

SAMPLE NO. \_\_\_\_\_

**THE WESTERN COMPANY**  
Service Laboratory

**WATER ANALYSIS**

Operator \_\_\_\_\_  
Well **Irrigation Well**  
Field **George Ross**  
Field **2 miles west**  
Formation \_\_\_\_\_  
Depth \_\_\_\_\_  
County \_\_\_\_\_

Sample #1

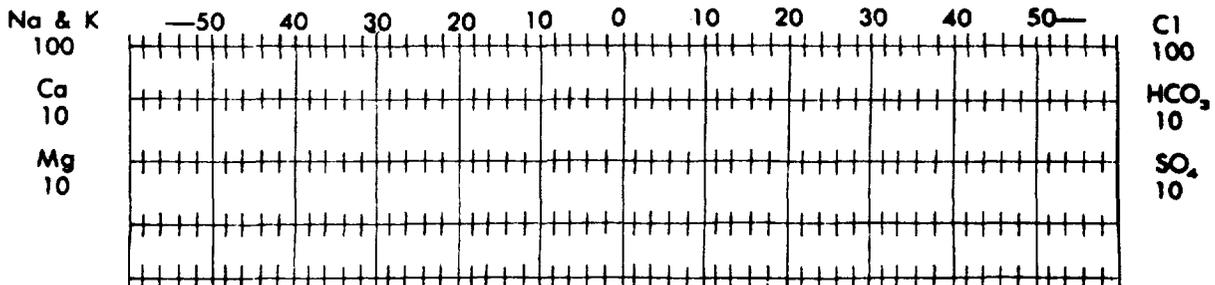
Date Sampled \_\_\_\_\_  
Date Received **5-2-69**  
Submitted by **Mr. Noel Sikes**  
Worked by **Jones**  
Other Description \_\_\_\_\_

**CHEMICAL DETERMINATIONS**

Density	<u>1.000 @ 75° F</u>	pH	<u>8.1</u>
Iron	<u>No Trace</u>	Hydrogen Sulfide	<u>None</u>
Sodium and Potassium	<u>13,610</u> ppm	Bicarbonate	<u>330</u> ppm
Calcium	<u>600</u> ppm	Sulfate	<u>1,980</u> ppm
Magnesium	<u>150</u> ppm	Phosphate	_____ ppm
Chloride	<u>1,944</u> ppm	as Sodium Chloride	_____ ppm

Remarks:

for Stiff type plot (in meq./l.)



Per Robert Jones

SAMPLE NO. \_\_\_\_\_

**THE WESTERN COMPANY**  
Service Laboratory

**WATER ANALYSIS**

Sample #2

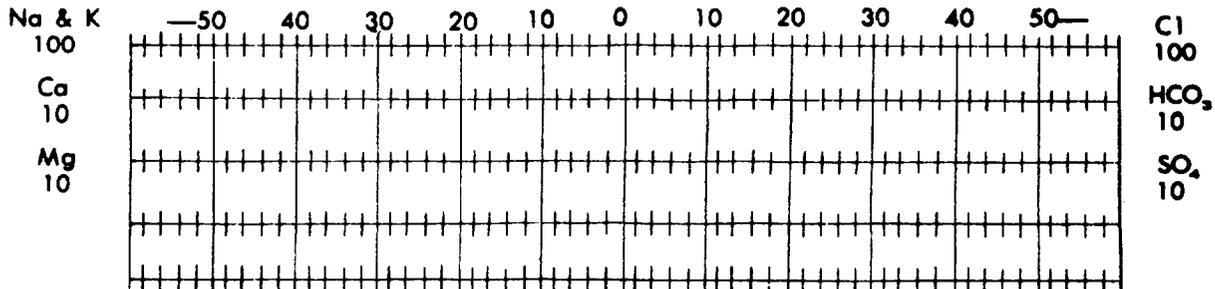
Operator	El Paso Water	Date Sampled	
Well	Wells 2 miles	Date Received	5-2-69
Field	Northeast	Submitted by	Mr. Noel Sikes
Formation		Worked by	Jones
Depth		Other Description	
County			

**CHEMICAL DETERMINATIONS**

Density	1.000 @ 75°F	pH	8.2
Iron	No Trace	Hydrogen Sulfide	None
Sodium and Potassium	408 ppm	Bicarbonate	244 ppm
Calcium	136 ppm	Sulfate	450 ppm
Magnesium	29 ppm	Phosphate	ppm
Chloride	480 ppm	as Sodium Chloride	ppm

Remarks:

for Stiff type plot (in meq./l.)



Per Robert C Jones

SAMPLE NO. \_\_\_\_\_

**THE WESTERN COMPANY**  
Service Laboratory

**WATER ANALYSIS**

Sample #3

Operator **Clark Windmill**  
Well **Texas**  
Field **2½ - 3 miles south**  
Formation \_\_\_\_\_  
Depth \_\_\_\_\_  
County \_\_\_\_\_

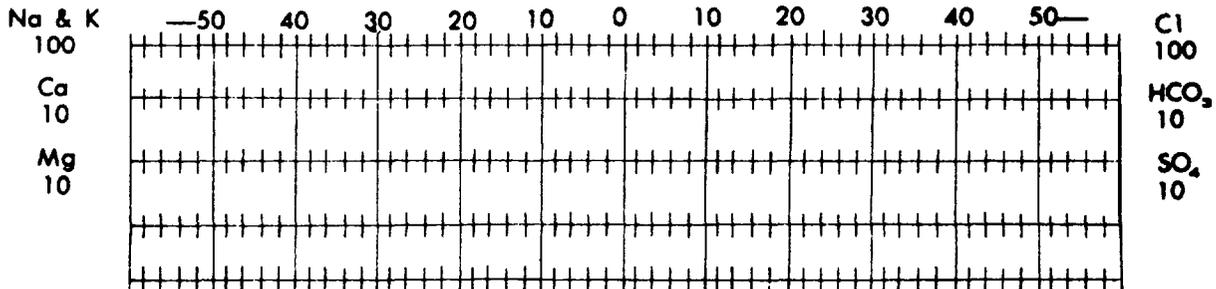
Date Sampled \_\_\_\_\_  
Date Received **5-2-69**  
Submitted by **Mr. Noel Sikes**  
Worked by **Jones**  
Other Description \_\_\_\_\_

**CHEMICAL DETERMINATIONS**

Density	<u>1.000 @ 77°F</u>	pH	<u>8.1</u>
Iron	<u>Very Faint Trace</u>	Hydrogen Sulfide	<u>None</u>
Sodium and Potassium	<u>293</u> ppm	Bicarbonate	<u>330</u> ppm
Calcium	<u>735</u> ppm	Sulfate	<u>2,160</u> ppm
Magnesium	<u>189</u> ppm	Phosphate	_____ ppm
Chloride	<u>520</u> ppm	as Sodium Chloride	_____ ppm

Remarks:

for Stiff type plot (in meq./l.)



Per Robert C Jones

SAMPLE NO. \_\_\_\_\_

**THE WESTERN COMPANY**  
Service Laboratory

**WATER ANALYSIS**

Sample #4

Operator	James Ranch House	Date Sampled	
Well	Windmill	Date Received	5-2-69
Field	1 1/4 - 1 1/2 miles Southwest	Submitted by	Mr. Noel Sikes
Formation		Worked by	Jones
Depth		Other Description	
County			

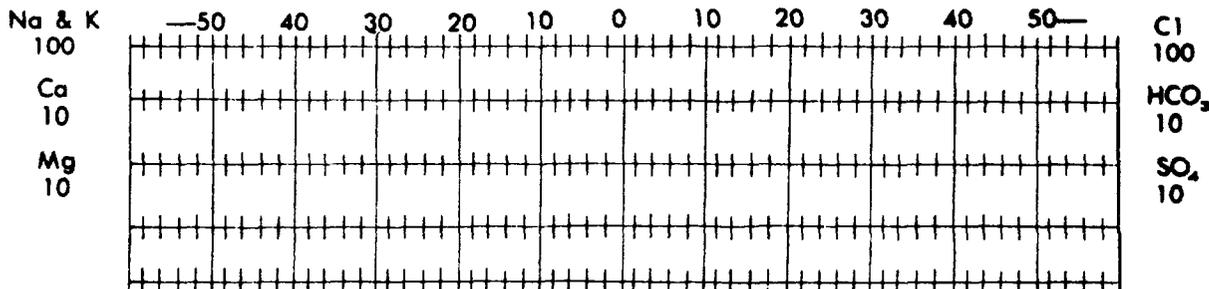
**CHEMICAL DETERMINATIONS**

Density	1.000 @ 74°F	pH	9.0
Iron	No Trace	Hydrogen Sulfide	None
Sodium and Potassium	221 ppm	Bicarbonate	463 ppm
Calcium	27 ppm	Sulfate	160 ppm
Magnesium	35 ppm	Phosphate	ppm
Chloride	104 ppm	as Sodium Chloride	ppm

Remarks:

*F 13*

for Stiff type plot (in meq./l.)



Per Robert C Jones

SAMPLE NO. \_\_\_\_\_

**THE WESTERN COMPANY**  
Service Laboratory

**WATER ANALYSIS**

Sample #5

Operator	Water Station	Date Sampled	
Well	Windmill	Date Received	5-2-69
Field	2 miles east on Jal highway	Submitted by	Mr. Noel Sikes
Formation		Worked by	Jones
Depth		Other Description	
County			

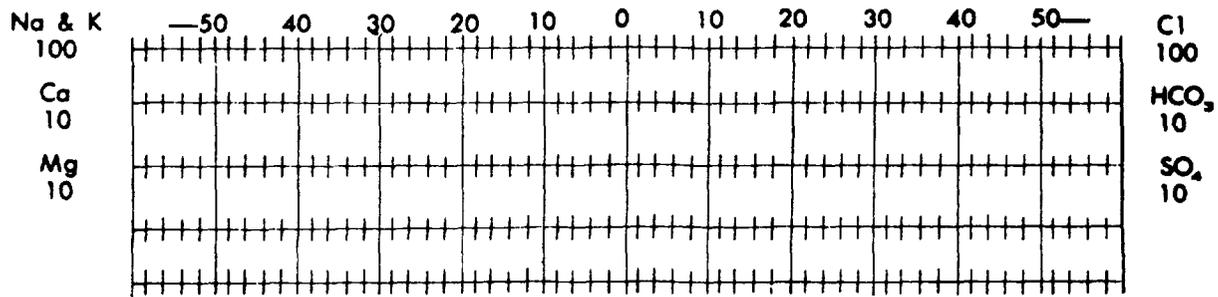
**CHEMICAL DETERMINATIONS**

Density	1.000 @ 76°F	pH	8.5
Iron	No Trace	Hydrogen Sulfide	None
Sodium and Potassium	259 ppm	Bicarbonate	462 ppm
Calcium	29 ppm	Sulfate	200 ppm
Magnesium	31 ppm	Phosphate	ppm
Chloride	124 ppm	as Sodium Chloride	ppm

Remarks:

*Handwritten scribble*

for Stiff type plot (in meq./l.)



Per Robert C Jones

SAMPLE NO. \_\_\_\_\_

**THE WESTERN COMPANY**  
Service Laboratory

**WATER ANALYSIS**

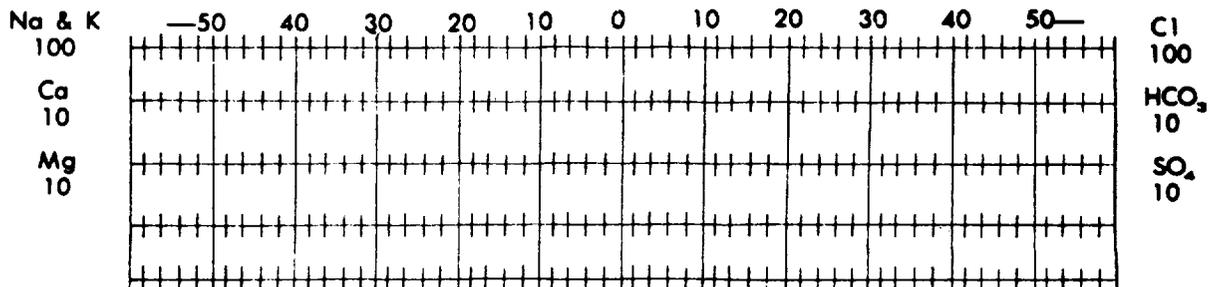
Operator	Pecos River West of Ross Farm	Date Sampled	
Well		Date Received	5-3-69
Field		Submitted by	Kermit District
Formation		Worked by	
Depth		Other Description	
County			

**CHEMICAL DETERMINATIONS**

Density	1.008 @ 74°F	pH	8.1
Iron	No Trace	Hydrogen Sulfide	None
Sodium and Potassium	4,620 ppm	Bicarbonate	292 ppm
Calcium	600 ppm	Sulfate	2,270 ppm
Magnesium	301 ppm	Phosphate	ppm
Chloride	7,420 ppm	as Sodium Chloride	ppm

Remarks:

for Stiff type plot (in meq./l.)



Per Robert C Jones

HALLIBURTON DIVISION LABORATORY  
HALLIBURTON COMPANY  
MIDLAND DIVISION

LABORATORY WATER ANALYSIS

No. W69-271

To CURTIS HANKAMER

Date 4-7-69

724 HOUSTON BANK & TRUST BLDG.

HOUSTON, TEXAS 77000

This report is the property of Halliburton Company and neither it nor any part thereof nor a copy thereof is to be published or disclosed without first securing the express written approval of laboratory management; it may however, be used in the course of regular business operations by any person or concern and employees thereof receiving such report from Halliburton Company.

Submitted by \_\_\_\_\_ Date Rec. 4-6-69

Well No. AS MARKED Depth \_\_\_\_\_ Formation \_\_\_\_\_

County \_\_\_\_\_ Field \_\_\_\_\_ Source DOUBLE X

	<u>BEATY GULF</u>	<u>HANSON FEDERAL</u>	<u>HANAGAN FEDERAL</u>
Resistivity	<u>0.073 @ 68° F.</u>	<u>0.070 @ 68° F.</u>	<u>0.049 @ 68° F.</u>
Specific Gravity	<u>1.094</u>	<u>1.097</u>	<u>1.164</u>
pH	<u>7.0</u>	<u>7.3</u>	<u>5.0</u>
Calcium (Ca)	<u>10,900</u>	<u>10,300</u>	<u>24,900</u> *MPL
Magnesium (Mg)	<u>1,740</u>	<u>2,820</u>	<u>3,350</u>
Chlorides (Cl)	<u>85,000</u>	<u>91,000</u>	<u>154,000</u>
Sulfates (SO <sub>4</sub> )	<u>1,530</u>	<u>1,600</u>	<u>600</u>
Bicarbonates (HCO <sub>3</sub> )	<u>61</u>	<u>85</u>	<u>36</u>
Soluble Iron (Fe)	<u>Nil</u>	<u>Nil</u>	<u>260</u>

Remarks:

\*Milligrams per liter

Respectfully submitted,

Analyst: CARLILE - BREWER  
cc: THORNTON HOOPER

HALLIBURTON COMPANY

By *N.C. Carlile*  
DIVISION CHEMIST

NOTICE

This report is limited to the described sample tested. Any user of this report agrees that Halliburton shall not be liable for any loss or damage, whether it be to act or omission, resulting from such report or its use.

HALLIBURTON DIVISION LABORATORY  
HALLIBURTON COMPANY  
MIDLAND DIVISION

LABORATORY WATER ANALYSIS No. W69-272

To CURTIS HANKAMER

Date 4-7-69

724 HOUSTON BANK & TRUST BLDG.

HOUSTON, TEXAS 77000

This report is the property of Halliburton Company and neither it nor any part thereof nor a copy thereof is to be published or disclosed without first securing the express written approval of laboratory management; it may however, be used in the course of regular business operations by any person or concern and employees thereof receiving such report from Halliburton Company.

Submitted by \_\_\_\_\_ Date Rec. 4-6-69

Well No. AS MARKED (LEASE) Depth \_\_\_\_\_ Formation \_\_\_\_\_

County \_\_\_\_\_ Field \_\_\_\_\_ Source \_\_\_\_\_

	<u>GULF FEDERAL</u>	<u>GULF FEDERAL "A"</u>	
Resistivity	<u>0.061 @ 68° F.</u>	<u>0.061 @ 68° F.</u>	
Specific Gravity	<u>1.098</u>	<u>1.098</u>	
pH	<u>7.0</u>	<u>6.9</u>	
Calcium (Ca)	<u>10,700</u>	<u>11,300</u>	*MPL
Magnesium (Mg)	<u>2,400</u>	<u>2,970</u>	
Chlorides (Cl)	<u>89,000 ✓</u>	<u>88,000 ✓</u>	
Sulfates (SO <sub>4</sub> )	<u>1,370</u>	<u>1,280</u>	
Bicarbonates (HCO <sub>3</sub> )	<u>73</u>	<u>73</u>	
Soluble Iron (Fe)	<u>NIL</u>	<u>NIL</u>	
.....	.....	.....	.....
.....	.....	.....	.....
.....	.....	.....	.....

Remarks: \_\_\_\_\_ \*Milligrams per liter

Respectfully submitted,

Analyst: CARLILE BREWER  
CC: THORNTON HOOPER

HALLIBURTON COMPANY

By *M. C. Carlile*  
DIVISION CHEMIST

NOTICE

This report is limited to the described sample tested. Any user of this report agrees that Halliburton shall not be liable for any loss or damage, whether it be to act or omission, resulting from such report or its use.

BEFORE THE OIL CONSERVATION COMMISSION  
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING  
CALLED BY THE OIL CONSERVATION  
COMMISSION OF NEW MEXICO FOR  
THE PURPOSE OF CONSIDERING:

CASE No. 4127  
Order No. R-3762

APPLICATION OF CURTIS HANKAMER  
FOR AN EXCEPTION TO ORDER NO.  
R-3221, AS AMENDED, LEA COUNTY,  
NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on May 7, 1969,  
at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this 20th day of May, 1969, the Commission, a  
quorum being present, having considered the testimony, the record,  
and the recommendations of the Examiner, and being fully advised  
in the premises,

FINDS:

(1) That due public notice having been given as required by  
law, the Commission has jurisdiction of this cause and the subject  
matter thereof.

(2) That the applicant, Curtis Hankamer, is the owner and  
operator of two wells located in Section 11, Township 24 South,  
Range 32 East, NMPM, Double X-Delaware Pool, Lea County, New  
Mexico.

(3) That effective January 1, 1969, Order (3) of Commission  
Order No. R-3221, as amended, prohibits in that area encompassed  
by Lea, Eddy, Chaves, and Roosevelt Counties, New Mexico, the  
disposal, subject to minor exceptions, of water produced in  
conjunction with the production of oil or gas, or both, on the  
surface of the ground, or in any pit, pond, lake, depression,  
draw, streambed, or arroyo, or in any watercourse, or in any

-2-

CASE No. 4127  
Order No. R-3762

other place or in any manner which would constitute a hazard to any fresh water supplies and said disposal has not previously been prohibited.

(4) That the aforesaid Order No. R-3221 was issued in order to afford reasonable protection against contamination of fresh water supplies designated by the State Engineer through disposal of water produced in conjunction with the production of oil or gas, or both, in unlined surface pits.

(5) That the State Engineer has designated, pursuant to Section 65-3-11 (15), N.M.S.A., 1953 Compilation, all underground water in the State of New Mexico containing 10,000 parts per million or less of dissolved solids as fresh water supplies to be afforded reasonable protection against contamination; except that said designation does not include any water for which there is no present or reasonably foreseeable beneficial use that would be impaired by contamination.

(6) That the applicant seeks an exception to the provisions of the aforesaid Order (3) to permit the continued disposal of salt water, produced by applicant's two wells located in said Section 11, in an unlined surface pit located in the SE/4 SE/4 of said Section 11.

(7) That the subject wells produce approximately 23 barrels of water per day.

(8) That fresh water supplies as designated by the State Engineer exist in the vicinity of the subject wells and in the vicinity of the unlined surface pit serving said wells.

(9) That the applicant has failed to establish that disposal of water produced in conjunction with the production of oil or gas, or both, by the subject wells in the subject unlined pit would not constitute a threat of contamination of fresh water supplies existing in the vicinity of said pit.

(10) That the subject application should be denied.

IT IS THEREFORE ORDERED:

(1) That the subject application is hereby denied.

-3-

CASE No. 4127

Order No. R-3762

(2) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO  
OIL CONSERVATION COMMISSION

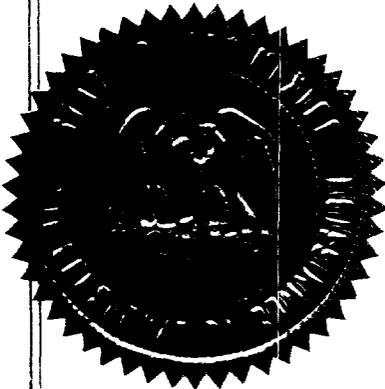
DAVID F. CARGO, Chairman



ALEX J. ARMIJO, Member



A. L. PORTER, Jr., Member & Secretary



esr/