STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION
POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87501

FORM C-108
Revised 7-1-81

APPLICATION FOR AUTHORIZATION TO INJECT

I. Purpose: ☐ Secondary Recovery ☐ Pressure Maintenance ☒ Disposal ☐ Storage
Application qualifies for administrative approval? ☒ yes ☐ no

II. Operator: TENNECO OIL CO

Address: P.O. Box 3249 Englewood, CO 80155

Contact party: Mr. Bob Sagle Phone: (303)740-4800

III. Well data: Complete the data required on the reverse side of this form for each well proposed for injection. Additional sheets may be attached if necessary.

IV. Is this an expansion of an existing project? ☐ yes ☒ no
If yes, give the Division order number authorizing the project _____.

V. Attach a map that identifies all wells and leases within two miles of any proposed injection well with a one-half mile radius circle drawn around each proposed injection well. This circle identifies the well's area of review.

* VI. Attach a tabulation of data on all wells of public record within the area of review which penetrate the proposed injection zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of completion, and a schematic of any plugged well illustrating all plugging detail.

VII. Attach data on the proposed operation, including:

1. Proposed average and maximum daily rate and volume of fluids to be injected;
2. Whether the system is open or closed;
3. Proposed average and maximum injection pressure;
4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and
5. If injection is for disposal purposes into a zone not productive of oil or gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water (may be measured or inferred from existing literature, studies, nearby wells, etc.).

*VIII. Attach appropriate geological data on the injection zone including appropriate lithologic detail, geological name, thickness, and depth. Give the geologic name, and depth to bottom of all underground sources of drinking water (aquifers containing waters with total dissolved solids concentrations of 10,000 mg/l or less) overlying the proposed injection zone as well as any such source known to be immediately underlying the injection interval.

IX. Describe the proposed stimulation program, if any.

* X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division they need not be resubmitted.)

* XI. Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken.

XII. Applicants for disposal wells must make an affirmative statement that they have examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground source of drinking water.

XIII. Applicants must complete the "Proof of Notice" section on the reverse side of this form.

XIV. Certification

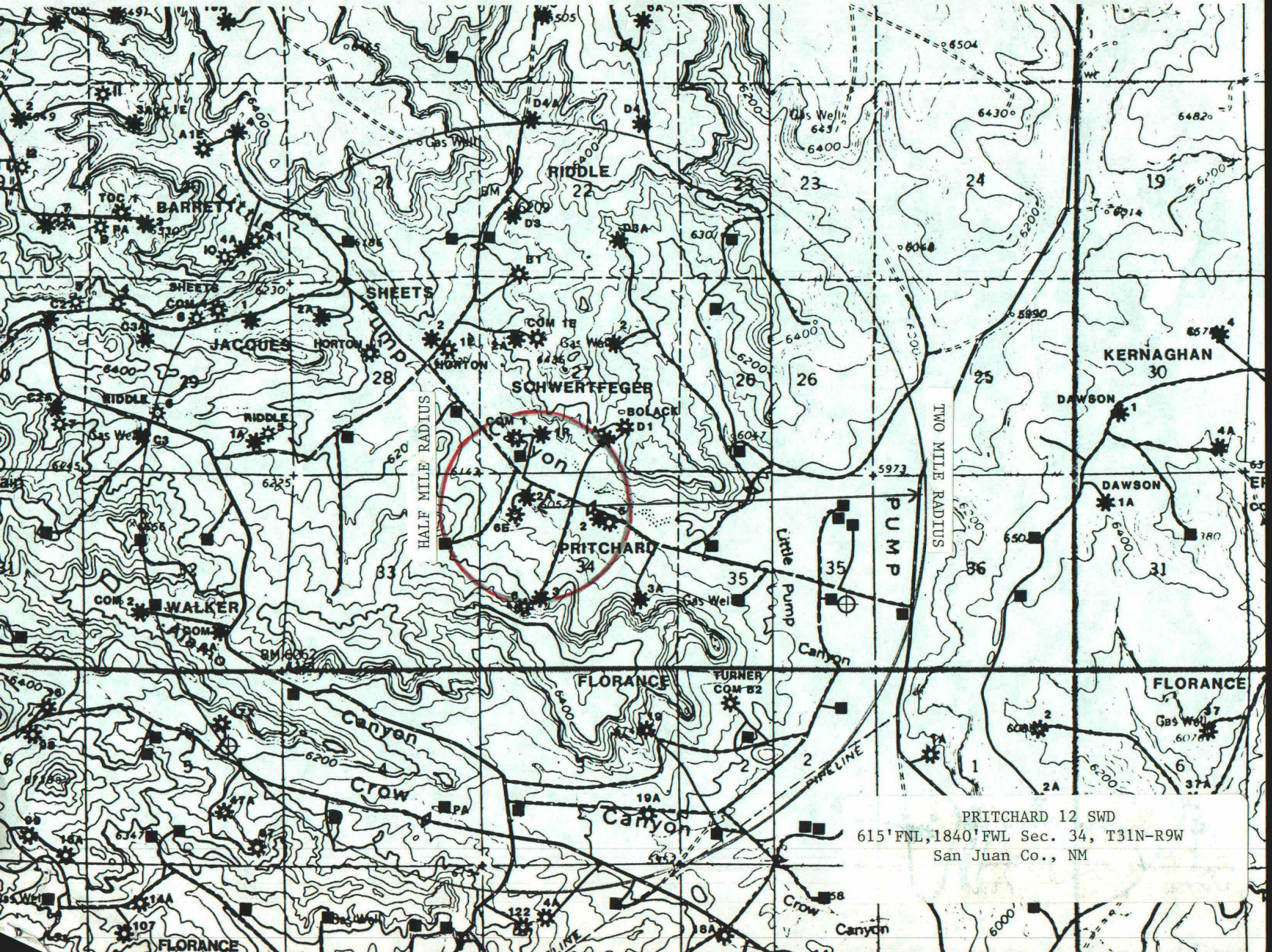
I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.

Name: Jerry D. Worsham, II Title Sr. Environmental Coordinator

Signature: Jerry D. Worsham Date: July 22, 1988

* If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be duplicated and resubmitted. Please show the date and circumstance of the earlier submittal. _____

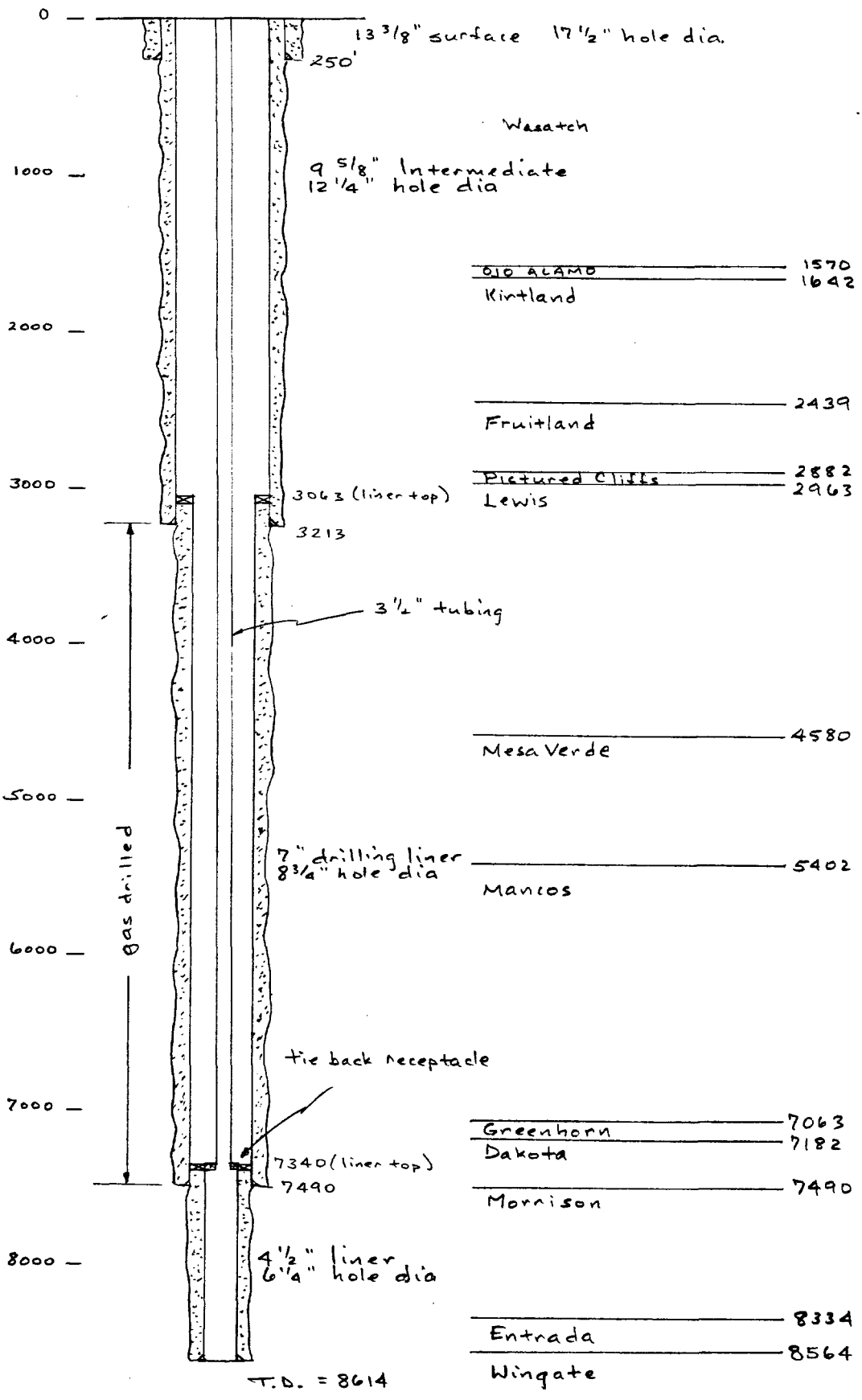
DISTRIBUTION: Original and one copy to Santa Fe with one copy to the appropriate Division district office.



PRITCHARD 12 SWD
615'FNL,1840'FWL Sec. 34, T31N-R9W
San Juan Co., NM

R. Gaffney
7/1/88

Pritchard SWD 12



INJECTION WELL DATA SHEET

SIDE 1

TENNECO OIL CO	PRITCHARD			
OPERATOR	LEASE			
#12 SWD	615'FNL 1840'FWL	34	31 North	9 West
WELL NO.	FOOTAGE LOCATION	SECTION	TOWNSHIP	RANGE

Schematic

Tabular Data

Surface Casing

Size 13 3/8 " Cemented with 300 sx.

TOC Surface feet determined by visual

Hole size 17 1/2 "

Intermediate Casing

Size 9 5/8 " Cemented with Two stage 270 + 100 sx.

TOC Surface/ Actual feet determined by Visual/Temp. Survey

Hole size 12 1/4"

Long string

See attached drilling procedure

Size _____ " Cemented with _____ sx.

TOC _____ feet determined by _____

Hole size _____

Total depth _____

Injection interval

7490 feet to 8334 feet

(perforated or open-hole, indicate which)

INJECTION WELL DATA SHEET -- SIDE 2

Tubing size 3 1/2" lined with polypropylene (material) set in a Baker Model D (brand and model) packer at 200' above Morrison feet

(or describe any other casing-tubing seal).

Other Data

1. Name of the injection formation ENTRADA / MORRISON

2. Name of Field or Pool (if applicable) _____

3. Is this a new well drilled for injection? XX Yes / 7 No

   If no, for what purpose was the well originally drilled? _____

4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used) _____

   Not Applicable

5. Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area. Fruitland 2439 Pictured Cliffs 2882 Mesa Verde 4580 Dakota 7182

PRITCHARD #12 Salt Water Disposal Well

VI. There are no wells penetrating the proposed depth interval within the two-mile area of review.

VII. Proposed Injection Operations:

1. The average injection rate is estimated at 4,000 BBls/day. The estimated maximum is proposed at 20,000 BBls/day.
2. The injection system will be closed.
3. The surface injection system will have an estimated maximum pressure of 2,000 psig.
4. The source of water will be from the Fruitland Coal formation.
5. Injection is for disposal purposes into a zone with no known oil and gas production within several miles. Chemical analysis and compatibility with the injected water will be supplied when the data becomes available.

VIII. The proposed injection zones are the Morrison and Entrada formations, both zones are sandstone. The Morrison formation is estimated at 7490' to 8334' and the Entrada is estimated to be between 8334' and 8564'.

The only overlaying freshwater aquifer is the Ojo Alamo, having an estimated depth of 1570'. There is no source of freshwater below the injection zone that is known.

IX. There is no proposed stimulation program at this time.

X. No logs or test data are available at present.

XI. There are no freshwater wells in the area that we can identify. We will test any wells that the New Mexico Oil and Gas Conservation Division believes to be in danger of groundwater contamination from our operation.

XI. An examination of geologic and engineering data indicates no evidence of open faults or other hydrologic connection between the disposal zone and any source of drinking water. The upper oil and gas bearing zone would serve to isolate and drinking water sources within the area of review.

XII. A copy of the application and support material has been sent by Certified Mail to the following:

SURFACE OWNER: Bureau of Land Management
1235 La Plata Highway
Farmington, NM 87401

LEASEHOLD OPERATORS: SE/4 Sec. 28 Meridian Oil Co.
3535 E. 30th St.
P.O. Box 4289
Farmington, NM 87499

PRITCHARD #12 Salt Water Disposal Well

XII. (con'td) NE/4 Sec. 33 Union Texas
375 U. S. Hwy 64
Farmington, NM 87401

LEGAL NOTICE has been sent to the Farmington Daily Times on July 21, 1988 in order to fulfill this obligation.

NOTE: All of Section 34 is Tenneco/Conoco.
All of Section 27 is Tenneco/Conoco.

Tenneco Oil Company
A Tenneco Company

Rocky Mountain Division
P.O. Box 3249
Englewood, Colorado 80155
(303) 740-4800

Delivery Address
6162 South Willow Drive
Englewood, Colorado 80111

July 21, 1988

Farmington Daily Times
P.O. Box 450
Farmington, New Mexico 87401

RE: Legal Notice

Dear Ms. Hunt:

Enclosed please find a Legal Notice for publication one time. Please send two proofs of publication with our statement.

Thank you.

Sincerely,

Jerry D. Worsham, II

****
TRANSMISSION REPORT
****

DATE & TIME ; JUL.21 '88 15:01
TRANSMITTER ; TENNECO DENVER
RECEIVER ; FARM DAILY TIMES

PAGES IN ERROR ; NONE
PAGES TRANSMITTED ; 03 PAGES
DOCUMENT JAM AT ; NONE

LEGAL NOTICE

Public Notice is hereby given that Tenneco Oil Co., P.O. Box 3249, Englewood, Colorado, 80155 has applied for administrative approval to drill the Pritchard #12 Salt Water Disposal well at a location 615' FNL, 1840'FWL Section 34, Township 31 North-Range 9 West, San Juan County, New Mexico to use as a produced water disposal well. The well is proposed to be drilled to the Wingate formation at a total depth of 8614'. The injection zone will be the Morrison/Entrada formations at a depth from 7490' to 8334' with a maximum injection rate proposed at 20,000 BBls/day and injection pressures proposed to not exceed 2000 psi. Interested parties may call Mr. Bob Sagle of Tenneco at (303) 740-4800 or may file objections or request a hearing with the Oil Conservation Division, P.O. Box 2088, Santa Fe, New Mexico 87501 within 15 days.

Tenneco Oil Company
A Tenneco Company

Rocky Mountain Division
P.O. Box 3249
Englewood, Colorado 80155
(303) 740-4800

Delivery Address
6162 South Willow Drive
Englewood, Colorado 80111

July 6, 1988

Bureau of Land Management
1235 LaPlata Highway
Farmington, New Mexico 87401

RE: Pritchard 12 - SWD

Gentlemen:

I have enclosed the original plus five copies of the above referenced APD. Please feel free to contact me if there are any problems with this application.

Sincerely,

TENNECO OIL COMPANY

Larry Bell
Administrative Supervisor

LB/jm:2620q(2)

Encls.

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

5. LEASE DESIGNATION AND SERIAL NO.: NM-013686

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7. UNIT AGREEMENT NAME:

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

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

8. FARM OR LEASE NAME: Pritchard

2. NAME OF OPERATOR: Tenneco Oil Company

9. WELL NO.: 12 - SWD

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

10. FIELD AND POOL, OR WILDCAT: Entrada

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*)
At surface: NW/4 Sec. 34, 1840' FWL, 615' FNL
At proposed prod. zone: Same

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: Sec. 34, T31N, R9W

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*: 13 miles NE of Aztec

12. COUNTY OR PARISH: San Juan

13. STATE: NM

15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any)	16. NO. OF ACRES IN LEASE	17. NO. OF ACRES ASSIGNED TO THIS WELL
615'	1275.56	---
18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.	**19. PROPOSED DEPTH**	**20. ROTARY OR CABLE TOOLS**
350'	8614'	Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.): 6061' GR

22. APPROX. DATE WORK WILL START*: 8/15/88

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
20"	20"		± 60'	Driven
17½"	13 3/8"	54.5#	± 250'	347 cu.ft. - Circ. to Surface
12¼"	9 5/8"	36#	±3213'	1519 cu.ft. - Circ. to Surface
8 3/4"	7" Liner	23#	±7490'	1331 cu.ft. -
6¼"	4½" Liner	13.5#	±7340'-±8612'	260 cu.ft. -

See Attached Drilling Procedure.

See Item 1.B of Surface Use Plan and Map 2A & 2B for BLM Right-of-Way Application.

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 Larry Bell TITLE Admin. Supervisor DATE 7/6/88

(This space for Federal or State office use)

PERMIT NO. _____ APPROVAL DATE _____

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

TENNECO OIL COMPANY
ROCKY MOUNTAIN DIVISION
P. O. BOX 3249
ENGLEWOOD, COLORADO 80155

DRILLING PROCEDURE

DATE: June 30, 1988 REVISION

LEASE: PRITCHARD SWD WELL NO: 12

LOCATION: 615' FNL, 1840 FWL
Sec. 34-T31N-R9W
San Juan Co., New Mexico FIELD:

ELEVATION: 6075' GL
6087' KB

TOTAL DEPTH: 8614'

PROJECTED HORIZON: Entrada

SUBMITTED BY: R. R. Griffee DATE: June 30, 1988

APPROVED BY: _____ DATE: 7/6/88

4933D

cc: AFE File
Drilling File
Field File
Well File

ESTIMATED FORMATION TOPS

Wasatch	Surface	
Ojo Alamo	1570	Fresh Water
Kirtland	1642	
Fruitland	2439	Gas
Pictured Cliffs	2882	Gas
Lewis	2963	
Mesa Verde	4580	Gas
Mancos	5402	
Greenhorn	7063	
Dakota	7182	Gas
Morrison	7490	Salt Water
Entrada	8334	Water
Wingate	8564	
T.D.	8614	

DRILLING, CASING AND CEMENT PROGRAM

1. Set 60' 20" conductor prior to moving in drilling rig.

2. MIRURT. Notify BLM of spud and all subsequent casing and cementing operations. (Farmington, New Mexico (505) 325-4572).

3. Drill 17 1/2" surface hole to 250'± with fresh water/gel/lime spud mud.

4. Rig up and run 13 3/8" casing to bottom. Equip the casing with a guide shoe and float collar. Place one centralizer on the shoe joint and one on each subsequent collar for a total of 4 centralizers.

5. Cement to surface with 300 sx Class 'B' + 2% $CaCl_2$ + 1/4#/sx celloflake (347 ft^3 at 1.18 ft^3/sx). WOC a minimum of 8 hours prior to drilling out.

6. While WOC, nipple up a 13 3/8", 3000 psi S.O.W. casinghead. NU BOPE as per TOC minimum requirements (see figure 2). Pressure test pipe rams, blind rams and choke manifold to 3000 psi for 5 mins. Pressure test annular preventer to 1500 psi for 5 mins. Pressure test casing to 1500 psi for 30 minutes. Record all tests on the IADC report sheet.

7. Drill out of surface casing with a 12 1/4" bit. Drill to 3213'± (250' below Lewis) using clear water/polymer mud system. Mud up at 2200'± or as required. Circulate at casing point a sufficient amount of time prior to running casing.

8. Install 9 5/8" casing rams and run 9 5/8" casing to intermediate T.D. Equip the casing with a guide shoe and float collar. (differential fill). Place stage tool at 1870'± (300' below Ojo Alamo). Centralize casing string with one centralizer on the shoe joint and one on every subsequent collar for a total of 6 centralizers. Place one centralizer above and one below the stage collar, also place one cement basket above and one below the stage collar.

9. Cement the intermediate casing string to surface as follows:

First Stage:	Lead Slurry:	270 sx, 517 ft^3 65/35 Poz + 6% gel + 5#/sx gilsonite + fluid loss and rheological additives.
	Tail Slurry:	100 sx, 118 ft^3 Class 'B' + fluid loss and rheological additives.

After displace the first stage, drop bomb, open stage collar. (circulate 4 hours).

Second Stage: 20 bbls. mud flush.
Lead slurry: 400 sx 766 ft^3
65/35 Poz + 6% gel + 5#/sx gilsonite + fluid loss and rheological additives.
Tail slurry: 100 sx 118 ft^3
Class 'B' + fluid loss and rheological additives.

(All above slurry volumes and calculated with 50% over gauge hole volume.)

9.a If cement is not circulated to surface, run a temperature survey after 8 hours (from plug down) to determine top of cement. WOC a total of 12 hours (from plug down) before drilling is resumed.

10. Set slips with full weight of string. Cut off casing. Re-nipple up BOPE and pressure test as described in step #6 above. Record all tests on IADC report.

11. Drill out of the 9 5/8" intermediate with an 8 3/4" bit and clear water. Drill cement and 30'$\pm$ of formation. Unload the hole in 2 stages with nitrogen and dry up hole.

12. Drill 8 3/4" hole to 7490' $\pm$ with gas.

13. Install 7" casing rams and run 7" drilling liner to T.D. Equip the casing with a float shoe and float collar 2 joints from bottom. Run 150' liner overlap into 9 5/8" casing. Hang liner 2 - 3' off bottom.

14. Cement liner as follows:

20 bbls. chemical wash.
Lead Slurry: 600 sx 1154_ft^3
65/35 Poz + 6% gel + fluid loss and rheological additives followed with
Tail Slurry: 150 sx 177 ft^3 Class 'B' + fluid loss and rheological additives.

(Cement volumes are calculated with 100% excess over gauge hole volume).

15. Set liner packoff - release from liner hanger. Reverse out all excess cement. TOH, lay down 1300'$\pm$ 4 1/2" drill pipe.

16. PU 6 1/4" bit, and the required lengths of 4 3/4" spiral drill collars and 3 1/2" drill pipe. TIH. Drill 6 1/4" hole w/fresh water/polymer mud to TD @ 8614' $\pm$.

17. Log as directed by G. E. Department.

18. Run 4 1/2" liner to T.D. Equip the casing with a float shoe on bottom and a latch down collar on top of the first joint. Centralize the string with one centralizer on the shoe joint and 6 centralizers. Hang liner 2 - 3' off bottom with the liner top 150' inside the 7" string (150' overlap).

19. Cement 4 1/2" liner as follows'

20 bbls. chemical wash
Lead slurry: 90 sx 172 ft^3
65/35 Poz + 6% gel + fluid loss and
rheological additives followed with
Tail slurry: 75 sx 88 ft^3
Class 'B' + fluid loss and rheological
additives.

(Cement volumes are calculated with 100% excess over gauge hole volume).

20. Set liner pack off. Release from liner. Reverse out any excess cement. TOH. LDDP. MORT.

21. Install wellhead and fence remainder of reserve pit.

CASING DESIGN

INTERVAL	LENGTH	OD	WT	GRADE	THREAD	GRADE
0' - 250'	250'	13 3/8	54.5	K-55	LT&C	New
0' - 3213'	3213'	9 5/8	36	K-55	LT&C	New
3063' - 6060'	2997'	7	23	SS95	LT&C	New
6060' - 7160'	1100'	7	23	N-80	LT&C	New
7160' - 7490'	330'	7	23	K-55	LT&C	New
7340' - 8614'	1274'	4 1/2	13.5	N-80	LT&C	New

MUD PROGRAM

0 - 250' Fresh water/gel/lime spud mud ±40 funnel viscosity @ 8.4 ppg.

250' - 2200' Fresh water. Sweep as required with polymer or gel/lime sweeps

2200' - 3213' Fresh water/polymer mud system. Keep mud wts below 9.1 ppg.

3213' - 7490' Gas drilling.

7490' - 8614' Fresh water/polymer mud system. Mud wts. ±8.9 ppg. Fluid loss approximately 10 or below.

EVALUATION

CORES AND DST's: None

LOGGING:

At intermediate casing point:	DIL/GR from TD to surface casing.
At 7" liner point:	DIL/GR from TD to intermediate casing.
At TD:	DIL/GR from TD to 7" liner.
	Neutron density from TD to 7" liner.

SAMPLES: As requested by G. E.

DEVIATION SURVEYS:

1. Survey surface hole at 100' intervals. Maximum allowable deviation at 250' is 1 1/2°.

2. From surface to TD, survey every 500'. Record all surveys in IADA tour book. Maximum allowable deviation change is 1°/100'. Maximum total deviation at TD is 7°.

4933D

REPORTS

Drilling Reports for the past 24 hours will include depth, footage, time distribution, activity breakdown, mud properties, bit record, bottomhole assembly, types of logs and depths ran, daily and cumulative mud cost, deviation surveys, and other pertinent information to be called into Division office by 7:00 A.M. Monday through Friday.

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

OFFICE DIRECTORY

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

1.	D. S. Barnes	303/740-4814	Office
	Div. Drilling Superintendent	303/936-0704	Home
2.	W. A. McAdam	303/740-2588	Office
	Drilling Eng. Supervisor	303/978-0724	Home
3.	R. R. Griffee	303/740-2531	Office
	Sr. Drilling Engineer	303/421-8353	Home
4.	Louis Jones	303/748-4800	Office
	Division Production Manager		

PLUGGING AND ABANDONMENT PROCEDURES

1. New Mexico Oil & Gas Commission will be notified prior to any abandonment procedures.

2. The wellbore will be plugged using Class B cement as follows:

   ° Plug #1: 75 sx (188 ft^3) 8564' - 8264' across Entrade formation.

   ° Plug #2: 55 sx (59 ft^3) 7200' - 7000' above Dakota formation (bottom of 7" liner).

   ° Plug #3: 50 sx (59 ft^3) 3263' - 3063' top of 7" liner..

NOTE: Actual cement plug intervals will be adjusted per log tops to isolate critical intervals.

3. A dry hole marker will be placed per state and/or landowner recommendations.

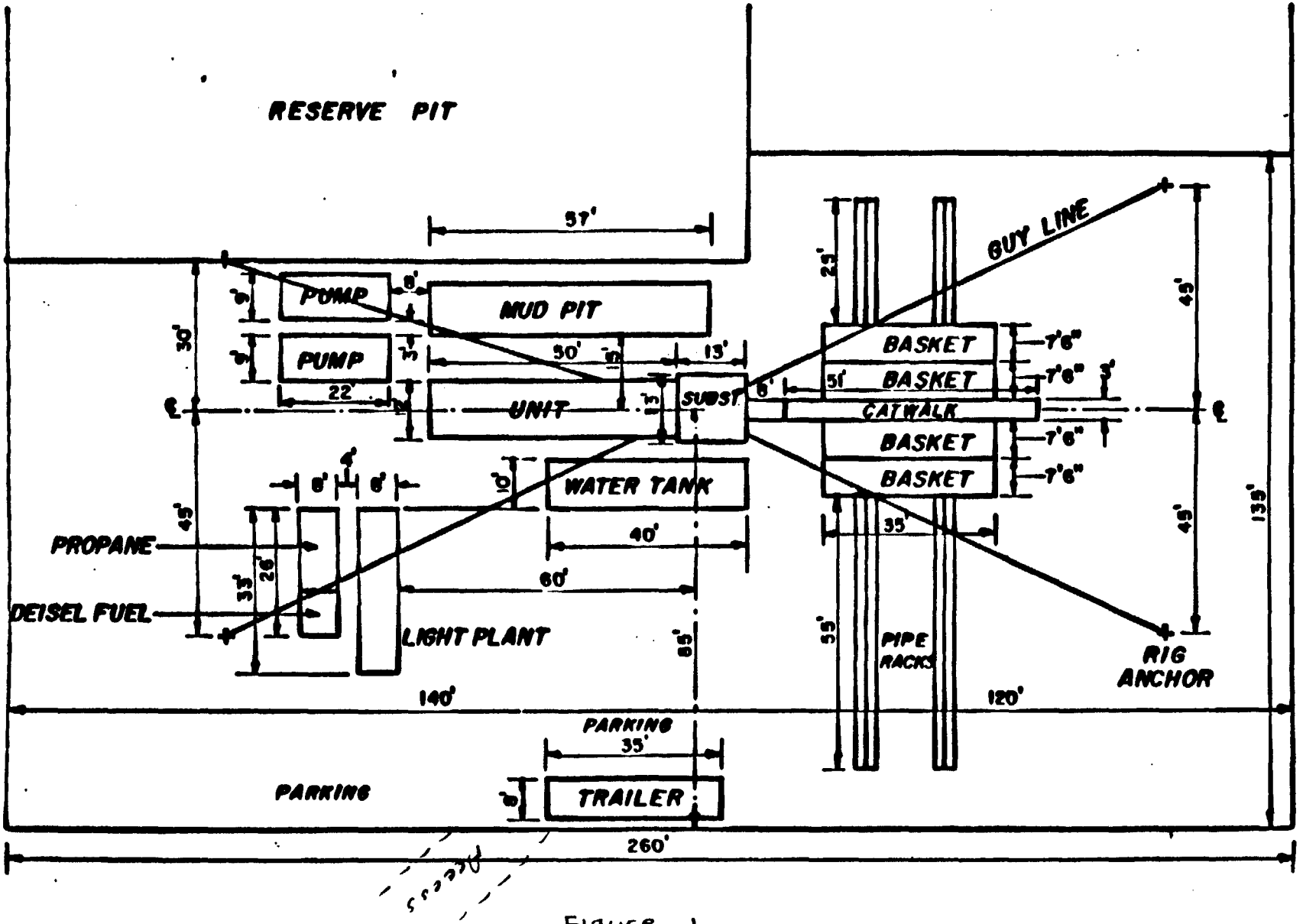
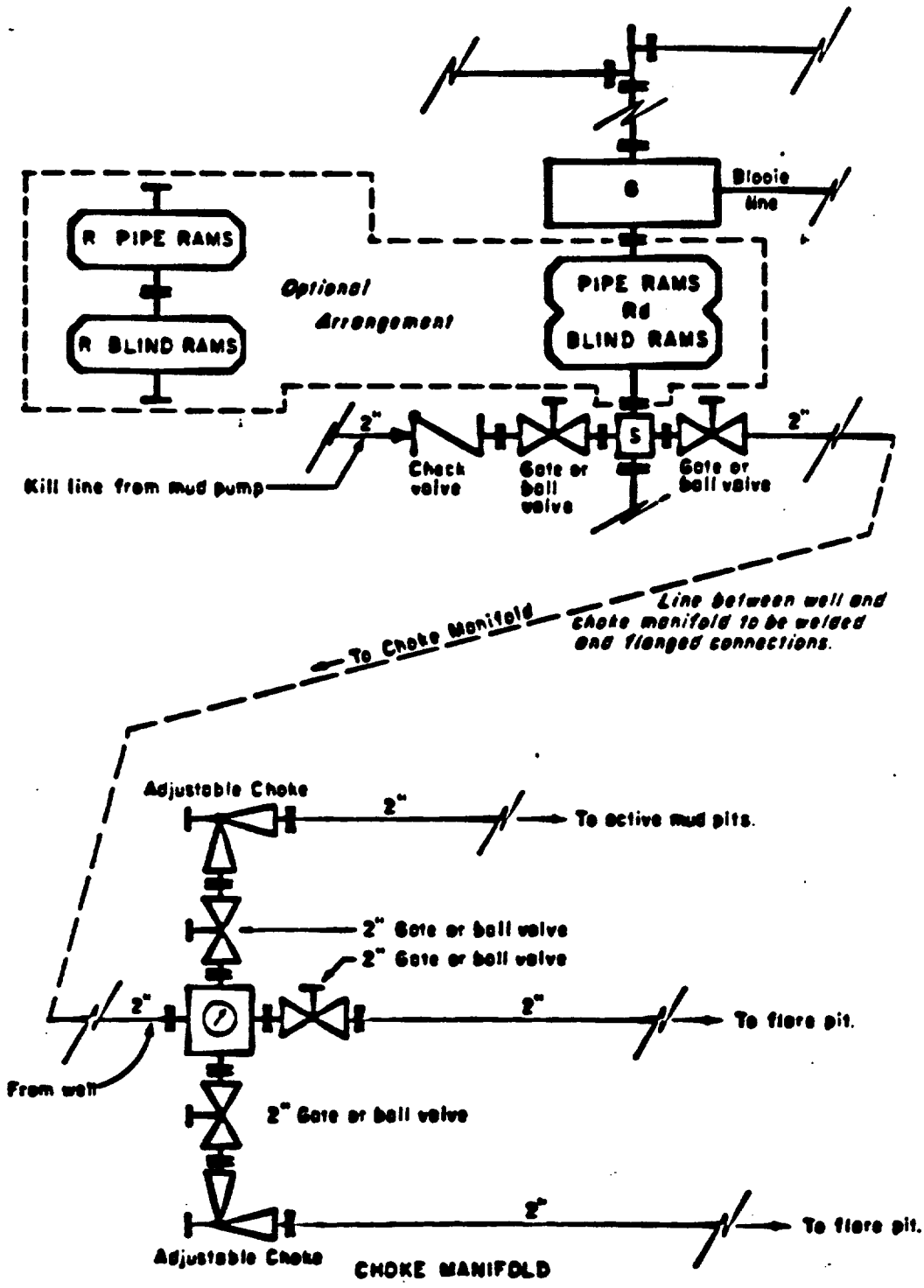


Figure 1

EXHIBIT A



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

Figure 2

ARRANGEMENT C

TENNECO OIL COMPANY
ROCKY MOUNTAIN DIVISION

REQUIRED MINIMUM
BLOWOUT PREVENTER AND
CHOKE MANIFOLD

J. MAGILL 10-26-70 EVI

TENNECO OIL COMPANY-10 POINT PLAN

1. The geological name of the surface formation: Tertiary

2. & 3. Estimated Formation Tops: (see attached drilling procedure)

4. Proposed Casing Program: (see attached drilling procedure)

5. Blowout Preventers:
Hydraulic double ram. One set of rams will be provided for each size drill pipe in the hole. One set of blind rams at all times. Fill line pipe will be 2", kill line will be 2", choke relief will be 2". BOP's, drills, and tests will be recorded in the drillers 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 as soon as possible and continue for approximately 20 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.

SURFACE USE PLAN
PRITCHARD 12 SWD

1. A. Existing Roads
See Map 1. The access to this location is existing except for approximately 75 feet. All existing roads will be maintained in as good or better condition as they presently are.

B. BLM Right-of-Way
A BLM Right-of-Way will not need to be obtained for this well. Access is on private land, Federal Lease NM 013686, and on Federal land with existing ROW applications. Refer to APD's for Pritchard 11, Horton 2, and Barrett 13.
See Maps 2A and 2B for ROW description.

2. Access Roads to be Constructed and Reconstructed
Approximately 75 feet of new road needs to be built. It will be 20 feet wide, crowned and ditched, and will not exceed 2 percent grade. No gates, cattleguards, culverts, or bridges need to be installed, nor do existing ones need to be altered. Water bars will be installed as discussed at the onsite inspection. No major cuts and fills are necessary nor will any turnouts be needed. See Map 1 for location of new road.

3. Location of Existing Wells
See Map 3. All producing wells within a one mile radius are shown on this map. There are no known water, injection, disposal, or drilling wells within a one mile radius of the proposed well.

4. Location of Existing and/or Proposed Facilities
A. On Well Pad
Refer to Exhibit C. This plat shows our planned layout for production equipment on this disposal well.

B. Off Well Pad
Tenneco will have no facilities off of the well pad.

5. Location and Type of Water Supply
Water will be obtained from a private source in the NWSW, Sec 36, T31N, R9W. It will be hauled in vacuum trucks via the access road previously described.

6. Construction Materials
No off-site materials will be needed to build the proposed location or access road.

7. Methods for Handling Waste Disposal
Cuttings and drilling fluids will be contained in a lined reserve pit. The pit will be fenced on three sides during drilling and the fourth side fenced after drilling is complete. It will remain fenced until the liquids have evaporated. When dry, the pit will be rehabilitated per BLM specifications. Any produced oil or water recovered during completion and testing will be contained in steel tanks. Garbage will be collected in enclosed containers and hauled to an approved landfill. A latrine will be provided

for human waste. Any garbage left on location after the rig moves off will be hauled to an appropriate disposal site.

8. Ancillary Facilities
No camps, airstrips or other ancillary facilities will be needed.

9. Well Site Layout
Exhibit B is a cross-section diagram of the drill pad showing cuts and fills and locations of the reserve and burn pits. Exhibit A shows the access road onto the pad, turnaround and parking areas and rig orientation.
The reserve pit will be lined with 8-10 mil reinforced plastic.

10. Plans for Reclamation of the Surface
After the reserve pit has dried, it and the burn pit will be backfilled and recontoured. Drainage will be routed around so as not to cause erosion. The portion of the location outside the anchors will be seeded during the recommended seeding period with the seed mix specified by BLM. Any waste on the site will be hauled to an approved landfill.

11. Surface Ownership
The surface at the well location is public land, managed by the Bureau of Land Management.

12. Other Information
The proposed well is a water disposal well for several planned Fruitland Coal wells in the vicinity. It is approximately 390 feet east of proposed well Pritchard 11. Vegetation is dominated by sagebrush along with several grasses and forbs. Soils are loamy. Land uses include recreation, grazing, and oil and gas development.

13. A. Lessees or Operators Field Representative
Gary Clark
3400 Southside River Road
Farmington, New Mexico 87401
505-327-0217

B. Certification
I hereby certify that I, or persons under my direct supervision have inspected the proposed drill site and access route; that I am familiar with the conditions which currently exist; that the statements made in this plan are, to the best of my knowledge, true and correct; and that the work associated with operations proposed herein will be performed by Tenneco Oil Company and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved. This statement is subject to the provisions of 18 U.S.C. 1001 for the filing of a false statement.

DATE 2-6-88

NAME AND TITLE Gary Bell Admin. Supervisor

NEW MEXICO OIL CONSERVATION COMMISSION

WELL LOCATION AND ACREAGE DEDICATION PLAT

Form C-102
Supersedes C-128
Effective 1-1-65

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

Operator	Lease	Well No.
TENNECO OIL COMPANY	PRITCHARD	12-SWD

Unit Letter	Section	Township	Range	County
C	34	31 N	9 W	SAN JUAN

Actual Footage Location of Well:
615 feet from the NORTH line and 1840 feet from the WEST line

Ground Level Elev.	Producing Formation	Pool	Dedicated Acreage:
6061	Entrada - Injection	Injection	--- Acres

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

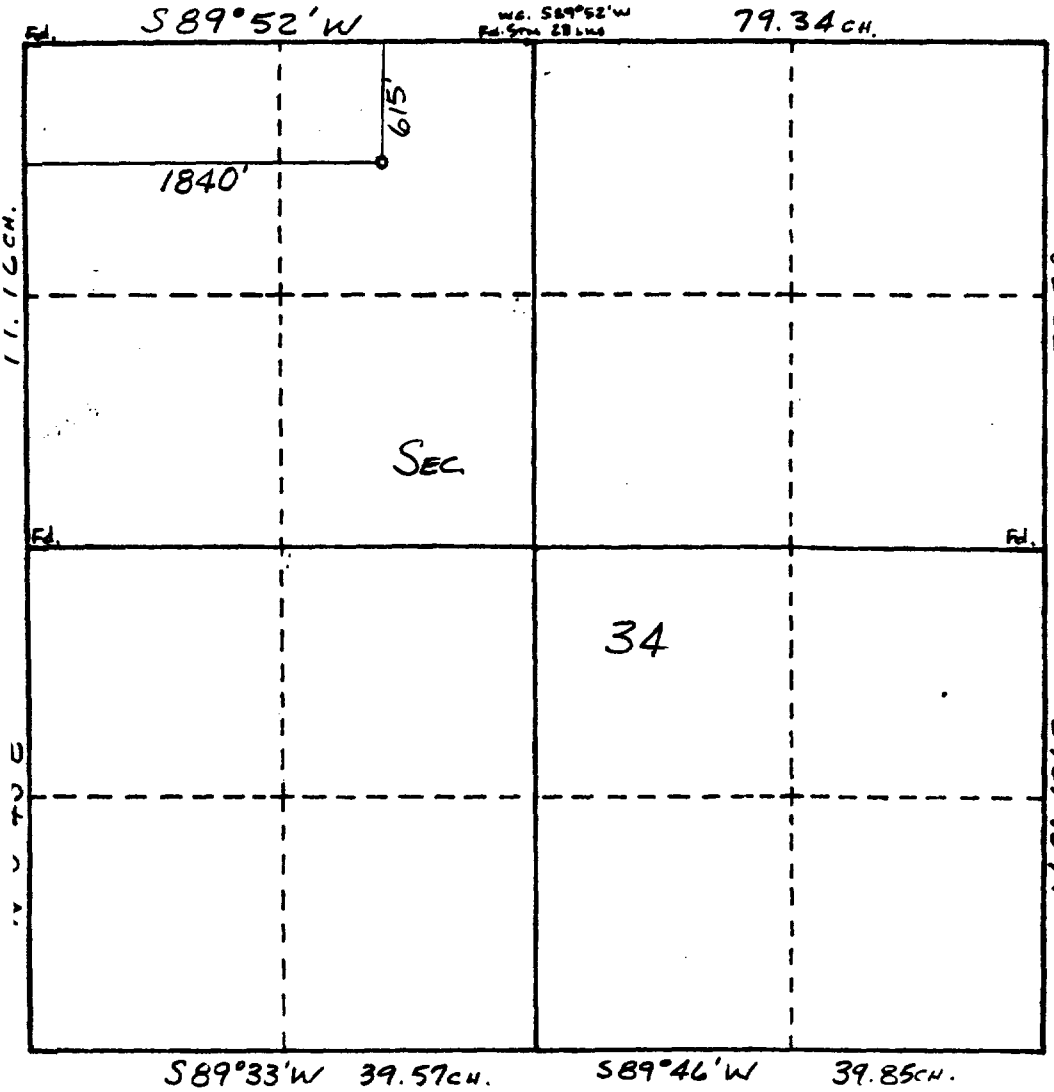
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).

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: Larry Bell

Position: Administrative Supervisor

Company: Tenneco Oil Company

Date: July 6, 1988

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: 24 JUNE 1988

William E. Mahnke II

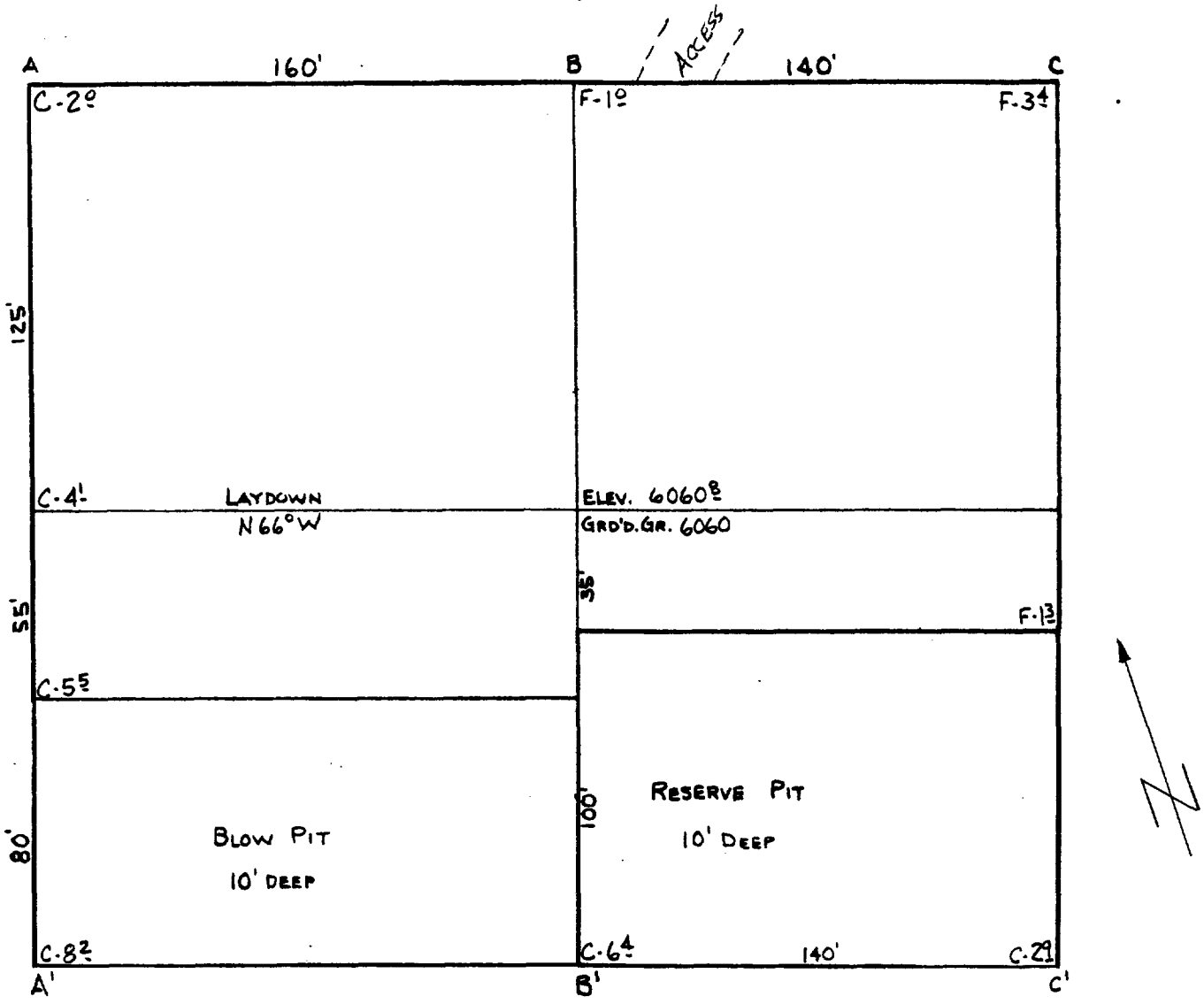
Registered Professional Engineer and Land Surveyor

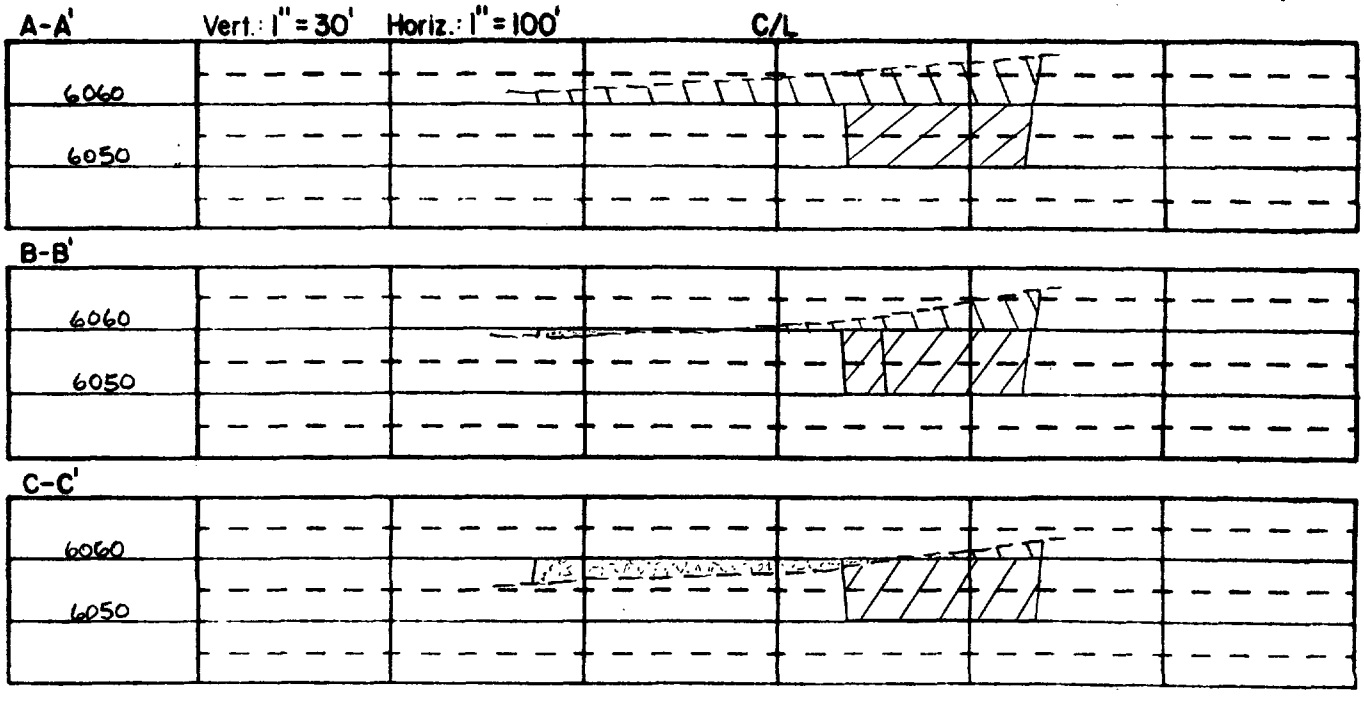
NEW MEXICO 9466 REGISTERED PROFESSIONAL LAND SURVEYOR

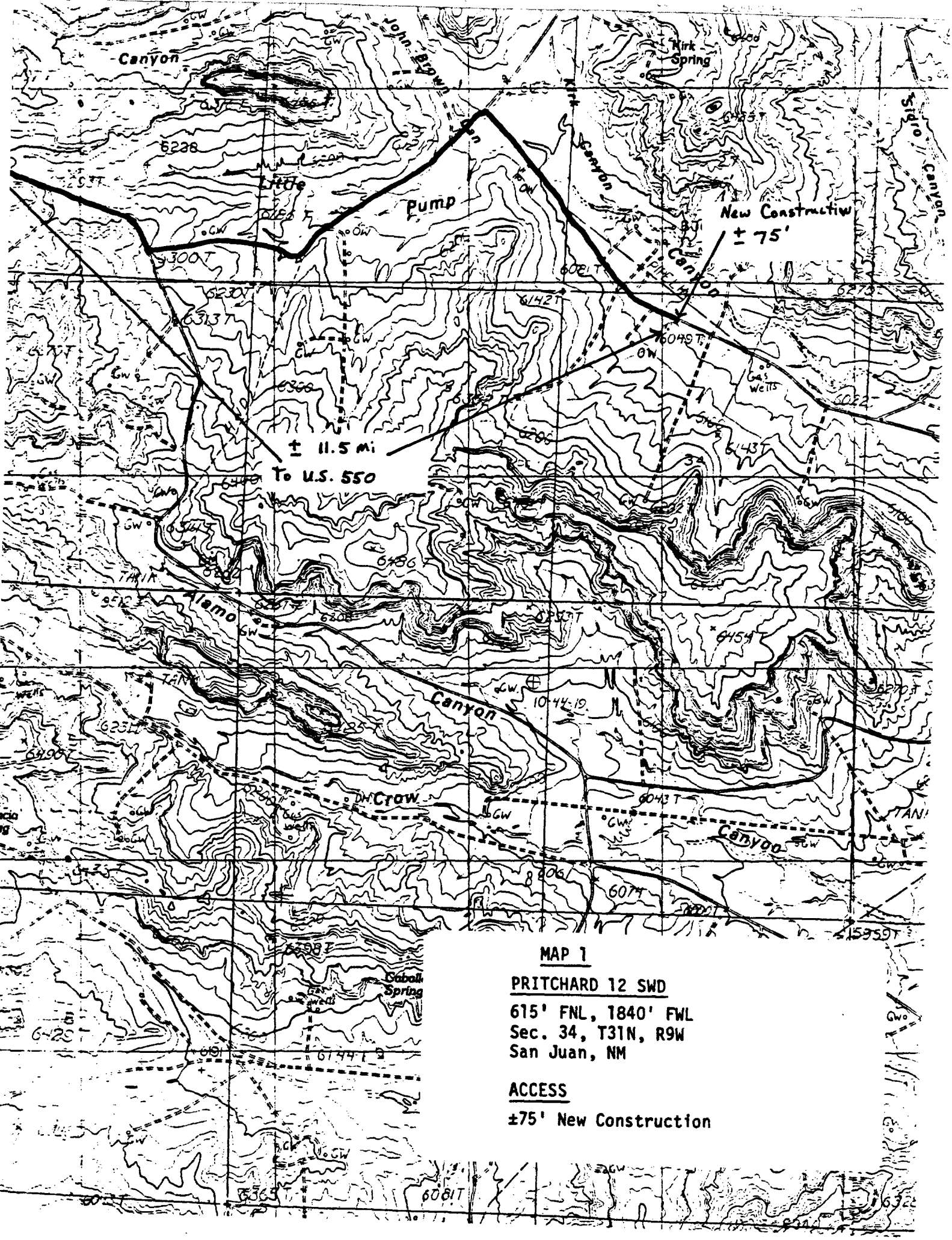
Certificate No. 9466

FORM 24-11

TENNECO OIL COMPANY
PRITCHARD 12-SWD
615'FNL & 1840'FWL
Sec.34, T31N, R9W
San Juan Co., NM







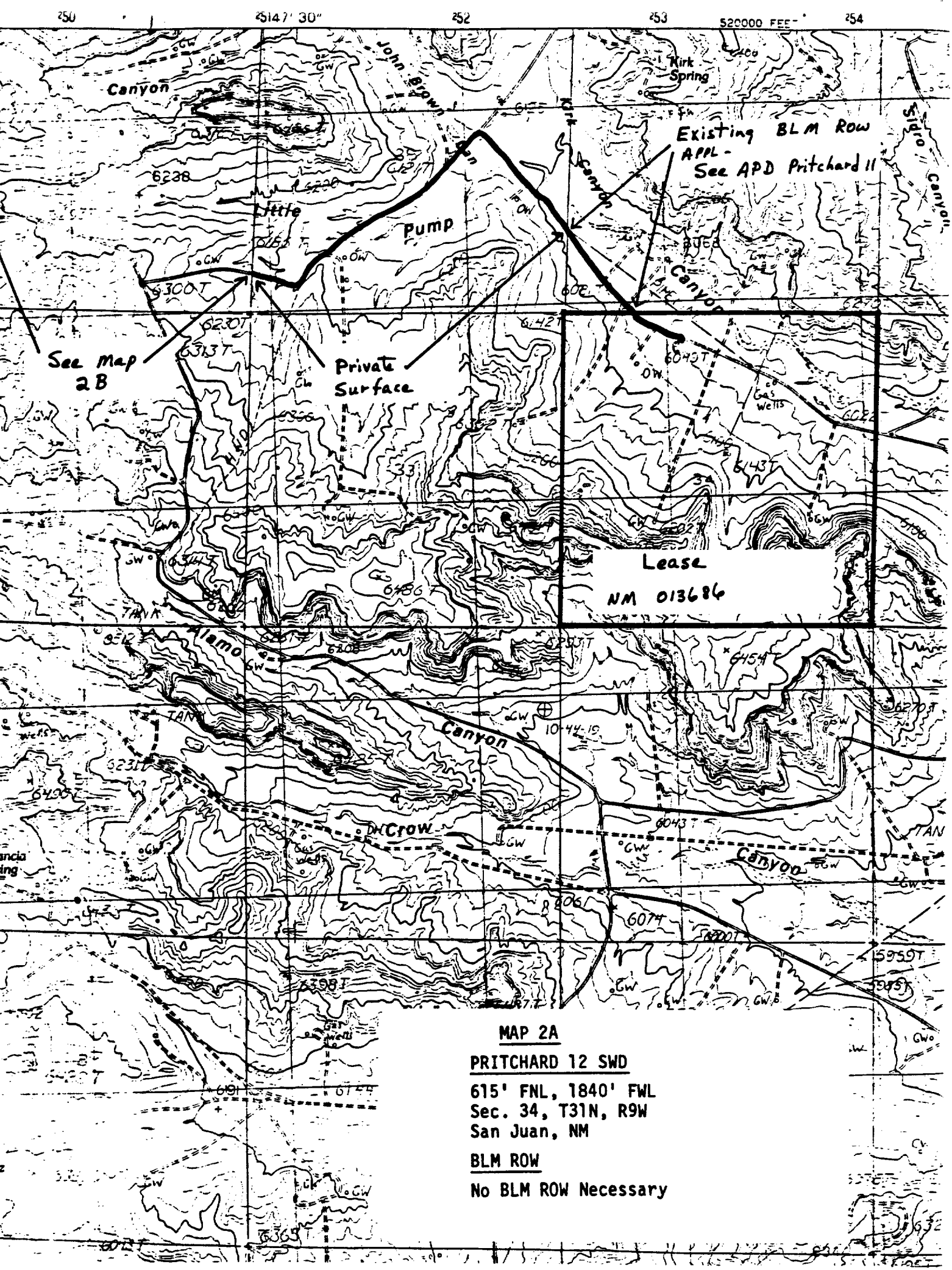
MAP 1

PRITCHARD 12 SWD

615' FNL, 1840' FWL
Sec. 34, T31N, R9W
San Juan, NM

ACCESS

±75' New Construction



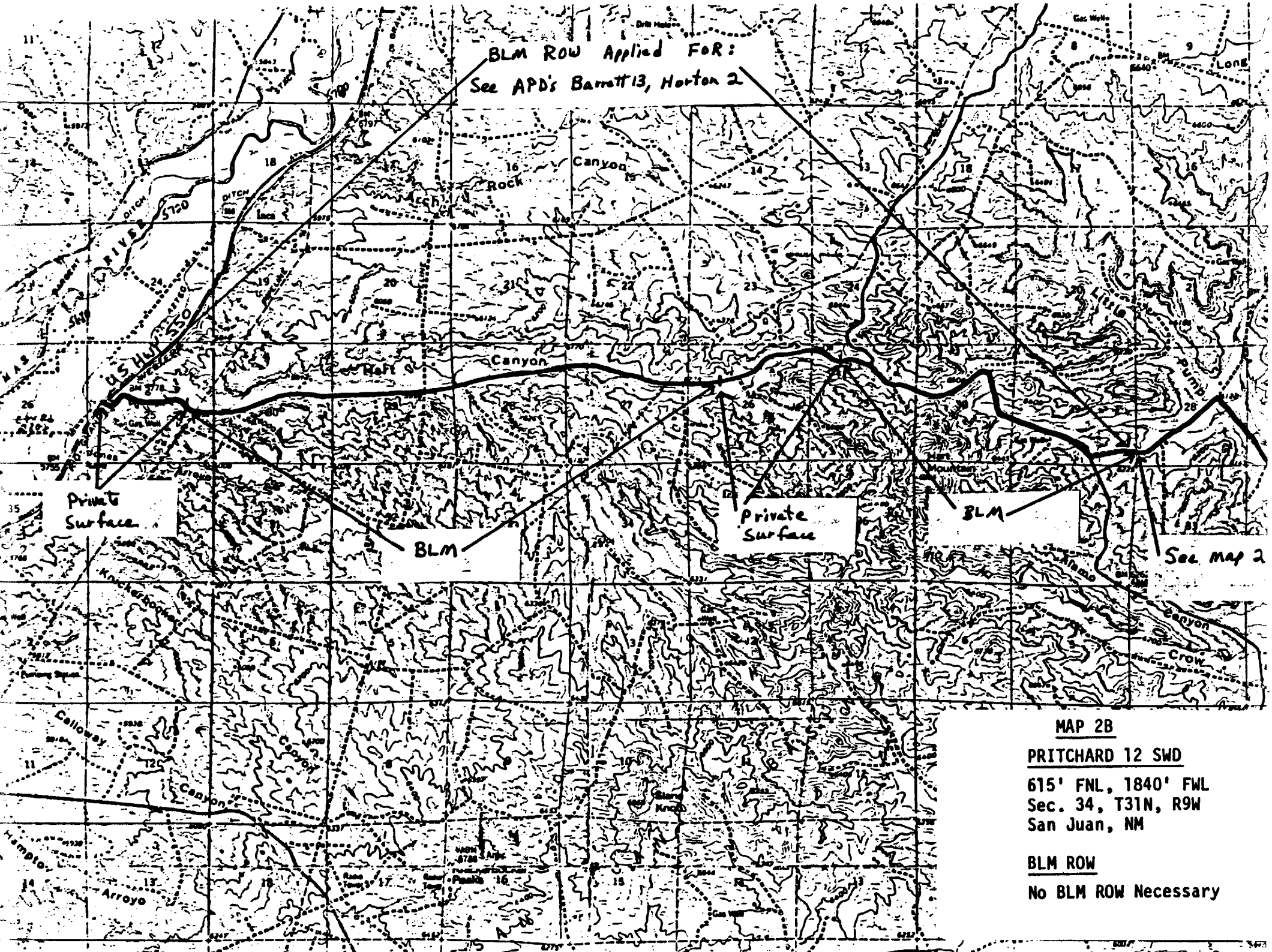
MAP 2A

PRITCHARD 12 SWD

615' FNL, 1840' FWL
Sec. 34, T31N, R9W
San Juan, NM

BLM ROW

No BLM ROW Necessary



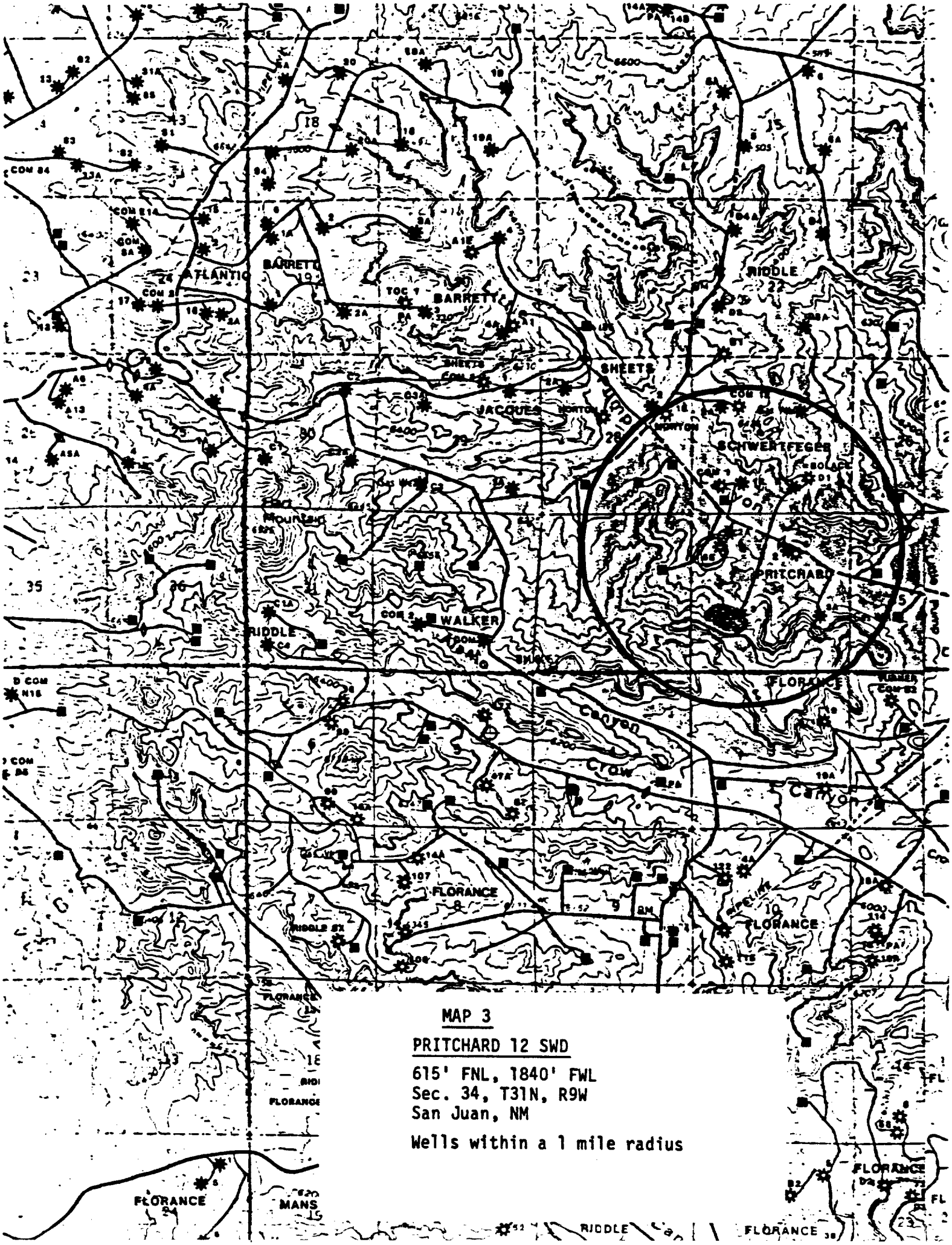
MAP 2B

PRITCHARD 12 SWD

615' FNL, 1840' FWL
Sec. 34, T31N, R9W
San Juan, NM

BLM ROW

No BLM ROW Necessary



MAP 3

PRITCHARD 12 SWD

615' FNL, 1840' FWL
Sec. 34, T31N, R9W
San Juan, NM

Wells within a 1 mile radius

AFFIDAVIT OF PUBLICATION

No. 22152

STATE OF NEW MEXICO,
County of San Juan:

Betty Shipp being duly

sworn, says: That he is the National Ad Manager of

THE FARMINGTON DAILY TIMES, a daily newspaper of general circulation published in English at Farmington, said county and state, and that the

hereto attached Legal Notice

was published in a regular and entire issue of the said FARMINGTON DAILY TIMES, a daily newspaper duly qualified for the purpose within the meaning of Chapter 167 of the 1937 Session Laws of the State of New Mexico for one consecutive (days) (weeks) on the same day as follows:

First Publication Monday July 25, 1988

Second Publication

Third Publication

Fourth Publication

and that payment therefor in the amount of $ 8.80

has been made.

Betty Shipp

Subscribed and sworn to before me this 25th day

of July, 19 88.

NOTARY PUBLIC, SAN JUAN COUNTY, NEW MEXICO

My Commission expires: June 23, 1990

Copy of Publication

NOTICE

Public Notice is hereby given that Tenneco Oil Co., P.O. Box 3249, Englewood, Colorado, 80155 has applied for administrative approval to drill the Pritchard #12 Salt Water Disposal well at a location 615'FNL, 1840'FWL, Section 34, Township 31 North-Range 9 West, San Juan County, New Mexico to use as a produced water disposal well. The well is proposed to be drilled to the Wingate formation at a total depth of 8614'. The injection zone will be the Morrison and Entrada formations at a depth from 7490 to 8334' with a maximum injection rate proposed at 20,000 BBls/day and injection pressures proposed to not exceed 2000 psi. Interested parties may call Mr. Bob Sagle of Tenneco at (303) 740-4800 or may file objections or request a hearing with the Oil Conservation Division, PO Box 2088, Santa Fe, New Mexico 87501 within 15 days.

Legal No. 22152 published in the Farmington Daily Times, Farmington, New Mexico on Monday, July 25, 1988.

SWD-353

P 079 359 781

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED
NOT FOR INTERNATIONAL MAIL

(See Reverse)

Sent to	Conoco
Street and No.	726 E. Michigan
P.O. State and ZIP Code	Hobbs, NM 88240
Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to whom and Date Delivered	
Return receipt showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	$
Postmark or Date	7/22/88

PS Form 3800, Feb. 1982 ★ U.S.G.P.O. 1984-446-014

P 168 549 805

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED
NOT FOR INTERNATIONAL MAIL

(See Reverse)

Sent to	BLM
Street and No.	1235 La Plata Highway
P.O. State and ZIP Code	Farmington, NM 87401
Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to whom and Date Delivered	
Return receipt showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	$
Postmark or Date	7/22/88

PS Form 3800, Feb. 1982 ★ U.S.G.P.O. 1984-446-014

P 079 359 782

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED
NOT FOR INTERNATIONAL MAIL

(See Reverse)

Sent to	Union Texas
Street and No.	375 U.S. Hwy 64
P.O. State and ZIP Code	Farmington, NM 87401
Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to whom and Date Delivered	
Return receipt showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	$
Postmark or Date	7/22/88

PS Form 3800, Feb. 1982 ★ U.S.G.P.O. 1984-446-014

P 079 359 783

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED
NOT FOR INTERNATIONAL MAIL

(See Reverse)

Sent to	Meridian Oil Inc.
Street and No.	3535 E. 30th St.
P.O. State and ZIP Code	Farmington, NM 87499
Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to whom and Date Delivered	
Return receipt showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	$
Postmark or Date	7/22/88

PS Form 3800, Feb. 1982 ★ U.S.G.P.O. 1984-446-014

MERIDIAN OIL

August 11, 1988

Tenneco Oil Company
Attn: Mr. Bob Sagle
Post Office Box 3249
Englewood, Colorado 80155

Re: Limited Waiver of Objection
Tenneco SWD Request
Pritchard #12 SWD
NW/4 Section 34, T-31-N, R-9-W
San Juan County, New Mexico

Gentlemen:

In response to your Application for Authorization to Inject received in this office August 1, 1988 Meridian Oil Inc. hereby conditionally waives any objection to your proposal. Our waiver is conditioned upon your agreement that the top perforation in the Morrison formation must be at least 100 feet below the bottom of the Dakota formation. In the Pritchard #12 SWD well the perforations would be from 7590 feet to 8334 feet.

If you are agreeable to the above revisions of the proposed perforated interval in the captioned well then Meridian Oil Inc. has no objection to the application. Please indicate your agreement by signing and returning one (1) copy of this letter to the undersigned.

Very truly yours

Robert J. Hopkins
Senior Landman

RJH:gm
NM-400 (offset lease)
Document 113+
cc: New Mexico Oil Conservation Division
Attention: Mr. William LeMay

Agreed and accepted this _____ day of _____, 1988.

TENNECO OIL EXPLORATION AND PRODUCTION COMPANY

BY: _____
PRINT NAME: _____
TITLE: _____