

S

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

OCD-ARTESIA

FORM APPROVED  
OMB No 1004-0137  
Expires March 31, 2007

5. Lease Serial No.

NM-0556811

6. If Indian, Allottee or Tribe Name

## APPLICATION FOR PERMIT TO DRILL OR REENTER

FEB 06 2008

1a. Type of Work: ☒ DRILL ☐ REENTER

OCD-ARTESIA

If Unit or CA Agreement, Name and No.

1b. Type of Well: ☒ Oil Well ☐ Gas Well ☐ Other ☒ Single Zone ☐ Multiple Zone8. Lease Name and Well No. 35578  
Nitro 11 Federal No. 2 H

2. Name of Operator

Cimarex Energy Co. of Colorado

9. API Well No.

30-015-36100

3a. Address

PO Box 140907; Irving, TX 75014

3b. Phone No. (include area code)

972-401-3111

10. Field and Pool, or Exploratory  
County Line Tank; Abo 97197

4. Location of Well (Report location clearly and in accordance with any State requirements. \*)

At Surface 925' FNL &amp; 330' FWL - D Roswell Controlled Water Basin

At proposed prod. Zone 375' FNL &amp; 330' FEL - A Proposed horizontal Abo test

11-16S-29E

14. Distance in-miles and direction from nearest town or post office\*

3 miles WNW of Loco Hills

12. County or Parish

Eddy

13. State

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

1480

17. Spacing Unit dedicated to this well

N2N2 160

18. Distance from proposed location\*  
to nearest well, drilling, completed,  
applied for, on this lease, ft.

NA

19. Proposed Depth

MD 11770'

TVD 7310'

20. BLM/BIA Bond No. on File

NM-2575

21. Elevations (Show whether DF, KDB, RT, GL, etc.)

3718' GR

22. Approximate date work will start\*

1/15/2008

23. Estimated duration

30-35 days

## 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
2. A Drilling Plan
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).
4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator Certification
6. Such other site specific information and/or plans as may be required by the authorized officer.

25. Signature

Zeno Farris

Name (Printed/Typed)

Zeno Farris

Date

11.28.07

Title

Manager Operations Administration

Approved By (Signature)

/s/ Don Peterson

Name (Printed/Typed)

/s/ Don Peterson

Date

FEB - 1 2008

Title

FIELD MANAGER

Office

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.

APPROVAL FOR TWO YEARS

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.

SEE ATTACHED FOR  
CONDITIONS OF APPROVALAPPROVAL SUBJECT TO  
GENERAL REQUIREMENTS  
AND SPECIAL STIPULATIONS  
ATTACHED

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          | Pool Code<br>97197                              | Pool Name<br>County Line Tank; Abo |
| Property Code       | Property Name<br>NITRO "11" FEDERAL             | Well Number<br>2 H                 |
| OGRID No.<br>162683 | Operator Name<br>CIMAREX ENERGY CO. OF COLORADO | Elevation<br>3718'                 |

**Surface Location**

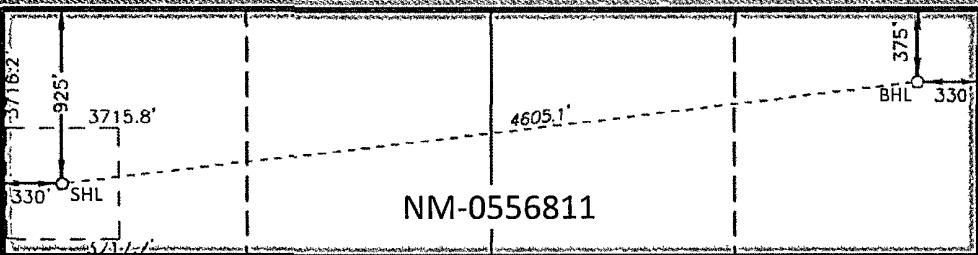
| UL or lot No. | Section | Township | Range | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County |
|---------------|---------|----------|-------|---------|---------------|------------------|---------------|----------------|--------|
| D             | 11      | 16 S     | 29 E  |         | 925           | NORTH            | 330           | WEST           | EDDY   |

**Bottom Hole Location If Different From Surface**

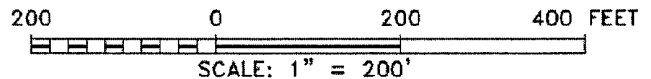
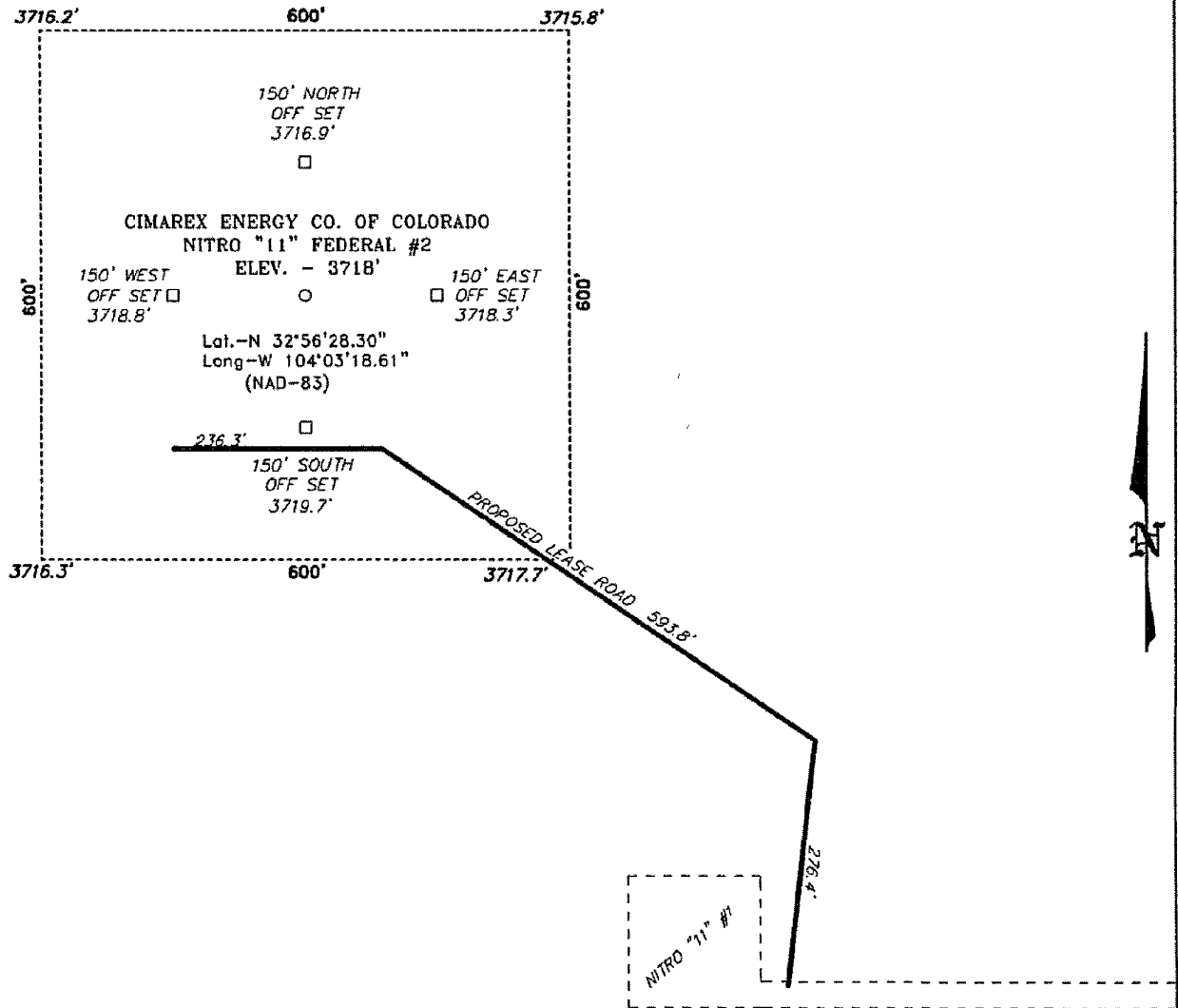
| UL or lot No. | Section | Township | Range | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County |
|---------------|---------|----------|-------|---------|---------------|------------------|---------------|----------------|--------|
| A             | 11      | 16 S     | 29 E  |         | 375           | NORTH            | 330           | EAST           | EDDY   |

|                        |                 |                    |           |
|------------------------|-----------------|--------------------|-----------|
| Dedicated Acres<br>160 | Joint or Infill | Consolidation Code | 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>NM-0556811</p>                                                                                                                                                                                                                                                                                                                       | <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> 11-28-07<br/>Signature Date</p> <p>Zeno Farris<br/>Printed Name</p> |
| <p><b>SURFACE LOCATION</b><br/>Lat - N32°56'27.30"<br/>Long - W104°03'10.86"<br/>NMSPCE- N 706155.3<br/>E 627333.1<br/>(NAD-83)</p>                                                                                                                                                                                                                                                                                        | <p><b>BOTTOM HOLE LOCATION</b><br/>Lat - N32°56'32.7"<br/>Long - W104°02'16.4"<br/>NMSPCE- N 706710.136<br/>E 631974.926<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>NOVEMBER 7, 2007</p> <p>Date Surveyed</p> <p>Signature &amp; Seal of Professional Surveyor</p> <p>Certificate No. Gary L. Jones 7977</p> <p>BASIN SURVEYS</p> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |

SECTION 11, TOWNSHIP 16 SOUTH, RANGE 29 EAST, N.M.P.M.,  
EDDY COUNTY, NEW MEXICO.



Directions to Location:

FROM JUNCTION OF US HWY 82 AND BARNIVAL DRAW ROAD, GO NORTH ON BARNIVAL DRAW FOR 6.8 MILES TO LEASE ROAD, ON LEASE ROAD CONTINUE NORTHWESTERLY 3.5 MILES TO GATE, GO SOUTHEAST 0.7 MILES THENCE SOUTHWEST 0.7 MILES TO LEASE ROAD, GO WEST 0.2 MILES TO PROPOSED LEASE ROAD.

**CIMAREX ENERGY CO. OF COLORADO**

REF: NITRO "11" FEDERAL #2 / WELL PAD TOPO

THE NITRO "11" FEDERAL #2 LOCATED 925' FROM  
THE NORTH LINE AND 330' FROM THE WEST LINE OF  
SECTION 11, TOWNSHIP 16 SOUTH, RANGE 29 EAST,  
N.M.P.M., EDDY COUNTY, NEW MEXICO.

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

W.O. Number: 18751 Drawn By: J. SMALL

Date: 11-07-2007 Disk: JMS 18751W

Survey Date: 11-03-2007 Sheet 1 of 1 Sheets

**Application to Drill**  
**Cimarex Energy Co. of Colorado**  
**Nitro 11 Federal No. 2**  
Unit D      Section 11  
T16S R29E      Eddy 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      925' FNL & 330' FWL  
                          BHL      ~~1980'~~ <sup>375'</sup> FNL & 330' FEL      *Proposed horizontal Abo test*
- 2 Elevation above sea level:      3718' 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 11770' TVD 7310'
- 6 Estimated tops of geological markers:  
     San Andres      2,700  
     Abo Shale      6,195  
     Lower Abo Dolomite      7,220  
     Wolfcamp      7,320
- 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 | 28-29 | May lose circ | Fresh water spud mud                                        |
| 340' to <del>2,500'</del> <sup>1750'</sup>    | 10.0      | 28-29 | May lose circ | Brine Water                                                 |
| <del>2,500'</del> <sup>1750'</sup> to 11,770' | 8.6 - 9.5 | 29-32 | NC            | Fresh water and brine, use hi-vis sweeps to keep hole clean |

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. Proposed drilling Plan

Kick off horizontal @ 6921' and drill 7-7/8" hole to 11770' MD, 7310' TVD (no pilot hole). Run 5-1/2" 17# N-80 LTC casing and cement as shown on page 2, production casing details.

Application to Drill  
Cimarex Energy Co. of Colorado  
**Nitro 11 Federal No. 2**  
Unit D                      Section 11  
T16S R29E                Eddy County, NM

9 Casing & Cementing Program:

| Hole Size | Depth |            | Casing OD  | Weight | Thread | Collar | Grade |
|-----------|-------|------------|------------|--------|--------|--------|-------|
| 17-1/2    | 0     | to 340'    | New 13-3/8 | 48#    | 8-R    | STC    | H-40  |
| 11        | 0     | to 1,800'  | New 8-5/8  | 24#    | 8-R    | STC    | J-55  |
| 7-7/8     | 0     | to 11,770' | New 5-1/2  | 17#    | 8-R    | LTC    | N-80  |

10 Cementing & Setting Depth:

13-3/8      **Surface**      Set 340' of 13-3/8 48# H-40 STC  
Lead: 171 sx Light Premium plus + 0.125 lb/sk Poly-E-Flake + 1% CaCl<sub>2</sub> (wt 14.2, yld 1.64)  
Tail: 220 sk Premium Plus + 2% CaCl (wt 14.8, yld 1.35)  
TOC              Surface

8-5/8      **Intermediate**      Set 1,800' of 8-5/8 24# J-55 STC  
Lead: 344 sks Interfill C + 0.125 lb/sk Poly-E-Flake (wt 11.9, yld 2.45)  
Tail: 200 sks Premium Plus + 1% CaCl (wt 14.8, yld 1.33)  
TOC              Surface

5-1/2      **Production**      Set 11,770' of 5-1/2 17# N-80 LTC  
1437 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 2,300' — see COA

Fresh water will be protected by setting 13-3/8 casing at 340' and cementing to Surface  
Hydrocarbon zones will be protected by setting 8-5/8 casing at 1,800' and cementing to Surface  
and by setting 5-1/2 casing at 11,770' and cementing to 2,300

Cimarex uses the following minimum safety factors:

|       |          |         |
|-------|----------|---------|
| Burst | Collapse | Tension |
| 1.125 | 1.0      | 1.80    |

**Application to Drill**  
**Cimarex Energy Co. of Colorado**  
**Nitro 11 Federal No. 2**  
Unit D      Section 11  
T16S R29E      Eddy County, NM

**11 Pressure control Equipment:**

Exhibit "E". A 13 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 13-3/8" 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 13-3/8" casing to 1000 psi using rig pumps. The BOP will be tested to 5000 PSI by an independent service company.

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

- A. Mud logging program: 2 man unit from 5500' to TD
- B. Electric logging program: CNL / LDT / CAL / GR, DLL / CAL / GR
- C. No DSTs or cored are planned.

**13 Potential Hazards:**

No abnormal pressures or temperatures are expected. The area has a potential H2S hazard. An H2S 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      30-35 days

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

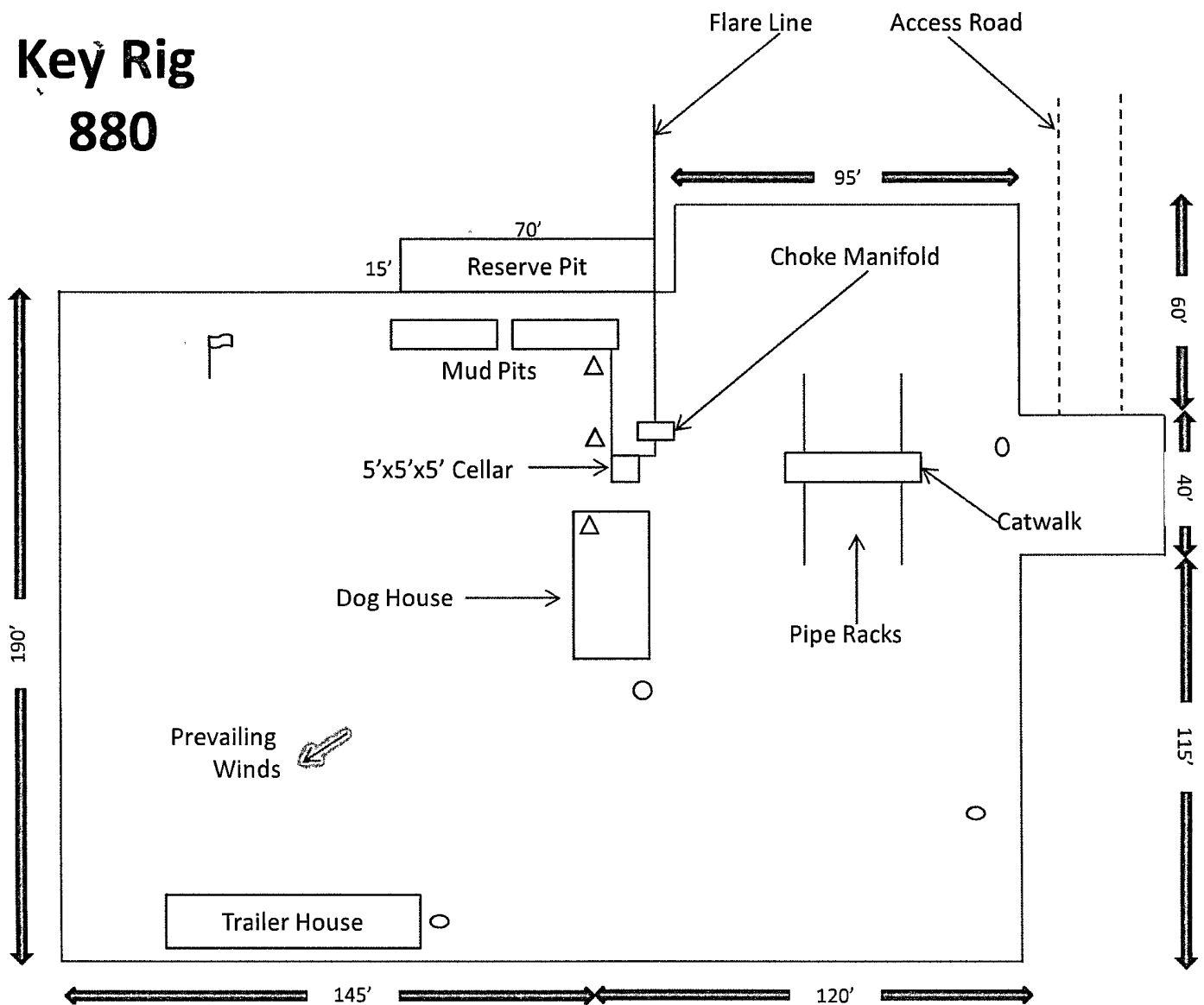
**15 Other Facets of Operations:**

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

**Ab**o pay will be perforated and stimulated.

The proposed well will be tested and potentialied as      **an oil well**

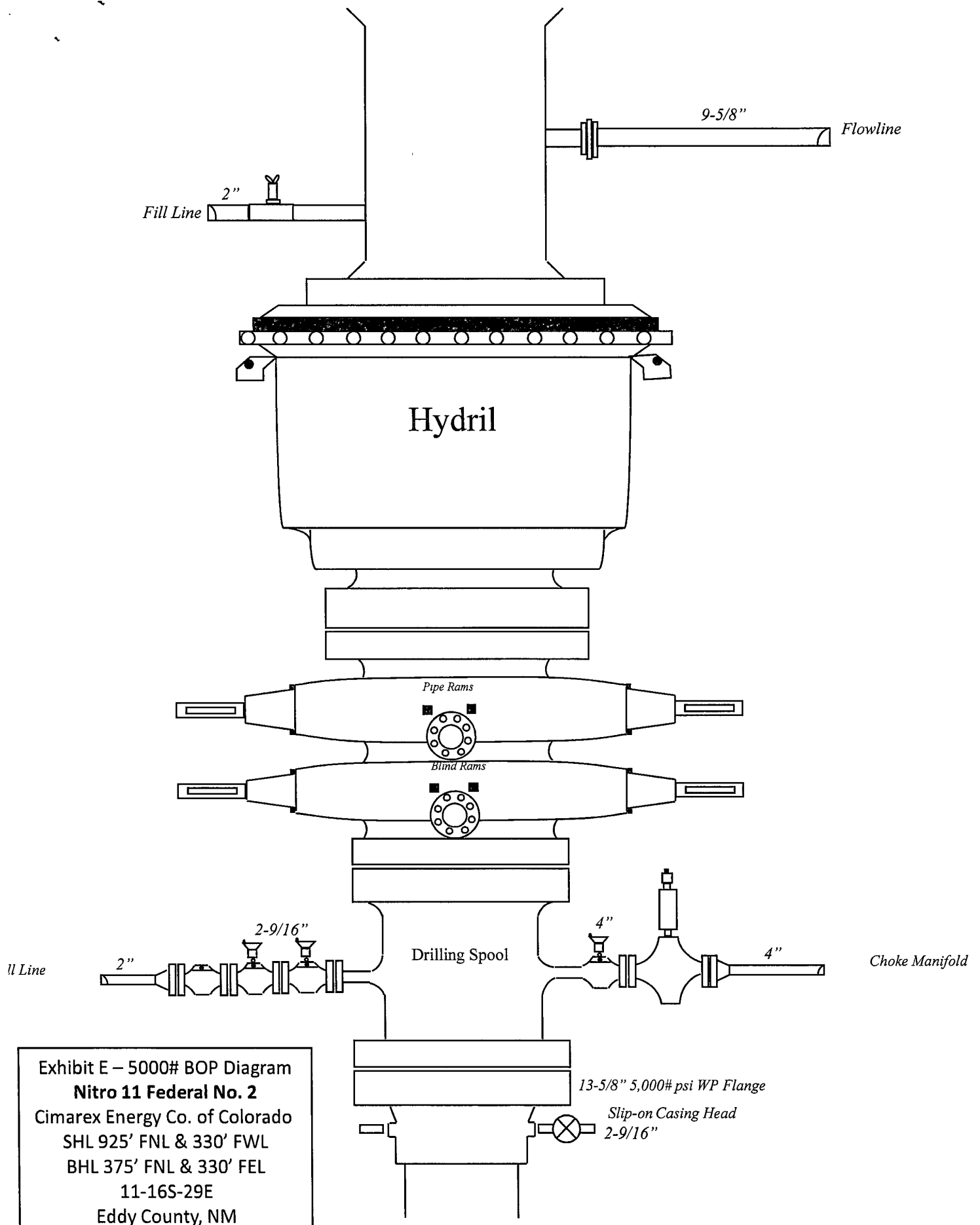
# Key Rig 880



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

Exhibit D – Rig Diagram  
**Nitro 11 Federal No. 2**  
 Cimarex Energy Co. of Colorado  
 SHL 925' FNL & 330' FWL  
 BHL 375' FNL & 330' FEL  
 11-16S-29E  
 Eddy County, NM

# SR & A



**DRILLING OPERATIONS  
CHOKE MANIFOLD  
SM SERVICE**

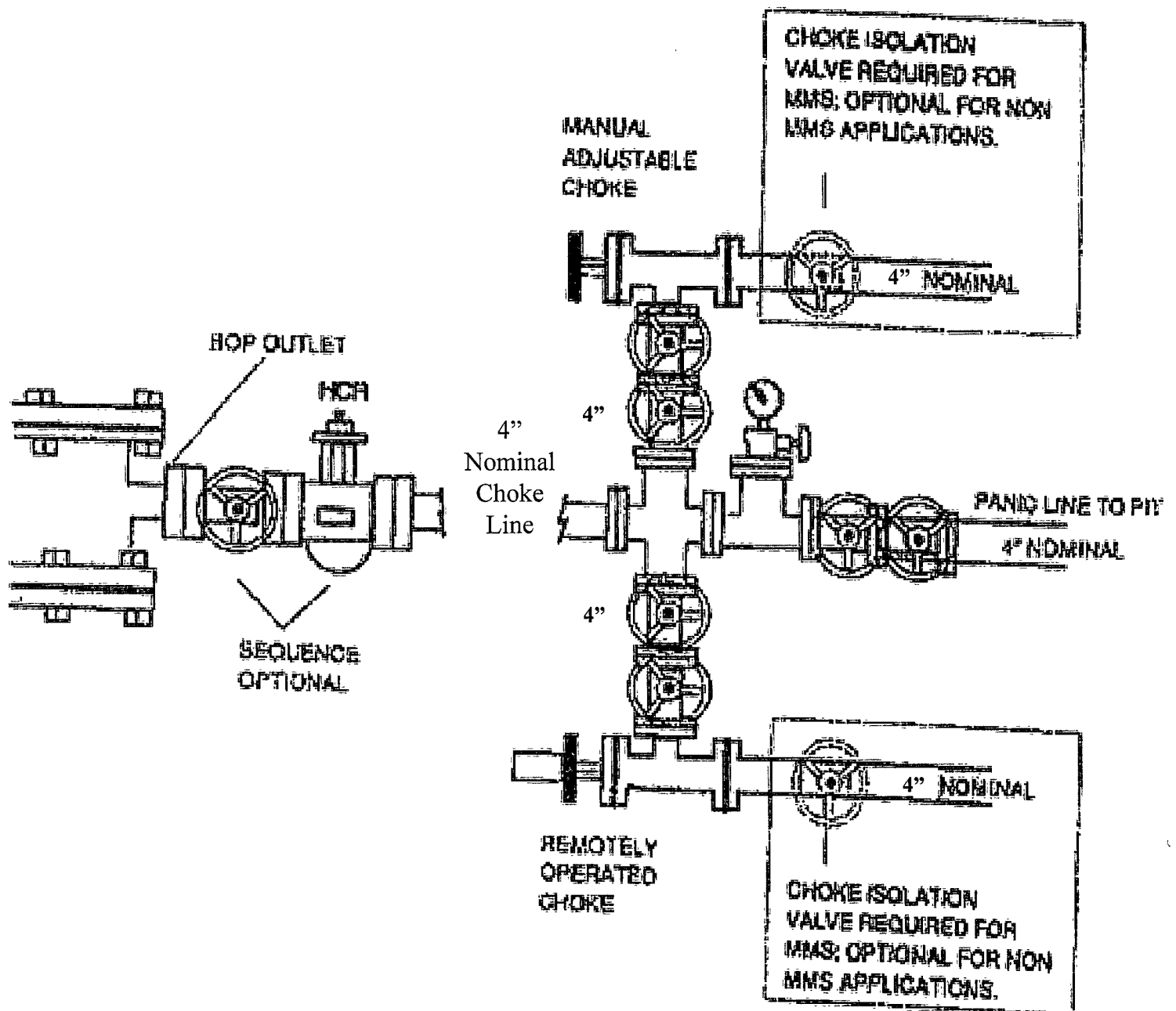
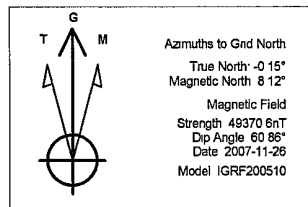
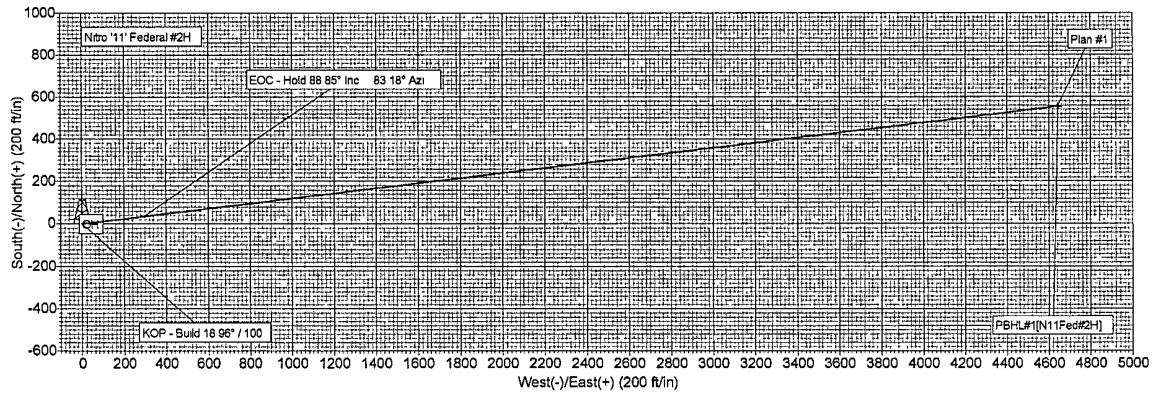


Exhibit E-1 – Choke Manifold Diagram  
**Nitro 11 Federal No. 2**  
 Cimarex Energy Co. of Colorado  
 SHL 925' FNL & 330' FWL  
 BHL 375' FNL & 330' FEL  
 11-16S-29E  
 Eddy County, NM

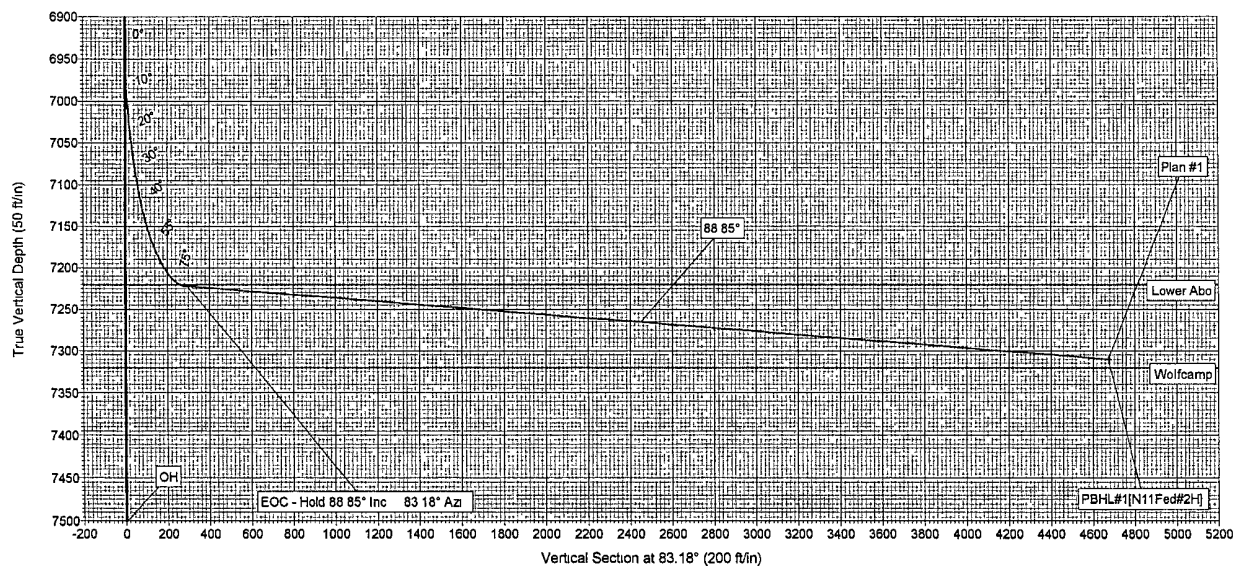


Project: Eddy Co., New Mexico  
 Site: Nitro '11' Federal #2H  
 Well: Nitro '11' Federal #2H  
 Wellbore: Lateral  
 Plan: Plan #1 (Nitro '11' Federal #2H/Lateral)



PROJECT DETAILS Eddy Co., New Mexico  
 Geodetic System US State Plane 1983  
 Datum North American Datum 1983  
 Ellipsoid GRS 1980  
 Zone New Mexico Eastern Zone  
 System Datum Mean Sea Level

| SECTION DETAILS |          |       |       |         |        |         |       |       |         |                   |
|-----------------|----------|-------|-------|---------|--------|---------|-------|-------|---------|-------------------|
| Sec             | MD       | Inc   | Azi   | TVD     | +N/-S  | +E/-W   | DLeg  | TFace | VSec    | Target            |
| 1               | 6920.00  | 0 00  | 0 00  | 6920.00 | 0 00   | 0 00    | 0 00  | 0 00  | 0 00    |                   |
| 2               | 6921.00  | 0 00  | 0 00  | 6921.00 | 0 00   | 0 00    | 0 00  | 0 00  | 0 00    |                   |
| 3               | 7389.57  | 88 85 | 83 18 | 7222.08 | 35.02  | 293.01  | 18.96 | 83.18 | 295.10  |                   |
| 4               | 11770.23 | 88 85 | 83 18 | 7310.00 | 554.84 | 4641.83 | 0 00  | 0 00  | 4674.87 | PBHL#1[N11Fed#2H] |



Plan Plan #1 (Nitro '11' Federal #2H/Lateral)  
 Created By LD Burton Date November 26, 2007



## **Cimarex Energy Co., Inc.**

**Eddy Co., New Mexico**

**Nitro '11' Federal #2H**

**Nitro '11' Federal #2H**

**Lateral**

**Plan: Plan #1**

## **Standard Survey Report**

**26 November, 2007**





Black Viper Energy  
Survey Report



|           |                          |                              |                                       |
|-----------|--------------------------|------------------------------|---------------------------------------|
| Company:  | Cimarex Energy Co., Inc. | Local Co-ordinate Reference: | Well Nitro '11' Federal #2H           |
| Project:  | Eddy Co., New Mexico     | TVD Reference:               | WELL @ 3718.00ft (Original Well Elev) |
| Site:     | Nitro '11' Federal #2H   | MD Reference:                | WELL @ 3718.00ft (Original Well Elev) |
| Well:     | Nitro '11' Federal #2H   | North Reference:             | Grid                                  |
| Wellbore: | Lateral                  | Survey Calculation Method:   | Minimum Curvature                     |
| Design:   | Plan #1                  | Database:                    | EDM 2003.14 1.0 Server DB             |

|             |                           |               |                |
|-------------|---------------------------|---------------|----------------|
| Project:    | Eddy Co., New Mexico      |               |                |
| Map System: | US State Plane 1983       | System Datum: | Mean Sea Level |
| Geo Datum:  | North American Datum 1983 |               |                |
| Map Zone:   | New Mexico Eastern Zone   |               |                |

|                       |                        |                   |                  |
|-----------------------|------------------------|-------------------|------------------|
| Site:                 | Nitro '11' Federal #2H |                   |                  |
| Site Position:        | Map                    | Northing:         | 706,155.30 ft    |
| From:                 |                        | Easting:          | 627,333.10 ft    |
| Position Uncertainty: | 0.00 ft                | Slot Radius:      | "                |
|                       |                        | Latitude:         | 32° 56' 27.290 N |
|                       |                        | Longitude:        | 104° 3' 10.878 W |
|                       |                        | Grid Convergence: | 0.15 °           |

|                      |       |                        |                     |               |               |                  |
|----------------------|-------|------------------------|---------------------|---------------|---------------|------------------|
| Well:                |       | Nitro '11' Federal #2H |                     |               |               |                  |
| Well Position        | +N/-S | 0.00 ft                | Northing:           | 706,155.30 ft | Latitude:     | 32° 56' 27.290 N |
|                      | +E/-W | 0.00 ft                | Easting:            | 627,333.10 ft | Longitude:    | 104° 3' 10.878 W |
| Position Uncertainty |       | 0.00 ft                | Wellhead Elevation: | ft            | Ground Level: | 3,718.00 ft      |

|           |            |             |                    |                  |                        |
|-----------|------------|-------------|--------------------|------------------|------------------------|
| Wellbore: | Lateral    |             |                    |                  |                        |
| Magnetics | Model Name | Sample Date | Declination<br>(°) | Dip Angle<br>(°) | Field Strength<br>(nT) |
|           | IGRF200510 | 2007-11-26  | 8.28               | 60.86            | 49,371                 |

|                   |                          |               |               |                  |          |
|-------------------|--------------------------|---------------|---------------|------------------|----------|
| Design:           | Plan #1                  |               |               |                  |          |
| Audit Notes:      |                          |               |               |                  |          |
| Version:          | ZERO                     | Phase:        | PROTOTYPE     | Tie On Depth:    | 6,920.00 |
| Vertical Section: | Depth From (TVD)<br>(ft) | +N/-S<br>(ft) | +E/-W<br>(ft) | Direction<br>(°) |          |
|                   | 0.00                     | 0.00          | 0.00          | 83.18            |          |

|                     |                  |                   |           |                |  |
|---------------------|------------------|-------------------|-----------|----------------|--|
| Survey Tool Program | Date: 2007-11-26 |                   |           |                |  |
| From<br>(ft)        | To<br>(ft)       | Survey (Wellbore) | Tool Name | Description    |  |
| 6,920.00            | 11,770.23        | Plan #1 (Lateral) | MWD       | MWD - Standard |  |

|                           |                    |                |                           |               |               |                             |                             |                            |                           |  |
|---------------------------|--------------------|----------------|---------------------------|---------------|---------------|-----------------------------|-----------------------------|----------------------------|---------------------------|--|
| Planned Survey:           |                    |                |                           |               |               |                             |                             |                            |                           |  |
| Measured<br>Depth<br>(ft) | Inclination<br>(°) | Azimuth<br>(°) | Vertical<br>Depth<br>(ft) | +N/-S<br>(ft) | +E/-W<br>(ft) | Vertical<br>Section<br>(ft) | Dogleg<br>Rate<br>(°/100ft) | Build<br>Rate<br>(%/100ft) | Turn<br>Rate<br>(°/100ft) |  |
| 6,920.00                  | 0.00               | 0.00           | 6,920.00                  | 0.00          | 0.00          | 0.00                        | 0.00                        | 0.00                       | 0.00                      |  |
| 6,921.00                  | 0.00               | 0.00           | 6,921.00                  | 0.00          | 0.00          | 0.00                        | 0.00                        | 0.00                       | 0.00                      |  |
| KOP - Build 18.96° / 100  |                    |                |                           |               |               |                             |                             |                            |                           |  |
| 6,925.00                  | 0.76               | 83.18          | 6,925.00                  | 0.00          | 0.03          | 0.03                        | 18.96                       | 18.96                      | 0.00                      |  |
| 6,950.00                  | 5.50               | 83.18          | 6,949.96                  | 0.17          | 1.38          | 1.39                        | 18.96                       | 18.96                      | 0.00                      |  |
| 6,975.00                  | 10.24              | 83.18          | 6,974.71                  | 0.57          | 4.78          | 4.81                        | 18.96                       | 18.96                      | 0.00                      |  |
| 7,000.00                  | 14.98              | 83.18          | 6,999.10                  | 1.22          | 10.20         | 10.27                       | 18.96                       | 18.96                      | 0.00                      |  |
| 7,025.00                  | 19.72              | 83.18          | 7,022.96                  | 2.10          | 17.60         | 17.72                       | 18.96                       | 18.96                      | 0.00                      |  |
| 7,050.00                  | 24.46              | 83.18          | 7,046.12                  | 3.22          | 26.93         | 27.12                       | 18.96                       | 18.96                      | 0.00                      |  |
| 7,075.00                  | 29.20              | 83.18          | 7,068.42                  | 4.56          | 38.13         | 38.40                       | 18.96                       | 18.96                      | 0.00                      |  |
| 7,100.00                  | 33.94              | 83.18          | 7,089.71                  | 6.11          | 51.12         | 51.49                       | 18.96                       | 18.96                      | 0.00                      |  |
| 7,125.00                  | 38.68              | 83.18          | 7,109.85                  | 7.87          | 65.82         | 66.29                       | 18.96                       | 18.96                      | 0.00                      |  |
| 7,150.00                  | 43.42              | 83.18          | 7,128.70                  | 9.82          | 82.12         | 82.70                       | 18.96                       | 18.96                      | 0.00                      |  |



Black Viper Energy  
Survey Report



|           |                          |                              |                                       |
|-----------|--------------------------|------------------------------|---------------------------------------|
| Company:  | Cimarex Energy Co., Inc. | Local Co-ordinate Reference: | Well Nitro '11' Federal #2H           |
| Project:  | Eddy Co., New Mexico     | TVD Reference:               | WELL @ 3718.00ft (Original Well Elev) |
| Site:     | Nitro '11' Federal #2H   | MD Reference:                | WELL @ 3718.00ft (Original Well Elev) |
| Well:     | Nitro '11' Federal #2H   | North Reference:             | Grid                                  |
| Wellbore: | Lateral                  | Survey Calculation Method:   | Minimum Curvature                     |
| Design:   | Plan #1                  | Database:                    | EDM 2003.14.1.0 Server DB             |

| Planned Survey                        |                 |             |                     |            |            |                       |                       |                      |                     |  |
|---------------------------------------|-----------------|-------------|---------------------|------------|------------|-----------------------|-----------------------|----------------------|---------------------|--|
| Measured Depth (ft)                   | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Vertical Section (ft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Turn Rate (°/100ft) |  |
| 7,175.00                              | 48.16           | 83.18       | 7,146.13            | 11.94      | 99.91      | 100.62                | 18.96                 | 18.96                | 0.00                |  |
| 7,200.00                              | 52.90           | 83.18       | 7,162.01            | 14.23      | 119.06     | 119.91                | 18.96                 | 18.96                | 0.00                |  |
| 7,225.00                              | 57.64           | 83.18       | 7,176.25            | 16.67      | 139.46     | 140.45                | 18.96                 | 18.96                | 0.00                |  |
| 7,250.00                              | 62.38           | 83.18       | 7,188.74            | 19.24      | 160.95     | 162.10                | 18.96                 | 18.96                | 0.00                |  |
| 7,275.00                              | 67.13           | 83.18       | 7,199.40            | 21.92      | 183.40     | 184.71                | 18.96                 | 18.96                | 0.00                |  |
| 7,300.00                              | 71.87           | 83.18       | 7,208.15            | 24.70      | 206.65     | 208.12                | 18.96                 | 18.96                | 0.00                |  |
| 7,325.00                              | 76.61           | 83.18       | 7,214.94            | 27.56      | 230.53     | 232.17                | 18.96                 | 18.96                | 0.00                |  |
| 7,350.00                              | 81.35           | 83.18       | 7,219.72            | 30.47      | 254.89     | 256.70                | 18.96                 | 18.96                | 0.00                |  |
| 7,351.89                              | 81.70           | 83.18       | 7,220.00            | 30.69      | 256.74     | 258.57                | 18.96                 | 18.96                | 0.00                |  |
| Lower Abo                             |                 |             |                     |            |            |                       |                       |                      |                     |  |
| 7,375.00                              | 86.09           | 83.18       | 7,222.46            | 33.42      | 279.55     | 281.54                | 18.96                 | 18.96                | 0.00                |  |
| 7,389.57                              | 88.85           | 83.18       | 7,222.08            | 35.02      | 293.01     | 295.10                | 18.96                 | 18.96                | 0.00                |  |
| EOC - Hold 88.85° Inc. :: 83.18° Azi. |                 |             |                     |            |            |                       |                       |                      |                     |  |
| 7,400.00                              | 88.85           | 83.18       | 7,222.29            | 36.26      | 303.37     | 305.53                | 0.00                  | 0.00                 | 0.00                |  |
| 7,500.00                              | 88.85           | 83.18       | 7,224.30            | 48.13      | 402.64     | 405.51                | 0.00                  | 0.00                 | 0.00                |  |
| 7,600.00                              | 88.85           | 83.18       | 7,226.30            | 59.99      | 501.91     | 505.49                | 0.00                  | 0.00                 | 0.00                |  |
| 7,700.00                              | 88.85           | 83.18       | 7,228.31            | 71.86      | 601.19     | 605.47                | 0.00                  | 0.00                 | 0.00                |  |
| 7,800.00                              | 88.85           | 83.18       | 7,230.32            | 83.73      | 700.46     | 705.45                | 0.00                  | 0.00                 | 0.00                |  |
| 7,900.00                              | 88.85           | 83.18       | 7,232.32            | 95.59      | 799.73     | 805.43                | 0.00                  | 0.00                 | 0.00                |  |
| 8,000.00                              | 88.85           | 83.18       | 7,234.33            | 107.46     | 899.01     | 905.41                | 0.00                  | 0.00                 | 0.00                |  |
| 8,100.00                              | 88.85           | 83.18       | 7,236.34            | 119.32     | 998.28     | 1,005.38              | 0.00                  | 0.00                 | 0.00                |  |
| 8,200.00                              | 88.85           | 83.18       | 7,238.35            | 131.19     | 1,097.55   | 1,105.36              | 0.00                  | 0.00                 | 0.00                |  |
| 8,300.00                              | 88.85           | 83.18       | 7,240.35            | 143.06     | 1,196.83   | 1,205.34              | 0.00                  | 0.00                 | 0.00                |  |
| 8,400.00                              | 88.85           | 83.18       | 7,242.36            | 154.92     | 1,296.10   | 1,305.32              | 0.00                  | 0.00                 | 0.00                |  |
| 8,500.00                              | 88.85           | 83.18       | 7,244.37            | 166.79     | 1,395.37   | 1,405.30              | 0.00                  | 0.00                 | 0.00                |  |
| 8,600.00                              | 88.85           | 83.18       | 7,246.37            | 178.66     | 1,494.64   | 1,505.28              | 0.00                  | 0.00                 | 0.00                |  |
| 8,700.00                              | 88.85           | 83.18       | 7,248.38            | 190.52     | 1,593.92   | 1,605.26              | 0.00                  | 0.00                 | 0.00                |  |
| 8,800.00                              | 88.85           | 83.18       | 7,250.39            | 202.39     | 1,693.19   | 1,705.24              | 0.00                  | 0.00                 | 0.00                |  |
| 8,900.00                              | 88.85           | 83.18       | 7,252.39            | 214.25     | 1,792.46   | 1,805.22              | 0.00                  | 0.00                 | 0.00                |  |
| 9,000.00                              | 88.85           | 83.18       | 7,254.40            | 226.12     | 1,891.74   | 1,905.20              | 0.00                  | 0.00                 | 0.00                |  |
| 9,100.00                              | 88.85           | 83.18       | 7,256.41            | 237.99     | 1,991.01   | 2,005.18              | 0.00                  | 0.00                 | 0.00                |  |
| 9,200.00                              | 88.85           | 83.18       | 7,258.42            | 249.85     | 2,090.28   | 2,105.16              | 0.00                  | 0.00                 | 0.00                |  |
| 9,300.00                              | 88.85           | 83.18       | 7,260.42            | 261.72     | 2,189.56   | 2,205.14              | 0.00                  | 0.00                 | 0.00                |  |
| 9,400.00                              | 88.85           | 83.18       | 7,262.43            | 273.58     | 2,288.83   | 2,305.12              | 0.00                  | 0.00                 | 0.00                |  |
| 9,500.00                              | 88.85           | 83.18       | 7,264.44            | 285.45     | 2,388.10   | 2,405.10              | 0.00                  | 0.00                 | 0.00                |  |
| 9,600.00                              | 88.85           | 83.18       | 7,266.44            | 297.32     | 2,487.38   | 2,505.08              | 0.00                  | 0.00                 | 0.00                |  |
| 9,700.00                              | 88.85           | 83.18       | 7,268.45            | 309.18     | 2,586.65   | 2,605.06              | 0.00                  | 0.00                 | 0.00                |  |
| 9,800.00                              | 88.85           | 83.18       | 7,270.46            | 321.05     | 2,685.92   | 2,705.04              | 0.00                  | 0.00                 | 0.00                |  |
| 9,900.00                              | 88.85           | 83.18       | 7,272.46            | 332.92     | 2,785.20   | 2,805.02              | 0.00                  | 0.00                 | 0.00                |  |
| 10,000.00                             | 88.85           | 83.18       | 7,274.47            | 344.78     | 2,884.47   | 2,905.00              | 0.00                  | 0.00                 | 0.00                |  |
| 10,100.00                             | 88.85           | 83.18       | 7,276.48            | 356.65     | 2,983.74   | 3,004.98              | 0.00                  | 0.00                 | 0.00                |  |
| 10,200.00                             | 88.85           | 83.18       | 7,278.49            | 368.51     | 3,083.02   | 3,104.96              | 0.00                  | 0.00                 | 0.00                |  |
| 10,300.00                             | 88.85           | 83.18       | 7,280.49            | 380.38     | 3,182.29   | 3,204.94              | 0.00                  | 0.00                 | 0.00                |  |
| 10,400.00                             | 88.85           | 83.18       | 7,282.50            | 392.25     | 3,281.56   | 3,304.92              | 0.00                  | 0.00                 | 0.00                |  |
| 10,500.00                             | 88.85           | 83.18       | 7,284.51            | 404.11     | 3,380.84   | 3,404.90              | 0.00                  | 0.00                 | 0.00                |  |
| 10,600.00                             | 88.85           | 83.18       | 7,286.51            | 415.98     | 3,480.11   | 3,504.88              | 0.00                  | 0.00                 | 0.00                |  |
| 10,700.00                             | 88.85           | 83.18       | 7,288.52            | 427.85     | 3,579.38   | 3,604.86              | 0.00                  | 0.00                 | 0.00                |  |
| 10,800.00                             | 88.85           | 83.18       | 7,290.53            | 439.71     | 3,678.65   | 3,704.84              | 0.00                  | 0.00                 | 0.00                |  |
| 10,900.00                             | 88.85           | 83.18       | 7,292.53            | 451.58     | 3,777.93   | 3,804.82              | 0.00                  | 0.00                 | 0.00                |  |
| 11,000.00                             | 88.85           | 83.18       | 7,294.54            | 463.44     | 3,877.20   | 3,904.80              | 0.00                  | 0.00                 | 0.00                |  |
| 11,100.00                             | 88.85           | 83.18       | 7,296.55            | 475.31     | 3,976.47   | 4,004.78              | 0.00                  | 0.00                 | 0.00                |  |
| 11,200.00                             | 88.85           | 83.18       | 7,298.56            | 487.18     | 4,075.75   | 4,104.76              | 0.00                  | 0.00                 | 0.00                |  |
| 11,300.00                             | 88.85           | 83.18       | 7,300.56            | 499.04     | 4,175.02   | 4,204.74              | 0.00                  | 0.00                 | 0.00                |  |
| 11,400.00                             | 88.85           | 83.18       | 7,302.57            | 510.91     | 4,274.29   | 4,304.72              | 0.00                  | 0.00                 | 0.00                |  |



Black Viper Energy  
Survey Report



|           |                          |                              |                                       |
|-----------|--------------------------|------------------------------|---------------------------------------|
| Company:  | Cimarex Energy Co., Inc. | Local Co-ordinate Reference: | Well Nitro '11' Federal #2H           |
| Project:  | Eddy Co., New Mexico     | TVD Reference:               | WELL @ 3718.00ft (Original Well Elev) |
| Site:     | Nitro '11' Federal #2H   | MD Reference:                | WELL @ 3718.00ft (Original Well Elev) |
| Well:     | Nitro '11' Federal #2H   | North Reference:             | Grid                                  |
| Wellbore: | Lateral                  | Survey Calculation Method:   | Minimum Curvature                     |
| Design:   | Plan #1                  | Database:                    | EDM 2003.14.1.0 Server DB             |

| Planned Survey      |                 |             |                     |           |           |                       |                       |                      |                     |  |
|---------------------|-----------------|-------------|---------------------|-----------|-----------|-----------------------|-----------------------|----------------------|---------------------|--|
| Measured Depth (ft) | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N-S (ft) | +E-W (ft) | Vertical Section (ft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Turn Rate (°/100ft) |  |
| 11,500.00           | 88.85           | 83.18       | 7,304.58            | 522.77    | 4,373.57  | 4,404.70              | 0.00                  | 0.00                 | 0.00                |  |
| 11,600.00           | 88.85           | 83.18       | 7,306.58            | 534.64    | 4,472.84  | 4,504.68              | 0.00                  | 0.00                 | 0.00                |  |
| 11,700.00           | 88.85           | 83.18       | 7,308.59            | 546.51    | 4,572.11  | 4,604.66              | 0.00                  | 0.00                 | 0.00                |  |
| 11,770.23           | 88.85           | 83.18       | 7,310.00            | 554.84    | 4,641.83  | 4,674.87              | 0.00                  | 0.00                 | 0.00                |  |
| PBHL#1[N11Fed#2H]   |                 |             |                     |           |           |                       |                       |                      |                     |  |

| Targets           |                    |               |              |          |           |           |               |              |                                   |
|-------------------|--------------------|---------------|--------------|----------|-----------|-----------|---------------|--------------|-----------------------------------|
| Target Name       | hit/miss target    | Dip Angle (°) | Dip Dir. (°) | TVD (ft) | +N-S (ft) | +E-W (ft) | Northing (ft) | Easting (ft) |                                   |
| Shape             |                    |               |              |          |           |           |               |              | Latitude Longitude                |
| PBHL#1[N11Fed#2H] | - plan hits target | 0.00          | 0.00         | 7,310.00 | 554.84    | 4,641.83  | 706,710.14    | 631,974.93   | 32° 56' 32.654 N 104° 2' 16.390 W |
|                   | - Point            |               |              |          |           |           |               |              |                                   |

| Formations          |                     |            |           |         |                   |  |
|---------------------|---------------------|------------|-----------|---------|-------------------|--|
| Measured Depth (ft) | Vertical Depth (ft) | Name       | Lithology | Dip (°) | Dip Direction (°) |  |
|                     | 2,700.00            | San Andres |           | 0.00    |                   |  |
|                     | 6,195.00            | Abo Shale  |           | 0.00    |                   |  |
| 7,351.89            | 7,220.00            | Lower Abo  |           | 0.00    |                   |  |
|                     | 7,320.00            | Wolfcamp   |           | 0.00    |                   |  |

| Plan Annotations    |                     |           |           |                                      |
|---------------------|---------------------|-----------|-----------|--------------------------------------|
| Measured Depth (ft) | Vertical Depth (ft) | +N-S (ft) | +E-W (ft) | Comment                              |
| 6,921.00            | 6,921.00            | 0.00      | 0.00      | KOP - Build 18.96° / 100             |
| 7,389.57            | 7,222.08            | 35.02     | 293.01    | EOC - Hold 88.85° Inc. : 83.18° Azi. |

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

Nitro '11' Federal #2H Lateral Plan #1 Report 11-26-07 (2).txt  
 Cimarex Energy Co., Inc.  
 Nitro '11' Federal #2H - Plan #1

Eddy Co., New Mexico  
 Nitro '11' Federal #2H

| Measured<br>Dogleg<br>Depth<br>Rate<br>(ft)<br>(°/100ft) | Incl.  | Azim.  | Vertical<br>Depth<br>(ft) | Northings<br>(ft) | Eastings<br>(ft) | Vertical<br>Section<br>(ft) |
|----------------------------------------------------------|--------|--------|---------------------------|-------------------|------------------|-----------------------------|
| 6920.00                                                  | 0.000  | 0.000  | 6920.00                   | 0.00 N            | 0.00 E           | 0.00                        |
| 0.00                                                     |        |        |                           |                   |                  |                             |
| 6930.00                                                  | 1.707  | 83.184 | 6930.00                   | 0.02 N            | 0.13 E           | 0.13                        |
| 17.07                                                    |        |        |                           |                   |                  |                             |
| 6940.00                                                  | 3.603  | 83.184 | 6939.99                   | 0.07 N            | 0.59 E           | 0.60                        |
| 18.96                                                    |        |        |                           |                   |                  |                             |
| 6950.00                                                  | 5.499  | 83.184 | 6949.96                   | 0.17 N            | 1.38 E           | 1.39                        |
| 18.96                                                    |        |        |                           |                   |                  |                             |
| 6960.00                                                  | 7.395  | 83.184 | 6959.89                   | 0.30 N            | 2.50 E           | 2.51                        |
| 18.96                                                    |        |        |                           |                   |                  |                             |
| 6970.00                                                  | 9.291  | 83.184 | 6969.79                   | 0.47 N            | 3.94 E           | 3.96                        |
| 18.96                                                    |        |        |                           |                   |                  |                             |
| 6980.00                                                  | 11.188 | 83.184 | 6979.63                   | 0.68 N            | 5.70 E           | 5.74                        |
| 18.96                                                    |        |        |                           |                   |                  |                             |
| 6990.00                                                  | 13.084 | 83.184 | 6989.40                   | 0.93 N            | 7.79 E           | 7.84                        |
| 18.96                                                    |        |        |                           |                   |                  |                             |
| 7000.00                                                  | 14.980 | 83.184 | 6999.10                   | 1.22 N            | 10.20 E          | 10.27                       |
| 18.96                                                    |        |        |                           |                   |                  |                             |
| 7010.00                                                  | 16.876 | 83.184 | 7008.72                   | 1.54 N            | 12.92 E          | 13.01                       |
| 18.96                                                    |        |        |                           |                   |                  |                             |
| 7020.00                                                  | 18.772 | 83.184 | 7018.24                   | 1.91 N            | 15.96 E          | 16.07                       |
| 18.96                                                    |        |        |                           |                   |                  |                             |
| 7030.00                                                  | 20.669 | 83.184 | 7027.65                   | 2.31 N            | 19.31 E          | 19.45                       |
| 18.96                                                    |        |        |                           |                   |                  |                             |
| 7040.00                                                  | 22.565 | 83.184 | 7036.95                   | 2.75 N            | 22.97 E          | 23.13                       |
| 18.96                                                    |        |        |                           |                   |                  |                             |
| 7050.00                                                  | 24.461 | 83.184 | 7046.12                   | 3.22 N            | 26.93 E          | 27.12                       |
| 18.96                                                    |        |        |                           |                   |                  |                             |
| 7060.00                                                  | 26.357 | 83.184 | 7055.15                   | 3.73 N            | 31.19 E          | 31.41                       |
| 18.96                                                    |        |        |                           |                   |                  |                             |
| 7070.00                                                  | 28.253 | 83.184 | 7064.03                   | 4.27 N            | 35.74 E          | 36.00                       |
| 18.96                                                    |        |        |                           |                   |                  |                             |
| 7080.00                                                  | 30.150 | 83.184 | 7072.76                   | 4.85 N            | 40.59 E          | 40.88                       |
| 18.96                                                    |        |        |                           |                   |                  |                             |
| 7090.00                                                  | 32.046 | 83.184 | 7081.33                   | 5.46 N            | 45.72 E          | 46.04                       |
| 18.96                                                    |        |        |                           |                   |                  |                             |
| 7100.00                                                  | 33.942 | 83.184 | 7089.71                   | 6.11 N            | 51.12 E          | 51.49                       |
| 18.96                                                    |        |        |                           |                   |                  |                             |
| 7110.00                                                  | 35.838 | 83.184 | 7097.91                   | 6.79 N            | 56.80 E          | 57.21                       |
| 18.96                                                    |        |        |                           |                   |                  |                             |
| 7120.00                                                  | 37.734 | 83.184 | 7105.92                   | 7.50 N            | 62.75 E          | 63.19                       |
| 18.96                                                    |        |        |                           |                   |                  |                             |
| 7130.00                                                  | 39.631 | 83.184 | 7113.73                   | 8.24 N            | 68.95 E          | 69.44                       |
| 18.96                                                    |        |        |                           |                   |                  |                             |
| 7140.00                                                  | 41.527 | 83.184 | 7121.32                   | 9.01 N            | 75.41 E          | 75.95                       |
| 18.96                                                    |        |        |                           |                   |                  |                             |
| 7150.00                                                  | 43.423 | 83.184 | 7128.70                   | 9.82 N            | 82.12 E          | 82.70                       |
| 18.96                                                    |        |        |                           |                   |                  |                             |
| 7160.00                                                  | 45.319 | 83.184 | 7135.85                   | 10.65 N           | 89.06 E          | 89.69                       |
| 18.96                                                    |        |        |                           |                   |                  |                             |

Nitro '11' Federal #2H Lateral Plan #1 Report 11-26-07 (2).txt

|         |        |        |         |         |          |        |
|---------|--------|--------|---------|---------|----------|--------|
| 7170.00 | 47.215 | 83.184 | 7142.76 | 11.50 N | 96.23 E  | 96.92  |
| 18.96   |        |        |         |         |          |        |
| 7180.00 | 49.112 | 83.184 | 7149.43 | 12.39 N | 103.63 E | 104.37 |
| 18.96   |        |        |         |         |          |        |
| 7190.00 | 51.008 | 83.184 | 7155.85 | 13.30 N | 111.24 E | 112.04 |
| 18.96   |        |        |         |         |          |        |
| 7200.00 | 52.904 | 83.184 | 7162.01 | 14.23 N | 119.06 E | 119.91 |
| 18.96   |        |        |         |         |          |        |
| 7210.00 | 54.800 | 83.184 | 7167.91 | 15.19 N | 127.08 E | 127.99 |
| 18.96   |        |        |         |         |          |        |
| 7220.00 | 56.696 | 83.184 | 7173.54 | 16.17 N | 135.29 E | 136.25 |
| 18.96   |        |        |         |         |          |        |
| 7230.00 | 58.593 | 83.184 | 7178.89 | 17.17 N | 143.68 E | 144.70 |
| 18.96   |        |        |         |         |          |        |
| 7240.00 | 60.489 | 83.184 | 7183.96 | 18.20 N | 152.23 E | 153.32 |
| 18.96   |        |        |         |         |          |        |
| 7250.00 | 62.385 | 83.184 | 7188.74 | 19.24 N | 160.95 E | 162.10 |
| 18.96   |        |        |         |         |          |        |
| 7260.00 | 64.281 | 83.184 | 7193.23 | 20.30 N | 169.83 E | 171.04 |
| 18.96   |        |        |         |         |          |        |
| 7270.00 | 66.177 | 83.184 | 7197.42 | 21.38 N | 178.84 E | 180.12 |
| 18.96   |        |        |         |         |          |        |
| 7280.00 | 68.074 | 83.184 | 7201.30 | 22.47 N | 187.99 E | 189.33 |
| 18.96   |        |        |         |         |          |        |
| 7290.00 | 69.970 | 83.184 | 7204.88 | 23.58 N | 197.26 E | 198.67 |
| 18.96   |        |        |         |         |          |        |
| 7300.00 | 71.866 | 83.184 | 7208.15 | 24.70 N | 206.65 E | 208.12 |
| 18.96   |        |        |         |         |          |        |
| 7310.00 | 73.762 | 83.184 | 7211.11 | 25.83 N | 216.13 E | 217.67 |
| 18.96   |        |        |         |         |          |        |
| 7320.00 | 75.658 | 83.184 | 7213.74 | 26.98 N | 225.71 E | 227.31 |
| 18.96   |        |        |         |         |          |        |
| 7330.00 | 77.554 | 83.184 | 7216.06 | 28.13 N | 235.37 E | 237.04 |
| 18.96   |        |        |         |         |          |        |
| 7340.00 | 79.451 | 83.184 | 7218.05 | 29.30 N | 245.10 E | 246.84 |
| 18.96   |        |        |         |         |          |        |
| 7350.00 | 81.347 | 83.184 | 7219.72 | 30.47 N | 254.89 E | 256.70 |
| 18.96   |        |        |         |         |          |        |
| 7360.00 | 83.243 | 83.184 | 7221.06 | 31.64 N | 264.73 E | 266.61 |
| 18.96   |        |        |         |         |          |        |
| 7370.00 | 85.139 | 83.184 | 7222.07 | 32.82 N | 274.60 E | 276.56 |
| 18.96   |        |        |         |         |          |        |
| 7380.00 | 87.035 | 83.184 | 7222.76 | 34.01 N | 284.51 E | 286.53 |
| 18.96   |        |        |         |         |          |        |
| 7390.00 | 88.850 | 83.184 | 7222.09 | 35.07 N | 293.44 E | 295.53 |
| 18.15   |        |        |         |         |          |        |
| 7400.00 | 88.850 | 83.184 | 7222.29 | 36.26 N | 303.37 E | 305.53 |
| 0.00    |        |        |         |         |          |        |
| 7410.00 | 88.850 | 83.184 | 7222.49 | 37.45 N | 313.29 E | 315.52 |
| 0.00    |        |        |         |         |          |        |
| 7420.00 | 88.850 | 83.184 | 7222.69 | 38.63 N | 323.22 E | 325.52 |
| 0.00    |        |        |         |         |          |        |
| 7430.00 | 88.850 | 83.184 | 7222.89 | 39.82 N | 333.15 E | 335.52 |
| 0.00    |        |        |         |         |          |        |
| 7440.00 | 88.850 | 83.184 | 7223.09 | 41.01 N | 343.08 E | 345.52 |
| 0.00    |        |        |         |         |          |        |
| 7450.00 | 88.850 | 83.184 | 7223.29 | 42.19 N | 353.00 E | 355.52 |
| 0.00    |        |        |         |         |          |        |
| 7460.00 | 88.850 | 83.184 | 7223.49 | 43.38 N | 362.93 E | 365.51 |
| 0.00    |        |        |         |         |          |        |
| 7470.00 | 88.850 | 83.184 | 7223.69 | 44.57 N | 372.86 E | 375.51 |
| 0.00    |        |        |         |         |          |        |
| 7480.00 | 88.850 | 83.184 | 7223.90 | 45.75 N | 382.78 E | 385.51 |

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|         |        |        |         |         |          |        |  |
|---------|--------|--------|---------|---------|----------|--------|--|
| 0.00    |        |        |         |         |          |        |  |
| 7490.00 | 88.850 | 83.184 | 7224.10 | 46.94 N | 392.71 E | 395.51 |  |
| 0.00    |        |        |         |         |          |        |  |
| 7500.00 | 88.850 | 83.184 | 7224.30 | 48.13 N | 402.64 E | 405.51 |  |
| 0.00    |        |        |         |         |          |        |  |
| 7510.00 | 88.850 | 83.184 | 7224.50 | 49.31 N | 412.57 E | 415.50 |  |
| 0.00    |        |        |         |         |          |        |  |
| 7520.00 | 88.850 | 83.184 | 7224.70 | 50.50 N | 422.49 E | 425.50 |  |
| 0.00    |        |        |         |         |          |        |  |
| 7530.00 | 88.850 | 83.184 | 7224.90 | 51.69 N | 432.42 E | 435.50 |  |
| 0.00    |        |        |         |         |          |        |  |
| 7540.00 | 88.850 | 83.184 | 7225.10 | 52.87 N | 442.35 E | 445.50 |  |
| 0.00    |        |        |         |         |          |        |  |
| 7550.00 | 88.850 | 83.184 | 7225.30 | 54.06 N | 452.28 E | 455.50 |  |
| 0.00    |        |        |         |         |          |        |  |
| 7560.00 | 88.850 | 83.184 | 7225.50 | 55.25 N | 462.20 E | 465.49 |  |
| 0.00    |        |        |         |         |          |        |  |
| 7570.00 | 88.850 | 83.184 | 7225.70 | 56.43 N | 472.13 E | 475.49 |  |
| 0.00    |        |        |         |         |          |        |  |
| 7580.00 | 88.850 | 83.184 | 7225.90 | 57.62 N | 482.06 E | 485.49 |  |
| 0.00    |        |        |         |         |          |        |  |
| 7590.00 | 88.850 | 83.184 | 7226.10 | 58.81 N | 491.99 E | 495.49 |  |
| 0.00    |        |        |         |         |          |        |  |
| 7600.00 | 88.850 | 83.184 | 7226.30 | 59.99 N | 501.91 E | 505.49 |  |
| 0.00    |        |        |         |         |          |        |  |
| 7610.00 | 88.850 | 83.184 | 7226.50 | 61.18 N | 511.84 E | 515.48 |  |
| 0.00    |        |        |         |         |          |        |  |
| 7620.00 | 88.850 | 83.184 | 7226.71 | 62.37 N | 521.77 E | 525.48 |  |
| 0.00    |        |        |         |         |          |        |  |
| 7630.00 | 88.850 | 83.184 | 7226.91 | 63.55 N | 531.69 E | 535.48 |  |
| 0.00    |        |        |         |         |          |        |  |
| 7640.00 | 88.850 | 83.184 | 7227.11 | 64.74 N | 541.62 E | 545.48 |  |
| 0.00    |        |        |         |         |          |        |  |
| 7650.00 | 88.850 | 83.184 | 7227.31 | 65.93 N | 551.55 E | 555.48 |  |
| 0.00    |        |        |         |         |          |        |  |
| 7660.00 | 88.850 | 83.184 | 7227.51 | 67.11 N | 561.48 E | 565.47 |  |
| 0.00    |        |        |         |         |          |        |  |
| 7670.00 | 88.850 | 83.184 | 7227.71 | 68.30 N | 571.40 E | 575.47 |  |
| 0.00    |        |        |         |         |          |        |  |
| 7680.00 | 88.850 | 83.184 | 7227.91 | 69.49 N | 581.33 E | 585.47 |  |
| 0.00    |        |        |         |         |          |        |  |
| 7690.00 | 88.850 | 83.184 | 7228.11 | 70.67 N | 591.26 E | 595.47 |  |
| 0.00    |        |        |         |         |          |        |  |
| 7700.00 | 88.850 | 83.184 | 7228.31 | 71.86 N | 601.19 E | 605.47 |  |
| 0.00    |        |        |         |         |          |        |  |
| 7710.00 | 88.850 | 83.184 | 7228.51 | 73.05 N | 611.11 E | 615.46 |  |
| 0.00    |        |        |         |         |          |        |  |
| 7720.00 | 88.850 | 83.184 | 7228.71 | 74.23 N | 621.04 E | 625.46 |  |
| 0.00    |        |        |         |         |          |        |  |
| 7730.00 | 88.850 | 83.184 | 7228.91 | 75.42 N | 630.97 E | 635.46 |  |
| 0.00    |        |        |         |         |          |        |  |
| 7740.00 | 88.850 | 83.184 | 7229.11 | 76.61 N | 640.90 E | 645.46 |  |
| 0.00    |        |        |         |         |          |        |  |
| 7750.00 | 88.850 | 83.184 | 7229.31 | 77.79 N | 650.82 E | 655.46 |  |
| 0.00    |        |        |         |         |          |        |  |
| 7760.00 | 88.850 | 83.184 | 7229.51 | 78.98 N | 660.75 E | 665.45 |  |
| 0.00    |        |        |         |         |          |        |  |
| 7770.00 | 88.850 | 83.184 | 7229.72 | 80.17 N | 670.68 E | 675.45 |  |
| 0.00    |        |        |         |         |          |        |  |
| 7780.00 | 88.850 | 83.184 | 7229.92 | 81.35 N | 680.60 E | 685.45 |  |
| 0.00    |        |        |         |         |          |        |  |
| 7790.00 | 88.850 | 83.184 | 7230.12 | 82.54 N | 690.53 E | 695.45 |  |
| 0.00    |        |        |         |         |          |        |  |

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|         |        |        |         |          |           |         |
|---------|--------|--------|---------|----------|-----------|---------|
| 7800.00 | 88.850 | 83.184 | 7230.32 | 83.73 N  | 700.46 E  | 705.45  |
| 0.00    |        |        |         |          |           |         |
| 7810.00 | 88.850 | 83.184 | 7230.52 | 84.91 N  | 710.39 E  | 715.44  |
| 0.00    |        |        |         |          |           |         |
| 7820.00 | 88.850 | 83.184 | 7230.72 | 86.10 N  | 720.31 E  | 725.44  |
| 0.00    |        |        |         |          |           |         |
| 7830.00 | 88.850 | 83.184 | 7230.92 | 87.29 N  | 730.24 E  | 735.44  |
| 0.00    |        |        |         |          |           |         |
| 7840.00 | 88.850 | 83.184 | 7231.12 | 88.47 N  | 740.17 E  | 745.44  |
| 0.00    |        |        |         |          |           |         |
| 7850.00 | 88.850 | 83.184 | 7231.32 | 89.66 N  | 750.10 E  | 755.44  |
| 0.00    |        |        |         |          |           |         |
| 7860.00 | 88.850 | 83.184 | 7231.52 | 90.85 N  | 760.02 E  | 765.43  |
| 0.00    |        |        |         |          |           |         |
| 7870.00 | 88.850 | 83.184 | 7231.72 | 92.03 N  | 769.95 E  | 775.43  |
| 0.00    |        |        |         |          |           |         |
| 7880.00 | 88.850 | 83.184 | 7231.92 | 93.22 N  | 779.88 E  | 785.43  |
| 0.00    |        |        |         |          |           |         |
| 7890.00 | 88.850 | 83.184 | 7232.12 | 94.41 N  | 789.81 E  | 795.43  |
| 0.00    |        |        |         |          |           |         |
| 7900.00 | 88.850 | 83.184 | 7232.32 | 95.59 N  | 799.73 E  | 805.43  |
| 0.00    |        |        |         |          |           |         |
| 7910.00 | 88.850 | 83.184 | 7232.53 | 96.78 N  | 809.66 E  | 815.42  |
| 0.00    |        |        |         |          |           |         |
| 7920.00 | 88.850 | 83.184 | 7232.73 | 97.97 N  | 819.59 E  | 825.42  |
| 0.00    |        |        |         |          |           |         |
| 7930.00 | 88.850 | 83.184 | 7232.93 | 99.15 N  | 829.51 E  | 835.42  |
| 0.00    |        |        |         |          |           |         |
| 7940.00 | 88.850 | 83.184 | 7233.13 | 100.34 N | 839.44 E  | 845.42  |
| 0.00    |        |        |         |          |           |         |
| 7950.00 | 88.850 | 83.184 | 7233.33 | 101.53 N | 849.37 E  | 855.42  |
| 0.00    |        |        |         |          |           |         |
| 7960.00 | 88.850 | 83.184 | 7233.53 | 102.71 N | 859.30 E  | 865.41  |
| 0.00    |        |        |         |          |           |         |
| 7970.00 | 88.850 | 83.184 | 7233.73 | 103.90 N | 869.22 E  | 875.41  |
| 0.00    |        |        |         |          |           |         |
| 7980.00 | 88.850 | 83.184 | 7233.93 | 105.09 N | 879.15 E  | 885.41  |
| 0.00    |        |        |         |          |           |         |
| 7990.00 | 88.850 | 83.184 | 7234.13 | 106.27 N | 889.08 E  | 895.41  |
| 0.00    |        |        |         |          |           |         |
| 8000.00 | 88.850 | 83.184 | 7234.33 | 107.46 N | 899.01 E  | 905.41  |
| 0.00    |        |        |         |          |           |         |
| 8010.00 | 88.850 | 83.184 | 7234.53 | 108.65 N | 908.93 E  | 915.40  |
| 0.00    |        |        |         |          |           |         |
| 8020.00 | 88.850 | 83.184 | 7234.73 | 109.83 N | 918.86 E  | 925.40  |
| 0.00    |        |        |         |          |           |         |
| 8030.00 | 88.850 | 83.184 | 7234.93 | 111.02 N | 928.79 E  | 935.40  |
| 0.00    |        |        |         |          |           |         |
| 8040.00 | 88.850 | 83.184 | 7235.13 | 112.20 N | 938.71 E  | 945.40  |
| 0.00    |        |        |         |          |           |         |
| 8050.00 | 88.850 | 83.184 | 7235.34 | 113.39 N | 948.64 E  | 955.39  |
| 0.00    |        |        |         |          |           |         |
| 8060.00 | 88.850 | 83.184 | 7235.54 | 114.58 N | 958.57 E  | 965.39  |
| 0.00    |        |        |         |          |           |         |
| 8070.00 | 88.850 | 83.184 | 7235.74 | 115.76 N | 968.50 E  | 975.39  |
| 0.00    |        |        |         |          |           |         |
| 8080.00 | 88.850 | 83.184 | 7235.94 | 116.95 N | 978.42 E  | 985.39  |
| 0.00    |        |        |         |          |           |         |
| 8090.00 | 88.850 | 83.184 | 7236.14 | 118.14 N | 988.35 E  | 995.39  |
| 0.00    |        |        |         |          |           |         |
| 8100.00 | 88.850 | 83.184 | 7236.34 | 119.32 N | 998.28 E  | 1005.38 |
| 0.00    |        |        |         |          |           |         |
| 8110.00 | 88.850 | 83.184 | 7236.54 | 120.51 N | 1008.21 E | 1015.38 |

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|         |        |        |         |          |           |         |  |
|---------|--------|--------|---------|----------|-----------|---------|--|
| 0.00    |        |        |         |          |           |         |  |
| 8120.00 | 88.850 | 83.184 | 7236.74 | 121.70 N | 1018.13 E | 1025.38 |  |
| 0.00    |        |        |         |          |           |         |  |
| 8130.00 | 88.850 | 83.184 | 7236.94 | 122.88 N | 1028.06 E | 1035.38 |  |
| 0.00    |        |        |         |          |           |         |  |
| 8140.00 | 88.850 | 83.184 | 7237.14 | 124.07 N | 1037.99 E | 1045.38 |  |
| 0.00    |        |        |         |          |           |         |  |
| 8150.00 | 88.850 | 83.184 | 7237.34 | 125.26 N | 1047.92 E | 1055.37 |  |
| 0.00    |        |        |         |          |           |         |  |
| 8160.00 | 88.850 | 83.184 | 7237.54 | 126.44 N | 1057.84 E | 1065.37 |  |
| 0.00    |        |        |         |          |           |         |  |
| 8170.00 | 88.850 | 83.184 | 7237.74 | 127.63 N | 1067.77 E | 1075.37 |  |
| 0.00    |        |        |         |          |           |         |  |
| 8180.00 | 88.850 | 83.184 | 7237.94 | 128.82 N | 1077.70 E | 1085.37 |  |
| 0.00    |        |        |         |          |           |         |  |
| 8190.00 | 88.850 | 83.184 | 7238.15 | 130.00 N | 1087.62 E | 1095.37 |  |
| 0.00    |        |        |         |          |           |         |  |
| 8200.00 | 88.850 | 83.184 | 7238.35 | 131.19 N | 1097.55 E | 1105.36 |  |
| 0.00    |        |        |         |          |           |         |  |
| 8210.00 | 88.850 | 83.184 | 7238.55 | 132.38 N | 1107.48 E | 1115.36 |  |
| 0.00    |        |        |         |          |           |         |  |
| 8220.00 | 88.850 | 83.184 | 7238.75 | 133.56 N | 1117.41 E | 1125.36 |  |
| 0.00    |        |        |         |          |           |         |  |
| 8230.00 | 88.850 | 83.184 | 7238.95 | 134.75 N | 1127.33 E | 1135.36 |  |
| 0.00    |        |        |         |          |           |         |  |
| 8240.00 | 88.850 | 83.184 | 7239.15 | 135.94 N | 1137.26 E | 1145.36 |  |
| 0.00    |        |        |         |          |           |         |  |
| 8250.00 | 88.850 | 83.184 | 7239.35 | 137.12 N | 1147.19 E | 1155.35 |  |
| 0.00    |        |        |         |          |           |         |  |
| 8260.00 | 88.850 | 83.184 | 7239.55 | 138.31 N | 1157.12 E | 1165.35 |  |
| 0.00    |        |        |         |          |           |         |  |
| 8270.00 | 88.850 | 83.184 | 7239.75 | 139.50 N | 1167.04 E | 1175.35 |  |
| 0.00    |        |        |         |          |           |         |  |
| 8280.00 | 88.850 | 83.184 | 7239.95 | 140.68 N | 1176.97 E | 1185.35 |  |
| 0.00    |        |        |         |          |           |         |  |
| 8290.00 | 88.850 | 83.184 | 7240.15 | 141.87 N | 1186.90 E | 1195.35 |  |
| 0.00    |        |        |         |          |           |         |  |
| 8300.00 | 88.850 | 83.184 | 7240.35 | 143.06 N | 1196.83 E | 1205.34 |  |
| 0.00    |        |        |         |          |           |         |  |
| 8310.00 | 88.850 | 83.184 | 7240.55 | 144.24 N | 1206.75 E | 1215.34 |  |
| 0.00    |        |        |         |          |           |         |  |
| 8320.00 | 88.850 | 83.184 | 7240.75 | 145.43 N | 1216.68 E | 1225.34 |  |
| 0.00    |        |        |         |          |           |         |  |
| 8330.00 | 88.850 | 83.184 | 7240.95 | 146.62 N | 1226.61 E | 1235.34 |  |
| 0.00    |        |        |         |          |           |         |  |
| 8340.00 | 88.850 | 83.184 | 7241.16 | 147.80 N | 1236.53 E | 1245.34 |  |
| 0.00    |        |        |         |          |           |         |  |
| 8350.00 | 88.850 | 83.184 | 7241.36 | 148.99 N | 1246.46 E | 1255.33 |  |
| 0.00    |        |        |         |          |           |         |  |
| 8360.00 | 88.850 | 83.184 | 7241.56 | 150.18 N | 1256.39 E | 1265.33 |  |
| 0.00    |        |        |         |          |           |         |  |
| 8370.00 | 88.850 | 83.184 | 7241.76 | 151.36 N | 1266.32 E | 1275.33 |  |
| 0.00    |        |        |         |          |           |         |  |
| 8380.00 | 88.850 | 83.184 | 7241.96 | 152.55 N | 1276.24 E | 1285.33 |  |
| 0.00    |        |        |         |          |           |         |  |
| 8390.00 | 88.850 | 83.184 | 7242.16 | 153.74 N | 1286.17 E | 1295.33 |  |
| 0.00    |        |        |         |          |           |         |  |
| 8400.00 | 88.850 | 83.184 | 7242.36 | 154.92 N | 1296.10 E | 1305.32 |  |
| 0.00    |        |        |         |          |           |         |  |
| 8410.00 | 88.850 | 83.184 | 7242.56 | 156.11 N | 1306.03 E | 1315.32 |  |
| 0.00    |        |        |         |          |           |         |  |
| 8420.00 | 88.850 | 83.184 | 7242.76 | 157.30 N | 1315.95 E | 1325.32 |  |
| 0.00    |        |        |         |          |           |         |  |

|         | Nitro '11' Federal #2H Lateral Plan #1 Report 11-26-07 (2).txt |        |         |          |           |         |
|---------|----------------------------------------------------------------|--------|---------|----------|-----------|---------|
| 8430.00 | 88.850                                                         | 83.184 | 7242.96 | 158.48 N | 1325.88 E | 1335.32 |
| 0.00    |                                                                |        |         |          |           |         |
| 8440.00 | 88.850                                                         | 83.184 | 7243.16 | 159.67 N | 1335.81 E | 1345.32 |
| 0.00    |                                                                |        |         |          |           |         |
| 8450.00 | 88.850                                                         | 83.184 | 7243.36 | 160.86 N | 1345.73 E | 1355.31 |
| 0.00    |                                                                |        |         |          |           |         |
| 8460.00 | 88.850                                                         | 83.184 | 7243.56 | 162.04 N | 1355.66 E | 1365.31 |
| 0.00    |                                                                |        |         |          |           |         |
| 8470.00 | 88.850                                                         | 83.184 | 7243.76 | 163.23 N | 1365.59 E | 1375.31 |
| 0.00    |                                                                |        |         |          |           |         |
| 8480.00 | 88.850                                                         | 83.184 | 7243.97 | 164.42 N | 1375.52 E | 1385.31 |
| 0.00    |                                                                |        |         |          |           |         |
| 8490.00 | 88.850                                                         | 83.184 | 7244.17 | 165.60 N | 1385.44 E | 1395.31 |
| 0.00    |                                                                |        |         |          |           |         |
| 8500.00 | 88.850                                                         | 83.184 | 7244.37 | 166.79 N | 1395.37 E | 1405.30 |
| 0.00    |                                                                |        |         |          |           |         |
| 8510.00 | 88.850                                                         | 83.184 | 7244.57 | 167.98 N | 1405.30 E | 1415.30 |
| 0.00    |                                                                |        |         |          |           |         |
| 8520.00 | 88.850                                                         | 83.184 | 7244.77 | 169.16 N | 1415.23 E | 1425.30 |
| 0.00    |                                                                |        |         |          |           |         |
| 8530.00 | 88.850                                                         | 83.184 | 7244.97 | 170.35 N | 1425.15 E | 1435.30 |
| 0.00    |                                                                |        |         |          |           |         |
| 8540.00 | 88.850                                                         | 83.184 | 7245.17 | 171.54 N | 1435.08 E | 1445.30 |
| 0.00    |                                                                |        |         |          |           |         |
| 8550.00 | 88.850                                                         | 83.184 | 7245.37 | 172.72 N | 1445.01 E | 1455.29 |
| 0.00    |                                                                |        |         |          |           |         |
| 8560.00 | 88.850                                                         | 83.184 | 7245.57 | 173.91 N | 1454.94 E | 1465.29 |
| 0.00    |                                                                |        |         |          |           |         |
| 8570.00 | 88.850                                                         | 83.184 | 7245.77 | 175.10 N | 1464.86 E | 1475.29 |
| 0.00    |                                                                |        |         |          |           |         |
| 8580.00 | 88.850                                                         | 83.184 | 7245.97 | 176.28 N | 1474.79 E | 1485.29 |
| 0.00    |                                                                |        |         |          |           |         |
| 8590.00 | 88.850                                                         | 83.184 | 7246.17 | 177.47 N | 1484.72 E | 1495.29 |
| 0.00    |                                                                |        |         |          |           |         |
| 8600.00 | 88.850                                                         | 83.184 | 7246.37 | 178.66 N | 1494.64 E | 1505.28 |
| 0.00    |                                                                |        |         |          |           |         |
| 8610.00 | 88.850                                                         | 83.184 | 7246.57 | 179.84 N | 1504.57 E | 1515.28 |
| 0.00    |                                                                |        |         |          |           |         |
| 8620.00 | 88.850                                                         | 83.184 | 7246.78 | 181.03 N | 1514.50 E | 1525.28 |
| 0.00    |                                                                |        |         |          |           |         |
| 8630.00 | 88.850                                                         | 83.184 | 7246.98 | 182.22 N | 1524.43 E | 1535.28 |
| 0.00    |                                                                |        |         |          |           |         |
| 8640.00 | 88.850                                                         | 83.184 | 7247.18 | 183.40 N | 1534.35 E | 1545.28 |
| 0.00    |                                                                |        |         |          |           |         |
| 8650.00 | 88.850                                                         | 83.184 | 7247.38 | 184.59 N | 1544.28 E | 1555.27 |
| 0.00    |                                                                |        |         |          |           |         |
| 8660.00 | 88.850                                                         | 83.184 | 7247.58 | 185.78 N | 1554.21 E | 1565.27 |
| 0.00    |                                                                |        |         |          |           |         |
| 8670.00 | 88.850                                                         | 83.184 | 7247.78 | 186.96 N | 1564.14 E | 1575.27 |
| 0.00    |                                                                |        |         |          |           |         |
| 8680.00 | 88.850                                                         | 83.184 | 7247.98 | 188.15 N | 1574.06 E | 1585.27 |
| 0.00    |                                                                |        |         |          |           |         |
| 8690.00 | 88.850                                                         | 83.184 | 7248.18 | 189.34 N | 1583.99 E | 1595.27 |
| 0.00    |                                                                |        |         |          |           |         |
| 8700.00 | 88.850                                                         | 83.184 | 7248.38 | 190.52 N | 1593.92 E | 1605.26 |
| 0.00    |                                                                |        |         |          |           |         |
| 8710.00 | 88.850                                                         | 83.184 | 7248.58 | 191.71 N | 1603.85 E | 1615.26 |
| 0.00    |                                                                |        |         |          |           |         |
| 8720.00 | 88.850                                                         | 83.184 | 7248.78 | 192.89 N | 1613.77 E | 1625.26 |
| 0.00    |                                                                |        |         |          |           |         |
| 8730.00 | 88.850                                                         | 83.184 | 7248.98 | 194.08 N | 1623.70 E | 1635.26 |
| 0.00    |                                                                |        |         |          |           |         |
| 8740.00 | 88.850                                                         | 83.184 | 7249.18 | 195.27 N | 1633.63 E | 1645.26 |

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|         |        |        |         |          |           |         |  |
|---------|--------|--------|---------|----------|-----------|---------|--|
| 0.00    |        |        |         |          |           |         |  |
| 8750.00 | 88.850 | 83.184 | 7249.38 | 196.45 N | 1643.55 E | 1655.25 |  |
| 0.00    |        |        |         |          |           |         |  |
| 8760.00 | 88.850 | 83.184 | 7249.58 | 197.64 N | 1653.48 E | 1665.25 |  |
| 0.00    |        |        |         |          |           |         |  |
| 8770.00 | 88.850 | 83.184 | 7249.79 | 198.83 N | 1663.41 E | 1675.25 |  |
| 0.00    |        |        |         |          |           |         |  |
| 8780.00 | 88.850 | 83.184 | 7249.99 | 200.01 N | 1673.34 E | 1685.25 |  |
| 0.00    |        |        |         |          |           |         |  |
| 8790.00 | 88.850 | 83.184 | 7250.19 | 201.20 N | 1683.26 E | 1695.25 |  |
| 0.00    |        |        |         |          |           |         |  |
| 8800.00 | 88.850 | 83.184 | 7250.39 | 202.39 N | 1693.19 E | 1705.24 |  |
| 0.00    |        |        |         |          |           |         |  |
| 8810.00 | 88.850 | 83.184 | 7250.59 | 203.57 N | 1703.12 E | 1715.24 |  |
| 0.00    |        |        |         |          |           |         |  |
| 8820.00 | 88.850 | 83.184 | 7250.79 | 204.76 N | 1713.05 E | 1725.24 |  |
| 0.00    |        |        |         |          |           |         |  |
| 8830.00 | 88.850 | 83.184 | 7250.99 | 205.95 N | 1722.97 E | 1735.24 |  |
| 0.00    |        |        |         |          |           |         |  |
| 8840.00 | 88.850 | 83.184 | 7251.19 | 207.13 N | 1732.90 E | 1745.24 |  |
| 0.00    |        |        |         |          |           |         |  |
| 8850.00 | 88.850 | 83.184 | 7251.39 | 208.32 N | 1742.83 E | 1755.23 |  |
| 0.00    |        |        |         |          |           |         |  |
| 8860.00 | 88.850 | 83.184 | 7251.59 | 209.51 N | 1752.75 E | 1765.23 |  |
| 0.00    |        |        |         |          |           |         |  |
| 8870.00 | 88.850 | 83.184 | 7251.79 | 210.69 N | 1762.68 E | 1775.23 |  |
| 0.00    |        |        |         |          |           |         |  |
| 8880.00 | 88.850 | 83.184 | 7251.99 | 211.88 N | 1772.61 E | 1785.23 |  |
| 0.00    |        |        |         |          |           |         |  |
| 8890.00 | 88.850 | 83.184 | 7252.19 | 213.07 N | 1782.54 E | 1795.23 |  |
| 0.00    |        |        |         |          |           |         |  |
| 8900.00 | 88.850 | 83.184 | 7252.39 | 214.25 N | 1792.46 E | 1805.22 |  |
| 0.00    |        |        |         |          |           |         |  |
| 8910.00 | 88.850 | 83.184 | 7252.60 | 215.44 N | 1802.39 E | 1815.22 |  |
| 0.00    |        |        |         |          |           |         |  |
| 8920.00 | 88.850 | 83.184 | 7252.80 | 216.63 N | 1812.32 E | 1825.22 |  |
| 0.00    |        |        |         |          |           |         |  |
| 8930.00 | 88.850 | 83.184 | 7253.00 | 217.81 N | 1822.25 E | 1835.22 |  |
| 0.00    |        |        |         |          |           |         |  |
| 8940.00 | 88.850 | 83.184 | 7253.20 | 219.00 N | 1832.17 E | 1845.22 |  |
| 0.00    |        |        |         |          |           |         |  |
| 8950.00 | 88.850 | 83.184 | 7253.40 | 220.19 N | 1842.10 E | 1855.21 |  |
| 0.00    |        |        |         |          |           |         |  |
| 8960.00 | 88.850 | 83.184 | 7253.60 | 221.37 N | 1852.03 E | 1865.21 |  |
| 0.00    |        |        |         |          |           |         |  |
| 8970.00 | 88.850 | 83.184 | 7253.80 | 222.56 N | 1861.96 E | 1875.21 |  |
| 0.00    |        |        |         |          |           |         |  |
| 8980.00 | 88.850 | 83.184 | 7254.00 | 223.75 N | 1871.88 E | 1885.21 |  |
| 0.00    |        |        |         |          |           |         |  |
| 8990.00 | 88.850 | 83.184 | 7254.20 | 224.93 N | 1881.81 E | 1895.21 |  |
| 0.00    |        |        |         |          |           |         |  |
| 9000.00 | 88.850 | 83.184 | 7254.40 | 226.12 N | 1891.74 E | 1905.20 |  |
| 0.00    |        |        |         |          |           |         |  |
| 9010.00 | 88.850 | 83.184 | 7254.60 | 227.31 N | 1901.66 E | 1915.20 |  |
| 0.00    |        |        |         |          |           |         |  |
| 9020.00 | 88.850 | 83.184 | 7254.80 | 228.49 N | 1911.59 E | 1925.20 |  |
| 0.00    |        |        |         |          |           |         |  |
| 9030.00 | 88.850 | 83.184 | 7255.00 | 229.68 N | 1921.52 E | 1935.20 |  |
| 0.00    |        |        |         |          |           |         |  |
| 9040.00 | 88.850 | 83.184 | 7255.20 | 230.87 N | 1931.45 E | 1945.20 |  |
| 0.00    |        |        |         |          |           |         |  |
| 9050.00 | 88.850 | 83.184 | 7255.41 | 232.05 N | 1941.37 E | 1955.19 |  |
| 0.00    |        |        |         |          |           |         |  |

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|         |        |        |         |          |           |         |
|---------|--------|--------|---------|----------|-----------|---------|
| 9060.00 | 88.850 | 83.184 | 7255.61 | 233.24 N | 1951.30 E | 1965.19 |
| 0.00    |        |        |         |          |           |         |
| 9070.00 | 88.850 | 83.184 | 7255.81 | 234.43 N | 1961.23 E | 1975.19 |
| 0.00    |        |        |         |          |           |         |
| 9080.00 | 88.850 | 83.184 | 7256.01 | 235.61 N | 1971.16 E | 1985.19 |
| 0.00    |        |        |         |          |           |         |
| 9090.00 | 88.850 | 83.184 | 7256.21 | 236.80 N | 1981.08 E | 1995.19 |
| 0.00    |        |        |         |          |           |         |
| 9100.00 | 88.850 | 83.184 | 7256.41 | 237.99 N | 1991.01 E | 2005.18 |
| 0.00    |        |        |         |          |           |         |
| 9110.00 | 88.850 | 83.184 | 7256.61 | 239.17 N | 2000.94 E | 2015.18 |
| 0.00    |        |        |         |          |           |         |
| 9120.00 | 88.850 | 83.184 | 7256.81 | 240.36 N | 2010.87 E | 2025.18 |
| 0.00    |        |        |         |          |           |         |
| 9130.00 | 88.850 | 83.184 | 7257.01 | 241.55 N | 2020.79 E | 2035.18 |
| 0.00    |        |        |         |          |           |         |
| 9140.00 | 88.850 | 83.184 | 7257.21 | 242.73 N | 2030.72 E | 2045.18 |
| 0.00    |        |        |         |          |           |         |
| 9150.00 | 88.850 | 83.184 | 7257.41 | 243.92 N | 2040.65 E | 2055.17 |
| 0.00    |        |        |         |          |           |         |
| 9160.00 | 88.850 | 83.184 | 7257.61 | 245.11 N | 2050.57 E | 2065.17 |
| 0.00    |        |        |         |          |           |         |
| 9170.00 | 88.850 | 83.184 | 7257.81 | 246.29 N | 2060.50 E | 2075.17 |
| 0.00    |        |        |         |          |           |         |
| 9180.00 | 88.850 | 83.184 | 7258.01 | 247.48 N | 2070.43 E | 2085.17 |
| 0.00    |        |        |         |          |           |         |
| 9190.00 | 88.850 | 83.184 | 7258.22 | 248.67 N | 2080.36 E | 2095.17 |
| 0.00    |        |        |         |          |           |         |
| 9200.00 | 88.850 | 83.184 | 7258.42 | 249.85 N | 2090.28 E | 2105.16 |
| 0.00    |        |        |         |          |           |         |
| 9210.00 | 88.850 | 83.184 | 7258.62 | 251.04 N | 2100.21 E | 2115.16 |
| 0.00    |        |        |         |          |           |         |
| 9220.00 | 88.850 | 83.184 | 7258.82 | 252.23 N | 2110.14 E | 2125.16 |
| 0.00    |        |        |         |          |           |         |
| 9230.00 | 88.850 | 83.184 | 7259.02 | 253.41 N | 2120.07 E | 2135.16 |
| 0.00    |        |        |         |          |           |         |
| 9240.00 | 88.850 | 83.184 | 7259.22 | 254.60 N | 2129.99 E | 2145.16 |
| 0.00    |        |        |         |          |           |         |
| 9250.00 | 88.850 | 83.184 | 7259.42 | 255.79 N | 2139.92 E | 2155.15 |
| 0.00    |        |        |         |          |           |         |
| 9260.00 | 88.850 | 83.184 | 7259.62 | 256.97 N | 2149.85 E | 2165.15 |
| 0.00    |        |        |         |          |           |         |
| 9270.00 | 88.850 | 83.184 | 7259.82 | 258.16 N | 2159.78 E | 2175.15 |
| 0.00    |        |        |         |          |           |         |
| 9280.00 | 88.850 | 83.184 | 7260.02 | 259.35 N | 2169.70 E | 2185.15 |
| 0.00    |        |        |         |          |           |         |
| 9290.00 | 88.850 | 83.184 | 7260.22 | 260.53 N | 2179.63 E | 2195.15 |
| 0.00    |        |        |         |          |           |         |
| 9300.00 | 88.850 | 83.184 | 7260.42 | 261.72 N | 2189.56 E | 2205.14 |
| 0.00    |        |        |         |          |           |         |
| 9310.00 | 88.850 | 83.184 | 7260.62 | 262.91 N | 2199.48 E | 2215.14 |
| 0.00    |        |        |         |          |           |         |
| 9320.00 | 88.850 | 83.184 | 7260.82 | 264.09 N | 2209.41 E | 2225.14 |
| 0.00    |        |        |         |          |           |         |
| 9330.00 | 88.850 | 83.184 | 7261.02 | 265.28 N | 2219.34 E | 2235.14 |
| 0.00    |        |        |         |          |           |         |
| 9340.00 | 88.850 | 83.184 | 7261.23 | 266.47 N | 2229.27 E | 2245.14 |
| 0.00    |        |        |         |          |           |         |
| 9350.00 | 88.850 | 83.184 | 7261.43 | 267.65 N | 2239.19 E | 2255.13 |
| 0.00    |        |        |         |          |           |         |
| 9360.00 | 88.850 | 83.184 | 7261.63 | 268.84 N | 2249.12 E | 2265.13 |
| 0.00    |        |        |         |          |           |         |
| 9370.00 | 88.850 | 83.184 | 7261.83 | 270.03 N | 2259.05 E | 2275.13 |

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|         |        |        |         |          |           |         |  |
|---------|--------|--------|---------|----------|-----------|---------|--|
| 0.00    |        |        |         |          |           |         |  |
| 9380.00 | 88.850 | 83.184 | 7262.03 | 271.21 N | 2268.98 E | 2285.13 |  |
| 0.00    |        |        |         |          |           |         |  |
| 9390.00 | 88.850 | 83.184 | 7262.23 | 272.40 N | 2278.90 E | 2295.13 |  |
| 0.00    |        |        |         |          |           |         |  |
| 9400.00 | 88.850 | 83.184 | 7262.43 | 273.58 N | 2288.83 E | 2305.12 |  |
| 0.00    |        |        |         |          |           |         |  |
| 9410.00 | 88.850 | 83.184 | 7262.63 | 274.77 N | 2298.76 E | 2315.12 |  |
| 0.00    |        |        |         |          |           |         |  |
| 9420.00 | 88.850 | 83.184 | 7262.83 | 275.96 N | 2308.68 E | 2325.12 |  |
| 0.00    |        |        |         |          |           |         |  |
| 9430.00 | 88.850 | 83.184 | 7263.03 | 277.14 N | 2318.61 E | 2335.12 |  |
| 0.00    |        |        |         |          |           |         |  |
| 9440.00 | 88.850 | 83.184 | 7263.23 | 278.33 N | 2328.54 E | 2345.11 |  |
| 0.00    |        |        |         |          |           |         |  |
| 9450.00 | 88.850 | 83.184 | 7263.43 | 279.52 N | 2338.47 E | 2355.11 |  |
| 0.00    |        |        |         |          |           |         |  |
| 9460.00 | 88.850 | 83.184 | 7263.63 | 280.70 N | 2348.39 E | 2365.11 |  |
| 0.00    |        |        |         |          |           |         |  |
| 9470.00 | 88.850 | 83.184 | 7263.83 | 281.89 N | 2358.32 E | 2375.11 |  |
| 0.00    |        |        |         |          |           |         |  |
| 9480.00 | 88.850 | 83.184 | 7264.04 | 283.08 N | 2368.25 E | 2385.11 |  |
| 0.00    |        |        |         |          |           |         |  |
| 9490.00 | 88.850 | 83.184 | 7264.24 | 284.26 N | 2378.18 E | 2395.10 |  |
| 0.00    |        |        |         |          |           |         |  |
| 9500.00 | 88.850 | 83.184 | 7264.44 | 285.45 N | 2388.10 E | 2405.10 |  |
| 0.00    |        |        |         |          |           |         |  |
| 9510.00 | 88.850 | 83.184 | 7264.64 | 286.64 N | 2398.03 E | 2415.10 |  |
| 0.00    |        |        |         |          |           |         |  |
| 9520.00 | 88.850 | 83.184 | 7264.84 | 287.82 N | 2407.96 E | 2425.10 |  |
| 0.00    |        |        |         |          |           |         |  |
| 9530.00 | 88.850 | 83.184 | 7265.04 | 289.01 N | 2417.89 E | 2435.10 |  |
| 0.00    |        |        |         |          |           |         |  |
| 9540.00 | 88.850 | 83.184 | 7265.24 | 290.20 N | 2427.81 E | 2445.09 |  |
| 0.00    |        |        |         |          |           |         |  |
| 9550.00 | 88.850 | 83.184 | 7265.44 | 291.38 N | 2437.74 E | 2455.09 |  |
| 0.00    |        |        |         |          |           |         |  |
| 9560.00 | 88.850 | 83.184 | 7265.64 | 292.57 N | 2447.67 E | 2465.09 |  |
| 0.00    |        |        |         |          |           |         |  |
| 9570.00 | 88.850 | 83.184 | 7265.84 | 293.76 N | 2457.59 E | 2475.09 |  |
| 0.00    |        |        |         |          |           |         |  |
| 9580.00 | 88.850 | 83.184 | 7266.04 | 294.94 N | 2467.52 E | 2485.09 |  |
| 0.00    |        |        |         |          |           |         |  |
| 9590.00 | 88.850 | 83.184 | 7266.24 | 296.13 N | 2477.45 E | 2495.08 |  |
| 0.00    |        |        |         |          |           |         |  |
| 9600.00 | 88.850 | 83.184 | 7266.44 | 297.32 N | 2487.38 E | 2505.08 |  |
| 0.00    |        |        |         |          |           |         |  |
| 9610.00 | 88.850 | 83.184 | 7266.64 | 298.50 N | 2497.30 E | 2515.08 |  |
| 0.00    |        |        |         |          |           |         |  |
| 9620.00 | 88.850 | 83.184 | 7266.85 | 299.69 N | 2507.23 E | 2525.08 |  |
| 0.00    |        |        |         |          |           |         |  |
| 9630.00 | 88.850 | 83.184 | 7267.05 | 300.88 N | 2517.16 E | 2535.08 |  |
| 0.00    |        |        |         |          |           |         |  |
| 9640.00 | 88.850 | 83.184 | 7267.25 | 302.06 N | 2527.09 E | 2545.07 |  |
| 0.00    |        |        |         |          |           |         |  |
| 9650.00 | 88.850 | 83.184 | 7267.45 | 303.25 N | 2537.01 E | 2555.07 |  |
| 0.00    |        |        |         |          |           |         |  |
| 9660.00 | 88.850 | 83.184 | 7267.65 | 304.44 N | 2546.94 E | 2565.07 |  |
| 0.00    |        |        |         |          |           |         |  |
| 9670.00 | 88.850 | 83.184 | 7267.85 | 305.62 N | 2556.87 E | 2575.07 |  |
| 0.00    |        |        |         |          |           |         |  |
| 9680.00 | 88.850 | 83.184 | 7268.05 | 306.81 N | 2566.80 E | 2585.07 |  |
| 0.00    |        |        |         |          |           |         |  |

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|----------|----------------------------------------------------------------|--------|---------|----------|-----------|---------|
| 9690.00  | 88.850                                                         | 83.184 | 7268.25 | 308.00 N | 2576.72 E | 2595.06 |
| 0.00     |                                                                |        |         |          |           |         |
| 9700.00  | 88.850                                                         | 83.184 | 7268.45 | 309.18 N | 2586.65 E | 2605.06 |
| 0.00     |                                                                |        |         |          |           |         |
| 9710.00  | 88.850                                                         | 83.184 | 7268.65 | 310.37 N | 2596.58 E | 2615.06 |
| 0.00     |                                                                |        |         |          |           |         |
| 9720.00  | 88.850                                                         | 83.184 | 7268.85 | 311.56 N | 2606.50 E | 2625.06 |
| 0.00     |                                                                |        |         |          |           |         |
| 9730.00  | 88.850                                                         | 83.184 | 7269.05 | 312.74 N | 2616.43 E | 2635.06 |
| 0.00     |                                                                |        |         |          |           |         |
| 9740.00  | 88.850                                                         | 83.184 | 7269.25 | 313.93 N | 2626.36 E | 2645.05 |
| 0.00     |                                                                |        |         |          |           |         |
| 9750.00  | 88.850                                                         | 83.184 | 7269.45 | 315.12 N | 2636.29 E | 2655.05 |
| 0.00     |                                                                |        |         |          |           |         |
| 9760.00  | 88.850                                                         | 83.184 | 7269.65 | 316.30 N | 2646.21 E | 2665.05 |
| 0.00     |                                                                |        |         |          |           |         |
| 9770.00  | 88.850                                                         | 83.184 | 7269.86 | 317.49 N | 2656.14 E | 2675.05 |
| 0.00     |                                                                |        |         |          |           |         |
| 9780.00  | 88.850                                                         | 83.184 | 7270.06 | 318.68 N | 2666.07 E | 2685.05 |
| 0.00     |                                                                |        |         |          |           |         |
| 9790.00  | 88.850                                                         | 83.184 | 7270.26 | 319.86 N | 2676.00 E | 2695.04 |
| 0.00     |                                                                |        |         |          |           |         |
| 9800.00  | 88.850                                                         | 83.184 | 7270.46 | 321.05 N | 2685.92 E | 2705.04 |
| 0.00     |                                                                |        |         |          |           |         |
| 9810.00  | 88.850                                                         | 83.184 | 7270.66 | 322.24 N | 2695.85 E | 2715.04 |
| 0.00     |                                                                |        |         |          |           |         |
| 9820.00  | 88.850                                                         | 83.184 | 7270.86 | 323.42 N | 2705.78 E | 2725.04 |
| 0.00     |                                                                |        |         |          |           |         |
| 9830.00  | 88.850                                                         | 83.184 | 7271.06 | 324.61 N | 2715.70 E | 2735.04 |
| 0.00     |                                                                |        |         |          |           |         |
| 9840.00  | 88.850                                                         | 83.184 | 7271.26 | 325.80 N | 2725.63 E | 2745.03 |
| 0.00     |                                                                |        |         |          |           |         |
| 9850.00  | 88.850                                                         | 83.184 | 7271.46 | 326.98 N | 2735.56 E | 2755.03 |
| 0.00     |                                                                |        |         |          |           |         |
| 9860.00  | 88.850                                                         | 83.184 | 7271.66 | 328.17 N | 2745.49 E | 2765.03 |
| 0.00     |                                                                |        |         |          |           |         |
| 9870.00  | 88.850                                                         | 83.184 | 7271.86 | 329.36 N | 2755.41 E | 2775.03 |
| 0.00     |                                                                |        |         |          |           |         |
| 9880.00  | 88.850                                                         | 83.184 | 7272.06 | 330.54 N | 2765.34 E | 2785.03 |
| 0.00     |                                                                |        |         |          |           |         |
| 9890.00  | 88.850                                                         | 83.184 | 7272.26 | 331.73 N | 2775.27 E | 2795.02 |
| 0.00     |                                                                |        |         |          |           |         |
| 9900.00  | 88.850                                                         | 83.184 | 7272.46 | 332.92 N | 2785.20 E | 2805.02 |
| 0.00     |                                                                |        |         |          |           |         |
| 9910.00  | 88.850                                                         | 83.184 | 7272.67 | 334.10 N | 2795.12 E | 2815.02 |
| 0.00     |                                                                |        |         |          |           |         |
| 9920.00  | 88.850                                                         | 83.184 | 7272.87 | 335.29 N | 2805.05 E | 2825.02 |
| 0.00     |                                                                |        |         |          |           |         |
| 9930.00  | 88.850                                                         | 83.184 | 7273.07 | 336.48 N | 2814.98 E | 2835.02 |
| 0.00     |                                                                |        |         |          |           |         |
| 9940.00  | 88.850                                                         | 83.184 | 7273.27 | 337.66 N | 2824.91 E | 2845.01 |
| 0.00     |                                                                |        |         |          |           |         |
| 9950.00  | 88.850                                                         | 83.184 | 7273.47 | 338.85 N | 2834.83 E | 2855.01 |
| 0.00     |                                                                |        |         |          |           |         |
| 9960.00  | 88.850                                                         | 83.184 | 7273.67 | 340.04 N | 2844.76 E | 2865.01 |
| 0.00     |                                                                |        |         |          |           |         |
| 9970.00  | 88.850                                                         | 83.184 | 7273.87 | 341.22 N | 2854.69 E | 2875.01 |
| 0.00     |                                                                |        |         |          |           |         |
| 9980.00  | 88.850                                                         | 83.184 | 7274.07 | 342.41 N | 2864.61 E | 2885.01 |
| 0.00     |                                                                |        |         |          |           |         |
| 9990.00  | 88.850                                                         | 83.184 | 7274.27 | 343.60 N | 2874.54 E | 2895.00 |
| 0.00     |                                                                |        |         |          |           |         |
| 10000.00 | 88.850                                                         | 83.184 | 7274.47 | 344.78 N | 2884.47 E | 2905.00 |

## Nitro '11' Federal #2H Lateral Plan #1 Report 11-26-07 (2).txt

|          |        |        |         |          |           |         |  |
|----------|--------|--------|---------|----------|-----------|---------|--|
| 0.00     |        |        |         |          |           |         |  |
| 10010.00 | 88.850 | 83.184 | 7274.67 | 345.97 N | 2894.40 E | 2915.00 |  |
| 0.00     |        |        |         |          |           |         |  |
| 10020.00 | 88.850 | 83.184 | 7274.87 | 347.16 N | 2904.32 E | 2925.00 |  |
| 0.00     |        |        |         |          |           |         |  |
| 10030.00 | 88.850 | 83.184 | 7275.07 | 348.34 N | 2914.25 E | 2935.00 |  |
| 0.00     |        |        |         |          |           |         |  |
| 10040.00 | 88.850 | 83.184 | 7275.27 | 349.53 N | 2924.18 E | 2944.99 |  |
| 0.00     |        |        |         |          |           |         |  |
| 10050.00 | 88.850 | 83.184 | 7275.48 | 350.71 N | 2934.11 E | 2954.99 |  |
| 0.00     |        |        |         |          |           |         |  |
| 10060.00 | 88.850 | 83.184 | 7275.68 | 351.90 N | 2944.03 E | 2964.99 |  |
| 0.00     |        |        |         |          |           |         |  |
| 10070.00 | 88.850 | 83.184 | 7275.88 | 353.09 N | 2953.96 E | 2974.99 |  |
| 0.00     |        |        |         |          |           |         |  |
| 10080.00 | 88.850 | 83.184 | 7276.08 | 354.27 N | 2963.89 E | 2984.99 |  |
| 0.00     |        |        |         |          |           |         |  |
| 10090.00 | 88.850 | 83.184 | 7276.28 | 355.46 N | 2973.82 E | 2994.98 |  |
| 0.00     |        |        |         |          |           |         |  |
| 10100.00 | 88.850 | 83.184 | 7276.48 | 356.65 N | 2983.74 E | 3004.98 |  |
| 0.00     |        |        |         |          |           |         |  |
| 10110.00 | 88.850 | 83.184 | 7276.68 | 357.83 N | 2993.67 E | 3014.98 |  |
| 0.00     |        |        |         |          |           |         |  |
| 10120.00 | 88.850 | 83.184 | 7276.88 | 359.02 N | 3003.60 E | 3024.98 |  |
| 0.00     |        |        |         |          |           |         |  |
| 10130.00 | 88.850 | 83.184 | 7277.08 | 360.21 N | 3013.52 E | 3034.98 |  |
| 0.00     |        |        |         |          |           |         |  |
| 10140.00 | 88.850 | 83.184 | 7277.28 | 361.39 N | 3023.45 E | 3044.97 |  |
| 0.00     |        |        |         |          |           |         |  |
| 10150.00 | 88.850 | 83.184 | 7277.48 | 362.58 N | 3033.38 E | 3054.97 |  |
| 0.00     |        |        |         |          |           |         |  |
| 10160.00 | 88.850 | 83.184 | 7277.68 | 363.77 N | 3043.31 E | 3064.97 |  |
| 0.00     |        |        |         |          |           |         |  |
| 10170.00 | 88.850 | 83.184 | 7277.88 | 364.95 N | 3053.23 E | 3074.97 |  |
| 0.00     |        |        |         |          |           |         |  |
| 10180.00 | 88.850 | 83.184 | 7278.08 | 366.14 N | 3063.16 E | 3084.97 |  |
| 0.00     |        |        |         |          |           |         |  |
| 10190.00 | 88.850 | 83.184 | 7278.28 | 367.33 N | 3073.09 E | 3094.96 |  |
| 0.00     |        |        |         |          |           |         |  |
| 10200.00 | 88.850 | 83.184 | 7278.49 | 368.51 N | 3083.02 E | 3104.96 |  |
| 0.00     |        |        |         |          |           |         |  |
| 10210.00 | 88.850 | 83.184 | 7278.69 | 369.70 N | 3092.94 E | 3114.96 |  |
| 0.00     |        |        |         |          |           |         |  |
| 10220.00 | 88.850 | 83.184 | 7278.89 | 370.89 N | 3102.87 E | 3124.96 |  |
| 0.00     |        |        |         |          |           |         |  |
| 10230.00 | 88.850 | 83.184 | 7279.09 | 372.07 N | 3112.80 E | 3134.96 |  |
| 0.00     |        |        |         |          |           |         |  |
| 10240.00 | 88.850 | 83.184 | 7279.29 | 373.26 N | 3122.72 E | 3144.95 |  |
| 0.00     |        |        |         |          |           |         |  |
| 10250.00 | 88.850 | 83.184 | 7279.49 | 374.45 N | 3132.65 E | 3154.95 |  |
| 0.00     |        |        |         |          |           |         |  |
| 10260.00 | 88.850 | 83.184 | 7279.69 | 375.63 N | 3142.58 E | 3164.95 |  |
| 0.00     |        |        |         |          |           |         |  |
| 10270.00 | 88.850 | 83.184 | 7279.89 | 376.82 N | 3152.51 E | 3174.95 |  |
| 0.00     |        |        |         |          |           |         |  |
| 10280.00 | 88.850 | 83.184 | 7280.09 | 378.01 N | 3162.43 E | 3184.95 |  |
| 0.00     |        |        |         |          |           |         |  |
| 10290.00 | 88.850 | 83.184 | 7280.29 | 379.19 N | 3172.36 E | 3194.94 |  |
| 0.00     |        |        |         |          |           |         |  |
| 10300.00 | 88.850 | 83.184 | 7280.49 | 380.38 N | 3182.29 E | 3204.94 |  |
| 0.00     |        |        |         |          |           |         |  |
| 10310.00 | 88.850 | 83.184 | 7280.69 | 381.57 N | 3192.22 E | 3214.94 |  |
| 0.00     |        |        |         |          |           |         |  |

|          | Nitro '11' Federal #2H Lateral Plan #1 Report 11-26-07 (2).txt |        |         |          |           |         |
|----------|----------------------------------------------------------------|--------|---------|----------|-----------|---------|
| 10320.00 | 88.850                                                         | 83.184 | 7280.89 | 382.75 N | 3202.14 E | 3224.94 |
| 0.00     |                                                                |        |         |          |           |         |
| 10330.00 | 88.850                                                         | 83.184 | 7281.09 | 383.94 N | 3212.07 E | 3234.94 |
| 0.00     |                                                                |        |         |          |           |         |
| 10340.00 | 88.850                                                         | 83.184 | 7281.30 | 385.13 N | 3222.00 E | 3244.93 |
| 0.00     |                                                                |        |         |          |           |         |
| 10350.00 | 88.850                                                         | 83.184 | 7281.50 | 386.31 N | 3231.93 E | 3254.93 |
| 0.00     |                                                                |        |         |          |           |         |
| 10360.00 | 88.850                                                         | 83.184 | 7281.70 | 387.50 N | 3241.85 E | 3264.93 |
| 0.00     |                                                                |        |         |          |           |         |
| 10370.00 | 88.850                                                         | 83.184 | 7281.90 | 388.69 N | 3251.78 E | 3274.93 |
| 0.00     |                                                                |        |         |          |           |         |
| 10380.00 | 88.850                                                         | 83.184 | 7282.10 | 389.87 N | 3261.71 E | 3284.93 |
| 0.00     |                                                                |        |         |          |           |         |
| 10390.00 | 88.850                                                         | 83.184 | 7282.30 | 391.06 N | 3271.63 E | 3294.92 |
| 0.00     |                                                                |        |         |          |           |         |
| 10400.00 | 88.850                                                         | 83.184 | 7282.50 | 392.25 N | 3281.56 E | 3304.92 |
| 0.00     |                                                                |        |         |          |           |         |
| 10410.00 | 88.850                                                         | 83.184 | 7282.70 | 393.43 N | 3291.49 E | 3314.92 |
| 0.00     |                                                                |        |         |          |           |         |
| 10420.00 | 88.850                                                         | 83.184 | 7282.90 | 394.62 N | 3301.42 E | 3324.92 |
| 0.00     |                                                                |        |         |          |           |         |
| 10430.00 | 88.850                                                         | 83.184 | 7283.10 | 395.81 N | 3311.34 E | 3334.92 |
| 0.00     |                                                                |        |         |          |           |         |
| 10440.00 | 88.850                                                         | 83.184 | 7283.30 | 396.99 N | 3321.27 E | 3344.91 |
| 0.00     |                                                                |        |         |          |           |         |
| 10450.00 | 88.850                                                         | 83.184 | 7283.50 | 398.18 N | 3331.20 E | 3354.91 |
| 0.00     |                                                                |        |         |          |           |         |
| 10460.00 | 88.850                                                         | 83.184 | 7283.70 | 399.37 N | 3341.13 E | 3364.91 |
| 0.00     |                                                                |        |         |          |           |         |
| 10470.00 | 88.850                                                         | 83.184 | 7283.90 | 400.55 N | 3351.05 E | 3374.91 |
| 0.00     |                                                                |        |         |          |           |         |
| 10480.00 | 88.850                                                         | 83.184 | 7284.11 | 401.74 N | 3360.98 E | 3384.91 |
| 0.00     |                                                                |        |         |          |           |         |
| 10490.00 | 88.850                                                         | 83.184 | 7284.31 | 402.93 N | 3370.91 E | 3394.90 |
| 0.00     |                                                                |        |         |          |           |         |
| 10500.00 | 88.850                                                         | 83.184 | 7284.51 | 404.11 N | 3380.84 E | 3404.90 |
| 0.00     |                                                                |        |         |          |           |         |
| 10510.00 | 88.850                                                         | 83.184 | 7284.71 | 405.30 N | 3390.76 E | 3414.90 |
| 0.00     |                                                                |        |         |          |           |         |
| 10520.00 | 88.850                                                         | 83.184 | 7284.91 | 406.49 N | 3400.69 E | 3424.90 |
| 0.00     |                                                                |        |         |          |           |         |
| 10530.00 | 88.850                                                         | 83.184 | 7285.11 | 407.67 N | 3410.62 E | 3434.90 |
| 0.00     |                                                                |        |         |          |           |         |
| 10540.00 | 88.850                                                         | 83.184 | 7285.31 | 408.86 N | 3420.54 E | 3444.89 |
| 0.00     |                                                                |        |         |          |           |         |
| 10550.00 | 88.850                                                         | 83.184 | 7285.51 | 410.05 N | 3430.47 E | 3454.89 |
| 0.00     |                                                                |        |         |          |           |         |
| 10560.00 | 88.850                                                         | 83.184 | 7285.71 | 411.23 N | 3440.40 E | 3464.89 |
| 0.00     |                                                                |        |         |          |           |         |
| 10570.00 | 88.850                                                         | 83.184 | 7285.91 | 412.42 N | 3450.33 E | 3474.89 |
| 0.00     |                                                                |        |         |          |           |         |
| 10580.00 | 88.850                                                         | 83.184 | 7286.11 | 413.61 N | 3460.25 E | 3484.89 |
| 0.00     |                                                                |        |         |          |           |         |
| 10590.00 | 88.850                                                         | 83.184 | 7286.31 | 414.79 N | 3470.18 E | 3494.88 |
| 0.00     |                                                                |        |         |          |           |         |
| 10600.00 | 88.850                                                         | 83.184 | 7286.51 | 415.98 N | 3480.11 E | 3504.88 |
| 0.00     |                                                                |        |         |          |           |         |
| 10610.00 | 88.850                                                         | 83.184 | 7286.71 | 417.17 N | 3490.04 E | 3514.88 |
| 0.00     |                                                                |        |         |          |           |         |
| 10620.00 | 88.850                                                         | 83.184 | 7286.92 | 418.35 N | 3499.96 E | 3524.88 |
| 0.00     |                                                                |        |         |          |           |         |
| 10630.00 | 88.850                                                         | 83.184 | 7287.12 | 419.54 N | 3509.89 E | 3534.88 |

## Nitro '11' Federal #2H Lateral Plan #1 Report 11-26-07 (2).txt

|          |        |        |         |          |           |         |  |
|----------|--------|--------|---------|----------|-----------|---------|--|
| 0.00     |        |        |         |          |           |         |  |
| 10640.00 | 88.850 | 83.184 | 7287.32 | 420.73 N | 3519.82 E | 3544.87 |  |
| 0.00     |        |        |         |          |           |         |  |
| 10650.00 | 88.850 | 83.184 | 7287.52 | 421.91 N | 3529.75 E | 3554.87 |  |
| 0.00     |        |        |         |          |           |         |  |
| 10660.00 | 88.850 | 83.184 | 7287.72 | 423.10 N | 3539.67 E | 3564.87 |  |
| 0.00     |        |        |         |          |           |         |  |
| 10670.00 | 88.850 | 83.184 | 7287.92 | 424.29 N | 3549.60 E | 3574.87 |  |
| 0.00     |        |        |         |          |           |         |  |
| 10680.00 | 88.850 | 83.184 | 7288.12 | 425.47 N | 3559.53 E | 3584.87 |  |
| 0.00     |        |        |         |          |           |         |  |
| 10690.00 | 88.850 | 83.184 | 7288.32 | 426.66 N | 3569.45 E | 3594.86 |  |
| 0.00     |        |        |         |          |           |         |  |
| 10700.00 | 88.850 | 83.184 | 7288.52 | 427.85 N | 3579.38 E | 3604.86 |  |
| 0.00     |        |        |         |          |           |         |  |
| 10710.00 | 88.850 | 83.184 | 7288.72 | 429.03 N | 3589.31 E | 3614.86 |  |
| 0.00     |        |        |         |          |           |         |  |
| 10720.00 | 88.850 | 83.184 | 7288.92 | 430.22 N | 3599.24 E | 3624.86 |  |
| 0.00     |        |        |         |          |           |         |  |
| 10730.00 | 88.850 | 83.184 | 7289.12 | 431.40 N | 3609.16 E | 3634.86 |  |
| 0.00     |        |        |         |          |           |         |  |
| 10740.00 | 88.850 | 83.184 | 7289.32 | 432.59 N | 3619.09 E | 3644.85 |  |
| 0.00     |        |        |         |          |           |         |  |
| 10750.00 | 88.850 | 83.184 | 7289.52 | 433.78 N | 3629.02 E | 3654.85 |  |
| 0.00     |        |        |         |          |           |         |  |
| 10760.00 | 88.850 | 83.184 | 7289.72 | 434.96 N | 3638.95 E | 3664.85 |  |
| 0.00     |        |        |         |          |           |         |  |
| 10770.00 | 88.850 | 83.184 | 7289.93 | 436.15 N | 3648.87 E | 3674.85 |  |
| 0.00     |        |        |         |          |           |         |  |
| 10780.00 | 88.850 | 83.184 | 7290.13 | 437.34 N | 3658.80 E | 3684.85 |  |
| 0.00     |        |        |         |          |           |         |  |
| 10790.00 | 88.850 | 83.184 | 7290.33 | 438.52 N | 3668.73 E | 3694.84 |  |
| 0.00     |        |        |         |          |           |         |  |
| 10800.00 | 88.850 | 83.184 | 7290.53 | 439.71 N | 3678.65 E | 3704.84 |  |
| 0.00     |        |        |         |          |           |         |  |
| 10810.00 | 88.850 | 83.184 | 7290.73 | 440.90 N | 3688.58 E | 3714.84 |  |
| 0.00     |        |        |         |          |           |         |  |
| 10820.00 | 88.850 | 83.184 | 7290.93 | 442.08 N | 3698.51 E | 3724.84 |  |
| 0.00     |        |        |         |          |           |         |  |
| 10830.00 | 88.850 | 83.184 | 7291.13 | 443.27 N | 3708.44 E | 3734.84 |  |
| 0.00     |        |        |         |          |           |         |  |
| 10840.00 | 88.850 | 83.184 | 7291.33 | 444.46 N | 3718.36 E | 3744.83 |  |
| 0.00     |        |        |         |          |           |         |  |
| 10850.00 | 88.850 | 83.184 | 7291.53 | 445.64 N | 3728.29 E | 3754.83 |  |
| 0.00     |        |        |         |          |           |         |  |
| 10860.00 | 88.850 | 83.184 | 7291.73 | 446.83 N | 3738.22 E | 3764.83 |  |
| 0.00     |        |        |         |          |           |         |  |
| 10870.00 | 88.850 | 83.184 | 7291.93 | 448.02 N | 3748.15 E | 3774.83 |  |
| 0.00     |        |        |         |          |           |         |  |
| 10880.00 | 88.850 | 83.184 | 7292.13 | 449.20 N | 3758.07 E | 3784.82 |  |
| 0.00     |        |        |         |          |           |         |  |
| 10890.00 | 88.850 | 83.184 | 7292.33 | 450.39 N | 3768.00 E | 3794.82 |  |
| 0.00     |        |        |         |          |           |         |  |
| 10900.00 | 88.850 | 83.184 | 7292.53 | 451.58 N | 3777.93 E | 3804.82 |  |
| 0.00     |        |        |         |          |           |         |  |
| 10910.00 | 88.850 | 83.184 | 7292.74 | 452.76 N | 3787.86 E | 3814.82 |  |
| 0.00     |        |        |         |          |           |         |  |
| 10920.00 | 88.850 | 83.184 | 7292.94 | 453.95 N | 3797.78 E | 3824.82 |  |
| 0.00     |        |        |         |          |           |         |  |
| 10930.00 | 88.850 | 83.184 | 7293.14 | 455.14 N | 3807.71 E | 3834.81 |  |
| 0.00     |        |        |         |          |           |         |  |
| 10940.00 | 88.850 | 83.184 | 7293.34 | 456.32 N | 3817.64 E | 3844.81 |  |
| 0.00     |        |        |         |          |           |         |  |

|          | Nitro '11' Federal #2H Lateral Plan #1 Report 11-26-07 (2).txt |        |         |          |           |         |
|----------|----------------------------------------------------------------|--------|---------|----------|-----------|---------|
| 10950.00 | 88.850                                                         | 83.184 | 7293.54 | 457.51 N | 3827.56 E | 3854.81 |
| 0.00     |                                                                |        |         |          |           |         |
| 10960.00 | 88.850                                                         | 83.184 | 7293.74 | 458.70 N | 3837.49 E | 3864.81 |
| 0.00     |                                                                |        |         |          |           |         |
| 10970.00 | 88.850                                                         | 83.184 | 7293.94 | 459.88 N | 3847.42 E | 3874.81 |
| 0.00     |                                                                |        |         |          |           |         |
| 10980.00 | 88.850                                                         | 83.184 | 7294.14 | 461.07 N | 3857.35 E | 3884.80 |
| 0.00     |                                                                |        |         |          |           |         |
| 10990.00 | 88.850                                                         | 83.184 | 7294.34 | 462.26 N | 3867.27 E | 3894.80 |
| 0.00     |                                                                |        |         |          |           |         |
| 11000.00 | 88.850                                                         | 83.184 | 7294.54 | 463.44 N | 3877.20 E | 3904.80 |
| 0.00     |                                                                |        |         |          |           |         |
| 11010.00 | 88.850                                                         | 83.184 | 7294.74 | 464.63 N | 3887.13 E | 3914.80 |
| 0.00     |                                                                |        |         |          |           |         |
| 11020.00 | 88.850                                                         | 83.184 | 7294.94 | 465.82 N | 3897.06 E | 3924.80 |
| 0.00     |                                                                |        |         |          |           |         |
| 11030.00 | 88.850                                                         | 83.184 | 7295.14 | 467.00 N | 3906.98 E | 3934.79 |
| 0.00     |                                                                |        |         |          |           |         |
| 11040.00 | 88.850                                                         | 83.184 | 7295.34 | 468.19 N | 3916.91 E | 3944.79 |
| 0.00     |                                                                |        |         |          |           |         |
| 11050.00 | 88.850                                                         | 83.184 | 7295.55 | 469.38 N | 3926.84 E | 3954.79 |
| 0.00     |                                                                |        |         |          |           |         |
| 11060.00 | 88.850                                                         | 83.184 | 7295.75 | 470.56 N | 3936.77 E | 3964.79 |
| 0.00     |                                                                |        |         |          |           |         |
| 11070.00 | 88.850                                                         | 83.184 | 7295.95 | 471.75 N | 3946.69 E | 3974.79 |
| 0.00     |                                                                |        |         |          |           |         |
| 11080.00 | 88.850                                                         | 83.184 | 7296.15 | 472.94 N | 3956.62 E | 3984.78 |
| 0.00     |                                                                |        |         |          |           |         |
| 11090.00 | 88.850                                                         | 83.184 | 7296.35 | 474.12 N | 3966.55 E | 3994.78 |
| 0.00     |                                                                |        |         |          |           |         |
| 11100.00 | 88.850                                                         | 83.184 | 7296.55 | 475.31 N | 3976.47 E | 4004.78 |
| 0.00     |                                                                |        |         |          |           |         |
| 11110.00 | 88.850                                                         | 83.184 | 7296.75 | 476.50 N | 3986.40 E | 4014.78 |
| 0.00     |                                                                |        |         |          |           |         |
| 11120.00 | 88.850                                                         | 83.184 | 7296.95 | 477.68 N | 3996.33 E | 4024.78 |
| 0.00     |                                                                |        |         |          |           |         |
| 11130.00 | 88.850                                                         | 83.184 | 7297.15 | 478.87 N | 4006.26 E | 4034.77 |
| 0.00     |                                                                |        |         |          |           |         |
| 11140.00 | 88.850                                                         | 83.184 | 7297.35 | 480.06 N | 4016.18 E | 4044.77 |
| 0.00     |                                                                |        |         |          |           |         |
| 11150.00 | 88.850                                                         | 83.184 | 7297.55 | 481.24 N | 4026.11 E | 4054.77 |
| 0.00     |                                                                |        |         |          |           |         |
| 11160.00 | 88.850                                                         | 83.184 | 7297.75 | 482.43 N | 4036.04 E | 4064.77 |
| 0.00     |                                                                |        |         |          |           |         |
| 11170.00 | 88.850                                                         | 83.184 | 7297.95 | 483.62 N | 4045.97 E | 4074.77 |
| 0.00     |                                                                |        |         |          |           |         |
| 11180.00 | 88.850                                                         | 83.184 | 7298.15 | 484.80 N | 4055.89 E | 4084.76 |
| 0.00     |                                                                |        |         |          |           |         |
| 11190.00 | 88.850                                                         | 83.184 | 7298.35 | 485.99 N | 4065.82 E | 4094.76 |
| 0.00     |                                                                |        |         |          |           |         |
| 11200.00 | 88.850                                                         | 83.184 | 7298.56 | 487.18 N | 4075.75 E | 4104.76 |
| 0.00     |                                                                |        |         |          |           |         |
| 11210.00 | 88.850                                                         | 83.184 | 7298.76 | 488.36 N | 4085.67 E | 4114.76 |
| 0.00     |                                                                |        |         |          |           |         |
| 11220.00 | 88.850                                                         | 83.184 | 7298.96 | 489.55 N | 4095.60 E | 4124.76 |
| 0.00     |                                                                |        |         |          |           |         |
| 11230.00 | 88.850                                                         | 83.184 | 7299.16 | 490.74 N | 4105.53 E | 4134.75 |
| 0.00     |                                                                |        |         |          |           |         |
| 11240.00 | 88.850                                                         | 83.184 | 7299.36 | 491.92 N | 4115.46 E | 4144.75 |
| 0.00     |                                                                |        |         |          |           |         |
| 11250.00 | 88.850                                                         | 83.184 | 7299.56 | 493.11 N | 4125.38 E | 4154.75 |
| 0.00     |                                                                |        |         |          |           |         |
| 11260.00 | 88.850                                                         | 83.184 | 7299.76 | 494.30 N | 4135.31 E | 4164.75 |

Nitro '11' Federal #2H Lateral Plan #1 Report 11-26-07 (2).txt

|          |        |        |         |          |           |         |
|----------|--------|--------|---------|----------|-----------|---------|
| 0.00     |        |        |         |          |           |         |
| 11270.00 | 88.850 | 83.184 | 7299.96 | 495.48 N | 4145.24 E | 4174.75 |
| 0.00     |        |        |         |          |           |         |
| 11280.00 | 88.850 | 83.184 | 7300.16 | 496.67 N | 4155.17 E | 4184.74 |
| 0.00     |        |        |         |          |           |         |
| 11290.00 | 88.850 | 83.184 | 7300.36 | 497.86 N | 4165.09 E | 4194.74 |
| 0.00     |        |        |         |          |           |         |
| 11300.00 | 88.850 | 83.184 | 7300.56 | 499.04 N | 4175.02 E | 4204.74 |
| 0.00     |        |        |         |          |           |         |
| 11310.00 | 88.850 | 83.184 | 7300.76 | 500.23 N | 4184.95 E | 4214.74 |
| 0.00     |        |        |         |          |           |         |
| 11320.00 | 88.850 | 83.184 | 7300.96 | 501.42 N | 4194.88 E | 4224.74 |
| 0.00     |        |        |         |          |           |         |
| 11330.00 | 88.850 | 83.184 | 7301.16 | 502.60 N | 4204.80 E | 4234.73 |
| 0.00     |        |        |         |          |           |         |
| 11340.00 | 88.850 | 83.184 | 7301.37 | 503.79 N | 4214.73 E | 4244.73 |
| 0.00     |        |        |         |          |           |         |
| 11350.00 | 88.850 | 83.184 | 7301.57 | 504.98 N | 4224.66 E | 4254.73 |
| 0.00     |        |        |         |          |           |         |
| 11360.00 | 88.850 | 83.184 | 7301.77 | 506.16 N | 4234.58 E | 4264.73 |
| 0.00     |        |        |         |          |           |         |
| 11370.00 | 88.850 | 83.184 | 7301.97 | 507.35 N | 4244.51 E | 4274.73 |
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| 11380.00 | 88.850 | 83.184 | 7302.17 | 508.54 N | 4254.44 E | 4284.72 |
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| 11390.00 | 88.850 | 83.184 | 7302.37 | 509.72 N | 4264.37 E | 4294.72 |
| 0.00     |        |        |         |          |           |         |
| 11400.00 | 88.850 | 83.184 | 7302.57 | 510.91 N | 4274.29 E | 4304.72 |
| 0.00     |        |        |         |          |           |         |
| 11410.00 | 88.850 | 83.184 | 7302.77 | 512.09 N | 4284.22 E | 4314.72 |
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| 11440.00 | 88.850 | 83.184 | 7303.37 | 515.65 N | 4314.00 E | 4344.71 |
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| 11450.00 | 88.850 | 83.184 | 7303.57 | 516.84 N | 4323.93 E | 4354.71 |
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| 11480.00 | 88.850 | 83.184 | 7304.18 | 520.40 N | 4353.71 E | 4384.70 |
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| 11500.00 | 88.850 | 83.184 | 7304.58 | 522.77 N | 4373.57 E | 4404.70 |
| 0.00     |        |        |         |          |           |         |
| 11510.00 | 88.850 | 83.184 | 7304.78 | 523.96 N | 4383.49 E | 4414.70 |
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| 11520.00 | 88.850 | 83.184 | 7304.98 | 525.15 N | 4393.42 E | 4424.70 |
| 0.00     |        |        |         |          |           |         |
| 11530.00 | 88.850 | 83.184 | 7305.18 | 526.33 N | 4403.35 E | 4434.69 |
| 0.00     |        |        |         |          |           |         |
| 11540.00 | 88.850 | 83.184 | 7305.38 | 527.52 N | 4413.28 E | 4444.69 |
| 0.00     |        |        |         |          |           |         |
| 11550.00 | 88.850 | 83.184 | 7305.58 | 528.71 N | 4423.20 E | 4454.69 |
| 0.00     |        |        |         |          |           |         |
| 11560.00 | 88.850 | 83.184 | 7305.78 | 529.89 N | 4433.13 E | 4464.69 |
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| 11570.00 | 88.850 | 83.184 | 7305.98 | 531.08 N | 4443.06 E | 4474.69 |
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|          | Nitro '11' | Federal | #2H Lateral | Plan #1 Report | 11-26-07 (2).txt |         |
|----------|------------|---------|-------------|----------------|------------------|---------|
| 11580.00 | 88.850     | 83.184  | 7306.18     | 532.27 N       | 4452.99 E        | 4484.68 |
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| 11590.00 | 88.850     | 83.184  | 7306.38     | 533.45 N       | 4462.91 E        | 4494.68 |
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| 0.00     |            |         |             |                |                  |         |
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| 11690.00 | 88.850     | 83.184  | 7308.39     | 545.32 N       | 4562.19 E        | 4594.66 |
| 0.00     |            |         |             |                |                  |         |
| 11700.00 | 88.850     | 83.184  | 7308.59     | 546.51 N       | 4572.11 E        | 4604.66 |
| 0.00     |            |         |             |                |                  |         |
| 11710.00 | 88.850     | 83.184  | 7308.79     | 547.69 N       | 4582.04 E        | 4614.66 |
| 0.00     |            |         |             |                |                  |         |
| 11720.00 | 88.850     | 83.184  | 7308.99     | 548.88 N       | 4591.97 E        | 4624.66 |
| 0.00     |            |         |             |                |                  |         |
| 11730.00 | 88.850     | 83.184  | 7309.19     | 550.07 N       | 4601.90 E        | 4634.65 |
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| 11750.00 | 88.850     | 83.184  | 7309.59     | 552.44 N       | 4621.75 E        | 4654.65 |
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| 11770.00 | 88.850     | 83.184  | 7310.00     | 554.81 N       | 4641.60 E        | 4674.65 |
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| 11770.23 | 88.850     | 83.184  | 7310.00     | 554.84 N       | 4641.83 E        | 4674.87 |
| 0.00     |            |         |             |                |                  |         |

All data are in feet unless otherwise stated. Directions and coordinates are relative to Grid North.  
Vertical depths are relative to WELL. Northings and Eastings are relative to Well.

The Dogleg Severity is in Degrees per 100 feet.  
Vertical Section is from Site and calculated along an Azimuth of 83.184° (Grid).

Coordinate System is North American Datum 1983 US State Plane 1983, New Mexico Eastern Zone.

Central meridian is -104.333°.

Grid Convergence at Surface is 0.152°.

Based upon Minimum Curvature type calculations, at a Measured Depth of 11770.23ft., the Bottom Hole Displacement is 4674.87ft., in the Direction of 83.184° (Grid).

# Hydrogen Sulfide Drilling Operations Plan

## Cimarex Energy Co. of Colorado

### Nitro 11 Federal No. 2

Unit D      Section 11

T16S R29E      Eddy County, NM

- 1 All Company and Contract personnel admitted on location must be trained by a qualified H2S safety instructor to the following:
  - A. Characteristics of H2S
  - B. Physical effects and hazards
  - C. Proper use of safety equipment and life support systems.
  - D. Principle and operation of H2S detectors, warning system and briefing areas.
  - E. Evacuation procedure, routes and first aid.
  - F. Proper use of 30 minute pressure demand air pack.
- 2 H2S Detection and Alarm Systems
  - A. H2S 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 (H2S 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 cored are planned.
- 8 Drilling contractor supervisor will be required to be familiar with the effects H2S has on tubular goods and other mechanical equipment.
- 9 If H2S 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 H2S scavengers if necessary.

**Surface Use Plan**  
**Cimarex Energy Co. of Colorado**  
**Nitro 11 Federal No. 2**  
Unit D      Section 11  
T16S R29E      Eddy County, NM

- 1 Existing Roads: Area maps, Exhibit "B" is a reproduction of Eddy Co. General Highway Map. Exhibit "C" is a reproduction of a USGS Topographic Map, showing existing roads and proposed roads. All existing roads will be maintained in a condition equal to or better than current conditions. Any new roads will be constructed to BLM specifications.

- A. Exhibit "A" shows the proposed well site as staked.
- B. From junction of US Hwy 82 and Barnival Draw Rd, go North on Barnival Draw Rd for 6.8 miles to lease road. On lease road, continue Northwesterly 3.5 miles to gate. Thence go Southeast 0.7 miles; thence Southwest 0.7 miles to lease road. Go West 0.2 miles to proposed lease road.

- 2 Planned Access Roads:      1106.5' of lease road will be consrtucted on-lease.

- 3 Location of Existing Wells in a One-Mile Radius - Exhibit A

- A. Water wells -      None known
- B. Disposal wells -      None known
- C. Drilling wells -      None known
- D. Producing wells -      As shown on Exhibit "A"
- E. Abandoned wells -      As shown on Exhibit "A"

**Surface Use Plan**  
**Cimarex Energy Co. of Colorado**  
**Nitro 11 Federal No. 2**  
Unit D      Section 11  
T16S R29E      Eddy County, NM

- 4 If on completion this well is a producer, Cimarex Energy Co. of Colorado will furnish maps and/or plats showing on site facilities or off site facilities if needed. This will be accompanied by a Sundry Notice.

5 Location and Type of Water Supply

Water will be purchased locally from a commercial source and trucked over the access roads or piped in flexible lines laid on top of the ground.

6 Source of Construction Material

If possible, construction will be obtained from the excavation of drill site. If additional material is needed, it will be purchased from a local source and transported over the access route as shown on Exhibit "C".

7 Methods of Handling Waste Material

- A. Drill cuttings will be disposed of in the reserve pit.
- 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. Remaining drilling fluids will be allowed to dry in the reserve pit until the pit is dry enough for breaking out. In the event that drillings fluids do not dry out in a reasonable time they will be hauled off by transports and be disposed of at a State approved disposal facility. Water produced during drilling will be put in reserve pit. Any oil or condensate produced will be stored in test tanks until sold and hauled from the site.

8 Ancillary Facilities

- A. No camps or airstrips to be constructed.

**Surface Use Plan**  
**Cimarex Energy Co. of Colorado**  
**Nitro 11 Federal No. 2**  
Unit D      Section 11  
T16S R29E      Eddy County, NM

**9 Well Site Layout**

- A. Exhibit "D" shows location and rig layout.
- B. This exhibit indicates proposed location of reserve and trash pits and living facilities.
- C. Mud pits in the active circulating system will be steel pits and the reserve pit is proposed to be lined with PVC or polyethylene liner. The pit liner will be 12 mils thick. Pit liner will extend a minimum, 2'00" over the reserve pits dikes where the liner will be anchored down.
- D. The reserve pit will be fenced on three sides with four strands of barbed wire during drilling and completion phases. The fourth side will be fenced after all drilling operations have ceased. If the well is a producer, the reserve pit fence will be torn down. The reserve pit and those areas of the location not essential to production facilities will be reclaimed and seeded per BLM requirements.

**10 Plans for Restoration of Surface**

Rehabilitation of the location and cuttings burial cell 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.

However, in either event, the reserve pit will be allowed to dry properly, and fluid removed and disposed of in accordance with Article 7.B as previously noted. The pit area will then be leveled and contoured to conform to the original and surrounding area. 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 spoil pile 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.

**Surface Use Plan**  
**Cimarex Energy Co. of Colorado**  
**Nitro 11 Federal No. 2**  
Unit D      Section 11  
T16S R29E      Eddy County, NM

**11 Other Information**

- A. Topography consists of a sloping plane with loose tan sands. Vegetation is mainly yucca, mesquite and shin oak.
- B. The wellsite is on surface owned by Department of the Interior, Bureau of Land Management. The land is used mainly for farming, cattle ranching, recreational use, and oil and gas production.
- C. An Archaeological survey will be conducted on the location and proposed roads, and this report will be filed with the Bureau of Land Management in the Carlsbad BLM office.
- D. There are no know dwellings within 1 1/2 miles of this location.

Operator Certification Statement  
Cimarex Energy Co. of Colorado  
Nitro 11 Federal No. 2  
Unit D      Section 11  
T16S R29E      Eddy County, NM

Operator's Representative

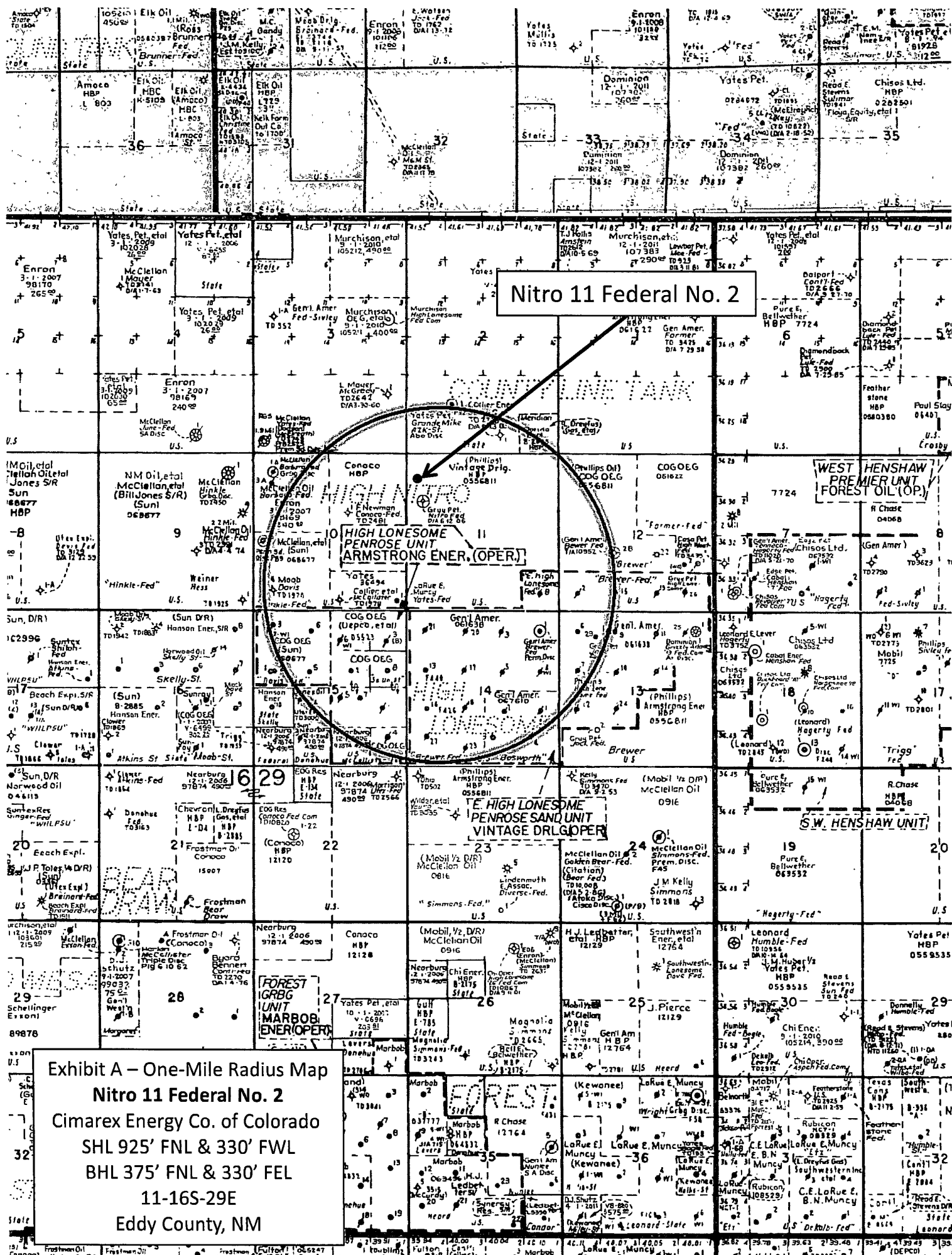
Cimarex Energy Co. of Colorado  
P.O. Box 140907  
Irving, TX 75014  
Office Phone: (972) 443-6489  
Zeno Farris

**CERTIFICATION:** I hereby certify that the statements and plans made in this APD are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed by Cimarex Energy Co. of Colorado and/or its contractors/subcontractors and is in conformity with this plan and the terms and conditions under which it is approved. This statement is subject to the provision of U.S.C. 1001 for the filing of a false statement.

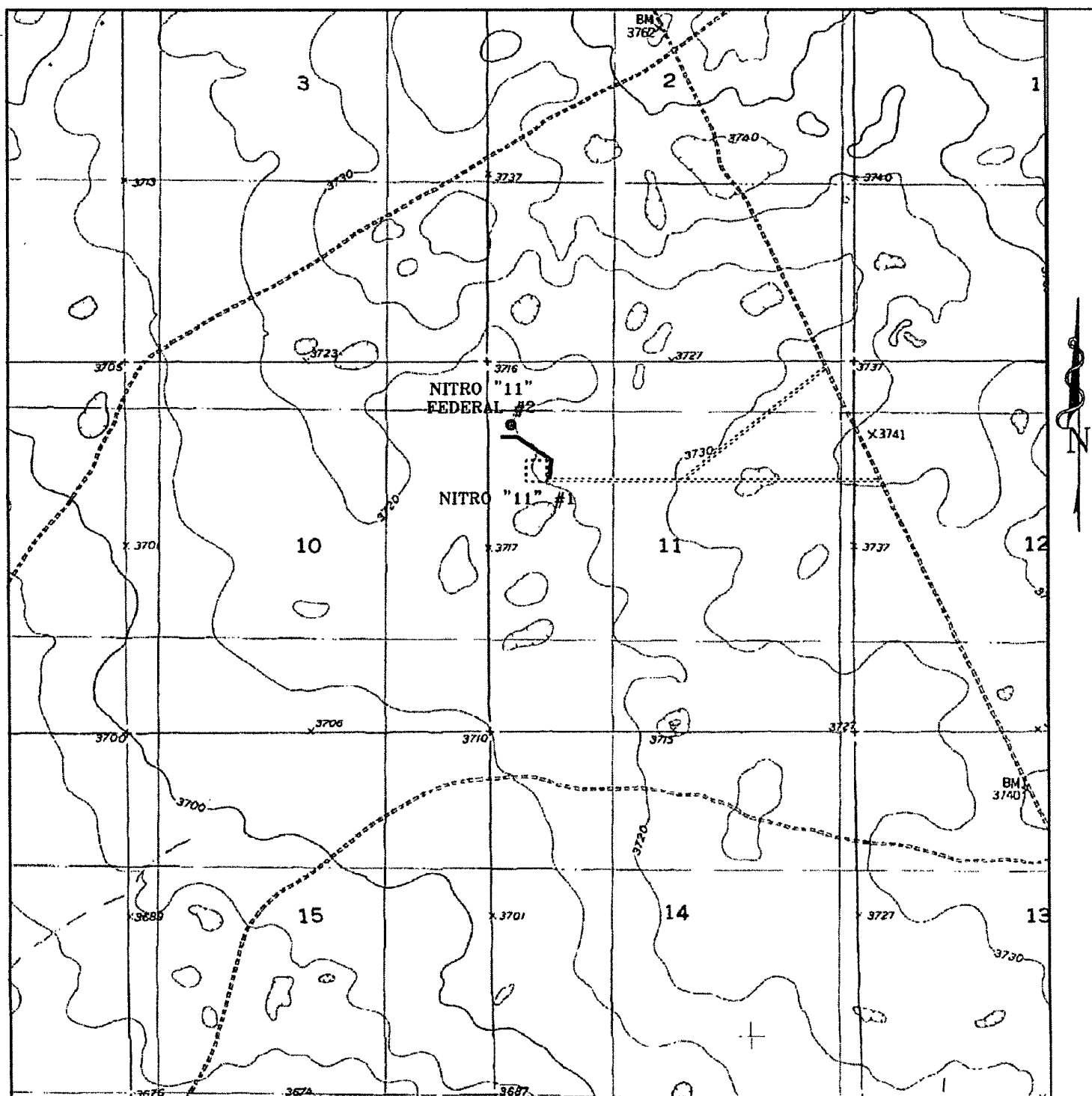
NAME: Zeno Farris  
Zeno Farris

DATE: November 28, 2007

TITLE: Manager Operations Administration



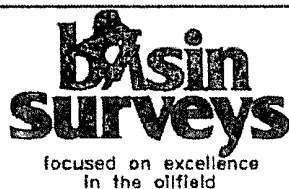
## Exhibit B



### NITRO "11" FEDERAL #2

Located 925' FNL and 330' FWL

Section 11, Township 16 South, Range 29 East,  
N.M.P.M., Eddy 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 18751T

Survey Date: 11-03-2007

Scale: 1" = 2000'

Date: 11-07-2007

**CIMAREX  
ENERGY CO.  
OF COLORADO**

Exhibit C

## PECOS DISTRICT CONDITIONS OF APPROVAL

|                       |                                     |
|-----------------------|-------------------------------------|
| OPERATOR'S NAME:      | Cimarex Energy Co. of Colorado      |
| LEASE NO.:            | NM-0556811                          |
| WELL NAME & NO.:      | 2H-Nitro 11 Federal                 |
| SURFACE HOLE FOOTAGE: | 925' FNL & 330' FWL                 |
| BOTTOM HOLE FOOTAGE:  | 375' FNL & 330' FEL                 |
| LOCATION:             | Section 11, T. 16 S., R 29 E., NMPM |
| COUNTY:               | Eddy County, New Mexico             |

### TABLE OF CONTENTS

Standard Conditions of Approval (COA) apply to this APD. If any deviations to these standards exist or special COAs are required, the section with the deviation or requirement will be checked below.

- ☐ **General Provisions**
- ☐ **Permit Expiration**
- ☐ **Archaeology, Paleontology, and Historical Sites**
- ☐ **Noxious Weeds**
- ☐ **Special Requirements**
- ☒ **Construction**
  - Notification
  - Topsoil
  - Reserve Pit
  - Federal Mineral Material Pits
  - Well Pads
  - Roads
- ☐ **Road Section Diagram**
- ☒ **Drilling**
- ☐ **Production (Post Drilling)**
  - Well Structures & Facilities
- ☐ **Reserve Pit Closure/Interim Reclamation**
- ☐ **Final Abandonment/Reclamation**

## **I. 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.

## **II. 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.)

## **III. 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.

## **IV. NOXIOUS WEEDS**

The operator shall be held responsible if noxious weeds become established within the areas of operations. 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.

## **V. CONSTRUCTION**

### **A. NOTIFICATION**

The BLM shall administer compliance and monitor construction of the access road and well pad. Notify the Carlsbad Field Office at (505) 234-5972 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 APD and Conditions of Approval (COA) on the well site and they shall be made available upon request by the Authorized Officer.

### **B. TOPSOIL**

The operator shall stockpile the topsoil of the well pad. The topsoil to be stripped is approximately 6 inches in depth. The topsoil shall not be used to backfill the reserve pit and will be used for interim and final reclamation.

### **C. RESERVE PITS**

The reserve pit shall be constructed and closed in accordance with the NMOCD rules.

The reserve pit shall be constructed 70' X 15' on the North side of the well pad.

The reserve pit shall be constructed, so that upon completion of drilling operations, the dried pit contents shall be buried a minimum depth of three feet below ground level. Should the pit content level not meet the three foot minimum depth requirement, the excess contents shall be removed until the required minimum depth of three feet below ground level has been met. The operator shall properly dispose of the excess contents at an authorized disposal site.

The reserve pit shall be constructed and maintained so that runoff water from outside the location is not allowed to enter the pit. The berms surrounding the entire perimeter of the pit shall extend a minimum of two (2) feet above ground level. At no time will standing fluids in the pit be allowed to rise above ground level.

The reserve pit shall be fenced on three (3) sides during drilling operations. The fourth side shall be fenced immediately upon rig release.

### **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 Carlsbad Field Office at (505) 234-5972.

#### **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 needs.

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

##### **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.

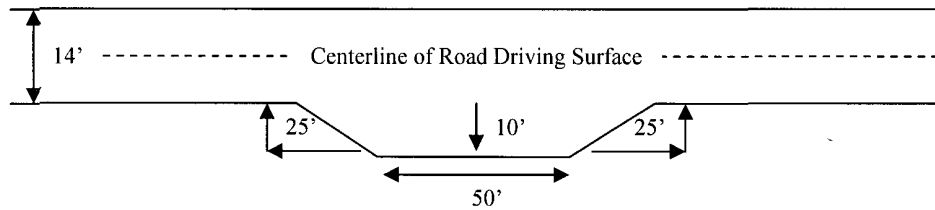
##### **Ditching**

Ditching shall be required on both sides of the road.

### 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**

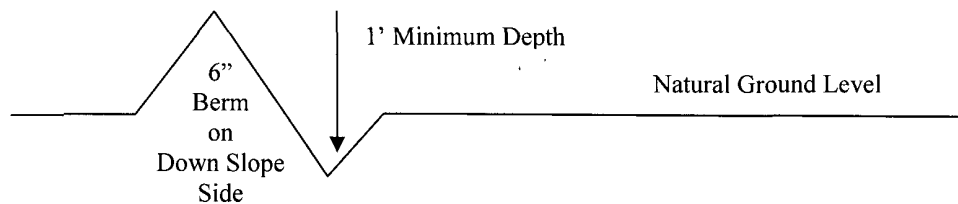


### Drainage

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 a 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:

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

### **Culvert Installations**

Appropriately sized culvert(s) shall be installed at the deep waterway channel flow crossing.

### **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**

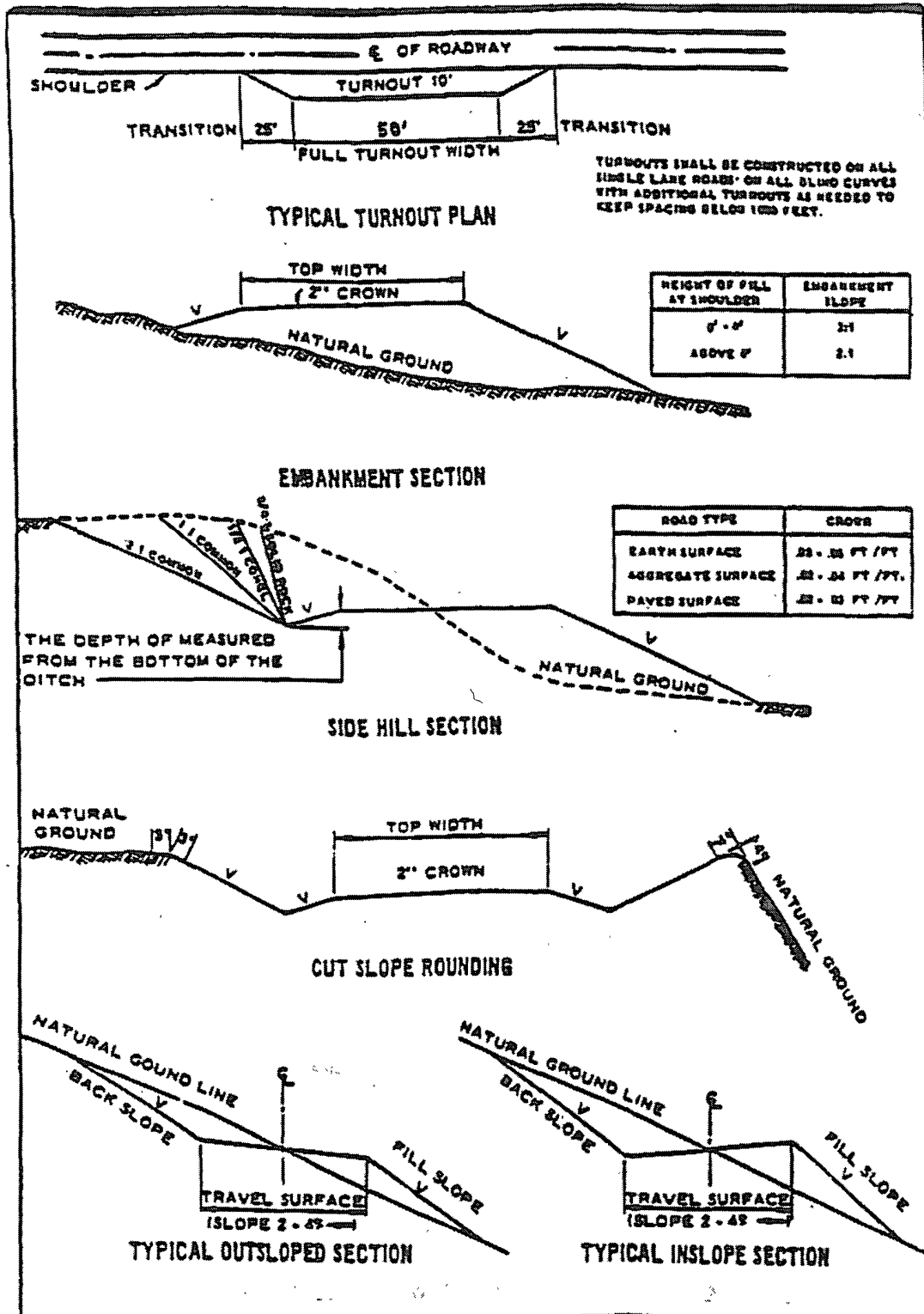
Where entry is required across a fence line, the fence shall be braced and tied off on both sides of the passageway prior to cutting.

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



## VI. DRILLING

### A. DRILLING OPERATIONS REQUIREMENTS

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

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

☒ **Chaves and Roosevelt Counties, T16S Eddy County**

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

1. **Although Hydrogen Sulfide has not been reported in this section, it is always a possible hazard. If Hydrogen Sulfide is encountered, please report measured amounts to the BLM.**
2. 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.
3. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works are located, this does not include the dog house or stairway area.

### B. CASING

1. The 13-3/8 inch surface casing shall be set **a minimum of 25 feet into the Rustler Anhydrite at whatever depth it occurs and above the salt at approximately 340 feet and cemented to the surface.**
  - a. If cement does not circulate to the surface, the appropriate BLM 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, 24 hours in the potash area, or 500 pounds compressive strength, whichever is greater. (This is to include the lead cement). **Please provide WOC times to inspector for cement slurries.**

- 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 compressive strength, whichever is greater.
- d. If cement falls back, remedial action will be done prior to drilling out that string.

**Possible lost circulation in the Grayburg and San Andres formations.  
Possible water flows in the Salado and Artesia Groups.**

- 2. The minimum required fill of cement behind the 9-5/8 inch intermediate casing is:

☒ Cement to surface. If cement does not circulate see B.1.a-d above.  
**Please provide WOC times to inspector for cement slurries.**

**Formation below the 9-5/8" shoe to be tested according to Onshore Order 2.III.B.1.i.**

- 3. The minimum required fill of cement behind the 5-1/2 inch production casing is:

☒ Cement should tie-back at least 200 feet into previous casing string. Operator shall provide method of verification. **Please provide WOC times to inspector for cement slurries.**

- 4. 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. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17.
- 2. The appropriate BLM office shall be notified a minimum of 2 hours in advance for a representative to witness the tests.
  - a. The tests shall be done by an independent service company.
  - b. The results of the test shall be reported to the appropriate BLM office.
  - c. 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 appropriate BLM office.

- d. 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.
- e. A variance to test only the surface casing to the reduced pressure of **1000 psi** with the rig pumps is approved. **The BOP will be tested to 5000 psi by an independent service company.**

**Engineer on call phone (after hours):      Carlsbad: (575) 706-2779**

**WWI 010708**

## **VII. PRODUCTION (POST DRILLING)**

### **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  
Shale Green, Munsell Soil Color Chart # 5Y 4/2

## **VIII. 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.

At the time reserve pits are to be reclaimed, operators should work with BLM surface management specialists to devise the best strategies to reduce the size of the location. Any reductions should allow for remedial well operations, as well as safe and efficient removal of oil and gas.

During reclamation, the removal of caliche is important to increasing the success of revegetating the site. Removed caliche may be used for road repairs, fire walls or for building other roads and locations. 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.

### **B. RESERVE PIT CLOSURE**

The reserve pit, when dried and closed, shall be recontoured, all trash removed, and reseeded as follows:

### Seed Mixture 1, for Loamy Sites

The holder shall seed all disturbed areas with the seed mixture listed below. The seed mixture shall be planted in the amounts specified in pounds of pure live seed (PLS)\* per acre. There shall be no primary or secondary noxious weeds in the seed mixture. Seed will be tested and the viability testing of seed will be done in accordance with State law(s) and within nine (9) months prior to purchase. Commercial seed will be either certified or registered seed. The seed container will be tagged in accordance with State law(s) and available for inspection by the authorized officer.

Seed will be planted using a drill equipped with a depth regulator to ensure proper depth regulator to ensure proper depth of planting where drilling is possible. The seed mixture will be evenly and uniformly planted over the disturbed area (small/heavier seeds have a tendency to drop the bottom of the drill and are planted first). The holder shall take appropriate measures to ensure this does not occur. Where drilling is not possible, seed will be broadcast and the area shall be raked or chained to cover the seed. When broadcasting the seed, the pounds per acre are to be doubled. The seeding will be repeated until a satisfactory stand is established as determined by the authorized officer. Evaluation of growth will not be made before completion of at least one full growing season after seeding.

Species to be planted in pounds of pure live seed\* per acre:

| <u>Species</u>                                    | <u>lb/acre</u> |
|---------------------------------------------------|----------------|
| Plains lovegrass ( <i>Eragrostis intermedia</i> ) | 0.5            |
| Sand dropseed ( <i>Sporobolus cryptandrus</i> )   | 1.0            |
| Sideoats grama ( <i>Bouteloua curtipendula</i> )  | 5.0            |

\*Pounds of pure live seed:

Pounds of seed x percent purity x percent gemination = pounds pure live seed  
(Insert Seed Mixture Here)

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

Upon abandonment of the well and/or when the access road is no longer in service the Authorized Officer shall issue instructions and/or orders for surface reclamation and restoration of all disturbed areas.

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 agreement.