

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

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

ARCO Oil & gas Company
Division of Atlantic Richfield Company

3. ADDRESS OF OPERATOR

P. O. Box 5540
Denver, Colorado 80217

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

At surface

1850' FSL & 1680' FEL Section 32

At proposed prod. zone

Approximately same

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

6 3/4 miles south & 1/2 mile west of Bloomfield, New Mexico

15. DISTANCE FROM PROPOSED*

LOCATION TO NEAREST

PROPERTY OR LEASE LINE, FT.

(Also to nearest drlg. unit line, if any)

1850'

18. DISTANCE FROM PROPOSED LOCATION*

TO NEAREST WELL, DRILLING, COMPLETED,
OR APPLIED FOR, ON THIS LEASE, FT.

1550'

16. NO. OF ACRES IN LEASE

2560.0

19. PROPOSED DEPTH

6500

17. NO. OF ACRES ASSIGNED
TO THIS WELL

E 320

20. ROTARY OR CABLE TOOLS

Rotary

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

6024' GL Ungraded

22. APPROX. DATE WORK WILL START*

When Approved

Approx. March 25, 1980

23.

PROPOSED CASING AND CEMENTING PROGRAM

| SIZE OF HOLE | SIZE OF CASING | WEIGHT PER FOOT | SETTING DEPTH | QUANTITY OF CEMENT |
|--------------|----------------|-----------------|---------------|--------------------|
| 12 1/4 | 8 5/8 | 24# | 900 | 300 sx |
| 7 7/8 | 4 1/2 | 10.5# | T.D. | 500 sx |

Proposed to drill well to a depth to test the Dakota Formation, setting surface casing thru the Ojo Alamo, and if productive setting production casing. If the Dakota formation is productive will perforate, test and treat if necessary.

Pursuant to the provisions of NTL-6 attached are: Certified Location Plot
Drilling Plan with attachments
Surface use and operation
with attachments.

RECEIVED
FEB 19 1980U. S. GEOLOGICAL SURVEY
FARMINGTON, N. M.RECEIVED
FEB 29 1980
OIL CON. COM.
DIST. 3

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 deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24.

SIGNED

TITLE Operations Manager

DATE February 12, 1980

(This space for Federal or State office use)

PERMIT NO.

APPROVAL DATE

APPROVED BY

TITLE

CONDITIONS OF APPROVAL, IF ANY:

APPROVED
AS AMENDEDFEB 23 1980
JAMES F. SIMS
DISTRICT ENGINEER

NMOCG

CLINTON
COUNTY
MISSISSIPPI
JAN 1 1900

All distances must be from the outer boundaries of the Section

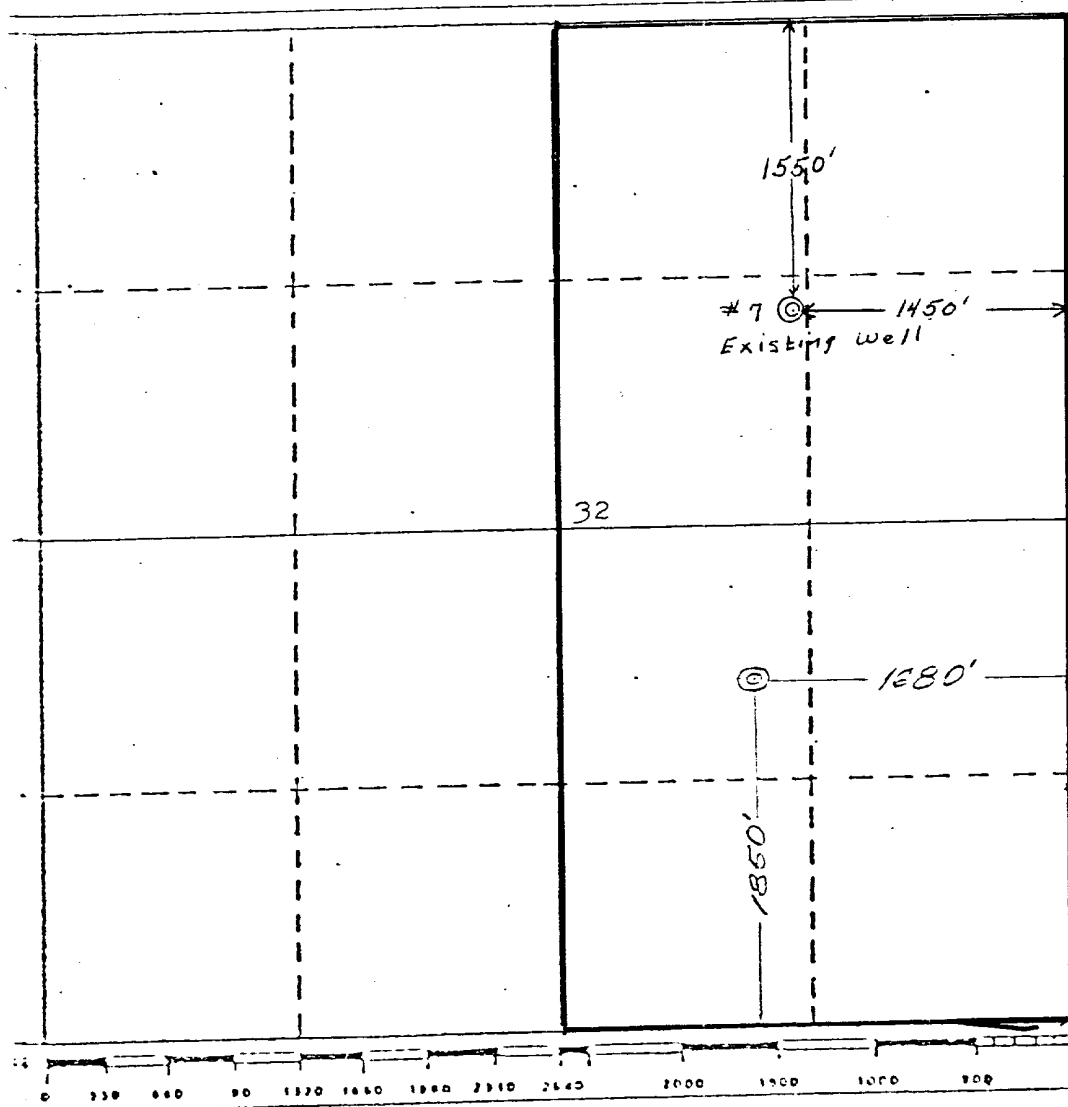
| | | | | | |
|---|--------------------------------------|-------------------------------------|-----------------------------------|------------------------------------|------------------------|
| Operator ARCO OIL & GAS COMPANY | | | Lease KRAUSE WY FEDERAL | | Well No. 7-E |
| Unit Letter J | Section 32 | Township 28 NORTH | Range 11 WEST | County SAN JUAN | |
| Actual Wellbore Location of Well: | | | | | |
| 1850 feet from the SOUTH line and | | 1680 feet from the EAST line | | | |
| Ground Level Elev. 6024 | Producing Formation DAKOTA | Pool BASIN DAKOTA | | Dedicated Acreage: E-320 | |

1. Outline the acreage dedicated to the subject well by colored pencil or hatchure marks on the plat below.
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling, etc?

☐ Yes ☐ No If answer is "yes," type of consolidation _____

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 interests, has been approved by the Division.



CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.

W. A. Walther, Jr.

Name

W. A. Walther, Jr.

Position

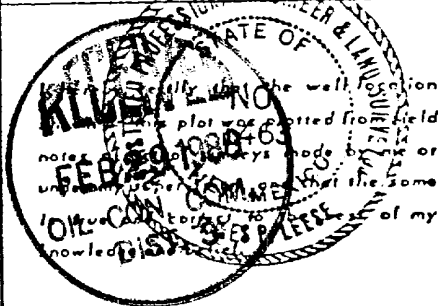
Operations Manager

Company

ARCO Oil & Gas Company

Date

February 16, 1980



Date Surveyed

December 18, 1979

Registered Professional Engineer and/or Land Surveyor

James P. Lease
James P. Lease

Certificate No.

1463

DRILLING PLAN

KRAUSE WN FEDERAL #7E
SE 1/4, Section 32-T28N-R11W
San Juan County, New Mexico

1. SURFACE FORMATION: Poison Spider

2. GEOLOGICAL MARKERS:

| | | | |
|-----------------|-------|--------------|-------|
| Ojo Alamo | 755' | Upper Mancos | 4547' |
| Kirtland | 1290' | Gallup | 5442' |
| Fruitland | 1642' | Lower Mancos | 5980' |
| Pictured Cliffs | 1853' | Greenhorn | 6232' |
| Lewis | 1937' | Graneros | 6295' |
| Chacra | 2792' | Dakota | 6414' |
| Cliff House | 3405' | Morrison | 6644' |
| Point Lookout | 4262' | | |

3. ANTICIPATED MINERAL BEARING FORMATIONS:

| | |
|-----------------|----------------|
| Ojo Alamo | (Poss. Wtr.) |
| Fruitland | (Poss. Gas) |
| Pictured Cliffs | (Poss. Gas) |
| Cliff House | (Poss. Gas) |
| Gallup | (Poss. Gas) |
| Dakota | (Poss Oil/Gas) |

4. CASING PROGRAM: Surface to 900' 8-5/8" 24# K55 ST&C,
Production to T.D. 4-1/2" 10.5# K55, ST&C.

5. CONTROL EQUIPMENT: Blowout Preventor -

Ram Type, hydraulic operated
Rams - Two: One blind ram and on pipe ram.
Series - 900 (3000#WP, 600#T)
Manufacturer - Cameron or Shaffe
Pressure test at 1000 psi prior to drilling out of casing string
Operational checks to be made daily and on trips.
Sketch attached.

6. DRILLING FLUIDS: 0 to 900' Gel and lime to drill surface hole and set casing.
900' to T.D. Low solids non-dispersed 9.0-9.1 gal., 38-45 vis., WL 8 cc or les

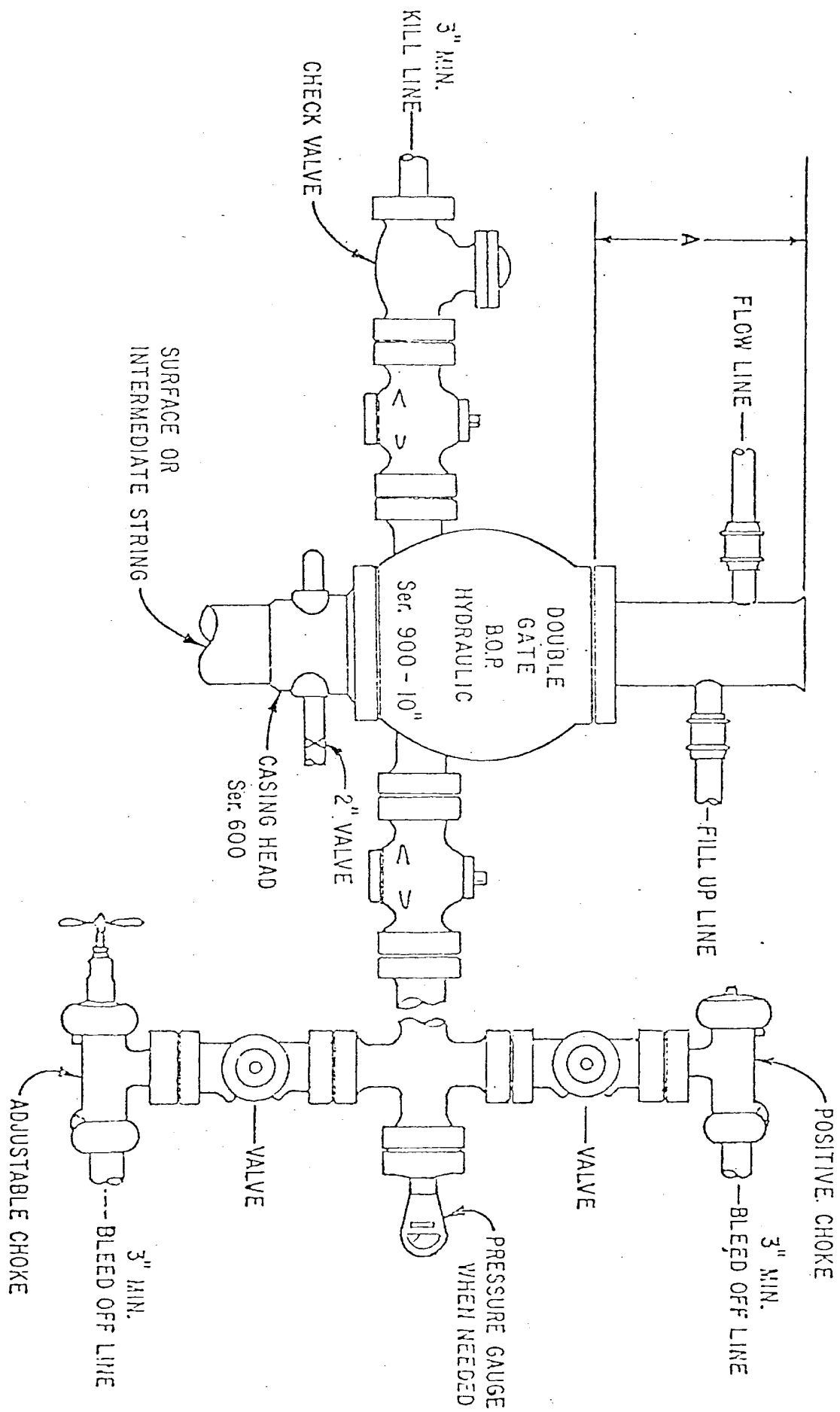
7. AUXILIARY EQUIPMENT: Kelly cock
Sub on floor with full opening valve for use in drill pipe when Kelly is not in the string

8. TESTING, LOGGING AND CORING: At this time no drill stem tests or cores are planned. However, hole conditions and information obtained while drilling may alter these plans.

9. ABNORMAL PRESSURES, TEMPERATURES, POTENTIAL HAZARDS: There are no abnormal pressures, temperatures or potential hazards in the area. The maximum anticipated pressure is 3600 psi. Weight material will be maintained on location at all times.

10. STARTING DATE - COMPLETION: Dirtwork and road work for this location will require 2 or 3 days. Moving in and rigging up 2 to 3 days. Drilling and completion will require approximately 30 days for a total of 36 days. In the event of bad weather or other delay this time could be considerably extended.

NTL-6 indicates a minimum of 30 days are required to obtain District Engineer's approval, in which case operations on this well could not be commenced until approximately March 25, 1980. Depending upon rig availability, equipment, weather, etc., this starting date could be extended.



SURFACE USE AND OPERATIONS PLAN

KRAUSE WN FEDERAL #7E

SE 1/4 Section 32-T28N-R11W

N.M.P.M., San Juan County, New Mexico

1. EXISTING ROADS: A portion of topographic map is attached showing the existing roads within a one (1) mile radius of the location (colored green). Main access will be from Bloomfield, New Mexico approximately 7 1/4 miles north. None of the existing roads will require any improvement. However, due to road conditions, weather, etc., these roads will be maintained to whatever extent is required.
2. PLANNED ACCESS ROAD: The planned access road will leave the existing road approximately 50 feet east of this location. The road will be approximately 18' wide (sufficient to handle drill equipment). There will be no cattle-guards, culverts, fence cuts, etc.
3. LOCATION OF EXISTING WELLS: Existing wells within one (1) mile radius of this location are shown on the attached map.
4. EXISTING AND/OR PROPOSED FACILITIES: ARCO Oil & Gas Company, Division of Atlantic Richfield Company has several existing wells within the area two of which are listed below:

Krause WN Federal #5, SW 1/4 Section 28-T28N-R11W
Krause WN Federal #6, NE 1/4 Section 29-T28N-R11W

The above wells each have 1-300 bbl storage tank and production unit which is located approximately 150' from the well head and is connected to the well with a buried gas line.

There are numerous other Krause WN Federal Wells proposed for this area, but due to the drilling rig availability it is not possible at this time to anticipate which wells will be drilled prior to the drilling of this well. The production facilities for this well will be similar to the above wells.

5. WATER SUPPLY: It is anticipated that water will be obtained from the San Juan River approximately six (6) miles north of this location. The water will be trucked over New Mexico Highway 44, existing roads and the planned access road in item number 2 above.
6. CONSTRUCTION MATERIALS: None anticipated.
7. WASTE DISPOSAL: Cuttings and drilling fluids will be disposed of in the reserve pit. A trash or burn pit will be used to dispose of trash, garbage, etc. If the reserve pit is sufficiently dry when the well is completed, both the reserve and trash pit will be filled. If the reserve pit is not sufficiently dry when the well is completed it will be fenced for the protection of livestock and wildlife to be filled at such time when it is sufficiently dry.
8. ANCILLARY FACILITIES: None are proposed.
9. WELL SITE LAYOUT: Per the attached sketches. The reserve pit will be approximately 100' by 100' and will be unlined.
10. RESTORATION OF SURFACE: Other than the area needed for operation and production facilities the site will be contoured as near as possible to its original state. Reseeding or any other restoration will be as specified by the Bureau of Indian Affairs and the United States Geological Survey. Any stockpiled topsoil will be distributed over the disturbed area for final grading and reseeded.
11. OTHER INFORMATION: Vegetation in this area consists of rabbit brush, morman tea, and sage brush, with isolated spots of native grass. Drainage is to the north-west into Horn Canyon then on into the San Juan River.

This location will require a 1' cut on the south side.

The V door of the rig will be to the north with the pits on west side.

The nearest dwelling is 5 1/4 miles north along Highway 44.

To the best of our knowledge there are no domestic water wells in the area,

11. (Con't.) To our knowledge there are no archaeological, cultured, or historical sites in the area which will be involved. However, an archaeological survey will be made and the report submitted as soon as it is received.

With the short period of operation and the restoration of the surface, any disturbance to vegetation and wildlife will be temporary and minimal. It is not anticipated that there will be any substantial impact on the environment.

12. LESSEE'S OR OPERATOR'S REPRESENTATIVE:

W. A. Walther, Jr.
(303) 575-7031
575-7153

C. E. Latchem
(303) 575-7127
575-7152

B. J. Sartain
(303) 575-7035
770-7849

ARCO Oil and Gas Company
Division of Atlantic Richfield Company
P. O. Box 5540
Denver, Colorado 80217

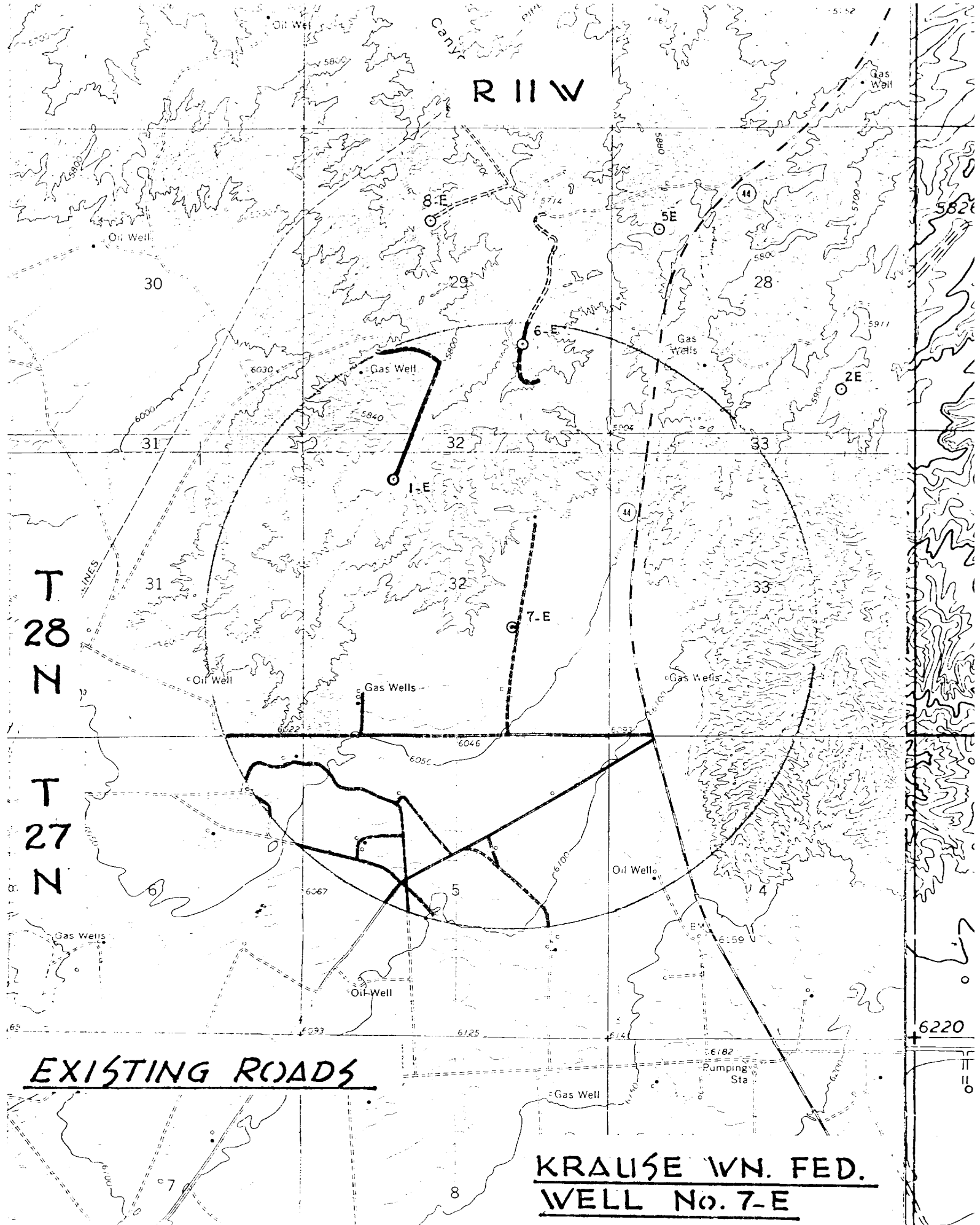
LOCAL REPRESENTATIVE:

J. E. Taylor
ARCO Oil and Gas Company
Division of Atlantic Richfield Company
P. O. Box 2197
Farmington, New Mexico 87401
(505) 325-7527
325-7968

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 presently 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 ARCO Oil and Gas Company, Division of Atlantic Richfield Company and its contractors and sub contractors in conformity with this plan and the terms and conditions unders which it is approved.

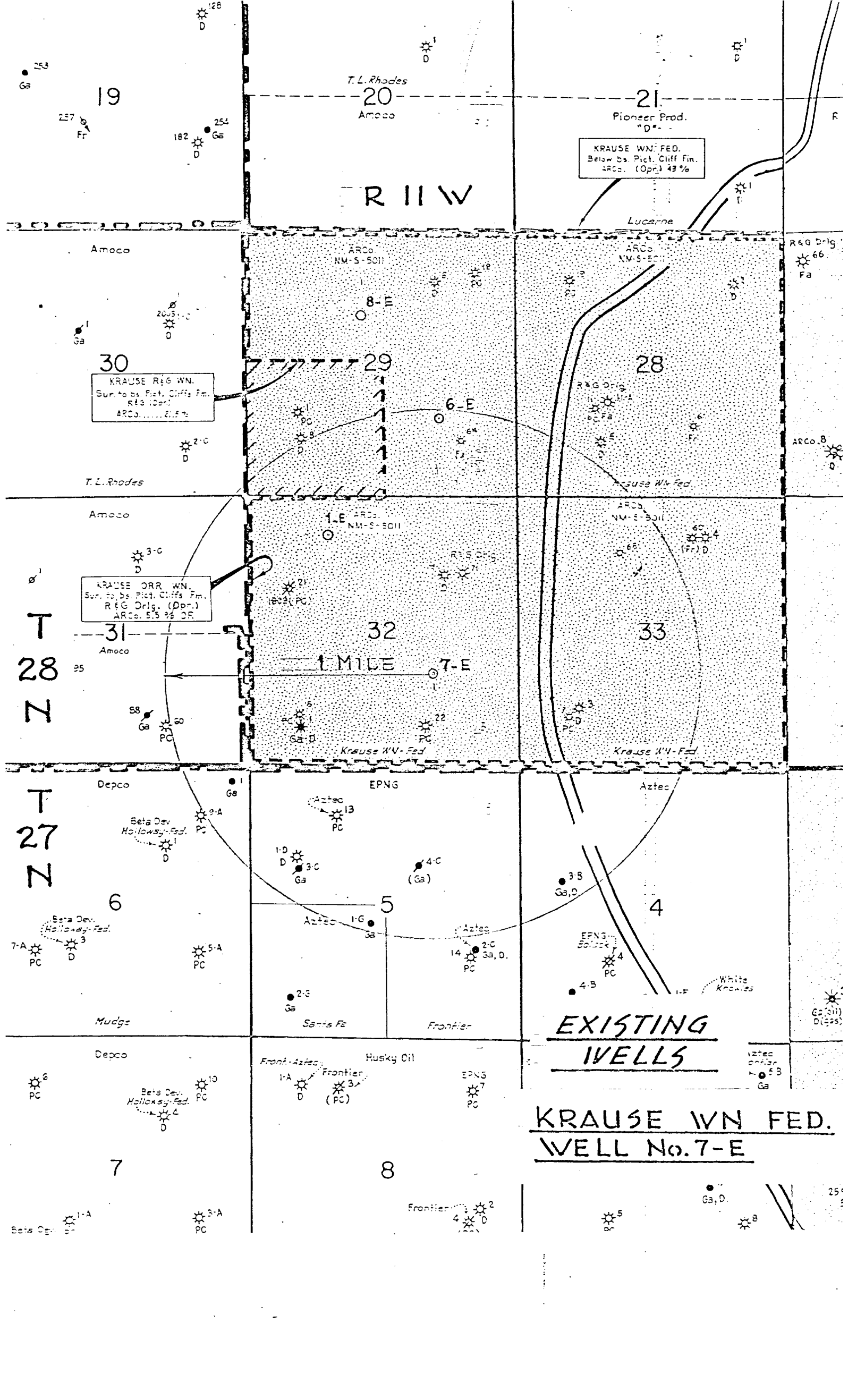
February 12, 1980
Date


W. A. Walther, Jr.
Operations Manager



EXISTING ROADS

KRAUSE WN. FED.
WELL No. 7-E



19

20
Amoco

21
Pioneer Prod.
"D"

KRAUSE WN FED.
Below bs. Pict. Cliff Fin.
ARCO. (Opr.) 43%

R 11 W

30

KRAUSE R&G WN.
Sur. to bs. Pict. Cliff Fin.
R&G Drilling
ARCO. (Opr.) 2.5%

29

28

T.L. Rhodes

Amoco

KRAUSE ORR WN.
Sur. to bs. Pict. Cliff Fin.
R&G Drilling. (Opr.)
ARCO. 5.5% OF

31

32

33

1 MILE

7-E

Depco

EPNG

Aztec

Beta Dev.
Hollandsky Fed.

Aztec
1-B
PC

4-C
(Ga)

6

5

4

Beta Dev.
Hollandsky Fed.

Aztec
1-G
Ga

Aztec
2-C
Ga, D.

Mudge

Santa Fe

Frontier

EXISTING
WELLS

Depco

Front-Aztec
Husky Oil

EPNG
7
PC

Beta Dev.
Hollandsky Fed.

Front-Aztec
1-A
D

Frontier
3-A
(PC)

KRAUSE WN FED.
WELL No. 7-E

7

8

Beta Dev.
Hollandsky Fed.

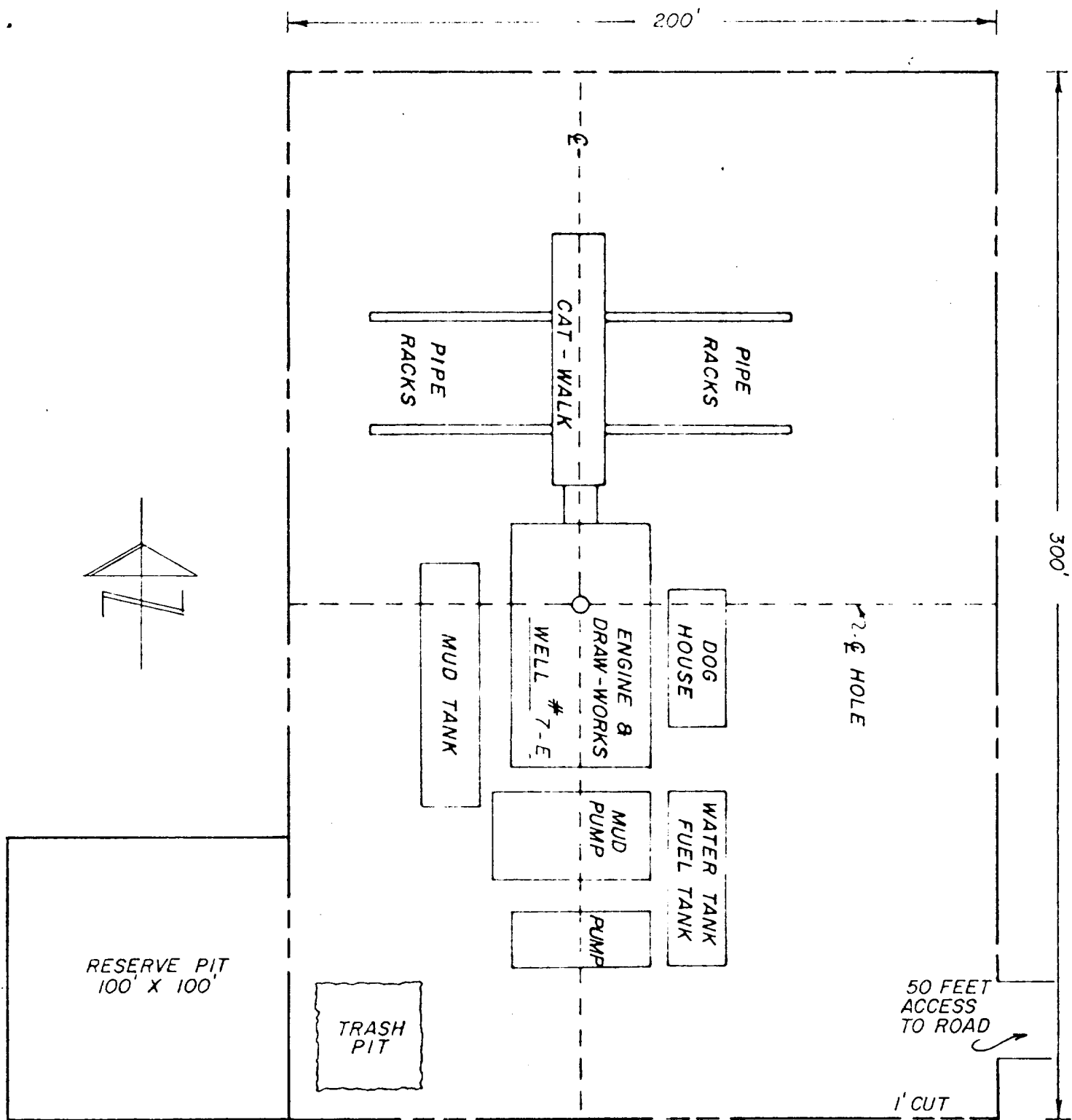
3-A
PC

Frontier
4
D

Ga, D.

8

25



KRAUSE WN FEDERAL No. 7-E
 1850' FSL, 1680' FEL, Sec. 32-28 N-11 W

