of this case is retained for the entry of further orders as the Division deems necessary.



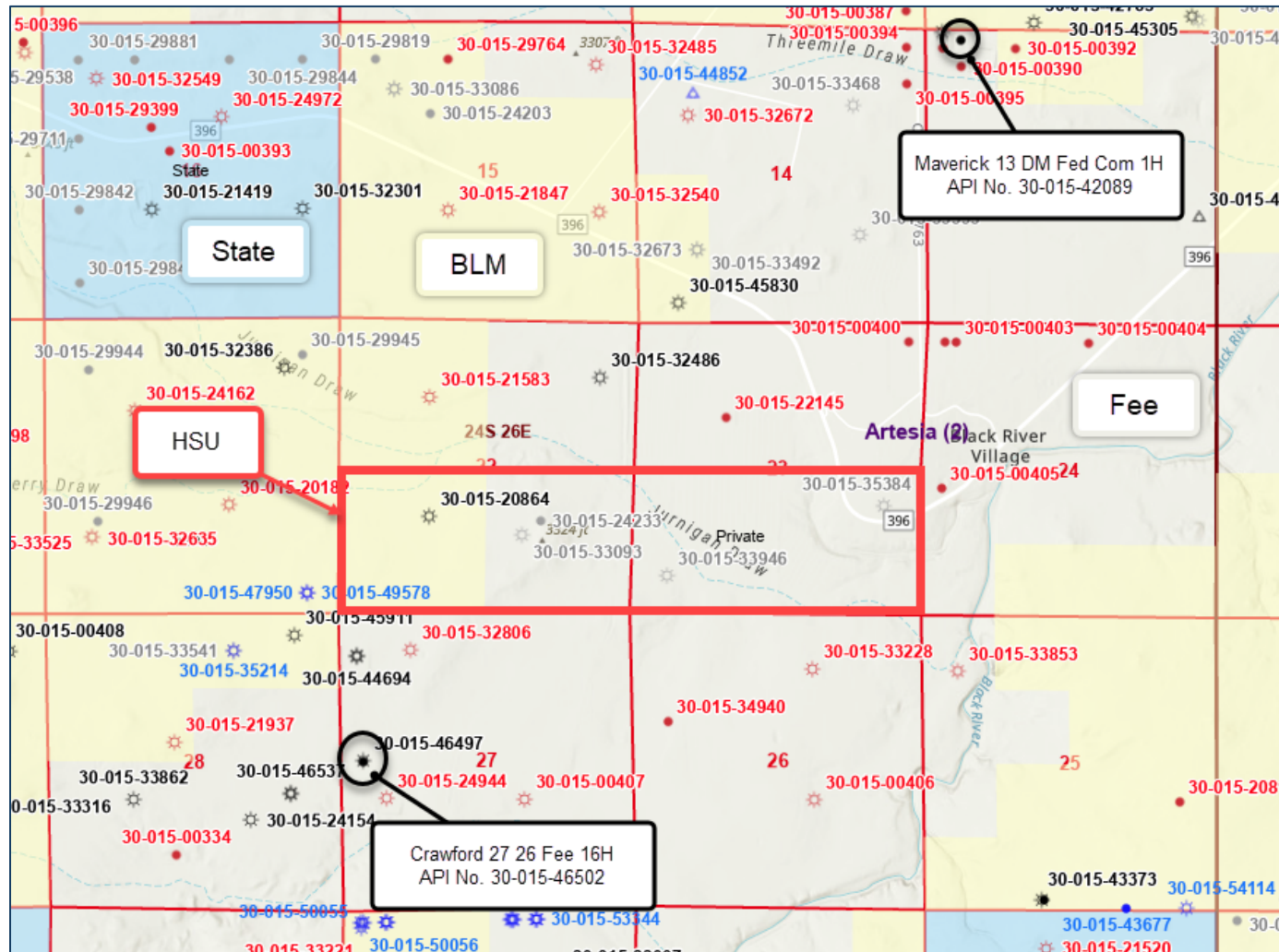
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**Albert C.S. Chang**  
Division Director  
AC/lrl

Date: 2/1/2026

### Surface Ownership Plats

Freedom's HSU, Surface Ownership Type, and Offset Wells in the same pool as Freedom's NSL well



Flat Creek Resources, LLC  
 Jurnegan BS Fed Com 10H  
 SHL 1016' FSL & 931' FWL 22-24S-26E  
 BHL 2525' FSL & 15' FEL 23-24S-26E  
 Eddy County, NM

DRILL PLAN PAGE 1

### Drilling Program

#### 1. ESTIMATED TOPS

Formation	TVD	MD	Bearing
Alluvium	26'	26'	water
Top Salt	1101'	1101'	N/A
Base Salt	1456'	1457'	N/A
Lamar/Delaware Mountain Group	1756'	1762'	N/A
Bell Canyon	1861'	1870'	N/A
Cherry Canyon	2676'	2758'	N/A
Brushy Canyon	3566'	3753'	N/A
Bone Spring Lime	5256'	5611'	Hydrocarbons
KOP	5933'	6295'	
1st Bone Spring Sand	6161'	6532'	Hydrocarbons
2nd Bone Spring Shale	6361'	6824'	Hydrocarbons
2nd Bone Spring Shale Target	6401'	6946'	Hydrocarbons
TD	6646'	17076'	Hydrocarbons

#### 2. NOTABLE ZONES

Second Bone Spring Shale is the goal. All perforations will be  $\geq 100'$  from the dedication perimeter.

#### 3. PRESSURE CONTROL

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.

Flat Creek Resources, LLC  
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Eddy County, NM

DRILL PLAN PAGE 2

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

#### BOP Testing Procedure

1. Use water to test BOP's.
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.

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 Eddy County, NM

DRILL PLAN PAGE 3

Surface Casing & BOP Equipment Test			
Component	High Test	Low Test	Duration
Wellhead Test	5000 psi	250 psi	10 min
BOP Rams	5000 psi	250 psi	10 min
Annular	3500 psi	250 psi	10 min
HCR	5000 psi	250 psi	10 min
Manifold	5000 psi	250 psi	10 min
Upper/Lower Kelly valves	5000 psi	250 psi	10 min
TIW safety valves/dart	5000 psi	250 psi	10 min
Standpipe/mudlines	5000 psi	250 psi	10 min
Orbit valve/rotating head	300 psi	-	10 min
Surface casing	1500 psi	-	30 min

4. CASING & CEMENT

All casing will be new and API. See attached casing assumption worksheets.

Name	Hole OD	Casing OD	Tapered	Top MD	Bottom MD	Top TVD	BTM TVD	Grade	Weight	Thread	Collapse	Burst	Tension	Coupling
Surface	14.75"	10.75	No	0	400	0	400	J-55	45.5	STC	11.2	19.1	44.1	Standard
1st Intermediate	9.875"	7.625"	No	0	1780	0	1778	P-110 HC	29.7	BTC	7.7	7.4	12.9	Standard
Production	6.75"	5.5"	No	0	17076	0	6646	P-110 HC	20	TCBC-HT	3.6	3.8	5.1	Special Clearance 5.9" OD

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 BHL 2525' FSL & 15' FEL 23-24S-26E  
 Eddy County, NM

DRILL PLAN PAGE 4

Name	Type	Top MD	Sacks	Yield	Cu. Ft	Weight	Excess	Cement	Additives
Surface	Lead	0	135	1.68	227	12.8	100%	35/65 Poz-Premium C	5% bwow Sodium chloride + 6% bentonite gel + 0.4% CPT-503P + 0.125 lbs/sk Dura fiber
	Tail	200	170	1.34	228	14.8	100%	C	1% Calcium chloride + 0.25 lb/sk cellophane flake
Intermediate	Lead	0	250	1.68	420	12.8	50%	35/65 Poz-Premium C	5% bwow Sodium chloride + 6% bentonite gel + 0.4% CPT-503P + 0.125 lbs/sk Dura fiber
	Tail	1280	85	1.74	148	13.5	50%	C	1% calcium chloride + 4% bentonite gel + 0.4% CPT-503P + 0.125 lbs/sk Dura fiber
Production	Lead	0	225	2.82	635	10.4	15%	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
	Tail	6500	725	1.42	1030	13.2	15%	35/65 Poz-Premium H	0.2% CPT-23

5. MUD PROGRAM

A closed loop system will be used. An electronic pit volume totalizer (PVT) mud system will monitor pit volumes for gains or losses, flow rate, pump pressures, and stroke rate. 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.

Name	Top	Bottom	Type	Mud Weight (ppg)	Visc	Fluid Loss
Surface	0	400	FW Spud Mud	8.8	45-60	NC
Intermediate 1	400	1780	Cut Brine	10	29 - 30	NC
Production	1780	17076	Cut Brine	9.4	34-38	6-8

6. CORES, TESTS, & LOGS

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

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Eddy County, NM

DRILL PLAN PAGE 5

7. DOWN HOLE CONDITIONS

No abnormal pressure or temperature is expected. Maximum expected bottom hole pressure is  $\approx 2981$  psi. Expected bottom hole temperature is  $\approx 144^\circ$  F.

An H2S plan is attached. H2S monitoring equipment will be used from surface casing setting point to TD.

8. OTHER INFORMATION

Anticipated spud date is upon approval. It is expected it will take  $\approx 2$  months to drill and complete the well.

## Flat Creek Resources

### BOP Break Testing Variance

Flat Creek Resources respectfully requests a variance from the minimum standards for well control equipment testing of 43 CFR 3172 to allow a testing schedule of the blowout preventer and blowout prevention equipment along with Batch Drilling operations to include the following:

#### Procedures:

1. Flat Creek Resources will use this document for our break testing plan for New Mexico Delaware Basin.
2. Flat Creek will perform BOP break testing on multi-well pads where multiple intermediate sections will be drilled.
  - a. Full BOPE test at first installation on the pad.
  - b. The first intermediate hole section on the pad will be the deepest. All the remaining intermediate hole sections will be the same depth or shallower.
3. After performing a complete BOP test on the first well, the intermediate hole section will be drilled and cased. After the well section is cemented and secured with a pack off, the BOP will be disconnected from the wellhead, and the choke line will be disconnected.
4. The BOP is then lifted and removed from the wellhead by a hydraulic lift system.
5. TA cap will be installed according to manufacturer recommendations and pressure inside the casing will be monitored via the valve on the TA cap.
6. After skidding to the next well, the BOP is moved onto the wellhead by the hydraulic lift system and installed.
7. The BOP and choke line will then be reconnected.
8. Install a test plug into the wellhead.
9. A shell test is performed against the upper pipe ram and the valves on the choke manifold (valves to be rotated each test)
10. The shell test will consist of a 250-psi low test and a high test to 5000 psi. A function test will be performed on the following components: lower pipe rams, blind rams, and annular.
11. This process will be repeated for subsequent wells on the pad.

#### Standard Procedures:

1. Full BOPE test every 21 days
2. Annular preventer shall be tested to 70% or higher than the MASP of the deepest hole section.
3. Function test BOP elements per 43 CFR 3172.
4. Contact BLM if a well control event occurs.
5. If a well control event occurs, go back to full BOP test.
6. If the upcoming well section cannot be completed within 21 days, then a full BOPE test will always be completed.
7. Break test not to be used for production hole section (full BOP test)
8. The drill sections shall be higher than the Wolfcamp formation.
9. This Break Test Variance only to depths above a TVD of 12,000'

## **Barriers**

Before nipple down:

- Floats in casing
- Kill weight fluid in casing
- Kill weight fluid in annulus
- Solid body mandrel and/or fluted mandrel with pack off

After nipple down

- Floats in casing
- Kill weight fluid in casing
- Kill weight fluid in annulus
- Solid body mandrel and/or fluted mandrel with pack off
- Capping flange

## **Well Control Response:**

1. Primary barrier remains fluid
2. In the event of an influx due to being underbalanced and after a realized gain or flow, the order of closing the BOP is as follows:
  - a. Annular first

- b. If annular were not to hold, upper pipe rams second (which were tested on the break test)
- c. If the upper pipe rams were not to hold, the lower pipe rams would be third

## **Summary**

A variance is requested to test broken pressure seals on the BOPE when moving between wells on a multi-well pad, subject to the following conditions:

- A full BOPE test conducted on the first well of the pad. API Standard 53 requires testing annular BOP to 70% of working pressure or 100% of MASP, whichever is greater.
- If the first well on the pad does not have the deepest section, a full BOPE test will be performed prior to the deeper well.
- The hole section to be drilled has a MASP under 5000 psi.
- If a well control event occurs, BLM will be contacted for permission to continue break testing.

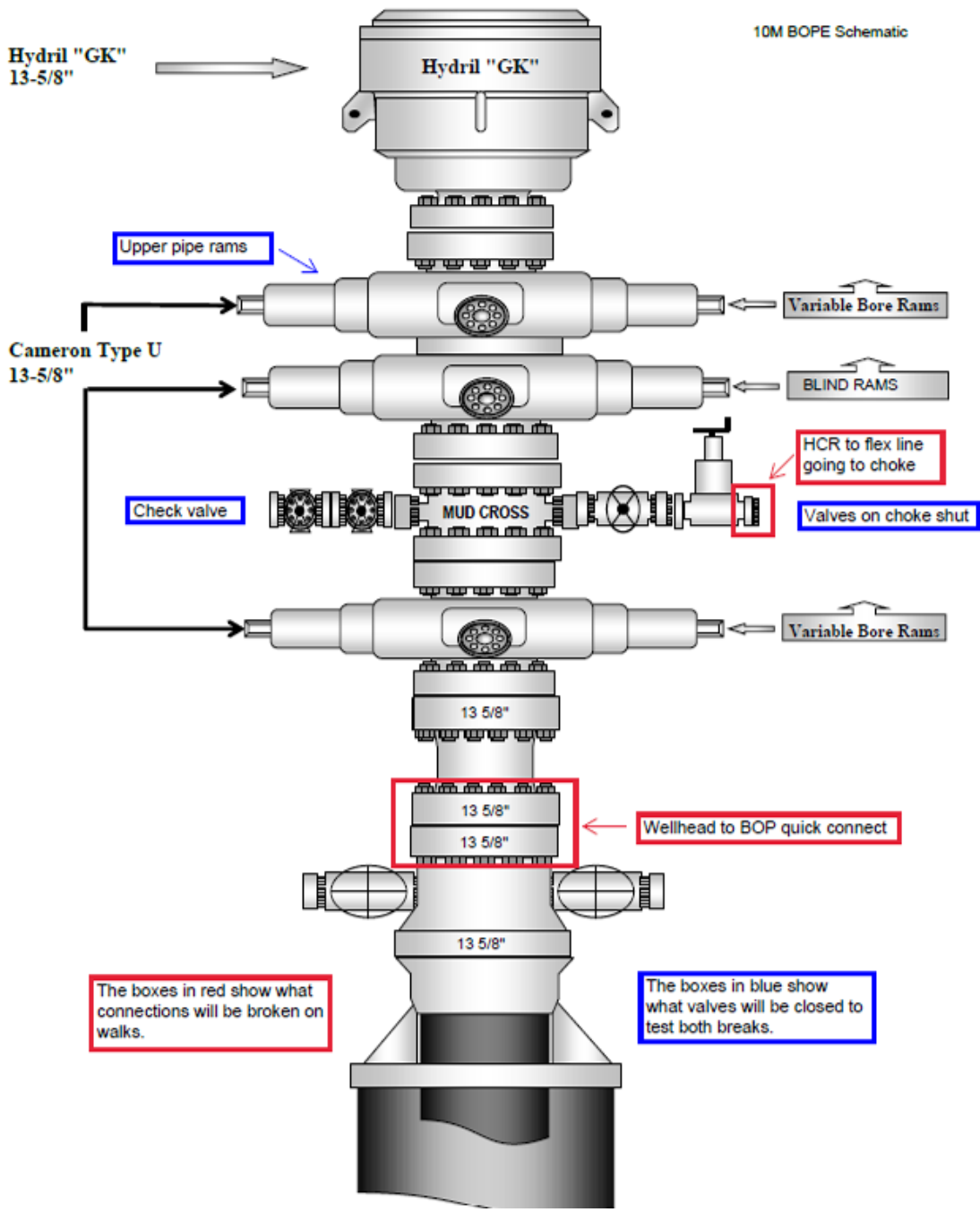
While skidding the rig, the BOP stack will be secured via a hydraulic handling system. A full BOPE test will be performed at least every 21 days.



BOP Quick Connect Adapter

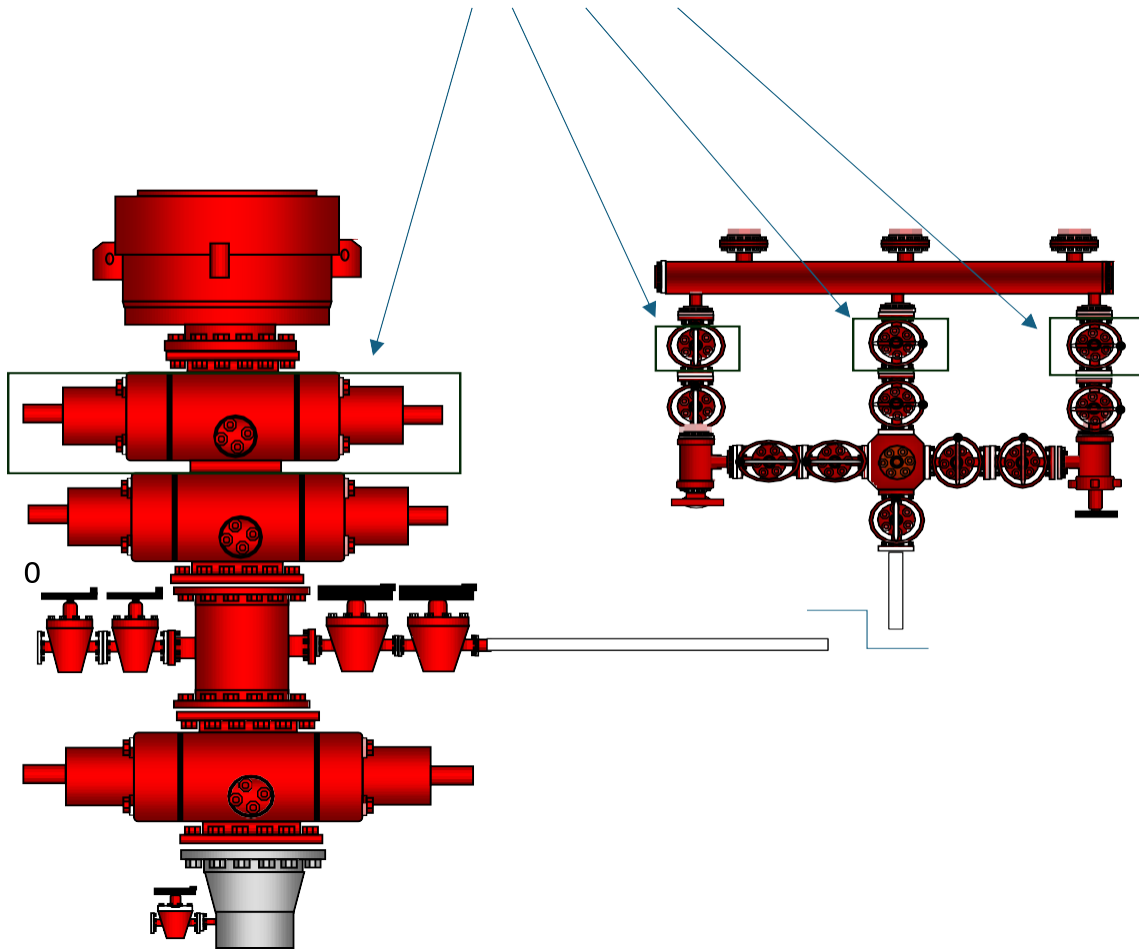
Wellhead Body

Surface Casing



### Break Testing

TO BE CLOSED DURING BREAK TEST



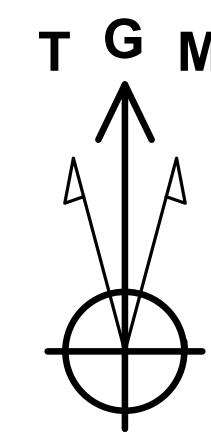


Stack Handler back view



Stack Handler side view

Company: Freedom Energy  
 Field: Eddy County, NM NAD83  
 Location: Jurnegan  
 Well: Jurnegan BS Fed Com 10H  
 OH  
 Plan: Plan 5  
 GL 3332' + 26.5' KB @ 3358.50usft



Azimuths to Grid North  
 True North: -0.02°  
 Magnetic North: 6.51°

Magnetic Field  
 Strength: 46866.6nT  
 Dip Angle: 59.61°  
 Date: 1/16/2026  
 Model: IGRF2025

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

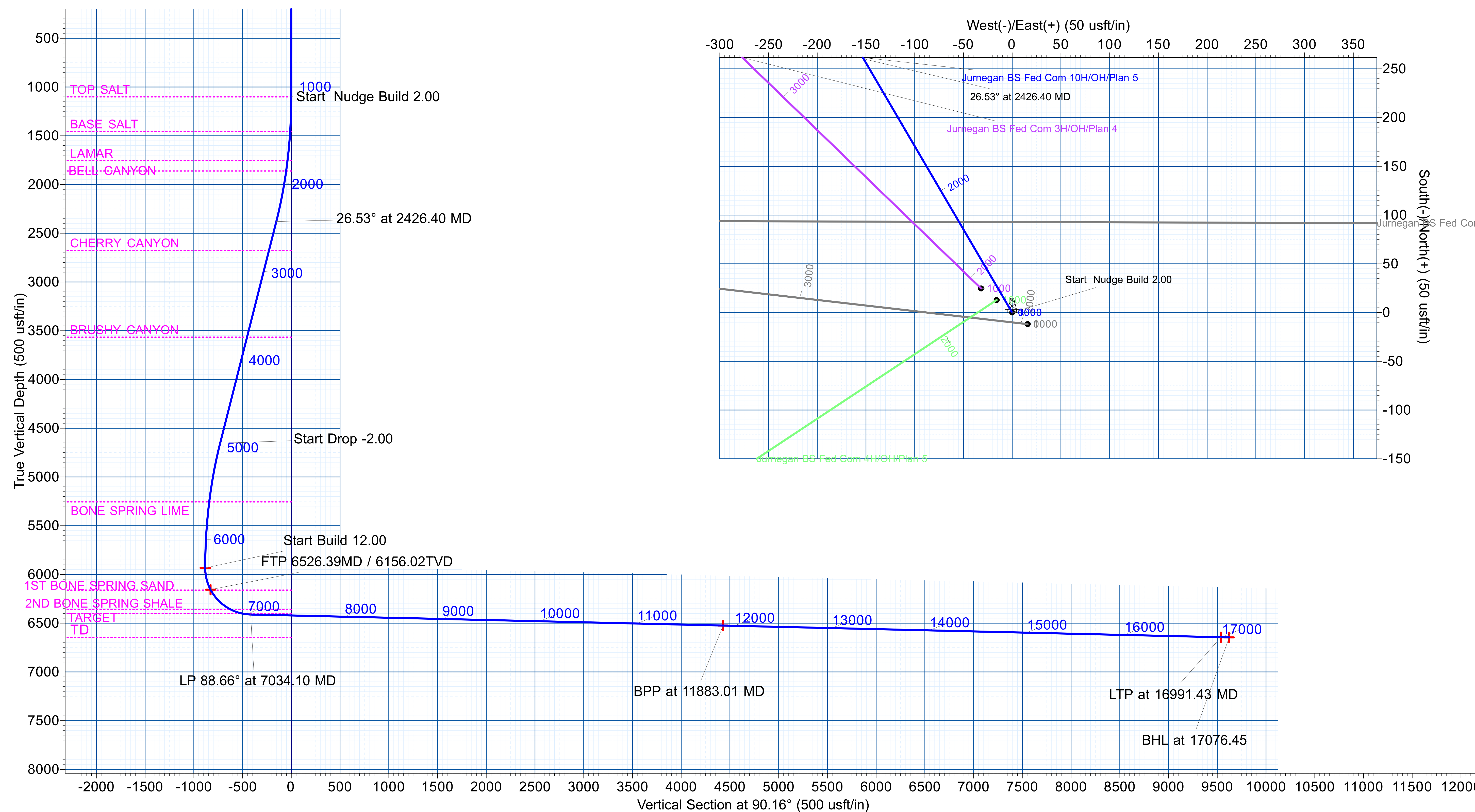
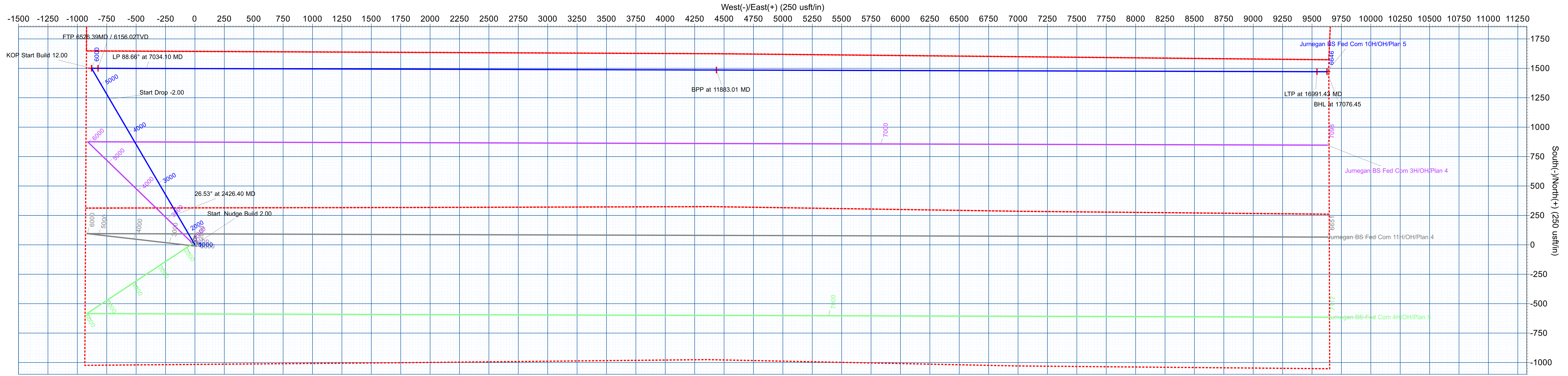


WELL DETAILS: Jurnegan BS Fed Com 10H

+N/-S	+E/-W	GL 3332' + 26.5' KB @ 3358.50usft		3332.00
0.00	0.00	Northing	Easting	Latitude
		435933.49	555810.96	32.198450
				Longitude
				-104.286542

To convert a Magnetic Direction to a Grid Direction, Add 6.51°

Rig:



DESIGN TARGET DETAILS							
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
KOP - Jurnegan BS Fed 10H	5933.82	1500.51	-878.96	437434.00	554932.00	32.202576	-104.289382
FTP (100' FWL) - Jurnegan BS Fed 10H	6156.02	1500.51	-823.96	437434.00	554987.00	32.202575	-104.289204
BPP - Jurnegan BS Fed 7H	6524.55	1485.51	4435.04	437419.00	560246.00	32.202527	-104.272201
LTP (100' FEL) - Jurnegan BS Fed 10H	6644.01	1471.51	9542.04	437405.00	565353.00	32.202480	-104.255690
BHL(15' FEL) - Jurnegan BS Fed 10H	6646.00	1471.51	9627.04	437405.00	565438.00	32.202479	-104.255415

SECTION DETAILS									
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	1100.00	0.00	0.00	1100.00	0.00	0.00	0.00	0.00	0.00
3	2426.40	26.53	329.64	2379.51	260.26	-152.44	2.00	329.64	-153.17
4	4968.87	26.53	329.64	4654.31	1240.10	-726.37	0.00	0.00	-729.83
5	6295.27	0.00	90.16	5933.82	1500.35	-878.81	2.00	180.00	-883.00
6	7034.10	88.66	90.16	6411.15	1499.06	-412.52	12.00	90.16	-416.70
7	11883.01	88.66	90.16	6524.55	1485.65	4435.04	0.00	0.00	4430.88
8	16991.43	88.66	90.16	6644.01	1471.51	9542.04	0.00	0.00	9537.90
9	17076.45	88.66	90.16	6646.00	1471.28	9627.04	0.00	0.00	9622.90

FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
26.50	26.50	SALADO
1101.00	1101.00	TOP SALT
1456.00	1456.92	BASE SALT
1756.00	1761.87	LAMAR
1861.00	1870.25	BELL CANYON
2676.00	2757.77	CHERRY CANYON
3566.00	3752.50	BRUSHY CANYON
5256.00	5610.96	BONE SPRING LIME
6161.00	6532.03	1ST BONE SPRING SAND
6361.00	6824.17	2ND BONE SPRING SHALE
6401.00	6945.99	TARGET



# Freedom Energy

Eddy County, NM NAD83  
Jurnegan  
Jurnegan BS Fed Com 10H

OH

Plan: Plan 5

## Standard Planning Report

26 January, 2026



## Legacy Directional Drilling Planning Report

<b>Database:</b>	EDM_WA	<b>Local Co-ordinate Reference:</b>	Well Jurnegan BS Fed Com 10H
<b>Company:</b>	Freedom Energy	<b>TVD Reference:</b>	GL 3332' + 26.5' KB @ 3358.50usft
<b>Project:</b>	Eddy County, NM NAD83	<b>MD Reference:</b>	GL 3332' + 26.5' KB @ 3358.50usft
<b>Site:</b>	Jurnegan	<b>North Reference:</b>	Grid
<b>Well:</b>	Jurnegan BS Fed Com 10H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan 5		

<b>Project</b>	Eddy County, NM NAD83		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		
<b>Map Zone:</b>	New Mexico Eastern Zone		

<b>Site</b>	Jurnegan				
<b>Site Position:</b>		<b>Northing:</b>	439,291.00 usft	<b>Latitude:</b>	32.207680
<b>From:</b>	Map	<b>Easting:</b>	555,610.00 usft	<b>Longitude:</b>	-104.287187
<b>Position Uncertainty:</b>	0.00 usft	<b>Slot Radius:</b>	13-3/16 "		

<b>Well</b>	Jurnegan BS Fed Com 10H					
<b>Well Position</b>	<b>+N/-S</b>	0.00 usft	<b>Northing:</b>	435,933.48 usft	<b>Latitude:</b>	32.198450
	<b>+E/-W</b>	0.00 usft	<b>Easting:</b>	555,810.96 usft	<b>Longitude:</b>	-104.286542
<b>Position Uncertainty</b>		0.00 usft	<b>Wellhead Elevation:</b>	usft	<b>Ground Level:</b>	3,332.00 usft
<b>Grid Convergence:</b>		0.02 °				

<b>Wellbore</b>	OH				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2025	1/16/2026	6.53	59.61	46,866.57457700

<b>Design</b>	Plan 5			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	0.00
<b>Vertical Section:</b>	<b>Depth From (TVD) (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Direction (°)</b>
	0.00	0.00	0.00	90.16

<b>Plan Survey Tool Program</b>	<b>Date</b>	1/26/2026		
<b>Depth From (usft)</b>	<b>Depth To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Remarks</b>
1	0.00	17,076.45 Plan 5 (OH)	MWD	
			OWSG MWD - Standard	



**Legacy Directional Drilling**  
Planning Report

<b>Database:</b>	EDM_WA	<b>Local Co-ordinate Reference:</b>	Well Jurnegan BS Fed Com 10H
<b>Company:</b>	Freedom Energy	<b>TVD Reference:</b>	GL 3332' + 26.5' KB @ 3358.50usft
<b>Project:</b>	Eddy County, NM NAD83	<b>MD Reference:</b>	GL 3332' + 26.5' KB @ 3358.50usft
<b>Site:</b>	Jurnegan	<b>North Reference:</b>	Grid
<b>Well:</b>	Jurnegan BS Fed Com 10H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan 5		

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	
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,426.40	26.53	329.64	2,379.51	260.26	-152.44	2.00	2.00	0.00	329.64	
4,968.87	26.53	329.64	4,654.31	1,240.10	-726.37	0.00	0.00	0.00	0.00	
6,295.27	0.00	90.16	5,933.82	1,500.35	-878.81	2.00	-2.00	0.00	180.00	
7,034.10	88.66	90.16	6,411.15	1,499.06	-412.52	12.00	12.00	0.00	90.16	
11,883.01	88.66	90.16	6,524.55	1,485.65	4,435.05	0.00	0.00	0.00	0.00	0.00 BPP - Jurnegan BS F
16,991.43	88.66	90.16	6,644.01	1,471.51	9,542.04	0.00	0.00	0.00	0.00	0.00 LTP (100' FEL) - Jurn
17,076.45	88.66	90.16	6,646.00	1,471.28	9,627.04	0.00	0.00	0.00	0.00	0.00 BHL(15' FEL) - Jurneg



### Legacy Directional Drilling

#### Planning Report

<b>Database:</b>	EDM_WA	<b>Local Co-ordinate Reference:</b>	Well Jurnegan BS Fed Com 10H
<b>Company:</b>	Freedom Energy	<b>TVD Reference:</b>	GL 3332' + 26.5' KB @ 3358.50usft
<b>Project:</b>	Eddy County, NM NAD83	<b>MD Reference:</b>	GL 3332' + 26.5' KB @ 3358.50usft
<b>Site:</b>	Jurnegan	<b>North Reference:</b>	Grid
<b>Well:</b>	Jurnegan BS Fed Com 10H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan 5		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26.50	0.00	0.00	26.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>SALADO</b>										
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	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	0.00
800.00	0.00	0.00	800.00	0.00	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	0.00
1,000.00	0.00	0.00	1,000.00	0.00	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	0.00
<b>Start Build 2.00</b>										
1,101.00	0.02	329.64	1,101.00	0.00	0.00	0.00	2.00	2.00	0.00	0.00
<b>TOP SALT</b>										
1,200.00	2.00	329.64	1,199.98	1.51	-0.88	-0.89	2.00	2.00	0.00	0.00
1,300.00	4.00	329.64	1,299.84	6.02	-3.53	-3.54	2.00	2.00	0.00	0.00
1,400.00	6.00	329.64	1,399.45	13.54	-7.93	-7.97	2.00	2.00	0.00	0.00
1,456.92	7.14	329.64	1,456.00	19.16	-11.22	-11.28	2.00	2.00	0.00	0.00
<b>BASE SALT</b>										
1,500.00	8.00	329.64	1,498.70	24.06	-14.09	-14.16	2.00	2.00	0.00	0.00
1,600.00	10.00	329.64	1,597.47	37.55	-22.00	-22.10	2.00	2.00	0.00	0.00
1,700.00	12.00	329.64	1,695.62	54.02	-31.64	-31.79	2.00	2.00	0.00	0.00
1,761.87	13.24	329.64	1,756.00	65.68	-38.47	-38.66	2.00	2.00	0.00	0.00
<b>LAMAR</b>										
1,800.00	14.00	329.64	1,793.06	73.43	-43.01	-43.21	2.00	2.00	0.00	0.00
1,870.25	15.40	329.64	1,861.00	88.81	-52.02	-52.27	2.00	2.00	0.00	0.00
<b>BELL CANYON</b>										
1,900.00	16.00	329.64	1,889.64	95.76	-56.09	-56.36	2.00	2.00	0.00	0.00
2,000.00	18.00	329.64	1,985.27	120.99	-70.87	-71.20	2.00	2.00	0.00	0.00
2,100.00	20.00	329.64	2,079.82	149.08	-87.32	-87.74	2.00	2.00	0.00	0.00
2,200.00	22.00	329.64	2,173.17	180.00	-105.43	-105.93	2.00	2.00	0.00	0.00
2,300.00	24.00	329.64	2,265.21	213.71	-125.18	-125.78	2.00	2.00	0.00	0.00
2,400.00	26.00	329.64	2,355.84	250.18	-146.54	-147.24	2.00	2.00	0.00	0.00
2,426.40	26.53	329.64	2,379.51	260.26	-152.44	-153.17	2.00	2.00	0.00	0.00
<b>Start 2542.47 hold at 2426.40 MD</b>										
2,500.00	26.53	329.64	2,445.37	288.62	-169.06	-169.86	0.00	0.00	0.00	0.00
2,600.00	26.53	329.64	2,534.84	327.16	-191.63	-192.54	0.00	0.00	0.00	0.00
2,700.00	26.53	329.64	2,624.31	365.70	-214.20	-215.22	0.00	0.00	0.00	0.00
2,757.77	26.53	329.64	2,676.00	387.96	-227.25	-228.33	0.00	0.00	0.00	0.00
<b>CHERRY CANYON</b>										
2,800.00	26.53	329.64	2,713.78	404.24	-236.78	-237.91	0.00	0.00	0.00	0.00
2,900.00	26.53	329.64	2,803.25	442.78	-259.35	-260.59	0.00	0.00	0.00	0.00
3,000.00	26.53	329.64	2,892.72	481.32	-281.93	-283.27	0.00	0.00	0.00	0.00
3,100.00	26.53	329.64	2,982.20	519.85	-304.50	-305.95	0.00	0.00	0.00	0.00
3,200.00	26.53	329.64	3,071.67	558.39	-327.07	-328.63	0.00	0.00	0.00	0.00
3,300.00	26.53	329.64	3,161.14	596.93	-349.65	-351.31	0.00	0.00	0.00	0.00
3,400.00	26.53	329.64	3,250.61	635.47	-372.22	-373.99	0.00	0.00	0.00	0.00
3,500.00	26.53	329.64	3,340.08	674.01	-394.79	-396.67	0.00	0.00	0.00	0.00
3,600.00	26.53	329.64	3,429.55	712.55	-417.37	-419.36	0.00	0.00	0.00	0.00
3,700.00	26.53	329.64	3,519.03	751.09	-439.94	-442.04	0.00	0.00	0.00	0.00



### Legacy Directional Drilling

#### Planning Report

<b>Database:</b>	EDM_WA	<b>Local Co-ordinate Reference:</b>	Well Jurnegan BS Fed Com 10H
<b>Company:</b>	Freedom Energy	<b>TVD Reference:</b>	GL 3332' + 26.5' KB @ 3358.50usft
<b>Project:</b>	Eddy County, NM NAD83	<b>MD Reference:</b>	GL 3332' + 26.5' KB @ 3358.50usft
<b>Site:</b>	Jurnegan	<b>North Reference:</b>	Grid
<b>Well:</b>	Jurnegan BS Fed Com 10H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan 5		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
3,752.50	26.53	329.64	3,566.00	771.32	-451.79	-453.95	0.00	0.00	0.00
<b>BRUSHY CANYON</b>									
3,800.00	26.53	329.64	3,608.50	789.63	-462.52	-464.72	0.00	0.00	0.00
3,900.00	26.53	329.64	3,697.97	828.17	-485.09	-487.40	0.00	0.00	0.00
4,000.00	26.53	329.64	3,787.44	866.71	-507.66	-510.08	0.00	0.00	0.00
4,100.00	26.53	329.64	3,876.91	905.24	-530.24	-532.76	0.00	0.00	0.00
4,200.00	26.53	329.64	3,966.38	943.78	-552.81	-555.44	0.00	0.00	0.00
4,300.00	26.53	329.64	4,055.86	982.32	-575.38	-578.12	0.00	0.00	0.00
4,400.00	26.53	329.64	4,145.33	1,020.86	-597.96	-600.81	0.00	0.00	0.00
4,500.00	26.53	329.64	4,234.80	1,059.40	-620.53	-623.49	0.00	0.00	0.00
4,600.00	26.53	329.64	4,324.27	1,097.94	-643.11	-646.17	0.00	0.00	0.00
4,700.00	26.53	329.64	4,413.74	1,136.48	-665.68	-668.85	0.00	0.00	0.00
4,800.00	26.53	329.64	4,503.21	1,175.02	-688.25	-691.53	0.00	0.00	0.00
4,900.00	26.53	329.64	4,592.69	1,213.56	-710.83	-714.21	0.00	0.00	0.00
4,968.87	26.53	329.64	4,654.31	1,240.10	-726.37	-729.83	0.00	0.00	0.00
<b>Start Drop -2.00</b>									
5,000.00	25.91	329.64	4,682.23	1,251.96	-733.32	-736.82	2.00	-2.00	0.00
5,100.00	23.91	329.64	4,772.93	1,288.30	-754.61	-758.20	2.00	-2.00	0.00
5,200.00	21.91	329.64	4,865.04	1,321.88	-774.28	-777.97	2.00	-2.00	0.00
5,300.00	19.91	329.64	4,958.45	1,352.67	-792.31	-796.08	2.00	-2.00	0.00
5,400.00	17.91	329.64	5,053.05	1,380.63	-808.69	-812.54	2.00	-2.00	0.00
5,500.00	15.91	329.64	5,148.73	1,405.72	-823.38	-827.30	2.00	-2.00	0.00
5,600.00	13.91	329.64	5,245.36	1,427.91	-836.38	-840.37	2.00	-2.00	0.00
5,610.96	13.69	329.64	5,256.00	1,430.17	-837.70	-841.69	2.00	-2.00	0.00
<b>BONE SPRING LIME</b>									
5,700.00	11.91	329.64	5,342.82	1,447.18	-847.67	-851.71	2.00	-2.00	0.00
5,800.00	9.91	329.64	5,441.01	1,463.50	-857.23	-861.31	2.00	-2.00	0.00
5,900.00	7.91	329.64	5,539.80	1,476.86	-865.05	-869.18	2.00	-2.00	0.00
6,000.00	5.91	329.64	5,639.07	1,487.24	-871.13	-875.28	2.00	-2.00	0.00
6,100.00	3.91	329.64	5,738.70	1,494.61	-875.45	-879.62	2.00	-2.00	0.00
6,200.00	1.91	329.64	5,838.57	1,498.99	-878.01	-882.20	2.00	-2.00	0.00
6,295.27	0.00	90.16	5,933.82	1,500.35	-878.81	-883.00	2.00	-2.00	0.00
<b>Start Build 12.00</b>									
6,300.00	0.57	90.16	5,938.55	1,500.35	-878.79	-882.98	12.00	12.00	0.00
6,325.00	3.57	90.16	5,963.53	1,500.35	-877.89	-882.08	12.00	12.00	0.00
6,350.00	6.57	90.16	5,988.43	1,500.35	-875.68	-879.87	12.00	12.00	0.00
6,375.00	9.57	90.16	6,013.18	1,500.34	-872.17	-876.36	12.00	12.00	0.00
6,400.00	12.57	90.16	6,037.71	1,500.32	-867.37	-871.56	12.00	12.00	0.00
6,425.00	15.57	90.16	6,061.96	1,500.31	-861.30	-865.49	12.00	12.00	0.00
6,450.00	18.57	90.16	6,085.86	1,500.29	-853.96	-858.15	12.00	12.00	0.00
6,475.00	21.57	90.16	6,109.34	1,500.26	-845.38	-849.57	12.00	12.00	0.00
6,500.00	24.57	90.16	6,132.33	1,500.23	-835.59	-839.78	12.00	12.00	0.00
6,525.00	27.57	90.16	6,154.79	1,500.20	-824.61	-828.79	12.00	12.00	0.00
6,526.39	27.73	90.16	6,156.02	1,500.20	-823.96	-828.15	12.00	12.00	0.00
<b>FTP 6526.39MD / 6156.02TVD</b>									
6,532.03	28.41	90.16	6,161.00	1,500.19	-821.30	-825.49	12.00	12.00	0.00
<b>1ST BONE SPRING SAND</b>									
6,550.00	30.57	90.16	6,176.64	1,500.17	-812.46	-816.65	12.00	12.00	0.00
6,575.00	33.57	90.16	6,197.82	1,500.13	-799.19	-803.38	12.00	12.00	0.00
6,600.00	36.57	90.16	6,218.28	1,500.09	-784.83	-789.01	12.00	12.00	0.00
6,625.00	39.57	90.16	6,237.96	1,500.05	-769.42	-773.60	12.00	12.00	0.00
6,650.00	42.57	90.16	6,256.81	1,500.01	-752.99	-757.18	12.00	12.00	0.00
6,675.00	45.57	90.16	6,274.77	1,499.96	-735.61	-739.79	12.00	12.00	0.00



### Legacy Directional Drilling

#### Planning Report

<b>Database:</b>	EDM_WA	<b>Local Co-ordinate Reference:</b>	Well Jurnegan BS Fed Com 10H
<b>Company:</b>	Freedom Energy	<b>TVD Reference:</b>	GL 3332' + 26.5' KB @ 3358.50usft
<b>Project:</b>	Eddy County, NM NAD83	<b>MD Reference:</b>	GL 3332' + 26.5' KB @ 3358.50usft
<b>Site:</b>	Jurnegan	<b>North Reference:</b>	Grid
<b>Well:</b>	Jurnegan BS Fed Com 10H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan 5		

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)	
6,700.00	48.57	90.16	6,291.79	1,499.91	-717.31	-721.49	12.00	12.00	0.00	
6,725.00	51.57	90.16	6,307.84	1,499.85	-698.14	-702.32	12.00	12.00	0.00	
6,750.00	54.57	90.16	6,322.86	1,499.80	-678.16	-682.34	12.00	12.00	0.00	
6,775.00	57.57	90.16	6,336.81	1,499.74	-657.42	-661.60	12.00	12.00	0.00	
6,800.00	60.57	90.16	6,349.66	1,499.68	-635.98	-640.16	12.00	12.00	0.00	
6,824.17	63.47	90.16	6,361.00	1,499.62	-614.63	-618.82	12.00	12.00	0.00	
<b>2ND BONE SPRING SHALE</b>										
6,825.00	63.57	90.16	6,361.37	1,499.62	-613.89	-618.08	12.00	12.00	0.00	
6,850.00	66.57	90.16	6,371.91	1,499.56	-591.22	-595.41	12.00	12.00	0.00	
6,875.00	69.57	90.16	6,381.25	1,499.49	-568.03	-572.22	12.00	12.00	0.00	
6,900.00	72.57	90.16	6,389.36	1,499.43	-544.39	-548.58	12.00	12.00	0.00	
6,925.00	75.57	90.16	6,396.22	1,499.36	-520.35	-524.54	12.00	12.00	0.00	
6,945.99	78.09	90.16	6,401.00	1,499.31	-499.92	-504.10	12.00	12.00	0.00	
<b>TARGET</b>										
6,950.00	78.57	90.16	6,401.81	1,499.29	-495.99	-500.18	12.00	12.00	0.00	
6,975.00	81.57	90.16	6,406.12	1,499.23	-471.37	-475.55	12.00	12.00	0.00	
7,000.00	84.57	90.16	6,409.14	1,499.16	-446.55	-450.74	12.00	12.00	0.00	
7,025.00	87.57	90.16	6,410.85	1,499.09	-421.62	-425.80	12.00	12.00	0.00	
7,034.10	88.66	90.16	6,411.15	1,499.06	-412.52	-416.70	12.00	12.00	0.00	
<b>LP 88.66° at 7034.10 MD</b>										
7,100.00	88.66	90.16	6,412.70	1,498.88	-346.64	-350.82	0.00	0.00	0.00	
7,200.00	88.66	90.16	6,415.03	1,498.60	-246.67	-250.85	0.00	0.00	0.00	
7,300.00	88.66	90.16	6,417.37	1,498.33	-146.69	-150.88	0.00	0.00	0.00	
7,400.00	88.66	90.16	6,419.71	1,498.05	-46.72	-50.90	0.00	0.00	0.00	
7,500.00	88.66	90.16	6,422.05	1,497.77	53.25	49.07	0.00	0.00	0.00	
7,600.00	88.66	90.16	6,424.39	1,497.50	153.22	149.04	0.00	0.00	0.00	
7,700.00	88.66	90.16	6,426.73	1,497.22	253.20	249.01	0.00	0.00	0.00	
7,800.00	88.66	90.16	6,429.07	1,496.94	353.17	348.99	0.00	0.00	0.00	
7,900.00	88.66	90.16	6,431.40	1,496.67	453.14	448.96	0.00	0.00	0.00	
8,000.00	88.66	90.16	6,433.74	1,496.39	553.11	548.93	0.00	0.00	0.00	
8,100.00	88.66	90.16	6,436.08	1,496.11	653.08	648.90	0.00	0.00	0.00	
8,200.00	88.66	90.16	6,438.42	1,495.84	753.06	748.88	0.00	0.00	0.00	
8,300.00	88.66	90.16	6,440.76	1,495.56	853.03	848.85	0.00	0.00	0.00	
8,400.00	88.66	90.16	6,443.10	1,495.28	953.00	948.82	0.00	0.00	0.00	
8,500.00	88.66	90.16	6,445.43	1,495.01	1,052.97	1,048.79	0.00	0.00	0.00	
8,600.00	88.66	90.16	6,447.77	1,494.73	1,152.95	1,148.77	0.00	0.00	0.00	
8,700.00	88.66	90.16	6,450.11	1,494.45	1,252.92	1,248.74	0.00	0.00	0.00	
8,800.00	88.66	90.16	6,452.45	1,494.18	1,352.89	1,348.71	0.00	0.00	0.00	
8,900.00	88.66	90.16	6,454.79	1,493.90	1,452.86	1,448.68	0.00	0.00	0.00	
9,000.00	88.66	90.16	6,457.13	1,493.62	1,552.83	1,548.66	0.00	0.00	0.00	
9,100.00	88.66	90.16	6,459.47	1,493.35	1,652.81	1,648.63	0.00	0.00	0.00	
9,200.00	88.66	90.16	6,461.80	1,493.07	1,752.78	1,748.60	0.00	0.00	0.00	
9,300.00	88.66	90.16	6,464.14	1,492.79	1,852.75	1,848.58	0.00	0.00	0.00	
9,400.00	88.66	90.16	6,466.48	1,492.52	1,952.72	1,948.55	0.00	0.00	0.00	
9,500.00	88.66	90.16	6,468.82	1,492.24	2,052.70	2,048.52	0.00	0.00	0.00	
9,600.00	88.66	90.16	6,471.16	1,491.96	2,152.67	2,148.49	0.00	0.00	0.00	
9,700.00	88.66	90.16	6,473.50	1,491.69	2,252.64	2,248.47	0.00	0.00	0.00	
9,800.00	88.66	90.16	6,475.84	1,491.41	2,352.61	2,348.44	0.00	0.00	0.00	
9,900.00	88.66	90.16	6,478.17	1,491.13	2,452.59	2,448.41	0.00	0.00	0.00	
10,000.00	88.66	90.16	6,480.51	1,490.86	2,552.56	2,548.38	0.00	0.00	0.00	
10,100.00	88.66	90.16	6,482.85	1,490.58	2,652.53	2,648.36	0.00	0.00	0.00	
10,200.00	88.66	90.16	6,485.19	1,490.30	2,752.50	2,748.33	0.00	0.00	0.00	
10,300.00	88.66	90.16	6,487.53	1,490.03	2,852.47	2,848.30	0.00	0.00	0.00	



### Legacy Directional Drilling

#### Planning Report

<b>Database:</b>	EDM_WA	<b>Local Co-ordinate Reference:</b>	Well Jurnegan BS Fed Com 10H
<b>Company:</b>	Freedom Energy	<b>TVD Reference:</b>	GL 3332' + 26.5' KB @ 3358.50usft
<b>Project:</b>	Eddy County, NM NAD83	<b>MD Reference:</b>	GL 3332' + 26.5' KB @ 3358.50usft
<b>Site:</b>	Jurnegan	<b>North Reference:</b>	Grid
<b>Well:</b>	Jurnegan BS Fed Com 10H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan 5		

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)	
10,400.00	88.66	90.16	6,489.87	1,489.75	2,952.45	2,948.27	0.00	0.00	0.00	
10,500.00	88.66	90.16	6,492.21	1,489.47	3,052.42	3,048.25	0.00	0.00	0.00	
10,600.00	88.66	90.16	6,494.54	1,489.20	3,152.39	3,148.22	0.00	0.00	0.00	
10,700.00	88.66	90.16	6,496.88	1,488.92	3,252.36	3,248.19	0.00	0.00	0.00	
10,800.00	88.66	90.16	6,499.22	1,488.64	3,352.34	3,348.17	0.00	0.00	0.00	
10,900.00	88.66	90.16	6,501.56	1,488.37	3,452.31	3,448.14	0.00	0.00	0.00	
11,000.00	88.66	90.16	6,503.90	1,488.09	3,552.28	3,548.11	0.00	0.00	0.00	
11,100.00	88.66	90.16	6,506.24	1,487.81	3,652.25	3,648.08	0.00	0.00	0.00	
11,200.00	88.66	90.16	6,508.58	1,487.54	3,752.22	3,748.06	0.00	0.00	0.00	
11,300.00	88.66	90.16	6,510.91	1,487.26	3,852.20	3,848.03	0.00	0.00	0.00	
11,400.00	88.66	90.16	6,513.25	1,486.98	3,952.17	3,948.00	0.00	0.00	0.00	
11,500.00	88.66	90.16	6,515.59	1,486.71	4,052.14	4,047.97	0.00	0.00	0.00	
11,600.00	88.66	90.16	6,517.93	1,486.43	4,152.11	4,147.95	0.00	0.00	0.00	
11,700.00	88.66	90.16	6,520.27	1,486.15	4,252.09	4,247.92	0.00	0.00	0.00	
11,800.00	88.66	90.16	6,522.61	1,485.88	4,352.06	4,347.89	0.00	0.00	0.00	
11,883.01	88.66	90.16	6,524.55	1,485.65	4,435.05	4,430.88	0.00	0.00	0.00	
<b>BPP at 11883.01 MD</b>										
11,900.00	88.66	90.16	6,524.94	1,485.60	4,452.03	4,447.86	0.00	0.00	0.00	
12,000.00	88.66	90.16	6,527.28	1,485.32	4,552.00	4,547.84	0.00	0.00	0.00	
12,100.00	88.66	90.16	6,529.62	1,485.05	4,651.97	4,647.81	0.00	0.00	0.00	
12,200.00	88.66	90.16	6,531.96	1,484.77	4,751.95	4,747.78	0.00	0.00	0.00	
12,300.00	88.66	90.16	6,534.30	1,484.49	4,851.92	4,847.76	0.00	0.00	0.00	
12,400.00	88.66	90.16	6,536.64	1,484.22	4,951.89	4,947.73	0.00	0.00	0.00	
12,500.00	88.66	90.16	6,538.98	1,483.94	5,051.86	5,047.70	0.00	0.00	0.00	
12,600.00	88.66	90.16	6,541.31	1,483.66	5,151.84	5,147.67	0.00	0.00	0.00	
12,700.00	88.66	90.16	6,543.65	1,483.39	5,251.81	5,247.65	0.00	0.00	0.00	
12,800.00	88.66	90.16	6,545.99	1,483.11	5,351.78	5,347.62	0.00	0.00	0.00	
12,900.00	88.66	90.16	6,548.33	1,482.83	5,451.75	5,447.59	0.00	0.00	0.00	
13,000.00	88.66	90.16	6,550.67	1,482.56	5,551.73	5,547.56	0.00	0.00	0.00	
13,100.00	88.66	90.16	6,553.01	1,482.28	5,651.70	5,647.54	0.00	0.00	0.00	
13,200.00	88.66	90.16	6,555.35	1,482.00	5,751.67	5,747.51	0.00	0.00	0.00	
13,300.00	88.66	90.16	6,557.68	1,481.73	5,851.64	5,847.48	0.00	0.00	0.00	
13,400.00	88.66	90.16	6,560.02	1,481.45	5,951.61	5,947.45	0.00	0.00	0.00	
13,500.00	88.66	90.16	6,562.36	1,481.17	6,051.59	6,047.43	0.00	0.00	0.00	
13,600.00	88.66	90.16	6,564.70	1,480.90	6,151.56	6,147.40	0.00	0.00	0.00	
13,700.00	88.66	90.16	6,567.04	1,480.62	6,251.53	6,247.37	0.00	0.00	0.00	
13,800.00	88.66	90.16	6,569.38	1,480.34	6,351.50	6,347.34	0.00	0.00	0.00	
13,900.00	88.66	90.16	6,571.72	1,480.07	6,451.48	6,447.32	0.00	0.00	0.00	
14,000.00	88.66	90.16	6,574.05	1,479.79	6,551.45	6,547.29	0.00	0.00	0.00	
14,100.00	88.66	90.16	6,576.39	1,479.51	6,651.42	6,647.26	0.00	0.00	0.00	
14,200.00	88.66	90.16	6,578.73	1,479.24	6,751.39	6,747.24	0.00	0.00	0.00	
14,300.00	88.66	90.16	6,581.07	1,478.96	6,851.36	6,847.21	0.00	0.00	0.00	
14,400.00	88.66	90.16	6,583.41	1,478.68	6,951.34	6,947.18	0.00	0.00	0.00	
14,500.00	88.66	90.16	6,585.75	1,478.41	7,051.31	7,047.15	0.00	0.00	0.00	
14,600.00	88.66	90.16	6,588.09	1,478.13	7,151.28	7,147.13	0.00	0.00	0.00	
14,700.00	88.66	90.16	6,590.42	1,477.85	7,251.25	7,247.10	0.00	0.00	0.00	
14,800.00	88.66	90.16	6,592.76	1,477.58	7,351.23	7,347.07	0.00	0.00	0.00	
14,900.00	88.66	90.16	6,595.10	1,477.30	7,451.20	7,447.04	0.00	0.00	0.00	
15,000.00	88.66	90.16	6,597.44	1,477.02	7,551.17	7,547.02	0.00	0.00	0.00	
15,100.00	88.66	90.16	6,599.78	1,476.75	7,651.14	7,646.99	0.00	0.00	0.00	
15,200.00	88.66	90.16	6,602.12	1,476.47	7,751.12	7,746.96	0.00	0.00	0.00	
15,300.00	88.66	90.16	6,604.45	1,476.19	7,851.09	7,846.93	0.00	0.00	0.00	
15,400.00	88.66	90.16	6,606.79	1,475.92	7,951.06	7,946.91	0.00	0.00	0.00	
15,500.00	88.66	90.16	6,609.13	1,475.64	8,051.03	8,046.88	0.00	0.00	0.00	



### Legacy Directional Drilling

#### Planning Report

<b>Database:</b>	EDM_WA	<b>Local Co-ordinate Reference:</b>	Well Jurnegan BS Fed Com 10H
<b>Company:</b>	Freedom Energy	<b>TVD Reference:</b>	GL 3332' + 26.5' KB @ 3358.50usft
<b>Project:</b>	Eddy County, NM NAD83	<b>MD Reference:</b>	GL 3332' + 26.5' KB @ 3358.50usft
<b>Site:</b>	Jurnegan	<b>North Reference:</b>	Grid
<b>Well:</b>	Jurnegan BS Fed Com 10H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan 5		

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)	
15,600.00	88.66	90.16	6,611.47	1,475.36	8,151.00	8,146.85	0.00	0.00	0.00	
15,700.00	88.66	90.16	6,613.81	1,475.09	8,250.98	8,246.83	0.00	0.00	0.00	
15,800.00	88.66	90.16	6,616.15	1,474.81	8,350.95	8,346.80	0.00	0.00	0.00	
15,900.00	88.66	90.16	6,618.49	1,474.53	8,450.92	8,446.77	0.00	0.00	0.00	
16,000.00	88.66	90.16	6,620.82	1,474.26	8,550.89	8,546.74	0.00	0.00	0.00	
16,100.00	88.66	90.16	6,623.16	1,473.98	8,650.87	8,646.72	0.00	0.00	0.00	
16,200.00	88.66	90.16	6,625.50	1,473.70	8,750.84	8,746.69	0.00	0.00	0.00	
16,300.00	88.66	90.16	6,627.84	1,473.43	8,850.81	8,846.66	0.00	0.00	0.00	
16,400.00	88.66	90.16	6,630.18	1,473.15	8,950.78	8,946.63	0.00	0.00	0.00	
16,500.00	88.66	90.16	6,632.52	1,472.87	9,050.75	9,046.61	0.00	0.00	0.00	
16,600.00	88.66	90.16	6,634.86	1,472.60	9,150.73	9,146.58	0.00	0.00	0.00	
16,700.00	88.66	90.16	6,637.19	1,472.32	9,250.70	9,246.55	0.00	0.00	0.00	
16,800.00	88.66	90.16	6,639.53	1,472.04	9,350.67	9,346.52	0.00	0.00	0.00	
16,900.00	88.66	90.16	6,641.87	1,471.77	9,450.64	9,446.50	0.00	0.00	0.00	
16,991.43	88.66	90.16	6,644.01	1,471.51	9,542.04	9,537.90	0.00	0.00	0.00	
<b>LTP at 16991.43 MD</b>										
17,000.00	88.66	90.16	6,644.21	1,471.49	9,550.62	9,546.47	0.00	0.00	0.00	
17,076.45	88.66	90.16	6,646.00	1,471.28	9,627.04	9,622.90	0.00	0.00	0.00	
<b>BHL at 17076.45</b>										

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
KOP - Jurnegan BS Fed - hit/miss target - Shape	0.00	0.00	5,933.82	1,500.51	-878.96	437,434.00	554,932.00	32.202576	-104.289382	
- plan misses target center by 0.21usft at 6295.27usft MD (5933.82 TVD, 1500.35 N, -878.81 E)										
- Point										
FTP (100' FWL) - Jurneg	0.00	0.00	6,156.02	1,500.51	-823.96	437,434.00	554,987.00	32.202576	-104.289204	
- plan misses target center by 0.31usft at 6526.39usft MD (6156.02 TVD, 1500.20 N, -823.96 E)										
- Point										
BPP - Jurnegan BS Fed - plan misses target center by 0.13usft at 11883.01usft MD (6524.55 TVD, 1485.65 N, 4435.05 E)	0.00	0.00	6,524.55	1,485.51	4,435.04	437,419.00	560,246.00	32.202527	-104.272201	
- Point										
LTP (100' FEL) - Jurneg; - plan hits target center - Point	0.00	0.00	6,644.01	1,471.51	9,542.04	437,405.00	565,353.00	32.202480	-104.255690	
BHL (15' FEL) - Jurnegar - plan misses target center by 0.24usft at 17076.45usft MD (6646.00 TVD, 1471.28 N, 9627.04 E)	0.00	0.00	6,646.00	1,471.51	9,627.04	437,405.00	565,438.00	32.202480	-104.255415	
- Point										



**Legacy Directional Drilling**  
Planning Report

<b>Database:</b>	EDM_WA	<b>Local Co-ordinate Reference:</b>	Well Jurnegan BS Fed Com 10H
<b>Company:</b>	Freedom Energy	<b>TVD Reference:</b>	GL 3332' + 26.5' KB @ 3358.50usft
<b>Project:</b>	Eddy County, NM NAD83	<b>MD Reference:</b>	GL 3332' + 26.5' KB @ 3358.50usft
<b>Site:</b>	Jurnegan	<b>North Reference:</b>	Grid
<b>Well:</b>	Jurnegan BS Fed Com 10H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan 5		

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
26.50	26.50	SALADO				
1,101.00	1,101.00	TOP SALT				
1,456.92	1,456.00	BASE SALT				
1,761.87	1,756.00	LAMAR				
1,870.25	1,861.00	BELL CANYON				
2,757.77	2,676.00	CHERRY CANYON				
3,752.50	3,566.00	BRUSHY CANYON				
5,610.96	5,256.00	BONE SPRING LIME				
6,532.03	6,161.00	1ST BONE SPRING SAND				
6,824.17	6,361.00	2ND BONE SPRING SHALE				
6,945.99	6,401.00	TARGET				

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment	
		+N/-S (usft)	+E/-W (usft)		
1,100.00	1,100.00	0.00	0.00	Start Build 2.00	
2,426.40	2,379.51	260.26	-152.44	Start 2542.47 hold at 2426.40 MD	
4,968.87	4,654.31	1,240.10	-726.37	Start Drop -2.00	
6,295.27	5,933.82	1,500.35	-878.81	Start Build 12.00	
6,526.39	6,156.02	1,500.20	-823.96	FTP 6526.39MD / 6156.02TVD	
7,034.10	6,411.15	1,499.06	-412.52	LP 88.66° at 7034.10 MD	
11,883.01	6,524.55	1,485.65	4,435.05	BPP at 11883.01 MD	
16,991.43	6,644.01	1,471.51	9,542.04	LTP at 16991.43 MD	
17,076.45	6,646.00	1,471.28	9,627.04	BHL at 17076.45	



# Freedom Energy

Eddy County, NM NAD83  
Jurnegan  
Jurnegan BS Fed Com 10H

OH  
Plan 5

## Anticollision Report

26 January, 2026



### Legacy Directional Drilling Anticollision Report

<b>Company:</b>	Freedom Energy	<b>Local Co-ordinate Reference:</b>	Well Jurnegan BS Fed Com 10H
<b>Project:</b>	Eddy County, NM NAD83	<b>TVD Reference:</b>	GL 3332' + 26.5' KB @ 3358.50usft
<b>Reference Site:</b>	Jurnegan	<b>MD Reference:</b>	GL 3332' + 26.5' KB @ 3358.50usft
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Jurnegan BS Fed Com 10H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH	<b>Database:</b>	EDM_WA
<b>Reference Design:</b>	Plan 5	<b>Offset TVD Reference:</b>	Reference Datum

<b>Reference</b>	Plan 5		
<b>Filter type:</b>	GLOBAL FILTER APPLIED: All wellpaths within 200'+ 100/1000 of reference		
<b>Interpolation Method:</b>	MD Interval 100.00usft	<b>Error Model:</b>	ISCWSA
<b>Depth Range:</b>	Unlimited	<b>Scan Method:</b>	Closest Approach 3D
<b>Results Limited by:</b>	Maximum centre distance of 1,907.64usft	<b>Error Surface:</b>	Pedal Curve
<b>Warning Levels Evaluated at:</b>	2.00 Sigma	<b>Casing Method:</b>	Not applied

<b>Survey Tool Program</b>	<b>Date</b>	1/26/2026		
<b>From (usft)</b>	<b>To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>
0.00	17,076.45	Plan 5 (OH)	MWD	OWSG MWD - Standard

Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
<b>Offset Well - Wellbore - Design</b>						
Jurnegan						
Jurnegan BS Fed Com 11H - OH - Plan 4	1,100.00	1,101.00	19.87	12.17	2.581	CC, ES
Jurnegan BS Fed Com 11H - OH - Plan 4	1,200.00	1,200.98	21.49	13.08	2.554	SF
Jurnegan BS Fed Com 2H - OH - Plan 3	17,076.45	17,228.17	985.63	527.17	2.150	CC, ES, SF
Jurnegan BS Fed Com 3H - OH - Plan 4	1,563.77	1,559.75	15.00	3.97	1.361	Collision Risk Procedures Re
Jurnegan BS Fed Com 4H - OH - Plan 5	1,426.62	1,424.85	7.37	-2.65	0.735	Collision Risk Procedures Re
Jurnegan BS Fed Com 6H - OH - Plan 3	6,607.74	6,441.94	799.09	747.03	15.351	CC, ES
Jurnegan BS Fed Com 6H - OH - Plan 3	17,076.45	18,078.32	1,461.94	1,150.93	4.701	SF
Jurnegan BS Fed Com 9H - OH - Plan 1	17,076.45	16,749.61	1,607.09	1,100.64	3.173	CC, ES, SF

<b>Offset Design:</b>	Jurnegan - Jurnegan BS Fed Com 11H - OH - Plan 4										<b>Offset Site Error:</b>	0.00 usft	
<b>Survey Program:</b>	0-MWD										<b>Offset Well Error:</b>	0.00 usft	
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.00	0.00	1.00	0.00	0.00	0.00	126.68	-11.87	15.94	19.87				
100.00	100.00	101.00	100.00	0.26	0.27	126.68	-11.87	15.94	19.87	19.34	0.53	37.459	
200.00	200.00	201.00	200.00	0.62	0.63	126.68	-11.87	15.94	19.87	18.63	1.25	15.931	
300.00	300.00	301.00	300.00	0.98	0.98	126.68	-11.87	15.94	19.87	17.91	1.96	10.117	
400.00	400.00	401.00	400.00	1.34	1.34	126.68	-11.87	15.94	19.87	17.19	2.68	7.412	
500.00	500.00	501.00	500.00	1.70	1.70	126.68	-11.87	15.94	19.87	16.48	3.40	5.848	
600.00	600.00	601.00	600.00	2.06	2.06	126.68	-11.87	15.94	19.87	15.76	4.12	4.829	
700.00	700.00	701.00	700.00	2.41	2.42	126.68	-11.87	15.94	19.87	15.04	4.83	4.113	
800.00	800.00	801.00	800.00	2.77	2.78	126.68	-11.87	15.94	19.87	14.32	5.55	3.581	
900.00	900.00	901.00	900.00	3.13	3.13	126.68	-11.87	15.94	19.87	13.61	6.27	3.172	
1,000.00	1,000.00	1,001.00	1,000.00	3.49	3.49	126.68	-11.87	15.94	19.87	12.89	6.98	2.846	
1,100.00	1,100.00	1,101.00	1,100.00	3.85	3.85	126.68	-11.87	15.94	19.87	12.17	7.70	2.581	CC, ES
1,200.00	1,199.98	1,200.98	1,199.98	4.21	4.21	158.84	-11.87	15.94	21.49	13.08	8.42	2.554	SF
1,300.00	1,299.84	1,300.84	1,299.84	4.56	4.57	162.91	-11.87	15.94	26.44	17.31	9.13	2.896	
1,400.00	1,399.45	1,400.45	1,399.45	4.92	4.93	167.08	-11.87	15.94	34.87	25.02	9.85	3.541	
1,500.00	1,498.70	1,499.70	1,498.70	5.29	5.28	170.38	-11.87	15.94	46.82	36.27	10.56	4.434	
1,600.00	1,597.47	1,598.47	1,597.47	5.66	5.64	172.74	-11.87	15.94	62.31	51.03	11.27	5.527	
1,700.00	1,695.62	1,696.62	1,695.62	6.05	5.99	174.40	-11.87	15.94	81.27	69.29	11.98	6.782	
1,800.00	1,793.06	1,794.06	1,793.06	6.46	6.34	175.58	-11.87	15.94	103.69	90.99	12.69	8.169	
1,900.00	1,889.64	1,893.34	1,892.33	6.90	6.69	176.99	-11.70	14.43	128.56	115.15	13.40	9.591	

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



## Legacy Directional Drilling Anticollision Report

<b>Company:</b>	Freedom Energy	<b>Local Co-ordinate Reference:</b>	Well Jurnegan BS Fed Com 10H
<b>Project:</b>	Eddy County, NM NAD83	<b>TVD Reference:</b>	GL 3332' + 26.5' KB @ 3358.50usft
<b>Reference Site:</b>	Jurnegan	<b>MD Reference:</b>	GL 3332' + 26.5' KB @ 3358.50usft
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Jurnegan BS Fed Com 10H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH	<b>Database:</b>	EDM_WA
<b>Reference Design:</b>	Plan 5	<b>Offset TVD Reference:</b>	Reference Datum

Offset Design: Jurnegan - Jurnegan BS Fed Com 11H - OH - Plan 4													Offset Site Error:	0.00 usft
Survey Program: 0-MWD													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
2,000.00	1,985.27	1,992.81	1,991.67	7.36	7.03	179.01	-11.13	9.49	154.77	140.66	14.11	10.970		
2,100.00	2,079.82	2,092.18	2,090.67	7.86	7.38	-178.64	-10.17	1.15	182.49	167.68	14.82	12.315		
2,200.00	2,173.17	2,191.30	2,189.09	8.39	7.73	-176.14	-8.82	-10.57	211.91	196.37	15.54	13.638		
2,300.00	2,265.21	2,290.05	2,286.66	8.97	8.09	-173.60	-7.09	-25.60	243.17	226.89	16.27	14.942		
2,400.00	2,355.84	2,388.29	2,383.16	9.59	8.46	-171.06	-4.99	-43.86	276.41	259.38	17.03	16.229		
2,500.00	2,445.37	2,486.20	2,478.66	10.25	8.84	-168.63	-2.52	-65.32	310.86	293.04	17.82	17.446		
2,600.00	2,534.84	2,584.43	2,573.66	10.93	9.25	-166.19	0.32	-90.09	344.44	325.79	18.65	18.472		
2,700.00	2,624.31	2,680.88	2,666.13	11.64	9.67	-163.79	3.46	-117.33	377.29	357.78	19.52	19.331		
2,800.00	2,713.78	2,774.28	2,755.50	12.35	10.10	-161.75	6.56	-144.31	410.41	390.00	20.41	20.105		
2,900.00	2,803.25	2,867.69	2,844.87	13.08	10.54	-160.01	9.66	-171.28	443.93	422.60	21.33	20.808		
3,000.00	2,892.72	2,961.10	2,934.25	13.82	10.99	-158.51	12.77	-198.26	477.77	455.49	22.28	21.445		
3,100.00	2,982.20	3,054.50	3,023.62	14.57	11.45	-157.21	15.87	-225.24	511.86	488.61	23.24	22.021		
3,200.00	3,071.67	3,147.91	3,112.99	15.33	11.92	-156.07	18.97	-252.21	546.16	521.93	24.23	22.542		
3,300.00	3,161.14	3,241.32	3,202.36	16.09	12.40	-155.06	22.08	-279.19	580.62	555.39	25.23	23.015		
3,400.00	3,250.61	3,334.73	3,291.74	16.86	12.88	-154.17	25.18	-306.17	615.23	588.99	26.24	23.443		
3,500.00	3,340.08	3,428.13	3,381.11	17.63	13.37	-153.37	28.28	-333.14	649.96	622.69	27.27	23.833		
3,600.00	3,429.55	3,521.54	3,470.48	18.41	13.87	-152.65	31.39	-360.12	684.79	656.48	28.31	24.188		
3,700.00	3,519.03	3,614.95	3,559.86	19.19	14.37	-152.00	34.49	-387.10	719.71	690.34	29.36	24.512		
3,800.00	3,608.50	3,708.35	3,649.23	19.98	14.88	-151.41	37.59	-414.07	754.69	724.27	30.42	24.808		
3,900.00	3,697.97	3,801.76	3,738.60	20.76	15.39	-150.87	40.69	-441.05	789.75	758.26	31.49	25.080		
4,000.00	3,787.44	3,895.17	3,827.98	21.56	15.91	-150.38	43.80	-468.02	824.86	792.29	32.57	25.329		
4,100.00	3,876.91	3,988.58	3,917.35	22.35	16.43	-149.93	46.90	-495.00	860.02	826.37	33.65	25.559		
4,200.00	3,966.38	4,081.98	4,006.72	23.14	16.95	-149.51	50.00	-521.98	895.22	860.48	34.74	25.771		
4,300.00	4,055.86	4,175.39	4,096.10	23.94	17.48	-149.12	53.11	-548.95	930.46	894.63	35.83	25.967		
4,400.00	4,145.33	4,268.80	4,185.47	24.74	18.00	-148.77	56.21	-575.93	965.74	928.81	36.93	26.149		
4,500.00	4,234.80	4,362.20	4,274.84	25.54	18.53	-148.43	59.31	-602.91	1,001.04	963.01	38.04	26.318		
4,600.00	4,324.27	4,455.61	4,364.22	26.34	19.07	-148.12	62.42	-629.88	1,036.38	997.23	39.15	26.475		
4,700.00	4,413.74	4,549.02	4,453.59	27.14	19.60	-147.83	65.52	-656.86	1,071.74	1,031.48	40.26	26.621		
4,800.00	4,503.21	4,642.43	4,542.96	27.94	20.13	-147.56	68.62	-683.84	1,107.12	1,065.74	41.38	26.758		
4,900.00	4,592.69	4,735.83	4,632.33	28.75	20.67	-147.31	71.72	-710.81	1,142.52	1,100.02	42.50	26.886		
5,000.00	4,682.23	4,829.29	4,721.75	29.55	21.21	-147.19	74.83	-737.80	1,177.81	1,134.19	43.62	27.003		
5,100.00	4,772.93	4,923.42	4,811.82	30.32	21.76	-147.27	77.96	-764.99	1,211.01	1,166.27	44.74	27.065		
5,200.00	4,865.04	5,018.35	4,902.65	31.04	22.31	-147.24	81.11	-792.40	1,241.47	1,195.60	45.87	27.062		
5,300.00	4,958.45	5,110.26	4,990.95	31.72	22.83	-147.18	84.02	-817.73	1,269.32	1,222.38	46.94	27.042		
5,400.00	5,053.05	5,202.81	5,080.64	32.35	23.32	-147.16	86.63	-840.37	1,294.68	1,246.73	47.95	27.001		
5,500.00	5,148.73	5,296.16	5,171.82	32.94	23.78	-147.18	88.92	-860.29	1,317.52	1,268.62	48.90	26.942		
5,600.00	5,245.36	5,390.22	5,264.29	33.48	24.22	-147.22	90.88	-877.37	1,337.79	1,288.00	49.79	26.868		
5,700.00	5,342.82	5,484.87	5,357.86	33.97	24.62	-147.30	92.51	-891.49	1,355.47	1,304.85	50.62	26.779		
5,800.00	5,441.01	5,580.00	5,452.32	34.41	25.00	-147.40	93.78	-902.59	1,370.52	1,319.14	51.38	26.675		
5,900.00	5,539.80	5,675.47	5,547.45	34.81	25.34	-147.53	94.70	-910.59	1,382.93	1,330.85	52.07	26.557		
6,000.00	5,639.07	5,771.18	5,643.03	35.17	25.65	-147.69	95.26	-915.44	1,392.68	1,339.98	52.70	26.425		
6,100.00	5,738.70	5,866.98	5,738.81	35.48	25.93	-147.88	95.45	-917.12	1,399.78	1,346.52	53.26	26.281		
6,200.00	5,838.57	5,966.74	5,838.57	35.75	26.21	-148.03	95.45	-917.12	1,404.08	1,350.27	53.81	26.094		
6,300.00	5,938.55	6,066.72	5,938.55	35.97	26.56	91.40	95.45	-917.12	1,405.42	1,351.00	54.42	25.825		
6,400.00	6,037.71	6,174.38	6,045.37	36.12	26.78	91.44	95.42	-905.67	1,405.44	1,350.60	54.84	25.626		
6,500.00	6,132.33	6,282.26	6,147.13	36.18	26.87	91.40	95.32	-870.54	1,405.42	1,350.41	55.01	25.547		
6,600.00	6,218.28	6,389.71	6,238.10	36.16	26.91	91.30	95.16	-813.77	1,405.37	1,350.33	55.03	25.536		
6,700.00	6,291.79	6,496.35	6,313.59	36.09	26.96	91.14	94.95	-738.78	1,405.29	1,350.25	55.04	25.531		
6,800.00	6,349.66	6,601.84	6,370.09	35.98	27.09	90.93	94.70	-649.95	1,405.20	1,350.01	55.19	25.463		
6,900.00	6,389.36	6,705.95	6,405.44	35.85	27.36	90.67	94.43	-552.25	1,405.11	1,349.53	55.58	25.279		
7,000.00	6,409.14	6,808.53	6,418.77	35.70	27.78	90.39	94.14	-450.73	1,405.05	1,348.77	56.28	24.965		
7,089.45	6,414.76	6,897.90	6,420.83	35.57	28.28	90.25	93.89	-361.39	1,405.04	1,347.83	57.20	24.562		

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



## Legacy Directional Drilling Anticollision Report

<b>Company:</b>	Freedom Energy	<b>Local Co-ordinate Reference:</b>	Well Jurnegan BS Fed Com 10H
<b>Project:</b>	Eddy County, NM NAD83	<b>TVD Reference:</b>	GL 3332' + 26.5' KB @ 3358.50usft
<b>Reference Site:</b>	Jurnegan	<b>MD Reference:</b>	GL 3332' + 26.5' KB @ 3358.50usft
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Jurnegan BS Fed Com 10H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH	<b>Database:</b>	EDM_WA
<b>Reference Design:</b>	Plan 5	<b>Offset TVD Reference:</b>	Reference Datum

Offset Design: Jurnegan - Jurnegan BS Fed Com 11H - OH - Plan 4													Offset Site Error:	0.00 usft
Survey Program: 0-MWD													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
7,100.00	6,412.70	6,908.50	6,421.08	35.55	28.36	90.34	93.86	-350.79	1,405.05	1,347.71	57.34	24.503		
7,200.00	6,415.03	7,008.50	6,423.38	35.44	29.13	90.34	93.58	-250.81	1,405.06	1,346.26	58.79	23.899		
7,300.00	6,417.37	7,108.50	6,425.68	35.38	30.08	90.34	93.30	-150.84	1,405.06	1,344.46	60.60	23.184		
7,400.00	6,419.71	7,208.50	6,427.98	35.38	31.20	90.34	93.02	-50.87	1,405.06	1,342.32	62.75	22.392		
7,500.00	6,422.05	7,308.50	6,430.29	35.49	32.46	90.34	92.74	49.11	1,405.07	1,339.88	65.19	21.553		
7,600.00	6,424.39	7,408.50	6,432.59	35.78	33.86	90.33	92.45	149.08	1,405.07	1,337.17	67.90	20.693		
7,700.00	6,426.73	7,508.50	6,434.89	36.40	35.37	90.33	92.17	249.05	1,405.08	1,334.23	70.85	19.833		
7,800.00	6,429.07	7,608.50	6,437.20	37.43	36.98	90.33	91.89	349.03	1,405.08	1,331.08	74.00	18.988		
7,900.00	6,431.40	7,708.50	6,439.50	38.81	38.68	90.33	91.61	449.00	1,405.09	1,327.75	77.33	18.169		
8,000.00	6,433.74	7,808.50	6,441.80	40.41	40.46	90.33	91.33	548.97	1,405.09	1,324.26	80.83	17.383		
8,100.00	6,436.08	7,908.50	6,444.10	42.15	42.30	90.33	91.05	648.94	1,405.10	1,320.63	84.47	16.635		
8,200.00	6,438.42	8,008.50	6,446.41	43.98	44.20	90.33	90.77	748.92	1,405.10	1,316.88	88.22	15.926		
8,300.00	6,440.76	8,108.50	6,448.71	45.89	46.16	90.32	90.48	848.89	1,405.11	1,313.01	92.09	15.258		
8,400.00	6,443.10	8,208.50	6,451.01	47.86	48.16	90.32	90.20	948.86	1,405.11	1,309.06	96.05	14.629		
8,500.00	6,445.43	8,308.50	6,453.31	49.87	50.20	90.32	89.92	1,048.84	1,405.11	1,305.02	100.10	14.038		
8,600.00	6,447.77	8,408.50	6,455.62	51.93	52.28	90.32	89.64	1,148.81	1,405.12	1,300.90	104.21	13.483		
8,700.00	6,450.11	8,508.50	6,457.92	54.01	54.39	90.32	89.36	1,248.78	1,405.12	1,296.72	108.40	12.963		
8,800.00	6,452.45	8,608.50	6,460.22	56.13	56.52	90.32	89.08	1,348.76	1,405.13	1,292.49	112.64	12.474		
8,900.00	6,454.79	8,708.50	6,462.53	58.28	58.68	90.32	88.80	1,448.73	1,405.13	1,288.20	116.93	12.016		
9,000.00	6,457.13	8,808.50	6,464.83	60.45	60.86	90.31	88.51	1,548.70	1,405.14	1,283.86	121.27	11.587		
9,100.00	6,459.47	8,908.50	6,467.13	62.63	63.06	90.31	88.23	1,648.68	1,405.14	1,279.49	125.65	11.183		
9,200.00	6,461.80	9,008.50	6,469.43	64.84	65.28	90.31	87.95	1,748.65	1,405.15	1,275.07	130.07	10.803		
9,300.00	6,464.14	9,108.50	6,471.74	67.07	67.52	90.31	87.67	1,848.62	1,405.15	1,270.62	134.53	10.445		
9,400.00	6,466.48	9,208.50	6,474.04	69.31	69.77	90.31	87.39	1,948.59	1,405.16	1,266.15	139.01	10.108		
9,500.00	6,468.82	9,308.50	6,476.34	71.56	72.03	90.31	87.11	2,048.57	1,405.16	1,261.64	143.52	9.791		
9,600.00	6,471.16	9,408.50	6,478.65	73.82	74.31	90.31	86.83	2,148.54	1,405.16	1,257.11	148.05	9.491		
9,700.00	6,473.50	9,508.50	6,480.95	76.10	76.59	90.30	86.55	2,248.51	1,405.17	1,252.56	152.61	9.208		
9,800.00	6,475.84	9,608.50	6,483.25	78.39	78.89	90.30	86.26	2,348.49	1,405.17	1,247.98	157.19	8.939		
9,900.00	6,478.17	9,708.50	6,485.55	80.68	81.19	90.30	85.98	2,448.46	1,405.18	1,243.39	161.79	8.685		
10,000.00	6,480.51	9,808.50	6,487.86	82.99	83.51	90.30	85.70	2,548.43	1,405.18	1,238.78	166.40	8.444		
10,100.00	6,482.85	9,908.50	6,490.16	85.30	85.83	90.30	85.42	2,648.41	1,405.19	1,234.15	171.03	8.216		
10,200.00	6,485.19	10,008.50	6,492.46	87.62	88.16	90.30	85.14	2,748.38	1,405.19	1,229.51	175.68	7.999		
10,300.00	6,487.53	10,108.50	6,494.77	89.95	90.49	90.30	84.86	2,848.35	1,405.20	1,224.86	180.34	7.792		
10,400.00	6,489.87	10,208.50	6,497.07	92.28	92.83	90.29	84.58	2,948.33	1,405.20	1,220.19	185.01	7.595		
10,500.00	6,492.21	10,308.50	6,499.37	94.62	95.18	90.29	84.29	3,048.30	1,405.20	1,215.51	189.70	7.408		
10,600.00	6,494.54	10,408.50	6,501.67	96.97	97.53	90.29	84.01	3,148.27	1,405.21	1,210.82	194.39	7.229		
10,700.00	6,496.88	10,508.50	6,503.98	99.32	99.89	90.29	83.73	3,248.24	1,405.21	1,206.12	199.10	7.058		
10,800.00	6,499.22	10,608.50	6,506.28	101.67	102.25	90.29	83.45	3,348.22	1,405.22	1,201.41	203.81	6.895		
10,900.00	6,501.56	10,708.50	6,508.58	104.03	104.61	90.29	83.17	3,448.19	1,405.22	1,196.69	208.53	6.739		
11,000.00	6,503.90	10,808.50	6,510.89	106.39	106.98	90.29	82.89	3,548.16	1,405.23	1,191.96	213.26	6.589		
11,100.00	6,506.24	10,908.50	6,513.19	108.76	109.35	90.28	82.61	3,648.14	1,405.23	1,187.23	218.00	6.446		
11,200.00	6,508.58	11,008.50	6,515.49	111.13	111.73	90.28	82.32	3,748.11	1,405.24	1,182.49	222.75	6.309		
11,300.00	6,510.91	11,108.50	6,517.79	113.50	114.11	90.28	82.04	3,848.08	1,405.24	1,177.74	227.50	6.177		
11,400.00	6,513.25	11,208.50	6,520.10	115.88	116.49	90.28	81.76	3,948.06	1,405.25	1,172.99	232.26	6.050		
11,500.00	6,515.59	11,308.50	6,522.40	118.26	118.88	90.28	81.48	4,048.03	1,405.25	1,168.23	237.02	5.929		
11,600.00	6,517.93	11,408.50	6,524.70	120.64	121.26	90.28	81.20	4,148.00	1,405.25	1,163.46	241.79	5.812		
11,700.00	6,520.27	11,508.50	6,527.00	123.03	123.65	90.27	80.92	4,247.98	1,405.26	1,158.69	246.57	5.699		
11,800.00	6,522.61	11,608.50	6,529.31	125.42	126.05	90.27	80.64	4,347.95	1,405.26	1,153.91	251.35	5.591		
11,900.00	6,524.94	11,708.50	6,531.61	127.81	128.44	90.27	80.35	4,447.92	1,405.27	1,149.13	256.13	5.486		
12,000.00	6,527.28	11,808.50	6,533.91	130.20	130.84	90.27	80.07	4,547.89	1,405.27	1,144.35	260.92	5.386		
12,100.00	6,529.62	11,908.50	6,536.22	132.59	133.23	90.27	79.79	4,647.87	1,405.28	1,139.56	265.72	5.289		
12,200.00	6,531.96	12,008.50	6,538.52	134.99	135.64	90.27	79.51	4,747.84	1,405.28	1,134.77	270.51	5.195		

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



## Legacy Directional Drilling Anticollision Report

<b>Company:</b>	Freedom Energy	<b>Local Co-ordinate Reference:</b>	Well Jurnegan BS Fed Com 10H
<b>Project:</b>	Eddy County, NM NAD83	<b>TVD Reference:</b>	GL 3332' + 26.5' KB @ 3358.50usft
<b>Reference Site:</b>	Jurnegan	<b>MD Reference:</b>	GL 3332' + 26.5' KB @ 3358.50usft
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Jurnegan BS Fed Com 10H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH	<b>Database:</b>	EDM_WA
<b>Reference Design:</b>	Plan 5	<b>Offset TVD Reference:</b>	Reference Datum

Offset Design: Jurnegan - Jurnegan BS Fed Com 11H - OH - Plan 4													Offset Site Error:	0.00 usft
Survey Program: 0-MWD													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
12,300.00	6,534.30	12,108.50	6,540.82	137.39	138.04	90.27	79.23	4,847.81	1,405.29	1,129.97	275.32	5.104		
12,400.00	6,536.64	12,208.50	6,543.12	139.79	140.44	90.26	78.95	4,947.79	1,405.29	1,125.17	280.12	5.017		
12,500.00	6,538.98	12,308.50	6,545.43	142.19	142.85	90.26	78.67	5,047.76	1,405.30	1,120.37	284.93	4.932		
12,600.00	6,541.31	12,408.50	6,547.73	144.59	145.25	90.26	78.39	5,147.73	1,405.30	1,115.56	289.74	4.850		
12,700.00	6,543.65	12,508.50	6,550.03	147.00	147.66	90.26	78.10	5,247.71	1,405.30	1,110.75	294.55	4.771		
12,800.00	6,545.99	12,608.50	6,552.34	149.41	150.07	90.26	77.82	5,347.68	1,405.31	1,105.94	299.37	4.694		
12,900.00	6,548.33	12,708.50	6,554.64	151.81	152.48	90.26	77.54	5,447.65	1,405.31	1,101.12	304.19	4.620		
13,000.00	6,550.67	12,808.50	6,556.94	154.22	154.90	90.26	77.26	5,547.63	1,405.32	1,096.30	309.01	4.548		
13,100.00	6,553.01	12,908.50	6,559.24	156.63	157.31	90.25	76.98	5,647.60	1,405.32	1,091.48	313.84	4.478		
13,200.00	6,555.35	13,008.50	6,561.55	159.05	159.73	90.25	76.70	5,747.57	1,405.33	1,086.66	318.67	4.410		
13,300.00	6,557.68	13,108.50	6,563.85	161.46	162.14	90.25	76.42	5,847.54	1,405.33	1,081.83	323.50	4.344		
13,400.00	6,560.02	13,208.50	6,566.15	163.87	164.56	90.25	76.13	5,947.52	1,405.34	1,077.01	328.33	4.280		
13,500.00	6,562.36	13,308.50	6,568.46	166.29	166.98	90.25	75.85	6,047.49	1,405.34	1,072.18	333.16	4.218		
13,600.00	6,564.70	13,408.50	6,570.76	168.70	169.40	90.25	75.57	6,147.46	1,405.35	1,067.35	338.00	4.158		
13,700.00	6,567.04	13,508.50	6,573.06	171.12	171.82	90.25	75.29	6,247.44	1,405.35	1,062.51	342.84	4.099		
13,800.00	6,569.38	13,608.50	6,575.36	173.54	174.24	90.24	75.01	6,347.41	1,405.35	1,057.68	347.68	4.042		
13,900.00	6,571.72	13,708.50	6,577.67	175.96	176.66	90.24	74.73	6,447.38	1,405.36	1,052.84	352.52	3.987		
14,000.00	6,574.05	13,808.50	6,579.97	178.38	179.08	90.24	74.45	6,547.36	1,405.36	1,048.00	357.36	3.933		
14,100.00	6,576.39	13,908.50	6,582.27	180.80	181.51	90.24	74.16	6,647.33	1,405.37	1,043.16	362.21	3.880		
14,200.00	6,578.73	14,008.50	6,584.57	183.22	183.93	90.24	73.88	6,747.30	1,405.37	1,038.32	367.05	3.829		
14,300.00	6,581.07	14,108.50	6,586.88	185.64	186.35	90.24	73.60	6,847.28	1,405.38	1,033.48	371.90	3.779		
14,400.00	6,583.41	14,208.50	6,589.18	188.07	188.78	90.24	73.32	6,947.25	1,405.38	1,028.63	376.75	3.730		
14,500.00	6,585.75	14,308.50	6,591.48	190.49	191.21	90.23	73.04	7,047.22	1,405.39	1,023.78	381.60	3.683		
14,600.00	6,588.09	14,408.50	6,593.79	192.92	193.63	90.23	72.76	7,147.19	1,405.39	1,018.94	386.45	3.637		
14,700.00	6,590.42	14,508.50	6,596.09	195.34	196.06	90.23	72.48	7,247.17	1,405.40	1,014.09	391.31	3.592		
14,800.00	6,592.76	14,608.50	6,598.39	197.77	198.49	90.23	72.19	7,347.14	1,405.40	1,009.24	396.16	3.548		
14,900.00	6,595.10	14,708.50	6,600.69	200.20	200.92	90.23	71.91	7,447.11	1,405.40	1,004.39	401.02	3.505		
15,000.00	6,597.44	14,808.50	6,603.00	202.62	203.35	90.23	71.63	7,547.09	1,405.41	999.53	405.87	3.463		
15,100.00	6,599.78	14,908.50	6,605.30	205.05	205.77	90.23	71.35	7,647.06	1,405.41	994.68	410.73	3.422		
15,200.00	6,602.12	15,008.50	6,607.60	207.48	208.20	90.22	71.07	7,747.03	1,405.42	989.83	415.59	3.382		
15,300.00	6,604.45	15,108.50	6,609.91	209.91	210.64	90.22	70.79	7,847.01	1,405.42	984.97	420.45	3.343		
15,400.00	6,606.79	15,208.50	6,612.21	212.34	213.07	90.22	70.51	7,946.98	1,405.43	980.11	425.31	3.304		
15,500.00	6,609.13	15,308.50	6,614.51	214.77	215.50	90.22	70.23	8,046.95	1,405.43	975.26	430.18	3.267		
15,600.00	6,611.47	15,408.50	6,616.81	217.20	217.93	90.22	69.94	8,146.93	1,405.44	970.40	435.04	3.231		
15,700.00	6,613.81	15,508.50	6,619.12	219.63	220.36	90.22	69.66	8,246.90	1,405.44	965.54	439.90	3.195		
15,800.00	6,616.15	15,608.50	6,621.42	222.06	222.80	90.22	69.38	8,346.87	1,405.45	960.68	444.77	3.160		
15,900.00	6,618.49	15,708.50	6,623.72	224.49	225.23	90.21	69.10	8,446.85	1,405.45	955.82	449.63	3.126		
16,000.00	6,620.82	15,808.50	6,626.03	226.92	227.66	90.21	68.82	8,546.82	1,405.46	950.96	454.50	3.092		
16,100.00	6,623.16	15,908.50	6,628.33	229.36	230.10	90.21	68.54	8,646.79	1,405.46	946.09	459.37	3.060		
16,200.00	6,625.50	16,008.50	6,630.63	231.79	232.53	90.21	68.26	8,746.76	1,405.46	941.23	464.23	3.027		
16,300.00	6,627.84	16,108.50	6,632.93	234.22	234.97	90.21	67.97	8,846.74	1,405.47	936.37	469.10	2.996		
16,400.00	6,630.18	16,208.50	6,635.24	236.66	237.40	90.21	67.69	8,946.71	1,405.47	931.50	473.97	2.965		
16,500.00	6,632.52	16,308.50	6,637.54	239.09	239.84	90.20	67.41	9,046.68	1,405.48	926.64	478.84	2.935		
16,600.00	6,634.86	16,408.50	6,639.84	241.53	242.27	90.20	67.13	9,146.66	1,405.48	921.77	483.71	2.906		
16,700.00	6,637.19	16,508.50	6,642.14	243.96	244.71	90.20	66.85	9,246.63	1,405.49	916.90	488.58	2.877		
16,800.00	6,639.53	16,608.50	6,644.45	246.40	247.14	90.20	66.57	9,346.60	1,405.49	912.03	493.46	2.848		
16,900.00	6,641.87	16,708.50	6,646.75	248.83	249.58	90.20	66.29	9,446.58	1,405.50	907.17	498.33	2.820		
17,000.00	6,644.21	16,808.50	6,649.05	251.27	252.02	90.20	66.00	9,546.55	1,405.50	902.30	503.20	2.793		
17,076.45	6,646.00	16,884.95	6,650.81	253.13	253.88	90.20	65.79	9,622.98	1,405.50	898.58	506.93	2.773		

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



## Legacy Directional Drilling Anticollision Report

<b>Company:</b>	Freedom Energy	<b>Local Co-ordinate Reference:</b>	Well Jurnegan BS Fed Com 10H
<b>Project:</b>	Eddy County, NM NAD83	<b>TVD Reference:</b>	GL 3332' + 26.5' KB @ 3358.50usft
<b>Reference Site:</b>	Jurnegan	<b>MD Reference:</b>	GL 3332' + 26.5' KB @ 3358.50usft
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Jurnegan BS Fed Com 10H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH	<b>Database:</b>	EDM_WA
<b>Reference Design:</b>	Plan 5	<b>Offset TVD Reference:</b>	Reference Datum

Offset Design: Jurnegan - Jurnegan BS Fed Com 2H - OH - Plan 3													Offset Site Error: 0.00 usft
Survey Program: 0-MWD													Offset Well Error: 0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
4,100.00	3,876.91	4,255.87	4,179.98	22.35	18.96	32.47	2,754.50	-627.93	1,876.47	1,843.09	33.38	56.210	
4,200.00	3,966.38	4,340.06	4,261.85	23.14	19.39	32.70	2,740.36	-641.59	1,822.88	1,788.61	34.26	53.203	
4,300.00	4,055.86	4,424.25	4,343.71	23.94	19.83	32.94	2,726.22	-655.24	1,769.30	1,734.16	35.15	50.340	
4,400.00	4,145.33	4,508.44	4,425.57	24.74	20.26	33.20	2,712.09	-668.89	1,715.75	1,679.72	36.04	47.613	
4,500.00	4,234.80	4,592.63	4,507.43	25.54	20.69	33.48	2,697.95	-682.54	1,662.23	1,625.30	36.93	45.011	
4,600.00	4,324.27	4,676.81	4,589.29	26.34	21.13	33.77	2,683.81	-696.20	1,608.74	1,570.91	37.83	42.528	
4,700.00	4,413.74	4,761.00	4,671.16	27.14	21.56	34.09	2,669.67	-709.85	1,555.28	1,516.55	38.73	40.155	
4,800.00	4,503.21	4,845.19	4,753.02	27.94	22.00	34.43	2,655.54	-723.50	1,501.86	1,462.22	39.64	37.886	
4,900.00	4,592.69	4,929.38	4,834.88	28.75	22.43	34.79	2,641.40	-737.15	1,448.48	1,407.92	40.56	35.715	
5,000.00	4,682.23	5,013.65	4,916.82	29.55	22.87	34.95	2,627.25	-750.82	1,395.26	1,353.78	41.48	33.639	
5,100.00	4,772.93	5,099.19	5,000.00	30.32	23.31	34.61	2,612.88	-764.69	1,343.94	1,301.55	42.39	31.703	
5,200.00	4,865.04	5,186.31	5,084.71	31.04	23.76	34.24	2,598.26	-778.82	1,295.15	1,251.85	43.30	29.914	
5,300.00	4,958.45	5,274.89	5,170.85	31.72	24.22	33.84	2,583.38	-793.18	1,248.90	1,204.72	44.18	28.267	
5,400.00	5,053.05	5,364.84	5,258.31	32.35	24.69	33.40	2,568.27	-807.77	1,205.26	1,160.20	45.05	26.753	
5,500.00	5,148.73	5,456.04	5,346.99	32.94	25.16	32.90	2,552.96	-822.56	1,164.25	1,118.35	45.90	25.366	
5,600.00	5,245.36	5,537.73	5,426.48	33.48	25.58	32.37	2,539.41	-835.64	1,126.16	1,079.39	46.77	24.080	
5,700.00	5,342.82	5,611.13	5,498.27	33.97	25.94	31.89	2,528.41	-846.26	1,092.35	1,044.69	47.66	22.921	
5,800.00	5,441.01	5,686.22	5,572.09	34.41	26.29	31.46	2,518.54	-855.80	1,063.14	1,014.64	48.51	21.917	
5,900.00	5,539.80	5,762.79	5,647.71	34.81	26.62	31.08	2,509.90	-864.14	1,038.66	989.34	49.32	21.061	
6,000.00	5,639.07	5,840.60	5,724.85	35.17	26.94	30.75	2,502.62	-871.17	1,019.00	968.92	50.08	20.347	
6,100.00	5,738.70	5,919.41	5,803.24	35.48	27.25	30.47	2,496.78	-876.81	1,004.24	953.45	50.80	19.770	
6,200.00	5,838.57	6,000.00	5,883.60	35.75	27.53	30.24	2,492.42	-881.02	994.45	942.99	51.46	19.324	
6,300.00	5,938.55	6,078.93	5,962.44	35.97	27.79	-90.45	2,489.72	-883.63	989.67	937.60	52.07	19.008	
6,398.95	6,036.69	6,157.57	6,041.07	36.12	28.01	-91.18	2,488.59	-884.72	988.43	935.95	52.48	18.835	
6,400.00	6,037.71	6,158.40	6,041.89	36.12	28.02	-91.19	2,488.59	-884.72	988.43	935.94	52.48	18.834	
6,500.00	6,132.33	6,248.84	6,132.33	36.18	28.25	-92.73	2,488.55	-884.76	989.54	936.89	52.65	18.794	
6,600.00	6,218.28	6,334.79	6,218.28	36.16	28.47	-94.77	2,488.55	-884.76	993.49	940.82	52.68	18.860	
6,700.00	6,291.79	6,408.30	6,291.79	36.09	28.66	-96.50	2,488.55	-884.76	1,002.72	950.04	52.68	19.033	
6,800.00	6,349.66	6,516.48	6,399.67	35.98	28.91	-99.45	2,488.10	-879.01	1,019.09	966.44	52.65	19.357	
6,900.00	6,389.36	6,625.85	6,669.38	35.85	29.13	-108.47	2,477.22	-739.20	1,035.59	984.94	50.64	20.448	
7,000.00	6,409.14	7,200.00	6,803.59	35.70	28.76	-112.21	2,450.96	-400.98	1,031.31	979.99	51.32	20.097	
7,100.00	6,412.70	7,289.63	6,806.09	35.55	28.71	-112.52	2,445.55	-311.55	1,025.76	973.61	52.14	19.672	
7,200.00	6,415.03	7,369.74	6,808.33	35.44	28.77	-112.60	2,442.50	-231.54	1,022.66	969.51	53.15	19.240	
7,300.00	6,417.37	7,452.01	6,810.64	35.38	29.10	-112.64	2,441.09	-149.31	1,021.50	967.00	54.50	18.744	
7,400.00	6,419.71	7,552.01	6,813.43	35.38	30.03	-112.68	2,440.20	-49.36	1,021.11	964.63	56.48	18.079	
7,500.00	6,422.05	7,652.01	6,816.23	35.49	31.26	-112.72	2,439.31	50.60	1,020.72	961.99	58.74	17.378	
7,600.00	6,424.39	7,752.00	6,819.03	35.78	32.67	-112.76	2,438.42	150.55	1,020.34	959.09	61.25	16.659	
7,700.00	6,426.73	7,852.00	6,821.83	36.40	34.20	-112.79	2,437.53	250.51	1,019.95	955.96	63.98	15.941	
7,800.00	6,429.07	7,952.00	6,824.62	37.43	35.84	-112.83	2,436.64	350.46	1,019.56	952.64	66.92	15.236	
7,900.00	6,431.40	8,051.99	6,827.42	38.81	37.56	-112.87	2,435.75	450.41	1,019.17	949.15	70.02	14.555	
8,000.00	6,433.74	8,151.99	6,830.22	40.41	39.36	-112.90	2,434.86	550.37	1,018.79	945.51	73.28	13.903	
8,100.00	6,436.08	8,251.99	6,833.02	42.15	41.23	-112.94	2,433.97	650.32	1,018.40	941.74	76.66	13.285	
8,200.00	6,438.42	8,351.99	6,835.81	43.98	43.15	-112.98	2,433.08	750.28	1,018.02	937.86	80.16	12.700	
8,300.00	6,440.76	8,451.98	6,838.61	45.89	45.12	-113.02	2,432.19	850.23	1,017.63	933.88	83.75	12.150	
8,400.00	6,443.10	8,551.98	6,841.41	47.86	47.14	-113.05	2,431.30	950.18	1,017.25	929.81	87.43	11.634	
8,500.00	6,445.43	8,651.98	6,844.21	49.87	49.19	-113.09	2,430.41	1,050.14	1,016.86	925.67	91.19	11.151	
8,600.00	6,447.77	8,751.97	6,847.00	51.93	51.28	-113.13	2,429.53	1,150.09	1,016.48	921.47	95.01	10.698	
8,700.00	6,450.11	8,851.97	6,849.80	54.01	53.40	-113.16	2,428.64	1,250.05	1,016.10	917.20	98.89	10.275	
8,800.00	6,452.45	8,951.97	6,852.60	56.13	55.54	-113.20	2,427.75	1,350.00	1,015.71	912.89	102.83	9.878	
8,900.00	6,454.79	9,051.97	6,855.40	58.28	57.71	-113.24	2,426.86	1,449.95	1,015.33	908.53	106.80	9.507	
9,000.00	6,457.13	9,151.96	6,858.19	60.45	59.90	-113.28	2,425.97	1,549.91	1,014.95	904.13	110.82	9.159	
9,100.00	6,459.47	9,251.96	6,860.99	62.63	62.11	-113.31	2,425.08	1,649.86	1,014.57	899.70	114.87	8.832	

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



## Legacy Directional Drilling Anticollision Report

<b>Company:</b>	Freedom Energy	<b>Local Co-ordinate Reference:</b>	Well Jurnegan BS Fed Com 10H
<b>Project:</b>	Eddy County, NM NAD83	<b>TVD Reference:</b>	GL 3332' + 26.5' KB @ 3358.50usft
<b>Reference Site:</b>	Jurnegan	<b>MD Reference:</b>	GL 3332' + 26.5' KB @ 3358.50usft
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Jurnegan BS Fed Com 10H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH	<b>Database:</b>	EDM_WA
<b>Reference Design:</b>	Plan 5	<b>Offset TVD Reference:</b>	Reference Datum

Offset Design: Jurnegan - Jurnegan BS Fed Com 2H - OH - Plan 3													Offset Site Error: 0.00 usft
Survey Program: 0-MWD													Offset Well Error: 0.00 usft
Reference		Offset		Semi Major Axis			Offset Wellbore Centre		Distance			Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)		
9,200.00	6,461.80	9,351.96	6,863.79	64.84	64.34	-113.35	2,424.19	1,749.82	1,014.19	895.24	118.95	8.526	
9,300.00	6,464.14	9,451.95	6,866.59	67.07	66.58	-113.39	2,423.30	1,849.77	1,013.81	890.74	123.06	8.238	
9,400.00	6,466.48	9,551.95	6,869.38	69.31	68.84	-113.43	2,422.41	1,949.72	1,013.43	886.23	127.20	7.967	
9,500.00	6,468.82	9,651.95	6,872.18	71.56	71.11	-113.46	2,421.52	2,049.68	1,013.05	881.69	131.36	7.712	
9,600.00	6,471.16	9,751.94	6,874.98	73.82	73.39	-113.50	2,420.63	2,149.63	1,012.67	877.13	135.54	7.471	
9,700.00	6,473.50	9,851.94	6,877.78	76.10	75.68	-113.54	2,419.74	2,249.59	1,012.29	872.55	139.74	7.244	
9,800.00	6,475.84	9,951.94	6,880.57	78.39	77.98	-113.58	2,418.85	2,349.54	1,011.91	867.96	143.95	7.030	
9,900.00	6,478.17	10,051.94	6,883.37	80.68	80.29	-113.62	2,417.96	2,449.49	1,011.53	863.35	148.18	6.826	
10,000.00	6,480.51	10,151.93	6,886.17	82.99	82.61	-113.65	2,417.07	2,549.45	1,011.16	858.73	152.42	6.634	
10,100.00	6,482.85	10,251.93	6,888.97	85.30	84.93	-113.69	2,416.18	2,649.40	1,010.78	854.10	156.68	6.451	
10,200.00	6,485.19	10,351.93	6,891.76	87.62	87.27	-113.73	2,415.29	2,749.36	1,010.40	849.46	160.94	6.278	
10,300.00	6,487.53	10,451.92	6,894.56	89.95	89.60	-113.77	2,414.40	2,849.31	1,010.03	844.81	165.22	6.113	
10,400.00	6,489.87	10,551.92	6,897.36	92.28	91.95	-113.80	2,413.51	2,949.26	1,009.65	840.15	169.50	5.957	
10,500.00	6,492.21	10,651.92	6,900.16	94.62	94.30	-113.84	2,412.62	3,049.22	1,009.27	835.48	173.79	5.807	
10,600.00	6,494.54	10,751.92	6,902.95	96.97	96.65	-113.88	2,411.73	3,149.17	1,008.90	830.81	178.09	5.665	
10,700.00	6,496.88	10,851.91	6,905.75	99.32	99.01	-113.92	2,410.84	3,249.13	1,008.53	826.13	182.40	5.529	
10,800.00	6,499.22	10,951.91	6,908.55	101.67	101.38	-113.96	2,409.95	3,349.08	1,008.15	821.44	186.71	5.400	
10,900.00	6,501.56	11,051.91	6,911.35	104.03	103.74	-113.99	2,409.06	3,449.03	1,007.78	816.75	191.02	5.276	
11,000.00	6,503.90	11,151.90	6,914.14	106.39	106.12	-114.03	2,408.17	3,548.99	1,007.41	812.06	195.35	5.157	
11,100.00	6,506.24	11,251.90	6,916.94	108.76	108.49	-114.07	2,407.28	3,648.94	1,007.03	807.36	199.67	5.043	
11,200.00	6,508.58	11,351.90	6,919.74	111.13	110.87	-114.11	2,406.40	3,748.89	1,006.66	802.66	204.00	4.935	
11,300.00	6,510.91	11,451.89	6,922.54	113.50	113.25	-114.15	2,405.51	3,848.85	1,006.29	797.95	208.33	4.830	
11,400.00	6,513.25	11,551.89	6,925.33	115.88	115.64	-114.19	2,404.62	3,948.80	1,005.92	793.25	212.67	4.730	
11,500.00	6,515.59	11,651.89	6,928.13	118.26	118.02	-114.22	2,403.73	4,048.76	1,005.55	788.54	217.01	4.634	
11,600.00	6,517.93	11,751.89	6,930.93	120.64	120.41	-114.26	2,402.84	4,148.71	1,005.18	783.83	221.35	4.541	
11,700.00	6,520.27	11,851.88	6,933.73	123.03	122.80	-114.30	2,401.95	4,248.66	1,004.81	779.11	225.69	4.452	
11,800.00	6,522.61	11,951.88	6,936.52	125.42	125.20	-114.34	2,401.06	4,348.62	1,004.44	774.40	230.04	4.366	
11,900.00	6,524.94	12,051.88	6,939.32	127.81	127.60	-114.38	2,400.17	4,448.57	1,004.07	769.68	234.39	4.284	
12,000.00	6,527.28	12,151.87	6,942.12	130.20	129.99	-114.41	2,399.28	4,548.53	1,003.70	764.97	238.73	4.204	
12,100.00	6,529.62	12,251.87	6,944.92	132.59	132.40	-114.45	2,398.39	4,648.48	1,003.33	760.25	243.08	4.128	
12,200.00	6,531.96	12,351.87	6,947.71	134.99	134.80	-114.49	2,397.50	4,748.43	1,002.96	755.53	247.43	4.053	
12,300.00	6,534.30	12,451.87	6,950.51	137.39	137.20	-114.53	2,396.61	4,848.39	1,002.60	750.81	251.78	3.982	
12,400.00	6,536.64	12,551.86	6,953.31	139.79	139.61	-114.57	2,395.72	4,948.34	1,002.23	746.09	256.14	3.913	
12,500.00	6,538.98	12,651.86	6,956.11	142.19	142.02	-114.61	2,394.83	5,048.30	1,001.86	741.38	260.49	3.846	
12,600.00	6,541.31	12,751.86	6,958.90	144.59	144.43	-114.65	2,393.94	5,148.25	1,001.50	736.66	264.84	3.782	
12,700.00	6,543.65	12,851.85	6,961.70	147.00	146.84	-114.68	2,393.05	5,248.20	1,001.13	731.94	269.19	3.719	
12,800.00	6,545.99	12,951.85	6,964.50	149.41	149.25	-114.72	2,392.16	5,348.16	1,000.77	727.22	273.54	3.659	
12,900.00	6,548.33	13,051.85	6,967.30	151.81	151.66	-114.76	2,391.27	5,448.11	1,000.40	722.51	277.90	3.600	
13,000.00	6,550.67	13,151.85	6,970.09	154.22	154.08	-114.80	2,390.38	5,548.07	1,000.04	717.79	282.25	3.543	
13,100.00	6,553.01	13,251.84	6,972.89	156.63	156.49	-114.84	2,389.49	5,648.02	999.67	713.08	286.60	3.488	
13,200.00	6,555.35	13,351.84	6,975.69	159.05	158.91	-114.88	2,388.60	5,747.97	999.31	708.36	290.95	3.435	
13,300.00	6,557.68	13,451.84	6,978.49	161.46	161.33	-114.92	2,387.71	5,847.93	998.95	703.65	295.30	3.383	
13,400.00	6,560.02	13,551.83	6,981.28	163.87	163.74	-114.95	2,386.82	5,947.88	998.59	698.94	299.65	3.333	
13,500.00	6,562.36	13,651.83	6,984.08	166.29	166.16	-114.99	2,385.93	6,047.84	998.22	694.23	304.00	3.284	
13,600.00	6,564.70	13,751.83	6,986.88	168.70	168.58	-115.03	2,385.04	6,147.79	997.86	689.52	308.34	3.236	
13,700.00	6,567.04	13,851.82	6,989.68	171.12	171.01	-115.07	2,384.16	6,247.74	997.50	684.81	312.69	3.190	
13,800.00	6,569.38	13,951.82	6,992.47	173.54	173.43	-115.11	2,383.27	6,347.70	997.14	680.10	317.04	3.145	
13,900.00	6,571.72	14,051.82	6,995.27	175.96	175.85	-115.15	2,382.38	6,447.65	996.78	675.40	321.38	3.102	
14,000.00	6,574.05	14,151.82	6,998.07	178.38	178.28	-115.19	2,381.49	6,547.61	996.42	670.70	325.72	3.059	
14,100.00	6,576.39	14,251.81	7,000.87	180.80	180.70	-115.23	2,380.60	6,647.56	996.06	666.00	330.07	3.018	
14,200.00	6,578.73	14,351.81	7,003.66	183.22	183.13	-115.26	2,379.71	6,747.51	995.70	661.30	334.41	2.978	
14,300.00	6,581.07	14,451.81	7,006.46	185.64	185.55	-115.30	2,378.82	6,847.47	995.35	656.60	338.75	2.938	

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



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<b>Project:</b>	Eddy County, NM NAD83	<b>TVD Reference:</b>	GL 3332' + 26.5' KB @ 3358.50usft
<b>Reference Site:</b>	Jurnegan	<b>MD Reference:</b>	GL 3332' + 26.5' KB @ 3358.50usft
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Jurnegan BS Fed Com 10H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH	<b>Database:</b>	EDM_WA
<b>Reference Design:</b>	Plan 5	<b>Offset TVD Reference:</b>	Reference Datum

Offset Design: Jurnegan - Jurnegan BS Fed Com 2H - OH - Plan 3													Offset Site Error:	0.00 usft
Survey Program: 0-MWD													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Offset Wellbore Centre		Distance			Rule Assigned:		Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
14,400.00	6,583.41	14,551.80	7,009.26	188.07	187.98	-115.34	2,377.93	6,947.42	994.99	651.90	343.08	2.900		
14,500.00	6,585.75	14,651.80	7,012.06	190.49	190.41	-115.38	2,377.04	7,047.38	994.63	647.21	347.42	2.863		
14,600.00	6,588.09	14,751.80	7,014.85	192.92	192.84	-115.42	2,376.15	7,147.33	994.27	642.52	351.75	2.827		
14,700.00	6,590.42	14,851.80	7,017.65	195.34	195.27	-115.46	2,375.26	7,247.28	993.92	637.83	356.09	2.791		
14,800.00	6,592.76	14,951.79	7,020.45	197.77	197.70	-115.50	2,374.37	7,347.24	993.56	633.14	360.42	2.757		
14,900.00	6,595.10	15,051.79	7,023.25	200.20	200.13	-115.54	2,373.48	7,447.19	993.21	628.46	364.75	2.723		
15,000.00	6,597.44	15,151.79	7,026.04	202.62	202.56	-115.58	2,372.59	7,547.15	992.85	623.78	369.08	2.690		
15,100.00	6,599.78	15,251.78	7,028.84	205.05	204.99	-115.62	2,371.70	7,647.10	992.50	619.10	373.40	2.658		
15,200.00	6,602.12	15,351.78	7,031.64	207.48	207.42	-115.66	2,370.81	7,747.05	992.14	614.42	377.73	2.627		
15,300.00	6,604.45	15,451.78	7,034.44	209.91	209.85	-115.69	2,369.92	7,847.01	991.79	609.74	382.05	2.596		
15,400.00	6,606.79	15,551.77	7,037.23	212.34	212.28	-115.73	2,369.03	7,946.96	991.44	605.07	386.37	2.566		
15,500.00	6,609.13	15,651.77	7,040.03	214.77	214.72	-115.77	2,368.14	8,046.92	991.09	600.40	390.69	2.537		
15,600.00	6,611.47	15,751.77	7,042.83	217.20	217.15	-115.81	2,367.25	8,146.87	990.73	595.73	395.00	2.508		
15,700.00	6,613.81	15,851.77	7,045.63	219.63	219.58	-115.85	2,366.36	8,246.82	990.38	591.06	399.32	2.480		
15,800.00	6,616.15	15,951.76	7,048.42	222.06	222.02	-115.89	2,365.47	8,346.78	990.03	586.40	403.63	2.453		
15,900.00	6,618.49	16,051.76	7,051.22	224.49	224.45	-115.93	2,364.58	8,446.73	989.68	581.74	407.94	2.426		
16,000.00	6,620.82	16,151.76	7,054.02	226.92	226.89	-115.97	2,363.69	8,546.69	989.33	577.08	412.25	2.400		
16,100.00	6,623.16	16,251.75	7,056.82	229.36	229.32	-116.01	2,362.80	8,646.64	988.98	572.43	416.55	2.374		
16,200.00	6,625.50	16,351.75	7,059.61	231.79	231.76	-116.05	2,361.91	8,746.59	988.63	567.78	420.85	2.349		
16,300.00	6,627.84	16,451.75	7,062.41	234.22	234.20	-116.09	2,361.03	8,846.55	988.28	563.13	425.16	2.325		
16,400.00	6,630.18	16,551.75	7,065.21	236.66	236.63	-116.13	2,360.14	8,946.50	987.93	558.48	429.45	2.300		
16,500.00	6,632.52	16,651.74	7,068.01	239.09	239.07	-116.17	2,359.25	9,046.46	987.59	553.83	433.75	2.277		
16,600.00	6,634.86	16,751.74	7,070.80	241.53	241.51	-116.21	2,358.36	9,146.41	987.24	549.19	438.05	2.254		
16,700.00	6,637.19	16,851.74	7,073.60	243.96	243.94	-116.25	2,357.47	9,246.36	986.89	544.55	442.34	2.231		
16,800.00	6,639.53	16,951.73	7,076.40	246.40	246.38	-116.29	2,356.58	9,346.32	986.54	539.92	446.63	2.209		
16,900.00	6,641.87	17,051.73	7,079.20	248.83	248.82	-116.33	2,355.69	9,446.27	986.20	535.28	450.91	2.187		
17,000.00	6,644.21	17,151.24	7,082.02	251.27	251.25	-116.37	2,354.81	9,545.74	985.88	530.70	455.18	2.166		
17,076.45	6,646.00	17,228.17	7,084.19	253.13	253.12	-116.40	2,354.14	9,622.64	985.63	527.17	458.46	2.150 CC, ES, SF		

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



## Legacy Directional Drilling Anticollision Report

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<b>Project:</b>	Eddy County, NM NAD83	<b>TVD Reference:</b>	GL 3332' + 26.5' KB @ 3358.50usft
<b>Reference Site:</b>	Jurnegan	<b>MD Reference:</b>	GL 3332' + 26.5' KB @ 3358.50usft
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Jurnegan BS Fed Com 10H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH	<b>Database:</b>	EDM_WA
<b>Reference Design:</b>	Plan 5	<b>Offset TVD Reference:</b>	Reference Datum

Offset Design: Jurnegan - Jurnegan BS Fed Com 3H - OH - Plan 4													Offset Site Error:	0.00 usft
Survey Program: 0-MWD													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
0.00	0.00	0.00	2.00	0.00	0.00	-52.18	24.74	-31.87	40.40					
100.00	100.00	98.00	100.00	0.26	0.26	-52.18	24.74	-31.87	40.35	39.83	0.52	77.342		
200.00	200.00	198.00	200.00	0.62	0.61	-52.18	24.74	-31.87	40.35	39.11	1.24	32.625		
300.00	300.00	298.00	300.00	0.98	0.97	-52.18	24.74	-31.87	40.35	38.39	1.95	20.652		
400.00	400.00	398.00	400.00	1.34	1.33	-52.18	24.74	-31.87	40.35	37.68	2.67	15.108		
500.00	500.00	498.00	500.00	1.70	1.69	-52.18	24.74	-31.87	40.35	36.96	3.39	11.911		
600.00	600.00	598.00	600.00	2.06	2.05	-52.18	24.74	-31.87	40.35	36.24	4.10	9.830		
700.00	700.00	698.00	700.00	2.41	2.41	-52.18	24.74	-31.87	40.35	35.53	4.82	8.368		
800.00	800.00	798.00	800.00	2.77	2.77	-52.18	24.74	-31.87	40.35	34.81	5.54	7.285		
900.00	900.00	898.00	900.00	3.13	3.12	-52.18	24.74	-31.87	40.35	34.09	6.26	6.450		
1,000.00	1,000.00	998.00	1,000.00	3.49	3.48	-52.18	24.74	-31.87	40.35	33.38	6.97	5.787		
1,100.00	1,100.00	1,098.00	1,100.00	3.85	3.84	-52.18	24.74	-31.87	40.35	32.66	7.69	5.247		
1,200.00	1,199.98	1,197.98	1,199.98	4.21	4.20	-22.79	24.74	-31.87	38.73	30.33	8.40	4.608		
1,300.00	1,299.84	1,297.84	1,299.84	4.56	4.56	-26.25	24.74	-31.87	33.97	24.85	9.12	3.725		
1,400.00	1,399.45	1,397.45	1,399.45	4.92	4.91	-34.71	24.74	-31.87	26.43	16.60	9.83	2.688		
1,500.00	1,498.70	1,496.70	1,498.70	5.29	5.27	-57.69	24.74	-31.87	17.79	7.24	10.55	1.686	Collision Risk Procedures Req.	
1,563.77	1,561.75	1,559.75	1,561.75	5.53	5.50	-90.00	24.74	-31.87	15.00	3.97	11.02	1.361	Collision Risk Procedures Req., CC, E	
1,600.00	1,597.47	1,595.47	1,597.47	5.66	5.62	-111.72	24.74	-31.87	16.18	4.89	11.29	1.433	Collision Risk Procedures Req.	
1,700.00	1,695.62	1,693.62	1,695.62	6.05	5.98	-148.63	24.74	-31.87	29.28	17.28	12.00	2.441		
1,800.00	1,793.06	1,792.37	1,794.36	6.46	6.33	-161.17	25.78	-32.94	48.72	36.02	12.70	3.836		
1,900.00	1,889.64	1,891.83	1,893.69	6.90	6.68	-165.75	29.20	-36.49	69.50	56.09	13.41	5.184		
2,000.00	1,985.27	1,991.96	1,993.46	7.36	7.04	-167.63	35.07	-42.56	90.83	76.71	14.11	6.436		
2,100.00	2,079.82	2,092.76	2,093.53	7.86	7.40	-168.32	43.43	-51.20	112.49	97.68	14.82	7.592		
2,200.00	2,173.17	2,194.23	2,193.78	8.39	7.78	-168.37	54.30	-62.45	134.44	118.91	15.53	8.658		
2,300.00	2,265.21	2,296.36	2,294.06	8.97	8.16	-168.04	67.73	-76.34	156.62	140.37	16.24	9.641		
2,400.00	2,355.84	2,399.17	2,394.25	9.59	8.57	-167.47	83.75	-92.91	179.02	162.05	16.97	10.549		
2,500.00	2,445.37	2,502.84	2,494.38	10.25	9.00	-166.75	102.42	-112.23	200.75	183.04	17.71	11.334		
2,600.00	2,534.84	2,607.78	2,594.66	10.93	9.47	-165.71	123.87	-134.42	219.50	201.02	18.48	11.877		
2,700.00	2,624.31	2,709.54	2,690.95	11.64	9.95	-164.48	146.75	-158.09	235.64	216.32	19.32	12.198		
2,800.00	2,713.78	2,808.16	2,784.14	12.35	10.43	-163.41	169.17	-181.28	251.57	231.36	20.21	12.450		
2,900.00	2,803.25	2,906.78	2,877.34	13.08	10.93	-162.46	191.59	-204.47	267.57	246.45	21.11	12.672		
3,000.00	2,892.72	3,005.40	2,970.53	13.82	11.45	-161.62	214.01	-227.66	283.63	261.59	22.04	12.868		
3,100.00	2,982.20	3,104.02	3,063.73	14.57	11.98	-160.87	236.43	-250.86	299.75	276.77	22.99	13.041		
3,200.00	3,071.67	3,202.64	3,156.92	15.33	12.51	-160.19	258.86	-274.05	315.92	291.97	23.94	13.194		
3,300.00	3,161.14	3,301.26	3,250.12	16.09	13.06	-159.58	281.28	-297.24	332.12	307.20	24.92	13.329		
3,400.00	3,250.61	3,399.88	3,343.31	16.86	13.61	-159.03	303.70	-320.44	348.35	322.45	25.90	13.449		
3,500.00	3,340.08	3,498.50	3,436.51	17.63	14.18	-158.53	326.12	-343.63	364.62	337.72	26.90	13.555		
3,600.00	3,429.55	3,597.12	3,529.71	18.41	14.74	-158.07	348.54	-366.82	380.91	353.00	27.90	13.650		
3,700.00	3,519.03	3,695.74	3,622.90	19.19	15.32	-157.65	370.96	-390.01	397.22	368.30	28.92	13.735		
3,800.00	3,608.50	3,794.36	3,716.10	19.98	15.90	-157.26	393.38	-413.21	413.55	383.61	29.94	13.811		
3,900.00	3,697.97	3,892.98	3,809.29	20.76	16.48	-156.90	415.80	-436.40	429.90	398.92	30.98	13.878		
4,000.00	3,787.44	3,991.60	3,902.49	21.56	17.07	-156.57	438.22	-459.59	446.26	414.25	32.01	13.939		
4,100.00	3,876.91	4,090.22	3,995.68	22.35	17.66	-156.26	460.64	-482.78	462.64	429.58	33.06	13.994		
4,200.00	3,966.38	4,188.84	4,088.88	23.14	18.25	-155.97	483.06	-505.98	479.03	444.92	34.11	14.044		
4,300.00	4,055.86	4,287.46	4,182.07	23.94	18.85	-155.70	505.48	-529.17	495.43	460.26	35.17	14.088		
4,400.00	4,145.33	4,386.08	4,275.27	24.74	19.45	-155.45	527.90	-552.36	511.84	475.61	36.23	14.128		
4,500.00	4,234.80	4,484.70	4,368.46	25.54	20.05	-155.21	550.32	-575.55	528.26	490.96	37.29	14.165		
4,600.00	4,324.27	4,583.32	4,461.66	26.34	20.66	-154.99	572.74	-598.75	544.68	506.32	38.36	14.198		
4,700.00	4,413.74	4,681.94	4,554.85	27.14	21.26	-154.78	595.16	-621.94	561.12	521.68	39.44	14.229		
4,800.00	4,503.21	4,780.56	4,648.05	27.94	21.87	-154.58	617.58	-645.13	577.56	537.05	40.51	14.256		
4,900.00	4,592.69	4,879.18	4,741.24	28.75	22.48	-154.39	640.00	-668.33	594.01	552.41	41.59	14.281		
5,000.00	4,682.23	4,977.82	4,834.46	29.55	23.09	-154.26	662.42	-691.52	610.31	567.63	42.68	14.300		

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



## Legacy Directional Drilling Anticollision Report

<b>Company:</b>	Freedom Energy	<b>Local Co-ordinate Reference:</b>	Well Jurnegan BS Fed Com 10H
<b>Project:</b>	Eddy County, NM NAD83	<b>TVD Reference:</b>	GL 3332' + 26.5' KB @ 3358.50usft
<b>Reference Site:</b>	Jurnegan	<b>MD Reference:</b>	GL 3332' + 26.5' KB @ 3358.50usft
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Jurnegan BS Fed Com 10H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH	<b>Database:</b>	EDM_WA
<b>Reference Design:</b>	Plan 5	<b>Offset TVD Reference:</b>	Reference Datum

Offset Design: Jurnegan - Jurnegan BS Fed Com 3H - OH - Plan 4													Offset Site Error: 0.00 usft	
Survey Program: 0-MWD													Offset Well Error: 0.00 usft	
Reference		Offset		Semi Major Axis			Highside		Offset Wellbore Centre		Distance			Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
5,100.00	4,772.93	5,076.80	4,927.99	30.32	23.71	-154.10	684.92	-714.80	624.25	580.47	43.78	14.259		
5,200.00	4,865.04	5,176.10	5,021.83	31.04	24.33	-153.78	707.50	-738.15	635.10	590.20	44.90	14.144		
5,300.00	4,958.45	5,275.62	5,115.87	31.72	24.95	-153.32	730.12	-761.56	642.88	596.83	46.05	13.961		
5,400.00	5,053.05	5,375.22	5,210.00	32.35	25.57	-152.70	752.77	-784.98	647.61	600.39	47.22	13.715		
5,500.00	5,148.73	5,468.90	5,298.59	32.94	26.15	-151.99	773.92	-806.86	649.54	601.17	48.37	13.429		
5,600.00	5,245.36	5,554.40	5,380.13	33.48	26.66	-151.33	791.82	-825.37	650.31	600.88	49.42	13.158		
5,700.00	5,342.82	5,640.09	5,462.56	33.97	27.14	-150.70	808.05	-842.16	650.28	599.85	50.42	12.896		
5,800.00	5,441.01	5,725.95	5,545.84	34.41	27.60	-150.08	822.58	-857.20	649.44	598.07	51.37	12.643		
5,900.00	5,539.80	5,811.99	5,629.88	34.81	28.03	-149.48	835.40	-870.46	647.77	595.52	52.25	12.397		
6,000.00	5,639.07	5,900.00	5,716.37	35.17	28.43	-148.89	846.70	-882.15	645.28	592.18	53.09	12.153		
6,100.00	5,738.70	5,984.64	5,799.99	35.48	28.79	-148.33	855.81	-891.57	641.94	588.10	53.84	11.924		
6,200.00	5,838.57	6,071.25	5,885.91	35.75	29.13	-147.78	863.36	-899.38	637.75	583.21	54.54	11.694		
6,300.00	5,938.55	6,158.05	5,972.31	35.97	29.44	-147.28	869.10	-905.32	632.71	577.54	55.17	11.469		
6,400.00	6,037.71	6,244.05	6,058.12	36.12	29.72	-146.99	873.00	-909.36	629.05	573.09	55.97	11.239		
6,437.50	6,073.96	6,275.53	6,089.57	36.14	29.82	-146.85	873.98	-910.37	628.71	572.36	56.36	11.156		
6,500.00	6,132.33	6,326.48	6,140.49	36.18	29.97	-146.86	875.06	-911.48	629.82	572.68	57.14	11.022		
6,600.00	6,218.28	6,404.27	6,218.28	36.16	30.18	-146.96	875.51	-911.96	637.39	578.71	58.68	10.863		
6,700.00	6,291.79	6,477.78	6,291.79	36.09	30.37	-147.55	875.51	-911.96	654.03	593.53	60.50	10.810		
6,800.00	6,349.66	6,535.65	6,349.66	35.98	30.52	-148.17	875.51	-911.96	682.46	620.18	62.28	10.958		
6,900.00	6,389.36	6,667.36	6,480.08	35.85	30.77	-148.05	875.47	-896.74	722.29	658.48	63.80	11.320		
7,000.00	6,409.14	7,165.14	6,820.00	35.70	30.75	-148.90	874.59	-564.18	756.79	700.93	55.87	13.546		
7,100.00	6,412.70	7,371.66	6,840.05	35.55	30.92	-148.38	874.04	-359.34	757.12	701.55	55.57	13.625		
7,200.00	6,415.03	7,471.66	6,842.64	35.44	31.22	-148.39	873.77	-259.38	757.25	700.34	56.91	13.307		
7,300.00	6,417.37	7,571.66	6,845.22	35.38	31.75	-148.41	873.50	-159.41	757.38	698.87	58.51	12.944		
7,400.00	6,419.71	7,671.66	6,847.80	35.38	32.52	-148.42	873.24	-59.45	757.51	697.15	60.35	12.551		
7,500.00	6,422.05	7,771.66	6,850.38	35.49	33.52	-148.44	872.97	40.52	757.63	695.22	62.42	12.138		
7,600.00	6,424.39	7,871.65	6,852.96	35.78	34.72	-124.46	872.70	140.49	757.76	693.08	64.68	11.715		
7,700.00	6,426.73	7,971.65	6,855.54	36.40	36.09	-124.47	872.44	240.45	757.89	690.77	67.13	11.290		
7,800.00	6,429.07	8,071.65	6,858.12	37.43	37.59	-124.49	872.17	340.42	758.02	688.29	69.73	10.871		
7,900.00	6,431.40	8,171.65	6,860.71	38.81	39.21	-124.50	871.90	440.38	758.15	685.68	72.47	10.461		
8,000.00	6,433.74	8,271.65	6,863.29	40.41	40.92	-124.52	871.63	540.35	758.28	682.94	75.35	10.064		
8,100.00	6,436.08	8,371.65	6,865.87	42.15	42.71	-124.53	871.37	640.32	758.41	680.08	78.33	9.682		
8,200.00	6,438.42	8,471.65	6,868.45	43.98	44.57	-124.55	871.10	740.28	758.54	677.13	81.41	9.317		
8,300.00	6,440.76	8,571.65	6,871.03	45.89	46.48	-124.56	870.83	840.25	758.67	674.09	84.59	8.969		
8,400.00	6,443.10	8,671.65	6,873.61	47.86	48.44	-124.58	870.57	940.21	758.80	670.97	87.84	8.639		
8,500.00	6,445.43	8,771.65	6,876.19	49.87	50.45	-124.60	870.30	1,040.18	758.93	667.77	91.16	8.325		
8,600.00	6,447.77	8,871.65	6,878.78	51.93	52.50	-124.61	870.03	1,140.15	759.06	664.52	94.54	8.029		
8,700.00	6,450.11	8,971.65	6,881.36	54.01	54.58	-124.63	869.76	1,240.11	759.19	661.21	97.98	7.748		
8,800.00	6,452.45	9,071.65	6,883.94	56.13	56.69	-124.64	869.50	1,340.08	759.32	657.85	101.47	7.483		
8,900.00	6,454.79	9,171.65	6,886.52	58.28	58.82	-124.66	869.23	1,440.04	759.45	654.44	105.01	7.232		
9,000.00	6,457.13	9,271.65	6,889.10	60.45	60.98	-124.67	868.96	1,540.01	759.58	651.00	108.59	6.995		
9,100.00	6,459.47	9,371.65	6,891.68	62.63	63.16	-124.69	868.70	1,639.98	759.71	647.52	112.20	6.771		
9,200.00	6,461.80	9,471.65	6,894.26	64.84	65.36	-124.70	868.43	1,739.94	759.84	644.00	115.84	6.559		
9,300.00	6,464.14	9,571.65	6,896.85	67.07	67.58	-124.72	868.16	1,839.91	759.98	640.46	119.52	6.359		
9,400.00	6,466.48	9,671.65	6,899.43	69.31	69.81	-124.73	867.89	1,939.87	760.11	636.89	123.22	6.169		
9,500.00	6,468.82	9,771.65	6,902.01	71.56	72.06	-124.75	867.63	2,039.84	760.24	633.29	126.95	5.989		
9,600.00	6,471.16	9,871.65	6,904.59	73.82	74.32	-124.77	867.36	2,139.81	760.37	629.67	130.70	5.818		
9,700.00	6,473.50	9,971.65	6,907.17	76.10	76.59	-124.78	867.09	2,239.77	760.50	626.03	134.46	5.656		
9,800.00	6,475.84	10,071.65	6,909.75	78.39	78.88	-124.80	866.83	2,339.74	760.63	622.38	138.25	5.502		
9,900.00	6,478.17	10,171.65	6,912.33	80.68	81.17	-124.81	866.56	2,439.71	760.76	618.70	142.06	5.355		
10,000.00	6,480.51	10,271.65	6,914.92	82.99	83.47	-124.83	866.29	2,539.67	760.89	615.01	145.88	5.216		
10,100.00	6,482.85	10,371.65	6,917.50	85.30	85.78	-124.84	866.03	2,639.64	761.02	611.31	149.71	5.083		

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



## Legacy Directional Drilling Anticollision Report

<b>Company:</b>	Freedom Energy	<b>Local Co-ordinate Reference:</b>	Well Jurnegan BS Fed Com 10H
<b>Project:</b>	Eddy County, NM NAD83	<b>TVD Reference:</b>	GL 3332' + 26.5' KB @ 3358.50usft
<b>Reference Site:</b>	Jurnegan	<b>MD Reference:</b>	GL 3332' + 26.5' KB @ 3358.50usft
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Jurnegan BS Fed Com 10H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH	<b>Database:</b>	EDM_WA
<b>Reference Design:</b>	Plan 5	<b>Offset TVD Reference:</b>	Reference Datum

Offset Design: Jurnegan - Jurnegan BS Fed Com 3H - OH - Plan 4													Offset Site Error: 0.00 usft	
Survey Program: 0-MWD													Offset Well Error: 0.00 usft	
Reference		Offset		Semi Major Axis			Highside		Offset Wellbore Centre		Distance		Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)			
10,200.00	6,485.19	10,471.65	6,920.08	87.62	88.10	124.86	865.76	2,739.60	761.15	607.60	153.56	4.957		
10,300.00	6,487.53	10,571.65	6,922.66	89.95	90.42	124.87	865.49	2,839.57	761.28	603.87	157.42	4.836		
10,400.00	6,489.87	10,671.65	6,925.24	92.28	92.75	124.89	865.22	2,939.54	761.41	600.13	161.29	4.721		
10,500.00	6,492.21	10,771.65	6,927.82	94.62	95.09	124.90	864.96	3,039.50	761.55	596.38	165.17	4.611		
10,600.00	6,494.54	10,871.65	6,930.40	96.97	97.43	124.92	864.69	3,139.47	761.68	592.62	169.05	4.505		
10,700.00	6,496.88	10,971.65	6,932.99	99.32	99.78	124.93	864.42	3,239.43	761.81	588.86	172.95	4.405		
10,800.00	6,499.22	11,071.65	6,935.57	101.67	102.13	124.95	864.16	3,339.40	761.94	585.08	176.86	4.308		
10,900.00	6,501.56	11,171.65	6,938.15	104.03	104.49	124.97	863.89	3,439.37	762.07	581.30	180.77	4.216		
11,000.00	6,503.90	11,271.64	6,940.73	106.39	106.85	124.98	863.62	3,539.33	762.20	577.51	184.69	4.127		
11,100.00	6,506.24	11,371.64	6,943.31	108.76	109.21	125.00	863.35	3,639.30	762.33	573.72	188.62	4.042		
11,200.00	6,508.58	11,471.64	6,945.89	111.13	111.58	125.01	863.09	3,739.26	762.47	569.91	192.55	3.960		
11,300.00	6,510.91	11,571.64	6,948.47	113.50	113.95	125.03	862.82	3,839.23	762.60	566.11	196.49	3.881		
11,400.00	6,513.25	11,671.64	6,951.06	115.88	116.33	125.04	862.55	3,939.20	762.73	562.30	200.43	3.805		
11,500.00	6,515.59	11,771.64	6,953.64	118.26	118.70	125.06	862.29	4,039.16	762.86	558.48	204.38	3.733		
11,600.00	6,517.93	11,871.64	6,956.22	120.64	121.09	125.07	862.02	4,139.13	762.99	554.66	208.33	3.662		
11,700.00	6,520.27	11,971.64	6,958.80	123.03	123.47	125.09	861.75	4,239.09	763.12	550.84	212.28	3.595		
11,800.00	6,522.61	12,071.64	6,961.38	125.42	125.86	125.10	861.48	4,339.06	763.26	547.01	216.24	3.530		
11,900.00	6,524.94	12,171.64	6,963.96	127.81	128.24	125.12	861.22	4,439.03	763.39	543.18	220.20	3.467		
12,000.00	6,527.28	12,271.64	6,966.54	130.20	130.64	125.13	860.95	4,538.99	763.52	539.35	224.17	3.406		
12,100.00	6,529.62	12,371.64	6,969.12	132.59	133.03	125.15	860.68	4,638.96	763.65	535.51	228.14	3.347		
12,200.00	6,531.96	12,471.64	6,971.71	134.99	135.42	125.17	860.42	4,738.92	763.78	531.67	232.11	3.291		
12,300.00	6,534.30	12,571.64	6,974.29	137.39	137.82	125.18	860.15	4,838.89	763.92	527.83	236.08	3.236		
12,400.00	6,536.64	12,671.64	6,976.87	139.79	140.22	125.20	859.88	4,938.86	764.05	523.99	240.06	3.183		
12,500.00	6,538.98	12,771.64	6,979.45	142.19	142.62	125.21	859.61	5,038.82	764.18	520.14	244.04	3.131		
12,600.00	6,541.31	12,871.64	6,982.03	144.59	145.03	125.23	859.35	5,138.79	764.31	516.30	248.02	3.082		
12,700.00	6,543.65	12,971.64	6,984.61	147.00	147.43	125.24	859.08	5,238.75	764.44	512.45	252.00	3.034		
12,800.00	6,545.99	13,071.64	6,987.19	149.41	149.84	125.26	858.81	5,338.72	764.58	508.60	255.98	2.987		
12,900.00	6,548.33	13,171.64	6,989.78	151.81	152.24	125.27	858.55	5,438.69	764.71	504.74	259.97	2.942		
13,000.00	6,550.67	13,271.64	6,992.36	154.22	154.65	125.29	858.28	5,538.65	764.84	500.89	263.95	2.898		
13,100.00	6,553.01	13,371.64	6,994.94	156.63	157.06	125.30	858.01	5,638.62	764.97	497.03	267.94	2.855		
13,200.00	6,555.35	13,471.64	6,997.52	159.05	159.47	125.32	857.75	5,738.58	765.11	493.18	271.93	2.814		
13,300.00	6,557.68	13,571.64	7,000.10	161.46	161.88	125.33	857.48	5,838.55	765.24	489.32	275.92	2.773		
13,400.00	6,560.02	13,671.64	7,002.68	163.87	164.30	125.35	857.21	5,938.52	765.37	485.46	279.91	2.734		
13,500.00	6,562.36	13,771.64	7,005.26	166.29	166.71	125.36	856.94	6,038.48	765.51	481.60	283.90	2.696		
13,600.00	6,564.70	13,871.64	7,007.85	168.70	169.13	125.38	856.68	6,138.45	765.64	477.75	287.89	2.659		
13,700.00	6,567.04	13,971.64	7,010.43	171.12	171.54	125.39	856.41	6,238.41	765.77	473.89	291.89	2.624		
13,800.00	6,569.38	14,071.64	7,013.01	173.54	173.96	125.41	856.14	6,338.38	765.90	470.03	295.88	2.589		
13,900.00	6,571.72	14,171.64	7,015.59	175.96	176.38	125.42	855.88	6,438.35	766.04	466.16	299.87	2.555		
14,000.00	6,574.05	14,271.64	7,018.17	178.38	178.80	125.44	855.61	6,538.31	766.17	462.30	303.87	2.521		
14,100.00	6,576.39	14,371.64	7,020.75	180.80	181.22	125.46	855.34	6,638.28	766.30	458.44	307.86	2.489		
14,200.00	6,578.73	14,471.64	7,023.33	183.22	183.64	125.47	855.07	6,738.24	766.44	454.58	311.86	2.458		
14,300.00	6,581.07	14,571.64	7,025.92	185.64	186.06	125.49	854.81	6,838.21	766.57	450.72	315.85	2.427		
14,400.00	6,583.41	14,671.63	7,028.50	188.07	188.49	125.50	854.54	6,938.18	766.70	446.86	319.85	2.397		
14,500.00	6,585.75	14,771.63	7,031.08	190.49	190.91	125.52	854.27	7,038.14	766.84	442.99	323.84	2.368		
14,600.00	6,588.09	14,871.63	7,033.66	192.92	193.33	125.53	854.01	7,138.11	766.97	439.13	327.84	2.339		
14,700.00	6,590.42	14,971.63	7,036.24	195.34	195.76	125.55	853.74	7,238.07	767.10	435.27	331.83	2.312		
14,800.00	6,592.76	15,071.63	7,038.82	197.77	198.18	125.56	853.47	7,338.04	767.24	431.41	335.83	2.285		
14,900.00	6,595.10	15,171.63	7,041.40	200.20	200.61	125.58	853.20	7,438.01	767.37	427.54	339.83	2.258		
15,000.00	6,597.44	15,271.63	7,043.99	202.62	203.03	125.59	852.94	7,537.97	767.50	423.68	343.82	2.232		
15,100.00	6,599.78	15,371.63	7,046.57	205.05	205.46	125.61	852.67	7,637.94	767.64	419.82	347.82	2.207		
15,200.00	6,602.12	15,471.63	7,049.15	207.48	207.89	125.62	852.40	7,737.90	767.77	415.96	351.81	2.182		
15,300.00	6,604.45	15,571.63	7,051.73	209.91	210.32	125.64	852.14	7,837.87	767.91	412.10	355.81	2.158		

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



## Legacy Directional Drilling Anticollision Report

<b>Company:</b>	Freedom Energy	<b>Local Co-ordinate Reference:</b>	Well Jurnegan BS Fed Com 10H
<b>Project:</b>	Eddy County, NM NAD83	<b>TVD Reference:</b>	GL 3332' + 26.5' KB @ 3358.50usft
<b>Reference Site:</b>	Jurnegan	<b>MD Reference:</b>	GL 3332' + 26.5' KB @ 3358.50usft
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Jurnegan BS Fed Com 10H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH	<b>Database:</b>	EDM_WA
<b>Reference Design:</b>	Plan 5	<b>Offset TVD Reference:</b>	Reference Datum

Offset Design: Jurnegan - Jurnegan BS Fed Com 3H - OH - Plan 4													Offset Site Error: 0.00 usft
Survey Program: 0-MWD													Offset Well Error: 0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance			Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)		
15,400.00	6,606.79	15,671.63	7,054.31	212.34	212.75	125.65	851.87	7,937.84	768.04	408.24	359.80	2.135	
15,500.00	6,609.13	15,771.63	7,056.89	214.77	215.18	125.67	851.60	8,037.80	768.17	404.38	363.79	2.112	
15,600.00	6,611.47	15,871.63	7,059.47	217.20	217.61	125.68	851.33	8,137.77	768.31	400.52	367.79	2.089	
15,700.00	6,613.81	15,971.63	7,062.06	219.63	220.04	125.70	851.07	8,237.73	768.44	396.66	371.78	2.067	
15,800.00	6,616.15	16,071.63	7,064.64	222.06	222.47	125.71	850.80	8,337.70	768.57	392.80	375.78	2.045	
15,900.00	6,618.49	16,171.63	7,067.22	224.49	224.90	125.73	850.53	8,437.67	768.71	388.94	379.77	2.024	
16,000.00	6,620.82	16,271.63	7,069.80	226.92	227.33	125.74	850.27	8,537.63	768.84	385.08	383.76	2.003	
16,100.00	6,623.16	16,371.63	7,072.38	229.36	229.76	125.76	850.00	8,637.60	768.98	381.23	387.75	1.983	Collision Risk Procedures Req.
16,200.00	6,625.50	16,471.63	7,074.96	231.79	232.19	125.77	849.73	8,737.56	769.11	377.37	391.74	1.963	Collision Risk Procedures Req.
16,300.00	6,627.84	16,571.63	7,077.54	234.22	234.63	125.79	849.47	8,837.53	769.25	373.51	395.73	1.944	Collision Risk Procedures Req.
16,400.00	6,630.18	16,671.63	7,080.12	236.66	237.06	125.80	849.20	8,937.50	769.38	369.66	399.72	1.925	Collision Risk Procedures Req.
16,500.00	6,632.52	16,771.63	7,082.71	239.09	239.49	125.82	848.93	9,037.46	769.51	365.80	403.71	1.906	Collision Risk Procedures Req.
16,600.00	6,634.86	16,871.63	7,085.29	241.53	241.93	125.83	848.66	9,137.43	769.65	361.95	407.70	1.888	Collision Risk Procedures Req.
16,700.00	6,637.19	16,971.63	7,087.87	243.96	244.36	125.85	848.40	9,237.39	769.78	358.09	411.69	1.870	Collision Risk Procedures Req.
16,800.00	6,639.53	17,071.63	7,090.45	246.40	246.80	125.86	848.13	9,337.36	769.92	354.24	415.68	1.852	Collision Risk Procedures Req.
16,900.00	6,641.87	17,171.63	7,093.03	248.83	249.23	125.88	847.86	9,437.33	770.05	350.39	419.66	1.835	Collision Risk Procedures Req.
17,000.00	6,644.21	17,271.63	7,095.61	251.27	251.67	125.89	847.60	9,537.29	770.19	346.54	423.65	1.818	Collision Risk Procedures Req.
17,076.45	6,646.00	17,348.08	7,097.59	253.13	253.53	125.91	847.39	9,613.72	770.29	343.59	426.70	1.805	Collision Risk Procedures Req.

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



## Legacy Directional Drilling Anticollision Report

<b>Company:</b>	Freedom Energy	<b>Local Co-ordinate Reference:</b>	Well Jurnegan BS Fed Com 10H
<b>Project:</b>	Eddy County, NM NAD83	<b>TVD Reference:</b>	GL 3332' + 26.5' KB @ 3358.50usft
<b>Reference Site:</b>	Jurnegan	<b>MD Reference:</b>	GL 3332' + 26.5' KB @ 3358.50usft
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Jurnegan BS Fed Com 10H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH	<b>Database:</b>	EDM_WA
<b>Reference Design:</b>	Plan 5	<b>Offset TVD Reference:</b>	Reference Datum

Offset Design: Jurnegan - Jurnegan BS Fed Com 4H - OH - Plan 5													Offset Site Error:	0.00 usft
Survey Program: 0-MWD													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
0.00	0.00	0.00	1.00	0.00	0.00	-51.07	12.87	-15.93	20.51					
100.00	100.00	99.00	100.00	0.26	0.26	-51.07	12.87	-15.93	20.48	19.96	0.52	39.065		
200.00	200.00	199.00	200.00	0.62	0.62	-51.07	12.87	-15.93	20.48	19.24	1.24	16.514		
300.00	300.00	299.00	300.00	0.98	0.98	-51.07	12.87	-15.93	20.48	18.53	1.96	10.465		
400.00	400.00	399.00	400.00	1.34	1.34	-51.07	12.87	-15.93	20.48	17.81	2.67	7.659		
500.00	500.00	499.00	500.00	1.70	1.69	-51.07	12.87	-15.93	20.48	17.09	3.39	6.040		
600.00	600.00	599.00	600.00	2.06	2.05	-51.07	12.87	-15.93	20.48	16.37	4.11	4.986		
700.00	700.00	699.00	700.00	2.41	2.41	-51.07	12.87	-15.93	20.48	15.66	4.83	4.245		
800.00	800.00	799.00	800.00	2.77	2.77	-51.07	12.87	-15.93	20.48	14.94	5.54	3.696		
900.00	900.00	899.00	900.00	3.13	3.13	-51.07	12.87	-15.93	20.48	14.22	6.26	3.273		
1,000.00	1,000.00	999.00	1,000.00	3.49	3.49	-51.07	12.87	-15.93	20.48	13.51	6.98	2.936		
1,100.00	1,100.00	1,099.00	1,100.00	3.85	3.84	-51.07	12.87	-15.93	20.48	12.79	7.69	2.663		
1,200.00	1,199.98	1,198.98	1,199.98	4.21	4.20	-22.60	12.87	-15.93	18.86	10.45	8.41	2.243		
1,300.00	1,299.84	1,298.84	1,299.84	4.56	4.56	-30.80	12.87	-15.93	14.17	5.05	9.12	1.553	Collision Risk Procedures Req.	
1,400.00	1,399.45	1,398.45	1,399.45	4.92	4.92	-64.55	12.87	-15.93	8.03	-1.81	9.84	0.816	Collision Risk Procedures Req.	
1,426.62	1,425.91	1,424.85	1,425.85	5.02	5.01	-85.66	12.81	-16.02	7.37	-2.65	10.03	0.735	Collision Risk Procedures Req., CC, E	
1,500.00	1,498.70	1,497.40	1,498.38	5.29	5.26	-134.30	11.96	-17.31	12.53	1.98	10.54	1.188	Collision Risk Procedures Req.	
1,600.00	1,597.47	1,595.58	1,596.42	5.66	5.59	-150.09	9.19	-21.50	28.39	17.16	11.23	2.528		
1,700.00	1,695.62	1,692.62	1,693.11	6.05	5.92	-152.62	4.63	-28.39	49.56	37.64	11.92	4.158		
1,800.00	1,793.06	1,788.19	1,788.00	6.46	6.25	-152.45	-1.62	-37.83	75.39	62.78	12.61	5.980		
1,900.00	1,889.64	1,881.96	1,880.69	6.90	6.59	-151.55	-9.44	-49.67	105.78	92.48	13.30	7.954		
2,000.00	1,985.27	1,973.67	1,970.84	7.36	6.93	-150.46	-18.71	-63.68	140.63	126.63	13.99	10.050		
2,100.00	2,079.82	2,063.04	2,058.14	7.86	7.28	-149.33	-29.27	-79.64	179.83	165.14	14.69	12.242		
2,200.00	2,173.17	2,149.89	2,142.36	8.39	7.63	-148.23	-40.97	-97.32	223.25	207.86	15.39	14.507		
2,300.00	2,265.21	2,238.26	2,227.73	8.97	8.01	-147.42	-53.57	-116.37	270.04	253.89	16.15	16.720		
2,400.00	2,355.84	2,325.21	2,311.72	9.59	8.40	-147.02	-65.97	-135.12	319.41	302.49	16.93	18.872		
2,500.00	2,445.37	2,411.07	2,394.66	10.25	8.79	-147.25	-78.21	-153.62	370.64	352.93	17.71	20.927		
2,600.00	2,534.84	2,496.87	2,477.55	10.93	9.18	-147.56	-90.45	-172.12	421.97	403.46	18.51	22.801		
2,700.00	2,624.31	2,582.67	2,560.43	11.64	9.59	-147.81	-102.68	-190.62	473.31	453.99	19.32	24.501		
2,800.00	2,713.78	2,668.48	2,643.32	12.35	10.00	-148.01	-114.92	-209.11	524.65	504.50	20.14	26.049		
2,900.00	2,803.25	2,754.28	2,726.21	13.08	10.42	-148.17	-127.15	-227.61	575.99	555.01	20.98	27.460		
3,000.00	2,892.72	2,840.08	2,809.09	13.82	10.84	-148.31	-139.39	-246.10	627.34	605.52	21.82	28.750		
3,100.00	2,982.20	2,925.88	2,891.98	14.57	11.27	-148.42	-151.62	-264.60	678.69	656.01	22.67	29.933		
3,200.00	3,071.67	3,011.68	2,974.87	15.33	11.70	-148.52	-163.86	-283.10	730.04	706.50	23.53	31.020		
3,300.00	3,161.14	3,097.49	3,057.75	16.09	12.13	-148.61	-176.09	-301.59	781.39	756.99	24.40	32.020		
3,400.00	3,250.61	3,183.29	3,140.64	16.86	12.57	-148.69	-188.33	-320.09	832.74	807.46	25.28	32.943		
3,500.00	3,340.08	3,269.09	3,223.53	17.63	13.01	-148.75	-200.56	-338.58	884.10	857.94	26.16	33.796		
3,600.00	3,429.55	3,354.89	3,306.41	18.41	13.45	-148.81	-212.80	-357.08	935.45	908.41	27.05	34.588		
3,700.00	3,519.03	3,440.69	3,389.30	19.19	13.90	-148.86	-225.03	-375.57	986.81	958.87	27.94	35.323		
3,800.00	3,608.50	3,526.50	3,472.19	19.98	14.35	-148.91	-237.27	-394.07	1,038.16	1,009.33	28.83	36.007		
3,900.00	3,697.97	3,612.30	3,555.07	20.76	14.80	-148.96	-249.51	-412.57	1,089.52	1,059.79	29.73	36.646		
4,000.00	3,787.44	3,698.10	3,637.96	21.56	15.25	-149.00	-261.74	-431.06	1,140.88	1,110.24	30.63	37.242		
4,100.00	3,876.91	3,783.90	3,720.85	22.35	15.70	-149.03	-273.98	-449.56	1,192.24	1,160.69	31.54	37.800		
4,200.00	3,966.38	3,869.70	3,803.73	23.14	16.16	-149.07	-286.21	-468.05	1,243.59	1,211.14	32.45	38.323		
4,300.00	4,055.86	3,955.51	3,886.62	23.94	16.61	-149.10	-298.45	-486.55	1,294.95	1,261.59	33.36	38.815		
4,400.00	4,145.33	4,041.31	3,969.51	24.74	17.07	-149.12	-310.68	-505.05	1,346.31	1,312.03	34.28	39.277		
4,500.00	4,234.80	4,127.11	4,052.39	25.54	17.53	-149.15	-322.92	-523.54	1,397.67	1,362.47	35.19	39.713		
4,600.00	4,324.27	4,212.91	4,135.28	26.34	17.99	-149.17	-335.15	-542.04	1,449.03	1,412.91	36.11	40.124		
4,700.00	4,413.74	4,298.72	4,218.17	27.14	18.45	-149.20	-347.39	-560.53	1,500.39	1,463.35	37.04	40.512		
4,800.00	4,503.21	4,384.52	4,301.05	27.94	18.91	-149.22	-359.62	-579.03	1,551.75	1,513.79	37.96	40.879		
4,900.00	4,592.69	4,470.32	4,383.94	28.75	19.37	-149.24	-371.86	-597.53	1,603.10	1,564.22	38.89	41.227		
5,000.00	4,682.23	4,556.20	4,466.90	29.55	19.83	-149.44	-384.10	-616.04	1,654.34	1,614.53	39.81	41.554		

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



## Legacy Directional Drilling Anticollision Report

<b>Company:</b>	Freedom Energy	<b>Local Co-ordinate Reference:</b>	Well Jurnegan BS Fed Com 10H
<b>Project:</b>	Eddy County, NM NAD83	<b>TVD Reference:</b>	GL 3332' + 26.5' KB @ 3358.50usft
<b>Reference Site:</b>	Jurnegan	<b>MD Reference:</b>	GL 3332' + 26.5' KB @ 3358.50usft
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Jurnegan BS Fed Com 10H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH	<b>Database:</b>	EDM_WA
<b>Reference Design:</b>	Plan 5	<b>Offset TVD Reference:</b>	Reference Datum

<b>Offset Design:</b> Jurnegan - Jurnegan BS Fed Com 4H - OH - Plan 5													<b>Offset Site Error:</b> 0.00 usft
<b>Survey Program:</b> 0-MWD													<b>Offset Well Error:</b> 0.00 usft
Reference		Offset		Semi Major Axis			Offset Wellbore Centre		Distance				Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
5,100.00	4,772.93	4,643.22	4,550.96	30.32	20.30	-149.97	-396.51	-634.80	1,703.59	1,662.85	40.74	41.816	
5,200.00	4,865.04	4,731.65	4,636.39	31.04	20.78	-150.40	-409.12	-653.86	1,750.19	1,708.52	41.67	42.004	
5,300.00	4,958.45	4,821.38	4,723.08	31.72	21.27	-150.72	-421.92	-673.20	1,794.09	1,751.49	42.59	42.120	
5,400.00	5,053.05	4,912.31	4,810.92	32.35	21.76	-150.95	-434.88	-692.80	1,835.25	1,791.73	43.52	42.171	
5,500.00	5,148.73	5,004.33	4,899.80	32.94	22.26	-151.10	-448.01	-712.64	1,873.64	1,829.20	44.44	42.162	

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



## Legacy Directional Drilling Anticollision Report

<b>Company:</b>	Freedom Energy	<b>Local Co-ordinate Reference:</b>	Well Jurnegan BS Fed Com 10H
<b>Project:</b>	Eddy County, NM NAD83	<b>TVD Reference:</b>	GL 3332' + 26.5' KB @ 3358.50usft
<b>Reference Site:</b>	Jurnegan	<b>MD Reference:</b>	GL 3332' + 26.5' KB @ 3358.50usft
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Jurnegan BS Fed Com 10H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH	<b>Database:</b>	EDM_WA
<b>Reference Design:</b>	Plan 5	<b>Offset TVD Reference:</b>	Reference Datum

Offset Design: Jurnegan - Jurnegan BS Fed Com 6H - OH - Plan 3													Offset Site Error: 0.00 usft
Survey Program: 0-MWD													Offset Well Error: 0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
4,000.00	3,787.44	4,224.73	4,150.19	21.56	18.74	31.51	2,717.62	-646.84	1,891.25	1,859.16	32.10	58.924	
4,100.00	3,876.91	4,306.69	4,229.97	22.35	19.16	31.86	2,701.29	-656.09	1,834.74	1,801.80	32.93	55.712	
4,200.00	3,966.38	4,388.65	4,309.76	23.14	19.58	32.23	2,684.95	-665.34	1,778.27	1,744.50	33.77	52.652	
4,300.00	4,055.86	4,470.61	4,389.54	23.94	20.00	32.62	2,668.62	-674.58	1,721.86	1,687.24	34.62	49.732	
4,400.00	4,145.33	4,552.58	4,469.33	24.74	20.42	33.04	2,652.29	-683.83	1,665.51	1,630.03	35.48	46.945	
4,500.00	4,234.80	4,634.54	4,549.11	25.54	20.84	33.49	2,635.96	-693.08	1,609.22	1,572.88	36.34	44.283	
4,600.00	4,324.27	4,716.50	4,628.90	26.34	21.26	33.97	2,619.63	-702.33	1,553.01	1,515.80	37.21	41.736	
4,700.00	4,413.74	4,798.46	4,708.68	27.14	21.68	34.49	2,603.30	-711.57	1,496.88	1,458.79	38.09	39.299	
4,800.00	4,503.21	4,880.42	4,788.46	27.94	22.10	35.05	2,586.96	-720.82	1,440.84	1,401.86	38.98	36.966	
4,900.00	4,592.69	4,962.38	4,868.25	28.75	22.52	35.64	2,570.63	-730.07	1,384.91	1,345.03	39.88	34.729	
5,000.00	4,682.23	5,044.44	4,948.12	29.55	22.94	36.04	2,554.28	-739.32	1,329.20	1,288.41	40.79	32.589	
5,100.00	4,772.93	5,127.88	5,029.35	30.32	23.37	35.91	2,537.66	-748.74	1,275.41	1,233.72	41.70	30.588	
5,200.00	4,865.04	5,213.07	5,112.28	31.04	23.81	35.77	2,520.68	-758.35	1,224.13	1,181.53	42.60	28.737	
5,300.00	4,958.45	5,299.91	5,196.80	31.72	24.25	35.62	2,503.38	-768.15	1,175.38	1,131.90	43.49	27.029	
5,400.00	5,053.05	5,388.27	5,282.82	32.35	24.71	35.43	2,485.77	-778.11	1,129.19	1,084.83	44.36	25.455	
5,500.00	5,148.73	5,478.06	5,370.22	32.94	25.17	35.21	2,467.88	-788.24	1,085.58	1,040.37	45.21	24.011	
5,600.00	5,245.36	5,569.17	5,458.91	33.48	25.63	34.94	2,449.73	-798.52	1,044.58	998.54	46.04	22.688	
5,700.00	5,342.82	5,661.48	5,548.77	33.97	26.11	34.61	2,431.33	-808.94	1,006.21	959.37	46.84	21.482	
5,800.00	5,441.01	5,754.89	5,639.69	34.41	26.59	34.20	2,412.72	-819.48	970.52	922.91	47.61	20.385	
5,900.00	5,539.80	5,849.27	5,731.57	34.81	27.07	33.71	2,393.91	-830.12	937.54	889.19	48.34	19.393	
6,000.00	5,639.07	5,944.52	5,824.29	35.17	27.56	33.12	2,374.93	-840.87	907.32	858.27	49.04	18.500	
6,100.00	5,738.70	6,040.52	5,917.74	35.48	28.06	32.43	2,355.80	-851.70	879.92	830.22	49.71	17.702	
6,200.00	5,838.57	6,137.15	6,011.80	35.75	28.56	31.63	2,336.55	-862.60	855.43	805.09	50.34	16.994	
6,300.00	5,938.55	6,221.45	6,093.96	35.97	28.98	-89.78	2,320.12	-871.90	834.40	783.36	51.04	16.348	
6,400.00	6,037.71	6,300.00	6,170.94	36.12	29.36	-93.06	2,306.56	-879.58	817.26	765.67	51.60	15.840	
6,500.00	6,132.33	6,371.09	6,240.97	36.18	29.68	-96.65	2,295.87	-885.64	804.57	752.67	51.90	15.503	
6,600.00	6,218.28	6,437.19	6,306.32	36.16	29.97	-100.02	2,287.29	-890.50	799.12	747.08	52.04	15.355	
6,607.74	6,224.46	6,441.94	6,311.03	36.16	29.99	-100.25	2,286.72	-890.82	799.09	747.03	52.05	15.351	CC, ES
6,700.00	6,291.79	6,500.00	6,368.62	36.09	30.23	-102.73	2,280.35	-894.42	803.97	751.77	52.20	15.401	
6,800.00	6,349.66	6,537.92	6,406.32	35.98	30.37	-102.94	2,276.74	-896.47	821.51	768.82	52.70	15.590	
6,900.00	6,389.36	6,567.59	6,435.84	35.85	30.48	-101.03	2,274.22	-897.90	852.89	799.36	53.53	15.933	
7,000.00	6,409.14	6,580.77	6,448.96	35.70	30.53	-96.10	2,273.18	-898.48	897.18	842.49	54.69	16.404	
7,100.00	6,412.70	6,580.09	6,448.29	35.55	30.53	-93.59	2,273.23	-898.45	951.52	895.50	56.02	16.985	
7,200.00	6,415.03	6,578.32	6,446.52	35.44	30.52	-93.46	2,273.37	-898.38	1,012.91	955.48	57.42	17.640	
7,300.00	6,417.37	6,576.49	6,444.70	35.38	30.52	-93.33	2,273.51	-898.30	1,080.07	1,021.29	58.78	18.374	
7,400.00	6,419.71	6,574.60	6,442.82	35.38	30.51	-93.19	2,273.66	-898.21	1,152.01	1,091.98	60.04	19.188	
7,500.00	6,422.05	6,572.65	6,440.88	35.49	30.50	-93.04	2,273.81	-898.12	1,227.89	1,166.72	61.17	20.074	
7,600.00	6,424.39	6,570.64	6,438.88	35.78	30.49	-92.90	2,273.97	-898.03	1,307.01	1,244.84	62.17	21.023	
7,700.00	6,426.73	6,568.57	6,436.81	36.40	30.49	-92.74	2,274.14	-897.94	1,388.82	1,325.77	63.05	22.028	
7,800.00	6,429.07	6,566.42	6,434.68	37.43	30.48	-92.58	2,274.31	-897.84	1,472.87	1,409.05	63.82	23.079	
7,900.00	6,431.40	8,902.05	7,653.56	38.81	39.31	-144.96	2,353.84	432.09	1,492.94	1,441.55	51.39	29.052	
8,000.00	6,433.74	9,002.05	7,655.91	40.41	41.02	-144.98	2,352.95	532.06	1,492.59	1,438.99	53.60	27.848	
8,100.00	6,436.08	9,102.04	7,658.25	42.15	42.81	-145.00	2,352.06	632.02	1,492.25	1,436.36	55.89	26.700	
8,200.00	6,438.42	9,202.04	7,660.60	43.98	44.66	-145.02	2,351.17	731.99	1,491.90	1,433.65	58.25	25.612	
8,300.00	6,440.76	9,302.04	7,662.95	45.89	46.57	-145.04	2,350.28	831.95	1,491.56	1,430.88	60.67	24.584	
8,400.00	6,443.10	9,402.04	7,665.29	47.86	48.52	-145.06	2,349.39	931.92	1,491.21	1,428.06	63.15	23.614	
8,500.00	6,445.43	9,502.04	7,667.64	49.87	50.52	-145.08	2,348.50	1,031.89	1,490.87	1,425.19	65.67	22.701	
8,600.00	6,447.77	9,602.03	7,669.98	51.93	52.55	-145.10	2,347.61	1,131.85	1,490.52	1,422.28	68.24	21.842	
8,700.00	6,450.11	9,702.03	7,672.33	54.01	54.62	-145.12	2,346.72	1,231.82	1,490.18	1,419.33	70.84	21.035	
8,800.00	6,452.45	9,802.03	7,674.68	56.13	56.72	-145.14	2,345.84	1,331.79	1,489.83	1,416.35	73.48	20.276	
8,900.00	6,454.79	9,902.03	7,677.02	58.28	58.84	-145.16	2,344.95	1,431.75	1,489.49	1,413.34	76.14	19.561	
9,000.00	6,457.13	10,002.03	7,679.37	60.45	60.99	-145.18	2,344.06	1,531.72	1,489.14	1,410.31	78.84	18.889	

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



## Legacy Directional Drilling Anticollision Report

<b>Company:</b>	Freedom Energy	<b>Local Co-ordinate Reference:</b>	Well Jurnegan BS Fed Com 10H
<b>Project:</b>	Eddy County, NM NAD83	<b>TVD Reference:</b>	GL 3332' + 26.5' KB @ 3358.50usft
<b>Reference Site:</b>	Jurnegan	<b>MD Reference:</b>	GL 3332' + 26.5' KB @ 3358.50usft
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Jurnegan BS Fed Com 10H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH	<b>Database:</b>	EDM_WA
<b>Reference Design:</b>	Plan 5	<b>Offset TVD Reference:</b>	Reference Datum

Offset Design: Jurnegan - Jurnegan BS Fed Com 6H - OH - Plan 3													Offset Site Error: 0.00 usft
Survey Program: 0-MWD													Offset Well Error: 0.00 usft
Reference		Offset		Semi Major Axis			Offset Wellbore Centre		Distance			Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)		
9,100.00	6,459.47	10,102.02	7,681.71	62.63	63.16	-145.20	2,343.17	1,631.69	1,488.80	1,407.25	81.55	18.256	
9,200.00	6,461.80	10,202.02	7,684.06	64.84	65.35	-145.22	2,342.28	1,731.65	1,488.46	1,404.17	84.29	17.660	
9,300.00	6,464.14	10,302.02	7,686.41	67.07	67.56	-145.24	2,341.39	1,831.62	1,488.11	1,401.07	87.04	17.097	
9,400.00	6,466.48	10,402.02	7,688.75	69.31	69.79	-145.25	2,340.50	1,931.59	1,487.77	1,397.96	89.81	16.566	
9,500.00	6,468.82	10,502.02	7,691.10	71.56	72.03	-145.27	2,339.61	2,031.55	1,487.43	1,394.83	92.59	16.064	
9,600.00	6,471.16	10,602.01	7,693.44	73.82	74.28	-145.29	2,338.72	2,131.52	1,487.08	1,391.69	95.39	15.589	
9,700.00	6,473.50	10,702.01	7,695.79	76.10	76.54	-145.31	2,337.83	2,231.49	1,486.74	1,388.54	98.20	15.139	
9,800.00	6,475.84	10,802.01	7,698.14	78.39	78.82	-145.33	2,336.94	2,331.45	1,486.40	1,385.37	101.03	14.713	
9,900.00	6,478.17	10,902.01	7,700.48	80.68	81.11	-145.35	2,336.05	2,431.42	1,486.06	1,382.20	103.86	14.308	
10,000.00	6,480.51	11,002.01	7,702.83	82.99	83.40	-145.37	2,335.16	2,531.39	1,485.71	1,379.01	106.70	13.924	
10,100.00	6,482.85	11,102.01	7,705.17	85.30	85.71	-145.39	2,334.27	2,631.35	1,485.37	1,375.82	109.55	13.559	
10,200.00	6,485.19	11,202.00	7,707.52	87.62	88.02	-145.41	2,333.38	2,731.32	1,485.03	1,372.63	112.40	13.212	
10,300.00	6,487.53	11,302.00	7,709.87	89.95	90.34	-145.43	2,332.49	2,831.29	1,484.69	1,369.42	115.27	12.880	
10,400.00	6,489.87	11,402.00	7,712.21	92.28	92.66	-145.45	2,331.60	2,931.25	1,484.35	1,366.21	118.13	12.565	
10,500.00	6,492.21	11,502.00	7,714.56	94.62	95.00	-145.47	2,330.71	3,031.22	1,484.00	1,363.00	121.01	12.264	
10,600.00	6,494.54	11,602.00	7,716.90	96.97	97.34	-145.49	2,329.82	3,131.19	1,483.66	1,359.78	123.89	11.976	
10,700.00	6,496.88	11,701.99	7,719.25	99.32	99.68	-145.51	2,328.93	3,231.15	1,483.32	1,356.55	126.77	11.701	
10,800.00	6,499.22	11,801.99	7,721.60	101.67	102.03	-145.53	2,328.04	3,331.12	1,482.98	1,353.33	129.66	11.438	
10,900.00	6,501.56	11,901.99	7,723.94	104.03	104.38	-145.55	2,327.15	3,431.09	1,482.64	1,350.09	132.55	11.186	
11,000.00	6,503.90	12,001.99	7,726.29	106.39	106.74	-145.57	2,326.26	3,531.05	1,482.30	1,346.86	135.44	10.944	
11,100.00	6,506.24	12,101.99	7,728.63	108.76	109.10	-145.59	2,325.37	3,631.02	1,481.96	1,343.62	138.33	10.713	
11,200.00	6,508.58	12,201.98	7,730.98	111.13	111.47	-145.61	2,324.48	3,730.99	1,481.62	1,340.39	141.23	10.491	
11,300.00	6,510.91	12,301.98	7,733.33	113.50	113.84	-145.63	2,323.59	3,830.95	1,481.28	1,337.15	144.13	10.277	
11,400.00	6,513.25	12,401.98	7,735.67	115.88	116.21	-145.65	2,322.70	3,930.92	1,480.94	1,333.90	147.03	10.072	
11,500.00	6,515.59	12,501.98	7,738.02	118.26	118.59	-145.67	2,321.81	4,030.89	1,480.60	1,330.66	149.94	9.875	
11,600.00	6,517.93	12,601.98	7,740.36	120.64	120.97	-145.69	2,320.92	4,130.85	1,480.26	1,327.42	152.84	9.685	
11,700.00	6,520.27	12,701.98	7,742.71	123.03	123.35	-145.71	2,320.03	4,230.82	1,479.92	1,324.17	155.75	9.502	
11,800.00	6,522.61	12,801.97	7,745.06	125.42	125.74	-145.73	2,319.14	4,330.79	1,479.58	1,320.92	158.66	9.326	
11,900.00	6,524.94	12,901.97	7,747.40	127.81	128.12	-145.75	2,318.25	4,430.75	1,479.24	1,317.68	161.56	9.156	
12,000.00	6,527.28	13,001.97	7,749.75	130.20	130.51	-145.77	2,317.36	4,530.72	1,478.90	1,314.43	164.47	8.992	
12,100.00	6,529.62	13,101.97	7,752.09	132.59	132.91	-145.79	2,316.47	4,630.69	1,478.56	1,311.18	167.38	8.833	
12,200.00	6,531.96	13,201.97	7,754.44	134.99	135.30	-145.81	2,315.58	4,730.65	1,478.23	1,307.93	170.29	8.681	
12,300.00	6,534.30	13,301.96	7,756.79	137.39	137.70	-145.83	2,314.69	4,830.62	1,477.89	1,304.69	173.20	8.533	
12,400.00	6,536.64	13,401.96	7,759.13	139.79	140.09	-145.85	2,313.80	4,930.59	1,477.55	1,301.44	176.11	8.390	
12,500.00	6,538.98	13,501.96	7,761.48	142.19	142.49	-145.87	2,312.91	5,030.55	1,477.21	1,298.19	179.02	8.252	
12,600.00	6,541.31	13,601.96	7,763.82	144.59	144.90	-145.89	2,312.02	5,130.52	1,476.87	1,294.94	181.93	8.118	
12,700.00	6,543.65	13,701.96	7,766.17	147.00	147.30	-145.91	2,311.13	5,230.49	1,476.54	1,291.70	184.84	7.988	
12,800.00	6,545.99	13,801.95	7,768.52	149.41	149.71	-145.93	2,310.24	5,330.45	1,476.20	1,288.45	187.75	7.863	
12,900.00	6,548.33	13,901.95	7,770.86	151.81	152.11	-145.95	2,309.35	5,430.42	1,475.86	1,285.20	190.66	7.741	
13,000.00	6,550.67	14,001.95	7,773.21	154.22	154.52	-145.97	2,308.46	5,530.39	1,475.53	1,281.96	193.57	7.623	
13,100.00	6,553.01	14,101.95	7,775.55	156.63	156.93	-145.99	2,307.57	5,630.35	1,475.19	1,278.72	196.47	7.508	
13,200.00	6,555.35	14,201.95	7,777.90	159.05	159.34	-146.01	2,306.68	5,730.32	1,474.85	1,275.47	199.38	7.397	
13,300.00	6,557.68	14,301.95	7,780.25	161.46	161.75	-146.02	2,305.79	5,830.29	1,474.51	1,272.23	202.29	7.289	
13,400.00	6,560.02	14,401.94	7,782.59	163.87	164.17	-146.04	2,304.90	5,930.25	1,474.18	1,268.99	205.19	7.184	
13,500.00	6,562.36	14,501.94	7,784.94	166.29	166.58	-146.06	2,304.01	6,030.22	1,473.84	1,265.75	208.09	7.083	
13,600.00	6,564.70	14,601.94	7,787.28	168.70	169.00	-146.08	2,303.12	6,130.19	1,473.51	1,262.51	211.00	6.984	
13,700.00	6,567.04	14,701.94	7,789.63	171.12	171.41	-146.10	2,302.23	6,230.15	1,473.17	1,259.27	213.90	6.887	
13,800.00	6,569.38	14,801.94	7,791.98	173.54	173.83	-146.12	2,301.34	6,330.12	1,472.84	1,256.03	216.80	6.794	
13,900.00	6,571.72	14,901.93	7,794.32	175.96	176.25	-146.14	2,300.45	6,430.09	1,472.50	1,252.80	219.70	6.702	
14,000.00	6,574.05	15,001.93	7,796.67	178.38	178.67	-146.16	2,299.56	6,530.05	1,472.16	1,249.57	222.60	6.614	
14,100.00	6,576.39	15,101.93	7,799.01	180.80	181.09	-146.18	2,298.67	6,630.02	1,471.83	1,246.33	225.50	6.527	
14,200.00	6,578.73	15,201.93	7,801.36	183.22	183.51	-146.20	2,297.78	6,729.99	1,471.49	1,243.10	228.39	6.443	

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



## Legacy Directional Drilling Anticollision Report

<b>Company:</b>	Freedom Energy	<b>Local Co-ordinate Reference:</b>	Well Jurnegan BS Fed Com 10H
<b>Project:</b>	Eddy County, NM NAD83	<b>TVD Reference:</b>	GL 3332' + 26.5' KB @ 3358.50usft
<b>Reference Site:</b>	Jurnegan	<b>MD Reference:</b>	GL 3332' + 26.5' KB @ 3358.50usft
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Jurnegan BS Fed Com 10H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH	<b>Database:</b>	EDM_WA
<b>Reference Design:</b>	Plan 5	<b>Offset TVD Reference:</b>	Reference Datum

Offset Design: Jurnegan - Jurnegan BS Fed Com 6H - OH - Plan 3												Offset Site Error: 0.00 usft	
Survey Program: 0-MWD											Offset Well Error: 0.00 usft		
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
14,300.00	6,581.07	15,301.93	7,803.71	185.64	185.93	-146.22	2,296.89	6,829.95	1,471.16	1,239.87	231.29	6.361	
14,400.00	6,583.41	15,401.92	7,806.05	188.07	188.36	-146.24	2,296.00	6,929.92	1,470.83	1,236.64	234.18	6.281	
14,500.00	6,585.75	15,501.92	7,808.40	190.49	190.78	-146.26	2,295.11	7,029.89	1,470.49	1,233.42	237.07	6.203	
14,600.00	6,588.09	15,601.92	7,810.74	192.92	193.20	-146.28	2,294.22	7,129.85	1,470.16	1,230.19	239.96	6.127	
14,700.00	6,590.42	15,701.92	7,813.09	195.34	195.63	-146.30	2,293.33	7,229.82	1,469.82	1,226.97	242.85	6.052	
14,800.00	6,592.76	15,801.92	7,815.44	197.77	198.06	-146.32	2,292.44	7,329.79	1,469.49	1,223.75	245.74	5.980	
14,900.00	6,595.10	15,901.92	7,817.78	200.20	200.48	-146.34	2,291.55	7,429.75	1,469.16	1,220.53	248.63	5.909	
15,000.00	6,597.44	16,001.91	7,820.13	202.62	202.91	-146.36	2,290.66	7,529.72	1,468.82	1,217.31	251.51	5.840	
15,100.00	6,599.78	16,101.91	7,822.47	205.05	205.34	-146.39	2,289.77	7,629.69	1,468.49	1,214.10	254.39	5.773	
15,200.00	6,602.12	16,201.91	7,824.82	207.48	207.77	-146.41	2,288.88	7,729.65	1,468.16	1,210.88	257.27	5.707	
15,300.00	6,604.45	16,301.91	7,827.17	209.91	210.19	-146.43	2,288.00	7,829.62	1,467.82	1,207.67	260.15	5.642	
15,400.00	6,606.79	16,401.91	7,829.51	212.34	212.62	-146.45	2,287.11	7,929.59	1,467.49	1,204.46	263.03	5.579	
15,500.00	6,609.13	16,501.90	7,831.86	214.77	215.05	-146.47	2,286.22	8,029.55	1,467.16	1,201.25	265.91	5.518	
15,600.00	6,611.47	16,601.90	7,834.20	217.20	217.49	-146.49	2,285.33	8,129.52	1,466.82	1,198.04	268.78	5.457	
15,700.00	6,613.81	16,701.90	7,836.55	219.63	219.92	-146.51	2,284.44	8,229.49	1,466.49	1,194.84	271.65	5.398	
15,800.00	6,616.15	16,801.90	7,838.90	222.06	222.35	-146.53	2,283.55	8,329.45	1,466.16	1,191.64	274.53	5.341	
15,900.00	6,618.49	16,901.90	7,841.24	224.49	224.78	-146.55	2,282.66	8,429.42	1,465.83	1,188.43	277.39	5.284	
16,000.00	6,620.82	17,001.89	7,843.59	226.92	227.21	-146.57	2,281.77	8,529.39	1,465.50	1,185.24	280.26	5.229	
16,100.00	6,623.16	17,101.89	7,845.93	229.36	229.64	-146.59	2,280.88	8,629.35	1,465.17	1,182.04	283.13	5.175	
16,200.00	6,625.50	17,201.89	7,848.28	231.79	232.08	-146.61	2,279.99	8,729.32	1,464.83	1,178.84	285.99	5.122	
16,300.00	6,627.84	17,301.89	7,850.63	234.22	234.51	-146.63	2,279.10	8,829.29	1,464.50	1,175.65	288.85	5.070	
16,400.00	6,630.18	17,401.89	7,852.97	236.66	236.95	-146.65	2,278.21	8,929.25	1,464.17	1,172.46	291.71	5.019	
16,500.00	6,632.52	17,501.89	7,855.32	239.09	239.38	-146.67	2,277.32	9,029.22	1,463.84	1,169.27	294.57	4.969	
16,600.00	6,634.86	17,601.88	7,857.66	241.53	241.82	-146.69	2,276.43	9,129.19	1,463.51	1,166.08	297.43	4.921	
16,700.00	6,637.19	17,701.88	7,860.01	243.96	244.25	-146.71	2,275.54	9,229.15	1,463.18	1,162.90	300.28	4.873	
16,800.00	6,639.53	17,801.88	7,862.36	246.40	246.69	-146.73	2,274.65	9,329.12	1,462.85	1,159.72	303.13	4.826	
16,900.00	6,641.87	17,901.88	7,864.70	248.83	249.12	-146.75	2,273.76	9,429.09	1,462.52	1,156.54	305.98	4.780	
17,000.00	6,644.21	18,001.88	7,867.05	251.27	251.56	-146.77	2,272.87	9,529.05	1,462.19	1,153.36	308.83	4.735	
17,076.45	6,646.00	18,078.32	7,868.84	253.13	253.42	-146.78	2,272.19	9,605.48	1,461.94	1,150.93	311.01	4.701 SF	

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



## Legacy Directional Drilling Anticollision Report

<b>Company:</b>	Freedom Energy	<b>Local Co-ordinate Reference:</b>	Well Jurnegan BS Fed Com 10H
<b>Project:</b>	Eddy County, NM NAD83	<b>TVD Reference:</b>	GL 3332' + 26.5' KB @ 3358.50usft
<b>Reference Site:</b>	Jurnegan	<b>MD Reference:</b>	GL 3332' + 26.5' KB @ 3358.50usft
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Jurnegan BS Fed Com 10H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH	<b>Database:</b>	EDM_WA
<b>Reference Design:</b>	Plan 5	<b>Offset TVD Reference:</b>	Reference Datum

Offset Design: Jurnegan - Jurnegan BS Fed Com 9H - OH - Plan 1													Offset Site Error: 0.00 usft
Survey Program: 0-MWD													Offset Well Error: 0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
5,100.00	4,772.93	4,881.40	4,830.73	30.32	19.93	31.49	3,181.08	-803.84	1,894.30	1,852.08	42.22	44.866	
5,200.00	4,865.04	4,974.33	4,922.09	31.04	20.35	31.14	3,177.85	-820.54	1,857.42	1,814.27	43.16	43.039	
5,300.00	4,958.45	5,068.34	5,014.51	31.72	20.78	30.78	3,174.59	-837.43	1,823.34	1,779.27	44.07	41.372	
5,400.00	5,053.05	5,162.24	5,106.84	32.35	21.22	30.40	3,171.34	-854.28	1,792.10	1,747.13	44.96	39.857	
5,500.00	5,148.73	5,249.21	5,192.61	32.94	21.60	30.06	3,168.62	-868.33	1,764.03	1,718.20	45.82	38.499	
5,600.00	5,245.36	5,337.17	5,279.77	33.48	21.97	29.79	3,166.38	-879.93	1,739.36	1,692.71	46.65	37.287	
5,700.00	5,342.82	5,425.97	5,368.09	33.97	22.32	29.60	3,164.64	-888.97	1,718.14	1,670.70	47.44	36.216	
5,800.00	5,441.01	5,515.44	5,457.32	34.41	22.65	29.49	3,163.40	-895.36	1,700.40	1,652.20	48.20	35.278	
5,900.00	5,539.80	5,605.39	5,547.18	34.81	22.95	29.46	3,162.70	-899.02	1,686.19	1,637.27	48.92	34.466	
6,000.00	5,639.07	5,697.28	5,639.07	35.17	23.24	29.50	3,162.51	-899.96	1,675.53	1,625.92	49.60	33.777	
6,100.00	5,738.70	5,796.91	5,738.70	35.48	23.54	29.57	3,162.51	-899.96	1,668.08	1,617.83	50.25	33.195	
6,200.00	5,838.57	5,897.92	5,839.71	35.75	23.84	29.63	3,162.51	-899.65	1,663.67	1,612.80	50.87	32.707	
6,300.00	5,938.55	6,002.35	5,943.19	35.97	24.06	-90.44	3,162.41	-886.77	1,662.08	1,610.64	51.44	32.312	
6,400.00	6,037.71	6,102.71	6,038.87	36.12	24.20	-89.81	3,162.17	-856.92	1,661.88	1,610.00	51.89	32.030	
6,500.00	6,132.33	6,200.73	6,125.91	36.18	24.29	-89.32	3,161.81	-812.09	1,661.76	1,609.60	52.15	31.863	
6,600.00	6,218.28	6,297.07	6,202.79	36.16	24.36	-88.96	3,161.35	-754.22	1,661.61	1,609.30	52.31	31.766	
6,700.00	6,291.79	6,392.32	6,268.22	36.09	24.46	-88.76	3,160.80	-685.16	1,661.37	1,608.92	52.45	31.673	
6,800.00	6,349.66	6,487.01	6,321.05	35.98	24.63	-88.72	3,160.17	-606.71	1,660.99	1,608.29	52.71	31.514	
6,900.00	6,389.36	6,581.66	6,360.24	35.85	24.92	-88.84	3,159.48	-520.67	1,660.48	1,607.31	53.17	31.227	
7,000.00	6,409.14	6,676.78	6,384.83	35.70	25.36	-89.12	3,158.75	-428.90	1,659.87	1,605.95	53.92	30.784	
7,100.00	6,412.70	6,773.32	6,394.00	35.55	25.96	-89.35	3,157.98	-332.90	1,659.27	1,604.29	54.98	30.180	
7,200.00	6,415.03	6,873.32	6,396.57	35.44	26.79	-89.35	3,157.19	-232.94	1,658.74	1,602.25	56.49	29.362	
7,300.00	6,417.37	6,973.32	6,399.14	35.38	27.79	-89.36	3,156.39	-132.98	1,658.22	1,599.85	58.36	28.412	
7,400.00	6,419.71	7,073.32	6,401.71	35.38	28.98	-89.37	3,155.59	-33.02	1,657.69	1,597.12	60.57	27.366	
7,500.00	6,422.05	7,173.32	6,404.29	35.49	30.32	-89.38	3,154.79	66.94	1,657.17	1,594.08	63.09	26.267	
7,600.00	6,424.39	7,273.32	6,406.86	35.78	31.79	-89.39	3,153.99	166.91	1,656.64	1,590.77	65.87	25.149	
7,700.00	6,426.73	7,373.31	6,409.43	36.40	33.38	-89.39	3,153.19	266.87	1,656.12	1,587.23	68.89	24.039	
7,800.00	6,429.07	7,473.31	6,412.00	37.43	35.07	-89.40	3,152.40	366.83	1,655.59	1,583.48	72.12	22.957	
7,900.00	6,431.40	7,573.31	6,414.58	38.81	36.84	-89.41	3,151.60	466.79	1,655.07	1,579.54	75.53	21.914	
8,000.00	6,433.74	7,673.31	6,417.15	40.41	38.69	-89.42	3,150.80	566.76	1,654.55	1,575.46	79.09	20.920	
8,100.00	6,436.08	7,773.31	6,419.72	42.15	40.60	-89.43	3,150.00	666.72	1,654.02	1,571.23	82.79	19.978	
8,200.00	6,438.42	7,873.31	6,422.29	43.98	42.57	-89.43	3,149.20	766.68	1,653.50	1,566.89	86.61	19.091	
8,300.00	6,440.76	7,973.30	6,424.87	45.89	44.59	-89.44	3,148.40	866.64	1,652.97	1,562.44	90.53	18.258	
8,400.00	6,443.10	8,073.30	6,427.44	47.86	46.65	-89.45	3,147.60	966.60	1,652.45	1,557.90	94.55	17.477	
8,500.00	6,445.43	8,173.30	6,430.01	49.87	48.74	-89.46	3,146.81	1,066.57	1,651.93	1,553.28	98.65	16.746	
8,600.00	6,447.77	8,273.30	6,432.58	51.93	50.87	-89.47	3,146.01	1,166.53	1,651.40	1,548.59	102.81	16.062	
8,700.00	6,450.11	8,373.30	6,435.16	54.01	53.02	-89.47	3,145.21	1,266.49	1,650.88	1,543.84	107.04	15.423	
8,800.00	6,452.45	8,473.30	6,437.73	56.13	55.20	-89.48	3,144.41	1,366.45	1,650.35	1,539.03	111.32	14.825	
8,900.00	6,454.79	8,573.29	6,440.30	58.28	57.41	-89.49	3,143.61	1,466.41	1,649.83	1,534.17	115.66	14.265	
9,000.00	6,457.13	8,673.29	6,442.87	60.45	59.63	-89.50	3,142.81	1,566.38	1,649.31	1,529.27	120.03	13.740	
9,100.00	6,459.47	8,773.29	6,445.45	62.63	61.87	-89.51	3,142.01	1,666.34	1,648.78	1,524.33	124.45	13.248	
9,200.00	6,461.80	8,873.29	6,448.02	64.84	64.12	-89.51	3,141.22	1,766.30	1,648.26	1,519.36	128.90	12.787	
9,300.00	6,464.14	8,973.29	6,450.59	67.07	66.39	-89.52	3,140.42	1,866.26	1,647.73	1,514.35	133.38	12.353	
9,400.00	6,466.48	9,073.29	6,453.16	69.31	68.67	-89.53	3,139.62	1,966.22	1,647.21	1,509.31	137.90	11.945	
9,500.00	6,468.82	9,173.28	6,455.74	71.56	70.96	-89.54	3,138.82	2,066.19	1,646.69	1,504.25	142.43	11.561	
9,600.00	6,471.16	9,273.28	6,458.31	73.82	73.26	-89.55	3,138.02	2,166.15	1,646.16	1,499.17	147.00	11.199	
9,700.00	6,473.50	9,373.28	6,460.88	76.10	75.58	-89.55	3,137.22	2,266.11	1,645.64	1,494.06	151.58	10.857	
9,800.00	6,475.84	9,473.28	6,463.45	78.39	77.90	-89.56	3,136.42	2,366.07	1,645.11	1,488.93	156.18	10.533	
9,900.00	6,478.17	9,573.28	6,466.02	80.68	80.23	-89.57	3,135.63	2,466.03	1,644.59	1,483.79	160.80	10.228	
10,000.00	6,480.51	9,673.28	6,468.60	82.99	82.56	-89.58	3,134.83	2,566.00	1,644.07	1,478.63	165.44	9.938	
10,100.00	6,482.85	9,773.27	6,471.17	85.30	84.90	-89.59	3,134.03	2,665.96	1,643.54	1,473.46	170.09	9.663	
10,200.00	6,485.19	9,873.27	6,473.74	87.62	87.25	-89.59	3,133.23	2,765.92	1,643.02	1,468.27	174.75	9.402	

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



## Legacy Directional Drilling Anticollision Report

<b>Company:</b>	Freedom Energy	<b>Local Co-ordinate Reference:</b>	Well Jurnegan BS Fed Com 10H
<b>Project:</b>	Eddy County, NM NAD83	<b>TVD Reference:</b>	GL 3332' + 26.5' KB @ 3358.50usft
<b>Reference Site:</b>	Jurnegan	<b>MD Reference:</b>	GL 3332' + 26.5' KB @ 3358.50usft
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Jurnegan BS Fed Com 10H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH	<b>Database:</b>	EDM_WA
<b>Reference Design:</b>	Plan 5	<b>Offset TVD Reference:</b>	Reference Datum

Offset Design: Jurnegan - Jurnegan BS Fed Com 9H - OH - Plan 1													Offset Site Error:	0.00 usft
Survey Program: 0-MWD													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
10,300.00	6,487.53	9,973.27	6,476.31	89.95	89.60	-89.60	3,132.43	2,865.88	1,642.50	1,463.07	179.43	9.154		
10,400.00	6,489.87	10,073.27	6,478.89	92.28	91.96	-89.61	3,131.63	2,965.85	1,641.97	1,457.85	184.12	8.918		
10,500.00	6,492.21	10,173.27	6,481.46	94.62	94.33	-89.62	3,130.83	3,065.81	1,641.45	1,452.63	188.82	8.693		
10,600.00	6,494.54	10,273.27	6,484.03	96.97	96.69	-89.63	3,130.04	3,165.77	1,640.93	1,447.40	193.53	8.479		
10,700.00	6,496.88	10,373.26	6,486.60	99.32	99.07	-89.63	3,129.24	3,265.73	1,640.40	1,442.15	198.25	8.274		
10,800.00	6,499.22	10,473.26	6,489.18	101.67	101.44	-89.64	3,128.44	3,365.69	1,639.88	1,436.90	202.98	8.079		
10,900.00	6,501.56	10,573.26	6,491.75	104.03	103.82	-89.65	3,127.64	3,465.66	1,639.36	1,431.64	207.71	7.892		
11,000.00	6,503.90	10,673.26	6,494.32	106.39	106.20	-89.66	3,126.84	3,565.62	1,638.83	1,426.38	212.46	7.714		
11,100.00	6,506.24	10,773.26	6,496.89	108.76	108.59	-89.67	3,126.04	3,665.58	1,638.31	1,421.10	217.21	7.543		
11,200.00	6,508.58	10,873.26	6,499.47	111.13	110.98	-89.67	3,125.24	3,765.54	1,637.79	1,415.82	221.97	7.379		
11,300.00	6,510.91	10,973.25	6,502.04	113.50	113.37	-89.68	3,124.45	3,865.50	1,637.26	1,410.53	226.73	7.221		
11,400.00	6,513.25	11,073.25	6,504.61	115.88	115.76	-89.69	3,123.65	3,965.47	1,636.74	1,405.24	231.50	7.070		
11,500.00	6,515.59	11,173.25	6,507.18	118.26	118.16	-89.70	3,122.85	4,065.43	1,636.22	1,399.94	236.28	6.925		
11,600.00	6,517.93	11,273.25	6,509.76	120.64	120.56	-89.71	3,122.05	4,165.39	1,635.69	1,394.64	241.06	6.786		
11,700.00	6,520.27	11,373.25	6,512.33	123.03	122.96	-89.71	3,121.25	4,265.35	1,635.17	1,389.33	245.84	6.651		
11,800.00	6,522.61	11,473.25	6,514.90	125.42	125.36	-89.72	3,120.45	4,365.31	1,634.65	1,384.02	250.63	6.522		
11,900.00	6,524.94	11,573.24	6,517.47	127.81	127.77	-89.73	3,119.65	4,465.28	1,634.12	1,378.70	255.42	6.398		
12,000.00	6,527.28	11,673.24	6,520.05	130.20	130.17	-89.74	3,118.86	4,565.24	1,633.60	1,373.38	260.22	6.278		
12,100.00	6,529.62	11,773.24	6,522.62	132.59	132.58	-89.75	3,118.06	4,665.20	1,633.08	1,368.05	265.02	6.162		
12,200.00	6,531.96	11,873.24	6,525.19	134.99	134.99	-89.76	3,117.26	4,765.16	1,632.55	1,362.72	269.83	6.050		
12,300.00	6,534.30	11,973.24	6,527.76	137.39	137.40	-89.76	3,116.46	4,865.12	1,632.03	1,357.39	274.64	5.942		
12,400.00	6,536.64	12,073.24	6,530.34	139.79	139.81	-89.77	3,115.66	4,965.09	1,631.51	1,352.06	279.45	5.838		
12,500.00	6,538.98	12,173.24	6,532.91	142.19	142.23	-89.78	3,114.86	5,065.05	1,630.99	1,346.72	284.27	5.737		
12,600.00	6,541.31	12,273.23	6,535.48	144.59	144.64	-89.79	3,114.06	5,165.01	1,630.46	1,341.38	289.09	5.640		
12,700.00	6,543.65	12,373.23	6,538.05	147.00	147.06	-89.80	3,113.27	5,264.97	1,629.94	1,336.03	293.91	5.546		
12,800.00	6,545.99	12,473.23	6,540.63	149.41	149.48	-89.80	3,112.47	5,364.94	1,629.42	1,330.69	298.73	5.454		
12,900.00	6,548.33	12,573.23	6,543.20	151.81	151.89	-89.81	3,111.67	5,464.90	1,628.90	1,325.34	303.56	5.366		
13,000.00	6,550.67	12,673.23	6,545.77	154.22	154.31	-89.82	3,110.87	5,564.86	1,628.37	1,319.99	308.39	5.280		
13,100.00	6,553.01	12,773.23	6,548.34	156.63	156.73	-89.83	3,110.07	5,664.82	1,627.85	1,314.63	313.22	5.197		
13,200.00	6,555.35	12,873.22	6,550.92	159.05	159.16	-89.84	3,109.27	5,764.78	1,627.33	1,309.28	318.05	5.117		
13,300.00	6,557.68	12,973.22	6,553.49	161.46	161.58	-89.85	3,108.47	5,864.75	1,626.80	1,303.92	322.89	5.038		
13,400.00	6,560.02	13,073.22	6,556.06	163.87	164.00	-89.85	3,107.68	5,964.71	1,626.28	1,298.56	327.73	4.962		
13,500.00	6,562.36	13,173.22	6,558.63	166.29	166.42	-89.86	3,106.88	6,064.67	1,625.76	1,293.20	332.56	4.889		
13,600.00	6,564.70	13,273.22	6,561.21	168.70	168.85	-89.87	3,106.08	6,164.63	1,625.24	1,287.83	337.41	4.817		
13,700.00	6,567.04	13,373.22	6,563.78	171.12	171.28	-89.88	3,105.28	6,264.59	1,624.71	1,282.47	342.25	4.747		
13,800.00	6,569.38	13,473.21	6,566.35	173.54	173.70	-89.89	3,104.48	6,364.56	1,624.19	1,277.10	347.09	4.679		
13,900.00	6,571.72	13,573.21	6,568.92	175.96	176.13	-89.89	3,103.68	6,464.52	1,623.67	1,271.73	351.94	4.613		
14,000.00	6,574.05	13,673.21	6,571.50	178.38	178.56	-89.90	3,102.88	6,564.48	1,623.15	1,266.36	356.79	4.549		
14,100.00	6,576.39	13,773.21	6,574.07	180.80	180.99	-89.91	3,102.09	6,664.44	1,622.63	1,260.99	361.64	4.487		
14,200.00	6,578.73	13,873.21	6,576.64	183.22	183.41	-89.92	3,101.29	6,764.40	1,622.10	1,255.61	366.49	4.426		
14,300.00	6,581.07	13,973.21	6,579.21	185.64	185.84	-89.93	3,100.49	6,864.37	1,621.58	1,250.24	371.34	4.367		
14,400.00	6,583.41	14,073.20	6,581.79	188.07	188.27	-89.94	3,099.69	6,964.33	1,621.06	1,244.86	376.19	4.309		
14,500.00	6,585.75	14,173.20	6,584.36	190.49	190.71	-89.94	3,098.89	7,064.29	1,620.54	1,239.49	381.05	4.253		
14,600.00	6,588.09	14,273.20	6,586.93	192.92	193.14	-89.95	3,098.09	7,164.25	1,620.01	1,234.11	385.91	4.198		
14,700.00	6,590.42	14,373.20	6,589.50	195.34	195.57	-89.96	3,097.29	7,264.21	1,619.49	1,228.73	390.76	4.144		
14,800.00	6,592.76	14,473.20	6,592.08	197.77	198.00	-89.97	3,096.50	7,364.18	1,618.97	1,223.35	395.62	4.092		
14,900.00	6,595.10	14,573.20	6,594.65	200.20	200.43	-89.98	3,095.70	7,464.14	1,618.45	1,217.97	400.48	4.041		
15,000.00	6,597.44	14,673.19	6,597.22	202.62	202.87	-89.99	3,094.90	7,564.10	1,617.93	1,212.58	405.34	3.992		
15,100.00	6,599.78	14,773.19	6,599.79	205.05	205.30	-89.99	3,094.10	7,664.06	1,617.40	1,207.20	410.20	3.943		
15,200.00	6,602.12	14,873.19	6,602.37	207.48	207.73	-90.00	3,093.30	7,764.03	1,616.88	1,201.82	415.07	3.895		
15,300.00	6,604.45	14,973.19	6,604.94	209.91	210.17	-90.01	3,092.50	7,863.99	1,616.36	1,196.43	419.93	3.849		
15,400.00	6,606.79	15,073.19	6,607.51	212.34	212.60	-90.02	3,091.70	7,963.95	1,615.84	1,191.05	424.79	3.804		

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



## Legacy Directional Drilling Anticollision Report

<b>Company:</b>	Freedom Energy	<b>Local Co-ordinate Reference:</b>	Well Jurnegan BS Fed Com 10H
<b>Project:</b>	Eddy County, NM NAD83	<b>TVD Reference:</b>	GL 3332' + 26.5' KB @ 3358.50usft
<b>Reference Site:</b>	Jurnegan	<b>MD Reference:</b>	GL 3332' + 26.5' KB @ 3358.50usft
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Jurnegan BS Fed Com 10H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH	<b>Database:</b>	EDM_WA
<b>Reference Design:</b>	Plan 5	<b>Offset TVD Reference:</b>	Reference Datum

Offset Design: Jurnegan - Jurnegan BS Fed Com 9H - OH - Plan 1													Offset Site Error: 0.00 usft
Survey Program: 0-MWD													Offset Well Error: 0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance			Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)		
15,500.00	6,609.13	15,173.19	6,610.08	214.77	215.04	-90.03	3,090.91	8,063.91	1,615.32	1,185.66	429.66	3.760	
15,600.00	6,611.47	15,273.18	6,612.66	217.20	217.47	-90.04	3,090.11	8,163.87	1,614.79	1,180.27	434.52	3.716	
15,700.00	6,613.81	15,373.18	6,615.23	219.63	219.91	-90.04	3,089.31	8,263.84	1,614.27	1,174.88	439.39	3.674	
15,800.00	6,616.15	15,473.18	6,617.80	222.06	222.35	-90.05	3,088.51	8,363.80	1,613.75	1,169.49	444.26	3.632	
15,900.00	6,618.49	15,573.18	6,620.37	224.49	224.78	-90.06	3,087.71	8,463.76	1,613.23	1,164.10	449.13	3.592	
16,000.00	6,620.82	15,673.18	6,622.95	226.92	227.22	-90.07	3,086.91	8,563.72	1,612.71	1,158.71	454.00	3.552	
16,100.00	6,623.16	15,773.18	6,625.52	229.36	229.66	-90.08	3,086.11	8,663.68	1,612.19	1,153.32	458.87	3.513	
16,200.00	6,625.50	15,873.17	6,628.09	231.79	232.10	-90.09	3,085.32	8,763.65	1,611.66	1,147.93	463.74	3.475	
16,300.00	6,627.84	15,973.17	6,630.66	234.22	234.53	-90.09	3,084.52	8,863.61	1,611.14	1,142.54	468.61	3.438	
16,400.00	6,630.18	16,073.17	6,633.23	236.66	236.97	-90.10	3,083.72	8,963.57	1,610.62	1,137.14	473.48	3.402	
16,500.00	6,632.52	16,173.17	6,635.81	239.09	239.41	-90.11	3,082.92	9,063.53	1,610.10	1,131.75	478.35	3.366	
16,600.00	6,634.86	16,273.17	6,638.38	241.53	241.85	-90.12	3,082.12	9,163.49	1,609.58	1,126.35	483.23	3.331	
16,700.00	6,637.19	16,373.17	6,640.95	243.96	244.29	-90.13	3,081.32	9,263.46	1,609.06	1,120.96	488.10	3.297	
16,800.00	6,639.53	16,473.16	6,643.52	246.40	246.73	-90.14	3,080.53	9,363.42	1,608.54	1,115.56	492.97	3.263	
16,900.00	6,641.87	16,573.16	6,646.10	248.83	249.17	-90.14	3,079.73	9,463.38	1,608.01	1,110.17	497.85	3.230	
17,000.00	6,644.21	16,673.16	6,648.67	251.27	251.61	-90.15	3,078.93	9,563.34	1,607.49	1,104.77	502.72	3.198	
17,076.45	6,646.00	16,749.61	6,650.64	253.13	253.47	-90.16	3,078.32	9,639.76	1,607.09	1,100.64	506.45	3.173	CC, ES, SF

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

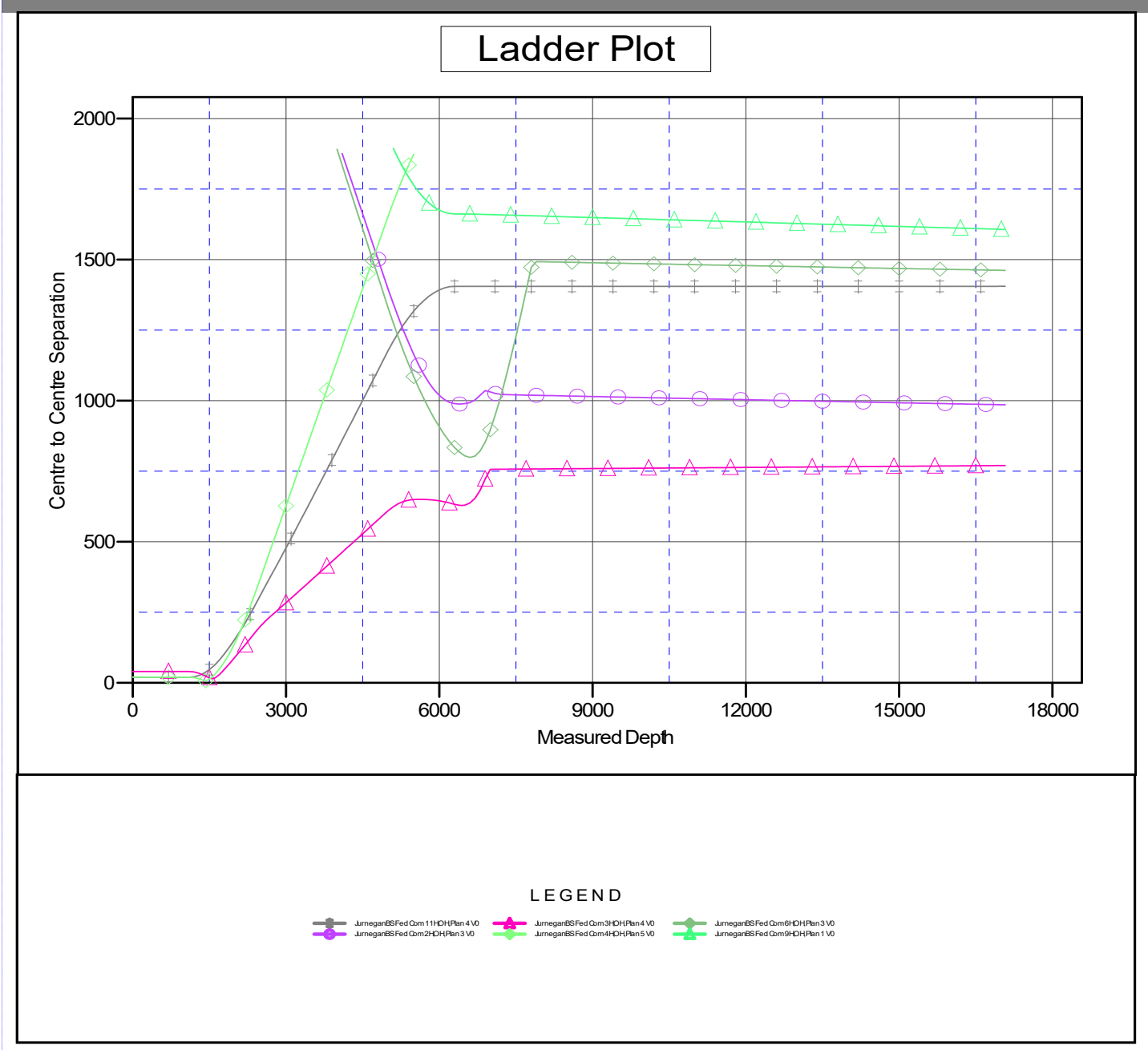


## Legacy Directional Drilling Anticollision Report

<b>Company:</b>	Freedom Energy	<b>Local Co-ordinate Reference:</b>	Well Jurnegan BS Fed Com 10H
<b>Project:</b>	Eddy County, NM NAD83	<b>TVD Reference:</b>	GL 3332' + 26.5' KB @ 3358.50usft
<b>Reference Site:</b>	Jurnegan	<b>MD Reference:</b>	GL 3332' + 26.5' KB @ 3358.50usft
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Jurnegan BS Fed Com 10H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH	<b>Database:</b>	EDM_WA
<b>Reference Design:</b>	Plan 5	<b>Offset TVD Reference:</b>	Reference Datum

Reference Depths are relative to GL 3332' + 26.5' KB @ 3358.50usft  
 Offset Depths are relative to Offset Datum  
 Central Meridian is -104.333334

Coordinates are relative to: Jurnegan BS Fed Com 10H  
 Coordinate System is US State Plane 1983, New Mexico Eastern Zone  
 Grid Convergence at Surface is: 0.02°



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

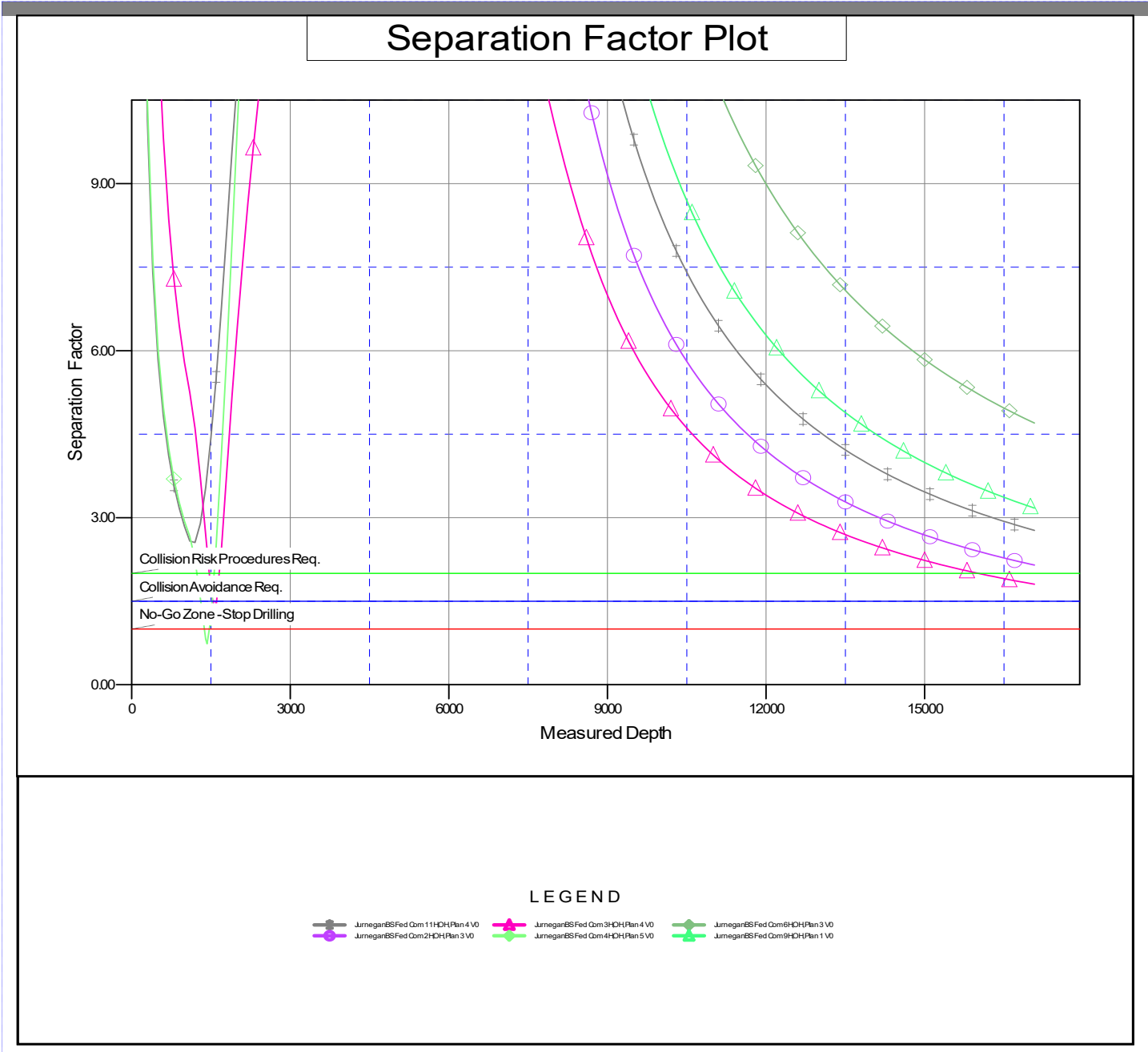


# Legacy Directional Drilling Anticollision Report

<b>Company:</b>	Freedom Energy	<b>Local Co-ordinate Reference:</b>	Well Jurnegan BS Fed Com 10H
<b>Project:</b>	Eddy County, NM NAD83	<b>TVD Reference:</b>	GL 3332' + 26.5' KB @ 3358.50usft
<b>Reference Site:</b>	Jurnegan	<b>MD Reference:</b>	GL 3332' + 26.5' KB @ 3358.50usft
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Jurnegan BS Fed Com 10H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH	<b>Database:</b>	EDM_WA
<b>Reference Design:</b>	Plan 5	<b>Offset TVD Reference:</b>	Reference Datum

Reference Depths are relative to GL 3332' + 26.5' KB @ 3358.50usft  
 Offset Depths are relative to Offset Datum  
 Central Meridian is -104.333334

Coordinates are relative to: Jurnegan BS Fed Com 10H  
 Coordinate System is US State Plane 1983, New Mexico Eastern Zone  
 Grid Convergence at Surface is: 0.02°



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

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

Action 574815

**ACKNOWLEDGMENTS**

Operator: Flat Creek Resources, LLC 777 Main St. Fort Worth, TX 76102	OGRID: 374034
	Action Number: 574815
	Action Type: [C-101] BLM - Federal/Indian Land Lease (Form 3160-3)

**ACKNOWLEDGMENTS**

<input checked="" type="checkbox"/>	I hereby certify that no additives containing PFAS chemicals will be added to the completion or recompletion of this well.
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COMMENTS

Action 574815

**COMMENTS**

Operator: Flat Creek Resources, LLC 777 Main St. Fort Worth, TX 76102	OGRID: 374034
	Action Number: 574815
	Action Type: [C-101] BLM - Federal/Indian Land Lease (Form 3160-3)

**COMMENTS**

Created By	Comment	Comment Date
jeffrey.harrison	Infill to Jurnegan BS Federal Com 003H	4/14/2026

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CONDITIONS

Action 574815

**CONDITIONS**

Operator: Flat Creek Resources, LLC 777 Main St. Fort Worth, TX 76102	OGRID: 374034
	Action Number: 574815
	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.	4/13/2026
permitsw	If cement does not circulate on any string, a Cement Bond Log (CBL) is required for that string of casing.	4/13/2026
jeffrey.harrison	NSP required prior to production if not included in an existing order or not an infill to an appropriate defining well in the same pool and spacing unit.	4/14/2026
jeffrey.harrison	All logs run on the well must be submitted to NMOCD.	4/14/2026
jeffrey.harrison	File As Drilled C-102 and a directional Survey with C-104 completion packet.	4/14/2026
jeffrey.harrison	Notify the OCD 24 hours prior to casing & cement.	4/14/2026
jeffrey.harrison	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.	4/14/2026
jeffrey.harrison	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.	4/14/2026