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Form 3160-3
(April 2004)

HOBBSOCD

N.M. Oil Cons. Division
1825 N. French Dr.
Hobbs, NM 88240

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of Work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. Surface - Privately Owned SHL Privately Owned BHL NM-0153471	
1b. Type of Well: <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other <input checked="" type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		6. If Indian, Allottee or Tribe Name	
2. Name of Operator Cimarex Energy Co. of Colorado		7. If Unit or CA Agreement, Name and No. Pending	
3a. Address PO Box 140907 Irving, TX 75014		8. Lease Name and Well No. <3753> Coral Sea 7 Federal Com No. 3	
3b. Phone No. (include area code) 972-401-3111		9. API Well No. 30-005- 290A3	
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At Surface 1980 FNL & 375 FEL At proposed prod Zone 1980 FNL & 375 FWL Unit # Proposed Horizontal Abo Test		10. Field and Pool, or Exploratory Abo; Wildcat; ABO-WOLFCAMP	
11. Sec., T. R. M. or Blk. and Survey or Area 7-15S-31E		12. County or Parish Chaves	
13. State NM		14. Distance in miles and direction from nearest town or post office*	
15. Distance from proposed* location to nearest property or lease line, ft (Also to nearest drig unit line if any) 375		16. No of acres in lease NM-0153471 - 79.06 acres	
17. Spacing Unit dedicated to this well S2N2 159.08		18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft NA	
19. Proposed Depth Pilot Hole 9500 MD 13002 TVD 8615		20. BLM/BIA Bond No. on File NM-2575	
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 4,448' GR		22. Approximate date work will start* 9/15/2008	
23. Estimated duration 35-45 days		24. Attachments ROSWELL CONTROLLED WATER BASIN	

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, shall be attached to this form:

- Well plat certified by a registered surveyor
- A Drilling Plan
- A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office).
- Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
- Operator Certification
- 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 08.07.08
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Manager Operations Administration		Name (Printed/Typed) /s/ Jerry Dutchover		Date 10 9 JAN 2009
Approved By (Signature) /s/ Jerry Dutchover		Office ROSWELL FIELD OFFICE		APPROVED FOR 2 YEARS
Title Acting Assistant Field Manager, Lands And Minerals				

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)

DECLARED WATER BASIN

CEMENT BEHIND THE 13" CASING MUST BE CIRCULATED

WITNESS

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

Form C-102
Revised October 12, 2005

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

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 3D-005-29093	Pool Code ✓	Pool Name Abc Wildcat; ABO-WOLFCAMP
Property Code 37531	Property Name CORAL SEA "7" FEDERAL COM	Well Number 3
GRID No. 162683	Operator Name CIMAREX ENERGY CO. OF COLORADO	Elevation 4448'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
H	7	15 S	31 E		1980	NORTH	375	EAST	CHAVES

Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
E	7	15 S	31 E		1980	NORTH	375	WEST	CHAVES

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
159.1		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

BOTTOM HOLE LOCATION Lat - N33°01'55.99" Long - W103°52'06.87" NMSPEC - N 739573.133 E 693770.246 (NAD-83)	SURFACE LOCATION Lat - N33°01'55.97" Long - W103°51'14.04" NMSPEC - N 739592.2 E 688267.5 (NAD-83)
NM-0153471	Fee-owned
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 08-07-08 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 supervision, and that the same is true and correct to the best of my belief. APR 11 2008 Date Surveyed Signature & Seal of Professional Surveyor W.O. 10-10-05 Certificate No. Gary L. Jones 7977 Basin Surveys	

Operator - Landowner Agreement

Company: Cimarex Energy Co. of Colorado
Proposed Well: Coral Sea 7 Federal Com No. 3
Federal Lease Number: NM-0153471

This is to advise that Cimarex Energy Co. of Colorado has an agreement with: Bill Medlin; PO Box 50; Maljamar, NM 88264 the surface owner, concerning entry and surface restoration after completion of drilling operations at the above described well.

After abandonment of the well, all pits will be filled and levelled and all equipment and trash will be removed from the well site. No other requirements were made concerning restoration of the well site.

August 7, 2008
Date

Zeno Farris
Signature Zeno Farris
Manager, Operations Administration

Application to Drill
Coral Sea 7 Federal Com No. 3
 Cimarex Energy Co. of Colorado
 Unit H, Section 7
 T15S R31E; Chaves County, NM

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

- 1 Location: SHL 1980 FNL & 375 FEL
 BHL 1980 FNL & 375 FWL *Proposed Horizontal Abo Test*
- 2 Elevation above sea level: 4,448 GR
- 3 Geologic name of surface formation: Quaternary Alluvium Deposits
- 4 Drilling tools and associated equipment: Conventional rotary drilling rig using fluid as a circulating medium for solids removal.
- 5 Proposed drilling depth: Pilot Hole 9500 MD 13002 TVD 8615
- 6 Estimated tops of geological markers:

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

Abo	Oil
Wolfcamp	Oil
Queen	Oil

8 Proposed Mud Circulating System:

Depth			Mud Wt	Visc	Fluid Loss	Type Mud
0	to	340	8.4 - 8.6	30-32	May lose circ	Fresh water spud mud
340	to	3,950	10.0	28-29	May lose circ	Brine Water
3,950	to	9,500	8.6 - 9.5	28-29	NC	Fresh water and brine, use hi-vis sweeps to keep hole clean
8,395	to	13,002	8.4 - 8.9	28	NC	2% KCl

Sufficient mud materials will be kept on location at all times in order to combat lost circulation, or unexpected kicks. In order to run DSTs, open hole logs, and casing, the viscosity and water loss may have to be adjusted in order to meet these needs. Mud system monitoring equipment with derrick floor indicators and visual/audio alarms shall be installed and operative prior to drilling into the Wolfcamp formation. This equipment will remain in use until production casing is run and cemented.

- 8a Drill 7½" pilot hole to 9500' and run and cement 7" casing as shown on next page. Set KO Plug @ 8405.' Mill window from 8390' to 8400' and kick off lateral leg @ 8395.' Drill lateral 6½" hole to 13002' MD & 8615' TVD. Run 4½" 11.6# P-110 **BTC** (Peak Systems Iso-Pak Liner) from RSB packer @ 8288' to 8694' (End of Curve) and **LTC** from 8694' to TD @ MD 13002' and TVD 8615.' No cement required for Peak Systems Liner. Lateral length 4498' and liner length 4714.'

Application to Drill
Coral Sea 7 Federal Com No. 3
 Cimarex Energy Co. of Colorado
 Unit H, Section 7
 T15S R31E; Chaves County, NM

9 Casing Program:

Hole Size (inches)	Depth			Casing OD (inches)		Weight (lbs)	Thread	Collar	Grade
17½	0	to	340	New	13½	48	8-R	STC	H-40
12½	0	to	3950	New	9½	40	8-R	LTC	J-55
8½	0	to	9500	New	7	26	8-R	LTC	P-110
6½	8288	to	8694	New	4½	12	8-R	BTC	P-110
6½	8694		13002	New	4½	12	8-R	LTC	P-110

10 Cementing Program:

Surface Lead: 110 sx Light Premium Plus + 0.125 lb/sk Poly-E-Flake + 1% CaCl₂ (wt 14.2, yld 1.64)
 Tail: 220 sx Premium Plus + 2% CaCl₂ (wt 14.8, yld 1.35)
 TOC Surface

Intermediate Lead: 450 sx Interfill C + 0.125 lb/sk Poly-E-Flake (wt 11.9, yld 2.45)
 Tail: 200 sx Premium Plus + 1% CaCl₂ (wt 14.8, yld 1.33)
 TOC Surface

Production 615 sx Super H + 0.5% Halad-344 + 0.4% CFR-3 + 1lbm/sk Salt + 5 lb/sk Gilsonite + 0.125 lb/sk Poly-E-Flake + 0.35% HR-7
 (wt 13.0, yld 1.67)
 TOC 3,750'

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

Fresh water will be protected by setting surface casing at **340** and cementing to **Surface**
 Hydrocarbon zones will be protected by setting intermediate casing at **3950** and cementing to **Surface**
 and by setting production casing at **9500** and cementing to **3750**

Cimarex uses the following minimum safety factors:

Burst	Collapse	Tension
1.125	1.125	1.80

Application to Drill
Coral Sea 7 Federal Com No. 3
Cimarex Energy Co. of Colorado
Unit H, Section 7
T15S R31E; Chaves County, NM

11 Pressure control Equipment:

Exhibit "E". A 13 $\frac{3}{8}$ " 5000 PSI working pressure B.O.P. consisting of one set of blind rams and one set of pipe rams and a 5000 # annular type preventer. A choke manifold and 120 gallon accumulator with floor and remote operating stations and auxiliary power system. Rotating head below 6000'. A kelly cock will be installed and maintained in operable condition and a drill string safety valve in the open position will be available on the rig floor.

BOP unit will be hydraulically operated. BOP will be nipped up and operated at least once a day while drilling and the blind rams will be operated when out of hole during trips. No abnormal pressure or temperature is expected while drilling. From the base of the surface pipe through the running of production casing, the well will be equipped with a 5000 psi BOP system.

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

12 Testing, Logging and Coring Program:

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

13 Potential Hazards:

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

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

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

Drilling expected to take 35-45 days

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

15 Other Facets of Operations:

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

Abo pay will be perforated and stimulated.

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

Hydrogen Sulfide Drilling Operations Plan
Coral Sea 7 Federal Com No. 3
Cimarex Energy Co. of Colorado
Unit H, Section 7
T15S R31E; Chaves County, NM

- 1 All Company and Contract personnel admitted on location must be trained by a qualified H₂S safety instructor to the following:
 - A. Characteristics of H₂S
 - B. Physical effects and hazards
 - C. Proper use of safety equipment and life support systems.
 - D. Principle and operation of H₂S detectors, warning system and briefing areas.
 - E. Evacuation procedure, routes and first aid.
 - F. Proper use of 30 minute pressure demand air pack.
- 2 H₂S Detection and Alarm Systems:
 - A. H₂S detectors and audio alarm system to be located at bell nipple, end of flow line (mud pit) and on derrick floor or doghouse.
- 3 Windsock and/or wind streamers:
 - A. Windsock at mudpit area should be high enough to be visible.
 - B. Windsock at briefing area should be high enough to be visible.
- 4 Condition Flags and Signs:
 - A. Warning sign on access road to location.
 - B. Flags to be displayed on sign at entrance to location. Green flag indicates normal safe condition. Yellow flag indicates potential pressure and danger. Red flag indicates danger (H₂S present in dangerous concentration). Only emergency personnel admitted to location.
- 5 Well control equipment:
 - A. See exhibit "E"
- 6 Communication:
 - A. While working under masks chalkboards will be used for communication.
 - B. Hand signals will be used where chalk board is inappropriate.
 - C. Two way radio will be used to communicate off location in case of emergency help is required. In most cases cellular telephones will be available at most drilling foreman's trailer or living quarters.
- 7 Drillstem Testing:

No DSTs or cores are planned at this time.
- 8 Drilling contractor supervisor will be required to be familiar with the effects H₂S has on tubular goods and other mechanical equipment.
- 9 If H₂S is encountered, mud system will be altered if necessary to maintain control of formation. A mud gas separator will be brought into service along with H₂S scavengers if necessary.

H₂S Contingency Plan
Coral Sea 7 Federal Com No. 3
Cimarex Energy Co. of Colorado
Unit H, Section 7
T15S R31E; Chaves County, NM

Emergency Procedures

In the event of a release of gas containing H₂S, the first responder(s) must:

- ★ Isolate the area and prevent entry by other persons into the 100 ppm ROE.
- ★ Evacuate any public places encompassed by the 100 ppm ROE.
- ★ Be equipped with H₂S monitors and air packs in order to control the release.
- ★ Use the "buddy system" to ensure no injuries occur during the response.
- ★ Take precautions to avoid personal injury during this operation.
- ★ Contact operator and/or local officials to aid in operation. See list of phone numbers attached.
- ★ Have received training in the:
 - ◆ Detection of H₂S, and
 - ◆ Measures for protection against the gas,
 - ◆ Equipment used for protection and emergency response.

Ignition of Gas Source

Should control of the well be considered lost and ignition considered, take care to protect against exposure to Sulfur Dioxide (SO₂). Intentional ignition must be coordinated with the NMOCD and local officials. Additionally, the NM State Police may become involved. NM State Police shall be the Incident Command on scene of any major release. Take care to protect downwind whenever there is an ignition of the gas.

Characteristics of H₂S and SO₂

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

Contacting Authorities

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

H₂S Contingency Plan Emergency Contacts
Coral Sea 7 Federal Com No. 3
 Cimarex Energy Co. of Colorado
 Unit H, Section 7
 T15S R31E; Chaves County, NM

Company Office

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

800-969-4789

Key Personnel

Name	Title	Office	Mobile
Doug Park	Drilling Manager	972-443-6463	972-333-1407
Dee Smith	Drilling Super	972-443-6491	972-882-1010
Jim Evans	Drilling Super	972-443-6451	972-465-6564
Dorsey Rogers	Field Super		575-200-6105
Roy Shirley	Field Super		432-634-2136

Artesia

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

Carlsbad

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

Santa Fe

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

National

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

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

Other

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

Surface Use Plan
Coral Sea 7 Federal Com No. 3
Cimarex Energy Co. of Colorado
Unit H, Section 7
T15S R31E; 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 mile marker 30 of Hwy 31, go Northeast 0.5 miles on lease road to lease road. On lease road, go Northwest 0.25 miles to proposed lease road.
- 2 PLANNED ACCESS ROADS: 1960.3' of on-lease access road will be built. The portion of the proposed road in 8-15S-31E is on private surface and will therefore not need a Federal or State ROW.
- 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 separated by a series of solids removal equipment and hauled to the cuttings drying area and then hauled to a state-approved disposal facility.
 - B. All trash, junk and other waste material will be contained in trash cages or bins to prevent scattering. When the job is completed all contents will be removed and disposed of in an approved sanitary land fill.
 - C. Salts remaining after completion of well will be picked up by supplier including broken sacks.
 - D. Sewage from living quarters will drain into holding tanks and be cleaned out periodically. A Porta-John will be provided for the rig crews. This equipment will be properly maintained during the drilling operations and removed upon completion of the well.
 - E. Drilling fluids will be contained in steel pits in a closed circulating system. Fluids will be cleaned and reused. Water produced during testing will be contained in the steel pits and disposed of at a state approved disposal facility. Any oil or condensate produced will be stored in test tanks until sold and hauled from the site.
- 8 Ancillary Facilities:
 - A. No camps or airstrips to be constructed.

Surface Use Plan
Coral Sea 7 Federal Com No. 3
Cimarex Energy Co. of Colorado
Unit H, Section 7
T15S R31E; Chaves 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 20 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 hauled off to a State-Approved disposal facility.
- E. If the well is a producer, the cuttings drying 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 will start in a timely manner after all drilling operations cease. The type of reclamation will depend on whether the well is a producer or a dry hole.

Drainage systems, if any, will be reshaped to the original configuration with provisions made to alleviate erosion. These may need to be modified in certain circumstances to prevent inundation of the location's pad and surface facilities. After the area has been shaped and contoured, topsoil from the 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.

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 Bill Medlin. 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 Roswell BLM office.
- D. There are no known dwellings within 1½ miles of this location.

Operator Certification Statement
Coral Sea 7 Federal Com No. 3
Cimarex Energy Co. of Colorado
Unit H, Section 7
T15S R31E; 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

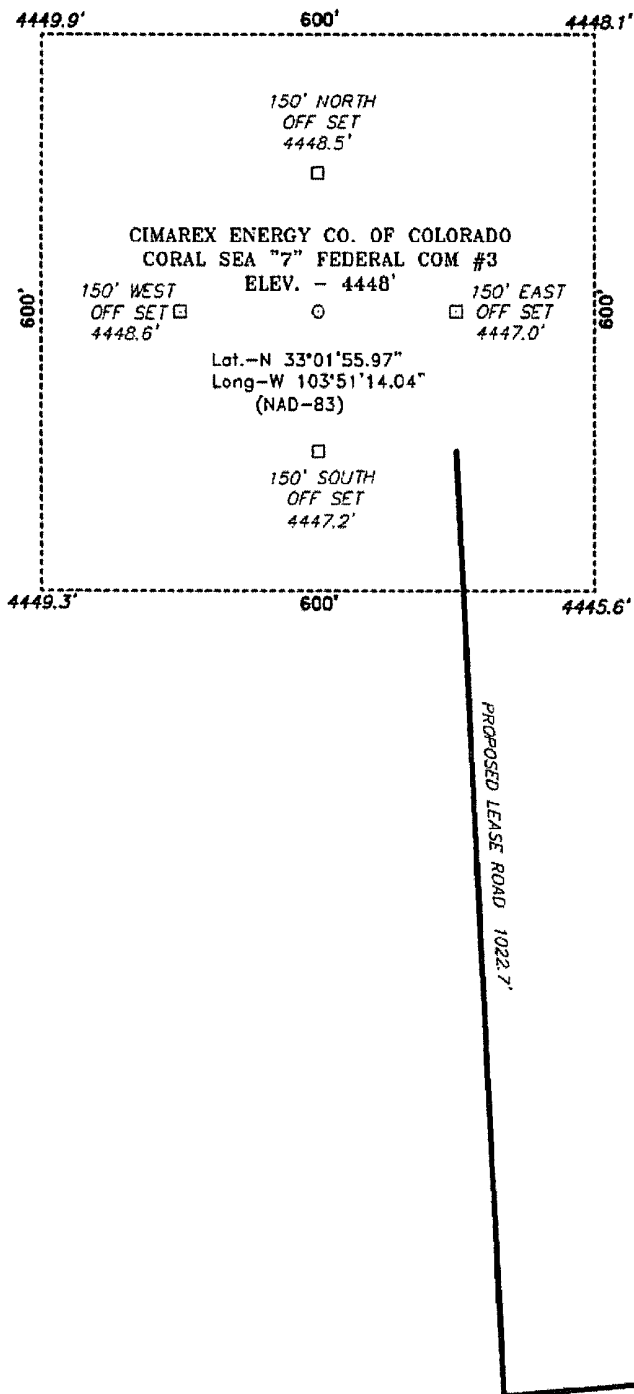
DATE:

August 7, 2008

TITLE:

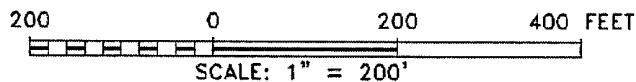
Manager Operations Administration

SECTION 7, TOWNSHIP 15 SOUTH, RANGE 31 EAST, N.M.P.M.,
CHAVES COUNTY, NEW MEXICO.



Directions to Location:

FROM MILE MARKER 30 OF HWY 31, GO NORTHEAST
0.9 MILES ON LEASE ROAD TO LEASE ROAD, ON
LEASE ROAD GO NORTHWEST 0.25 MILES TO
PROPOSED LEASE ROAD.



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

W.O. Number: 19435 Drawn By: J. SMALL

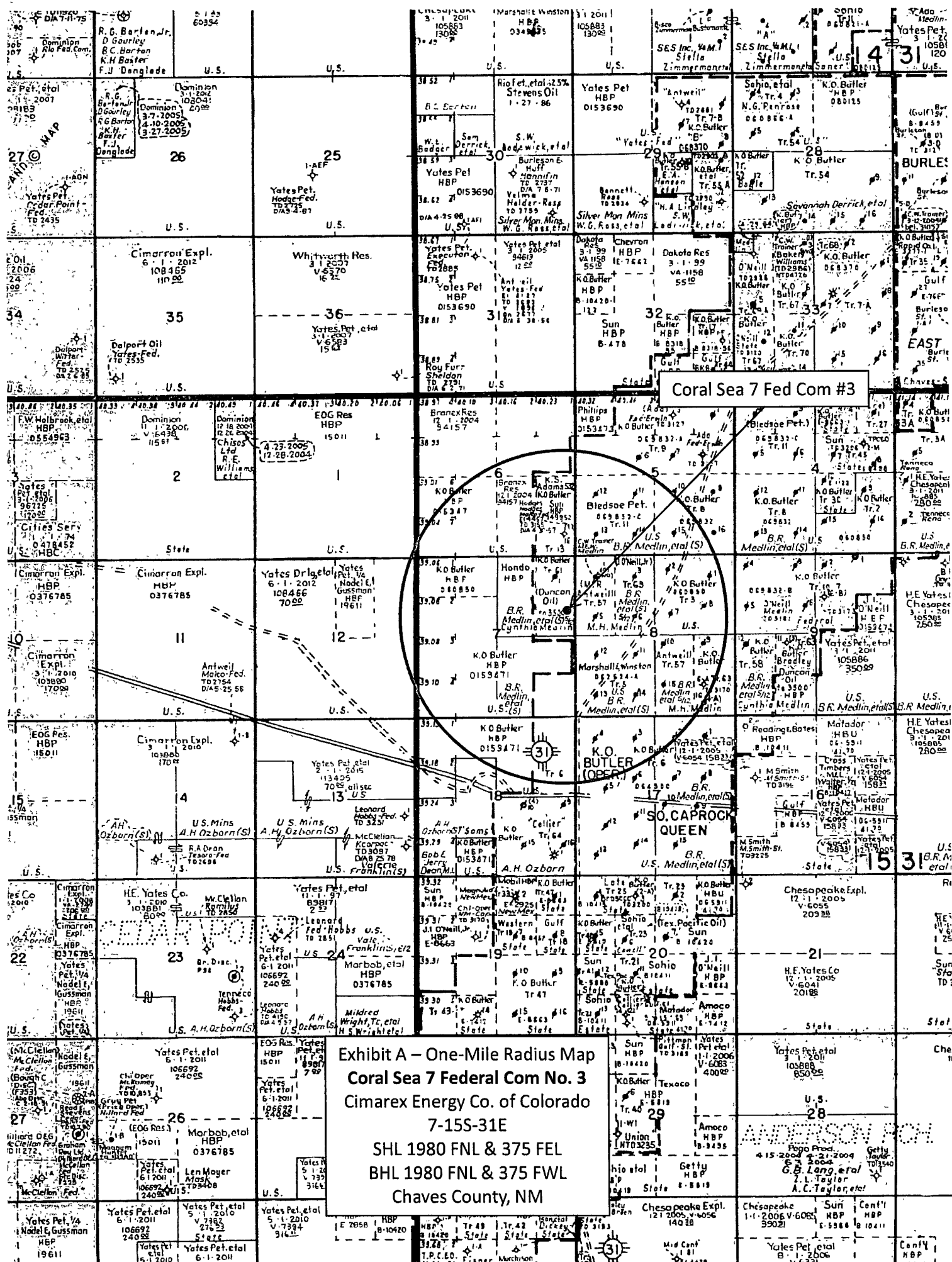
Date: 04-11-2008 Disk: JMS 19435W

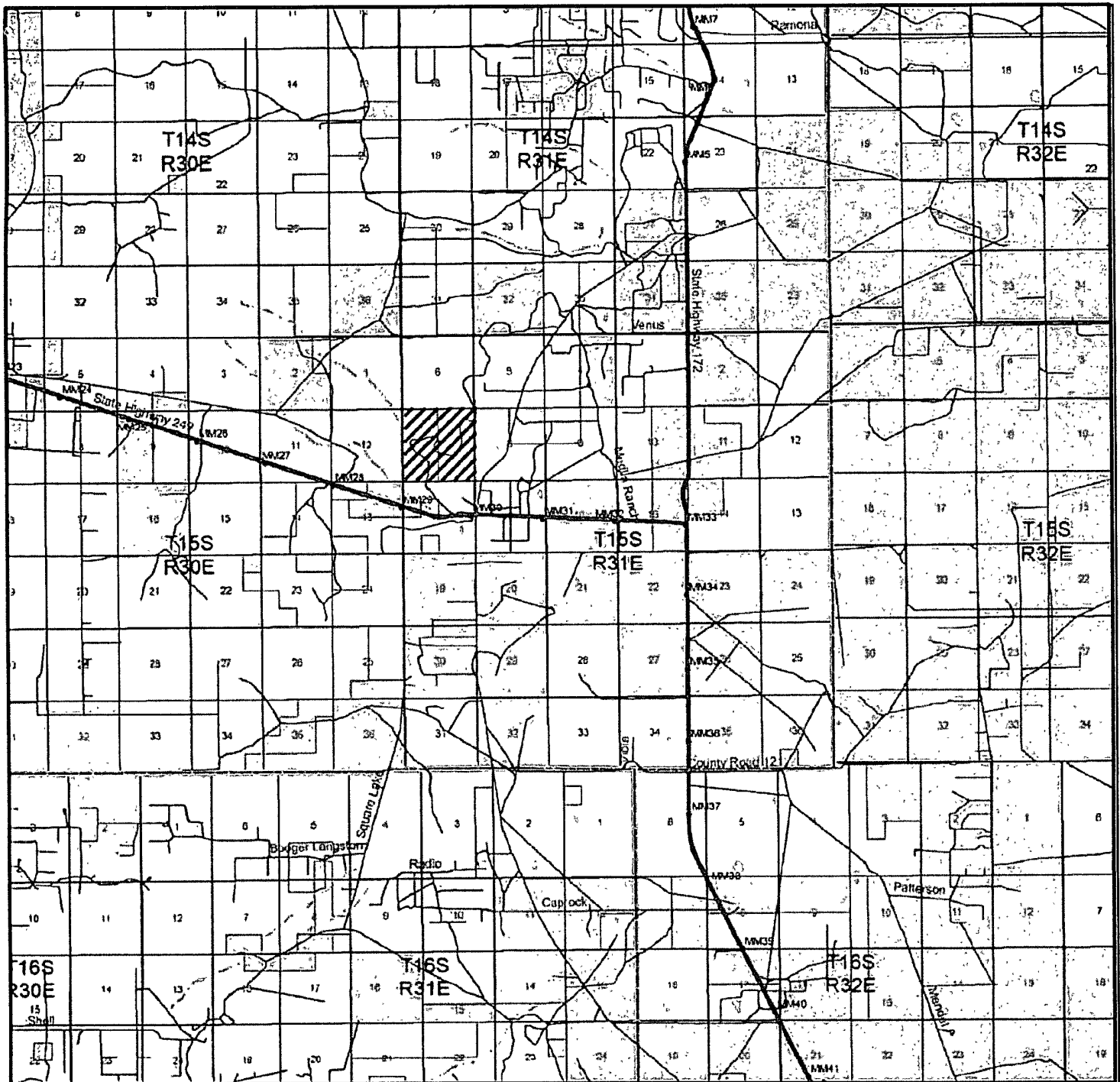
CIMAREX ENERGY CO. OF COLORADO

REF: CORAL SEA "7" FEDERAL COM #3 / WELL PAD TOPO

THE CORAL SEA "7" FEDERAL COM #3 LOCATED 1980'
FROM THE NORTH LINE AND 375' FROM THE EAST LINE OF
SECTION 7, TOWNSHIP 15 SOUTH, RANGE 31 EAST,
N.M.P.M., CHAVES COUNTY, NEW MEXICO.

Survey Date: 04-10-2008 Sheet 1 of 1 Sheets





CORAL SEA "7" FEDERAL COM #3
 Located 1980' FNL and 375' FEL
 Section 7, Township 15 South, Range 31 East,
 N.M.P.M., Chaves County, New Mexico.

basin
surveys
 focused on excellence
 in the oilfield

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 Hobbs, New Mexico 88241
 (505) 393-7316 - Office
 (505) 392-3074 - Fax
 basinsurveys.com

W.O. Number: JMS 19435TR

Survey Date: 04-10-2008

Scale: 1" = 2 MILES

Date: 04-11-2008

CIMAREX
ENERGY CO.
OF COLORADO

Exhibit B

Patriot Rig 4

Cimarex Energy Co. of Colorado

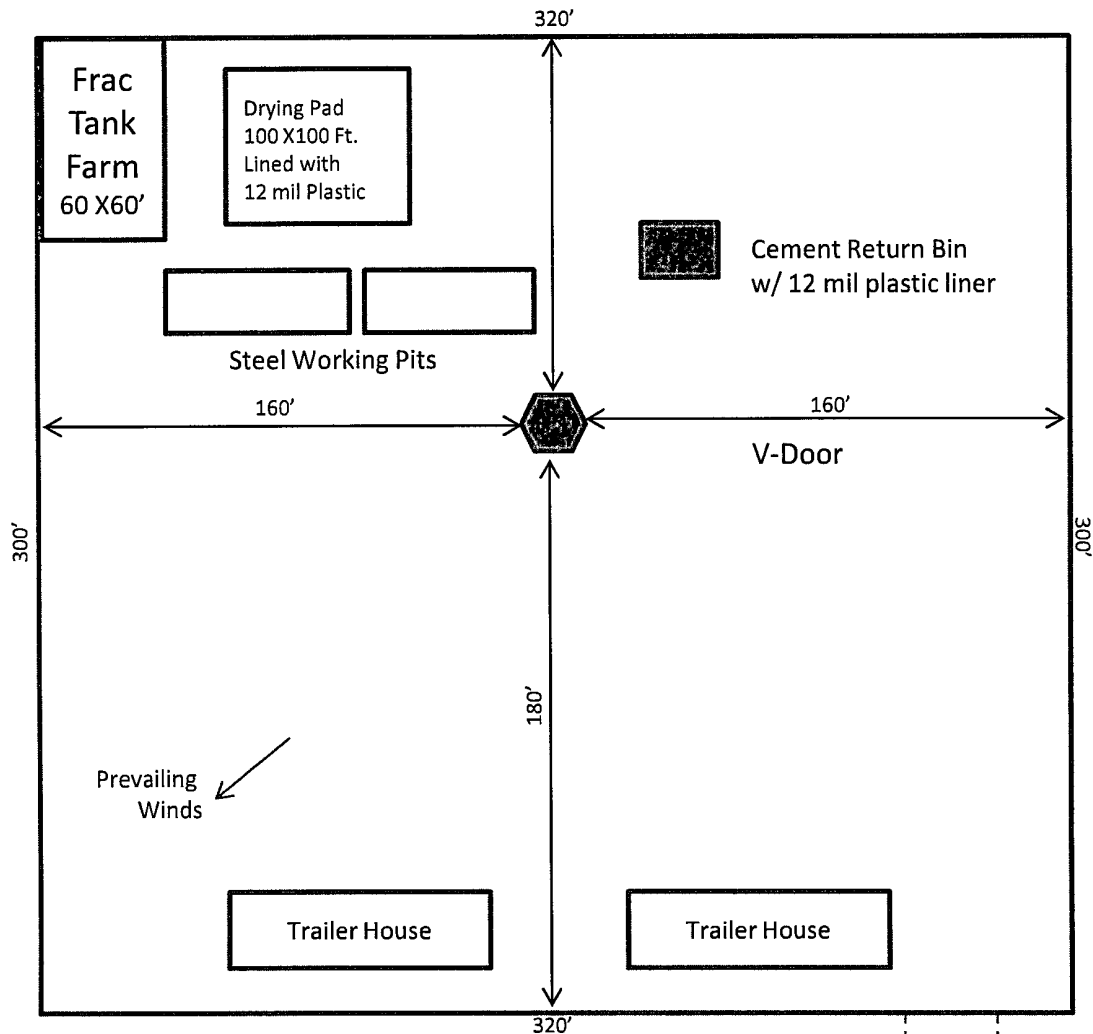
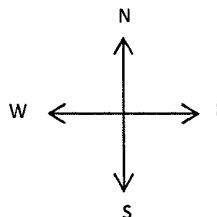
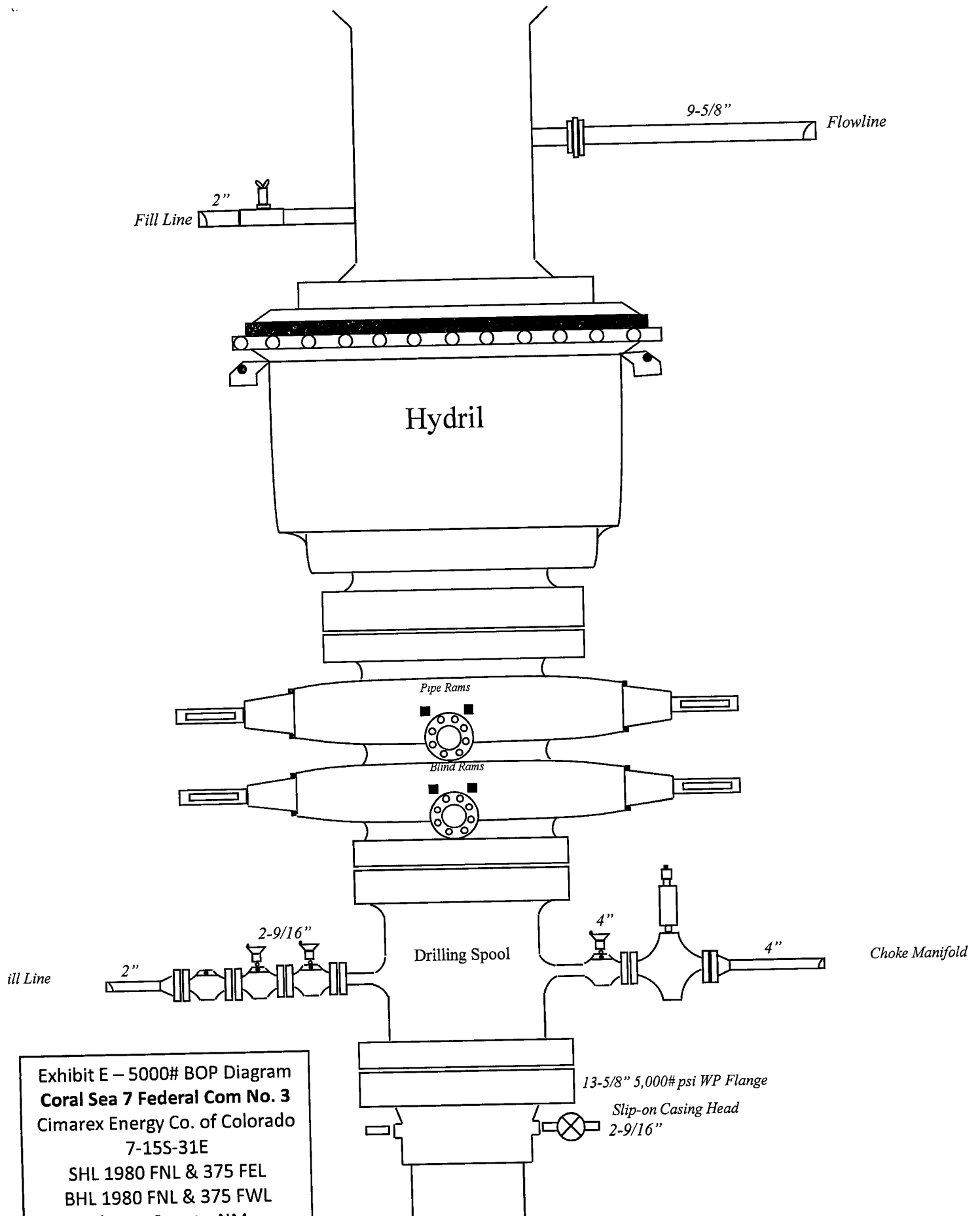


Exhibit D - Rig Layout
Coral Sea 7 Federal Com No. 3
Cimarex Energy Co. of Colorado
7-15S-31E
SHL 1980 FNL & 375 FEL
BHL 1980 FNL & 375 FWL
Chaves County, NM



SK & A



**DRILLING OPERATIONS
CHOKE MANIFOLD
5M SERVICE**

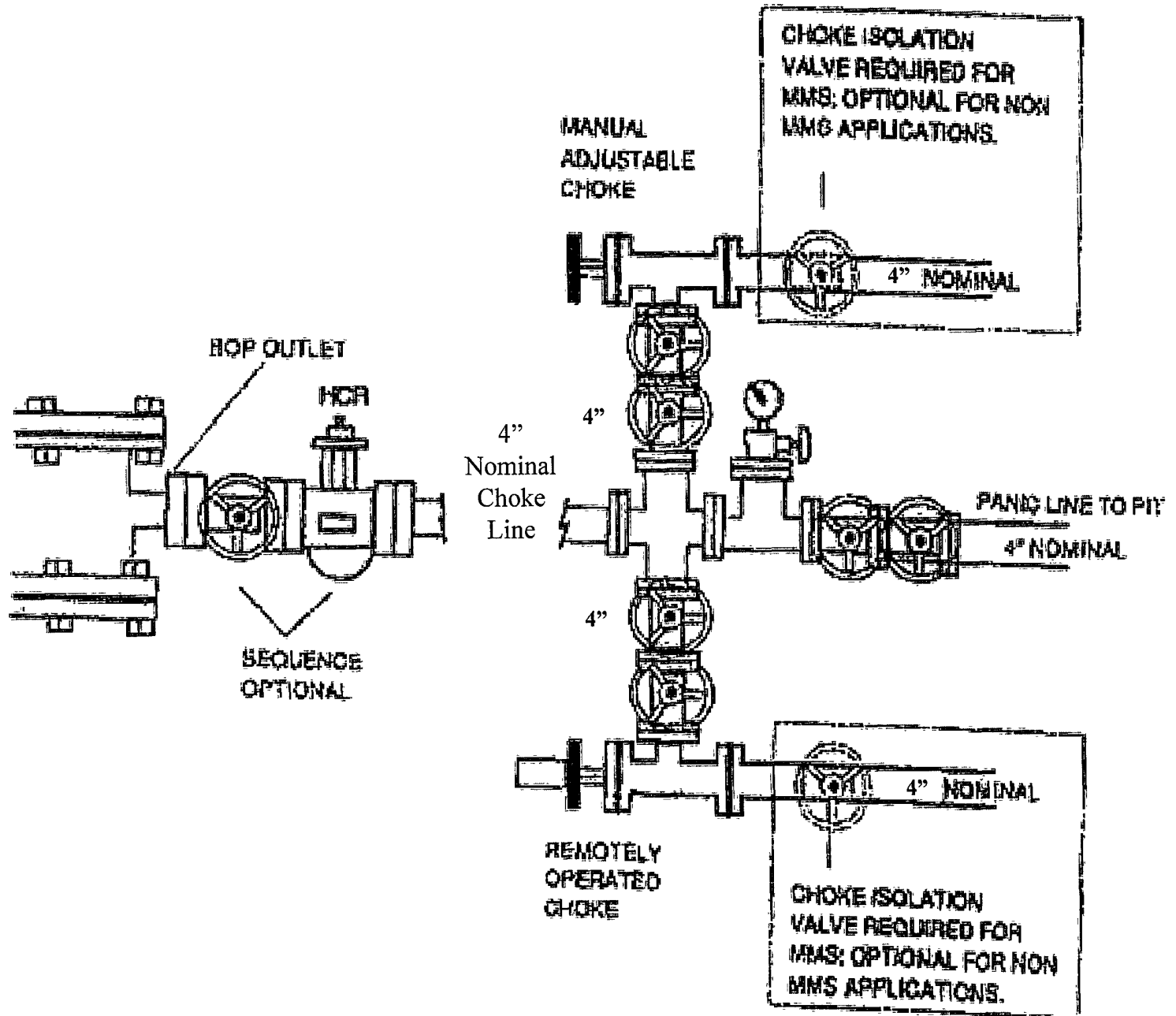


Exhibit E-1 – Choke Manifold Diagram
Coral Sea 7 Federal Com No. 3
Cimarex Energy Co. of Colorado
7-15S-31E
SHL 1980 FNL & 375 FEL
BHL 1980 FNL & 375 FWL
Chaves County, NM



Planned Wellpath Report

Preliminary

Page 1 of 4



INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	Cimarex Energy Co. of Colorado	Slot	No. 3H SHL
Area	Chaves County, NM	Well	No. 3H
Field	(Coral) Sec 7, T15S, R31E	Wellbore	No. 3H PWB
Facility	Coral Sea 7 Fed Com No. 3H		

REPORT SETUP INFORMATION			
Projection System	NAD83 / TM New Mexico State Planes, Eastern Zone (3001), US feet	Software System	WellArchitect® 2.0
North Reference	Grid	User	Victor Hernandez
Scale	0.999934	Report Generated	5/29/2008 at 3:53:37 PM
Convergence at slot	0.26° East	Database/Source file	WA_Midland/No. 3H_PWB.xml

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[USft]	Northing[USft]	Latitude	Longitude
Slot Location	0.00	0.00	688267.50	739592.20	33°01'55.973"N	103°51'14.043"W
Facility Reference Pt			688267.50	739592.20	33°01'55.973"N	103°51'14.043"W
Field Reference Pt			688317.50	738271.10	33°01'42.900"N	103°51'13.527"W

WELLPATH DATUM			
Calculation method	Minimum curvature	Rig on No. 3H SHL (RT) to Facility Vertical Datum	18.00ft
Horizontal Reference Pt	Facility Center	Rig on No. 3H SHL (RT) to Mean Sea Level	4466.00ft
Vertical Reference Pt	Rig on No. 3H SHL (RT)	Facility Vertical Datum to Mud Line (Facility)	0.00ft
MD Reference Pt	Rig on No. 3H SHL (RT)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	269.76°

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Planned Wellpath Report

Preliminary
Page 2 of 4



REFERENCE WELLPATH IDENTIFICATION			
Operator	Cimarex Energy Co. of Colorado	Slot	No. 3H SHL
Area	Chaves County, NM	Well	No. 3H
Field	(Coral) Sec 7, T15S, R31E	Wellbore	No. 3H PWB
Facility	Coral Sea 7 Fed Com No. 3H		

WELLPATH DATA (50 stations) † = interpolated/extrapolated station								
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]	Comments
0.00	0.000	269.761	0.00	0.00	0.00	0.00	0.00	Tie On
8395.00	0.000	269.761	8395.00	0.00	0.00	0.00	0.00	KOP
8495.00†	30.000	269.761	8490.49	25.59	-0.11	-25.59	30.00	
8595.00†	60.000	269.761	8560.40	95.49	-0.40	-95.49	30.00	
8693.71†	89.614	269.761	8585.98	189.70	-0.79	-189.70	30.00	EOC
8695.00†	89.614	269.761	8585.99	190.99	-0.80	-190.98	0.00	
8795.00†	89.614	269.761	8586.66	290.98	-1.21	-290.98	0.00	
8895.00†	89.614	269.761	8587.34	390.98	-1.63	-390.98	0.00	
8995.00†	89.614	269.761	8588.01	490.98	-2.05	-490.97	0.00	
9095.00†	89.614	269.761	8588.68	590.98	-2.47	-590.97	0.00	
9195.00†	89.614	269.761	8589.36	690.97	-2.88	-690.97	0.00	
9295.00†	89.614	269.761	8590.03	790.97	-3.30	-790.97	0.00	
9395.00†	89.614	269.761	8590.70	890.97	-3.72	-890.96	0.00	
9495.00†	89.614	269.761	8591.38	990.97	-4.14	-990.96	0.00	
9595.00†	89.614	269.761	8592.05	1090.97	-4.55	-1090.96	0.00	
9695.00†	89.614	269.761	8592.73	1190.96	-4.97	-1190.95	0.00	
9795.00†	89.614	269.761	8593.40	1290.96	-5.39	-1290.95	0.00	
9895.00†	89.614	269.761	8594.07	1390.96	-5.80	-1390.95	0.00	
9995.00†	89.614	269.761	8594.75	1490.96	-6.22	-1490.94	0.00	
10095.00†	89.614	269.761	8595.42	1590.95	-6.64	-1590.94	0.00	
10195.00†	89.614	269.761	8596.09	1690.95	-7.06	-1690.94	0.00	
10295.00†	89.614	269.761	8596.77	1790.95	-7.47	-1790.93	0.00	
10395.00†	89.614	269.761	8597.44	1890.95	-7.89	-1890.93	0.00	
10495.00†	89.614	269.761	8598.11	1990.95	-8.31	-1990.93	0.00	
10595.00†	89.614	269.761	8598.79	2090.94	-8.73	-2090.92	0.00	
10695.00†	89.614	269.761	8599.46	2190.94	-9.14	-2190.92	0.00	
10795.00†	89.614	269.761	8600.13	2290.94	-9.56	-2290.92	0.00	
10895.00†	89.614	269.761	8600.81	2390.94	-9.98	-2390.92	0.00	
10995.00†	89.614	269.761	8601.48	2490.93	-10.39	-2490.91	0.00	
11095.00†	89.614	269.761	8602.15	2590.93	-10.81	-2590.91	0.00	

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Planned Wellpath Report

Preliminary

Page 3 of 4



INTEQ

REFERENCE WELLPATH IDENTIFICATION

Operator	Cimarex Energy Co. of Colorado	Slot	No. 3H SHL
Area	Chaves County, NM	Well	No. 3H
Field	(Coral) Sec 7, T15S, R31E	Wellbore	No. 3H PWB
Facility	Coral Sea 7 Fed Com No. 3H		

WELLPATH DATA (50 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]	Comments
11195.00†	89.614	269.761	8602.83	2690.93	-11.23	-2690.91	0.00	
11295.00†	89.614	269.761	8603.50	2790.93	-11.65	-2790.90	0.00	
11395.00†	89.614	269.761	8604.18	2890.92	-12.06	-2890.90	0.00	
11495.00†	89.614	269.761	8604.85	2990.92	-12.48	-2990.90	0.00	
11595.00†	89.614	269.761	8605.52	3090.92	-12.90	-3090.89	0.00	
11695.00†	89.614	269.761	8606.20	3190.92	-13.32	-3190.89	0.00	
11795.00†	89.614	269.761	8606.87	3290.92	-13.73	-3290.89	0.00	
11895.00†	89.614	269.761	8607.54	3390.91	-14.15	-3390.88	0.00	
11995.00†	89.614	269.761	8608.22	3490.91	-14.57	-3490.88	0.00	
12095.00†	89.614	269.761	8608.89	3590.91	-14.98	-3590.88	0.00	
12195.00†	89.614	269.761	8609.56	3690.91	-15.40	-3690.87	0.00	
12295.00†	89.614	269.761	8610.24	3790.90	-15.82	-3790.87	0.00	
12395.00†	89.614	269.761	8610.91	3890.90	-16.24	-3890.87	0.00	
12495.00†	89.614	269.761	8611.58	3990.90	-16.65	-3990.86	0.00	
12595.00†	89.614	269.761	8612.26	4090.90	-17.07	-4090.86	0.00	
12695.00†	89.614	269.761	8612.93	4190.90	-17.49	-4190.86	0.00	
12795.00†	89.614	269.761	8613.60	4290.89	-17.90	-4290.86	0.00	
12895.00†	89.614	269.761	8614.28	4390.89	-18.32	-4390.85	0.00	
12995.00†	89.614	269.761	8614.95	4490.89	-18.74	-4490.85	0.00	
13002.18	89.614	269.761	8615.00†	4498.06	-18.77	-4498.03	0.00	No. 3H BHL

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Planned Wellpath Report

Preliminary

Page 4 of 4



INTEQ

REFERENCE WELLPATH IDENTIFICATION

Operator	Cimarex Energy Co. of Colorado	Slot	No. 3H SHL
Area	Chaves County, NM	Well	No. 3H
Field	(Coral) Sec 7, T15S, R31E	Wellbore	No. 3H PWB
Facility	Coral Sea 7 Fed Com No. 3H		

TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	Shape
1) No. 3H BHL	13002.18	8615.00	-18.77	-4498.03	683769.78	739573.43	33°01'55.988"N	103°52'06.877"W	point

SURVEY PROGRAM Ref Wellbore: No. 3H PWB Ref Wellpath: Preliminary

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
18.00	13002.18	NaviTrak (Standard)		No. 3H PWB

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Cimarex Energy Co. of Colorado

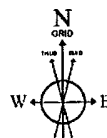
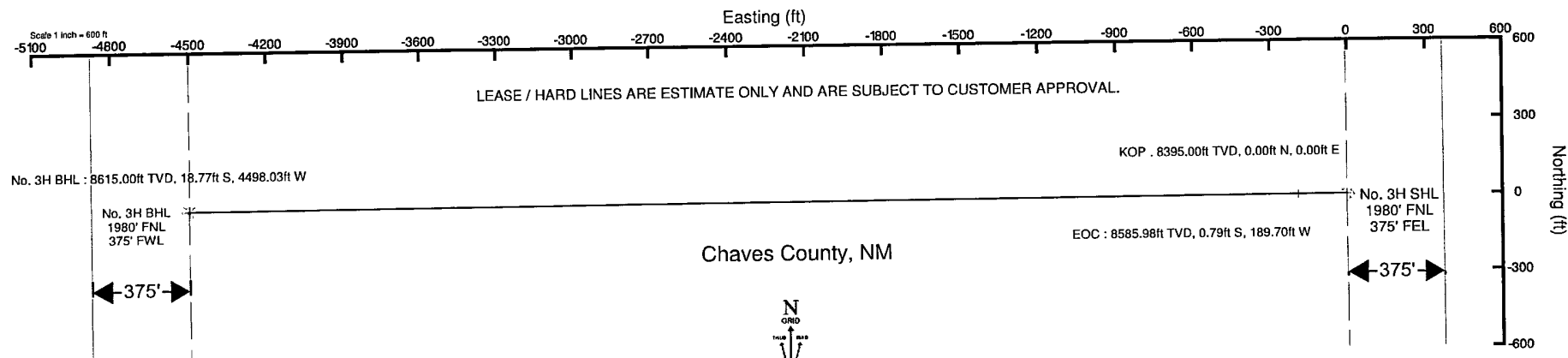
Location: Chaves County, NM
Field: (Coral) Sec 7, T15S, R31E
Facility: Coral Sea 7 Fed Com No. 3H

Slot: No. 3H SHL
Well: No. 3H
Wellbore: No. 3H PWB



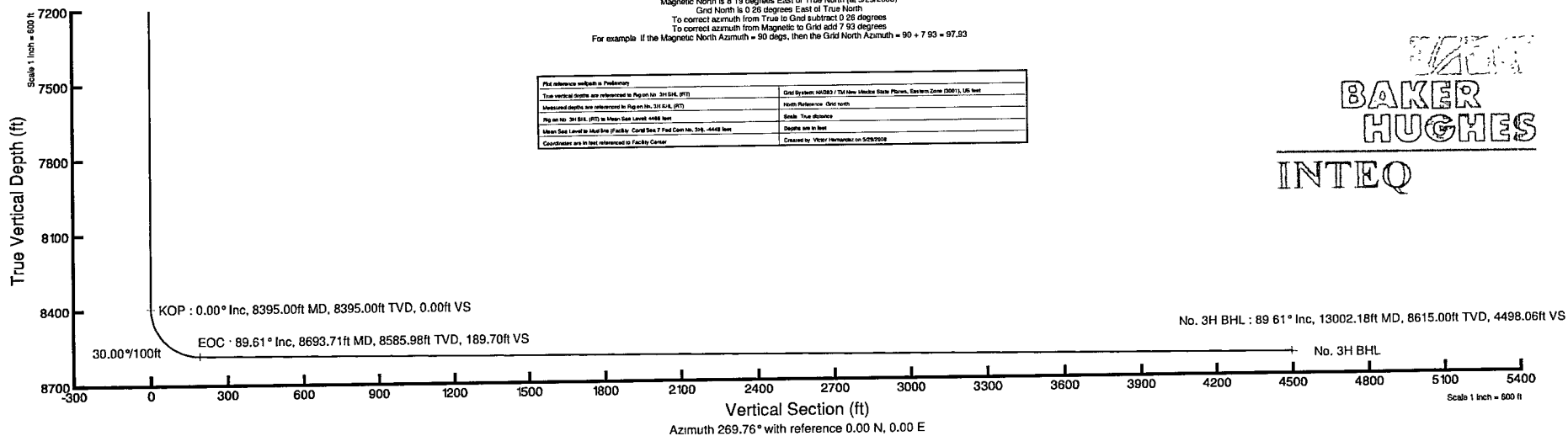
Well Profile Data

Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (%/100ft)	VS (ft)
Tie On	0.00	0.000	269.761	0.00	0.00	0.00	0.00	0.00
KOP	8395.00	0.000	269.761	8395.00	0.00	0.00	0.00	0.00
EOC	8693.71	89.614	269.761	8585.98	-0.79	-189.70	30.00	189.70
No. 3H BHL	13002.18	89.614	269.761	8615.00	-18.77	-4498.03	0.00	4498.06



BGGM (1945 0 to 2009 0) Dip 80 97° Field 49395 5 nT
Magnetic North is 8 19 degrees East of True North (at 5/29/2008)
Grid North is 0 26 degrees East of True North
To correct azimuth from True to Grid subtract 0 26 degrees
To correct azimuth from Magnetic to Grid add 7 93 degrees
For example if the Magnetic North Azimuth = 90 degs, then the Grid North Azimuth = 90 + 7 93 = 97.93

Field reference wellbore is Preliminary	
True vertical depths are referenced to Pgs on No. 3H SHL, (FT)	Grid System: NAD83 / TM (New Mexico State Plane, Eastern Zone 2001), US feet
Measured depths are referenced to Pgs on No. 3H SHL, (FT)	North Reference: Grid North
Pgs on No. 3H SHL, (FT) is Mean Sea Level + 4498 feet	Grid True distance
Mean Sea Level is blue line (Pgs on No. 3H SHL, (FT) is Mean Sea Level + 4498 feet)	Depths are in feet
Coordinates are in feet referenced to Facility Center	Checked by: VHSR/Henrikson on 5/29/2008



Cimarex - Caprock Queen

0 0.125 0.25 0.5 0.75 1 Miles

No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual use or aggregate use with other data, or for purposes not intended by BLM. Spatial information may not meet National Map Accuracy Standards. This information may be updated without notification. Map created 8/20/2008

EXHIBIT B
PECOS DISTRICT - RFO
CONDITIONS OF APPROVAL

October 14, 2008

Coral Sea 7 Federal #3

Surface: 1980' FNL & 375' FEL, Sec. 7 T15S-R31E

Bottom: 1980' FNL & 375' FWL, Sec. 7 T15S-R31E

Chaves County, New Mexico NMPM

Cimarex Energy Company of Colorado

Lease Number: NM-053471

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. **The operator is required to close and reclaim the nearby old existing reserve pit prior to construction of new pad.**

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

B. TOPSOIL:

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

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

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

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

D. FEDERAL MINERAL MATERIALS PIT:

If the operator elects to surface the access road and/or well pad, payment shall be made to the BLM prior to removal of any federal mineral material. Call the Roswell Field Office at (505) 627-0236.

E. WELL PAD SURFACING:

Surfacing of the well pad is not required.

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

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

F. ON LEASE ACCESS ROADS:

Road Egress and Ingress

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

Road Width

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

Surfacing

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

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

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

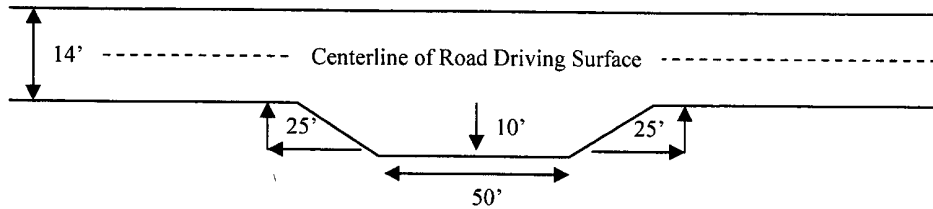
Crowning

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

Turnouts

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

Standard Turnout – Plan View

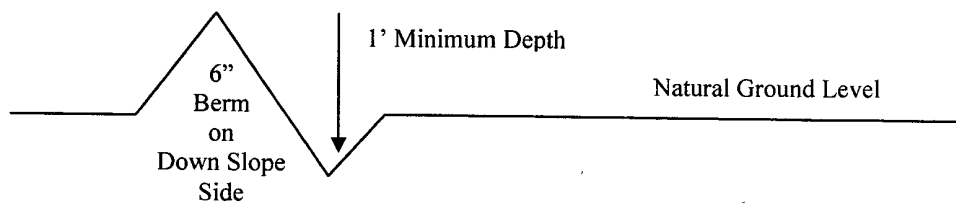


Drainage

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

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

Cross Section Of Typical Lead-off Ditch



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

Formula For Spacing Interval Of Lead-off Ditches

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

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

Cattleguards

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

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

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

Fence Requirement

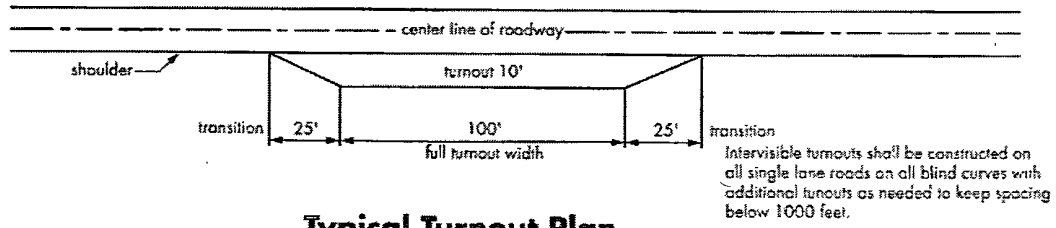
Where entry is required across a fence line, the fence shall be braced and tied off on both sides of the passageway prior to cutting.

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

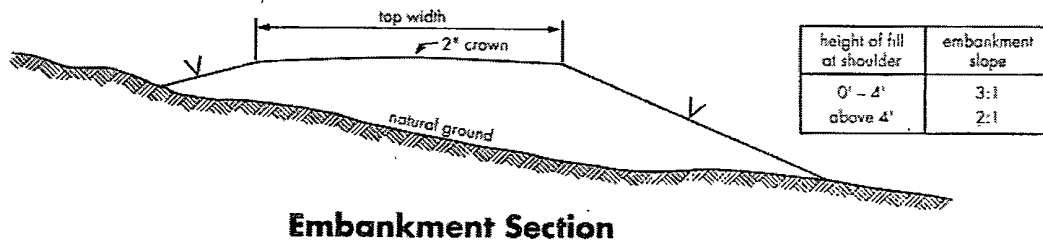
Public Access

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

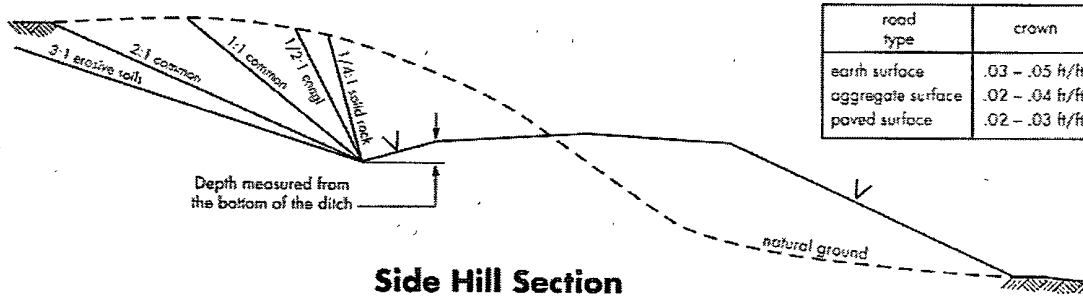
Figure 1 – Cross Sections and Plans For Typical Road Sections



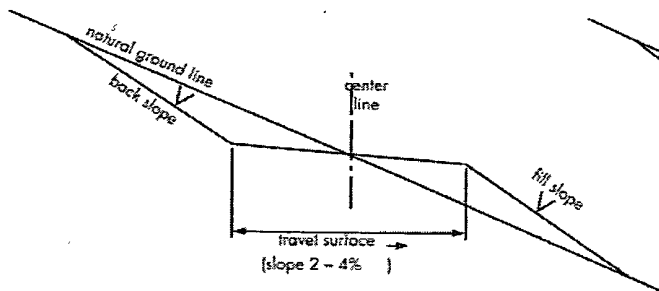
Typical Turnout Plan



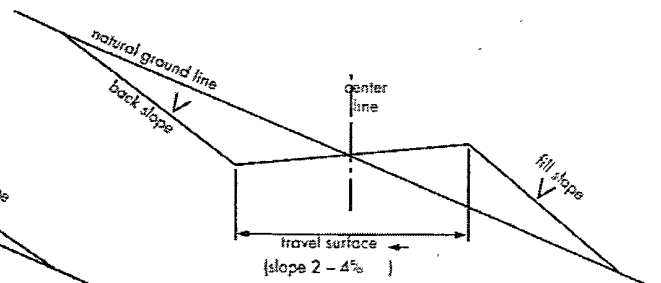
Embankment Section



Side Hill Section



Typical Outsloped Section



Typical Insloped Section

V. DRILLING

DRILLING OPERATIONS REQUIREMENTS

1 Chaves and Roosevelt Counties

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

2. The BLM is to be notified a minimum of 24 hours in advance for a representative to witness:
- a. Spudding well
 - b. Setting and/or Cementing of all casing strings

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

BOPE Tests

3. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.
4. Include the API No. assigned to well by NMOCD on the subsequent report of setting the first casing string.
5. **The operator will be required to have a geolograph or some other device to accurately measure the drilling rate in order to set the base of the usable water protection casing shoe opposite competent rock Onshore Order No. 2. III. B. The record of the drilling rate along with the gamma ray-neutron well log run to surface will be submitted to this office as well as all other logs run on the on the borehole CFR 3162.4-1(a) and (b).**
6. **Air air-mist or fresh water and non toxic drilling mud shall be used to drill to the base of the usable water protection casing string. Any polymers used will be water based and non-toxic.**
7. A Communitization Agreement covering the acreage dedicated to this well must be filed for approval with the BLM. The effective date of the agreement shall be prior to any sales.

B. CASING:

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

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

C. PRESSURE CONTROL:

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

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

VI. PRODUCTION

A. WELL STRUCTURES & FACILITIES

Placement of Production Facilities

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

Containment Structures

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

Painting Requirement

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

VRM Facility Requirement

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

VII. INTERIM RECLAMATION & RESERVE PIT CLOSURE

A. INTERIM RECLAMATION

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

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

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

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

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

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

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

VIII. FINAL ABANDONMENT & REHABILITATION REQUIREMENTS

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