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 II. TITS OF WORK DRILL ARE WILL ARE WILL ARE OTHER ADDESSES OF OFFERATOR P.O. BOX 3249, Englewood, Colorado 80155 A LOCATION OF WALL (Report location elearly and in accordance with any State requirements*) A topoposed prof. 1850 FEL At proposed prof. 1800 FEL A proposition and survey (4. DISTANCE IN MILES AND DIRECTION FROM MEASEST TOWN OR POST OFFICE* Approximately 20 miles NW of Lindrith, N.M. (5. DISTANCE FROM FROMEDS* TO THIS LEASE, T. (ALDESSES ON FROMEDS* TO THE LEASE TOWN OR THIS LEASE, T. (ALDESSES ON FROMEDS* TO THE LEASE TOWN OR THIS LEASE, T. (ALDESSES ON FROMEDS* TO THE LEASE TOWN OR THIS LEASE, T. (ALDESSES ON FROMEDS* TO THIS CALL TO THE TREE NAME D. TITLO WILL THE NAME AT THE OWER WILL BE AND THE TREE NAME D. THE LAND THE TREE NAME D. THE DATE TO THE LEASE TABLE D. THE DATE
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This latter is the latter and the source and the so
* Calabat Al authorizations (CTR 290)
The gas is dedicated. ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, give data on present productive some and proposed new productive one. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout reventer program, if any. SIGNED R. A. Mishier TITLE Sr. Production Analyst December 10, 1980 DATE
PERMIT NOACIDITYFD APPROVAL DATE
AS AMENDED
CONDITIONS OF APPROVAL, IF ANY: 1981

FULL HAMMEN F. SIMS

DISTRICT ENGINEER *See Instructions On Reverse Side

NMOCC

STATE OF NEW MEXICO ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION P. O. BOX 2088 SANTA FE, NEW MEXICO 87501

Form C-107 kevised 10-1-78

		All distances	must be from	m the cut	er hounderles	ef the Section	m.		
Operator				Lease				Well No.	
TENNECO OIL COMPANY			JICARILLA C			6E			
Unit Letter	t Letter Section Township			Range County					
В	<u> 14</u>	26N			5W -	Rio	Arriba		
Actual Footage Loca				- 0-	4 -				
790		orth	line and	185	, fee	t from the	<u>East</u>	line	
Ground Level Elev: Producing Formation]	Pool				Dedicated Acreage:		
7221 Dakota				Bas	sin Dakota			320	Acres
2. If more the interest and	l royalty).	dedicated t	to the well	, outline	e each and id	entify the	ownership	thereof (both as to	J
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TENNECO OIL COMPANY ROCKY MOUNTAIN DIVISION PENTHOUSE, 720 SOUTH COLORADO BOULEVARD DENVER, COLORADO 80222

DRILLING PROCEDURE	
DATE: September 23, 1980	
LEASE: Jicarilla	WELL NO.: C#6E
LOCATION: 790 FNL, 1850' FEL Section 14, T26N, R5W Rio Arriba County, New Mexico	FIELD: Basin Dakota
ELEVATION: 7221 (Est. G.L.)	
TOTAL DEPTH: 8290'	
PROJECTED HORIZON: Dakota	
SUBMITTED BY: David Kranz	DATE: <u>September 23, 1980</u>
APPROVED BY: Bane	DATE: 7/2.5/80

CC: Administration DSB Well File Field File

ESTIMATED FORMATION TOPS

Ojo Alamo	3030'	Water
Pictured Cliffs	3835 '	SD, Gas
Lewis	3860'	Shale
Mesaverde	5470'	SD, Gas
Mancos	6170'	Shale
Greenhorn	7900'	Lmy SS
Dakota	7 990'	Gas
TD	8290'	

DRILLING, CASING AND CEMENTING PROGRAM

- MIRURT
- 2. Drill a $12\frac{1}{4}$ " 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% CaCl $_2$ 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 $4\frac{1}{2}$ " 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 DV tool ± 250' above Cliffhouse to prevent lost returns in Mesa 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

Interval	Length	<u>Size</u>	<u>Weight</u>	Grade	Coupling
0-300	300	9 5/8	36#	K-55	STC
7000-8290	1290	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 Mancos. Before reaching Gallup, add 6% LCM and run viscosity at 38-40 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 toal depth, deviation surveys must be taken every 500' or each trip, whichever is first. The 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 deviation allowable is 5°.

Samples: As requested by Wellsite Geological Engineer.

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

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 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. 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. John W. Owen, Project Drilling Engineer.
- 3. Mr. Mike Lacey, Division Production Manager (Home 303-979-0509).

TENNECO OIL COMPANY - 10 POINT PLAN

1. The geological name of the surface formation:

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.

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6. Mud Program: (Sufficient quantity of mud and weight material will be available on location).

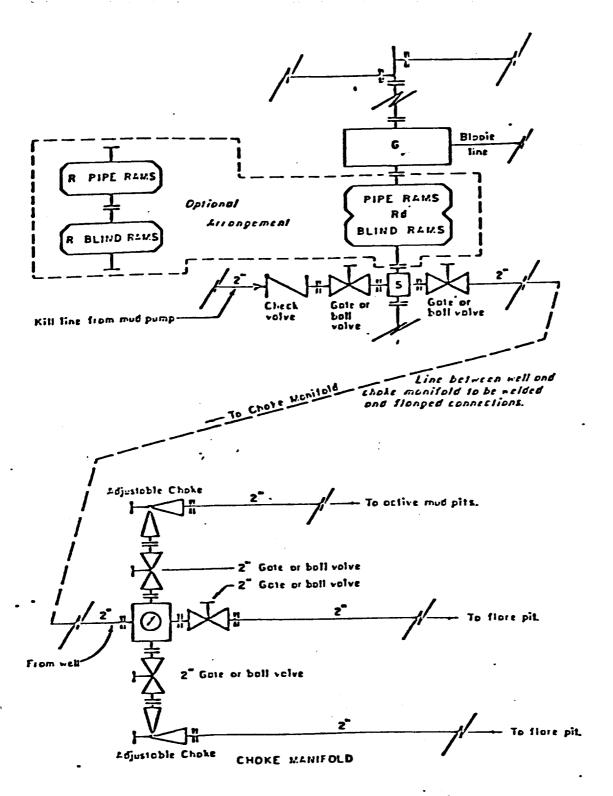
(See Attached Drilling Procedure.

- 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 (funch 'b') 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 os noted.

- Rd Double rom type preventer with two sets of roms.
- R Single rom type preventer with one set of roms.
- 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 10-26-70 EVI

- 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 I 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.

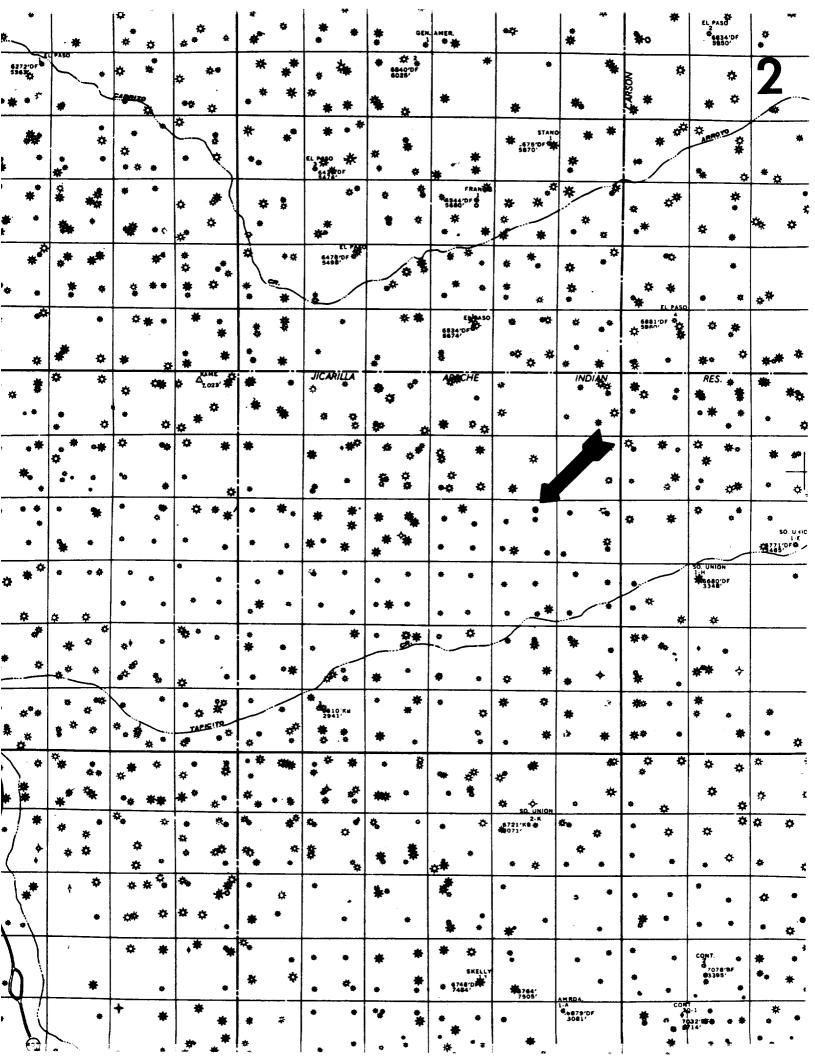
- 8. Ancillary Facilities No camps or airstrips will be associated with this project.
- 9. Wellsite Layout Please refer to the attached Plat No. 1.
- 10. Plans for Restoration of the Surface After completion of the proposed project
 the location will be cleaned and leveled. The location will be
 left 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 a bench just below mesa top. Drainage is to the north. Soil is sandy clay. Vegetation includes pinon & juniper, sage, mountain mahogany, snakeweed, bitterbrush, prickly pear, galleta and other grasses.
- 12. Operator's Representative See drilling prognosis.
- 13. Certification -

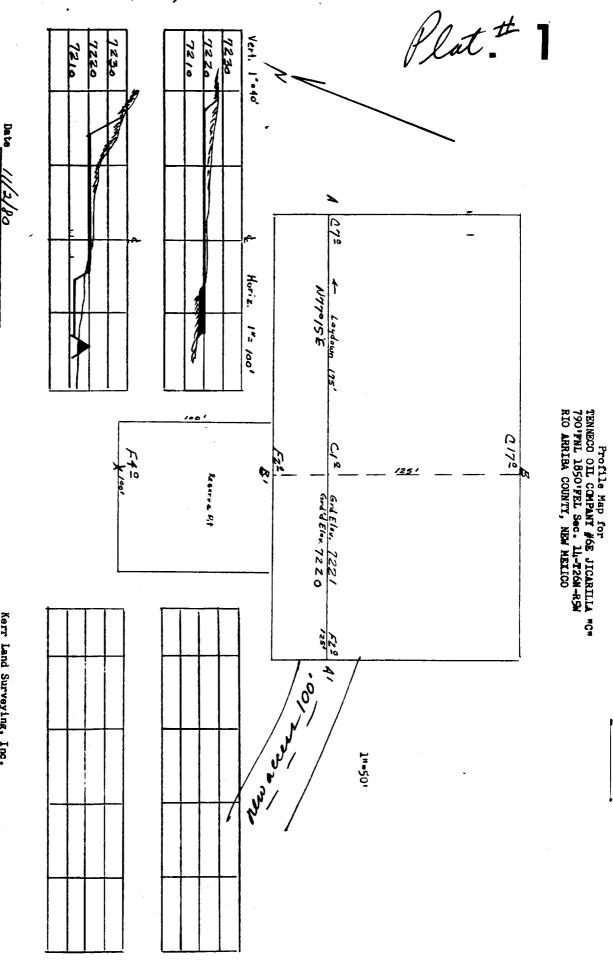
I hereby certify that I, or persons under my direct supervision, have inspected the proposed drillsite and access route; that I am familiar with the conditions which presently exist; that the statements mad in this plan are, to the best of my knowledge, true and correct; and that the work associated 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

Sr. Production Analyst







Kerr Land Surveying, Inc.

UNITED STATES DEPARTMENT OF THE INTERIOR

		Form Approved. Budget Bureau No. 42~R1424
5	. LEASE	
	Contr	act #108
_ 6	. IF INDI Jicar	AN, ALLOTTEE OR TRIBE NAME
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GEOLOGICAL SURVEY	 IF INDIAN, ALLOTTEE OR TRIBE NAME Jicarilla
SUNDRY NOTICES AND REPORTS ON WELLS (Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use Form 9–331–C for such proposals.)	7. UNIT AGREEMENT NAME
1. Oil gas well a cher	8. FARM OR LEASE NAME Jicarilla C
well well & other 2. NAME OF OPERATOR	9. WELL NO. 6E
Tenneco Oil Company	10. FIELD OR WILDCAT NAME
3. ADDRESS OF OPERATOR	Basin Dakota
P. O. Box 3249, Englewood, CO 80155	11. SEC., T., R., M., OR BLK. AND SURVEY OR
 LOCATION OF WELL (REPORT LOCATION CLEARLY. See space 17 below.) 	AREA Sect. 14, T26N R5W
AT SURFACE: 790' FNL 1850' FEL "B"	12. COUNTY OR PARISH 13. STATE
AT TOP PROD. INTERVAL:	Rio Arriba New Mexico
AT TOTAL DEPTH:	14. API NO.
16. CHECK APPROPRIATE BOX TO INDICATE NATURE OF NOTICE,	
REPORT, OR OTHER DATA	15. ELEVATIONS (SHOW DF, KDB, AND WD)
REQUEST FOR APPROVAL TO: SUBSEQUENT REPORT OF:	7221' gr.
TEST WATER SHUT-OFF	and the second s
FRACTURE TREAT SHOOT OR ACIDIZE	
REPAIR WELL	(NOTE: Report results of multiple completion or zone
PULL OR ALTER CASING	change on Form 9–330.)
MULTIPLE COMPLETE	
ABANDON*	10.40
(other) Change in csg design	Company and the Company of the Compa
17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state including estimated date of starting any proposed work. If well is di measured and true vertical depths for all markers and zones pertinent. Tenneco proposes the following changes in csg	irectionally drilled, give subsurface locations and to this work.)*
12-1/4" 9-5/8" 36# + 300' Circ	c cmt to surface
	c cmt to surface
6-1/4" 4-1/2" 10.5, 11.6# ± 8290' Circ	c cmt to liner top/
	OR OWN DOWN

cortify that the foregoing is true and correct

Subsurface Safety Valve: Manu. and Type _

Asst.Div.Adm

(This space for Federal or State office use)

SIGNED_

__ TITLE _

*See Instructions on Reverse Side

DAT DISTRICT ENGINEER