# OCD-ARTESIA

RECEIVED FORM APPROVED Form 3160-3 (April 2004) OMB No. 1004-0137 Expires March 31, 2007 MAR 29 2006 UNITED STATES Lease Serial No. DEPARTMENT OF THE INTERIOR JUWATESM NMNM 93203 BUREAU OF LAND MANAGEMENT 6. If Indian, Allotee or Tribe Name APPLICATION FOR PERMIT TO DRILL OR REENTER 7 If Unit or CA Agreement, Name and No. **V** DRILL REENTER la. Type of work: 8. Lease Name and Well No. ✓ Oil Well Gas Well lb. Type of Well: Other 1 Single Zone **GLOBE 14 FEDERAL 1** 9. API Well No. Name of Operator CHESAPEAKE OPERATING INC. ATTN: LINDA GOOD 0-015-3b. Phone No. (include area code) 10. Field and Pool, or Exploratory 3a. Address P.O. BOX 18496, OKLAHOMA CITY, OK 73154-0496 405-767-4275 HENSHAW; WOLFCAMP 11. Sec., T. R. M. or Blk. and Survey or Area 4. Location of Well (Report location clearly and in accordance with any State requirements.\*) 2280 FNL 1980 FEL SWNE At surface 14-16S-30E At proposed prod. zone 2130 FNL 1830 FEL SWNE 12. County or Parish 13 State 14. Distance in miles and direction from nearest town or post office EDDY 8.5 MILES FROM LOCO HILLS, NM NM Distance from proposed 17. Spacing Unit dedicated to this well 16. No. of acres in lease location to nearest property or lease line, ft. (Also to nearest drig, unit line, if any) 400 Distance from proposed location\* to nearest well, drilling, completed, applied for, on this lease, ft. 20. BLM/BIA Bond No. on file) 19. Proposed Depth NM2634 Elevations (Show whether DF, KDB, RT, GL, etc.) 22. Approximate date work will start\* 23. Estimated duration 3845 GL 3865 KB 24. Attachments Roswell 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. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above). 3. A Surface Use Plan (if the location is on National Forest System Lands, the Operator certification SUPO shall be filed with the appropriate Forest Service Office). Such other site specific information and/or plans as may be required by the authorized officer. 25. Signature Name (Printed/Typed) 2/7/06 Michael Sherwood Title Vice President - Land, Southern Division Name (Printed/Typed) Tony J. Herrell Approved by (Signature "s/ Tony J. Herrell MAR 2 7 2006 Title Office CARLSBAD FIELD OFFICE FIELD MANAGER 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

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)

conduct operations thereon.

Conditions of approval, if any, are attached.

DECLARED WATER BASIN 3 CEMENT BEHIND THE CASING MUST BE

APPROVAL SUBJECT TO General requirements and SPECIAL STIPULATIONS ATTACHED

APPROVAL FOR 1 YEAR

Chesapeake Operating, Inc Globe 14 Federal 1

SL: 2280 FNL 1980 FEL BL: 2130 FNL 1830 FEL

SWNE of Section 14-16S-30E Eddy County, New Mexico Confidential – Tight Hole Lease Contract No. NMNM 93203

Page 2

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

Chesapeake Operating, Inc. proposes to drill a well to 9000' to test the Wolfcamp 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.

Archaeological 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.

#### State of New Mexico

DISTRICT I

Energy, Minerals and Natural Resources Department

DISTRICT II

1301 W. GRAND AVENUE, ARTESIA, NM 88210

DISTRICT III 1000 Rio Brazos Rd., Aztec, NN 87410 OIL CONSERVATION DIVISION 1220 SOUTH ST. FRANCIS DR. Santa Fe. New Mexico 87505 Form C-102
Revised JUNE 10, 2003
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

DISTRICT IV WELL LOCATION AND ACREAGE DEDICATION PLAT ☐ AMENDED REPORT 1220 S. ST. FRANCIS DR., SANTA FR, NM 87505 Pool Code API Number 30630 Henshaw; Wolfcamp Well Number Property Code **GLOBE 14 FEDERAL** 1 Operator Name Elevation OGRID No. CHESAPEAKE OPERATING, INC. 147179 3834'

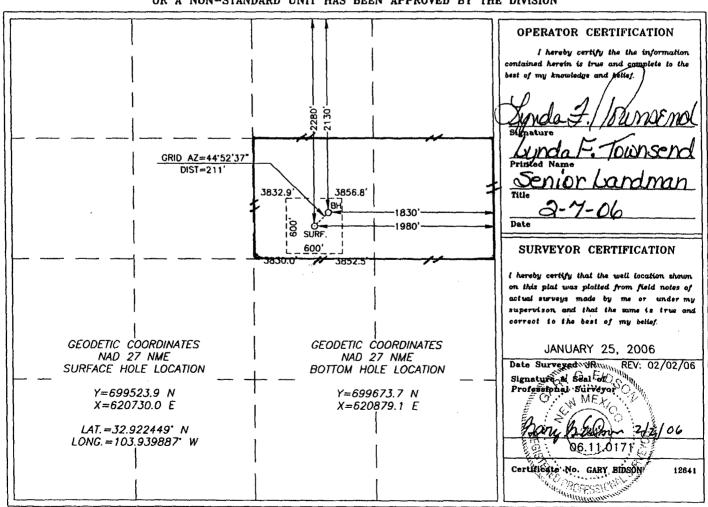
#### Surface Location

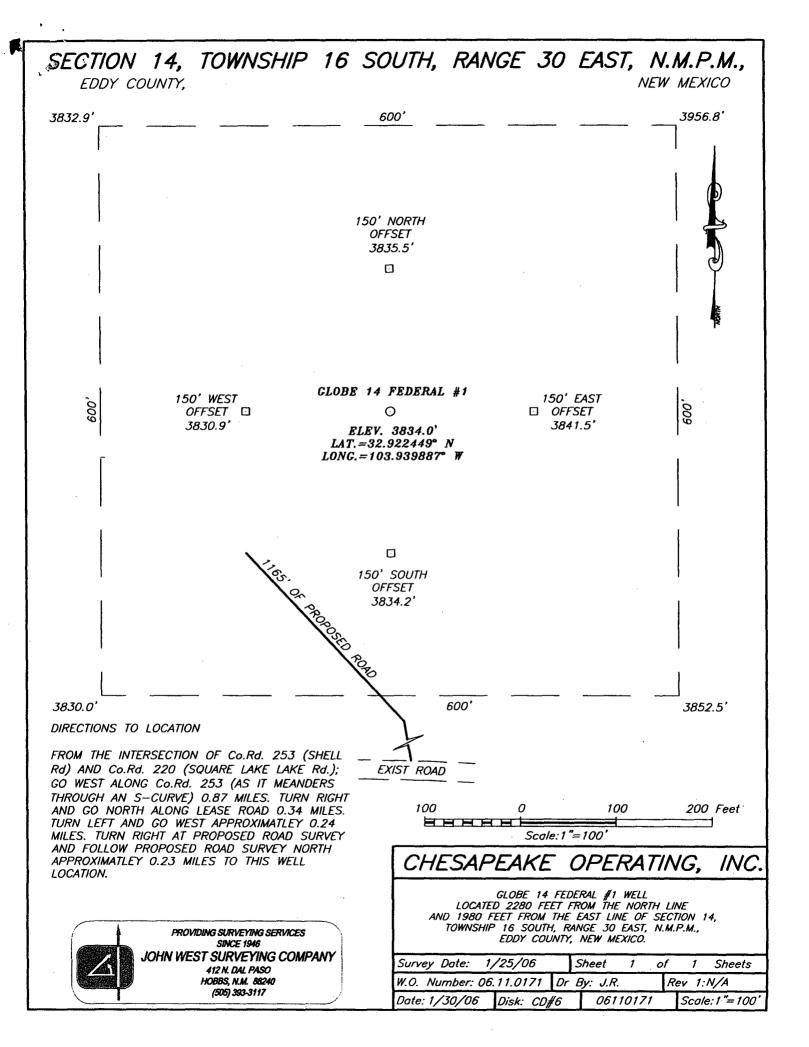
1	UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	Rast/West line	County	1
	G	14	16-S	30-E		2280	NORTH	1980	EAST	EDDY	

#### Bottom Hole Location If Different From Surface

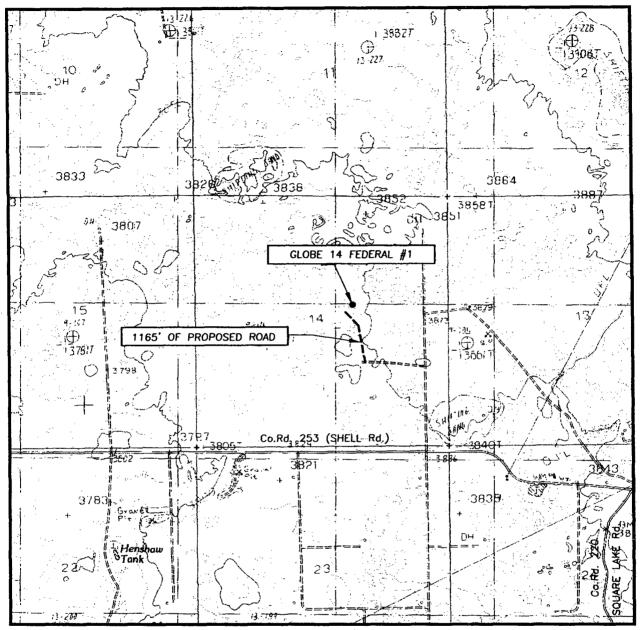
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
G	14	16-S	30-E		2130	NORTH	1830	EAST	EDDY
Dedicated Acre	s Joint o	r Infill Co	nsolidation	ode Or	der No.				
80	1								

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





# LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

CONTOUR INTERVAL: HENSHAW TANK, N.M. - 10'

SEC. 14 IWP. 16-	S RGE. 30-E
SURVEY N.I	М.Р.М.
COUNTYE	DDY
DESCRIPTION 2280' I	FNL & 1980' FEL
ELEVATION	
OPERATOR OPER	IESAPEAKE RATING, INC.
LEASE GLOBE 1	4 FEDERAL
U.S.G.S. TOPOGRAPH HENSHAW TANK, N.M.	



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

# **BLOWOUT PREVENTOR SCHEMATIC**

CHESAPEAKE OPERATING INC

WELL

: Globe: 13 Fed Com #1

RIG

COUNTY

: Eddy

STATE: New Mexico

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

	SIZE	PRESSURE	DESCRIPTION	_
A	13-5/8"	500#	Rot Head	
В	13-5/8"	5,000#	Annular	
С	13-5/8"	5,000#	Pipe Rams	
D	13-5/8"	5,000#	Blind Rams	
E	13-5/8"	5,000#	Mud Cross	
				7
IC	DSA	<u> </u>	"" 5M x 13-5/8" 3M	
	A-Sec	13-3/8"	SOW x 13-5/8" 3M	
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1				A I & .
ı		_		A-Sec
		Kill	Line	A-Sec Choke Line

SIZE	PRESSURE	DESCRIPTION
2"	5,000#	Check Valve
2"	5,000#	Gate Valve
2"	5,000#	Gate Valve
	1	

	SIZE	PRESSURE	DESCRIPTION
	4"	5,000#	Gate Valve
	4"	5,000#	HCR Valve
L		_EYI	HBIT F
		LA	116/11

# **BLOWOUT PREVENTOR SCHEMATIC**

CHESAPEAKE OPERATING INC

WELL

: Globe 14 Fed Com #1

RIG

COUNTY

: Eddy

STATE: New Mexico

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

	SIZE	PRESSURE	DESCRIPTION	
A	13-5/8"	500#	Rot Head	
В	13-5/8"	5,000#	Annular	
С	13-5/8"	5,000#	Pipe Rams	
D	13-5/8"	5,000#	Blind Rams	
E	13-5/8"	5,000#	Mud Cross	·
_				
	DSA		5M x 13-5/8" 5M	
	B-sec		5/8" 3M x 11" 5M	
	A-Sec	13-3/8"	SOW x 13-5/8" 3M	
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				B-Sec
				A-Sec.
		Kill	Line	A-Sec Choke Line
	917E D	Kill	Line	A-Sec Choke Line

SIZE	PRESSURE	DESCRIPTION
2"	5,000#	Check Valve
2"	5,000#	Gate Valve
2"	5,000#	Gate Valve
_		

SIZE	PRESSURE	DESCRIPTION		
4"	5,000#	Gate Valve		
4"	5,000#	HCR Valve		
	<u> </u>			
	FXH	IBIT CO		



2105 market Street Midland, TX 79703 Ph. (432)694-9517 Fax. (432)694-5648

# Directional/Horizontal Plan Report

Chesapeake Operating Inc.

Globe 14 Federal #1

**Eddy County, NM** 

Plan #1

Prepared By Oscar Gomez Wednesday, February 01, 2006

Baker Hughes INTEQ 2105 market Street Midland, TX 79703 Ph. (432)694-9517 Fax. (432)694-5648

#### CHESAPEAKE OPERATING, INC. Globe 14 Federal #1,slot #1 UNKNOWN,LEA COUNTY, NEW MEXICO

PROPOSAL LISTING Page 1 Your ref : Plan1 Last revised : 1-Feb-2006

Measured Depth		Azimuth Degrees	True Vert Depth	REC						Dogleg Deg/100ft	Vert Sect
0.00	0.00	0.00	0.00	0	.00	N		0	.00	E 0.00	0.00
500.00	0.00	0.00	500.00		.00			0	.00	E 0.00	0.00
1000.00	0.00	0.00	1000.00	Ċ	.00	N		0	.00	E 0.00	0.00
1500.00	0.00	0.00	1500.00	C	00.0	N		0	.00	E 0.00	0.00
2000.00	0.00	0.00	2000.00	C	.00	N		0	.00	E 0.00	0.00
2500.00	0.00	0.00	2500.00		00.0				. 00		0.00
3000.00	0.00		3000.00		00.		Ŋ., .			E 0.00	0.00 KOP
3100.00	2.00	45.00	3099.98		24				. 23		1.75
3133.96		45.00					Angley	2			3.13 EOB
3500.00	2,68	45.00	3499.55	14	. 31	N		14	. 31	E 0.00	20.24
4000.00	2.68	45.00	3999.00		84		•		. 84		43.62
4500.00	2.68	45.00	4498.46		7.37				. 37		66.99
5000.00	2.68	45.00	4997.91		3.90				. 90		90.36
5500.00	2.68	45.00	5497.36		.42				. 42		113.74
6000.00	2.68	45.00	5996.82	96	5.95	N		96	. 95	E 0.00	137.11
6500.00	2.68	45.00	6496.27		3.48			113			160.48
7000.00	2.68	45.00	6995.72		00.6			130			183.85
7500.00	2.68	45.00	7495.18		5.53			146			207.23
7604.94	2.68						Q 30				212.13 Tgt
7630.73	2.65	45.00	7625.77	150	. 85	N		150	. 85	E 0.12	213.33
7730.73	2.53	45.00	7725,67	154	1.04	N		154	. 04	E 0.12	217.85
7830.73	2.41	45.00	7825.58	15	7.09	N		157	.09	E 0.12	222.15
7930.73	2.29	45.00	7925.49		9.98			159	. 98	E 0.12	226.25
8030.73	2.17	45.00	8025.42	163	2.73	N		162	.73	E 0.12	230.13
8130.73	2.05	45.00	8125.35	16	5.33	N		165	. 33	E 0.12	233.81
8230,73	1.93	45.00	8225.29	16	7.78	N		167	.78	E 0.12	237.28
8330.73	1.81	45.00	8325.23	170	80.0	N		170	.08		240.53
8430.73	1.69	45.00	8425.19	173	2.23	N		172	.24	E 0.12	243.58
8530.73	1.56	45.00	8525,15	174	4.24	N		174	.24	E 0.12	246.41
8630.73	1.44	45.00	8625.11	17	6.10	N		176	. 10	E 0.12	249.04
8730.73	1.32	45.00	8725.08	17	7.81	N		177	. 81	E 0.12	251.45
8830.73	1.20	45.00	8825.06	17	9.36	N		179	. 37	E 0.12	253.66
8930.73	1.08	45.00	8925.04	18	0.78	N		180	.78	E 0.12	255.66
9000.00	1.00	45.00	8994.29	18:	1.67	N		181	. 67	E 0.12	256.92

All data is in feet unless otherwise stated.

Coordinates from structure and TVD from rotary table.

Bottom hole distance is 255.92 on azimuth 45.00 degrees from wellhead.

Vertical section is from N 0.00 E 0.00 on azimuth 45.00 degrees.

Calculation uses the minimum curvature method.

Presented by Baker Hughes INTEQ

CHESAPEAKE OPERATING, INC. Globe 14 Federal #1,slot #1 UNKNOWN,LEA COUNTY, NEW MEXICO PROPOSAL LISTING Page 2 Your ref : Plan1 Last revised : 1-Feb-2006

# Comments in wellpath

MD	TVD	Rectangular	Coords.	Comment

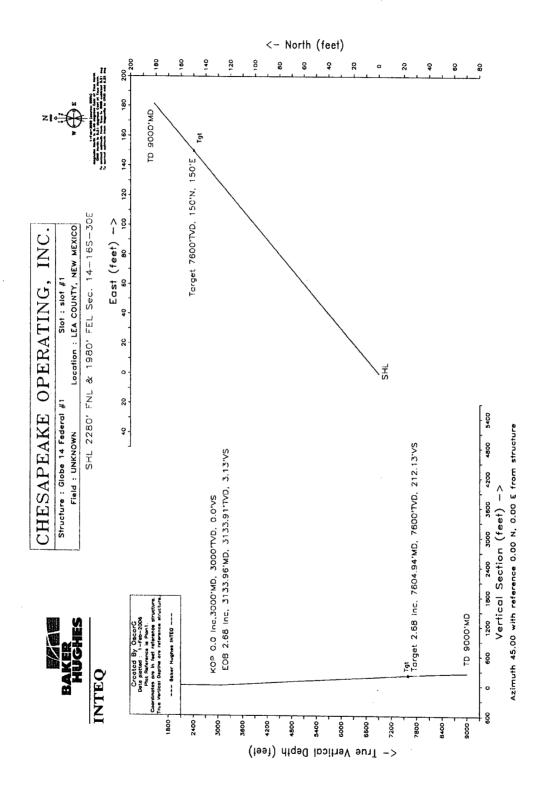
MD	TVD	Rectangular		Comment
	3000.00	0.00 N	0.00 E	
3133.96	3133.91	2.22 N	2.21 E	EOB
7604.94	7600.00	150.00 N	150.00 E	Tgt

#### Casing positions in string ${}^{\backprime}A{}^{\backprime}$

Top MD	Top TVD	Rectangular	Coords.	Bot MD	Bot TVD	Rectangular	Coords.	Casing	
0.00	0.00	0.00N	0.00E	3000.00	3000.00	0.00N	0.00E	9 5/8"	

#### Targets associated with this wellpath

Target name	Geographic Location	T.V.D.	Rectangular Co		Revised
Tgt	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	7600.00	150.00N	150.00E	1-Feb-2006



ONSHORE ORDER NO. 1

Chesapeake Operating, Inc. Globe 14 Federal 1

SL: 2280 FNL 1980 FEL BL: 2130 FNL 1830 FEL SWNE of Section 14-16S-30E

**Eddy County, NM** 

Lease No. NMNM 93203

**CONFIDENTIAL - TIGHT HOLE** 

SURFACE USE PLAN
Page 1

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. A proposed access road 1135' 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 Co. Rd. 253 (Shell Rd) and Co. Rd. 220 (Square Lake Lake Rd); go West along Co. Rd. 253 (As it meanders through an S-curve) 0.87 miles. Turn right and go North along lease road 0.34 miles. Turn left and go West approximately 0.24 miles. Turn right at proposed road survey and follow proposed road survey North approximately 0.23 miles to this well location.

# 3. <u>LOCATION OF EXISTING WELLS WITHIN A 1-MILE RADIUS OF THE PROPOSED LOCATION – see Exhibit B.</u>

# 4. LOCATION OF PRODUCTION FACILITIES

It is anticipated that production facilities will be located on the well pad as product will be sold at the wellhead and/or tank battery. New facilities connected to Duke laid pipeline – See Exhibit C.

**ONSHORE ORDER NO. 1** 

Chesapeake Operating, Inc.

Globe 14 Federal 1

SL: 2280 FNL 1980 FEL BL: 2130 FNL 1830 FEL

SWNE of Section 14-16S-30E

**Eddy County, NM** 

Lease No. NMNM 93203

**CONFIDENTIAL - TIGHT HOLE** 

SURFACE USE PLAN Page 2

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 23-16S-30E. All material (i.e. shale) will be acquired from private or commercial sources.

# 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. The V-Door is oriented to the South.

#### 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**

Bogle LTD Co. P.O. Drawer 460 Dexter. NM 88230

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

ONSHORE ORDER NO. 1 Chesapeake Operating, Inc. Globe 14 Federal 1 SL: 2280 FNL 1980 FEL

BL: 2130 FNL 1830 FEL SWNE of Section 14-16S-30E

**Eddy County, NM** 

# 12. ADDITIONAL INFORMATION

**CONFIDENTIAL - TIGHT HOLE** 

Lease No. NMNM 93203

SURFACE USE PLAN Page 3

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

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

# **Regulatory Compliance**

Linda Good Permitting Agent - Federal P.O. Box 18496 Oklahoma City, OK 73154 (405) 767-4275 (OFFICE) (405) 879-9583 (FAX) lgood@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

#### **Assett Manager**

Andrew McCalmont
P.O. Box 18496
Oklahoma City, OK 73154-0496
405-879-7852 (OFFICE)
405-879-7930 (FAX)
amccalmont@chkenergy.com

ONSHORE ORDER NO. 1 Chesapeake Operating, Inc. Globe 14 Federal 1 SL: 2280 FNL 1980 FEL BL: 2130 FNL 1830 FEL SWNE of Section 14-16S-30E Eddy County, NM

**CONFIDENTIAL - TIGHT HOLE** 

Lease No. NMNM 93203

SURFACE USE PLAN
Page 4

# 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.

Ву:	Michael Sherwood, Vice President – Land, Southern Division
Date:	217/06

ONSHORE ORDER NO. 1 Chesapeake Operating, Inc. Globe 14 Federal 1

SL: 2280 FNL 1980 FEL BL: 2130 FNL 1830 FEL SWNE of Section 14-16S-30E Eddy County, New Mexico CONFIDENTIAL - TIGHT HOLE Lease Contract No. NMNM 93203

DRILLING PROGRAM

Page 1

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.

#### FORMATION TOPS

The estimated tops of important geologic markers are as follows:

Formation	Subsea	Depth
Rustler	3580	285
Yates	2390	1475
Seven Rivers	2145	1720
*Queen	1615	2250
*San Andres	885	2980
*Upper San Andres Pay	640	3225
*Middle San Andres Pay	385	3480
*Lower San Andres Pay	185	3680
Glorietta	-625	4490
Abo	-2525	6390
**Wolfcamp "Upper Pay"	-3830	7695
Base "Wolfcamp Upper Pay"	-3930	7795
XX Marker	-4105	7970
Base Three Brothers	-4450	8315
Cisco	-4710	8575
** "Wolfcamp Pay"	-4845	8710
Base "Wolfcamp Pay"	-4925	8790
TD	-5135	9000
*Potential Pay Zones: Primary Objectives**		

# 2. <u>ESTIMATED DEPTH OF WATER, OIL, GAS & OTHER MINERAL BEARING</u> 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:

ONSHORE ORDER NO. 1

Chesapeake Operating, Inc. Globe 14 Federal 1

SL: 2280 FNL 1980 FEL BL: 2130 FNL 1830 FEL SWNE of Section 14-16S-30E Eddy County, New Mexico

#### CONFIDENTIAL - TIGHT HOLE Lease Contract No. NMNM 93203

#### **DRILLING PROGRAM**

Page 2

<u>Substance</u>	<u>Formation</u>	<u>Depth</u>
Oil/Gas	Wolfcamp	7695-7795
Oil/Gas	Wolfcamp	8710-8790

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:

## 1. 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.

ONSHORE ORDER NO. 1 Chesapeake Operating, Inc. Globe 14 Federal 1 CONFIDENTIAL - TIGHT HOLE Lease Contract No. NMNM 93203

SL: 2280 FNL 1980 FEL BL: 2130 FNL 1830 FEL SWNE of Section 14-16S-30E

DRILLING PROGRAM

Eddy County, New Mexico

Page 3

#### D. Test Duration

1. In each case, the individual components should be monitored for leaks for <u>5</u> <u>minutes</u>, 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

- The accumulator should be of sufficient volume to supply 1.5 times the volume to close and hold all BOP equipment in sequence, <u>without recharging</u> and the <u>pump turned off</u>, and have remaining pressures of <u>200 PSI above the</u> <u>precharge pressure</u>.
- Minimum precharge pressures for the various accumulator systems per manufacturers recommended specifications are as follows:

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 ramtype 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.

ONSHORE ORDER NO. 1 Chesapeake Operating, Inc.

Globe 14 Federal 1 SL: 2280 FNL 1980 FEL BL: 2130 FNL 1830 FEL SWNF of Section 14-16S-301 CONFIDENTIAL – TIGHT HOLE Lease Contract No. NMNM 93203

#### DRILLING PROGRAM

SWNE of Section 14-16S-30E Eddy County, New Mexico

Page 4

4. Record the remaining accumulator pressure at the end of the test sequence. Per the previous requirement, this pressure <u>should not be less</u> 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 <u>full open</u> or <u>full closed</u> position. <u>Do not leave in neutral position</u>.

## 4. CASING AND CEMENTING PROGRAM

a. The proposed casing program will be as follows:

Purpose	Interval	Hole Size	Casing Size	Weight	<u>Grade</u>	Thread	Condition
Surface	0-520'	17 1/2"	13 3/8	48#	H-40	STC	NEW
Intermediate	0-3000'	11"	8 5/8	32#	J55	LTC	NEW
Production	0-9000,	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:

<u>Interval</u>	<u>Type</u>	Amount	Yield	Washout	Excess
0-520	Premium plus (lead)	200 sks	1.98	40	100
	Class C (tail)	340 sks	1.34	40	100
520-3000	Interfill C (lead)	470	2.45	20	75
	Premium Plus (tail)	180	1.34	20	50
3000-9000	Interfill H (lead)	390	2.45	10	25
	Premium plus (tail)	340	1.31	10	25
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#### 5. MUD PROGRAM

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

[_	<u>Interval</u>	Mud Type	Mud Weight	Viscosity	Fluid Loss		
	0-520	FW	8.6-9.0	32-36	NC		
	520-3000	FW/Brine	9.9-10	28-29	NC		
	3000-9000	FW/Brine	8.4-9.0	28-29	20-30		

ONSHORE ORDER NO. 1 Chesapeake Operating, Inc. Globe 14 Federal 1 2130 FNL 1830 FEL SWNE of Section 14–16S-30E EDDY County, New Mexico CONFIDENTIAL - TIGHT HOLE Lease No. OKNM 93203

**DRILLING PROGRAM** 

Page 5

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.

The V-Door is oriented to the South.

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 4200. 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. 1 - Globe 14 Federal

Location: SH: 2280' FNL & 1980' FEL BH: 2130' FNL & 1830' FEL sec. 14, T. 16 S., R. 30 E.

Lease: <u>NM-93203</u>

#### 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
- C. BOP tests
- 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 of this office.
- 3. Include the API No. assigned to well by NMOCD on the subsequent report of setting the first casing string.

#### II. CASING:

- 1. 13-3/8 inch surface casing should be set in the Rustler Anhydrite at approximately 520 feet, below usable water and circulate cement to the surface. If cement does not circulate to the surface, the Carlsbad Field Office shall be notified at (505) 234-5972 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 <u>8-5/8</u> inch intermediate casing is <u>sufficient to circulate to the surface</u>.
- 3. Minimum required fill of cement behind the <u>5-1/2</u> inch production casing is <u>sufficient to tie back 500 feet above</u> the uppermost perforation in the pay zone.

#### **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 intermediate 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 intermediate casing, minimum working pressure of the blowout preventer and related equipment (BOPE) shall be 3000 psi.

#### CONDITIONS OF APPROVAL - DRILLING (CONTINUED)

Operator's Name: Chesapeake Operating, Inc. Well No. 1 - Globe 14 Federal

Location: SH: 2280' FNL & 1980' FEL BH: 2130' FNL & 1830' FEL sec. 14, T. 16 S., R. 30 E.

Lease: NM-93203

#### **III. PRESSURE CONTROL:**

3. After setting the <u>8-5/8</u> inch intermediate casing and before drilling into the <u>Wolfcamp</u> formation, the BOPE shall be tested as described in Onshore Order No. 2. Any equipment failing to test satisfactorily shall be repaired or replaced.

A. The Carlsbad Field Office shall be notified at (505) 234-5972 in sufficient time for a representative to witness the tests.

- B. The tests shall be done by an independent service company.
- C. The results of the test shall be reported to the BLM Carlsbad Field Office at 620 East Greene Street, Carlsbad, New Mexico 88220-6292.
- D. 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.
- E. Testing must be done in a safe workman like manner. Hard line connections shall be required.

#### **IV. DRILLING MUD:**

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1. Mud system monitoring equipment, with derrick floor indicators and visual and audio alarms, shall be operating before drilling into the <u>Wolfcamp</u> formation, and shall be used until production casing is run and cemented. Monitoring equipment shall consist of the following:

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- A. Recording pit level indicator to indicate volume gains and losses.
- B. Flow-sensor on the flow-line to warn of abnormal mud returns from the well.