

DIVISION OF WATER RESOURCES

Region 7
 Investigation Gen. Water Qual.
 County San Diego Near _____

Ground Water Analyses

Basin Borrego Valley
 DWR No. 105/6E-16N1; SB B&M
 Other Nos. owner #15

105/6E-16N1

Use irrig. Depth 197' Date Completed 1950 Capacity (gpm) 1500 SWL _____
 Drawdown 25' Perforations _____ Size Casing & Depth 16"
 Gravel Packed Seal _____ At What Depth _____ Log _____ Water Level Record _____
 Surface Elev. 676 Datum sea level Source of Information _____

Lab./Field No.	<u>64822</u>											
Sampled By												
Date Collected												
Date Analyzed	<u>4-28-52</u>											
Temperature/pH	<u>7.4</u>											
EC x 10 ⁸ @ 25° C	<u>2115</u>											
Constituents in	egm	% RV	ppm	egm	% RV	ppm	egm	% RV	ppm	egm	% RV	ppm
Cations:												
Ca			<u>202.0</u>									
Mg			<u>4.9</u>									
Na			<u>37.9</u>									
K												
Total Cations												
Anions:												
CO ₃			<u>0.0</u>									
HCO ₃			<u>165.3</u>									
SO ₄			<u>282.3</u>									
Cl			<u>126.3</u>									
NO ₃			<u>20.0</u>									
F												
Total Anions												
Balance												
Boron			<u>0.01</u>									
Silica												
Fe			<u>0.2</u>									
Total Solids/Sum	<u>673.1</u>		<u>756</u>									
Per Cent Sodium			<u>13.6</u>									
Hardness: Total/NC	<u>525.0</u>											
Laboratory/Chemist	<u>Hornkohl</u>											
Copied: Date/By	<u>9-1-53 H. Blaney</u>											

REMARKS: 1. submitted by Di Giorgio Farms

- 2.
- 3.
- 4.

HORNKOHL LABORATORIES

105/6E-16 N1

CHEMICAL AND TESTING ENGINEERS

714 TRUXTUN AVENUE

BAKERSFIELD, CALIFORNIA

Laboratory No. 79501

October 8, 1954

Sample Water

Marked Well # 15

Received September 28, 1954

Submitted by A. F. Peterson

1603 California Avenue * * * * *
Bakersfield, California

IRRIGATION WATER ANALYSIS

CONSTITUENTS			PARTS PER MILLION	GRAINS PER GALLON	IRRIGATION WATER CLASSIFICATION
CARBONATES	(ALKALI)	(CO ₃)	7.2	0.45	Good
BICARBONATES		(HCO ₃)	135.4	7.92	Good
CHLORIDES	(SALT)	(Cl)	170.3	9.96	Good
SULPHATES		(SO ₄)	797.8	46.65	Good
SULPHIDES		(S)	0.0	0.00	Good
NITRATES		(NO ₃)	2.2		Good
CALCIUM	(LIME)	(Ca)	283.2	16.56	Good
MAGNESIUM		(Mg)	37.1	2.17	Good
SODIUM		(Na)	154.1	9.01	Good
BORON		(B)	.05		Good
IRON		(Fe)	.1		Good
HARDNESS AS CaCO ₃			860.0	50.29	Good
TOTAL SOLIDS @ 105°C			1519.1	88.83	Good
TOTAL SOLIDS @ RED HEAT			1463.9	85.60	Good
pH (HYDROGEN ION CONCENTRATION)			8.3		
SODIUM PERCENTAGE			28.0%		
COLOR	Water White				
ODOR	None				
TURBIDITY	Clear				
CONDUCTIVITY, MHOS/CM X 10 ³ @ 25°C.			242.2		

THEORETICAL ANALYSIS

Calcium Carbonate	12.0	0.70
Calcium Bicarbonate	179.9	10.52
Calcium Sulfate	796.4	46.57
Magnesium Sulfate	183.0	10.70
Sodium Sulfate	133.5	7.81
Sodium Chloride	280.6	16.41

REMARKS: As noted by the last column above this sample would be classified as excellent for irrigation use.

16N1

HORNKOHL LABORATORIES

CHEMICAL AND TESTING ENGINEERS

714 TRUXTON AVENUE

BAKERSFIELD, CALIFORNIA

Laboratory No. 79501

October 8, 1954

Sample Water

Marked Well # 15

Received September 26, 1954

Submitted by A. F. Peterson
1603 California Avenue
Bakersfield, California

IRRIGATION WATER ANALYSIS

CONSTITUENTS	PARTS PER MILLION	GRAINS PER GALLON	IRRIGATION WATER CLASSIFICATION
CARBONATES (ALKALI) (CO ₂)	7.2	0.45	Good
BICARBONATES (HCO ₃)	135.4 <i>W20</i>	7.92	Good
CHLORIDES (SALT) (Cl)	170.3	9.96	Good
SULPHATES (SO ₄)	797.8	46.65	Good
SULPHIDES (S)	0.0	0.00	Good
NITRATES (NO ₃)	2.2		Good
CALCIUM (LIME) (Ca)	233.2	16.56	Good
MAGNESIUM (Mg)	37.1	2.17	Good
SODIUM (Na)	154.1	9.01	Good
BORON (B)	.05		Good
IRON (Fe)	.1		Good
HARDNESS AS CaCO ₃	860.0	50.29	Good
TOTAL SOLIDS @ 105°C	1519.1	88.83	Good
TOTAL SOLIDS @ RED HEAT	1463.9	85.60	Good
pH (HYDROGEN ION CONCENTRATION)	8.3		
SODIUM PERCENTAGE	28.0%		
COLOR			
ODOR	Water White		
TURBIDITY	None		
CONDUCTIVITY, MHOS/CM @ 25°C	242.2		

THEORETICAL ANALYSIS

Calcium Carbonate	12.0	0.70
Calcium Bicarbonate	179.9	10.52
Calcium Sulfate	796.4	46.57
Magnesium Sulfate	183.0	10.70
Sodium Sulfate	133.5	7.81
Sodium Chloride	230.6	16.41

REMARKS: As noted by the last column above this sample would be classified as excellent for irrigation use.

CHALMERS
APPROVED WATER LABORATORY

#15

105/6E-16N1



ESTABLISHED 1906

EDWARD S. BABCOCK & SONS

P. O. BOX 432
RIVERSIDE, CALIFORNIA 92502

PHONE 684-1881
AREA CODE 714

LABORATORIES
3215 CHICAGO AVE.

TO **Riviera Farms Inc.**
P.O. Box 1127
Borrego Springs, CA. 92004

SAMPLE MARKED

Dec. 31, 1975

DR. Giorgio Corp.
Well #15 7:30 pm
12/16/75
DR. Giorgio Corp.
Well #15 7:30 pm
12/16/75

Laboratory No. 751219-25

Cations	Milligrams per liter (ppm)	Milli equivalents per liter	Anions	Milligrams per liter (ppm)	Milli equivalents per liter
Calcium (Ca)	212	10.60	Alkalinity as Hydroxide (OH)	0	0
Sodium (Mg)	26	2.20	Carbonate (CO ₃)	0	0
Potassium (Na)	215	9.35	Bicarbonate (HCO ₃)	153	2.50
Ammonium (K)	18	0.46	Sulfate (SO ₄)	670	13.96
			Chloride (Cl)	130	3.65
			Nitrate (NO ₃)	190	3.06
			Phosphate (PO ₄)		
Conductivity		2261			2317
Percentages ECx10 ⁶ @ 25 ° C.		2130			Milligrams per liter (ppm)
Hydrogen Sulfide		41			
Color		7.7	Total Hardness calculated as CaCO ₃		640
pH			Total Dissolved Residue (180° C)		1610
Temperature			Fluoride (F)		
Total Hardness			Boron (B)		0.8
Total Dissolved Residue			Iron (Fe)		
Fluoride			Manganese (Mn)		

Edward S. Babcock & Sons

Edward S. Babcock

HORNKOHL LABORATORIES

CHEMICAL AND TESTING ENGINEERS

714 TRUXTON AVENUE
BAKERSFIELD, CALIFORNIA

Laboratory No. 79501

October 8, 1954

Sample Water

Marked Well # 15

Received September 25, 1954

Submitted by A. F. Peterson
1603 California Avenue * * * * *
Bakersfield, California

IRRIGATION WATER ANALYSIS

CONSTITUENTS		PARTS PER MILLION	GRAINS PER GALLON	IRRIGATION WATER CLASSIFICATION
CARBONATES (ALKALI) (CO ₃)		7.2	0.45	Good
BICARBONATES (HCO ₃)		135.4 <i>120</i>	7.92	Good
CHLORIDES (SALT) (Cl)		170.3	9.96	Good
SULPHATES (SO ₄)		797.8	46.65	Good
SULPHIDES (S)		0.0	0.00	Good
NITRATES (NO ₃)		2.2		Good
CALCIUM (LIME) (CA)		203.2	16.56	Good
MAGNESIUM (MG)		37.1	2.17	Good
SODIUM (NA)		154.1	9.01	Good
BORON (B)		.05		Good
IRON (FE)		.1		Good
HARDNESS AS CaCO ₃		360.0	50.29	Good
TOTAL SOLIDS @ 105°C		1519.1	80.83	Good
TOTAL SOLIDS @ RED HEAT		1463.9	85.60	Good
pH (HYDROGEN ION CONCENTRATION)	8.3			
SODIUM PERCENTAGE	20.0%			
COLOR	Water White			
ODOR	None			
TURBIDITY	Clear			
CONDUCTIVITY, MHOS/CM @ 25°C	242.2			

THEORETICAL ANALYSIS

Calcium Carbonate	12.0	0.70
Calcium Bicarbonate	179.9	10.52
Calcium Sulfate	796.4	46.57
Magnesium Sulfate	103.0	10.70
Sodium Sulfate	133.5	7.81
Sodium Chloride	200.6	16.41

REMARKS: As noted by the last column above this sample would be classified as excellent for irrigation use.