

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT  
N.M. Oil Cons. Division  
1625 N. French Dr.  
Hobbs, NM 88240

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

**SUNDRY NOTICES AND REPORTS ON WELLS**

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

Lease Designation and Serial No.  
NMNM97164

6. If Indian, Allottee or Tribe Name  
N/A

7. If Unit or CA, Agreement Designation  
N/A

8. Well Name and No.  
Federal "24" Lease

9. API Well No.

10. Field and Pool, or Exploratory Area  
Blinebry, Abo, East Warren Tubb

11. County or Parish, State

Lea County, NM

**SUBMIT IN TRIPLICATE**

1. Type of Well

Oil Gas  
☐ Well ☐ Well ☒ Other Leasewide

2. Name of Operator

Falcon Creek Resources, Inc.

3. Address and Telephone No.

621 17th Street, Suite 1800, Denver, CO 80293-0621

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

SE/4, S/2 SW/4 Section 24, T20S R38E

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

TYPE OF SUBMISSION

- ☐ Notice of Intent  
☒ Subsequent Report  
☐ Final Abandonment Notice

TYPE OF ACTION

- ☐ Abandonment  
☐ Recompletion  
☐ Plugging Back  
☐ Casing Repair  
☐ Altering Casing  
☐ Other  
☐ Change of Plans  
☐ New Construction  
☐ Non-Routine Fracturing  
☐ Water Shut-Off  
☐ Conversion to Injection  
☒ Dispose Water

(Note: Report results of multiple completion on Well  
Completion or Recompletion Report and 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.)\*

The operator requests authorization for saltwater disposal from the subject lease into the NMF State #1 SWD well located in the NW/4 NW/4 Sec. 36, T20S R38E, Lea County, NM. (See attached for details and supporting documentation)

**SEE ATTACHED FOR  
CONDITIONS OF APPROVAL**

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

Signed

*Alexis C. Swohoda*

Title Senior Engineer

Date 02/02/00

(This space for Federal or State office use)

Approved by (ORIG. SGD.) ALEXIS C. SWOBODA

Title PETROLEUM ENGINEER

Date FEB 16 2000

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 statements or representations as to any matter within its jurisdiction.

\*See Instructions on Reverse Side



## FALCON CREEK RESOURCES, INC.

621 17th Street, Suite 1800  
Denver, Colorado 80293-0621

Telephone 303-675-0007  
Facsimile 303-675-0008

February 2, 2000

U.S. Bureau of Land Management  
Hobbs Inspection Office  
414 West Taylor  
Hobbs, NM 88240

Re: Federal "24" Lease, Lease NMNM97164, Sec. 24 T20S R38E, Lea Co., NM,  
Saltwater Disposal Request and Incident of Noncompliance #SJC-035-00

To Whom It May Concern:

Falcon creek Resources, Inc. herein requests authorization for saltwater disposal for the above referenced Federal "24" lease into the NMF State #1 well as described in a later paragraph. This letter is also our response to the referenced Incident of Noncompliance for having failed to previously secure that authorization.

The Federal "24" lease produces oil gas and water from the Blinebry, Tubb and Abo formations. The average water production per well for the month of November, 1999 was:

Federal "24" Lease Water Production (11/99)		
	BWPD	
Fed. "24" #1 - (Blinebry)	26	
Fed. "24" #1 - (Tubb)	5	
Fed. "24" #2 - (Blinebry)	14	
Fed. "24" #2 - (Tubb)	10	
Fed. "24" #3 - (Abo)	13	
Fed. "24" #4 - (Blinebry)	41	
Fed. "24" #4 - (Abo)	19	
Fed. "24" #4 - (Tubb)	23	
Fed. "24" #5 - (Abo)	0	
Fed. "24" #5 - (Tubb)	24	
Fed. "24" #6 - (Abo)	0	
Fed. "24" #6 - (Tubb)	0	
Total	175	
Federal "24" Lease Water, 11/99, By Zone		
	BWPD	
Blinebry	81	
Tubb	62	
Abo	32	
Total	175	

Attached are water analyses from each of the producing zones. We have no analyses from the Blinbry from the Federal "24" lease so analyses from the adjacent Kyte lease are provided.

The Federal "24" lease has two battery facilities, one each at the Federal "24" #1 and Federal "24" #2 wells. At the "24" #1 battery, water is held in a 250 Bbl open top steel tank. At the "24" #2 battery water is held in a 210 Bbl fiberglass tank. The water is then moved to the saltwater disposal well by a transfer pump and pipeline with separate metering at each battery.

Saltwater disposal for the lease is into the NMF State #1 Saltwater Disposal Well (NW/4 NW/4 Sec. 36, T20S R38E, Lea County, New Mexico). The disposal well is operated by Falcon Creek Resources under New Mexico Oil Conservation Division Administrative Order SWD-726. A copy of that order, issued October 13, 1998, is attached.

Should you require any further information in regard to this Request for Saltwater Disposal or our response to the Noncompliance Notice, please feel free to call me at the letterhead phone number, extension 132.

Sincerely,  
**Falcon Creek Resources, Inc.**



Joe H. Cox, Jr.  
Senior Engineer

attachments

# Permian Treating Chemicals

## WATER ANALYSIS REPORT

### SAMPLE

Oil Co. : Stevens & Tull

Lease : Kyte Federal

Well No. : # 4

Lab No. :

Blinebry

Sample Loc. :

Date Analyzed: 05-May-1998

Date Sampled :

### ANALYSIS

1. pH 6.170
2. Specific Gravity 60/60 F. 1.096
3. CaCO<sub>3</sub> Saturation Index @ 80 F. +0.392  
@ 140 F. +1.272

#### Dissolved Gasses

- |                     | MG/L           | EQ. WT. | *MEQ/L |
|---------------------|----------------|---------|--------|
| 4. Hydrogen Sulfide | Not Present    |         |        |
| 5. Carbon Dioxide   | Not Determined |         |        |
| 6. Dissolved Oxygen | Not Determined |         |        |

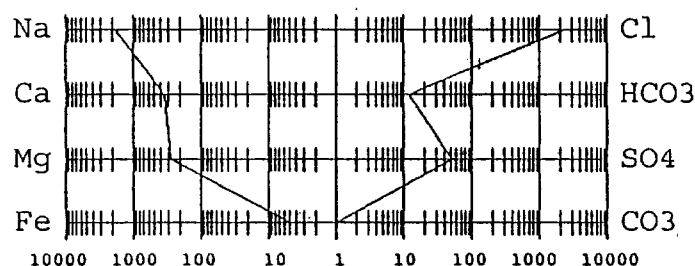
#### Cations

- |              |                     |                |   |        |          |
|--------------|---------------------|----------------|---|--------|----------|
| 7. Calcium   | (Ca <sup>++</sup> ) | 6,774          | / | 20.1 = | 337.01   |
| 8. Magnesium | (Mg <sup>++</sup> ) | 3,161          | / | 12.2 = | 259.10   |
| 9. Sodium    | (Na <sup>+</sup> )  | 40,852         | / | 23.0 = | 1,776.17 |
| 10. Barium   | (Ba <sup>++</sup> ) | Not Determined |   |        |          |

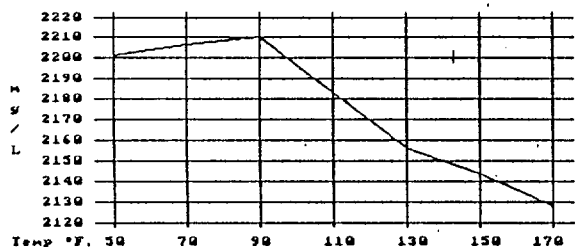
#### Anions

- |   |                                  |            |   |        |          |
|---|----------------------------------|------------|---|--------|----------|
| 11. Hydroxyl                            | (OH <sup>-</sup> )               | 0          | / | 17.0 = | 0.00     |
| 12. Carbonate                           | (CO <sub>3</sub> <sup>=</sup> )  | 0          | / | 30.0 = | 0.00     |
| 13. Bicarbonate                         | (HCO <sub>3</sub> <sup>-</sup> ) | 708        | / | 61.1 = | 11.59    |
| 14. Sulfate                             | (SO <sub>4</sub> <sup>2-</sup> ) | 2,450      | / | 48.8 = | 50.20    |
| 15. Chloride                            | (Cl <sup>-</sup> )               | 81,982     | / | 35.5 = | 2,309.35 |
| 16. Total Dissolved Solids              |                                  | 135,927    |   |        |          |
| 17. Total Iron (Fe)                     |                                  | 84         | / | 18.2 = | 4.62     |
| 18. Total Hardness As CaCO <sub>3</sub> |                                  | 29,927     |   |        |          |
| 19. Resistivity @ 75 F. (Calculated)    |                                  | 0.050 /cm. |   |        |          |

#### LOGARITHMIC WATER PATTERN \*meq/L.



#### Calcium Sulfate Solubility Profile



#### PROBABLE MINERAL COMPOSITION

COMPOUND	EQ. WT.	X	*meq/L = mg/L.
Ca(HCO <sub>3</sub> ) <sub>2</sub>	81.04	11.59	939
CaSO <sub>4</sub>	68.07	50.20	3,417
CaCl <sub>2</sub>	55.50	275.22	15,275
Mg(HCO <sub>3</sub> ) <sub>2</sub>	73.17	0.00	0
MgSO <sub>4</sub>	60.19	0.00	0
MgCl <sub>2</sub>	47.62	259.10	12,338
NaHCO <sub>3</sub>	84.00	0.00	0
NaSO <sub>4</sub>	71.03	0.00	0
NaCl	58.46	1,775.03	103,768

\*Milli Equivalents per Liter

This water is slightly corrosive due to the pH observed on analysis.  
The corrosivity is increased by the content of mineral salts in solution.

# Permian Treating Chemicals

## WATER ANALYSIS REPORT

### SAMPLE

Oil Co. : Stevens & Tull  
Lease : Federal 24  
Well No. : # 2  
Salesman :

Tubb

Sample Loc. :  
Date Analyzed: 22-September-1997  
Date Sampled :

### ANALYSIS

1. pH 6.190
2. Specific Gravity 60/60 F. 1.123
3. CaCO<sub>3</sub> Saturation Index @ 90 F. +0.523  
@ 140 F. +1.543

#### Dissolved Gasses

MG/L EQ. WT. \*MEQ/L

4. Hydrogen Sulfide Not Present
5. Carbon Dioxide Not Determined
6. Dissolved Oxygen Not Determined

#### Cations

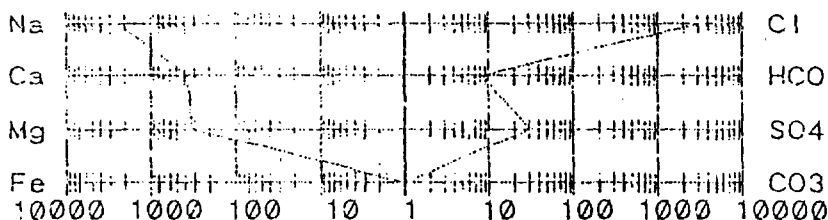
- |   |                |          |          |
|---|----------------|----------|----------|
| 7. Calcium (Ca <sup>++</sup> )            | 6,977          | / 20.1 = | 347.11   |
| 8. Magnesium (Mg <sup>++</sup> )          | 3,835          | / 12.2 = | 314.34   |
| 9. Sodium (Na <sup>+</sup> ) (Calculated) | 56,935         | / 23.0 = | 2,475.43 |
| 10. Barium (Ba <sup>++</sup> )            | Not Determined |          |          |

#### Anions

- |  |         |          |          |
|--|---------|----------|----------|
| 11. Hydroxyl (OH <sup>-</sup> )                  | 0       | / 17.0 = | 0.00     |
| 12. Carbonate (CO <sub>3</sub> <sup>=</sup> )    | 0       | / 30.0 = | 0.00     |
| 13. Bicarbonate (HCO <sub>3</sub> <sup>-</sup> ) | 488     | / 61.1 = | 7.99     |
| 14. Sulfate (SO <sub>4</sub> <sup>=</sup> )      | 1,450   | / 48.8 = | 29.71    |
| 15. Chloride (Cl <sup>-</sup> )                  | 109,975 | / 35.5 = | 3,097.89 |

- |   |            |          |      |
|---|------------|----------|------|
| 16. Total Dissolved Solids              | 179,560    |          |      |
| 17. Total Iron (Fe)                     | 19         | / 18.2 = | 1.02 |
| 18. Total Hardness As CaCO <sub>3</sub> | 33,214     |          |      |
| 19. Resistivity @ 75 F. (Calculated)    | 0.012 /cm. |          |      |

#### LOGARITHMIC WATER PATTERN \*meq/L.



#### PROBABLE MINERAL COMPOSITION COMPOUND EQ. WT. X \*meq/L = mg/L.

Na	Cl	Ca(HCO <sub>3</sub> ) <sub>2</sub>	81.04	7.99	647
Ca	HCO <sub>3</sub>	CaSO <sub>4</sub>	68.07	29.71	2,023
Mg	SO <sub>4</sub>	CaCl <sub>2</sub>	55.50	309.41	17,172
Fe	CO <sub>3</sub>	Mg(HCO <sub>3</sub> ) <sub>2</sub>	73.17	0.00	0
		MgSO <sub>4</sub>	60.19	0.00	0
		MgCl <sub>2</sub>	47.62	314.34	14,969
		NaHCO <sub>3</sub>	84.00	0.00	0
		NaSO <sub>4</sub>	71.03	0.00	0
		NaCl	58.46	2,474.13	144,638

#### Calcium Sulfate Solubility Profile



This water is slightly corrosive due to the pH observed on analysis.  
The corrosivity is increased by the content of mineral salts in solution.

\*Milli Equivalents per Liter

# Permian Treating Chemicals

## WATER ANALYSIS REPORT

### SAMPLE

Oil Co. : Stevens & Tull  
Lease : Federal, 24  
Well No. : # 1  
Salesman:

Sample Loc. :  
Date Analyzed: 22-September-1997  
Date Sampled :

*Tubb*

### ANALYSIS

1. pH 5.860
2. Specific Gravity 60/60 F. 1.126
3. CaCO<sub>3</sub> Saturation Index @ 80 F. +0.283  
@ 140 F. +1.383

#### Dissolved Gasses

MG/L EQ. WT. \*MEQ/L

4. Hydrogen Sulfide Not Present
5. Carbon Dioxide Not Determined
6. Dissolved Oxygen Not Determined

#### Cations

7. Calcium (Ca<sup>++</sup>) 8,503 / 20.1 = 423.03
8. Magnesium (Mg<sup>++</sup>) 3,108 / 12.2 = 254.75
9. Sodium (Na<sup>+</sup>) (Calculated) 57,842 / 23.0 = 2,514.87
10. Barium (Ba<sup>++</sup>) Not Determined

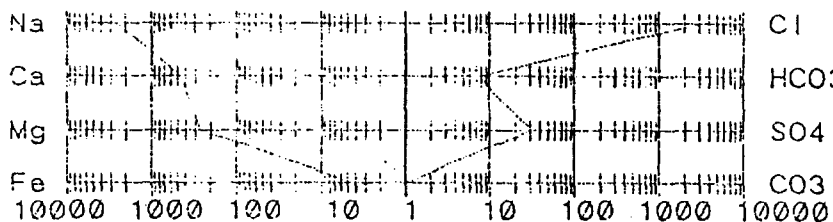
#### Anions

11. Hydroxyl (OH<sup>-</sup>) 0 / 17.0 = 0.00
12. Carbonate (CO<sub>3</sub><sup>=</sup>) 0 / 30.0 = 0.00
13. Bicarbonate (HCO<sub>3</sub><sup>-</sup>) 449 / 61.1 = 7.35
14. Sulfate (SO<sub>4</sub><sup>=</sup>) 1,450 / 48.8 = 29.71
15. Chloride (Cl<sup>-</sup>) 111,975 / 35.5 = 3,154.23

16. Total Dissolved Solids 183,327
17. Total Iron (Fe) 74 / 18.2 = 4.07
18. Total Hardness As CaCO<sub>3</sub> 34,030
19. Resistivity @ 75 F. (Calculated) 0.010 /cm.

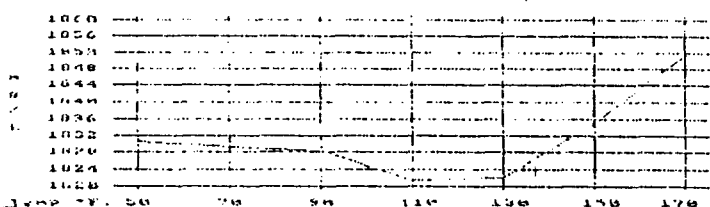
#### LOGARITHMIC WATER PATTERN \*meq/L.

#### PROBABLE MINERAL COMPOSITION COMPOUND EQ. WT. X \*meq/L = mg/L.



Na	Cl	Ca(HCO <sub>3</sub> ) <sub>2</sub>	81.04	7.35	596
Ca	HCO <sub>3</sub>	CaSO <sub>4</sub>	68.07	29.71	2,023
Mg	SO <sub>4</sub>	CaCl <sub>2</sub>	55.50	385.97	21,422
Fe	CO <sub>3</sub>	Mg(HCO <sub>3</sub> ) <sub>2</sub>	73.17	0.00	0
		MgSO <sub>4</sub>	60.13	0.00	0
		MgCl <sub>2</sub>	47.62	254.75	12,131
		NaHCO <sub>3</sub>	84.00	0.00	0
		NaSO <sub>4</sub>	71.03	0.00	0
		NaCl	58.46	2,513.50	146,939

#### Calcium Sulfate Solubility Profile



\*Milli Equivalents per Liter

The water is somewhat corrosive due to the pH observed on analysis.  
The corrosivity is increased by the content of mineral salts in solution.

# Permian Treating Chemicals

## WATER ANALYSIS REPORT

### SAMPLE

Oil Co. : Stevens & Tull

Lease : Fed. 24

Well No. : # 3

Lab No. : Abo

Sample Loc. :

Date Analyzed: 06-May-1998

Date Sampled :

### ANALYSIS

1. pH 6.100
2. Specific Gravity 60/60 F. 1.128
3. CaCO<sub>3</sub> Saturation Index @ 80 F. +0.666  
@ 140 F. +1.836

#### Dissolved Gasses

MG/L EQ. WT. \*MEQ/L

4. Hydrogen Sulfide Not Present
5. Carbon Dioxide Not Determined
6. Dissolved Oxygen Not Determined

#### Cations

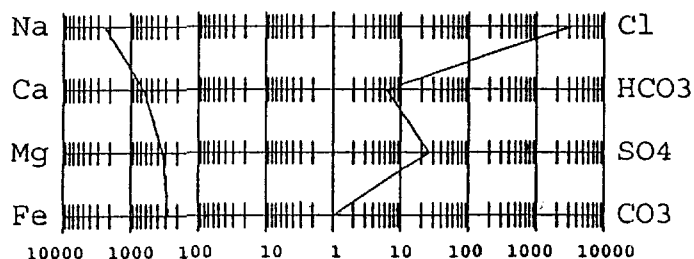
- |              |                    |                |   |        |          |
|--------------|--------------------|----------------|---|--------|----------|
| 7. Calcium   | (Ca++)             | 12,297         | / | 20.1 = | 611.79   |
| 8. Magnesium | (Mg++)             | 3,919          | / | 12.2 = | 321.23   |
| 9. Sodium    | (Na+) (Calculated) | 53,768         | / | 23.0 = | 2,337.74 |
| 10. Barium   | (Ba++)             | Not Determined |   |        |          |

#### Anions

- |   |                      |            |   |        |          |
|---|----------------------|------------|---|--------|----------|
| 11. Hydroxyl                            | (OH-)                | 0          | / | 17.0 = | 0.00     |
| 12. Carbonate                           | (CO <sub>3</sub> =)  | 0          | / | 30.0 = | 0.00     |
| 13. Bicarbonate                         | (HCO <sub>3</sub> -) | 351        | / | 61.1 = | 5.74     |
| 14. Sulfate                             | (SO <sub>4</sub> =)  | 1,250      | / | 48.8 = | 25.61    |
| 15. Chloride                            | (Cl <sup>1/2</sup> ) | 114,974    | / | 35.5 = | 3,238.70 |
| 16. Total Dissolved Solids              |                      | 186,559    |   |        |          |
| 17. Total Iron (Fe)                     |                      | 4,900      | / | 18.2 = | 269.23   |
| 18. Total Hardness As CaCO <sub>3</sub> |                      | 46,842     |   |        |          |
| 19. Resistivity @ 75 F. (Calculated)    |                      | 0.007 /cm. |   |        |          |

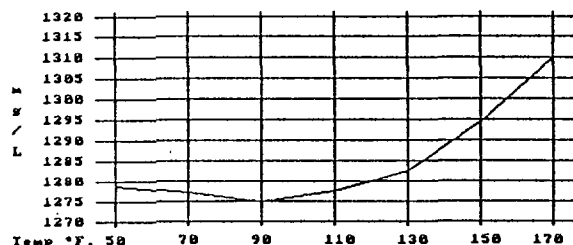
#### LOGARITHMIC WATER PATTERN \*meq/L.

#### PROBABLE MINERAL COMPOSITION COMPOUND EQ. WT. X \*meq/L = mg/L.



Ca (HCO <sub>3</sub> ) <sub>2</sub>	81.04	5.74	466
CaSO <sub>4</sub>	68.07	25.61	1,744
CaCl <sub>2</sub>	55.50	580.43	32,214
Mg (HCO <sub>3</sub> ) <sub>2</sub>	73.17	0.00	0
MgSO <sub>4</sub>	60.19	0.00	0
MgCL <sub>2</sub>	47.62	321.23	15,297
NaHCO <sub>3</sub>	84.00	0.00	0
NaSO <sub>4</sub>	71.03	0.00	0
NaCl	58.46	2,337.04	136,624

#### Calcium Sulfate Solubility Profile



\*Milli Equivalents per Liter

This water is slightly corrosive due to the pH observed on analysis.  
The corrosivity is increased by the content of mineral salts in solution.

# Permian Treating Chemicals

## WATER ANALYSIS REPORT

### SAMPLE

Oil Co. : Stevens & Tull  
 Lease : Fed. 24  
 Well No. : # 4  
 Lab No. : A60

Sample Loc. :  
 Date Analyzed: 06-May-1998  
 Date Sampled :

### ANALYSIS

1. pH 6.080
2. Specific Gravity 60/60 F. 1.118
3. CaCO<sub>3</sub> Saturation Index @ 80 F. +0.527  
 @ 140 F. +1.487

#### Dissolved Gasses

- |                     | MG/L           | EQ. WT. | *MEQ/L |
|---------------------|----------------|---------|--------|
| 4. Hydrogen Sulfide | Not Present    |         |        |
| 5. Carbon Dioxide   | Not Determined |         |        |
| 6. Dissolved Oxygen | Not Determined |         |        |

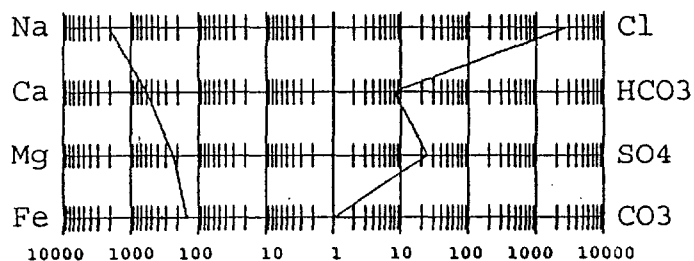
#### Cations

- |   |                |          |          |
|---|----------------|----------|----------|
| 7. Calcium (Ca <sup>++</sup> )            | 11,463         | / 20.1 = | 570.30   |
| 8. Magnesium (Mg <sup>++</sup> )          | 2,718          | / 12.2 = | 222.79   |
| 9. Sodium (Na <sup>+</sup> ) (Calculated) | 47,289         | / 23.0 = | 2,056.04 |
| 10. Barium (Ba <sup>++</sup> )            | Not Determined |          |          |

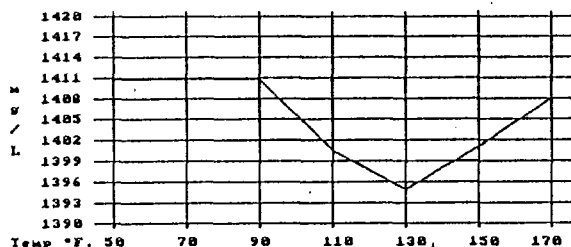
#### Anions

- |  |            |          |          |
|--|------------|----------|----------|
| 11. Hydroxyl (OH <sup>-</sup> )                  | 0          | / 17.0 = | 0.00     |
| 12. Carbonate (CO <sub>3</sub> <sup>=</sup> )    | 0          | / 30.0 = | 0.00     |
| 13. Bicarbonate (HCO <sub>3</sub> <sup>-</sup> ) | 464        | / 61.1 = | 7.59     |
| 14. Sulfate (SO <sub>4</sub> <sup>=</sup> )      | 1,200      | / 48.8 = | 24.59    |
| 15. Chloride (Cl <sup>-</sup> )                  | 99,977     | / 35.5 = | 2,816.25 |
| 16. Total Dissolved Solids                       | 163,111    |          |          |
| 17. Total Iron (Fe)                              | 2,600      | / 18.2 = | 142.86   |
| 18. Total Hardness As CaCO <sub>3</sub>          | 39,816     |          |          |
| 19. Resistivity @ 75 F. (Calculated)             | 0.026 /cm. |          |          |

#### LOGARITHMIC WATER PATTERN \*meq/L.



#### Calcium Sulfate Solubility Profile



#### PROBABLE MINERAL COMPOSITION COMPOUND EQ. WT. X \*meq/L = mg/L.

Ca (HCO <sub>3</sub> ) <sub>2</sub>	81.04	7.59	615
CaSO <sub>4</sub>	68.07	24.59	1,674
CaCl <sub>2</sub>	55.50	538.11	29,865
Mg (HCO <sub>3</sub> ) <sub>2</sub>	73.17	0.00	0
MgSO <sub>4</sub>	60.19	0.00	0
MgCl <sub>2</sub>	47.62	222.79	10,609
NaHCO <sub>3</sub>	84.00	0.00	0
NaSO <sub>4</sub>	71.03	0.00	0
NaCl	58.46	2,055.35	120,156

\*Milli Equivalents per Liter

This water is slightly corrosive due to the pH observed on analysis.  
 The corrosivity is increased by the content of mineral salts in solution.



# Permian Treating Chemicals

## WATER ANALYSIS REPORT

SAMPLE

Oil Co. : Stevens & Tull  
Lease : Federal 24  
Well No. : # 5  
Lab No. :

Sample Loc. :  
Date Analyzed: 05-May-1998  
Date Sampled :

Alco

## ANALYSIS

1. pH 6.130
2. Specific Gravity 60/60 F. 1.123
3. CaCO<sub>3</sub> Saturation Index @ 80 F. +0.872  
@ 140 F. +2.042

### Dissolved Gasses

- |                     | MG/L           | EQ. WT. | *MEQ/L |
|---------------------|----------------|---------|--------|
| 4. Hydrogen Sulfide | Not Present    |         |        |
| 5. Carbon Dioxide   | Not Determined |         |        |
| 6. Dissolved Oxygen | Not Determined |         |        |

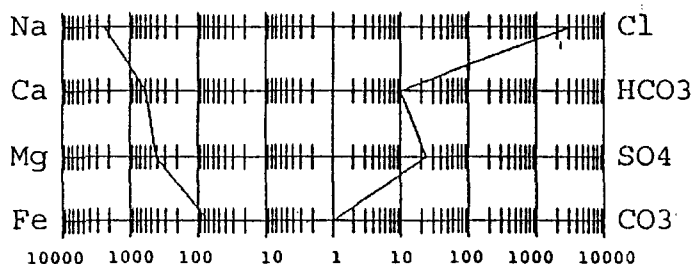
### Cations

- |              |                                 |                |          |          |
|--------------|---------------------------------|----------------|----------|----------|
| 7. Calcium   | (Ca <sup>++</sup> )             | 11,150         | / 20.1 = | 554.73   |
| 8. Magnesium | (Mg <sup>++</sup> )             | 4,867          | / 12.2 = | 398.93   |
| 9. Sodium    | (Na <sup>+</sup> ) (Calculated) | 52,681         | / 23.0 = | 2,290.48 |
| 10. Barium   | (Ba <sup>++</sup> )             | Not Determined |          |          |

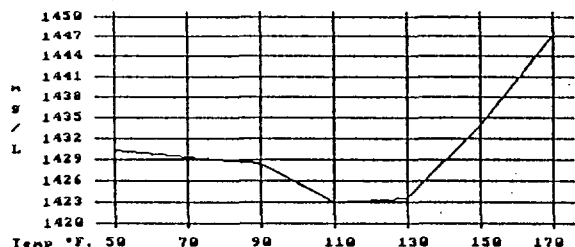
### Anions

- |   |                                  |            |          |          |
|---|----------------------------------|------------|----------|----------|
| 11. Hydroxyl                            | (OH <sup>-</sup> )               | 0          | / 17.0 = | 0.00     |
| 12. Carbonate                           | (CO <sub>3</sub> <sup>=</sup> )  | 0          | / 30.0 = | 0.00     |
| 13. Bicarbonate                         | (HCO <sub>3</sub> <sup>-</sup> ) | 581        | / 61.1 = | 9.51     |
| 14. Sulfate                             | (SO <sub>4</sub> <sup>=</sup> )  | 1,150      | / 48.8 = | 23.57    |
| 15. Chloride                            | (Cl <sup>-</sup> )               | 113,974    | / 35.5 = | 3,210.54 |
| 16. Total Dissolved Solids              |                                  | 184,403    |          |          |
| 17. Total Iron (Fe)                     |                                  | 1,281      | / 18.2 = | 70.38    |
| 18. Total Hardness As CaCO <sub>3</sub> |                                  | 47,883     |          |          |
| 19. Resistivity @ 75 F. (Calculated)    |                                  | 0.008 /cm. |          |          |

### LOGARITHMIC WATER PATTERN \*meq/L.



### Calcium Sulfate Solubility Profile



### PROBABLE MINERAL COMPOSITION COMPOUND EQ. WT. X \*meq/L = mg/L.

Ca (HCO <sub>3</sub> ) <sub>2</sub>	81.04	9.51	771
CaSO <sub>4</sub>	68.07	23.57	1,604
CaCl <sub>2</sub>	55.50	521.65	28,952
Mg (HCO <sub>3</sub> ) <sub>2</sub>	73.17	0.00	0
MgSO <sub>4</sub>	60.19	0.00	0
MgCl <sub>2</sub>	47.62	398.93	18,997
NaHCO <sub>3</sub>	84.00	0.00	0
NaSO <sub>4</sub>	71.03	0.00	0
NaCl	58.46	2,289.95	133,870

\*Milli Equivalents per Liter

This water is slightly corrosive due to the pH observed on analysis.  
The corrosivity is increased by the content of mineral salts in solution.



ADMINISTRATIVE ORDER SWD-726

*APPLICATION OF FALCON CREEK RESOURCES, INC. FOR SALT WATER  
DISPOSAL, LEA COUNTY, NEW MEXICO.*

ADMINISTRATIVE ORDER  
OF THE OIL CONSERVATION DIVISION

Under the provisions of Rule 701(B), Falcon Creek Resources, Inc. made application to the New Mexico Oil Conservation Division on September 14, 1998, for permission to complete for salt water disposal its NMF State Well No.1 located 660 feet from the North line and 660 feet from the West line (Unit D) of Section 36, Township 20 South, Range 38 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;
- (3) The applicant has presented satisfactory evidence that all requirements prescribed in Rule 701 will be met; and
- (4) No objections have been received within the waiting period prescribed by said rule.

IT IS THEREFORE ORDERED THAT:

The applicant herein, Falcon Creek Resources, Inc. is hereby authorized to complete its NMF State Well No.1 located 660 feet from the North line and 660 feet from the West line (Unit D) of Section 36, Township 20 South, Range 38 East, NMPM, Lea County, New Mexico, in such manner as to permit the injection of salt water for disposal purposes into the Glorieta formation at approximately 5,570 feet to 5,670 feet through 2 7/8-inch plastic-lined tubing set in a packer located at approximately 5,500 feet.

IT IS FURTHER ORDERED THAT:

Prior to commencing injection operations into the well, the operator shall perform cement squeeze on existing perforation from approximately 4,281 feet to 4,355 feet and set a cast iron bridge plug at approximately 5,900 feet.

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 1116 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 Glorieta formation. 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.

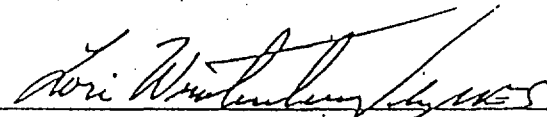
The operator shall immediately notify the supervisor of the Hobbs district office of the Division of the failure of the tubing, casing, or packer in said well and shall take such steps as may be timely and necessary to correct such failure or leakage.

PROVIDED FURTHER THAT, jurisdiction is retained by the Division for the entry of such further orders as may be necessary for the prevention of waste and/or protection of correlative rights or upon failure of the operator to conduct operations (1) to protect fresh water or (2) consistent with the requirements in this order, whereupon the Division may, after notice and hearing, terminate the injection authority granted herein.

The operator shall submit monthly reports of the disposal operations on Division Form C-115 in accordance with Rule Nos. 706 and 1120 of the Division Rules and Regulations.

The injection authority granted herein shall terminate one year after the effective date of this order if the operator has not commenced injection operations into the subject well, provided however, the Division, upon written request by the operator, may grant an extension thereof for good cause shown.

Approved at Santa Fe, New Mexico, on this 13th day of October, 1998.



LORI WROTENBERY, Director

LW/BES/kv

xc: Oil Conservation Division - Hobbs  
State Land Office - Oil & Gas Division