

## CHEMICAL ANALYSIS (mg/liter)

WELL NO. 3	1/23/63 <u>Merrin</u>	7/29/66 <u>Henry C. Myers</u>	5/23/73 <u>Env.Engr.Lab.</u>	5/3/75 <u>Env.Engr.Lab.</u>	12/5/75
Silica (SiO <sub>2</sub> )	--	15.0	5.2	17.0	
Iron	.06	.05	.1	.04	
Manganese	.0	.0	.0	.0	
Fluoride	.6	.7	.62	.55	
Calcium	44.0	43.0	50.0	42.0	
Magnesium	2.4	2.4	2.9	3.6	
Sodium	158.0	140.0	162.0	166.0	
Potassium	12.0	6.0	12.0	12.0	
Bicarbonate	49.0	71.0	73.0	70.0	
Chloride	59.0	57.0	69.0	64.0	
Sulfate	325.0	276.0	339.0	321.0	
Nitrate	--	.0	.22	17.0	1.8
Total Dissolved Solids	675.0	575.0	680.0	640.0	
Total Hardness as CaCO <sub>3</sub>	120.0	117.0	136.0	117.0	
Elect. Cond. K x 10 <sup>6</sup> @ 25°C.	--	1010.0	1020.0	980.0	
pH	7.5	7.9	7.7	8.21	

Sample Number 4850 Laboratory Number 3092 Work Authority Number 140B-0739

Type of Analysis Comp  
GROUND WASTE

G.W. Basin \_\_\_\_\_ Source \_\_\_\_\_  
Date drilled \_\_\_\_\_ Depth \_\_\_\_\_ Dia \_\_\_\_\_ Treatment \_\_\_\_\_  
MLP. II \_\_\_\_\_ Depth to water \_\_\_\_\_ Location of discharge \_\_\_\_\_  
Sampled depth \_\_\_\_\_ Ppg \_\_\_\_\_ Discharge to \_\_\_\_\_  
Perf. \_\_\_\_\_ G.S. Elev. \_\_\_\_\_

General location \_\_\_\_\_ miles \_\_\_\_\_ of \_\_\_\_\_

State Well No. 10 6E 250

Areal Code X-22-A3 Date Sampled 5/21/70

Analysis No. \_\_\_\_\_ Time 1230 PST

County 90 Temp 92 °F

Laboratory Code No. 5050 Surface Water No. \_\_\_\_\_

Gage Ht. \_\_\_\_\_ Disch. \_\_\_\_\_ cfs/gpm

Field pH \_\_\_\_\_ D.O. \_\_\_\_\_

Other identification \_\_\_\_\_

OWNER Name Ppg on arrival Address \_\_\_\_\_ City \_\_\_\_\_ Zip Code \_\_\_\_\_

REMARKS: \_\_\_\_\_ Send copy to owner

Color \_\_\_\_\_ Odor \_\_\_\_\_ Foam \_\_\_\_\_ Algae \_\_\_\_\_ Turbid \_\_\_\_\_

Sampler Baldriga of DWR Agency Code No. 5050

pH <u>7.8</u>	Cell Constant _____	ALKALINITY _____ ml _____		<u>1.28</u> mg/l
<u>1024</u>	R _____ T _____	_____		BORON (B) _____
SPECIFIC CONDUCT. <u>46</u> mg/l	R _____ T _____	<u>0</u> mg/l	CO <sub>3</sub> <u>0</u> meq/l	_____ mg/l
CALCIUM (Ca) <u>2.30</u> meq/l		<u>60</u> mg/l	HCO <sub>3</sub> <u>0.98</u> meq/l	MBAS as ABS _____
		<u>326</u> mg/l	<u>6.79</u> meq/l	_____ mg/l
MAGNESIUM (Mg) <u>2</u> mg/l	<u>0.19</u> meq/l	SULFATE (SO <sub>4</sub> ) _____		ORTHOPHOSPHATE (PO <sub>4</sub> ) _____
		<u>64</u> mg/l	<u>1.81</u> meq/l	<u>682</u> mg/l
SODIUM (Na) <u>154</u> mg/l	<u>6.70</u> meq/l	CHLORIDE (Cl) _____		TOTAL DISSOLVED SOLIDS (at 180° C) _____
POTASSIUM (K) <u>14</u> mg/l	<u>0.35</u> meq/l	<u>1</u> mg/l	<u>0.01</u> meq/l	TOTAL HARDNESS (CaCO <sub>3</sub> ) <u>124</u> mg/l
		NITRATE (NO <sub>3</sub> ) _____		<u>49</u> mg/l TOTAL ALKALINITY as CaCO <sub>3</sub>
		Devarda's <input type="checkbox"/>		TURBIDITY _____ units
AMMONIUM (NH <sub>4</sub> ) _____ mg/l	_____ meq/l	<u>0.65</u> mg/l	<u>0.03</u> meq/l	COLIFORM: MPN/100ml _____
		FLUORIDE (F) _____		_____
		Distilled <input type="checkbox"/>		B.O.D. (5 day) _____ mg/l
TOTAL CATIONS <u>9.54</u> meq/l		TOTAL ANIONS <u>9.62</u> meq/l		SET S. _____ ml/l/hr
				SUS. S. _____ mg/l

Additional Analyses

18R1

\_\_\_\_\_ units

Date into Laboratory \_\_\_\_\_

Date Started \_\_\_\_\_

Date Completed 8-17-70

CHEMIST Tam

105/6E-1321

BSWC #3

Well No. Water Co. New WellLocation Borroon

DATE	MAY 1965					
Total Soluble Salts (ECx10 <sup>3</sup> )	1.05					
pH (1-7 Acid; 7-14 Basic)	7.9					
Boron (parts per million)	0.20					
Nitrogen (pounds per acre ft.)	2.16					
Sodium percentage (%)	78.1					
<u>CATIONS</u> -						
Calcium (meq./liter)	2.32 <sup>2.32</sup>					
Magnesium "						
Sodium "	9.06					
Potassium "	0.30					
TOTAL	11.6					
<u>ANIONS</u> -						
Carbonate (meq./liter)	0					
Bicarbonate "	0.88					
Chloride "	1.46					
Nitrate "	.057					
Sulfate *	9.21					
TOTAL	11.6					

\* Sulfate determined by difference.







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

105/4E-18R1

Borrego Springs Water Co.  
 Box B  
 Borrego Springs, California

Date January 8, 1976  
 Date Collected \_\_\_\_\_  
 Date Received December 15, 1975

Sample Source: Well # 3

Conductivity \_\_\_\_\_ micromhos/cm @ 25°C  
 pH \_\_\_\_\_

Principal Constituents

Cations:

Calcium	Ca
Magnesium	Mg
Sodium	Na
Potassium	K
Ammonia	NH <sub>4</sub>
% Sodium	

mg/l	me/l
------	------

Aluminum	Al	mg/l
Zinc	Zn	0.13
Hexavalent Chromium	Cr	
Total Chromium	Cr	
Arsenic	As	< 0.01
Lead	Pb	< 0.001
Copper	Cu	0.07
Selenium	Se	0.012
Nickel	Ni	

Barium	Ba	mg/l
Cadmium	Cd	
Silver	Ag	
Mercury	Hg	
Gold	Au	

Anions:

Hydroxide	OH
Carbonate	CO <sub>3</sub>
Bicarbonate	HCO <sub>3</sub>
Sulfate	SO <sub>4</sub>
Chloride	Cl
Nitrate	NO <sub>3</sub>
Fluoride	F

1.8

Boron	B	0.26
Silica	SiO <sub>2</sub>	
Iron	Fe	
Manganese	Mn	
Total Phosphate	PO <sub>4</sub>	
Ortho Phosphate	PO <sub>4</sub>	
Nitrite	N	
Nitrate	N	0.41
Ammonia	N	
Total Organic Nitrogen	N	
Total Kjeldahl Nitrogen	N	
Total Alkalinity	CaCO <sub>3</sub>	
Total Hardness	CaCO <sub>3</sub>	
Dissolved Solids		
Turbidity, Units		

Cyanide	CN
Phenols	
M B A S	
Grease & Oil	
Sulfides	
Volatile Acids	
Suspended Solids	
Volatile Suspended Solids	
Dissolved Solids	
Volatile Dissolved Solids	
Settleable Solids	
BOD, 5 day 20°C	
Oxygen Consumed	
Coliform, MPN/100 ml	
Plate Count/ml	
Plankton Count/ml	
Radioactivity Picocuries/ml	

Remarks

*Robert L. Chambers*



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105/6E-18R1

Sample Source: Well # 3Borrego Springs Water Co.Date March 31, 1980Box B

Date Collected \_\_\_\_\_

Borrego Springs, CaDate Received March 12, 1980Conductivity 1000 micromhos/cm @ 25°CpH 7.22

## Principal Constituents

Cations:		mg/l	me/l			mg/l			mg/l
Calcium	Ca	40		Aluminum	Al		Barium	Ba	< 0.2
Magnesium	Mg	1.2		Zinc	Zn	< 0.01	Cadmium	Cd	< 0.010
Sodium	Na	182		Hexavalent Chromium	Cr		Silver	Ag	< 0.01
Potassium	K			Total Chromium	Cr	< 0.01	Mercury	Hg	0.0005
Ammonia	NH <sub>4</sub>			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		0.05			
				Grease & Oil					
				Sulfides					
				Volatile Acids					
Boron	B			Suspended Solids					
Silica	SiO <sub>2</sub>			Volatile Suspended Solids					
Iron	Fe	0.08		Dissolved Solids					
Manganese	Mn	< 0.01		Volatile Dissolved Solids					
Total Phosphate	PO <sub>4</sub>			Settleable Solids					
Ortho Phosphate	PO <sub>4</sub>			BOD, 5 day 20°C					
Nitrite	N			Oxygen Consumed					
Nitrate	N	0.15		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 <sub>3</sub>	43							
Total Hardness	CaCO <sub>3</sub>	105							
Dissolved Solids		650							
Turbidity, Units									

Remarks cc Lin Burzell



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105/6E-18R1

Borrego Springs Water Co.  
Box B  
Borrego Springs, CaDate March 31, 1980  
Date Collected \_\_\_\_\_  
Date Received March 12, 1980Sample Source: Well # 3Conductivity 1000 micromhos/cm @ 25°C  
pH 7.22

Principal Constituents								
		mg/l	me/l		mg/l			mg/l
<b>Cations:</b>								
Calcium	Ca	40		Aluminum	Al		Barium	Ba < 0.2
Magnesium	Mg	1.2		Zinc	Zn	< 0.01	Cadmium	Cd < 0.010
Sodium	Na	182		Hexavalent Chromium	Cr		Silver	Ag < 0.01
Potassium	K			Total Chromium	Cr	< 0.01	Mercury	Hg 0.0005
Ammonia	NH <sub>4</sub>			Arsenic	As	< 0.01	Gold	Au
% Sodium				Lead	Pb	< 0.01		
				Copper	Cu	< 0.01		
				Selenium	Se	< 0.005		
				Nickel	Ni			
<b>Anions:</b>								
Hydroxide	OH	0						
Carbonate	CO <sub>3</sub>	0		Cyanide	CN			
Bicarbonate	HCO <sub>3</sub>	53		Phenols				
Sulfate	SO <sub>4</sub>	360		M B A S		0.05		
Chloride	Cl	68		Grease & Oil				
Nitrate	NO <sub>3</sub>	0.66		Sulfides				
Fluoride	F	0.82		Volatile Acids				
				Suspended Solids				
Boron	B			Volatile Suspended Solids				
Silica	SiO <sub>2</sub>			Dissolved Solids				
Iron	Fe	0.08		Volatile Dissolved Solids				
Manganese	Mn	< 0.01		Settleable Solids				
Total Phosphate	PO <sub>4</sub>			BOD, 5 day 20°C				
Ortho Phosphate	PO <sub>4</sub>			Oxygen Consumed				
Nitrite	N			Coliform, MPN/100 ml				
Nitrate	N	0.15		Plate Count/ml				
Ammonia	N			Plankton Count/ml				
Total Organic Nitrogen	N			Radioactivity Picocuries/ml				
Total Kjeldahl Nitrogen	N							
Total Alkalinity	CaCO <sub>3</sub>	43						
Total Hardness	CaCO <sub>3</sub>	105						
Dissolved Solids		650						
Turbidity, Units								

Remarks cc Lin Burzell

Reported By

*Robert L. Chambers*