

WALLISBURTON SERVICES

ARTESIA DISTRICT

LABORATORY REPORT

No. SDX Resources

No. _____
Date 2/10/95

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Submitted by Chuck Morgan Date Rec. 2/10/95

Well No. Canoco 7 Tank Bat. Depth _____ Formation _____

Field _____ County _____ Source _____

Resistivity06

Specific Gravity .. 1.1

pH 7.1

Calcium 2500

Magnesium 750

Chlorides 110,000 m/l

Sulfates 4500 m/l

Bicarbonates 800 m/l

Soluble Iron Nil

Remarks:

David M. S. G. 2.10
Respectfully submitted

Analyst: _____

WALLISBURTON SERVICES

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TRETOLITE DIVISION

(505) 746-358
Fax (505) 746-358

Reply to:
PO Box 114
Artesia, NM
88211-750

WATER ANALYSIS REPORT

Company : SDX RESOURCES Date : 01/22/96
Address : ARTESIA, NM Date Sampled : 01/22/96
Lease : CONOCO 7 STATE Analysis No : 0205
Well : #3
Sample Pt. : WELLHEAD

ANALYSIS		mg/L	* meq/L
1. pH		6.5	
2. H2S		125	
3. Specific Gravity		1.080	
4. Total Dissolved Solids		126426.9	
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	939.0	HCO3 15.4
12. Chloride	Cl	75402.0	Cl 2127.0
13. Sulfate	SO4	2000.0	SO4 41.6
14. Calcium	Ca	2080.0	Ca 103.8
15. Magnesium	Mg	2041.6	Mg 168.0
16. Sodium (calculated)	Na	43963.3	Na 1912.3
17. Iron	Fe	1.0	
18. Barium	Ba	NR	
19. Strontium	Sr	NR	
20. Total Hardness (CaCO3)		13600.0	

PROBABLE MINERAL COMPOSITION

*milli equivalents per Liter	Compound	Equiv. wt X meq/L	mg/L
15.4 *CaCO3	Ca(HCO3)2	81.0	1240
41.6 *SO4	CaSO4	66.1	2650
42.1 *Mg	CaCl2	58.5	2450
1912.3 *Na	Mg(HCO3)2	73.2	
	MgSO4	60.2	
	MgCl2	47.6	
	NaHCO3	84.0	
	Na2SO4	71.0	
	NaCl	58.4	
Saturation Values Dist. Water 22 C			
CaCO3 13 mg/L			
CaSO4 1090 mg/L			
BaSO4 2.4 mg/L			

REMARKS

1.157 7.000

SCALE TENDENCY REPORT

Company	: SDX RESOURCES	Date	: 01/22/86
Address	: ARTESIA, NM	Date Sampled	: 01/22/86
Lease	: CONOCO 7 STATE	Analysis No.	: 0205
Well	: #3	Analyst	: STEVE TIGERT
Sample Pt.	: WELLHEAD		

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

S.I.	=	0.5	at	60 deg.	F or	16 deg.	C
S.I.	=	0.5	at	80 deg.	F or	27 deg.	C
S.I.	=	0.6	at	100 deg.	F or	38 deg.	C
S.I.	=	0.7	at	120 deg.	F or	49 deg.	C
S.I.	=	0.7	at	140 deg.	F or	60 deg.	C

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

S	=	5260	at	60 deg	F or	16 deg
S	=	5629	at	80 deg	F or	27 deg
S	=	5864	at	100 deg	F or	38 deg
S	=	5975	at	120 deg	F or	49 deg
S	=	6056	at	140 deg	F or	60 deg



SCALE TENDENCY REPORT

Company	: SDX RESOURCES	Date	: 02/29/96
Address	: ARTESIA, NM	Date Sampled	: 02/29/96
Lease	: CONOCO 7 STATE	Analysis No.	: 0234
Well	: #5	Analyst	: SHAWNA MATTHEWS
Sample Pt.	: WELLHEAD		

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

S.I. = -0.1 at 60 deg. F or 16 deg. C
S.I. = -0.0 at 80 deg. F or 27 deg. C
S.I. = NR at 100 deg. F or 38 deg. C
S.I. = 0.1 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 = 6087 at 60 deg. F or 16 deg C
S = 6462 at 80 deg. F or 27 deg C
S = 6699 at 100 deg. F or 38 deg C
S = 6812 at 120 deg. F or 49 deg C
S = 6894 at 140 deg. F or 60 deg C

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11:06

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NO. 074

007

PETROLITE

Petrolite Corporation
422 West Main Street
Artesia, NM 88210-2041

TRETOLITE DIVISION

(505) 746-3588
Fax (505) 746-3580

WATER ANALYSIS REPORT

Reply to:
P.O. Box 1140
Artesia, NM
88211-7531

Company : SDX RESOURCES
Address : ARTESIA, NM
Lease : CONOCO 7 STATE
Well : #5
Sample Pt. : WELLHEAD

Date : 02/29/96
Date Sampled : 02/29/96
Analysis No. : 0234

ANALYSIS		mg/L	* meq/L
1. pH	6.2		
2. H2S	100 PPM		
3. Specific Gravity	1.080		
4. Total Dissolved Solids		119964.3	
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	927.0	HCO3 15.2
12. Chloride	Cl	71994.0	Cl 2030.9
13. Sulfate	SO4	1400.0	SO4 29.2
14. Calcium	Ca	1160.0	Ca 57.9
15. Magnesium	Mg	2127.0	Mg 175.0
16. Sodium (calculated)	Na	42355.4	Na 1842.3
17. Iron	Fe	1.0	
18. Barium	Ba	NR	
19. Strontium	Sr	NR	
20. Total Hardness (CaCO3)		11654.0	

PROBABLE MINERAL COMPOSITION

*milli equivalents per Liter	Compound	Equiv wt X meq/L	= mg/L
58 *Ca <----- *HCO3	Ca(HCO3)2	81.0	1231
/----->	CaSO4	68.1	1984
175 *Mg -----> *SO4	CaCl2	55.5	751
<-----/	Mg(HCO3)2	73.2	
1842 *Na -----> *Cl	MgSO4	60.2	
	MgCl2	47.6	8330
Saturation Values Dist. Water 20 C	NaHCO3	84.0	
CaCO3 13 mg/L	Na2SO4	71.0	
CaSO4 * 2H2O 2090 mg/L	NaCl	58.4	107666
BaSO4 2.4 mg/L			

REMARKS:

----- STEVE TIGERT

PETROLITE

SCALE TENDENCY REPORT

Company : SDX RESOURCES Date : 02/29/96
Address : ARTESIA, NM Date Sampled : 02/29/96
Lease : CONOCO 7 STATE Analysis No. : 0235
Well : #6 Analyst : SHAWNA MATTHEWS
Sample Pt. : WELLHEAD

STABILITY INDEX CALCULATIONS

(Stiff-Davies Method)

CaCO₃ Scaling Tendency

S.I. = -0.3 at 60 deg. F or 16 deg. C
S.I. = -0.2 at 80 deg. F or 27 deg. C
S.I. = -0.2 at 100 deg. F or 38 deg. C
S.I. = -0.1 at 120 deg. F or 49 deg. C
S.I. = -0.1 at 140 deg. F or 60 deg. C

CALCIUM SULFATE SCALING TENDENCY CALCULATIONS

(Skillman-McDonald-Stiff Method)

Calcium Sulfate

S = 6322 at 60 deg. F or 16 deg C
S = 6720 at 80 deg. F or 27 deg C
S = 6968 at 100 deg. F or 38 deg C
S = 7078 at 120 deg. F or 49 deg C
S = 7156 at 140 deg. F or 60 deg C

Petrolite Oilfield Chemicals Group

Respectfully submitted,
SHAWNA MATTHEWS

PETROLITE

Petrolite Corporation
422 West Main Street
Artesia, NM 88210-2041

TRETOLITE DIVISION

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Reply to:
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Artesia, NM
88211-7531

WATER ANALYSIS REPORT

Company : SDX RESOURCES
Address : ARTESIA, NM
Lease : CONOCO 7 STATE
Well : #6
Sample Pt. : WELLHEAD

Date : 02/29/96
Date Sampled : 02/29/96
Analysis No. : 0235

ANALYSIS		mg/L		* meq/L
1. pH		5.8		
2. H2S		90 PPM		
3. Specific Gravity		1.135		
4. Total Dissolved Solids		203125.4		
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	536.0	HCO3	8.8
12. Chloride	Cl	119280.0	Cl	3364.7
13. Sulfate	SO4	4500.0	SO4	93.7
14. Calcium	Ca	2520.0	Ca	125.7
15. Magnesium	Mg	597.5	Mg	49.2
16. Sodium (calculated)	Na	75690.7	Na	3292.3
17. Iron	Fe	1.2		
18. Barium	Ba	NR		
19. Strontium	Sr	NR		
20. Total Hardness (CaCO3)		8753.0		

PROBABLE MINERAL COMPOSITION

*milli equivalents per Liter	Compound	Equiv wt X meq/L	= mg/L
126 *Ca <----- *HCO3	Ca(HCO3)2	81.0	8.8
/----->	CaSO4	68.1	93.7
49 *Mg -----> *SO4	CaCl2	55.5	23.3
<-----/	Mg(HCO3)2	73.2	
3292 *Na -----> *Cl	MgSO4	60.2	
	MgCl2	47.6	49.2
Saturation Values Dist. Water 20 C	NaHCO3	84.0	
CaCO3 13 mg/L	Na2SO4	71.0	
CaSO4 * 2H2O 2090 mg/L	NaCl	58.4	3292.3
BaSO4 2.4 mg/L			192404

REMARKS:

----- STEVE TIGERT

PETROLITE

SCALE TENDENCY REPORT

Company	: SDX RESOURCES	Date	: 02/29/96
Address	: ARTESIA, NM	Date Sampled	: 02/29/96
Lease	: CONOCO 7 STATE	Analysis No.	: 0236
Well	: #7	Analyst	: SHAWNA MATTHEWS
Sample Pt.	: WELLHEAD		

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

S.I. =	0.1	at	60 deg. F	or	16 deg. C
S.I. =	0.2	at	80 deg. F	or	27 deg. C
S.I. =	0.2	at	100 deg. F	or	38 deg. C
S.I. =	0.3	at	120 deg. F	or	49 deg. C
S.I. =	0.4	at	140 deg. F	or	60 deg. C

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

S =	5750	at	60 deg. F	or	16 deg C
S =	6113	at	80 deg. F	or	27 deg C
S =	6340	at	100 deg. F	or	38 deg C
S =	6447	at	120 deg. F	or	49 deg C
S =	6525	at	140 deg. F	or	60 deg C

Petrolite Oilfield Chemicals Group

Respectfully submitted,
SHAWNA MATTHEWS

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88211-7531

WATER ANALYSIS REPORT

Company : SDX RESOURCES
Address : ARTESIA, NM
Lease : CONOCO 7 STATE
Well : #7
Sample Pt. : WELLHEAD

Date : 02/29/96
Date Sampled : 02/29/96
Analysis No. : 0236

ANALYSIS	mg/L	* meq/L
1. pH	6.2	
2. H2S	150 PPM	
3. Specific Gravity	1.080	
4. Total Dissolved Solids	110356.4	
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 951.0	HCO3 15.6
12. Chloride	Cl 64539.0	Cl 1820.6
13. Sulfate	SO4 2750.0	SO4 57.3
14. Calcium	Ca 1880.0	Ca 93.8
15. Magnesium	Mg 1277.1	Mg 105.1
16. Sodium (calculated)	Na 38957.4	Na 1694.5
17. Iron	Fe 1.8	
18. Barium	Ba NR	
19. Strontium	Sr NR	
20. Total Hardness (CaCO3)	9953.0	

PROBABLE MINERAL COMPOSITION

*milli equivalents per Liter	Compound	Equiv wt X meq/L	= mg/L
94 *Ca <----- *HCO3	Ca(HCO3)2	81.0	15.6 1263
/----->	CaSO4	68.1	57.3 3898
105 *Mg -----> *SO4	CaCl2	55.5	21.0 1163
<-----/	Mg(HCO3)2	73.2	
1695 *Na -----> *Cl	MgSO4	60.2	
	MgCl2	47.6	105.1 5002
Saturation Values Dist. Water 20 C	NaHCO3	84.0	
CaCO3 13 mg/L	Na2SO4	71.0	
CaSO4 * 2H2O 2090 mg/L	NaCl	58.4	1694.5 99029
BaSO4 2.4 mg/L			

REMARKS:

----- STEVE TIGERT



RECEIVED

2-15-95

Halliburton Energy Services
Artesia District
Laboratory Report

No. W22-95

TO: S D X Resources

Date: February 10, 1995

P. O. Box 5061

Midland, TX 79704

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Submitted by Chuck Morgan

Date Rec February 10, 1995

Well No _____ Depth _____ Formation _____

Field _____ County _____ Source Fresh Water Tank

Resistivity..... 1.8

Specific Gravity..... 1.0

pH..... 6.2

Calcium..... 250

Magnesium..... 150

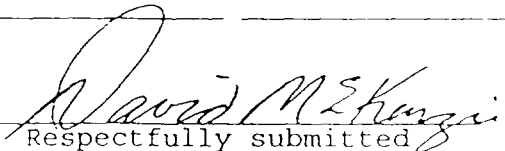
Chlorides..... 2,000 mp1

Sulfates..... 1,750 mp1

Bicarbonates..... 200

Soluble Iron..... Nil

Remarks:


Respectfully submitted

Analyst: David McKenzie -- Technical Advisor

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