

**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 294726

**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>30-015-48139 |
| 4. Property Code<br>30356                                                               | 5. Property Name<br>GARVIN 22 STATE COM | 6. Well No.<br>222H           |

**7. Surface Location**

|               |               |                 |              |              |                   |               |                  |               |                |
|---------------|---------------|-----------------|--------------|--------------|-------------------|---------------|------------------|---------------|----------------|
| UL - Lot<br>I | Section<br>22 | Township<br>18S | Range<br>28E | Lot Idn<br>i | Feet From<br>1735 | 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>L | Section<br>22 | Township<br>18S | Range<br>28E | Lot Idn<br>L | Feet From<br>1735 | N/S Line<br>S | Feet From<br>100 | E/W Line<br>W | County<br>Eddy |
|---------------|---------------|-----------------|--------------|--------------|-------------------|---------------|------------------|---------------|----------------|

**9. Pool Information**

|                           |       |
|---------------------------|-------|
| ILLINOIS CAMP;BONE SPRING | 33590 |
|---------------------------|-------|

**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>3543 |
| 16. Multiple<br>N         | 17. Proposed Depth<br>12030 | 18. Formation<br>Bone Spring           | 19. Contractor          | 20. Spud Date<br>5/1/2021          |
| 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               | 12030         | 1340            | 3000          |

**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

Title: Regulatory Manager

Email Address: pamo@vfpetroleum.com

Date: 4/8/2021

Phone: 432-683-3344

Approved By: Kurt Simmons

Title: Petroleum Specialist - A

Approved Date: 4/20/2021

Expiration Date: 4/20/2023

Conditions of Approval Attached

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Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico  
Energy, Minerals & Natural Resources Department  
OIL CONSERVATION DIVISION  
1220 South St. Francis Dr.  
Santa Fe, 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             | Pool Code<br>33590                   | Pool Name<br>ILLINOIS CAMP; BONE SPRING |
| Property Code<br>30356 | Property Name<br>GARVIN 22 STATE COM | Well Number<br>222H                     |
| OGRID No.<br>24010     | Operator Name<br>V-F PETROLEUM INC   | Elevation<br>3543'                      |

## Surface Location

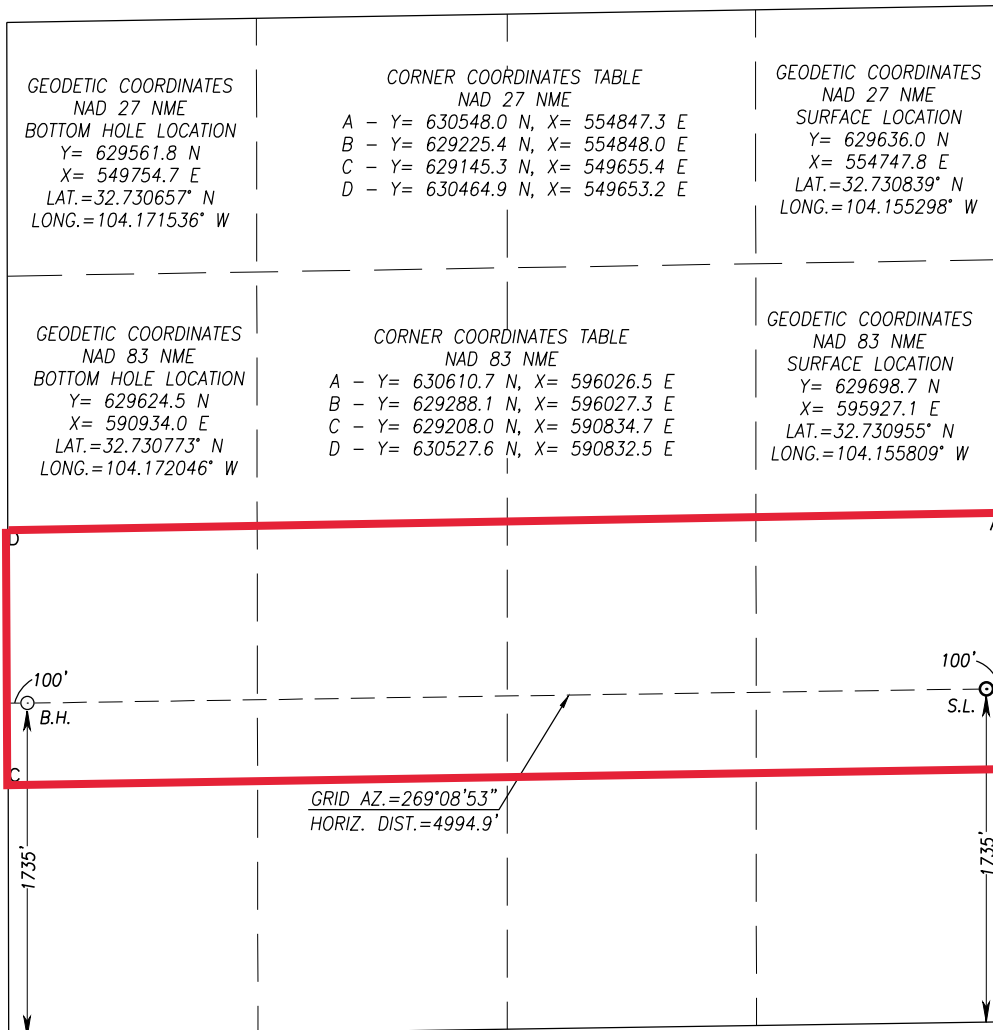
| UL or lot No. | Section | Township | Range | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County |
|---------------|---------|----------|-------|---------|---------------|------------------|---------------|----------------|--------|
| I             | 22      | 18-S     | 28-E  |         | 1735          | SOUTH            | 100           | EAST           | EDDY   |

## 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 |
|---------------|---------|----------|-------|---------|---------------|------------------|---------------|----------------|--------|
| L             | 22      | 18-S     | 28-E  |         | 1735          | SOUTH            | 100           | WEST           | EDDY   |

| Dedicated Acres | Joint or Infill | Consolidation Code | Order No. |
|-----------------|-----------------|--------------------|-----------|
| 160             |                 | C                  |           |

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



## 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.

Signature *Jason L. Lodge* Date 4/8/21

Printed Name Jason Lodge

Jason@vfpetroleum.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.

Date of Survey 04/10/2019  
Signature *Ronald J. Eidson* Seal of Professional Surveyor

Certificate Number 12641  
Gary G. Eidson  
Ronald J. Eidson 3239

LSL JWSC W.O.: 19.11.0134

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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: 4/20/2021

☒ 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 |
|---------------------------|--------------|--------------------------|-------------|-------------------|---------------------|----------|
| GARVIN 22 STATE COM #222H | 30-015-48139 | I-22-18S-28E             | 1735S 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 DCP OPERATING COMPANY, LP and will be connected to DCP OPERATING COMPANY, LP High/Low Pressure gathering system located in Eddy County, New Mexico. It will require 2180' of pipeline to connect the facility to High/Low Pressure gathering system. V-F PETROLEUM INC provides (periodically) to DCP OPERATING COMPANY, LP 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 DCP OPERATING COMPANY, LP have periodic conference calls to discuss changes to drilling and completion schedules. Gas from these wells will be processed at DCP OPERATING COMPANY, LP 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 DCP OPERATING COMPANY, LP 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 Conditions

Permit 294726

**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>30-015-48139        |
|                                                                                               | Well:<br>GARVIN 22 STATE COM #222H |

|                 |                                                                                                                                                                                                                                                                      |
|-----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| OCD<br>Reviewer | Condition                                                                                                                                                                                                                                                            |
| ksimmons        | Notify OCD 24 hours prior to casing & cement                                                                                                                                                                                                                         |
| ksimmons        | Will require a File As Drilled C-102 and a Directional Survey with the C-104                                                                                                                                                                                         |
| ksimmons        | The Operator is to notify NMOC by sundry (Form C-103) within ten (10) days of the well being spud                                                                                                                                                                    |
| kpickford       | Surface casing must be set 25' below top of Rustler Anhydrite or salt in order to seal off protectable water                                                                                                                                                         |
| kpickford       | 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       | 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                  |

F Petroleum, Inc.  
 Project: Eddy County, NM  
 Site: Sec 22-T18S-R28E  
 Well: Garvin 22 State Com 222H  
 Wellbore: Wellbore #1  
 Plan: Plan #1 (Garvin 22 State Com 222H/Wellbore #1)

WELL DETAILS: Garvin 22 State Com 222H

Ground Elevation: 3543.0  
 RKB Elevation: 3543+20 @ 3563.0usft  
 Rig Name:

| North         | East      | Lat              | Long             |
|---------------|-----------|------------------|------------------|
| 0.0 629698.70 | 595927.10 | 32° 43' 51.438 N | 104° 9' 20.910 W |

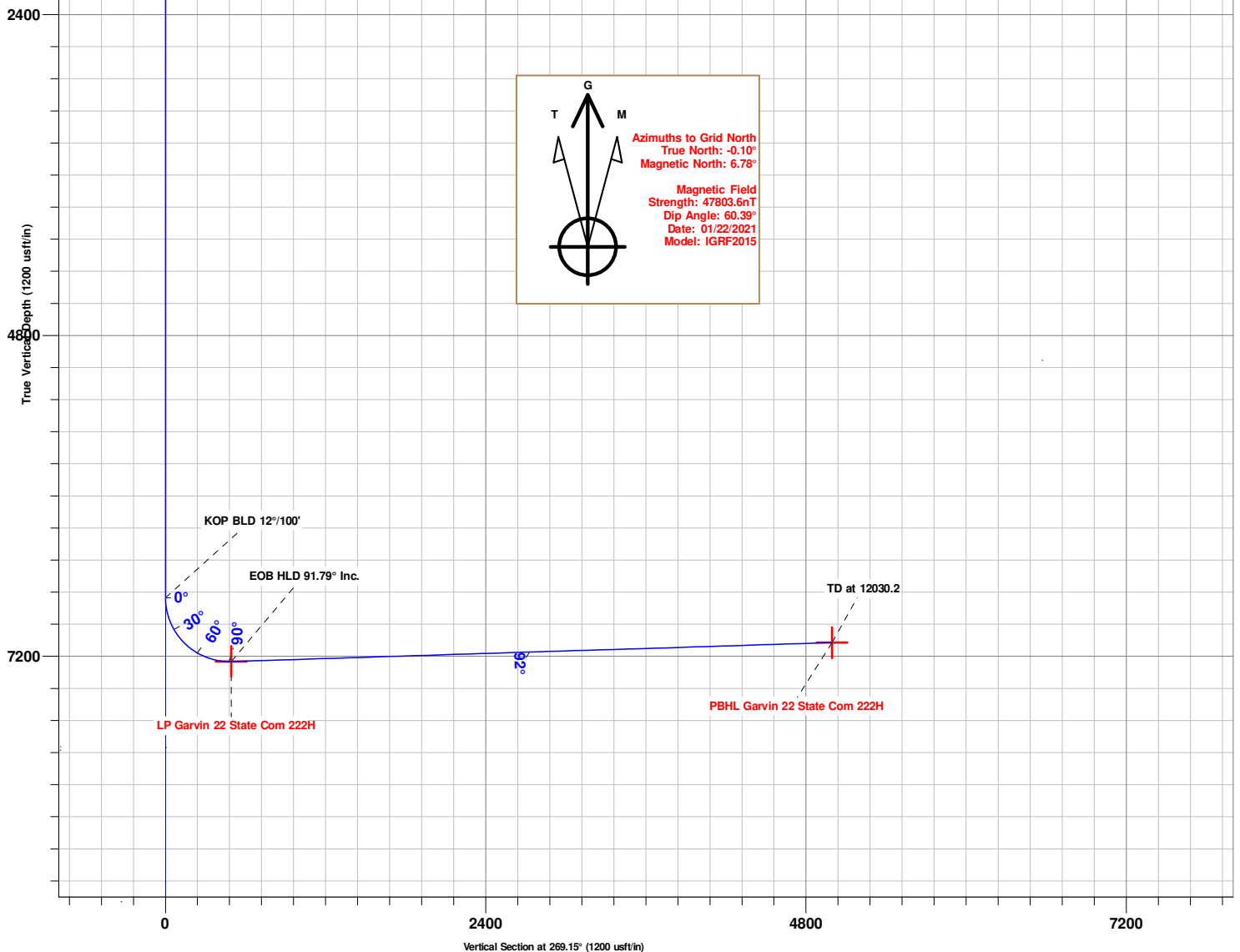
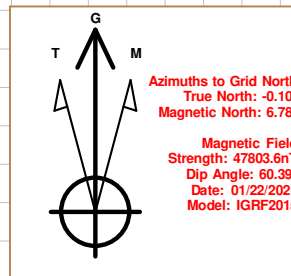
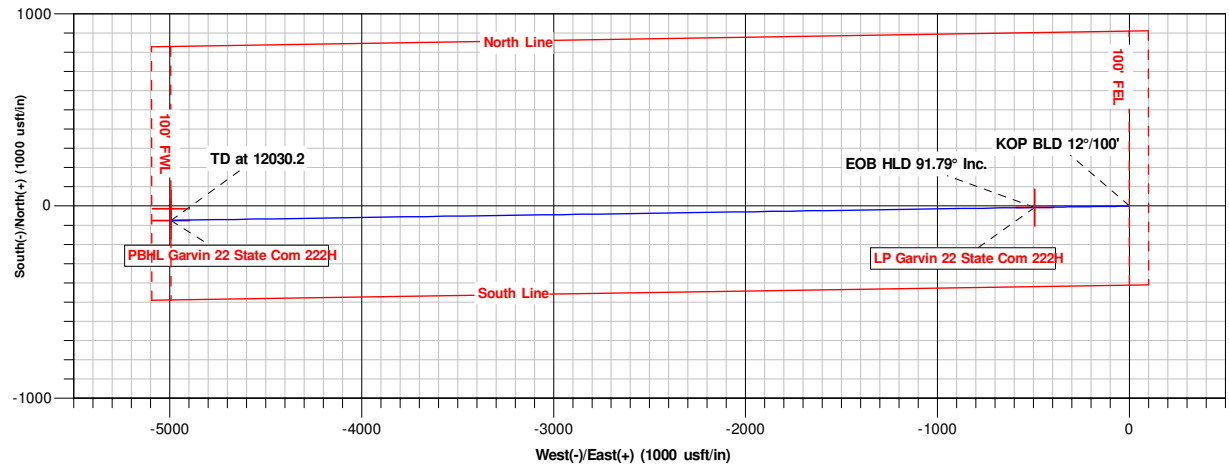
## SECTION DETAILS

| MD      | Inc   | Azi    | TVD    | +N/-S | +E/-W   | Dleg  | TFace  | VSec   |
|---------|-------|--------|--------|-------|---------|-------|--------|--------|
| 0.0     | 0.00  | 0.00   | 0.0    | 0.0   | 0.0     | 0.00  | 0.00   | 0.0    |
| 6761.8  | 0.00  | 0.00   | 6761.8 | 0.0   | 0.0     | 0.00  | 0.00   | 0.0    |
| 7526.8  | 91.79 | 269.15 | 7239.0 | -7.3  | -492.4  | 12.00 | 269.15 | 492.4  |
| 12030.2 | 91.79 | 269.15 | 7098.0 | -74.2 | -4993.1 | 0.00  | 0.00   | 4993.7 |

## DESIGN TARGET DETAILS

| Name                          | TVD    | +N/-S | +E/-W   | North     | East      | Lat              | Long              | Shape |
|-------------------------------|--------|-------|---------|-----------|-----------|------------------|-------------------|-------|
| PBHL Garvin 22 State Com 222H | 7098.0 | -74.2 | -4993.1 | 629624.50 | 590934.00 | 32° 43' 50.782 N | 104° 10' 19.366 W | Point |
| LP Garvin 22 State Com 222H   | 7239.0 | -7.3  | -492.4  | 629691.40 | 595434.70 | 32° 43' 51.373 N | 104° 9' 26.675 W  | Point |

- plan hits target center  
 - plan hits target center



# **V-F Petroleum, Inc.**

**Eddy County, NM**

**Sec 22-T18S-R28E**

**Garvin 22 State Com 222H**

**Wellbore #1**

**Plan: Plan #1**

## **Standard Planning Report**

**22 January, 2021**

**Microsoft**  
Planning Report

|                  |                            |                                     |                               |
|------------------|----------------------------|-------------------------------------|-------------------------------|
| <b>Database:</b> | EDM 5000.15 Single User Db | <b>Local Co-ordinate Reference:</b> | Well Garvin 22 State Com 222H |
| <b>Company:</b>  | V-F Petroleum, Inc.        | <b>TVD Reference:</b>               | 3543+20 @ 3563.0usft          |
| <b>Project:</b>  | Eddy County, NM            | <b>MD Reference:</b>                | 3543+20 @ 3563.0usft          |
| <b>Site:</b>     | Sec 22-T18S-R28E           | <b>North Reference:</b>             | Grid                          |
| <b>Well:</b>     | Garvin 22 State Com 222H   | <b>Survey Calculation Method:</b>   | Minimum Curvature             |
| <b>Wellbore:</b> | Wellbore #1                |                                     |                               |
| <b>Design:</b>   | Plan #1                    |                                     |                               |

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

|                       |                  |              |                 |                   |                  |
|-----------------------|------------------|--------------|-----------------|-------------------|------------------|
| Site                  | Sec 22-T18S-R28E |              |                 |                   |                  |
| Site Position:        |                  | Northing:    | 629,698.70 usft | Latitude:         | 32° 43' 51.438 N |
| From:                 | Map              | Easting:     | 595,927.10 usft | Longitude:        | 104° 9' 20.910 W |
| Position Uncertainty: | 0.0 usft         | Slot Radius: | 13-3/16 "       | Grid Convergence: | 0.10 °           |

| Well                 | Garvin 22 State Com 222H |          |                     |                 |               |                  |
|----------------------|--------------------------|----------|---------------------|-----------------|---------------|------------------|
| Well Position        | +N/-S                    | 0.0 usft | Northing:           | 629,698.70 usft | Latitude:     | 32° 43' 51.438 N |
|                      | +E/-W                    | 0.0 usft | Easting:            | 595,927.10 usft | Longitude:    | 104° 9' 20.910 W |
| Position Uncertainty |                          | 0.0 usft | Wellhead Elevation: |                 | Ground Level: | 3,543.0 usft     |

|                  |                   |                    |                        |                      |                            |
|------------------|-------------------|--------------------|------------------------|----------------------|----------------------------|
| <b>Wellbore</b>  | Wellbore #1       |                    |                        |                      |                            |
| <b>Magnetics</b> | <b>Model Name</b> | <b>Sample Date</b> | <b>Declination (°)</b> | <b>Dip Angle (°)</b> | <b>Field Strength (nT)</b> |
|                  | IGRF2015          | 01/22/21           | 6.88                   | 60.39                | 47,803.64349977            |

|                          |                                |                     |                      |                      |
|--------------------------|--------------------------------|---------------------|----------------------|----------------------|
| <b>Design</b>            | Plan #1                        |                     |                      |                      |
| <b>Audit Notes:</b>      |                                |                     |                      |                      |
| <b>Version:</b>          | <b>Phase:</b>                  | PLAN                | <b>Tie On Depth:</b> | 0.0                  |
| <b>Vertical Section:</b> | <b>Depth From (TVD) (usft)</b> | <b>+N/-S (usft)</b> | <b>+E/-W (usft)</b>  | <b>Direction (°)</b> |
|                          | 0.0                            | 0.0                 | 0.0                  | 269.15               |

|                                 |                        |                          |                       |                     |
|---------------------------------|------------------------|--------------------------|-----------------------|---------------------|
| <b>Plan Survey Tool Program</b> | <b>Date</b>            | 01/22/21                 |                       |                     |
| <b>Depth From (usft)</b>        | <b>Depth To (usft)</b> | <b>Survey (Wellbore)</b> | <b>Tool Name</b>      | <b>Remarks</b>      |
| 1                               | 0.0                    | 12,030.2                 | Plan #1 (Wellbore #1) | MWD                 |
|                                 |                        |                          |                       | OWSG MWD - Standard |

|                              |                        |                    |                              |                     |                     |                                |                               |                              |                |                      |
|------------------------------|------------------------|--------------------|------------------------------|---------------------|---------------------|--------------------------------|-------------------------------|------------------------------|----------------|----------------------|
| <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>        |
| 0.0                          | 0.00                   | 0.00               | 0.0                          | 0.0                 | 0.0                 | 0.00                           | 0.00                          | 0.00                         | 0.00           |                      |
| 6,761.8                      | 0.00                   | 0.00               | 6,761.8                      | 0.0                 | 0.0                 | 0.00                           | 0.00                          | 0.00                         | 0.00           |                      |
| 7,526.8                      | 91.79                  | 269.15             | 7,239.0                      | -7.3                | -492.4              | 12.00                          | 12.00                         | -11.88                       | 269.15         |                      |
| 12,030.2                     | 91.79                  | 269.15             | 7,098.0                      | -74.2               | -4,993.1            | 0.00                           | 0.00                          | 0.00                         | 0.00           | PBHL Garvin 22 State |

**Microsoft**  
Planning Report

|                  |                            |                                     |                               |
|------------------|----------------------------|-------------------------------------|-------------------------------|
| <b>Database:</b> | EDM 5000.15 Single User Db | <b>Local Co-ordinate Reference:</b> | Well Garvin 22 State Com 222H |
| <b>Company:</b>  | V-F Petroleum, Inc.        | <b>TVD Reference:</b>               | 3543+20 @ 3563.0usft          |
| <b>Project:</b>  | Eddy County, NM            | <b>MD Reference:</b>                | 3543+20 @ 3563.0usft          |
| <b>Site:</b>     | Sec 22-T18S-R28E           | <b>North Reference:</b>             | Grid                          |
| <b>Well:</b>     | Garvin 22 State Com 222H   | <b>Survey Calculation Method:</b>   | Minimum Curvature             |
| <b>Wellbore:</b> | Wellbore #1                |                                     |                               |
| <b>Design:</b>   | Plan #1                    |                                     |                               |

| Planned Survey        |                 |             |                       |              |              |                         |                         |                        |                       |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
| 0.0                   | 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                  |



**Microsoft**  
Planning Report

|                  |                            |                                     |                               |
|------------------|----------------------------|-------------------------------------|-------------------------------|
| <b>Database:</b> | EDM 5000.15 Single User Db | <b>Local Co-ordinate Reference:</b> | Well Garvin 22 State Com 222H |
| <b>Company:</b>  | V-F Petroleum, Inc.        | <b>TVD Reference:</b>               | 3543+20 @ 3563.0usft          |
| <b>Project:</b>  | Eddy County, NM            | <b>MD Reference:</b>                | 3543+20 @ 3563.0usft          |
| <b>Site:</b>     | Sec 22-T18S-R28E           | <b>North Reference:</b>             | Grid                          |
| <b>Well:</b>     | Garvin 22 State Com 222H   | <b>Survey Calculation Method:</b>   | Minimum Curvature             |
| <b>Wellbore:</b> | Wellbore #1                |                                     |                               |
| <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) |
| 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                  |
| 6,700.0                    | 0.00            | 0.00        | 6,700.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 6,761.8                    | 0.00            | 0.00        | 6,761.8               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| <b>KOP BLD 12°/100'</b>    |                 |             |                       |              |              |                         |                         |                        |                       |
| 6,775.0                    | 1.58            | 269.15      | 6,775.0               | 0.0          | -0.2         | 0.2                     | 12.00                   | 12.00                  | 0.00                  |
| 6,800.0                    | 4.58            | 269.15      | 6,800.0               | 0.0          | -1.5         | 1.5                     | 12.00                   | 12.00                  | 0.00                  |
| 6,825.0                    | 7.58            | 269.15      | 6,824.8               | -0.1         | -4.2         | 4.2                     | 12.00                   | 12.00                  | 0.00                  |
| 6,850.0                    | 10.58           | 269.15      | 6,849.5               | -0.1         | -8.1         | 8.1                     | 12.00                   | 12.00                  | 0.00                  |
| 6,875.0                    | 13.58           | 269.15      | 6,873.9               | -0.2         | -13.4        | 13.4                    | 12.00                   | 12.00                  | 0.00                  |
| 6,900.0                    | 16.58           | 269.15      | 6,898.1               | -0.3         | -19.9        | 19.9                    | 12.00                   | 12.00                  | 0.00                  |
| 6,925.0                    | 19.58           | 269.15      | 6,921.8               | -0.4         | -27.6        | 27.6                    | 12.00                   | 12.00                  | 0.00                  |
| 6,950.0                    | 22.58           | 269.15      | 6,945.2               | -0.5         | -36.6        | 36.6                    | 12.00                   | 12.00                  | 0.00                  |
| 6,975.0                    | 25.58           | 269.15      | 6,968.0               | -0.7         | -46.8        | 46.8                    | 12.00                   | 12.00                  | 0.00                  |
| 7,000.0                    | 28.58           | 269.15      | 6,990.2               | -0.9         | -58.2        | 58.2                    | 12.00                   | 12.00                  | 0.00                  |
| 7,025.0                    | 31.58           | 269.15      | 7,011.9               | -1.1         | -70.7        | 70.7                    | 12.00                   | 12.00                  | 0.00                  |
| 7,050.0                    | 34.58           | 269.15      | 7,032.8               | -1.3         | -84.4        | 84.4                    | 12.00                   | 12.00                  | 0.00                  |
| 7,075.0                    | 37.58           | 269.15      | 7,053.0               | -1.5         | -99.1        | 99.1                    | 12.00                   | 12.00                  | 0.00                  |
| 7,100.0                    | 40.58           | 269.15      | 7,072.4               | -1.7         | -114.8       | 114.9                   | 12.00                   | 12.00                  | 0.00                  |
| 7,125.0                    | 43.58           | 269.15      | 7,091.0               | -2.0         | -131.6       | 131.6                   | 12.00                   | 12.00                  | 0.00                  |
| 7,150.0                    | 46.58           | 269.15      | 7,108.6               | -2.2         | -149.3       | 149.3                   | 12.00                   | 12.00                  | 0.00                  |
| 7,175.0                    | 49.58           | 269.15      | 7,125.3               | -2.5         | -167.9       | 167.9                   | 12.00                   | 12.00                  | 0.00                  |
| 7,200.0                    | 52.58           | 269.15      | 7,141.0               | -2.8         | -187.3       | 187.4                   | 12.00                   | 12.00                  | 0.00                  |
| 7,225.0                    | 55.58           | 269.15      | 7,155.7               | -3.1         | -207.6       | 207.6                   | 12.00                   | 12.00                  | 0.00                  |
| 7,250.0                    | 58.58           | 269.15      | 7,169.3               | -3.4         | -228.6       | 228.6                   | 12.00                   | 12.00                  | 0.00                  |
| 7,275.0                    | 61.58           | 269.15      | 7,181.7               | -3.7         | -250.2       | 250.3                   | 12.00                   | 12.00                  | 0.00                  |
| 7,300.0                    | 64.58           | 269.15      | 7,193.1               | -4.0         | -272.5       | 272.5                   | 12.00                   | 12.00                  | 0.00                  |
| 7,325.0                    | 67.58           | 269.15      | 7,203.2               | -4.4         | -295.4       | 295.4                   | 12.00                   | 12.00                  | 0.00                  |
| 7,350.0                    | 70.58           | 269.15      | 7,212.1               | -4.7         | -318.7       | 318.7                   | 12.00                   | 12.00                  | 0.00                  |
| 7,375.0                    | 73.58           | 269.15      | 7,219.8               | -5.1         | -342.5       | 342.5                   | 12.00                   | 12.00                  | 0.00                  |
| 7,400.0                    | 76.58           | 269.15      | 7,226.2               | -5.4         | -366.6       | 366.7                   | 12.00                   | 12.00                  | 0.00                  |
| 7,425.0                    | 79.58           | 269.15      | 7,231.4               | -5.8         | -391.1       | 391.1                   | 12.00                   | 12.00                  | 0.00                  |
| 7,450.0                    | 82.58           | 269.15      | 7,235.3               | -6.2         | -415.8       | 415.8                   | 12.00                   | 12.00                  | 0.00                  |
| 7,475.0                    | 85.58           | 269.15      | 7,237.8               | -6.5         | -440.7       | 440.7                   | 12.00                   | 12.00                  | 0.00                  |
| 7,500.0                    | 88.58           | 269.15      | 7,239.1               | -6.9         | -465.6       | 465.7                   | 12.00                   | 12.00                  | 0.00                  |
| 7,526.8                    | 91.79           | 269.15      | 7,239.0               | -7.3         | -492.4       | 492.4                   | 12.00                   | 12.00                  | 0.00                  |
| <b>EOB HLD 91.79° Inc.</b> |                 |             |                       |              |              |                         |                         |                        |                       |
| 7,600.0                    | 91.79           | 269.15      | 7,236.7               | -8.4         | -565.6       | 565.6                   | 0.00                    | 0.00                   | 0.00                  |
| 7,700.0                    | 91.79           | 269.15      | 7,233.6               | -9.9         | -665.5       | 665.6                   | 0.00                    | 0.00                   | 0.00                  |
| 7,800.0                    | 91.79           | 269.15      | 7,230.5               | -11.4        | -765.4       | 765.5                   | 0.00                    | 0.00                   | 0.00                  |
| 7,900.0                    | 91.79           | 269.15      | 7,227.3               | -12.9        | -865.4       | 865.5                   | 0.00                    | 0.00                   | 0.00                  |
| 8,000.0                    | 91.79           | 269.15      | 7,224.2               | -14.3        | -965.3       | 965.4                   | 0.00                    | 0.00                   | 0.00                  |

**Microsoft**  
Planning Report

|                  |                            |                                     |                               |
|------------------|----------------------------|-------------------------------------|-------------------------------|
| <b>Database:</b> | EDM 5000.15 Single User Db | <b>Local Co-ordinate Reference:</b> | Well Garvin 22 State Com 222H |
| <b>Company:</b>  | V-F Petroleum, Inc.        | <b>TVD Reference:</b>               | 3543+20 @ 3563.0usft          |
| <b>Project:</b>  | Eddy County, NM            | <b>MD Reference:</b>                | 3543+20 @ 3563.0usft          |
| <b>Site:</b>     | Sec 22-T18S-R28E           | <b>North Reference:</b>             | Grid                          |
| <b>Well:</b>     | Garvin 22 State Com 222H   | <b>Survey Calculation Method:</b>   | Minimum Curvature             |
| <b>Wellbore:</b> | Wellbore #1                |                                     |                               |
| <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) |  |
| 8,100.0               | 91.79           | 269.15      | 7,221.1               | -15.8        | -1,065.3     | 1,065.4                 | 0.00                    | 0.00                   | 0.00                  |  |
| 8,200.0               | 91.79           | 269.15      | 7,217.9               | -17.3        | -1,165.2     | 1,165.3                 | 0.00                    | 0.00                   | 0.00                  |  |
| 8,300.0               | 91.79           | 269.15      | 7,214.8               | -18.8        | -1,265.1     | 1,265.3                 | 0.00                    | 0.00                   | 0.00                  |  |
| 8,400.0               | 91.79           | 269.15      | 7,211.7               | -20.3        | -1,365.1     | 1,365.2                 | 0.00                    | 0.00                   | 0.00                  |  |
| 8,500.0               | 91.79           | 269.15      | 7,208.6               | -21.8        | -1,465.0     | 1,465.2                 | 0.00                    | 0.00                   | 0.00                  |  |
| 8,600.0               | 91.79           | 269.15      | 7,205.4               | -23.3        | -1,565.0     | 1,565.1                 | 0.00                    | 0.00                   | 0.00                  |  |
| 8,700.0               | 91.79           | 269.15      | 7,202.3               | -24.7        | -1,664.9     | 1,665.1                 | 0.00                    | 0.00                   | 0.00                  |  |
| 8,800.0               | 91.79           | 269.15      | 7,199.2               | -26.2        | -1,764.8     | 1,765.0                 | 0.00                    | 0.00                   | 0.00                  |  |
| 8,900.0               | 91.79           | 269.15      | 7,196.0               | -27.7        | -1,864.8     | 1,865.0                 | 0.00                    | 0.00                   | 0.00                  |  |
| 9,000.0               | 91.79           | 269.15      | 7,192.9               | -29.2        | -1,964.7     | 1,964.9                 | 0.00                    | 0.00                   | 0.00                  |  |
| 9,100.0               | 91.79           | 269.15      | 7,189.8               | -30.7        | -2,064.7     | 2,064.9                 | 0.00                    | 0.00                   | 0.00                  |  |
| 9,200.0               | 91.79           | 269.15      | 7,186.6               | -32.2        | -2,164.6     | 2,164.8                 | 0.00                    | 0.00                   | 0.00                  |  |
| 9,300.0               | 91.79           | 269.15      | 7,183.5               | -33.7        | -2,264.5     | 2,264.8                 | 0.00                    | 0.00                   | 0.00                  |  |
| 9,400.0               | 91.79           | 269.15      | 7,180.4               | -35.1        | -2,364.5     | 2,364.7                 | 0.00                    | 0.00                   | 0.00                  |  |
| 9,500.0               | 91.79           | 269.15      | 7,177.2               | -36.6        | -2,464.4     | 2,464.7                 | 0.00                    | 0.00                   | 0.00                  |  |
| 9,600.0               | 91.79           | 269.15      | 7,174.1               | -38.1        | -2,564.4     | 2,564.6                 | 0.00                    | 0.00                   | 0.00                  |  |
| 9,700.0               | 91.79           | 269.15      | 7,171.0               | -39.6        | -2,664.3     | 2,664.6                 | 0.00                    | 0.00                   | 0.00                  |  |
| 9,800.0               | 91.79           | 269.15      | 7,167.8               | -41.1        | -2,764.2     | 2,764.5                 | 0.00                    | 0.00                   | 0.00                  |  |
| 9,900.0               | 91.79           | 269.15      | 7,164.7               | -42.6        | -2,864.2     | 2,864.5                 | 0.00                    | 0.00                   | 0.00                  |  |
| 10,000.0              | 91.79           | 269.15      | 7,161.6               | -44.0        | -2,964.1     | 2,964.4                 | 0.00                    | 0.00                   | 0.00                  |  |
| 10,100.0              | 91.79           | 269.15      | 7,158.4               | -45.5        | -3,064.1     | 3,064.4                 | 0.00                    | 0.00                   | 0.00                  |  |
| 10,200.0              | 91.79           | 269.15      | 7,155.3               | -47.0        | -3,164.0     | 3,164.4                 | 0.00                    | 0.00                   | 0.00                  |  |
| 10,300.0              | 91.79           | 269.15      | 7,152.2               | -48.5        | -3,263.9     | 3,264.3                 | 0.00                    | 0.00                   | 0.00                  |  |
| 10,400.0              | 91.79           | 269.15      | 7,149.1               | -50.0        | -3,363.9     | 3,364.3                 | 0.00                    | 0.00                   | 0.00                  |  |
| 10,500.0              | 91.79           | 269.15      | 7,145.9               | -51.5        | -3,463.8     | 3,464.2                 | 0.00                    | 0.00                   | 0.00                  |  |
| 10,600.0              | 91.79           | 269.15      | 7,142.8               | -53.0        | -3,563.8     | 3,564.2                 | 0.00                    | 0.00                   | 0.00                  |  |
| 10,700.0              | 91.79           | 269.15      | 7,139.7               | -54.4        | -3,663.7     | 3,664.1                 | 0.00                    | 0.00                   | 0.00                  |  |
| 10,800.0              | 91.79           | 269.15      | 7,136.5               | -55.9        | -3,763.6     | 3,764.1                 | 0.00                    | 0.00                   | 0.00                  |  |
| 10,900.0              | 91.79           | 269.15      | 7,133.4               | -57.4        | -3,863.6     | 3,864.0                 | 0.00                    | 0.00                   | 0.00                  |  |
| 11,000.0              | 91.79           | 269.15      | 7,130.3               | -58.9        | -3,963.5     | 3,964.0                 | 0.00                    | 0.00                   | 0.00                  |  |
| 11,100.0              | 91.79           | 269.15      | 7,127.1               | -60.4        | -4,063.5     | 4,063.9                 | 0.00                    | 0.00                   | 0.00                  |  |
| 11,200.0              | 91.79           | 269.15      | 7,124.0               | -61.9        | -4,163.4     | 4,163.9                 | 0.00                    | 0.00                   | 0.00                  |  |
| 11,300.0              | 91.79           | 269.15      | 7,120.9               | -63.4        | -4,263.3     | 4,263.8                 | 0.00                    | 0.00                   | 0.00                  |  |
| 11,400.0              | 91.79           | 269.15      | 7,117.7               | -64.8        | -4,363.3     | 4,363.8                 | 0.00                    | 0.00                   | 0.00                  |  |
| 11,500.0              | 91.79           | 269.15      | 7,114.6               | -66.3        | -4,463.2     | 4,463.7                 | 0.00                    | 0.00                   | 0.00                  |  |
| 11,600.0              | 91.79           | 269.15      | 7,111.5               | -67.8        | -4,563.2     | 4,563.7                 | 0.00                    | 0.00                   | 0.00                  |  |
| 11,700.0              | 91.79           | 269.15      | 7,108.3               | -69.3        | -4,663.1     | 4,663.6                 | 0.00                    | 0.00                   | 0.00                  |  |
| 11,800.0              | 91.79           | 269.15      | 7,105.2               | -70.8        | -4,763.0     | 4,763.6                 | 0.00                    | 0.00                   | 0.00                  |  |
| 11,900.0              | 91.79           | 269.15      | 7,102.1               | -72.3        | -4,863.0     | 4,863.5                 | 0.00                    | 0.00                   | 0.00                  |  |
| 12,000.0              | 91.79           | 269.15      | 7,098.9               | -73.8        | -4,962.9     | 4,963.5                 | 0.00                    | 0.00                   | 0.00                  |  |
| 12,030.2              | 91.79           | 269.15      | 7,098.0               | -74.2        | -4,993.1     | 4,993.7                 | 0.00                    | 0.00                   | 0.00                  |  |
| TD at 12030.2         |                 |             |                       |              |              |                         |                         |                        |                       |  |

**Microsoft**  
Planning Report

|                  |                            |                                     |                               |
|------------------|----------------------------|-------------------------------------|-------------------------------|
| <b>Database:</b> | EDM 5000.15 Single User Db | <b>Local Co-ordinate Reference:</b> | Well Garvin 22 State Com 222H |
| <b>Company:</b>  | V-F Petroleum, Inc.        | <b>TVD Reference:</b>               | 3543+20 @ 3563.0usft          |
| <b>Project:</b>  | Eddy County, NM            | <b>MD Reference:</b>                | 3543+20 @ 3563.0usft          |
| <b>Site:</b>     | Sec 22-T18S-R28E           | <b>North Reference:</b>             | Grid                          |
| <b>Well:</b>     | Garvin 22 State Com 222H   | <b>Survey Calculation Method:</b>   | Minimum Curvature             |
| <b>Wellbore:</b> | Wellbore #1                |                                     |                               |
| <b>Design:</b>   | Plan #1                    |                                     |                               |

| Design Targets            |           |          |         |        |          |            |            |                  |                   |
|---------------------------|-----------|----------|---------|--------|----------|------------|------------|------------------|-------------------|
| Target Name               | Dip Angle | Dip Dir. | TVD     | +N/-S  | +E/-W    | Northing   | Easting    | Latitude         | Longitude         |
| - hit/miss target         | (°)       | (°)      | (usft)  | (usft) | (usft)   | (usft)     | (usft)     |                  |                   |
| - Shape                   |           |          |         |        |          |            |            |                  |                   |
| PBHL Garvin 22 State C    | 0.00      | 0.00     | 7,098.0 | -74.2  | -4,993.1 | 629,624.50 | 590,934.00 | 32° 43' 50.782 N | 104° 10' 19.366 W |
| - plan hits target center |           |          |         |        |          |            |            |                  |                   |
| - Point                   |           |          |         |        |          |            |            |                  |                   |
| LP Garvin 22 State Com    | 0.00      | 0.00     | 7,239.0 | -7.3   | -492.4   | 629,691.40 | 595,434.70 | 32° 43' 51.373 N | 104° 9' 26.675 W  |
| - plan hits target center |           |          |         |        |          |            |            |                  |                   |
| - Point                   |           |          |         |        |          |            |            |                  |                   |

| Plan Annotations |                |                   |              |                     |
|------------------|----------------|-------------------|--------------|---------------------|
| Measured Depth   | Vertical Depth | Local Coordinates |              | Comment             |
| (usft)           | (usft)         | +N/-S (usft)      | +E/-W (usft) |                     |
| 6,761.8          | 6,761.8        | 0.0               | 0.0          | KOP BLD 12°/100'    |
| 7,526.8          | 7,239.0        | -7.3              | -492.4       | EOB HLD 91.79° Inc. |
| 12,030.2         | 7,098.0        | -74.2             | -4,993.1     | TD at 12030.2       |