

CONFIDENTIAL

Form 3160-3  
(April 2004)

OCD-HOBBS

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

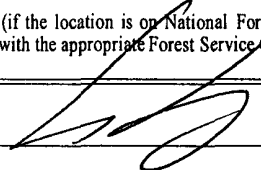
1a. Type of work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		7. If Unit or CA Agreement, Name and No.
1b. Type of Well: <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other <input type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		8. Lease Name and Well No. <b>(35730)</b> <b>KELLER 27 FEDERAL 2</b>
2. Name of Operator <b>CHESAPEAKE OPERATING, INC. ATTN: LINDA GOOD</b>		9. API Well No. <b>30-025-37906</b>
3a. Address <b>P.O. BOX 18496, OKLAHOMA CITY, OK 73154-0496</b>	3b. Phone No. (include area code) <b>405-767-4275</b>	10. Field and Pool, or Exploratory <b>Bell Lake Delaware East</b> <b>ANTELOPE RIDGE</b>
4. Location of Well (Report location clearly and in accordance with any State requirements.) At surface <b>1967 FSL 2055 FWL, NESW</b> At proposed prod. zone <b>SAME</b> <b>Unit K</b>		11. Sec., T. R. M. or Blk. and Survey or Area <b>27-23S-34E</b> <b>(96322)</b>
14. Distance in miles and direction from nearest town or post office* <b>APPROX. 20 MILES NW OF JAL, NM.</b>		12. County or Parish <b>LEA</b>
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)		13. State <b>NM</b>
16. No. of acres in lease <b>320</b>		17. Spacing Unit dedicated to this well <b>40</b>
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.		20. BLM/BIA Bond No. on file <b>NM2634</b>
19. Proposed Depth <b>8800</b>		21. Elevations (Show whether DF, KDB, RT, GL, etc.) <b>3440 GR 3452 KB</b>
22. Approximate date work will start*		23. Estimated duration

24. Attachments

**Capitan 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.  | 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) <b>HENRY HOOD</b>	Date <b>7/1/06</b>
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Title  
**SR. VICE PRESIDENT - LAND & LEGAL**

Approved by (Signature) <b>/s/ Tony J. Herrell</b>	Name (Printed/Typed) <b>/s/ Tony J. Herrell</b>	Date <b>MAY 19 2006</b>
--	--	----------------------------

Title <b>FIELD MANAGER</b>	Office <b>CARLSBAD FIELD OFFICE</b>
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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.

**APPROVAL FOR 1 YEAR**

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)

Witness Surface Casing

**KZ**  
**APPROVAL SUBJECT TO  
GENERAL REQUIREMENTS AND  
SPECIAL STIPULATIONS  
ATTACHED**

Chesapeake Operating Inc.  
Keller 27 Federal 2  
1967 FSL 2055 FWL  
NESW of Section 27-23S-34E  
Lea County, NM

Confidential – Tight Hole  
Lease No. NMLC 071949

**#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. A general rig plat is attached as Exhibit D. A final rig plat will be submitted prior to spud. ~~Exhibit E Archeological 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.



## DISTRICT I

1626 N. FRENCH DR., HOBBS, NM 88240

## DISTRICT II

1301 W. GRAND AVENUE, 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 Department

## 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 <b>30-025-37906</b>	Pool Code <b>96322</b>	Pool Name <b>Bell Lake; Delaware, East</b>
Property Code <b>35730</b>	Property Name <b>KELLER 27 FEDERAL</b>	Well Number <b>2</b>
OGRID No. <b>147179</b>	Operator Name <b>CHESAPEAKE OPERATING, INC.</b>	Elevation <b>3475'</b>

## Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
K	27	23-S	34-E		1967	SOUTH	2055	WEST	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

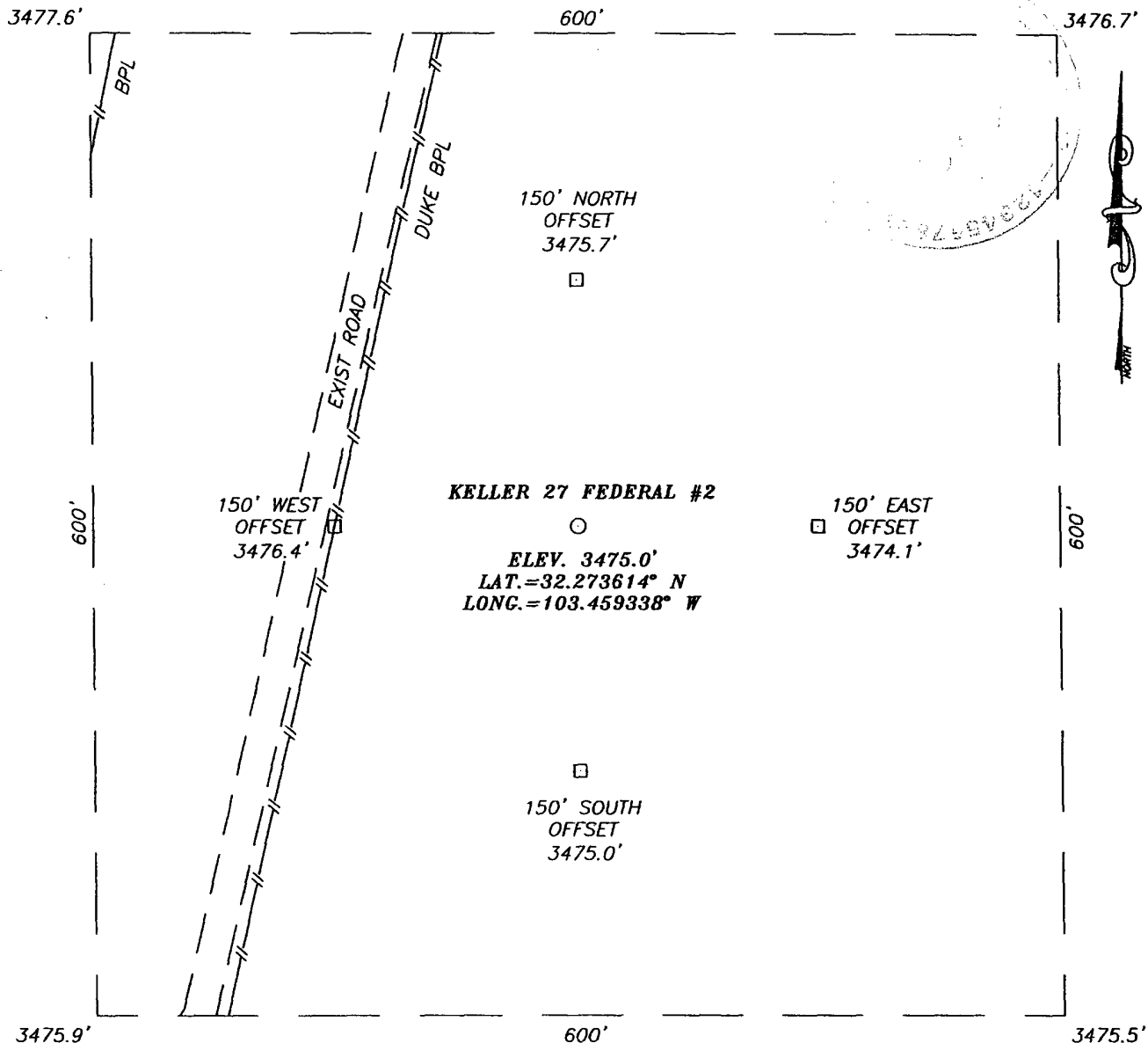
Dedicated Acres <b>40</b>	Joint or Infill	Consolidation Code	Order No.
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NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED  
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

<p>GEODETC COORDINATES NAD 27 NME</p> <p>Y=464358.7 N X=770130.9 E</p> <p>LAT.=32.273614° N LONG.=103.459338° W</p>	<p><b>OPERATOR CERTIFICATION</b></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>Kathy F. Blick</i> 2/15/06 Signature Date</p> <p><i>Kathy F. Blick</i> Printed Name</p> <p><b>SURVEYOR CERTIFICATION</b></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>FEBRUARY 1, 2006</p> <p>Date Surveyed JR</p> <p>Signature &amp; Seal of Professional Surveyor</p> <p><i>Gary L. Edson</i> 2/13/06 06-11-0241</p> <p>Certificate No. GARY EDSON 12641</p>
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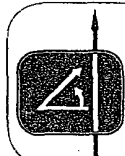
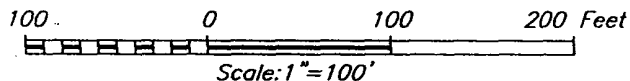
EXHIBIT A-1

**SECTION 27, 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 ANTELOPE RD., GO SOUTH ON ANTELOPE RD. APPROX. 3.2 MILES TO ADOBE RD., TURN LEFT (EAST) AND GO APPROX. 1.1 MILES TO A CALICHE ROAD ON THE RIGHT. TURN RIGHT (SOUTH) AND GO APPROX. 0.77 MILES. THIS LOCATION IS APPROX. 150' EAST OF ROAD.



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

**CHESAPEAKE OPERATING, INC.**

KELLER 27 FEDERAL #2 WELL  
 LOCATED 1967 FEET FROM THE SOUTH LINE  
 AND 2055 FEET FROM THE WEST LINE OF SECTION 27,  
 TOWNSHIP 23 SOUTH, RANGE 34 EAST, N.M.P.M.,  
 LEA COUNTY, NEW MEXICO.

Survey Date: 2/01/06	Sheet 1 of 1 Sheets		
W.O. Number: 06.11.0241	Dr By: J.R.	Rev 1:N/A	
Date: 2/09/06	Disk: CD#6	06110241	Scale: 1"=100'

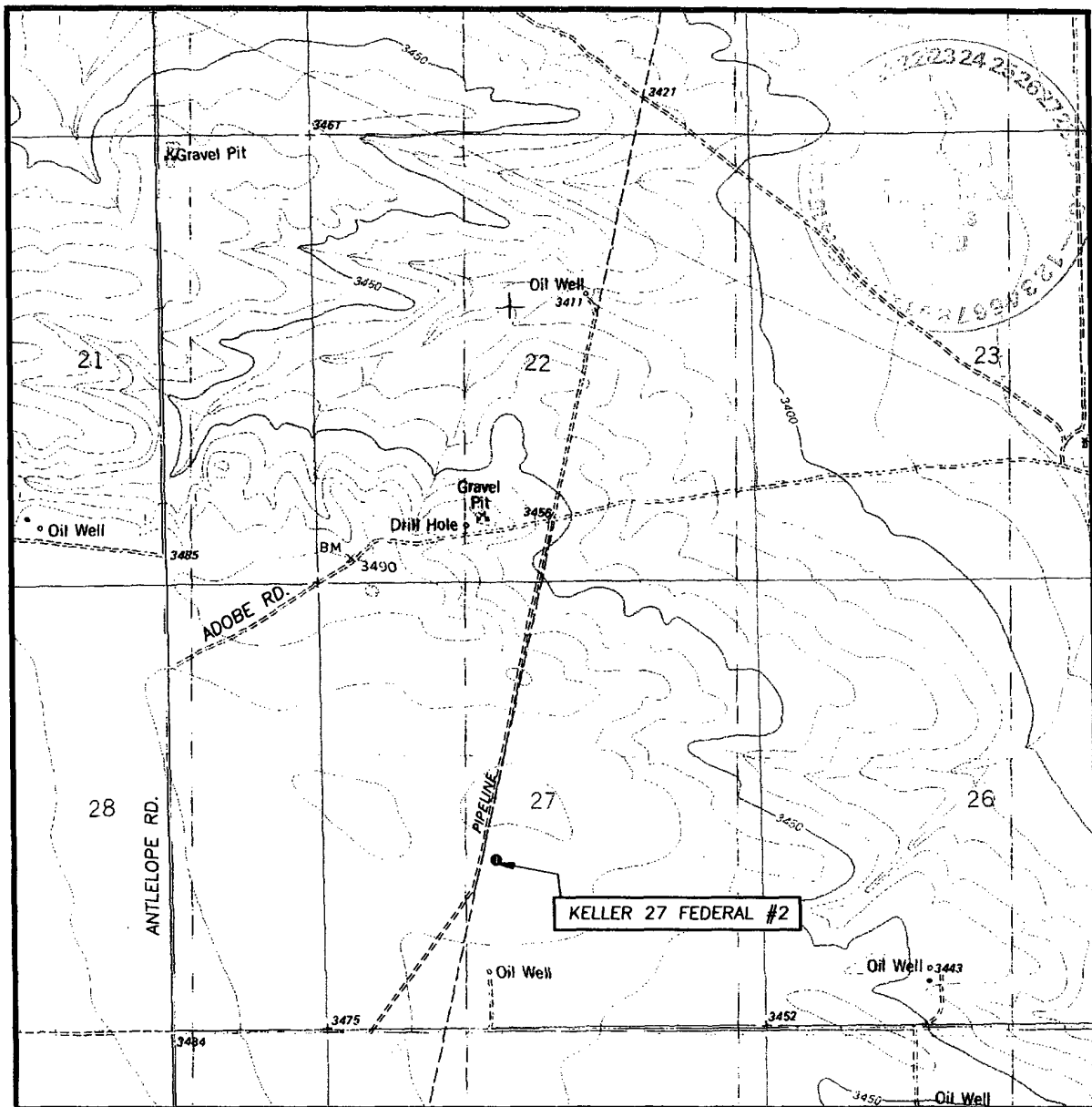
**EXHIBIT A-2**

28	27	



EXHIBIT A-3

# LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

CONTOUR INTERVAL:  
SAN SIMON SINK, N.M. - 10'

SEC. 27 TWP. 23-S RGE. 34-E

SURVEY \_\_\_\_\_ N.M.P.M.

COUNTY LEA STATE NEW MEXICO

DESCRIPTION 1967' FSL & 2055' FWL

ELEVATION 3475'

OPERATOR CHESAPEAKE OPERATING, INC.

LEASE KELLER 27 FEDERAL

U.S.G.S. TOPOGRAPHIC MAP  
SAN SIMON SINK, N.M.

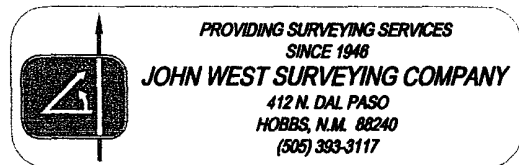


EXHIBIT A-4



**Linda Good**  
Permitting Agent

May 4, 2006

**VIA FACSIMILE (505) 234-5927**

Mr. Cody Layton  
United States Department of the Interior  
Bureau of Land Management  
Carlsbad Field Office  
620 E. Greene Street  
Carlsbad, NM 88220-6292

Re: Pit Dimensions

Dear Cody:

Chesapeake Operating, Inc. proposes to use a modified loop system for the wells below. There will be a pit 130' long x 10' wide x 10' deep to be used for cuttings only.

Keller 22 Federal 1  
Keller 27 Federal 1, 2 & 3  
Lotus C Federal 907  
Lotus 10 Federal 6

We propose that the in-ground pit dimensions for the wells below will be 130' long x 15' wide x 10' deep.

Livestock Federal 3-9, Lea County  
Sun Pearl 28 Federal 7, Lea County

If you have any further questions, please contact me at 405-767-4275.

Sincerely,

CHESAPEAKE OPERATING, INC.

A handwritten signature in cursive script that reads "Linda Good".

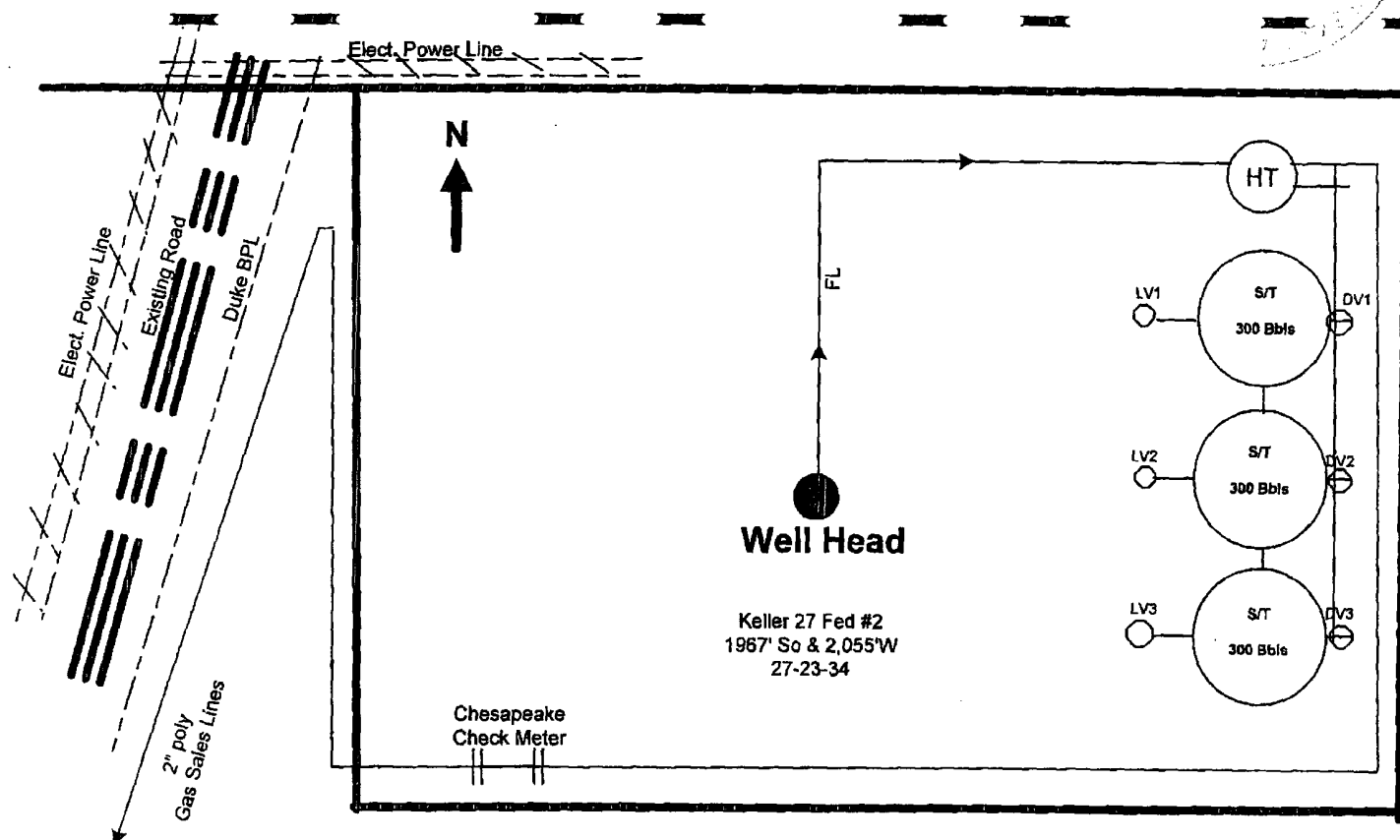
Linda Good  
Federal Regulatory



Chesapeake Energy Corporation

6100 N. Western Ave. • Oklahoma City, OK 73118 • P.O. Box 18496 • Oklahoma City, OK 73154-0496  
405.767.4275 • fax 405.879.9583 • lgood@chkenergy.com

**CHESAPEAKE OPERATING, INC.**  
**KELLER 27 FEDERAL 2**  
**27-23S-34E**  
**LEA COUNTY, NM**



From Jal, go West on 128, 15 miles, from the intersection of Co. Rd. E-21 (Delaware Basin Rd) and Antelope Rd. Go South on Antelope Rd. Approx. 3.2 miles to Adobe Rd, turn Left (East) and go Approx. 1.1 Miles to a Caliche Road on the Right. Turn Right (South) and go approx. 0.77 miles. This location is approx. 150' East of Road.

All product will be metered on location.

General sealing of valves and sales by tank gauging. Production phase: all drain valves (D1-D3) and sales valves (L1-L3) sealed closed. Sales phase: the tank from which sales are being made will be isolated by sealing closed the drain, fill, and any equalizer valves during sales. Draining phase: the tank being drained will be isolated by sealing closed the sales, fill, equalizer valves and drain valves on the other tanks.

KELLER 27 FEDERAL #2 610218

This lease is subject to  
 Chesapeake's Site Security Plan  
 located at 6100 N. Western  
 Oklahoma City, OK 73118

Prepared by: DEBBIE HERNANDEZ  
 Date: 02-23-2006

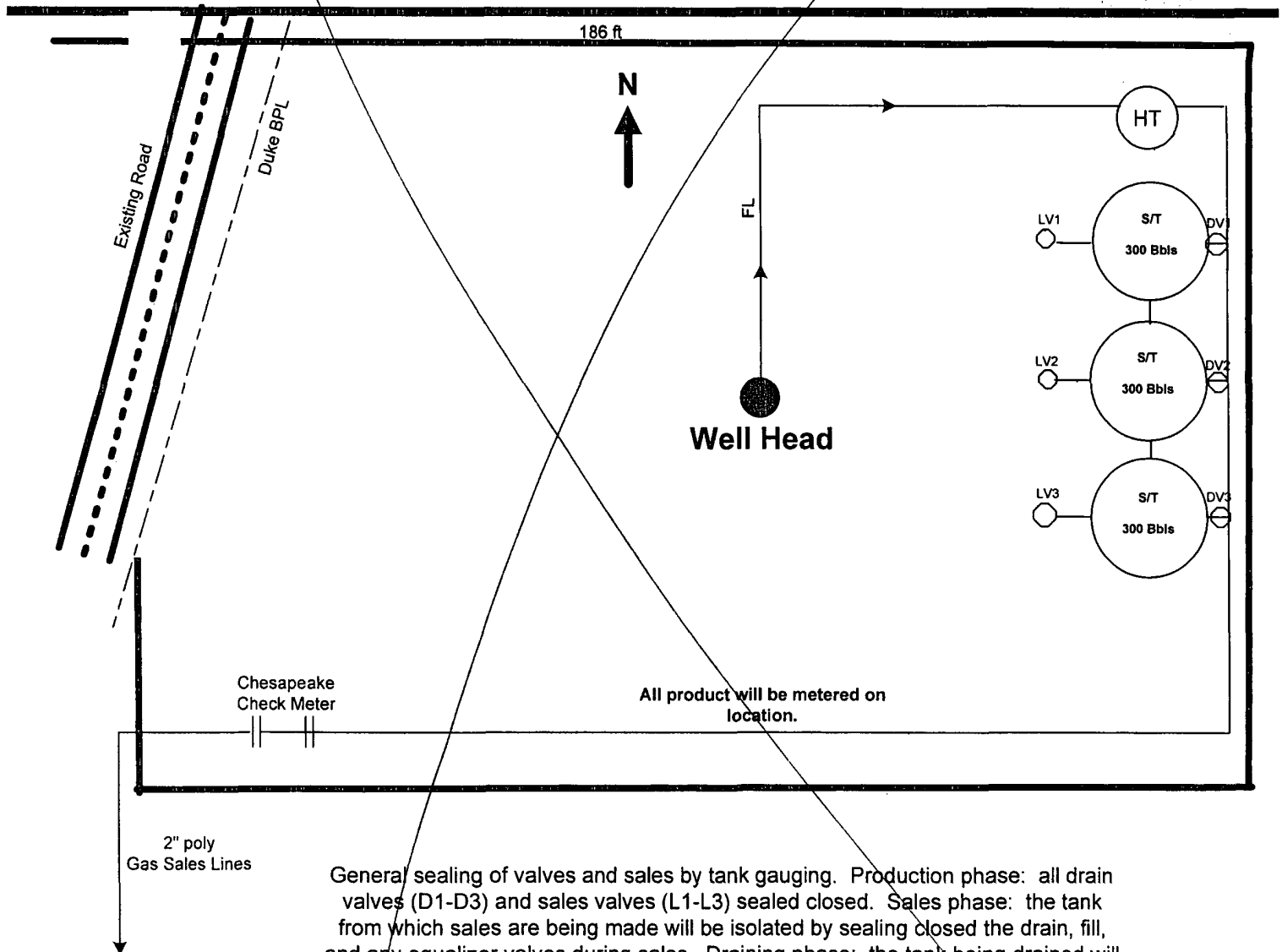
Approved by:  
 Date:

EXHIBIT *C*



# CHESAPEAKE OPERATING, INC.

## KELLER 27 FEDERAL 2 27-23S-34E LEA COUNTY, NM



General sealing of valves and sales by tank gauging. Production phase: all drain valves (D1-D3) and sales valves (L1-L3) sealed closed. Sales phase: the tank from which sales are being made will be isolated by sealing closed the drain, fill, and any equalizer valves during sales. Draining phase: the tank being drained will be isolated by sealing closed the sales, fill, equalizer valves and drain valves on the other tanks.

From Jal, go West on 128, 15 miles, from the intersection of Co. Rd, E-21 (Delaware Basin Rd) and Antelope Rd. Go South on Antelope Rd. Approx. 3.2 miles to Adobe Rd, turn Left (East) and go Approx. 1.1 Miles to a Caliche Road on the Right. Turn Right (South) and go approx. 0.77 miles. This location is approx. 150' East of Road.

KELLER 27 FEDERAL #2 610218

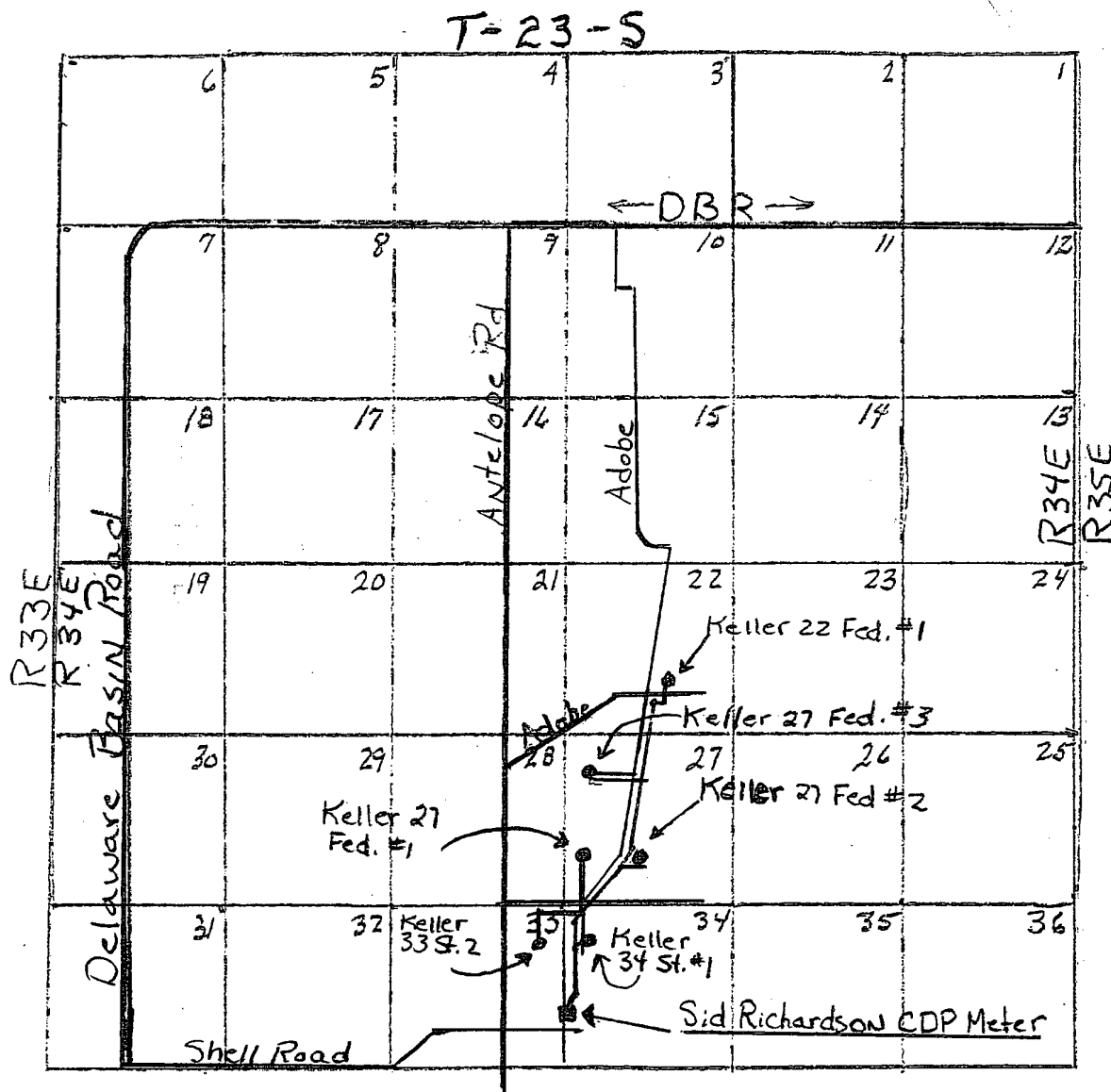
This lease is subject to Chesapeake's Site Security Plan located at 6100 N. Western Oklahoma City, OK 73118

Prepared by: DEBBIE HERNANDEZ  
Date: 02-23-2006

Approved by:  
Date:

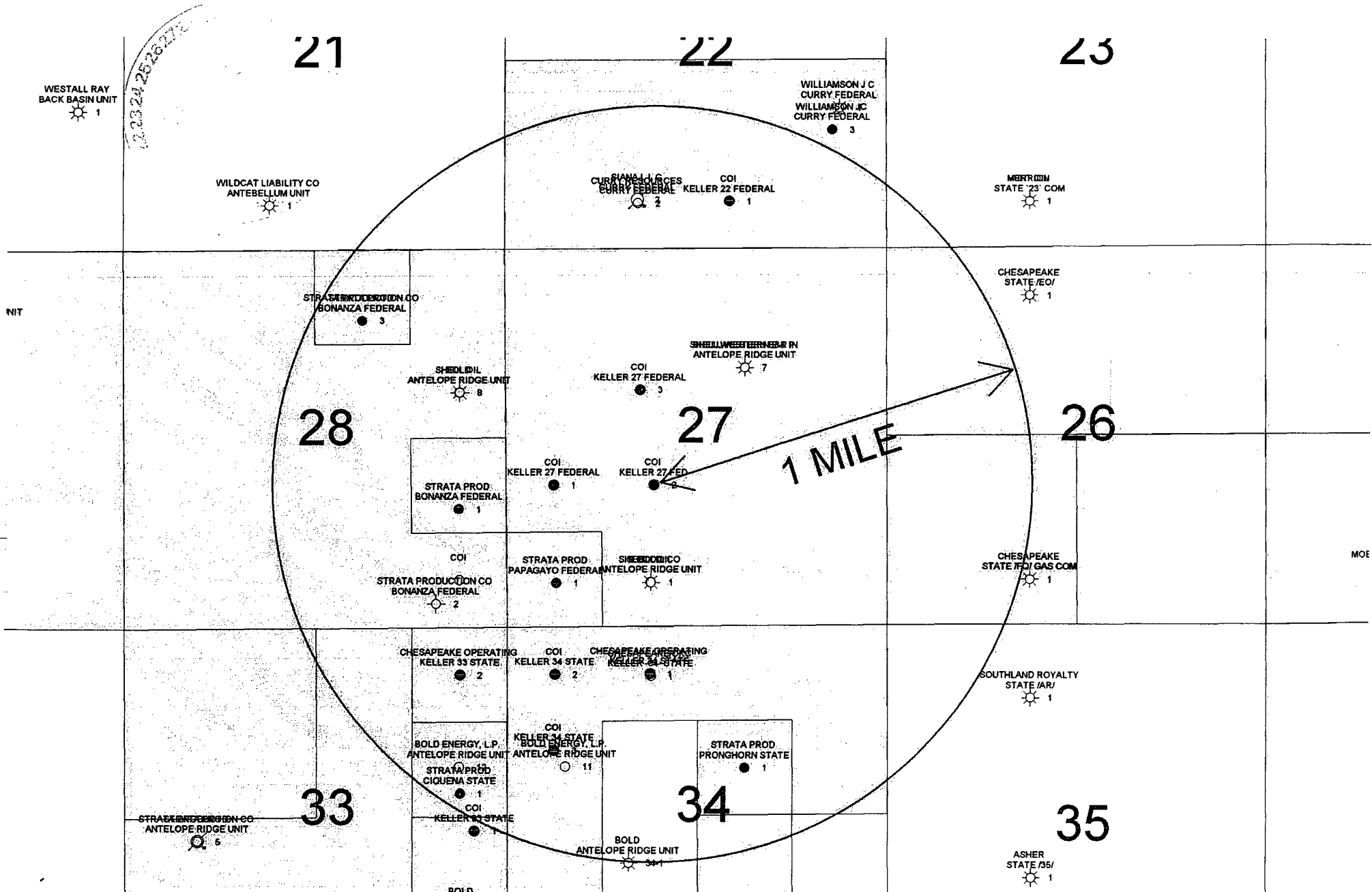
EXHIBIT C

# Chesapeake Keller Gas Flow Lines

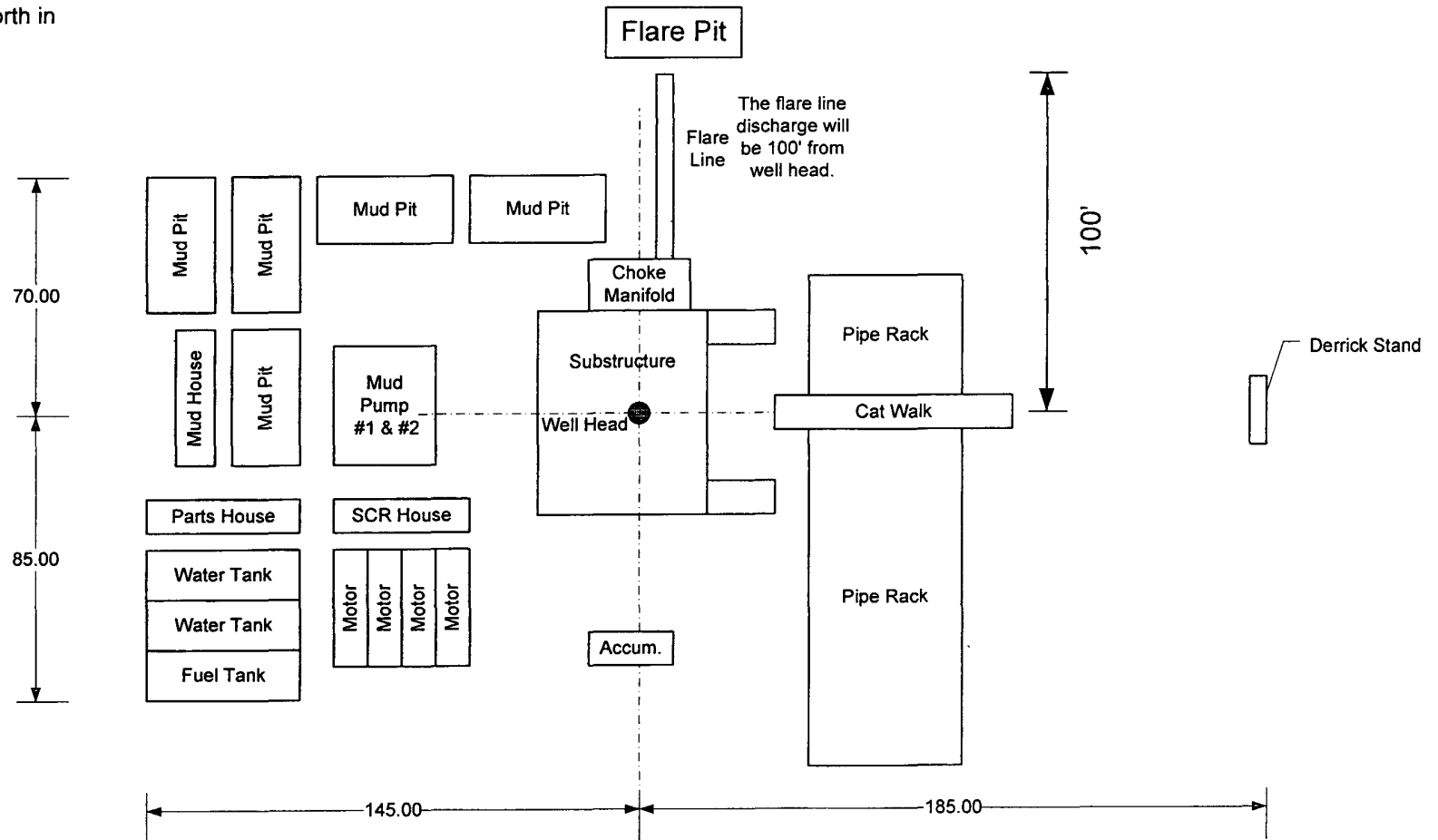


Cody the Keller 33 St. #2 production line will go over to the Keller 34 St. #1. All other wells will have their own separate batteries.

Chesapeake will measure the gas at each battery and deliver the gas to Sid Richardson/Southern Union at location marked above.



Prevailing Winds from the North in Winter and from the South in Summer.



**Chesapeake Operating, Inc**

## General Rig Layout

SIZE	FSCM NO	DWG NO	REV
SCALE	Not to Scale	SHEET	1 OF 1

EXHIBIT 8

# BLOWOUT PREVENTOR SCHEMATIC

CHESAPEAKE OPERATING INC

WELL : KELLER 27 FEDERAL 2

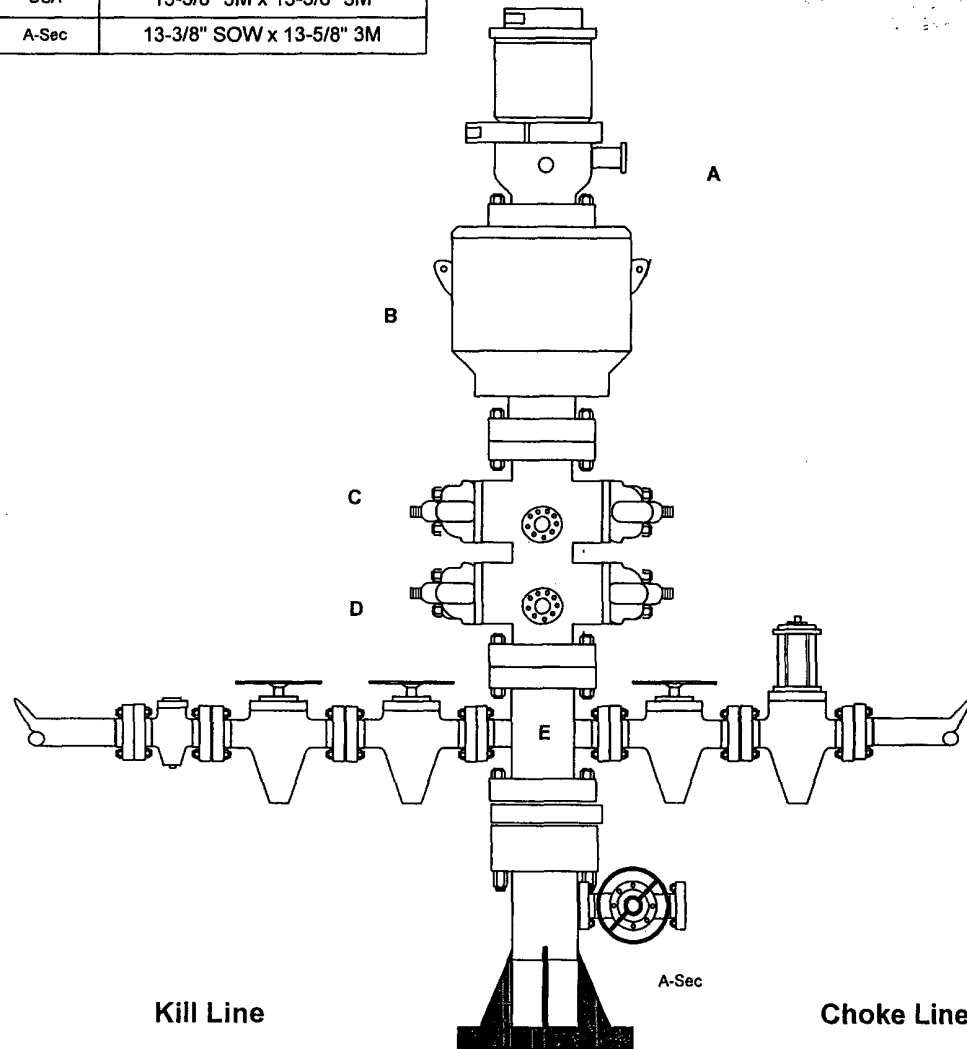
RIG :

COUNTY : Lea

STATE: New Mexico

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

	SIZE	PRESSURE	DESCRIPTION
A	13-5/8"	500#	Rot Head
B	13-5/8"	3,000#	Annular
C	13-5/8"	3,000#	Pipe Rams
D	13-5/8"	3,000#	Blind Rams
E	13-5/8"	3,000#	Mud Cross
DSA	13-5/8" 3M x 13-5/8" 3M		
A-Sec	13-3/8" SOW x 13-5/8" 3M		



SIZE	PRESSURE	DESCRIPTION
2"	3,000#	Check Valve
2"	3,000#	Gate Valve
2"	3,000#	Gate Valve

SIZE	PRESSURE	DESCRIPTION
4"	3,000#	Gate Valve
4"	3,000#	HCR Valve

EXHIBIT F-1

# BLOWOUT PREVENTOR SCHEMATIC

## CHESAPEAKE OPERATING INC

WELL : KELLER 27 FEDERAL 2

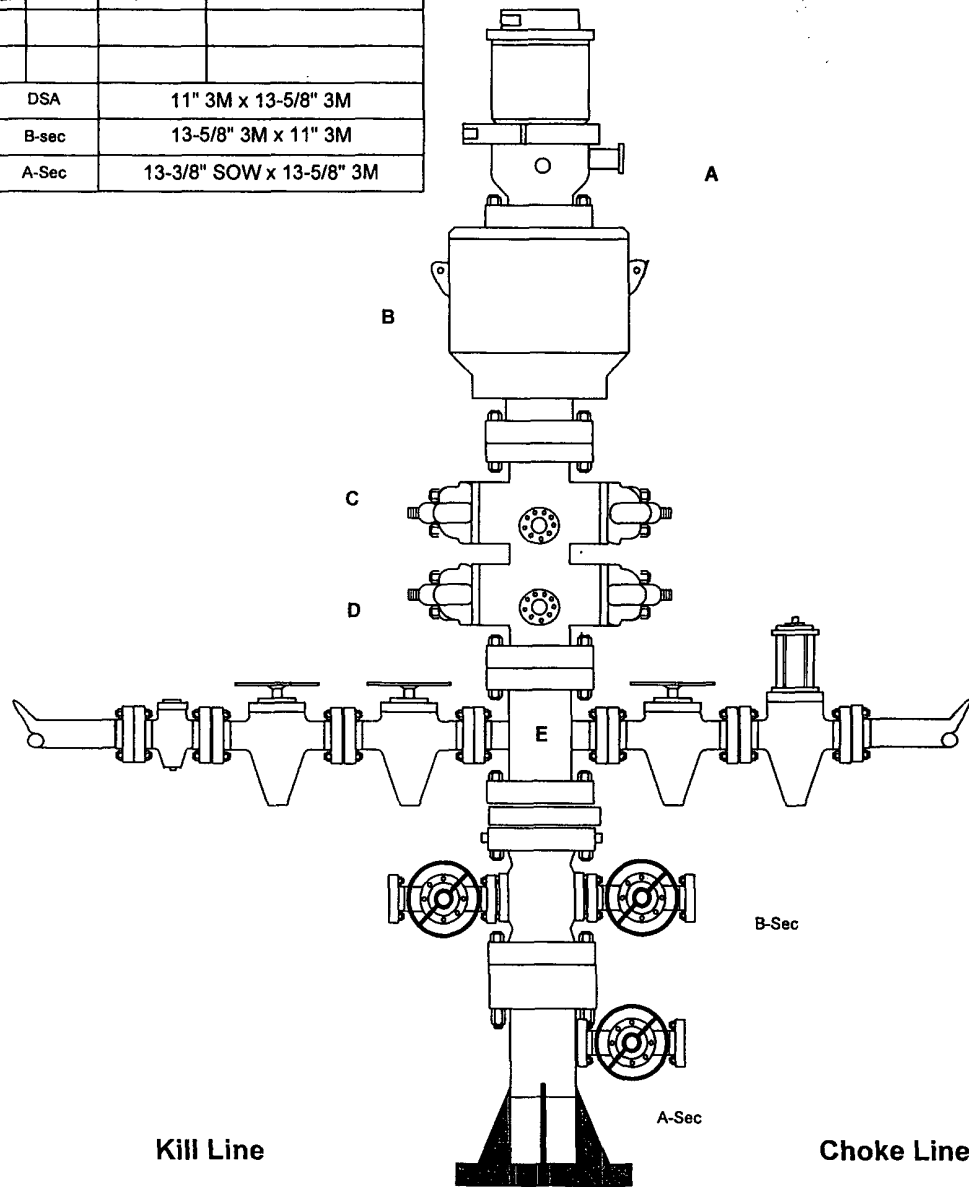
RIG :

COUNTY : Lea

STATE: New Mexico

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

	SIZE	PRESSURE	DESCRIPTION
A	13-5/8"	500#	Rot Head
B	13-5/8"	3,000#	Annular
C	13-5/8"	3,000#	Pipe Rams
D	13-5/8"	3,000#	Blind Rams
E	13-5/8"	3,000#	Mud Cross
DSA	11" 3M x 13-5/8" 3M		
B-sec	13-5/8" 3M x 11" 3M		
A-Sec	13-3/8" SOW x 13-5/8" 3M		



SIZE	PRESSURE	DESCRIPTION
2"	3,000#	Check Valve
2"	3,000#	Gate Valve
2"	3,000#	Gate Valve

SIZE	PRESSURE	DESCRIPTION
4"	3,000#	Gate Valve
4"	3,000#	HCR Valve

EXHIBIT F-2

District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
1301 W. Grand Avenue, Artesia, NM 88210  
District III  
1000 Rio Brazos Road, 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 South St. Francis Dr.  
Santa Fe, NM 87505

Form C-144  
June 1, 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 Operating Inc. Telephone: (432)687-2992 e-mail address: bcoffman@chkenergy.com  
Address: P. O. Box 11050 Midland, TX 79702-8050  
Facility or well name: Keller 27 Federal #2 API#: 30-025-37406 U/I or Qtr/Qtr K Sec 27 T 23S R 34E  
County: Lea Latitude 32.273614 N Longitude 103.459338 W NAD: 1927 ☒ 1983 ☐ Surface Owner Federal ☒ State ☐ Private ☐ Indian ☐

<b>Pit</b> Type: Drilling <input checked="" type="checkbox"/> Production <input type="checkbox"/> Disposal <input type="checkbox"/> Workover <input type="checkbox"/> Emergency <input type="checkbox"/> Lined <input checked="" type="checkbox"/> Unlined <input type="checkbox"/> Liner type: Synthetic <input checked="" type="checkbox"/> Thickness <u>12</u> mil Clay <input type="checkbox"/> Pit Volume <u>12129</u> bbl		<b>Below-grade tank</b> Volume: _____ bbl Type of fluid: _____ Construction material: _____ Double-walled, with leak detection? Yes <input type="checkbox"/> 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	(20 points)	
	50 feet or more, but less than 100 feet	(10 points)	
	100 feet or more	(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	(20 points)	
	No	(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	(20 points)	
	200 feet or more, but less than 1000 feet	(10 points)	10
	1000 feet or more	(0 points)	
Ranking Score (Total Points)			10

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: (check the onsite box if you are burying in place) 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.

Additional Comments:

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: 05/31/2006

Printed Name/Title Brenda Coffman Regulatory Analyst

Signature Brenda Coffman

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.

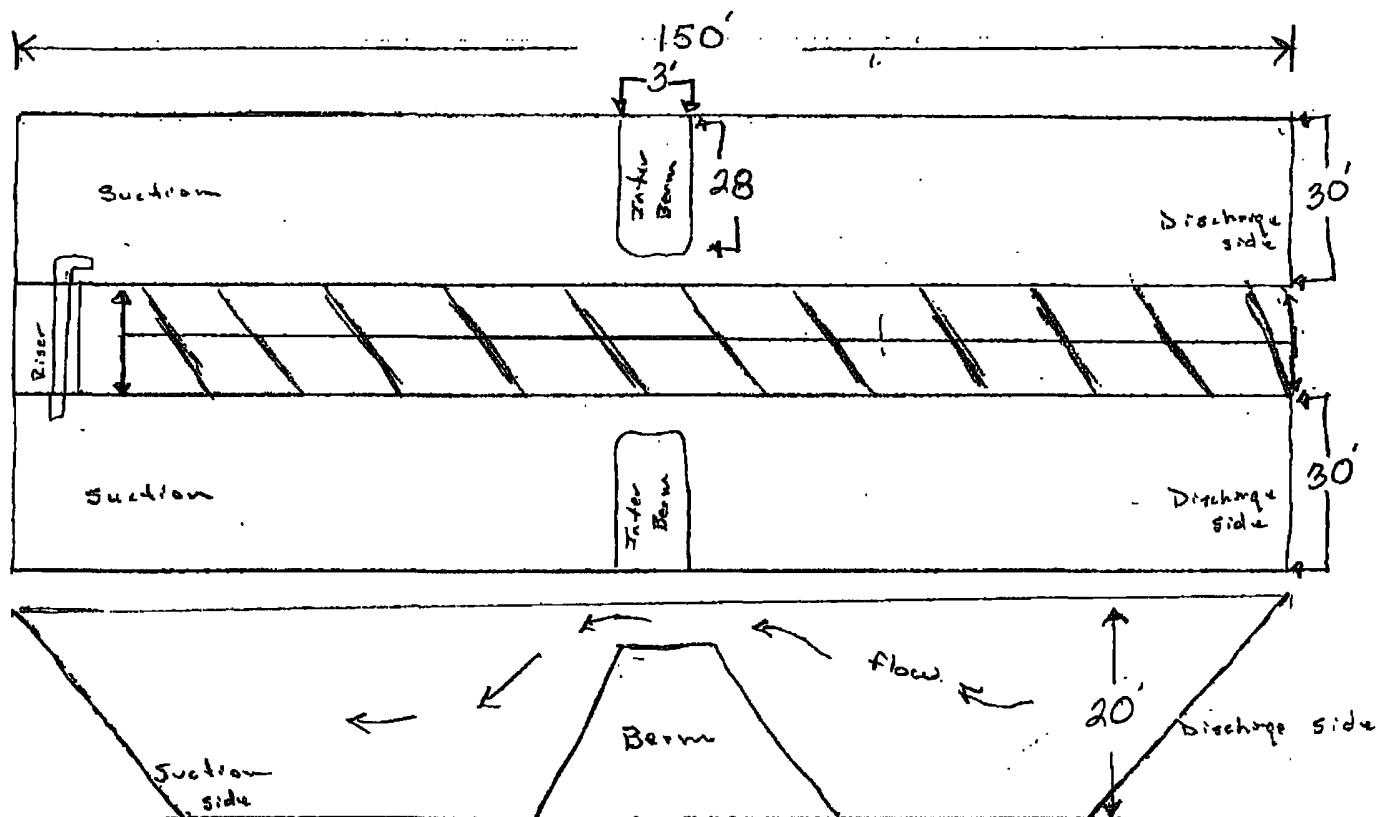
Approval:

**PETROLEUM ENGINEER**

Printed Name/Title \_\_\_\_\_

Signature [Signature]

Date: JUN 05 2006

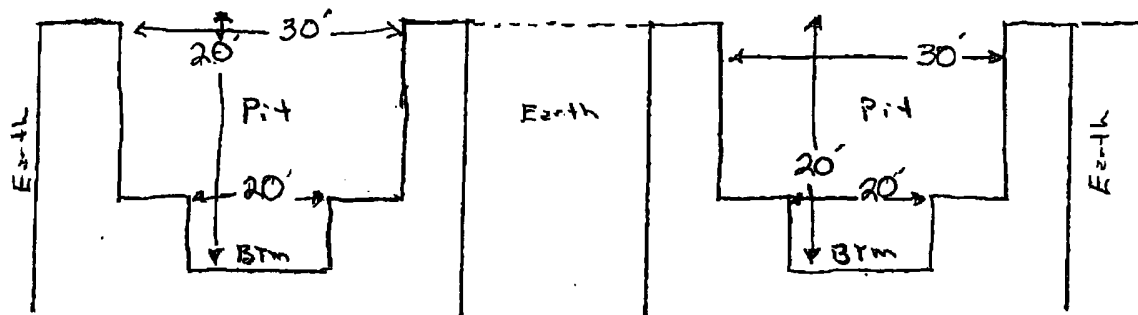


102 mm plate  
over all

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



 The sender of this message has requested a read receipt. [Click here to send a receipt.](#)

**Mull, Donna, EMNRD**

**From:** Phillips, Dorothy, EMNRD  
**To:** Mull, Donna, EMNRD  
**Cc:**  
**Subject:** RE: Financial Assurance Requirement  
**Attachments:**

**Sent:** Mon 6/5/2006 9:18 AM

All have blankets and one appear on Jane's list.

---

**From:** Mull, Donna, EMNRD  
**Sent:** Monday, June 05, 2006 8:06 AM  
**To:** Phillips, Dorothy, EMNRD  
**Cc:** Macquesten, Gail, EMNRD; Sanchez, Daniel J., EMNRD  
**Subject:** Financial Assurance Requirement

Dorothy,

Is the Financial Assurance Requirement for these Operators OK?

Pogo Producing Co (17891)  
Devon Energy Production Co LP (6137)  
Pride Energy Co (151323)  
BTA Oil Producers (3002)  
Chesapeake Operating Inc (147179)  
B C Operating Inc (160825)

I have check the inactive well list for each of these operators.

Please let me know. Thanks and have a nice day. Donna