Form 3160-3
(December 1990)

K-05-34

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN TRIPLICATE: (See other instructions on reverse side)

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

Form approved.

APPLICATION FOR PERMIT TO DRILL OR DEEPEN

CONFIDENTIAL – TIGHT HOLE

1a. TYPE OF WORK: DRILL ☒ DEEPEN ☐

b. TYPE OF WELL: OIL WELL ☐ GAS WELL ☒ Other ___ SINGLE ZONE ☐ MULTIPLE ZONE ☐

2. NAME OF OPERATOR
CHESAPEAKE OPERATING, INC. (147179) Linda Good 405-767-4275

3. ADDRESS AND TELEPHONE NO.
P.O. BOX 18496 OKLAHOMA CITY, OK 73154-0496

4. LOCATION OF WELL (*Report location clearly and in accordance with any State requirements*)*
At surface: ~~660~~ 990 FSL 1980 FEL SWSE per attached SN dated 9-30-05 (EA)
Unit O

5. LEASE DESIGNATION AND SERIAL NO.
NMNM57285

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME, WELL NO. (300154)
CODORNIZ 28 FEDERAL 3

9. API WELL NO.
30-025-37523

10. FIELD AND POOL, OR WILDCAT
QUAIL RIDGE; MORROW (GAS)

11. SEC., T., R., M., OR BLOCK AND SURVEY OR AREA
28-19S-34E

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*
24 MILES W OF HOBBS, NEW MEXICO

12. COUNTY OR PARISH: LEA COUNTY

13. STATE: NM

15. DISTANCE FROM PROPOSED LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line if any)	16. NO. OF ACRES IN LEASE	17. NO. OF ACRES ASSIGNED TO THIS WELL
	1280	320
18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.	19. PROPOSED DEPTH	20. ROTARY OR CABLE TOOLS*
	13,750	ROTARY
21. ELEVATIONS (Show whether DF, RT, GR, etc.)		22. APPROX. DATE WORK WILL START*
3698 GR		

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	GRADE, SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
"	"	#	'	+/-
"	"	#	'	+/-
	"	#	'	+/-

Chesapeake Operating, Inc. proposes to drill a well to 13,750' to test the Morrow formation. If productive, casing will be run and the well completed. If dry, the well will be plugged and abandoned as per BLM and New Mexico Oil Conservation Division requirements.

Please find the Surface Use Plan and Drilling Plan as required by Onshore Order No. 1.

Please be advised that Chesapeake Operating, Inc. is considered to be the Operator of the above mentioned well. Chesapeake Operating, Inc. agrees to be responsible under the terms and conditions of the lease for the operations conducted upon the lease lands.

Chesapeake Operating, Inc. has an agreement with the grazing lessee.

BLM Nationwide Bond #NM2634.

APPROVAL SUBJECT TO GENERAL REQUIREMENTS AND SPECIAL STIPULATIONS ATTACHED

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24.

SIGNED J. Mark Lester TITLE Sr. Vice President Exploration DATE 8/26/05
J. Mark Lester

*(This space for Federal or State office use)

PERMIT NO. _____ APPROVAL DATE _____

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:

APPROVED BY /s/ Joe G. Lara TITLE ACTING FIELD MANAGER DATE OCT 12 2005

See Instructions On Reverse Side

APPROVAL FOR 1 Y

Title 18 U.S.C. Section 1001, makes 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

OCD-HOBBS

Form 3160-5
(April 2004)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OM B No. 1004-0137
Expires: March 31, 2007

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160 - 3 (APD) for such proposals.

SUBMIT IN TRIPLICATE- Other instructions on reverse side.

5. Lease Serial No.
NMNM57285

6. If Indian, Allottee or Tribe Name

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

1. Type of Well
☐ Oil Well ☑ Gas Well ☐ Other

8. Well Name and No.
CODORNIZ 28 FEDERAL 3

2. Name of Operator **CHESAPEAKE OPERATING, INC.**

9. API Well No.

3a. Address
P.O. BOX 18496, OKLAHOMA CITY, OK 73154-0496

3b. Phone No. *(include area code)*
405-767-4275

10. Field and Pool, or Exploratory Area
QUAIL RIDGE; MORROW (GAS)

4. Location of Well *(Footage, Sec., T., R., M., or Survey Description)*
860 FSL 1980 FEL SW SE SEC 28-T19S-R 34E

11. County or Parish, State
LEA COUNTY, NM

12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
☐ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☑ Subsequent Report	☐ Alter Casing	☐ Fracture Treat	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☐ Other **CHANGE TO ORIGINAL APD.**
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

LOCATION CHNGD FROM 660 FSL 1920 FEL TO 860 FSL 1980 FEL - SEE ATTACHED SURVEY PLATS

ACCESS ROAD CHANGED - SEE ATTACHED MAP.

BLM NATIONWIDE BOND #NM2634.

(CHK PN 819656)

RECEIVED
OCT 13 PM 12:45
CARLSBAD FIELD OFFICE

14. I hereby certify that the foregoing is true and correct
Name *(Printed/Typed)*
LINDA GOOD Title **PERMITTING AGENT**

Signature Linda Good Date **09/30/2005**

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by **/s/ Joe G. Lara** Title **FIELD MANAGER** Date **OCT 12 2005**

Conditions of approval, if any, are attached. Approval of this notice 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.

Office **CARLSBAD FIELD OFFICE**

Title 18 U.S.C. 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)

TITLE PAGE/ABSTRACT/ NEGATIVE SITE REPORT CFO/RFO

1/03

1. BLM Report No.	2. Reviewer's Initials/Date_____ ACCEPTED ( ) REJECTED ( )	3. NMCRIS No.: 94661 ADDENDUM to 94263

4. Type of Report: Negative(X) Positive ( )

5.Title of Report: ADDENDUM
Class III archaeological survey of an access road for the Codorniz "28" Fed. well No. 3.
Author(s): Ann Boone

6. Fieldwork Date(s): from 14 Sept. 2005 to

7. Report Date: 15 Sept. 2005

8. Consultant Name & Address:
Boone Archaeological Services
2030 North Canal
Carlsbad, NM 88220
Direct Charge: Danny Boone
Field Personnel Names: Danny Boone
Phone: (505) 885-1352

9. Cultural Resource Permit No.:
BLM: 190-2920-03-E
STATE: NM-05-157

10. Consultant Report No.:
BAS 08-05-06A
ADDENDUM to BAS 08-05-06

11. Customer Name: Chesapeake Operating, Inc.
Responsible Individual: Linda Good
Address: P.O. Box 18496
Oklahoma City, Oklahoma 73154-0496
Phone: (405) 848-8000

12. Customer Project No.:

13. Land Status	BLM	STATE	PRIVATE	OTHER	TOTAL
a. Area Surveyed (acres)	1.15 (+/-)	0	0	0	1.15 (-/+)
b. Area of Effect (acres)	0.69 (-/)	0	o	o	0.69 (+/-)

14. Linear: Length; 600' Total [500' survey] Width; 100'
Block: NA

15. Location: (Maps Attached if Negative Survey)
a. State: New Mexico
b. County: Lea
c. BLM Office: Carlsbad
d. Nearest City or Town: Maljamar, NM
e. Legal Location: T 19S, R 34E, Sec. 28, NW¼ SE¼, SW¼ SE¼.
f. Well Pad Footages: NA
g. USGS 7.5 Map Name(s) and Code Number(s): IRONHOUSE WELL, NM (1984) 32103-G8

16. Project Data:

a. Records Search: Date(s) of BLM File Review: 15 Aug. 2005 Name of Reviewer (s): Stephen Smith

Date(s) of ARMS Data Review: 15 Aug. 2005 Name of Reviewer (s): Janet Cox

Findings (see Field Office requirements to determine area to be reviewed during records search):

LA 137078 is within 0.25 mile.

b. Description of Undertaking:

The current access road begins at an existing caliche capped road, trends south crossing one buried pipeline to a point approximately 100 feet into the northwest corner of the Codorniz No. 3 pad survey area. Total length is estimated to be 600 feet. No plat was avaliable therefore location, footages and acres are estimations based on a hand held GPS Unit. Survey acres were estimated on 500 feet in length by 100 feet in width. Impact acres are unknown but were estimated on 600 feet in length by 50 feet in width.

c. Environmental Setting (NRCS soil designation; vegetative community; etc.):

Topography: Mildly rolling dunal plain.

Vegetation: Overall groundcover is approximately 35% consisting primarily of shinoak, mesquite, broom snakeweed, sage brush, yucca cactus, assorted grasses and other flora.

NRCS: Pyote-Maljamar-Kermit association: Gently undulating and rolling, deep, sandy soils.

d. Field Methods: (transect intervals; crew size; time in field, etc.):

Transects: One space up to 15 meters on each side of staked centerline.

Crew Size: One

Time in Field: 0.5 hour.

e. Artifacts Collected (?): None

17. Cultural Resource Findings: None

a. Identification and description:

b. Evaluation of significance of Each Resource:

18. Management Summary (Recommendations):

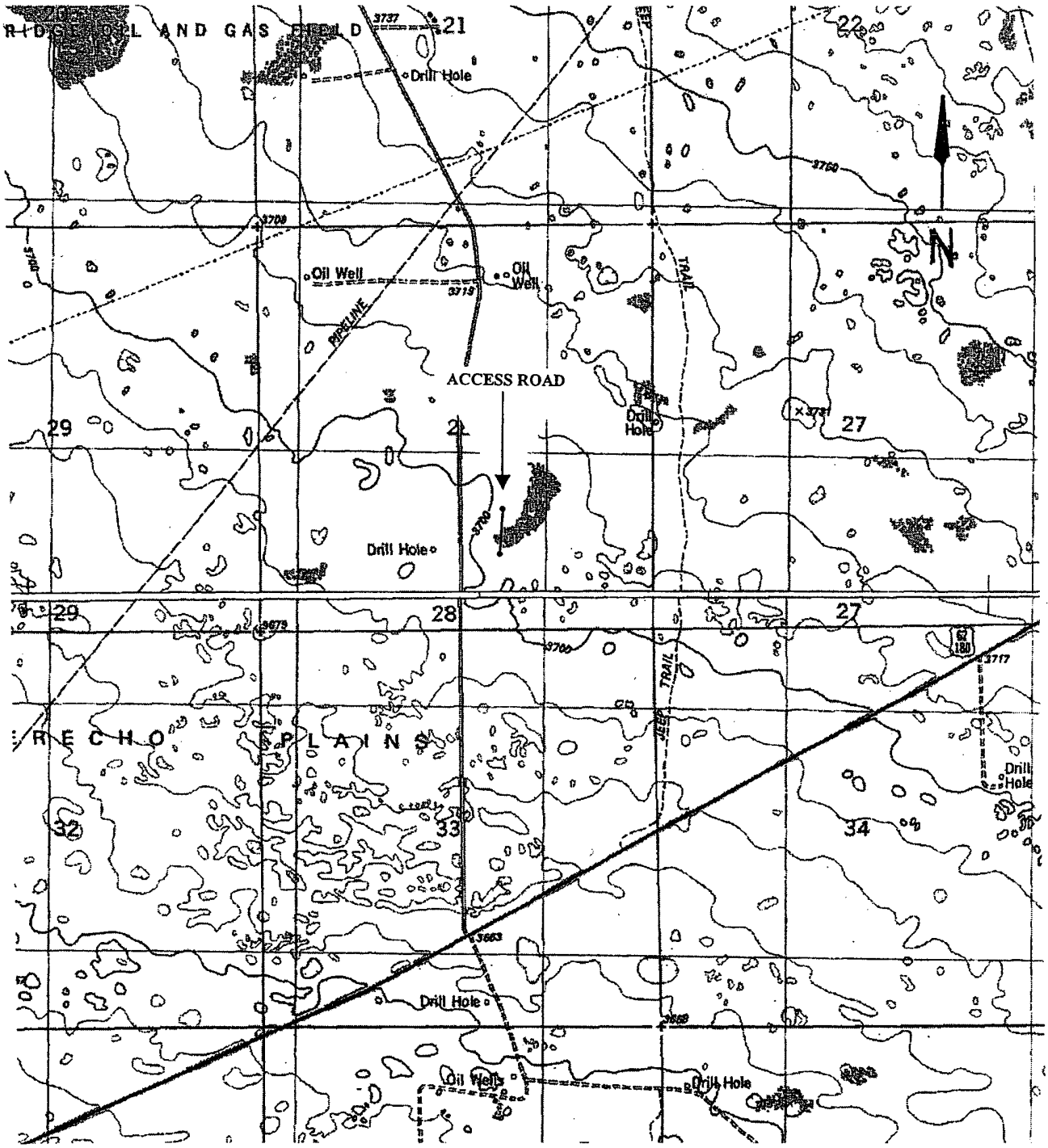
Archaeological clearnace of an access road for the Codorniz "28" Fed. well No. 3 for Chesapeake Operating, Inc. is recommended.as presently staked. If cultural resources are encountered at any time all activity should cease and the BLM Archaeologist notified immediately.

19.

I certify that the information provided above is correct and accurate and meets all appreciable BLM standards.

Responsible Archaeologist Wayne Boone 15 Sept. 2005

Signature Date



ADDENDUM

Location Map of an access road for the Codorniz "28" Fed. well No. 3 for Chesapeake Operating, Inc. in Section 28, T 19S, R 34E, NMPM, Lea County, New Mexico.

Map Reference: USGS 7.5' Series; IRONHOUSE WELL, NM (1984) 32103-G8

SCALE 1:24000

1 0 1 MILE

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

1 .5 0 1 KILOMETER

GAS

State of New Mexico
Energy, Minerals and Natural Resources Department

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

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
30-025-37523	83280	Quail Ridge Morrow

Property Code	Property Name	Well Number
300159	CODORNIZ 28 FEDERAL	3

OGRID No.	Operator Name	Elevation
147179	CHESAPEAKE OPERATING, INC.	3698'

Surface Location

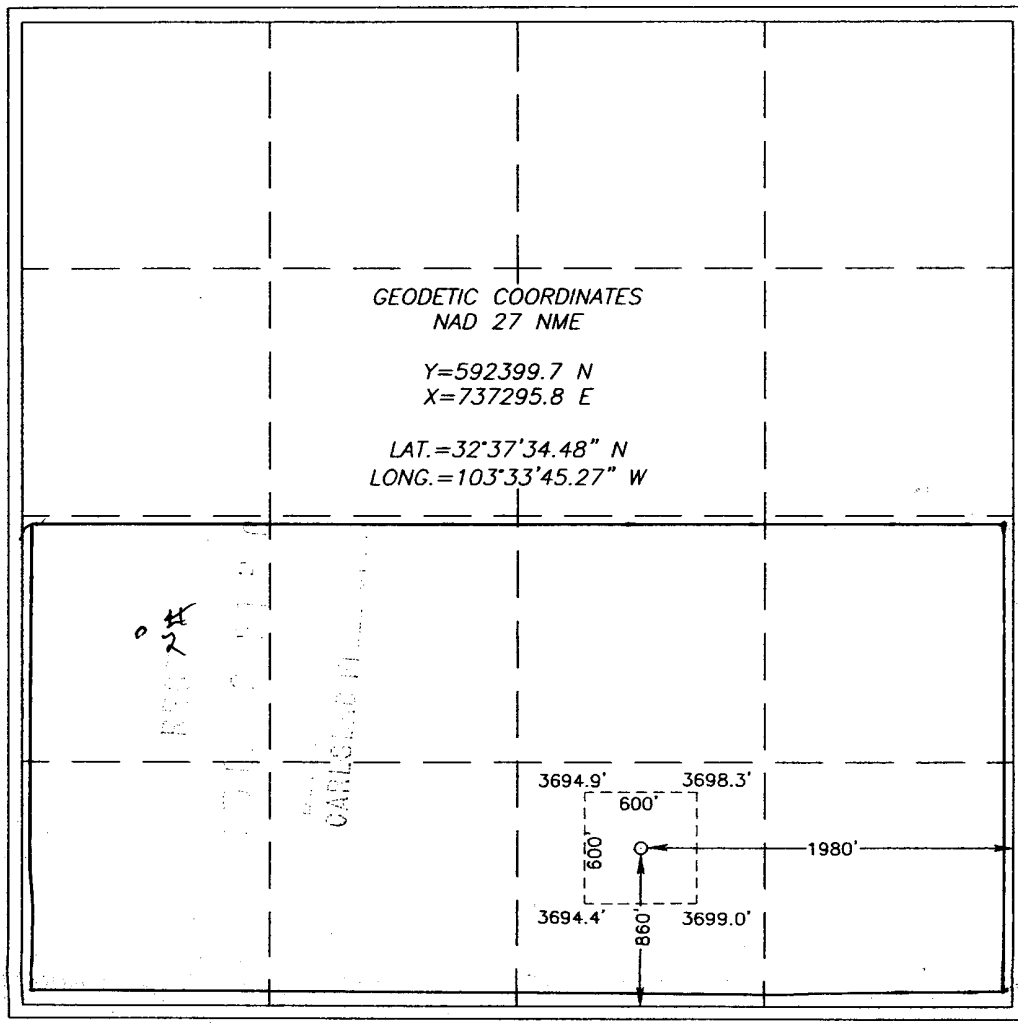
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
O	28	19-S	34-E		860	SOUTH	1980	EAST	LEA

Bottom Hole Location If Different From Surface

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

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
320			

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION



OPERATOR CERTIFICATION

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

Signature

H.G. SMITH
Printed Name

AGENT
Title

9-30-2005
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.

SEPTEMBER 15, 2005
Date Surveyed JR

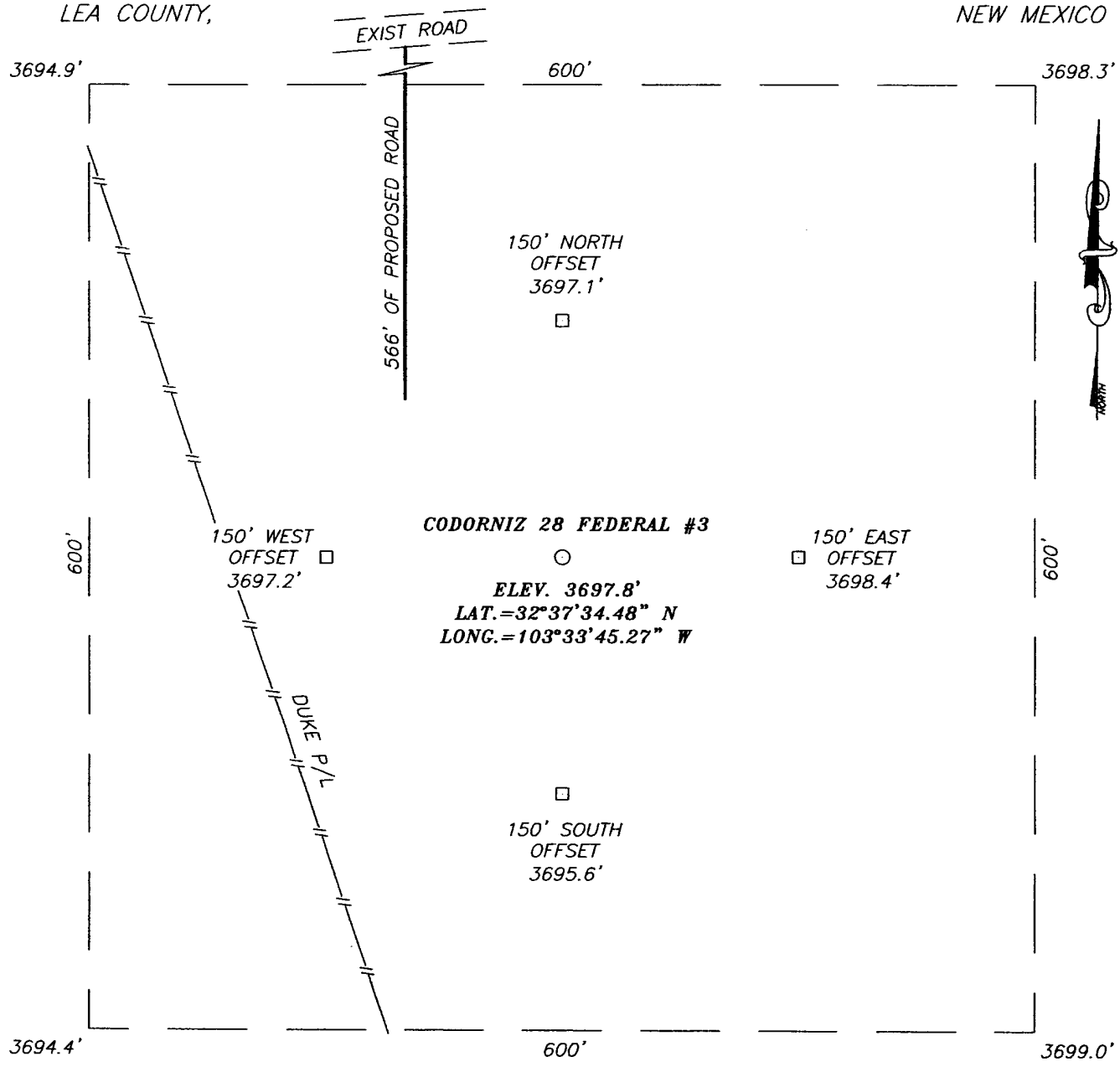
Signature & Seal of Professional Surveyor

GARY L. EDSON
NEW MEXICO
9/30/05
05.11.1401
REGISTERED PROFESSIONAL SURVEYOR

Certificate No. GARY EDSON 12641

SECTION 28, TOWNSHIP 19 SOUTH, RANGE 34 EAST, N.M.P.M.,

LEA COUNTY, NEW MEXICO



DIRECTIONS TO LOCATION

FROM THE INTERSECTION OF U.S. HWY. 62–180 AND CO. RD. H–27 (MARATHON RD,) GO SOUTHWEST ON U.S. HWY. 62–180 TO MILEPOST 79, CONTINUE WEST APPROX. 0.8 MILES. TURN RIGHT (NORTH) AND GO APPROX. 1.0 MILES TO AN INTERSECTION. TURN RIGHT (EAST) AND GO APPROX. 0.1 MILES TO A PROPOSED ROAD SURVEY ON THE RIGHT. FOLLOW PROPOSED ROAD SURVEY SOUTH APPROX. 566' 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

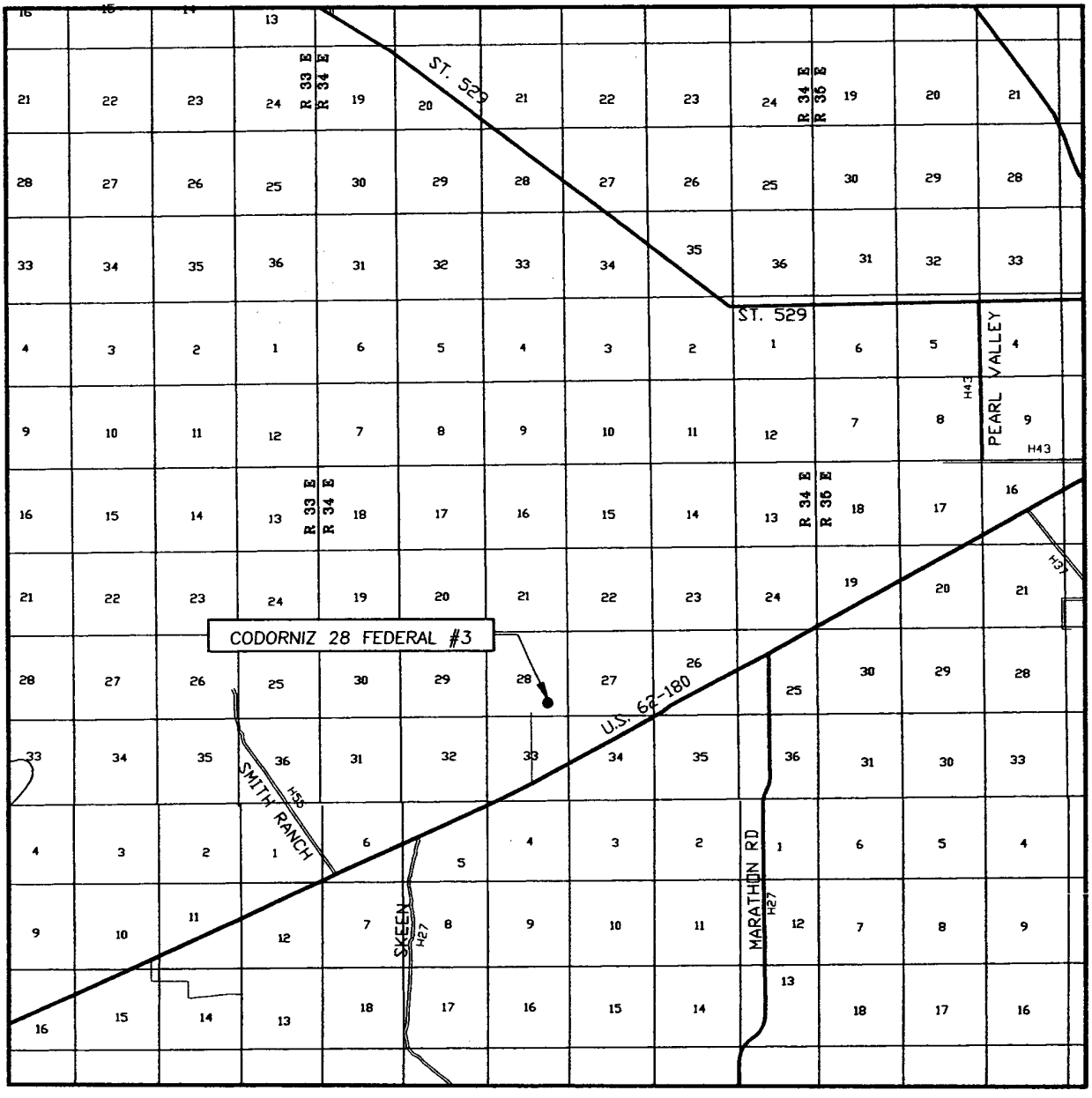
(505) 393-3117

CHESAPEAKE OPERATING, INC.

CODORNIZ 28 FEDERAL #3 WELL
LOCATED 860 FEET FROM THE SOUTH LINE
AND 1980 FEET FROM THE EAST LINE OF SECTION 28,
TOWNSHIP 19 SOUTH, RANGE 34 EAST, N.M.P.M.,
LEA COUNTY, NEW MEXICO.

Survey Date: 09/15/05	Sheet 1 of 1 Sheets		
W.O. Number: 05.11.1401	Dr By: J.R.		Rev 1:N/A
Date: 09/23/05	Disk: CD#5	05111401	Scale: 1"=100'

VICINITY MAP



SCALE: 1" = 2 MILES

SEC. 28 TWP. 19-S RGE. 34-E

SURVEY N.M.P.M.

COUNTY LEA

DESCRIPTION 860' FSL & 1980' FEL

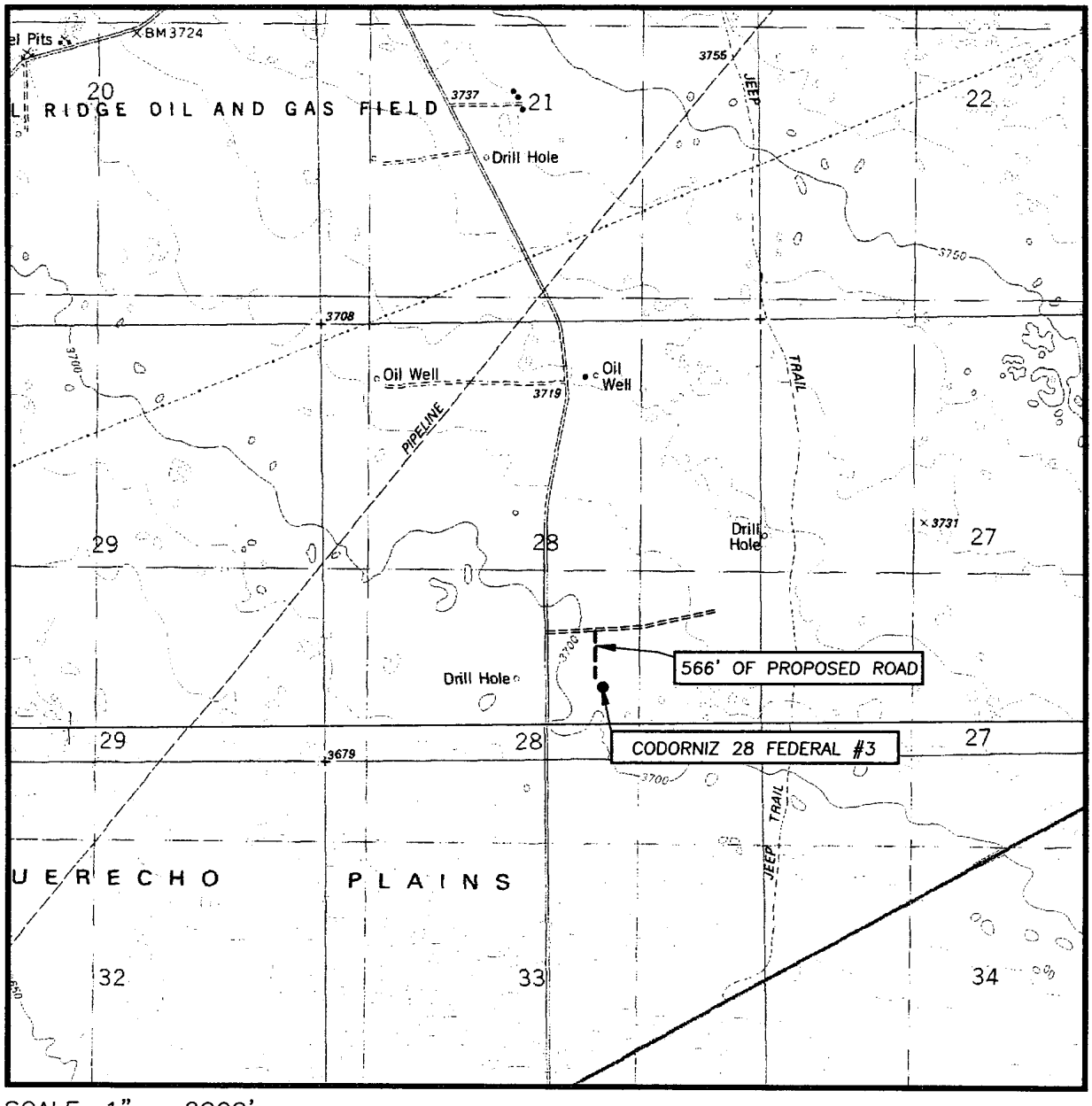
ELEVATION 3698'

OPERATOR CHESAPEAKE OPERATING, INC.

LEASE CODORNIZ 28 FEDERAL

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

LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

CONTOUR INTERVAL:
IRONHOUSE WELL, N.M. – 10'
LEA, N.M. – 10'

SEC. 28 TWP. 19-S RGE. 34-E

SURVEY N.M.P.M.

COUNTY LEA

DESCRIPTION 860' FSL & 1980' FEL

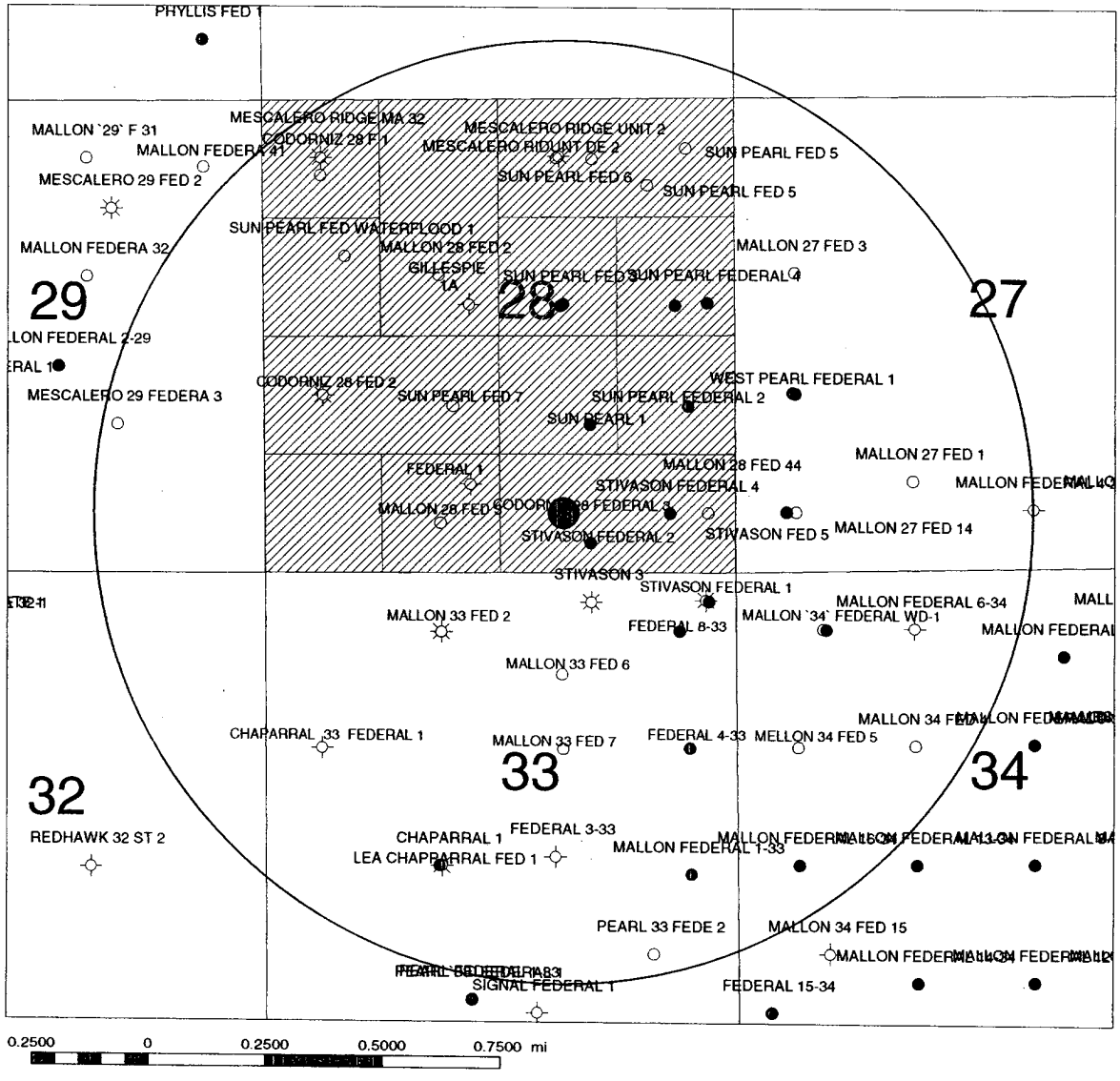
ELEVATION 3698'

OPERATOR CHESAPEAKE OPERATING, INC.

LEASE CODORNIZ 28 FEDERAL

U.S.G.S. TOPOGRAPHIC MAP
IRONHOUSE WELL, N.M.

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



N

Chesapeake Natural Gas Natural Advantages

CHESAPEAKE OPERATING, INC.

Codorniz 28 Federal #3
Lea NM
28-T19S-R34E

DagCentralLeaCodornizAlisa.gmp

Date: 9 August, 2005 | **Geologist:** DAG/AB

Exhibit B

ONSHORE OIL & GAS ORDER NO. 1
Approval of Operations on Onshore
Federal and Indian Oil and Gas Leases

1. EXISTING ROADS

a. Existing county roads will be used to enter proposed access road.
b. Location, access, and vicinity plats attached hereto. See Exhibits A-1 through A-4.

2. PLANNED ACCESS ROADS

a. A new access road 795' in length and 14' in travel way width with a maximum disturbance area of 30' will be built in accordance with guidelines set forth in the BLM Onshore Orders.
b. No turnouts are expected.
c. In order to level the location, cut and fill will be required. Please see attached Well Location and Acreage Dedication Plat – Exhibit A1-A4.
d. A locking gate will be installed at the site entrance.
e. Any fences cut will be repaired. Cattle guards will be installed, if needed.
f. Surface disturbance and vehicular travel will be limited to the approved location and approved access route. Any additional area needed will be approved in advance.
g. Driving directions: At Milepost 78.2 on U.S. Hwy #62-180, turn Right (North) and go approx 0.8 miles. Turn Right (East) and go approx 0.15 miles. Turn Left @ existing well pad for the Stavison Federal 1, go North for approx 0.14 miles to the Stavison Federal 27 D.H., This location if approx. 375' NW.

3. LOCATION OF EXISTING WELLS WITHIN A 1-MILE RADIUS OF THE PROPOSED LOCATION – see Exhibit B.

4. LOCATION OF PRODUCTION FACILITIES

It is anticipated that production facilities will be located on the well pad as product will be sold at the wellhead and/or tank battery. Duke will obtain ROW and lay pipeline to well. – See Exhibit C

5. LOCATION AND TYPE OF WATER SUPPLY
Water will be obtained from a private water source. Chesapeake Operating, Inc. will ensure all proper notifications and filings are made with the state.

6. CONSTRUCTION MATERIALS
No construction materials will be used from Section 4-20S-33E. All material (i.e. shale) will be acquired from private or commercial sources.

7. METHODS FOR HANDLING WASTE DISPOSAL
An in ground reserve pit will be used to handle all drilling fluids, this pit design is based on the current (OCD guidelines for reserve pits). This will consist of two parallel pits approximately 150' in length X 15" in width X 12' deep. The pits will be lined with 12 mil woven plastic liner. The closing procedure will follow Guidelines set forth on page 14 Item B #3 in "The Pit and Below Grade Tank Guidelines" dated Nov. 1, 2004. All wastes accumulated during drilling operations will be contained in a portable trash cage and removed from location and deposited in an approved sanitary landfill. Sanitary wastes will be contained in a chemical porta-tolet and then hauled to an approved sanitary landfill.

8. ANCILLARY FACILITIES
None

9. WELLSITE LAYOUT
The proposed site layout plat is attached showing a generic rig plat with rig orientation and equipment location. See Exhibit D.

10. PLANS FOR RECLAMATION OF THE SURFACE
The location will be restored to as near as original condition as possible. Reclamation of the surface shall be done in strict compliance with the existing New Mexico Oil Conservation Division regulations.

Backfilling leveling, and contouring are planned as soon as the drilling rig and steel tanks are removed. Wastes and spoils materials will be buried immediately after drilling is completed. If production is obtained, the unused area will be restored as soon as possible. The rehabilitation will begin after the drilling rig is removed.

11. SURFACE & MINERAL OWNERSHIP
United States of America
Department of Interior
Bureau of Land Management

GRAZING LESSEE
Kenneth Smith
267 Smith Ranch Rd.
Hobbs, NM 88240
505-887-3374
(Chesapeake Operating, Inc. has an agreement with the grazing lessee)

12. ADDITIONAL INFORMATION

A Class III cultural resource inventory report was prepared by Boone Archaeological Services, Carlsbad, New Mexico for the proposed location. A copy of the report has been sent to the BLM office under separate cover and is also attached for reference. See Exhibit E.

Chesapeake Operating, Inc. agrees to be responsible under the terms and conditions of the lease for the operations conducted upon the lease lands.

13. OPERATOR'S REPRESENTATIVES

Drilling and Completion Operations
Rob Jones
District Manager
P.O. Box 18496
Oklahoma City, OK 73154
(405) 810-2694 (OFFICE)
(405) 879-9573 (FAX)
rjones@chkenergy.com

Cecil Gutierrez
Sr. Landman
P.O. Box 11050
Midland, TX 79705
432-687-2992 (OFFICE)
432-687-3675 (FAX)
cgutierrez@chkenergy.com

Regulatory Compliance
Linda Good
Regulatory Compliance Analyst
P.O. Box 18496
Oklahoma City, OK 73154
(405) 767-4275 (OFFICE)
(405) 879-9583 (FAX)
lgood@chkenergy.com

Drilling Engineer
David DeLaO
P.O. Box 14896
Oklahoma City, OK 73154
(405) 767-4339 (OFFICE)
(405) 879-9573 (FAX)
(405) 990-8182 (MOBILE)
ddelao@chkenergy.com

Assett Manager
Jeff Finnell
P.O. Box 18496
Oklahoma City, OK 73154-0496
405-767-4347 (OFFICE)
405-879-7930 (FAX)
jfinnell@chkenergy.com

14. 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 presently exist; that the statements made in this surface use plan are, to the best of my knowledge, true and correct; and, that the work associated with the operations proposed will be performed by operator (including contractors and subcontractors) submitting the APD, in conformity with this plan and the terms and conditions under which it is approved. This statement is subject to the provisions of 18 U.S.C. 1001 for the filing of a false statement.

By: J. Mark Lester

Date: 8/26/05

ONSHORE OIL & GAS ORDER NO. 1
Approval of Operations on Onshore
Federal and Indian Oil and Gas Leases

All lease and/or unit operations are to be conducted in such a manner that full compliance is made with the applicable laws, regulations (CFR 43, Part 3160) and the approved Application for Permit to Drill. The operator is considered fully responsible for the actions of his subcontractors. A copy of the approved APD must be on location during construction, drilling and completion operations.

Approval of this application 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.

1. FORMATION TOPS

The estimated tops of important geologic markers are as follows:

Formation	Depth	Subsea
Rustler	1725	1995
Yates	3540	180
Seven Rivers Sand	3845	-125
Queen	4555	-835
Capitan	4955	-1235
Delaware	5805	-2085
Bone Spring	8210	-4490
First Bone Spring Sand	9970	-6250
Third Bone Spring Sand	10,575	-6855
Wolfcamp	10,940	-7220
Penn Shale	11,695	-7975
Strawn	12,140	-8420
Atoka Shale	12,580	-8860
Morrow Lime	12,780	-9060
Morrow Clastics	13,030	-9310
Morrow Primary Sand	13,320'	-9600
Lower Morrow	13,470	-9750
Mississippian	13,625	-9905
TD	13,750	

2. ESTIMATED DEPTH OF WATER, OIL, GAS & OTHER MINERAL BEARING FORMATIONS

The estimated depths at which the top and bottom of the anticipated water, oil, gas or other mineral bearing formations are expected to be encountered are as follows:

Substance	Formation	Depth
Oil	Seven Rivers	3845
Oil	Delaware	5805
Oil	Wolfcamp	10,940
Gas	Morrow	13,320

All shows of fresh water and minerals will be reported and protected.

3. BOP EQUIPMENT: 5,000# System

Chesapeake Operating, Inc.'s minimum specifications for pressure control equipment are as follows:

I. BOP, Annular, Choke Manifold, Pressure Test - See Exhibit F-1 and F-2.

A. Equipment
1. The equipment to be tested includes all of the following that is installed on the well:
(a) Ram-type and annular preventers,
(b) Choke manifolds and valves,
(c) Kill lines and valves, and
(d) Upper and lower kelly cock valves, inside BOP's and safety valves.

B. Test Frequency
1. All tests should be performed with clear **water**,
(a) when installed,
(b) before drilling out each casing string,
(c) at any time that there is a repair requiring a pressure seal to be broken in the assembly, and
(d) at least once every **30 days** while drilling.

C. Test Pressure
1. In some drilling operations, the pressures to be used for low and high-pressure testing of preventers and casing may be different from those given below due to governmental regulations, or approved local practices.
2. If an individual component does not test at the low pressure, **do not,** test to the high pressure and then drop back down to the low pressure.
3. All valves located downstream of a valve being tested must be placed in the open position.
4. All equipment will be tested with an initial "low pressure" test at 250 psi.
5. The subsequent "high pressure" test will be conducted at the rated working pressure of the equipment for all equipment except the annular preventer.

6. The "high pressure" test for the annular preventer will be conducted at 70% of the rated working pressure.
7. A record of all pressures will be made on a pressure-recording chart.

D. Test Duration
   1. In each case, the individual components should be monitored for leaks for **5 minutes,** with no observable pressure decline, once the test pressure as been applied.

II. Accumulator Performance Test

A. Scope

   1. The purpose of this test is to check the capabilities of the BOP control systems, and to detect deficiencies in the hydraulic oil volume and recharge time.

B. Test Frequency
   1. The accumulator is to be tested each time the BOP's are tested, or any time a major repair is performed.

C. Minimum Requirements
   1. The accumulator should be of sufficient volume to supply 1.5 times the volume to close and hold all BOP equipment in sequence, **without recharging** and the **pump turned off**, and have remaining pressures of **200 PSI above the precharge pressure**.

   2. Minimum precharge pressures for the various accumulator systems per **manufacturers recommended specifications** are as follows:
   3.

System Operating Pressures	Precharge Pressure
1500 PSI	750 PSI
2000 PSI	1,000 PSI
3000 PSI	1,000 PSI

   3. Closing times for the Hydril should be less than **20 seconds**, and for the ram-type preventers less than **10 seconds**.

   4. System Recharge time should not exceed **10 minutes**.

D. Test Procedure
   1. Shut accumulator pumps off and record accumulator pressure.

   2. In sequence, close the annular and one set of properly sized pipe rams, and open the HCR valve.

3. Record time to close or open each element and the remaining accumulator pressure after each operation.

4. Record the remaining accumulator pressure at the end of the test sequence. Per the previous requirement, this pressure **should not be less** than the following pressures:

System Pressure	Remaining Pressure At Conclusion of Test
1,500 PSI	950 PSI
2,000 PSI	1,200 PSI
3,000 PSI	1,200 PSI

5. Turn the accumulator pumps on and record the recharge time. This time should not exceed **10 minutes.**

6. Open annular and ram-type preventers. Close HCR valve.

7. Place all 4-way control valves in **full open** or **full closed** position. **Do not leave in neutral position**.

4. CASING AND CEMENTING PROGRAM

a. The proposed casing program will be as follows:

Purpose	Interval	Hole Size	Casing Size	Weight	Grade	Thread	Condition
Surface	0' – 500'	17-1/2"	13-3/8"	48#	H40	STC	New
Intermediate	0' – 5,300'	11"	8-5/8"	32#	J55	LTC	New
Production	0' – 13,750'	7-7/8"	5.5"	17&20#	L80	LTC	New

b. Casing design subject to revision based on geologic conditions encountered.
c. The cementing program will be as follows:

Interval	Type	Amount	Yield	Washout	Excess
0' – 500'	35:65 Poz:C (Lead)	200 sks	2.07	40%	100%
	Class C (Tail)	100 sks	1.34	40%	100%
500' – 5,300'	50:50 Poz:C (Lead)	720 sks	2.48	20%	75%
	Class C (Tail)	235 sks	1.32	20%	50%
5,300' – 13,750'	50:50 Poz:H (Lead)	560 sks	2.5	10%	25%
	50:50 Poz:H (Tail)	320 sks	1.35	10%	25%

5. MUD PROGRAM

a. The proposed circulating mediums to be used in drilling are as follows:

Interval	Mud Type	Mud Weight	Viscosity	Fluid Loss
0 – 500'	FW	8.4 – 9.0	34-36	NC
1700/~~500~~' - 5,300'	Brine	10.0 - 10.1	28-29	NC
5,300'-11,500'	FW/Brine	8.4 – 10.0	29-32	NC
11,500'-13,750'	Brine/XCD	10-11.2	36-45	NC-10

7500'-1700' FW (JSS)

An in ground reserve pit will be utilized during the drilling of this well. All fluids and cuttings will be disposed of in accordance with New Mexico Oil Conservation Division rules and regulations.

A mud test shall be performed every 24 hours after mudding up to determine, as applicable: density, viscosity, gel strength, filtration, and pH.

6. TESTING, LOGGING AND CORING

The anticipated type and amount of testing, logging and coring are as follows:

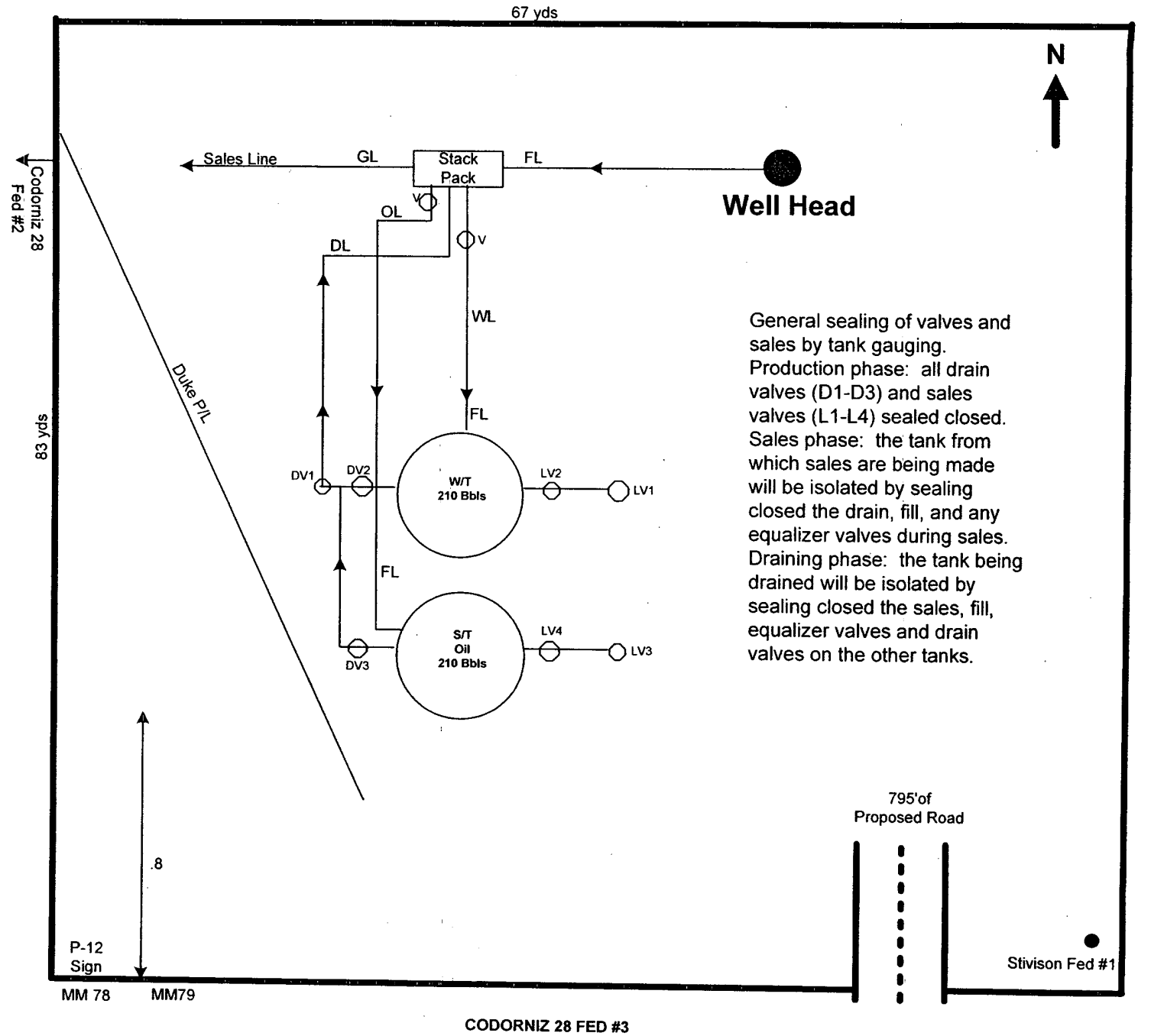
a. Drill stem tests are not planned.
b. The logging program will consist of Natural GR, Density-Neutron, PE & Dual Laterolog from TD to surface casing; Neutron-GR surface casing to surface.
c. Cores samples are not planned.

7. ABNORMAL PRESSURES AND HYDROGEN SULFIDE

a. The estimated bottom hole pressure is 8,008 psi. No abnormal pressures or temperatures are anticipated.
b. Hydrogen sulfide gas is not anticipated.

CHESAPEAKE OPERATING, INC.

CODORNIZ 28 FEDERAL 3
28-19S-34E
LEA COUNTY, NM



CODORNIZ 28 FED #3

Prepared by: DEBBIE HERNANDEZ
Date: 08-11-2005

Approved by:
Date:

Exhibit C

Prevailing Winds from the North in Winter and from the South in Summer.

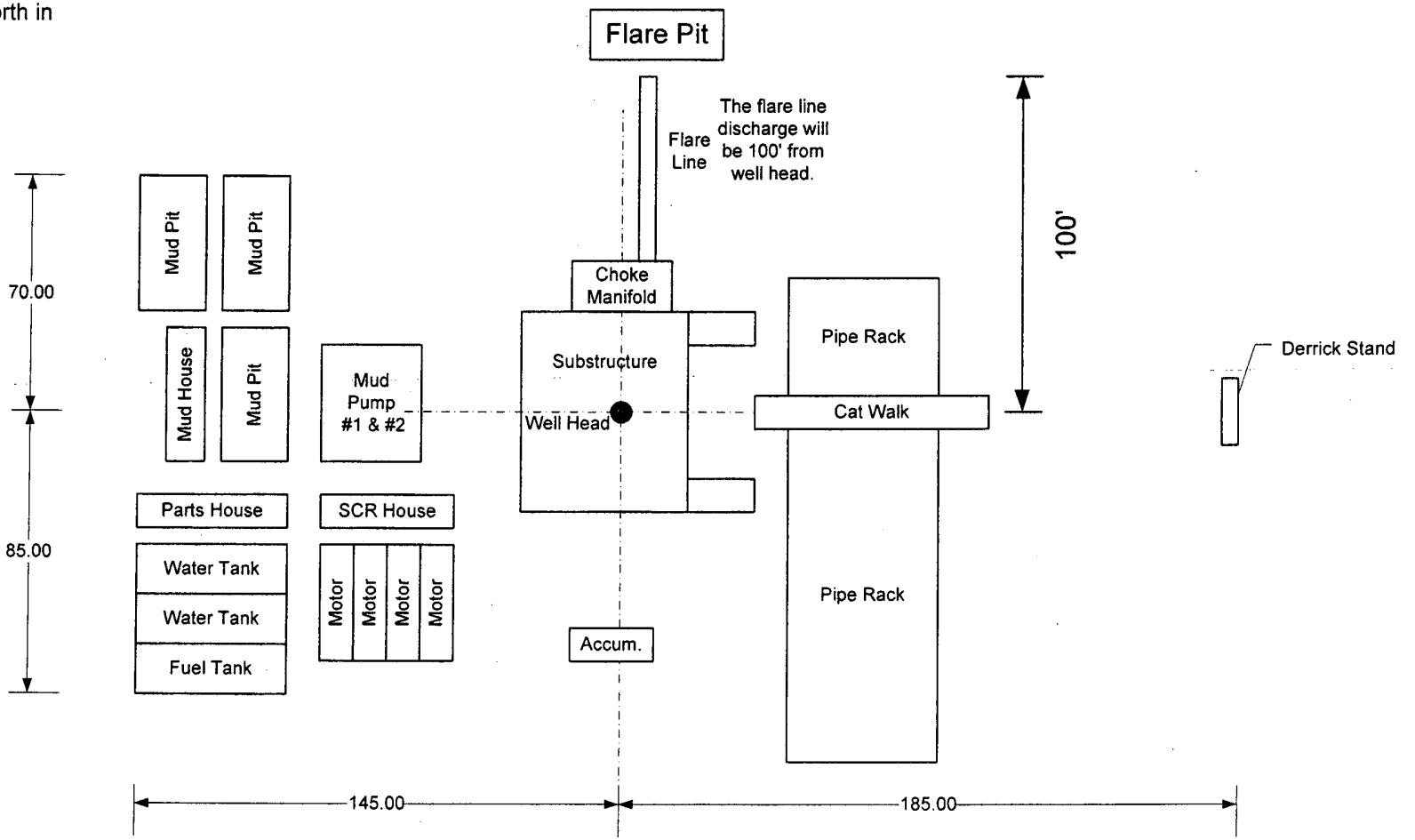


Exhibit A

Chesapeake Operating, Inc			
General Rig Layout			
SIZE	FSCM NO	DWG NO	REV
SCALE Not to Scale		SHEET 1 OF 1	

RECEIVED
AUG 2 4 2005

1/03

TITLE PAGE/ABSTRACT/ NEGATIVE SITE REPORT CFO/RFO

1. BLM Report No.	2. Reviewer's Initials/Date_____ ACCEPTED ( ) REJECTED ( )	3. NMCRIS No.: 94263
4. Type of Report	Negative(X)	Positive ( )
5.Title of Report: Class III Archaeological Survey for Chesapeake Operating Inc.'s Proposed Access Road and Well Pad to Serve the Codorniz 28 Federal No. 3 Well Author: Stephen Smith		6. Fieldwork Date: August 16,2005 7. Report Date: August 17, 2005
8. Consultant Name & Address: Boone Archaeological Services 2030 North Canal Carlsbad, NM 88220 Direct Charge: Danny Boone Field Personnel Name: Stephen Smith Phone: (505) 885-1352		9. Cultural Resource Permit No.: BLM: 190-2920-05-E State: NM-05-157 10. Consultant Report No.: BAS 08-05-06
11. Customer Name: Chesapeake Operating, Inc. Responsible Individual: Linda Good Address: P.O. Box 18496 Oklahoma City, Oklahoma 73154-0496 Phone: (405) 848-8000		12. Customer Project No.:

13.Land Status	BLM	STATE	PRIVATE	OTHER	TOTAL
a. Area Surveyed (acres)	9.74	0	0	0	9.74
b. Area of Effect (acres)	4.58	0	0	0	4.58

14. Linear: Length: 795 ft (total length of the proposed access road) Width: 100 ft
645 ft (total length after 150 ft deduction for the current survey)
Block: 600 ft by 600 ft

15. Location: (Maps Attached if Negative Survey)

a. State: New Mexico
b. County: Lea
c. BLM Office: Carlsbad Field Office
d. Nearest City or Town: Carlsbad, NM
e. Legal Location: T 19S, R 34E, Section 28: S½SW¼SE¼; N½SW¼SE¼
Section 33: NE¼NW¼NE¼
f. Well Pad Footages: 660 ft FSL, 1920 ft FEL
g. USGS 7.5 Map Name and Code Number: Iron House Well, NM (1984) 32103-F5
Lea, NM (1984) 32103-E5

Exhibit E

16. Project Data:

a. Records Search: Date of BLM File Review: August 15, 2005 Name of Reviewer: Stephen Smith

Date of ARMS Data Review: August 15, 2005 Name of Reviewer: Janet Cox

Findings:

Sites within 0.25 mile of the project area: During pre-field research for this project it was learned that one BLM previously recorded site is plotted within 0.25 mile of the project area, LA 137078. No previously recorded sites are located within 500 ft of the project area. The pre-field investigation was supervised by Bruce Boeke, BLM-CFO archaeologist.

b. Description of Undertaking: Chesapeake Operating Inc. plans to construct an access road and well pad to serve the Codorniz 28 Federal No. 3 well. On August 3, 2005, Linda Good of Chesapeake Operating, Inc. contacted Boone Archaeological Services requesting an archaeological survey for the proposed access road and well pad. On August 16, 2005, Stephen Smith of Boone Archaeological Services, conducted an intensive pedestrian cultural survey for the proposed well pad and access road. The well pad is staked at 600 ft by 600 ft (8.26 acres) The proposed access road begins at an existing lease road and travels 795 ft north, ending in the southeast corner of the Codorniz 28 Federal No. 3 well. A total of 150 ft was deducted from the total length of the survey of the access road because of interaction with the current survey. A total of 645 ft (1.48 acres) of the survey for the proposed access road required survey. The access road and well pad does not interact with any BLM previous projects. The total area surveyed is 9.74 acres, all of which is on land administered by the BLM-CFO.

c. Environmental Setting:

Topography: Aeolian, dunes ranging from 0.75 meters to 3.5 meters in height, deep sand

Vegetation: Shin oak, sage, mesquite, yucca, and various grasses

Visibility: 65-75 percent due to ground cover

NRCS: Pyote-Maljamar-Kermit association: Gently undulating and rolling, deep, sandy soils

d. Field Methods:

Transect Interval: Transects are no greater than 15 meters and performed in a straight line pattern.

Crew Size: 1

Time in Field: 3.5 hours

e. Artifacts Collected: None

17. Cultural Resource Findings: During the course of this survey one isolated manifestation was encountered and recorded.

a. Identification and Description: N/A

b. Evaluation of Significance of Each Resource: N/A

18. Management Summary (Recommendations): Because no significant cultural resources were encountered during this survey, Chesapeake Operating, Inc.'s proposed access road and well pad are recommended as presently staked. If cultural resources are encountered during any construction related activity, construction should cease and an archaeologist with the BLM be immediately notified.

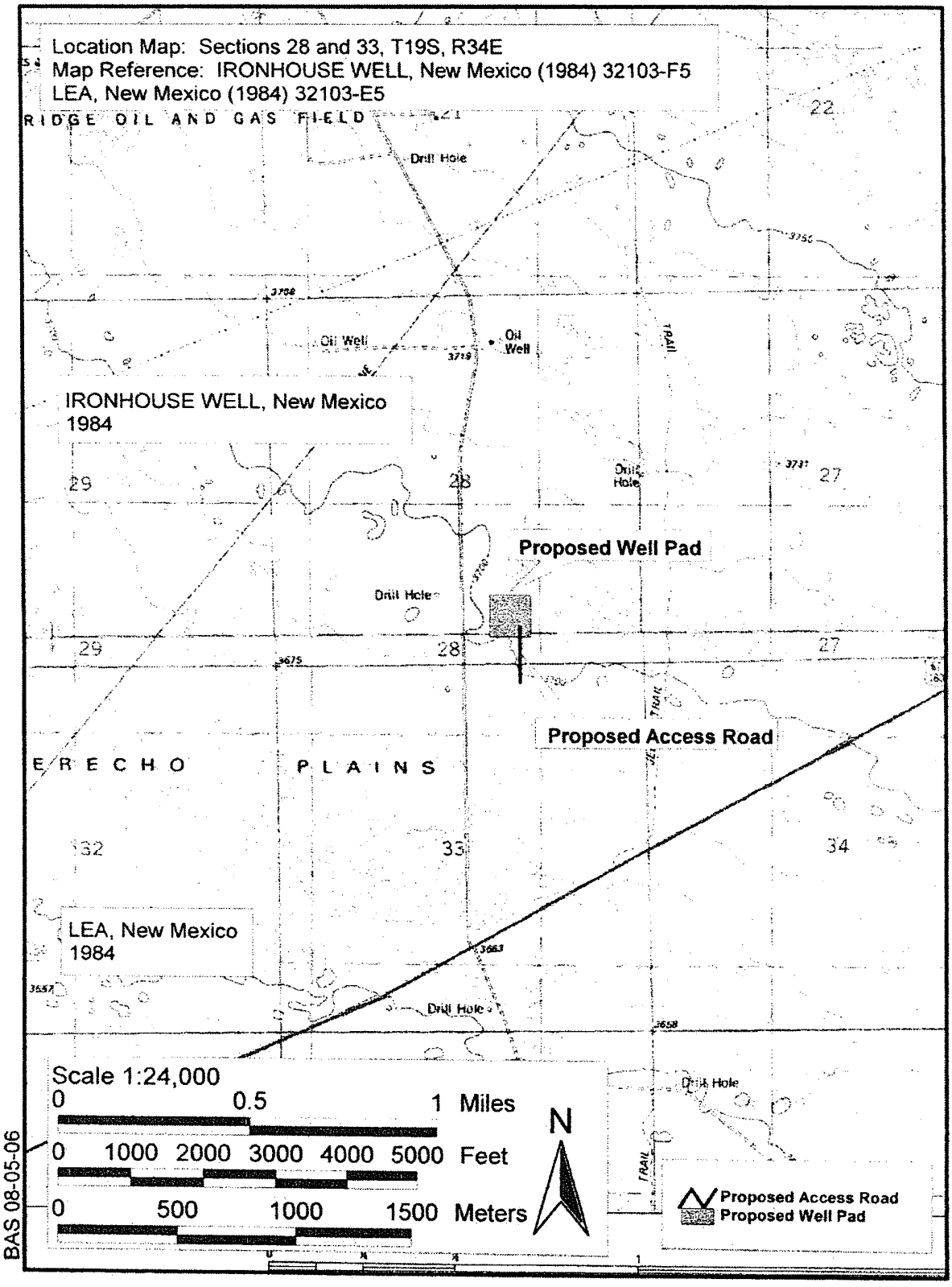
19.

I certify that the information provided above is correct and accurate and meets all appreciable BLM standards.

Responsible Archaeologist Stephen Smith 8-19-05

Signature Date

Survey for Chesapeake Operating, Inc.'s Proposed Access Road and Well Pad to Serve the Codorniz 28 Federal No. 3 Well



BLOWOUT PREVENTOR SCHEMATIC

CHESAPEAKE OPERATING INC

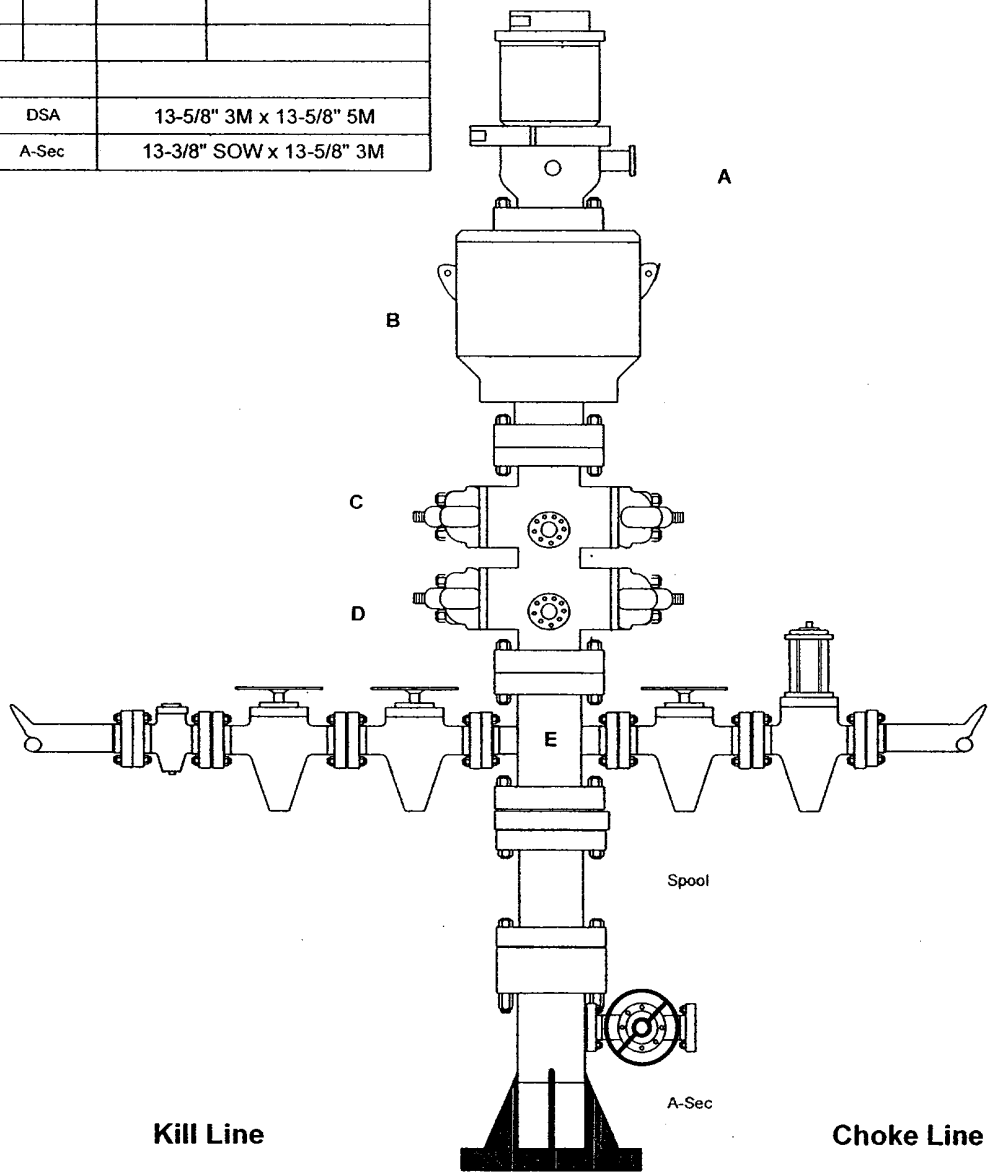
WELL : **Codorniz 28 Federal #3**

RIG :

COUNTY : **Lea** **STATE: New Mexico**

OPERATION: Drill out below 13-3/8" Casing

	SIZE	PRESSURE	DESCRIPTION
A	13-5/8"	500#	Rot Head
B	13-5/8"	5,000#	Annular
C	13-5/8"	5,000#	Pipe Rams
D	13-5/8"	5,000#	Blind Rams
E	13-5/8"	5,000#	Mud Cross
DSA		13-5/8" 3M x 13-5/8" 5M	
A-Sec		13-3/8" SOW x 13-5/8" 3M	



Kill Line

SIZE	PRESSURE	DESCRIPTION
2"	5,000#	Check Valve
2"	5,000#	Gate Valve
2"	5,000#	Gate Valve

Choke Line

SIZE	PRESSURE	DESCRIPTION
4"	5,000#	Gate Valve
4"	5,000#	HCR Valve

Exhibit F-1

BLOWOUT PREVENTOR SCHEMATIC

CHESAPEAKE OPERATING INC

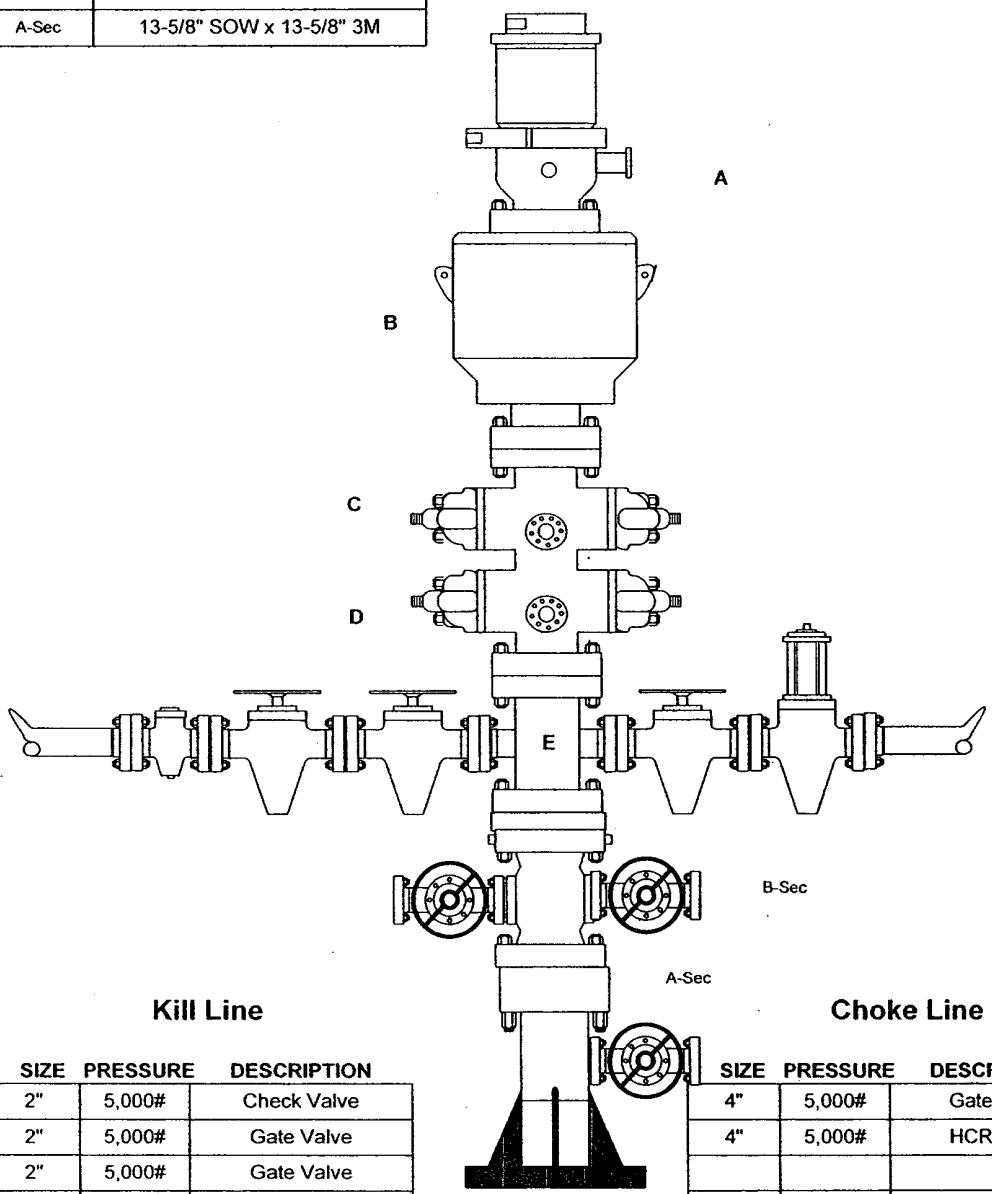
WELL : Codorniz 28 Federal #3

RIG :

COUNTY : Lea **STATE:** New Mexico

OPERATION: Drill out below 8-5/8" Casing

	SIZE	PRESSURE	DESCRIPTION
A	13-5/8"	500#	Rot Head
B	13-5/8"	5,000#	Annular
C	13-5/8"	5,000#	Pipe Rams
D	13-5/8"	5,000#	Blind Rams
E	13-5/8"	5,000#	Mud Cross
Spool		13-5/8" 5M x 13-5/8" 5M	
B-Sec		13-5/8" 3M x 13-5/8" 5M	
A-Sec		13-5/8" SOW x 13-5/8" 3M	



Kill Line

SIZE	PRESSURE	DESCRIPTION
2"	5,000#	Check Valve
2"	5,000#	Gate Valve
2"	5,000#	Gate Valve

Choke Line

SIZE	PRESSURE	DESCRIPTION
4"	5,000#	Gate Valve
4"	5,000#	HCR Valve

Exhibit F-2

SPECIAL DRILLING STIPULATIONS

THE FOLLOWING DATA IS REQUIRED ON THE WELL SIGN

Operator's Name Chesapeake Operating Co. Well Name & No. Corodniz 28 Federal #3
Location 860 F S L & 1980 F E L Sec. 28, T. 19 S, R 34 E.
Lease No. NM-57285 County Lea State New Mexico

The Special stipulations check marked below are applicable to the above described well and approval of this application to drill is conditioned upon compliance with such stipulations in addition to the General Requirements. The permittee should be familiar with the General Requirements, a copy of which is available from a Bureau of Land Management office. EACH PERMITTEE HAS THE RIGHT OF ADMINISTRATIVE APPEAL TO THESE STIPULATIONS PURSUANT TO TITLE 43 CRF 3165.3 AND 3165.4.

This permit is valid for a period of one year from the date of approval or until lease expiration or termination whichever is shorter.

I. SPECIAL ENVIRONMENT REQUIREMENTS

(X) Lesser Prairie Chicken (stips attached)
( ) San Simon Swale (stips attached)
( ) Flood plain (stips attached)
( ) Other

II. ON LEASE - SURFACE REQUIREMENTS PRIOR TO DRILLING

(X) The BLM will monitor construction of this drill site. Notify the (X) Carlsbad Field Office at (505) 234-5972 ( ) Hobbs Office (505) 393-3612, at least 3 working days prior to commencing construction.

(X) Roads and the drill pad for this well must be surfaced with 6 inches of compacted caliche.

( ) All topsoil and vegetation encountered during the construction of the drill site area will be stockpiled and made available for resurfacing of the disturbed area after completion of the drilling operation. Topsoil on the subject location is approximately _____inches in depth. Approximately _____cubic yards of topsoil material will be stockpiled for reclamation.

( ) Other.

III. WELL COMPLETION REQUIREMENTS

( ) A Communlitization Agreement covering the acreage dedicated to the well must be filed for approval with the BLM. The effective date of the agreement must be prior to any sales.

(X) Surface Restoration: If the well is a producer, the reserve pit(s) will be backfilled when dry, and cut-and-fill slopes will be reduced to a slope of 3:1 or less. All areas of the pad not necessary for production must be re-contoured to resemble the original contours of the surrounding terrain, and topsoil must be re-distributed and re-seeded with a drill equipped with a depth indicator (set at depth of ½ inch) with the following seed mixture, in pounds of Pure Live Seed (PLS), per acre.

( ) A. Seed Mixture 1 (Loamy Sites)
Side Oats Grama (*Bouteloua curtipendula*) 5.0
Sand Dropseed (*Sporobolus cryptandrus*) 1.0

(X) B. Seed Mixture 2 (Sandy Sites)
Sand Dropseed (*Sporobolus crptandrus)* 1.0
Sand Lovegrass (*Eragostis trichodes*) 1.0
Plains Bristlegrass (*Setaria magrostachya*) 2.0

( ) C. Seed Mixture 3 (Shallow Sites)
Side oats Grama (*Boute curtipendula*) 1.0

( ) D. Seed Mixture 4 (Gypsum Sites)
Alkali Sacaton (*Sporobollud airoides*) 1.0
Four-Wing Saltbush (*Atriplex canescens*) 5.0

( ) OTHER SEE ATTACHED SEED MIXTURE

Seeding should be done either late in the fall (September 15 - November 15, before freeze up, or early as possible the following spring to take advantage of available ground moisture.

( ) Other.

RESERVE PIT CONSTRUCTION STANDARDS

The reserve pit shall be constructed entirely in cut material and lined with 6 mil plastic.

Mineral material extracted during construction of the reserve pit may be used for development of the pad and access road as needed. Removal of any additional material on location must be purchased from BLM.

Reclamation: Reclamation of this type of deep pit will consist of pushing the pit walls into the pit when sufficiently dry to support track equipment. The pit liner is NOT TO BE RUPTURED to facilitate drying; a ten month period after completion of the well is allowed for drying of the pit contents.

The pit area must be contoured to the natural terrain with all contaminated drilling mud buried with at least 3 feet of clean soil. The reclaimed area will then be seeded as specified in this permit.

OPTIONAL PIT CONSTRUCTION STANDARDS

The reserve pit may be constructed in predominantly fill material if:

(1) Lined as specified above and

(2) A borrow/caliche/gravel pit can be constructed immediately adjacent to the reserve pit and it capable of containing all reserve pit contents. The mineral material removed in the process can be used for pad and access road construction. However, a material sales contract must be purchased from the BLM prior to removal of the material.

Reclamation of the reserve pit consists of bulldozing all reserve pit contents and contaminants into the borrow pit and covering with a minimum of 3 feet of clean soil material. The entire area must be recontoured, all trash removed, and reseeded as specified in this permit.

CULTURAL

Whether or not an archaeological survey has been completed and notwithstanding that operations are being conducted as approved, the lessee/operator/grantee shall notify the BLM immediately if previously unidentified cultural resources are observed during surface disturbing operations. From the time of the observation, the lessee/operator/grantee shall avoid operations that will result in disturbance to these cultural resources until directed to processed by BLM.

TRASH PIT STIPS

All trash, junk, and other waste material shall be contained in trash cages or bins to prevent scattering and will be removed and deposited in an approved sanitary landfill. Burial on site is not permitted.

PRAIRIE CHICKENS

No surface use is allowed during the following time periods; unless otherwise specified, this stipulation does not apply to operation and maintenance of production facilities.

On the lands described below: All of Section 28 T. 19 S., R. 34 E.

For the purpose of: Protecting Prairie Chickens:

Drilling for oil and gas, and 3-D geophysical exploration operations will not be allowed in Lesser Prairie Chicken Habitat during the period of March 15 through June 15, each year. During that period, other activities that produce noise or involve human activity, such as the maintenance of oil and gas facilities, geophysical exploration other than 3-D operations, and pipeline, road, and well pad construction, will be allowed except between 3:00 a.m. and 9:00 a.m. The 3:00 a.m. and 9:00 a..m. restriction will not apply to normal, around-the-clock operations, such as venting, flaring, or pumping, which do not require a human presence during the period. Additionally, no new drilling will be allowed within up to 200 meters of leks know at the time of permitting. Normal vehicle use on existing roads will not be restricted. Exhaust noise from pump jack engines must be muffled or otherwise controlled so as not to exceed 75 db measured at 30 feet from the source of the noise.

CONDITIONS OF APPROVAL - DRILLING

Operator's Name: Chesapeake Operating Incorporated
Well Name & No: Codorniz 28 Federal No.03
Location: Surface: ~~660~~ 860' FSL & ~~1920~~ 1980' FEL, Sec. 28, T. 19 S. R. 24 E. per attached sketch of 5-30-05 (AP)
Lease: NMNM 57285
Lea County, New Mexico

I. DRILLING OPERATIONS REQUIREMENTS:

1. The Bureau of Land Management (BLM) is to be notified at the Roswell Field Office, 2909 West Second St., Roswell, NM 88201, (505) 627-0272 for wells in Chaves and Roosevelt Counties; the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220, (505) 361-2822 for wells in Eddy County; and the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240, (505) 393-3612 for wells in Lea County, in sufficient time for a representative to witness:

A. Spudding

B. Cementing casing: 13 ⅜ inch; 8 ⅝ inch; 5 ½ inch.

C. BOP Tests

2. A Hydrogen Sulfide (H2S) Drilling Plan is shall be in operations 500 feet or three days prior to drilling into the Top of the **Yates** formation estimated to be at 3538 feet.

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

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

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

II. CASING:

1. The 13⅜ inch shall be set at **500 Feet** with cement circulated to the surface and use the Lea County Conditions of Approval (attached) to drill from below the surface shoe to the next casing shoe setting depth of 5300 feet. If cement does not circulate to the surface the appropriate BLM office shall be notified and a temperature survey or cement bond log shall be run to verify the top of the cement. Remedial cementing shall be completed prior to drilling out that string.

2. The minimum required fill of cement behind the 8 ⅝ inch Intermediate casing is to **circulate to surface.**

3. The minimum required fill of cement behind the 5 ½ inch Production casing is to **place TOC at least 200 feet above any potential hydro-carbon bearing formations .**

III. PRESSURE CONTROL:

1. All BOP systems and related equipment shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2. The BOP and related equipment shall be installed and operational before drilling below the 13 ⅜ inch casing shoe and shall be tested as described in Onshore Order No. 2. Any equipment failing to test satisfactorily shall be repaired or replaced.

2. Minimum working pressure of the blowout preventer and related equipment (BOPE) shall be **5 M psi.**

III. Pressure Control (continued):

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

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

ALTERNATIVE CONDITIONS OF APPROVAL - DRILLING

Drilling Fluids, Casing and Cementing Requirements for Most of Lea County:

Casing and Cementing

Surface casing is to be set at a sufficient depth to protect useable water zones and cement circulated to surface. In areas where the salt section (Salado) is present, surface casing should be set at least 25 feet into the top of the Rustler Anhydrite and cement circulated to the surface.

As an alternative, surface casing may be set through the Santa Rosa Formation or other potable water bearing zones and circulate cement to surface. For wells requiring an intermediate casing string, such string shall be cemented to the ground surface. In the case where intermediate casing is not required the operator shall case and cement the production hole to the ground surface.

While drilling from the surface casing to the Rustler formation it is recommended that operators periodically sweep the hole with viscous low water loss pills to help build a filter cake across useable water zones in the redbeds.

Drilling Fluid

Fresh water or fresh water spud mud shall be used to drill to surface casing depth. If surface casing is set at a lesser depth than the top of the Rustler formation., fresh water spud mud may be used to drill down to the first salt in the Rustler Formation. after which brine or fresh water may be used.

Non-toxic or biodegradable water based polymers, drilling paper, starch and gels may be used in the mud system in order to retard seepage into the redbeds.

Two to five percent diesel or crude oil may be used in the redbed section in order to control heaving shales and mudstones.

Caustics and Lime shall not be used in the red beds but may be added when the Rustler formation is reached. However, sodium carbonate maybe used for alkalinity or ph control while drilling the redbeds above the Rustler formation.

Additionally, questions of whether an additive may be used should be referred to the Roswell Field office.

BLM Serial Number: NM-57285
Company Reference: Chesapeake Operating Co.
Well No. & Name: Codorniz 28 Federal #3

STANDARD STIPULATIONS FOR PERMANENT RESOURCE ROADS
CARLSBAD FIELD OFFICE

A copy of the grant and attachments, including stipulations and map, will be on location during construction. BLM personnel may request to view a copy of your permit during construction to ensure compliance with all stipulations.

The holder/grantee/permittee shall hereafter be identified as the holder in these stipulations. The Authorized Officer is the person who approves the Application for Permit to Drill (APD) and/or Right-of-Way (ROW).

GENERAL REQUIREMENTS

A. The holder shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of public lands under this grant.

B. The holder shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, the holder shall comply with the Toxic Substances Control Act of 1976, as amended (15 U.S.C. 2601, *et. seq.*) with regard to any toxic substances that are used, generated by or stored on the right-of-way or on facilities authorized by this grant. (See 40 CFR, Part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193.) Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR, Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation and Liability Act, Section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the Authorized Officer concurrent with the filing of the reports to the involved Federal agency or State government.

C. The holder agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601, *et. seq.* or the Resource Conservation and Recovery Act, 42 U.S.C. 6901, *et. seq.*) on the right-of-way (unless the release or threatened release is wholly unrelated to the right-of-way holder's activity on the right-of-way). This agreement applies without regard to whether a release is caused by the holder, its agent, or unrelated third parties.

D. If, during any phase of the construction, operation, maintenance, or termination of the road, any oil or other pollutant should be discharged, impacting Federal lands, the control and total removal, disposal, and cleaning up of such oil of other pollutant, wherever found, shall be the responsibility of the holder, regardless of fault. Upon failure of the holder to control, dispose of, or clean up such discharge on or affecting Federal lands, or to repair all damages to Federal lands resulting there from, the Authorized Officer may take such measures as deemed necessary to control and cleanup the discharge and restore the area, including, where appropriate, the aquatic environment and fish and wildlife habitats, at the full expense of the holder. Such action by the Authorized Officer shall not relieve the holder of any liability or responsibility.

E. The holder shall minimize disturbance to existing fences and other improvements on public domain surface. The holder is required to promptly repair improvements to at least their former state. Functional use of these improvements will be maintained at all times.

The holder will make a documented good-faith effort to contact the owner of any improvements prior to disturbing them. When necessary to pass through a fence line, the fence shall be braced on both sides of the passageway prior to cutting of the fence.

F. The Holder shall ensure that the entire right-of-way, including the driving surface, ditching and drainage control structures, road verges and any construction sites or zones, will be kept free of the following plant species: Malta starthistle, African rue, Scotch thistle and salt cedar.

Holder agrees to comply with the following stipulations:

1. ROAD WIDTH AND GRADE

The road will have a driving surface of 14 feet (all roads shall have a minimum driving surface of 12 feet, unless local conditions dictate a different width). The maximum grade is 10 percent unless the box below is checked. Maximum width of surface disturbance from construction will be 30 feet.

/__/ Those segments of road where grade is in excess of 10% for more than 300 feet shall be designed by a professional engineer.

2. CROWNING AND DITCHING

Crowning with materials on site and ditching on one side of the road on the uphill side will be required. The road cross-section will conform to the cross section diagrams in Figure 1. If conditions dictate, ditching may be required for both sides of the road; if local conditions permit, a flat-bladed road may be considered (if these conditions exist, check the appropriate box below). The crown shall have a grade of approximately 2% (i.e., 1" crown on a 12' wide road).

/_X/ Ditching will be required on both sides of the roadway as shown on the attached map or as staked in the field.

/__/ Flat-blading is authorized on segment(s) delineated on the attached map.

3. DRAINAGE

Drainage control shall be ensured over the entire road through the use of borrow ditches, outsloping, insloping, natural rolling topography, lead-off (turnout) ditches, culverts, and/or drainage dips.

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

SPACING INTERVAL FOR TURNOUT DITCHES

Percent slope	Spacing interval
0% - 4%	400' - 150'
4% - 6%	250' - 125'
6% - 8%	200' - 100'
8% - 10%	150' - 75'

A typical lead-off ditch has a minimum depth of 1 foot below and a berm 6 inches above natural ground level. The berm will be on the down-slope side of the lead-off ditch. The ditch end will tie into vegetation whenever possible.

For this road the spacing interval for lead-off ditches shall be at

/_x_/ 400 foot intervals.

/__/ _____ foot intervals.

/__/ locations staked in the field as per spacing intervals above.

/__/ locations delineated on the attached map.

B. Culvert pipes shall be used for cross drains where drainage dips or low water crossings are not feasible. The minimum culvert diameter must be 18 inches. Any culvert pipe installed shall be of sufficient diameter to pass the anticipated flow of water. Culvert location and required diameter are shown on the attached map (Further details can be obtained from the Roswell District Office or the appropriate Resource Area Office).

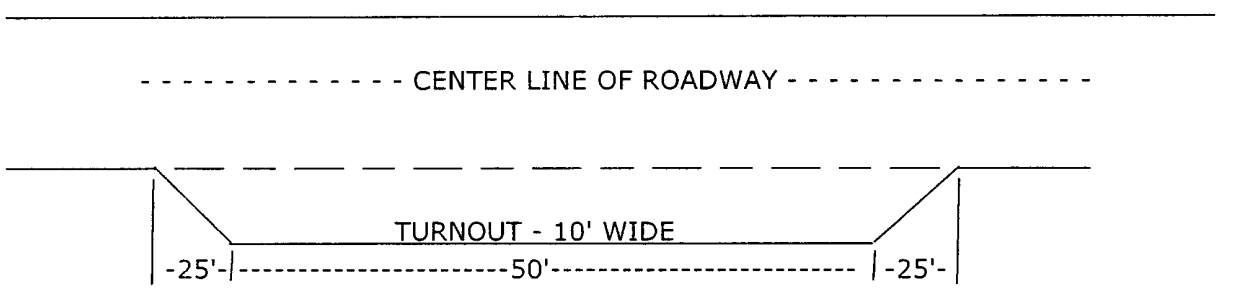
C. On road slopes exceeding 2%, drainage dips shall drain water into an adjacent lead-off ditch. Drainage dip location and spacing shall be determined by the formula:

spacing interval = $\frac{400'}{\text{road slope in \%}} + 100'$

Example: 4% slope: spacing interval = $\frac{400}{4} + 100 = 200$ feet

4. TURNOUTS

Unless otherwise approved by the Authorized Officer, vehicle turnouts will be required. Turnouts will be located at 2000-foot intervals, or the turnouts will be intervisible, whichever is less. Turnouts will conform to the following diagram:



STANDARD TURNOUT - PLAN VIEW

5. SURFACING

Surfacing of the road or those portions identified on the attached map may, at the direction of the Authorized Officer, be required, if necessary, to maintain traffic within the right-of-way with caliche, gravel, or other surfacing material which shall be approved by the Authorized Officer. When surfacing is required, surfacing materials will be compacted to a minimum thickness of six inches with caliche material. The width of surfacing shall be no less than the driving surface. Prior to using any mineral materials from an existing or proposed Federal source, authorization must be obtained from the Authorized Officer.

A sales contract for the removal of mineral materials (caliche, sand, gravel, fill dirt, etc.) from an authorized pit, site, or on location must be obtained from the BLM prior to using any such mineral material from public lands. Contact the BLM solid minerals staff for the various options to purchase mineral material.

6. CATTLEGUARDS

Where used, all cattleguard grids and foundation designs and construction shall meet the American Association of State Highway and Transportation Officials (AASHTO) Load Rating H-20, although AASHTO U-80 rated grids shall be required where heavy loads (exceeding H-20 loading), are anticipated (See BLM standard drawings for cattleguards). Cattleguard grid length shall not be less than 8 feet and width of not less than 14 feet. A wire gate (16-foot minimum width) will be provided on one side of the cattleguard unless requested otherwise by the surface user.

7. MAINTENANCE

The holder shall maintain the road in a safe, usable condition. A maintenance program shall include, but not be limited to blading, ditching, culvert installation, culvert cleaning, drainage installation, cattleguard maintenance, and surfacing.

8. PUBLIC ACCESS

Public access along this road will not be restricted by the holder without specific written approval being granted by the Authorized Officer. Gates or cattleguards on public lands will not be locked or closed to public use unless closure is specifically determined to be necessary and is authorized in writing by the Authorized Officer.

9. CULTURAL RESOURCES

Any cultural and/or paleontological resource (historic or prehistoric site or object) discovered by the holder, or any person working on the holder's behalf, on public or Federal land shall be immediately reported to the authorized officer. The holder 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 will be made by the authorized officer to determine appropriate actions to prevent the loss of significant cultural or scientific values. The holder will be responsible for the cost of evaluation and any decision as to the proper mitigation measures will be made by the authorized officer after consulting with the holder.

10. SPECIAL STIPULATIONS:

Submit 3 Copies To Appropriate District Office
District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Ave., 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

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

Form C-103
May 27, 2004

WELL API NO. 30-025-37523
5. Indicate Type of Lease STATE ☐ FEE ☐
6. State Oil & Gas Lease No.

SUNDRY NOTICES AND REPORTS ON WELLS
(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)

7. Lease Name or Unit Agreement Name: Codorniz 28 Federal
1. Type of Well: Oil Well ☐ Gas Well ☒ Other
8. Well Number 3
2. Name of Operator: Chesapeake Operating Inc.
9. OGRID Number 147179
3. Address of Operator: P. O. Box 11050, Midland, TX 79702-8050
10. Pool name or Wildcat: Quail Ridge;Morrow (Gas)

4. Well Location
Unit Letter O : 860 feet from the South line and 1980 feet from the East line
Section 28 Township 19S Range 34E NMPM County Lea

11. Elevation *(Show whether DR, RKB, RT, GR, etc.)* 3698' GR

Pit or Below-grade Tank Application ☒ or Closure ☐
Pit type Drilling Depth to Groundwater 150' Distance from nearest fresh water well 1000+ Distance from nearest surface water 1000+
Pit Liner Thickness: 12 mil Below-Grade Tank: Volume 12,129 bbls; Construction Material plastic

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
PERFORM REMEDIAL WORK ☐	PLUG AND ABANDON ☐	REMEDIAL WORK ☐	ALTERING CASING ☐
TEMPORARILY ABANDON ☐	CHANGE PLANS ☐	COMMENCE DRILLING OPNS. ☐	P AND A ☐
PULL OR ALTER CASING ☐	MULTIPLE COMPL ☐	CASING/CEMENT JOB ☐	
OTHER:Pit ☒		OTHER: ☐	

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 1103. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

Chesapeake, hereby, certify's that we will close the drilling pit according to NMOCD Pit Guidelines, Rule 50 # B3b.

I hereby certify that the information above is true and complete to the best of my knowledge and belief. I further certify that any pit or below-grade tank has been/will be constructed or closed according to NMOCD guidelines ☒, a general permit ☐ or an (attached) alternative OCD-approved plan ☐.

SIGNATURE Brenda Coffman TITLE Regulatory Analyst DATE 10/20/2005

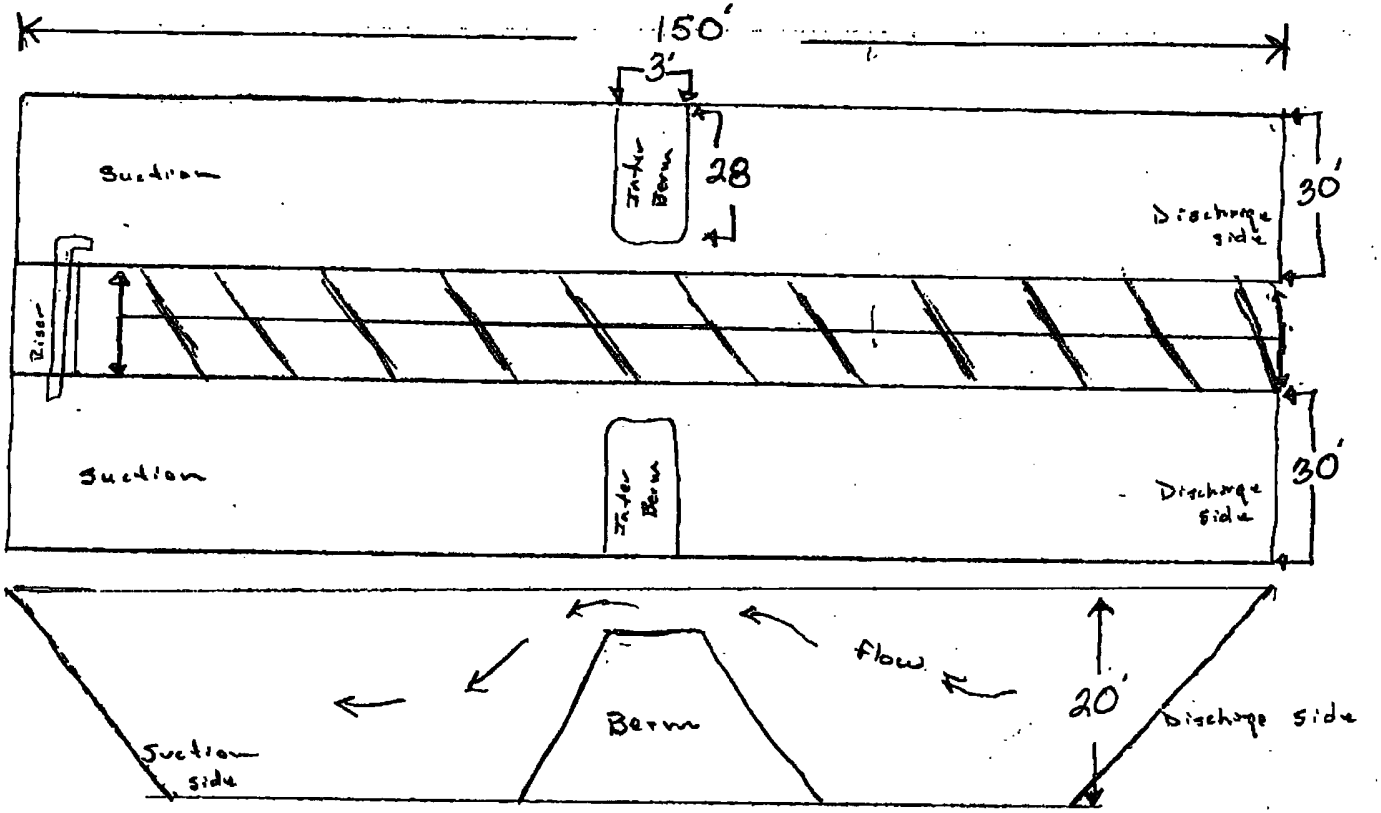
Type or print name Brenda Coffman E-mail address:bcoffman@chkenergy.com Telephone No. (432)687-2992

For State Use Only

APPROVED BY: TITLE PETROLEUM ENGINEER DATE OCT 21 2005

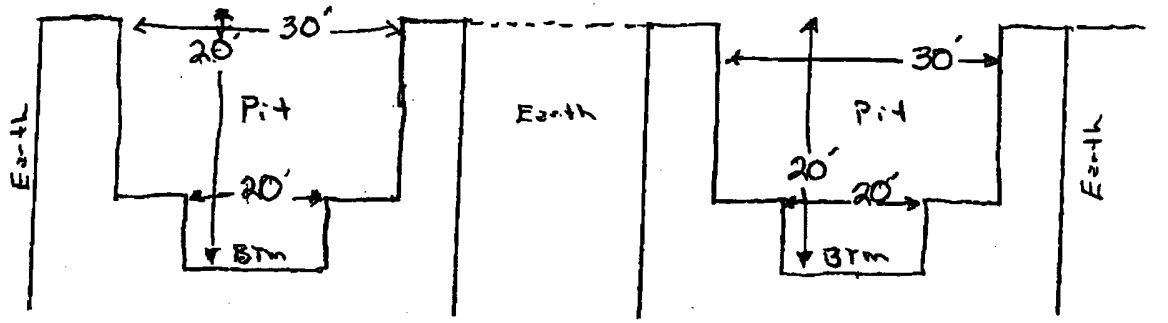
Conditions of Approval (if any):

Chesapeake Energy — Double Pit — Guideline 3A



3' x 30' x 140' = 75600 ft³ ÷ 5.6146 = 13464.8 bbls x 2 = 26929.7 bbls. with 18' of fluid & cuttings in pits.

0' x 30 x 140 = 90000 ft³ ÷ 56146 = 16029.6 bbls x 2 = 32059.2 bbls with 20'



End cross section

10/20/2005 12:54 FAX 432 687 4112 CHK MIDLAND 003/003