CASE 3920: Application of KERN COUNTY LAND COMPANY FOR SALT WATER DISPOSAL, ROOSEVELT COUNTY.

Case Number 3920

Application

Trascripts

Small Exhibits

ETC.

BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
November 7, 1968

IN THE MATTER OF:

Application of Kern County Land Company for Salt Water Disposal, Roosevelt County, New Mexico

Application of Kern County Land Company for Salt Water Disposal, Roosevelt County, New Mexico

Application of Tenneco Oil Company for Salt Water Disposal, Roosevelt County, New Mexico.

Consolidated:

Case No. 3920

Case No. 3921

Case No. 3922

BEFORE: ELVIS A. UTZ

TRANSCRIPT OF HEARING

MR. UTZ: We will consolidate Cases 3920, 3921 and 3922 for purposes of testimony. Separate Orders will be written on the Cases.

MR. HATCH: Case 3920: Application of Kern County Land Company for salt water disposal, Roosevelt County, New Mexico.

Case 3921: Application of Kern County Land Company for salt water disposal, Roosevelt County, New Mexico.

Case 3922: Application of Tenneco Oil Company for salt water disposal, Roosevelt County, New Mexico.

MR. UTZ: Are there any appearances in these three cases?

MR. KELLY: Booker Kelly on behalf of Tenneco Oil Company and Kern County Land Company. Kern County is solidly owned by Tenneco, but for their own internal purposes the lands are still in the name of Kern County Land Company. The witness will testify on behalf of both organizations.

(Witness sworn.)

(Applicants' Exhibits 1 through 8 marked for identification.)

* * * * * * * * * *

L O U I S W I L L I A M S, called as a witness, having been first duly sworn, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. KELLY:

Q Would you state your name, position and employer, please?

A I am Louis Williams, a Petroleum Engineer employed by Tenneco Oil Company in Midland.

Q And have you previously qualified as a Petroleum Engineer before this Commission?

A No.

Q Would you give the Examiner a brief resume of your professional and educational experiences?

A I have a Bachelor of Science Degree in Petroleum Engineering from Texas Tech, and have been employed since that time by Union Oil Company of California and Tenneco as a Petroleum Engineer, working in the West Texas-New Mexico and South Los Angeles Areas.

Q Are you familiar with the field involved in these three hearings?

A Yes.

MR. KELLY: Are the witness's qualifications acceptable?

MR. UTZ: Yes, sir, they are.

Q (By Mr. Kelly) Now, referring to what has been

marked Exhibit No. 1 which is a plat of the area on which the three subject wells are located, would you, for the Examiner, locate the three wells and give their present status?

A The first well, Kern County Land Company's Federal 23 No. 11, located in Section 23, Township 7 South, Range 33 East, Chaveroo-San Andres Pool, Roosevelt County. The well I just mentioned is currently producing approximately 10 barrels of oil and one barrel of water per day.

The second well of interest is Kern County Land Company's Federal 21 Well No. 3, located in Section 21, Township 7 South, Range 33 East, Roosevelt County, is a producing oil well, producing about 35 barrels of oil and no water per day.

The third well of interest is Tenneco Oil Company's State "V" Well No. 3, located in Section 30, Township 7 South, Range 34 East, Roosevelt County, currently producing 17 barrels of oil and 20 barrels of water, approximately.

Q These wells, especially the last two, still have fairly substantial oil production. Did Tenneco and Kern County have any other wells that they could have used or are these about the three worst wells that you had in the area?

A These wells, there are other wells located on our

properties which make less oil than the ones chosen; however, these wells were chosen because in addition to disposing of our salt water produced in this field, we hope to gain useful data and knowledge concerning secondary recovery waterflood type operations. These wells will lend themselves to gathering of that data more readily than some others which produce less oil.

Q Is your salt water disposal plan here in conjunction with any other operator in this field?

A Yes, we're in the process now of negotiating an agreement with Pan American Petroleum Corporation to jointly dispose of water in each others' wells where it is geographically more convenient and more economical to do so.

Q As a matter of fact, what well will be first used for injection purposes?

A The well that we plan to convert and utilize first will be Kern County Land Company's Federal 23 No. 11, located in Section 23.

Q That's the one with the lowest oil production?

A Yes.

Q Is oil production from all three of these wells declining?

A Yes, it is, very rapidly.

Q Now, on Exhibit No. 2, I believe you have calculated the water analysis for this water. What is the type of water that will be injected?

A It's an extremely salty water, not fit for human or domestic uses.

Q Where is this water being produced from?

A The San Andres formation.

Q So you are just going to be putting the water back in the zone it's been produced from, is that it?

A Yes.

MR. UTZ: Mr. Kelly, let me ask a question at this point.

MR. KELLY: Yes, sir.

MR. UTZ: It is my understanding that these wells are going to be used not only for salt water disposal, but to evaluate waterflood possibilities?

THE WITNESS: Well, their primary function, of course, will be as disposal wells, but through disposal of water into these wells, we hope to gain data and information which would establish the feasibility of waterflooding.

MR. UTZ: But you are not at this time asking for a pilot waterflood?

THE WITNESS: No, we are not.

Q (By Mr. Kelly) This application is strictly for salt water disposal?

A For salt water disposal.

Q You are looking down the road as to possible secondary benefits?

A Yes, trying to make the wells serve two purposes.

Q Now, turning to what has been marked Exhibit No. 3, this is your sketch, that's Kern County Land Company Well Federal 23 No. 11?

A Yes, Federal 23, No. 11.

Q Which well is that on the plat?

A That's the well in the center of the plat with the red arrow.

Q Could you describe the installation that is proposed?

A This installation consists of 7-inch surface pipe, set at 1817 feet with cement circulated to the surface, the volume 375 sacks was used. Then the oil string is 4 and 1/2-inch casing set at 4300 feet, cemented with 350 sacks which by calculation the top of that cement should be at about 2500 feet. Then injection will be down 2 and 7/8ths-inch tubing internally plastic-coated set on a hookwall retreivable Baker Model packer at about 4300 feet. The annulus of this

well between the tubing and the casing will be filled with a treated inhibited inert type packer fluid and pressure gauge will be maintained at the surface on this annulus.

Q Now, Exhibits 4 and 5 are the sketches for the other two proposed injection wells?

A Yes.

Q The casing is the same for all three?

A Yes.

Q You will have cement circulated to the surface in all cases?

A Yes.

Q Do you feel this will protect any possible fresh water in the area?

A Yes, I do.

Q Do you feel it will protect any other possible oil producing zones?

A Yes.

Q What is the anticipated volume of water that you will be injecting into these wells?

A 200 barrels per day or less. The water production along with the oil production in this field is declining rapidly. We anticipate the water that we have to dispose of

to fall off.

Q Do you expect that you will be injecting under pressure?

A That's a distinct possibility that we'll have to inject under pressure.

Q What would that be?

A That should be a thousand pounds or less.

Q Do you anticipate that any of the wells will have any trouble taking that volume of water under pressure?

A Oh, no.

Q I believe that you have received a copy of a letter from Kermit Oil Company stating some objection to one of the proposed injection wells, is that correct?

A That's correct.

Q Which well is it?

A Kermit Oil Company has a well, their State No. 1 located in the northeast quarter of Section 25, it's a diagonal offset to Tenneco's State "V" 3, Northwest diagonal offset. We did receive a letter from those people objecting to the injection of water into the San Andres, this, of course, is the same zone that they're producing oil from.

Q Do you have any opinion as to whether the injection of water in the volumes you have testified to would have any

adverse effect on that well?

A In my opinion the small volumes of water which will be injected into this well will probably not affect them at all, and if it does, it would more than likely be a beneficial effect as I would expect an oil bank to be built as a result of this injection and that oil bank, of course, is going to be pushed at least partially toward their well.

Q In your opinion, would the granting of this application have any adverse effect on correlative rights of any operators, offset operators, in the three wells?

A No.

Q You have marked Exhibits 6, 7 and 8 which are the logs of the three wells in the order in which the cases were called, is that right?

A That is correct.

Q Were Exhibits 1 through 8 prepared by you or under your supervision?

A Yes, they were.

MR. KELLY: We move the introduction of Exhibits 1 through 8.

MR. UTZ: Without objection, Exhibits 1 through 8 will be entered into the record of this case.

(Whereupon, Applicants' Exhibits 1 through 8 offered and admitted in evidence.)

MR. KELLY: We have no further testimony on direct, Mr. Examiner.

CROSS EXAMINATION

BY MR. UTZ:

Q What were the volumes of water, again,for each of these wells, that you anticipated to go in?

A We would anticipate a volume of 200 barrels per day or less.

Q For each well?

A Yes, the reason is we are not sure of the exact volume because we are not sure exactly what agreement we're going to come to with Pan American and how much water from what wells will ultimately wind up at any given injection well, if you follow me.

Q It says on the order that the volumes that are ordinarily injected in water injection wells for waterflood pruposes,is that right, usually starts at 300 barrels a day, so that is a sizeable amount of water, it would seem to me, to be put in the San Andres. Are there any waterfloods in this area here that you know of?

A No, sir.

Q This injection zone particularly on your, is that the 30-3 well, is that your third well --

A It's 3 "V".

Q 3 "V"?

A Or "V" 3, actually.

Q Is the injection zone in that well, the "V" 3, identical to the production zone of the Kermit Well?

A Yes, we're injecting into a long interval, we are producing from a long interval in this well, 3 "V". The interval that Kermit is producing from in their well is part of that interval.

Q This plat is a little vague, is that a producing well offset to the north of your lease, or do you have a producing well offset to the north?

A Yes, sir, we have 3 wells on that tract, one, two and three, and No. 2 is the offset to the north of the No. 3 although it's hard to see on this plat.

Q Pan American has an offset from the same zone to the west?

A Yes.

Q And Skelly to the east?

A Yes, to the east.

Q Yes.

A Yes, that's true.

Q Would it be reasonable to assume that water

production would show up in any of these four wells that I have just mentioned, particularly the three offsets before it would show up in the Kermit well, that is if you were flooding out the formation?

A Normally, one would expect it to show up in either the north or the east offset before it showed up in the Kermit well. However, if directional permeability or something of that nature existed, it's possible that it would show up in the Kermit well first.

Q If the Kermit well should get some response, it could certainly be noticed by an increase in production, would that be true?

A Yes, sir.

Q And if that did happen, and they still objected to an increase in production, then something could be done about your injection at that time, could it not?

A Yes.

MR. UTZ: Are there any other questions of the witness?

MR. KELLY: Nothing further.

MR. UTZ: One thing I did want to take up. Is the cementing program on each of these three wells virtually the same as the schematic that you showed on the 23 - 11?

A Yes, sir, they are all basically the same. They differ in detail, but --

Q They're all plastic-coated tubing under a packer, annulus filled with inert fluid, gauge at the surface?

A Yes, sir.

Q And cement on the production string comes up to approximately 2500 feet?

A Yes, sir.

MR. UTZ: The witness may be excused.

(Witness excused.)

MR. UTZ: Any statements? The case will be taken under advisement.

GOVERNOR
DAVID F. CARGO
CHAIRMAN

State of New Mexico
Oil Conservation Commission

LAND COMMISSIONER
GUYTON B. HAYS
MEMBER

STATE GEOLOGIST
A. L. PORTER, JR.
SECRETARY - DIRECTOR

P. O. BOX 2088
SANTA FE

November 19, 1968

Re: Case No. 3920 3921 3922
Order No. R-3575
Applicant: 3576 3577
Kern County
Tenneco

Mr. Booker Kelly
White, Gilbert, Koch & Kelly
Attorneys at Law
Post Office Box 787
Santa Fe, New Mexico

Dear Sir:

Enclosed herewith are two copies of the above-referenced Commission order recently entered in the subject case.

Very truly yours,

A. L. PORTER, Jr.
Secretary-Director

ALP/ir

Carbon copy of order also sent to:

Hobbs OCC x
Artesia OCC
Aztec OCC
Other State Engineer Office

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
COMMISSION OF NEW MEXICO FOR
THE PURPOSE OF CONSIDERING:

CASE No. 3920
Order No. R-3575

APPLICATION OF KERN COUNTY LAND
COMPANY FOR SALT WATER DISPOSAL,
ROOSEVELT COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on November 7, 1968, at Santa Fe, New Mexico, before Examiner Elvis A. Utz.

NOW, on this 19th day of November, 1968, the Commission, a quorum being present, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS:

(1) That due public notice having been given as required by law, the Commission has jurisdiction of this cause and the subject matter thereof.

(2) That the applicant, Kern County Land Company, is the owner and operator of the Federal 23 Well No. 11, located in Unit F of Section 23, Township 7 South, Range 33 East, NMPM, Chaveroo-San Andres Pool, Roosevelt County, New Mexico.

(3) That the applicant proposes to utilize said well to inject produced salt water into the San Andres formation, with injection into the perforated interval from approximately 4158 feet to 4233 feet.

(4) That the subject well should be classified as a pressure maintenance project injection well.

(5) That the subject pressure maintenance project is in the interest of conservation and should result in greater ultimate recovery of oil, thereby preventing waste.

(6) That the subject application should be approved and the project should be governed by the provisions of Rules 701, 702, and 703 of the Commission Rules and Regulations.

IT IS THEREFORE ORDERED:

(1) That the applicant, Kern County Land Company, is hereby authorized to institute a pressure maintenance project in the Chaveroo-San Andres Pool, Roosevelt County, New Mexico, by the injection of water into the San Andres formation through its Federal 23 Well No. 11, located in Unit F of Section 23, Township 7 South, Range 33 East, NMPM, Roosevelt County, New Mexico.

(2) That said injection should be accomplished through 2 7/8-inch tubing installed in a packer set at approximately 4300 feet, and into the perforated interval from approximately 4158 feet to 4233 feet;

PROVIDED HOWEVER, that the tubing shall be plastic-lined; that the casing-tubing annulus shall be filled with an inert fluid; and that a pressure gauge shall be attached to the annulus in order to determine leakage in the tubing, casing, or packer.

(3) That the subject pressure maintenance project is hereby designated the Kern County Federal 23 Pressure Maintenance Project and shall be governed by the provisions of Rules 701, 702, and 703 of the Commission Rules and Regulations.

(4) That monthly progress reports of the pressure maintenance project herein authorized shall be submitted to the Commission in accordance with Rules 704 and 1120 of the Commission Rules and Regulations.

(5) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

DAVID F. CARGO, Chairman

GUYTON B. HAYS, Member

A. L. PORTER, Jr., Member & Secretary

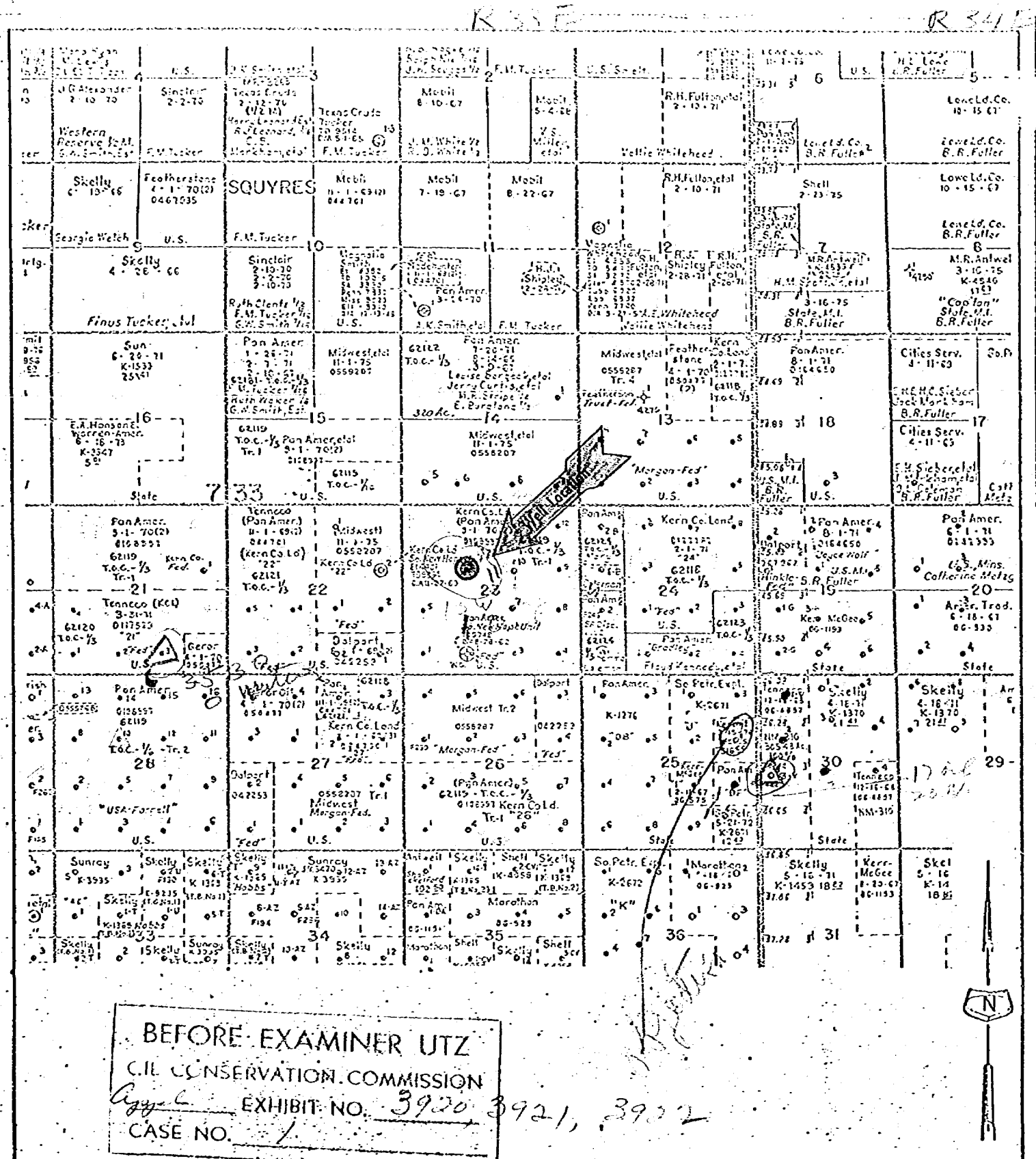
esr/

3920
Heard 11-7-68
Rec. 11-8 GF.

I. Grant Kern Co. (Dennco) permission to convert their Ted "23" #11, F 23-7S-33E, Chaneypool to ~~dis~~ SW Dwell. Injection shall be thru 2⅞ internally plastic coated tubing, under a packer set at approx. 4300' and into the San Andres fm. thru perfs from 4158 - 4233.

The 4½ x 2⅞ annulus shall be filled with inert fluid with a pressure gauge at the surface.

Elvis A. Utz



BEFORE EXAMINER UTZ
OIL CONSERVATION COMMISSION
Agy-C EXHIBIT NO. 3920, 3921, 3922
CASE NO. 1

ALL PRODUCTION WITHIN TWO MILES OF THIS PROPOSED SALT WATER DISPOSAL WELL IS FROM THE SAN ANDRES FORMATION.

KERN CO. LAND COMPANY

CHAVEROO FIELD
ROOSEVELT COUNTY, NEW MEXICO.

Proposed SWD Well
Federal 23 #11
Injection Zone-San Andres

SCALE IN FEET
4000 0 4000 8000

'68 NOV 12 AM 8 13

CHAVEROO FIELD

Roosevelt County, New Mexico

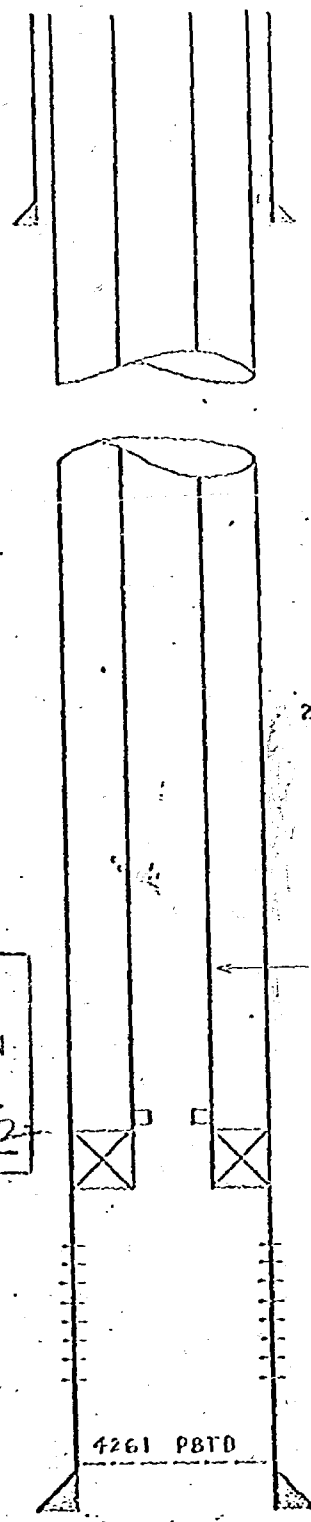
Typical San Andres Water Analysis

EXHIBIT A

FORMATION WATER ANALYSIS
Milligrams per Liter

Na	66,600
Ca	27,680
Mg	4,860
SO_4	200
Cl	165,600
HCO_3	nil
CO_3	nil
Total Solids	264,940
Iron	None
Specific Gravity @ 60° F	1.174
Hydrogen Sulfide, H_2S	Present

BEFORE EXAMINER UTZ
OIL CONSERVATION COMMISSION
EXHIBIT NO. 2
CASE NO. 3920, 3921, 3922



BEFORE EXAMINER UTZ
OIL CONSERVATION COMMISSION
EXHIBIT NO. 3
CASE NO. 3920, 3921, 3922

KERN CO. LAND COMPANY

Subsurface Schematic
Proposed SWD Well

Federal "23" #11
Chaveroo Field
Roosevelt County, New Mexico
Injection Zone-San Andres

SCALE IN FEET
4000 0 4000 8000

COMPENSATED
FORMATION DENSITY LOG
SCHLUMBERGER

SCHLUMBERGER WELL SURVEYING CORPORATION
HOUSTON, TEXAS

COMPANY KERN COUNTY LAND COMPANY
WELL FEDERAL 23 # 11
FIELD CHAVEROO
COUNTY ROOSEVELT STATE NEW MEXICO
Location:
Sec. 23 Twp. 7S Rge. 33E

Other Services: L, MLL, Micro

Permanent Datum: GL Elev.: 4355
Log Measured From KB, 8.5 Ft. Above Perm. Datum
Drilling Measured From KB

Elev.: K.B. 4363.5
D.F.
G.L. 4355

Date	9-23-60			
Run No.	ONE			
Type Log	FDC-GR			
Depth—Driller	3900			
Depth—Logger	3891			
Bottom logged interval	3890			
Top logged interval	0			
Type fluid in hole	Salt			
Salinity, PPM Cl.	170,000			
Density	10			
Level				
Max rec. temp., deg F.	103°F			
Operating rig time	3 HR			
Recorded by	WILSON & KREEMAN			
Witnessed by	MR. YANCY			

RUN	BORE-HOLE RECORD			CASING RECORD		
No.	Bit	From	To	Size	Wgt.	From
ONE	6 1/8	SURF	TD	7"	SURF	

COMPANY
COUNTY
FIELD or LOCATION
WELL

D HERE

EQUIPMENT DATA

Gamma-Gamma		General	
No.	ONE	Run No.	ONE
Model No.	PGT-D	Hoist Truck No.	3720
ameter	4 1/8	Inst. Truck No.	3720
Model No.	RGD-D	Tool Serial No.	
pe	SCINT.	Location	HOBBS

LOGGING DATA

General			Gamma Ray				Gamma-Gamma			
Depths		Speed	T.C.	Sens.	Zero	API Units	Log.	CALIBRATE -- ACPS.		
From	To	Ft/Min.	Sec.	Settings	Div. L or R	per Log Div.	T.C.	P_1	P_2	
TD	3400	20	3	400	0	100	3	424	804	
3400	SURF	30	2	400	0	100	2			

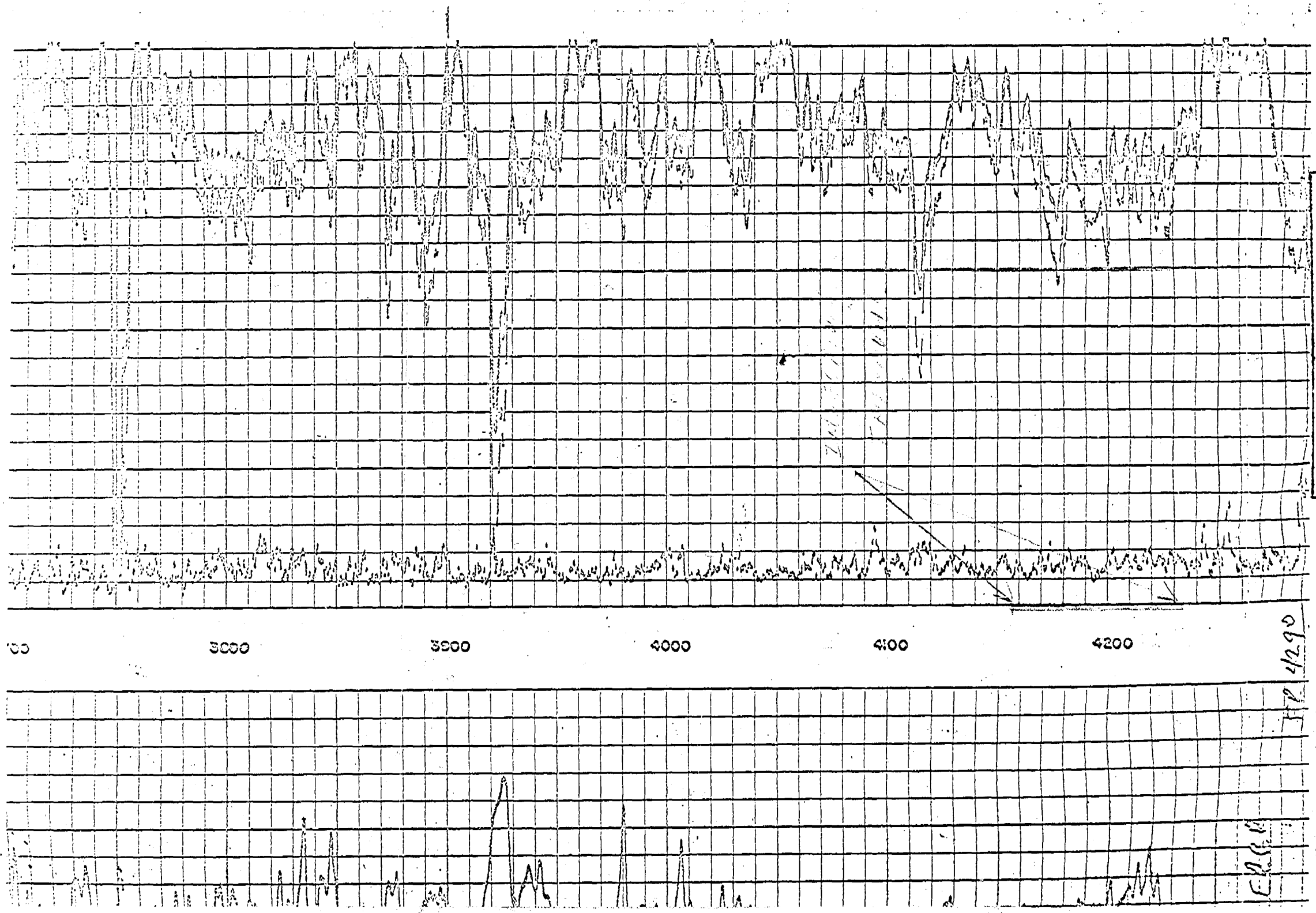
arks:

BEFORE EXAMINER UTZ
OIL CONSERVATION COMMISSION
EXHIBIT NO. 6
CASE NO. 3980, 3971, 30

CALIPER
HOLE DIAM. IN INCHES
16

DEPTHS

−.25 0 +.25
CORRECTION
GRAMS/CC.



BEFORE EXAMINER UTZ
OIL CONSERVATION COMMISSION
EXHIBIT NO. 4
CASE NO. 4290

TENNECO OIL COMPANY · P. O. BOX 1031 · 1800 WILCO BUILDING · MIDLAND, TEXAS 79701

October 21, 1968

Case 3920

~~3921~~

New Mexico Oil Conservation Commission
P. O. Box 2088
Santa Fe
New Mexico 87501

ATTENTION: Mr. D. S. Nutter

RE: Salt Water Disposal Applications
Chaveroo Field, Roosevelt County,
New Mexico.

Gentlemen:

Attached are two applications to convert producing Kern County Land Company wells to salt water disposal. They are the Federal "23" Well No.11 and the Federal "21" Well No. 3. All the necessary supporting data required by Rule 701-B is attached.

We request that these two applications be scheduled for hearing on November 7, 1968, as we did by telephone on Friday, October 18, 1968, to Mr. D. S. Nutter.

Very truly yours,

TENNECO OIL COMPANY

F. J. McDonald

F. J. McDonald
District Superintendent

LMW:cw

cc: Department of Interior
New Mexico State Engineer - State Capitol Building, Santa Fe, New Mexico
All Offset Operators

68 OCT 23

DOCKET MAILED

Date 10-25-68

Case -3920

Form C-108
Revised 1-1-65

NEW MEXICO OIL CONSERVATION COMMISSION

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

OPERATOR: Kern County Land Company
ADDRESS: P. O. Box 1031 Midland, Texas 79701
LEASE NAME: Federal "23" WELL NO.: 11
FIELD: Chaveroo COUNTY: Roosevelt
LOCATION: UNIT LETTER F ; WELL IS LOCATED 1980 FEET FROM THE North LINE AND 1980 FEET FROM THE West LINE, SECTION 23 TOWNSHIP 7-S RANGE 33-E NMPM.

CASING AND TUBING DATA

NAME OF STRING	SIZE	SETTING DEPTH	SACKS CEMENT	TOP OF CEMENT	TOP DETERMINED BY
SURFACE CASING	7"	1817	375	Circulated	-------
INTERMEDIATE					
LONG STRING	4-1/2	4300	350	2500	Calculated
TUBING	2-7/8		NAME, MODEL AND DEPTH OF TUBING PACKER: Baker Model "R" @ 4100' ±		

NAME OF PROPOSED INJECTION FORMATION: San Andres
TOP OF FORMATION: 3368
BOTTOM OF FORMATION: Not Penetrated
IS INJECTION THROUGH TUBING, CASING, OR ANNULUS? Tubing
PERFORATIONS OR OPEN HOLE? Perforated,
PROPOSED INTERVAL(S) OF INJECTION: 4158 - 4233
HAS WELL EVER BEEN PERFORATED IN ANY ZONE OTHER THAN THE PROPOSED INJECTION ZONE? No
IS THIS A NEW WELL DRILLED FOR DISPOSAL? No
IF ANSWER IS NO, FOR WHAT PURPOSE WAS WELL ORIGINALLY DRILLED? Oil WELL
LIST ALL SUCH PERFORATED INTERVALS AND SACKS OF CEMENT USED TO SEAL OFF OR SQUEEZE EACH
DEPTH OF BOTTOM OF NEXT HIGHER OIL OR GAS ZONE IN THIS AREA: None
DEPTH OF TOP OF NEXT LOWER OIL OR GAS ZONE IN THIS AREA: None
DEPTH OF BOTTOM OF DEEPEST FRESH WATER ZONE IN THIS AREA: 200'
IS INJECTION TO BE BY GRAVITY OR PRESSURE? Pressure if needed
APPROX. PRESSURE (PSI): 1000
ANTICIPATED DAILY INJECTION VOLUME (BBLS.): MINIMUM 150 MAXIMUM 500
OPEN OR CLOSED TYPE SYSTEM: Closed
WATER TO BE DISPOSED OF: Yes
NATURAL WATER IN DISPOSAL ZONE: Yes
ARE WATER ANALYSES ATTACHED? No
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 --

NAME AND ADDRESS OF SURFACE OWNER (OR LESSEE, IF STATE OR FEDERAL LAND)
Federal Land - USGS - Drawer 1857 - Roswell, New Mexico 88201

LIST NAMES AND ADDRESSES OF ALL OPERATORS WITHIN ONE-HALF (½) MILE OF THIS INJECTION WELL
Midwest Oil Company - Wilco Building - Midland, Texas 79701
Pan American Petroleum Co. - P. O. Box 68, Hobbs, New Mexico 88240
Dalport Oil Corp. - 930 Fidelity Union Life Bldg. - Dallas, Texas

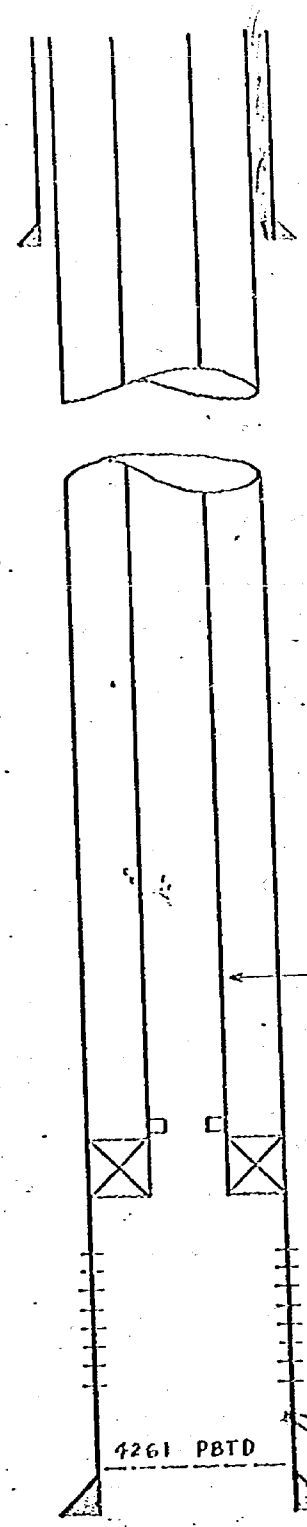
68 Oct 23 AM 8

HAVE COPIES OF THIS APPLICATION BEEN SENT TO EACH OF THE FOLLOWING?			
	SURFACE OWNER: Yes - USGS	EACH OPERATOR WITHIN ONE-HALF MILE OF THIS WELL: Yes	THE NEW MEXICO STATE ENGINEER: Yes
ARE THE FOLLOWING ITEMS ATTACHED TO THIS APPLICATION (SEE RULE 701-B)	PLAT OF AREA: Yes	ELECTRICAL LOG: Yes	DIAGRAMMATIC SKETCH OF WELL: Yes

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

L. M. Williams — Production Engineer — October 21, 1968
(Signature) (Title) (Date)

NOTE: Should waivers from the State Engineer, 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.

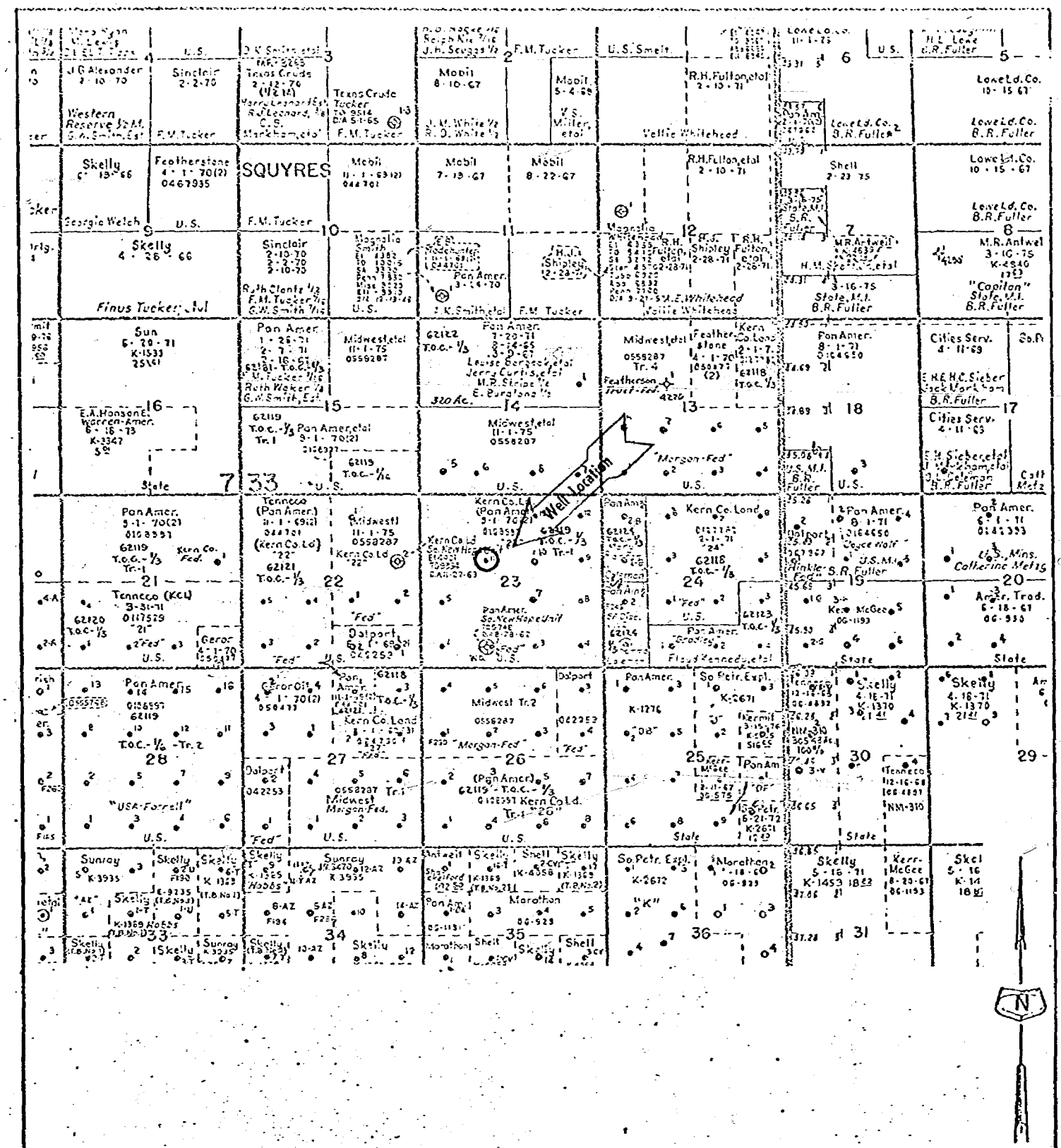


2555
2125 open

KERN CO. LAND COMPANY
Subsurface Schematic Proposed SWD Well
Federal "23" #11 Chaveroo Field Roosevelt County, New Mexico Injection Zone-San Andres

SCALE IN FEET
4000 0 4000 8000

Case 3926



KERN CO. LAND COMPANY

CHAVEROO FIELD
ROOSEVELT COUNTY, NEW MEXICO

Proposed SWD Well
Federal 23 #11
Injection Zone-San Andres

SCALE IN FEET
4000 0 4000 8000

Case 3920

COMPENSATED DENSITY LOG
FORMATION DENSITY LOG
GAMMA RAY SURVEYING CORPORATION
HOUSTON, TEXAS

SCHLUMBERGER

COMPANY KEN'N COUNTY LAND COMPANY
WELL FEDERAL 23 #11
FIELD CHAVEROO
COUNTY ROOSEVELT STATE NEW MEXICO

Midland
Tops - Perfs

Location:
Sec. 23 Twp. 7S Rge. 33E

Other Services:
L, MLL
MOI

Elev.: K.B. 4363.5
D.F.
G.L. 4355

COUNTY
FIELD or LOCATION
WELL
COMPANY

Permanent Datum: Gr. Log Measured From KB, 8.5 Ft. Above Perm. Datum
Drilling Measured From KB

Date	9-23-66
Run No.	ONE
Type Log	FDC-GR
Depth—Driller	4302
Depth—Logger	4291
Bottom logged interval	4290
Top logged interval	0
Type fluid in hole	Salt
Salinity, PPM Cl.	170,000
Density	10
Level	103°F
Max rec. temp., deg F.	3 HR
Operating rig time	WILSON & KEENAN
Recorded by	DAVE YANCY
Witnessed by	

BORE-HOLE RECORD

RUN No.	Bit	From	To
ONE	6 1/4	SURF	TD

CASING RECORD

Size	Wgt.	From	To
7"	20#	SURF	1800

EQUIPMENT DATA

	General	Gamma-Gamma
Run No.	ONE	ONE
Hoist Truck No.	3720	PGT-D
Inst. Truck No.	3720	4 1/2
Tool Serial No.		PGD-D
Location	HOBBS	SCINT.

LOGGING DATA

General Depths From	To	Speed Ft/Min.	T.C. Sec.	Sens. Settings	Gamma Ray Zero Div. L or R	Gamma Ray API Units per Log Div.
TD	3400	20	3	400	0	100
3400	SURF	30	2	400	0	100

Gamma-Gamma Log. T.C.	CALIBRATE — ACPS. ρ_1	ρ_2
3	424	804
2		

Remarks:

CALIPER
HOLE DIAM. IN INCHES
6 16

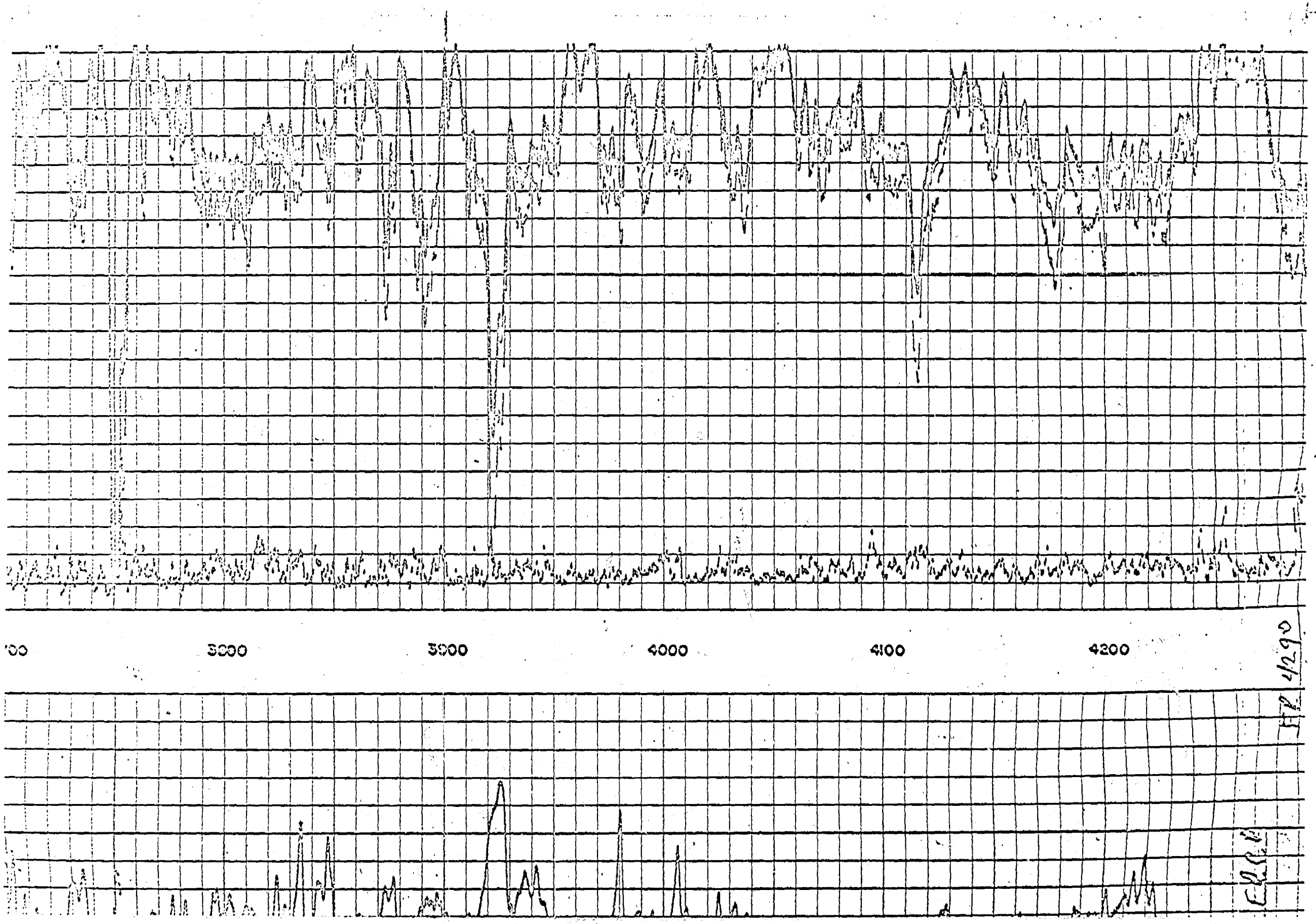
DEPTHS

GAMMA RAY
API UNITS

-.25 0 +.25
CORRECTION
GRAMS/CC.

BULK DENSITY
GRAMS/CC.
Case 3926

24


3000
3900
4000
4100
4200

DRAFT

GMH/esr
11-14-68

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
COMMISSION OF NEW MEXICO FOR
THE PURPOSE OF CONSIDERING:

CASE No. 3920

Order No. R-3575

APPLICATION OF KERN COUNTY LAND
COMPANY FOR SALT WATER DISPOSAL,
ROOSEVELT COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on November 7, 1968, at Santa Fe, New Mexico, before Examiner Elvis A. Utz.

NOW, on this _____ day of November, 1968, the Commission, a quorum being present, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS:

(1) That due public notice having been given as required by law, the Commission has jurisdiction of this cause and the subject matter thereof.

(2) That the applicant, Kern County Land Company, is the owner and operator of the Federal 23 Well No. 11, located in Unit F of Section 23, Township 7 South, Range 33 East, NMPM, Chaveroo-San Andres Pool, Roosevelt County, New Mexico.

(3) That the applicant proposes to utilize said well to ~~dispose of~~ inject produced salt water into the San Andres formation, with injection into the perforated interval from approximately 4158 feet to 4233 feet.

(4) That the subject well should be classified as a pressure maintenance project injection well.

(5) That the subject pressure maintenance project is in the interest of conservation and should result in greater ultimate recovery of oil, thereby preventing waste.

(6) That the subject application should be approved and the project should be governed by the provisions of Rules 701, 702, and 703 of the Commission Rules and Regulations.

IT IS THEREFORE ORDERED:

(1) That the applicant, Kern County Land Company, is hereby authorized to institute a pressure maintenance project in the Chaveroo-San Andres Pool, Roosevelt County, New Mexico, by the injection of water into the San Andres formation through its Federal 23 Well No. 11, located in Unit F of Section 23, Township 7 South, Range 33 East, NMPM, Roosevelt County, New Mexico.

(2) That said injection should be accomplished through 2 7/8-inch tubing installed in a packer set at approximately 4300 feet, and into the perforated interval from approximately 4158 feet to 4233 feet;

PROVIDED HOWEVER, that the tubing shall plastic-lined; that the casing-tubing annulus shall be filled with an inert fluid; and that a pressure gauge shall be attached to the annulus in order to determine leakage in the tubing, casing, or packer.

(3) That the subject pressure maintenance project is hereby designated the Kern County, Federal 23 Pressure Maintenance Project and shall be governed by the provisions of Rules 701, 702, and 703 of the Commission Rules and Regulations.

(4) That monthly progress reports of the pressure maintenance project herein authorized shall be submitted to the Commission in accordance with Rules 704 and 1120 of the Commission Rules and Regulations.

(5) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

Kern County Land Co.
disposal Produced
salt wtr in the San Andres
form in the perf int
from 4158' to 4233' in
its Federal 25 45-AC No 11
loc unit F Sec 23,
T 7S R 33E Rowland
Co. N. Mex.

1980 FNL
FWL

CASE 3921: Application of KERN COUNTY LAND COMPANY FOR SALT WATER DISPOSAL, ROOSEVELT COUNTY.

Docket
to Jim Cramer
10-25-68

Memo

Case 3921

From IDA RODRIGUEZ
Secretary to Director

To Manuscript
in Case
3920 or
3922 —