

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
New Mexico Oil Conservation

SUBMIT IN TRIPlicate*

Form approved.

CONFIDENTIAL - TIGHT HOLE

LEASE DESIGNATION AND SERIAL NO.

NMNM 104724

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

NMNM 103145X

8. FARM OR LEASE NAME, WELL NO.

W-945

9. API WELL NO.

30-025-36079

10. FIELD AND POOL, OR WILDCAT

Yates Teas' Y-SR West

11. SEC., T., R., M., OR BLOCK AND SURVEY OR AREA

9-20S-33E

12. COUNTY OR PARISH

Lea

13. STATE

NM

APPLICATION FOR PERMIT TO DRILL OR DEEPEN

1a. TYPE OF WORK: DRILL ☒ DEEPEN ☐

b. TYPE OF WELL:

OIL WELL ☒ GAS WELL ☐ Other ☐ SINGLE ZONE ☐ MULTIPLE ZONE ☐

2. NAME OF OPERATOR

CHESAPEAKE OPERATING, INC. Attn: Janelle McNeely

3. ADDRESS AND TELEPHONE NO.

P.O. BOX 18496 OKLAHOMA CITY, OK 73154

405-879-9406

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)*

At surface 2,612' FNL & 330' FEL

At top proposed prod. zone Same as above

R-111-P Potash

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*

15. DISTANCE FROM PROPOSED LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT
(Also to nearest drlg. unit line if any)

28' FNLL

16. NO. OF ACRES IN LEASE

280.00

18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.

19. PROPOSED DEPTH

3,360

17. NO. OF ACRES ASSIGNED TO THIS WELL

20. ROTARY OR CABLE TOOLS*

Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.)

3,553' GR at stake

Capitan Controlled Water Basin

22. APPROX. DATE WORK WILL START*

Upon approval

23. R-111-P Potash

PROPOSED CASING AND CEMENTING PROGRAM

| SIZE OF HOLE | GRADE, SIZE OF CASING | WEIGHT PER FOOT | SETTING DEPTH | QUANTITY OF CEMENT |
|--------------|-----------------------|-----------------|---------------|--------------------|
| 12 1/4" | J-55, 8 5/8" | 32# | 0' - 1,310' | +/- 665 sx |
| 7 7/8" | J-55, 5 1/2" | 15.5# | 0' - 3,360' | +/- 595 sx |

CIRCULATE

Chesapeake Operating, Inc. proposes to drill a well to 3,360' to test the Yates formations. 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.

Attached please find the Surface Use Plan and Drilling Plan as required by Onshore Order No. 1. A generic rig layout is attached as Exhibit H. A final rig layout will be submitted prior to spud once rig is assigned.

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.

Bond coverage for this well is provided by Chesapeake Operating, Inc. under their Nationwide Bond No. NM2634.

APPROVAL SUBJECT TO
GENERAL REQUIREMENTS AND
SPECIAL STIPULATIONS
ATTACHED

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen, give data on present productive formations, proposed completion, etc. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. If blowout prevention program, if any.

24.

SIGNED J. Mark Lester

J. Mark Lester
TITLE Sr. Vice President Exploration

DATE 8/22/02

*(This space for Federal or State office use)

PERMIT NO. _____ APPROVAL DATE _____

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which wot thereon.

CONDITIONS OF APPROVAL, IF ANY:

APPROVED BY 151 TIMOTHY R. SPIERAK TITLE FOR ACTING STATE DIRECTOR

See Instructions On Reverse Side

OPER. OGRID NO. 147179
PROPERTY NO. 30422
POOL CODE 59110
EFF. DATE 12-19-02
API NO. 30-025-36079

DATE DEC 11 2002

APPROVAL FOR 1 YEAR

Title 18 U.S.C. Section 1001, makes 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

RECEIVED
JUN 26 PM 11:31
JUN 26 PM 11:31

ONSHORE ORDER NO.
Chesapeake Operating, Inc.
WTU 945
2,612' FNL & 330' FEL
SE NE of Section 9-20S-33E
Lea County, NM

CONFIDENTIAL – TIGHT HOLE

Lease No. NM 104724

SURFACE USE PLAN
Page 1

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

1. EXISTING ROADS

- a. Existing access road to WTU 943 in Section 9-20S-33E will be utilized. See Exhibit A-2.
- b. See Exhibit A-4 for proposed access road.
- c. Location, access and vicinity plats attached hereto. See Exhibits A-1 through A-4.

2. PLANNED ACCESS ROADS

- a. A new access road 443' in length will be built coming off the existing WTU 943 location in a north easterly direction. See Exhibits A-2 and A-4. The road will be built in accordance with guidelines set forth in the BLM Onshore Orders.
- b. No turnouts are expected.
- c. A locking gate will be installed at the site entrance.
- d. Any fences cut will be repaired. Cattle guards will be installed, if needed.
- e. Surface disturbance and vehicular travel will be limited to the approved location and approved access route. Any additional area needed will be approved in advance.

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 adjacent to existing WTU 932 – 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

It is Chesapeake's understanding, caliche for road building may be obtained from the caliche pit in the NW/4 of Section 9-20S-33E per the BLM. All other material (i.e. shale) will be acquired from private or commercial sources.

7. METHODS FOR HANDLING WASTE DISPOSAL

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.

8. ANCILLARY FACILITIES

See Exhibit C for plant facility and Exhibit D for proposed flowlines. The plant facility will be entirely encompassed on an existing location. No new surface disturbance for the plant will be required. The details of the proposed flowlines and additional archeological survey will be submitted under separate sundry notice.

9. WELLSITE LAYOUT

The proposed site layout plat is attached showing rig orientation and equipment location. See Exhibit E.

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 levelling, 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.
Chesapeake Operating, Inc.
WTU 945
2,612' FNL & 330' FEL
SE NE of Section 9-20S-33E
Lea County, NM

CONFIDENTIAL – TIGHT HOLE

Lease No. NM 104724

SURFACE USE PLAN
Page 3

Grazing Lease Held by:
Kenneth Smith, Inc.
P.O. Box 764
Carlsbad, NM 88220

12. ADDITIONAL INFORMATION

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

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

Keith Curtis
P.O. Box 14896
Oklahoma City, OK 73154
(405) 810- (OFFICE)
(405) 879-9571 (FAX)
(405) 650-6399 (MOBILE)
kcurtis@chkenergy.com

Production Operations

Dave Wittman
303 E. McAlpine
Navasota, TX 77868
(936) 825-3226 (OFFICE)
(936) 825-3278 (FAX)
(979) 820-3308 (MOBILE)
dwittman@chkenergy.com

Asset Manager

Andrew McCalmont
P.O. Box 14896
Oklahoma City, OK 73154-0496
(405) 848-8000 Ext. 852 (OFFICE)
(405) 879-7930 (FAX)
amccalmont@chkenergy

Regulatory Compliance

Janelle McNeely
Regulatory Compliance Coordinator
Mailing Address: P.O. Box 18496
Oklahoma City, OK 73154
Street Address: 6100 N. Western
Oklahoma City, OK 73118
(405) 879-9406 (OFFICE)
(405) 879-7930 (FAX)
jmcneely@chkenergy.com

ONSHORE ORDER NO. .
Chesapeake Operating, Inc.
WTU 945
2,612' FNL & 330' FEL
SE NE of Section 9-20S-33E
Lea County, NM

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Lease No. NM 104724

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: X J. Mark Lester

Date: X 8/22/02

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 | Depth | Subsea |
|-------------------------|--------------|--------|
| Rustler | 1,300 | -2,260 |
| Salt | 1,400 | -2,160 |
| Base Salt | 2,910 | -650 |
| Tansill Dolomite | 2,950 | -610 |
| Yates | 3,080 | 480 |
| Yates Upper 1 Sand | 3,085 | 475 |
| Yates Lower 1 Sand | 3,135 | 425 |
| Yates 2 Carbonate | 3,155 | 405 |
| Yates 2 Sand | 3,205 | 355 |
| Yates 2 Lower Carbonate | 3,215 | 345 |
| Yates 3 U Sand | 3,230 | 330 |
| Yates 3 Middle Sand | 3,255 | 305 |
| Yates 3 Lower Sand | 3,290 | 270 |
| Seven Rivers | 3,305 | 200 |
| Total Depth | 3,360 | |

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:

DRILLING PROGRAM

Page 2

| Substance | Formation | Depth |
|-----------|---------------------|-------|
| Oil | Yates Upper 1 Sand | 475 |
| Oil | Yates Lower 1 Sand | 425 |
| Oil | Yates 2 Sand | 355 |
| Oil | Yates 3 U Sand | 330 |
| Oil | Yates 3 Middle Sand | 305 |
| Oil | Yates 3 Lower Sand | 270 |

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

3. BOP EQUIPMENT: 3,000# System

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

I. BOP, Annular, Choke Manifold, Pressure Test

A. Equipment

1. The equipment to be tested includes all of the following that is installed on the well. See Exhibit G.
 - (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.

DRILLING PROGRAM

Page 3

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 has 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:

| <u>System Operating Pressures</u> | <u>Precharge Pressure</u> |
|-----------------------------------|---------------------------|
| 1,500 PSI | 750 PSI |
| 2,000 PSI | 1,000 PSI |
| 3,000 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.

DRILLING PROGRAM

Page 4

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' - 1,310' | 12-1/4" | 8-5/8" | 32 | J-55 | STC | NEW |
| Production Liner | 0' - 3,360' | 7-7/8" | 5-1/2" | 15.5 | J-55 | LTC | NEW |

- b. Casing design subject to revision based on geologic conditions encountered.
- c. The cementing program will be as follows:

| <u>Interval</u> | <u>Type</u> | <u>Amount</u> | <u>Yield</u> | <u>Washout</u> | <u>Excess</u> |
|-----------------|---|------------------------------|--------------------------|----------------|--------------------------|
| Surface | Lead: 35:65 Poz:Class C + 5% Salt + 6% Gel + 0.1 pps Celloflake Tail: Class C + 2% CC + 0.1 pps Celloflake | Lead: 470 sx Tail: 195 sx | Lead: 1.94 Tail: 1.34 | 50% | Lead: 100% Tail: 100% |
| Production | Lead: Lead: 35:65 Poz:Class C + 5% Salt + 6% Gel + 0.1 pps Celloflake Tail: 50:50 Poz:Class C + 5% Salt + 2% Gel | Lead: 400 sx Tail: 195 sx | Lead: 2.14 Tail: 1.35 | 20% | Lead: 150% Tail: 50% |

DRILLING PROGRAM

Page 5

5. MUD PROGRAM

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

| Interval | Mud Type | Mud Weight | Viscosity | Fluid Loss |
|-----------------|-----------------|-------------------|------------------|-------------------|
| 0-1,310' | Water Based | 8.5-9.3ppg | 32-36 | NC |
| 1,310'-3,360' | Water based | 10.0-10.2ppg | 28-30 | 15-20 |

A steel 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 and High Resolution Induction from surface to TD.
- Cores samples are not planned.

7. ABNORMAL PRESSURES AND HYDROGEN SULFIDE

- The estimated bottom hole pressures is 450 psi. No abnormal pressures or temperatures are anticipated.
- Hydrogen sulfide gas is not expected to be encountered.

DISTRICT I
P.O. Box 1980, Hobbs, NM 88241-1980

DISTRICT II
P.O. Drawer DD, Artesia, NM 88211-0719

DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410

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

State of New Mexico

Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION

P.O. Box 2088
Santa Fe, New Mexico 87504-2088

CONFIDENTIAL

Form C-102

Revised February 10, 1994

Submit to Appropriate District Office

State Lease - 4 Copies

Fee Lease - 3 Copies

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

| | | |
|----------------------------|---|-------------------------------|
| API Number 30-025-36079 | Pool Code 59110 | Pool Name Teas, X-7R, West |
| Property Code 30422 | Property Name West Teas Yates WTH Seven Rivers WTH | Well Number 945 |
| OGRID No. 147179 | Operator Name CHESAPEAKE OPERATING, INC. | Elevation 3553' |

Surface Location

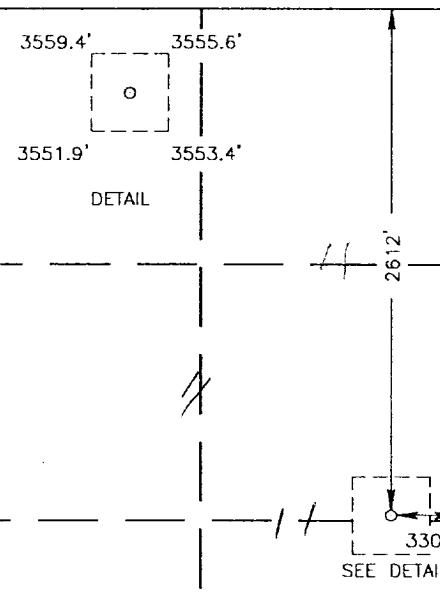
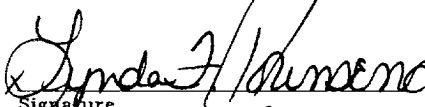
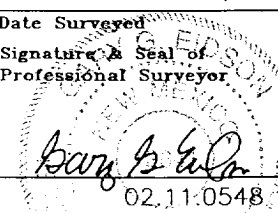
| UL or lot No. | Section | Township | Range | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County |
|---------------|---------|----------|-------|---------|---------------|------------------|---------------|----------------|--------|
| H | 9 | 20-S | 33-E | | 2612 | NORTH | 330 | EAST | 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 |
|---------------|---------|----------|-------|---------|---------------|------------------|---------------|----------------|--------|
| | | | | | | | | | |

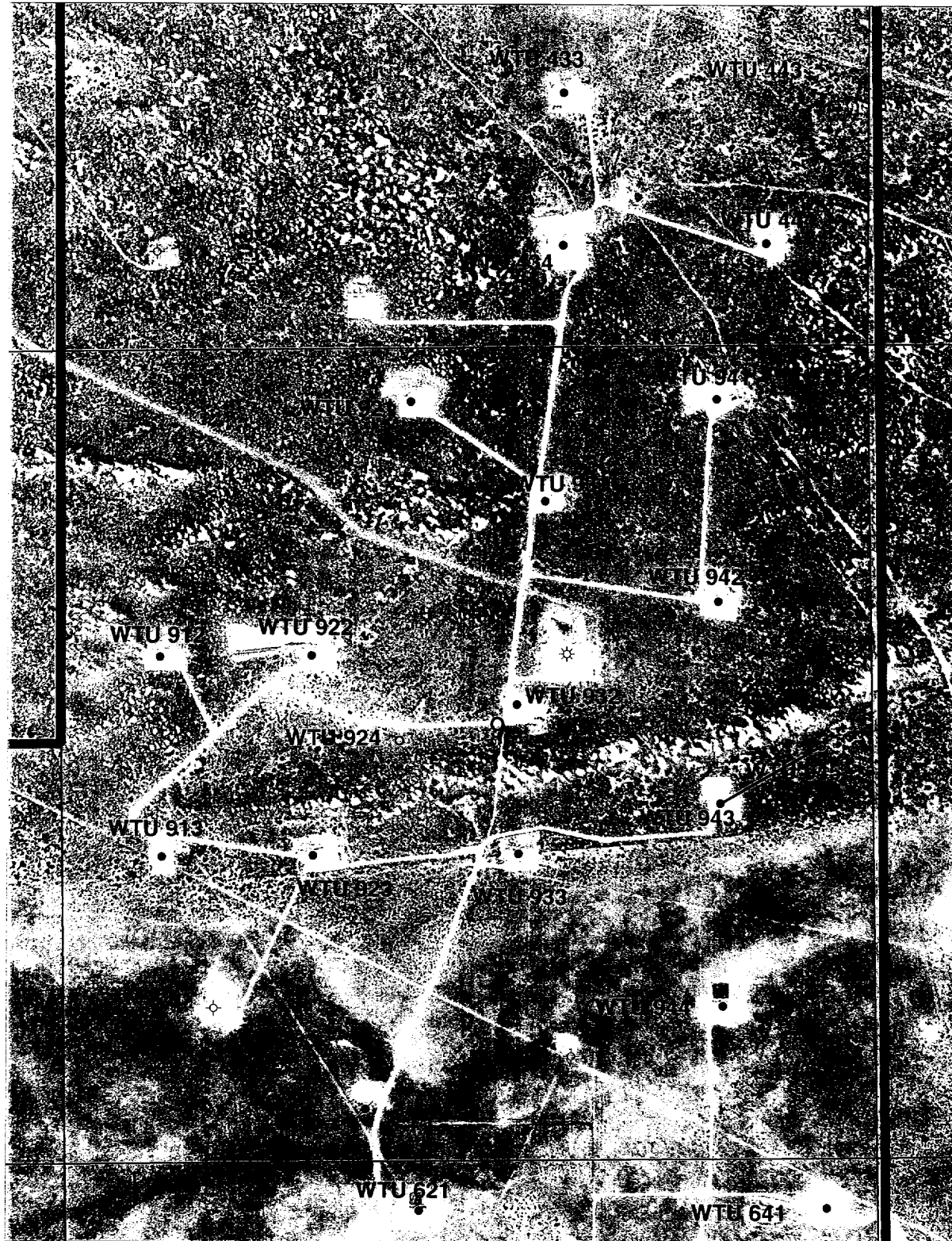
| Dedicated Acres | Joint or Infill | Consolidation Code | Order No. |
|-----------------|-----------------|--------------------|-----------|
| 40 | | | |


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

| | |
|--|---|
|  | OPERATOR CERTIFICATION I hereby certify the the information contained herein is true and complete to the best of my knowledge and belief.  Signature Lynda F. Townsend Printed Name Landman Title 08-19-02 Date |
| | 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. AUGUST 01, 2002 Date Surveyed AWB Signature & Seal of Professional Surveyor  02.11.0548 Certificate No. RONALD J. EIDSON 3239 GARY EIDSON 12641 |

GEODETIC COORDINATE
SPC NME
NAD 1927
Y=578131.3
X=707303.7
LAT. 32°35'15.31"N
LONG. 103°39'37.01"W

Exhibit A-1

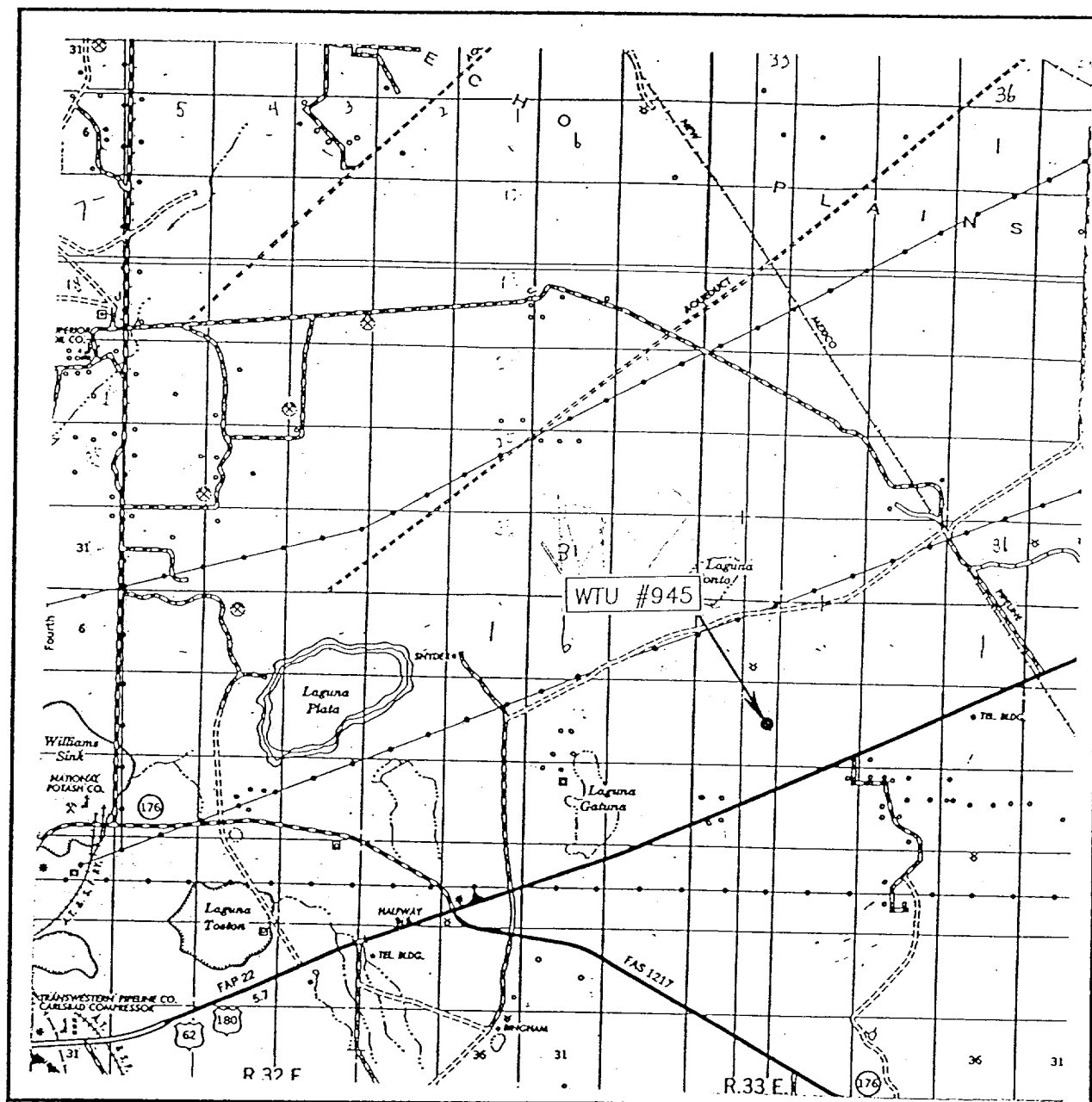


| | |
|---|---------------------------------------|
|  | CHESAPEAKE OPERATING, INC. |
| West Teas Unit Lea County, New Mexico | |
| Airphotos with well spots <small>West Teas Air Photos amp</small> | |
| <small>Date: 13 August 2002</small> | <small>Geologist: Doug Belis</small> |

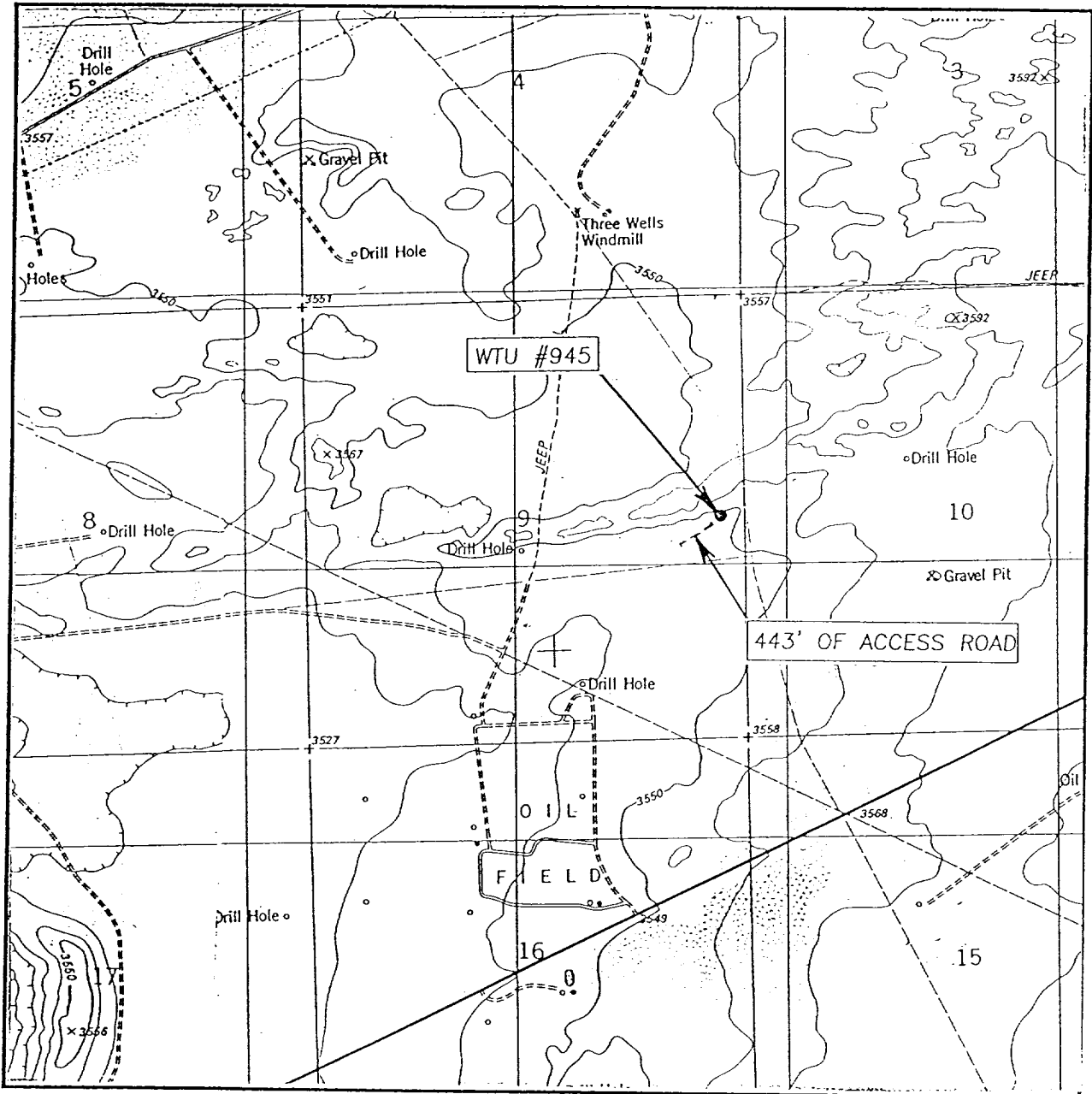
WTU 945
Proposed Access Road

CONFIDENTIAL

VICINITY MAP



LOCATION VERIFICATION MAP CONFIDENTIAL



SCALE: 1" = 2000'

CONTOUR INTERVAL: 10'
LAGUNA GATUNA, N.M.

SEC. 9 TWP. 20-S RGE. 33-E

SURVEY N.M.P.M.

COUNTY LEA

DESCRIPTION 2612' FNL & 330' FEL

ELEVATION 3553'

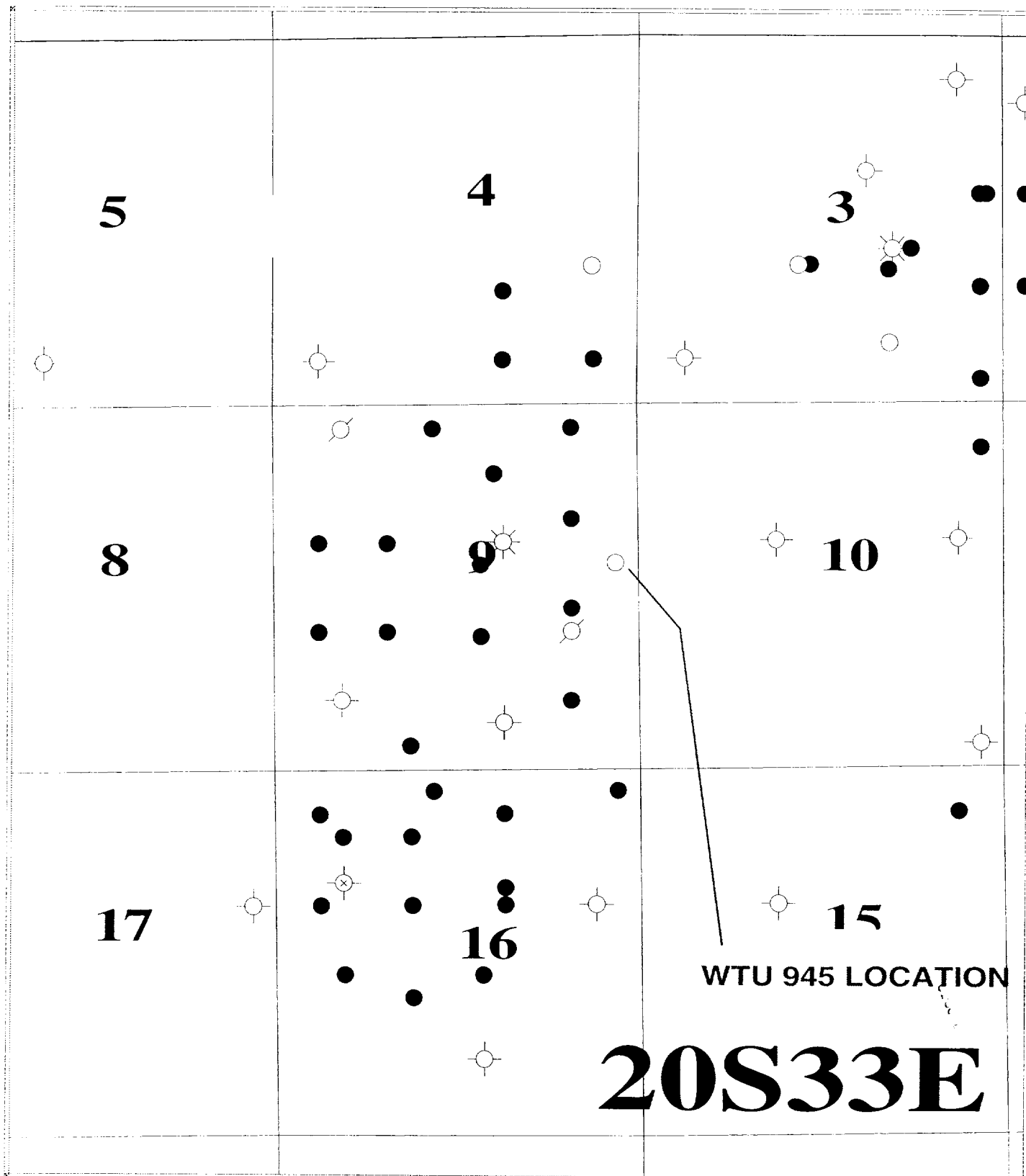
OPERATOR CHESAPEAKE OPERATING, INC.

LEASE WTU

U.S.G.S. TOPOGRAPHIC MAP
LAGUNA GATUNA, N.M.

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

Exhibit A-4

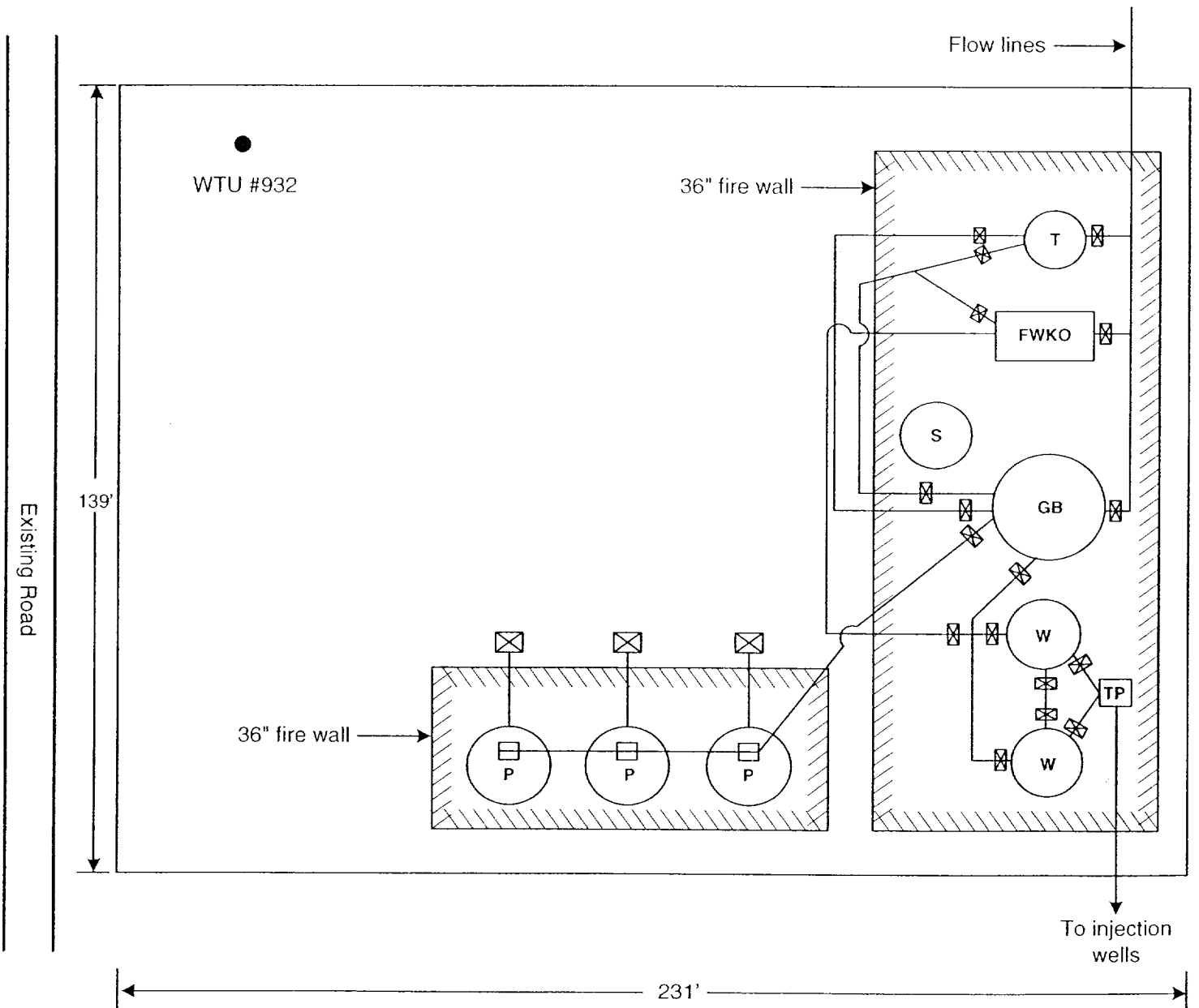
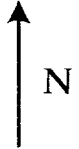


| | | |
|--------------------------------|----------|---------|
| West Texas Area | | |
| Wells within 1 mile of WTU 945 | | |
| Sheet | 11404219 | 4/12/01 |

Chesapeake Energy
Proposed West Teas Unit Plant
 2310' FNL - 2310' FEL
 SW NE Section 9-T20S-R33E
 Lea County, NM

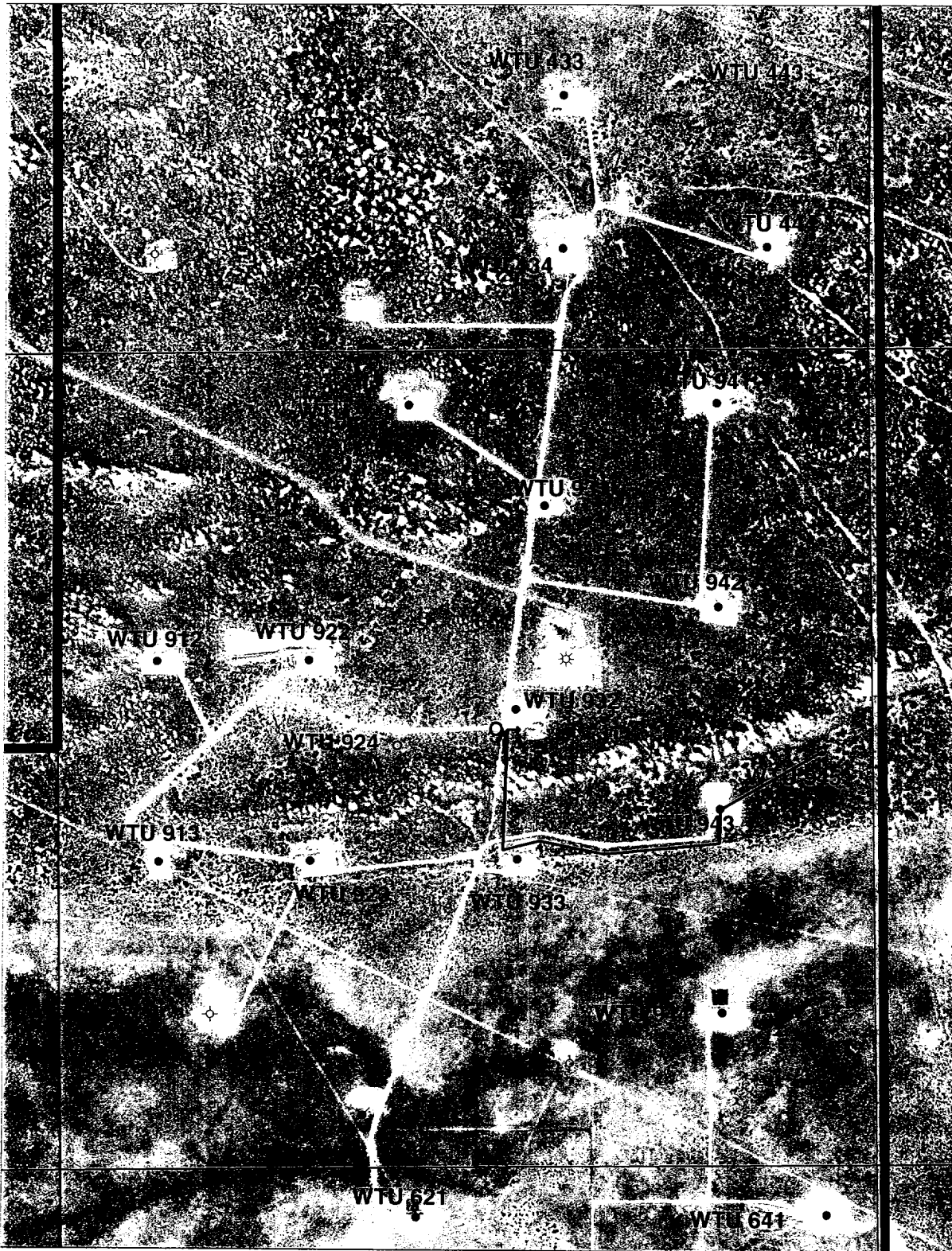
CONFIDENTIAL


| | |
|-------|--------------------------------|
| T: | 4' x 20' Heater Treater |
| FWKO: | 4' x 12' Free Water Knock Out |
| GB: | 750 bbl. Gunbarrel |
| W: | 400 bbl. Fiberglass Water Tank |
| P: | 500 bbl. Production Tank |
| TP: | Triplex Injection Pump |
| S: | Skim Tank |



Note: Pad site is existing. No incremental ground encroachment required.

Exhibit c



| | |
|---|--|
|  | CHESAPEAKE OPERATING, INC. |
| West Teas Unit Lea County, New Mexico Airphotos with well spots | |
| Date: 13 August 2002 | West Teas Air Photos.jpg Geologist: Doug Bellis |

WTU 945 Proposed Flowline

CONFIDENTIAL

Barrier Fence (for Dune Preservation)

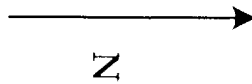
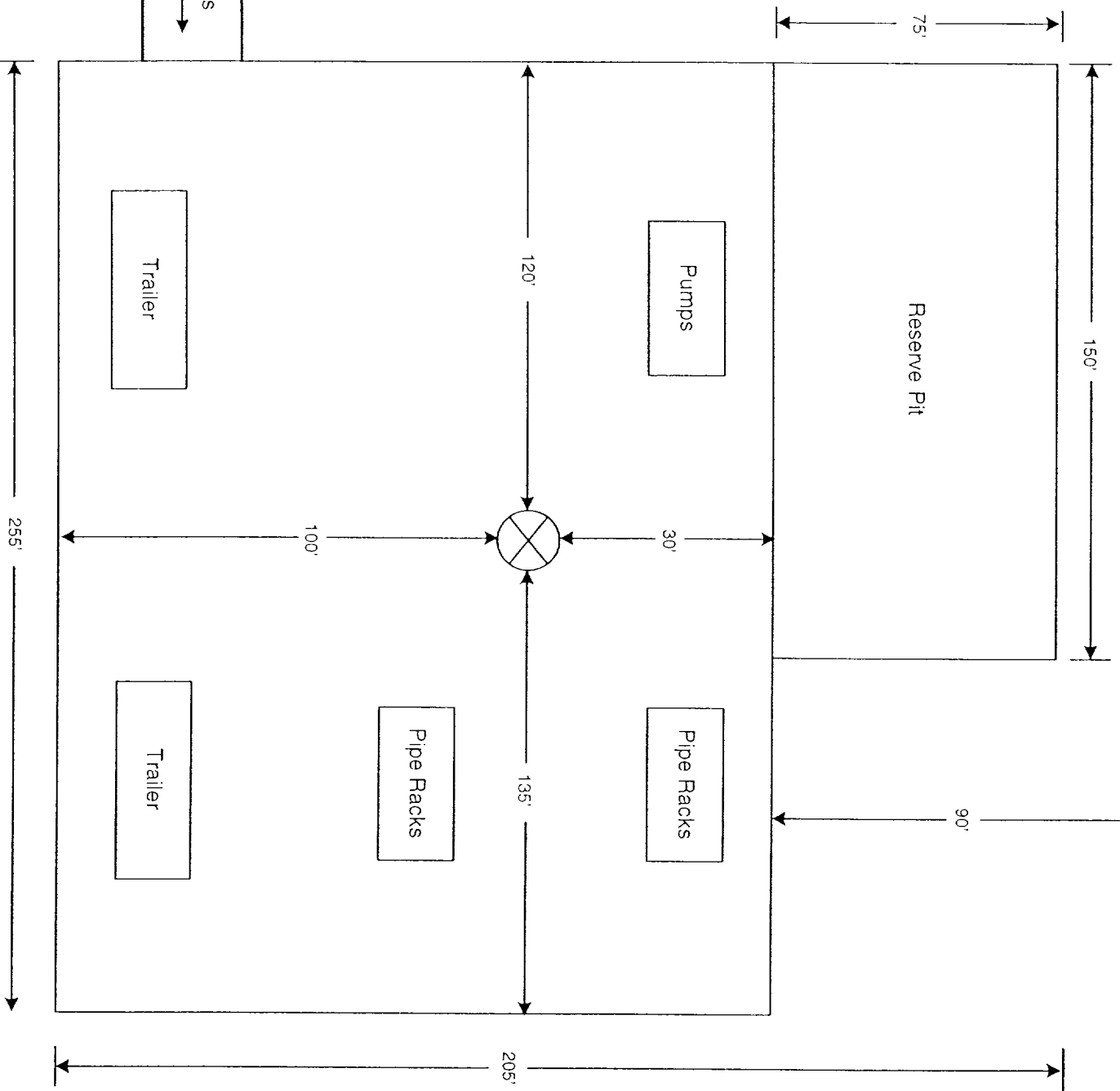


Exhibit E

Lea County, New Mexico

Chesapeake Operating, Inc.

WTU #945

LOCATION PLAT

CONFIDENTIAL

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

1/95

| | | |
|--|--------------------------|---|
| 1. BLM Report No. | 2. (ACCEPTED) (REJECTED) | 3. NMCRIS No. 80020 |
| 4. Title of Report (Project Title) Class III archaeological survey of a pad for the WTU well No. 924 and a pad and access road for the WTU well No. 945 for Chesapeake Operating, INC in Section 9, T 20S, R 33E, NMPM, Lea County, New Mexico. | | 5. Project Date(s) <u>31 July, 2002 to 16 August, 2002</u> |
| | | 6. Report Date 21 August, 2002 |
| 7. Consultant Name & Address: Direct Charge: Danny Boone Name: Boone Archaeological Services, LLC Address: 2030 N. Canal Carlsbad, New Mexico Authors Name: Danny Boone Field Personnel Names: Danny Boone Phone: (505) 885-1352 | | 8. Permit No. 190-2920-02-B |
| | | 9. Consultant Report No. BAS 8-2-05 |
| 10. Sponsor Name and Address: Indiv. Responsible: Janelle McNeely Name: Chesapeake Operating, INC. Address: P.O. Box 18496 Oklahoma City, Oklahoma 73154-7930 Phone: (405) 848-8000 | | 11. For BLM Use Only. |
| | | 12. ACREAGE: Total No. of acres surveyed: <u>31.2 (+/-)</u> SURFACE OWNERSHIP: Federal: <u>31.2 (-/+)</u> State: <u>0</u> , Private: <u>0</u> |
| 13. Location: (Maps Attached if Negative Survey) | | |
| a. State: New Mexico | | |
| b. County: Lea | | |
| c. BLM Office Carlsbad | | |
| d. Nearest City or Town: Maljamar, New Mexico | | |
| e. Legal Location: T 20S R 33E Sec.9, WTU No. 924; SE NW, NE SW; WTU No. 945 Pad; SE NE, NE SE, Access Road, NE NE SE, NW NE SE: Well Footages: WTU No. 924, 2562' FNL, 2210' FWL WTU No. 945, 2612' FNL, 330' FEL | | |
| f. USGS 7.5 Map Name(s) and Code Number(s): LAGUNA GATUNA, NM (1984) 32103-E6 | | |
| g. Area: Block: surveyed: 400' x 400' times 2 pads Impact: Within survey area of pads [See 14 b.] Linear: Surveyed: 100' x 443' Impact: 50' x 443' | | |

Exhibit F

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14. a. Records Search; ARMS: Date(s): 15 August, 2002 Name(s): Danny Boone
 BLM Office: Date(s): 01 August, 2002 Name(s): Danny Boone
 List Sites within .25 miles of Project:
 Show sites within 500' on Project Map

b. Description of Undertaking:

On 31 July 2002 Danny Boone was at the location to meet with Chesapeake representative Andrew McCalmont but due to a mixup in communication this did not occur. On 01 August, 2002 Danny Boone of Boone Archaeological Services, Don Peterson of the Carlsbad BLM, Chesapeake personnel D. O. Wittman and Andrew McCalmont met in the field and the affected area was superficially examined. Due to environmental concerns a new location for the WTU No. 945 was selected and John West Engineering then proceeded with the staking process.

The WTU well No. 924 will be served by an existing lease road that passes through the north portion of the pad area. The WTU well No. 945 has an access road that begins at the northeast portion of the WTU well No. 943 and trends northeast to a point approximately 50 inside of the southwest portion of the pad survey area. Plats are attached to this report. Total survey acreage is estimation and was arrived at because of the update of LA 59589.

c. Environmental Setting (NRCS soil designation; vegetative community; etc.):

Topography: Transition zone from flat sandy plain to high dunes

Vegetation: 40% (-/+) groundcover, mesquite, sage brush, shin oak, soap berry tree, broom snakeweed, assorted sunflowers, various grasses and other flora.

NRCS : Peyote-Maljamar-Kermil association: Gently undulating and rolling, deep, sandy soils

d. Field Methods:

Transect Intervals: For the pads, a grid of parallel transects spaced fifteen meters or less and for the road, transects spaced up to 15 meters each side of flagged center line.

Crew Size: One

Time in Field: 35 hrs.

15. Cultural Resource Findings:

a. Identification and description

The southeast corner of the WTU No. 924 and the north portion of the WTU No. 945 were in contact with the drawn boundaries of LA 59589 and this site was updated. The original recording of LA 59589 in 1987 recommended inclusion in the National Register of Historic Places and stated that the length was 700 meters east to west, an update by the same recorders in 1992 states 700 meters long but on the Topographic Map it had grown to approximately 1650 meters (one mile). Another update in 1995 by another organization shows a site approximately 700 meters long. The 1992 update collected a carbon sample and the 1995 update collected a obsidian flake, these samples or the results do not appear in the records beyond this. The 1992 update resulted in the placement of a overhead electric line across LA 59589. The current update resulted in a total redefining of the boundaries of LA 59589 and resulted in the recording of LA 137102 and LA 137103. LA 137102 is recommended for the National Register.

LA 59589 at UTM coordinates 625798E, 3606290N, BLM II site recommended for the National Register.

LA 137102 at UTM coordinates 624783E, 3606063N, BLM II site recommended for the National Register.

LA 137103 at UTM coordinates 625098E, 3606099N BLM II site not recommended for the National Register.

16. Management Summary (Recommendations):

Archaeological clearance of a pad for the WTU well No. 924 and the pad and access road for the WTU well No. 945 for Chesapeake Operating, INC in Section 9, T 20S, R 33E, NMPM, Lea County, New Mexico as presently staked is recommended provided that two stipulations are followed. A barrier fence be erected on the WTU No. 924 120' southeast of the drill hole across the southeast portion of the pad and no construction be allowed beyond this point; a barrier fence be erected on the WTU No. 945 across the northern portion of the pad 120' north of the drill hole and no construction be allowed beyond this point and a

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qualified archaeological monitor is present during initial surface disturbing activities. See attached diagrams. All activity should cease and the BLM archaeologist be notified immediately if any cultural resources are encountered at any time.

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

Responsible Archaeologist

Signature

Wang Boone

Date

8-21-02

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Pad for the WTU well No. 924 and a pad and access road for the WTU well No. 945 for
Chesapeake Operating, INC

Boone Archaeological Services, LLC
Report No.: BAS 8-2-05

NMCRIS No. 80020

Chesapeake Operating, INC.
P.O. Box 18496
Oklahoma City, Oklahoma 73154-7930

Attention:
Ms Janelle McNeely

1. Introduction:

An intensive archaeological survey of a pad for the WTU well No. 924 and a pad and access road for the WTU well No. 945 for Chesapeake Operating, INC in Section 9, T 20S, R 33E, NMPM, Lea County, New Mexico. Fieldwork was conducted on 7, 13, 14, & 16 August 2002 and resulted in the update of LA 59589, recording of LA 137102 and LA 137103.

2. Legal Description:

T 20S, R 33E, Sec. 9; WTU No. 924; SE NW, NE SW; 2562' FNT., 2210' FWL.

WTU No. 945, WTU No. 945 Pad; SE NE, NE SE, 2612' FNL, 330' FEL

Access Road, NE NE SE, NW NE SE; 443' in length:

Map Reference, USGS 7.5' Series: LAGUNA GATUNA, NM (1984) 32103-E6

Land Status: BLM, Carlsbad Field Office

Project Description:

On 31 July Danny Boone was at the location to meet with Chesapeake representative Andrew McCalmont but due to a mix-up in communication this did not occur. On 01 August, 2002 Danny Boone of Boone Archaeological Services, Don Peterson of the Carlsbad BLM, Chesapeake personnel D. O. Wittman and Andrew McCalmont met in the field and the affected area was superficially examined. Due to environmental concerns a new location for the WTU No. 945 was selected and John West Engineering then proceeded with the staking process.

The WTU well No. 924 will be served by an existing lease road that passes through the north portion of the pad area. The WTU well No. 945 has an access road that begins at the northeast portion of the WTU well No. 943 and trends northeast to a point approximately 50' inside of the southwest portion of the pad survey area. Plats are attached to this report. Total survey acreage is estimation and was arrived at because of the update of LA 59589.

Topography: Transition zone from flat sandy plain to high dunes

Vegetation: 40% (-/+) groundcover, mesquite, sage brush, shin oak, soap berry tree, broom snakeweed, assorted sunflowers, various grasses and other flora.

NRCS: Simona-Pajarito association: sandy, deep soils and soils that are shallow to caliche; from wind-worked deposits..

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Aspect: 360 degrees
Elevation: Varies from 3550' (+/-)
Lithic Resources: Chert and quartzite occur in the local gravels
Water Sources: (potential) No known potable source nearby
(permanent) Pecos River approximately 35 miles west.

3. Examination Procedure:

For the pad, a grid of parallel transects spaced fifteen meters or less and for the road, transects spaced up to 15 meters each side of flagged center line.
Area Delineation: Staked by client
Visibility: 15 to 100 %
Weather: Clear, sunny, hot
Lighting Conditions: Good
Work Hours on the Ground: 35
Crew Size: One

4. Findings:

The southeast corner of the WTU No. 924 and the north portion of the WTU No. 945 were in contact with the drawn boundaries of LA 59589 and this site was updated. The original recording of LA 59589 in 1987 recommended inclusion in the National Register of Historic Places and stated that the length was 700 meters east to west, an update by the same recorders in 1992 states 700 meters long but on the Topographic Map it had grown to approximately 1650 meters (one mile). Another update in 1995 by another organization shows a site approximately 700 meters long. The 1992 update collected a carbon sample and the 1995 update collected a obsidian flake, these samples or the results do not appear in the records beyond this. The 1992 update resulted in the placement of a overhead electric line across LA 59589. The current update resulted in a total redefining of the boundaries of LA 59589 and resulted in the recording of LA 137102 and LA 137103. LA 137102 is recommended for the National Register.

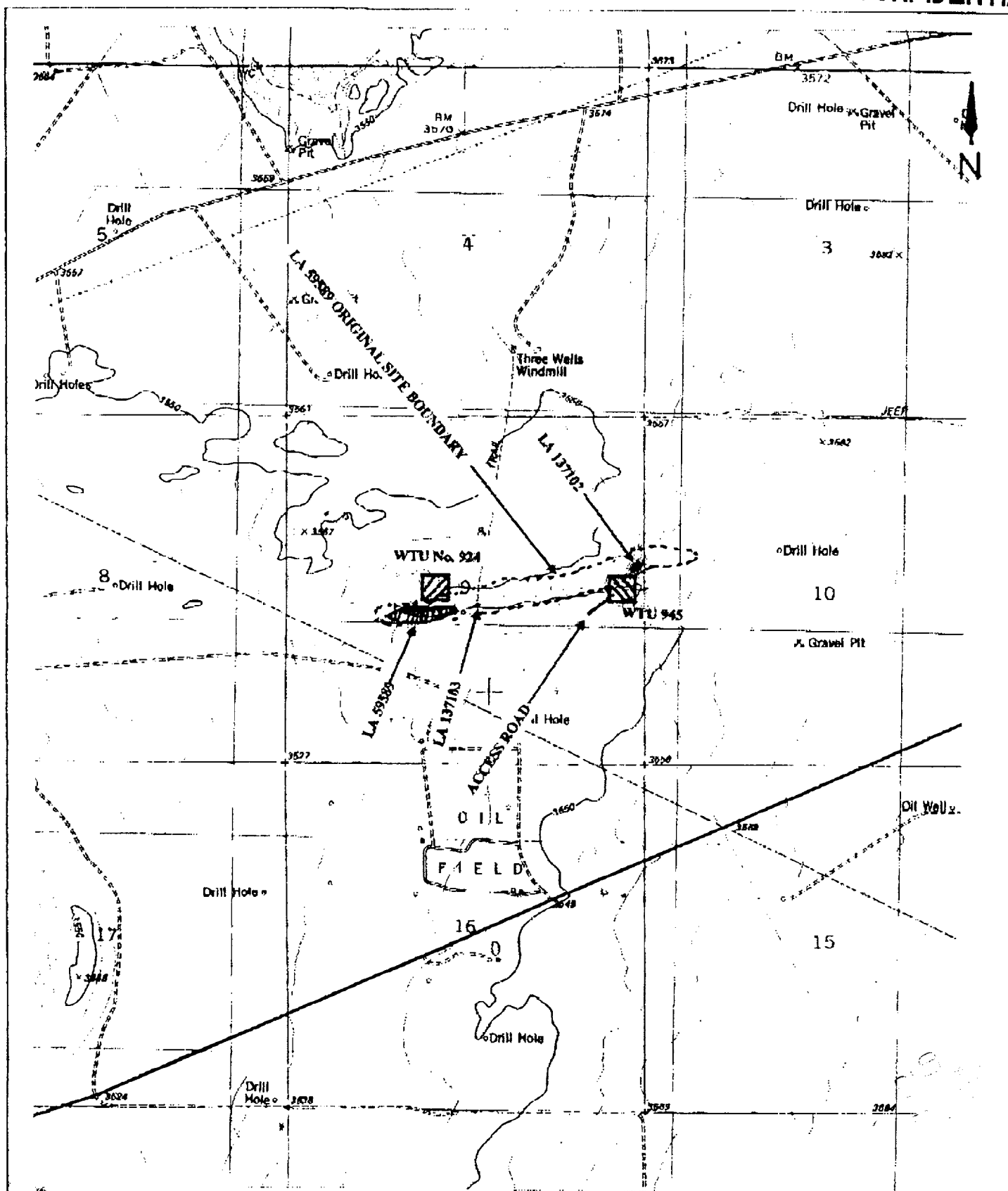
LA 59589 at UTM coordinates 625798E, 3606290N, BLM II site recommended for the National Register.

LA 137102 at UTM coordinates 624783E, 3606063N, BLM II site recommended for the National Register.

LA 137103 at UTM coordinates 625098E, 3606099N BLM II site not recommended for the National Register.

Recommendations:

Archaeological clearance of a pad for the WTU well No. 924 and the pad and access road for the WTU well No. 945 for Chesapeake Operating, INC in Section 9, T 20S, R 33E, NMPM, Lea County, New Mexico as presently staked is recommended provided that two stipulations are followed. A barrier fence be erected on the WTU No. 924 120' southeast of the drill hole across the southeast portion of the pad and no construction be allowed beyond this point; a barrier fence be erected on the WTU No. 945 across the northern portion of the pad 120' north of the drill hole and no construction be allowed beyond this point and a qualified archaeological monitor is present during initial surface disturbing activities. See attached diagrams. All activity should cease and the BLM archaeologist be notified immediately if any cultural resources are encountered at any time.

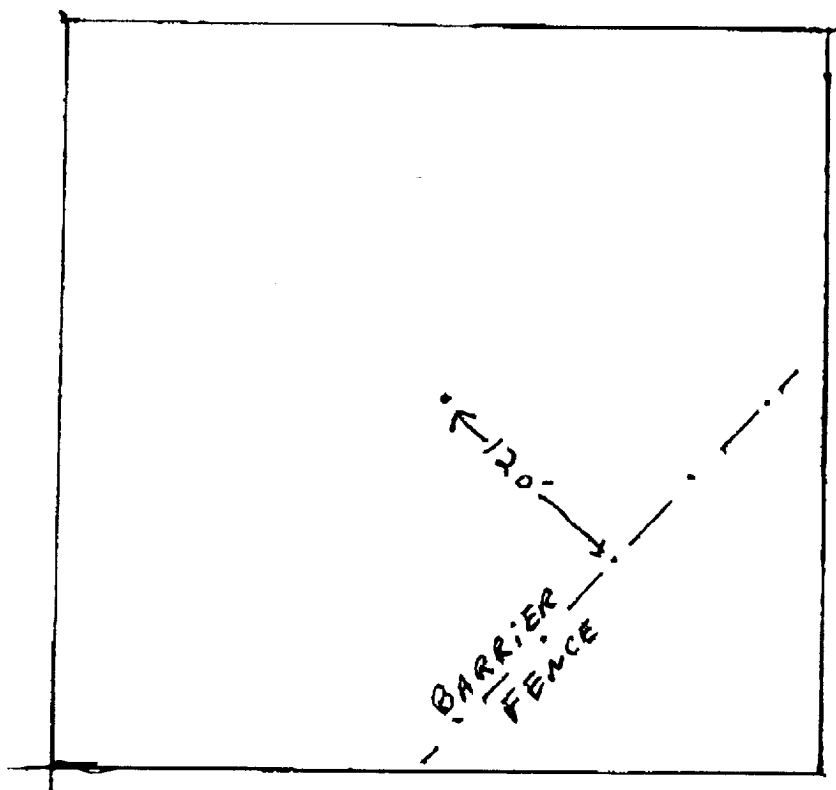
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Location Map for of a pad for the WTU well No. 924 and a pad and access road for the WTU well No. 945 for Chesapeake Operating, INC in Section 9, T 20S, R 33E, NMPM, Lea County, New Mexico.

Map Reference USGS 7.5' Series: LAGUNA GATUNA, NM (1984) 32103-E6

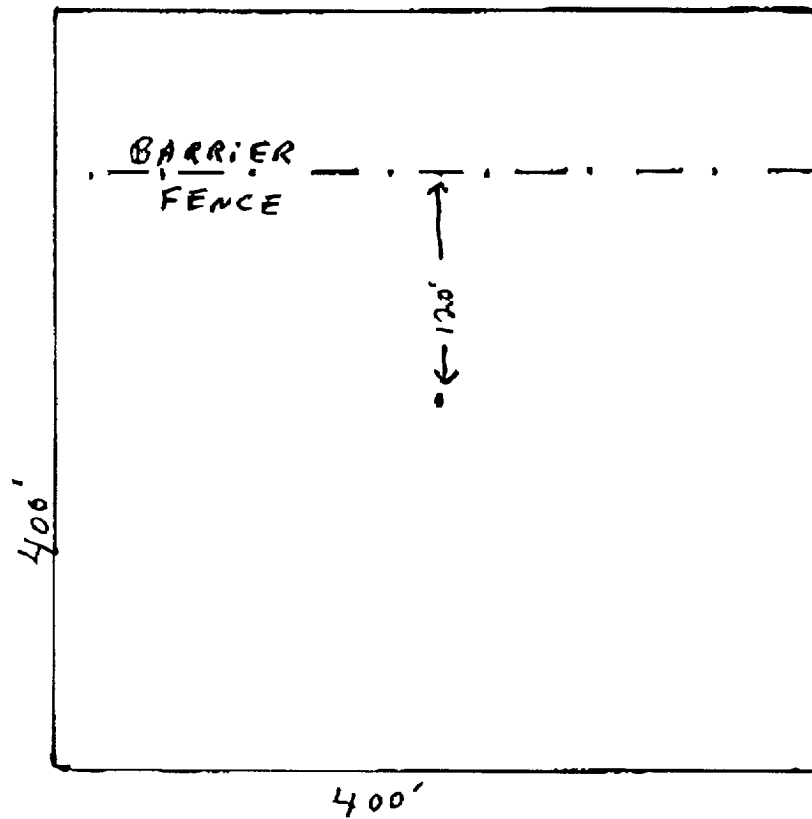
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DIAGRAM FOR WTU WELL No. 924

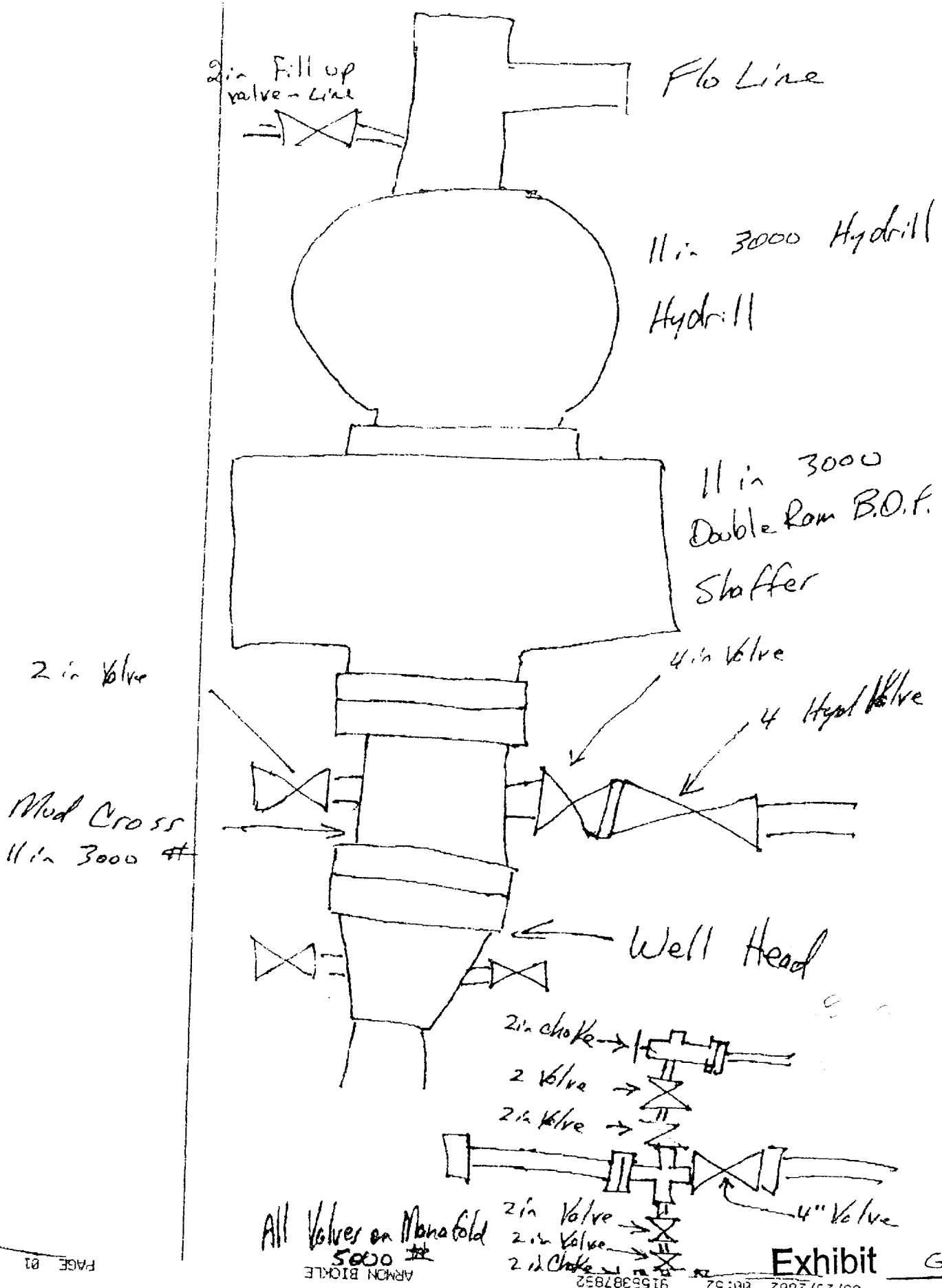


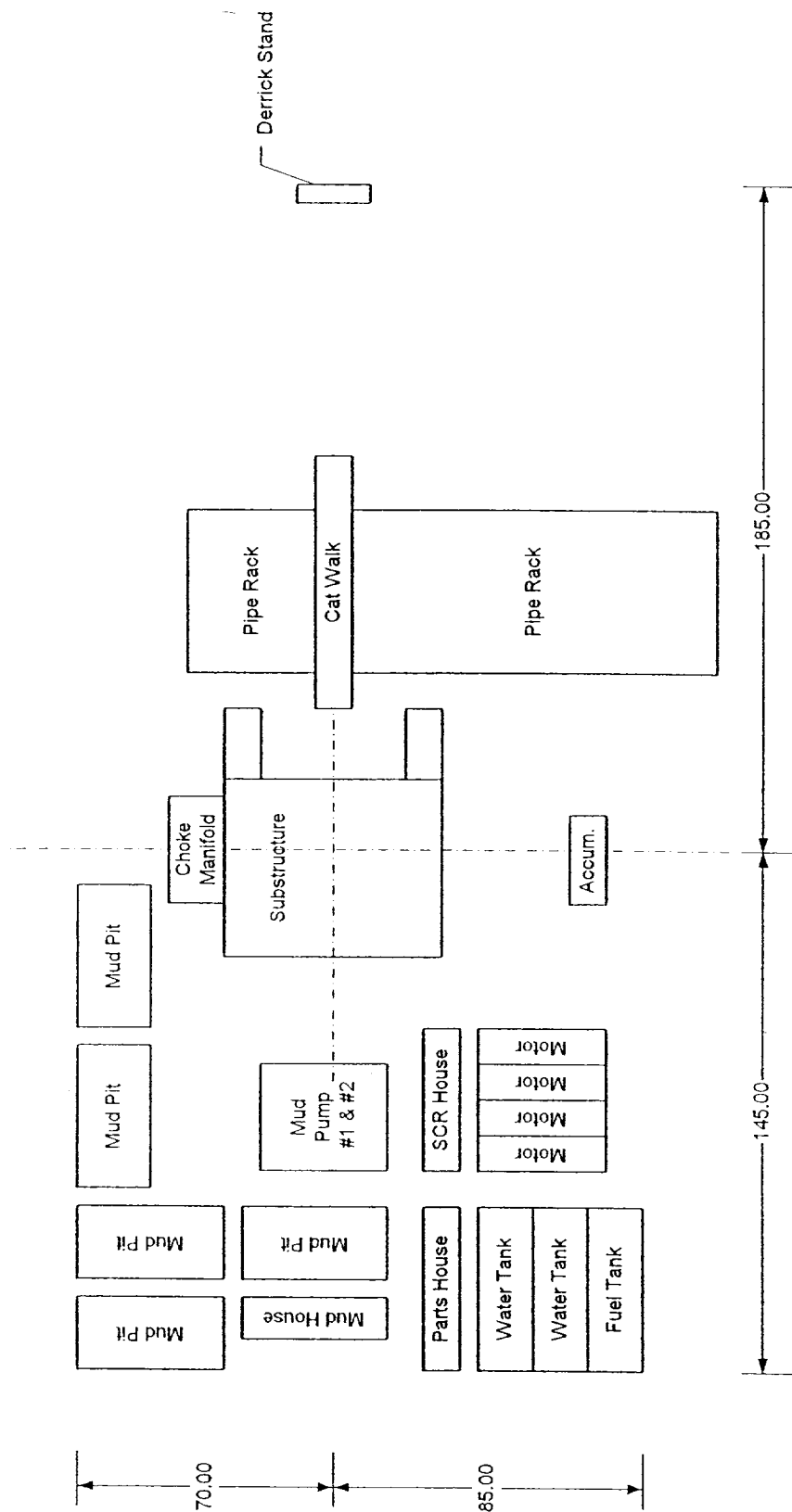
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DIAGRAM FOR WTU WELL No. 945



[Handwritten signature]
9/9/02





Chesapeake Operating, Inc

General Rig Layout

SIZE FSCM NO DWG NO

SCALE

Not to Scale

SHEET

1 OF 1

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United States Department of the Interior

BUREAU OF LAND MANAGEMENT

New Mexico State Office

1474 Rodeo Road

P. O. Box 27115

Santa Fe, New Mexico 87502-0115

IN REPLY REFER TO:

3104 (93200-rayo)

Nationwide Bond

June 21, 1999

DECISION

Bonded Subsidiaries:

Chesapeake Operating, Inc.

Chesapeake Mid-Continent Corp.

Chesapeake Exploration Limited Partnership

P.O. Box 18496

Oklahoma City, OK 73154

Surety:

Underwriters Indemnity Company

Greenway Plaza, Suite 400

Houston, TX 77046

BLM Bond No.: NM2634

Surety Bond No.: B7258

Bond Type: Oil and Gas

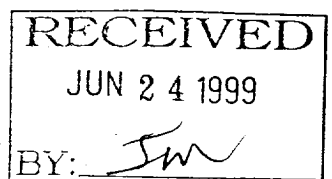
Amount of Bond \$150,000.00

Execution Date: 3/20/1998

Rider Accepted

On February 11, 1999, Rider No. 4 was filed to the bond described above. The rider adds Chesapeake Exploration Limited Partnership, as an additional principal. The rider has been examined and found satisfactory and is accepted effective, February 11, 1999, the date filed in this office.

The parent company, Chesapeake Energy Corporation, holds no title to any properties in this name, and is not required to be bonded at this time. Chesapeake Exploration Limited Partnership is a subsidiary of Chesapeake Energy Corporation.



We specifically call your attention to the fact that the bond described above now provides coverage for Chesapeake Exploration Limited Partnership, either jointly or individually, as long as the ownership remains the same.

If you have any questions, you may contact me at (505) 438-7610.

/s/ Rose Ann Ortiz
Rose Ann Ortiz
Land Law Examiner
Fluids Adjudication Team

FILED
HUBBS
OCD