

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of Work: ☒ DRILL ☐ REENTER

CONFIDENTIAL

1b. Type of Well: ☒ Oil Well ☐ Gas Well ☐ Other ☒ Single Zone ☐ Multiple Zone2. Name of Operator
CHESAPEAKE AGENT FOR BOPCO

Contact: LINDA GOOD

Email: linda.good@chk.com

3a. Address
P.O. BOX 18496
OKLAHOMA CITY, OK 73154-04963b. Phone No. (include area code)
Ph: 405-935-4275

4. Location of Well (Report location clearly and in accordance with any State requirements. *)

At surface SWSE 100FSL 2240FEL

At proposed prod. zone NWNE 350FNL 2240FEL

14. Distance in miles and direction from nearest town or post office*
18.7 MILES EAST OF MALAGA, NM.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
200.0018. Distance from proposed location to nearest well, drilling,
completed, applied for, on this lease, ft.19. Proposed Depth
14072 MD
9391 TVD21. Elevations (Show whether DF, KB, RT, GL, etc.)
3451 GL

22. Approximate date work will start

5. Lease Serial No.
NMNMO157779

BHL: LCC061705B

6. If Indian, Allottee or Tribe Name

7. If Unit or CA Agreement, Name and No.

8. Lease Name and Well No.
PLU BIG SINKS 25 FEDERAL 1H

9. API Well No.

30-015-39018

10. Field and Pool, or Exploratory
UNKOWN

11. Sec., T., R., M., or Blk. and Survey or Area

Sec 25 T24S R30E Mer NMP

12. County or Parish
EDDY13. State
NM17. Spacing Unit dedicated to this well
160.0020. BLM/BIA Bond No. on file
NM2634

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.
2. A Drilling Plan.
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).

4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator certification
6. Such other site specific information and/or plans as may be required by the authorized officer.

25. Signature
(Electronic Submission)Name (Printed/Typed)
LINDA GOOD Ph: 405-935-4275Date
03/07/2011Title
SR. REGULATORY COMPLIANCE SPECApproved by (Signature)
/s/ Don Peterson

Name (Printed/Typed)

Date
APR 15 2011Title
FIELD MANAGER

Office

CARLSBAD FIELD OFFICE

Application approval does not warrant or certify 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 TWO YEARS

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.

Additional Operator Remarks (see next page)

Electronic Submission #103750 verified by the BLM Well Information System
For CHESAPEAKE AGENT FOR BOPCO, sent to the Carlsbad

Carlsbad Controlled Water Basin

Approval Subject to General Requirements
& Special Stipulations AttachedSEE ATTACHED FOR
CONDITIONS OF APPROVAL

** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED **

EC APD General

Type of Work	DRILL	# Acres in Lease	200	
# of Completions	S1	# Acres This Well	160	
Proposed Meas. Depth	14072	Operator Submitted Bond	NM2634	
Proposed TVD	9391	BLM Revised Bond	NM2634	
Proposed Elevation	3451	Datum	GL	Work Start Date (Approximate)
Rotary/Cable				Work Duration (Approximate)

Distance and direction from nearest town or post office
18.7 MILES EAST OF MALAGA, NM.

Distance from proposed location to nearest property/lease line

Distance from proposed location to nearest well (drilling, completed, or applied for)

Description of Proposed Program

PROPOSED BHLOC: LEASE NMLC61705B 1730.31 ACRES.

Chesapeake Operating, Inc. respectfully requests permission to drill a well to 14,072? 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 Program 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 Cactus Rig #116 layout, Exhibit F-1 to F-2 BOP & Choke Manifold and Exhibit G Directional Drill Plan.

An Archeological Survey will be delivered to the BLM when completed.

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

Please be advised that Chesapeake Operating, Inc. is the Designated Agent for BOPCO, the Operator of this unit. Chesapeake Operating, Inc. agrees to be responsible under the terms and conditions of the lease for the operations conducted upon the lease lands.

(CHK PN 636499)

Additional Operator Remarks:

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(CHK PN 636499)

ONSHORE ORDER NO. 1
Chesapeake Agent for BOPCO
PLU Big Sinks 25 Federal 1H
SL: 100' FSL & 2240' FEL
BL: 350' FNL & 2240' FEL
Section 25-24S-30E
Eddy County, New Mexico

CONFIDENTIAL – TIGHT HOLE
DRILLING PROGRAM

SL: Lease No. NMNM 157779
BL: Lease No. NMLC 61705B

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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	SUBSEA	<u>KBTVD</u>	<u>MD</u>
Base of Salt	-340'	3,820'	
Bell Canyon	-750'	4,230'	
Cherry Canyon	-1,625'	5,105'	
Brushy Canyon	-3,190'	6,670'	
Bone Spring Lime	-4,590'	8,070'	
TOTAL DEPTH			14,092'

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:

<u>Substance</u>	<u>Formation</u>	<u>Depth</u>
Water	Rustler	455'-505'
Oil/Gas	Bell Canyon	4,230'
Oil/Gas	Bone Spring	8,070'

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

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SHL: 100' FSL 2240' FEL, Section 25, Township 24S, Range 30E

BHL: 350' FNL 2240' FEL, Section 25, Township 24S, Range 30E

Eddy County, NM

CONFIDENTIAL -- TIGHT HOLE

SHL Lease Contract No. NMNM 157779

BHL Lease Contract No. NMLC 61705B

DRILLING PLAN

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3. BOP EQUIPMENT

Will have a 5000 psi rig stack (see proposed schematic) for drill out below surface casing, but this system will be tested to 3000 psi working pressure and 3000 psi working pressure for the annular preventer; therefore, no shoe tests will be conducted.

Chesapeake Operating Inc.'s minimum specifications for pressure control equipment are as follows:

I. 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
 - (d) Upper and lower kelly cock valves, inside BOP's and safety valves

B. Frequency

1. All tests shall 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
 - (d) at least once every 30 days while drilling

C. Frequency

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 unless otherwise stated (see above).
6. The "high pressure" test for the annular preventer will be conducted at 70% of the rated working pressure unless otherwise stated (see above).
7. A record of all pressures will be made on a pressure-recording chart.

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 BO's are tested, or any time a major repair is performed.

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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	To	Hole Size	Csg Size	Weight	Grade	Thread	Condition
Surface	0'	555'	17-1/2"	13-3/8"	48 #	H-40	STC	New
Intermediate	0'	4,210'	11"	8-5/8"	32 #	J-55	LTC	New
Production	0'	14,072'	7-7/8"	5-1/2"	20 #	L-80	LTC	New

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

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DRILLING PLAN

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c. Casing Safety Factors

Casing String	Min SF Burst	Min SF Collapse	Min SF Tension
Surface	1.43	3.07	1.56
Intermediate	2.08	1.39	1.75
Production	1.22	2.11	1.59

Min SF is the smallest of a group of safety factors that include the following considerations:
S, I, and P indicate considerations for Surface, Intermediate, and Production casing strings.

Burst:	Po: pore pressure	Pi: pressure test (S,I), drill ahead with fluids (S,I), frac at shoe with 1/3 BHP at surface (S,I), Stimulation Pressures (P), Tubing Leak (P)
Collapse:	Po: Mud, Mix water	Pi: full evacuation (S,I,P), cementing (S,I,P), drill ahead with fluids (S,I)
Tension:	100k lb overpull (S,I,P)	

5. CEMENTING PROGRAM See COA

Slurry	Type	Top	Btm	Wt	Yld	%Exc	Sx
Surface				(ppg)	(sx/cu ft)	Open Hole	
Lead	C + 4% Gel	0'	555'	13.5	1.73	150	580
Intermediate							
Lead	TXL	0'	2,660'	12	1.8	150	890
Tail	50C/50Poz +2%Gel, 5% Salt	2,660'	4,210' 4,150'	14.2	1.37	150	742
Production							
1st Stage Lead	TXL + 1% Salt	5,050'	7,900'	12	1.83	65	494
1st Stage Tail	50H/50Poz +6%Gel, 5% Salt	7,900'	12,710'	13.2	1.74	65	797
2nd Stage Lead	TXL	3,710'	4,800'	12	1.8	200	220
2nd Stage Tail	C	4,800'	5,050'	14.8	1.33	200	98

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. The production casing will be cemented in two stages with the DV tool place at: 5,050'
4. Production casing will have one centralizer on every other joint from TD to KOP (horizontal type) and from KOP to intermediate casing (bowspring type).

Pilot Hole Plugging Plan:

There will be no pilot hole for this well.

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DRILLING PLAN

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6. MUD PROGRAM

From	To	Type	Weight	F. Vis	FL
0'	555'	Spud Mud	8.4-8.7	32-34	NC-NC
555'	4,210' 4 1/2'	Brine	9.8-10.1	28-29	NC-NC
4,210'	8,967'	FW/Cut Brine	8.4-8.6	28-29	NC-NC
8,967'	9,723'	FW/Cut Brine	8.4-9	28-29	NC-NC
9,723'	14,072'	FW/Cut Brine	8.4-9	28-32	NC-NC

A closed system will be utilized consisting of above ground steel tanks. All wastes accumulated during drilling operations will be contained in a portable trash cage and removed from location and deposited in an approved sanitary landfill. Sanitary wastes will be contained in a chemical porta-toilet and then hauled to an approved sanitary landfill.

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.

7. TESTING, LOGGING, AND CORING See COA

The anticipated type and amount of testing, logging, and coring are as follows:

- Drill stem tests are not planned.
- The logging program will be as follows:

TYPE	Logs	Interval	Timing	Vendor
Mudlog	Mudlogging	Int Shoe to Base of Curve	After set Int Casing	Suttles
OH	GR/Ind/Neutron/Density/Pe/Dual Induction	Curve to Int Shoe	After Curve	Baker Atlas
OH	GR/Neutron	Int Shoe to Surface	After Curve	Baker Atlas
LWD	Gamma/MWD	Curve and Lateral	While Drilling	Ryan

- Core samples are not planned.
- A Directional Survey will be run.

8. ABNORMAL PRESSURES AND HYDROGEN SULFIDE

- No abnormal pressures or temperatures are expected. Estimated BHP is: 4125 psi
- Hydrogen sulfide gas is not anticipated.

Permian District

Poker Lake

PLU Big Sinks 25 Federal 1H

PLU Big Sinks 25 Federal 1H

PLU Big Sinks 25 Federal 1H

Plan: Plat

Standard Planning Report

25 February, 2011

Chesapeake Energy Corporation

Planning Report

Database:	Drilling Database	Local Co-ordinate Reference:	Well PLU Big Sinks 25 Federal 1H
Company:	Permian District	TVD Reference:	WELL @ 0.0ft (Original Well Elev)
Project:	Poker Lake	MD Reference:	WELL @ 0.0ft (Original Well Elev)
Site:	PLU Big Sinks 25 Federal 1H	North Reference:	Grid
Well:	PLU Big Sinks 25 Federal 1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	PLU Big Sinks 25 Federal 1H		
Design:	Plat		

Project:	Poker Lake, Eddy County, NM		
Map System:	US State Plane 1983	System Datum:	Ground Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site	PLU Big Sinks 25 Federal 1H				
Site Position:		Northing:	430,257.00 usft	Latitude:	32.1818644
From:	Map	Easting:	696,147.00 usft	Longitude:	-103.8329411
Position Uncertainty:	0.0 ft	Slot Radius:	0.000 in	Grid Convergence:	0.2665392

Well	PLU Big Sinks 25 Federal 1H					
Well Position	+N-S	0.0 ft	Northing:	430,257.00 usft	Latitude:	32.1818644
	+E-W	0.0 ft	Easting:	696,147.00 usft	Longitude:	-103.8329411
Position Uncertainty		0.0 ft	Wellhead Elevation:		Ground Level:	0.0

Wellbore						PLU Big Sinks 25 Federal 1H					
Magnetics		Model Name		Sample Date		Declination		Dip Angle		Field Strength	
						(°)		(°)		(nT)	
		User Defined		1/18/2011		0.0000000		0.0000000		0	

Design:	Plat			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction
	(ft)	(ft)	(ft)	(°)
	0.0	0.0	0.0	359.75

Plan Sections										
Measured Depth	Inclination	Azimuth	Vertical Depth	+N-S	+E-W	Dogleg Rate	Build Rate	Turn Rate	TFO	Target
(ft)	(°)	(°)	(ft)	(ft)	(ft)	(°/100ft)	(°/100ft)	(°/100ft)	(°)	
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.0000000	
8,966.7	0.00	0.00	8,966.7	0.0	0.0	0.00	0.00	0.00	0.0000000	
9,722.5	90.70	359.75	9,444.1	483.3	-2.1	12.00	12.00	0.00	359.7509926	
14,071.6	90.70	359.75	9,391.0	4,832.0	-21.0	0.00	0.00	0.00	0.0000000	BS25-BHL

Chesapeake Energy Corporation

Planning Report

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Company:	Permian District	TVD Reference:	WELL @ 0.0ft (Original Well Elev)
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Site:	PLU Big Sinks 25 Federal 1H	North Reference:	Grid
Well:	PLU Big Sinks 25 Federal 1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	PLU Big Sinks 25 Federal 1H		
Design:	Plat		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00	
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00	
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00	
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00	
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00	
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00	
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00	
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00	
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00	
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00	
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00	
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00	
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00	
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	0.00	
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00	
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00	
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	0.00	
1,700.0	0.00	0.00	1,700.0	0.0	0.0	0.0	0.00	0.00	0.00	
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.0	0.00	0.00	0.00	
1,900.0	0.00	0.00	1,900.0	0.0	0.0	0.0	0.00	0.00	0.00	
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	0.00	
2,100.0	0.00	0.00	2,100.0	0.0	0.0	0.0	0.00	0.00	0.00	
2,200.0	0.00	0.00	2,200.0	0.0	0.0	0.0	0.00	0.00	0.00	
2,300.0	0.00	0.00	2,300.0	0.0	0.0	0.0	0.00	0.00	0.00	
2,400.0	0.00	0.00	2,400.0	0.0	0.0	0.0	0.00	0.00	0.00	
2,500.0	0.00	0.00	2,500.0	0.0	0.0	0.0	0.00	0.00	0.00	
2,600.0	0.00	0.00	2,600.0	0.0	0.0	0.0	0.00	0.00	0.00	
2,700.0	0.00	0.00	2,700.0	0.0	0.0	0.0	0.00	0.00	0.00	
2,800.0	0.00	0.00	2,800.0	0.0	0.0	0.0	0.00	0.00	0.00	
2,900.0	0.00	0.00	2,900.0	0.0	0.0	0.0	0.00	0.00	0.00	
3,000.0	0.00	0.00	3,000.0	0.0	0.0	0.0	0.00	0.00	0.00	
3,100.0	0.00	0.00	3,100.0	0.0	0.0	0.0	0.00	0.00	0.00	
3,200.0	0.00	0.00	3,200.0	0.0	0.0	0.0	0.00	0.00	0.00	
3,300.0	0.00	0.00	3,300.0	0.0	0.0	0.0	0.00	0.00	0.00	
3,400.0	0.00	0.00	3,400.0	0.0	0.0	0.0	0.00	0.00	0.00	
3,500.0	0.00	0.00	3,500.0	0.0	0.0	0.0	0.00	0.00	0.00	
3,600.0	0.00	0.00	3,600.0	0.0	0.0	0.0	0.00	0.00	0.00	
3,700.0	0.00	0.00	3,700.0	0.0	0.0	0.0	0.00	0.00	0.00	
3,800.0	0.00	0.00	3,800.0	0.0	0.0	0.0	0.00	0.00	0.00	
3,900.0	0.00	0.00	3,900.0	0.0	0.0	0.0	0.00	0.00	0.00	
4,000.0	0.00	0.00	4,000.0	0.0	0.0	0.0	0.00	0.00	0.00	
4,100.0	0.00	0.00	4,100.0	0.0	0.0	0.0	0.00	0.00	0.00	
4,200.0	0.00	0.00	4,200.0	0.0	0.0	0.0	0.00	0.00	0.00	
4,300.0	0.00	0.00	4,300.0	0.0	0.0	0.0	0.00	0.00	0.00	
4,400.0	0.00	0.00	4,400.0	0.0	0.0	0.0	0.00	0.00	0.00	
4,500.0	0.00	0.00	4,500.0	0.0	0.0	0.0	0.00	0.00	0.00	
4,600.0	0.00	0.00	4,600.0	0.0	0.0	0.0	0.00	0.00	0.00	
4,700.0	0.00	0.00	4,700.0	0.0	0.0	0.0	0.00	0.00	0.00	
4,800.0	0.00	0.00	4,800.0	0.0	0.0	0.0	0.00	0.00	0.00	
4,900.0	0.00	0.00	4,900.0	0.0	0.0	0.0	0.00	0.00	0.00	
5,000.0	0.00	0.00	5,000.0	0.0	0.0	0.0	0.00	0.00	0.00	
5,100.0	0.00	0.00	5,100.0	0.0	0.0	0.0	0.00	0.00	0.00	
5,200.0	0.00	0.00	5,200.0	0.0	0.0	0.0	0.00	0.00	0.00	
5,300.0	0.00	0.00	5,300.0	0.0	0.0	0.0	0.00	0.00	0.00	

Chesapeake Energy Corporation

Planning Report

Database:	Drilling Database	Local Co-ordinate Reference:	Well PLU Big Sinks 25 Federal 1H
Company:	Permian District	TVD Reference:	WELL @ 0.0ft (Original Well Elev)
Project:	Poker Lake	MD Reference:	WELL @ 0.0ft (Original Well Elev)
Site:	PLU Big Sinks 25 Federal 1H	North Reference:	Grid
Well:	PLU Big Sinks 25 Federal 1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	PLU Big Sinks 25 Federal 1H		
Design:	Plat		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
5,400.0	0.00	0.00	5,400.0	0.0	0.0	0.0	0.00	0.00	0.00	
5,500.0	0.00	0.00	5,500.0	0.0	0.0	0.0	0.00	0.00	0.00	
5,600.0	0.00	0.00	5,600.0	0.0	0.0	0.0	0.00	0.00	0.00	
5,700.0	0.00	0.00	5,700.0	0.0	0.0	0.0	0.00	0.00	0.00	
5,800.0	0.00	0.00	5,800.0	0.0	0.0	0.0	0.00	0.00	0.00	
5,900.0	0.00	0.00	5,900.0	0.0	0.0	0.0	0.00	0.00	0.00	
6,000.0	0.00	0.00	6,000.0	0.0	0.0	0.0	0.00	0.00	0.00	
6,100.0	0.00	0.00	6,100.0	0.0	0.0	0.0	0.00	0.00	0.00	
6,200.0	0.00	0.00	6,200.0	0.0	0.0	0.0	0.00	0.00	0.00	
6,300.0	0.00	0.00	6,300.0	0.0	0.0	0.0	0.00	0.00	0.00	
6,400.0	0.00	0.00	6,400.0	0.0	0.0	0.0	0.00	0.00	0.00	
6,500.0	0.00	0.00	6,500.0	0.0	0.0	0.0	0.00	0.00	0.00	
6,600.0	0.00	0.00	6,600.0	0.0	0.0	0.0	0.00	0.00	0.00	
6,700.0	0.00	0.00	6,700.0	0.0	0.0	0.0	0.00	0.00	0.00	
6,800.0	0.00	0.00	6,800.0	0.0	0.0	0.0	0.00	0.00	0.00	
6,900.0	0.00	0.00	6,900.0	0.0	0.0	0.0	0.00	0.00	0.00	
7,000.0	0.00	0.00	7,000.0	0.0	0.0	0.0	0.00	0.00	0.00	
7,100.0	0.00	0.00	7,100.0	0.0	0.0	0.0	0.00	0.00	0.00	
7,200.0	0.00	0.00	7,200.0	0.0	0.0	0.0	0.00	0.00	0.00	
7,300.0	0.00	0.00	7,300.0	0.0	0.0	0.0	0.00	0.00	0.00	
7,400.0	0.00	0.00	7,400.0	0.0	0.0	0.0	0.00	0.00	0.00	
7,500.0	0.00	0.00	7,500.0	0.0	0.0	0.0	0.00	0.00	0.00	
7,600.0	0.00	0.00	7,600.0	0.0	0.0	0.0	0.00	0.00	0.00	
7,700.0	0.00	0.00	7,700.0	0.0	0.0	0.0	0.00	0.00	0.00	
7,800.0	0.00	0.00	7,800.0	0.0	0.0	0.0	0.00	0.00	0.00	
7,900.0	0.00	0.00	7,900.0	0.0	0.0	0.0	0.00	0.00	0.00	
8,000.0	0.00	0.00	8,000.0	0.0	0.0	0.0	0.00	0.00	0.00	
8,100.0	0.00	0.00	8,100.0	0.0	0.0	0.0	0.00	0.00	0.00	
8,200.0	0.00	0.00	8,200.0	0.0	0.0	0.0	0.00	0.00	0.00	
8,300.0	0.00	0.00	8,300.0	0.0	0.0	0.0	0.00	0.00	0.00	
8,400.0	0.00	0.00	8,400.0	0.0	0.0	0.0	0.00	0.00	0.00	
8,500.0	0.00	0.00	8,500.0	0.0	0.0	0.0	0.00	0.00	0.00	
8,600.0	0.00	0.00	8,600.0	0.0	0.0	0.0	0.00	0.00	0.00	
8,700.0	0.00	0.00	8,700.0	0.0	0.0	0.0	0.00	0.00	0.00	
8,800.0	0.00	0.00	8,800.0	0.0	0.0	0.0	0.00	0.00	0.00	
8,900.0	0.00	0.00	8,900.0	0.0	0.0	0.0	0.00	0.00	0.00	
8,966.7	0.00	0.00	8,966.7	0.0	0.0	0.0	0.00	0.00	0.00	
9,000.0	4.00	359.75	9,000.0	1.2	0.0	1.2	11.99	11.99	0.00	
9,100.0	16.00	359.75	9,098.3	18.5	-0.1	18.5	12.00	12.00	0.00	
9,200.0	28.00	359.75	9,190.8	55.9	-0.2	55.9	12.00	12.00	0.00	
9,300.0	40.00	359.75	9,273.6	111.7	-0.5	111.7	12.00	12.00	0.00	
9,400.0	52.00	359.75	9,342.9	183.5	-0.8	183.5	12.00	12.00	0.00	
9,500.0	64.00	359.75	9,395.8	268.1	-1.2	268.1	12.00	12.00	0.00	
9,600.0	76.00	359.75	9,430.0	361.9	-1.6	361.9	12.00	12.00	0.00	
9,700.0	88.00	359.75	9,443.9	460.8	-2.0	460.8	12.00	12.00	0.00	
9,722.5	90.70	359.75	9,444.1	483.3	-2.1	483.3	12.01	12.01	0.00	
9,800.0	90.70	359.75	9,443.2	560.8	-2.4	560.8	0.00	0.00	0.00	
9,900.0	90.70	359.75	9,442.0	660.8	-2.9	660.8	0.00	0.00	0.00	
10,000.0	90.70	359.75	9,440.7	760.8	-3.3	760.8	0.00	0.00	0.00	
10,100.0	90.70	359.75	9,439.5	860.7	-3.7	860.7	0.00	0.00	0.00	
10,200.0	90.70	359.75	9,438.3	960.7	-4.2	960.7	0.00	0.00	0.00	
10,300.0	90.70	359.75	9,437.1	1,060.7	-4.6	1,060.7	0.00	0.00	0.00	
10,400.0	90.70	359.75	9,435.9	1,160.7	-5.0	1,160.7	0.00	0.00	0.00	
10,500.0	90.70	359.75	9,434.6	1,260.7	-5.5	1,260.7	0.00	0.00	0.00	

Chesapeake Energy Corporation

Planning Report

Database:	Drilling Database	Local Co-ordinate Reference:	Well PLU Big Sinks 25 Federal 1H
Company:	Permian District	TVD Reference:	WELL @ 0.0ft (Original Well Elev)
Project:	Poker Lake	MD Reference:	WELL @ 0.0ft (Original Well Elev)
Site:	PLU Big Sinks 25 Federal 1H	North Reference:	Grid
Well:	PLU Big Sinks 25 Federal 1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	PLU Big Sinks 25 Federal 1H		
Design:	Plat		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
10,600.0	90.70	359.75	9,433.4	1,360.7	-5.9	1,360.7	0.00	0.00	0.00
10,700.0	90.70	359.75	9,432.2	1,460.7	-6.3	1,460.7	0.00	0.00	0.00
10,800.0	90.70	359.75	9,431.0	1,560.7	-6.8	1,560.7	0.00	0.00	0.00
10,900.0	90.70	359.75	9,429.7	1,660.7	-7.2	1,660.7	0.00	0.00	0.00
11,000.0	90.70	359.75	9,428.5	1,760.7	-7.7	1,760.7	0.00	0.00	0.00
11,100.0	90.70	359.75	9,427.3	1,860.7	-8.1	1,860.7	0.00	0.00	0.00
11,200.0	90.70	359.75	9,426.1	1,960.7	-8.5	1,960.7	0.00	0.00	0.00
11,300.0	90.70	359.75	9,424.9	2,060.6	-9.0	2,060.7	0.00	0.00	0.00
11,400.0	90.70	359.75	9,423.6	2,160.6	-9.4	2,160.7	0.00	0.00	0.00
11,500.0	90.70	359.75	9,422.4	2,260.6	-9.8	2,260.7	0.00	0.00	0.00
11,600.0	90.70	359.75	9,421.2	2,360.6	-10.3	2,360.6	0.00	0.00	0.00
11,700.0	90.70	359.75	9,420.0	2,460.6	-10.7	2,460.6	0.00	0.00	0.00
11,800.0	90.70	359.75	9,418.8	2,560.6	-11.1	2,560.6	0.00	0.00	0.00
11,900.0	90.70	359.75	9,417.5	2,660.6	-11.6	2,660.6	0.00	0.00	0.00
12,000.0	90.70	359.75	9,416.3	2,760.6	-12.0	2,760.6	0.00	0.00	0.00
12,100.0	90.70	359.75	9,415.1	2,860.6	-12.4	2,860.6	0.00	0.00	0.00
12,200.0	90.70	359.75	9,413.9	2,960.6	-12.9	2,960.6	0.00	0.00	0.00
12,300.0	90.70	359.75	9,412.6	3,060.6	-13.3	3,060.6	0.00	0.00	0.00
12,400.0	90.70	359.75	9,411.4	3,160.6	-13.7	3,160.6	0.00	0.00	0.00
12,500.0	90.70	359.75	9,410.2	3,260.5	-14.2	3,260.6	0.00	0.00	0.00
12,600.0	90.70	359.75	9,409.0	3,360.5	-14.6	3,360.6	0.00	0.00	0.00
12,700.0	90.70	359.75	9,407.8	3,460.5	-15.0	3,460.6	0.00	0.00	0.00
12,800.0	90.70	359.75	9,406.5	3,560.5	-15.5	3,560.6	0.00	0.00	0.00
12,900.0	90.70	359.75	9,405.3	3,660.5	-15.9	3,660.5	0.00	0.00	0.00
13,000.0	90.70	359.75	9,404.1	3,760.5	-16.3	3,760.5	0.00	0.00	0.00
13,100.0	90.70	359.75	9,402.9	3,860.5	-16.8	3,860.5	0.00	0.00	0.00
13,200.0	90.70	359.75	9,401.6	3,960.5	-17.2	3,960.5	0.00	0.00	0.00
13,300.0	90.70	359.75	9,400.4	4,060.5	-17.6	4,060.5	0.00	0.00	0.00
13,400.0	90.70	359.75	9,399.2	4,160.5	-18.1	4,160.5	0.00	0.00	0.00
13,500.0	90.70	359.75	9,398.0	4,260.5	-18.5	4,260.5	0.00	0.00	0.00
13,600.0	90.70	359.75	9,396.8	4,360.5	-19.0	4,360.5	0.00	0.00	0.00
13,700.0	90.70	359.75	9,395.5	4,460.4	-19.4	4,460.5	0.00	0.00	0.00
13,800.0	90.70	359.75	9,394.3	4,560.4	-19.8	4,560.5	0.00	0.00	0.00
13,900.0	90.70	359.75	9,393.1	4,660.4	-20.3	4,660.5	0.00	0.00	0.00
14,000.0	90.70	359.75	9,391.9	4,760.4	-20.7	4,760.5	0.00	0.00	0.00
14,071.6	90.70	359.75	9,391.0	4,832.0	-21.0	4,832.1	0.00	0.00	0.00

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
BS25- BHL - plan hits target center - Point	0.00	0.00	9,391.0	4,832.0	-21.0	435,089.00	696,126.00	32.19514695	-103.83293639
BS25- SHL - plan misses target center by 201.9ft at 9342.3ft MD (9304.7 TVD, 140.3 N, -0.6 E) - Point	0.00	0.00	9,450.0	0.0	0.0	430,257.00	696,147.00	32.18186440	-103.83294117

Chesapeake Energy Corporation

Planning Report

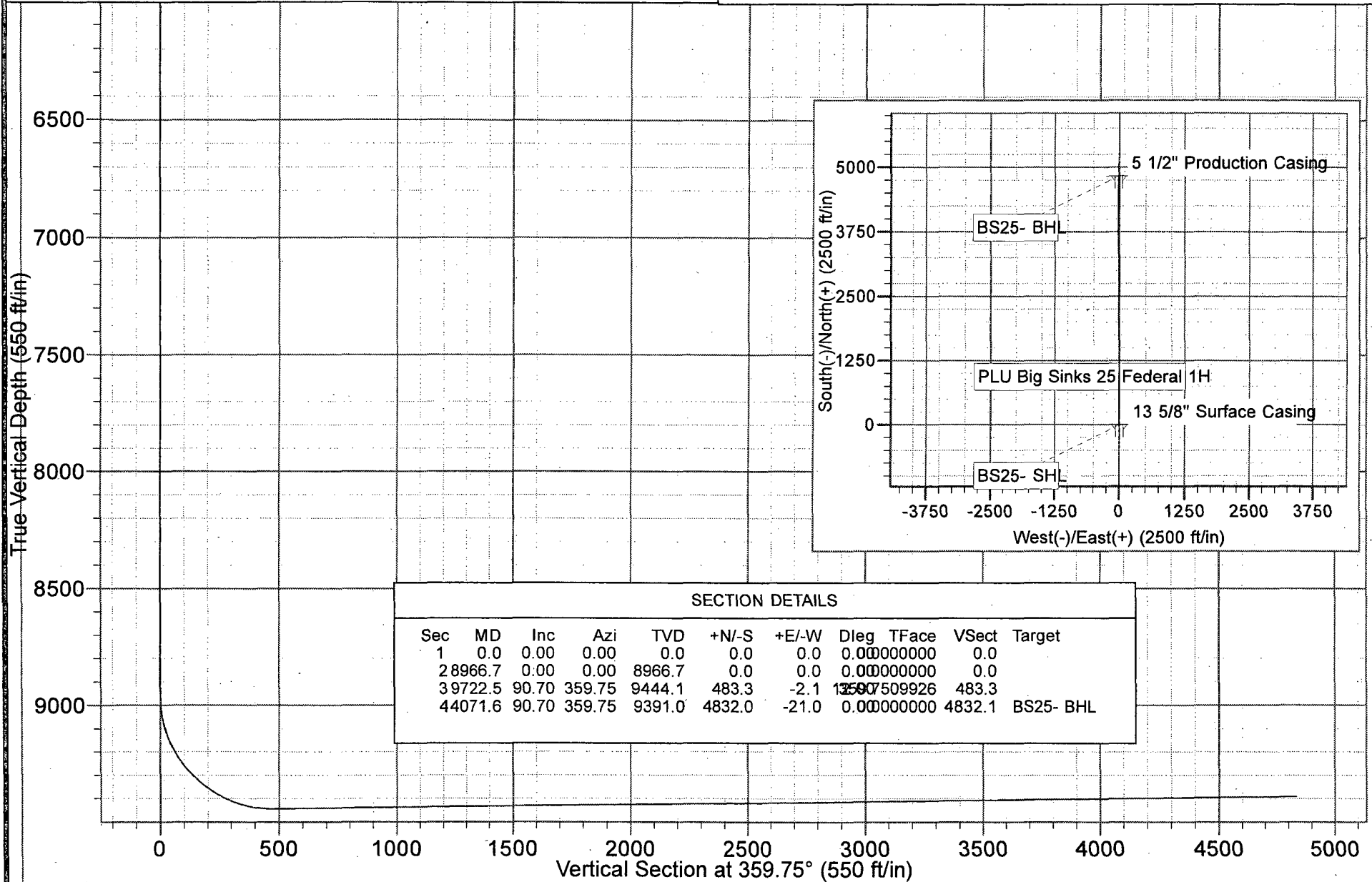
Database:	Drilling Database	Local Co-ordinate Reference:	Well PLU Big Sinks 25 Federal 1H
Company:	Permian District	TVD Reference:	WELL @ 0.0ft (Original Well Elev)
Project:	Poker Lake	MD Reference:	WELL @ 0.0ft (Original Well Elev)
Site:	PLU Big Sinks 25 Federal 1H	North Reference:	Grid
Well:	PLU Big Sinks 25 Federal 1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	PLU Big Sinks 25 Federal 1H		
Design:	Plat		

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)	
555.0	555.0	13 5/8" Surface Casing	13.625	17.500	
4,210.0	4,210.0	8 5/8" Intermediate Casing	8.625	11.000	
14,071.0	9,391.0	5 1/2" Production Casing	5.500	7.875	

Project: Poker Lake
 Site: PLU Big Sinks 25 Federal 1H
 Well: PLU Big Sinks 25 Federal 1H
 Wellbore: PLU Big Sinks 25 Federal 1H
 Design: Plat

PROJECT DETAILS: Poker Lake

Geodetic System: US State Plane 1983
 Datum: North American Datum 1983
 Ellipsoid: GRS 1980
 Zone: New Mexico Eastern Zone

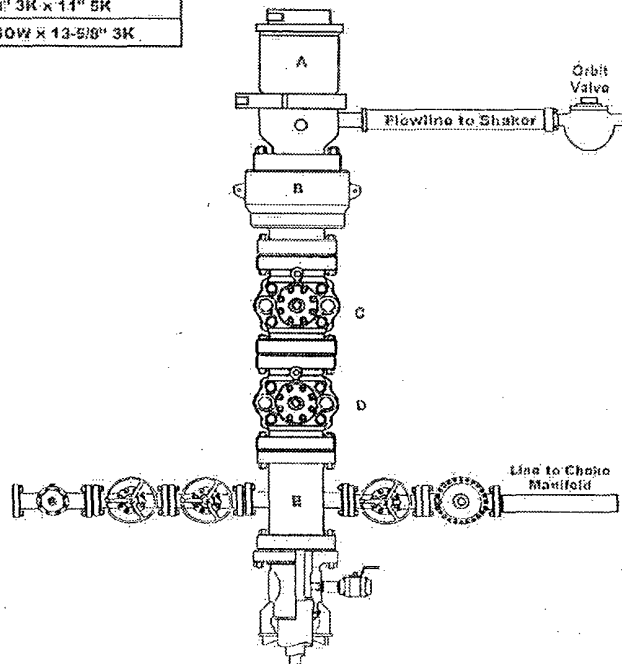


Chesapeake Minimum BOPE Requirements
 Wellname: PLU Big Sinks 25 Federal 1H
 County, State: Eddy County, NM
 Location: 100' FSL 2240' FEL, Section 25, Township 24S, Range 30E
 Operation: Intermediate and Production Hole Sections

	SIZE	PRESSURE	DESCRIPTION
A		500	Rotating Head
B	13 5/8"	5,000	Annular
C	13 5/8"	5,000	Pipe Ram
D	13 5/8"	5,000	Blind Ram
E	13 5/8"	5,000	Mud Cross
F			
DSA	As required for each hole size		
C-sec			
B-sec	13-5/8" 3K x 11" 5K		
A-sec	13-3/8" 6QW x 13-5/8" 3K		

Test Notes:

- Pressure test to rating of BOP or wellhead every 21 days.
- Function test on trips
- H2S service trim required.



Kill Line

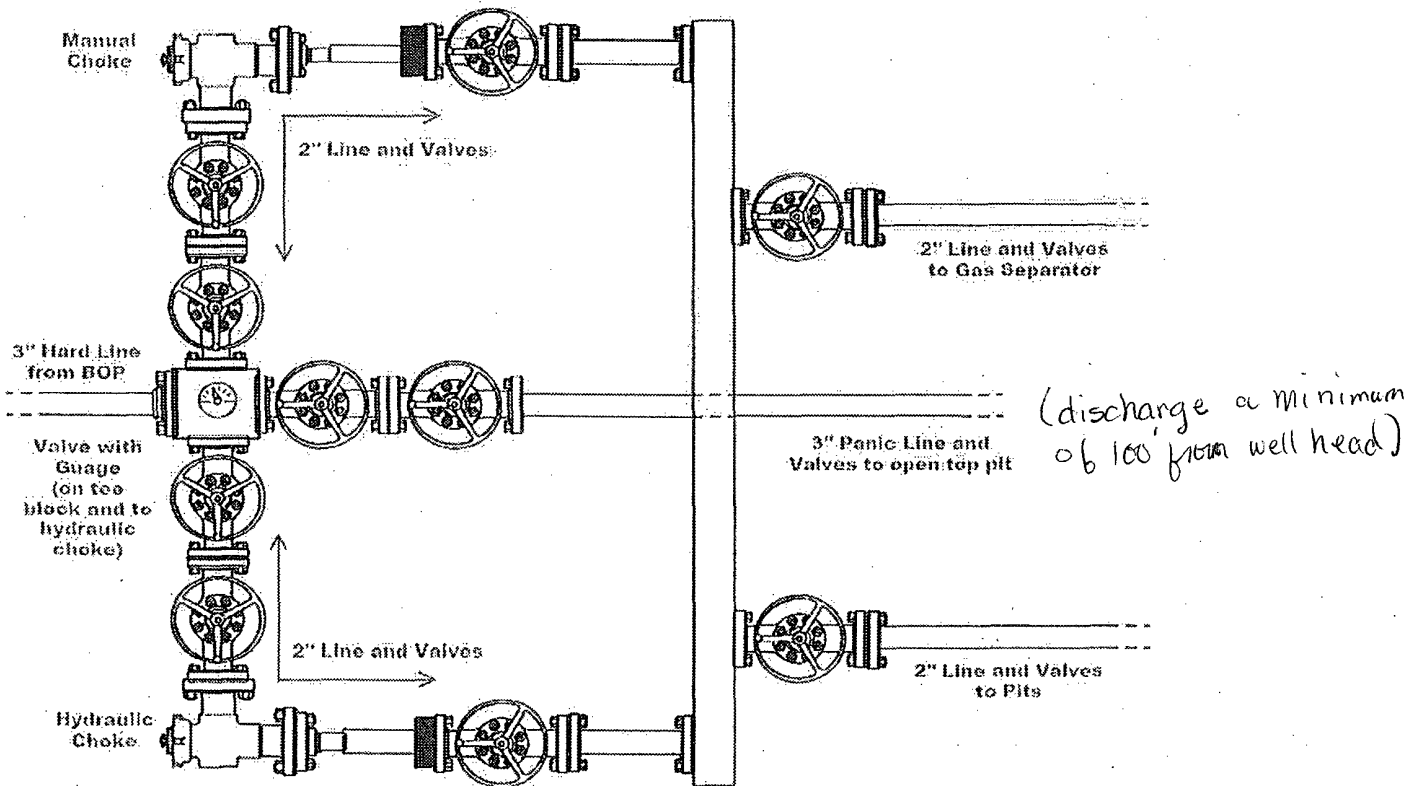
SIZE	PRESSURE	DESCRIPTION
2"	5,000	Check Valve
2"	5,000	Gate Valve
2"	5,000	Gate Valve

Choke Line

SIZE	PRESSURE	DESCRIPTION
3"	5,000	Gate Valve
3"	5,000	HCR Valve
3"	5,000	Steel Line Only

EXHIBIT F-1

Chesapeake Minimum BOPE Requirements
 Wellname: PLU Big Sinks 25 Federal 1H
 County, State: Eddy County, NM
 Location: 100' FSL 2240' FEL, Section 25, Township 24S, Range 30E
 Operation: Intermediate and Production Hole Sections



Choke Manifold

SIZE	PRESSURE	DESCRIPTION
2" or 3"	5,000	Gate Valves
3'x15'		Gas Separator
8"		Gas Separator vent line (anchored)

EXHIBIT F-2