

150

CONFIDENTIAL

A75-07-23

OCD-HOBBS

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. NMLC- 6775 067715
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 CHESAPEAKE OPERATING, INC. ATTN: LINDA GOOD		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. KELLER 28 FEDERAL 1
3b. Phone No. (include area code) 405-767-4275		9. API Well No. 30-025-38252
4. Location of Well (Report location clearly and in accordance with any State requirements.) At surface 643 FSL & 628 FEL, SESE At proposed prod. zone SAME		10. Field and Pool, or Exploratory WEST ANTELOPE RIDGE Bone Spring
14. Distance in miles and direction from nearest town or post office* APPROXIMATELY 18 MILES NW OF JAL, NEW MEXICO.		11. Sec., T. R. M. or Blk. and Survey or Area 28-23S-34E
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 640	12. County or Parish LEA COUNTY
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	17. Spacing Unit dedicated to this well 40	13. State NM
19. Proposed Depth 8800	20. BLM/BIA Bond No. on file NM2634	
21. Elevations (Show whether DF, KDB, RT, GL, etc.) ESTIMATED 3476 GR / 3494 KB	22. Approximate date work will start*	23. Estimated location

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) Henry Hood	Date 11/1/06
Title Sr. Vice President - Land & Legal & General Counsel		
Approved by (Signature) 	Name (Printed/Typed) Is/ Don Peterson	Date DEC 06 2006
Title ACTING FIELD MANAGER		
Office CARLSBAD FIELD 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.

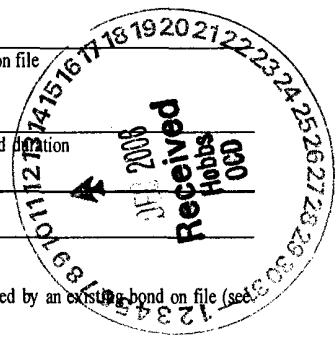
Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)

CAPTAN CONTROLLED WATER BASIN

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

APPROVAL SUBJECT TO
GENERAL REQUIREMENTS
AND SPECIAL STIPULATIONS
ATTACHED



Chesapeake Operating Inc.
Keller 28 Federal 1
643 FSL & 628 FEL, SESE
of Section 28-23S-34E
Lea County, NM

Confidential – Tight Hole
Lease No. NMLC-677715

#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 surface owner.

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.

State of New Mexico

Energy, Minerals and Natural Resources Department

DISTRICT I

1625 N. FRENCH DR., HOBBS, NM 58240

DISTRICT II

1301 W. GRAND AVENUE, ARTESIA, NM 58210

DISTRICT III

1000 Rio Brazos Rd., Aztec, NM 87410

DISTRICT IV

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

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 30-025-38257	Pool Code 2209	Pool Name West Antelope Ridge; Bone Spring
Property Code 36250	Property Name KELLER 28 FEDERAL	Well Number 1
OGRID No. 147179	Operator Name CHESAPEAKE OPERATING, INC.	Elevation 3474'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	28	23-S	34-E		643	SOUTH	628	EAST	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

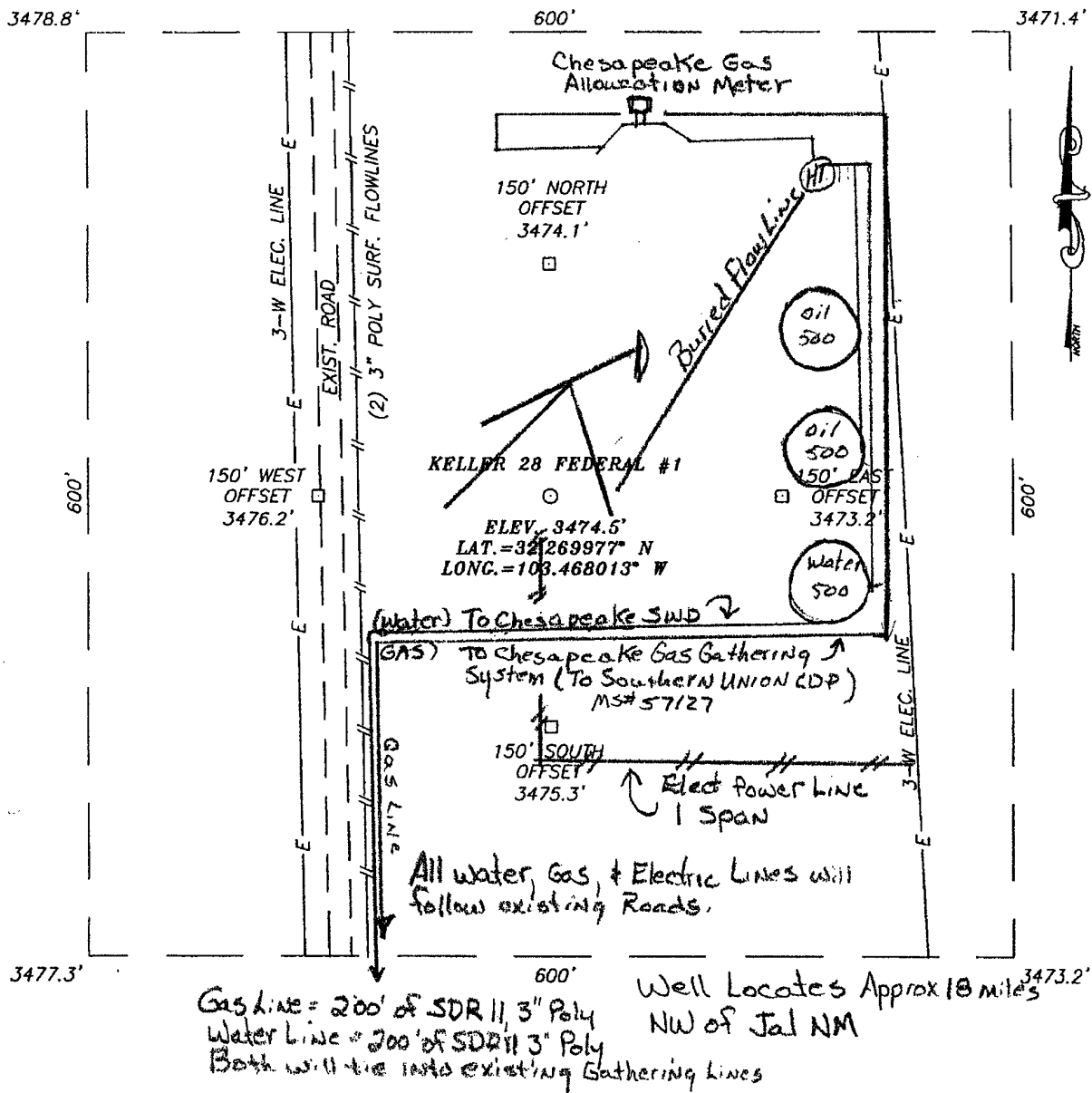
Dedicated Acres 40	Joint or Infill	Consolidation Code	Order No.
------------------------------	-----------------	--------------------	-----------

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>GEODETIC COORDINATES NAD 27 NME</p> <p>Y=463013.6 N X=767460.3 E</p> <p>LAT.=32.269977° N LONG.=103.468013° W</p>		<p>OPERATOR CERTIFICATION</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</p> <p>Lynda F. Townsend Printed Name</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>SEPTEMBER 23, 2006</p> <p>Date Surveyed LA</p> <p>Signature & Seal of Professional Surveyor <i>Ronald J. Eidson</i> 06-11-1463</p> <p>Certificate No. GARY EIDSON 12641 RONALD EIDSON 3239</p>

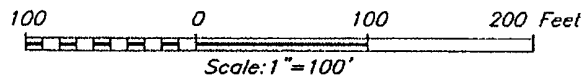
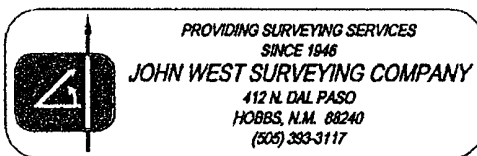
EXHIBIT A-1

SECTION 28, TOWNSHIP 23 SOUTH, RANGE 34 EAST, N.M.P.M.,
LEA COUNTY, NEW MEXICO



DIRECTIONS TO LOCATION

FROM THE INTERSECTION OF CO. RD. E-21
(DELAWARE BASIN RD.) AND CO. RD. J-21
(ANTELOPE RD.) GO SOUTH ON J-21 FOR
APPROX. 4.0 MILES. TURN LEFT AND GO EAST
APPROX. 0.2 MILES. TURN LEFT AND GO NORTH
APPROX. 0.1 MILES. THIS LOCATION IS APPROX.
120 FEET EAST.



CHESAPEAKE OPERATING, INC.

KELLER 28 FEDERAL #1 WELL
LOCATED 643 FEET FROM THE SOUTH LINE
AND 628 FEET FROM THE EAST LINE OF SECTION 28,
TOWNSHIP 23 SOUTH, RANGE 34 EAST, N.M.P.M.,
LEA COUNTY, NEW MEXICO.

Survey Date: 9/23/06	Sheet 1 of 1 Sheets
W.O. Number: 06.11.1465	Dr By: LA
Date: 9/25/06	Rev 1: N/A
Disk: CD#5	06111465
Scale: 1\"=100'	

EXHIBIT C-2

BLOWOUT PREVENTOR SCHEMATIC

CHESAPEAKE OPERATING INC

WELL : Keller 28 Federal 1

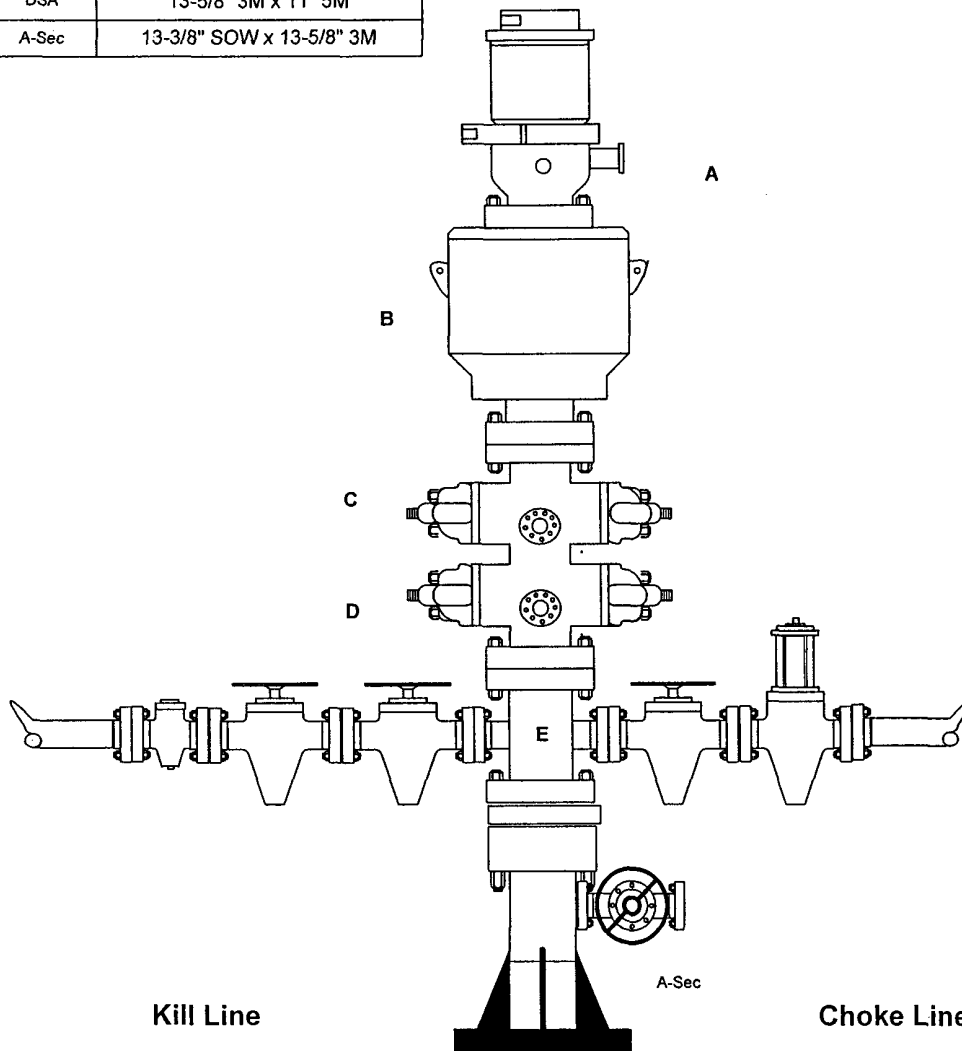
RIG : Forster Rig 15

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

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

EXHIBIT F-1

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

EXHIBIT F-2

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
BASE OF SALADO FM	-1,562'	5,056'
*BELL CANYON	-1,615'	5,109'
*CHERRY CANYON FM.	-2,494'	5,988'
MANZANITA MKR.	-2,695'	6,188'
*BASAL CHERRY CANYON ZN.	-3,708'	7,202'
*BRUSHY CANYON FM.	-3,792'	7,285'
*CIGUENA ZN.	-3,920'	7,414'
*UPPER BRUSHY ZN.	-4,110'	7,603'
*MIDDLE BRUSHY ZN.	-4,816'	8,310'
*BONE SPRING FM.	-5,104'	8,599'
BONE SPRING	Total Depth:	8,800'
*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	Cherry Canyon	5988'-7285'
Oil/Gas	Brushy Canyon	7285'-8599'

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

3. BOP EQUIPMENT: 3,000 psi 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 to 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 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:
- 3.

<u>System Operating Pressures</u>	<u>Precharge Pressure</u>
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:

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

- 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' - 575'	17-1/2"	13 3/8"	48#	H-40	ST&C	new
Intermediate	0' - 5060'	11"	8-5/8"	32#	J55	LT&C	new
Production	0' - 8800'	7-7/8"	5-1/2"	17#	L-80	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>
0' - 575'	Class C + Additives	400 + 100	1.74 / 1.34	25	75
0' - 5060'	50:50 Poz:C + Additives	1150 + 200	2.00 / 1.34	25	75
4500' - 6300' (2 nd stage)	50:50 Poz:C+ Additives Class H + Additives	100 180	2.30 1.18	15 15	20 20
6300' - 8800' (1 st stage)	LW Poz:C (15:61:11) + Additives	380	1.57	15	20

- 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' – 575'	FW	8.7	28 - 38	NC
575' - 5060'	Brine	10.0	28 - 30	NC
5060' – 8500'	FW	8.4 - 8.8	28 - 30	NC
8500' – 8800'	FW	8.4 - 8.8	30 - 32	25-30

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:

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

7. ABNORMAL PRESSURES AND HYDROGEN SULFIDE

- The estimated bottom hole pressure is 4400 psi. No abnormal pressures or temperatures are anticipated.
- Hydrogen sulfide gas is not anticipated.

CONDITIONS OF APPROVAL - DRILLING

Well Name & No. 1-Keller 28 Federal
Operator's Name: Chesapeake Operating, Inc.
Location: 0643FSL, 0628 FEL, Section 28, T-23-S, R-34-E
Lease: NMLC-067715

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) 234-5972 or (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: 13-3/8 inch 8-5/8 inch 5-1/2 inch

C. BOP tests

2. Hydrogen Sulfide has been reported in Sections 3, 5, 6, 10, 14, 15, 19, 20, 21, 22, 30, 31, and 34 at rates of 100-500 ppm Monitoring equipment should be onsite prior to drilling into the Delaware formation with appropriate drilling plans available should H₂S be encountered.

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 13-3/8 inch surface casing shall be set **a minimum of 25 feet into the Rustler Anhydrite approximately 975 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.

Possible lost circulation in the Delaware and Bone Spring formations.

2. The minimum required fill of cement behind the 8-5/8 inch intermediate 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 extend upward a minimum of 200 feet into the intermediate casing. First stage to circulate.**

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 13-3/8 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. **Test pressure to be held for at least 10 minutes per Onshore Order 2.III.A.2.i.ii.**

2. Minimum working pressure of the blowout preventer and related equipment (BOPE) required for drilling the surface and intermediate casing shall be 3M psi. Minimum working pressure of the blowout preventer and related equipment (BOPE) required for drilling below the 8-5/8 inch casing shall be 3M psi.

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

- 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. DRILLING MUD:

Fresh water mud to be used until Rustler Anhydrite is reached.

Engineer on call phone: 505-706-2779

WWI 120406

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
Revised June 10, 2003

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

WELL API NO.

30-025-38257

5. Indicate Type of Lease

STATE ☐ FEE ☐

6. State Oil & Gas Lease No.

7. Lease Name or Unit Agreement Name
Keller 28 Federal

8. Well Number

1

9. OGRID Number

147179

10. Pool name or Wildcat

West Antelope Ridge; Bone Spring

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 2010 Rankin Hiway
Midland, TX 79701

4. Well Location

Unit Letter P 643 feet from the South line and 628 feet from the East line

Section 28 Township 23S Range 34E NMPM County Lea

11. Elevation (Show whether DR, RKB, RT, GR, etc.)
3474' GR

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 COMPLETION ☐

OTHER: Drilling Pit ☒

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐ ALTERING CASING ☐

COMMENCE DRILLING OPNS. ☐ PLUG AND ABANDONMENT ☐

CASING TEST AND CEMENT JOB ☐

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 request permission to build a drilling pit per the attached diagram for this well. Chesapeake will follow all OCD guidelines.

*Please use the C103 form which
has the pit registration info. or
submit a C144.
to 300' to 600' under water.*

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

SIGNATURE Brenda Coffman TITLE Sr. Regulatory Comp. Specialist DATE 12/12/2006

bcoffman@chkenergy.com

Type or print name Brenda Coffman

E-mail address:

Telephone No. (432)687-2992

(This space for State use)

APPROVED BY Chris Williams TITLE DISTRICT SUPERVISOR/GENERAL MANAGER

DATE

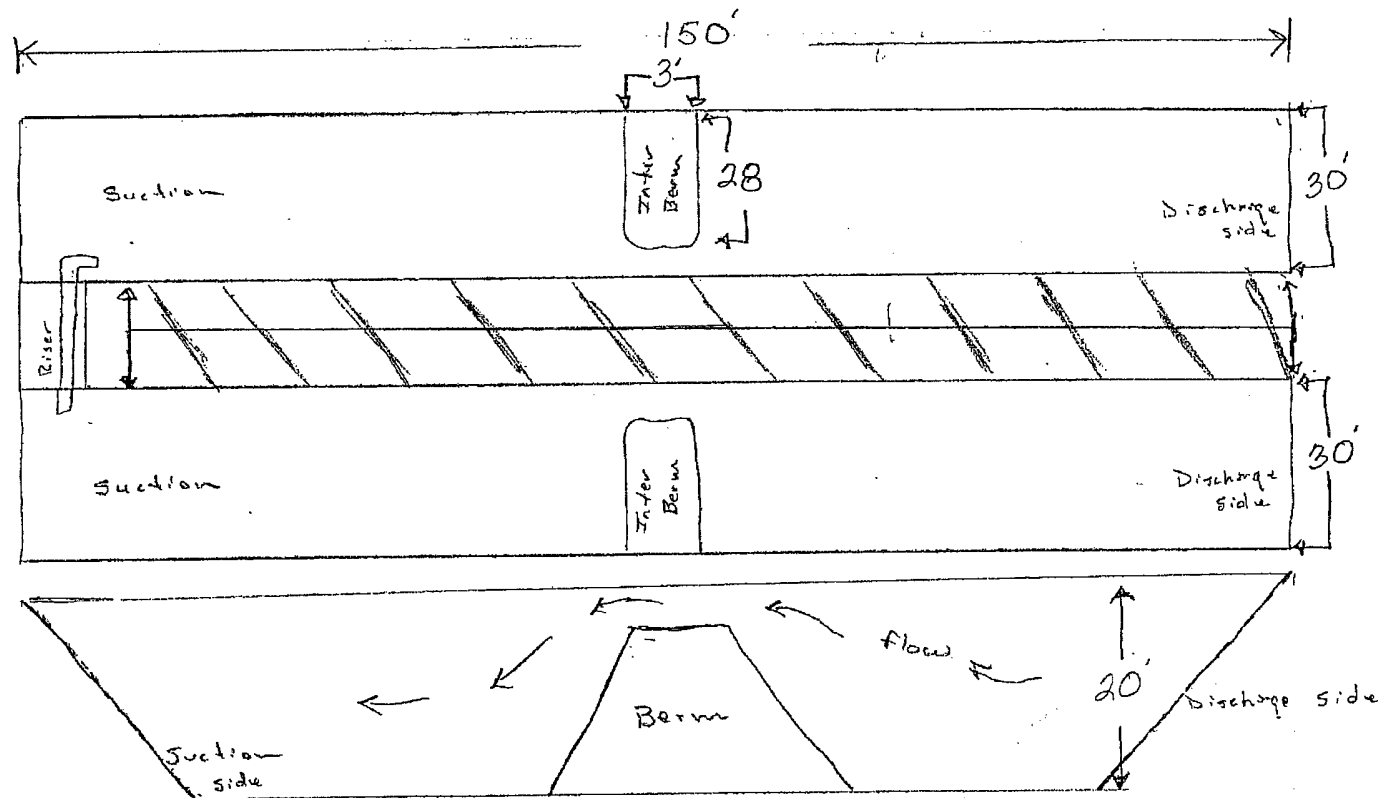
Conditions of approval, if any:

JAN 12 2007

Chesapeake Energy

Double Pit

Guideline 3A

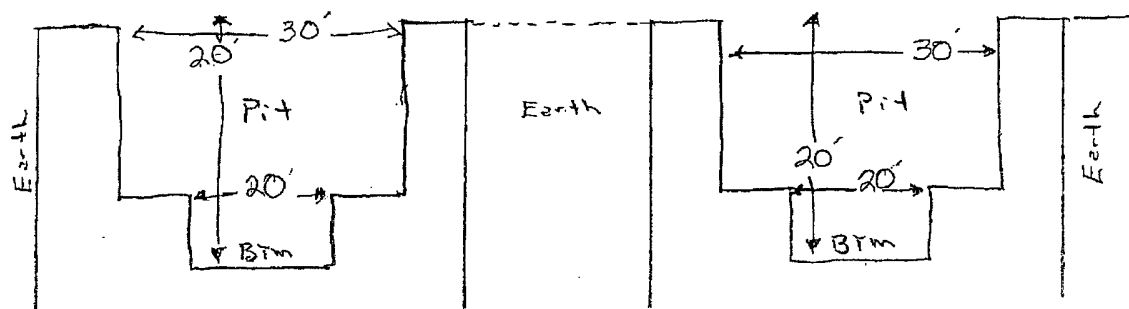


102 mm plaster
over all

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