

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

Form approved.  
Budget Bureau No. 1004-0136  
Expires: December 31, 1991

**APPLICATION FOR PERMIT TO DRILL OR DEEPEN**

1a. TYPE OF WORK <b>DRILL <input checked="" type="checkbox"/> DEEPEN <input type="checkbox"/></b>		5. LEASE DESIGNATION AND SERIAL NO. NM 05792, NM 05792A NM 024368A	
b. TYPE OF WELL OIL WELL <input type="checkbox"/> GAS WELL <input checked="" type="checkbox"/> OTHER <input type="checkbox"/>		6. IF INDIAN, ALLOTTEE OR TRIBE NAME	
2. NAME OF OPERATOR Matador Operating Company		7. UNIT AGREEMENT NAME	
3. ADDRESS AND TELEPHONE NO. 8340 Meadow Rd., #158, Dallas, TX 75231, 214-987-7144		8. FARM OR LEASE NAME, WELL NO. Red Hills Unit #5	
4. LOCATION OF WELL (Report location clearly and in accordance with BLM Form 3160-1) At surface: 1695-1650 FNL-660 FWL At proposed prod. zone: 717 E		9. API WELL NO. 30-025-35112	
14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR VILLAGE 25 miles west of Jal, NM		10. FIELD AND POOL, OR WILDCAT Red Hills (Atoka) Pool	
15. DISTANCE FROM PROPOSED LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any) 1650'		11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA Sec 33, T25S, R33E	
16. DISTANCE FROM PROPOSED LOCATION TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT. 4440'		12. COUNTY OR PARISH Lea	
17. PROPOSED DEPTH 15,000'		13. STATE NM	
21. ELEVATIONS (Show whether DF, RT, GR, etc.) 3368' GR		22. APPROX. DATE WORK WILL START August 1, 2000	

PROPOSED CASING AND CEMENTING LOG				
SIZE OF HOLE	GRADE, SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
17-1/2"	13-3/8 H-40	48#	700'	500 SX
12-1/4"	9-5/8 N-80	40#	4800'	1470 SX
8-3/4"	7 P110	29#	12,900'	890 SX
6-1/8"	4-1/2 P110	15.1#	15,000'	400 SX

Drill 15,000' Wolfcamp-Atoka test. Drill 17-1/2" hole to  $\pm 700'$ . Run and cement 13-3/8" casing to surface. NU BOP stack and drill 12-1/4" hole to  $\pm 4,800'$ . Run and cement 9-5/8" casing to surface. NU 5M BOP assembly and test. Drill 8-3/4" hole to  $\pm 12,800'$  and evaluate. Run and cement 7" casing, NU 10M BOP assy & test to rated pressure. Drill 6-1/8" hole to 15,000' and evaluate. If commercial, run and cement 4-1/2" liner.

Well Location and Acreage Dedication Plat

Application for Permit to Drill (Drilling Program)

Surface Use Plan

Exhibit A, Area Map

Exhibit B, Wellsite Plan

Exhibit C, Production Map

Exhibit C, Blowout preventer requirements

Exhibit E, BOP Schematic

Exhibit F, Choke Manifold

Well Plan Outline

Topo Map

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

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

24. SIGNED J. W. Bell TITLE Drilling Manager DATE 6-29-00

(This space for Federal or State office use)

PERMIT NO. \_\_\_\_\_ APPROVAL DATE \_\_\_\_\_

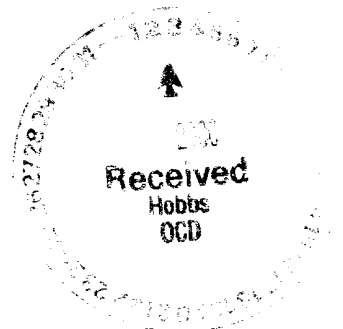
Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon. CONDITIONS OF APPROVAL, IF ANY:

APPROVED BY /S/LARRY D. BRAY TITLE Assistant Field Manager, Lands And Minerals DATE 6-29-00

\*See Instructions On Reverse Side

APPROVED FOR 1 YEAR

RECEIVED  
JUL 03 2000  
BLM  
ROSSELL, NM



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

State of New Mexico  
Energy, Minerals, and Natural Resources Department

Form C-102  
Revised 02-10-94

Instructions on back

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

**OIL CONSERVATION DIVISION**  
P. O. Box 2088  
Santa Fe, New Mexico 87504-2088

Submit to the Appropriate  
District Office  
State Lease - 4 copies  
Fee Lease - 3 copies

☒ AMENDED REPORT

DISTRICT III  
1000 Rio Brazos Rd.  
Aztec, NM 87410

DISTRICT IV  
P. O. Box 2088  
Santa Fe, NM 87507-2088

**WELL LOCATION AND ACREAGE DEDICATION PLAT**

<sup>1</sup> API Number 30-02-5-35112	<sup>2</sup> Pool Code 83560	<sup>3</sup> Pool Name Red Hills, Penn
<sup>4</sup> Property Code 22445	<sup>5</sup> Property Name RED HILLS UNIT	<sup>6</sup> Well Number 5
<sup>7</sup> OGRID No. 014245	<sup>8</sup> Operator Name MATADOR OPERATING COMPANY	<sup>9</sup> Elevation 3370'

**<sup>10</sup> SURFACE LOCATION**

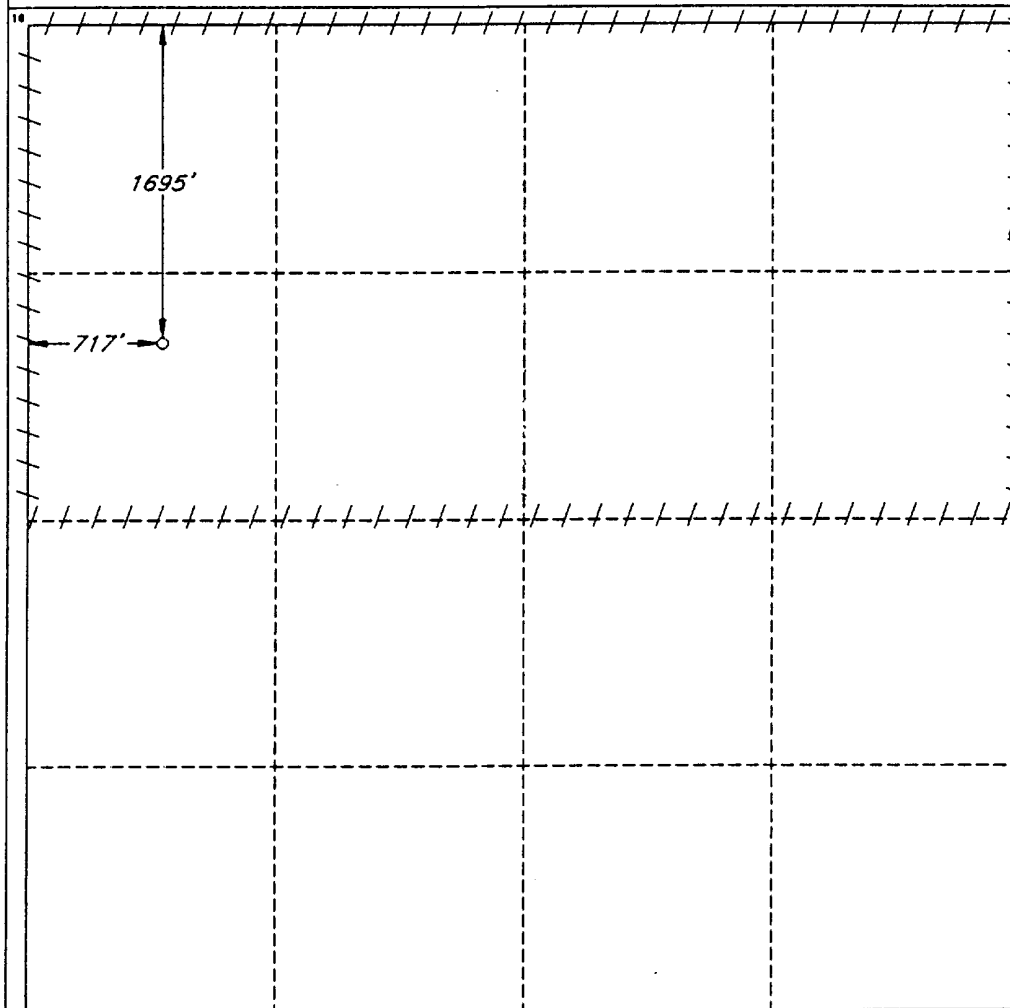
UL or lot no.	Section	Township	Range	Lot Ida	Feet from the	North/South line	Feet from the	East/West line	County
E	33	25 SOUTH	33 EAST, N.M.P.M.		1695'	NORTH	717'	WEST	LEA

**"BOTTOM HOLE LOCATION IF DIFFERENT FROM SURFACE"**

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

<sup>12</sup> Dedicated Acres 320	<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code	<sup>15</sup> Order No.
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NO ALLOWABLE WELL 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 that the information contained herein is true and complete to the best of my knowledge and belief.

Signature  
*[Signature]*  
Printed Name  
Jim Kramer  
Title  
Sr. Engineer  
Date  
7/18/00

**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 of Survey  
JULY 11, 2000

Signature and Seal of  
Professional Surveyor

*[Signature]*  
Certificate No.  
V. L. BEZNER R.P.S. #7920

JOB #70351 / 22 SE / J.C.P.

New Mexico Oil Conservation Division  
C-102 Instructions

IF THIS IS AN AMENDED REPORT, CHECK THE BOX LABELED  
"AMENDED REPORT" AT THE TOP OF THIS DOCUMENT.

Surveyors shall use the latest United States government survey or dependent resurvey. Well locations will be in reference to the New Mexico Principal Meridian. If the land is not surveyed contact the appropriate OCD district office. Independent subdivision surveys will not be acceptable.

1. The OCD assigned API number for this well
2. The pool code for this (proposed) completion
3. The pool name for this (proposed) completion
4. The property code for this (proposed) completion
5. The property name (well name) for this (proposed) completion
6. The well number for this (proposed) completion
7. Operator's OGRID number
8. The operator's name
9. The ground level elevation of this well
10. The surveyed surface location of this well measured from the section lines NOTE: If the United States government survey designates a Lot Number for this location use that number in the "UL or lot no." box. Otherwise use the OCD unit letter.
11. Proposed bottom hole location. If this is a horizontal hole indicate the location of the end of the hole.
12. The calculated acreage dedicated to this completion to nearest hundredth of an acre
13. Put a Y if more than one completion will be sharing this same acreage or N if this is the only completion on this acreage
14. If more than one lease of different ownership has been dedicated to the well show the consolidation code from the following table:

C	Communitization
U	Unitization
F	Forced pooling
O	Other
P	Consolidation pending

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!

15. Write in the OCD order(s) approving a non-standard location, non-standard spacing, or directional or horizontal drilling

16. This grid represents a standard section. You may superimpose a non-standard section over this grid. Outline the dedicated acreage and the separate leases within that dedicated acreage. Show the well surface location and bottom hole location, if it is directionally drilled, with the dimensions from the section lines in the cardinal directions. (Note: A legal location is determined from the perpendicular distance to the edge of the tract.) If this is a high angle or horizontal hole show that portion of the well bore that is open within this pool.

Show all lots, lot numbers, and their respective acreage.

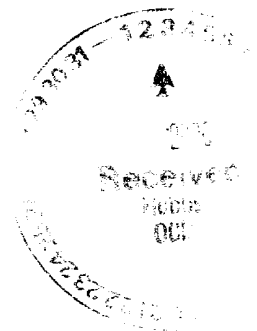
If more than one lease has been dedicated to this completion, outline each one and identify the ownership as to both working interest and royalty.

17. The signature, printed name, and title of the person authorized to make this report, and the date this document was signed.
18. The Registered surveyors certification. This section does not have to be completed if this form has been previously accepted by the OCD and is being filed for a change of pool or dedicated acreage.

RECEIVED  
NEW MEXICO OIL CONSERVATION DIVISION  
WELLS DIVISION

2000 JUL 20 A 9 13

RECEIVED



## APPLICATION FOR PERMIT TO DRILL

### MATADOR OPERATING CORPORATION

RED HILLS UNIT #5  
1650' FNL & 660' FWL  
Sec 33, T25S, R33E  
Lea, New Mexico

In conjunction with Form 3160-3, Application for Permit to Drill, Matador Operating Company submits the following items of pertinent information in accordance with Onshore Oil and Gas Order Nos. 1 & 2, and with all other applicable federal and state regulations.

1. Geological Name of Surface Formation:

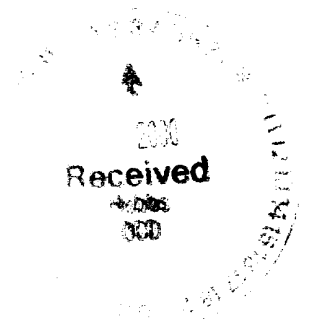
Permian

2. Estimated Tops of Important Geological Markers:

	Measured Depth	Subsea	
Upper Permian Delaware Fm	-1495'	4889' MD	+
Lower Permian Bone Spring Fm	-5470'	8864' MD	
1st Bone Spring SS Mbr	-6305'	9699' MD	
2nd Bone Spring SS Mbr	-7170'	10564' MD	
3rd Bone Spring SS Mbr	-8160'	11554' MD	+
Lower Permian Wolfcamp Fm	-8730'	12124' MD	
Lower Wolfcamp	-9930'	13324' MD	*
Pennsylvanian	-10440'	13834' MD	
Canyon	-10630'	14024' MD	
Strawn	-10765'	14159' MD	
Atoka	-10965'	14359' MD	*
Atoka Carbonates	-11155'	14549' MD	*
PTD	-11606'	15000' MD	

\* = Primary Reservoir Targets

+ = Secondary Reservoir Targets



3. Estimated Depth of Anticipated Fresh Water, Oil or Gas:

Upper Permian Sands	0-300'	Fresh water
Delaware	4889'	oil
3rd Bone Spring SS Mbr	11,554'	oil
Lower Wolfcamp	13,324'	gas
Atoka	14,359'	gas
Atoka Carbonates	14,549'	gas

The ground water will be protected by setting 13-3/8" surface casing at 700' and circulating cement back to surface. The productive Lower Wolfcamp, Atoka and Atoka Carbonates horizons will be protected by setting 4-1/2" production liner at TD with cement tied back to inside the 7" casing, if the Delaware and Bone Spring are productive, cement will be brought up to 500' above upper most zone.

4. Proposed Casing Program:

Hole Size	Interval	Casing OD	Description
25"	0-40'	20"	Conductor, if necessary
17-1/2"	0-700'	13-3/8"	48#, H-40, ST&C New, R-3
12-1/4"	0-4800'	9-5/8"	40#, N-80, LT&C, New, R-3
8-3/4"	0-12,800'	7"	29#, P110, LT&C, New, R-3
6-1/8"	12,800-15,000'	4-1/2"	15.10#, S-95, MTC, New, R-3

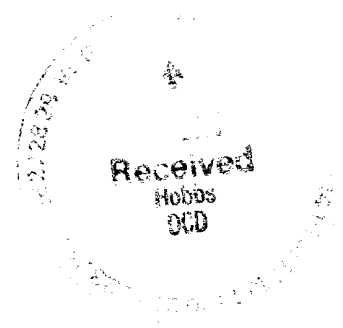
Proposed Cement Program:

20" Conductor:

Ready-mix poured to surface.

13-3/8" Surface Casing: Cement Lead: 250 sxs 35/65 POZ "C" w/ 6% gel, 2% CaCl, .25% Celloflake, .2% antifoamer, mixed @ 12.4 PPG 2.07 yield, 11.51 GPS wtr, Tail: 250 sxs "C" w/ 2% CaCl, mixed @ 14.8 PPG, yield 1.34, 6.31. GPS wtr. Float equipment: Texas Pattern shoe with an insert float valve above the shoe joint and 2 centralizers. The shoe and first collar will be welded. One plug will be used to displace cement.

9-5/8" Intermediate Casing: Cement Lead: 1350 sxs 35/65 POZ "C" w/ 10% D44, 6% D20, .25 PPS D29, .2% D46, mixed @ 12.4 PPG, 2.26 yield, 12.58 GPS wtr. Tail: 120 sxs "C" neat mixed @ 14.8 PPG, 1.32 yield, 6.31 GPS wtr. Float equipment: Float shoe with a float collar





1 joint above the shoe joint and 12 centralizers. The shoe and float collar will be welded. One plug will be used to displace cement.

7" Production Casing: Cement Lead: 600 sx 50/50 POZ "H" w/ 2% D20, .7% D156, .2% D46, 14.2 PPG, 1.32 yield, 6.15 GPS wtr. Tail: 290 sxs Class "H" w/ .3% D65, .4% D156, .3% D800, 15.6 PPG, 1.18 yield, 5.2 GPS wtr.

4-1/2" Production Liner Cement w/ 400 sxs "H" 2%B28, 2.3 GPS D600, .05 GPS M45, .1% D153, .3% D65, .04 GPS D801, mixed 16.4 PPG, yield 1.10, 4.54 GPS wtr.

#### 5. Pressure Control Equipment:

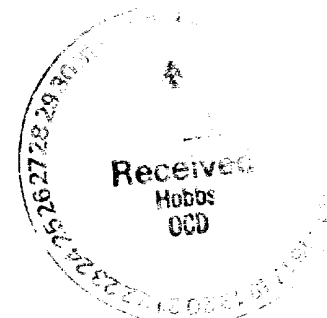
The blowout preventer equipment (BOP) shown in Exhibit D will be utilized for the 12 1/4" and 8 3/4" holes. This assembly will consist of a double ram-type (3000 PSI WP) preventer and a bag-type (hydril) preventer (3000 PSI WP). Both units will be hydraulically operated and the ram-type preventer will be equipped with blind rams on top and 4-1/2" drill pipe rams on bottom. Both BOP's will be nipped up on the 13-3/8" surface casing and used continuously until setting the 7" casing at +/-12,800'. All BOP's and accessory equipment will be tested to 1000 PSI before drilling out of surface casing. Before drilling out of intermediate casing, the ram-type BOP and accessory equipment will be tested to 3000 psi and the hydril to 70% of rated working pressure (2100 PSI).

The blowout preventer equipment (BOP) shown in Exhibit E will be utilized for the 6 1/8" hole. This assembly will consist of a double ram-type (10,000 PSI WP) preventer and a bag-type (hydril) preventer (5000 PSI WP). Both units will be hydraulically operated and the ram-type preventer will be equipped with blind rams on top and 4-1/2" drill pipe rams on bottom. Before drilling out of the 7" casing, the ram-type BOP and accessory equipment will be tested to 10,000 PSI and the hydril to 70% of rated working pressure (3500 PSI).

Pipe rams will be operationally checked each 24 hour period. Blind rams will be operationally checked on each trip out of the hole. These checks will be noted on the daily tour sheets. A 2" kill line and 3" choke line will be included in the drilling spool located below the ram-type BOP. Other accessories to the BOP equipment will include a Kelly cock and floor safety valve (inside BOP) and choke lines and a choke manifold with 10,000 psi WP rating which is shown in Exhibit F.

#### 6. Proposed Mud System:

The proposed mud system will be a combination of fresh water, brine, cut brine, and polymer gel. The depth and mud properties of the mud system are listed below.



Depth	Type	Weight (ppg)	Viscosity (sec)	Waterloss (cc)	ph
0-425'	Fresh Water	8.3-8.8	28-30	Not Critical	9-10
425-4000'	Brine Water	8.8-10.2	28-30	Not Critical	9-10
4000-12,900'	Cut Brine	8.5-9.0	28-30	Not Critical	9-10
12,900-15,000'	Polymer/Gel	10.0-15.0	30-40	10-20	9-10

Sufficient mud materials to maintain the above mentioned mud properties and meet minimum lost circulation and weight increase requirements will be kept at the location at all times.

7. Auxiliary Well Control and Monitoring Equipment:

- A Kelly cock will be kept in the drill string at all times.
- A full opening drill pipe stabbing valve (inside BOP) with proper drill pipe connections will be on the rig floor at all times.
- A mud logging unit will be monitoring drilling penetration rate and hydrocarbon shows from 4800' to TD.

8. Drillstem Testing, Logging and Coring Programs:

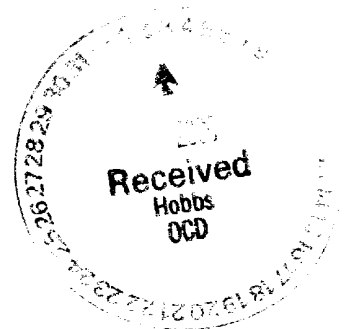
- Drillstem tests will be run based on shows encountered while drilling.
- No logs are planned for the 12 1/4" hole section. The electric logging program for the 8 3/4" and 6 1/8" hole sections will consist of GR-Dual Laterolog MLL and Compensated Neutron—LithoDensity from 12,800' to intermediate casing with GR to surface. Selected sidewall cores and RFT's may be taken in zones of interest.
- No conventional coring is anticipated.

9. Abnormal Conditions, Pressures, Temperatures, & Potential Hazards:

Minor losses occur in the Bone Spring and can be remedied by pumping lost circulation material. Abnormal pressures is expected at the top of the Lower Wolfcamp at 13,500'. No hydrogen sulfide or other hazardous gases or fluids are known to exist in the zones that will be encountered.

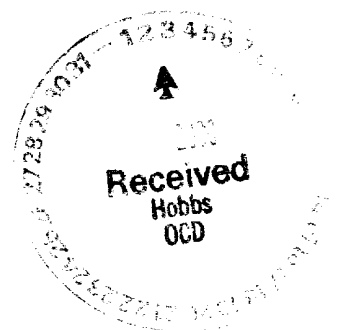
10. Anticipated Starting Date and Duration of Operations:

The anticipated start date will be August 1, 2000 . Once commenced, drilling operations should be completed in approximately 60 days. If the well is productive, another 30 days will be required for completion work and facility installation.



**SURFACE USE PLAN  
MATADOR OPERATING COMPANY  
RED HILLS UNIT #5  
1650' FNL, 660' FWL  
Sec 33, T25S, R33E  
LEA COUNTY, NEW MEXICO**

1. EXISTING ROADS – Area map, Exhibit “A”, is a reproduction of the appropriate part of the U.S.G.S. New Mexico 7-1/2 minutes quadrangle. Existing roads are shown on the exhibit and the road to be used on the referenced well is marked. All roads shall be maintained in a condition equal to that which existed prior to the start of construction.
  - A. Exhibit “A” shows the proposed exploratory well site as staked.
  - B. Direction: From the junction of state highway 128 and state highway 18 in Jal, go west 14.3 miles on state highway 128, then southwest & west 13.4 miles on county road C-2, turn right at stop sign and go through cattleguard. Keep to the right at the “Y”. continue west for 2.4 miles, then north for 1.3 miles to location.
2. PLANNED ACCESS ROADS – Location is next to existing road. No new road construction will be necessary.
3. LOCATION OF EXISTING WELLS ON A ONE-MILE RADIUS
  - A. Water wells - NA.
  - B. Disposal wells - NA.
  - C. Drilling wells - NA.
  - D. Producing wells – As shown on Exhibit “C”.
  - E. Abandoned wells – As shown on Exhibit “C”.
4. If upon completion, the well is a producer, Matador Operating Company will furnish maps or plats showing On Well Pad Facilities, and Off Well Pad Facilities (if needed) on a Sundry Notice before construction of these facilities starts.
5. LOCATION AND TYPE OF WATER SUPPLY  
Water will be purchased locally from a private source and trucked over the access road or piped in flexible lines laid on top of the ground.



6. SOURCE OF CONSTRUCTION MATERIALS

If needed, construction materials will be obtained from the drill site's excavations, or from a local source. These materials will be transported over the access route as shown in Exhibit "A".

7. METHODS FOR HANDLING WASTE DISPOSAL.

- A.
  - 1. Drill cuttings will be disposed of in the reserve pit.
  - 2. Trash, waste paper, and garbage will be contained in a fenced trash trailer to prevent wind-scattering during storage. When the rig moves out, all trash and debris will be hauled to an approved land-fill site.
  - 3. Salts remaining after completion of the well will be picked up by the supplier, including broken sacks.
  - 4. Sewage from trailer houses will drain into holes with minimum depth of 10'00". These holes will be covered during drilling and back-filled upon completion. A "porta-john" will be provided for the rig crews. This will be properly maintained during the drilling operations and removed upon completion of the well.
  - 5. Chemicals remaining after completion of the well will be stored in the manufacturer's containers and picked up by the supplier.
- B. Remaining drilling fluids will be allowed to evaporate in the reserve pit until the pit is dry enough for back-filling. In the event drilling fluids will not be evaporated in a reasonable period of time, they will be transported by a tank truck to a state approved disposal site.

Water produced during testing of the well will be disposed of in the reserve pit. Oil produced during testing of the well will be stored in test tanks until sold and hauled from the site.

8. ANCILLARY FACILITIES

No camps or airstrips will be constructed.





9. WELL SITE LAYOUT

- A. Exhibit "B" shows the proposed well site layout.
- B. This exhibit indicates proposed location of the reserve pits and trash trailer.
- C. Mud pits in the active circulating system will be steel pits and the reserve pit is proposed to be unlined, unless subsurface conditions encountered during pit construction indicate that lining is needed for lateral containment of fluids.
- D. If needed, the reserve pit is to be lined with a poly-ethylene liner. The pit liner will be a minimum of 6 mils thick. The pit liner will extend a minimum of 2'00" over the reserve pit dikes where the liner will be anchored down.
- E. The reserve pit will be fenced on three sides with four strands of barbed wire during drilling and completion phases. The fourth side will be fenced after all drilling operations have ceased. If the well is a producer, the reserve pit fence will be torn down. The reserve pit and those areas of the location not essential to production facilities will be reclaimed and seeded per BLM requirements.

10. PLANS FOR RESTORATION OF SURFACE

Rehabilitation of the location and reserve pit will start in a timely manner after all drilling operations cease. The type of reclamation will depend on whether the well is a producer or dry hole.

In either event, the reserve pit will be allowed to dry properly, and fluid removed and disposed of in accordance with Article 7.B as previously noted. The pit area will then be leveled and contoured to conform to the original and surrounding area as closely as is possible. Drainage system, if any, will be reshaped to the original configuration with provisions made to alleviate erosion. These may need to be modified in certain circumstance to prevent inundation of the location pad and surface facilities. After the area had been shaped and contoured, topsoil from the soil pits will be placed over the disturbed area to the extent possible. Revegetation procedures will comply with BLM standards.

Should the well be a producer, the previously noted procedures will apply to those areas which are not required for production facilities.



11. OTHER INFORMATION

- A. The area around the wellsite is gently undulating and rolling with snakeweed, mesquite, shin oak, Mormon tea, yucca & assorted grasses.
- B. The surface use is grazing and the lessee is Dinwiddle Cattle Company, Box 302, Jal, NM 88252.
- C. An archaeological study will be conducted for the location and road. The report will be submitted under separate cover.
- D. There are no buildings in the area.

12. OPERATOR'S REPRESENTATIVE

Matador Operating Company's field representative for contact regarding compliance with the Surface Use Plan is:

Before, during, and after construction:

John W. Bell

8340 Meadow Road #158

Dallas, TX 75231

Office: 214-987-7144

Res: 972-818-8778

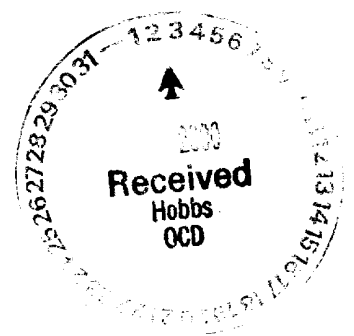
Mobile: 214-507-0985

13. CERTIFICATION

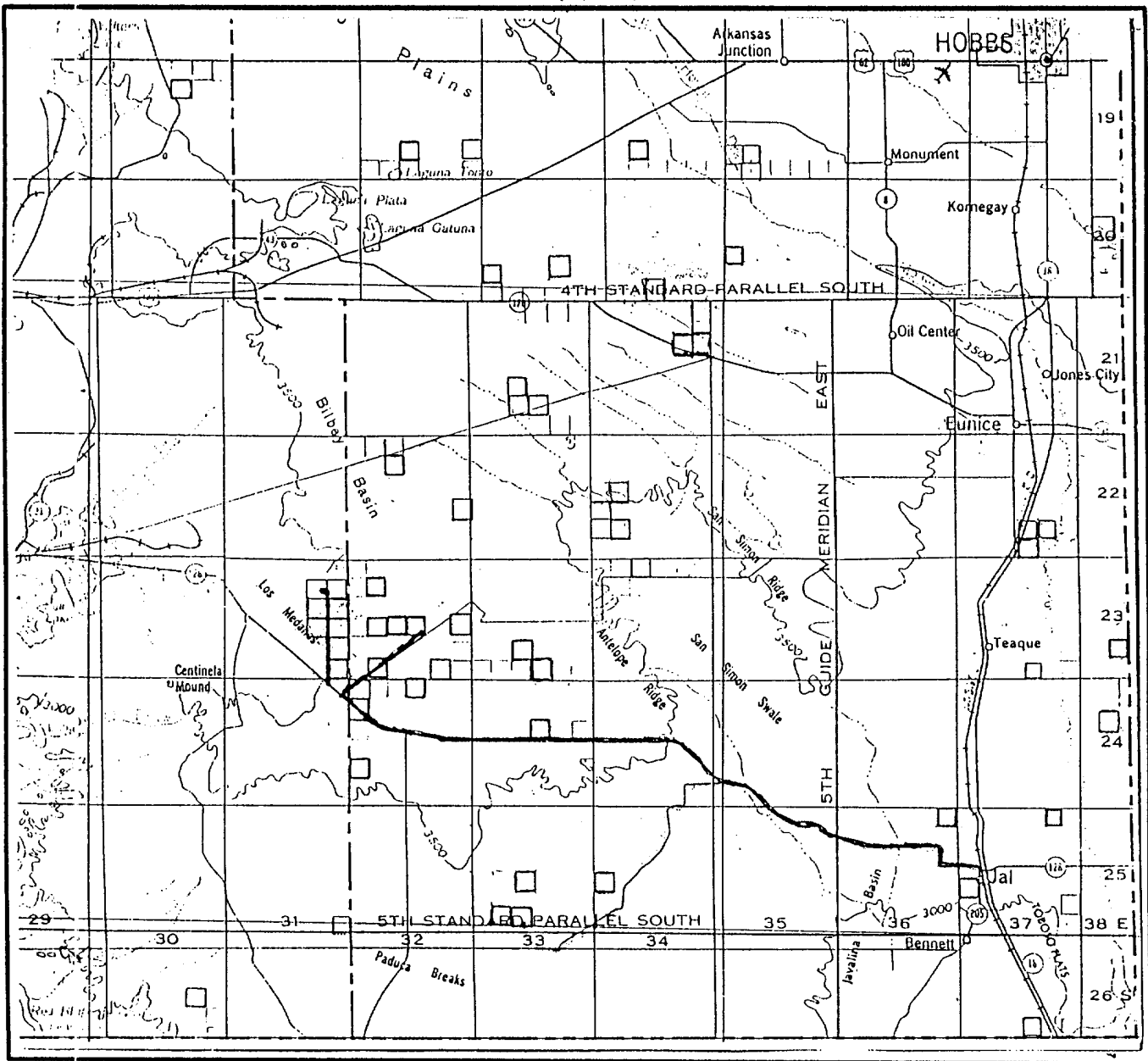
I hereby certify that I, or persons under my direct supervision, have inspected the proposed drill site and access route; that I am familiar with the conditions which currently exist; that the statements made in this plan are to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed by Matador Operating Company and its contractors/ subcontractors 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.

Name: John W. Bell  
John W. Bell  
Drilling Manager

Date: 6-29-00



# VICINITY MAP



SECTION 33 TWP 25-S RGE 33-E  
 SURVEY NEW MEXICO PRINCIPAL MERIDIAN  
 COUNTY LEA STATE NM  
 DESCRIPTION 1650' FNL & 660' FWL

OPERATOR MATADOR OPERATING COMPANY  
 LEASE RED HILLS UNIT #5

DISTANCE & DIRECTION FROM THE JCT. OF STATE HWY.  
128 & STATE HWY. 18 IN JAL, GO WEST 14.0 MILES ON  
STATE HWY. 128, THENCE SOUTHWEST & WEST 15.7  
MILES ON COUNTY ROAD, THENCE NORTH 2.0 MILES ON  
LEASE ROAD, THENCE WEST ON RANCH ROAD 1.0 MILES,  
THENCE SOUTHEASTERLY ON RANCH ROAD 0.3 MILE TO  
A POINT ±200' WEST OF LOCATION.

EXHIBIT A  
 AREA MAP

This location has been very carefully staked on the ground according to the best official survey records, maps, and other data available to us.  
 Review this plat and notify us immediately of any possible discrepancy.

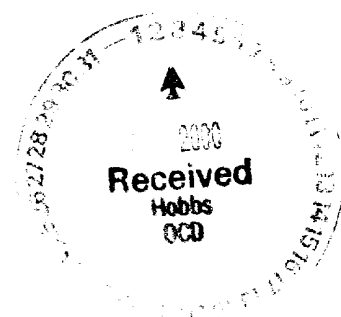
## TOPOGRAPHIC LAND SURVEYORS

*Surveying & Mapping for the Oil & Gas Industry*

1307 N. HOBART  
 PAMPA, TX. 79065  
 (800) 658-6382

6709 N. CLASSEN BLVD.  
 OKLAHOMA CITY, OK. 73116  
 (800) 654-3219

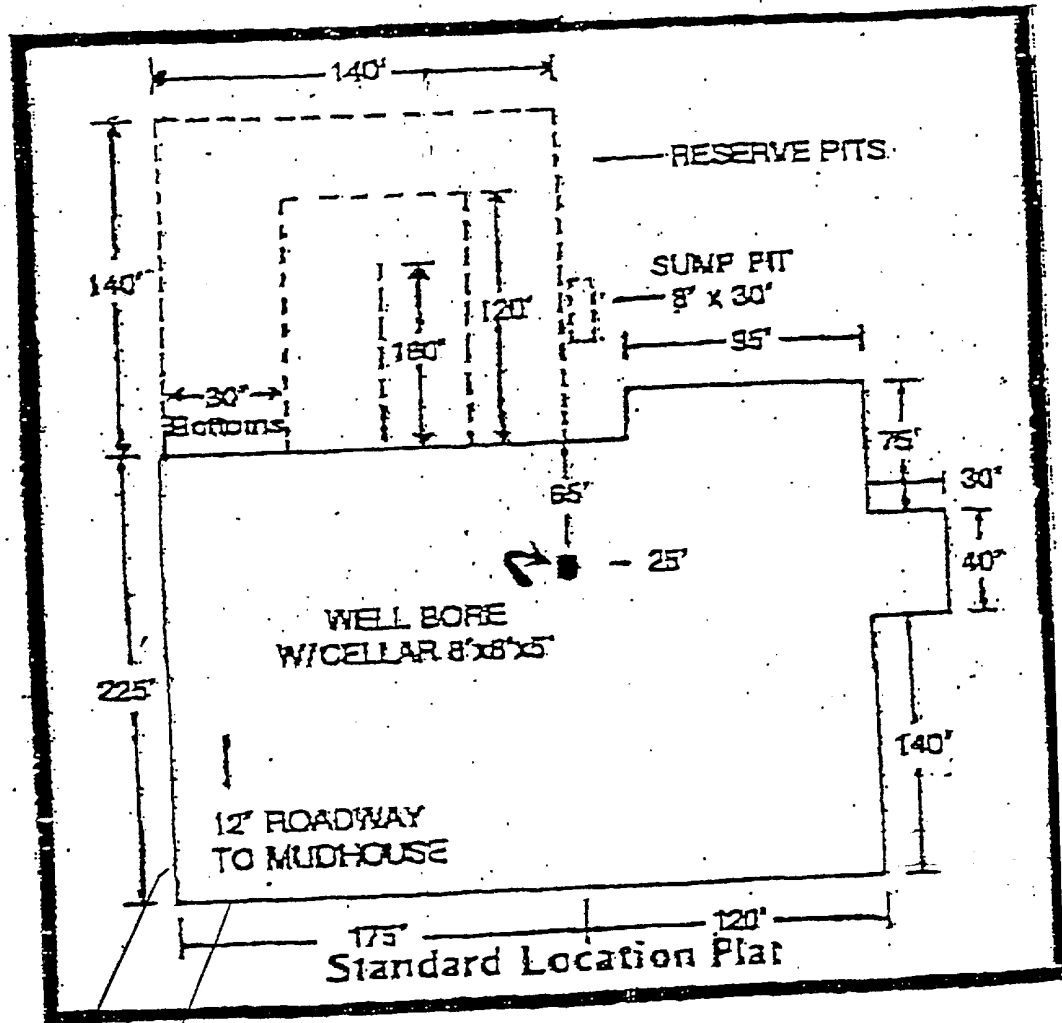
2903 N. BIG SPRING  
 MIDLAND, TX. 79705  
 (800) 767-1653

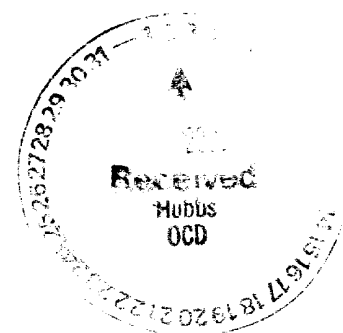


# WELLSITE PLAN

MATADOR OPERATING COMPANY  
RED HILLS UNIT #5  
1650' FNL & 660' FWL  
Sec 33, T25S, R33E  
Lea County, New Mexico

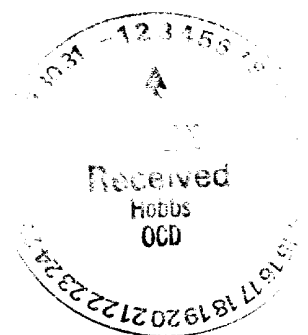
EXHIBIT B



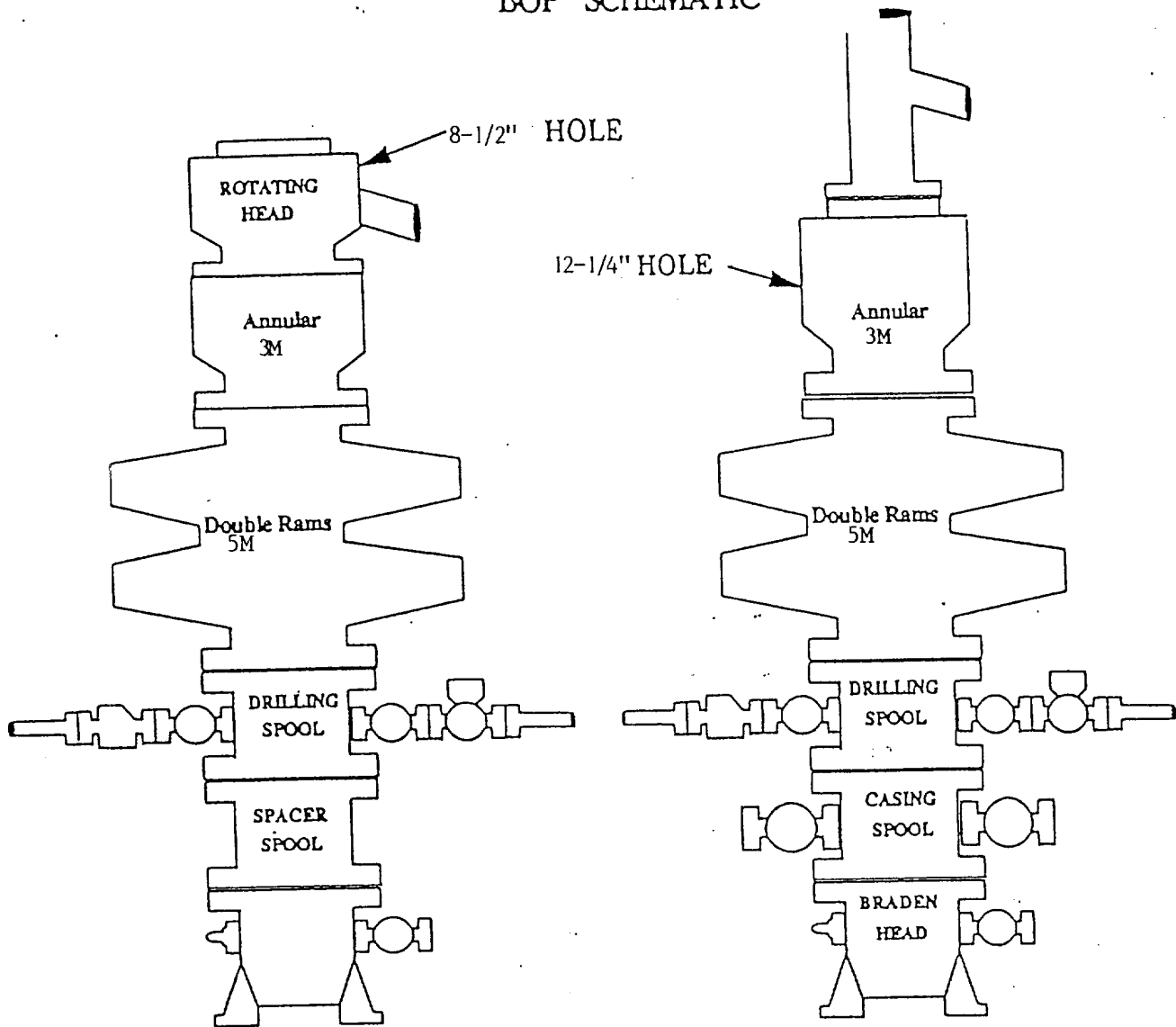




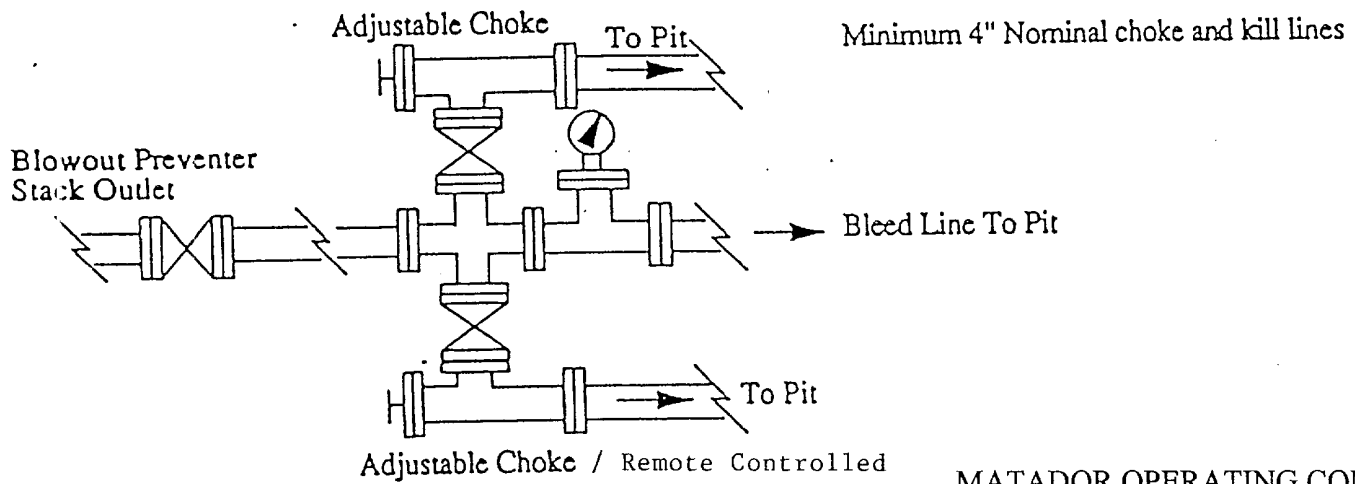
MATADOR OPERATING COMPANY  
RED HILLS UNIT #5  
1650' FNL & 660' FWL  
Sec 33, T25S, R33E  
Lea County, New Mexico  
EXHIBIT C  
PRODUCTION MAP



# BOP SCHEMATIC

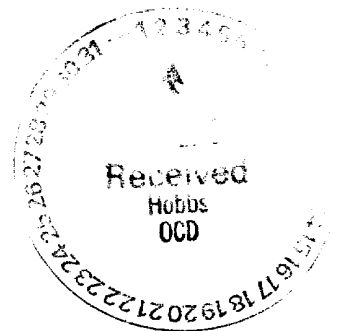


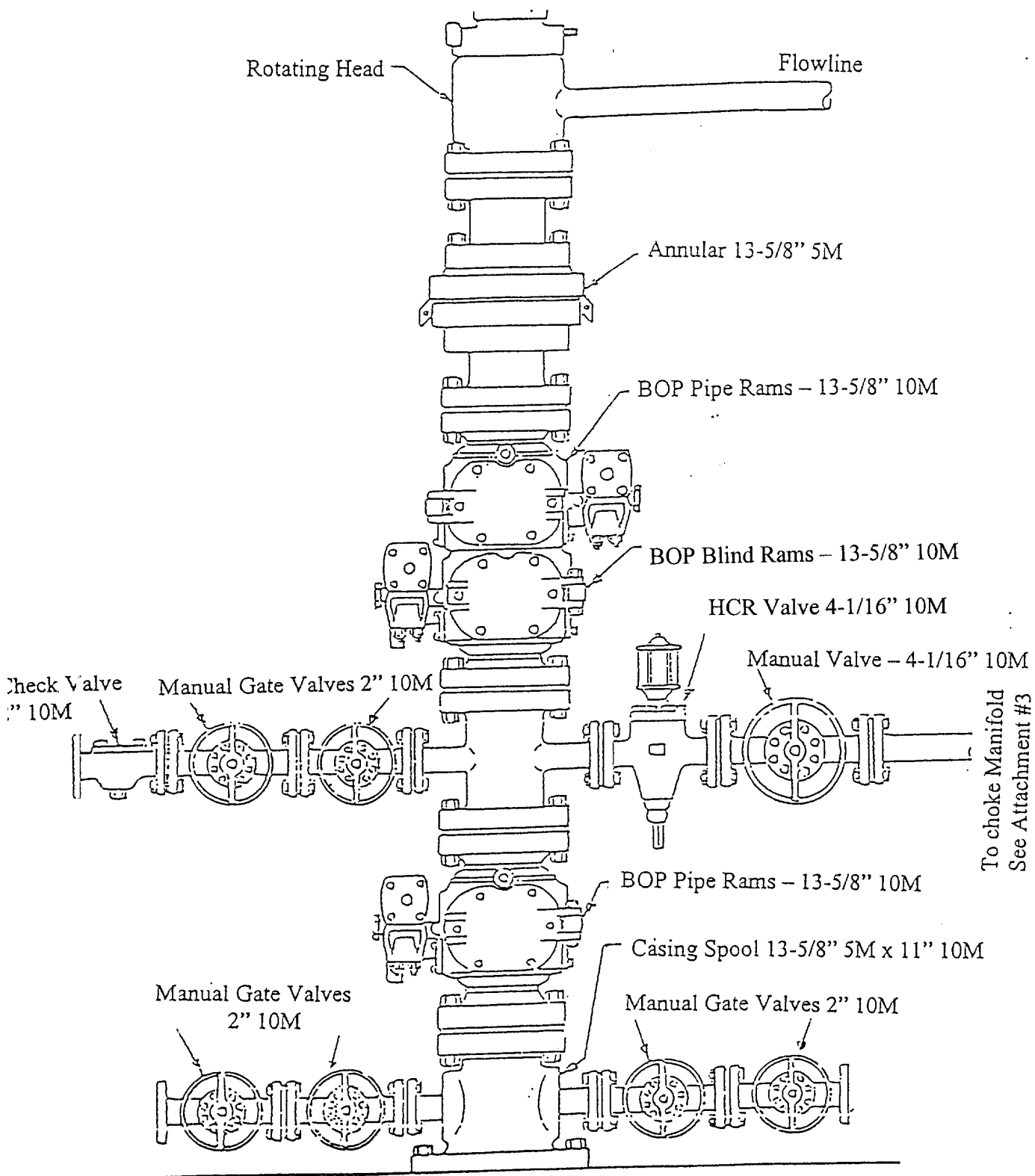
Choke Manifold Requirement (5000 psi WP)



MATADOR OPERATING COMPANY  
 RED HILLS UNIT #5  
 1650' FNL & 660' FWL  
 Sec 33, T25S, R33E  
 Lea County, New Mexico

EXHIBIT D

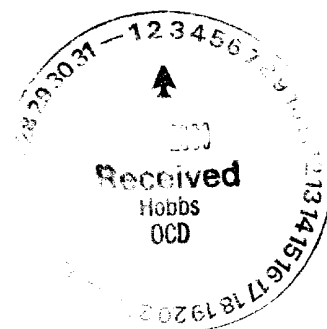




10M BOP Assembly  
 Depth Interval 12,800 to TD  
 Hole Size 6-1/8"

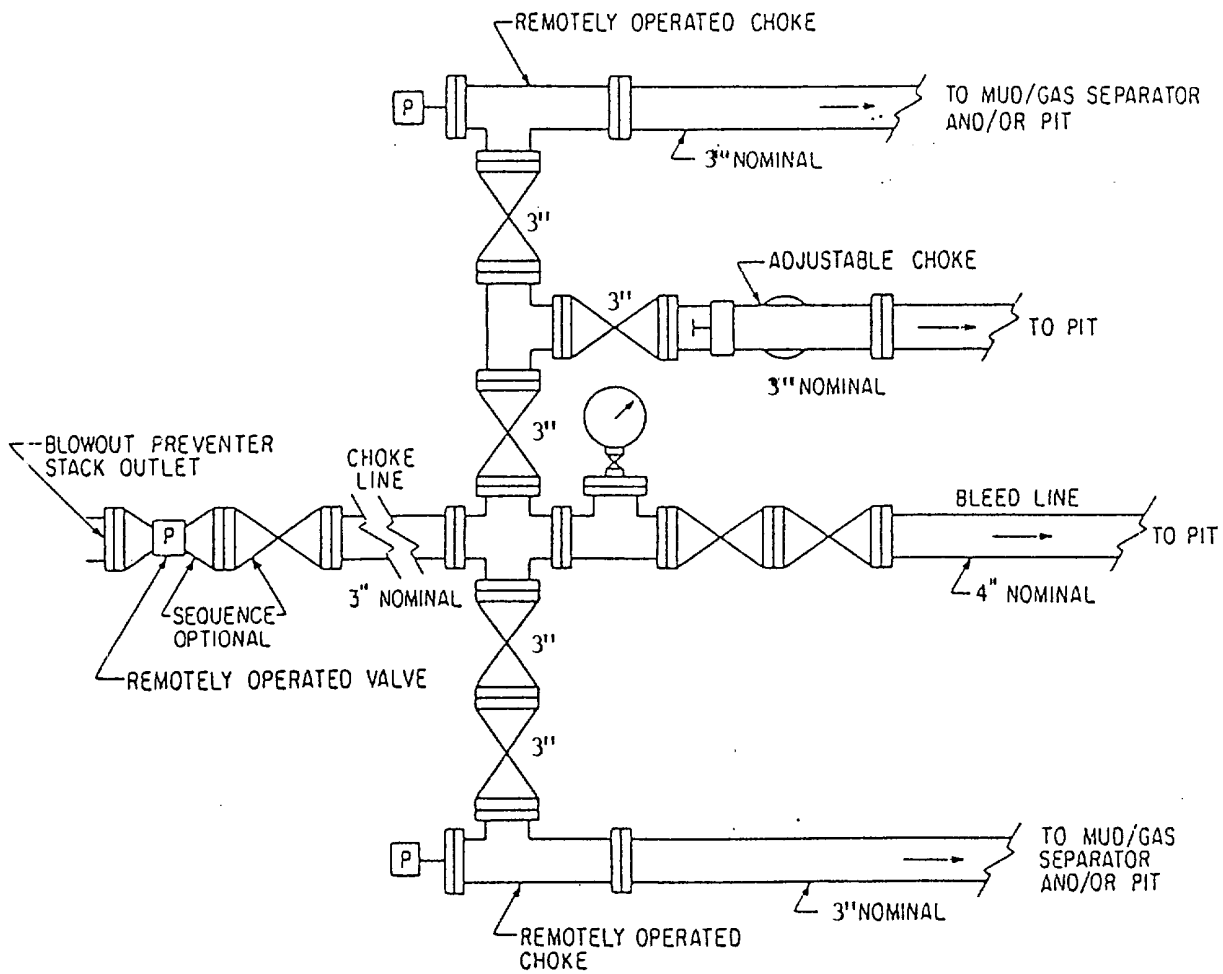
MATADOR OPERATING COMPANY  
 RED HILLS UNIT #5  
 1650' FNL & 660' FWL  
 Sec 33, T25S, R33E  
 Lea County, New Mexico

EXHIBIT E

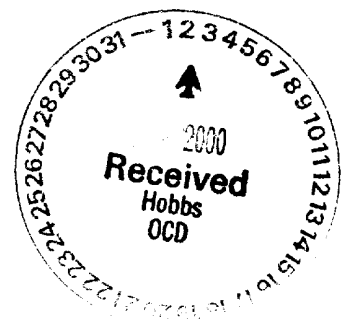


MATADOR OPERATING COMPANY  
 RED HILLS UNIT #5  
 1650' FNL & 660' FWL  
 Sec 33, T25S, R33E  
 Lea County, New Mexico

EXHIBIT F



10M Choke Manifold  
 Depth Interval 12,800 to TD  
 Hole Size 6-1/8"





WEI    AN OUTLINE

Well Name: Red Hills Unit #5

County: Lea

State: NM

Location: 1650 FNL-660 FWL

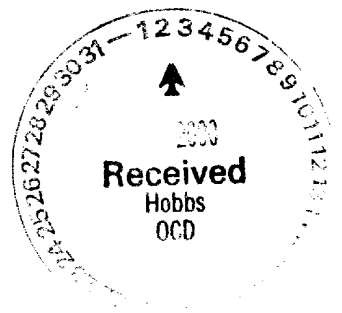
Est KB: 3388'

TD 15,000

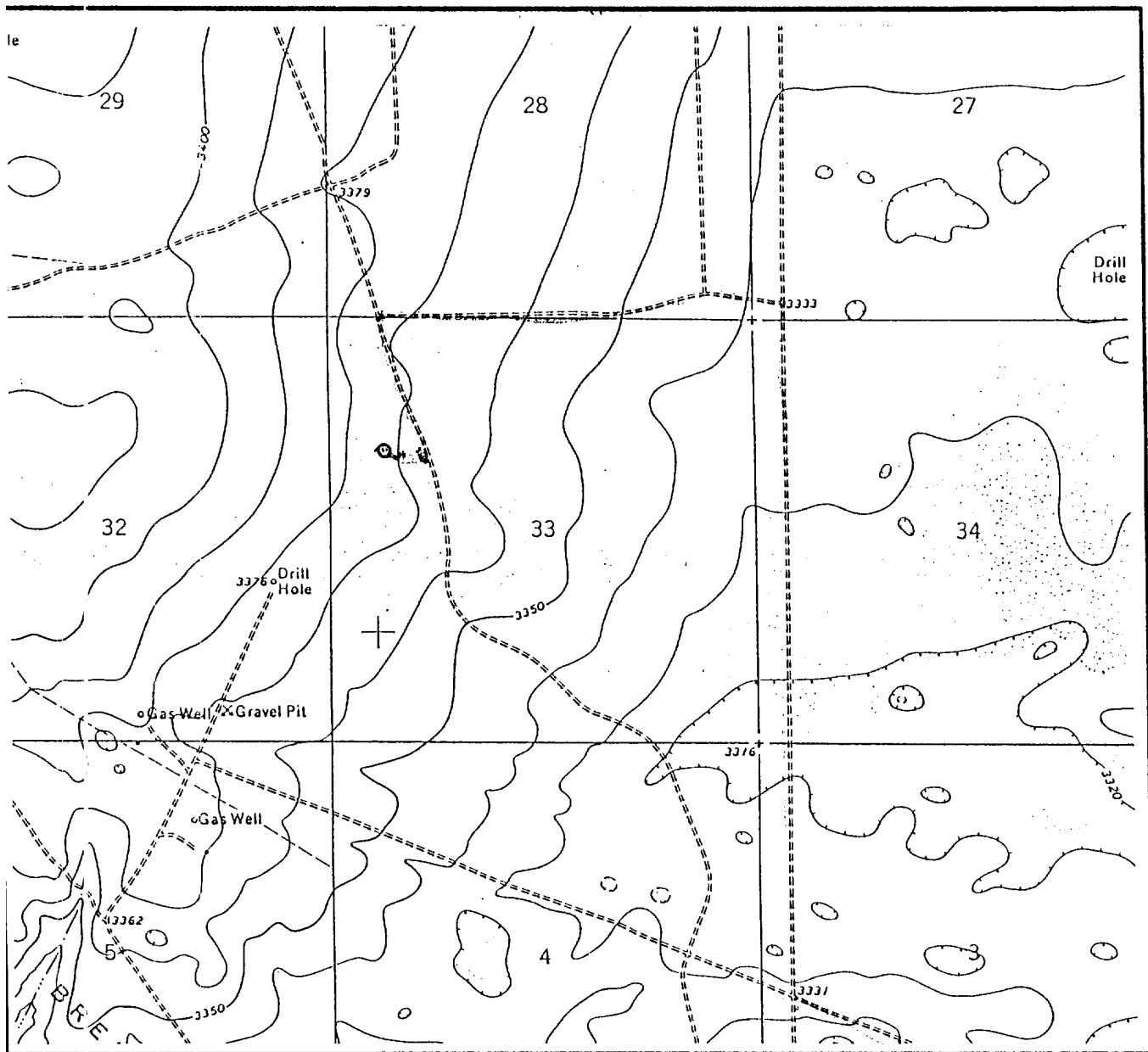
Sec 33, T25S, R33E

GL: 3368' GR

Depth	Formation Top & Type	Drilling Problems	Type of Formation Evaluation	Hole Size	Casing Size-Depth	Frac Grad	Form Press Grad	(ppg) Mud Wt & Type	Days
	Sand & Red Bed @ 300'		0-700' Dev survey <1 deg	17-1/2"	13-3/8" 48# H-40 @ 700' w/ cmt to surface			8.3-8.8 Fresh wtr	1
1000	Andydrite/Salt		500' surveys to TD						
2000				12-1/4"				8.8-10.2 Cut Brine	
3000									
4000									
5000	Delaware 4889' (1495')		Logging unit 4800' to TD		9-5/8" 40# N-80 @ 4800 w/ cmt to surf				10
6000									
7000				8-3/4"				8.5-9.0 Cut Brine	
8000		Possible Lost Circ	Maximum deviation 5 degrees						
9000	Bone Spring 8864' (-5470')								
10000	1st Bone Spg 9699 (-6305)								20
11000	2nd Bone Spg 10564' (-7170')								
12000	3rd Bone Spg 11554' (-8160')								
13000	Lwr Permian Wfcp 12124' (-8730') Lwr Wolfcamp 13324' (-9930')								
14000					7" 29# P110 LTC @ 12,800'				30
15000	Penn 13834' (-10440') Canyon 14024' (-10630') Strawn 14159' (-10765') Atoka 14359' (-10965') Atoka Carb 14549' (-11155') PTD 15000 (-11606')			6-1/8"	4-1/2" 15.10# P110 @ 15,000'			13.0-15.0 Polymer gel	



# LOCATION & ELEVATION VERIFICATION M.



SCALE : 1" = 2000'

CONTOUR INTERVAL 10'

SECTION 33 TWP 25-S RGE 33-E  
 SURVEY NEW MEXICO PRINCIPAL MERIDIAN  
 COUNTY LEA STATE NM  
 DESCRIPTION 1650' FNL & 660' FWL  
 ELEVATION 3368'

OPERATOR MATADOR OPERATING COMPANY  
 LEASE RED HILLS UNIT #5

U.S.G.S. TOPOGRAPHIC MAP  
PADUCA BREAKS EAST, NEW MEXICO

SCALED LAT. N 32°05'23"  
 LONG. W 103°34'59"



This location has been very carefully staked on the ground according to the best official survey records, maps, and other data available to us.  
 Review this plot and notify us immediately of any possible discrepancy.

## TOPOGRAPHIC LAND SURVEYORS

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ELF 7/12/01  
ABOVE DATE DOES NOT  
INDICATE WHEN  
CONFIDENTIAL LOGS  
WILL BE RELEASED

