Form 9-331 C
(May 1963)

SUBMIT IN TRIPLICATE*
(Other instructions on reverse side)

Form approved.
Budget Bureau No. 42-R1425.

30-039-22580

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

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

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

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: 1670 FNL, 1780 FWL
At proposed prod. zone: same

5. LEASE DESIGNATION AND SERIAL NO.: Contract #110

6. IF INDIAN, ALLOTTEE OR TRIBE NAME: Jicarilla

7. UNIT AGREEMENT NAME:

8. FARM OR LEASE NAME: Jicarilla A

9. WELL NO.: #1M

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

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: Sec. 18, T26N, R5W

12. COUNTY OR PARISH: Rio Arriba 13. STATE: N.M.

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*: Approximately 24 miles NW of Lindrith.

15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any): 860'

16. NO. OF ACRES IN LEASE: 2558.36

17. NO. OF ACRES ASSIGNED TO THIS WELL: W/319.20 & W/319.20

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.): 6614 GR

22. APPROX. DATE WORK WILL START*: January 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#	±250	Circulate to surface
8 3/4"	7" new	23#	±5730	Cement in two stages
6 1/4"	4 1/2" new	10.5#, 11.6#	±7600	Circulate to liner top

See attached.

The gas is dedicated.

RECEIVED
JAN 9 1981
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 R. A. Mishler R. A. Mishler TITLE Sr. Production Analyst DATE December 10, 1980

(This space for Federal or State office use)

APPROVED AS AMENDED

PERMIT NO. _____ APPROVAL DATE _____

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

JAN 07 1981
for JAMES F. SIMS
DISTRICT ENGINEER

*See Instructions On Reverse Side

NMOCC

OIL CONSERVATION DIVISION

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

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

Form C-107
Revised 10-1-78

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

Operator	Lease	Well No.
TENNECO OIL COMPANY	JICARILLA "A"	1M

Unit Letter	Section	Township	Range	County
F	18	26N	5W	Rio Arriba

Actual Footage Location of Well:
1670 feet from the North line and 1780 feet from the West line

Ground Level Elev.	Producing Formation	Pool	Dedicated Acreage:
6614	DAKOTA/MESAVERDE	BASIN DAKOTA / BLANCO MESAVERDE	319.20 ~~320~~ Acres

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

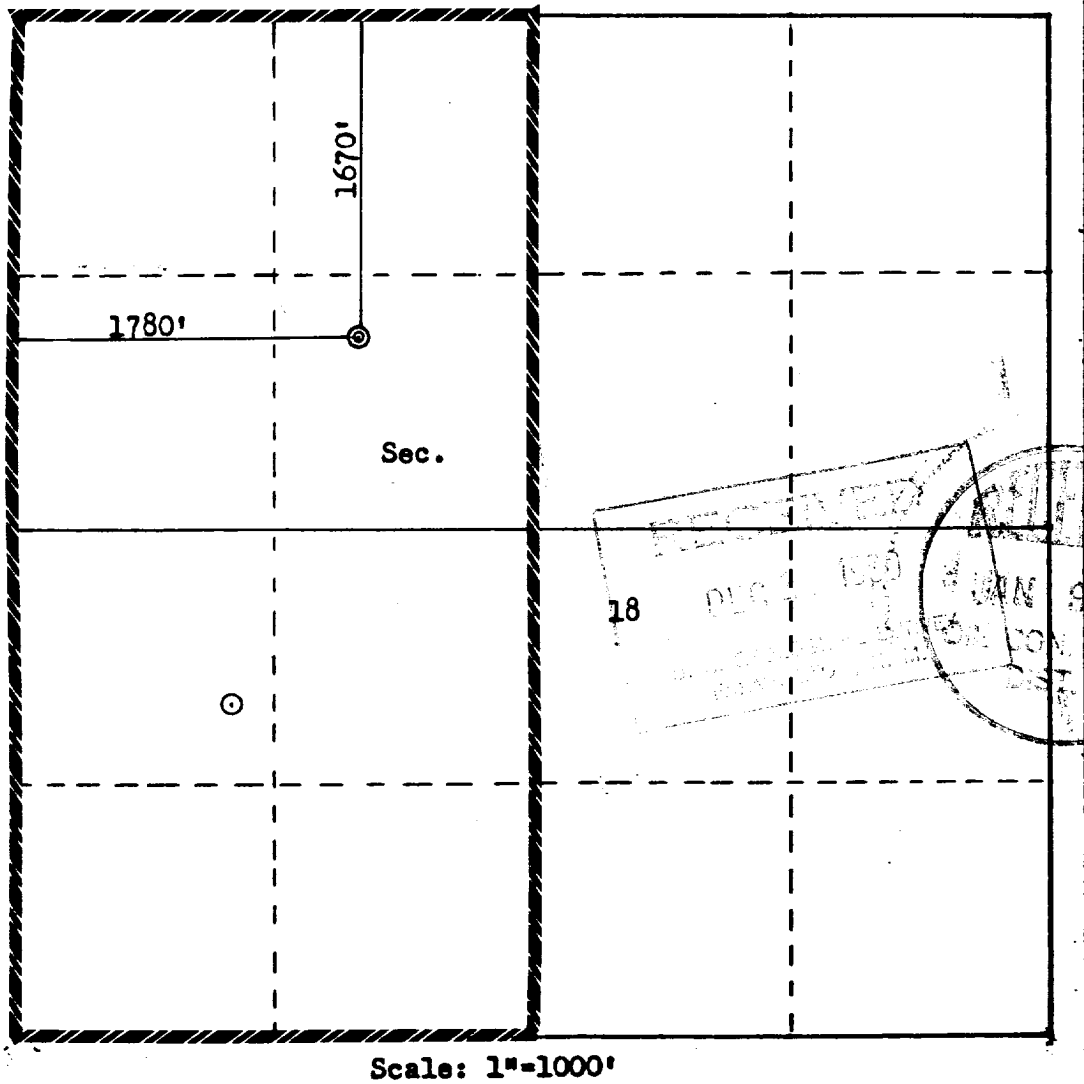
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).

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.

R. A. Mishler

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 15, 1980

Registered Professional Engineer and Land Surveyor

Fred B. Kerr Jr.

Certificate No. 3950

FORM 24-11

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 #1M

LOCATION: 1670 FNL, 1780 FWL
Section 18, T26N, R5W
Rio Arriba County, New Mexico

FIELD: Basin Dakota

ELEVATION: 6614

TOTAL DEPTH: 7600

PROJECTED HORIZON: Dakota/Mesaverde

SUBMITTED BY: Bruce Ladd

DATE: September 23, 1980

APPROVED BY: T. J. Kardash

DATE: Nov 11-1980

CC: Administration
DSB Well File
Field File

ESTIMATED FORMATION TOPS

Ojo	1700	Water
Fruitland		
Pictured Cliffs	3070	Gas
Lewis	3150	
Cliff House	4790	Gas
Menefee		
Point Lookout		
Mancos	5480	
Gallup		
Greenhorn	7215	
Dakota	7305	Gas
T.D.	7600	

DRILLING, CASING, AND CEMENTING PROGRAM

1. MIRURT.

2. Drill a 12 1/4" hole to ± 250'.

3. RU and run 9 5/8", 36#, K-55, STC casing.

4. Cement with sufficient volume to circ cement to surface using $CaCl_2$ as an accelerator.

5. WOC a minimum of 12 hours. Nipple up BOP's, manifold and lines. Pressure test blinds, lines and casing 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 Sheet. Drill out.

6. Drill an 8 3/4 hole to ± 5730 or 250' into the Mancos Shale. Treat mud system for possible lost circulation in the Mesaverde.

7. Log open hole as directed by GE Department.

8. RU and run 7", 23#, K-55, STC to TD, with DV tool at ±4590 . Use cement baskets through out the MV.

9. Cement the first stage with "Lite" tailed by 150 sx Class B + 2% $CaCl_2$ in sufficient quantity to raise cement to stage tool. Circulate 4 hours through DV and WOC. Cement 2nd stage with "Lite" in sufficient volume to raise cement to surface.

10. WOC 18 hrs. Set slips and cut off casing. NU BOP's and pressure test. Record tests on IADC Report Sheet. PU 3 1/2 drilling assembly, 6 1/4 Bit.

11. Drill to within 5' of shoe. Displace water with nitrogen, nitrogen with gas. Drill a few feet of hole and blow hole until dusting. Drill with gas to TD.

DRILLING, CASING, AND CEMENTING PROGRAM

12. Log open hole as GE Department directs.

13. If productive, run 4 1/2, 10.5#, and 11.6# casing as a liner to TD. Have 150' of overlap in the 7" casing. Make sure this doesn't interfere with the Mesaverde bottom perforations.

14. Cement with sufficient quantity to circulate cement to the liner top.

15. Circulate cut excess cement and LDDP.

16. Install tree and fence reserve pit.

17. If non-productive, P and A as USGS requires.

CASING PROGRAM

Interval	Footage	Size	Weight	Grade
0-250	250	9 5/8	36#	K-55 STC
0-5730	5730	7	23#	K-55 STC
5580-6850	1270	4 1/2	10.5#	K-55 STC
6850-7600	750	4 1/2	11.6#	K-55 STC

MUD PROGRAM

0-250	Spud Mud.
250-5730	Low solid fresh water mud (water and benex). Mud up prior to drilling Mesaverde formation top and treat mud with lost circulation material.
5730-TD	Attempt to drill out of intermediate hole with air. If formation gets wet attempt to drill with mist. If mist drilling is not possible the hole will have to be mudded up. Use a light gel-chemical mud system.

EVALUATION

Cores and DST's: None

Deviation Surveys:

1. Survey surface holes 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' 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° per 100'. Maximum allowable deviation is 1° per 1000' of depth.

Samples:

As requested by Wellsite Geological Engineer.

Logs:

1. 8 3/4" hole drilled through Mesaverde.
   Induction/GR/SP - TD to sfc.
   CNL/FDC/GR - TD to base of Pictured Cliffs

2. Second set of logs - run to Dakota TD.
   Induction/GR/SP - TD to Mesaverde.
   CNL/FDC/GR - TD to Mesaverde.

BLOWOUT EQUIPMENT

11" - 3000 PSI BOP with rotating head to comply with TOC requirements as shown in BOE arrangement Figure C (as shown in exhibits for Application for Permit to Drill). 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.

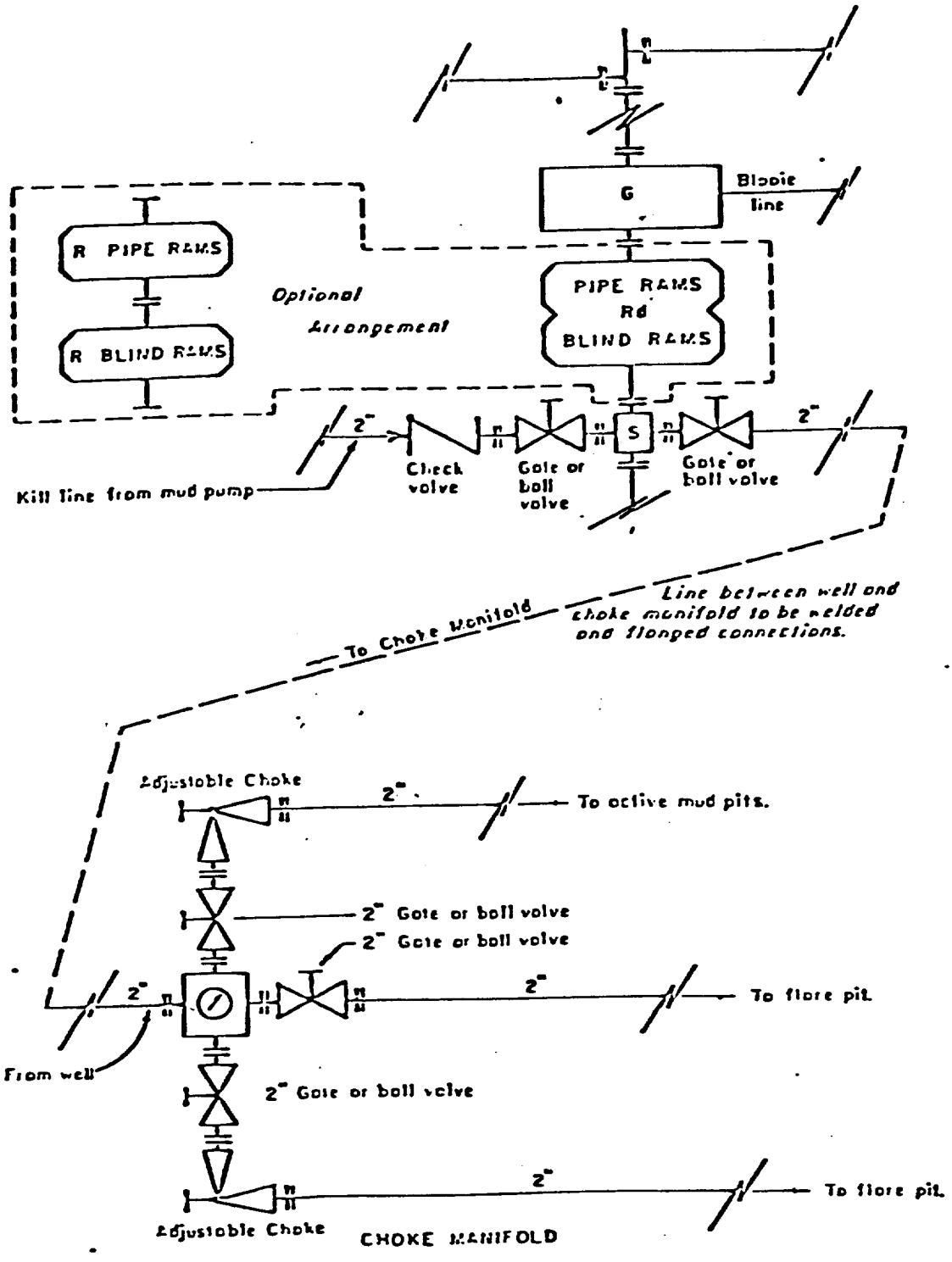
8. Coring, Logging, and Testing Program:

(See Attached Drilling Procedure)

9. No abnormal pressures, temperatures or potential hazards such as H_2S are expected to be encountered.

10. The drilling of this well will start approximately (January '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 AN
CHOKE MANIFOLD

J. MAGILL 10-26-78 EVI

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.

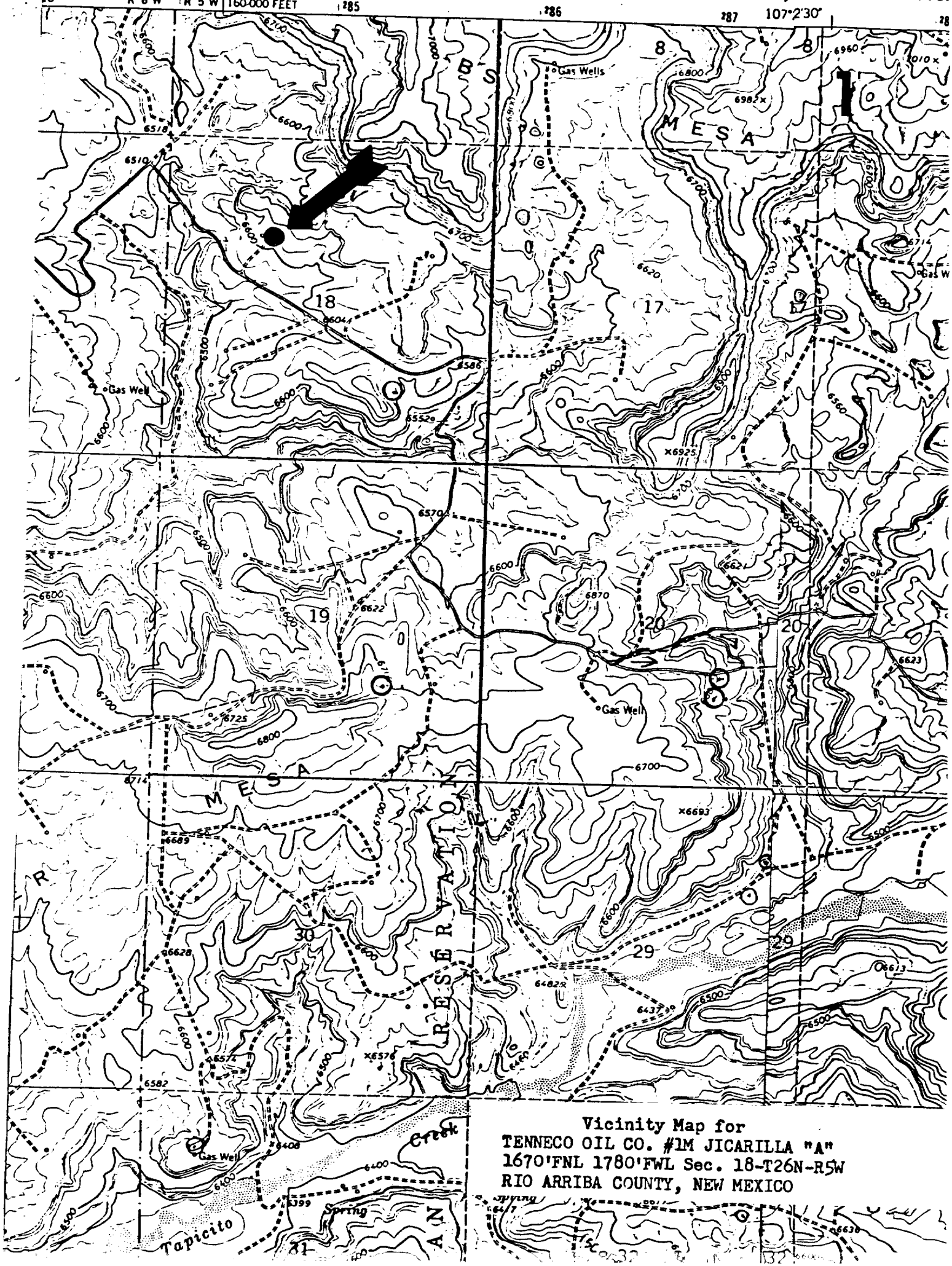
11. Other Information - The location is on an eroded sloping area. Soil is sandy clay. Vegetation includes pinon & juniper, sage, narrowleaf yucca, snakeweed, greasewood, and native grasses.

12. Operator's Representative - See drilling prognosis.

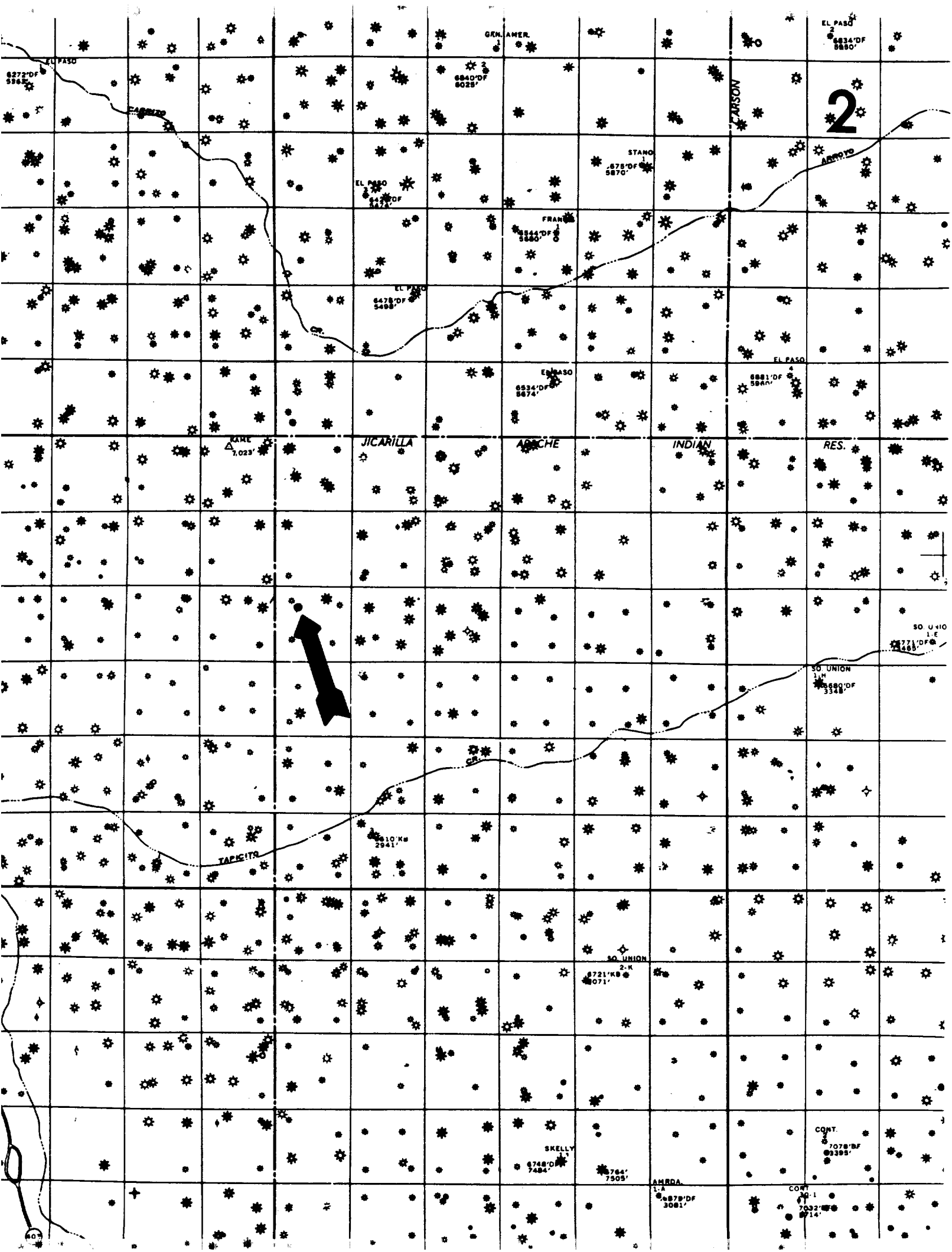
13. Certification - I hereby certify that I, or persons under my direct supervision, have inspected the proposed drillsite and access route; that I am familiar with the conditions which presently exist; that the statements mad in this plan are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed by Tenneco Oil Company and its contractors and sub-contractors in conformity with this plan and the terms and conditions under which it is approved.

R. A. Mishler

R. A. Mishler
Sr. Production Analyst



Vicinity Map for
TENNECO OIL CO. #1M JICARILLA "A"
1670'FNL 1780'FWL Sec. 18-T26N-R5W
RIO ARRIBA COUNTY, NEW MEXICO

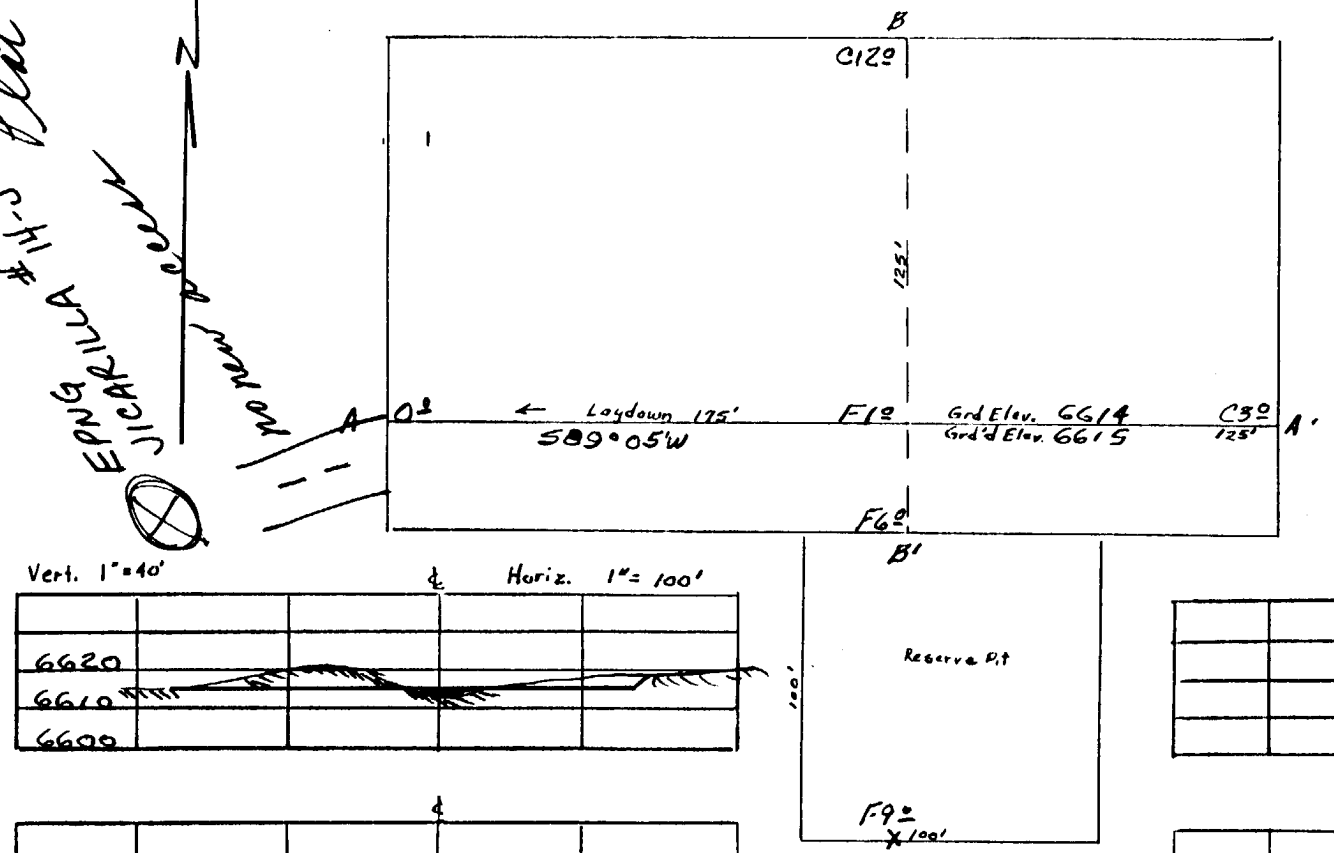

EL PASO
6272'DF
5965'
CARRIZO
GRN. AMER.
2
6840'DF
6029'
EL PASO
6478'DF
5474'
FRANK
6544'DF
5680'
EL PASO
6478'DF
5488'
CR.
EL PASO
6534'DF
5674'
EL PASO
6881'DF
5984'
CARSON
2
STANO
6878'DF
5870'
ARROYO
JICARILLA
APACHE
INDIAN
RES.
KARE
7,023'
SO. UNION
1-E
6771'DF
5465'
SO. UNION
1-H
6680'DF
5348'
CR.
TAPICITO
6810'KB
2941'
SO. UNION
2-K
6721'KB
6071'
SKELLY
1-1
6748'DF
7484'
6764'
7505'
AMERDA
1-A
6879'DF
3081'
CONT.
2
7078'DF
6395'
CONT.
30-1
7032'DF
6714'
60

Profile Map for
TENNECO OIL COMPANY #1M JICARILLA "A"
1670'FNL 1780'FWL Sec. 18-T26N-R5W
RIO ARRIBA COUNTY, NEW MEXICO

Plat #1

EPNG JICARILLA #14-J pipeline

N



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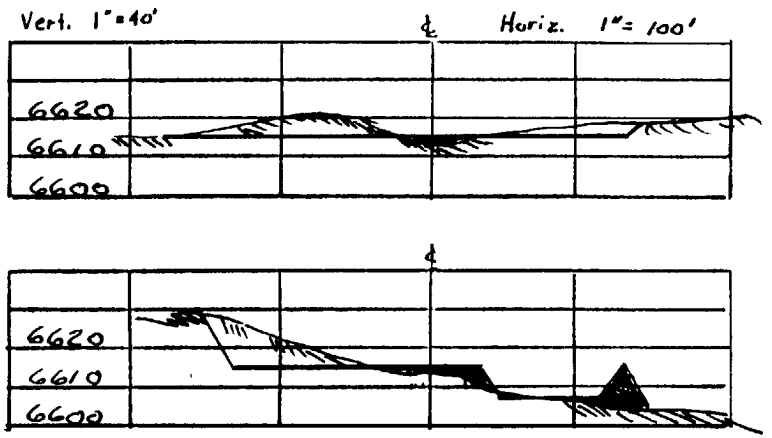

Date 11/1/80

Kerr Land Surveying, Inc.