

SAMPLE NO. _____

THE WESTERN COMPANY

Service Laboratory

WATER ANALYSIS

Sample #1

Operator

Irrigation Well

Well

George Ross

Field

2 miles west

Formation

Depth

County

Date Sampled

Date Received

5-2-69

Submitted by

Mr. Noel Sikes

Worked by

Jones

Other Description

CHEMICAL DETERMINATIONS

Density 1.000 @ 75° F

pH 8.1

Iron No Trace

Hydrogen Sulfide None

Sodium and Potassium 13,610 ppm

Bicarbonate 330 ppm

Calcium 600 ppm

Sulfate 1,980 ppm

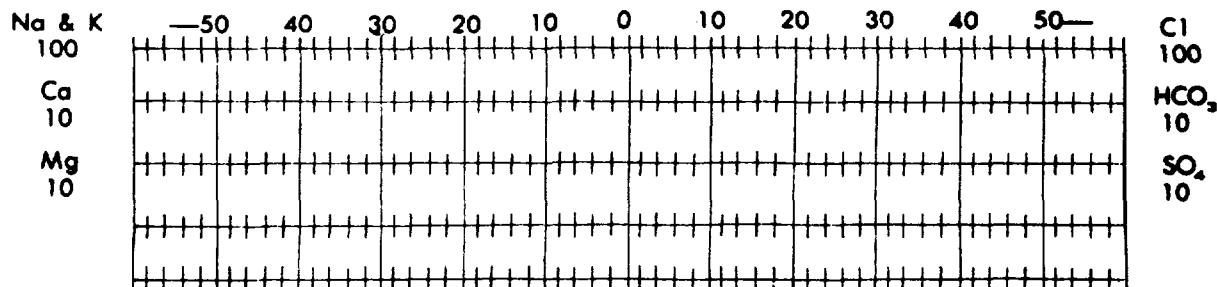
Magnesium 150 ppm

Phosphate _____ ppm

Chloride 1,944 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 #2

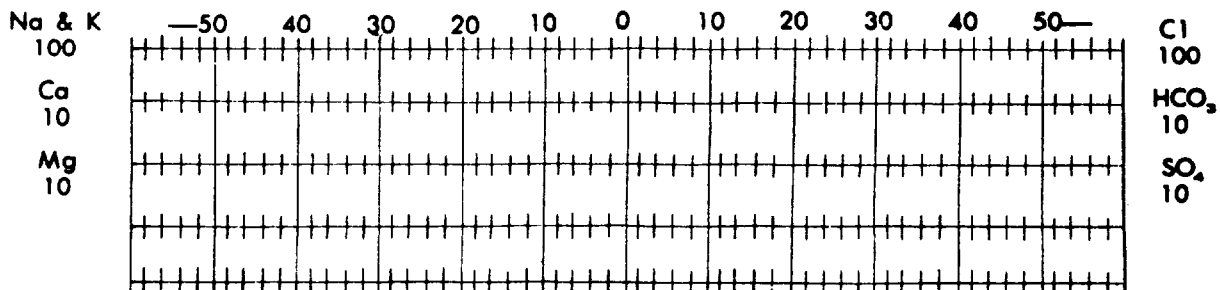
Operator	El Paso Water	Date Sampled	
Well	Wells 2 miles	Date Received	5-2-69
Field	Northeast	Submitted by	Mr. Noel Sikes
Formation		Worked by	Jones
Depth		Other Description	
County			

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

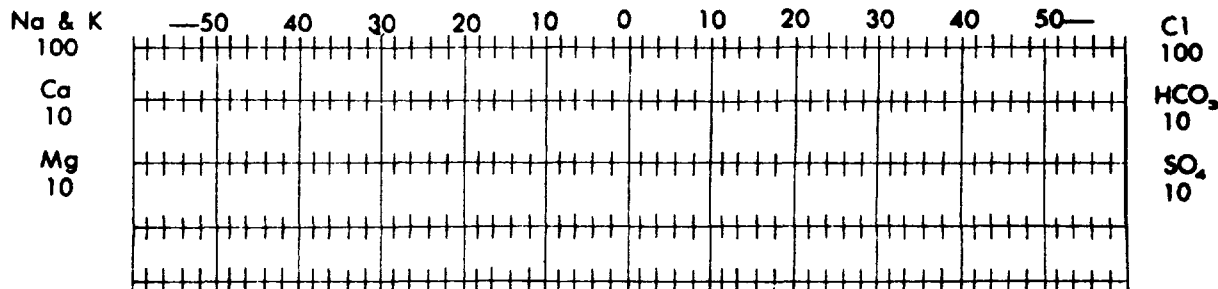
Date Sampled
Date Received **5-2-69**
Submitted by **Mr. Noel Sikes**
Worked by **Jones**
Other Description

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	<u> </u> ppm
Chloride	<u>520</u> ppm	as Sodium Chloride	<u> </u> 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 $\frac{1}{4}$ - 1 $\frac{1}{2}$ miles Southwest	Submitted by	Mr. Noel Sikes
Formation		Worked by	Jones
Depth		Other Description	
County			

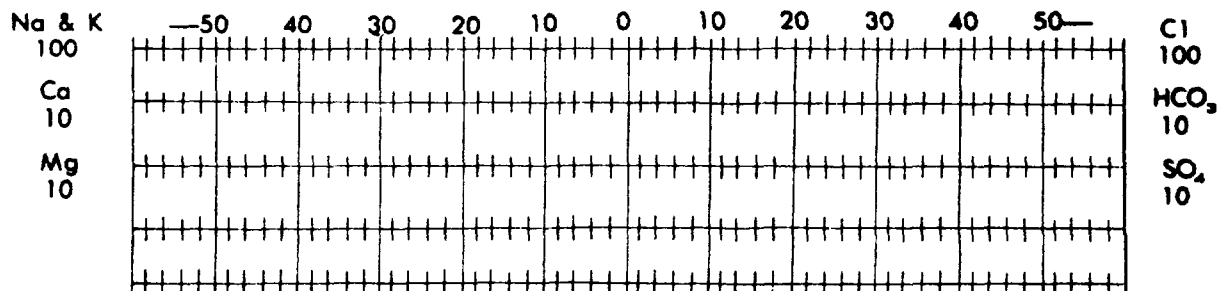
CHEMICAL DETERMINATIONS

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:

#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			

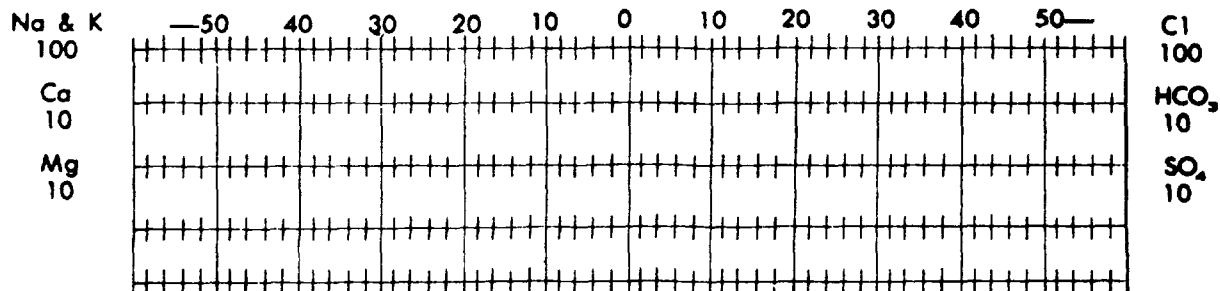
CHEMICAL DETERMINATIONS

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:

5-2-69

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



Per

Robert C Jones

SAMPLE NO. _____

THE WESTERN COMPANY
Service Laboratory

WATER ANALYSIS

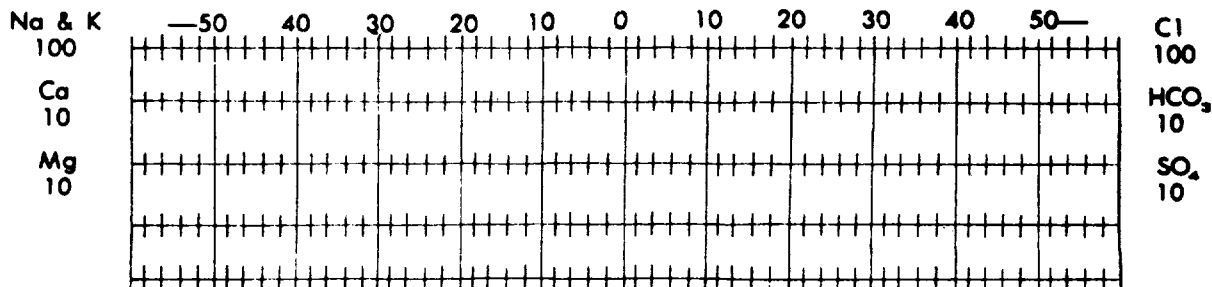
Operator	Pecos River West of Ross Farm	Date Sampled	
Well		Date Received	5-3-69
Field		Submitted by	Kermit District
Formation		Worked by	
Depth		Other Description	
County			

CHEMICAL DETERMINATIONS

Density	1.008 @ 74°F	pH	8.1
Iron	No Trace	Hydrogen Sulfide	None
Sodium and Potassium	4,620 ppm	Bicarbonate	232 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

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Submitted by

Date Rec. 4-6-69

Well No. AS MARKED

Depth

Formation

County

Field

Source

DOUBLE X

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

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.

HALLIBURTON DIVISION LABORATORY
HALLIBURTON COMPANY
MIDLAND DIVISION

LABORATORY WATER ANALYSISNo. W69-272To CURTIS HANKAMERDate 4-7-69724 HOUSTON BANK & TRUST BLDG.HOUSTON, TEXAS 77000

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Submitted by _____ Date Rec. 4-6-69Well 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 ₄)	<u>1,370</u>	<u>1,280</u>	
Bicarbonates (HCO ₃)	<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

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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.

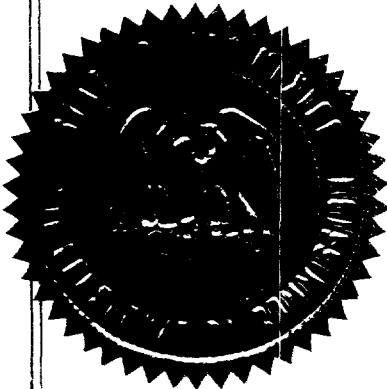
DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

DAVID F. CARGO, Chairman

ALEX J. ARMISTEAD, Member

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



esr/