COOPERATIVE EXTENSION SERVICE • NEW MEXICO STATE UNIVERSITY • U. S. DEPARTMENT OF AGRICULTURE

WATER ANALYSIS REPORT

BEFORE EXAMINER ... UTTER
... EXHIBIT NO. 11
applicants 4642

(Standard Irrigation , Test 3)

SOIL AND WATER TESTING LABORATORY

Lab No. 188 Date 8/4/69

NAME Don C. Wiley & Fluid Pump Co.

ADDRESS 1116 Bank of New Mexico Albuquerque, New Mexico

Sample Number: 1 Sample Received: ______

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pH 7.6

Total Soluble Salts:
EC x 10^6 5500 Parts Per Million 3520

Total Dissolved Solids 16584 ppm* (or 44776 pounds per acre foot of water)

Sodium (Na) ______ meq/1** (or ______ pounds of Na per acre foot of water)
Sodium content too high to measure with out flame photometer.

Extremely poor water for irrigation pump., due to very high salt and sodium content.

Sodium - Adsorption - Ratio (SAR) ______

Residual Sodium Carbonate (RSC) ______

WATER CLASSIFICATION: ***

U. S. Salinity Laboratory System: C - 4

New Mexico State University System: ______

(See reverse side for explanation)

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* ppm = parts per million
** meq/l = milliequivalents per liter

EXPLANATION ***

Salinity Hazard

☐ Low-Salinity Water (C1) can be used for irrigation with most crops in most soils with little likelihood that soil salinity will develop.

☐ Medium-Salinity Water (C2) can be used if a moderate amount of leaching occurs.

☐ High-Salinity Water (C3) cannot be used on soils with restricted drainage.

☑ Very-High-Salinity Water (C4) is not suitable for irrigation under ordinary conditions, but may be used occasionally under very special circumstances.

Sodium Hazard

☐ Low-Sodium Water (S1) can be used for irrigation on almost all soils with little danger of the development of harmful levels of sodium.

☐ Medium-Sodium Water (S2) will possibly cause a sodium hazard in fine-textured soils, under low-leaching conditions. This water can be used on course-textured soils with good permeability.

☐ High-Sodium Water (S3) may produce a sodium hazard and will require special soil management—good drainage, high leaching, and possibly the use of chemical amendments such as gypsum.

☐ Very-High-Sodium Water (S4) is usually unsatisfactory for irrigation purposes.

NMSU Classification System

The system used by the University is based upon three classes of water, which take into account salinity and sodium hazard.

☐ Class 1 water is suitable for use for most crops under most conditions.

☐ Class 2 water can be used satisfactorily for most crops if care is taken to prevent the accumulation of soluble salt and sodium in the soil.

☐ Class 3 water is generally unsatisfactory for crop production. Less salty waters in Class 3 may be used as a supplemental source if the regular water is of better quality.

*** Refer to the enclosed "Plant Science Guides" for additional information:

400 A-108 "Irrigation Waters"

400 A-110 "Classification of Irrigation Waters"

Sincerely,

C. D. Leedy
Extension Soils Specialist

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(Standard Irrigation , Test 3)

SOIL AND WATER TESTING LABORATORY

Lab No. 189 Date 8/4/69

NAME Don C. Wiley & Fluid Pump Co.

ADDRESS 1116 Bank of New Mexico Albuquerque, New Mexico

Sample Number: 2 Sample Received: _____

pH 7.8

Total Soluble Salts:
EC x 10^6 5500 Parts Per Million 3520

Total Dissolved Solids 16692 ppm* (or 45068 pounds per acre foot of water)

Sodium (Na) _____ meq/l** (or _____ pounds of Na per acre foot of water)
Sodium content too high to measure with our flame photometer.

Extremely poor water for irrigation pump, due to very high salt and sodium content.

Sodium - Adsorption - Ratio (SAR) _____

Residual Sodium Carbonate (RSC) _____

WATER CLASSIFICATION: ***

U. S. Salinity Laboratory System: C - 4

New Mexico State University System: _____

(See reverse side for explanation)

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