

**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 332714

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

|                                                                                                            |                                            |                               |
|------------------------------------------------------------------------------------------------------------|--------------------------------------------|-------------------------------|
| 1. Operator Name and Address<br>COLGATE OPERATING, LLC<br>300 North Marienfeld Street<br>Midland, TX 79701 |                                            | 2. OGRID Number<br>371449     |
|                                                                                                            |                                            | 3. API Number<br>30-015-53305 |
| 4. Property Code<br>333726                                                                                 | 5. Property Name<br>Black Cat 16 State Com | 6. Well No.<br>132H           |

**7. Surface Location**

|               |               |                 |              |         |                   |               |                  |               |                |
|---------------|---------------|-----------------|--------------|---------|-------------------|---------------|------------------|---------------|----------------|
| UL - Lot<br>A | Section<br>16 | Township<br>19S | Range<br>28E | Lot Idn | Feet From<br>1027 | N/S Line<br>N | Feet From<br>333 | E/W Line<br>E | County<br>Eddy |
|---------------|---------------|-----------------|--------------|---------|-------------------|---------------|------------------|---------------|----------------|

**8. Proposed Bottom Hole Location**

|               |               |                 |              |              |                   |               |                 |               |                |
|---------------|---------------|-----------------|--------------|--------------|-------------------|---------------|-----------------|---------------|----------------|
| UL - Lot<br>E | Section<br>17 | Township<br>19S | Range<br>28E | Lot Idn<br>E | Feet From<br>2050 | N/S Line<br>N | Feet From<br>10 | 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>3523 |
| 16. Multiple<br>N         | 17. Proposed Depth<br>18640 | 18. Formation<br>3rd Bone Spring Sand  | 19. Contractor          | 20. Spud Date<br>4/7/2023          |
| 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             | 260           | 331             | 0             |
| Int1 | 12.25     | 9.625       | 36               | 2830          | 828             | 0             |
| Prod | 7.875     | 5.5         | 20               | 18640         | 1905            | 8078          |
| Prod | 8.75      | 5.5         | 20               | 8828          | 722             | 0             |

**Casing/Cement Program: Additional Comments**

|                                                                                                                 |
|-----------------------------------------------------------------------------------------------------------------|
| Drilling 8.75-hole size for the curve and 7.875-hole size for the lateral for the 5.5 production casing string. |
|-----------------------------------------------------------------------------------------------------------------|

**22. Proposed Blowout Prevention Program**

| Type | Working Pressure | Test Pressure | Manufacturer |
|------|------------------|---------------|--------------|
| Pipe | 10000            | 5000          | CAMERON      |

|                                                                                                                                                                                                                                                                                                    |                                  |                                 |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|---------------------------------|
| 23. I hereby certify that the information given above is true and complete to the best of my knowledge and belief.<br>I further certify I have complied with 19.15.14.9 (A) NMAC <input checked="" type="checkbox"/> and/or 19.15.14.9 (B) NMAC <input checked="" type="checkbox"/> if applicable. | <b>OIL CONSERVATION DIVISION</b> |                                 |
| Signature:                                                                                                                                                                                                                                                                                         |                                  |                                 |
| Printed Name: Electronically filed by Kayla Butler                                                                                                                                                                                                                                                 | Approved By: Katherine Pickford  |                                 |
| Title: Production Engineer Analyst                                                                                                                                                                                                                                                                 | Title: Geoscientist              |                                 |
| Email Address: kbutler@colgateenergy.com                                                                                                                                                                                                                                                           | Approved Date: 2/22/2023         | Expiration Date: 2/22/2025      |
| Date: 1/17/2023                                                                                                                                                                                                                                                                                    | Phone: 432-219-8567              | Conditions of Approval Attached |

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

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

☐ AMENDED REPORT

**WELL LOCATION AND ACREAGE DEDICATION PLAT**

|                                     |                                                  |                                                     |
|-------------------------------------|--------------------------------------------------|-----------------------------------------------------|
| <b>1 API Number</b><br>30-015-53305 | <b>2 Pool Code</b><br>97569                      | <b>3 Pool Name</b><br>Winchester; Bone Spring, West |
| <b>4 Property Code</b><br>333726    | <b>5 Property Name</b><br>BLACK CAT 16 STATE COM | <b>6 Well Number</b><br>132H                        |
| <b>7 OGRID No.</b><br>371449        | <b>8 Operator Name</b><br>COLGATE OPERATING, LLC | <b>9 Elevation</b><br>3522.50'                      |

**10 Surface Location**

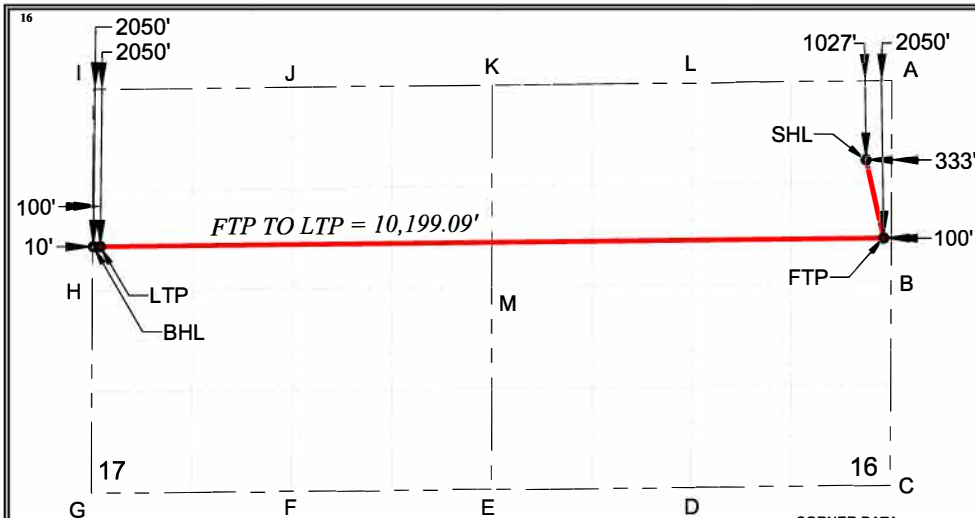
| UL or lot no. | Section | Township | Range | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County |
|---------------|---------|----------|-------|---------|---------------|------------------|---------------|----------------|--------|
| A             | 16      | 19-S     | 28-E  |         | 1027'         | NORTH            | 333'          | EAST           | EDDY   |

**11 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 |
|---------------|---------|----------|-------|---------|---------------|------------------|---------------|----------------|--------|
| E             | 17      | 19-S     | 28-E  |         | 2050'         | NORTH            | 10'           | WEST           | EDDY   |

|                                  |                           |                              |                     |
|----------------------------------|---------------------------|------------------------------|---------------------|
| <b>12 Dedicated Acres</b><br>320 | <b>13 Joint or Infill</b> | <b>14 Consolidation Code</b> | <b>15 Order No.</b> |
|----------------------------------|---------------------------|------------------------------|---------------------|

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.



**17 OPERATOR CERTIFICATION**

I hereby certify that the information contained 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 a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Signature: *[Signature]* Date: 1/15/23

Meghan Twele

Printed Name

meghan.twele@permianres.com

E-mail Address

**18 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: 10/25/2022

Signature and Seal of Professional Surveyor

25490

Certificate Number

CHARLES L. JURICA

PROFESSIONAL SURVEYOR

*[Signature]*

Certificate Number

**CORNER DATA**

**NEW MEXICO EAST - NAD 83**

- A - FOUND IRON PIPE W/ BRASS CAP N:606757.31' E:590806.24'
- B - FOUND 1" IRON PIPE N:604120.46' E:590796.45'
- C - FOUND IRON PIPE W/ BRASS CAP N:601487.49' E:590787.58'
- D - FOUND IRON PIPE W/ BRASS CAP N:601458.74' E:588190.50'
- E - FOUND IRON PIPE W/ BRASS CAP N:601430.34' E:585595.57'
- F - FOUND IRON PIPE W/ BRASS CAP N:601406.13' E:582988.92'
- G - FOUND IRON PIPE W/ BRASS CAP N:601382.22' E:580382.84'
- H - FOUND IRON PIPE W/ BRASS CAP N:604011.85' E:580396.86'
- I - FOUND 2" IRON PIPE N:606641.54' E:580411.81'
- J - FOUND 1" IRON PIPE N:606668.08' E:583007.40'
- K - FOUND 2" IRON PIPE N:606695.00' E:585602.41'
- L - CALCULATED CORNER N:606726.16' E:588204.33'
- M - FOUND 1" IRON PIPE N:604062.54' E:585596.50'

**SURFACE HOLE LOCATION (SHL)**

NEW MEXICO EAST - NAD 83  
X=590469.46 LAT.= 32.66508651° N  
Y=604726.46 LONG.= 104.17367388° W  
NEW MEXICO EAST - NAD 27  
X=549289.75 LAT.= 32.66496979° N  
Y=605664.34 LONG.= -104.17316482° W  
1027' FNL, 333' FEL - SECTION 16

**FIRST TAKE POINT (FTP)**

NEW MEXICO EAST - NAD 83  
X=590698.62 LAT.= 32.66228029° N  
Y=604705.88 LONG.= 104.17293422° W  
NEW MEXICO EAST - NAD 27  
X=549518.89 LAT.= 32.66216354° N  
Y=604643.78 LONG.= -104.17242525° W  
2050' FNL, 100' FEL - SECTION 16

**LAST TAKE POINT (LTP)**

NEW MEXICO EAST - NAD 83  
X=580500.96 LAT.= 32.66200618° N  
Y=604592.34 LONG.= 104.20607192° W  
NEW MEXICO EAST - NAD 27  
X=539321.23 LAT.= 32.66188977° N  
Y=604530.32 LONG.= -104.20556219° W  
2050' FNL, 100' FWL - SECTION 17

**BOTTOM HOLE LOCATION (BHL)**

NEW MEXICO EAST - NAD 83  
X=580410.16 LAT.= 32.66200393° N  
Y=604591.41 LONG.= 104.20636699° W  
NEW MEXICO EAST - NAD 27  
X=539230.42 LAT.= 32.66188752° N  
Y=604529.40 LONG.= -104.20585725° W  
2050' FNL, 10' FWL - SECTION 17

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

Form APD Conditions

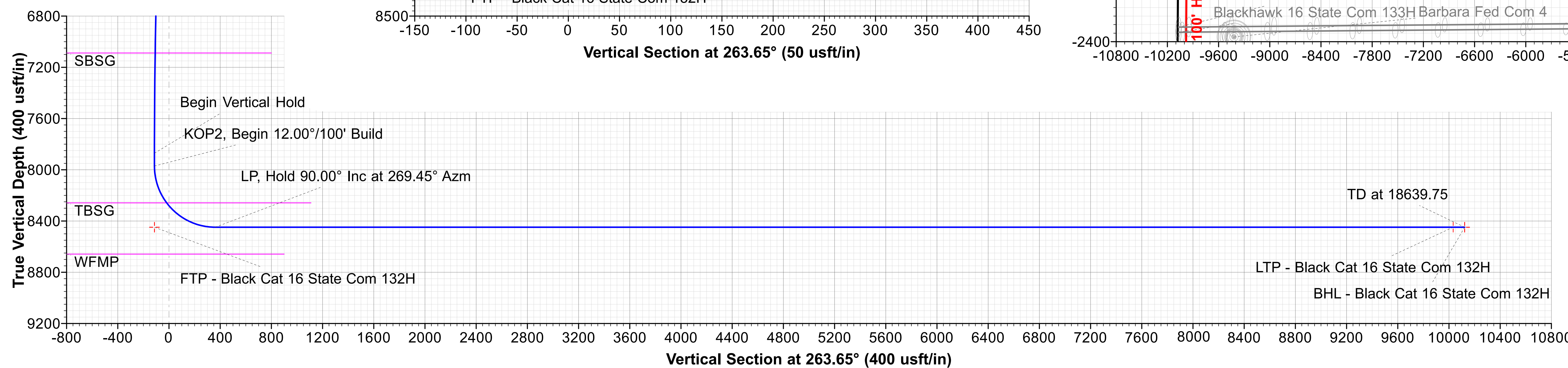
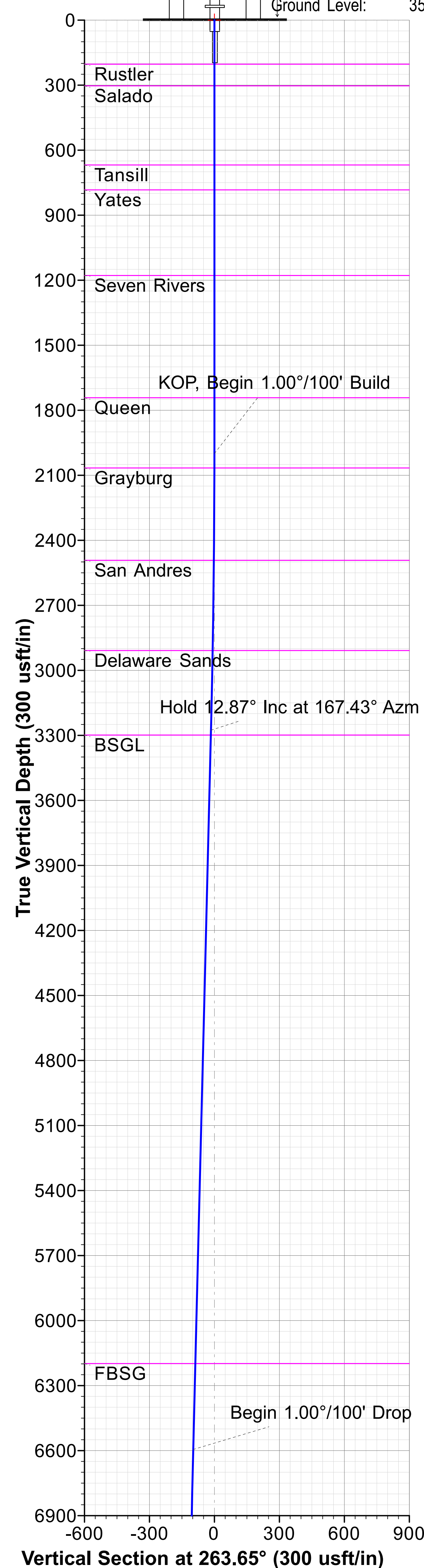
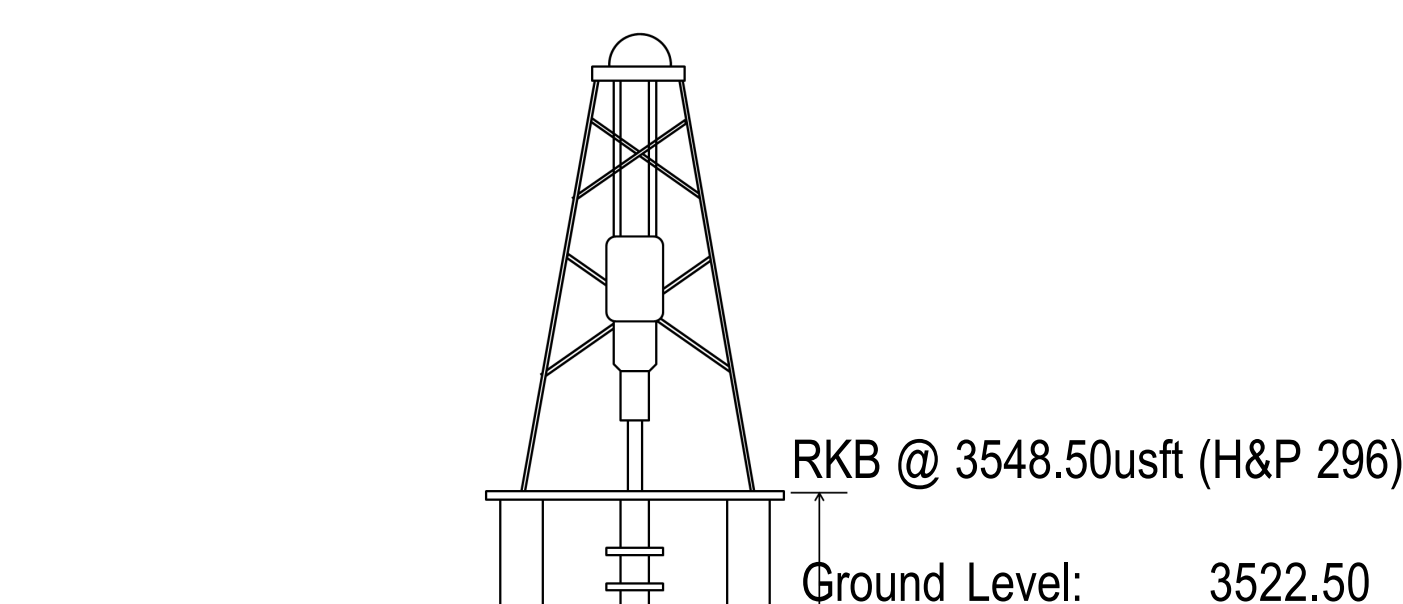
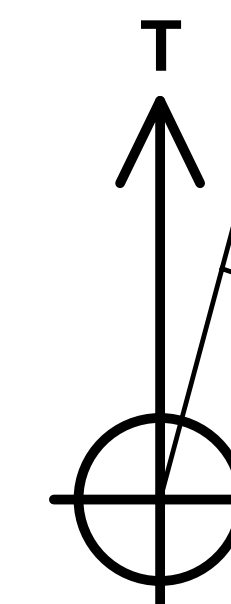
Permit 332714

**PERMIT CONDITIONS OF APPROVAL**

|                                                                                                                   |                                       |
|-------------------------------------------------------------------------------------------------------------------|---------------------------------------|
| Operator Name and Address:<br>COLGATE OPERATING, LLC [371449]<br>300 North Marienfeld Street<br>Midland, TX 79701 | API Number:<br>30-015-53305           |
|                                                                                                                   | Well:<br>Black Cat 16 State Com #132H |

| OCD<br>Reviewer | Condition                                                                                                                                                                                                                                                            |
|-----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| kpickford       | Notify OCD 24 hours prior to casing & cement                                                                                                                                                                                                                         |
| kpickford       | Will require a File As Drilled C-102 and a Directional Survey with the C-104                                                                                                                                                                                         |
| kpickford       | The Operator is to notify NMOC by sundry (Form C-103) within ten (10) days of the well being spud                                                                                                                                                                    |
| 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       | Cement is required to circulate on both surface and intermediate1 strings of casing                                                                                                                                                                                  |
| 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                  |

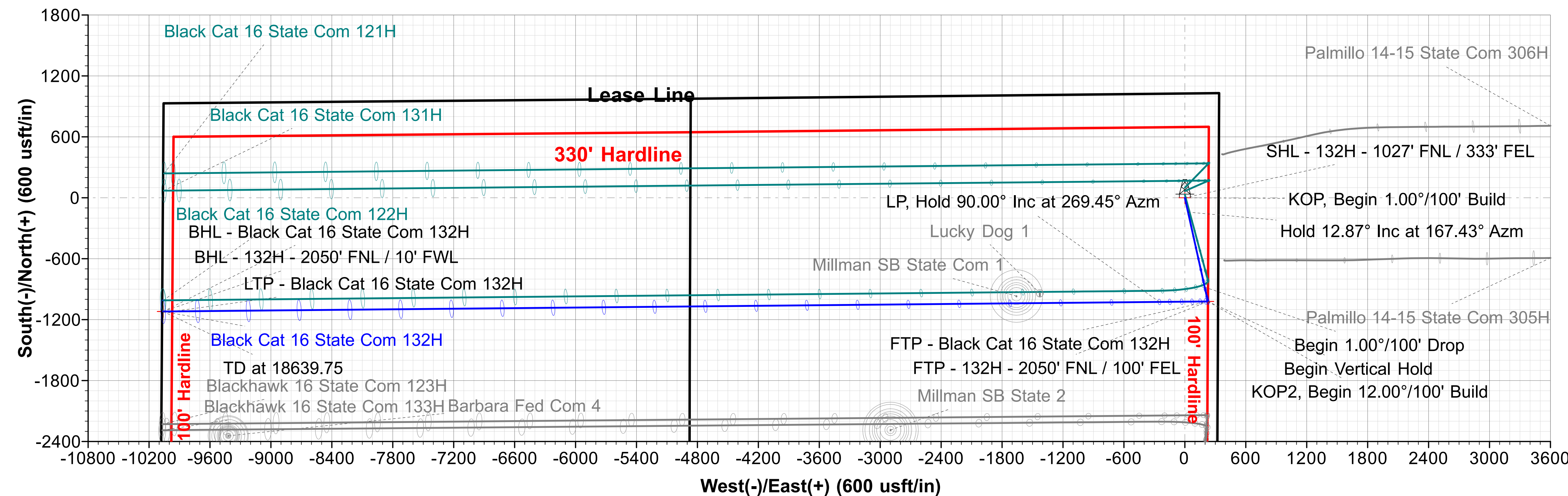
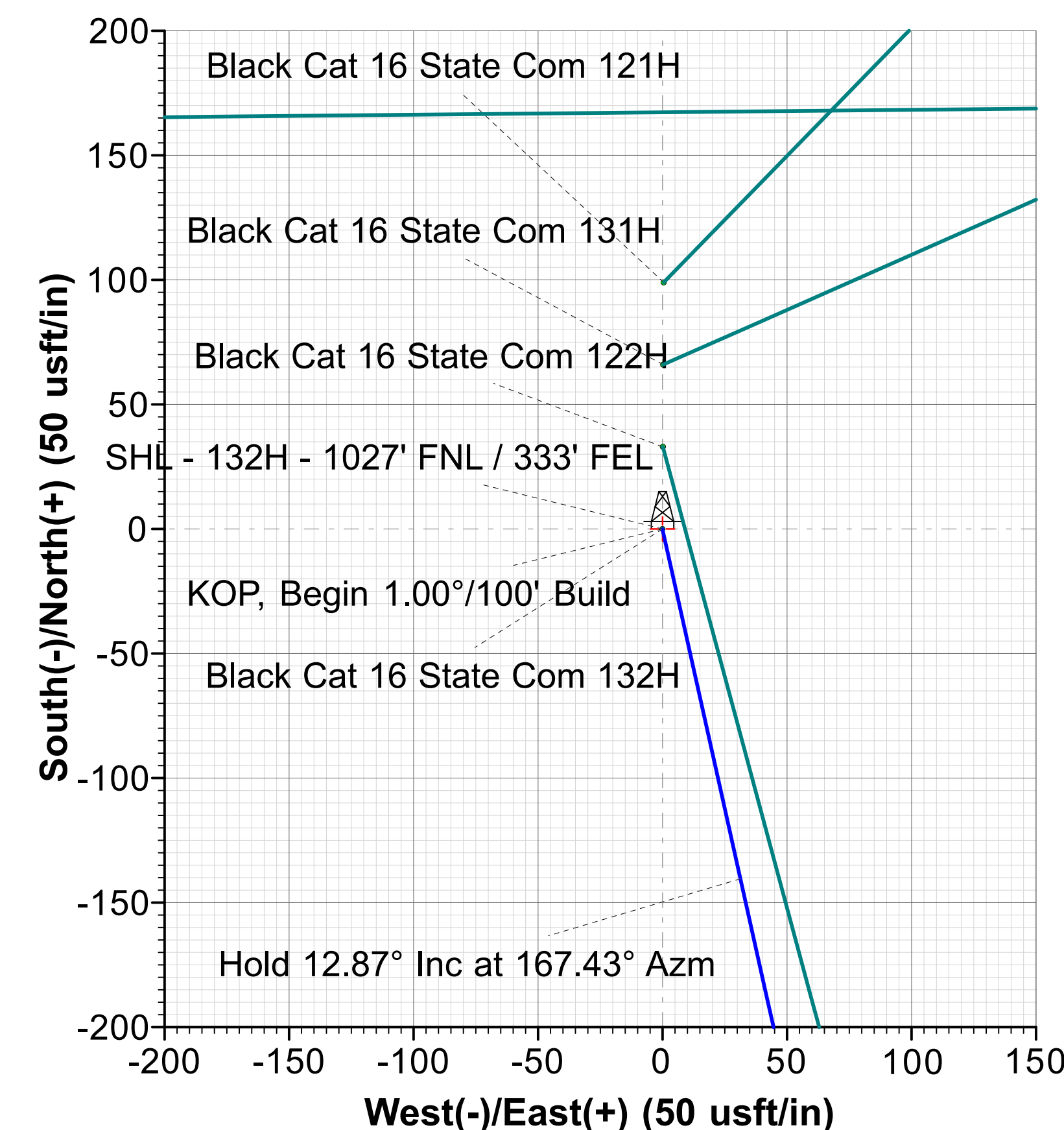
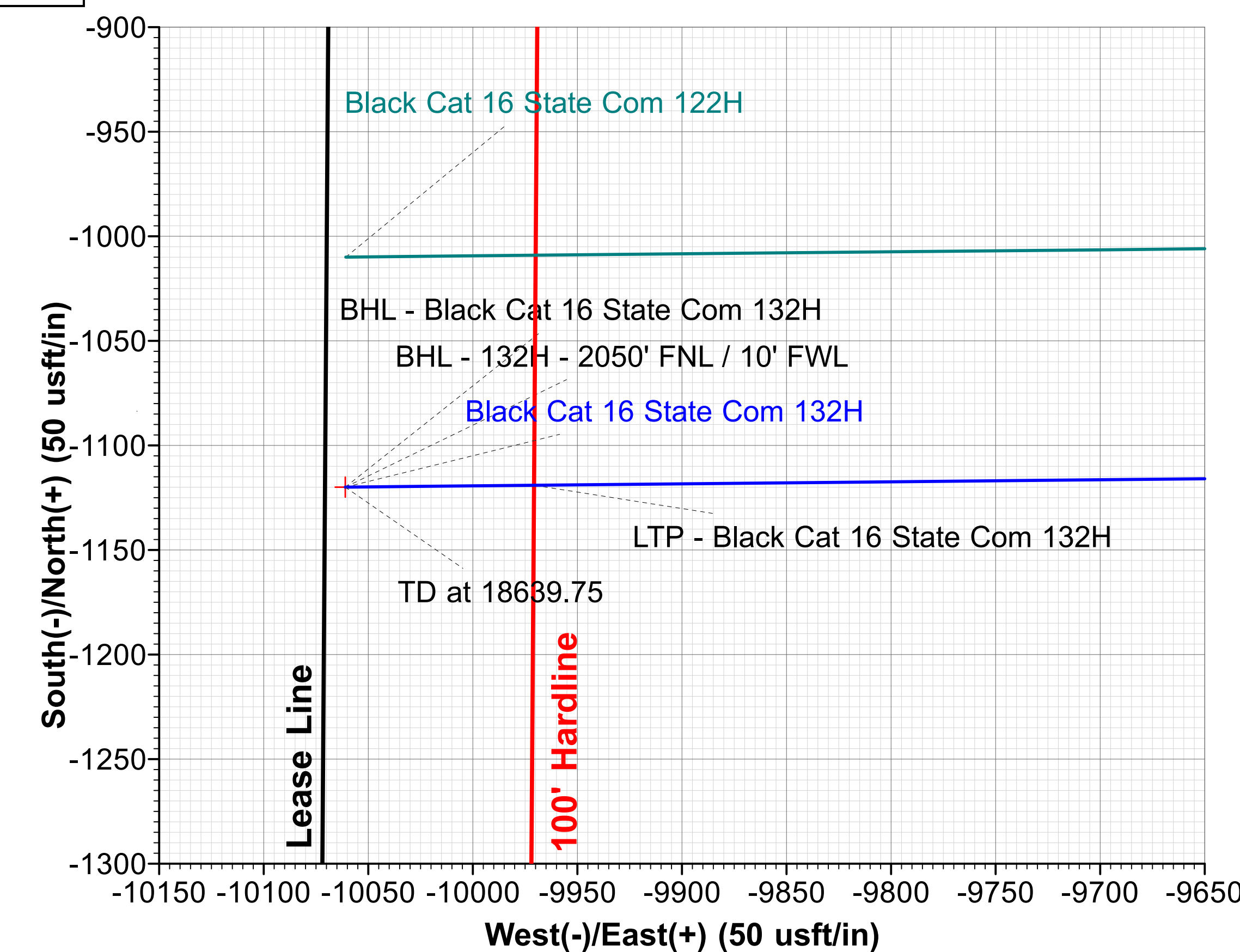




| WELL DETAILS                      |          |               |           |                     |                      |                     |                      |         |          |                                   |                                    |
|-----------------------------------|----------|---------------|-----------|---------------------|----------------------|---------------------|----------------------|---------|----------|-----------------------------------|------------------------------------|
|                                   |          | Ground Level: |           | 3522.50             |                      |                     |                      |         |          |                                   |                                    |
| +N/-S                             | +E/-W    | Northing      | Easting   | Latitude            | Longitude            |                     |                      |         |          |                                   |                                    |
| 0.00                              | 0.00     | 605726.46     | 590469.46 | 32° 39' 54.311451 N | 104° 10' 25.225998 W |                     |                      |         |          |                                   |                                    |
| DESIGN TARGET DETAILS             |          |               |           |                     |                      |                     |                      |         |          |                                   |                                    |
| Name                              | TVD      | +N/-S         | +E/-W     | Northing            | Easting              | Latitude            | Longitude            |         |          |                                   |                                    |
| SHL - 132H - 1027' FNL / 333' FEL | 0.00     | 0.00          | 0.00      | 605726.46           | 590469.46            | 32° 39' 54.311451 N | 104° 10' 25.225998 W |         |          |                                   |                                    |
| BHL - 132H - 2050' FNL / 10' FWL  | 8448.50  | -1119.92      | -10061.00 | 604591.41           | 580410.16            | 32° 39' 43.214118 N | 104° 12' 22.921090 W |         |          |                                   |                                    |
| BHL - Black Cat 16 State Com 132H | 8448.50  | -1119.92      | -10061.00 | 604591.41           | 580410.16            | 32° 39' 43.214118 N | 104° 12' 22.921090 W |         |          |                                   |                                    |
| FTP - 132H - 2050' FNL / 100' FEL | 8448.50  | -1020.92      | 227.62    | 604705.88           | 590698.62            | 32° 39' 44.209052 N | 104° 10' 22.563200 W |         |          |                                   |                                    |
| FTP - Black Cat 16 State Com 132H | 8448.50  | -1020.92      | 227.62    | 604705.88           | 590698.62            | 32° 39' 44.209052 N | 104° 10' 22.563200 W |         |          |                                   |                                    |
| LTP - Black Cat 16 State Com 132H | 8448.50  | -1119.12      | -9970.19  | 604592.34           | 580500.96            | 32° 39' 43.222244 N | 104° 12' 21.858884 W |         |          |                                   |                                    |
| SECTION DETAILS                   |          |               |           |                     |                      |                     |                      |         |          |                                   |                                    |
| Sec                               | MD       | Inc           | Azi       | TVD                 | +N/-S                | +E/-W               | Dleg                 | TFace   | VSect    | Target                            | Annotation                         |
| 1                                 | 0.00     | 0.00          | 0.00      | 0.00                | 0.00                 | 0.00                | 0.00                 | 0.000   | 0.00     |                                   |                                    |
| 2                                 | 2000.00  | 0.00          | 0.00      | 2000.00             | 0.00                 | 0.00                | 0.00                 | 0.000   | 0.00     |                                   | KOP, Begin 1.00°/100' Build        |
| 3                                 | 3286.79  | 12.87         | 167.43    | 3276.00             | -140.44              | 31.31               | 1.00                 | 167.431 | -15.58   |                                   | Hold 12.87° Inc at 167.43° Azm     |
| 4                                 | 6691.33  | 12.87         | 167.43    | 6595.04             | -880.48              | 196.31              | 0.00                 | 0.000   | -97.70   |                                   | Begin 1.00°/100' Drop              |
| 5                                 | 7978.12  | 0.00          | 0.00      | 7871.04             | -1020.92             | 227.62              | 1.00                 | 180.000 | -113.28  |                                   | Begin Vertical Hold                |
| 6                                 | 8078.12  | 0.00          | 0.00      | 7971.04             | -1020.92             | 227.62              | 0.00                 | 0.000   | -113.28  |                                   | KOP2, Begin 12.00°/100' Build      |
| 7                                 | 8828.12  | 90.00         | 269.45    | 8448.50             | -1025.52             | -249.82             | 12.00                | 269.449 | 361.74   |                                   | LP, Hold 90.00° Inc at 269.45° Azm |
| 8                                 | 18639.75 | 90.00         | 269.45    | 8448.50             | -1119.92             | -10061.00           | 0.00                 | 0.000   | 10123.13 | BHL - Black Cat 16 State Com 132H | TD at 18639.75                     |

|                                                                      |  |
|----------------------------------------------------------------------|--|
| Map System: US State Plane 1983                                      |  |
| Datum: North American Datum 1983                                     |  |
| Ellipsoid: GRS 1980                                                  |  |
| Zone Name: New Mexico Eastern Zone                                   |  |
| Local Origin: Well Black Cat 16 State Com 132H, True North           |  |
| Latitude: 32° 39' 54.311451 N                                        |  |
| Longitude: 104° 10' 25.225998 W                                      |  |
| Grid East: 590469.46                                                 |  |
| Grid North: 605726.46                                                |  |
| Scale Factor: 1.000                                                  |  |
| Geomagnetic Model: MVHD                                              |  |
| Sample Date: 03-Jan-23                                               |  |
| Magnetic Declination: 6.929°                                         |  |
| Dip Angle from Horizontal: 60.312°                                   |  |
| Magnetic Field Strength: 47619.95587526nT                            |  |
| To convert a Magnetic Direction to a Grid Direction, Add 6.842°      |  |
| To convert a Magnetic Direction to a True Direction, Add 6.929° East |  |
| To convert a True Direction to a Grid Direction, Subtract 0.086°     |  |

| FORMATION TOP DETAILS |         |                |          |        |
|-----------------------|---------|----------------|----------|--------|
| TVDPath               | MDPath  | Formation      | DipAngle | DipDir |
| 203.50                | 203.50  | Rustler        |          |        |
| 303.50                | 303.50  | Salado         |          |        |
| 668.50                | 668.50  | Tansill        |          |        |
| 783.50                | 783.50  | Yates          |          |        |
| 1178.50               | 1178.50 | Seven Rivers   |          |        |
| 1742.50               | 1742.50 | Queen          |          |        |
| 2066.50               | 2066.50 | Grayburg       |          |        |
| 2492.50               | 2493.11 | San Andres     |          |        |
| 2908.50               | 2912.35 | Delaware Sands |          |        |
| 3298.50               | 3309.87 | BSGL           |          |        |
| 6198.50               | 6284.58 | FBSG           |          |        |
| 7088.50               | 7193.13 | SBSG           |          |        |
| 8258.50               | 8386.60 | TBSG           |          |        |







## **Permian Resources**

**Eddy County, NM (NAD83 - NME)**

**Black Cat**

**Black Cat 16 State Com 131H**

**OH**

**Plan: Plan 1 11-10-22**

## **Standard Planning Report**

**10 November, 2022**

**PERMIAN**  
RESOURCES



## Planning Report

# PERMIAN

## RESOURCES

|                  |                               |                                     |                                  |
|------------------|-------------------------------|-------------------------------------|----------------------------------|
| <b>Database:</b> | USA Compass                   | <b>Local Co-ordinate Reference:</b> | Well Black Cat 16 State Com 131H |
| <b>Company:</b>  | Permian Resources             | <b>TVD Reference:</b>               | RKB @ 3548.80usft (H&P 296)      |
| <b>Project:</b>  | Eddy County, NM (NAD83 - NME) | <b>MD Reference:</b>                | RKB @ 3548.80usft (H&P 296)      |
| <b>Site:</b>     | Black Cat                     | <b>North Reference:</b>             | True                             |
| <b>Well:</b>     | Black Cat 16 State Com 131H   | <b>Survey Calculation Method:</b>   | Minimum Curvature                |
| <b>Wellbore:</b> | OH                            |                                     |                                  |
| <b>Design:</b>   | Plan 1 11-10-22               |                                     |                                  |

|                    |                               |                      |                |
|--------------------|-------------------------------|----------------------|----------------|
| <b>Project</b>     | Eddy County, NM (NAD83 - NME) |                      |                |
| <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                  | Black Cat |              |                 |            |                      |
| Site Position:        |           | Northing:    | 605,825.46 usft | Latitude:  | 32° 39' 55.291084 N  |
| From:                 | Map       | Easting:     | 590,469.82 usft | Longitude: | 104° 10' 25.220045 W |
| Position Uncertainty: |           | Slot Radius: | 13-3/16 "       |            |                      |

| Well                 | Black Cat 16 State Com 131H |             |                     |                 |               |                      |
|----------------------|-----------------------------|-------------|---------------------|-----------------|---------------|----------------------|
| Well Position        | +N/-S                       | -33.00 usft | Northing:           | 605,792.46 usft | Latitude:     | 32° 39' 54.964539 N  |
|                      | +E/-W                       | -0.17 usft  | Easting:            | 590,469.70 usft | Longitude:    | 104° 10' 25.222029 W |
| Position Uncertainty |                             | 1.00 usft   | Wellhead Elevation: |                 | Ground Level: | 3,522.80 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> |
|                  | MVHD              | 1/3/2023           | 6.929                  | 60.312               | 47,619.95019553            |

|                          |                                |                     |                      |                      |
|--------------------------|--------------------------------|---------------------|----------------------|----------------------|
| <b>Design</b>            | Plan 1 11-10-22                |                     |                      |                      |
| <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                 | 270.02               |

|                                 |                        |                          |                      |                        |
|---------------------------------|------------------------|--------------------------|----------------------|------------------------|
| <b>Plan Survey Tool Program</b> | <b>Date</b>            | 11/10/2022               |                      |                        |
| <b>Depth From (usft)</b>        | <b>Depth To (usft)</b> | <b>Survey (Wellbore)</b> | <b>Tool Name</b>     | <b>Remarks</b>         |
| 1                               | 0.00                   | 18,548.70                | Plan 1 11-10-22 (OH) | MWD+IFR1+MS            |
|                                 |                        |                          |                      | OWSG MWD + IFR1 + Mult |

|                              |                        |                    |                              |                     |                     |                                |                               |                              |                |                    |
|------------------------------|------------------------|--------------------|------------------------------|---------------------|---------------------|--------------------------------|-------------------------------|------------------------------|----------------|--------------------|
| <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                         | 0.000          |                    |
| 2,000.00                     | 0.00                   | 0.00               | 2,000.00                     | 0.00                | 0.00                | 0.00                           | 0.00                          | 0.00                         | 0.000          |                    |
| 3,000.00                     | 10.00                  | 66.15              | 2,994.93                     | 35.20               | 79.61               | 1.00                           | 1.00                          | 0.00                         | 66.150         |                    |
| 3,472.37                     | 10.00                  | 66.15              | 3,460.12                     | 68.36               | 154.63              | 0.00                           | 0.00                          | 0.00                         | 0.000          |                    |
| 4,472.37                     | 0.00                   | 0.00               | 4,455.05                     | 103.56              | 234.25              | 1.00                           | -1.00                         | 0.00                         | 180.000        |                    |
| 7,988.65                     | 0.00                   | 0.00               | 7,971.34                     | 103.56              | 234.25              | 0.00                           | 0.00                          | 0.00                         | 0.000          |                    |
| 8,738.66                     | 90.00                  | 269.45             | 8,448.81                     | 98.95               | -243.20             | 12.00                          | 12.00                         | -12.07                       | 269.447        |                    |
| 18,548.70                    | 90.00                  | 269.45             | 8,448.80                     | 4.20                | -10,052.79          | 0.00                           | 0.00                          | 0.00                         | 0.000          | BHL - Black Cat 16 |



## Planning Report

# PERMIAN

## RESOURCES

|                  |                               |                                     |                                  |
|------------------|-------------------------------|-------------------------------------|----------------------------------|
| <b>Database:</b> | USA Compass                   | <b>Local Co-ordinate Reference:</b> | Well Black Cat 16 State Com 131H |
| <b>Company:</b>  | Permian Resources             | <b>TVD Reference:</b>               | RKB @ 3548.80usft (H&P 296)      |
| <b>Project:</b>  | Eddy County, NM (NAD83 - NME) | <b>MD Reference:</b>                | RKB @ 3548.80usft (H&P 296)      |
| <b>Site:</b>     | Black Cat                     | <b>North Reference:</b>             | True                             |
| <b>Well:</b>     | Black Cat 16 State Com 131H   | <b>Survey Calculation Method:</b>   | Minimum Curvature                |
| <b>Wellbore:</b> | OH                            |                                     |                                  |
| <b>Design:</b>   | Plan 1 11-10-22               |                                     |                                  |

| Planned Survey                       |                 |             |                       |              |              |                         |                         |                        |                       |
|--------------------------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| Measured Depth (usft)                | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
| 0.00                                 | 0.00            | 0.00        | 0.00                  | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 203.80                               | 0.00            | 0.00        | 203.80                | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| <b>Rustler</b>                       |                 |             |                       |              |              |                         |                         |                        |                       |
| 303.80                               | 0.00            | 0.00        | 303.80                | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| <b>Salado</b>                        |                 |             |                       |              |              |                         |                         |                        |                       |
| 668.80                               | 0.00            | 0.00        | 668.80                | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| <b>Tansill</b>                       |                 |             |                       |              |              |                         |                         |                        |                       |
| 783.80                               | 0.00            | 0.00        | 783.80                | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| <b>Yates</b>                         |                 |             |                       |              |              |                         |                         |                        |                       |
| 1,178.80                             | 0.00            | 0.00        | 1,178.80              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| <b>Seven Rivers</b>                  |                 |             |                       |              |              |                         |                         |                        |                       |
| 1,742.80                             | 0.00            | 0.00        | 1,742.80              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| <b>Queen</b>                         |                 |             |                       |              |              |                         |                         |                        |                       |
| 2,000.00                             | 0.00            | 0.00        | 2,000.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| <b>KOP, Begin 1.00°/100' Build</b>   |                 |             |                       |              |              |                         |                         |                        |                       |
| 2,066.80                             | 0.67            | 66.15       | 2,066.80              | 0.16         | 0.36         | -0.36                   | 1.00                    | 1.00                   | 0.00                  |
| <b>Grayburg</b>                      |                 |             |                       |              |              |                         |                         |                        |                       |
| 2,100.00                             | 1.00            | 66.15       | 2,099.99              | 0.35         | 0.80         | -0.80                   | 1.00                    | 1.00                   | 0.00                  |
| 2,200.00                             | 2.00            | 66.15       | 2,199.96              | 1.41         | 3.19         | -3.19                   | 1.00                    | 1.00                   | 0.00                  |
| 2,300.00                             | 3.00            | 66.15       | 2,299.86              | 3.17         | 7.18         | -7.18                   | 1.00                    | 1.00                   | 0.00                  |
| 2,400.00                             | 4.00            | 66.15       | 2,399.68              | 5.64         | 12.77        | -12.76                  | 1.00                    | 1.00                   | 0.00                  |
| 2,493.41                             | 4.93            | 66.15       | 2,492.80              | 8.58         | 19.42        | -19.42                  | 1.00                    | 1.00                   | 0.00                  |
| <b>San Andres</b>                    |                 |             |                       |              |              |                         |                         |                        |                       |
| 2,500.00                             | 5.00            | 66.15       | 2,499.37              | 8.82         | 19.94        | -19.94                  | 1.00                    | 1.00                   | 0.00                  |
| 2,600.00                             | 6.00            | 66.15       | 2,598.90              | 12.69        | 28.71        | -28.70                  | 1.00                    | 1.00                   | 0.00                  |
| 2,700.00                             | 7.00            | 66.15       | 2,698.26              | 17.27        | 39.06        | -39.05                  | 1.00                    | 1.00                   | 0.00                  |
| 2,800.00                             | 8.00            | 66.15       | 2,797.40              | 22.55        | 51.00        | -50.99                  | 1.00                    | 1.00                   | 0.00                  |
| 2,900.00                             | 9.00            | 66.15       | 2,896.30              | 28.52        | 64.52        | -64.51                  | 1.00                    | 1.00                   | 0.00                  |
| 2,912.65                             | 9.13            | 66.15       | 2,908.80              | 29.33        | 66.34        | -66.33                  | 1.00                    | 1.00                   | 0.00                  |
| <b>Delaware Sands</b>                |                 |             |                       |              |              |                         |                         |                        |                       |
| 3,000.00                             | 10.00           | 66.15       | 2,994.93              | 35.20        | 79.61        | -79.60                  | 1.00                    | 1.00                   | 0.00                  |
| <b>Hold 10.00° Inc at 66.15° Azm</b> |                 |             |                       |              |              |                         |                         |                        |                       |
| 3,100.00                             | 10.00           | 66.15       | 3,093.41              | 42.22        | 95.49        | -95.48                  | 0.00                    | 0.00                   | 0.00                  |
| 3,200.00                             | 10.00           | 66.15       | 3,191.89              | 49.24        | 111.38       | -111.36                 | 0.00                    | 0.00                   | 0.00                  |
| 3,300.00                             | 10.00           | 66.15       | 3,290.37              | 56.26        | 127.26       | -127.23                 | 0.00                    | 0.00                   | 0.00                  |
| 3,308.56                             | 10.00           | 66.15       | 3,298.80              | 56.86        | 128.62       | -128.59                 | 0.00                    | 0.00                   | 0.00                  |
| <b>BSGL</b>                          |                 |             |                       |              |              |                         |                         |                        |                       |
| 3,400.00                             | 10.00           | 66.15       | 3,388.85              | 63.28        | 143.14       | -143.11                 | 0.00                    | 0.00                   | 0.00                  |
| 3,472.37                             | 10.00           | 66.15       | 3,460.12              | 68.36        | 154.63       | -154.61                 | 0.00                    | 0.00                   | 0.00                  |
| <b>Begin 1.00°/100' Drop</b>         |                 |             |                       |              |              |                         |                         |                        |                       |
| 3,500.00                             | 9.72            | 66.15       | 3,487.35              | 70.28        | 158.96       | -158.93                 | 1.00                    | -1.00                  | 0.00                  |
| 3,600.00                             | 8.72            | 66.15       | 3,586.05              | 76.76        | 173.62       | -173.59                 | 1.00                    | -1.00                  | 0.00                  |
| 3,700.00                             | 7.72            | 66.15       | 3,685.02              | 82.54        | 186.70       | -186.67                 | 1.00                    | -1.00                  | 0.00                  |
| 3,800.00                             | 6.72            | 66.15       | 3,784.23              | 87.62        | 198.20       | -198.17                 | 1.00                    | -1.00                  | 0.00                  |
| 3,900.00                             | 5.72            | 66.15       | 3,883.64              | 92.01        | 208.12       | -208.08                 | 1.00                    | -1.00                  | 0.00                  |
| 4,000.00                             | 4.72            | 66.15       | 3,983.22              | 95.69        | 216.45       | -216.41                 | 1.00                    | -1.00                  | 0.00                  |
| 4,100.00                             | 3.72            | 66.15       | 4,082.95              | 98.67        | 223.18       | -223.14                 | 1.00                    | -1.00                  | 0.00                  |
| 4,200.00                             | 2.72            | 66.15       | 4,182.79              | 100.94       | 228.33       | -228.28                 | 1.00                    | -1.00                  | 0.00                  |
| 4,300.00                             | 1.72            | 66.15       | 4,282.71              | 102.51       | 231.87       | -231.83                 | 1.00                    | -1.00                  | 0.00                  |
| 4,400.00                             | 0.72            | 66.15       | 4,382.69              | 103.37       | 233.83       | -233.78                 | 1.00                    | -1.00                  | 0.00                  |
| 4,472.37                             | 0.00            | 0.00        | 4,455.05              | 103.56       | 234.25       | -234.20                 | 1.00                    | -1.00                  | 0.00                  |
| <b>Begin Vertical Hold</b>           |                 |             |                       |              |              |                         |                         |                        |                       |



## Planning Report

# PERMIAN

## RESOURCES

|                  |                               |                                     |                                  |
|------------------|-------------------------------|-------------------------------------|----------------------------------|
| <b>Database:</b> | USA Compass                   | <b>Local Co-ordinate Reference:</b> | Well Black Cat 16 State Com 131H |
| <b>Company:</b>  | Permian Resources             | <b>TVD Reference:</b>               | RKB @ 3548.80usft (H&P 296)      |
| <b>Project:</b>  | Eddy County, NM (NAD83 - NME) | <b>MD Reference:</b>                | RKB @ 3548.80usft (H&P 296)      |
| <b>Site:</b>     | Black Cat                     | <b>North Reference:</b>             | True                             |
| <b>Well:</b>     | Black Cat 16 State Com 131H   | <b>Survey Calculation Method:</b>   | Minimum Curvature                |
| <b>Wellbore:</b> | OH                            |                                     |                                  |
| <b>Design:</b>   | Plan 1 11-10-22               |                                     |                                  |

| 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) |
| 4,500.00                                  | 0.00            | 0.00        | 4,482.69              | 103.56       | 234.25       | -234.20                 | 0.00                    | 0.00                   | 0.00                  |
| 4,600.00                                  | 0.00            | 0.00        | 4,582.69              | 103.56       | 234.25       | -234.20                 | 0.00                    | 0.00                   | 0.00                  |
| 4,700.00                                  | 0.00            | 0.00        | 4,682.69              | 103.56       | 234.25       | -234.20                 | 0.00                    | 0.00                   | 0.00                  |
| 4,800.00                                  | 0.00            | 0.00        | 4,782.69              | 103.56       | 234.25       | -234.20                 | 0.00                    | 0.00                   | 0.00                  |
| 4,900.00                                  | 0.00            | 0.00        | 4,882.69              | 103.56       | 234.25       | -234.20                 | 0.00                    | 0.00                   | 0.00                  |
| 5,000.00                                  | 0.00            | 0.00        | 4,982.69              | 103.56       | 234.25       | -234.20                 | 0.00                    | 0.00                   | 0.00                  |
| 5,100.00                                  | 0.00            | 0.00        | 5,082.69              | 103.56       | 234.25       | -234.20                 | 0.00                    | 0.00                   | 0.00                  |
| 5,200.00                                  | 0.00            | 0.00        | 5,182.69              | 103.56       | 234.25       | -234.20                 | 0.00                    | 0.00                   | 0.00                  |
| 5,300.00                                  | 0.00            | 0.00        | 5,282.69              | 103.56       | 234.25       | -234.20                 | 0.00                    | 0.00                   | 0.00                  |
| 5,400.00                                  | 0.00            | 0.00        | 5,382.69              | 103.56       | 234.25       | -234.20                 | 0.00                    | 0.00                   | 0.00                  |
| 5,500.00                                  | 0.00            | 0.00        | 5,482.69              | 103.56       | 234.25       | -234.20                 | 0.00                    | 0.00                   | 0.00                  |
| 5,600.00                                  | 0.00            | 0.00        | 5,582.69              | 103.56       | 234.25       | -234.20                 | 0.00                    | 0.00                   | 0.00                  |
| 5,700.00                                  | 0.00            | 0.00        | 5,682.69              | 103.56       | 234.25       | -234.20                 | 0.00                    | 0.00                   | 0.00                  |
| 5,800.00                                  | 0.00            | 0.00        | 5,782.69              | 103.56       | 234.25       | -234.20                 | 0.00                    | 0.00                   | 0.00                  |
| 5,900.00                                  | 0.00            | 0.00        | 5,882.69              | 103.56       | 234.25       | -234.20                 | 0.00                    | 0.00                   | 0.00                  |
| 6,000.00                                  | 0.00            | 0.00        | 5,982.69              | 103.56       | 234.25       | -234.20                 | 0.00                    | 0.00                   | 0.00                  |
| 6,100.00                                  | 0.00            | 0.00        | 6,082.69              | 103.56       | 234.25       | -234.20                 | 0.00                    | 0.00                   | 0.00                  |
| 6,200.00                                  | 0.00            | 0.00        | 6,182.69              | 103.56       | 234.25       | -234.20                 | 0.00                    | 0.00                   | 0.00                  |
| 6,216.11                                  | 0.00            | 0.00        | 6,198.80              | 103.56       | 234.25       | -234.20                 | 0.00                    | 0.00                   | 0.00                  |
| <b>FBSG</b>                               |                 |             |                       |              |              |                         |                         |                        |                       |
| 6,300.00                                  | 0.00            | 0.00        | 6,282.69              | 103.56       | 234.25       | -234.20                 | 0.00                    | 0.00                   | 0.00                  |
| 6,400.00                                  | 0.00            | 0.00        | 6,382.69              | 103.56       | 234.25       | -234.20                 | 0.00                    | 0.00                   | 0.00                  |
| 6,500.00                                  | 0.00            | 0.00        | 6,482.69              | 103.56       | 234.25       | -234.20                 | 0.00                    | 0.00                   | 0.00                  |
| 6,600.00                                  | 0.00            | 0.00        | 6,582.69              | 103.56       | 234.25       | -234.20                 | 0.00                    | 0.00                   | 0.00                  |
| 6,700.00                                  | 0.00            | 0.00        | 6,682.69              | 103.56       | 234.25       | -234.20                 | 0.00                    | 0.00                   | 0.00                  |
| 6,800.00                                  | 0.00            | 0.00        | 6,782.69              | 103.56       | 234.25       | -234.20                 | 0.00                    | 0.00                   | 0.00                  |
| 6,900.00                                  | 0.00            | 0.00        | 6,882.69              | 103.56       | 234.25       | -234.20                 | 0.00                    | 0.00                   | 0.00                  |
| 7,000.00                                  | 0.00            | 0.00        | 6,982.69              | 103.56       | 234.25       | -234.20                 | 0.00                    | 0.00                   | 0.00                  |
| 7,100.00                                  | 0.00            | 0.00        | 7,082.69              | 103.56       | 234.25       | -234.20                 | 0.00                    | 0.00                   | 0.00                  |
| 7,106.11                                  | 0.00            | 0.00        | 7,088.80              | 103.56       | 234.25       | -234.20                 | 0.00                    | 0.00                   | 0.00                  |
| <b>SBSG</b>                               |                 |             |                       |              |              |                         |                         |                        |                       |
| 7,200.00                                  | 0.00            | 0.00        | 7,182.69              | 103.56       | 234.25       | -234.20                 | 0.00                    | 0.00                   | 0.00                  |
| 7,300.00                                  | 0.00            | 0.00        | 7,282.69              | 103.56       | 234.25       | -234.20                 | 0.00                    | 0.00                   | 0.00                  |
| 7,400.00                                  | 0.00            | 0.00        | 7,382.69              | 103.56       | 234.25       | -234.20                 | 0.00                    | 0.00                   | 0.00                  |
| 7,500.00                                  | 0.00            | 0.00        | 7,482.69              | 103.56       | 234.25       | -234.20                 | 0.00                    | 0.00                   | 0.00                  |
| 7,600.00                                  | 0.00            | 0.00        | 7,582.69              | 103.56       | 234.25       | -234.20                 | 0.00                    | 0.00                   | 0.00                  |
| 7,700.00                                  | 0.00            | 0.00        | 7,682.69              | 103.56       | 234.25       | -234.20                 | 0.00                    | 0.00                   | 0.00                  |
| 7,800.00                                  | 0.00            | 0.00        | 7,782.69              | 103.56       | 234.25       | -234.20                 | 0.00                    | 0.00                   | 0.00                  |
| 7,900.00                                  | 0.00            | 0.00        | 7,882.69              | 103.56       | 234.25       | -234.20                 | 0.00                    | 0.00                   | 0.00                  |
| 7,988.65                                  | 0.00            | 0.00        | 7,971.34              | 103.56       | 234.25       | -234.20                 | 0.00                    | 0.00                   | 0.00                  |
| <b>KOP2, Begin 12.00°/100' Build</b>      |                 |             |                       |              |              |                         |                         |                        |                       |
| 8,000.00                                  | 1.36            | 269.45      | 7,982.68              | 103.56       | 234.11       | -234.07                 | 12.00                   | 12.00                  | 0.00                  |
| 8,100.00                                  | 13.36           | 269.45      | 8,081.68              | 103.43       | 221.32       | -221.28                 | 12.00                   | 12.00                  | 0.00                  |
| 8,200.00                                  | 25.36           | 269.45      | 8,175.85              | 103.11       | 188.23       | -188.19                 | 12.00                   | 12.00                  | 0.00                  |
| 8,297.13                                  | 37.02           | 269.45      | 8,258.80              | 102.63       | 138.02       | -137.98                 | 12.00                   | 12.00                  | 0.00                  |
| <b>TBSG</b>                               |                 |             |                       |              |              |                         |                         |                        |                       |
| 8,300.00                                  | 37.36           | 269.45      | 8,261.09              | 102.61       | 136.29       | -136.24                 | 12.00                   | 12.00                  | 0.00                  |
| 8,400.00                                  | 49.36           | 269.45      | 8,333.66              | 101.95       | 67.75        | -67.71                  | 12.00                   | 12.00                  | 0.00                  |
| 8,500.00                                  | 61.36           | 269.45      | 8,390.39              | 101.16       | -14.37       | 14.41                   | 12.00                   | 12.00                  | 0.00                  |
| 8,600.00                                  | 73.36           | 269.45      | 8,428.81              | 100.27       | -106.49      | 106.53                  | 12.00                   | 12.00                  | 0.00                  |
| 8,700.00                                  | 85.36           | 269.45      | 8,447.24              | 99.32        | -204.59      | 204.63                  | 12.00                   | 12.00                  | 0.00                  |
| 8,738.66                                  | 90.00           | 269.45      | 8,448.81              | 98.95        | -243.20      | 243.24                  | 12.00                   | 12.00                  | 0.00                  |
| <b>LP, Hold 90.00° Inc at 269.45° Azm</b> |                 |             |                       |              |              |                         |                         |                        |                       |





## Planning Report

# PERMIAN

## RESOURCES

|                  |                               |                                     |                                  |
|------------------|-------------------------------|-------------------------------------|----------------------------------|
| <b>Database:</b> | USA Compass                   | <b>Local Co-ordinate Reference:</b> | Well Black Cat 16 State Com 131H |
| <b>Company:</b>  | Permian Resources             | <b>TVD Reference:</b>               | RKB @ 3548.80usft (H&P 296)      |
| <b>Project:</b>  | Eddy County, NM (NAD83 - NME) | <b>MD Reference:</b>                | RKB @ 3548.80usft (H&P 296)      |
| <b>Site:</b>     | Black Cat                     | <b>North Reference:</b>             | True                             |
| <b>Well:</b>     | Black Cat 16 State Com 131H   | <b>Survey Calculation Method:</b>   | Minimum Curvature                |
| <b>Wellbore:</b> | OH                            |                                     |                                  |
| <b>Design:</b>   | Plan 1 11-10-22               |                                     |                                  |

| 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) |
| 8,800.00              | 90.00           | 269.45      | 8,448.80              | 98.35        | -304.54      | 304.58                  | 0.00                    | 0.00                   | 0.00                  |
| 8,900.00              | 90.00           | 269.45      | 8,448.80              | 97.39        | -404.53      | 404.57                  | 0.00                    | 0.00                   | 0.00                  |
| 9,000.00              | 90.00           | 269.45      | 8,448.80              | 96.42        | -504.53      | 504.57                  | 0.00                    | 0.00                   | 0.00                  |
| 9,100.00              | 90.00           | 269.45      | 8,448.80              | 95.46        | -604.52      | 604.56                  | 0.00                    | 0.00                   | 0.00                  |
| 9,200.00              | 90.00           | 269.45      | 8,448.80              | 94.49        | -704.52      | 704.56                  | 0.00                    | 0.00                   | 0.00                  |
| 9,300.00              | 90.00           | 269.45      | 8,448.80              | 93.52        | -804.52      | 804.55                  | 0.00                    | 0.00                   | 0.00                  |
| 9,400.00              | 90.00           | 269.45      | 8,448.80              | 92.56        | -904.51      | 904.55                  | 0.00                    | 0.00                   | 0.00                  |
| 9,500.00              | 90.00           | 269.45      | 8,448.80              | 91.59        | -1,004.51    | 1,004.54                | 0.00                    | 0.00                   | 0.00                  |
| 9,600.00              | 90.00           | 269.45      | 8,448.80              | 90.63        | -1,104.50    | 1,104.54                | 0.00                    | 0.00                   | 0.00                  |
| 9,700.00              | 90.00           | 269.45      | 8,448.80              | 89.66        | -1,204.50    | 1,204.53                | 0.00                    | 0.00                   | 0.00                  |
| 9,800.00              | 90.00           | 269.45      | 8,448.80              | 88.70        | -1,304.49    | 1,304.53                | 0.00                    | 0.00                   | 0.00                  |
| 9,900.00              | 90.00           | 269.45      | 8,448.80              | 87.73        | -1,404.49    | 1,404.52                | 0.00                    | 0.00                   | 0.00                  |
| 10,000.00             | 90.00           | 269.45      | 8,448.80              | 86.76        | -1,504.48    | 1,504.52                | 0.00                    | 0.00                   | 0.00                  |
| 10,100.00             | 90.00           | 269.45      | 8,448.80              | 85.80        | -1,604.48    | 1,604.51                | 0.00                    | 0.00                   | 0.00                  |
| 10,200.00             | 90.00           | 269.45      | 8,448.80              | 84.83        | -1,704.47    | 1,704.51                | 0.00                    | 0.00                   | 0.00                  |
| 10,300.00             | 90.00           | 269.45      | 8,448.80              | 83.87        | -1,804.47    | 1,804.50                | 0.00                    | 0.00                   | 0.00                  |
| 10,400.00             | 90.00           | 269.45      | 8,448.80              | 82.90        | -1,904.46    | 1,904.50                | 0.00                    | 0.00                   | 0.00                  |
| 10,500.00             | 90.00           | 269.45      | 8,448.80              | 81.94        | -2,004.46    | 2,004.49                | 0.00                    | 0.00                   | 0.00                  |
| 10,600.00             | 90.00           | 269.45      | 8,448.80              | 80.97        | -2,104.45    | 2,104.49                | 0.00                    | 0.00                   | 0.00                  |
| 10,700.00             | 90.00           | 269.45      | 8,448.80              | 80.00        | -2,204.45    | 2,204.48                | 0.00                    | 0.00                   | 0.00                  |
| 10,800.00             | 90.00           | 269.45      | 8,448.80              | 79.04        | -2,304.45    | 2,304.48                | 0.00                    | 0.00                   | 0.00                  |
| 10,900.00             | 90.00           | 269.45      | 8,448.80              | 78.07        | -2,404.44    | 2,404.47                | 0.00                    | 0.00                   | 0.00                  |
| 11,000.00             | 90.00           | 269.45      | 8,448.80              | 77.11        | -2,504.44    | 2,504.47                | 0.00                    | 0.00                   | 0.00                  |
| 11,100.00             | 90.00           | 269.45      | 8,448.80              | 76.14        | -2,604.43    | 2,604.46                | 0.00                    | 0.00                   | 0.00                  |
| 11,200.00             | 90.00           | 269.45      | 8,448.80              | 75.17        | -2,704.43    | 2,704.46                | 0.00                    | 0.00                   | 0.00                  |
| 11,300.00             | 90.00           | 269.45      | 8,448.80              | 74.21        | -2,804.42    | 2,804.45                | 0.00                    | 0.00                   | 0.00                  |
| 11,400.00             | 90.00           | 269.45      | 8,448.80              | 73.24        | -2,904.42    | 2,904.45                | 0.00                    | 0.00                   | 0.00                  |
| 11,500.00             | 90.00           | 269.45      | 8,448.80              | 72.28        | -3,004.41    | 3,004.44                | 0.00                    | 0.00                   | 0.00                  |
| 11,600.00             | 90.00           | 269.45      | 8,448.80              | 71.31        | -3,104.41    | 3,104.44                | 0.00                    | 0.00                   | 0.00                  |
| 11,700.00             | 90.00           | 269.45      | 8,448.80              | 70.35        | -3,204.40    | 3,204.43                | 0.00                    | 0.00                   | 0.00                  |
| 11,800.00             | 90.00           | 269.45      | 8,448.80              | 69.38        | -3,304.40    | 3,304.43                | 0.00                    | 0.00                   | 0.00                  |
| 11,900.00             | 90.00           | 269.45      | 8,448.80              | 68.41        | -3,404.39    | 3,404.42                | 0.00                    | 0.00                   | 0.00                  |
| 12,000.00             | 90.00           | 269.45      | 8,448.80              | 67.45        | -3,504.39    | 3,504.42                | 0.00                    | 0.00                   | 0.00                  |
| 12,100.00             | 90.00           | 269.45      | 8,448.80              | 66.48        | -3,604.39    | 3,604.41                | 0.00                    | 0.00                   | 0.00                  |
| 12,200.00             | 90.00           | 269.45      | 8,448.80              | 65.52        | -3,704.38    | 3,704.41                | 0.00                    | 0.00                   | 0.00                  |
| 12,300.00             | 90.00           | 269.45      | 8,448.80              | 64.55        | -3,804.38    | 3,804.40                | 0.00                    | 0.00                   | 0.00                  |
| 12,400.00             | 90.00           | 269.45      | 8,448.80              | 63.59        | -3,904.37    | 3,904.40                | 0.00                    | 0.00                   | 0.00                  |
| 12,500.00             | 90.00           | 269.45      | 8,448.80              | 62.62        | -4,004.37    | 4,004.39                | 0.00                    | 0.00                   | 0.00                  |
| 12,600.00             | 90.00           | 269.45      | 8,448.80              | 61.65        | -4,104.36    | 4,104.39                | 0.00                    | 0.00                   | 0.00                  |
| 12,700.00             | 90.00           | 269.45      | 8,448.80              | 60.69        | -4,204.36    | 4,204.38                | 0.00                    | 0.00                   | 0.00                  |
| 12,800.00             | 90.00           | 269.45      | 8,448.80              | 59.72        | -4,304.35    | 4,304.38                | 0.00                    | 0.00                   | 0.00                  |
| 12,900.00             | 90.00           | 269.45      | 8,448.80              | 58.76        | -4,404.35    | 4,404.37                | 0.00                    | 0.00                   | 0.00                  |
| 13,000.00             | 90.00           | 269.45      | 8,448.80              | 57.79        | -4,504.34    | 4,504.37                | 0.00                    | 0.00                   | 0.00                  |
| 13,100.00             | 90.00           | 269.45      | 8,448.80              | 56.82        | -4,604.34    | 4,604.36                | 0.00                    | 0.00                   | 0.00                  |
| 13,200.00             | 90.00           | 269.45      | 8,448.80              | 55.86        | -4,704.33    | 4,704.36                | 0.00                    | 0.00                   | 0.00                  |
| 13,300.00             | 90.00           | 269.45      | 8,448.80              | 54.89        | -4,804.33    | 4,804.35                | 0.00                    | 0.00                   | 0.00                  |
| 13,400.00             | 90.00           | 269.45      | 8,448.80              | 53.93        | -4,904.32    | 4,904.35                | 0.00                    | 0.00                   | 0.00                  |
| 13,500.00             | 90.00           | 269.45      | 8,448.80              | 52.96        | -5,004.32    | 5,004.34                | 0.00                    | 0.00                   | 0.00                  |
| 13,600.00             | 90.00           | 269.45      | 8,448.80              | 52.00        | -5,104.32    | 5,104.34                | 0.00                    | 0.00                   | 0.00                  |
| 13,700.00             | 90.00           | 269.45      | 8,448.80              | 51.03        | -5,204.31    | 5,204.33                | 0.00                    | 0.00                   | 0.00                  |
| 13,800.00             | 90.00           | 269.45      | 8,448.80              | 50.06        | -5,304.31    | 5,304.33                | 0.00                    | 0.00                   | 0.00                  |
| 13,900.00             | 90.00           | 269.45      | 8,448.80              | 49.10        | -5,404.30    | 5,404.32                | 0.00                    | 0.00                   | 0.00                  |
| 14,000.00             | 90.00           | 269.45      | 8,448.80              | 48.13        | -5,504.30    | 5,504.32                | 0.00                    | 0.00                   | 0.00                  |
| 14,100.00             | 90.00           | 269.45      | 8,448.80              | 47.17        | -5,604.29    | 5,604.31                | 0.00                    | 0.00                   | 0.00                  |



## Planning Report

# PERMIAN

## RESOURCES

|                  |                               |                                     |                                  |
|------------------|-------------------------------|-------------------------------------|----------------------------------|
| <b>Database:</b> | USA Compass                   | <b>Local Co-ordinate Reference:</b> | Well Black Cat 16 State Com 131H |
| <b>Company:</b>  | Permian Resources             | <b>TVD Reference:</b>               | RKB @ 3548.80usft (H&P 296)      |
| <b>Project:</b>  | Eddy County, NM (NAD83 - NME) | <b>MD Reference:</b>                | RKB @ 3548.80usft (H&P 296)      |
| <b>Site:</b>     | Black Cat                     | <b>North Reference:</b>             | True                             |
| <b>Well:</b>     | Black Cat 16 State Com 131H   | <b>Survey Calculation Method:</b>   | Minimum Curvature                |
| <b>Wellbore:</b> | OH                            |                                     |                                  |
| <b>Design:</b>   | Plan 1 11-10-22               |                                     |                                  |

| 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) |
| 14,200.00             | 90.00           | 269.45      | 8,448.80              | 46.20        | -5,704.29    | 5,704.31                | 0.00                    | 0.00                   | 0.00                  |
| 14,300.00             | 90.00           | 269.45      | 8,448.80              | 45.23        | -5,804.28    | 5,804.30                | 0.00                    | 0.00                   | 0.00                  |
| 14,400.00             | 90.00           | 269.45      | 8,448.80              | 44.27        | -5,904.28    | 5,904.30                | 0.00                    | 0.00                   | 0.00                  |
| 14,500.00             | 90.00           | 269.45      | 8,448.80              | 43.30        | -6,004.27    | 6,004.29                | 0.00                    | 0.00                   | 0.00                  |
| 14,600.00             | 90.00           | 269.45      | 8,448.80              | 42.34        | -6,104.27    | 6,104.29                | 0.00                    | 0.00                   | 0.00                  |
| 14,700.00             | 90.00           | 269.45      | 8,448.80              | 41.37        | -6,204.26    | 6,204.28                | 0.00                    | 0.00                   | 0.00                  |
| 14,800.00             | 90.00           | 269.45      | 8,448.80              | 40.41        | -6,304.26    | 6,304.28                | 0.00                    | 0.00                   | 0.00                  |
| 14,900.00             | 90.00           | 269.45      | 8,448.80              | 39.44        | -6,404.25    | 6,404.27                | 0.00                    | 0.00                   | 0.00                  |
| 15,000.00             | 90.00           | 269.45      | 8,448.80              | 38.47        | -6,504.25    | 6,504.27                | 0.00                    | 0.00                   | 0.00                  |
| 15,100.00             | 90.00           | 269.45      | 8,448.80              | 37.51        | -6,604.25    | 6,604.26                | 0.00                    | 0.00                   | 0.00                  |
| 15,200.00             | 90.00           | 269.45      | 8,448.80              | 36.54        | -6,704.24    | 6,704.26                | 0.00                    | 0.00                   | 0.00                  |
| 15,300.00             | 90.00           | 269.45      | 8,448.80              | 35.58        | -6,804.24    | 6,804.25                | 0.00                    | 0.00                   | 0.00                  |
| 15,400.00             | 90.00           | 269.45      | 8,448.80              | 34.61        | -6,904.23    | 6,904.25                | 0.00                    | 0.00                   | 0.00                  |
| 15,500.00             | 90.00           | 269.45      | 8,448.80              | 33.65        | -7,004.23    | 7,004.24                | 0.00                    | 0.00                   | 0.00                  |
| 15,600.00             | 90.00           | 269.45      | 8,448.80              | 32.68        | -7,104.22    | 7,104.23                | 0.00                    | 0.00                   | 0.00                  |
| 15,700.00             | 90.00           | 269.45      | 8,448.80              | 31.71        | -7,204.22    | 7,204.23                | 0.00                    | 0.00                   | 0.00                  |
| 15,800.00             | 90.00           | 269.45      | 8,448.80              | 30.75        | -7,304.21    | 7,304.22                | 0.00                    | 0.00                   | 0.00                  |
| 15,900.00             | 90.00           | 269.45      | 8,448.80              | 29.78        | -7,404.21    | 7,404.22                | 0.00                    | 0.00                   | 0.00                  |
| 16,000.00             | 90.00           | 269.45      | 8,448.80              | 28.82        | -7,504.20    | 7,504.21                | 0.00                    | 0.00                   | 0.00                  |
| 16,100.00             | 90.00           | 269.45      | 8,448.80              | 27.85        | -7,604.20    | 7,604.21                | 0.00                    | 0.00                   | 0.00                  |
| 16,200.00             | 90.00           | 269.45      | 8,448.80              | 26.88        | -7,704.19    | 7,704.20                | 0.00                    | 0.00                   | 0.00                  |
| 16,300.00             | 90.00           | 269.45      | 8,448.80              | 25.92        | -7,804.19    | 7,804.20                | 0.00                    | 0.00                   | 0.00                  |
| 16,400.00             | 90.00           | 269.45      | 8,448.80              | 24.95        | -7,904.18    | 7,904.19                | 0.00                    | 0.00                   | 0.00                  |
| 16,500.00             | 90.00           | 269.45      | 8,448.80              | 23.99        | -8,004.18    | 8,004.19                | 0.00                    | 0.00                   | 0.00                  |
| 16,600.00             | 90.00           | 269.45      | 8,448.80              | 23.02        | -8,104.18    | 8,104.18                | 0.00                    | 0.00                   | 0.00                  |
| 16,700.00             | 90.00           | 269.45      | 8,448.80              | 22.06        | -8,204.17    | 8,204.18                | 0.00                    | 0.00                   | 0.00                  |
| 16,800.00             | 90.00           | 269.45      | 8,448.80              | 21.09        | -8,304.17    | 8,304.17                | 0.00                    | 0.00                   | 0.00                  |
| 16,900.00             | 90.00           | 269.45      | 8,448.80              | 20.12        | -8,404.16    | 8,404.17                | 0.00                    | 0.00                   | 0.00                  |
| 17,000.00             | 90.00           | 269.45      | 8,448.80              | 19.16        | -8,504.16    | 8,504.16                | 0.00                    | 0.00                   | 0.00                  |
| 17,100.00             | 90.00           | 269.45      | 8,448.80              | 18.19        | -8,604.15    | 8,604.16                | 0.00                    | 0.00                   | 0.00                  |
| 17,200.00             | 90.00           | 269.45      | 8,448.80              | 17.23        | -8,704.15    | 8,704.15                | 0.00                    | 0.00                   | 0.00                  |
| 17,300.00             | 90.00           | 269.45      | 8,448.80              | 16.26        | -8,804.14    | 8,804.15                | 0.00                    | 0.00                   | 0.00                  |
| 17,400.00             | 90.00           | 269.45      | 8,448.80              | 15.29        | -8,904.14    | 8,904.14                | 0.00                    | 0.00                   | 0.00                  |
| 17,500.00             | 90.00           | 269.45      | 8,448.80              | 14.33        | -9,004.13    | 9,004.14                | 0.00                    | 0.00                   | 0.00                  |
| 17,600.00             | 90.00           | 269.45      | 8,448.80              | 13.36        | -9,104.13    | 9,104.13                | 0.00                    | 0.00                   | 0.00                  |
| 17,700.00             | 90.00           | 269.45      | 8,448.80              | 12.40        | -9,204.12    | 9,204.13                | 0.00                    | 0.00                   | 0.00                  |
| 17,800.00             | 90.00           | 269.45      | 8,448.80              | 11.43        | -9,304.12    | 9,304.12                | 0.00                    | 0.00                   | 0.00                  |
| 17,900.00             | 90.00           | 269.45      | 8,448.80              | 10.47        | -9,404.11    | 9,404.12                | 0.00                    | 0.00                   | 0.00                  |
| 18,000.00             | 90.00           | 269.45      | 8,448.80              | 9.50         | -9,504.11    | 9,504.11                | 0.00                    | 0.00                   | 0.00                  |
| 18,100.00             | 90.00           | 269.45      | 8,448.80              | 8.53         | -9,604.11    | 9,604.11                | 0.00                    | 0.00                   | 0.00                  |
| 18,200.00             | 90.00           | 269.45      | 8,448.80              | 7.57         | -9,704.10    | 9,704.10                | 0.00                    | 0.00                   | 0.00                  |
| 18,300.00             | 90.00           | 269.45      | 8,448.80              | 6.60         | -9,804.10    | 9,804.10                | 0.00                    | 0.00                   | 0.00                  |
| 18,400.00             | 90.00           | 269.45      | 8,448.80              | 5.64         | -9,904.09    | 9,904.09                | 0.00                    | 0.00                   | 0.00                  |
| 18,500.00             | 90.00           | 269.45      | 8,448.80              | 4.67         | -10,004.09   | 10,004.09               | 0.00                    | 0.00                   | 0.00                  |
| 18,548.70             | 90.00           | 269.45      | 8,448.80              | 4.20         | -10,052.79   | 10,052.79               | 0.00                    | 0.00                   | 0.00                  |
| TD at 18548.70        |                 |             |                       |              |              |                         |                         |                        |                       |



## Planning Report

# PERMIAN

## RESOURCES

|                  |                               |                                     |                                  |
|------------------|-------------------------------|-------------------------------------|----------------------------------|
| <b>Database:</b> | USA Compass                   | <b>Local Co-ordinate Reference:</b> | Well Black Cat 16 State Com 131H |
| <b>Company:</b>  | Permian Resources             | <b>TVD Reference:</b>               | RKB @ 3548.80usft (H&P 296)      |
| <b>Project:</b>  | Eddy County, NM (NAD83 - NME) | <b>MD Reference:</b>                | RKB @ 3548.80usft (H&P 296)      |
| <b>Site:</b>     | Black Cat                     | <b>North Reference:</b>             | True                             |
| <b>Well:</b>     | Black Cat 16 State Com 131H   | <b>Survey Calculation Method:</b>   | Minimum Curvature                |
| <b>Wellbore:</b> | OH                            |                                     |                                  |
| <b>Design:</b>   | Plan 1 11-10-22               |                                     |                                  |

| Design Targets                                                                                                                   |           |          |          |        |            |            |            |                     |                    |
|----------------------------------------------------------------------------------------------------------------------------------|-----------|----------|----------|--------|------------|------------|------------|---------------------|--------------------|
| Target Name                                                                                                                      |           |          |          |        |            |            |            |                     |                    |
| - hit/miss target                                                                                                                | Dip Angle | Dip Dir. | TVD      | +N/-S  | +E/-W      | Northing   | Easting    | Latitude            | Longitude          |
| - Shape                                                                                                                          | (°)       | (°)      | (usft)   | (usft) | (usft)     | (usft)     | (usft)     |                     |                    |
| SHL - 131H - 961' FNI<br>- plan hits target center<br>- Point                                                                    | 0.00      | 0.00     | 0.00     | 0.00   | 0.00       | 605,792.46 | 590,469.70 | 32° 39' 54.964539 N | 4° 10' 25.222029 W |
| FTP - 131H - 860' FN<br>- plan misses target center by 197.88usft at 8369.34usft MD (8312.95 TVD, 102.17 N, 90.36 E)<br>- Point  | 0.00      | 0.00     | 8,448.80 | 103.56 | 234.25     | 605,896.37 | 590,703.79 | 32° 39' 55.989271 N | 4° 10' 22.481676 W |
| FTP - Black Cat 16 St<br>- plan misses target center by 197.88usft at 8369.34usft MD (8312.95 TVD, 102.17 N, 90.36 E)<br>- Point | 0.00      | 0.00     | 8,448.80 | 103.56 | 234.25     | 605,896.37 | 590,703.79 | 32° 39' 55.989271 N | 4° 10' 22.481676 W |
| LTP - Black Cat 16 St<br>- plan misses target center by 0.08usft at 18458.69usft MD (8448.80 TVD, 5.07 N, -9962.77 E)<br>- Point | 0.00      | 0.00     | 8,448.80 | 4.99   | -9,962.77  | 605,782.46 | 580,506.93 | 32° 39' 54.998826 N | 4° 12' 21.772354 W |
| BHL - 131H - 860' FNI<br>- plan hits target center<br>- Point                                                                    | 0.00      | 0.00     | 8,448.80 | 4.20   | -10,052.79 | 605,781.54 | 580,416.92 | 32° 39' 54.990789 N | 4° 12' 22.825356 W |
| BHL - Black Cat 16 St<br>- plan hits target center<br>- Point                                                                    | 0.00      | 0.00     | 8,448.80 | 4.20   | -10,052.79 | 605,781.54 | 580,416.92 | 32° 39' 54.990789 N | 4° 12' 22.825356 W |

| Formations            |                       |                |           |         |                   |  |
|-----------------------|-----------------------|----------------|-----------|---------|-------------------|--|
| Measured Depth (usft) | Vertical Depth (usft) | Name           | Lithology | Dip (°) | Dip Direction (°) |  |
| 203.80                | 203.80                | Rustler        |           |         |                   |  |
| 303.80                | 303.80                | Salado         |           |         |                   |  |
| 668.80                | 668.80                | Tansill        |           |         |                   |  |
| 783.80                | 783.80                | Yates          |           |         |                   |  |
| 1,178.80              | 1,178.80              | Seven Rivers   |           |         |                   |  |
| 1,742.80              | 1,742.80              | Queen          |           |         |                   |  |
| 2,066.80              | 2,066.80              | Grayburg       |           |         |                   |  |
| 2,493.41              | 2,492.80              | San Andres     |           |         |                   |  |
| 2,912.65              | 2,908.80              | Delaware Sands |           |         |                   |  |
| 3,308.56              | 3,298.80              | BSGL           |           |         |                   |  |
| 6,216.11              | 6,198.80              | FBSG           |           |         |                   |  |
| 7,106.11              | 7,088.80              | SBSG           |           |         |                   |  |
| 8,297.13              | 8,258.80              | TBSG           |           |         |                   |  |

| Plan Annotations      |                       |                   |              |                                    |
|-----------------------|-----------------------|-------------------|--------------|------------------------------------|
| Measured Depth (usft) | Vertical Depth (usft) | Local Coordinates |              | Comment                            |
|                       |                       | +N/-S (usft)      | +E/-W (usft) |                                    |
| 2,000.00              | 2,000.00              | 0.00              | 0.00         | KOP, Begin 1.00°/100' Build        |
| 3,000.00              | 2,994.93              | 35.20             | 79.61        | Hold 10.00° Inc at 66.15° Azm      |
| 3,472.37              | 3,460.12              | 68.36             | 154.63       | Begin 1.00°/100' Drop              |
| 4,472.37              | 4,455.05              | 103.56            | 234.25       | Begin Vertical Hold                |
| 7,988.65              | 7,971.34              | 103.56            | 234.25       | KOP2, Begin 12.00°/100' Build      |
| 8,738.66              | 8,448.81              | 98.95             | -243.20      | LP, Hold 90.00° Inc at 269.45° Azm |
| 18,548.70             | 8,448.80              | 4.20              | -10,052.79   | TD at 18548.70                     |

Intent ☐ As Drilled ☐

|                |                |             |
|----------------|----------------|-------------|
| API #          |                |             |
| Operator Name: | Property Name: | Well Number |

## Kick Off Point (KOP)

|          |         |          |       |     |           |          |      |          |        |
|----------|---------|----------|-------|-----|-----------|----------|------|----------|--------|
| UL       | Section | Township | Range | Lot | Feet      | From N/S | Feet | From E/W | County |
| Latitude |         |          |       |     | Longitude |          |      |          | NAD    |

## First Take Point (FTP)

|          |         |          |       |     |           |          |      |          |        |
|----------|---------|----------|-------|-----|-----------|----------|------|----------|--------|
| UL       | Section | Township | Range | Lot | Feet      | From N/S | Feet | From E/W | County |
| Latitude |         |          |       |     | Longitude |          |      |          | NAD    |

## Last Take Point (LTP)

|          |         |          |       |     |           |          |      |          |        |
|----------|---------|----------|-------|-----|-----------|----------|------|----------|--------|
| UL       | Section | Township | Range | Lot | Feet      | From N/S | Feet | From E/W | County |
| Latitude |         |          |       |     | Longitude |          |      |          | NAD    |

Is this well the defining well for the Horizontal Spacing Unit? ☐Is this well an infill well? ☐

If infill is yes please provide API if available, Operator Name and well number for Defining well for Horizontal Spacing Unit.

|                |                |             |
|----------------|----------------|-------------|
| API #          |                |             |
| Operator Name: | Property Name: | Well Number |

KZ 06/29/2018



State of New Mexico  
Energy, Minerals and Natural Resources Department

Submit Electronically  
Via E-permitting

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

## NATURAL GAS MANAGEMENT PLAN

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

### Section 1 – Plan Description

Effective May 25, 2021

**I. Operator:** Colgate Operating, LLC **OGRID:** 371449 **Date:** 12 / 08 / 22

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

If Other, please describe: \_\_\_\_\_

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

| Well Name                   | API | ULSTR        | Footages       | Anticipated Oil BBL/D | Anticipated Gas MCF/D | Anticipated Produced Water BBL/D |
|-----------------------------|-----|--------------|----------------|-----------------------|-----------------------|----------------------------------|
| Black Cat 16 State Com 121H |     | A-16-19S-28E | 928FNL&333FEL  | 2100 BBL/D            | 3600 MCF/D            | 3600 BBL/D                       |
| Black Cat 16 State Com 122H |     | A-16-19S-28E | 994FNL&333FEL  | 2100 BBL/D            | 3600 MCF/D            | 3600 BBL/D                       |
| Black Cat 16 State Com 131H |     | A-16-19S-28E | 961FNL&333FEL  | 1800 BBL/D            | 3800 MCF/D            | 3300 BBL/D                       |
| Black Cat 16 State Com 132H |     | A-16-19S-28E | 1027FNL&333FEL | 1800 BBL/D            | 3800 MCF/D            | 3300 BBL/D                       |

**IV. Central Delivery Point Name:** BLACK CAT-BLACK HAWK CDP [See 19.15.27.9(D)(1) NMAC]

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

| Well Name                   | API | Spud Date | TD Reached Date | Completion Commencement Date | Initial Flow Back Date | First Production Date |
|-----------------------------|-----|-----------|-----------------|------------------------------|------------------------|-----------------------|
| Black Cat 16 State Com 121H |     | 3/11/2023 | 3/26/2023       | 6/24/2023                    | 7/13/2023              | 7/13/2023             |
| Black Cat 16 State Com 122H |     | 2/27/2023 | 3/14/2023       | 6/24/2023                    | 7/13/2023              | 7/13/2023             |
| Black Cat 16 State Com 131H |     | 4/10/2023 | 4/25/2023       | 6/24/2023                    | 7/13/2023              | 7/13/2023             |
| Black Cat 16 State Com 132H |     | 3/23/2023 | 4/8/2023        | 6/24/2023                    | 7/13/2023              | 7/13/2023             |

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

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

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

## **Section 2 – Enhanced Plan**

### **EFFECTIVE APRIL 1, 2022**

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

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

#### **IX. Anticipated Natural Gas Production:**

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

#### **X. Natural Gas Gathering System (NGGS):**

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

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

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

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

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

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

### **Section 3 - Certifications**

**Effective May 25, 2021**

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

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

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

***If Operator checks this box, Operator will select one of the following:***

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

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

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

### **Section 4 - Notices**

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

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

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

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

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

|                                                                                                  |
|--------------------------------------------------------------------------------------------------|
| Signature: <i>Jackson Taylor</i>                                                                 |
| Printed Name: Jackson Taylor                                                                     |
| Title: Director of Midstream & Marketing                                                         |
| E-mail Address: jackson.taylor@permianres.com                                                    |
| Date: 1/5/23                                                                                     |
| Phone: 720-499-1531                                                                              |
| <b>OIL CONSERVATION DIVISION</b><br><b>(Only applicable when submitted as a standalone form)</b> |
| Approved By:                                                                                     |
| Title:                                                                                           |
| Approval Date:                                                                                   |
| Conditions of Approval:                                                                          |



## **VI. Separation Equipment:**

Colgate Operating, LLC production tank batteries include separation equipment designed to efficiently separate gas from liquid phases to optimize gas capture based on projected and estimated volumes from the targeted pool in conjunction with the total number of wells planned to or existing within the facility. Separation equipment is upgraded prior to well being drilled or completed, if determined to be undersized or needed. The separation equipment is designed and built according to the relevant industry specifications (API Specification 12J and ASME Sec VIII Div I). Other recognized industry publications such as the Gas Processors Suppliers Association (GPSA) are referenced when designing separation equipment to optimize gas capture.

## **VII. Operational Practices:**

### **1. Subsection B.**

- During drilling, flare stacks will be located a minimum of 150 feet from the nearest surface hole location. All gas is captured or combusted. If an emergency or malfunction occurs, gas will be flared or vented for public health, safety and the environment and be properly reported to the NMOCD pursuant to 19.15.27.8.G.
- Measure or estimate the volume of natural gas that is vented, flared or beneficially used during drilling, completion and production operations, regardless of the reason or authorization for such venting or flaring.
- At any point in the well life (drilling, completion, production, inactive) an audio, visual and olfactory (AVO) inspection will be performed weekly (at minimum) to confirm that all production equipment is operating properly and there are no leaks or releases except as allowed in Subsection D of 19.15.27.8 NMAC.

### **2. Subsection C.**

- During completion operations, operator does not produce oil or gas but maintains adequate well control through completion operations.

For emergencies, equipment malfunction, or if the operator decides to produce oil and gas during well completion:

- Flowlines will be routed for flowback fluids into a completion or storage tank and, if feasible under well conditions, flare rather than vent and commence operation of a separator as soon as it is technically feasible for a separator to function.

- Measure or estimate the volume of natural gas that is vented, flared or beneficially used during drilling, completion and production operations, regardless of the reason or authorization for such venting or flaring.
- At any point in the well life (drilling, completion, production, inactive) an audio, visual and olfactory (AVO) inspection will be performed weekly (at minimum) to confirm that all production equipment is operating properly and there are no leaks or releases except as allowed in Subsection D of 19.15.27.8 NMAC.

### 3. Subsection D.

- At any point in the well life (drilling, completion, production, inactive) an audio, visual and olfactory (AVO) inspection will be performed weekly (at minimum) to confirm that all production equipment is operating properly and there are no leaks or releases except as allowed in Subsection D of 19.15.27.8 NMAC.
- Monitor manual liquid unloading for wells on-site or in close proximity (<30 minutes' drive time), take reasonable actions to achieve a stabilized rate and pressure at the earliest practical time, and take reasonable actions to minimize venting to the maximum extent practicable.
- Measure or estimate the volume of natural gas that is vented, flared or beneficially used during drilling, completion and production operations, regardless of the reason or authorization for such venting or flaring.

### 4. Subsection E.

- All tanks and separation equipment are designed for maximum throughput and pressure to minimize waste.
- Flare stack has been designed for proper size and combustion efficiency. Flare currently has a continuous pilot and is located more than 100 feet from any known well and storage tanks.
- At any point in the well life (drilling, completion, production, inactive) an audio, visual and olfactory (AVO) inspection will be performed weekly (at minimum) to confirm that all production equipment is operating properly and there are no leaks or releases except as allowed in Subsection D of 19.15.27.8 NMAC.

### 5. Subsection F.

- Measurement equipment is installed to measure the volume of natural gas flared from process piping or a flowline piped from the equipment associated with a well and facility associated with the approved application for permit

to drill that has an average daily production greater than 60 mcf of natural gas.

- Measurement equipment installed is not designed or equipped with a manifold to allow diversion of natural gas around the metering equipment, except for the sole purpose of inspecting and servicing the measurement equipment, as noted in NMAC 19.15.27.8 Subsection G.

### **VIII. Best Management Practices:**

1. During completion operations, operator does not produce oil or gas but maintains adequate well control through completion operations.
2. Operator does not flow well (well shut in) during initial production until all flowlines, tank batteries, and oil/gas takeaway are installed, tested, and determined operational.
3. Operator equips storage tanks with an automatic gauging system to reduce venting of natural gas.
4. Operator reduces the number of blowdowns by looking for opportunities to coordinate repair and maintenance activities.
5. Operator combusts natural gas that would otherwise be vented or flared, when feasible.
6. Operator has a flare stack designed in accordance with need and to handle sufficient volume to ensure proper combustion efficiency. Flare stacks are equipped with continuous pilots and securely anchored at least 100 feet (at minimum) from storage tanks and wells.
7. Operator minimizes venting (when feasible) through pump downs of vessels and reducing time required to purge equipment before returning equipment to service.
8. Operator will shut in wells (when feasible) in the event of a takeaway disruption, emergency situations, or other operations where venting or flaring may occur due to equipment failures.
9. Operator utilizes compressed air to operate pneumatic equipment instead of gas.
10. Operator utilizes vapor recovery towers and VRU's to increase gas capture efficiency.