

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

N.M.
P.O. Box

FORM APPROVED
Budget Bureau No. 1004-0135
Expires: March 31, 1993

5. Lease Designation and Serial No.
LC 032579(C)NM90798

6. If Indian, Allottee or Tribe Name

N/A

7. If Unit or CA, Agreement Designation

N/A

8. Well Name and No.
CARLSON A FED.#2

9. API Well No.
30-025-11696

10. Field and Pool, or Exploratory Area
LANGLIE MATTIX 7 RVRS

11. County or Parish, State
LEA COUNTY, NM

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to deepen or reentry to a different reservoir.
Use "APPLICATION FOR PERMIT—" for such proposals

SUBMIT IN TRIPLICATE

1. Type of Well
☒ Oil Well ☐ Gas Well ☐ Other

2. Name of Operator
Permian Resources, Inc. dba Permian Partners, Inc.

3. Address and Telephone No.
P. O. Box 590 Midland, TX 79702 915/685-0113

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)
UNIT LETTER O, SEC. 22, T-25-S, R-37-E,
990' FROM THE SOUTH LINE, 1650' FROM THE EAST LINE

12. CHECK APPROPRIATE BOX(S) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION	
<input type="checkbox"/> Notice of Intent	<input type="checkbox"/> Abandonment	<input type="checkbox"/> Change of Plans
<input checked="" type="checkbox"/> Subsequent Report	<input type="checkbox"/> Recompletion	<input type="checkbox"/> New Construction
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Plugging Back	<input type="checkbox"/> Non-Routine Fracturing
	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> Water Shut-Off
	<input type="checkbox"/> Altering Casing	<input type="checkbox"/> Conversion to Injection
	<input type="checkbox"/> Other	<input checked="" type="checkbox"/> Dispose Water

(Note: Report results of multiple completion or well completion or recompletion upon the Log form)

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)

REQUESTING WATER DISPOSAL APPROVAL(SEE ATTACHMENTS)

RECEIVED
1999 MAY -7 P 4: 30
BUREAU OF LAND MGMT.
10335, NEW MEXICO

14. I hereby certify that the foregoing is true and correct

Signed David R. Glass

Title Report

Date 5-6-99

(This space for Federal or State office use)

(ORIG. SGD.) DAVID R. GLASS

Title PETROLEUM ENGINEER

Date MAY 13 1999

Approved by
Conditions of approval, if any:

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statement or representations as to any matter within its jurisdiction.

*See Instruction on Reverse Side

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

TOTAL P.03

Water Production & disposal Information

In order to process your disposal request, the following information must be completed:

1. Name of formations producing water on the lease. Seven Rivers
2. Amount of water produced from all formations in barrels per day. 12
3. Attach a current water analysis of produced water from all zones showing at least the total dissolved solids, ph, and the concentrations of chlorides and sulfates. (one sample will suffice if the water is commingled)
4. How water is stored on the lease. Water dumps straight into disposal line
5. How water is moved to the disposal facility. Pipeline
6. Identify the Disposal Facility by :
 - A. Facility operators name. Rice Operating Company
 - B. Name of facility or well name & number. Henry No.2 Well
 - C. Type of facility or well (WDW) (WIW) etc. SWD
 - D. Location by 1/4 1/4 Unit N section 26 township 25S range 37E
7. Attach a copy of the State issued permit for the Disposal Facility.

Submit to this office, 414 West Taylor, Hobbs, NM 88240, the above required information on a sundry Notice 3160-5. submit 1 original and 3 copies, within the required time frame. (This form may be used as an attachment to the Sundry Notice.) Call me at 505-393-3612 if you need to further discuss this matter.



ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION

ORDER NO. SWD-349

GARREY CARAUTHERS
GOVERNOR

POST OFFICE BOX 208
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 8
15051 B27-5800

APPLICATION OF RICE ENGINEERING CORPORATION

ADMINISTRATIVE ORDER
OF THE OIL CONSERVATION DIVISION

Under the provisions of Rule 701(B), Rice Engineering Corporation made application to the New Mexico Oil Conservation Division on July 5, 1988, for permission to complete for salt water is Henry Well No. 2, located in Unit N, of Section 26, Township 25 South, Range 37 East, NMPM, Lea County, New Mexico.

THE DIVISION DIRECTOR FINDS THAT:

(1) The application has been duly filed under the provisions of Rule 701(B) of the Division Rules and Regulations.

(2) Satisfactory information has been provided that all offset operators and surface owners have been duly notified; and

(3) The applicant has presented satisfactory evidence that all requirements prescribed in Rule 701 will be met.

(4) No objections have been received within the waiting period prescribed by said rule.

IT IS THEREFORE ORDERED THAT:

(1) The applicant herein, Rice Engineering Corporation is hereby authorized to complete its Henry Well No. 2 located in Unit N of Section 26, Township 25 South, Range 37 East, NMPM, Lea County, New Mexico, in such a manner as to permit the injection of salt water for disposal purposes into the San Andres and Glorieta formations at approximately 3500 feet to approximately 5000 feet through 3 1/2-inch plastic lined tubing set in a packer located at approximately 3450 feet.

IT IS FURTHER ORDERED THAT:

The operator shall take all steps necessary to ensure that the injected water enters only the proposed injection interval and is not permitted to escape to other formations or onto the surface.

Prior to commencing injection operations into the well, the casing shall be pressure tested from the surface to the packer setting depth to assure the integrity of said casing.

The casing-tubing annulus shall be loaded with an inert fluid and equipped with a pressure gauge at the surface or left open to the atmosphere to facilitate detection of leakage in the casing, tubing or packer.

The injection well or system shall be equipped with a pressure limiting device which will limit the wellhead pressure on the injection well to no more than 700 psi.

The Director of the Division may authorize an increase in injection pressure upon a proper showing by the operator of said well that such higher pressure will not result in migration of the injected fluid from the San Andres and Glorieta formations. Such proper showing shall consist of a valid step-rate test run in accordance with and acceptable to this office.

The operator shall notify the supervisor of the Hobbs district office of the Division of the date and time of the installation of disposal equipment and of the mechanical integrity test so that the same may be inspected and witnessed.

The operator shall immediately notify the supervisor of the Hobbs district office of the Division of the failure of the tubing, casing or packer in said well and shall take such steps as may be timely and necessary to correct such failure or leakage.

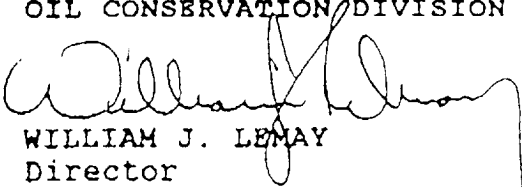
PROVIDED FURTHER THAT, jurisdiction of this cause is hereby retained by the Division for such further order or orders as any seem necessary or convenient for the prevention of waste and/or protection of correlative rights; upon failure of the operator to conduct operations in a manner which will ensure the protection of fresh water or in a manner inconsistent with the requirements set forth in this order, the Division may, after notice and hearing, terminate the injection authority granted herein.

The operator shall submit monthly reports of the disposal operations in accordance with Rule 706 and 1120 of the Division Rules and Regulations.

Order SWD-349
Page 3

Approved at Santa Fe, New Mexico, on this 14th day of
September, 1988.

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION


WILLIAM J. LEMAY
Director

S E A L

RECEIVED

SEP 14 1988

ENGINEERING DIVISION
HOUSTON, TEXAS

TO	✓
SAH	✓
Gr. Dept.	✓
FILE	✓

DONCO

CHEMICAL CORPORATION

P.O. Box 775 Andrews, Tx. 79714 Telephone 915 524-6500

DATE
ANALYSIS

May 6, 1999

COMPANY

Permian Resources

SOURCE

Carlson A-22 Battery

	ANALYSIS	MG/L	*MEG/L
1	PH	7.00	
2	H ₂ S (QUALITATIVE)	Pos.	
3	SPECIFIC GRAVITY	1.01	
4	DISSOLVED SOLIDS	30781	
5	SUSPENDED SOLIDS		
6	PHENOLPHTHALEIN ALK (CaCO ₃)		
7	METHYL ORANGE ALK (CaCO ₃)	1140	
8	BICARBONATE (HCO ₃)	1381	22.80
9	CHLORIDES (Cl)	12900	363.38
10	SULFATES (SO ₄)	5500	114.58
11	CALCIUM (Ca)	2320	116.00
12	MAGNESIUM (Mg)	194	15.93
13	TOTAL HARDNESS (CaCO ₃)	6600	
14	TOTAL IRON (Fe)	8	
15	BARIUM (QUALITATIVE)		
16	STRONTIUM		
*MILLI	EQUIVALENTS PER LITER		

PROBABLE MINERAL COMPOSITION

116.00	Ca	HCO ₃	22.80
15.93	Mg	SO ₄	114.58
368.83	Na	Cl	363.38

COMPOUND	EQUIV. WT. X	MEG/L	MG/L
Ca (HCO ₃) ₂	81.04	22.80	1847.71
Ca SO ₄	68.07	114.58	7799.69
Ca Cl ₂	55.50	-21.38	-1188.78
Mg (HCO ₃) ₂	73.17	0.00	0.00
Mg SO ₄	60.19	0.00	0.00
Mg Cl ₂	47.62	15.93	758.80
Na HCO ₃	84.00	0.00	0.00
Na ₂ SO ₄	71.03	0.00	0.00
Na Cl	58.46	368.83	21581.75
			30781.18

PG.2

Carlson A-22 Battery

S.I.=PH - PC - -PC - PALK - K
 S.I. = STABILTY INDEX
 PH. = AS MEASURED ON FRESH SAMPLE
 PCA. = NEG. LOGARITHM OF CALCIUM CONCENTRATION
 PALK.= NEG. LOGARITHM OF TOTAL ALKALINITY
 K. = CONSTANT, DEPENDS UPON TEMP. & SALT

CALCULATIONS

NA	8483.07	0.00	0.19
CA	2320.00	0.00	0.12
MG	194.40	0.00	0.02
CI	12900.00	0.00	0.18
HCO 3	1390.80	0.00	0.01
SO 4	5500.00	0.00	0.12

TOTAL IONIC STRENGTH	0.00	0.63
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STABILTY INDEX

PH =	7.00	PH =	7.00
PCA =	1.23	PCA =	1.23
PALK =	1.88	PALK =	1.88
K =	1.62	K =	3.20
SI @ 180°	2.49	SI @ 80°	0.91

SI= 0 OR	WATER RELATIVELY STABLE UNDER	50 °F
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REMARKS	INDICATES SCALING @ TEMP ABOVE (POS. SI INDICATES SCALING)	50 °F
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SCALING TENDENCY CALCULATION USING SKILLMAN-McDONALD-STIFF METHOD

@ 80°, K =	0.001253600
@ 180°, K =	0.001159800
X =	0.000800000
X°X =	0.000000840

	meq/l	mg/l
@80°, S =	70.00	4765.00
@180°, S =	67.30	4581.00

From Probable Mineral Composition, Ca SO4 =	7799.69
	4830.00

Because probable mineral composition is less than 4813 (calculated),
 the water should be stable. At temperatures close to 180 degrees,
 there is a slight potential toward the deposition of Calcium Sulphate