

**District I**

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

**District II**

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

**District III**

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

**District IV**

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

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

Form C-101  
August 1, 2011

Permit 286279

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

|                                                                                         |                                            |                               |
|-----------------------------------------------------------------------------------------|--------------------------------------------|-------------------------------|
| 1. Operator Name and Address<br>V-F PETROLEUM INC<br>P.O. Box 1889<br>Midland, TX 79702 |                                            | 2. OGRID Number<br>24010      |
|                                                                                         |                                            | 3. API Number<br>30-015-47400 |
| 4. Property Code<br>329325                                                              | 5. Property Name<br>Lightfoot 19 State Com | 6. Well No.<br>221H           |

**7. Surface Location**

|               |               |                 |              |              |                   |               |                  |               |                |
|---------------|---------------|-----------------|--------------|--------------|-------------------|---------------|------------------|---------------|----------------|
| UL - Lot<br>P | Section<br>19 | Township<br>19S | Range<br>28E | Lot Idn<br>P | Feet From<br>1113 | N/S Line<br>S | Feet From<br>100 | E/W Line<br>E | County<br>Eddy |
|---------------|---------------|-----------------|--------------|--------------|-------------------|---------------|------------------|---------------|----------------|

**8. Proposed Bottom Hole Location**

|               |               |                 |              |              |                  |               |                  |               |                |
|---------------|---------------|-----------------|--------------|--------------|------------------|---------------|------------------|---------------|----------------|
| UL - Lot<br>M | Section<br>19 | Township<br>19S | Range<br>28E | Lot Idn<br>M | Feet From<br>605 | N/S Line<br>S | Feet From<br>100 | E/W Line<br>W | County<br>Eddy |
|---------------|---------------|-----------------|--------------|--------------|------------------|---------------|------------------|---------------|----------------|

**9. Pool Information**

|                               |       |
|-------------------------------|-------|
| WINCHESTER; BONE SPRING, WEST | 97569 |
|-------------------------------|-------|

**Additional Well Information**

|                           |                             |                                        |                         |                                    |
|---------------------------|-----------------------------|----------------------------------------|-------------------------|------------------------------------|
| 11. Work Type<br>New Well | 12. Well Type<br>OIL        | 13. Cable/Rotary                       | 14. Lease Type<br>State | 15. Ground Level Elevation<br>3501 |
| 16. Multiple<br>N         | 17. Proposed Depth<br>12159 | 18. Formation<br>Bone Spring           | 19. Contractor          | 20. Spud Date<br>11/1/2020         |
| 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      | 54.5             | 450           | 450             | 0             |
| Int1 | 12.25     | 9.625       | 40               | 3500          | 825             | 0             |
| Prod | 8.75      | 5.5         | 17               | 12159         | 1400            | 2700          |

**Casing/Cement Program: Additional Comments**

|  |
|--|
|  |
|--|

**22. Proposed Blowout Prevention Program**

| Type       | Working Pressure | Test Pressure | Manufacturer |
|------------|------------------|---------------|--------------|
| Annular    | 3000             | 1500          | 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.

**OIL CONSERVATION DIVISION**

Signature:

|                                                  |                                 |
|--------------------------------------------------|---------------------------------|
| Printed Name: Electronically filed by Pam O'Neil | Approved By: Kurt Simmons       |
| Title: Regulatory Manager                        | Title: Petroleum Specialist - A |
| Email Address: pamo@vfpetroleum.com              | Approved Date: 11/18/2020       |
| Date: 9/8/2020                                   | Expiration Date: 11/18/2022     |
| Phone: 432-683-3344                              | Conditions of Approval Attached |

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DISTRICT IV  
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State of New Mexico  
Energy, Minerals & Natural Resources Department  
OIL CONSERVATION DIVISION  
1220 South St. Francis Dr.  
Santa Fe, New Mexico 87505

Form C-102  
Revised August 1, 2011  
Submit one copy to appropriate  
District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

|                              |                                                |                                                   |
|------------------------------|------------------------------------------------|---------------------------------------------------|
| API Number<br><b>30-015-</b> | Pool Code<br><b>97569</b>                      | Pool Name<br><b>WINCHESTER; BONE SPRING, WEST</b> |
| Property Code                | Property Name<br><b>LIGHTFOOT 19 STATE COM</b> | Well Number<br><b>221H</b>                        |
| OGRID No.<br><b>24010</b>    | Operator Name<br><b>V-F PETROLEUM INC.</b>     | Elevation<br><b>3501'</b>                         |

Surface Location

| UL or lot No. | Section   | Township    | Range       | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County      |
|---------------|-----------|-------------|-------------|---------|---------------|------------------|---------------|----------------|-------------|
| <b>P</b>      | <b>19</b> | <b>19-S</b> | <b>28-E</b> |         | <b>1113</b>   | <b>SOUTH</b>     | <b>100</b>    | <b>EAST</b>    | <b>EDDY</b> |

Bottom Hole Location If Different From Surface

| UL or lot No.                    | Section         | Township                       | Range       | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County      |
|----------------------------------|-----------------|--------------------------------|-------------|---------|---------------|------------------|---------------|----------------|-------------|
| <b>4</b>                         | <b>19</b>       | <b>19-S</b>                    | <b>28-E</b> |         | <b>605</b>    | <b>SOUTH</b>     | <b>100</b>    | <b>WEST</b>    | <b>EDDY</b> |
| Dedicated Acres<br><b>163.11</b> | Joint or Infill | Consolidation Code<br><b>C</b> | Order No.   |         |               |                  |               |                |             |

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

|                                                                                                                                                                |                                                                                                                                                                                                    |                                                                                                                                                   |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>1</p> <p>GEODETIC COORDINATES<br/>NAD 27 NME<br/>BOTTOM HOLE LOCATION<br/>Y= 596534.4 N<br/>X= 533976.3 E<br/>LAT.=32.639927° N<br/>LONG.=104.222957° W</p> | <p>CORNER COORDINATES TABLE<br/>NAD 27 NME<br/>A - Y= 597373.7 N, X= 539192.3 E<br/>B - Y= 596058.2 N, X= 539188.8 E<br/>C - Y= 595926.8 N, X= 533873.3 E<br/>D - Y= 597246.2 N, X= 533880.0 E</p> | <p>GEODETIC COORDINATES<br/>NAD 27 NME<br/>SURFACE LOCATION<br/>Y= 597168.9 N<br/>X= 539091.7 E<br/>LAT.=32.641656° N<br/>LONG.=104.206337° W</p> |
| <p>2</p> <p>GEODETIC COORDINATES<br/>NAD 83 NME<br/>BOTTOM HOLE LOCATION<br/>Y= 596596.2 N<br/>X= 575156.2 E<br/>LAT.=32.640043° N<br/>LONG.=104.223467° W</p> | <p>CORNER COORDINATES TABLE<br/>NAD 83 NME<br/>A - Y= 597435.6 N, X= 580372.2 E<br/>B - Y= 596120.1 N, X= 580368.7 E<br/>C - Y= 595988.6 N, X= 575053.2 E<br/>D - Y= 597308.0 N, X= 575059.8 E</p> | <p>GEODETIC COORDINATES<br/>NAD 83 NME<br/>SURFACE LOCATION<br/>Y= 597230.8 N<br/>X= 580271.6 E<br/>LAT.=32.641772° N<br/>LONG.=104.206846° W</p> |
| <p>3</p>                                                                                                                                                       |                                                                                                                                                                                                    |                                                                                                                                                   |
| <p>4</p> <p>GRID AZ.=262°55'42"<br/>HORIZ. DIST.=5155.9'</p>                                                                                                   |                                                                                                                                                                                                    |                                                                                                                                                   |

OPERATOR CERTIFICATION

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

*Brian Wood* **9-7-20**  
Signature Date  
**Brian Wood**  
Printed Name  
**brian@permitswest.com**  
E-mail Address

SURVEYOR CERTIFICATION

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

FEBRUARY 12, 2019

Date of Survey  
Signature & Seal of Professional Surveyor:

*Ronald J. Eidson*  
Certificate Number **3239**  
Gary G. Eidson 12641  
Ronald J. Eidson 3239  
LSL JWSC W.O.: 19.11.0125

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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**

## GAS CAPTURE PLAN

Date: 11/18/2020

☒ Original

Operator & OGRID No.: [24010] V-F PETROLEUM INC

☐ Amended - Reason for  
Amendment:

This Gas Capture Plan outlines actions to be taken by the Operator to reduce well/production facility flaring/venting for new completion (new drill, recomple to new zone, re-frac) activity.

*Note: Form C-129 must be submitted and approved prior to exceeding 60 days allowed by Rule (Subsection A of 19.15.18.12 NMAC).*

### Well(s)/Production Facility – Name of facility

The well(s) that will be located at the production facility are shown in the table below.

| Well Name                    | API          | Well Location<br>(ULSTR) | Footages    | Expected<br>MCF/D | Flared or<br>Vented | Comments |
|------------------------------|--------------|--------------------------|-------------|-------------------|---------------------|----------|
| Lightfoot 19 State Com #221H | 30-015-47400 | P-19-19S-28E             | 1113S 0100E | 1500              | Flared              |          |

### Gathering System and Pipeline Notification

Well(s) will be connected to a production facility after flowback operations are complete, if gas transporter system is in place. The gas produced from production facility is dedicated to GPM GAS CORP and will be connected to GPM GAS CORP High/Low Pressure gathering system located in Eddy County, New Mexico. It will require 700' of pipeline to connect the facility to High/Low Pressure gathering system. V-F PETROLEUM INC provides (periodically) to GPM GAS CORP a drilling, completion and estimated first production date for wells that are scheduled to be drilled in the foreseeable future. In addition, V-F PETROLEUM INC and GPM GAS CORP have periodic conference calls to discuss changes to drilling and completion schedules. Gas from these wells will be processed at GPM GAS CORP Processing Plant located in Sec. 20, Twn. 19S, Rng. 28E, Eddy County, New Mexico. The actual flow of the gas will be based on compression operating parameters and gathering system pressures.

### Flowback Strategy

After the fracture treatment/completion operations, well(s) will be produced to temporary production tanks and gas will be flared or vented. During flowback, the fluids and sand content will be monitored. When the produced fluids contain minimal sand, the wells will be turned to production facilities. Gas sales should start as soon as the wells start flowing through the production facilities, unless there are operational issues on GPM GAS CORP system at that time. Based on current information, it is V-F PETROLEUM INC's belief the system can take this gas upon completion of the well(s).

Safety requirements during cleanout operations from the use of underbalanced air cleanout systems may necessitate that sand and non-pipeline quality gas be vented and/or flared rather than sold on a temporary basis.

### Alternatives to Reduce Flaring

Below are alternatives considered from a conceptual standpoint to reduce the amount of gas flared.

- Power Generation – On lease
  - Only a portion of gas is consumed operating the generator, remainder of gas will be flared
- Compressed Natural Gas – On lease
  - Gas flared would be minimal, but might be uneconomical to operate when gas volume declines
- NGL Removal – On lease
  - Plants are expensive, residue gas is still flared, and uneconomical to operate when gas volume declines

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**1220 S. St Francis Dr.**  
**Santa Fe, NM 87505**

Form APD Comments

Permit 286279

PERMIT COMMENTS

|                                                                                               |  |                                       |
|-----------------------------------------------------------------------------------------------|--|---------------------------------------|
| Operator Name and Address:<br>V-F PETROLEUM INC [24010]<br>P.O. Box 1889<br>Midland, TX 79702 |  | API Number:<br>30-015-47400           |
|                                                                                               |  | Well:<br>Lightfoot 19 State Com #221H |

|            |         |              |
|------------|---------|--------------|
| Created By | Comment | Comment Date |
|------------|---------|--------------|

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Form APD Conditions

Permit 286279

**PERMIT CONDITIONS OF APPROVAL**

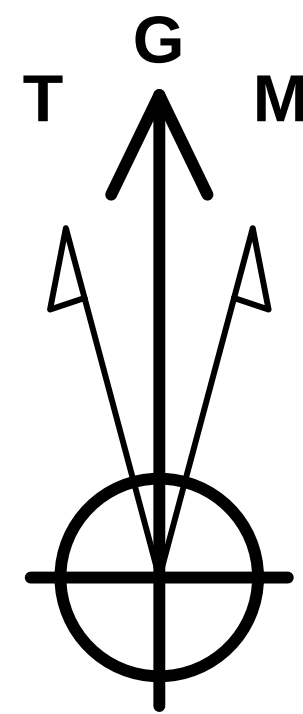
|                                                                                               |                                       |
|-----------------------------------------------------------------------------------------------|---------------------------------------|
| Operator Name and Address:<br>V-F PETROLEUM INC [24010]<br>P.O. Box 1889<br>Midland, TX 79702 | API Number:<br>30-015-47400           |
|                                                                                               | Well:<br>Lightfoot 19 State Com #221H |

|                 |                                                                                                                                                                                                                                                                                                                                                 |
|-----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| OCD<br>Reviewer | Condition                                                                                                                                                                                                                                                                                                                                       |
| ksimmons        | Will require a directional survey with the C-104                                                                                                                                                                                                                                                                                                |
| ksimmons        | Cement is required to circulate on both surface and intermediate1 strings of casing                                                                                                                                                                                                                                                             |
| kpickford       | 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                                                                            |
| kpickford       | 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.                                                                                            |
| kpickford       | The Operator is to notify NMOCD by sundry (Form C-103) within ten (10) days of the well being spud                                                                                                                                                                                                                                              |
| kpickford       | The Operator is to notify NMOCD by sundry (Form C-103) within ten (10) days of the well being spud 2)- Drilling Sundries Form C-103 (Casing and Cement test are to be submitted within 10 days 3)- Completion Reports & Logs are to be submitted within 45 days 4)- Deviation / Directional Drill Survey are to be filed with or prior to C-104 |
| kpickford       | Surface casing must be set 25' below top of Rustler Anhydrite in order to seal off protectable water                                                                                                                                                                                                                                            |

V-F Petroleum, Inc.

Company: V-F Petroleum Inc.  
Field: Eddy County, NM  
Location: Lightfoot 19 State Com  
Well: 221H  
OH  
Plan: Plan 1

GL 3501' + 20' KB @ 3521.00usft



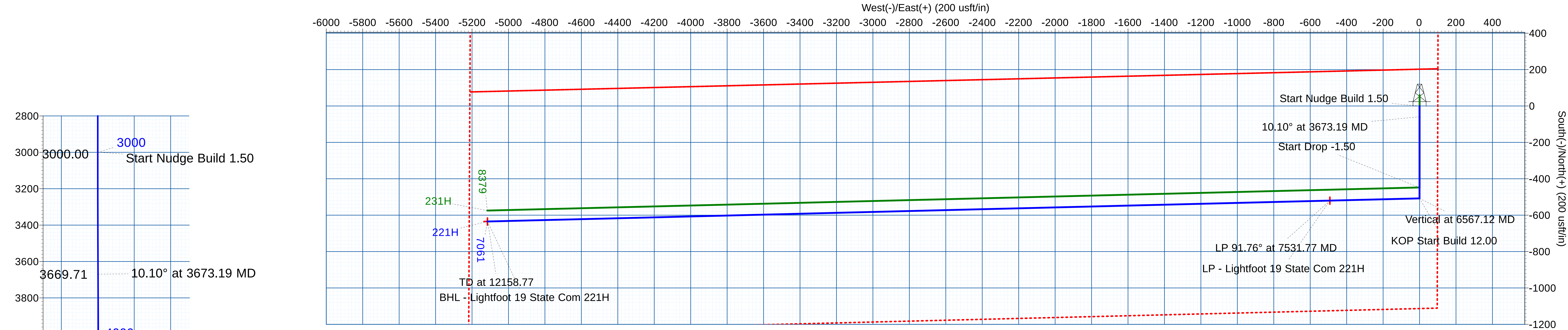
Azimuths to Grid North  
True North: -0.07°  
Magnetic North: 6.91°  
  
Magnetic Field  
Strength: 47762.0nT  
Dip Angle: 60.21°  
Date: 8/18/2020  
Model: WMM2020



PROJECT DETAILS: Eddy County, NM

Geodetic System: US State Plane 1927 (Exact solution)  
Datum: NAD 1927 (NADCON CONUS)  
Ellipsoid: Clarke 1866  
Zone: New Mexico East 3001  
System Datum: Mean Sea Level

To convert a Magnetic Direction to a Grid Direction, Add 6.91°



WELL DETAILS: 221H

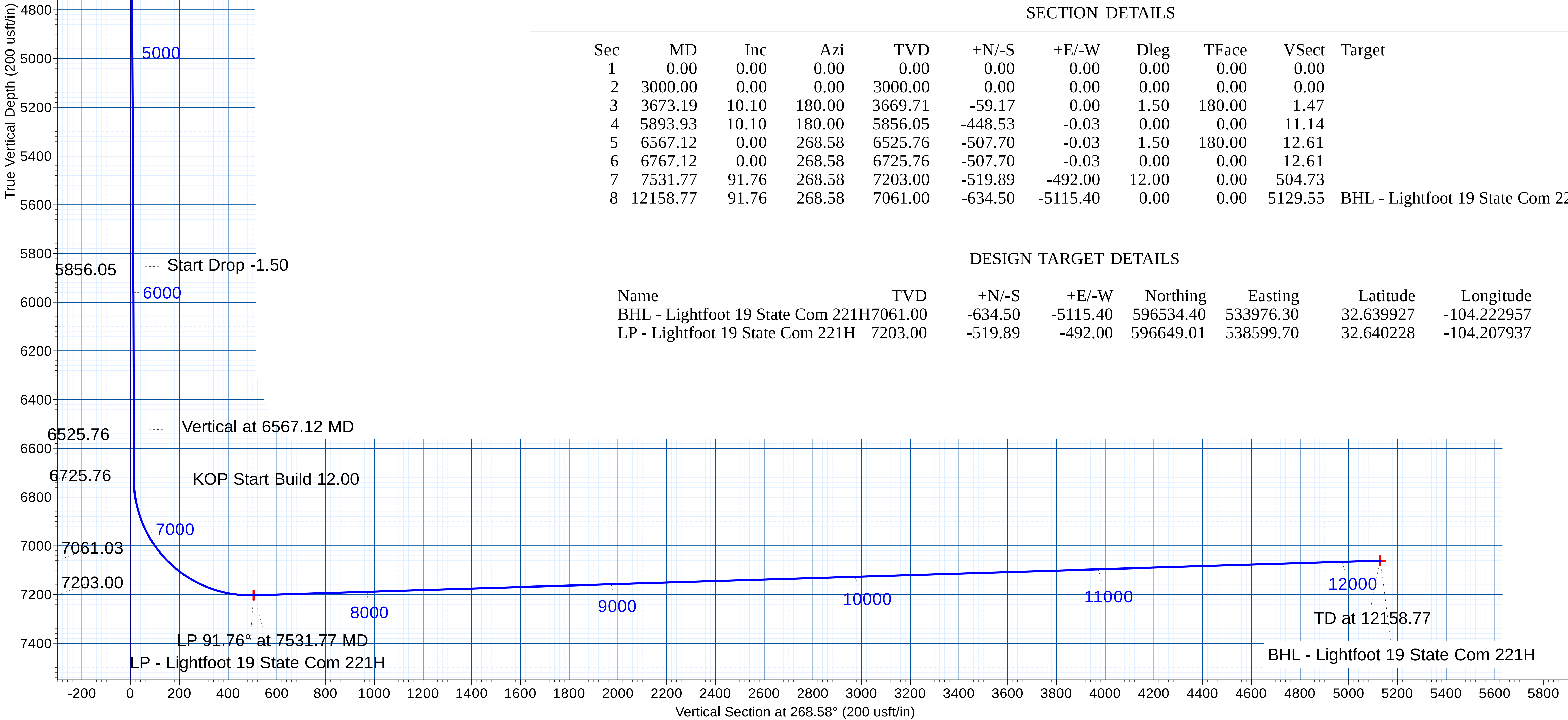
|       |       | GL 3501' + 20' KB @ 3521.00usft |           | 3501.00   |             |      |
|-------|-------|---------------------------------|-----------|-----------|-------------|------|
| +N/-S | +E/-W | Northing                        | Easting   | Latitude  | Longitude   | Slot |
| 0.00  | 0.00  | 597168.90                       | 539091.70 | 32.641655 | -104.206337 |      |

SECTION DETAILS

| Sec | MD       | Inc   | Azi    | TVD     | +N/-S   | +E/-W    | Dleg  | TFace  | VSect   | Target                            |
|-----|----------|-------|--------|---------|---------|----------|-------|--------|---------|-----------------------------------|
| 1   | 0.00     | 0.00  | 0.00   | 0.00    | 0.00    | 0.00     | 0.00  | 0.00   | 0.00    |                                   |
| 2   | 3000.00  | 0.00  | 0.00   | 3000.00 | 0.00    | 0.00     | 0.00  | 0.00   | 0.00    |                                   |
| 3   | 3673.19  | 10.10 | 180.00 | 3669.71 | -59.17  | 0.00     | 1.50  | 180.00 | 1.47    |                                   |
| 4   | 5893.93  | 10.10 | 180.00 | 5856.05 | -448.53 | -0.03    | 0.00  | 0.00   | 11.14   |                                   |
| 5   | 6567.12  | 0.00  | 268.58 | 6525.76 | -507.70 | -0.03    | 1.50  | 180.00 | 12.61   |                                   |
| 6   | 6767.12  | 0.00  | 268.58 | 6725.76 | -507.70 | -0.03    | 0.00  | 0.00   | 12.61   |                                   |
| 7   | 7531.77  | 91.76 | 268.58 | 7203.00 | -519.89 | -492.00  | 12.00 | 0.00   | 504.73  |                                   |
| 8   | 12158.77 | 91.76 | 268.58 | 7061.00 | -634.50 | -5115.40 | 0.00  | 0.00   | 5129.55 | BHL - Lightfoot 19 State Com 221H |

DESIGN TARGET DETAILS

| Name                              | TVD     | +N/-S   | +E/-W    | Northing  | Easting   | Latitude  | Longitude   |
|-----------------------------------|---------|---------|----------|-----------|-----------|-----------|-------------|
| BHL - Lightfoot 19 State Com 221H | 7061.00 | -634.50 | -5115.40 | 596534.40 | 533976.30 | 32.639927 | -104.222957 |
| LP - Lightfoot 19 State Com 221H  | 7203.00 | -519.89 | -492.00  | 596649.01 | 538599.70 | 32.640228 | -104.207937 |



## Legacy Directional

## Planning Report

|                  |                            |                                     |                                 |
|------------------|----------------------------|-------------------------------------|---------------------------------|
| <b>Database:</b> | EDM 5000.14 Single User Db | <b>Local Co-ordinate Reference:</b> | Well 221H                       |
| <b>Company:</b>  | V-F Petroleum Inc.         | <b>TVD Reference:</b>               | GL 3501' + 20' KB @ 3521.00usft |
| <b>Project:</b>  | Eddy County, NM            | <b>MD Reference:</b>                | GL 3501' + 20' KB @ 3521.00usft |
| <b>Site:</b>     | Lightfoot 19 State Com     | <b>North Reference:</b>             | Grid                            |
| <b>Well:</b>     | 221H                       | <b>Survey Calculation Method:</b>   | Minimum Curvature               |
| <b>Wellbore:</b> | OH                         |                                     |                                 |
| <b>Design:</b>   | Plan 1                     |                                     |                                 |

|                    |                                      |                      |                |
|--------------------|--------------------------------------|----------------------|----------------|
| <b>Project</b>     | Eddy County, NM                      |                      |                |
| <b>Map System:</b> | US State Plane 1927 (Exact solution) | <b>System Datum:</b> | Mean Sea Level |
| <b>Geo Datum:</b>  | NAD 1927 (NADCON CONUS)              |                      |                |
| <b>Map Zone:</b>   | New Mexico East 3001                 |                      |                |

| Site                  | Lightfoot 19 State Com |              |                 |                   |             |
|-----------------------|------------------------|--------------|-----------------|-------------------|-------------|
| Site Position:        |                        | Northing:    | 597,168.90 usft | Latitude:         | 32.641656   |
| From:                 | Map                    | Easting:     | 539,091.70 usft | Longitude:        | -104.206337 |
| Position Uncertainty: | 0.00 usft              | Slot Radius: | 13-3/16 "       | Grid Convergence: | 0.07 °      |

|                      |       |           |                     |                 |               |               |
|----------------------|-------|-----------|---------------------|-----------------|---------------|---------------|
| Well                 | 221H  |           |                     |                 |               |               |
| Well Position        | +N/-S | 0.00 usft | Northing:           | 597,168.90 usft | Latitude:     | 32.641656     |
|                      | +E/-W | 0.00 usft | Easting:            | 539,091.70 usft | Longitude:    | -104.206337   |
| Position Uncertainty |       | 0.00 usft | Wellhead Elevation: |                 | Ground Level: | 3,501.00 usft |

|                  |                   |                    |                        |                      |                            |
|------------------|-------------------|--------------------|------------------------|----------------------|----------------------------|
| <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> |
|                  | WMM2020           | 8/18/2020          | 6.98                   | 60.21                | 47,761.96408262            |

|                          |                                |                     |                      |                      |
|--------------------------|--------------------------------|---------------------|----------------------|----------------------|
| <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) (usft)</b> | <b>+N/-S (usft)</b> | <b>+E/-W (usft)</b>  | <b>Direction (°)</b> |
|                          | 0.00                           | 0.00                | 0.00                 | 268.58               |

|                                 |                        |                          |                        |                |
|---------------------------------|------------------------|--------------------------|------------------------|----------------|
| <b>Plan Survey Tool Program</b> | <b>Date</b>            | 8/18/2020                |                        |                |
| <b>Depth From (usft)</b>        | <b>Depth To (usft)</b> | <b>Survey (Wellbore)</b> | <b>Tool Name</b>       | <b>Remarks</b> |
| 1                               | 0.00                   | 12,158.47 Plan 1 (OH)    | MWD+IGRF+FDIR          |                |
|                                 |                        |                          | OWSG MWD + IGRF or WMM |                |

|                              |                        |                    |                              |                     |                     |                                |                               |                              |                |                        |
|------------------------------|------------------------|--------------------|------------------------------|---------------------|---------------------|--------------------------------|-------------------------------|------------------------------|----------------|------------------------|
| <b>Plan Sections</b>         |                        |                    |                              |                     |                     |                                |                               |                              |                |                        |
| <b>Measured Depth (usft)</b> | <b>Inclination (°)</b> | <b>Azimuth (°)</b> | <b>Vertical Depth (usft)</b> | <b>+N/-S (usft)</b> | <b>+E/-W (usft)</b> | <b>Dogleg Rate (°/100usft)</b> | <b>Build Rate (°/100usft)</b> | <b>Turn Rate (°/100usft)</b> | <b>TFO (°)</b> | <b>Target</b>          |
| 0.00                         | 0.00                   | 0.00               | 0.00                         | 0.00                | 0.00                | 0.00                           | 0.00                          | 0.00                         | 0.00           |                        |
| 3,000.00                     | 0.00                   | 0.00               | 3,000.00                     | 0.00                | 0.00                | 0.00                           | 0.00                          | 0.00                         | 0.00           |                        |
| 3,673.19                     | 10.10                  | 180.00             | 3,669.71                     | -59.17              | 0.00                | 1.50                           | 1.50                          | 0.00                         | 180.00         |                        |
| 5,893.93                     | 10.10                  | 180.00             | 5,856.05                     | -448.53             | -0.03               | 0.00                           | 0.00                          | 0.00                         | 0.00           |                        |
| 6,567.12                     | 0.00                   | 268.58             | 6,525.76                     | -507.70             | -0.03               | 1.50                           | -1.50                         | 0.00                         | 180.00         |                        |
| 6,767.12                     | 0.00                   | 268.58             | 6,725.76                     | -507.70             | -0.03               | 0.00                           | 0.00                          | 0.00                         | 0.00           |                        |
| 7,531.77                     | 91.76                  | 268.58             | 7,203.00                     | -519.89             | -492.00             | 12.00                          | 12.00                         | 0.00                         | 0.00           |                        |
| 12,158.77                    | 91.76                  | 268.58             | 7,061.00                     | -634.50             | -5,115.40           | 0.00                           | 0.00                          | 0.00                         | 0.00           | BHL - Lightfoot 19 Stc |

## Legacy Directional

## Planning Report

|                  |                            |                                     |                                 |
|------------------|----------------------------|-------------------------------------|---------------------------------|
| <b>Database:</b> | EDM 5000.14 Single User Db | <b>Local Co-ordinate Reference:</b> | Well 221H                       |
| <b>Company:</b>  | V-F Petroleum Inc.         | <b>TVD Reference:</b>               | GL 3501' + 20' KB @ 3521.00usft |
| <b>Project:</b>  | Eddy County, NM            | <b>MD Reference:</b>                | GL 3501' + 20' KB @ 3521.00usft |
| <b>Site:</b>     | Lightfoot 19 State Com     | <b>North Reference:</b>             | Grid                            |
| <b>Well:</b>     | 221H                       | <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) |  |
| 3,000.00                      | 0.00            | 0.00        | 3,000.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |  |
| <b>Start Nudge Build 1.50</b> |                 |             |                       |              |              |                         |                         |                        |                       |  |
| 3,100.00                      | 1.50            | 180.00      | 3,099.99              | -1.31        | 0.00         | 0.03                    | 1.50                    | 1.50                   | 0.00                  |  |
| 3,200.00                      | 3.00            | 180.00      | 3,199.91              | -5.23        | 0.00         | 0.13                    | 1.50                    | 1.50                   | 0.00                  |  |
| 3,300.00                      | 4.50            | 180.00      | 3,299.69              | -11.77       | 0.00         | 0.29                    | 1.50                    | 1.50                   | 0.00                  |  |
| 3,400.00                      | 6.00            | 180.00      | 3,399.27              | -20.92       | 0.00         | 0.52                    | 1.50                    | 1.50                   | 0.00                  |  |
| 3,500.00                      | 7.50            | 180.00      | 3,498.57              | -32.68       | 0.00         | 0.81                    | 1.50                    | 1.50                   | 0.00                  |  |
| 3,600.00                      | 9.00            | 180.00      | 3,597.54              | -47.03       | 0.00         | 1.17                    | 1.50                    | 1.50                   | 0.00                  |  |
| 3,673.19                      | 10.10           | 180.00      | 3,669.71              | -59.17       | 0.00         | 1.47                    | 1.50                    | 1.50                   | 0.00                  |  |
| <b>10.10° at 3673.19 MD</b>   |                 |             |                       |              |              |                         |                         |                        |                       |  |
| 3,700.00                      | 10.10           | 180.00      | 3,696.11              | -63.87       | 0.00         | 1.59                    | 0.00                    | 0.00                   | 0.00                  |  |
| 3,800.00                      | 10.10           | 180.00      | 3,794.56              | -81.40       | -0.01        | 2.02                    | 0.00                    | 0.00                   | 0.00                  |  |
| 3,900.00                      | 10.10           | 180.00      | 3,893.01              | -98.93       | -0.01        | 2.46                    | 0.00                    | 0.00                   | 0.00                  |  |
| 4,000.00                      | 10.10           | 180.00      | 3,991.46              | -116.47      | -0.01        | 2.89                    | 0.00                    | 0.00                   | 0.00                  |  |
| 4,100.00                      | 10.10           | 180.00      | 4,089.91              | -134.00      | -0.01        | 3.33                    | 0.00                    | 0.00                   | 0.00                  |  |
| 4,200.00                      | 10.10           | 180.00      | 4,188.36              | -151.53      | -0.01        | 3.77                    | 0.00                    | 0.00                   | 0.00                  |  |
| 4,300.00                      | 10.10           | 180.00      | 4,286.81              | -169.07      | -0.01        | 4.20                    | 0.00                    | 0.00                   | 0.00                  |  |
| 4,400.00                      | 10.10           | 180.00      | 4,385.26              | -186.60      | -0.01        | 4.64                    | 0.00                    | 0.00                   | 0.00                  |  |
| 4,500.00                      | 10.10           | 180.00      | 4,483.71              | -204.13      | -0.01        | 5.07                    | 0.00                    | 0.00                   | 0.00                  |  |
| 4,600.00                      | 10.10           | 180.00      | 4,582.16              | -221.67      | -0.01        | 5.51                    | 0.00                    | 0.00                   | 0.00                  |  |
| 4,700.00                      | 10.10           | 180.00      | 4,680.62              | -239.20      | -0.02        | 5.94                    | 0.00                    | 0.00                   | 0.00                  |  |
| 4,800.00                      | 10.10           | 180.00      | 4,779.07              | -256.73      | -0.02        | 6.38                    | 0.00                    | 0.00                   | 0.00                  |  |
| 4,900.00                      | 10.10           | 180.00      | 4,877.52              | -274.26      | -0.02        | 6.81                    | 0.00                    | 0.00                   | 0.00                  |  |
| 5,000.00                      | 10.10           | 180.00      | 4,975.97              | -291.80      | -0.02        | 7.25                    | 0.00                    | 0.00                   | 0.00                  |  |
| 5,100.00                      | 10.10           | 180.00      | 5,074.42              | -309.33      | -0.02        | 7.69                    | 0.00                    | 0.00                   | 0.00                  |  |
| 5,200.00                      | 10.10           | 180.00      | 5,172.87              | -326.86      | -0.02        | 8.12                    | 0.00                    | 0.00                   | 0.00                  |  |
| 5,300.00                      | 10.10           | 180.00      | 5,271.32              | -344.40      | -0.02        | 8.56                    | 0.00                    | 0.00                   | 0.00                  |  |
| 5,400.00                      | 10.10           | 180.00      | 5,369.77              | -361.93      | -0.02        | 8.99                    | 0.00                    | 0.00                   | 0.00                  |  |
| 5,500.00                      | 10.10           | 180.00      | 5,468.22              | -379.46      | -0.02        | 9.43                    | 0.00                    | 0.00                   | 0.00                  |  |
| 5,600.00                      | 10.10           | 180.00      | 5,566.67              | -396.99      | -0.03        | 9.86                    | 0.00                    | 0.00                   | 0.00                  |  |
| 5,700.00                      | 10.10           | 180.00      | 5,665.13              | -414.53      | -0.03        | 10.30                   | 0.00                    | 0.00                   | 0.00                  |  |
| 5,800.00                      | 10.10           | 180.00      | 5,763.58              | -432.06      | -0.03        | 10.74                   | 0.00                    | 0.00                   | 0.00                  |  |
| 5,893.93                      | 10.10           | 180.00      | 5,856.05              | -448.53      | -0.03        | 11.14                   | 0.00                    | 0.00                   | 0.00                  |  |
| <b>Start Drop -1.50</b>       |                 |             |                       |              |              |                         |                         |                        |                       |  |
| 5,900.00                      | 10.01           | 180.00      | 5,862.03              | -449.59      | -0.03        | 11.17                   | 1.50                    | -1.50                  | 0.00                  |  |
| 6,000.00                      | 8.51            | 180.00      | 5,960.72              | -465.67      | -0.03        | 11.57                   | 1.50                    | -1.50                  | 0.00                  |  |
| 6,100.00                      | 7.01            | 180.00      | 6,059.80              | -479.17      | -0.03        | 11.91                   | 1.50                    | -1.50                  | 0.00                  |  |
| 6,200.00                      | 5.51            | 180.00      | 6,159.21              | -490.07      | -0.03        | 12.18                   | 1.50                    | -1.50                  | 0.00                  |  |
| 6,300.00                      | 4.01            | 180.00      | 6,258.86              | -498.36      | -0.03        | 12.38                   | 1.50                    | -1.50                  | 0.00                  |  |
| 6,400.00                      | 2.51            | 180.00      | 6,358.69              | -504.04      | -0.03        | 12.52                   | 1.50                    | -1.50                  | 0.00                  |  |
| 6,500.00                      | 1.01            | 180.00      | 6,458.64              | -507.11      | -0.03        | 12.60                   | 1.50                    | -1.50                  | 0.00                  |  |
| 6,567.12                      | 0.00            | 268.58      | 6,525.76              | -507.70      | -0.03        | 12.61                   | 1.50                    | -1.50                  | 0.00                  |  |
| <b>Vertical at 6567.12 MD</b> |                 |             |                       |              |              |                         |                         |                        |                       |  |
| 6,600.00                      | 0.00            | 0.00        | 6,558.64              | -507.70      | -0.03        | 12.61                   | 0.00                    | 0.00                   | 0.00                  |  |
| 6,700.00                      | 0.00            | 0.00        | 6,658.64              | -507.70      | -0.03        | 12.61                   | 0.00                    | 0.00                   | 0.00                  |  |
| 6,767.12                      | 0.00            | 0.00        | 6,725.76              | -507.70      | -0.03        | 12.61                   | 0.00                    | 0.00                   | 0.00                  |  |
| <b>KOP Start Build 12.00</b>  |                 |             |                       |              |              |                         |                         |                        |                       |  |
| 6,800.00                      | 3.95            | 268.58      | 6,758.62              | -507.72      | -1.16        | 13.75                   | 12.00                   | 12.00                  | 0.00                  |  |
| 6,900.00                      | 15.95           | 268.58      | 6,856.93              | -508.15      | -18.40       | 30.99                   | 12.00                   | 12.00                  | 0.00                  |  |
| 7,000.00                      | 27.95           | 268.58      | 6,949.52              | -509.08      | -55.69       | 68.29                   | 12.00                   | 12.00                  | 0.00                  |  |
| 7,100.00                      | 39.95           | 268.58      | 7,032.32              | -510.46      | -111.41      | 124.03                  | 12.00                   | 12.00                  | 0.00                  |  |
| 7,200.00                      | 51.95           | 268.58      | 7,101.73              | -512.24      | -183.13      | 195.77                  | 12.00                   | 12.00                  | 0.00                  |  |
| 7,300.00                      | 63.95           | 268.58      | 7,154.70              | -514.33      | -267.70      | 280.37                  | 12.00                   | 12.00                  | 0.00                  |  |

## Legacy Directional

## Planning Report

|                  |                            |                                     |                                 |
|------------------|----------------------------|-------------------------------------|---------------------------------|
| <b>Database:</b> | EDM 5000.14 Single User Db | <b>Local Co-ordinate Reference:</b> | Well 221H                       |
| <b>Company:</b>  | V-F Petroleum Inc.         | <b>TVD Reference:</b>               | GL 3501' + 20' KB @ 3521.00usft |
| <b>Project:</b>  | Eddy County, NM            | <b>MD Reference:</b>                | GL 3501' + 20' KB @ 3521.00usft |
| <b>Site:</b>     | Lightfoot 19 State Com     | <b>North Reference:</b>             | Grid                            |
| <b>Well:</b>     | 221H                       | <b>Survey Calculation Method:</b>   | Minimum Curvature               |
| <b>Wellbore:</b> | OH                         |                                     |                                 |
| <b>Design:</b>   | Plan 1                     |                                     |                                 |

| Planned Survey                                             |                    |                |                             |                 |                 |                               |                               |                              |                             |
|------------------------------------------------------------|--------------------|----------------|-----------------------------|-----------------|-----------------|-------------------------------|-------------------------------|------------------------------|-----------------------------|
| Measured<br>Depth<br>(usft)                                | Inclination<br>(°) | Azimuth<br>(°) | Vertical<br>Depth<br>(usft) | +N/-S<br>(usft) | +E/-W<br>(usft) | Vertical<br>Section<br>(usft) | Dogleg<br>Rate<br>(°/100usft) | Build<br>Rate<br>(°/100usft) | Turn<br>Rate<br>(°/100usft) |
| 7,400.00                                                   | 75.95              | 268.58         | 7,188.93                    | -516.66         | -361.44         | 374.13                        | 12.00                         | 12.00                        | 0.00                        |
| 7,500.00                                                   | 87.95              | 268.58         | 7,202.92                    | -519.10         | -460.24         | 472.96                        | 12.00                         | 12.00                        | 0.00                        |
| 7,531.77                                                   | 91.76              | 268.58         | 7,203.00                    | -519.89         | -492.00         | 504.73                        | 12.00                         | 12.00                        | 0.00                        |
| LP 91.76° at 7531.77 MD - LP - Lightfoot 19 State Com 221H |                    |                |                             |                 |                 |                               |                               |                              |                             |
| 7,600.00                                                   | 91.76              | 268.58         | 7,200.91                    | -521.58         | -560.17         | 572.93                        | 0.00                          | 0.00                         | 0.00                        |
| 7,700.00                                                   | 91.76              | 268.58         | 7,197.84                    | -524.06         | -660.10         | 672.88                        | 0.00                          | 0.00                         | 0.00                        |
| 7,800.00                                                   | 91.76              | 268.58         | 7,194.77                    | -526.54         | -760.02         | 772.83                        | 0.00                          | 0.00                         | 0.00                        |
| 7,900.00                                                   | 91.76              | 268.58         | 7,191.70                    | -529.01         | -859.94         | 872.79                        | 0.00                          | 0.00                         | 0.00                        |
| 8,000.00                                                   | 91.76              | 268.58         | 7,188.63                    | -531.49         | -959.86         | 972.74                        | 0.00                          | 0.00                         | 0.00                        |
| 8,100.00                                                   | 91.76              | 268.58         | 7,185.56                    | -533.97         | -1,059.78       | 1,072.69                      | 0.00                          | 0.00                         | 0.00                        |
| 8,200.00                                                   | 91.76              | 268.58         | 7,182.49                    | -536.44         | -1,159.71       | 1,172.64                      | 0.00                          | 0.00                         | 0.00                        |
| 8,300.00                                                   | 91.76              | 268.58         | 7,179.42                    | -538.92         | -1,259.63       | 1,272.60                      | 0.00                          | 0.00                         | 0.00                        |
| 8,400.00                                                   | 91.76              | 268.58         | 7,176.35                    | -541.40         | -1,359.55       | 1,372.55                      | 0.00                          | 0.00                         | 0.00                        |
| 8,500.00                                                   | 91.76              | 268.58         | 7,173.29                    | -543.87         | -1,459.47       | 1,472.50                      | 0.00                          | 0.00                         | 0.00                        |
| 8,600.00                                                   | 91.76              | 268.58         | 7,170.22                    | -546.35         | -1,559.40       | 1,572.46                      | 0.00                          | 0.00                         | 0.00                        |
| 8,700.00                                                   | 91.76              | 268.58         | 7,167.15                    | -548.83         | -1,659.32       | 1,672.41                      | 0.00                          | 0.00                         | 0.00                        |
| 8,800.00                                                   | 91.76              | 268.58         | 7,164.08                    | -551.30         | -1,759.24       | 1,772.36                      | 0.00                          | 0.00                         | 0.00                        |
| 8,900.00                                                   | 91.76              | 268.58         | 7,161.01                    | -553.78         | -1,859.16       | 1,872.31                      | 0.00                          | 0.00                         | 0.00                        |
| 9,000.00                                                   | 91.76              | 268.58         | 7,157.94                    | -556.26         | -1,959.08       | 1,972.27                      | 0.00                          | 0.00                         | 0.00                        |
| 9,100.00                                                   | 91.76              | 268.58         | 7,154.87                    | -558.74         | -2,059.01       | 2,072.22                      | 0.00                          | 0.00                         | 0.00                        |
| 9,200.00                                                   | 91.76              | 268.58         | 7,151.80                    | -561.21         | -2,158.93       | 2,172.17                      | 0.00                          | 0.00                         | 0.00                        |
| 9,300.00                                                   | 91.76              | 268.58         | 7,148.73                    | -563.69         | -2,258.85       | 2,272.13                      | 0.00                          | 0.00                         | 0.00                        |
| 9,400.00                                                   | 91.76              | 268.58         | 7,145.66                    | -566.17         | -2,358.77       | 2,372.08                      | 0.00                          | 0.00                         | 0.00                        |
| 9,500.00                                                   | 91.76              | 268.58         | 7,142.60                    | -568.64         | -2,458.70       | 2,472.03                      | 0.00                          | 0.00                         | 0.00                        |
| 9,600.00                                                   | 91.76              | 268.58         | 7,139.53                    | -571.12         | -2,558.62       | 2,571.98                      | 0.00                          | 0.00                         | 0.00                        |
| 9,700.00                                                   | 91.76              | 268.58         | 7,136.46                    | -573.60         | -2,658.54       | 2,671.94                      | 0.00                          | 0.00                         | 0.00                        |
| 9,800.00                                                   | 91.76              | 268.58         | 7,133.39                    | -576.07         | -2,758.46       | 2,771.89                      | 0.00                          | 0.00                         | 0.00                        |
| 9,900.00                                                   | 91.76              | 268.58         | 7,130.32                    | -578.55         | -2,858.38       | 2,871.84                      | 0.00                          | 0.00                         | 0.00                        |
| 10,000.00                                                  | 91.76              | 268.58         | 7,127.25                    | -581.03         | -2,958.31       | 2,971.80                      | 0.00                          | 0.00                         | 0.00                        |
| 10,100.00                                                  | 91.76              | 268.58         | 7,124.18                    | -583.51         | -3,058.23       | 3,071.75                      | 0.00                          | 0.00                         | 0.00                        |
| 10,200.00                                                  | 91.76              | 268.58         | 7,121.11                    | -585.98         | -3,158.15       | 3,171.70                      | 0.00                          | 0.00                         | 0.00                        |
| 10,300.00                                                  | 91.76              | 268.58         | 7,118.04                    | -588.46         | -3,258.07       | 3,271.66                      | 0.00                          | 0.00                         | 0.00                        |
| 10,400.00                                                  | 91.76              | 268.58         | 7,114.98                    | -590.94         | -3,358.00       | 3,371.61                      | 0.00                          | 0.00                         | 0.00                        |
| 10,500.00                                                  | 91.76              | 268.58         | 7,111.91                    | -593.41         | -3,457.92       | 3,471.56                      | 0.00                          | 0.00                         | 0.00                        |
| 10,600.00                                                  | 91.76              | 268.58         | 7,108.84                    | -595.89         | -3,557.84       | 3,571.51                      | 0.00                          | 0.00                         | 0.00                        |
| 10,700.00                                                  | 91.76              | 268.58         | 7,105.77                    | -598.37         | -3,657.76       | 3,671.47                      | 0.00                          | 0.00                         | 0.00                        |
| 10,800.00                                                  | 91.76              | 268.58         | 7,102.70                    | -600.84         | -3,757.68       | 3,771.42                      | 0.00                          | 0.00                         | 0.00                        |
| 10,900.00                                                  | 91.76              | 268.58         | 7,099.63                    | -603.32         | -3,857.61       | 3,871.37                      | 0.00                          | 0.00                         | 0.00                        |
| 11,000.00                                                  | 91.76              | 268.58         | 7,096.56                    | -605.80         | -3,957.53       | 3,971.33                      | 0.00                          | 0.00                         | 0.00                        |
| 11,100.00                                                  | 91.76              | 268.58         | 7,093.49                    | -608.27         | -4,057.45       | 4,071.28                      | 0.00                          | 0.00                         | 0.00                        |
| 11,200.00                                                  | 91.76              | 268.58         | 7,090.42                    | -610.75         | -4,157.37       | 4,171.23                      | 0.00                          | 0.00                         | 0.00                        |
| 11,300.00                                                  | 91.76              | 268.58         | 7,087.36                    | -613.23         | -4,257.30       | 4,271.18                      | 0.00                          | 0.00                         | 0.00                        |
| 11,400.00                                                  | 91.76              | 268.58         | 7,084.29                    | -615.71         | -4,357.22       | 4,371.14                      | 0.00                          | 0.00                         | 0.00                        |
| 11,500.00                                                  | 91.76              | 268.58         | 7,081.22                    | -618.18         | -4,457.14       | 4,471.09                      | 0.00                          | 0.00                         | 0.00                        |
| 11,600.00                                                  | 91.76              | 268.58         | 7,078.15                    | -620.66         | -4,557.06       | 4,571.04                      | 0.00                          | 0.00                         | 0.00                        |
| 11,700.00                                                  | 91.76              | 268.58         | 7,075.08                    | -623.14         | -4,656.98       | 4,671.00                      | 0.00                          | 0.00                         | 0.00                        |
| 11,800.00                                                  | 91.76              | 268.58         | 7,072.01                    | -625.61         | -4,756.91       | 4,770.95                      | 0.00                          | 0.00                         | 0.00                        |
| 11,900.00                                                  | 91.76              | 268.58         | 7,068.94                    | -628.09         | -4,856.83       | 4,870.90                      | 0.00                          | 0.00                         | 0.00                        |
| 12,000.00                                                  | 91.76              | 268.58         | 7,065.87                    | -630.57         | -4,956.75       | 4,970.85                      | 0.00                          | 0.00                         | 0.00                        |
| 12,100.00                                                  | 91.76              | 268.58         | 7,062.80                    | -633.04         | -5,056.67       | 5,070.81                      | 0.00                          | 0.00                         | 0.00                        |
| 12,158.77                                                  | 91.76              | 268.58         | 7,061.00                    | -634.50         | -5,115.40       | 5,129.55                      | 0.00                          | 0.00                         | 0.00                        |
| TD at 12158.77 - BHL - Lightfoot 19 State Com 221H         |                    |                |                             |                 |                 |                               |                               |                              |                             |

## Legacy Directional Planning Report

|                  |                            |                                     |                                 |
|------------------|----------------------------|-------------------------------------|---------------------------------|
| <b>Database:</b> | EDM 5000.14 Single User Db | <b>Local Co-ordinate Reference:</b> | Well 221H                       |
| <b>Company:</b>  | V-F Petroleum Inc.         | <b>TVD Reference:</b>               | GL 3501' + 20' KB @ 3521.00usft |
| <b>Project:</b>  | Eddy County, NM            | <b>MD Reference:</b>                | GL 3501' + 20' KB @ 3521.00usft |
| <b>Site:</b>     | Lightfoot 19 State Com     | <b>North Reference:</b>             | Grid                            |
| <b>Well:</b>     | 221H                       | <b>Survey Calculation Method:</b>   | Minimum Curvature               |
| <b>Wellbore:</b> | OH                         |                                     |                                 |
| <b>Design:</b>   | Plan 1                     |                                     |                                 |

| Design Targets                                                    |                  |                 |               |                 |                 |                    |                   |           |             |
|-------------------------------------------------------------------|------------------|-----------------|---------------|-----------------|-----------------|--------------------|-------------------|-----------|-------------|
| Target Name<br>- hit/miss target<br>- Shape                       | Dip Angle<br>(°) | Dip Dir.<br>(°) | TVD<br>(usft) | +N/-S<br>(usft) | +E/-W<br>(usft) | Northing<br>(usft) | Easting<br>(usft) | Latitude  | Longitude   |
| BHL - Lightfoot 19 State<br>- plan hits target center<br>- Point  | 0.00             | 0.00            | 7,061.00      | -634.50         | -5,115.40       | 596,534.40         | 533,976.30        | 32.639927 | -104.222957 |
| LP - Lightfoot 19 State C<br>- plan hits target center<br>- Point | 0.00             | 0.00            | 7,203.00      | -519.89         | -492.00         | 596,649.01         | 538,599.70        | 32.640228 | -104.207937 |

| Plan Annotations            |                             |                   |                 |                         |  |
|-----------------------------|-----------------------------|-------------------|-----------------|-------------------------|--|
| Measured<br>Depth<br>(usft) | Vertical<br>Depth<br>(usft) | Local Coordinates |                 |                         |  |
|                             |                             | +N/-S<br>(usft)   | +E/-W<br>(usft) | Comment                 |  |
| 3,000.00                    | 3,000.00                    | 0.00              | 0.00            | Start Nudge Build 1.50  |  |
| 3,673.19                    | 3,669.71                    | -59.17            | 0.00            | 10.10° at 3673.19 MD    |  |
| 5,893.93                    | 5,856.05                    | -448.53           | -0.03           | Start Drop -1.50        |  |
| 6,567.12                    | 6,525.76                    | -507.70           | -0.03           | Vertical at 6567.12 MD  |  |
| 6,767.12                    | 6,725.76                    | -507.70           | -0.03           | KOP Start Build 12.00   |  |
| 7,531.77                    | 7,203.00                    | -519.89           | -492.00         | LP 91.76° at 7531.77 MD |  |
| 12,158.77                   | 7,061.00                    | -634.50           | -5,115.40       | TD at 12158.77          |  |