

HALLIBURTON SERVICES

ARTESIA DISTRICT

LABORATORY REPORT

No. _____

TO SDX ResourcesDate 2/10/95

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Submitted by Chuck Morgan Date Rec. 2/10/95Well No. Conoco 7 Tank Bat. Depth _____ Formation _____

Field _____ County _____ Source _____

Resistivity06Specific Gravity .. 1.1pH 7.1Calcium 2500Magnesium 750Chlorides 110,000 mpSulfates 4500 mpBicarbonates 800 mpSoluble Iron Nil

Remarks:

David M. H. H. H.
Respectfully submitted

Analyst: _____

HALLIBURTON SERVICES

NOTICE:

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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.	: 0232
Well	: #2	Analyst	: SHAWNA MATTHEWS
Sample Pt.	: WELLHEAD		

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

S.I. =	0.3	at	60 deg. F	or	16 deg. C
S.I. =	0.4	at	80 deg. F	or	27 deg. C
S.I. =	0.5	at	100 deg. F	or	38 deg. C
S.I. =	0.6	at	120 deg. F	or	49 deg. C
S.I. =	0.6	at	140 deg. F	or	60 deg. C

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

S =	6479	at	60 deg. F	or	16 deg C
S =	6844	at	80 deg. F	or	27 deg C
S =	7070	at	100 deg. F	or	38 deg C
S =	7177	at	120 deg. F	or	49 deg C
S =	7253	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

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

WATER ANALYSIS REPORT

Reply to:
PO Box 1140
Artesia, NM
88211-7531

Company : SDX RESOURCES Date : 02/29/96
Address : ARTESIA, NM Date Sampled : 02/29/96
Lease : CONOCO 7 STATE Analysis No. : 0232
Well : #2
Sample Pt. : WELLHEAD

ANALYSIS		mg/L	* meq/L
1.	pH	6.6	
2.	H2S	210 PPM	
3.	Specific Gravity	1.070	
4.	Total Dissolved Solids	109059.7	
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 1683.0	HCO3 27.6
12.	Chloride	Cl 64539.0	Cl 1820.6
13.	Sulfate	SO4 1200.0	SO4 25.0
14.	Calcium	Ca 720.0	Ca 35.9
15.	Magnesium	Mg 1482.8	Mg 122.0
16.	Sodium (calculated)	Na 39432.9	Na 1715.2
17.	Iron	Fe 2.0	
18.	Barium	Ba NR	
19.	Strontium	Sr NR	
20.	Total Hardness (CaCO3)	7903.0	

PROBABLE MINERAL COMPOSITION

*milli equivalents per Liter		Compound	Equiv wt X meq/L	mg/L
36	*Ca <----- *HCO3	Ca(HCO3)2	81.0	2236
	/----->	CaSO4	68.1	568
122	*Mg -----> *SO4	CaCl2	55.5	
	<-----/	Mg(HCO3)2	73.2	
1715	*Na -----> *Cl	MgSO4	60.2	1002
		MgCl2	47.6	5015
Saturation Values Dist. Water 20 C		NaHCO3	84.0	
	CaCO3 13 mg/L	Na2SO4	71.0	
	CaSO4 * 2H2O 2090 mg/L	NaCl	58.4	1715.2 100238
	BaSO4 2.4 mg/L			

REMARKS:

----- STEVE TIGERT

TRETOLITE DIVISION

(505) 746-356
Fax (505) 746-366

WATER ANALYSIS REPORT

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

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
1041 *Ca <----- *HCO3 15	Ca(HCO3)2	81.0	15.4
166 *Mg <----- *SO4 42	CaSO4	68.2	41.6
1912 *Na <----- *Cl 2127	CaCl2	58.5	46.8
	Mg(HCO3)2	73.2	
	MgSO4	60.2	
	MgCl2	47.6	
Saturation Values List Water 20 C	NaHCO3	84.0	
CaCO3 13 mg/L	Na2SO4	71.0	
CaSO4 2390 mg/L	NaCl	58.4	1912.3
NaSO4 2.4 mg/L			

REMARKS
- SIGHT THERM

SCALE TENDENCY 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	Analyst	: STEVE TIGERT
Sample Pt.	: WELLHEAD		

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

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

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

S	=	5260	at	60 deg.	For	16 deg. C
S	=	5629	at	80 deg.	For	27 deg. C
S	=	5864	at	100 deg.	For	38 deg. C
S	=	5975	at	120 deg.	For	49 deg. C
S	=	6056	at	140 deg.	For	60 deg. C

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.	: 0233
Well	: #4	Analyst	: SHAWNA MATTHEWS
Sample Pt.	: WELLHEAD		

STABILITY INDEX CALCULATIONS

(Stiff-Davis Method)

CaCO₃ Scaling Tendency

S.I.	=	-0.3	at	60 deg. F	or	16 deg. C
S.I.	=	-0.3	at	80 deg. F	or	27 deg. C
S.I.	=	-0.2	at	100 deg. F	or	38 deg. C
S.I.	=	-0.2	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	=	7183	at	60 deg. F	or	16 deg. C
S	=	7587	at	80 deg. F	or	27 deg. C
S	=	7838	at	100 deg. F	or	38 deg. C
S	=	7951	at	120 deg. F	or	49 deg. C
S	=	8030	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 86210-2041

TRETOLITE DIVISION

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Fax (505) 746-3580

WATER ANALYSIS REPORT

Reply to:
P.O. Box 1140
Artesia, NM
88211-7537

Company : SDX RESOURCES
Address : ARTESIA, NM
Lease : CONOCO 7 STATE
Well : #4
Sample Pt. : WELLHEAD

Date : 02/29/96
Date Sampled : 02/29/96
Analysis No. : 0233

ANALYSIS		mg/L		* meq/L
1. pH	5.8			
2. H ₂ S	110 PPM			
3. Specific Gravity	1.130			
4. Total Dissolved Solids		193036.9		
5. Suspended Solids		NR		
6. Dissolved Oxygen		NR		
7. Dissolved CO ₂		NR		
8. Oil In Water		NR		
9. Phenolphthalein Alkalinity (CaCO ₃)				
10. Methyl Orange Alkalinity (CaCO ₃)				
11. Bicarbonate	HCO ₃	646.0	HCO ₃	10.6
12. Chloride	Cl	112890.0	Cl	3184.5
13. Sulfate	SO ₄	4750.0	SO ₄	98.9
14. Calcium	Ca	2080.0	Ca	103.8
15. Magnesium	Mg	755.0	Mg	62.1
16. Sodium (calculated)	Na	71914.6	Na	3128.1
17. Iron	Fe	1.3		
18. Barium	Ba	NR		
19. Strontium	Sr	NR		
20. Total Hardness (CaCO ₃)		8303.0		

PROBABLE MINERAL COMPOSITION

*milli equivalents per Liter		Compound	Equiv wt X meq/L	= mg/L
104 *Ca <----- *HCO ₃	11	Ca(HCO ₃) ₂	81.0 10.6	858
/----->		CaSO ₄	68.1 93.2	6343
62 *Mg -----> *SO ₄	99	CaCl ₂	55.5	
<-----/		Mg(HCO ₃) ₂	73.2	
3128 *Na -----> *Cl	3184	MgSO ₄	60.2 5.7	344
		MgCl ₂	47.6 56.4	2685
Saturation Values Diet. Water 20 C		NaHCO ₃	84.0	
CaCO ₃ 13 mg/L		Na ₂ SO ₄	71.0	
CaSO ₄ * 2H ₂ O 2090 mg/L		NaCl	58.4 3128.1	182805
BaSO ₄ 2.4 mg/L				

REMARKS:

----- STEVE TIGERT



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

Petrolite Oilfield Chemicals Group

Respectfully submitted,
SHAWNA MATTHEWS

PETROLITE

Petrolite Corporation
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TRETOLITE DIVISION

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Fax (505) 746-3580

WATER ANALYSIS REPORT

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

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

ANALYSIS		mg/L	* meq/L
1.	pH	6.2	
2.	H ₂ S	100 PPM	
3.	Specific Gravity	1.080	
4.	Total Dissolved Solids	119964.3	
5.	Suspended Solids	NR	
6.	Dissolved Oxygen	NR	
7.	Dissolved CO ₂	NR	
8.	Oil In Water	NR	
9.	Phenolphthalein Alkalinity (CaCO ₃)		
10.	Methyl Orange Alkalinity (CaCO ₃)		
11.	Bicarbonate HCO ₃	927.0	HCO ₃ 15.2
12.	Chloride Cl	71994.0	Cl 2030.9
13.	Sulfate SO ₄	1400.0	SO ₄ 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 (CaCO ₃)	11654.0	

PROBABLE MINERAL COMPOSITION

*milli equivalents per Liter	Compound	Equiv wt X meq/L	= mg/L
58 *Ca <----- *HCO ₃	Ca(HCO ₃) ₂	81.0	1231
/----->	CaSO ₄	68.1	1984
175 *Mg -----> *SO ₄	CaCl ₂	55.5	751
<-----/	Mg(HCO ₃) ₂	73.2	
1842 *Na -----> *Cl	MgSO ₄	60.2	
	MgCl ₂	47.6	8330
Saturation Values Dist. Water 20 C	NaHCO ₃	84.0	
CaCO ₃ 13 mg/L	Na ₂ SO ₄	71.0	
CaSO ₄ * 2H ₂ O 2090 mg/L	NaCl	58.4	107666
BaSO ₄ 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-Davis 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

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422 West Main Street
Artesia, NM 88210-2041

TRETOLITE DIVISION

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Reply to:
P.O. Box 1140
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	712
/----->	CaSO4	68.1	6378
49 *Mg -----> *SO4	CaCl2	55.5	1290
<-----/	Mg(HCO3)2	73.2	
3292 *Na -----> *Cl	MgSO4	60.2	
	MgCl2	47.6	2340
Saturation Values Dist. Water 20 C	NaHCO3	84.0	
CaCO3 13 mg/L	Na2SO4	71.0	
CaSO4 * 2H2O 2090 mg/L	NaCl	58.4	192404
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.	: 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

PETROLITE

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

TRETOLITE DIVISION

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

Reply to:
P.O. Box 1140
Artesia, NM
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.	H ₂ S	150 PPM	
3.	Specific Gravity	1.080	
4.	Total Dissolved Solids	110356.4	
5.	Suspended Solids	NR	
6.	Dissolved Oxygen	NR	
7.	Dissolved CO ₂	NR	
8.	Oil In Water	NR	
9.	Phenolphthalein Alkalinity (CaCO ₃)		
10.	Methyl Orange Alkalinity (CaCO ₃)		
11.	Bicarbonate	HCO ₃ 951.0	HCO ₃ 15.6
12.	Chloride	Cl 64539.0	Cl 1820.6
13.	Sulfate	SO ₄ 2750.0	SO ₄ 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 (CaCO ₃)	9953.0	

PROBABLE MINERAL COMPOSITION

*milli equivalents per Liter	Compound	Equiv wt X meq/L	= mg/L
94 *Ca <----- *HCO ₃	Ca(HCO ₃) ₂	81.0	1263
/----->	CaSO ₄	68.1	3898
105 *Mg -----> *SO ₄	CaCl ₂	55.5	1163
<-----/	Mg(HCO ₃) ₂	73.2	
1695 *Na -----> *Cl	MgSO ₄	60.2	
	MgCl ₂	47.6	5002
Saturation Values Dist. Water 20 C	NaHCO ₃	84.0	
CaCO ₃ 13 mg/L	Na ₂ SO ₄	71.0	
CaSO ₄ * 2H ₂ O 2090 mg/L	NaCl	58.4	99029
BaSO ₄ 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.	: 0237
Well	: #8	Analyst	: SHAWNA MATTHEWS
Sample Pt.	: WELLHEAD		

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

S.I.	=	-0.3	at	60 deg. F	or	16 deg. C
S.I.	=	-0.3	at	80 deg. F	or	27 deg. C
S.I.	=	-0.3	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	=	6842	at	60 deg. F	or	16 deg C
S	=	7244	at	80 deg. F	or	27 deg C
S	=	7493	at	100 deg. F	or	38 deg C
S	=	7604	at	120 deg. F	or	49 deg C
S	=	7682	at	140 deg. F	or	60 deg C

Petrolite Oilfield Chemicals Group

Respectfully submitted,
SHAWNA MATTHEWS

PETROLITE

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Artesia, NM 88210-2041

TRETOLITE DIVISION

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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 : #8
Sample Pt. : WELLHEAD

Date : 02/29/96
Date Sampled : 02/29/96
Analysis No. : 0237

ANALYSIS		mg/L		* meq/L
1. pH	5.8			
2. H ₂ S	40 PPM			
3. Specific Gravity	1.130			
4. Total Dissolved Solids		202393.4		
5. Suspended Solids		NR		
6. Dissolved Oxygen		NR		
7. Dissolved CO ₂		NR		
8. Oil In Water		NR		
9. Phenolphthalein Alkalinity (CaCO ₃)				
10. Methyl Orange Alkalinity (CaCO ₃)				
11. Bicarbonate	HCO ₃	512.0	HCO ₃	8.4
12. Chloride	Cl	118854.0	Cl	3352.7
13. Sulfate	SO ₄	4750.0	SO ₄	98.9
14. Calcium	Ca	2280.0	Ca	113.8
15. Magnesium	Mg	1046.9	Mg	86.1
16. Sodium (calculated)	Na	74950.4	Na	3260.1
17. Iron	Fe	0.1		
18. Barium	Ba	NR		
19. Strontium	Sr	NR		
20. Total Hardness (CaCO ₃)		10004.0		

PROBABLE MINERAL COMPOSITION

*milli equivalents per Liter		Compound	Equiv wt X meq/L	= mg/L
114 *Ca <----- *HCO ₃	8	Ca(HCO ₃) ₂	81.0	680
/----->		CaSO ₄	68.1	6732
86 *Mg -----> *SO ₄	99	CaCl ₂	55.5	359
<-----/		Mg(HCO ₃) ₂	73.2	
3260 *Na -----> *Cl	3353	MgSO ₄	60.2	
		MgCl ₂	47.6	4100
Saturation Values Dist. Water 20 C		NaHCO ₃	84.0	
CaCO ₃	13 mg/L	Na ₂ SO ₄	71.0	
CaSO ₄ * 2H ₂ O	2090 mg/L	NaCl	58.4	190522
BaSO ₄	2.4 mg/L			

REMARKS:

----- STEVE TIGERT

SCALE TENDENCY REPORT

Company	: SDX RESOURCES	Date	: 02/29/96
Address	: ARTESIA, NM	Date Sampled	: 02/29/96
Lease	: CONOCO 7 STATE	Analysis No.	: 0241
Well	: #9	Analyst	: SHAWNA MATTHEWS
Sample Pt.	: WELLHEAD		

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

S.I. =	0.2	at	60 deg. F	or	16 deg. C
S.I. =	0.3	at	80 deg. F	or	27 deg. C
S.I. =	0.3	at	100 deg. F	or	38 deg. C
S.I. =	0.4	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 =	6089	at	60 deg. F	or	16 deg C
S =	6486	at	80 deg. F	or	27 deg C
S =	6733	at	100 deg. F	or	38 deg C
S =	6845	at	120 deg. F	or	49 deg C
S =	6923	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

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Fax (505) 746-3580

TRETOLITE DIVISION

WATER ANALYSIS REPORT

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

Company : SDX RESOURCES
Address : ARTESIA, NM
Lease : CONOCO 7 STATE
Well : #9
Sample Pt. : WELLHEAD

Date : 02/29/96
Date Sampled : 02/29/96
Analysis No. : 0241

ANALYSIS	mg/L	* meq/L
1. pH	6.2	
2. H ₂ S	70 PPM	
3. Specific Gravity	1.125	
4. Total Dissolved Solids	191071.0	
5. Suspended Solids	NR	
6. Dissolved Oxygen	NR	
7. Dissolved CO ₂	NR	
8. Oil In Water	NR	
9. Phenolphthalein Alkalinity (CaCO ₃)		
10. Methyl Orange Alkalinity (CaCO ₃)		
11. Bicarbonate	HCO ₃ 658.0	HCO ₃ 10.8
12. Chloride	Cl 111825.0	Cl 3154.4
13. Sulfate	SO ₄ 4750.0	SO ₄ 98.9
14. Calcium	Ca 2800.0	Ca 139.7
15. Magnesium	Mg 889.4	Mg 73.2
16. Sodium (calculated)	Na 70148.4	Na 3051.3
17. Iron	Fe 0.3	
18. Barium	Ba NR	
19. Strontium	Sr NR	
20. Total Hardness (CaCO ₃)	10654.0	

PROBABLE MINERAL COMPOSITION

*milli equivalents per Liter	Compound	Equiv wt X meq/L	= mg/L
140 *Ca <----- *HCO ₃	Ca(HCO ₃) ₂	81.0	874
/----->	CaSO ₄	68.1	6732
73 *Mg -----> *SO ₄	CaCl ₂	55.5	1666
<-----/	Mg(HCO ₃) ₂	73.2	
3051 *Na -----> *Cl	MgSO ₄	60.2	
	MgCl ₂	47.6	3483
	NaHCO ₃	84.0	
	Na ₂ SO ₄	71.0	
	NaCl	58.4	178315

Saturation Values Dist. Water 20 C
 CaCO₃ 13 mg/L
 CaSO₄ * 2H₂O 2090 mg/L
 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.	: 0238
Well	: #11	Analyst	: SHAWNA MATTHEWS
Sample Pt.	: WELLHEAD		

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

S.I. =	0.3	at	60 deg. F	or	16 deg. C
S.I. =	0.4	at	80 deg. F	or	27 deg. C
S.I. =	0.4	at	100 deg. F	or	38 deg. C
S.I. =	0.5	at	120 deg. F	or	49 deg. C
S.I. =	0.6	at	140 deg. F	or	60 deg. C

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

S =	5918	at	60 deg. F	or	16 deg C
S =	6285	at	80 deg. F	or	27 deg C
S =	6515	at	100 deg. F	or	38 deg C
S =	6624	at	120 deg. F	or	49 deg C
S =	6704	at	140 deg. F	or	60 deg C

Petrolite Oilfield Chemicals Group

Respectfully submitted,
SHAWNA MATTHEWS

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WATER ANALYSIS REPORT

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

Company : SDX RESOURCES Date : 02/29/96
Address : ARTESIA, NM Date Sampled : 02/29/96
Lease : CONOCO 7 STATE Analysis No. : 0238
Well : #11
Sample Pt. : WELLHEAD

ANALYSIS		mg/L		* meq/L
1. pH	6.6			
2. H ₂ S	100 PPM			
3. Specific Gravity	1.080			
4. Total Dissolved Solids		114294.6		
5. Suspended Solids		NR		
6. Dissolved Oxygen		NR		
7. Dissolved CO ₂		NR		
8. Oil In Water		NR		
9. Phenolphthalein Alkalinity (CaCO ₃)				
10. Methyl Orange Alkalinity (CaCO ₃)				
11. Bicarbonate	HCO ₃	1134.0	HCO ₃	18.6
12. Chloride	Cl	68586.0	Cl	1934.7
13. Sulfate	SO ₄	825.0	SO ₄	17.2
14. Calcium	Ca	980.0	Ca	48.9
15. Magnesium	Mg	1580.1	Mg	130.0
16. Sodium (calculated)	Na	41188.7	Na	1791.6
17. Iron	Fe	0.8		
18. Barium	Ba	NR		
19. Strontium	Sr	NR		
20. Total Hardness (CaCO ₃)		8953.0		

PROBABLE MINERAL COMPOSITION

*milli equivalents per Liter		Compound	Equiv wt X meq/L	= mg/L
49 *Ca <----- *HCO ₃	19	Ca(HCO ₃) ₂	81.0	1506
/----->		CaSO ₄	68.1	1169
130 *Mg -----> *SO ₄	17	CaCl ₂	55.5	729
<-----/		Mg(HCO ₃) ₂	73.2	
1792 *Na -----> *Cl	1935	MgSO ₄	60.2	
		MgCl ₂	47.6	130.0
		NaHCO ₃	84.0	
		Na ₂ SO ₄	71.0	
		NaCl	58.4	1791.6
				104701

Saturation Values Dist. Water 20 C

CaCO ₃	13 mg/L
CaSO ₄ * 2H ₂ O	2090 mg/L
BaSO ₄	2.4 mg/L

REMARKS:

----- STEVE TIGERT

PETROLITE

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

TRETOLITE DIVISION

(505) 746-3588
Fax (505) 746-3590

WATER ANALYSIS REPORT

Reply to:
P.O. Box 1140
Artesia, NM
88211-7631

Company : SDX RESOURCES
Address : ARTESIA, NM
Lease : CONOCO 7 STATE
Well : #12
Sample Pt. : WELLHEAD

Date : 02/29/96
Date Sampled : 02/29/96
Analysis No. : 0240

ANALYSIS		mg/L	* meq/L
1.	pH	6.4	
2.	H2S	110 PPM	
3.	Specific Gravity	1.075	
4.	Total Dissolved Solids	125625.0	
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 1024.0	HCO3 16.8
12.	Chloride	Cl 73272.0	Cl 2066.9
13.	Sulfate	SO4 2900.0	SO4 60.4
14.	Calcium	Ca 1740.0	Ca 86.8
15.	Magnesium	Mg 681.7	Mg 56.1
16.	Sodium (calculated)	Na 46007.0	Na 2001.2
17.	Iron	Fe 0.3	
18.	Barium	Ba NR	
19.	Strontium	Sr NR	
20.	Total Hardness (CaCO3)	7152.0	

PROBABLE MINERAL COMPOSITION

*milli equivalents per Liter	Compound	Equiv wt X meq/L	= mg/L
87 *Ca <----- *HCO3	Ca(HCO3)2	81.0	1360
/----->	CaSO4	68.1	4110
56 *Mg -----> *SO4	CaCl2	55.5	536
<-----/	Mg(HCO3)2	73.2	
2001 *Na <-----> *Cl	MgSO4	60.2	
	MgCl2	47.6	2670
Saturation Values Dist. Water 20 C	NaHCO3	84.0	
CaCO3 13 mg/L	Na2SO4	71.0	
CaSO4 * 2H2O 2090 mg/L	NaCl	58.4	116949
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.	: 0240
Well	: #12	Analyst	: SHAWNA MATTHEWS
Sample Pt.	: WELLHEAD		

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

S.I. =	0.3	at	60 deg. F	or	16 deg. C
S.I. =	0.4	at	80 deg. F	or	27 deg. C
S.I. =	0.5	at	100 deg. F	or	38 deg. C
S.I. =	0.5	at	120 deg. F	or	49 deg. C
S.I. =	0.6	at	140 deg. F	or	60 deg. C

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

S =	6176	at	60 deg. F	or	16 deg C
S =	6553	at	80 deg. F	or	27 deg C
S =	6792	at	100 deg. F	or	38 deg C
S =	6906	at	120 deg. F	or	49 deg C
S =	6988	at	140 deg. F	or	60 deg C

Petrolite Oilfield Chemicals Group

Respectfully submitted,
SHAWNA MATTHEWS

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.	: 0239
Well	: #13	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. =	0.3	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 =	6836	at	60 deg. F	or	16 deg C
S =	7233	at	80 deg. F	or	27 deg C
S =	7483	at	100 deg. F	or	38 deg C
S =	7598	at	120 deg. F	or	49 deg C
S =	7680	at	140 deg. F	or	60 deg C

Petrolite Oilfield Chemicals Group

Respectfully submitted,
SHAWNA MATTHEWS

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

WATER ANALYSIS REPORT

Company : SDX RESOURCES
Address : ARTESIA, NM
Lease : CONOCO 7 STATE
Well : #13
Sample Pt. : WELLHEAD

Date : 02/29/96
Date Sampled : 02/29/96
Analysis No. : 0239

ANALYSIS		mg/L	* meq/L
1. pH	6.2		
2. H2S	100 PPM		
3. Specific Gravity	1.115		
4. Total Dissolved Solids		157282.8	
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	829.0	HCO3 13.6
12. Chloride	Cl	91377.0	Cl 2577.6
13. Sulfate	SO4	4375.0	SO4 91.1
14. Calcium	Ca	2060.0	Ca 102.8
15. Magnesium	Mg	742.9	Mg 61.1
16. Sodium (calculated)	Na	57898.3	Na 2518.4
17. Iron	Fe	0.6	
18. Barium	Ba	NR	
19. Strontium	Sr	NR	
20. Total Hardness (CaCO3)		8203.0	

PROBABLE MINERAL COMPOSITION

*milli equivalents per Liter	Compound	Equiv wt X meq/L	= mg/L
103 *Ca <----- *HCO3	Ca(HCO3)2	81.0	13.6 1101
/----->	CaSO4	68.1	89.2 6071
61 *Mg -----> *SO4	CaCl2	55.5	
<-----/	Mg(HCO3)2	73.2	
2518 *Na -----> *Cl	MgSO4	60.2	1.9 114
	MgCl2	47.6	59.2 2819
Saturation Values Dist. Water 20 C	NaHCO3	84.0	
CaCO3 13 mg/L	Na2SO4	71.0	
CaSO4 * 2H2O 2090 mg/L	NaCl	58.4	2518.4 147176
BaSO4 2.4 mg/L			

REMARKS:

----- STEVE TIGERT

Petrolite Oilfield Chemicals Group

Respectfully submitted,
SHAWNA MATTHEWS



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

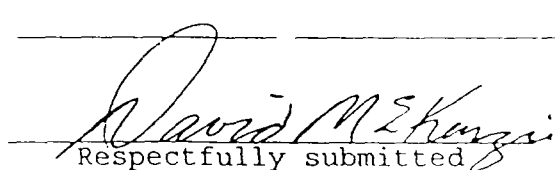
Date Rec February 10, 1995

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 mpl		
Sulfates.....	1,750 mpl		
Bicarbonates.....	200		
Soluble Iron.....	Nil		

Remarks:


Respectfully submitted

Analyst: David McKenzie -- Technical Advisor

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ATTACHMENT "F"