

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
 Tenneco Oil Company

3. ADDRESS OF OPERATOR
 P.O. Box 3249, Englewood, Colorado 80155

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)
 At surface 1550 FSL, 1590 FEL
 At proposed prod. zone same as above

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*
 Approximately 23 miles NW of Lindrith.

10. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any) 1050'

16. NO. OF ACRES IN LEASE 2558.36

17. NO. OF ACRES ASSIGNED TO THIS WELL E/320

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

19. PROPOSED DEPTH ±7595

20. ROTARY OR CABLE TOOLS Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.) 6706'

22. APPROX. DATE WORK WILL START* February 1981

| 23. PROPOSED CASING AND CEMENTING PROGRAM | | | | |
|---|----------------|-----------------|---------------|----------------------|
| SIZE OF HOLE | SIZE OF CASING | WEIGHT PER FOOT | SETTING DEPTH | QUANTITY OF CEMENT |
| 12 1/4" | 9 5/8" new | 36# | ±300 | Circulate to surface |
| 7/78" | 4 1/4" new | 11.6#, 10.5# | ±7595 | Cement in two stages |

See attached.

The gas is dedicated.

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 R. A. Mishler TITLE Sr. Production Analyst DATE December 10, 1980
R. A. Mishler

(This space for Federal or State office use)

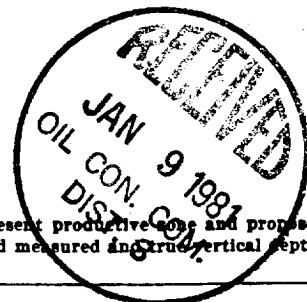
APPROVED
 PERMIT NO. AS AMENDED APPROVAL DATE

APPROVED BY JAMES F. SIMS TITLE DATE
 CONDITIONS OF APPROVAL, IF ANY

JAN 9 1981
for District Engineer
JAMES F. SIMS
 DISTRICT ENGINEER

*See Instructions On Reverse Side

NM000



All distances must be from the outer boundaries of the Section.

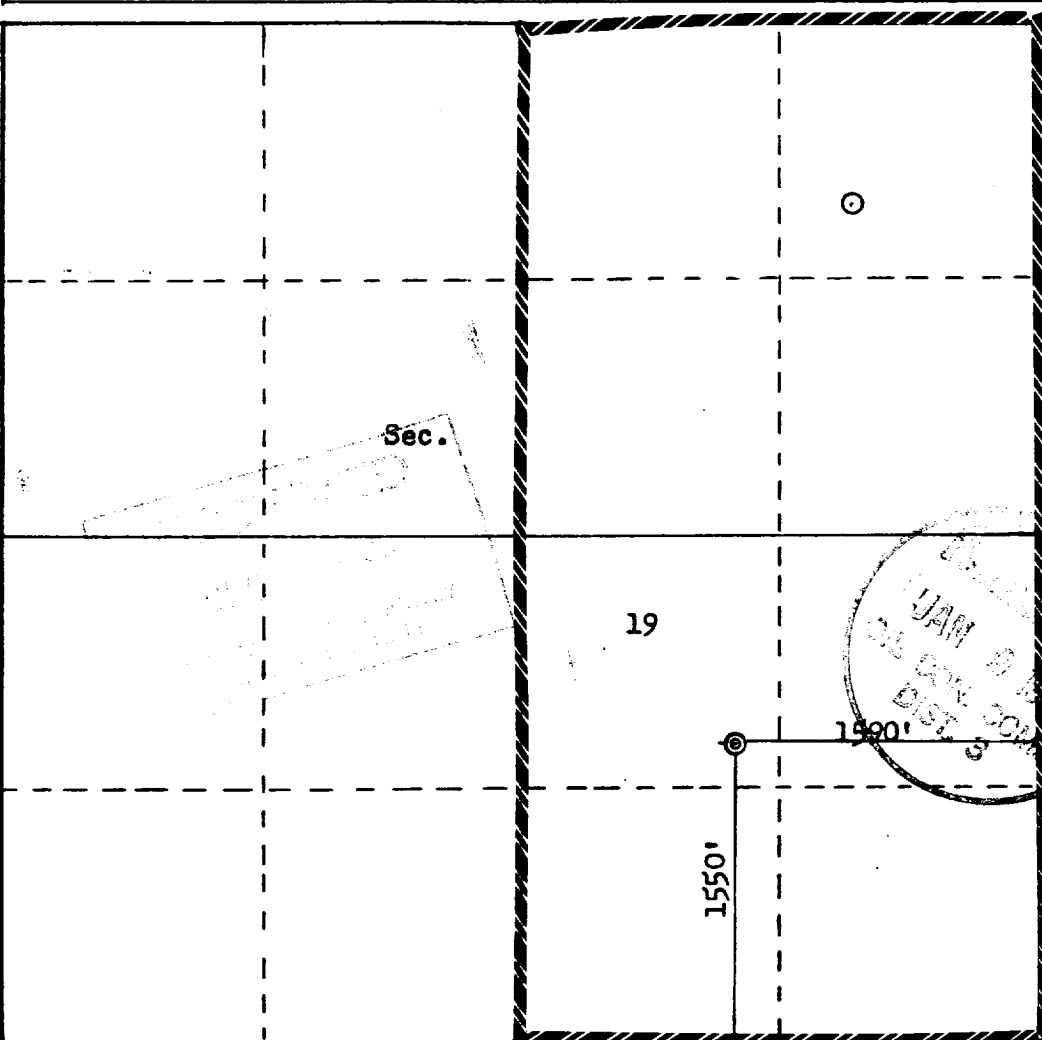
| | | | | | |
|--|--------------------------------------|------------------------|-------------------------------|-----------------------------|--|
| Operator TENNECO OIL COMPANY | | | Lease JICARILLA "A" | | Well No. 3E |
| Unit Letter J | Section 19 | Township 26N | Range 5W | County Rio Arriba | |
| Actual Footage Location of Well: 1550 feet from the South line and 1590 feet from the East line | | | | | |
| Ground Level Elev: 6706 | Producing Formation Dakota | | Pool Basin Dakota | | Dedicated Acreage: 320 Acres |

1. Outline the acreage dedicated to the subject well by colored pencil or hachure 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 Commission.



Scale: 1"=1000'

| | |
|---|-------------------------------|
| CERTIFICATION | |
| I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief. | |
| Name | R. A. Mishler |
| Position | Sr. Production Analyst |
| Company | Tenneco Oil Company |
| Date | December 10, 1980 |
| 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 knowledge and belief. | |
| Date Surveyed | November 2, 1980 |
| Registered Professional Engineer and Land Surveyor | |
| Fred B. Kerr Jr. | |
| Certificate No. 3950 | |

TENNECO OIL COMPANY
ROCKY MOUNTAIN DIVISION
PENTHOUSE, 720 SOUTH COLORADO BOULEVARD
DENVER, COLORADO 80222

DRILLING PROCEDURE

DATE: September 23, 1980

LEASE: Jicarilla

WELL NO.: A 3E

LOCATION: 1550 FSL, 1590 FEL
Section 19, T26N, R5W
Rio Arriba County, New Mexico

FIELD: Basin Dakota

ELEVATION: 6706'

TOTAL DEPTH: 7595'

PROJECTED HORIZON: Dakota

SUBMITTED BY: Bruce Ladd

DATE: September 23, 1980

APPROVED BY: Df. Karsh

DATE: November 12, 1980

CC: Administration
DSB Well File
Field File



Ojo

Fruitland

Pictured Cliffs

Lewis

Cliff House

Menefee

Point Lookout

Mancos

Gallup

Greenhorn

Dakota

T.D.



DRILLING, CASING AND CEMENTING PROGRAM

1. MIRURT
2. Drill a 12¼" Hole to \pm 300' with Gel-Water Mud.
3. RU and run 9 5/8", 36#, K-55, ST&C casing to TD. Cement with Class B + 2% CaCl₂ in sufficient quantity to circulate cement to surface. WOC 12 hours.
4. Screw on 9 5/8 8rd x 11-3000 casing head, NU BOPS. Pressure test casing, lines and blinds to 1000 PSI for 30 minutes. GIH with drill pipe and test pipe rams to 1000 PSI for 30 minutes. Record all tests on IADC Report.
5. Drill out using a 7 7/8" Bit to T.D. Log open hole as directed by G.E. Department.
6. Run 4½" 11.6 and 10.50# K-55, ST&C as designed.
7. Cement in two stages with sufficient volume to circulate cement to surface. Locate TV tool \pm 250' above Cliffhouse to prevent lost returns in Boca Verde. Lead in first stage with light cement (pozmix, Halliburton lite, etc.). Tail in with sufficient volume of Class "B" cement to cover the Dakota. Circulate a minimum of four hours between stages. Lead in second stage with light cement.
8. MORT
9. Install tree and fence reserve pit.
10. If non-productive, P & A as required by the USGS.

Casing Program

| <u>Interval</u> | <u>Length</u> | <u>Size</u> | <u>Weight</u> | <u>Grade</u> | <u>Coupling</u> |
|-----------------|---------------|-------------|---------------|--------------|-----------------|
| 0-300 | 300 | 9 5/8 | 36# | K-55 | STC |
| 7595-7000 | 595 | 4 1/2 | 11.6# | K-55 | STC |
| 0-7000 | 7000 | 4 1/2 | 10.5# | K-55 | STC |

MUD PROGRAM

- 0-300 Native solids. Have sufficient viscosity to gel chemical to clean hole and run casing.
- 300-TD Low solids. Gel chemical. 32 viscosity and 10-15 water loss down through the Marcos. Before reaching Gallup, add 6% LCM and run viscosity at 33-40 seconds. After penetrating Gallup, let LCM drop.

EVALUATION

Cores and DST's: None.

Deviation Surveys:

1. Survey surface hole at 100' intervals. Maximum allowable deviation at 500' is 1-1/2°.
2. From surface to total depth, deviation surveys must be taken every 500' on each trip, whichever is first. This may entail running the TOTCO on wire line. Record each survey on the IADC Drilling Report Sheet. Maximum allowable change in deviation is 1° per 100'. Maximum deviation allowable is 5°.

Sampling: As requested by Wellsite Geological Engineer.

Logs: 1. GR/IND FDC-GR-Cal TD to MV

BLOWOUT EQUIPMENT

30" - 3000 BOP with rotating head to comply with TOC requirements as shown in LBE arrangement, Figure C. Preventers must be checked for operation every 24 hours with each check recorded on the IADC Drilling Report Sheet.

REPORTS

Drilling Reports for the past 24 hours will include depth, footage, time distribution, activity breakdown, mud properties, bit record, bottom hole assembly, daily and cumulative mud cost, deviation surveys, and other pertinent information to be called into Division Office by 7:30 A.M. Monday thru Friday.

TENNECO OIL COMPANY
P.O. BOX 3249
ENGLEWOOD, COLORADO 80155
PHONE: 303-740-4800

Office Directory

| | |
|---------------|----------|
| Don S. Barnes | 740-4814 |
| John W. Owen | 740-4810 |
| Tom Dunning | 740-4813 |
| Jack Magill | 740-4802 |
| Dale Kardash | 740-4809 |

In case of emergency or after hours call the following in the preferred order.

- | | | | |
|-----|-----------------------------|----------|--------|
| (1) | Don S. Barnes | 740-4814 | Office |
| | Division Drilling Engineer | 936-0704 | Home |
| (2) | John W. Owen | 740-4810 | Office |
| | Project Drilling Engineer | 795-0221 | Home |
| (3) | Mike Lacey | 797-2651 | Home |
| | Division Production Manager | | |

TENNECO OIL COMPANY - 10 POINT PLAN

1. The geological name of the surface formation: *San Jose*
- 2 & 3. Estimated Formation Tops:

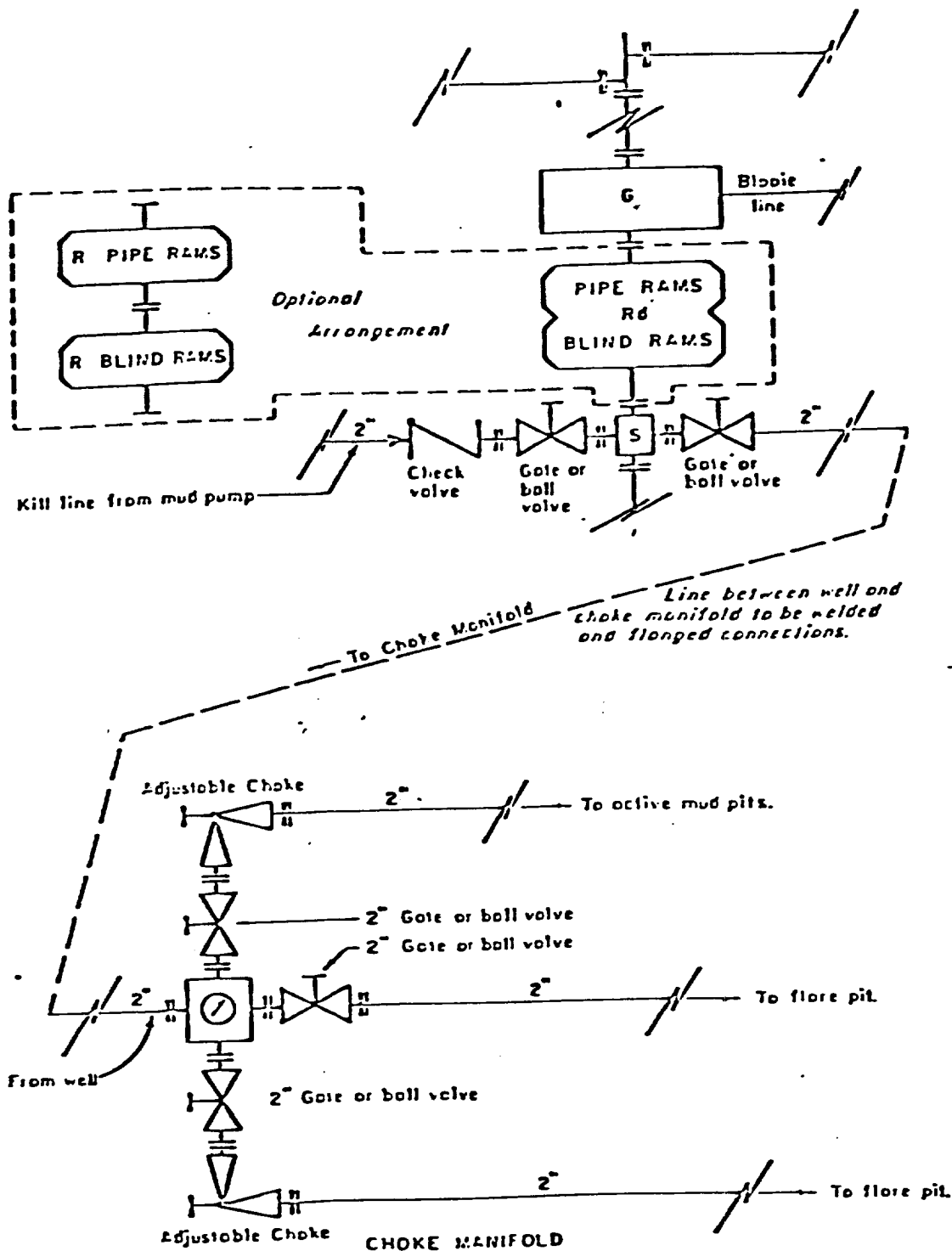
(See Attached Drilling Procedure)
4. Proposed Casing Program:

(See Attached Drilling Procedure)
5. Blowout Preventors:
Hydraulic double ram. One set of rams will be provided each size drill pipe in the hole. One set of blind rams at all times. Fill line will be 2", kill line will be 2", choke relief line will be 2". BOP's, drills and tests will be recorded in the driller's log. BOP will be tested every 24 hours and recorded in IADC Log.
6. Mud Program: (Sufficient quantity of mud and weight material will be available on location).

(See Attached Drilling Procedure.)
7. Auxiliary Equipment:
 - a. Kelly cock will be in use at all times.
 - b. Stabbing valve to fit drill pipe will be present on floor at all times.
 - c. Mud monitoring will be visual. No abnormal pressures are anticipated.
 - d. Floats at bits.
 - e. Drill string safety valve(s) to fit all pipe in drill string will be maintained on the rig floor while drilling operations are in progress.
8. Coring, Logging, and Testing Program:

(See Attached Drilling Procedure)
9. No abnormal pressures, temperatures or potential hazards such as H₂S are expected to be encountered.
10. The drilling of this well will start approximately (*February 81*) and continue for 10 to 12 days.

Your office will be notified of spudding in sufficient time to witness cementing operations. Immediate notice will be given on blowouts, fires, spills, and accidents involving life threatening injuries or loss of life. Prior approval will be obtained before appreciably changing drilling program or commencing plugging operations, plug back work, casing repair work or corrective cementing operations.



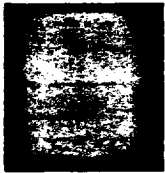
All equipment to be 3,000 psi working pressure except as noted.

- Rd Double ram type preventer with two sets of rams.
- R Single ram type preventer with one set of rams.
- S Drilling spool with side outlet connections for choke and kill lines.
- G Rotating head 150 psi working pressure minimum

ARRANGEMENT C

TENNECO OIL COMPANY
ROCKY MOUNTAIN DIVISION
REQUIRED MINIMUM
BLOWOUT PREVENTER AND
CHOKE MANIFOLD

1. Existing Road - Please refer to Map No. 1 which shows the existing roads. New roads which will be required have been marked on this map. All existing and new roads will be properly maintained during the duration of this project.
2. Planned Access Roads - Please refer to Map No. 1. The grade of the access roads will be consistent with that of the local terrain. The road surface will not exceed twenty feet (20') in width. Upon completion of the project, the access road will be adequately drained to control soil erosion. Drainage facilities may include ditches, water bars, culverts or any other measure deemed necessary by trained Company personnel to insure proper drainage. Gates and/or cattle guards will be installed if necessary.
3. Location of Existing Wells - Please refer to Map No. 2.
4. Location of Tank Batteries, Production Facilities, and Production Gathering and Service Lines - Please refer to Maps No. 1 and No. 2. Map No. 2 shows the existing roads and new proposed access roads. All known production facilities are shown on these two maps.
5. Location and Type of Water Supply - Water for the proposed project will be obtained from a private source.
6. Source of Construction Materials - No additional materials will be required to build either the access road or the proposed location.
7. Methods of Handling Waste Materials - All garbage and trash materials will be put into a burn pit shown on the attached Location Plat No. 1. When clean-up operations are begun on the proposed project, the burn pit with its refuse will be buried to a depth of at least three feet (3'). A latrine, the location of which is also shown on Plat No. 1, will be provided for human waste. If large amounts of liquids are left in the reserve pit after completion of the project, the pit will be fenced until the liquids have had adequate time to dry. The location clean-up will not take place until a time as the reserve pit can be properly covered over to prevent run-off from carrying any of these materials into the watershed. No earthen pit will be located on natural drainage; all earthen pits will be so constructed as to prevent leakage from occurring.



8. Ancillary Facilities -
pr

9. Wellsite Layout - Pl

10. Plans for Restoration c
th

of
by
re
pe
pr
re

11. Other Information - The
Dra
Sna

12. Operator's Representati

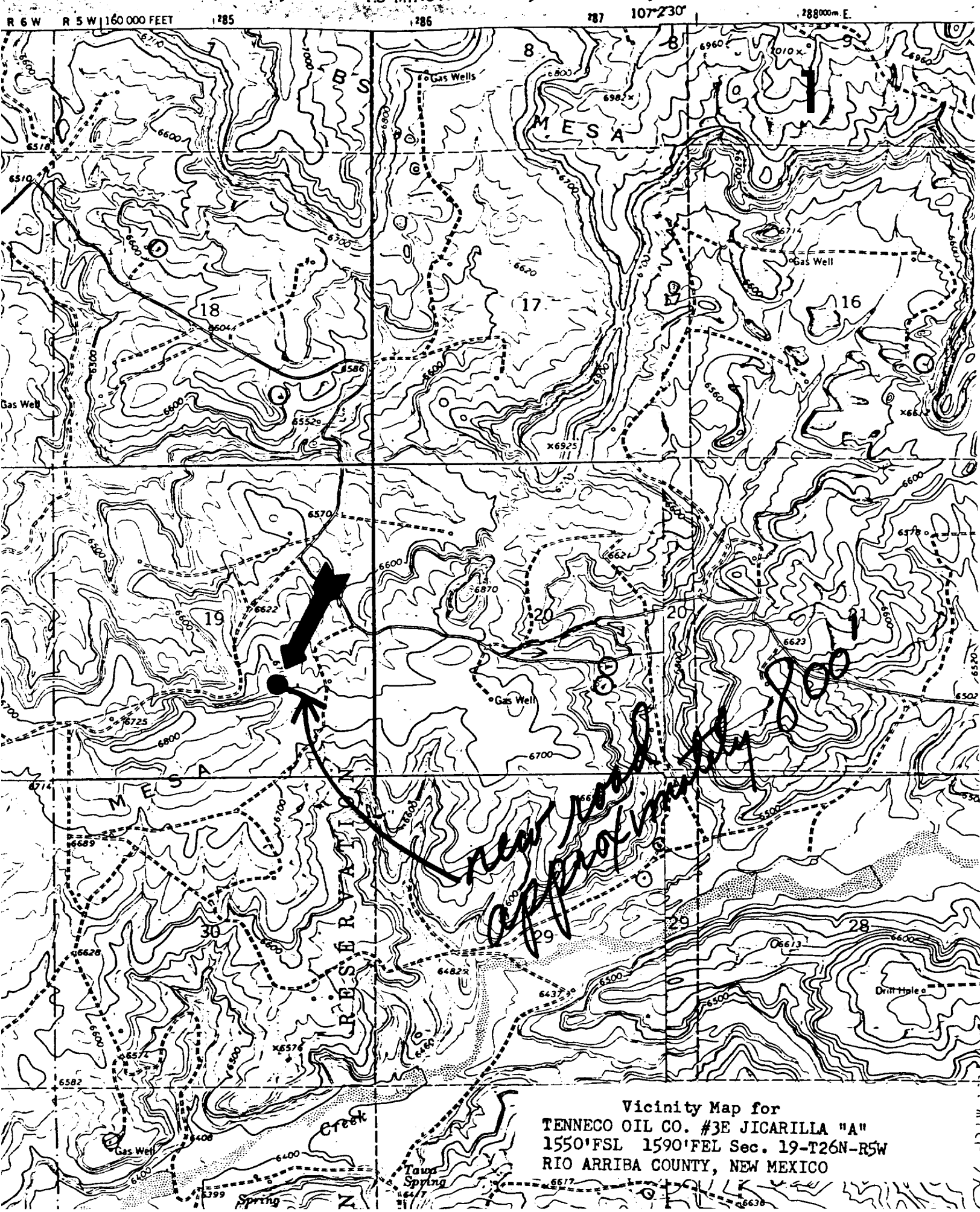
13. Certification - I
vi
ro
ex
of
as
fo
an
te



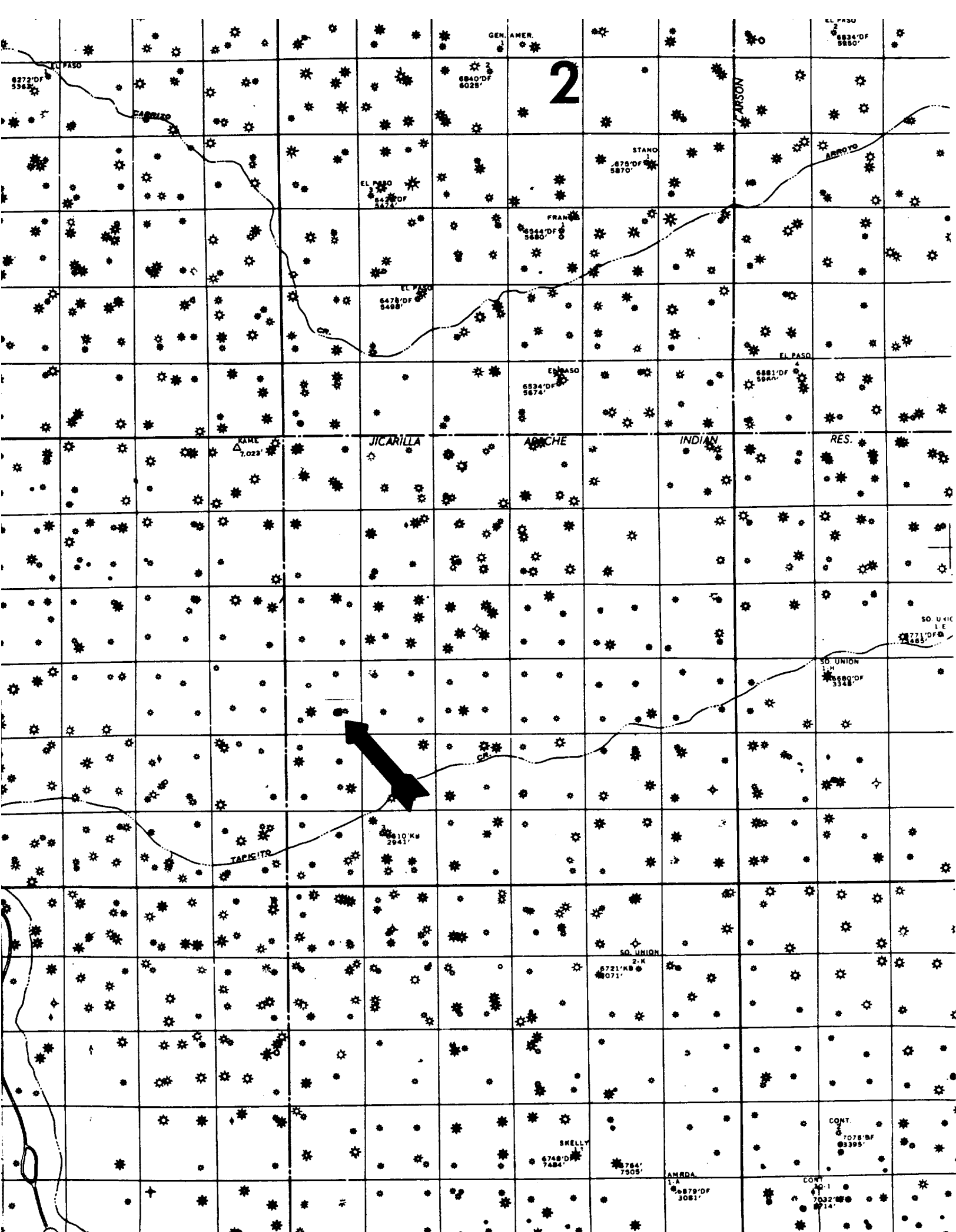
R.
Sr.

NEW MEXICO RIO ARriba CO. DEPARTMENT OF THE INTERIOR
7.5 MINUTE SERIES (TOPOGRAPHIC)

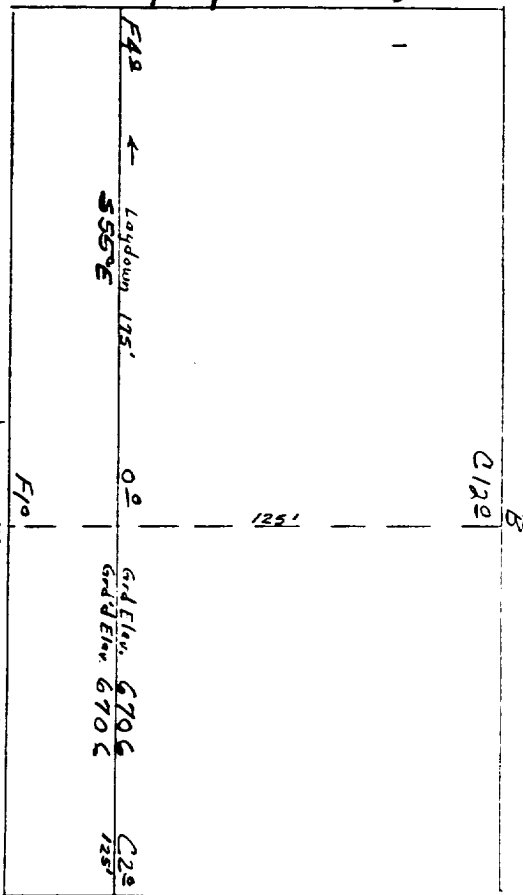
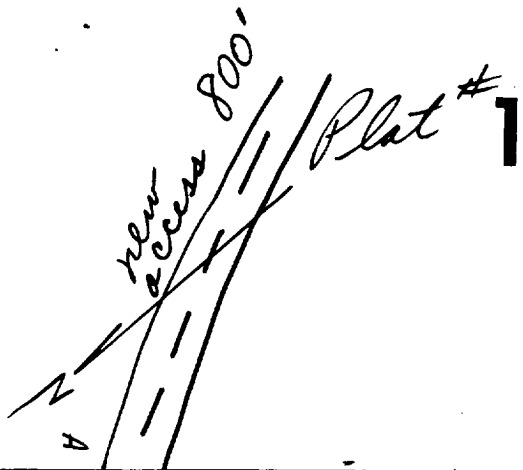
GEOLOGICAL SURVEY



Vicinity Map for
TENNECO OIL CO. #3E JICARILLA "A"
1550' FSL 1590' FEL Sec. 19-T26N-R5W
RIO ARRIBA COUNTY, NEW MEXICO



Profile Map for
 TENNECO OIL CO. #3E JICARILLA "A"
 1550' FSL 1590' FEL Sec. 19-T26N-R5W
 RIO ARriba COUNTY, NEW MEXICO



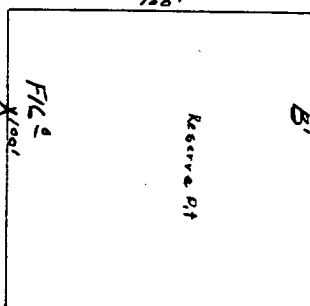
1"=50'

Vert. 1"=40'

Horiz. 1"=100'

| | | | | | | | | | |
|------|--|--|--|--|--|--|--|--|--|
| 6710 | | | | | | | | | |
| 6700 | | | | | | | | | |
| 6690 | | | | | | | | | |

| | | | | | | | | | |
|------|--|--|--|--|--|--|--|--|--|
| 6710 | | | | | | | | | |
| 6700 | | | | | | | | | |
| 6690 | | | | | | | | | |



| | | | | | | | | | |
|--|--|--|--|--|--|--|--|--|--|
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

| | | | | | | | | | |
|--|--|--|--|--|--|--|--|--|--|
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

Date 11/1/82

Kerr Land Surveying, Inc.