

**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 297811

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

|                                                                                         |                                         |                               |
|-----------------------------------------------------------------------------------------|-----------------------------------------|-------------------------------|
| 1. Operator Name and Address<br>EOG RESOURCES INC<br>P.O. Box 2267<br>Midland, TX 79702 |                                         | 2. OGRID Number<br>7377       |
|                                                                                         |                                         | 3. API Number<br>30-015-48699 |
| 4. Property Code<br>331158                                                              | 5. Property Name<br>SHERPA 12 STATE COM | 6. Well No.<br>729H           |

**7. Surface Location**

|               |               |                 |              |              |                  |               |                   |               |                |
|---------------|---------------|-----------------|--------------|--------------|------------------|---------------|-------------------|---------------|----------------|
| UL - Lot<br>A | Section<br>12 | Township<br>25S | Range<br>27E | Lot Idn<br>A | Feet From<br>631 | N/S Line<br>N | Feet From<br>1298 | E/W Line<br>E | County<br>Eddy |
|---------------|---------------|-----------------|--------------|--------------|------------------|---------------|-------------------|---------------|----------------|

**8. Proposed Bottom Hole Location**

|               |               |                 |              |              |                  |               |                  |               |                |
|---------------|---------------|-----------------|--------------|--------------|------------------|---------------|------------------|---------------|----------------|
| UL - Lot<br>P | Section<br>13 | Township<br>25S | Range<br>27E | Lot Idn<br>P | Feet From<br>230 | N/S Line<br>S | Feet From<br>792 | E/W Line<br>E | County<br>Eddy |
|---------------|---------------|-----------------|--------------|--------------|------------------|---------------|------------------|---------------|----------------|

**9. Pool Information**

|                         |       |
|-------------------------|-------|
| LOST LAKE; WOLFCAMP (G) | 97281 |
|-------------------------|-------|

**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>3076 |
| 16. Multiple<br>N         | 17. Proposed Depth<br>19664 | 18. Formation<br>Wolfcamp              | 19. Contractor          | 20. Spud Date<br>10/10/2021        |
| Depth to Ground water     |                             | Distance from nearest fresh water well |                         | Distance to nearest surface water  |

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

**21. Proposed Casing and Cement Program**

| Type | Hole Size | Casing Size | Casing Weight/ft | Setting Depth | Sacks of Cement | Estimated TOC |
|------|-----------|-------------|------------------|---------------|-----------------|---------------|
| Surf | 12.25     | 9.625       | 36               | 700           | 300             | 0             |
| Int1 | 8.75      | 7.625       | 29.7             | 8150          | 1470            | 0             |
| Prod | 6.75      | 5.5         | 17               | 19664         | 1020            | 7650          |

**Casing/Cement Program: Additional Comments**

|                                                                                                                                                                           |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| EOG respectfully requests the option to use the casing and cement program described in Design A of the drill plan. The NMOCDC will be notified of EOG's election at spud. |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

**22. Proposed Blowout Prevention Program**

| Type       | Working Pressure | Test Pressure | Manufacturer |
|------------|------------------|---------------|--------------|
| Double Ram | 5000             | 3000          |              |

|                                                                                                                                                                                                                                                                                                      |                                  |                                 |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|---------------------------------|
| 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 Kay Maddox                                                                                                                                                                                                                                                     | Approved By: Kurt Simmons        |                                 |
| Title: Regulatory Agent                                                                                                                                                                                                                                                                              | Title: Petroleum Specialist - A  |                                 |
| Email Address: kay_maddox@eogresources.com                                                                                                                                                                                                                                                           | Approved Date: 7/2/2021          | Expiration Date: 7/2/2023       |
| Date: 6/29/2021                                                                                                                                                                                                                                                                                      | Phone: 432-686-3658              | Conditions of Approval Attached |

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

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

Form APD Conditions

Permit 297811

**PERMIT CONDITIONS OF APPROVAL**

|                                                                                              |                                    |
|----------------------------------------------------------------------------------------------|------------------------------------|
| Operator Name and Address:<br>EOG RESOURCES INC [7377]<br>P.O. Box 2267<br>Midland, TX 79702 | API Number:<br>30-015-48699        |
|                                                                                              | Well:<br>SHERPA 12 STATE COM #729H |

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

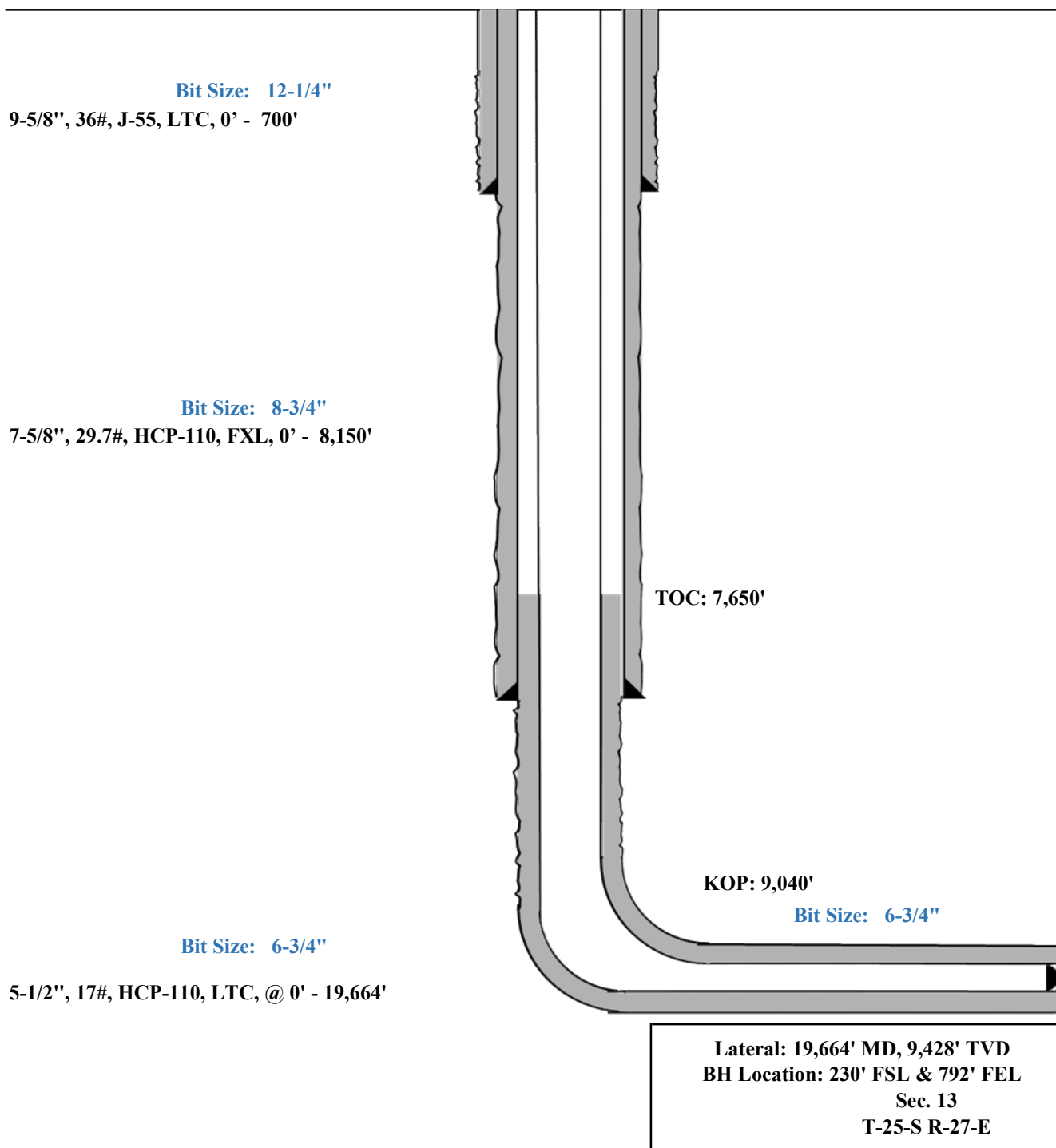


Sherpa 12 State Com #729H  
Eddy County, New Mexico  
Proposed Wellbore  
Design A

631' FNL  
1298' FEL  
Section 12  
T-25-S, R-27-E

KB: 3101'  
GL: 3076'

API: 30-015-\*\*\*\*\*



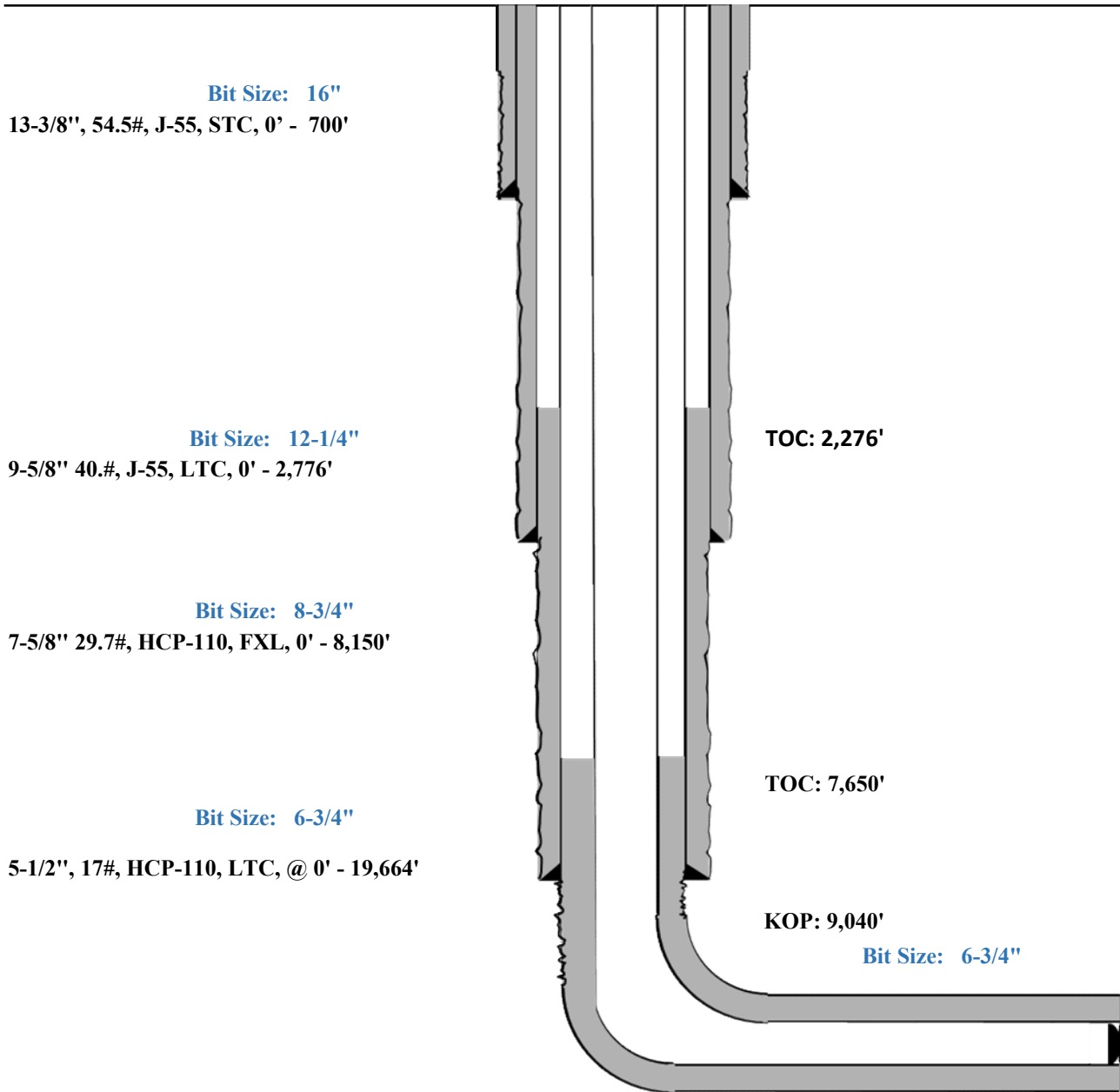


Sherpa 12 State Com #729H  
Eddy County, New Mexico  
Proposed Wellbore  
Design B

631' FNL  
1298' FEL  
Section 12  
T-25-S, R-27-E

KB: 3101'  
GL: 3076'

API: 30-015-\*\*\*\*\*



Lateral: 19,664' MD, 9,428' TVD  
BH Location: 230' FSL & 792' FEL  
Sec. 13  
T-25-S R-27-E



## Sherpa 12 State Com #729H

### Permit Information:

Well Name: Sherpa 12 State Com #729H

### Location:

SHL: 631' FNL & 1298' FEL, Section 12, T-25-S, R-27-E, Eddy Co., N.M.

BHL: 230' FSL & 792' FEL, Section 13, T-25-S, R-27-E, Eddy Co., N.M.

### Design A

### Casing Program:

| Hole Size | Interval     | Csg OD | Weight | Grade   | Conn | DFmin Collapse | DFmin Burst | Dfmin Tension |
|-----------|--------------|--------|--------|---------|------|----------------|-------------|---------------|
| 12.25"    | 0' - 700'    | 9.625" | 36#    | J-55    | LTC  | 1.125          | 1.25        | 1.6           |
| 8.75"     | 0' - 8,150'  | 7.625" | 29.7#  | HCP-110 | FXL  | 1.125          | 1.25        | 1.6           |
| 6.75"     | 0' - 19,664' | 5.5"   | 17#    | HCP-110 | LTC  | 1.125          | 1.25        | 1.6           |

### Cement Program:

| Depth   | No. Sacks | Wt. ppg | Yld Ft3/sk | Slurry Description                                                                                      |
|---------|-----------|---------|------------|---------------------------------------------------------------------------------------------------------|
| 700'    | 220       | 13.5    | 1.73       | Class C + 4.0% Bentonite + 0.6% CD-32 + 0.5% CaCl <sub>2</sub> + 0.25 lb/sk Cello-Flake (TOC @ Surface) |
|         | 80        | 14.8    | 1.34       | Class C + 0.6% FL-62 + 0.25 lb/sk Cello-Flake + 0.2% Sodium Metasilicate                                |
| 8,150'  | 470       | 14.2    | 1.11       | 1st Stage (Tail): Class C + 5% Salt (TOC @ 4,208')                                                      |
|         | 1000      | 14.8    | 1.5        | 2nd Stage (Bradenhead squeeze): Class C + 3% Salt + 1% PreMag-M + 6% Bentonite Gel (TOC @ surface)      |
| 19,664' | 1020      | 14.2    | 1.31       | Class H + 0.1% C-20 + 0.05% CSA-1000 + 0.20% C-49 + 0.40% C-17 (TOC @ 7,650')                           |

### Mud Program:

| Depth                       | Type        | Weight (ppg) | Viscosity | Water Loss |
|-----------------------------|-------------|--------------|-----------|------------|
| 0 – 700'                    | Fresh - Gel | 8.6-8.8      | 28-34     | N/c        |
| 700' – 8,150'               | Brine       | 10.0-10.2    | 28-34     | N/c        |
| 8,150' – 9,040'             | Oil Base    | 8.7-9.4      | 58-68     | N/c - 6    |
| 9,040' – 19,664'<br>Lateral | Oil Base    | 10.0-14.0    | 58-68     | 4 - 6      |



## Sherpa 12 State Com #729H

**Design B****CASING PROGRAM**

| Hole Size | Interval     | Csg OD  | Weight | Grade   | Conn | DFmin Collapse | DFmin Burst | DFmin Tension |
|-----------|--------------|---------|--------|---------|------|----------------|-------------|---------------|
| 16"       | 0' - 700'    | 13.375" | 54.5#  | J-55    | STC  | 1.125          | 1.25        | 1.6           |
| 12.25"    | 0' - 2,776'  | 9.625"  | 40#    | J-55    | LTC  | 1.125          | 1.25        | 1.6           |
| 8.75"     | 0' - 8,150'  | 7.625"  | 29.7#  | HCP-110 | FXL  | 1.125          | 1.25        | 1.6           |
| 6.75"     | 0' - 19,664' | 5.5"    | 17#    | HCP-110 | FXL  | 1.125          | 1.25        | 1.6           |

**Cementing Program:**

| Depth   | No. Sacks | Wt. ppg | Yld Ft3/sk | Slurry Description                                                                                     |
|---------|-----------|---------|------------|--------------------------------------------------------------------------------------------------------|
| 700'    | 210       | 13.5    | 1.73       | Lead: Class C + 4.0% Bentonite Gel + 2.0% CaCl <sub>2</sub> (TOC @ Surface)                            |
|         | 100       | 14.8    | 1.34       | Tail: Class C + 0.6% FL-62 + 0.25 lb/sk Cello-Flake + 0.2% Sodium Metasilicate + 2.0% KCl (1.06 lb/sk) |
| 2,776'  | 410       | 12.7    | 2.22       | Lead: Class C + 0.15% C-20 + 11.63 pps Salt + 0.1% C-51 + 0.75% C-41P (TOC @ Surface)                  |
|         | 180       | 10.8    | 1.32       | Tail: Class C + 0.13% C-20                                                                             |
| 8,150'  | 170       | 14.8    | 3.67       | Lead: Class H + 0.40% D013 + 0.20% D046 + 0.10% D065 + 0.20% D167 (TOC @ 2,280')                       |
|         | 100       | 14.8    | 2.38       | Tail: Class H + 94.0 pps D909 + 0.25% D065 + 0.30% D167 + 0.02% D208 + 0.15% D800 (TOC @ 6,649')       |
| 19,664' | 1020      | 14.8    | 1.31       | Class H + 0.1% C-20 + 0.05% CSA-1000 + 0.20% C-49 + 0.40% C-17 (TOC @ 7,649')                          |

As a contingency, EOG requests to pump a two stage cement job on the 7-5/8" intermediate casing string with the first stage being pumped conventionally with the calculated top of cement at the Brushy Canyon (4,408') and the second stage performed as a bradenhead squeeze with planned cement from the Brushy Canyon to surface. If necessary, a top out consisting of 1,000 sacks of Class C cement + 3% Salt + 1% PreMag-M + 6% Bentonite Gel (1.5 yld, 14.8 ppg) will be executed.

**Mud Program:**

| Depth                       | Type        | Weight (ppg) | Viscosity | Water Loss |
|-----------------------------|-------------|--------------|-----------|------------|
| 0 – 700'                    | Fresh - Gel | 8.6-8.8      | 28-34     | N/c        |
| 700' – 2,776'               | Brine       | 10.0-10.2    | 28-34     | N/c        |
| 2,776' – 8,150'             | Oil Base    | 8.7-9.4      | 58-68     | N/c - 6    |
| 8,150' – 19,664'<br>Lateral | Oil Base    | 10.0-14.0    | 58-68     | 4 - 6      |

**Sherpa 12 State Com #729H****Hydrogen Sulfide Plan Summary**

A. All personnel shall receive proper H<sub>2</sub>S training in accordance with Onshore Order III.C.3.a.

B. Briefing Area: two perpendicular areas will be designated by signs and readily accessible.

C. Required Emergency Equipment:

■ Well control equipment

- a. Flare line 150' from wellhead to be ignited by flare gun.
- b. Choke manifold with a remotely operated choke.
- c. Mud/gas separator

■ Protective equipment for essential personnel.

Breathing apparatus:

- a. Rescue Packs (SCBA) — 1 unit shall be placed at each breathing area, 2 shall be stored in the safety trailer.
- b. Work/Escapes packs — 4 packs shall be stored on the rig floor with sufficient air hose not to restrict work activity.
- c. Emergency Escape Packs — 4 packs shall be stored in the doghouse for emergency evacuation.

Auxiliary Rescue Equipment:

- a. Stretcher
- b. Two OSHA full body harness
- c. 100 ft 5/8 inch OSHA approved rope
- d. 1-20# class ABC fire extinguisher

■ H<sub>2</sub>S detection and monitoring equipment:

The stationary detector with three sensors will be placed in the upper dog house if equipped, set to visually alarm @ 10 ppm and audible @ 14 ppm. Calibrate a minimum of every 30 days or as needed. The sensors will be placed in the following places: Rig floor / Bell nipple / End of flow line or where well bore fluid is being discharged.

(Gas sample tubes will be stored in the safety trailer)

■ Visual warning systems.

- a. One color code condition sign will be placed at the entrance to the site reflecting the possible conditions at the site.
- b. A colored condition flag will be on display, reflecting the current condition at the site at the time.
- c. Two wind socks will be placed in strategic locations, visible from all angles.





## Sherpa 12 State Com #729H

### ■ Mud program:

The mud program has been designed to minimize the volume of H<sub>2</sub>S circulated to surface. The operator will have the necessary mud products to minimize hazards while drilling in H<sub>2</sub>S bearing zones.

### ■ Metallurgy:

All drill strings, casings, tubing, wellhead, blowout preventer, drilling spool, kill lines, choke manifold and lines, and valves shall be suitable for H<sub>2</sub>S service.

### ■ Communication:

Communication will be via cell phones and land lines where available.



**Sherpa 12 State Com #729H**  
**Emergency Assistance Telephone List**

**PUBLIC SAFETY:** **911 or**

|                                 |                |
|---------------------------------|----------------|
| Lea County Sheriff's Department | (575) 396-3611 |
| Rod Coffman                     |                |
| Fire Department:                |                |
| Carlsbad                        | (575) 885-3125 |
| Artesia                         | (575) 746-5050 |
| Hospitals:                      |                |
| Carlsbad                        | (575) 887-4121 |
| Artesia                         | (575) 748-3333 |
| Hobbs                           | (575) 392-1979 |
| Dept. of Public Safety/Carlsbad | (575) 748-9718 |
| Highway Department              | (575) 885-3281 |
| New Mexico Oil Conservation     | (575) 476-3440 |
| U.S. Dept. of Labor             | (575) 887-1174 |

**EOG Resources, Inc.**

|               |        |                |
|---------------|--------|----------------|
| EOG / Midland | Office | (432) 686-3600 |
|---------------|--------|----------------|

**Company Drilling Consultants:**

|                 |      |                |
|-----------------|------|----------------|
| David Dominique | Cell | (985) 518-5839 |
| Mike Vann       | Cell | (817) 980-5507 |

**Drilling Engineer**

|                   |      |                |
|-------------------|------|----------------|
| Esteban Del Valle | Cell | (432) 269-7063 |
| Daniel Moose      | Cell | (432) 312-2803 |

**Drilling Manager**

|         |        |                |
|---------|--------|----------------|
| Aj Dach | Office | (432) 686-3751 |
|         | Cell   | (817) 480-1167 |

**Drilling Superintendent**

|                |        |                |
|----------------|--------|----------------|
| Jason Townsend | Office | (432) 848-9209 |
|                | Cell   | (210) 776-5131 |

**H&P Drilling**

|                      |        |                |
|----------------------|--------|----------------|
| H&P Drilling         | Office | (432) 563-5757 |
| H&P 651 Drilling Rig | Rig    | (903) 509-7131 |

**Tool Pusher:**

|                 |      |                |
|-----------------|------|----------------|
| Johnathan Craig | Cell | (817) 760-6374 |
| Brad Garrett    |      |                |

**Safety:**

|                              |        |                |
|------------------------------|--------|----------------|
| Brian Chandler (HSE Manager) | Office | (432) 686-3695 |
|                              | Cell   | (817) 239-0251 |



## **EOG Resources - Midland**

**Eddy County, NM (NAD 83 NME)**

**Sherpa 12 State Com**

**#729H**

**OH**

**Plan: Plan #0.1**

## **Standard Planning Report**

**10 May, 2021**

## EOG Resources

## Planning Report



|                  |                              |                                    |                      |
|------------------|------------------------------|------------------------------------|----------------------|
| <b>Database:</b> | EDM 5000.14                  | <b>Local Co-ordinate Reference</b> | Well #729H           |
| <b>Company:</b>  | EOG Resources - Midland      | <b>TVD Reference:</b>              | KB = 25 @ 3101.0usft |
| <b>Project:</b>  | Eddy County, NM (NAD 83 NME) | <b>MD Reference:</b>               | KB = 25 @ 3101.0usft |
| <b>Site:</b>     | Sherpa 12 State Com          | <b>North Reference:</b>            | Grid                 |
| <b>Well:</b>     | #729H                        | <b>Survey Calculation Method:</b>  | Minimum Curvature    |
| <b>Wellbore:</b> | OH                           |                                    |                      |
| <b>Design:</b>   | Plan #0.1                    |                                    |                      |

|                    |                              |                      |                |
|--------------------|------------------------------|----------------------|----------------|
| <b>Project</b>     | Eddy County, NM (NAD 83 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      |                      |                |

|                              |                     |                          |                  |
|------------------------------|---------------------|--------------------------|------------------|
| <b>Site</b>                  | Sherpa 12 State Com |                          |                  |
| <b>Site Position:</b>        |                     | <b>Northing:</b>         | 418,435.00 usft  |
| <b>From:</b>                 | Map                 | <b>Easting:</b>          | 601,280.00 usft  |
| <b>Position Uncertainty:</b> | 0.0 usft            | <b>Slot Radius:</b>      | 13-3/16 "        |
|                              |                     | <b>Latitude:</b>         | 32° 9' 0.749 N   |
|                              |                     | <b>Longitude:</b>        | 104° 8' 22.728 W |
|                              |                     | <b>Grid Convergence:</b> | 0.10 °           |

|                             |              |            |                            |
|-----------------------------|--------------|------------|----------------------------|
| <b>Well</b>                 | #729H        |            |                            |
| <b>Well Position</b>        | <b>+N/-S</b> | 0.0 usft   | <b>Northing:</b>           |
|                             | <b>+E/-W</b> | -15.0 usft | <b>Easting:</b>            |
| <b>Position Uncertainty</b> | 0.0 usft     |            | <b>Wellhead Elevation:</b> |
|                             |              |            | <b>Latitude:</b>           |
|                             |              |            | <b>Longitude:</b>          |
|                             |              |            | <b>Ground Level:</b>       |

|                  |                   |                    |                       |
|------------------|-------------------|--------------------|-----------------------|
| <b>Wellbore</b>  | OH                |                    |                       |
| <b>Magnetics</b> | <b>Model Name</b> | <b>Sample Date</b> | <b>Declination</b>    |
|                  |                   |                    | (°)                   |
|                  | IGRF2020          | 5/10/2021          | 6.81                  |
|                  |                   |                    | <b>Dip Angle</b>      |
|                  |                   |                    | (°)                   |
|                  |                   |                    | <b>Field Strength</b> |
|                  |                   |                    | (nT)                  |

|                          |                         |              |                      |
|--------------------------|-------------------------|--------------|----------------------|
| <b>Design</b>            | Plan #0.1               |              |                      |
| <b>Audit Notes:</b>      |                         |              |                      |
| <b>Version:</b>          | <b>Phase:</b>           | PLAN         | <b>Tie On Depth:</b> |
|                          |                         |              | 0.0                  |
| <b>Vertical Section:</b> | <b>Depth From (TVD)</b> | <b>+N/-S</b> | <b>+E/-W</b>         |
|                          | (usft)                  | (usft)       | (usft)               |
|                          | 0.0                     | 0.0          | 0.0                  |
|                          |                         |              | <b>Direction</b>     |
|                          |                         |              | (°)                  |

|                                 |                 |                          |                  |                |
|---------------------------------|-----------------|--------------------------|------------------|----------------|
| <b>Plan Survey Tool Program</b> | <b>Date</b>     | 5/10/2021                |                  |                |
| <b>Depth From</b>               | <b>Depth To</b> | <b>Survey (Wellbore)</b> | <b>Tool Name</b> | <b>Remarks</b> |
| (usft)                          | (usft)          |                          |                  |                |
| 1                               | 0.0             | 19,664.1 Plan #0.1 (OH)  | EOG MWD+IFR1     |                |
|                                 |                 |                          | MWD + IFR1       |                |

|                      |                    |                |                 |              |              |               |              |             |            |                     |
|----------------------|--------------------|----------------|-----------------|--------------|--------------|---------------|--------------|-------------|------------|---------------------|
| <b>Plan Sections</b> |                    |                |                 |              |              |               |              |             |            |                     |
| <b>Measured</b>      | <b>Inclination</b> | <b>Azimuth</b> | <b>Vertical</b> | <b>+N/-S</b> | <b>+E/-W</b> | <b>Dogleg</b> | <b>Build</b> | <b>Turn</b> | <b>TFO</b> | <b>Target</b>       |
| <b>Depth</b>         | (°)                | (°)            | <b>Depth</b>    | (usft)       | (usft)       | <b>Rate</b>   | <b>Rate</b>  | <b>Rate</b> | (°)        |                     |
| (usft)               |                    |                | (usft)          |              |              | (°/100usft)   | (°/100usft)  | (°/100usft) |            |                     |
| 0.0                  | 0.00               | 0.00           | 0.0             | 0.0          | 0.0          | 0.00          | 0.00         | 0.00        | 0.00       |                     |
| 700.0                | 0.00               | 0.00           | 700.0           | 0.0          | 0.0          | 0.00          | 0.00         | 0.00        | 0.00       |                     |
| 1,423.5              | 14.47              | 40.94          | 1,415.8         | 68.6         | 59.5         | 2.00          | 2.00         | 0.00        | 40.94      |                     |
| 3,774.4              | 14.47              | 40.94          | 3,692.2         | 512.4        | 444.5        | 0.00          | 0.00         | 0.00        | 0.00       |                     |
| 4,497.9              | 0.00               | 0.00           | 4,408.0         | 581.0        | 504.0        | 2.00          | -2.00        | 0.00        | 180.00     |                     |
| 9,040.4              | 0.00               | 0.00           | 8,950.5         | 581.0        | 504.0        | 0.00          | 0.00         | 0.00        | 0.00       | KOP(sherpa 12 SC #; |
| 9,790.4              | 90.00              | 179.71         | 9,428.0         | 103.5        | 506.4        | 12.00         | 12.00        | 23.96       | 179.71     |                     |
| 19,664.1             | 90.00              | 179.71         | 9,428.0         | -9,770.0     | 557.0        | 0.00          | 0.00         | 0.00        | 0.00       | PBHL(sherpa 12 SC # |

## EOG Resources

## Planning Report



|                  |                              |                                    |                      |
|------------------|------------------------------|------------------------------------|----------------------|
| <b>Database:</b> | EDM 5000.14                  | <b>Local Co-ordinate Reference</b> | Well #729H           |
| <b>Company:</b>  | EOG Resources - Midland      | <b>TVD Reference:</b>              | KB = 25 @ 3101.0usft |
| <b>Project:</b>  | Eddy County, NM (NAD 83 NME) | <b>MD Reference:</b>               | KB = 25 @ 3101.0usft |
| <b>Site:</b>     | Sherpa 12 State Com          | <b>North Reference:</b>            | Grid                 |
| <b>Well:</b>     | #729H                        | <b>Survey Calculation Method:</b>  | Minimum Curvature    |
| <b>Wellbore:</b> | OH                           |                                    |                      |
| <b>Design:</b>   | Plan #0.1                    |                                    |                      |

| Planned Survey        |                 |             |                       |              |              |                         |                         |                        |                       |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
| 0.0                   | 0.00            | 0.00        | 0.0                   | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 100.0                 | 0.00            | 0.00        | 100.0                 | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 200.0                 | 0.00            | 0.00        | 200.0                 | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 300.0                 | 0.00            | 0.00        | 300.0                 | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 400.0                 | 0.00            | 0.00        | 400.0                 | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 500.0                 | 0.00            | 0.00        | 500.0                 | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 600.0                 | 0.00            | 0.00        | 600.0                 | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 700.0                 | 0.00            | 0.00        | 700.0                 | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 800.0                 | 2.00            | 40.94       | 800.0                 | 1.3          | 1.1          | -1.3                    | 2.00                    | 2.00                   | 0.00                  |
| 900.0                 | 4.00            | 40.94       | 899.8                 | 5.3          | 4.6          | -5.0                    | 2.00                    | 2.00                   | 0.00                  |
| 1,000.0               | 6.00            | 40.94       | 999.5                 | 11.9         | 10.3         | -11.3                   | 2.00                    | 2.00                   | 0.00                  |
| 1,100.0               | 8.00            | 40.94       | 1,098.7               | 21.1         | 18.3         | -20.0                   | 2.00                    | 2.00                   | 0.00                  |
| 1,200.0               | 10.00           | 40.94       | 1,197.5               | 32.9         | 28.5         | -31.2                   | 2.00                    | 2.00                   | 0.00                  |
| 1,300.0               | 12.00           | 40.94       | 1,295.6               | 47.3         | 41.0         | -44.9                   | 2.00                    | 2.00                   | 0.00                  |
| 1,400.0               | 14.00           | 40.94       | 1,393.1               | 64.3         | 55.8         | -61.0                   | 2.00                    | 2.00                   | 0.00                  |
| 1,423.5               | 14.47           | 40.94       | 1,415.8               | 68.6         | 59.5         | -65.1                   | 2.00                    | 2.00                   | 0.00                  |
| 1,500.0               | 14.47           | 40.94       | 1,489.9               | 83.1         | 72.1         | -78.8                   | 0.00                    | 0.00                   | 0.00                  |
| 1,600.0               | 14.47           | 40.94       | 1,586.7               | 102.0        | 88.4         | -96.8                   | 0.00                    | 0.00                   | 0.00                  |
| 1,700.0               | 14.47           | 40.94       | 1,683.6               | 120.8        | 104.8        | -114.7                  | 0.00                    | 0.00                   | 0.00                  |
| 1,800.0               | 14.47           | 40.94       | 1,780.4               | 139.7        | 121.2        | -132.6                  | 0.00                    | 0.00                   | 0.00                  |
| 1,900.0               | 14.47           | 40.94       | 1,877.2               | 158.6        | 137.6        | -150.5                  | 0.00                    | 0.00                   | 0.00                  |
| 2,000.0               | 14.47           | 40.94       | 1,974.0               | 177.5        | 153.9        | -168.4                  | 0.00                    | 0.00                   | 0.00                  |
| 2,100.0               | 14.47           | 40.94       | 2,070.9               | 196.3        | 170.3        | -186.3                  | 0.00                    | 0.00                   | 0.00                  |
| 2,200.0               | 14.47           | 40.94       | 2,167.7               | 215.2        | 186.7        | -204.2                  | 0.00                    | 0.00                   | 0.00                  |
| 2,300.0               | 14.47           | 40.94       | 2,264.5               | 234.1        | 203.1        | -222.1                  | 0.00                    | 0.00                   | 0.00                  |
| 2,400.0               | 14.47           | 40.94       | 2,361.4               | 253.0        | 219.4        | -240.1                  | 0.00                    | 0.00                   | 0.00                  |
| 2,500.0               | 14.47           | 40.94       | 2,458.2               | 271.8        | 235.8        | -258.0                  | 0.00                    | 0.00                   | 0.00                  |
| 2,600.0               | 14.47           | 40.94       | 2,555.0               | 290.7        | 252.2        | -275.9                  | 0.00                    | 0.00                   | 0.00                  |
| 2,700.0               | 14.47           | 40.94       | 2,651.8               | 309.6        | 268.5        | -293.8                  | 0.00                    | 0.00                   | 0.00                  |
| 2,800.0               | 14.47           | 40.94       | 2,748.7               | 328.4        | 284.9        | -311.7                  | 0.00                    | 0.00                   | 0.00                  |
| 2,900.0               | 14.47           | 40.94       | 2,845.5               | 347.3        | 301.3        | -329.6                  | 0.00                    | 0.00                   | 0.00                  |
| 3,000.0               | 14.47           | 40.94       | 2,942.3               | 366.2        | 317.7        | -347.5                  | 0.00                    | 0.00                   | 0.00                  |
| 3,100.0               | 14.47           | 40.94       | 3,039.2               | 385.1        | 334.0        | -365.4                  | 0.00                    | 0.00                   | 0.00                  |
| 3,200.0               | 14.47           | 40.94       | 3,136.0               | 403.9        | 350.4        | -383.3                  | 0.00                    | 0.00                   | 0.00                  |
| 3,300.0               | 14.47           | 40.94       | 3,232.8               | 422.8        | 366.8        | -401.3                  | 0.00                    | 0.00                   | 0.00                  |
| 3,400.0               | 14.47           | 40.94       | 3,329.6               | 441.7        | 383.2        | -419.2                  | 0.00                    | 0.00                   | 0.00                  |
| 3,500.0               | 14.47           | 40.94       | 3,426.5               | 460.6        | 399.5        | -437.1                  | 0.00                    | 0.00                   | 0.00                  |
| 3,600.0               | 14.47           | 40.94       | 3,523.3               | 479.4        | 415.9        | -455.0                  | 0.00                    | 0.00                   | 0.00                  |
| 3,700.0               | 14.47           | 40.94       | 3,620.1               | 498.3        | 432.3        | -472.9                  | 0.00                    | 0.00                   | 0.00                  |
| 3,774.4               | 14.47           | 40.94       | 3,692.2               | 512.4        | 444.5        | -486.2                  | 0.00                    | 0.00                   | 0.00                  |
| 3,800.0               | 13.96           | 40.94       | 3,717.0               | 517.1        | 448.6        | -490.7                  | 2.00                    | -2.00                  | 0.00                  |
| 3,900.0               | 11.96           | 40.94       | 3,814.4               | 534.0        | 463.3        | -506.8                  | 2.00                    | -2.00                  | 0.00                  |
| 4,000.0               | 9.96            | 40.94       | 3,912.6               | 548.4        | 475.7        | -520.4                  | 2.00                    | -2.00                  | 0.00                  |
| 4,100.0               | 7.96            | 40.94       | 4,011.4               | 560.2        | 485.9        | -531.6                  | 2.00                    | -2.00                  | 0.00                  |
| 4,200.0               | 5.96            | 40.94       | 4,110.6               | 569.3        | 493.9        | -540.3                  | 2.00                    | -2.00                  | 0.00                  |
| 4,300.0               | 3.96            | 40.94       | 4,210.3               | 575.8        | 499.5        | -546.5                  | 2.00                    | -2.00                  | 0.00                  |
| 4,400.0               | 1.96            | 40.94       | 4,310.1               | 579.7        | 502.9        | -550.2                  | 2.00                    | -2.00                  | 0.00                  |
| 4,497.9               | 0.00            | 0.00        | 4,408.0               | 581.0        | 504.0        | -551.4                  | 2.00                    | -2.00                  | 0.00                  |
| 4,500.0               | 0.00            | 0.00        | 4,410.1               | 581.0        | 504.0        | -551.4                  | 0.00                    | 0.00                   | 0.00                  |
| 4,600.0               | 0.00            | 0.00        | 4,510.1               | 581.0        | 504.0        | -551.4                  | 0.00                    | 0.00                   | 0.00                  |
| 4,700.0               | 0.00            | 0.00        | 4,610.1               | 581.0        | 504.0        | -551.4                  | 0.00                    | 0.00                   | 0.00                  |
| 4,800.0               | 0.00            | 0.00        | 4,710.1               | 581.0        | 504.0        | -551.4                  | 0.00                    | 0.00                   | 0.00                  |
| 4,900.0               | 0.00            | 0.00        | 4,810.1               | 581.0        | 504.0        | -551.4                  | 0.00                    | 0.00                   | 0.00                  |

## EOG Resources

## Planning Report



|                  |                              |                                    |                      |
|------------------|------------------------------|------------------------------------|----------------------|
| <b>Database:</b> | EDM 5000.14                  | <b>Local Co-ordinate Reference</b> | Well #729H           |
| <b>Company:</b>  | EOG Resources - Midland      | <b>TVD Reference:</b>              | KB = 25 @ 3101.0usft |
| <b>Project:</b>  | Eddy County, NM (NAD 83 NME) | <b>MD Reference:</b>               | KB = 25 @ 3101.0usft |
| <b>Site:</b>     | Sherpa 12 State Com          | <b>North Reference:</b>            | Grid                 |
| <b>Well:</b>     | #729H                        | <b>Survey Calculation Method:</b>  | Minimum Curvature    |
| <b>Wellbore:</b> | OH                           |                                    |                      |
| <b>Design:</b>   | Plan #0.1                    |                                    |                      |

| Planned Survey              |                    |                |                             |                 |                 |                               |                               |                              |                             |  |
|-----------------------------|--------------------|----------------|-----------------------------|-----------------|-----------------|-------------------------------|-------------------------------|------------------------------|-----------------------------|--|
| Measured<br>Depth<br>(usft) | Inclination<br>(°) | Azimuth<br>(°) | Vertical<br>Depth<br>(usft) | +N/-S<br>(usft) | +E/-W<br>(usft) | Vertical<br>Section<br>(usft) | Dogleg<br>Rate<br>(°/100usft) | Build<br>Rate<br>(°/100usft) | Turn<br>Rate<br>(°/100usft) |  |
| 5,000.0                     | 0.00               | 0.00           | 4,910.1                     | 581.0           | 504.0           | -551.4                        | 0.00                          | 0.00                         | 0.00                        |  |
| 5,100.0                     | 0.00               | 0.00           | 5,010.1                     | 581.0           | 504.0           | -551.4                        | 0.00                          | 0.00                         | 0.00                        |  |
| 5,200.0                     | 0.00               | 0.00           | 5,110.1                     | 581.0           | 504.0           | -551.4                        | 0.00                          | 0.00                         | 0.00                        |  |
| 5,300.0                     | 0.00               | 0.00           | 5,210.1                     | 581.0           | 504.0           | -551.4                        | 0.00                          | 0.00                         | 0.00                        |  |
| 5,400.0                     | 0.00               | 0.00           | 5,310.1                     | 581.0           | 504.0           | -551.4                        | 0.00                          | 0.00                         | 0.00                        |  |
| 5,500.0                     | 0.00               | 0.00           | 5,410.1                     | 581.0           | 504.0           | -551.4                        | 0.00                          | 0.00                         | 0.00                        |  |
| 5,600.0                     | 0.00               | 0.00           | 5,510.1                     | 581.0           | 504.0           | -551.4                        | 0.00                          | 0.00                         | 0.00                        |  |
| 5,700.0                     | 0.00               | 0.00           | 5,610.1                     | 581.0           | 504.0           | -551.4                        | 0.00                          | 0.00                         | 0.00                        |  |
| 5,800.0                     | 0.00               | 0.00           | 5,710.1                     | 581.0           | 504.0           | -551.4                        | 0.00                          | 0.00                         | 0.00                        |  |
| 5,900.0                     | 0.00               | 0.00           | 5,810.1                     | 581.0           | 504.0           | -551.4                        | 0.00                          | 0.00                         | 0.00                        |  |
| 6,000.0                     | 0.00               | 0.00           | 5,910.1                     | 581.0           | 504.0           | -551.4                        | 0.00                          | 0.00                         | 0.00                        |  |
| 6,100.0                     | 0.00               | 0.00           | 6,010.1                     | 581.0           | 504.0           | -551.4                        | 0.00                          | 0.00                         | 0.00                        |  |
| 6,200.0                     | 0.00               | 0.00           | 6,110.1                     | 581.0           | 504.0           | -551.4                        | 0.00                          | 0.00                         | 0.00                        |  |
| 6,300.0                     | 0.00               | 0.00           | 6,210.1                     | 581.0           | 504.0           | -551.4                        | 0.00                          | 0.00                         | 0.00                        |  |
| 6,400.0                     | 0.00               | 0.00           | 6,310.1                     | 581.0           | 504.0           | -551.4                        | 0.00                          | 0.00                         | 0.00                        |  |
| 6,500.0                     | 0.00               | 0.00           | 6,410.1                     | 581.0           | 504.0           | -551.4                        | 0.00                          | 0.00                         | 0.00                        |  |
| 6,600.0                     | 0.00               | 0.00           | 6,510.1                     | 581.0           | 504.0           | -551.4                        | 0.00                          | 0.00                         | 0.00                        |  |
| 6,700.0                     | 0.00               | 0.00           | 6,610.1                     | 581.0           | 504.0           | -551.4                        | 0.00                          | 0.00                         | 0.00                        |  |
| 6,800.0                     | 0.00               | 0.00           | 6,710.1                     | 581.0           | 504.0           | -551.4                        | 0.00                          | 0.00                         | 0.00                        |  |
| 6,900.0                     | 0.00               | 0.00           | 6,810.1                     | 581.0           | 504.0           | -551.4                        | 0.00                          | 0.00                         | 0.00                        |  |
| 7,000.0                     | 0.00               | 0.00           | 6,910.1                     | 581.0           | 504.0           | -551.4                        | 0.00                          | 0.00                         | 0.00                        |  |
| 7,100.0                     | 0.00               | 0.00           | 7,010.1                     | 581.0           | 504.0           | -551.4                        | 0.00                          | 0.00                         | 0.00                        |  |
| 7,200.0                     | 0.00               | 0.00           | 7,110.1                     | 581.0           | 504.0           | -551.4                        | 0.00                          | 0.00                         | 0.00                        |  |
| 7,300.0                     | 0.00               | 0.00           | 7,210.1                     | 581.0           | 504.0           | -551.4                        | 0.00                          | 0.00                         | 0.00                        |  |
| 7,400.0                     | 0.00               | 0.00           | 7,310.1                     | 581.0           | 504.0           | -551.4                        | 0.00                          | 0.00                         | 0.00                        |  |
| 7,500.0                     | 0.00               | 0.00           | 7,410.1                     | 581.0           | 504.0           | -551.4                        | 0.00                          | 0.00                         | 0.00                        |  |
| 7,600.0                     | 0.00               | 0.00           | 7,510.1                     | 581.0           | 504.0           | -551.4                        | 0.00                          | 0.00                         | 0.00                        |  |
| 7,700.0                     | 0.00               | 0.00           | 7,610.1                     | 581.0           | 504.0           | -551.4                        | 0.00                          | 0.00                         | 0.00                        |  |
| 7,800.0                     | 0.00               | 0.00           | 7,710.1                     | 581.0           | 504.0           | -551.4                        | 0.00                          | 0.00                         | 0.00                        |  |
| 7,900.0                     | 0.00               | 0.00           | 7,810.1                     | 581.0           | 504.0           | -551.4                        | 0.00                          | 0.00                         | 0.00                        |  |
| 8,000.0                     | 0.00               | 0.00           | 7,910.1                     | 581.0           | 504.0           | -551.4                        | 0.00                          | 0.00                         | 0.00                        |  |
| 8,100.0                     | 0.00               | 0.00           | 8,010.1                     | 581.0           | 504.0           | -551.4                        | 0.00                          | 0.00                         | 0.00                        |  |
| 8,200.0                     | 0.00               | 0.00           | 8,110.1                     | 581.0           | 504.0           | -551.4                        | 0.00                          | 0.00                         | 0.00                        |  |
| 8,300.0                     | 0.00               | 0.00           | 8,210.1                     | 581.0           | 504.0           | -551.4                        | 0.00                          | 0.00                         | 0.00                        |  |
| 8,400.0                     | 0.00               | 0.00           | 8,310.1                     | 581.0           | 504.0           | -551.4                        | 0.00                          | 0.00                         | 0.00                        |  |
| 8,500.0                     | 0.00               | 0.00           | 8,410.1                     | 581.0           | 504.0           | -551.4                        | 0.00                          | 0.00                         | 0.00                        |  |
| 8,600.0                     | 0.00               | 0.00           | 8,510.1                     | 581.0           | 504.0           | -551.4                        | 0.00                          | 0.00                         | 0.00                        |  |
| 8,700.0                     | 0.00               | 0.00           | 8,610.1                     | 581.0           | 504.0           | -551.4                        | 0.00                          | 0.00                         | 0.00                        |  |
| 8,800.0                     | 0.00               | 0.00           | 8,710.1                     | 581.0           | 504.0           | -551.4                        | 0.00                          | 0.00                         | 0.00                        |  |
| 8,900.0                     | 0.00               | 0.00           | 8,810.1                     | 581.0           | 504.0           | -551.4                        | 0.00                          | 0.00                         | 0.00                        |  |
| 9,000.0                     | 0.00               | 0.00           | 8,910.1                     | 581.0           | 504.0           | -551.4                        | 0.00                          | 0.00                         | 0.00                        |  |
| 9,040.4                     | 0.00               | 0.00           | 8,950.5                     | 581.0           | 504.0           | -551.4                        | 0.00                          | 0.00                         | 0.00                        |  |
| KOP(sherpa 12 SC #729H)     |                    |                |                             |                 |                 |                               |                               |                              |                             |  |
| 9,050.0                     | 1.15               | 179.71         | 8,960.1                     | 580.9           | 504.0           | -551.3                        | 12.00                         | 12.00                        | 0.00                        |  |
| 9,075.0                     | 4.15               | 179.71         | 8,985.1                     | 579.7           | 504.0           | -550.1                        | 12.00                         | 12.00                        | 0.00                        |  |
| 9,100.0                     | 7.15               | 179.71         | 9,009.9                     | 577.3           | 504.0           | -547.7                        | 12.00                         | 12.00                        | 0.00                        |  |
| 9,125.0                     | 10.15              | 179.71         | 9,034.7                     | 573.5           | 504.0           | -543.9                        | 12.00                         | 12.00                        | 0.00                        |  |
| 9,150.0                     | 13.15              | 179.71         | 9,059.1                     | 568.5           | 504.1           | -538.9                        | 12.00                         | 12.00                        | 0.00                        |  |
| 9,175.0                     | 16.15              | 179.71         | 9,083.3                     | 562.2           | 504.1           | -532.5                        | 12.00                         | 12.00                        | 0.00                        |  |
| 9,200.0                     | 19.15              | 179.71         | 9,107.1                     | 554.6           | 504.1           | -525.0                        | 12.00                         | 12.00                        | 0.00                        |  |
| 9,225.0                     | 22.15              | 179.71         | 9,130.5                     | 545.8           | 504.2           | -516.2                        | 12.00                         | 12.00                        | 0.00                        |  |
| 9,250.0                     | 25.15              | 179.71         | 9,153.4                     | 535.7           | 504.2           | -506.2                        | 12.00                         | 12.00                        | 0.00                        |  |
| 9,275.0                     | 28.15              | 179.71         | 9,175.8                     | 524.5           | 504.3           | -495.0                        | 12.00                         | 12.00                        | 0.00                        |  |

## EOG Resources

## Planning Report



|                  |                              |                                    |                      |
|------------------|------------------------------|------------------------------------|----------------------|
| <b>Database:</b> | EDM 5000.14                  | <b>Local Co-ordinate Reference</b> | Well #729H           |
| <b>Company:</b>  | EOG Resources - Midland      | <b>TVD Reference:</b>              | KB = 25 @ 3101.0usft |
| <b>Project:</b>  | Eddy County, NM (NAD 83 NME) | <b>MD Reference:</b>               | KB = 25 @ 3101.0usft |
| <b>Site:</b>     | Sherpa 12 State Com          | <b>North Reference:</b>            | Grid                 |
| <b>Well:</b>     | #729H                        | <b>Survey Calculation Method:</b>  | Minimum Curvature    |
| <b>Wellbore:</b> | OH                           |                                    |                      |
| <b>Design:</b>   | Plan #0.1                    |                                    |                      |

| Planned Survey              |                    |                |                             |                 |                 |                               |                               |                              |                             |  |
|-----------------------------|--------------------|----------------|-----------------------------|-----------------|-----------------|-------------------------------|-------------------------------|------------------------------|-----------------------------|--|
| Measured<br>Depth<br>(usft) | Inclination<br>(°) | Azimuth<br>(°) | Vertical<br>Depth<br>(usft) | +N/-S<br>(usft) | +E/-W<br>(usft) | Vertical<br>Section<br>(usft) | Dogleg<br>Rate<br>(°/100usft) | Build<br>Rate<br>(°/100usft) | Turn<br>Rate<br>(°/100usft) |  |
| 9,300.0                     | 31.15              | 179.71         | 9,197.5                     | 512.1           | 504.4           | -482.6                        | 12.00                         | 12.00                        | 0.00                        |  |
| 9,325.0                     | 34.15              | 179.71         | 9,218.5                     | 498.7           | 504.4           | -469.1                        | 12.00                         | 12.00                        | 0.00                        |  |
| 9,350.0                     | 37.15              | 179.71         | 9,238.9                     | 484.1           | 504.5           | -454.6                        | 12.00                         | 12.00                        | 0.00                        |  |
| 9,375.0                     | 40.15              | 179.71         | 9,258.4                     | 468.5           | 504.6           | -439.0                        | 12.00                         | 12.00                        | 0.00                        |  |
| 9,400.0                     | 43.15              | 179.71         | 9,277.1                     | 451.9           | 504.7           | -422.4                        | 12.00                         | 12.00                        | 0.00                        |  |
| 9,425.0                     | 46.15              | 179.71         | 9,294.8                     | 434.3           | 504.8           | -404.9                        | 12.00                         | 12.00                        | 0.00                        |  |
| 9,450.0                     | 49.15              | 179.71         | 9,311.7                     | 415.8           | 504.8           | -386.4                        | 12.00                         | 12.00                        | 0.00                        |  |
| 9,475.0                     | 52.15              | 179.71         | 9,327.5                     | 396.5           | 504.9           | -367.1                        | 12.00                         | 12.00                        | 0.00                        |  |
| 9,500.0                     | 55.15              | 179.71         | 9,342.3                     | 376.4           | 505.0           | -347.0                        | 12.00                         | 12.00                        | 0.00                        |  |
| 9,525.0                     | 58.15              | 179.71         | 9,356.1                     | 355.5           | 505.2           | -326.1                        | 12.00                         | 12.00                        | 0.00                        |  |
| 9,550.0                     | 61.15              | 179.71         | 9,368.7                     | 333.9           | 505.3           | -304.6                        | 12.00                         | 12.00                        | 0.00                        |  |
| 9,575.0                     | 64.15              | 179.71         | 9,380.2                     | 311.7           | 505.4           | -282.4                        | 12.00                         | 12.00                        | 0.00                        |  |
| 9,600.0                     | 67.15              | 179.71         | 9,390.5                     | 288.9           | 505.5           | -259.7                        | 12.00                         | 12.00                        | 0.00                        |  |
| 9,601.5                     | 67.33              | 179.71         | 9,391.1                     | 287.6           | 505.5           | -258.3                        | 12.00                         | 12.00                        | 0.00                        |  |
| FTP(sherpa 12 SC #729H)     |                    |                |                             |                 |                 |                               |                               |                              |                             |  |
| 9,625.0                     | 70.15              | 179.71         | 9,399.6                     | 265.6           | 505.6           | -236.4                        | 12.00                         | 12.00                        | 0.00                        |  |
| 9,650.0                     | 73.15              | 179.71         | 9,407.5                     | 241.9           | 505.7           | -212.7                        | 12.00                         | 12.00                        | 0.00                        |  |
| 9,675.0                     | 76.15              | 179.71         | 9,414.1                     | 217.8           | 505.9           | -188.7                        | 12.00                         | 12.00                        | 0.00                        |  |
| 9,700.0                     | 79.15              | 179.71         | 9,419.4                     | 193.4           | 506.0           | -164.3                        | 12.00                         | 12.00                        | 0.00                        |  |
| 9,725.0                     | 82.15              | 179.71         | 9,423.5                     | 168.7           | 506.1           | -139.7                        | 12.00                         | 12.00                        | 0.00                        |  |
| 9,750.0                     | 85.15              | 179.71         | 9,426.3                     | 143.9           | 506.2           | -114.8                        | 12.00                         | 12.00                        | 0.00                        |  |
| 9,775.0                     | 88.15              | 179.71         | 9,427.7                     | 118.9           | 506.4           | -89.9                         | 12.00                         | 12.00                        | 0.00                        |  |
| 9,790.4                     | 90.00              | 179.71         | 9,428.0                     | 103.5           | 506.4           | -74.5                         | 12.00                         | 12.00                        | 0.00                        |  |
| 9,800.0                     | 90.00              | 179.71         | 9,428.0                     | 93.9            | 506.5           | -65.0                         | 0.00                          | 0.00                         | 0.00                        |  |
| 9,900.0                     | 90.00              | 179.71         | 9,428.0                     | -6.1            | 507.0           | 34.9                          | 0.00                          | 0.00                         | 0.00                        |  |
| 10,000.0                    | 90.00              | 179.71         | 9,428.0                     | -106.1          | 507.5           | 134.8                         | 0.00                          | 0.00                         | 0.00                        |  |
| 10,100.0                    | 90.00              | 179.71         | 9,428.0                     | -206.1          | 508.0           | 234.6                         | 0.00                          | 0.00                         | 0.00                        |  |
| 10,200.0                    | 90.00              | 179.71         | 9,428.0                     | -306.1          | 508.5           | 334.5                         | 0.00                          | 0.00                         | 0.00                        |  |
| 10,300.0                    | 90.00              | 179.71         | 9,428.0                     | -406.1          | 509.1           | 434.4                         | 0.00                          | 0.00                         | 0.00                        |  |
| 10,400.0                    | 90.00              | 179.71         | 9,428.0                     | -506.1          | 509.6           | 534.2                         | 0.00                          | 0.00                         | 0.00                        |  |
| 10,500.0                    | 90.00              | 179.71         | 9,428.0                     | -606.1          | 510.1           | 634.1                         | 0.00                          | 0.00                         | 0.00                        |  |
| 10,600.0                    | 90.00              | 179.71         | 9,428.0                     | -706.1          | 510.6           | 734.0                         | 0.00                          | 0.00                         | 0.00                        |  |
| 10,700.0                    | 90.00              | 179.71         | 9,428.0                     | -806.0          | 511.1           | 833.8                         | 0.00                          | 0.00                         | 0.00                        |  |
| 10,800.0                    | 90.00              | 179.71         | 9,428.0                     | -906.0          | 511.6           | 933.7                         | 0.00                          | 0.00                         | 0.00                        |  |
| 10,900.0                    | 90.00              | 179.71         | 9,428.0                     | -1,006.0        | 512.1           | 1,033.6                       | 0.00                          | 0.00                         | 0.00                        |  |
| 11,000.0                    | 90.00              | 179.71         | 9,428.0                     | -1,106.0        | 512.6           | 1,133.4                       | 0.00                          | 0.00                         | 0.00                        |  |
| 11,100.0                    | 90.00              | 179.71         | 9,428.0                     | -1,206.0        | 513.2           | 1,233.3                       | 0.00                          | 0.00                         | 0.00                        |  |
| 11,200.0                    | 90.00              | 179.71         | 9,428.0                     | -1,306.0        | 513.7           | 1,333.2                       | 0.00                          | 0.00                         | 0.00                        |  |
| 11,300.0                    | 90.00              | 179.71         | 9,428.0                     | -1,406.0        | 514.2           | 1,433.0                       | 0.00                          | 0.00                         | 0.00                        |  |
| 11,400.0                    | 90.00              | 179.71         | 9,428.0                     | -1,506.0        | 514.7           | 1,532.9                       | 0.00                          | 0.00                         | 0.00                        |  |
| 11,500.0                    | 90.00              | 179.71         | 9,428.0                     | -1,606.0        | 515.2           | 1,632.8                       | 0.00                          | 0.00                         | 0.00                        |  |
| 11,600.0                    | 90.00              | 179.71         | 9,428.0                     | -1,706.0        | 515.7           | 1,732.6                       | 0.00                          | 0.00                         | 0.00                        |  |
| 11,700.0                    | 90.00              | 179.71         | 9,428.0                     | -1,806.0        | 516.2           | 1,832.5                       | 0.00                          | 0.00                         | 0.00                        |  |
| 11,800.0                    | 90.00              | 179.71         | 9,428.0                     | -1,906.0        | 516.7           | 1,932.4                       | 0.00                          | 0.00                         | 0.00                        |  |
| 11,900.0                    | 90.00              | 179.71         | 9,428.0                     | -2,006.0        | 517.2           | 2,032.2                       | 0.00                          | 0.00                         | 0.00                        |  |
| 12,000.0                    | 90.00              | 179.71         | 9,428.0                     | -2,106.0        | 517.8           | 2,132.1                       | 0.00                          | 0.00                         | 0.00                        |  |
| 12,100.0                    | 90.00              | 179.71         | 9,428.0                     | -2,206.0        | 518.3           | 2,232.0                       | 0.00                          | 0.00                         | 0.00                        |  |
| 12,200.0                    | 90.00              | 179.71         | 9,428.0                     | -2,306.0        | 518.8           | 2,331.8                       | 0.00                          | 0.00                         | 0.00                        |  |
| 12,300.0                    | 90.00              | 179.71         | 9,428.0                     | -2,406.0        | 519.3           | 2,431.7                       | 0.00                          | 0.00                         | 0.00                        |  |
| 12,400.0                    | 90.00              | 179.71         | 9,428.0                     | -2,506.0        | 519.8           | 2,531.6                       | 0.00                          | 0.00                         | 0.00                        |  |
| 12,500.0                    | 90.00              | 179.71         | 9,428.0                     | -2,606.0        | 520.3           | 2,631.4                       | 0.00                          | 0.00                         | 0.00                        |  |
| 12,600.0                    | 90.00              | 179.71         | 9,428.0                     | -2,706.0        | 520.8           | 2,731.3                       | 0.00                          | 0.00                         | 0.00                        |  |
| 12,700.0                    | 90.00              | 179.71         | 9,428.0                     | -2,806.0        | 521.3           | 2,831.1                       | 0.00                          | 0.00                         | 0.00                        |  |

## EOG Resources

## Planning Report



|                  |                              |                                    |                      |
|------------------|------------------------------|------------------------------------|----------------------|
| <b>Database:</b> | EDM 5000.14                  | <b>Local Co-ordinate Reference</b> | Well #729H           |
| <b>Company:</b>  | EOG Resources - Midland      | <b>TVD Reference:</b>              | KB = 25 @ 3101.0usft |
| <b>Project:</b>  | Eddy County, NM (NAD 83 NME) | <b>MD Reference:</b>               | KB = 25 @ 3101.0usft |
| <b>Site:</b>     | Sherpa 12 State Com          | <b>North Reference:</b>            | Grid                 |
| <b>Well:</b>     | #729H                        | <b>Survey Calculation Method:</b>  | Minimum Curvature    |
| <b>Wellbore:</b> | OH                           |                                    |                      |
| <b>Design:</b>   | Plan #0.1                    |                                    |                      |

| Planned Survey              |                    |                |                             |                 |                 |                               |                               |                              |                             |  |
|-----------------------------|--------------------|----------------|-----------------------------|-----------------|-----------------|-------------------------------|-------------------------------|------------------------------|-----------------------------|--|
| Measured<br>Depth<br>(usft) | Inclination<br>(°) | Azimuth<br>(°) | Vertical<br>Depth<br>(usft) | +N/-S<br>(usft) | +E/-W<br>(usft) | Vertical<br>Section<br>(usft) | Dogleg<br>Rate<br>(°/100usft) | Build<br>Rate<br>(°/100usft) | Turn<br>Rate<br>(°/100usft) |  |
| 12,800.0                    | 90.00              | 179.71         | 9,428.0                     | -2,906.0        | 521.9           | 2,931.0                       | 0.00                          | 0.00                         | 0.00                        |  |
| 12,900.0                    | 90.00              | 179.71         | 9,428.0                     | -3,006.0        | 522.4           | 3,030.9                       | 0.00                          | 0.00                         | 0.00                        |  |
| 13,000.0                    | 90.00              | 179.71         | 9,428.0                     | -3,106.0        | 522.9           | 3,130.7                       | 0.00                          | 0.00                         | 0.00                        |  |
| 13,100.0                    | 90.00              | 179.71         | 9,428.0                     | -3,206.0        | 523.4           | 3,230.6                       | 0.00                          | 0.00                         | 0.00                        |  |
| 13,200.0                    | 90.00              | 179.71         | 9,428.0                     | -3,306.0        | 523.9           | 3,330.5                       | 0.00                          | 0.00                         | 0.00                        |  |
| 13,300.0                    | 90.00              | 179.71         | 9,428.0                     | -3,406.0        | 524.4           | 3,430.3                       | 0.00                          | 0.00                         | 0.00                        |  |
| 13,400.0                    | 90.00              | 179.71         | 9,428.0                     | -3,506.0        | 524.9           | 3,530.2                       | 0.00                          | 0.00                         | 0.00                        |  |
| 13,500.0                    | 90.00              | 179.71         | 9,428.0                     | -3,606.0        | 525.4           | 3,630.1                       | 0.00                          | 0.00                         | 0.00                        |  |
| 13,600.0                    | 90.00              | 179.71         | 9,428.0                     | -3,706.0        | 526.0           | 3,729.9                       | 0.00                          | 0.00                         | 0.00                        |  |
| 13,700.0                    | 90.00              | 179.71         | 9,428.0                     | -3,806.0        | 526.5           | 3,829.8                       | 0.00                          | 0.00                         | 0.00                        |  |
| 13,800.0                    | 90.00              | 179.71         | 9,428.0                     | -3,906.0        | 527.0           | 3,929.7                       | 0.00                          | 0.00                         | 0.00                        |  |
| 13,900.0                    | 90.00              | 179.71         | 9,428.0                     | -4,006.0        | 527.5           | 4,029.5                       | 0.00                          | 0.00                         | 0.00                        |  |
| 14,000.0                    | 90.00              | 179.71         | 9,428.0                     | -4,106.0        | 528.0           | 4,129.4                       | 0.00                          | 0.00                         | 0.00                        |  |
| 14,100.0                    | 90.00              | 179.71         | 9,428.0                     | -4,206.0        | 528.5           | 4,229.3                       | 0.00                          | 0.00                         | 0.00                        |  |
| 14,200.0                    | 90.00              | 179.71         | 9,428.0                     | -4,306.0        | 529.0           | 4,329.1                       | 0.00                          | 0.00                         | 0.00                        |  |
| 14,300.0                    | 90.00              | 179.71         | 9,428.0                     | -4,406.0        | 529.5           | 4,429.0                       | 0.00                          | 0.00                         | 0.00                        |  |
| 14,400.0                    | 90.00              | 179.71         | 9,428.0                     | -4,506.0        | 530.0           | 4,528.9                       | 0.00                          | 0.00                         | 0.00                        |  |
| 14,500.0                    | 90.00              | 179.71         | 9,428.0                     | -4,606.0        | 530.6           | 4,628.7                       | 0.00                          | 0.00                         | 0.00                        |  |
| 14,600.0                    | 90.00              | 179.71         | 9,428.0                     | -4,706.0        | 531.1           | 4,728.6                       | 0.00                          | 0.00                         | 0.00                        |  |
| 14,700.0                    | 90.00              | 179.71         | 9,428.0                     | -4,806.0        | 531.6           | 4,828.5                       | 0.00                          | 0.00                         | 0.00                        |  |
| 14,800.0                    | 90.00              | 179.71         | 9,428.0                     | -4,906.0        | 532.1           | 4,928.3                       | 0.00                          | 0.00                         | 0.00                        |  |
| 14,900.0                    | 90.00              | 179.71         | 9,428.0                     | -5,006.0        | 532.6           | 5,028.2                       | 0.00                          | 0.00                         | 0.00                        |  |
| 15,000.0                    | 90.00              | 179.71         | 9,428.0                     | -5,106.0        | 533.1           | 5,128.1                       | 0.00                          | 0.00                         | 0.00                        |  |
| 15,100.0                    | 90.00              | 179.71         | 9,428.0                     | -5,206.0        | 533.6           | 5,227.9                       | 0.00                          | 0.00                         | 0.00                        |  |
| 15,200.0                    | 90.00              | 179.71         | 9,428.0                     | -5,306.0        | 534.1           | 5,327.8                       | 0.00                          | 0.00                         | 0.00                        |  |
| 15,300.0                    | 90.00              | 179.71         | 9,428.0                     | -5,406.0        | 534.7           | 5,427.7                       | 0.00                          | 0.00                         | 0.00                        |  |
| 15,400.0                    | 90.00              | 179.71         | 9,428.0                     | -5,506.0        | 535.2           | 5,527.5                       | 0.00                          | 0.00                         | 0.00                        |  |
| 15,500.0                    | 90.00              | 179.71         | 9,428.0                     | -5,606.0        | 535.7           | 5,627.4                       | 0.00                          | 0.00                         | 0.00                        |  |
| 15,600.0                    | 90.00              | 179.71         | 9,428.0                     | -5,706.0        | 536.2           | 5,727.3                       | 0.00                          | 0.00                         | 0.00                        |  |
| 15,700.0                    | 90.00              | 179.71         | 9,428.0                     | -5,806.0        | 536.7           | 5,827.1                       | 0.00                          | 0.00                         | 0.00                        |  |
| 15,800.0                    | 90.00              | 179.71         | 9,428.0                     | -5,906.0        | 537.2           | 5,927.0                       | 0.00                          | 0.00                         | 0.00                        |  |
| 15,900.0                    | 90.00              | 179.71         | 9,428.0                     | -6,006.0        | 537.7           | 6,026.9                       | 0.00                          | 0.00                         | 0.00                        |  |
| 16,000.0                    | 90.00              | 179.71         | 9,428.0                     | -6,106.0        | 538.2           | 6,126.7                       | 0.00                          | 0.00                         | 0.00                        |  |
| 16,100.0                    | 90.00              | 179.71         | 9,428.0                     | -6,206.0        | 538.8           | 6,226.6                       | 0.00                          | 0.00                         | 0.00                        |  |
| 16,200.0                    | 90.00              | 179.71         | 9,428.0                     | -6,306.0        | 539.3           | 6,326.4                       | 0.00                          | 0.00                         | 0.00                        |  |
| 16,300.0                    | 90.00              | 179.71         | 9,428.0                     | -6,406.0        | 539.8           | 6,426.3                       | 0.00                          | 0.00                         | 0.00                        |  |
| 16,400.0                    | 90.00              | 179.71         | 9,428.0                     | -6,506.0        | 540.3           | 6,526.2                       | 0.00                          | 0.00                         | 0.00                        |  |
| 16,500.0                    | 90.00              | 179.71         | 9,428.0                     | -6,606.0        | 540.8           | 6,626.0                       | 0.00                          | 0.00                         | 0.00                        |  |
| 16,600.0                    | 90.00              | 179.71         | 9,428.0                     | -6,706.0        | 541.3           | 6,725.9                       | 0.00                          | 0.00                         | 0.00                        |  |
| 16,700.0                    | 90.00              | 179.71         | 9,428.0                     | -6,806.0        | 541.8           | 6,825.8                       | 0.00                          | 0.00                         | 0.00                        |  |
| 16,800.0                    | 90.00              | 179.71         | 9,428.0                     | -6,906.0        | 542.3           | 6,925.6                       | 0.00                          | 0.00                         | 0.00                        |  |
| 16,900.0                    | 90.00              | 179.71         | 9,428.0                     | -7,006.0        | 542.8           | 7,025.5                       | 0.00                          | 0.00                         | 0.00                        |  |
| 17,000.0                    | 90.00              | 179.71         | 9,428.0                     | -7,106.0        | 543.4           | 7,125.4                       | 0.00                          | 0.00                         | 0.00                        |  |
| 17,100.0                    | 90.00              | 179.71         | 9,428.0                     | -7,206.0        | 543.9           | 7,225.2                       | 0.00                          | 0.00                         | 0.00                        |  |
| 17,200.0                    | 90.00              | 179.71         | 9,428.0                     | -7,306.0        | 544.4           | 7,325.1                       | 0.00                          | 0.00                         | 0.00                        |  |
| 17,300.0                    | 90.00              | 179.71         | 9,428.0                     | -7,406.0        | 544.9           | 7,425.0                       | 0.00                          | 0.00                         | 0.00                        |  |
| 17,400.0                    | 90.00              | 179.71         | 9,428.0                     | -7,506.0        | 545.4           | 7,524.8                       | 0.00                          | 0.00                         | 0.00                        |  |
| 17,500.0                    | 90.00              | 179.71         | 9,428.0                     | -7,606.0        | 545.9           | 7,624.7                       | 0.00                          | 0.00                         | 0.00                        |  |
| 17,600.0                    | 90.00              | 179.71         | 9,428.0                     | -7,706.0        | 546.4           | 7,724.6                       | 0.00                          | 0.00                         | 0.00                        |  |
| 17,700.0                    | 90.00              | 179.71         | 9,428.0                     | -7,806.0        | 546.9           | 7,824.4                       | 0.00                          | 0.00                         | 0.00                        |  |
| 17,800.0                    | 90.00              | 179.71         | 9,428.0                     | -7,906.0        | 547.5           | 7,924.3                       | 0.00                          | 0.00                         | 0.00                        |  |
| 17,900.0                    | 90.00              | 179.71         | 9,428.0                     | -8,006.0        | 548.0           | 8,024.2                       | 0.00                          | 0.00                         | 0.00                        |  |
| 18,000.0                    | 90.00              | 179.71         | 9,428.0                     | -8,106.0        | 548.5           | 8,124.0                       | 0.00                          | 0.00                         | 0.00                        |  |





## EOG Resources

## Planning Report

|                  |                              |                                    |                      |
|------------------|------------------------------|------------------------------------|----------------------|
| <b>Database:</b> | EDM 5000.14                  | <b>Local Co-ordinate Reference</b> | Well #729H           |
| <b>Company:</b>  | EOG Resources - Midland      | <b>TVD Reference:</b>              | KB = 25 @ 3101.0usft |
| <b>Project:</b>  | Eddy County, NM (NAD 83 NME) | <b>MD Reference:</b>               | KB = 25 @ 3101.0usft |
| <b>Site:</b>     | Sherpa 12 State Com          | <b>North Reference:</b>            | Grid                 |
| <b>Well:</b>     | #729H                        | <b>Survey Calculation Method:</b>  | Minimum Curvature    |
| <b>Wellbore:</b> | OH                           |                                    |                      |
| <b>Design:</b>   | Plan #0.1                    |                                    |                      |

| Planned Survey              |                    |                |                             |                 |                 |                               |                               |                              |                             |  |
|-----------------------------|--------------------|----------------|-----------------------------|-----------------|-----------------|-------------------------------|-------------------------------|------------------------------|-----------------------------|--|
| Measured<br>Depth<br>(usft) | Inclination<br>(°) | Azimuth<br>(°) | Vertical<br>Depth<br>(usft) | +N/-S<br>(usft) | +E/-W<br>(usft) | Vertical<br>Section<br>(usft) | Dogleg<br>Rate<br>(°/100usft) | Build<br>Rate<br>(°/100usft) | Turn<br>Rate<br>(°/100usft) |  |
| 18,100.0                    | 90.00              | 179.71         | 9,428.0                     | -8,206.0        | 549.0           | 8,223.9                       | 0.00                          | 0.00                         | 0.00                        |  |
| 18,200.0                    | 90.00              | 179.71         | 9,428.0                     | -8,306.0        | 549.5           | 8,323.8                       | 0.00                          | 0.00                         | 0.00                        |  |
| 18,300.0                    | 90.00              | 179.71         | 9,428.0                     | -8,405.9        | 550.0           | 8,423.6                       | 0.00                          | 0.00                         | 0.00                        |  |
| 18,400.0                    | 90.00              | 179.71         | 9,428.0                     | -8,505.9        | 550.5           | 8,523.5                       | 0.00                          | 0.00                         | 0.00                        |  |
| 18,500.0                    | 90.00              | 179.71         | 9,428.0                     | -8,605.9        | 551.0           | 8,623.4                       | 0.00                          | 0.00                         | 0.00                        |  |
| 18,600.0                    | 90.00              | 179.71         | 9,428.0                     | -8,705.9        | 551.6           | 8,723.2                       | 0.00                          | 0.00                         | 0.00                        |  |
| 18,700.0                    | 90.00              | 179.71         | 9,428.0                     | -8,805.9        | 552.1           | 8,823.1                       | 0.00                          | 0.00                         | 0.00                        |  |
| 18,800.0                    | 90.00              | 179.71         | 9,428.0                     | -8,905.9        | 552.6           | 8,923.0                       | 0.00                          | 0.00                         | 0.00                        |  |
| 18,900.0                    | 90.00              | 179.71         | 9,428.0                     | -9,005.9        | 553.1           | 9,022.8                       | 0.00                          | 0.00                         | 0.00                        |  |
| 19,000.0                    | 90.00              | 179.71         | 9,428.0                     | -9,105.9        | 553.6           | 9,122.7                       | 0.00                          | 0.00                         | 0.00                        |  |
| 19,100.0                    | 90.00              | 179.71         | 9,428.0                     | -9,205.9        | 554.1           | 9,222.6                       | 0.00                          | 0.00                         | 0.00                        |  |
| 19,200.0                    | 90.00              | 179.71         | 9,428.0                     | -9,305.9        | 554.6           | 9,322.4                       | 0.00                          | 0.00                         | 0.00                        |  |
| 19,300.0                    | 90.00              | 179.71         | 9,428.0                     | -9,405.9        | 555.1           | 9,422.3                       | 0.00                          | 0.00                         | 0.00                        |  |
| 19,400.0                    | 90.00              | 179.71         | 9,428.0                     | -9,505.9        | 555.6           | 9,522.2                       | 0.00                          | 0.00                         | 0.00                        |  |
| 19,500.0                    | 90.00              | 179.71         | 9,428.0                     | -9,605.9        | 556.2           | 9,622.0                       | 0.00                          | 0.00                         | 0.00                        |  |
| 19,600.0                    | 90.00              | 179.71         | 9,428.0                     | -9,705.9        | 556.7           | 9,721.9                       | 0.00                          | 0.00                         | 0.00                        |  |
| 19,664.1                    | 90.00              | 179.71         | 9,428.0                     | -9,770.0        | 557.0           | 9,785.9                       | 0.00                          | 0.00                         | 0.00                        |  |
| PBHL(sherpa 12 SC #729H)    |                    |                |                             |                 |                 |                               |                               |                              |                             |  |

| Design Targets                                                                                                                |                  |                 |               |                 |                 |                    |                   |                 |                  |
|-------------------------------------------------------------------------------------------------------------------------------|------------------|-----------------|---------------|-----------------|-----------------|--------------------|-------------------|-----------------|------------------|
| Target Name                                                                                                                   | Dip Angle<br>(°) | Dip Dir.<br>(°) | TVD<br>(usft) | +N/-S<br>(usft) | +E/-W<br>(usft) | Northing<br>(usft) | Easting<br>(usft) | Latitude        | Longitude        |
| KOP(sherpa 12 SC #729H)<br>- plan hits target center<br>- Point                                                               | 0.00             | 0.00            | 8,950.5       | 581.0           | 504.0           | 419,016.00         | 601,769.00        | 32° 9' 6.490 N  | 104° 8' 17.028 W |
| FTP(sherpa 12 SC #729H)<br>- plan misses target center by 39.7usft at 9601.5usft MD (9391.1 TVD, 287.6 N, 505.5 E)<br>- Point | 0.00             | 0.00            | 9,428.0       | 302.0           | 504.0           | 418,737.00         | 601,769.00        | 32° 9' 3.729 N  | 104° 8' 17.034 W |
| PBHL(sherpa 12 SC #729H)<br>- plan hits target center<br>- Point                                                              | 0.00             | 0.00            | 9,428.0       | -9,770.0        | 557.0           | 408,665.00         | 601,822.00        | 32° 7' 24.054 N | 104° 8' 16.630 W |

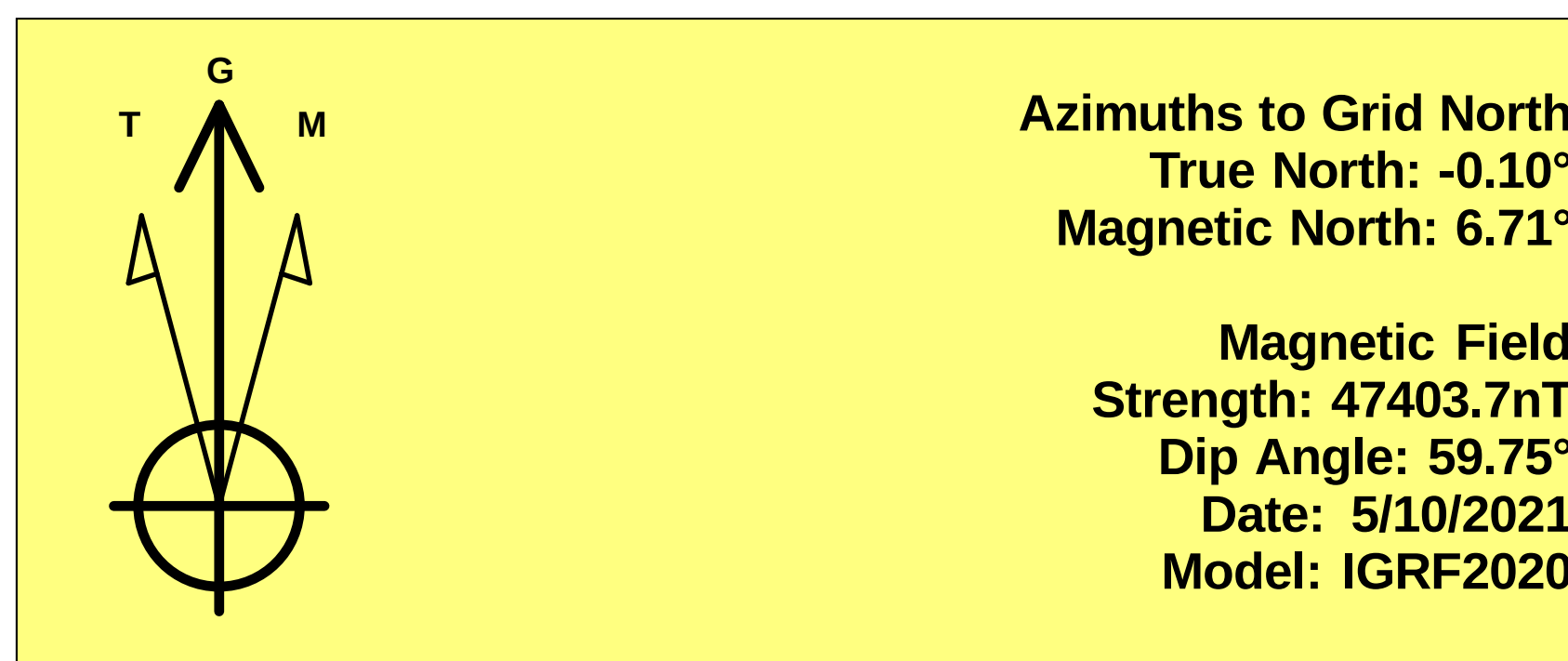




Eddy County, NM (NAD 83 NME)

Sherpa 12 State Com #729H

Plan #0.1



To convert a Magnetic Direction to a Grid Direction, Add 6.71°  
To convert a Magnetic Direction to a True Direction, Add 6.81° East  
To convert a True Direction to a Grid Direction, Subtract 0.10°

PROJECT DETAILS: Eddy County, NM (NAD 83 NME)

Geodetic System: US State Plane 1983  
Datum: North American Datum 1983  
Ellipsoid: GRS 1980  
Zone: New Mexico Eastern Zone  
System Datum: Mean Sea Level

WELL DETAILS: #729H

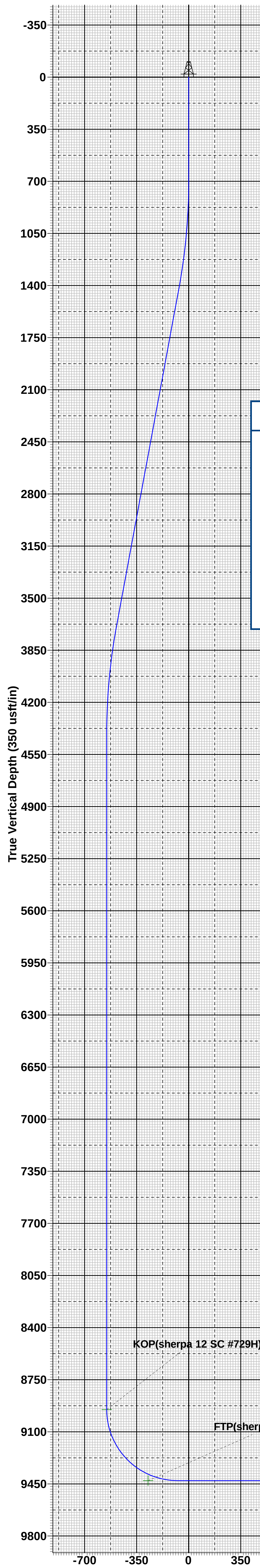
KB = 25 @ 3101.0usft 3076.0  
Northing 418435.00 Easting 601265.00 Latitude 32° 9' 0.749 N Longitude 104° 8' 22.903 W

SECTION DETAILS

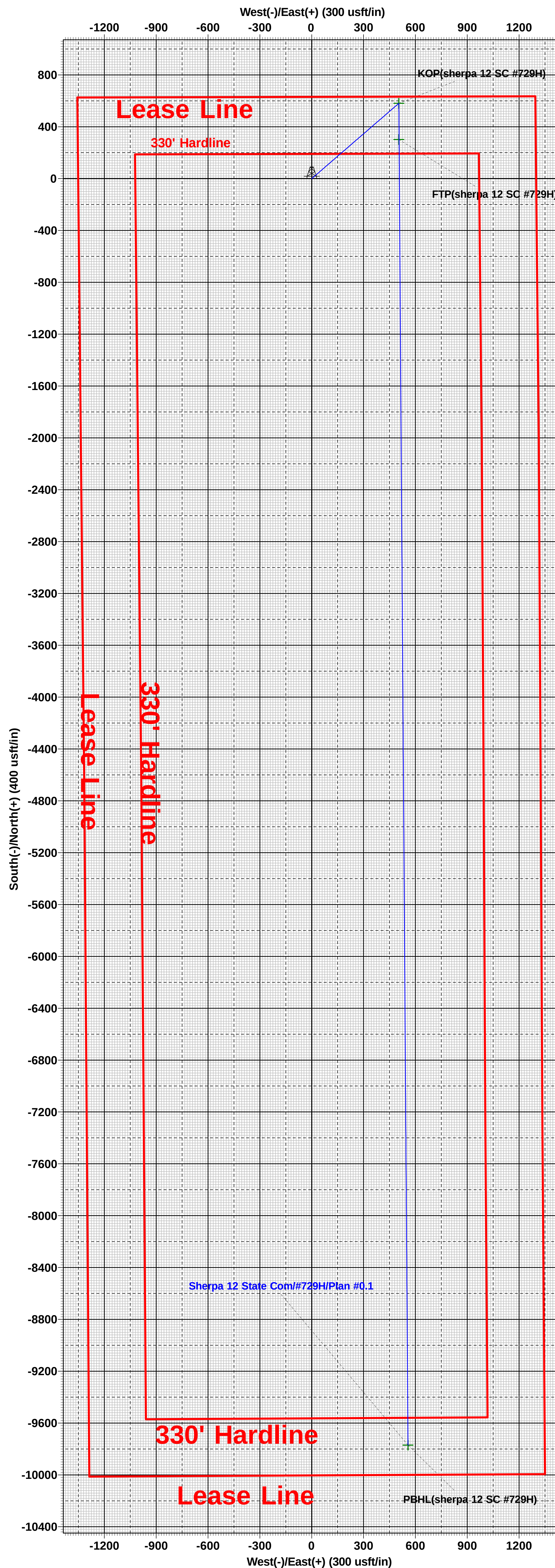
| Sec | MD      | Inc   | Azi    | TVD    | +N/-S   | +E/-W | Dleg  | TFace  | VSect  | Target                   |
|-----|---------|-------|--------|--------|---------|-------|-------|--------|--------|--------------------------|
| 1   | 0.0     | 0.00  | 0.00   | 0.0    | 0.0     | 0.0   | 0.00  | 0.00   | 0.0    |                          |
| 2   | 700.0   | 0.00  | 0.00   | 700.0  | 0.0     | 0.0   | 0.00  | 0.00   | 0.0    |                          |
| 3   | 1423.5  | 14.47 | 40.94  | 1415.8 | 68.6    | 59.5  | 2.00  | 40.94  | -65.1  |                          |
| 4   | 3774.4  | 14.47 | 40.94  | 3692.2 | 512.4   | 444.5 | 0.00  | 0.00   | -486.2 |                          |
| 5   | 4497.9  | 0.00  | 0.00   | 4408.0 | 581.0   | 504.0 | 2.00  | 180.00 | -551.4 |                          |
| 6   | 9040.4  | 0.00  | 0.00   | 8950.5 | 581.0   | 504.0 | 0.00  | 0.00   | -551.4 | KOP(sherpa 12 SC #729H)  |
| 7   | 9790.4  | 90.00 | 179.71 | 9428.0 | 103.5   | 506.4 | 12.00 | 179.71 | -74.5  |                          |
| 8   | 19664.1 | 90.00 | 179.71 | 9428.0 | -9770.0 | 557.0 | 0.00  | 0.00   | 9785.9 | PBHL(sherpa 12 SC #729H) |

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

| Name                     | TVD    | +N/-S   | +E/-W | Northing  | Easting   |
|--------------------------|--------|---------|-------|-----------|-----------|
| KOP(sherpa 12 SC #729H)  | 8950.5 | 581.0   | 504.0 | 419016.00 | 601769.00 |
| FTP(sherpa 12 SC #729H)  | 9428.0 | 302.0   | 504.0 | 418737.00 | 601769.00 |
| PBHL(sherpa 12 SC #729H) | 9428.0 | -9770.0 | 557.0 | 408665.00 | 601822.00 |



Vertical Section at 176.74° (350 usft/in)





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:** EOG Resources, Inc. **OGRID:** 7377 **Date:** 06/ 28 /2021

**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 |
|--------------------------|-----|--------------|----------------------|-----------------------|-----------------------|----------------------------------|
| SHERPA 12 STATE COM 729H |     | A-12-25S-27E | 631' FNL & 1298' FEL | +/- 1000              | +/- 3500              | +/- 3000                         |
|                          |     |              |                      |                       |                       |                                  |

**IV. Central Delivery Point Name:** Magnolia 15 Fed Com CTB [See 19.15.27.9(D)(1) NMAC]

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

| Well Name                | API | Spud Date | TD Reached Date | Completion Commencement Date | Initial Flow Back Date | First Production Date |
|--------------------------|-----|-----------|-----------------|------------------------------|------------------------|-----------------------|
| SHERPA 12 STATE COM 729H |     | 10/10/21  | 11/7/21         | 1/7/22                       | 2/7/22                 | 3/7/22                |
|                          |     |           |                 |                              |                        |                       |

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

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

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

## **Section 2 – Enhanced Plan**

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

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

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

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

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

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

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

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

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

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

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

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

### **Section 3 - Certifications**

**Effective May 25, 2021**

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

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

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

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

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

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

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

### **Section 4 - Notices**

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

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

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

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

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

|                                                                                                  |
|--------------------------------------------------------------------------------------------------|
| Signature: <i>Craig RICHARDSON</i>                                                               |
| Printed Name: Craig Richardson                                                                   |
| Title: Regulatory Specialist                                                                     |
| E-mail Address: craig_richardson@eogresources.com                                                |
| Date: 6/28/2021                                                                                  |
| Phone: (432) 848-6677                                                                            |
| <b>OIL CONSERVATION DIVISION</b><br><b>(Only applicable when submitted as a standalone form)</b> |
| Approved By:                                                                                     |
| Title:                                                                                           |
| Approval Date:                                                                                   |
| Conditions of Approval:                                                                          |

**Natural Gas Management Plan****Items VI-VIII****VI. Separation Equipment: Attach a complete description of how Operator will size separation equipment to optimize gas capture.**

- Separation equipment will be sized to provide adequate separation for anticipated rates.
- Adequate separation relates to retention time for Liquid – Liquid separation and velocity for Gas-Liquid separation.
- Collection systems are appropriately sized to handle facility production rates on all (3) phases.
- Ancillary equipment and metering is selected to be serviced without flow interruptions or the need to release gas from the well.

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

- All flare stacks will be properly sized. The flare stacks will be located at a minimum 100' from the nearest surface hole location on the pad.
- All natural gas produced during drilling operations will be flared, unless there is an equipment malfunction and/or to avoid risk of an immediate and substantial adverse impact on safety and the environment, at which point the gas will be vented.

**Completions/Recompletions Operations**

- New wells will not be flowed back until they are connected to a properly sized gathering system.
- The facility will be built/sized for maximum anticipated flowrates and pressures to minimize waste.
- For flowback operations, multiple stages of separation will be used as well as excess VRU and blowers to make sure waste is minimized off the storage tanks and facility.
- During initial flowback, the well stream will be routed to separation equipment.
- At an existing facility, when necessary, post separation natural gas will be flared until it meets pipeline specifications, at which point it will be turned into a collection system.
- At a new facility, post separation natural gas will be vented until storage tanks can safely function, at which point it will be flared until it meets pipeline spec.

**Production Operations**

- Weekly AVOs will be performed on all facilities.
- All flares will be equipped with auto-ignition systems and continuous pilot operations.
- After a well is stabilized from liquid unloading, the well will be turned back into the collection system.
- All plunger lift systems will be optimized to limit the amount of waste.
- All tanks will have automatic gauging equipment installed.
- Leaking thief hatches found during AVOs will be cleaned and properly re-sealed.

**Performance Standards**

- Production equipment will be designed to handle maximum anticipated rates and pressure.
- All flared gas will be combusted in a flare stack that is properly sized and designed to ensure proper combustion.
- Weekly AVOs will be performed on all wells and facilities that produce more than 60 Mcfd.

**Measurement & Estimation**

- All volume that is flared and vented that is not measured will be estimated.
- All measurement equipment for flared volumes will conform to API 14.10.
- No meter bypasses will be installed.



- When metering is not practical due to low pressure/low rate, the vented or flared volume will be estimated.

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

- During downhole well maintenance, EOG will use best management practices to vent as minimally as possible.
- Prior to the commencement of any maintenance, the tank or vessel will be isolated from the rest of the facilities.
- All valves upstream of the equipment will be closed and isolated.
- After equipment has been isolated, the equipment will be blown down to as low a pressure as possible into the collection system.
- If the equipment being maintained cannot be relieved into the collection system, it shall be released to a tank where the vapor can either be captured or combusted if possible.
- After downhole well maintenance, natural gas will be flared until it reaches pipeline specification.