New Mexico Oil Conservation Division, District I
1625 N. French Drive
Hobbs, NM 88240

Form 3160-3
(April 2004)

RESUBMITTAL

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

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

5. Lease Serial No.
NM-51837

6. If Indian, Allotee or Tribe Name

1a Type of Work. [X] DRILL [ ] REENTER

7 If Unit or CA Agreement, Name and No
Pending

1b. Type of Well. [ ] Oil Well [X] Gas Well [ ] Other [X] Single Zone [ ] Multiple Zone

8 Lease Name and Well No. <36249>
Kinahan 20 Federal No. 3

2 Name of Operator
Cimarex Energy Co. of Colorado <162683>

9. API Well No.
30-005- 28026

3a Address
PO Box 140907
Irving, TX 75014

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

10. Field and Pool, or Exploratory
Little Lucky Lake; Morrow <80285>

4. Location of Well *(Report location clearly and in accordance with any State requirements *)*
At Surface 660' FSL & 1650' FWL
At proposed prod. Zone Unit N ROSWELL CONTROLLED WATER BASIN

11 Sec , T. R. M or Blk and Survey or Area
20-15S-30E

14 Distance in miles and direction from nearest town or post office*
13 miles NE of Loco Hills, NM

12 County or Parish
Chaves

13 State
NM

15 Distance from proposed* location to nearest property or lease line, ft (Also to nearest drig. unit line if any)	16. No of acres in lease	17. Spacing Unit dedicated to this well
660'	640	W2 320
18 Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	**19. Proposed Depth**	**20. BLM/BIA Bond No on File**
NA	10,600'	NM-2575
21 Elevations (Show whether DF, KDB, RT, GL, etc)	**22 Approximate date work will start***	**23. Estimated duration**
3,966' GR	4/1/2008	35-45 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	Name *(Printed/Typed)*	Date
Zeno Farris	Zeno Farris	02.19.08

Title
Manager Operations Administration

Approved By *(Signature)*	Name (Printed/Typed)	Date
/S/ Angel Mayes	/S/ Angel Mayes	3-27-08
Title Assistant Field Manager, Lands And Minerals	**Office** ROSWELL FIELD OFFICE	APPROVED FOR 2 YEARS

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

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

* *(Instructions on page 2)*

RECEIVED
MAY 07 2008
HOBBS OCD

SEE ATTACHED FOR CONDITIONS OF APPROVAL

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

OIL CONSERVATION DIVISION

1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

Form C-102
Revised October 12, 2005

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
30-005-28026	80285	Little Lucky Lake; Morrow

Property Code	Property Name	Well Number
36249	KINAHAN "20" FEDERAL	3

OGRID No.	Operator Name	Elevation
162683	CIMAREX ENERGY CO. OF COLORADO	3966'

Surface Location

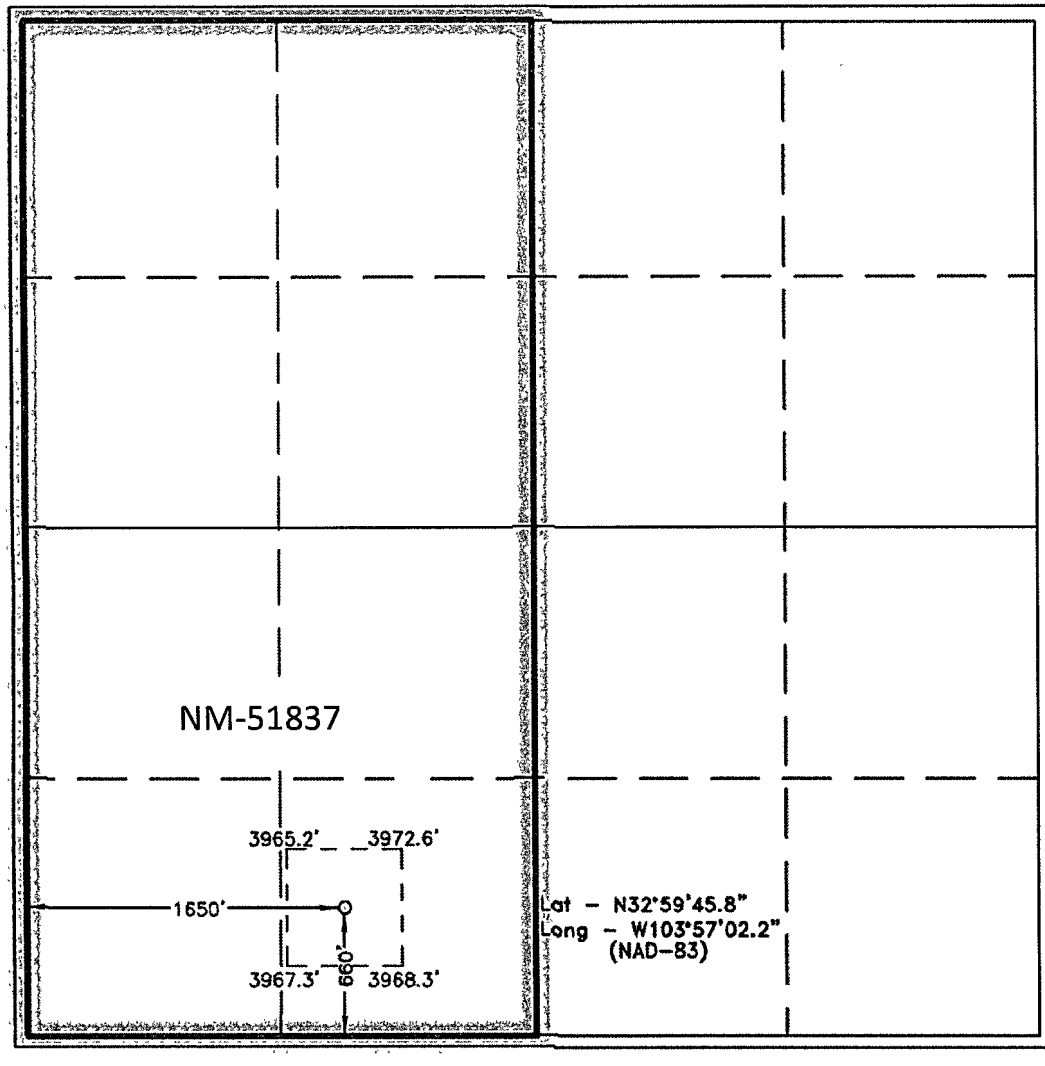
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
N	20	15 S	30 E		660	SOUTH	1650	WEST	CHAVES

Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
320			

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



OPERATOR CERTIFICATION

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.

Zeno Farris 02-19-08
Signature Date

Zeno Farris
Printed Name

SURVEYOR CERTIFICATION

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 supervison, and that the same is true and correct to the best of my belief.

OCTOBER 16, 2006
Date Surveyed

Signature & Seal of Professional Surveyor

GARY L. JONES
NEW MEXICO
7977
PROFESSIONAL SURVEYOR

No. 12264

Certificate No. Gary L. Jones 7977

BASIN SURVEYS

Application to Drill
Cimarex Energy Co. of Colorado
Kinahan 20 Federal No. 3
Unit N Section 20
T15S R30E Chaves County, NM

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

1 Location: 660' FSL & 1650' FWL

2 Elevation above sea level: 3,966 GR

3 Geologic name of surface formation: Quaternery 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: 10,600'

6 Estimated tops of geological markers:

Yates	1,430'
Queen	2,175'
Abo Shale	6,450'
Hueco	7,700'
Wolfcamp LS	8,000'
Atoka Clastics	9,950'
Morrow Clastics	10,350'
Miss Unconformity	10,425'

7 Possible mineral bearing formation:

Morrow	Gas
Atoka	Gas
Abo	Oil

8 Proposed Mud Circulating System:

Depth	Mud Wt	Visc	Fluid Loss	Type Mud
0 to 430 ~~340'~~	8.4 - 8.6	30-32	May lose circ	Fresh water spud mud
430' ~~340'~~ to 3,950'	10.0	28-29	May lose circ	Brine Water
3,950' to 10,600'	8.6 - 9.5	28-29	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. 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.

Application to Drill
Cimarex Energy Co. of Colorado
Kinahan 20 Federal No. 3
Unit N Section 20
T15S R30E Chaves County, NM

9 Casing & Cementing Program:

Hole Size	Depth			Casing OD		Weight	Thread	Collar	Grade
17½"	0	to	~~340'~~ 430'	New	13⅜"	48#	8-R	STC	H-40
12¼"	0	to	3,950'	New	9⅝"	40#	8-R	LTC	J/K-55
8¾"	0	to	10,600'	New	5½"	17#	8-R	LTC	P-110

10 Cementing & Setting Depth:

13⅜" Surface Set ~~340'~~ 430' of 13⅜" 48# H-40 STC
Lead: 110 sx Light Premium Plus + 0.125 lb/sk Poly-E-Flake + 1% $CaCl_2$ (wt 14.2, yld 1.64)
Tail: 220 sx Premium Plus + 2% $CaCl_2$ (wt 14.8, yld 1.35) WITNESS
TOC Surface

9⅝" Intermediate Set 3,950' of 9⅝" 40# J/K-55 LTC
Lead: 450 sx Interfill C + 0.125 lb/sk Poly-E-Flake (wt 11.9, yld 2.45)
Tail: 200 sx Premium Plus + 1% $CaCl_2$ (wt 14.8, yld 1.33)
TOC Surface

5½" Production Set 10,600' of 5½" 17# P-110 LTC
615 sx Super H + 0.5% Halad-344 + 0.4% CFR-3 + 1 lb/sk Salt + 5 lb/sk Gilsonite + 0.125 lb/sk Poly-e-flake + 0.35% HR-7 (wt 13.0, yld 1.67)
TOC 3,700'

Fresh water will be protected by setting 13⅜" casing at ~~340'~~ 430' and cementing to Surface
Hydrocarbon zones will be protected by setting 9⅝" casing at 3,950' and cementing to Surface
and by setting 5½" casing at 10,600' and cementing to 3700'

Cimarex uses the following minimum safety factors:

Burst	Collapse	Tension
1.125	1.125	1.80

Application to Drill
Cimarex Energy Co. of Colorado
Kinahan 20 Federal No. 3
Unit N Section 20
T15S R30E Chaves County, NM

11 Pressure control Equipment:

Exhibit "E". A 13⅜" 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 nippled 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 13⅜" 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 13⅜" 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 2 man unit from 1000' to TD
B. Electric logging program: CNL / LDT / CAL / GR, DLL / CAL / GR
C. No DSTs or cores are planned at this time.

13 Potential Hazards:

No abnormal pressures or temperatures are expected. The area has a potiential H2S hazard. An H_2 drilling plan is attached. Adequate flare lines will be installed off the mud / gas separator where gas may be flared safely. All personnel will be familiar with all aspects of safe operation of equipment being used.

Estimated BHP **4000 psi** Estimated BHT **175**

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

Drilling expected to take 35-45 days

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

15 Other Facets of Operations:

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

Morrow pay will be perforated and stimulated.

The proposed well will be tested and potentialed as **a gas well.**

Hydrogen Sulfide Drilling Operations Plan
Cimarex Energy Co. of Colorado
Kinahan 20 Federal No. 3
Unit N Section 20
T15S R30E Chaves County, NM

1 All Company and Contract personnel admitted on location must be trained by a qualified H_2S safety instructor to the following:
   A. Characteristics of H_2S
   B. Physical effects and hazards
   C. Proper use of safety equipment and life support systems.
   D. Principle and operation of H_2S detectors, warning system and briefing areas.
   E. Evacuation procedure, routes and first aid.
   F. Proper use of 30 minute pressure demand air pack.

2 H_2S Detection and Alarm Systems:
   A. H_2S detectors and audio alarm system to be located at bell nipple, end of flow line (mud pit) and on derrick floor or doghouse.

3 Windsock and/or wind streamers:
   A. Windsock at mudpit area should be high enough to be visible.
   B. Windsock at briefing area should be high enough to be visible.

4 Condition Flags and Signs:
   A. Warning sign on access road to location.
   B. Flags to be displayed on sign at entrance to location. Green flag indicates normal safe condition. Yellow flag indicates potential pressure and danger. Red flag indicates danger (H_2S present in dangerous concentration). Only emergency personnel admitted to location.

5 Well control equipment:
   A. See exhibit "E"

6 Communication:
   A. While working under masks chalkboards will be used for communication.
   B. Hand signals will be used where chalk board is inappropriate.
   C. Two way radio will be used to communicate off location in case of emergency help is required. In most cases cellular telephones will be available at most drilling foreman's trailer or living quarters.

7 Drillstem Testing:
No DSTs or cores are planned at this time.

8 Drilling contractor supervisor will be required to be familiar with the effects H_2S has on tubular goods and other mechanical equipment.

9 If H_2S is encountered, mud system will be altered if necessary to maintain control of formation. A mud gas seperator will be brought into service along with H_2S scavengers if necessary.

Surface Use Plan
Cimarex Energy Co. of Colorado
Kinahan 20 Federal No. 3
Unit N Section 20
T15S R30E Chaves 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 the junction of St Hwy 81 and Co Rd 217 (Hagerman Cutoff), proceed East on St Hwy 81 for 2.2 miles to lease road. On lease road, proceed South 2.8 miles to proposed lease road.

2 PLANNED ACCESS ROADS: 482.1' of on-lease access road is proposed.

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"

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 seperated by a series of solids removal equipment and hauled to the cuttings drying area and then disposed of in the cuttings burial cell.

B. All trash, junk and other waste material will be contained in trash cages or bins to prevent scattering. When the job is completed all contents will be removed and disposed of in an approved sanitary land fill.

C. Salts remaining after completion of well will be picked up by supplier including broken sacks.

D. Sewage from living quarters will drain into holding tanks and be cleaned out periodically. A Porta-John will be provided for the rig crews. This equipment will be properly maintained during the drilling operations and removed upon completion of the well.

E. Drilling fluids will be contained in steel pits in a closed circulating system. Fluids will be cleaned and reused. Water produced during testing will be contained in the steel pits and disposed of at a state approved disposal facility. Any oil or condensate produced will be stored in test tanks until sold and hauled from the site.

8 Ancillary Facilities:

A. No camps or airstrips to be constructed.

9 Well Site Layout:

A. Exhibit "D" shows location and rig layout.
B. This exhibit indicates proposed location of the 100' X 100' cuttings drying area.
C. Mud pits in the closed circulating system will be steel pits and the cuttings drying area will be surrounded by a 2' X 2' ring levee and a 2' earthen berm. A 12 mil liner will cover the cuttings drying area and extend a minimum of 2' over the earthen berm where it will be anchored down. A pump off system will pump any accumulated fluids in the ring levee to the rig holding tanks to be cleaned and reused.
D. After drying cuttings will be disposed of in a 50' X 50' cuttings burial cell. The bottom will be lined with a 12 mil liner. Drill cuttings will be hauled from the cuttings drying area and encapsulated in a 12 mil liner. The 12 mil liner will be folded over the cuttings and capped with a 20 mil membrane cap. The cell will be filled with 3' to 4' of top soil and leveled and contoured to conform to the original surrounding area.
E. If the well is a producer, the cuttings burial area 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 drill cuttings will be allowed to dry properly, and fluid removed and disposed of in accordance with Article 7.B as previously noted. The cuttings burial 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
Kinahan 20 Federal No. 3
Unit N Section 20
T15S R30E Chaves 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 the State of New Mexico~~ FEDERAL per NATALIE @ CIMAREX. 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
Kinahan 20 Federal No. 3
Unit N Section 20
T15S R30E Chaves County, NM

Operator's Representative:

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

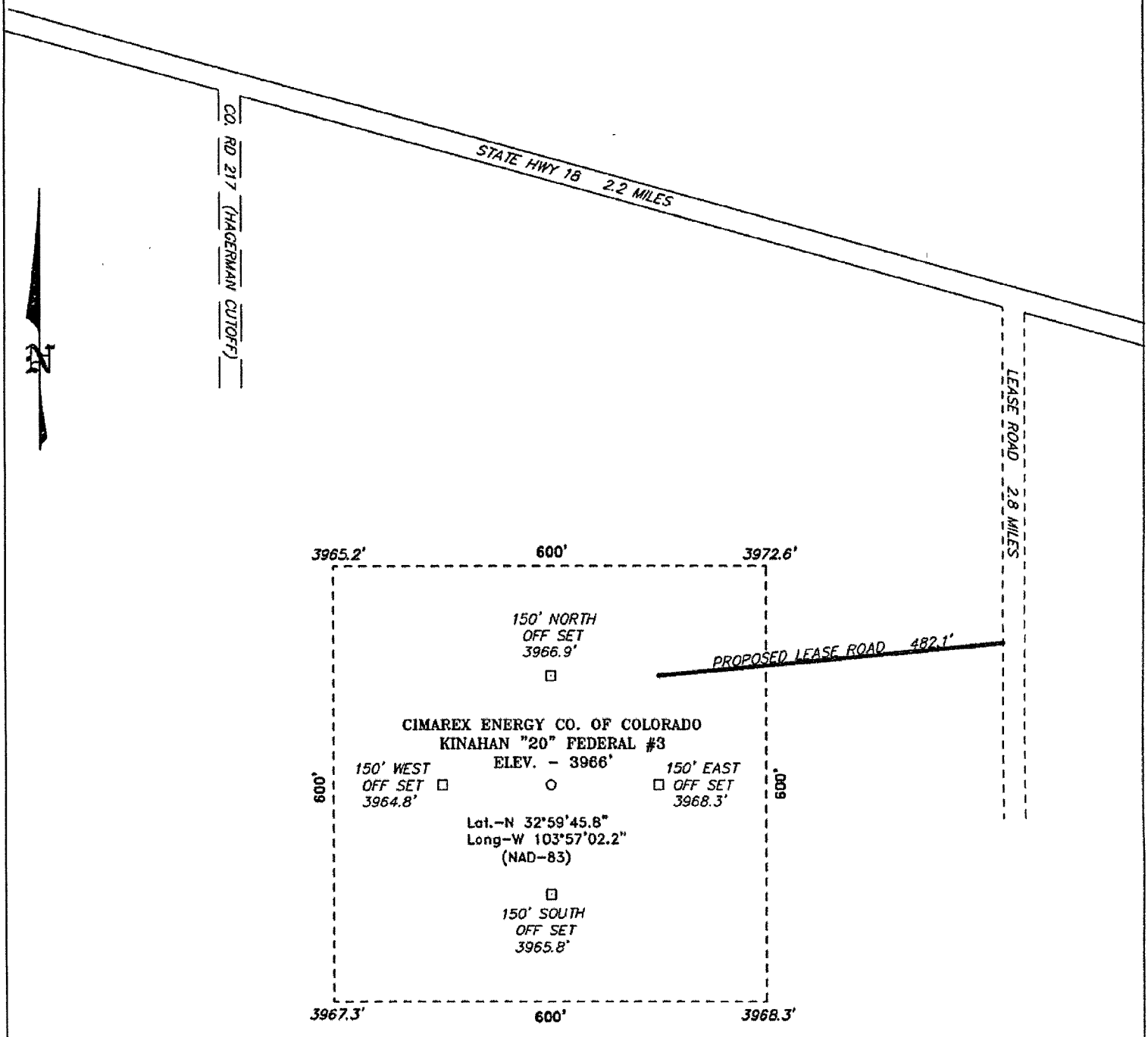
CERTIFICATION: I hereby certify that the statements and plans made in this APD are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed by Cimarex Energy Co. of Colorado and/or its contractors/subcontractors and is in conformity 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: February 19, 2008

TITLE: Manager Operations Administration

SECTION 20, TOWNSHIP 15 SOUTH, RANGE 30 EAST, N.M.P.M.,
CHAVES COUNTY, NEW MEXICO.



200 0 200 400 FEET

SCALE: 1" = 200'

Directions to Location:

FROM THE JUNCTION OF STATE HWY 81 AND CO. RD. 217 (HAGERMAN CUTOFF), PROCEED EAST ON STATE HWY 81 FOR 2.2 MILES TO LEASE ROAD, ON LEASE ROAD PROCEED SOUTH 2.8 MILES TO PROPOSED LEASE ROAD.

CIMAREX ENERGY CO. OF COLORADO

REF: KINAHAN "20" FEDERAL #3 / WELL PAD TOPO

THE KINAHAN "20" FEDERAL No. 3 LOCATED 660' FROM THE SOUTH LINE AND 1650' FROM THE WEST LINE OF SECTION 20, TOWNSHIP 15 SOUTH, RANGE 30 EAST, N.M.P.M., CHAVES COUNTY, NEW MEXICO.

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

W.O. Number: 17264	Drawn By: J. M. SMALL		
Date: 10-17-2006	Disk: JMS 17264W	Survey Date: 10-16-2006	Sheet 1 of 1 Sheets

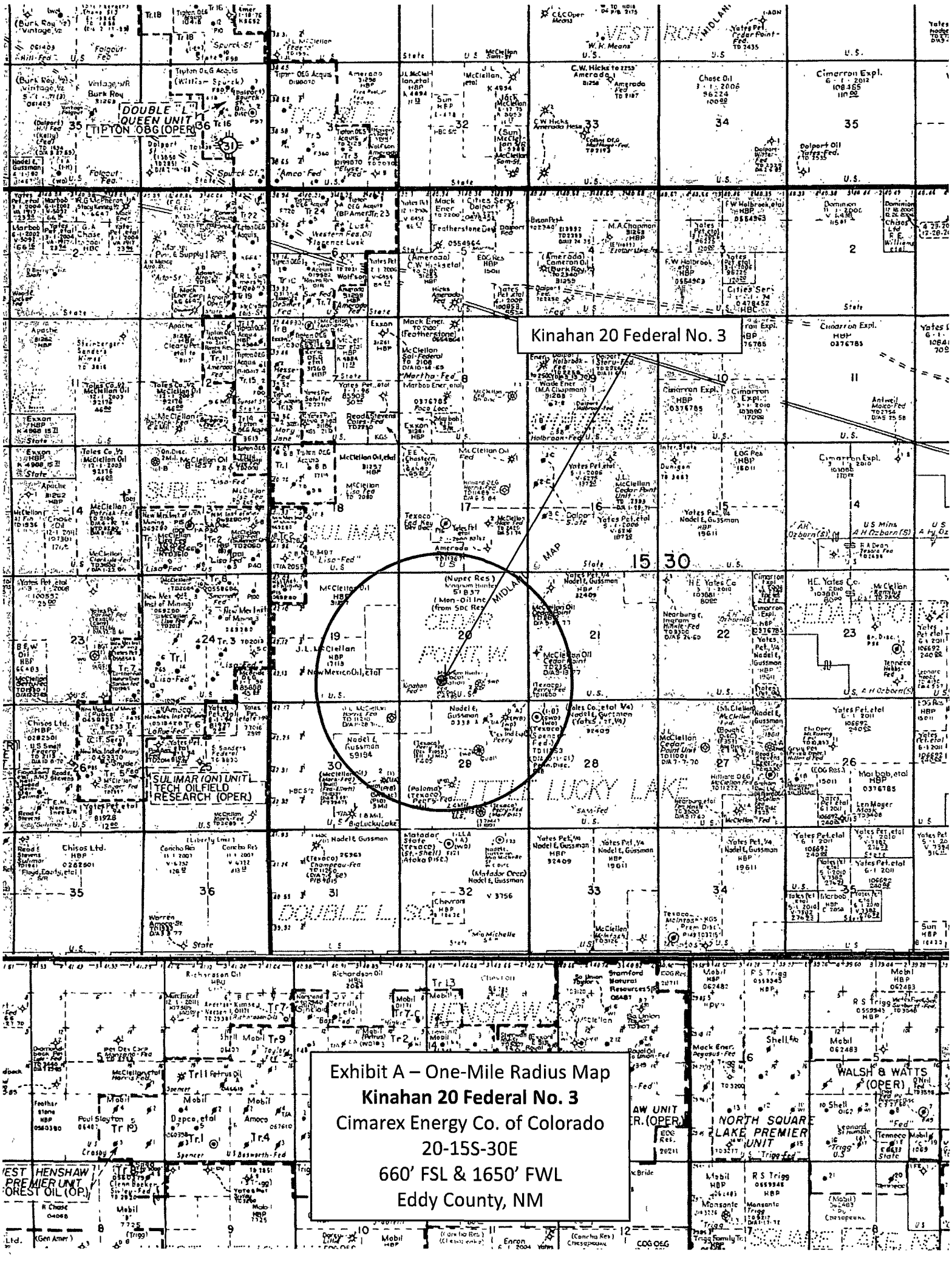


Exhibit A – One-Mile Radius Map

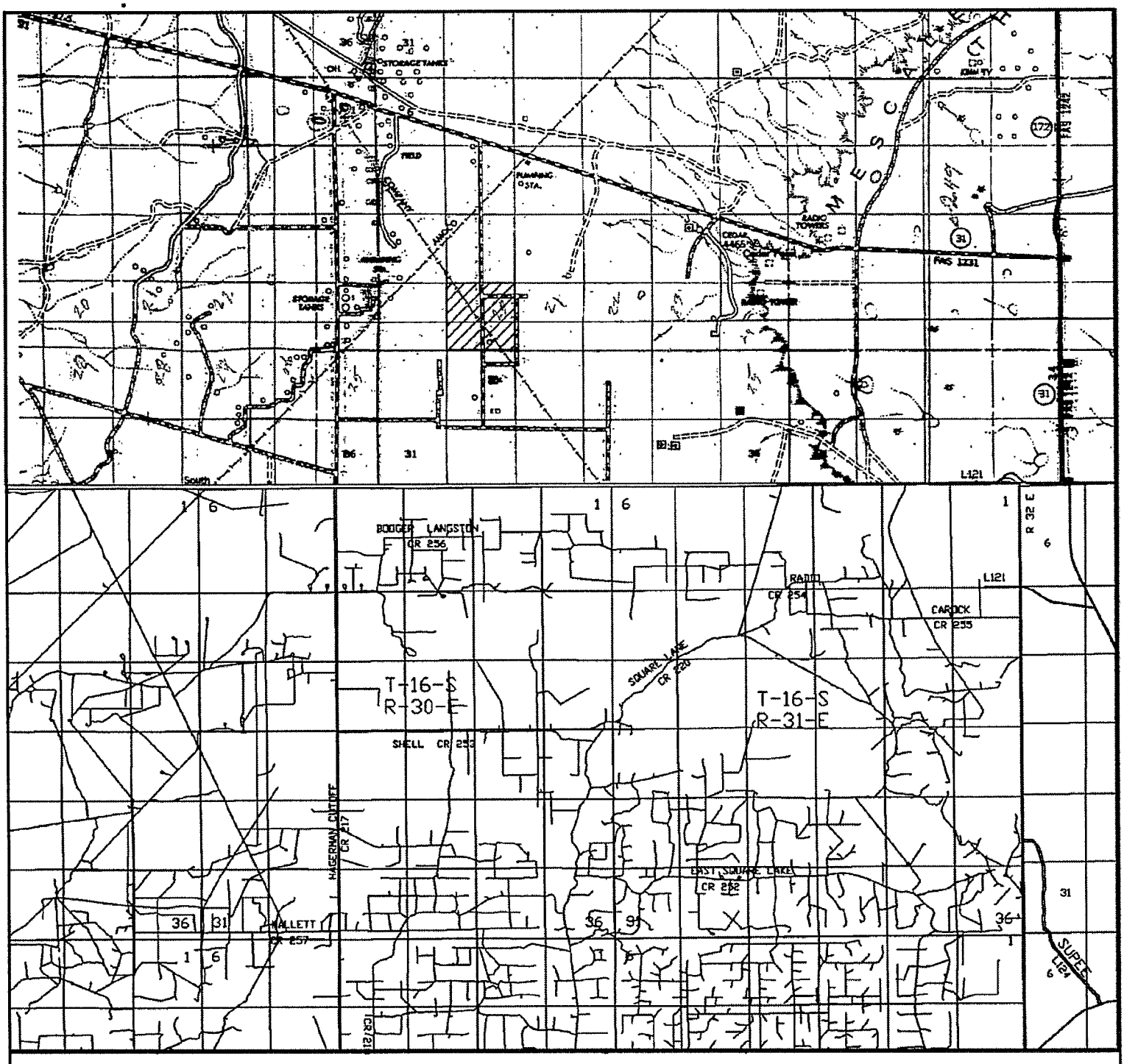
Kinahan 20 Federal No. 3

Cimarex Energy Co. of Colorado

20-15S-30E

660' FSL & 1650' FWL

Eddy County, NM



KINAHAN "20" FEDERAL #3
Located 660' FSL and 1650' FWL
Section 20, Township 15 South, Range 30 East,
N.M.P.M., Chaves County, New Mexico.

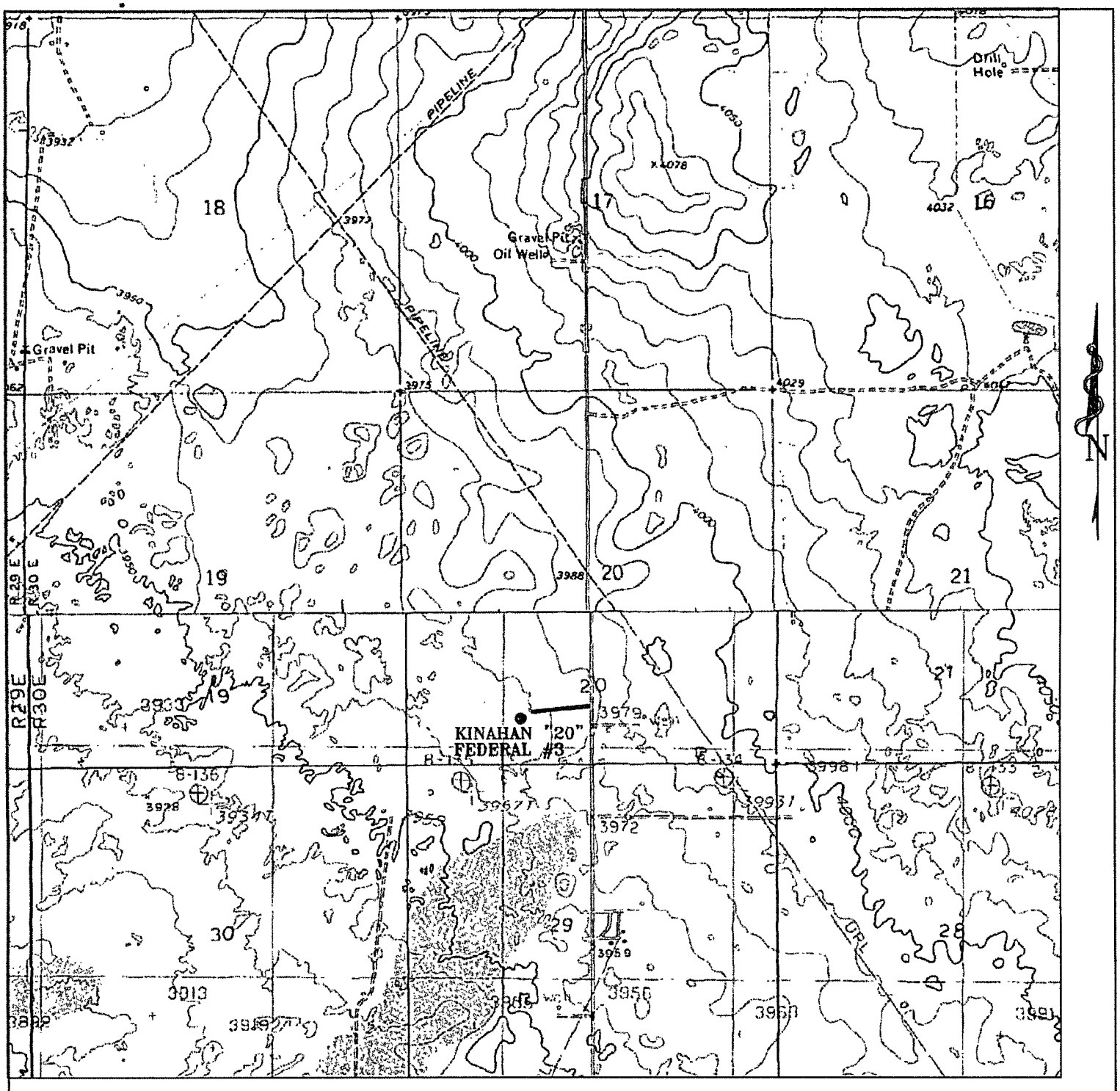
basin surveys
focused on excellence in the oilfield

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

W.O. Number:	JMS 17264T
Survey Date:	10-16-2006
Scale:	1" = 2 MILES
Date:	10-17-2006

CIMAREX ENERGY CO. OF COLORADO

Exhibit B



KINAHAN "20" FEDERAL #3
Located 660' FSL and 1650' FWL
Section 20, Township 15 South, Range 30 East,
N.M.P.M., Chaves County, New Mexico.

basin surveys
focused on excellence in the oilfield
P.O. Box 1786
1120 N. West County Rd.
Hobbs, New Mexico 88241
(505) 393-7316 - Office
(505) 392-3074 - Fax
basinsurveys.com

W.O. Number:	JMS 17264T
Survey Date:	10-16-2006
Scale:	1" = 2000'
Date:	10-17-2006

CIMAREX ENERGY CO. OF COLORADO

Exhibit C

Rig 75

Cimarex Energy Co. of Colorado

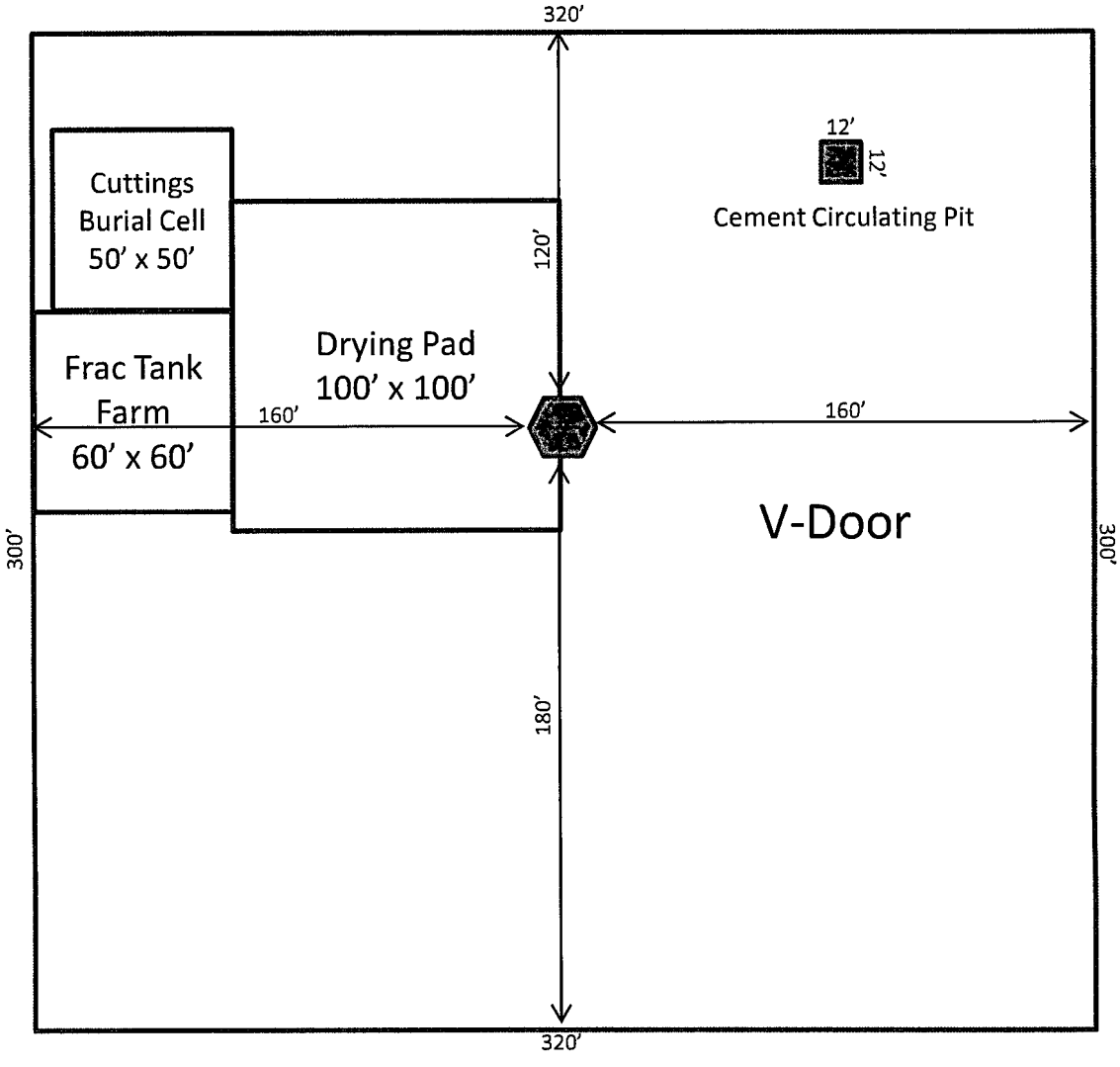


Exhibit D – Rig Layout
Kinahan 20 Federal No. 3
Cimarex Energy Co. of Colorado
20-15S-30E
660' FSL & 1650' FWL
Eddy County, NM

SR & A

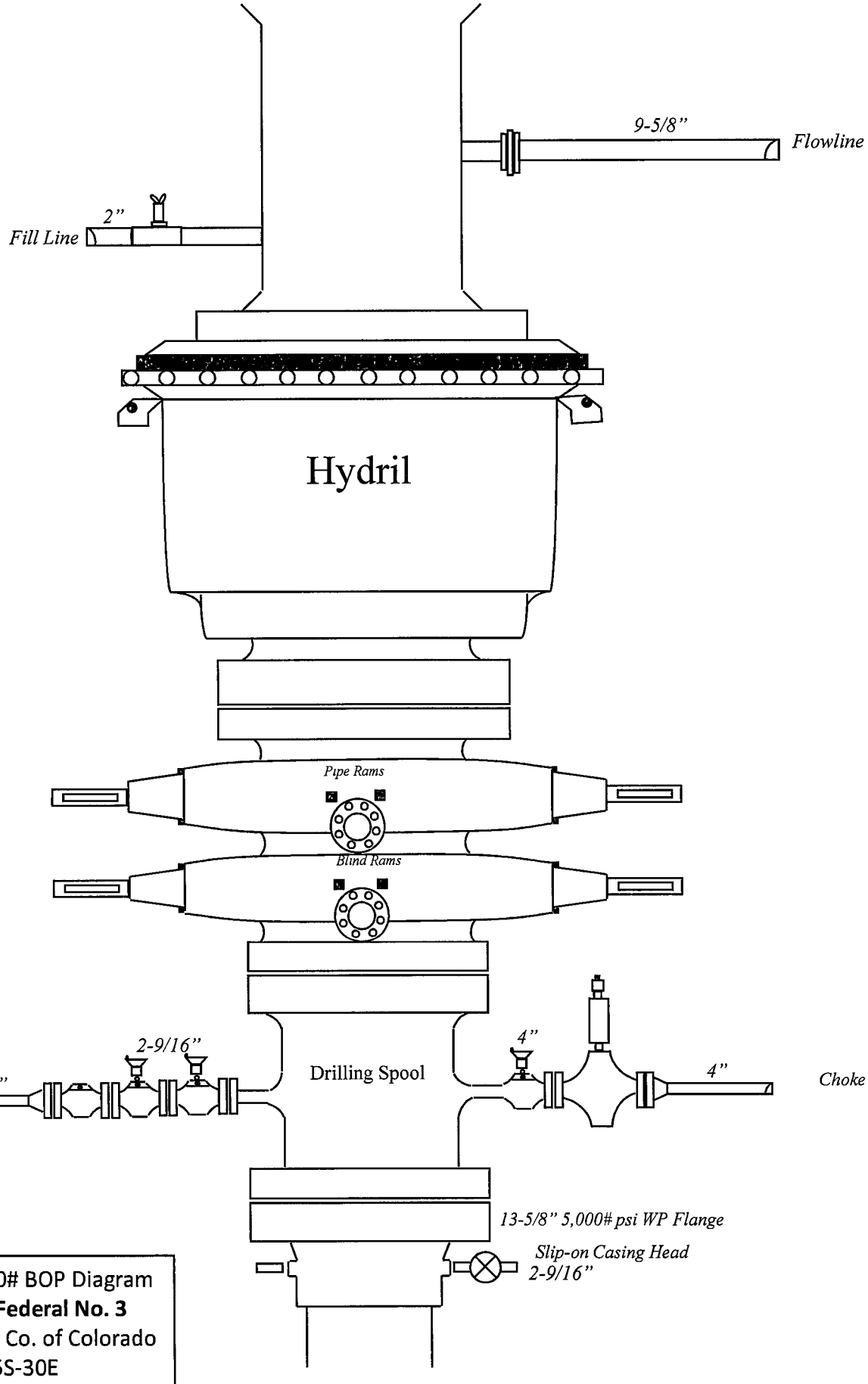


Exhibit E – 5000# BOP Diagram
Kinahan 20 Federal No. 3
Cimarex Energy Co. of Colorado
20-15S-30E
660' FSL & 1650' FWL
Eddy County, NM

DRILLING OPERATIONS
CHOKE MANIFOLD
5M SERVICE

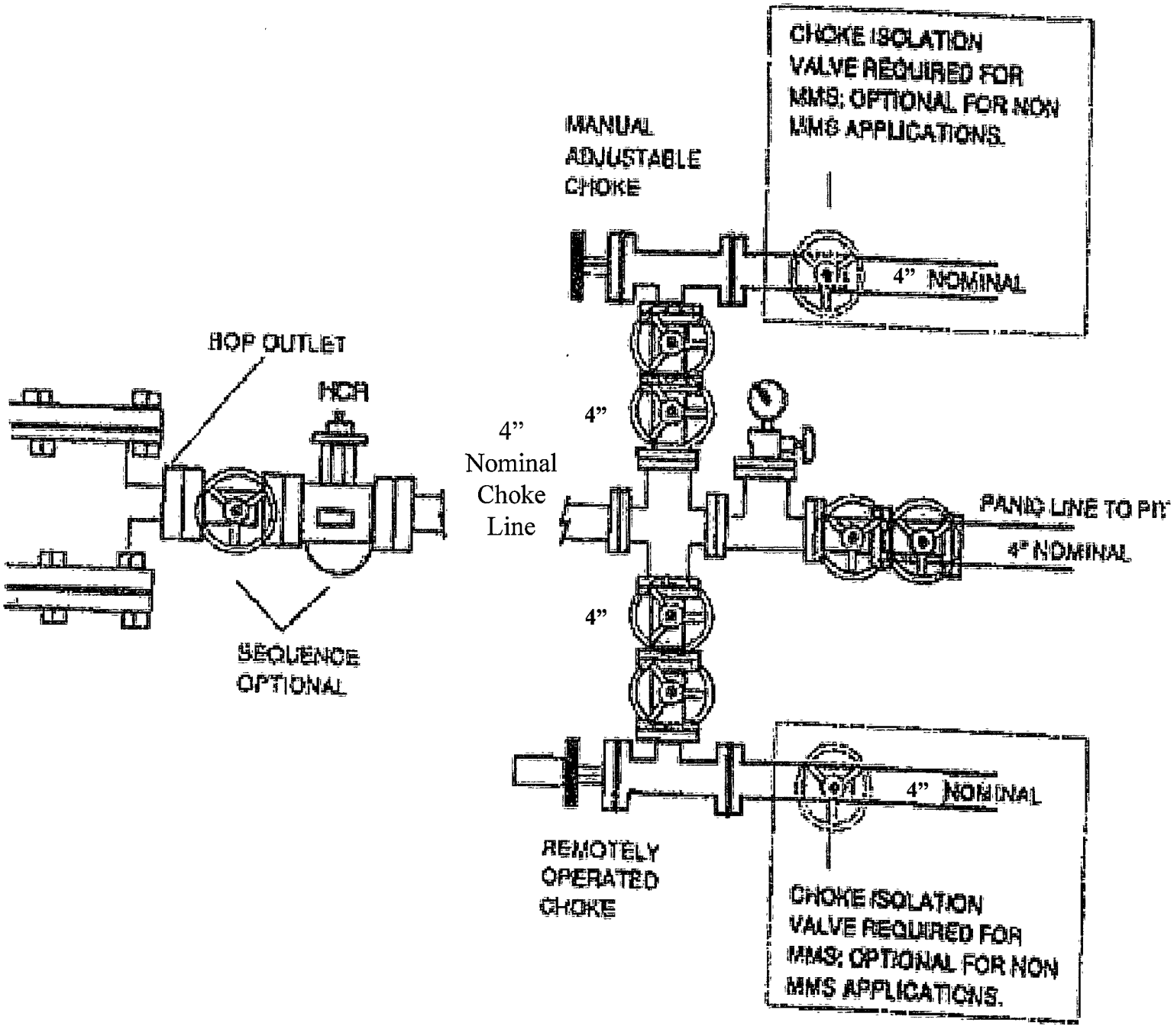
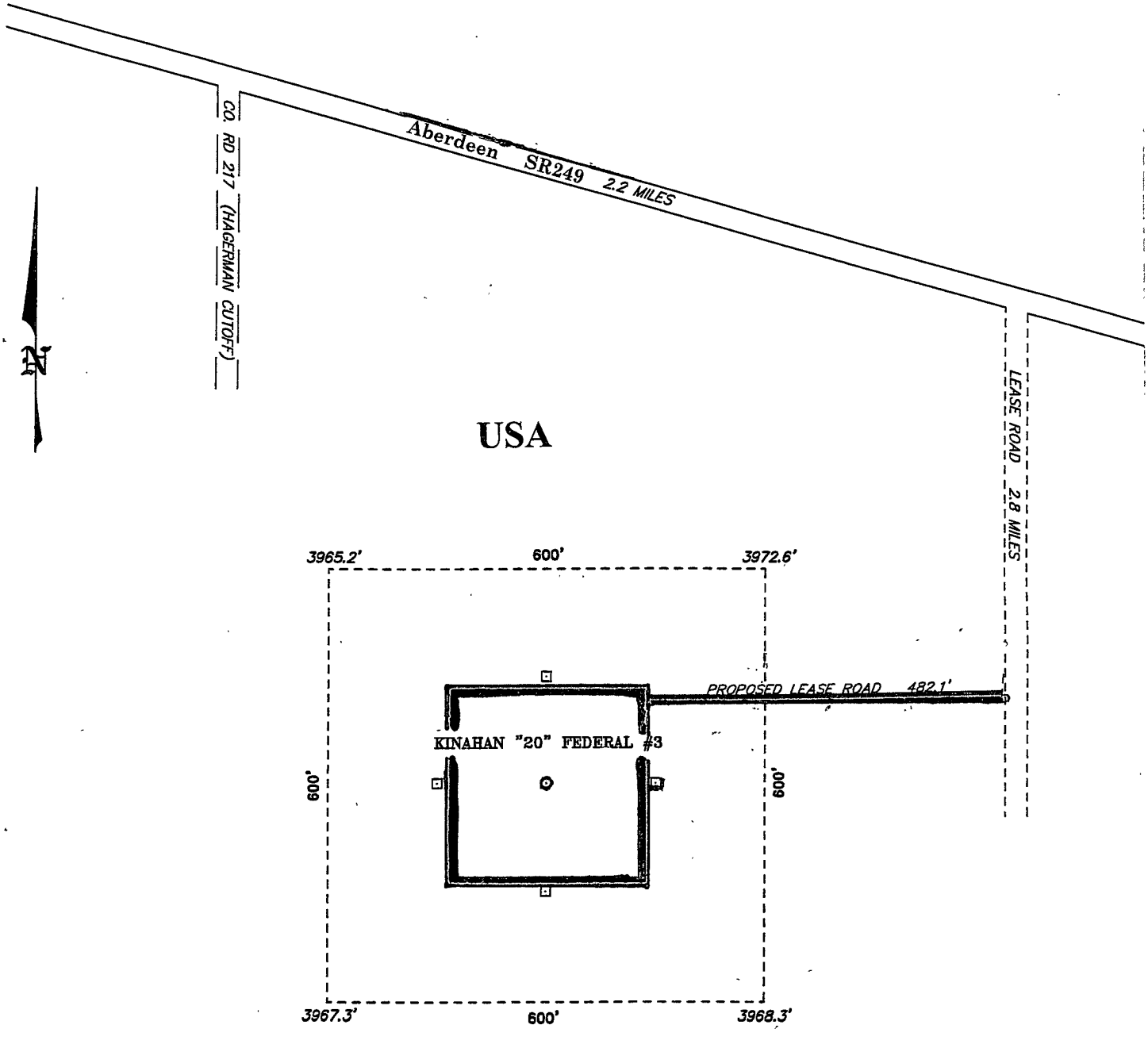


Exhibit E-1 – Choke Manifold Diagram
Kinahan 20 Federal No. 3
Cimarex Energy Co. of Colorado
20-15S-30E
660' FSL & 1650' FWL
Eddy County, NM

EXHIBIT A

OPERATORS NAME: **Cimarex Energy Co. of Colorado** LEASE NO.: **NM-51837**
WELL NAME & NO: **Kinahan "20" Federal #3**
QUARTER/QUARTER & FOOTAGE: **SE¼SW¼ - 660' FSL & 1650' FWL**
LOCATION: **Section 20, T. 15 S., R. 30 E.**
COUNTY: **Chaves County, New Mexico, NMPM**



PECOS DISTRICT - RFO
CONDITIONS OF APPROVAL

OPERATORS NAME: **Cimarex Energy Co. of Colorado**
LEASE NO.: **NM-51837**
WELL NAME & NO: **Kinahan "20" Federal #3**
SURFACE HOLE FOOTAGE: **660' FSL & 1650' FWL**
LOCATION: **Section 20, T. 15 S., R. 30 E., NMPM**
COUNTY: **Chaves County, New Mexico**

GENERAL PROVISIONS

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

I. PERMIT EXPIRATION

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

II. ARCHAEOLOGICAL, PALEONTOLOGY & HISTORICAL SITES

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

III. NOXIOUS WEEDS

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

IV. CONSTRUCTION

A. NOTIFICATION:

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

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

B. TOPSOIL:

The 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. The soil shall be stockpiled on the southeast corner of the well pad.

C. STEEL TANK REQUIREMENTS:

NO RESERVE PITS -Operator opted to use a closed system.

1. **The holder shall use steel tanks for drilling the well in lieu of reserve pits.** Steel tanks will help prevent the possibility of the drilling fluid leaching into the underground aquifers and reduce soil disturbance.

2. The steel tanks shall be constructed so as not to leak, break, or allow discharge of drilling muds. Under no circumstances shall the steel tanks be opened and allowed to drain drilling muds on the ground.

3. The steel tanks shall be equipped to deter entry by birds, bats, and other wildlife.

4. The holder shall dispose of drilling muds and cuttings at an authorized disposal site. No drilling muds and/or cuttings shall be dumped on location.

D. FEDERAL MINERAL MATERIALS PIT:

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

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

E. WELL PAD SURFACING:

Surfacing of the well pad is not required.

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

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

F. ON LEASE ACCESS ROADS:

Road Egress and Ingress

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

Road Width

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

Surfacing

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

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

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

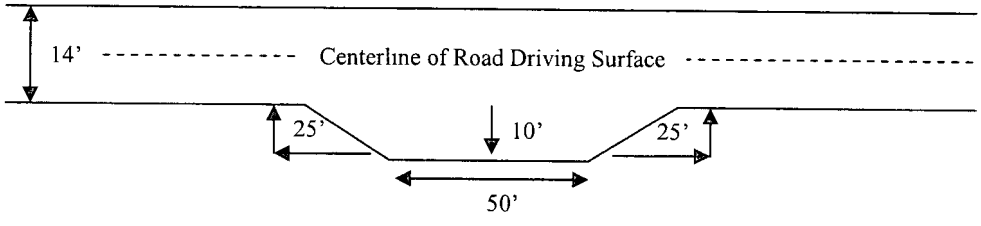
Crowning

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

Turnouts

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

Standard Turnout – Plan View

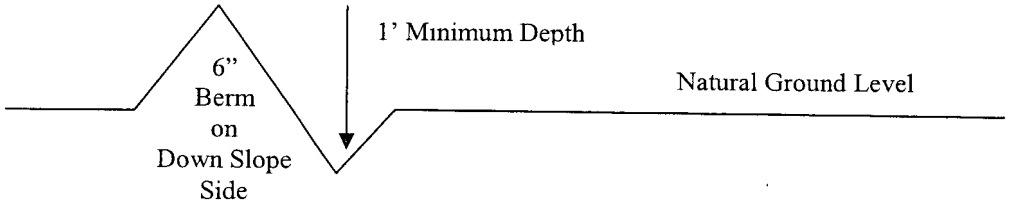


Drainage

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

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

Cross Section of Typical Lead-off Ditch



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

Formula for Spacing Interval Of Lead-off Ditches

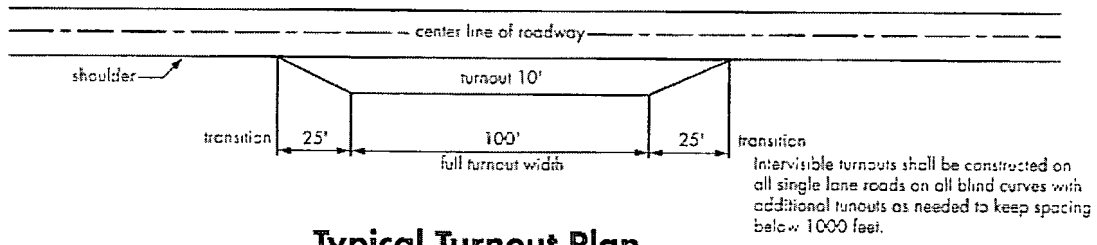
Example - On a 4% road slope that is 400 feet long, the water flow shall drain water into a lead-off ditch. Spacing interval shall be determined by the following formula:

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

Public Access

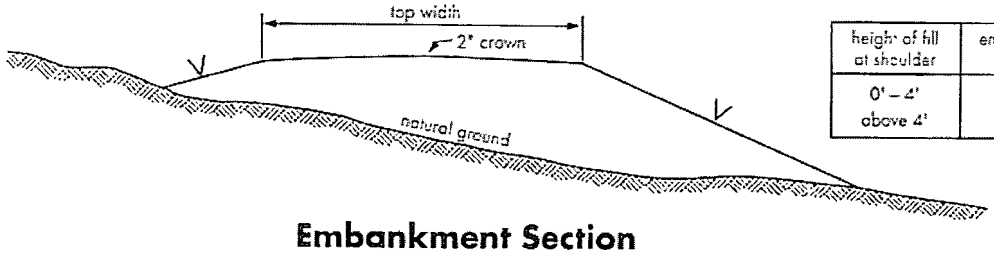
Public access on this road shall not be restricted by the operator without specific written approval granted by the Authorized Officer.

Figure 1 – Cross Sections and Plans For Typical Road Sections



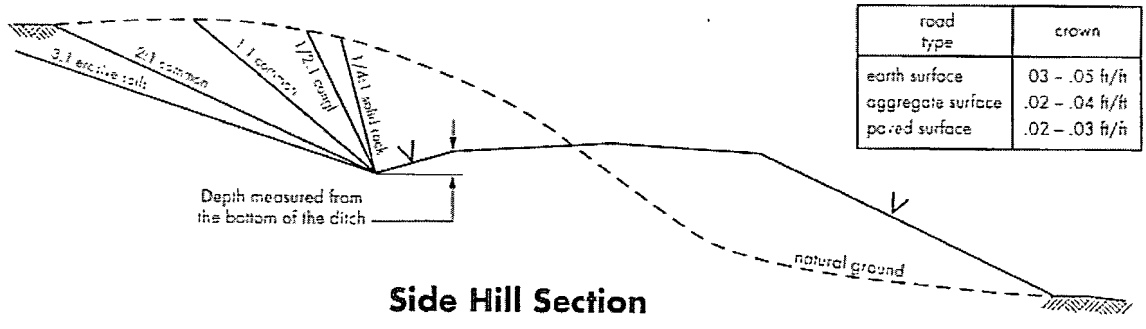
Intervisible turnouts shall be constructed on all single lane roads on all blind curves with additional turnouts as needed to keep spacing below 1000 feet.

Typical Turnout Plan



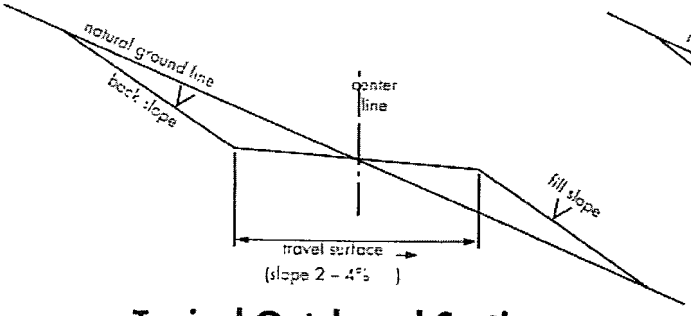
height of fill at shoulder	embankment slope
0' – 4'	3:1
above 4'	2:1

Embankment Section

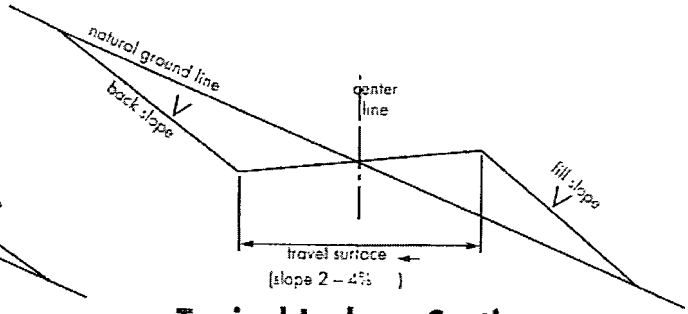


road type	crown
earth surface	03 – .05 ft/ft
aggregate surface	.02 – .04 ft/ft
paved surface	.02 – .03 ft/ft

Side Hill Section



Typical Outsloped Section



Typical Inslope Section

V. DRILLING

A. DRILLING OPERATIONS REQUIREMENTS

1. Call the BLM Roswell Field Office, 2909 West Second Street, Roswell, NM 88201. 24 hours call (575) 627-0205.

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

A. Spudding

B. Cementing casing: **13 ⅜** inch; **9 ⅝** inch; **5 ½** inch.

C. BOP Tests

2. A Hydrogen Sulfide (H2S) Drilling Plan is not required for this wellbore.

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

4. Submit a Sundry Notice (Form 3160-5, one original and five copies) for each casing string, describing the casing and cementing operations. Include pertinent information such as; spud date, hole size, casing (size, weight, grade and thread type), cement (type, quantity and top), water zones and problems or hazards encountered. The Sundry shall be submitted within 15 days of completion of each casing string. The reports may be combined into the same Sundry if they fall within the same 15 day time frame.

5. The API No. assigned to the well by NMOCD shall be included on the subsequent report of setting the first casing string.

B. CASING

1. The **13 ⅜** inch shall be set at **430 Feet** with cement circulated to the surface. If cement does not circulate to the surface the appropriate BLM office shall be notified and a temperature survey or cement bond log shall be run to verify the top of the cement. Remedial cementing shall be completed prior to drilling out that string.

2. The minimum required fill of cement behind the **9 ⅝** inch Intermediate casing is to **3,000** .

3. The minimum required fill of cement behind the **5 ½** inch Production casing is to **10,900** .

C. PRESSURE CONTROL

1. All BOP systems and related equipment shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2.

The BOP and related equipment shall be installed and operational before drilling below the 13 ⅜ inch casing shoe and shall be tested as described in Onshore Order No. 2. Any equipment failing to test satisfactorily shall be repaired or replaced.

2. Minimum working pressure of the blowout preventer and related equipment (BOPE) shall be **3 M psi.**

3. The appropriate BLM office shall be notified in sufficient time for a representative to witness the test.

-The test shall be done by an independent service company
-The results of the test shall be reported to the appropriate BLM office.
-Testing fluid must be water or an appropriate clear liquid suitable for sub-freezing temperatures.
-Use of drilling mud for testing is not permitted since it can mask small leaks.
-Testing must be done in safe workman-like manner. Hard line connections shall be required.
-Both low pressure and high pressure testing of BOPE is required.

VI. PRODUCTION

A. WELL STRUCTURES & FACILITIES

Placement of Production Facilities

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

Containment Structures

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

Painting Requirement

All above-ground structures including meter housing that are not subject to safety requirements shall be painted a flat non-reflective paint color, Olive Drab, Munsell Soil Color Chart 18-0622 TPX.

VII. INTERIM RECLAMATION

The operator opted to use the closed system for drilling. Steel tanks are required for drilling operations: No Pits Allowed.

A. INTERIM RECLAMATION

If the well is a producer, interim reclamation shall be conducted on the well site in accordance with the orders of the Authorized Officer.

The operator shall submit a Sundry Notices and Reports on Wells (Notice of Intent), Form 3160-5, prior to conducting interim reclamation.

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

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

The operator 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.

The following seed mixture to be planted in pounds of pure live seed per acre:

Common Name and Preferred Variety	Scientific Name	Pounds of Pure Live Seed Per Acre
Sand bluestem,	(*Andropogon hallii)*	0.50 lb.
Little bluestem var. Pastura	(*Schizachyrium scoparium)*	0.50 lb.
Sideoats grama, var. Vaughn or El Reno	(*Bouteloua curtipendula)*	1.5 lbs.
Sand dropseed	(*Sporobolus cryptandrus)*	0.50 lb.
Spike dropseed	(Sporobolus contractus)	0.50 lb.
Mesa dropseed	(Sporobolus flexuosus)	0.50 lb.
Plains bristlegrass	(*Setaria macrostachya)*	2.00 lbs.
Desert or Scarlet Globemallow	(*Sphaeralcea ambigua*) or (*S. coccinea)*	0.50 lb.
Buckwheat	(*Eriogonum* spp.)	1.50 lbs.
TOTAL POUNDS PURE LIVE SEED PER ACRE		8.00 lbs.

If one species is not available, increase ALL others proportionately. The seed mixture shall be certified weed free seed. No less than six (6) species with the minimum of one (1) forb. No less than 8.0 pounds per acre shall be applied.

VIII. 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.

VIII. SPECIAL REQUIREMENT:

A. Lesser Prairie Chicken Stipulation:

The Roswell Approved Resource Management Plan and Record Of Decision addresses the preservation of the Lesser prairie chicken wildlife habitat.

1. There shall be no earthmoving construction activities, well exploratory and/or developmental drilling, well completion, plugging and abandonment activities, **between March 15th through June 15th**, of each year. During that period, other activities, including the operation and maintenance of oil and gas facilities, will not be allowed between **3:00 a.m.** and **9:00 a.m.**. To the extent practicable, activities occurring for a short period of time may be conducted so long as they do not commence until after **9:00 A.M.**. Any deviation from this stipulation must be approved in writing by the Roswell Field Office Manager or the appropriate Authorized Officer.

2. All motors or engines that produce high noise levels shall have mufflers installed that effectively reduce excessive noise levels within prairie chicken habitat. High noise levels produced by motors or engines shall be reduced and muffled so as not to exceed 75 db measured at 30 feet from the source of the noise.

3. Upon abandonment of the well, reclamation activities can be conducted between March 15th through June 15th, so long as reclamation work shall not be conducted between the hours of **3:00 AM** to **9:00 AM**. Any deviation from this requirement shall require prior approval by the Authorized Officer.

4. In an emergency situation, the Authorized Officer can allow a pit to be constructed for the purpose of collecting crude oil for removal. To prevent wildlife from entering the pit, netting of adequate size to deter access by wildlife shall cover the pit until it is no longer a threat to wildlife, and the pit is reclaimed.