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OCD-ARTESIA

ATS-07-413

746

JUN 15 2007

OCD-ARTESIA

Form 3160-3
(April 2004)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a Type of Work: [X] DRILL [ ] REENTER	5 Lease Serial No. NM-100332
	6. If Indian, Allotee or Tribe Name
	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 DaVinci 7 Federal Com No. 1 36558
2 Name of Operator 162683 Cimarex Energy Co. of Colorado	9 API Well No 30-015- 35666
3a Address PO Box 140907; Irving, TX 75014-0907	3b Phone No. *(include area code)* 972-401-3111
	10 Field and Pool, or Exploratory Cottonwood Draw; Morrow
4. Location of Well *(Report location clearly and in accordance with any State requirements.*)* At Surface 1880' ~~1980'~~ FNL & 660' FEL As per phone call to Zeno Farris-4/24/07. cr At proposed prod Zone 1880' ~~1980'~~ FNL & 660' FEL	11. Sec , T. R M or Blk and Survey or Area 7-25S-27E
14 Distance in miles and direction from nearest town or post office* 19 miles South of Carlsbad	12 County or Parish Eddy / 13. State NM

CARLSBAD CONTROLLED WATER BASIN

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'	478.44	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
n/a	12800'	NM-2575
21. Elevations (Show whether DF, KDB, RT, GL, etc)	22 Approximate date work will start*	23 Estimated duration
3293' GR	8/1/2007	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 Zeno Farris	Name *(Printed/Typed)* Zeno Farris	Date 04.20.07
Title Manager Operations Administration		
Approved By *(Signature)* /s/ James Stovall	Name (Printed/Typed)	Date JUN 13 2007
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.

* *(Instructions on page 2)*

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 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
	97377	Cottonwood Draw; Morrow

Property Code	Property Name	Well Number
	DA VINCI '7" FEDERAL COM	1

OGRID No.	Operator Name	Elevation
162683	CIMAREX ENERGY CO. OF COLORADO	3293'

Surface Location

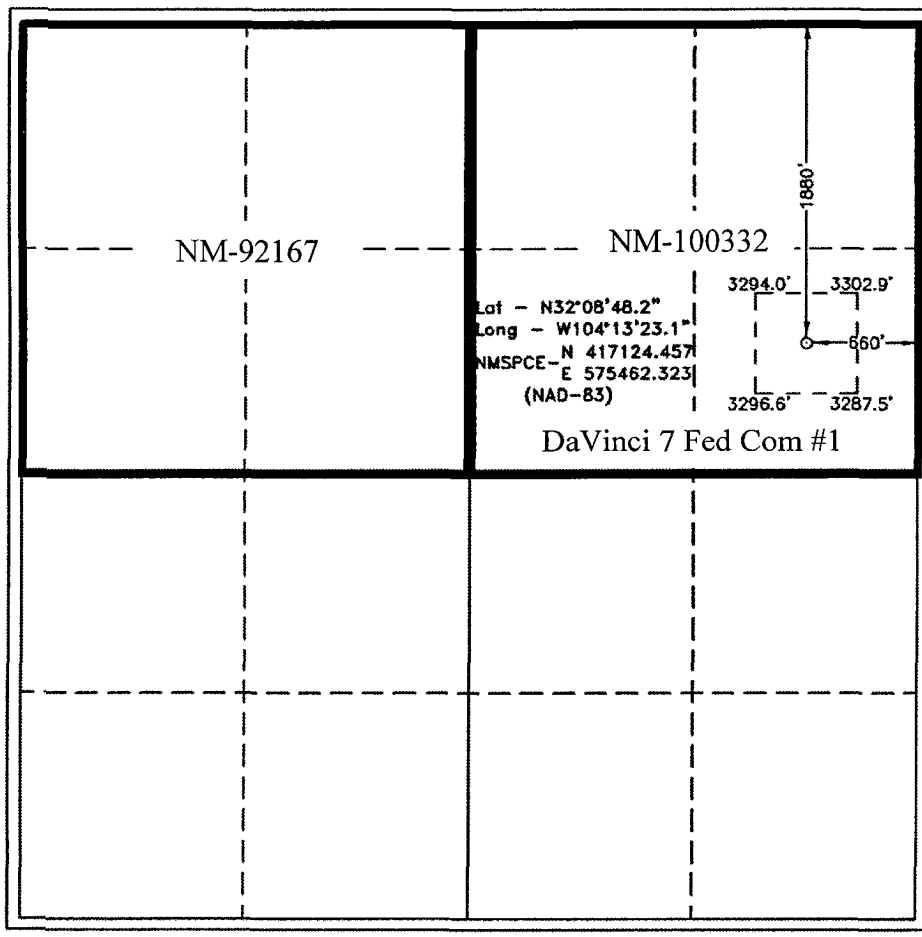
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
H	7	25 S	27 E		1880	NORTH	660	EAST	EDDY

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.
320		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 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 04-20-07
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.

MARCH 30, 2007
Date Surveyed

Signature & Seal of Professional Surveyor

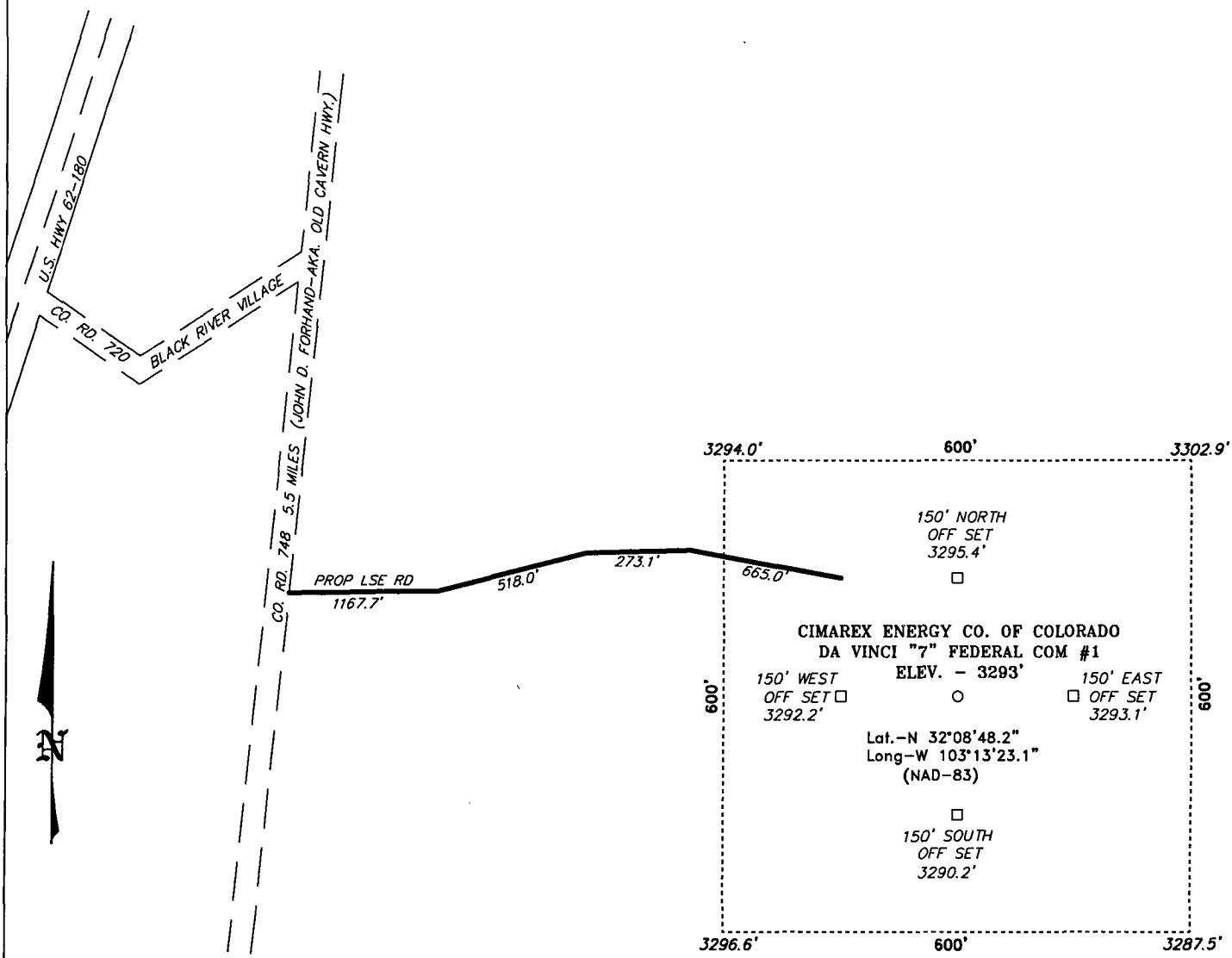
GARY L. JONES
NEW MEXICO
7977

W.O.: 17348

Certificate No. Gary L. Jones 7977

BASIN SURVEYS

SECTION 7, TOWNSHIP 25 SOUTH, RANGE 27 EAST, N.M.P.M.,
EDDY COUNTY, **NEW MEXICO.**



Directions to Location:

FROM THE JUNCTION OF CO. RD. 720 (BLACK RIVER) AND CO. RD. 748 (JOHN D. FORHAND-AKA. OLD CAVERN HWY), GO SOUTH ON CO. RD. 748 FOR 5.5 MILES TO PROPOSED LEASE ROAD.

CIMAREX ENERGY CO. OF COLORADO

REF: DA VINCI "7" FEDERAL COM #1 / WELL PAD TOPO

THE DA VINCI "7" FEDERAL COM #1 LOCATED 1880' FROM THE NORTH LINE AND 660' FROM THE EAST LINE OF SECTION 7, TOWNSHIP 25 SOUTH, RANGE 27 EAST, N.M.P.M., EDDY COUNTY, NEW MEXICO.

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

W.O. Number: 17948	Drawn By: J. M. SMALL		
Date: 04-04-2007	Disk: JMS 17948W	Survey Date: 03-29-2007	Sheet 1 of 1 Sheets

Application to Drill

Cimarex Energy Co. of Colorado
DaVinci 7 Federal Com No. 1
Unit H Section 7
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: 1880' FNL & 660' FEL

2 Elevation above sea level: 3293' 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: 12800'

6 Estimated tops of geological markers:

Base Salt	1870	Cisco-Canyon	10301
Delaware	2067	Strawn	10539
Bone Spring	5578	Atoka	10708
1st Bone Spring Ss	6542	Morrow	11324
2nd Bone Spring Ss	7776	Middle Morrow	11731
3rd Bone Spring Ss	8369	Lower Morrow	12047
Wolfcamp	8700		

7 Possible mineral bearing formation:

Morrow	Gas	Primary
Cisco-Canyon	Oil	Secondary
Wolfcamp	Oil	Secondary

8 Casing program:

Hole Size	Interval	Casing OD	Weight	Thread	Collar	Grade
17-1/2"	0-220'	13-3/8"	48	8-R	ST&C	H-40
12-1/4"	0-2850'	9-5/8"	40	8-R	LT&C	J-55
8-3/4"	0-12800'	4-1/2"	11.6	8-R	LT&C	P-110

Application to Drill

Cimarex Energy Co. of Colorado
DaVinci 7 Federal Com No. 1
Unit H Section 7
T25S R27E Eddy County, NM

9 Cementing & Setting Depth:

13-3/8"	Surface	Set 220' of 13-3/8" H-40 48 # ST&C casing. Cement with 340 sx Premium Plus Cmt w/ 2% CaCl2 - 14.8 PPG, 1.34 cf/sx. TOC @ 0.'
9-5/8"	Intermediate	Set 2850' of 9-5/8" J-55 40# LT&C casing. Lead: of 472 sx Interfill C Cmt + 1/4 pps Flocele - 11.9 PPG, 2.45 cf/sx, Tail: 250 sx Premium Plus Cmt + 1% CaCl2 - 14.8 PPG, 1.33 cf/sx. TOC @ 0.'
4-1/2"	Production	Set 12800' of 4-1/2" P-110 11.6# LT&C casing. Lead: 1855 sx Interfill H + 0.25% HR-7 + 5 pps Gilsonite + 0.25 pps Flocele - 11.9 PPG, 2.47 cf/sx, Tail: 694 sx Super H +910 sx Interfill H (wt 13.0, yld 1.67) + 0.5% Halad-344 + 0.4% CFR-3 w/o Defoamer + 1# Salt Bulk + 5# Gilsonite Bulk + 0.125# Poly-E-Flake + 0.2% HR-7, TOC @ 0.'

10 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 on the 9 5/8" casing and will be 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 the 13-3/8" surface casing and BOP testing 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 a variance 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.

11 Proposed Mud Circulating System:

Depth	Mud Wt	Viscosity	Fluid Loss	Type Mud
0 - 220'	8.4 - 8.6	30 - 32	May lose circ.	Fresh water gel spud mud.
220' - 2850'	8.4 - 8 6	28 - 29	May lose circ.	Fresh water mud.
2850' - 12800'	8.4-9.7	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 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
DaVinci 7 Federal Com No. 1
Unit H Section 7
T25S R27E Eddy County, NM

12 Testing, Logging and Coring Program:

A. Mud logging program: Two-man unit from 2850' 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 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 Anticipated Starting Date and Duration of Operations:

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

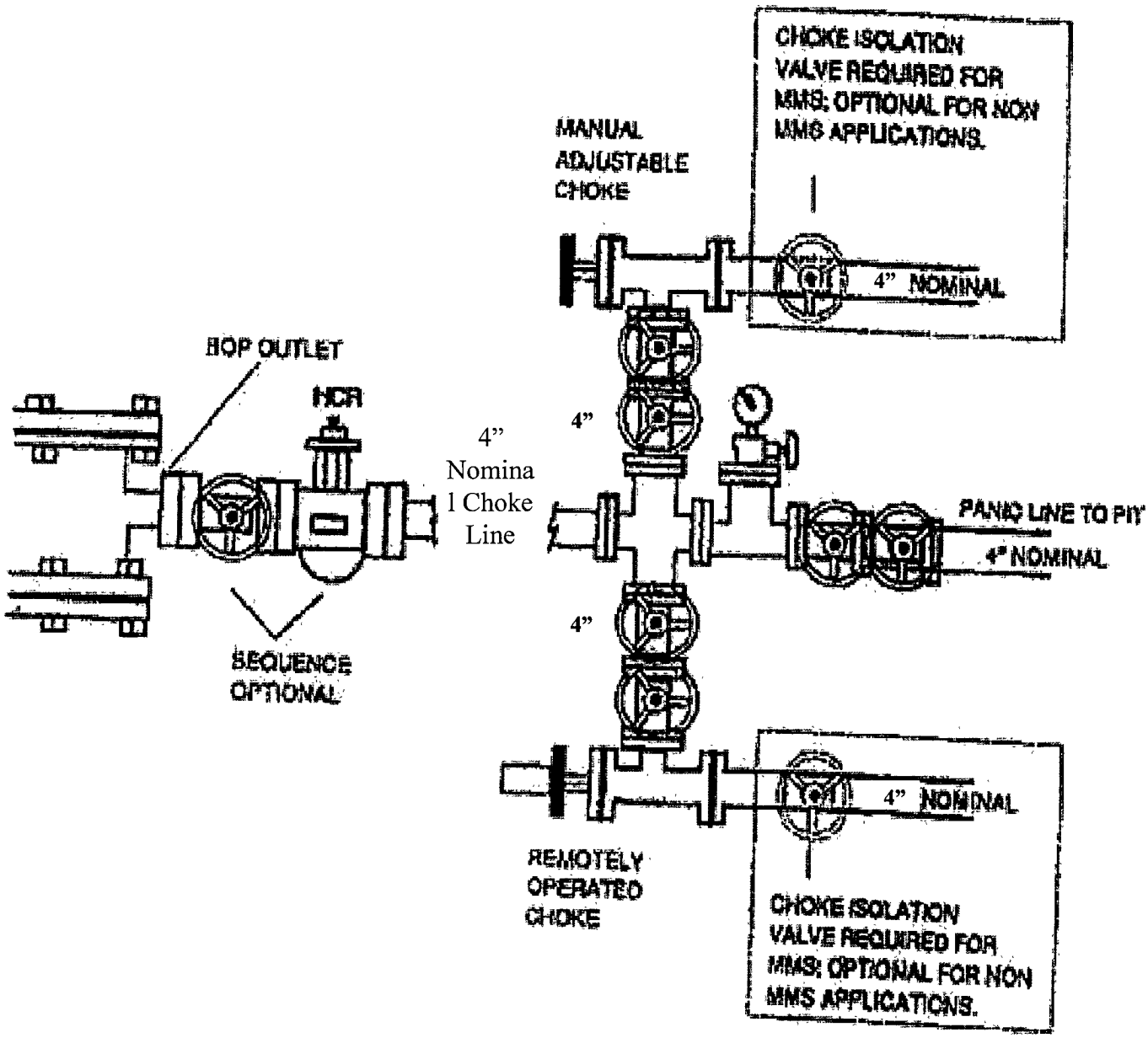


Exhibit E1 – Choke Manifold
DaVinci 7 Federal Com No. 1
Cimarex Energy Co. of Colorado
7-25S-27E
1880' FNL & 660' FEL
Eddy County, NM

Hydrogen Sulfide Drilling Operations Plan

Cimarex Energy Co. of Colorado
DaVinci 7 Federal Com No. 1
Unit H Section 7
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

A DST is planned for 9100' - 9250.'

Hydrogen Sulfide Drilling Operations Plan

Cimarex Energy Co. of Colorado
DaVinci 7 Federal Com No. 1
Unit H Section 7
T25S R27E Eddy County, NM

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
DaVinci 7 Federal Com No. 1
Unit H Section 7
T25S R27E Eddy County, NM

1 Existing Roads: Area maps, Exhibit "B" is a reproduction of Lea 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 Co Rd 720 (Black River) and Co Rd 748 (John D Forehand-AKA Old Cavern Hwy), go South on Co Rd 748 for 5.5 miles to proposed lease road.

2 PLANNED ACCESS ROADS: 2596.6' of proposed lease road will be constructed 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
DaVinci 7 Federal Com No. 1
Unit H Section 7
T25S R27E 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 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.

Surface Use Plan

Cimarex Energy Co. of Colorado
DaVinci 7 Federal Com No. 1
Unit H Section 7
T25S R27E Eddy County, NM

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
DaVinci 7 Federal Com No. 1
Unit H Section 7
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 US Department of the Interior's 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.

12 OPERATOR'S REPRESENTATIVE:

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

13 CERTIFICATION: I hereby certify that I, or persons under my direct supervision, have inspected the proposed drill site and access route; that I am familiar with the conditions which currently exit; that the statements made in this plan 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

DATE: April 20, 2007

TITLE: Manager Operations Administration

CONDITIONS OF APPROVAL - DRILLING

Operator's Name:	**Cimarex Energy Co. of Colorado**
Well Name & No.	**1-DaVinci 7 Federal Com**
Location:	**1880 FNL, 0660 FEL, Sec. 7, T-25-S, R-27-E, Eddy County, NM**
Lease:	**NM-100332**

I. DRILLING OPERATIONS REQUIREMENTS:

A. The Bureau of Land Management (BLM) is to be notified a minimum of 4 hours in advance for a representative to witness:

1. Spudding well
2. Setting and/or Cementing of all casing strings
3. BOPE tests

- Eddy County call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220, (505) 361-2822

B. Although H2S has not been reported in this section; it has been reported in the township to the west measuring 1200-1500 ppm in STVs. The operator has included a Hydrogen Sulfide drilling plan with the APD.

C. 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.

D. If floor controls are required, (3M or Greater) 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.

II. CASING:

A. The **13-3/8** inch surface casing shall be set **into the Rustler Anhydrite and above the salt at approximately 220 feet** and cemented to the surface.

1. 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.
2. Wait on cement (WOC) time for a primary cement job will be a minimum of 18 hours for a water basin or 500 pounds compression strength, whichever is greater. (This is to include the lead cement)
3. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compression strength, whichever is greater.
4. If cement falls back, remedial action will be done prior to drilling out that string.

Possible lost circulation in the Delaware formation.
Possible high pressure gas bursts in the Wolfcamp formation.
High pressure gas through the Canyon, Strawn, Atoka, and Morrow formations.

B. The minimum required fill of cement behind the **9-5/8** inch intermediate casing is **cement shall circulate to surface. Intermediate casing to be set at approximately 2850' in the Lamar Limestone or upper part of the Bell Canyon.** If cement does not circulate see A.1 thru 4.

C. The minimum required fill of cement behind the **5-1/2** inch production casing is **cement shall extend a minimum of 200' into the 9-5/8" casing.**

D. 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.

III. PRESSURE CONTROL:

A. 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.

B. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **2000 (2M)** PSI. **BOP/BOPE will be tested as proposed in APD.**

C. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the **9-5/8"** intermediate casing shoe shall be **5000 (5M)**) PSI. **Casing shoe pressure integrity test required for this shoe according to Onshore Order 2.III.B.1.i.**

D. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.

1. The tests shall be done by an independent service company.
2. The results of the test shall be reported to the appropriate BLM office.
3. 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.
4. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi in accordance with API RP 53. 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.
5. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the **Wolfcamp** formation. This test does not exclude the test prior to drilling out the casing shoe as per Onshore Order No. 2.
6. A variance to test **only the surface casing (not BOPE)** to the reduced pressure of **1000** psi with the rig pumps is approved.

IV. 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.

1. Recording pit level indicator to indicate volume gains and losses.
2. Mud measuring device for accurately determining the mud volumes necessary to fill the hole during trips.
3. Flow-sensor on the flow line to warn of abnormal mud returns from the well

Engineer on call phone: 505-706-2779

WWI 053107