

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

Artesia, N.M. 88210

30-015-26198  
5. LEASE DESIGNATION AND SERIAL NO.028731-A  
6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. NAME OF LEASE NAME

Little Wing Fed. Com.

9. WELL NO.  
110. FIELD AND POOL, OR WILDCAT  
Wildcat11. SEC. T. R. M. OR E.L.E.  
AND SURVEY OR AREA

14. T-17-S, R-29-E

12. COUNTY OR PARISH  
Eddy13. STATE  
New Mexico

## APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

## 1a. TYPE OF WORK

DRILL ☒DEEPEN ☐PLUG BACK ☐

## b. TYPE OF WELL

OIL  
WELL ☐GAS  
WELL ☒

OTHER

SINGLE  
ZONE ☐MULTIPLE  
ZONE ☐

## 2. NAME OF OPERATOR

Oryx Energy Company

## 3. ADDRESS OF OPERATOR

P. O. Box 1861, Midland, Texas 79702

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

At surface

At proposed prod. zone L, 2180' FSL &amp; 860' FWL

O. C. D.  
ARTESIA, OFFICE

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

4 miles West and 1/2 mile North of Loco Hills

## 15. DISTANCE FROM PROPOSED\*

LOCATION TO NEAREST  
PROPERTY OR LEASE LINE, FT.  
(Also to nearest drig. unit line, if any)

860'

## 16. NO. OF ACRES IN LEASE

1600 acres

17. NO. OF ACRES ASSIGNED  
TO THIS WELL

320

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

## 19. PROPOSED DEPTH

11,200'

## 20. ROTARY OR CABLE TOOLS

Rotary

## 21. ELEVATIONS (Show whether DF, ET, GR, etc.)

3603.2' GR

## 23.

## PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
17-1/2"	13-3/8"	54.5#	400'	425 sxs
11"	8-5/8"	32#	4000'	1640 sxs
7-7/8"	5-1/2"	17#	11200'	900 sxs

## REGULAR LOCATION

RECEIVED

SEP 20 11 12 AM '89

CARTERSVILLE

ATTACHED

AND

Post 20-1  
10-6-89  
New Loc 4-API

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

## 24.

SIGNED

Maria L. Perez

TITLE

Accountant

915 688 0375

(This space for Federal or State office use)

PERMIT NO.

APPROVAL DATE

APPROVED BY

TITLE

CARLSBAD RESOURCE AREA

CONDITIONS OF APPROVAL, IF ANY:

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

State of New Mexico  
Energy, Minerals and Natural Resources Department

Form C-102  
Revised 1-1-89

OIL CONSERVATION DIVISION

P.O. Box 2088

Santa Fe, New Mexico 87504-2088

DISTRICT I

P.O. Box 1980, Hobbs, NM 88240

DISTRICT II

P.O. Drawer DD, Artesia, NM 88210

DISTRICT III

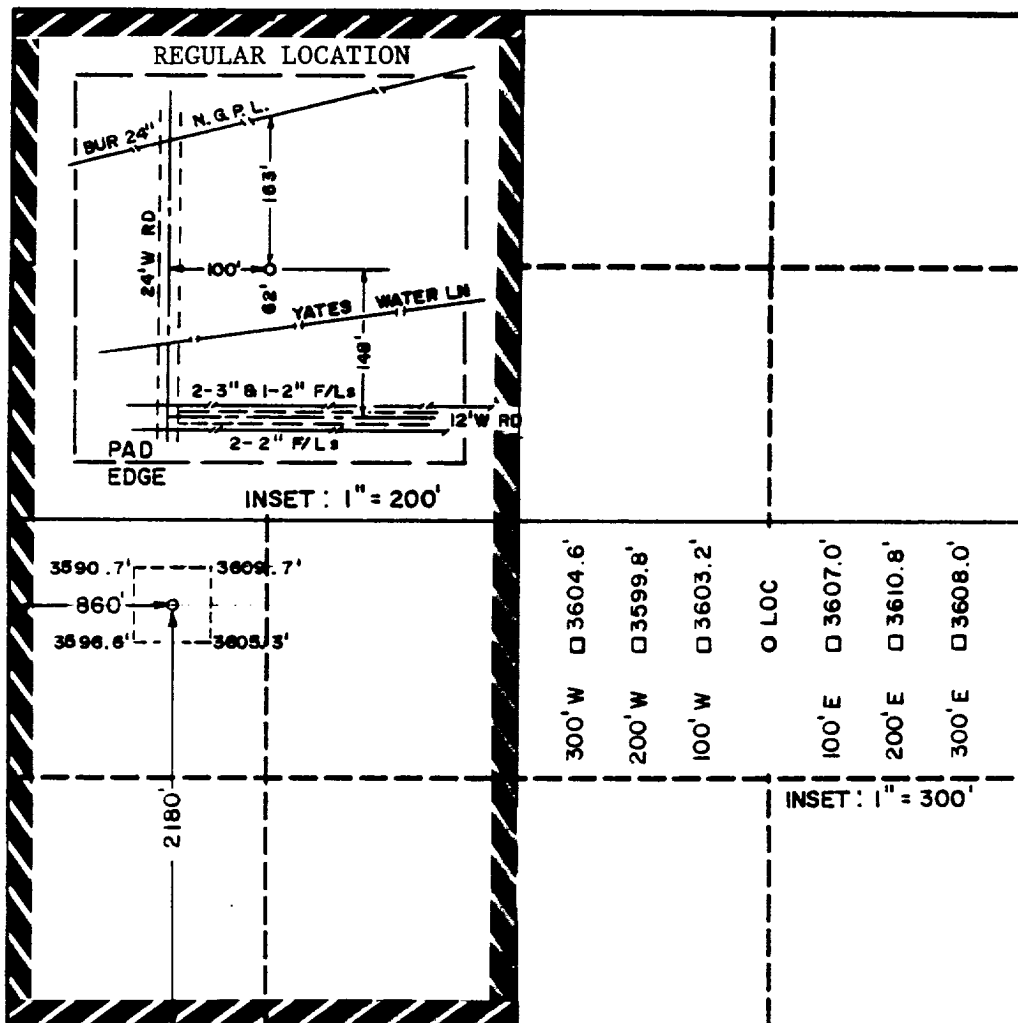
1000 Rio Brazos Rd., Aztec, NM 87410

WELL LOCATION AND ACREAGE DEDICATION PLAT

All Distances must be from the outer boundaries of the section

Operator Oryx Energy Corporation			Lease Little Wing Federal Com.		Well No. 1
Unit Letter L	Section 14	Township 17 South	Range 29 East	County Eddy	
Actual Footage Location of Well: 2180 feet from the South line and 860 feet from the West line					
Ground level Elev. 3603.2		Producing Formation Morrow		Pool Wildcat	
				Dedicated Acreage: 320 Acres	

- Outline the acreage dedicated to the subject well by colored pencil or hatchure marks on the plat below.
- If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
- If more than one lease of different ownership is dedicated to the well, have the interest of all owners been consolidated by communitization, unitization, force-pooling, etc?  
☐ Yes ☐ No If answer is "yes" type of consolidation Communitization  
If answer is "no" list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.)  
No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interest, 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

*Maria L. Perez*

Printed Name

Maria L. Perez

Position

Accountant

Company

Oryx Energy Company

Date

8-16-89

SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was located from the notes of actual survey made by me or under my supervision and that the same is true and correct to the best of my knowledge and belief.

Date Surveyed

August

Signature & Seal of Professional Surveyor

Certificate No. *John W. West*  
JOHN W. WEST, 676  
RONALD J. EIDSON, 3239

TEN POINT DRILLING PLAN FOR LITTLE WING FEDERAL COMM. # 1  
IN COMPLIANCE WITH ORDER NUMBER 1

ORYX ENERGY COMPANY  
LITTLE WING FEDERAL COMM. # 1  
SEC. 14, T17S, R29E  
2180' FSL & 860' FWL  
EDDY COUNTY, NEW MEXICO

1) GEOLOGIC SURFACE FORMATION: QUATERNARY

2) ESTIMATED TOPS OF IMPORTANT GEOLOGIC MARKERS:

RUSTLER	200	WOLFCAMP MARKER	7790
TOP SALT	300	WOLFCAMP PAY	8295*
BTM SALT	800	STRAWN	10000*
QUEEN	1755	ATOKA SHALE	10240
SAN ANDRES	2510*	ATOKA "C" SAND	10440*
ABO	6096	MIDDLE CLASTICS	10672*
WOLFCAMP	7280	MISSISSIPPIAN	10872
		TD	11200

3) ESTIMATED DEPTH OF ANTICIPATED WATER, OIL, GAS, OR MINERALS:  
FORMATIONS POSSIBLY PRODUCTIVE WITH OIL OR GAS ARE INDICATED  
WITH AN ASTERISK (\*) IN ABOVE SECTION 2.

4) PROPOSED CASING PROGRAM:

SIZE	CASING SEAT	FOOTAGE	GRADE	WEIGHT & THREAD
----	-----	-----	-----	-----
13 3/8	400	400	K-55	54.5# ST&C
8 5/8	4000	4000	K-55	32 0# ST&C
5 1/2		1200	K-55	17.0# BT&C
5 1/2		8300	K-55	17.0# LT&C
5 1/2	11200	1700	N-80	17.0# LT&C
2 7/8		11200	N-80	6.5# 8RD EUE

5) PROPOSED CEMENTING PROGRAM:

13 3/8" CEMENT TO SURFACE WITH 425 SX. CLASS "C" + 2% CaCl<sub>2</sub> +  
1/4 #/sx FLAKE MIXED @ 14.8 PPG AND A YIELD OF  
1.31 CU.FT./SX. 100% EXCESS

8 5/8" ATTEMPT TO CEMENT TO SURFACE IN ONE STAGE USING  
1500 SX. 65:35:6 LITE CLASS "C" + 10% SALT +  
1/4 #/sx FLAKE MIXED @ 12.4 PPG AND A YIELD OF 1.97  
CU.FT./SX. 200% EXCESS. TAILED IN WITH 190SX  
CLASS "C" NEAT MIXED @ 14.8 PPG AND A YIELD OF  
1.32 CU.FT./SX. 100% EXCESS.

5 1/2" CEMENT IN ONE STAGE WITH 900 SX. 50:50:2 POZ-MIX "H"  
FLUID LOSS ADDITIVES PLUS DISPERSANT. MIS @ 14.2 PPG  
AND A YIELD OF 1.26 CU.FT./SX. 50% EXCESS

NOTE: CEMENT VOLUMES WILL BE ADJUSTED BY CALIPER ON THE  
8 5/8 AND 5 1/2 INCH STRINGS. IF LOSS CIRCULATION  
IS ENCOUNTERED ON EITHER SECTION OF HOLE, A TWO STAGE  
JOB MAY BE REQUIRED.

## 6) TYPE AND MUD SYSTEM CHARACTERISTICS:

FROM	TO	TYPE	WT.	VISC.	WL.
0	400	FW. W/ GEL, LIME & PAPER	8.4-9.0	28 - 40	NC
400	4000	BRINE WTR/ SALT GEL, LIME & PAPER SWEEPS/ OIL & STARCH AS NECESSARY.	10.0-10.2	28 - 32	NC
4000	6800	FW W/ GEL, LIME & PAPER SWEEPS.	8.4-9.0	28 - 32	NC
6800	9800	CUT BRINE TO BRINE W/ PREHYDRATED GEL, POLYMER, AND LCM SWEEPS. USE CAUSTIC pH CONTROL.	9.0-9.3	28 - 30	NC
9800	11200	CUT BRINE W/ PREHYDRATED GEL, XC POLYMER, DRISPAC & CAUSTIC FOR PH CONTROL	9.3-9.5	32 - 36	10-15 8-10*
* LOWER WTR LOSS CONTROL TO BELOW 10cc THROUGH THE MORROW.					

## 7) BOP AND AUXILLARY EQUIPMENT:

BOP & CHOKE MANIFOLD WILL BE SETUP AS INDICATED ON EXHIBIT #D1  
THROUGH #D4.

ACCUMULATOR VOLUME WILL BE SUFFICIENT TO PROVIDE REPEATED  
OPEN AND CLOSING OF PREVENTERS.

A DRILL PIPE AND DRILL COLLAR FULL OPENING SAFETY VALVE WILL BE  
KEPT ON THE RIG FLOOR IN THE OPEN POSITION AT ALL TIMES DURING  
DRILLING OPERATIONS.

AN UPPER AND LOWER KELLY COCK WILL BE USED.

THE HOLE WILL BE KEPT FULL AND FILL VOLUMES WILL BE MONITORED ON  
ALL TRIPS.

PUT, HYDRAULIC CHOKE, BULK BARITE, GAS SEPERATOR AND ROTATING  
HEAD WILL BE INSTALLED AND IN SERVICE BY 8000' (ABOVE THE  
WOLFCAMP). FLOW SENSORS WILL BE INSTALLED BY 7000' (ABOVE THE  
THE ABO).

## 8) TEST PROCEDURE AND DRILLS:

RAM TYPE PREVENTERS WILL BE TESTED TO RATED W.P. OR 70% OF CASING  
BURST, WHICHEVER IS LESS.

ANNULAR TYPE BOP WILL BE TESTED TO 50% OF W.P.

PIPE RAMS WILL BE OPERATED ONCE EACH 24 HRS., AND BLIND RAMS WILL  
BE OPERATED ON EACH TRIP OUT OF THE HOLE.

APPROVED CLOSE-IN PROCEDURE TO BE POSTED ON THE RIG FLOOR.

EACH RIG CREW WILL HOLD A WEEKLY BOP DRILL.

## 9) TESTING PROGRAM:

POSSIBLE DST'S FROM 7500' TO TOTAL DEPTH AS DICTATED BY SHOWS.  
SUCH TESTS, IF NECESSARY, WILL BE CONDUCTED UNDER PRUDENT  
INDUSTRY PRACTICE.

## OPEN HOLE LOGGING PROGRAM:

DLL-MSFL-GR-CAL	4000' TO TD
CNL-LDT-GR-CAL	4000' TO TD
	WILL PULL CNL-GR TO SURFACE.
LONGSPACED SONIC-GR-CAL	4000' TO TD

MUD LOGGING UNIT TO BE IN SERVICE FROM 7500' TO TOTAL DEPTH.

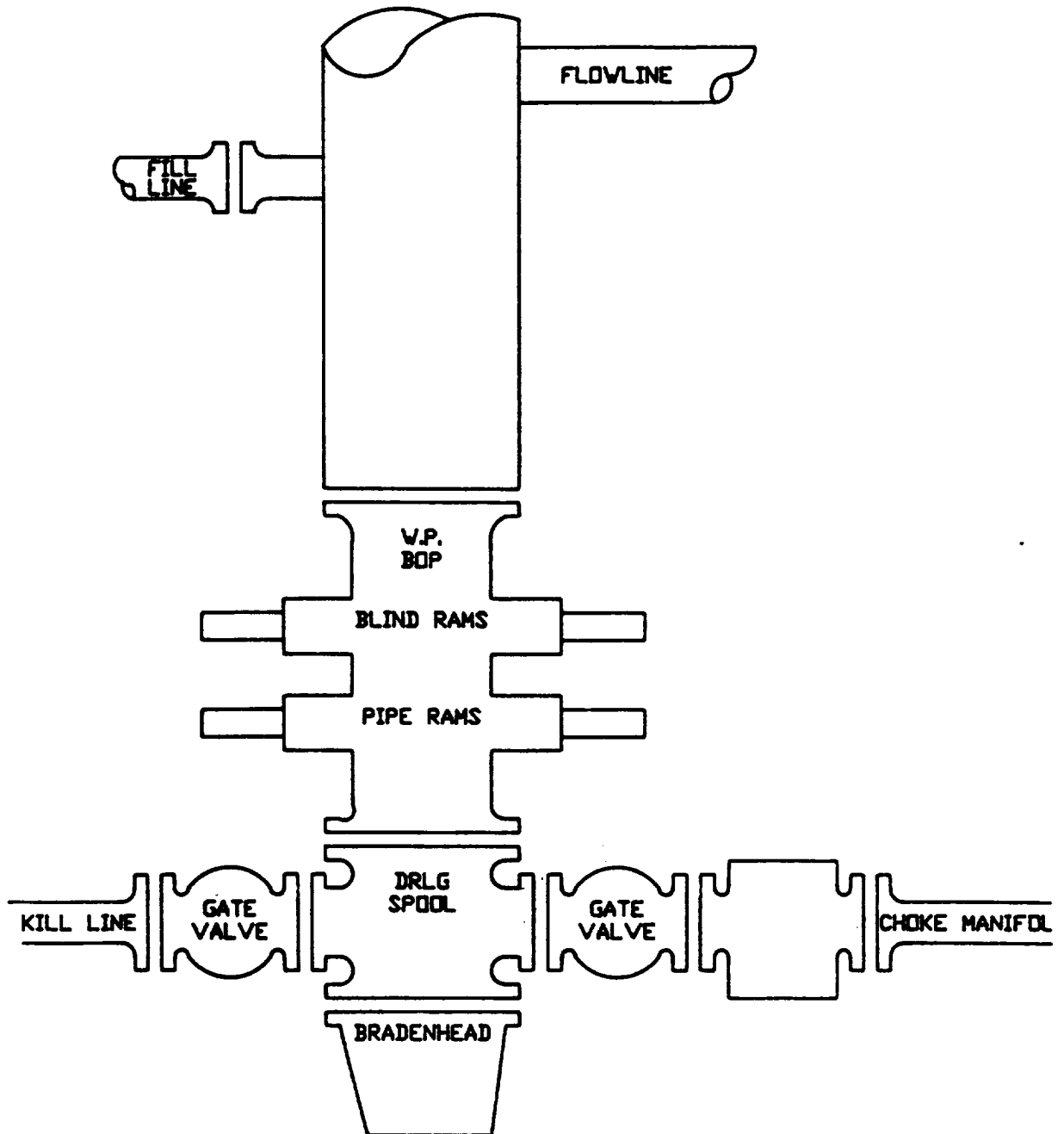
## 10) POTENTIAL HAZARDS:

NO H2S, ABNORMAL TEMPERATURES OR PRESSURES ARE ANTICIPATED  
WHILE DRILLING THIS WELL. MAXIMUM MUD WEIGHT IS ANTICIPATED  
TO BE 9.5 PPG.

## 11) ESTIMATED STARTING DATE:

ANTICIPATE STARTING OPERATIONS ON OR BEFORE SEPT 30, 1989  
DUE TO A CRITICAL SPUD DATE.

400-4000  
3000 psi.  
BOP  
EXHIBIT D1



3000 psi  
MANIFOLD  
EXHIBIT D Z

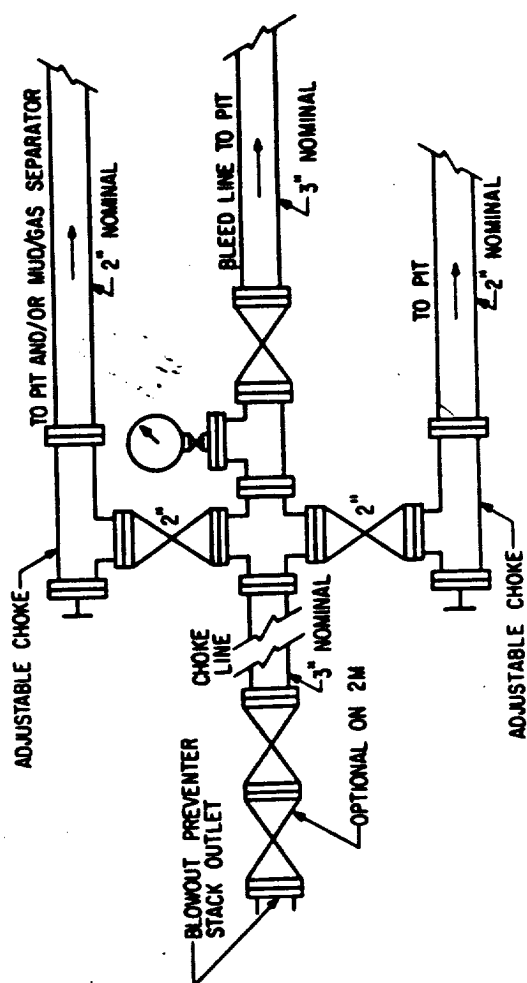
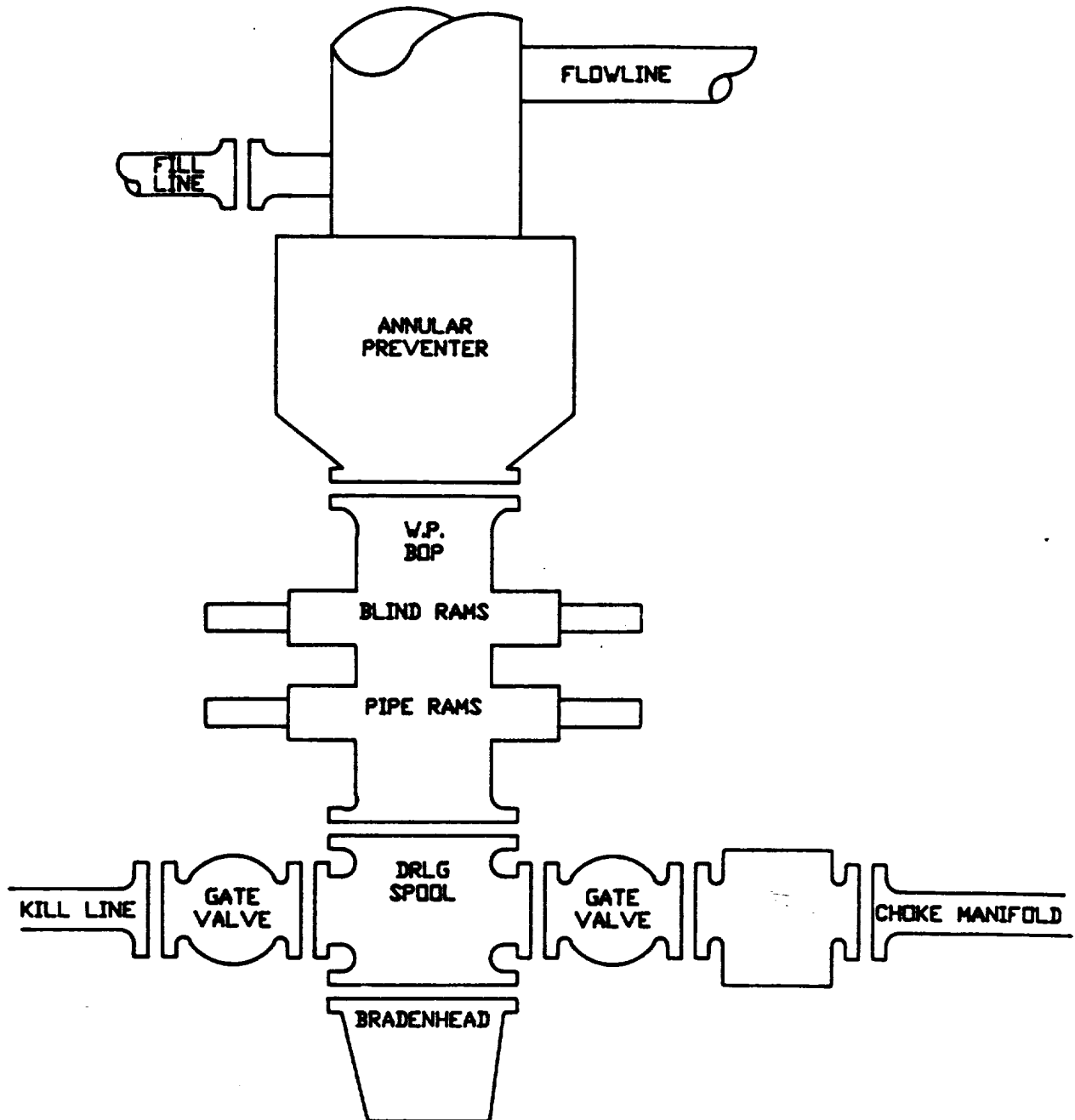


FIG. 3.A.1

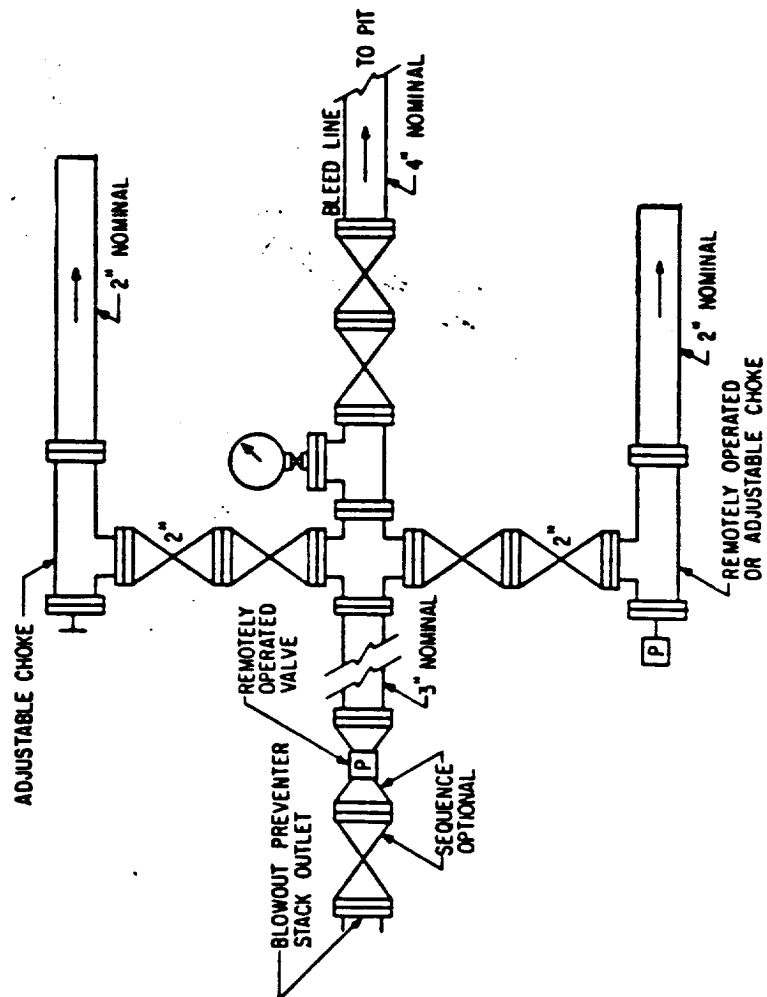
TYPICAL CHOKE MANIFOLD ASSEMBLY  
FOR 2M AND 3M RATED WORKING  
PRESSURE SERVICE -- SURFACE INSTALLATION

4000 - 11200'  
3000 PSI  
BOP  
EXHIBIT D3





4000 - 11200'  
 3000 ps.  
 MANIFOLD  
 EXHIBIT D 4



TYPICAL CHOKE MANIFOLD ASSEMBLY FOR 3M  
 RATED WORKING PRESSURE SERVICE —  
 SURFACE INSTALLATION

# MULTI-POINT SURFACE USE AND OPERATION

ORYX ENERGY COMPANY  
LITTLE WING FEDERAL COMM. # 1  
SEC.14, T17S, R29E  
2180' FSL & 860' FWL  
EDDY COUNTY, NEW MEXICO

## 1) EXISTING ROADS:

- A. THE PROPOSED WELLSITE AND EXISTING ROADS TO PROPOSED LOCATION ARE SHOWN IN EXHIBIT #1. THE DIRECTIONS TO THIS WELL ARE AS FOLLOWS:

TRAVEL 2.7 MILES WEST OF LOCO HILLS GENERAL STORE.  
TURN NORTH ON KEWANEE ROAD OR CR 215, GO .4 MILE TURN WEST  
AND GO .7 MILE (PAST 4TH PUMPING UNIT) LOCATION 400' NORTH.

- B. EXHIBIT #2 IS A TOPOGRAPHIC MAP INDICATING THE PROPOSED WELL LOCATION.

## 2) PLANNED ACCESS ROADS:

AN ACCESS ROAD APPROXIMATELY .1 MILE LONG WILL BE CONSTRUCTED ACROSS SECTION 14 OF T17S, R29E, EDDY COUNTY, NEW MEXICO. THE ROAD WILL BE CONSTRUCTED WITH CALICHE. NO ARCHAEOLOGICAL FINDS WERE OBSERVED IN THE PROPOSED RIGHT-OF-WAY. ALL OTHER ROADS WILL BE IMPROVED AND UPGRADED WHERE NECESSARY WITH CALICHE.

## 3) LOCATION OF EXISTING WELLS:

EXISTING WELLS WITHIN A ONE-MILE RADIUS ARE SHOWN ON EXHIBIT #3.

## 4) LOCATION OF EXISTING AND/OR PROPOSED FACILITIES:

- A. EXISTING FACILITIES WITHIN A ONE-MILE RADIUS OF THE PROPOSED LOCATION CAN BE SEEN ON EXHIBIT # 3. THESE EXISTING FACILITIES INCLUDE OIL OR GAS WELLS AND THEIR RESPECTIVE BATTERIES.

- B. IF THE PROPOSED WELL IS COMPLETED AND PRODUCTIVE, PLANS ARE TO CONSTRUCT A TANK BATTERY AT THE WELL PAD AND NO ADDITIONAL SURFACE DISTURBANCE WILL OCCUR.

## 5) LOCATION AND TYPE OF WATER SUPPLY:

WATER WILL BE PURCHASED FROM A COMMERCIAL WATER HAULER AND TRUCKED TO THE PROPOSED WELLSITE.

## 6) SOURCE OF CONSTRUCTION MATERIALS:

CALICHE FOR CONSTRUCTING THE ACCESS ROAD AND FOR CONSTRUCTING THE PROPOSED WELL LOCATION WILL BE OBTAINED FROM A CALICHE PIT DUG ON THE PROPOSED DRILLING PAD.