

N.M. Oil Cons. DIV-Dist. 2

1301 W. Grand Avenue

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
Alamosa, NM 88210

FORM APPROVED
OMB No. 1004-0136
Expires November 30, 2000



APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of Work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. NMNM26067 ✓	
1b. Type of Well: <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other <input checked="" type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		6. If Indian, Allottee or Tribe Name	
2. Name of Operator CHESAPEAKE OPERATING INC		7. If Unit or CA Agreement, Name and No.	
3a. Address P O BOX 18496 OKLAHOMA CITY, OK 73154-0496		8. Lease Name and Well No. JJ 1 FEDERAL 4	
3b. Phone No. (include area code) Ph: 405.767.4275 Fx: 405.879.9583		9. API Well No. 30-005-63711	
4. Location of Well (Report location clearly and in accordance with any State requirements.) At surface SWSW 660FSL 990FWL At proposed prod. zone		10. Field and Pool, or Exploratory PECOS SLOPE; Abo	
14. Distance in miles and direction from nearest town or post office*		11. Sec., T., R., M., or Blk. and Survey or Area Sec 1 T10S R25E Mer NMP SME: BLM	
15. Distance from proposed location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)		12. County or Parish CHAVES	
16. No. of Acres in Lease 120.00		13. State NM	
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.	
19. Proposed Depth 4600 MD		20. BLM/BIA Bond No. on file	
21. Elevations (Show whether DF, KB, RT, GL, etc.) 3728 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:

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

25. Signature (Electronic Submission)	Name (Printed/Typed) LINDA GOOD	Date 08/25/2004
Title AUTHORIZED REPRESENTATIVE		
Approved by (Signature) (ORIG. SGD.) DAVID H. GLASS For Larry D. Bray	Name (Printed/Typed) (ORIG. SGD.) DAVID H. GLASS	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 #35146 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 (04LA0286AE)

CEMENT TO COVER ALL OIL,
GAS AND WATER BEARING

** BLM REVISED ** BLM REVISED ** BLM REVISE ZONES 1.e, Glorieta

Additional Operator Remarks:

Chesapeake Operating, Inc. proposed to drill a well to 4600' to test the Abo formation. If productive casing will be run and the well will be completed. If dry, the well will be plugged & 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 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

Form C-103
May 27, 2004

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

Federal Well

WELL API NO.
5. Indicate Type of Lease STATE <input type="checkbox"/> FEE <input type="checkbox"/>
6. State Oil & Gas Lease No.
7. Lease Name or Unit Agreement Name JJ "1" 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

RECEIVED

NOV 16 2004

~~OOD-ARTESIA~~

4. Well Location
Unit Letter M : 660 feet from the South line and 990 feet from the West line
Section 1 Township 10S Range 25E NMPM County Chaves

11. Elevation (Show whether DR, RKB, RT, GR, etc.)
3722 GR

Pit or Below-grade Tank Application ☒ or Closure ☐

Pit type Drilling Depth to Groundwater 100+ 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.

Please, cancel the previous C-103 for pit approval mailed on 10-21-04.

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 #2 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
DISTRICT II SUPERVISOR

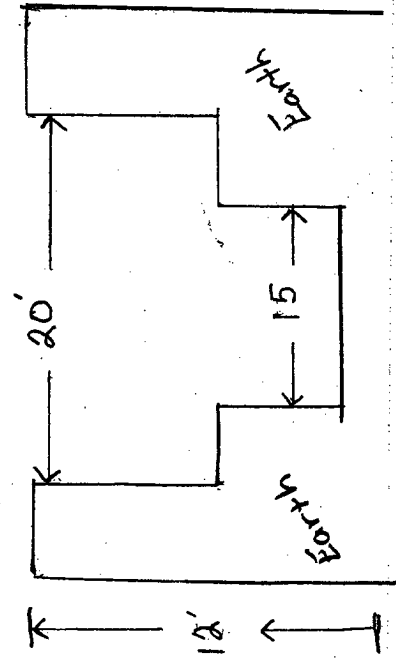
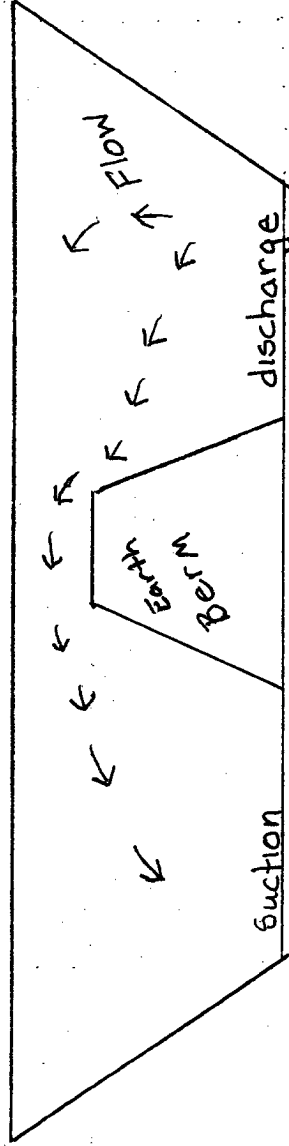
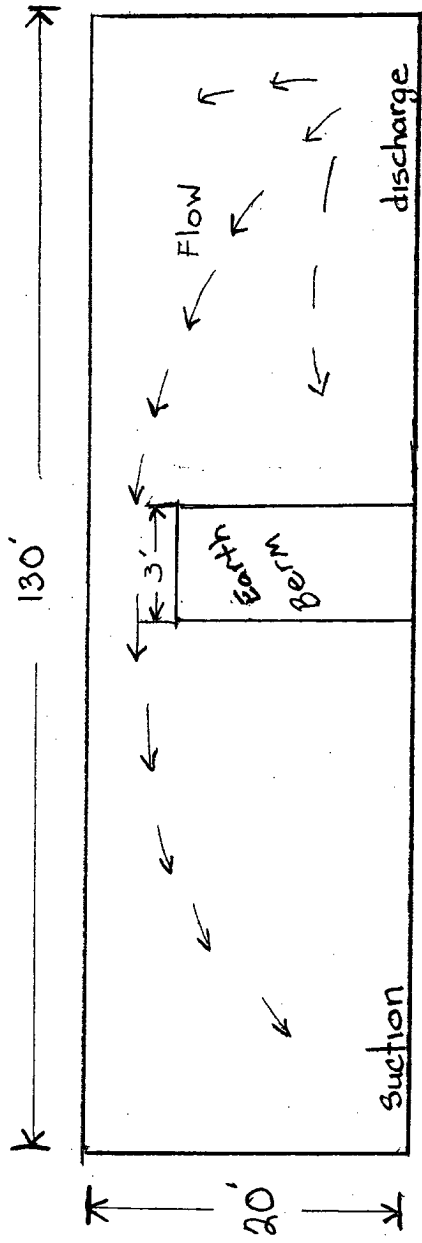
NOV 24 2004

APPROVED BY: _____ TITLE _____ DATE _____

Conditions of Approval (if any):

Chesapeake Energy

Single Pit



28800 ft³
5129.4 bbls.

12 mil. woven plastic

1825 N. French Dr., Hobbs, NM 88340

811 South First, Artesia, NM 88210

1000 Rio Brazos Rd., Aztec, NM 87410

ED40 South Pacheco, Santa Fe, NM 87506

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

Free Lease - 3 Copies

OIL CONSERVATION DIVISION

2040 South Pacheco

Santa Fe, New Mexico 87504-2088

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number		Pool Code	Pool Name
Property Code	Property Name JJ1 FEDERAL		Well Number 4
OGRID No.	Operator Name CHESAPEAKE OPERATING INC.		Elevation 3722

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
M	1	10 S	25 E		660	SOUTH	990	WEST	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	Joint or Infill	Consolidation Code	Order No.						
160									

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

<div style="border: 1px dashed black; height: 400px; margin-bottom: 20px;"></div> <div style="border: 1px dashed black; height: 150px;"></div> <div style="position: relative; height: 150px; margin-top: 20px;"> <div style="position: absolute; top: 10px; right: 10px;"> Lat.: N33°28'09.2" Long.: W104°21'38.4" </div> <div style="position: absolute; bottom: 10px; left: 10px;"> <div style="display: flex; align-items: center;"> <div style="width: 50px; height: 5px; background-color: black; margin-right: 5px;"></div> <div style="text-align: center;"> <div style="width: 0; height: 0; border-left: 5px solid transparent; border-right: 5px solid transparent; border-bottom: 10px solid black; margin: 0 auto;"></div> <div style="width: 10px; height: 10px; border: 1px solid black; border-radius: 50%; position: relative; margin: 0 auto;"> <div style="position: absolute; top: -5px; left: 0; right: 0; border-bottom: 1px solid black;"></div> <div style="position: absolute; left: -5px; top: 0; bottom: 0; border-right: 1px solid black;"></div> </div> </div> </div> </div> </div>	<div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <h3 style="text-align: center; margin: 0;">OPERATOR CERTIFICATION</h3> <p style="font-size: small; margin: 5px 0;">I hereby certify the the information contained herein is true and complete to the best of my knowledge and belief.</p> <div style="text-align: center; margin: 10px 0;"> <hr style="border: 0; border-top: 1px solid black; margin: 5px 0;"/> Signature <div style="margin-top: 5px;"> Jim Ball <hr style="border: 0; border-top: 1px solid black; margin: 5px 0;"/> Printed Name Senior Landman <hr style="border: 0; border-top: 1px solid black; margin: 5px 0;"/> Title <div style="margin-top: 5px;"> 7/12/04 <hr style="border: 0; border-top: 1px solid black; margin: 5px 0;"/> Date </div> </div> </div> <div style="border: 1px solid black; padding: 5px;"> <h3 style="text-align: center; margin: 0;">SURVEYOR CERTIFICATION</h3> <p style="font-size: small; margin: 5px 0;">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> <div style="text-align: center; margin: 10px 0;"> <div style="margin-bottom: 5px;">JUNE 29, 2004</div> <div style="display: flex; align-items: center;"> <div style="width: 100px; height: 10px; background-color: black; margin-right: 5px;"></div> <div style="text-align: center;"> <div style="width: 0; height: 0; border-left: 5px solid transparent; border-right: 5px solid transparent; border-bottom: 10px solid black; margin: 0 auto;"></div> <div style="width: 10px; height: 10px; border: 1px solid black; border-radius: 50%; position: relative; margin: 0 auto;"> <div style="position: absolute; top: -5px; left: 0; right: 0; border-bottom: 1px solid black;"></div> <div style="position: absolute; left: -5px; top: 0; bottom: 0; border-right: 1px solid black;"></div> </div> </div> </div> <div style="margin-top: 5px;"> <div style="display: flex; align-items: center;"> <div style="width: 50px; height: 5px; background-color: black; margin-right: 5px;"></div> <div style="text-align: center;"> <div style="width: 0; height: 0; border-left: 5px solid transparent; border-right: 5px solid transparent; border-bottom: 10px solid black; margin: 0 auto;"></div> <div style="width: 10px; height: 10px; border: 1px solid black; border-radius: 50%; position: relative; margin: 0 auto;"> <div style="position: absolute; top: -5px; left: 0; right: 0; border-bottom: 1px solid black;"></div> <div style="position: absolute; left: -5px; top: 0; bottom: 0; border-right: 1px solid black;"></div> </div> </div> </div> </div> </div></div></div>
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Exhibit A-1

ONSHORE ORDER NO. 1
Chesapeake Operating, Inc.
JJ 1 FEDERAL 4
660 FSL 990 FWL
E2 SWSW of Section 1-10S-25E
Chaves County, NM

CONFIDENTIAL – TIGHT HOLE

Lease No. NMNM 26067

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 1009' in length and 14' in travel width with a maximum disturbance area of 30' 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 go East on Hwy 360, 10 miles to mile marker 165, thrn North on Alamo Rd 2 miles. Turn East .5 miles then back North .5 miles, stay left ay "y", go 1.6 miles, turn west .3 miles, South .3 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. A 6" steel pipeline will be laid along the lease road and gas meter will be on location. . – See Exhibit C & A-2.

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

ONSHORE ORDER NO. 1
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JJ 1 FEDERAL 4
660 FSL 990 FWL
E2 SWSW of Section 1-10S-25E
Chaves County, NM

CONFIDENTIAL – TIGHT HOLE

Lease No. NMNM 26067

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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Chaves County, NM

CONFIDENTIAL - TIGHT HOLE

Lease No. NMNM 26067

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:

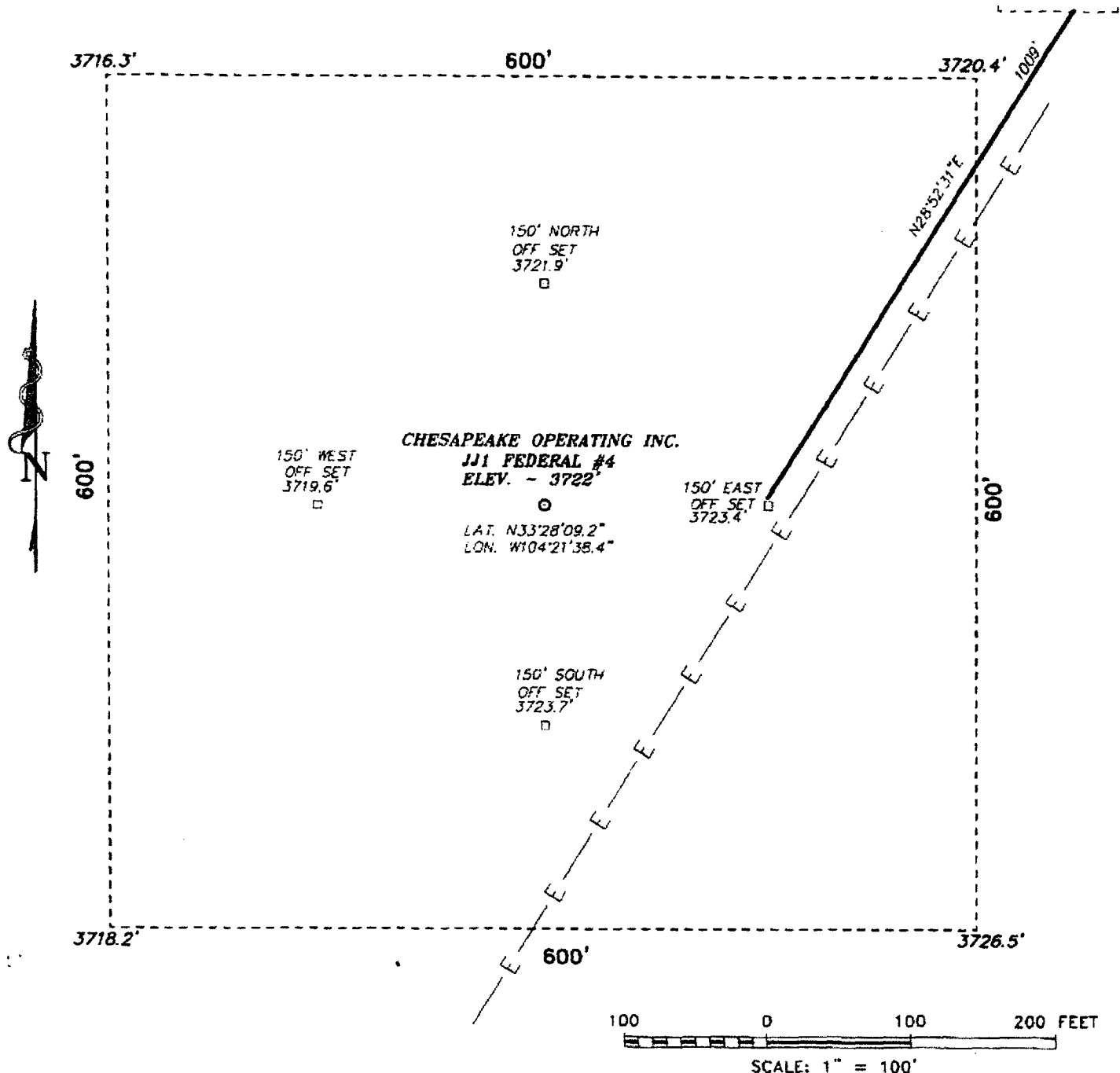
J. Mark Lester

Date:

8/25/04

SECTION 1, TOWNSHIP 10 SOUTH, RANGE 25 EAST, N.M.P.M.,
CHAVES COUNTY, NEW MEXICO.

JJ FED. #2



Directions to Location:

FROM THE JUNCTION OF US HWY 380 AND CO. RD.
ALAMO GO NORTH 1.9 MILES TO "Y" GO LEFT 1.6
MILES TO "Y" GO LT. 0.2 MILES TO JCT. ALAMO &
COYOTE ROAD GO 1.6 MILES ON ALAMO TO LEASE
ROAD, THEN WEST 0.2 MILES TO THE JJ FEDERAL #2
AND THE BEGINNING OF PROPOSED ROAD.

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

W.O. Number: 4408

Drawn By: JAMES PRESLEY

Date: 07/06/04

Disk: JLP #1 - 4408A

CHESAPEAKE OPERATING INC.

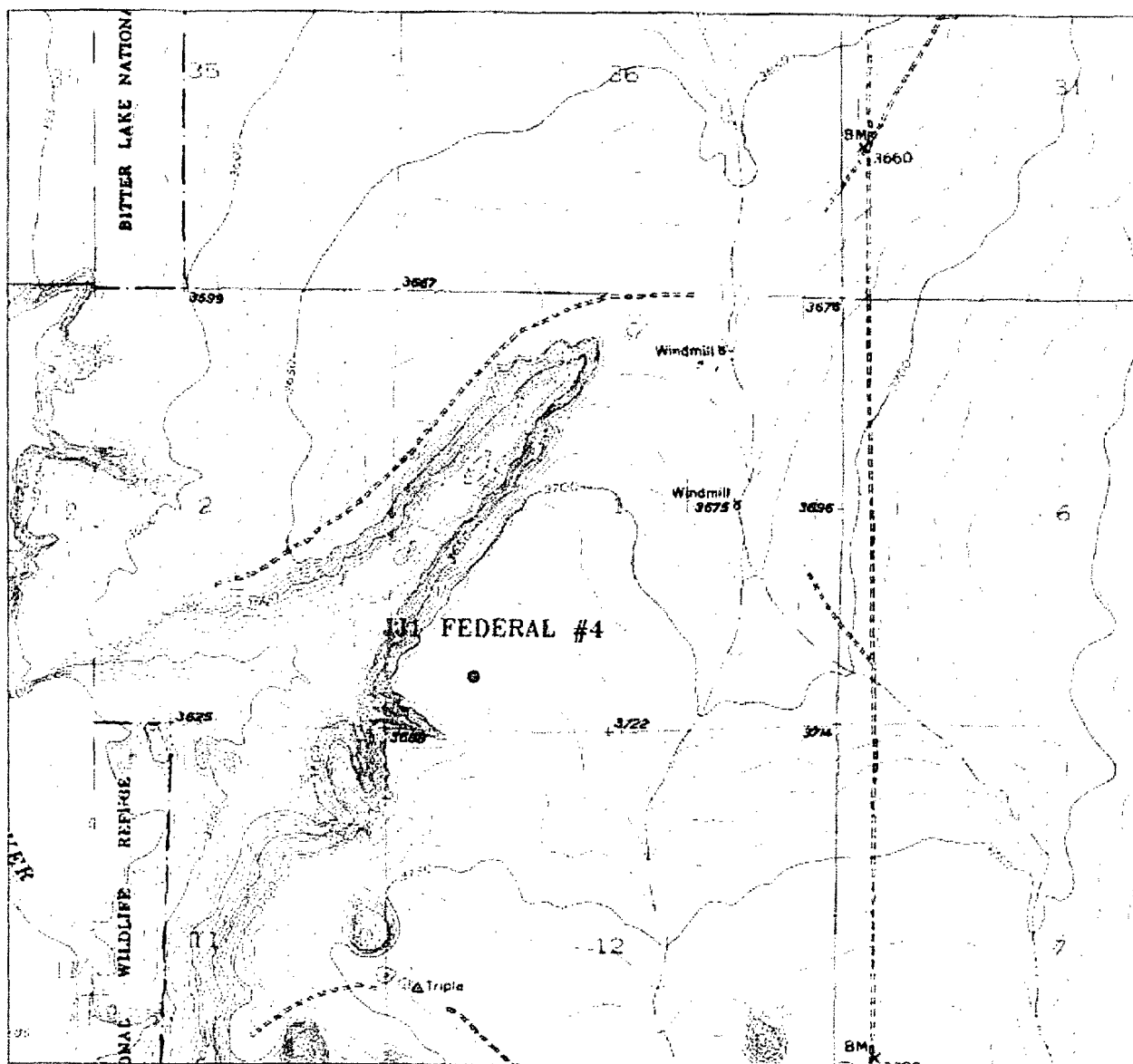
REF: JJ1 FEDERAL #4 / Well Pad Topo

JJ1 FEDERAL #4 LOCATED 660' FROM THE
SOUTH LINE AND 990' FROM THE WEST LINE OF
SECTION 1, TOWNSHIP 10 SOUTH, RANGE 25 EAST,
N.M.P.M., CHAVES COUNTY, NEW MEXICO.

Survey Date: 06/29/04

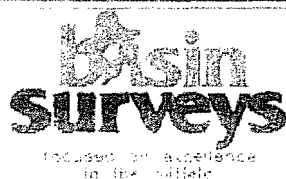
Sheet 1 of 1 Sheets

Exhibit A-2



JJ1 FEDERAL #4

Located at 660' FSL and 990' FWL
 Section 1, Township 10 South, Range 25 East,
 N.M.P.M., Chaves County, New Mexico.



P.O. Box 1786
 1120 N. First County Rd.
 Hobbs, New Mexico 88241
 (505) 593-7316 - Office
 (505) 593-7074 - Fax
 basin-surveys.com

W.D. Number 440542 - JLP #1

Survey Date 06/23/04

Scale 1" = 300'

Date 07/08/04

**CHESAPEAKE
 OPERATING
 INC.**

Exhibit A-3

ONSHORE ORDER NO. 1
Chesapeake Operating, Inc.
JJ 1 FEDERAL 4
660 FSL 990 FWL
E2 SWSW of Section 1-10S-25E
Chaves County, NM

CONFIDENTIAL – TIGHT HOLE
Lease Contract No. NMNM 26067

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	690	3025
Glorietta	1580	1860
Tubb	3280	430
Abo	4030	-315
Abo B	4130	-425
Abo C	4250	-530
Abo C Lower	4340	-620
Abo D	4430	-715
Total Depth	4600	-1870

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	4030 to 4500

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:

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.

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.

DRILLING PROGRAM

Page 4

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:

<u>Purpose</u>	<u>Interval</u>	<u>Hole Size</u>	<u>Casing Size</u>	<u>Weight</u>	<u>Grade</u>	<u>Thread</u>	<u>Condition</u>
Surface	0-1,000'	11"	8-5/8"	24#	J-55	ST &C	New
Production	0-4,600'	7-7/8"	4-1/2"	11.6#	J-55	LT &C	New

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

<u>Interval</u>	<u>Type</u>	<u>Amount</u>	<u>Yield</u>	<u>Washout</u>	<u>Excess</u>
Surface	Lead 65:35:6 + 6# Salt + 1/4# Flo-cel	300sx	2.1	50%	100%
	Tail: c + 2% CaCl	200sx	1.3		
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:

<u>Interval</u>	<u>Mud Type</u>	<u>Mud Weight</u>	<u>Viscosity</u>	<u>Fluid Loss</u>
0-1,000'	Water	8.4 – 9.0	28-40	NC
1,000' – 4,600'	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:

- a. Drill stem tests are not planned.
b. 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.
c. Cores samples are not planned.

7. ABNORMAL PRESSURES AND HYDROGEN SULFIDE

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

BLOWOUT PREVENTOR SCHEMATIC

CHESAPEAKE OPERATING INC

WELL : JJ 1 Federal 4

FIELD : Pecos Slope

RIG : United #23

COUNTY : Chaves

STATE: New Mexico

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

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-Sec	8-5/8" SOW x 11" 3M	

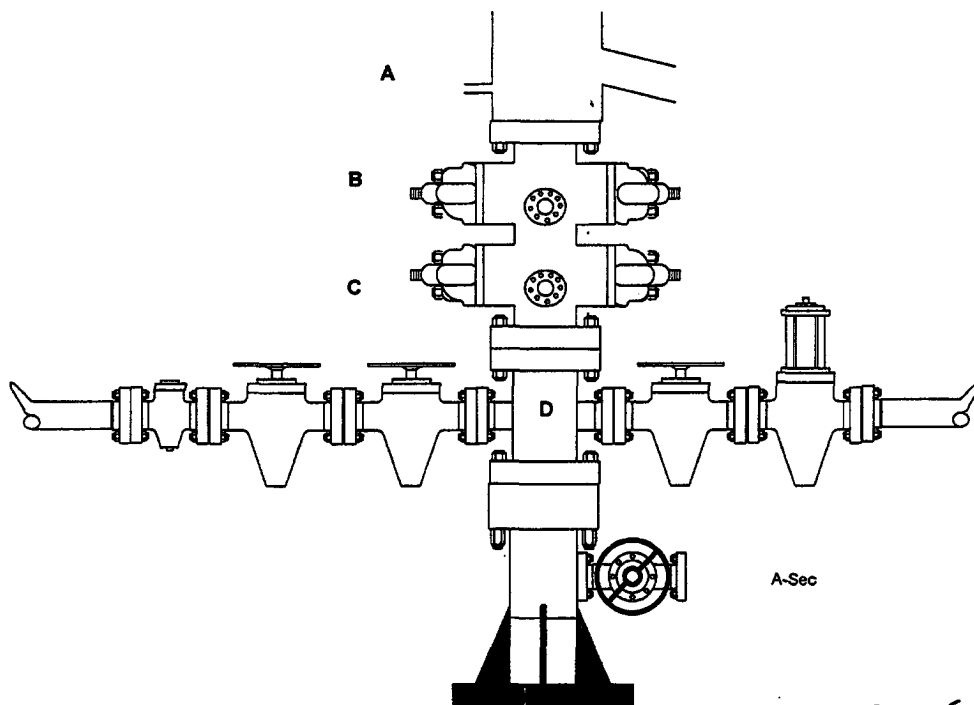


Exhibit F-1

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

CHOKE MANIFOLD SCHEMATIC

CHESAPEAKE OPERATING INC

WELL : JJ 1 Federal 4

FIELD : Pecos Slope

RIG : Unknown

COUNTY : Chaves

STATE: NM

OPERATION: 3M CHOKE MANIFOLD

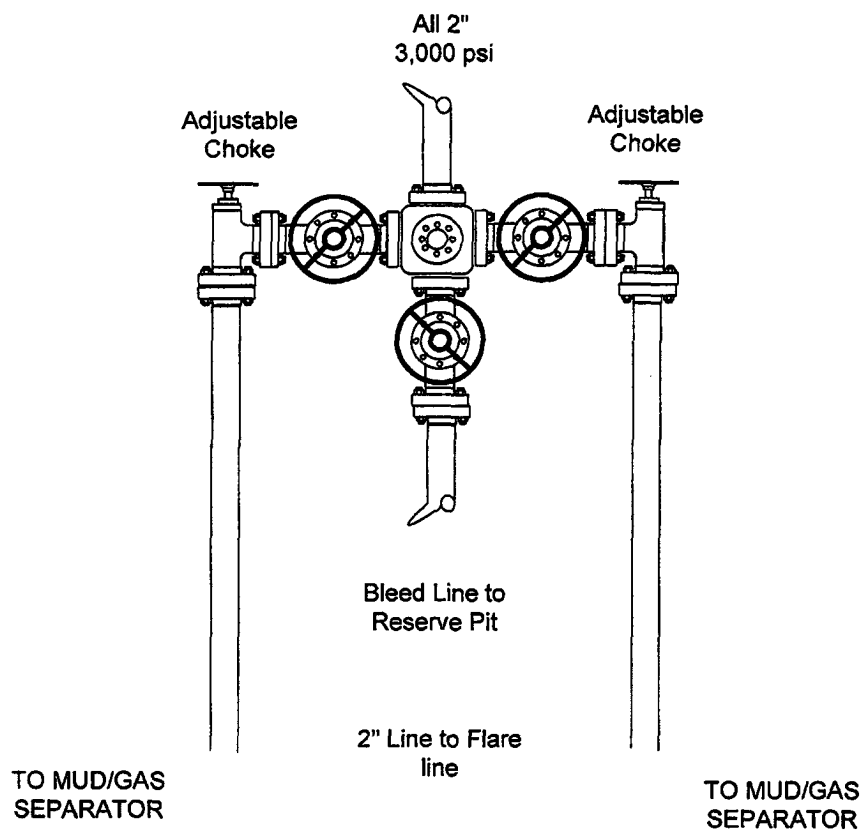


Exhibit F-2

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

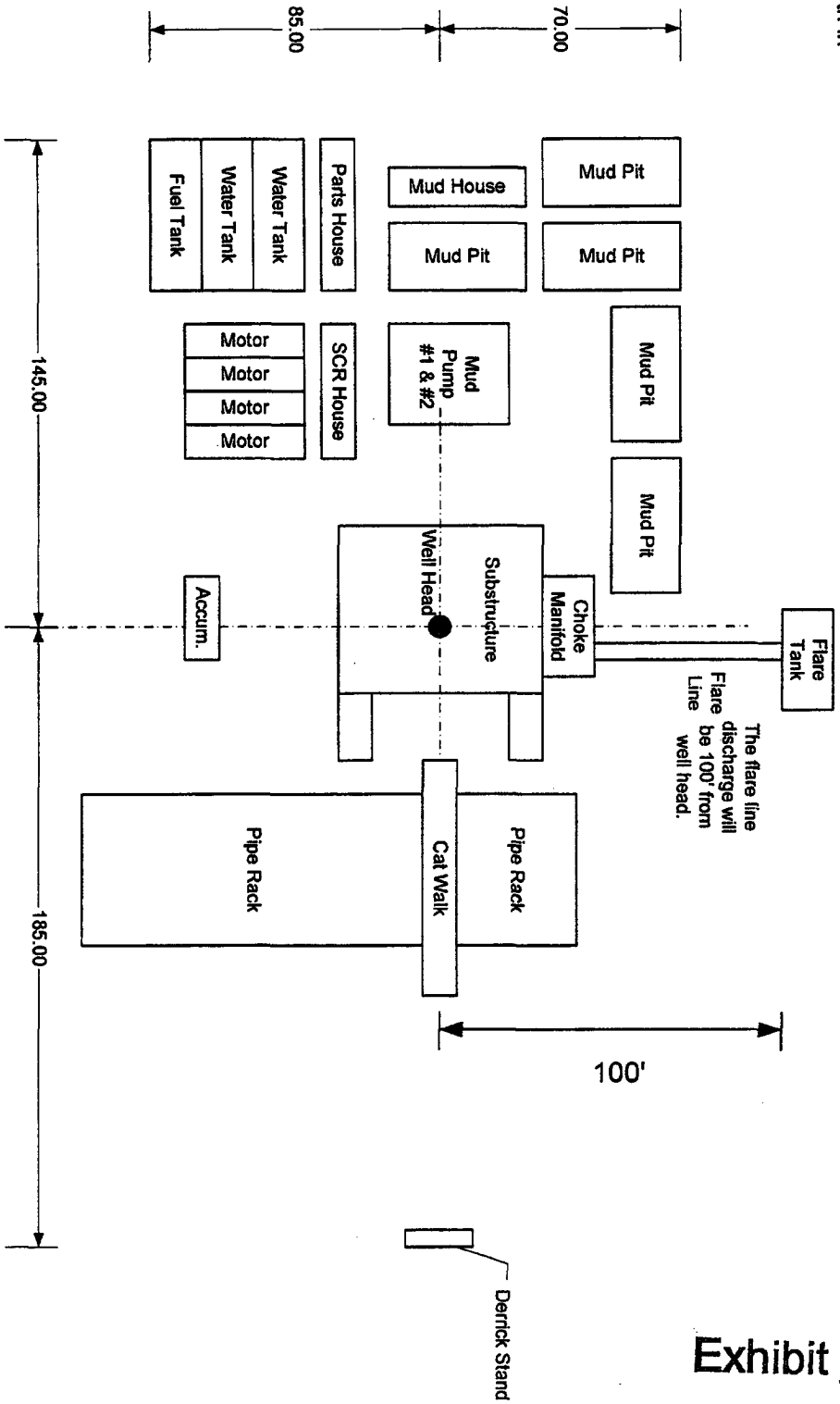


Exhibit D

Chesapeake Operating, Inc

General Rig Layout

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

