

Form 3160-3
(July 1992)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN TRIPLICATE*
(Other instructions on
reverse side)

FORM APPROVED
OMB NO. 1004-0136
Expires: February 28, 1995

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
Arch Petroleum Inc.

3. ADDRESS AND TELEPHONE NO.
P. O. Box 10340, Midland, TX 79702-7340 (915)685-8100

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)
At surface 990' FNL & 430' FWL D
At proposed prod. zone Same

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*
Approximately 10 miles south of Eunice New Mexico

15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drig. unit line, if any)
430'

16. NO. OF ACRES IN LEASE
1280

17. NO. OF ACRES ASSIGNED TO THIS WELL
40

18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.
1650'

19. PROPOSED DEPTH
3700'

20. ROTARY OR CABLE TOOLS
Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.)
3309' GR

22. APPROX. DATE WORK WILL START*
When approved

5. LEASE DESIGNATION AND SERIAL NO.
LC-030187

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME, WELL NO.
C. E. Lamunyon #78

9. API WELL NO.
30-025-36188

10. FIELD AND POOL, OR WILDCAT
Lanqlie Mattix 7R's Q Grba

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA
Section 28, T23S, R37E

12. COUNTY OR PARISH
Lea County

13. STATE
NM

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	GRADE, SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
25"	Conductor	NA	40'	Cmt to surface w/ Redi-mix
12-1/4"	8-5/8" J-55	32	1100'	900 sks circ to surface
7-7/8"	5-1/2" J-55	15.5	3700'	1000 sks circ to surface

APPROVAL SUBJECT TO
GENERAL REQUIREMENTS AND
SPECIAL STIPULATIONS
ATTACHED

- Drill 25" hole to 40'. Set 40' of 20" conductor pipe and cmt to surface w/ Redi-mix.
- Drill 12-1/4" hole to 1100'. Run & set 1100' 8-5/8" 32# J-55 ST&C csg. Cmt w/ 900 sks CI "C" cmt + 1/4# Flocele/sk + 2% CaCl. Circ cmt to surface.
- Drill 7-7/8" hole to 3700'. Run & set 3700' 5-1/2" 15.5# J-55 ST&C csg. Cmt w/ 1000 sks CI "C" cmt + additives. Circ cmt to surface.

OPER. OGRID NO. 962
PROPERTY NO. 14898
POOL CODE 37240
EFF. DATE 2-26-03
API NO. 30-025-

IN ABOVE SPACE DESCRIBE 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 prevention program, if any.

24. SIGNED Cathy Embert TITLE Sr. Operation Tech DATE 01/16/03

(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/ JOE G. LARA

TITLE

FIELD MANAGER

DATE

FEB 21 2003

*See Instructions On Reverse Side

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.

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BUREAU OF LAND MGMT.
ROSWELL OFFICE

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JAN 17 2003

30-032-
3-31-03
3:15 PM
1/17/03
dpc

30-032-30-032

DISTRICT I
P.O. Box 1880, Hobbs, NM 88241-1880

DISTRICT II
P.O. Drawer 80, Artesia, NM 88211-0719

DISTRICT III
1000 Elmo Brazos Rd., Artec, NM 87410

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

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-102
Revised February 10, 1994
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

OIL CONSERVATION DIVISION

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-025-36188	Pool Code 37240	Pool Name LANGLIE MATTIX-7 RIVERS, QUEEN, GRAYBURG
Property Code 14908 14898	Property Name C. E. LAMUNYON	Well Number 78
OGRID No. 962	Operator Name ARCH PETROLEUM, INC.	Elevation 3309

Surface Location

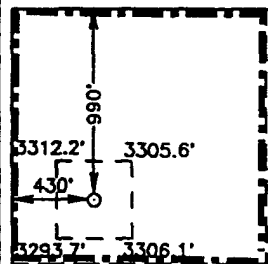
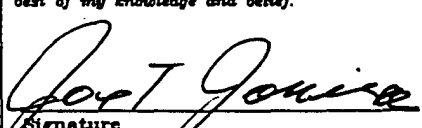
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
D	28	23 S	37 E		990	NORTH	430	WEST	LEA

Bottom Hole Location If Different From Surface

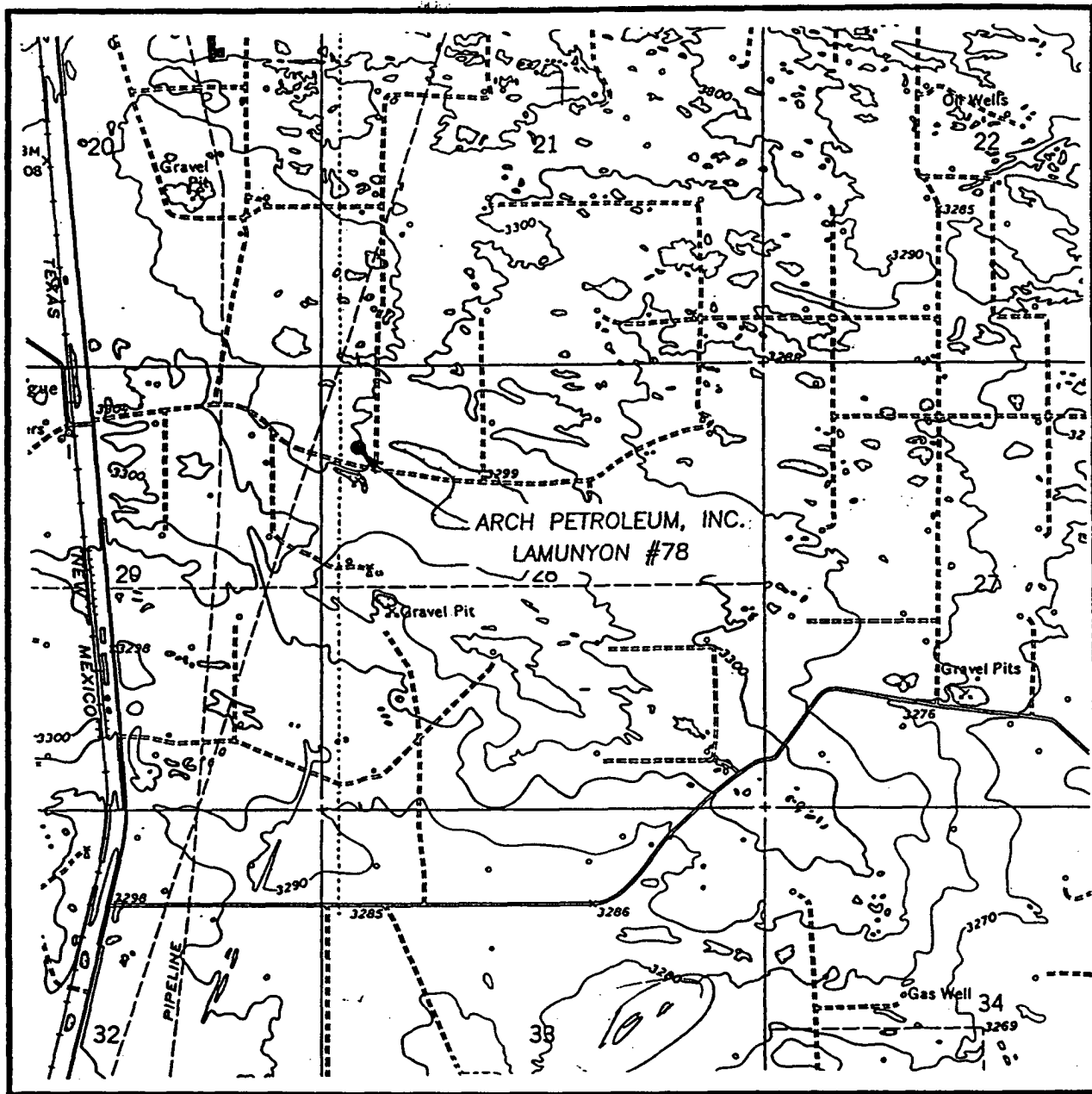
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County

Dedicated Acres 40	Joint or Infill	Consolidation Code	Order No.
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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 Joe T. Janica Printed Name Agent Title 11/25/00 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. NOVEMBER 15, 2000 Date Surveyed JLP Signature & Seal of Professional Surveyor  W.O. Num. 00-11-1363 Certificate No. RONALD J. EDSON 3239 GARY G. EIDSON 12641
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LOCATION VERIFICATION MAP

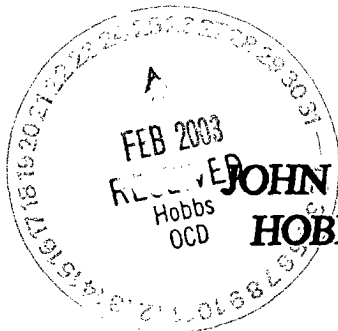


SCALE: 1" = 2000'

CONTOUR INTERVAL - 10'

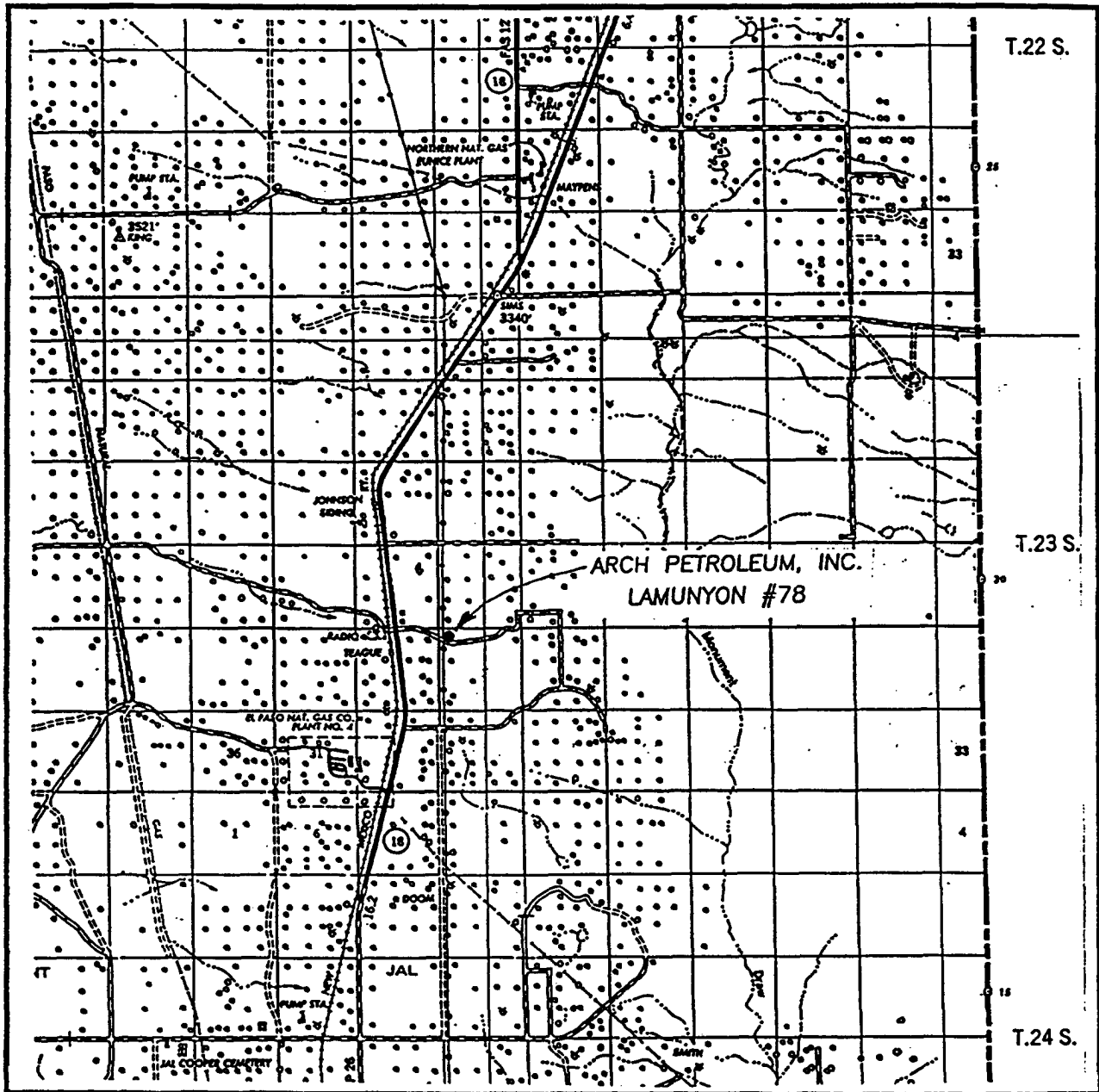
SEC. 28 TWP. 23-S RGE. 37-E
 SURVEY N.M.P.M.
 COUNTY LEA
 DESCRIPTION 990' FNL & 430' FWL
 ELEVATION 3309
 OPERATOR ARCH PETROLEUM, INC.
 LEASE LAMUNYON

U.S.G.S. TOPOGRAPHIC MAP
 RATTLESNAKE CANYON, N.M.



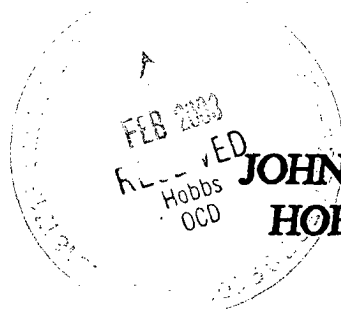
JOHN WEST SURVEYING
HOBBS, NEW MEXICO
(505) 393-3117

VICINITY MAP



SCALE: 1" = 2 MILES

SEC. 28 TWP. 23-S RGE. 37-E
 SURVEY N.M.P.M.
 COUNTY LEA
 DESCRIPTION 990' FNL & 430' FWL
 ELEVATION 3309
 OPERATOR ARCH PETROLEUM, INC.
 LEASE LAMUNYON



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

APPLICATION TO DRILL

ARCH PETROLEUM, INC.
 C. E. LAMUNYON # 78
 UNIT "D" SECTION 28
 T23S-R37E LEA CO. NM

In response to questions asked under Section II of Bulletin NTL-6 the following information on the above well is provided for your consideration.

1. Location: 990' FNL & 430' FWL SEC. 28 T23S-R37E LEA CO. NM
2. Elevation above Sea Level: 3306' GR.
3. Geologic name of surface formation: Quaternary Aeolian Deposits.
4. Drilling tools and associated equipment: Conventional rotary drilling rig using drilling mud as a circulating medium for solids removal from hole.
5. Proposed drilling depth: 3650'
6. Estimated tops of geological markers:

Santa Rosa	250'	Queen	3368'
Rustler Anhydrite	1050'	Penrose	3478'
Yates	2627'	Grayburg	3644'
7 Rivers	2912'		
7. Possible mineral bearing formations:

7 Rivers	Oil	Grayburg	Oil
Penrose	Oil	Queen	Oil
8. Casing program:

Hole size	Interval	OD of casing	Weight	Thread	Collar	Grade
25"	0-40	20"	NA	NA	NA	Conductor
12½"	0-1100'	8 5/8"	32	8-R	ST&C	J-55
7 7/8"	0-3650'	5½"	15.5	8-R	ST&C	J-55

ARCH PETROLEUM, INC.
C. E. LAMUNYON # 78
UNIT "D" SECTION 28
T23S-R37E LEA CO. NM

9. CEMENTING & SETTING DEPTH:

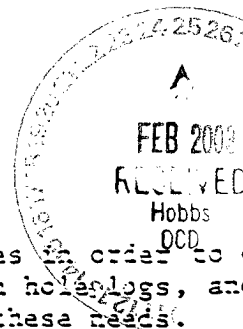
20"	Conductor	Set 40' of 20" conductor pipe and cement to surface with Redi-mix.
8 5/8"	Surface	Set 1100' of 8 5/8" 32# J-55 ST&C casing. Cement with 900 Sx. of Class "C" cement + 1/4# Flocele/Sx. + 2% CaCl, circulate cement to surface.
5 1/2"	Production	Set 3650' of 5 1/2" 15.5# J-55 ST&C casing. Cement with 1000 Sx. of Class "C" cement + additives estimate top of cement 850'.

10. PRESSURE CONTROL EQUIPMENT:* Exhibit "E". A Series 900 3000 PSI working pressure B.O.P. consisting of a double ram type preventor with a bag type annular preventor. The B.O.P. unit will be hydraulically operated. Exhibit "E-1". Choke manifold and closing unit. The B.O.P. will be nipped up on 8 5/8" casing and will be operated at least once each 24 hour period while drilling and blind rams will be operated when out of hole on trips. Full opening stabbing valve and upper kelly cock will be utilized. No abnormal pressure or temperature is expected while drilling.
- * If substructure is too low on this rig a control head will be used instead of a B.O.P.

11. PROPOSED MUD CIRCULATING SYSTEM:

Depth	Mud Wt.	Visc.	Fluid Loss	Type Mud System
40-1100'	8.5-8.7	29-36	NC	Fresh water spud mud add add paper to control seepage.
1100-3650'	10.1-10.2	29-38	NC	Brine water using high viscosity sweeps to clean hole. Uas soda ash for pH control.

Sufficient mud materials will be kept on location at all times in order to combat lost circulation, or unexpected kicks. In order to run DST's, open hole logs, and casing the viscosity and/or water loss may have to be adjusted to meet these needs.



APPLICATION TO DRILL

ARCH PETROLEUM, INC.
C. E. LAMUNYON # 78
UNIT "D" SECTION 28
T23S-R37E LEA CO. NM

12. TESTING, LOGGING, & COREING PROGRAM:

- A. Open hole logs: Dual Laterolog, SNP, Density, Gamma Ray, Caliper from TD to 1100'. Run Gamma Ray, Neutron from 1100' to surface.
- B. No DST's are planned at this time.
- C. No cores are planned, the use of mud logger is not planned at this time.

13. POTENTIAL HAZARDS:

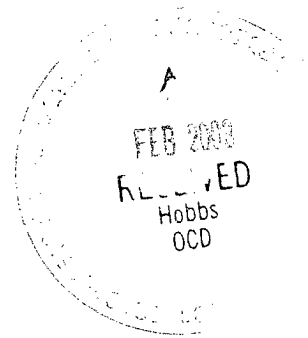
No abnormal pressures or temperatures are expected. Hydrogen Sulfide gas may be encountered, H₂S detectors will be in place to detect any presence of unsafe levels of H₂S. No lost circulation is expected to occur. All personnel will be familiar with all aspects of safe operations of all equipment that will be used. Estimated BHP 1250 PSI & estimated BHT 125°.

14. ANTICIPATED STARTING DATE AND DURATION OF OPERATION:

Roads and location construction will begin after the BLM approves the APD. Anticipated spud date will be as soon as pad & road construction has been completed. Drilling time for the well is estimated to take 10 days. If production casing is run an additional 12 days will be required to complete well and construct surface facilities.

15. OTHER FACETS OF OPERATION:

After running production casing, cased hole Gamma-Neutron & Collar logs will be run over all possible pay intervals. If commercial production from the Queen pay is indicated it will be perforated and stimulated. Then if necessary the pay will be swab tested and completed as an Oil well.



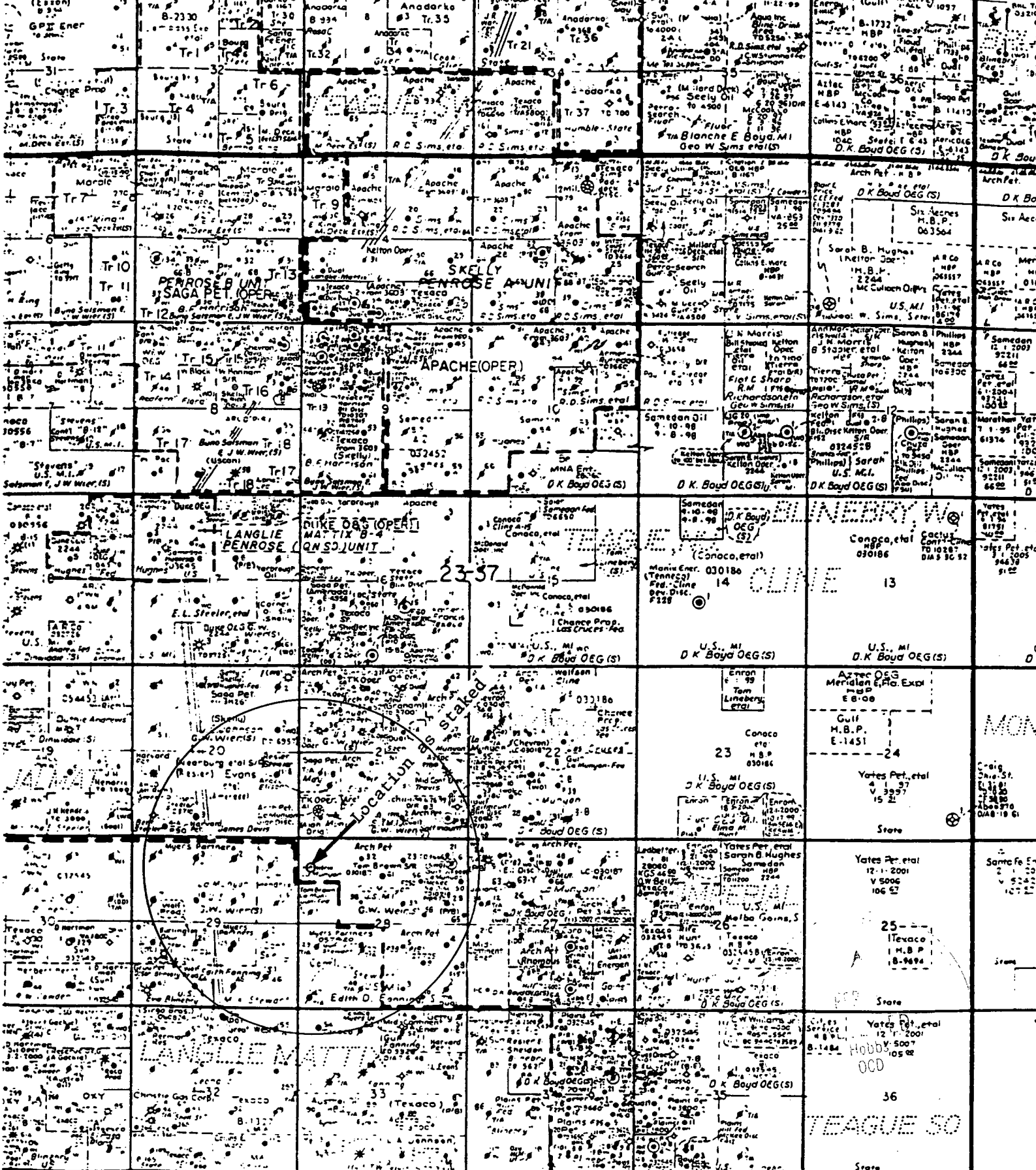
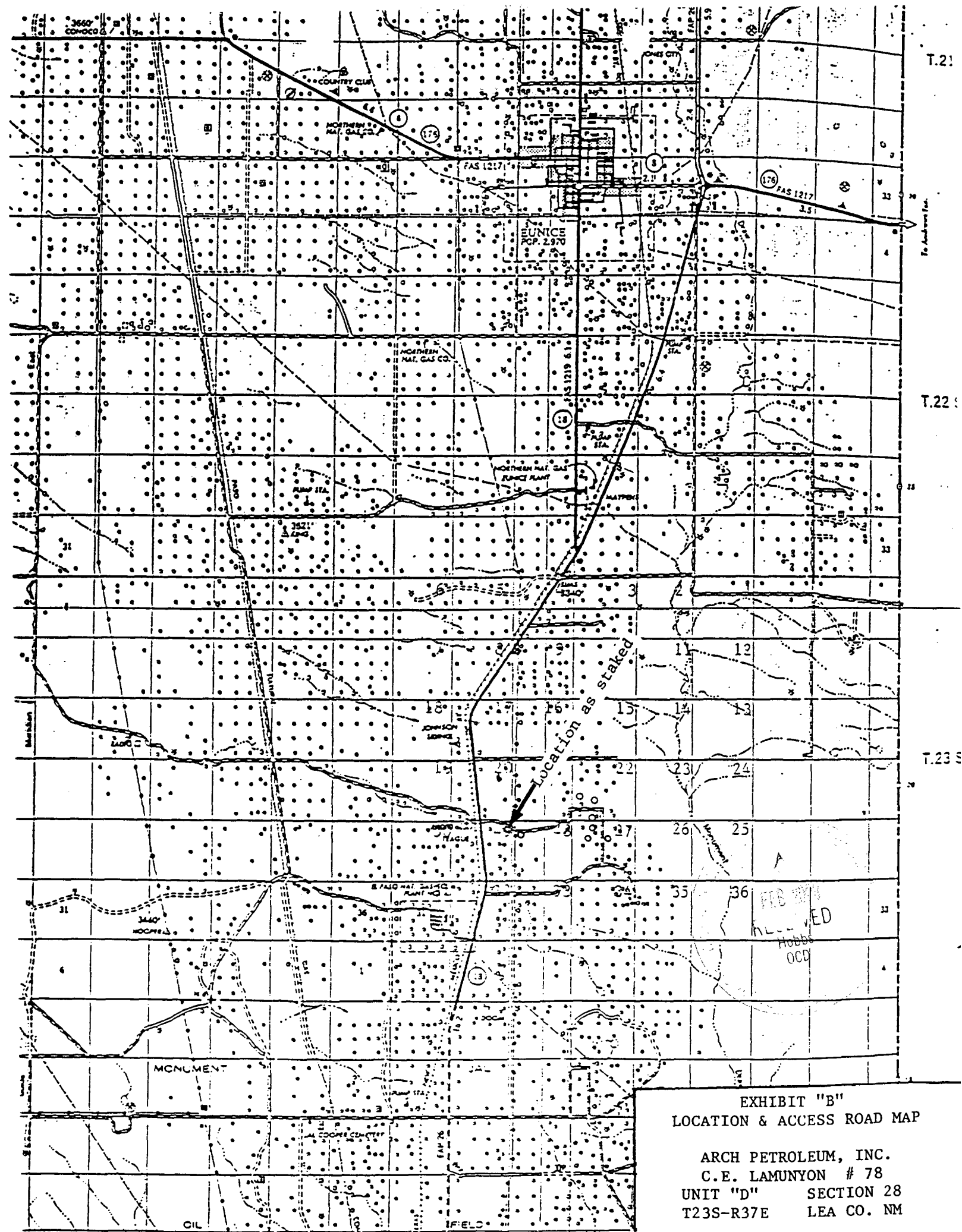


EXHIBIT "A-1"
ONE MILE RADIUS MAP
ARCH PETROLEUM, INC
C.E. LAMUNYON # 78
UNIT "D" SECTION 28
T23S-R37E LEA CO. NM



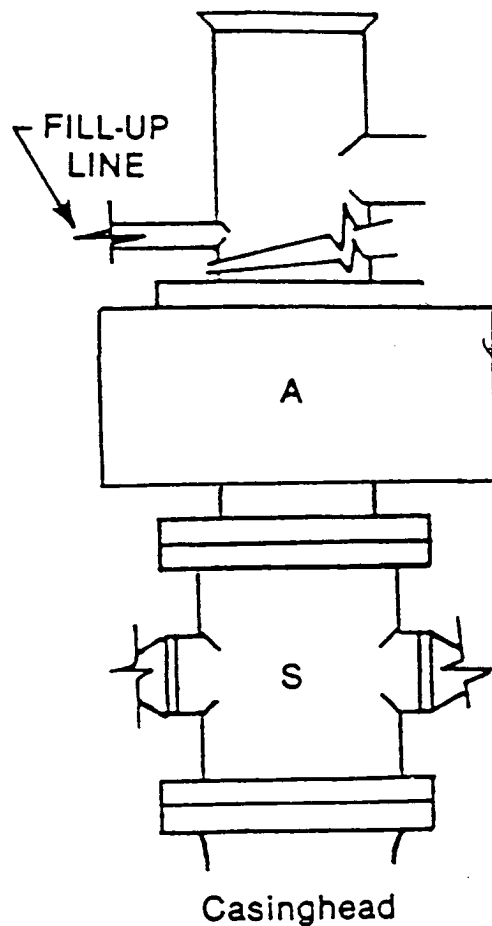
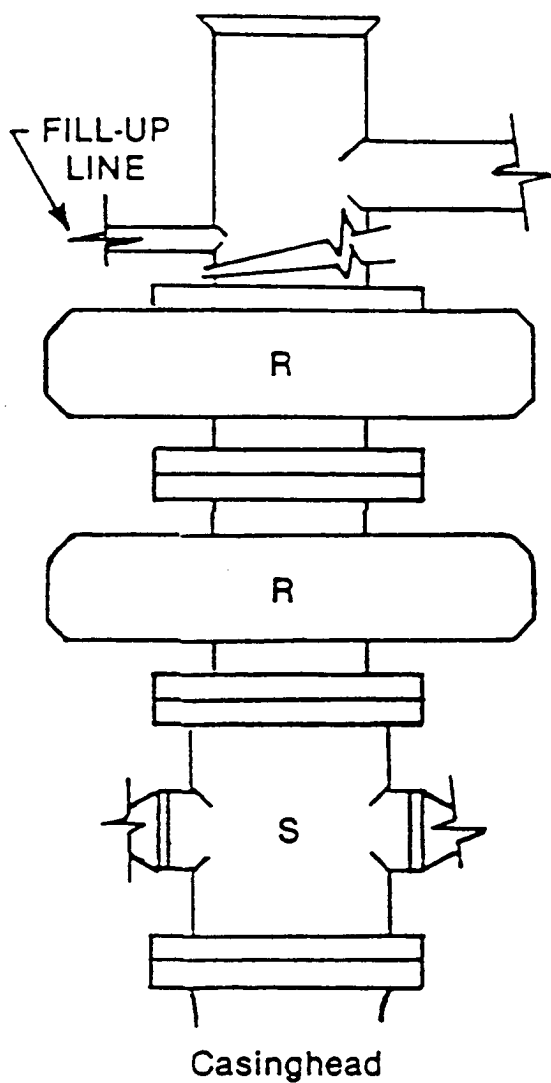


FIGURE K1-1. Recommended IADC Class 2 BOP stack, 2000 psi WP. Either SRd (left) or SA (right) arrangement is acceptable and drilling spool is optional.

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EXHIBIT "E"
SKETCH OF B.O.P. TO BE USED ON

ARCH PETROLEUM, INC.
C.E. LAMUNYON # 78
UNIT "D" SECTION 28
T23S-R37E LEA CO. NM

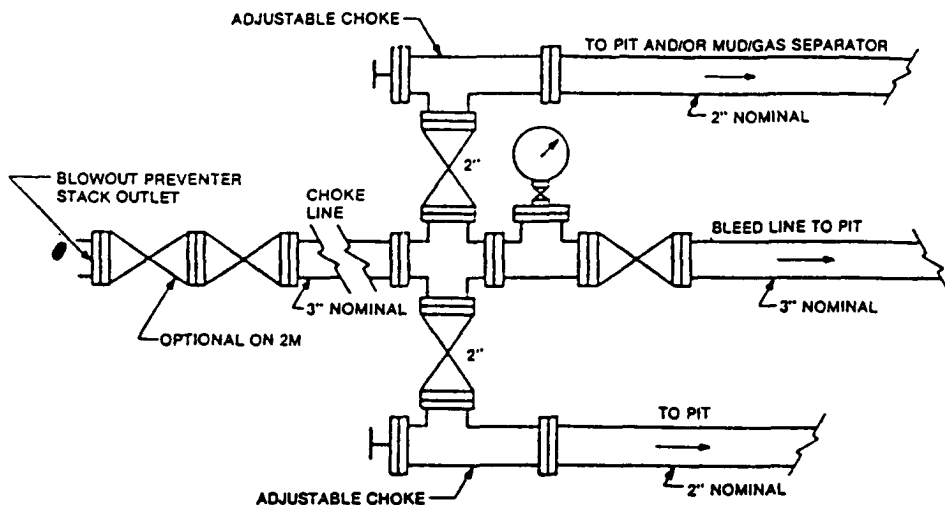


FIGURE K4-1. Typical choke manifold assembly for 2M and 3M rated working pressure service — surface installation.

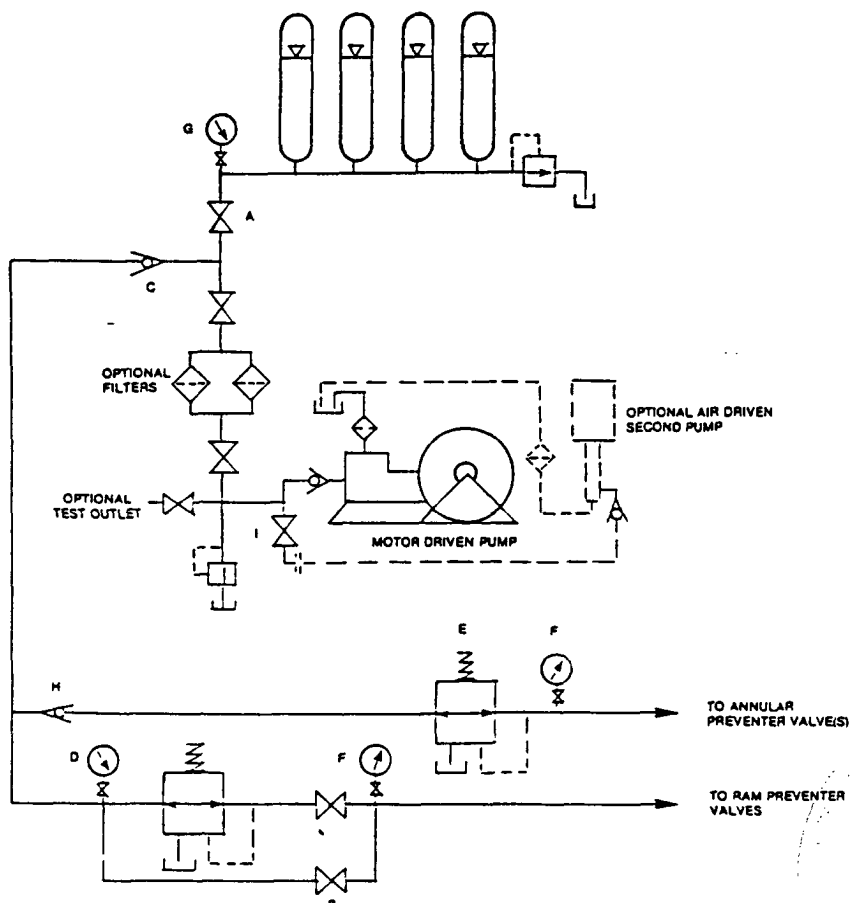


FIGURE K6-1. The schematic sketch of an accumulator system shows required and optional components.

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EXHIBIT "E-1"
CHOKE MANIFOLD & CLOSING UNIT

ARCH PETROLEUM, INC.
C.E. LAMUNYON # 78
UNIT "D" SECTION 28
T23S-R37E LEA CO. NM