

OPER. OGRID NO. 147179
PROPERTY NO. 32563
POOL CODE 59110
EFF. DATE 6-16-04
APPLIC. API NO. 30-025-367305. Lease Serial No.
NMNM77074

6. If Indian, Allottee or Tribe Name

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

8. Lease Name and Well No.
SMITH 4 FEDERAL 2 ✓

9. API Well No.

30-025-3673010. Field and Pool, or Exploratory
W TEAS Yates-Saven
Rivers

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

Sec 4 T20S R33E Mer NMP

12. County or Parish
LEA13. State
NM

17. Spacing Unit dedicated to this well

40.00

20. BLM/BIA Bond No. on file

23. Estimated duration

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, shall be attached to this form:

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

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

25. Signature
(Electronic Submission)Name (Printed/Typed)
SHARON E. DRIESDate
04/01/2004Title
AUTHORIZED REPRESENTATIVEApproved by (Signature)
/s/ Linda S. C. Rundell

Name (Printed/Typed) /s/ Linda S. C. Rundell

Date
MAY 28 2004Title
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 SUBJECT TO
GENERAL REQUIREMENTS AND
SPECIAL STIPULATIONS
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 #28961 verified by the BLM Well Information System
For CHESAPEAKE OPERATING INC, sent to the Hobbs
Committed to AFMSS for processing by ARMANDO I OPEZ on 04/02/2004 (04AL0066AE)DECLARED WATER BASIN
CEMENT BEHIND THE 8 5/8"
CASING MUST BE CIRCULATEDR-111-P Potash
CEMENT BEHIND THE 5 1/2"
CASING MUST BE CIRCULATED

** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED **

Additional Operator Remarks:

Chesapeake Operating, Inc proposes to drill a well to 3500' to test the Yates Sands formation. 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 OCD requirements.

Attached please find the Surface Use Pland and Drilling Plan as required by Onshore Orders No. 1.

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

P.O. Box 1900, Hobbs, NM 88241-1900

DISTRICT II

P.O. Drawer DD, Artesia, NM 88211-0710

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

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 30-025-36730	Pool Code 59110	Pool Name W. Teas Yates Seven Rivers
Property Code 32563	Property Name SMITH FEDERAL 4	Well Number 2
OGRID No. 147178	Operator Name CHESAPEAKE OPERATING, INC.	Elevation 3568'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
1	4	20-S	33-E		990	NORTH	395	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

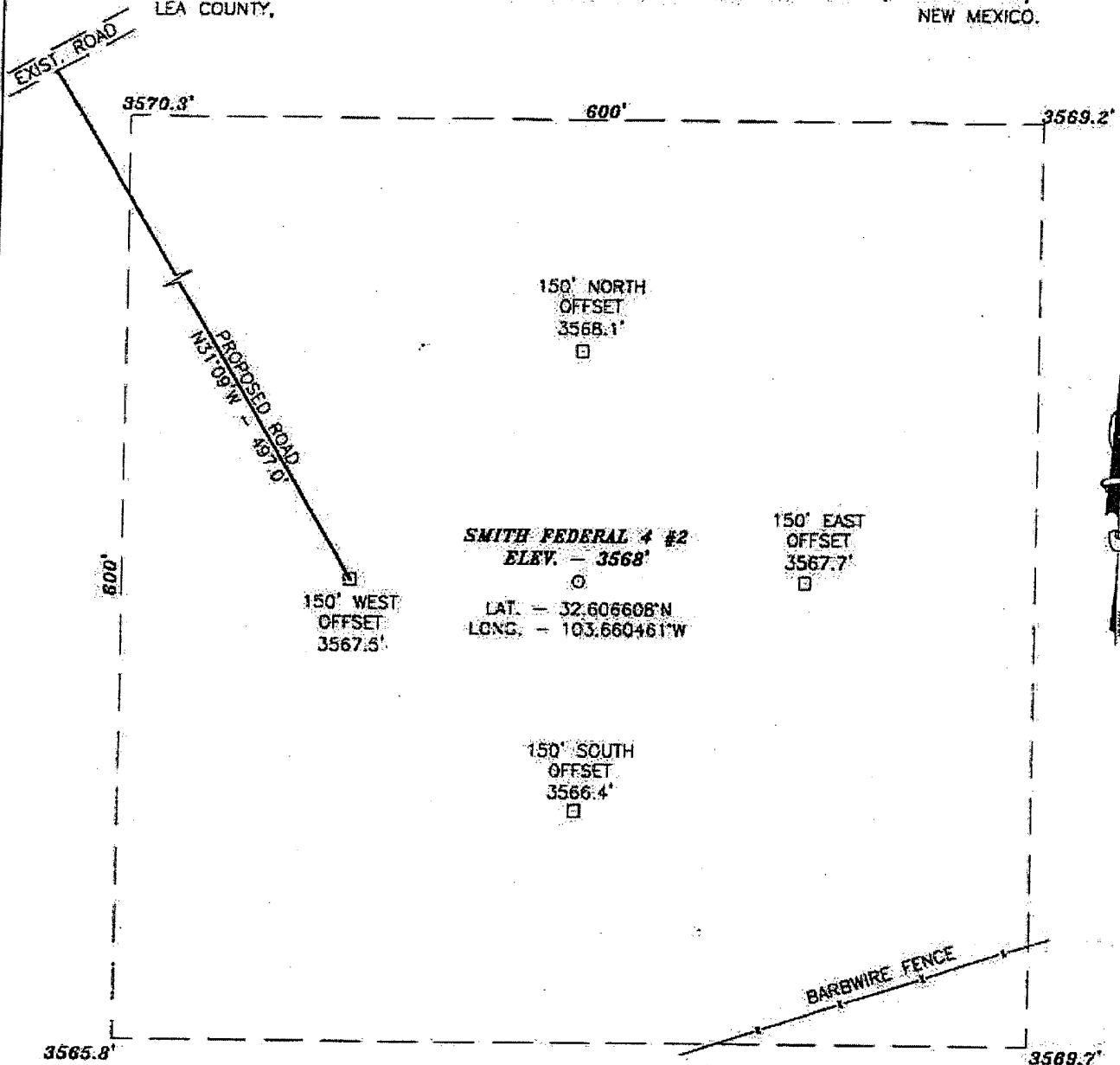
Dedicated Acres	Joint or Infill	Consolidation Code	Order No.

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

LOT 4 40.51 AC.	LOT 3 40.41 AC.	LOT 2 40.31 AC.	LOT 1 40.21 AC.
GEODETIC COORDINATES NAD 27 NME Y = 585051.1 N X = 707203.8 E LAT. 32.606608° N LONG. 103.660461° W		DETAIL 	
OPERATOR CERTIFICATION I hereby certify the information contained herein to be true and complete to the best of my knowledge and belief. Signature: <i>Lynnda F. Townsend</i> Printed Name: Lynnda F. Townsend Title: Landman Date: 11-24-03			
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. Date Surveyed: NOVEMBER 13, 2003 Signature & Seal of Professional Surveyor: <i>Gary Edson</i> Certificate No.: GARY EDSON 12841			

Exhibit A-1

SECTION 4, TOWNSHIP 20 SOUTH, RANGE 33 EAST, N.M.P.M.,
LEA COUNTY, NEW MEXICO.



DIRECTIONS TO LOCATION:

GOING WEST ON 62-180. GO 0.4 MILES PAST MILE MARKER 76.
GO RIGHT ONTO SMITH RANCH ROAD AND GO NORTHWEST 2.0
MILES. TURN LEFT AND GO WEST 2.0 MILES. ACCESS ROAD
STAKED TO THIS POINT. PROPOSED LOCATION IS 500' SOUTH &
VISIBLE FROM ROAD.

JOHN WEST SURVEYING COMPANY

412 N. DAL PASO - HOBBS, NEW MEXICO - 505-393-3117

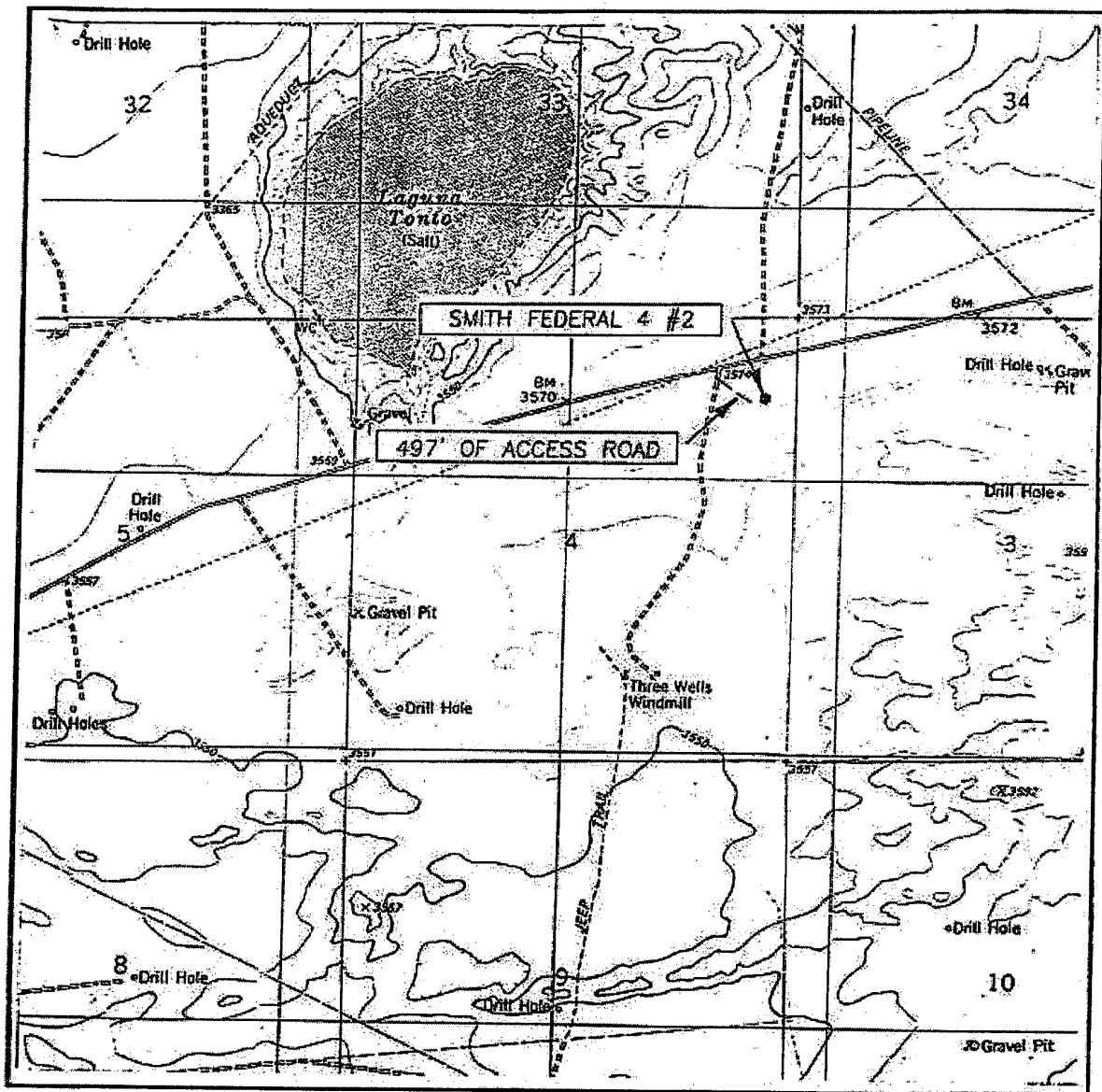
CHESAPEAKE OPERATING, INC.

THE SMITH FEDERAL 4 #2 LOCATED 990 FEET FROM
THE NORTH LINE AND 395 FEET FROM THE EAST LINE
SECTION 4, TOWNSHIP 20 SOUTH, RANGE 33 EAST,
N.M.P.M., LEA COUNTY, NEW MEXICO.

Survey Date: 11/13/03	Sheet 1 of 1 Sheets
W.O. Number: 03.11.1268	Drawn By: L.A.
Date: 11/14/03	DISK:CD#2
	03111268

Exhibit A-2

LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

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

SEC. 4 TWP. 20-S RGE. 33-E

SURVEY N.M.P.M.

COUNTY LEA

DESCRIPTION 990' FNL & 395' FEL

ELEVATION 3568'

OPERATOR CHESAPEAKE OPERATING, INC.

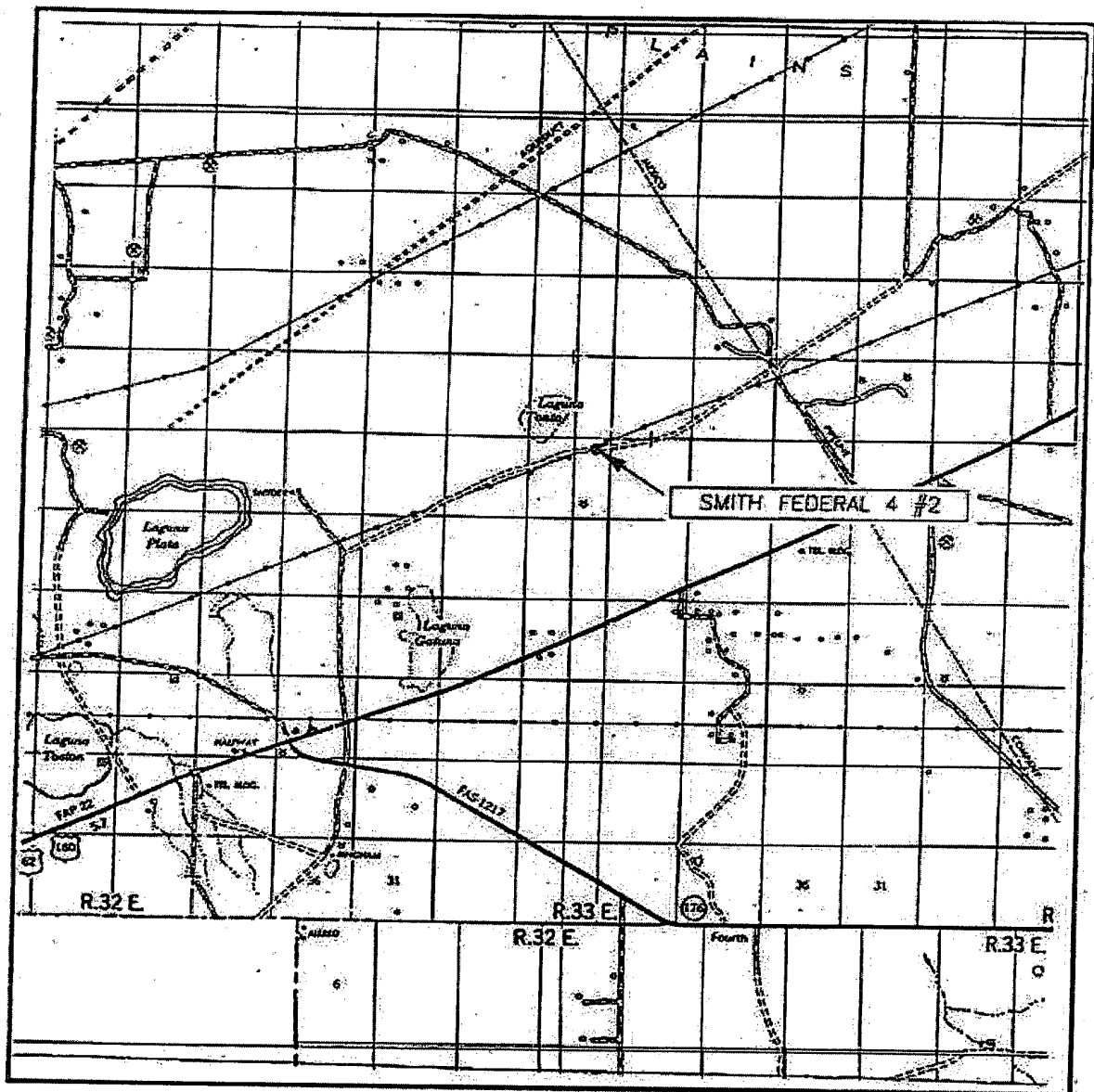
LEASE SMITH FEDERAL 4

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

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

Exhibit A-3

VICINITY MAP



SCALE: 1" = 2 MILES

SEC. 4 TWP. 20-S RGE. 33-E

SURVEY N.M.P.M.

COUNTY LEA

DESCRIPTION 990' FNL & 395' FEL

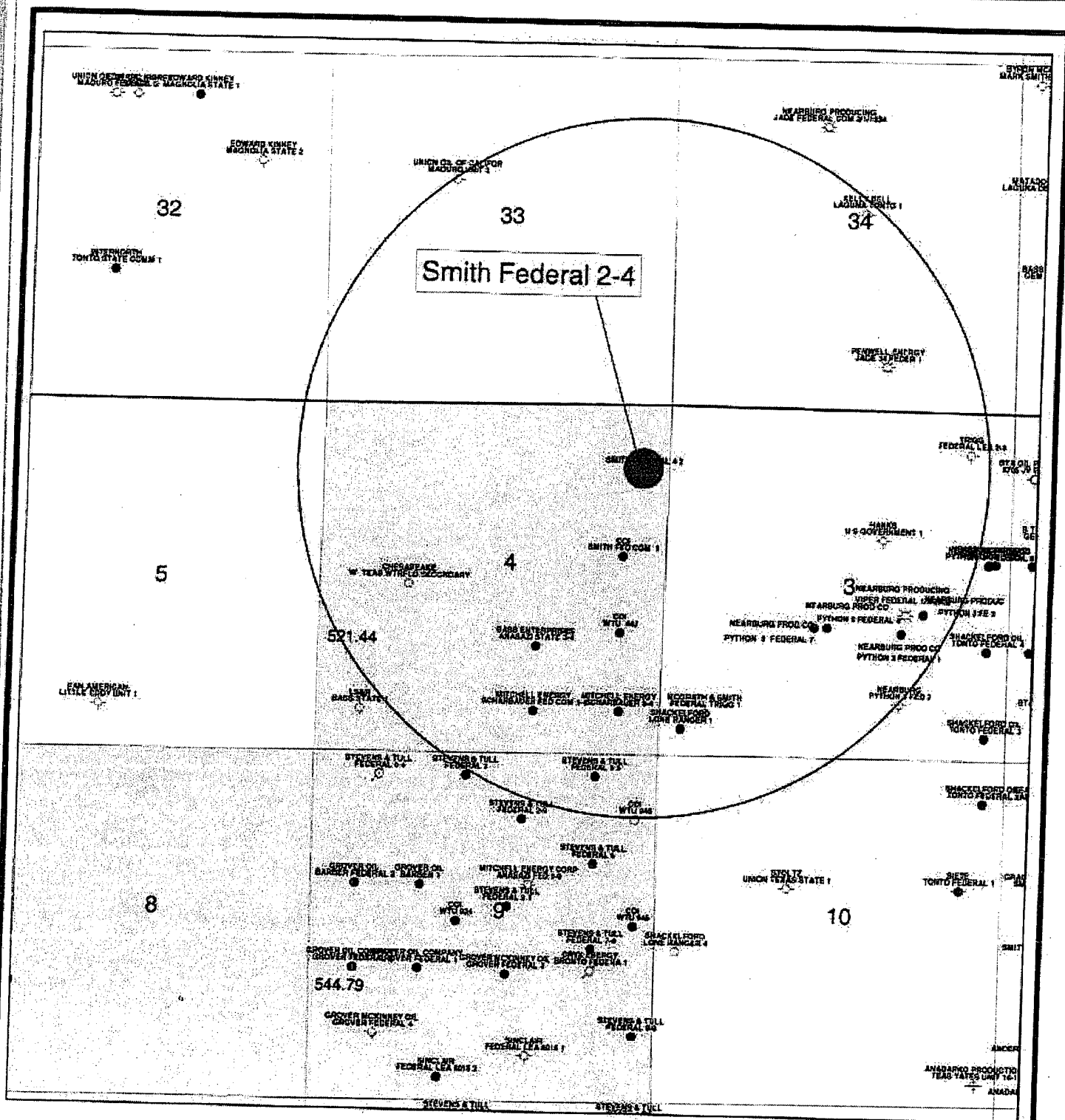
ELEVATION 3568'

OPERATOR CHESAPEAKE OPERATING, INC.

LEASE SMITH FEDERAL 4

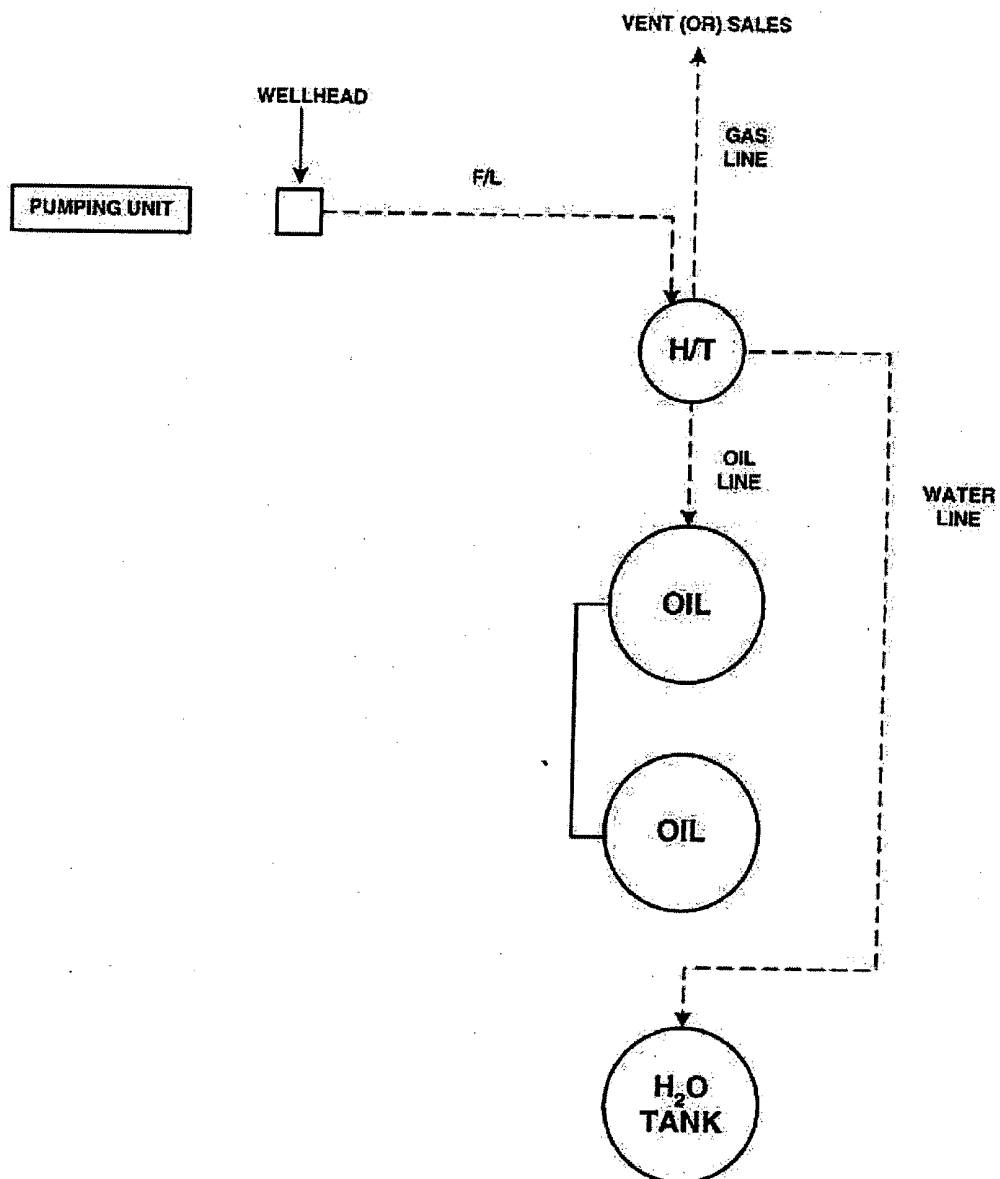
JOHN WEST SURVEYING
HOBBS, NEW MEXICO
(505) 393-3117

Exhibit A-4





R
O
A
D



Drawn By: G. A. Kennedy
Date: 6/17/03

ONSHORE ORDER NO. 1
Chesapeake Operating, Inc.
SMITH 4 FEDERAL 2
990' FNL & 395' FEL
NENE of Section 4-20S-33E
Lea County, NM

CONFIDENTIAL – TIGHT HOLE

Lease No. NMNM 111243

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 county roads will be used to enter proposed access road.
 - b. Location, access, and vicinity plats attached hereto. See Exhibits A-1 through A-4.
2. PLANNED ACCESS ROADS
 - a. A new access road 497' in length and 14' in travel way width with a maximum disturbance area of 30' will be built in accordance with guidelines set forth in the BLM Onshore Orders.
 - b. No turnouts are expected.
 - c. In order to level the location, cut and fill will be required. Please see attached Well Location and Acreage Dedication Plat – Exhibit A1-A4.
 - d. A locking gate will be installed at the site entrance.
 - e. Any fences cut will be repaired. Cattle guards will be installed, if needed.
 - f. 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.
 - g. Driving directions are from the intersection of HWY 62/180 and West County Rd in Hobbs, NM go 30.5 miles west on HWY 62/180. Turn right go through cattle guard turn left and go .3 miles then turn right go .7 miles to cattle guard. Go through cattle guard, turn left go .9 miles then turn left go .6 mile to a cattle guard. Go through cattle guard, turn right go .2 miles and then turn left go .5 mile to the proposed location.
3. LOCATION OF EXISTING WELLS WITHIN A 1-MILE RADIUS OF THE PROPOSED LOCATION – see Exhibit B.
4. LOCATION OF PRODUCTION FACILITIES

It is anticipated that production facilities will be located on the well pad as product will be sold at the wellhead and/or tank battery. – 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

No construction materials will be used from Section 4-20S-33E. All material (i.e. shale) will be acquired from private or commercial sources.

7. METHODS FOR HANDLING WASTE DISPOSAL

Drill cuttings will be contained and buried in an earthen reserve pit after the drilling fluids have evaporated. 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

The proposed site layout plat is attached showing a generic rig plat with rig orientation and equipment location. See Exhibit D. Also see Exhibit A for the size of the pad.

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 Oklahoma Corporation Commission 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.

ONSHORE ORDER NO. 1
Chesapeake Operating, Inc.
SMITH 4 FEDERAL 2
990' FNL & 395' FEL
NENE of Section 4-20S-33E
Lea County, NM

CONFIDENTIAL – TIGHT HOLE

Lease No. NMNM 111243

SURFACE USE PLAN
Page 3

11. SURFACE & MINERAL OWNERSHIP

United States of America
Department of Interior
Bureau of Land Management
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 Boone Archaeological Services, Carlsbad, New Mexico for the proposed location. A copy of the report has been sent to the BLM office under separate cover and is also attached for reference. 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) 879-9530 (FAX)
candrews@chkenergy.com

Regulatory Compliance

Sharon Dries
Regulatory Compliance Analyst
P.O. Box 18496
Oklahoma City, OK 73154
(405) 879-7985 (OFFICE)
(405) 879-9583 (FAX)
sdries@chkenergy.com

Drilling Engineer

Rob Jones
P.O. Box 14896
Oklahoma City, OK 73154
(405) 879-9375 (OFFICE)
(405) 879-9573 (FAX)
(405) 623-5880 (MOBILE)
rjones@chkenergy.com

Field Representative

Mark Mabe
Production Superintendent
P.O. Box 11050
Midland, TX 79702-8050
432-683-7443 (OFFICE)
432-683-7441 (FAX)
505 390-0221 (MOBILE)
mmabe@chkenergy.com

ONSHORE ORDER NO. 1
Chesapeake Operating, Inc.
SMITH 4 FEDERAL 2
990' FNL & 395' FEL
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CONFIDENTIAL - TIGHT HOLE

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SURFACE USE PLAN
Page 4

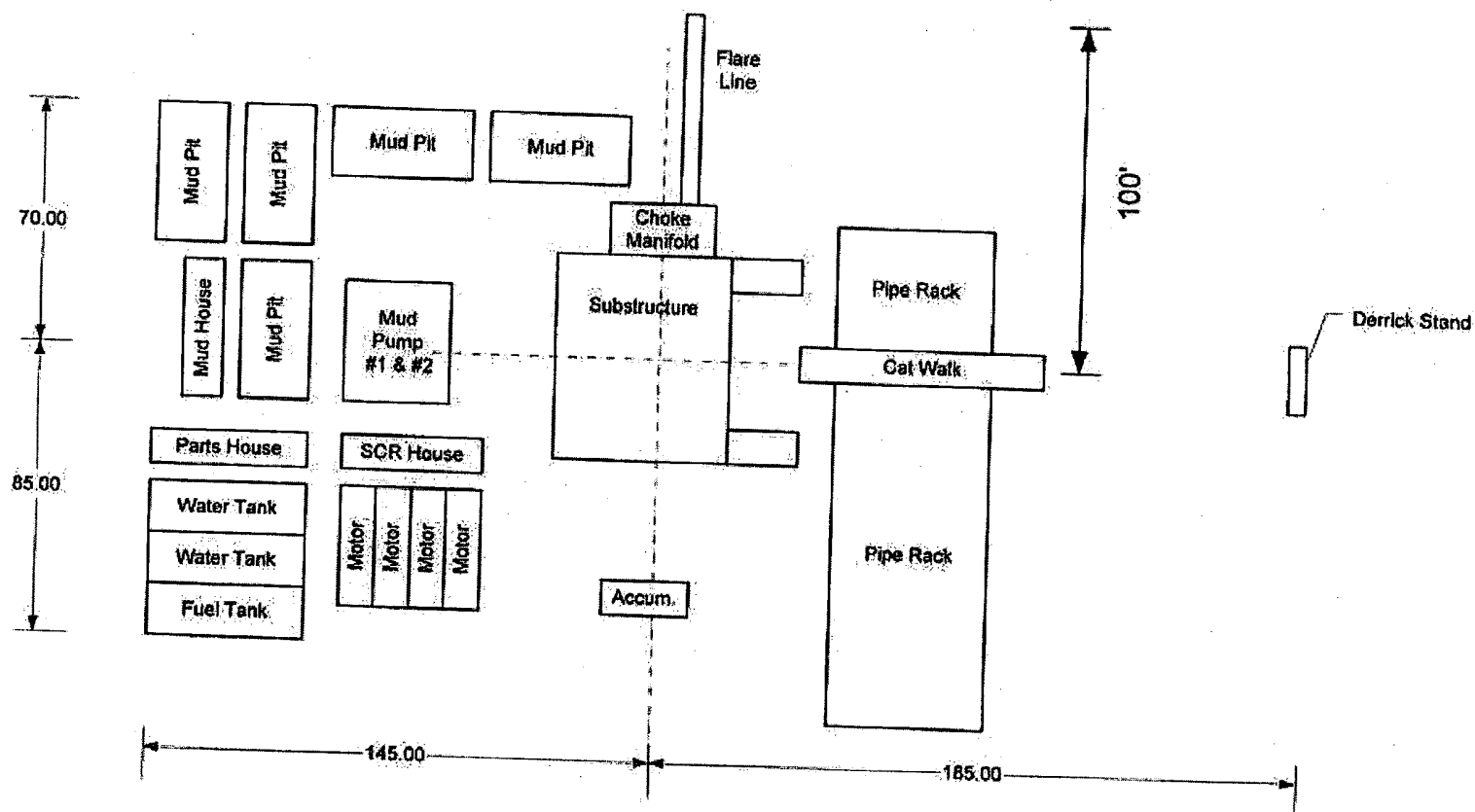
14. CERTIFICATION

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: J. Mark Lester

Date: 3/31/04

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

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

1/03

1. BLM Report No.	2. Reviewer's Initials/Date _____ ACCEPTED () REJECTED ()	3. NMCRIS No.: 86527
4. Type of Report <div style="display: flex; justify-content: space-around;"> Negative(X) Positive () </div>		
5. Title of Report: Class III Archaeological Survey for Chesapeake Operating, Inc.'s Proposed Access Road and Well Pad to Serve the Smith Federal No.4 Well Author: Stephen Smith		6. Fieldwork Date: January 5, 2003 7. Report Date: January 6, 2004
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		9. Cultural Resource Permit No.: 190-2920-03-E 10. Consultant Report No.: BAS 01-04-01
11. Customer Name: Chesapeake Operating, Inc. Responsible Individual: Sharon Dries Address: P.O. Box 18496 Oklahoma City, Oklahoma 73154-7930 Phone: (405) 848-8000		12. Customer Project No.:
13. Land Status	BLM	STATE
a. Area Surveyed (acres)	8.69	0
b. Area of Effect (acres)	4.01	0
14. Linear:	Length: 497 ft (total length of access road)	Width: 130 ft
144 ft [+/-] (total length requiring archaeological survey/overlap with 600 ft x 600 ft pad)		
Block: 600 ft x 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: Maljamar, NM e. Legal Location: T 20S, R 33E, Section 4: S½NE¼NE¼, NW¼NE¼NE¼ f. Well Pad Footages: 990 ft FNL, 395 ft FEL g. USGS 7.5 Map Name and Code Number: Laguna Gatuna, NM (1984) 32103-E6		

16. Project Data:

a. Records Search: Date of BLM File Review: January 5, 2004 Name of Reviewer: Stephen Smith
Date of ARMS Data Review: January 5, 2004 Name of Reviewer: Stephen Smith

Findings:

Sites within 0.25 mile of the project area: During the pre-field record search for this project it was learned that two previously recorded sites are plotted within 0.25 mile of the project area, LA 100721 and LA 100722. One site is plotted within 500 ft of the proposed well pad and access road, LA 100721. The pre-field record search was supervised by Bruce Boeke, BLM-CFO archaeologist.

b. Description of Undertaking: Chesapeake Operating, Inc. plans to construct a well pad and access road to serve the Smith Federal No. 4 well. On January 5, 2004, 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 x 600 ft (8.26 acres). The proposed access road to serve the well pad begins at an existing lease road and extends 497 ft (1.48 acres) into the northwest corner of the well pad. Because the road is overlapped within the survey for the well pad, 353 ft was deducted from the total length, leaving 144 ft (0.43 acres) requiring survey. The total area of the survey is 11.41 acres, all of which is on land administered by the BLM-CFO.

c. Environmental Setting:

Topography: The project is located in a flat area and is north of an east/west trending dune ridge

Vegetation: Mesquite, yucca, prickly pear, and various grasses

Visibility: 65-75 percent due to vegetative cover

NRCS: Pyote-Maljamar-Kermite association: Gently undulating and rolling, deep, sandy soils

d. Field Methods:

Transect Interval: Transects are no greater than 15 meters and performed in a zig-zag pattern (well pad) and four parallel transects no greater than 12 meters (access road)

Crew Size: 1

Time in Field: 3 hours

e. Artifacts Collected: None

17. Cultural Resource Findings: No cultural resources were encountered during the course of 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 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.

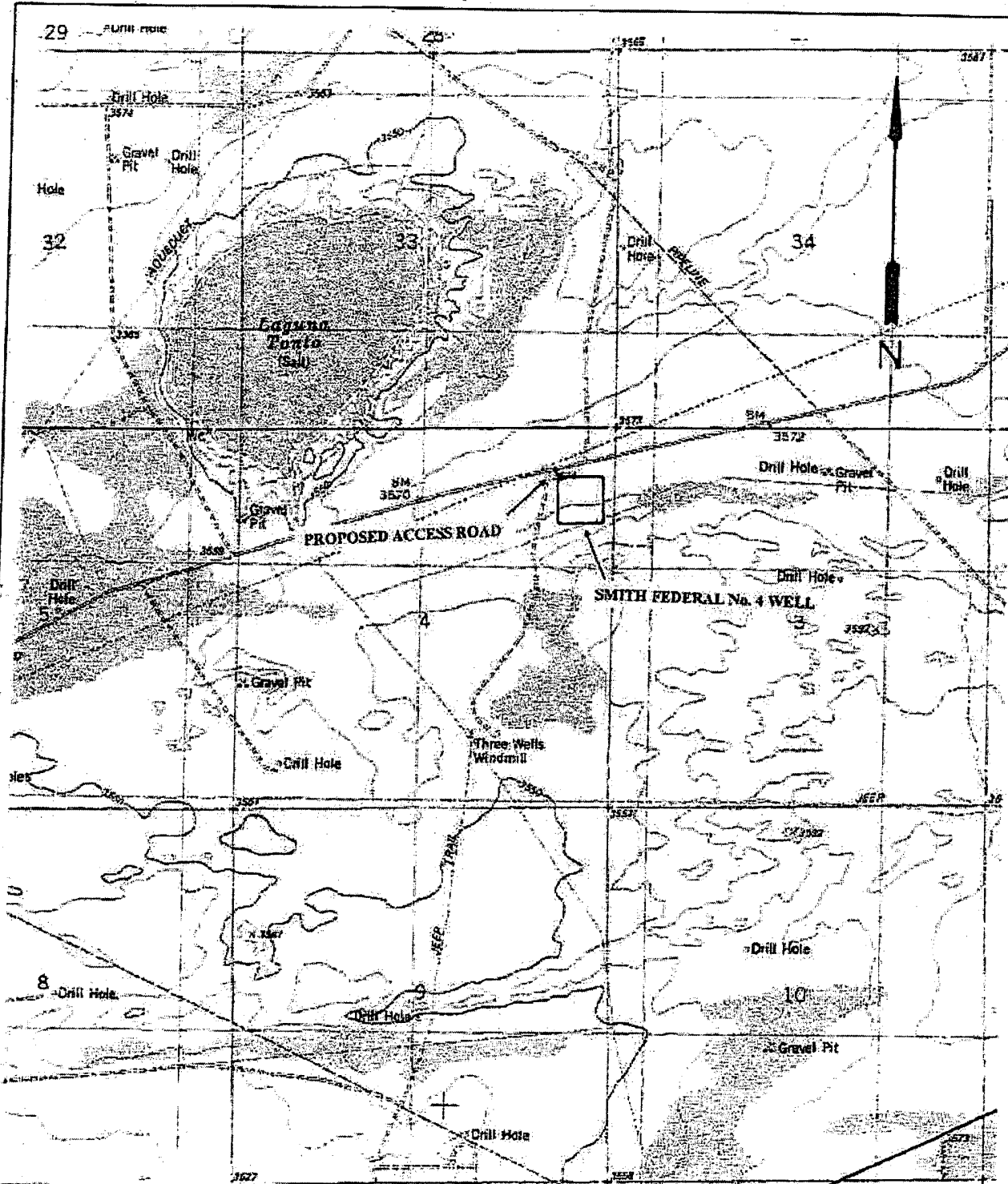
19.

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

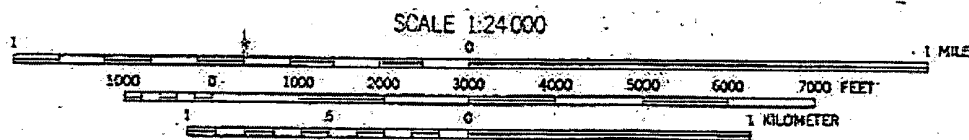
Responsible Archaeologist

Stephen Smith
Signature

1-7-04
Date



Location Map: Class III Archaeological Survey for Chesapeake Operating, Inc.'s Proposed Access Road and Well Pad to Serve the Smith Federal No. 4 Well in Section 4, T 20S, R 33E, NMPM, Lea County, New Mexico. Map Reference USGS 7.5' Series: Laguna Garuna, NM (1984) 32103-E6



BLOWOUT PREVENTOR SCHEMATIC

CHESAPEAKE OPERATING INC

WELL : Smith Federal 2-4

FIELD : WTU

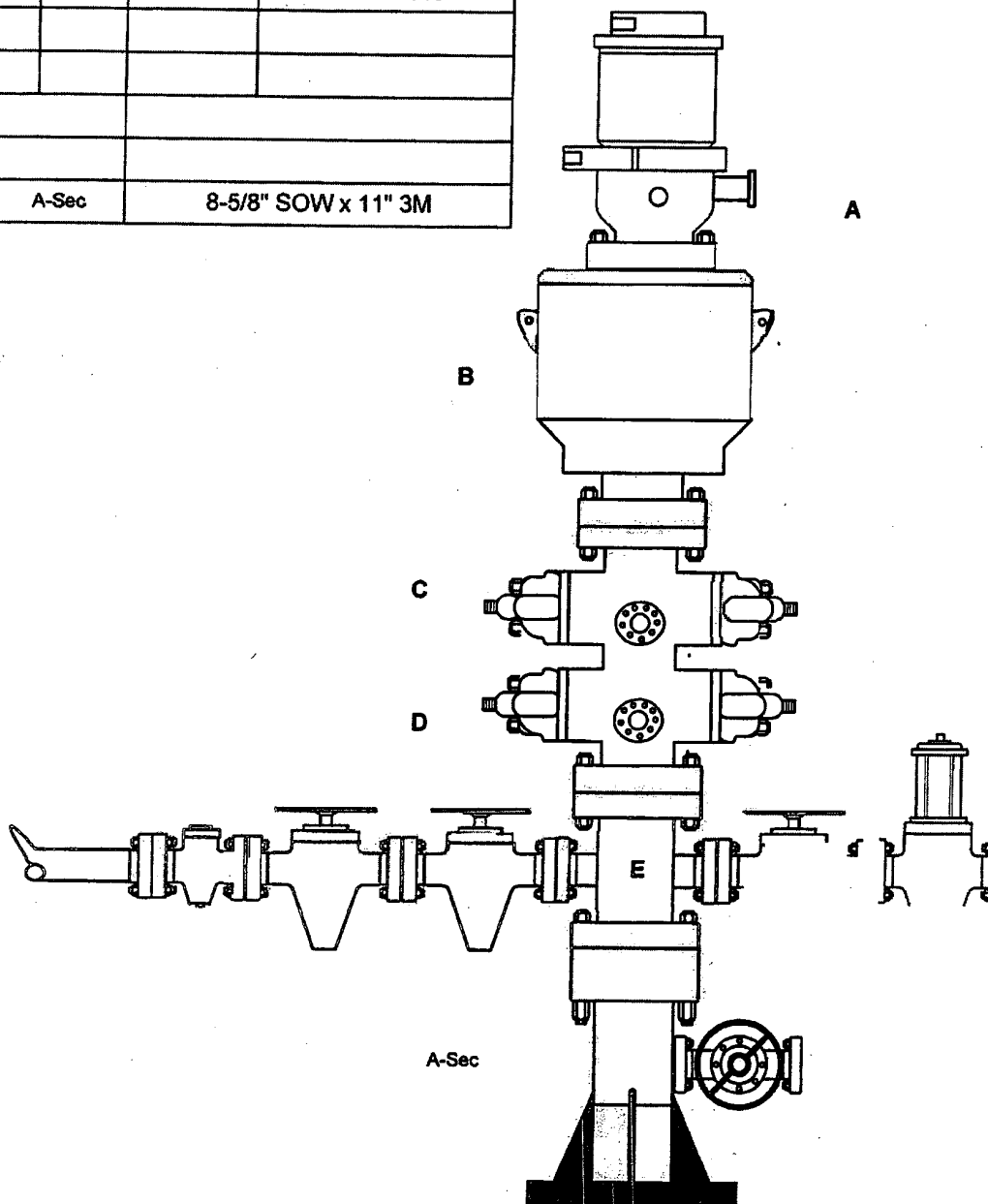
RIG : Unknown

COUNTY : Lea

STATE: New Mexico

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

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



BLOWOUT PREVENTOR SCHEMATIC

CHESAPEAKE OPERATING INC

WELL : Smith Federal 2-4

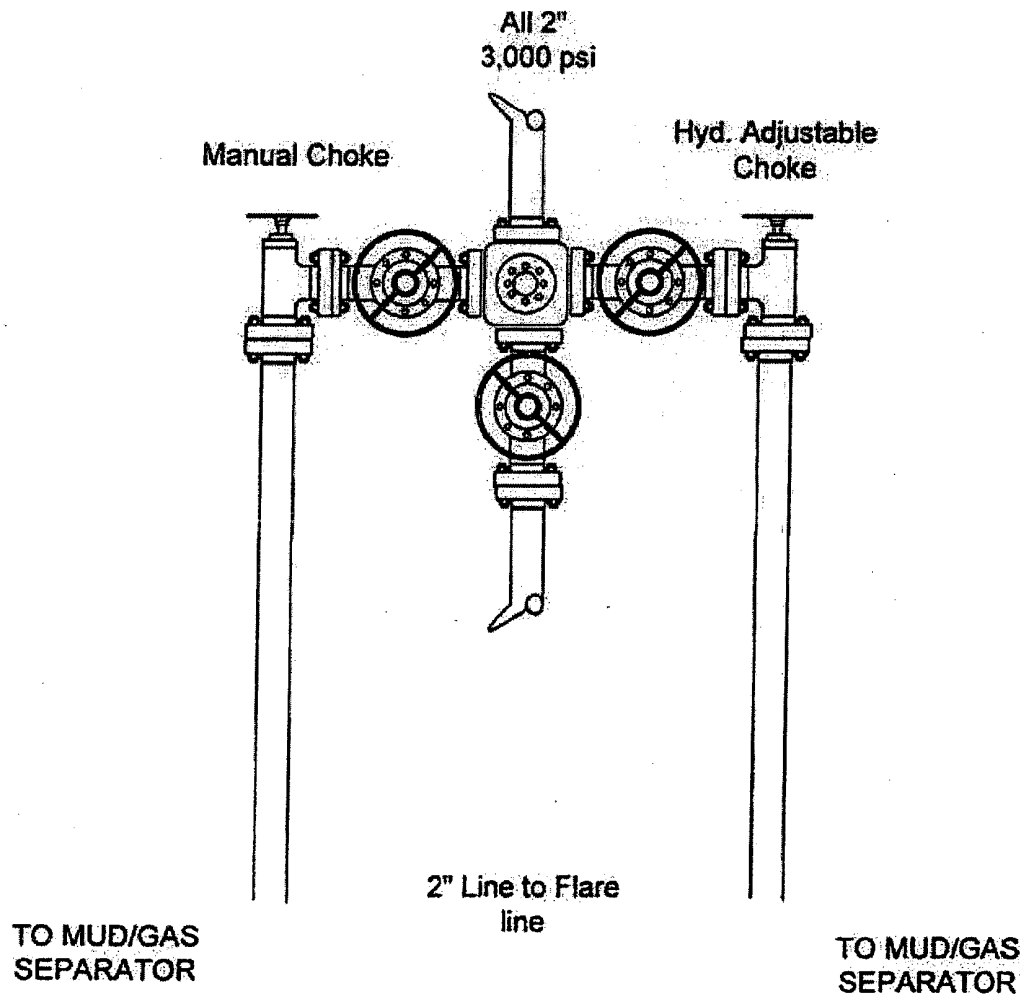
FIELD : WTU

RIG : Unknown

COUNTY : Lea

STATE: NM

OPERATION: 3M CHOKE MANIFOLD



ONSHORE ORDER NO. 1
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Smith 4 Federal 2
990' FNL & 395' FEL
NE NE of Section 4-20S-33E
Lea County, New Mexico

CONFIDENTIAL – TIGHT HOLE
Lease Contract No. NM 77074

DRILLING PROGRAM

Page 1

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	1340	2245
Salt	1400	2185
Base Salt	3010	575
Tansill Dolomite	3015	570
Yates	3195	390
Upper Yates 1 Sand	3220	365
Lower Yates 1 Sand	3240	345
Yates 2 Carbonate	3295	290
Yates 2 Sand	3310	275
Yates 2 L Carbonate	3315	270
Yates 3 U Sand	3335	245
Yates 3 Mid Sand	3355	225
Yates 3 Lower Sand	3380	205
Seven Rivers	3390	195
TOTAL DEPTH	3500	85

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:

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DRILLING PROGRAM

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<u>Substance</u>	<u>Formation</u>	<u>Depth</u>
Oil	Upper Yates 1 Sand	3220
Oil	Lower Yates 1 Sand	3240

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 - See Exhibit F-1 and F-2.

A. Equipment

1. The equipment to be tested includes all of the following that is installed on the well:
 - (a) Ram-type and annular preventers,
 - (b) Choke manifolds and valves,
 - (c) Kill lines and valves, 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 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:

3.

<u>System Operating Pressures</u>	<u>Precharge Pressure</u>
1500 PSI	750 PSI
2000 PSI	1,000 PSI
3000 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.

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DRILLING PROGRAM

Page 4

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</u>
	<u>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	0-1,400'	12-1/4"	8-5/8"	24	J-55	STC	NEW
Production Casing	0-3,500'	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: 450 sx Tail: 200 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: 200 sx	Lead: 2.14 Tail: 1.35	20%	Lead: 30% Tail: 30%

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>
0-1,400'	Water Based	8.5-9.3ppg	32-36	NC
1,400'-3,500'	Salt Water based	10.0-10.2ppg	28-30	15-20

An in-ground, lined pit will be utilized during the drilling of this well. All fluids and cuttings will be disposed of in accordance with New Mexico Oil Conservation Division rules and regulations.

A mud test shall be performed every 24 hours after mudding up to determine, as applicable: density, viscosity, gel strength, filtration, and pH.

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 Natural GR, Density-Neutron, PE & Dual Laterolog from TD to surface casing; Neutron-GR surface casing to surface.
- Cores samples are not planned.

7. ABNORMAL PRESSURES AND HYDROGEN SULFIDE

- The estimated bottom hole pressure is 1515 psi. No abnormal pressures or temperatures are anticipated.
- Hydrogen sulfide gas is not anticipated.

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 ResourcesOil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505Form C-144
March 12, 2004For drilling and production facilities, submit to
appropriate NMOC 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

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Telephone: 685-7443e-mail address: awhitefield@chkenrgy.comAddress: 550 W. Texas Ave. #1300 Midland, TX, 79701Facility or well name: Smith 4 Fed. 2API #: 30-025-36730U/L or Qtr/Qtr: NE/NE Sec: 4 T: 20 R: 33County: LeaLatitude: 32.605608NLongitude: 103.550461WNAD: 1927 ☐ 1983 ☐ Surface Owner Federal ☒ State ☐ Private ☐ Indian ☐

Pit

Type: Drilling ☒ Production ☐ Disposal ☐Workover ☐ Emergency ☐Lined ☒ Unlined ☐Liner type: Synthetic ☒ Thickness: 12 mil Clay ☐ Volume6085 bbl²

Below-grade tank

Volume: _____ bbl Type of fluid: _____

Construction material: _____

Double-walled, with leak detection? Yes ☐ If not, explain why not: _____

Depth to ground water (vertical distance from bottom of pit to seasonal high water elevation of ground water.)

Less than 50 feet

50 feet or more, but less than 100 feet

100 feet or more

(20 points)

(10 points)

(0 points) 0

Wellhead protection area: (Less than 200 feet from a private domestic water source, or less than 1000 feet from all other water sources.)

Yes

No

(20 points)

(0 points) 0

Distance to surface water: (horizontal distance to all wetlands, playas, irrigation canals, ditches, and perennial and ephemeral watercourses.)

Less than 200 feet

200 feet or more, but less than 1000 feet

1000 feet or more

(20 points)

(10 points)

(0 points) 0

Ranking Score (Total Points)

0If this is a pit closure: (1) attach a diagram of the facility showing the pit's relationship to other equipment and tanks. (2) Indicate disposal location: onsite ☐ offsite ☐ If offsite, name of facility: _____(3) Attach a general description of remedial action taken including remediation start date and end date. (4) Groundwater encountered: No ☐ Yes ☐ If yes, show depth below ground surface _____ ft. and attach sample results. (5) Attach soil sample results and a diagram of sample locations and excavations.I hereby certify that the information above is true and complete to the best of my knowledge and belief. I further certify that the above-described pit or below-grade tank has been/will be constructed or closed according to NMOC guidelines ☒, a general permit ☐, or an (attached) alternative OCD-approved plan ☐.Date: 6-15-04Printed Name/Title: Mike Whitefield Field Rep.Signature: Mike Whitefield

Your certification and NMOC approval of this application/closure does not relieve the operator of liability should the contents of the pit or tank contaminate ground water or otherwise endanger public health or the environment. Nor does it relieve the operator of its responsibility for compliance with any other federal, state, or local laws and/or regulations.

Approval:

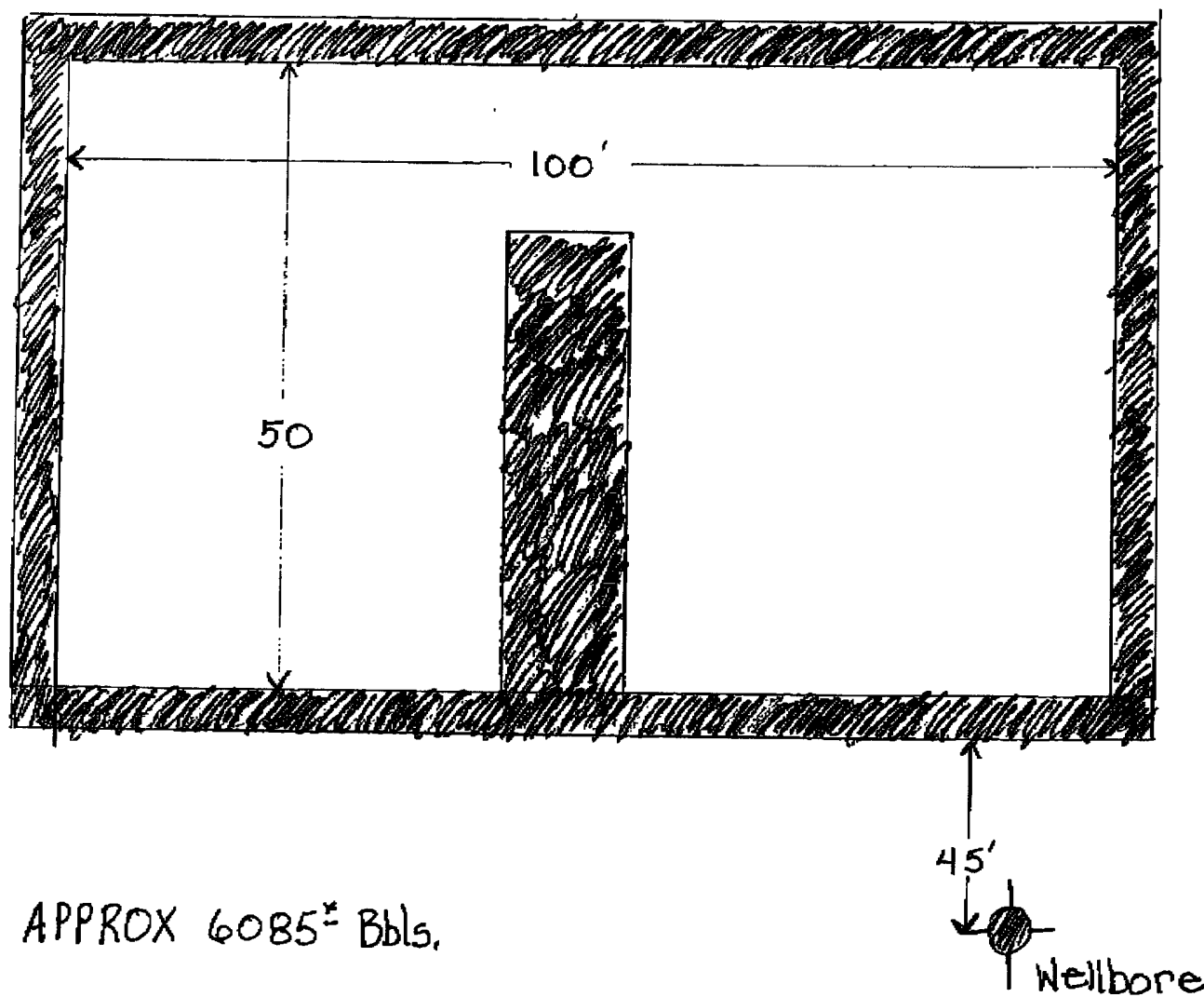
Date: _____

Printed Name/Title: _____

Signature: _____

RESERVE (#3 design) single horse shoe

Smith 4 Fed. 2



APPROX 6085[±] Bbls.

WALL BERMS design #3

Smith 4 Fed. 2

