ENERGY AND MINERALS DEPARTMENT

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

Revised 7-1-81

Case 8817

APPLICATION FOR AUTHORIZATION TO INJECT

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

II. Operator: Pollution Control Inc.

Address: P. O. Box 1060 Lovington, NM 88260

Contact party: Joe D. Ramey Phone: 505-392-6525

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

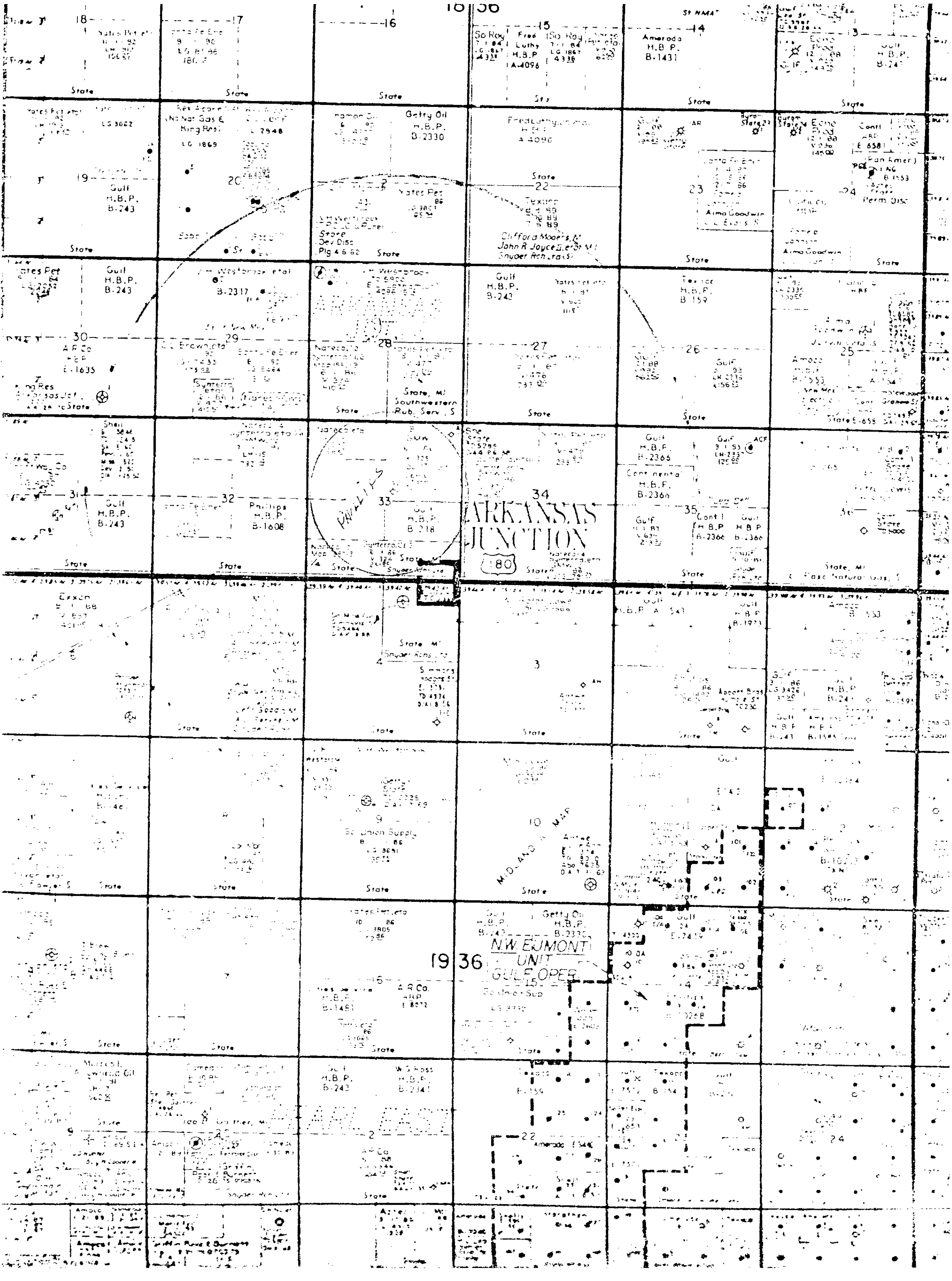
I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.

Name: Joe D. Ramey Title Consultant

Signature: Joe D Ramey Date: 1/9/86

* 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



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Yates Pet
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H.B.P.
B-1431
Echo Prod
Gulf
H.B.P.
B-243
State
Getty Oil
H.B.P.
B-2330
Fred Luthy
A-4096
Rex Appel
King Res
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Gulf
H.B.P.
B-243
Yates Pet
Texaco
Clifford Moeers, M
John R. Joyce
Snyder Rch
Santa Fe Ener
Alma Goodwin
Pan Amer
Perm Disc
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E-6581
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Arkansas Jct
State
J.H. Westbrook et al
B-2317
C.C. Brown et al
Santa Fe Ener
Gulf
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B-159
Amoco
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State, M
Southwestern Rub. Serv., S
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Shell
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PHILLIPS
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Exxon
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State
Sc Union Supply
MIDLAND MAP
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Yates Pet et al
Gulf
H.B.P.
B-243
Getty Oil
H.B.P.
B-2330
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N.W. EUMONT
UNIT
GULF OPER
16
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14
A R Co
H.B.P.
E-8072
Sc Union Sup
Gulf
E-7419
Gulf
H.B.P.
B-243
W.S. Ross
H.B.P.
B-2341
Texaco
B-159
Texaco
B-154
Gulf
Amerada
22
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24
A R Co
Amoco
Griffin Pure
Marathon
State

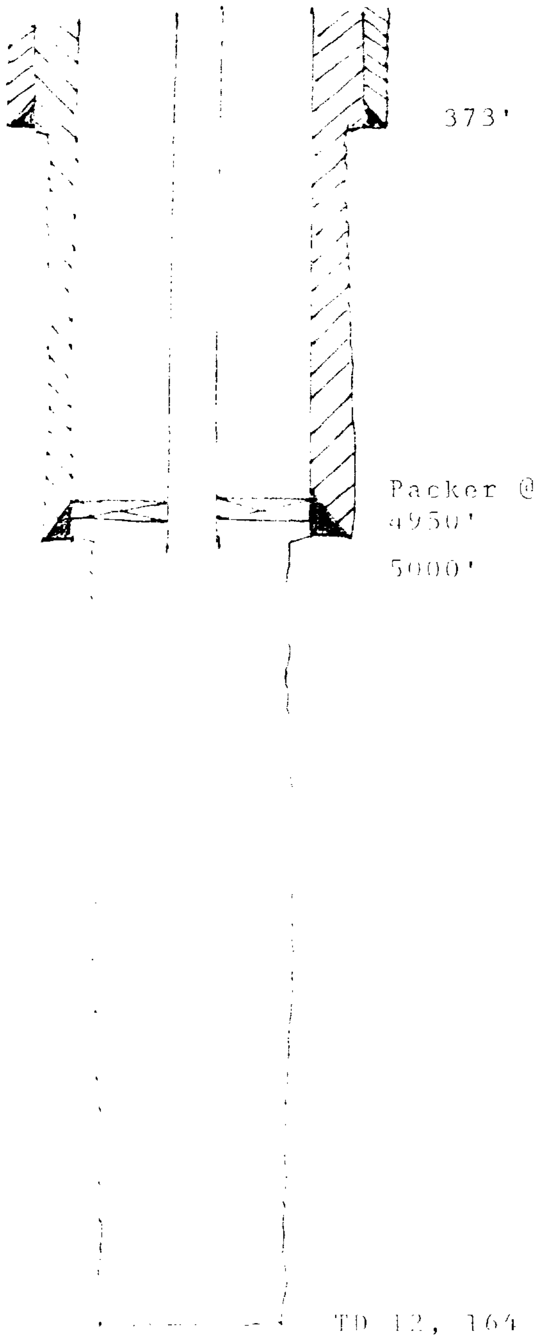
INJECTION WELL DATA SHEET

Pollution Control Inc.	SWD
OPERATOR	LEASE

No. 1	G 2310' N&E	33	18S	36E
WELL NO.	FOOTAGE LOCATION	SECTION	TOWNSHIP	RANGE

Lea County, NM

Schematic



Tabular Data

Surface Casing

Size 13 3/8 " Cemented with 400 sx.

TOC Circulated feet determined by C-103

Hole size 17 ½"

Intermediate Casing

Size 8 5/8 " Cemented with 2300 sx.

TOC Circulated feet determined by C-103

Hole size 12 ¼"

Long string

Size - " Cemented with - sx.

TOC - feet determined by -

Hole size 7 7/8"

Total depth 12,164'

Injection interval

5,000 feet to 12, 164 feet
(perforated or open-hole, indicate which)

Tubing size 2 7/8" lined with plastic coating (material) set in a

Baker Model D or similar (brand and model) packer at 4950 feet

(or describe any other casing-tubing seal).

Other Data

1. Name of the injection formation Abo-Wolfcamp-Mississippian-Devonian

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

3. Is this a new well drilled for injection? ☐ Yes ☒ No

If no, for what purpose was the well originally drilled? Oil & gas test. P&A

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)

None

5. Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area. West Arkansas Junction San Andres Pool to the northwest at a depth of 5470'-5525'. The Monument and Eumont Pools are situated to the southeast and ~~are~~ at a depth of around 3200'-3800'

The subject well was drilled as the L&B Oil Company, Inc., State "AJ" Well No. 1 and is located in Unit G, 2310 feet from the north and east lines of Section 33, Township 18 South, Range 36 East, Lea County, New Mexico. It was drilled to a total depth of 12,164 feet to the Devonian formation as an oil and gas test. It was spudded on 12/17/82 and plugged and abandoned on 2/17/83. Surface casing is 13 3/8" set at 373 feet with 400 sxs. cement circulated and 8 5/8" intermediate casing set at 5000 feet with 2300 sxs. cemented circulated.

Applicant proposes to re-enter, drill out cement plugs and clean out to the total depth of 12,164 feet. Acid will be used to treat those intervals of good porosity as indicated on the electric log. Plastic lined 2 7/8" tubing will be utilized in the well and will be used in conjunction with a packer to be set at approximately 4950 feet. The annular space above the packer will be filled with an inert fluid and a pressure guage installed to detect any tubing or packer leaks.

The disposal system will be an open system with facilities available for truck delivery. Initial injection of 2000 barrels per day is anticipated with a maximum volume of 10,000 barrels. per day. The well should handle these volumes by gravity. However, an injection pressure of 2430 psi is requested for the well.

The primary injection zone is the Devonian from 12,136 to 12,162 feet. The Devonian in the well is a limestone with vuggy porosity and good indicated permeability. During periods of high injection rates the fluid level may be high enough in the well bore wherein fluids may enter other zones as well. The electric log indicates zones of good porosity and permeability in the Mississippian, Wolfcamp, and Abo which could take water if the fluid level is high enough in the well bore. These formations are also predominately limestone interbedded with shale and minor amounts of sandstone. The depth and thickness of these formations is as follows:

Abo	7434'	1286'
Wolfcamp	9384'	627'
Mississippian	11309'	634'

There are no known wells within the one-half mile area of review.

Analysis of the receiving fluid will be accomplished upon completion of the well. Compatability tests will be conducted on all fluids to be injected prior to injection of those fluids.

The only fresh water in the area is found in the Ogallala formation. The base of the fresh water is around 280 feet. After examining the available geologic and engineering data, there is no evidence of open faulting or any other hydrolic connection between any disposal zones and any underground source of drinking water. Fresh water samples from nearby wells have been analized and are attached as part of this application.

Copies of this application have been furnished to the surface owner and to all leasehold operators within one-half mile of the well, address list attached.

5603

WATER ANALYSIS REPORT

TECH SERVICE LABORATORY: Odessa, Texas Phone (915) 337-0055 & 563-0863
RESEARCH LABORATORY: Houston, Texas Phone (713) 431-2561
PLANT: Odessa, Texas Phone (915) 337-0055

Champion Chemicals, Inc.

BOX 4513
ODESSA, TEXAS 79760

REPORT FOR Patrick Gray
CC Skidmore
CC
CC
COMPANY General Petroleum
ADDRESS
SERVICE ENGINEER Cecil Brumley

DATE SAMPLED 12-26-85
DATE REPORTED 12-26-85
FIELD, LEASE, OR WELL Fresh water
COUNTY STATE
FORMATION
DEPTH
SUBMITTED BY

CHEMICAL ANALYSIS (AS PARTS PER MILLION)

	Field, Lease, or Well					
Chemical Component	#1	#2	#3	#4		
Chloride (Cl)	50	50	50	50		
Iron (Fe)	0	0	0	0		
Total Hardness ($CaCO_3$)	190	230	200	190		
Calcium (Ca)	68	92	64	68		
Magnesium (Mg)	4.9	9.7	9.7	4.9		
Bicarbonate (HCO_3)	232	183	195	207		
Carbonate (CO_3)	0	0	0	0		
Sulfate (SO_4)	41.3	90	61.2	57.5		
Hydrogen Sulfide (H_2S)	0	0	0	0		
Specific Gravity	1.001	1.001	1.001	1.001		
~~Density lb/gal~~ TDS	449.3	445.2	423.4	438		
pH - Beckman ☒ Strip ☐	7.4	7.5	7.5	7.8		
Sodium	53.1	20.5	43.5	50.6		
Scale Index						
$CaCO_3$ 85 F	0.23	0.35	0.23	0.58		
$CaCO_3$ 160 F	0.96	1.08	0.96	1.31		
$CaSO_4$	neg.	neg.	neg.	neg.		

OTHER DESCRIPTION, REMARKS AND RECOMMENDATIONS

REPORTED BY Joe Edwards TITLE Tech Service

ADDRESS LIST

Snyder Ranches
P. O. Box 726
Lovington, NM 88260

New Mexico Land Office
P. O. Box 1148
Santa Fe, NM 87504-1148

Synterra Oil & Gas Company, Inc.
P. O. Box 8822
Midland, TX 79703

Chevron Oil Company
Box 670
Hobbs, NM 88240

Phillips Petroleum Company
4001 Penbrook
Odessa, TX 79762

Yates Petroleum Corp.
207 South Fourth
Artesia, NM 88210