ATS-08-200

OCD-ARTESIA

207

Form 3160-3
(April 2004)

RESUBMITTAL

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

JAN 15 2008
OCD-ARTESIA

APPLICATION FOR PERMIT TO DRILL OR REENTER

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

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

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

2 Name of Operator
Cimarex Energy Co. of Colorado

3a. Address
PO Box 140907
Irving, TX 75014

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

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*
At Surface 660' FNL & 660' FWL
At proposed prod Zone Carlsbad Controlled Water Basin

5. Lease Serial No.
NM-110348

6. If Indian, Allotee or Tribe Name

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

8. Lease Name and Well No
Merganser 6 Federal Com No. 1

9. API Well No
30-015- 36045

10 Field and Pool, or Exploratory
Chosa Draw; Morrow

11 Sec., T. R M or Blk. and Survey or Area
6-25S-27E

14 Distance in miles and direction from nearest town or post office*
17 miles South of Carlsbad

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)	16. No of acres in lease	17. Spacing Unit dedicated to this well
660'	310.91	N2 312.55
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**
N/A	12450'	NM-2575
21 Elevations (Show whether DF, KDB, RT, GL, etc.)	**22 Approximate date work will start***	**23. Estimated duration**
3337' GR	2/1/2008	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	Name *(Printed/Typed)*	Date
Zeno Farris	Zeno Farris	11.26.07

Title
Manager, Operations Administration

Approved By *(Signature)*	Name (Printed/Typed)	Date
/S/ DAVID D. EVANS	/S/ DAVID D. EVANS	JAN 11 2008
Title /S/ DAVID D. EVANS 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 APPROVAL

APPROVAL 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

OIL CONSERVATION DIVISION
1220 SOUTH ST. FRANCIS DR.
Santa Fe, New Mexico 87505

Form C-102
Revised JUNE 10, 2003
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number	Pool Code	Pool Name
	74900	Chosa Draw; Morrow

Property Code	Property Name	Well Number
35355	MERGANSER 6 FEDERAL COM	1

OGRID No.	Operator Name	Elevation
162683	CIMAREX ENERGY CO. OF COLORADO	3337'

Surface Location

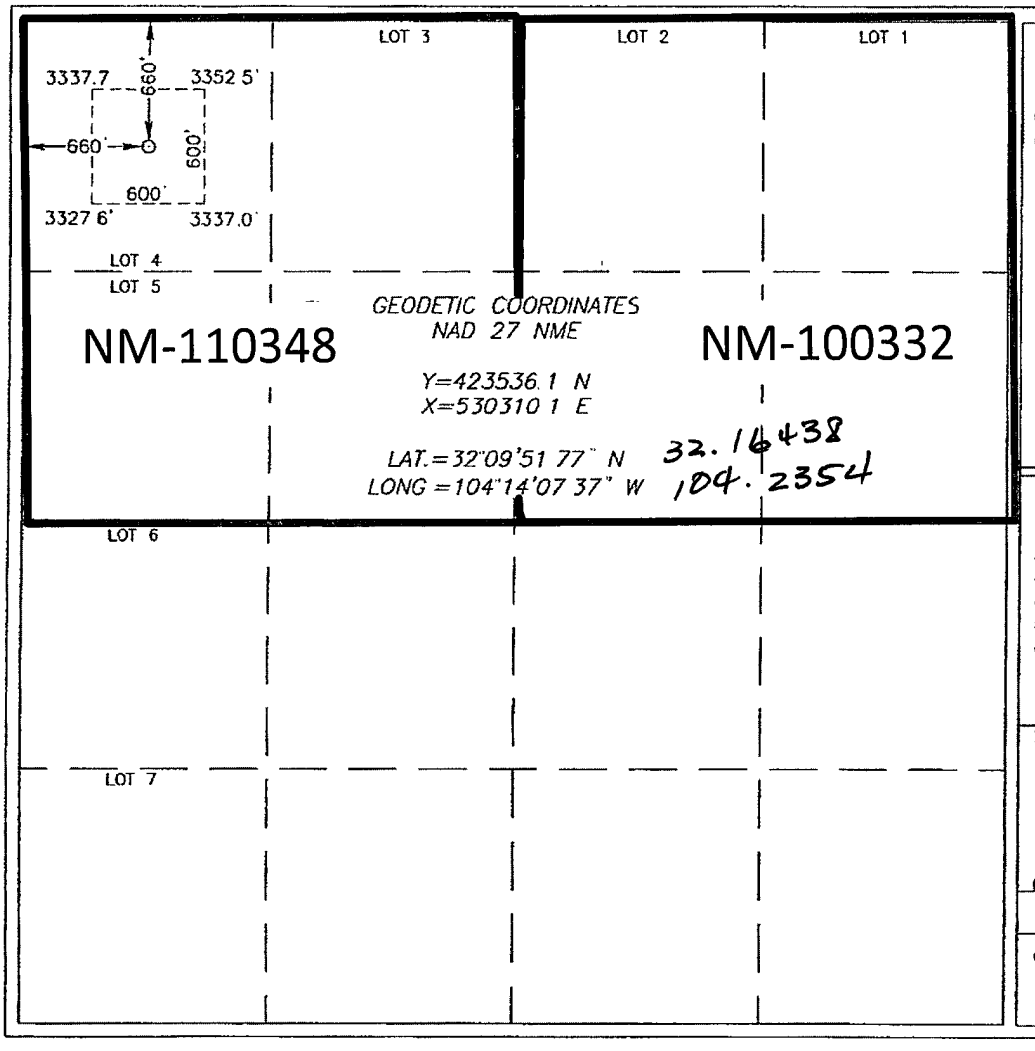
Ul or lot No	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
4	6	25-S	27-E		660	NORTH	660	WEST	EDDY

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

Dedicated Acres	Joint or Infill	Consolidation Code	Order No
312.55		P	

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 the the information contained herein is true and complete to the best of my knowledge and belief.

Zeno Farris
Signature

Zeno Farris
Printed Name

Manager Operations Admin
Title

11-26-07
Date

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 20, 2005
Date Surveyed JR

Signature & Seal of Professional Surveyor

RONALD J. EIDSON
NEW MEXICO
REGISTERED PROFESSIONAL SURVEYOR

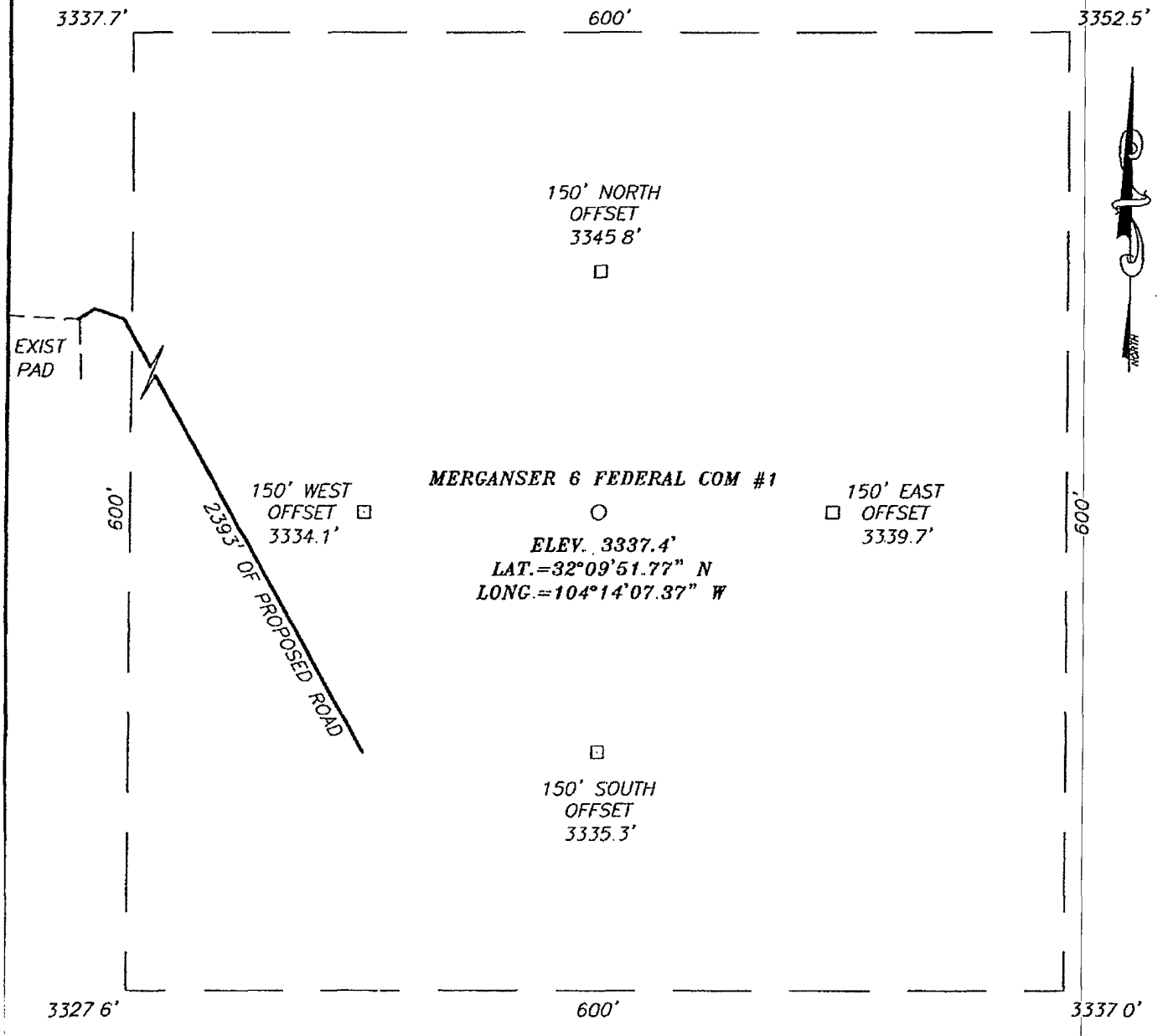
10/25/05

05.11.1645

Certificate No. RONALD J. EIDSON 3239

SECTION 6, TOWNSHIP 25 SOUTH, RANGE 27 EAST, N.M.P.M.,

EDDY COUNTY, NEW MEXICO



DIRECTIONS TO LOCATION

FROM THE INTERSECTION OF CO. RD. #720 (BLACK RIVER VILLAGE) AND CO. RD. #742 (JOHN C. FOREHAND) GO SOUTH ON CO. RD .#742 FOR APPROX 3.9 MILES TO A CALICHE ROAD ON THE RIGHT. TURN RIGHT (WEST) AND GO APPROX. 0.8 MILES TURN LEFT (SW) AND GO APPROX. 1.1 MILES TURN LEFT (SOUTH) AND GO APPROX. 0.2 MILES. TURN LEFT (SE) AND GO APPROX. 0.6 MILES, VEER LEFT (SE) AND GO APPROX. 0.4 MILES. TURN LEFT (NORTH) AND GO APPROX 0.3 MILES TO THE NWc OF PAD FOR THE MARQUARDT 1 FED #2 WELL. FOLLOW PROPOSED ROAD SURVEY FORM THE NWc OF PAD APPROX 0.4 MILES TO THIS LOCATION.

100 0 100 200 Feet

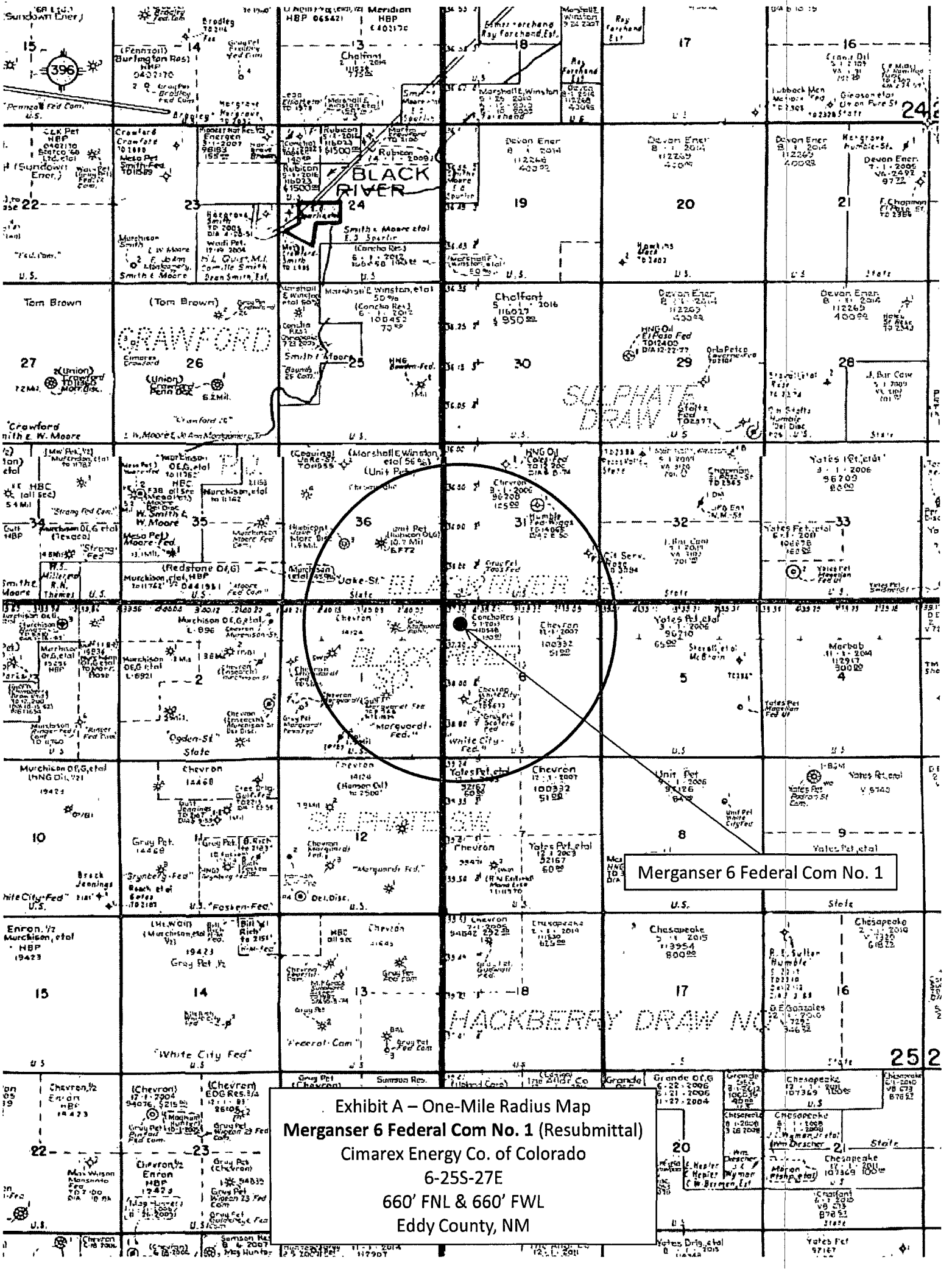
Scale:1"=100'

PROVIDING SURVEYING SERVICES
SINCE 1946
JOHN WEST SURVEYING COMPANY
412 N. DAL PASO
HOBBS, N.M. 88240
(505) 393-3117

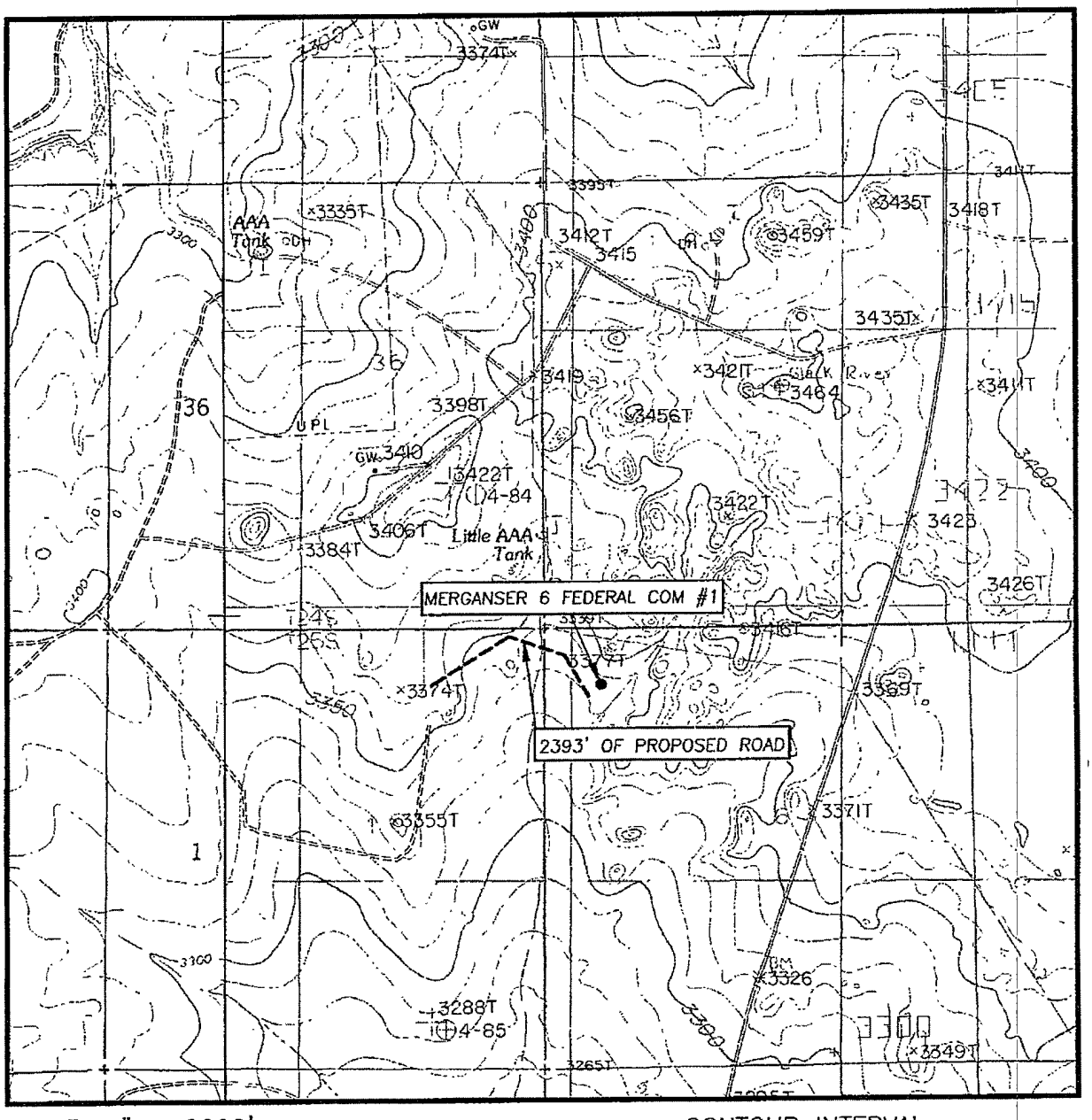
CIMAREX ENERGY CO. OF COLORADO

MERGANSER 6 FEDERAL COM #1 WELL
LOCATED 660 FEET FROM THE NORTH LINE
AND 660 FEET FROM THE WEST LINE OF SECTION 6,
TOWNSHIP 25 SOUTH, RANGE 27 EAST, N.M.P.M.,
EDDY COUNTY, NEW MEXICO

Survey Date: 10/20/05	Sheet 1 of 1 Sheets		
W.O. Number: 05.11.1645	Dr By. J.R.	Rev 1: N/A	
Date: 10/24/05	Disk. CD#5	05111645	Scale:1"=100'


Merganser 6 Federal Com No. 1
BLACK RIVER
CRAWFORD
SULPHATE DRAW
HACKBERRY DRAW NORTH
Exhibit A – One-Mile Radius Map
Merganser 6 Federal Com No. 1 (Resubmittal)
Cimarex Energy Co. of Colorado
6-25S-27E
660' FNL & 660' FWL
Eddy County, NM

LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

CONTOUR INTERVAL:
BOND DRAW, N.M. – 10'
BLACK RIVER VILLAGE, N.M – 20'

SEC. 6 TWP. 25-S RGE 27-E

SURVEY N.M.P.M.

COUNTY EDDY

DESCRIPTION 660' FNL & 660' FWL

ELEVATION 3337'

OPERATOR CIMAREX ENERGY CO. OF COLORADO

LEASE MERGANSER 6 FEDERAL COM

U.S.G.S. TOPOGRAPHIC MAP
BOND DRAW, N.M.

PROVIDING SURVEYING SERVICES SINCE 1946
JOHN WEST SURVEYING COMPANY
412 N. DAL PASO
HOBBS, N.M. 88240
(505) 393-3117

Application to Drill
Cimarex Energy Co. of Colorado
Merganser 6 Federal Com No. 1 Resubmittal
Lot 4 Section 6
T25S R27E 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: 660' FNL & 660' FWL

2 Elevation above sea level: 3337' 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: 12450'

6 Estimated tops of geological markers:

Base Salt	1,911'	Cisco-Canyon	10,224'
Delaware	2,109'	Strawn	10,405'
Bone Spring	5,617'	Atoka	10,588'
1st Bone Spring Ss	6,553'	Morrow	11,190'
2nd Bone Spring Ss	7,068'	Middle Morrow	11,561'
3rd Bone Spring Ss	8,437'	Lower Morrow	11,869'
Wolfcamp	8,760'		

7 Possible mineral bearing formation:

Morrow	Gas	Primary
Atoka	Gas	
Delaware	Oil	

8 Proposed Mud Circulating System:

Depth	Mud Wt	Visc	Fluid Loss	Type Mud
0' to 300'	8.4 - 8.6	28-36	May lose circ	FW spud mud
300' to 2600'	10.0	28-29	May lose circ	Brine water
2600' to 12450'	8.4 - 9.4	28-46	NC	Fresh water & brine

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.

Application to Drill
Cimarex Energy Co. of Colorado
Merganser 6 Federal Com No. 1 Resubmittal
Lot 4 Section 6
T25S R27E Eddy County, NM

9 Casing & Cementing Program:

Hole Size	Depth			Casing OD		Weight	Thread	Collar	Grade
17-1/2"	0	to	300'	New	13-3/8"	48#	8-R	STC	H-40
12-1/4"	0	to	2600'	New	9-5/8"	40#	8-R	LTC	J-55
7-7/8"	0	to	12450'	New	4-1/2"	11.6#	8-R	LTC	P-110

10 Cementing & Setting Depth:

13-3/8" **Surface** Set 300' of 13-3/8" 48# H-40 STC
340 sx Premium Plus Class C Type III + 2% CaCl (wt 14.8 ppg, yld 1.34 cuftsx)
TOC Surface

9-5/8" **Intermediate** Set 2600' of 9-5/8" 40# J-55 LTC
Lead: 925 sx Interfill C + 0.125 lbm Poly-E-Flake (wt 11.9 ppg, yld 2.45 cuftsx)
Tail: 200 sx Premium Plus + 1% CaCl (wt 14.8ppg, yld 1.34 cuftsx)
TOC Surface

4-1/2" **Production** Set 12450' of 4-1/2" 11.6# P-110 LTC
Lead: 650 sx Interfill H + 0.25% HR-7 + 5 lb/sk Gilsonite + 0.25 lb/sk Flocele (wt 11.9 ppg, yld 2.47 cuftsx)
Tail: 370 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 cuftsx)
TOC 1600'

Fresh water will be protected by setting 13-3/8" casing at 300' and cementing to Surface
Hydrocarbon zones will be protected by setting 9-5/8" casing at 2600' and cementing to Surface
and by setting 4-1/2" casing at 12450' and cementing to 1600'

Cimarex uses the following minimum safety factors:

Burst	Collapse	Tension
1.125	1.0	1.80

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 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 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 2600' to TD
B. Electric logging program: CNL / LDT / CAL / GR, DLL / CAL / GR
C. Approximately 15 RFTs are planned from 10588'-12350.'

13 Potential Hazards:

No abnormal pressures or temperatures are expected. The area has a potiential 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.

BHP and BHT based on past RFT tests which indicate low of 4000 psi and high of 5000 psi for wells drilled in area. Pressures in Wolfcamp/Cisco zone depend on porosity of zone. Low porosity is the norm. Highest observed pressure gradient while drilling through higher porosity Wolfcamp/Cisco zones is 0.57 psi per foot. Normal observed pressure gradient in more common lower porosity Wolfcamp/Cisco zones are 0.5 psi per foot.

Estimated BHP **4500 psi** Estimated BHT **185**

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.
Morrow pay will be perforated and stimulated.
The proposed well will be tested and potentialed as **a gas well**

See COA

Rig 80

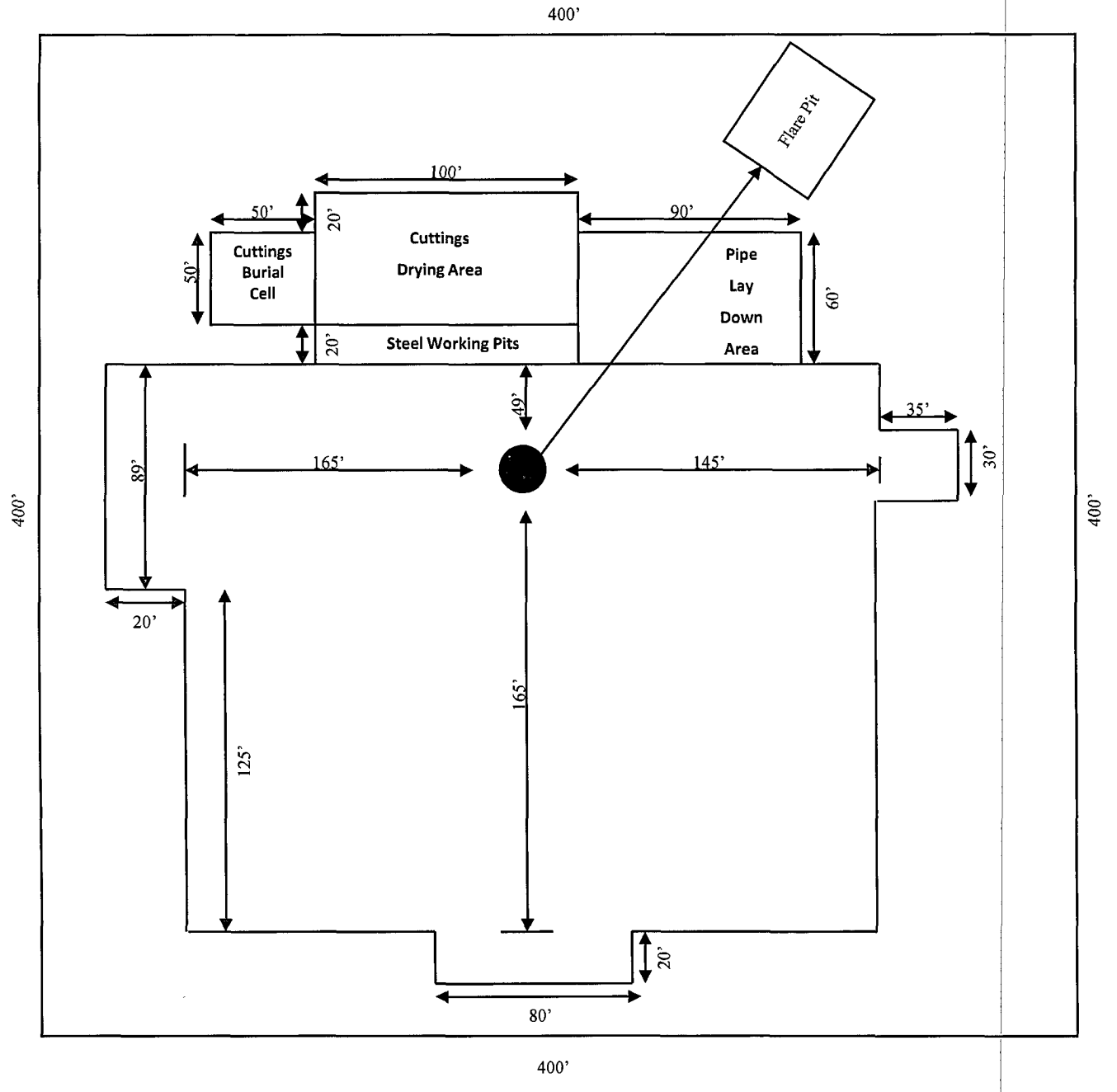


Exhibit D – Rig Layout
Merganser 6 Federal Com No. 1 (Resubmittal)
Cimarex Energy Co. of Colorado
6-25S-27E
660' FNL & 660' FWL
Eddy County, NM

SR & A

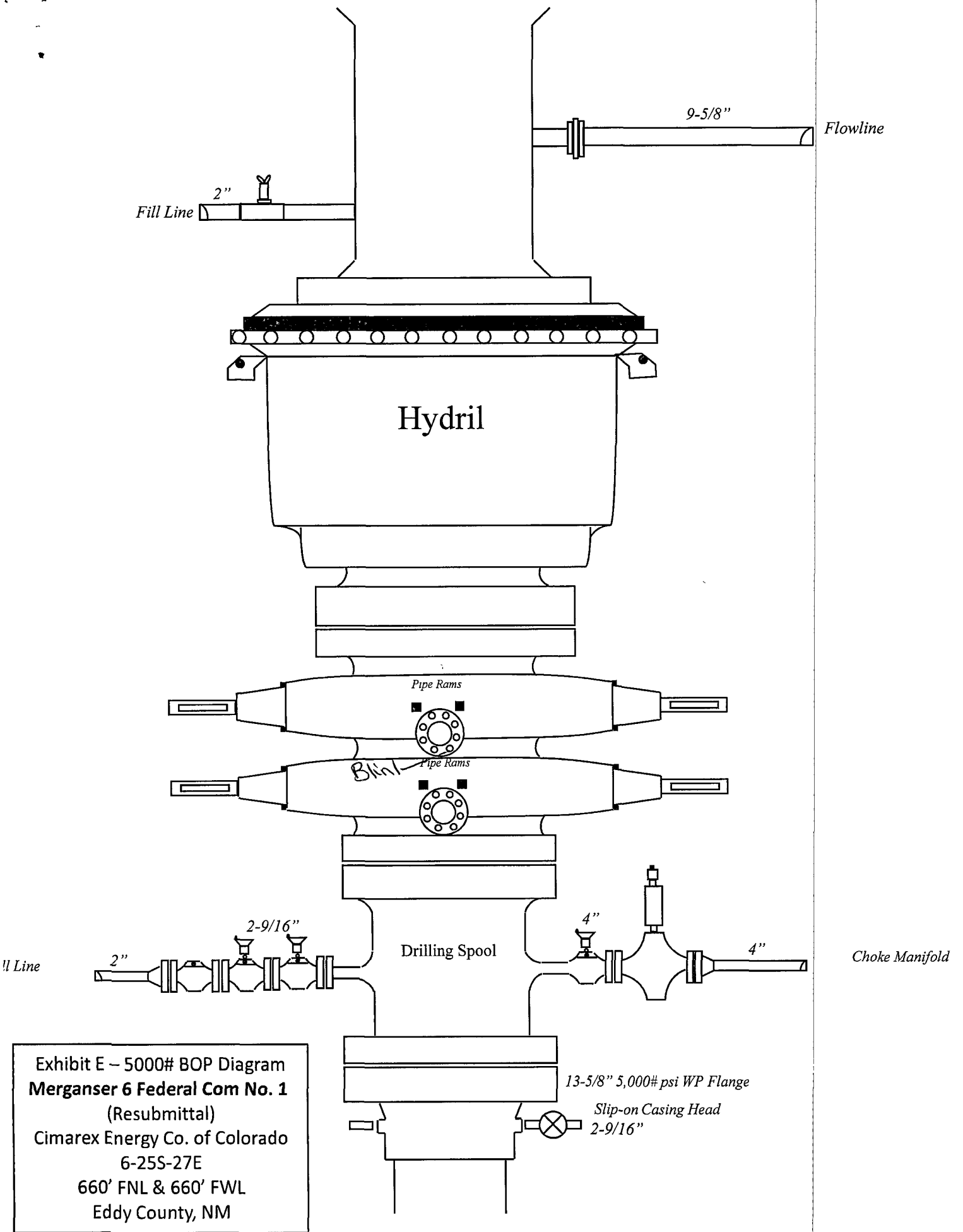


Exhibit E – 5000# BOP Diagram
Merganser 6 Federal Com No. 1
(Resubmittal)
Cimarex Energy Co. of Colorado
6-25S-27E
660' FNL & 660' FWL
Eddy County, NM

DRILLING OPERATIONS
CHOKE MANIFOLD
5M SERVICE

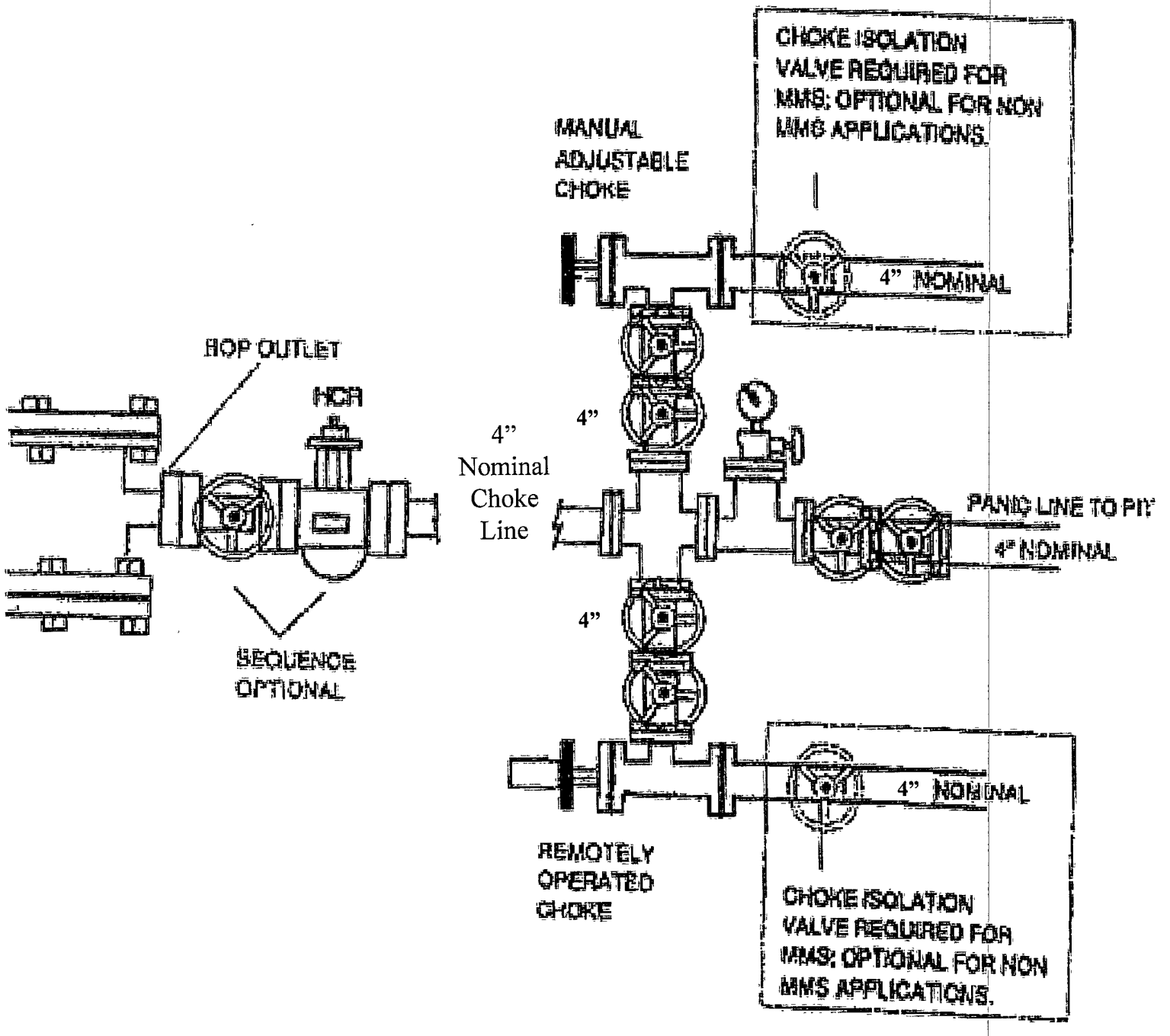


Exhibit E-1 – Choke Manifold Diagram
Merganser 6 Federal Com No. 1
(Resubmittal)
Cimarex Energy Co. of Colorado
6-25S-27E
660' FNL & 660' FWL
Eddy County, NM

Hydrogen Sulfide Drilling Operations Plan
Cimarex Energy Co. of Colorado
Merganser 6 Federal Com No. 1 Resubmittal
Lot 4 Section 6
T25S R27E 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
   Approximately 15 RFTs are planned from 10588'-12350.'

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 seperator will be brought into service along with H2S scavengers if necessary.

Surface Use Plan
Cimarex Energy Co. of Colorado
Merganser 6 Federal Com No. 1 Resubmittal
Lot 4 Section 6
T25S R27E 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 the intersection of Co Rd 720 (Black River Village) and Co Rd 742 (John C. Forehand), go South on Co Rd 742 for approx 3.9 miles to a caliche road on the right. Turn right (West) and go approx 0.8 miles. Go left (Southwest) and go approx 1.1 miles. Turn left (South) and go approx 0.2 miles. Turn left (Southeast) and go approx 0.6 miles. Veer left (Southeast) and go approx 0.4 miles. Turn left (North) and go approx 0.3 miles to the NW corner of pad for the Marquardt 1 Penn Federal No. 2 well. Follow proposed road to survey from the NW corner of pad approx 0.4 miles to this location.

2 Planned Access Roads: 2393' of road has been built via ROW NM-114302.

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
Merganser 6 Federal Com No. 1 Resubmittal
Lot 4 Section 6
T25S R27E 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 has been conducted on the location and proposed roads, and this report has been filed with the Bureau of Land Management in the Carlsbad BLM office **(NMCRIS 94965)**.
D. There are no know dwellings within 1 1/2 miles of this location.

Operator Certification Statement
Cimarex Energy Co. of Colorado
Merganser 6 Federal Com No. 1 Resubmittal
Lot 4 Section 6
T25S R27E 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 26, 2007

TITLE: Manager, Operations Administration

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

☒ **Eddy County**
Call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220, (575) 361-2822

1. **Although Hydrogen Sulfide has not been reported in this section, it is always a potential hazard and has been reported in this Township measuring 1200-1500 ppm in STVs. 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 at **approximately 300** 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.

Medium cave/karst.
Possible lost circulation in the Delaware.
Possible abnormal pressures in the Wolfcamp and high pressure gas in the Pennsylvanian Section.

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 **4-1/2** 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. Additional cement will be required.**

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 4 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. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the **Wolfcamp** formation **if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days**. This test does not exclude the test prior to drilling out the casing shoe as per Onshore Order No. 2.

f. 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.**

D. DRILLING MUD

Mud system monitoring equipment, with derrick floor indicators and visual and audio alarms, shall be operating before drilling into the **Wolfcamp** formation, and shall be used until production casing is run and cemented.

E. DRILL STEM TEST

If drill stem tests are performed, Onshore Order 2.III.D shall be followed.

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

WWI 010508