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

Form C-101
August 1, 2011

Permit 378295

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

1. Operator Name and Address	2. OGRID Number
V-F PETROLEUM INC P.O. Box 1889 Midland, TX 79702	24010
	3. API Number 30-015-55774

4. Property Code	5. Property Name	6. Well No.
329325	Lightfoot 19 State Com	223H

7. Surface Location

UL - Lot	Section	Township	Range	Lot Idn	Feet From	N/S Line	Feet From	E/W Line	County
H	19	19S	28E		1825	N	100	E	Eddy

8. Proposed Bottom Hole Location

UL - Lot	Section	Township	Range	Lot Idn	Feet From	N/S Line	Feet From	E/W Line	County
G	24	19S	27E	G	1880	N	2534	E	Eddy

9. Pool Information

WINCHESTER; BONE SPRING, WEST	97569

Additional Well Information

11. Work Type	12. Well Type	13. Cable/Rotary	14. Lease Type	15. Ground Level Elevation
New Well	OIL		State	3510
16. Multiple	**17. Proposed Depth**	**18. Formation**	**19. Contractor**	**20. Spud Date**
N	14698	Bone Spring		1/2/2025
Depth to Ground water		Distance from nearest fresh water well		Distance to nearest surface water

☒ **We will be using a closed-loop system in lieu of lined pits**

21. Proposed Casing and Cement Program

Type	Hole Size	Casing Size	Casing Weight/ft	Setting Depth	Sacks of Cement	Estimated TOC
Surf	17.5	13.375	48	450	410	0
Int1	12.25	9.625	40	3500	950	0
Prod	8.75	5.5	20	14698	2470	1850

Casing/Cement Program: Additional Comments

22. Proposed Blowout Prevention Program

Type	Working Pressure	Test Pressure	Manufacturer
Annular	3000	3000	TBD
Double Ram	3000	3000	TBD

23. I hereby certify that the information given above is true and complete to the best of my knowledge and belief. **I further certify I have complied with 19.15.14.9 (A) NMAC ☒ and/or 19.15.14.9 (B) NMAC ☒, if applicable.** Signature:		**OIL CONSERVATION DIVISION**	
Printed Name:	Electronically filed by Pam O'Neil	Approved By:	Ward Rikala
Title:	Regulatory Manager	Title:	Petroleum Specialist Supervisor
Email Address:	pamo@vfpetroleum.com	Approved Date: 11/21/2024	Expiration Date: 11/21/2026
Date: 11/20/2024	Phone: 432-683-3344	Conditions of Approval Attached	

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

WELL LOCATION INFORMATION

API Number	Pool Code	Pool Name
30-015- 55774	97569	WINCHESTER; BONE SPRING, WEST

Property Code	Property Name	Well Number
329325	LIGHTFOOT 19 STATE COM	223H

OGRID No.	Operator Name	Ground Level Elevation
24010	V-F PETROLEUM INC.	3510'

Surface Owner: ☒ State ☐ Fee ☐ Tribal ☐ Federal

Mineral Owner: ☒ State ☐ Fee ☐ Tribal ☐ Federal

Surface Location

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
H	19	19-S	28-E	-	1825 FNL	100 FEL	32.648160°	104.206817°	EDDY

Bottom Hole Location

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
G	24	19-S	27-E	-	1880 FNL	2534 FEL	32.647850°	104.231965°	EDDY

Dedicated Acres	Infill or Defining Well	Defining Well API	Overlapping Spacing Unit (Y/N)	Consolidation Code
243.04				C

Order Numbers.

Well setbacks are under Common Ownership: ☐Yes ☐No

Kick Off Point (KOP)

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
H	19	19-S	28-E	-	1825 FNL	100 FEL	32.648160°	104.206817°	EDDY

First Take Point (FTP)

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
H	19	19-S	28-E	-	1825 FNL	400 FEL	32.648143°	104.207791°	EDDY

Last Take Point (LTP)

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
G	24	19-S	27-E	-	1880 FNL	2434 FEL	32.647844°	104.231642°	EDDY

Unitized Area or Area of Uniform Interest	Spacing Unit Type ☒ Horizontal ☐ Vertical	Ground Floor Elevation:

OPERATOR CERTIFICATIONS

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

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

Cory Walk 11/11/24

Signature Date

Cory Walk

Printed Name

cory@permitswest.com

E-mail Address

SURVEYOR CERTIFICATIONS

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.

GARY G. EIDSON NEW MEXICO 12641 PROFESSIONAL SURVEYOR

Gary G Eidson 10/21/2024

Signature and Seal of Professional Surveyor

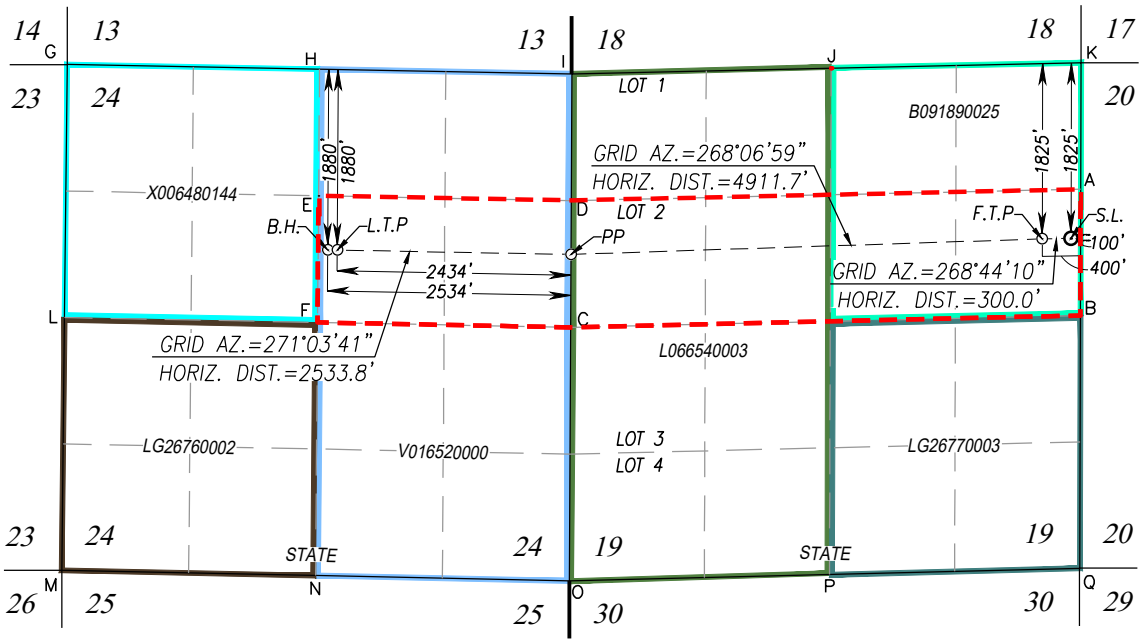
Gary G. Eidson 12641 FEBRUARY 13, 2019

Certificate Number Date of Survey

ACK REV.:10/14/2024 REL. W.O.: 21130324 JWSC W.O.: 24.13.0318

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

SCALE: 1"=2000'



BOTTOM HOLE LOCATION NAD 27 NME	LAST TAKE POINT GEODETIC COORDINATES NAD 27 NME	PENETRATION POINT GEODETIC COORDINATES NAD 27 NME	FIRST TAKE POINT GEODETIC COORDINATES NAD 27 NME	SURFACE LOCATION GEODETIC COORDINATES NAD 27 NME
Y= 599371.9 N	Y= 599369.9 N	Y= 599325.0 N	Y= 599486.4 N	Y= 599493.0 N
X= 531357.7 E	X= 531457.2 E	X= 533890.4 E	X= 538798.1 E	X= 539098.0 E
LAT.=32.647734° N	LAT.=32.647728° N	LAT.=32.647598° N	LAT.=32.648027° N	LAT.=32.648044° N
LONG.=104.231455° W	LONG.=104.231132° W	LONG.=104.223227° W	LONG.=104.207281° W	LONG.=104.206307° W
1880.0' FNL-2534.0' FEL SEC. 24	1880' FNL & 2434' FEL SEC. 24	1880' FNL SEC. 19 & 24	1825' FNL & 400' FEL SEC. 19	1825.0' FNL-100.0' FEL SEC. 19

BOTTOM HOLE LOCATION NAD 83 NME	LAST TAKE POINT GEODETIC COORDINATES NAD 83 NME	PENETRATION POINT GEODETIC COORDINATES NAD 83 NME	FIRST TAKE POINT GEODETIC COORDINATES NAD 83 NME	SURFACE LOCATION GEODETIC COORDINATES NAD 83 NME
Y= 599433.8 N	Y= 599431.8 N	Y= 599386.8 N	Y= 599548.2 N	Y= 599554.9 N
X= 572537.5 E	X= 572637.0 E	X= 575070.2 E	X= 579977.9 E	X= 580277.8 E
LAT.=32.647850° N	LAT.=32.647844° N	LAT.=32.647714° N	LAT.=32.648143° N	LAT.=32.648160° N
LONG.=104.231965° W	LONG.=104.231642° W	LONG.=104.223737° W	LONG.=104.207791° W	LONG.=104.206817° W

CORNER COORDINATES TABLE
NAD 27 NME

A - Y= 600004.7 N,	X= 539199.4 E		
B - Y= 598689.2 N,	X= 539195.9 E		
C - Y= 598565.7 N,	X= 533886.6 E		
D - Y= 599885.1 N,	X= 533893.2 E		
E - Y= 599935.2 N,	X= 531262.0 E		
F - Y= 598617.2 N,	X= 531251.8 E		
G - Y= 601301.7 N,	X= 528645.6 E		
H - Y= 601253.2 N,	X= 531272.2 E		
I - Y= 601204.4 N,	X= 533899.7 E		
J - Y= 601263.2 N,	X= 536600.0 E		
K - Y= 601320.1 N,	X= 539203.0 E		
L - Y= 598668.8 N,	X= 528616.8 E		
M - Y= 596036.6 N,	X= 528588.6 E		
N - Y= 595981.9 N,	X= 531231.4 E		
O - Y= 595926.8 N,	X= 533873.3 E		
P - Y= 595993.7 N,	X= 536581.8 E		
Q - Y= 596058.2 N,	X= 539188.8 E		

CORNER COORDINATES TABLE
NAD 83 NME

A - Y= 600066.6 N,	X= 580379.2 E		
B - Y= 598751.1 N,	X= 580375.7 E		
C - Y= 598627.5 N,	X= 575066.4 E		
D - Y= 599946.9 N,	X= 575073.0 E		
E - Y= 599997.0 N,	X= 572441.8 E		
F - Y= 598679.1 N,	X= 572431.6 E		
G - Y= 601363.5 N,	X= 569825.4 E		
H - Y= 601315.0 N,	X= 572451.9 E		
I - Y= 601266.3 N,	X= 575079.5 E		
J - Y= 601325.2 N,	X= 577779.8 E		
K - Y= 601382.1 N,	X= 580382.8 E		
L - Y= 598730.6 N,	X= 569796.6 E		
M - Y= 596098.3 N,	X= 569768.5 E		
N - Y= 596043.7 N,	X= 572411.2 E		
O - Y= 595988.6 N,	X= 575053.2 E		
P - Y= 596055.5 N,	X= 577761.6 E		
Q - Y= 596120.1 N,	X= 580368.6 E		

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

Form APD Conditions

Permit 378295

PERMIT CONDITIONS OF APPROVAL

Operator Name and Address:	API Number:
V-F PETROLEUM INC [24010] P.O. Box 1889 Midland, TX 79702	30-015-55774
	Well: Lightfoot 19 State Com #223H

OCD Reviewer	Condition
ward.rikala	Notify the OCD 24 hours prior to casing & cement.
ward.rikala	File As Drilled C-102 and a directional Survey with C-104 completion packet.
ward.rikala	Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string.
ward.rikala	Cement is required to circulate on both surface and intermediate1 strings of casing.
ward.rikala	If cement does not circulate on any string, a Cement Bond Log (CBL) is required for that string of casing.
ward.rikala	Oil base muds are not to be used until fresh water zones are cased and cemented providing isolation from the oil or diesel. This includes synthetic oils. Oil based mud, drilling fluids and solids must be contained in a steel closed loop system.
ward.rikala	A [C-103] Sub. Drilling (C-103N) is required within (10) days of spud.

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: V-F Petroleum Inc. **OGRID:** 24010 **Date:** 11/11/2024

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

If Other, please describe: _____

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

Well Name	API	ULSTR	Footages	Anticipated Oil BBL/D	Anticipated Gas MCF/D	Anticipated Produced Water BBL/D
Lightfoot 19 State Com #223H		H 19 19S 28E	1825FNL & 100FEL	650	900	1,200
Lightfoot 19 State Com #233H		H 19 19S 28E	1765FNL & 100FEL	750	900	1,200

IV. Central Delivery Point Name: Lightfoot North CTB [See 19.15.27.9(D)(1) NMAC]

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

Well Name	API	Spud Date	TD Reached Date	Completion Commencement Date	Initial Flow Back Date	First Production Date
Lightfoot 19 State Com #223H		01/15/2025	02/06/2025	06/15/2025	07/15/2025	07/15/2025
Lightfoot 19 State Com #233H		02/08/2025	03/02/2025	06/15/2025	07/15/2025	07/15/2025

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: Bill Pierce
Printed Name: Bill Pierce
Title: Operations Manager
E-mail Address: bill@vfpetroleum.com
Date: 11/11/2024
Phone: (432) 683-3344

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

V-F Petroleum Inc
Natural Gas Management Plan - Attachment

VI: Separation Equipment

V-F Petroleum Inc (V-F) has sized all separation equipment to be adequate to handle the maximum anticipated production facility rates for all three phases. Adequate separation relates to retention time for Liquid-Liquid separation and velocity for Gas-Liquid separation. Ancillary equipment and metering will be selected to be serviced without flow interruptions or the need to release gas from the well.

VII: Operational Practices

Drilling Operations

V-F will capture or combust natural gas using best industry practices and control technologies during drilling operations. A properly sized flare stack will be located at a minimum of 100 feet from the nearest surface hole location. Gas may be vented in an emergency to avoid a risk of an immediate and substantial adverse impact on safety, public health, or the environment.

Completion/Recompletion Operations

During initial flowback, V-F will route flowback fluids into a completion or storage tank, and if possible, flare instead of vent any natural gas with a properly sized flare stack until it is able to flow through a separator and down a line for sales. In the unlikely event that produced natural gas does not meet pipeline specifications, V-F will flare it for 60 days or until the natural gas meets pipeline specifications, whichever is sooner.

Production Operations

Natural gas will not be flared with the exceptions and provisions listed in the 19.15.27.8 D (1) through (4). If there is no adequate takeaway for the separator gas, all effected wells will be shut in until takeaway issues are resolved. Exceptions would be emergency or major malfunction situations.

Performance Standards

All completion, production separation equipment, and storage tanks will be properly sized to handle the maximum anticipated volumes and pressures associated with each well. Any permanent storage tank associated with production operations that is routed to a flare or control device, will be equipped with an automatic gauging system that reduces the venting of natural gas. A properly sized flare stack will be securely anchored and installed at least 100 feet away from both the well(s) and storage tanks, and will be equipped with an automatic ignitor or continuous pilot. V-F will conduct AVO inspections on the frequency specified in 19.15.27.8 E (5) (b) and (c). V-F will do everything possible to minimize waste and will resolve emergencies as quickly and safely as possible.

Measurement and Estimation

Any vented or flared natural gas volumes will be estimated and reported appropriately. V-F will install equipment to measure the volume of natural gas flared from existing process piping or a flowline piped from equipment such as high-pressure separators, heater treaters, or vapor recovery units. All measuring equipment will adhere to industry standards set forth by the American Petroleum Institute Manual of Petroleum Measurement Standards Chapter 14.10. Measuring equipment will not be designed or equipped with a manifold that allows diversion of natural gas around a metering element, except for the sole purpose of inspecting and servicing the measurement equipment. Flared/vented

natural gas will be estimated if metering is not practical due to low flow rate or low pressures. This estimation will include but will not be limited to an annual GOR test reported to the division.

VIII: Best Management Practices

V-F will utilize best management practices to minimize venting during active and planned maintenance. Potential actions that will be considered include, but are not limited to:

- Venting limited to the depressurizing of the subject equipment to ensure a safe repair
- Identifying alternate capture methods
- Temporarily reduce production or shut-in wells during maintenance
- Flare if natural gas does not meet pipeline specifications
- Perform preventative maintenance to avoid potential equipment failure

Petroleum, Inc.
Project: Eddy County, NM
Site: Sec 19-T19S-R28E
Well: Lightfoot 19 State Com 223H
Wellbore: Wellbore #1
Plan: Plan #1 (Lightfoot 19 State Com 223H/Wellbore #1)

WELL DETAILS: Lightfoot 19 State Com 223H

Ground Elevation:: 3510.0
RKB Elevation: 3510+20 @ 3530.0usft
Rig Name:

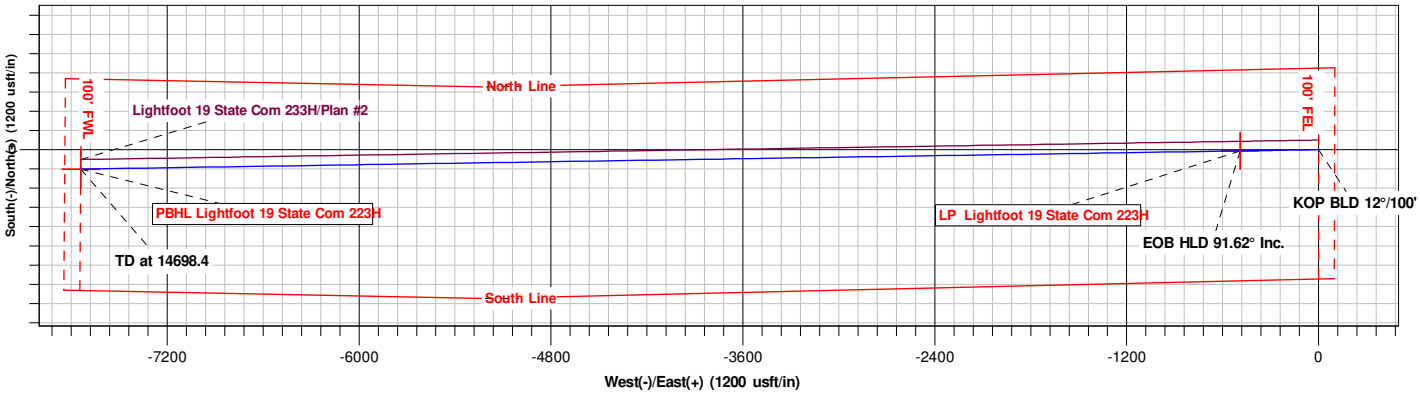
Northing	Easting	Latitude	Longitude
599554.90	580277.80	32° 38' 53.378 N	104° 12' 24.540 W

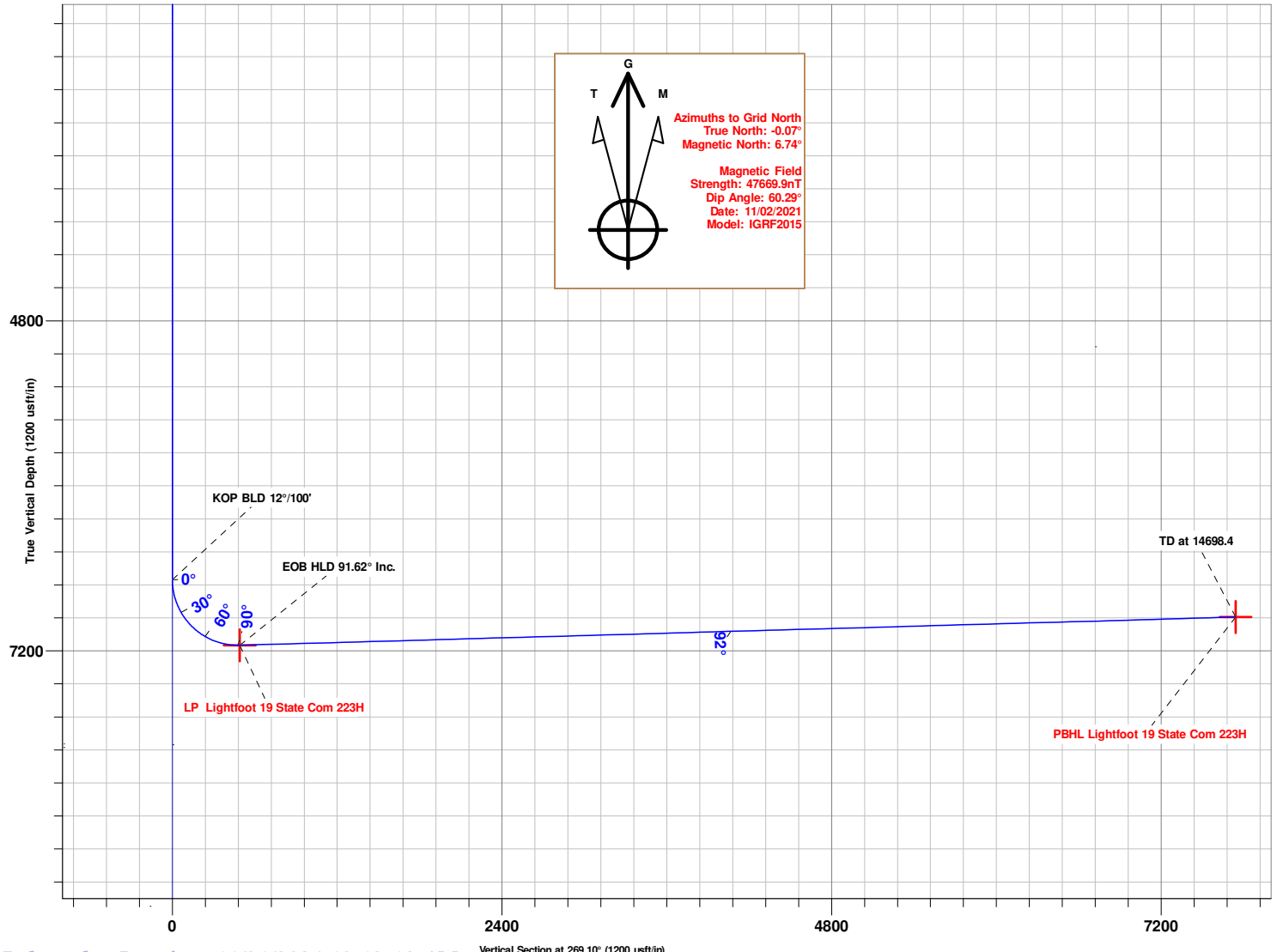
SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0
6681.7	0.00	0.00	6681.7	0.0	0.0	0.00	0.00	0.0
7445.2	91.62	269.10	7159.0	-7.7	-490.9	12.00	269.10	491.0
14698.4	91.62	269.10	6954.0	-121.1	-7740.3	0.00	0.00	7741.2

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
PBHL Lightfoot 19 State Com 223H - plan hits target center	6954.0	-121.1	-7740.3	599433.80	572537.50	32° 38' 52.261 N	104° 13' 55.074 W	Point
LP Lightfoot 19 State Com 223H - plan hits target center	7159.0	-7.7	-490.9	599547.20	579786.90	32° 38' 53.307 N	104° 12' 30.282 W	Point





PANTHER

V-F Petroleum, Inc.

Eddy County, NM
Sec 19-T19S-R28E
Lightfoot 19 State Com 223H

Wellbore #1

Plan: Plan #1

Standard Planning Report

02 November, 2021

PANTHER

Microsoft
Planning Report

Database:	EDM 5000.15 Single User Db	**Local Co-ordinate Reference:**	Well Lightfoot 19 State Com 223H
Company:	V-F Petroleum, Inc.	**TVD Reference:**	3510+20 @ 3530.0usft
Project:	Eddy County, NM	**MD Reference:**	3510+20 @ 3530.0usft
Site:	Sec 19-T19S-R28E	**North Reference:**	Grid
Well:	Lightfoot 19 State Com 223H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1		

Project Eddy County, NM

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

Site Sec 19-T19S-R28E

Site Position:		**Northing:**	598,207.90 usft	**Latitude:**	32° 38' 40.049 N
From:	Map	**Easting:**	580,274.30 usft	**Longitude:**	104° 12' 24.599 W
Position Uncertainty:	0.0 usft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	0.07 °

Well Lightfoot 19 State Com 223H

Well Position	**+N/-S**	1,347.0 usft	**Northing:**	599,554.90 usft	**Latitude:**	32° 38' 53.378 N
	+E/-W	3.5 usft	**Easting:**	580,277.80 usft	**Longitude:**	104° 12' 24.540 W
Position Uncertainty		0.0 usft	**Wellhead Elevation:**		**Ground Level:**	3,510.0 usft

Wellbore Wellbore #1

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	11/02/21	6.81	60.29	47,669.92063228

Design Plan #1

Audit Notes:

Version:		**Phase:**	PLAN	**Tie On Depth:**	0.0

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	269.10

Plan Survey Tool Program **Date** 11/02/21

	Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.0	14,698.4	Plan #1 (Wellbore #1)	MWD	
				OWSG MWD - Standard	

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
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
6,681.7	0.00	0.00	6,681.7	0.0	0.0	0.00	0.00	0.00	0.00	
7,445.2	91.62	269.10	7,159.0	-7.7	-490.9	12.00	12.00	-11.91	269.10	
14,698.4	91.62	269.10	6,954.0	-121.1	-7,740.3	0.00	0.00	0.00	0.00	PBHL Lightfoot 19 Sta

PANTHER

Microsoft
Planning Report

Database:	EDM 5000.15 Single User Db	**Local Co-ordinate Reference:**	Well Lightfoot 19 State Com 223H
Company:	V-F Petroleum, Inc.	**TVD Reference:**	3510+20 @ 3530.0usft
Project:	Eddy County, NM	**MD Reference:**	3510+20 @ 3530.0usft
Site:	Sec 19-T19S-R28E	**North Reference:**	Grid
Well:	Lightfoot 19 State Com 223H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	0.00
1,700.0	0.00	0.00	1,700.0	0.0	0.0	0.0	0.00	0.00	0.00
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.0	0.00	0.00	0.00
1,900.0	0.00	0.00	1,900.0	0.0	0.0	0.0	0.00	0.00	0.00
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	0.00
2,100.0	0.00	0.00	2,100.0	0.0	0.0	0.0	0.00	0.00	0.00
2,200.0	0.00	0.00	2,200.0	0.0	0.0	0.0	0.00	0.00	0.00
2,300.0	0.00	0.00	2,300.0	0.0	0.0	0.0	0.00	0.00	0.00
2,400.0	0.00	0.00	2,400.0	0.0	0.0	0.0	0.00	0.00	0.00
2,500.0	0.00	0.00	2,500.0	0.0	0.0	0.0	0.00	0.00	0.00
2,600.0	0.00	0.00	2,600.0	0.0	0.0	0.0	0.00	0.00	0.00
2,700.0	0.00	0.00	2,700.0	0.0	0.0	0.0	0.00	0.00	0.00
2,800.0	0.00	0.00	2,800.0	0.0	0.0	0.0	0.00	0.00	0.00
2,900.0	0.00	0.00	2,900.0	0.0	0.0	0.0	0.00	0.00	0.00
3,000.0	0.00	0.00	3,000.0	0.0	0.0	0.0	0.00	0.00	0.00
3,100.0	0.00	0.00	3,100.0	0.0	0.0	0.0	0.00	0.00	0.00
3,200.0	0.00	0.00	3,200.0	0.0	0.0	0.0	0.00	0.00	0.00
3,300.0	0.00	0.00	3,300.0	0.0	0.0	0.0	0.00	0.00	0.00
3,400.0	0.00	0.00	3,400.0	0.0	0.0	0.0	0.00	0.00	0.00
3,500.0	0.00	0.00	3,500.0	0.0	0.0	0.0	0.00	0.00	0.00
3,600.0	0.00	0.00	3,600.0	0.0	0.0	0.0	0.00	0.00	0.00
3,700.0	0.00	0.00	3,700.0	0.0	0.0	0.0	0.00	0.00	0.00
3,800.0	0.00	0.00	3,800.0	0.0	0.0	0.0	0.00	0.00	0.00
3,900.0	0.00	0.00	3,900.0	0.0	0.0	0.0	0.00	0.00	0.00
4,000.0	0.00	0.00	4,000.0	0.0	0.0	0.0	0.00	0.00	0.00
4,100.0	0.00	0.00	4,100.0	0.0	0.0	0.0	0.00	0.00	0.00
4,200.0	0.00	0.00	4,200.0	0.0	0.0	0.0	0.00	0.00	0.00
4,300.0	0.00	0.00	4,300.0	0.0	0.0	0.0	0.00	0.00	0.00
4,400.0	0.00	0.00	4,400.0	0.0	0.0	0.0	0.00	0.00	0.00
4,500.0	0.00	0.00	4,500.0	0.0	0.0	0.0	0.00	0.00	0.00
4,600.0	0.00	0.00	4,600.0	0.0	0.0	0.0	0.00	0.00	0.00
4,700.0	0.00	0.00	4,700.0	0.0	0.0	0.0	0.00	0.00	0.00
4,800.0	0.00	0.00	4,800.0	0.0	0.0	0.0	0.00	0.00	0.00
4,900.0	0.00	0.00	4,900.0	0.0	0.0	0.0	0.00	0.00	0.00
5,000.0	0.00	0.00	5,000.0	0.0	0.0	0.0	0.00	0.00	0.00
5,100.0	0.00	0.00	5,100.0	0.0	0.0	0.0	0.00	0.00	0.00
5,200.0	0.00	0.00	5,200.0	0.0	0.0	0.0	0.00	0.00	0.00
5,300.0	0.00	0.00	5,300.0	0.0	0.0	0.0	0.00	0.00	0.00

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Planning Report

Database:	EDM 5000.15 Single User Db	**Local Co-ordinate Reference:**	Well Lightfoot 19 State Com 223H
Company:	V-F Petroleum, Inc.	**TVD Reference:**	3510+20 @ 3530.0usft
Project:	Eddy County, NM	**MD Reference:**	3510+20 @ 3530.0usft
Site:	Sec 19-T19S-R28E	**North Reference:**	Grid
Well:	Lightfoot 19 State Com 223H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,400.0	0.00	0.00	5,400.0	0.0	0.0	0.0	0.00	0.00	0.00
5,500.0	0.00	0.00	5,500.0	0.0	0.0	0.0	0.00	0.00	0.00
5,600.0	0.00	0.00	5,600.0	0.0	0.0	0.0	0.00	0.00	0.00
5,700.0	0.00	0.00	5,700.0	0.0	0.0	0.0	0.00	0.00	0.00
5,800.0	0.00	0.00	5,800.0	0.0	0.0	0.0	0.00	0.00	0.00
5,900.0	0.00	0.00	5,900.0	0.0	0.0	0.0	0.00	0.00	0.00
6,000.0	0.00	0.00	6,000.0	0.0	0.0	0.0	0.00	0.00	0.00
6,100.0	0.00	0.00	6,100.0	0.0	0.0	0.0	0.00	0.00	0.00
6,200.0	0.00	0.00	6,200.0	0.0	0.0	0.0	0.00	0.00	0.00
6,300.0	0.00	0.00	6,300.0	0.0	0.0	0.0	0.00	0.00	0.00
6,400.0	0.00	0.00	6,400.0	0.0	0.0	0.0	0.00	0.00	0.00
6,500.0	0.00	0.00	6,500.0	0.0	0.0	0.0	0.00	0.00	0.00
6,600.0	0.00	0.00	6,600.0	0.0	0.0	0.0	0.00	0.00	0.00
6,681.7	0.00	0.00	6,681.7	0.0	0.0	0.0	0.00	0.00	0.00
KOP BLD 12°/100'									
6,700.0	2.20	269.10	6,700.0	0.0	-0.4	0.4	12.00	12.00	0.00
6,725.0	5.20	269.10	6,724.9	0.0	-2.0	2.0	12.00	12.00	0.00
6,750.0	8.20	269.10	6,749.8	-0.1	-4.9	4.9	12.00	12.00	0.00
6,775.0	11.20	269.10	6,774.4	-0.1	-9.1	9.1	12.00	12.00	0.00
6,800.0	14.20	269.10	6,798.8	-0.2	-14.6	14.6	12.00	12.00	0.00
6,825.0	17.20	269.10	6,822.9	-0.3	-21.3	21.3	12.00	12.00	0.00
6,850.0	20.20	269.10	6,846.5	-0.5	-29.4	29.4	12.00	12.00	0.00
6,875.0	23.20	269.10	6,869.8	-0.6	-38.6	38.6	12.00	12.00	0.00
6,900.0	26.20	269.10	6,892.5	-0.8	-49.0	49.0	12.00	12.00	0.00
6,925.0	29.20	269.10	6,914.6	-0.9	-60.7	60.7	12.00	12.00	0.00
6,950.0	32.20	269.10	6,936.1	-1.1	-73.4	73.4	12.00	12.00	0.00
6,975.0	35.20	269.10	6,956.9	-1.4	-87.3	87.3	12.00	12.00	0.00
7,000.0	38.20	269.10	6,976.9	-1.6	-102.2	102.2	12.00	12.00	0.00
7,025.0	41.20	269.10	6,996.2	-1.8	-118.2	118.2	12.00	12.00	0.00
7,050.0	44.20	269.10	7,014.5	-2.1	-135.1	135.1	12.00	12.00	0.00
7,075.0	47.20	269.10	7,032.0	-2.4	-153.0	153.0	12.00	12.00	0.00
7,100.0	50.20	269.10	7,048.5	-2.7	-171.8	171.8	12.00	12.00	0.00
7,125.0	53.20	269.10	7,064.0	-3.0	-191.4	191.4	12.00	12.00	0.00
7,150.0	56.20	269.10	7,078.4	-3.3	-211.8	211.8	12.00	12.00	0.00
7,175.0	59.20	269.10	7,091.8	-3.6	-232.9	233.0	12.00	12.00	0.00
7,200.0	62.20	269.10	7,104.0	-4.0	-254.7	254.8	12.00	12.00	0.00
7,225.0	65.20	269.10	7,115.1	-4.3	-277.1	277.2	12.00	12.00	0.00
7,250.0	68.20	269.10	7,125.0	-4.7	-300.1	300.1	12.00	12.00	0.00
7,275.0	71.20	269.10	7,133.7	-5.1	-323.5	323.6	12.00	12.00	0.00
7,300.0	74.20	269.10	7,141.1	-5.4	-347.4	347.4	12.00	12.00	0.00
7,325.0	77.20	269.10	7,147.3	-5.8	-371.6	371.7	12.00	12.00	0.00
7,350.0	80.20	269.10	7,152.2	-6.2	-396.1	396.2	12.00	12.00	0.00
7,375.0	83.20	269.10	7,155.8	-6.6	-420.8	420.9	12.00	12.00	0.00
7,400.0	86.20	269.10	7,158.1	-7.0	-445.7	445.8	12.00	12.00	0.00
7,425.0	89.20	269.10	7,159.1	-7.4	-470.7	470.8	12.00	12.00	0.00
7,445.2	91.62	269.10	7,159.0	-7.7	-490.9	491.0	12.00	12.00	0.00
EOB HLD 91.62° Inc.									
7,500.0	91.62	269.10	7,157.4	-8.5	-545.7	545.7	0.00	0.00	0.00
7,600.0	91.62	269.10	7,154.6	-10.1	-645.6	645.7	0.00	0.00	0.00
7,700.0	91.62	269.10	7,151.8	-11.7	-745.6	745.7	0.00	0.00	0.00
7,800.0	91.62	269.10	7,148.9	-13.2	-845.5	845.6	0.00	0.00	0.00
7,900.0	91.62	269.10	7,146.1	-14.8	-945.5	945.6	0.00	0.00	0.00
8,000.0	91.62	269.10	7,143.3	-16.4	-1,045.4	1,045.5	0.00	0.00	0.00

PANTHER

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Planning Report

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Company:	V-F Petroleum, Inc.	**TVD Reference:**	3510+20 @ 3530.0usft
Project:	Eddy County, NM	**MD Reference:**	3510+20 @ 3530.0usft
Site:	Sec 19-T19S-R28E	**North Reference:**	Grid
Well:	Lightfoot 19 State Com 223H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
8,100.0	91.62	269.10	7,140.5	-17.9	-1,145.4	1,145.5	0.00	0.00	0.00
8,200.0	91.62	269.10	7,137.6	-19.5	-1,245.3	1,245.5	0.00	0.00	0.00
8,300.0	91.62	269.10	7,134.8	-21.0	-1,345.3	1,345.4	0.00	0.00	0.00
8,400.0	91.62	269.10	7,132.0	-22.6	-1,445.2	1,445.4	0.00	0.00	0.00
8,500.0	91.62	269.10	7,129.2	-24.2	-1,545.2	1,545.3	0.00	0.00	0.00
8,600.0	91.62	269.10	7,126.3	-25.7	-1,645.1	1,645.3	0.00	0.00	0.00
8,700.0	91.62	269.10	7,123.5	-27.3	-1,745.0	1,745.3	0.00	0.00	0.00
8,800.0	91.62	269.10	7,120.7	-28.9	-1,845.0	1,845.2	0.00	0.00	0.00
8,900.0	91.62	269.10	7,117.9	-30.4	-1,944.9	1,945.2	0.00	0.00	0.00
9,000.0	91.62	269.10	7,115.0	-32.0	-2,044.9	2,045.1	0.00	0.00	0.00
9,100.0	91.62	269.10	7,112.2	-33.6	-2,144.8	2,145.1	0.00	0.00	0.00
9,200.0	91.62	269.10	7,109.4	-35.1	-2,244.8	2,245.1	0.00	0.00	0.00
9,300.0	91.62	269.10	7,106.6	-36.7	-2,344.7	2,345.0	0.00	0.00	0.00
9,400.0	91.62	269.10	7,103.7	-38.2	-2,444.7	2,445.0	0.00	0.00	0.00
9,500.0	91.62	269.10	7,100.9	-39.8	-2,544.6	2,544.9	0.00	0.00	0.00
9,600.0	91.62	269.10	7,098.1	-41.4	-2,644.6	2,644.9	0.00	0.00	0.00
9,700.0	91.62	269.10	7,095.3	-42.9	-2,744.5	2,744.9	0.00	0.00	0.00
9,800.0	91.62	269.10	7,092.4	-44.5	-2,844.5	2,844.8	0.00	0.00	0.00
9,900.0	91.62	269.10	7,089.6	-46.1	-2,944.4	2,944.8	0.00	0.00	0.00
10,000.0	91.62	269.10	7,086.8	-47.6	-3,044.4	3,044.7	0.00	0.00	0.00
10,100.0	91.62	269.10	7,083.9	-49.2	-3,144.3	3,144.7	0.00	0.00	0.00
10,200.0	91.62	269.10	7,081.1	-50.8	-3,244.3	3,244.7	0.00	0.00	0.00
10,300.0	91.62	269.10	7,078.3	-52.3	-3,344.2	3,344.6	0.00	0.00	0.00
10,400.0	91.62	269.10	7,075.5	-53.9	-3,444.2	3,444.6	0.00	0.00	0.00
10,500.0	91.62	269.10	7,072.6	-55.4	-3,544.1	3,544.5	0.00	0.00	0.00
10,600.0	91.62	269.10	7,069.8	-57.0	-3,644.1	3,644.5	0.00	0.00	0.00
10,700.0	91.62	269.10	7,067.0	-58.6	-3,744.0	3,744.5	0.00	0.00	0.00
10,800.0	91.62	269.10	7,064.2	-60.1	-3,844.0	3,844.4	0.00	0.00	0.00
10,900.0	91.62	269.10	7,061.3	-61.7	-3,943.9	3,944.4	0.00	0.00	0.00
11,000.0	91.62	269.10	7,058.5	-63.3	-4,043.8	4,044.3	0.00	0.00	0.00
11,100.0	91.62	269.10	7,055.7	-64.8	-4,143.8	4,144.3	0.00	0.00	0.00
11,200.0	91.62	269.10	7,052.9	-66.4	-4,243.7	4,244.3	0.00	0.00	0.00
11,300.0	91.62	269.10	7,050.0	-68.0	-4,343.7	4,344.2	0.00	0.00	0.00
11,400.0	91.62	269.10	7,047.2	-69.5	-4,443.6	4,444.2	0.00	0.00	0.00
11,500.0	91.62	269.10	7,044.4	-71.1	-4,543.6	4,544.1	0.00	0.00	0.00
11,600.0	91.62	269.10	7,041.6	-72.6	-4,643.5	4,644.1	0.00	0.00	0.00
11,700.0	91.62	269.10	7,038.7	-74.2	-4,743.5	4,744.1	0.00	0.00	0.00
11,800.0	91.62	269.10	7,035.9	-75.8	-4,843.4	4,844.0	0.00	0.00	0.00
11,900.0	91.62	269.10	7,033.1	-77.3	-4,943.4	4,944.0	0.00	0.00	0.00
12,000.0	91.62	269.10	7,030.3	-78.9	-5,043.3	5,043.9	0.00	0.00	0.00
12,100.0	91.62	269.10	7,027.4	-80.5	-5,143.3	5,143.9	0.00	0.00	0.00
12,200.0	91.62	269.10	7,024.6	-82.0	-5,243.2	5,243.9	0.00	0.00	0.00
12,300.0	91.62	269.10	7,021.8	-83.6	-5,343.2	5,343.8	0.00	0.00	0.00
12,400.0	91.62	269.10	7,019.0	-85.2	-5,443.1	5,443.8	0.00	0.00	0.00
12,500.0	91.62	269.10	7,016.1	-86.7	-5,543.1	5,543.7	0.00	0.00	0.00
12,600.0	91.62	269.10	7,013.3	-88.3	-5,643.0	5,643.7	0.00	0.00	0.00
12,700.0	91.62	269.10	7,010.5	-89.9	-5,743.0	5,743.7	0.00	0.00	0.00
12,800.0	91.62	269.10	7,007.6	-91.4	-5,842.9	5,843.6	0.00	0.00	0.00
12,900.0	91.62	269.10	7,004.8	-93.0	-5,942.9	5,943.6	0.00	0.00	0.00
13,000.0	91.62	269.10	7,002.0	-94.5	-6,042.8	6,043.5	0.00	0.00	0.00
13,100.0	91.62	269.10	6,999.2	-96.1	-6,142.8	6,143.5	0.00	0.00	0.00
13,200.0	91.62	269.10	6,996.3	-97.7	-6,242.7	6,243.5	0.00	0.00	0.00
13,300.0	91.62	269.10	6,993.5	-99.2	-6,342.6	6,343.4	0.00	0.00	0.00
13,400.0	91.62	269.10	6,990.7	-100.8	-6,442.6	6,443.4	0.00	0.00	0.00

PANTHER

Microsoft

Planning Report

Database:	EDM 5000.15 Single User Db	**Local Co-ordinate Reference:**	Well Lightfoot 19 State Com 223H
Company:	V-F Petroleum, Inc.	**TVD Reference:**	3510+20 @ 3530.0usft
Project:	Eddy County, NM	**MD Reference:**	3510+20 @ 3530.0usft
Site:	Sec 19-T19S-R28E	**North Reference:**	Grid
Well:	Lightfoot 19 State Com 223H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
13,500.0	91.62	269.10	6,987.9	-102.4	-6,542.5	6,543.3	0.00	0.00	0.00
13,600.0	91.62	269.10	6,985.0	-103.9	-6,642.5	6,643.3	0.00	0.00	0.00
13,700.0	91.62	269.10	6,982.2	-105.5	-6,742.4	6,743.3	0.00	0.00	0.00
13,800.0	91.62	269.10	6,979.4	-107.1	-6,842.4	6,843.2	0.00	0.00	0.00
13,900.0	91.62	269.10	6,976.6	-108.6	-6,942.3	6,943.2	0.00	0.00	0.00
14,000.0	91.62	269.10	6,973.7	-110.2	-7,042.3	7,043.1	0.00	0.00	0.00
14,100.0	91.62	269.10	6,970.9	-111.7	-7,142.2	7,143.1	0.00	0.00	0.00
14,200.0	91.62	269.10	6,968.1	-113.3	-7,242.2	7,243.1	0.00	0.00	0.00
14,300.0	91.62	269.10	6,965.3	-114.9	-7,342.1	7,343.0	0.00	0.00	0.00
14,400.0	91.62	269.10	6,962.4	-116.4	-7,442.1	7,443.0	0.00	0.00	0.00
14,500.0	91.62	269.10	6,959.6	-118.0	-7,542.0	7,542.9	0.00	0.00	0.00
14,600.0	91.62	269.10	6,956.8	-119.6	-7,642.0	7,642.9	0.00	0.00	0.00
14,698.4	91.62	269.10	6,954.0	-121.1	-7,740.3	7,741.2	0.00	0.00	0.00
TD at 14698.4									

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
PBHL Lightfoot 19 State - plan hits target center - Point	0.00	0.00	6,954.0	-121.1	-7,740.3	599,433.80	572,537.50	32° 38' 52.261 N	104° 13' 55.074 W
LP Lightfoot 19 State C - plan hits target center - Point	0.00	0.00	7,159.0	-7.7	-490.9	599,547.20	579,786.90	32° 38' 53.307 N	104° 12' 30.281 W

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
6,681.7	6,681.7	0.0	0.0	KOP BLD 12°/100'
7,445.2	7,159.0	-7.7	-490.9	EOB HLD 91.62° Inc.
14,698.4	6,954.0	-121.1	-7,740.3	TD at 14698.4