# Form 3160-5 (August 2007)

## **UNITED STATES** DEPARTMENT OF THE INTERIOR

| OCD | Artesia |
|-----|---------|

FORM APPROVED OMB NO 1004-0135 Expires: July 31, 2010

| •    |   |
|------|---|
| "icc | 1 |
|      |   |

| 11 B   | UREAU OF LAND MANA   | GEMENT   | OCD Artesia  |  | July 31, 2010   |
|--|--|--|--|--|---|
|  | <b>NOTICES AND REPO</b>  |  |  | 5. Lease Serial No<br>NMNM95630  |   |
| Do not use th<br>abandoned we  | is form for proposals to<br>II. Use form 3160-3 (AP  | drill or to re-enter an<br>D) for such proposals.  |  | 6 If Indian, Allottee  | or Tribe Name   |
| SUBMIT IN TRI  | PLICATE - Other instruc  | ctions on reverse side.  | <del></del>  | 7. If Unit or CA/Agre  | eement, Name and/or No  |
| Type of Well     Gas Well □ Otl  | her  | - 11   |  | 8 Well Name and No<br>CROW FLATS 1   | 4 16 28 USA 2H  |
| 2 Name of Operator<br>CHESAPEAKE OPERATING   | Contact.   | LYNDEE SONGER<br>nger@chk.com  |  | 9. API Well No<br>30-015-39945   |   |
| 3a Address<br>PO BOX 18496<br>OKLAHOMA CITY, OK 7315   | <del></del>  | 3b. Phone No. (include are Ph: 405-935-2411  | a code)  | 10. Field and Pool, of WOLFCAMP  | r Exploratory   |
| 4 Location of Well (Footage, Sec., 7   |  | 1)   |  | 11 County or Parish,   | and State   |
| Sec 14 T16S R28E Mer NMP   | SWNW 1980FNL 10FW  | L  |  | EDDY COUNT   | Y, NM   |
| 12. CHECK APP  | ROPRIATE BOX(ES) TO  | O INDICATE NATURE  | OF NOTICE, RI  | EPORT, OR OTHE   | ER DATA   |
| TYPE OF SUBMISSION   |  | TY   | PE OF ACTION   |  |   |
| - Nation of Intent   | Acidize  | Deepen   | Product  | ion (Start/Resume)   | ☐ Water Shut-Off  |
| Notice of Intent   | Alter Casing   | Fracture Treat   | ☐ Reclama  | ation  | ☐ Well Integrity  |
| ☐ Subsequent Report  | Casing Repair  | New Construction   | on Recomp  | lete   | Other Change to Original A  |
| Final Abandonment Notice   | Change Plans   | Plug and Aband   | on   | arily Abandon  | Change to Original A PD   |
| <b>ш</b>   | Convert to Injection   | Plug Back  | ☐ Water D  |  | 1 D   |
| B Describe Proposed or Completed Op If the proposal is to deepen direction Attach the Bond under which the wo following completion of the involved testing has been completed Final Addetermined that the site is ready for for CHESAPEAKE REQUESTS FOR STACK TO CHOKE MANIFOL | ally or recomplete horizontally,<br>rk will be performed or provide<br>I operations. If the operation re-<br>bandonment Notices shall be fil-<br>pinal inspection.)  PERMISSION TO CHANG | give subsurface locations and<br>the Bond No. on file with BL<br>sults in a multiple completion<br>ed only after all requirements, | measured and true ve<br>M/BIA. Required sul<br>or recompletion in a i<br>, including reclamation | rtical depths of all perti-<br>osequent reports shall b<br>new interval, a Form 31<br>n, have been completed | nent markers and zones.<br>e filed within 30 days<br>60-4 shall be filed once<br>, and the operator has |
| THE RIG WILL BE CHANGIN  | G FROM THE PATTERS   | ON 62 TO THE CACTU   | S 120 (RIG PLAT  | ATTACHED)  |   |
| HOSE IS RATED TO 10,000 I<br>PRESSURE SYSTEM. (MANU  |  |  | USED WITH A 5,   | 000 PSI WORKING  | à   |
| THE CASING PROGRAM WII<br>STRING TO SURFACE). ATT  |  |  |  |  | (FULL   |
| (CHK PN 615831)<br>Enginee(ing Reviewed  | 17/2/12 CAN  | SEE ATTACHED   | FOR<br>APPROVAL  | Tanner Ny 91   | ~n 3/27/12  |
| 4. Thereby certify that the foregoing is   | Electronic Submission #<br>For CHESAPEA  | 133580 verified by the BL<br>KE OPERATING INC, ser<br>or processing by KURT S  | nt to the Carlsbad   | •  |   |
| Name(Printed/Typed) LYNDEE   |  |  |  | MPLIANCE ANALY   | ST  |
| Signature (Electronic S  | Submission)  | Date 03  | /21/2012   |  |   |
|  | THIS SPACE FO  | OR FEDERAL OR STA  | ATE OFFICE US  | SE   |   |
| and By   | 040  | Title  |  |  | MAR 2 8 20  |

Conditions of approval, if any, are attached. Approval of this notice 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. Approved By

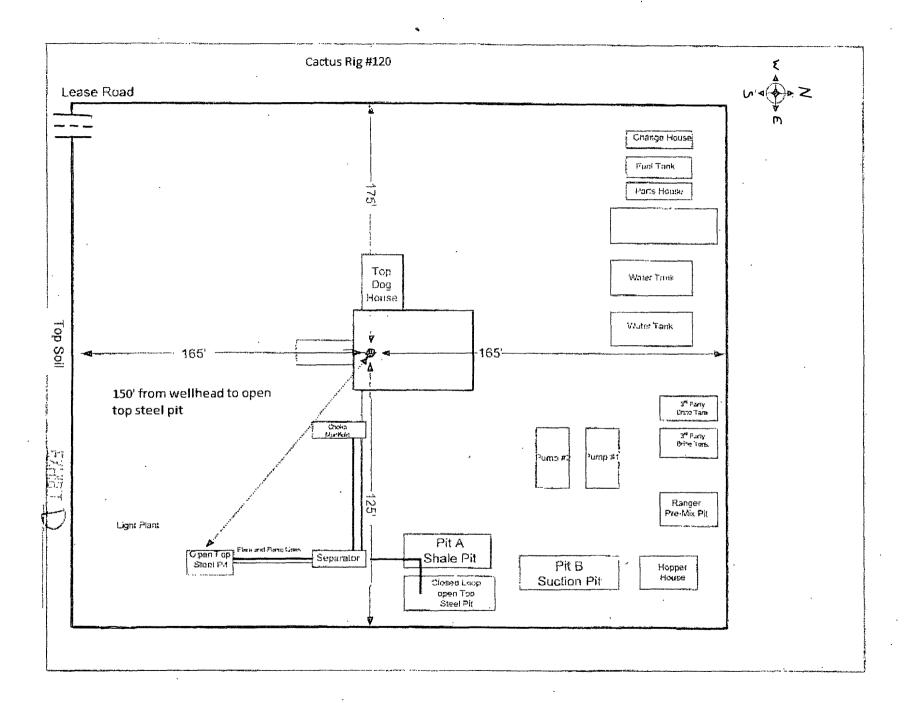
Title

Office

CARLSBAD FIELD OFFICE

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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.



ONSHORE ORDER NO. 1 Chesapeake Operating, Inc Crow Flats 14-16-28 USA 2H CONFIDENTIAL -- TIGHT HOLE Lease Contract No: NM95630

DRILLING PLAN

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#### 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 Pressure | Precharge Pressure |
|---------------------------|--------------------|
| 1500 psi                  | 750 psi            |
| 2000 psi                  | 1000 psi           |
| 3000 psi                  | 1000 psi           |

- 3. Closing times for the annular preventer 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 Operating Pressure | Remaining Pressure After Test |
|---------------------------|-------------------------------|
| 1500 psi                  | 950 psi                       |
| ·2000 psi                 | 1200 psi                      |
| 3000 psi                  | 1200 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.

#### 3. CASING PROGRAM

a. The proposed casing program will be as follows:

| Purpose              | From | То      | Hole Size | Csg Size | Weight | Grade | Thread | Condition |
|----------------------|------|---------|-----------|----------|--------|-------|--------|-----------|
| Surface              | 0'   | 350'    | 17-1/2"   | 13-3/8"  | 48 #   | H-40  | STC    | New       |
| Shallow Intermediate | 0'   | 2,000'  | 12-1/4"   | 9-5/8"   | 40 #   | J-55  | LTC    | New       |
|                      |      |         |           |          |        |       |        | , ,       |
| Production           | 0'   | 11,237' | 8-3/4"    | 5-1/2"   | 20.0 # | L-80  | LTC    | New       |

b. Casing design subject to revision based on geologic conditions encountered.

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### c. Casing Safety Factors

| Casing String        | Min SF Burst | Min SF Collapse | Min SF Tension |
|----------------------|--------------|-----------------|----------------|
| Surface              | 1.44         | 5.68            | 1.65           |
| Shallow Intermediate | 1.63         | 2.97            | 2.33           |
| Production           | 1.27         | 2.53            | 2.38           |

Min SF is the smallest of a group of safety factors that include the following considerations:

|   | Surf             | Int         | Prod         |
|---|------------------|-------------|--------------|
| Burst Design  | 1                |             | ì            |
| Pressure Test- Surface, Int, Prod Csg                   | X                | X           | Х            |
| P external: Water                                       |                  |             | 1            |
| P internal: Test psi + next section heaviest mud in csg |                  |             |              |
| Displace to Gas- Surf Csg                               | X                |             |              |
| P external: Water                                       | 1                | - 1         | -            |
| P internal: Dry Gas from Next Csg Point                 |                  |             |              |
| Frac at Shoe, Gas to Surf- Int Csg                      |                  | X           |              |
| P external: Water                                       | ļ                | }           |              |
| P internal: Dry Gas, 15 ppg Frac Gradient               |                  |             | ĺ            |
| Stimulation (Frac) Pressures- Prod Csg                  |                  |             | X            |
| P external: Water                                       |                  |             |              |
| P internal: Max inj pressure w/ heaviest injected fluid |                  |             |              |
| Tubing leak- Prod Csg (packer at KOP)                   |                  |             | X            |
| P external: Water                                       |                  |             |              |
| P internal: Leak just below surf, 8.7 ppg packer fluid  |                  |             |              |
| Collapse Design   |                  | -           |              |
| Full Evacuation   | X                | X           | x            |
| P external: Water gradient in cement, mud above TOC     |                  |             | i            |
| P internal: none  |                  |             |              |
| Cementing- Surf, Int, Prod Csg                          | Х                | X           | X            |
| P external: Wet cement                                  | -                | - 1         |              |
| P internal: water                                       |                  |             |              |
| Tonoign Degian  |                  |             |              |
| Tension Design  | - <del> </del> - | <del></del> | <del> </del> |
| 100k lb overpull  | IX               | lx          | ΊX           |

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### 5. **CEMENTING PROGRAM**

| Slurry        | Туре               | Тор    | Btm    | Wt    | Yld        | %Exc      | Sx  |
|---------------|--------------------|--------|--------|-------|------------|-----------|-----|
| Surface       |                    | ·      |        | (ppg) | (sx/cu ft) | Open Hole |     |
| Single Slurry | C + 4% Gel         | 0'     | 350'   | 13.5  | 1.73       | _150      | 341 |
| Shallow Int   |                    |        |        |       |            |           |     |
| Lead          | TXI + 5% Salt      | 0'     | 1,500' | 12    | 1.8        | 150       | 569 |
| Tail          | 50C/50Poz +5% Salt | 1,500' | 2,000' | 14.2  | -1.37      | 150       | 300 |
| Production    |                    |        |        |       |            |           |     |
| Lead          | 35/65Poz H +8% Gel | 1,500' | 6,106' | 11.9  | 2.52       | 75        | 772 |
| Tail          | 50/50Poz H +2% Gel | 6,106' | 6,856' | 14.5  | 1.27       | 75        | 267 |
|               |                    |        |        |       |            |           |     |
|               |                    |        |        |       |            |           |     |
|               |                    |        |        |       |            |           |     |

- 1. Final cement volumes will be determined by caliper.
- 2. Surface casing shall have at least one centralizer installed on each of the bottom three joints starting with the shoe joint.
- 3. Open hole packers and production casing will be left uncemented from TD of 11,237' to 6,856' and the rest of the production casing will be cemented using a stage tool from 6,856' to 1,500'.
- 4. Production casing will have one centralizer on every other joint from the stage tool to KOP (horizontal type) and from KOP to intermediate casing (bowspring type). Pilot Hole Plugging Plan:

No pilot Hole

## MIDWEST

# HOSE AND SPECIALTY INC.

| INTERNAL HYDROSTATIC TEST REPORT |                    |                                       |                 |                                       |       |             |
|----------------------------------|--------------------|---------------------------------------|-----------------|---------------------------------------|-------|-------------|
| Customer:                        |                    | · · · · · · · · · · · · · · · · · · · | ···             | P.O. Numb                             | er:   |             |
| CACTUS                           |                    |                                       |                 | ASSET#                                | V1107 | 12          |
|                                  |                    | HOSE SPECIF                           | ICATIONS        |                                       |       |             |
| Туре: СН                         | OKE & K            | ILL                                   |                 | Length:                               | 35    | ;•          |
| I.D.                             | 4''                | INCHES                                | O.D.            | 8"                                    | IN    | ICHES       |
| WORKING PRES                     | SURE               | TEST PRESSUR                          | E               | BURST PRES                            | SURE  | <del></del> |
| 10,000                           | PSI                | 15,000                                | PSI             |                                       |       | PSI         |
|                                  |                    | COUP                                  | LINGS           |                                       |       | •           |
| Type of End<br>E4.0              | Fitting<br>0X64WB  |                                       |                 |                                       |       |             |
| Type of Coup<br>4 1/             | oling:<br>16 10K F | LANGE                                 |                 |                                       |       |             |
|                                  |                    | PROC                                  | EDURE           |                                       |       |             |
| · Hoo                            |                    | pressure tested wi                    | thtau at ambian | • • • • • • • • • • • • • • • • • • • |       |             |
|                                  |                    | TEST PRESSURE                         | \               | URST PRESSU                           | RE:   |             |
| ,                                | 1                  | MIN.                                  |                 | •                                     | 0     | PSI         |
| COMMENTS:                        |                    |                                       |                 |                                       |       |             |
| ASSET#M10712                     |                    |                                       |                 |                                       |       |             |
| Date: 9/29                       | 9/2010             | Tested By:<br>BOBBY FINK              |                 | Approved:<br>MENDI J                  | ACKS  | ON          |

# **Co-Flex line Conditions of Approval**

Variance approved to use flex line from BOP to choke manifold. Check condition of flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. If the BLM inspector questions the straightness of the hose, a BLM engineer will be contacted and will review in the field or via picture supplied by inspector to determine if changes are required (operator shall expect delays if this occurs).