Form 9-331 C
(May 1963)

SUBMIT IN TRIPLICATE*
(Other instructions on reverse side)

Form approved.
Budget Bureau No. 42-R1425.

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK: DRILL [XX] DEEPEN [ ] PLUG BACK [ ]

b. TYPE OF WELL: OIL WELL [ ] GAS WELL [XX] OTHER — SINGLE ZONE [ ] MULTIPLE ZONE [XX]

2. NAME OF OPERATOR: Tenneco Oil Company

3. ADDRESS OF OPERATOR: 720 S. Colorado Blvd., Denver, CO 80222

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*)
At surface: 960' FNL, 960' FEL
A
At proposed prod. zone

5. LEASE DESIGNATION AND SERIAL NO.: Contract #108

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7. UNIT AGREEMENT NAME:

8. FARM OR LEASE NAME: Jicarilla "C"

9. WELL NO.: ~~5E~~ 5M

10. FIELD AND POOL, OR WILDCAT: Mesa Verde/Dakota

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: Sec. 24, T26N, R5W

12. COUNTY OR PARISH: Rio Arriba

13. STATE: NM

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*: 20 miles north/northeast of Counselor, NM

15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any): 960'

16. NO. OF ACRES IN LEASE: 2560

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: 7600'

20. ROTARY OR CABLE TOOLS: Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.): 6652 GR

22. APPROX. DATE WORK WILL START*: ASAP (Spring).

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
12¼"	9 5/8" new	36#, K-55	± 250'	Circulate to surface
8 3/4"	7" new	23#, K-55	±6000'	Two stages, circulate to surface
6¼"	4½" new	10.5#, K-55	±7600'	Circulate through liner hanger

SEE ATTACHED

No abnormal temperatures, pressures or geologic hazards are expected.

THE GAS IS DEDICATED

RECEIVED
MAR 21 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 M. L. FREEMAN TITLE Staff Production Analyst DATE February 1, 1980

(This space for Federal or State office use)

PERMIT NO. _____ APPROVAL DATE _____

APPROVED AS AMENDED
MAR 20 1980
JAMES F. SIMS
DISTRICT ENGINEER

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

*See Instructions On Reverse Side

DRILLING OPERATIONS AUTHORIZED ARE SUBJECT TO COMPLIANCE WITH ATTACHED "GENERAL REQUIREMENTS"

OIL CONSERVATION DIVISION

STATE OF NEW MEXICO
ERGY AND MINERALS DEPARTMENT

P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

Form C-102
Revised 10-1-78

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

Operator	Lease	Well No.
TENNECO OIL COMPANY	JICARILLA "C"	~~5-E~~ 5M

Unit Letter	Section	Township	Range	County
A	24	26N	5W	Rio Arriba

Actual Footage Location of Well:
960 feet from the North line and 960 feet from the East line

Ground Level Elev.	Producing Formation	Pool	Dedicated Acreage:
6652	Dakota/Mesa Verde	Basin Dakota/Blanco Mesa Verde	E 320 Acres

1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.

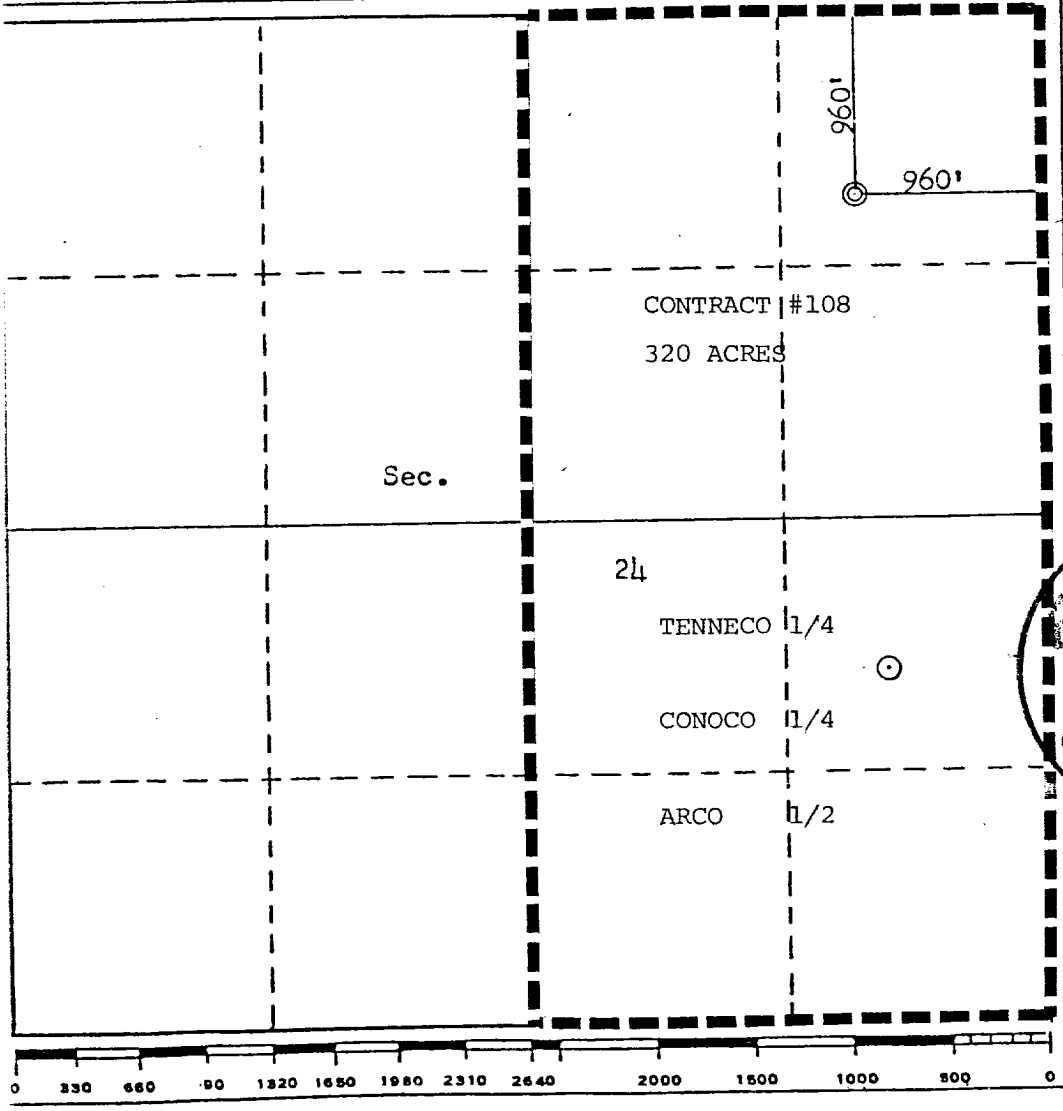
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).

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.



CERTIFICATION

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

Name: M. L. FREEMAN

Position: Staff Production Analyst

Company: Tenneco Oil Company

Date: February 1, 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.

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MAR 21 1980
OIL CON. COM.
DIST. 3

Date Surveyed: October 26, 1979

Registered Professional Engineer and/or Land Surveyor

Fred B. Kerr, Jr.

Certificate No. 3950

NEW MEXICO — FRED B. KERR, JR.

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

DRILLING PROCEDURE

DATE: January 29, 1980

LEASE: Jicarilla "C"

WELL NO.: 5-E

LOCATION: 960' FNL, 960' FEL
Sec. 14, T 26N, R 5W
Rio Arriba County, New Mexico

FIELD: Basin Dakota

ELEVATION: 6640' Est. G.L.

TOTAL DEPTH: 7600'

PROJECTED HORIZON: Dakota/Mesa Verde Dual

SUBMITTED BY: _____ DATE: _____

APPROVED BY: George E Bowman DATE: 1/31/80

BL/ms

CC: Administration
DSB Well File
Field File

ESTIMATED FORMATION TOPS

SURFACE FORMATION - SAN JOSE

OJO	2870' (Water)
Pictured Cliffs	3230' (Gas)
Cliffhouse	4890' (Gas)
Menefee	5010' (Gas)
Point Lookout	5430' (Gas)
Gallup	6540' (Gas & Oil)
Greenhorn	7350'
Dakota	7450' (Gas)
T.D.	7600'

DRILLING, CASING, AND CEMENT PROGRAM

1. MIRURT.
2. Drill a 12 1/4" hole to 250' ±.
3. Run 9 5/8", 36#, K-55, ST&C casing set at ± 250'. Circulate cement to surface. Cement should contain 2% $CaCl_2$.
4. WOC a minimum of 12 hours. Cut off casing and weld on casing head. Pressure test casing, BOP's, and manifold to 1000 psi for 30 minutes.
5. Drill out shoe and reduce hole to 8 3/4". Drill an 8 3/4" hole to ± 6000', or 250' below Point Lookout.
6. Run 7", 23#, K-55, ST&C casing to 6000' and cement in two stages. Cement baskets to be run above Point Lookout, Menefee, and Cliffhouse. Set DV at 5000'. First stage: Cement to fill to DV tool, circulate and WOC four hours. Second stage: Cement with sufficient volume to circulate cement to surface.
7. Land casing in slips and cut off. NU BOP's, pressure test blind rams, manifold, and casing to 1000 psi for 15 minutes. Pick up drilling assembly and 3 1/2" drill pipe. Pressure test pipe rams to 1000 psi for 15 minutes.
8. Drill out of 7" with 6 1/4" bit. Drill to T.D. with mud.
9. Run logs as directed by the Geological Engineer.
10. If productive, run 4 1/2" casing liner with approximately 200' of lap into 7" to T.D. Hang liner and cement through the shoe with sufficient volume to circulate to top of liner.
11. If not productive, plug and abandon as per U.S.G.S. requirements.

CASING PROGRAM

Surface:	250', 9 5/8", 36#, K-55, ST&C casing.
Intermediate:	6000', 7", 23#, K-55, ST&C casing.
Liner:	700', 4 1/2", 11.6#, K-55, ST&C casing. 1200', 4 1/2", 10.5#, K-55, ST&C casing.

MUD PROGRAM

0-250'	Native solids. N/C WL. Use sufficient viscosity to clean hole and run casing.
250'-6000'	Low solids, fresh water mud. No. WL control. Pretreat mud with 5% LCM at 5100'. Use sufficient viscosity to clean hole.
6000'-T.D.	Low solids, fresh water mud WL less than 10 cc. Vis 36-40.

EVALUATION

Cores and DST's: None.

Deviation Surveys:

1. Survey surface hole at 100' intervals.
2. From surface to total depth, deviation surveys must be taken every 500' or each trip, whichever is first. This may entail running the TOTCO on wireline. Record each survey on the IADC Drilling Report Sheet. Maximum allowable change in deviation is 1^{o} per 100'.

Samples:

As directed by Wellsite Geological Engineer.

Logs:

Dakota: (T.D. - 6000'): Induction/GR, GR/FDC.
(6000' - surface): TDT.

BLOWOUT EQUIPMENT

1. From 250' to T.D. as per USGS requirements.
2. Preventers must be checked for operation every 24 hours, and the check must be 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 costs, plus any other pertinent information, will be called into Tenneco Oil Company, Denver, Colorado, between 7:30 a.m. and 8:00 a.m.

1. 303-758-7130 (Office) Don Barnes
   303-758-7287 (Office) Don Barnes' private line, Monday-Friday (before 7:45 a.m)
   303-936-0704 (Home) Don Barnes, weekends and holidays.

2. George Ramsey (Home) 303-771-5154.

3. John Owen (Home) 303-795-0221.

The yellow sheet of the IADC Report is to be filled out completely. The original copy of the drilling time recorder, and copies of any invoices from this well, signed and received for Tenneco Oil Company, will be mailed daily to:

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

ATTENTION: Drilling Department

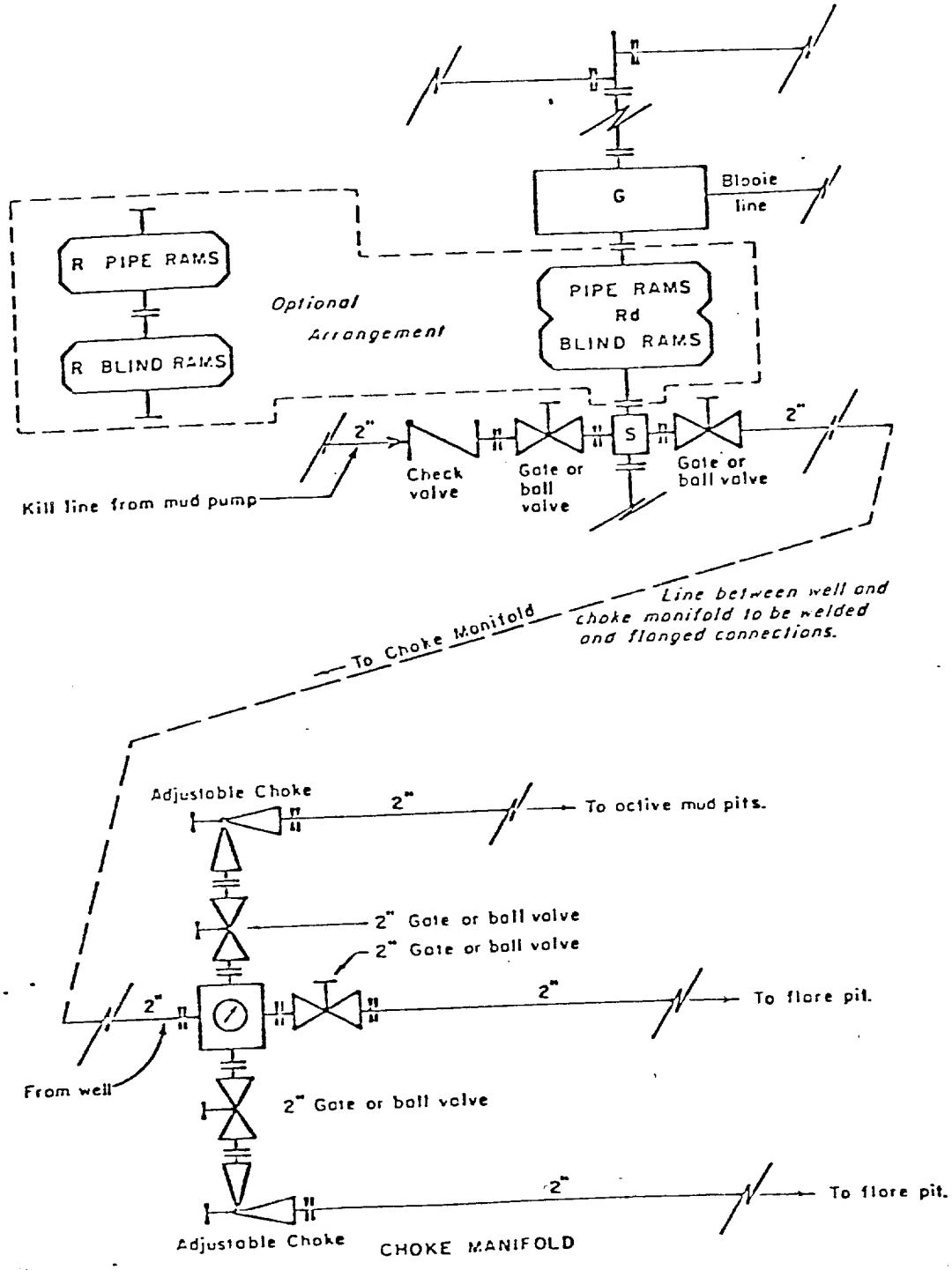
IN CASE OF EMERGENCY, NOTIFY THE FOLLOWING:

1. Mr. Don Barnes, Division Drilling Engineer.

2. Mr. George E. Ramsey, Jr., Drilling Engineers Supervisor

3. Mr. John W. Owen, Project Drilling Engineer.

4. Mr. Mike Lacey, Division Production Manager (Home 303-979-0509).



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 AN
CHOKE MANIFOLD

J. MAGILL 10-26-78 EVI

JICARILLA "C" 5E

SURFACE USE PLAN

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 cattleguards 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 lease 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 such 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 - No camps or airstrips will be associated with this project.

9. Wellsite Layout - Please refer to the attached Plat No. 1.

10. Plans for Restoration of the Surface - After completion of the proposed project the location will be cleaned and leveled. The location will be left in such a condition that will enable reseeding operations to be carried out. Seed mixture as designated by the responsible government agency will be used. The reseeding operation will be performed during the time period set forth by the regulatory body. The location production equipment will be painted as designated by the responsible government agency.

11. Other Information - The proposed site is located atop a rolling alluvial slope with southerly drainage, alluvial surface deposits & sandstone outcrops. The soil is clayey sand supporting juniper, pinon, sagebrush, wolfberry, greasewood & native grasses.

12. Operator's Representative -

SEE DRILLING PROGNOSIS

13. Certification - I hereby certify that I, or persons under my direct supervision, have inspected the proposed drillsite and access route; that I am familiar with the conditions which presently exist; that the statements mad 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 Tenneco Oil Company Company and its contractors and sub-contractors in conformity with this plan and the terms and conditions under which it is approved.

L. Freeman
Staff Production Analyst

LF/gh

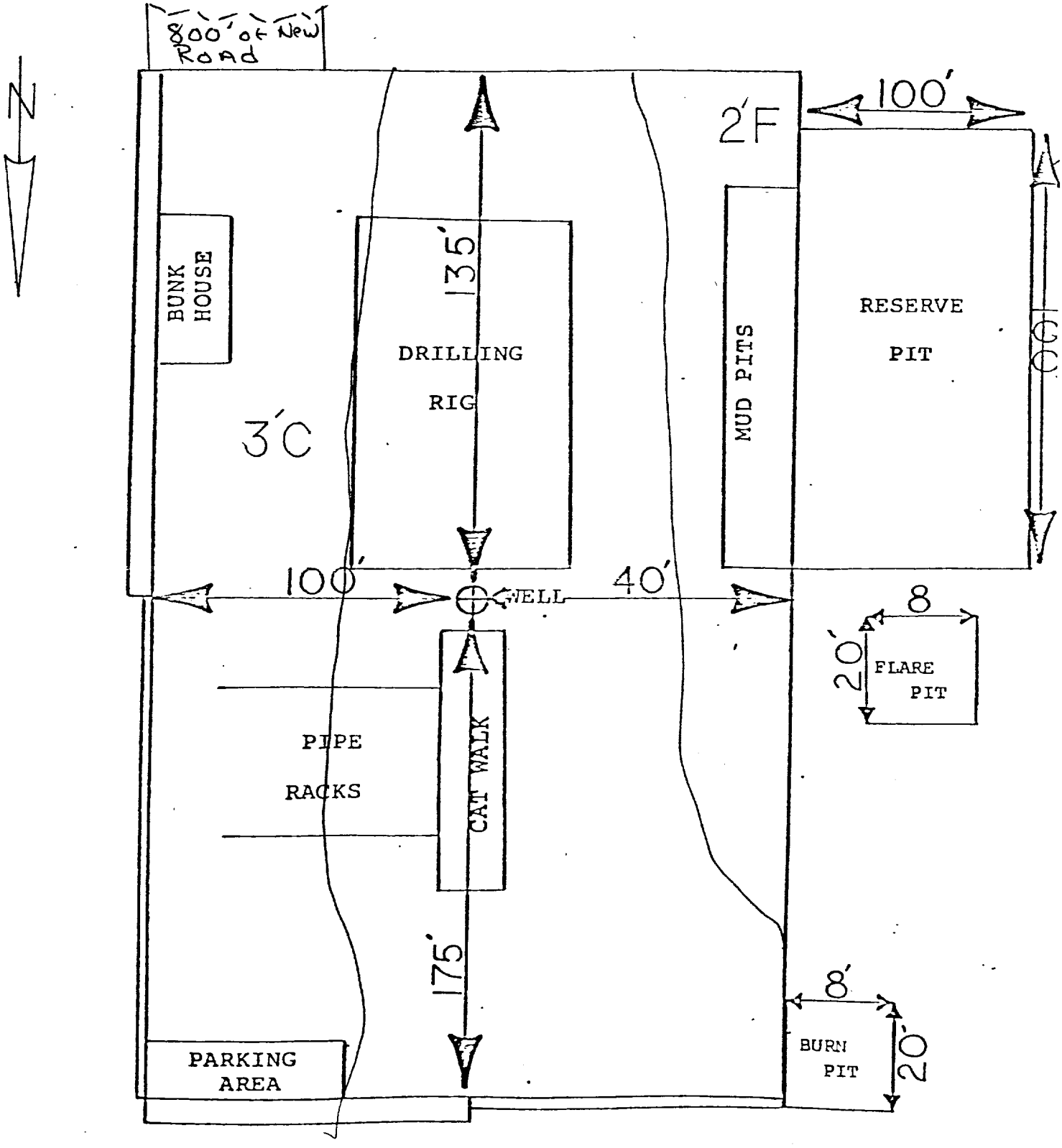
TENNECO OIL COMPANY

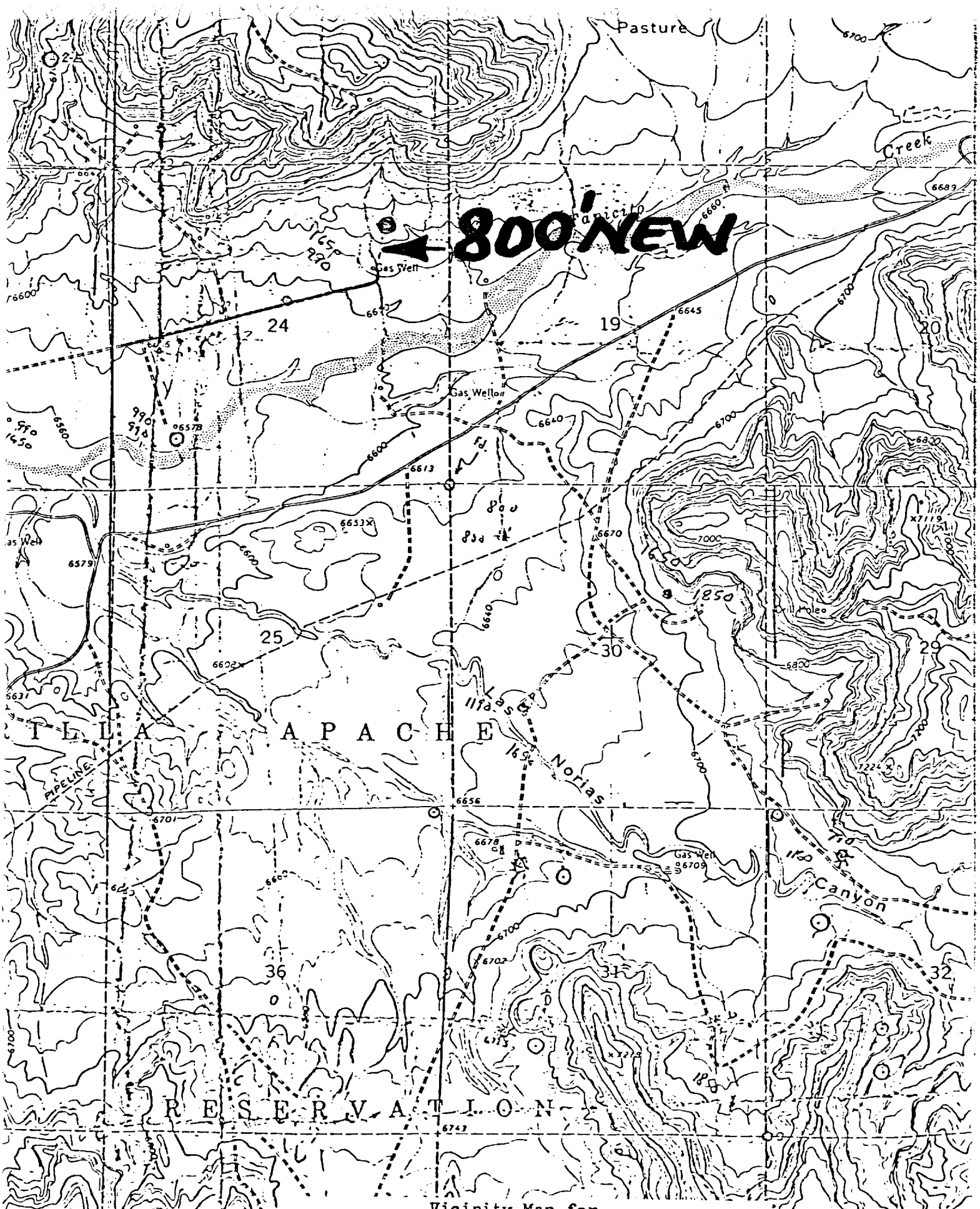
CALCULATION SHEET

EXHIBIT

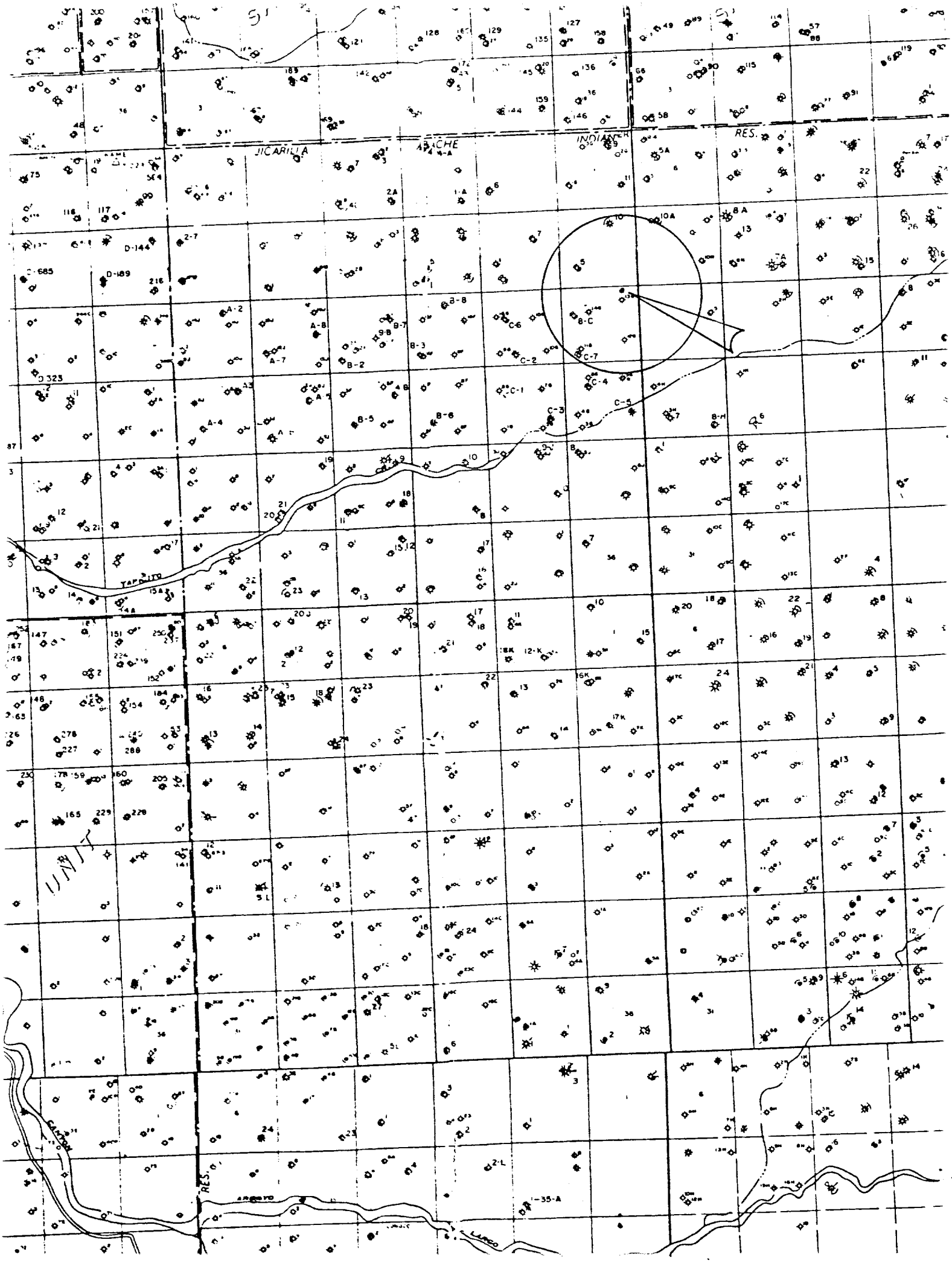
LLING WELL SITE LAYOUT JICARILLA "C" 5E

760 FNL, 960 FEL SEC 24, T26N, R5W DATE 1/30/80





Vicinity Map for
TENNECO OIL COMPANY #5-E JICARILLA "C"
960'FNL 960'FEL Sec, 24-T26N-R5W
RIO ARRIBA COUNTY, NEW MEXICO


JICARILLA
APACHE
INDIAN
RES.
TAPACITO
CANYON
RES.
ARROYO
LARGO