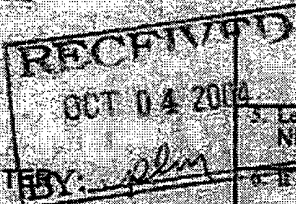


OPERATOR'S COPY

Form 3166-3
(August 1999)

UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT



FORM APPROVED
OMB No. 1024-0136
Expires November 30, 2000



APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of Work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		3. Lease Serial No. NMNM8431	
1b. Type of Well: <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other		6. If Indian, Allottee or Tribe Name	
2. Name of Operator CHESAPEAKE OPERATING INC		7. If Unit or CA Agreement, Name and No.	
Contact: LINDA GOOD E-Mail: lgood@chkenrgy.com		8. Lease Name and Well No. TYRELL 13 FEDERAL 4	
3a. Address P.O. BOX 18496 OKLAHOMA CITY, OK 73154-0496		9. API Well No. 30-005-63703	
3b. Phone No. (include area code) Ph: 405.767.4275 Fx: 405.879.9583		10. Field and Pool, or Exploratory PECOS SLOPE; Abo	
4. Location of Well (Report location clearly and in accordance with any State requirements) At surface NENE 860FNL 800FEL At proposed prod. zone		11. Sec., T., R., M., or Bld. and Survey or Area Sec 13 T10S R25E Mer NMP SME: FEE	
14. Distance in miles and direction from nearest town or post office 11.3 MI ENE OF ROSWELL		12. County or Parish CHAVES	
15. Distance from proposed location to nearest property or lease line, ft. (Also to nearest drg. unit line, if any)		13. State NM	
16. No. of Acres in Lease		17. Spacing Unit dedicated to this well 160.00	
18. Distance from proposed location to nearest well, drilling completed, applied for, on this lease, ft.		20. BLM/BIA Bond No. on file	
19. Proposed Depth 4700 MD		21. Estimated duration	
21. Elevations (Show whether DF, KB, RT, GL, etc.) 3812 GL		22. Approximate date work will start	
23. Estimated duration		24. Attachments	

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

1. Well plat certified by a registered surveyor.
2. A Drilling Plan
3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPD shall be filed with the appropriate Forest Service Office)
4. Bond to cover the operations unless covered by an existing bond on file (see item 20 above)
5. Operator certification
6. Such other site specific information and/or plans as may be required by the authorized officer.

25. Signature (Electronic Submission)	Name (Printed/Typed) LINDA GOOD	Date 08/25/2004
--	------------------------------------	--------------------

Title
AUTHORIZED REPRESENTATIVE

Approved by (Signature) <i>David R. Glass</i>	Name (Printed/Typed) David R. Glass For Larry D. Bray	Date SEP 27 2004
Title Assistant Field Manager, Lands And Minerals	Office ROSWELL FIELD OFFICE	APPROVED FOR 1 YEAR

Application approval does not warrant or certify 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.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.

Additional Operator Remarks (see next page)

Electronic Submission #35151 verified by the BLM Well Information System
For CHESAPEAKE OPERATING INC, sent to the Roswell
Committed to AFMSS for processing by LINDA ASKWIG on 08/25/2004 (04LA0285AE)

** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM

CEMENT TO COVER ALL OIL,
GAS AND WATER BEARING
ZONES i.e., Glorietta

Additional Operator Remarks:

Chesapeake Operating, Inc. proposes to drill a well to 4700' to test the Abo formation. If productive, casing will be run and the well will be completed. If dry, the well will be plugged and abandoned as per BLM and New Mexico Oil Conservation Division requirements.

Attached please find the Surface Use Plan, Drilling Plan, and attachments as required by Onshore Order No. 1. A general rig plat is attached as Exhibit D. A final rig plat will be submitted prior to spud once a rig is assigned.

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.

Submit 3 Copies To Appropriate District
OfficeState of New Mexico
Energy, Minerals and Natural Resources

Form C-103

May 27, 2004

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 IV1220 S. St. Francis Dr., Santa Fe, NM
87505OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505*Federal Well*

WELL API NO.

5. Indicate Type of Lease

STATE ☐ FEE ☐

6. State Oil & Gas Lease No.

7. Lease Name or Unit Agreement Name
Tyrell "13" Federal

8. Well Number 4

9. OGRID Number 147179

10. Pool name or Wildcat
Pecos Slope

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.)1. Type of Well: Oil Well ☐ Gas Well ☒ Other

2. Name of Operator

Chesapeake Operating, Inc.

3. Address of Operator

P. O. Box 11050
Midland, TX 79702-8050

4. Well Location

Unit Letter A : 660 feet from the North line and 800 feet from the East line
Section 13 Township 10S Range 25E NMPM County Chaves11. Elevation (Show whether DR, RKB, RT, GR, etc.)
3812 GRPit or Below-grade Tank Application ☒ or Closure ☐Pit type Drilling Depth to Groundwater 50+ Distance from nearest fresh water well 1000+ Distance from nearest surface water 1000+

Pit Liner Thickness: 12 mil Below-Grade Tank: Volume 6085 bbls; Construction Material Synthetic

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

NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK ☐ PLUG AND ABANDON ☐
TEMPORARILY ABANDON ☐ CHANGE PLANS ☐
PULL OR ALTER CASING ☐ MULTIPLE COMPL ☐

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐ ALTERING CASING ☐
COMMENCE DRILLING OPNS. ☐ P AND A ☐
CASING/CEMENT JOB ☐OTHER: Pit Approval ☒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, respectfully, requests that the attached procedure be approved for the drilling pit for this well. Chesapeake, hereby,
agrees to close the pit according to NMOCD guidelines per item #3 in Rule 50.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 11/15/2004

Type or print name Brenda Coffman

E-mail address: bcoffman@chkenergy.com

Telephone No. (432)685-4310

For State Use Only

TIM W. GUM

NOV 22 2004

APPROVED BY:

DISTRICT II SUPERVISOR

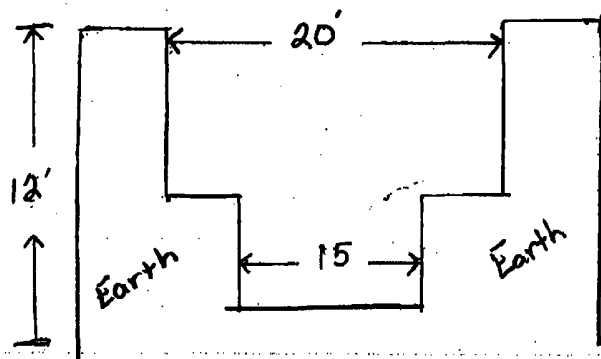
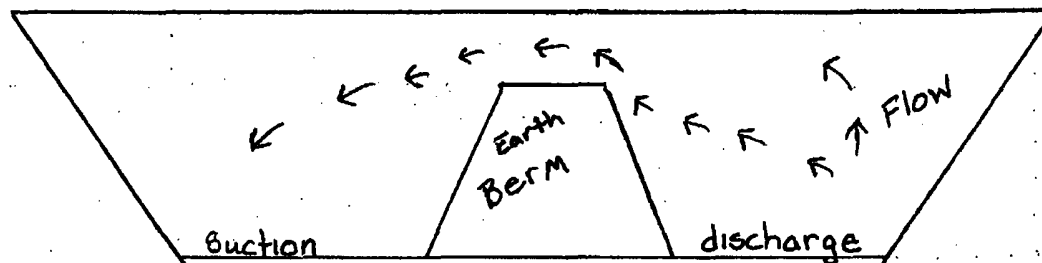
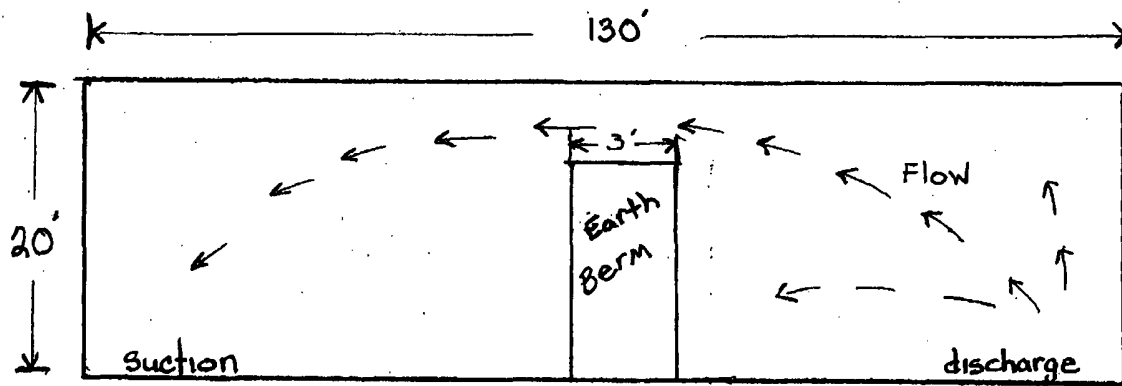
DATE

Conditions of Approval (if any):

OK for VB

Chesapeake Energy

Single Pit



28800 ft³
5129.4 bbls.

12 mil. woven plastic

DISTRICT I
1626 N. French Dr., Hobbs, NM 88240

DISTRICT II
811 South First, Artesia, NM 88210

DISTRICT III
1800 Rio Grande Rd., Aztec, NM 87410

DISTRICT IV
2040 South Pacheco, Santa Fe, NM 87503

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-102
Revised March 17, 1999

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

OIL CONSERVATION DIVISION

2040 South Pacheco
Santa Fe, New Mexico 87504-2086

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
Property Code	Property Name TYRELL "13" FEDERAL	Well Number 4
OGRID No.	Operator Name CHESAPEAKE OPERATING INC.	Elevation 3812'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	13	10 S	25 E		560	NORTH	800	EAST	CHAVES

Bottom Hole Location If Different From Surface

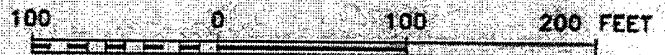
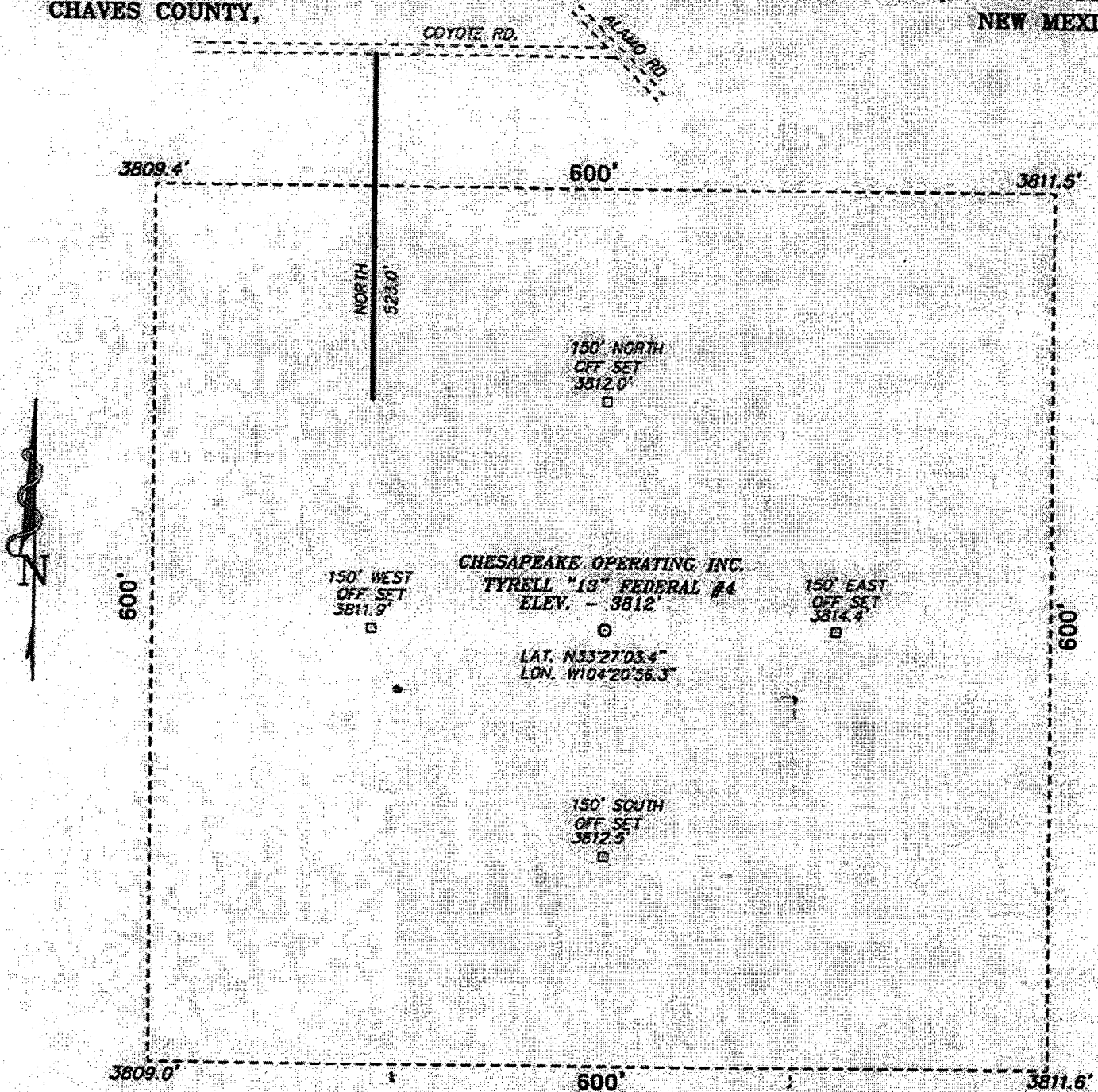
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County

Dedicated Acres 160	Joint or Infill	Consolidation Code	Order No.
------------------------	-----------------	--------------------	-----------

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

	<p>OPERATOR CERTIFICATION</p> <p>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.</p> <p></p> <p>Signature</p> <p>Jim Ball</p> <p>Printed Name</p> <p>Senior Landman</p> <p>Title</p> <p>7/12/04</p> <p>Date</p>	
	<p>SURVEYOR CERTIFICATION</p> <p>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.</p> <p>JUNE 30, 2004</p> <p>Date Surveyed</p> <p></p> <p>Signature</p> <p>Professional Surveyor</p> <p></p> <p>7977</p> <p>Certification</p> <p>J.P. Basin Support</p>	
	<p>RECEIVED</p> <p>NOV 22 2004</p> <p>OCD-ARTERIA</p>	

SECTION 13, TOWNSHIP 10 SOUTH, RANGE 25 EAST, N.M.P.M.,
CHAVES COUNTY, NEW MEXICO.



SCALE: 1" = 100'

Directions to Location:

FROM THE JUNCTION OF US HWY 380 AND CO. RD.
ALAMO GO NORTH ON ALAMO 1.8 MILES TO "Y" GO
LEFT 1.6 MILES TO JCT. ALAMO RD. AND COYOTE RD.
GO WEST ON COY. RD. 0.1 MILES TO PROPOSED C.L.
OF ROAD.

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

W.D. Number: 4409 Drawn By: JAMES PRESLEY

Date: 07/06/04 Disk: JLP #1 - CHE4409A

CHESAPEAKE OPERATING INC.

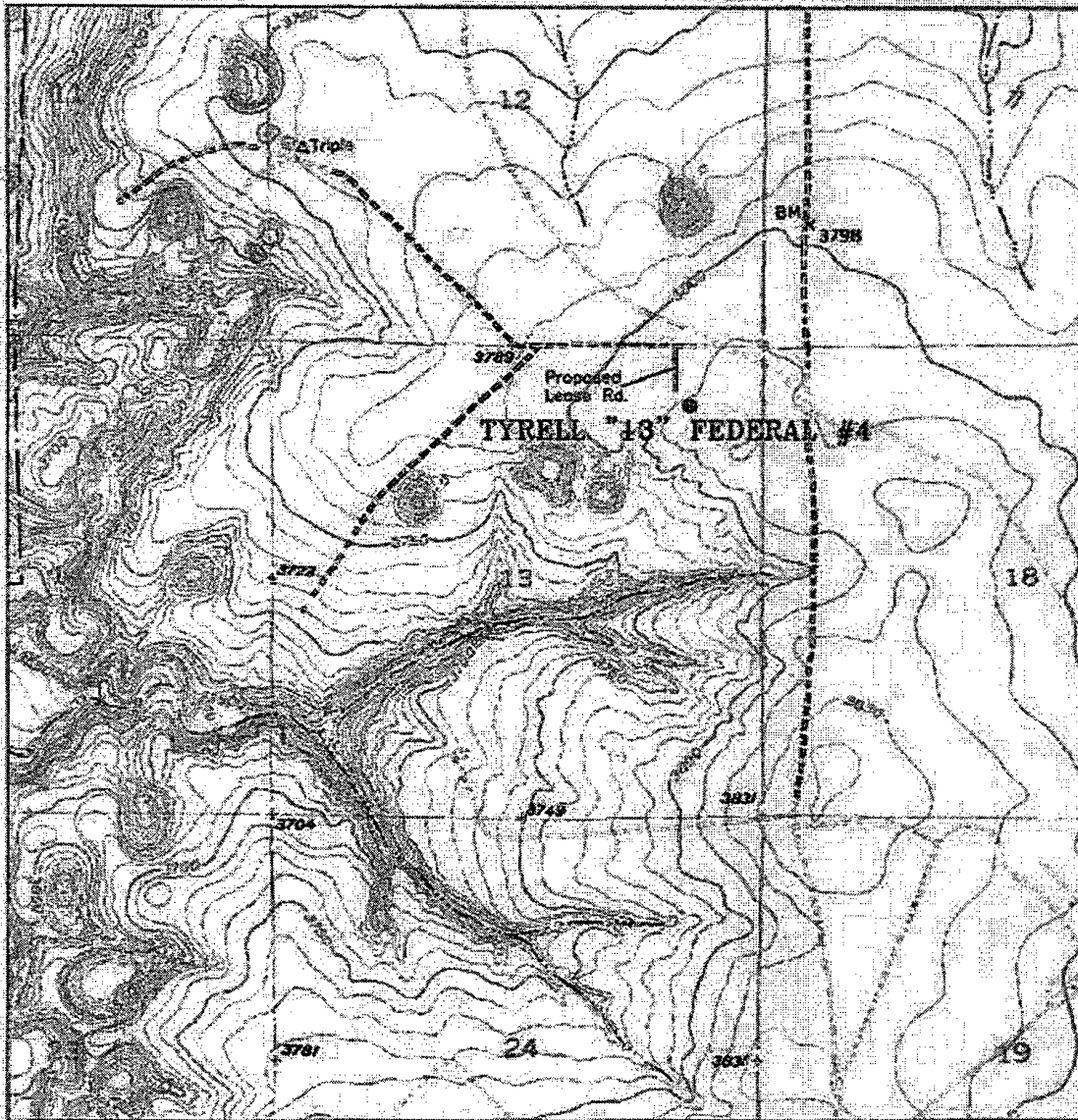
REF: TYRELL "13" FEDERAL #4 / Well Pad Topo

TYRELL "13" FEDERAL #4 LOCATED 660' FROM THE
NORTH LINE AND 800' FROM THE EAST LINE OF
SECTION 13, TOWNSHIP 10 SOUTH, RANGE 25 EAST,
N.M.P.M., CHAVES COUNTY, NEW MEXICO.

Survey Date: 06/30/04 Sheet 1 of 1 Sheets

Exhibit 4-2

Revised
Exhibit A-3
Survey Plat



TYRELL "13" FEDERAL #4

Located at 660' FNL and 800' FEL
Section 13, Township 10 South, Range 25 East,
N.M.P.M., CHAVES County, New Mexico.

basin
surveys

focused on excellence
in the oilfield

P.O. Box 1735
1120 N. West County Rd.
Hobbs, New Mexico 88241
(505) 393-7315 - Office
(505) 382-3974 - Fax
basinsurveys.com

W.O. Number: 4409AA - JLP #1

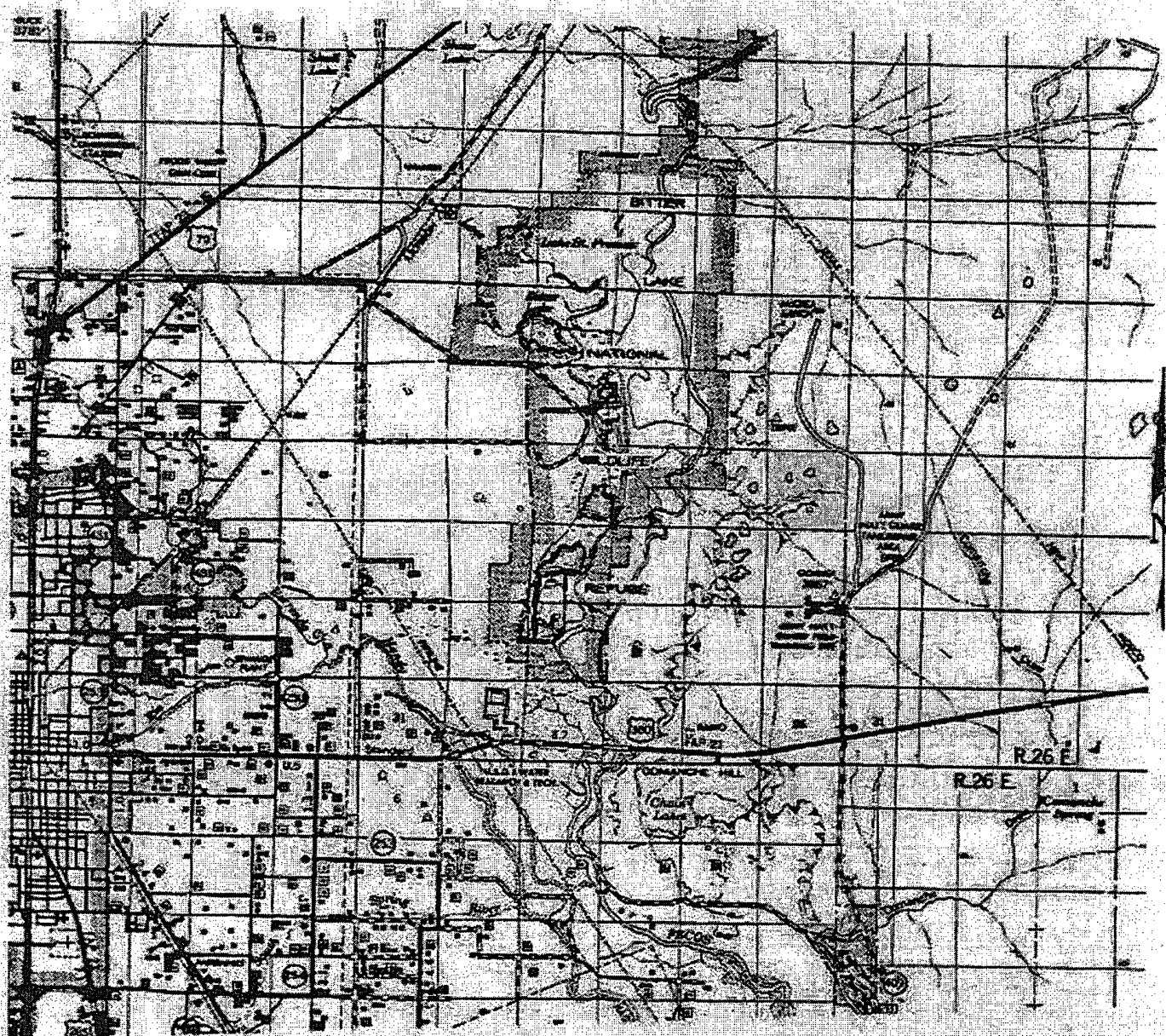
Survey Date: 06/30/04

Scale: 1" = 2000'

Date: 07/05/04

CHESAPEAKE
OPERATING
INC.

Exhibit A-3



TYRELL "13" FEDERAL #4
 Located at 660' FNL and 800' FEL
 Section 13, Township 10 South, Range 25 East,
 N.M.P.M., CHAVES County, New Mexico.

basin
surveys
 focused on excellence
 in the oilfield

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

W.O. Number: 4409AA - JLP #1

Survey Date: 06/30/04

Scale: 1" = 2000'

Date: 07/06/04

CHESAPEAKE
OPERATING
INC.

Exhibit

ONSHORE ORDER NO. 1
Chesapeake Operating, Inc.
Tyrell 13 FEDERAL 4
660 FNL 800 FEL
NE NE of Section 13-10S-25E
Chaves County, NM

CONFIDENTIAL - TIGHT HOLE
Lease Contract No. NMNM 08431

DRILLING PROGRAM

Page 1

**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
San Andres	405	3130
Glorietta	1535	2000
Tubb	2955	580
Abo	3655	-120
Abo B	3760	-225
Abo C	3875	-340
Abo C Lower	3970	-435
Abo D	4050	-515
Total Depth	4200	-665

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/Gas	Abo	4170 to 4650

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

3. BOP EQUIPMENT: 3,000# System

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

DRILLING PROGRAM

Page 2

I. BOP, Annular, Choke Manifold, Pressure Test

A. Equipment

1. The equipment to be tested includes all of the following that is installed on the well. See Exhibit F-1 to F-2.
 - (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 has 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.

ONSHORE ORDER NO. 1
Chesapeake Operating, Inc.
Tyrell 13 FEDERAL 4
660 FNL 800 FEL
NE NE of Section 13-10S-25E
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CONFIDENTIAL - TIGHT HOLE
Lease Contract No. NMNM 08431

DRILLING PROGRAM

Page 3

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:

<u>System Operating Pressures</u>	<u>Precharge Pressure</u>
1,500 PSI	750 PSI
2,000 PSI	1,000 PSI
3,000 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:

<u>System Pressure</u>	<u>Remaining Pressure At Conclusion of</u> <u>Test</u>
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

ONSHORE ORDER NO. 1
Chesapeake Operating, Inc.
Tyrell 13 FEDERAL 4
660 FNL 800 FEL
NE NE of Section 13-10S-25E
Chaves County, NM

CONFIDENTIAL - TIGHT HOLE
Lease Contract No. NMNM 08431

DRILLING PROGRAM

Page 4

a. The proposed casing program will be as follows:

Purpose	Interval	Hole Size	Casing Size	Weight	Grade	Thread	Condition
Surface	0-1,000'	11"	8-5/8"	24#	J-55	ST & C	New
Production	0-4,200'	7-7/8"	4-1/2"	11.6#	J-55	LT & C	New

b. The cementing program will be as follows:

Interval	Type	Amount	Yield	Washout	Excess
Surface	Lead 65:35:6 + 6# Salt + 1/4# Flo-ael Tail: c + 2% CaCl	300sx 200sx	2.1 1.3	50%	100%
Production	50 :50 Poz H + additives	200sx	1.3	20%	30%

5. MUD PROGRAM

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

Interval	Mud Type	Mud Weight	Viscosity	Fluid Loss
0-1,000'	Water	8.4 - 9.0	28-40	NC
1,000' - 4,200'	Cut Brine	9.4 - 10.0	35-46	5 - 10

A steel pit will be utilized during the drilling of this well. All fluids and cuttings will be disposed of in accordance with New Mexico Oil Conversation 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:

- Drill stem tests are not planned.
- The logging program will consist of Natural GR, Density, Neutron and Pe from TD to surface casing, then GR and Neutron to surface; Dual Laterolog from TD to surface casing.
- Cores samples are not planned.

7. ABNORMAL PRESSURES AND HYDROGEN SULFIDE

- The estimated bottom hole pressures is 900 psi. No abnormal pressures or temperatures are anticipated.
- Hydrogen sulfide gas is not expected to be encountered.

ONSHORE ORDER NO. 1
Chesapeake Operating, Inc.
TYRELL 13 FEDERAL 4
660 FNL 800 FEL
W2 NENE of Section 13-10S-25E
Chaves County, NM

CONFIDENTIAL - TIGHT HOLE

Lease No. NMNM 08431

SURFACE USE PLAN
Page 1

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

1. EXISTING ROADS

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

2. PLANNED ACCESS ROADS

- a. A new access road 523' in length and 14' in travel width with a maximum disturbance area of 36' will be built coming off the existing county road in an easterly direction. See Exhibit A-2. The road 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 A-1 & A-2.
- 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: From Roswell, head East on Hwy 360 to mile marker 165, thn North on Alamo Rd, go 2 miles, turn East .5 miles, then North .5 miles, stay left at "Y" .1 miles, then turn West on Coyote Rd .3 miles, turn South .2 miles to location.

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. The proposed pipeline will require a ROW. - 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

All material (i.e. shale) will be acquired from private or commercial sources.

7. METHODS FOR HANDLING WASTE DISPOSAL

Drill cuttings will be contained and buried in an earthen reserve pit after the drilling fluids have evaporated. 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-toilet and then hauled to an approved sanitary landfill.

8. ANCILLARY FACILITIES

None.

9. WELLSITE LAYOUT

The proposed site layout plat is attached showing 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 OWNERSHIP

Jack Hagelstein & Patricia S. Hagelstein
P.O. Box 297
Dexter, NM 88230

ONSHORE ORDER NO. 1
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TYRELL 13 FEDERAL 4
660 FNL 800 FEL
W2 NENE of Section 13-10S-25E
Chaves County, NM

CONFIDENTIAL - TIGHT HOLE

Lease No. NMNM 08431

SURFACE USE PLAN

Page 3

MINERAL OWNERSHIP

United States of America
Department of Interior
Bureau of Land Management

12. ADDITIONAL INFORMATION (This is presumed info, may need to revise)

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.

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

Drilling Engineer

David DeLaO
P.O. Box 18496
Oklahoma City, OK 73154
405-767-4339 (OFFICE)
405-879-9573 (FAX)
405-990-8182 (MOBILE)
ddelao@chkenergy.com

Field Representative

Mike Whitefield
550 West Texas Ave.
Midland, TX 79701
432-683-7443 (OFFICE)
432-685-4399 (FAX)
mwhitefield@chkenergy.com

Asset Manager

Andrew McCalmont
P.O. Box 18496
Oklahoma City, OK 73154-0496
405-848-8000 Ext. 852 (OFFICE)
405-879-7930 (FAX)
amccalmont@chkenergy.com

Regulatory Compliance

Linda Good
Regulatory Compliance Analyst
P.O. Box 18496
Oklahoma City, OK 73154
405-767-4275 (OFFICE)
405-879-7953 (FAX)
lgood@chkenergy.com

ONSHORE ORDER NO. 1
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TYRELL 13 FEDERAL 4
660 FNL 800 FEL
W2 NENE of Section 13-10S-25E
Chaves County, NM

CONFIDENTIAL - TIGHT HOLE

Lease No. NMNM 08431

SURFACE USE PLAN

Page 4

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 R. Lister

Date:

8/25/04

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

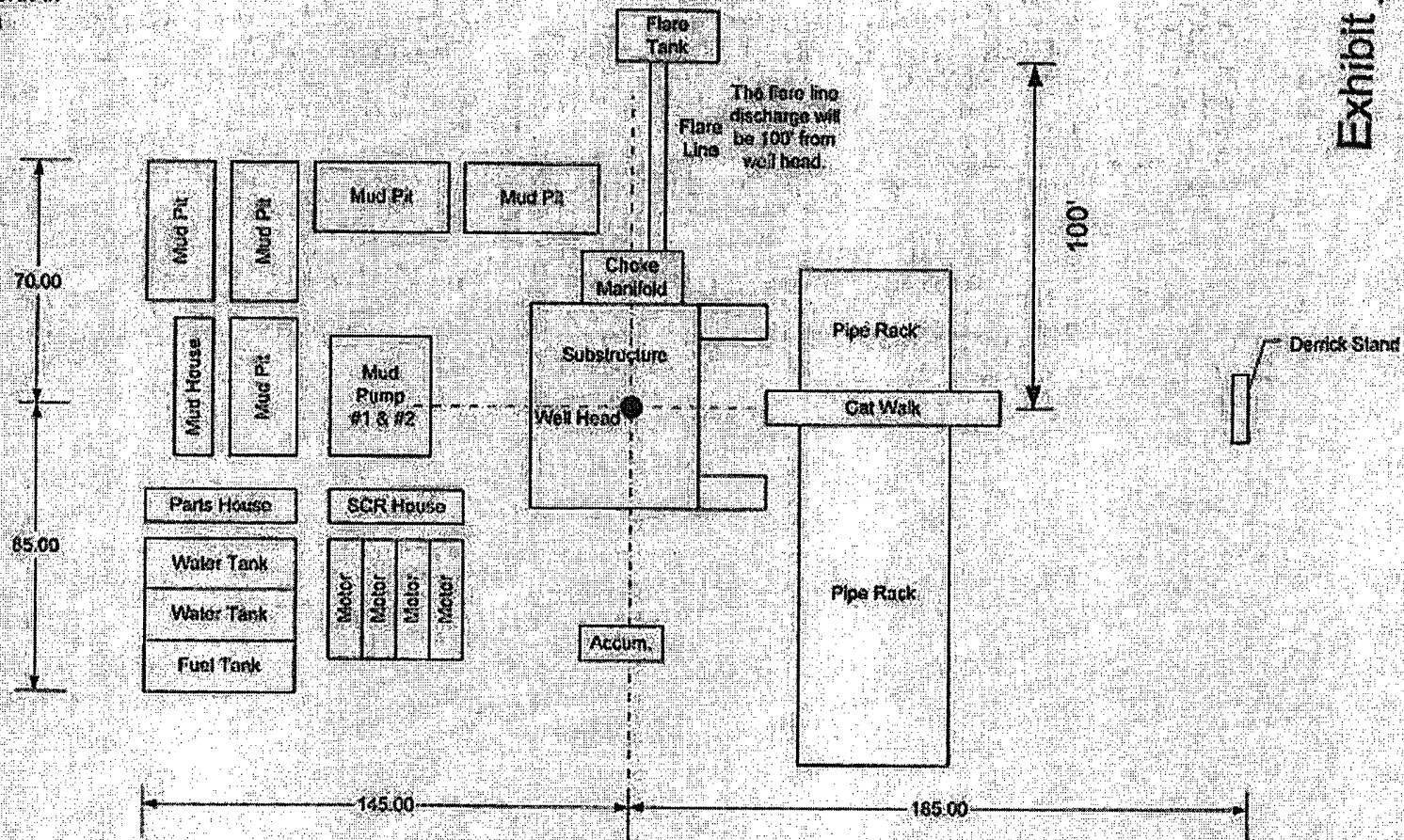


Exhibit D

Chesapeake Operating, Inc

General Rig Layout

SIZE	FSCM NO	DWG NO	REV
SCALE	Not to Scale	SHEET	1 OF 1

BLOWOUT PREVENTOR SCHEMATIC

CHESAPEAKE OPERATING INC

WELL : Tyrell 13 Federal 4
FIELD : Pecos Slope
RIG : United #23
COUNTY : Chaves
OPERATION: Drill out below 8-5/8" Casing

STATE: New Mexico

SIZE		PRESSURE	DESCRIPTION
A			Flow Line
B	11"	3,000#	Pipe Rams
C	11"	3,000#	Blind Rams
D	11"	3,000#	Mud Cross
A-Sea		8-5/8" SOW x 11" 3M	

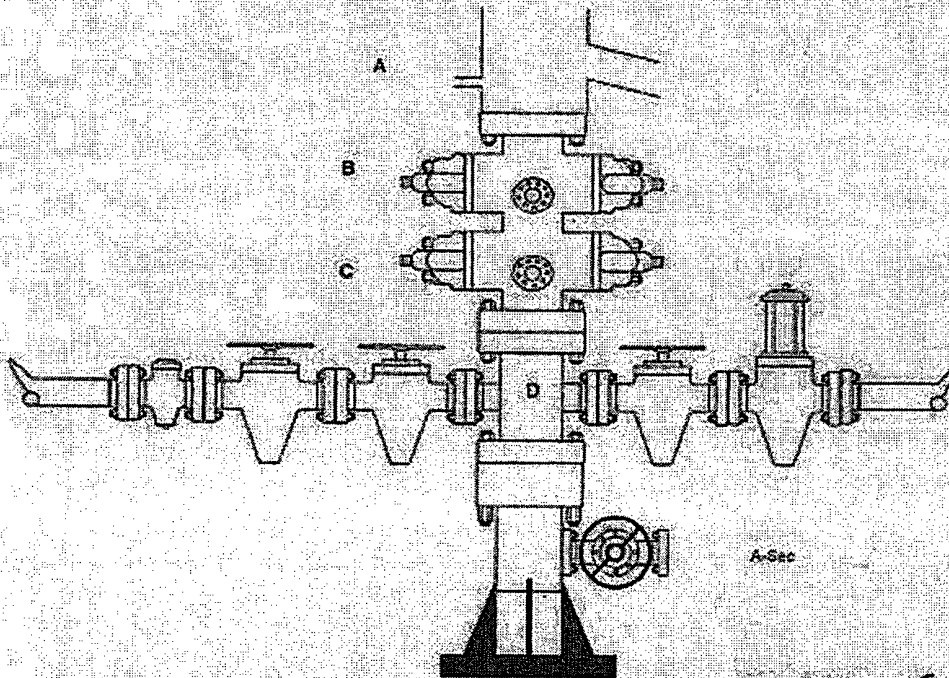


Exhibit F-1

Kill Line

SIZE	PRESSURE	DESCRIPTION
2"	3,000#	Check Valve
2"	3,000#	Gate Valve
2"	3,000#	Gate Valve

Choke Line

SIZE	PRESSURE	DESCRIPTION
2"	3,000#	Gate Valve
2"	3,000#	HCR Valve

CHUKE MANIFOLD SCHEMATIC

CHESAPEAKE OPERATING INC

WELL : Tyrell 13 Federal 4
FIELD : Pecos Slope
RIG : Unknown
COUNTY : Chaves
OPERATION: 3M CHUKE MANIFOLD

STATE: NM

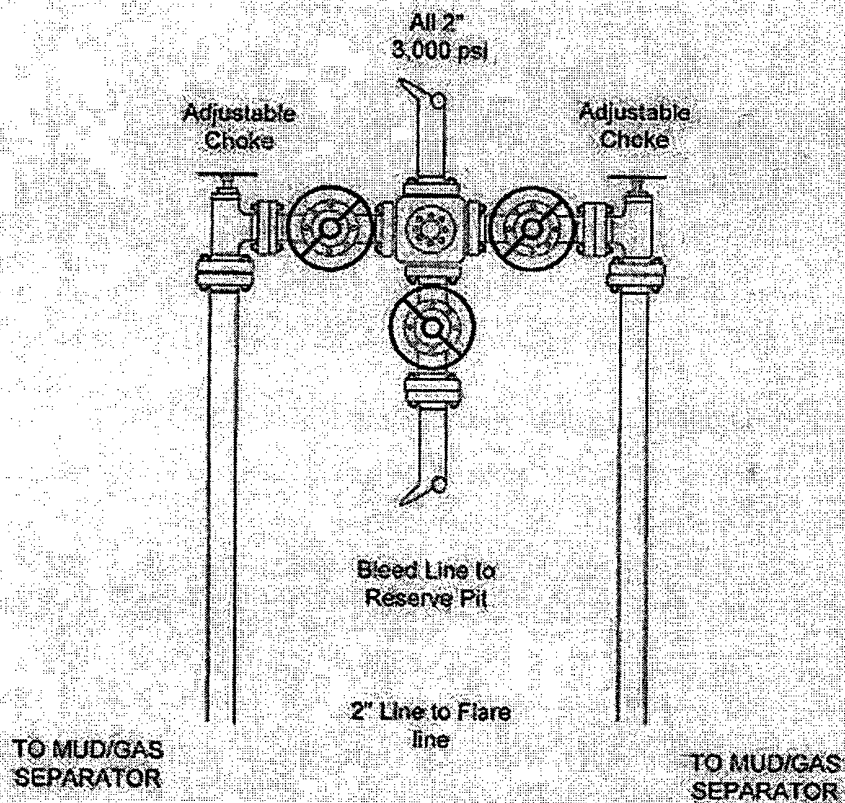


Exhibit F-2

FEDERAL PERMIT ATTACHED – READ CAREFULLY FOLLOW REQUIREMENTS

DATE: October 6, 2004
TO: DISTRIBUTION
FROM: Linda Good
RE: APD (Federal Permit) - APPROVED
Tyrell 13 Federal Com 4
Section 13-10S-25E, Chaves County NM
BLM Lease: NMNM-8431

RECEIVED
NOV 22 2004
OCD-ARTEZIA

Please be advised this well is subject to Bureau of Land Management (BLM) regulations and Minerals Management Service (MMS) reporting. A copy of the BLM approved permit to drill must be on location at the date of first surface disturbance and thereafter, including any subsequent sundry notices changing the original APD. A summary of BLM stipulations is set forth below, but is not a substitute for your review and compliance with all stipulations. In addition, these requirements are not in lieu of any state requirements; we must be in compliance with both state and federal rules and regulations. A copy of the approved federal permit is attached.

- **REVIEW AND COMPLY WITH THE CONDITIONS OF APPROVAL.** All operations, unless otherwise specifically approved in APD, must be conducted in accordance with Onshore Order No. 1 – Surface Use, Onshore Order No. 2 - Drilling Operations and Onshore Order No. 3 – Site Security.
- **REQUIREMENTS PRIOR TO & DURING CONSTRUCTION:**
 1. Approved APD must be read carefully and followed by all parties involved. A complete copy must be on location at all times.
 2. The BLM will monitor construction of this drill site. Contact Richard G. Hill with the BLM Roswell Field Office at 505-627-0247 at least 3 working days prior to commencing construction of access road and/or well pad (Well Drilling Requirements, Exhibit B, Pg. 1, Item II).
 3. Provide dirt contractor with copy of approved APD signature page, copy of the location map (Exhibit A), a copy of pages 1 & 2 from the Well Drilling Requirements (Exhibit B), and a copy of the Permanent Resource Road Requirements (Exhibit D).
 4. Stockpile the topsoil disturbed during construction of well pad on the Southwest corner of the well pad. The topsoil on the well pad is approximate 6 inches in depth. Approximately 800 cubic yards of topsoil shall be stockpiled. (See Well Drilling Requirements (Exhibit B, Pg. 1, Item II C).
 5. Construct and maintain access road pursuant to BLM standards. The travelway of the road shall be constructed 14 feet wide not to exceed 30 feet wide. The Access road will be surfaced with caliche material and shall be compacted to a minimum thickness of 6 inches for entire length of the travelway surface on the

access road. The access road shall access the well pad on the Northwest corner. (Permanent Resource Road Requirements, Exhibit D, Pg. 1, Item 2 & 3 and Pg. 2, Item 4).

6. Crowning and Ditching are required for access road. For Lead-off ditches, (see Permanent Resource Road Requirements, Exhibit D, Pg. 2, Item 6B).
7. The reserve pit shall be constructed 100' X 100' on the East side of the well pad. The reserve pit shall be constructed to a minimum depth of four (4) feet below ground level (Exhibit B, Pg. 1, Item D). Pit content level shall meet the three (3) foot minimum depth requirement. The excess contents which have been removed shall be disposed of at an authorized location. Contact Jessica Rubado, at 505-627-0240, three (3) days before commencing the reserve pit reclamation.
8. If sinkholes or cave openings are discovered all construction activities shall immediately cease. Contact Larry Bray at 505-627-0250.

• **STANDARD and SPECIAL ENVIRONMENTAL STIPULATIONS:**

1. All surface-disturbing activities will be restricted to approved areas (Well Drilling Requirements, Exhibit B, Pg. 1, Item D 1 and 2). During surface-disturbing activities if any archeological items or foundations are encountered immediately contact BLM Roswell Field Office (Conditions of Approval, Exhibit C, Pg. 2, Item 7a and b).
2. No burn pits allowed. Junk or trash shall not be buried in the reserve pit (Well Drilling Requirements, Exhibit B, Pg. 2, Item 9).
3. A final rig layout must be submitted and approved prior to rig up. PLEASE notify Regulatory of the final rig layout, so a new rig plat can be submitted via Sundry.
4. Review drilling program under Conditions of Approval, (Exhibit C, Pg. 1).
5. Refer to NTL-96 for protection of migratory birds and bats.
6. Re-vegetate all reclaimed areas with desired seed mixture (Well Drilling Requirements, Exhibit B, Pg. 4, Item VI, A-I). If dry hole, restore to former land use. The recommended time to seed is from June 15th through September 15th. The optimum seeding time is in mid-July. Successive seeding should be done either late in the fall (Sept. 15th – Nov. 15th, before freeze up) Contact Jessica Rubado at 505-727-0272 to witness the seeding operations two (2) days before the start of the seeding process.

If questions arise regarding environmental/biological issues, contact BLM biologist, Richard G. Hill, Roswell Field Office, NM at 505-627-0247.

REPORTING REQUIREMENTS:

1. Contact Richard G. Hill, BLM Roswell Field Office, at 505-627-0247, within 3 working days (72 hours) before starting access road and/or well pad construction.
2. Contact BLM Roswell Field Office, at 505-393-3612 in sufficient time for BLM representative to witness the following. Voice mail, E-mail, or Facsimile notice is allowed only after direct communication. Daily progress report should include BLM staff that was notified (directly or otherwise).

- a) spud
- b) cementing of all casing strings
- c) testing of BOP equipment

3. Submit a Sundry Notice for each casing string, and cementing operations. The Sundry shall be submitted within 15 days of completion of each casing string. Reports may be combined into same Sundry if they fall within the same 15-day time frame.
4. Submit written daily progress report to BLM Hobbs Field Office until well is completed. Submit a weekly report during period between completion of drilling operations and initiation of completion operations.
5. Production start-up must be reported within 5 business days of production.
6. Site Facility Diagram must be submitted to BLM within 60 days of production. Diagram should indicate required federal seals.
7. MMS revenue must be reported by 4 p.m. Mountain Time on or before the last day of the month following the month the product was removed from the lease or sold, unless lease terms state otherwise. If the last day of the month, or the due date, falls on a weekend or Federal holiday, the report and payment are due by 4 p.m. mountain time the next business day.

If you have any questions or need additional information, please do not hesitate to call me at 405-767-4275.

attachments

DISTRIBUTION:

<u>Memo with APD Copy</u>	<u># of copies</u>
Rob Jones-District Mgr	1
Curtis Blake	1
Mike Whitefield	1
Jim Ball	original
David DeLaO-Drig Eng	1
Andrew McCalmont	1
Well Records	1
Regulatory Compliance	1
Brenda Coffman	1

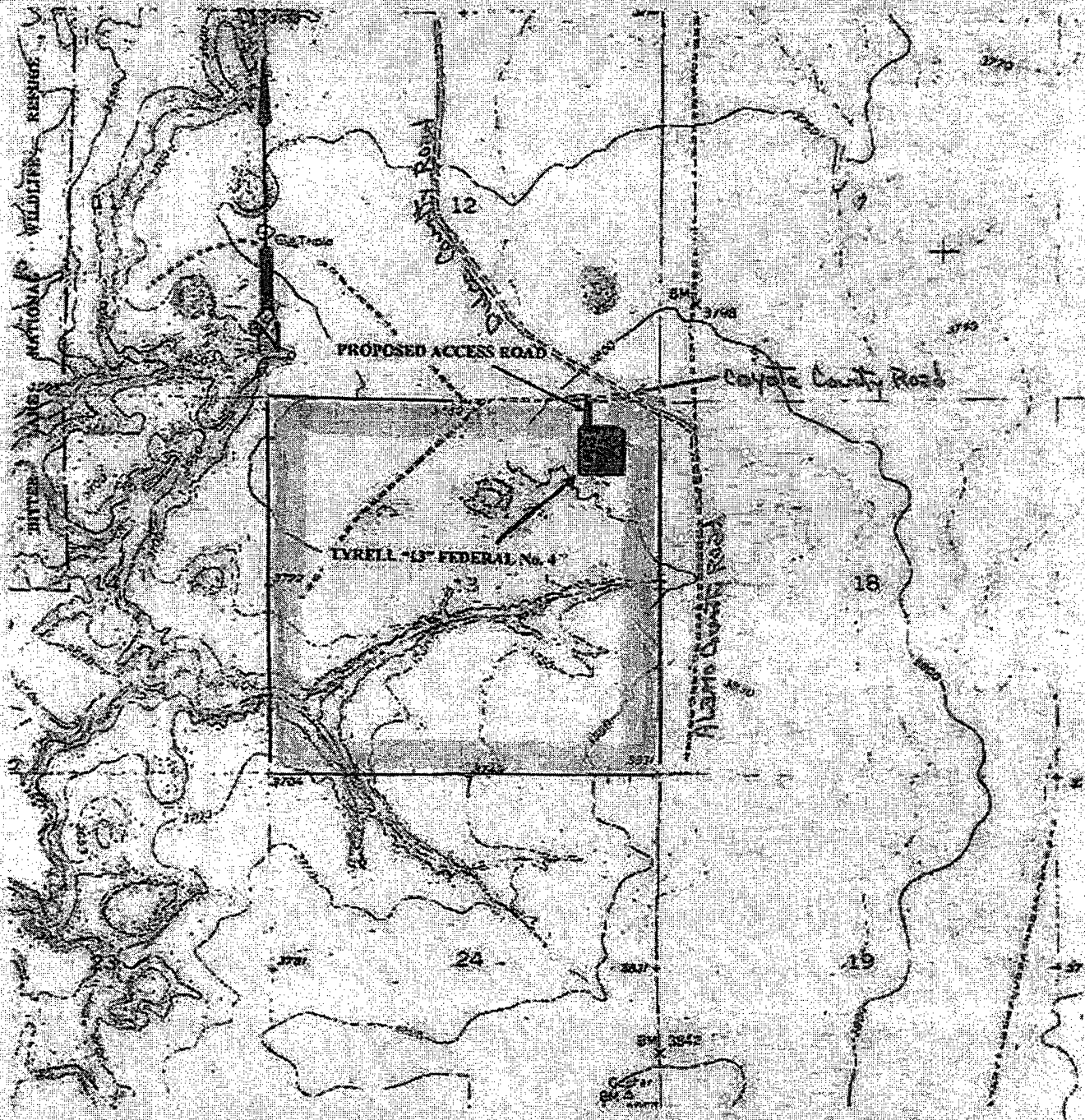
<u>Memo Only</u>
TLW, SCD, SWM, JML, HJH
Keith Dudley
Mark Edge
Mike Hazlip
Doug Bellis
LuAnn Wernli
Cindi Williams

Susan Keller
Wade Brawley
Gayle Harris
Julie Knox
Carol Fehrenbacher
Matthew Klaassen

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EXHIBIT A

Operator: Chesapeake Operating, Inc.
BLM Serial Number: NM-8431
Well Name & NO.: Tyrell 13 Federal #4
Location: Section 13, T. 10 S., R. 25 E.
660' FNL & 800' FEL, Chaves County, N.M.





United States Department of the Interior
BUREAU OF LAND MANAGEMENT
Roswell Field Office
2909 West Second Street
Roswell, New Mexico 88201

EXHIBIT B

1 of 8 pages

WELL DRILLING REQUIREMENTS

OPERATORS NAME: Chesapeake Operating, Inc. LEASE NO.: NM-8431
WELL NAME & NO: Tyrell 13 Federal #4
QUARTER/QUARTER & FOOTAGE: NE¹/₄NE¹/₄ - 660' FNL & 800' FEL
LOCATION: Section 13, T. 10 S., R. 25 E., NMPM
COUNTY: Chaves County, New Mexico

I. GENERAL PROVISIONS:

- A. The operator has the right of administrative review of these requirements pursuant to 43 CFR 3165.1(a).
- B. The operator shall hereafter be identified as the holder in these requirements. The Authorized Officer is the person who approves the Well Drilling Requirements.

II. WELL PAD CONSTRUCTION REQUIREMENTS:

- A. The BLM shall administer compliance and monitor construction of the access road and well pad. Notify Richard G. Hill at least 3 working days (72 Hours) prior to commencing construction of the access road and/or well pad. Roswell Field Office number (505) 627-0247.
- B. Prior to commencing construction of the access road, well pad, or other associated developments, the holder shall provide the dirt contractor with a copy of the approved APD signature page, a copy of the location map (EXHIBIT A), a copy of pages 1 & 2 from the Well Drilling Requirements (EXHIBIT B), and a copy of the Permanent Resource Road Requirements (EXHIBIT D).
- C. The holder shall stockpile the topsoil from the surface of the well pad for reclamation purposes. The topsoil on the Tyrell 13 Federal #4 well pad is approximate 6 inches in depth. Approximately 800 cubic yards of topsoil shall be stockpiled on the Southwest corner of the well pad, opposite the reserve pit. Upon reclamation of the well pad, the topsoil stockpile shall be redistributed over the disturbed areas. See Well Drilling Requirements - VI. Seeding Requirements - for reclamation of the well pad.
- D. Reserve Pit Requirements:
 - 1. The reserve pit shall be constructed 100' X 100' on the East side of the well pad.
 - 2. The reserve pit shall be constructed to a minimum depth of four (4) feet below ground level. This pit shall be constructed, so that upon completion of drilling operations, the dried pit contents will be buried a minimum depth of three feet below ground level. Should the pit content level not meet the three foot minimum depth requirement, the excess contents shall be removed until the required minimum depth of three feet below ground level requirement has been met. The excess contents which have been removed shall be disposed of at an authorized location. Contact Jessica Rubado, at (505) 627-0240, three days before commencing the reserve pit reclamation.

WELL DRILLING REQUIREMENTS

2 of 8 pages

3. The plastic lining that is used to line the reserve pit shall be at least 9 mil in thickness and have a bursting strength of 170 PSI. Upon reclamation of the reserve pit, any exposed plastic lining shall be cut below ground level, removed, and properly disposed of before the reserve pit is backfilled.
4. The reserve pit shall be fenced on three (3) sides during drilling operations. The fourth side shall be fenced immediately upon rig release.
5. The reserve pit shall be constructed so as not to leak, break, or allow discharge of drilling muds. Under no circumstances will the reserve pit be cut to drain drilling muds on the terrain.
6. The reserve pit shall not be located in any natural drainage.
7. The reserve pit shall be equipped to deter entry by birds, bats, other wildlife, and livestock, if the reserve pit contains any oil and/or toxic fluids.
8. Drilling muds shall be properly disposed of before the reserve pit is reclaimed. Drilling muds can be allowed to evaporate in the reserve pit or be removed and transported to an authorized disposal site. The reserve pit shall be backfilled when dry.
9. Dumping of junk or trash into the reserve pit is not allowed. Junk or trash shall be removed from within the reserve pit before the reserve pit is reclaimed. Junk or trash shall not be buried in the reserve pit.

E. Federal Mineral Materials Pit Requirements:

1. Caliche, gravel, or other related materials from new or existing pits on Federal mineral estate shall not be taken without prior approval from the authorized officer. Contact Jerry Dutchover at (505) 627-0236.
2. Payment for any Federal mineral materials that will be used to surface the access road and the well pad is required prior to removal of the mineral materials.
3. Mineral Materials extracted during construction of the reserve pit may be used for development of the pad and access road as needed, for the Tyrell 13 Federal #4 gas well only. Removal of any additional material on location must be purchased from BLM prior to removal of any material.
 - a. An optional mineral material pit may be constructed within the archaeologically cleared area. The mineral material removed in the process can be used for pad and access road construction. However, a mineral material sales contract must be purchased from the BLM prior to removal of any material.

F. Well Pad Surfacing Requirement:

The well pad shall be surfaced with a minimum of 3 inches of gravel. The well pad shall be surfaced prior to drilling operations. See Permanent Resource Road Requirements - EXHIBIT D - requirement #4, for road surfacing.

G. Cave Requirements:

1. If, during any construction activities any sinkholes or cave openings are discovered, all construction activities shall immediately cease. Contact Larry Bray at (505) 627-0250.
2. The BLM Authorized Officer will, within 24 hours of notification in "A" above, conduct an on-the-ground field inspection for karst. At the field inspection the authorized field inspector will authorize or suggest mitigating measures to lessen the damage to the karst environment. A verbal order to proceed or stop the operation will be issued at that time.

III. DRILLING OPERATION REQUIREMENTS:**A. GENERAL DRILLING 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 in sufficient time for a representative to witness:

A. Spudding B. Cementing casing: 8 1/4 inch 4 1/4 inch C. BOP tests

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

3. 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.

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

C. CASING:

1. The 8 1/4 inch surface casing shall be set at 600' and cement circulated to the surface. If cement does not circulate to the surface the appropriate BLM office shall be notified and a temperature survey or cement bond log shall be run to verify the top of the cement. Remedial cementing shall be completed prior to drilling out that string.

2. The minimum required fill of cement behind the 4 1/4 inch production casing shall extend upward a minimum of 200' above the Glorieta Formation.

D. 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 8 1/4 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 2000 psi.

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

A. The tests shall be done by an Independent service company.

B. The results of the test shall be reported to the appropriate BLM office.

C. 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.

D. Testing must be done in a safe workman-like manner. Hard line connections shall be required.

IV. DOWN HOLE ABANDONMENT REQUIREMENTS:

- A. If the well is a dry hole and will be plugged, approval of the proposed plugging program may be obtained orally. However, oral approval must be confirmed in writing by immediately filing a Sundry Notice And Report On Wells (Form 3160-5) "Notice of Intention to Abandon", and submitting an original and five (5) copies to the Roswell Field Office. The report should show the total depth reached, the reason for plugging, and the proposed intervals, by depths, where plugs are to be placed, type of plug, type of plugging mud, etc..
- B. If the well is not drilled, please notify the BLM so that an official release can be approved.

V. SURFACE RECLAMATION/RESTORATION REQUIREMENTS:

- A. When the well is abandoned the "Notice of Intention to Abandon" (Form 3160-5) could also be used by the holder as the initial report for the surface reclamation/restoration of the access road and well pad. Upon receipt of the "NOI" the Authorized Officer shall provide the holder with the specific requirements for the reclamation/restoration of the access road and well pad.
- B. **Subsequent Report Of Abandonment:** The holder shall submit a second report on Form 3160-5, Sundry Notice and Report On Wells, the original and five (5) copies to the Roswell Field Office, pertaining to the reclamation/restoration of the access road and well pad. The holder shall demonstrate that the surface reclamation/restoration requirements have been complied with. The holder shall specify that the reclamation work accomplished the restoration of the disturbed areas to as near the original surface condition the land was in prior to construction of the access road and well pad.
- C. **Final Abandonment Notice:** The holder shall submit a third report on Form 3160-5, Sundry Notice and Report On Wells, the original and five (5) copies to the Roswell Field Office, that will ascertain that all surface reclamation/restoration requirements have finally been completed and that the access road and well pad are ready for final inspection. The holder shall specify that the surface has been reclaimed in accordance with federal regulations and request final approval of the access road and well pad.
- D. The holder shall comply with all the surface reclamation/restoration required by the Authorized Officer pertaining to the reclamation/restoration of the access road and well pad. Liability under bond shall be retained until surface reclamation/restoration of the access road and well pad has been completed to the satisfaction of the Authorized Officer.

VI. SEEDING REQUIREMENTS:

- A. The stockpile of topsoil shall be spread over the well pad to cultivate a seed bed. The holder shall not mix the topsoil with the reserve pit area soil. The mixing of the soils will render the conservation of the topsoil for reclamation purposes pointless, if the topsoil is contaminated with the reserve pit mud soils.
- B. The reclaimed area(s) shall be seeded with the seed mixture that was determined by the Roswell Field Office for the Desired Plant Community on this well site.
- C. The same seed mixture shall be used on the reclaimed access road; See **PERMANENT RESOURCE ROAD REQUIREMENT #12.**

D. The planting of the seed shall be done in accordance with the following seeding requirements:

1. The access road and well pad shall be ripped a minimum of 16 inches deep. The topsoil soil shall be plowed under with soil turning equipment and the plowed surface shall be disked before seeding. Seed shall be planted using a drill equipped planter with a depth regulator to ensure proper depth of planting where drilling is possible. The seed mixture shall be evenly and uniformly planted over the disturbed area. Smaller/heavier seeds have a tendency to drop to the bottom of the drill and are planted first, the holder shall take appropriate measures to ensure this does not occur. Where drilling is not possible, seed shall be broadcast and the area shall be raked or chained to cover the seed. When broadcasting the seed, the pounds per acre noted below are to be doubled.

2. The holder shall seed all the disturbed areas with the DPC seed mixture listed below. The seed mixture shall be planted in the amounts specified in pounds of pure live seed per acre. (Pounds of pure live seed per acre: pounds of seed X percent purity X percent germination = pounds pure live seed). There shall be no primary or secondary noxious weeds in the seed mixture.

In accordance with State law(s) the seed should be tested for purity and viability within nine (9) months prior to sell. Commercial seed shall be either certified or registered seed. The seed mixture container shall be tagged in accordance with State law(s) and the certified seed tag shall be made available for inspection by the Authorized Officer.

3. Desired Plant Community seed mixture to be planted in pounds of pure live seed per acre:

Alama silt loam, dry, 0-3% Slope
Hollomex loam, 1-9% slope, dry
Reeves loam, 0-2% slope, dry
Milner loam, 0-2% slope, dry

Loamy, SD-3 Ecological Site

<u>Common Name and Preferred Variety</u>	<u>Scientific Name</u>	<u>Pounds of Pure Live Seed Per Acre</u>
Blue grama, var. Lovington	(<i>Bouteloua gracilis</i>)	4.00 lbs.
Sideoats grama, var. Vaughn or El Reno	(<i>Bouteloua curtipendula</i>)	1.00 lb.
Sand dropseed	(<i>Sporobolus cryptandrus</i>)	0.50 lb.
Vine mesquite	(<i>Panicum obtusum</i>)	1.00 lb.
Plains bristlegrass	(<i>Setaria macrostachya</i>)	1.00 lb.
Indian blanketflower	(<i>Gaillardia aristata</i>)	0.50 lb.
Desert or Scarlet Globemallow	(<i>Sphaeralcea ambigua</i>) or (<i>S. coccinea</i>)	<u>1.00 lb.</u>
TOTAL POUNDS PURE LIVE SEED PER ACRE		9.00 lbs.

If one species is not available, increase ALL others proportionately. Certified Weed Free Seed. A minimum of 4 species is required, including 1 forb species.

WELL DRILLING REQUIREMENTS

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E. The recommended time to seed is from June 15th through September 15th. The optimum seeding time is in mid-July. Successive seeding should be done either late in the fall (Sept. 15th - Nov. 15th, before freeze up) or early as possible the following spring to take advantage of available ground moisture. However, the holder may seed immediately after completing surface abandonment requirements.

F. The seeding of the disturbed areas shall be repeated until a vegetation thicket is established on the access road and well pad. The Authorized Officer shall make the determination when the regrowth on the disturbed areas is satisfactory.

G. The holder shall be responsible for the establishment of vegetation on the access road and well pad. Evaluation of vegetation growth will not be made before the completion of the first growing season after seeding. The Authorized Officer reserves the right to require reseeded at a specific time if seed does not germinate after one growing season. Waiver of this requirement would be considered if diligent attempts to revegetate the disturbed areas have failed and the Authorized Officer determines that further attempts to replant the access road and well pad is futile.

H. Contact Jessica Rubado at (505) 627-0240 to witness the seeding operations, two (2) days prior to seeding the disturbed areas.

Invasive and Noxious Weeds Requirement:

A. The holder shall be held responsible if noxious weeds become established within the area. Evaluation of the growth of noxious weeds shall be made upon discovery. Weed control will be required on the disturbed land where noxious weeds exist, which includes the roads, pads, associated pipelines, and adjacent land affected by the establishment of weeds due to this action. The holder is responsible for consultation with the Authorized Officer for acceptable weed control methods, which include following EPA and BLM requirements and policy.

B. The holder shall insure that the equipment and or vehicles that will be used to construct, maintain and administer the access roads, well pad and resulting well are not polluted with invasive and noxious weed seed. Transporting of invasive and noxious weed seed could occur if the equipment and vehicles were previously used in noxious weed infested areas. In order to prevent the spread of noxious weeds, the Authorized Officer shall require that the equipment and vehicles be cleaned with either high pressure water or air prior to construction, maintenance and administration of the access roads, well pad, and resulting well.

VIII. ON LEASE - WELL REQUIREMENTS:

A. The holder shall post signs identifying the location permitted herein with the requirements contained in Onshore Oil and Gas Order #1 and 43 CFR §162.6.

B. The following data is required on the well sign that shall be posted in a conspicuous place on the well pad. The sign shall be kept up with current identification and shall be legible for as long as the well is in existence:

WELL DRILLING REQUIREMENTS

7 of 8 pages

Operator Name: Chesapeake Operating, Inc.
Well Name & No.: Tyrell 13 Federal #4
Lease No.: NM-8431
Footage: 660' FNL & 800' FEL
Location: Section 13, T. 10 S., R. 29 E.

C. UPON ABANDONMENT OF THE WELL, THE SAME INFORMATION SHALL BE INSCRIBED ON THE DRY HOLE MARKER WITH A BEADED WELD.

D. The approval of the APD does not in any way imply or grant approval of any on-lease, off-lease, or off-unit action(s). It is the responsibility of the holder to obtain other approval(s) such as rights-of-way from the Roswell Field Office or other agencies, including private surface landowner(s).

E. All vehicles, including caterpillar track-type tractors, motor graders, off-highway trucks and any other type of motorized equipment that is used in the construction of the access road and well pad shall be confined to the area(s) herein approved. The drilling rig that is used to drill the well shall also be confined to the approved area(s).

F. Containment Structure Requirement:

1. A containment structure or earthen dike shall be constructed and maintained around all storage facilities/batteries. The containment structure or earthen dike shall surround the storage facilities/batteries.
2. The containment structure or earthen dike shall be constructed two (2) feet high around the facilities/batteries (the containment structure or earthen dike can be constructed higher than the two (2) feet high minimum).
3. The perimeter of the containment structure or earthen dike can be constructed substantial larger for greater holding capacity of the contents of the largest tank.
4. The containment structure or earthen dike shall be constructed so that in case of a spill the structure can contain the entire contents of the largest tank, plus 24 hour production, within the containment structure or earthen dike, unless more stringent protective requirements are deemed necessary by the Authorized Officer.

G. Well Completion Requirement:

If the well is completed, all areas of the well pad not necessary for operations shall be reclaimed to resemble the original contours of the surrounding terrain. Cut-and-fill slopes shall be re-contoured and reduced to a slope of 3:1 or less.

H. Painting Requirement:

All above-ground structures (e.g.: meter houses, tanks, above ground pipelines, and related appurtenance, etc.) not subject to safety requirements shall be painted by the holder to blend with the natural color of the landscape. The paint used shall be a color which simulates "Standard

Environmental Colors" designated by the Rocky Mountain Five-State Interagency Committee. The color selected for painting all the well facilities is Slate Gray, Munsell Soil Color Chart Number 5Y 6/1.

I. Fence Requirement:

The holder shall minimize disturbance to existing fences and other improvements on public lands. The holder is required to promptly repair impacted improvements to at least their former state. On private surface the holder shall 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. No permanent gates shall be allowed unless approved by the Authorized Officer.

J. Open-vent Exhaust Stack Requirements:

1. All open-vent exhaust stacks associated with heater-treater, separators and dehydrator units shall be modified to prevent birds and bats from entering them and to the extent practical to discourage perching and nesting.
2. New production equipment installed on federal leases after November 1st, 1993, shall have the open-vent exhaust stacks constructed to prevent the entry of birds and bats and to the extent practical, to discourage perching, and nesting.

IX. SPECIAL REQUIREMENT(S): NONE



United States Department of the Interior
BUREAU OF LAND MANAGEMENT
Roswell Field Office
2909 West Second Street
Roswell, New Mexico 88201

EXHIBIT C

1 of 3 pages

CONDITIONS OF APPROVAL

OPERATOR: Chesapeake Operating, Inc.
LEASE NO: NM-8431
WELL NAME & NO.: Tyrell 13 Federal #4
LOCATION: Section 13, T. 10 S., R. 25 E., N.M.P.M.
QUARTER/QUARTER & FOOTAGE: NE $\frac{1}{4}$ NE $\frac{1}{4}$ - 660' FNL & 800' FEL
COUNTY: Chaves County, New Mexico

GENERAL CONDITIONS OF APPROVAL:

1. The operator shall hereafter be identified as the holder in these requirements. The Authorized Officer is the person who approves the Conditions Of Approval.
2. The holder shall indemnify the United States against any liability for damage to life or property arising from occupancy or use of public lands under this authorization.
3. The holder shall have surface use approval prior to any construction work on change(s) or modification(s) to the access road and/or well pad. The holder shall submit (Form 3160-5), Sundry Notice and Report On Wells, an original plus one (1) copy to the Roswell Field Office, stating the basis for any changes to previously approved plans. Prior to any revised construction the holder shall have an approved Sundry Notice and Report On Wells or written authorization to proceed with the change in plans ratified by the Authorized Officer.
4. **Weed Control:**
 - A. The holder shall be held responsible if noxious weeds become established within the area. Evaluation of the growth of noxious weeds shall be made upon discovery. Weed control will be required on the disturbed land where noxious weeds exist, which includes the roads, pads, associated pipelines, and adjacent land affected by the establishment of weeds due to this action. The holder is responsible for consultation with the Authorized Officer for acceptable weed control methods, which include following EPA and BLM requirements and policy.

B. The holder shall insure that the equipment and or vehicles that will be used to construct, maintain and administer the access roads, well pad and resulting well are not polluted with invasive and noxious weed seed. Transporting of invasive and noxious weed seed could occur if the equipment and vehicles were previously used in noxious weed infested areas. In order to prevent the spread of noxious weeds, the Authorized Officer shall require that the equipment and vehicles be cleaned with either high pressure water or air prior to construction, maintenance and administration of the access roads, well pad, and resulting well.

5. Hazardous Substances:

a. 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. seg.*) with regard to any toxic substances that are used, generated by or stored on the project/pipeline route or on facilities authorized. (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.

b. The holder agrees to indemnify the United States against any liability arising from the release of any hazardous substances 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. seg.* or the Resource Conservation and Recovery Act, 42 U.S.C. 6901, *et. seg.*) on this project/pipeline (unless the release or threatened release is wholly unrelated to the holder's activity on the pipeline). This agreement applies without regard to whether a release is caused by the operator, its agent, or unrelated third parties.

6. Undesirable Events:

If, during any phase of the construction, operation, maintenance, or termination of the authorization, any oil or other pollutants, should be discharged, and impacting Federal lands, the control and total removal, disposal, and cleaning up of such oil or other pollutants, 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 therefrom, 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.

7. Archaeological, Paleontology, and Historical Sites:

a. 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 valuation 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 shall 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.

b. The holder is hereby obligated to comply with procedures established in the Native American Graves Protection and Repatriation Act (NAGPRA) to protect such cultural items as human remains, associated funerary objects, sacred objects, and objects of cultural patrimony discovered inadvertently during the course of project implementation. In the event that any of the cultural items listed above are discovered during the course of the project work, the holder shall immediately halt the disturbance and contact the BLM within 24 hours for instructions. The holder or initiator of any project shall be held responsible for protecting, evaluating, reporting, excavating, treating, and disposing of these cultural items according to the procedures established by the BLM in consultation with Indian Tribes. Any unauthorized collection or disturbance of cultural resources may result in a shutdown order by the Authorized Officer.

8. Sanitation:

The holder shall be responsible for maintaining the site in a sanitary condition at all times; waste materials shall be disposed of promptly at an appropriate waste disposal site. "Waste" means all discarded matter including, but not limited to, human waste, trash, garbage, refuse, oil drums, petroleum products, ashes, and equipment.

9. Open-top Tanks: Any open-top tank containing oil and/or toxic fluids shall be covered with netting or equipped to prevent birds, bats, and other wildlife from entering the open-top tank.

10. Other: None



United States Department of the Interior
BUREAU OF LAND MANAGEMENT
Roswell Field Office
2909 West Second Street
Roswell, New Mexico 88201

EXHIBIT D

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PERMANENT RESOURCE ROAD REQUIREMENTS

Operator: Chesapeake Operating, Inc.

BLM Serial Number: NM-8431

Well Name & NO.: Tyrell 13 Federal #4

Location: Section 13, T. 10 S., R. 25 E.,

660' FNL & 800' FEL, Chaves County, N.M.

The holder agrees to comply with the following requirements:

1. GENERAL REQUIREMENTS:

- A. The operator shall hereafter be identified as the holder in these requirements. The Authorized Officer is the person who approves the Permanent Resource Road Requirements.
- B. The holder shall minimize any disturbance to structures on public domain surface. Damages caused to any structure during road construction operations shall be promptly repaired by the holder. Functional use of any structure shall be maintained at all times. The holder shall make a documented good-faith effort to contact the owner prior to disturbing any structure.
- C. When necessary to pass through an existing fence line, the fence shall be braced on both sides of the passageway prior to cutting and the fence shall be promptly repaired to at least it's former state or to a higher standard than it was previously constructed.
- D. A professional engineer shall design the access road if the road grade exceeds 10 percent slope.

2. INGRESS AND EGRESS:

The access road shall be constructed to access the well pad on the Northwest corner of the well pad to comply with the planned access road route.

3. ROAD TRAVELWAY WIDTH:

The travelway of the road shall be constructed 14 feet wide. The maximum width of surface disturbance shall not exceed 30 feet of road construction. The specified travelway width is 14 feet for all road travelway surfaces unless the Authorized Officer approves a different width.