

**ENVIRONMENTAL ENGINEERING LABORATORY**3538 HANCOCK STREET, SAN DIEGO, CALIF. 92110 • PHONE: 298-6131
P. O. BOX 81789, SAN DIEGO, CALIF. 92138

115/6E-7K3

Sample Source: Well #2Borrego Springs Water Co.Date March 31, 1980Box B

Date Collected _____

Borrego Springs, CaDate Received March 12, 1980Conductivity 760 micromhos/cm @ 25°CpH 7.30**Principal Constituents**

Cations:		mg/l	me/l			mg/l			mg/l
Calcium	Ca	34		Aluminum	Al		Barium	Ba	< 0.2
Magnesium	Mg	8.5		Zinc	Zn	< 0.01	Cadmium	Cd	< 0.010
Sodium	Na	120		Hexavalent Chromium	Cr		Silver	Ag	< 0.01
Potassium	K			Total Chromium	Cr	< 0.01	Mercury	Hg	0.0005
Ammonia	NH ₄			Arsenic	As	< 0.01	Gold	Au	
% Sodium				Lead	Pb	< 0.01			
				Copper	Cu	< 0.01			
				Selenium	Se	< 0.005			
				Nickel	Ni				
				Cyanide	CN				
				Phenols					
				M B A S		0.02			
				Grease & Oil					
				Sulfides					
				Volatile Acids					
Boron	B			Suspended Solids					
Silica	SiO ₂			Volatile Suspended Solids					
Iron	Fe	0.04		Dissolved Solids					
Manganese	Mn	< 0.01		Volatile Dissolved Solids					
Total Phosphate	PO ₄			Settleable Solids					
Ortho Phosphate	PO ₄			BOD, 5 day 20°C					
Nitrite	N			Oxygen Consumed					
Nitrate	N	0.96		Coliform, MPN/100 ml					
Ammonia	N			Plate Count/ml					
Total Organic Nitrogen	N			Plankton Count/ml					
Total Kjeldahl Nitrogen	N			Radioactivity Picocuries/ml					
Total Alkalinity	CaCO ₃	98							
Total Hardness	CaCO ₃	120							
Dissolved Solids		460							
Turbidity, Units									

Remarks CC Lin Burzell

Approved Water Laboratory, California State Department of Public Health

Reported By

Robert R. Chambers



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115/6E-7K3

Borrego Springs Water Co.

Box B

Borrego Springs, California

Date June 7, 1978

Date Collected

Date Received May 30, 1978

Sample Source: Well # 2

Conductivity _____ micromhos/cm @ 25°C
 pH _____

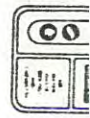
Principal Constituents

Cations:		mg/l	me/l		mg/l	mg/l
Calcium	Ca			Aluminum	Al	Barium Ba
Magnesium	Mg			Zinc	Zn	Cadmium Cd
Sodium	Na			Hexavalent Chromium	Cr	Silver Ag
Potassium	K			Total Chromium	Cr	Mercury Hg
Ammonia	NH ₄			Arsenic	As	Gold Au
% Sodium				Lead	Pb	
Anions:						
Hydroxide	OH			Copper	Cu	
Carbonate	CO ₃			Selenium	Se	
Bicarbonate	HCO ₃			Nickel	Ni	
Sulfate	SO ₄			Cyanide	CN	
Chloride	Cl			Phenols		
Nitrate	NO ₃			M B A S		
Fluoride	F	3.2		Grease & Oil		
				Sulfides		
				Volatile Acids		
Boron	B			Suspended Solids		
Silica	SiO ₂			Volatile Suspended Solids		
Iron	Fe			Dissolved Solids		
Manganese	Mn			Volatile Dissolved Solids		
Total Phosphate	PO ₄			Settleable Solids		
Ortho Phosphate	PO ₄			BOD, 5 day 20°C		
Nitrite	N			Oxygen Consumed		
Nitrate	N			Coliform, MPN/100 ml		
Ammonia	N			Plate Count/ml		
Total Organic Nitrogen	N			Radioactivity Picocuries/ml		
Total Kjeldahl Nitrogen	N					
Total Alkalinity	CaCO ₃					
Total Hardness	CaCO ₃					
Dissolved Solids						
Turbidity, Units						
Remarks						

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Reported By

Robert R. Chambers



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115/6E-7K3

Borrego Springs Water Co.
 Box B
 Borrego Springs, California

Date June 28, 1978
 Date Collected _____
 Date Received June 23, 1978
 Sample Source: Well # 2
 Conductivity _____ micromhos/cm @ 25°C
 pH _____

Principal Constituents						
Cations:		mg/l	me/l			
Calcium	Ca			Aluminum	Al	mg/l
Magnesium	Mg			Zinc	Zn	mg/l
Sodium	Na			Hexavalent Chromium	Cr	mg/l
Potassium	K			Total Chromium	Cr	mg/l
Ammonia	NH ₄			Arsenic	As	mg/l
% Sodium				Lead	Pb	mg/l
				Copper	Cu	mg/l
Anions:				Selenium	Se	mg/l
Hydroxide	OH			Nickel	Ni	mg/l
Carbonate	CO ₃					
Bicarbonate	HCO ₃			Cyanide	CN	mg/l
Sulfate	SO ₄			Phenols		mg/l
Chloride	Cl			M B A S		mg/l
Nitrate	NO ₃			Grease & Oil		mg/l
Fluoride	F	2.8		Sulfides		mg/l
				Volatile Acids		mg/l
Boron	B			Suspended Solids		mg/l
Silica	SiO ₂			Volatile Suspended Solids		mg/l
Iron	Fe			Dissolved Solids		mg/l
Manganese	Mn			Volatile Dissolved Solids		mg/l
Total Phosphate	PO ₄			Settleable Solids		mg/l
Ortho Phosphate	PO ₄			BOD, 5 day 20°C		mg/l
Nitrite	N			Oxygen Consumed		mg/l
Nitrate	N			Coliform, MPN/100 ml		mg/l
Ammonia	N			Plate Count/ml		mg/l
Total Organic Nitrogen	N			Radioactivity Picocuries/ml		mg/l
Total Kjeldahl Nitrogen	N					mg/l
Total Alkalinity	CaCO ₃					mg/l
Total Hardness	CaCO ₃					mg/l
Dissolved Solids	CaCO ₃					mg/l
Turbidity, Units						mg/l
Remarks						mg/l

Approved Water Laboratory, California State Department of Public Health

Reported By

Robert R. Chambers



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 3538 HANCOCK STREET, SAN DIEGO, CALIF. 92110 • PHONE: 298-6131
 P. O. BOX 81789, SAN DIEGO, CALIF. 92138

11S/6E-7K5

Borrego Springs Water Co.
 Box B
 Borrego Springs, California

Date May 3, 1978
 Date Collected _____
 Date Received April 24, 1978

Sample Source: Well 2A
 Conductivity _____ micromhos/cm @ 25°C
 pH _____

Principal Constituents		mg/l	me/l	Aluminum	AI	mg/l	Barium	Ba	mg/l
Cations:				Zinc	Zn		Cadmium	Cd	
Calcium	Ca			Hexavalent Chromium	Cr		Silver	Ag	
Magnesium	Mg			Total Chromium	Cr		Mercury	Hg	
Sodium	Na			Arsenic	As		Gold	Au	
Potassium	K			Lead	Pb				
Ammonia	NH ₄			Copper	Cu				
% Sodium				Selenium	Se				
				Nickel	Ni				
Anions:				Cyanide	CN				
Hydroxide	OH			Phenols					
Carbonate	CO ₃			M B A S					
Bicarbonate	HCO ₃			Grease & Oil					
Sulfate	SO ₄			Sulfides					
Chloride	Cl			Volatle Acids					
Nitrate	NO ₃	1.4		Suspended Solids					
Fluoride	F	2.3		Volatle Suspended Solids					
				Dissolved Solids					
				Volatle Dissolved Solids					
Boron	B			Settleable Solids					
Silica	SiO ₂			BOD 5 day 20°C					
Iron	Fe			Oxygen Consumed					
Manganese	Mn			Coliform, MPN/100 ml					
Total Phosphate	PO ₄			Plate Count/ml					
Ortho Phosphate	PO ₄			Radioactivity Picouries/ml					
Nitrite	N								
Nitrate	N	0.31							
Ammonia	N								
Total Organic Nitrogen	N								
Total Kjeldahl Nitrogen	N								
Total Alkalinity	CaCO ₃								
Total Hardness	CaCO ₃								
Dissolved Solids	CaCO ₃								
Turbidity, Units		376							

Remarks c.c. Lindon Burrell 1002 Bonnie Brae Place Vista, Ca.

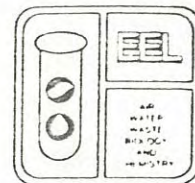
Approved Water Laboratory, California State Department of Public Health

Reported By

Robert H. Chambers

115/6E-7K3

September 25, 1978



Borrego Springs Water Co.
Box B
Borrego Springs, California

3538 HANCOCK STREET
SAN DIEGO, CALIF. 92110
P. O. BOX 81789
SAN DIEGO, CALIF. 92138
PHONE: 298-6131

LABORATORY REPORT

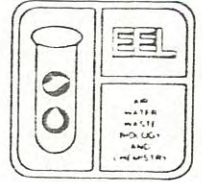
Water samples received on September 14, 1978

<u>Sample</u>	<u>Nitrate (N) mg/l</u>	<u>Fluoride mg/l</u>
3 & 4 mixed	10.4	
Well # 4	14	
Well # 3	1.3	
Well # 2		1.6

Submitted by,

Robert L. Chambers

Robert L. Chambers
Director



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PHONE: 298-6131

Borrego Springs Water Co.
Box B
Borrego Springs, California

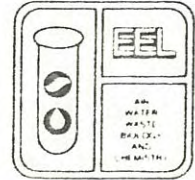
LABORATORY REPORT

Water samples received on August 15, 1978

<u>Sample</u>	<u>Fluoride mg/l</u>	<u>Nitrate mg/l</u>	
		(N)	(NO ₃)
Well # 2 ³ 11S/6E-TKX	4.4		
Well # 3 & 4 (Mix)		9.9	44
Well # 3 & 4 Granada		9.9	44
<u>Well # 4</u>		9.4	42

Submitted by,

Robert L. Chambers
Robert L. Chambers
Director



October 30, 1978

Borrego Springs Water Co.
Box B
Borrego Springs, California

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SAN DIEGO, CALIF. 92138
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LABORATORY REPORT

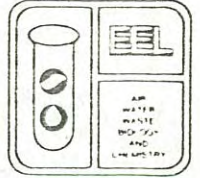
Water samples received October 24, 1978

<u>Sample</u>	<u>Fluoride mg/l</u>	<u>Nitrate (N) mg/l</u>
Well # 2 ³ 115/6E-7K7	1.8	
Well 2, 3, & 4	2.4	
<u>Well # 4</u>		13
Well # 3 & 4		0.38

Submitted by,

Robert L. Chambers

Robert L. Chambers
Director



3538 HANCOCK STREET
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PHONE: 298-6131

November 16, 1978

Borrego Springs Water Co.
P.O. Box B
Borrego Springs, California 92004

LABORATORY REPORT

Water samples received November 9, 1978

Sample	Nitrate mg/l		Fluoride mg/l
	(N)	(NO ₃)	
Well # 2 <i>11S/6E-7K3</i>	0.30 <i>0.30</i>	3.5	2.0
Well # 3	0.67	3.0	
Well # 4	12	53	

*This is correct
Conversion factor
is $4.427 \times N = NO_3$*

Submitted by,

Robert L. Chambers

Robert L. Chambers
Director



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115/6E-7K3

Borrego Springs Water Co.
 Box B
 Borrego Springs, California

Date May 3, 1978
 Date Collected _____
 Date Received April 24, 1978

Conductivity _____ micromhos/cm @ 25°C
 pH _____
 Sample Source: Well 2A

Principal Constituents

Cations:	mg/l	me/l	mg/l	mg/l
Calcium	Ca	Aluminum	Al	Barium
Magnesium	Mg	Zinc	Zn	Cadmium
Sodium	Na	Hexavalent Chromium	Cr	Silver
Potassium	K	Total Chromium	Cr	Mercury
Ammonia	NH ₄	Arsenic	As	Gold
% Sodium		Lead	Pb	Au
		Copper	Cu	
		Selenium	Se	
Anions:		Nickel	Ni	
Hydroxide	OH	Cyanide	CN	
Carbonate	CO ₃	Phenols		
Bicarbonate	HCO ₃	M B A S		
Sulfate	SO ₄	Grease & Oil		
Chloride	Cl	Sulfides		
Nitrate	NO ₃	Volatle Acids		
Fluoride	F	Suspended Solids		
		Volatle Suspended Solids		
Boron	B	Dissolved Solids		
Silica	SiO ₂	Volatle Dissolved Solids		
Iron	Fe	Settleable Solids		
Manganese	Mn	BOD, 5 day 20°C		
Total Phosphate	PO ₄	Oxygen Consumed		
Ortho Phosphate	PO ₄	Coliform, MPN/100 ml		
Nitrite	N	Plate Count/ml		
Nitrate	N	Plankton Count/ml		
Ammonia	N	Radioactivity Picocuries/ml		
Total Organic Nitrogen	N			
Total Kjeldahl Nitrogen	N			
Total Alkalinity	CaCO ₃			
Total Hardness	CaCO ₃			
Dissolved Solids	376			
Turbidity, Units				

Remarks c.c. Jindon Burtzell 1002 Bonnie Brae Place Vista, Ca.

Robert H. Chamberlain



ENVIRONMENTAL ENGINEERING LABORATORY
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 P. O. BOX 81789, SAN DIEGO, CALIF. 92138

Sample Source: Well #2

115/6E-7K23

Borrego Springs Water Co.,
 Box B
 Borrego Springs, Ca

Date March 31, 1980
 Date Collected March 12, 1980
 Date Received March 12, 1980
 Conductivity 760 micromhos/cm @ 25°C
 pH 7.30

Principal Constituents

Cations:	mg/l	me/l	mg/l	mg/l	mg/l
Calcium	Ca	34	Aluminum	Al	< 0.2
Magnesium	Mg	8.5	Zinc	Zn	< 0.010
Sodium	Na	120	Hexavalent Chromium	Cr	< 0.01
Potassium	K		Total Chromium	Cr	< 0.01
Ammonia	NH4		Arsenic	As	< 0.01
% Sodium			Lead	Pb	< 0.01
			Copper	Cu	< 0.01
			Selenium	Se	< 0.005
			Nickel	Ni	
Anions:			Cyanide	CN	
Hydroxide	OH	0	Phenols		
Carbonate	CO3	0	M B A S		0.02
Bicarbonate	HCO3	120	Grease & Oil		
Sulfate	SO4	114	Sulfides		
Chloride	Cl	99	Volatle Acids		
Nitrate	NO3	4.3	Suspended Solids		
Fluoride	F	1.4	Volatle Suspended Solids		
			Dissolved Solids		
Boron	B		Volatle Dissolved Solids		
Silica	SiO2		BOD, 5 day 20°C		
Iron	Fe	0.04	Oxygen Consumed		
Manganese	Mn	< 0.01	Coliform, MPN/100 ml		
Total Phosphate	PO4		Plate Count/ml		
Ortho Phosphate	PO4		Plankton Count/ml		
Nitrite	N		Radioactivity Picocuries/ml		
Nitrate	N	0.96			
Ammonia	N				
Total Organic Nitrogen	N				
Total Kjeldahl Nitrogen	N				
Total Alkalinity	CaCO3	98			
Total Hardness	CaCO3	120			
Dissolved Solids		460			
Turbidity, Units					

Remarks CC Lin Burrell

Robert W. Burrell

115/6E-7K2

not
2A
A

CHEMICAL ANALYSIS (mg/liter)

WELL NO. 2

	8/18/60 <u>Anderson(BSE)</u>	4/22/63 <u>Campbell</u>	7/29/66 <u>Henry C. Myers</u>	5/23/73 <u>Env.Engr.Lab.</u>	5/15/75 <u>Env.Engr.Lab.</u>	1/8/76
Silica (SiO ₂)			28.0	24.0	30.0	
Iron	.05	.0	.0	.0	.02	
Manganese	.0	.0	.0	.0	.0	
Fluoride	1.5	1.6	1.4	1.1	.85	
Calcium	20.0	23.0	23.6	34.0	32.0	
Magnesium	3.7	2.4	4.1	2.9	4.4	
Sodium	100.0	110.0	103.0	122.0	126.0	
Potassium	3.0	3.2	4.0	4.0	4.3	
Bicarbonate	95.0	89.0	106.0	134.0	146.0	
Chloride	73.0	73.0	82.0	103.0	108.0	
Sulfate	70.0	100.0	92.0	104.0	86.0	
Nitrate	--	--	1.8	.68	6.3	3.7
Total Dissolved Solids	390.0	400.0	390.0	476.0	460.0	
Total Hardness as CaCO ₃	65.0	68.0	76.0	96.0	98.0	
Elect. Cond. K x 10 ⁶ @25°C.	--	--	669.0	730.0	770.0	
pH	7.6	7.8	7.9	7.6	7.89	

Well No 2 A is a replacement well for nearby Well No 2 a 10" well drilled in 1955 which failed in 1977.