

**OCD-HOBBS**  
**CONFIDENTIAL**

AT5-07-70

Form 3160-3  
(April 2004)

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

**APPLICATION FOR PERMIT TO DRILL OR REENTER**

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

1a. Type of work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. <del>NMLC 71949</del> <b>LC071949</b>
1b. Type of Well: <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other <input type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		6. If Indian, Allottee or Tribe Name
2. Name of Operator <b>CHESAPEAKE OPERATING, INC. ATTN: LINDA GOOD</b>		7. If Unit or CA Agreement, Name and No.
3a. Address <b>P.O. BOX 18496, OKLAHOMA CITY, OK 73154-0496</b>		8. Lease Name and Well No. <b>(35730) Keller 27 Federal 7</b>
3b. Phone No. (include area code) <b>405-767-4275</b>		9. API Well No. <b>30-025-38359</b>
4. Location of Well (Report location clearly and in accordance with any State requirements.) At surface <b>498 FSL &amp; 1807 FWL, SESW</b> At proposed prod. zone <b>SAME CAPITAN CONTROLLED WATER BASIN Unit N</b>		10. Field and Pool, or Exploratory <b>Antelope Ridge West Bone Spring</b>
11. Sec., T. R. M. or Blk. and Survey or Area <b>27-23S-34E</b>		12. County or Parish <b>Lea County</b>
13. State <b>NM</b>		
14. Distance in miles and direction from nearest town or post office* <b>18 MILES NW OF JAL, NEW MEXICO</b>	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 <b>600</b>
17. Spacing Unit dedicated to this well <b>40</b>	18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. <b>8800</b>	19. Proposed Depth <b>8800</b>
20. BLM/BIA Bond No. on file <b>NM2634</b>	21. Elevations (Show whether DF, KDB, RT, GL, etc.) <b>GR 3468 EST. / KB 3486 EST.</b>	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.  | 4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).    |
| 2. A Drilling Plan.   | 5. Operator certification  |
| 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). | 6. Such other site specific information and/or plans as may be required by the authorized officer. |

25. Signature 	Name (Printed/Typed) <b>Henry Hood</b>	Date <b>11/2/06</b>
Title <b>Sr. Vice President - Land &amp; Legal &amp; General Counsel</b>		
Approved by (Signature) <b>/s/ James Stovall</b>	Name (Printed/Typed) <b>/s/ James Stovall</b>	Date <b>JAN 12 2007</b>
Title <b>FIELD MANAGER CARLSBAD FIELD OFFICE</b>		

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.

**APPROVAL FOR 1 YEAR**

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)

**SEE ATTACHED FOR  
CONDITIONS OF APPROVAL**

**APPROVAL SUBJECT TO  
GENERAL REQUIREMENTS  
AND SPECIAL STIPULATIONS  
ATTACHED**

## State of New Mexico

## DISTRICT I

1625 N. FRENCH DR., HOHES, NM 88240

Energy, Minerals and Natural Resources Department

Form C-102

Revised October 12, 2005

Submit to Appropriate District Office

State Lease - 4 Copies

Fee Lease - 3 Copies

## DISTRICT II

1301 W. GRAND AVENUE, ARTESIA, NM 88210

## OIL CONSERVATION DIVISION

1220 SOUTH ST. FRANCIS DR.

Santa Fe, New Mexico 87505

## DISTRICT III

1000 Rio Brazos Rd., Aztec, NM 87410

## DISTRICT IV

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

## WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number <b>30-025-38359</b>	Pool Code <b>2209</b>	Pool Name <b>Antelope Ridge; Bone Spring, West</b>
Property Code <b>35730</b>	Property Name <b>KELLER 27 FEDERAL</b>	Well Number <b>7</b>
OGRID No. <b>147179</b>	Operator Name <b>CHESAPEAKE OPERATING, INC.</b>	Elevation <b>3463'</b>

## Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
N	27	23-S	34-E		498	SOUTH	1807	WEST	LEA

## Bottom Hole Location If Different From Surface

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

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
<b>40</b>			

**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>GEODETIC COORDINATES NAD 27 NME</p> <p>Y=462888.1 N X=769896.2 E</p> <p>LAT.=32.269577° N LONG.=103.460136° W</p>	<p><b>OPERATOR CERTIFICATION</b></p> <p>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.</p> <p><i>Lynda F. Townsend</i> Signature Date <b>Lynda F. Townsend</b> Printed Name</p>
	<p><b>SURVEYOR CERTIFICATION</b></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>OCTOBER 06, 2006</p> <p>Date Surveyed JMD Signature &amp; Seal of Professional Surveyor <i>Gary E. Eason</i> 06.11.1466 Certificate No. GARY EASON 12841</p>

EXHIBIT A-1

Chesapeake Operating Inc.  
Keller 27 Federal 7  
498 FSL & 1807 FWL  
SESW of Section 27-23S-34E  
Lea County, NM

Confidential – Tight Hole  
Lease No. NMLC 71949

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

Chesapeake Operating, Inc. respectfully requests permission to drill a well to 8800' 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.

Attached are the Exhibit A-1 to A-4 Survey plats, Exhibit B 1 mile radius plat, Exhibit C Production facility, Exhibit D Forester rig #15 plat, Exhibit E Arch. Survey and Exhibit F-1 to F-2 BOP & Choke Manifold.

**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.**

# BLOWOUT PREVENTOR SCHEMATIC

CHESAPEAKE OPERATING INC

WELL : Keller 27 Federal 7

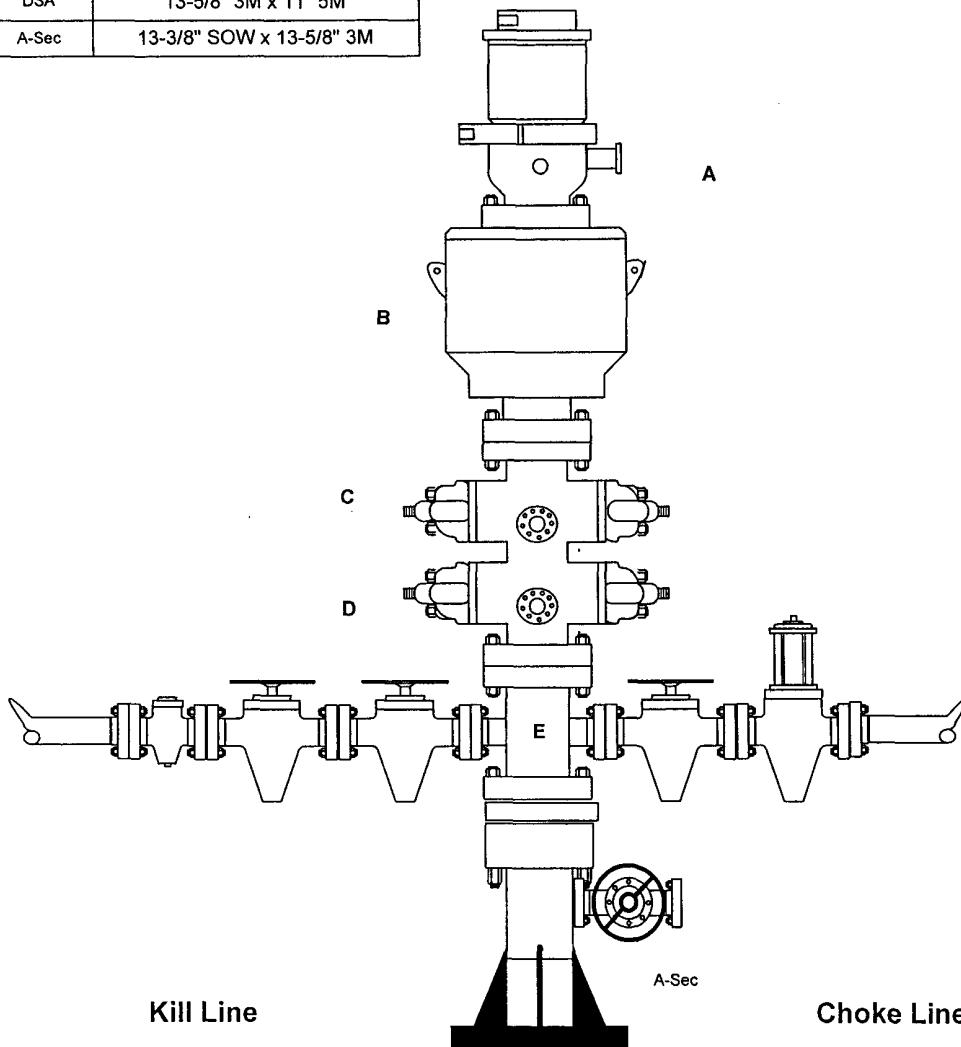
RIG : Forster Rig 15

COUNTY : Lea

STATE: New Mexico

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

	SIZE	PRESSURE	DESCRIPTION
A	11"	500 psi	Rot Head
B	11"	5000 psi	Annular
C	11"	5000 psi	Pipe Rams
D	11"	5000 psi	Blind Rams
E	11"	5000 psi	Mud Cross
DSA		13-5/8" 3M x 11" 5M	
A-Sec		13-3/8" SOW x 13-5/8" 3M	



SIZE	PRESSURE	DESCRIPTION
2"	5000 psi	Check Valve
2"	5000 psi	Gate Valve
2"	5000 psi	Gate Valve

EXHIBIT F-1

SIZE	PRESSURE	DESCRIPTION
4"	5000 psi	Gate Valve
4"	5000 psi	HCR Valve

# BLOWOUT PREVENTOR SCHEMATIC

CHESAPEAKE OPERATING INC

WELL : Keller 27 Federal 7

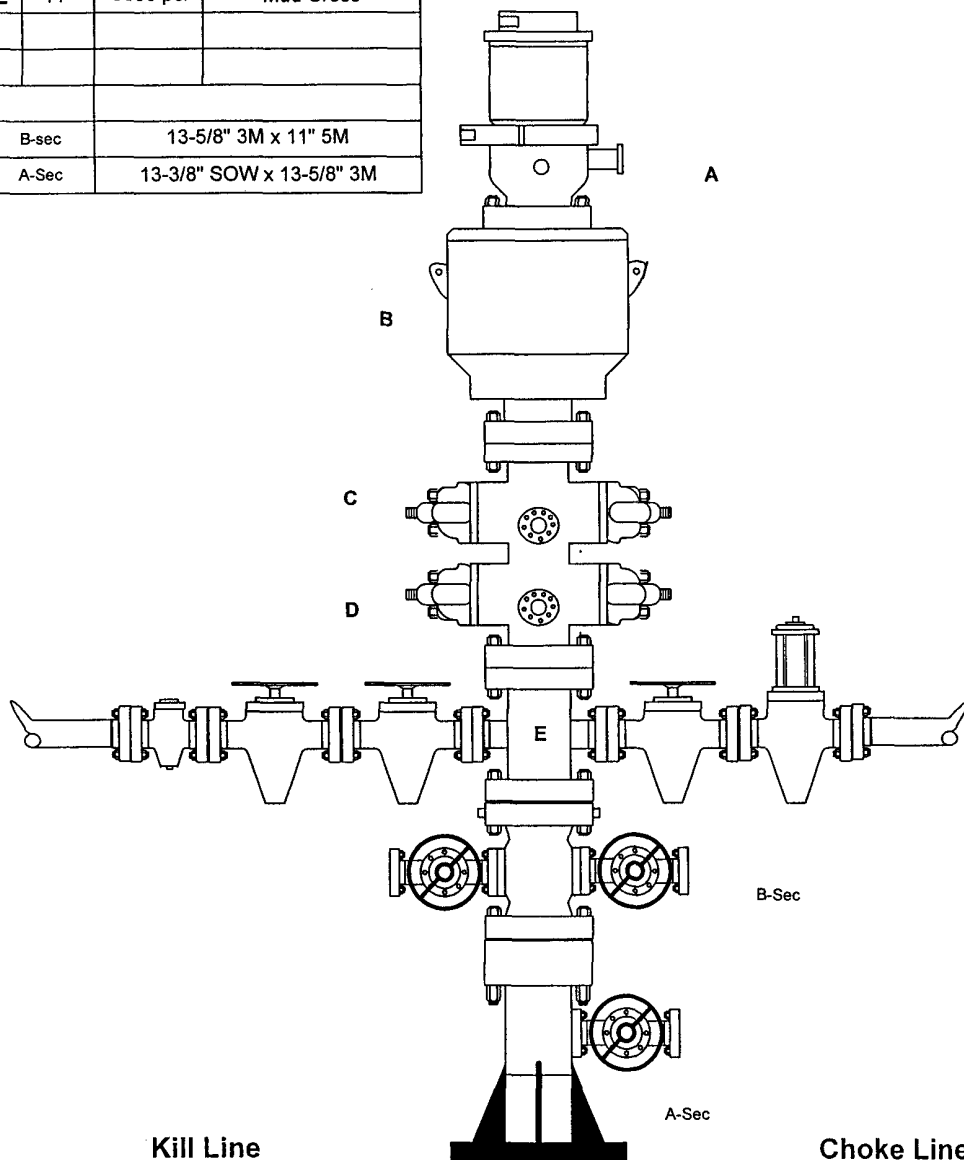
RIG Forster Rig 15

COUNTY : Lea

STATE: New Mexico

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

SIZE	PRESSURE	DESCRIPTION
A	11"	500 psi
B	11"	5000 psi
C	11"	5000 psi
D	11"	5000 psi
E	11"	5000 psi
B-sec	13-5/8" 3M x 11" 5M	
A-Sec	13-3/8" SOW x 13-5/8" 3M	



SIZE	PRESSURE	DESCRIPTION
2"	5000 psi	Check Valve
2"	5000 psi	Gate Valve
2"	5000 psi	Gate Valve

SIZE	PRESSURE	DESCRIPTION
4"	5000 psi	Gate Valve
4"	5000 psi	HCR Valve

EXHIBIT F-2

## CONDITIONS OF APPROVAL - DRILLING

Well Name & No.      Keller 27 Federal # 7  
Operator's Name:      Chesapeake Operating Inc.  
Location:              498'FSL, 1807'FWL, SEC27, T23S, R34E, Lea County, NM  
Lease:                  LC-071949

### I. DRILLING OPERATIONS REQUIREMENTS:

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

A. Spudding

B. Cementing casing: 13.375 inch 8.625 inch 5.5 inch

C. BOP tests

2. A Hydrogen Sulfide (H<sub>2</sub>S) Drilling Plan should be activated prior to drilling into the Cherry Canyon Formation. A copy of the plan shall be posted at the drilling site.

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

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

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

6. A Communitization Agreement covering the acreage dedicated to this well must be filed for approval with the BLM. The effective date of the agreement shall be prior to any sales.

7. 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. The 13.375 inch surface casing shall be set @ APPROXIMATELY 575 FEET, below usable water 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 8 5/8 inch salt protection casing is CIRCULATE CEMENT TO THE SURFACE.

3. The minimum required fill of cement behind the 5-1/2 inch production casing is cement shall CIRCULATE TO at least 200 feet above the shoe of the 8 5/8 inch intermediate casing.

5. 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. All BOP systems and related equipment shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2. The BOP and related equipment shall be installed and operational before drilling below the 13.375 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) is 2000 psi.
3. The appropriate BLM office shall be notified in sufficient time for a representative to witness the tests.
  - A variance to test the \_\_\_\_\_ to the reduced pressure of \_\_\_\_\_psi with the rig pumps is approved.
  - The tests shall be done by an independent service company.
  - The results of the test shall be reported to the appropriate BLM office.
  - Testing fluid must be water or an appropriate clear liquid suitable for sub-freezing temperatures. Use of drilling mud for testing is not permitted since it can mask small leaks.
  - Testing must be done in a safe workman-like manner. Hard line connections shall be required.

### **IV. MUD**

1. Fresh water based mud will be used to drill the surface well bore and down to the top of the Rustler @ approximately 1000 feet.

**Engineers can be reached at 505-706-2779 for any variances that might be necessary.**

F Wright 1/3/07

District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
1301 W. Grand Avenue, Artesia, NM 88210  
District III  
1000 Rio Brazos Road, 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-144  
June 1, 2004

Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

For drilling and production facilities, submit to  
appropriate NMOCD District Office.  
For downstream facilities, submit to Santa Fe  
office

**Pit or Below-Grade Tank Registration or Closure**

Is pit or below-grade tank covered by a "general plan"? Yes ☐ No ☐

Type of action: Registration of a pit or below-grade tank ☐ Closure of a pit or below-grade tank ☐

Operator: <u>Chesapeake Operating, Inc.</u> Telephone: <u>(432)687-2992</u> e-mail address: <u>bcoffman@chkenergy.com</u>		
Address: <u>2010 Rankin Hiway Midland, TX 79701</u>		
Facility or well name: <u>Keller 27 Federal</u> API#: <u>30-025-38359</u> U/for Qtr/ Qtr. <u>N</u> Sec <u>27</u> T <u>23S</u> R <u>34E</u>		
County: <u>Lea</u> Latitude _____ Longitude _____ NAD: 1927 <input type="checkbox"/> 1983 <input type="checkbox"/> Surface Owner Federal <input checked="" type="checkbox"/> State <input type="checkbox"/> Private <input type="checkbox"/> Indian <input type="checkbox"/>		
<b>Pit</b> Type: Drilling <input checked="" type="checkbox"/> Production <input type="checkbox"/> Disposal <input type="checkbox"/> Workover <input type="checkbox"/> Emergency <input type="checkbox"/> Lined <input checked="" type="checkbox"/> Unlined <input type="checkbox"/> Liner type: Synthetic <input checked="" type="checkbox"/> Thickness _____ mil Clay <input type="checkbox"/> Pit Volume <u>12129</u> bbl	<b>Below-grade tank</b> Volume: _____ bbl Type of fluid: _____ Construction material: _____ Double-walled, with leak detection? Yes <input type="checkbox"/> If not, explain why not: _____	
Depth to ground water (vertical distance from bottom of pit to seasonal high water elevation of ground water.)	Less than 50 feet	(20 points)
	50 feet or more, but less than 100 feet	(10 points)
	100 feet or more	( 0 points) <u>0</u>
Wellhead protection area: (Less than 200 feet from a private domestic water source, or less than 1000 feet from all other water sources.)	Yes	(20 points)
	No	( 0 points) <u>0</u>
Distance to surface water: (horizontal distance to all wetlands, playas, irrigation canals, ditches, and perennial and ephemeral watercourses.)	Less than 200 feet	(20 points)
	200 feet or more, but less than 1000 feet	(10 points)
	1000 feet or more	( 0 points) <u>10</u>
<b>Ranking Score (Total Points)</b>		<b>10</b>

**If this is a pit closure:** (1) attach a diagram of the facility showing the pit's relationship to other equipment and tanks. (2) Indicate disposal location: (check the onsite box if you are burying in place) onsite ☐ offsite ☐ If offsite, name of facility \_\_\_\_\_ (3) Attach a general description of remedial action taken including remediation start date and end date. (4) Groundwater encountered: No ☐ Yes ☐ If yes, show depth below ground surface \_\_\_\_\_ ft. and attach sample results. (5) Attach soil sample results and a diagram of sample locations and excavations.

Additional Comments:

I hereby certify that the information above is true and complete to the best of my knowledge and belief. I further certify that the above-described 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 ☐.

Date: 03/22/2007

Printed Name/Title Brenda Coffman Sr. Regulatory Comp. Specialist Signature Brenda Coffman

Your certification and NMOCD approval of this application/closure does not relieve the operator of liability should the contents of the pit or tank contaminate ground water or otherwise endanger public health or the environment. Nor does it relieve the operator of its responsibility for compliance with any other federal, state, or local laws and/or regulations.

Approval:

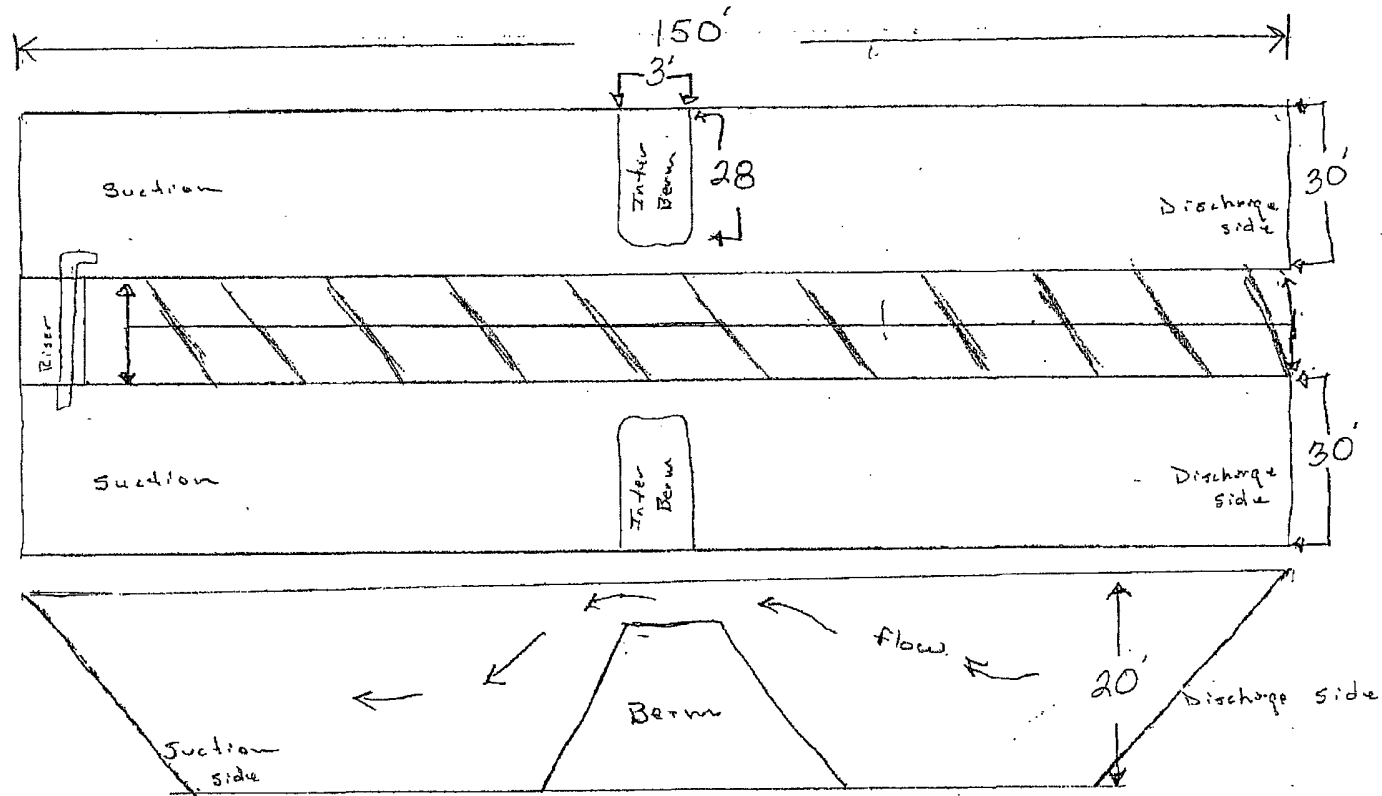
Printed Name/Title CHRIS WILLIAMS / DIST. SEC Signature Chris Williams Date: 3/24/07



Chesapeake Energy

Double Pit

Guideline 3A



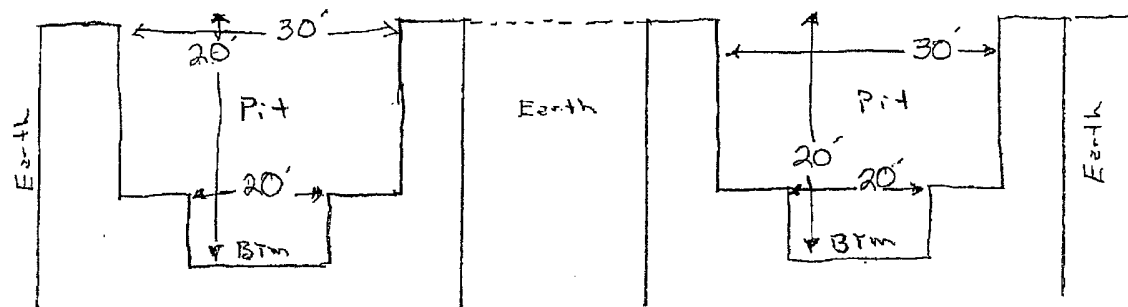
12 mm plastic  
over all

Top View

Side View

$$18' \times 30' \times 140' = 75600 \text{ ft}^3 \div 5.6146 = 13464.8 \text{ bbls} \times 2 = 26929.7 \text{ bbls. with 18' of fluid \& cuttings in pits.}$$

$$20' \times 30' \times 140' = 90000 \text{ ft}^3 \div 5.6146 = 16029.6 \text{ bbls} \times 2 = 32059.2 \text{ bbls with 20'}$$



End  
cross section