G-06-59

If earthen pits are used in association with the drilling of this well, an OCD pit permit must be obtained prior to pit construction.

Form 3160-3
(April 2004)

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No. **NMNM 029234**

6. If Indian, Allotee or Tribe Name

1a. Type of work: ☑ DRILL ☐ REENTER R-111-POTASH Fed

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. **LOTOS 10 FEDERAL 6** 30002 4

2. Name of Operator **CHESAPEAKE OPERATING, INC.** 147179 **ATTN: LINDA GOOD**

9. API Well No. 30-015-34944

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

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

10. Field and Pool, or Exploratory **COTTON DRAW; BONESPRING**

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*
At surface **660 FNL 1980 FEL, NW NE**
At proposed prod. zone **SAME**

RECEIVED
JUN 14 2006
OCD-ARTESIA

11. Sec., T. R. M. or Blk. and Survey or Area **10 - 24S - 31E**

14. Distance in miles and direction from nearest town or post office*
APPROX. 33 MILES WEST OF JAL, NEW MEXICO

12. County or Parish **EDDY**

13. State **NM**

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)	16. No. of acres in lease	17. Spacing Unit dedicated to this well
	1280	**40**
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	19. Proposed Depth	20. BLM/BIA Bond No. on file
	8350	**NM2634**
21. Elevations (Show whether DF, KDB, RT, GL, etc.) **3477 GR 3492 KB**	22. Approximate date work will start*	23. Estimated duration

24. Attachments CARLSBAD CONTROLLED WATER BASIN

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

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	Name *(Printed/Typed)*	Date
	HENRY HOOD	4/24/06
Title **SR. VICE PRESIDENT - LAND & LEGAL**		
Approved by *(Signature)** **/s/ Linda S.C. Rundell**	Name *(Printed/Typed)* **/s/ Linda S.C. Rundell**	Date JUN 07 2006
Title **STATE DIRECTOR**	Office **NM STATE OFFICE**	

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.
Conditions of approval, if any, are attached.

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

**(Instructions on page 2)*

APPROVAL FOR 1 YEAR

DECLARED WATER BASIN
CEMENT BEHIND THE ___
CASING MUST BE ___

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

R-111-Potash
Cement behind the 8 5/8"
Casing Must be CIRCULATED
WITNESS

APPROVAL SUBJECT TO
GENERAL REQUIREMENTS
AND SPECIAL STIPULATIONS
ATTACHED

Sec 17 25.5

D-R.G.,
ENGINEERING OK! 5/18/06

Chesapeake Operating Inc.
Lotos 10 Federal 6
660 FNL 1980 FEL
NW NE of Section 10-24S-31E
Eddy County, NM

Confidential – Tight Hole
Lease No. NMNM 029234

#24 Attachment to Application for Permit to Drill or Re-enter

Chesapeake Operating, Inc. respectfully requests permission to drill a well to 8350' to test the Bone Spring formation. If productive, casing will be run and the well completed. If dry, the well will be plugged and abandoned as per BLM and New Mexico Oil Conservation Division requirements.

Please find the Surface Use Plan and Drilling Plan as required by Onshore Order No. 1. A general rig plat is attached as Exhibit D. A final rig plat will be submitted prior to spud. Exhibit_E Archeological Survey to follow.

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

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.

DISTRICT I
1625 N. FRENCH DR., HOBBS, NM 88240

DISTRICT II
1301 W. GRAND AVENUE, ARTESIA, NM 88210

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

DISTRICT IV
1220 S. ST. FRANCIS DR., SANTA FE, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION
1220 SOUTH ST. FRANCIS DR.
Santa Fe, New Mexico 87505

Form C-102
Revised October 12, 2005
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number	Pool Code	Pool Name
	13367	Cotton Draw; Bonespring, (OIL)

Property Code	Property Name	Well Number
	LOTOS 10 FEDERAL	6

OGRID No.	Operator Name	Elevation
147179	CHESAPEAKE OPERATING, INC.	3476'

Surface Location

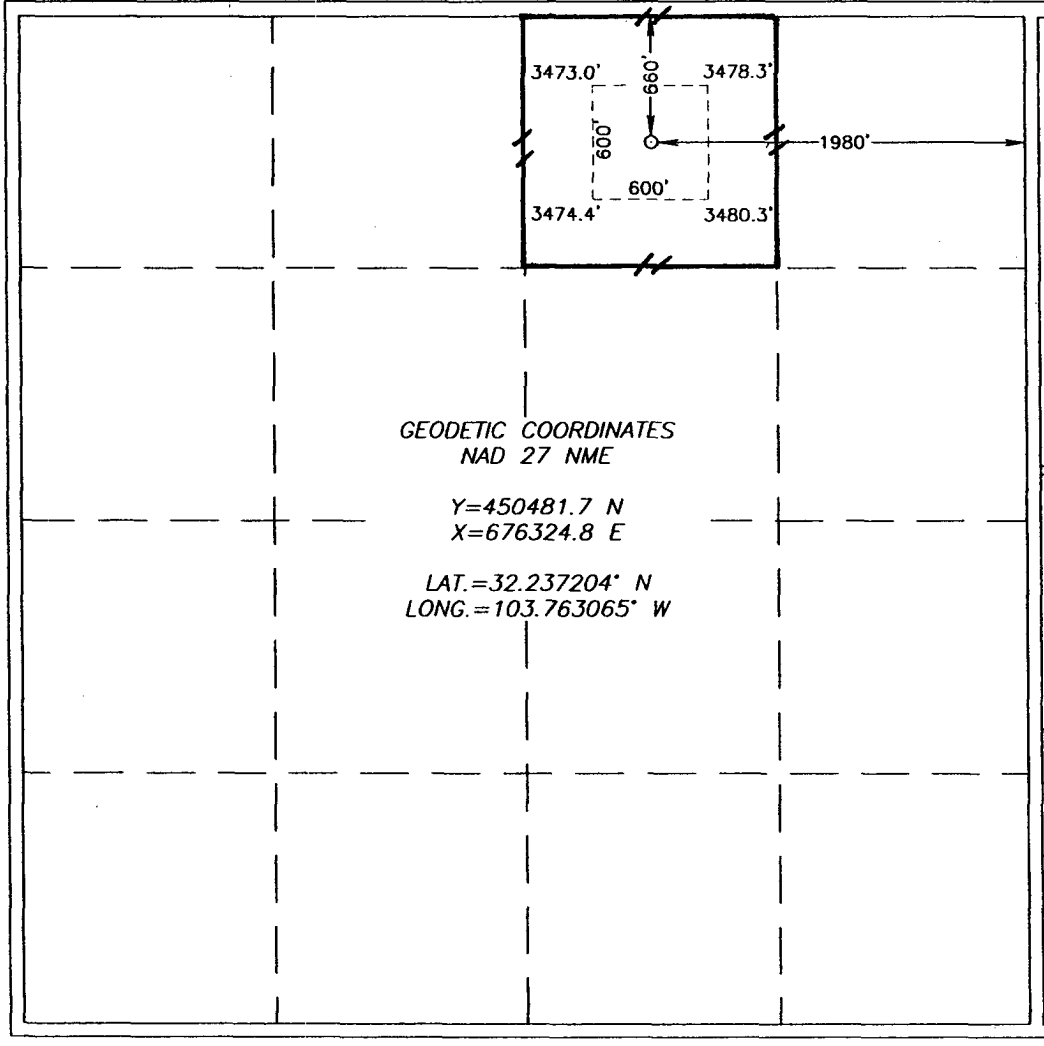
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
B	10	24-S	31-E		660	NORTH	1980	EAST	EDDY

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.
40			

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 that the information herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Kathy F. Blick 4-13-06
Signature Date

Kathy F. Blick
Printed Name

SURVEYOR CERTIFICATION

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

MARCH 17, 2006
Date Surveyed DSR

Signature & Seal of Professional Surveyor

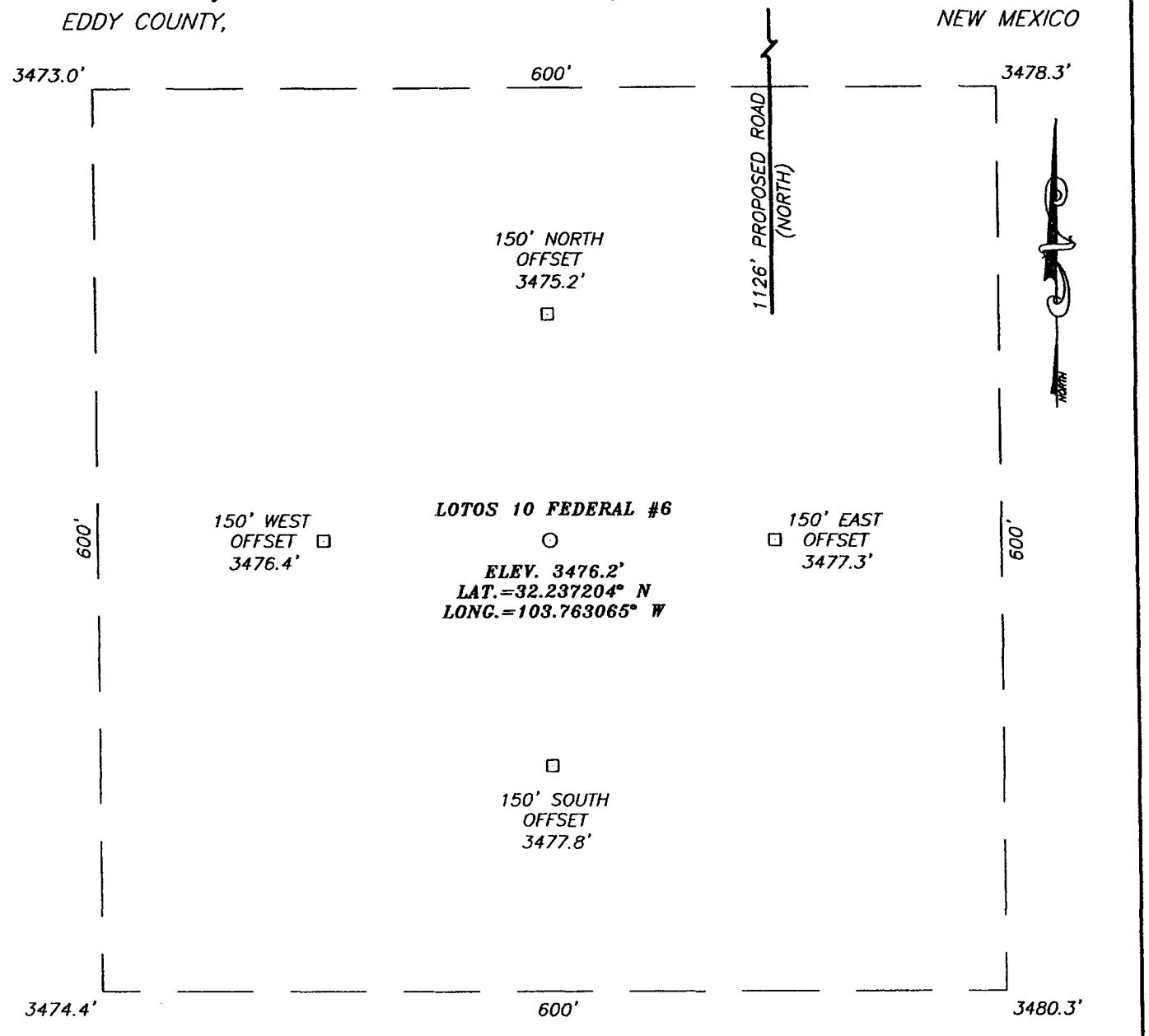
Gary L. Eidson 4/7/06
06.11.0512

Certificate No. GARY EIDSON 12641

EXHIBIT A-1

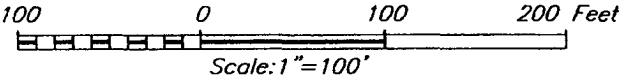
SECTION 10, TOWNSHIP 24 SOUTH, RANGE 31 EAST, N.M.P.M.,

EDDY COUNTY, NEW MEXICO



DIRECTIONS TO LOCATION

FROM THE INTERSECTION OF ST. HWY. #128 (JAL HWY.) AND CO. RD. #798 (RED RD.), GO NORTHWEST ON ST. HWY. 128 APPROX. 0.1 MILE. TURN LEFT AND GO SOUTHWEST APPROX. 1.3 MILES ROAD BENDS RIGHT. CONTINUE ON THIS ROAD WEST APPROX. 0.2 MILES TO A BEGIN ROAD SURVEY. TURN LEFT AND GO SOUTH ALONG ROAD SURVEY APPROX. 1126 FEET TO THIS LOCATION.



Scale:1"=100'

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

CHESAPEAKE OPERATING, INC.

LOTOS 10 FEDERAL #6 WELL
LOCATED 660 FEET FROM THE NORTH LINE
AND 1980 FEET FROM THE EAST LINE OF SECTION 10,
TOWNSHIP 24 SOUTH, RANGE 31 EAST, N.M.P.M.,
EDDY COUNTY, NEW MEXICO.

Survey Date: 03/17/06	Sheet 1 of 1 Sheets		
W.O. Number: 03.11.0512	Dr By: D.S.R.	Rev 1:N/A	
Date: 03/23/06	Disk: CD#1	06110512	Scale:1"=100'

EXHIBIT A-2

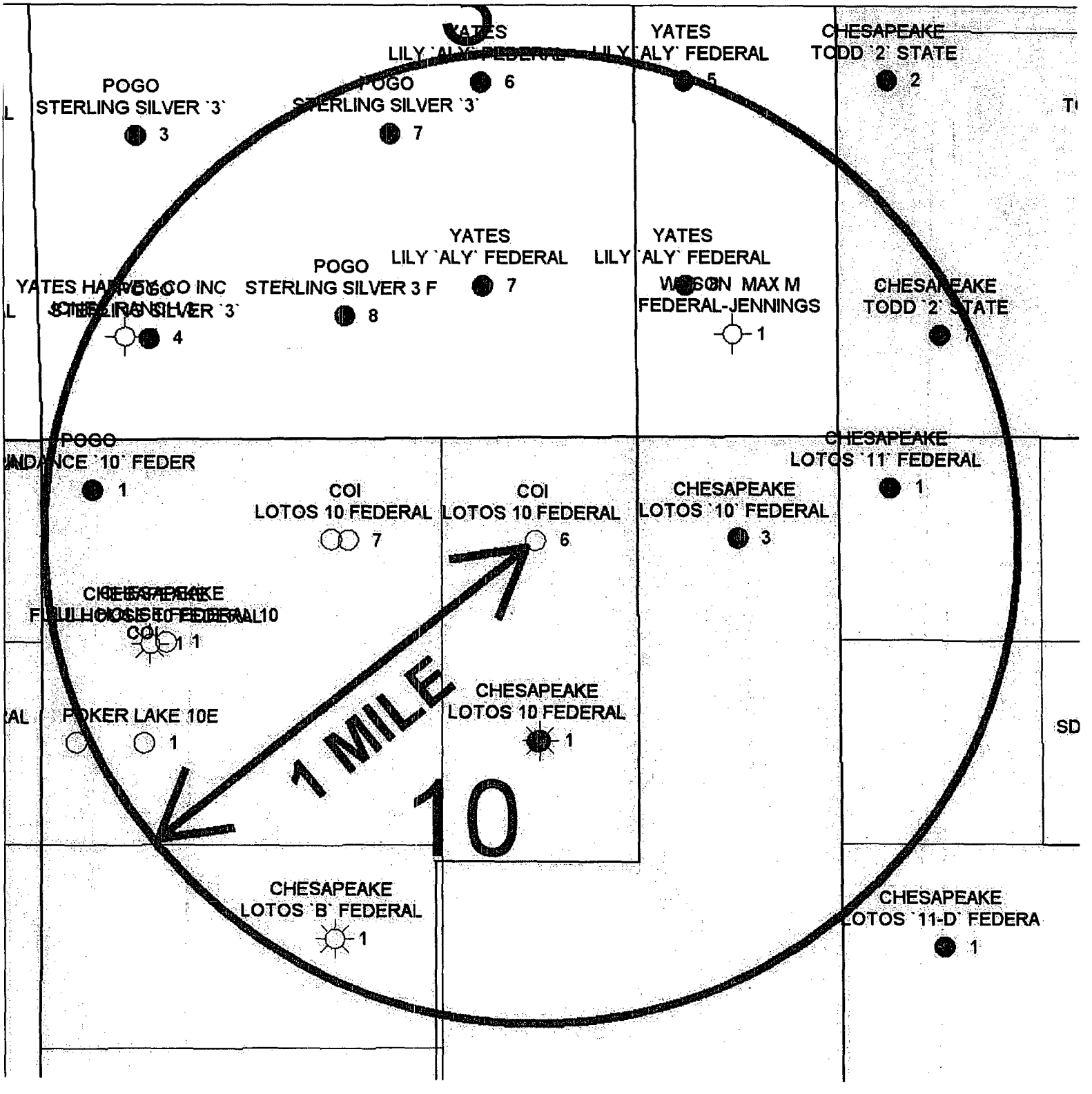

YATES
LILY `ALY` FEDERAL
6
YATES
LILY `ALY` FEDERAL
5
CHESAPEAKE
TODD `2` STATE
2
POGO
STERLING SILVER `3`
3
POGO
STERLING SILVER `3`
7
YATES
LILY `ALY` FEDERAL
7
YATES
LILY `ALY` FEDERAL
POGO
STERLING SILVER 3 F
8
YATES HARVEY CO INC
4
WILSON MAX M
FEDERAL-JENNINGS
1
CHESAPEAKE
TODD `2` STATE
POGO
1
CHESAPEAKE
LOTOS `11` FEDERAL
1
COI
LOTOS 10 FEDERAL
7
COI
LOTOS 10 FEDERAL
6
CHESAPEAKE
LOTOS `10` FEDERAL
3
COI
1
1 MILE
10
CHESAPEAKE
LOTOS 10 FEDERAL
1
POKER LAKE 10E
1
CHESAPEAKE
LOTOS `B` FEDERAL
1
CHESAPEAKE
1

EXHIBIT B

BLOWOUT PREVENTOR SCHEMATIC

CHESAPEAKE OPERATING INC

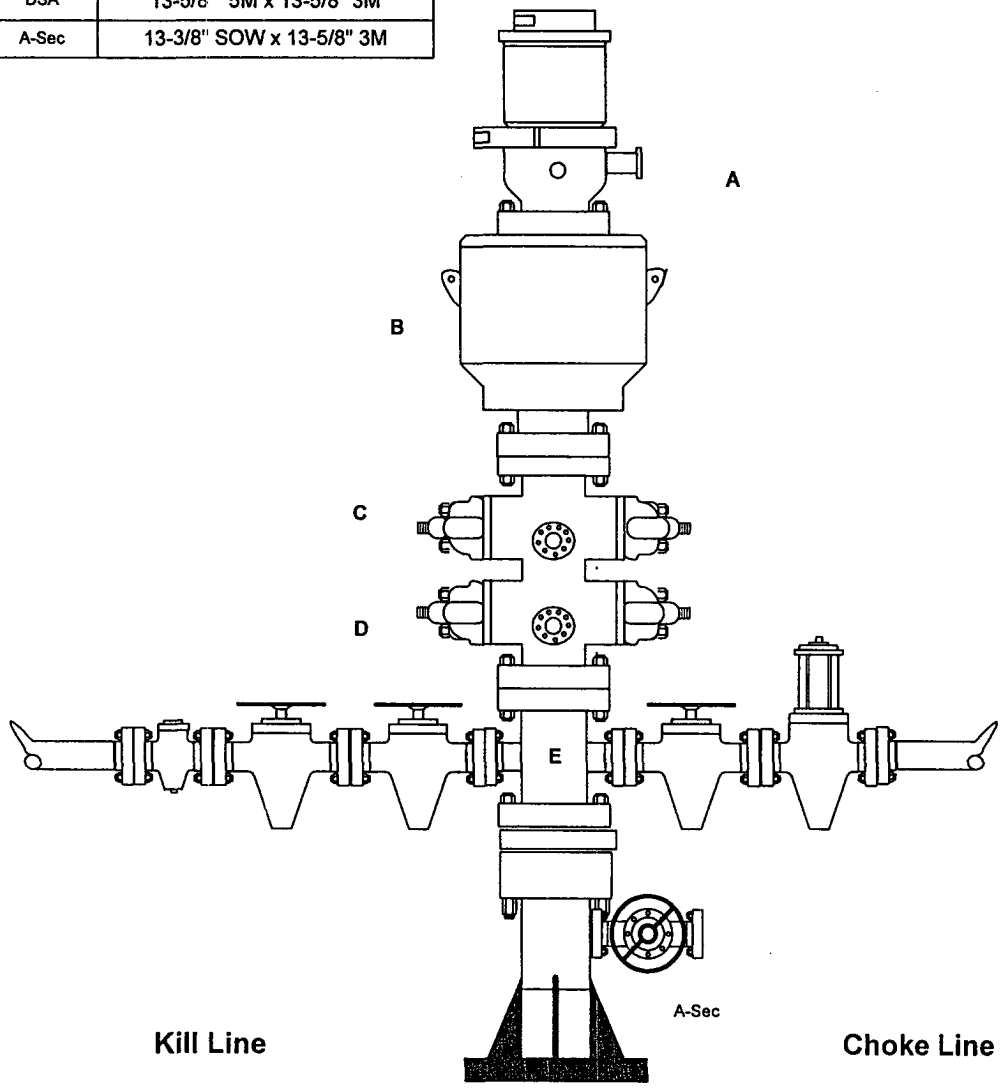
WELL : Lotos 10 Federal 6

RIG

COUNTY : Eddy **STATE:** New Mexico

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

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



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
4"	3,000#	Gate Valve
4"	3,000#	HCR Valve

EXHIBIT F-1

BLOWOUT PREVENTOR SCHEMATIC

CHESAPEAKE OPERATING INC

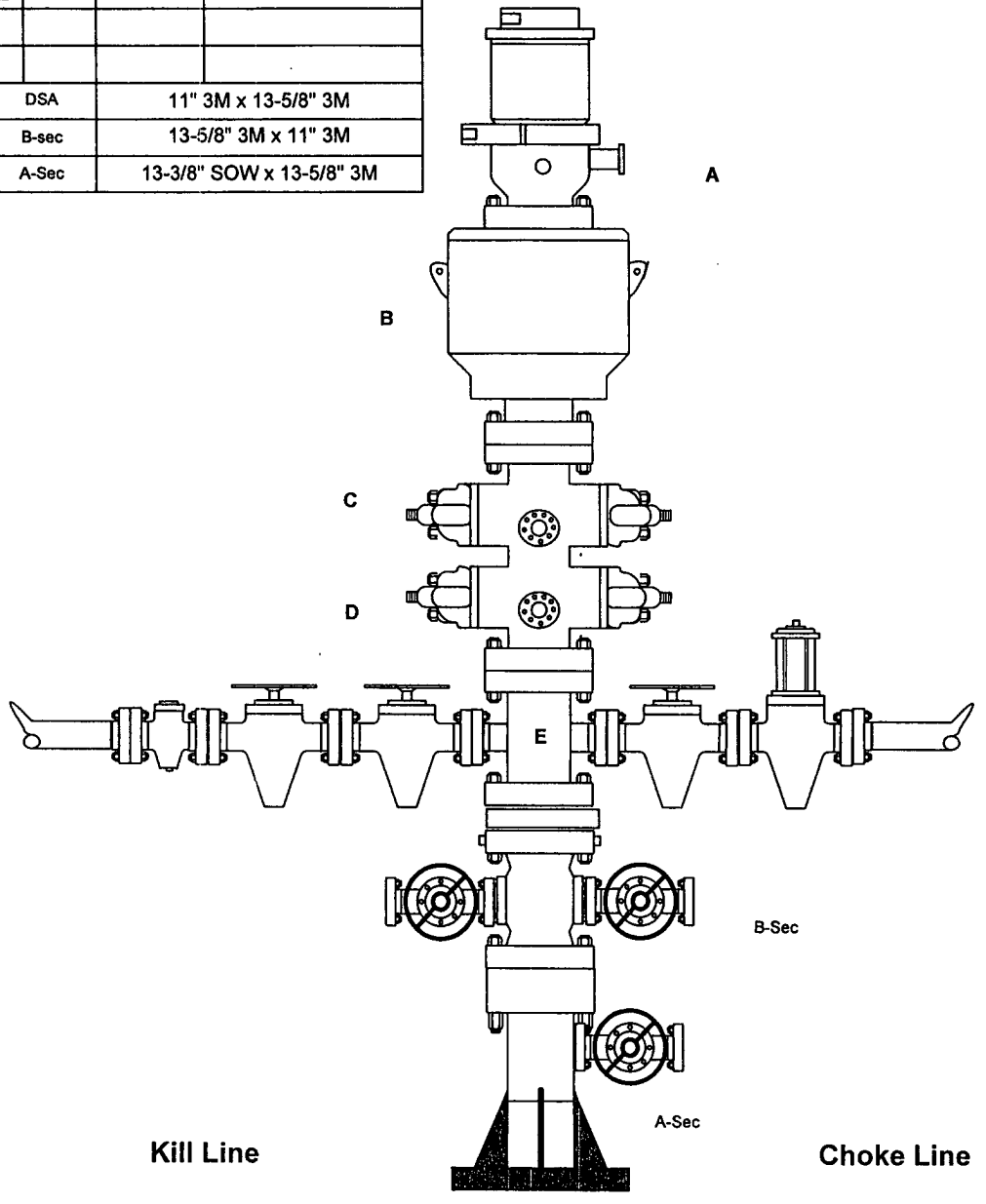
WELL : Lotos 10 Federal 6

RIG

COUNTY : Eddy **STATE:** New Mexico

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

	SIZE	PRESSURE	DESCRIPTION
A	13-5/8"	500#	Rot Head
B	13-5/8"	3,000#	Annular
C	13-5/8"	3,000#	Pipe Rams
D	13-5/8"	3,000#	Blind Rams
E	13-5/8"	3,000#	Mud Cross
DSA		11" 3M x 13-5/8" 3M	
B-sec		13-5/8" 3M x 11" 3M	
A-Sec		13-3/8" SOW x 13-5/8" 3M	



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
4"	3,000#	Gate Valve
4"	3,000#	HCR Valve

EXHIBIT F-2

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 Exhibits A-1 to A-4.

2. PLANNED ACCESS ROADS

   a. An existing access road 1126' in length and 14' in travel way width with a maximum disturbance area of 30' will be used, and in accordance with guidelines set forth in the BLM Onshore Orders. No turnouts are expected.
   b. In order to level the location, cut and fill will be required. Please see attached Well Location and Acreage Dedication Plat – Exhibits A-1 to A-4.
   c. A locking gate will be installed at the site entrance.
   d. Any fences cut will be repaired. Cattle guards will be installed, if needed.
   e. 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.
   f. Driving directions are from the intersection of St Hwy #128 (Jal Hwy) and County Rd #798 (Red Rd), go Northwest on St Hwy #128 approx. 0.1 mile. Turn left and go Southwest approx. 1.3 miles road bends right. Continue on this road West approx. 0.2 miles to a begin road survey. Turn left and go South along road survey approx. 1126 feet to this location.

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

4. LOCATION OF PRODUCTION FACILITIES

We Will produce to the Central Lotos 10 Federal Battery. The gas will be commingled with the other Lotos 10 leases & be sold to Duke @ Ms #131-55-049. We will lay 6864' of 3" SDR poly pipe to the Lotos 10 Federal Central Battery. The gas will be measured off well site by on lease. All flow lines and power lines will follow existing lease roads – See Exhibit C-1 to C-3.

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

6. CONSTRUCTION MATERIALS
No construction materials will be used from Section 10-24S-31E. All material (i.e. shale) will be acquired from private or commercial sources.

7. METHODS FOR HANDLING WASTE DISPOSAL
An in-ground, lined pit will be utilized during the drilling of this well. All fluids and cuttings will be disposed of in accordance with New Mexico Oil Conservation Division rules and regulations.

8. ANCILLARY FACILITIES
None

9. WELLSITE LAYOUT
The proposed site layout plat is attached showing rig orientation and equipment location. See Exhibit D. Also see Exhibit A for the size of the pad.

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 Oklahoma Corporation Commission regulations.

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

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

GRAZING LESSEE
Richardson Cattle Company
P.O. Box 487
Carlsbad, NM 88221

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

12. ADDITIONAL INFORMATION

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

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

13. OPERATOR'S REPRESENTATIVES

Drilling and Completion Operations
Jarvis Hensley
District Manager – Northern Permian
P.O. Box 18496
Oklahoma City, OK 73154
(405) 879-7863 (OFFICE)
(405) 879-9529 (FAX)
jhensley@chkenergy.com

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

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

Asset Manager
Andrew McCalmont
P.O. Box 18496
Oklahoma City, OK 73154-0496
405-879-7852 (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) 879-9583 (FAX)
lgood@chkenergy.com

14. CERTIFICATION

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drill site and access route; that I am familiar with the conditions which presently exist; that the statements made in this surface use plan are, to the best of my knowledge, true and correct; and, that the work associated with the operations proposed will be performed by operator (including contractors and subcontractors) submitting the APD, in conformity with this plan and the terms and conditions under which it is approved. This statement is subject to the provisions of 18 U.S.C. 1001 for the filing of a false statement.

By: _____

Date: 4/24/06

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	Subsea	Depth
*BELL CANYON FM.	-899'	4,385'
*CHERRY CANYON FM.	-1,834'	5,320'
*BRUSHY CANYON FM.	-3,049	6,535'
*LOWER BRUSHY "B" ZONE	-4,538'	8,024'
*LOWER BRUSHY 'C" ZONE	-4,640'	8,126'
*LOWER BRUSHY "D" ZONE	-4,680'	8,166'
*BONE SPRING	-4,760'	8,246'
TOTAL DEPTH		8,350'
*Potentially productive zones		

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	Bell Canyon	4428-5318
Oil/Gas	Cherry Canyon	5318-6498
Oil/Gas	Brushy Canyon	6498-8246

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 - See Exhibit F-1 and F-2.

A. Equipment

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

B. Test Frequency

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

C. Test Pressure

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

D. Test Duration

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

II. Accumulator Performance Test

A. Scope

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

B. Test Frequency

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

C. Minimum Requirements

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

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

3.

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

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

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

D. Test Procedure

1. Shut accumulator pumps off and record accumulator pressure.

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

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

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

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

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

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

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

4. CASING AND CEMENTING PROGRAM

a. The proposed casing program will be as follows:

Purpose	Interval	Hole Size	Casing Size	Weight	Grade	Thread	Condition
Surface	0-460'	17 1/2"	13 3/8	48#	H-40	STC	NEW
Intermediate	0-4,350'	11 "	8 5/8	32#	J55	LTC	NEW
Production	0-8,350'	7 7/8 "	5 1/2	17#	L-80	LTC	NEW

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

Interval	Type	Amount	Yield	Washout	Excess
0-460	Premium plus (lead) Class C (tail)	190 sks 340 sks	1.98 1.34	40 40	100 100
460-4,350	Interfill C (lead) Premium Plus (tail)	720 170	2.45 1.34	20 20	75 50
4,350-8,350	Interfill H (lead) Premium plus (tail)	340 210	2.45 1.31	10 10	25 25

5. MUD PROGRAM

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

Interval	Mud Type	Mud Weight	Viscosity	Fluid Loss
0-460	FW	8.6-9.0	32-36	NC
460-4,350	*FW/Brine	9.9-10	28-29	NC
4,350-8,350	FW/Brine	8.4-9.0	28-29	20-30

*Fresh water will be used from 460' to the top of the Rustler formation

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

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

6. TESTING, LOGGING AND CORING

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

a. Drill stem tests are not planned.

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

7. ABNORMAL PRESSURES AND HYDROGEN SULFIDE
   a. The estimated bottom hole pressure is 3590 psi. No abnormal pressures or temperatures are anticipated.
   b. Hydrogen sulfide gas is not anticipated.

CONDITIONS OF APPROVAL - DRILLING

Operator's Name: Chesapeake Operating, Inc. **Well No.** 6 – Lotos 10 Federal
Location: 660' FNL & 1980' FEL **sec.** 10, **T.** 24 S., **R.** 31 E.
Lease: NM-29234

I. DRILLING OPERATIONS REQUIREMENTS:

1. The Bureau of Land Management (BLM) is to be notified at (505) 234-5972 in sufficient time for a representative to witness:

A. Spudding

B. Cementing casing: 13-3/8 inch 8-5/8 inch 5-1/2 inch

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. Include the API No. assigned to well by NMOCD on the subsequent report of setting the first casing string.

4. Gamma-Ray/Neutron logs shall be run from the base of the Salado formation to the surface; cable speed not to exceed 30 feet per minute.

II. CASING:

1. 13-3/8 inch surface casing should be set **at approximately 765 feet in the Rustler Anhydrite above the top of the Salt,** below usable water and circulate cement to the surface. If cement does not circulate to the surface, the BLM Carlsbad Field 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. Minimum required fill of cement behind the 8-5/8 inch salt protection casing is **sufficient to circulate to the surface.**

3. Minimum required fill of cement behind the 5-1/2 inch production casing is **sufficient to circulate to the surface.**

4. Whenever a casing string is cemented in the R-111-P Potash Area, cement shall be allowed to stand a minimum of twelve (12) hours under pressure and a total of twenty-four (24) hours before drilling the plug or initiating tests.

III. PRESSURE CONTROL:

1. Before drilling below the 13-3/8 inch surface casing, the blowout preventer assembly shall consist of a minimum of One Annular Preventer or Two Ram-Type Preventers and a Kelly Cock/Stabbing Valve. Before drilling below the 8-5/8 inch salt protection casing, the blowout preventer assembly shall consist of a minimum of One Annular Preventer, Two Ram-Type Preventers, and a Kelly Cock/Stabbing Valve.

2. Before drilling below the 13-3/8 inch surface casing, minimum working pressure of the blowout preventer and related equipment (BOPE) shall be 2000 psi. Before drilling below the 8-5/8 inch salt protection casing, minimum working pressure of the blowout preventer and related equipment (BOPE) shall be 3000 psi.

3. The BOPE shall be installed before drilling below the 8-5/8 inch salt protection casing and shall be tested as described in Onshore Order No. 2. Any equipment failing to test satisfactorily shall be repaired or replaced.

A. The results of the test will be reported to the BLM Carlsbad Field Office at 620 East Greene Street, Carlsbad, New Mexico 88220-6292.

B. 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.

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