

EC

APPLIK

OPER. OGRID NO. 147179PROPERTY NO. 33187POOL CODE 72660EFF. DATE 2/23/04API NO. 30-025-36583POTASH  
FORM APPROVED  
OMB No. 1004-0136

Expires November 30, 2000

5. Lease Serial No.  
NMNM96244

6. If Indian, Allottee or Tribe Name

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

8. Lease Name and Well No.  
LIVESTOCK FEDERAL X2

9. API Well No.

30-025-3658310. Field and Pool, or Exploratory  
~~UNKNOWN~~ Boo+leg Ridge  
Morrow East

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

Sec 9 T22S R33E Mer NMP  
SME: BLM12. County or Parish  
LEA13. State  
NM

17. Spacing Unit dedicated to this well

320.00

20. BLM/BIA Bond No. on file

23. Estimated duration

1a. Type of Work: ☒ DRILL ☐ REENTER

CONFIDENTIAL

1b. Type of Well: ☐ Oil Well ☒ Gas Well ☐ Other ☒ Single Zone ☐ Multiple Zone2. Name of Operator  
CHESAPEAKE OPERATING INCContact: SHARON E. DRIES  
E-Mail: sdries@chkenergy.com3a. Address  
P O BOX 18496  
OKLAHOMA CITY, OK 731543b. Phone No. (include area code)  
Ph: 405.879.7985  
Fx: 405.879.9583

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

At surface SWNE 1450FNL 1950FEL 32.40945 N Lat, 103.57470 W Lon

At proposed prod. zone

Unit G

Secretary's Potash

14. Distance in miles and direction from nearest town or post office\*  
APPROXIMATELY 68 MILES FROM HOBBS15. Distance from proposed location to nearest property or  
lease line, ft. (Also to nearest drig. unit line, if any)  
690 FEET16. No. of Acres in Lease  
2360.0018. Distance from proposed location to nearest well, drilling,  
completed, applied for, on this lease, ft.  
3161 FEET19. Proposed Depth  
15400 MD21. Elevations (Show whether DF, KB, RT, GL, etc.)  
3619 GL22. Approximate date work will start  
02/01/2004

24. Attachments

Carlsbad 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:

- Well plat certified by a registered surveyor.
- A Drilling Plan.
- A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office).

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

25. Signature  
(Electronic Submission)Name (Printed/Typed)  
SHARON E. DRIESDate  
01/09/2004Title  
AUTHORIZED REPRESENTATIVEApproved by (Signature)  
/s/ Jesse J. JuenName (Printed/Typed)  
/s/ Jesse J. JuenDate  
FEB 09 2004Title  
ASSOCIATE STATE DIRECTOROffice  
NM STATE OFFICEApplication 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 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.

Additional Operator Remarks (see next page)

Electronic Submission #26676 verified by the BLM Well Information System  
For CHESAPEAKE OPERATING INC, sent to the Hobbs  
Committed to AFMSS for processing by LINDA ASKWIG on 01/18/2004 (04LA0057AE)DECLARED WATER BASIN  
CEMENT BEHIND THE 13 3/8"  
CASING MUST BE CIRCULATEDDECLARED WATER BASIN  
CEMENT BEHIND THE 9 5/8"  
CASING MUST BE CIRCULATEDAPPROVAL SUBJECT TO  
GENERAL REQUIREMENTS AND  
SPECIAL STIPULATIONS  
ATTACHED

\*\* BLM REVISED \*\* BLM REVISED \*\* BLM REVISED \*\* BLM REVISED \*\*

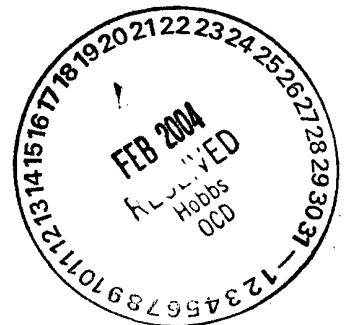
**Additional Operator Remarks:**

Chesapeake Operating, Inc. proposed to drill a well to 15400' to test the Bell Canyon, Basal Brushy Canyon Sand, Bone Springs, Atoka, and Morrow formations. If productive casing will be run and the well will be completed. If dry, the well will be plugged and abandoned as per BLM and New Mexico Oil Conservation Division requirements.

Attached please find the Surface Use Plan, Drilling Plan, and attachments 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 once a rig is assigned.

The grazing lessee was present at the staking of this well and is aware that Chesapeake intends to drill this well.

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.



ONSHORE ORDER NO. 1  
Chesapeake Operating, Inc.  
Livestock Federal 9 2  
1450' FNL & 1950' FEL  
SW NE of Section 9-22S-33E  
Lea County, NM

CONFIDENTIAL - TIGHT HOLE

Lease No. NMNM 96244

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.

By:

J. Mark Lester

Date:

1/9/04

## DISTRICT I

P.O. Box 1080, Hobbs, NM 88241-1080

## State of New Mexico

Energy, Minerals and Natural Resources Department

Form C-102

Revised February 10, 1984

Submit to Appropriate District Office

State Lease - 4 Copies

Fee Lease - 3 Copies

## DISTRICT II

P.O. Drawer DD, Artesia, NM 88211-0716

## OIL CONSERVATION DIVISION

P.O. Box 2088

Santa Fe, New Mexico 87504-2088

## DISTRICT III

1000 Rio Brazos Rd., Aztec, NM 87410

## DISTRICT IV

P.O. Box 2088, Santa Fe, N.M. 87504-2088

## WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number <b>30-025-36583</b>	Pool Code <b>72660</b>	Pool Name <b>BOOTLEG RIDGE MORROW EAST</b>
Property Code <b>33187</b>	Property Name <b>LIVESTOCK FEDERAL</b>	Well Number <b>2</b>
OGRID No. <b>147179</b>	Operator Name <b>CHESAPEAKE OPERATING, INC.</b>	Elevation <b>3619'</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
<b>G</b>	<b>9</b>	<b>22-S</b>	<b>33-E</b>		<b>1450</b>	<b>NORTH</b>	<b>1950</b>	<b>EAST</b>	<b>LEA</b>

## Bottom Hole Location If Different From Surface

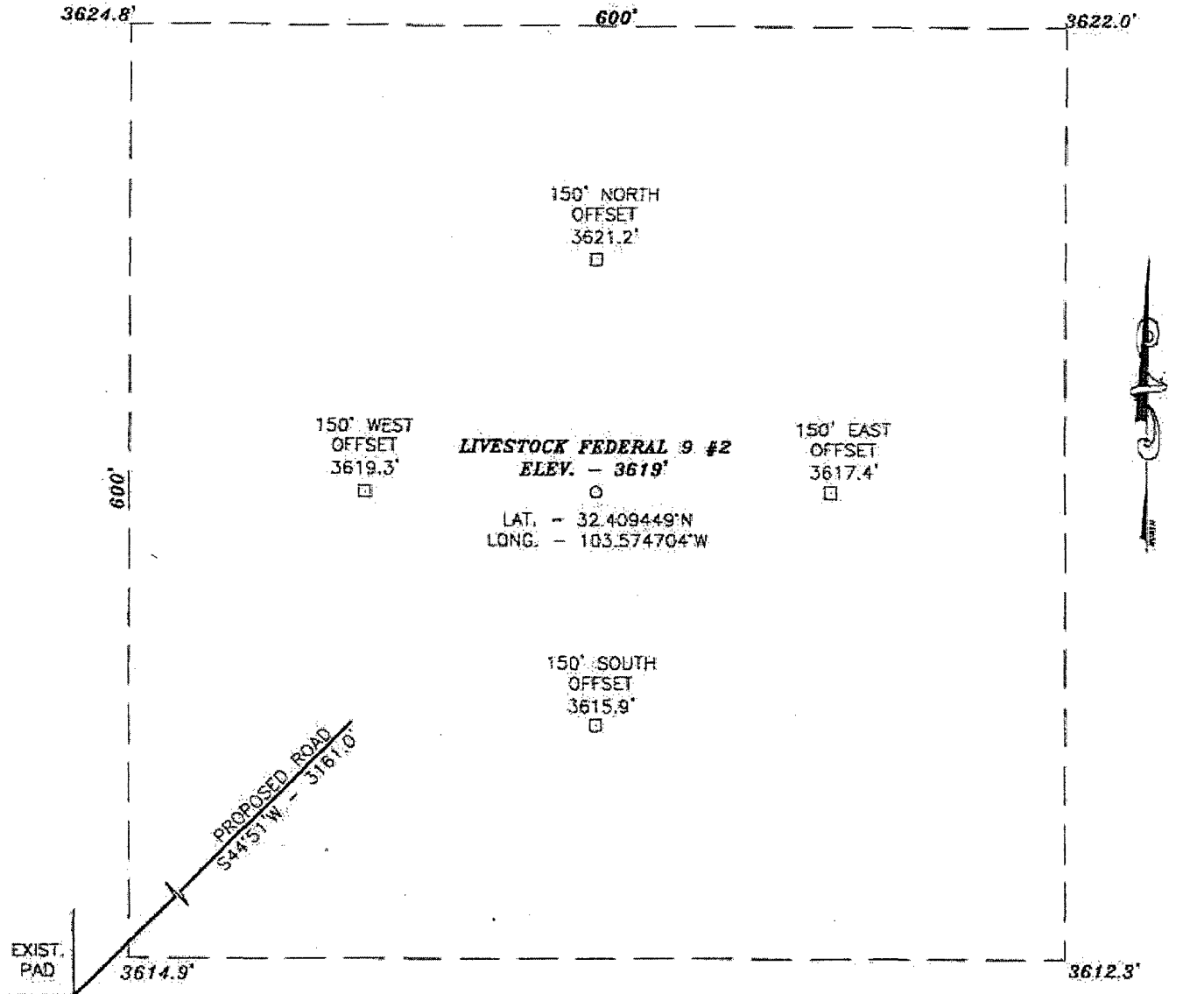
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
<b>320</b>			

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

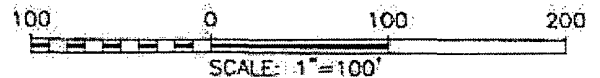
<p>GEODETIC COORDINATES NAD 27 NME Y = 513502.6 N X = 734123.1 E LAT. 32.408449° N LONG. 103.574704° W</p>	<p><b>OPERATOR CERTIFICATION</b></p> <p>I hereby certify the the information contained herein is true and complete to the best of my knowledge and belief.</p> <p><i>Linda F. Townsend</i> Signature <b>Linda F. Townsend</b> Printed Name <b>S. Lindman</b> Title <b>11-6-42</b> Date</p>
	<p><b>SURVEY 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><b>OCTOBER 31, 2003</b></p> <p>Date Surveyed <i>Gary E. Johnson</i> Signature <b>GARY E. JOHNSON</b> Professional Surveyor <b>03.17.1215</b> Certificate No. <b>GARY E. JOHNSON 12641</b></p>

SECTION 9, TOWNSHIP 22 SOUTH, RANGE 33 EAST, N.M.P.M.,  
LEA COUNTY, NEW MEXICO.



DIRECTIONS TO LOCATION:

FROM THE INTERSECTION OF U.S. HWY #8 AND U.S. HWY #176 TRAVEL WEST ALONG U.S. HWY #176 9.1 MILES. TURN LEFT ONTO SAN SIMON RANCH ROAD, A CALICHE ROAD. TRAVEL SOUTH 0.2 MILES AND TURN RIGHT ONTO EL PASO NATURAL GAS PIPELINE ROAD (IN SOUTHWESTERLY DIRECTION). GO 9.9 MILES TO A FORK IN ROAD. TAKE THE SOUTH FORK (AS IT CURVES TO THE SOUTH). 1.5 MILES TO A 3 FORKED ROAD INTERSECTION. (ROAD FORKS: SE, S & SW) TAKE SOUTHEAST ROAD 1.2 MILES. THEN TURN DUE SOUTH 0.25 MILES (CROSS PASTURE) TO LIVESTOCK FEDERAL 9 #2 WELL LOCATION FLAG.



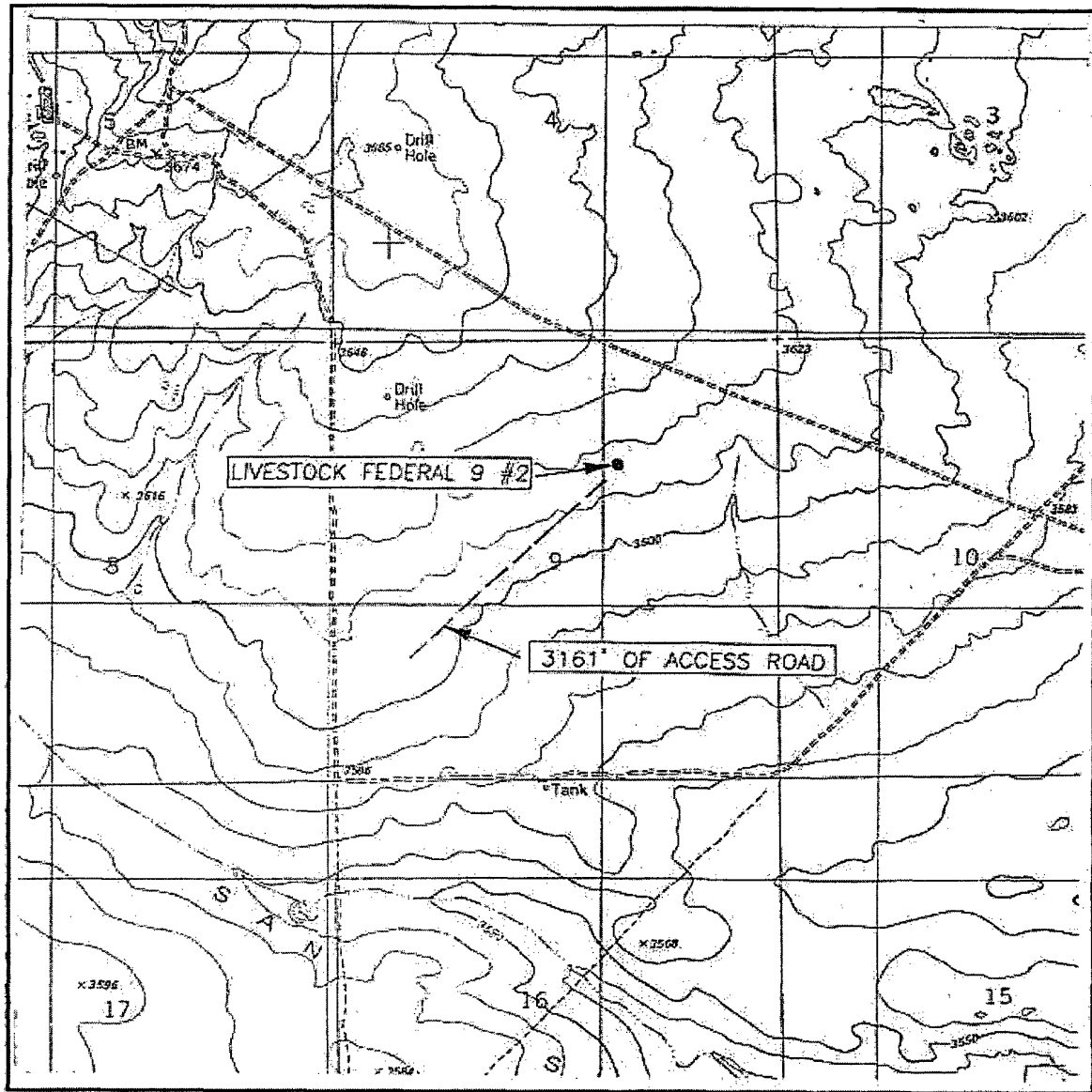
CHESAPEAKE OPERATING, INC.

THE LIVESTOCK FEDERAL 9 #2 LOCATED 1450 FEET FROM THE NORTH LINE AND 1950 FEET FROM THE EAST LINE SECTION 9, TOWNSHIP 22 SOUTH, RANGE 33 EAST, N.M.P.M., LEA COUNTY, NEW MEXICO.

JOHN WEST SURVEYING COMPANY  
412 N. DAL PASO - HOBBS, NEW MEXICO - 505-393-3117

Survey Date: 10/31/03	Sheet 1 of 1 Sheets
W.O. Number: 03.11.1215	Drawn By: L.A.
Date: 11/03/03	DISK:CD#2 03111215

# LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

CONTOUR INTERVAL: 10'  
GRAMA RIDGE, N.M.

SEC. 9 TWP. 22-S RGE. 33-E

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

COUNTY \_\_\_\_\_ LEA

DESCRIPTION 1450' FNL & 1950' FEL

ELEVATION 3619'

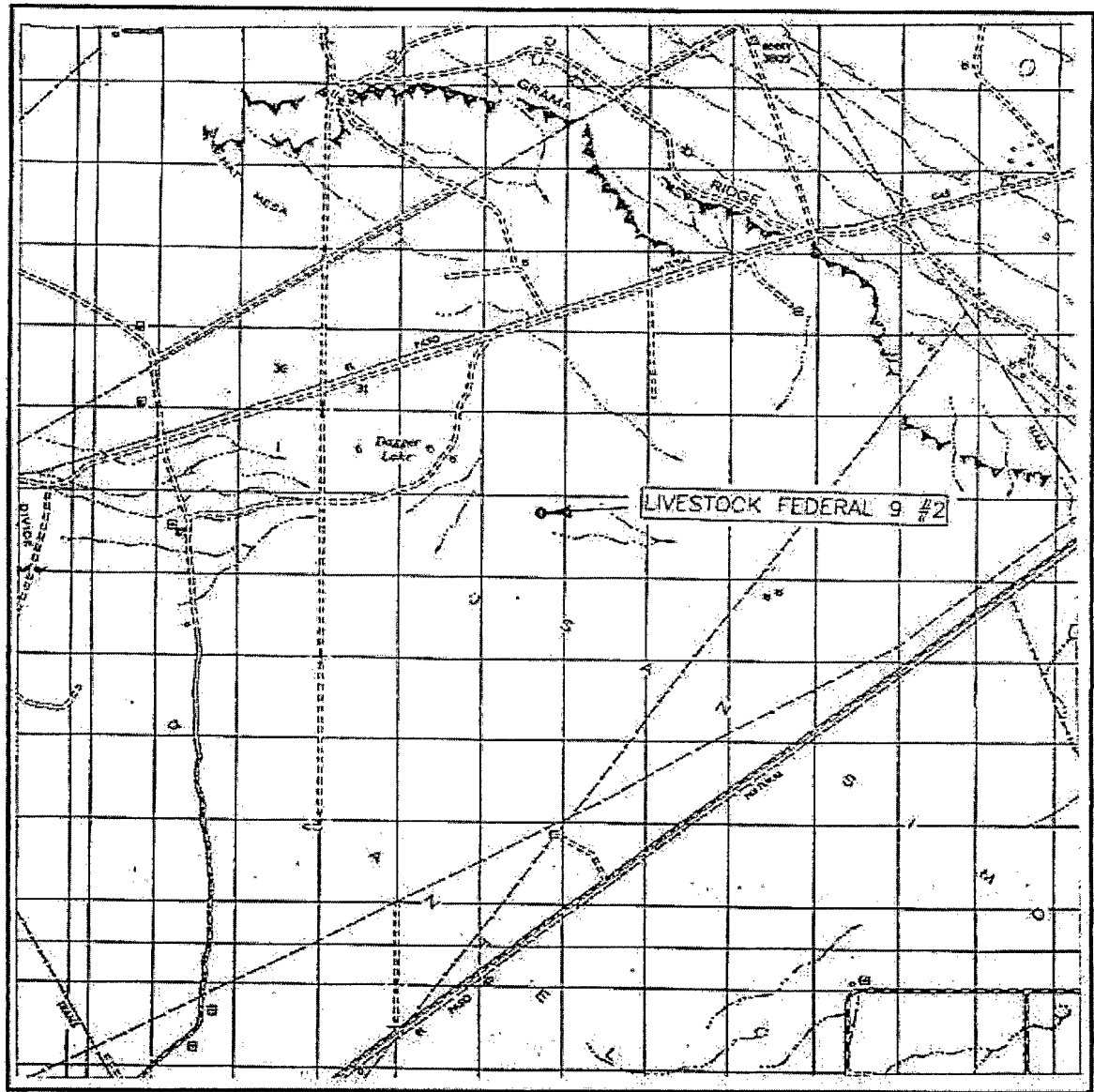
OPERATOR CHESAPEAKE OPERATING, INC.

LEASE LIVESTOCK FEDERAL 9

U.S.G.S. TOPOGRAPHIC MAP  
GRAMA RIDGE, N.M.

JOHN WEST SURVEYING  
HOBBS, NEW MEXICO  
(505) 393-3117

# VICINITY MAP



SCALE: 1" = 2 MILES

SEC. 9 TWP. 22-S. RGE. 33-E

SURVEY N.M.P.M.

COUNTY LEA

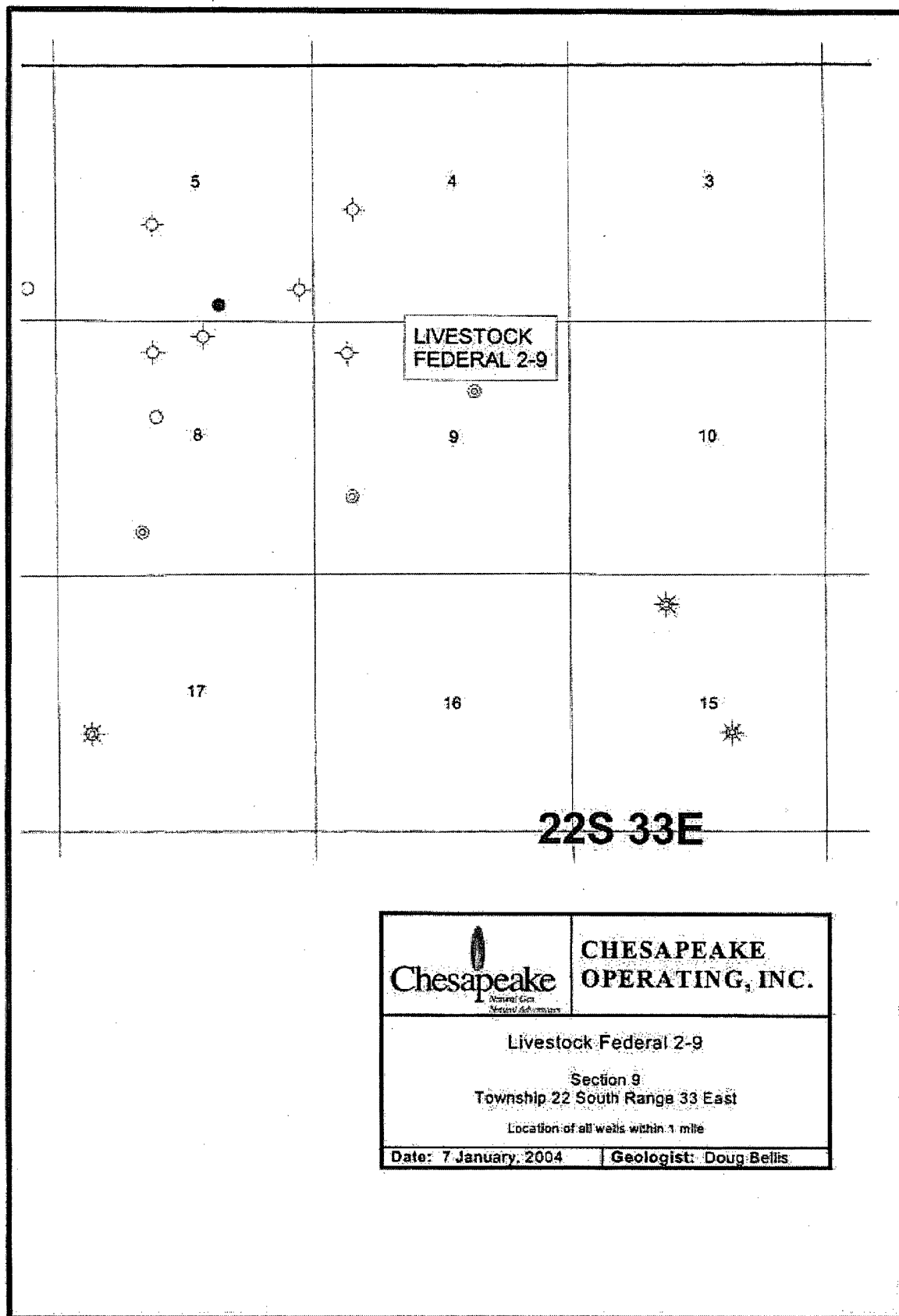
DESCRIPTION 1450' FNL & 1950' FEL

ELEVATION 3619'

OPERATOR CHESAPEAKE OPERATING, INC.

LEASE LIVESTOCK FEDERAL 9

**JOHN WEST SURVEYING**  
**HOBBS, NEW MEXICO**  
**(505) 393-3117**





ONSHORE OIL & GAS ORDER NO. 1  
Approval of Operations on Onshore  
Federal and Indian Oil and Gas Leases

1. EXISTING ROADS

- a. Existing roads will be used where possible. Driving directions are from the Intersection of U.S. HWY 8 and U.S. HWY 176 travel west on U.S. HWY 176 9.1 miles. Turn left onto San Simon Ranch Road. Go south 0.2 miles then turn right onto El Paso Natural Gas Pipeline Road (SW direction). Go 9.9 miles to a fork in road, take the south fork (as it curves to the south), 1.5 miles to a 3 forked road intersection (road forks: SE, S, & SW). Take the SE road 1.2 miles then turn due south .25 miles (cross pasture) to Livestock Federal 9 2 well location flag. The total mileage from Hobbs will be approximately 68 miles.
- b. Location, access and vicinity plats attached hereto. See Exhibit A-1 through A-4.

2. PLANNED ACCESS ROADS

- a. A new access road 3161' in length and 14' in travel way width with a maximum disturbance area of 30' will be built coming off an existing access road in an northeasterly direction. See Exhibit A-2 and A-3. The road will be built in accordance with guidelines set forth in the BLM Onshore Orders.
- b. Any required turnouts will be constructed using BLM guidelines.
- c. Any fences cut will be repaired. Cattle guards will be installed, if needed.
- d. 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.

3. LOCATION OF EXISTING WELLS WITHIN A 1-MILE RADIUS OF THE PROPOSED LOCATION – see Exhibit B.

4. LOCATION OF PRODUCTION FACILITIES

Production facilities will be located on location. See Exhibit C.

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

All other material (i.e. shale) will be acquired from private or commercial sources.

7. METHODS FOR HANDLING WASTE DISPOSAL

Lined pits will be utilized during the drilling of this well. All fluids and cutting will be disposed of in accordance with New Mexico Oil Conservation Division rules and regulation. 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.

8. ANCILLARY FACILITIES

None.

9. WELLSITE LAYOUT

A General Rig site layout plat is attached showing rig orientation and equipment location. See Exhibit D. When a rig is assigned the rig plat for the assigned rig will be submitted via Sundry Notice.

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 New Mexico Oil Conservation Division 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 AND MINERAL OWNERSHIP

United States of America  
Department of Interior  
Bureau of Land Management

ONSHORE ORDER NO. 1  
Chesapeake Operating, Inc.  
Livestock Federal 9 2  
1450' FNL & 1950' FEL  
SW NE of Section 9-22S-33E  
Lea County, NM

CONFIDENTIAL – TIGHT HOLE

Lease No. NMNM 96244

SURFACE USE PLAN  
Page 3

GRAZING LEASEE

Merchant Livestock Company  
P.O. Box 1166  
Carlsbad, NM 88220

12. ADDITIONAL INFORMATION

A Class III cultural resource inventory report was prepared by Stephen Smith of Boone Archaeological Services, LLC, for the proposed location and new access road. Clearance has been recommended. See Exhibit E.

13. OPERATOR'S REPRESENTATIVES

**Drilling and Completion Operations**

Colley Andrews  
District Manager  
P.O. Box 18496  
Oklahoma City, OK 73154  
405-879-9230 (OFFICE)  
405-850-4336 (MOBILE)  
405-879-7930 (FAX)  
candrews@chkenergy.com

**Drilling Engineer**

Rob Jones  
P.O. Box 18496  
Oklahoma City, OK 73154  
405-848-8000 Ext. 2694 (OFFICE)  
405-879-9571 (FAX)  
405-650-6399 (MOBILE)  
rjones@chkenergy.com

**Production Operations**

Mark Mabe  
5014 Carlsbad Hwy  
Hobbs, NM 88240  
505-391-1462 (OFFICE)  
505-391-6679 (FAX)  
505-390-0221 (MOBILE)  
mmabe@chkenergy.com

**Asset Manager**

Andrew McCalmont  
P.O. Box 18496  
Oklahoma City, OK 73154-0496  
405-848-8000 Ext. 852 (OFFICE)  
405-879-7930 (FAX)  
amccalmont@chkenergy

**Regulatory Compliance**

Sharon E. Dries  
Regulatory Analyst  
Mailing Address: P.O. Box 18496  
Oklahoma City, OK 73154  
Street Address: 6100 N. Western  
Oklahoma City, OK 73118  
405-879-7985 (OFFICE)  
405-879-9583 (FAX)  
sdries@chkenergy.com

ONSHORE ORDER NO. 1  
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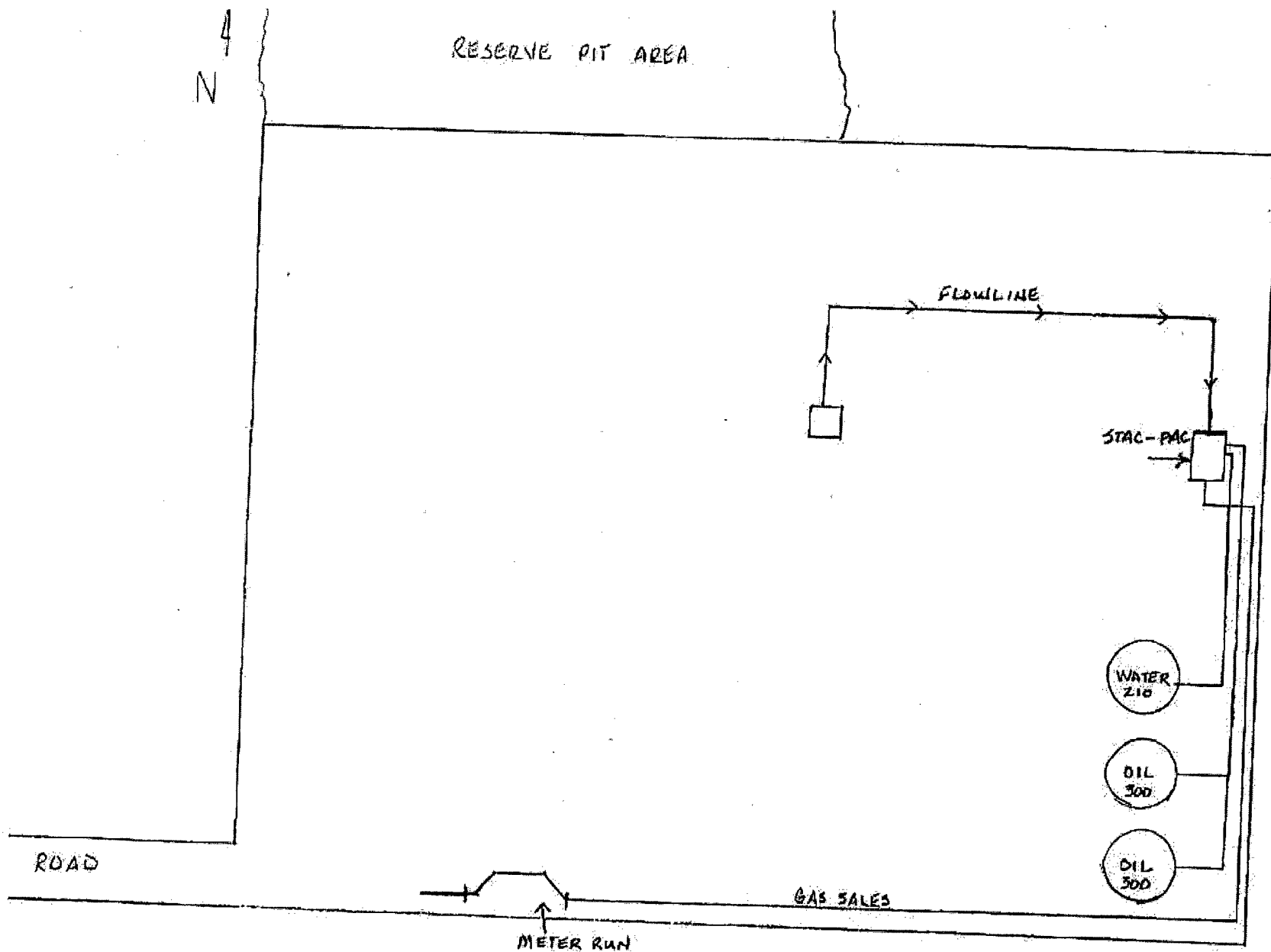
SURFACE USE PLAN  
Page 4

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.

By: \_\_\_\_\_

Date: \_\_\_\_\_



— LIVESTOCK FEDERAL 92

NOT TO SCALE

**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:

<b>Formation</b>	<b>Depth</b>	<b>Subsea</b>
Rustler	1220	2420
Delaware	4850	-1210
Bell Canyon	5000	-1360
Cherry Canyon	5810	-2170
Cherry Canyon Marker	5990	-2350
Brushy Canyon	6970	-3330
Basal Brushy Canyon Sd	8575	-4935
Bone Springs Lime	8760	-5120
Upper Bone Springs Pay	8950	-5310
First Bone Springs	9950	-6310
Second Bone Springs	10570	-6930
Third Bone Springs	11790	-8150
Wolfcamp	12030	-8390
Cisco	12860	-9220
Canyon	13300	-9660
Strawn	13435	-9795
Atoka	13655	-10015
Atoka Sand	13730	-10090
Atoka Bank	13800	-10160
Upper Morrow	14240	-10600
U Morrow Red Tank Sand	14470	-10830
Morrow Clastic	14560	-10920
Middle Morrow Marker	14570	-10930
Morrow B Sand	14650	-11010

Morrow C Sand	14770	-11130
Lower Morrow	15030	-11390
Lower Morrow Basal Sand	15130	-11490
Barnett Shale	15120	-11560
<b>Total Depth</b>	<b>15400</b>	<b>-11760</b>

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>
Oil	Bell Canyon	5000
Oil	Basal Brushy Canyon Sd	8575
Oil	Upper Bone Springs Pay	8950
Oil	First Bone Springs	9950
Gas	Atoka Sand	13730
Gas	U Morrow Red Tank Sd	14470
Gas	Morrow B Sand	14650
Gas	Morrow C Sand	14770
Gas	Lower Morrow Basal Sd	15130

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

3. BOP EQUIPMENT: 10,000# System

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

I. BOP, Annular, Choke Manifold, Pressure Test - See Exhibits F-1 to F-4.

A. Equipment

1. The equipment to be tested includes all of the following that is installed on the well. See Exhibit H and I.
  - (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 the rated working pressure.
7. A record of all pressures will be made on a pressure-recording chart.

D. Test Duration

1. In each case, the individual components should be monitored for leaks for **5 minutes**, 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

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 Pressures

Precharge Pressure

1,500 PSI  
2,000 PSI  
3,000 PSI

750 PSI  
1,000 PSI  
1,000 PSI



3. Closing times for the Hydril 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:

<u>System Pressure</u>	<u>Remaining Pressure At Conclusion of Test</u>
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 **full open** or **full closed** position. **Do not leave in neutral position**.

4. CASING AND CEMENTING PROGRAM

- a. The proposed casing program will be as follows:

<u>Purpose</u>	<u>Interval</u>	<u>Hole Size</u>	<u>Casing Size</u>	<u>Weight</u>	<u>Grade</u>	<u>Thread</u>	<u>Condition</u>
Surface	0'-775'	17-1/2	13-3/8	54.5	J-55	STC	New
Intermediate	0'-4,600'	12-1/4"	9-5/8	40	J-55	LTC	New
Production	0'-12,100'	8-3/4	7	29	L-80	LTC	New
Prod Liner	11,900'-15,400'	6-1/8"	4-1/2"	13.5	P-110	LTC	New

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

DRILLING PROGRAM

Page 5

c. The cementing program will be as follows:

<u>Interval</u>	<u>Type</u>	<u>Amount</u>	<u>Yield</u>	<u>Washout</u>	<u>Excess</u>
0'-775'	Class C	500	1.34	50%	100%
0'-4,600'	Class C 50/50 Poz	800	2.37	50%	100%
0'-12,100'	Class H	300	1.07	25%	40%
11,900'-15,400'	Class H	400	1.07	5%	10%

5. MUD PROGRAM

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

<u>Interval</u>	<u>Mud Type</u>	<u>Mud Weight</u>	<u>Viscosity</u>	<u>Fluid Loss</u>
0'-775'	Fresh Water	8.4-8.9	34-36	NC
775'-4,600'	Salt	9.9-10.1	32-34	NC
4600'-12,100'	Fresh Water	8.4-8.5	28-29	NC
12,100'-15,400'	Fresh water polymer	9.8-12.8	36-40	10-12

A lined earthen pit will be utilized during the drilling of this well. All fluids and cuttings will be disposed of in accordance with New Mexico Oil Conversation 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.

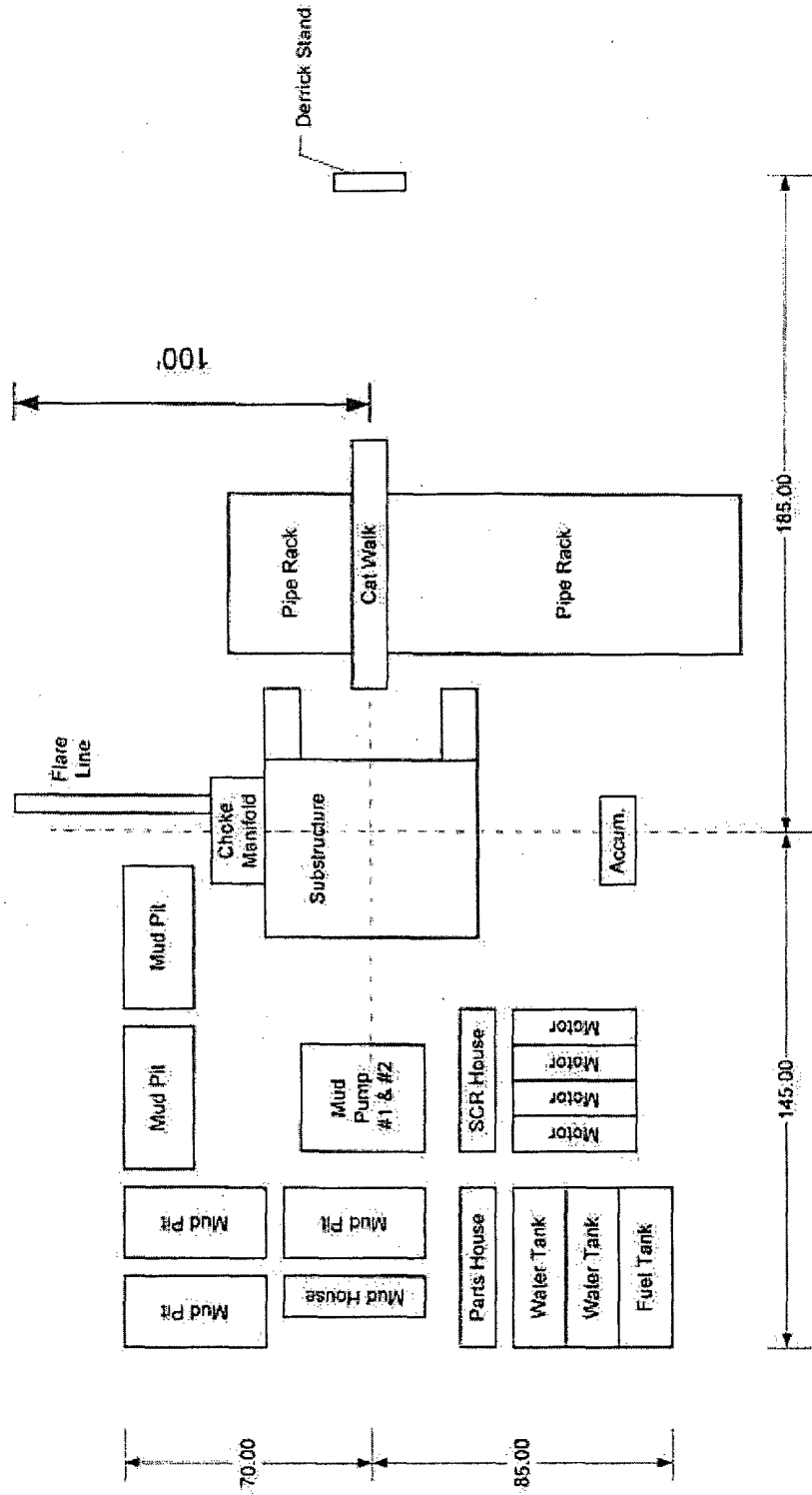
6. TESTING, LOGGING AND CORING

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

- Drill stem tests are not planned.
- The logging program will consist of GR, Density, Neutron Pe & High resolution Induction, Sonic from 4800-12,100. Then GR, Density, Neutron, Pe, Dual laterolog, Sonic 12,100 to TD.
- Cores samples are not planned.

7. ABNORMAL PRESSURES AND HYDROGEN SULFIDE

- The estimated bottom hole pressures is 9000 psi. No abnormal pressures or temperatures are anticipated.
- Low levels of Hydrogen sulfide gas are expected to be encountered.



Chesapeake Operating, Inc					
General Rig Layout					
SIZE	FSCM NO	DWG NO	REV		
SCALE	Not to Scale	SHEET	1 OF 1		

**TITLE PAGE/ABSTRACT/  
NEGATIVE SITE REPORT  
CFO/RFO**

1/03

1. BLM Report No.	2. Reviewer's Initials/Date _____ ACCEPTED ( ) REJECTED ( )	3. NMCRIS No.: 86132			
4. Type of Report                      Negative(X)                      Positive ( )					
5. Title of Report: Class III Archaeological Survey of a Well Pad and Access Road for Chesapeake Operating, Inc's Livestock Federal 9 No. 2 Well  Author: Stephen Smith		6. Fieldwork Date: November 29, 2003			
8. Consultant Name & Address: Boone Archaeological Services 2030 North Canal Carlsbad, NM 88220 Direct Charge: Danny Boone Field Personnel Name: Stephen Smith Phone: (505) 885-1352		7. Report Date: November 30, 2003			
		9. Cultural Resource Permit No. 190-2920-03-E			
11. Customer Name: Chesapeake Operating, Inc. Responsible Individual: Sharon E. Dries Address: P.O. Box 18496 Oklahoma City, Oklahoma 73154-7930 Phone: (405) 848-8000		10. Consultant Report No. BAS 11-03-19			
		12. Customer Project No.:			
13. Land Status	BLM	STATE	PRIVATE	OTHER	TOTAL
a. Area Surveyed (acres)	17.10	0	0	0	17.10
b. Area of Effect (acres)	5.85	0	0	0	5.85
14. Linear: Length: 3,161 ft (access road/total length)                      Width: 130 ft 2,961 ft (200 ft overlap with well pad surveys)  Block: 600 ft by 600 ft					
15. Location: (Maps Attached if Negative Survey) a. State: New Mexico b. County: Lea c. BLM Office: Carlsbad d. Nearest City or Town: Carlsbad, NM e. Legal Location: T 22S, R 33E, Section 9: SE¼NW¼SW¼, W¼NE¼SW¼, NE¼NE¼NW¼, SE¼SE¼NW¼, SW¼SE¼NE¼, N¼SW¼NE¼, S¼NW¼NE¼ f. Well Pad Footages: 1,450 ft FNL, 1950 ft FEL g. USGS 7.5 Map Name and Code Number: Grama Ridge, NM (1984) 32103-D5					

16. Project Data:

- a. Records Search: Date of BLM File Review: November 25, 2003 Name of Reviewer: Ann Boone  
Date of ARMS Data Review: November 25, 2003 Name of Reviewer: Ann Boone

Findings:

Sites within 0.25 mile of the project area: Pre-field investigation for this project revealed that no previously recorded sites are plotted within 0.25 mile or 1.0 mile of the project area.

- b. Description of Undertaking: Chesapeake Operating, Inc. plans to construct a well pad and access road to serve the Livestock Federal 9 No. 2 well. On November 25, 2003, Ms. Sharon Dries of Chesapeake Operating, Inc. Contacted Boone Archaeological Services requesting an archaeological survey for the proposed well pad and access road. The well pad is staked at 600 ft by 600 ft (8.26 acres). The access road begins at a staked well pad (BLM 4.4) and extends 3161 ft (9.43.17 acres) northeast before entering the southwest corner of the proposed well pad. Approximately 200 ft of the access road overlaps with the survey of the 100 ft safety zone pertaining to both the Livestock Federal No 1 well (BLM 4.4) and the Livestock Federal 9 No. 2 well (deducted from total acreage). A total of 17.10 acres was surveyed, all of which is on surface land administered by the BLM-CFO.

c. Environmental Setting:

Topography: Aeolian, slight slope going uphill from west to east, project begins along the drainage of the San Simon Swale

Vegetation: Mesquite, shin oak, yucca, prickly pear, sage, pencil cholla, and various grasses

Visibility: 65-75 percent due to vegetative cover

NRCS: Pyoto-Maljammar-Kermit association: Gently undulating and rolling, deep, sandy soils

d. Field Methods:

Transect Interval: Four transects that are no greater than 10 meters in width

Crew Size: 1

Time in Field: 5.5

e. Artifacts Collected: None

17. Cultural Resource Findings: No cultural resources were encountered during this survey.

- a. Identification and description: N/A  
b. Evaluation of significance of Each Resource: N/A

18. Management Summary (Recommendations): Because no cultural resources were encountered during this survey, Chesapeake Operating, Inc.'s proposed well pad and access road for the Livestock Federal 9 No. 2 well is recommended as presently staked. If cultural resources are encountered during any construction related activity, construction should cease and an archaeologist with the BLM be immediately notified.

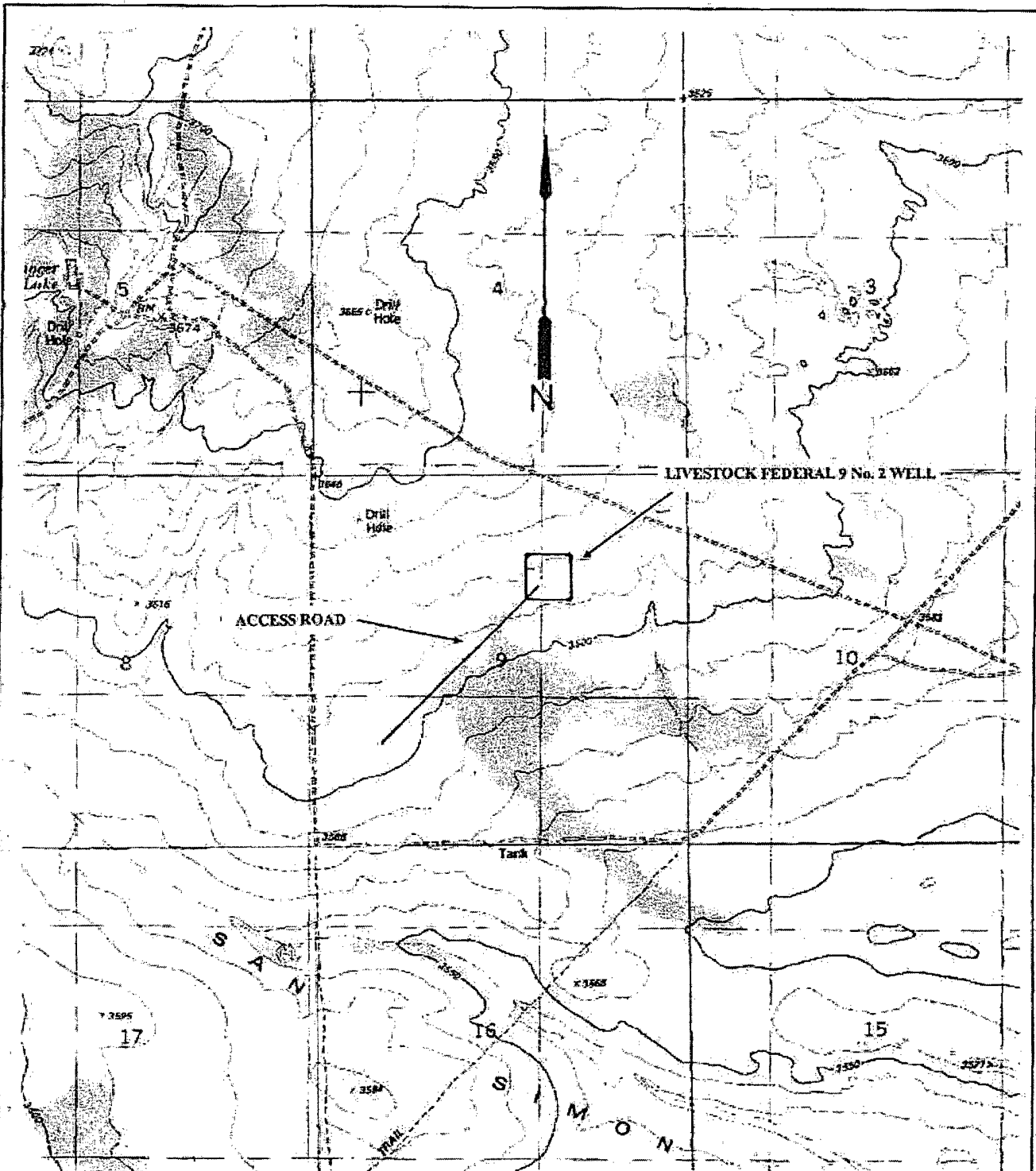
19.

I certify that the information provided above is correct and accurate and meets all appreciable BLM standards.

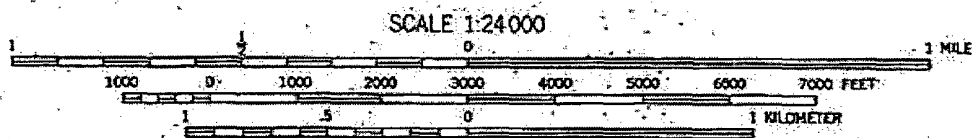
Responsible Archaeologist

Stephen Smith  
Signature

11-30-03  
Date



Location Map: Class III Archaeological Survey of a Well Pad and Access Road for Chesapeake Operating, Inc.'s Livestock Federal 9 No. 2 Well in Section 9, T 22S, R 33E, NMPM, Lea County, New Mexico. Map Reference USGS 7.5' Series, Grama Ridge, NM (1984) 32103-D5



# BLOWOUT PREVENTOR SCHEMATIC

## CHESAPEAKE OPERATING INC

WELL : Livestock Federal 2-9

FIELD :

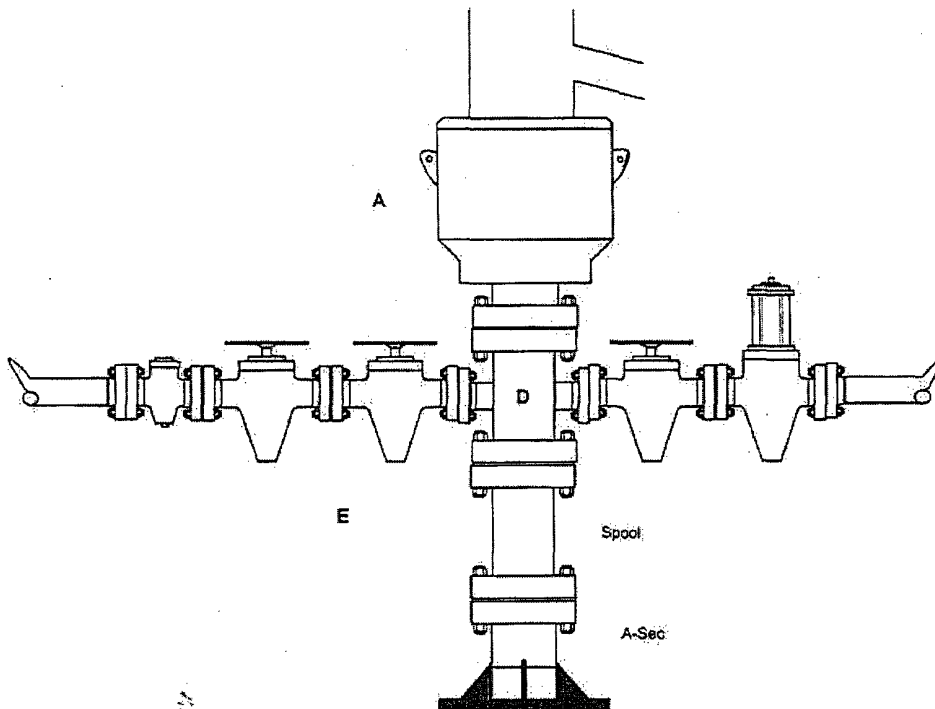
RIG : Unknown

COUNTY : Lea

STATE: New Mexico

OPERATION: Drill out below 13-5/8" Casing

	SIZE	PRESSURE	DESCRIPTION
A	13-5/8"	5,000#	Annular
D	13-5/8"	10,000#	Mud Cross
Spool	13-5/8" 3M x 13-5/8" 10M		
A-Sec	13-5/8" SOW x 13-5/8" 3M		



**Kill Line**

SIZE	PRESSURE	DESCRIPTION
2"	10,000#	Check Valve
2"	10,000#	Gate Valve
2"	10,000#	Gate Valve

**Choke Line**

SIZE	PRESSURE	DESCRIPTION
4"	10,000#	Gate Valve
4"	10,000#	HCR Valve

# BLOWOUT PREVENTOR SCHEMATIC

## CHESAPEAKE OPERATING INC

WELL : Livestock Federal 2-9

FIELD : Permian

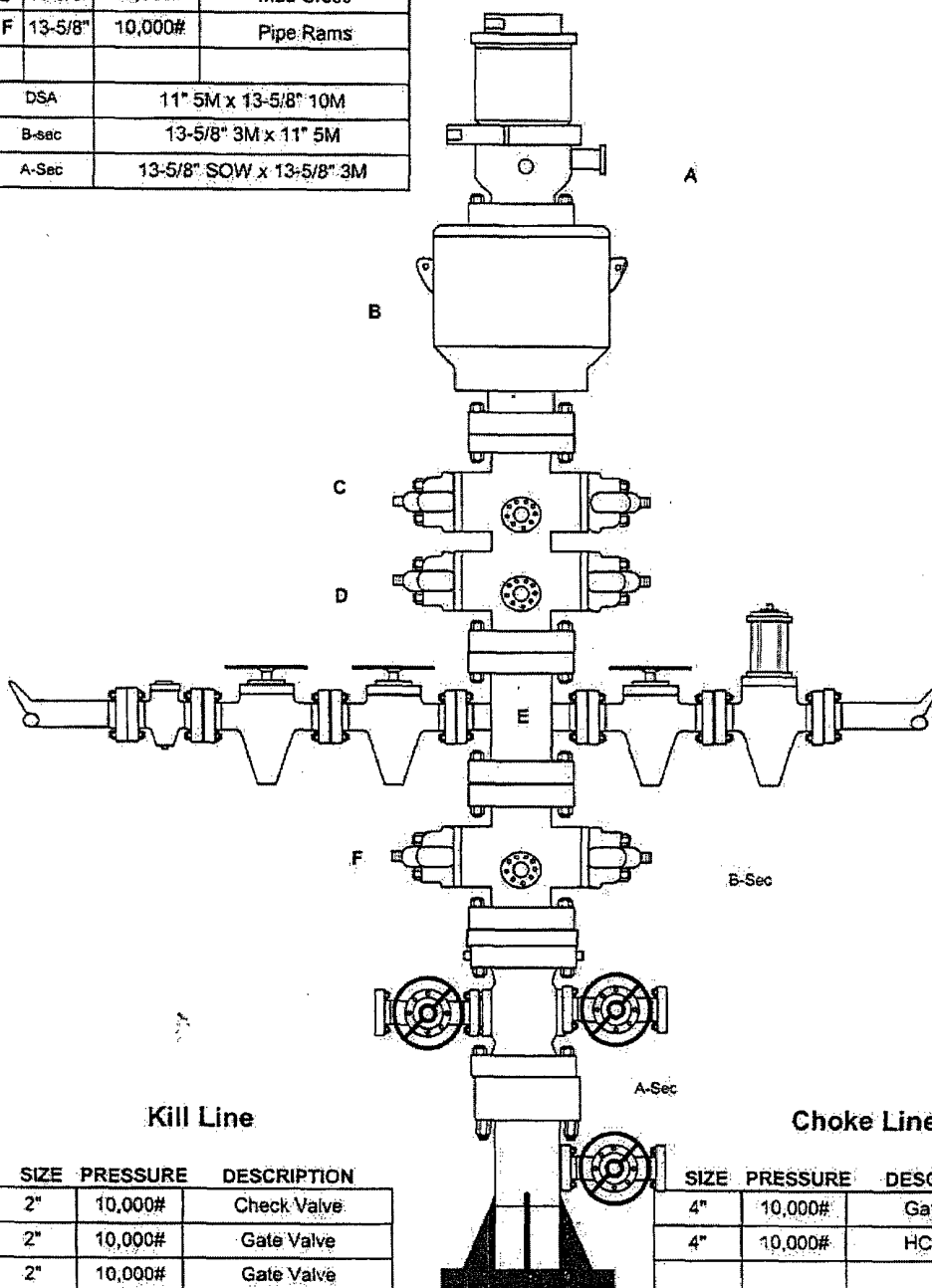
RIG : Unknown

COUNTY : Lea

STATE: New Mexico

OPERATION: Drill out below 9-5/8" Casing

	SIZE	PRESSURE	DESCRIPTION
A	13-5/8"	500#	Rot Head
B	13-5/8"	5,000#	Annular
C	13-5/8"	10,000#	Pipe Rams
D	13-5/8"	10,000#	Blind Rams
E	13-5/8"	10,000#	Mud Cross
F	13-5/8"	10,000#	Pipe Rams
DSA	11" 5M x 13-5/8" 10M		
B-sec	13-5/8" 3M x 11" 5M		
A-Sec	13-5/8" SOW x 13-5/8" 3M		



**Kill Line**

SIZE	PRESSURE	DESCRIPTION
2"	10,000#	Check Valve
2"	10,000#	Gate Valve
2"	10,000#	Gate Valve

**Choke Line**

SIZE	PRESSURE	DESCRIPTION
4"	10,000#	Gate Valve
4"	10,000#	HCR Valve



# BLOWOUT PREVENTOR SCHEMATIC

## CHESAPEAKE OPERATING INC

WELL : Livestock Federal 2-9

FIELD : Permian

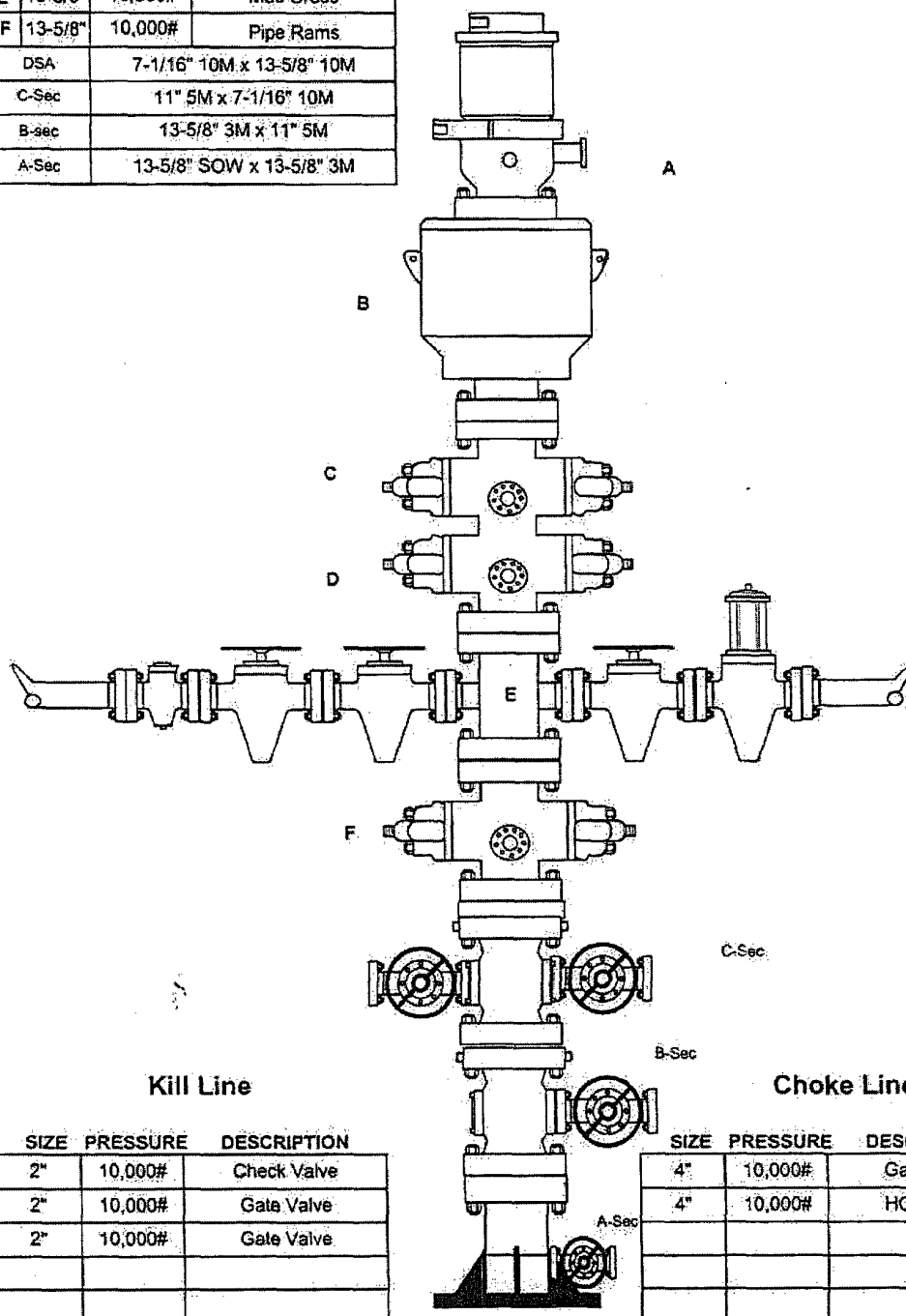
RIG : Unknown

COUNTY : Lea

STATE: New Mexico

OPERATION: Drill out below 7" Casing

	SIZE	PRESSURE	DESCRIPTION
A	13-5/8"	500#	Rot Head
B	13-5/8"	5,000#	Annular
C	13-5/8"	10,000#	Pipe Rams
D	13-5/8"	10,000#	Blind Rams
E	13-5/8"	10,000#	Mud Cross
F	13-5/8"	10,000#	Pipe Rams
DSA	7-1/16" 10M x 13-5/8" 10M		
C-Sec	11" 5M x 7-1/16" 10M		
B-sec	13-5/8" 3M x 11" 5M		
A-Sec	13-5/8" SOW x 13-5/8" 3M		



# BLOWOUT PREVENTOR SCHEMATIC

## CHESAPEAKE OPERATING INC

WELL : Livestock Federal 2-9

FIELD : Permian

RIG : Unknown

COUNTY : Lea

STATE: NM

OPERATION: 10M Choke Manifold

