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NEW MEXICO OIL CONSERVATION COMMISSION

30-045-25802

Form C-101
Revised 1-1-65

5A. Indicate Type of Lease STATE <input checked="" type="checkbox"/> FEE <input type="checkbox"/>	
5. State Oil & Gas Lease No. B 11189	
7. Unit Agreement Name	
8. Farm or Lease Name State M	
9. Well No. 1E	
10. Field and Pool, or Wildcat Basin Dakota	
12. County San Juan	
19. Proposed Depth 7710'	19A. Formation Dakota
20. Rotary or C.T. Rotary	
21. Elevations (Show whether DF, RT, etc.) 6546' GR	21A. Kind & Status Plug. Bond General
21B. Drilling Contractor Four Corners	
22. Approx. Date Work will start ASAP	

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. Type of Work DRILL <input checked="" type="checkbox"/> DEEPEN <input type="checkbox"/> PLUG BACK <input type="checkbox"/>	
b. Type of Well OIL WELL <input type="checkbox"/> GAS WELL <input checked="" type="checkbox"/> OTHER <input type="checkbox"/> SINGLE ZONE <input checked="" type="checkbox"/> MULTIPLE ZONE <input type="checkbox"/>	
2. Name of Operator Tenneco Oil Company	
3. Address of Operator P.O. Box 3249, Englewood, Colorado 80155	
4. Location of Well UNIT LETTER K LOCATED 1780 FEET FROM THE South LINE AND 1540 FEET FROM THE West LINE OF SEC. 16 TWP. 29N RGE. 8W NMPM	
23.	

PROPOSED CASING AND CEMENT PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	SACKS OF CEMENT	EST. TOP
12 1/4"	9 5/8"	36#	+ 250'	Circ to surface	
8 3/4"	7"	23#	+ 3768'	2 stage - Circ to surface	
6 1/4"	4 1/2"	11.6#, 10.5#	+ 7710'	Circ to liner top	

See Attached Drilling Procedure.

Gas is Dedicated

APPROVAL EXPIRES 3-12-84
UNLESS DRILLING IS COMMENCED.
SPUD NOTICE MUST BE SUBMITTED
WITHIN 10 DAYS.

RECEIVED
SEP 12 1983
OIL CON. DIV.
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. GIVE FLOWOUT PREVENTER PROGRAM, IF ANY.

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

Signed Denise Wilson Title Production Analyst Date September 6, 1983

APPROVED BY [Signature] TITLE SUPERVISOR DISTRICT # 3 DATE _____

CONDITIONS OF APPROVAL, IF ANY:

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.

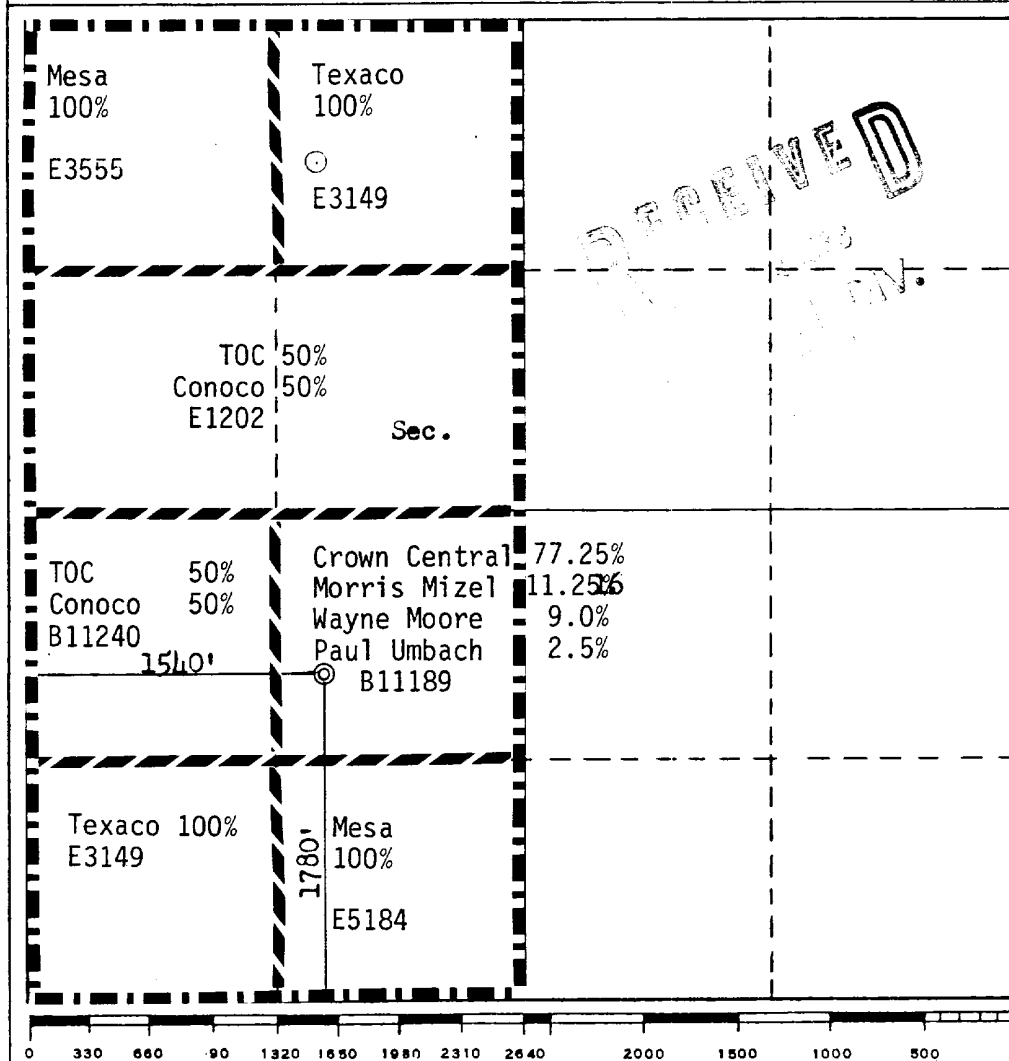
Operator TENNECO OIL COMPANY		Lease STATE "M"		Well No. 1E
Unit Letter K	Section 16	Township 29N	Range 8W	County San Juan
Actual Footage Location of Well: 1780 feet from the South line and 1540 feet from the West line				
Ground Level Elev. 6542	Producing Formation Dakota	Pool Basin Dakota	Dedicated 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 Communitization

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.



APPROVED

CERTIFICATION

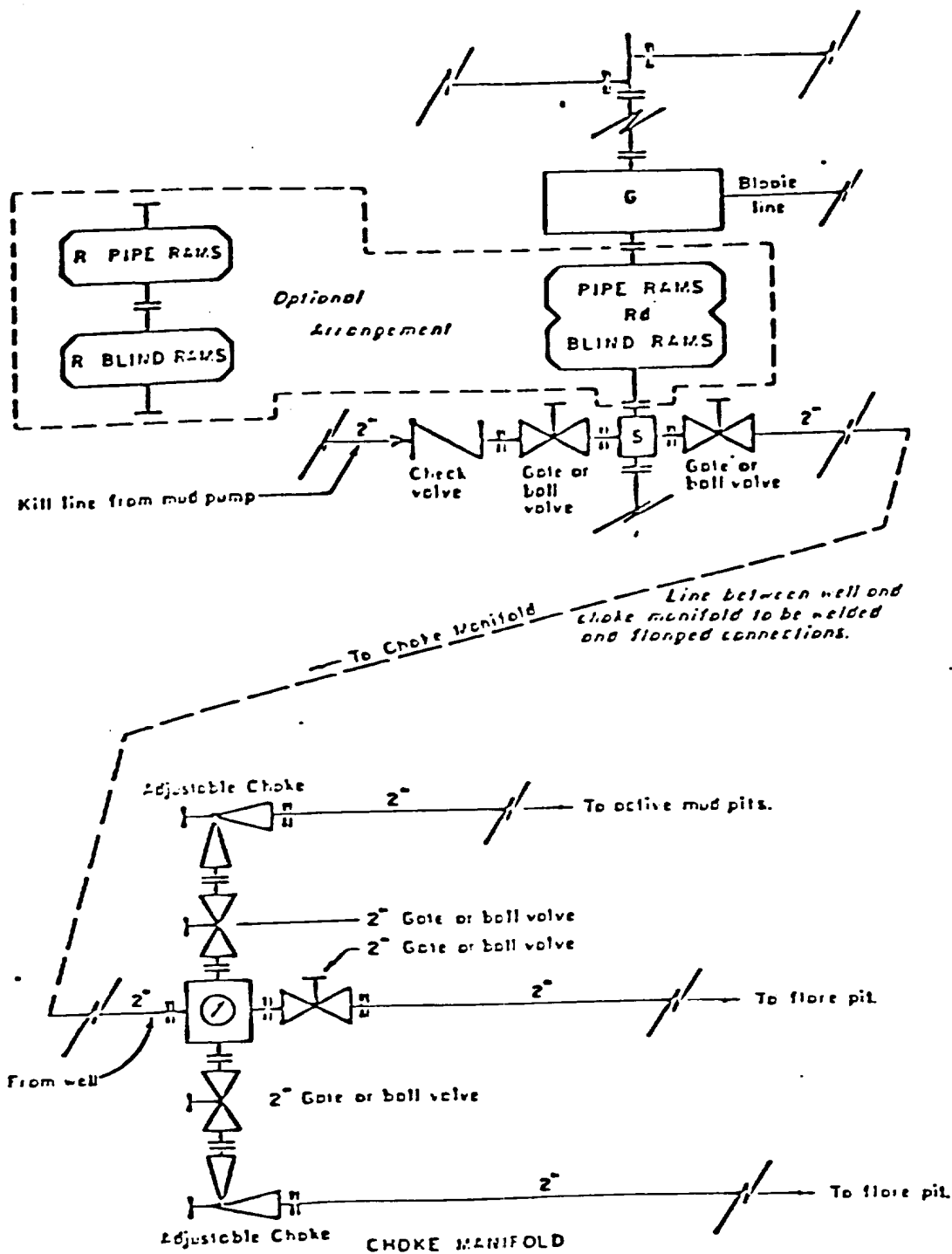
I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.

Ken Russell

Name **Ken Russell**
Position **Sr. Production Analyst**
Company **Tenneco Oil E & P**
Date **July 20, 1982**

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 **June 18, 1982**
Registered Professional Engineer and/or Land Surveyor
Fred B. Kerr Jr.
Fred B. Kerr Jr.
Certificate No. **3950**



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

TENNECO OIL COMPANY
ROCKY MOUNTAIN DIVISION
6061 SOUTH WILLOW DRIVE
ENGLEWOOD, COLORADO 80155

DRILLING PROCEDURE

DATE: August 3, 1982

LEASE: STATE "M" WELL NO: 1E

LOCATION: 1520' FSL, 1530' FWL FIELD: Basin Dakota
Section 16, T29N, R8W
San Juan County, New Mexico

ELEVATION 6546' G.L.

TOTAL DEPTH: 7710'

PROJECTED HORIZON: Dakota

SUBMITTED BY: J.P. Dick

DATE: August 4, 1982

APPROVED BY: DJ. Kardach

DATE: 8/5/82

CC: Administration
C.R. Jenkins
Field File

ESTIMATED FORMATION TOPS

Ojo	2208'	Water
Fruitland	2908'	Gas, Water
Pictured Cliffs	3208'	Gas
Lewis	3268'	
Cliff House	4746'	Gas, Water
Menefee	4915'	Gas, Water
Point Lookout	5338'	Gas
Mancos	5507'	
Gallup	6442'	Oil/Gas
Greenhorn	7318'	
Dakota	7412'	Gas
TD	7710'	

DRILLING, CASING AND CEMENT PROGRAM

1. MIRURT
2. Drill a 12 1/4" hole to ± 250 ft. with a gel water mud.
3. Rig up and run 9 5/8" 36# K-55 ST&C casing to bottom. Cement with Class B. + 2% CaCl₂ in sufficient quantity to circulate cement to surface. If conditions warrant the use of loss circulation agents, 1/4 #/sx celloflake may be added. Wait on cement a minimum of 12 hours prior to drilling out.
4. While waiting on cement, screw on a 9 5/8" - 8rd X 11 3M casinghead. NU BOP's. Pressure test casing, blinds, manifold and lines to 1000 PSI for 30 minutes. GIH with drill pipe and test the pipe rams in the same manner. Record all tests on the IADC report sheet.
5. Drill out with an 8 3/4" bit and clear water. Drill to ± 3768, or 500' into the Lewis Shale. Mud up prior to reaching intermediate T.D. Circulate at casing point a sufficient time to clean the hole to run casing.
6. Install casing rams, run 7" 23# K-55 casing equipped with a guide shoe on bottom, float collar one joint up and a stage collar 200' below the Ojo Alamo. Bakerlock from the shoe to the top of the float collar and run casing to bottom.

7.

INTERMEDIATE CEMENTING PROGRAM

FIRST STAGE:	LEAD	TAIL
Type		Cl B + 2% CaCl ₂ + 1/4 #/sx flocele.
Sacks		150-200 sx
Slurry yield		1.18 cuft/sx
Mix weight		15.6 ppg
Water requirements		5.20 gal/sx

SECOND STAGE:

LEAD

TAIL

Type	Howco Lite + 1/4 #/sx flocele + 2% CaCl ₂	Cl B + 2% CaCl ₂
Sacks	Calculated annular volume	50-75
Slurry yield	1.84 cuft/sx	1.18 cuft/sx
Mix weight	12.7 ppg	15.6 ppg
Water req's.	9.9 gal/sx	5.2 gal/sx

Precede the first stage with 20 bbls chemical wash and circulate two hours after opening the stage tool. Precede the second stage with 10 bbls "flow-check" or equivalent. If cement is not circulated to surface run a temperature survey after 6 hours to determine actual TOC as MMS requires. Wait on cement a total of 18 hours (from first plug down) before drilling is resumed.

8. Set slips with casing in full tension and cut-off. NU BOE and test as in procedure 4 above. Record tests on IADC report.
9. Drill out, dry up hole and drill a 6-1/4" hole to T.D. surveying as required. Lay down square drill collar before cutting the Dakota.
10. Log open hole as directed by GE department.
11. If productive, run 4-1/2" 11.6# and 10.5# K-55 casing as a liner. Equip the casing with a float shoe and latch down collar on the top of the first joint. No threadlock is to be used on this arrangement. Hang liner with a 150' lap in the intermediate casing.
12. Cement with a filler slurry as used for the intermediate string. Start with a 20 barrel mud flush, followed by the lead slurry with a fluid loss control additive and tail with 100 sx Cl B. Use sufficient quantity (50-75% excess) to circulate cement to the liner top.
13. Circulate out the excess cement, LDDP and MORT.
14. If non-productive P & A as required by USGS.
15. Install tree and fence remainder of reserve pit.

CASING PROGRAM

<u>INTERVAL</u>	<u>LENGTH</u>	<u>SIZE</u>	<u>WEIGHT</u>	<u>GRADE</u>	<u>OPTIMUM MAKE-UP</u>
0-250'	250'	9 5/8	36. #	K-55	4230 STC-3090
0-3768'	3768'	7	23.#	K-55	LTC-3410
3618-7000'	3382'	4 1/2	10.5#	K-55	STC - 1460
7000-TD'	710'	4 1/2	11.6#	K-55	STC - 1700 LTC-1800

MUD PROGRAM

0-250'	Spud mud.
250-3768'	Low solid, fresh water mud. (Water and Benex.) Mud up prior to running casing.
3768-TD	Gas

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 the Mancos formation, deviation surveys must be taken every 500'. In the Mancos/Gallup zones, surveys to be each 250'. Record all surveys in IADC Report book. Maximum allowable change in deviation is 1° per 100'. Maximum deviation allowable is 5°.

Samples:

As requested by Wellsite Geological Engineer

Logs:

1. GR/INDUCTION T.D to Intermediate.
2. CDL/GR/CALIPER

BLOWOUT EQUIPMENT

11" - 3000 BOP with rotating head to comply with TOC requirements as shown in BOE 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 AM Monday thru Friday.

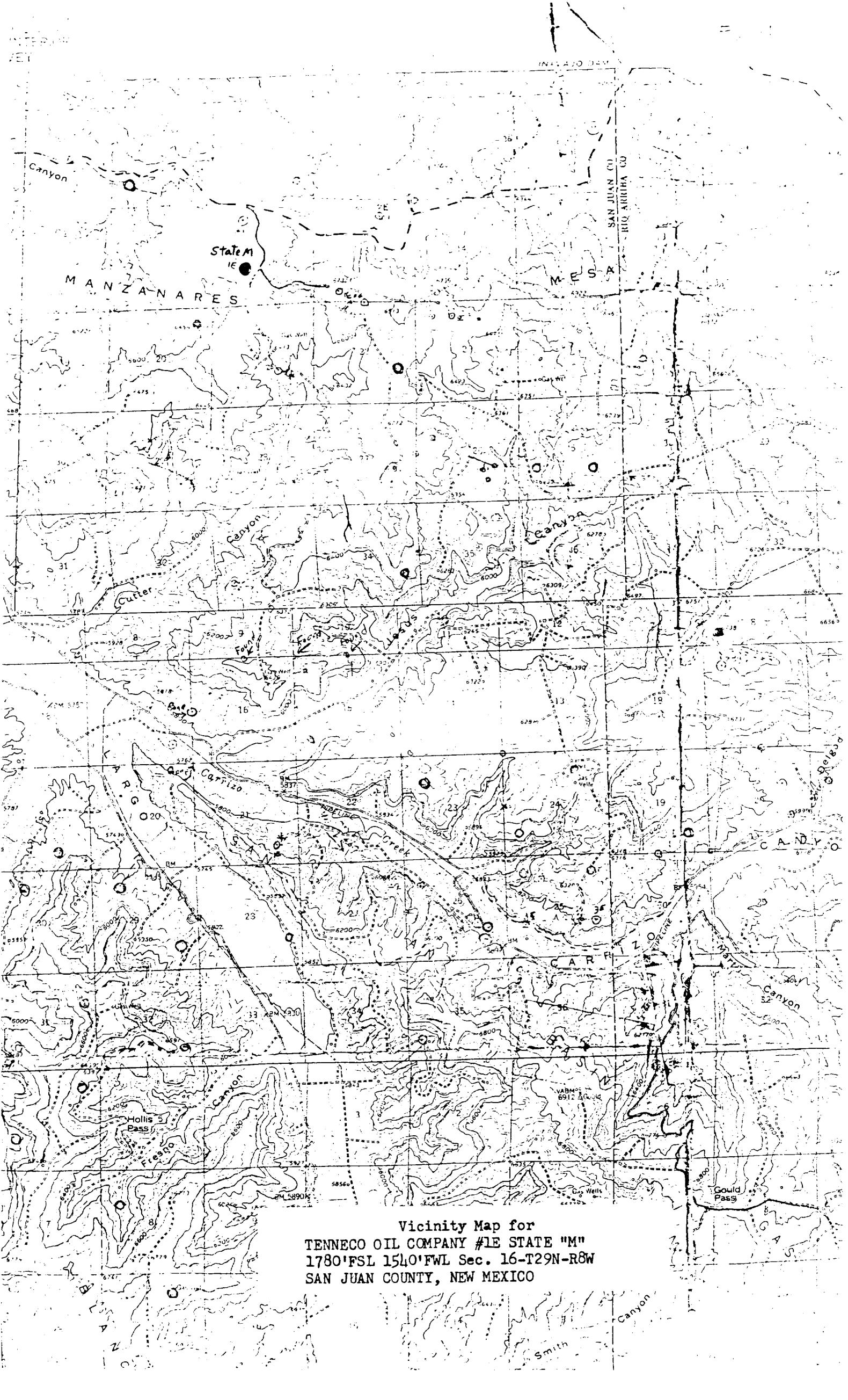
TENNECO OIL COMPANY
P.O. Box 3249
ENGLEWOOD, COLORADO 80155
PHONE: 303-740-4800

OFFICE DIRECTORY

Charles R. Jenkins	740-2575
Ted McAdam	740-2576
Tom Dunning	740-4813
Dale Kardash	740-4809

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

(1)	Dale Kardash Drilling Engineer	740-4809 694-3367	Office Home
(2)	Ted McAdam Senior Drilling Engineer Specialist	740-2576 978-0724	Office Home
(3)	Charles R. Jenkins Division Drilling Engineer	740-2575 989-1727	Office Home
(4)	Harry Hufft Division Production Manager	771-5257	Home



Vicinity Map for
TENNECO OIL COMPANY #1E STATE "M"
1780' FSL 1540' FWL Sec. 16-T29N-R8W
SAN JUAN COUNTY, NEW MEXICO