

109/6E-20B1

HORNKOHL LABORATORIES

CHEMICAL AND TESTING ENGINEERS

714 TRUXTON AVENUE

BAKERSFIELD, CALIFORNIA

Laboratory No. 79507

October 8, 1954

Sample Water

Marked Well #4

Received September 29, 1954

Submitted by A. F. Peterson

1603 California Avenue
Bakersfield, California

IRRIGATION WATER ANALYSIS

<u>CONSTITUENTS</u>		<u>PARTS PER MILLION</u>	<u>GRAINS PER GALLON</u>	<u>IRRIGATION WATER CLASSIFICATION</u>
CARBONATES	(ALKALI) (CO ₂)	0.0	0.00	Good
BICARBONATES	(HCO ₃)	90.8	5.78	Good
CHLORIDES	(SALT) (Cl)	83.7	4.90	Good
SULPHATES	(SO ₄)	389.3	22.77	Good
SULPHIDES	(S)	0.0	0.00	Good
NITRATES	(NO ₃)	13.0		Good
CALCIUM	(LIME) (Ca)	75.2	4.40	Too Low
MAGNESIUM	(Mg)	4.4	0.26	Good
SODIUM	(Na)	183.1	10.71	Good
BORON	(B)	.05		Good
IRON	(Fe)	.1		Good
HARDNESS AS CaCO ₃		206.0	12.05	Good
TOTAL SOLIDS @ 105°C		793.1	46.67	
TOTAL SOLIDS @ RED HEAT		761.7	44.54	
pH (HYDROGEN ION CONCENTRATION)	7.8			
SODIUM PERCENTAGE	65.9%			
COLOR	Water White			
ODOR	None			
TURBIDITY	Clear			
CONDUCTIVITY, MHOS/CM ² X10 ⁵ @ 25°C.	117.8			

Theoretical Analysis

Calcium Bicarbonate	131.3	7.68
Calcium Sulfate	145.7	8.52
Magnesium Sulfate	21.7	1.27
Sodium Sulfate	397.8	23.26
Sodium Chloride	138.0	8.07

Remarks: Other than needing about 60 lbs. of high grad gypsum per 160,000 Gallons of irrigation water to correct the irregularities shown, this sample would be classified as excellent for irrigation use.