

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENTFORM APPROVED  
OMB NO. 1004-0137  
Expires July 31, 2010

12-82

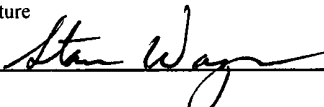
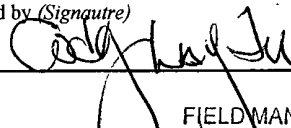
## APPLICATION FOR PERMIT TO DRILL OR REENTER

|                                                                                                                                                                                                                   |                                                          |                                                                               |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|-------------------------------------------------------------------------------|
| 1a. Type of Work<br><input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER                                                                                                                    |                                                          | 5. Lease Serial No.<br><b>NNM12412</b>                                        |
| 1b. Type of Well<br><input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other <input type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone     |                                                          | 6. If Indian, Allottee or Tribe Name                                          |
| 2. Name of Operator<br><b>EOG Resources Inc.</b>                                                                                                                                                                  |                                                          | 7. Unit or CA Agreement Name and No.                                          |
| 3a. Address<br><b>P.O. Box 2267 Midland, Texas 79702</b>                                                                                                                                                          | 3b. Phone No. (include area code)<br><b>432-686-3689</b> | 8. Lease Name and Well No.<br><b>Lusk 22 Federal 4H</b>                       |
| 4. Location of Well (Report location clearly and in accordance with any State requirements)*<br>At surface <b>1980' FSL &amp; 330' FEL, U/L I</b><br>At proposed prod zone <b>1980' FSL &amp; 330' FWL, U/L L</b> |                                                          | 9. API Well No.<br><b>30-025- 40614</b>                                       |
| 14. Distance in miles and direction from nearest town or post office*<br><b>+/- 20 miles Southeast from Maljamar NM</b>                                                                                           |                                                          | 10. Field and Pool, or Exploratory<br><b>Lusk, Bone Spring, East</b>          |
| 15. Distance from proposed* location to nearest property or lease line, ft.<br>(Also to nearest drg. unit line, if any) <b>330'</b>                                                                               |                                                          | 11. Sec., T., R., M., or Blk. and Survey or Area<br><b>Sec 22, T19S, R32E</b> |
| 16. No. of Acres in lease<br><b>2320</b>                                                                                                                                                                          |                                                          | 12. County or Parish<br><b>Lea</b>                                            |
| 17. Spacing Unit dedicated to this well<br><b>N/2 of S/2 Sec 22</b>                                                                                                                                               |                                                          | 13. State<br><b>NM</b>                                                        |
| 18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.<br><b>1320' to Lusk 22-3H</b>                                                                          |                                                          | 20. BLM/BIA Bond No. on file<br><b>NM 2308</b>                                |
| 19. Proposed Depth<br><b>13974 MD - 9550 TVD</b>                                                                                                                                                                  |                                                          | 21. Elevations (Show whether DF, KDB, RT, GL, etc.)<br><b>3601' GL</b>        |
| 22. Approximate date work will start*<br><b>2/1/2011</b>                                                                                                                                                          |                                                          | 23. Estimated duration<br><b>25 days</b>                                      |

## 24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, must be attached to this form:

- |                                                                                                                                                |                                                                                                 |
|------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|
| 1. Well plat certified by a registered surveyor.                                                                                               | 4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above). |
| 2. A Drilling Plan.                                                                                                                            | 5. Operator certification.                                                                      |
| 3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office). | 6. Such other site specific information and/or plans as may be required by the BLM              |

|                                                                                                                |                                              |                             |
|----------------------------------------------------------------------------------------------------------------|----------------------------------------------|-----------------------------|
| 25. Signature<br>           | Name (Printed/Typed)<br><b>Stan Wagner</b>   | Date<br><b>10/20/2011</b>   |
| Title<br><b>Regulatory Analyst</b>                                                                             |                                              |                             |
| Approved by (Signature)<br> | Name (Printed/Typed)<br><b>FIELD MANAGER</b> | Date<br><b>JUN - 5 2012</b> |
| Title<br><b>FIELD MANAGER</b>                                                                                  |                                              |                             |
| Office<br><b>CARLSBAD FIELD OFFICE</b>                                                                         |                                              |                             |

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.  
Conditions of approval, if any, are attached

APPROVAL FOR TWO YEARS

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Continued on page 2)

Capitan Controlled Water Basin

Approval Subject to General Requirements  
& Special Stipulations AttachedK2  
06/12/12SEE ATTACHED FOR  
CONDITIONS OF APPROVAL

JUN 13 2012

**EOG RESOURCES, INC.**  
**LUSK 22 FEDERAL NO. 4H**

**1. GEOLOGIC NAME OF SURFACE FORMATION:**

Permian

**2. ESTIMATED TOPS OF IMPORTANT GEOLOGICAL MARKERS:**

|                      |        |
|----------------------|--------|
| Rustler              | 990'   |
| Top of Salt          | 1,070' |
| Base of Salt         | 2,610' |
| Yates                | 2,780' |
| Seven Rivers         | 3,125' |
| Capitan              | 3,225' |
| Queen                | 3,960' |
| Base Capitan         | 4,720' |
| Cherry Canyon        | 5,080' |
| Brushy Canyon        | 5,820' |
| Bone Spring 1 Carb   | 7,495' |
| Bone Spring Sand 1   | 8,565' |
| Bone Spring 2 Carb   | 8,870' |
| Bone Spring 2 Sand   | 9,330' |
| Bone Spring 2 F Sand | 9,500' |
| TD                   | 9,550' |

**3. ESTIMATED DEPTHS OF ANTICIPATED FRESH WATER, OIL OR GAS:**

|                      |         |             |
|----------------------|---------|-------------|
| Upper Permian Sands  | 0- 400' | Fresh Water |
| Brushy Canyon        | 5,820'  | Oil         |
| Bone Spring 2 F Sand | 9,500'  | Oil         |

No other Formations are expected to give up oil, gas or fresh water in measurable quantities. Surface fresh water sands will be protected by setting 11.75" casing at ~~1020'~~ and circulating cement back to surface.

**4. CASING PROGRAM - NEW**

See 107

| Hole Size | Interval                   | Csg OD  | Weight | Grade          | Conn | DF <sub>min</sub> Collapse | DF <sub>min</sub> Burst | DF <sub>min</sub> Tension |
|-----------|----------------------------|---------|--------|----------------|------|----------------------------|-------------------------|---------------------------|
| 14.75"    | 0 - <del>1020'</del> 1065' | 11.750" | 42#    | H40            | STC  | 1.125                      | 1.25                    | 1.60                      |
| 11.00"    | 0 - 4000'                  | 8.625"  | 32#    | J55            | LTC  | 1.125                      | 1.25                    | 1.60                      |
| 11.00"    | 4000' - 4900'              | 8.625"  | 32#    | HCK55          | LTC  | 1.125                      | 1.25                    | 1.60                      |
| 7.875"    | 0' - 13,974'               | 5.5"    | 17#    | P110 or HCP110 | LTC  | 1.125                      | 1.25                    | 1.60                      |

**EOG RESOURCES, INC.  
LUSK 22 FEDERAL NO. 4H**

**Cementing Program:**

| Depth                           | No. Sacks | Wt. lb/gal | Yld Ft <sup>3</sup> /ft | Slurry Description                                                                                                                                                                        |
|---------------------------------|-----------|------------|-------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <del>1020</del> '               | 200       | 13.5       | 1.73                    | Lead: Class C + 4.0% Bentonite + 0.6% CD-32 + 0.5% CaCl <sub>2</sub> + 0.25 lb/sk Cello-Flake (TOC @ surface)                                                                             |
|                                 | 250       | 14.8       | 1.34                    | Tail: Class C + 0.6% FL-62 + 0.25 lb/sk Cello-Flake + 0.2% Sodium Metasilicate                                                                                                            |
| 4,900'<br>Stage Tool<br>@ 3100' | 150       | 12.7       | 2.22                    | 1 <sup>st</sup> Stage Lead: Class 'C' + 2.00% SMS + 10.00% Salt + 1.10% R-3 + 0.005 pps Static Free + 0.25 pps Cello Flake                                                                |
|                                 | 200       | 14.8       | 1.33                    | 1 <sup>st</sup> Stage Tail: Class 'C' + 0.60% FL-62 + 0.45% CD-32 + 0.15% SMS + 0.30% R-3                                                                                                 |
|                                 | 425       | 12.7       | 2.22                    | 2 <sup>nd</sup> Stage Lead: Class 'C' + 2.00% SMS + 10.0% Salt + 0.65% R-3 + 0.25 pps Cello Flake + 0.005 pps Static Free                                                                 |
|                                 | 100       | 14.8       | 1.32                    | 2 <sup>nd</sup> Stage Tail: Classs 'C' + 0.60% FL-62 + 0.45% CD-32 + 0.15% SMS + 0.15% R-3 + 0.005 pps Static Free                                                                        |
| 13,974'                         | 225       | 10.8       | 3.67                    | Lead: 60:40:0 Class 'C' + 15.00 lb/sk BA-90 + 4.00% MPA-5 + 3.00% SMS + 5.00% A-10 + 1.00% BA-10A + 0.80% ASA-301 + 2.90% R-21 + 8.00 lb/sk LCM-1 + 0.005 lb/sk Static Free (TOC @ 3180') |
|                                 | 300       | 11.8       | 2.38                    | Middle: 50:50:10 Class 'H' + 0.80% FL-52 + 0.45% ASA-301 + 0.40% SMS + 2.00% Salt + 3.00 lb/sx LCM-1 + 0.20% R-21 + 0.25 lb/sk Cello Flake + 0.005 lb/sk Static Free                      |
|                                 | 850       | 14.2       | 1.28                    | Tail: 50:50:2 Class 'H' + 0.65% FL-52 + 0.20% CD-32 + 0.15% SMS + 2.00% Salt + 0.10% R-3 + 0.005 lb/sk Static Free                                                                        |

Note: Cement volumes based on bit size plus at least 25% excess in the open hole plus 10% excess in the cased-hole overlap section.

**5. MINIMUM SPECIFICATIONS FOR PRESSURE CONTROL:**

Variance is requested to use a co-flex line between the BOP and choke manifold (instead of using a 4" OD steel line).

The minimum blowout preventer equipment (BOPE) shown in Exhibit #1 will consist of a double ram-type (10,000 psi WP) preventer and an annular preventer (5000-psi WP). Both units will be hydraulically operated and the ram-type will be equipped with blind rams on bottom and drill pipe rams on top. All BOPE will be tested in accordance with Onshore Oil & Gas order No. 2.

3000 psi BOPE is adequate for this application. Due to the 3000 psi BOPE requirement no FIT tests are planned.

Before drilling out of the surface casing, the ram-type BOP and accessory equipment will be tested to 3000/ 250 psig and the annular preventer to 2500/ 250 psig. The surface casing will be tested to 1400 psi for 30 minutes.

**EOG RESOURCES, INC.**  
**LUSK 22 FEDERAL NO. 4H**

Before drilling out of the intermediate casing, the ram-type BOP and accessory equipment will be tested to 3000/ 250 psig and the annular preventer to 2500/ 250 psig. Pipe rams will be operationally checked each 24-hour period. Blind rams will be operationally checked on each trip out of the hole. These checks will be noted on the daily tour sheets. The intermediate casing will be tested to 2000 psi for 30 minutes.

A hydraulically operated choke will be installed prior to drilling out of the intermediate casing shoe.

**6. TYPES AND CHARACTERISTICS OF THE PROPOSED MUD SYSTEM:**

The applicable depths and properties of the drilling fluid systems are as follows. Sufficient mud materials to maintain mud properties and meet minimum lost circulation and weight increase requirements will be kept on location at all times.

| Depth                       | Type            | Weight (ppg) | Viscosity | Water Loss |
|-----------------------------|-----------------|--------------|-----------|------------|
| 0 – 1020' 1065              | Fresh Water Gel | 8.6-8.8      | 28-34     | N/c        |
| 1020' – 4,900'              | Saturated Brine | 10.0-10.2    | 28-34     | N/c        |
| 4,900' – 9,073'             | Fresh Water     | 8.4-8.6      | 28-34     | N/c        |
| 9,073' – 13,974'<br>Lateral | Cut Brine Water | 8.6-9.3      | 28-34     | N/c        |

**7. AUXILIARY WELL CONTROL AND MONITORING EQUIPMENT:**

- (A) A kelly cock will be kept in the drill string at all times.
- (B) A full opening drill pipe-stabbing valve (inside BOP) with proper drill pipe connections will be on the rig floor at all times.
- (C) A mud logging unit will be continuously monitoring drill penetration rate and hydrocarbon shows from intermediate casing point to TD.
- (D) H<sub>2</sub>S monitoring and detection equipment will be utilized from surface casing point to TD.

**EOG RESOURCES, INC.**  
**LUSK 22 FEDERAL NO. 4H**

**8. LOGGING, TESTING AND CORING PROGRAM:** *See*

Open-hole logs are not planned for this well. *COA*

GR-CCL

Will be run in cased hole during completions phase of operations.

**9. ABNORMAL CONDITIONS, PRESSURES, TEMPERATURES AND POTENTIAL HAZARDS:**

The estimated bottom-hole temperature (BHT) at TD is 165 degrees F with an estimated maximum bottom-hole pressure (BHP) at TD of 4281 psig. No hydrogen sulfide or other hazardous gases or fluids have been encountered, reported or are known to exist at this depth in this area. No major loss circulation zones have been reported in offsetting wells.

**10. ANTICIPATED STARTING DATE AND DURATION OF OPERATIONS:**

The drilling operation should be finished in approximately one month. If the well is productive, an additional 60-90 days will be required for completion and testing before a decision is made to install permanent facilities.

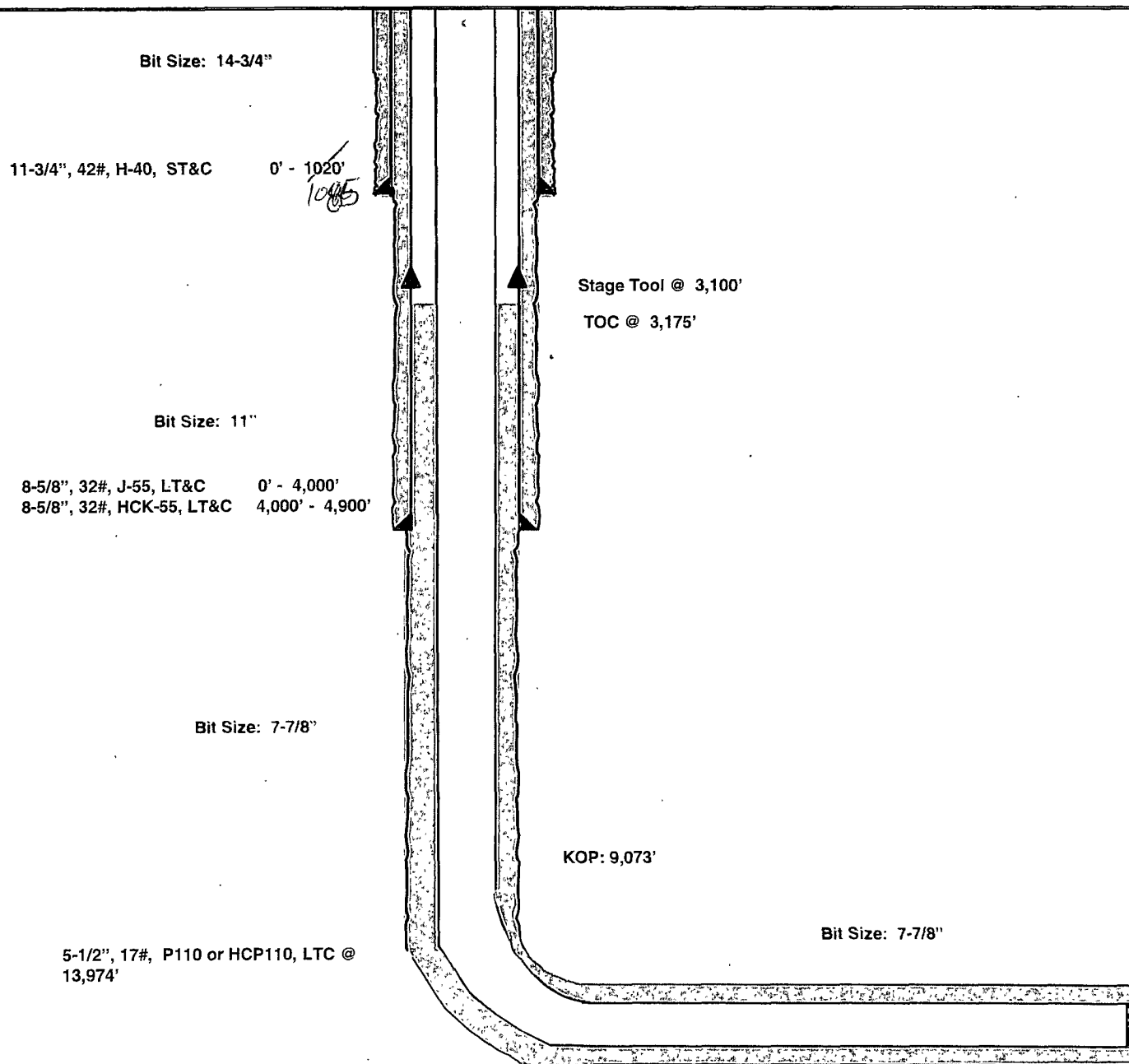
Lusk 22 Federal #4H  
Lea County, New Mexico

1980' FSL  
330' FEL  
Section 22  
T-19-S, R-32-E

Proposed Wellbore

API: 30-025-\*\*\*\*\*

KB: 3,631.9'  
GL: 3,601.9'

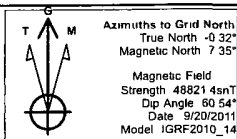


Lateral:  
13,974' MD, 9,550' TVD

BH Location: 1980' FSL & 330' FWL  
Section 22  
T-19-S, R-32-E

**Project: Lea County, NM (Nad27)**  
**Site: Lusk 22 Federal**  
**Well: Lusk 22 Fed 4H**  
**Wellbore: Wellbore #1**  
**Plan: Plan #1 092011**  
**Rig: Cactus Rig No. 123**

| PROJECT DETAILS        |                                      |
|------------------------|--------------------------------------|
| Lea County, NM (Nad27) |                                      |
| Geodetic System        | US State Plane 1927 (Exact solution) |
| Datum                  | NAD 1927 (NADCON CONUS)              |
| Ellipsoid              | Clarke 1866                          |
| Zone                   | New Mexico East 3001                 |
| System Datum           | Mean Sea Level                       |
| Location North         | Grid                                 |



**PHOENIX**  
TECHNOLOGY SERVICES

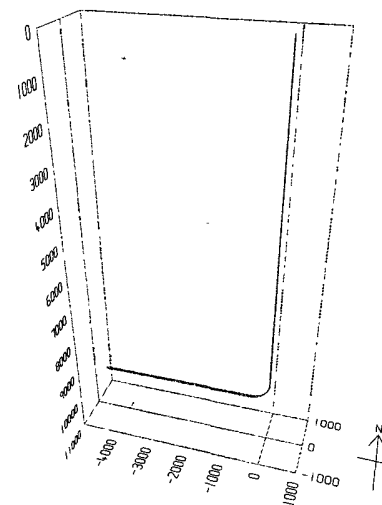
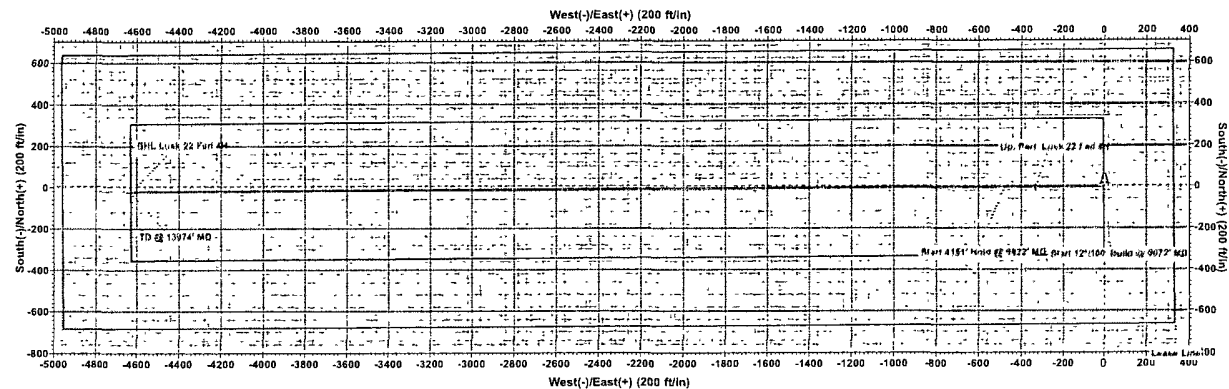
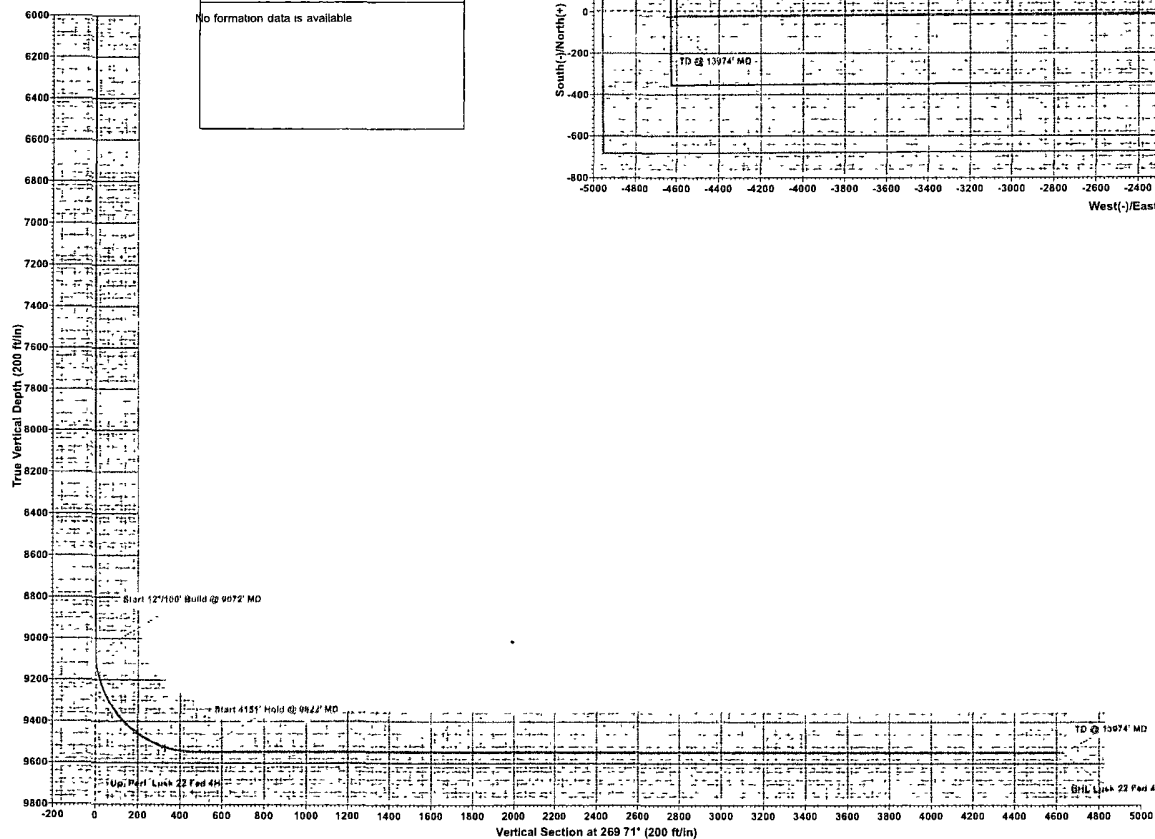
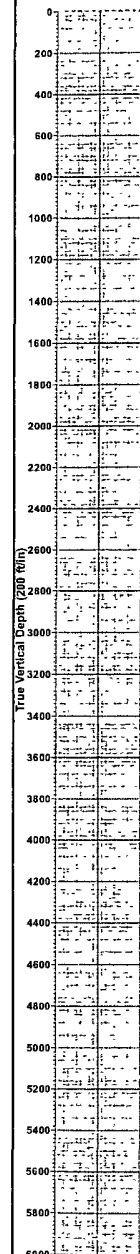
Northing 598478 50      Easting 680785 10      Ground Level 3601 90      Latitude 32° 38' 38 20 N      Longitude 103° 44' 45 63 W

| Name                   | TVD     | +N/-S  | +E/-W    | Northing  | Easting   | Shape |
|------------------------|---------|--------|----------|-----------|-----------|-------|
| Up Perf Lusk 22 Fed 4H | 9526 60 | -1 70  | -330 00  | 598476 80 | 680455 10 | Point |
| BHL Lusk 22 Fed 4H     | 9550 00 | -23 50 | -4629 01 | 598455 00 | 676156 10 | Point |

| MD       | Inc   | Azi    | TVD     | +N/-S  | +E/-W    | DLeg  | TFace  | VSec    |                    |
|----------|-------|--------|---------|--------|----------|-------|--------|---------|--------------------|
| 0 00     | 0 00  | 0 00   | 0 00    | 0 00   | 0 00     | 0 00  | 0 00   | 0 00    |                    |
| 9072 53  | 0 00  | 0 00   | 9072 53 | 0 00   | 0 00     | 0 00  | 0 00   | 0 00    |                    |
| 9822 54  | 90 00 | 269 71 | 9550 00 | -2 42  | -477 46  | 12 00 | 269 71 | 477 47  |                    |
| 13974 14 | 90 00 | 269 71 | 9550 00 | -23 50 | -4629 01 | 0 00  | 0 00   | 4629 07 | BHL Lusk 22 Fed 4H |

| TVL     | MD       | Annotation                      |
|---------|----------|---------------------------------|
| 9072 53 | 9072 53  | Start 12"/100' Build @ 9072' MD |
| 9550 00 | 9822 54  | Start 4151' Hold @ 9822' MD     |
| 9550 00 | 13974 14 | TD @ 13974' MD                  |

No formation data is available



## **EOG Resources**

Lea County, NM (Nad27)

Lusk 22 Federal

Lusk 22 Fed 4H

Wellbore #1

Plan: Plan #1 092011

## **EOG Resources**

20 September, 2011



Phoenix Technology Services  
EOG Resources



|                  |                        |                                     |                                                |
|------------------|------------------------|-------------------------------------|------------------------------------------------|
| <b>Company:</b>  | EOG Resources          | <b>Local Co-ordinate Reference:</b> | Well Lusk 22 Fed 4H                            |
| <b>Project:</b>  | Lea County, NM (Nad27) | <b>TVD Reference:</b>               | WELL @ 3631.90ft (Original Well Elev + 30' KB) |
| <b>Site:</b>     | Lusk 22 Federal        | <b>MD Reference:</b>                | WELL @ 3631.90ft (Original Well Elev + 30' KB) |
| <b>Well:</b>     | Lusk 22 Fed 4H         | <b>North Reference:</b>             | Grid                                           |
| <b>Wellbore:</b> | Wellbore #1            | <b>Survey Calculation Method:</b>   | Minimum Curvature                              |
| <b>Design:</b>   | Plan #1 092011         | <b>Database:</b>                    | GCR3                                           |

|                    |                                      |                      |                |
|--------------------|--------------------------------------|----------------------|----------------|
| <b>Project</b>     | Lea County, NM (Nad27)               |                      |                |
| <b>Map System:</b> | US State Plane 1927 (Exact solution) | <b>System Datum:</b> | Mean Sea Level |
| <b>Geo Datum:</b>  | NAD 1927 (NADCON CONUS)              |                      |                |
| <b>Map Zone:</b>   | New Mexico East 3001                 |                      |                |

|                              |                 |                          |                  |
|------------------------------|-----------------|--------------------------|------------------|
| <b>Site</b>                  | Lusk 22 Federal |                          |                  |
| <b>Site Position:</b>        |                 | <b>Northing:</b>         | 601,119.70 ft    |
| <b>From:</b>                 | Map             | <b>Easting:</b>          | 680,769.40 ft    |
| <b>Position Uncertainty:</b> | 0 00 ft         | <b>Slot Radius:</b>      | "                |
|                              |                 | <b>Latitude:</b>         | 32° 39' 4.34 N   |
|                              |                 | <b>Longitude:</b>        | 103° 44' 45.64 W |
|                              |                 | <b>Grid Convergence:</b> | 0 32 °           |

|                             |                |         |                                    |
|-----------------------------|----------------|---------|------------------------------------|
| <b>Well</b>                 | Lusk 22 Fed 4H |         |                                    |
| <b>Well Position</b>        | +N/-S          | 0.00 ft | <b>Northing:</b> 598,478.50 ft     |
|                             | +E/-W          | 0.00 ft | <b>Easting:</b> 680,785.10 ft      |
| <b>Position Uncertainty</b> |                | 0.00 ft | <b>Wellhead Elevation:</b> ft      |
|                             |                |         | <b>Latitude:</b> 32° 38' 38.20 N   |
|                             |                |         | <b>Longitude:</b> 103° 44' 45.63 W |
|                             |                |         | <b>Ground Level:</b> 3,601.90 ft   |

|                  |                   |                    |                       |
|------------------|-------------------|--------------------|-----------------------|
| <b>Wellbore</b>  | Wellbore #1       |                    |                       |
| <b>Magnetics</b> | <b>Model Name</b> | <b>Sample Date</b> | <b>Declination</b>    |
|                  | IGRF2010_14       | 9/20/2011          | 7.67                  |
|                  |                   |                    | <b>Dip Angle</b>      |
|                  |                   |                    | 60.54                 |
|                  |                   |                    | <b>Field Strength</b> |
|                  |                   |                    | 48,821                |

|                          |                         |              |                           |
|--------------------------|-------------------------|--------------|---------------------------|
| <b>Design</b>            | Plan #1 092011          |              |                           |
| <b>Audit Notes:</b>      |                         |              |                           |
| <b>Version:</b>          | <b>Phase:</b>           | PLAN         | <b>Tie On Depth:</b> 0.00 |
| <b>Vertical Section:</b> | <b>Depth From (TVD)</b> | <b>+N/-S</b> | <b>+E/-W</b>              |
|                          | (ft)                    | (ft)         | (ft)                      |
|                          | 0 00                    | 0.00         | 0.00                      |
|                          |                         |              | <b>Direction</b>          |
|                          |                         |              | 269.71                    |

|                            |                |                              |                    |
|----------------------------|----------------|------------------------------|--------------------|
| <b>Survey Tool Program</b> | Date 9/20/2011 |                              |                    |
| <b>From</b>                | <b>To</b>      | <b>Survey (Wellbore)</b>     | <b>Tool Name</b>   |
| (ft)                       | (ft)           |                              |                    |
| 0.00                       | 13,974.14      | Plan #1 092011 (Wellbore #1) | MWD                |
|                            |                |                              | <b>Description</b> |
|                            |                |                              | MWD - Standard     |

Phoenix Technology Services  
EOG Resources



|           |                        |                              |                                                |
|-----------|------------------------|------------------------------|------------------------------------------------|
| Company:  | EOG Resources          | Local Co-ordinate Reference: | Well Lusk 22 Fed 4H                            |
| Project:  | Lea County, NM (Nad27) | TVD Reference:               | WELL @ 3631.90ft (Original Well Elev + 30' KB) |
| Site:     | Lusk 22 Federal        | MD Reference:                | WELL @ 3631.90ft (Original Well Elev + 30' KB) |
| Well:     | Lusk 22 Fed 4H         | North Reference:             | Grid                                           |
| Wellbore: | Wellbore #1            | Survey Calculation Method:   | Minimum Curvature                              |
| Design:   | Plan #1 092011         | Database:                    | GCR3                                           |

| Planned Survey |            |                      |               |             |             |             |                |                   |                  |                 |  |
|----------------|------------|----------------------|---------------|-------------|-------------|-------------|----------------|-------------------|------------------|-----------------|--|
| MD<br>(ft)     | Inc<br>(°) | Azi (azimuth)<br>(°) | TVDSS<br>(ft) | TVD<br>(ft) | N/S<br>(ft) | E/W<br>(ft) | V. Sec<br>(ft) | DLeg<br>(°/100ft) | Northing<br>(ft) | Easting<br>(ft) |  |
| 0.00           | 0.00       | 0.00                 | -3,631.90     | 0.00        | 0.00        | 0.00        | 0.00           | 0.00              | 598,478.50       | 680,785.10      |  |
| 100.00         | 0.00       | 0.00                 | -3,531.90     | 100.00      | 0.00        | 0.00        | 0.00           | 0.00              | 598,478.50       | 680,785.10      |  |
| 200.00         | 0.00       | 0.00                 | -3,431.90     | 200.00      | 0.00        | 0.00        | 0.00           | 0.00              | 598,478.50       | 680,785.10      |  |
| 300.00         | 0.00       | 0.00                 | -3,331.90     | 300.00      | 0.00        | 0.00        | 0.00           | 0.00              | 598,478.50       | 680,785.10      |  |
| 400.00         | 0.00       | 0.00                 | -3,231.90     | 400.00      | 0.00        | 0.00        | 0.00           | 0.00              | 598,478.50       | 680,785.10      |  |
| 500.00         | 0.00       | 0.00                 | -3,131.90     | 500.00      | 0.00        | 0.00        | 0.00           | 0.00              | 598,478.50       | 680,785.10      |  |
| 600.00         | 0.00       | 0.00                 | -3,031.90     | 600.00      | 0.00        | 0.00        | 0.00           | 0.00              | 598,478.50       | 680,785.10      |  |
| 700.00         | 0.00       | 0.00                 | -2,931.90     | 700.00      | 0.00        | 0.00        | 0.00           | 0.00              | 598,478.50       | 680,785.10      |  |
| 800.00         | 0.00       | 0.00                 | -2,831.90     | 800.00      | 0.00        | 0.00        | 0.00           | 0.00              | 598,478.50       | 680,785.10      |  |
| 900.00         | 0.00       | 0.00                 | -2,731.90     | 900.00      | 0.00        | 0.00        | 0.00           | 0.00              | 598,478.50       | 680,785.10      |  |
| 1,000.00       | 0.00       | 0.00                 | -2,631.90     | 1,000.00    | 0.00        | 0.00        | 0.00           | 0.00              | 598,478.50       | 680,785.10      |  |
| 1,100.00       | 0.00       | 0.00                 | -2,531.90     | 1,100.00    | 0.00        | 0.00        | 0.00           | 0.00              | 598,478.50       | 680,785.10      |  |
| 1,200.00       | 0.00       | 0.00                 | -2,431.90     | 1,200.00    | 0.00        | 0.00        | 0.00           | 0.00              | 598,478.50       | 680,785.10      |  |
| 1,300.00       | 0.00       | 0.00                 | -2,331.90     | 1,300.00    | 0.00        | 0.00        | 0.00           | 0.00              | 598,478.50       | 680,785.10      |  |
| 1,400.00       | 0.00       | 0.00                 | -2,231.90     | 1,400.00    | 0.00        | 0.00        | 0.00           | 0.00              | 598,478.50       | 680,785.10      |  |
| 1,500.00       | 0.00       | 0.00                 | -2,131.90     | 1,500.00    | 0.00        | 0.00        | 0.00           | 0.00              | 598,478.50       | 680,785.10      |  |
| 1,600.00       | 0.00       | 0.00                 | -2,031.90     | 1,600.00    | 0.00        | 0.00        | 0.00           | 0.00              | 598,478.50       | 680,785.10      |  |
| 1,700.00       | 0.00       | 0.00                 | -1,931.90     | 1,700.00    | 0.00        | 0.00        | 0.00           | 0.00              | 598,478.50       | 680,785.10      |  |
| 1,800.00       | 0.00       | 0.00                 | -1,831.90     | 1,800.00    | 0.00        | 0.00        | 0.00           | 0.00              | 598,478.50       | 680,785.10      |  |
| 1,900.00       | 0.00       | 0.00                 | -1,731.90     | 1,900.00    | 0.00        | 0.00        | 0.00           | 0.00              | 598,478.50       | 680,785.10      |  |
| 2,000.00       | 0.00       | 0.00                 | -1,631.90     | 2,000.00    | 0.00        | 0.00        | 0.00           | 0.00              | 598,478.50       | 680,785.10      |  |
| 2,100.00       | 0.00       | 0.00                 | -1,531.90     | 2,100.00    | 0.00        | 0.00        | 0.00           | 0.00              | 598,478.50       | 680,785.10      |  |
| 2,200.00       | 0.00       | 0.00                 | -1,431.90     | 2,200.00    | 0.00        | 0.00        | 0.00           | 0.00              | 598,478.50       | 680,785.10      |  |
| 2,300.00       | 0.00       | 0.00                 | -1,331.90     | 2,300.00    | 0.00        | 0.00        | 0.00           | 0.00              | 598,478.50       | 680,785.10      |  |
| 2,400.00       | 0.00       | 0.00                 | -1,231.90     | 2,400.00    | 0.00        | 0.00        | 0.00           | 0.00              | 598,478.50       | 680,785.10      |  |
| 2,500.00       | 0.00       | 0.00                 | -1,131.90     | 2,500.00    | 0.00        | 0.00        | 0.00           | 0.00              | 598,478.50       | 680,785.10      |  |
| 2,600.00       | 0.00       | 0.00                 | -1,031.90     | 2,600.00    | 0.00        | 0.00        | 0.00           | 0.00              | 598,478.50       | 680,785.10      |  |

Phoenix Technology Services  
EOG Resources



|                  |                        |                                     |                                                |
|------------------|------------------------|-------------------------------------|------------------------------------------------|
| <b>Company:</b>  | EOG Resources          | <b>Local Co-ordinate Reference:</b> | Well Lusk 22 Fed 4H                            |
| <b>Project:</b>  | Lea County, NM (Nad27) | <b>TVD Reference:</b>               | WELL @ 3631.90ft (Original Well Elev + 30' KB) |
| <b>Site:</b>     | Lusk 22 Federal        | <b>MD Reference:</b>                | WELL @ 3631.90ft (Original Well Elev + 30' KB) |
| <b>Well:</b>     | Lusk 22 Fed 4H         | <b>North Reference:</b>             | Grid                                           |
| <b>Wellbore:</b> | Wellbore #1            | <b>Survey Calculation Method:</b>   | Minimum Curvature                              |
| <b>Design:</b>   | Plan #1 092011         | <b>Database:</b>                    | GCR3                                           |

| Planned Survey |            |                      |               |             |             |             |                |                   |                  |                 |  |
|----------------|------------|----------------------|---------------|-------------|-------------|-------------|----------------|-------------------|------------------|-----------------|--|
| MD<br>(ft)     | Inc<br>(°) | Azi (azimuth)<br>(°) | TVDSS<br>(ft) | TVD<br>(ft) | N/S<br>(ft) | E/W<br>(ft) | V. Sec<br>(ft) | DLeg<br>(°/100ft) | Northing<br>(ft) | Easting<br>(ft) |  |
| 2,700.00       | 0.00       | 0 00                 | -931.90       | 2,700.00    | 0.00        | 0.00        | 0.00           | 0.00              | 598,478.50       | 680,785.10      |  |
| 2,800.00       | 0.00       | 0 00                 | -831.90       | 2,800.00    | 0.00        | 0.00        | 0.00           | 0.00              | 598,478.50       | 680,785.10      |  |
| 2,900.00       | 0 00       | 0 00                 | -731.90       | 2,900.00    | 0.00        | 0 00        | 0.00           | 0.00              | 598,478.50       | 680,785.10      |  |
| 3,000.00       | 0.00       | 0 00                 | -631.90       | 3,000.00    | 0.00        | 0.00        | 0.00           | 0 00              | 598,478.50       | 680,785.10      |  |
| 3,100.00       | 0.00       | 0 00                 | -531.90       | 3,100.00    | 0.00        | 0 00        | 0.00           | 0.00              | 598,478.50       | 680,785.10      |  |
| 3,200.00       | 0.00       | 0 00                 | -431.90       | 3,200.00    | 0.00        | 0.00        | 0.00           | 0 00              | 598,478.50       | 680,785.10      |  |
| 3,300.00       | 0.00       | 0 00                 | -331.90       | 3,300.00    | 0.00        | 0 00        | 0.00           | 0 00              | 598,478.50       | 680,785.10      |  |
| 3,400.00       | 0.00       | 0 00                 | -231.90       | 3,400.00    | 0.00        | 0.00        | 0.00           | 0.00              | 598,478.50       | 680,785.10      |  |
| 3,500.00       | 0 00       | 0 00                 | -131.90       | 3,500.00    | 0.00        | 0 00        | 0.00           | 0.00              | 598,478.50       | 680,785.10      |  |
| 3,600.00       | 0.00       | 0 00                 | -31.90        | 3,600.00    | 0.00        | 0.00        | 0.00           | 0.00              | 598,478.50       | 680,785.10      |  |
| 3,700.00       | 0.00       | 0 00                 | 68.10         | 3,700.00    | 0.00        | 0 00        | 0.00           | 0.00              | 598,478.50       | 680,785.10      |  |
| 3,800.00       | 0.00       | 0 00                 | 168.10        | 3,800.00    | 0.00        | 0.00        | 0.00           | 0.00              | 598,478.50       | 680,785.10      |  |
| 3,900.00       | 0.00       | 0 00                 | 268.10        | 3,900.00    | 0.00        | 0.00        | 0.00           | 0 00              | 598,478.50       | 680,785.10      |  |
| 4,000.00       | 0 00       | 0 00                 | 368.10        | 4,000.00    | 0 00        | 0.00        | 0.00           | 0 00              | 598,478.50       | 680,785.10      |  |
| 4,100.00       | 0 00       | 0 00                 | 468.10        | 4,100.00    | 0 00        | 0.00        | 0.00           | 0.00              | 598,478.50       | 680,785.10      |  |
| 4,200.00       | 0.00       | 0 00                 | 568.10        | 4,200.00    | 0.00        | 0.00        | 0.00           | 0.00              | 598,478.50       | 680,785.10      |  |
| 4,300.00       | 0.00       | 0 00                 | 668.10        | 4,300.00    | 0.00        | 0.00        | 0.00           | 0 00              | 598,478.50       | 680,785.10      |  |
| 4,400.00       | 0.00       | 0 00                 | 768.10        | 4,400.00    | 0.00        | 0.00        | 0.00           | 0.00              | 598,478.50       | 680,785.10      |  |
| 4,500.00       | 0 00       | 0 00                 | 868.10        | 4,500.00    | 0 00        | 0.00        | 0.00           | 0.00              | 598,478.50       | 680,785.10      |  |
| 4,600.00       | 0.00       | 0 00                 | 968.10        | 4,600.00    | 0.00        | 0.00        | 0.00           | 0.00              | 598,478.50       | 680,785.10      |  |
| 4,700.00       | 0.00       | 0 00                 | 1,068.10      | 4,700.00    | 0 00        | 0.00        | 0.00           | 0.00              | 598,478.50       | 680,785.10      |  |
| 4,800.00       | 0.00       | 0 00                 | 1,168.10      | 4,800.00    | 0 00        | 0.00        | 0.00           | 0.00              | 598,478.50       | 680,785.10      |  |
| 4,900.00       | 0.00       | 0 00                 | 1,268.10      | 4,900.00    | 0.00        | 0 00        | 0.00           | 0.00              | 598,478.50       | 680,785.10      |  |
| 5,000.00       | 0.00       | 0 00                 | 1,368.10      | 5,000.00    | 0.00        | 0.00        | 0.00           | 0.00              | 598,478.50       | 680,785.10      |  |
| 5,100.00       | 0 00       | 0 00                 | 1,468.10      | 5,100.00    | 0.00        | 0.00        | 0.00           | 0.00              | 598,478.50       | 680,785.10      |  |
| 5,200.00       | 0.00       | 0 00                 | 1,568.10      | 5,200.00    | 0 00        | 0.00        | 0.00           | 0.00              | 598,478.50       | 680,785.10      |  |
| 5,300.00       | 0.00       | 0 00                 | 1,668.10      | 5,300.00    | 0.00        | 0 00        | 0.00           | 0.00              | 598,478.50       | 680,785.10      |  |

Phoenix Technology Services  
EOG Resources



|           |                        |                              |                                                |
|-----------|------------------------|------------------------------|------------------------------------------------|
| Company:  | EOG Resources          | Local Co-ordinate Reference: | Well Lusk 22 Fed 4H                            |
| Project:  | Lea County, NM (Nad27) | TVD Reference:               | WELL @ 3631.90ft (Original Well Elev + 30' KB) |
| Site:     | Lusk 22 Federal        | MD Reference:                | WELL @ 3631.90ft (Original Well Elev + 30' KB) |
| Well:     | Lusk 22 Fed 4H         | North Reference:             | Grid                                           |
| Wellbore: | Wellbore #1            | Survey Calculation Method:   | Minimum Curvature                              |
| Design:   | Plan #1 092011         | Database:                    | GCR3                                           |

| Planned Survey |            |                      |               |             |             |             |                |                   |                  |                 |  |
|----------------|------------|----------------------|---------------|-------------|-------------|-------------|----------------|-------------------|------------------|-----------------|--|
| MD<br>(ft)     | Inc<br>(°) | Azi (azimuth)<br>(°) | TVDSS<br>(ft) | TVD<br>(ft) | N/S<br>(ft) | E/W<br>(ft) | V. Sec<br>(ft) | DLeg<br>(°/100ft) | Northing<br>(ft) | Easting<br>(ft) |  |
| 5,400.00       | 0.00       | 0.00                 | 1,768.10      | 5,400.00    | 0.00        | 0.00        | 0.00           | 0.00              | 598,478.50       | 680,785.10      |  |
| 5,500.00       | 0.00       | 0.00                 | 1,868.10      | 5,500.00    | 0.00        | 0.00        | 0.00           | 0.00              | 598,478.50       | 680,785.10      |  |
| 5,600.00       | 0.00       | 0.00                 | 1,968.10      | 5,600.00    | 0.00        | 0.00        | 0.00           | 0.00              | 598,478.50       | 680,785.10      |  |
| 5,700.00       | 0.00       | 0.00                 | 2,068.10      | 5,700.00    | 0.00        | 0.00        | 0.00           | 0.00              | 598,478.50       | 680,785.10      |  |
| 5,800.00       | 0.00       | 0.00                 | 2,168.10      | 5,800.00    | 0.00        | 0.00        | 0.00           | 0.00              | 598,478.50       | 680,785.10      |  |
| 5,900.00       | 0.00       | 0.00                 | 2,268.10      | 5,900.00    | 0.00        | 0.00        | 0.00           | 0.00              | 598,478.50       | 680,785.10      |  |
| 6,000.00       | 0.00       | 0.00                 | 2,368.10      | 6,000.00    | 0.00        | 0.00        | 0.00           | 0.00              | 598,478.50       | 680,785.10      |  |
| 6,100.00       | 0.00       | 0.00                 | 2,468.10      | 6,100.00    | 0.00        | 0.00        | 0.00           | 0.00              | 598,478.50       | 680,785.10      |  |
| 6,200.00       | 0.00       | 0.00                 | 2,568.10      | 6,200.00    | 0.00        | 0.00        | 0.00           | 0.00              | 598,478.50       | 680,785.10      |  |
| 6,300.00       | 0.00       | 0.00                 | 2,668.10      | 6,300.00    | 0.00        | 0.00        | 0.00           | 0.00              | 598,478.50       | 680,785.10      |  |
| 6,400.00       | 0.00       | 0.00                 | 2,768.10      | 6,400.00    | 0.00        | 0.00        | 0.00           | 0.00              | 598,478.50       | 680,785.10      |  |
| 6,500.00       | 0.00       | 0.00                 | 2,868.10      | 6,500.00    | 0.00        | 0.00        | 0.00           | 0.00              | 598,478.50       | 680,785.10      |  |
| 6,600.00       | 0.00       | 0.00                 | 2,968.10      | 6,600.00    | 0.00        | 0.00        | 0.00           | 0.00              | 598,478.50       | 680,785.10      |  |
| 6,700.00       | 0.00       | 0.00                 | 3,068.10      | 6,700.00    | 0.00        | 0.00        | 0.00           | 0.00              | 598,478.50       | 680,785.10      |  |
| 6,800.00       | 0.00       | 0.00                 | 3,168.10      | 6,800.00    | 0.00        | 0.00        | 0.00           | 0.00              | 598,478.50       | 680,785.10      |  |
| 6,900.00       | 0.00       | 0.00                 | 3,268.10      | 6,900.00    | 0.00        | 0.00        | 0.00           | 0.00              | 598,478.50       | 680,785.10      |  |
| 7,000.00       | 0.00       | 0.00                 | 3,368.10      | 7,000.00    | 0.00        | 0.00        | 0.00           | 0.00              | 598,478.50       | 680,785.10      |  |
| 7,100.00       | 0.00       | 0.00                 | 3,468.10      | 7,100.00    | 0.00        | 0.00        | 0.00           | 0.00              | 598,478.50       | 680,785.10      |  |
| 7,200.00       | 0.00       | 0.00                 | 3,568.10      | 7,200.00    | 0.00        | 0.00        | 0.00           | 0.00              | 598,478.50       | 680,785.10      |  |
| 7,300.00       | 0.00       | 0.00                 | 3,668.10      | 7,300.00    | 0.00        | 0.00        | 0.00           | 0.00              | 598,478.50       | 680,785.10      |  |
| 7,400.00       | 0.00       | 0.00                 | 3,768.10      | 7,400.00    | 0.00        | 0.00        | 0.00           | 0.00              | 598,478.50       | 680,785.10      |  |
| 7,500.00       | 0.00       | 0.00                 | 3,868.10      | 7,500.00    | 0.00        | 0.00        | 0.00           | 0.00              | 598,478.50       | 680,785.10      |  |
| 7,600.00       | 0.00       | 0.00                 | 3,968.10      | 7,600.00    | 0.00        | 0.00        | 0.00           | 0.00              | 598,478.50       | 680,785.10      |  |
| 7,700.00       | 0.00       | 0.00                 | 4,068.10      | 7,700.00    | 0.00        | 0.00        | 0.00           | 0.00              | 598,478.50       | 680,785.10      |  |
| 7,800.00       | 0.00       | 0.00                 | 4,168.10      | 7,800.00    | 0.00        | 0.00        | 0.00           | 0.00              | 598,478.50       | 680,785.10      |  |
| 7,900.00       | 0.00       | 0.00                 | 4,268.10      | 7,900.00    | 0.00        | 0.00        | 0.00           | 0.00              | 598,478.50       | 680,785.10      |  |
| 8,000.00       | 0.00       | 0.00                 | 4,368.10      | 8,000.00    | 0.00        | 0.00        | 0.00           | 0.00              | 598,478.50       | 680,785.10      |  |

Phoenix Technology Services  
EOG Resources



|           |                        |                              |                                                |
|-----------|------------------------|------------------------------|------------------------------------------------|
| Company:  | EOG Resources          | Local Co-ordinate Reference: | Well Lusk 22 Fed 4H                            |
| Project:  | Lea County, NM (Nad27) | TVD Reference:               | WELL @ 3631.90ft (Original Well Elev + 30' KB) |
| Site:     | Lusk 22 Federal        | MD Reference:                | WELL @ 3631.90ft (Original Well Elev + 30' KB) |
| Well:     | Lusk 22 Fed 4H         | North Reference:             | Grid                                           |
| Wellbore: | Wellbore #1            | Survey Calculation Method:   | Minimum Curvature                              |
| Design:   | Plan #1 092011         | Database:                    | GCR3                                           |

| Planned Survey                  |            |                      |               |             |             |             |                |                   |                  |                 |  |
|---------------------------------|------------|----------------------|---------------|-------------|-------------|-------------|----------------|-------------------|------------------|-----------------|--|
| MD<br>(ft)                      | Inc<br>(°) | Azi (azimuth)<br>(°) | TVDSS<br>(ft) | TVD<br>(ft) | N/S<br>(ft) | E/W<br>(ft) | V. Sec<br>(ft) | DLeg<br>(°/100ft) | Northing<br>(ft) | Easting<br>(ft) |  |
| 8,100.00                        | 0.00       | 0.00                 | 4,468.10      | 8,100.00    | 0.00        | 0.00        | 0.00           | 0.00              | 598,478.50       | 680,785.10      |  |
| 8,200.00                        | 0.00       | 0.00                 | 4,568.10      | 8,200.00    | 0.00        | 0.00        | 0.00           | 0.00              | 598,478.50       | 680,785.10      |  |
| 8,300.00                        | 0.00       | 0.00                 | 4,668.10      | 8,300.00    | 0.00        | 0.00        | 0.00           | 0.00              | 598,478.50       | 680,785.10      |  |
| 8,400.00                        | 0.00       | 0.00                 | 4,768.10      | 8,400.00    | 0.00        | 0.00        | 0.00           | 0.00              | 598,478.50       | 680,785.10      |  |
| 8,500.00                        | 0.00       | 0.00                 | 4,868.10      | 8,500.00    | 0.00        | 0.00        | 0.00           | 0.00              | 598,478.50       | 680,785.10      |  |
| 8,600.00                        | 0.00       | 0.00                 | 4,968.10      | 8,600.00    | 0.00        | 0.00        | 0.00           | 0.00              | 598,478.50       | 680,785.10      |  |
| 8,700.00                        | 0.00       | 0.00                 | 5,068.10      | 8,700.00    | 0.00        | 0.00        | 0.00           | 0.00              | 598,478.50       | 680,785.10      |  |
| 8,800.00                        | 0.00       | 0.00                 | 5,168.10      | 8,800.00    | 0.00        | 0.00        | 0.00           | 0.00              | 598,478.50       | 680,785.10      |  |
| 8,900.00                        | 0.00       | 0.00                 | 5,268.10      | 8,900.00    | 0.00        | 0.00        | 0.00           | 0.00              | 598,478.50       | 680,785.10      |  |
| 9,000.00                        | 0.00       | 0.00                 | 5,368.10      | 9,000.00    | 0.00        | 0.00        | 0.00           | 0.00              | 598,478.50       | 680,785.10      |  |
| 9,072.53                        | 0.00       | 0.00                 | 5,440.63      | 9,072.53    | 0.00        | 0.00        | 0.00           | 0.00              | 598,478.50       | 680,785.10      |  |
| Start 12°/100' Build @ 9072' MD |            |                      |               |             |             |             |                |                   |                  |                 |  |
| 9,100.00                        | 3.30       | 269.71               | 5,468.08      | 9,099.98    | 0.00        | -0.79       | 0.79           | 12.00             | 598,478.50       | 680,784.31      |  |
| 9,200.00                        | 15.30      | 269.71               | 5,566.59      | 9,198.49    | -0.09       | -16.91      | 16.91          | 12.00             | 598,478.41       | 680,768.19      |  |
| 9,300.00                        | 27.30      | 269.71               | 5,659.59      | 9,291.49    | -0.27       | -53.16      | 53.17          | 12.00             | 598,478.23       | 680,731.94      |  |
| 9,400.00                        | 39.30      | 269.71               | 5,743.02      | 9,374.92    | -0.55       | -107.96     | 107.96         | 12.00             | 598,477.95       | 680,677.14      |  |
| 9,500.00                        | 51.30      | 269.71               | 5,813.24      | 9,445.14    | -0.91       | -178.90     | 178.91         | 12.00             | 598,477.59       | 680,606.20      |  |
| 9,600.00                        | 63.30      | 269.71               | 5,867.17      | 9,499.07    | -1.33       | -262.90     | 262.90         | 12.00             | 598,477.17       | 680,522.20      |  |
| 9,700.00                        | 75.30      | 269.71               | 5,902.46      | 9,534.36    | -1.81       | -356.27     | 356.27         | 12.00             | 598,476.69       | 680,428.83      |  |
| 9,800.00                        | 87.30      | 269.71               | 5,917.57      | 9,549.47    | -2.31       | -454.93     | 454.94         | 12.00             | 598,476.19       | 680,330.17      |  |
| 9,822.54                        | 90.00      | 269.71               | 5,918.10      | 9,550.00    | -2.42       | -477.46     | 477.47         | 12.00             | 598,476.08       | 680,307.64      |  |
| Start 4151' Hold @ 9822' MD     |            |                      |               |             |             |             |                |                   |                  |                 |  |
| 9,900.00                        | 90.00      | 269.71               | 5,918.10      | 9,550.00    | -2.82       | -554.92     | 554.93         | 0.00              | 598,475.68       | 680,230.18      |  |
| 10,000.00                       | 90.00      | 269.71               | 5,918.10      | 9,550.00    | -3.32       | -654.92     | 654.93         | 0.00              | 598,475.18       | 680,130.18      |  |
| 10,100.00                       | 90.00      | 269.71               | 5,918.10      | 9,550.00    | -3.83       | -754.92     | 754.93         | 0.00              | 598,474.67       | 680,030.18      |  |
| 10,200.00                       | 90.00      | 269.71               | 5,918.10      | 9,550.00    | -4.34       | -854.92     | 854.93         | 0.00              | 598,474.16       | 679,930.18      |  |
| 10,300.00                       | 90.00      | 269.71               | 5,918.10      | 9,550.00    | -4.85       | -954.92     | 954.93         | 0.00              | 598,473.65       | 679,830.18      |  |

Phoenix Technology Services  
EOG Resources



|           |                        |                              |                                                |
|-----------|------------------------|------------------------------|------------------------------------------------|
| Company:  | EOG Resources          | Local Co-ordinate Reference: | Well Lusk 22 Fed 4H                            |
| Project:  | Lea County, NM (Nad27) | TVD Reference:               | WELL @ 3631.90ft (Original Well Elev + 30' KB) |
| Site:     | Lusk 22 Federal        | MD Reference:                | WELL @ 3631.90ft (Original Well Elev + 30' KB) |
| Well:     | Lusk 22 Fed 4H         | North Reference:             | Grid                                           |
| Wellbore: | Wellbore #1            | Survey Calculation Method:   | Minimum Curvature                              |
| Design:   | Plan #1 092011         | Database:                    | GCR3                                           |

| Planned Survey |            |                      |               |             |             |             |                |                   |                  |                 |
|----------------|------------|----------------------|---------------|-------------|-------------|-------------|----------------|-------------------|------------------|-----------------|
| MD<br>(ft)     | Inc<br>(°) | Azi (azimuth)<br>(°) | TVDSS<br>(ft) | TVD<br>(ft) | N/S<br>(ft) | E/W<br>(ft) | V. Sec<br>(ft) | DLeg<br>(°/100ft) | Northing<br>(ft) | Easting<br>(ft) |
| 10,400.00      | 90.00      | 269.71               | 5,918.10      | 9,550.00    | -5.36       | -1,054.92   | 1,054.93       | 0.00              | 598,473.14       | 679,730.19      |
| 10,500.00      | 90.00      | 269.71               | 5,918.10      | 9,550.00    | -5.86       | -1,154.92   | 1,154.93       | 0.00              | 598,472.64       | 679,630.19      |
| 10,600.00      | 90.00      | 269.71               | 5,918.10      | 9,550.00    | -6.37       | -1,254.91   | 1,254.93       | 0.00              | 598,472.13       | 679,530.19      |
| 10,700.00      | 90.00      | 269.71               | 5,918.10      | 9,550.00    | -6.88       | -1,354.91   | 1,354.93       | 0.00              | 598,471.62       | 679,430.19      |
| 10,800.00      | 90.00      | 269.71               | 5,918.10      | 9,550.00    | -7.39       | -1,454.91   | 1,454.93       | 0.00              | 598,471.11       | 679,330.19      |
| 10,900.00      | 90.00      | 269.71               | 5,918.10      | 9,550.00    | -7.89       | -1,554.91   | 1,554.93       | 0.00              | 598,470.61       | 679,230.19      |
| 11,000.00      | 90.00      | 269.71               | 5,918.10      | 9,550.00    | -8.40       | -1,654.91   | 1,654.93       | 0.00              | 598,470.10       | 679,130.19      |
| 11,100.00      | 90.00      | 269.71               | 5,918.10      | 9,550.00    | -8.91       | -1,754.91   | 1,754.93       | 0.00              | 598,469.59       | 679,030.20      |
| 11,200.00      | 90.00      | 269.71               | 5,918.10      | 9,550.00    | -9.42       | -1,854.91   | 1,854.93       | 0.00              | 598,469.08       | 678,930.20      |
| 11,300.00      | 90.00      | 269.71               | 5,918.10      | 9,550.00    | -9.92       | -1,954.90   | 1,954.93       | 0.00              | 598,468.58       | 678,830.20      |
| 11,400.00      | 90.00      | 269.71               | 5,918.10      | 9,550.00    | -10.43      | -2,054.90   | 2,054.93       | 0.00              | 598,468.07       | 678,730.20      |
| 11,500.00      | 90.00      | 269.71               | 5,918.10      | 9,550.00    | -10.94      | -2,154.90   | 2,154.93       | 0.00              | 598,467.56       | 678,630.20      |
| 11,600.00      | 90.00      | 269.71               | 5,918.10      | 9,550.00    | -11.45      | -2,254.90   | 2,254.93       | 0.00              | 598,467.05       | 678,530.20      |
| 11,700.00      | 90.00      | 269.71               | 5,918.10      | 9,550.00    | -11.96      | -2,354.90   | 2,354.93       | 0.00              | 598,466.54       | 678,430.20      |
| 11,800.00      | 90.00      | 269.71               | 5,918.10      | 9,550.00    | -12.46      | -2,454.90   | 2,454.93       | 0.00              | 598,466.04       | 678,330.21      |
| 11,900.00      | 90.00      | 269.71               | 5,918.10      | 9,550.00    | -12.97      | -2,554.90   | 2,554.93       | 0.00              | 598,465.53       | 678,230.21      |
| 12,000.00      | 90.00      | 269.71               | 5,918.10      | 9,550.00    | -13.48      | -2,654.90   | 2,654.93       | 0.00              | 598,465.02       | 678,130.21      |
| 12,100.00      | 90.00      | 269.71               | 5,918.10      | 9,550.00    | -13.99      | -2,754.89   | 2,754.93       | 0.00              | 598,464.51       | 678,030.21      |
| 12,200.00      | 90.00      | 269.71               | 5,918.10      | 9,550.00    | -14.49      | -2,854.89   | 2,854.93       | 0.00              | 598,464.01       | 677,930.21      |
| 12,300.00      | 90.00      | 269.71               | 5,918.10      | 9,550.00    | -15.00      | -2,954.89   | 2,954.93       | 0.00              | 598,463.50       | 677,830.21      |
| 12,400.00      | 90.00      | 269.71               | 5,918.10      | 9,550.00    | -15.51      | -3,054.89   | 3,054.93       | 0.00              | 598,462.99       | 677,730.22      |
| 12,500.00      | 90.00      | 269.71               | 5,918.10      | 9,550.00    | -16.02      | -3,154.89   | 3,154.93       | 0.00              | 598,462.48       | 677,630.22      |
| 12,600.00      | 90.00      | 269.71               | 5,918.10      | 9,550.00    | -16.52      | -3,254.89   | 3,254.93       | 0.00              | 598,461.98       | 677,530.22      |
| 12,700.00      | 90.00      | 269.71               | 5,918.10      | 9,550.00    | -17.03      | -3,354.89   | 3,354.93       | 0.00              | 598,461.47       | 677,430.22      |
| 12,800.00      | 90.00      | 269.71               | 5,918.10      | 9,550.00    | -17.54      | -3,454.89   | 3,454.93       | 0.00              | 598,460.96       | 677,330.22      |
| 12,900.00      | 90.00      | 269.71               | 5,918.10      | 9,550.00    | -18.05      | -3,554.88   | 3,554.93       | 0.00              | 598,460.45       | 677,230.22      |
| 13,000.00      | 90.00      | 269.71               | 5,918.10      | 9,550.00    | -18.55      | -3,654.88   | 3,654.93       | 0.00              | 598,459.95       | 677,130.22      |

Phoenix Technology Services  
EOG Resources



|                  |                        |                                     |                                                |
|------------------|------------------------|-------------------------------------|------------------------------------------------|
| <b>Company:</b>  | EOG Resources          | <b>Local Co-ordinate Reference:</b> | Well Lusk 22 Fed 4H                            |
| <b>Project:</b>  | Lea County, NM (Nad27) | <b>TVD Reference:</b>               | WELL @ 3631.90ft (Original Well Elev + 30' KB) |
| <b>Site:</b>     | Lusk 22 Federal        | <b>MD Reference:</b>                | WELL @ 3631.90ft (Original Well Elev + 30' KB) |
| <b>Well:</b>     | Lusk 22 Fed 4H         | <b>North Reference:</b>             | Grid                                           |
| <b>Wellbore:</b> | Wellbore #1            | <b>Survey Calculation Method:</b>   | Minimum Curvature                              |
| <b>Design:</b>   | Plan #1 092011         | <b>Database:</b>                    | GCR3                                           |

| Planned Survey |            |                      |               |             |             |             |                |                   |                  |                 |
|----------------|------------|----------------------|---------------|-------------|-------------|-------------|----------------|-------------------|------------------|-----------------|
| MD<br>(ft)     | Inc<br>(°) | Azi (azimuth)<br>(°) | TVDSS<br>(ft) | TVD<br>(ft) | N/S<br>(ft) | E/W<br>(ft) | V. Sec<br>(ft) | DLeg<br>(°/100ft) | Northing<br>(ft) | Easting<br>(ft) |
| 13,100.00      | 90.00      | 269.71               | 5,918.10      | 9,550.00    | -19.06      | -3,754.88   | 3,754.93       | 0.00              | 598,459.44       | 677,030.23      |
| 13,200.00      | 90.00      | 269.71               | 5,918.10      | 9,550.00    | -19.57      | -3,854.88   | 3,854.93       | 0.00              | 598,458.93       | 676,930.23      |
| 13,300.00      | 90.00      | 269.71               | 5,918.10      | 9,550.00    | -20.08      | -3,954.88   | 3,954.93       | 0.00              | 598,458.42       | 676,830.23      |
| 13,400.00      | 90.00      | 269.71               | 5,918.10      | 9,550.00    | -20.59      | -4,054.88   | 4,054.93       | 0.00              | 598,457.91       | 676,730.23      |
| 13,500.00      | 90.00      | 269.71               | 5,918.10      | 9,550.00    | -21.09      | -4,154.88   | 4,154.93       | 0.00              | 598,457.41       | 676,630.23      |
| 13,600.00      | 90.00      | 269.71               | 5,918.10      | 9,550.00    | -21.60      | -4,254.88   | 4,254.93       | 0.00              | 598,456.90       | 676,530.23      |
| 13,700.00      | 90.00      | 269.71               | 5,918.10      | 9,550.00    | -22.11      | -4,354.87   | 4,354.93       | 0.00              | 598,456.39       | 676,430.23      |
| 13,800.00      | 90.00      | 269.71               | 5,918.10      | 9,550.00    | -22.62      | -4,454.87   | 4,454.93       | 0.00              | 598,455.88       | 676,330.24      |
| 13,900.00      | 90.00      | 269.71               | 5,918.10      | 9,550.00    | -23.12      | -4,554.87   | 4,554.93       | 0.00              | 598,455.38       | 676,230.24      |
| 13,974.14      | 90.00      | 269.71               | 5,918.10      | 9,550.00    | -23.50      | -4,629.01   | 4,629.07       | 0.00              | 598,455.00       | 676,156.10      |
| TD @ 13974' MD |            |                      |               |             |             |             |                |                   |                  |                 |

| Plan Annotations          |                           |                   |               |                                 |
|---------------------------|---------------------------|-------------------|---------------|---------------------------------|
| Measured<br>Depth<br>(ft) | Vertical<br>Depth<br>(ft) | Local Coordinates |               | Comment                         |
|                           |                           | +N/-S<br>(ft)     | +E/-W<br>(ft) |                                 |
| 9,072.53                  | 9,072.53                  | 0.00              | 0.00          | Start 12°/100' Build @ 9072' MD |
| 9,822.54                  | 9,550.00                  | -2.42             | -477.46       | Start 4151' Hold @ 9822' MD     |
| 13,974.14                 | 9,550.00                  | -23.50            | -4,629.01     | TD @ 13974' MD                  |

Checked By: \_\_\_\_\_ Approved By: \_\_\_\_\_ Date: \_\_\_\_\_

**EOG RESOURCES, INC.**  
**LUSK FED #4H**

ATTACHMENT TO EXHIBIT #1

1. Wear ring to be properly installed in head.
2. Blow out preventer and all fittings must be in good condition, 5000 psi W.P. minimum. Exhibit #1.
3. All fittings to be flanged
4. Safety valve must be available on rig floor at all times with proper connections, valve to be full bore 5000 psi W.P. minimum.
5. All choke and fill lines to be securely anchored especially ends of choke lines.
6. Equipment through which bit must pass shall be at least as large as the diameter of the casing being drilled through.
7. Kelly cock on kelly.
8. Extension wrenches and hand wheels to be properly installed.
9. Blow out preventer control to be located as close to driller's position as feasible.
10. Blow out preventer closing equipment to include minimum 40-gallon accumulator, two independent sources of pump power on each closing unit installation, and meet all API specifications.

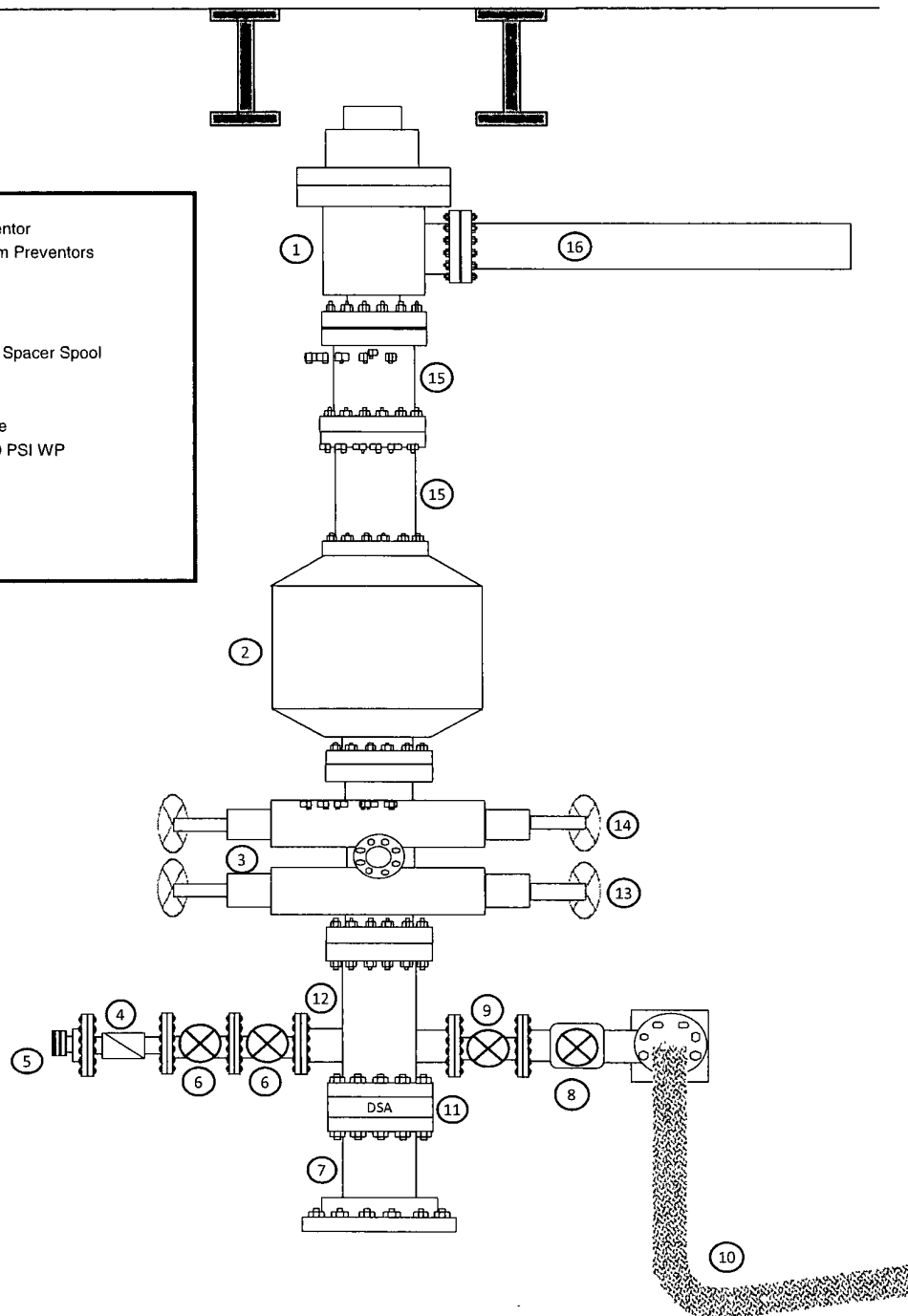
# EOG Resources

## Cactus #123

### Exhibit #1

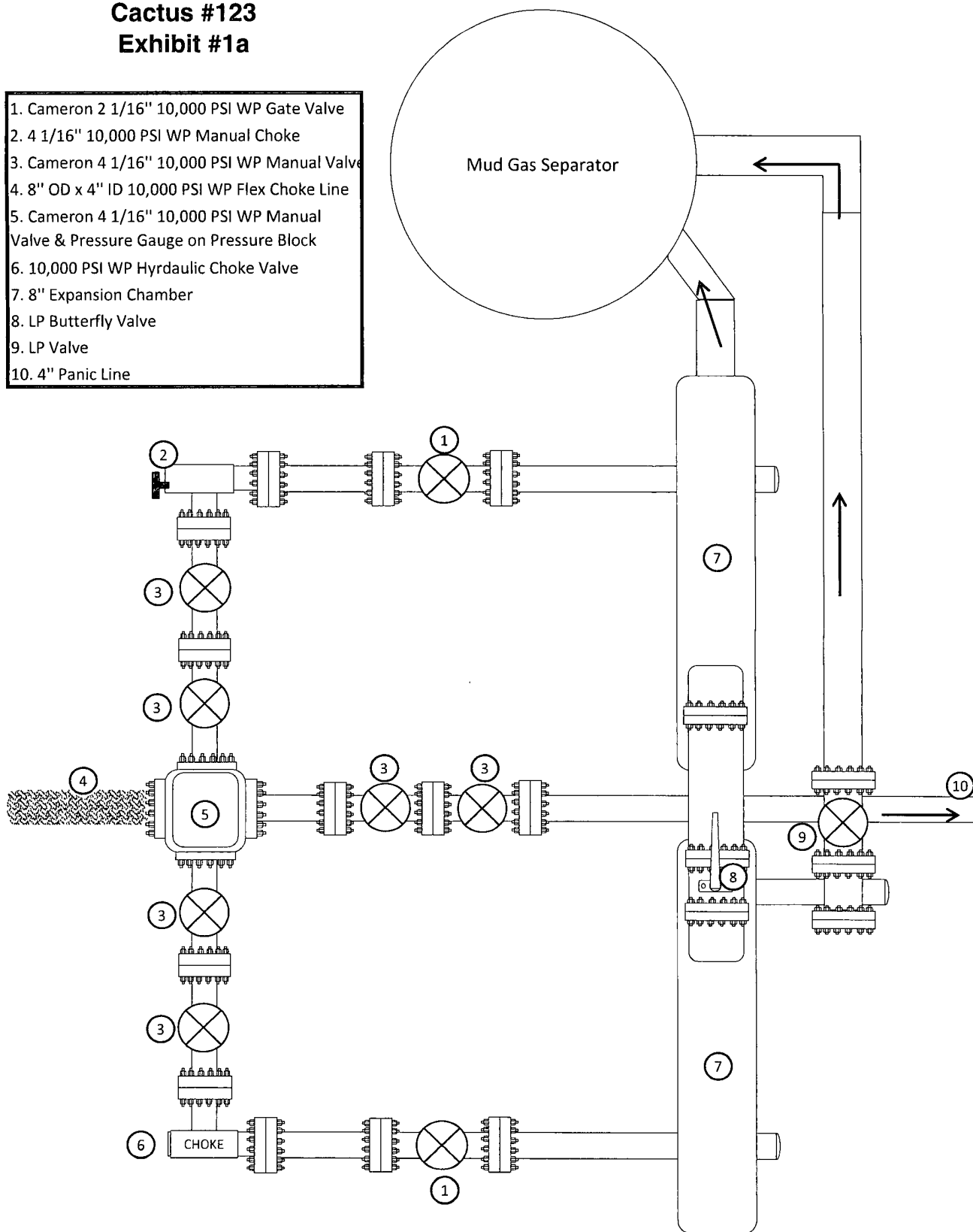
Rig Floor

1. 13 5/8" Rotating Head
2. Hydril 13 5/8" 5,000 PSI WP GK Annular Preventor
3. 13 5/8" Cameron Type "U" 10,000 PSI WP Ram Preventors
4. 2 1/16" - 10,000 PSI WP Check Valve
5. 10,000 PSI WP - 1502 Union to kill line
6. 2 1/16" - 10,000 PSI WP Manual Valves
7. 13 5/8" 3,000 PSI WP x 13 5/8" 5,000 PSI WP Spacer Spool
8. 4 1/16" 10,000 PSI WP HCR Valve
9. 4 1/16" 10,000 PSI WP Manual Valve
10. 8" OD x 4" ID 10,000 PSI WP Flex Choke Line
11. DSA - 13 5/8" 10,000 PSI WP x 13 5/8" 5,000 PSI WP
12. Mud Cross - 13 5/8" 10,000 PSI WP
13. Blind Rams
14. Pipe Rams
15. 13 5/8" 5,000 PSI WP Spacer Spools
16. Flow Line

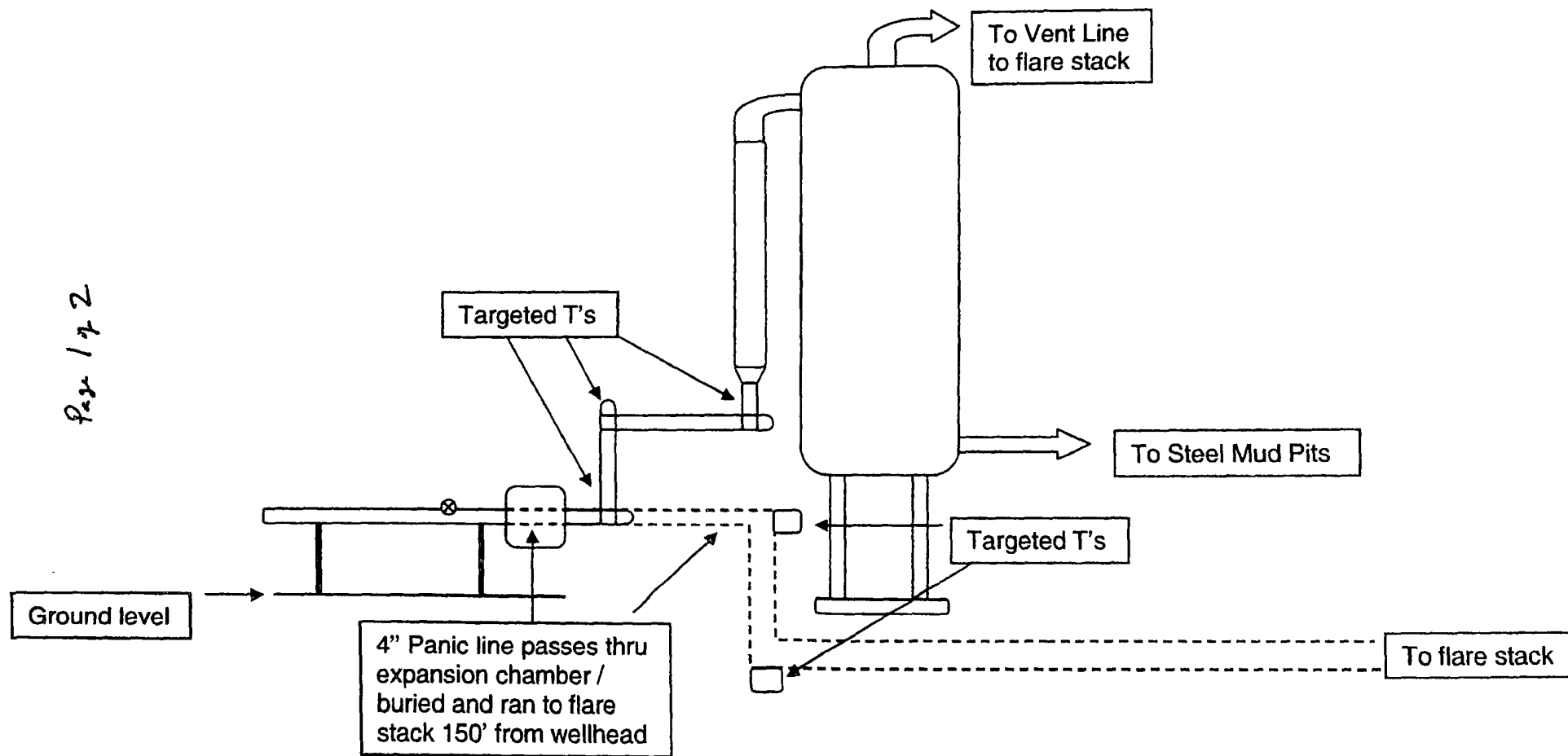


**EOG Resources**  
**Cactus #123**  
**Exhibit #1a**

1. Cameron 2 1/16" 10,000 PSI WP Gate Valve
2. 4 1/16" 10,000 PSI WP Manual Choke
3. Cameron 4 1/16" 10,000 PSI WP Manual Valve
4. 8" OD x 4" ID 10,000 PSI WP Flex Choke Line
5. Cameron 4 1/16" 10,000 PSI WP Manual Valve & Pressure Gauge on Pressure Block
6. 10,000 PSI WP Hydraulic Choke Valve
7. 8" Expansion Chamber
8. LP Butterfly Valve
9. LP Valve
10. 4" Panic Line

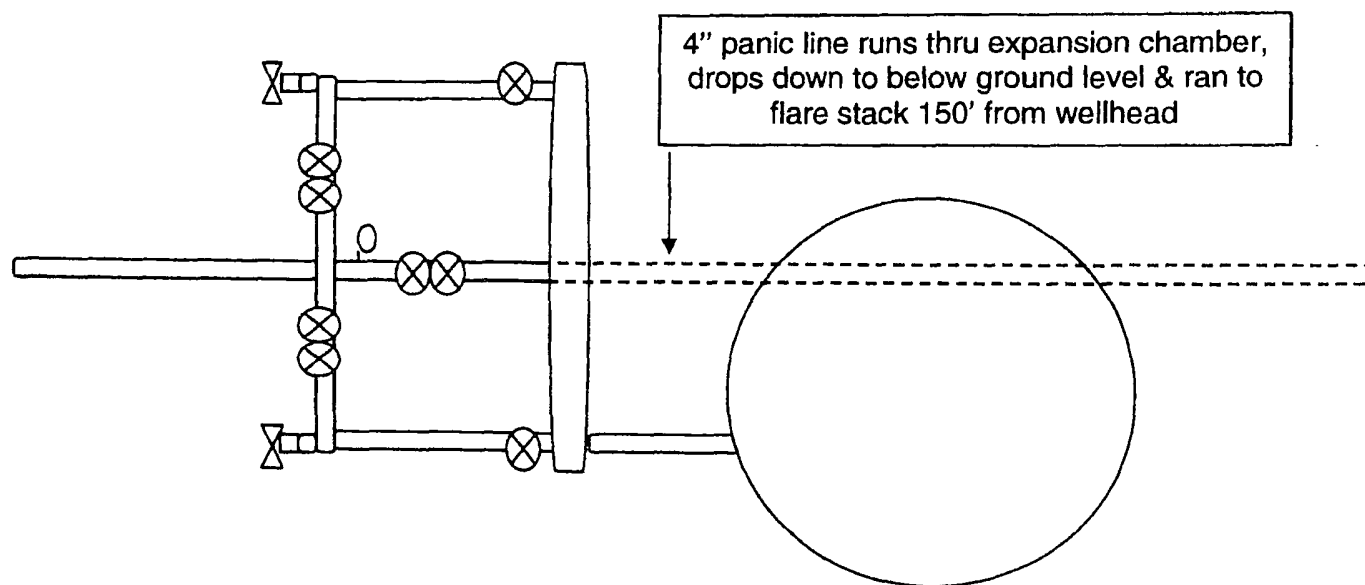


Profile View of Piping from Choke Manifold to the Mud Gas Separator



Page 2 of 2

Aerial View of the Piping from the Choke  
Manifold to the Mud Gas Separator



**Manufacturer: Midwest Hose & Specialty**

**Serial Number: SN#90067**

**Length: 35'**

**Size: OD = 8" ID = 4"**

**Ends: Flanges Size: 4-1/16"**

**WP Rating: 10,000 psi    Anchors required by manufacturer: No**

**M I D W E S T**  
**HOSE AND SPECIALTY INC.**

| <b>INTERNAL HYDROSTATIC TEST REPORT</b>                                                                                                                                                                             |                                    |                                                    |                                   |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|----------------------------------------------------|-----------------------------------|
| <b>Customer:</b><br>CACTUS                                                                                                                                                                                          |                                    | <b>P.O. Number:</b><br>RIG #123<br>Asset # M10761  |                                   |
| <b>HOSE SPECIFICATIONS</b>                                                                                                                                                                                          |                                    |                                                    |                                   |
| <b>Type:</b> CHOKER LINE                                                                                                                                                                                            |                                    | <b>Length:</b> 35'                                 |                                   |
| <b>I.D.</b> 4" INCHES                                                                                                                                                                                               |                                    | <b>O.D.</b> 8" INCHES                              |                                   |
| <b>WORKING PRESSURE</b><br>10,000 PSI                                                                                                                                                                               | <b>TEST PRESSURE</b><br>15,000 PSI | <b>BURST PRESSURE</b><br>PSI                       |                                   |
| <b>COUPLINGS</b>                                                                                                                                                                                                    |                                    |                                                    |                                   |
| <b>Type of End Fitting</b><br>4 1/16 10K FLANGE                                                                                                                                                                     |                                    |                                                    |                                   |
| <b>Type of Coupling:</b><br>SWEDGED                                                                                                                                                                                 |                                    | <b>MANUFACTURED BY</b><br>MIDWEST HOSE & SPECIALTY |                                   |
| <b>PROCEDURE</b>                                                                                                                                                                                                    |                                    |                                                    |                                   |
| <i>Hose assembly pressure tested with water at ambient temperature.</i>                                                                                                                                             |                                    |                                                    |                                   |
| <b>TIME HELD AT TEST PRESSURE</b><br>1 MIN.                                                                                                                                                                         |                                    | <b>ACTUAL BURST PRESSURE:</b><br>0 PSI             |                                   |
| <b>COMMENTS:</b><br>SN#90087 M10761<br>Hose is covered with stainless steel armour cover and wrapped with fire resistant vermiculite coated fiberglass insulation rated for 1500 degrees complete with lifting eyes |                                    |                                                    |                                   |
| <b>Date:</b><br>6/6/2011                                                                                                                                                                                            | <b>Tested By:</b><br>BOBBY FINK    |                                                    | <b>Approved:</b><br>MENDI JACKSON |

# Closure Plan for Closed Loop Drilling System

## **1. METHODS OF HANDLING WASTE MATERIALS**

- a. Drill cuttings shall be disposed of in steel cuttings bins (catch tanks) on the drilling pad (behind the steel mud tanks). The bin and cuttings shall be hauled to a division approved facility by an approved transporter. At the facility, the cuttings shall be removed from the bin and the bin shall be returned to the drilling site for reuse, moved to the next drilling site or returned to the provider.
- b. Remaining drilling fluids shall be hauled off by approved transports to a division approved disposal facility. Water produced during completion shall be put in storage tanks and disposed of at a division approved facility. Oil and condensate produced shall be put in a storage tank and sold or put in a sales pipeline.

## **2. RECLAMATION**

- a. Within 120 days after the drilling and completion of the well, the location area shall be reduced as determined by operator to the minimum area necessary to safely and effectively operate the well. The reclaimed location area shall be restored to the condition that existed prior to oil and gas operations.

# OPERATING AND MAINTENANCE PLAN – CLOSED LOOP SYSTEM

## 19.15.17.12 OPERATIONAL REQUIREMENTS:

A. General specifications. An operator shall maintain and operate a pit, closed-loop system, below-grade tank or sump in accordance with the following requirements.

(1) The operator shall operate and maintain a pit, closed-loop system, below-grade tank or sump to contain liquids and solids and maintain the integrity of the liner, liner system or secondary containment system. prevent contamination of fresh water and protect public health and the environment.

Operator shall operate and maintain a closed loop system.

(2) The operator shall recycle, reuse or reclaim all drilling fluids in a manner that prevents the contamination of fresh water and protects public health and the environment.

Operator shall recycle, reuse or reclaim all drilling fluids used. Excess or unused fluid shall be disposed of at division approved facilities.

(3) The operator shall not discharge into or store any hazardous waste in a pit, closed-loop system, below-grade tank or sump.

Operator shall not knowingly discharge hazardous waste into the closed loop system.

(4) If the integrity of the pit liner is compromised, or if any penetration of the liner occurs above the liquid's surface, then the operator shall notify the appropriate division district office within 48 hours of the discovery and repair the damage or replace the liner.

No Pit liner. Closed loop system.

(5) If a lined pit develops a leak, or if any penetration of the liner occurs below the liquid's surface, then the operator shall remove all liquid above the damage or leak line from the pit within 48 hours and repair the damage or replace the liner.

No Pit liner. Closed loop system. If a leak develops in any of the closed loop tanks, all liquid shall be removed from the effected tank within 48 hours and any damage shall be repaired prior to putting the tank back in service.

## OPERATING AND MAINTENANCE PLAN – CLOSED LOOP SYSTEM

(6) The operator shall install a level measuring device in a lined pit containing fluids to monitor the level of the fluid surface, so that the operator may recognize unanticipated change in volume of fluids.

No pit. Closed loop system. Excess fluid shall be removed appropriately from the catch tanks.

(7) The injection or withdrawal of liquids from a lined pit shall be accomplished through a header, diverter or other hardware that prevents damage to the liner by erosion, fluid jets or impact from installation and removal of hoses or pipes.

No pit. Closed loop system. Excess fluid shall be removed appropriately from the catch tanks using a re-circulating pump or vacuum trucks.

(8) The operator shall operate and install a pit, below-grade tank or sump to prevent the collection of surface water run-on.

Operator shall berm or collect surface water run- on and dispose of at a division approved facility.

(9) The operator shall install, or maintain on site, an oil absorbent boom or other device to contain and remove oil from a pit's surface.

Operator shall install a skimmer system on catch tanks, circulating tanks and over-flow tanks as needed to collect oil.