Val R. Reese, C.P.G.
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Oil / Gas / Mining

Office: Phone 243-0665
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December 24, 1970

SWD - 115

Mr. A. L. Porter, Secretary-Director
New Mexico Oil Conservation Commission
P. O. Box 2088
Santa Fe, New Mexico 87501

Re: Application for Salt Water Disposal - No. 5 Media well
Sandoval County, New Mexico

Dear Mr. Porter:

Don C. Wiley and Fluid Power Pump Company, operator of the Media field located in Township 19 North, Range 3 West, N.M.P.M., Sandoval County, New Mexico, desire to convert their No. 5 Federal Media well to a salt water disposal well.

In accordance with the Oil Conservation Commission's Rule No. 701 we are attaching the necessary information for administrative approval of conversion of the Federal Media No. 5 well to a salt water disposal well. The information attached has been prepared according to Rule 701 and the completed Form C-108 shows the location of the No. 5 well in Section 22 of Township 19 North, Range 3 West.

As required by Rule No. 701, a map is attached showing the location of the present producing wells in the Media Entrada field in Sections 14 and 15 of Township 19 North, Range 3 West. These wells are the Jurassic Entrada Nos. 1, 2, and 4 Federal Media wells. As shown on the map, a water pit is located between the Nos. 1 and 2 wells. It is our plan to construct a line from this water pit to the No. 5 well.

The attached map also shows the present ownership of the oil and gas leases within two miles of the No. 5 well. The majority of this acreage is held by Don C. Wiley and Fluid Power Pump Company, and there are no other operators active within the area. Mr. Andres Maestas of 2007 Las Luceros Road N.W., Albuquerque, New Mexico, is the surface lessee of the acreage upon which the No. 5 well is located, and he has been furnished with a copy of Application Form No. C-108 by certified mail today.

Also enclosed are two water analyses, Laboratory No. 189, Samples 1 and 2, as prepared by the United States Department of Agriculture at New Mexico State University. These analyses show a dissolved total solid content of 16,692 parts per million.

I am enclosing the induction electric log of the No. 5 well upon which formation tops have been drafted on the large scale portion of the log.

A perforating depth control log is also enclosed showing the diagrammatic sketch required for the approval of the salt water disposal well. As shown on the log, the top of the Gallup sand is at 2782' and the bottom of the Gallup sand is at 3380'. Perforated intervals are designated on the diagram.

Originally, the No. 5 well was drilled to the Entrada sandstone where it was found to be non-productive at a total depth of 5350'. The well was plugged back with approval of the U. S. Geological Survey by setting a 70 sack cement plug from 5350' up to 5150' covering the Entrada sand and a 105 sack cement plug from 4438' up to 4132' covering the Dakota sand. The operator then ran 4½" 9.5# casing in the No. 5 well from the surface down to 3453'. The 4½" casing was cemented with a total of 322 sacks of cement which, as shown on the diagrammatic survey, covered an interval from 3453' up to 953'. The well was then fractured in the Gallup formation, making use of 225,000# of sand and 213,400 gallons of water. The well did not respond to fracture treatment and has been in a temporarily abandoned status since.

At present, Don C. Wiley and Fluid Power Pump Company are on limited production capacity from the Federal Media Nos. 1, 2, and 4 Entrada wells due to our inability to dispose of the produced water.

We would appreciate your consideration of our application to make use of the No. 5 well as a water disposal well. It is our desire to use this well as a salt water disposal well because of the fact that it has been broken down over a large interval by the fracture treatment and the injection of water into this formation would not contaminate any known formation water. (The Gallup sandstone in this area is not known to contain water.) Also, the Mancos shale as shown on the induction electric log forms a good thick seal both above and below the Gallup sandstones, which would protect other porous formations from contamination in the salt water disposal well. The excellent cement job in this well should doubly insure that no water escapes to other formations.

If you find that additional information is needed in connection with this application, I will be glad to come to Santa Fe and bring any additional information that you may need to review this application.

Sincerely,

Val R. Reese

VAL R. REESE
Consulting Geologist for Don C.
Wiley and Fluid Power Pump Company

VRR:mb

CC: Mr. J. W. Cooper
Mr. John Ramming

Form C-108
Revised 3-1-68

NEW MEXICO OIL CONSERVATION COMMISSION

APPLICATION TO DISPOSE OF SALT WATER BY INJECTION INTO A POROUS FORMATION

OPERATOR	ADDRESS
Don C. Wiley & Fluid Power Pump Co.	900 Bank of New Mexico Bldg, Albuquerque, N.M.

LEASE NAME	WELL NO.	FIELD	COUNTY
Federal Media	5	Media Entrada	Sandoval

LOCATION

H UNIT LETTER; 1650' WELL IS LOCATED FEET FROM THE North LINE AND 660' FEET FROM THE

East LINE, SECTION 22 TOWNSHIP 19 North RANGE 3 West NMPM.

CASING AND TUBING DATA

NAME OF STRING	SIZE	SETTING DEPTH	SACKS CEMENT	TOP OF CEMENT	TOP DETERMINED BY
SURFACE CASING	8-5/8"	214'	175	Circulated to surface	
INTERMEDIATE NONE					
LONG STRING	4-1/2"	3453'	175 sx Diamix 147 sx Class A	Filled up 2500' to 953'	Temperature Survey
TUBING			NAME, MODEL AND DEPTH OF TUBING PACKER		

NAME OF PROPOSED INJECTION FORMATION	TOP OF FORMATION	BOTTOM OF FORMATION
Gallup	2782'	3404'

IS INJECTION THROUGH TUBING, CASING, OR ANNULUS?	PERFORATIONS OR OPEN HOLE?	PROPOSED INTERVAL(S) OF INJECTION
Casing	Perforations	2784-2910', 2964-3058', 3176-3268', 3290-3371'

IS THIS A NEW WELL DRILLED FOR DISPOSAL?	IF ANSWER IS NO, FOR WHAT PURPOSE WAS WELL ORIGINALLY DRILLED?	HAS WELL EVER BEEN PERFORATED IN ANY ZONE OTHER THAN THE PROPOSED INJECTION ZONE?
No	Oil well - not productive	No

LIST ALL SUCH PERFORATED INTERVALS AND SACKS OF CEMENT USED TO SEAL OFF OR SQUEEZE EACH

DEPTH OF BOTTOM OF DEEPEST FRESH WATER ZONE IN THIS AREA	DEPTH OF BOTTOM OF NEXT HIGHER OIL OR GAS ZONE IN THIS AREA	DEPTH OF TOP OF NEXT LOWER OIL OR GAS ZONE IN THIS AREA
None known	None	Entrada 5300'

ANTICIPATED DAILY INJECTION VOLUME (BBLS.)	MINIMUM	MAXIMUM	OPEN OR CLOSED TYPE SYSTEM	IS INJECTION TO BE BY GRAVITY OR PRESSURE?	APPROX. PRESSURE (PSI)
500	300	1000	Closed	Pressure	1000 lbs

ANSWER YES OR NO WHETHER THE FOLLOWING WATERS ARE MINERALIZED TO SUCH A DEGREE AS TO BE UNFIT FOR DOMESTIC, STOCK, IRRIGATION, OR OTHER GENERAL USE —	WATER TO BE DISPOSED OF	NATURAL WATER IN DISPOSAL ZONE	ARE WATER ANALYSES ATTACHED?
	Yes	None	Yes

NAME AND ADDRESS OF SURFACE OWNER (OR LESSEE, IF STATE OR FEDERAL LAND)

Federal land - surface lessee is Andres Maestas, 2007 Las Luceros Rd NW, Albuquerque, N.M.

LIST NAMES AND ADDRESSES OF ALL OPERATORS WITHIN ONE-HALF (½) MILE OF THIS INJECTION WELL

There are no operators within one-half mile except the applicant.

HAVE COPIES OF THIS APPLICATION BEEN SENT TO EACH OF THE FOLLOWING?	SURFACE OWNER	EACH OPERATOR WITHIN ONE-HALF MILE OF THIS WELL
	Yes	No operators to be notified

ARE THE FOLLOWING ITEMS ATTACHED TO THIS APPLICATION (SEE RULE 701-B)	PLAT OF AREA	ELECTRICAL LOG	DIAGRAMMATIC SKETCH OF WELL
	Yes	Yes	Yes

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

Val R. Reese	Consulting Geologist	December 21, 1970
(Signature)	(Title)	(Date)

NOTE: Should waivers from the surface owner and all operators within one-half mile of the proposed injection well not accompany this application, the New Mexico Oil Conservation Commission will hold the application for a period of 15 days from the date of receipt by the Commission's Santa Fe office. If at the end of the 15-day waiting period no protest has been received by the Santa Fe office, the application will be processed. If a protest is received, the application will be set for hearing, if the applicant so requests. SEE RULE 701.

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

WATER ANALYSIS REPORT

(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: _____

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/l** (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)

* 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.

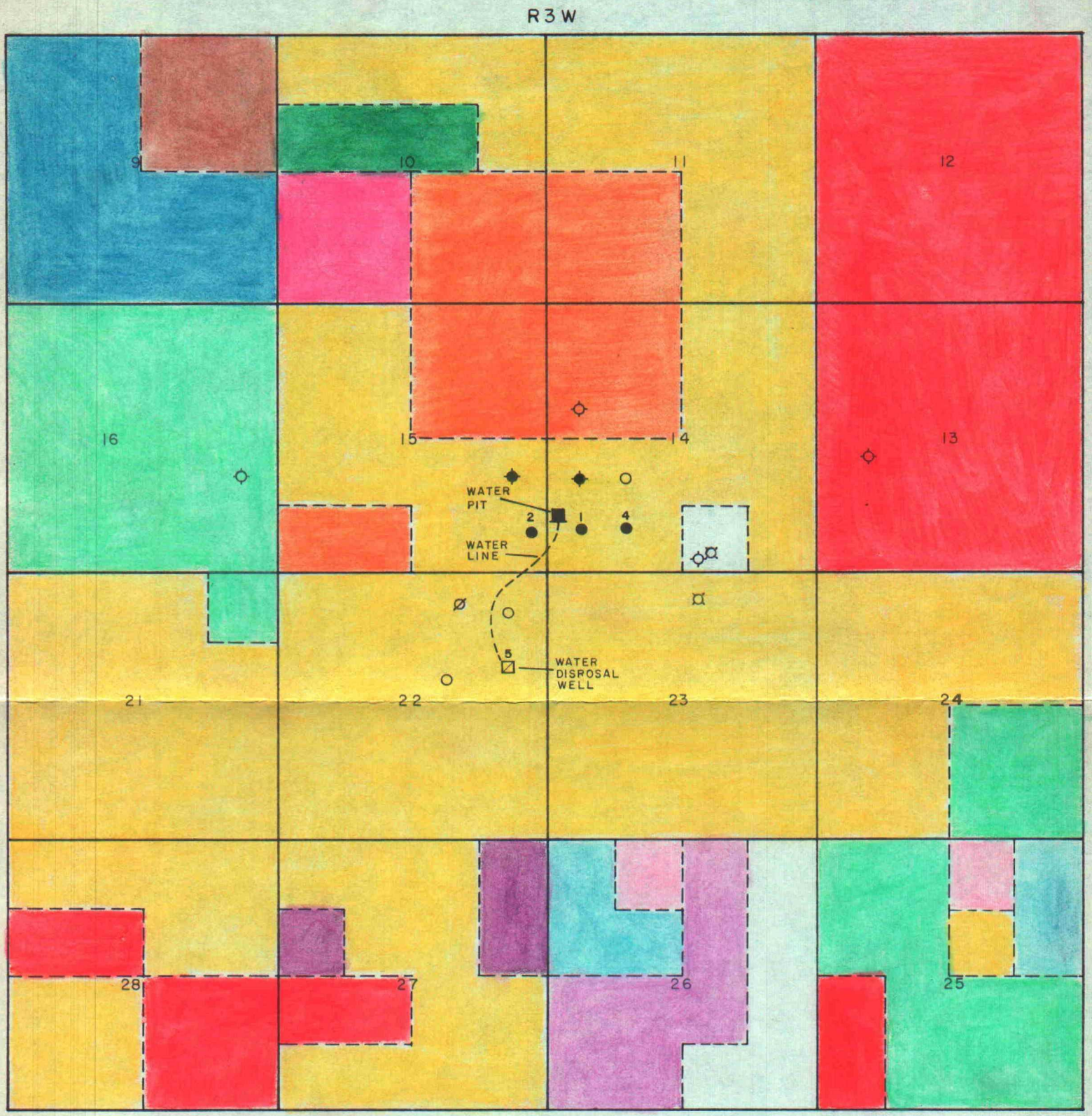
*** Refer to the enclosed "Plant Science Guides" for additional information:

400 A-108 "Irrigation Waters"

400 A-110 "Classification of Irrigation Waters"

Sincerely,

C. D. Leedy
Extension Soils Specialist



WATER DISPOSAL WELL FOR MEDIA ENTRADA FIELD

DON C. WILEY & FLUID POWER PUMP COMPANY, OPERATOR

SANDOVAL COUNTY, NEW MEXICO

SYMBOLS

- ● PRODUCING ENTRADA WELL
- ✦ ABANDONED ENTRADA WELL
- ⌑ ABANDONED GALLUP WELL
- ⌀ TEMPORARILY ABANDONED GALLUP WELL
- ⊖ DRY HOLE
- ○ LOCATION OR INCOMPLETE WELL

LESSEES

- DON C. WILEY AND FLUID POWER PUMP CO.
- YATES PETROLEUM
- SINCLAIR OIL AND GAS
- DEL LEA INC.
- ALLIED CHEMICAL
- BRUCE ANDERSON
- S.A. CHORNEY
- HARRY F. SCHRAMM
- DUNCAN MILLER
- BILLIE ROBINSON
- EDNA M. SWOPE
- EUGENIA BATE

SCALE: 2"=1MI.

V.R. REESE, GEOLOGIST