

		<u>1/14/08</u>	<u>8/21/07</u>	<u>5/10/07</u>
SUPERIOR FED. #6	Cl	130,000	169,947	142,956
	Na	34,844	76,937	30,497
	Ca	11,800	14,504	13,173
	Mg	18,600	7,987	24,364
	SO4	951	632	838

SUPERIOR FED. #5	Cl		115,965
	Na		31,250
	Ca		10,379
	Mg		16,619
	SO4		1,429

MERRIT W.F.	Cl	93,000
	Na	46,369
	Ca	5,460
	Mg	4,280
	SO4	2,574



PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR
ARMSTRONG ENERGY CORP.
ATTN: BRUCE STUBBS
P.O. BOX 1973
ROSWELL, NM 88201
FAX TO: (575) 623-1777 & (575) 392-4766

Receiving Date: 01/09/08
Reporting Date: 01/16/08
Project Owner: NOT GIVEN
Project Name: SUPERIOR FED NO. 6
Project Location: NOT GIVEN

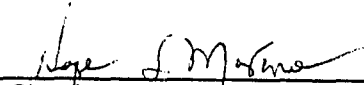
Sampling Date: 01/09/08
Sample Type: GROUNDWATER
Sample Condition: INTACT
Sample Received By: ML
Analyzed By: HM/KS

LAB NUMBER	SAMPLE ID	Na (mg/L)	Ca (mg/L)	Mg (mg/L)	K (mg/L)	Conductivity (uS/cm)	T-Alkalinity (mgCaCO ₃ /L)
ANALYSIS DATE:		01/14/08	01/14/08	01/14/08	01/14/08	01/16/08	01/10/08
H14042-1	MERRITT	46,369	5,460	4,280	1,400	178,700	188
H14042-2	SUPERIOR FED #6	34,844	11,800	18,600	1,910	273,200	144
Quality Control		NR	49.2	54.0	3.19	1,413	NR
True Value QC		NR	50.0	50.0	3.00	1,413	NR
% Recovery		NR	98.5	108	106	100	NR
Relative Percent Difference		NR	< 0.1	6.1	10.2	0.3	NR

METHODS:	SM3500-Ca-D	3500-Mg E	8049	120.1	310.1
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		Cl ⁻ (mg/L)	SO ₄ (mg/L)	CO ₃ (mg/L)	HCO ₃ (mg/L)	pH (s.u.)	TDS (mg/L)
ANALYSIS DATE:		01/10/08	01/11/08	01/10/08	01/10/08	01/10/08	01/09/08
H14042-1	MERRITT	93,000	2,574	0	229	6.82	159,964
H14042-2	SUPERIOR FED #6	130,000	951	0	176	6.29	228,816
Quality Control		490	26.3	NR	1000	7.02	NR
True Value QC		500	25.0	NR	1000	7.00	NR
% Recovery		98.0	105	NR	100	100	NR
Relative Percent Difference		2.0	5.8	NR	< 0.1	0.1	NR

METHODS:	SM4500-Cl-B	375.4	310.1	310.1	150.1	160.1
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Chemist

01-16-08
Date

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2



ARDINAL LABORATORIES

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PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR
ARMSTRONG ENERGY CORP.
ATTN: BRUCE STUBBS
P.O. BOX 1973
ROSWELL, NM 88201
FAX TO: (505) 622-2512

RECEIVED AUG 24 2007

Receiving Date: 08/10/07
Reporting Date: 08/21/07
Project Owner: NOT GIVEN
Project Name: SUPERIOR FED
Project Location: WELL #6

Sampling Date: 08/10/07
Sample Type: GROUNDWATER
Sample Condition: INTACT
Sample Received By: AB
Analyzed By: HM

LAB NUMBER	SAMPLE ID	Na (mg/L)	Ca (mg/L)	Mg (mg/L)	K (mg/L)	Conductivity (uS/cm)	T-Alkalinity (mgCaCO ₃ /L)
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ANALYSIS DATE:	08/21/07	08/21/07	08/21/07	08/21/07	08/17/07	08/17/07
H13068-1 WELL #6	76937	14,504	7,987	2895	316,800	64
Quality Control	NR	47.9	52.4	1.90	1427	NR
True Value QC	NR	50.0	50.0	2.00	1413	NR
% Recovery	NR	95.8	105	95.0	101	NR
Relative Percent Difference	NR	2.7	3.1	0.5	1.5	NR

METHODS:	SM3500-Ca-D	3500-Mg E	8049	120.1	310.1
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Cl ⁻ (mg/L)	SO ₄ (mg/L)	CO ₃ (mg/L)	HCO ₃ (mg/L)	pH (s.u.)	TDS (mg/L)
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ANALYSIS DATE:	08/17/07	08/20/07	08/17/07	08/17/07	08/17/07	08/17/07
H13068-1 WELL #6	169,947	632	0	78	6.39	286144
Quality Control	500	25.9	NR	952	6.95	NR
True Value QC	500	25.0	NR	1000	7.00	NR
% Recovery	100	104	NR	95.2	99.3	NR
Relative Percent Difference	< 0.1	< 0.1	NR	2.7	< 0.1	NR

METHODS:	SM4500-Cl-B	375.4	310.1	310.1	150.1	160.1
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[Signature]
Chemist

08-21-07
Date

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PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR
ARMSTRONG ENERGY CORP.
ATTN: BRUCE STUBBS
P.O. BOX 1973
ROSWELL, NM 88201
FAX TO: (505) 623-1777

RECEIVED MAY 17 2007

Receiving Date: 05/09/07
Reporting Date: 05/11/07
Project Owner: NOT GIVEN
Project Name: NOT GIVEN
Project Location: SUPERIOR FED. LSE WELL 5 & 6

Sampling Date: 05/09/07
Sample Type: WATER
Sample Condition: COOL & INTACT
Sample Received By: HM
Analyzed By: HM

LAB NUMBER	SAMPLE ID	Na (mg/L)	Ca (mg/L)	Mg (mg/L)	K (mg/L)	Conductivity (uS/cm)	T-Alkalinity (mgCaCO ₃ /L)
ANALYSIS DATE:		05/10/07	05/10/07	05/10/07	05/10/07	05/10/07	05/10/07
H12571-1	SUPERIOR FED. #5	31250	10379	16619	2100	14060	140
H12571-2	SUPERIOR FED. #6	30497	13173	24364	2175	13820	56.0
Quality Control		NR	49.2	52.4	1.91	1389	NR
True Value QC		NR	50.0	50.0	2.00	1413	NR
% Recovery		NR	98.5	105	95.7	98.3	NR
Relative Percent Difference		NR	5.3	6.3	1.6	0.4	NR

METHODS:	SM3500-Ca-D	3500-Mg E	8049	120.1	310.1
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	Cl ⁻ (mg/L)	SO ₄ (mg/L)	CO ₃ (mg/L)	HCO ₃ (mg/L)	pH (s.u.)	TDS (mg/L)
ANALYSIS DATE:	05/10/07	05/10/07	05/10/07	05/10/07	05/10/07	05/10/07
H12571-1 SUPERIOR FED. #5	115965	1429	0	171	6.37	178784
H12571-2 SUPERIOR FED. #6	142956	838	0	68.3	6.35	229802
Quality Control	490	23.2	NR	1037	6.92	NR
True Value QC	500	25.0	NR	1000	7.00	NR
% Recovery	98	92.9	NR	104	98.9	NR
Relative Percent Difference	0.0	16	NR	8.5	0.1	NR

METHODS:	SM4500-Cl-B	375.4	310.1	310.1	150.1	160.1
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Chemist

Date

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analysis. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above-stated reasons or otherwise.

WATER CONCERN DIVISION
RECEIVED



104 MAY 9 AM 8 50
P.O. Box 2187
BBS, N.M. 88240

PHONE: (505) 393-7726

WATER ANALYSIS REPORT

Report for: Lowell Deckert

cc: Kenny Kearney

cc:

cc:

Company: Subsurface Water Disp. Inc.

Address: P.O. Box 1002

Service Engineer: K. Kearney

Date sampled: 04/29/94

Date reported: 05/01/94

Lease or well #: Lea Bone Springs

County: Lea State: N.M.

Formation:

Depth:

Submitted by: K. Kearney

CHEMICAL COMPOSITION :

	mg/L	meq/L
Chloride (Cl)	160000	4513
Iron (Fe) (total)	3.0	
Total hardness	87000	
Calcium (Ca)	23458	1171
Magnesium (Mg)	6925	556
Bicarbonates (HCO ₃)	36	1
Carbonates (CO ₃)	0	
Sulfates (SO ₄)	548	11
Hydrogen sulfide (H ₂ S)	n/a	
Carbon dioxide (CO ₂)	n/a	
Sodium (Na)	64373	2799
Total dissolved solids	255342	
Barium (Ba)	n/a	
Strontium (Sr)	n/a	

Specific Gravity

1.182

Density (#/gal.)

9.850

pH

5.750

IONIC STRENGTH

5.39

Stiff-Davis (CaCO₃) Stability Index :

SI = pH - pCa - pAlk - K

SI @ 86 F = +0.41

104 F = +0.64

122 F = +0.90

140 F = +1.19

158 F = +1.51

This water is 90 mg/l (-10.38%) under ITS CALCULATED
CaSO₄ saturation value at 82 F.

SATURATION= 867 mg/L

PRESENT= 777 mg/L

REPORTED BY ROBERT C MIDDLETON
TECHNICAL SERVICES REPRESENTATIVE



P.O. BOX 2187
BBS, N.M. 88240

PHONE: (505) 393-7726

WATER ANALYSIS REPORT

Report for: Lowell Deckert
cc: Kenny Kearney

cc:

cc:

Company: Subsurface Water Disp. Inc.

Address: P.O. Box 1002

Service Engineer: K. Kearney

Date sampled: 04/29/94

Date reported: 05/01/94

Lease or well #: West Pearl Queen

County: Lea State: N.M.

Formation:

Depth:

Submitted by: K. Kearney

CHEMICAL COMPOSITION :

	mg/L	meq/L
Chloride (Cl)	110000	3103
Iron (Fe) (total)	1.0	
Total hardness	47000	
Calcium (Ca)	10827	540
Magnesium (Mg)	4860	390
Bicarbonates (HCO ₃)	158	3
Carbonates (CO ₃)	0	
Sulfates (SO ₄)	1757	37
Hydrogen sulfide (H ₂ S)	n/a	
Carbon dioxide (CO ₂)	n/a	
Sodium (Na)	50869	2212
Total dissolved solids	178473	
Barium (Ba)	n/a	
Strontium (Sr)	n/a	

Specific Gravity

1.127

Density (#/gal.)

9.392

pH

6.150

IONIC STRENGTH

3.63

Stiff-Davis (CaCO₃) Stability Index :

SI = pH - pCa - pAlk - K

SI @ 86 F = +0.25

104 F = +0.48

122 F = +0.74

140 F = +1.03

158 F = +1.35

This water is 512 mg/l (25.87%) over ITS CALCULATED
CaSO₄ saturation value at 82 F.

SATURATION= 1979 mg/L

PRESENT= 2491 mg/L

REPORTED BY ROBERT C MIDDLETON

TECHNICAL SERVICES REPRESENTATIVE



P.O. BOX 2187
OBBS, N.M. 88240

PHONE: (505) 393-7726

WATER ANALYSIS REPORT

Report for: Lowell Deckert
cc: Kenny Kearney
cc:
cc:
Company: Subsurface Water Disp. Inc.
Address: P.O. Box 1002
Service Engineer: K. Kearney

Date sampled: 04/29/94
Date reported: 05/01/94
Lease or well #: Guail Greyburg
County: Lea State: N.M.
Formation:
Depth:
Submitted by: K. Kearney

CHEMICAL COMPOSITION :

	mg/L	meq/L
Chloride (Cl)	180000	5078
Iron (Fe) (total)	2.0	
Total hardness	71000	
Calcium (Ca)	22055	1101
Magnesium (Mg)	3888	312
Bicarbonates (HCO ₃)	67	
Carbonates (CO ₃)	0	
Sulfates (SO ₄)	573	12
Hydrogen sulfide (H ₂ S)	n/a	
Carbon dioxide (CO ₂)	n/a	
Sodium (Na)	84592	3678
Total dissolved solids	291176	
Barium (Ba)	n/a	
Strontium (Sr)	n/a	

Specific Gravity 1.207
Density (#/gal.) 10.059
pH 5.950
IONIC STRENGTH 5.80

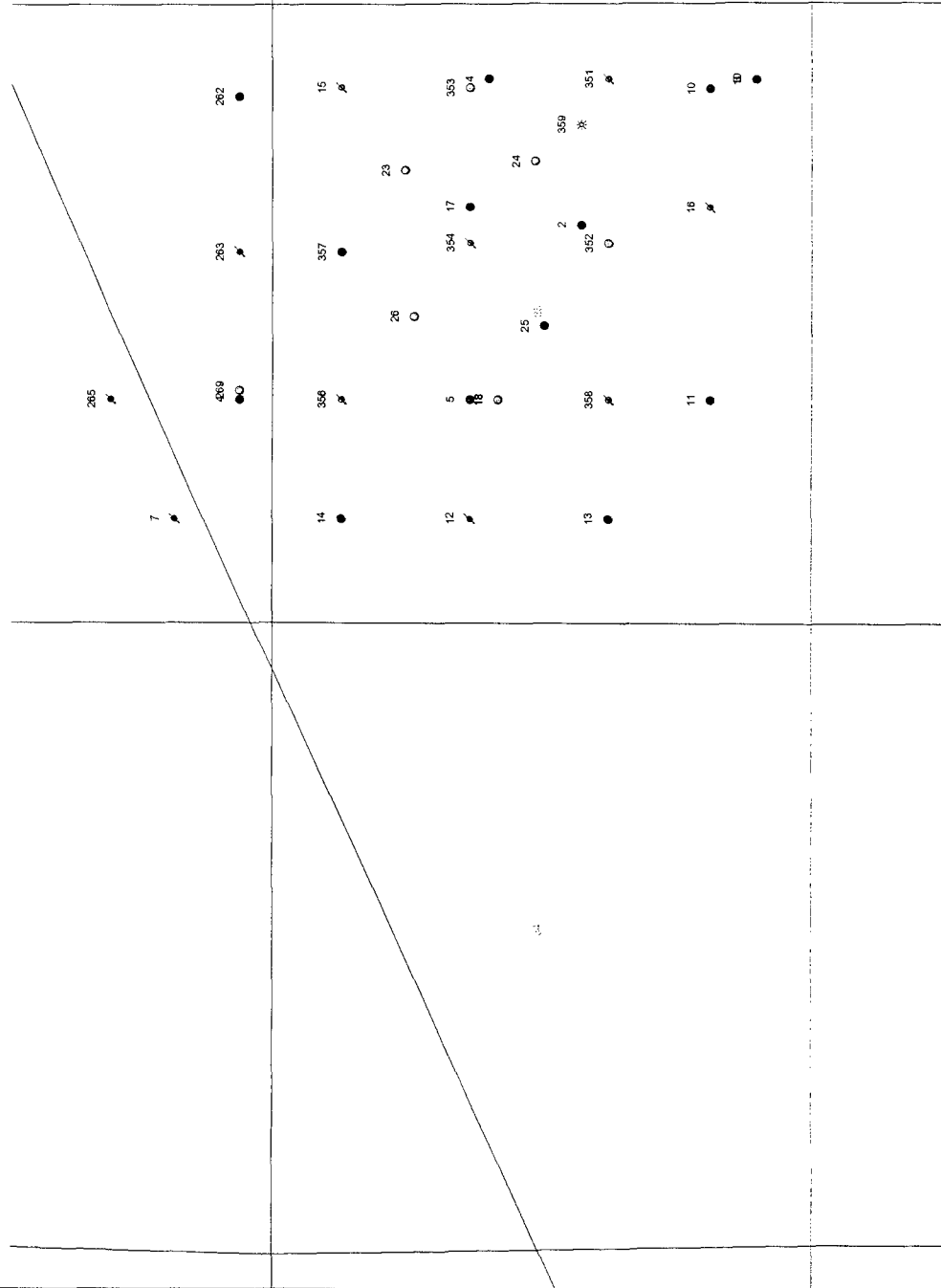
Stiff-Davis (CaCO₃) Stability Index :
SI = pH - pCa - pAlk - K

SI @ 86 F = +1.09
104 F = +1.32
122 F = +1.58
140 F = +1.87
158 F = +2.19

This water is 207 mg/l (-20.29%) under ITS CALCULATED
CaSO₄ saturation value at 82 F.
SATURATION= 1020 mg/L PRESENT= 813 mg/L

REPORTED BY ROBERT C MIDDLETON
TECHNICAL SERVICES REPRESENTATIVE

PI/Dwights PLUS on CD Map Report



Lease No: MULTIPLE
County: LEA, NM
Operator: MULTIPLE
Field: MULTIPLE
Reservoir: MULTIPLE
Location:

Mescalero Ridge Unit

