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

Form C-101
Permit 1156

APPLICATION FOR PERMIT TO DRILL

Operator Name and Address	OGRID Number
CHESAPEAKE OPERATING, INC. PO Box 18496 Oklahoma City, OK 73154-0496	147179
	API Number 30-015-33505

Property Code	Property Name	Well No.
32921	SPRUCE 10 STATE	002

Surface Location

UL or Lot	Section	Township	Range	Lot Idn	Feet From	N/S Line	Feet From	E/W Line	County
K	10	19S	23E	K	1980	S	1980	W	Eddy

Proposed Pools

HOAG TANK;MORROW (GAS) 78560

Work Type	Well Type	Cable/Rotary	Lease Type	Ground Level Elevation
New Well	GAS		State	3925
Multiple	**Proposed Depth**	**Formation**	**Contractor**	**Spud Date**
N	8400	Morrow		07/15/2004

Proposed Casing and Cement Program

Type	Hole Size	Casing Size	Casing Weight/ft	Setting Depth	Sacks of Cement	Estimated TOC
Surf	17.5	13.375	48	400	500	0
Int1	11	8.625	32	1900	500	0
Prod	7.875	5.5	17	8400	1100	1900

Casing/Cement Program: Additional Comments

13 3/8 csg. cmtd lead w/150 sx Prem. Plus Thix set + 2% Comp A + 0.25% Comp B, 2nd lead w/160 sx HLP + 2% CaCl2 + .25 pps Flocele Tailed w/200 sx Prem + 2% CaCl2: 8 5/8 Cmt. Lead: 130 sx Prem Plus Thix set + 10 pps gil. + .25 pps flocele; 2nd lead: 310 sx Interfill C-SBM + .25 pps Flocele + 5 pps gil; Tail 200 sx Prem Plus + 2% CaCl2; 5 1/2 csg. 350 sx 50:50 Poz Prem + additives + 2nd stage 550 sx Interfill C + additives; tail w/375 50:50 Poz Prem + additives.

Proposed Blowout Prevention Program

Type	Working Pressure	Test Pressure	Manufacturer
Annular	5000	3500	
Double Ram	5000	5000	

I hereby certify that the information given above is true and complete to the best of my knowledge and belief. Electronically Signed By: Mark Mabe	**OIL CONSERVATION DIVISION** Electronically Approved By: Bryan Arrant
Title: Manager	Title: Geologist
Date: 06/30/2004 / Phone: 432-685-4339	Approval Date: 07/16/2004 / Expiration Date: 07/16/2005
	Conditions of Approval: There are conditions. See Attached.

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Form C-102
Permit 1156

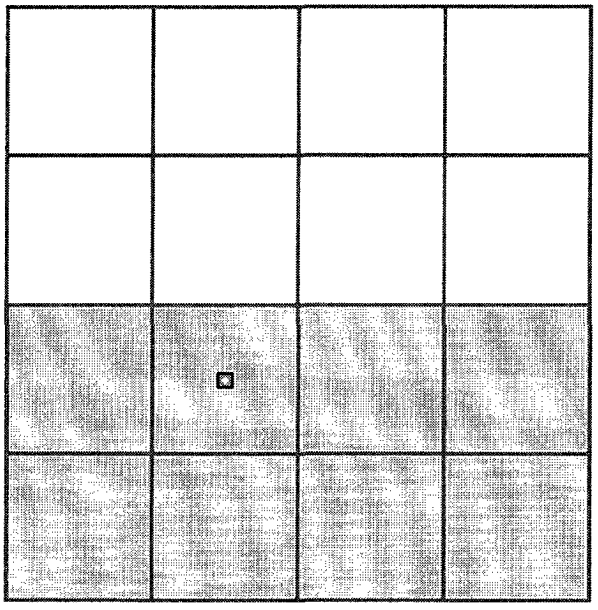
WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Name	Pool Code
30-015-33505	HOAG TANK;MORROW (GAS)	78560
Property Code	**Property Name**	**Well No.**
32921	SPRUCE 10 STATE	002
OGRID No.	**Operator Name**	**Elevation**
147179	CHESAPEAKE OPERATING, INC.	3925

Surface And Bottom Hole Location

UL or Lot	Section	Township	Range	Lot Idn	Feet From	N/S Line	Feet From	E/W Line	County
K	10	19S	23E	K	1980	S	1980	W	Eddy

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
320			



OPERATOR CERTIFICATION

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

Electronically Signed By: Mark Mabe

Title: Manager

Date: 06/30/2004

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.

Surveyed By: Gary L. Jones

Date of Survey: 06/18/2004

Certificate Number: 7977

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State of New Mexico
Energy Minerals and Natural Resources

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

Form C-144
March 12, 2004

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: Chesapeake Telephone: 432 683-7443 e-mail address: mwhitefield@chkenergy.com
Address: 550 W. Texas Ave. #1300 Midland, Texas 79701
Facility or well name: Spruce 10 St. 2 API #: _____ U/L or Qtr/Qtr K Sec 10 T 19 R 23
County: Eddy Latitude N32°40'24.4" Longitude W104°40'53.7" NAD: 1927 ☐ 1983 ☐ Surface Owner Federal ☐ State ☒ Private ☐ Indian ☐

Pit	Below-grade tank	
Type: Drilling ☒ Production ☐ Disposal ☐ Workover ☐ Emergency ☐ Lined ☒ Unlined ☐ Liner type: Synthetic ☒ Thickness 12 mil Clay ☐ Volume _____bbl	Volume: _____bbl Type of fluid: _____ Construction material: _____ Double-walled, with leak detection? Yes ☐ 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 50 feet or more, but less than 100 feet 100 feet or more 500'	(20 points) (10 points) (0 points) 0
Wellhead protection area: (Less than 200 feet from a private domestic water source, or less than 1000 feet from all other water sources.)	Yes No	(20 points) (0 points) 0
Distance to surface water: (horizontal distance to all wetlands, playas, irrigation canals, ditches, and perennial and ephemeral watercourses.)	Less than 200 feet 200 feet or more, but less than 1000 feet 1000 feet or more	(20 points) (10 points) (0 points) 0
	Ranking Score (Total Points)	

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: 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.

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: _____
Printed Name/Title Mike Whitefield Field Rep. Signature Mike Whitefield

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:
Date: 7/7/04
Printed Name/Title Mike Bratcher / Compliance Officer Signature Mike Bratcher

Permit Comments

Operator: CHESAPEAKE OPERATING, INC. , 147179
Well: SPRUCE 10 STATE #002

User Name	Comment	Comment Date
BARRANT	Operator to submit a h2s contingecy plan if this area meets the requirements of NMOCD Rule 118.	7/1/2004

Permit Conditions Of Approval

C-101, Permit 1156

Operator: CHESAPEAKE OPERATING, INC. , 147179
Well: SPRUCE 10 STATE #002

OCD Reviewer	Condition
BARRANT	Operator to drill surface and intermediate hole with air or fresh water mud only
BARRANT	Notify OCD time of spud and time to witness the cementing of the surface and intermediate casing.

Chesapeake Operating, Inc.
P. O. Box 11050
Midland, Texas 79702-8050

July 14, 2004

Oil conservation Commission
State of New Mexico
1301 W. Grand Avenue
Artesia, New Mexico 88210

Attention: Mr. Bryan Aarant

RE: Spruce 10 State #2
1980' FSL & 1980' FWL
Section 10, T19S, R23E
Eddy County, New Mexico
30-015-33505

Dear Bryan:

Per your request, this letter is in reference to the OCD's requirements for H2S contingency plan for the above captioned well. No H2S, abnormal pressures or temperatures are expected in the drilling of the above captioned well. H2S detection equipment will be installed prior to the top of the Delaware formation as a precautionary measure.

Yours truly,

Brenda Coffman

Brenda Coffman
Regulatory Analyst

BC

Hydrogen Sulfide Drilling Operations Plan

1 All Company and Contract personnel admitted on location must be trained by a qualified H2S safety instructor to the following:

   A. Characteristics of H2S
   B. Physical effects and hazards
   C. Proper use of safety equipment and life support systems.
   D. Principle and operation of H2S detectors, warning system and briefing
   E. Evacuation procedure, routes and first aid.
   F. Proper use of 30 minute pressure demand air pack.

2 H2S Detection and Alarm Systems

   A. H2S detectors and audio alarm system to be located at bell nipple, end of blooie line (mud pit) and on derrick floor or doghouse.

3 Windsock and/or wind streamers

   A. Windsock at mudpit area should be high enough to be visible.
   B. Windsock at briefing area should be high enough to be visible.
   C. There should be a windsock at entrance to location.

4 Condition Flags and Signs

   A. Warning sign on access road to location.
   B. Flags to be displayed on sign at entrance to location. Green flag, normal safe condition. Yellow flag indicates potential pressure and danger. Red flag, danger, H2S present in dangerous concentration. Only emergency personnel admitted to location.

5 Well control equipment

   A. See exhibit "E"

6 Communication

   A. While working under masks chalkboards will be used for communication.
   B. Hand signals will be used where chalk board is inappropriate.
   C. Two way radio will be used to communicate off location in case of emergency help is required. In most cases cellular telephones will be available at most drilling foreman's trailer or living quarters.

7 Drillstem Testing

   A. Exhausts will be watered.
   B. Flare line will be equipped with an electric ignitor or a propane pilot light in case gas reaches the surface.
   C. If location is near any dwelling a closed DST will be performed.

Hydrogen Sulfide Drilling Operations Plan

8 Drilling contractor supervisor will be required to be familiar with the effects H2S has on tubular goods and other mechanical equipment.

9 If H2S is encountered, mud system will be altered if necessary to maintain control of formation. A mud gas seperator will be brought into service along with H2S scavengers if