

**DEVON
ENERGY
CORPORATION**

20 North Broadway
Suite 1500
Oklahoma City, Oklahoma 73102

405/235-3611
Fax 405/236-4258

RECEIVED
OCT 13 1992
RELEASE 11.2.92

October 13, 1992

RE: Application for Authorization to Inject
Todd "26" Federal #2

State of New Mexico
Oil Conservation Division
P.O. Box 2088
Santa Fe, NM 87504

Attn : Mr. David Catanach

Dear Mr. Catanach:

Enclosed, please find the original + 1 copy of our Application for Authorization to Inject (Form C-108) for the above referenced well. I also sent a copy to the Artesia District office. Please direct any inquiries concerning this matter to me at (405) 235-3611 between 8 am and 5 pm weekdays.

Sincerely yours,

DEVON ENERGY CORPORATION

Debby O'Donnell

Ms. Debby O'Donnell
Engineering Technician

/do
Enclosures

APPLICATION FOR AUTHORIZATION TO INJECT

- I. Purpose: ☐ Secondary Recovery ☐ Pressure Maintenance ☒ Disposal ☐ Storage
Application qualifies for administrative approval? ☐ yes ☐ no
- II. Operator: Devon Energy Corporation (Nevada)
Address: 20 North Broadway Suite 1500 Oklahoma City, OK 73102
Contact party: Charles W. Horsman District Engr. Phone: (405) 235-3611
- 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.
*Please refer to Attachment III
- 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.
*Please refer to Attachment V
- * 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.
*Please refer to Attachment VI
- 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.).
- *Please refer to Attachment VII
- *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.
*Please refer to Attachment VIII
- IX. Describe the proposed stimulation program, if any.
Acidize the perforations using ball sealers.
- * X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division they need not be resubmitted.)
*All well logs have been submitted except a bond log which is enclosed.
- * 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.
*Please refer to Attachment XI
- 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.
- *Please refer to Attachment XII
- XIII. Applicants must complete the "Proof of Notice" section on the reverse side of this form.
*Enclosed in the application
- 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: J.M. Duckworth

Title Operations Manager

Signature: 

Date: September 30, 1992

- * 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.

III. WELL DATA * Please refer to Attachment III

A. The following well data must be submitted for each injection well covered by this application. The data must be both in tabular and schematic form and shall include:

- (1) Lease name; Well No.; location by Section, Township, and Range; and footage location within the section.
- (2) Each casing string used with its size, setting depth, sacks of cement used, hole size, top of cement, and how such top was determined.
- (3) A description of the tubing to be used including its size, lining material, and setting depth.
- (4) The name, model, and setting depth of the packer used or a description of any other seal system or assembly used.

Division District offices have supplies of Well Data Sheets which may be used or which may be used as models for this purpose. Applicants for several identical wells may submit a "typical data sheet" rather than submitting the data for each well.

B. The following must be submitted for each injection well covered by this application. All items must be addressed for the initial well. Responses for additional wells need be shown only when different. Information shown on schematics need not be repeated.

- (1) The name of the injection formation and, if applicable, the field or pool name.
- (2) The injection interval and whether it is perforated or open-hole.
- (3) State if the well was drilled for injection or, if not, the original purpose of the well.
- (4) Give the depths of any other perforated intervals and detail on the sacks of cement or bridge plugs used to seal off such perforations.
- (5) Give the depth to and name of the next higher and next lower oil or gas zone in the area of the well, if any.

XIV. PROOF OF NOTICE * Please refer to Attachment XIV

All applicants must furnish proof that a copy of the application has been furnished, by certified or registered mail, to the owner of the surface of the land on which the well is to be located and to each leasehold operator within one-half mile of the well location.

Where an application is subject to administrative approval, a proof of publication must be submitted. Such proof shall consist of a copy of the legal advertisement which was published in the county in which the well is located. The contents of such advertisement must include:

- (1) The name, address, phone number, and contact party for the applicant;
- (2) the intended purpose of the injection well; with the exact location of single wells or the section, township, and range location of multiple wells;
- (3) the formation name and depth with expected maximum injection rates and pressures; and
- (4) a notation that interested parties must file objections or requests for hearing with the Oil Conservation Division, P. O. Box 2088, Santa Fe, New Mexico 87501 within 15 days.

NO ACTION WILL BE TAKEN ON THE APPLICATION UNTIL PROPER PROOF OF NOTICE HAS BEEN SUBMITTED.

NOTICE: Surface owners or offset operators must file any objections or requests for hearing of administrative applications within 15 days from the date this application was mailed to them.

ATTACHMENT III

WELL DATA

A. (1) Todd "26" Federal #2
Section 26-T23S-R31E
1980' ~~FEL~~ & 1650' FEL

- (2) Please refer to wellbore schematic labelled Attachment III-A(2). Cement was circulated back to surface on the surface string and the two-stage production string.
- (3) We will be using 2 7/8" coated tubing (Tuboscope TK70 coating) set at $\pm 4400'$.
- (4) We will use a Baker Model A-1 tension packer set at $\pm 4400'$. The annulus will contain packer fluid.

B. (1) The injection formation will be the Bell Canyon in the Sand Dunes Field.

- (2) The injection interval will be perforated. Proposed perforated intervals are as follows:

5134' - 5074' (60')	- 30 holes	
5056' - 4970' (86')	- 43 holes	
4936' - 4906' (30')	- 15 holes	Total Perfs = 121
4786' - 4752' (34')	- 17 holes	
4686' - 4654' (32')	- 16 holes	

- (3) The well was originally drilled as an oil well.
- (4) Please refer to the wellbore schematic labelled Attachment III-A(2).
- (5) There are no higher oil or gas zones in the area of the well. The next lower zone is a depleted Cherry Canyon sand at 6,004'.

Lease _____
Well No. _____ Sec. _____ T. _____ R. _____
Co. _____

ACQUISITION

FIELD

LOCATION

WELL PROFILE

(CIRC 153x)

TD

DRILL PIPE

LOG

ELEVATION

DATUM POINT (GRD-KB-DF)

PBTD

DRILL PIPE

GAMMA-RAY

DATUM POINT ELEVATION

CASING DESIGN

SIZE	WEIGHT	GRADE	THREAD	COUPLING	MAKE	NO JTS	FOOTAGE	SACK
8 5/8"	24		8RD	STC		20	637'	
CEMENTED W/ 350 SX CLASS "C" + 2% CC (CIRC 75 SX)								
5 1/2"	15.5		8RD			188	6125'	
1ST STAGE: 200 SX CLASS 'C' + 8% GEL & 340 SX 50/50 DIAMIX + 1/4 #/SX FLOCELE (CIRC 75 SX)								
DV TOOL @ 4292'								
2ND STAGE: 910 SX TRINITY LITE + 7 1/2 #/SX SALT & 50 SX CLASS 'C' + 1/4 #/SX FLOCELE (CIRC 15 SX)								

PERFORATED
INTERVAL

FORMATION

REMARKS

COMMENTS:

COMPLETION DATA -

FEB 1970: DRLD DV TOOL TAG PBTD AT 6094'. SPOT 500 GAL MUD ACID ON BOTTOM

PERFORATE 6012-18 & 6022-36 (22 HOLES TOTAL)

PUMP IN ACID AT 0.2 BPM ISIP-1650#

REPERFORATE 6012-18 & 6022-36. ACIDIZE W/ 2000 GAL MUD ACID & 40 BALLS

FRACTURE TREAT W/ 5000 GAL REPAVED OIL & 7500# 20/40 SAND

IPF 17380-83 MCF - NO WATER.

NOV 1984: SET CIBP @ 5950' W/ 10' CMT ABOVE. PERF 5116-5176 (22 HOLES)

ACIDIZED W/ 1000 gals 7 1/2% HCL NEFE. BPP = 1500#

DROPPED 25 BALLS (had some action) Avg. INT RATE = 4.2 BPM

PRESS. 2700-1500# ISIP = 800# 15 MIN = 650#

SWABBED WATER - NO OIL OR GAS

PERF 5086-5092 (14 HOLES) SET CIBP @ 5150'. FLUID LEVEL = 400' FROM

SURFACE. REC ALL WATER & SAND. TA WELL

FEB 1984: LOG W/ SCHLUMBERGER

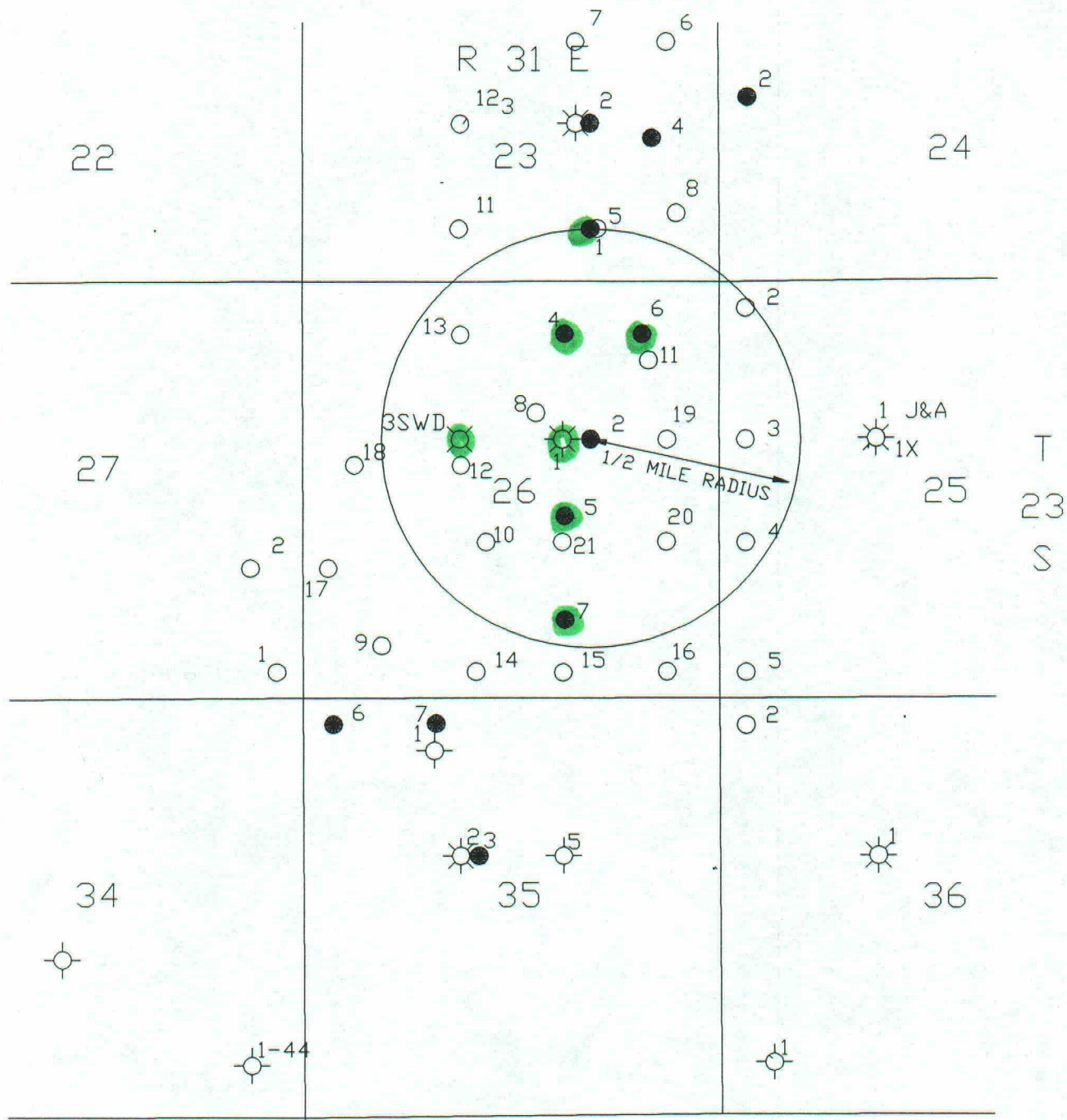
SUBMITTED BY

DATE

APPROVED BY

ATTACHMENT VI

WELL NAME	LOCATION	DATE DRILLED	DATE COMPLETED	TYPE OF WELL	DEPTH / PBTD	WELL CONSTRUCTION	COMPLETION / INITIAL PRODUCTION
Todd #23 Federal #1	Section 23-T23S-R31E 660' FSL & 1650' FEL Eddy County, NM	1/30/73	3/19/73	Delaware Oil Well	6150' / 6115'	8 5/8" surface casing @ 575' (300 sx Class C cement) 5 1/2" production casing @ 6100' w/ DV tool @ 3965' (2000 sx Lite cement, 660 sx Class C cement)	Perforated 6017' - 6032' (2 spf) and acidized with 10 mcf Initial Production Rate - 40 bopd, 5 bwpd, 11 mcf/d
Todd #26 Federal #1	Section 26-T23S-R31E 1980' FNL & 1980' FEL Eddy County, NM	7/29/69	12/12/69	Atoka Gas Well	16,496' / 14,950'	20" conductor casing @ 619' (1160 sx cement) 13 5/8" surface casing @ 4414' (3000 sx cement) 10 3/4" intermediate casing @ 12,721' (1400 sx cement) 7 5/8" production casing @ 15,800' (1070 sx cement)	Perforated 13,678' - 13,907' and acidized with 15,000 mcf Initial Production Rate - 75 mmcf/d
Todd #26 Federal #3	Section 26-T23S-R31E 1980' FNL & 1980' FWL Eddy County, NM	6/17/70	7/2/70 6/4/71 (converted to SWD)	Delaware Water Injection Well	6048'	8 5/8" surface casing @ 603' (230 sx Class C cement) Spotted cement plugs (40 sx ea.) at 4500', 3000', 1500', 650' Spotted cement plug (20 sx) at the surface	Well was initially D & A, but was converted to salt water Set 4 1/2" casing @ 4378' with a DV tool @ 1978' (1450 sx Lite and 50 sx Class C cement) Set 2 3/8" plastic coated tubing (Tuboscope TK-75) Model A packer.
Todd #26 Federal #4	Section 26-T23S-R31E 660' FNL & 1980' FEL Eddy County, NM	4/14/72	5/18/72	Delaware Oil Well	6150' 6120'	8 5/8" surface casing @ 618' (300 sx Class C cement) 5 1/2" production casing @ 6150' w/ DV tool @ 4280' (2000 sx Lite cement, 600sx Class C cement)	Perforated 5,966' - 6,002' and 6,008' - 6016' and acidized with 10 mcf Initial Production Rate - 82 bopd, 8 bwpd, 6 mcf/d
Todd #26 Federal #5	Section 26-T23S-R31E 2310' FSL & 1980' FEL Eddy County, NM	11/28/73	3/11/74	Delaware Oil Well	6100' 6065'	8 5/8" surface casing @ 596' (300 sx Class C cement) 5 1/2" production casing @ 6100' w/ DV tool @ 4303' (1750 sx Lite cement, 640 sx Class C - DV tool did not open Had to perforate @ 4040' and squeeze cement to surface)	Perforated 6,003' - 6,021' (1 spf) and acidized with 10 mcf Initial Production Rate - 47 bopd, 3 bwpd, 60 mcf/d
Todd #26 Federal #6	Section 26-T23S-R31E 660' FNL & 990' FEL Eddy County, NM	9/13/74	11/6/74	Delaware Oil Well (active)	6110' 6083'	8 5/8" surface casing @ 620' (300 sx Class C cement) 5 1/2" production casing @ 6110' w/ DV tool @ 4343' (2000 sx Lite cement, 660 sx Class C cement)	Perforated 6,062' - 6,066' (2 spf) and acidized with 7 mcf Initial Production Rate - 18 bopd, no water, 12 mcf/d
Todd #26 Federal #7	Section 26-T23S-R31E 990' FSL & 1980' FEL Eddy County, NM	2/7/75	4/28/75	Delaware Oil Well (active)	6103' 6065'	8 5/8" surface casing @ 598' (300 sx Class C cement) 5 1/2" production casing @ 6100' w/ DV tool @ 3965' (2000 sx Lite cement, 660 sx Class C cement)	Perforated 6,007' - 6,019' (2 spf) and acidized with 10 mcf Fraced with 12,500 gal gelled kerosene and 13,125' mcf Initial Production Rate - 23 bopd, 39 bwpd, 27 mcf/d



FILE: 26-2A

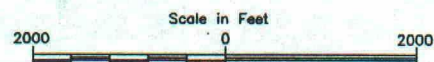
devon
ENERGY CORPORATION

SAND DUNES FIELD

EDDY COUNTY, NEW MEXICO

TODD-26 FED-2
SALTWATER DISPOSAL CONVERSION
WELLS WITHIN 1/2 MILE RADIUS

ATTACHMENT V



9/92

ATTACHMENT VII

PROPOSED OPERATION

1. We plan to inject 3,000 - 4,000 bbls of produced water per day.
2. The system will be a closed system.
3. The proposed injection pressure will be 1,000 psi (MAXIMUM).
4. The injection fluid will be reinjected produced water.
5. The DST run from 6369' - 6439' in the Todd "26" Federal #1 gave 70,000 ppm chlorides. Water from all of our wells are disposed into a common battery and then into the disposal well. The lack of current problems in the existing disposal well indicates compatibility. From this we infer the similarity of the Bell Canyon and Cherry Canyon waters. Tretolite analyzed the water disposed into the Todd "23" Federal #3 disposal well. For a copy of the Tretolite Chemical Analysis please refer to Attachment VII-5.



TRETOLITE DIVISION

369 Marshall Avenue / Saint Louis, Missouri 63119
(314) WD 1-3500/TWX 910-760-1860/Telex 44-2417

ATTACHMENT VII-5

WATER ANALYSIS REPORT

COMPANY TEXAS AMERICAN OIL CORP. ADDRESS LOCO HILLS, NM DATE: 1/12/84

SOURCE Todd Fed. 26-3 SWD DATE SAMPLED 1/12/84 ANALYSIS NO.
Analysis 26-3 Mg/L *Meq/L

1. pH	<u>6.3</u>			
2. H ₂ S (Qualitative)	<u>neg.</u>			
3. Specific Gravity	<u>1.080</u>			
4. Dissolved Solids		<u>109,922</u>		
5. Suspended Solids		<u> </u>		
6. Phenolphthalein Alkalinity (CaCO ₃)		<u> </u>		
7. Methyl Orange Alkalinity (CaCO ₃)		<u>50</u>		
8. Bicarbonate (HCO ₃)		<u>61</u>	<u>÷ 61</u>	<u>1</u> HCO ₃
9. Chlorides (Cl)		<u>68,686</u>	<u>÷ 35.5</u>	<u>1935</u> Cl
10. Sulfates (SO ₄)		<u>225</u>	<u>÷ 48</u>	<u>5</u> SO ₄
11. Calcium (Ca)		<u>7800</u>	<u>÷ 20</u>	<u>390</u> Ca
12. Magnesium (Mg)		<u>2795</u>	<u>÷ 12.2</u>	<u>229</u> Mg
13. Total Hardness (CaCO ₃)		<u>31,000</u>		
14. Total Iron (Fe)		<u> </u>		
15. Barium (Qualitative)		<u>13</u>		
16. Strontium		<u> </u>		

*Milli equivalents per liter

PROBABLE MINERAL COMPOSITION

390	Ca	←	HCO ₃	1	Compound	Equiv. Wt.	X	Meq/L	=	Mg/L
229	Mg	→	SO ₄	5	Ca (HCO ₃) ₂	81.04		1		81
1322	Na	→	Cl	1935	Ca SO ₄	68.07		5		340
					Ca Cl ₂	55.50		384		21,312
					Mg (HCO ₃) ₂	73.17		-0-		-0-
					Mg SO ₄	60.19		-0-		-0-
					Mg Cl ₂	47.62		229		10,905
					Na HCO ₃	84.00		-0-		-0-
					Na ₂ SO ₄	71.03		-0-		-0-
					Na Cl	58.46		1322		77,284

Saturation Values	Distilled Water 20°C
Ca CO ₃	13 Mg/L
Ca SO ₄ • 2H ₂ O	2,090 Mg/L
Mg CO ₃	103 Mg/L

Saturation Values	Distilled Water 20°C
Ca CO ₃	13 Mg/L
Ca SO ₄ • 2H ₂ O	2,090 Mg/L
Mg CO ₃	103 Mg/L

REMARKS

cc: Mr. Roy Henson - Monahans, TX

Mr. Bill Wadkins - Loco Hills, NM

G. Knorr, E. Speck

Respectfully submitted
TRETOLITE COMPANY

Steve Hollinger

ATTACHMENT VIII

GEOLOGY AND LITHOLOGY

The depth to the bottom of the acquifers is $\leq 800'$ (\pm). The proposed disposal zone is the sandstones within the Bell Canyon formation of the Delaware Mountain Group. Approximate depth of the interval is 4,654' - 5,134'.

P. O. BOX 1468
MONAHANS, TEXAS 79756
PH. 943-3234 OR 563-1040

RESULT OF WATER ANALYSES

LABORATORY NO. 69237
SAMPLE RECEIVED 6-4-92
RESULTS REPORTED 6-9-92

SOURCE OF SAMPLE AND DATE TAKEN:

NO. 4 _____

REMARKS:

CHEMICAL AND PHYSICAL PROPERTIES				
	NO. 1	NO. 2	NO. 3	NO. 4
Specific Gravity at 60° F.	1.0046	1.0042		
pH When Sampled				
pH When Received	6.64	6.81		
Bicarbonate as HCO ₃	142	63		
Supersaturation as CaCO ₃				
Undersaturation as CaCO ₃				
Total Hardness as CaCO ₃	1,980	1,860		
Calcium as Ca	576	552		
Magnesium as Mg	131	117		
Sodium and/or Potassium	275	241		
Sulfate as SO ₄	2,182	2,065		
Chloride as Cl	136	131		
Iron as Fe	0.04	0.22		
Barium as Ba				
Turbidity, Electric				
Color as Pt				
Total Solids, Calculated	3,442	3,169		
Temperature °F.				
Carbon Dioxide, Calculated				
Dissolved Oxygen,				
Hydrogen Sulfide	0.0	0.0		
Resistivity, ohms/m at 77° F.	2.30	2.42		
Suspended Oil				
Filtrable Solids as mg/l				
Volume Filtered, ml				
Nitrate, as N	10.5	0.1		

Results Reported As Milligrams Per Liter

Additional Determinations And Remarks The undersigned certifies the above to be true and correct to the best of his knowledge and belief.

Form No. 3

By

Waylan C. Martin, M.A.

cc: Mr. Roy Henson, Monahans

REPORT OF WATER ANALYSIS

LABORATORY: WESTON WATER LABORATORIES, INC.
SAMPLE NO.: 1000
CLIENT: WESTON WATER LABORATORIES, INC.

DATE: 10/10/00
LOCATION: 1000 WESTON DRIVE, WESTON, MA 02456
SOURCE: 1000 WESTON DRIVE, WESTON, MA 02456

ANALYST: J. J. WESTON
TITLE: 1000 WESTON DRIVE, WESTON, MA 02456
NO. 1000

DETAILS

CHEMICAL AND PHYSICAL PROPERTIES		NO. 1000	NO. 1000
1. pH	7.0	1.0	1.0
2. Total Hardness	100 mg/L	1.0	1.0
3. Calcium Hardness	50 mg/L	1.0	1.0
4. Magnesium Hardness	50 mg/L	1.0	1.0
5. Total Solids	100 mg/L	1.0	1.0
6. Dissolved Solids	100 mg/L	1.0	1.0
7. Suspended Solids	100 mg/L	1.0	1.0
8. Chloride	100 mg/L	1.0	1.0
9. Sulfate	100 mg/L	1.0	1.0
10. Nitrate	100 mg/L	1.0	1.0
11. Ammonia	100 mg/L	1.0	1.0
12. Nitrite	100 mg/L	1.0	1.0
13. Copper	100 mg/L	1.0	1.0
14. Lead	100 mg/L	1.0	1.0
15. Cadmium	100 mg/L	1.0	1.0
16. Chromium	100 mg/L	1.0	1.0
17. Manganese	100 mg/L	1.0	1.0
18. Iron	100 mg/L	1.0	1.0
19. Zinc	100 mg/L	1.0	1.0
20. Barium	100 mg/L	1.0	1.0
21. Strontium	100 mg/L	1.0	1.0
22. Boron	100 mg/L	1.0	1.0
23. Fluoride	100 mg/L	1.0	1.0
24. Silica	100 mg/L	1.0	1.0
25. Selenium	100 mg/L	1.0	1.0
26. Vanadium	100 mg/L	1.0	1.0
27. Molybdenum	100 mg/L	1.0	1.0
28. Cobalt	100 mg/L	1.0	1.0
29. Nickel	100 mg/L	1.0	1.0
30. Silver	100 mg/L	1.0	1.0
31. Gold	100 mg/L	1.0	1.0
32. Mercury	100 mg/L	1.0	1.0
33. Arsenic	100 mg/L	1.0	1.0
34. Antimony	100 mg/L	1.0	1.0
35. Bismuth	100 mg/L	1.0	1.0
36. Tellurium	100 mg/L	1.0	1.0
37. Iodine	100 mg/L	1.0	1.0
38. Bromine	100 mg/L	1.0	1.0
39. Chlorine	100 mg/L	1.0	1.0
40. Fluorine	100 mg/L	1.0	1.0
41. Oxygen	100 mg/L	1.0	1.0
42. Hydrogen	100 mg/L	1.0	1.0
43. Carbon	100 mg/L	1.0	1.0
44. Nitrogen	100 mg/L	1.0	1.0
45. Phosphorus	100 mg/L	1.0	1.0
46. Sulfur	100 mg/L	1.0	1.0
47. Silicon	100 mg/L	1.0	1.0
48. Magnesium	100 mg/L	1.0	1.0
49. Calcium	100 mg/L	1.0	1.0
50. Sodium	100 mg/L	1.0	1.0
51. Potassium	100 mg/L	1.0	1.0
52. Barium	100 mg/L	1.0	1.0
53. Strontium	100 mg/L	1.0	1.0
54. Boron	100 mg/L	1.0	1.0
55. Fluorine	100 mg/L	1.0	1.0
56. Silicon	100 mg/L	1.0	1.0
57. Selenium	100 mg/L	1.0	1.0
58. Vanadium	100 mg/L	1.0	1.0
59. Molybdenum	100 mg/L	1.0	1.0
60. Cobalt	100 mg/L	1.0	1.0
61. Nickel	100 mg/L	1.0	1.0
62. Silver	100 mg/L	1.0	1.0
63. Gold	100 mg/L	1.0	1.0
64. Mercury	100 mg/L	1.0	1.0
65. Arsenic	100 mg/L	1.0	1.0
66. Antimony	100 mg/L	1.0	1.0
67. Bismuth	100 mg/L	1.0	1.0
68. Tellurium	100 mg/L	1.0	1.0
69. Iodine	100 mg/L	1.0	1.0
70. Bromine	100 mg/L	1.0	1.0
71. Chlorine	100 mg/L	1.0	1.0
72. Fluorine	100 mg/L	1.0	1.0
73. Oxygen	100 mg/L	1.0	1.0
74. Hydrogen	100 mg/L	1.0	1.0
75. Carbon	100 mg/L	1.0	1.0
76. Nitrogen	100 mg/L	1.0	1.0
77. Phosphorus	100 mg/L	1.0	1.0
78. Sulfur	100 mg/L	1.0	1.0
79. Silicon	100 mg/L	1.0	1.0
80. Magnesium	100 mg/L	1.0	1.0
81. Calcium	100 mg/L	1.0	1.0
82. Sodium	100 mg/L	1.0	1.0
83. Potassium	100 mg/L	1.0	1.0
84. Barium	100 mg/L	1.0	1.0
85. Strontium	100 mg/L	1.0	1.0
86. Boron	100 mg/L	1.0	1.0
87. Fluorine	100 mg/L	1.0	1.0
88. Silicon	100 mg/L	1.0	1.0
89. Selenium	100 mg/L	1.0	1.0
90. Vanadium	100 mg/L	1.0	1.0
91. Molybdenum	100 mg/L	1.0	1.0
92. Cobalt	100 mg/L	1.0	1.0
93. Nickel	100 mg/L	1.0	1.0
94. Silver	100 mg/L	1.0	1.0
95. Gold	100 mg/L	1.0	1.0
96. Mercury	100 mg/L	1.0	1.0
97. Arsenic	100 mg/L	1.0	1.0
98. Antimony	100 mg/L	1.0	1.0
99. Bismuth	100 mg/L	1.0	1.0
100. Tellurium	100 mg/L	1.0	1.0

ATTACHMENT XII

An examination of the surrounding area shows no evidence of open faults or any other hydrologic connection between the disposal zone and the source(s) of drinking water.

ATTACHMENT XIV

PROOF OF NOTICE

Devon Energy Corporation (Nevada) is the leasehold operator in Section 26. The other leasehold operators, Amax (Section 24) and Texaco (Section 25) have been provided a copy of our application by certified mail. Proof of notification is enclosed. Mr. Charles James is the surface owner. Enclosed is a copy of the signed contract negotiated between Devon Energy Corporation (Nevada) and Mr. James for the proposed Todd "26" Federal #2 salt water disposal well.

PROOF OF PUBLICATION

Per discussions with David Catanach in the Santa Fe office on June 9, 1992, this project is subject to administrative approval. Proof of publication is enclosed.

ATTACHMENT XIV
(Proof of Notice)

**DEVON
ENERGY
CORPORATION**

20 North Broadway
Suite 1500
Oklahoma City, Oklahoma 73102

405/235-3611
Fax 405/236-4258

September 30, 1992

AMAX
Engineering Department
P.O. Box 42806
Houston, TX 77042

Certified Mail Receipt # P 307 416 701

RE: Salt Water Disposal Application

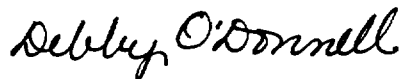
Dear Sirs:

Enclosed is a copy of our Application for Authorization to Inject for the Todd "26" Federal #2 in Section 26-T23S-R31E Eddy County, New Mexico.

Thank you for your attention in this matter. If you have any questions or need additional information, please contact Chuck Horsman (District Engineer) at (405) 235-3611.

Sincerely yours,

DEVON ENERGY CORPORATION



Debby O'Donnell
Engineering Technician

enc.

ATTACHMENT XIV
(Proof of Notice)

**DEVON
ENERGY
CORPORATION**

20 North Broadway
Suite 1500
Oklahoma City, Oklahoma 73102

405/235-3611
Fax 405/236-4258

September 30, 1992

Texaco
Engineering Department
4601 DTC Boulevard
Denver, CO 80237

Certified Mail Receipt # P 307 416 702

RE: Salt Water Disposal Application

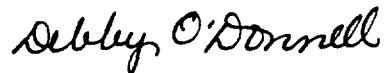
Dear Sirs:

Enclosed is a copy of our Application for Authorization to Inject for the Todd "26" Federal #2 in Section 26-T23S-R31E Eddy County, New Mexico.

Thank you for your attention in this matter. If you have any questions or need additional information, please contact Chuck Horsman (District Engineer) at (405) 235-3611.

Sincerely yours,

DEVON ENERGY CORPORATION



Debby O'Donnell
Engineering Technician

enc.

ATTACHMENT XIV
(Proof of Notice)

SENDER: Complete items 1 and 2 when additional services are desired, and complete items 3 and 4. Put your address in the "RETURN TO" Space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for additional service(s) requested. 1. <input type="checkbox"/> Show to whom delivered, date, and addressee's address. (Extra charge) 2. <input type="checkbox"/> Restricted Delivery (Extra charge)	
3. Article Addressed to: AMAX P.O. Box 42806 Houston, TX 77042	4. Article Number P 307 416 701 Type of Service: <input type="checkbox"/> Registered <input type="checkbox"/> Insured <input checked="" type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail <input checked="" type="checkbox"/> Return Receipt for Merchandise Always obtain signature of addressee or agent and DATE DELIVERED .
5. Signature - Addressee: X [Signature]	8. Addressee's Address (ONLY if requested and fee paid)
6. Signature - Agent X	
7. Date of Delivery 10-6-92	OCT - 6 1992

PS Form 3811, Mar. 1988 * U.S.G.P.O. 1988-212-865 DOMESTIC RETURN RECEIPT

SENDER: Complete items 1 and 2 when additional services are desired, and complete items 3 and 4. Put your address in the "RETURN TO" Space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for additional service(s) requested. 1. <input type="checkbox"/> Show to whom delivered, date, and addressee's address. (Extra charge) 2. <input type="checkbox"/> Restricted Delivery (Extra charge)	
3. Article Addressed to: Texaco Engineering Department 4601 DTC Boulevard Denver, CO 80237	4. Article Number P 307 416 702 Type of Service: <input type="checkbox"/> Registered <input type="checkbox"/> Insured <input checked="" type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail <input checked="" type="checkbox"/> Return Receipt for Merchandise Always obtain signature of addressee or agent and DATE DELIVERED .
5. Signature - Addressee: X	8. Addressee's Address (ONLY if requested and fee paid)
6. Signature - Agent X [Signature]	
7. Date of Delivery 10-5-92	NOV 5 1992

PS Form 3811, Mar. 1988 * U.S.G.P.O. 1988-212-865 DOMESTIC RETURN RECEIPT

SALT WATER DISPOSAL AGREEMENT

State of New Mexico

County of Eddy

This Agreement is made and entered into and shall be effective as of this the 9th day of September 1992, by and between Charles James, whose address is 1207 W. Riverside, Carlsbad, New Mexico 88220, (hereinafter called "Lessor"), and Devon Energy Corporation (Nevada), whose address is 20 North Broadway, Suite 1500, Oklahoma City, Oklahoma 73102 (hereinafter called "Lessee").

For adequate consideration, Lessor grants and conveys to Lessee, the right to inject water, salt water and such other substances as may be produced with oil and/or gas into the Todd 26 Federal #2 (the "Well"), located on the following lands (the "Lands"):

Todd 26 Federal #2
Located 1980' FNL and 1650' FEL
of Section 26-23S-31E
Eddy County, New Mexico

I.

This Agreement is entered into for the purpose of allowing Lessee to dispose of water, salt water, and other substances that may be produced with oil and/or gas from wells located on the Lands and from other lands or leases adjoining or near the Lands, whether the water, salt water or other substance is produced from lands owned by Lessor or otherwise, by injecting water, salt water and other substances into the formations underlying the Lands through the Well. Lessor also grants and conveys to Lessee the unrestricted right-of-way and easement in, upon, under, over and across the Lands, and other lands adjoining or nearby, in which Lessor owns an interest, to lay, repair, maintain and operate pipelines, and to construct and use tank batteries, power stations power lines, roads and other structures and equipment necessary or convenient to save, take care of, treat, store, transport, measure and dispose of water, salt water and other substances, together with the use and rights, at all times, of ingress and egress to and from the Well and the surface area around the Well as may be necessary or convenient to conduct the operations as provided in this Agreement. Lessee will consult with Lessor with respect to the routes to be taken by and the locations of any roads, pipelines, power lines, and other structures constructed under authority of the easement granted herein.

II.

This Salt Water Disposal Agreement is for a term of TEN (10) years, beginning on the Effective Date stated above, unless earlier terminated or abandoned as provided herein. Lessee has the

exclusive right to renew this Agreement for an additional TEN (10) year term, at a price agreed upon by Lessor and Lessee and their successors or assigns, thirty (30) days before the end of the initial TEN (10) year period. If Lessee or its successors decide to terminate this Agreement for any reason prior to the end of the TEN (10) year term, Lessee must notify Lessor of the desired termination date thirty (30) days prior to the termination of the Agreement.

III.

Lessee shall pay Lessor, as an annual rental payment, the sum of \$ 1200.00 beginning on the first anniversary date from the Effective Date. The rental payment may be paid by check or draft of Lessee mailed or delivered to Lessor at the address set out above. Lessor shall have the right to cancel this Lease after 60 days written notice to Lessee, if Lessee fails within said 60 days to remedy any default in payment of rentals.

The annual rental payment shall constitute full consideration for Lessee's right to inject into the Well all water, salt water and other substances.

Lessee's check for annual rentals, if made payable and mailed in accordance with the provisions of this Section III on or before the time required by this Agreement, shall be considered a proper, timely and sufficient payment and legal tender of payment to Lessor.

IV.

Lessee agrees to protect and hold Lessor harmless from and against any and all claims, liability and loss or damage to persons or property which may be occasioned by or which may arise in whole or in part out of Lessee's disposal operations and/or other operations under the terms of this Agreement.

V.

Lessee agrees to comply with all laws, rules and regulations of governmental authorities having jurisdiction relative to operations which may be conducted under this Agreement, and Lessee agrees to exercise its rights under this Agreement in such a manner so as to protect the surface and subsurface of the Lands from contamination which may be injurious to fresh water strata and the surface of the Lands around the Well.

VI.

This Agreement and all rights and obligations may be assigned, either in whole or in part, by Lessor or Lessee; provided, however, Lessor must approve, in writing, any assignment of Lessee's rights

granted herein, which approval shall not be unreasonably withheld. Upon assignment or any change in ownership relative to Lessor's title, Lessee shall not be responsible for payment to Lessor's successors in title for the rental until written evidence of such Assignment or transfer of title is furnished to Lessee. Nonpayment of rental may cause cancellation and forfeiture of this Agreement only when the Lessee fails or refuses to pay the same within thirty (30) days after the due date. Any forfeiture or cancellation of this Agreement shall not relieve or remove the obligations of the parties to this Agreement arising prior to termination or forfeiture which shall continue to exist until paid or satisfied. This Agreement and the rights granted and obligations provided shall be covenants running with the land and shall inure to the benefit of and be binding upon the Lessor and Lessee, their respective heirs, legal representatives, successors and assigns.

VII.

Notices and payments to Lessor or Lessee shall be mailed to the addresses set forth above for the respective parties, and such notices and payments shall be deemed given when deposited with the United States Postal Service in a properly addressed postage paid envelope.

VIII.

Upon termination of this Agreement, Lessee shall plug and abandon the Well in accordance with the applicable governmental rules and regulations, and restore the surface of the Lands to as near their original condition as practicable. Lessee shall have a reasonable amount of time in which to comply with the above stated requirement and remove all property, equipment, fixtures and facilities, including pipelines, placed on the Lands by Lessee.

XI.

This Agreement shall in no way affect ownership of the oil, gas or other minerals in, on or under the Lands. This Agreement is for the sole purpose of allowing Lessee to dispose of water, salt water, and other substances.

LESSOR:

By: Charles James
Charles James

LESSEE:

ATTEST:

DEVON ENERGY CORPORATION (NEVADA)

By: Steve Cromwell
Steve Cromwell
Assistant Secretary

By: [Signature] KLR

State of New Mexico)
County of) SS

The foregoing instrument was acknowledged before me this 9th day of September, 1992, by Charles James, an individual.

My Commission Expires:

Sept 16, 1996

[Signature]
Notary Public

State of Oklahoma)
County of Oklahoma) SS

The foregoing instrument was acknowledged before me this _____ day of _____, 1992, by _____, President of DEVON ENERGY CORPORATION (NEVADA), a Nevada corporation, on behalf of the corporation.

My Commission Expires:

Notary Public

Affidavit of Publication

State of New Mexico,
County of Eddy, ss.

E. C. Cantwell, being first duly sworn,
on oath says:

That he is publisher of the Carlsbad
Current-Argus, a newspaper published daily
at the City of Carlsbad, in said county of
Eddy, state of New Mexico and of general
paid circulation in said county; that the
same is a duly qualified newspaper under
the laws of the state wherein legal notices
and advertisements may be published; that
the printed notice attached hereto was pub-
lished in the regular and entire edition of
said newspaper and not in supplement thereof
on the date as follows, to wit:

OCTOBER 5, 19 92
_____, 19 ____
_____, 19 ____
_____, 19 ____

that the cost of publication is \$ 22.75,
and that payment thereof has been made
and will be assessed as court costs.

E C Cantwell

Subscribed and sworn to before me this
5 day of OCTOBER, 19 92

Linda S. Martin

My commission expires 7/22/96
Notary Public

October 5, 1992

NOTICE OF PUBLICATION

Notice is hereby given that
Devon Energy Corporation
(Nevada) is applying to con-
vert the following well to salt
water disposal:

Todd "26" Federal #2
1980'FSL & 1650' FEL
Section 26-T23S-R31E
Eddy County, NM

The intended purpose of this
injection well is to dispose of
produced Cherry Canyon wa-
ters into the Bell Canyon for-
mation at a depth of +4650'-
5100'. Maximum injected rate
of 3,000-4,000 bwpd and a
maximum injection pressure of
1,000 psi are expected.

Interested parties must file ob-
jections or requests for hear-
ing with the Oil Conservation
Division P.O. Box 2088 Santa
Fe, NM 87501 within 15 days.

Charles W. Horsman

District Engineer
Devon Energy Corporation
(Nevada)
20 North Broadway
Suite 1500
Oklahoma City, OK 73102
(405) 235-3611

**DEVON
ENERGY
CORPORATION**

20 North Broadway
Suite 1500
Oklahoma City, Oklahoma 73102

405/235-3611
Fax 405/236-4258

September 30, 1992

Carlsbad Current Argus
Attn: Classified Department

RE: Legal Advertisement

Dear Carmen,

Enclosed is the legal advertisement we wish to run in your paper. The Oil Conservation Division only requires us to run the ad one time. We must have proof of publication from you in order to complete our application, so please run the ad as soon as possible.

Thank you for your attention in this matter. If you have any questions or need additional information, please call me at (405) 235-3611.

Sincerely yours,

DEVON ENERGY CORPORATION

Debby O'Donnell
Engineering Technician

enc.

Notice of Publication

Notice is hereby given that Devon Energy Corporation (Nevada) is applying to convert the following well to salt water disposal:

Todd "26" Federal #2
1980' FSL & 1650' FEL
Section 26-T23S-R31E
Eddy County, NM

The intended purpose of this injection well is to dispose of produced Cherry Canyon waters into the Bell Canyon formation at a depth of $\pm 4650'$ - $5100'$. Maximum injected rate of 3,000 - 4,000 bwpd and a maximum injection pressure of 1,000 psi are expected.

Interested parties must file objections or requests for hearing with the Oil Conservation Division P.O.Box 2088 Santa Fe, NM 87501 within 15 days.

Charles W. Horsman
District Engineer
Devon Energy Corporation (Nevada)
20 North Broadway Suite 1500
Oklahoma City, OK 73102
(405) 235-3611

Schlumberger

CEMENT BOND LOG VARIABLE DENSITY

COUNTY EDDY, NM Field or LOCATION WILDCAT WELL TODD FEDERAL "26" #2 COMPANY TX AMERICAN OIL	COMPANY <u>TEXAS AMERICAN OIL CORPORATION</u>					
	WELL <u>TODD FEDERAL "26" #2</u>					
	FIELD <u>WILDCAT</u>					
	COUNTY <u>EDDY</u> STATE <u>NEW MEXICO</u>					
LOCATION <u>N 1980' FNL & 1650' FEL,</u> Sec. <u>26</u> Twp. <u>23-S</u> Rge. <u>31-E</u>					Other Services: <u>NGT, CNL</u>	
Permanent Datum: <u>G.L.</u> , Elev. <u>3444</u> Log Measured From <u>K.B.</u> , <u>10</u> Ft. Above Perm. Datum Drilling Measured From <u>K.B.</u>					Elev.: K.B. <u>345</u> D.F. <u>345</u> G.L. <u>344</u>	
Date	2-6-84		Casing Fluid	3% KCL WATER		
Run No.	ONE		Fluid Level	3000'		
Depth - Driller	5990		Max. Rec. Temp.	115 °F (C)		
Depth - Logger	5989		Est. Cement Top	SURFACE		
Btm. Log Interval	5976		Unit	District	5897 HOBE	
Top Log Interval	4300		Recorded By	SCROGGS		
Open Hole Size	7 7/8		Witnessed By	GOZA		
CASING REC.	Size	Wt/Ft	Grade	Type Joint	Top	Bottom
Surface String						
Prot. String						
Prod. String	5 1/2	15.5#			SURF	6140
Liner						
PRIMARY CEMENTING DATA						
STRING	Surface	Protection	Production	Liner		
Vol. of cement						
Type of cement						
Additive						
Retarder						
Wt. of slurry						
Water loss						
Type fluid in csg.						
Fluid wt.						