

ATTACHMENT C

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CHEMICALS and CONSULTING

MILLER CHEMICALS, INC.

Post Office Box 298

Artesia, N.M. 88211-0298

(505) 746-1919 Artesia Office

(505) 393-2893 Hobbs Office

(505) 746-1918 Fax

WATER ANALYSIS REPORT

Company : YATES PETROLEUM
Address : ARTESIA, NM
Lease : WINDMILL "ATI"
Well : #1
Sample Pt. : WELLHEAD

Date : 1/18/00
Date Sampled : 1/18/00
Analysis No. : 00095

ANALYSIS		mg/L		* meq/L
1. pH	6.0			
2. H2S	0			
3. Specific Gravity	1.030			
4. Total Dissolved Solids		97783.1		
5. Suspended Solids		NR		
6. Dissolved Oxygen		NR		
7. Dissolved CO2		NR		
8. Oil In Water		NR		
9. Phenolphthalein Alkalinity (CaCO3)				
10. Methyl Orange Alkalinity (CaCO3)				
11. Bicarbonate	HCO3	195.0	HCO3	3.2
12. Chloride	Cl	59640.0	Cl	1682.4
13. Sulfate	SO4	100.0	SO4	2.1
14. Calcium	Ca	1600.0	Ca	79.8
15. Magnesium	Mg	802.6	Mg	66.0
16. Sodium (calculated)	Na	35445.5	Na	1541.8
17. Iron	Fe	NR		
18. Barium	Ba	NR		
19. Strontium	Sr	NR		
20. Total Hardness (CaCO3)		7300.0		

PROBABLE MINERAL COMPOSITION

*milli equivalents per Liter		Compound	Equiv wt X meq/L	= mg/L
+-----+	+-----+			
80 *Ca <----- *HCO3	3	Ca (HCO3) 2	81.0	3.2 259
----- /----->	-----	CaSO4	68.1	2.1 142
66 *Mg -----> *SO4	2	CaCl2	55.5	74.6 4137
----- <-----/	-----	Mg (HCO3) 2	73.2	
1542 *Na -----> *Cl	1682	MgSO4	60.2	
+-----+	+-----+	MgCl2	47.6	66.0 3143
Saturation Values Dist. Water 20 C		NaHCO3	84.0	
CaCO3 13 mg/L		Na2SO4	71.0	
CaSO4 * 2H2O 2090 mg/L		NaCl	58.4	1541.8 90102
BaSO4 2.4 mg/L				

REMARKS:

SCALE TENDENCY REPORT

Company	: YATES PETROLEUM	Date	: 1/18/00
Address	: ARTESIA, NM	Date Sampled	: 1/18/00
Lease	: WINDMILL "ATI"	Analysis No.	: 00095
Well	: #1	Analyst	: A. MILLER
Sample Pt.	: WELLHEAD		

STABILITY INDEX CALCULATIONS
(Stiff-Davis Method)
CaCO₃ Scaling Tendency

S.I. =	-0.9	at	60 deg.	For	16 deg. C
S.I. =	-0.8	at	80 deg.	For	27 deg. C
S.I. =	-0.7	at	100 deg.	For	38 deg. C
S.I. =	-0.6	at	120 deg.	For	49 deg. C
S.I. =	-0.6	at	140 deg.	For	60 deg. C

CALCIUM SULFATE SCALING TENDENCY CALCULATIONS
(Skillman-McDonald-Stiff Method)
Calcium Sulfate

S =	4533	at	60 deg.	For	16 deg C
S =	4859	at	80 deg.	For	27 deg C
S =	5059	at	100 deg.	For	38 deg C
S =	5149	at	120 deg.	For	49 deg C
S =	5212	at	140 deg.	For	60 deg C

Respectfully submitted,
A. MILLER

ATTACHMENT D



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WATER ANALYSIS REPORT

Company	: YATES PETROLEUM	Date	: 3/3/00
Address	: ARTESIA, NM	Date Sampled	: 3/2/00
Lease	: SEC.9,155,28E	Analysis No.	: 00116
Well	: WINDMILL		
Sample Pt.	: UNKNOWN		

ANALYSIS		mg/L		* meq/L
-----		----		-----
1. pH	7.1			
2. H2S	0			
3. Specific Gravity	1.000			
4. Total Dissolved Solids		15197.9		
5. Suspended Solids		NR		
6. Dissolved Oxygen		NR		
7. Dissolved CO2		NR		
8. Oil In Water		NR		
9. Phenolphthalein Alkalinity (CaCO3)				
10. Methyl Orange Alkalinity (CaCO3)				
11. Bicarbonate	HCO3	98.0	HCO3	1.6
12. Chloride	Cl	7668.0	Cl	216.3
13. Sulfate	SO4	2000.0	SO4	41.6
14. Calcium	Ca	1280.0	Ca	63.9
15. Magnesium	Mg	389.5	Mg	32.0
16. Sodium (calculated)	Na	3762.2	Na	163.6
17. Iron	Fe	0.3		
18. Barium	Ba	NR		
19. Strontium	Sr	NR		
20. Total Hardness (CaCO3)		4800.0		

PROBABLE MINERAL COMPOSITION

*milli equivalents per Liter		Compound	Equiv wt X meq/L	= mg/L
-----	-----			
64 *Ca <----- *HCO3	2	Ca (HCO3) 2	81.0	1.6
----- /----->	-----	CaSO4	68.1	41.6
32 *Mg -----> *SO4	42	CaCl2	55.5	20.6
----- <-----/	-----	Mg (HCO3) 2	73.2	
164 *Na -----> *Cl	216	MgSO4	60.2	
-----	-----	MgCl2	47.6	32.0
Saturation Values Dist. Water 20 C		NaHCO3	84.0	
CaCO3	13 mg/L	Na2SO4	71.0	
CaSO4 * 2H2O	2090 mg/L	NaCl	58.4	163.6
BaSO4	2.4 mg/L			9564

REMARKS:

SCALE TENDENCY REPORT

Company : YATES PETROLEUM Date : 3/3/00
Address : ARTESIA, NM Date Sampled : 3/2/00
Lease : SEC.9,155,28E Analysis No. : 00116
Well : WINDMILL Analyst : A. MILLER
Sample Pt. : UNKNOWN

STABILITY INDEX CALCULATIONS (Stiff-Davis Method) CaCO3 Scaling Tendency

S.I. = 0.1 at 60 deg. F or 16 deg. C
S.I. = 0.1 at 80 deg. F or 27 deg. C
S.I. = 0.1 at 100 deg. F or 38 deg. C
S.I. = 0.2 at 120 deg. F or 49 deg. C
S.I. = 0.2 at 140 deg. F or 60 deg. C

CALCIUM SULFATE SCALING TENDENCY CALCULATIONS (Skillman-McDonald-Stiff Method) Calcium Sulfate

S = 2789 at 60 deg. F or 16 deg C
S = 2925 at 80 deg. F or 27 deg C
S = 2988 at 100 deg. F or 38 deg C
S = 2998 at 120 deg. F or 49 deg C
S = 2995 at 140 deg. F or 60 deg C

Respectfully submitted,
A. MILLER

ATTACHMENT E

MARTIN YATES, III
1912 - 1985
FRANK W. YATES
1936 - 1986



105 SOUTH FOURTH STREET
ARTESIA, NEW MEXICO 88210
TELEPHONE (505) 748-1471

S. P. YATES
CHAIRMAN OF THE BOARD
JOHN A. YATES
PRESIDENT
PEYTON YATES
EXECUTIVE VICE PRESIDENT
RANDY G. PATTERSON
SECRETARY
DENNIS G. KINSEY
TREASURER

March 6, 2000

Bureau of Land Management
2909 W. 2nd Street
Roswell, NM 88201

Gentlemen:

Enclosed please find a copy of form C-108 (Application for Authority to Inject) for the proposed Buffalo Valley QL Federal #1 located in Unit K of Section 3-T15S-R28E, Chaves County, New Mexico.

Should you have any questions, please feel free to contact me at (505) 748-4174.

Sincerely,

Albert R. Stall
Operations Engineer

ARS/sd

Enclosure

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FRANK W. YATES
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TREASURER

March 6, 2000

Santa Fe Schneider Corporation
550 W. Texas
Suite 1330
Midland, TX 79701

Gentlemen:

Enclosed please find a copy of form C-108 (Application for Authorization to Inject) on the Buffalo Valley QL Federal #1 located in Unit K of Section 3-T15S-R28E of Chaves County, New Mexico.

Should you have any questions, please feel free to contact me at (505) 748-4174.

Sincerely,

Albert R. Stall
Operations Engineer

ARS/sd

Enclosures

ATTACHMENT F

MARTIN YATES, III
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March 6, 2000

Roswell Daily Record
P. O. Box 1897
Roswell, NM 88202-1897

Gentlemen:

Yates Petroleum Corporation desires to place a public notice in your newspaper for one day. The notice is enclosed.

Please place this notice in your paper on Thursday, March 9, 2000, and forward a copy of it along with your billing as soon as possible to:

Yates Petroleum Corporation
105 South Fourth Street
Artesia, NM 88210
Attn: Albert R. Stall

If you have any questions, please contact me at 748-4174. Thank you for your cooperation in this matter.

Sincerely,

Albert R. Stall
Operations Engineer

ARS/sd

Enclosure

Legal Notice

Yates Petroleum Corporation, 105 South Fourth Street, Artesia, NM 88210, has filed form C-108 (Application for Authorization to Inject) with the New Mexico Oil Conservation Division seeking administrative approval for an injection well. The proposed well, the "Buffalo Valley QL Federal #1" located 1980'FSL & 1980'FWL of Section 3, Township 15 South, Range 28 East of Chaves County, New Mexico, will be used for salt water disposal. Disposal waters from the Morrow will be re-injected into the San Andres at a depth of 1948'-3365' with a maximum pressure of 1300 psi and a maximum rate of 5000 BWPD.

All interested parties opposing the aforementioned must file objections or requests for a hearing with the Oil Conservation Division, 2040 S. Pacheco Street, Santa Fe, NM 87505-5472, within 15 days. Additional information can be obtained by contacting Albert R. Stall at (505) 748-4174.