

New Mexico Oil and Gas Conservation Act  
 1625 N. French Drive  
 Hobbs, NM 88240

RECEIVED

DEC 08 2008

Form 3160-3  
 (April 2004)

HOBBSOCD

FORM APPROVED  
 OSIB No. 1004-0137  
 Expires March 31, 2007

UNITED STATES  
 DEPARTMENT OF THE INTERIOR  
 BUREAU OF LAND MANAGEMENT

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>SHL LC-064900 BHL NM-0153471                              |
| 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. of Colorado   |  | 7. If Unit or CA Agreement, Name and No<br>Pending                               |
| 3a. Address<br>PO Box 140907<br>Irving, TX 75014   |  | 8. Lease Name and Well No. <b>&lt;37526&gt;</b><br>Franklin 18 Federal Com No. 1 |
| 3b. Phone No (include area code)<br>972-401-3111   |  | 9. API Well No.<br>30-005- <b>29072</b>  |
| 4. Location of Well (Report location clearly and in accordance with any State requirements. *)<br>At Surface 330 FNL & 330 FEL <b>Unit A</b>   |  | 10. Field and Pool, or Exploratory<br>Abo; Wildcat                               |
| At proposed prod. Zone 330 FNL & 330 FWL <b>Unit D Proposed Horizontal Abo Test</b>  |  | 11. Sec., T. R. M. or Blk and Survey or Area<br>18-15S-31E                       |
| 14. Distance in miles and direction from nearest town or post office*  |  | 12. County or Parish<br>Chaves   |
|  |  | 13. State<br>NM  |
| 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>NM-0153471 - 753.62 acres<br>LC-064900 - 760 acres | 17. Spacing Unit dedicated to this well<br>N2N2 159.13 acres                     |
| 18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft NA   | 19. Proposed Depth<br>Pilot Hole 9075'<br>MD 13092'<br>TVD 8615'               | 20. BLM/BIA Bond No. on File<br>NM-2575  |
| 21. Elevations (Show whether DF, KDB, RT, GL, etc)<br>4,448' GR  | 22. Approximate date work will start*<br>6/30/2008                             | 23. Estimated duration<br>35-45 days   |

24. Attachments **ROSWELL CONTROLLED WATER BASIN**

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><b>Zeno Farris</b>  | Name (Printed/Typed)<br>Zeno Farris                | Date<br>06.05.08            |
| Title<br>Manager Operations Administration                                       |  |                             |
| Approved By (Signature)<br><b>/s/ Jerry Dutchover</b>                            | Name (Printed/Typed)<br><b>/s/ Jerry Dutchover</b> | Date<br><b>DEC 04 2008</b>  |
| Title<br><b>Assistant Field Manager,<br/>Lands And Minerals</b><br><b>Acting</b> | Office<br><b>ROSWELL FIELD OFFICE</b>              | <b>APPROVED FOR 2 YEARS</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

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 SUBJECT TO  
 GENERAL REQUIREMENTS AND  
 SPECIAL STIPULATIONS ATTACHED

WITNESS  
 SURFACE CASING

**KZ**

DISTRICT I  
1625 N. French Dr., Hobbs, NM 88240

DISTRICT II  
1301 W. Grand Avenue, Artesia, NM 88210

DISTRICT III  
1000 Rio Brazos Rd., Aztec, NM 87410

DISTRICT IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy, Minerals and Natural Resources Department

Form C-102  
Revised October 12, 2005

Submit to Appropriate District Office  
State Lease - 4 Copies  
Fee Lease - 3 Copies

**OIL CONSERVATION DIVISION**  
1220 South St. Francis Dr.  
Santa Fe, New Mexico 87505

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

|                                   |   |                           |
|-----------------------------------|---|---------------------------|
| API Number<br><b>30-005-29072</b> | Pool Code<br>/                                  | Pool Name<br>Abo; Wildcat |
| Property Code<br><b>37526</b>     | Property Name<br>FRANKLIN "18" FEDERAL COM      | Well Number<br>1          |
| OGRID No.<br>162683               | Operator Name<br>CIMAREX ENERGY CO. OF COLORADO | Elevation<br>4448'        |

Surface Location

| UL or lot No. | Section | Township | Range | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County |
|---------------|---------|----------|-------|---------|---------------|------------------|---------------|----------------|--------|
| A             | 18      | 15 S     | 31 E  |         | 330           | NORTH            | 330           | EAST           | CHAVES |

Bottom Hole Location If Different From Surface

| UL or lot No. | Section | Township | Range | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County |
|---------------|---------|----------|-------|---------|---------------|------------------|---------------|----------------|--------|
| D             | 18      | 15 S     | 31 E  |         | 330           | NORTH            | 330           | WEST           | CHAVES |

|                           |                 |                         |           |
|---------------------------|-----------------|-------------------------|-----------|
| Dedicated Acres<br>159.13 | Joint or Infill | Consolidation Code<br>P | Order No. |
|---------------------------|-----------------|-------------------------|-----------|

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

|   |  |  |
|---|--|--|
|   |  | <p><b>OPERATOR CERTIFICATION</b></p> <p>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.</p> <p><u>Zeno Farris</u> 06-05-08<br/>Signature Date</p> <p>Zeno Farris<br/>Printed Name</p> |
| <p><b>BOTTOM HOLE LOCATION</b><br/>Lat - N33°01'20.07"<br/>Long - W103°52'07.429"<br/>NMSPCE - N 735943.002<br/>E 683738.792<br/>(NAD-83)</p> | <p><b>SURFACE LOCATION</b><br/>Lat - N33°01'20.05"<br/>Long - W103°51'13.54"<br/>NMSPCE - N 735962.0<br/>E 688326.6<br/>(NAD-83)</p> |  |
|   |  | <p><b>SURVEYOR CERTIFICATION</b></p> <p>I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision and that the same is true and correct to the best of my belief.</p> <p>APRIL 19, 2008<br/>Date Surveyed</p> <p>GARY L. JONES<br/>Signature &amp; Seal<br/>Professional Surveyor</p> <p>W.O. 194<br/>Certificate No. Gary L. Jones 7977</p>  |
|   |  | <p>BASIN SURVEYS</p>   |



# Planned Wellpath Report

Preliminary  
Page 1 of 4



INTEQ

| REFERENCE WELLPATH IDENTIFICATION |                                |          |            |
|-----------------------------------|--------------------------------|----------|------------|
| Operator                          | Cimarex Energy Co. of Colorado | Slot     | No. 1H SHL |
| Area                              | Chaves County, NM              | Well     | No. 1H     |
| Field                             | (Franklin) Sec 18, T15S, R31E  | Wellbore | No. 1H PWB |
| Facility                          | Franklin 18 Fed Com No. 1H     |          |            |

| REPORT SETUP INFORMATION |   |                      |                           |
|--------------------------|---|----------------------|---------------------------|
| Projection System        | NAD83 / TM New Mexico State Planes, Eastern Zone (3001),<br>US feet | Software System      | WellArchitect® 2.0        |
| North Reference          | Grid  | User                 | Victor Hernandez          |
| Scale                    | 0.999934  | Report Generated     | 6/2/2008 at 2:47:34 PM    |
| Convergence at slot      | 0.26° East  | Database/Source file | WA_Midland/No. 1H_PWB.xml |

| WELLPATH LOCATION     |                   |          |                  |                |                        |                 |
|-----------------------|-------------------|----------|------------------|----------------|------------------------|-----------------|
|                       | Local coordinates |          | Grid coordinates |                | Geographic coordinates |                 |
|                       | North[ft]         | East[ft] | Easting[USft]    | Northing[USft] | Latitude               | Longitude       |
| Slot Location         | 0.00              | 0.00     | 688326.60        | 735962.00      | 33°01'20.052"N         | 103°51'13.544"W |
| Facility Reference Pt |                   |          | 688326.60        | 735962.00      | 33°01'20.052"N         | 103°51'13.544"W |
| Field Reference Pt    |                   |          | 688326.60        | 735962.00      | 33°01'20.052"N         | 103°51'13.544"W |

| WELLPATH DATUM           |                        |   |                   |
|--------------------------|------------------------|---|-------------------|
| Calculation method       | Minimum curvature      | Rig on No. 1H SHL (RT) to Facility Vertical Datum | 18.00ft           |
| Horizontal Reference Pt  | Facility Center        | Rig on No. 1H SHL (RT) to Mean Sea Level          | 4466.00ft         |
| Vertical Reference Pt    | Rig on No. 1H SHL (RT) | Facility Vertical Datum to Mud Line (Facility)    | 0.00ft            |
| MD Reference Pt          | Rig on No. 1H SHL (RT) | Section Origin                                    | N 0.00, E 0.00 ft |
| Field Vertical Reference | Mean Sea Level         | Section Azimuth                                   | 269.76°           |

BAKER  
HUGHES  
INTEQ



# Planned Wellpath Report

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| REFERENCE WELLPATH IDENTIFICATION |                                |          |            |
|-----------------------------------|--------------------------------|----------|------------|
| Operator                          | Cimarex Energy Co. of Colorado | Slot     | No. 1H SHL |
| Area                              | Chaves County, NM              | Well     | No. 1H     |
| Field                             | (Franklin) Sec 18, T15S, R31E  | Wellbore | No. 1H PWB |
| Facility                          | Franklin 18 Fed Com No. 1H     |          |            |

| WELLPATH DATA (50 stations) † = interpolated/extrapolated station |                 |             |          |                |            |           |               |          |
|---|-----------------|-------------|----------|----------------|------------|-----------|---------------|----------|
| MD [ft]   | Inclination [°] | Azimuth [°] | TVD [ft] | Vert Sect [ft] | North [ft] | East [ft] | DLS [°/100ft] | Comments |
| 0.00  | 0.000           | 269.763     | 0.00     | 0.00           | 0.00       | 0.00      | 0.00          | Tie On   |
| 8395.00   | 0.000           | 269.763     | 8395.00  | 0.00           | 0.00       | 0.00      | 0.00          | KOP      |
| 8495.00†  | 30.000          | 269.763     | 8490.49  | 25.59          | -0.11      | -25.59    | 30.00         |          |
| 8595.00†  | 60.000          | 269.763     | 8560.40  | 95.49          | -0.40      | -95.49    | 30.00         |          |
| 8693.74†  | 89.622          | 269.763     | 8585.98  | 189.73         | -0.79      | -189.72   | 30.00         | EOC      |
| 8695.00†  | 89.622          | 269.763     | 8585.99  | 190.99         | -0.79      | -190.98   | 0.00          |          |
| 8795.00†  | 89.622          | 269.763     | 8586.65  | 290.98         | -1.20      | -290.98   | 0.00          |          |
| 8895.00†  | 89.622          | 269.763     | 8587.31  | 390.98         | -1.62      | -390.98   | 0.00          |          |
| 8995.00†  | 89.622          | 269.763     | 8587.97  | 490.98         | -2.03      | -490.98   | 0.00          |          |
| 9095.00†  | 89.622          | 269.763     | 8588.63  | 590.98         | -2.45      | -590.97   | 0.00          |          |
| 9195.00†  | 89.622          | 269.763     | 8589.29  | 690.98         | -2.86      | -690.97   | 0.00          |          |
| 9295.00†  | 89.622          | 269.763     | 8589.95  | 790.97         | -3.28      | -790.97   | 0.00          |          |
| 9395.00†  | 89.622          | 269.763     | 8590.61  | 890.97         | -3.69      | -890.96   | 0.00          |          |
| 9495.00†  | 89.622          | 269.763     | 8591.27  | 990.97         | -4.10      | -990.96   | 0.00          |          |
| 9595.00†  | 89.622          | 269.763     | 8591.93  | 1090.97        | -4.52      | -1090.96  | 0.00          |          |
| 9695.00†  | 89.622          | 269.763     | 8592.59  | 1190.96        | -4.93      | -1190.95  | 0.00          |          |
| 9795.00†  | 89.622          | 269.763     | 8593.25  | 1290.96        | -5.35      | -1290.95  | 0.00          |          |
| 9895.00†  | 89.622          | 269.763     | 8593.91  | 1390.96        | -5.76      | -1390.95  | 0.00          |          |
| 9995.00†  | 89.622          | 269.763     | 8594.57  | 1490.96        | -6.17      | -1490.94  | 0.00          |          |
| 10095.00†   | 89.622          | 269.763     | 8595.23  | 1590.96        | -6.59      | -1590.94  | 0.00          |          |
| 10195.00†   | 89.622          | 269.763     | 8595.89  | 1690.95        | -7.00      | -1690.94  | 0.00          |          |
| 10295.00†   | 89.622          | 269.763     | 8596.55  | 1790.95        | -7.42      | -1790.94  | 0.00          |          |
| 10395.00†   | 89.622          | 269.763     | 8597.21  | 1890.95        | -7.83      | -1890.93  | 0.00          |          |
| 10495.00†   | 89.622          | 269.763     | 8597.87  | 1990.95        | -8.24      | -1990.93  | 0.00          |          |
| 10595.00†   | 89.622          | 269.763     | 8598.52  | 2090.94        | -8.66      | -2090.93  | 0.00          |          |
| 10695.00†   | 89.622          | 269.763     | 8599.18  | 2190.94        | -9.07      | -2190.92  | 0.00          |          |
| 10795.00†   | 89.622          | 269.763     | 8599.84  | 2290.94        | -9.49      | -2290.92  | 0.00          |          |
| 10895.00†   | 89.622          | 269.763     | 8600.50  | 2390.94        | -9.90      | -2390.92  | 0.00          |          |
| 10995.00†   | 89.622          | 269.763     | 8601.16  | 2490.94        | -10.31     | -2490.91  | 0.00          |          |
| 11095.00†   | 89.622          | 269.763     | 8601.82  | 2590.93        | -10.73     | -2590.91  | 0.00          |          |





# Planned Wellpath Report

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| REFERENCE WELLPATH IDENTIFICATION |                                |          |            |
|-----------------------------------|--------------------------------|----------|------------|
| Operator                          | Cimarex Energy Co. of Colorado | Slot     | No. 1H SHL |
| Area                              | Chaves County, NM              | Well     | No. 1H     |
| Field                             | (Franklin) Sec 18, T15S, R31E  | Wellbore | No. 1H PWB |
| Facility                          | Franklin 18 Fed Com No. 1H     |          |            |

| WELLPATH DATA (50 stations) † = interpolated/extrapolated station |                 |             |          |                |            |           |               |            |
|---|-----------------|-------------|----------|----------------|------------|-----------|---------------|------------|
| MD [ft]   | Inclination [°] | Azimuth [°] | TVD [ft] | Vert Sect [ft] | North [ft] | East [ft] | DLS [°/100ft] | Comments   |
| 11195.00†   | 89.622          | 269.763     | 8602.48  | 2690.93        | -11.14     | -2690.91  | 0.00          |            |
| 11295.00†   | 89.622          | 269.763     | 8603.14  | 2790.93        | -11.56     | -2790.91  | 0.00          |            |
| 11395.00†   | 89.622          | 269.763     | 8603.80  | 2890.93        | -11.97     | -2890.90  | 0.00          |            |
| 11495.00†   | 89.622          | 269.763     | 8604.46  | 2990.92        | -12.39     | -2990.90  | 0.00          |            |
| 11595.00†   | 89.622          | 269.763     | 8605.12  | 3090.92        | -12.80     | -3090.90  | 0.00          |            |
| 11695.00†   | 89.622          | 269.763     | 8605.78  | 3190.92        | -13.21     | -3190.89  | 0.00          |            |
| 11795.00†   | 89.622          | 269.763     | 8606.44  | 3290.92        | -13.63     | -3290.89  | 0.00          |            |
| 11895.00†   | 89.622          | 269.763     | 8607.10  | 3390.92        | -14.04     | -3390.89  | 0.00          |            |
| 11995.00†   | 89.622          | 269.763     | 8607.76  | 3490.91        | -14.46     | -3490.88  | 0.00          |            |
| 12095.00†   | 89.622          | 269.763     | 8608.42  | 3590.91        | -14.87     | -3590.88  | 0.00          |            |
| 12195.00†   | 89.622          | 269.763     | 8609.08  | 3690.91        | -15.28     | -3690.88  | 0.00          |            |
| 12295.00†   | 89.622          | 269.763     | 8609.74  | 3790.91        | -15.70     | -3790.88  | 0.00          |            |
| 12395.00†   | 89.622          | 269.763     | 8610.40  | 3890.91        | -16.11     | -3890.87  | 0.00          |            |
| 12495.00†   | 89.622          | 269.763     | 8611.06  | 3990.90        | -16.53     | -3990.87  | 0.00          |            |
| 12595.00†   | 89.622          | 269.763     | 8611.72  | 4090.90        | -16.94     | -4090.87  | 0.00          |            |
| 12695.00†   | 89.622          | 269.763     | 8612.38  | 4190.90        | -17.35     | -4190.86  | 0.00          |            |
| 12795.00†   | 89.622          | 269.763     | 8613.04  | 4290.90        | -17.77     | -4290.86  | 0.00          |            |
| 12895.00†   | 89.622          | 269.763     | 8613.70  | 4390.89        | -18.18     | -4390.86  | 0.00          |            |
| 12995.00†   | 89.622          | 269.763     | 8614.36  | 4490.89        | -18.60     | -4490.85  | 0.00          |            |
| 13092.27  | 89.622          | 269.763     | 8615.00  | 4588.16        | -19.00     | -4588.12  | 0.00          | No. 1H BHL |



INTEQ



# Planned Wellpath Report

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INTEQ

| REFERENCE WELLPATH IDENTIFICATION |                                |          |            |
|-----------------------------------|--------------------------------|----------|------------|
| Operator                          | Cimarex Energy Co. of Colorado | Slot     | No. 1H SHL |
| Area                              | Chaves County, NM              | Well     | No. 1H     |
| Field                             | (Franklin) Sec 18, T15S, R31E  | Wellbore | No. 1H PWB |
| Facility                          | Franklin 18 Fed Com No. 1H     |          |            |

| TARGETS       |          |          |            |           |                    |                     |                |                 |       |
|---------------|----------|----------|------------|-----------|--------------------|---------------------|----------------|-----------------|-------|
| Name          | MD [ft]  | TVD [ft] | North [ft] | East [ft] | Grid East [srv ft] | Grid North [srv ft] | Latitude       | Longitude       | Shape |
| 1) No. 1H BHL | 13092.27 | 8615:00  | -19:00     | -4588.12  | 683738:79          | 735943:00           | 33°01'20.068"N | 103°52'07:429"W | point |

| SURVEY PROGRAM Ref Wellbore: No. 1H PWB Ref Wellpath: Preliminary |             |                              |                  |            |
|---|-------------|------------------------------|------------------|------------|
| Start MD [ft]   | End MD [ft] | Positional Uncertainty Model | Log Name/Comment | Wellbore   |
| 18.00   | 13092.27    | NaviTrak (Standard)          |                  | No. 1H PWB |



INTEQ



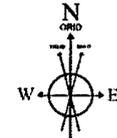
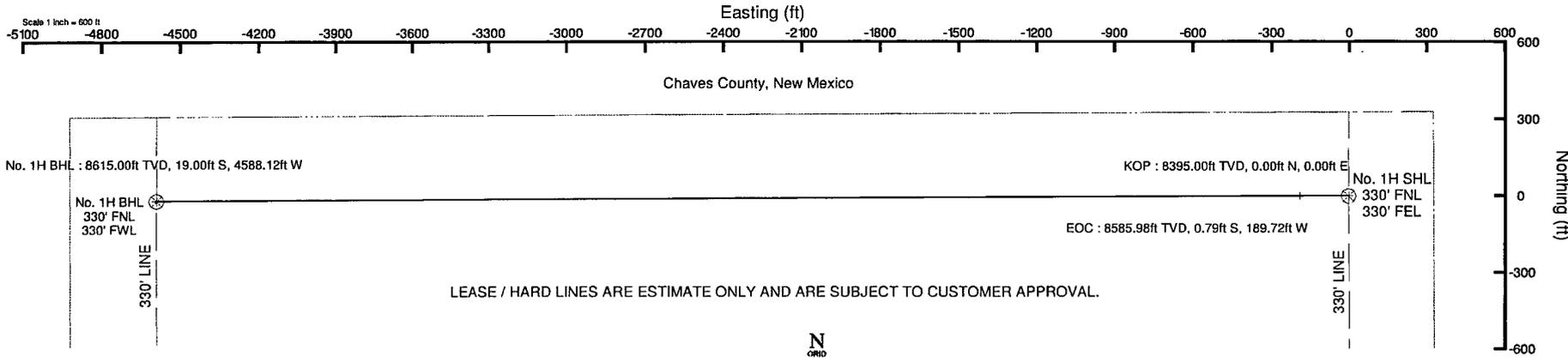
# Cimarex Energy Co. of Colorado

Location: Chaves County, NM  
 Field: (Franklin) Sec 18, T15S, R31E  
 Facility: Franklin 18 Fed Com No. 1H

Slot: No. 1H SHL  
 Well: No. 1H  
 Wellbore: No. 1H PWB

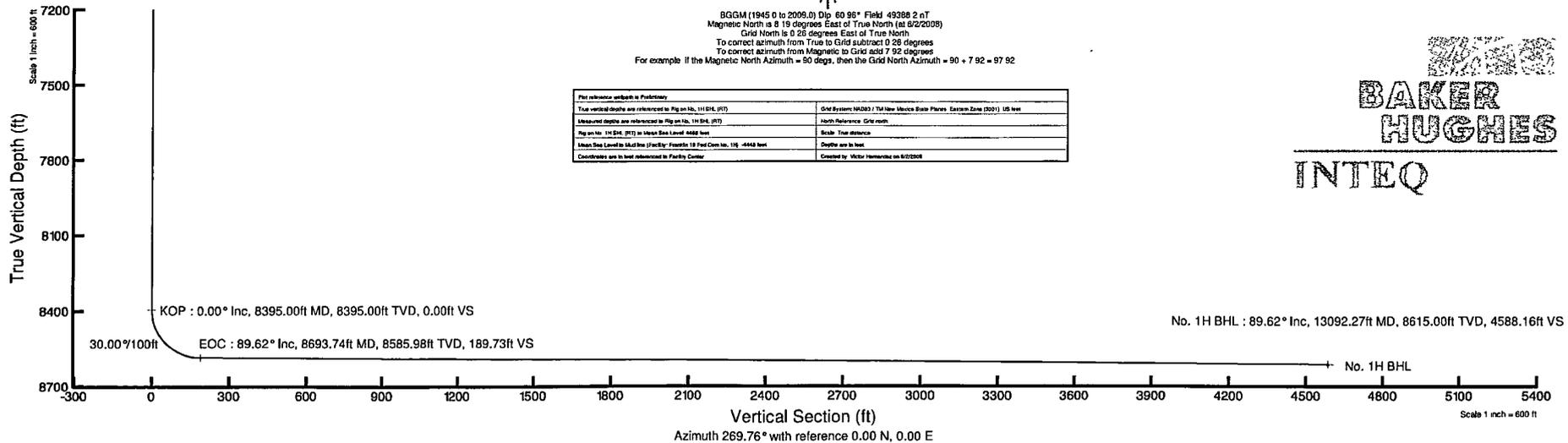


| Well Profile Data |          |         |         |          |              |              |               |         |
|-------------------|----------|---------|---------|----------|--------------|--------------|---------------|---------|
| Design Comment    | MD (ft)  | Inc (°) | Az (°)  | TVD (ft) | Local N (ft) | Local E (ft) | DLS (%/100ft) | VS (ft) |
| Tie On            | 0.00     | 0.000   | 269.763 | 0.00     | 0.00         | 0.00         | 0.00          | 0.00    |
| KOP               | 8395.00  | 0.000   | 269.763 | 8395.00  | 0.00         | 0.00         | 0.00          | 0.00    |
| EOC               | 8693.74  | 89.622  | 269.763 | 8585.98  | -0.79        | -189.72      | 30.00         | 189.73  |
| No. 1H BHL        | 13092.27 | 89.622  | 269.763 | 8615.00  | -19.00       | -4588.12     | 0.00          | 4588.16 |



BGGM (1945.0 to 2009.0) Dip: 60.96° Field: 49388.2 nT  
 Magnetic North is 8.19 degrees East of True North (at 8/2/2008)  
 Grid North is 0.28 degrees East of True North  
 To correct azimuth from True to Grid subtract 0.28 degrees  
 To correct azimuth from Magnetic to Grid add 7.92 degrees  
 For example if the Magnetic North Azimuth = 90 degs, then the Grid North Azimuth = 90 + 7.92 = 97.92

|   |  |
|---|--|
| For reference only - not to be used for production                                  |  |
| True vertical depths are referenced to Rig on No. 1H SHL (RT)                       | Grid System: NAD83 / The New Mexico State Plane, Eastern Zone (2011) US feet |
| Measured depths are referenced to Rig on No. 1H SHL (RT)                            | North Reference: Grid north  |
| Rig on No. 1H SHL (RT) is Mean Sea Level 4488 feet                                  | Scale: True distance   |
| Mean Sea Level is Mean Sea Level (Facility: Franklin 18 Fed Com No. 1H - 4448 feet) | Depth: as is best  |
| Coordinates are as best obtained by Facility Center                                 | Created by: Victor Hernandez on 8/2/2008                                     |



Application to Drill  
**Franklin 18 Federal Com No. 1**  
 Cimarex Energy Co. of Colorado  
 Unit A, Section 18  
 T15S R31E, Chaves 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 & 330 FEL  
 BHL 330 FNL & 330 FWL *Proposed Horizontal Abo Test*
- 2 Elevation above sea level: 4,448 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: Pilot Hole 9075' MD 13092' TVD 8615'
- 6 Estimated tops of geological markers:

|                    |        |
|--------------------|--------|
| Yates              | 2,312' |
| Queen              | 3,090' |
| SanAndres          | 3,940' |
| Abo Shale          | 7,340' |
| Lower Abo Dolomite | 8,585' |
| Wolfcamp LS        | 8,675' |
- 7 Possible mineral bearing formation:  
 Abo Oil

8 Proposed Mud Circulating System:

| Depth                   | Mud Wt    | Visc  | Fluid Loss    | Type Mud  |
|-------------------------|-----------|-------|---------------|---|
| 0' to 340'              | 8.4 - 8.6 | 30-32 | May lose circ | Fresh water spud mud  |
| 0' to 3,950'            | 10.0      | 28-29 | May lose circ | Brine Water   |
| 0' to 9,075'            | 8.6 - 9.5 | 28-29 | NC            | Fresh water and brine, use hi-vis sweeps to keep hole clean |
| KOP<br>8,395' to 8,783' | 8.4 - 8.9 | 28    | NC            | 2% KCl  |
| 8,783' to 13,092'       | 8.4 - 8.9 | 28    | 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. Mud system monitoring equipment with derrick floor indicators and visual/audio alarms shall be installed and operative prior to drilling into the Wolfcamp formation. This equipment will remain in use until production casing is run and cemented.

- 8a Drill 8¾" pilot hole to 9075.' Set KO Plug @ 8405.' Mill window from 8390' to 9400.' Kick off horizontal leg @ 8395' and drill 6½" hole to 13092' MD & 8615' TVD. Run 4½" 11.6# P-110 BTC Liner from RSB packer @ 8283' to 8783' and then LTC from 8783' to 13092.' No cement required for Peak Systems Liner.

**Application to Drill  
Franklin 18 Federal Com No. 1  
Cimarex Energy Co. of Colorado  
Unit A, Section 18  
T15S R31E, Chaves County, NM**

9 Casing Program:

| Hole Size | Depth             | Casing OD | Weight | Thread | Collar | Grade  |
|-----------|-------------------|-----------|--------|--------|--------|--------|
| 17½"      | 0' to 340'        | New 13¾"  | 48#    | 8-R    | STC    | H-40   |
| 12¼"      | 0' to 3,950'      | New 9½"   | 40#    | 8-R    | LTC    | J/K-55 |
| 8¾"       | 0' to 9,075'      | New 7"    | 26#    | 8-R    | LTC    | P-110  |
| 6⅞"       | 8,283' to 8,783'  | New 4½"   | 11.6#  | 8-R    | BTC    | P-110  |
| 6⅞"       | 8,783' to 13,092' | New 4½"   | 11.6#  | 8-R    | LTC    | P-110  |

10 Cement Program:

Surface Lead: 110 sx Light Premium Plus + 0.125 lb/sk Poly-E-Flake + 1% CaCl<sub>2</sub> (wt 14.2, yld 1.64)

**WITNESS**

Tail: 220 sx Premium Plus + 2% CaCl<sub>2</sub> (wt 14.8, yld 1.35)

TOC 0'

Intermediate Lead: 450 sx Interfill C + 0.125 lb/sk Poly-E-Flake (wt 11.9, yld 2.45)

Tail: 215 sx Premium Plus + 1% CaCl<sub>2</sub> (wt 14.8, yld 1.33)

TOC 0'

Pilot Hole 615 sx Super H + 0.5% Halad-344 + 0.4% CFR-3 + 1lbm/sk Salt + 5 lb/sk Gilsonite + 0.125 lb/sk Poly-E-Flake + 0.35% HR-7 (wt 13.0, yld 1.67)

**TOC 3750'**

Liner *Peak Systems Iso-Pack Liner will not require cementing.*

|  |      |           |        |                        |
|--|------|-----------|--------|------------------------|
| Fresh water will be protected by setting       | 13¾" | casing at | 340'   | and cementing to 0'    |
| Hydrocarbon zones will be protected by setting | 9½"  | casing at | 3,950' | and cementing to 0'    |
| and by setting                                 | 7"   | casing at | 9,075' | and cementing to 3750' |

Cimarex uses the following minimum safety factors:

|       |          |         |
|-------|----------|---------|
| Burst | Collapse | Tension |
| 1.125 | 1.125    | 1.80    |

**Application to Drill**  
**Franklin 18 Federal Com No. 1**  
**Cimarex Energy Co. of Colorado**  
Unit A, Section 18  
T15S R31E, Chaves County, NM

11 Pressure control Equipment:

Exhibit "E". A 13 $\frac{3}{8}$ " 5000 PSI working pressure B.O.P. consisting of one set of blind rams and one set of 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 6000'. 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.

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. From the base of the surface pipe through the running of production casing, the well will be equipped with a 5000 psi BOP system.

We are requesting a variance for testing the 13 $\frac{3}{8}$ " surface casing from Onshore Order No. 2, which states that all casing strings below the conductor shall be pressure tested to 0.22 psi per foot or 1500 psi, whichever is greater, but not to exceed 70% of the manufacturer's stated maximum internal yield. We are requesting to test the 13 $\frac{3}{8}$ " casing to 1000 psi using rig pumps. The BOP will be tested to 5000 PSI by an independent service company.

*ok  
acc*

12 Testing, Logging and Coring Program:

- A. Mud logging                      2 man unit from 3950' to TD
- B. Electric logging program: CNL / LDT / CAL / GR, DLL / CAL / GR
- C. No DSTs or cores are planned at this time.

13 Potential Hazards:

No abnormal pressures or temperatures are expected. The area has a potential H<sub>2</sub>S hazard. An H<sub>2</sub>S drilling plan is attached. 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    **4000 psi**                      Estimated BHT    **175**

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

Drilling expected to take    35-45 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.

Abo                      pay will be perforated and stimulated.

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

**Hydrogen Sulfide Drilling Operations Plan**  
**Franklin 18 Federal Com No. 1**  
**Cimarex Energy Co. of Colorado**  
Unit A, Section 18  
T15S R31E, Chaves County, NM

- 1 All Company and Contract personnel admitted on location must be trained by a qualified H<sub>2</sub>S safety instructor to the following:
  - A. Characteristics of H<sub>2</sub>S
  - B. Physical effects and hazards
  - C. Proper use of safety equipment and life support systems.
  - D. Principle and operation of H<sub>2</sub>S detectors, warning system and briefing areas.
  - E. Evacuation procedure, routes and first aid.
  - F. Proper use of 30 minute pressure demand air pack.
  
- 2 H<sub>2</sub>S Detection and Alarm Systems:
  - A. H<sub>2</sub>S detectors and audio alarm system to be located at bell nipple, end of flow line (mud pit) and on derrick floor or doghouse.
  
- 3 Windsock and/or wind streamers:
  - A. Windsock at mudpit area should be high enough to be visible.
  - B. Windsock at briefing area should be high enough to be visible.
  
- 4 Condition Flags and Signs:
  - A. Warning sign on access road to location.
  - B. Flags to be displayed on sign at entrance to location. Green flag indicates normal safe condition. Yellow flag indicates potential pressure and danger. Red flag indicates danger (H<sub>2</sub>S present in dangerous concentration). Only emergency personnel admitted to location.
  
- 5 Well control equipment:
  - A. See exhibit "E"
  
- 6 Communication:
  - A. While working under masks chalkboards will be used for communication.
  - B. Hand signals will be used where chalk board is inappropriate.
  - C. Two way radio will be used to communicate off location in case of emergency help is required. In most cases cellular telephones will be available at most drilling foreman's trailer or living quarters.
  
- 7 Drillstem Testing:

No DSTs or cores are planned at this time.
  
- 8 Drilling contractor supervisor will be required to be familiar with the effects H<sub>2</sub>S has on tubular goods and other mechanical equipment.
  
- 9 If H<sub>2</sub>S is encountered, mud system will be altered if necessary to maintain control of formation. A mud gas separator will be brought into service along with H<sub>2</sub>S scavengers if necessary.

**Emergency Procedures**

In the event of a release of gas containing H<sub>2</sub>S, the first responder(s) must:

- ★ Isolate the area and prevent entry by other persons into the 100 ppm ROE.
- ★ Evacuate any public places encompassed by the 100 ppm ROE.
- ★ Be equipped with H<sub>2</sub>S monitors and air packs in order to control the release.
- ★ Use the "buddy system" to ensure no injuries occur during the response.
- ★ Take precautions to avoid personal injury during this operation.
- ★ Contact operator and/or local officials to aid in operation. See list of phone numbers attached.
- ★ Have received training in the:
  - ◆ Detection of H<sub>2</sub>S, and
  - ◆ Measures for protection against the gas,
  - ◆ Equipment used for protection and emergency response.

**Ignition of Gas Source**

Should control of the well be considered lost and ignition considered, take care to protect against exposure to Sulfur Dioxide (SO<sub>2</sub>). Intentional ignition must be coordinated with the NMOCD and local officials. Additionally, the NM State Police may become involved. NM State Police shall be the Incident Command on scene of any major release. Take care to protect downwind whenever there is an ignition of the gas.

**Characteristics of H<sub>2</sub>S and SO<sub>2</sub>**

| Common Name      | Chemical Formula | Specific Gravity | Threshold Limit | Hazardous Limit | Lethal Concentration |
|------------------|------------------|------------------|-----------------|-----------------|----------------------|
| Hydrogen Sulfide | H <sub>2</sub> S | 1.189 Air=1      | 10 ppm          | 100 ppm/hr      | 600 ppm              |
| Sulfur Dioxide   | SO <sub>2</sub>  | 2.21 Air=1       | 2 ppm           | N/A             | 1000 ppm             |

**Contacting Authorities**

Cimarex Energy Co. of Colorado's personnel must liaise with local and state agencies to ensure a proper response to a major release. Additionally, the OCD must be notified of the release as soon as possible but no later than 4 hours. Agencies will ask for information such as type and volume of release, wind direction, location of release, etc. Be prepared with all information available including directions to site. The following call list of essential and potential responders has been prepared for use during a release. Cimarex Energy Co. of Colorado's response must be in coordination with the State of New Mexico's "Hazardous Materials Emergency Response Plan" (HMER).

H<sub>2</sub>S Contingency Plan Emergency Contacts

**Franklin 18 Federal Com No. 1**

Cimarex Energy Co. of Colorado

Unit A, Section 18

T15S R31E, Chaves County, NM

**Company Office**

Cimarex Energy Co. of Colorado  
Co. Office and After-Hours Menu

800-969-4789

**Key Personnel**

| Name          | Title            | Office       | Mobile       |
|---------------|------------------|--------------|--------------|
| Doug Park     | Drilling Manager | 972-443-6463 | 972-333-1407 |
| Dee Smith     | Drilling Super   | 972-443-6491 | 972-882-1010 |
| Jim Evans     | Drilling Super   | 972-443-6451 | 972-465-6564 |
| Dorsey Rogers | Field Super      |              | 505-200-6105 |
| Roy Shirley   | Field Super      |              | 432-634-2136 |

**Artesia**

|                                      |                     |
|--------------------------------------|---------------------|
| Ambulance                            | 911                 |
| State Police                         | 575-746-2703        |
| City Police                          | 575-746-2703        |
| Sheriff's Office                     | 575-746-9888        |
| <b>Fire Department</b>               | <b>575-746-2701</b> |
| Local Emergency Planning Committee   | 575-746-2122        |
| New Mexico Oil Conservation Division | 575-748-1283        |

**Carlsbad**

|                                    |                     |
|------------------------------------|---------------------|
| Ambulance                          | 911                 |
| State Police                       | 575-885-3137        |
| City Police                        | 575-885-2111        |
| Sheriff's Office                   | 575-887-7551        |
| <b>Fire Department</b>             | <b>575-887-3798</b> |
| Local Emergency Planning Committee | 575-887-6544        |
| US Bureau of Land Management       | 575-887-6544        |

**Santa Fe**

|  |              |
|--|--------------|
| New Mexico Emergency Response Commission (Santa Fe)        | 505-476-9600 |
| New Mexico Emergency Response Commission (Santa Fe) 24 Hrs | 505-827-9126 |
| New Mexico State Emergency Operations Center               | 505-476-9635 |

**National**

|   |              |
|---|--------------|
| National Emergency Response Center (Washington, D.C.) | 800-424-8802 |
|---|--------------|

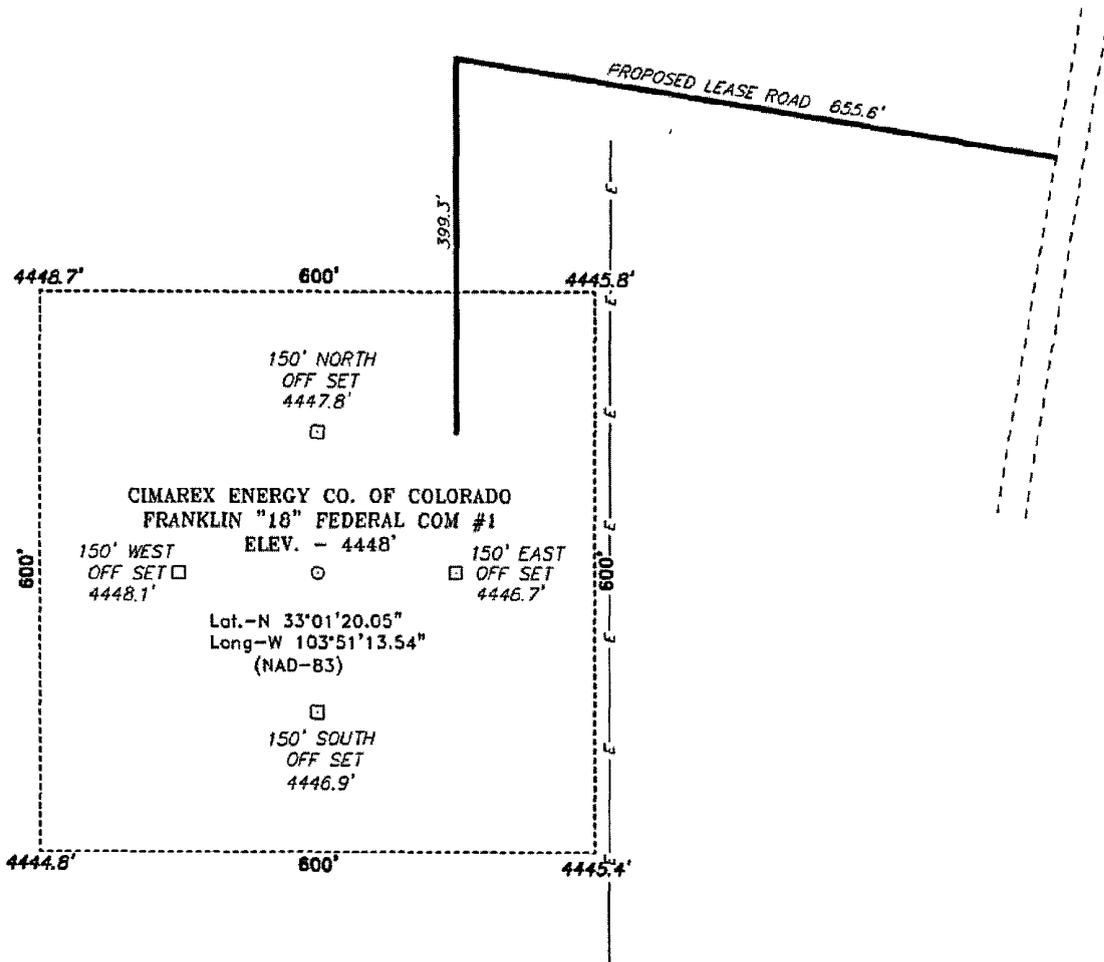
**Medical**

|   |              |
|---|--------------|
| Flight for Life - 4000 24th St.; Lubbock, TX                    | 806-743-9911 |
| Aerocare - R3, Box 49F; Lubbock, TX                             | 806-747-8923 |
| Med Flight Air Amb - 2301 Yale Blvd S.E., #D3; Albuquerque, NM  | 505-842-4433 |
| SB Air Med Service - 2505 Clark Carr Loop S.E.; Albuquerque, NM | 505-842-4949 |

**Other**

|                       |              |    |              |
|-----------------------|--------------|----|--------------|
| Boots & Coots IWC     | 800-256-9688 | or | 281-931-8884 |
| Cudd Pressure Control | 432-699-0139 | or | 432-563-3356 |
| Halliburton           | 575-746-2757 |    |              |
| B.J. Services         | 575-746-3569 |    |              |

SECTION 18, TOWNSHIP 15 SOUTH, RANGE 31 EAST, N.M.P.M.,  
 CHAVES COUNTY, NEW MEXICO.



Directions to Location.

FROM THE JUNCTION OF HWY 31 AND ALICE ROAD,  
 GO WEST 3.0 MILES TO LEASE ROAD, ON LEASE  
 ROAD TO NORTH 0.5 MILES TO PROPOSED LEASE  
 ROAD.

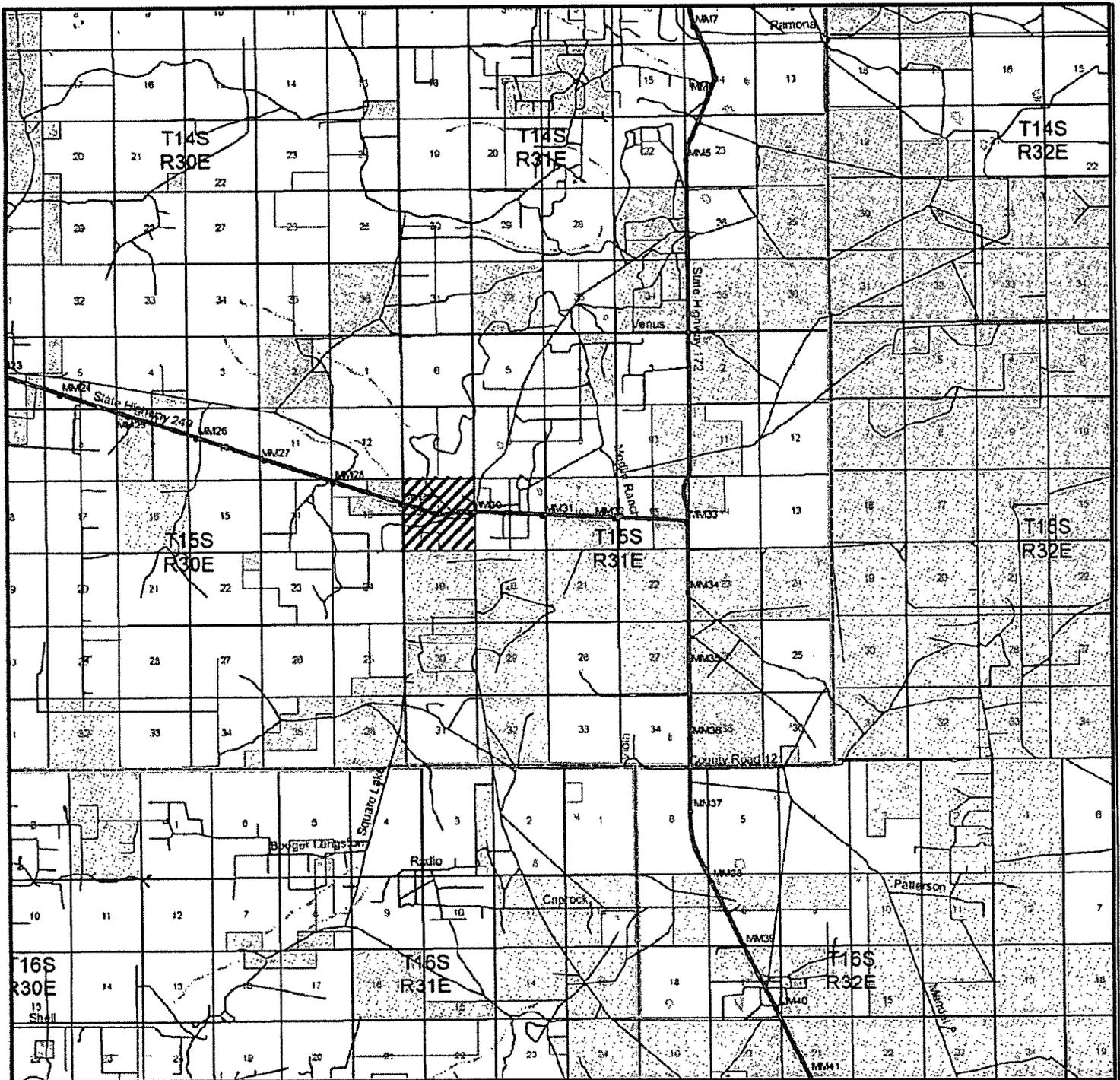
**BASIN SURVEYS** P.O. BOX 1786 -HOBBS, NEW MEXICO

W.O. Number: 19444      Drawn By: J. SMALL

Date: 04-21-2008      Disk: JMS 19444W

|  |                     |
|--|---------------------|
| <b>CIMAREX ENERGY CO. OF COLORADO</b>              |                     |
| REF: FRANKLIN "18" FEDERAL COM #1 / WELL PAD TOPO  |                     |
| THE FRANKLIN "18" FEDERAL COM #1 LOCATED 330'      |                     |
| FROM THE NORTH LINE AND 330' FROM THE EAST LINE OF |                     |
| SECTION 18, TOWNSHIP 15 SOUTH, RANGE 31 EAST,      |                     |
| N.M.P.M., CHAVES COUNTY, NEW MEXICO.               |                     |
| Survey Date: 04-19-2008                            | Sheet 1 of 1 Sheets |





FRANKLIN "18" FEDERAL COM #1  
 Located 330' FNL and 330' FEL  
 Section 18, Township 15 South, Range 31 East,  
 N.M.P.M., Chaves County, New Mexico.

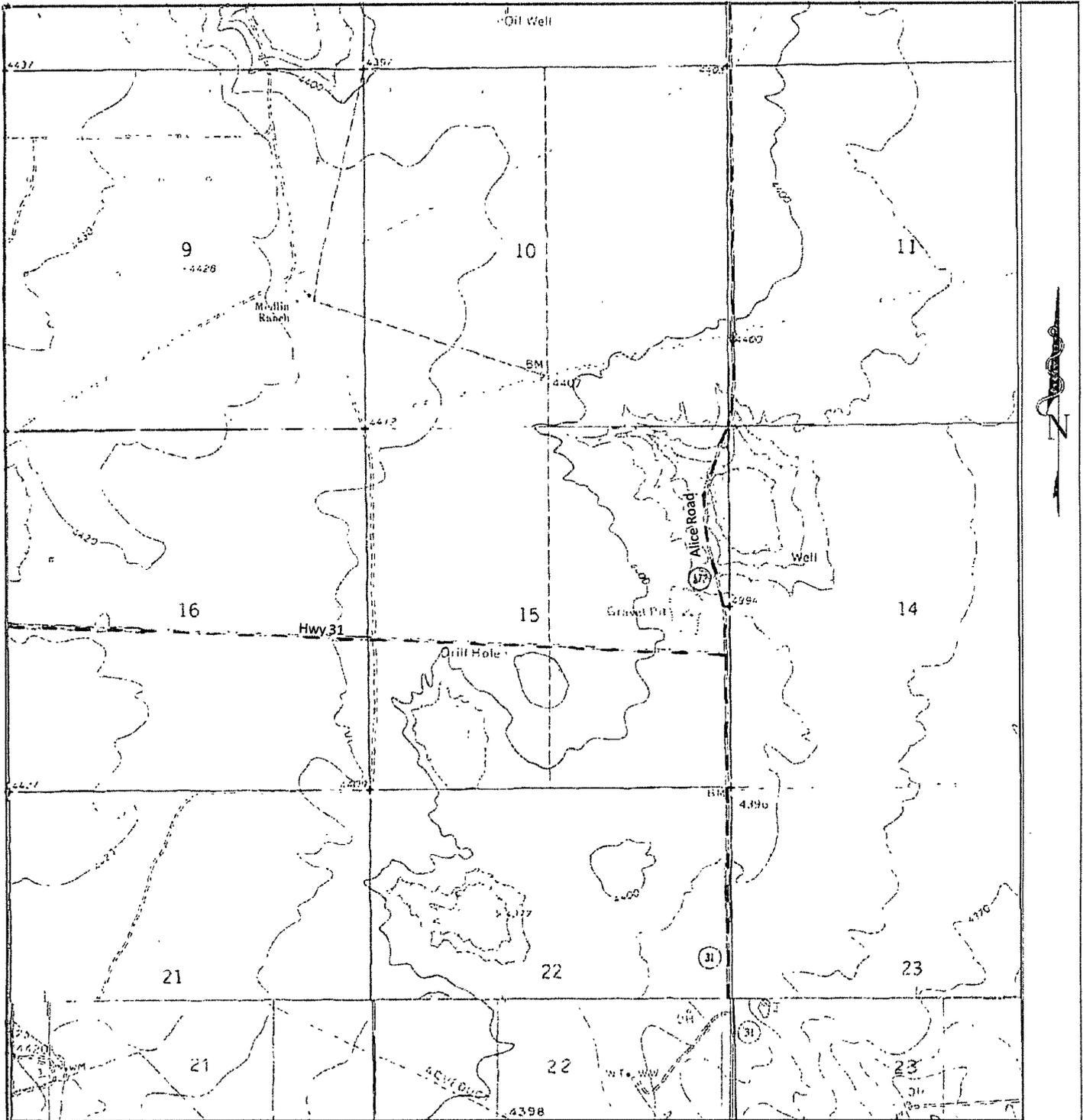
**basin surveys**  
 focused on excellence  
 in the oilfield

P.O. Box 1786  
 1120 N. West County Rd.  
 Hobbs, New Mexico 88241  
 (505) 393-7316 - Office  
 (505) 392-3074 - Fax  
 basinsurveys.com

|                          |
|--------------------------|
| W.O. Number: JMS 19444TR |
| Survey Date: 04-19-2008  |
| Scale: 1" = 2 MILES      |
| Date: 04-21-2008         |

**CIMAREX  
 ENERGY CO.  
 OF COLORADO**

Exhibit B



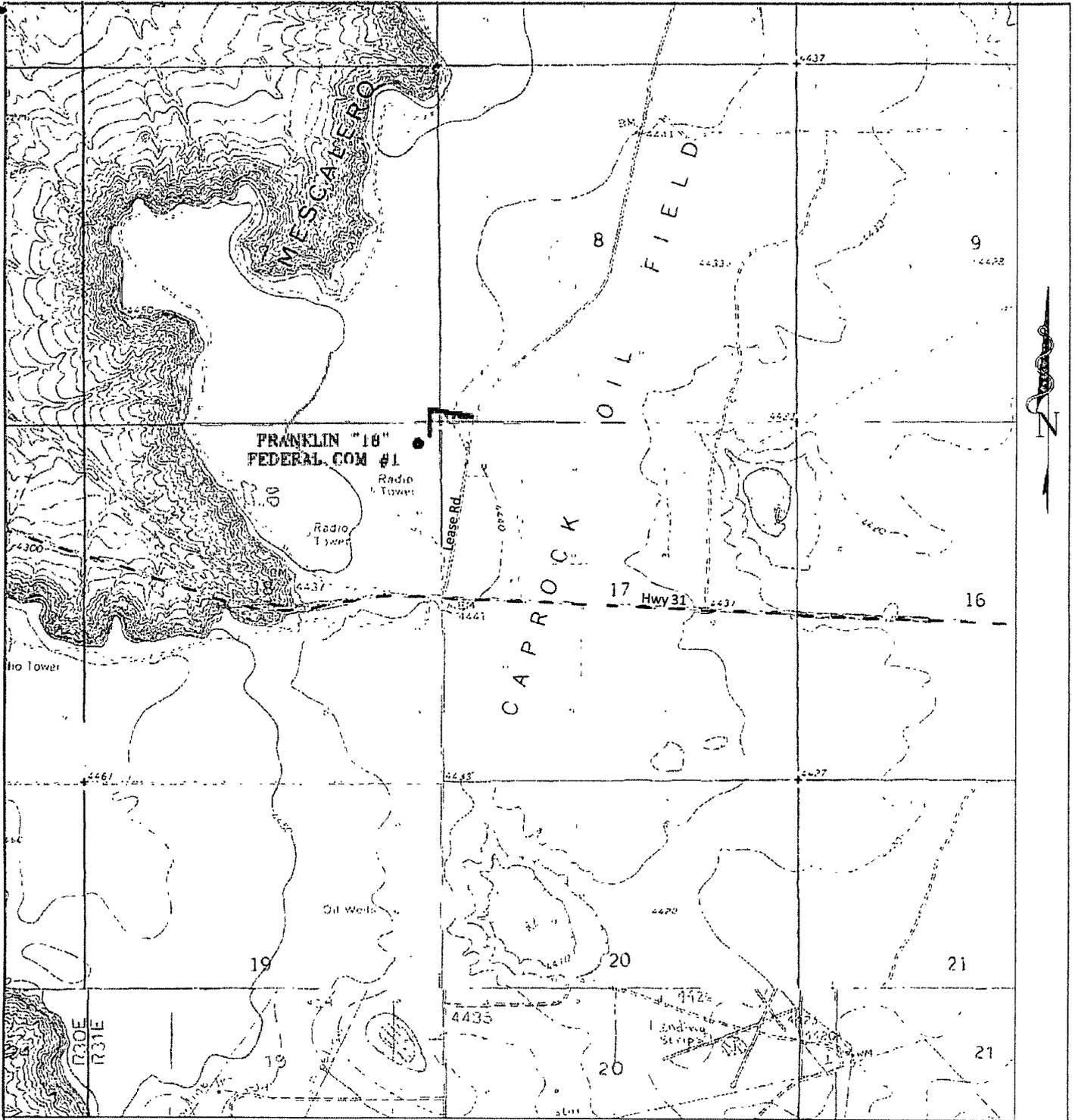
Sections 15&16, Township 15 South, Range 31 East,  
 N.M.P.M., Chaves County, New Mexico.

**basin**  
**Surveys**  
 focused on excellence  
 in the oilfield

P.O. Box 1786  
 1120 N. West County Rd.  
 Hobbs, New Mexico 83241  
 (505) 393-7316 - Office  
 (505) 392-3074 - Fax  
 basin-surveys.com

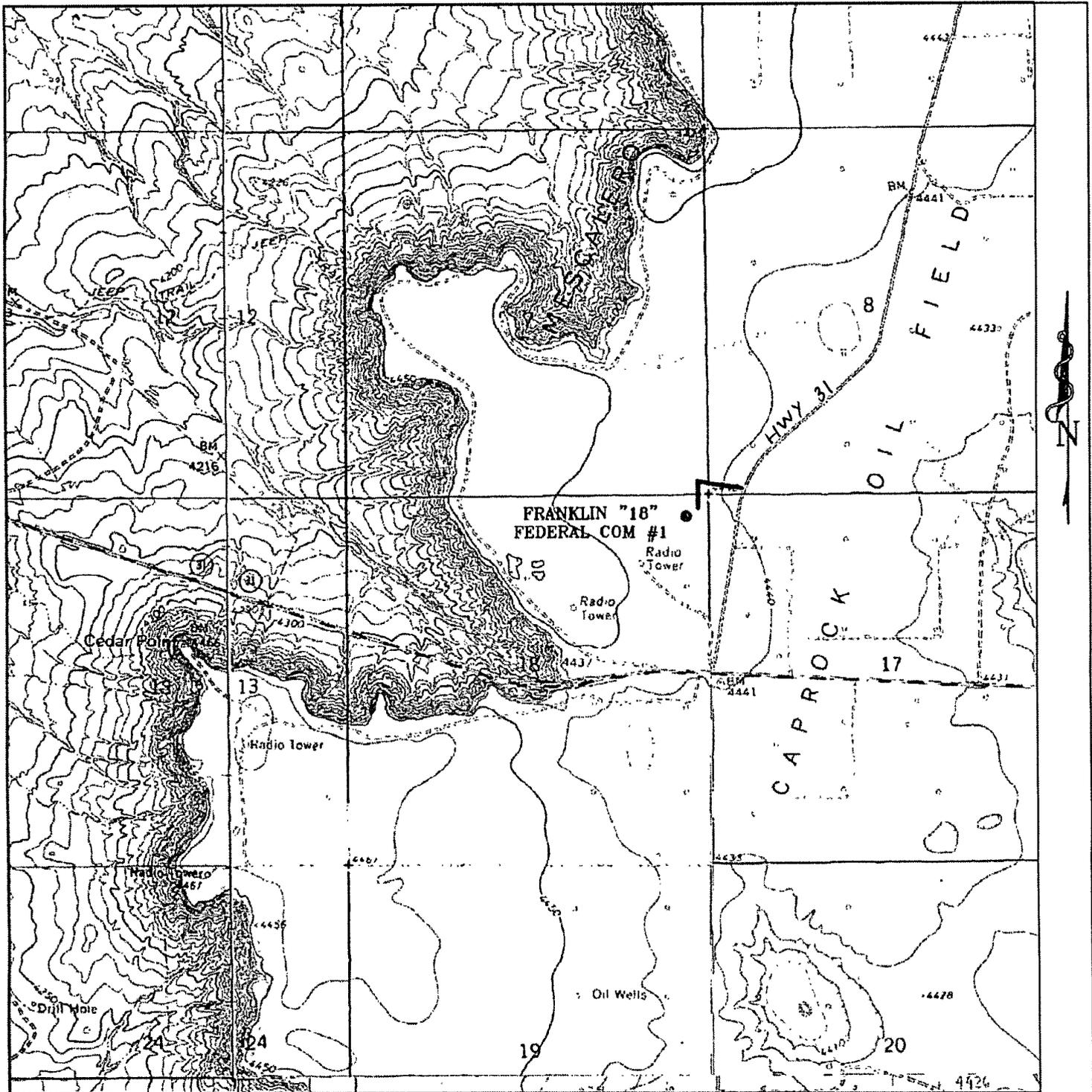
|                  |     |       |
|------------------|-----|-------|
| W.D. Number      | IMS | TCPOS |
| Survey Date      |     |       |
| Scale 1" = 2000' |     |       |
| Date: 06-10-2008 |     |       |

**CIMAREX**  
**ENERGY CO.**  
**OF COLORADO**

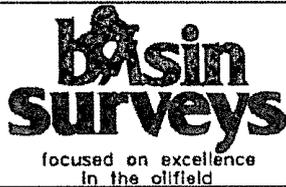


Sections 16,17&8, Township 15 South, Range 31 East, N.M.P.M.. Chaves County, New Mexico.

|  |  |                              |  |
|--|--|------------------------------|--|
|  <p>focused on excellence in the oilfield</p> | <p>P.O. Box 1786<br/>1120 N. West County Rd.<br/>Hobbs, New Mexico 88241<br/>(505) 393-7316 - Office<br/>(505) 392-3074 - Fax<br/>basinsurveys.com</p> | <p>W.D. Number IMS 10P03</p> | <p><b>CIMAREX ENERGY CO. OF COLORADO</b></p> |
|  |  | <p>Survey Date:</p>          |  |
|  |  | <p>Scale 1" = 2000'</p>      |  |
|  |  | <p>Date: 06-10-2008</p>      |  |



FRANKLIN "18" FEDERAL COM #1  
 Located 330' FNL and 330' FEL  
 Section 18, Township 15 South, Range 31 East,  
 N.M.P.M., Chaves County, New Mexico.



P.O. Box 1786  
 1120 N. West County Rd.  
 Hobbs, New Mexico 88241  
 (505) 393-7316 - Office  
 (505) 392-3074 - Fax  
 basinsurveys.com

W.O. Number: JMS 19444T

Survey Date: 04-19-2008

Scale: 1" = 2000'

Date: 04-20-2008

CIMAREX  
 ENERGY CO.  
 OF COLORADO

Exhibit C

# Patriot Rig 4

Cimarex Energy Co. of Colorado

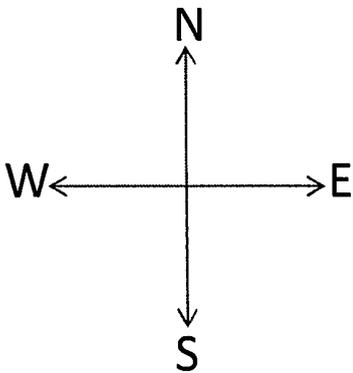
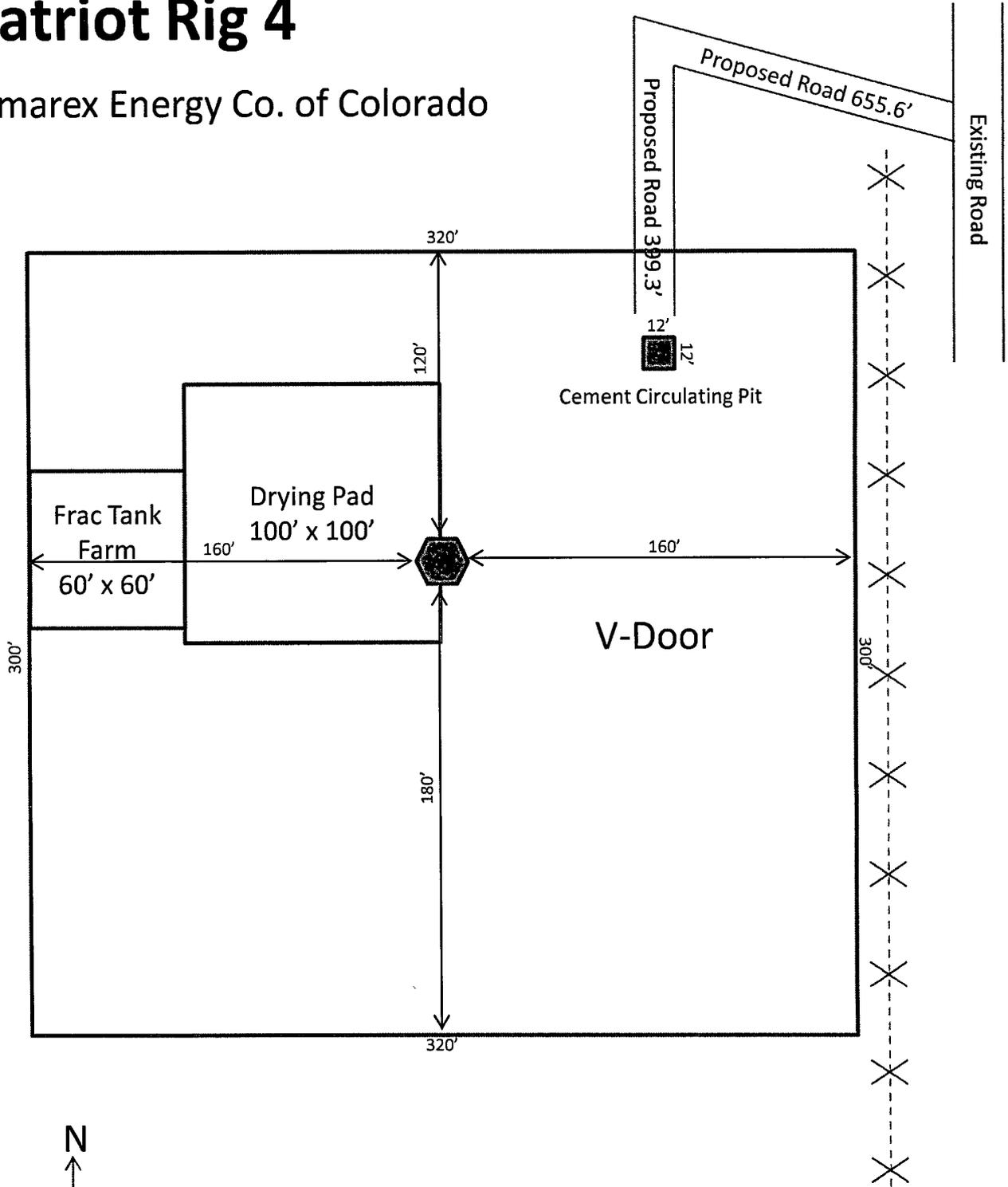


Exhibit D – Rig Layout  
**Franklin 18 Federal Com No. 1**  
Cimarex Energy Co. of Colorado  
18-15S-31E  
SHL 330 FNL & 330 FEL  
BHL 330 FNL & 330 FWL  
Chaves County, NM

# SR & A

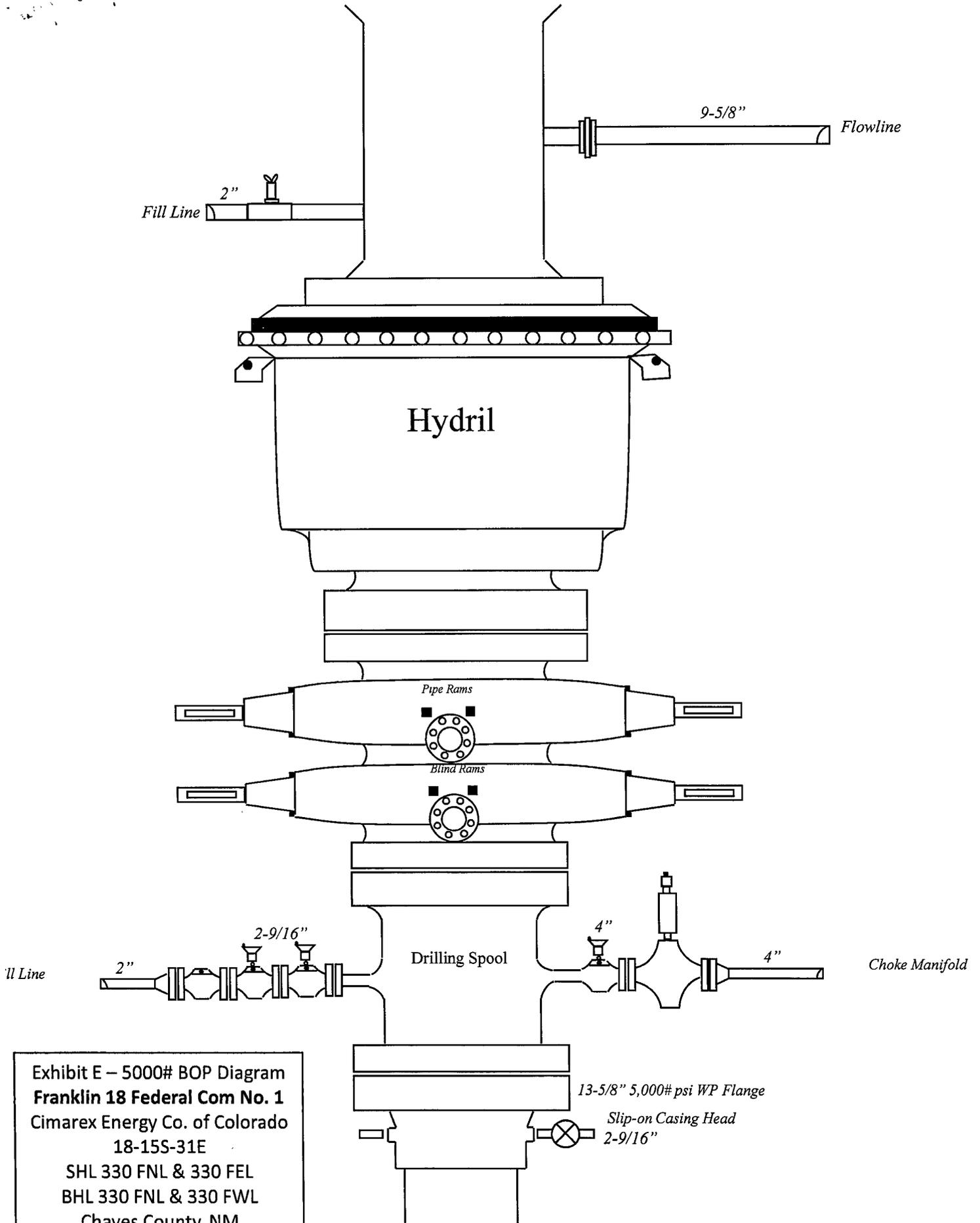


Exhibit E – 5000# BOP Diagram  
**Franklin 18 Federal Com No. 1**  
Cimarex Energy Co. of Colorado  
18-15S-31E  
SHL 330 FNL & 330 FEL  
BHL 330 FNL & 330 FWL  
Chaves County, NM

**DRILLING OPERATIONS  
CHOKE MANIFOLD  
SM SERVICE**

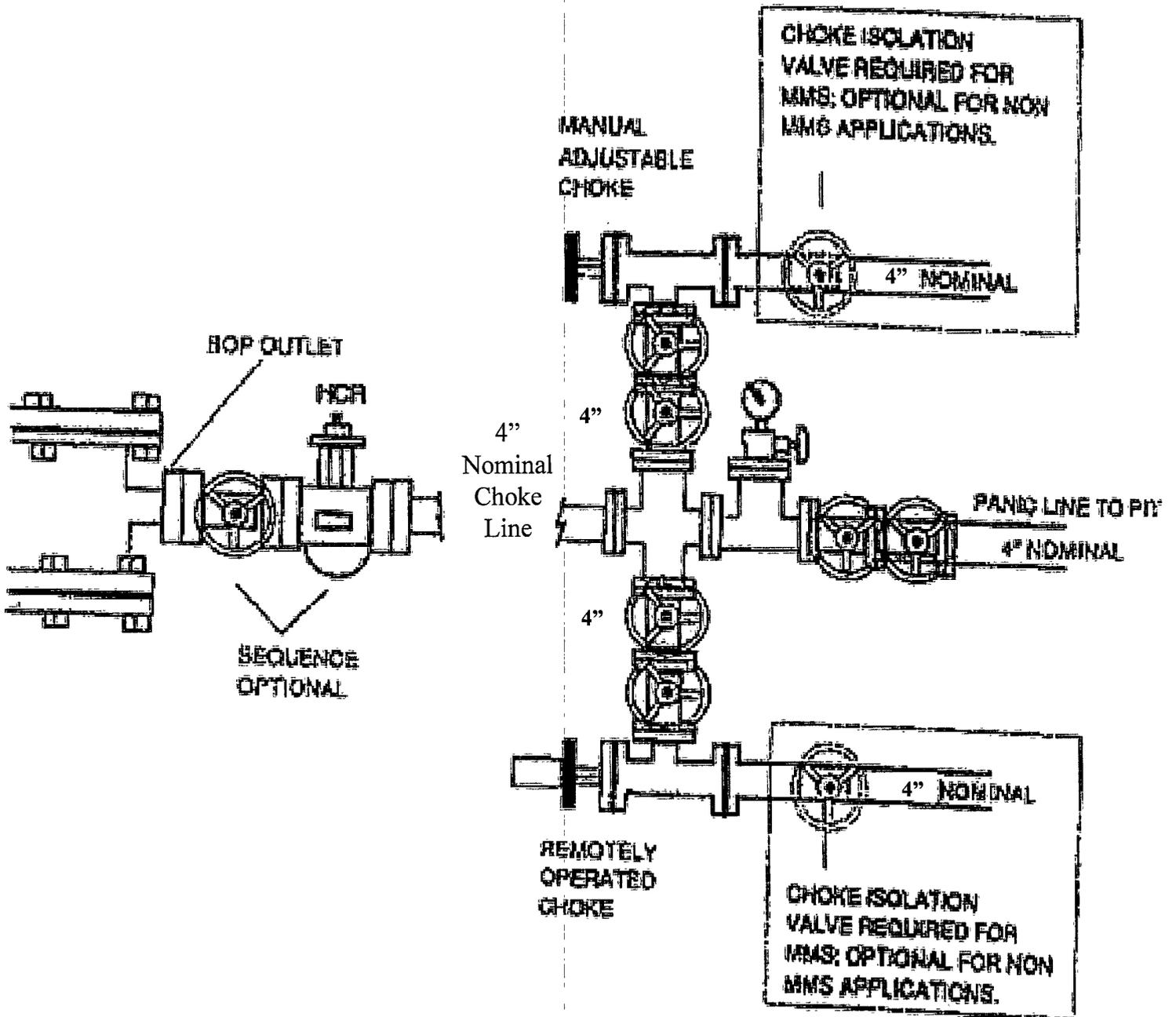
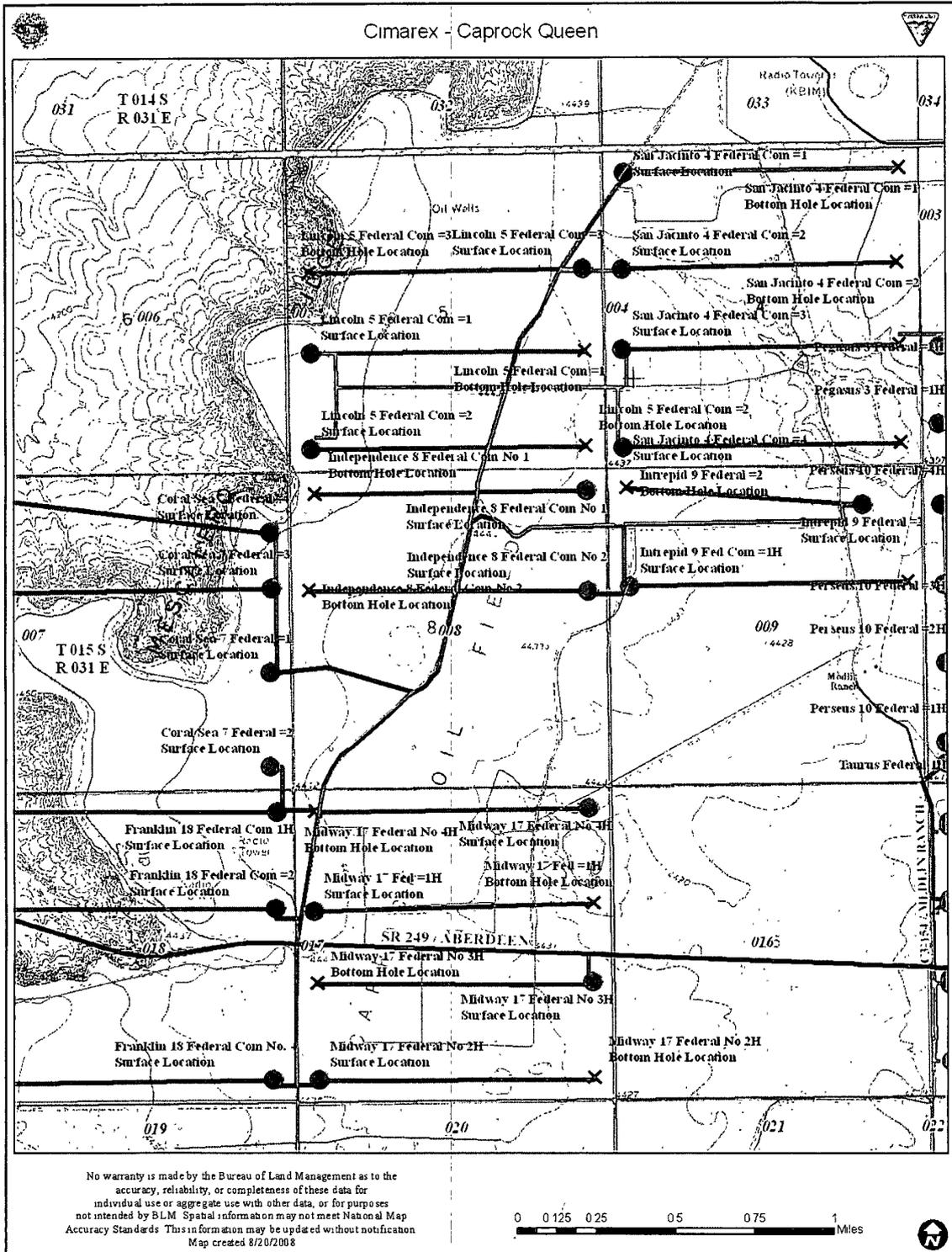


Exhibit E-1 – Choke Manifold Diagram  
 Franklin 18 Federal Com No. 1  
 Cimarex Energy Co. of Colorado  
 18-15S-31E  
 SHL 330 FNL & 330 FEL  
 BHL 330 FNL & 330 FWL  
 Chaves County, NM

# EXHIBIT A GENERAL LOCATION MAP



**EXHIBIT B  
PECOS DISTRICT - RFO  
CONDITIONS OF APPROVAL**

**December 4, 2008**

Project: Franklin 18 Fed Com #1  
EA Log Number: NM-510-2008-140  
SHL: 330' FNL & 330' FEL, Sec. 18 T15S R31E; LC-064900  
BHL: 330' FNL & 330' FWL, Sec. 18 T15S R31E; NM-0153471  
Archaeological Report: 08-R-087A; 08-R-107A  
Applicant: Cimarex Energy Company of Colorado  
Roswell Field Office: (575) 627-0272

**GENERAL PROVISIONS**

The approval of the Application For Permit To Drill (APD) is in compliance with all applicable laws and regulations: 43 Code of Federal Regulations 3160, the lease terms, Onshore Oil and Gas Orders, Notices To Lessees, New Mexico Oil Conservation Division (NMOCD) Rules, National Historical Preservation Act As Amended, and instructions and orders of the Authorized Officer. Any request for a variance shall be submitted to the Authorized Officer on Form 3160-5, Sundry Notices and Report on Wells.

**I. PERMIT EXPIRATION**

If the permit terminates prior to drilling and drilling cannot be commenced within 60 days after expiration, an operator is required to submit Form 3160-5, Sundry Notices and Reports on Wells, requesting surface reclamation requirements for any surface disturbance. However, if the operator will be able to initiate drilling within 60 days after the expiration of the permit, the operator must have set the conductor pipe in order to allow for an extension of 60 days beyond the expiration date of the APD (Filing of a Sundry Notice is required for this 60 day extension).

**II. ARCHAEOLOGICAL, PALEONTOLOGY & HISTORICAL SITES**

Any cultural and/or paleontological resource discovered by the operator or by any person working on the operator's behalf shall immediately report such findings to the Authorized Officer. The operator is fully accountable for the actions of their contractors and subcontractors. The operator shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery shall be made by the Authorized Officer to determine the appropriate actions that shall be required to prevent the loss of significant cultural or scientific values of the discovery. The operator shall be held responsible for the cost of the proper mitigation measures that the Authorized Officer assesses after consultation with the operator on the evaluation and decisions of the discovery. Any unauthorized collection or disturbance of cultural or paleontological resources may result in a shutdown order by the Authorized Officer.

### **III. NOXIOUS WEEDS**

The operator shall be held responsible if noxious weeds become established within the areas of operations (access road and/or well pad). Weed control shall be required on the disturbed land where noxious weeds exist, which includes the roads, pads, associated pipeline corridor, and adjacent land affected by the establishment of weeds due to this action. The operator shall consult with the Authorized Officer for acceptable weed control methods, which include following EPA and BLM requirements and policies.

### **IV. CONSTRUCTION**

#### **A. NOTIFICATION:**

The BLM shall administer compliance and monitor construction of the access road and well pad. Notify the Roswell Field Office at (505) 627-0247 at least 3 working days prior to commencing construction of the access road and/or well pad.

When construction operations are being conducted on this well, the operator shall have the approved Application for Permit to Drill and Conditions of Approval on the well site and they shall be made available upon request by the Authorized Officer.

#### **B. TOPSOIL:**

The topsoil will be stripped to approximately 6 inches in depth within the area designated for construction of the well pad. The operator shall stockpile the stripped topsoil on the side of the well pad. The topsoil will be used for interim and final reclamation of the surface disturbance created by the construction of the well pad.

#### **C. CLOSED SYSTEMS OR STEEL TANKS: No reserve pit will be used.**

Steel tanks are required for drilling operations: No Pits Allowed.

The operator shall properly dispose of drilling contents at an authorized disposal site.

#### **D. FEDERAL MINERAL MATERIALS PIT:**

If the operator elects to surface the access road and/or well pad, mineral materials extracted during construction of the reserve pit may be used for surfacing the well pad and access road and other facilities on the lease.

Payment shall be made to the BLM prior to removal of any additional federal mineral materials from any site other than the reserve pit. Call the Roswell Field Office at (505) 627-0236.

#### **E. WELL PAD SURFACING:**

Surfacing of the well pad is not required.

If the operator elects to surface the well pad, the surfacing material may be required to be removed at the time of reclamation.

The well pad shall be constructed in a manner which creates the smallest possible surface disturbance, consistent with safety and operational need.

## **F. ON LEASE ACCESS ROADS:**

### **Road Egress and Ingress**

The access road shall be constructed to access the corner of the well pad.

### **Road Width**

The access road shall have a driving surface that creates the smallest possible surface disturbance and does not exceed fourteen (14) feet in width. The maximum width of surface disturbance, when constructing the access road, shall not exceed thirty (30) feet.

### **Surfacing**

Surfacing material is not required on the new access road driving surface. If the operator elects to surface the new access road or pad, the surfacing material may be required to be removed at the time of reclamation.

Where possible, no improvements should be made on the unsurfaced access road other than to remove vegetation as necessary, road irregularities, safety issues, or to fill low areas that may sustain standing water.

The Authorized Officer reserves the right to require surfacing of any portion of the access road at any time deemed necessary. Surfacing may be required in the event the road deteriorates, erodes, road traffic increases, or it is determined to be beneficial for future field development. The surfacing depth and type of material will be determined at the time of notification.

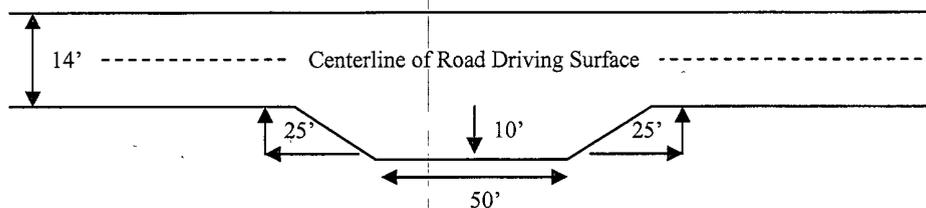
### **Crowning**

Crowning shall be done on the access road driving surface. The road crown shall have a grade of approximately 2% (i.e., a 1" crown on a 14' wide road). The road shall conform to Figure 1; cross section and plans for typical road construction.

### **Turnouts**

Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall be constructed on all blind curves. Turnouts shall conform to the following diagram:

### Standard Turnout – Plan View

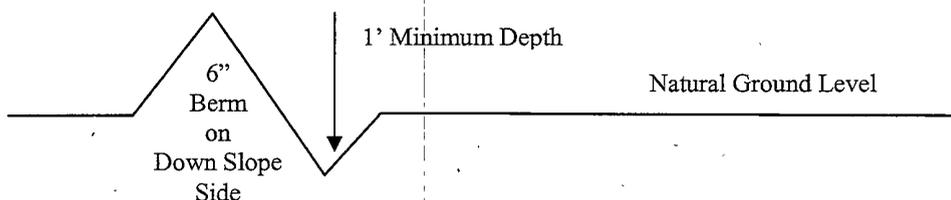


### Drainage

Drainage control systems shall be constructed on the entire length of road (e.g. ditches, sidehill outsloping and insloping, lead-off ditches, culvert installation, and low water crossings).

A typical lead-off ditch has a minimum depth of 1 foot below and a berm of 6 inches above natural ground level. The berm shall be on the down-slope side of the lead-off ditch.

### Cross Section Of Typical Lead-off Ditch



All lead-off ditches shall be graded to drain water with a 1 percent minimum to 3 percent maximum ditch slope. The spacing interval are variable for lead-off ditches and shall be determined according to the formula for spacing intervals of lead-off ditches, but may be amended depending upon existing soil types and centerline road slope (in %);

#### Formula For Spacing Interval Of Lead-off Ditches

Example - On a 4% road slope that is 400 feet long, the water flow shall drain water into a lead-off ditch. Spacing interval shall be determined by the following formula:

$$400 \text{ foot road with } 4\% \text{ road slope: } \frac{400'}{4\%} + 100' = 200' \text{ lead-off ditch interval}$$

### Cattleguards

An appropriately sized cattleguard(s) sufficient to carry out the project shall be installed and maintained at fence crossing(s).

Any existing cattleguard(s) on the access road shall be repaired or replaced if they are damaged or have deteriorated beyond practical use. The operator shall be responsible for the condition of the existing cattleguard(s) that are in place and are utilized during lease operations.

A gate shall be constructed and fastened securely to H-braces.

### **Fence Requirement**

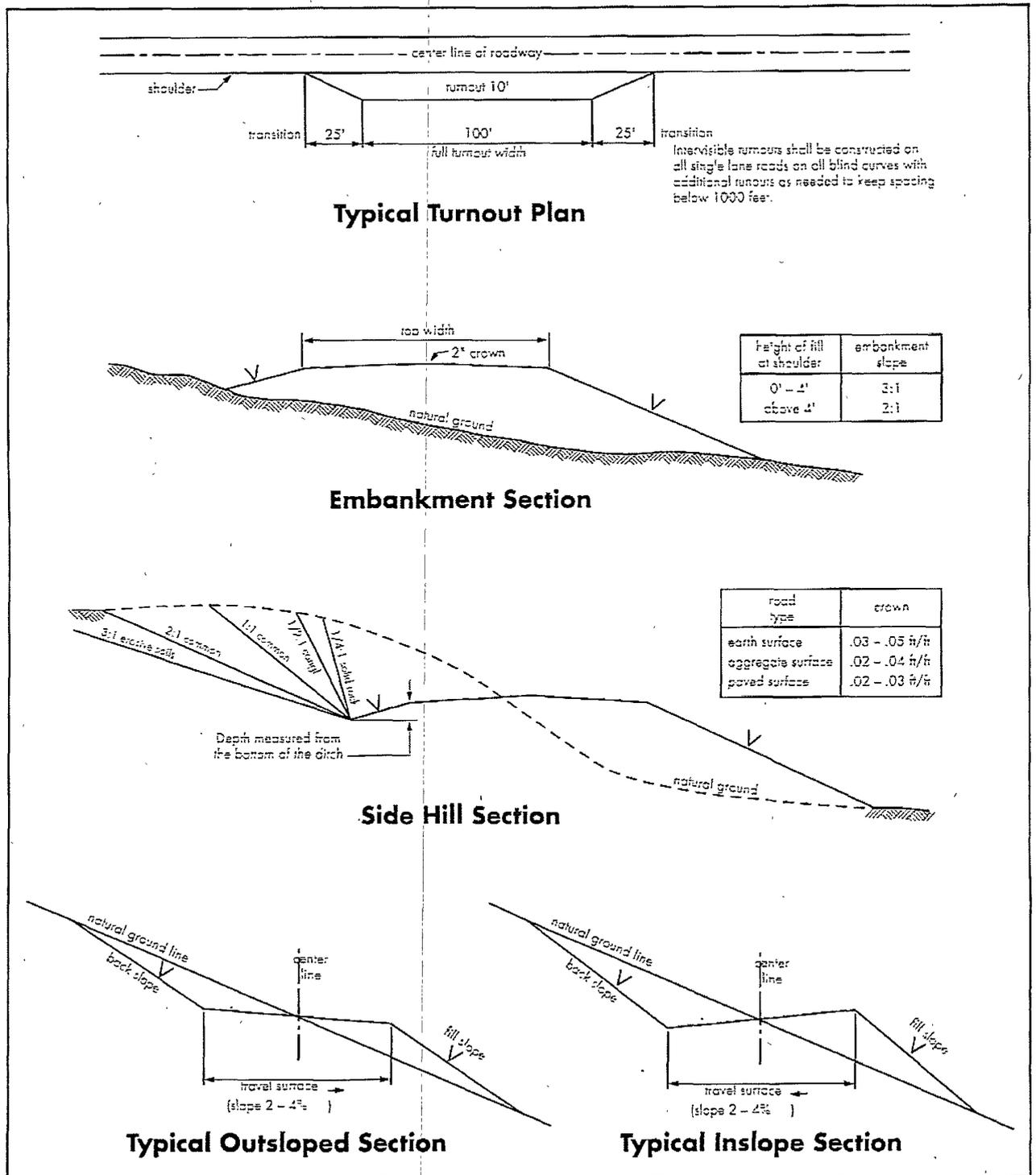
Where entry is required across a fence line, the fence shall be braced and tied off on both sides of the passageway prior to cutting.

The operator shall notify the private surface landowner or the grazing allotment holder prior to crossing any fence(s).

### **Public Access**

Public access on this road shall not be restricted by the operator without specific written approval granted by the Authorized Officer.

Figure 1 – Cross Sections and Plans For Typical Road Sections



## V. DRILLING

### DRILLING OPERATIONS REQUIREMENTS

1 Chaves and Roosevelt Counties

Call the Roswell Field Office, 2909 West Second St., Roswell, NM 88201, 24 hours at (575) 627-0205.

2. The BLM is to be notified a minimum of 24 hours in advance for a representative to witness:

- a. Spudding well
- b. Setting and/or Cementing of all casing strings

The BLM is to be notified a minimum of 4 hours in advance for a representative to witness:

#### BOPE Tests

3. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.

4. Include the API No. assigned to well by NMOCD on the subsequent report of setting the first casing string.

5. **The operator will be required to have a geologist or some other device to accurately measure the drilling rate in order to set the base of the usable water protection casing shoe opposite competent rock Onshore Order No. 2. III. B . The record of the drilling rate along with the gamma ray-neutron well log run to surface will be submitted to this office as well as all other logs run on the on the borehole CFR 3162.4-1(a) and (b).**

6. **Air air-mist or fresh water and non toxic drilling mud shall be used to drill to the base of the usable water protection casing string. Any polymers used will be water based and non-toxic.**

7. A Communitization Agreement covering the acreage dedicated to this well must be filed for approval with the BLM. The effective date of the agreement shall be prior to any sales.

#### B. CASING:

1. 1. The 13-3/8 inch surface casing shall be set **at approximately 340 feet if the bedrock is competent. If not the operator will be required to set surface casing in the next thick competent bedrock (i.e. 15 to 25 ft or greater) encountered and circulate cement to the surface.**

- a. If cement does not circulate to the surface, the Roswell Field Office shall be notified and a temperature survey utilizing an electronic type temperature survey with a surface log readout will be used or a cement bond log shall be run to verify the top of the cement.
  - b. Wait on cement (WOC) time for a primary cement job will be a minimum 18 hours for a water basin or 500 pounds compression strength, whichever is greater. (This is to include the lead cement).
  - c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compression strength, whichever is greater.
  - d. If cement falls back, remedial action will be done prior to drilling out that string.
2. The minimum required fill of cement behind the **9-5/8** inch intermediate casing is **sufficient to circulate to the surface**. If cement does not circulate see B.1.a-d above.
  3. The minimum required fill of cement behind the **7** inch production casing is **sufficient to tie back 500 feet above the uppermost perforation in the pay zone**. If cement does not circulate, a temperature survey utilizing an electronic type temperature survey with a surface log readout will be used or a cement bond log shall be run to verify the top of the cement.
  4. There is no required fill of cement behind the **4-1/2** inch production casing since a Peak Systems Iso-Pak liner will be used for lateral and will not require cementing.
  5. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.

#### **C. PRESSURE CONTROL:**

1. Before drilling below the **13-3/8** inch surface casing shoe, the blowout preventer assembly shall consist of a minimum of One Annular Preventer or Two Ram-Type Preventers and a Kelly Cock/Stabbing Valve. Before drilling below the **9-5/8** inch intermediate casing shoe, the blowout preventer assembly shall consist of a minimum of One Annular Preventer, Two Ram-Type Preventers, and a Kelly Cock/Stabbing Valve.
2. Before drilling below the **13-3/8** inch surface casing shoe, minimum working pressure of the blowout preventer and related equipment (BOPE) shall be **2000** psi. Before drilling below the **9-5/8** inch intermediate casing shoe, minimum working pressure of the blowout preventer and related equipment (BOPE) shall be **3000** psi.
3. The BOPE shall be installed before drilling below the **13-3/8** inch surface casing and the **9-5/8** inch intermediate casing and shall be tested as described in Onshore Order No. 2. Any equipment failing to test satisfactorily shall be repaired or replaced.

- a. The BLM Roswell Field office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
- b. The tests shall be done by an independent service company.
- c. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug.
- d. All tests are required to be recorded on a calibrated test chart. A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the BLM Roswell Field Office at 2909 West Second Street, Roswell, New Mexico 88201.
- e. Testing fluid must be water or an appropriate clear liquid suitable for sub-freezing temperatures. Use of drilling mud for testing is not permitted since it can mask small leaks.
- f. Testing must be done in a safe workman like manner. Hard line connections shall be required.
- g. The requested variance to test the BOPE prior to **drilling below the 13-3/8 inch surface casing** to the reduced pressure of 1000 psi using the rig pumps is approved.

## **VI. PRODUCTION**

### **A. WELL STRUCTURES & FACILITIES**

#### **Placement of Production Facilities**

Production facilities should be placed on the well pad to allow for maximum interim recontouring and revegetation of the well location.

#### **Containment Structures**

The containment structure shall be constructed to hold the capacity of the entire contents of the largest tank, plus 24 hour production, unless more stringent protective requirements are deemed necessary by the Authorized Officer.

#### **Painting Requirement**

All above-ground structures including meter housing that are not subject to safety requirements shall be painted a flat non-reflective paint color, Juniper Green (Standard Environmental Color Chart June 2008).

#### **VRM Facility Requirement**

Low-profile tanks not greater than eight-feet-high shall be used.

## VII. INTERIM RECLAMATION & RESERVE PIT CLOSURE

### A. INTERIM RECLAMATION

If the well is a producer, interim reclamation shall be conducted on the well site in accordance with the orders of the Authorized Officer. The operator shall submit a Sundry Notices and Reports on Wells (Notice of Intent), Form 3160-5, prior to conducting interim reclamation.

During the life of the development, all disturbed areas not needed for active support of production operations should undergo "interim" reclamation in order to minimize the environmental impacts of development on other resources and uses.

During reclamation, the removal of caliche is important to increasing the success of revegetating the site. Removed caliche may be used in road repairs, fire walls or for building other roads and locations. In addition, in order to operate the well or complete workover operations, it may be necessary to drive, park and operate on restored interim vegetation within the previously disturbed area. Disturbing revegetated areas for production or workover operations will be allowed. If there is significant disturbance and loss of vegetation, the area will need to be revegetated. Communicate with the appropriate BLM office for any exceptions/exemptions if needed.

The following soil or soil associations may represent these ecological sites:

Alama silt loam, dry, 0-3% Slope, Atoka, Bigetty-Pecos, Harkey fine sandy loam, Holloman, Holloman-Gypsum Land, Hollomex loam, 1-9% slope, dry, Largo loam, Milner loam, 0-2% slope, dry, Reagan loam, Reakor, Reakor-Bigetty, Reakor-Tencee, Reeves loam, 0-2% slope, dry, Russler, Shanta, Upton-Reakor.

| <b>Loamy, SD-3 Ecological Site; Loamy CP-2; Gyp Upland CP-2 (for Loamy HP-3)</b> |                                 |  |
|--|---------------------------------|--|
| <b>Common Name<br/>and Preferred Variety</b>                                     | <b>Scientific Name</b>          | <b>Pounds of Pure<br/>Live Seed Per Acre</b> |
| Blue grama,  | <i>(Bouteloua gracilis)</i>     | 4.00 LBS.                                    |
| Sideoats grama,  | <i>(Bouteloua curtipendula)</i> | 1.0 LB.                                      |
| Sand dropseed  | <i>(Sporobolus cryptandrus)</i> | 0.5 LB.                                      |
| Vine mesquite  | <i>(Panicum obtusum)</i>        | 1.0 LB.                                      |
| Plains bristlegrass  | <i>(Setaria macrostachya)</i>   | 1.0 LB.                                      |
| Indian blanketflower   | <i>(Gaillardia aristata)</i>    | 0.5 LB.                                      |
| Desert or Scarlet  | <i>(Sphaeralcea ambigua)</i>    | 1.0 LB.                                      |
| Globemallow or   | <i>(S. coccinea)</i>            |  |
| Annual sunflower   | <i>(Helianthus annuus)</i>      | <u>0.75 LB.</u>                              |
| <b>TOTAL POUNDS PURE LIVE SEED (pls) PER ACRE</b>                                |                                 | <b>9.75 LBS.</b>                             |

Certified Weed Free Seed. If one species is not available, increase ALL others proportionately. Use No Less than 4 species, including one forb. No less than 9.75 pounds lbs per acre shall be applied.

## **VIII. FINAL ABANDONMENT & REHABILITATION REQUIREMENTS**

- a. Upon abandonment of the well and/or when the access road is no longer in service, a Notice of Intent for Final Abandonment with the proposed surface restoration procedure must be submitted for approval.
  - b. On private surface/federal mineral estate land the reclamation procedures on the road and well pad shall be accomplished in accordance with the Private Surface Land Owner agreements and a copy of the release is to be submitted upon abandonment.
  - c. Upon abandonment of the well, all casing shall be cut-off at the base of the cellar or 3-feet below final restored ground level (whichever is deeper). A 4-inch pipe, 10 feet in length, shall be installed 4 feet above ground and embedded in cement. The following information shall be permanently inscribed on the dry hole marker: Well name and number, the name of the operator, the lease serial number, the surveyed location (the quarter-quarter section, section, township and range or other authorized survey designation acceptable to the authorized officer; such as metes and bounds).
  - d. Surface Reclamation must be completed within 6 months of well plugging. If the operator proposes to modify the plans for surface reclamation approved on the APD, the operator must attach these modifications to the Subsequent Report of Plug and Abandon using Sundry Notices and Reports on Wells, Form 3160-5.
-

New Mexico Oil Conservation Division, District I  
 1625 N. French Drive  
 UNITED STATES  
 DEPARTMENT OF THE INTERIOR  
 BUREAU OF LAND MANAGEMENT  
 Hobbs, NM 88240

Form 3160-5  
 November 1994

**RECEIVED**

DEC 08 2008 SUNDRY NOTICES AND REPORTS ON WELLS  
 Do not use this form for proposals to drill or to re-enter an abandoned well. Use form 3160-3 (APD) for such proposals.

**HOBBSOCD**

SUBMIT IN TRIPLICATE - Other instructions on reverse side

Type of Well  
 Oil Well     Gas Well     Other

Name of Operator  
 Cimarex Energy Co. of Colorado

Address  
 PO Box 140907; Irving, TX 75014-0907

3b. Phone No. (include area code)  
 972-401-3111

Location of Well (Footage, Sec., T., R., M., or Survey Description)  
 SHL 330 FNL & 330 FEL    18-15S-31E  
 BHL 330 FNL & 330 FWL

FORM APPROVED  
 OMB No. 1004-0135  
 Expires July 31, 1996

5. Lease Serial No.  
 BHL SHL  
~~SHL~~ NM-0153471    ~~SHL~~ LC-064900

6. If Indian, Allottee or Tribe Name

7. If Unit or CA/Agreement, Name and/or No.  
 Pending

8. Well Name and No.  
 Franklin 18 Federal Com No. 1

9. API Well No.  
 30-005-

10. Field and Pool, or Exploratory Area  
 Abo Wildcat

11. County or Parish, State  
 Chaves County, NM

12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

| TYPE OF SUBMISSION                                   | TYPE OF ACTION                                   |   |  |  |  |
|--|--|---|--|--|--|
| <input checked="" type="checkbox"/> Notice of Intent | <input type="checkbox"/> Acidize                 | <input type="checkbox"/> Deepen           | <input type="checkbox"/> Production (Start/Resume) | <input type="checkbox"/> Water Shut-Off                      |  |
| <input type="checkbox"/> Subsequent Report           | <input type="checkbox"/> Alter Casing            | <input type="checkbox"/> Fracture Treat   | <input type="checkbox"/> Reclamation               | <input type="checkbox"/> Well Integrity                      |  |
| <input type="checkbox"/> Final Abandonment Notice    | <input type="checkbox"/> Casing Repair           | <input type="checkbox"/> New Construction | <input type="checkbox"/> Recomplete                | <input checked="" type="checkbox"/> Other <u>Change Rig,</u> |  |
|  | <input checked="" type="checkbox"/> Change Plans | <input type="checkbox"/> Plug and Abandon | <input type="checkbox"/> Temporarily Abandon       | <u>switch to closed-loop</u>                                 |  |
|  | <input type="checkbox"/> Convert to Injection    | <input type="checkbox"/> Plug Back        | <input type="checkbox"/> Water Disposal            | <u>system w/ haul-off bins</u>                               |  |

Describe Proposed or Completed Operation (clearly state all pertinent details, included estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

Cimarex has chosen to drill this well with Patriot Rig 4. As a result, aspects of our surface use plan have changed.

Attached are the relevant revised aspects of the Surface Use Plan as well as a revised Rig Plat.

I hereby certify that the foregoing is true and correct

Name (Printed/Typed)    Title  
 Natalie Krueger    Regulatory Analyst

Signature    Date  
*Natalie Krueger*    December 1, 2008

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by /s/ Jerry Dutchover    Assistant Field Manager, Lands And Minerals    Date **DEC 04 2008**

Conditions of Approval, if any, are attached. Approval of this notice 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.

Office  
**ROSWELL FIELD OFFICE**

Section 1001, makes 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 reverse)

Surface Use Plan Revisions  
**Franklin 18 Federal Com No. 1**  
18-15S-31E  
SHL 330 FNL & 330 FEL                      BHL 330 FNL & 330 FWL  
Chaves County, NM

Methods of Handling Waste Material

- A. Drill cuttings will be separated by a series of solids removal equipment and stored in steel containment pits and then hauled to a state-approved disposal facility.
- B. All trash, junk and other waste material will be contained in trash cages or bins to prevent scattering. When the job is completed all contents will be removed and disposed of in an approved sanitary land fill.
- C. Salts remaining after completion of well will be picked up by supplier including broken sacks.
- D. Sewage from living quarters will drain into holding tanks and be cleaned out periodically. A Porta-John will be provided for the rig crews. This equipment will be properly maintained during the drilling operations and removed upon completion of the well.
- E. Drilling fluids will be contained in steel pits in a closed circulating system. Fluids will be cleaned and reused. Water produced during testing will be contained in the steel pits and disposed of at a state approved disposal facility. Any oil or condensate produced will be stored in test tanks until sold and hauled from the site.

Well Site Layout

- A. Exhibit "D" shows location and rig layout.
- B. Mud pits in the closed circulating system will be steel pits and the cuttings will be stored in steel containment pits.
- C. Cuttings will be stored in steel pits until they are hauled to a state-approved disposal facility.
- D. If the well is a producer, those areas of the location not essential to production facilities will be reclaimed and seeded per BLM requirements.

Plans for Restoration of Surface

Rehabilitation of the location will start in a timely manner after all drilling operations cease. The type of reclamation will depend on whether the well is a producer or a dry hole.

Drainage systems, if any, will be reshaped to the original configuration with provisions made to alleviate erosion. These may need to be modified in certain circumstances to prevent inundation of the location's pad and surface facilities. After the area has been shaped and contoured, topsoil from the stockpile will be placed over the disturbed area to the extent possible. Revegetation procedures will comply with BLM standards.

If the well is a dry hole, the pad and road area will be recountoured to match the existing terrain. Topsoil will be spread to the extent possible. Revegetation will comply with BLM standards.

Should the well be a producer, the previously noted procedures will apply to those areas which are not required for production facilities.

# Patriot Rig 4

Cimarex Energy Co. of Colorado

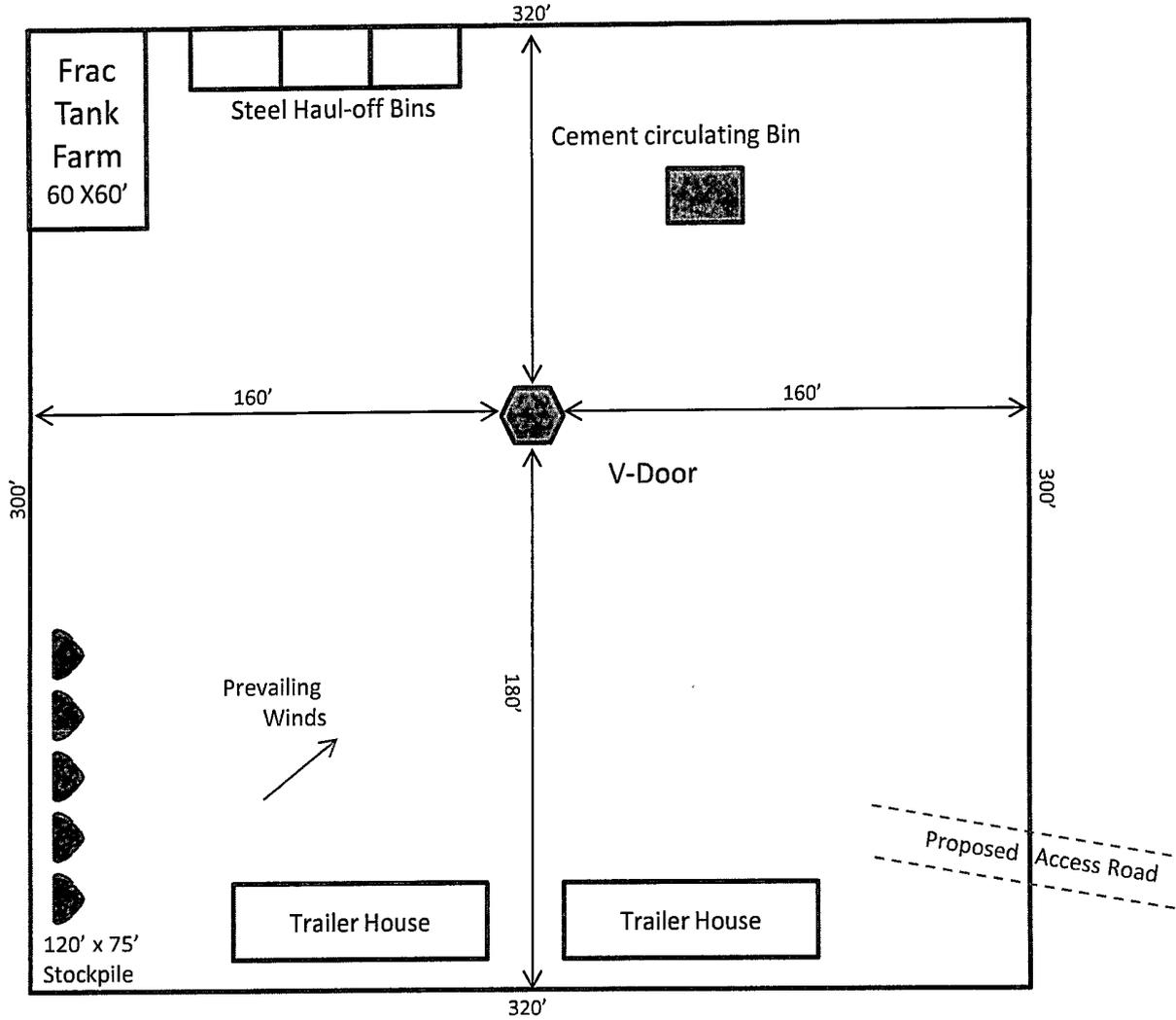
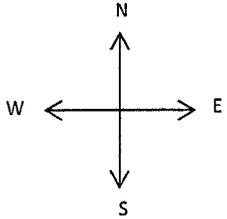
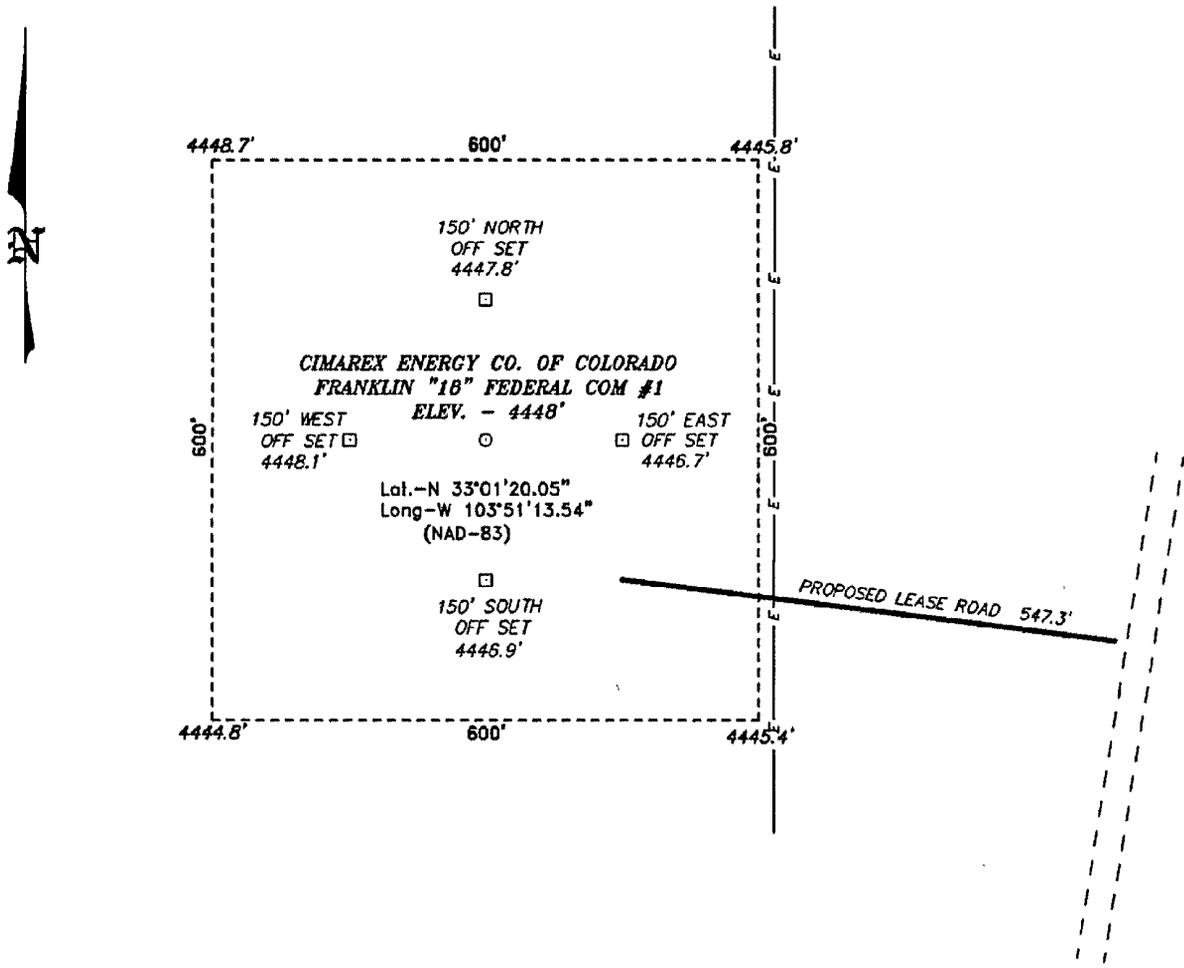


Exhibit D – Rig Layout  
**Franklin 18 Federal Com No. 1**  
Cimarex Energy Co. of Colorado  
18-15S-31E  
SHL 330 FNL & 330 FEL  
BHL 330 FNL & 330 FWL  
Chaves County, NM



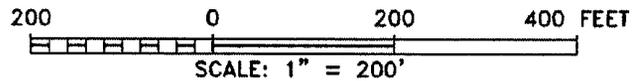


SECTION 18, TOWNSHIP 15 SOUTH, RANGE 31 EAST, N.M.P.M.,  
 CHAVES COUNTY, NEW MEXICO.



Directions to Location:

FROM MILE MARKER 30 OF HWY 31, GO EAST ON  
 HWY 31 APPROX, 300' TO ROAD, ON ROAD GO  
 NORTH 0.4 MILES TO PROPOSED LEASE ROAD.



**BASIN SURVEYS** P.O. BOX 1786-HOBBS, NEW MEXICO

W.O. Number: 20022      Drawn By: J. SMALL

Date: 06-30-2008      Disk: JMS 20022

|  |                     |
|--|---------------------|
| <b>CIMAREX ENERGY CO. OF COLORADO</b>  |                     |
| REF: FRANKLIN "18" FEDERAL COM #1 / WELL PAD TOPO  |                     |
| THE FRANKLIN "18" FEDERAL COM #1 LOCATED 330'<br>FROM THE NORTH LINE AND 330' FROM THE EAST LINE OF<br>SECTION 18, TOWNSHIP 15 SOUTH, RANGE 31 EAST,<br>N.M.P.M., CHAVES COUNTY, NEW MEXICO. |                     |
| Survey Date: VARIES  | Sheet 1 of 1 Sheets |



# Patriot Rig 4

Cimarex Energy Co. of Colorado

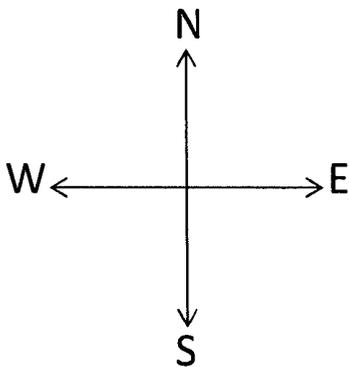
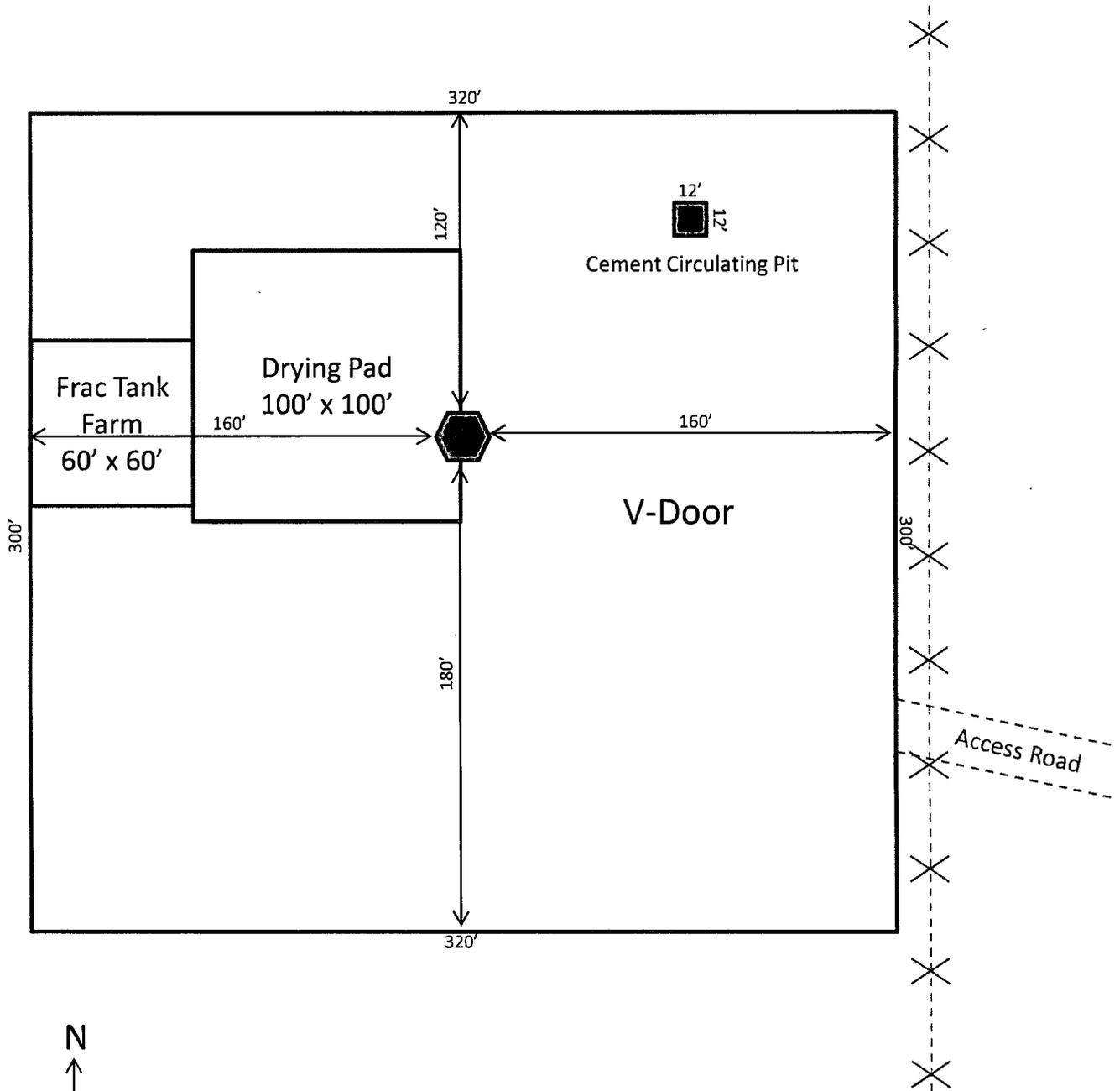


Exhibit D – Rig Layout  
**Franklin 18 Federal Com No. 1**  
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18-15S-31E  
SHL 330 FNL & 330 FEL  
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Chaves County, NM