

HOBBS OCD

SEP 20 2012

Form 3160-3  
(April 2004)UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENTRECEIVED  
OCD HobbsFORM APPROVED  
OMB No. 1004-0137  
Expires March 31, 2007

## APPLICATION FOR PERMIT TO DRILL OR REENTER

|                                                                                                                                                                                                                       |                                                   |                                                                                                                                |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|
| 1a Type of Work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER                                                                                                                           |                                                   | 5. Lease Serial No.<br>NMNM 127895                                                                                             |
| 1b Type of Well: <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other <input checked="" type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone |                                                   | 6. If Indian, Allottee or Tribe Name                                                                                           |
| 2. Name of Operator<br>Cimarex Energy Co.                                                                                                                                                                             |                                                   | 7. If Unit or CA Agreement, Name and No.                                                                                       |
| 3a. Address<br>600 N. Marienfeld St. Ste. 600 Midland Tx 79701                                                                                                                                                        | 3b. Phone No. (include area code)<br>432-571-7800 | 8. Lease Name and Well No.<br>Double X 25 Federal No. 2 #39348                                                                 |
| 4. Location of Well (Report location clearly and in accordance with any State requirements. *)<br>At Surface 330 FNL & 735 FWL Unit D<br>At proposed prod Zone 330 FSL & 990 FWL Unit M Horizontal Bone Spring test   |                                                   | 9. API Well No.<br>30-025-40763                                                                                                |
| 14. Distance in miles and direction from nearest town or post office*                                                                                                                                                 |                                                   | 10. Field and Pool, or Exploratory<br>WC-025-5-06 5253201M;<br>11. Sec., T. R. M. or Blk. and Survey or Area<br>AS UPPER SHALE |
| 15. Distance from proposed* location to nearest property or lease line, ft (Also to nearest drig. unit line if any) 330'                                                                                              | 16. No of acres in lease<br>640 acres             | 12. County or Parish<br>Lea                                                                                                    |
| 18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 150' from #1                                                                                               | 19. Proposed Depth<br>MD 15482' TVD 10975'        | 13. State<br>NM                                                                                                                |
| 21. Elevations (Show whether DF, KDB, RT, GL, etc.)<br>3583' GR                                                                                                                                                       | 22. Approximate date work will start*<br>02.01.13 | 17. Spacing Unit dedicated to this well<br>W2W2 160 acres                                                                      |
| 23. Estimated duration<br>25-30 days                                                                                                                                                                                  |                                                   | 20. BLM/BIA Bond No. on File<br>COB000011                                                                                      |

## 24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, shall 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 shall be filed with the appropriate Forest Service Office). | 6. Such other site specific information and/or plans as may be required by the authorized officer |

|                                             |                                          |                     |
|---------------------------------------------|------------------------------------------|---------------------|
| 25. Signature<br>                           | Name (Printed/Typed)<br>Terri Stathem    | Date<br>5.9.12      |
| Title<br>Regulatory Analyst                 |                                          |                     |
| Approved By (Signature)<br>/s/ Don Peterson | Name (Printed/Typed)<br>/s/ Don Peterson | Date<br>SEP 18 2012 |
| Title<br>FIELD MANAGER                      | Office<br>CARLSBAD FIELD OFFICE          |                     |

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

Title 18 U.S.S. 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.

\* (Instructions on page 2)

APPROVAL FOR TWO YEARS

K 09/24/12 Carlsbad Controlled Water Basin

SEE ATTACHED FOR  
CONDITIONS OF APPROVALApproval Subject to General Requirements  
& Special Stipulations Attached

SEP 25 2012

**Drilling Plan**  
**Double X 25 Federal No. 2**  
 Cimarex Energy Co.  
 Unit D, Section 25  
 T24S-R32E, Lea County, NM

In response to questions asked under Section II B of Bulletin NTL-6, the following information is provided for your consideration:

- 1 **Location:** SHL 330 FNL & 735 FWL  
 BHL 330 FSL & 990 FWL
- 2 **Elevation above sea level:** 3583' GR
- 3 **Geologic name of surface formation:** Quaternary Alluvium Deposits
- 4 **Drilling tools and associated equipment:** Conventional rotary drilling rig using fluid as a circulating medium for solids removal.
- 5 **Proposed drilling depth:** MD 15482' TVD 9725'
- 6 **Estimated tops of geological markers:**

|                |        |
|----------------|--------|
| Rustler        | 1080'  |
| Top of Salt    | 1400'  |
| Castile        | 3400'  |
| Base of Salt   | 4680'  |
| Delaware Sands | 5000'  |
| Brushy Canyon  | 8660'  |
| Bone Spring    | 8900'  |
| Avalon         | 9275'  |
| FBSS           | 10000' |
- 7 **Possible mineral bearing formations:**

|             |     |
|-------------|-----|
| Bone Spring | Oil |
| Delaware    | Oil |

8 **Proposed Mud Circulating System:**

| Depth                           | Mud Wt    | Visc  | Fluid Loss | Type Mud                                           |
|---------------------------------|-----------|-------|------------|----------------------------------------------------|
| 0' to <del>1125'</del><br>1195' | 8.4 - 8.6 | 28    | NC         | FW                                                 |
| 1125' to 4900'                  | 10.0      | 30-32 | NC         | Brine                                              |
| 4900' to 10689'                 | 8.4-9.0   | 28-29 | NC         | FW and brine, use hi-vis sweeps to keep hole clean |
| 10689' to 15482'                | 8.5-9.5   | 27-45 | NC         | 2% KCL                                             |

Sufficient mud materials will be kept on location at all times in order to combat lost circulation or unexpected kicks. In order to run DSTs, open hole logs, and casing, the viscosity and water loss may have to be adjusted in order to meet these needs.

**Proposed drilling Plan**

Drill 8¾" hole to 10689'. Continue drilling lateral through the curve to TD @ 15482' MD, 10925' TVD. Run 5½" 17# P-110 LTC from 0-15482' and cement.

**Drilling Plan**  
**Double X 25 Federal No. 2**  
 Cimarex Energy Co.  
 Unit D, Section 25  
 T24S-R32E, Lea County, NM

**9 Casing & Cementing Program:**

| String       | Hole Size        | Depth        | Casing OD   | Weight | Collar | Grade |
|--------------|------------------|--------------|-------------|--------|--------|-------|
| Surface 1    | 17 1/2"          | 0' to 1125'  | New 13 3/8" | 48#    | STC    | H-40  |
| Intermediate | 12 1/4"          | 0' to 4900'  | New 9 5/8"  | 40#    | LTC    | J-55  |
| Production   | 7 7/8" or 8 3/4" | 0' to 15482' | New 5 1/2"  | 17#    | LTC    | P-110 |

**10 Cementing:**

**Surface** Lead: 545SKS Halcem C + 4% Bentomite + 2% CaCl 13.5ppg 1.75 yield 100% Excess  
 Tail: 420SKS Halcem C + 2% CaCl 14.2ppg 1.34 yield 50% Excess  
**TOC Surface Centralizers per Onshorder 2.III.B.1.f**

**Intermediate** Lead: 1655SKS Econocem + 5% Salt + 5# Gilsonite 14.6ppg 1.54 yield 70% Excess  
 Tail: 200SKS Halcem + 1% CaCl 14.8ppg 1.34 yield 25% Excess  
**TOC Surface**

**Production** Lead: 1030SKS Econocem H + 0.5% CFR-3 + 0.1% HR-601 11.9ppg 2.44 yield 50% Excess  
 Tail: 1305SKS Versacem H + 0.5% Halad-344 + 0.4% CFR-3 + 1# Salt + 0.1% HR-601 14.5ppg 1.22 yield 25% Excess  
 Cement volumes will be adjusted according to hole size.  
**TOC 3800' Centralizers every 3rd joint in lateral to provide adequate cement coverage every 100' unless lateral doglegs require greater spacing between centralizers.**

According to the NM State Engineer, depth to ground water is 100 feet. Fresh water zones will be protected by setting 13 3/8" casing at 1125' and 9 5/8" casing at 4900' and cementing to surface. Hydrocarbon zones will be protected by setting 5 1/2" casing at 14400' and cementing to 3800'.

| <u>Collapse Factor</u> | <u>Burst Factor</u> | <u>Tension Factor</u> |
|------------------------|---------------------|-----------------------|
| 1.125                  | 1.125               | 1.6                   |

**11 Pressure control Equipment:**

Exhibit "E". A 13 3/4" 5000 PSI working pressure B.O.P. consisting of one set of 10K blind rams and two sets of 10K pipe rams and a 5000# annular type preventer. A choke manifold and 120 gallon accumulator with floor and remote operating stations and auxiliary power system. Rotating head below 4900'. A kelly cock will be installed and maintained in operable condition and a drill string safety valve in the open position will be available on the rig floor. Mud gas separator will be available if drilling in H2S areas.

BOP unit will be hydraulically operated. BOP will be nipped up and operated at least once a day while drilling and the blind rams will be operated when out of hole during trips. No abnormal pressure or temperature is expected while drilling.

Before drilling out of the surface casing BOPs will be tested to 250 psi low and 3000 psi high by an independent service company. Hydril will be tested to 250 psi low and 1500 psi high. Before drilling out of the intermediate casing BOPs will be tested to 250 psi low and 5000 psi high. Hydril will be tested to 250 psi low and 2500 high.

Cimarex Energy Co. of Colorado (operator) requests a variance if Scandril Eagle (rig name) is used to drill this well to use a co-flex line between the BOP and choke manifold.

Manufacturer: Gates E&S North America

Serial Number: L31853011112

Length: 35' Size: 3-1/16" Ends - flanges/clamps

WP rating: 10,000 psi Anchors required by manufacturer - Yes/No

**Drilling Plan**  
**Double X 25 Federal No. 2**  
Cimarex Energy Co.  
Unit D, Section 25  
T24S-R32E, Lea County, NM

**12 Testing, Logging and Coring Program:** *See CCA*

- A. Mud logging program: 2 man unit from 4900 to TD
- B. Electric logging program: CNL / LDT / CAL / GR, DLL / CAL / GR Surface to TD
- C. No DSTs or cores are planned at this time.

**13 Potential Hazards:**

No abnormal pressures or temperatures are expected. In accordance with Onshore Order 6, Cimarex does not anticipate that there will be enough H<sub>2</sub>S from the surface to the Bone Spring formations to meet the BLM's minimum requirements for the submission of an "H<sub>2</sub>S Drilling Operation Plan" or "Public Protection Plan" for the drilling and completion of this well. Since we have an H<sub>2</sub>S Safety package on all wells, attached is an "H<sub>2</sub>S Drilling Operations Plan." Adequate flare lines will be installed off the mud / gas separator where gas may be flared safely. All personnel will be familiar with all aspects of safe operation of equipment being used.

Estimated BHP      **4940 psi**      Estimated BHT      **130°**

**14 Road and location construction will begin after BLM approval of APD. Anticipated spud date as soon as approved.**

Drilling expected to take      30-35 days

If production casing is run an additional 30 days will be required to complete and construct surface facilities.

**15 Other Facets of Operations:**

After running casing, cased hole gamma ray neutron collar logs will be run from total depth over possible pay intervals.

Bone Spring pay will be perforated and stimulated.

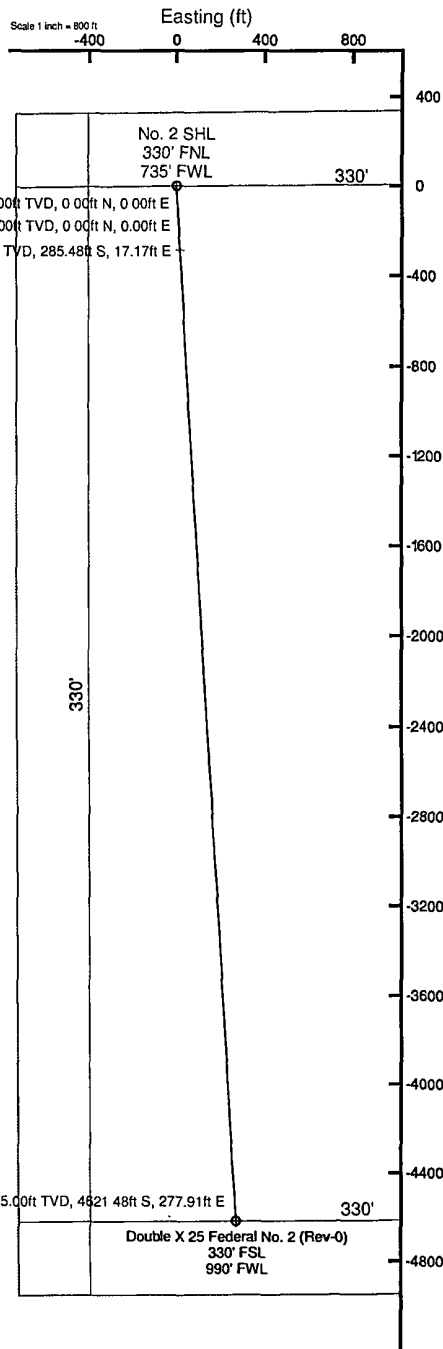
The proposed well will be tested and potentialized as      **an oil well.**



# Cimarex Energy Co.

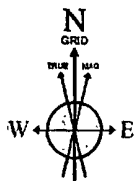
Location: Lea County, NM  
Field: (Double X)Sec 25, T24S, R32E  
Facility: Double X 25 Federal No. 2

Slot: No. 2 SHL  
Well: No. 2  
Wellbore: No. 2 PWB

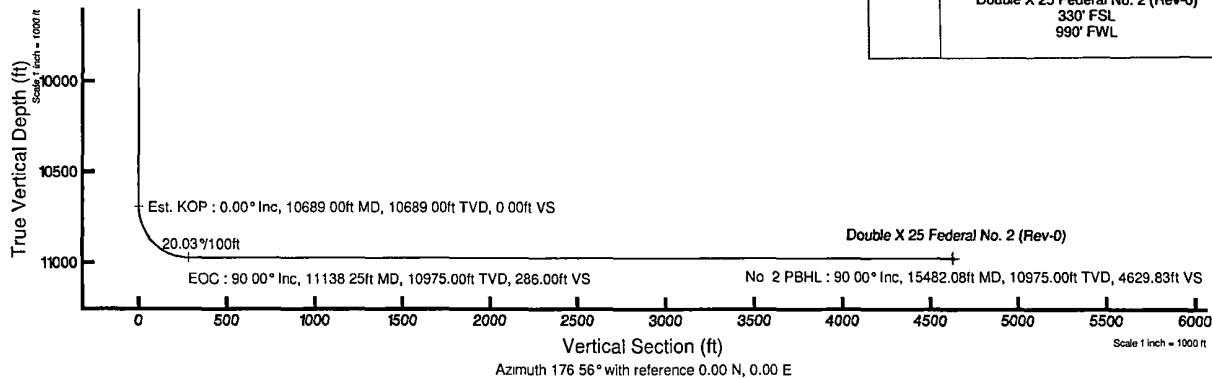


| Well Profile Data |          |         |         |          |              |              |         |
|-------------------|----------|---------|---------|----------|--------------|--------------|---------|
| Design Comment    | MD (ft)  | Inc (°) | Az (°)  | TVD (ft) | Local N (ft) | Local E (ft) | VS (ft) |
| Tie On            | 0.00     | 0.000   | 176.559 | 0.00     | 0.00         | 0.00         | 0.00    |
| Est. KOP          | 10689.00 | 0.000   | 176.559 | 10689.00 | 0.00         | 0.00         | 0.00    |
| EOC               | 11138.25 | 90.000  | 176.559 | 10975.00 | -285.48      | 17.17        | 286.00  |
| No. 2 PWB         | 15482.08 | 90.000  | 176.559 | 10975.00 | -4621.48     | 277.91       | 4629.83 |

|                                                              |                                                                     |
|--------------------------------------------------------------|---------------------------------------------------------------------|
| Plot reference wellpath is Rev-A 0                           |                                                                     |
| True vertical depths are referenced to Rig on No. 2 SHL (RT) | Grid System: NAD83 / TM New Mexico SP, Eastern Zone (3001), US feet |
| Measured depths are referenced to Rig on No. 2 SHL (RT)      | North Reference: Grid north                                         |
| Rig on No. 2 SHL (RT) to Mean Sea Level: 3583 feet           | Scale: True distance                                                |
| Mean Sea Level to Mud line (At Slot No. 2 SHL): -3583 feet   | Depths are in feet                                                  |
| Coordinates are in feet referenced to Slot                   | Created by: hankol on 4/18/2012                                     |



BGGM (1945.0 to 2013.0) Dip: 60.09° Field: 48509.7 nT  
Magnetic North is 7.59 degrees East of True North (at 4/18/2012)  
Grid North is 0.37 degrees East of True North  
To correct azimuth from True to Grid subtract 0.37 degrees  
To correct azimuth from Magnetic to Grid add 7.22 degrees  
For example if the Magnetic North Azimuth = 90 degs, then the Grid North Azimuth = 90 + 7.22 = 97.22





# Planned Wellpath Report

Rev-A.0  
Page 1 of 6



| REFERENCE WELLPATH IDENTIFICATION |                              |          |           |
|-----------------------------------|------------------------------|----------|-----------|
| Operator                          | Cimarex Energy Co.           | Slot     | No. 2 SHL |
| Area                              | Lea County, NM               | Well     | No. 2     |
| Field                             | (Double X)Sec 25, T24S, R32E | Wellbore | No. 2 PWB |
| Facility                          | Double X 25 Federal No. 2    |          |           |

| REPORT SETUP INFORMATION |                                                        |                      |                          |
|--------------------------|--------------------------------------------------------|----------------------|--------------------------|
| Projection System        | NAD83 / TM New Mexico SP, Eastern Zone (3001), US feet | Software System      | WellArchitect® 3.0.0     |
| North Reference          | Grid                                                   | User                 | Harrkol                  |
| Scale                    | 0.999963                                               | Report Generated     | 4/18/2012 at 3:25:52 PM  |
| Convergence at slot      | 0.37° East                                             | Database/Source file | WA Midland/No. 2_PWB.xml |

| WELLPATH LOCATION     |                   |          |                  |                 |                        |                 |
|-----------------------|-------------------|----------|------------------|-----------------|------------------------|-----------------|
|                       | Local coordinates |          | Grid coordinates |                 | Geographic coordinates |                 |
|                       | North[ft]         | East[ft] | Easting[US ft]   | Northing[US ft] | Latitude               | Longitude       |
| Slot Location         | 0.00              | 0.00     | 757517.00        | 435383.20       | 32°11'42.053"N         | 103°38'04.119"W |
| Facility Reference Pt |                   |          | 757517.00        | 435383.20       | 32°11'42.053"N         | 103°38'04.119"W |
| Field Reference Pt    |                   |          | 758836.50        | 435394.30       | 32°11'42.077"N         | 103°37'48.763"W |

| WELLPATH DATUM           |                       |                                                       |                   |
|--------------------------|-----------------------|-------------------------------------------------------|-------------------|
| Calculation method       | Minimum curvature     | Rig on No. 2 SHL (RT) to Facility Vertical Datum      | 0.00ft            |
| Horizontal Reference Pt  | Slot                  | Rig on No. 2 SHL (RT) to Mean Sea Level               | 3583.00ft         |
| Vertical Reference Pt    | Rig on No. 2 SHL (RT) | Rig on No. 2 SHL (RT) to Mud Line at Slot (No. 2 SHL) | 0.00ft            |
| MD Reference Pt          | Rig on No. 2 SHL (RT) | Section Origin                                        | N 0.00, E 0.00 ft |
| Field Vertical Reference | Mean Sea Level        | Section Azimuth                                       | 176.56°           |



# Planned Wellpath Report

Rev-A.0

Page 2 of 6



| REFERENCE WELLPATH IDENTIFICATION |                              |          |           |
|-----------------------------------|------------------------------|----------|-----------|
| Operator                          | Cimarex Energy Co.           | Slot     | No. 2 SHL |
| Area                              | Lea County, NM               | Well     | No. 2     |
| Field                             | (Double X)Sec 25, T24S, R32E | Wellbore | No. 2 PWB |
| Facility                          | Double X 25 Federal No. 2    |          |           |

| WELLPATH DATA (161 stations) † = interpolated/extrapolated station |                 |             |          |                |            |           |                   |                    |                |                 |               |          |
|--------------------------------------------------------------------|-----------------|-------------|----------|----------------|------------|-----------|-------------------|--------------------|----------------|-----------------|---------------|----------|
| MD [ft]                                                            | Inclination [°] | Azimuth [°] | TVD [ft] | Vert Sect [ft] | North [ft] | East [ft] | Grid East [US ft] | Grid North [US ft] | Latitude       | Longitude       | DLS [°/100ft] | Comments |
| 0.00                                                               | 0.000           | 176.559     | 0.00     | 0.00           | 0.00       | 0.00      | 757517.00         | 435383.20          | 32°11'42.053"N | 103°38'04.119"W | 0.00          | Tie On   |
| 100.00†                                                            | 0.000           | 176.559     | 100.00   | 0.00           | 0.00       | 0.00      | 757517.00         | 435383.20          | 32°11'42.053"N | 103°38'04.119"W | 0.00          |          |
| 200.00†                                                            | 0.000           | 176.559     | 200.00   | 0.00           | 0.00       | 0.00      | 757517.00         | 435383.20          | 32°11'42.053"N | 103°38'04.119"W | 0.00          |          |
| 300.00†                                                            | 0.000           | 176.559     | 300.00   | 0.00           | 0.00       | 0.00      | 757517.00         | 435383.20          | 32°11'42.053"N | 103°38'04.119"W | 0.00          |          |
| 400.00†                                                            | 0.000           | 176.559     | 400.00   | 0.00           | 0.00       | 0.00      | 757517.00         | 435383.20          | 32°11'42.053"N | 103°38'04.119"W | 0.00          |          |
| 500.00†                                                            | 0.000           | 176.559     | 500.00   | 0.00           | 0.00       | 0.00      | 757517.00         | 435383.20          | 32°11'42.053"N | 103°38'04.119"W | 0.00          |          |
| 600.00†                                                            | 0.000           | 176.559     | 600.00   | 0.00           | 0.00       | 0.00      | 757517.00         | 435383.20          | 32°11'42.053"N | 103°38'04.119"W | 0.00          |          |
| 700.00†                                                            | 0.000           | 176.559     | 700.00   | 0.00           | 0.00       | 0.00      | 757517.00         | 435383.20          | 32°11'42.053"N | 103°38'04.119"W | 0.00          |          |
| 800.00†                                                            | 0.000           | 176.559     | 800.00   | 0.00           | 0.00       | 0.00      | 757517.00         | 435383.20          | 32°11'42.053"N | 103°38'04.119"W | 0.00          |          |
| 900.00†                                                            | 0.000           | 176.559     | 900.00   | 0.00           | 0.00       | 0.00      | 757517.00         | 435383.20          | 32°11'42.053"N | 103°38'04.119"W | 0.00          |          |
| 1000.00†                                                           | 0.000           | 176.559     | 1000.00  | 0.00           | 0.00       | 0.00      | 757517.00         | 435383.20          | 32°11'42.053"N | 103°38'04.119"W | 0.00          |          |
| 1080.00†                                                           | 0.000           | 176.559     | 1080.00  | 0.00           | 0.00       | 0.00      | 757517.00         | 435383.20          | 32°11'42.053"N | 103°38'04.119"W | 0.00          | Rustler  |
| 1100.00†                                                           | 0.000           | 176.559     | 1100.00  | 0.00           | 0.00       | 0.00      | 757517.00         | 435383.20          | 32°11'42.053"N | 103°38'04.119"W | 0.00          |          |
| 1200.00†                                                           | 0.000           | 176.559     | 1200.00  | 0.00           | 0.00       | 0.00      | 757517.00         | 435383.20          | 32°11'42.053"N | 103°38'04.119"W | 0.00          |          |
| 1300.00†                                                           | 0.000           | 176.559     | 1300.00  | 0.00           | 0.00       | 0.00      | 757517.00         | 435383.20          | 32°11'42.053"N | 103°38'04.119"W | 0.00          |          |
| 1400.00†                                                           | 0.000           | 176.559     | 1400.00  | 0.00           | 0.00       | 0.00      | 757517.00         | 435383.20          | 32°11'42.053"N | 103°38'04.119"W | 0.00          | Salt     |
| 1500.00†                                                           | 0.000           | 176.559     | 1500.00  | 0.00           | 0.00       | 0.00      | 757517.00         | 435383.20          | 32°11'42.053"N | 103°38'04.119"W | 0.00          |          |
| 1600.00†                                                           | 0.000           | 176.559     | 1600.00  | 0.00           | 0.00       | 0.00      | 757517.00         | 435383.20          | 32°11'42.053"N | 103°38'04.119"W | 0.00          |          |
| 1700.00†                                                           | 0.000           | 176.559     | 1700.00  | 0.00           | 0.00       | 0.00      | 757517.00         | 435383.20          | 32°11'42.053"N | 103°38'04.119"W | 0.00          |          |
| 1800.00†                                                           | 0.000           | 176.559     | 1800.00  | 0.00           | 0.00       | 0.00      | 757517.00         | 435383.20          | 32°11'42.053"N | 103°38'04.119"W | 0.00          |          |
| 1900.00†                                                           | 0.000           | 176.559     | 1900.00  | 0.00           | 0.00       | 0.00      | 757517.00         | 435383.20          | 32°11'42.053"N | 103°38'04.119"W | 0.00          |          |
| 2000.00†                                                           | 0.000           | 176.559     | 2000.00  | 0.00           | 0.00       | 0.00      | 757517.00         | 435383.20          | 32°11'42.053"N | 103°38'04.119"W | 0.00          |          |
| 2100.00†                                                           | 0.000           | 176.559     | 2100.00  | 0.00           | 0.00       | 0.00      | 757517.00         | 435383.20          | 32°11'42.053"N | 103°38'04.119"W | 0.00          |          |
| 2200.00†                                                           | 0.000           | 176.559     | 2200.00  | 0.00           | 0.00       | 0.00      | 757517.00         | 435383.20          | 32°11'42.053"N | 103°38'04.119"W | 0.00          |          |
| 2300.00†                                                           | 0.000           | 176.559     | 2300.00  | 0.00           | 0.00       | 0.00      | 757517.00         | 435383.20          | 32°11'42.053"N | 103°38'04.119"W | 0.00          |          |
| 2400.00†                                                           | 0.000           | 176.559     | 2400.00  | 0.00           | 0.00       | 0.00      | 757517.00         | 435383.20          | 32°11'42.053"N | 103°38'04.119"W | 0.00          |          |
| 2500.00†                                                           | 0.000           | 176.559     | 2500.00  | 0.00           | 0.00       | 0.00      | 757517.00         | 435383.20          | 32°11'42.053"N | 103°38'04.119"W | 0.00          |          |
| 2600.00†                                                           | 0.000           | 176.559     | 2600.00  | 0.00           | 0.00       | 0.00      | 757517.00         | 435383.20          | 32°11'42.053"N | 103°38'04.119"W | 0.00          |          |
| 2700.00†                                                           | 0.000           | 176.559     | 2700.00  | 0.00           | 0.00       | 0.00      | 757517.00         | 435383.20          | 32°11'42.053"N | 103°38'04.119"W | 0.00          |          |
| 2800.00†                                                           | 0.000           | 176.559     | 2800.00  | 0.00           | 0.00       | 0.00      | 757517.00         | 435383.20          | 32°11'42.053"N | 103°38'04.119"W | 0.00          |          |
| 2900.00†                                                           | 0.000           | 176.559     | 2900.00  | 0.00           | 0.00       | 0.00      | 757517.00         | 435383.20          | 32°11'42.053"N | 103°38'04.119"W | 0.00          |          |
| 3000.00†                                                           | 0.000           | 176.559     | 3000.00  | 0.00           | 0.00       | 0.00      | 757517.00         | 435383.20          | 32°11'42.053"N | 103°38'04.119"W | 0.00          |          |
| 3100.00†                                                           | 0.000           | 176.559     | 3100.00  | 0.00           | 0.00       | 0.00      | 757517.00         | 435383.20          | 32°11'42.053"N | 103°38'04.119"W | 0.00          |          |
| 3200.00†                                                           | 0.000           | 176.559     | 3200.00  | 0.00           | 0.00       | 0.00      | 757517.00         | 435383.20          | 32°11'42.053"N | 103°38'04.119"W | 0.00          |          |
| 3300.00†                                                           | 0.000           | 176.559     | 3300.00  | 0.00           | 0.00       | 0.00      | 757517.00         | 435383.20          | 32°11'42.053"N | 103°38'04.119"W | 0.00          |          |
| 3400.00†                                                           | 0.000           | 176.559     | 3400.00  | 0.00           | 0.00       | 0.00      | 757517.00         | 435383.20          | 32°11'42.053"N | 103°38'04.119"W | 0.00          | Castille |
| 3500.00†                                                           | 0.000           | 176.559     | 3500.00  | 0.00           | 0.00       | 0.00      | 757517.00         | 435383.20          | 32°11'42.053"N | 103°38'04.119"W | 0.00          |          |
| 3600.00†                                                           | 0.000           | 176.559     | 3600.00  | 0.00           | 0.00       | 0.00      | 757517.00         | 435383.20          | 32°11'42.053"N | 103°38'04.119"W | 0.00          |          |
| 3700.00†                                                           | 0.000           | 176.559     | 3700.00  | 0.00           | 0.00       | 0.00      | 757517.00         | 435383.20          | 32°11'42.053"N | 103°38'04.119"W | 0.00          |          |
| 3800.00†                                                           | 0.000           | 176.559     | 3800.00  | 0.00           | 0.00       | 0.00      | 757517.00         | 435383.20          | 32°11'42.053"N | 103°38'04.119"W | 0.00          |          |
| 3900.00†                                                           | 0.000           | 176.559     | 3900.00  | 0.00           | 0.00       | 0.00      | 757517.00         | 435383.20          | 32°11'42.053"N | 103°38'04.119"W | 0.00          |          |
| 4000.00†                                                           | 0.000           | 176.559     | 4000.00  | 0.00           | 0.00       | 0.00      | 757517.00         | 435383.20          | 32°11'42.053"N | 103°38'04.119"W | 0.00          |          |
| 4100.00†                                                           | 0.000           | 176.559     | 4100.00  | 0.00           | 0.00       | 0.00      | 757517.00         | 435383.20          | 32°11'42.053"N | 103°38'04.119"W | 0.00          |          |
| 4200.00†                                                           | 0.000           | 176.559     | 4200.00  | 0.00           | 0.00       | 0.00      | 757517.00         | 435383.20          | 32°11'42.053"N | 103°38'04.119"W | 0.00          |          |
| 4300.00†                                                           | 0.000           | 176.559     | 4300.00  | 0.00           | 0.00       | 0.00      | 757517.00         | 435383.20          | 32°11'42.053"N | 103°38'04.119"W | 0.00          |          |



# Planned Wellpath Report

Rev-A.0  
Page 3 of 6



| REFERENCE WELLPATH IDENTIFICATION |                              |          |           |
|-----------------------------------|------------------------------|----------|-----------|
| Operator                          | Cimarex Energy Co.           | Slot     | No. 2 SHL |
| Area                              | Lea County, NM               | Well     | No. 2     |
| Field                             | (Double X)Sec 25, T24S, R32E | Wellbore | No. 2 PWB |
| Facility                          | Double X 25 Federal No. 2    |          |           |

| WELLPATH DATA (161 stations) † = interpolated/extrapolated station |                    |                |             |                   |               |              |                      |                       |                |                 |                  |                     |
|--------------------------------------------------------------------|--------------------|----------------|-------------|-------------------|---------------|--------------|----------------------|-----------------------|----------------|-----------------|------------------|---------------------|
| MD<br>[ft]                                                         | Inclination<br>[°] | Azimuth<br>[°] | TVD<br>[ft] | Vert Sect<br>[ft] | North<br>[ft] | East<br>[ft] | Grid East<br>[US ft] | Grid North<br>[US ft] | Latitude       | Longitude       | DLS<br>[°/100ft] | Comments            |
| 4400.00†                                                           | 0.000              | 176.559        | 4400.00     | 0.00              | 0.00          | 0.00         | 757517.00            | 435383.20             | 32°11'42.053"N | 103°38'04.119"W | 0.00             |                     |
| 4500.00†                                                           | 0.000              | 176.559        | 4500.00     | 0.00              | 0.00          | 0.00         | 757517.00            | 435383.20             | 32°11'42.053"N | 103°38'04.119"W | 0.00             |                     |
| 4600.00†                                                           | 0.000              | 176.559        | 4600.00     | 0.00              | 0.00          | 0.00         | 757517.00            | 435383.20             | 32°11'42.053"N | 103°38'04.119"W | 0.00             |                     |
| 4700.00†                                                           | 0.000              | 176.559        | 4700.00     | 0.00              | 0.00          | 0.00         | 757517.00            | 435383.20             | 32°11'42.053"N | 103°38'04.119"W | 0.00             | Base Salt           |
| 4800.00†                                                           | 0.000              | 176.559        | 4800.00     | 0.00              | 0.00          | 0.00         | 757517.00            | 435383.20             | 32°11'42.053"N | 103°38'04.119"W | 0.00             |                     |
| 4900.00†                                                           | 0.000              | 176.559        | 4900.00     | 0.00              | 0.00          | 0.00         | 757517.00            | 435383.20             | 32°11'42.053"N | 103°38'04.119"W | 0.00             |                     |
| 5000.00†                                                           | 0.000              | 176.559        | 5000.00     | 0.00              | 0.00          | 0.00         | 757517.00            | 435383.20             | 32°11'42.053"N | 103°38'04.119"W | 0.00             | Delaware Sands      |
| 5100.00†                                                           | 0.000              | 176.559        | 5100.00     | 0.00              | 0.00          | 0.00         | 757517.00            | 435383.20             | 32°11'42.053"N | 103°38'04.119"W | 0.00             |                     |
| 5200.00†                                                           | 0.000              | 176.559        | 5200.00     | 0.00              | 0.00          | 0.00         | 757517.00            | 435383.20             | 32°11'42.053"N | 103°38'04.119"W | 0.00             |                     |
| 5300.00†                                                           | 0.000              | 176.559        | 5300.00     | 0.00              | 0.00          | 0.00         | 757517.00            | 435383.20             | 32°11'42.053"N | 103°38'04.119"W | 0.00             |                     |
| 5400.00†                                                           | 0.000              | 176.559        | 5400.00     | 0.00              | 0.00          | 0.00         | 757517.00            | 435383.20             | 32°11'42.053"N | 103°38'04.119"W | 0.00             |                     |
| 5500.00†                                                           | 0.000              | 176.559        | 5500.00     | 0.00              | 0.00          | 0.00         | 757517.00            | 435383.20             | 32°11'42.053"N | 103°38'04.119"W | 0.00             |                     |
| 5600.00†                                                           | 0.000              | 176.559        | 5600.00     | 0.00              | 0.00          | 0.00         | 757517.00            | 435383.20             | 32°11'42.053"N | 103°38'04.119"W | 0.00             |                     |
| 5700.00†                                                           | 0.000              | 176.559        | 5700.00     | 0.00              | 0.00          | 0.00         | 757517.00            | 435383.20             | 32°11'42.053"N | 103°38'04.119"W | 0.00             |                     |
| 5800.00†                                                           | 0.000              | 176.559        | 5800.00     | 0.00              | 0.00          | 0.00         | 757517.00            | 435383.20             | 32°11'42.053"N | 103°38'04.119"W | 0.00             |                     |
| 5900.00†                                                           | 0.000              | 176.559        | 5900.00     | 0.00              | 0.00          | 0.00         | 757517.00            | 435383.20             | 32°11'42.053"N | 103°38'04.119"W | 0.00             |                     |
| 6000.00†                                                           | 0.000              | 176.559        | 6000.00     | 0.00              | 0.00          | 0.00         | 757517.00            | 435383.20             | 32°11'42.053"N | 103°38'04.119"W | 0.00             |                     |
| 6100.00†                                                           | 0.000              | 176.559        | 6100.00     | 0.00              | 0.00          | 0.00         | 757517.00            | 435383.20             | 32°11'42.053"N | 103°38'04.119"W | 0.00             |                     |
| 6200.00†                                                           | 0.000              | 176.559        | 6200.00     | 0.00              | 0.00          | 0.00         | 757517.00            | 435383.20             | 32°11'42.053"N | 103°38'04.119"W | 0.00             |                     |
| 6300.00†                                                           | 0.000              | 176.559        | 6300.00     | 0.00              | 0.00          | 0.00         | 757517.00            | 435383.20             | 32°11'42.053"N | 103°38'04.119"W | -0.00            |                     |
| 6400.00†                                                           | 0.000              | 176.559        | 6400.00     | 0.00              | 0.00          | 0.00         | 757517.00            | 435383.20             | 32°11'42.053"N | 103°38'04.119"W | 0.00             |                     |
| 6500.00†                                                           | 0.000              | 176.559        | 6500.00     | 0.00              | 0.00          | 0.00         | 757517.00            | 435383.20             | 32°11'42.053"N | 103°38'04.119"W | 0.00             |                     |
| 6600.00†                                                           | 0.000              | 176.559        | 6600.00     | 0.00              | 0.00          | 0.00         | 757517.00            | 435383.20             | 32°11'42.053"N | 103°38'04.119"W | 0.00             |                     |
| 6700.00†                                                           | 0.000              | 176.559        | 6700.00     | 0.00              | 0.00          | 0.00         | 757517.00            | 435383.20             | 32°11'42.053"N | 103°38'04.119"W | 0.00             |                     |
| 6800.00†                                                           | 0.000              | 176.559        | 6800.00     | 0.00              | 0.00          | 0.00         | 757517.00            | 435383.20             | 32°11'42.053"N | 103°38'04.119"W | 0.00             |                     |
| 6900.00†                                                           | 0.000              | 176.559        | 6900.00     | 0.00              | 0.00          | 0.00         | 757517.00            | 435383.20             | 32°11'42.053"N | 103°38'04.119"W | 0.00             |                     |
| 7000.00†                                                           | 0.000              | 176.559        | 7000.00     | 0.00              | 0.00          | 0.00         | 757517.00            | 435383.20             | 32°11'42.053"N | 103°38'04.119"W | 0.00             |                     |
| 7100.00†                                                           | 0.000              | 176.559        | 7100.00     | 0.00              | 0.00          | 0.00         | 757517.00            | 435383.20             | 32°11'42.053"N | 103°38'04.119"W | 0.00             |                     |
| 7200.00†                                                           | 0.000              | 176.559        | 7200.00     | 0.00              | 0.00          | 0.00         | 757517.00            | 435383.20             | 32°11'42.053"N | 103°38'04.119"W | 0.00             |                     |
| 7300.00†                                                           | 0.000              | 176.559        | 7300.00     | 0.00              | 0.00          | 0.00         | 757517.00            | 435383.20             | 32°11'42.053"N | 103°38'04.119"W | 0.00             |                     |
| 7400.00†                                                           | 0.000              | 176.559        | 7400.00     | 0.00              | 0.00          | 0.00         | 757517.00            | 435383.20             | 32°11'42.053"N | 103°38'04.119"W | 0.00             |                     |
| 7500.00†                                                           | 0.000              | 176.559        | 7500.00     | 0.00              | 0.00          | 0.00         | 757517.00            | 435383.20             | 32°11'42.053"N | 103°38'04.119"W | 0.00             |                     |
| 7600.00†                                                           | 0.000              | 176.559        | 7600.00     | 0.00              | 0.00          | 0.00         | 757517.00            | 435383.20             | 32°11'42.053"N | 103°38'04.119"W | 0.00             |                     |
| 7700.00†                                                           | 0.000              | 176.559        | 7700.00     | 0.00              | 0.00          | 0.00         | 757517.00            | 435383.20             | 32°11'42.053"N | 103°38'04.119"W | 0.00             |                     |
| 7800.00†                                                           | 0.000              | 176.559        | 7800.00     | 0.00              | 0.00          | 0.00         | 757517.00            | 435383.20             | 32°11'42.053"N | 103°38'04.119"W | 0.00             |                     |
| 7900.00†                                                           | 0.000              | 176.559        | 7900.00     | 0.00              | 0.00          | 0.00         | 757517.00            | 435383.20             | 32°11'42.053"N | 103°38'04.119"W | 0.00             |                     |
| 8000.00†                                                           | 0.000              | 176.559        | 8000.00     | 0.00              | 0.00          | 0.00         | 757517.00            | 435383.20             | 32°11'42.053"N | 103°38'04.119"W | 0.00             |                     |
| 8100.00†                                                           | 0.000              | 176.559        | 8100.00     | 0.00              | 0.00          | 0.00         | 757517.00            | 435383.20             | 32°11'42.053"N | 103°38'04.119"W | 0.00             |                     |
| 8200.00†                                                           | 0.000              | 176.559        | 8200.00     | 0.00              | 0.00          | 0.00         | 757517.00            | 435383.20             | 32°11'42.053"N | 103°38'04.119"W | 0.00             |                     |
| 8300.00†                                                           | 0.000              | 176.559        | 8300.00     | 0.00              | 0.00          | 0.00         | 757517.00            | 435383.20             | 32°11'42.053"N | 103°38'04.119"W | 0.00             |                     |
| 8400.00†                                                           | 0.000              | 176.559        | 8400.00     | 0.00              | 0.00          | 0.00         | 757517.00            | 435383.20             | 32°11'42.053"N | 103°38'04.119"W | 0.00             |                     |
| 8500.00†                                                           | 0.000              | 176.559        | 8500.00     | 0.00              | 0.00          | 0.00         | 757517.00            | 435383.20             | 32°11'42.053"N | 103°38'04.119"W | 0.00             |                     |
| 8600.00†                                                           | 0.000              | 176.559        | 8600.00     | 0.00              | 0.00          | 0.00         | 757517.00            | 435383.20             | 32°11'42.053"N | 103°38'04.119"W | 0.00             |                     |
| 8660.00†                                                           | 0.000              | 176.559        | 8660.00     | 0.00              | 0.00          | 0.00         | 757517.00            | 435383.20             | 32°11'42.053"N | 103°38'04.119"W | 0.00             | Basal Brushy Canyon |
| 8700.00†                                                           | 0.000              | 176.559        | 8700.00     | 0.00              | 0.00          | 0.00         | 757517.00            | 435383.20             | 32°11'42.053"N | 103°38'04.119"W | 0.00             |                     |



# Planned Wellpath Report

Rev-A.0  
Page 4 of 6



## REFERENCE WELLPATH IDENTIFICATION

|          |                              |          |           |
|----------|------------------------------|----------|-----------|
| Operator | Cimarex Energy Co.           | Slot     | No. 2 SHL |
| Area     | Lea County, NM               | Well     | No. 2     |
| Field    | (Double X)Sec 25, T24S, R32E | Wellbore | No. 2 PWB |
| Facility | Double X 25 Federal No. 2    |          |           |

## WELLPATH DATA (161 stations) † = interpolated/extrapolated station

| MD<br>[ft] | Inclination<br>[°] | Azimuth<br>[°] | TVD<br>[ft] | Vert Sect<br>[ft] | North<br>[ft] | East<br>[ft] | Grid East<br>[US ft] | Grid North<br>[US ft] | Latitude       | Longitude       | DLS<br>[°/100ft] | Comments     |
|------------|--------------------|----------------|-------------|-------------------|---------------|--------------|----------------------|-----------------------|----------------|-----------------|------------------|--------------|
| 8800.00†   | 0.000              | 176.559        | 8800.00     | 0.00              | 0.00          | 0.00         | 757517.00            | 435383.20             | 32°11'42.053"N | 103°38'04.119"W | 0.00             |              |
| 8900.00†   | 0.000              | 176.559        | 8900.00     | 0.00              | 0.00          | 0.00         | 757517.00            | 435383.20             | 32°11'42.053"N | 103°38'04.119"W | 0.00             | Bone Spring  |
| 9000.00†   | 0.000              | 176.559        | 9000.00     | 0.00              | 0.00          | 0.00         | 757517.00            | 435383.20             | 32°11'42.053"N | 103°38'04.119"W | 0.00             |              |
| 9100.00†   | 0.000              | 176.559        | 9100.00     | 0.00              | 0.00          | 0.00         | 757517.00            | 435383.20             | 32°11'42.053"N | 103°38'04.119"W | 0.00             |              |
| 9200.00†   | 0.000              | 176.559        | 9200.00     | 0.00              | 0.00          | 0.00         | 757517.00            | 435383.20             | 32°11'42.053"N | 103°38'04.119"W | 0.00             |              |
| 9270.00†   | 0.000              | 176.559        | 9270.00     | 0.00              | 0.00          | 0.00         | 757517.00            | 435383.20             | 32°11'42.053"N | 103°38'04.119"W | 0.00             | Avalon Shale |
| 9300.00†   | 0.000              | 176.559        | 9300.00     | 0.00              | 0.00          | 0.00         | 757517.00            | 435383.20             | 32°11'42.053"N | 103°38'04.119"W | 0.00             |              |
| 9400.00†   | 0.000              | 176.559        | 9400.00     | 0.00              | 0.00          | 0.00         | 757517.00            | 435383.20             | 32°11'42.053"N | 103°38'04.119"W | 0.00             |              |
| 9500.00†   | 0.000              | 176.559        | 9500.00     | 0.00              | 0.00          | 0.00         | 757517.00            | 435383.20             | 32°11'42.053"N | 103°38'04.119"W | 0.00             |              |
| 9600.00†   | 0.000              | 176.559        | 9600.00     | 0.00              | 0.00          | 0.00         | 757517.00            | 435383.20             | 32°11'42.053"N | 103°38'04.119"W | 0.00             |              |
| 9700.00†   | 0.000              | 176.559        | 9700.00     | 0.00              | 0.00          | 0.00         | 757517.00            | 435383.20             | 32°11'42.053"N | 103°38'04.119"W | 0.00             |              |
| 9800.00†   | 0.000              | 176.559        | 9800.00     | 0.00              | 0.00          | 0.00         | 757517.00            | 435383.20             | 32°11'42.053"N | 103°38'04.119"W | 0.00             |              |
| 9900.00†   | 0.000              | 176.559        | 9900.00     | 0.00              | 0.00          | 0.00         | 757517.00            | 435383.20             | 32°11'42.053"N | 103°38'04.119"W | 0.00             |              |
| 10000.00†  | 0.000              | 176.559        | 10000.00    | 0.00              | 0.00          | 0.00         | 757517.00            | 435383.20             | 32°11'42.053"N | 103°38'04.119"W | 0.00             | 1st BSS      |
| 10100.00†  | 0.000              | 176.559        | 10100.00    | 0.00              | 0.00          | 0.00         | 757517.00            | 435383.20             | 32°11'42.053"N | 103°38'04.119"W | 0.00             |              |
| 10200.00†  | 0.000              | 176.559        | 10200.00    | 0.00              | 0.00          | 0.00         | 757517.00            | 435383.20             | 32°11'42.053"N | 103°38'04.119"W | 0.00             |              |
| 10300.00†  | 0.000              | 176.559        | 10300.00    | 0.00              | 0.00          | 0.00         | 757517.00            | 435383.20             | 32°11'42.053"N | 103°38'04.119"W | 0.00             |              |
| 10400.00†  | 0.000              | 176.559        | 10400.00    | 0.00              | 0.00          | 0.00         | 757517.00            | 435383.20             | 32°11'42.053"N | 103°38'04.119"W | 0.00             |              |
| 10500.00†  | 0.000              | 176.559        | 10500.00    | 0.00              | 0.00          | 0.00         | 757517.00            | 435383.20             | 32°11'42.053"N | 103°38'04.119"W | 0.00             |              |
| 10600.00†  | 0.000              | 176.559        | 10600.00    | 0.00              | 0.00          | 0.00         | 757517.00            | 435383.20             | 32°11'42.053"N | 103°38'04.119"W | 0.00             | 2nd BSS      |
| 10689.00   | 0.000              | 176.559        | 10689.00    | 0.00              | 0.00          | 0.00         | 757517.00            | 435383.20             | 32°11'42.053"N | 103°38'04.119"W | 0.00             | Est. KOP     |
| 10700.00†  | 2.204              | 176.559        | 10700.00    | 0.21              | -0.21         | 0.01         | 757517.01            | 435382.99             | 32°11'42.051"N | 103°38'04.119"W | 20.03            |              |
| 10800.00†  | 22.237             | 176.559        | 10797.23    | 21.27             | -21.23        | 1.28         | 757518.28            | 435361.97             | 32°11'41.843"N | 103°38'04.106"W | 20.03            |              |
| 10900.00†  | 42.271             | 176.559        | 10881.37    | 74.37             | -74.23        | 4.46         | 757521.46            | 435308.97             | 32°11'41.318"N | 103°38'04.073"W | 20.03            |              |
| 11000.00†  | 62.304             | 176.559        | 10942.23    | 153.07            | -152.80       | 9.19         | 757526.19            | 435230.41             | 32°11'40.540"N | 103°38'04.024"W | 20.03            |              |
| 11100.00†  | 82.338             | 176.559        | 10972.45    | 247.87            | -247.42       | 14.88        | 757531.88            | 435135.79             | 32°11'39.604"N | 103°38'03.965"W | 20.03            |              |
| 11138.25   | 90.000             | 176.559        | 10975.00    | 286.00            | -285.48       | 17.17        | 757534.17            | 435097.73             | 32°11'39.227"N | 103°38'03.941"W | 20.03            | EOC          |
| 11200.00†  | 90.000             | 176.559        | 10975.00    | 347.75            | -347.13       | 20.87        | 757537.87            | 435036.09             | 32°11'38.617"N | 103°38'03.903"W | 0.00             |              |
| 11300.00†  | 90.000             | 176.559        | 10975.00    | 447.75            | -446.94       | 26.88        | 757543.88            | 434936.27             | 32°11'37.629"N | 103°38'03.840"W | 0.00             |              |
| 11400.00†  | 90.000             | 176.559        | 10975.00    | 547.75            | -546.76       | 32.88        | 757549.88            | 434836.46             | 32°11'36.640"N | 103°38'03.778"W | 0.00             |              |
| 11500.00†  | 90.000             | 176.559        | 10975.00    | 647.75            | -646.58       | 38.88        | 757555.88            | 434736.64             | 32°11'35.652"N | 103°38'03.716"W | 0.00             |              |
| 11600.00†  | 90.000             | 176.559        | 10975.00    | 747.75            | -746.40       | 44.88        | 757561.88            | 434636.83             | 32°11'34.664"N | 103°38'03.653"W | 0.00             |              |
| 11700.00†  | 90.000             | 176.559        | 10975.00    | 847.75            | -846.22       | 50.89        | 757567.89            | 434537.01             | 32°11'33.676"N | 103°38'03.591"W | 0.00             |              |
| 11800.00†  | 90.000             | 176.559        | 10975.00    | 947.75            | -946.04       | 56.89        | 757573.89            | 434437.19             | 32°11'32.688"N | 103°38'03.529"W | 0.00             |              |
| 11900.00†  | 90.000             | 176.559        | 10975.00    | 1047.75           | -1045.86      | 62.89        | 757579.89            | 434337.38             | 32°11'31.700"N | 103°38'03.466"W | 0.00             |              |
| 12000.00†  | 90.000             | 176.559        | 10975.00    | 1147.75           | -1145.68      | 68.90        | 757585.89            | 434237.56             | 32°11'30.712"N | 103°38'03.404"W | 0.00             |              |
| 12100.00†  | 90.000             | 176.559        | 10975.00    | 1247.75           | -1245.50      | 74.90        | 757591.89            | 434137.75             | 32°11'29.724"N | 103°38'03.342"W | 0.00             |              |
| 12200.00†  | 90.000             | 176.559        | 10975.00    | 1347.75           | -1345.32      | 80.90        | 757597.90            | 434037.93             | 32°11'28.736"N | 103°38'03.280"W | 0.00             |              |
| 12300.00†  | 90.000             | 176.559        | 10975.00    | 1447.75           | -1445.14      | 86.90        | 757603.90            | 433938.12             | 32°11'27.748"N | 103°38'03.217"W | 0.00             |              |
| 12400.00†  | 90.000             | 176.559        | 10975.00    | 1547.75           | -1544.96      | 92.91        | 757609.90            | 433838.30             | 32°11'26.759"N | 103°38'03.155"W | 0.00             |              |
| 12500.00†  | 90.000             | 176.559        | 10975.00    | 1647.75           | -1644.78      | 98.91        | 757615.90            | 433738.48             | 32°11'25.771"N | 103°38'03.093"W | 0.00             |              |
| 12600.00†  | 90.000             | 176.559        | 10975.00    | 1747.75           | -1744.60      | 104.91       | 757621.91            | 433638.67             | 32°11'24.783"N | 103°38'03.030"W | 0.00             |              |
| 12700.00†  | 90.000             | 176.559        | 10975.00    | 1847.75           | -1844.42      | 110.91       | 757627.91            | 433538.85             | 32°11'23.795"N | 103°38'02.968"W | 0.00             |              |
| 12800.00†  | 90.000             | 176.559        | 10975.00    | 1947.75           | -1944.24      | 116.92       | 757633.91            | 433439.04             | 32°11'22.807"N | 103°38'02.906"W | 0.00             |              |
| 12900.00†  | 90.000             | 176.559        | 10975.00    | 2047.75           | -2044.06      | 122.92       | 757639.91            | 433339.22             | 32°11'21.819"N | 103°38'02.844"W | 0.00             |              |



# Planned Wellpath Report

Rev-A.0  
Page 5 of 6



| REFERENCE WELLPATH IDENTIFICATION |                              |          |           |
|-----------------------------------|------------------------------|----------|-----------|
| Operator                          | Cimarex Energy Co.           | Slot     | No. 2 SHL |
| Area                              | Lea County, NM               | Well     | No. 2     |
| Field                             | (Double X)Sec 25, T24S, R32E | Wellbore | No. 2 PWB |
| Facility                          | Double X 25 Federal No. 2    |          |           |

| WELLPATH DATA (161 stations) † = interpolated/extrapolated station |                    |                |             |                   |               |              |                      |                       |                |                 |                  |            |
|--------------------------------------------------------------------|--------------------|----------------|-------------|-------------------|---------------|--------------|----------------------|-----------------------|----------------|-----------------|------------------|------------|
| MD<br>[ft]                                                         | Inclination<br>[°] | Azimuth<br>[°] | TVD<br>[ft] | Vert Sect<br>[ft] | North<br>[ft] | East<br>[ft] | Grid East<br>[US ft] | Grid North<br>[US ft] | Latitude       | Longitude       | DLS<br>[°/100ft] | Comments   |
| 13000.00†                                                          | 90.000             | 176.559        | 10975.00    | 2147.75           | -2143.88      | 128.92       | 757645.92            | 433239.40             | 32°11'20.831"N | 103°38'02.781"W | 0.00             |            |
| 13100.00†                                                          | 90.000             | 176.559        | 10975.00    | 2247.75           | -2243.70      | 134.92       | 757651.92            | 433139.59             | 32°11'19.843"N | 103°38'02.719"W | 0.00             |            |
| 13200.00†                                                          | 90.000             | 176.559        | 10975.00    | 2347.75           | -2343.52      | 140.93       | 757657.92            | 433039.77             | 32°11'18.855"N | 103°38'02.657"W | 0.00             |            |
| 13300.00†                                                          | 90.000             | 176.559        | 10975.00    | 2447.75           | -2443.34      | 146.93       | 757663.92            | 432939.96             | 32°11'17.866"N | 103°38'02.594"W | 0.00             |            |
| 13400.00†                                                          | 90.000             | 176.559        | 10975.00    | 2547.75           | -2543.16      | 152.93       | 757669.93            | 432840.14             | 32°11'16.878"N | 103°38'02.532"W | 0.00             |            |
| 13500.00†                                                          | 90.000             | 176.559        | 10975.00    | 2647.75           | -2642.98      | 158.93       | 757675.93            | 432740.33             | 32°11'15.890"N | 103°38'02.470"W | 0.00             |            |
| 13600.00†                                                          | 90.000             | 176.559        | 10975.00    | 2747.75           | -2742.80      | 164.94       | 757681.93            | 432640.51             | 32°11'14.902"N | 103°38'02.407"W | 0.00             |            |
| 13700.00†                                                          | 90.000             | 176.559        | 10975.00    | 2847.75           | -2842.62      | 170.94       | 757687.93            | 432540.69             | 32°11'13.914"N | 103°38'02.345"W | 0.00             |            |
| 13800.00†                                                          | 90.000             | 176.559        | 10975.00    | 2947.75           | -2942.44      | 176.94       | 757693.94            | 432440.88             | 32°11'12.926"N | 103°38'02.283"W | 0.00             |            |
| 13900.00†                                                          | 90.000             | 176.559        | 10975.00    | 3047.75           | -3042.26      | 182.94       | 757699.94            | 432341.06             | 32°11'11.938"N | 103°38'02.221"W | 0.00             |            |
| 14000.00†                                                          | 90.000             | 176.559        | 10975.00    | 3147.75           | -3142.08      | 188.95       | 757705.94            | 432241.25             | 32°11'10.950"N | 103°38'02.158"W | 0.00             |            |
| 14100.00†                                                          | 90.000             | 176.559        | 10975.00    | 3247.75           | -3241.90      | 194.95       | 757711.94            | 432141.43             | 32°11'09.962"N | 103°38'02.096"W | 0.00             |            |
| 14200.00†                                                          | 90.000             | 176.559        | 10975.00    | 3347.75           | -3341.72      | 200.95       | 757717.94            | 432041.62             | 32°11'08.974"N | 103°38'02.034"W | 0.00             |            |
| 14300.00†                                                          | 90.000             | 176.559        | 10975.00    | 3447.75           | -3441.54      | 206.96       | 757723.95            | 431941.80             | 32°11'07.985"N | 103°38'01.971"W | 0.00             |            |
| 14400.00†                                                          | 90.000             | 176.559        | 10975.00    | 3547.75           | -3541.35      | 212.96       | 757729.95            | 431841.98             | 32°11'06.997"N | 103°38'01.909"W | 0.00             |            |
| 14500.00†                                                          | 90.000             | 176.559        | 10975.00    | 3647.75           | -3641.17      | 218.96       | 757735.95            | 431742.17             | 32°11'06.009"N | 103°38'01.847"W | 0.00             |            |
| 14600.00†                                                          | 90.000             | 176.559        | 10975.00    | 3747.75           | -3740.99      | 224.96       | 757741.95            | 431642.35             | 32°11'05.021"N | 103°38'01.785"W | 0.00             |            |
| 14700.00†                                                          | 90.000             | 176.559        | 10975.00    | 3847.75           | -3840.81      | 230.97       | 757747.96            | 431542.54             | 32°11'04.033"N | 103°38'01.722"W | 0.00             |            |
| 14800.00†                                                          | 90.000             | 176.559        | 10975.00    | 3947.75           | -3940.63      | 236.97       | 757753.96            | 431442.72             | 32°11'03.045"N | 103°38'01.660"W | 0.00             |            |
| 14900.00†                                                          | 90.000             | 176.559        | 10975.00    | 4047.75           | -4040.45      | 242.97       | 757759.96            | 431342.91             | 32°11'02.057"N | 103°38'01.598"W | 0.00             |            |
| 15000.00†                                                          | 90.000             | 176.559        | 10975.00    | 4147.75           | -4140.27      | 248.97       | 757765.96            | 431243.09             | 32°11'01.069"N | 103°38'01.535"W | 0.00             |            |
| 15100.00†                                                          | 90.000             | 176.559        | 10975.00    | 4247.75           | -4240.09      | 254.98       | 757771.97            | 431143.27             | 32°11'00.081"N | 103°38'01.473"W | 0.00             |            |
| 15200.00†                                                          | 90.000             | 176.559        | 10975.00    | 4347.75           | -4339.91      | 260.98       | 757777.97            | 431043.46             | 32°10'59.093"N | 103°38'01.411"W | 0.00             |            |
| 15300.00†                                                          | 90.000             | 176.559        | 10975.00    | 4447.75           | -4439.73      | 266.98       | 757783.97            | 430943.64             | 32°10'58.104"N | 103°38'01.349"W | 0.00             |            |
| 15400.00†                                                          | 90.000             | 176.559        | 10975.00    | 4547.75           | -4539.55      | 272.98       | 757789.97            | 430843.83             | 32°10'57.116"N | 103°38'01.286"W | 0.00             |            |
| 15482.08                                                           | 90.000             | 176.559        | 10975.00†   | 4629.83           | -4621.48      | 277.91       | 757794.90            | 430761.90             | 32°10'56.305"N | 103°38'01.235"W | 0.00             | No. 2 PBHL |



# Planned Wellpath Report

Rev-A.0  
Page 6 of 6

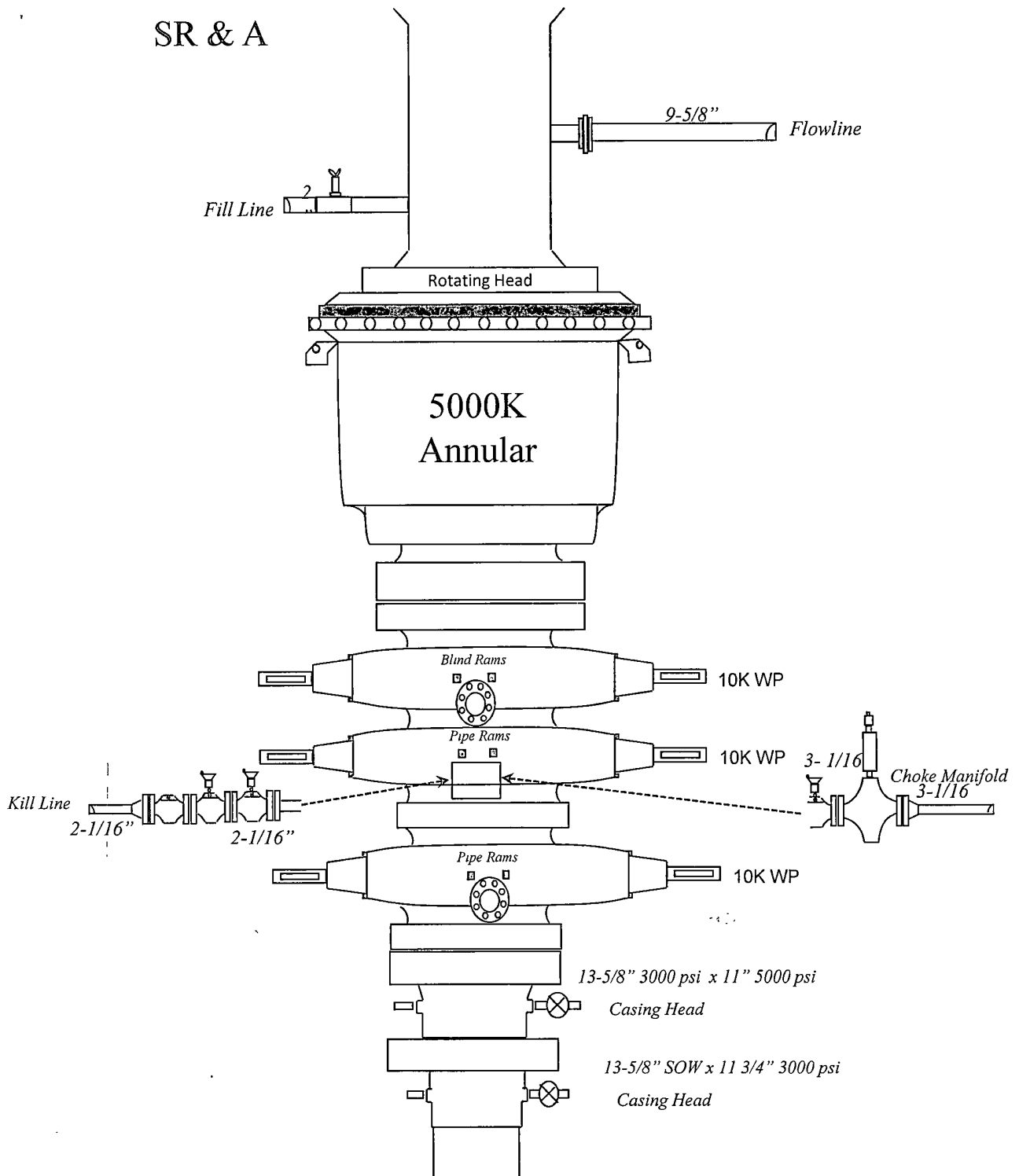


| REFERENCE WELLPATH IDENTIFICATION |                              |          |           |
|-----------------------------------|------------------------------|----------|-----------|
| Operator                          | Cimarex Energy Co.           | Slot     | No. 2 SHL |
| Area                              | Lea County, NM               | Well     | No. 2     |
| Field                             | (Double X)Sec 25, T24S, R32E | Wellbore | No. 2 PWB |
| Facility                          | Double X 25 Federal No. 2    |          |           |

| TARGETS                                 |            |             |               |              |                      |                       |                |                 |       |
|-----------------------------------------|------------|-------------|---------------|--------------|----------------------|-----------------------|----------------|-----------------|-------|
| Name                                    | MD<br>[ft] | TVD<br>[ft] | North<br>[ft] | East<br>[ft] | Grid East<br>[US ft] | Grid North<br>[US ft] | Latitude       | Longitude       | Shape |
| 1) Double X 25 Federal No. 2<br>(Rev-0) | 15482.08   | 10975.00    | -4621.48      | 277.91       | 757794.90            | 430761.90             | 32°10'56.305"N | 103°38'01.235"W | point |

| SURVEY PROGRAM - Ref Wellbore: No. 2 PWB : Ref Wellpath: Rev-A.0 |                |                              |                  |           |
|------------------------------------------------------------------|----------------|------------------------------|------------------|-----------|
| Start MD<br>[ft]                                                 | End MD<br>[ft] | Positional Uncertainty Model | Log Name/Comment | Wellbore  |
| 0.00                                                             | 15482.08       | NaviTrak (Standard)          |                  | No. 2 PWB |

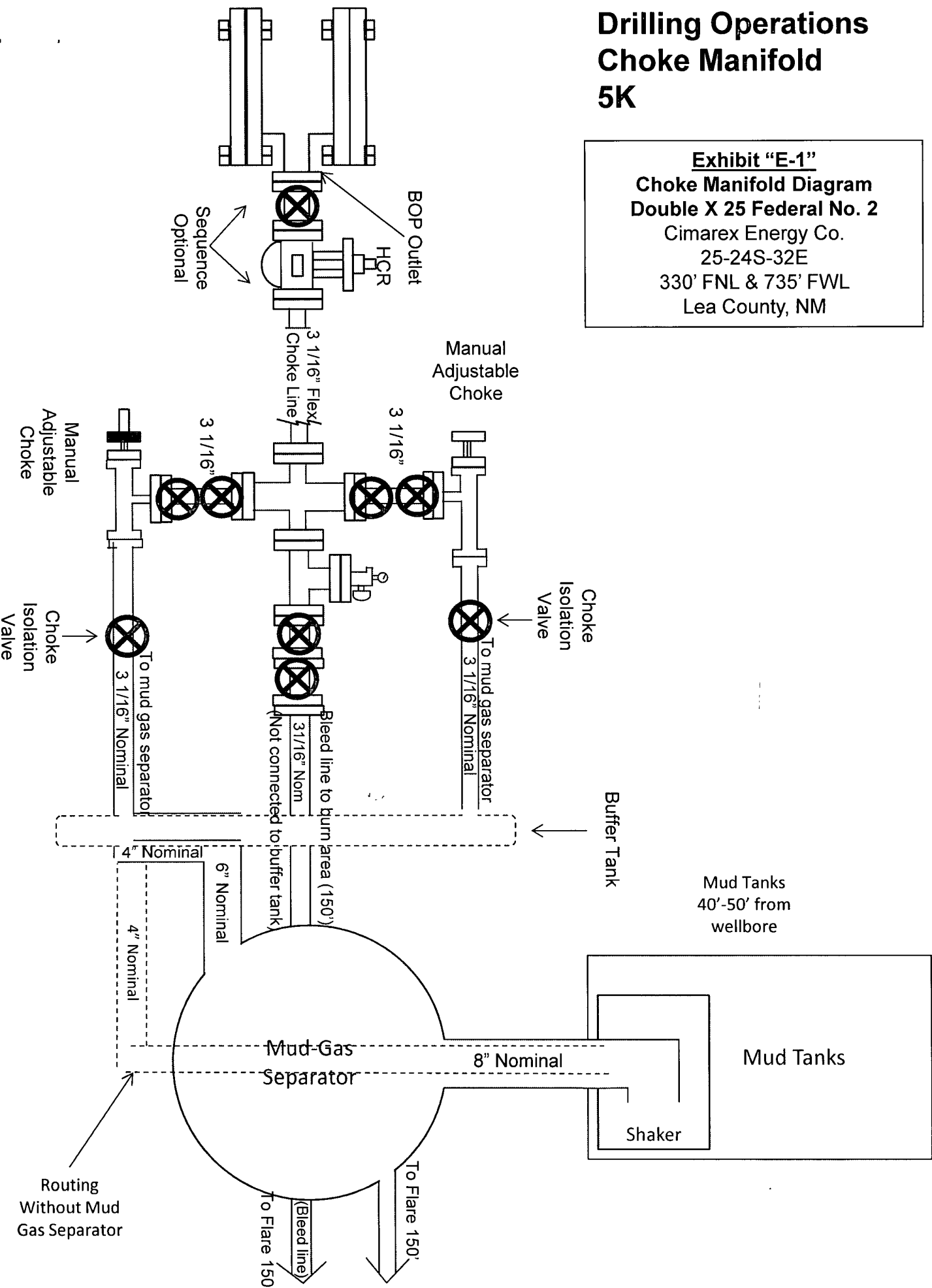
SR & A

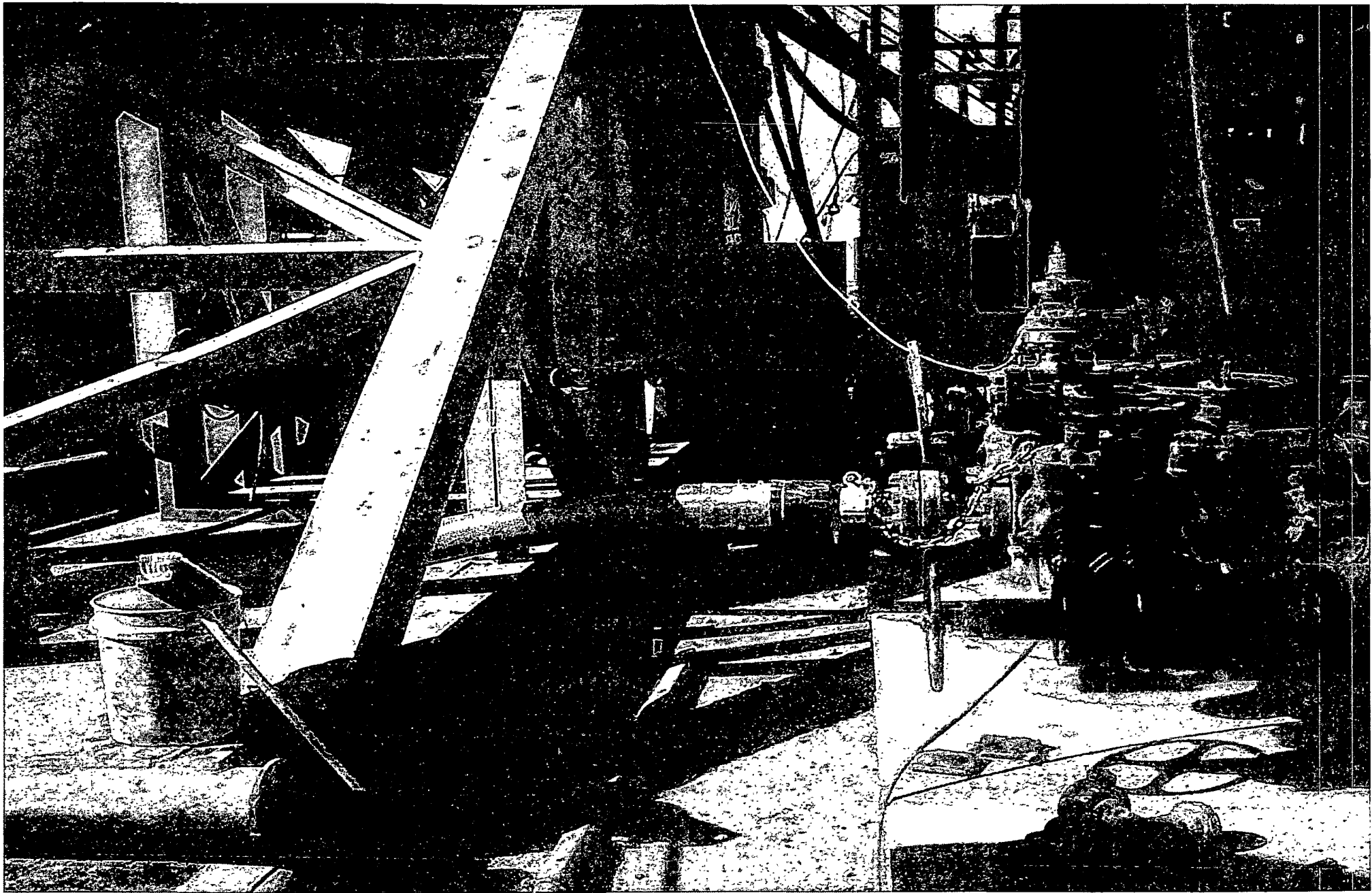


**Exhibit "E"– 5K BOP**  
**Double X 25 Federal No. 4**  
Cimarex Energy Co.  
25-24S-32E  
330' FNL & 735' FWL  
Lea County, NM

# Drilling Operations Choke Manifold 5K

**Exhibit "E-1"**  
**Choke Manifold Diagram**  
**Double X 25 Federal No. 2**  
Cimarex Energy Co.  
25-24S-32E  
330' FNL & 735' FWL  
Lea County, NM

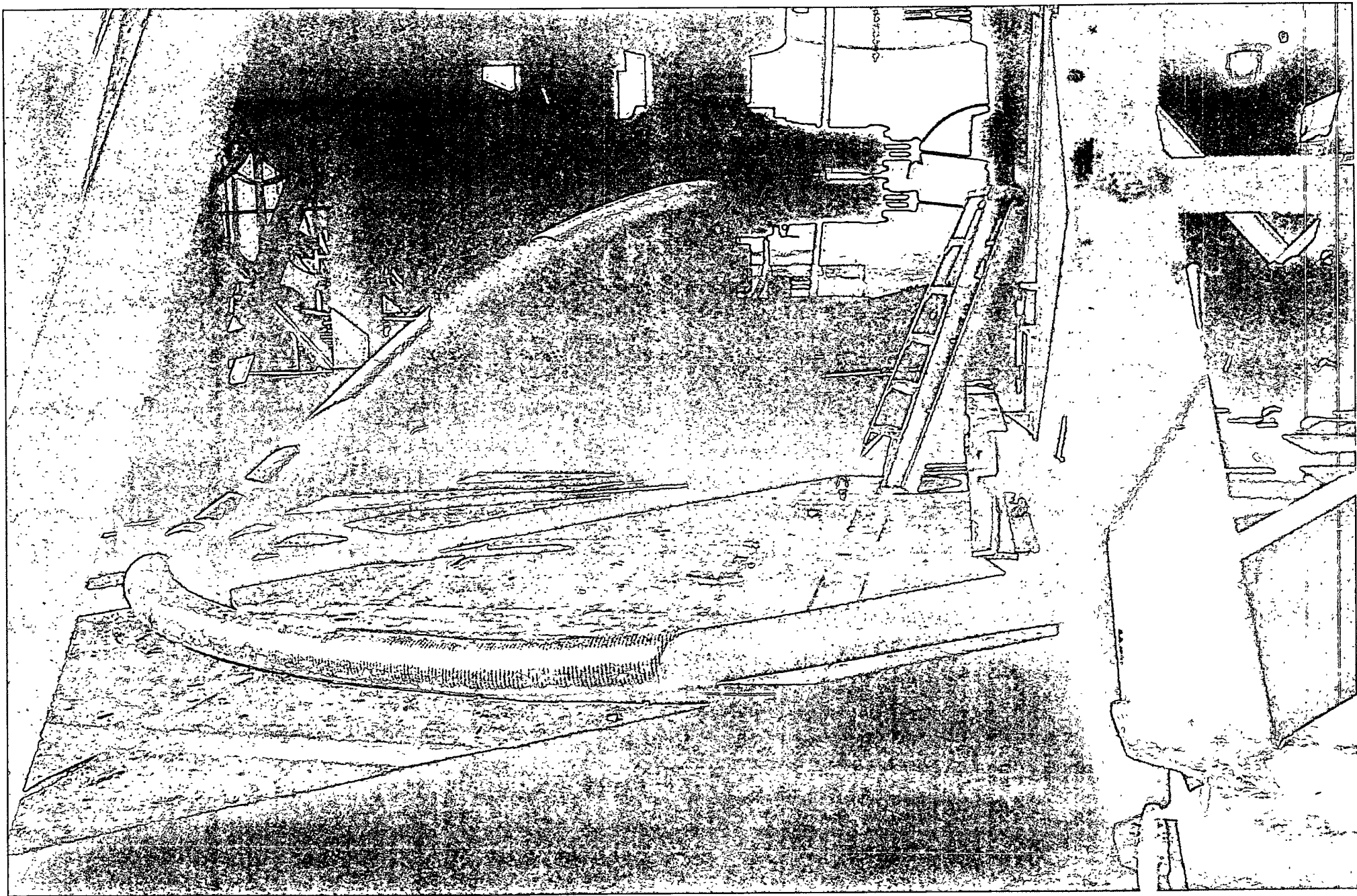




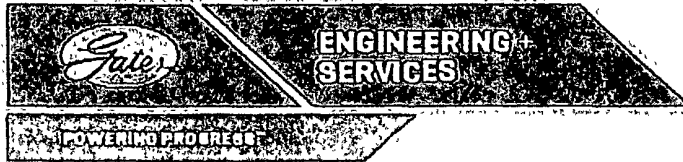
Scandrill Eagle

Serial #

L31853011112D



Scandrill Eagle  
Serial #  
L31853011112D



GATES E & S NORTH AMERICA, INC  
DU-TEX  
134 44TH STREET  
CORPUS CHRISIT, TEXAS 78405

PHONE: 361-887-9807  
FAX: 361-887-0812  
EMAIL: crpe&s@gates.com  
WEB: www.gates.com

## GRADE E PRESSURE TEST CERTIFICATE

|                      |                              |                   |                        |
|----------------------|------------------------------|-------------------|------------------------|
| Customer :           | SPECIALTY SALES              | Test Date :       | 3/13/2012              |
| Customer Ref. :      | 44479-5                      | Certificate No. : | D-031312-2             |
| Invoice No. :        | 184955                       | Created By :      | RORY BOYD              |
| Product Description: | 10K3.542.0CK41/1610K FLANGES |                   |                        |
| End Fitting 1 :      | 4 1/16 10K FLANGE            | End Fitting 2 :   | 4 1/16 10K FLANGE      |
| Gates Part No. :     | 4773-6291                    | Hose Serial No. : | L31853011112D-031312-2 |
| Assembly Code :      | L31853011112                 | Test Pressure :   | 15,000 PSI             |
| Working Pressure :   | 10,000 PSI                   |                   |                        |

Gates E & S North America, Inc. certifies that the following hose assembly has been tested to API 7K requirements and passed the hydrostatic test per API Spec 7K, Fifth Edition, June 2010, Test pressure 9.6.7 and per Table 9 to 15,000 psi in accordance with this product number. Hose burst pressure 9.6.7.2 exceeds the minimum of 2.5 times the working pressure per Table 9.

|                   |           |                        |           |
|-------------------|-----------|------------------------|-----------|
| Technician :      | JOE R.    | Technical Supervisor : | RAM V.    |
| Date :            | 3/13/2012 | Date :                 | 3/13/2012 |
| Signature :       |           | Signature :            |           |
| Quality Manager : | RORY B.   | Testing Operator :     | MARK M.   |
| Date :            | 3/13/2012 | Date :                 | 3/13/2012 |
| Signature :       |           | Signature :            |           |

# **Cimarex Energy Co. of Colorado – Closed-Loop System Design Plan**

## **Equipment List**

- Primary Shakers
- Mud Cleaner – hydro-cyclones
- 1 or 2 Centrifuges (depending on well depth)
- De-watering system with pH adjustment, coagulant mixing and dosing, and polymer mixing and dosing (may not be necessary for shallower wells)
- Drying Augur
- Sump Drying Augur
- Sump
- Cuttings Boxes
- Reserve Fluids Tank Farm
- Wire Mesh Trash Enclosure (spent motor oils kept in separate containers and later sent to approved landfill)

## **Operation and Maintenance**

The Cimarex Zero Discharge system is designed to maintain drill solids at or below 5%. The equipment is arranged to progressively remove solids from the largest to the smallest size. Drilling fluids can thus be reused and savings is realized on mud and disposal costs. Dewatering may be required with the centrifuges to insure removal of ultra fine solids.

The drilling location is constructed to allow storm water to flow to a central sump normally the cellar. This ensures no contamination leaves the drilling pad in the event of a spill. Storm water is reused in the mud system or stored in a reserve fluid tank farm until it can be reused. All lubricants, oils, or chemicals are removed immediately from the ground to prevent the contamination of storm water. An oil trap is normally installed on the sump if an oil spill occurs during a storm.

A tank farm is utilized to store drilling fluids including fresh water and brine fluids. The tank farm is constructed on a 20 ml plastic lined, bermed pad to prevent the contamination of the drilling site during a spill. Fluids from other sites may be stored in these tanks for processing by the solids control equipment and reused in the mud system. At the end of the well the fluids are transported from the tank farm to an adjoining well or to the next well for the rig.

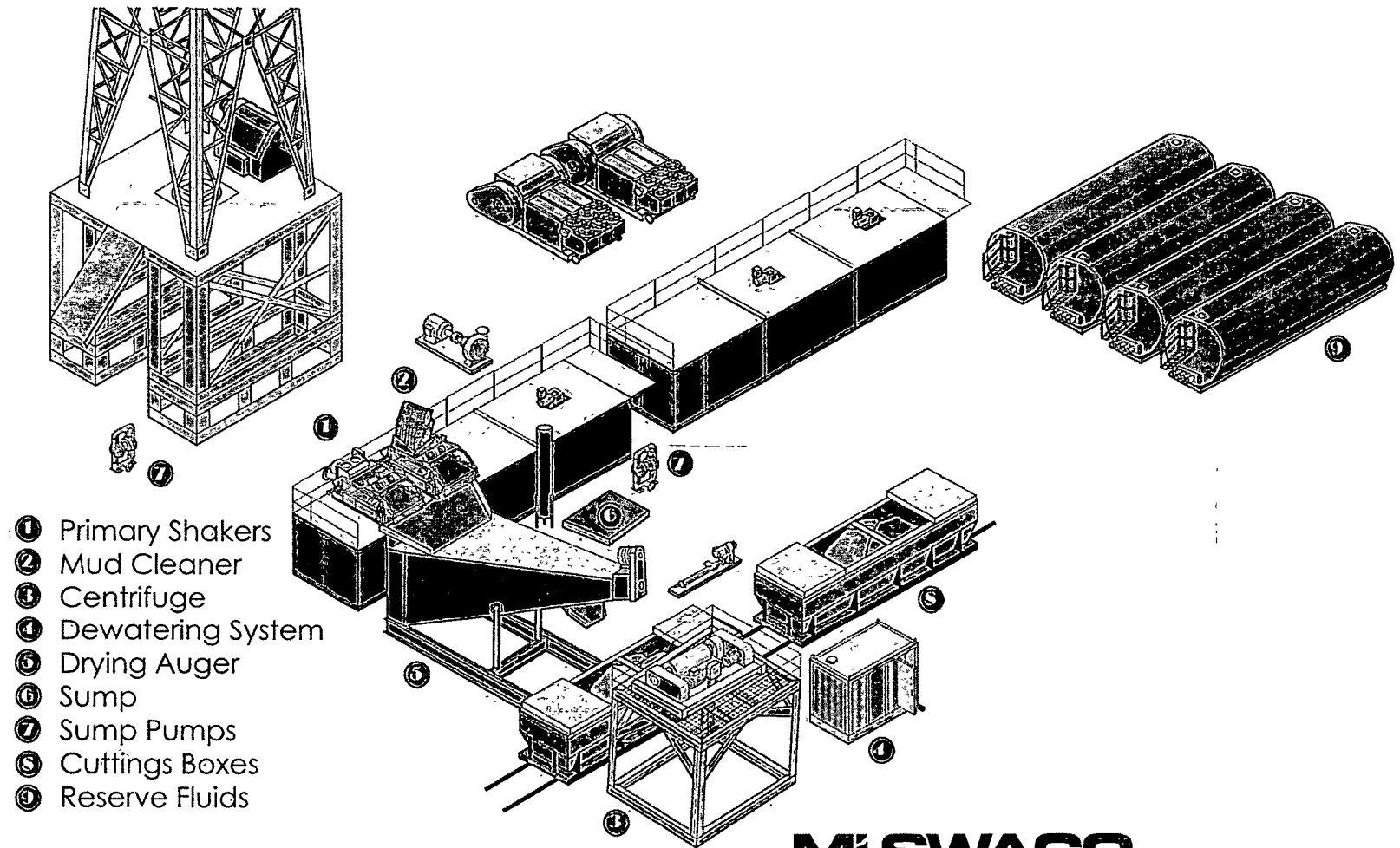
These closed loop operations can be monitored by our service technicians. Daily logs are maintained to ensure optimal equipment operation and maintenance. Screen and chemical use is logged to maintain inventory control. Fluid properties are monitored and recorded and drilling mud volumes are accounted for in the mud storage farm. This data is kept for end of well review to insure performance goals are met. Lessons learned are logged and used to help with continuous improvement.

Spill prevention is accomplished by maintaining pump packing, hoses, and pipe fittings to insure no leaks are occurring. During an upset condition the source of the spill is isolated and repaired as soon as it is discovered. Free liquid is removed by a diaphragm pump and returned to the mud system. Loose topsoil may be used to stabilize the spill and the contaminated soil is excavated and placed in the cuttings boxes. After the well is finished and the rig has moved, the entire location is scrapped and tested for all regulated toxic materials. If found they are removed and disposed of per regulatory requirements.

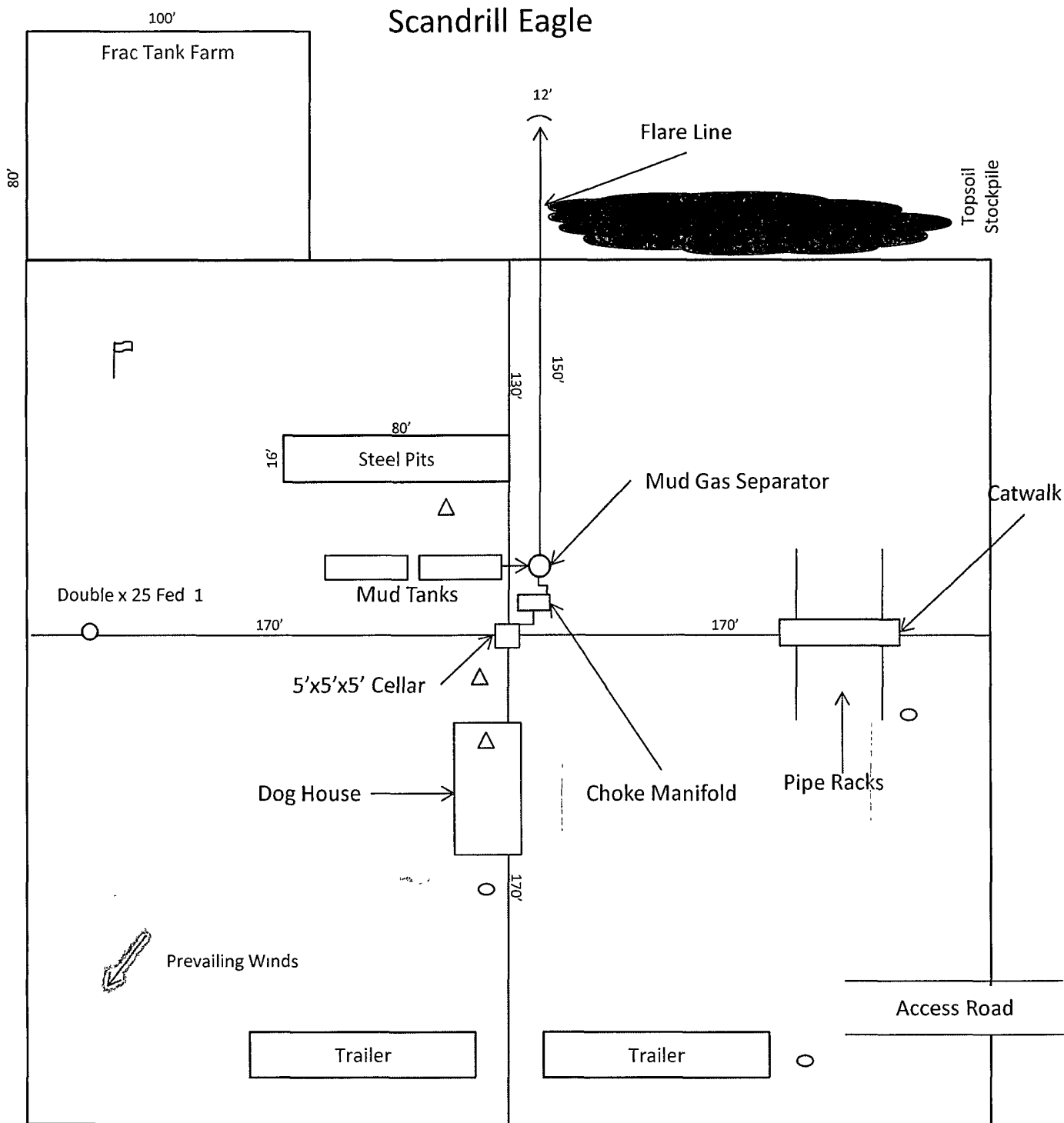
## **Closure Plan**

During drilling operations, all liquids, drilling fluids, and cuttings will be hauled off via CRI (Controlled Recovery Incorporated, Permit R-9166).

# Closed Loop with Drying Auger and Dewatering System



**Mi SWACO**



-  Wind Direction Indicators  
(wind sock or streamers)
-  • H2S Monitors  
(alarms at bell nipple and shale shaker)
-  Briefing Areas

**Exhibit "D"**  
**Rig Diagram**  
**Double X 25 Fed 2**  
 Cimarex Energy Co.  
 25-24S-32E  
 SHL 330 FNL & 735 FWL  
 BHL 330 FSL & 990 FWL  
 Lea County, NM

