

Mr. John A. Yates

September 1, 1969

Re: Appraisal of State Leases, Artesia (Grayburg), Eddy County

Page 5

WELL COMPLETION DATA

Fletcher-State#1	9/25	El.3530	10" 35#	424'	s/g 1850-55, s/o 1925-55, 2075-87
Yates-State #4		TD-2128			Shot @ 2067' w/60qts, @ 1955 w/160
2390/S 2390/W	4/54	PB-1960	8"	750' 50sx	SOF 1930-60 w/4000g. Petrofrac
K-5-19-28		TD-2560			IP- 15 BOPD
Yates-State #1	4/53	El.3536	8 $\frac{1}{4}$ "	423' 25sx	s/o 1840-54, 1912-27, 1990-2004
2180/S 2080/W		TD-2100			Hyfrac 1912-70, 2095-2100; IP-132
K-5-19-28					GOR 341/1, S.G. 1.23; 37°API
	5/59	Liner	4 $\frac{1}{2}$ "	2080' 50sx	SOF 95,000#/5500b.; IP-25 BOPD
Yates-State #2	10/53	El.3528	8 5/8	436' 50s	s/o 1850-70, 1880-1910, 2650-2710
2310/S 2310/E		TD-2870			SOF 9000g; IP- 50 BOPD, 2 EWPD
J-5-19-28	12/57	5$\frac{1}{2}$"	1920' 50sx	Pf 1872-67, OH 1920-55, SOF 23000#	1872-67, OH 1920-55, SOF 23000#
	9/58	Liner	4 $\frac{1}{2}$ "	2100' 50sx	Pf 1867-72, 1892-96, 1905-09, 39-43,
					Pf 1963-67; SOF 48500#/33000g, 1250g
Yates-State #3	7/54	El.3530	7"	525' set	s/o 1867-73, 1920-38, s/g 1843-49
2310/N 2310/W		TD-1947	5 $\frac{1}{2}$ "	1908' 25sx	Pf 1867-73, OH 1908-47; SOF 10000g.
F-5-19-28					IPF- 144 BOPD
	12/57				SOF 23000#/30000g.
Yates-State #5	3/59	El.3540	7"	515' 50sx	Pf 1880-84, 1942-46, 1956-61
2310/E 990/S		TD-2860	4 $\frac{1}{2}$ "	2065' 40sx	SOF 55000#/500b, 500g.A; IPF-38 BOPD
O-5-19-28	4/61				Treat 20000g. 7 $\frac{1}{2}$ % KW-38
Yates-State #6	5/59	El.3545	8 $\frac{1}{4}$ "	470' 50sx	Pf 1940-46, 58-64, 90-94, 2012-16
990/S 990/E		TD-2050	4 $\frac{1}{2}$ "	2050' 90sx	SOF 100000#/870b, 750g.BDA; IP-36
P-5-19-28					
Yates-Gulf St#1	6/59	El.3554	8 $\frac{1}{4}$ "	465' 100sx	Pf 1894-97, 1942-47; SOF 80000# /
330/N 2310/E		TD-2103	4 $\frac{1}{2}$ "	2051' 75sx	600b., 500g.15%; IP 20 BOPD
B-8-19-28					

EXHIBIT 2

BEFORE EXAMINER UTZ	
OIL CONSERVATION COMMISSION	
EXHIBIT NO.	2
CASE NO.	4226

John A. Yates- State "A" No. 2
2310/S 2310/E J-5-19-28
Artesia Pool, Eddy County, N.M.

Correlation - Collar-Neutron log

1800

Top Gbg
1850

(1) 

Pt 1867-73

Dol, buff, calcareous

(2) 

SSO oil stn, good prod.

Pt 1892-96

1900

Dol, buff, fx

(2-B) 

slt Sdy

Pt 1905-09

Dol, buff, calcareous

(3) 

oil stained, not prod

80% Dol
20% Sdy dol no stn

(3B) 

100% Sand
Some fairly well oil stn

(4A) 

S/O

Pt 1939-43

1950

90-100% Sand

Some oil stn

stn but poor prod

(4B) 

Loco Hills

Pt 1963-67

11563

EXHIBIT 3a

2000

95% Slt-tight no stn

BEFORE EXAMINER UTZ
OIL CONSERVATION COMMISSION
EXHIBIT NO. 3A
CASE NO. 4226

Work Copy



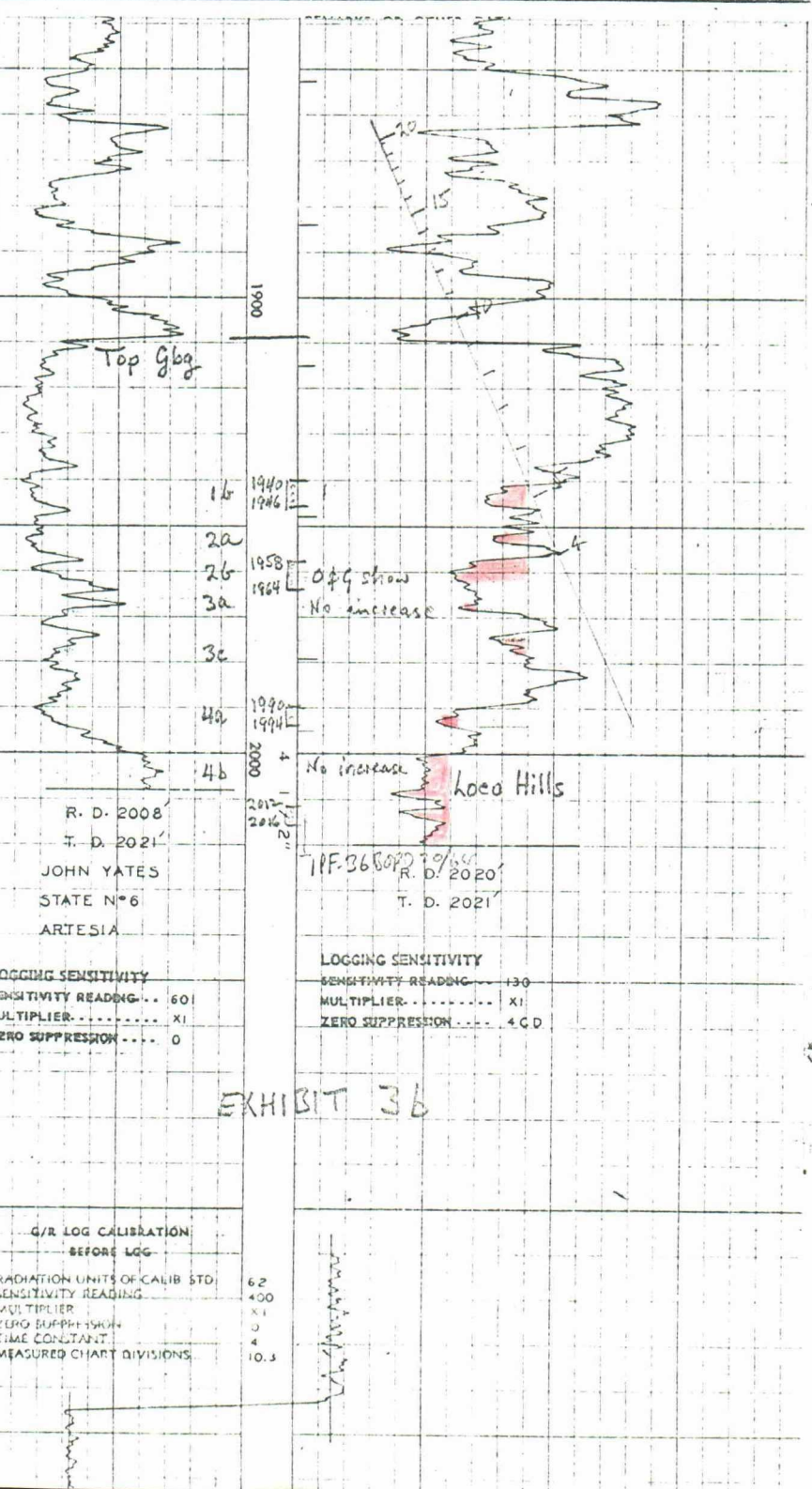
Radioactivity Log

COMPANY: JOHN YATES	Well Location
WELL: STATE NO. 6	
FIELD: ARTESIA	
LOCATION: 2901 FSL. & 2901 FSL. OF SRA. 5	
COUNTY: ELLI	STATE: N. MEX.
LOG ZERO: CABLE TOOL FLOOR	ELEV. *
DRLG. ZERO: CABLE TOOL FLOOR	ELEV. *
PERM. DATUM: CABLE TOOL FLOOR	ELEV. *

BEFORE EXAMINER UTZ
CIL CONSERVATION COMM. 10/1/10
EXHIBIT NO. 3B
CASE NO. 9226

TYPE OF LOG	GAMMA RAY	N/NEUTRON
RUN NO.	ONE-W	ONE-W
DATE	5-11-59	5-11-59
TOTAL DEPTH (DRILLER) STRAIN	2016	2016
EFFECTIVE DEPTH (DRILLER)	2016	2016
TOP OF LOGGED INTERVAL	SURFACE	SURFACE
BOTTOM OF LOGGED INTERVAL	2016	2016
TYPE OF FLUID IN HOLE	WATER	WATER
FLUID LEVEL	FULL	FULL
MAXIMUM RECORDED TEMP		510.3
SOURCE STRENGTH & TYPE		13.2
SOURCE SPACING - IN.		13.2
DETECTOR CLASS.	SCINT.	SCINT.
DETECTOR TYPE	DMG1	DMG1
LENGTH OF MEAS. DEVICE - IN.	1	1
O.D. OF INSTRUMENT - IN.	3.5/8	3.5/8
TIME CONSTANT - SECONDS	1.5-2.9	1.5-2.9
LOGGING SPEED FT./MIN.	10-50	10-50
STATISTICAL VARIATION - IN.	RECORDED	RECORDED
SENSITIVITY REFERENCE	271 J10	D366
RECORDED BY	REED	REED
WITNESSED BY	YATES	YATES

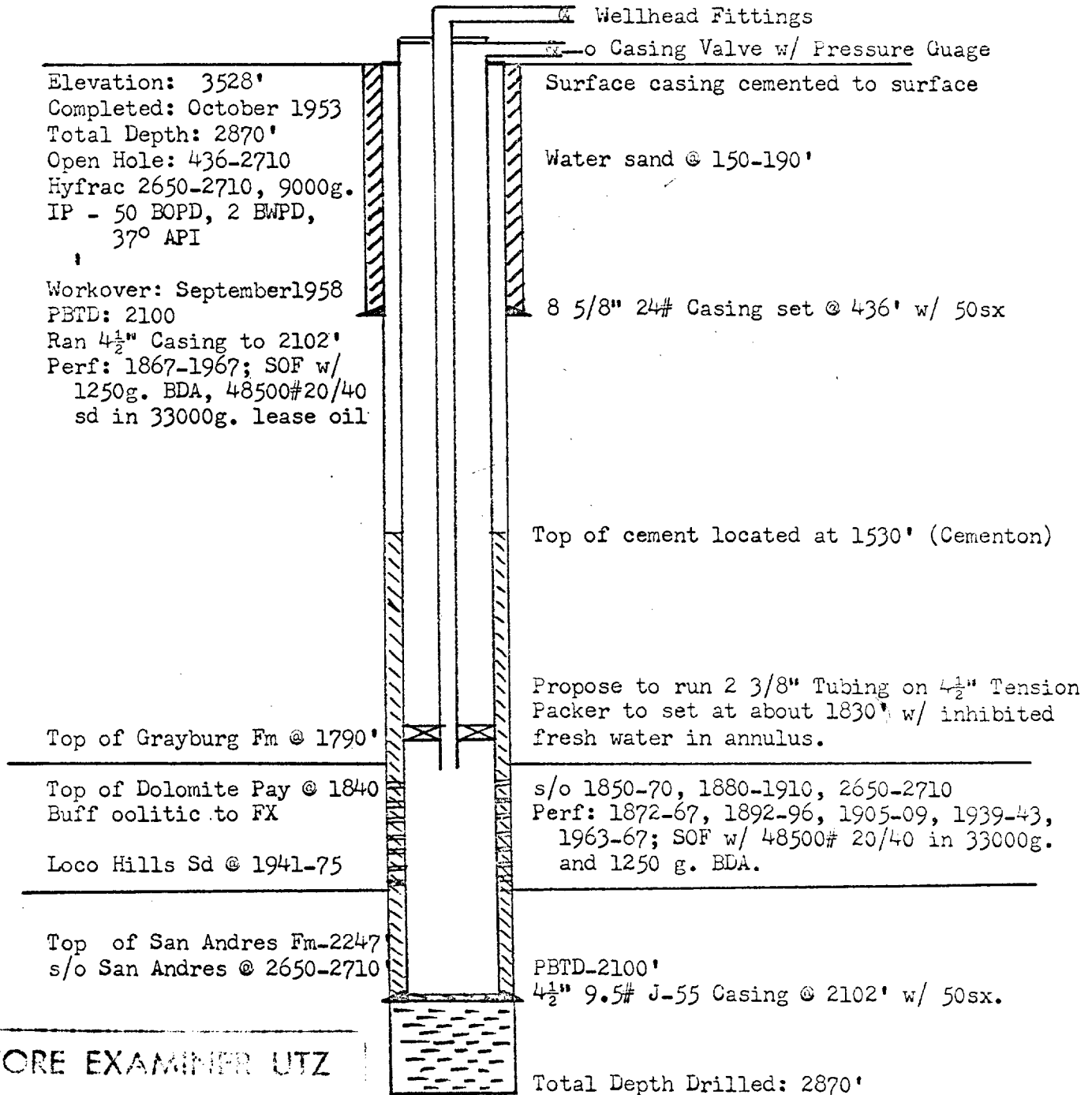
WELL RECORD			
RUN	BIT SIZE	CASING WT.-LB.	FROM LOG
ONE	10 1/4	8.5/2	SURFACE TO 526
ONE	1 1/2		SURFACE TO 2016
			TO
			TO
			TO



YATES BROTHERS
GEOLOGICAL FILE

DIAGRAMMATIC SKETCH OF INJECTION WELL

John A. Yates - State "A" No. 2
2310/S 2310/E, Unit J 5-19-28
Artesia (Grayburg) Pool
Eddy County, New Mexico



BEFORE EXAMINER UTZ

FILE CONSERVED

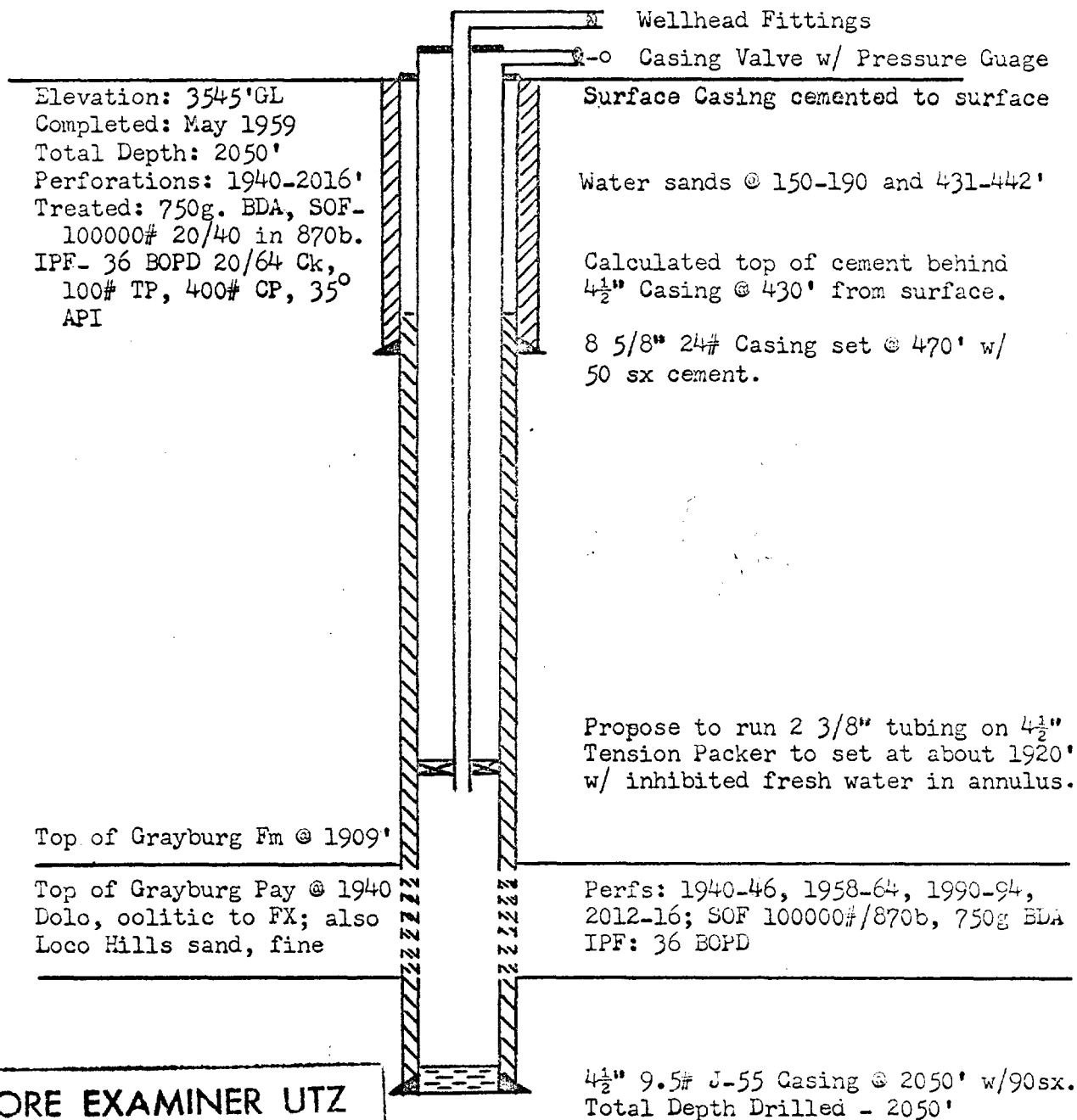
EXHIBIT 4A

FILE NO. 4226

EXHIBIT 4a

DIAGRAMMATIC SKETCH OF INJECTION WELL

John A. Yates - State "A" No. 6
990/S 990/E, Unit P, 5-19-28
Artesia (Grayburg) Pool
Eddy County, New Mexico



BEFORE EXAMINER UTZ

OIL CONSERVATION COMMISSION

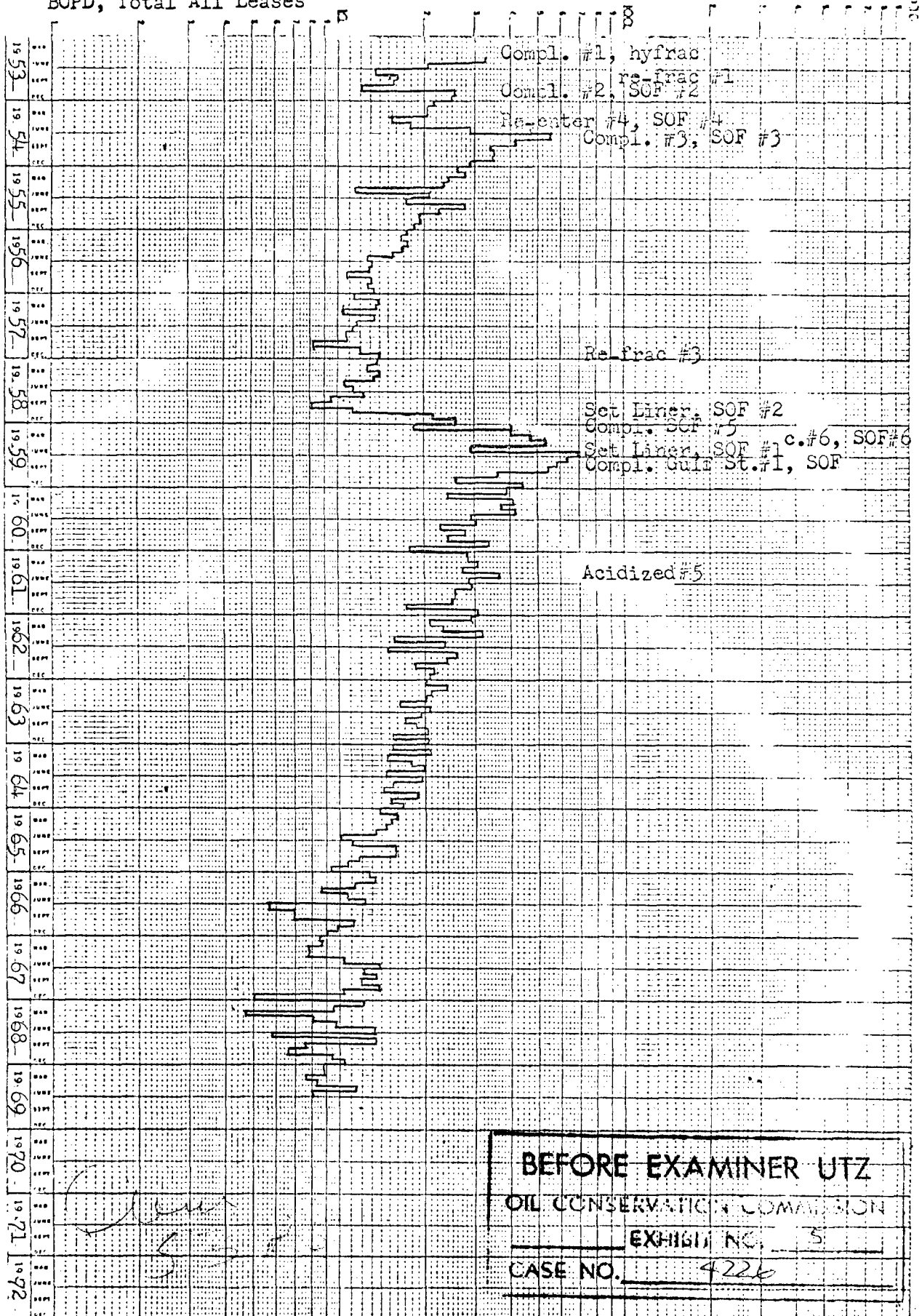
EXHIBIT NO. 413

CASE NO. 4226

EXHIBIT 4b

WATER & OIL PRODUCTION BBLs/DAY
WATER INJECTION BBLs/DAY

BOPD, Total All Leases



TIME-YEARS
EXHIBIT 5

JOHN A. YATES
ARTESIA (Gbg, S.A.) POOL
EDDY COUNTY, NEW MEXICO
PRODUCTION DECLINE CURVE

BEFORE EXAMINER UTZ
OIL CONSERVATION COMMISSION
EXHIBIT NO. 5
CASE NO. 4226

JOHN A. YATES

Oil Producer

ARTESIA, NEW MEXICO - 88210

323 CARPER BUILDING
DIAL 746-3558

September 9, 1969

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

Re: Application to Inject Water into Grayburg
Formation, Artesia Pool, Eddy County

Dear Mr. Porter:

Application is hereby submitted by John A. Yates for original authority to inject water into the Grayburg formation in a Pilot Waterflood Project in a portion of the Artesia Pool. The project area comprise the John A. Yates State leases in Sections 5 and 8, Township 19-South, Range 28-East, Eddy County, New Mexico, located approximately seventeen miles southeast of Artesia.

Permission is sought to convert to injection the following wells:

John A. Yates - State A No. 2 Unit J Section 5-19-28
John A. Yates - State A No. 6 Unit P Section 5-19-28

The production history of the project area briefly is:

<u>Lease</u>	<u>No. Wells</u>	<u>Cumulative 6/69</u>	<u>Current Prod.</u>
State A	3	53,957 BO	90 BOPM
State B	2	38,407 BO	110 BOPM
State C	1	16,888 BO	44 BOPM
Gulf State	1	5,274 BO	16 BOPM

Water injectivity is estimated at about 240 BPD at pressures to 1000 psi for both wells, and the water source will be fresh water occurring locally at depths to 300 feet, or from the Caprock Water Basin. It is anticipated that the injection water will have to be inhibited. Ogallala water is also available from the Double Eagle Corporation trunk line located about two miles east of the study area.

A lease map is appended showing the location of the proposed injection wells and offset producers, and indicating the lessees and producing formations within the 2-mile radius of the project. Electric logs and diagrammatic sketches of the proposed injectors, completion data and a production decline curve for all wells in the project area are also attached.

Respectfully submitted,

John A. Yates

DOCKET MAILED

Date 9/26/69

Mr. John A. Yates

September 1, 1969

Re: Appraisal of State Leases, Artesia (Grayburg), Eddy County

Page 5

WELL COMPLETION DATA

Cope 4226

Fletcher-State#1	9/25	El.3530	10" 35#	424'	s/g 1850-55, s/o 1925-55, 2075-87
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2390/S 2390/W	4/54	PB-1960	8"	750' 50sx	SOF 1930-60 w/4000g. Petrofrac
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Yates-State #1	4/53	El.3536	8 $\frac{1}{4}$ "	423' 25sx	s/o 1840-54, 1912-27, 1990-2004
2180/S 2080/W		TD-2100			Hyfrac 1912-70, 2095-2100; IP-132
K-5-19-28					COR 341/1, S.G. 1.23; 37°API
	5/59	Liner	4 $\frac{1}{2}$ "	2080' 50sx	SOF 95,000#/550b.; IP-25 BOPD
Yates-State #2	10/53	El.3528	8 5/8	436' 50s	s/o 1850-70, 1880-1910, 2650-2710
2310/S 2310/E		TD-2870			SOF 9000g; IP- 50 BOPD, 2 EAPD
J-5-19-28	12/57	5$\frac{1}{2}$" 1920' 50sx	5$\frac{1}{2}$"	1920' 50sx	Pf 1867-72, 1892-96, 1905-09, 39-43,
	9/58	Liner	4 $\frac{1}{2}$ "	2100' 50sx	Pf 1867-72, 1892-96, 1905-09, 39-43,
					Pf 1963-67; SOF 48500#/33000g, 1250g
Yates-State #3	7/54	El.3530	7"	525' set	s/o 1867-73, 1920-38, s/g 1843-49
2310/N 2310/W		TD-1947	5 $\frac{1}{2}$ "	1908' 25sx	Pf 1867-73, CH 1908-47; SOF 10000g.
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	12/57				SOF 23000#/30000g.
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2310/E 990/S		TD-2860	4 $\frac{1}{2}$ "	2065' 40sx	SOF 55000#/500b, 500g.A; IPF-38 BOPD
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990/S 990/E		TD-2050	4 $\frac{1}{2}$ "	2050' 90sx	SOF 100000#/870b, 750g.EDA; IP-36
P-5-19-28					
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330/N 2310/E		TD-2103	4 $\frac{1}{2}$ "	2051' 75sx	600b., 500g.15%; IP 20 BOPD
B-8-19-28					

EXHIBIT 2

John A. Yates- State "A" No. 2
2310/S 2310/E J-5-19-28
Artesia Pool, Eddy County, N.M.

Correlation - Collar-Neutron log

1800

Top Gbg
1850

(1)

Dol, buff

20

SSO oil str. poor pr.

Pt 1867-73

1900

Dol, buff ex

(2-B)

sti Sdy

Pt 1905-09

Dol, buff calc.
oil stained, not pr.

(3)

30

80% Dol
20% sty dol - 50.0 in

100% Sand
Some fairly well at str

(4A)

Sto

Pt 1939-43

1950

90-100% Sand

Some oil str

40

str but poor pr.

11553

Loco Hills

Pt 1963-67

EXHIBIT 3a

2000

95% Sand

11554

Work Copy



Radioactivity Log

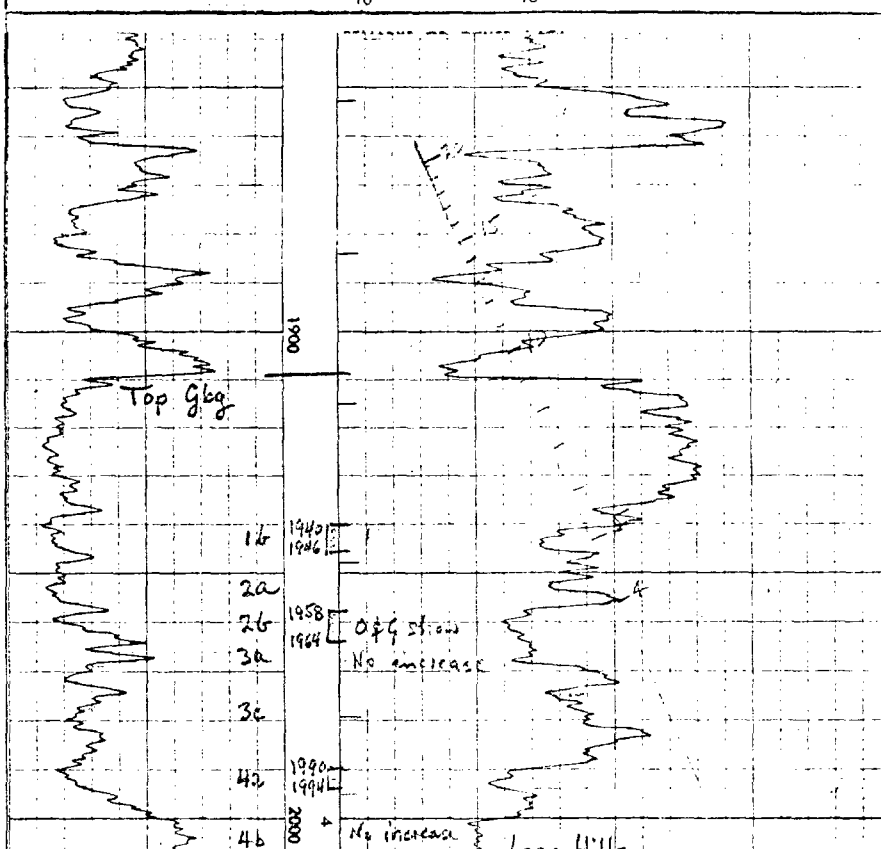
COMPANY: JOHN YATES WELL: STATE NO. 6 FIELD: ARTESIA LOCATION: SEC. 5, T-17S, R-21E COUNTY: NEW MEXICO STATE: NEW MEXICO	COMPANY: JOHN YATES	Well Location
	WELL: STATE NO. 6	
	FIELD: ARTESIA	
	LOCATION: 2201 EBL & 2201 EBL OF SEC. 5, T-17S, R-21E	
	COUNTY: NEW MEXICO	STATE: NEW MEXICO
LOG ZERO	CASING TOOL JOBS	ELEV. *
DALG. ZERO	CASING TOOL JOBS	ELEV. *
PERM. DATUM	CASING TOOL JOBS	ELEV. *

3250

TYPE OF LOG	RAW DATA	N/SECTION
RUN NO.	1	ONE
DATE	1940	1940-20
TOTAL DEPTH (DRILLER) STRAIN	2016	2016
EFFECTIVE DEPTH (DRILLER)	2016	2016
TOP OF LOGGED INTERVAL	SURFACE	SURFACE
BOTTOM OF LOGGED INTERVAL	2016	2016
TYPE OF FLUID IN HOLE	WATER	WATER
FLUID LEVEL	FULL	FULL
MAXIMUM RECORDED TEMP.		
SOURCE STRENGTH & TYPE		310A3
SOURCE SPACING - IN.		12.2
DETECTOR CLASS	SCINT.	SCINT.
DETECTOR TYPE	BLK	BLK
LENGTH OF MEAS. DEVICE - IN.	1	1
O.D. OF INSTRUMENT - IN.	3 5/8	3 5/8
TIME CONSTANT - SECONDS	1.5-2.2	1.5-2.2
LOGGING SPEED FT./MIN.	10-20	10-20
STATISTICAL VARIATION - IN.	RECORDED	RECORDED
SENSITIVITY REFERENCE	21A, 11D	D36E
RECORDED BY	YATES	YATES
WITNESSED BY	YATES	YATES

YATES BROTHERS
GEOLOGICAL FILE

WELL RECORD			
RUN	BITSIZE	CASING WT.-LB.	FROM LOG
ONE	12 1/4	8.5/2	SURFACE TO 528
ONE	4 1/2		SURFACE TO 2016
			TO
			TO



R. D. 2008	11F-3658	R. D. 2020
T. D. 2021		T. D. 2021
JOHN YATES		
STATE N°6		
ARTESIA		
LOGGING SENSITIVITY		
SENSITIVITY READING... 601		SENSITIVITY READING... 130
MULTIPLIER... X1		MULTIPLIER... X1
ZERO SUPPRESSION... 0		ZERO SUPPRESSION... 4.0 D

EXHIBIT 36

G/R LOG CALIBRATION	
BEFORE LOG	
RADIATION UNITS OF CALIB STD	62
SENSITIVITY READING	400
MULTIPLIER	X1
ZERO SUPPRESSION	0
TIME CONSTANT	4
MEASURED CHART DIVISIONS	10.3

DIAGRAMMATIC SKETCH OF INJECTION WELL

John A. Yates - State "A" No. 2
2310/S 2310/E, Unit J 5-19-28
Artesia (Grayburg) Pool
Eddy County, New Mexico

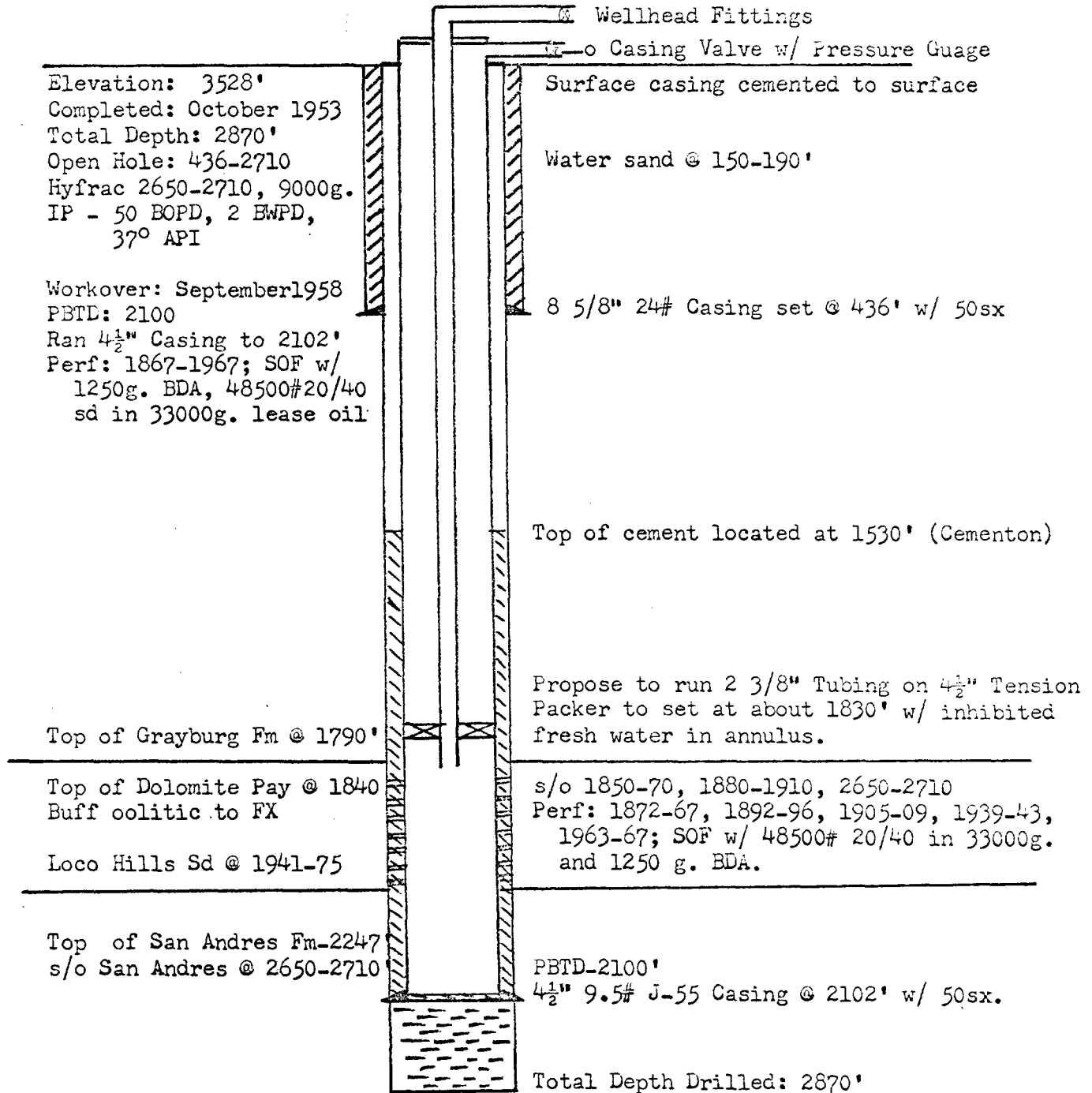


EXHIBIT 4a

4226

DIAGRAMMATIC SKETCH OF INJECTION WELL

John A. Yates - State "A" No. 6
990/S 990/E, Unit P, 5-19-28
Artesia (Grayburg) Pool
Eddy County, New Mexico

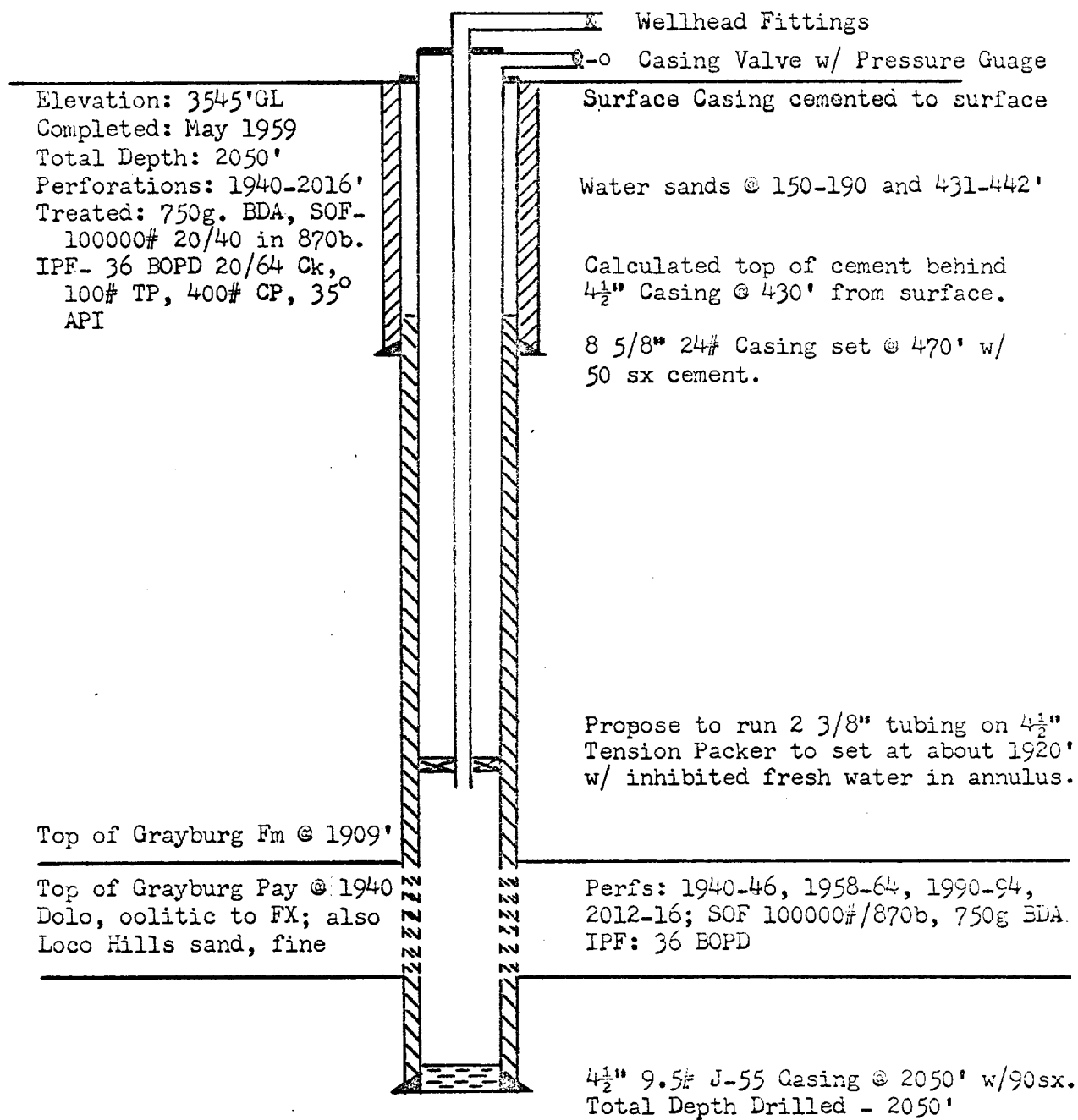


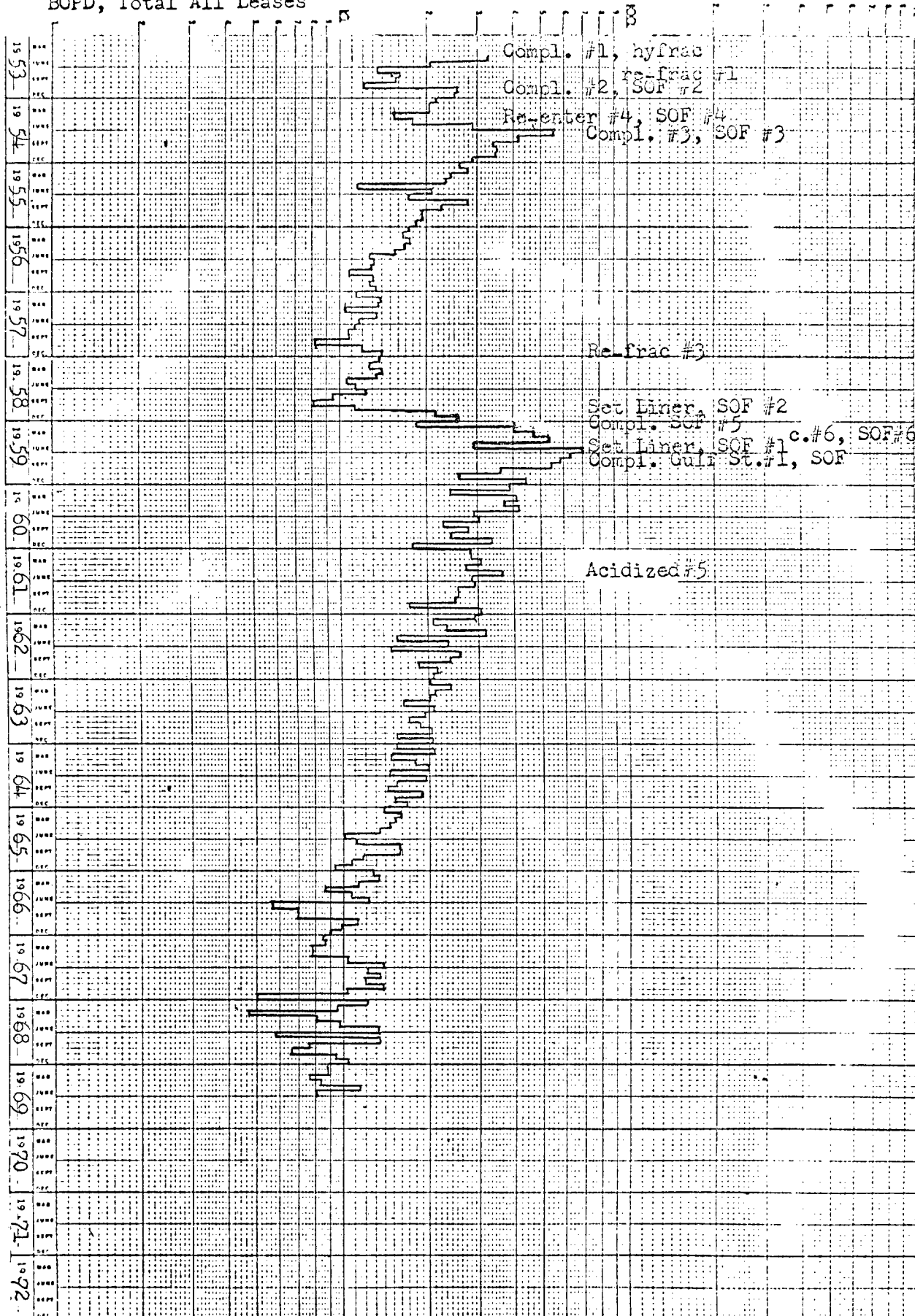
EXHIBIT 4b

Case 4226

Case 4236

WATER & OIL PRODUCTION BBLS/DAY
WATER INJECTION BBLS/DAY

BOPD, Total All Leases



TIME - YEARS
EXHIBIT 5

ARTESIA (Gbg, S.A.) POOL
EDDY COUNTY, NEW MEXICO
PRODUCTION DECLINE CURVE

JOHN A. YATES