EC

Form 3160-3
(August 1999)

ROSWELL FIELD OFFICE

N.M. Oil Cons. DIV-Dist. 2
1301 W. Grand Avenue
Artesia, NM 88210

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

CONFIDENTIAL

1a. Type of Work: ☒ DRILL ☐ REENTER	5. Lease Serial No. NMNM16069
	6. If Indian, Allottee or Tribe Name
	7. If Unit or CA Agreement, Name and No.
1b. Type of Well: ☐ Oil Well ☒ Gas Well ☐ Other ☒ Single Zone ☐ Multiple Zone	8. Lease Name and Well No. COYOTE FEDERAL 5
2. Name of Operator CHESAPEAKE OPERATING INC Contact: SHARON E. DRIES E-Mail: sdries@chkenergy.com	9. API Well No. 30-005-63580
3a. Address P O BOX 18496 OKLAHOMA CITY, OK 73154-0496 3b. Phone No. (include area code) Ph: 405.879.7985 Fx: 405.879.9583	10. Field and Pool, or Exploratory PERMIAN
4. Location of Well *(Report location clearly and in accordance with any State requirements.*)* At surface NWSE 1850FSL 1980FEL At proposed prod. zone	11. Sec., T., R., M., or Blk. and Survey or Area Sec 1 T8S R24E Mer NMP
14. Distance in miles and direction from nearest town or post office* 18.4 NEOF ROSWELL, NM	12. County or Parish CHAVES 13. State NM
15. Distance from proposed location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 1850 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. 1796.4 19. Proposed Depth 4000 MD 20. BLM/BIA Bond No. on file	
21. Elevations (Show whether DF, KB, RT, GL, etc. 3681 GL 22. Approximate date work will start 23. Estimated duration	

JUL 2003
RECEIVED
OCD - ARTESIA

24. Attachments

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

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

25. Signature (Electronic Submission)	Name (Printed/Typed) SHARON E. DRIES	Date 04/28/2003
Title REGULATORY ANALYST		
Approved by (Signature) /S/LARRY D. BRAY	Name (Printed/Typed) /S/LARRY D. BRAY	Date JUL 07 200
Title Assistant Field Manager, Lands And Minerals	Office ROSWELL FIELD OFFICE	

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 #20979 verified by the BLM Well Information System
For CHESAPEAKE OPERATING INC, sent to the Roswell
Committed to AFMSS for processing by Linda Askwig on 05/01/2003 (03LA0094AE)

APPROVED FOR 1 YEAR

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

Additional Operator Remarks:

Chesapeake Operating,Inc proposes to drill a well to 4000' to test the Abo, ABo B, C, and D formations. If productive, casing will be run and the well will be completed. If dry, well will be plugged and abandoned per BLM and New Mexico Oil Conservation Division requirements.

Attached plese find the Surface Use Pland and Drilling Pland and attachments as required by Onshore Order No. 1. A generic rig layout is attached as Exhibit F. A final rig layout 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 leased lands.

Bond coverage for this well is provided by Chesapeake Operating, Inc. under their Nationwide Bond No. NM2634

DISTRICT I
P.O. Box 1980, Hobbs, NM 88241-1980

DISTRICT II
P.O. Drawer DD, Artesia, NM 88211-0719

DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410

DISTRICT IV
P.O. BOX 2088, SANTA FE, N.M. 87504-2088

State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION
P.O. Box 2088
Santa Fe, New Mexico 87504-2088

Form C-10
Revised February 10, 19
Submit to Appropriate District Offic
State Lease - 4 Copi
Fee Lease - 3 Copi

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPOR

API Number	Pool Code	Pool Name

Property Code	Property Name	Well Number
	COYOTE FEDERAL	5
OGRID No.	Operator Name	Elevation
	CHESAPEAKE OPERATING, INC.	3681'

Surface Location

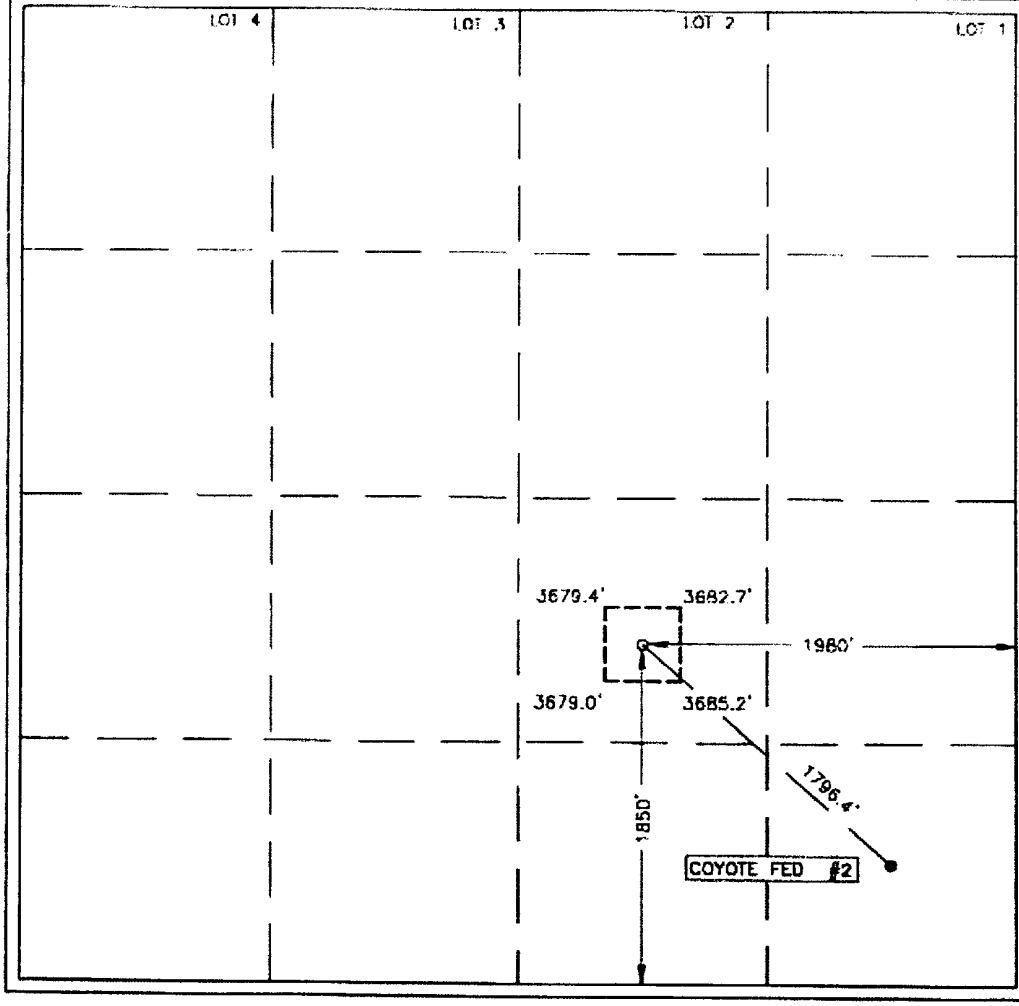
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
J	1	8-S	24-E		1850'	SOUTH	1980'	EAST	CHAVES

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	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



OPERATOR CERTIFICATION

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

W F Chatham
Signature

William F. Chatham
Printed Name

Landman
Title

4/16/03
Date

SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervison, and that the same is true and correct to the best of my belief.

April 14, 2003
Date Surveyed AWB

Signature & Seal of Professional Surveyor

Ronald J. Eidson 4/15/03

03.11.0040

Certificate No. RONALD J. EIDSON 3239
GARY EIDSON 12641

12. ADDITIONAL INFORMATION

A Class III cultural resource inventory report was prepared by Danny Boone of Boone Archaeological Services, LLC, for the proposed location and new access road. Clearance has been recommended. See Exhibit G.

13. OPERATOR'S REPRESENTATIVES

Drilling and Completion Operations
Colley Andrews
District Manager
P.O. Box 18496
Oklahoma City, OK 73154
(405) 879-9230 (OFFICE)
(405) 850-4336 (MOBILE)
(405) 879-7930 (FAX)
candrews@chkenergy.com

Drilling Engineer
Keith Curtis
P.O. Box 18496
Oklahoma City, OK 73154
(405) 848-8000 Ext. 623 (OFFICE)
(405) 879-9571 (FAX)
(405) 650-6399 (MOBILE)
kcurtis@chkenergy.com

Production Operations
Mark Mabe
5014 Carlsbad Hwy.
Hobbs, NM 88240
(505) 391-1462 (OFFICE)
(505) 391-6679 (FAX)
(505) 390-0221(MOBILE)
mmabe@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

Regulatory Compliance
Sharon Dries
Regulatory Analyst
Mailing Address: P.O. Box 18496
Oklahoma City, OK 73154
Street Address: 6100 N. Western
Oklahoma City, OK 73118
(405) 879-7985 (OFFICE)
(405) 879-9583 (FAX)
sdries@chkenergy.com

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	520	3200
Glorietta	1290	2430
Tubb	2730	990
Abo	3420	300
Abo B	3530	190
Abo C	3650	70
Abo C Lower	3750	-30
Abo D	3830	-110
Total Depth	**4000**	

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
Gas	Abo	3420
Gas	Abo B	3530
Gas	Abo C	3650
Gas	Abo C Lower	3750
Gas	Abo D	3830

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 H.
(a) Ram-type and annular preventers,
(b) Choke manifolds and valves,
(c) Kill lines and valves, and
(d) Upper and lower kelly cock valves, inside BOP's and safety valves.

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

C. Test Pressure
1. In some drilling operations, the pressures to be used for low and high-pressure testing of preventers and casing may be different from those given below due to governmental regulations, or approved local practices.
2. If an individual component does not test at the low pressure, **do not,** test to the high pressure and then drop back down to the low pressure.
3. All valves located downstream of a valve being tested must be placed in the open position.
4. All equipment will be tested with an initial "low pressure" test at 250 psi.
5. The subsequent "high pressure" test will be conducted at the rated working pressure of the equipment for all equipment except the annular preventer.
6. The "high pressure" test for the annular preventer will be conducted at 70% of the rated working pressure.
7. A record of all pressures will be made on a pressure-recording chart.

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

II. Accumulator Performance Test

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

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

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

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

System Operating Pressures	Precharge Pressure
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:

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

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

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

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

4. CASING AND CEMENTING PROGRAM

a. The proposed casing program will be as follows:

Purpose	Interval	Hole Size	Casing Size	Weight	Grade	Thread	Condition
Surface	0-1,000'	12 ¼"	9 5/8"	40#	J-55	ST&C	NEW
Production	0-4,000'	7 7/8"	4 ½"	15.5#	J-55	LT&C	NEW

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

Interval	Type	Amount	Yield	Washout	Excess
Surface	Lead: 65:35:6 + 6# Salt + ¼ # Flo-Cell Tail: "C" + 2% CC	315sx 285sx	2.1 1.32	50%	100%
Production	50:50 "H" + 4# KCL + 0.4% Haladd-322 + 2% Gel	265sx	1.34	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 Based	8.4-9.0	28-40	NC
1,000'-4,000'	Water Based	9.4-10.0	35-46	NC-7

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 550 psi. No abnormal pressures or temperatures are anticipated.
   b. Hydrogen sulfide gas is not expected to be encountered.

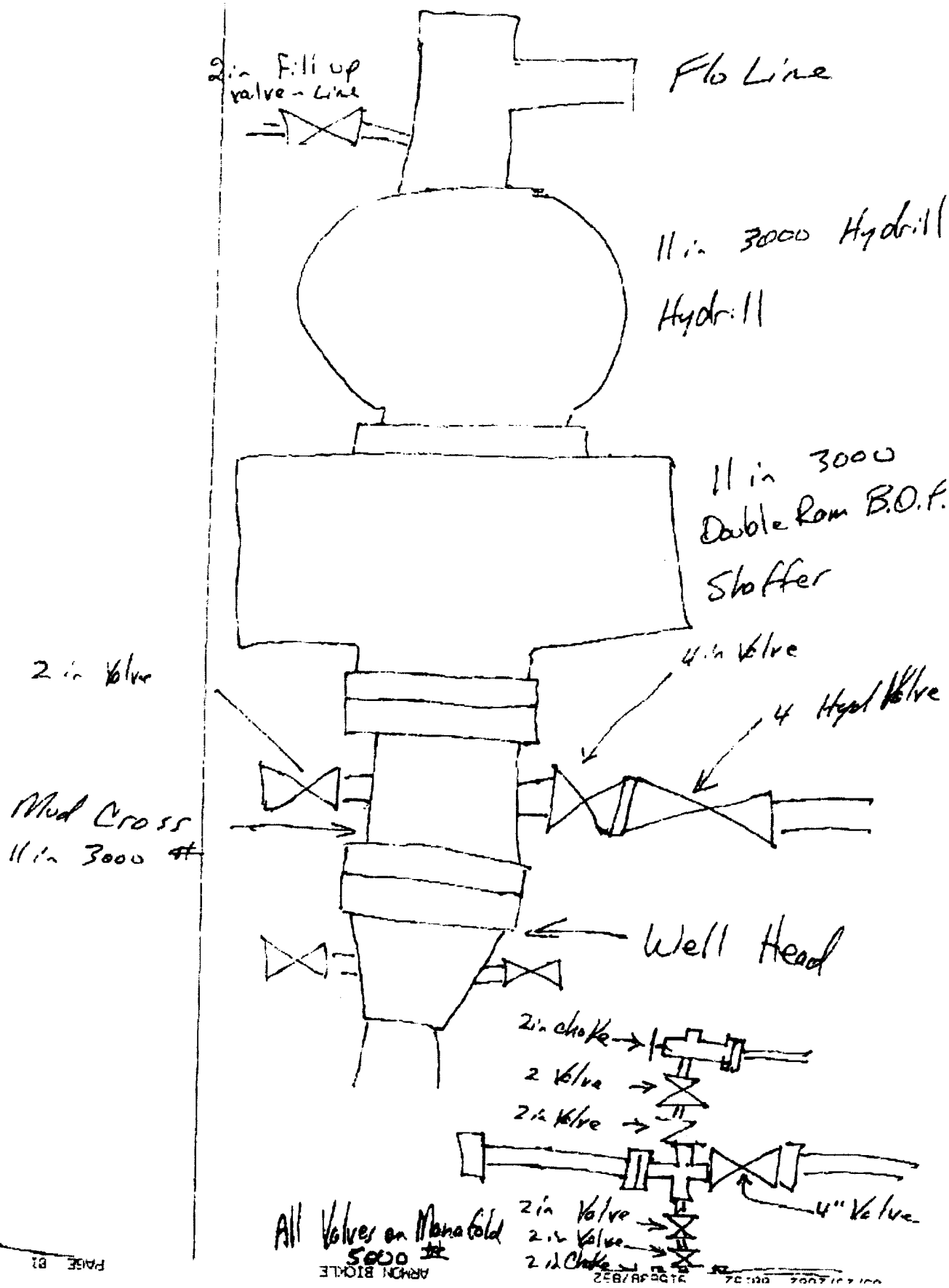
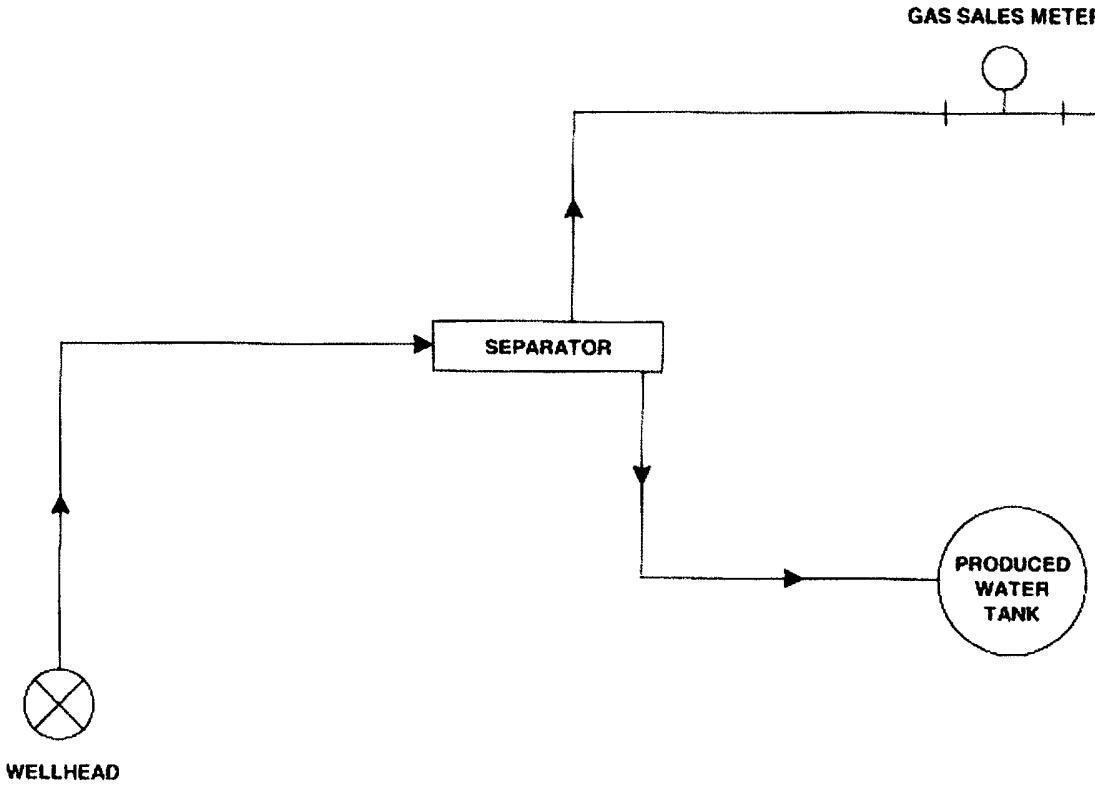

2 in Fill up valve - Line
Flo Line
11 in 3000 Hydrill
Hydrill
11 in 3000
Double Ram B.O.P.
Shaffer
2 in Valve
4 in Valve
4 Hyd Valve
Mud Cross
11 in 3000 #
Well Head
2 in choke
2 Valve
2 in Valve
4" Valve
2 in Valve
2 in Valve
2 in Choke
All Valves on Manifold
5000 #

EXHIBIT A
FLOW SCHEMATIC



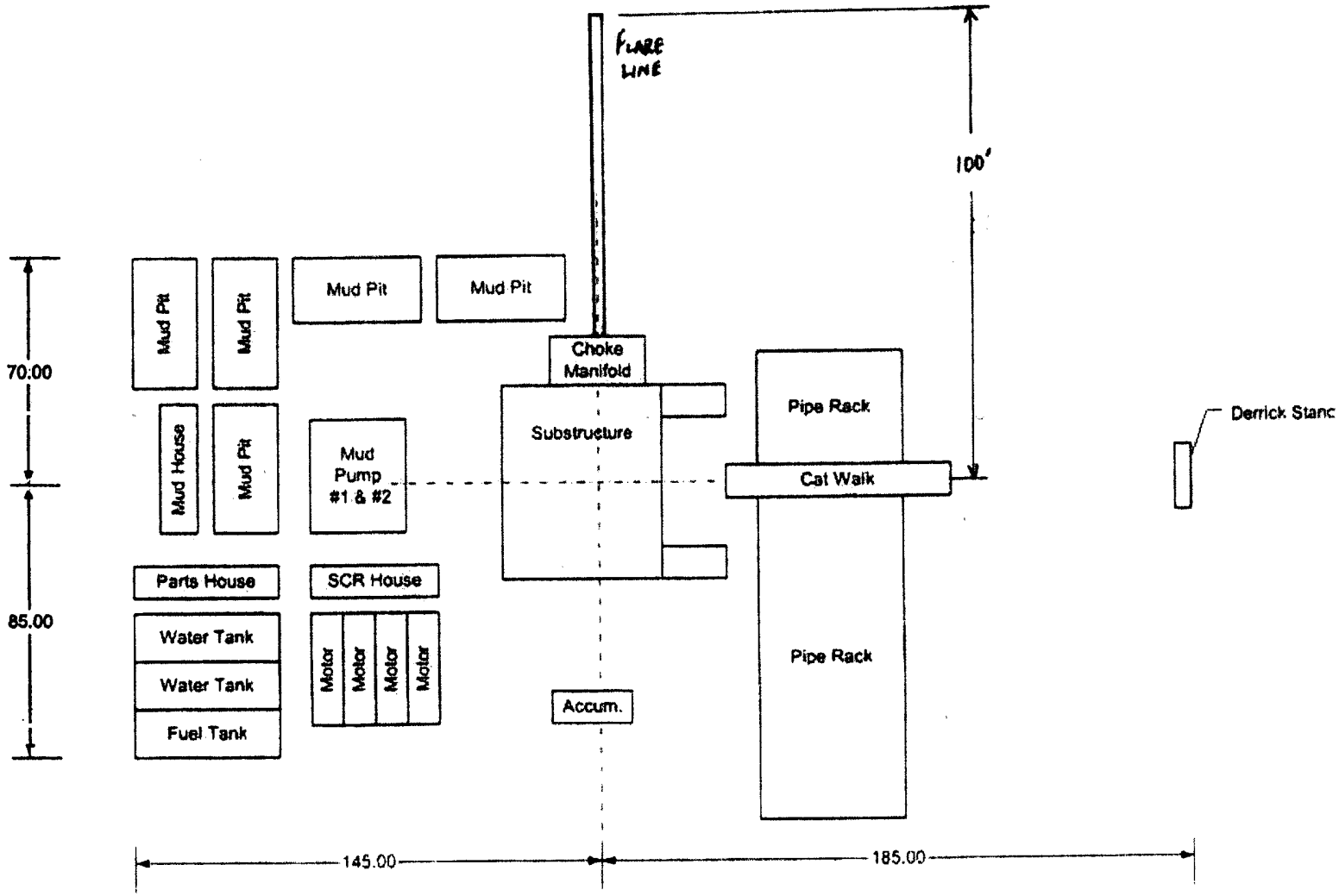
CHESAPEAKE OPERATING, INC.
OKLAHOMA CITY, OK

Chesapeake

COYOTE FEDERAL 5

1,980' FSL & 1,980' FEL, SECTION 1-8S-24E
CHAVES COUNTY, NEW MEXICO

DATE: 3/14/03
DRAWN BY: GAK
Not To Scale

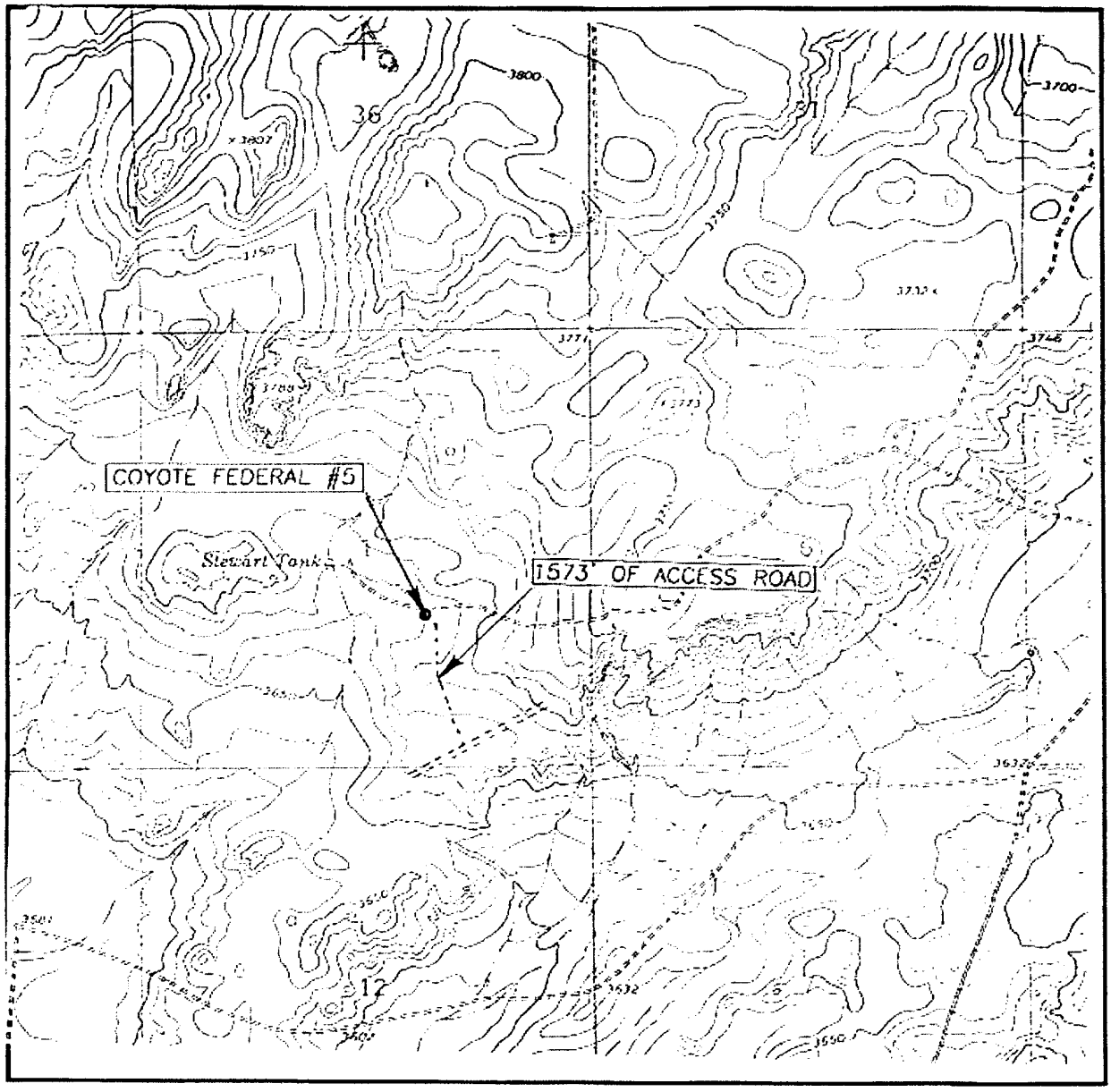


Chesapeake Operating, Inc

General Rig Layout

SIZE	FSCM NO	DWG NO	REV
		Generic	

LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

CONTOUR INTERVAL: 10'
COYOTE DRAW, N.M.

SEC. 1 TWP. 8-S RGE. 24-E

SURVEY N.M.P.M.

COUNTY CHAVES

DESCRIPTION 1850' FSL & 1980' FEL

ELEVATION 3681'

OPERATOR CHESAPEAKE OPERATING, INC.

LEASE COYOTE FEDERAL

U.S.G.S. TOPOGRAPHIC MAP
COYOTE DRAW, N.M.

JOHN WEST SURVEYING
HOBBS, NEW MEXICO
(505) 393-3117