CASE 4038: Application of KENNEDY OIL CO. FOR WATERFLOOD PROJECT & WATERFLOOD BUFFER ZONE, EDDY CO.

_'dse Number

4038

Application

Transcripts.

Small Exhibits

ETC.

dearnley-meier
SPECIALIZING IN: DEPOSITIONS, HEARINGS, STATEMENTS, EXPERT TESTIMONY, DAILY COPY, CONVENTIONS
1120 SIMMS BLDG. • P. O. BOX 1092 • PHONE 243-6691 • ALBUQUERQUE, NEW MEXICO

BEFORE THE

NEW MEXICO OIL CONSERVATION COMMISSION

Santa Fe, New Mexico

February 5, 1969

EXAMINER HEARING

IN THE MATTER OF: Application of Kennedy Oil Company for a waterflood project and waterflood buffer zone, Eddy County, New Mexico.	Case No. 4038

BEFORE: Daniel S. Nutter,
Examiner

TRANSCRIPT OF HEARING

MR. NUTTER: Call Case 4038.

MR. HATCH: Case 4038, application of Kennedy Oil Company for a waterflood project and waterflood buffer zone, Eddy County, New Mexico.

MR. KENNEDY: I am Robert B. Kennedy, Kennedy Oil Company, Artesia, New Mexico.

(Whereupon, Applicant's Exhibits Numbers 1 through 5, inclusive, were marked for identification.)

ROBERT B. KENNEDY

called as a witness by the Applicant, having been first duly sworn, was examined and testified as follows:

DIRECT EXAMINATION

MR. KENNEDY: We have come here to make application for a waterflood project in the Square Lake Pool, with waterflood buffer zone allowable.

I will refer first to our Exhibit Number 1. It is a portion of the Square Lake Field, showing the Kennedy Oil Company properties, and offset properties, and the status of the present and proposed waterflood project in the area under question. Our project covers the north half of the southwest quarter of Section 19, Township 16 South, Range 31 East, containing our Carper Federal No. 1 and No. 2 wells.

Previous testimony that was given on the prior case

did concern Anadarko, which is the offset acreage in this particular case.

MR. NUTTER: While we are on this exhibit, the north half of the southwest quarter of Section 19 is the only acreage that is concerned in this case?

MR. KENNEDY: In our case.

MR. NUTTER: Now, you show a proposed injection well in the northeast quarter of the southwest quarter of Section 20, but you recently obtained authority to use that well for injection?

MR. KENNEDY: That's right, that has been granted by the Commission.

MR. NUTTER: Has that well been put on injection?

MR. KENNEDY: No, we are waiting for the conclusion of the order on this project that we are proposing at this time.

MR. NUTTER: Go ahead.

MR. KENNEDY: The red circles, of course, are the expanded project of Kennedy and Anadarko, and the Newmont interest there in Section 19.

Now, I will refer to Exhibit Number 2. On this, we will see that we have the cumulative to 10-1-68 on our Carper Federal No. 1 and No. 2, and then showing October and November production, and the total production from each well in the

section.

Exhibit Number 3 gives our completion dates, total depths, casing sizes, depth, casing cement, and perforations of each well in question.

On the Carper Federal No. 2, eight and five-eighths was set at 374 with 50 sacks of cement. Five and a half fourteen-pound new seamless casing was run in this well, set at 3,309, with 100 sacks of cement, with perforated intervals as shown on the sketch, itself.

Exhibit Number 4 is a density log of our Carper Federal No. 2, which will be the proposed injection well. And on this, we have it labeled to the Grayburg Formation and the San Andres Formation with perforations, size of holes, and a proposed packer setting point, which will be approximately 3,170. That will be a short tension packer run in that well. The intervals are the same as the offset operators have. Mainly the Premier and the Lovington Sand sections are what we are concerned with.

Exhibit Number 5 is a schematic drawing of our proposed injection well. The estimated top of cement behind the eight and five-eighths casing is 191 feet. Five and a half-inch casing was run, new seamless pipe. The cement estimated top is 2,924. We propose that there again to run our tubing with short tension packer set approximately 3,180, so that we

can inject separately into the Grayburg and the Lovington Sand. The pressure differential there caused us to separate these zones, and pressures anticipated are approximately 2,100 pounds to inject into the Premier, and 2,600 pounds to inject into the Lovington.

We propose to inject approximately 250 barrels of water per day in this well. 150 barrels will be going into the Premier section, and 100 barrels will be going into the Lovington. Prior to any injection in this well, we will pressure-test our casing to 3,000 pounds per square inch. If we have any failure, we will repair at that point and proceed.

Water source will be from a commercial water company, and water will be coming from the Ogallala Formation. Pressured water will be purchased from Anadarko Production Company. Our produced water will be returned to Anadarko Company's plant, treated, mixed with fresh water, and then in turn will give us our injected water.

The estimated life of this project is approximately ten years, there again, depending on economics. The recovery estimate is 50,000 barrels of oil.

Referring back to Exhibit Number 1, on the map the south half of the southeast quarter was previously covered by Order R-1011-B, which did grant allowables. We, just having an

80-acre tract need capacity allowables, because there are times when we come upon peak production where we just have two wells. If furnished, this will protect correlative rights and prevent waste. I introduce Exhibits 1 through 5 in support of the application of Kennedy Oil Company for a waterflood project covering the north half of the southwest quarter of Section 19, Township 16 South, Range 31 East, with buffer zone allowable.

MR. NUTTER: Exhibits 1 through 5 will be admitted in evidence.

(Whereupon, Applicant's Exhibits Numbers 1 through 5, inclusive, were admitted in evidence.)

CROSS EXAMINATION

MR. NUTTER: Mr. Kennedy, you heard the testimony offered by Mr. Stumhoffer in the previous case, I presume, that that water will be identical to the water he is going to be injecting?

MR. KENNEDY: It will, off their line.

MR. NUTTER: So this will be the same inhibited water going down the annulus and down the tubing?

MR. KENNEDY: Yes.

MR. NUTTER: That top of the cement at 2,924 on the five and a half-inch casing in the injection well, is that a calculated top or temperature survey?

MR. KENNEDY: That is calculated top.

MR. NUTTER: Any further questions of Mr. Kennedy? You may be excused.

Does anyone have anything they wish to offer in this case?

MR. HATCH: The Commission has received a letter from Newmont Oil Company supporting the application.

MR. NUTTER: Anything further in Case No. 4038? We will take the case under advisement.

I N D E X

WITNESS	PAGE
ROBERT B. KENNEDY	
Direct Examination	2
Cross Examination by Mr. Nutter	6

EXHIBITS	MARKED	OFFERED AND ADMITTED
Applicant's Exhibits Numbers 1 through 5	2	6

STATE OF NEW MEXICO)
) ss.
COUNTY OF BERNALILLO)

I, SAMUEL MORTELETTE, Court Reporter in and for the County of Bernalillo, State of New Mexico, do hereby certify that the foregoing and attached Transcript of Hearing before the New Mexico Oil Conservation Commission was reported by me, and that the same is a true and correct record of the said proceedings, to the best of my knowledge, skill and ability.

Samuel Mortelette
COURT REPORTER

I do hereby certify [illegible]

2/5 4038
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[illegible]
New Mexico Oil Conservation [illegible]

OIL CONSERVATION COMMISSION

STATE OF NEW MEXICO
P. O. BOX 2088 - SANTA FE
87501

GOVERNOR
DAVID F. CARGO
CHAIRMAN

LAND COMMISSIONER
ALEX J. ARMIJO
MEMBER

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

February 14, 1969

Mr. Robert B. Kennedy
Kennedy Oil Company
Post Office Box 151
Artesia, New Mexico 88210

Re: Case No. 4038
Order No. R-3578
Applicant:
Kennedy Oil Company

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.

A. L. PORTER, Jr.
Secretary-Director

ALP/ir

Copy of order also sent to:

Hobbs OCC x
Artesia OCC x
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. 4038
Order No. R-3678

APPLICATION OF KENNEDY OIL COMPANY
FOR A WATERFLOOD PROJECT AND WATER-
FLOOD BUFFER ZONE, EDDY COUNTY, NEW
MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on February 5, 1969, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this 13th day of February, 1969, 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, Kennedy Oil Company, seeks permission to institute a waterflood project in the Square Lake Pool by the injection of water into the Grayburg and San Andres formations through its Carper Federal Well No. 2, located in Unit K of Section 19, Township 16 South, Range 31 East, NMPM, Eddy County, New Mexico.

(3) That the wells in the project area are in an advanced state of depletion and should properly be classified as "stripper" wells.

(4) That the proposed waterflood project should result in the recovery of otherwise unrecoverable oil, thereby preventing waste.

(5) That the applicant further proposes that the N/2 SW/4 of said Section 19 be designated a waterflood buffer zone inasmuch as it directly offsets a capacity-type waterflood project immediately south and east.

(6) That approval of the proposed buffer zone will afford the applicant the opportunity to produce its just and equitable share of the oil in the pool.

(7) 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, provided however, that capacity allowables may be assigned to the wells in the N/2 SW/4 of said Section 19.

IT IS THEREFORE ORDERED:

(1) That the applicant, Kennedy Oil Company, is hereby authorized to institute a waterflood project in the Square Lake Pool by the injection of water into the Grayburg and San Andres formations through its Carper Federal Well No. 2, located in Unit K of Section 19, Township 16 South, Range 31 East, NMPM, Eddy County, New Mexico.

(2) That the subject waterflood project is hereby designated the Kennedy Square Lake Carper Waterflood Project and shall be governed by the provisions of Rules 701, 702, and 703 of the Commission Rules and Regulations, provided however, that the N/2 SW/4 of Section 19, Township 16 South, Range 31 East, NMPM, Eddy County, New Mexico, is hereby designated a waterflood buffer zone wherein water can be injected and wells produced at rates comparable with the capacity-type waterflood projects in the S/2 SW/4 and the SE/4 of said Section 19.

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

(4) 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

ALEX J. ARMIJO, Member

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

esr /

NEWMONT OIL COMPANY
ROOM 303, FIRST NATIONAL BANK BUILDING
P. O. BOX 1305
ARTESIA, NEW MEXICO 88210

NEW MEXICO
DISTRICT OFFICE

January 30, 1969

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GAA
file - case 4038

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

Dear Sir:

Newmont Oil Company as offset operator wishes to support the application of Kennedy Oil Company for a waterflood project in Section 19, Township 16S, Range 31E, Eddy County, New Mexico to be heard in Case No. 4038.

Yours truly,

NEWMONT OIL COMPANY

Herman J. Ledbetter

Herman J. Ledbetter
Division Superintendent

HJL/saf

Docket No. 4-69

DOCKET: EXAMINER HEARING - WEDNESDAY - FEBRUARY 5 1969

9 A.M. - OIL CONSERVATION COMMISSION CONFERENCE ROOM
STATE LAND OFFICE BUILDING - SANTA FE, NEW MEXICO

The following cases will be heard before Daniel S. Nutter, Examiner, or Elvis A. Utz, Alternate Examiner:

CASE 4036: Application of Mobil Oil Corporation for a dual completion, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks approval for the dual completion (conventional) of its C. L. O'Brien Well No. 1 located in Unit A of Section 7 Township 8 South, Range 30 East, Chaves County, New Mexico, to produce oil from an undesignated Pennsylvanian oil pool and the Lightcap (Devonian) Pool through parallel strings of tubing.

CASE 3975 (Reopened):
In the matter of Case No. 3975 being reopened pursuant to the provisions of Order No. R-3618, which order established 80-acre spacing units for the East Bluitt-San Andres Pool, Roosevelt County, New Mexico, for a period of approximately two months. All interested parties may appear and present evidence as to whether the subject area is indeed a separate common source of supply or an extension of the Bluitt-San Andres Gas Pool.

CASE 4010: (Continued from December 27, 1968 and January 8, 1969 Examiner Hearings)

Application of John H. Trigg for a waterflood project, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a waterflood project by the injection of water into the Grayburg-San Andres formations through his Empire "J" Federal Well No. 1 located in Unit P of Section 1, Township 18 South, Range 26 East, Red Lake Grayburg-San Andres Pool, Eddy County, New Mexico.

CASE 4037: Application of Anadarko Production Company for several waterflood projects and waterflood buffer zones, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute several waterflood projects by the injection of water into the Grayburg and San Andres formations of the Square Lake Pool by the conversion to water injection of its Etz Federal Well No. 3 and its Grier Well No. 14 located, respectively, in Sections 19 and 20 of Township 16 South, Range 31 East, Eddy County, New Mexico. Applicant further seeks the designation of the S/2 SW/4 of said Section 19, the N/2 SE/4 of said Section 19, and the N/2 SE/4 of said Section 20 as waterflood buffer zones with capacity allowables.

CASE 4038: Application of Kennedy Oil Company for a waterflood project and waterflood buffer zone, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a waterflood project by the injection of water into the Grayburg and San Andres formations of the Square Lake Pool by the conversion to water injection of its Carper Federal Well No. 2 located in Unit K of Section 19, Township 16 South, Range 31 East, Eddy County, New Mexico. Applicant further seeks the designation of the N/2 SW/4 of said Section 19 as a waterflood buffer zone with capacity allowable.

CASE 4039: The application of the Oil Conservation Commission upon its own motion for an order granting an exception to the ninth paragraph of Chapter II, Section 2 of Order No. R-333-F to permit shutting in gas wells for the required shut-in test at some period during the 1969 test season other than immediately following the 7-day deliverability flow test; further to permit measuring the shut-in test pressure during the 8th to 15th day of shut-in of the well rather than on the 8th day as presently required. The above exceptions would be for the 1969 annual deliverability test season only and would be applicable to all wells in San Juan, Rio Arriba, McKinley and Sandoval Counties, New Mexico, subject to the testing requirements of Chapter II of Order No. R-333-F.

CASE 4023: (Continued and readvertised from the January 15, 1969 Regular Hearing)

Application of Ernest A. Hanson for salt water disposal, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the Queen formation in the perforated interval from approximately 1724 feet to 1736 feet in his Welch Federal Well No. 2 located 1650 feet from the North line and 2310 feet from the West line of Section 22, Township 19 South, Range 28 East, East Millman Queen-Grayburg Pool, Eddy County, New Mexico.

CASE 4040: Application of Cities Service Oil Company for the institution of gas prorationing in the Buffalo Valley-Pennsylvanian Gas Pool, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks the limitation of gas production from the Buffalo Valley-Pennsylvanian Gas Pool in Chaves County, New Mexico, to reasonable market demand and to the capacity of gas transportation facilities, and that the subject pool be governed by the general rules and regulations for the prorated gas pools of Southeastern New Mexico insofar as said general rules and regulations are not inconsistent with the special rules and regulations governing the subject pool. Further, the applicant proposes that the allowable production from the pool be allocated among the wells in the pool on a 100% surface acreage basis.

CASE 4041: Application of Tamarack Petroleum Company, Inc. for salt water injection, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to inject produced salt water into the Queen formation in the perforated interval from 4955 feet to 5030 feet in its Texaco Moran Well No. 2, located in Unit H of Section 22, Township 19 South, Range 35 East, Pearl Queen Pool, Lea County, New Mexico.

CASE 4042: Application of El Paso Natural Gas Company for an amendment to Order No. R-2948, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks the amendment of Order No. R-2948, which order established a number of non-standard gas proration units in the Basin-Dakota Gas Pool, Rio Arriba County, New Mexico. Applicant proposes to change the acreage dedication comprising units 12 and 13 of Township 28 North, Range 6 West and Units 16 and 17 of Township 28 North, Range 7 West to comprise the following:

TOWNSHIP 28 NORTH, RANGE 6 WEST

Unit	Acres	Description
12	320	Section 33: N/2
13	330.71	Section 33: S/2

TOWNSHIP 28 NORTH, RANGE 7 WEST

Unit	Acres	Description
16	320	Section 35: N/2
17	332.40	Section 35: S/2

CASE 4017: (Continued from the January 8, 1969 Examiner Hearing)

Application of Corinne Grace for compulsory pooling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Morrow formation underlying Section 8, Township 21 South, Range 24 East, North Indian Hills-Morrow Gas Pool, Eddy County, New Mexico. Said acreage to be dedicated to a well to be drilled in the SE/4 of said Section 8. Also to be considered will be the costs of drilling said well, a charge for the risk involved, a provision for the allocation of actual operating costs, and the establishment of charges for supervision of said well

CASE 4043: Application of David Fasken for compulsory pooling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Morrow formation underlying Section 8, Township 21 South, Range 24 East, North Indian Hills-Morrow Gas Pool, Eddy County, New Mexico. Said acreage to be dedicated to a well to be drilled 1980 feet from the North line and 2105 feet from the East line of said Section 8. Also to be considered will be the costs of drilling said well, a charge for the risk involved, a provision for the allocation of actual operating costs, and the establishment of charges for supervision of said well. Case No. 4043 will be consolidated for purposes of hearing with Case No. 4017 which is the application of Corinne Grace for compulsory pooling of the same section.

CASE 4044: Application of Continental Oil Company for a non-standard gas proration unit, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the consolidation of two existing non-standard gas proration units into one 481-acre unit comprising the E/2 and E/2 W/2 of Section 3, Township 20 South, Range 36 East, Eumont Gas Pool, Lea County, New Mexico, to be dedicated to its Reed A-3 Wells Nos. 2 and 3 located in Units H and I, respectively of said Section 3, to be effective as of January 1, 1967. Applicant further seeks authority to produce the allowable assigned to said unit from either of the aforesaid wells in any proportion.

CASE 4045: Application of H & S Oil Company for an amendment to Order No. R-3357, as amended by Order No. R-3357-A, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks the amendment of Order No. R-3357, as amended by Order No. R-3357-A, which order authorized the H & S West Artesia Unit Waterflood Project. Applicant proposes to substitute the Roach Drilling Company-Leonard Well No. 18 located in Unit D of Section 17 as a water injection well in said project in lieu of the Cities Service-Mell Well No. 17 located in Unit M of Section 8, both in Township 18 South, Range 28 East, Artesia Pool, Eddy County, New Mexico.

CASE 4030: (Continued from the January 22, 1969 Examiner Hearing)

Application of Argus Production Company for salt water disposal, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the Seven Rivers formation in the perforated and open-hole interval from approximately 3554 feet to 3775 feet in its J. T. Lynn A-28 Well No. 3 located 2310 feet from the South line and 1650 feet from the East line of Section 28, Township 23 South, Range 36 East, Jalmat Yates-Seven Rivers Pool, Lea County, New Mexico.

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ACCUMULATIVE OIL PRODUCTION

Proration Unit	Accumulative to 10-1-68	October 1968	November 1968	Total Production from Proration Unit
Sec. 19, T-16S, R-31E				
NW/4 SW/4 Carper #1	4724	155	173	5052
NE/4 SW/4 Carper #2	6433	322	299	7054

BEFORE EXAMINER NUTTER
OIL CONSERVATION COMMISSION
EXHIBIT NO. 2
CASE NO. 4038

KENNEDY OIL COMPANY
CARPER FLOOD PROJECT
SQUARE LAKE FIELD
EDDY COUNTY, N.M.

KENNEDY OIL COMPANY
CARPER FLOOD PROJECT
SQUARE LAKE FIELD
EDDY COUNTY, N.M.

Lot 3 (NW/4 SW/4) & NE/4 SW/4
Sec. 19, T-16S, R-31E., NMPM

LEASE & WELL NO.	COMPLETION DATE	ELEVATION	T.D.	CASING SIZES	CASING DEPTH	CEMENT	PERFORATIONS
Carper # 1	8-27-59	3869	3264	8 5/8 32# 5½ 15.5	342' 3193'	50 125	2691-2695 3103-3043 3228-3233 O.H.
Carper # 2	10-4-63	3876	3315	8 5/8 32# 5½ 14#	374' 3309'	50 100	3054-3163 3256-3264

4038

SCHLUMBERGER

COMPANY KENNEDY OIL COMPANY

WELL CARPER FEDERAL # 2

FIELD SQUARE LAKE

COUNTY EDDY STATE NEW MEXICO

Location: NE QUARTER OF THE SW QUARTER

Sec. 19 Twp. 16S Rge. 31E

Other Services:

COUNTY	EDDY
FIELD or LOCATION	SQUARE LAKE
WELL	CARPER FEDERAL #2
COMPANY	KENNEDY OIL COMPANY

Permanent Datum: GL ; Elev.:
Log Measured From KB 8 Ft. Above Perm. Datum
Drilling Measured From

Elev.: K.B. N.A.
D.F.
G.L.

Date	8-26-63
Run No.	ONE
Type Log	FDL
Depth—Driller	3315
Depth—Logger	3315
Bottom logged interval	3314
Top logged interval	100
Type fluid in hole	SALT
Salinity PPM Cl.	150000
Density	10.5
Level	FULL
Max. rec. temp., deg F.	-
Operating rig time	3 HOURS
Recorded by	WILSON
Witnessed by	KENNEDY

BORE-HOLE RECORD

Bit No.	From	To
7 7/8	CSG.	TD

CASING RECORD

Size	Wgt.	From	To
8 5/8		SURF	382

FOLD HERE

EQUIPMENT DATA

Gamma-Gamma		General	
Run No.	ONE	Run No.	ONE
Tool Model No.	PGT-C	Hoist Truck No.	2519
Diameter	4 3/8	Inst. Truck No.	2519
Det'r Model No.	PGD	Tool Serial No.	
Type	SCINT.	Location	HOBBS

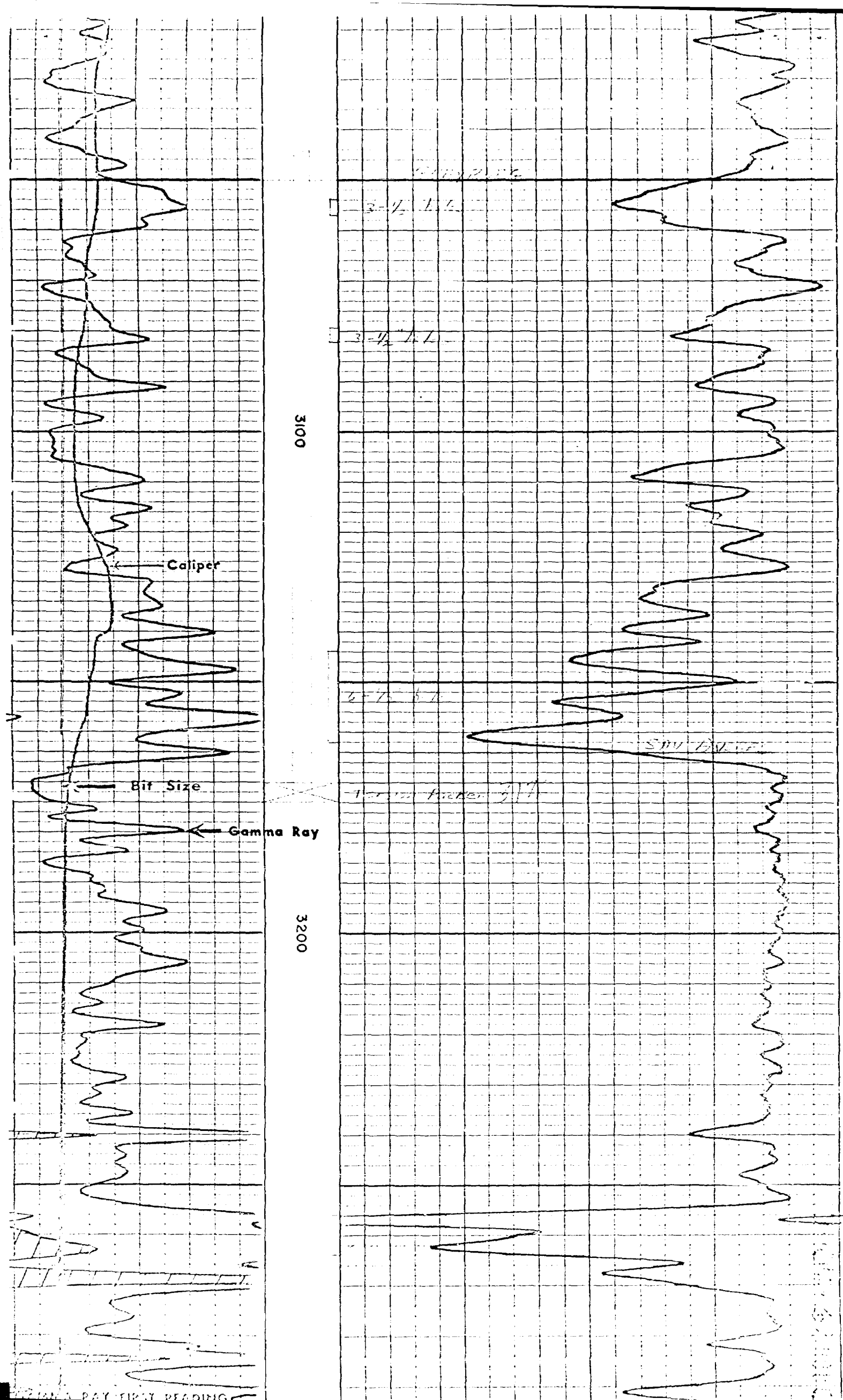
LOGGING DATA

General				Gamma Ray				Gamma-Gamma			
Run No.	Depths From	Depths To	Speed Ft/Min.	T.C. Sec.	Sens. Settings	Zero Div. L or R	API Units per Log Div.	T.C. Sec.	Sens. Settings	Zero Div. R. of Zero of Track	Standard CPS per Log Div.
	100	TD	30/60	2/1	400	0	10	2/1	300	24	30

Remarks:

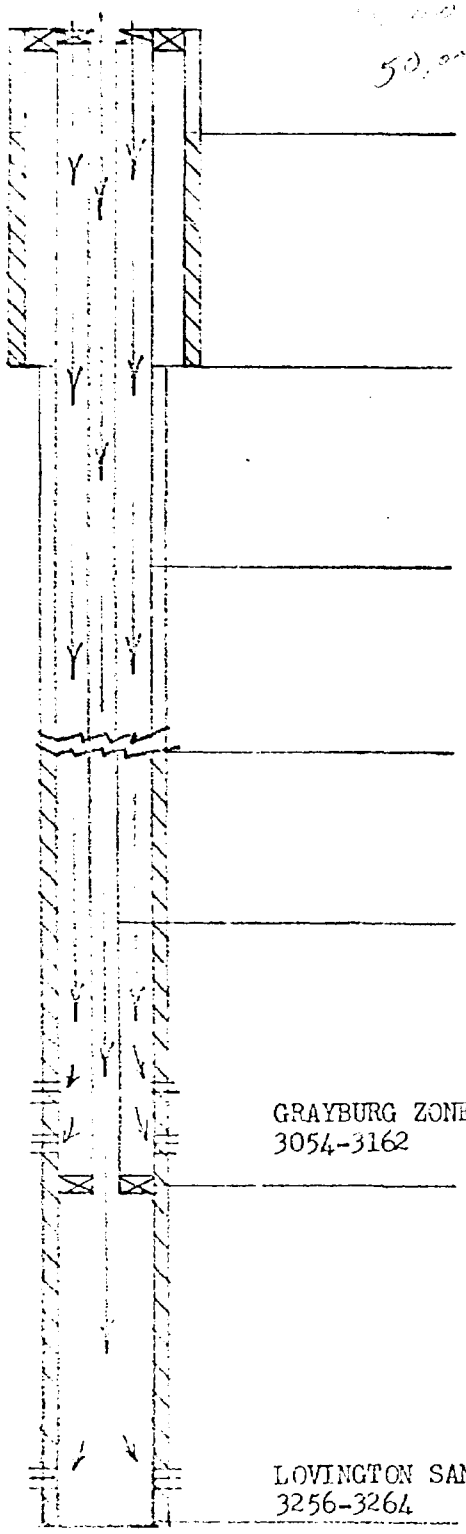
4038

CALIPER HOLE DIAM. IN INCHES	DEPTHS	GAMMA GAMMA DENSITY LOG STANDARD COUNTS SECOND
6" 16"		720 420 120
GAMMA RAY API UNITS		**BULK DENSITY GRAMS CC.**
0 100		2.33 2.55 3.0
100 200		


Caliper
Bit Size
Gamma Ray
3100
3200

SCHEMATIC DRAWING OF PROPOSED INJECTION WELL

KENNEDY OIL COMPANY - CARPER FEDERAL # 2
NE/4 SW/4 SECTION 19, T-16S, R-31E NMPM
CARPER FLOOD PROJECT
SQUARE LAKE FIELD
EDDY COUNTY, NEW MEXICO



Top cement behind 8 5/8" casing 191' ±

8 5/8" 32# casing set at 374'

5½" 14# J casing, seamless, ran new

Top cement behind 5½" casing 2924' ±

2" EUE 8rd, seamless, tubing - Injection String

GRAYBURG ZONE
3054-3162

2" x 5½" Tension Packer at 3180' ±

LOVINGTON SAND
3256-3264

5½" 14# J casing set at 3309'

T.D. 3315'

1402 W. Washington

PHONE ~~SHERWOOD 6-4226~~
677-2132

Kennedy Oil Company

—OIL PRODUCERS—
P. O. Box 151
Artesia, New Mexico

January 6, 1969

'69 JAN 8 PM 1 06

Case 4038

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

Dear Mr. Porter:

Enclosed herewith you will please find three copies of the Application of Kennedy Oil Company for a waterflood project in the Square Lake Field, Eddy County, New Mexico, with the attached data therein described.

Please set this matter for hearing at the next regularly scheduled examiner's hearing and advise us the date of such hearing.

Very truly yours,
Kennedy Oil Company
Robert B. Kennedy
Robert B. Kennedy

DOCKET MAILED
Date 1-23-69

BEFORE THE OIL CONSERVATION COMMISSION

OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE APPLICATION OF KENNEDY OIL COMPANY FOR A WATERFLOOD PROJECT, SQUARE LAKE POOL, EDDY COUNTY, NEW MEXICO	:	No. 4038

APPLICATION

COMES KENNEDY OIL COMPANY, by its engineer, Robert B. Kennedy, and states:

1. That it is the operator of two producing oil wells in the Square Lake Field, Eddy County, New Mexico, and within the proposed project area covered by this Application, to-wit:

Township 16 South, Range 31 East, N.M.P.M.

Section 19: Lot 3, (NW/4 SW/4) and NE/4 SW/4

containing 70.33 acres, more or less.

2. There is attached hereto and by reference made a part hereof, a plat showing the location of the wells covered by this Application and the location of all other wells and leases within a radius of two miles from the proposed project area, and designating the formations from which said wells are producing.

3. That the two producing wells within the project area covered by this application have reached an advanced or "stripper" state of depletion and the Applicant proposes to inject water into the producing or once producing Grayburg and San Andres formations in sufficient quantities and under sufficient pressure to stimulate the production of oil from the producing well in the project area.

4. That the Applicant proposes to commence injecting water into the Grayburg and San Andres formations through the following proposed injection well, to-wit:

Kennedy Oil Company, Carper Federal No. 2
located in the NE/4 SW/4 of Section 19,
Township 16 South, Range 31 East, N.M.P.M.

5. There is attached hereto and by reference made a part hereof a copy of the log of the Kennedy Oil Company Carper Federal No. 2.

6. There is attached hereto and by reference made a part hereof a diagrammatic sketch of the proposed injection well, and designated as the Kennedy Oil Company, Carper Federal No. 2 showing all casing strings, including diameters and setting depths, quantities used and tops of cement, perforated intervals, tubing string, including diameters and setting depth, and the type and location of the packer.

7. That Applicant proposes to contract for the purchase of water from the Anadarko Production Company, which in turn is purchasing water from a commercial water company.

8. That Applicant proposes to inject water into the injection well at pressures up to 2500 p.s.i., and at rates up to 250 barrels per day.

9. That Applicant states that produced water will be returned to the injection plant, treated and then re-injected into the proposed injection well.

10. That Newmont Oil Company is presently operating at capacity allowable a waterflood project (S/2 SE/4 Sec. 19-T-16S, R-31E., Order R-1110 B) adjoining Applicants proposed project area and therefore Applicant proposes to conduct its waterflood project with a capacity buffer zone allowable.

11. That the approval of this waterflood project will be in the interest of conservation and will prevent waste and protect correlative rights.

WHEREFORE, Applicant prays the orders of the Commission as follows:

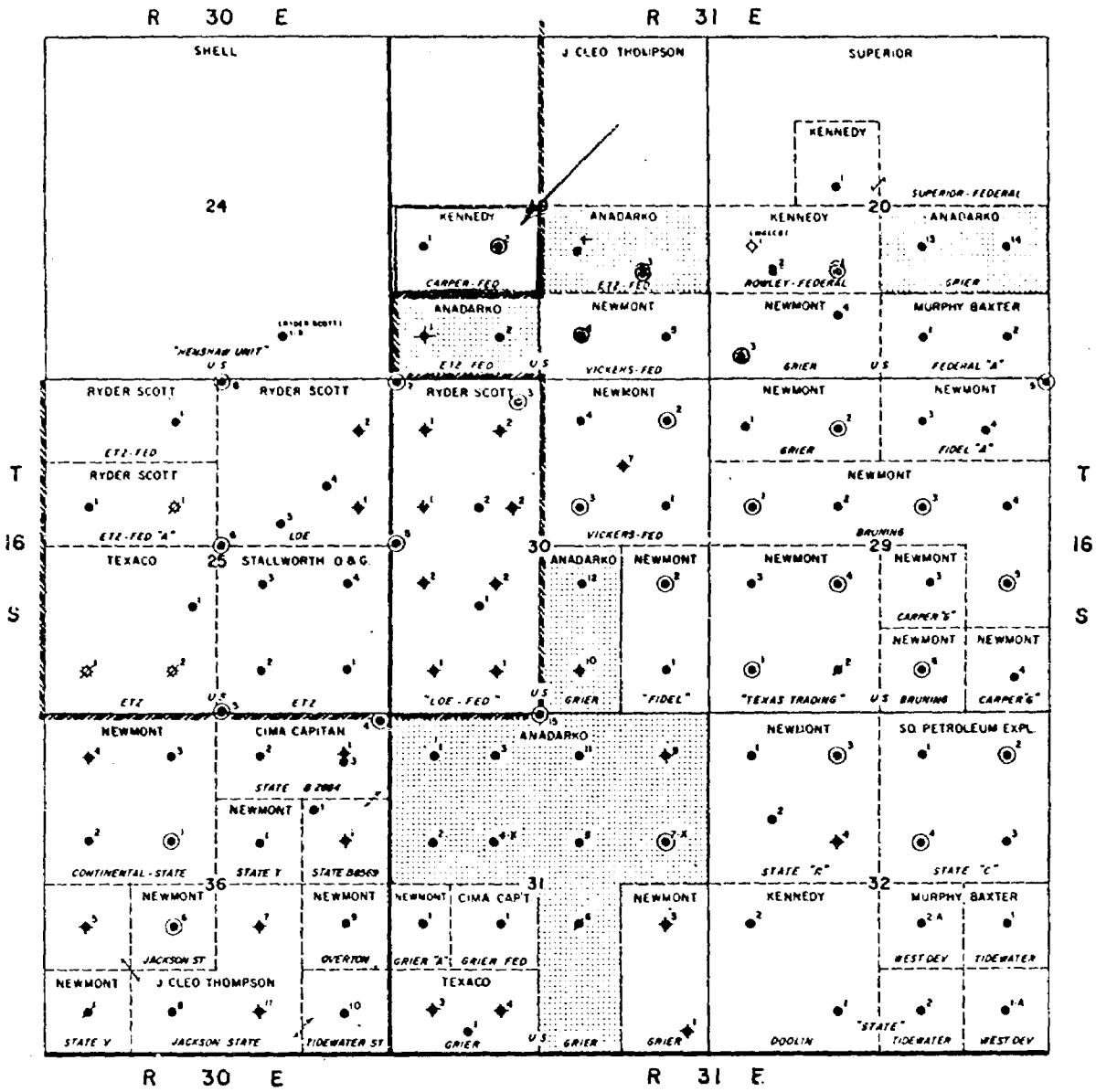
1. That this matter be set for hearing before an examiner duly appointed by the Commission and that due notice be given thereof as required by law.

2. That after hearing, an order be entered authorizing the Applicant to institute the aforesaid waterflood project as a buffer zone with capacity allowable.

3. And for such other relief as may be just in the premises.

KENNEDY OIL COMPANY

By [illegible]



LEGEND

- Oil Well
- Plugged & Abandoned
- Temporarily Abandoned
- Dry & Abandoned
- Water Injection Well
- Anadarko Acreage
- Shell Operated Henshaw Deep Unit
- Wells to be Converted to Water Injection

KENNEDY OIL COMPANY
CARPER FLOOD PROJECT
SQUARE LAKE FIELD
EDDY COUNTY, N.M.

Case 4038

COOPERATIVE WATERFLOOD AGREEMENT
EDDY COUNTY, NEW MEXICO

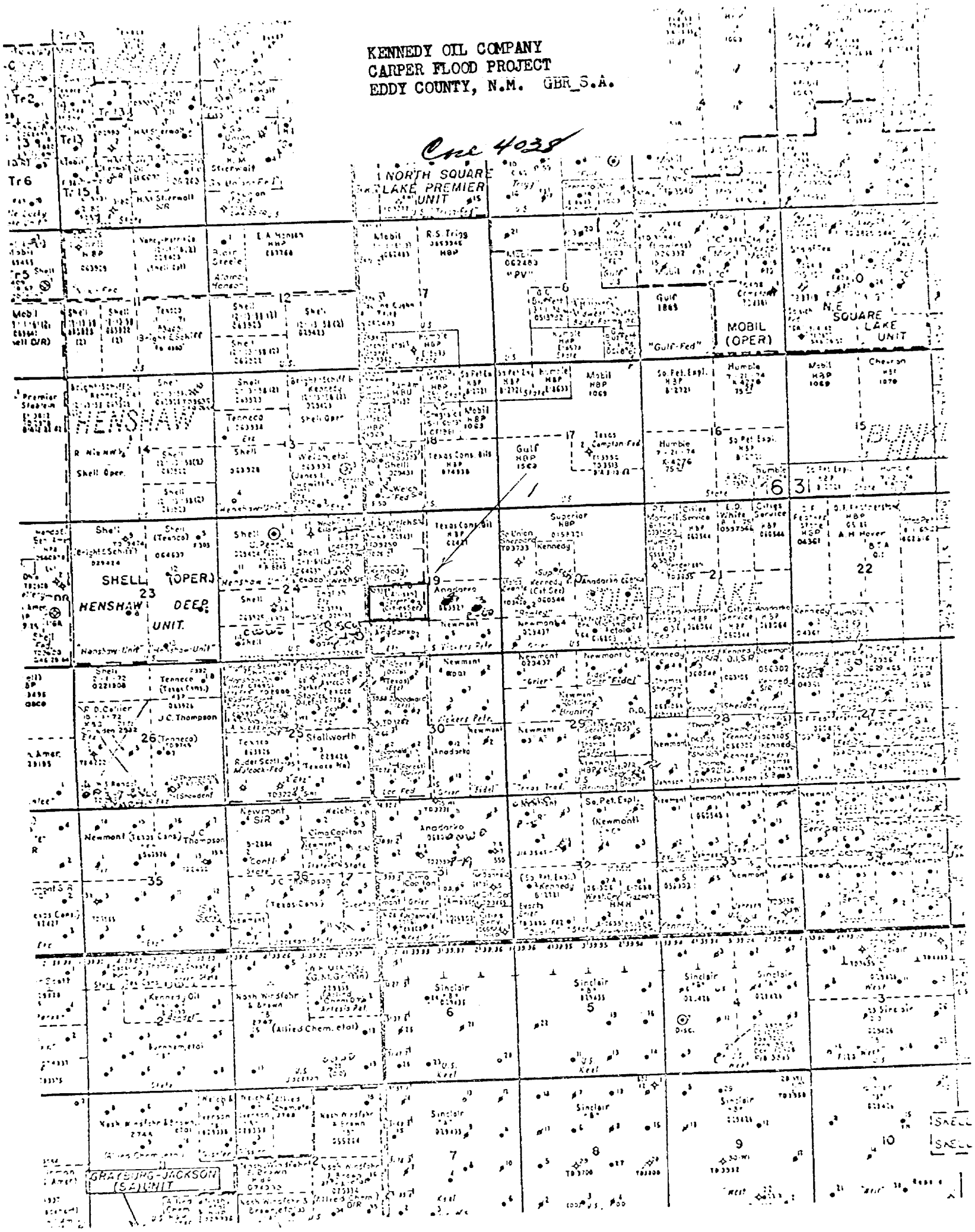
SQUARE LAKE FIELD

AUGUST 1, 1968

0 1320' 2640' 3960' 5280'
SCALE IN FEET

KENNEDY OIL COMPANY
CARPER FLOOD PROJECT
EDDY COUNTY, N.M. GBR_S.A.

Case 4038



SCHLUMBERGER

COMPANY KENNEDY OIL COMPANY

WELL CARPER FEDERAL # 2

FIELD SQUARE LAKE

COUNTY EDDY STATE NEW MEXICO

Location: NE QUARTER OF THE SW QUARTER

Sec. 19 Twp. 16S Rge. 31E

Other Services:

COUNTY EDDY

FIELD or LOCATION SQUARE LAKE

WELL CARPER FEDERAL #2

COMPANY KENNEDY OIL COMPANY

Permanent Datum: GL ; Elev.: ____

Log Measured From KB 8 Ft. Above Perm. Datum

Drilling Measured From ____

Elev.: K.B. N.A. D.F. G.L.

Date	8-26-63
Run No.	ONE
Type Log	FDL
Depth—Driller	3315
Depth—Logger	3315
Bottom logged interval	3314
Top logged interval	100
Type fluid in hole	SALT
Salinity, PPM Cl.	150000
Density	10.5
Level	FULL
Max rec. temp., deg F.	-
Operating rig time	3 HOURS
Recorded by	WILSON
Witnessed by	KENNEDY

BORE-HOLE RECORD				CASING RECORD	
Run No.	Bit	From	To	Size	Wgt.	From	To
1	7 7/8	CSG.	TD	8 5/8		SURF	382

Case 4038

FOLD HERE

EQUIPMENT DATA

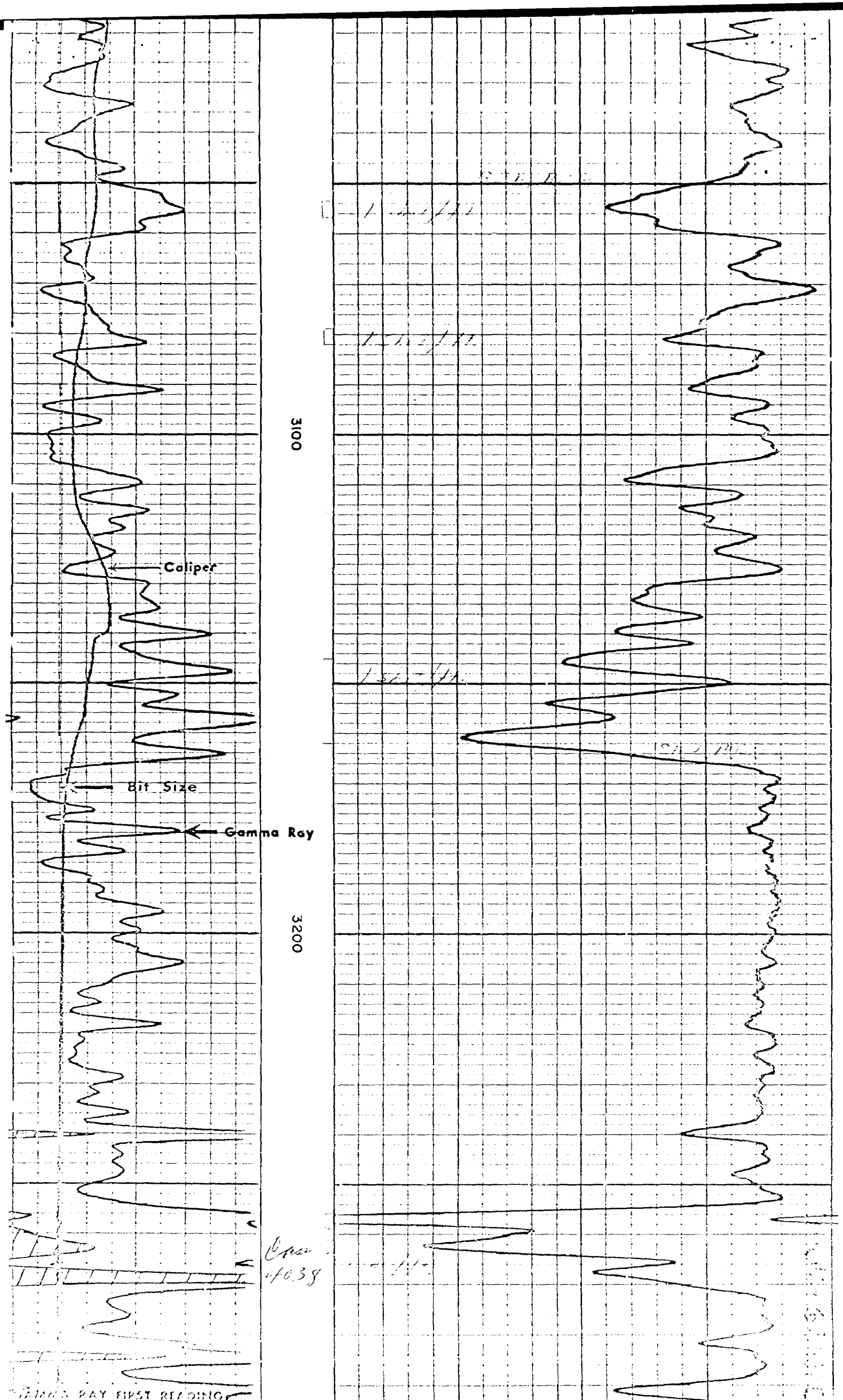
Gamma-Gamma		General	
Run No.	ONE	Run No.	ONE
Tool Model No.	PGT-C	Hoist Truck No.	2519
Diameter	4 3/8	Inst. Truck No.	2519
Det'r Model No.	PGD	Tool Serial No.	
Type	SCINT.	Location	HOBBS

LOGGING DATA

Run No.	General Depths From	General Depths To	Speed Ft/Min.	Gamma Ray T.C. Sec.	Gamma Ray Sens. Settings	Gamma Ray Zero Div. L or R	Gamma Ray API Units per Log Div.	Gamma-Gamma T.C. Sec.	Gamma-Gamma Sens. Settings	Gamma-Gamma Zero Div. R. of Zero of Track II	Gamma-Gamma Standard CPS per Log Div.
	100	TD	30/60	2/1	400	0	10	2/1	300	24	30

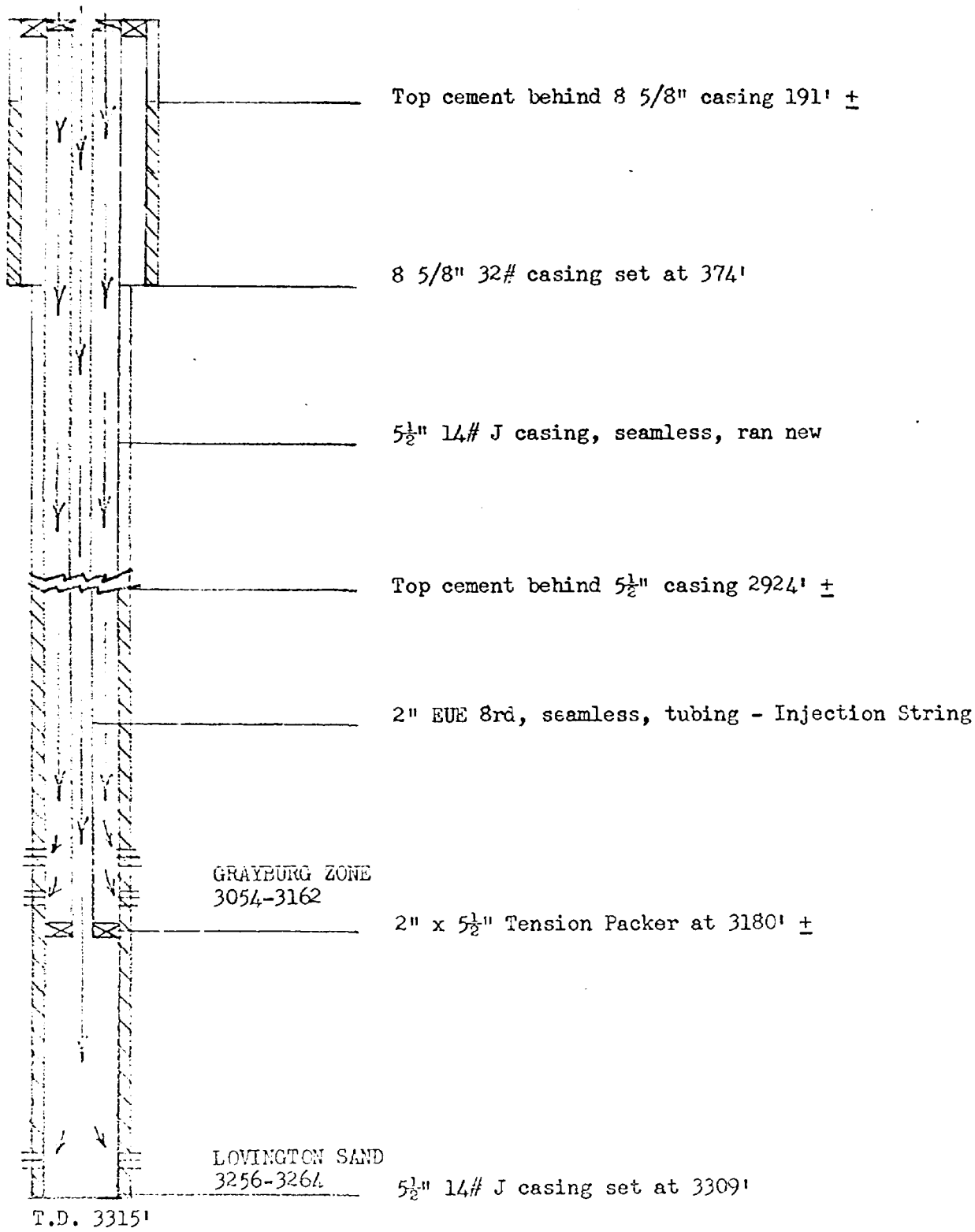
Remarks:

CALIPER HOLE DIAM. IN INCHES	DEPTHS	GAMMA GAMMA DENSITY LOG STANDARD COUNTS SECOND
6" 16"		720 420 120
GAMMA RAY API UNITS		**BULK DENSITY GRAMS CC.**
0 100		2.33 2.55 3.0
100 200		


Caliper
Bit Size
Gamma Ray
3100
3200

SCHEMATIC DRAWING OF PROPOSED INJECTION WELL

KENNEDY OIL COMPANY - CARPER FEDERAL # 2
NE/4 SW/4 SECTION 19, T-16S, R-31E NMPM
CARPER FLOOD PROJECT
SQUARE LAKE FIELD
EDDY COUNTY, NEW MEXICO



Case 4638

DRAFT

GMH/esr

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. 4038

Order No. R-3678

APPLICATION OF KENNEDY OIL COMPANY
FOR A WATERFLOOD PROJECT AND WATER-
FLOOD BUFFER ZONE, EDDY COUNTY, NEW
MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on February 5, 1969, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this _____ day of February, 1969, 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, Kennedy Oil Company, seeks permission to institute a waterflood project in the Square Lake Pool by the injection of water into the Grayburg and San Andres formations through its Carper Federal Well No. 2, located in Unit K of Section 19, Township 16 South, Range 31 East, NMPM, Eddy County, New Mexico.

(3) That the wells in the project area are in an advanced state of depletion and should properly be classified as "stripper" wells.

(4) That the proposed waterflood project should result in the recovery of otherwise unrecoverable oil, thereby preventing waste.

(5) That the applicant further proposes that the N/2 SW/4 of said Section 19 be designated a waterflood buffer zone inasmuch as it directly offsets a capacity-type waterflood project immediately south and east.

(6) That approval of the proposed buffer zone will afford the applicant the opportunity to produce its just and equitable share of the oil in the pool.

(7) 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, provided however, that capacity allowables ~~should~~ may be assigned to the wells in the N/2 SW/4 of said Section 19.

IT IS THEREFORE ORDERED:

(1) That the applicant, Kennedy Oil Company, is hereby authorized to institute a waterflood project in the Square Lake Pool by the injection of water into the Grayburg and San Andres formations through its Carper Federal Well No. 2, located in Unit K of Section 19, Township 16 South, Range 31 East, NMPM, Eddy County, New Mexico.

(2) That the subject waterflood project is hereby designated the Kennedy Square Lake Carper waterflood project shall be governed by the provisions of Rules 701, 702, and 703 of the Commission Rules and Regulations, provided however, that the N/2 SW/4 of Section 19, Township 16 South, Range 31 East, NMPM, Eddy County, New Mexico, is hereby designated a waterflood buffer zone wherein water can be injected and wells produced at rates comparable with the capacity-type waterflood projects in the S/2 SW/4 and the ~~S/2 SE/4~~ SE/4 of said Section 19.

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

(4) 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.