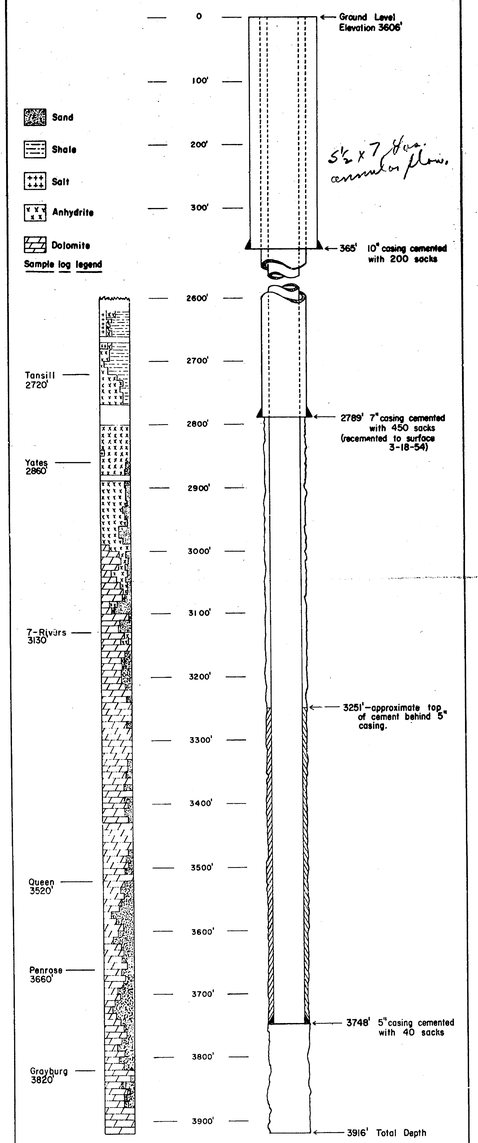
CASE
#1190
MISSING
BOX#11

30

GULF OIL CORPORATION NO. 2

R. R. BELL (NCT-A)

SE SE SECTION 8 T21S R36E



SAMPLE LOG SCHEMATIC DIAGRAM

BEFORE THE OIL CONSERVATION COMMISSION SANTA FE, NEW MEXICO EXHIBIT NO. 4 CASE 1191

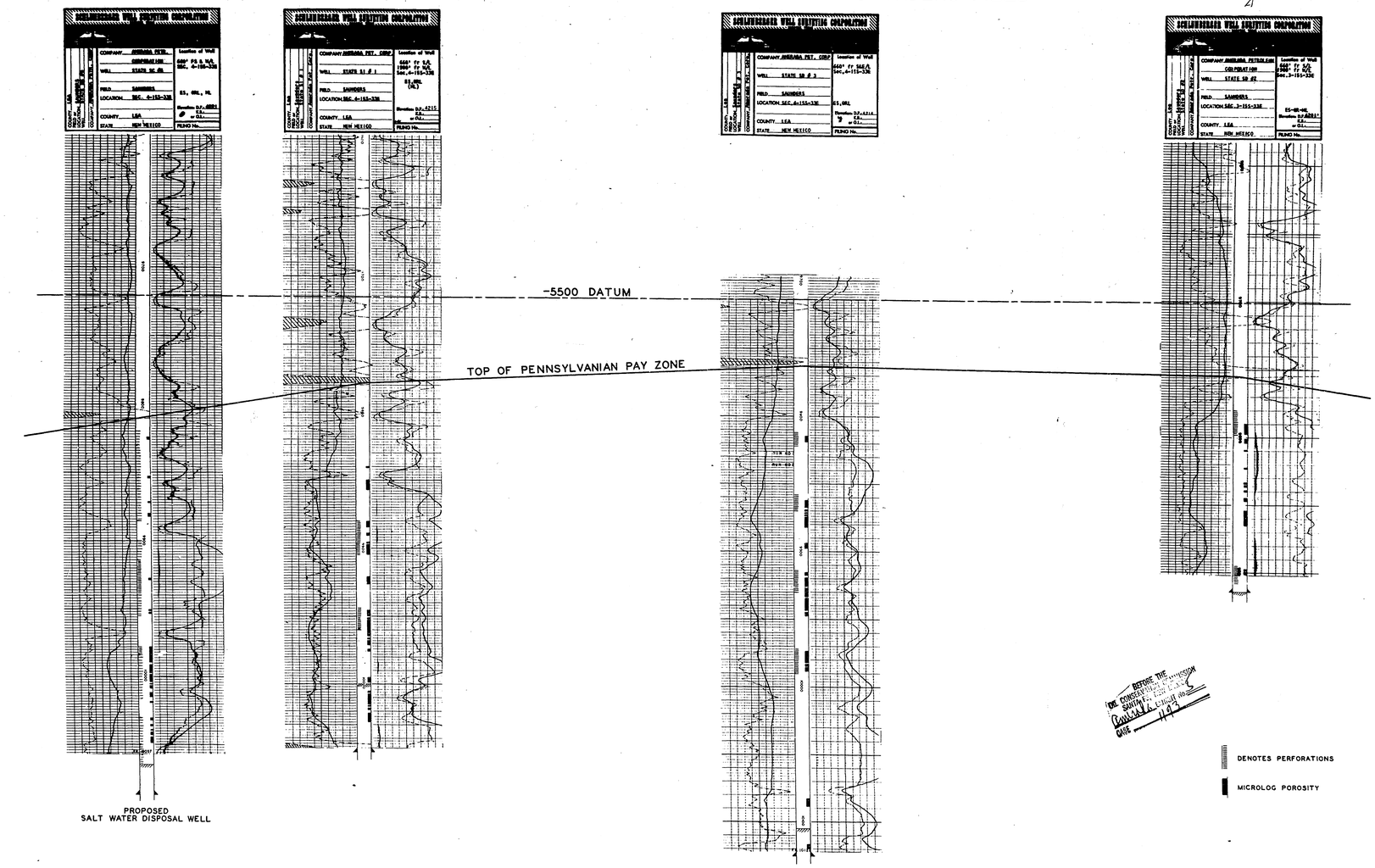
Case No. 1191
Exhibit No. 4
January 9, 1957

31

WEST-EAST ELECTRIC LOG CROSS SECTION SAUNDERS FIELD

A

A'



BEFORE THE OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO
CASE No. 1179

32

SCHLUMBERGER WELL SURVEYING CORPORATION
HOUSTON, TEXAS

Electrical Log

COMPANY AMERADA PETR. CORPORATION
WELL STATE SC #5
FIELD SAUNDERS
LOCATION SEC. 4-15S-33E
COUNTY LEA
STATE NEW MEXICO

Location of Well
660' FS & W/L
SEC. 4-15S-33E

ES, GRL, ML

Elevation: D.F. 4221
K.B.
or G.L.

FILING No.

RUN No.	I	II						
Date	5-27-53	5-28-53						
First Reading	9859	10057						
Last Reading	4289	9859						
Feet Measured	5570	198						
Csg. Schlum.	4289	4289						
Csg. Driller	4290	4290						
Depth Reached	9862	10060						
Bottom Driller	9862	10060						
Depth Datum	KB 12.48'	ABV. GL						
Mud Nat.	CHEMICAL	CAUSTIC	QUEBRACHO					
" Density	9.9	9.9						
" Viscosity	58	54						
" Resist.	.82 @ 100F	.84@ 94F	@ °F	@ °F	@ °F	@ °F	@ °F	@ °F
" Res. Bht	.65 @ 124F	.66 138F	@ °F	@ °F	@ °F	@ °F	@ °F	@ °F
" pH	9.8	9.6	°F	@ °F	@ °F	@ °F	@ °F	@ °F
" Wtr. Loss	12.8 CC 30 min.	9.6 CC 30 min.	CC 30 min.		CC 30 min.		CC 30 min.	
Max. Temp. °F	124	138						
Bit Size	7 7/8"	7 7/8"						
Spcgs.—AM	10'	10'						
AD	32' LS	32' LS						
AO	144' 1ST LAT	151' 1ST LAT						
Opr. Rig Time	4 HRS.	4 HRS.						
Truck No.	1124-ROS	1139-ROS						
Recorded By	WILSON	HOTLE						
Witness By	TROOP							

OIL CONSERVATION COMMISSION
ARTESIA, NEW MEXICO
Exhibit No. 1
Case No. 1143

COUNTY LEA
FIELD SAUNDERS
LOCATION SEC. 4-15S-33E
WELL STATE SC #5
COMPANY AMERADA PETR. CORP.

REMARKS
SET TO DRLR. T.D. OR REQUEST.
SET TO DRLR. T.D. OR REQUEST.

SCH. T.D. 10057'.
DRLR. T.D. 10057'.

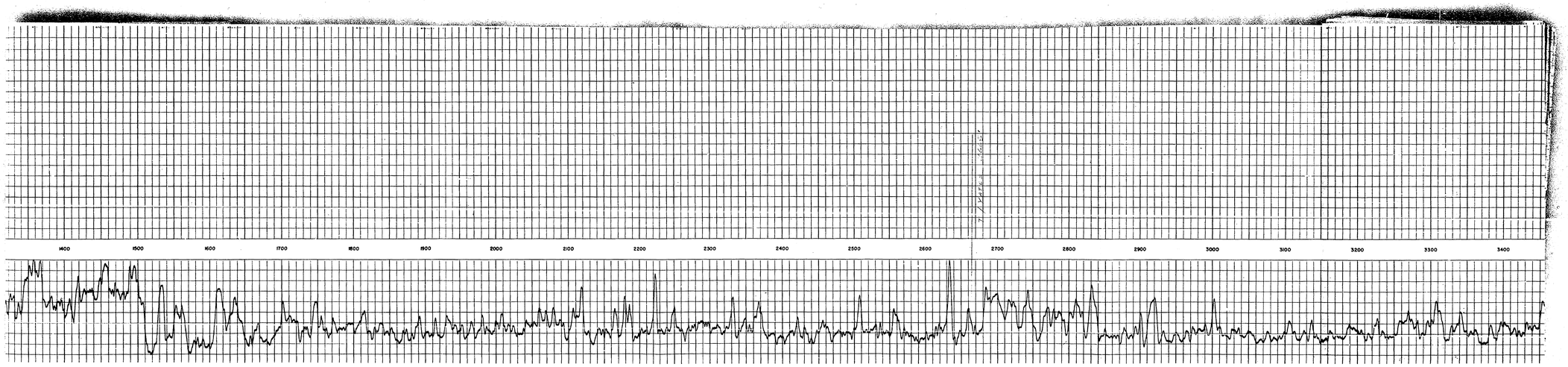
RESISTIVITY -ohms. m²/m
RUN I & II
10" NORMAL 0 100 0 2000
16" LATERAL 0 100 0 2000
32"-45 0 100 0 2000
64" 0 100 0 2000

DEPTHS

SPONTANEOUS-POTENTIAL millivolts
RADIOACTIVITY INCREASES

100 200 300 400 500 600 700 800 900 1000 1100 1200 1300 1400 1500 1600

33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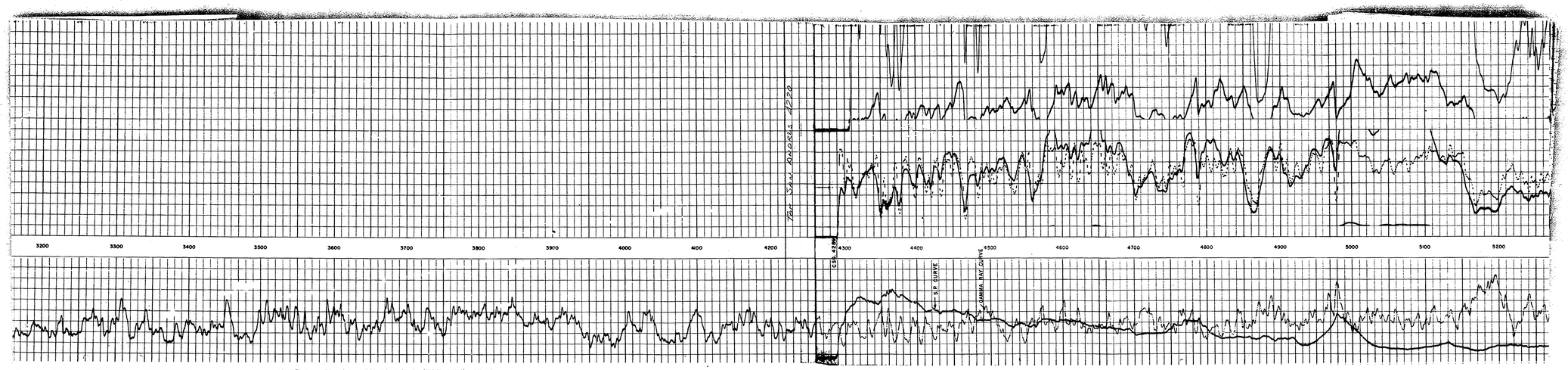
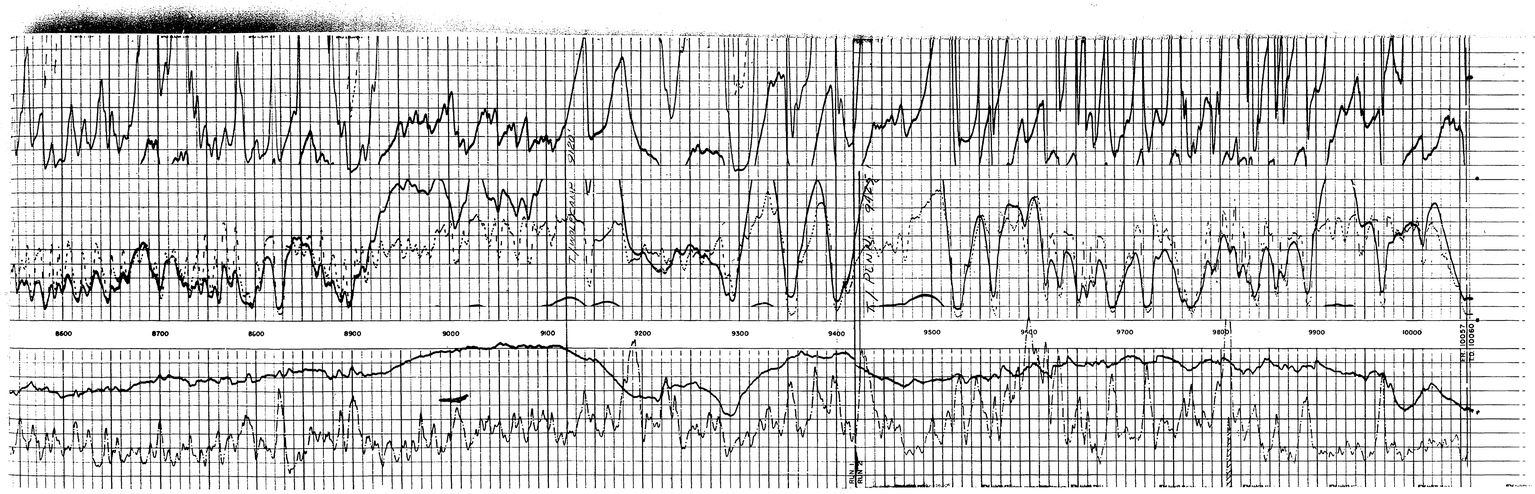
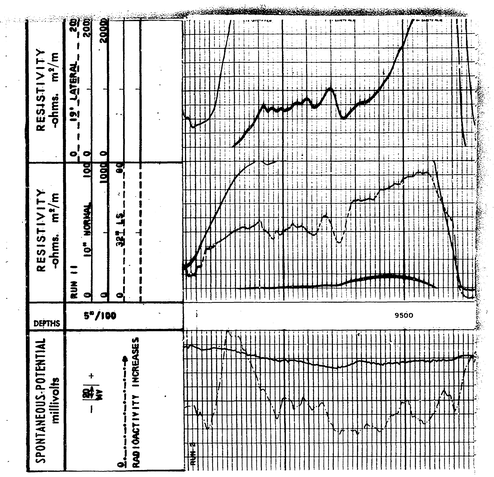
1500
1600
1700
1800
1900
2000
2100
2200
2300
2400
2500
2600
2700
2800
2900
3000
3100
3200
3300
3400


3200
3300
3400
3500
3600
3700
3800
3900
4000
4100
4200
CSG. 4286
4300
4400
4500
4600
4700
4800
4900
5000
5100
5200
SP CURVE
GAMMA RAY CURVE

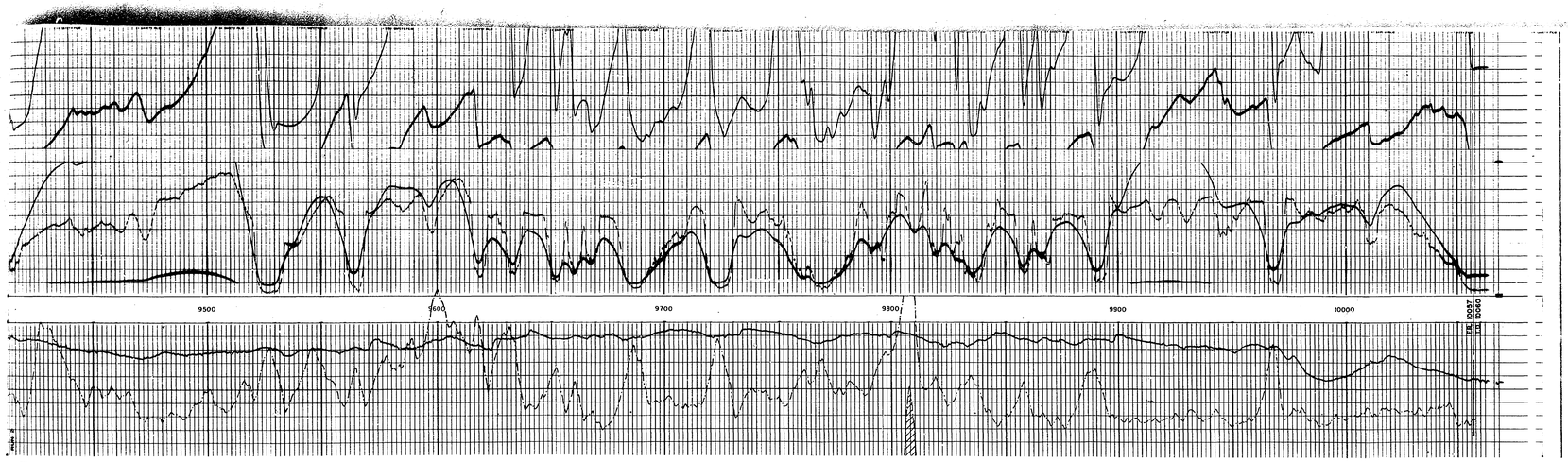
5000
5100
5200
5300
5400
5500
5600
5700
5800
5900
6000
6100
6200
6300
6400
6500
6600
6700
6800
6900
7000

6800
6900
7000
7100
7200
7300
7400
7500
7600
7700
7800
7900
8000
8100
8200
8300
8400
8500
8600
8700
8800


8600
8700
8800
8900
9000
9100
9200
9300
9400
9500
9600
9700
9800
9900
10000
RUN II
RUN I


RESISTIVITY
-ohms. m²/m
0
20
2000
16" NORMAL
100
1000
18" LATERAL
80
RUN II
DEPTHS
5"/100
9500
SPONTANEOUS POTENTIAL
millivolts
RADIOACTIVITY INCREASES
RUN I

38



AMERADA PETR. CORP.
STATE SC #5
SAUNDERS
LEA CO., N. M.

SCHLUMBERGER WELL SURVEYING CORPORATION

MICROLOGGING

COUNTY LEA
FIELD or LOCATION SAUNDERS
WELL STATE SC #5
COMPANY AMERADA PETR. CORP.

COMPANY AMERADA PETR. CORPORATION
WELL STATE SC #5
FIELD SAUNDERS
LOCATION SEC. 4-15S-33E
COUNTY LEA
STATE NEW MEXICO

Location of Well: 660' FS & FEC. 4-15S
Elevation: D.F., K.B., or G.L.
FILING No.

RUN No.	1								
Date	5-26-53								
First Reading	10057								
Last Reading	9500								
Feet Measured	557								
Csg. Schlum.	4295								
Csg. Driller	4290								
Depth Reached	10060								
Bottom Driller	10060								
Depth Datum	KB 12.46' ABV GL								
Mud Not.	CAUSTIC, QUEBRACHO								
" Density	9.0								
" Viscosity	54								
" Resist.	.824@ 94 °F	@ °F	@ °F	@ °F					
" Res. Bht	.618@ 138 °F	@ °F	@ °F	@ °F					
" pH	10.8 @ °F	@ °F	@ °F	@ °F					
" Wtr. Loss	9.6 cc 30 min.	cc 30 min.	cc 30 min.	cc 30 min.					
Max. Temp. °F	132								
Bit Size	7 7/8"								
Spacing									
MICRODIFL.	18"								
MICROINV.	2"								
Opr. Rig Time	8 HRS.								
Truck No.	T139-ROS								
Recorded By	HOYLE								
Witness By									

39

SCHLUMBERGER WELL SURVEYING CORPORATION
HOUSTON, TEXAS

MICROLOGGING

COUNTY LEA
FIELD SAUNDERS
LOCATION SEC. 4-15S-33E
WELL STATE SC #5
COMPANY AMERADA PETR. CORP.

COMPANY AMERADA PETR. CORPORATION
WELL STATE SC #5
FIELD SAUNDERS
LOCATION SEC. 4-15S-33E
COUNTY LEA
STATE NEW MEXICO

Location of Well
660' FS & W/L
SEC. 4-15S-33E

Elevation: D.F. 4221
K.B.:
or G.L.:

FILING No.

RUN No.											
Dte	5-26-53										
1st Reading	10057										
Last Reading	9500										
Net Measured	557										
Csg. Schlum.	4289										
Csg. Driller	4290										
Depth Reached	10060										
Schlum. Driller	10060										
Depth Datum	KB 12.46' ABV. GL										
Mud Not	CAUSTIC, QUEBRACHO										
Density	9.0										
Viscosity	54										
Resist.	.84@ 94 °F	@	°F	@	°F	@	°F	@	°F	@	°F
Res. BHT	.68@ 132 °F	@	°F	@	°F	@	°F	@	°F	@	°F
pH	10.8 °F	@	°F	@	°F	@	°F	@	°F	@	°F
Wtr. Loss	5 cc 30 min.	cc 30 min.		cc 30 min.		cc 30 min.		cc 30 min.		cc 30 min.	
Rec. Temp. °F	132										
Bit Size	7 7/8"										
Gncs.											
MICROLOG	12"										
MICROMOR.	2"										
Opr. Rig Time	2 HRS										
Unit No.	1139-ROS										
Recorded By	HOYLE										
Witness By											

REMARKS RE-SURVEYED TO DRILLERS DEPTH AT OPERATOR'S REQUEST. SCH. T.D. 10057'.

RESISTIVITY -ohms. m²/m
0 Micro Inverse 1" x 1" 20 40
0 Micro Normal 2" 20 40

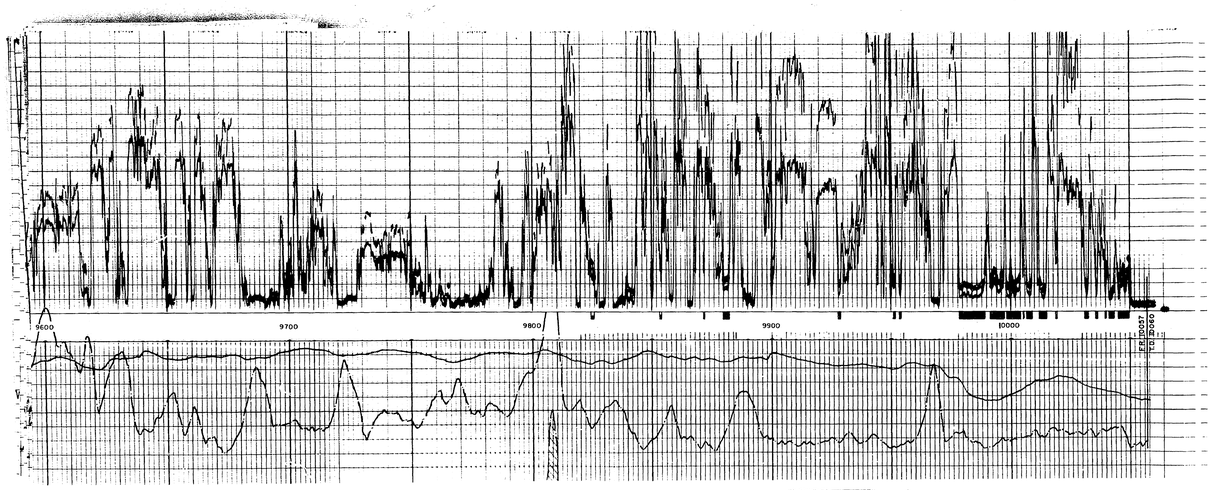
DEPTHS

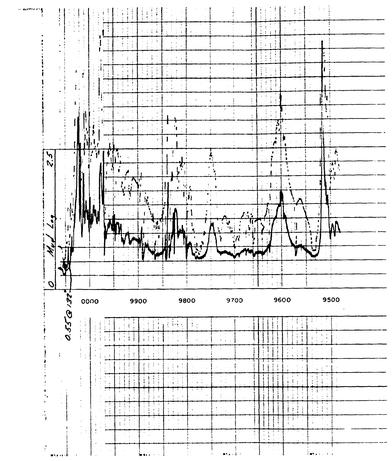
SPONTANEOUS POTENTIAL millivolts
RADIOACTIVITY INCREASES

9500 9600 9700 9800 9900 10000

R.K. 10057
T.D. 10060

40





AMERADA PETR. CORP.
STANOLIND
SAUNDERS
LEA CO., N. M.

41

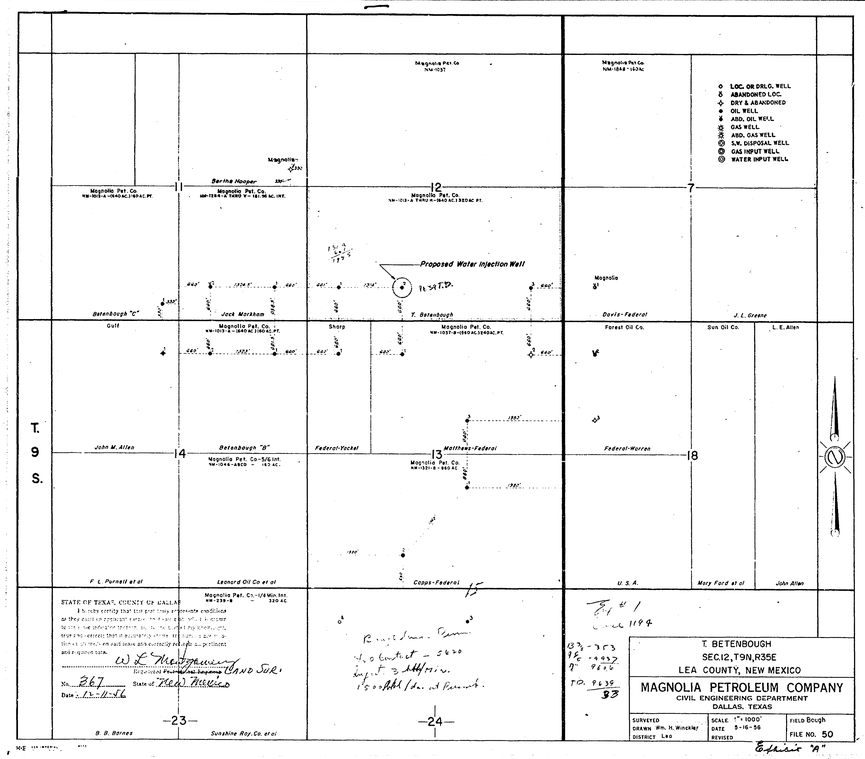

Magnolia Pet Co NM-1037
Magnolia Pet Co NM-1848 - 162Ac
LOC. OR DRLG. WELL
ABANDONED LOC.
DRY & ABANDONED
OIL WELL
ABD. OIL WELL
GAS WELL
ABD. GAS WELL
S.W. DISPOSAL WELL
GAS INPUT WELL
WATER INPUT WELL
Magnolia
Bertha Hooper
Magnolia Pet. Co NM-1037-A-1040 AC.-160 AC. PT.
Magnolia Pet. Co NM-1284-A-7680 W - 181.38 AC. INT.
12
Magnolia Pet. Co NM-1037-B-T 24N-R 14E=1640 AC.-320 AC PT.
Proposed Water Injection Well
1334' F.
Betenbough "C"
Jack Markham
T. Betenbough
Gulf
Magnolia Pet. Co NM-1037-A-1640 AC.-160 AC. PT.
Sharp
Magnolia Pet. Co NM-1037-B-1280 AC.-320 AC. PT.
Magnolia
Davis-Federal
Forest Oil Co.
Sun Oil Co.
L. E. Allen
J. L. Greene
T. 9 S.
John M. Allen
Betenbough "B"
Federal-Yocket
Matthews-Federal
Federal-Warren
14
13
18
Magnolia Pet. Co-5/6 Int. NM-1048-ABCD - 160 AC.
Magnolia Pet. Co NM-1037-B-640 AC
F. L. Purnell et al
Leonard Oil Co et al
Coppa-Federal
U. S. A.
Mary Ford et al
John Allen
15
Magnolia Pet. Co.-1/8 Min. Int. NM-1284-B - 320 AC.
STATE OF TEXAS, COUNTY OF DALLAS
I hereby certify that the plat may accurately designate
W. E. McSpadden
Registered Public Land Surveyor
No. 267 State of New Mexico
Date 12-11-56
B. B. Barnes
Sunshine Roy. Co. et al
23
24
T. BETENBOUGH
SEC. 12, T9N, R35E
LEA COUNTY, NEW MEXICO
MAGNOLIA PETROLEUM COMPANY
CIVIL ENGINEERING DEPARTMENT
DALLAS, TEXAS
SURVEYED
DRAWN Wm. H. Wuckler
DISTRICT Lea
SCALE 1" = 1000'
DATE 5-16-56
REVISED
FIELD Bough
FILE NO. 50

Exhibit "A"

42

SCHLUMBERGER

MicroLog

Location of Well
660' fr S/L
1980' fr W/L
SEC. 12 9S-35E

Elevation: D.F. 4128'
K.B.
or G.L.

COMPANY: MAGNOLIA PETR. CO.
WELL: RETENTION A #2
FIELD: RETENTION
LOCATION: SEC. 12 9S-35E
COUNTY: LEA
STATE: NEW MEXICO
FILING No.

COMPANY MAGNOLIA PETR. CO.
WELL RETENTION A #2
FIELD RETENTION
LOCATION SEC. 12 9S-35E
COUNTY LEA
STATE NEW MEXICO

RUN NO.	1				
Date	1-15-50				
First Reading	9639				
Last Reading	9468				
Footage Measured	150				
Max. Depth Reached	9644				
Bottom Driller	9639				
Depth Datum	3'abv.RT or 113'abv.GL				
Mud Nature	Emuls				
" Density	11				
" Viscosity	55				
" Resistivity	.955 @ 58 °F	@ °F	@ °F	@ °F	@ °F
" Resistivity Mf	Inst. @ °F	@ °F	@ °F	@ °F	@ °F
" pH	@ °F	@ °F	@ °F	@ °F	@ °F
" Water Loss	7 CC/30 Min	CC/30 Min	CC/30 Min	CC/30 Min	CC/30 Min
Maximum Temp. °F	140				
Bit Size	8 3/4"				
Spacings Mrl.	1"				
Mfl.	2"				
E.S. Rig Time	24 hrs.				
Truck No.	570				
Recorded By	Bess				
Witnessed By					

REMARKS:

RESISTIVITY
ohms m²/m.

20 | 0

1" x 1" Lateral SHORT SPACING

2" Normal LONG SPACING

DEPTHS

PERMEABILITY Good Fair Poor

SPONTANEOUS-POTENTIAL millivolts

RADIOACTIVITY INCREASES

9500 | 9600

9538
9641

COMPANY : MAGNOLIA PETR. CO.
WELL : RETENTION A #2
FIELD : RETENTION
COUNTY: LEA STATE: NEW MEXICO

43

SCHLUMBERGER

Location of Well

660' fr N/L
1980' fr W/L
SEC. 32 9S-35E

COMPANY: MAGNOLIA PETROLEUM CO.

WELL: RETENTION A #2

FIELD: RETENTION

LOCATION: SEC. 32 9S-35E

COUNTY: LEA

STATE: NEW MEXICO

FILING No.

Elevation: D.F. 4328'
R.B. 4338
or G.L.

RUN NO.	I	II
Date	4-10-50	4-15-50
Depth—Driller	9550 9550	9638 9638
Depth—Logger	4435 0	9550 9550
Btm. Log Recorded	5335 9550	88 88
Csg Shoe Schlum.	4435	4435
Csg Shoe Driller	4435	4435
Max. Depth Reached	9551	9641
Bottom Driller	9558	9639
Depth Datum	1' above or 11' abv. Gr.	
Mud Nature	Zeogel	Zeogel
" Density	10.5	11
" Viscosity	60	66
" Resistivity	.058 @ 62 °F	.055 @ 58 °F @ °F
" Resistivity BHT	Bat @ °F	Bat @ °F @ °F
" pH	@ °F	@ °F @ °F
Water Loss	8.8 CC 30 Min.	7 CC/30 Min. CC/30 Min. CC/30 Min.
Maximum Temp. °F	138	162
Bit Size	8 3/4"	8 3/4"
Spacings — AM.	16"	16"
" A	32"	32"
" AO.	20'	20'
E.S. Rig Time	5 hrs.	11 hrs.
Truck No.	570	570
Recorded By	Scott	Scott
Witnessed By		

COMPANY MAGNOLIA PETROLEUM CO.
WELL RETENTION A #2
FIELD RETENTION
COUNTY LEA STATE NEW MEXICO
100 WEST BROADWAY, ROSWELL, N.M.

REMARKS

SPONTANEOUS-POTENTIAL millivolts — | — | +

RADIOACTIVITY INCREASES →

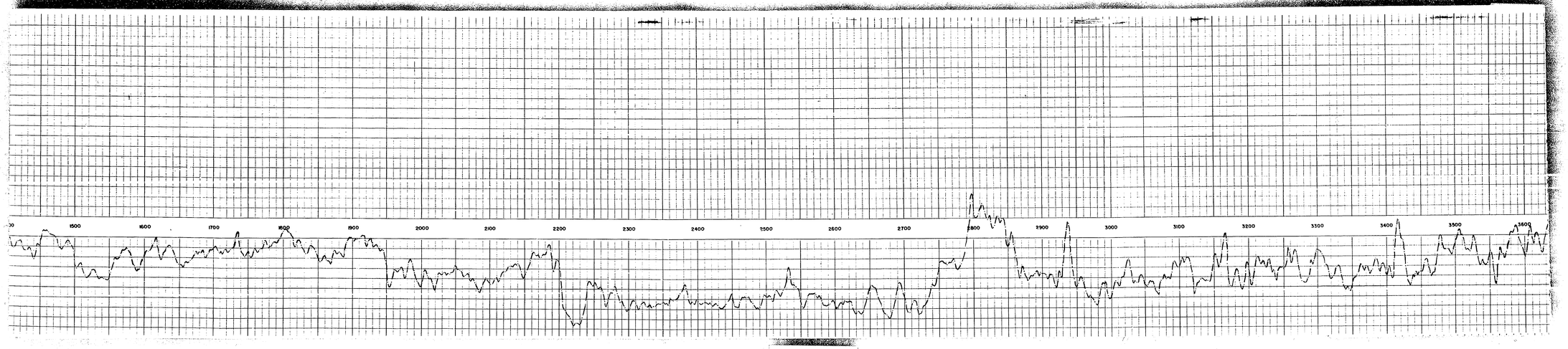
DEPTHS

RESISTIVITY ohms, m²/m.
10" Normal 0 1
32" L. S. 0 2

RESISTIVITY ohms, m²/m.
16" Lateral 0 185 1850

0000 0100 0200 0300 0400 0500 0600 0700 0800 0900 1000 100 1200 1300 1400 1500 1600 1700

44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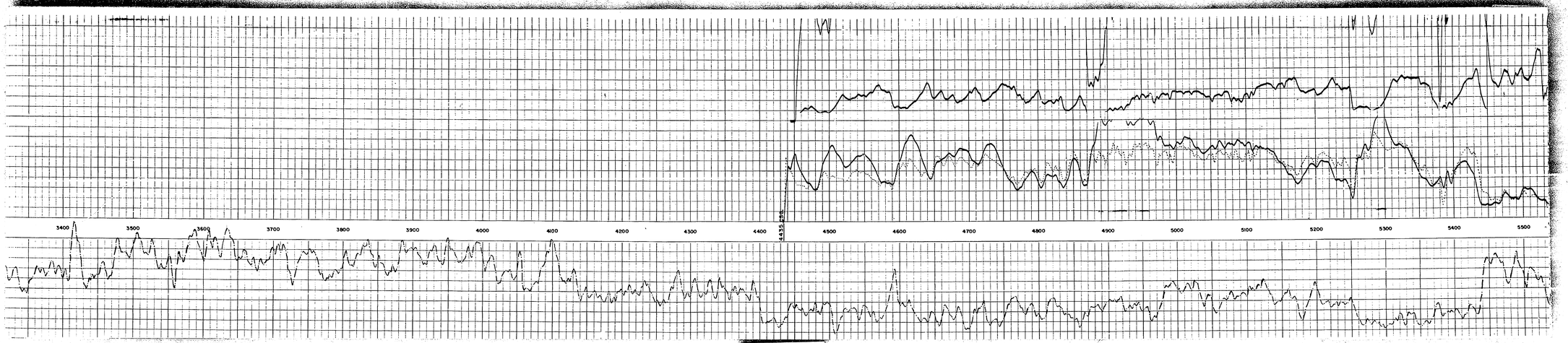
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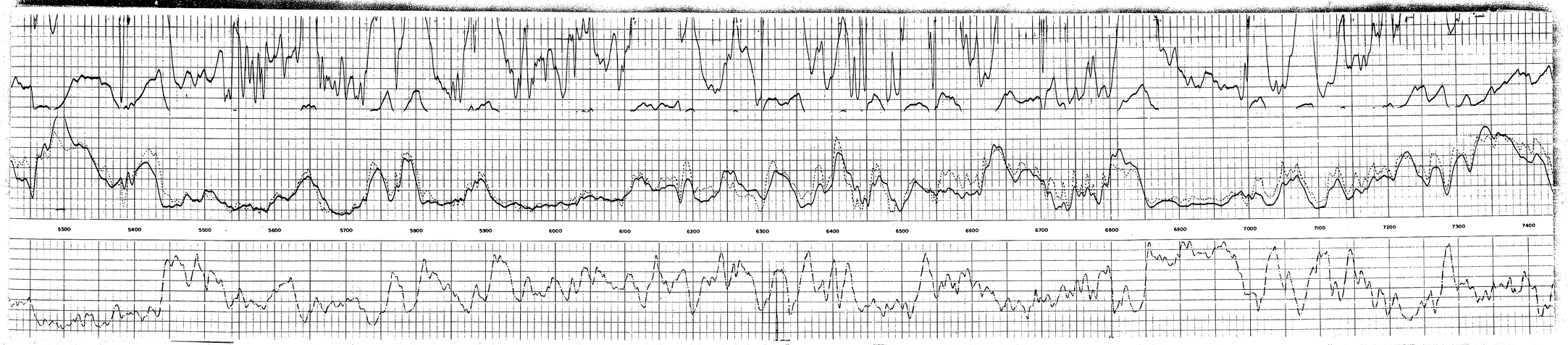
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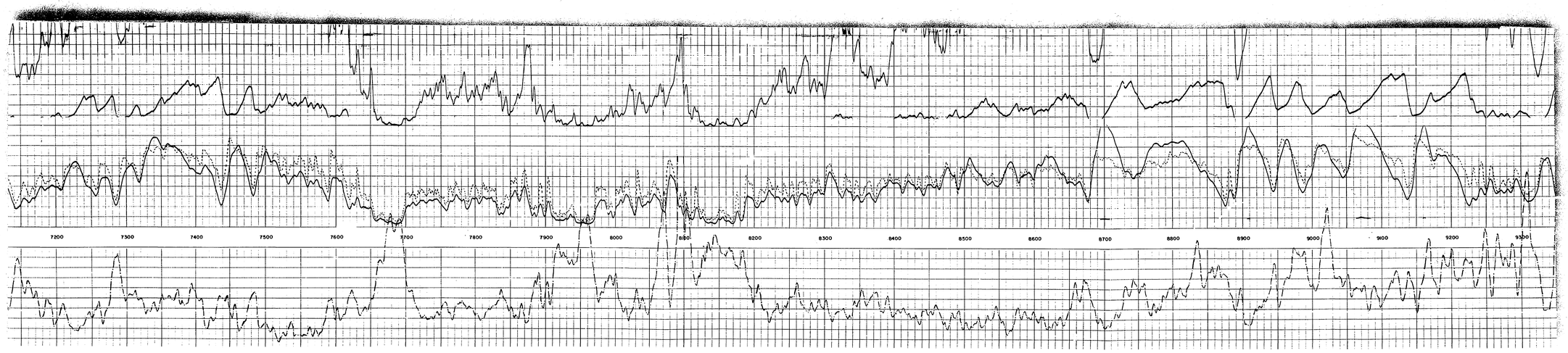
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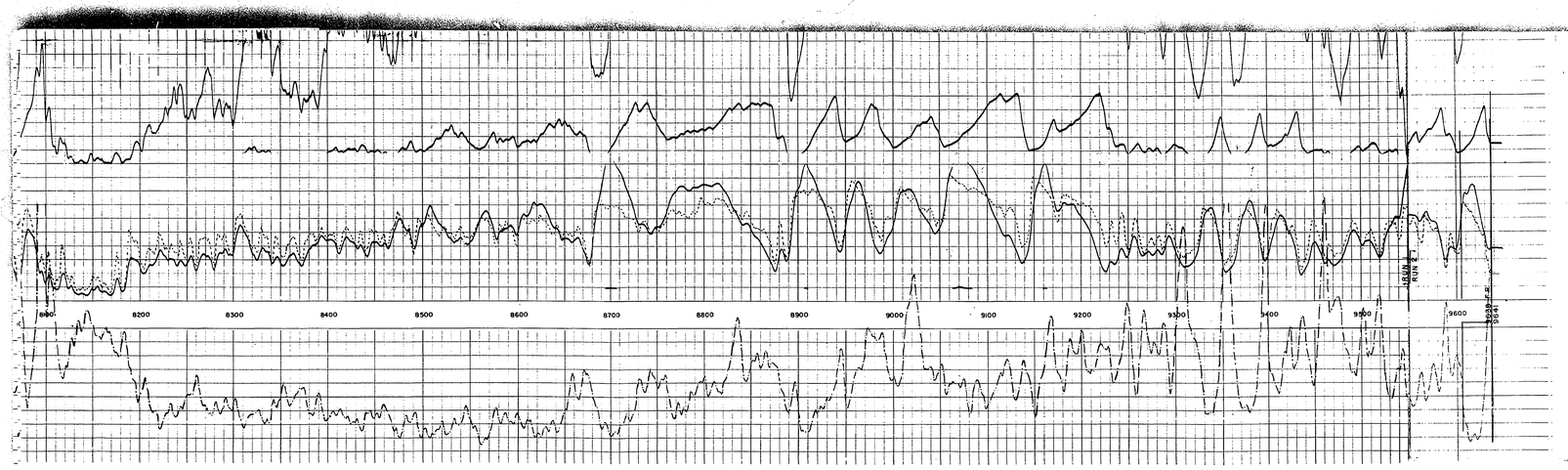


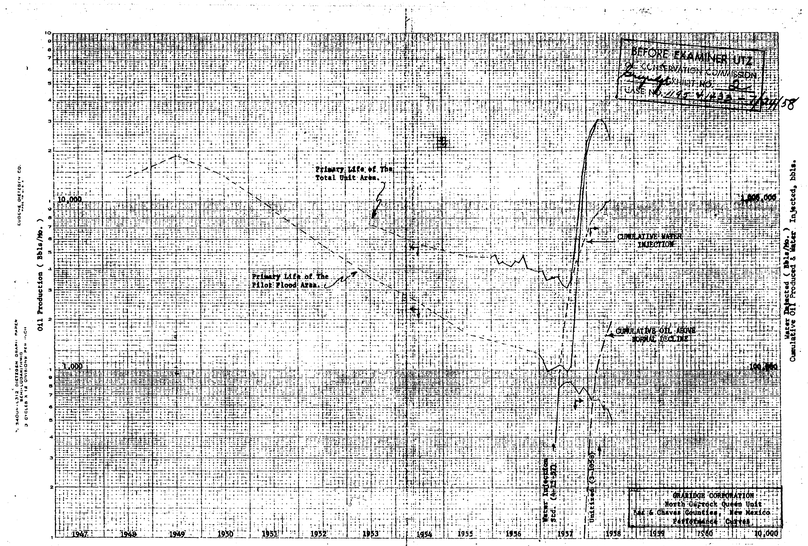
COMPANY MAGNOLIA PETROLEUM CO.

WELL BETTENHAUSEN A #2

FIELD BETTENHAUSEN

COUNTY LEA STATE NEW MEXICO

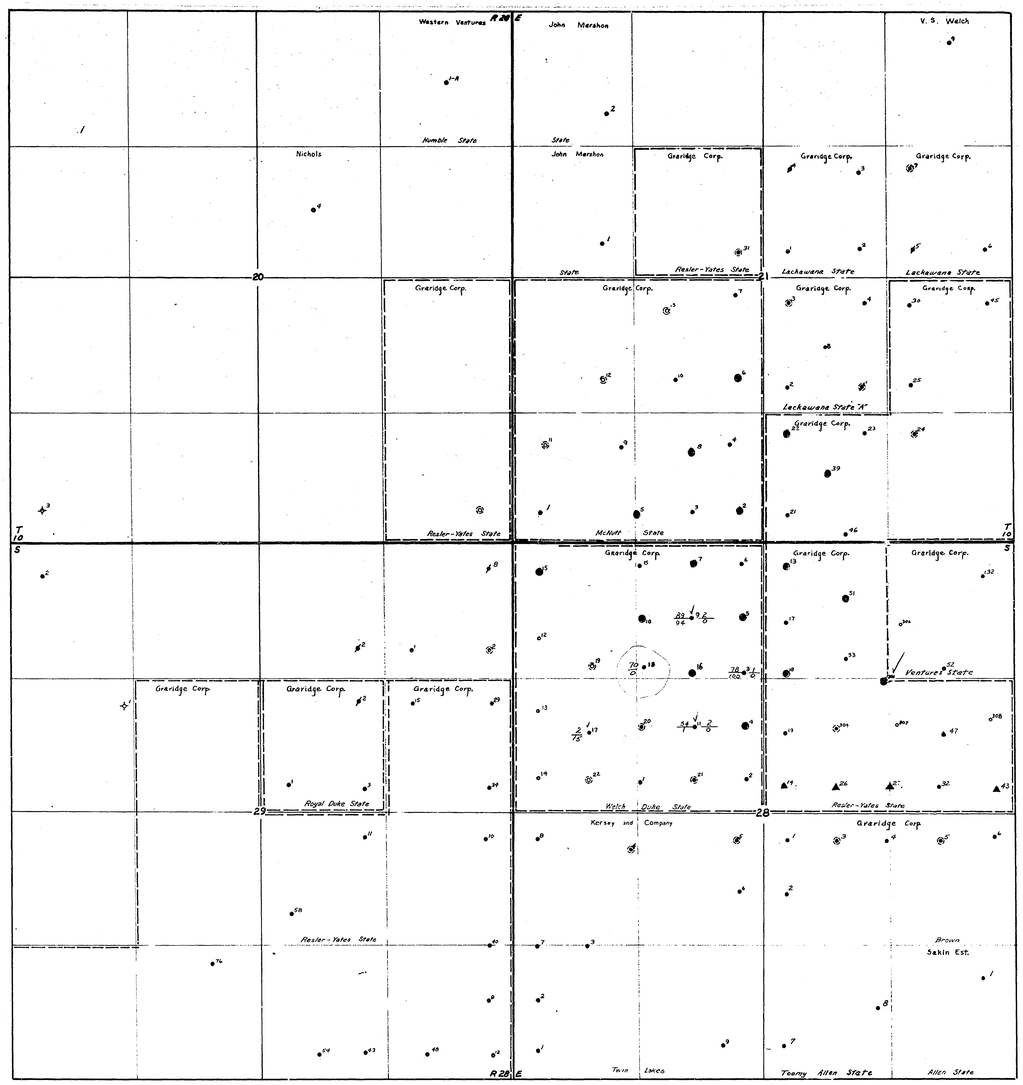
49



Primary Life of The Total Unit Area.
Primary Life of The Pilot Flood Area.
CUMULATIVE WATER INJECTION
CUMULATIVE OIL ABOVE NORMAL DECLINE
Water Injection Est. (4-15-57)
Unitized (5-1-57)
Oil Production (Bbls/Mo.)
Water Injected (Bbls/Mo.)
Cumulative Oil Produced & Water Injected, bbls.
10,000
1,000
1,000,000
100,000
1947
1948
1949
1950
1951
1952
1953
1954
1955
1956
1957
1958
1959
1960
10,000
GRARIDGE CORPORATION
North Caprock Queen Unit
Lea & Chaves Counties, New Mexico
Performance Curves

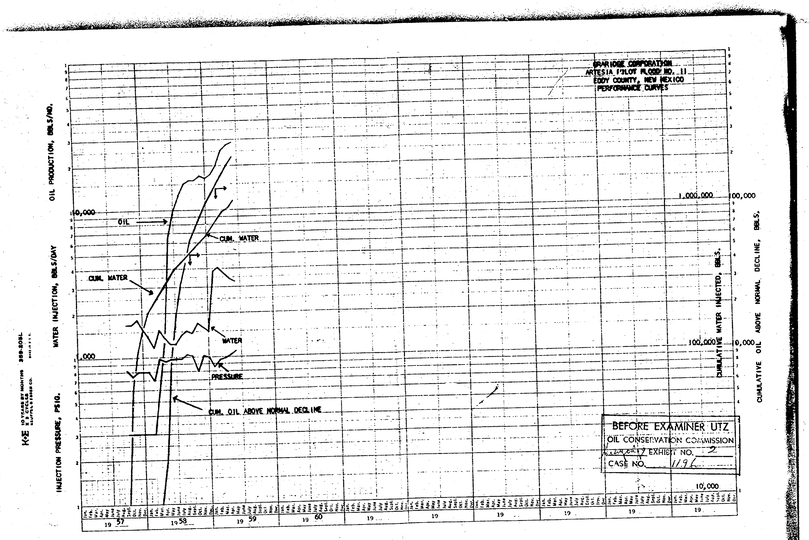
50

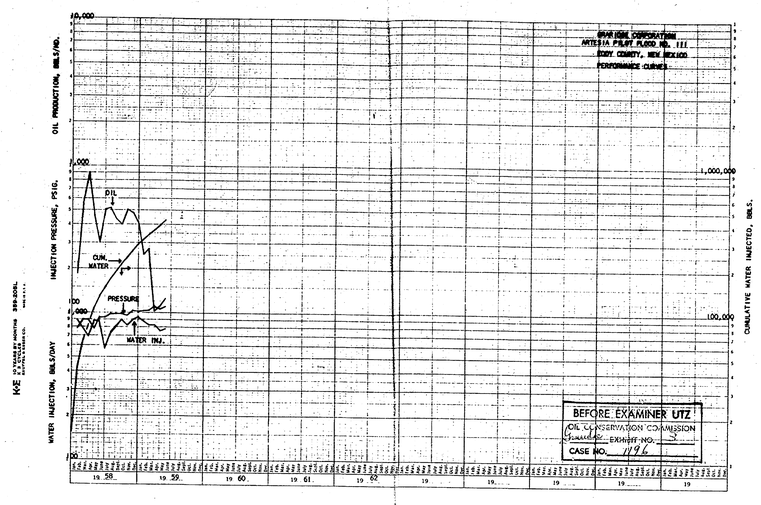
Cases 1195 & 1433.

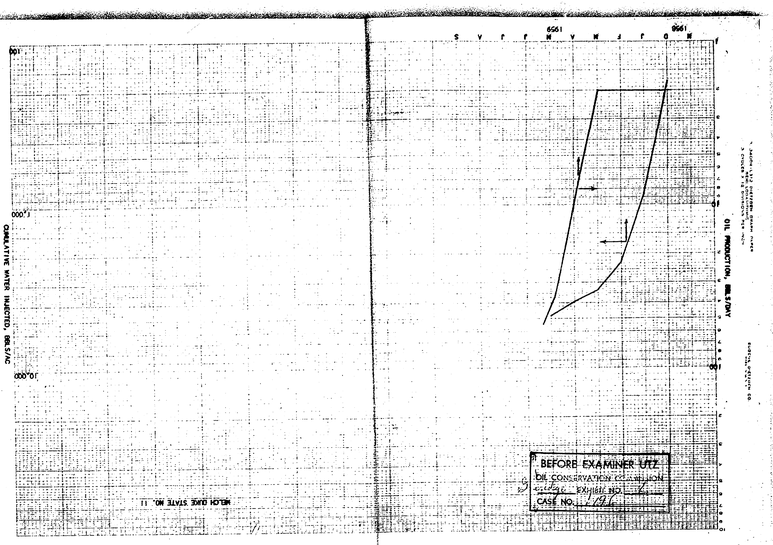


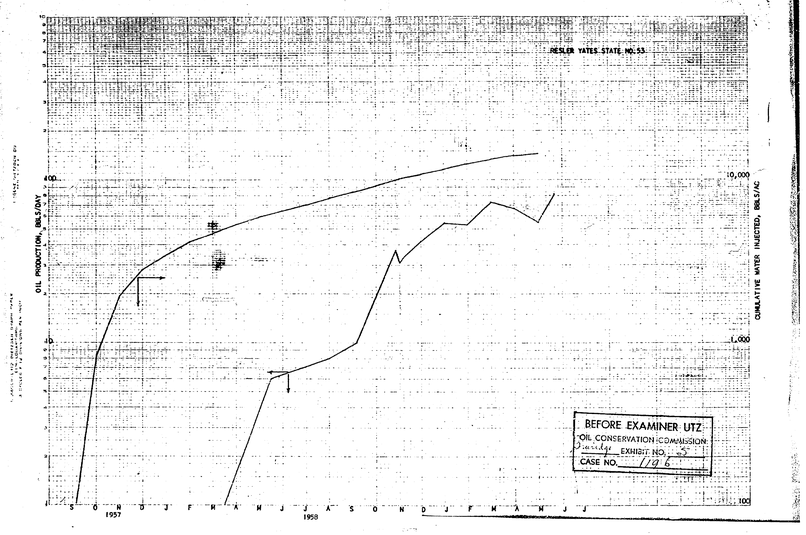
51

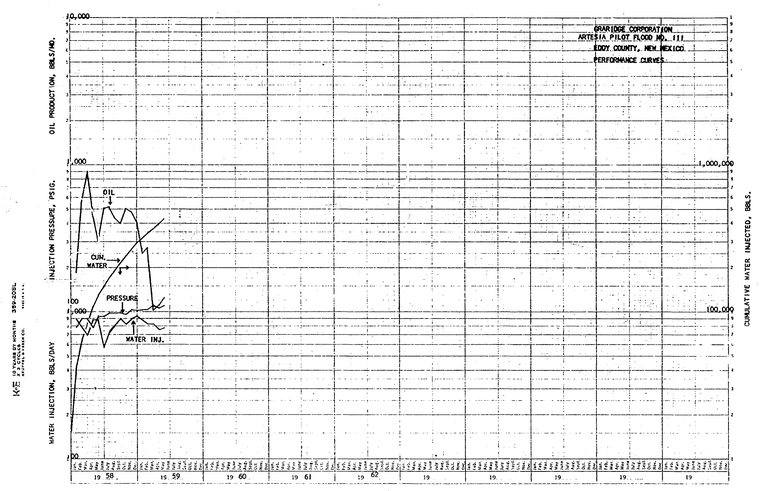
BEFORE EXAMINER FISCHER
OIL CONSERVATION COMMISSION
Exhibit No. 1
Case No. 1681

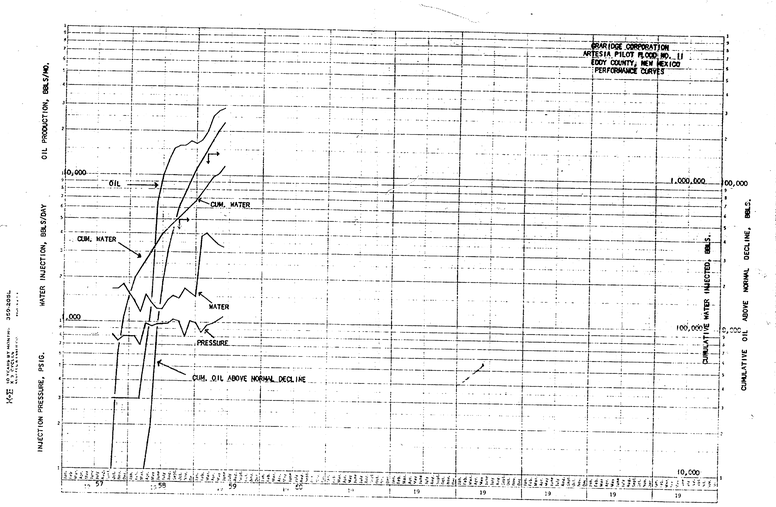

GRAYRIDGE CORPORATION
ARTESIA PILOT FLOOD NO. II
EDDY COUNTY, NEW MEXICO
PERFORMANCE CURVES
OIL PRODUCTION, BBLS/DAY
WATER INJECTION, BBLS/DAY
INJECTION PRESSURE, PSIG.
CUMULATIVE WATER INJECTED, BBLS.
CUMULATIVE OIL ABOVE NORMAL DECLINE, BBLS.
OIL
CUM. WATER
WATER
PRESSURE
CUM. OIL ABOVE NORMAL DECLINE
BEFORE EXAMINER UTZ
OIL CONSERVATION COMMISSION
EXHIBIT NO. 2
CASE NO. 1196


GRAYRIDGE CORPORATION
ARTESIA PILOT FLOOD NO. III
EDDY COUNTY, NEW MEXICO
PERFORMANCE CURVES
OIL PRODUCTION, BBLS/NO.
INJECTION PRESSURE, PSIG.
WATER INJECTION, BBLS/DAY
CUMULATIVE WATER INJECTED, BBLS.
OIL
CUM. WATER
PRESSURE
WATER INJ.
BEFORE EXAMINER UTZ
OIL CONSERVATION COMMISSION
EXHIBIT NO. 3
CASE NO. 1196

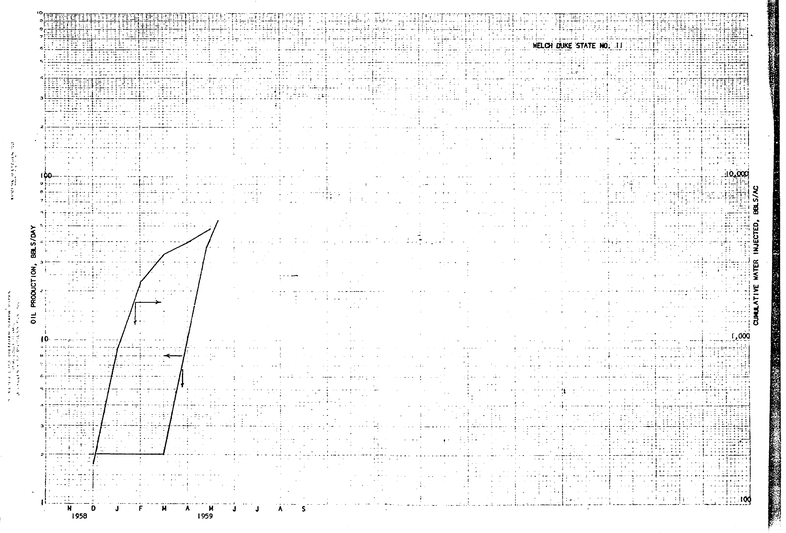

MELCH DUKE STATE NO. 11
BEFORE EXAMINER UTZ
OIL CONSERVATION COMMISSION
EXHIBIT NO. 4
CASE NO. 1196

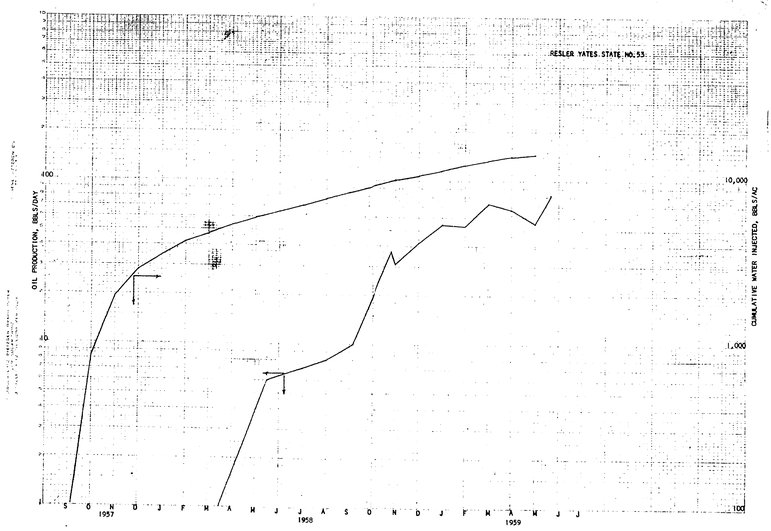

RESLER YATES STATE NO. 53
OIL PRODUCTION, BBLS/DAY
CUMULATIVE WATER INJECTED, BBLS/AC
BEFORE EXAMINER UTZ
OIL CONSERVATION COMMISSION
EXHIBIT NO. 5
CASE NO. 1196


GRAYRIDGE CORPORATION
ARTESIA PILOT FLOOD NO. III
EDDY COUNTY, NEW MEXICO
PERFORMANCE CURVES
OIL PRODUCTION, BBLS/NO.
INJECTION PRESSURE, PSIG.
WATER INJECTION, BBLS/DAY
CUMULATIVE WATER INJECTED, BBLS.
OIL
CUM. WATER
PRESSURE
WATER INJ.

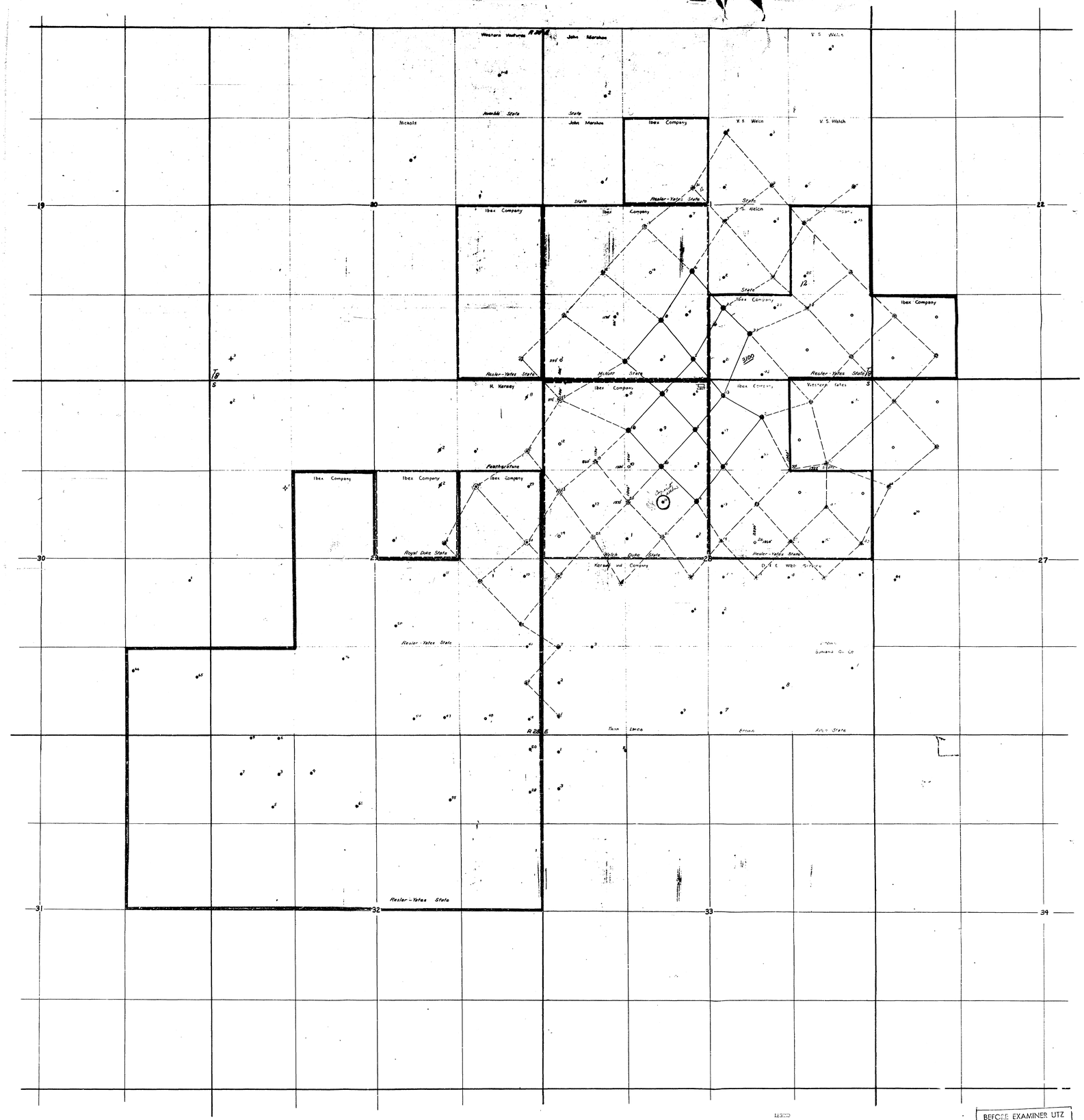

GRAYRIDGE CORPORATION
ARTESIA PILOT FLOOD NO. II
EDDY COUNTY, NEW MEXICO
PERFORMANCE CURVES
OIL PRODUCTION, BBLS/NO.
WATER INJECTION, BBLS/DAY
INJECTION PRESSURE, PSIG.
CUMULATIVE WATER INJECTED, BBLS.
CUMULATIVE OIL ABOVE NORMAL DECLINE, BBLS.
OIL
CUM. WATER
WATER
PRESSURE
CUM. OIL ABOVE NORMAL DECLINE

52


MELCH DUKE STATE NO. 11
OIL PRODUCTION, BBLS/DAY
CUMULATIVE WATER INJECTED, BBLS/AC


RESLER YATES STATE NO. 53
OIL PRODUCTION, BBLS/DAY
CUMULATIVE WATER INJECTED, BBLS/AC

53

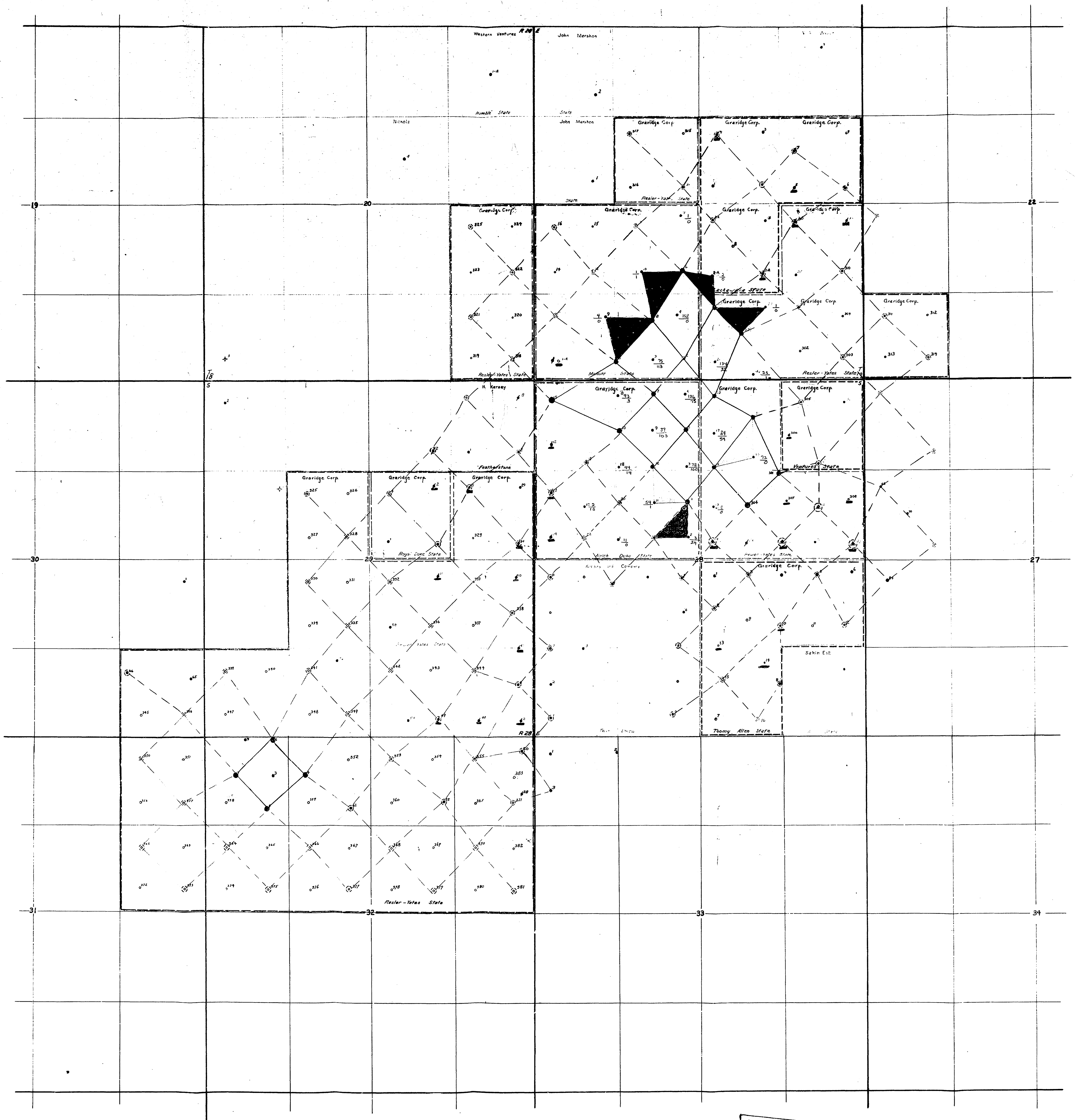


LEGEND

Future Producing well location ..... o
Future Injection well location ..... ☆
Present producing well ..... •
Present producing well that will eventually be an injection well ..... ✱
Active injection well ..... ●
Well in Deeper Horizon that will either be plugged back or twinned ..... ▲

ARTESIA FIELD
EDDY COUNTY, N. MEX.
SCALE 1"=500'

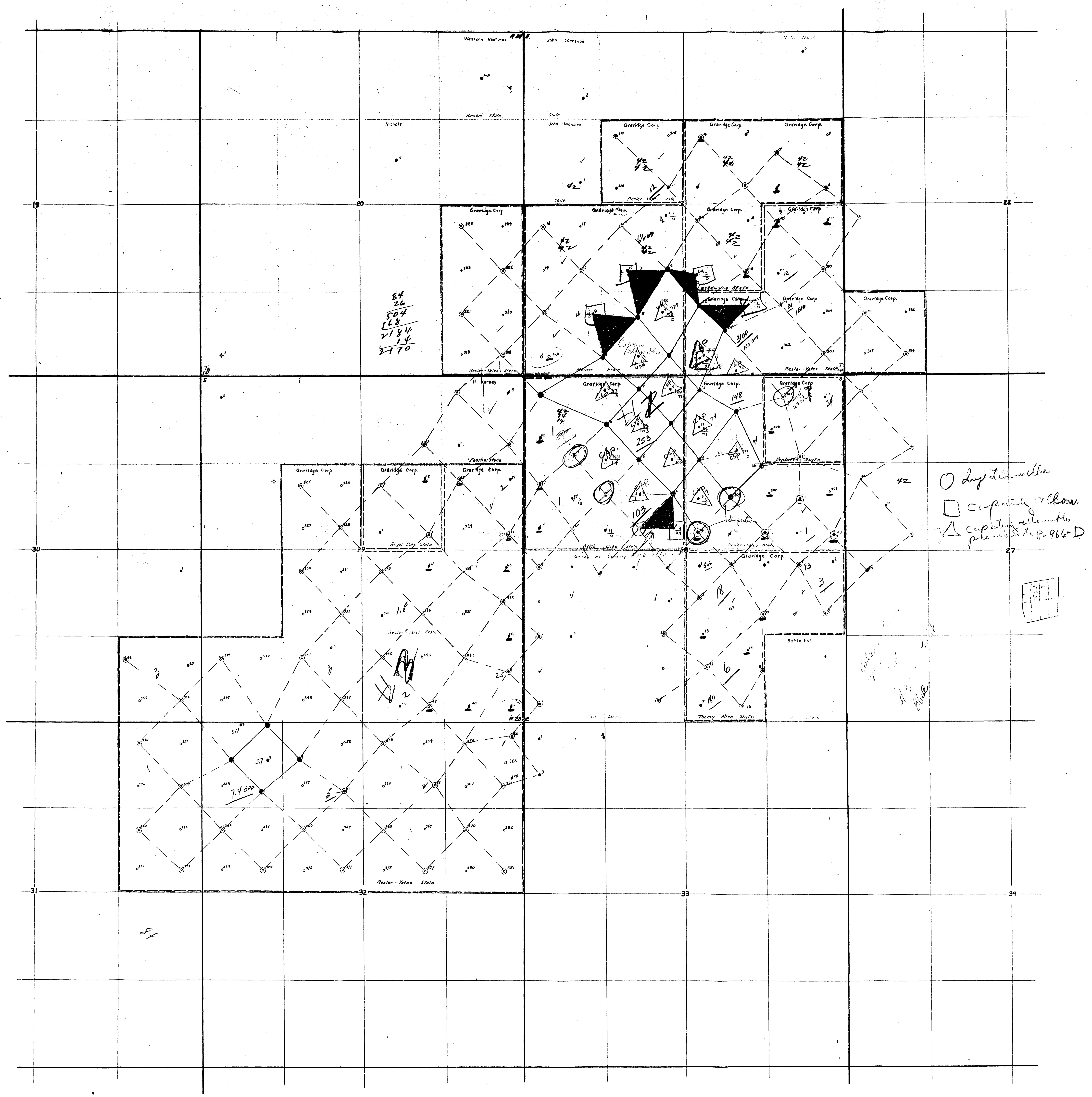
BEFORE EXAMINER UTZ
OIL CONSERVATION COMMISSION
EXHIBIT NO. 1
CASE NO. 1196



54

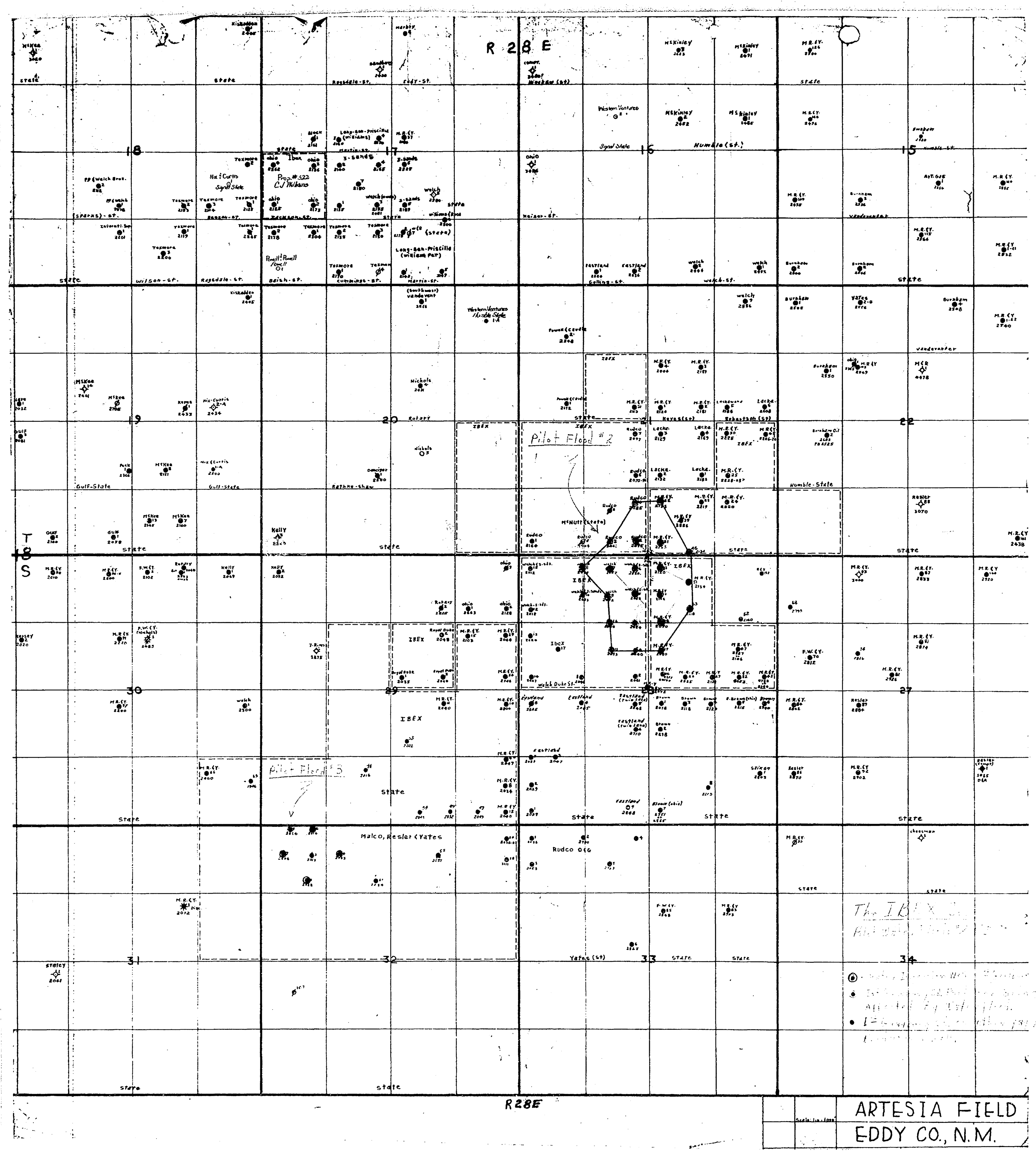
BEFORE EXAMINER UTZ
OIL CONSERVATION COMMISSION
EXHIBIT NO. 1
CASE NO. 1192

ARTESIA FIELD
EDDY COUNTY, N. MEX.
SCALE 1"=500'

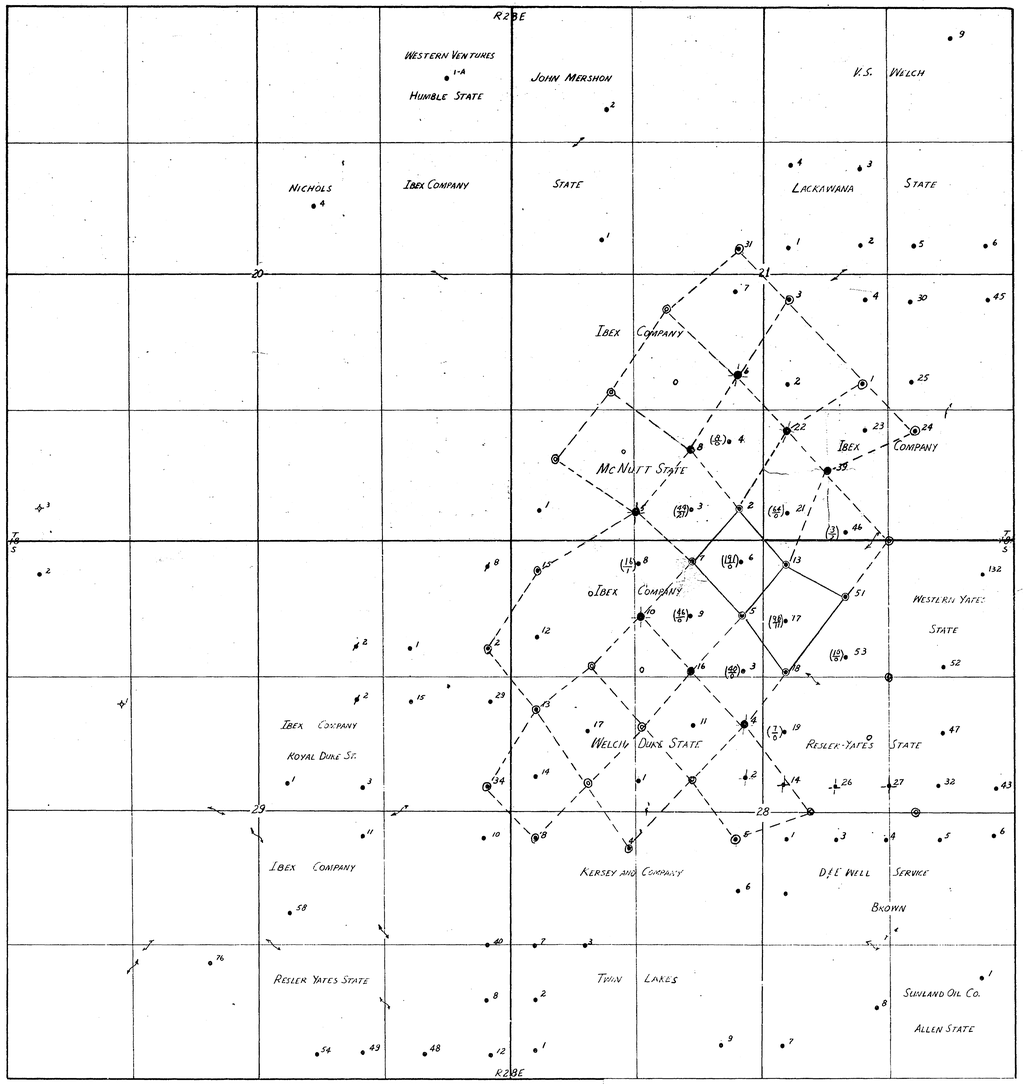


ARTESIA FIELD
EDDY COUNTY, N. MEX.
SCALE 1"=500'

55


R 28 E
T 18 S
18
17
16
15
19
20
21
22
30
29
28
27
31
32
33
34
Pilot Flood #2
Pilot Flood #3
IBEX
Malco, Resler Yates
Rudco O&G
Humble-State
Gulf-State
state
R28E
ARTESIA FIELD
EDDY CO., N.M.

56



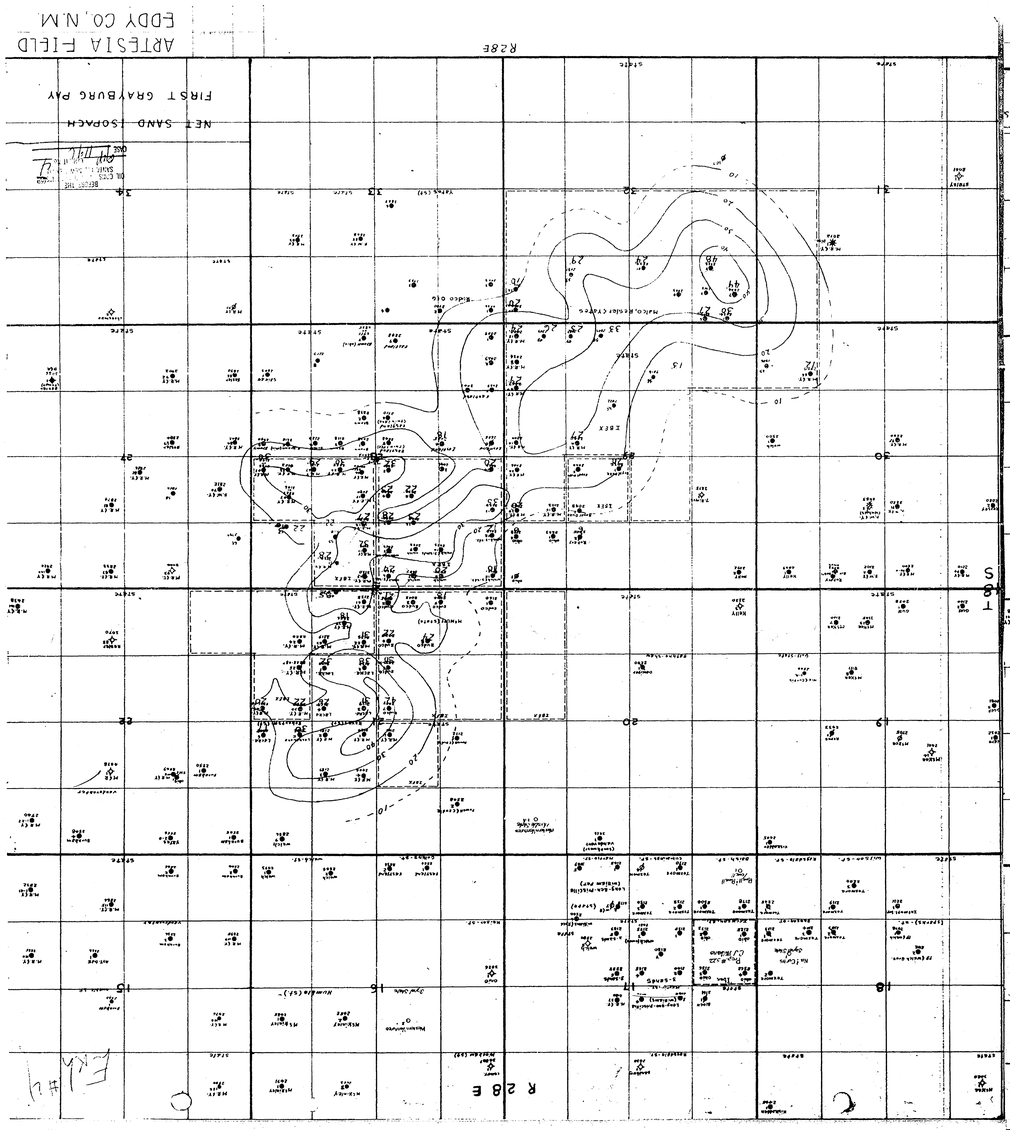
57

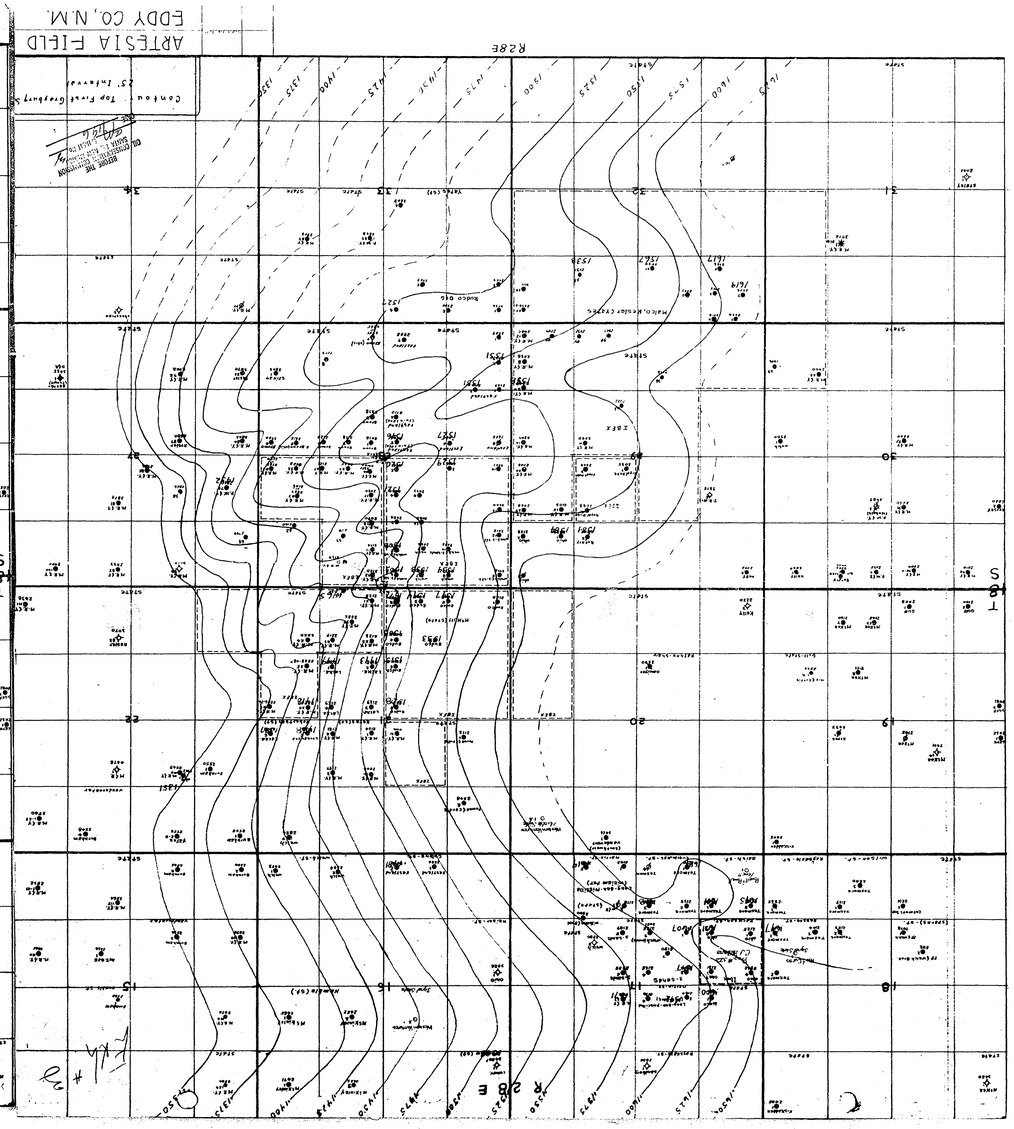
PORTION OF THE ARTESIA FIELD
EDDY COUNTY, NEW MEXICO
Scale 1"=500'

THE IBEX COMPANY
ARTESIA PILOT FLOOD NO. 2
LEGEND

- Present Producing Well
- Proposed Producing Well Location
- Present Injection Well
- Proposed Injection Well In Expansion Requested
- Proposed Injection Well For Future Expansion
- Proposed Injection Well Location For Future Expansion
- Wells Requiring OCC Approval as Unorthodox Locations
- Well Not To Be Included in Water Flood
- Present Pilot Flood
- Projected Development Pattern (As Presently Proposed)
- Present Daily Production, Bbls.

58


ARTESIA FIELD
EDDY CO. N.M.
NET SAND ISOPACH
FIRST GRAYBURG PAY
R 28 E
T 18 S


ARTESIA FIELD
EDDY CO. N.M.
R 28 E
T 18 S

Exh #1

R 28 E

Possible Salt Water Supply Source.

Pilot Flood #2

Pilot Flood #3

T 18 S

Proposed Pilot Floods #2 & #3 in First Grayburg Sand Formation.
- Proposed Conversion to Injection Well.
- Temporarily Abandoned Producers.
- Present Producers - 'First Grayburg Sd.'
- Water Supply Wells - '350 Ft. Sd.'

ARTESIA FIELD
EDDY CO., N.M.

R 28 E

Pilot Flood #2

Pilot Flood #3

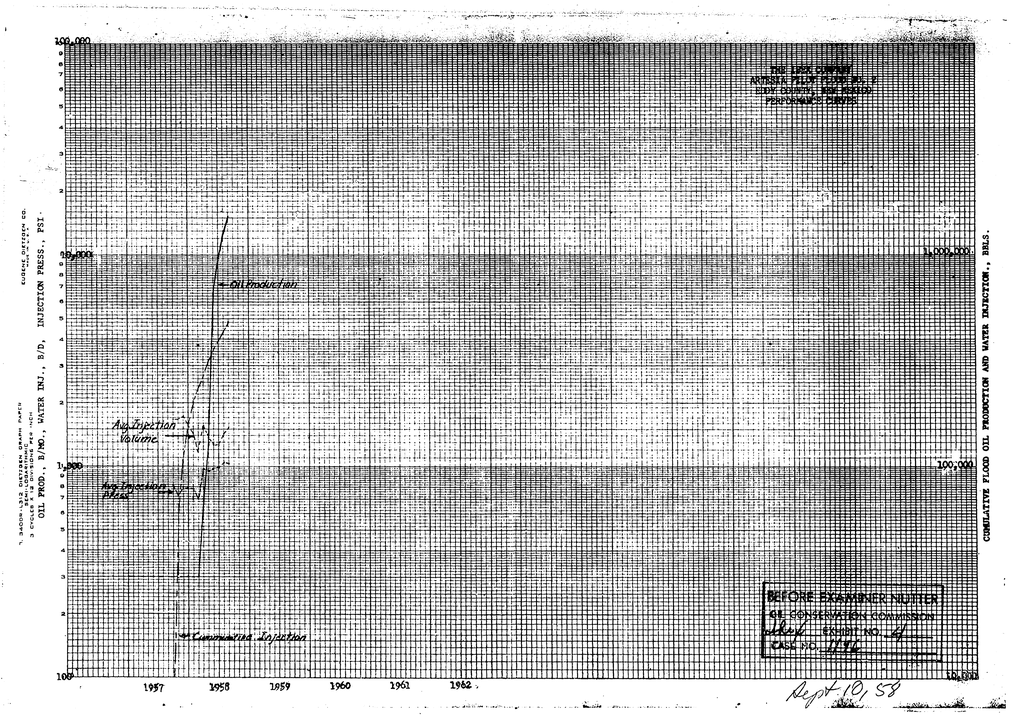
THE IBEX COMPANY
ARTESIA PILOT FLOODS #2 & #3

- Present Injection Wells
- Present Producing Wells
- Presently Abandoned Producers
- Producers Affected by Pilot Floods
- Proposed Producing wells or new wells to be used as Water Injection Wells in Future Expansion
- Proposed New Producing Well to be used in future expansion.
- IBEX OWNED OR OPERATED TRACTS
- Projected Development Pattern (As of the present)

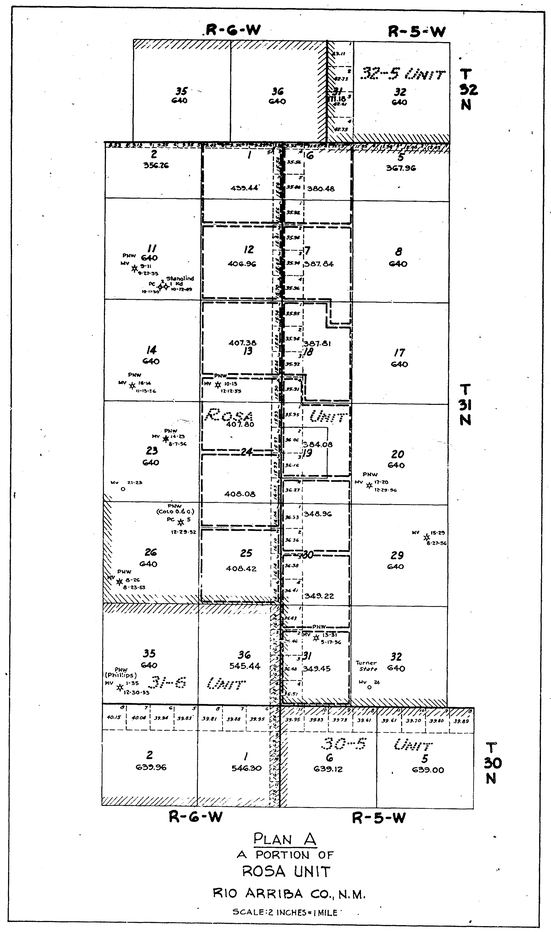
40 acres with new prod. in process of 10 acres.

ARTESIA FIELD
EDDY CO., N.M.

59

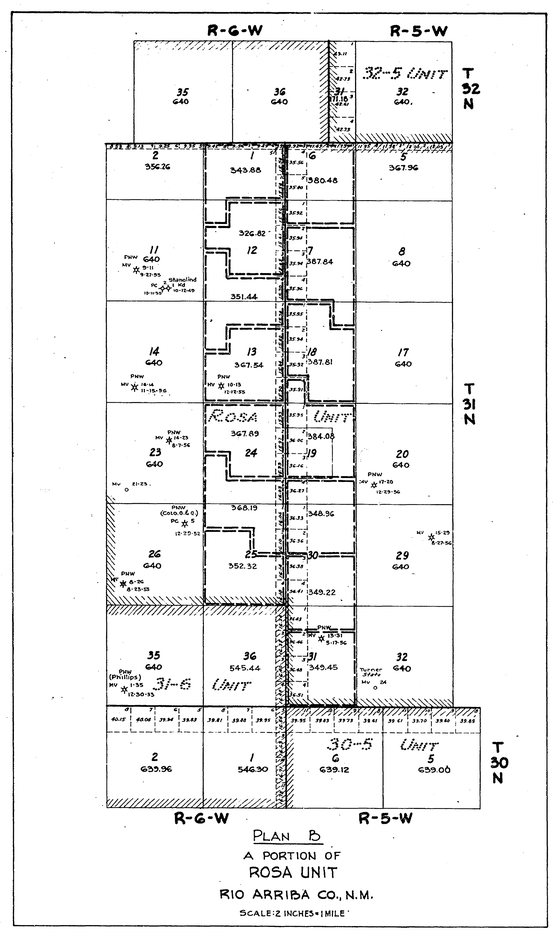

100,000
EDD LOCK POOLING
ARTESIA FIELD, EDDY CO., N. M.
EDDY COUNTY, NEW MEXICO
PERFORMANCE CURVES
10,000
1,000
100
1957
1958
1959
1960
1961
1962
Oil Production
Avg Injection Volume
Avg Injection Rate
Commercial Injection
OIL PROD., B/MO., WATER INJ., B/D, INJECTION PRESS., PSI
CUMULATIVE FLOOD OIL PRODUCTION AND WATER INJECTION., BBLS.
BEFORE EXAMINER NUTTER
OIL CONSERVATION COMMISSION
EXHIBIT NO. 4
CASE NO. 1176
Sept 10, 58

60



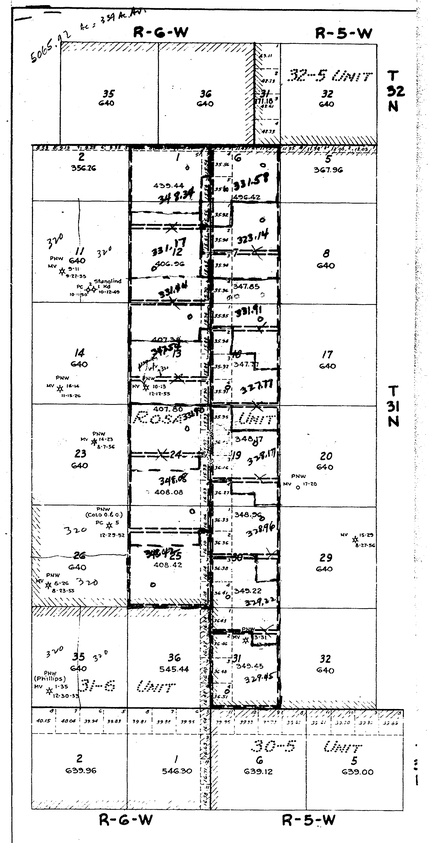
PLAN A
A PORTION OF
ROSA UNIT
RIO ARRIBA CO., N.M.
SCALE: 2 INCHES = 1 MILE

BEFORE THE OIL CONSERVATION COMMISSION SANTA FE, NEW MEXICO
EXHIBIT No. 1
CASE 1200



PLAN B
A PORTION OF
ROSA UNIT
RIO ARRIBA CO., N.M.
SCALE: 2 INCHES = 1 MILE

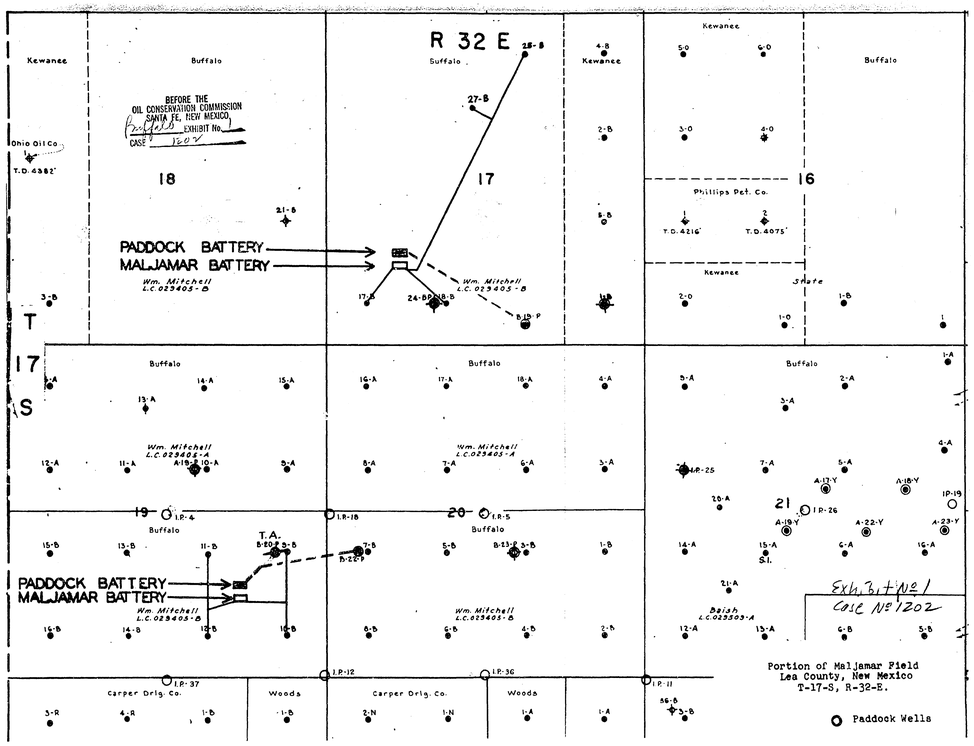
BEFORE THE OIL CONSERVATION COMMISSION SANTA FE, NEW MEXICO
EXHIBIT No. 2
CASE 1200



13 = 348 to 496 acre
13 = 323 to 348 acre

A PORTION OF
ROSA UNIT
RIO ARRIBA CO., N.M.
SCALE: 2 INCHES = 1 MILE

61



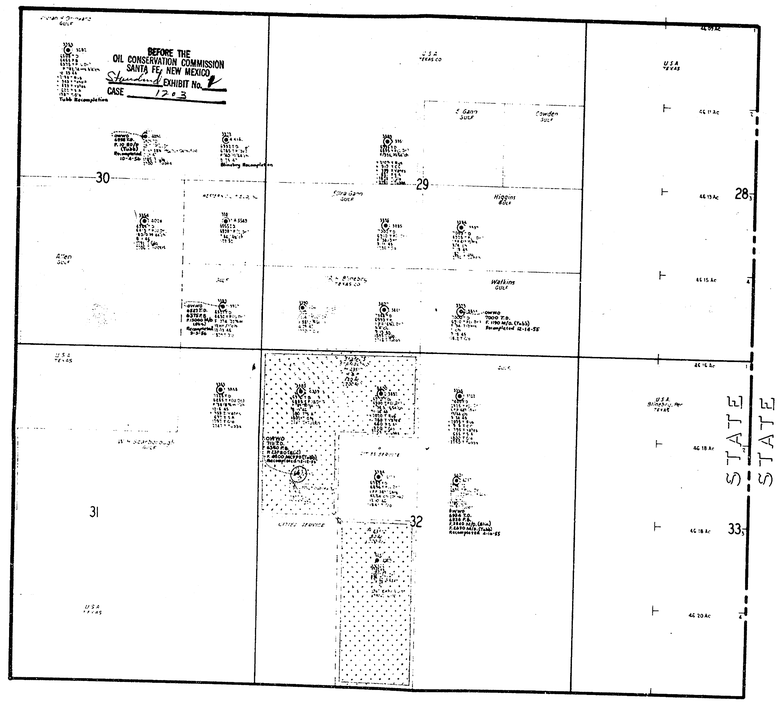
BEFORE THE
OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO
EXHIBIT No. Exhibit No 1
CASE 1202

Exhibit No 1
Case No 1202

62

1

BEFORE THE
OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO
Stanolind EXHIBIT No. 1
CASE 1203



STANOLIND OIL AND GAS COMPANY
T-22-S, R-38-E
PORTION OF TUBB & BLINEBRY FIELDS
LEA CO. NEW MEXICO
SCALE: 1"=1000'

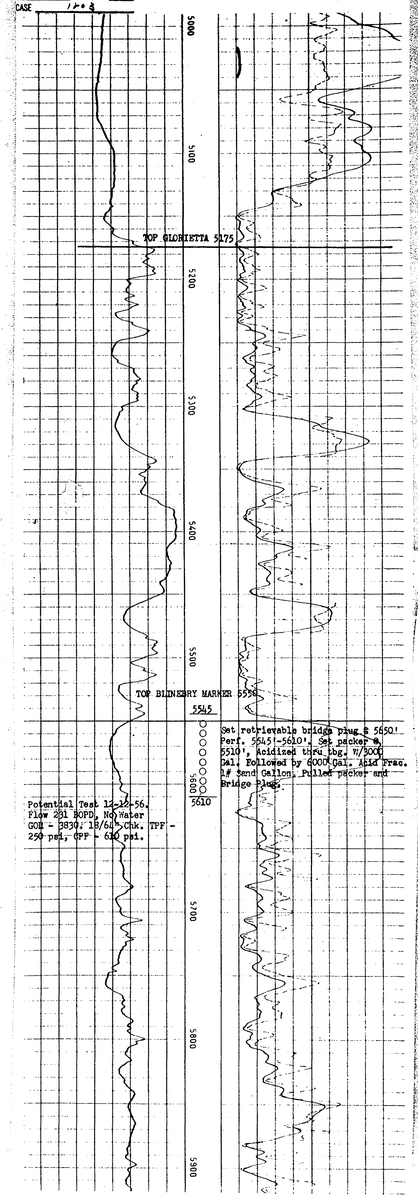
63

STANOLIND OIL AND GAS CO.

STATE "S" NO. 3

SECTION 32; T-22-S, R-38-E

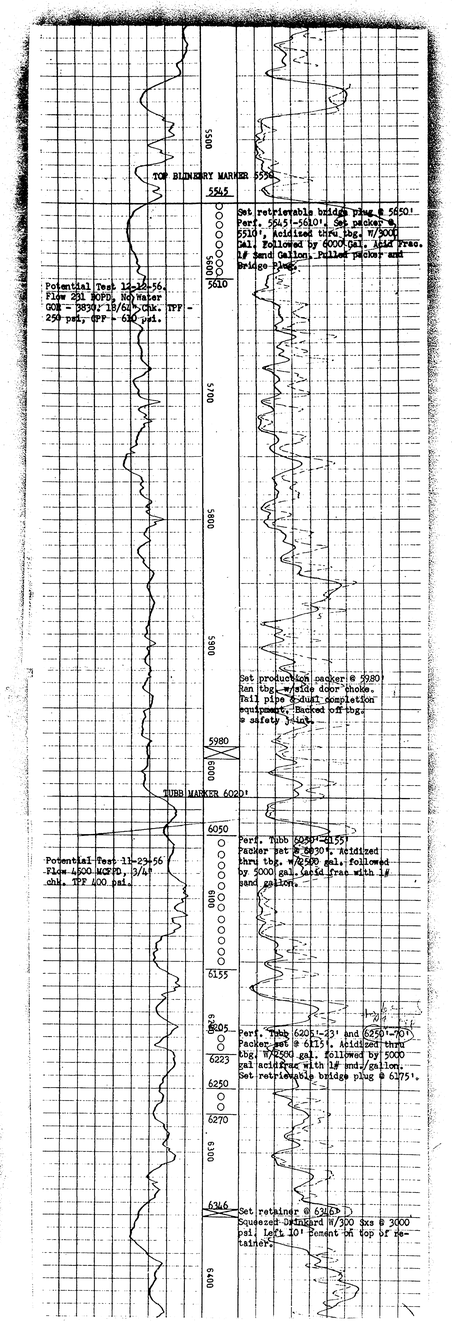
BEFORE THE
OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO
Stanolind EXHIBIT No. 5
CASE 1088



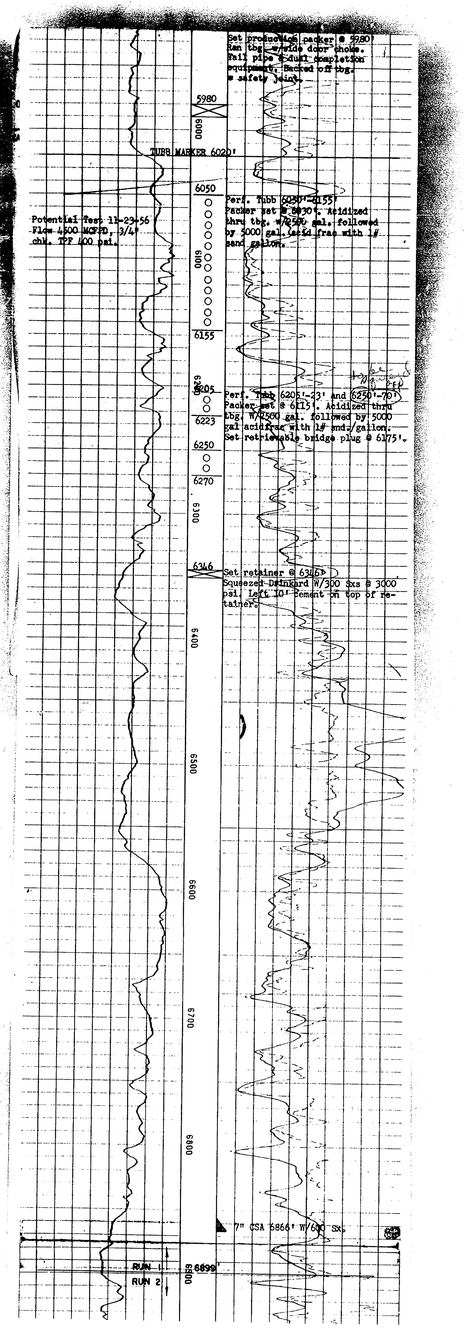
Potential Test 12-12-56.
Flow 231 BOPD, No Water
GOR - 3830, 18/64" Chk. TFP - 250 psi, CFP - 610 psi.

Set retrievable bridge plug @ 5650'. Perf. 5545'-5610'. Set packer @ 5510', Acidized thru tbg. w/500 Gal. Followed by 6000 Gal. Acid Frac. 1# Sand/Gallon. Pulled packer and Bridge Plug.

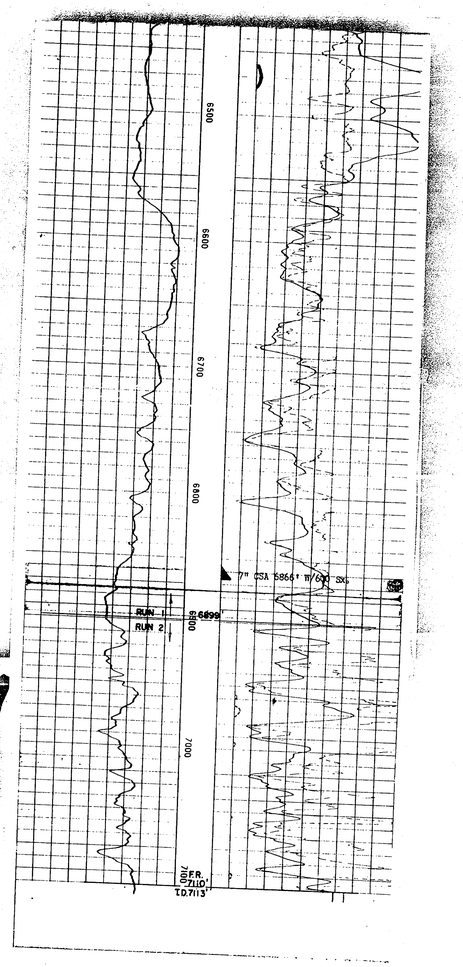
64


5500
TOP BLINEBRY MARKER 5554'
5545
Set retrievable bridge plug @ 5650'.
Perf. 5545-5610'. Set packer @
5510', Acidized thru tbg. w/5000
Gal. Followed by 6000 Gal. Acid Frac.
1# Sand Gallon. Pullet packer and
Bridge Plugs.
5600
5610
Potential Test 12-12-56.
Flow 251 BOPD, No Water
GOR - 3830, 18/64" Chk. TPF -
250 psi, CPF - 620 psi.
5700
5800
5900
Set production packer @ 5980'
Ran tbg. w/side door choke.
Tail pipe & dual completion
equipment. Backed off tbg.
@ safety joint.
5980
6000
TUBB MARKER 6020'
6050
Perf. Tubb 6050'-6155'
Packer set @ 6030'. Acidized
thru tbg. w/2500 gal. followed
by 5000 gal. acid frac with 1#
sand gallon.
Potential Test 11-29-56
Flow 4500 MCFD, 3/4"
chk. TFP 400 psi.
6100
6155
6205
6223
Perf. Tubb 6203'-23' and 6250'-70'.
Packer set @ 6115'. Acidized thru
tbg. W/2500 gal. followed by 5000
gal acid frac with 1# sand/gallon.
Set retrievable bridge plug @ 6175'.
6250
6270
6300
6346
Set retainer @ 6346'
Squeezed Dehkard W/300 Sxs @ 3000
psi. Left 10' Cement on top of re-
tainer.
6400

65


Set production packer @ 5980'
Ran tbg. w/wide door choke.
Hall pipe & duct completion
equipment. Backed off tbg.
@ safety joint.
5980
TUBB MARKER 6020'
6050
Perf. Tubb 6080'-6155'
Packer set @ 5930'. Acidized
thru tbg. w/2500 gal. followed
by 5000 gal. acid frac with 1#
sand gallon.
Potential Test 11-29-56
Flow 4500 MCFPD, 3/4"
chk. TTP 400 psi.
6155
6205
6223
Perf. Tubb 6205'-23' and 6250'-70'
Packer set @ 6115'. Acidized thru
tbg. W/2500 gal. followed by 5000
gal acid frac with 1# sand/gallon.
Set retrievable bridge plug @ 6175'.
6250
6270
6346
Set retainer @ 6346'
Squeezed Dehkard W/300 Sxs @ 3000
psi. Left 10' Cement on top of re-
tainer.
6400
6500
6600
6700
6800
6899
7" CSA 5866' W/600 SXS
RUN 1
RUN 2

66


6500
6600
6700
6800
6900
7000
7" CSA 7866' w/600 SKS
RUN 1
RUN 2
6699
6700
6710'
T.D.7113'

67

SCHLUMBERGER WELL SURVEYING CORPORATION
HOUSTON, TEXAS

Electrical Log

COMPANY ANDERSON PRICHARD OIL CORPORATION
WELL AMERICAN REPUBLICS FEDERAL # 1
FIELD WILDCAT
LOCATION SEC. 28-25S-37E
COUNTY LEA
STATE NEW MEXICO

Location of Well
1980' F S&W/L
Sec. 28-25S-37E

ES-GRL (ML)

Elevation: D.F. 3065
K.B.
or G.L. 3050

FILING No.

COUNTY Lea
FIELD OR LOCATION Wildcat
WELL American Republics Federal #1
COMPANY Anderson Prichard Oil Corp.

RUN No.	1
Date	1-1-55
First Reading	10840
Last Reading	3610
Feet Measured	7230
Csg. Schlum.	3610
Csg. Driller	3605
Depth Reached	10843
Bottom Driller	10830
Depth Datum	RDB 15'Adv.GL
Mud Mat.	Gel-Chemicals
Density	10.5
Viscosity	42
Resist.	1.76 68 F @ F @ F @ F @ F @
Res. BHT	1.46 156 F @ F @ F @ F @ F @
pH	11.6 F @ F @ F @ F @ F @
Wtr. Loss	5.6 cc 30 min. cc 30 min. cc 30 min. cc 30 min. cc 30 min.
Max. Temp. F	156
Bit Size	7 7/8"
Spcg. AM	10'
A	32" LS
AO	19'
Opr. Rig Time	4 Hrs.
Truck No.	1162-Hobbs
Recorded By	Swinders
Witness By	Coulson

BEFORE THE OIL CONSERVATION COMMISSION SANTA FE, NEW MEXICO
CASE No. 2 ORDER No. 27

FIELD COPY

REMARKS: GR. Base = 175 - 100 (20.0) Log: Schl. 1400 sacks 4000/Thr. except 8200-8600, 2000/Thr.

RESISTIVITY -ohms. m²/m
0 - 12" Lateral - - 50 500
10" Normal 300 0 3000 0
0 - 32" LS Lateral 150 0 5000

DEPTHS 2"/100

SPONTANEOUS-POTENTIAL millivolts 120 0

GAMMA RAY Micrograms Radium Equiv./Ton of formation

Log Run #1 Type - Radio Depth Driller 10830 Depth Logger 10843 Bottom Logged Interval 10840 Top Logged Interval 3610 Type Fluid in Hole Gel-Chemicals Salinity PPM Cl Density 10.5 Level Full Max. Rec. Temp. Deg. F 156 Operating Rig Time 4 Hrs. Recorded By Swinders Witnessed By Coulson

3600 CASING 3610 3700 3800 3900 4000 4100 4200 4300 4400 4500 4600 4700 4800 4900 5000 5100 5200

Log Run #2 Type - Radio Depth Driller 10830 Depth Logger 10843 Bottom Logged Interval 10840 Top Logged Interval 3610 Type Fluid in Hole Gel-Chemicals Salinity PPM Cl Density 10.5 Level Full Max. Rec. Temp. Deg. F 156 Operating Rig Time 4 Hrs. Recorded By Swinders Witnessed By Coulson

SCHLUMBERGER WELL SURVEYING CORPORATION
HOUSTON, TEXAS

MicroLogging®

COMPANY ANDERSON PRICHARD OIL CORPORATION
WELL AMERICAN REPUBLICS FEDERAL # 1
FIELD WILDCAT
LOCATION SEC. 28-25S-37E
COUNTY LEA
STATE NEW MEXICO

Location of Well
1980' F S/L
Sec. 28-25S-37E

ML-GRL (ES)

Elevation: D.F. 3065
K.B.
or G.L. 3050

FILING No.

COUNTY Lea
FIELD OR LOCATION Wildcat
WELL American Republics Federal #1
COMPANY Anderson Prichard Oil Corp.

RUN No.	1
Date	1-7-55
First Reading	8500
Last Reading	8200
Feet Measured	300
Csg. Schlum.	
Csg. Driller	3605
Depth Reached	8600
Bottom Driller	10830
Depth Datum	RDB 15'Adv.GL
Mud Mat.	Gel-Chemicals
Density	10.5
Viscosity	42
Resist.	1.76 68 F @ F @ F @ F @ F @
Res. BHT	1.46 156F @ F @ F @ F @ F @
pH	11.6 F @ F @ F @ F @ F @
Wtr. Loss	5.6 cc 30 min. cc 30 min. cc 30 min. cc 30 min. cc 30 min.
Max. Temp. F	156
Bit Size	
Spcg.	
Opr. Rig Time	
Truck No.	
Recorded By	
Witness By	

BEFORE THE OIL CONSERVATION COMMISSION SANTA FE, NEW MEXICO
CASE No. ORDER No.

FIELD COPY

REMARKS: GR. Base = 175 - 100 (20.0) Log: Schl. 1400 sacks 4000/Thr. except 8200-8600, 2000/Thr. Tension device failure on lower pass. Tension correction applied to corrected copy.

RESISTIVITY -ohms. m²/m
0 Micro Inverse 1" x 1" 20
0 Micro Normal 2" 20

DEPTHS 5"/100

SPONTANEOUS-POTENTIAL millivolts

GAMMA RAY Micrograms Radium Equiv./Ton of formation

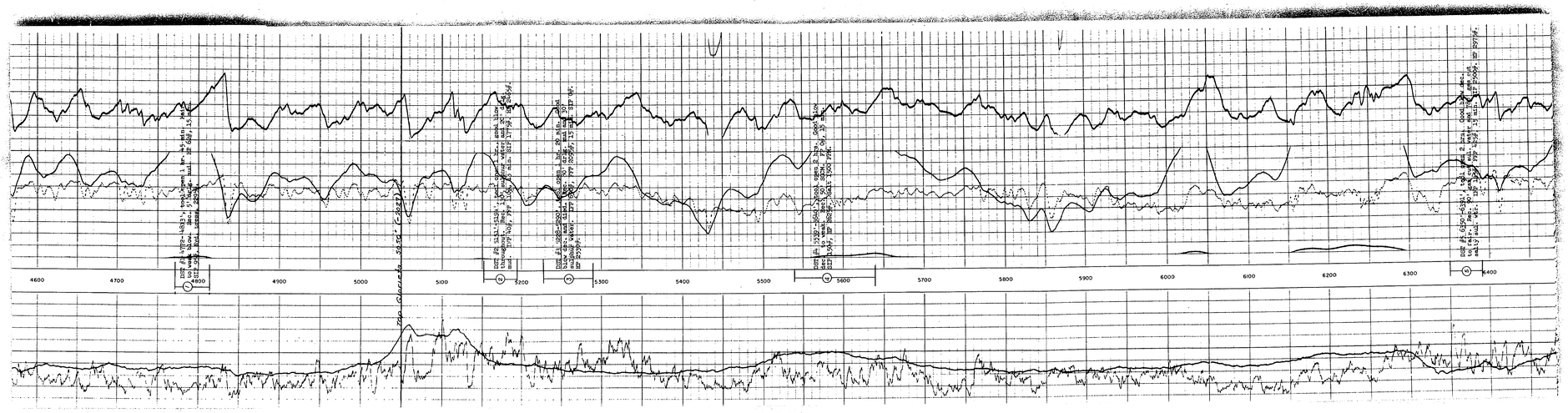
Log Run #1 Type - Radio Depth Driller 8600 Depth Logger 8600 Bottom Logged Interval 8600 Top Logged Interval 8200 Type Fluid in Hole Gel-Chemicals Salinity PPM Cl Density 10.5 Level Full Max. Rec. Temp. Deg. F 156 Operating Rig Time Recorded By Witnessed By

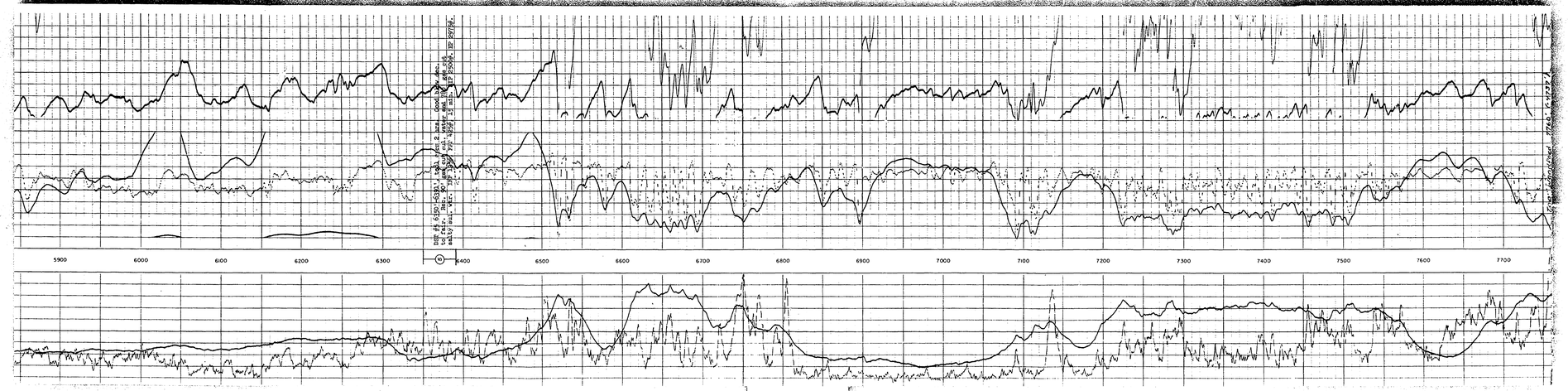
8200 8300 8400 8500 8600

Log Run #1 Type - Radio Depth Driller 8600 Depth Logger 8600 Bottom Logged Interval 8600 Top Logged Interval 8200 Type Fluid in Hole Gel-Chemicals Salinity PPM Cl Density 10.5 Level Full Max. Rec. Temp. Deg. F 156 Operating Rig Time Recorded By Witnessed By

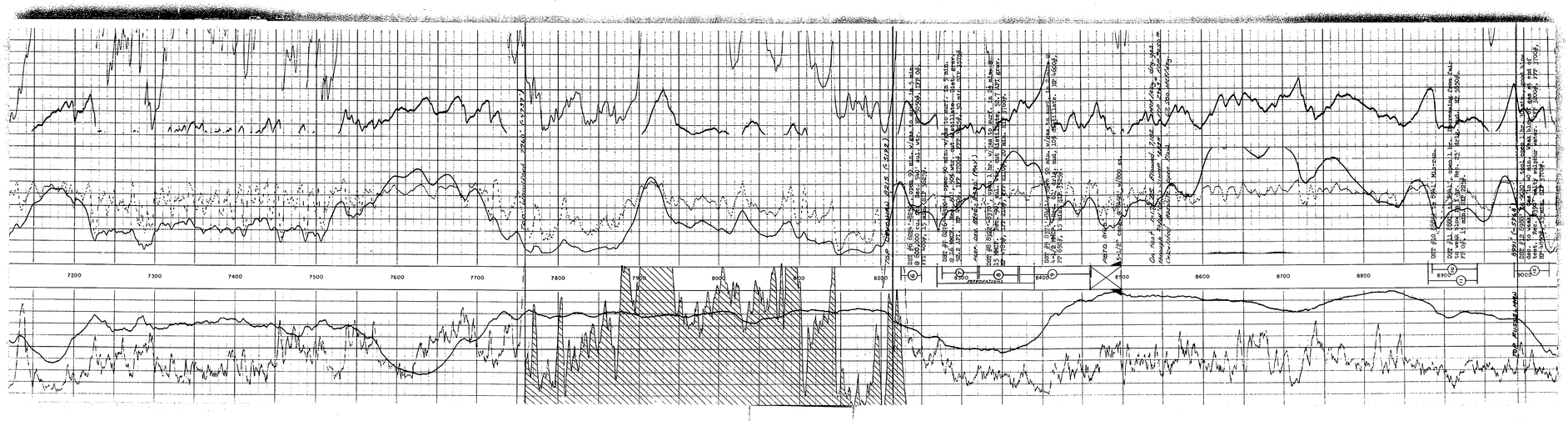
ANDERSON PRICHARD OIL CORP. AMERICAN REPUBLICS FEDERAL # 1 WILDCAT LEA COUNTY, N.M.

68


4600
4700
4800
4900
5000
5100
5200
5300
5400
5500
5600
5700
5800
5900
6000
6100
6200
6300
6400


5900
6000
6100
6200
6300
6400
6500
6600
6700
6800
6900
7000
7100
7200
7300
7400
7500
7600
7700

70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7300
7400
7500
7600
7700
7800
7900
8000
8100
8200
8300
8400
8500
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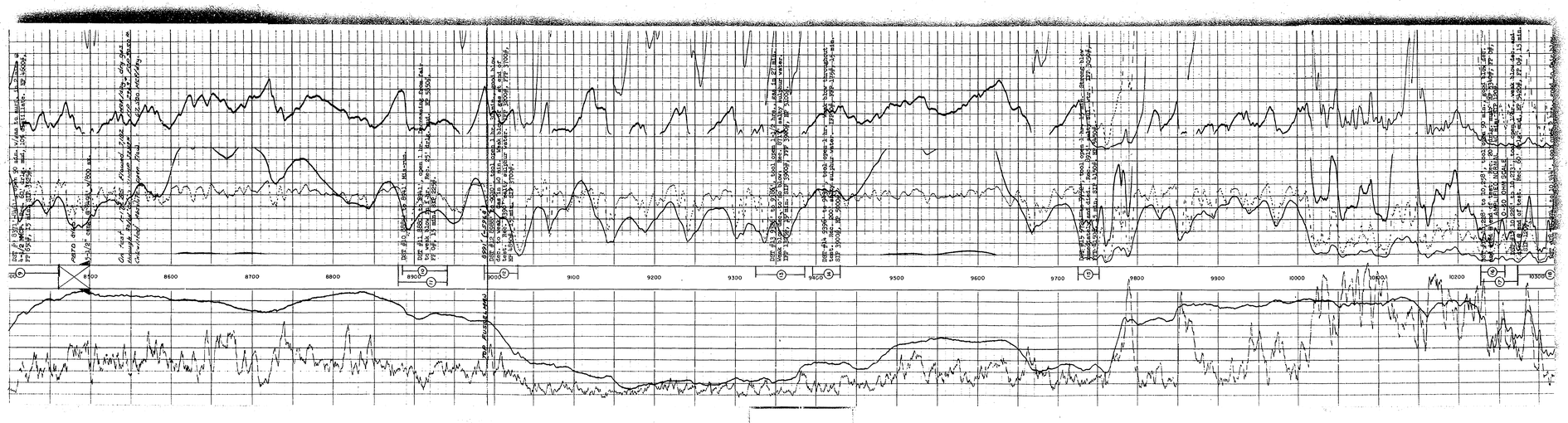
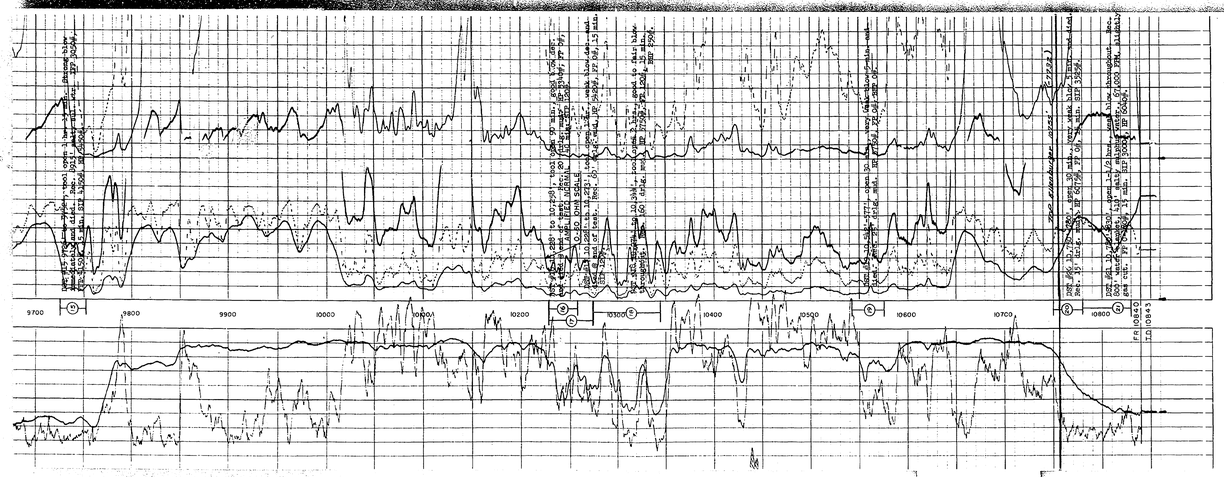
8800
8900
9000

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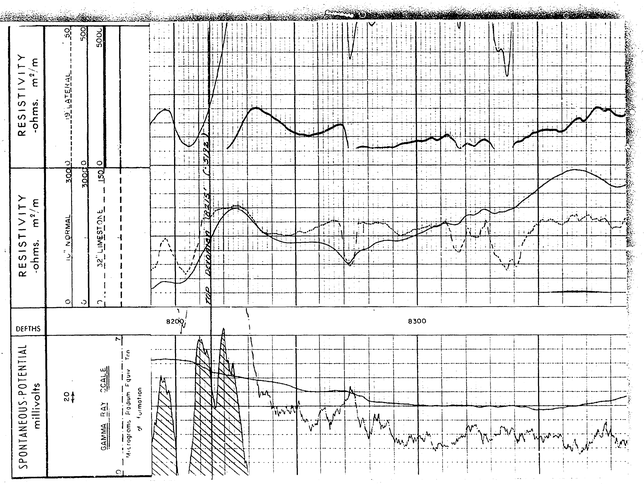
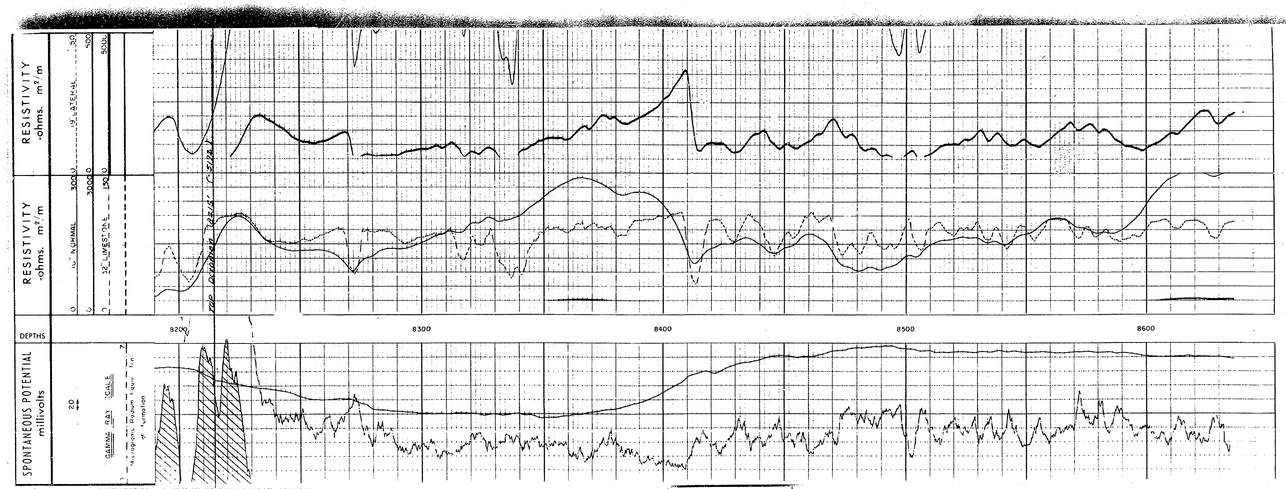
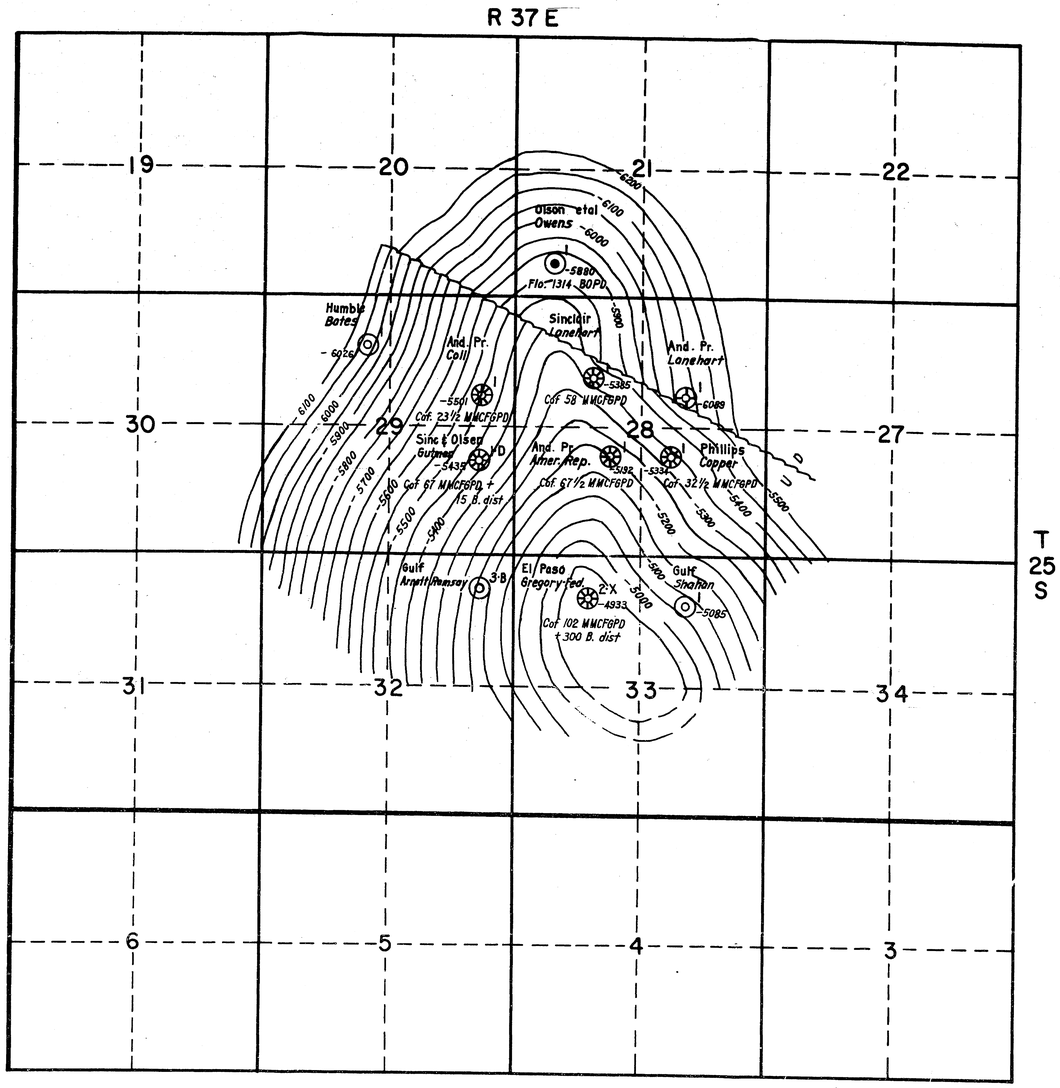
9800
9900
10000
10100
10200
10300
10400
10500
10600
10700
10800
TD 10845


RESISTIVITY
-ohms. m²/m
DEPTHS
8200
8300
SPONTANEOUS POTENTIAL
millivolts


RESISTIVITY
-ohms. m²/m
SPONTANEOUS POTENTIAL
millivolts
DEPTHS
8200
8300
8400
8500
8600
ANDERSON PRICHARD OIL CORP.
AMERICAN REPUBLICS FEDERAL # 1
WILDCAT
LEA COUNTY, N.M.

74



Phillips

EXHIBIT "A"

CROSBY—DEVONIAN POOL

CONTOURED ON TOP DEVONIAN

CI: 50' SCALE 1" = 1000'

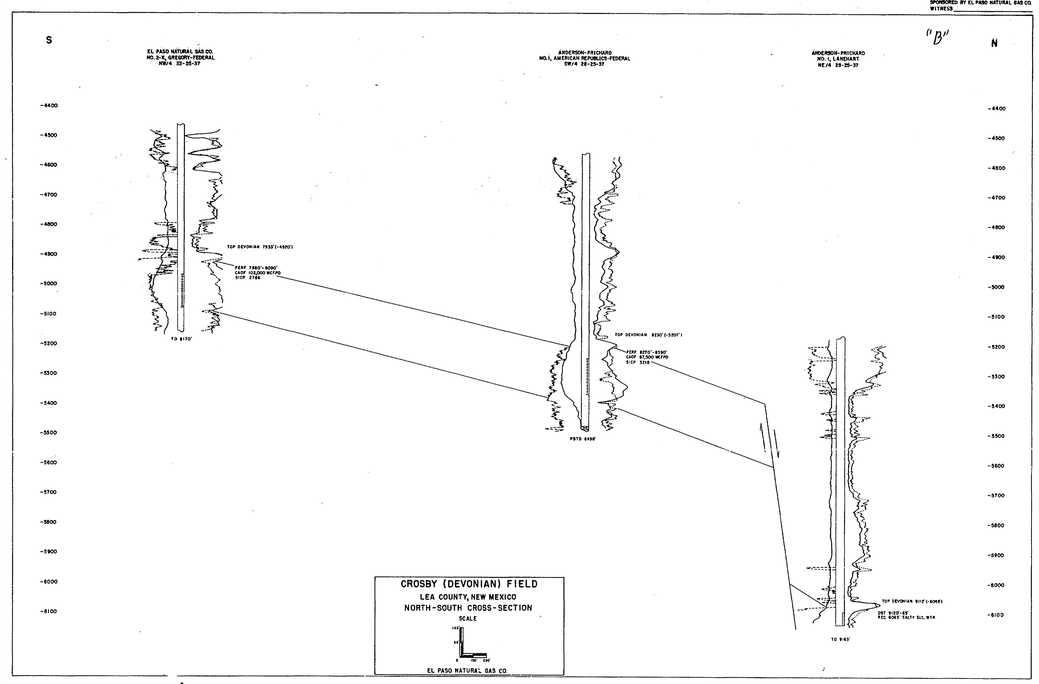
GEOLOGY BY CARL LAWRENCE

POSTED TO 11-10-56

75

EXHIBIT
SPONSORED BY EL PASO NATURAL GAS CO.
WITNESS

"B"

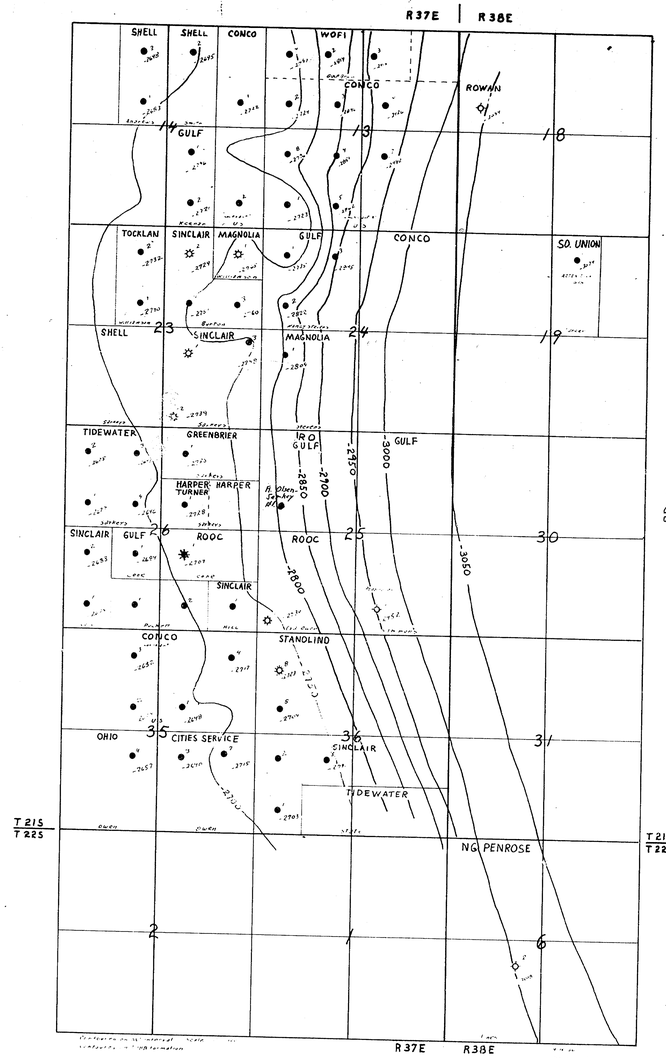


CROSBY (DEVONIAN) FIELD
LEA COUNTY, NEW MEXICO
NORTH-SOUTH CROSS-SECTION
SCALE
HOR. 1" = 1000'
VER. 1" = 100'
EL PASO NATURAL GAS CO

76

77

SE LEA COUNTY, NEW MEXICO



BEFORE THE
OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO
Olsen EXHIBIT No. 2
CASE 1205

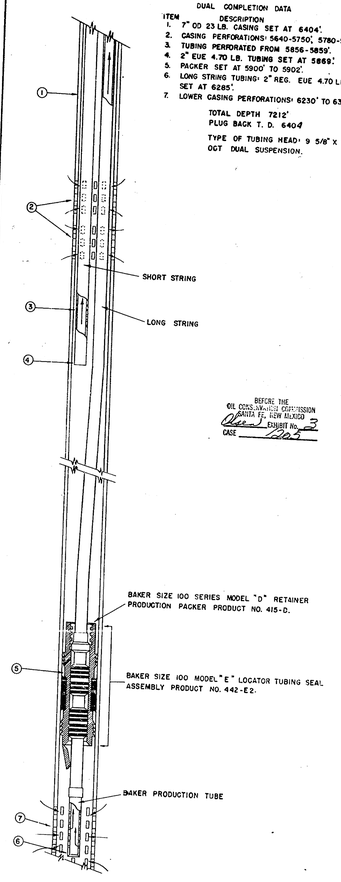
OPERATOR: OLSEN & RUDMAN
LEASE: SARKEYS WELL NO. 1
FIELD: TUBBS & BLINEBRY
LEA COUNTY, NEW MEXICO

DUAL COMPLETION DATA

ITEM	DESCRIPTION
1.	7" OD 23 LB. CASING SET AT 6404'.
2.	CASING PERFORATIONS: 5640-5750', 5780-5830'.
3.	TUBING PERFORATED FROM 5856-5859'.
4.	2" EUE 4.70 LB. TUBING SET AT 5869'.
5.	PACKER SET AT 5900' TO 5902'.
6.	LONG STRING TUBING: 2" REG. EUE 4.70 LB. SET AT 6285'.
7.	LOWER CASING PERFORATIONS: 6230' TO 6316'.

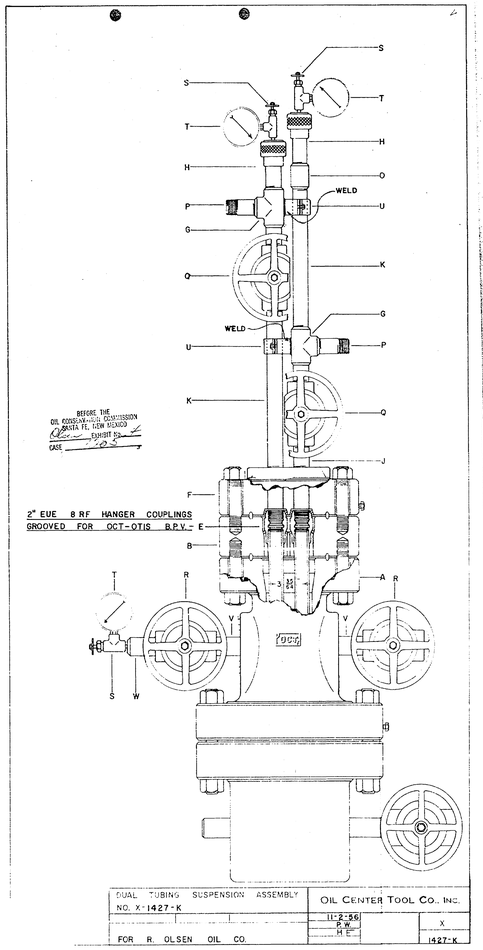
TOTAL DEPTH 7212'
PLUG BACK T. D. 6404'

TYPE OF TUBING HEAD: 9 5/8" X 7"X 2" OCT DUAL SUSPENSION.



BAKER SINGLE - PACKER
FULL-OPENING PARALLEL-STRING
HOOKUP, SHORT STRING
HANGING FREE

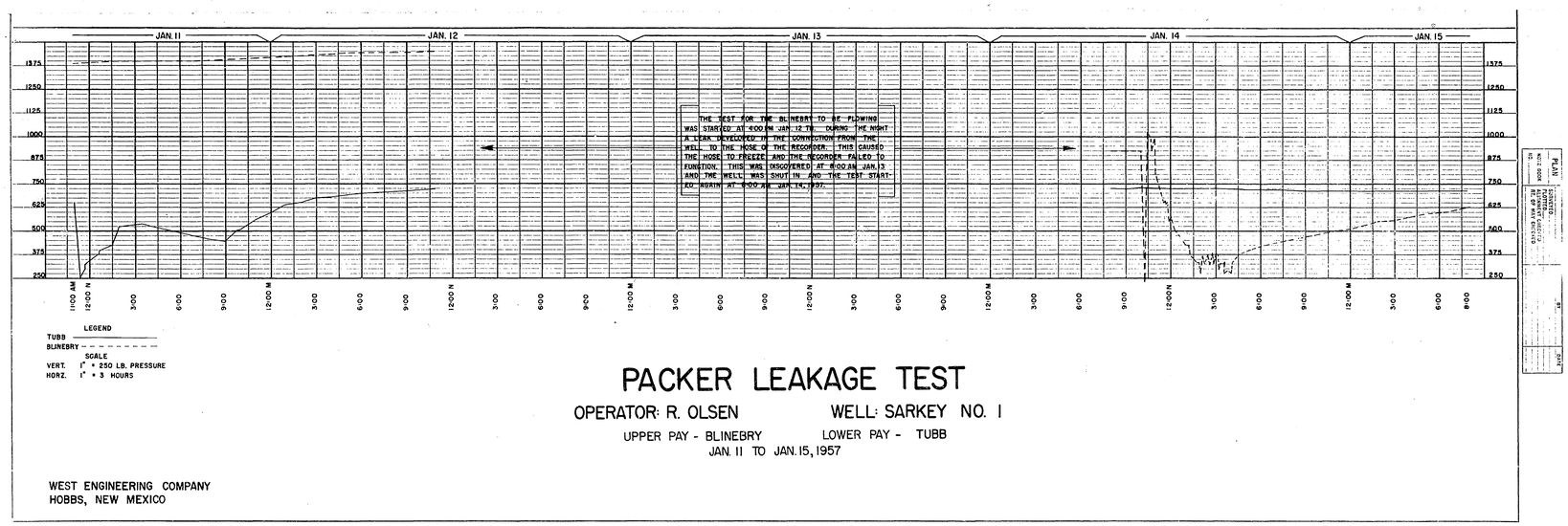
BEFORE THE
OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO
Olsen EXHIBIT No. 3
CASE 1205



BEFORE THE
OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO
EXHIBIT NO.
CASE

2" EUE 8 RF HANGER COUPLINGS
GROOVED FOR OCT-OTIS B.P.V.

DUAL TUBING SUSPENSION ASSEMBLY NO. X-1427-K	OIL CENTER TOOL CO. INC.	
FOR R. OLSEN OIL CO.	11-2-56 PW HE	X 1427-K



LEGEND
TUBB
BLINEBRY

SCALE
VERT. 1" = 250 LB. PRESSURE
HORZ. 1" = 3 HOURS

PACKER LEAKAGE TEST

OPERATOR: R. OLSEN WELL: SARKEY NO. 1

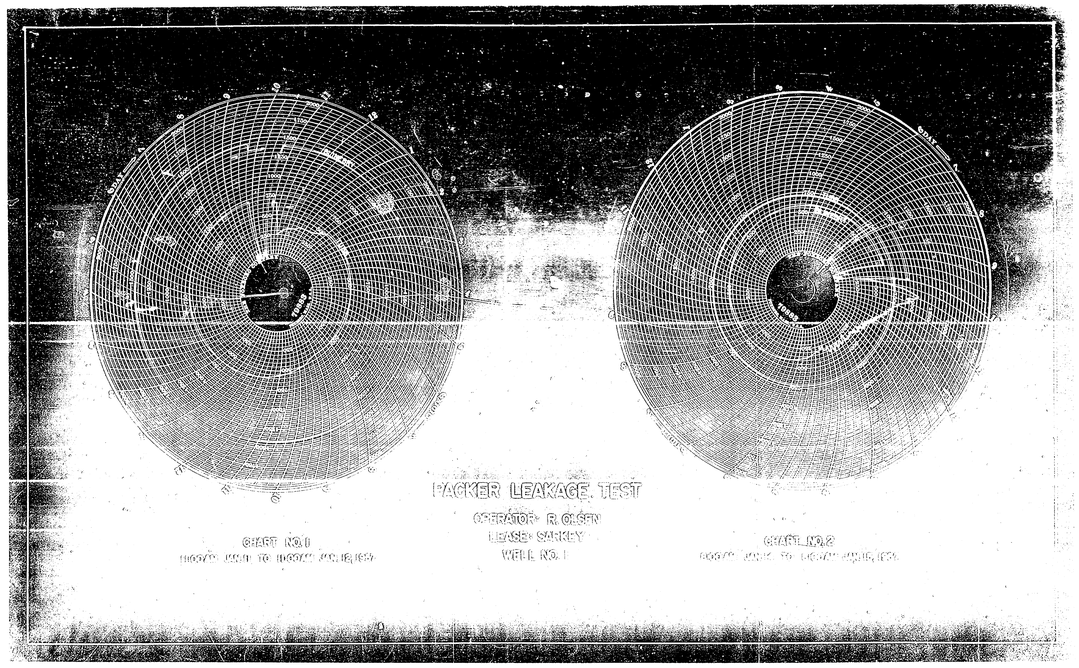
UPPER PAY - BLINEBRY LOWER PAY - TUBB

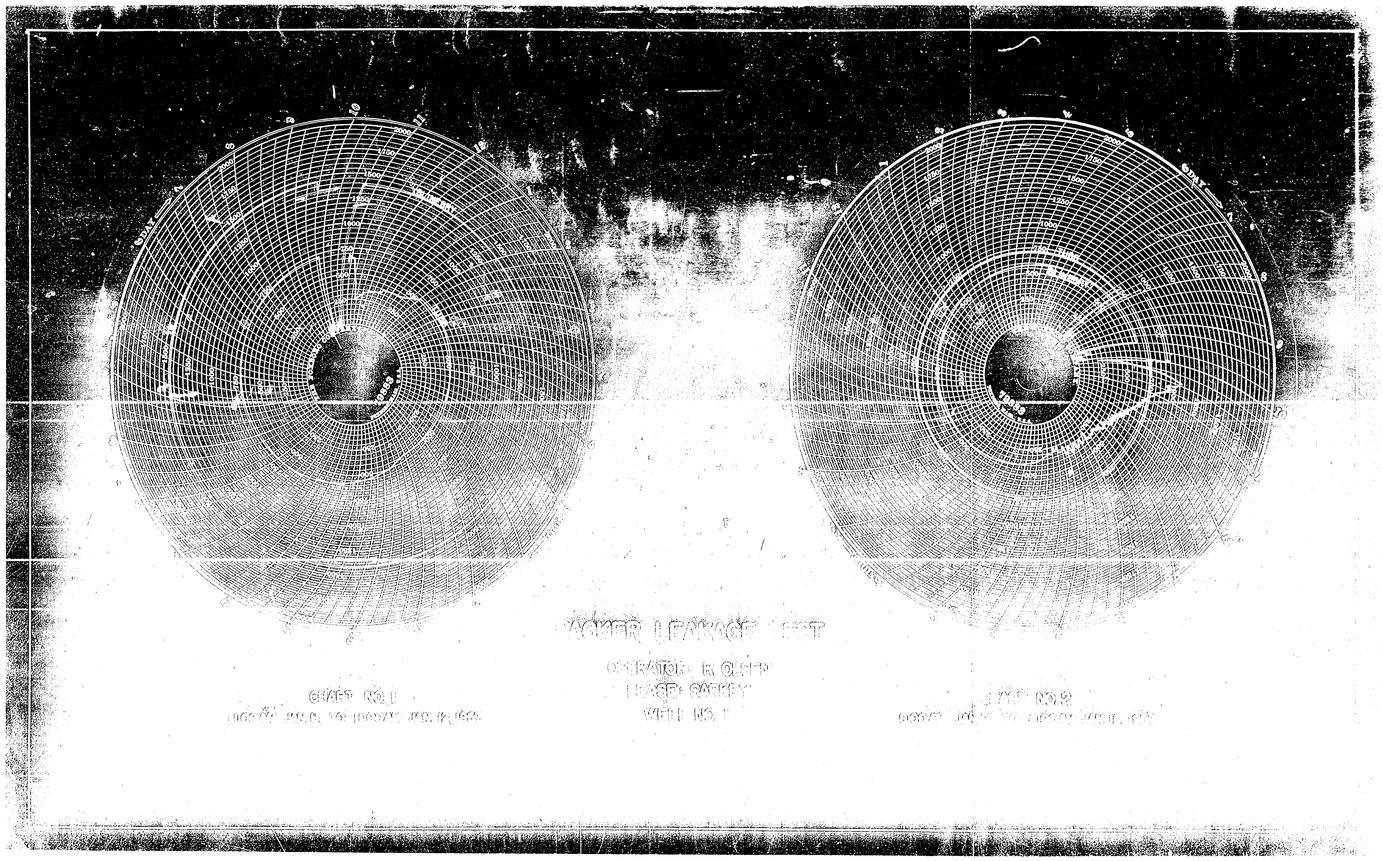
JAN. 11 TO JAN. 15, 1957

WEST ENGINEERING COMPANY
HOBBS, NEW MEXICO

PLAN
CONTROL
NOTE: BOOK
PLOTTED
CHECKED
FILE OF MAP RECORDS

78


PACKER LEAKAGE TEST
OPERATOR R. OLSEN
LEASE SARKEY
WELL NO. 1



Ex 1
1209

TOWNSHIP 25 & 26 S. RANGE 37 E. LEA COUNTY, STATE OF NEW MEXICO

R.37 E.

T. 25 S.

T. 26 S.

Legend

Y. - Yates
I - Int. Seven Rivers
D - Ind. Seven Rivers
St - Stuart
P - Penrose

TOP ZONE I.
CONTOUR INTERVAL - 50'
SCALE 1"=2000'

80

R. OLSEN
NO. 1 FARNSWORTH

660 FNL 1980 FEL
SEC. 4 T-26-S R-37-E
LEA CO. N. MEX.
ELEV. 2998

R. OLSEN
NO. 2 FARNSWORTH

660 FNL 660 FEL
SEC. 4 T-26-S R-37-E
LEA CO. N. MEX.
ELEV. 3000

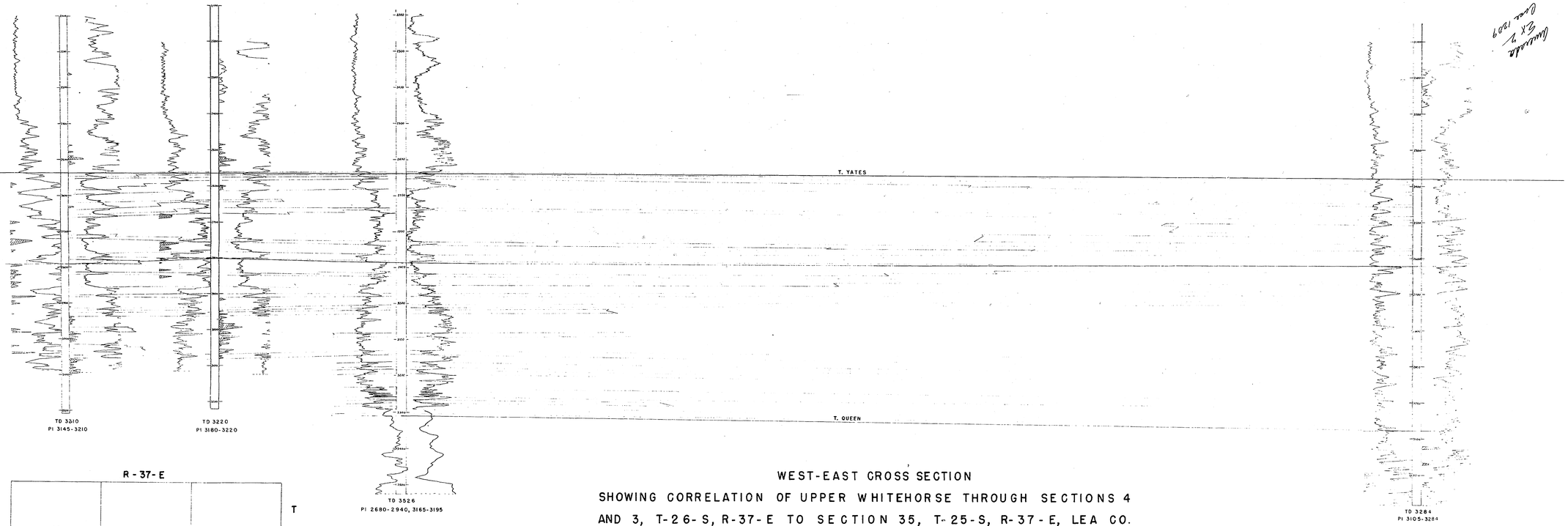
AMERADA
NO. 1 CAGLE "C"

990 FNL 990 FWL
SEC. 3 T-26-S R-37-E
LEA CO. N. MEX.
ELEV. 3004

R. OLSEN
NO. 1 GREGORY-FEDERAL

990 FSL 660 FEL
SEC. 35 T-25-S R-37-E
LEA CO. N. MEX.
ELEV. 3025

Amerada
Gas 1209



R-37-E

33	34	35	T 25 S
4	3	2	T 26 S

WEST-EAST CROSS SECTION
SHOWING CORRELATION OF UPPER WHITEHORSE THROUGH SECTIONS 4 AND 3, T-26-S, R-37-E TO SECTION 35, T-25-S, R-37-E, LEA CO.

REFERENCE DATUM: TOP YATES

FEBRUARY 1957

J.A. VEEDER P.E. NELSON

OIL CONSERVATION COMMISSION
Amerada
CASE 1209

VERTICAL SCALE
1" = 100'
300
200
100

HORIZONTAL SCALE
1" = 300'

81

FORM 540-REVISED J. WALLACE

THIS FORM APPROVED TO API SP 33

RADIOACTIVITY LOG
WELEX JET SERVICES, Inc.

LICENSED BY: WELL SURVEYS, INC. FILE NO.

Location of Well
Amended
Sec 4
Rge 37E

COMPANY AMERADA PETROLEUM CORPORATION
WELL C. C. CAGLE "C" NO. 1
FIELD LANGLIE - MATTIX
COUNTY LEA STATE NEW MEXICO
LOCATION 990' FWL & 990' FNL OF SEC. 3
T - 26 - S, R - 37 - E.

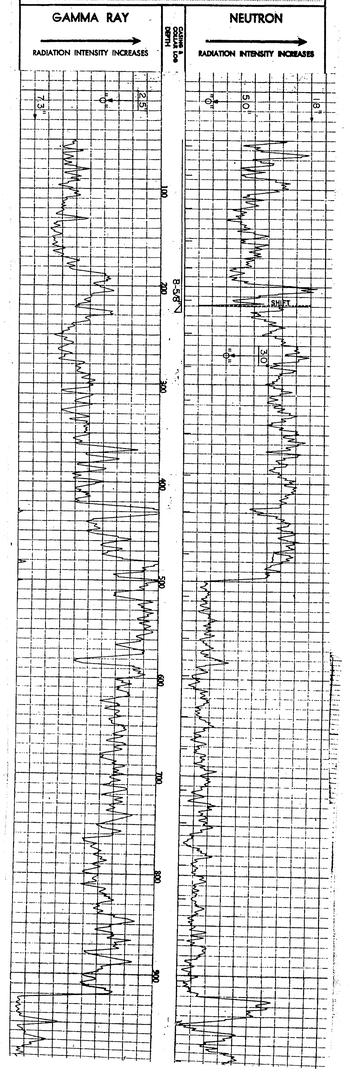
LOG MEAS. FROM TOP ROTARY TABLE ELEV. 3006'
DRLG. MEAS. FROM TOP ROTARY TABLE ELEV. 3006'
PERM. DATUM GROUND LEVEL ELEV. 2993'

	GAMMA RAY	NEUTRON
TYPE OF LOG	G. R.	N
RUN NO.	One	One
DATE	5/8/56	5/8/56
JOB NO.	266-Rdm	528-Rdm
TOTAL DEPTH (DRILLER)	3308	3308
EFFECTIVE DEPTH (DRILLER)	3308	3308
TOTAL DEPTH (R/A LOG)	3307	3307
TOP OF LOGGED INTERVAL	50	50
BOTTOM OF LOGGED INTERVAL	3295	3295
TYPE OF FLUID IN HOLE	OIL	OIL
FLUID LEVEL	220	220
MAXIMUM RECORDED TEMPERATURE		
NEUTRON SOURCE STRENGTH & TYPE		600 M
SOURCE SPACING—IN.		7.15
LENGTH OF MEASURING DEVICE—IN.	30	7.1
O.D. OF INSTRUMENT—IN.	3 5/8	3 5/8
TIME CONSTANT—SECONDS	1.2	1.0
LOGGING SPEED FT./MIN. 5" =	20-40	20-40
2" =	20	20
STATISTICAL VARIATION—IN.	0.25	0.25
SENSITIVITY REFERENCE	270	270
RECORDED BY	WILLIAM	WILLIS
WITNESSED BY	MR. MAUPIN	

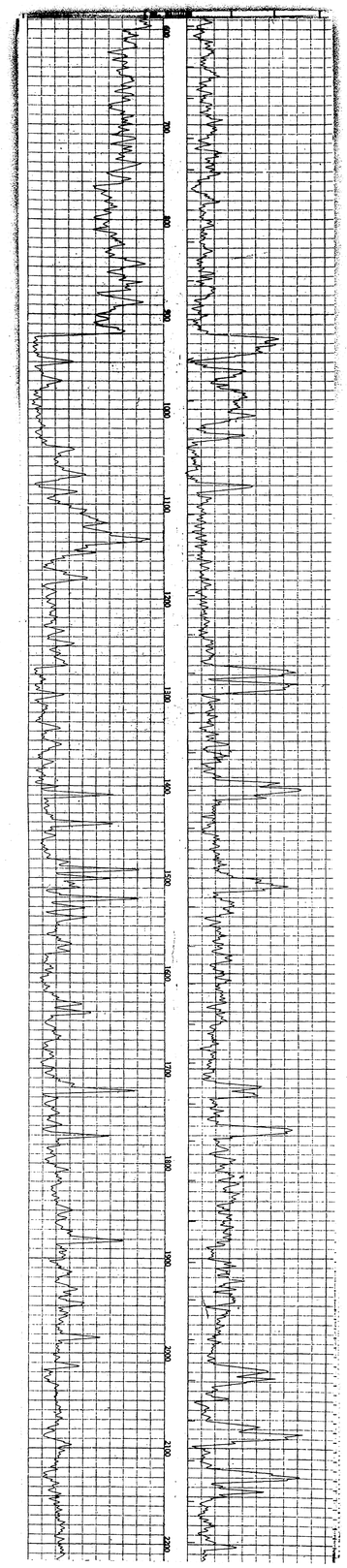
BEFORE THE OIL CONSERVATION COMMISSION SANTA FE, NEW MEXICO
Case No. 1209 Exhibit No. 4

CASING RECORD			BORE HOLE		
SIZE—INS. WT.—LB.	INTERVAL FROM WELL RECORD	FROM R/A LOG	BIT SIZE INS.	INTERVAL FROM WELL RECORD	FROM R/A LOG
8 5/8	0 To 327'	To	12 1/4	To	To
5 1/2 J-55	0 To 3318'	To	7 7/8	To	To
	To	To		To	To
	To	To		To	To

REMARKS OR OTHER DATA
*C 209 NEUTRON CHAMBER USED - SENSITIVITY SHOWN IS BOTTLE SENSITIVITY



82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1100
1200
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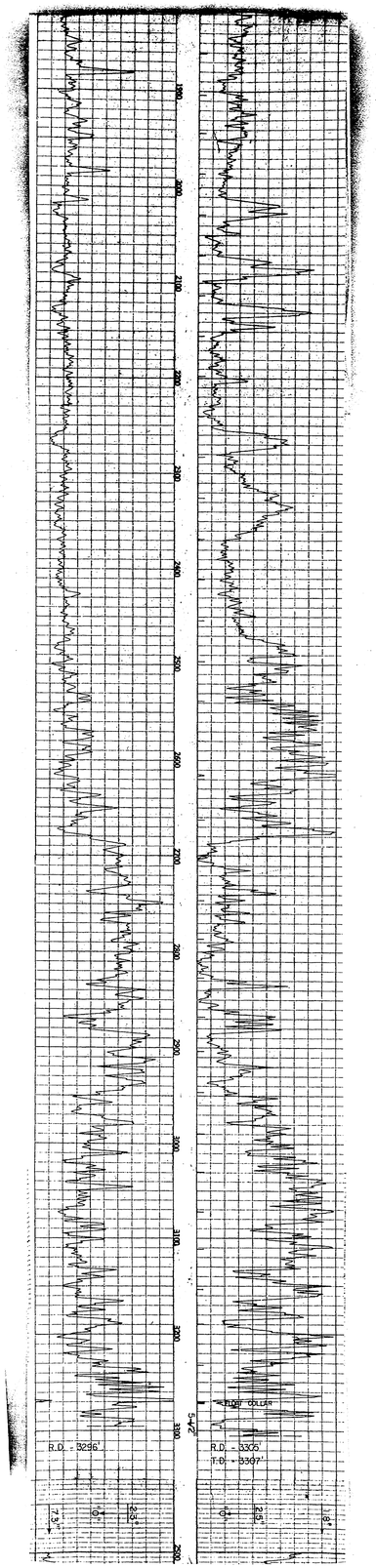
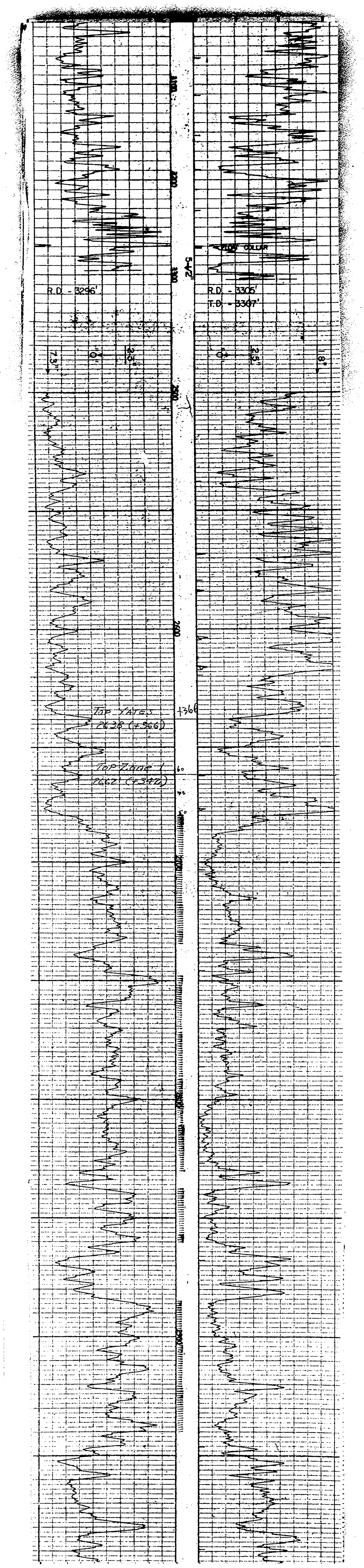
1400
1500
1600
1700
1800
1900
2000
2100
2200


1900
2000
2100
2200
2300
2400
2500
2600
2700
2800
2900
3000
3100
3200
3300
5½"
FLOAT COLLAR
R.D. - 3296'
R.D. - 3326'
T.D. - 3307'
7.2°
6°
5.5°
0°
2.5°
1.8°

84



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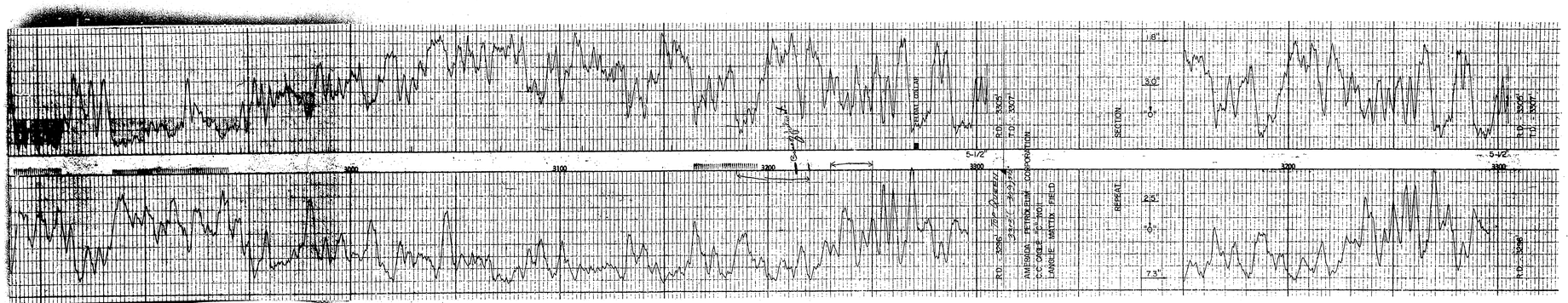
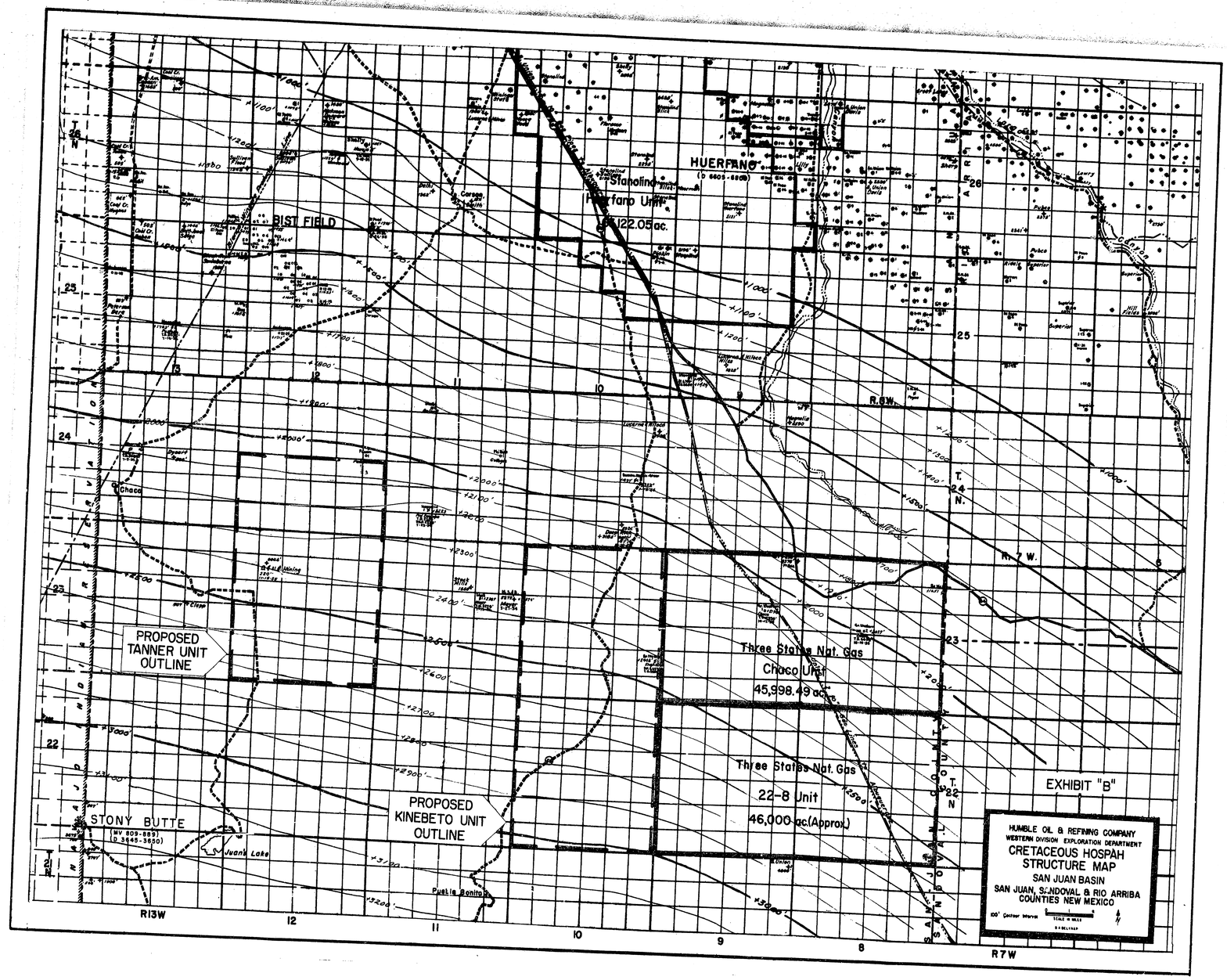

3000
3100
3200
3300
5-1/2"
RD. 3268'
AMERADA PETROLEUM CORPORATION
C.C. OGLE #1 WOLF
LANGLIE MATTIX FIELD
SECTION
REPEAT
RD. 3268'
RD. 3307'
RD. 3268'
RD. 3307'

86


HUERFANO
(D 6605-6690)
Stanolind
Huerfano Unit
6,122.05 ac.
BIST FIELD
R.O.W.
T. 24 N.
R. 7 W.
Three States Nat. Gas
Chaco Unit
45,998.49 ac.
Three States Nat. Gas
22-8 Unit
46,000 ac.(Approx.)
PROPOSED
TANNER UNIT
OUTLINE
PROPOSED
KINEBETO UNIT
OUTLINE
STONY BUTTE
(MV 609-889)
(D 5645-5690)
Juanita Lake
Pueblo Bonito
Chaco
EXHIBIT "B"
HUMBLE OIL & REFINING COMPANY
WESTERN DIVISION EXPLORATION DEPARTMENT
CRETACEOUS HOSPAH
STRUCTURE MAP
SAN JUAN BASIN
SAN JUAN, SANDOVAL & RIO ARRIBA
COUNTIES NEW MEXICO
100' Contour Interval
SCALE IN MILES
T. 22 N.
T. 21 N.
R13W
R7W
12
11
10
9
8
25
24
23
22
21

87

88

TANNER UNIT AREA
San Juan County, New Mexico
EXHIBIT "A"

LEGEND
Unit Outline
Tract Number
Federal Land 25,966.12 Acres
State of New Mexico Land 3,678.28 Acres
Reconveyed Indian Land 2350 Acres
Allotted Indian Land 1,916.76 Acres
Total: 33,751.16 Acres

R12W

T 23 N

T 24 N

TANNER UNIT AREA
San Juan County, New Mexico
EXHIBIT "A"

LEGEND
Unit Outline
Tract Number
Federal Land 26,960.84 Acres
State of New Mexico Land 3,678.28 Acres
Reconveyed Indian Land 1,916.76 Acres
Allotted Indian Land 1,195.28 Acres
Total: 33,751.16 Acres

R12W

T 23 N

T 24 N

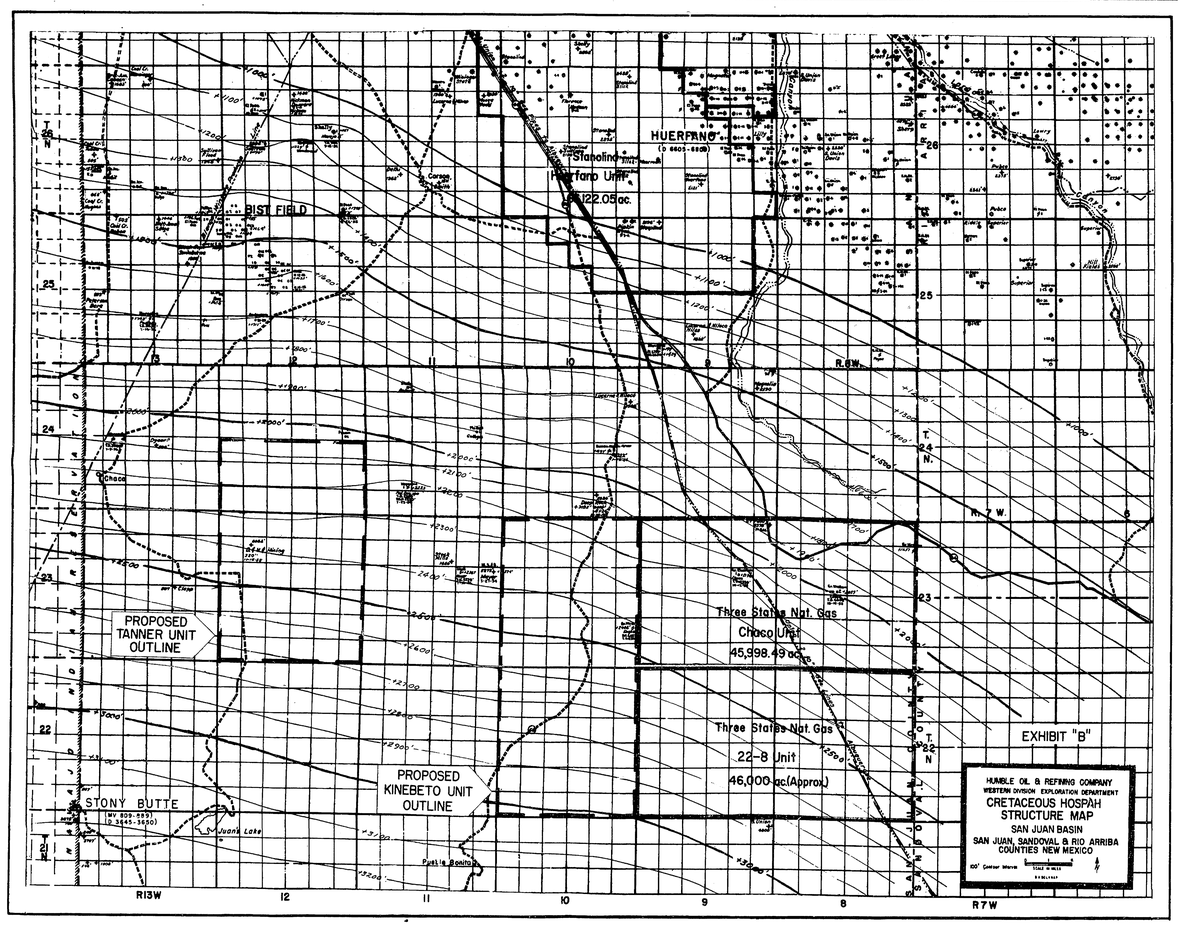
TANNER UNIT AREA
San Juan County, New Mexico
EXHIBIT "A"

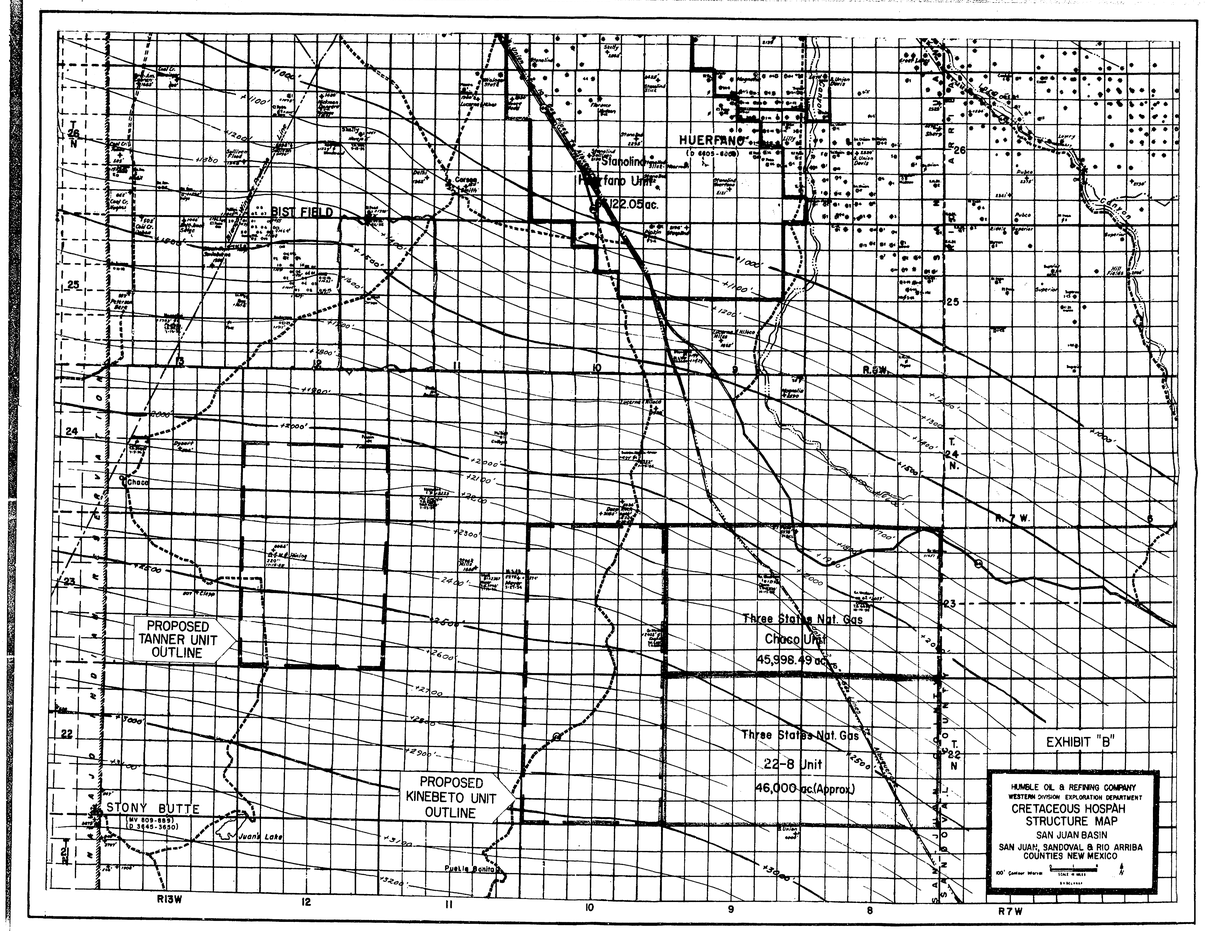
LEGEND
Unit Outline
Tract Number
Federal Land 26,960.84 Acres
State of New Mexico Land 3,678.28 Acres
Reconveyed Indian Land 1,916.76 Acres
Allotted Indian Land 1,195.28 Acres
Total: 33,751.16 Acres

R12W

T 23 N

T 24 N


HUERFANO
(D 6605-6208)
Stanolind
Huerfano Unit
5122.05ac.
BIST FIELD
Three States Nat. Gas
Choco Unit
45,998.49 acres
Three States Nat. Gas
22-8 Unit
46,000 ac(Approx.)
PROPOSED
TANNER UNIT
OUTLINE
PROPOSED
KINEBETO UNIT
OUTLINE
STONY BUTTE
(W 609-693)
(D 5645-5650)
Juank Lake
Pueblo Bonito
Chaco
EXHIBIT "B"
HUMBLE OIL & REFINING COMPANY
WESTERN DIVISION EXPLORATION DEPARTMENT
CRETACEOUS HOSPAH
STRUCTURE MAP
SAN JUAN BASIN
SAN JUAN, SANDOVAL & RIO ARRIBA
COUNTIES NEW MEXICO
T. 24 N.
T. 23 N.
T. 22 N.
R. 7 W.
R. 6 W.
R13W
R7W


HUERFANO
(D 6605-6208)
Stanolind
Huerfano Unit
5122.05ac.
BIST FIELD
Three States Nat. Gas
Choco Unit
45,998.49 acres
Three States Nat. Gas
22-8 Unit
46,000 ac(Approx.)
PROPOSED
TANNER UNIT
OUTLINE
PROPOSED
KINEBETO UNIT
OUTLINE
STONY BUTTE
(W 609-693)
(D 5645-5650)
Juank Lake
Pueblo Bonito
Chaco
EXHIBIT "B"
HUMBLE OIL & REFINING COMPANY
WESTERN DIVISION EXPLORATION DEPARTMENT
CRETACEOUS HOSPAH
STRUCTURE MAP
SAN JUAN BASIN
SAN JUAN, SANDOVAL & RIO ARRIBA
COUNTIES NEW MEXICO
T. 24 N.
T. 23 N.
T. 22 N.
R. 7 W.
R. 6 W.
R13W
R7W

89

LANE RADIOACTIVITY LOG WELLS

COMPANY

Location of Well

3278' DF

COMPANY: CONTINENTAL OIL CO.
WELL: E. E. JACK B-17 NO. 3
FIELD: JALMAT
COUNTY: LEA STATE: N. MEX.
LOCATION: 990' FN & EL-SEC. 17
243-37E

FILE NO.

COMPANY CONTINENTAL OIL CO.
WELL E. E. JACK B-17 NO. 3
FIELD JALMAT
LOCATION LEA STATE N. MEX.

LOG MEAS. FROM ROTARY TABLE ELEV. 3279'
DRLG. MEAS. FROM ROTARY TABLE ELEV. 3279'
PERM. DATUM 5 1/2" BRADEN HEAD ELEV. 3260.6'

	G/R	N-1
TYPE OF LOG	1	1
RUN NO.		
DATE	8-25-51	8-25-51
TOTAL DEPTH (DRILLER) RACK	3060'	3060'
EFFECTIVE DEPTH (DRILLER)	3059'	3050'
TOP OF LOGGED INTERVAL	2200'	2200'
BOTTOM OF LOGGED INTERVAL	3049'	3049'
% OF MUD IN HOLE	MUD	MUD
FLUID LEVEL	FULL	FULL
MAXIMUM RECORDED TEMP.		
NEUTRON SOURCE STRENGTH & TYPE		SOCN
SOURCE SPACING—IN.		5.25
LENGTH OF MEASURING DEVICE—IN.	36	6
O.D. OF INSTRUMENT—IN.	3 5/8	3 5/8
TIME CONSTANT—SECONDS	H	K
LOGGING SPEED—FT. MIN.	30	35
STATISTICAL VARIATION—IN.		
SENSITIVITY REFERENCE	274	275
RECORDED BY	KELLY	KELLY
WITNESSED BY	WOODYARD	WOODYARD

Exhibit No. 2
Case No. 1216

APP. DR. Z.
CAS. Dft.

CASING RECORD

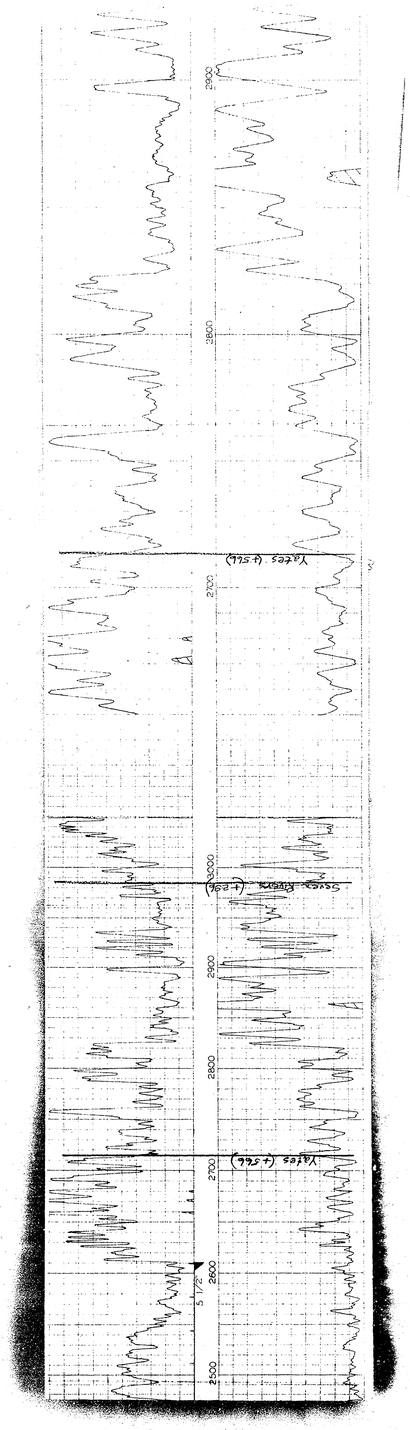
RUN NO.	BIT SIZE	CASING	WEIGHT	FROM	WELL RECORD TO	FROM	P.A. LOG TO
1		5 1/2		SURF.	2609'	SURF.	2611'
1	4 3/4			2609'	T. D.	2611'	T. D.
					TO		TO
					TO		TO
					TO		TO

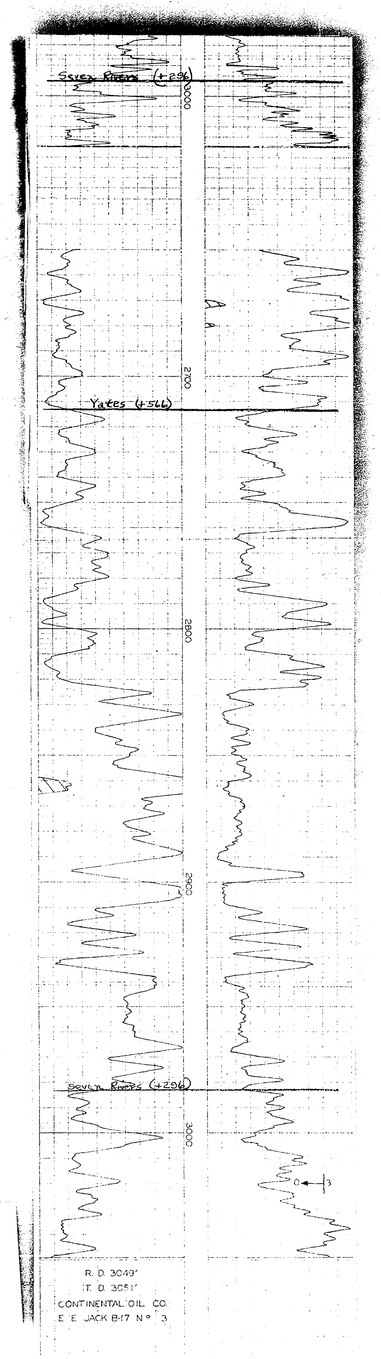
REMARKS OR OTHER DATA

GAMMA RAY — RADIATION INTENSITY INCREASES

NEUTRON — RADIATION INTENSITY INCREASES

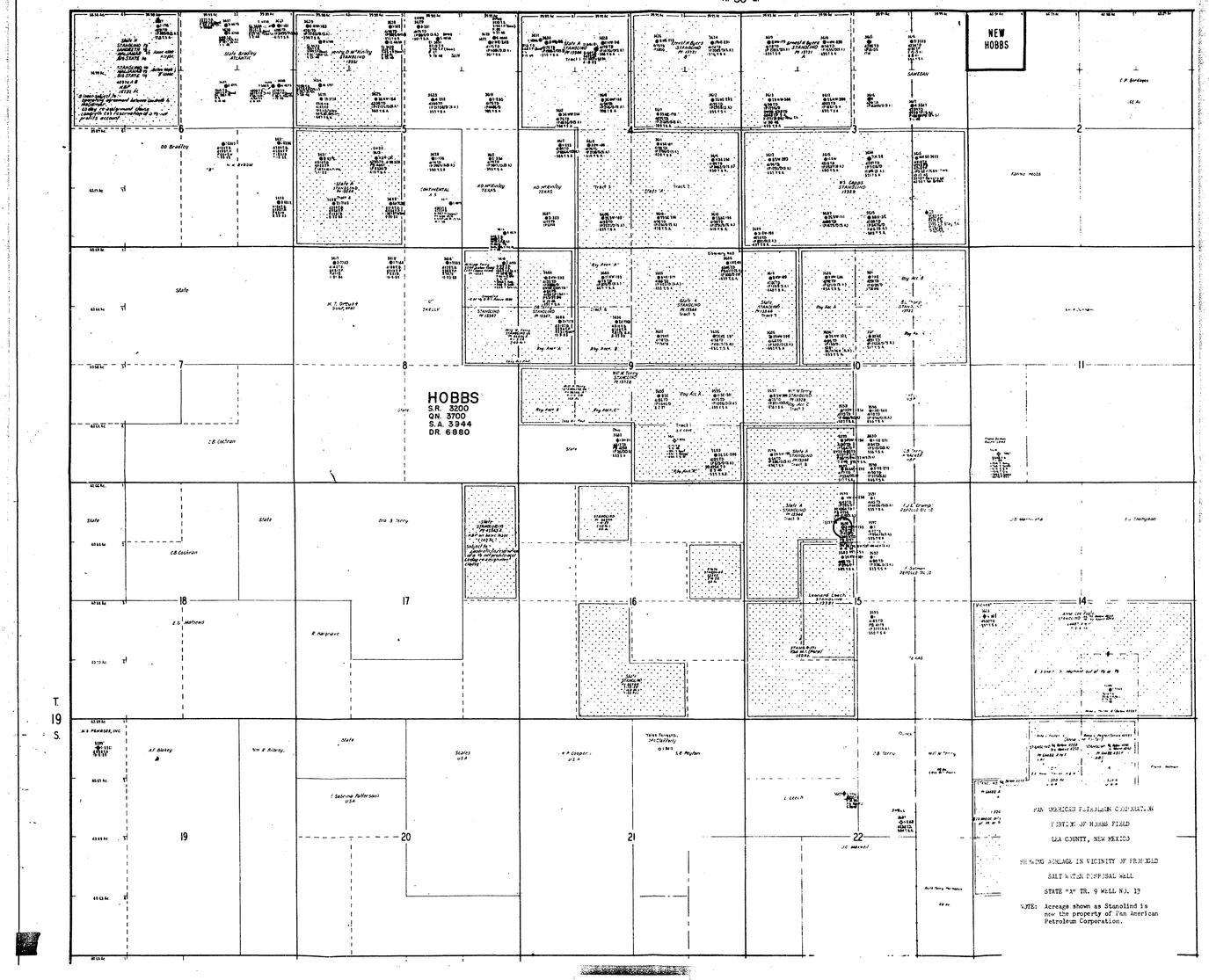
90


2900
2800
Yates (+ sat)
2700
Seven Rivers (+ psl)
3000
2900
2800
Yates (+ sat)
2700
2600
2500


Seven Rivers (+294)
Yates (+544)
3000
2200
2800
2600
3000
R. D. 3049'
T. D. 3051'
CONTINENTAL OIL CO.
E. E. JACK B-17 N° 3

92

R. 38 E.


NEW HOBBS
HOBBS
S.R. 3200
QN. 3700
S.A. 3944
DR. 6880
T. 19 S.
6
5
4
3
2
7
8
9
10
11
18
17
16
15
14
19
20
21
22
PAN AMERICAN PETROLEUM CORPORATION
PERIMETER OF HOBBS FIELD
LEA COUNTY, NEW MEXICO
SHOWING ACREAGE IN VICINITY OF FRESH WATER
SALT WATER DISPOSAL WELL
STATE "AW" TR. 9 WELL NO. 13
NOTE: Acreage shown as Stanolind is now the property of Pan American Petroleum Corporation.

93

R. 38 E.

T 19 S.

NEW HOBBS

HOBBS
S.R. 3200
QN. 3700
S.A. 3944
DR. 6880

FAN AMERICAN PETROLEUM CORPORATION

PORTION OF HOBBS FIELD

LEA COUNTY, NEW MEXICO

SHOWING DOMAGE IN VICINITY OF PROPOSED

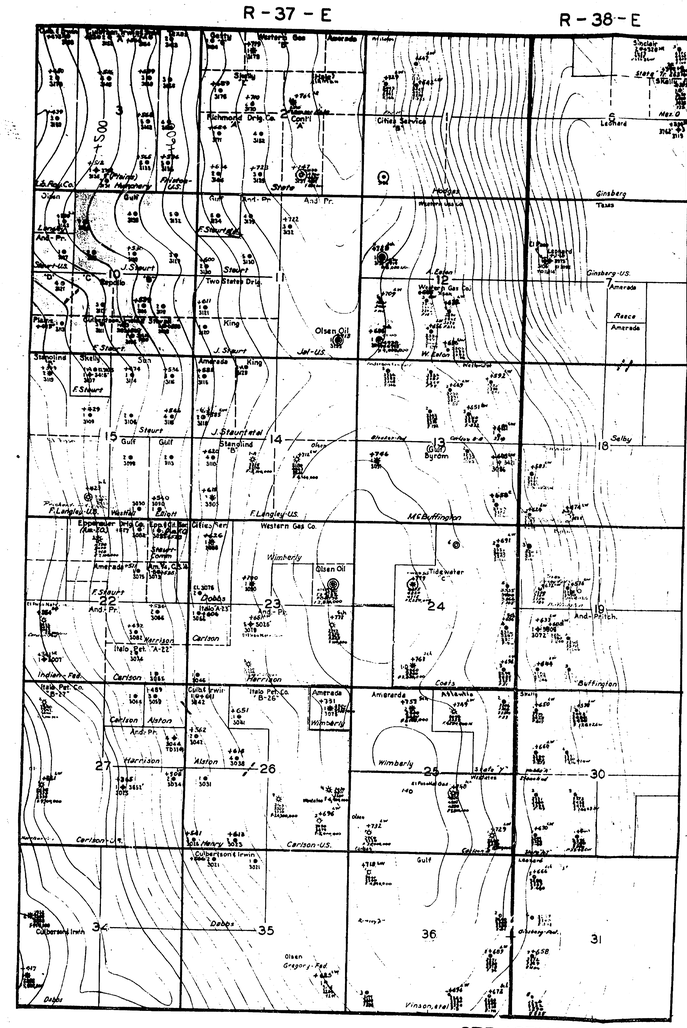
SALT WATER DISPOSAL WELL

STATE "A" TR. 9 WELL NO. 13

NOTE: Acreage shown as Stanolind is now the property of Fan American Petroleum Corporation.

94

95



STRUCTURE MAP

CONTOURED ON MARKER NEAR TOP OF YATES

CONTOUR INTERVAL - 25'

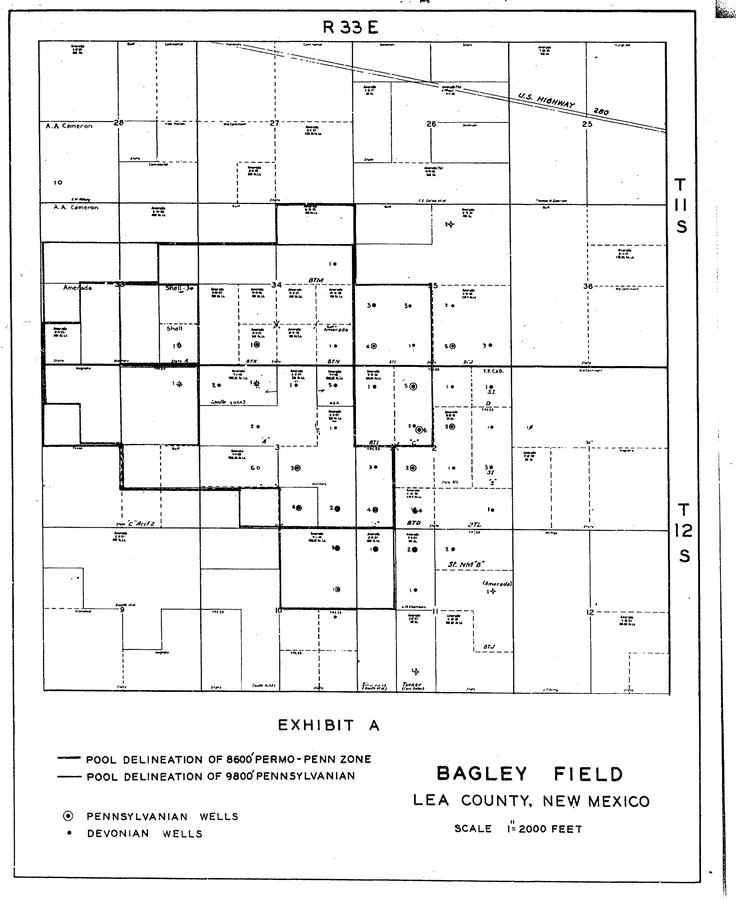
JUSTIS GAS POOL

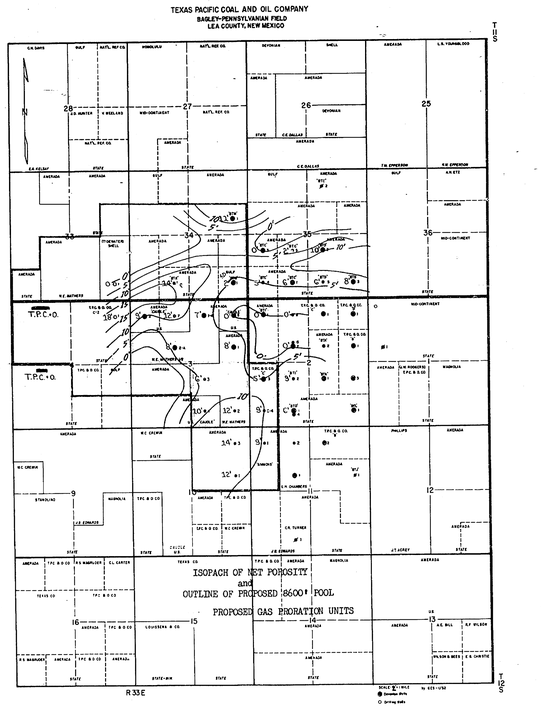
LEA COUNTY, NEW MEXICO

SCALE: 1" = 2000

⊛ JUSTIS POOL GAS WELL

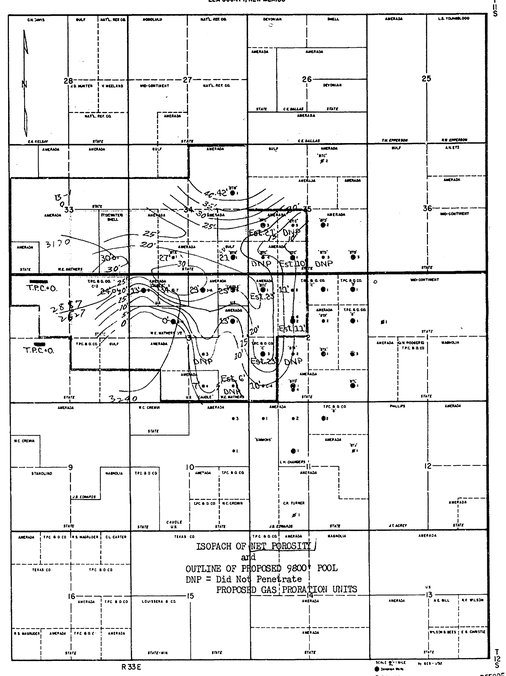
BEFORE THE
OIL CONS. COMMISSION
SANTA FE, NEW MEXICO
Amerada EXHIBIT No. 1
CASE 1219





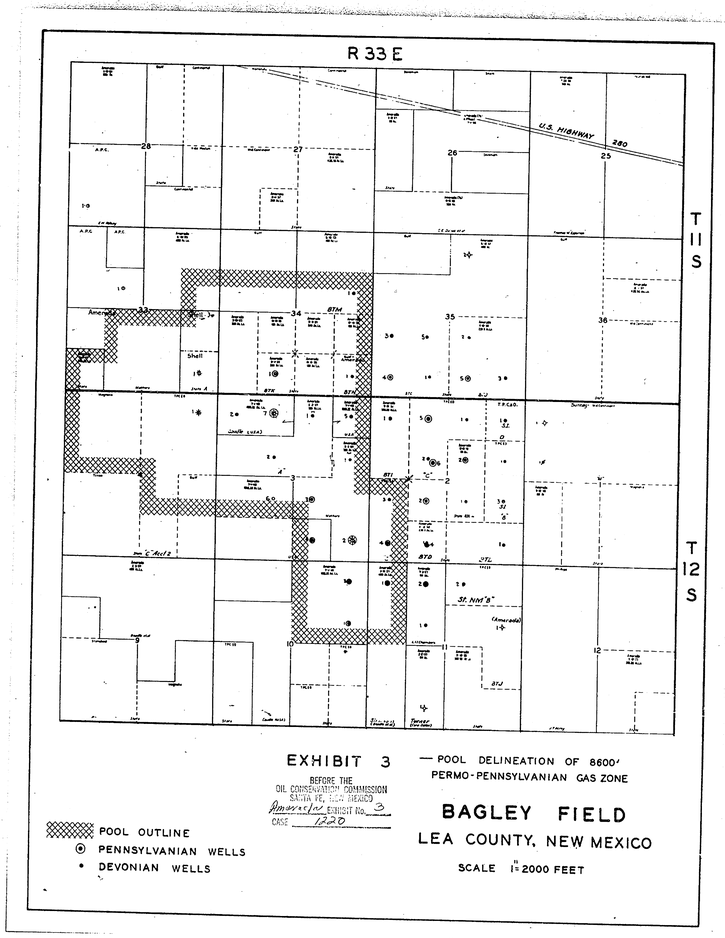
BEFORE THE
OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO
EX. # 8
CASE 1220

Ex. # 8

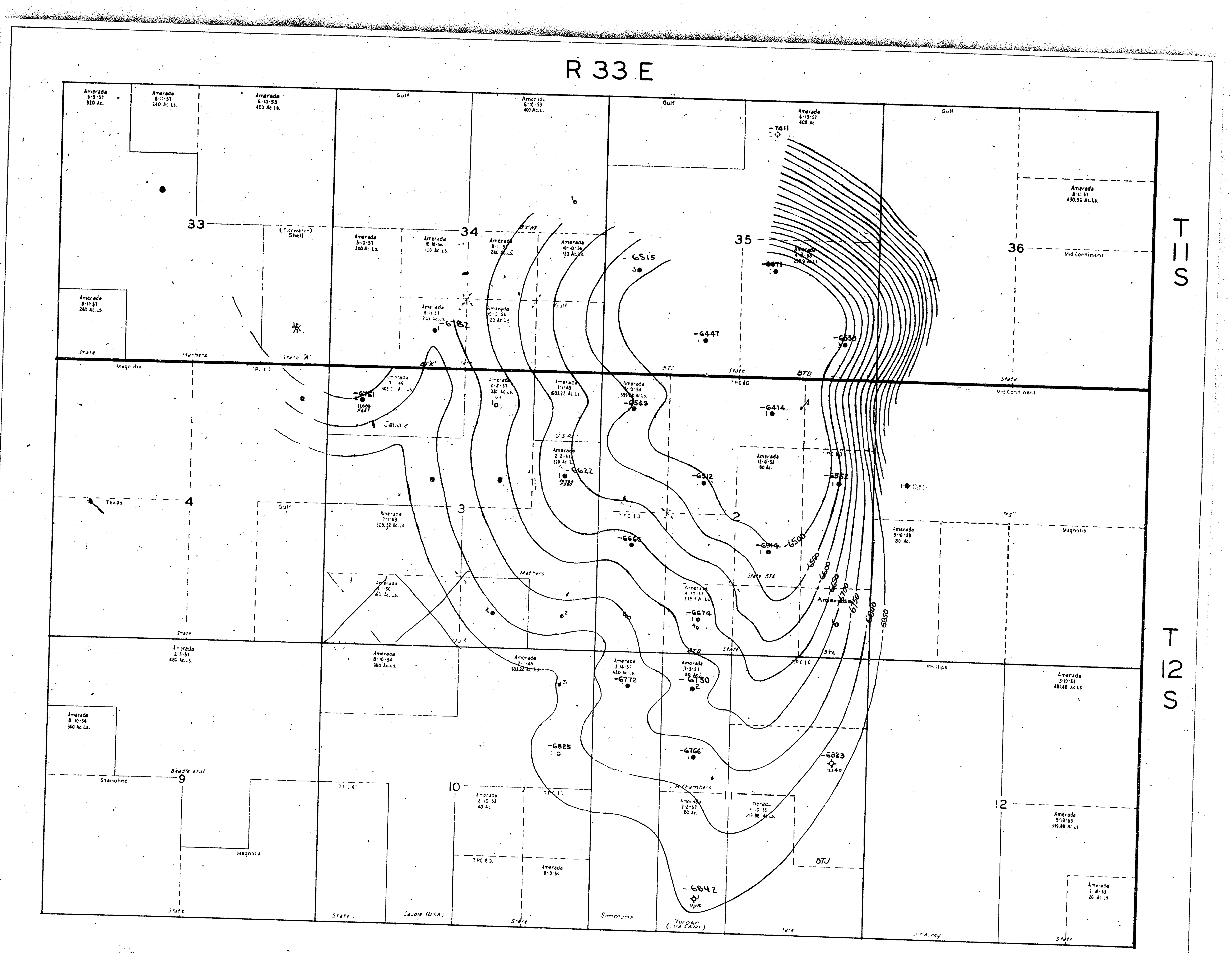


BEFORE THE
OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO
EX. # 8
CASE 1220

96


R 33 E
U.S. HIGHWAY 380
T 11 S
T 12 S
BTM
BTK
STL
STD
Amerada
Shell
St. Mtn "B"
Commercial
Pennzoil
Tenneco
EXHIBIT 3
BEFORE THE
OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO
Amerada EXHIBIT No. 3
CASE 1220
POOL OUTLINE
PENNSYLVANIAN WELLS
DEVONIAN WELLS
— POOL DELINEATION OF 8600' PERMO-PENNSYLVANIAN GAS ZONE
BAGLEY FIELD
LEA COUNTY, NEW MEXICO
SCALE 1" = 2000 FEET

97



STRUCTURE MAP - TOP OF DEVONIAN PAY
CONTOUR INTERVAL - 50'

BAGLEY FIELD

LEA COUNTY, NEW MEXICO

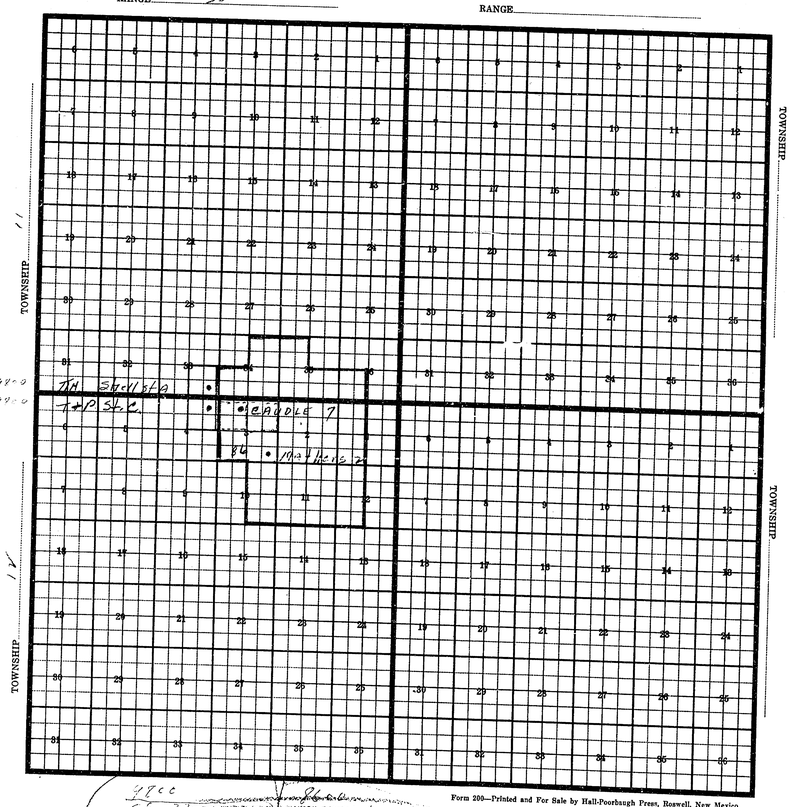
SCALE 1"=1000'

98

Lower Penn.
9800 foot zone SE/4 33-11-33, NE/4 4-12-33 NW 3-12-33 (9766-9980)
Upper Penn.
8600 foot zone N/2 AND SE/4 3-12-33 (8589-8648)
Oil zone (8930-9015)

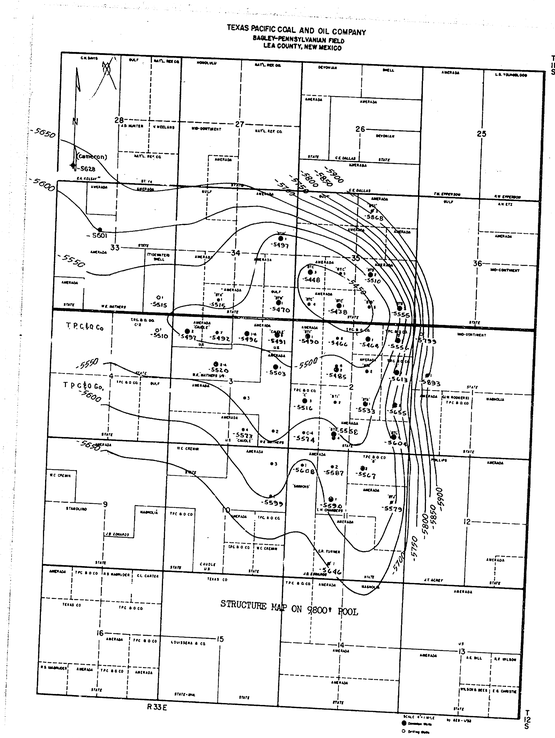
COUNTY_____ STATE_____

RANGE 33 RANGE_____



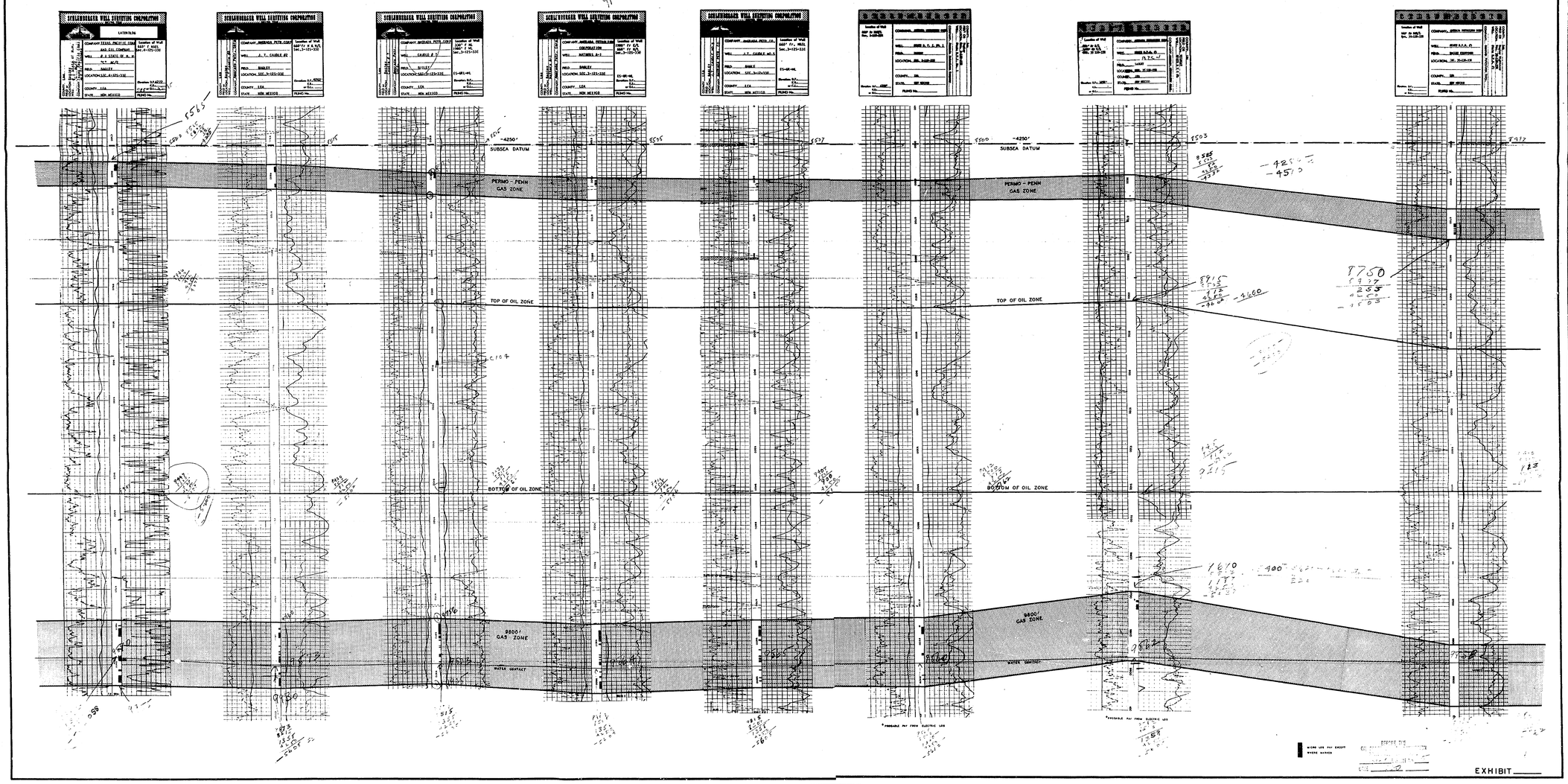
Form 200—Printed and For Sale by Hall-Poorbaugh Press, Roswell, New Mexico

TPCC
SE 33-11-33
NE 4-12-33
NW 3-12-33



99

EAST-WEST ELECTRIC LOG CROSS-SECTION BAGLEY FIELD



EXHIBIT

100

NORTH – SOUTH ELECTRIC LOG CROSS – SECTION BAGLEY FIELD

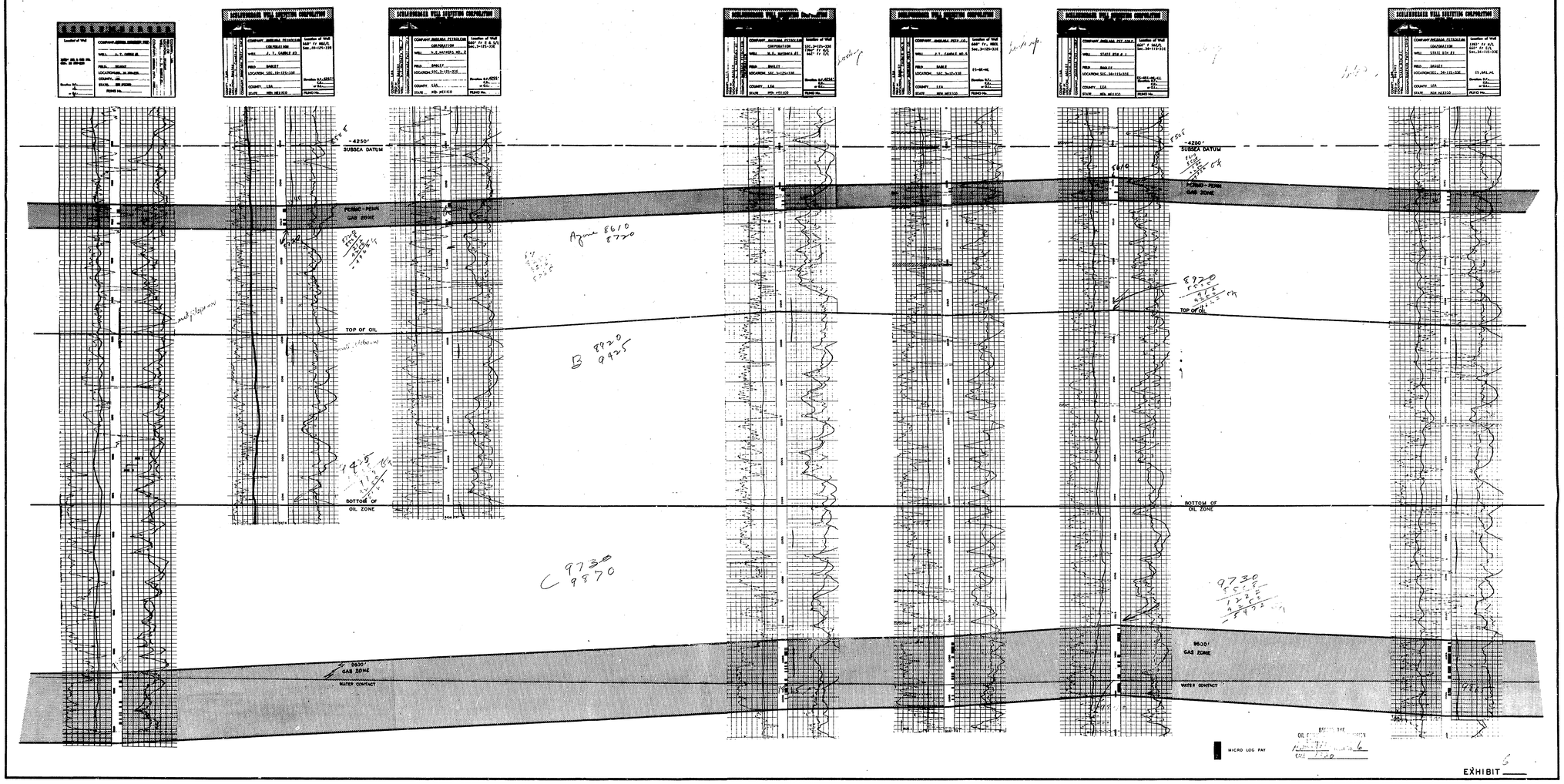
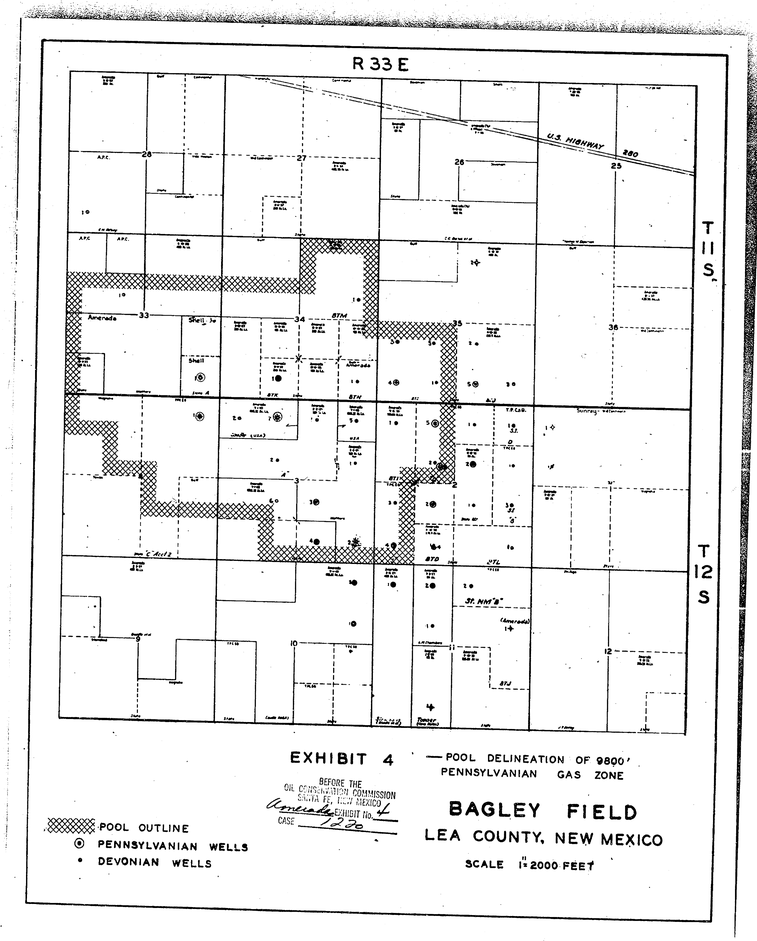
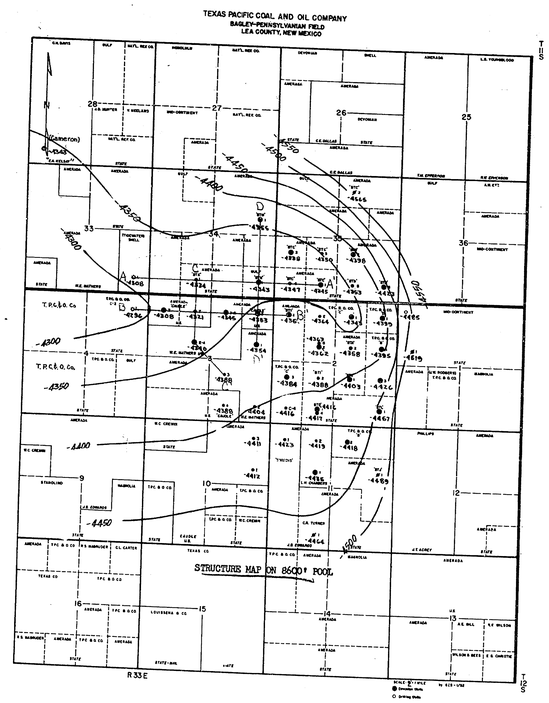


EXHIBIT ____

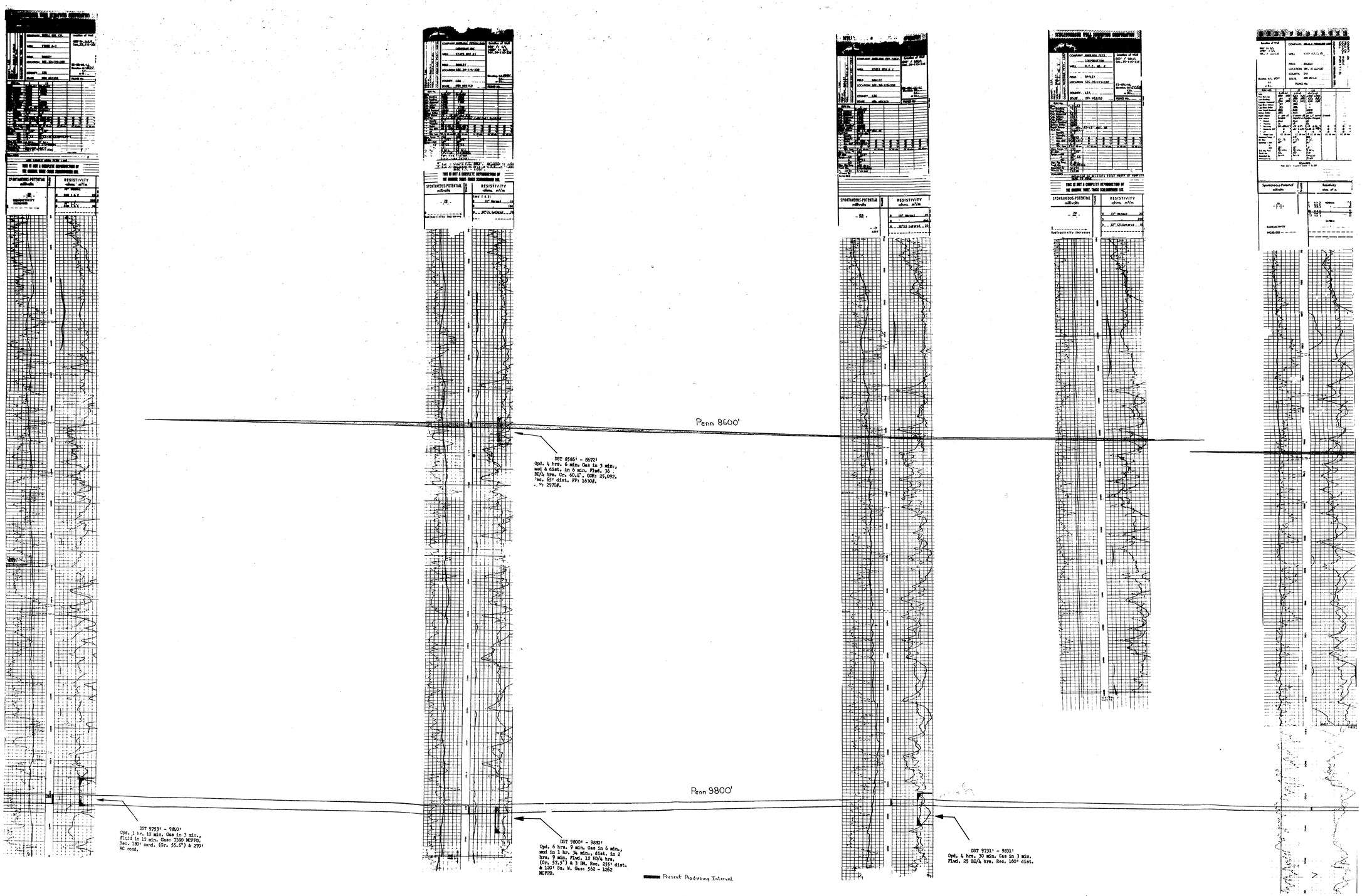
101


R 33 E
U.S. HIGHWAY 380
T 11 S
T 12 S
Amerada
Shell
St. NM "B"
EXHIBIT 4
— POOL DELINEATION OF 9800' PENNSYLVANIAN GAS ZONE
POOL OUTLINE
PENNSYLVANIAN WELLS
DEVONIAN WELLS
BAGLEY FIELD
LEA COUNTY, NEW MEXICO
SCALE 1" = 2000 FEET
BEFORE THE OIL CONSERVATION COMMISSION SANTA FE, NEW MEXICO
EXHIBIT No. 4
CASE 1230

102


TEXAS PACIFIC COAL AND OIL COMPANY
BAGLEY-PENNSYLVANIAN FIELD
LEA COUNTY, NEW MEXICO
(Kennetron)
-9,600
-9,800
-10,000
-10,200
-9,400
-9,200
-9,000
-8,800
-8,600
-8,400
-8,200
-8,000
-7,800
-7,600
-7,400
-7,200
-7,000
-6,800
-6,600
-6,400
-6,200
-6,000
-5,800
-5,600
-5,400
-5,200
-5,000
-4,800
-4,600
-4,400
-4,200
-4,000
T.P.C.&O.Co.
STRUCTURE MAP ON 8600' POOL
R 33 E
T 12 S
BEFORE THE OIL CONSERVATION COMMISSION SANTA FE, NEW MEXICO
EXHIBIT No. 1
CASE 1230

BAGLEY PENNSYLVANIAN
WEST-EAST CROSS SECTION A-A'



103

BAGLEY PENNSYLVANIAN
EAST - WEST CROSS SECTION BB'

BEFORE THE OIL CONSERVATION COMMISSION
EXHIBIT 7
CASE 1660

8000'
8500'
9000'
9500'
10000'

DST 8560' - 8643'
Opd. 1 hr, 30 min. Gas in 4 min., dist. in 5 min. Gas: 787M MCFPD, 1" chk., surf. FP 1300#. Flwd. 7.5 Bo. Gr. 68°. FP: 1500 - 2375#. 30 min. SIP: 2625#.

DST 8565' - 8717'
Opd. 4 hrs. 8 min. Gas in 4 min., mud & dist. in 8 min. Flwd. 41.4 BO/4 hrs. Gr. 59.7°. Gas: 6850 MCFPD. GOR: 2758. Rec. 304' dist. & 60' Su. W. FP: 1490 - 1575#. 15 min. SIP: 3050#.

DST 8585' - 8665'
Opd. 4 hrs. 10 min. Gas in 3 min., (6965 MCFPD), mud in 8 min., dist. in 10 min. Flwd. 38 BO/4 hrs. Gr. 60°. Rec. 20' dist. FP: 1970#. 15 min. SIP: 3060#.

DST 9795' - 9835'
Opd. 3 hrs. Gas in 30 min., TSTM. Rec. 110' SGCM. FP: 0#. 15 min. SIP: 700#.

DST 9764' - 9830'
Opd. 5 hrs. 50 min. Gas in 6 min., mud & dist. in 1 hr. 50 min. Flwd. 8.3 BO/4 hrs. Gr. 51.7°. Gas vol.: 1628 MCFPD. Closed tool & bled off 1.7 BO, no SS or W. Rec. 420' oil, MW. GOR: 11797. FP: 380 - 1650. 15 min. SIP: 3580#.

DST 9768' - 9892'
Opd. 4 hrs. Gas in 4 min. - 1064 MCFPD. Rec. 140' dist. (Gr. 58.7°) & 540' SGCM. FP: 505#. SIP: 3555#.

DST 9753' - 9853'
Opd. 5 hrs. 7 min. Gas in 4 min., mud in 10 min., dist. in 55 min. Flwd. 40 BO/4 hrs. Gr. 50.6°. FP: 770 - 860#. 15 min. SIP: 3070#.

DST 9731' - 9860'
Opd. 5 hrs. 20 min. Gas in 5 min., dist. in 8 min. Flwd. 15BO/4 hrs. Gas: 1958 MCFPD. Rec. 270' dist. (Gr. 56°) & 180' Su. W. GOR: 11,201

Penn 8600'

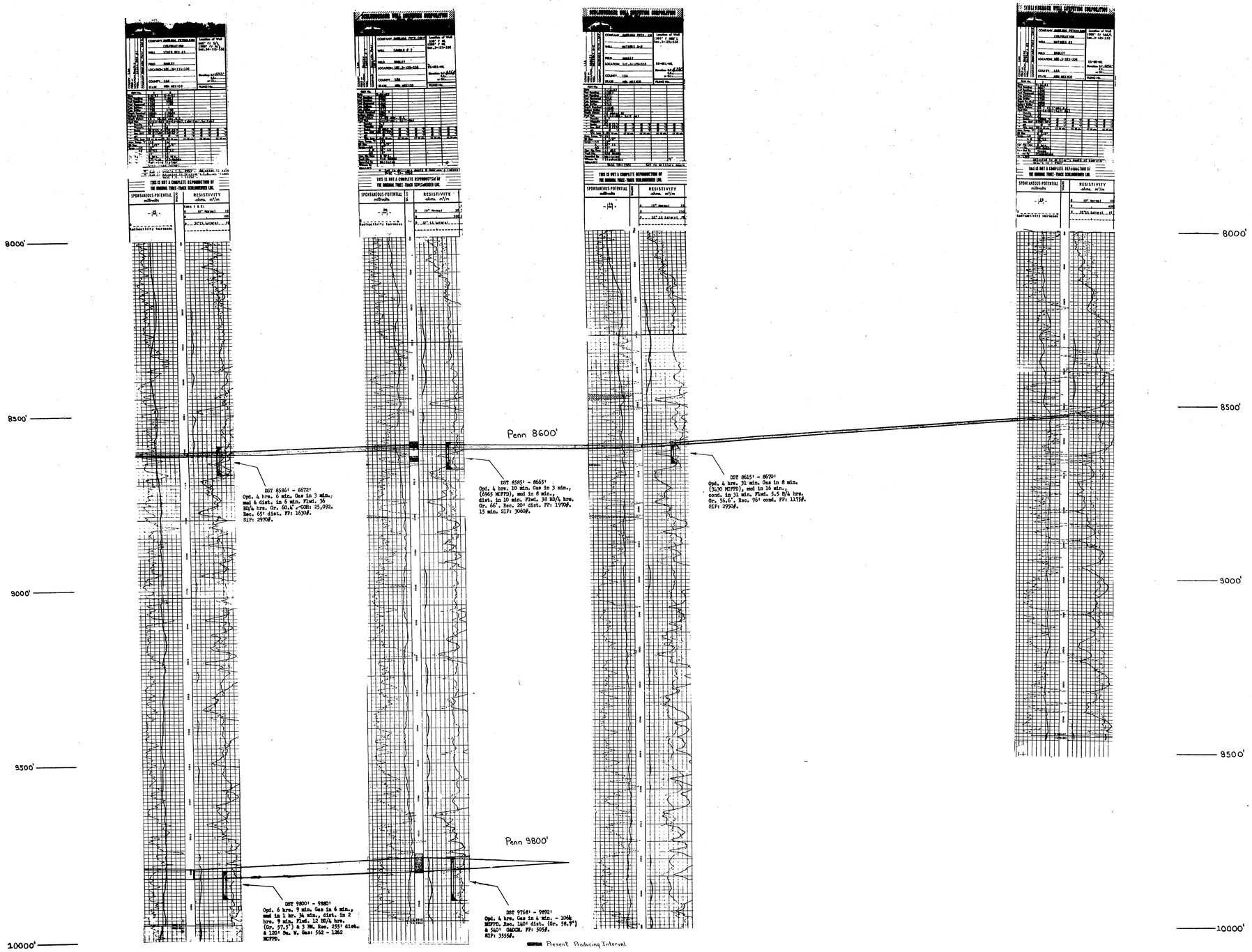
Penn 9800'

Present Producing Interval

104

BEFORE THE OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO
EXHIBIT No. 5
CASE 1220

BAGLEY PENNSYLVANIAN
NORTH-SOUTH CROSS SECTION C-C'



105

BAGLEY PENNSYLVANIAN
NORTH-SOUTH CROSS SECTION D-D'

8000'
8500'
9000'
9500'
10000'

Penn 8600'

Penn 9800'

DST 9765' - 9840'
Opd. 4 hrs. Gas in 8 min. - 362 to 611 MCFPD. Rec. 820' mud, 40% gas & clear Dist. FP: 240 - 310#. 15 min. SIP: 3360#.

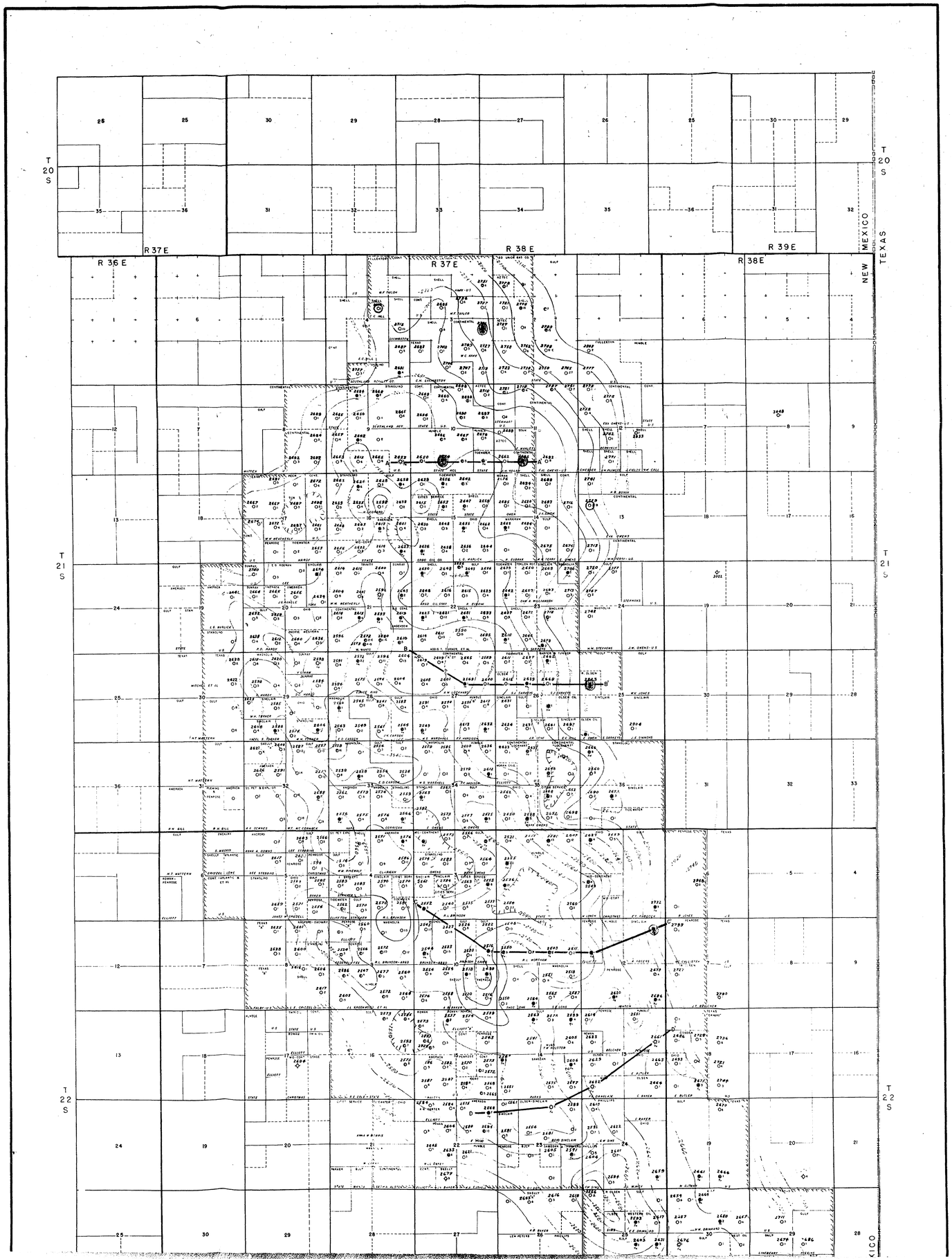
DST 9731' - 9831'
Opd. 4 hrs. 30 min. Gas in 3 min. Flwd. 25 BO/4 hrs. Rec. 160' dist.

DST 9731' - 9860'
Opd. 5 hrs. 20 min. Gas in 5 min., dist. in 8 min. Flwd. 158D/4 hrs. Gas: 1958 MCFPD. Rec. 270' dist. (Gr. 56°) & 180' Sa. w. GCM: 11,201

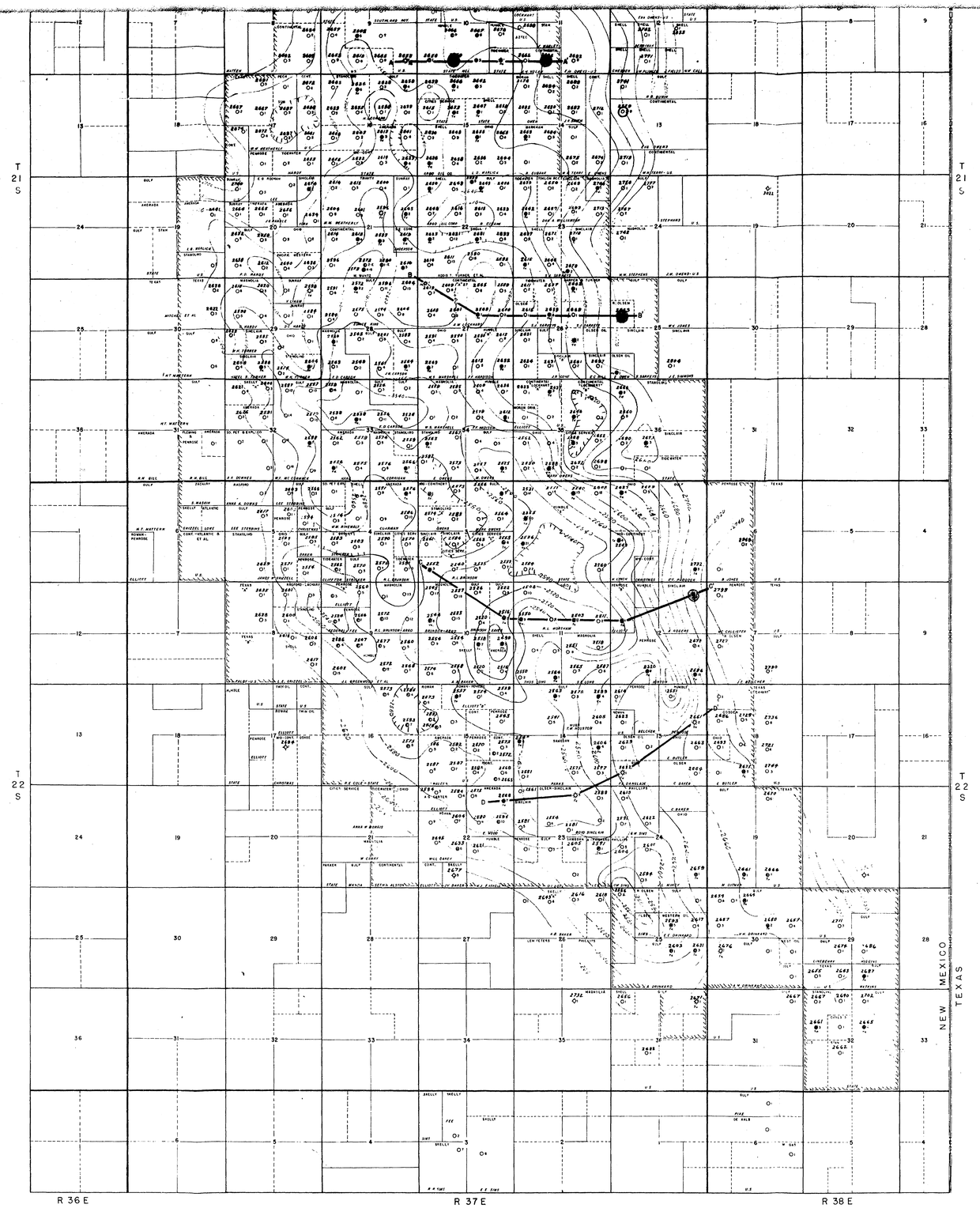
DST 8610' - 8675'
1. 4 hrs. Gas in 3 min. Int. Vol.: 71,200 MCFPD. Final Vol.: 32 MCFPD
Rec. 360' GCM.

DST 9768' - 9835'
Opd. 4 hrs. Gas in 50 min. Rec. 275' GCM.

106



107



Ex. #1

BEFORE THE
OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO
EXHIBIT #1
CASE 104

LEGEND:
- ① – ELLENBURGER WELLS.
- ⊘ – HAKE "
- ⊘ – MCKEE "
- ○ – DRINKARD "
- ● – TUBB OIL WELLS.
- ✱ – TUBB GAS WELLS.
- ◎ – TUBB WELLS –LOW GAS/LIQUID RATIO.
- Ⓞ – OIL TESTED IN TUBB FORMATION.

N.

N.M. OIL CONSERVATION COMMISSION
HOBBS, NEW MEXICO

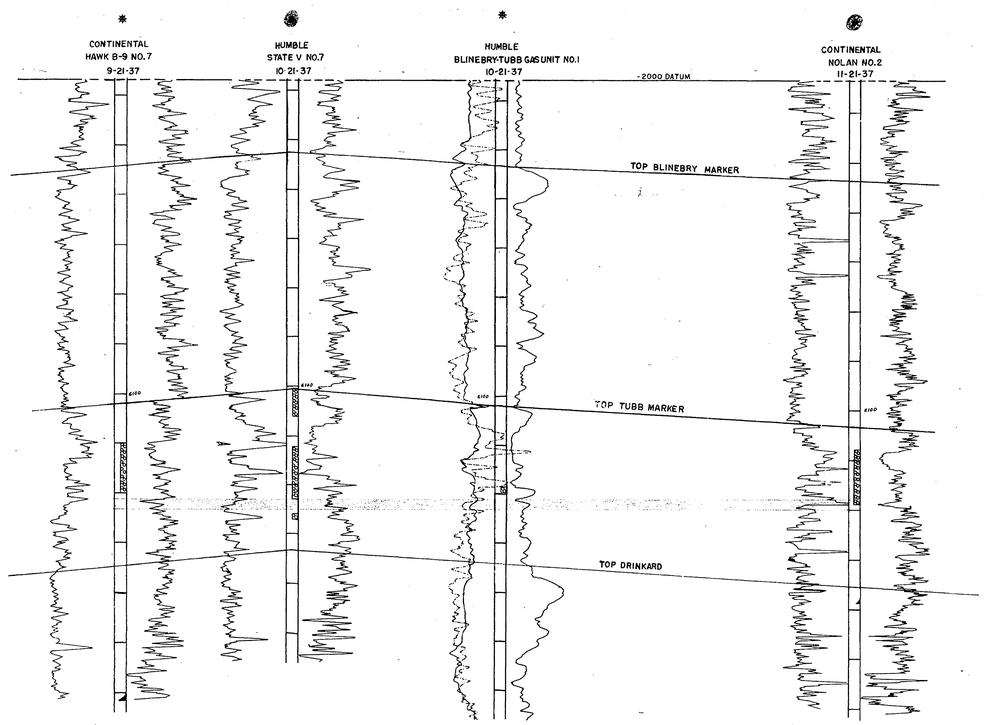
TUBB POOL
LEA COUNTY, NEW MEXICO

STRUCTURAL MAP ON THE TUBB MARKER

CONTOUR INTERVAL
SCALE: 1"=2000'
GEOLOGIST J. W. RUNYAN
DATE:

0 2000 4000 6000 8000 10000
FEET

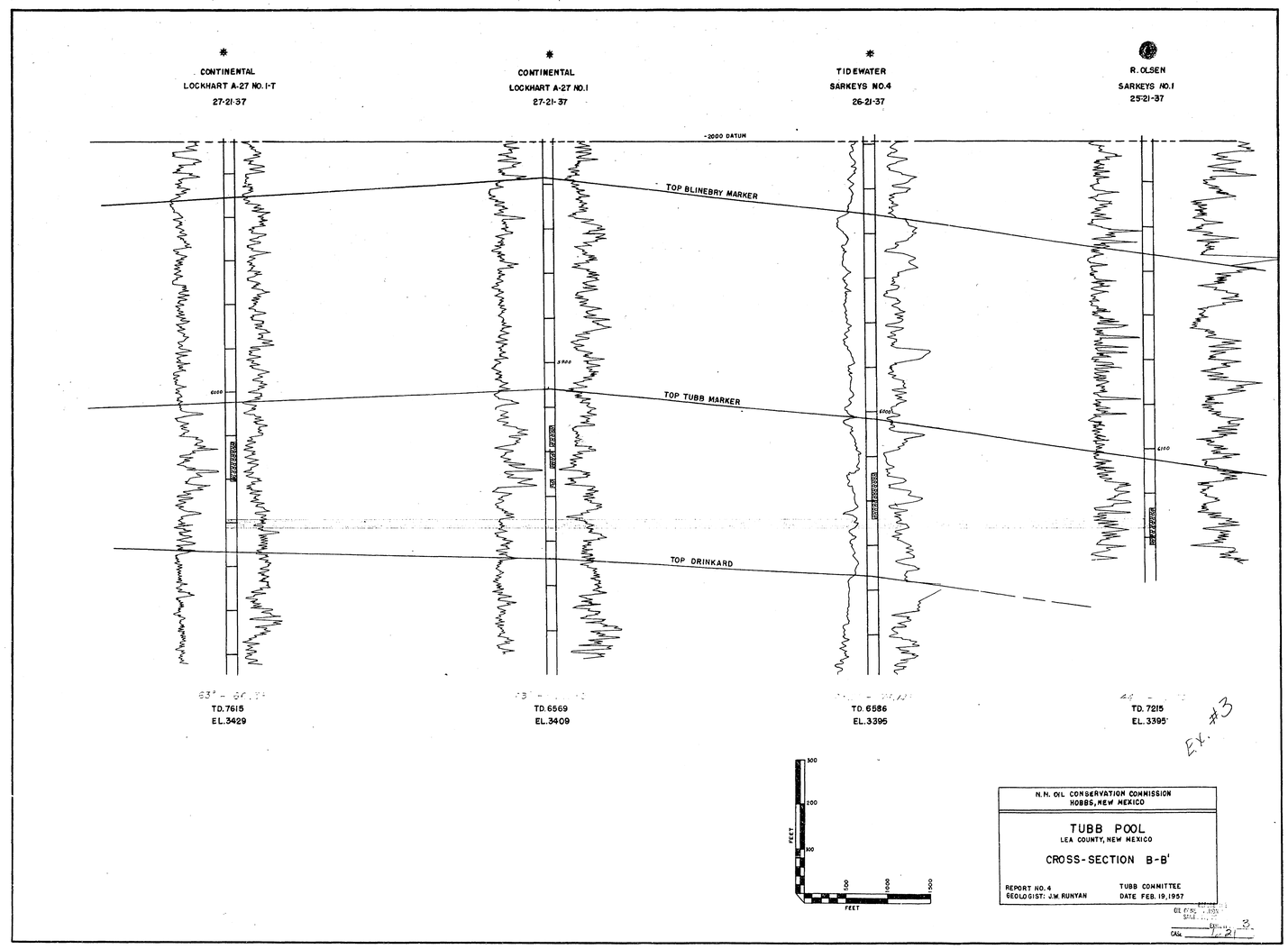
108



109

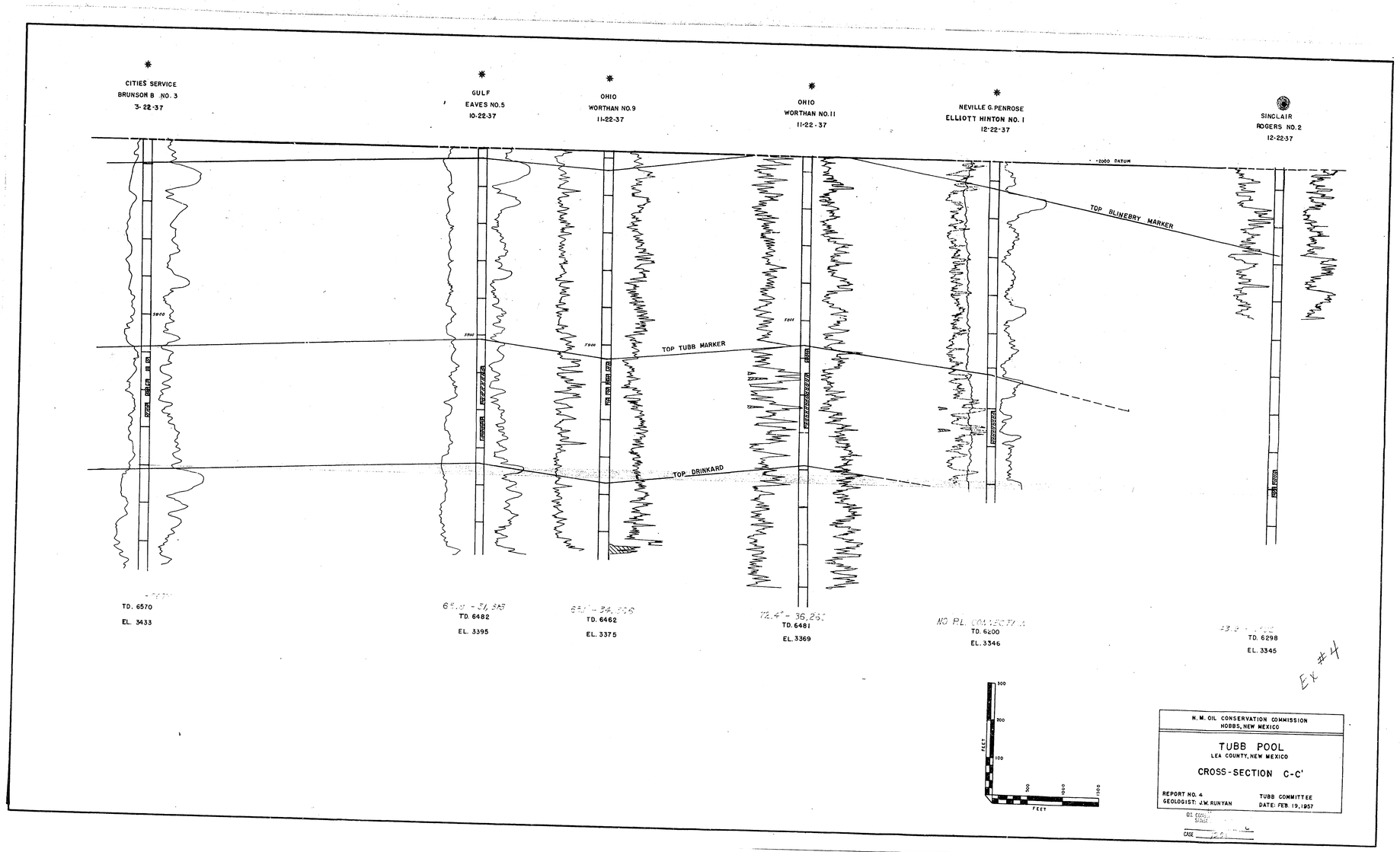
E-1 #2

OIL CONS. COMM.
CASE 1321


CONTINENTAL
LOCKHART A-27 NO. 1-T
27-21-37
CONTINENTAL
LOCKHART A-27 NO. 1
27-21-37
TIDEWATER
SARKEYS NO. 4
26-21-37
R. OLSEN
SARKEYS NO. 1
25-21-37
-2000 DATUM
TOP BLINEBRY MARKER
TOP TUBB MARKER
TOP DRINKARD
TD. 7615
EL. 3429
TD. 6569
EL. 3409
TD. 6586
EL. 3395
TD. 7215
EL. 3395
FEET
FEET
N.M. OIL CONSERVATION COMMISSION
HOBBS, NEW MEXICO
TUBB POOL
LEA COUNTY, NEW MEXICO
CROSS-SECTION B-B'
REPORT NO. 4
GEOLOGIST: J.W. RUNYAN
TUBB COMMITTEE
DATE FEB. 19, 1957

Ex. #3

110



H. M. OIL CONSERVATION COMMISSION
HOBBS, NEW MEXICO

TUBB POOL

LEA COUNTY, NEW MEXICO

CROSS-SECTION C-C'

REPORT NO. 4
GEOLOGIST: J.W. RUNYAN

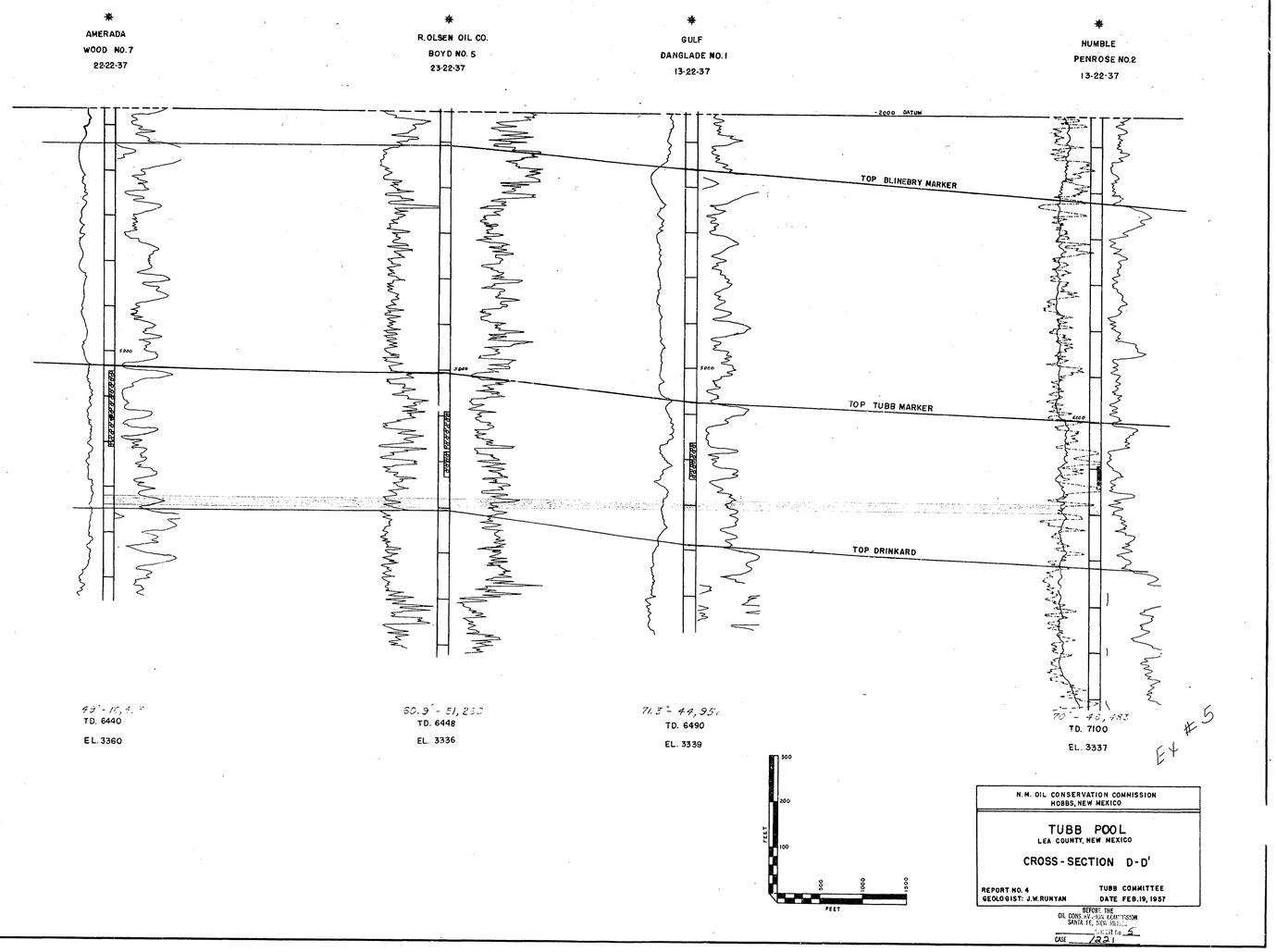
TUBB COMMITTEE
DATE: FEB. 19, 1957

OIL CONS. DIV.
SANTA FE

CASE 601

EX #4

111


AMERADA
WOOD NO.7
22-22-37
R.OLSEN OIL CO.
BOYD NO. 5
23-22-37
GULF
DANGLADE NO.1
13-22-37
HUMBLE
PENROSE NO.2
13-22-37
-2000 DATUM
TOP BLINEBRY MARKER
TOP TUBB MARKER
TOP DRINKARD
5900
5900
5900
6000
49'-16,4."
TD. 6440
EL. 3360
50.9'-51,250
TD. 6448
EL. 3336
71.3'-44,95.
TD. 6490
EL. 3339
70'-48,483
TD. 7100
EL. 3337
Ex #5
500
200
100
FEET
500
1000
2000
FEET
N.M. OIL CONSERVATION COMMISSION
HOBBS, NEW MEXICO
TUBB POOL
LEA COUNTY, NEW MEXICO
CROSS-SECTION D-D'
REPORT NO. 4
GEOLOGIST: J.W.RUNYAN
TUBB COMMITTEE
DATE FEB.19, 1957
BEFORE THE
OIL CONS. AT. ION COMMISSION
SANTA FE, NEW MEX.CO
CASE 1221

112

R 25E R 26E R 27E

T 19 S

T 20 S

T 21 S

FEDERAL LSE. SERIAL NUMBER	
03203	1916.25
03207	2375.40
03215	1704.51
03217	1080.00
03365	223.72
070997	320.00
071846	320.00
071847	160.00
071848	160.00
071849	160.00
STATE LSE.	
E-2864	200.00
TOTAL:	10,635.88

LAKE

McMILLAN

WILSHIRE OIL COMPANY
OF
TEXAS

SEVEN RIVERS HILLS PROSPECT

EDDY COUNTY,
NEW MEXICO

SCALE: 1" = 4000'

CONTOURS—TOP QUEEN SAND 9-13-56
INTERVAL 100'

R 24E R 25 E R 26 E

BOUNDARY—RESERVOIR NO.3 — CARLSBAD PROJECT

PROPOSED UNIT BOUNDARY

3260 FOOT CONTOUR INTERVAL—RESERVOIR NO.3

9680 AC. WILSHIRE	87.936%
1328 AC. TO BE ADDED	12.064%
11,008	100.000%

956 AC WILSHIRE

PROPOSED LOC.

BEFORE THE OIL CONSERVATION COMMISSION SANTA FE, NEW MEXICO
CASE NO. EXHIBIT NO. 2
DATE 12-5-56

FIG. 2

113

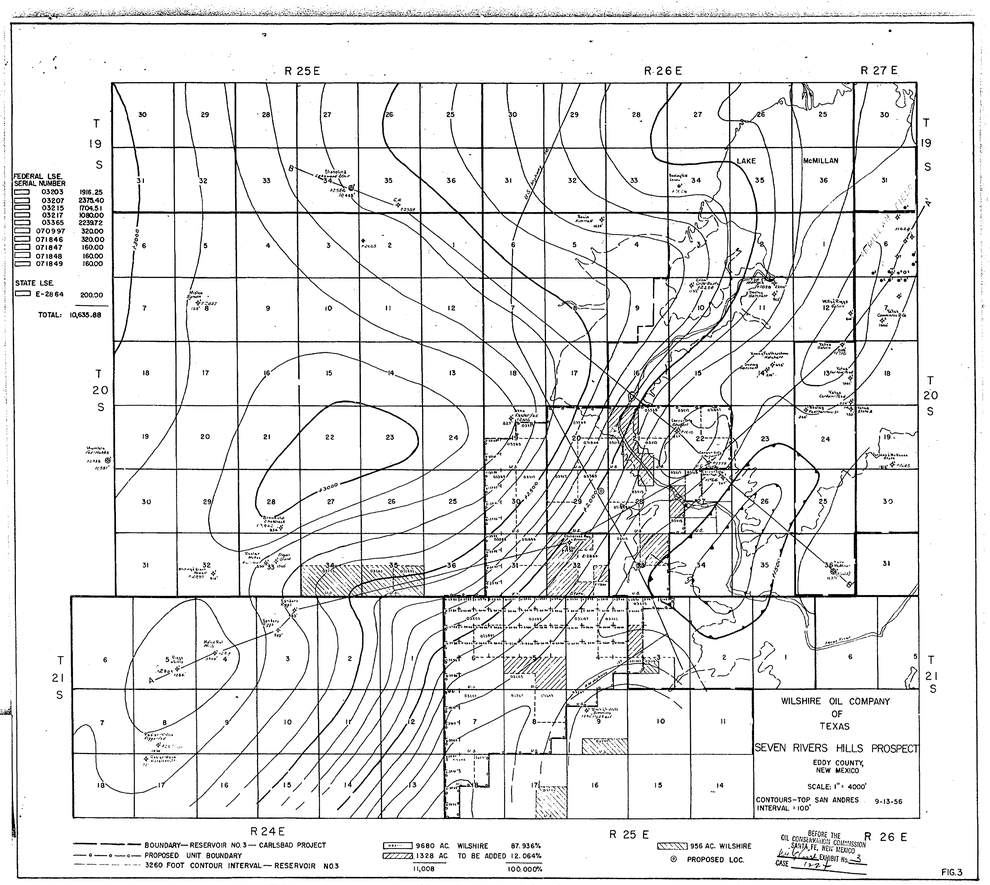

R 25E
R 26E
R 27E
T 19 S
T 20 S
T 21 S
LAKE
McMILLAN
FEDERAL LSE. SERIAL NUMBER
03203 1916.25
03207 2375.40
03215 1704.51
03217 1080.00
03365 2239.72
070997 320.00
071846 320.00
071847 160.00
071848 160.00
071849 160.00
STATE LSE.
E-2864 200.00
TOTAL: 10,635.88
WILSHIRE OIL COMPANY OF TEXAS
SEVEN RIVERS HILLS PROSPECT
EDDY COUNTY, NEW MEXICO
SCALE: 1" = 4000'
CONTOURS-TOP SAN ANDRES 9-13-56
INTERVAL = 100'
R 24E
R 25 E
R 26 E
BOUNDARY— RESERVOIR NO. 3 — CARLSBAD PROJECT
PROPOSED UNIT BOUNDARY
3260 FOOT CONTOUR INTERVAL— RESERVOIR NO3
9680 AC. WILSHIRE 87.936%
1328 AC. TO BE ADDED 12.064%
11,008 100.000%
956 AC. WILSHIRE
PROPOSED LOC.
BEFORE THE OIL CONSERVATION COMMISSION SANTA FE, NEW MEXICO
EXHIBIT NO. 3
CASE 1327

FIG.3

114

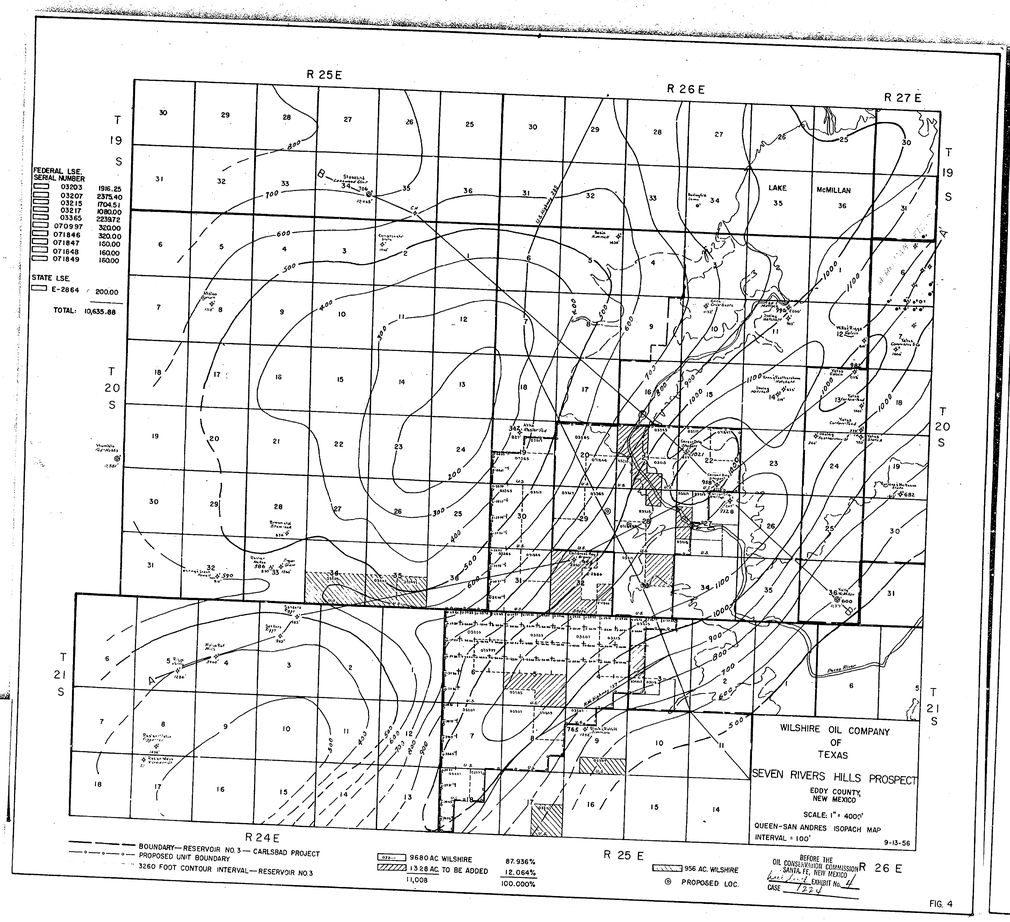

R 25E
R 26E
R 27E
T 19 S
T 20 S
T 21 S
R 24E
R 25 E
R 26 E
FEDERAL LSE. SERIAL NUMBER
03203 1916.25
03207 2375.40
03215 1704.51
03217 1080.00
03365 223972
070997 320.00
071846 320.00
071847 160.00
071848 160.00
071849 160.00
STATE LSE.
E-2864 200.00
TOTAL: 10,635.88
LAKE
McMILLAN
WILSHIRE OIL COMPANY OF TEXAS
SEVEN RIVERS HILLS PROSPECT
EDDY COUNTY, NEW MEXICO
SCALE: 1" = 4000'
QUEEN-SAN ANDRES ISOPACH MAP
INTERVAL = 100'
9-13-56
BOUNDARY—RESERVOIR NO.3 — CARLSBAD PROJECT
PROPOSED UNIT BOUNDARY
3260 FOOT CONTOUR INTERVAL—RESERVOIR NO.3
9680 AC. WILSHIRE 87.936%
1328 AC. TO BE ADDED 12.064%
11,008 100.000%
956 AC. WILSHIRE
PROPOSED LOC.
BEFORE THE OIL CONSERVATION COMMISSION SANTA FE, NEW MEXICO
EXHIBIT No. 4
CASE 722

FIG. 4

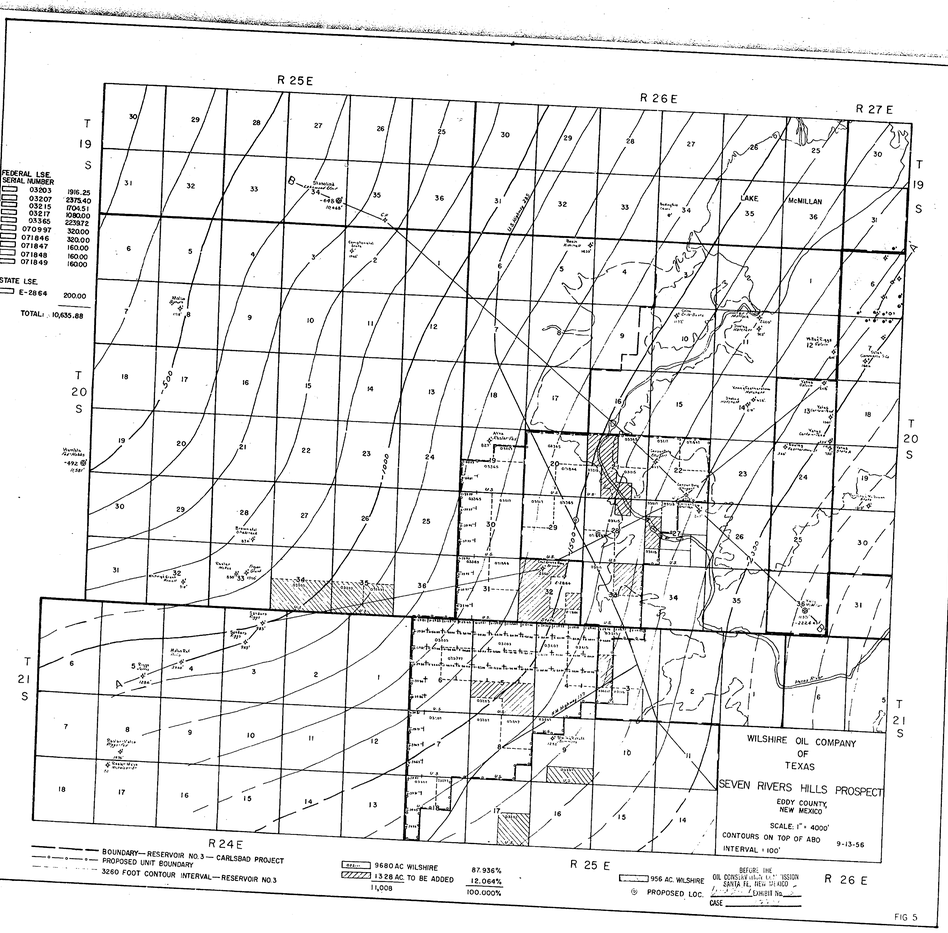
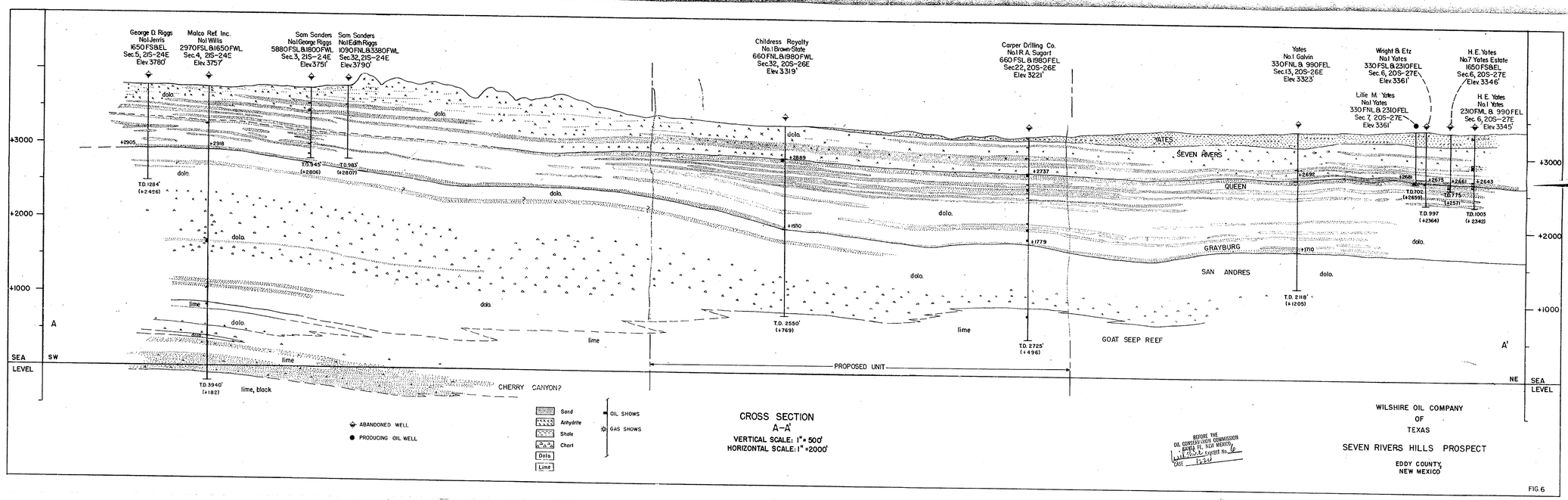

R 25E
R 26E
R 27E
T 19 S
T 20 S
T 21 S
R 24E
R 25 E
R 26 E
FEDERAL LSE. SERIAL NUMBER
03203 1916.25
03207 2375.40
03215 1704.51
03217 1080.00
03365 223972
070997 320.00
071846 320.00
071847 160.00
071848 160.00
071849 160.00
STATE LSE.
E-2864 200.00
TOTAL: 10,635.88
LAKE
McMILLAN
WILSHIRE OIL COMPANY OF TEXAS
SEVEN RIVERS HILLS PROSPECT
EDDY COUNTY, NEW MEXICO
SCALE: 1" = 4000'
CONTOURS ON TOP OF ABO
INTERVAL = 100'
9-13-56
BOUNDARY—RESERVOIR NO.3 — CARLSBAD PROJECT
PROPOSED UNIT BOUNDARY
3260 FOOT CONTOUR INTERVAL—RESERVOIR NO.3
9680 AC. WILSHIRE 87.936%
1328 AC. TO BE ADDED 12.064%
11,008 100.000%
956 AC. WILSHIRE
PROPOSED LOC.
BEFORE THE OIL CONSERVATION COMMISSION SANTA FE, NEW MEXICO
EXHIBIT No.
CASE

FIG 5



CROSS SECTION
A–A'
VERTICAL SCALE: 1" = 500'
HORIZONTAL SCALE: 1" = 2000'

WILSHIRE OIL COMPANY
OF
TEXAS

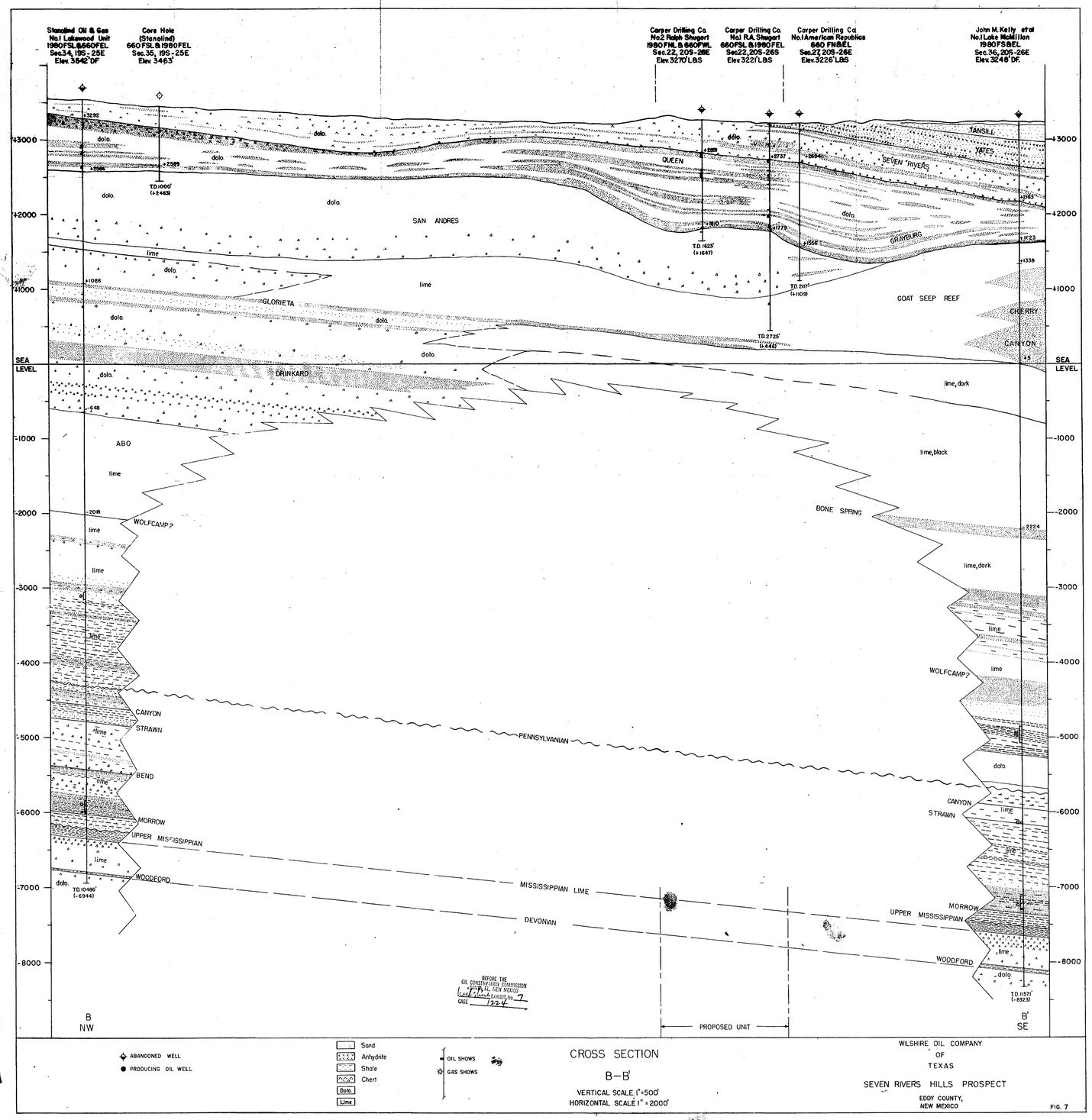
SEVEN RIVERS HILLS PROSPECT

EDDY COUNTY,
NEW MEXICO

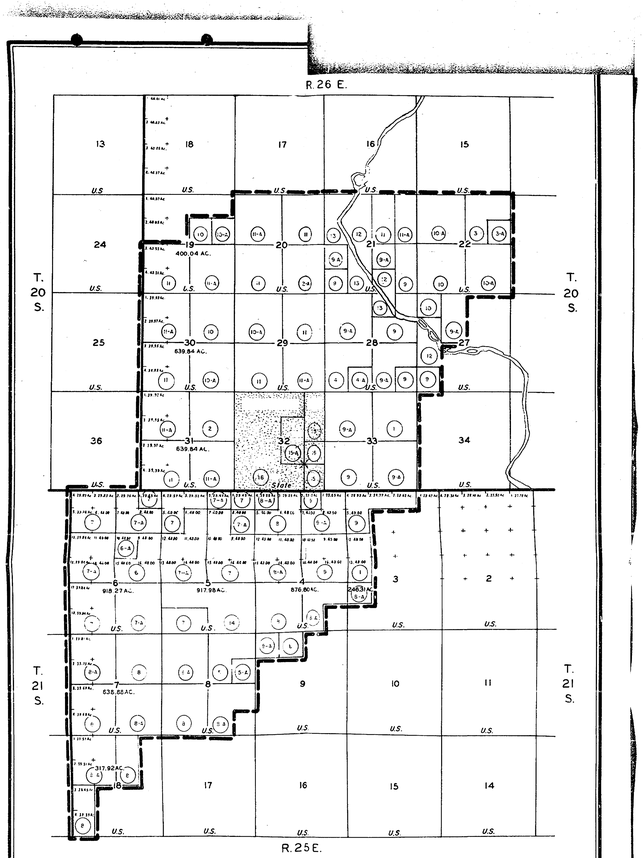
FIG. 6

BEFORE THE
OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO
Wilshire EXHIBIT No. 6
CASE 1253

116


Stanolind Oil & Gas No.1 Lotawood Unit 1980FSL&660FEL Sec.34, 19S-25E Elev. 3542' DF
Core Hole (Stanolind) 660FSL & 1980FEL Sec.35, 19S-25E Elev. 3463'
Carper Drilling Co. No.2 Ralph Shugart 1980FNL & 660FWL Sec.22, 20S-26E Elev. 3270' L&S
Carper Drilling Co. No.1 R.A. Shugart 660FSL & 1980FEL Sec.22, 20S-26S Elev. 3221' L&S
Carper Drilling Co. No.1 American Republics 660 FNL&EL Sec.27, 20S-26E Elev. 3226' L&S
John M. Kelly et al No.1 Lake McMillan 1980FS&EL Sec.36, 20S-26E Elev. 3248' DF.
+3000
+2000
+1000
SEA LEVEL
-1000
-2000
-3000
-4000
-5000
-6000
-7000
-8000
dolo.
lime
QUEEN
SAN ANDRES
GLORIETA
DRINKARD
ABO
WOLFCAMP?
CANYON
STRAWN
BEND
MORROW
UPPER MISSISSIPPIAN
WOODFORD
MISSISSIPPIAN LIME
DEVONIAN
PENNSYLVANIAN
TANSILL
YATES
SEVEN RIVERS
GRAYBURG
GOAT SEEP REEF
CHERRY CANYON
BONE SPRING
lime, dark
lime, black
T.D.1000' (+2463)
T.D.1623' (+1647)
T.D.2111' (+1109)
T.D.2725' (+445)
T.D.10486' (-6944)
T.D.11571' (-8323)
B NW
B' SE
PROPOSED UNIT
BEFORE THE OIL CONSERVATION COMMISSION SANTA FE, NEW MEXICO Case No. 7 EXHIBIT NO. 7 CASE 1224
ABANDONED WELL
PRODUCING OIL WELL
Sand
Anhydrite
Shale
Chert
Dolo.
Lime
OIL SHOWS
GAS SHOWS
CROSS SECTION
B–B'
VERTICAL SCALE 1"=500'
HORIZONTAL SCALE 1" = 2000'
WILSHIRE OIL COMPANY OF TEXAS
SEVEN RIVERS HILLS PROSPECT
EDDY COUNTY, NEW MEXICO
FIG. 7

117



LEGEND

	ACREAGE	PERCENT
FEDERAL LANDS	10 355.88	94.18%
STATE LANDS	640.00	5.82%
TOTAL	10 995.88	100.00%

○ TRACT NUMBER FROM EXHIBIT "B"

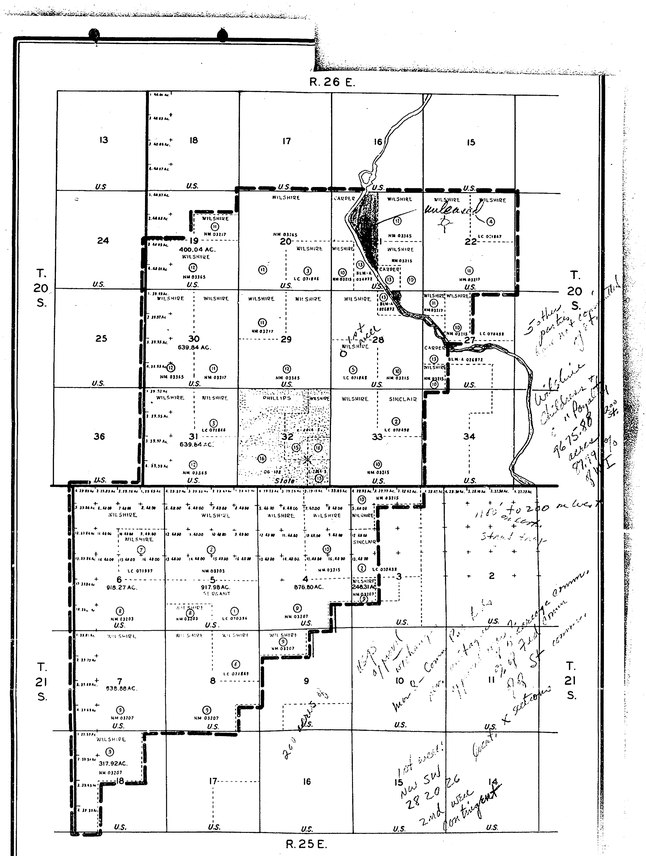
EXHIBIT "A"

SEVEN RIVERS HILLS UNIT AREA

EDDY COUNTY NEW MEXICO

SCALE 2 INCHES = 1 MILE

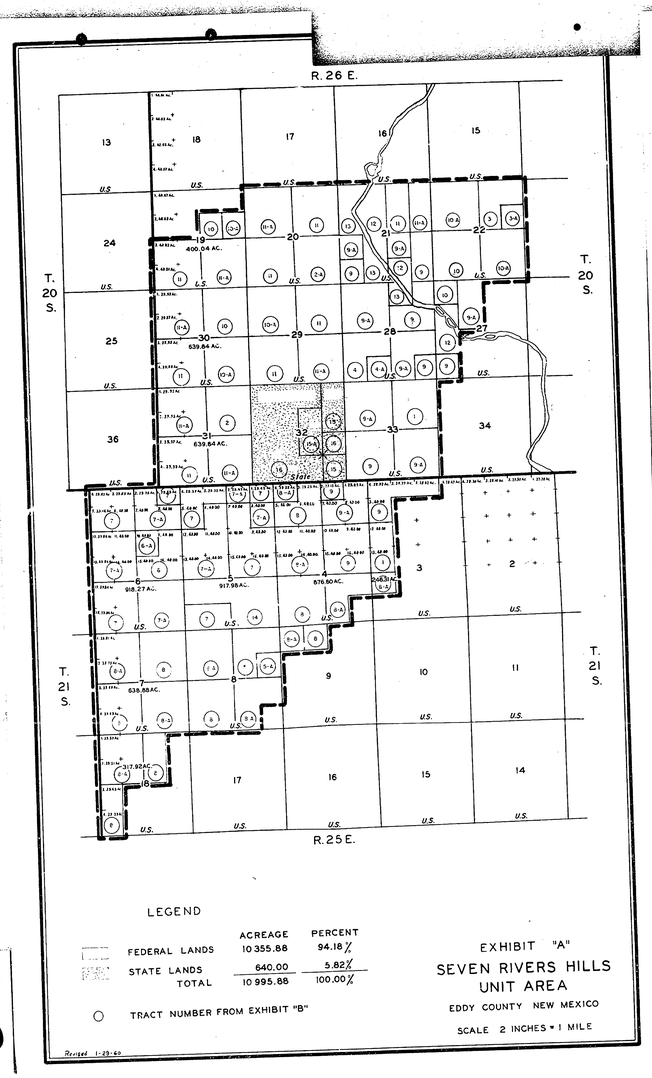
Revised 1-23-80

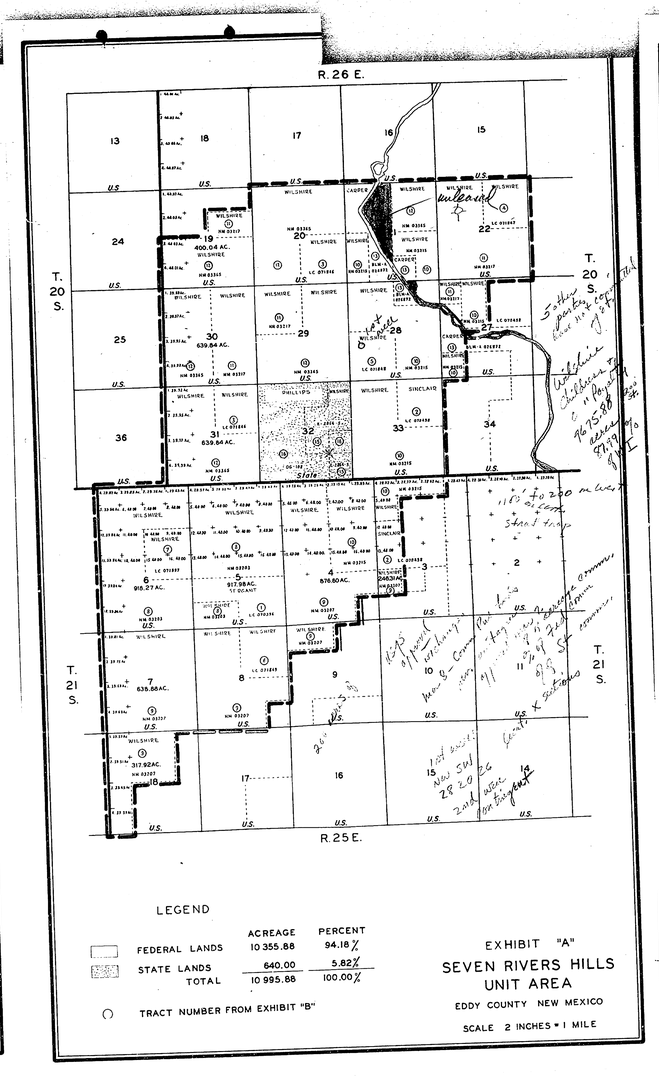


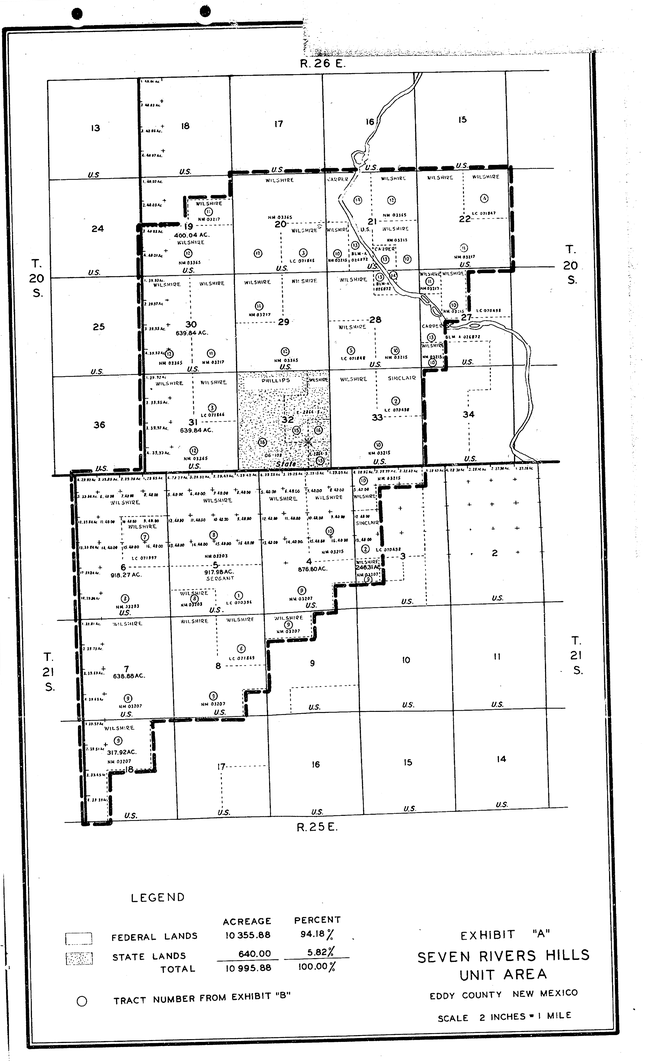
LEGEND

	ACREAGE	PERCENT
FEDERAL LANDS	10 355.88	94.18%
STATE LANDS	640.00	5.82%
TOTAL	10 995.88	100.00%

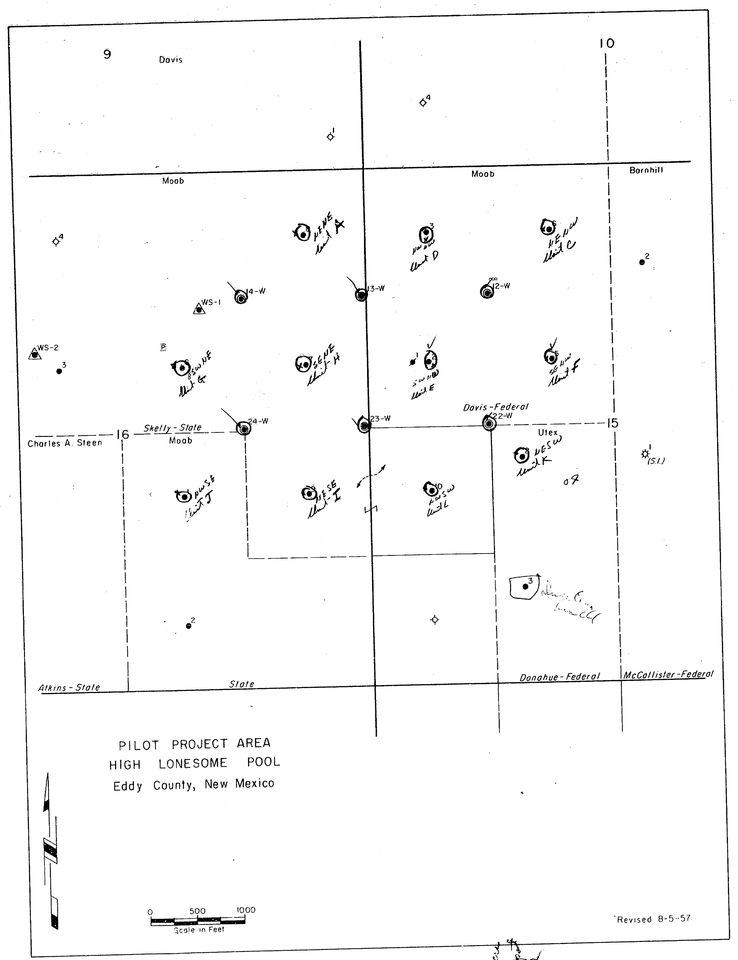
○ TRACT NUMBER FROM EXHIBIT "B"


R. 26 E.
T. 20 S.
T. 21 S.
R. 25 E.
LEGEND
FEDERAL LANDS 10 355.88 94.18%
STATE LANDS 640.00 5.82%
TOTAL 10 995.88 100.00%
TRACT NUMBER FROM EXHIBIT "B"
EXHIBIT "A"
SEVEN RIVERS HILLS UNIT AREA
EDDY COUNTY NEW MEXICO
SCALE 2 INCHES = 1 MILE
Revised 1-23-69


R. 26 E.
T. 20 S.
T. 21 S.
R. 25 E.
LEGEND
FEDERAL LANDS 10 355.88 94.18%
STATE LANDS 640.00 5.82%
TOTAL 10 995.88 100.00%
TRACT NUMBER FROM EXHIBIT "B"
EXHIBIT "A"
SEVEN RIVERS HILLS UNIT AREA
EDDY COUNTY NEW MEXICO
SCALE 2 INCHES = 1 MILE


R. 26 E.
T. 20 S.
T. 21 S.
R. 25 E.
LEGEND
FEDERAL LANDS 10 355.88 94.18%
STATE LANDS 640.00 5.82%
TOTAL 10 995.88 100.00%
TRACT NUMBER FROM EXHIBIT "B"
EXHIBIT "A"
SEVEN RIVERS HILLS UNIT AREA
EDDY COUNTY NEW MEXICO
SCALE 2 INCHES = 1 MILE

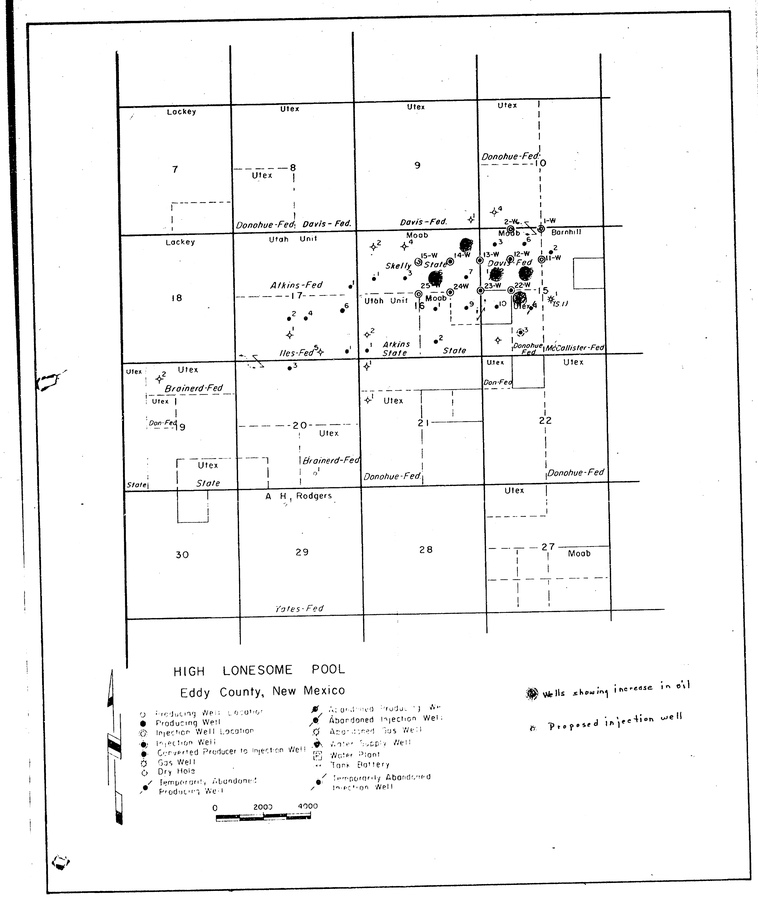
118



1191

O - Injection wells
O producing wells

40 acre spacing



SCHLUMBERGER WELL SURVEYING CORPORATION

Gamma Ray-Neutron

COMPANY MOAB DRILLING CO.

WELL DAVIS FEDERAL # 2

FIELD HIGH LONESOME

LOCATION SEC. 15-16S-29E

COUNTY EDDY

STATE NEW MEXICO

Location of Well
1980' f NL
760' f NL
Sec. 15-16S-29E

GRN

Elevation: D.F.
K.B. 3706
G.L. 3695

FILING No.

COUNTY Eddy
FIELD High Lonesome
WELL Davis Federal # 2
LOCATION 1980' f NL 760' f NL Sec. 15-16S-29E
COMPANY Moab Drilling Co.

RUN NO.	1		
Date	11-14-55		
Depth Reference	RT 10' Abv. GL		
First Reading	1934		
Last Reading	100		
Footage Measured	1834		
Max. Depth Reached	1935		
Bottom Driller	1938		
Maximum Temp. °F.			
Mud: Nature	Chemicals		
" Density	8.9		
" Viscosity	34		
" Resistivity	52 @ 1940 °F.	@	°F.
Casing Size & 1	14 # to 1940		to
Weight 2	to		to
Open Hole 1	to		to
2	to		to
Fluid level	Surf.		
Recording Speed (ft/hd)	2000 & 4000		
Sensitivity Top	GR) 150 N)300/400	GR)	N)
Time Constant			
Panel	GNP-C # 99		
Opr. Rig Time	2 Hrs.		
Sonde Size & Type	3 5/8"		
Truck No.	2704-Hobbs		
Server	Gathey		

REMARKS: CALIBRATION - BACKGROUND API GAMMA RAY 40 NEUTRON

Recording Speed (1850-1934) 2000 FPH (100-1850) 4000 FPH

	FINAL SCALE API FOR GAL	GAIN INCREASE FACTORS
Gamma Ray	100	4
Neutron	220	1

NEUTRON
STANDARD COUNTS/SECOND

SENSITIVITY CHANGE SHOWN ON LOG

HOLE SENSITIVITY 300 TO 305 FEET
HOLE SENSITIVITY 400 305 TO 1934 FEET

COLLARS RECORDED 18' DEEP

COLLARS CORRECTED

GAMMA RAY
MICROGRAMS RA EQ TON

NEUTRON ZERO

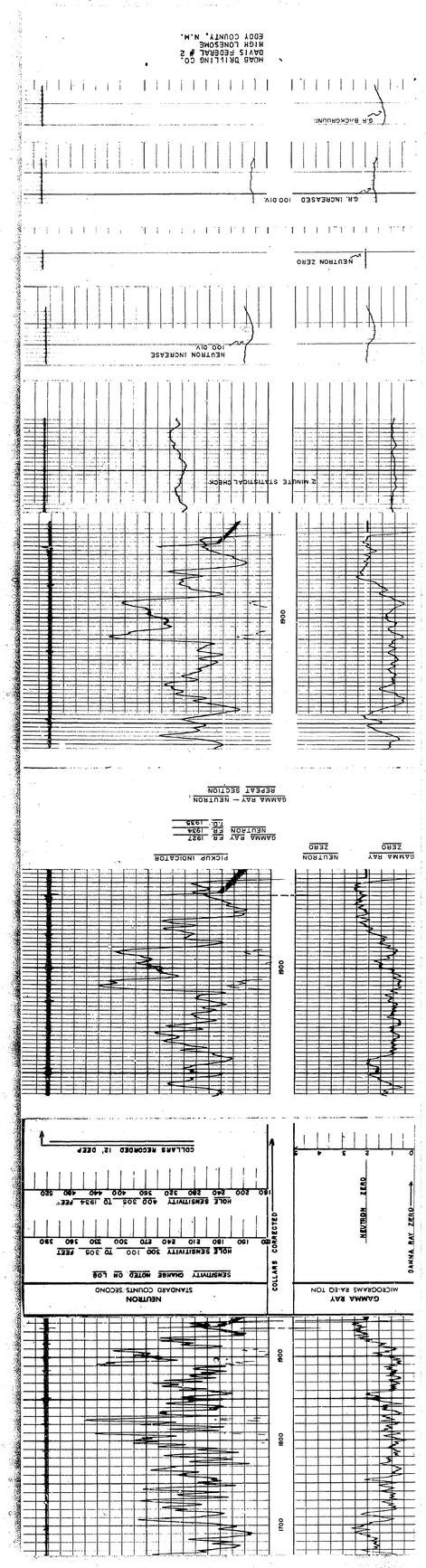
GAMMA RAY ZERO

0100 0200 0300 0400 0500 0600 0700 0800 0900 1000 1100 1200 1300 1400 1500 1600 1700 1800 1900

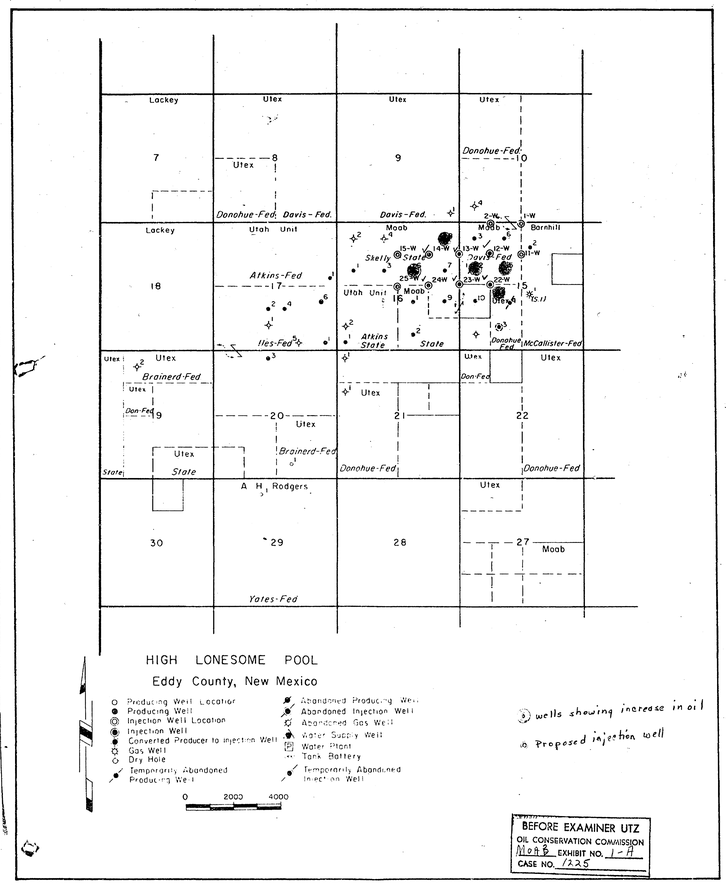
NEUTRON

GAMMA RAY

120


MOAB DRILLING CO.
DAVIS FEDERAL # 2
HIGH LONESOME
EDDY COUNTY, N.M.
G.R. BACKGROUND
G.R. INCREASED 100 DIV.
NEUTRON ZERO
NEUTRON INCREASE
100 DIV.
2 MINUTE STATISTICAL CHECK
GAMMA RAY — NEUTRON
REPEAT SECTION
6000
PICKUP INDICATOR
GAMMA RAY ZERO
NEUTRON ZERO
GAMMA RAY FROM 1927
NEUTRON FROM 1934
TO 1933
GAMMA RAY — NEUTRON
REPEAT SECTION
6000
NEUTRON
STANDARD COUNTS SECOND
SENSITIVITY CHANGE NOTED ON LOG
HOLE SENSITIVITY 100 105 TO 305 FEET
100 180 210 240 270 300 330 360 390
HOLE SENSITIVITY 400 305 TO 1934 FEET
160 200 240 280 320 360 400 440 480 520
COLLARS RECORDED 12' DEEP
COLLARS CORRECTED
GAMMA RAY
MICROGRAMS RA-EQ TON
GAMMA RAY ZERO
NEUTRON ZERO
0 1 2 3 4 5
6000
6100
6200

121



HIGH LONESOME POOL

Eddy County, New Mexico

- Producing Well Location
- Producing Well
- Injection Well Location
- Injection Well
- Converted Producer to Injection Well
- Gas Well
- Dry Hole
- Temporarily Abandoned Producing Well
- Abandoned Producing Well
- Abandoned Injection Well
- Abandoned Gas Well
- Water Supply Well
- Water Plant
- Tank Battery
- Temporarily Abandoned Injection Well

0 2000 4000

(5) wells showing increase in oil

(6) Proposed injection well

BEFORE EXAMINER UTZ
OIL CONSERVATION COMMISSION
Hearing EXHIBIT NO. 1-A
CASE NO. 1225

122

R. 3 W. R. 2 W.

MAGNOLIA
2-E
IP 6800m Mv
El 7060
TD 6211
9-27-56
JICARILLA

MAGNOLIA
1-F
IP 845m PC
5880m Mv
El 7147
TD 6300
6-11-56
JICARILLA

MAGNOLIA
2-G
IP 3895m Mv
El 7270
TD 6300
10-16-56
JICARILLA

MAGNOLIA
2-F
IP 3970m Mv
El 7263
TD 6255
10-30-56
JICARILLA

MAGNOLIA
1-G
IP 3135m PC
5450m Mv
El 7216
TD 6200
8-23-56
JICARILLA

Not leased

JICARILLA
MAGNOLIA
2-H
IP 2008m PC
4815m Mv
El 7102
TD 6100
11-10-56
JICARILLA

JICARILLA
MAGNOLIA
1-H
IP 5610m PC
6730m Mv
El 7074
TD 5895
8-18-56
JICARILLA

JICARILLA
MAGNOLIA
2-D
IP 4735m PC
6864m Mv
El 7185
TD 6025
11-10-56
JICARILLA

E. A. HANSON
GULF
Pc - 3600'
TD - 5700'
U S
JOHN J EISNER
MAGNOLIA
Pc - 5608'
MV - 5908'
TD - 6200'
M D RUECKHAUS ET AL
J CHENEY
IP 6700m Mv
El 7215
TD 6100
12-1-56
MAGNOLIA

T. 27 N.
T. 26 N.

BLANCO MESAVERDE GAS POOL BOUNDARY
PROPOSED GAS UNITS:
HANSON-FEDERAL PICTURED CLIFFS
RUECKHAUS ET AL PICTURED CLIFFS
RUECKHAUS ET AL MESAVERDE

MAP SHOWING JOHN J. EISNER
PROPOSED GAS PRORATION UNITS
RIO ARRIBA COUNTY, NEW MEXICO
SCALE 3" —— 1 MILE

BEFORE THE
OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO
CASE NO. EXHIBIT NO.
12-27

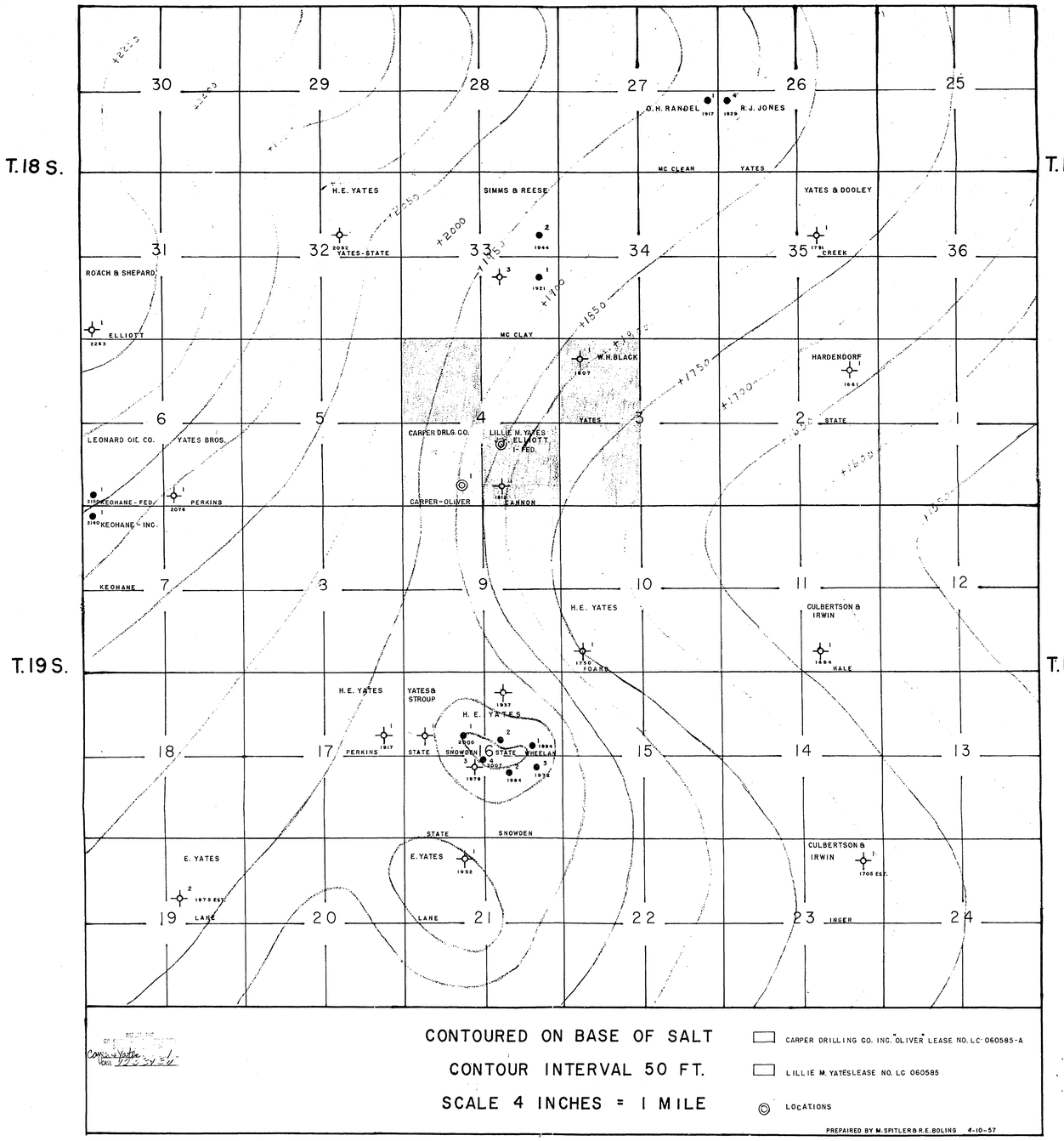
EXHIBIT "C"

2-25-57

123

A PART OF TWP'S. 18 & 19S RNG. 30E. EDDY CO. N. M.

R. 30 E.



CONTOURED ON BASE OF SALT

CONTOUR INTERVAL 50 FT.

SCALE 4 INCHES = 1 MILE

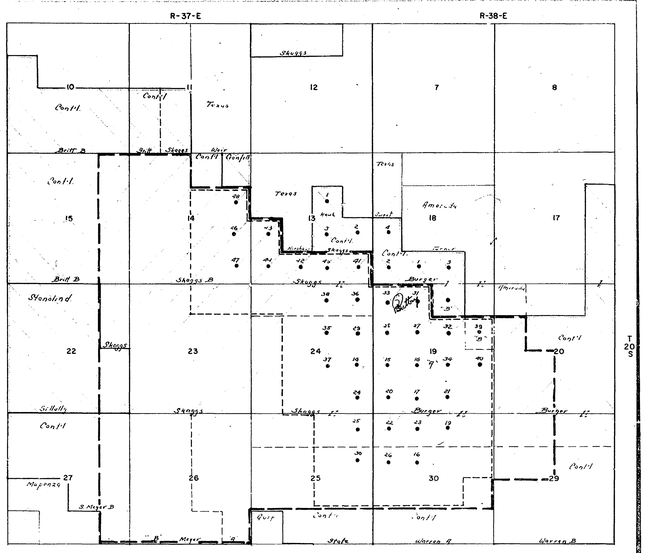
CARPER DRILLING CO. INC. OLIVER LEASE NO. LC 060585-A

LILLIE M. YATES LEASE NO. LC 060585

LOCATIONS

PREPAIRED BY M. SPITLER & R.E. BOLING 4-10-57

124

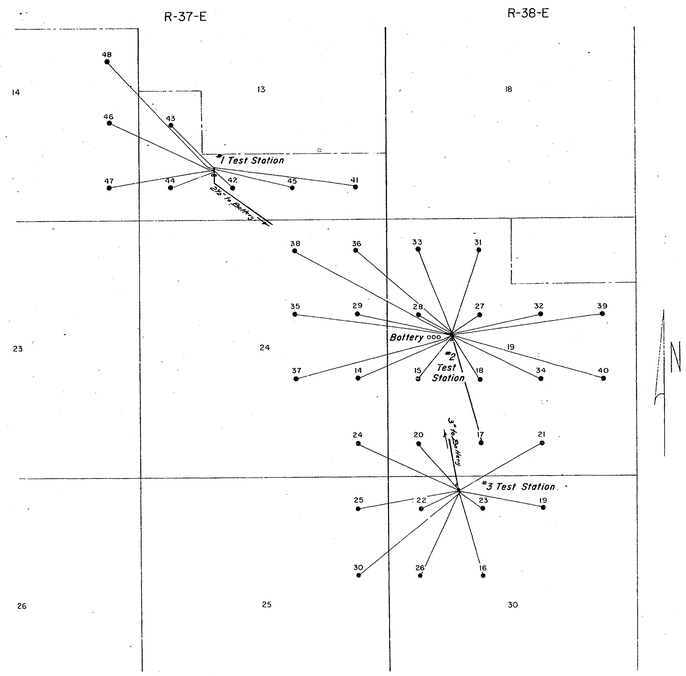


CONTINENTAL OIL COMPANY
SOUTHEAST MONUMENT UNIT AREA

——— UNIT BOUNDARY
- - - - - - - - - PERMIAN PART. AREA BOUNDARY

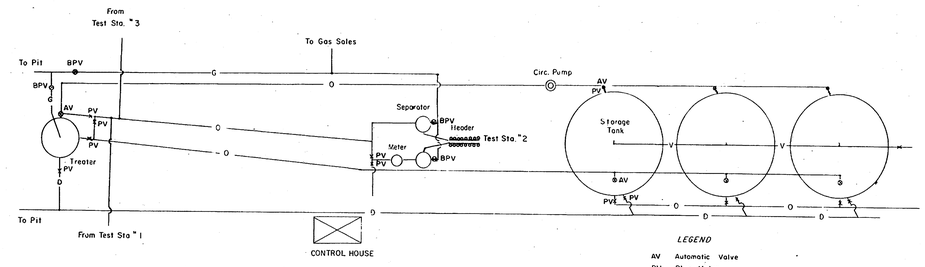
Scale 1"=2000'

Case No. 1235
Exhibit No. 1



MAP OF SKAGGS AREA
showing
CONTINENTAL'S SEMU-PERMIAN WELLS
PROPOSED HOOK-UP — AUTOMATIC BATTERY SYSTEM
scale: 1"= 1000'

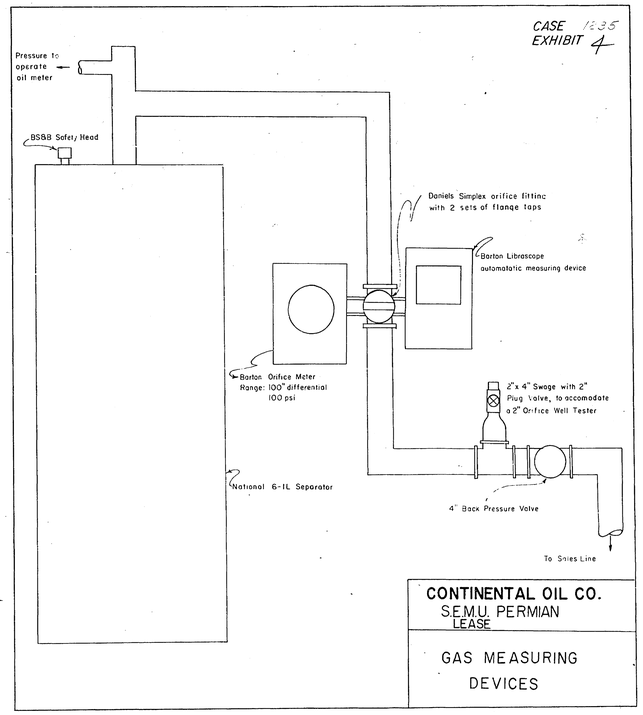
Case No. 1235
Exhibit No. 2



CONTINENTAL OIL COMPANY
SEMU-PERMIAN LEASE
BATTERY LAYOUT

CASE 1235
EXHIBIT 3

CASE 1235
EXHIBIT 4



CONTINENTAL OIL CO.
S.E.M.U. PERMIAN LEASE

GAS MEASURING DEVICES

125

LANE WELLS

RADIOACTIVITY LOG

COMPANY

JUKES-LEE
Location of Wells
13 PRINTS
3-17-53
Midland Via
W.T.E.L.S.

COMPANY: CONTINENTAL OIL CO.
WELL: PAGE B-3 No. 3
FIELD: BLINEBRY-D
COUNTY: LEA STATE: N.M.
LOCATION: 1650' F S/L & 330' F E/L
330' E-1650'S

OTHER SERVICES: NONE

SEC. 2 TWP. 21-S RGE. 37-E

PERMANENT DATUM: GROUND LEVEL ELEV. 3436'
LOG MEASURED FROM: KELLY BUSHING 12' A.G.L.
DRLG. MEASURED FROM: KELLY BUSHING

	RUN NO. 1	RUN NO. 1
TYPE OF LOG	R/A	N/L
DATE	3-13-53	3-13-53
TOTAL DEPTH—DRILLER	6714'	6714'
TOTAL DEPTH—LOGGER	6713'	6714'
TOP OF LOGGED INTERVAL	2400'	2400'
BOTTOM OF LOGGED INTERVAL	6706'	6716'
TYPE OF FLUID IN HOLE	SWGCL	MUD
FLUID LEVEL	FULL	FULL
MAXIMUM REC. TEMP.		
NEUTRON SOURCE—TYPE, STRENGTH & TYPE		6GDC
SOURCE SPACING		5"/20
LENGTH OF MEASURING CHAMBER—IN	36	0
O.D. OF INSTRUMENT—IN.	3 3/8	3 3/8
TIME CONSTANT—SECONDS	0	0
LOGGING SPEED—FPM	20	20
STATISTICAL VARIATION—IN		
SENSITIVITY SETTING	274	274
RECORDED BY	BAILEY	MCCABE
WITNESSED BY	MR. DARRO	MR. DARRO

Case No. 1236
Exhibit No. 2

CASING RECORD

RUN NO.	SIZE	WEIGHT	INTERVAL
1	9 5/8		SURFACE TO 307'
1	7		SURFACE TO T.D.

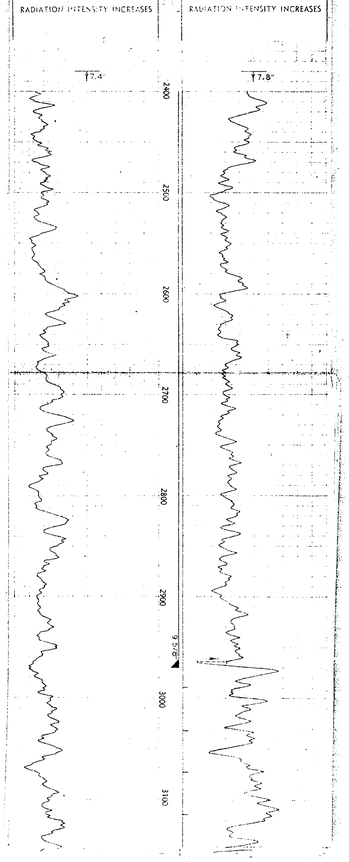
OPEN HOLE RECORD

BIT SIZE	INTERVAL

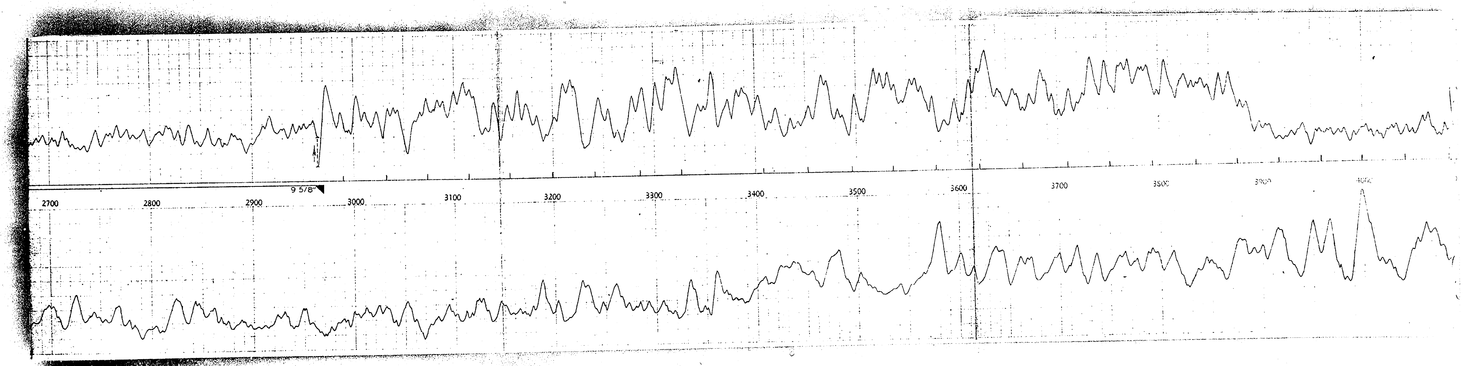
REMARKS OR OTHER DATA

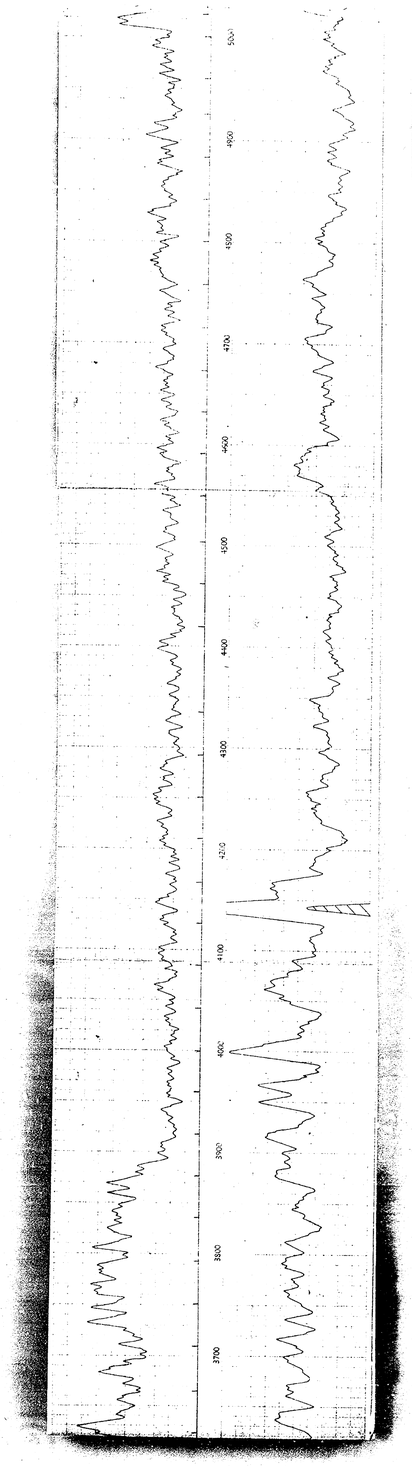
GAMMA RAY
RADIATION INTENSITY INCREASES →

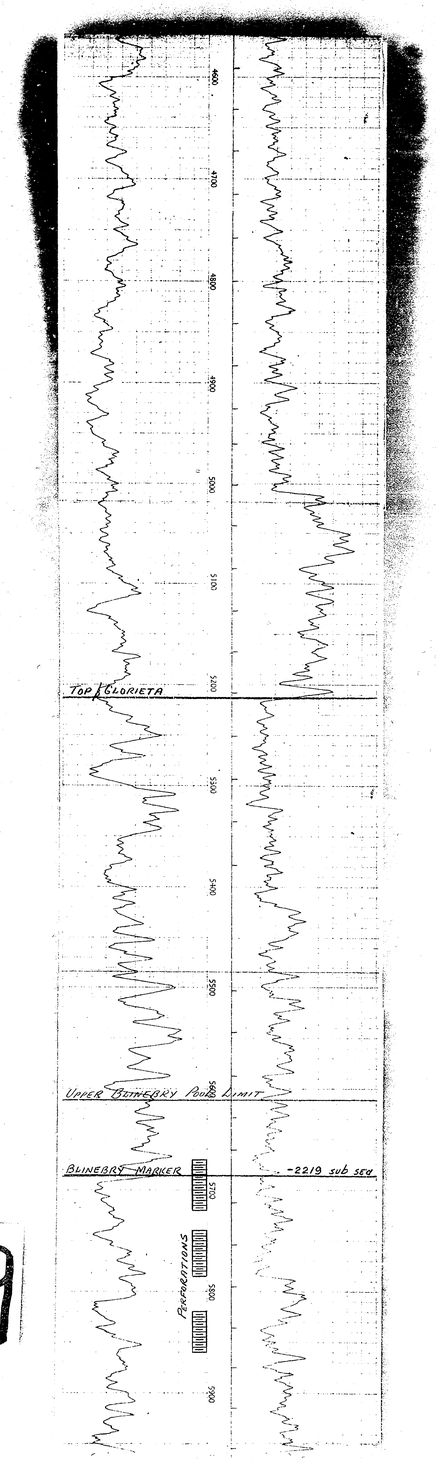
NEUTRON
RADIATION INTENSITY INCREASES →



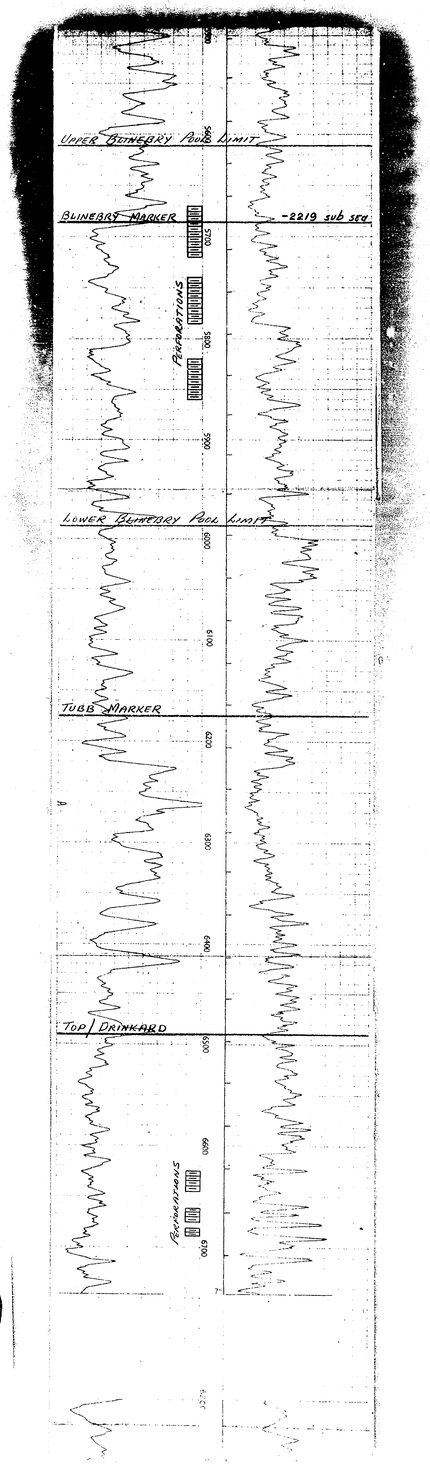
126


9 5/8"
2700
2800
2900
3000
3100
3200
3300
3400
3500
3600
3700

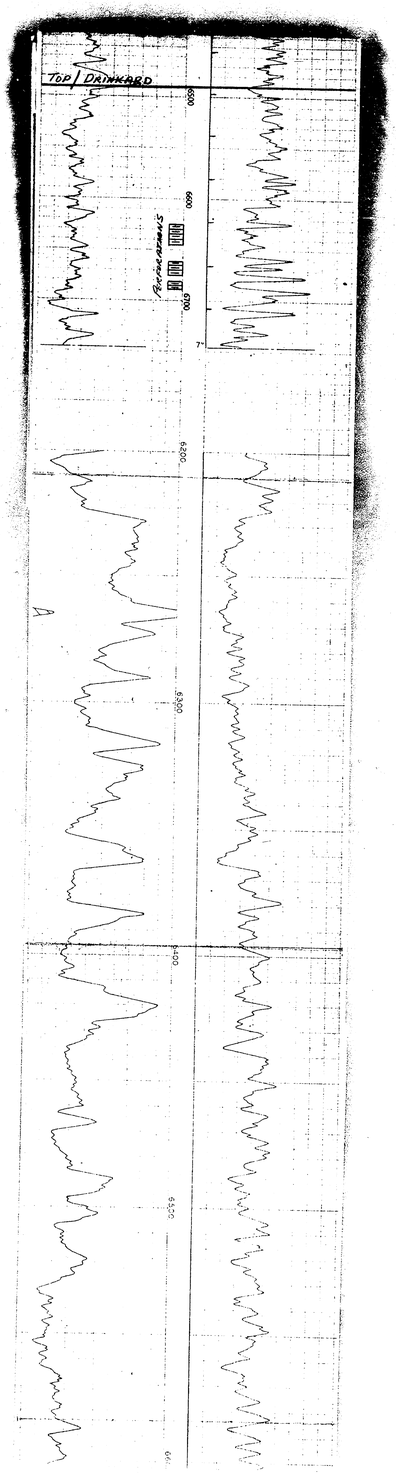

5000
4900
4800
4700
4600
4500
4400
4300
4200
4100
4000
3900
3800
3700

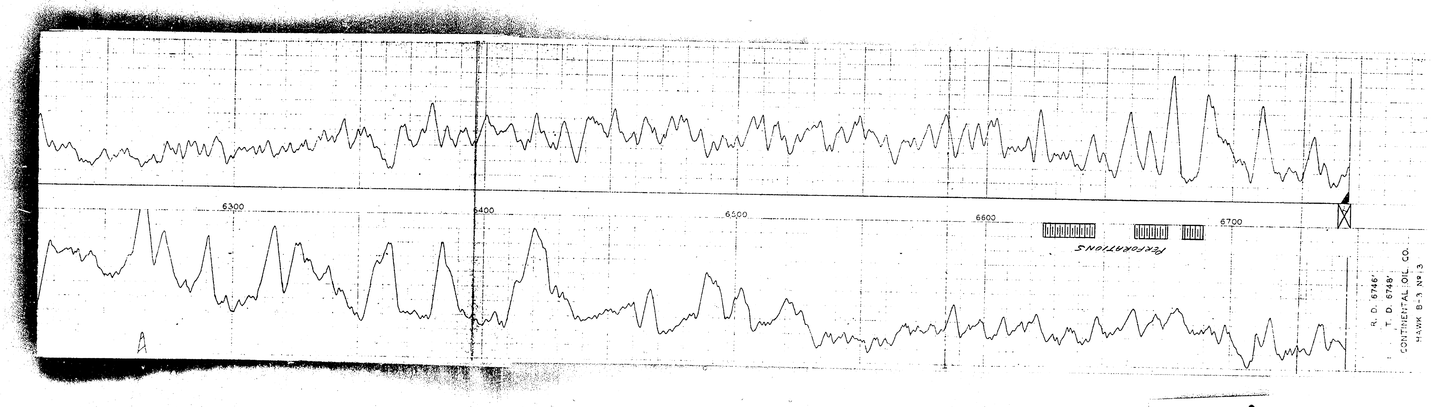

TOP GLORIETA
UPPER BONEBARY POOL LIMIT
BLINEBRY MARKER
-2219 sub sea
PERFORATIONS
4600
4700
4800
4900
5000
5100
5200
5300
5400
5500
5600
5700
5800
5900

129


UPPER BLINEBRY POOL LIMIT
BLINEBRY MARKER
-2219 sub sea
PERFORATIONS
LOWER BLINEBRY POOL LIMIT
TUBB MARKER
TOP / DRINKARD
PERFORATIONS

130


TOP / DAKKARD
6600
6700
6800
6900
6950
7000


6300
6400
6500
6600
6700
PERFORATIONS
A
R. D. 6746'
T. D. 6748'
CONTINENTAL OIL CO.
HAWK B-3 NO. 3

132

LANE WELLS RADIOACTIVITY LOG COMPANY

Location of Well: 660' FSL 660' FEL

COMPANY: CONTINENTAL OIL CO.
WELL: DANCIGER A-B #2 FILE:
FIELD: JALMAT
COUNTY: LEA STATE: N.M.
LOCATION: 660' FSL 660' FEL
SEC. 3 T 23S R 36E

3496' D.F.

LOG MEASURED FROM DRILLING BUSHING ELEVATION 3496.6'
DRILLING MEASURED FROM DRILLING ELEVATION 3496.6'
PERMANENT DATUM 7" BRADEN HEAD ELEVATION 3487.6'

	1	1
RUN NUMBER		
TYPE OF LOG	GAMMA RAY	NEUTRON
DATE	6-29-48	6-29-48
COMPANY DEPTH—DRILLER	3713'	3713'
MAXIMUM DEPTH REACHED	3713'	3713'
WELL FLUID	OIL	OIL
FLUID LEVEL	FULL	FULL
MAXIMUM TEMPERATURE		
O.D. OF INSTRUMENT—INCHES	3 5/8	3 5/8
SENSITIVITY REFERENCE	274	275
RECORDED BY	M. D. TULLOCK	TULLOCK
WITNESSED BY	SMALL	SMALL

Case No. 1237
Exhibit No. 2

CASING RECORD

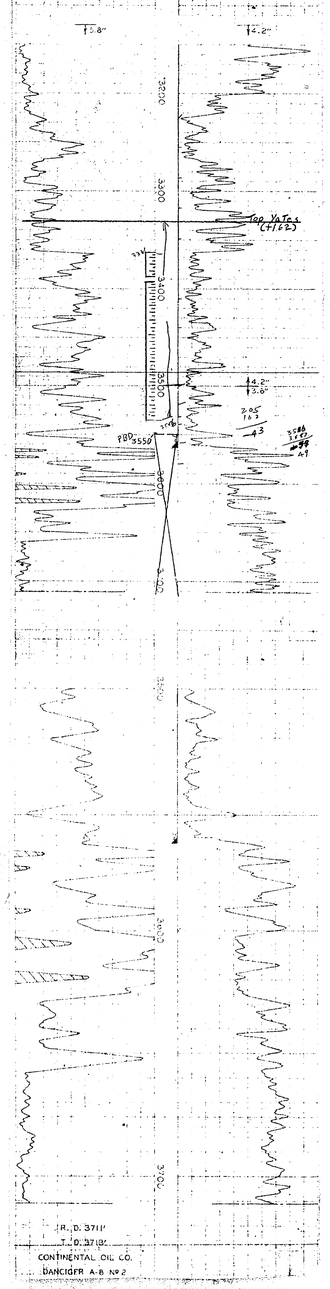
RUN NO.	SIZE—IN.	WT.—LB.	INTERVAL
1	7	SURFACE	TO 3565'
			TO
			TO
			TO
			TO

OPEN HOLE RECORD

BIT SIZE—IN.	INTERVAL
6 3/4	3565' TO 3713'
	TO
	TO
	TO
	TO

REMARKS OR OTHER DATA

GAMMA RAY — RADIATION INTENSITY INCREASES
NEUTRON — RADIATION INTENSITY INCREASES



133

Reproduced by
West Texas Electrical Log Service
Dallas 6, Texas

REFERENCE No. A 5568 -A

BEFORE THE
OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO
Gulf EXHIBIT No. 2
Case No. 1241

Halliburton
OIL WELL CEMENTING CO.

RADIOACTIVITY LOG

NATURAL GAMMA RADIATION — INDUCED GAMMA RADIATION

COMPANY GULF OIL CORPORATION — Location: 1980' From N/L, 660' From E/L
WELL W. T. WATTERS NCT-D # 6 — Sec. 28-T Twp. 20-S Rge. 37-E
FIELD ARKINSAW
COUNTY Lea — STATE New Mexico — API No. 30-025-11431
Sec. 8 Twp. 20-S Rge. 37-E — Elev.: D.F. 3448, G.L. 3436, K.B. 3459
SURVEY

Log Measured From	Drlg. Bushing	Elevation	3459
Driller Measured From	Drlg. Bushing	Elevation	3459
Permanent Datum	Ground Level	Elevation	3436

	GAMMA	N-GAMMA	
Date Log	4-21-57	4-21-57	
Run No.	One	One	
Depth Driller	3747	3747	
Depth Logger	3747	3747	
Btm. Log Interval	3747	3747	
Top Log Interval	3051	3051	
Type of Fluid in Hole	Gel	Gel	
Fluid Level	Full	Full	
Max. Rec. Temp. deg. F.	105	105	
Operating Time	1½ hrs.	1½ hrs.	
Recorded By	C. Kemp	C. Kemp	
Witnessed By	Mr. Hays	Mr. Hays	

CASING RECORD				OPEN HOLE RECORD	
RUN NO.	SIZE - In.	WT. - LB.	INTERVAL	BIT SIZE-In.	INTERVAL
One	8-5/8"		Surface to 3051'	11 1/4"	Surface to 318'
One	5 1/2"		Surface to 3051'	7 7/8"	318' to 3051'
			to	4 1/2"	3051' to 3747'
			to		to
			to		to

REMARKS: THIS LOG MADE WITH P.N. DETECTOR.
GR-N1 TOOL # 8980.
RECORDED MODE OF TEST INDICATES GR-INDUC ZONES.
CASING COLLARS RECORDED AT THIS TIME.

COMPLETION RECORD

SPUD DATE

COMP DATE

TOT RECORD

Case No. 1241 Exhibit No.

CASING RECORD — Gulf Oil Corp. April 23, 1957

PERFORATING RECORD

ACID FRAC Data

I.P.

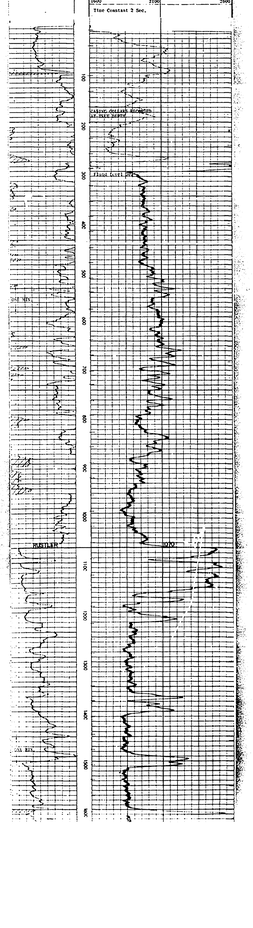
GOR — GE

G.P. — G.T.

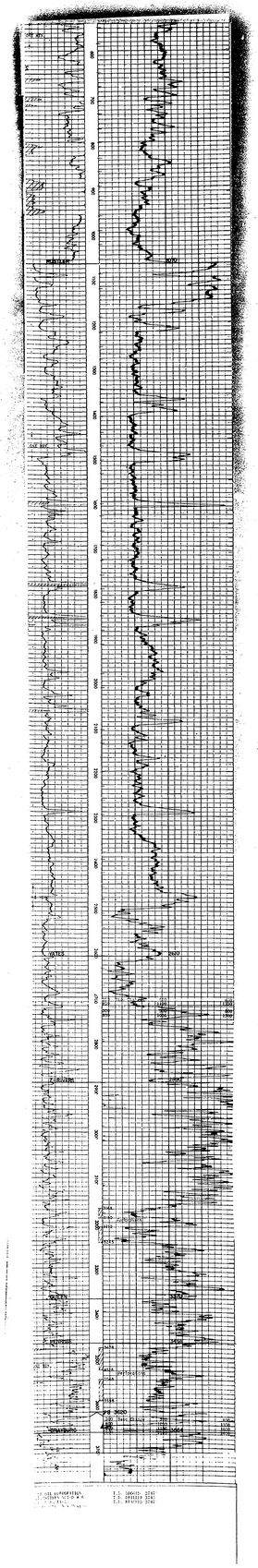
REMARKS

GAMMA COUNTS PER SECOND	Depth in Feet Opposite
0	50
50	100
Time Constant 3 Sec.	

NEUTRON - GAMMA COUNTS PER SECOND		
Sensitivity 10"-2650"		
150	600	650
650	1100	1550
Sensitivity 2650"-3050"		
200	550	800
800	1750	2300
Sensitivity 3051"-3747"		
600	1150	1600
1000	2150	2900
Time Constant 3 Sec.		



134



135

REPRODUCED BY
WEST TEXAS ELECTRICAL LOG SERVICE

BEFORE THE
OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO
EXHIBIT No.
CASE

SCHLUMBERGER

Location of Well

COMPANY:
WELL:
RUN NO.:
FIELD:
SURVEY:
COUNTY:
STATE:
FILING No.

First Reading			ft.
Last Reading			ft.
Footage Measured			ft.
Casing Size Depth	SOLUMETER		in.
	DRILLER		ft.
Max. depth reached			ft.
Bottom Depth	DRILLER		ft.
Depth Datum			

DIAMETER OF HOLE	MUD CHARACTERISTICS	SPACINGS
Size	Type	AM
From	Weight	AO
To	Viscosity	OA
Bottom Temperature	Resistivity	

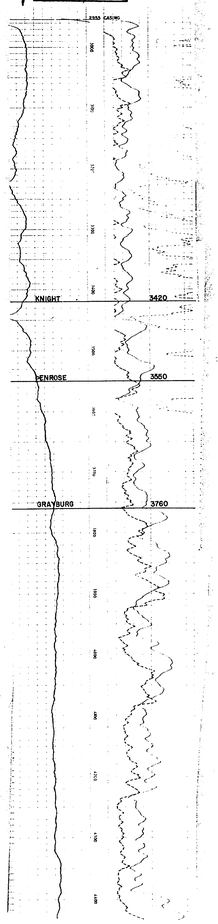
REMARKS

Case No. 1242 Exhibit No.
Gulf Oil Corp. April 23, 1957

DATE OBSERVERS

SELF-POTENTIAL millivolts	SCALE	RESISTIVITY ohms m²/m.

BEFORE THE
OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO
EXHIBIT No. 2
CASE No. 1242



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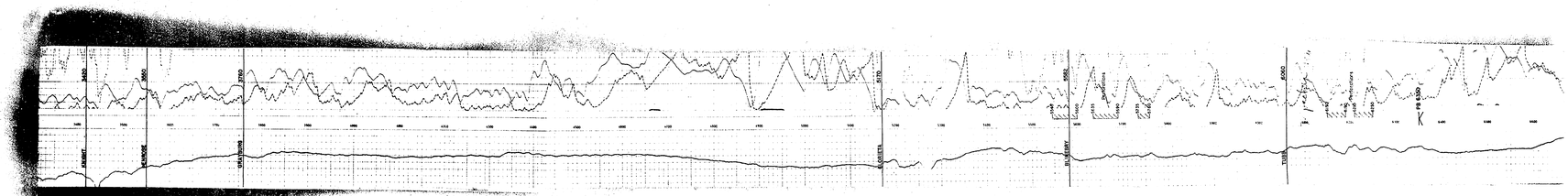

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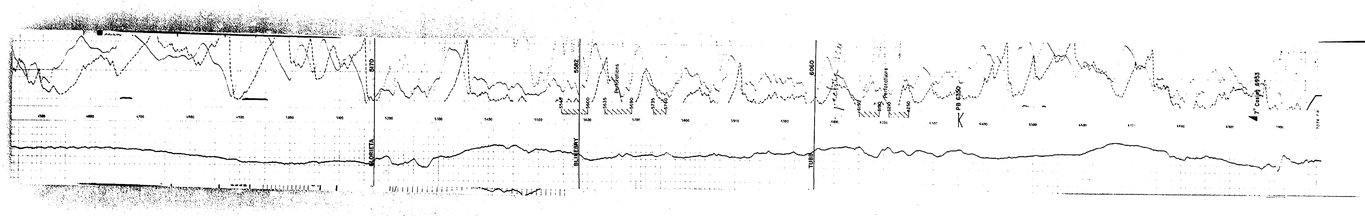
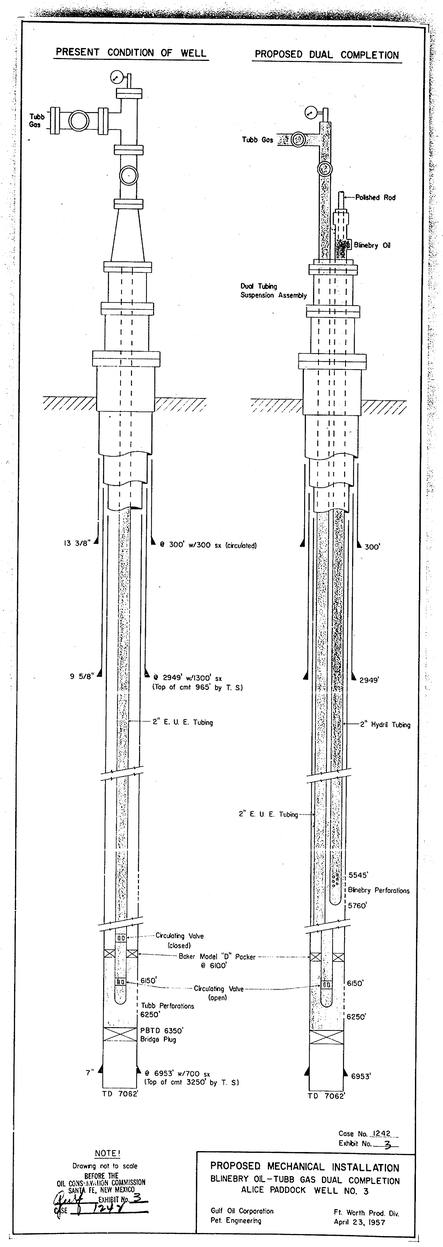




139

NOTE!
Drawing not to scale

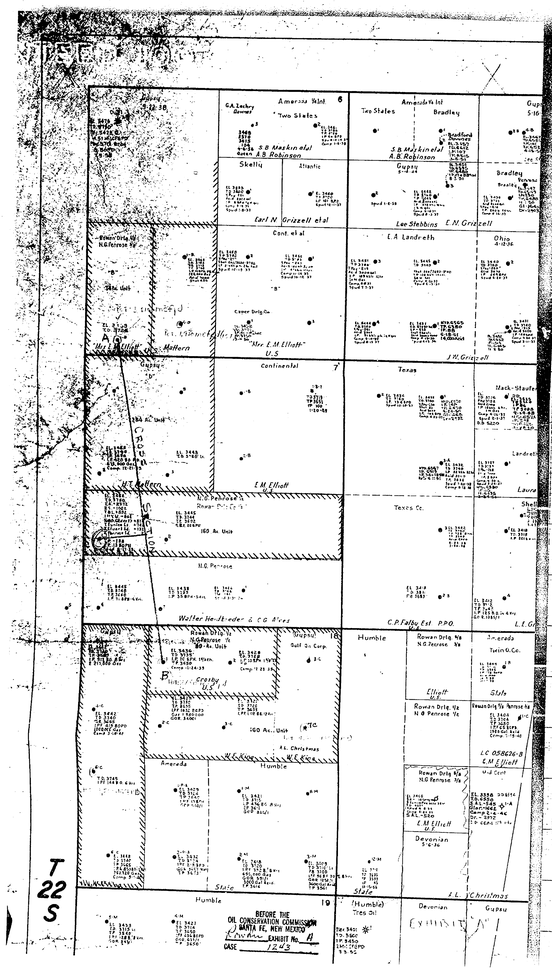
BEFORE THE
OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO
EXHIBIT No. 3
CASE # 1242

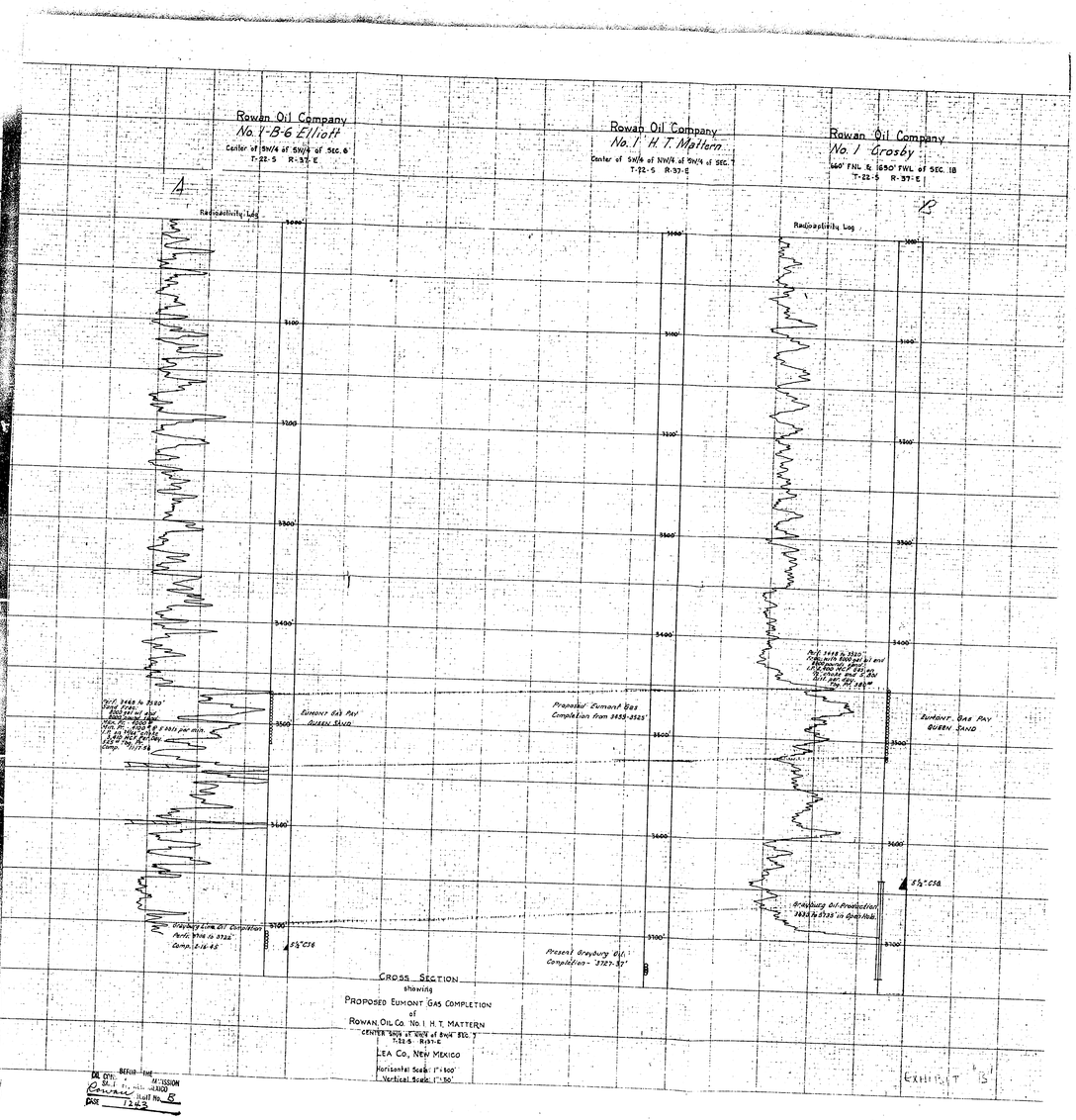
Case No. 1242
Exhibit No. 3

PROPOSED MECHANICAL INSTALLATION
BLINEBRY OIL-TUBB GAS DUAL COMPLETION
ALICE PADDOCK WELL NO. 3

Gulf Oil Corporation
Pet. Engineering

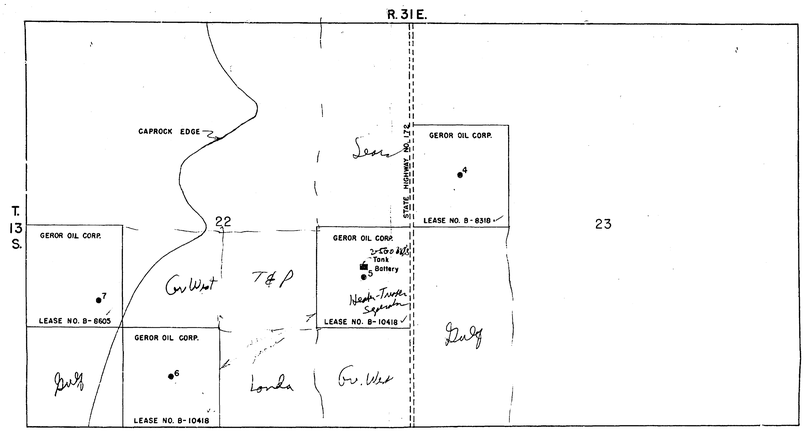
Ft. Worth Prod. Div.
April 23, 1957


T 22 S
R 37 E
Amerada Stat
Amerada Stat
Two States
Bradley
Shelly
Elastic
Carl N Grizzell et al
Cont. et al
E.A. Landreth
Ohio
Lee Stebbins C.N. Grizzell
Mr. E.M. Elliott
U.S.
Mattern
J.W. Grizzell
Continental
Texas
Mack-Stauffer
E.M. Elliott
Texas Co.
M.G. Perrine
Walter Ho-Heider & C.G. Myers
C.P. Talley Est. P.P.O.
Humble
Rowan Drlg. Co.
N.G. Perrine
Elliott
Rowan Drlg. Co.
N.G. Perrine Tr.
Gulf Oil Corp.
Crosby
Emerada
Devonian
Gulf
Christmas
(Humble)
Tres Oil
BEFORE THE OIL CONSERVATION COMMISSION SANTA FE, NEW MEXICO
EXHIBIT No. 4
CASE 1249


Rowan Oil Company
No. 1-B-6 Elliott
Center of SW/4 of SW/4 of Sec. 6
T-22-S R-37-E
Rowan Oil Company
No. 1 H. T. Mattern
Center of SW/4 of NW/4 of SW/4 of Sec. 7
T-22-S R-37-E
Rowan Oil Company
No. 1 Grosby
660' FNL & 1650' FWL of SEC. 18
T-22-S R-37-E
Radioactivity Log
Eumont Gas Pay
Queen Sand
Proposed Eumont Gas Completion from 3455-3525'
Greyburg Oil Production
3832 to 3725 in Open Hole
Greyburg Low Oil Completion
Perfs. 3706 to 3732'
Comp. 2-16-48
Present Greyburg Oil Completion - 3727-57'
CROSS SECTION
showing
PROPOSED EUMONT GAS COMPLETION
of
ROWAN OIL CO. NO. 1 H. T. MATTERN
CENTER SW/4 of SW/4 of Sec. 7
T-22-S R-37-E
LEA CO., NEW MEXICO
Horizontal Scale: 1"=600'
Vertical Scale: 1"=50'
BEFORE THE OIL CONSERVATION COMMISSION
EXHIBIT No. 5
CASE 1249

140

CASE NO. 1245
EXHIBIT NO. 1



BEFORE THE
OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO
Gerror EXHIBIT No. 1
CASE 1245

GEROR OIL CORPORATION LEASES

Queen
CAPROCK POOL

CHAVES COUNTY, N.M.

1" = 1/8 MILE

APRIL 1957

E.E. KINNEY

141

R-37-E

R-38-E

T 18 S

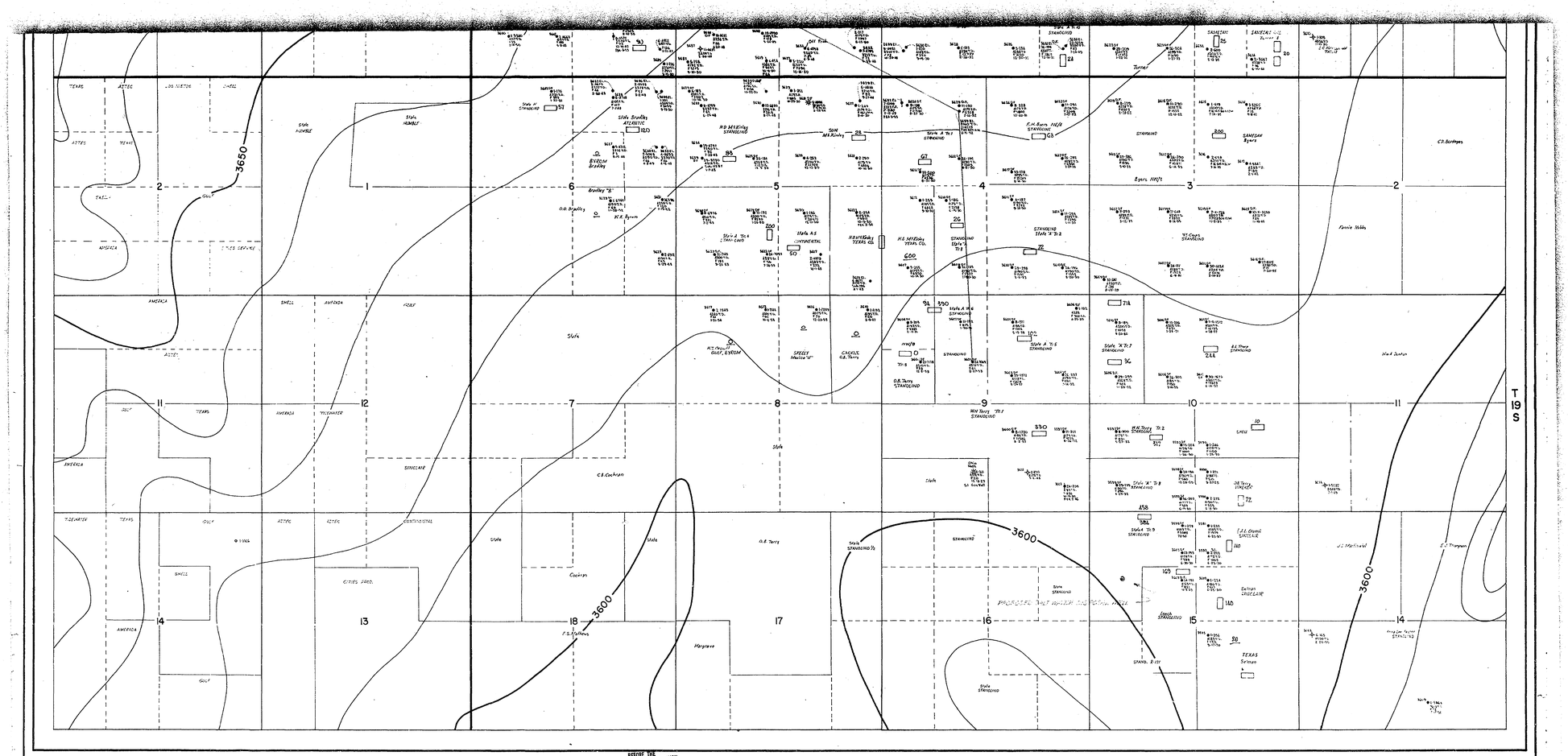
T 19 S

3700

3650

3650

142



BEFORE THE
OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO
EXHIBIT No. 1
CASE 1267

- Producing Well
- Abandoned Well
- Gas Well
- Dry Hole
- Dual or Bradenhead Completion
- Tank Battery

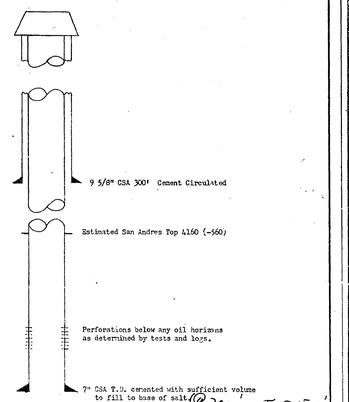
229-Estimated Maximum Water Production

HOBBS FIELD

LEA COUNTY, N. M.
SCALE 1" = 1,000'

143

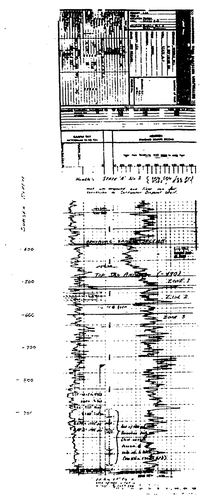
Proposed Salt Water Disposal Well Installation - State "A" Tr. 9 LSE.
Location: 840' FSL, 1650' FEL Section 15, T-19-S, R-38-E.



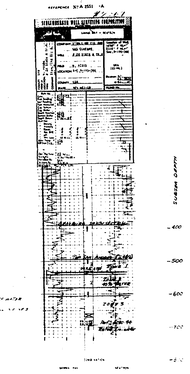
Proposed General Completion Procedure

1. Drill to approximately 4300'. Drill stem test to determine if below oil zones. Determine if water units for general use. Conduct injectivity test.
2. Continue drilling and testing until sufficient injectivity obtained.
3. Run logs.
4. Set 7" casing at T.D. and cement with sufficient volume to fill to base of salt.
5. Perforate zones of injectivity, as based on tests and logs, below any oil zones.
6. Run tubing.
7. Conduct final injectivity tests.

BEFORE THE
OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO
Case Exhibit No. 2
CASE 1247



BEFORE THE
OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO
Case Exhibit No. 3
CASE 1247



144

R. 38 E.

T. 19 S.

NEW HOBBS

HOBBS
S.R. 3200
QN 3700
S.A. 3944
DR. 6880

PAN AMERICAN PETROLEUM CORPORATION

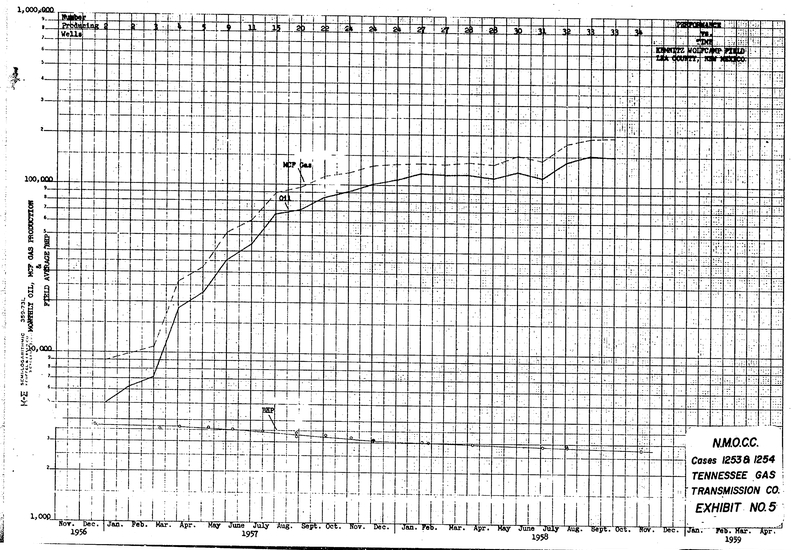
PORTION OF HOBBS FIELD

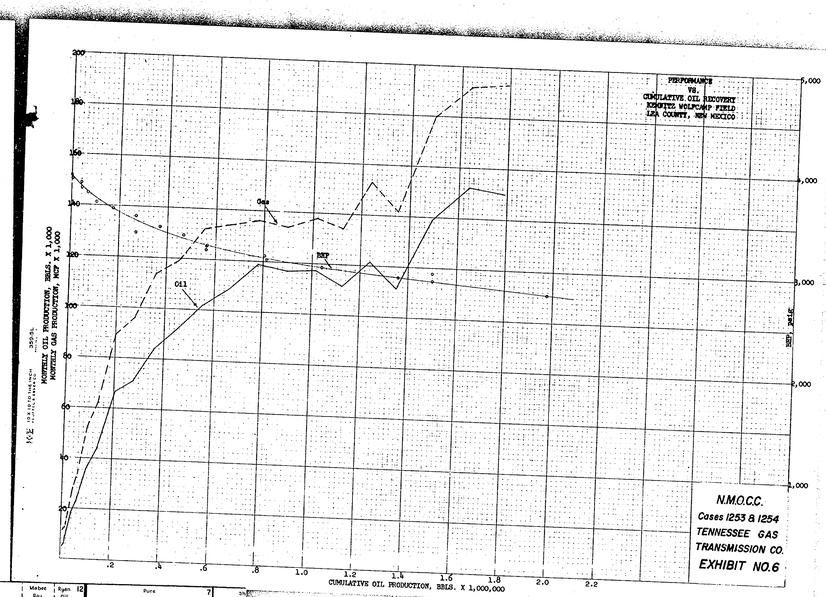
LEA COUNTY, NEW MEXICO

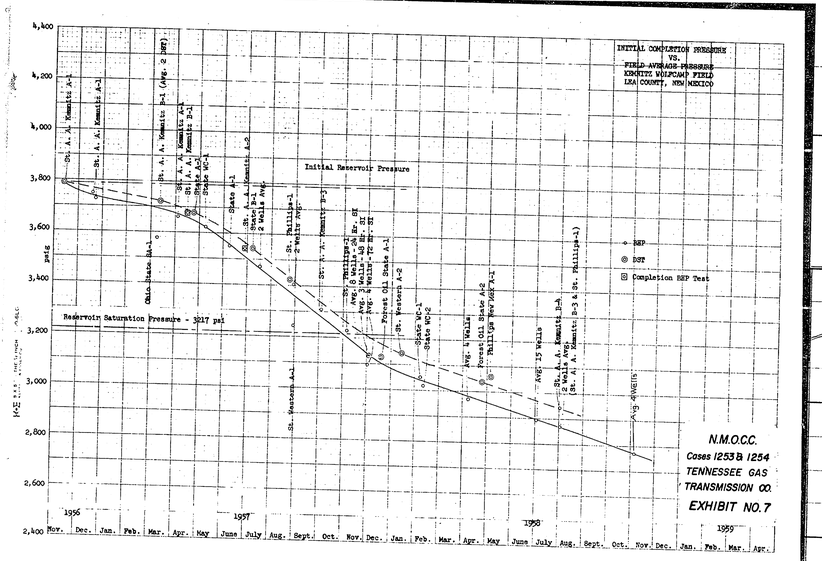
SHOWING ACREAGE IN VICINITY OF PRODUCED SALT WATER DISPOSAL WELL

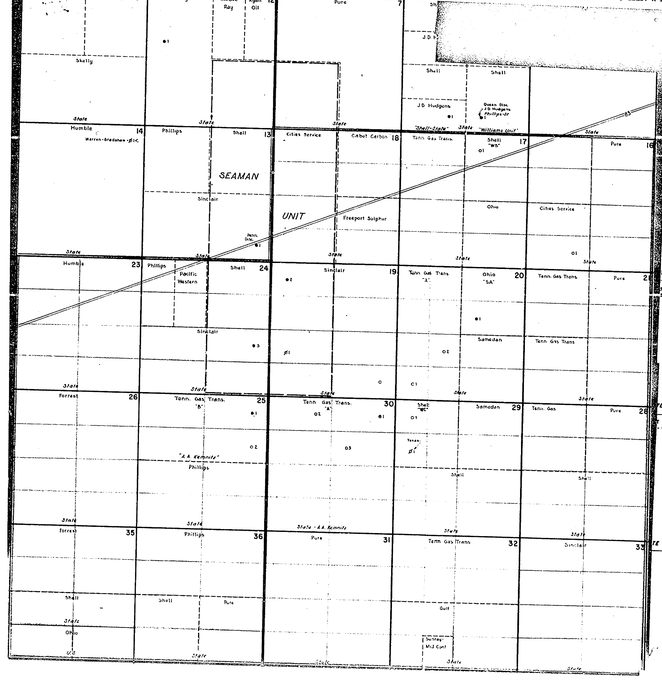
NOTE: Acreage shown as Stanolind is now the property of Pan American Petroleum Corporation.

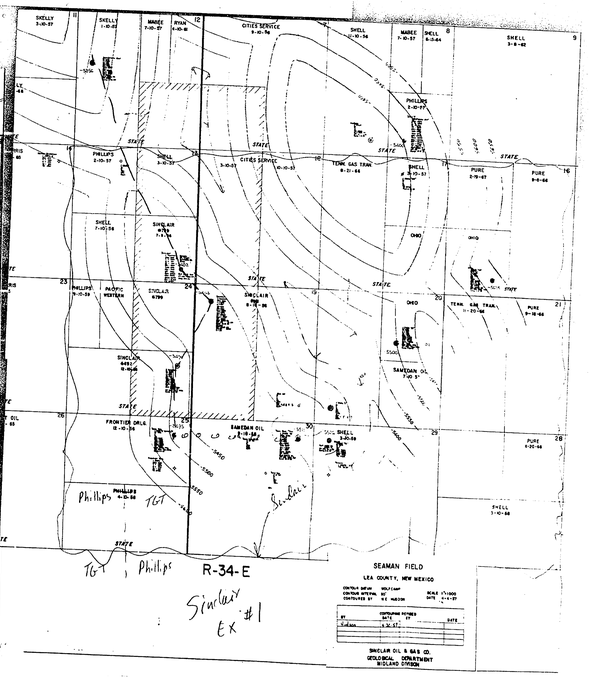
145


PERFORMANCE
VS.
TIME
KEMNITZ WOLFCAMP FIELD
LEA COUNTY, NEW MEXICO
Number Producing Wells
MCF Gas
Oil
MEP
MONTHLY OIL, MCF GAS PRODUCTION
FIELD AVERAGE MEP
1,000,000
100,000
10,000
1,000
Nov. Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr.
1956 1957 1958 1959
N.M.O.C.C.
Cases 1253 & 1254
TENNESSEE GAS
TRANSMISSION CO.
EXHIBIT NO.5


PERFORMANCE
VS.
CUMULATIVE OIL RECOVERY
KEMNITZ WOLFCAMP FIELD
LEA COUNTY, NEW MEXICO
Gas
MEP
Oil
MONTHLY OIL PRODUCTION, BBLS. X 1,000
MONTHLY GAS PRODUCTION, MCF X 1,000
200
180
160
140
120
100
80
60
40
20
5,000
4,000
3,000
2,000
1,000
.2 .4 .6 .8 1.0 1.2 1.4 1.6 1.8 2.0 2.2
CUMULATIVE OIL PRODUCTION, BBLS. X 1,000,000
N.M.O.C.C.
Cases 1253 & 1254
TENNESSEE GAS
TRANSMISSION CO.
EXHIBIT NO.6


INITIAL COMPLETION PRESSURES
VS.
FIELD AVERAGE PRESSURE
KEMNITZ WOLFCAMP FIELD
LEA COUNTY, NEW MEXICO
Initial Reservoir Pressure
Reservoir Saturation Pressure - 3217 psi
MEP
DST
Completion SIP Test
psig
4,400
4,200
4,000
3,800
3,600
3,400
3,200
3,000
2,800
2,600
2,400
Nov. Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr.
1956 1957 1958 1959
N.M.O.C.C.
Cases 1253 & 1254
TENNESSEE GAS
TRANSMISSION CO.
EXHIBIT NO.7


SEAMAN
UNIT


R-34-E
SEAMAN FIELD
LEA COUNTY, NEW MEXICO
SINCLAIR OIL & GAS CO.
GEOLOGICAL DEPARTMENT
MIDLAND DIVISION

146

Sec. 4, T. 19S, R. 30E.

STATE New Mexico ELEV. 3402'

COUNTY Eddy

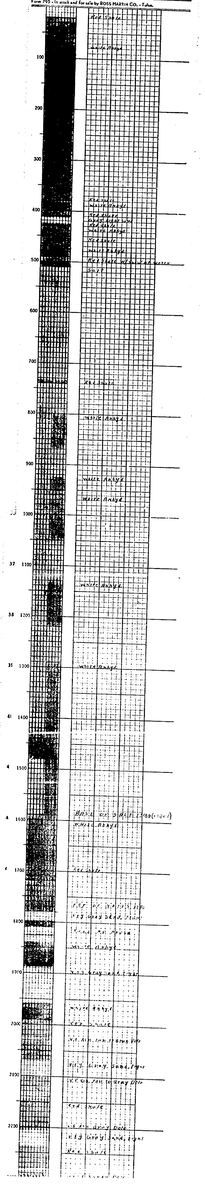
COMPANY J. M. Elliott

FARM Taylor-Ohnon WELL NO. 1

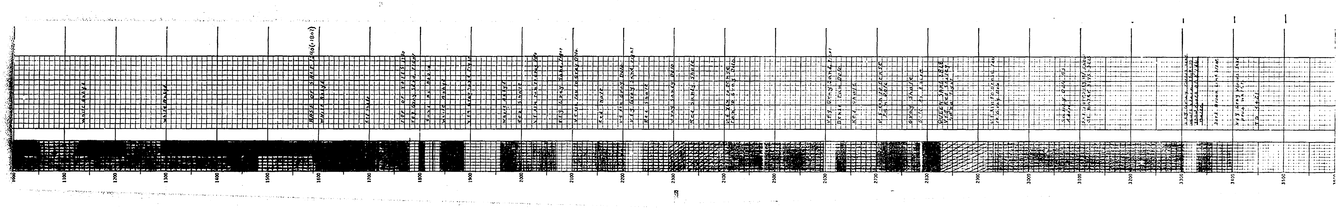
LOCATION SW/4 SE/4

T.D. 3421' TOOLS Rotary

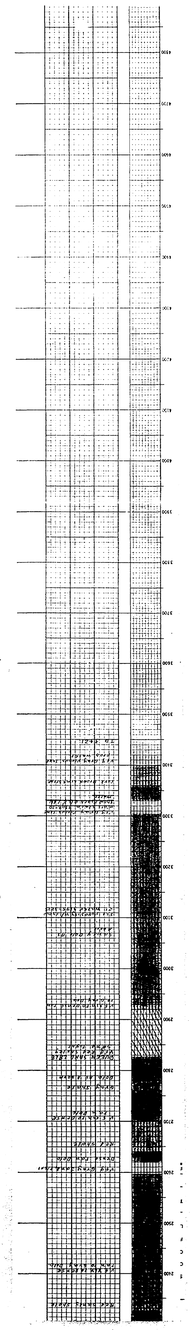
I.P. Gas 1955 MCF

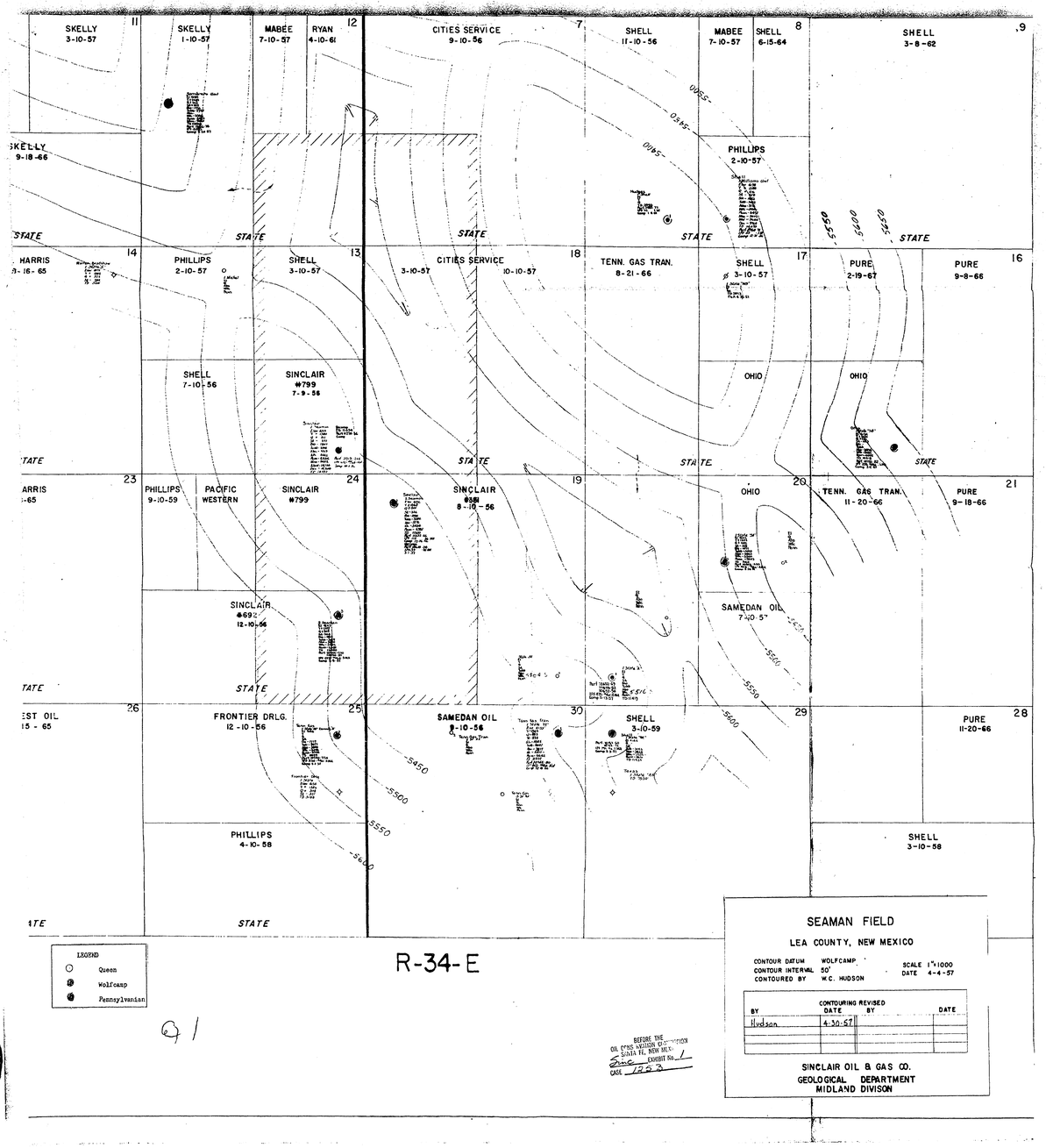


147

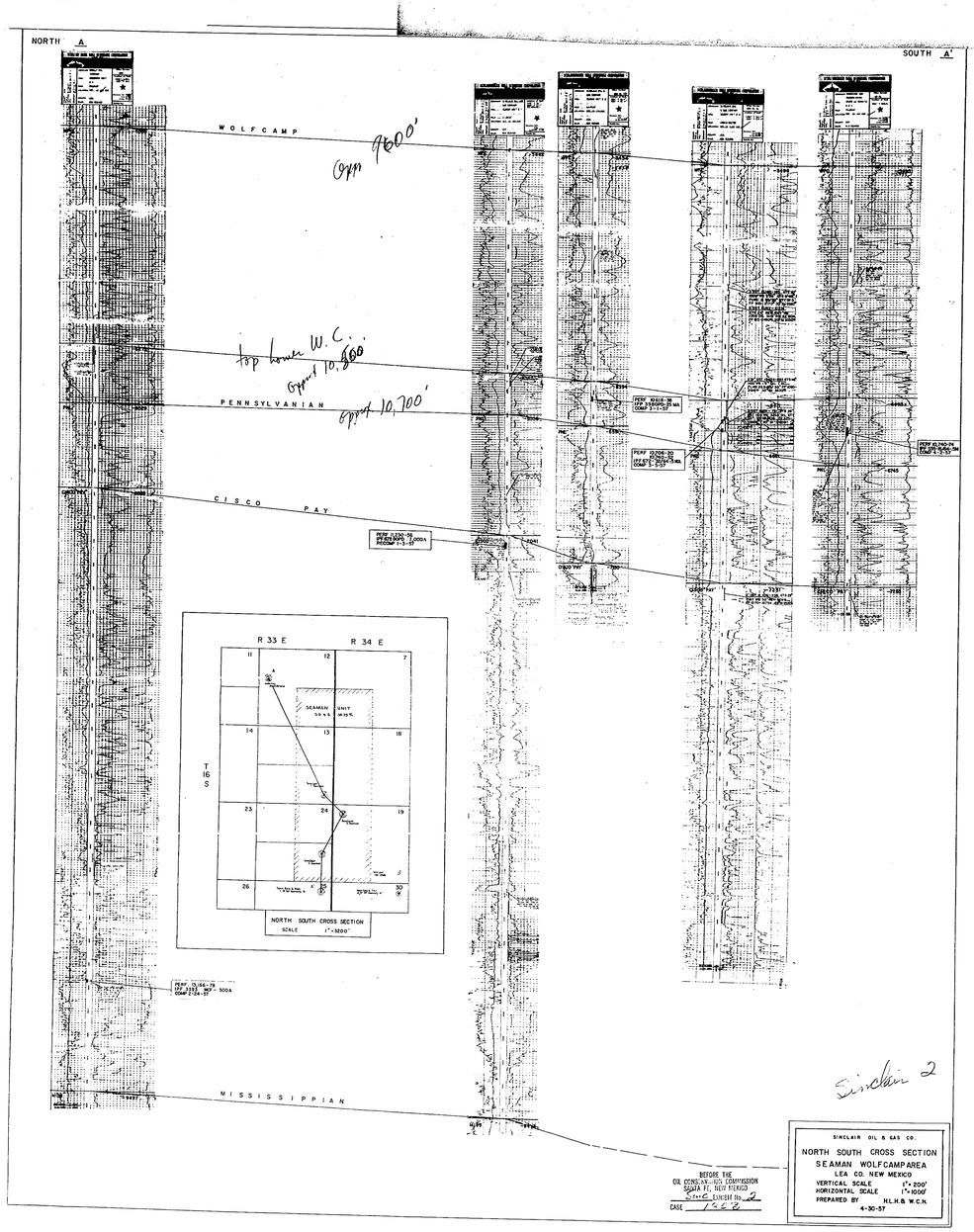


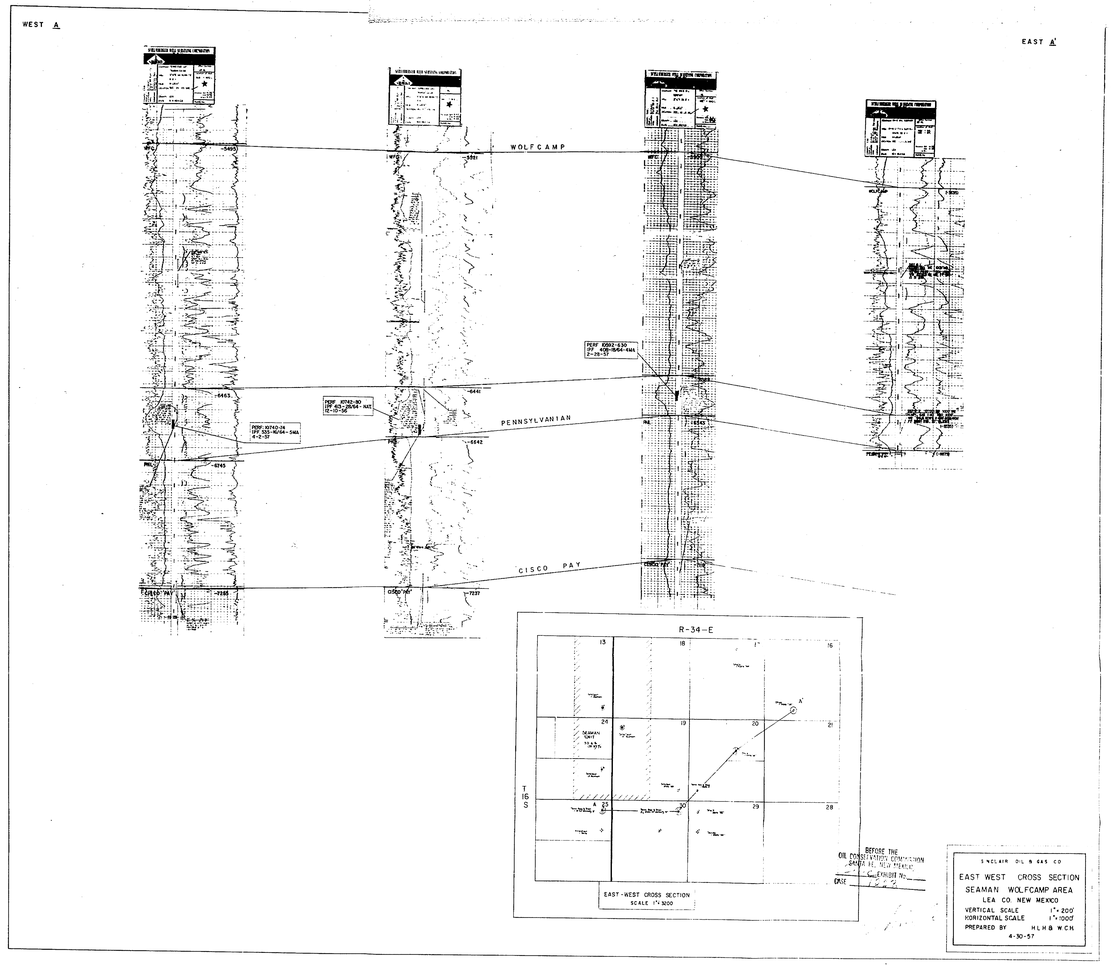
148



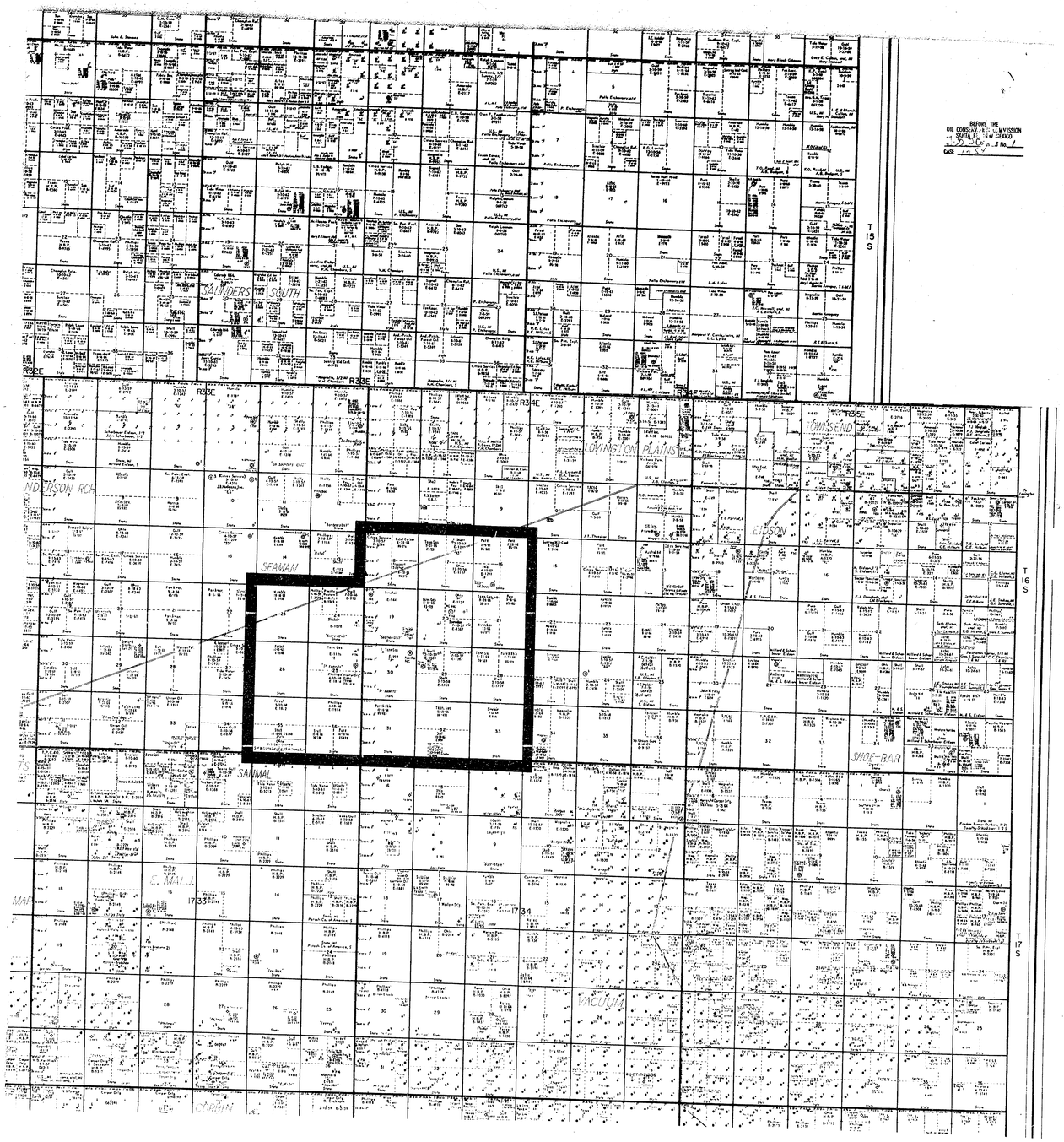

SKELLY 3-10-57
SKELLY 1-10-57
MABEE 7-10-57
RYAN 4-10-6
CITIES SERVICE 9-10-56
SHELL 11-10-56
MABEE 7-10-57
SHELL 6-15-64
SHELL 3-8-62
PHILLIPS 2-10-57
SKELLY 9-18-66
HARRIS 9-16-65
PHILLIPS 2-10-57
SHELL 3-10-57
CITIES SERVICE 3-10-57
10-10-57
TENN. GAS TRAN. 8-21-66
SHELL 3-10-57
PURE 2-19-67
PURE 9-8-66
SHELL 7-10-56
SINCLAIR #799 7-9-56
OHIO
OHIO
HARRIS 1-65
PHILLIPS 9-10-59
PACIFIC WESTERN
SINCLAIR #799
SINCLAIR #691 8-10-56
OHIO
TENN. GAS TRAN. 11-20-66
PURE 9-18-66
SINCLAIR #692 12-10-56
SAMEDAN OIL 7-10-57
EST OIL 15-65
FRONTIER DRLG. 12-10-56
SAMEDAN OIL 8-10-56
SHELL 3-10-59
PURE 11-20-66
PHILLIPS 4-10-58
SHELL 3-10-58
STATE
-5450
-5500
-5550
-5600
-5400
-5350
LEGEND
Queen
Wolfcamp
Pennsylvanian
R-34-E
SEAMAN FIELD
LEA COUNTY, NEW MEXICO
CONTOUR DATUM WOLFCAMP
CONTOUR INTERVAL 50'
CONTOURED BY W.C. HUDSON
SCALE 1"=1000
DATE 4-4-57
CONTOURING REVISED
BY DATE BY DATE
Hudson 4-30-57
SINCLAIR OIL & GAS CO.
GEOLOGICAL DEPARTMENT
MIDLAND DIVISON
BEFORE THE OIL CONSERVATION COMMISSION SANTA FE, NEW MEX.
EXHIBIT No. 1
CASE 1253

150


NORTH A
SOUTH A'
WOLFCAMP
Opp 9800'
top lower W.C.
Opp 10,600'
PENNSYLVANIAN
Opp 10,700'
CISCO PAY
MISSISSIPPIAN
R 33 E
R 34 E
T 16 S
SEAMAN UNIT
NORTH SOUTH CROSS SECTION
SCALE 1"=3200'
Sinclair 2
SINCLAIR OIL & GAS CO.
NORTH SOUTH CROSS SECTION
SEAMAN WOLFCAMP AREA
LEA CO. NEW MEXICO
VERTICAL SCALE 1"=200'
HORIZONTAL SCALE 1"=1000'
PREPARED BY H.L.H.& W.C.H.
4-30-57
BEFORE THE
OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO
CASE 1228


WEST A
EAST A'
WOLFCAMP
PENNSYLVANIAN
CISCO PAY
R-34-E
T 16 S
EAST-WEST CROSS SECTION
SCALE 1"=3200
SINCLAIR OIL & GAS CO
EAST WEST CROSS SECTION
SEAMAN WOLFCAMP AREA
LEA CO NEW MEXICO
VERTICAL SCALE 1"=200'
HORIZONTAL SCALE 1"=1000'
PREPARED BY H.L.H.& W.C.H.
4-30-57
BEFORE THE
OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO
CASE 1228 EXHIBIT NO. 2

151



BEFORE THE
OIL CONSERV. N COMMISSION
SANTA FE, NEW MEXICO
EXH. NO. 1
CASE 1454

152

R32E R33E R34E

T 15 S

T 16 S

T 17 S

SEAMAN UNIT

TGT

TENNESSEE GAS TRANSMISSION CO.
PRODUCTION DEPT. - MIDLAND, TEXAS

WEST EIDSON AREA
LEA COUNTY, NEW MEXICO

STRUCTURE MAP
CONTOURED ON
TOP OF LOWER WOLFCAMP
CONTOUR INTERVAL: 20'

SCALE
2000' 1000' 0 2000' 4000' 6000'

GWS. B.R.L.B. 7-10-57

BEFORE THE OIL CONSERV. COMMISSION SANTA FE, N.M.
EXHIBIT NO. 2
CASE 1556

153

R32E | R33E | R34E

T 15 S

T 16 S

T 17 S

SEAMAN UNIT

TENNESSEE GAS TRANSMISSION CO.
PRODUCTION DEPT. - MIDLAND, TEXAS

WEST EIDSON AREA
LEA COUNTY, NEW MEXICO

ISOPACH OF EFFECTIVE POROSITY
FROM MICRO-LOG
IN LOWER WOLFCAMP 10,700' ZONE
CONTOUR INTERVAL: 5'

SCALE
2000' 1000' 0 2000' 4000' 6000'

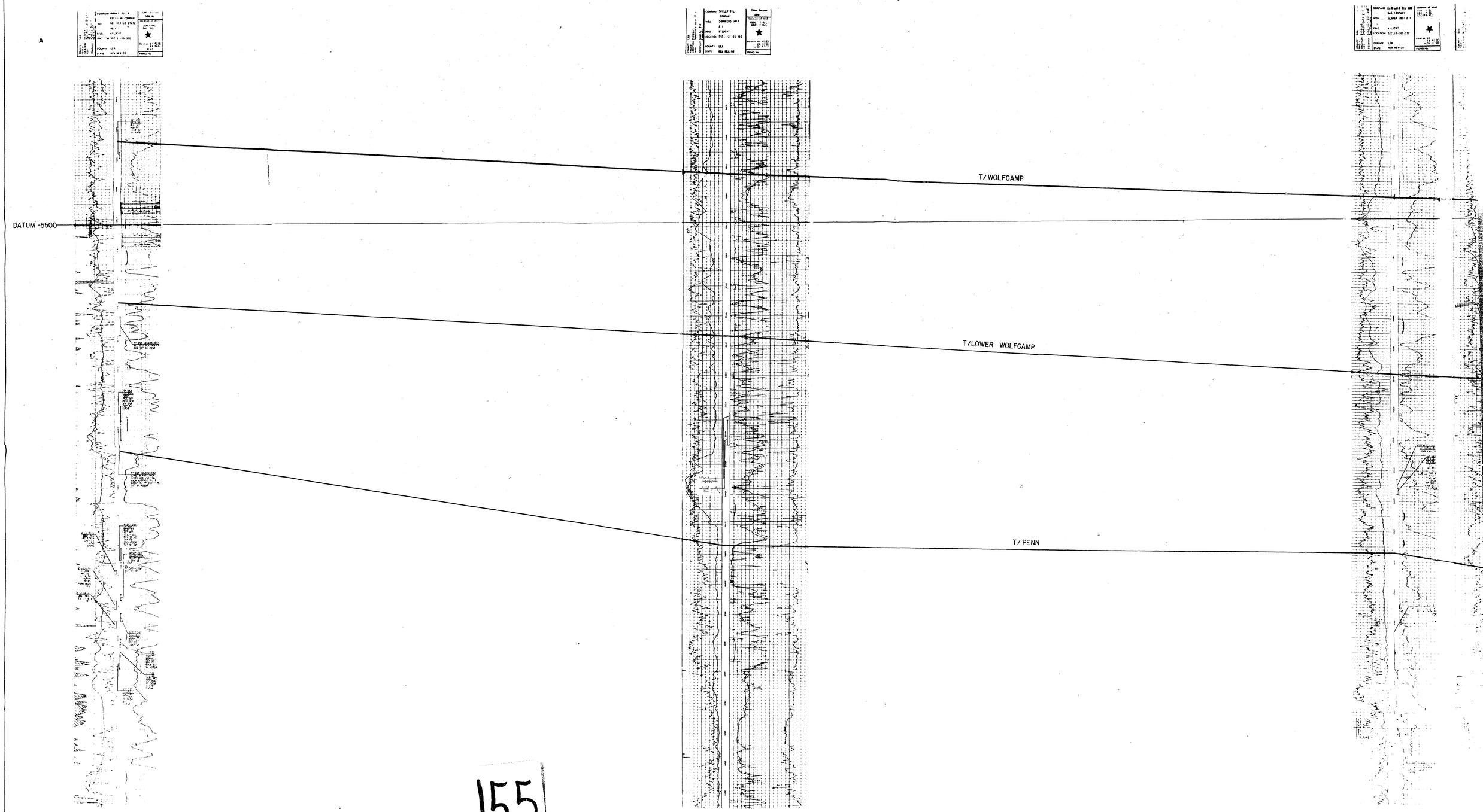
G.W.S. & R.L.B. 7-10-57

BEFORE THE OIL CONSERVATION COMMISSION SANTA FE, NEW MEXICO EXHIBIT No. CASE

#3

154

A



155

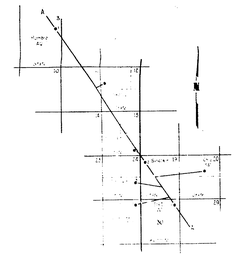
A'

T/WOLFCAMP

DATUM -5500

T/LOWER WOLFCAMP

T/ PENN



156

BEFORE THE
OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO
EXHIBIT NO. 5
CASE 1267

157

TENNESSEE GAS TRANSMISSION CO
PRODUCTION DEPT. - MIDLAND, TEXAS
WEST EIDSON AREA
LEA COUNTY, NEW MEXICO

WELL DATA MAP

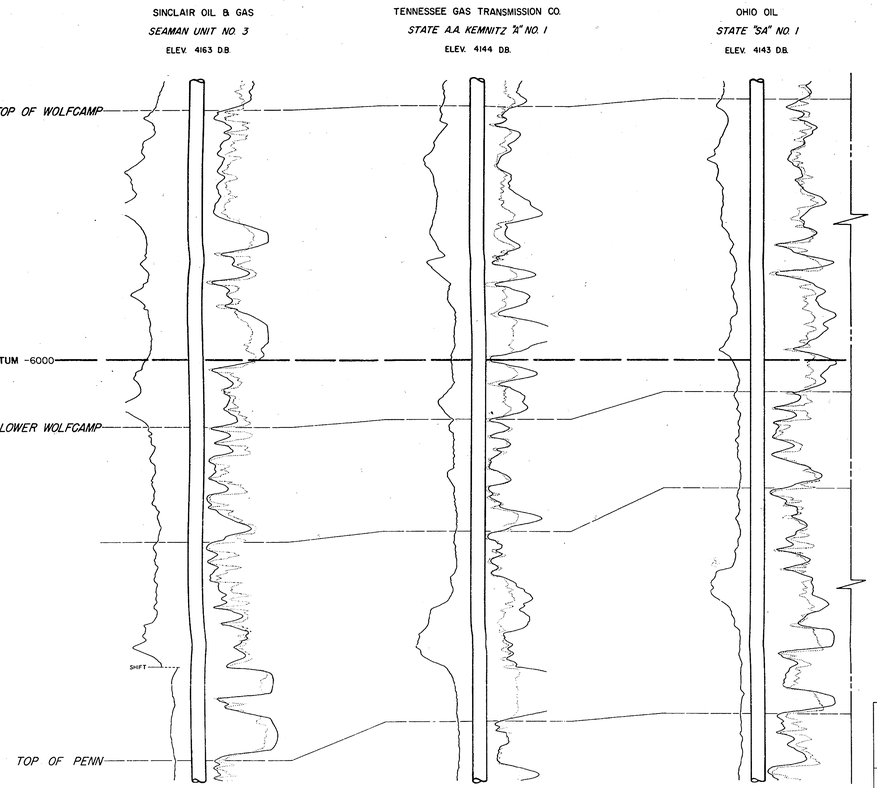
LEGEND

PRODUCING HORIZON	TOTAL DEPTH
COMPLETION DATE	PRODUCING INTERVAL
	INITIAL POTENTIAL

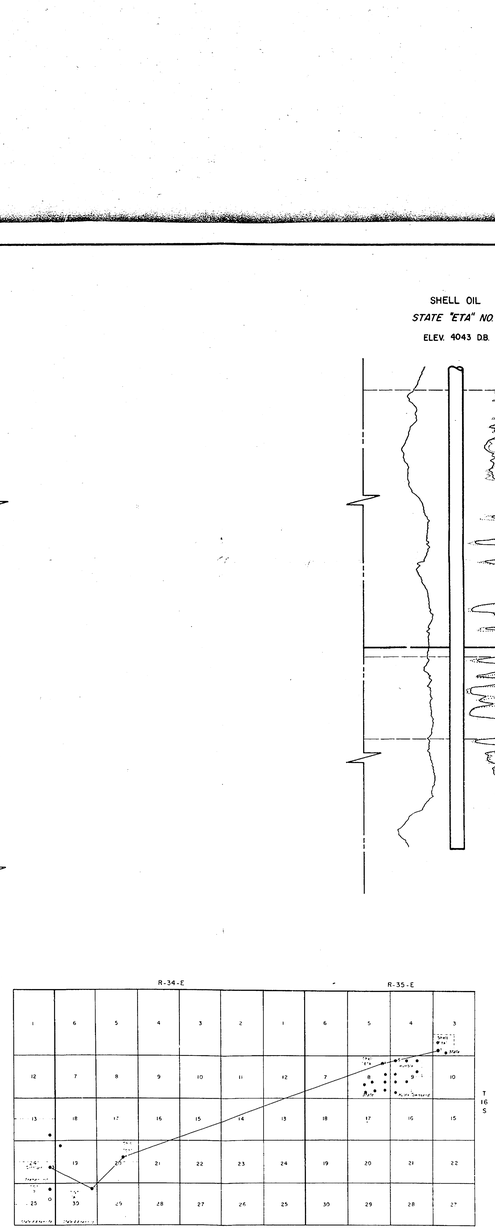
SCALE
0 1000 2000 3000 4000 5000

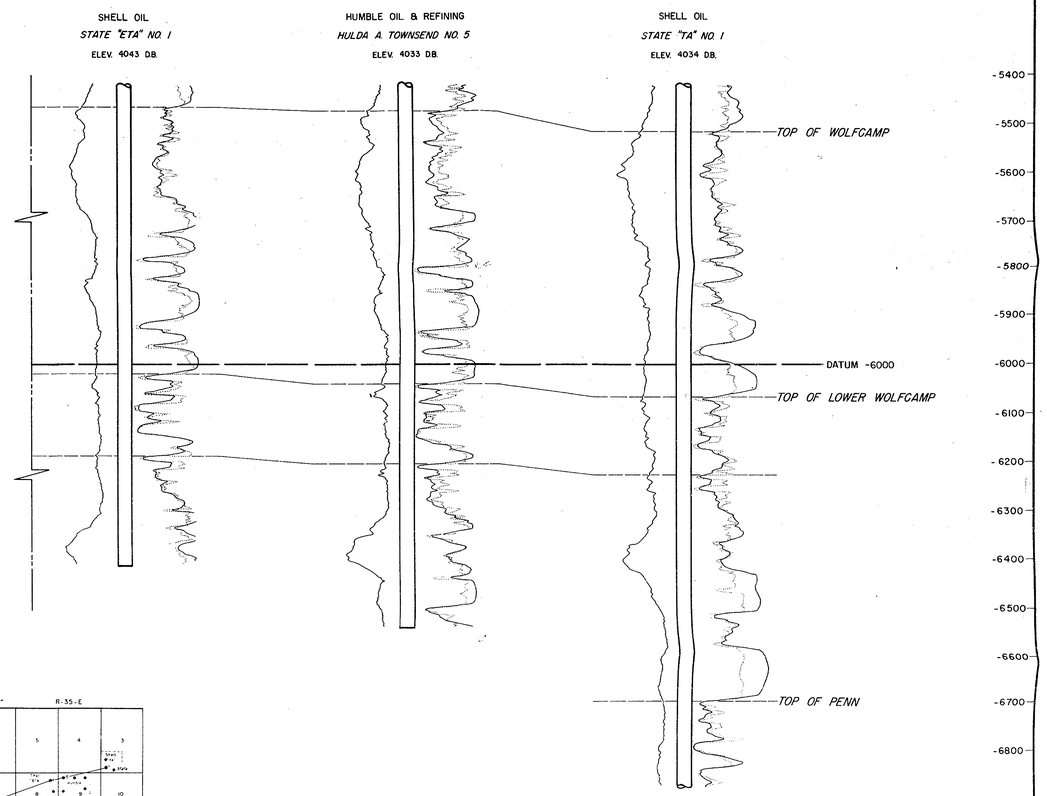
BEFORE THE
OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO
EXHIBIT NO. 5
CASE 1267

T 17 S
T 16 S
T 15 S
R34E
R33E
R32E



KEMNITZ AREA





TOWNSEND AREA

BEFORE THE OIL CONSERVATION COMMISSION SANTA FE, NEW MEXICO
EXHIBIT NO. 11
CASE 1334

TENNESSEE GAS TRANSMISSION CO.
PRODUCTION DEPT. - FT. WORTH, TEXAS

LEA COUNTY, NEW MEXICO

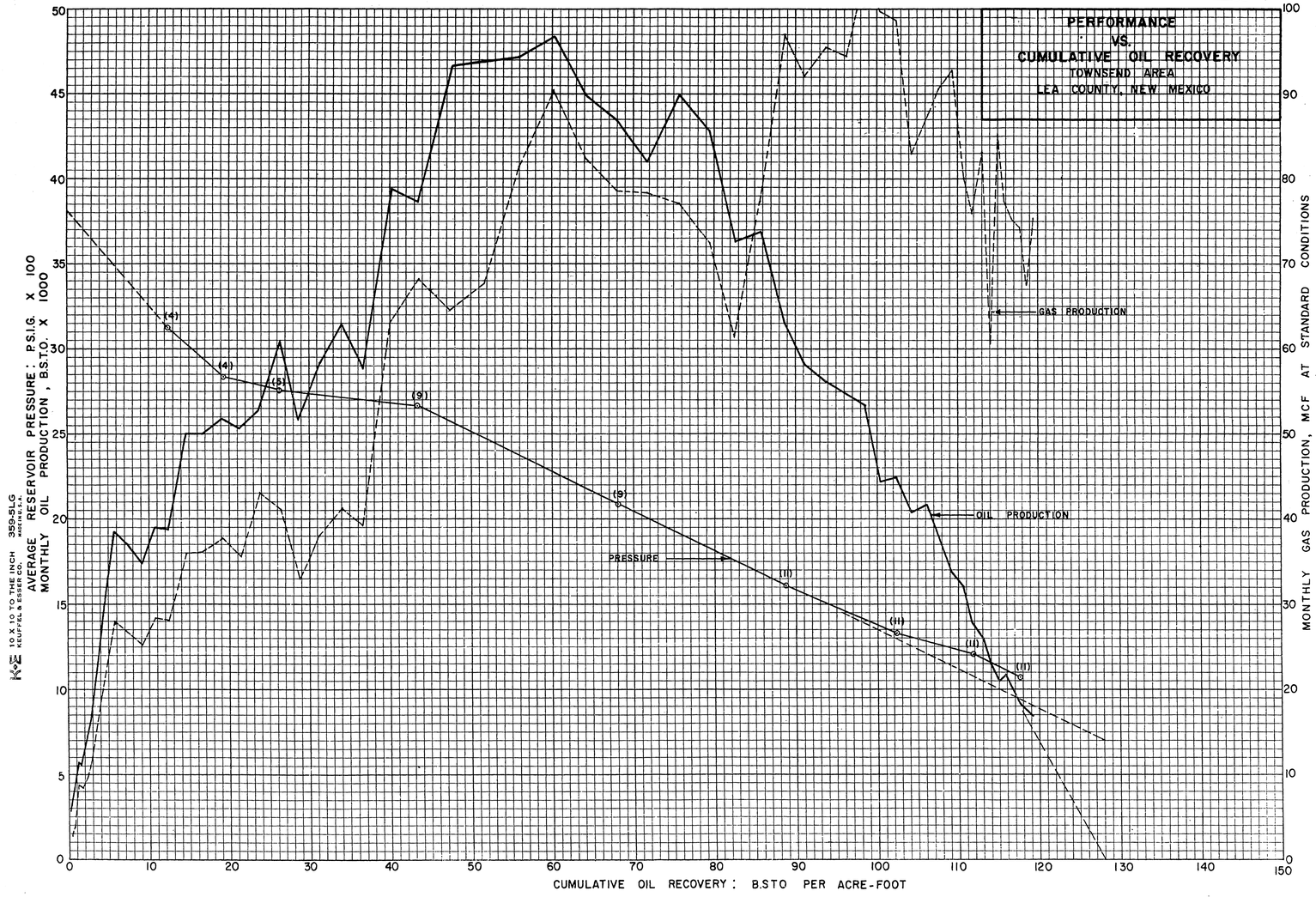
KEMNITZ AREA - TOWNSEND WOLFCAMP
CROSS SECTION

Horizontal Scale
No Scale
Vertical Scale
100 50 0 100 200

158

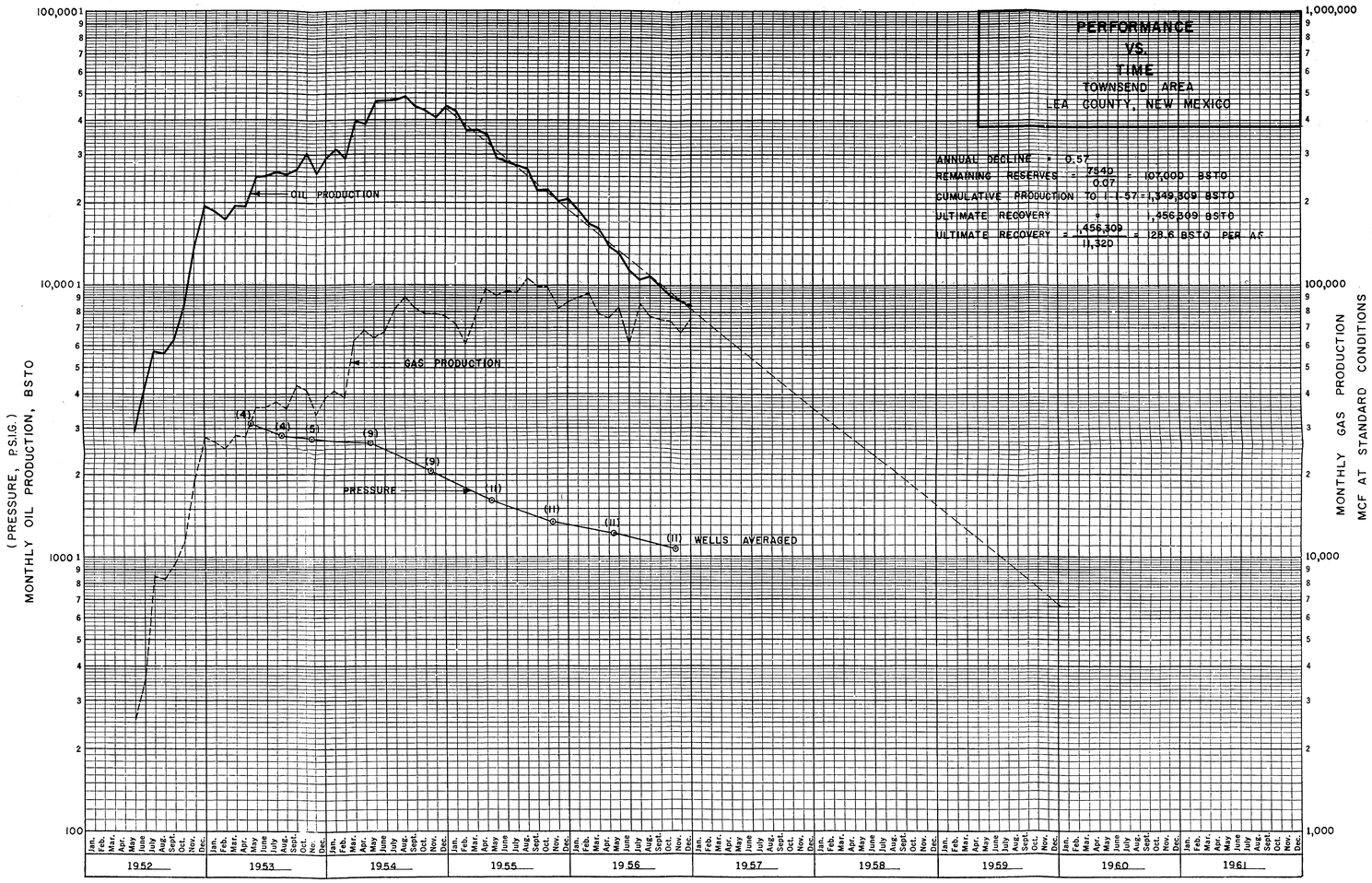
BEFORE THE
OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO
EXHIBIT No. 10
CASE 159

PERFORMANCE VS. CUMULATIVE OIL RECOVERY
TOWNSEND AREA
LEA COUNTY, NEW MEXICO



10 X 10 TO THE INCH 359-5LG
KEUFFEL & ESSER CO. MADE IN U.S.A.

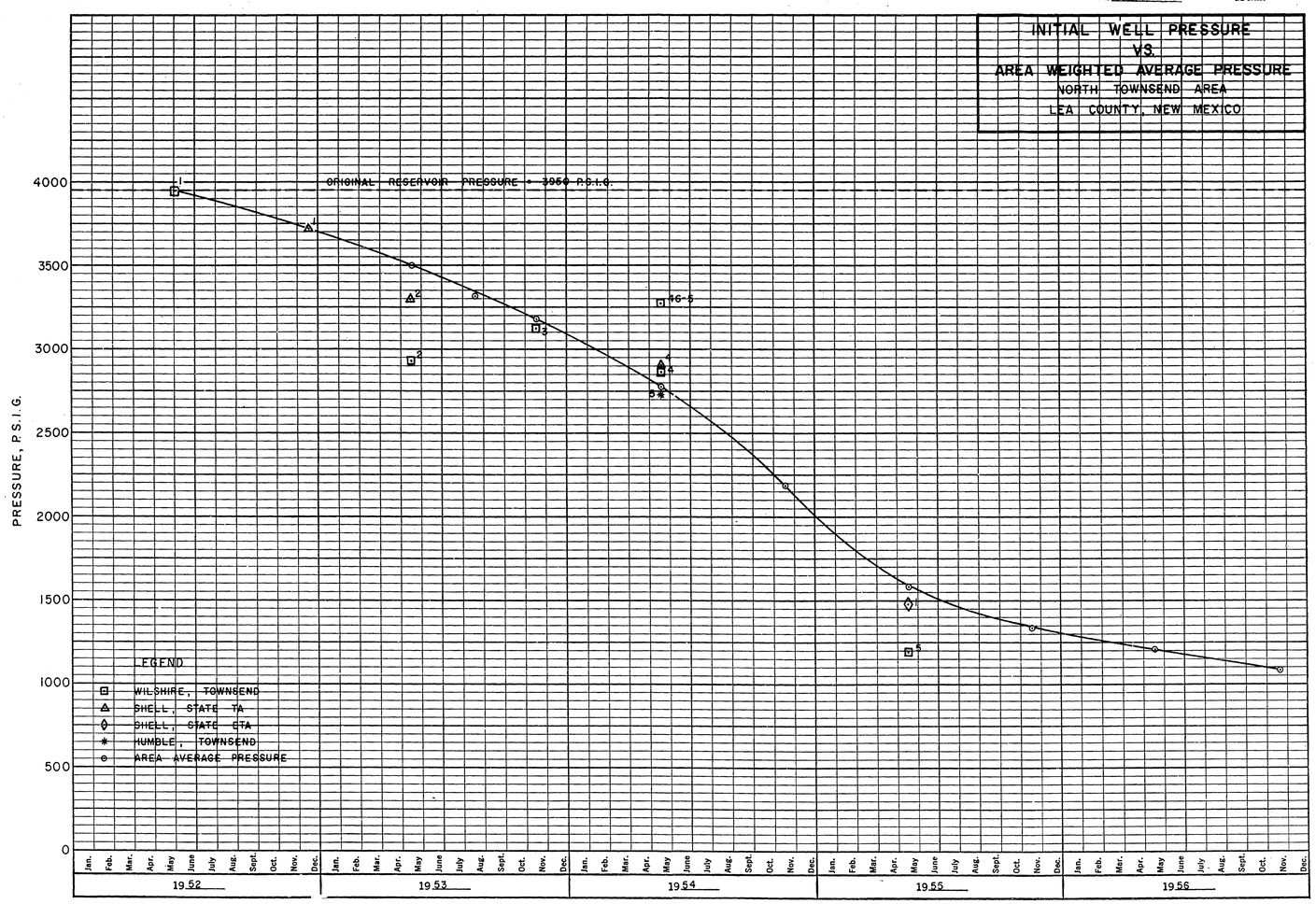
159


PERFORMANCE
VS.
TIME
TOWNSEND AREA
LEA COUNTY, NEW MEXICO
ANNUAL DECLINE = 0.57
REMAINING RESERVES = 75.0 / 0.07 = 107,000 BSTO
CUMULATIVE PRODUCTION TO 1-1-57 = 1,349,309 BSTO
ULTIMATE RECOVERY = 1,456,309 BSTO
ULTIMATE RECOVERY = 1,456,309 / 11,320 = 128.6 BSTO PER AC
OIL PRODUCTION
GAS PRODUCTION
PRESSURE
WELLS AVERAGED
(PRESSURE, P.S.I.G.)
MONTHLY OIL PRODUCTION, BSTO
MONTHLY GAS PRODUCTION
MCF AT STANDARD CONDITIONS
100,000
10,000
1,000
1000
100
1952
1953
1954
1955
1956
1957
1958
1959
1960
1961

160

BEFORE THE
OIL CONSERVATION COMMISSION
SANTA FE, N.M.
EXHIBIT No. 12
CASE 1281

INITIAL WELL PRESSURE
VS.
AREA WEIGHTED AVERAGE PRESSURE
NORTH TOWNSEND AREA
LEA COUNTY, NEW MEXICO



BEFORE THE
OIL CONSERVATION COMMISSION
SANTA FE, N.M.
EXHIBIT No. 12
CASE 1281

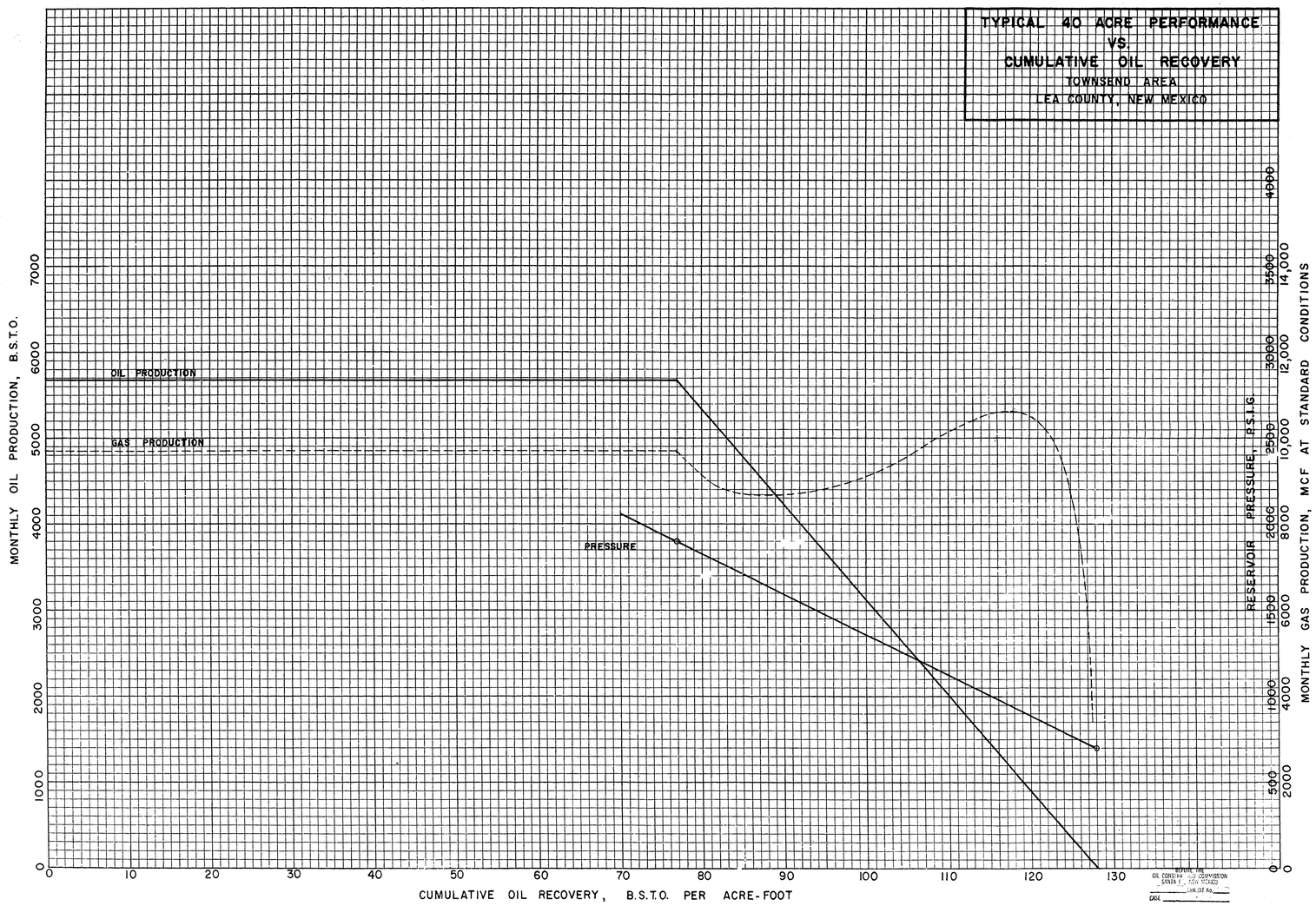
OIL CONSERVATION COMMISSION
EXHIBIT No. 7
CASE 1267

ULTIMATE UNIT VOLUME RECOVERY VS. WELL COMPLETION DATE

TOWNSEND AREA
LEA COUNTY, NEW MEXICO

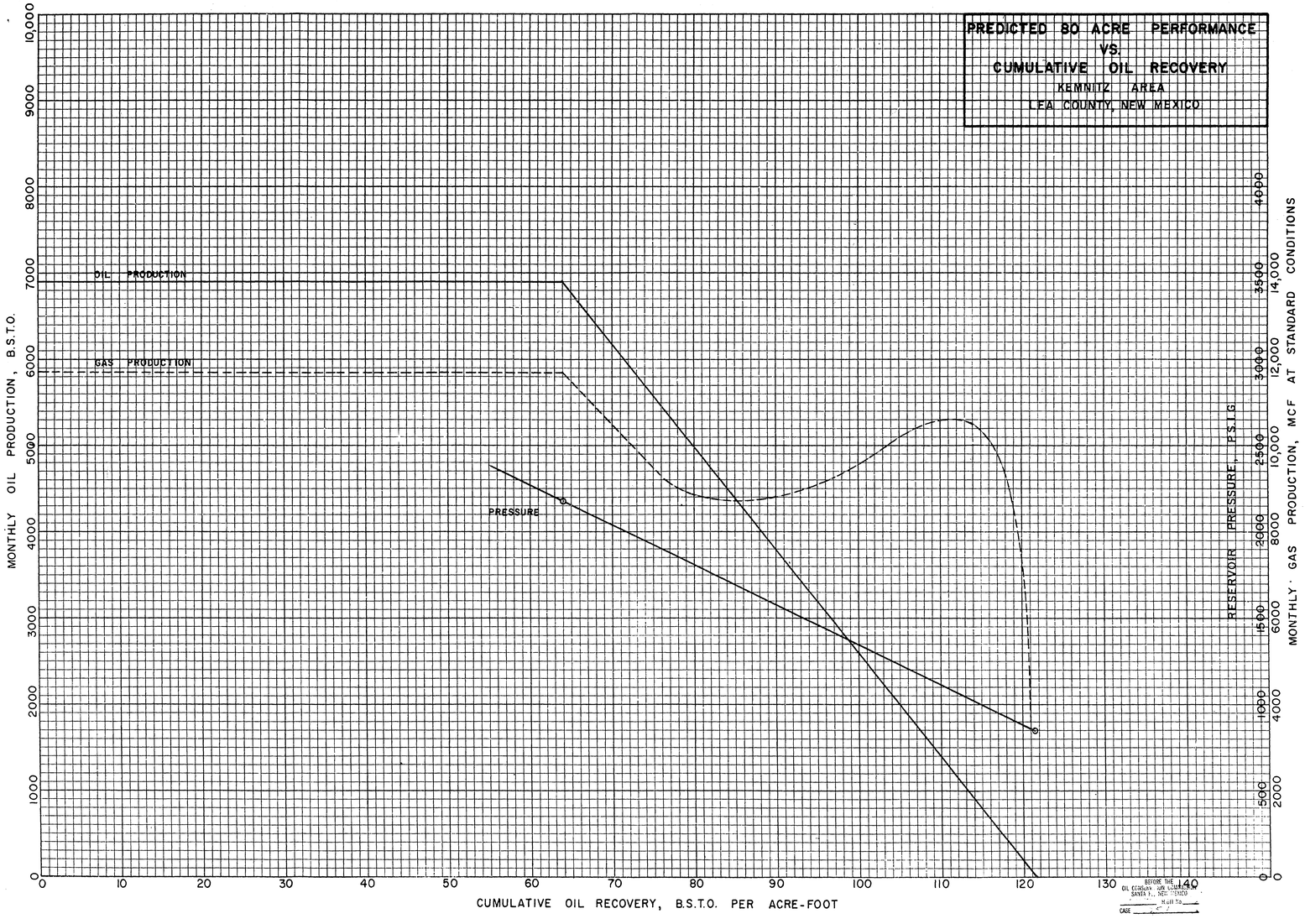
TYPICAL 40 ACRE PERFORMANCE VS. CUMULATIVE OIL RECOVERY

TOWNSEND AREA
LEA COUNTY, NEW MEXICO

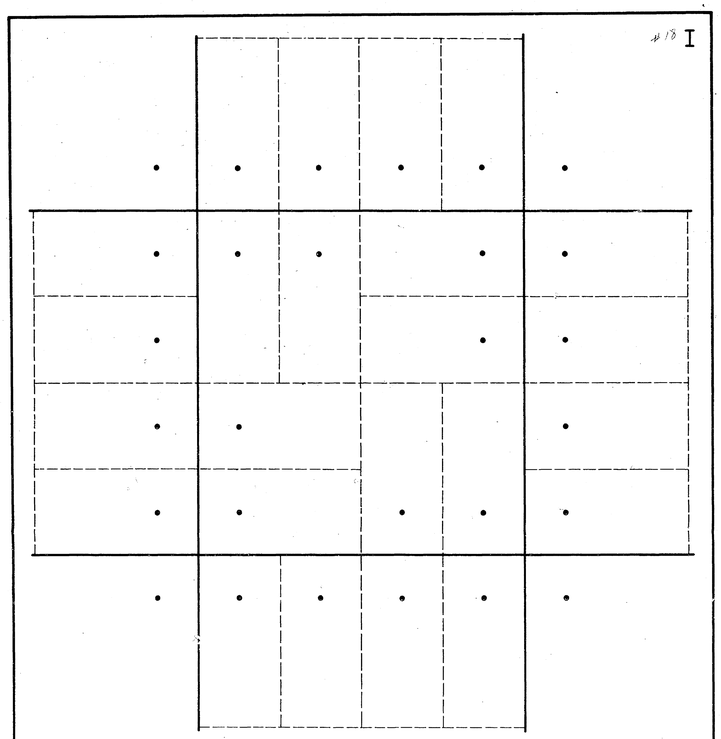


BEFORE THE
OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO
EXHIBIT No. ____
CASE ____

163


PREDICTED 80 ACRE PERFORMANCE
VS.
CUMULATIVE OIL RECOVERY
KEMNITZ AREA
LEA COUNTY, NEW MEXICO
OIL PRODUCTION
GAS PRODUCTION
PRESSURE
MONTHLY OIL PRODUCTION, B.S.T.O.
RESERVOIR PRESSURE, P.S.I.G.
MONTHLY GAS PRODUCTION, MCF AT STANDARD CONDITIONS
CUMULATIVE OIL RECOVERY, B.S.T.O. PER ACRE-FOOT
0 10 20 30 40 50 60 70 80 90 100 110 120 130 140
0 1000 2000 3000 4000 5000 6000 7000 8000 9000 10,000
0 500 1000 1500 2000 2500 3000 3500 4000
0 2000 4000 6000 8000 10,000 12,000 14,000
BEFORE THE OIL CONSERVATION COMMISSION SANTA FE, NEW MEXICO
EXHIBIT NO.
CASE

16A



TENNESSEE GAS TRANSMISSION CO.
PRODUCTION DEPT. HOUSTON, TEXAS

POSSIBLE DEV. - 80 Ac. SPACING

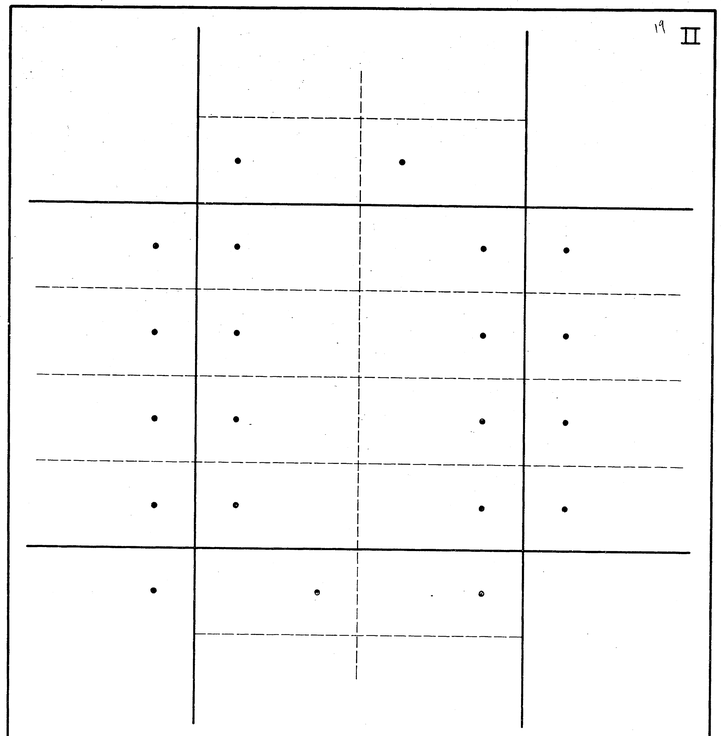
OPTIONAL WELL LOCATIONS

&

OPTIONAL PRORATION UNITS

NO SCALE

BEFORE THE OIL CONSERVATION COMMISSION SANTA FE, NEW MEXICO
EXHIBIT No. 18
CASE 1154



TENNESSEE GAS TRANSMISSION CO.
PRODUCTION DEPT. HOUSTON, TEXAS

POSSIBLE DEV. - 80 Ac. SPACING

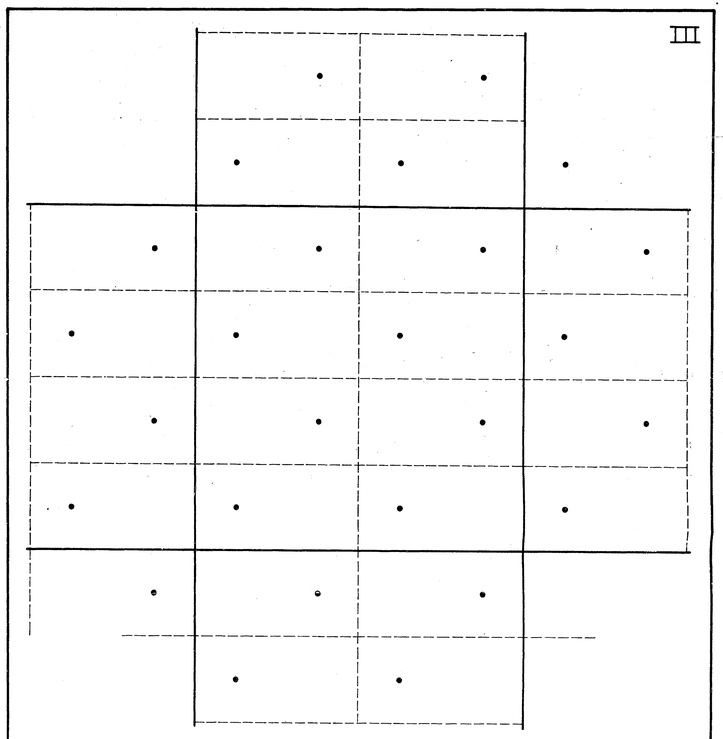
OPTIONAL WELL LOCATIONS

&

DESIGNATED PRORATION UNITS

NO SCALE

BEFORE THE OIL CONSERVATION COMMISSION SANTA FE, NEW MEXICO
EXHIBIT No. 19
CASE 1154



TENNESSEE GAS TRANSMISSION CO.
PRODUCTION DEPT. HOUSTON, TEXAS

POSSIBLE DEV. - 80 Ac. SPACING

DESIGNATED WELL LOCATIONS

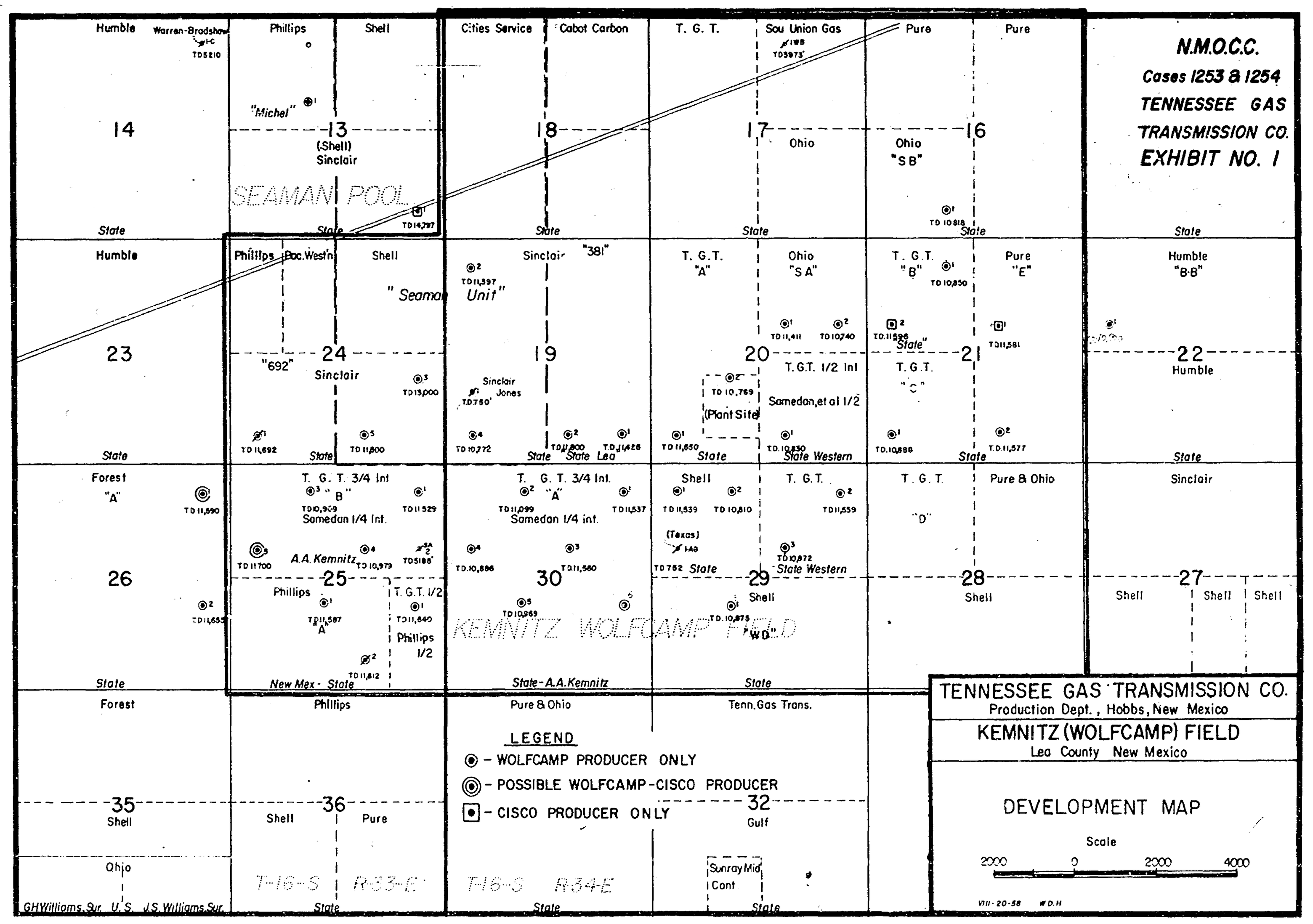
&

DESIGNATED PRORATION UNITS

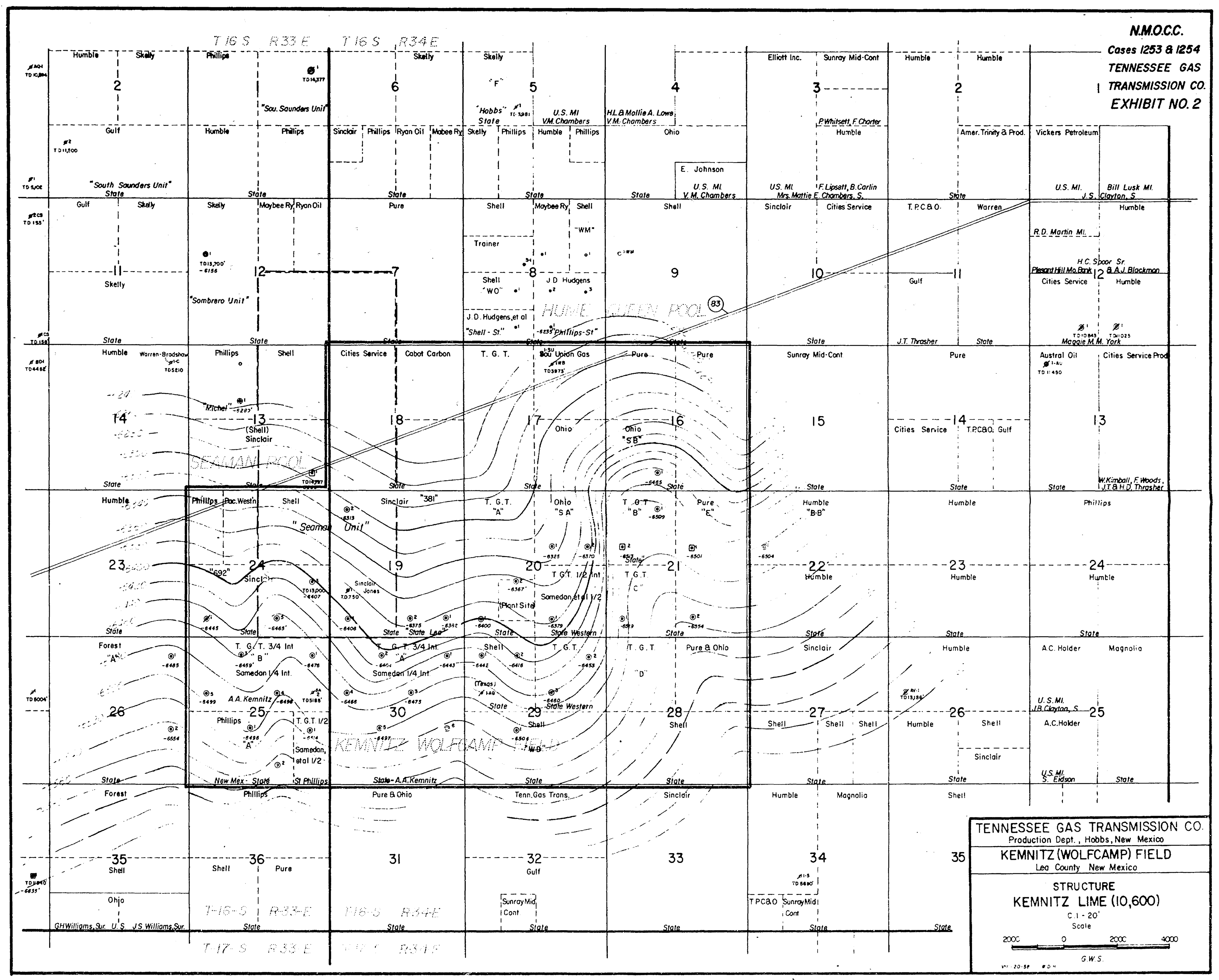
NO SCALE

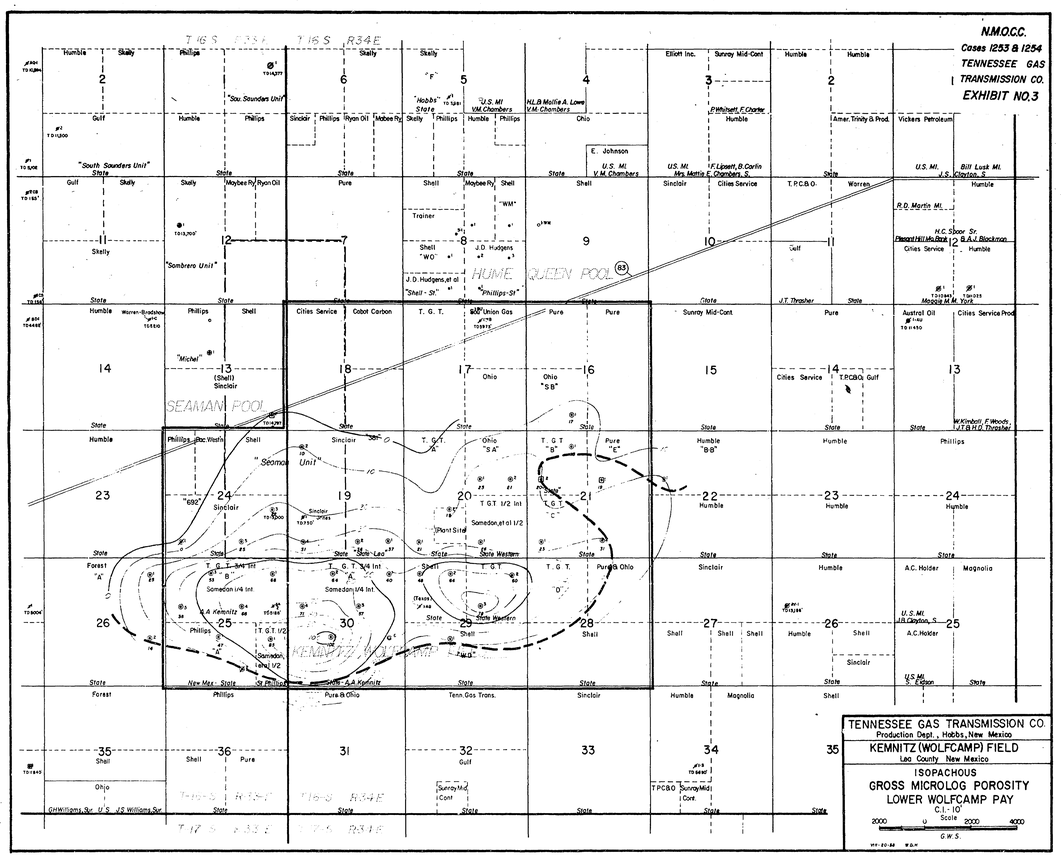
BEFORE THE OIL CONSERVATION COMMISSION SANTA FE, NEW MEXICO
EXHIBIT No. 20
CASE 1154

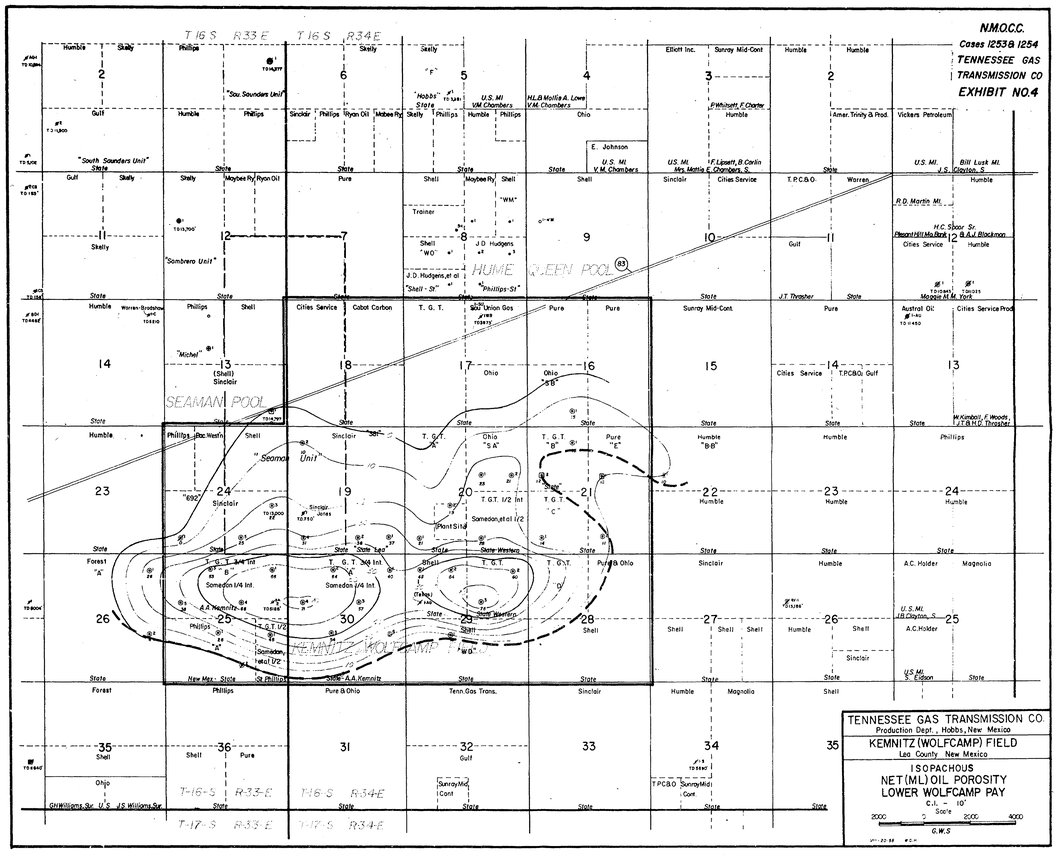
165


N.M.O.C.C.
Cases 1253 & 1254
TENNESSEE GAS
TRANSMISSION CO.
EXHIBIT NO. 1
SEAMAN POOL
KEMNITZ WOLFCAMP FIELD
LEGEND
- WOLFCAMP PRODUCER ONLY
- POSSIBLE WOLFCAMP-CISCO PRODUCER
- CISCO PRODUCER ONLY
T-16-S R-33-E
T-16-S R-34-E
TENNESSEE GAS TRANSMISSION CO.
Production Dept., Hobbs, New Mexico
KEMNITZ (WOLFCAMP) FIELD
Lea County New Mexico
DEVELOPMENT MAP
Scale
2000 0 2000 4000

166


N.M.O.C.C.
Cases 1253 & 1254
TENNESSEE GAS
TRANSMISSION CO.
EXHIBIT NO. 2
T 16 S R 33 E T 16 S R 34 E
SEAMAN POOL
HUME QUEEN POOL
KEMNITZ WOLFCAMP FIELD
T-16-S R-33-E
T-16-S R-34-E
T-17-S R-33-E
TENNESSEE GAS TRANSMISSION CO.
Production Dept., Hobbs, New Mexico
KEMNITZ (WOLFCAMP) FIELD
Lea County New Mexico
STRUCTURE
KEMNITZ LIME (10,600)
C.I. - 20'
Scale
2000 0 2000 4000
G.W.S.


N.M.O.C.C.
Cases 1253 & 1254
TENNESSEE GAS TRANSMISSION CO.
EXHIBIT NO.3
T 16 S R 33 E
T 16 S R 34 E
HUME QUEEN POOL
SEAMAN POOL
"Seaman Unit"
"Sou. Saunders Unit"
"Sombrero Unit"
"South Saunders Unit"
"Michel"
"Hobbs" State
"F"
"WM"
"WO"
"Shell - St"
"Phillips-St"
Trainer
Plant Site
Somedon, et al I/2
Somedon 1/4 Int
T. G. T. 1/2 Int
T. G. T. 3/4 Int
Ohio "SA"
Ohio "SB"
T. G. T. "A"
T. G. T. "B"
T. G. T. "C"
Pure "E"
Humble "BB"
"692"
Forest "A"
Sinclair
Shell
Phillips
Humble
Gulf
Skelly
Maybee Ry.
Ryan Oil
Sinclair
Pure
Cities Service
Cabot Carbon
T. G. T.
Union Gas
Sunray Mid-Cont.
T.P.C.B.O.
Warren
Amer. Trinity & Prod.
Vickers Petroleum
Austral Oil
Cities Service Prod.
Warren-Bradshaw
Elliott Inc.
Ohio
Tenn. Gas Trans.
Magnolia
A.C. Holder
U.S. Mt.
V.M. Chambers
H.L.B Mollie A. Lowe
V.M. Chambers
F. Whitsett, F. Charter
F. Lipsett, B. Carlin
Mrs. Mattie E. Chambers, S.
E. Johnson
R.D. Martin Mt.
H.C. Spoor Sr.
Pleasant Hill Mo. Bapt.
B.& J. Blackmon
Bill Lusk Mt.
J.S. Clayton, S.
J.D. Hudgens, et al
J.T. Thrasher
Maggie M.M. York
W. Kimbell, F. Woods, J.T. & H.C. Thrasher
A.A. Kemnitz
Lea
Chaves
New Mex.-State
Oil & Phillips
State-A.A. Kemnitz
State-Lea
State Western
GH Williams, Sr. U.S. J.S. Williams, Sr.
T-17-S R-33-E
T-17-S R-34-E
TENNESSEE GAS TRANSMISSION CO.
Production Dept., Hobbs, New Mexico
KEMNITZ (WOLFCAMP) FIELD
Lea County, New Mexico
ISOPACHOUS
GROSS MICROLOG POROSITY
LOWER WOLFCAMP PAY
C.I.- 10'
Scale
2000 0 2000 4000
G.W.S.


N.M.O.C.C.
Cases 1253 & 1254
TENNESSEE GAS TRANSMISSION CO.
EXHIBIT NO.4
T 16 S R 33 E
T 16 S R 34 E
HUME QUEEN POOL
SEAMAN POOL
"Seaman Unit"
"Sou. Saunders Unit"
"Sombrero Unit"
"South Saunders Unit"
"Michel"
"Hobbs" State
"F"
"WM"
"WO"
"Shell - St"
"Phillips-St"
Trainer
Plant Site
Somedon, et al I/2
Somedon 1/4 Int
T. G. T. 1/2 Int
T. G. T. 3/4 Int
Ohio "SA"
Ohio "SB"
T. G. T. "A"
T. G. T. "B"
T. G. T. "C"
Pure "E"
Humble "BB"
"692"
Forest "A"
Sinclair
Shell
Phillips
Humble
Gulf
Skelly
Maybee Ry.
Ryan Oil
Sinclair
Pure
Cities Service
Cabot Carbon
T. G. T.
Union Gas
Sunray Mid-Cont.
T.P.C.B.O.
Warren
Amer. Trinity & Prod.
Vickers Petroleum
Austral Oil
Cities Service Prod.
Warren-Bradshaw
Elliott Inc.
Ohio
Tenn. Gas Trans.
Magnolia
A.C. Holder
U.S. Mt.
V.M. Chambers
H.L.B Mollie A. Lowe
V.M. Chambers
F. Whitsett, F. Charter
F. Lipsett, B. Carlin
Mrs. Mattie E. Chambers, S.
E. Johnson
R.D. Martin Mt.
H.C. Spoor Sr.
Pleasant Hill Mo. Bapt.
B.& J. Blackmon
Bill Lusk Mt.
J.S. Clayton, S.
J.D. Hudgens, et al
J.T. Thrasher
Maggie M.M. York
W. Kimbell, F. Woods, J.T. & H.C. Thrasher
A.A. Kemnitz
Lea
Chaves
New Mex.-State
Oil & Phillips
State-A.A. Kemnitz
State-Lea
State Western
GH Williams, Sr. U.S. J.S. Williams, Sr.
T-17-S R-33-E
T-17-S R-34-E
TENNESSEE GAS TRANSMISSION CO.
Production Dept., Hobbs, New Mexico
KEMNITZ (WOLFCAMP) FIELD
Lea County, New Mexico
ISOPACHOUS
NET (ML) OIL POROSITY
LOWER WOLFCAMP PAY
C.I. - 10'
Scale
2000 0 2000 4000
G.W.S

167

A

GREAT WESTERN DRILLING COMPANY
(FORMERLY MOORE & TURNER)
No. 1 McQuoin
Sec. 8, T-18-S, R-39-E
Lea County, New Mexico

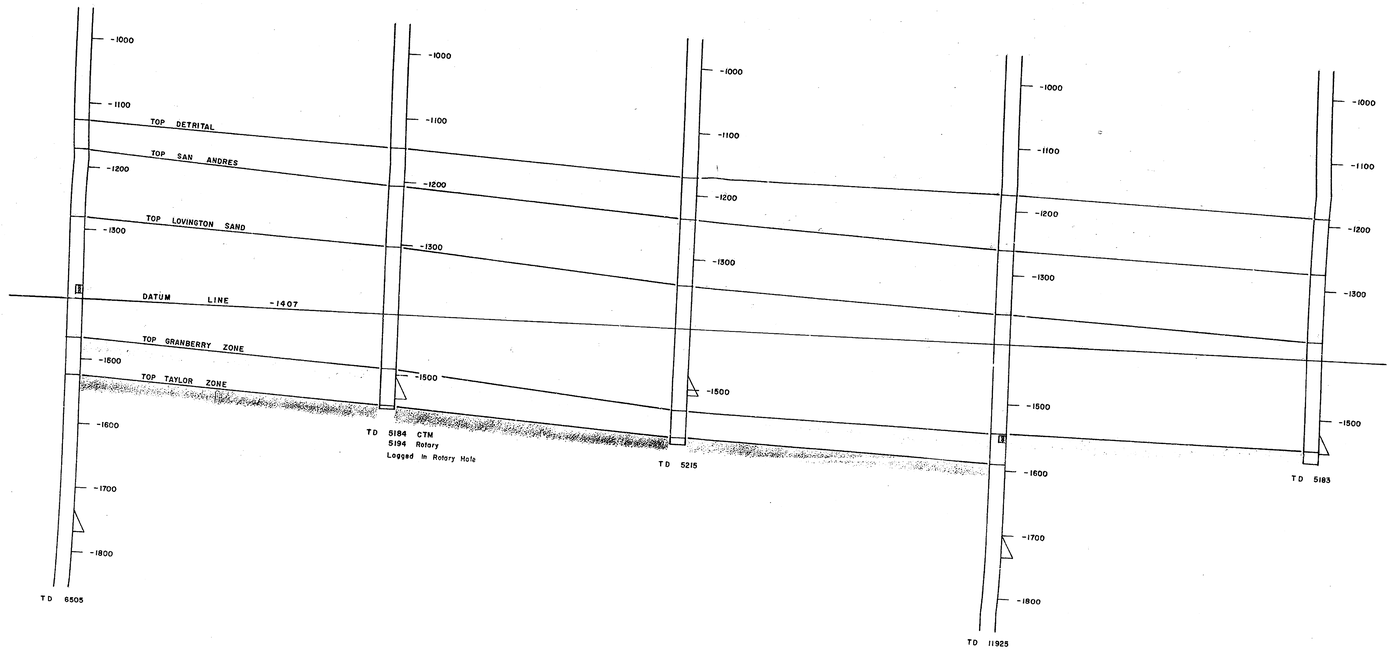
GREAT WESTERN DRILLING COMPANY
No. 1 S. Johnson
Sec. 8, T-18-S, R-39-E
Lea County, New Mexico

GREAT WESTERN DRILLING COMPANY
No. 1 C. A. Taylor
Sec. 15, Blk. A-9, P.S.L. Survey
Gaines County, Texas

GREAT WESTERN DRILLING COMPANY
No. 1 F. S. Granberry
Sec. 6, Blk. A-9, P.S.L. Survey
Gaines County, Texas

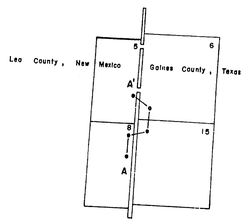
A'

GREAT WESTERN DRILLING COMPANY
No. 1 E. Carter
Sec. 5, T-18-S, R-39-E
Lea County, New Mexico



HORIZONTAL SCALE : 1" = 250'
VERTICAL SCALE : 1" = 100'
DATUM LINE : -1407
MAY 7, 1957

NORTH - SOUTH CROSS SECTION
CARTER SAN ANDRES AREA
LEA COUNTY, NEW MEXICO — GAINES COUNTY, TEXAS

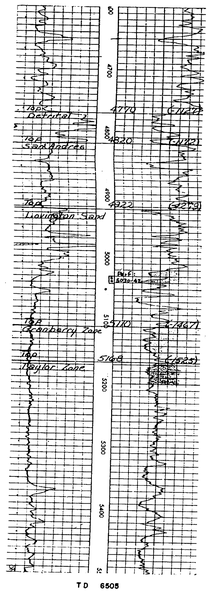


168

BEFORE THE
OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO
EXHIBIT No.
CASE

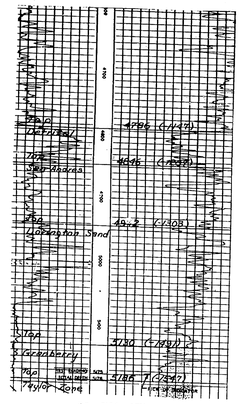
A

GREAT WESTERN DRILLING COMPANY
(FORMERLY MOORE & TURNER)
No. 1 McGuire
Sec. 8, T-18-S, R-39-E
Lea County, New Mexico



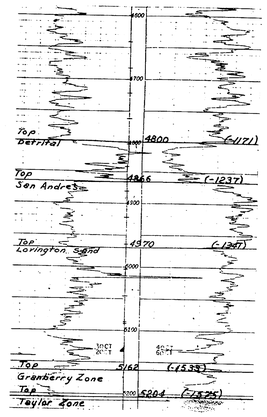
TD 6505

GREAT WESTERN DRILLING COMPANY
No. 1 S. Johnson
Sec. 8, T-18-S, R-39-E
Lea County, New Mexico



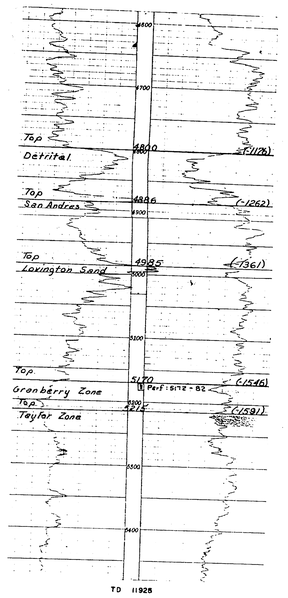
TD 5184 CTN
5194 Rotary
Logged in Rotary Hole

GREAT WESTERN DRILLING COMPANY
No. 1 C. A. Taylor
Sec. 15, Blk. A-9, P.S.L. Survey
Gaines County, Texas



TD 5215

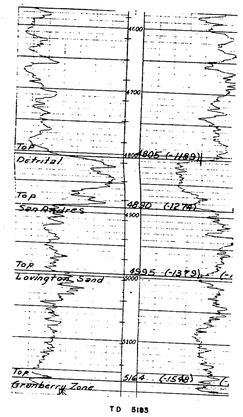
GREAT WESTERN DRILLING COMPANY
No. 1 F. S. Cranberry
Sec. 6, Blk. A-9, P.S.L. Survey
Gaines County, Texas



TD 11925

A'

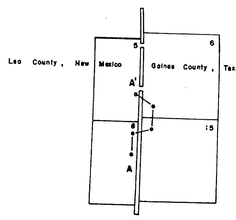
GREAT WESTERN DRILLING COMPANY
No. 1 E. Carter
Sec. 5, T-18-S, R-39-E
Lea County, New Mexico



TD 5183

HORIZONTAL SCALE : 1" = 250'
VERTICAL SCALE : 1" = 100'
DATUM LINE : -1407
MAY 7, 1957

NORTH - SOUTH CROSS SECTION
CARTER SAN ANDRES AREA
LEA COUNTY, NEW MEXICO — GAINES COUNTY, TEXAS



169

BEFORE THE
OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO
EXHIBIT No.
CASE 1229

LANE RADIOACTIVITY LOG WELLS

Ex "B" COMPANY

FILE NO.

Location of Well

BEFORE THE OIL CONSERVATION COMMISSION SANTA FE, NEW MEXICO EXHIBIT NO. 2 CASE 2560

3516' TOTAL DEPTH

COMPANY: CITIES SERVICE OIL COMPANY

WELL: CLOSSON NO. B - 6

FIELD: SOUTH EUNICE

COUNTY: LEA STATE: N.M.

LOCATION: 1980' FN & 660' FWL

SEC. 20 - 22 S - 36 E

COMPANY: CITIES SERVICE OIL COMPANY
WELL: CLOSSON No. B - 6
FIELD: SOUTH EUNICE
COUNTY: LEA
LOCATION:
STATE: N.M.

LOG MEAS. FROM TOP OF B.O.P. ELEV. *

DRLG. MEAS. FROM TOP OF B.O.P. ELEV. *

TOP OF UPPERMOST 5 1/2" CSG. COLLAR

PERM. DATUM IS 5' BELOW TOP OF B.O.P. ELEV. *

TYPE OF LOG	GAMMA RAY	NEUTRON		
RUN NO.	1 C.W.	1 C.W.		
DATE	6-17-52	6-17-52		
TOTAL DEPTH (DRILLER) BACK				
EFFECTIVE DEPTH (DRILLER)	3531'	3531'		
TOP OF LOGGED INTERVAL	SURFACE	SURFACE		
BOTTOM OF LOGGED INTERVAL	3516'	3516'		
TYPE OF FLUID IN HOLE	OIL & WATER			
FLUID LEVEL	1715'	1715'		
MAXIMUM RECORDED TEMP.				
NEUTRON SOURCE STRENGTH & TYPE		60MC		
SOURCE SPACING — IN.		8.25"		
LENGTH OF MEASURING DEVICE — IN.	36"	9"		
O.D. OF INSTRUMENT — IN.	3 5/8"	3 5/8"		
TIME CONSTANT — SECONDS	5	2.5		
LOGGING SPEED FT. MIN.	30 - 50	40 - 60		
STATISTICAL VARIATION — IN.				
SENSITIVITY REFERENCE	275	275		
RECORDED BY	STEWART	STEWART		
WITNESSED BY	HARDMAN	HARDMAN		

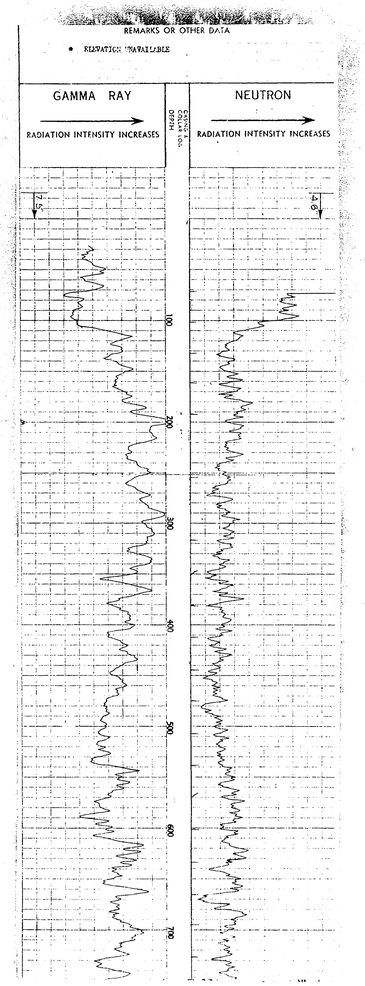
CASING RECORD

RUN NO.	BIT SIZE	CASING	WT.—Lb.	FROM	WELL RECORD TO	FROM	R A LOG TO
1		5 1/2"		SURF.	3531'	SURF.	3516'
					TO		TO
					TO		TO
					TO		TO
					TO		TO

170

REMARKS OR OTHER DATA

• RESISTIVITY UNAVAILABLE



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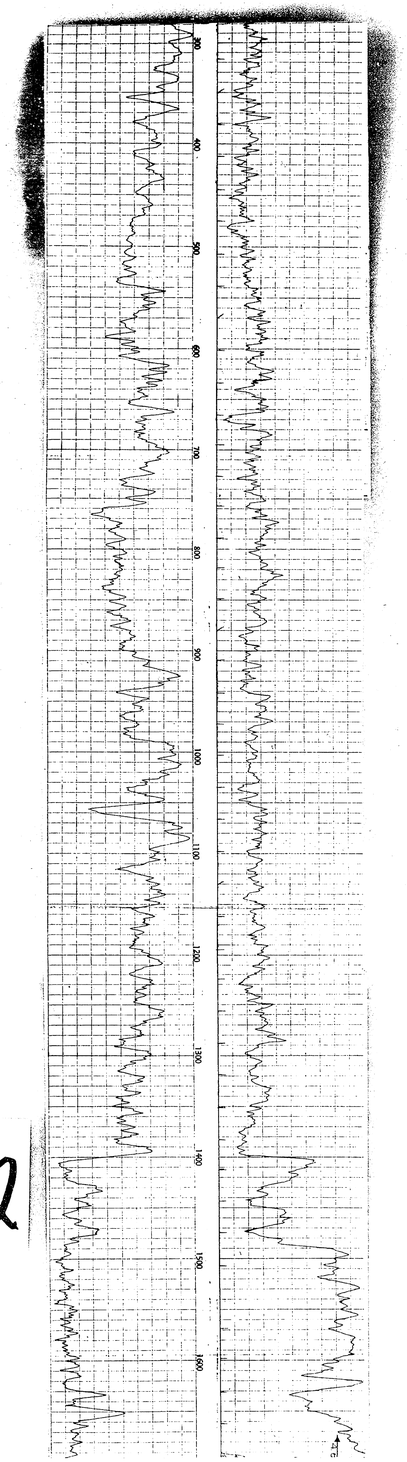
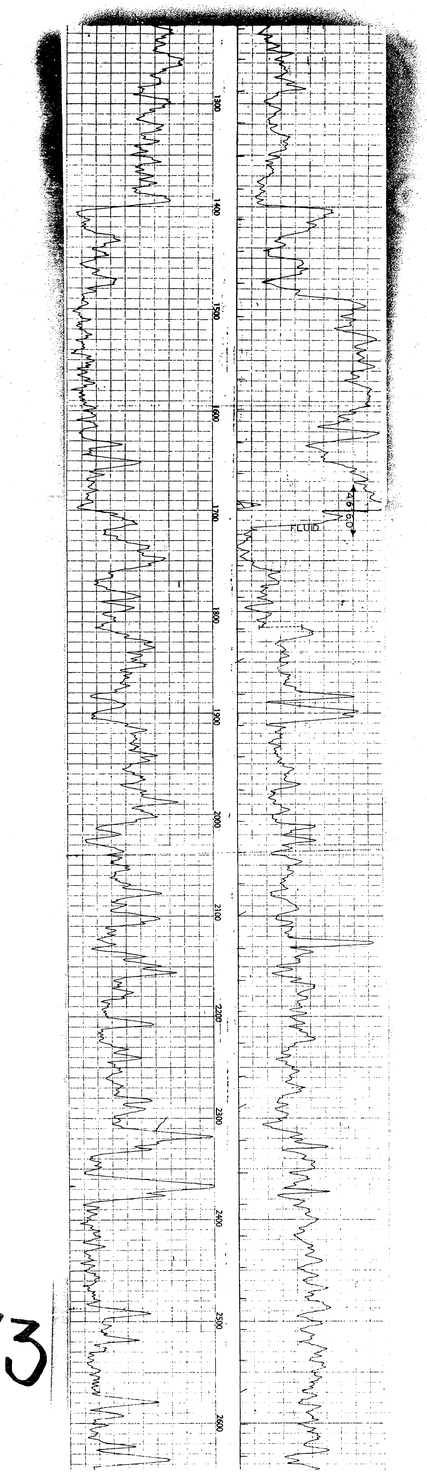
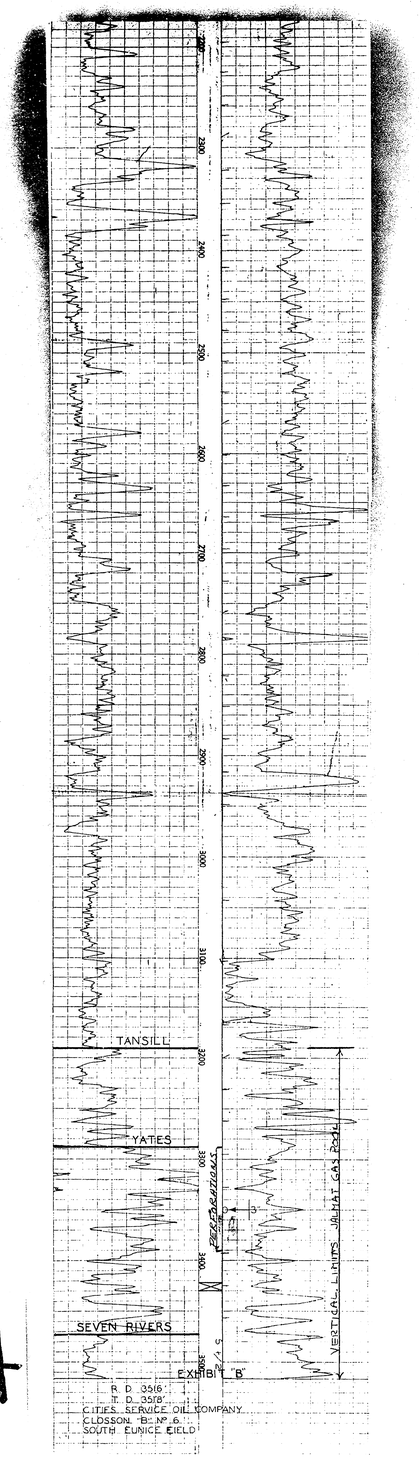


172


1300
1400
1500
1600
1700
1800
1900
2000
2100
2200
2300
2400
2500
2600
FCUD


2200
2300
2400
2500
2600
2700
2800
2900
3000
3100
TANSILL
3200
YATES
3300
7 Rivers Dolomite
3400
SEVEN RIVERS
3500
EXHIBIT "B"
R. D. 3516'
T. D. 3578'
CITIES SERVICE OIL COMPANY
CLOSSON "B" NO. 6
SOUTH EUNICE FIELD
VERTICAL UNITS - MUD GAS PSIA

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RADIOACTIVITY LOG

WELEX JET SERVICES, Inc.

Ex "C"

FILE NO.

COMPANY CITIES SERVICE OIL CO.
WELL CLOSSON "B" NO. 3
FIELD SOUTH HUNTER
COUNTY LEA STATE NEW MEXICO
LOCATION SEC. 20, T - 22 - S, R - 36 - E

Location of Well
OPERATOR'S METHOD OF LOCATING WELL ON EXHIBIT PLAT
S. E.

LOG MEAS. FROM TOP TUBING HEAD FLANGE ELEV.
DRLG. MEAS. FROM ELEV.
PERM. DATUM TUBING HEAD FLANGE ELEV.

TYPE OF LOG	GAMMA RAY	N - N	M/G M.S.
RUN NO.	- 1 -	- 2 -	- 2 -
DATE	8/23/57	8/23/57	8/23/57
JOB NO.	LJ-2018 & 363-695	LJ-2018 & 363-695	LJ-2018 & 363-695
TOTAL DEPTH (DRILLER)	3801	3801	3801
EFFECTIVE DEPTH (DRILLER)	3726	3726	3726
TOTAL DEPTH (R/A LOG)	3726	3726	3726
TOP OF LOGGED INTERVAL	50	50	1800
BOTTOM OF LOGGED INTERVAL	3720	3720	3720
TYPE OF FLUID IN HOLE	OIL	OIL	OIL
FLUID LEVEL	FL	FL	FL
MAXIMUM RECORDED TEMPERATURE		81043	81043
NEUTRON SOURCE STRENGTH & TYPE		13.50	22.50
SOURCE SPACING—IN.		SCINT.	SCINT.
DETECTOR CLASS	SCINT.	D 401	D 611
DETECTOR TYPE	D 401	4	4
LENGTH OF MEASURING DEVICE—IN.	4	3 5/8	3 5/8
O.D. OF INSTRUMENT—IN.	3 5/8	3.5	3.5
TIME CONSTANT—SECONDS	2.0	20-40	
LOGGING SPEED FT./MIN. 2" -	20-40	80-40	
5" -	20	20	20
STATISTICAL VARIATION—IN.	0.15	0.15	
SENSITIVITY REFERENCE	C 213	D 368	D 368
RECORDED BY	DEPUE	DEPUE	DEPUE
WITNESSED BY	MR. WOODRUFF		MR. WOODRUFF

CASING RECORD

SIZE—INS. WT.—LB.	INTERVAL FROM WELL RECORD	INTERVAL FROM R/A LOG
5 1/2	0 To 3720'	To
	To	To
	To	To
	To	To

BIT SIZE INS.	BORE HOLE INTERVAL FROM WELL RECORD	BORE HOLE INTERVAL FROM R/A LOG
	To	To
	To	To
	To	To
	To	To

REMARKS OR OTHER DATA

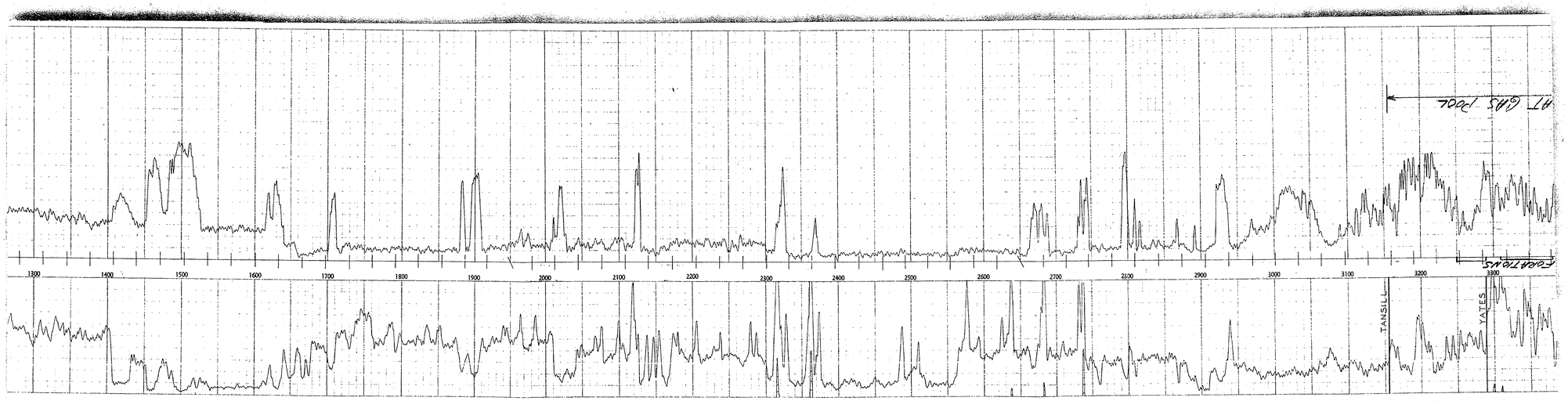
NEUTRON — RADIATION INTENSITY INCREASES

FLUID LEVEL

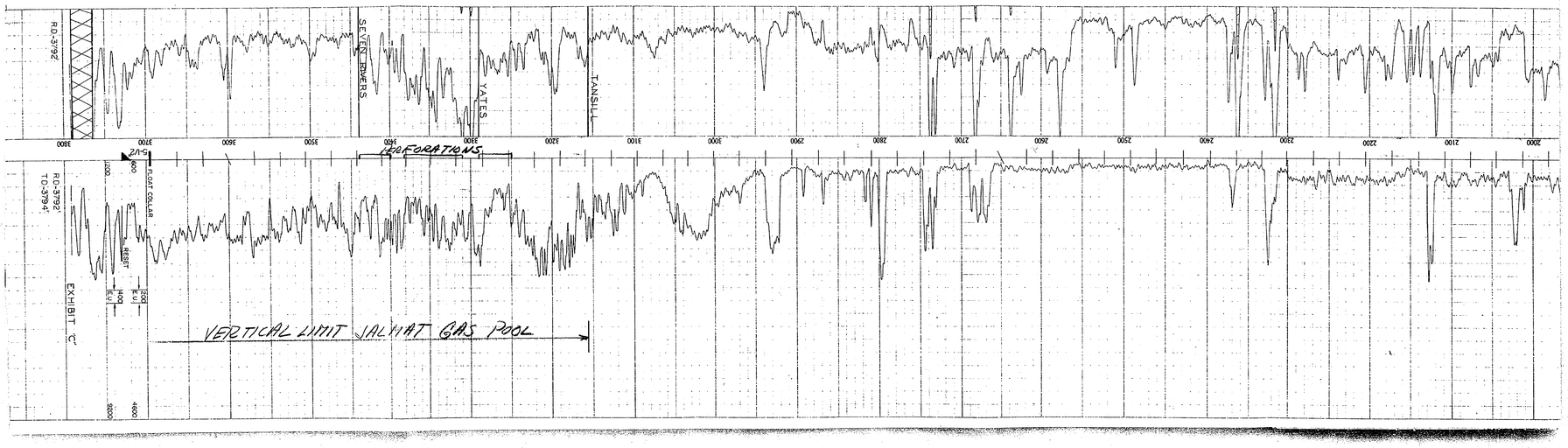
CASING & COLLAR LOG DEPTH

GAMMA RAY — RADIATION INTENSITY INCREASES

175


HT GAS PROG
1300
1400
1500
1600
1700
1800
1900
2000
2100
2200
2300
2400
2500
2600
2700
2800
2900
3000
3100
3200
3300
TANSILL
YATES

176


RD-3792'
SEVEN RIVERS
YATES
TANSILL
PERFORATIONS
RD-3792'
TD-3794'
FLOAT COLLAR
RESET
EXHIBIT "C"
VERTICAL LIMIT JALMAT GAS POOL

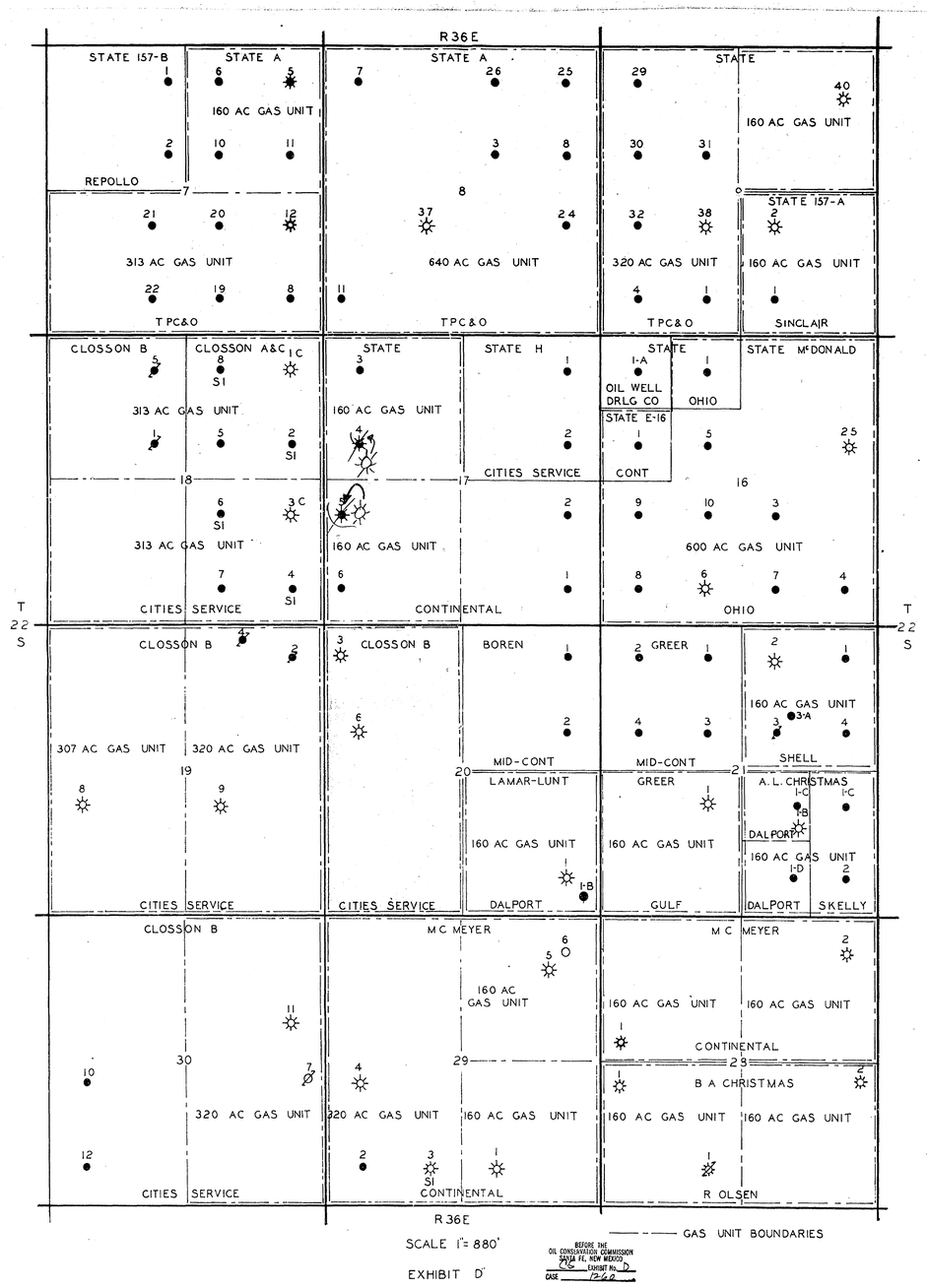


EXHIBIT 'D'

BEFORE THE OIL CONSERVATION COMMISSION SANTA FE, NEW MEXICO EXHIBIT No. D CASE 1262

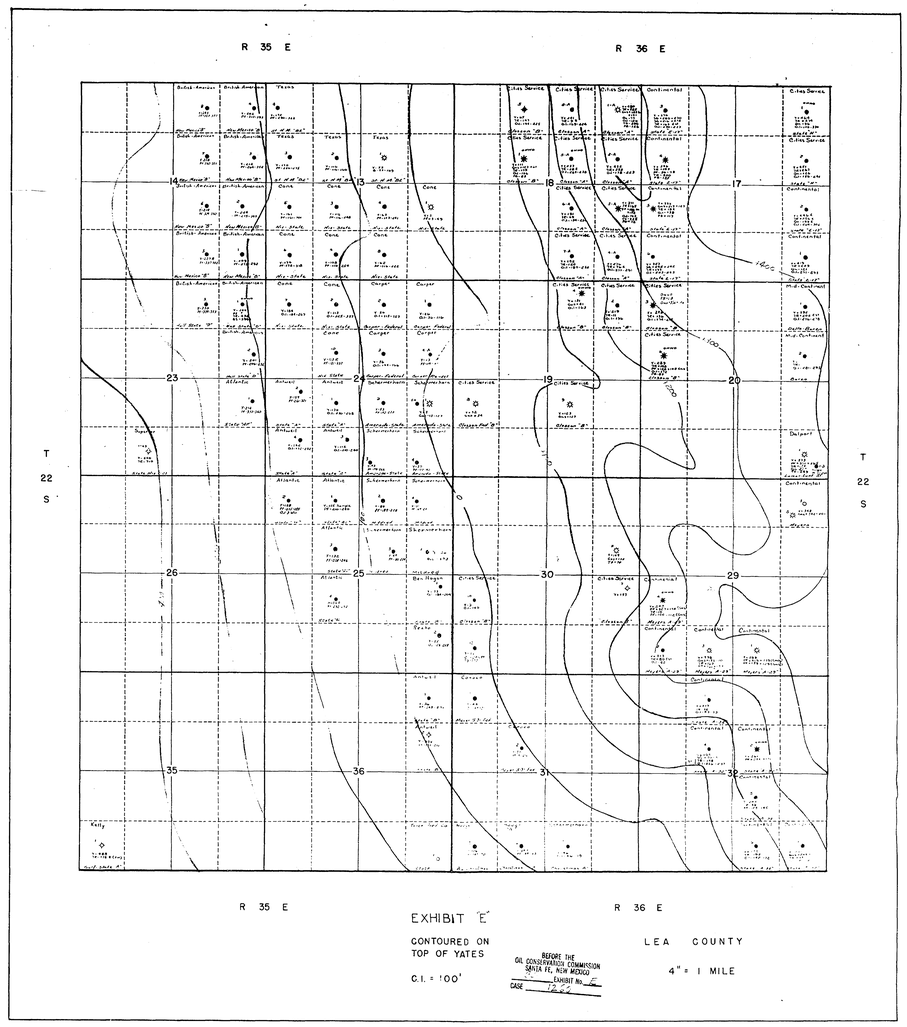


EXHIBIT 'E'

CONTOURED ON TOP OF YATES

BEFORE THE OIL CONSERVATION COMMISSION SANTA FE, NEW MEXICO EXHIBIT No. E CASE 1262

178

County Los Animas
Rge. 4 W
Rge. 3 W
Rge. 2 W
Twp. 27 N
Twp. 26 N
R 5 W
R 4 W
T 27 N
T 25 N

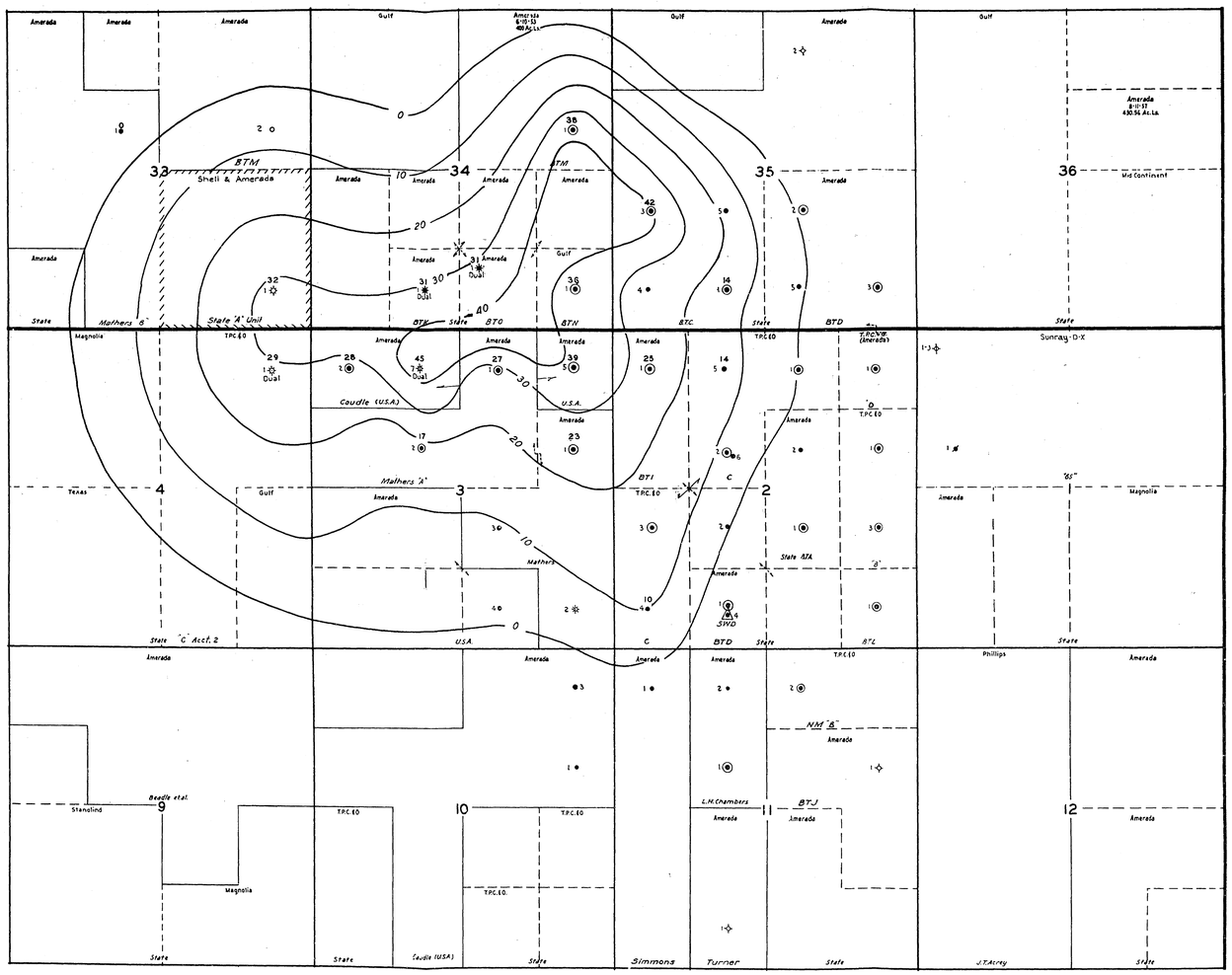
179

MAIN OFFICE OCC

R33E

T 11 S

T 12 S



AMERADA PETR. CORP.

ISOPACHOUS MAP OF NET GAS PAY

BAGLEY LOWER PENNSYLVANIAN GAS POOL

CONTOUR INTERVAL 10'

BAGLEY FIELD

LEA COUNTY, NEW MEXICO

SCALE 1"=1000'

◉ - SILURO-DEVONIAN WELL

• PENNSYLVANIAN WELL

EXHIBIT NO. 7

180

NORTH - SOUTH ELECTRIC LOG CROSS - SECTION BAGLEY FIELD

AMERADA
STATE BTM Nº 1
SEC. 34 – T 11 S – R 33 E
ELEV. 4255

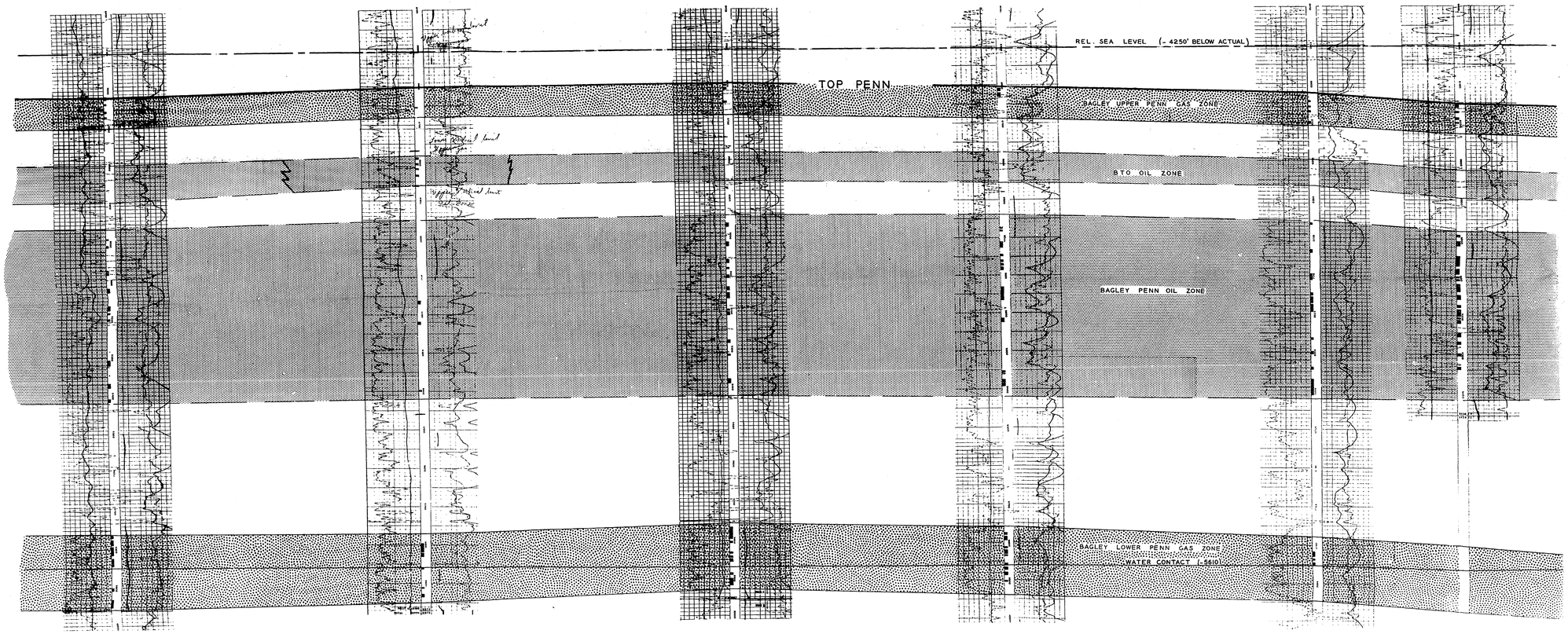
AMERADA
STATE BTO Nº 1
SEC. 34 – T 11 S – R 33 E
ELEV. 4259

AMERADA
W.E. MATHERS A Nº 1
SEC. 3 – T 12 S – R 33 E
ELEV. 4257

AMERADA
W.E. MATHERS Nº 1
SEC. 3 – T 12 S – R 33 E
ELEV. 4254

T.P.C. & O
STATE C Nº 3
SEC. 2 – T 12 S – R 33 E
ELEV. 4254

AMERADA
W.E. MATHERS Nº 2
SEC. 3 – T 12 S – R 33 E
ELEV. 4255



CROSS - SECTION BAGLEY FIELD

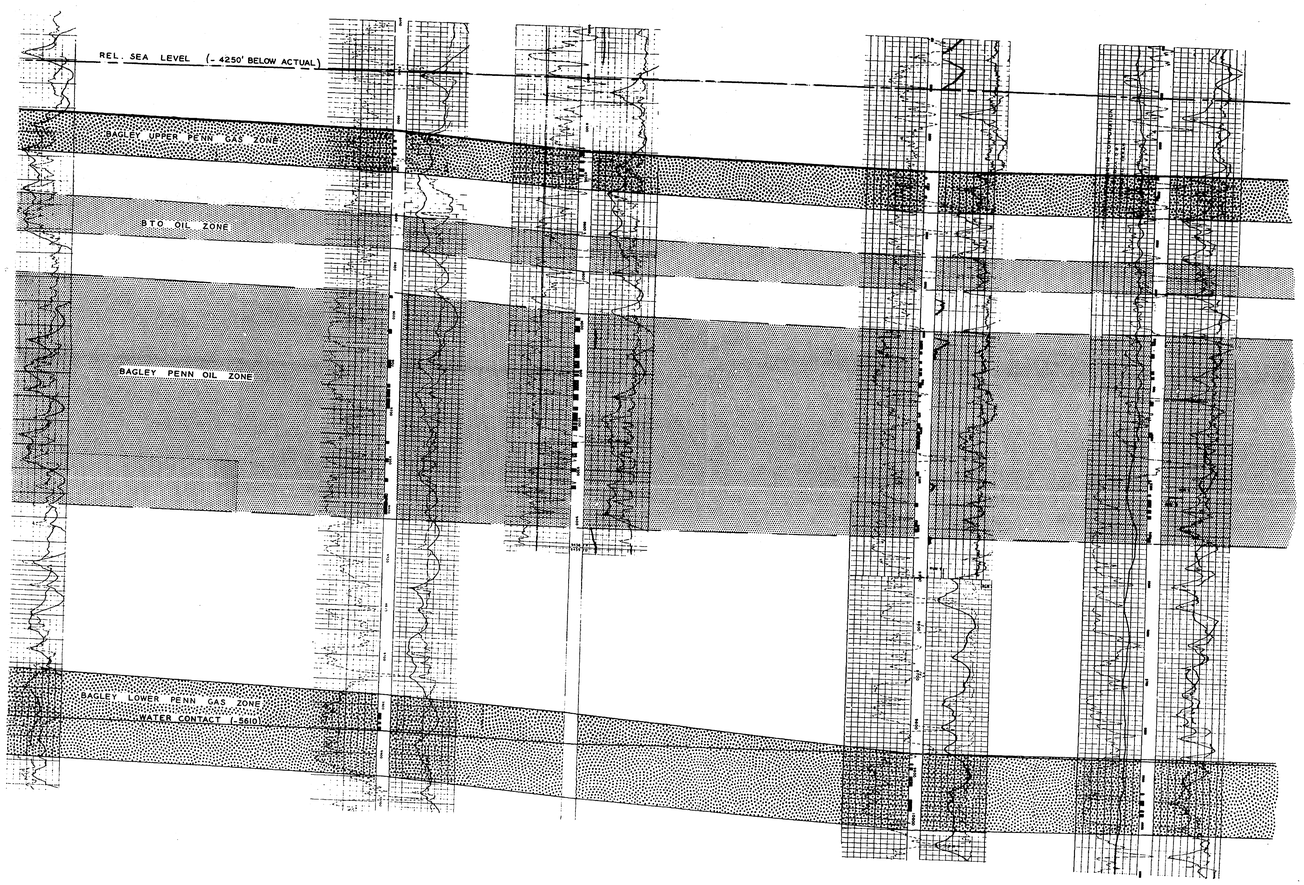
S Nº 1
S – R 33 E

T. P. C. & O
STATE C Nº 3
SEC. 2 – T 12 S – R 33 E
ELEV. 4254

AMERADA
W.E. MATHERS Nº 2
SEC. 3 – T 12 S – R 33 E
ELEV. 4255

AMERADA
J.E. SIMMONS Nº 1
SEC. 11 – T 12 S – R 33 E
ELEV. 4253

AMERADA
A. T. CAUDLE Nº 1
SEC. 10 – T 12 S – R 33 E.
ELEV. 4256



■ MICRO LOG PAY.

EXHIBIT ____

HORIZONTAL SCALE : 1" = 200 FT.
VERTICAL SCALE : 1" = 100 FT.

PREPARED BY O. E. PHELPS, 6-30-58

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NORTH - SOUTH ELECTRIC LOG CROSS - SECTION BAGLEY FI

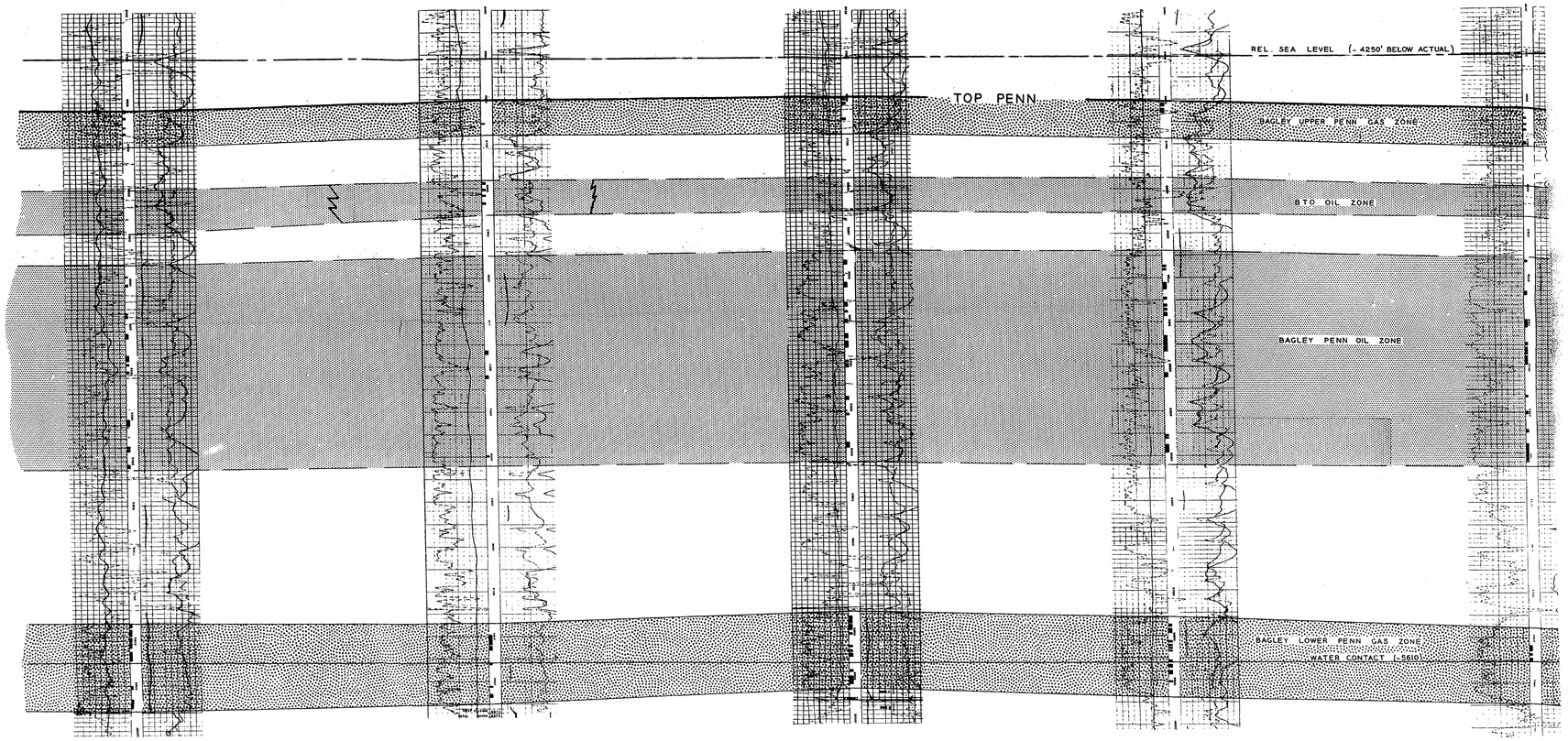
AMERADA
STATE BTM Nº 1
SEC. 34 – T 11 S – R 33 E
ELEV. 4255

AMERADA
STATE B TO Nº 1
SEC. 34 – T 11 S – R 33 E
ELEV. 4259

AMERADA
W.E. MATHERS A Nº 1
SEC. 3 – T 12 S – R 33 E
ELEV. 4257

AMERADA
W.E. MATHERS Nº 1
SEC. 3 – T 12 S – R 33 E
ELEV. 4254

T. P. C. & O
STATE C Nº 3
SEC. 2 – T 12 S –
ELEV. 4254



183

CROSS - SECTION BAGLEY FIELD

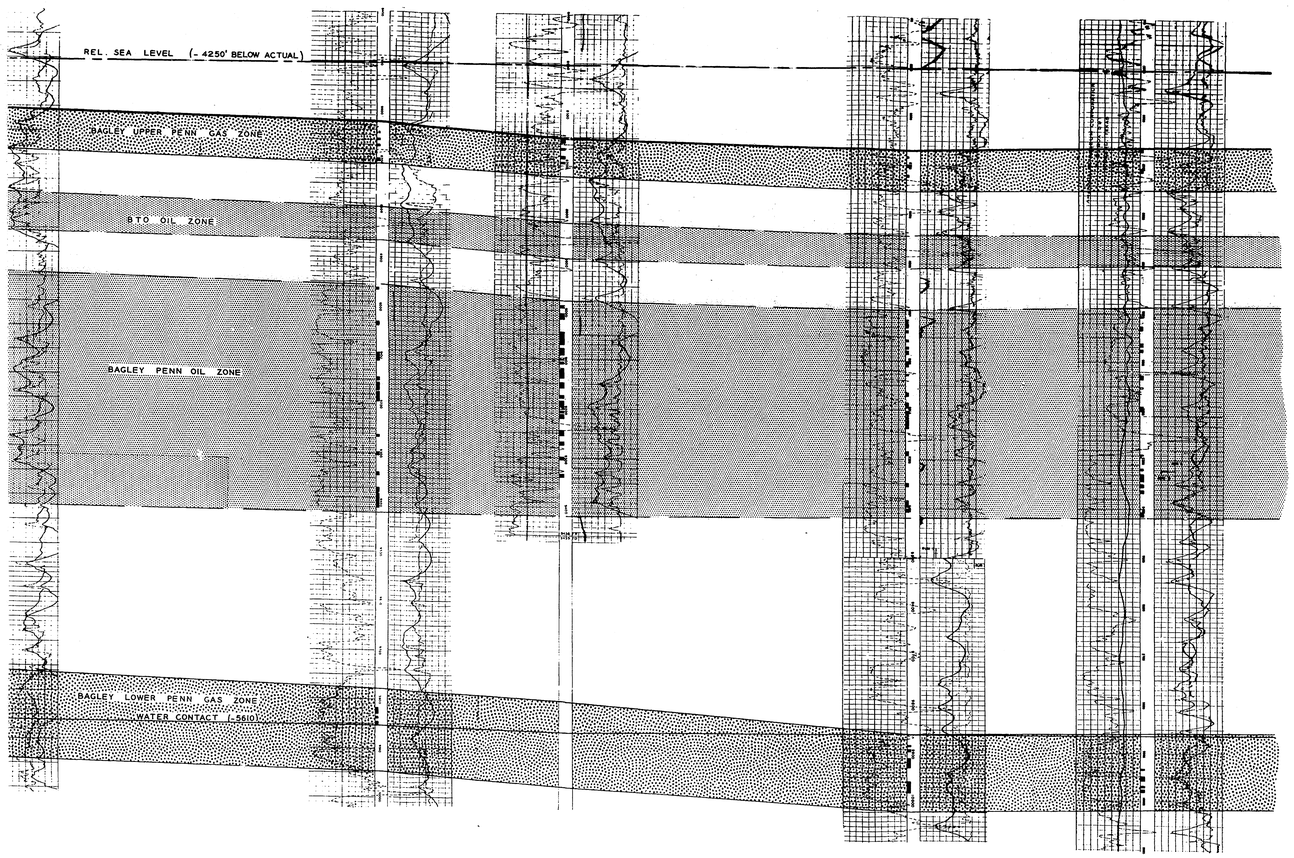
S Nº 1
S – R 33 E

T. P. C. & O
STATE C Nº 3
SEC. 2 – T 12 S – R 33 E
ELEV. 4254

AMERADA
W.E. MATHERS Nº 2
SEC. 3 – T 12 S – R 33 E
ELEV. 4255

AMERADA
J.E. SIMMONS Nº 1
SEC. 11 – T 12 S – R 33 E
ELEV. 4253

AMERADA
A. T. CAUDLE Nº 1
SEC. 10 – T 12 S – R 33 E.
ELEV. 4256



■ MICRO LOG PAY.

EXHIBIT 6

HORIZONTAL SCALE : 1" = 200 FT.
VERTICAL SCALE : 1" = 100 FT.

184

PREPARED BY O. E. PHELPS, 6-30-58

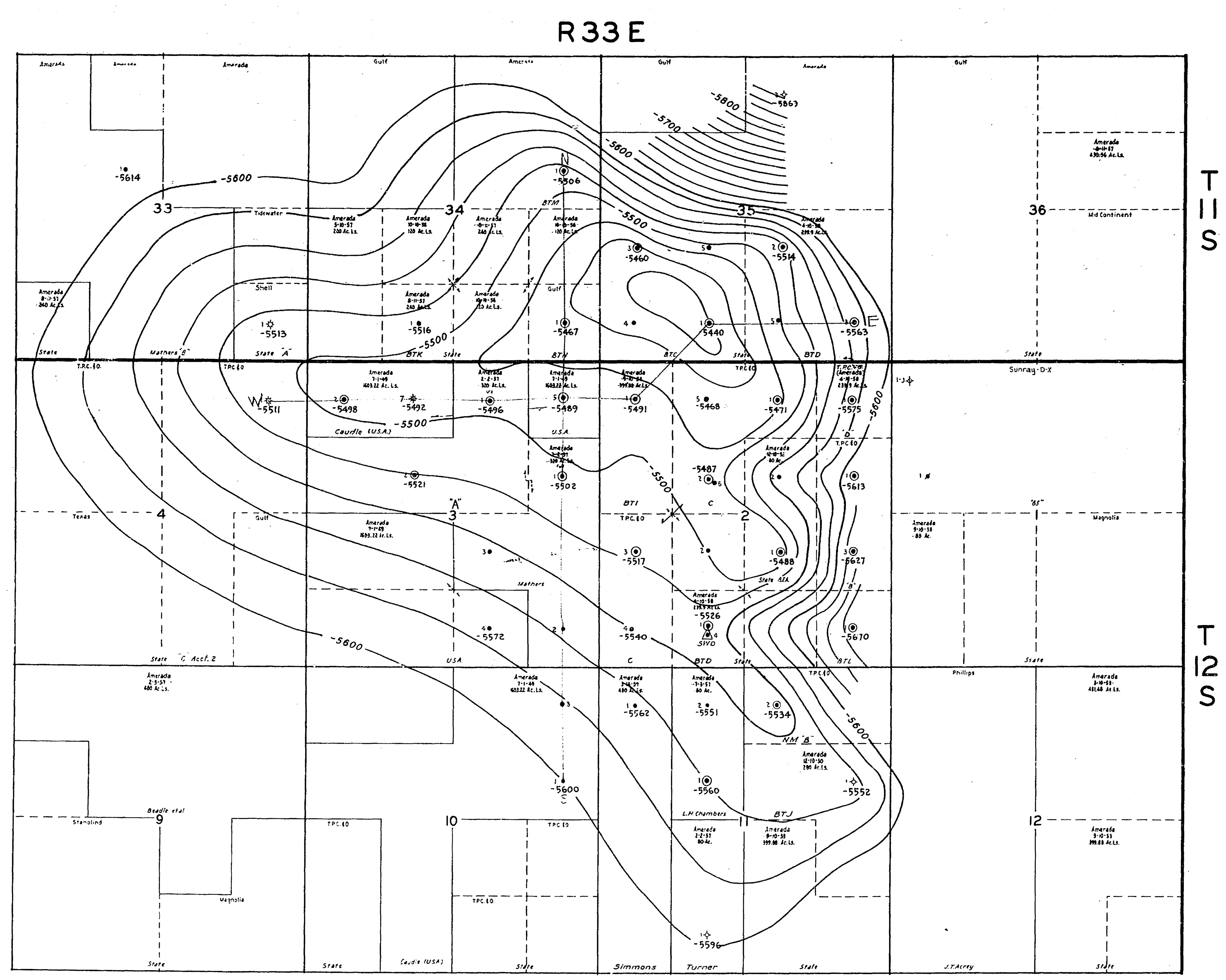


EXHIBIT NO. 1

STRUCTURE MAP
TOP PENNSYLVANIAN 9800′
GAS ZONE
CONTOUR INTERVAL 20 FEET

BEFORE THE
OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO
Amerada EXHIBIT No. 1
CASE 1376

BAGLEY FIELD
LEA COUNTY, NEW MEXICO
SCALE 1″:1000′

◉ SILURO-DEVONIAN WELL
• PENNSYLVANIAN WELL

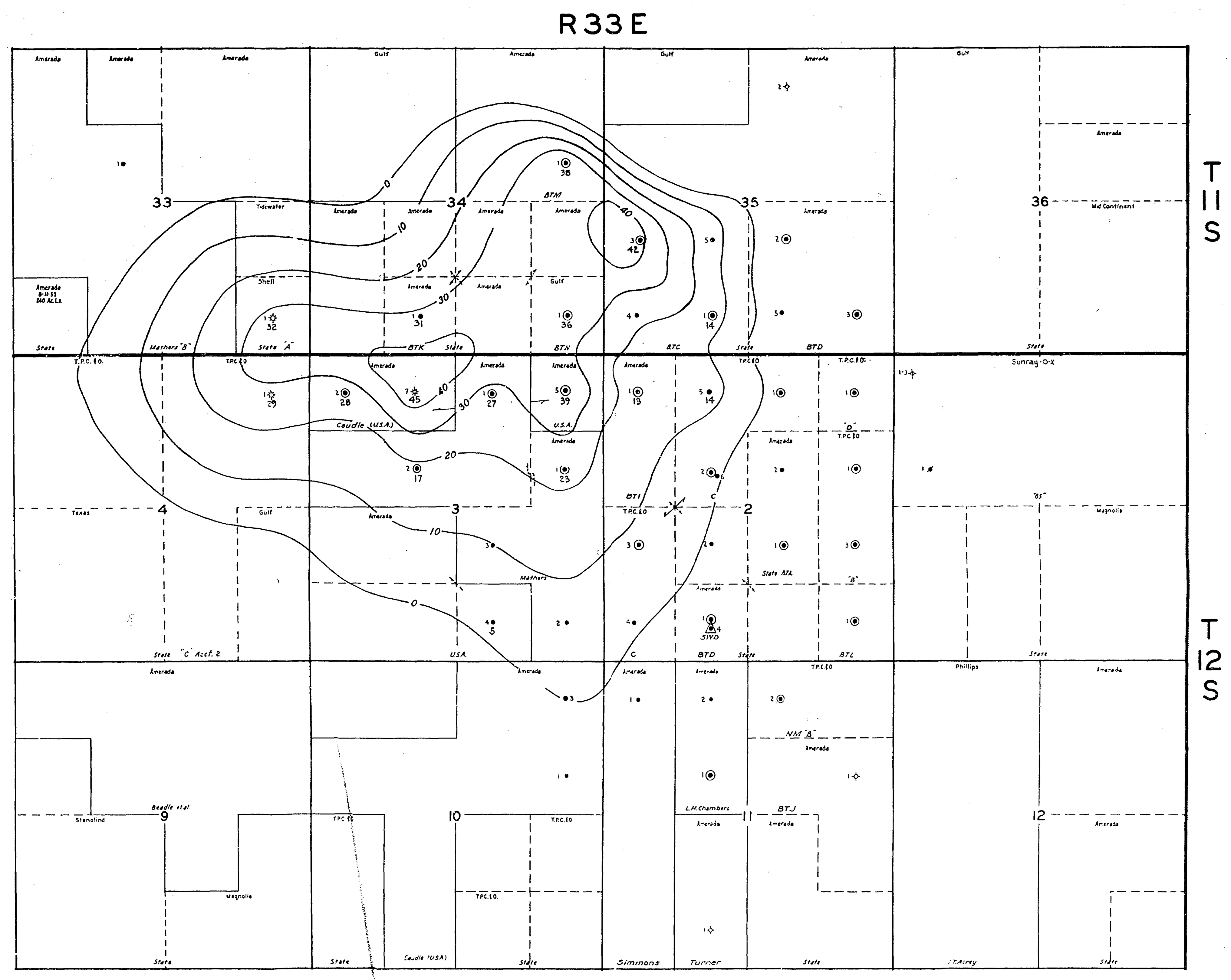


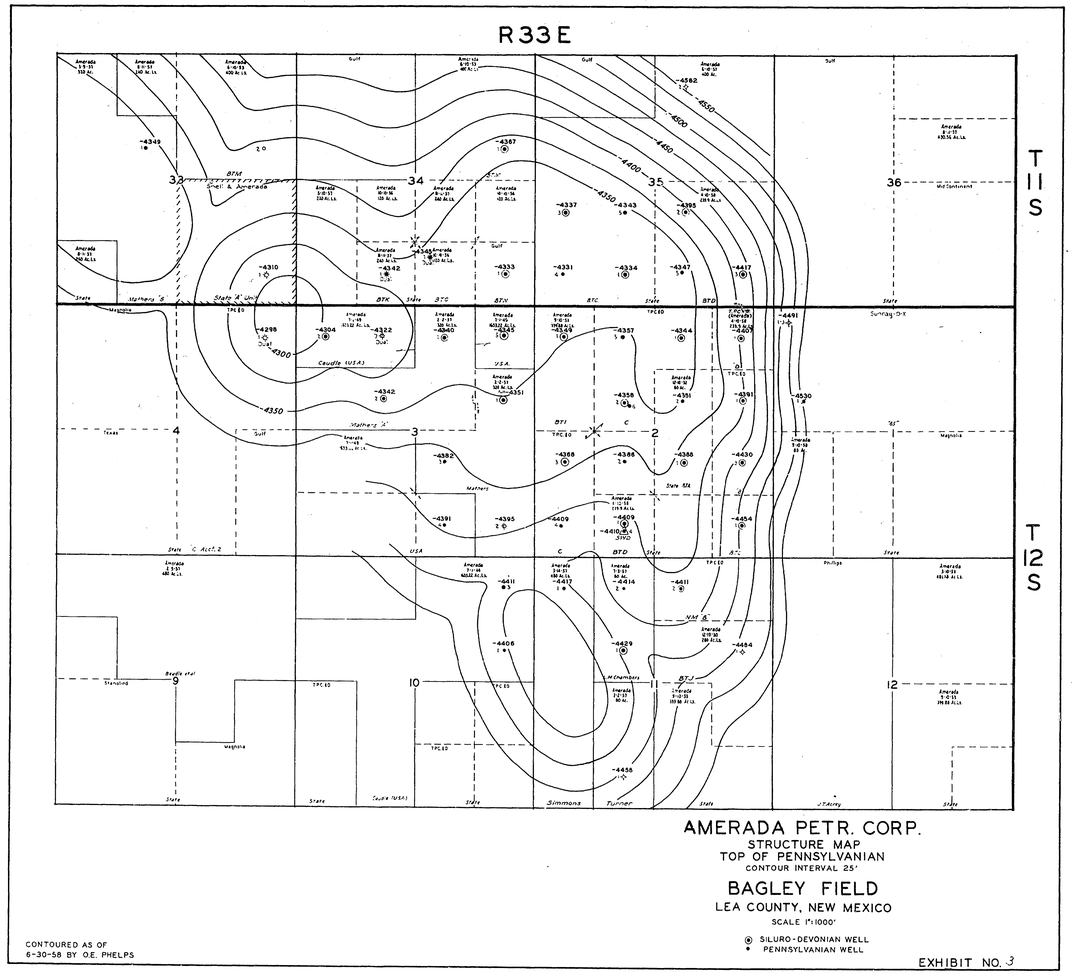
EXHIBIT NO. 2

ISOPACHOUS MAP OF
NET GAS PAY
BAGLEY LOWER PENNSYLVANIAN GAS POOL
CONTOUR INTERVAL 10 FEET

BEFORE THE
OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO
Amerada EXHIBIT No. 2
CASE 1376

BAGLEY FIELD
LEA COUNTY, NEW MEXICO
SCALE 1″:1000′

◉ SILURO-DEVONIAN WELL
• PENNSYLVANIAN WELL



AMERADA PETR. CORP.

STRUCTURE MAP

TOP OF PENNSYLVANIAN

CONTOUR INTERVAL 25'

BAGLEY FIELD

LEA COUNTY, NEW MEXICO

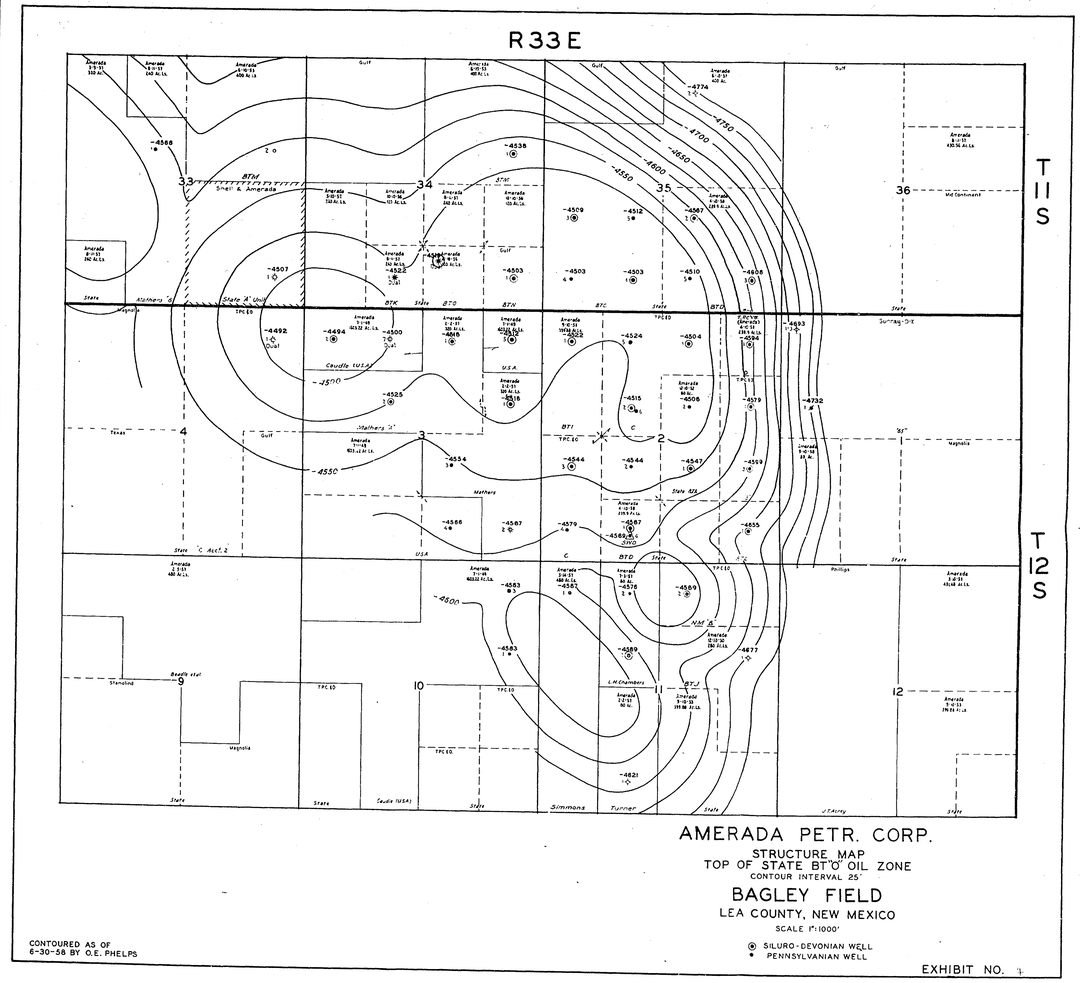
SCALE 1"=1000'

◉ SILURO-DEVONIAN WELL

• PENNSYLVANIAN WELL

CONTOURED AS OF
6-30-58 BY O.E. PHELPS

EXHIBIT NO. 3



AMERADA PETR. CORP.

STRUCTURE MAP

TOP OF STATE BT"O" OIL ZONE

CONTOUR INTERVAL 25'

BAGLEY FIELD

LEA COUNTY, NEW MEXICO

SCALE 1"=1000'

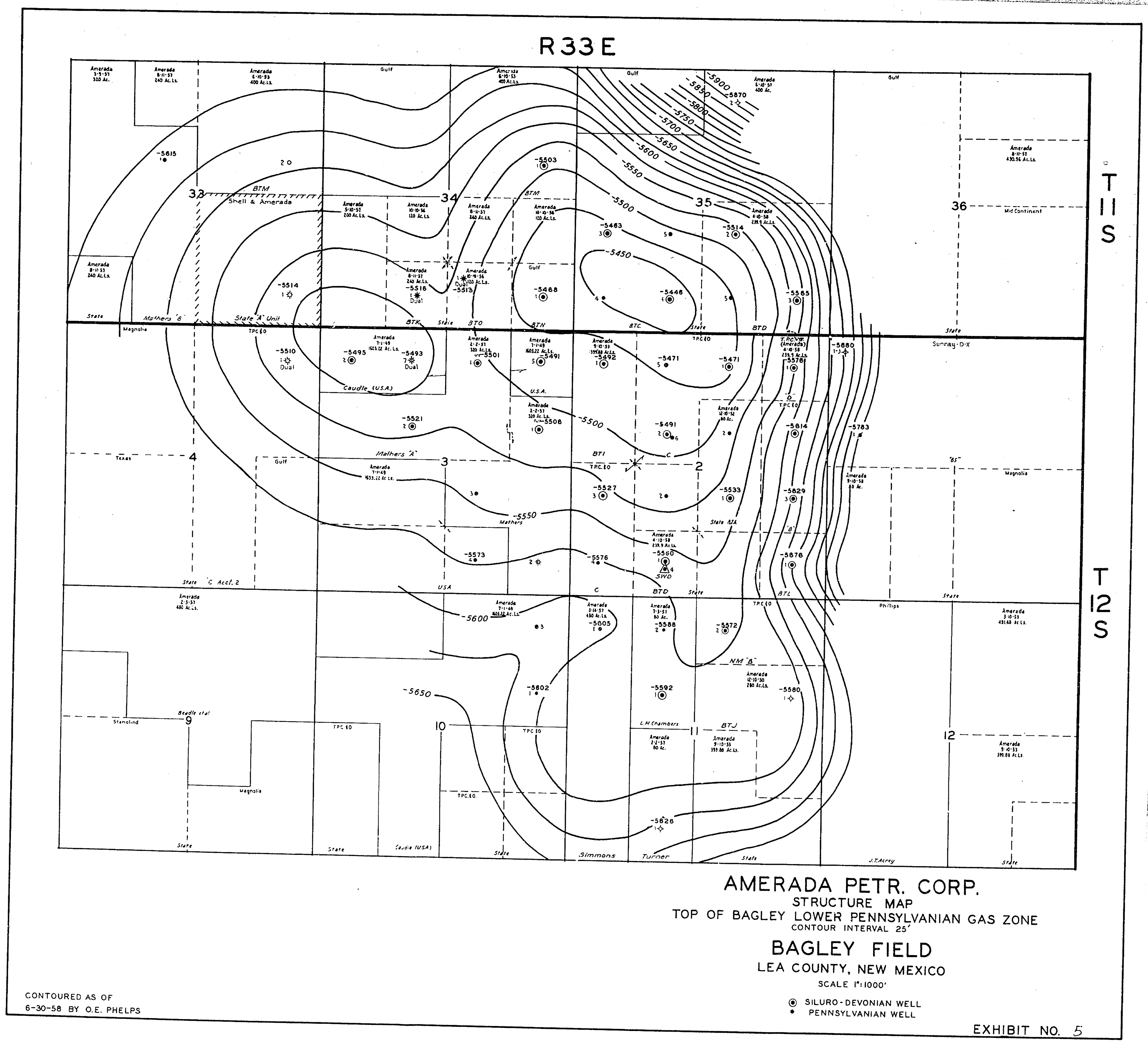
◉ SILURO-DEVONIAN WELL

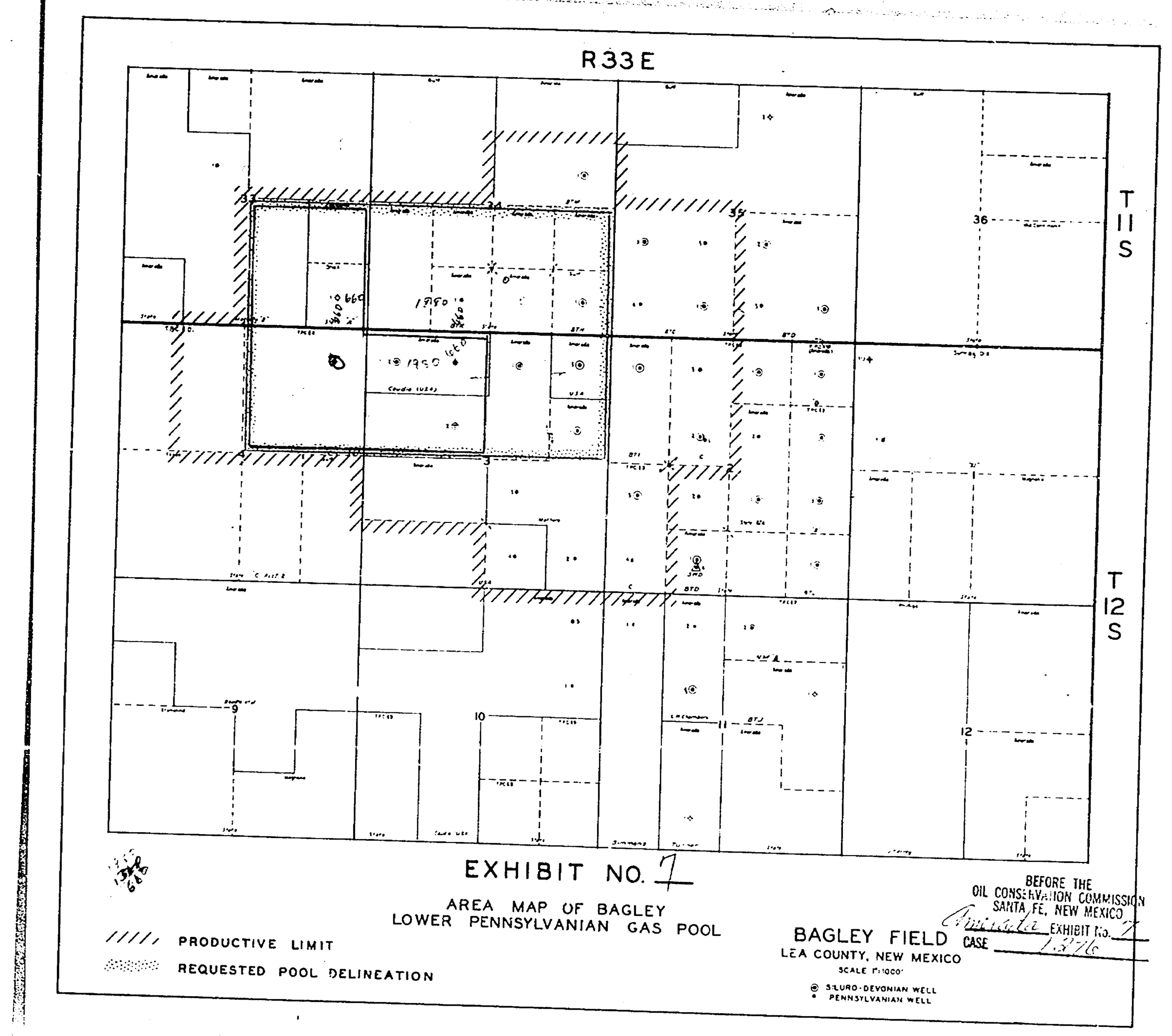
• PENNSYLVANIAN WELL

CONTOURED AS OF
6-30-58 BY O.E. PHELPS

EXHIBIT NO. 4

186


R33E
T 11 S
T 12 S
33
34
35
36
4
3
2
9
10
11
12
-5900
-5850
-5800
-5750
-5700
-5650
-5600
-5550
-5500
-5450
-5600
-5650
BTM
Shell & Amerada
Mathers "B"
State "A" Unit
Caudle (U.S.A.)
Mathers "A"
State "C" Acct. 2
Sunray-D-X
Magnolia
Stanolind
Mid Continent
Phillips
Simmons
Turner
J.T. Acrey
L.H. Chambers
AMERADA PETR. CORP.
STRUCTURE MAP
TOP OF BAGLEY LOWER PENNSYLVANIAN GAS ZONE
CONTOUR INTERVAL 25'
BAGLEY FIELD
LEA COUNTY, NEW MEXICO
SCALE 1"=1000'
SILURO-DEVONIAN WELL
PENNSYLVANIAN WELL
CONTOURED AS OF
6-30-58 BY O.E. PHELPS
EXHIBIT NO. 5


R33E
T 11 S
T 12 S
EXHIBIT NO. 7
AREA MAP OF BAGLEY
LOWER PENNSYLVANIAN GAS POOL
PRODUCTIVE LIMIT
REQUESTED POOL DELINEATION
BAGLEY FIELD
LEA COUNTY, NEW MEXICO
SILURO-DEVONIAN WELL
PENNSYLVANIAN WELL
BEFORE THE
OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO
Amerada EXHIBIT No. 7
CASE 1376

187

SCHLUMBERGER WELL SURVEYING CORPORATION

Electrical Log

COMPANY AMERADA PETR. CORP.

WELL CAUDLE # 7

FIELD BAGLEY

LOCATION SEC. 3-12S-33E

COUNTY LEA

STATE NEW MEXICO

Location of Well
330' f NL
1980' f WL
Sec. 3-12S-33E

Exhibit No. 19

ES-GRL-WL

Elevation: D.F.
K.B.:
or G.L.:

FILING No.

COUNTY Lea
FIELD Bagley
LOCATION Caudle # 7
WELL
COMPANY Amerada Petr.

RUN No.									
Date	2-24-52								
First Reading	9949								
Last Reading	3785								
Feet Measured	6164								
Csg. Schlum.	3785								
Csg. Driller	3773								
Depth Reached	9952 *								
Bottom Driller	9988								
Depth Datum	13.89 abv. G.L.								
Mud No.	My-Lo-Gel; Salt-Gel								
" Density	9.7								
" Viscosity	58								
" Resist.	18 @63 °F	@ °F	@ °F	@ °F	@ °F	@ °F	@ °F	@ °F	@ °F
" Res. BHT	.085 @133°F	@ °F	@ °F	@ °F	@ °F	@ °F	@ °F	@ °F	@ °F
" pH		@ °F	@ °F	@ °F	@ °F	@ °F	@ °F	@ °F	@ °F
" Wtr. Loss	4 CC 30 min.	CC 30 min.		CC 30 min.		CC 30 min.		CC 30 min.	
Max. Temp. °F	133								
Bit Size	7 7/8"								
Spcgs.—AM	70'								
A O	32' LS								
AO	191'								
Opr. Rig Time	0 Hrs.								
Truck No.	1-1 and 5								
Recorded By	Whitely								
Witness By									

REMARKS — Sets 10 dfl Logs (GUARD) SSSC = 9950

RESISTIVITY -ohms. m²/m
0 — 10" Normal — 30
0 — 32" Lat. Lateral — 300

RESISTIVITY -ohms. m²/m
0 — 19' Lateral — 20
2000 — 200

DEPTHS

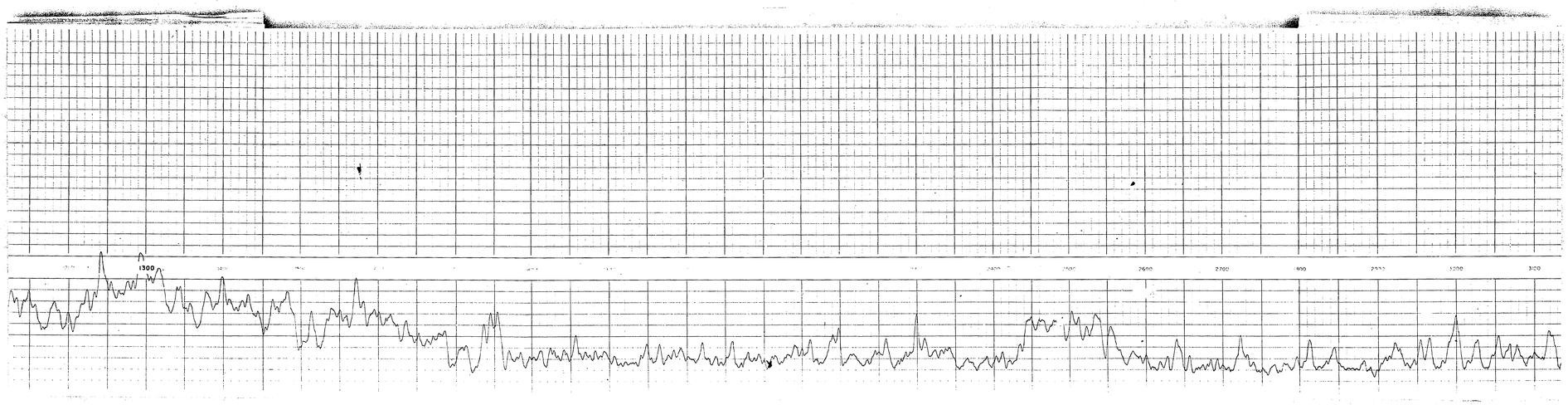
SPONTANEOUS-POTENTIAL millivolts
— 20 +

Radioactivity Increases

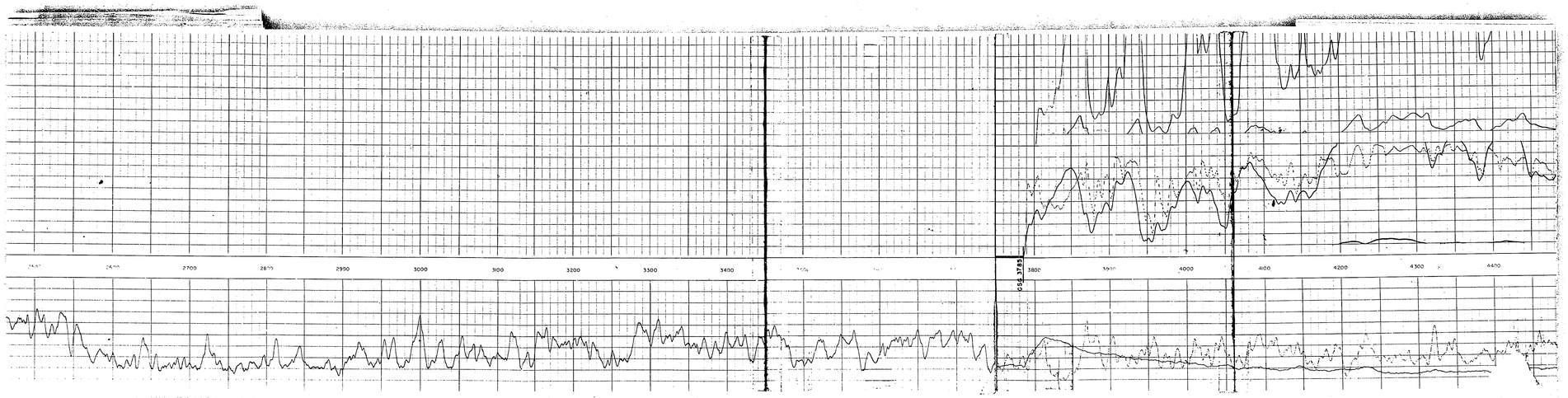
GAMMA RAY CURVE

1300

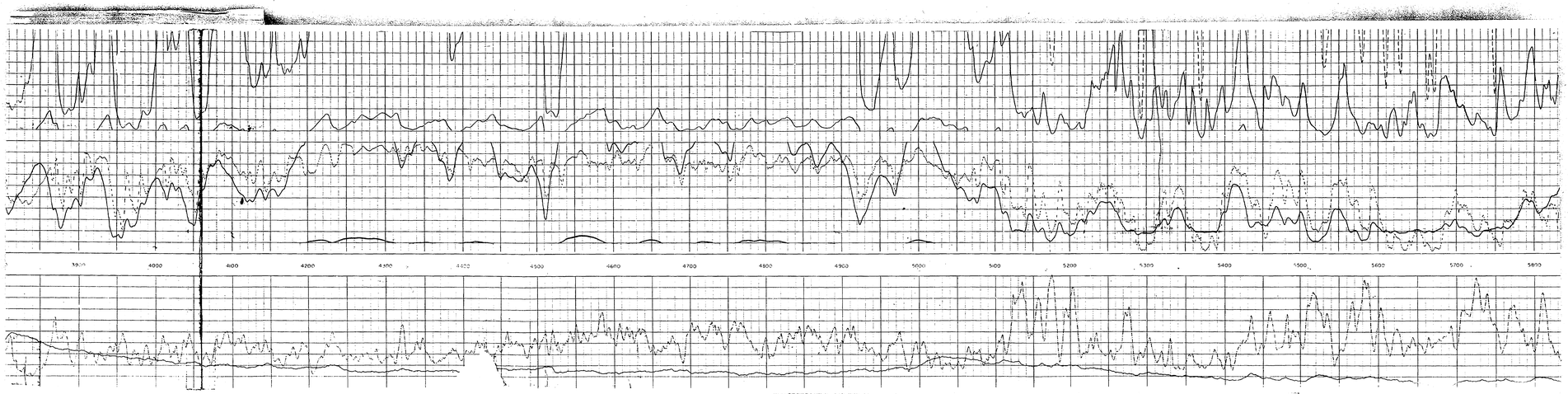
188

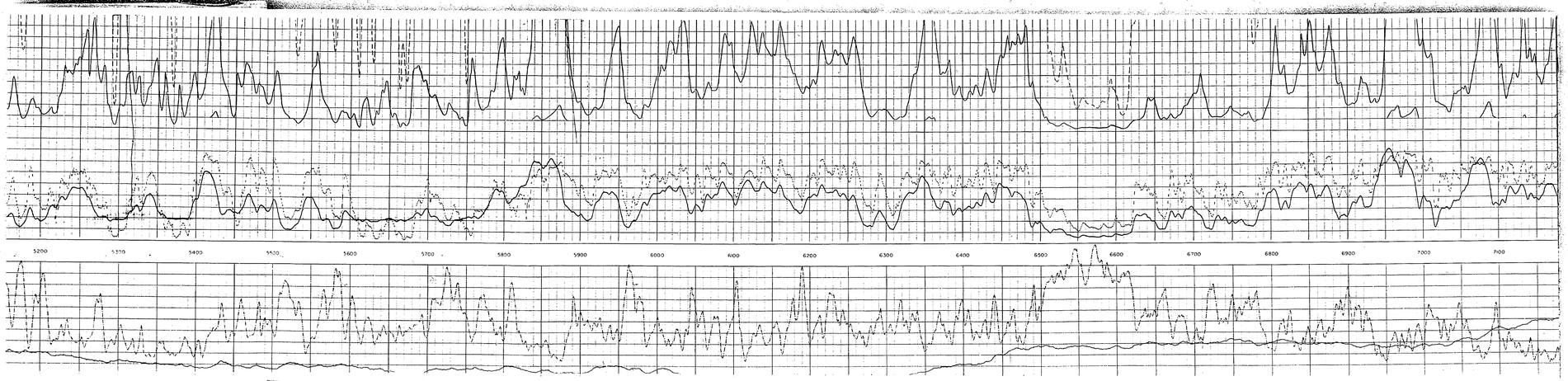


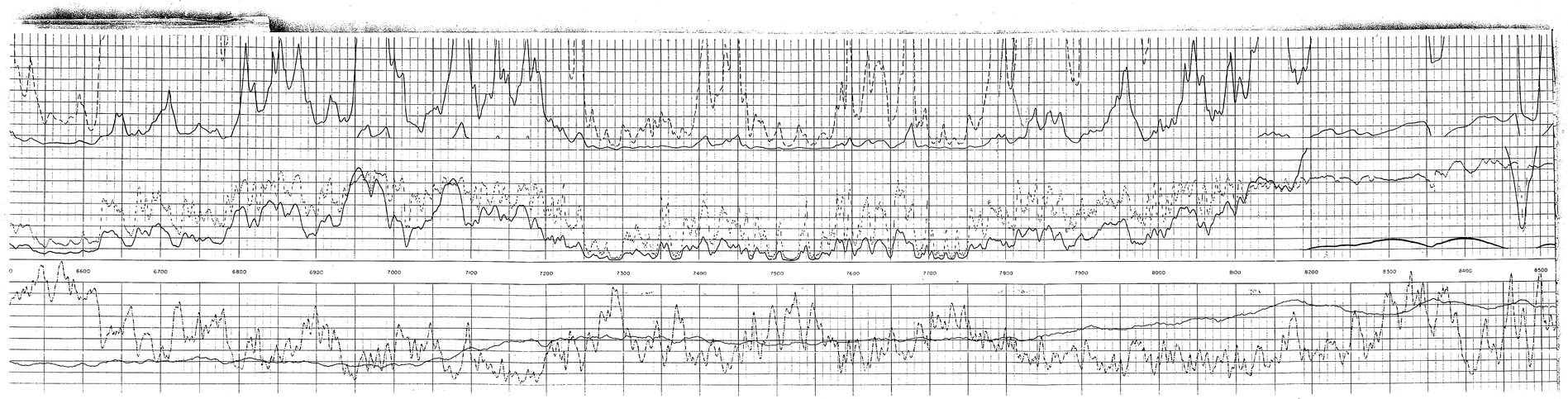
189


2700
2800
2900
3000
3100
3200
3300
3400
3800
3900
4000
4100
4200
4300
4400

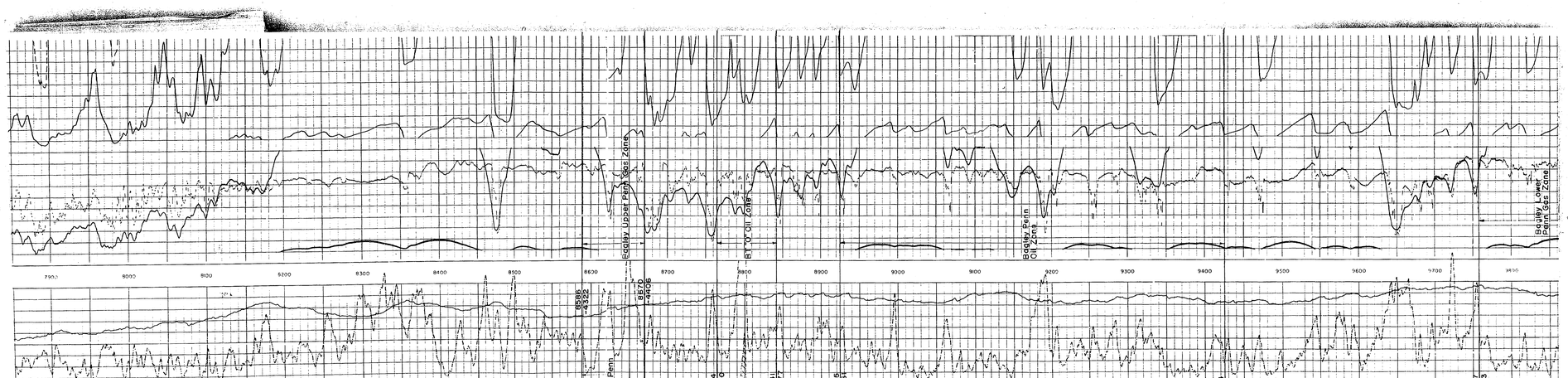
190


3900
4000
4100
4200
4300
4400
4500
4600
4700
4800
4900
5000
5100
5200
5300
5400
5500
5600
5700
5800

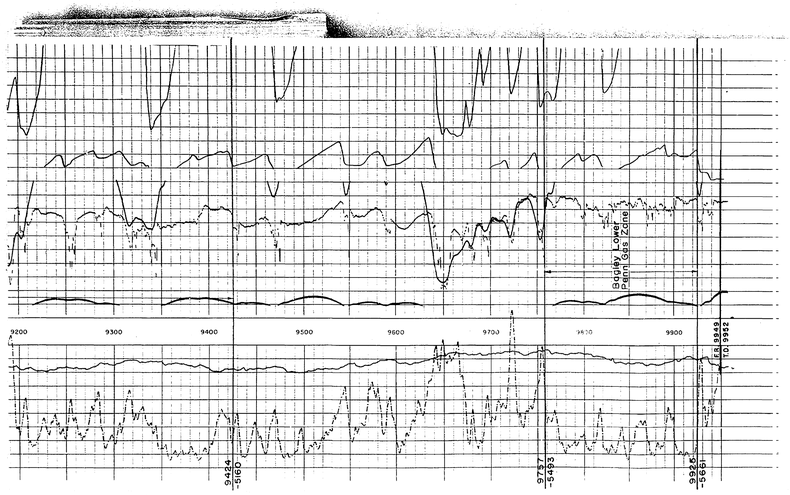

5200
5300
5400
5500
5600
5700
5800
5900
6000
6100
6200
6300
6400
6500
6600
6700
6800
6900
7000
7100

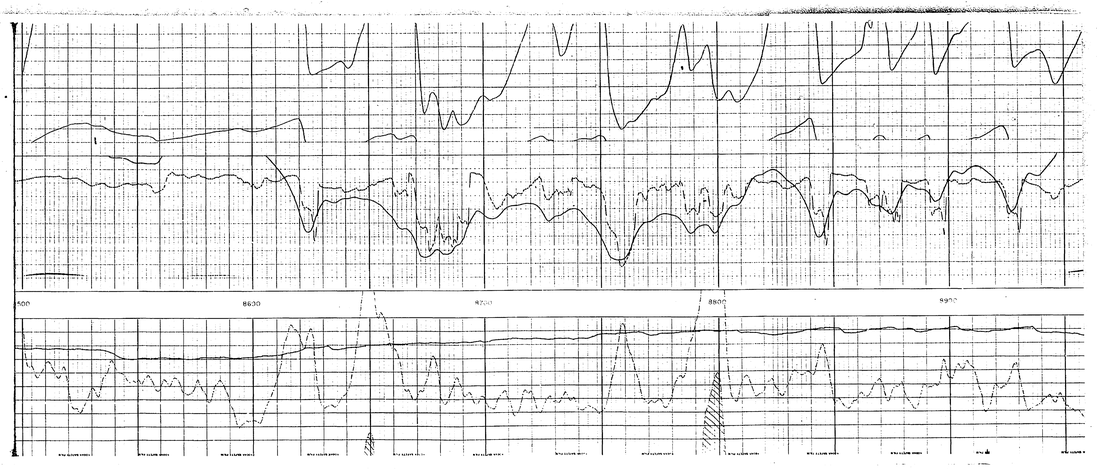

0
6600
6700
6800
6900
7000
7100
7200
7300
7400
7500
7600
7700
7800
7900
8000
8100
8200
8300
8400
8500

193

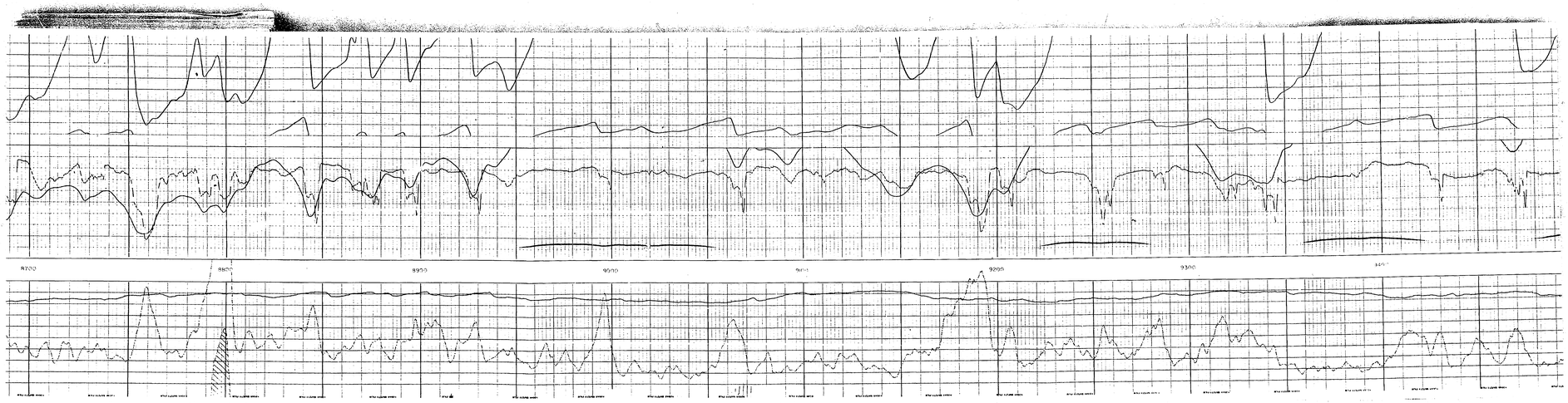

Radley Upper Penn Gas Zone
BT 'O' Oil Zone
Badley Penn Oil Zone
Badley Lower Penn Gas Zone
8598 -4322
8776 -4406
8764 -4500
8841 -4577
8825 -4661
9464 -5160
9757 -5493

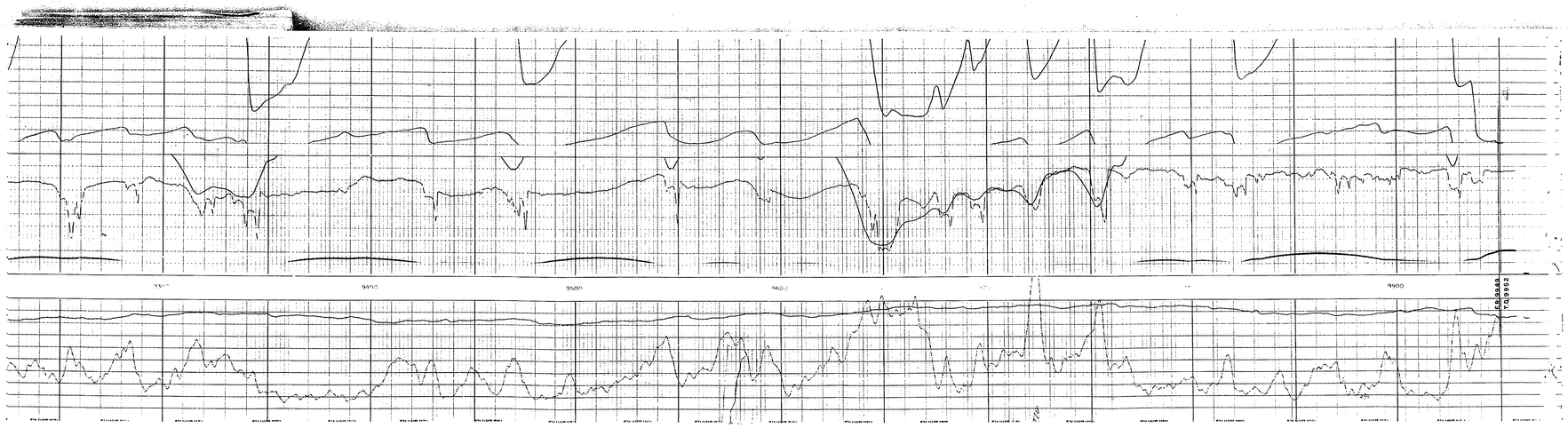
194


Gravity Loss
Pain Gas Zone
9200
9300
9400
9500
9600
9700
9800
9900
RA 3849
Dec 9926
9424
-5160
9757
-5493
9926
-5691

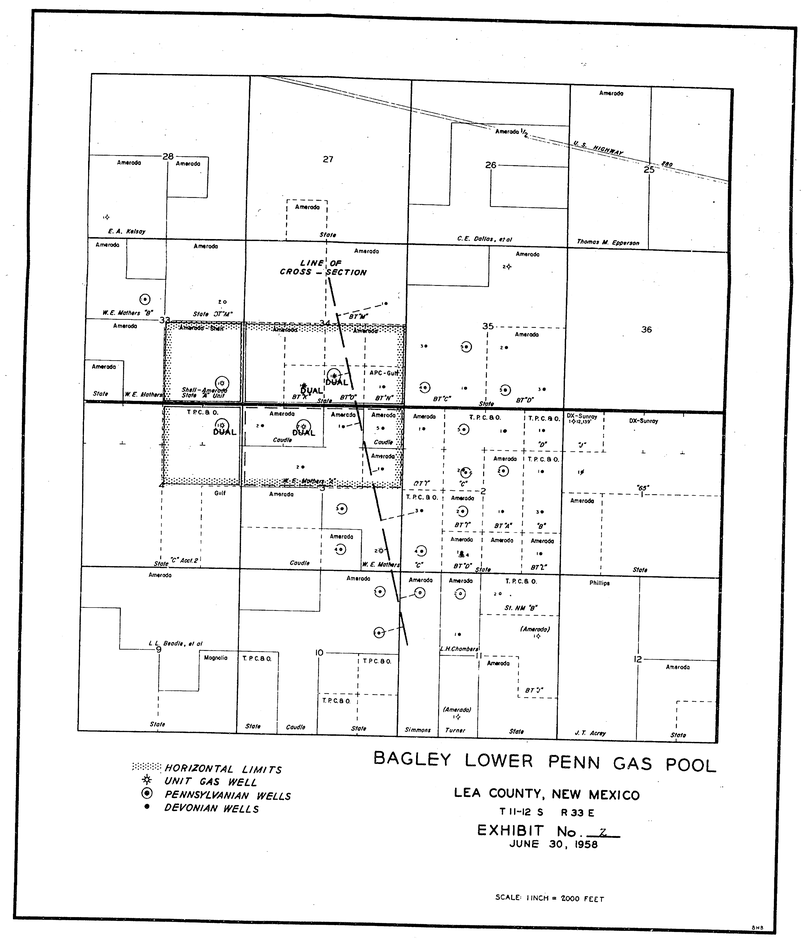

8500
8600
8700
8800
8900

195


8700
8800
8950
9000
9200
9300



197



HORIZONTAL LIMITS
UNIT GAS WELL
PENNSYLVANIAN WELLS
DEVONIAN WELLS

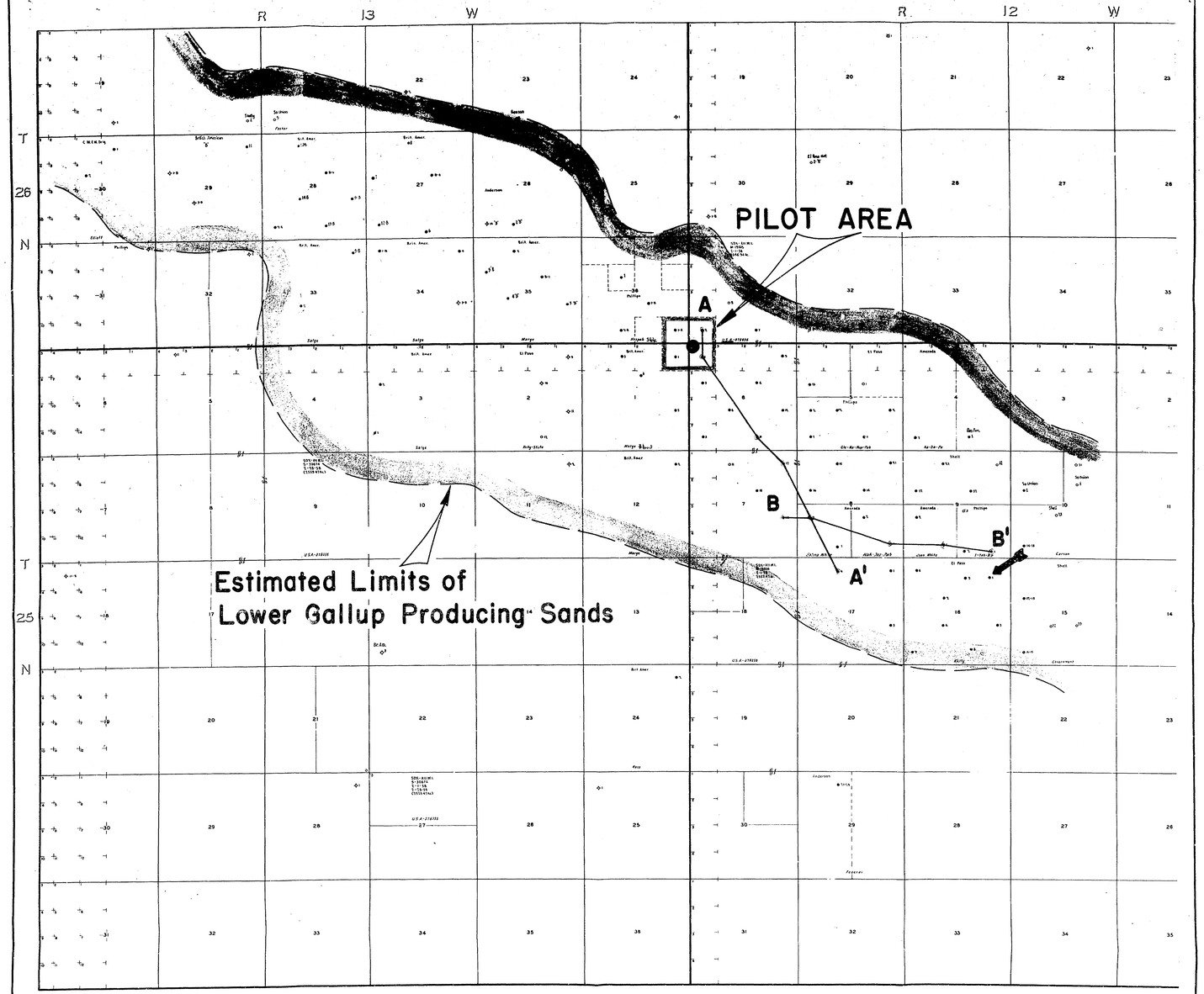
BAGLEY LOWER PENN GAS POOL

LEA COUNTY, NEW MEXICO
T 11-12 S R 33 E

EXHIBIT No. 2
JUNE 30, 1958

SCALE: 1 INCH = 2000 FEET

198



199

COMPLETION LEGEND

BEFORE THE OIL CONSERVATION COMMISSION SANTA FE, NEW MEXICO EXHIBIT NO. CASE 1180

SUNRAY MID-CONTINENT OIL COMPANY
EXHIBIT NO. 1 DOCKET NO. 1180

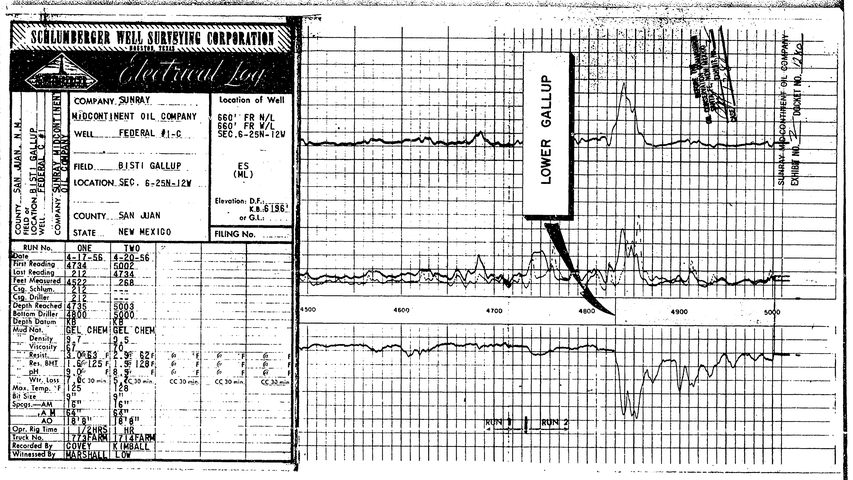
SUNRAY MID-CONTINENT OIL CO

BISTI LOWER GALLUP OIL POOL
Portions of
Township 25 & 26 N., Ranges 10, 11, 12 & 13 W.
County San Juan State New Mexico

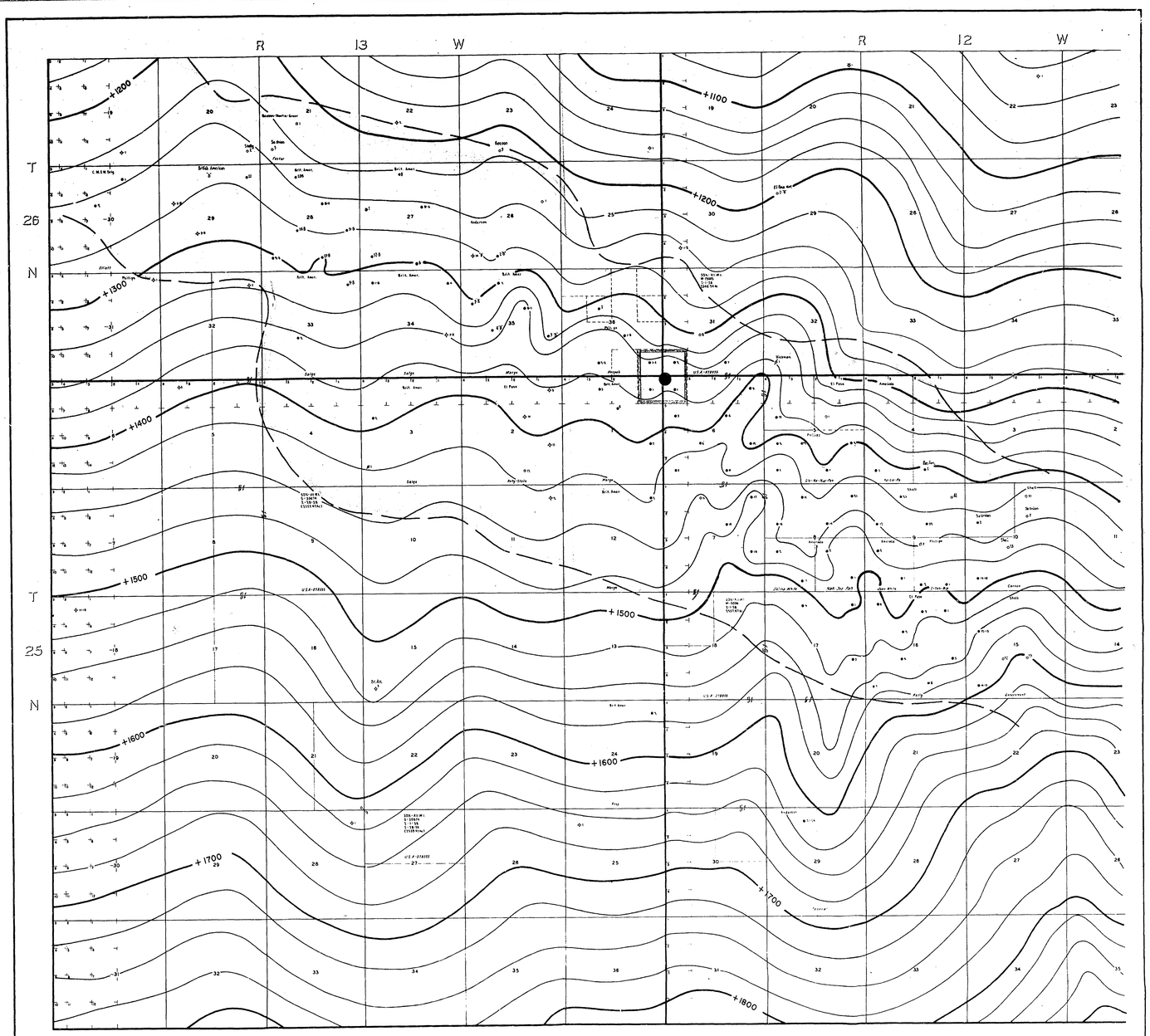
2000 1000 0 500 2000 4000
SCALE IN FEET

PREPARED BY EXPLORATION DRAFTING SECTION

DATE: 7/5/57


SCHLUMBERGER WELL SURVEYING CORPORATION
HOUSTON, TEXAS
Electrical Log
COMPANY SUNRAY MIDCONTINENT OIL COMPANY
WELL FEDERAL #1-C
FIELD BISTI GALLUP
LOCATION SEC. 6-25N-12W
COUNTY SAN JUAN
STATE NEW MEXICO
Location of Well
660' FR N/L
660' FR W/L
SEC. 6-25N-12W
ES
(ML)
Elevation: D.F. K.B. 6156'
or G.L.:
FILING No.
COUNTY SAN JUAN FIELD BISTI GALLUP WELL FEDERAL C #1 COMPANY SUNRAY MIDCONTINENT OIL COMPANY
RUN No. ONE TWO
Date 4-17-56 4-20-56
First Reading 4734 5002
Last Reading 212 4734
Feet Measured 4522 268
Csg. Schlum. 212 ---
Csg. Driller 212 ---
Depth Reached 4735 5003
Bottom Driller 4800 5000
Depth Datum KB KB
Mud Nat. GEL CHEM GEL CHEM
Density 9.7 9.5
Viscosity 61 70
Resist. 3.04@3 F 2.39 @2 F @ F @ F @ F
Res. BHT 1.56@125 F 1.36@128 F @ F @ F @ F
pH 9.0 F 8.5 F @ F @ F @ F
Wtr. Loss 7 cc/30 min 7 cc/30 min CC/30 min CC/30 min CC/30 min
Max. Temp. °F 125 128
Bit Size 9" 9"
Spcgt.—AM 16" 16"
—AM 16" 16" 6" 6"
AO 18'8" 18'6"
Opr. Rig time 1/2 HRS HR
Truck No. 173FARM 171FARM
Recorded By COVEY KIMBALL
Witnessed By MARSHALL LOW
LOWER GALLUP
4500 4600 4700 4800 4900 5000
RUN 1 RUN 2
SUNRAY MID-CONTINENT OIL COMPANY
EXHIBIT NO. 2 DOCKET NO. 1280

200


R 13 W
R 12 W
T 26 N
T 25 N
+1200
+1100
+1300
+1400
+1500
+1600
+1700
+1800
BEFORE THE OIL CONSERVATION COMMISSION
CASE NO. 1280 EXHIBIT NO. 2
CASE 1280
LEGEND
Pilot Area
Estimated Limits of Lower Gallup Producing Sands
SUNRAY MID-CONTINENT OIL COMPANY
EXHIBIT NO. 2 DOCKET NO. 1280
TOP LOWER GALLUP SAND
STRUCTURE
C.I. = 25'
SUNRAY MID-CONTINENT OIL CO.
BISTI LOWER GALLUP OIL POOL
Portions of
Township 25 & 26 N. Ranges 10, 11, 12 & 13 W.
County San Juan State New Mexico
2000 1000 0 1000 2000 4000
SCALE IN FEET
PREPARED BY EXPLORATION DRAFTING SECTION
DATE: 7/5/57

A

SDX
FEDERAL C
2
Elev.
6171' KB

SDX
FEDERAL C
1
Elev.
6196 KB

SDX
FEDERAL C
10
Elev.
6220 KB

SDX
FEDERAL C
17
Elev.
6268' KB

AMERADA
SALINA WHITE
2
Elev.
6287' KB

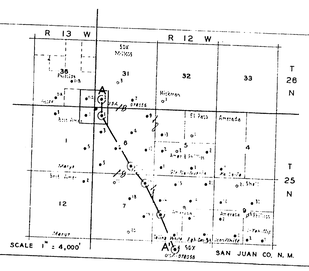
A'

SDX
FEDERAL B
4
Elev.
6302' KB

+1600
+1500
+1400
+1300
+1200
+1100

LOWER
GALLUP
SAND

LOWER
GALLUP
SAND



SUNRAY MID-CONTINENT OIL COMPANY
EXHIBIT NO. 4 DOCKET NO. 1280

HORIZONTAL SCALE
800' 400' 200' 0'
VERTICAL SCALE
100' 50' 25' 0'

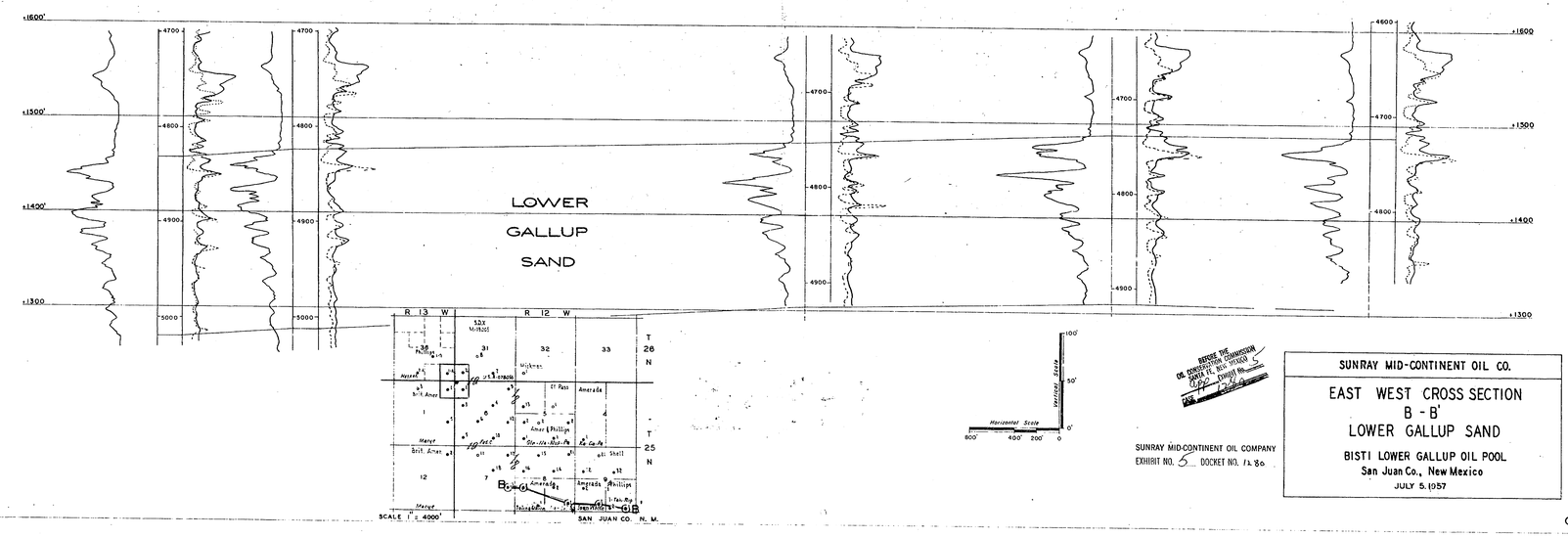
SUNRAY MID-CONTINENT OIL CO.

NORTH SOUTH CROSS SECTION
A - A'
LOWER GALLUP SAND

BISTI LOWER GALLUP OIL POOL
San Juan Co., New Mexico
JULY 5, 1957

D2-158

201



BEFORE THE OIL CONSERVATION COMMISSION
CASE NO. 1181 EXHIBIT NO. 5
CASE NO. 1181

SUNRAY MID-CONTINENT OIL COMPANY
EXHIBIT NO. 5 DOCKET NO. 14-80

SUNRAY MID-CONTINENT OIL CO.

EAST WEST CROSS SECTION
B - B'
LOWER GALLUP SAND

BISTI LOWER GALLUP OIL POOL
San Juan Co., New Mexico
JULY 5, 1957

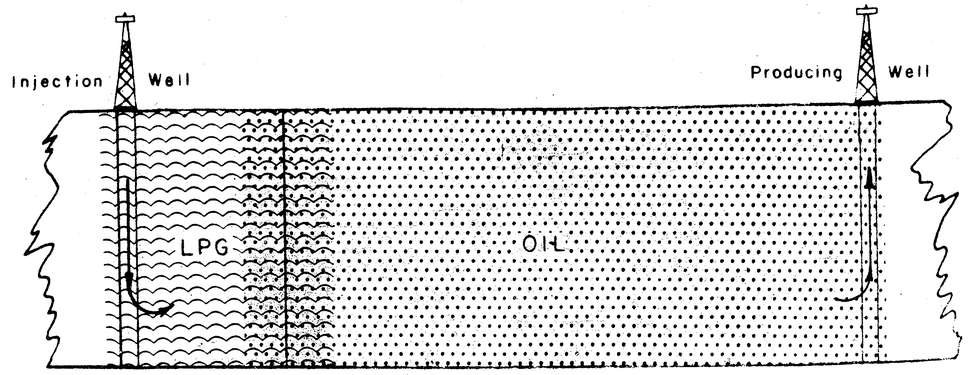
C2 - 160

202

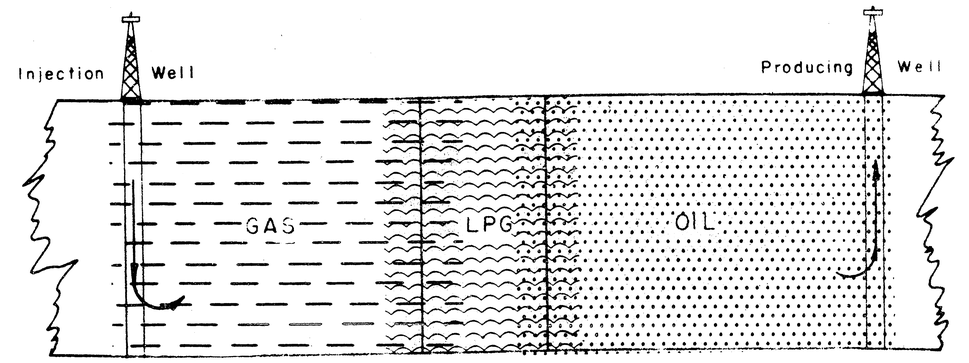
DIAGRAMMATIC ILLUSTRATION OF DISPLACEMENT

BY

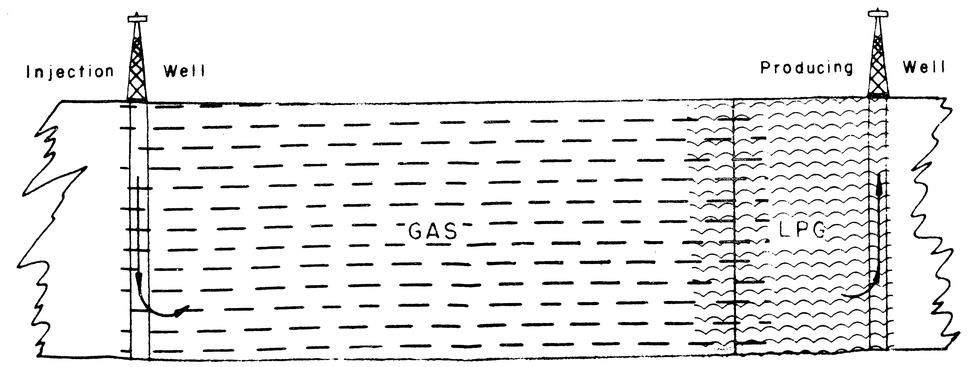
LPG FLOODING



Initial Operating Phase



Intermediate Operating Phase



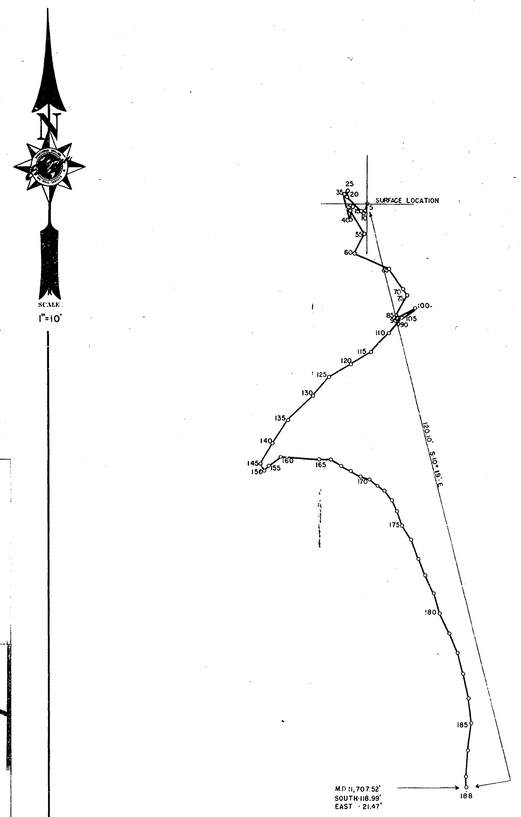
Final Operating Phase

203

BEFORE THE OIL CONSERVATION COMMISSION SANTA FE, NEW MEXICO
CASE NO. 1320

SUNRAY MID-CONTINENT OIL COMPANY
EXHIBIT NO. 12 DOCKET NO. 12-60

PLAN

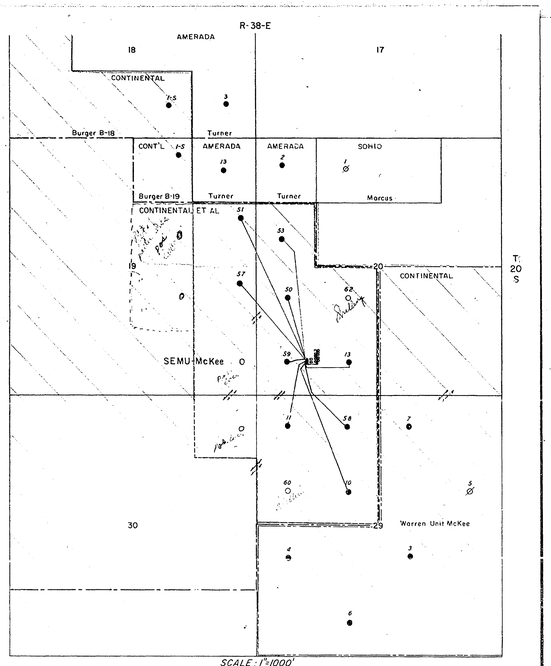


204

Job No. WT- 65557

FORM D 537 CHARLES AUSTIN'S NO. 478

EASEMAN OIL WELL SURVEY COMPANY
DENVER LONG BEACH HOUSTON



CONTINENTAL OIL COMPANY

LEGEND

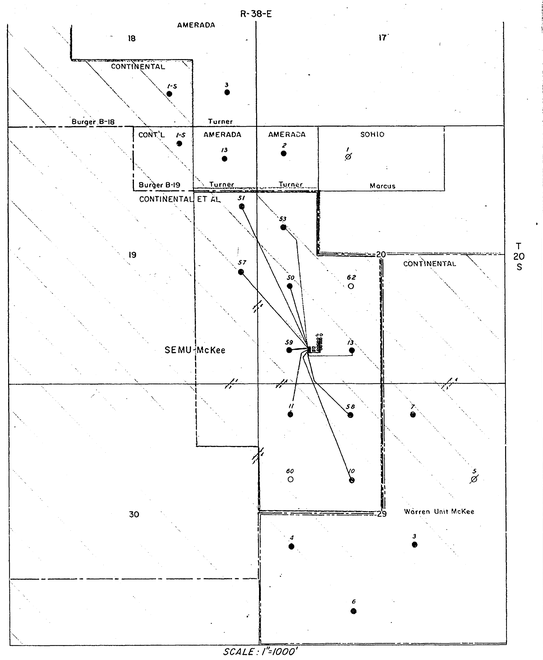
- McKee Well
- Boudary SEMU Unit
- Limits McKee Participating Area

WARREN McKEE POOL - SEMU LEASE

FLOW LINE DIAGRAM

BEFORE THE OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO
CASE 1288

CASE:1288
EXHIBIT:1



CONTINENTAL OIL COMPANY

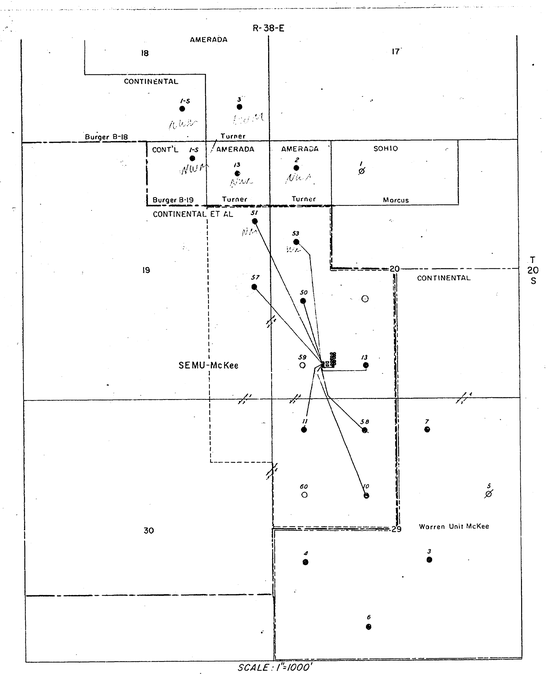
LEGEND

- McKee Well
- Boudary SEMU Unit
- Limits McKee Participating Area

WARREN McKEE POOL - SEMU LEASE

FLOW LINE DIAGRAM

CASE:1288
EXHIBIT:1



CONTINENTAL OIL COMPANY

LEGEND

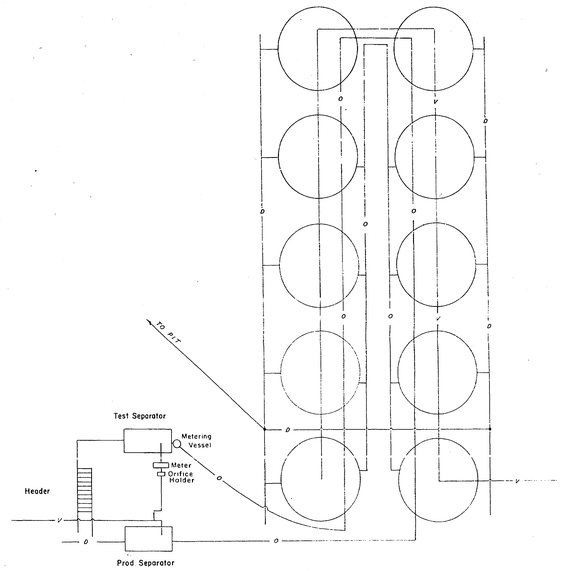
- McKee Well
- Boudary SEMU Unit
- Limits McKee Participating Area

WARREN McKEE POOL - SEMU LEASE

FLOW LINE DIAGRAM

EXHIBIT "A"

10 — 400 Bbl. Storage Tanks



LEGEND

- Oil Line
- Vent Line
- Drain Line

BEFORE THE OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO
CASE 1288

CONTINENTAL OIL COMPANY

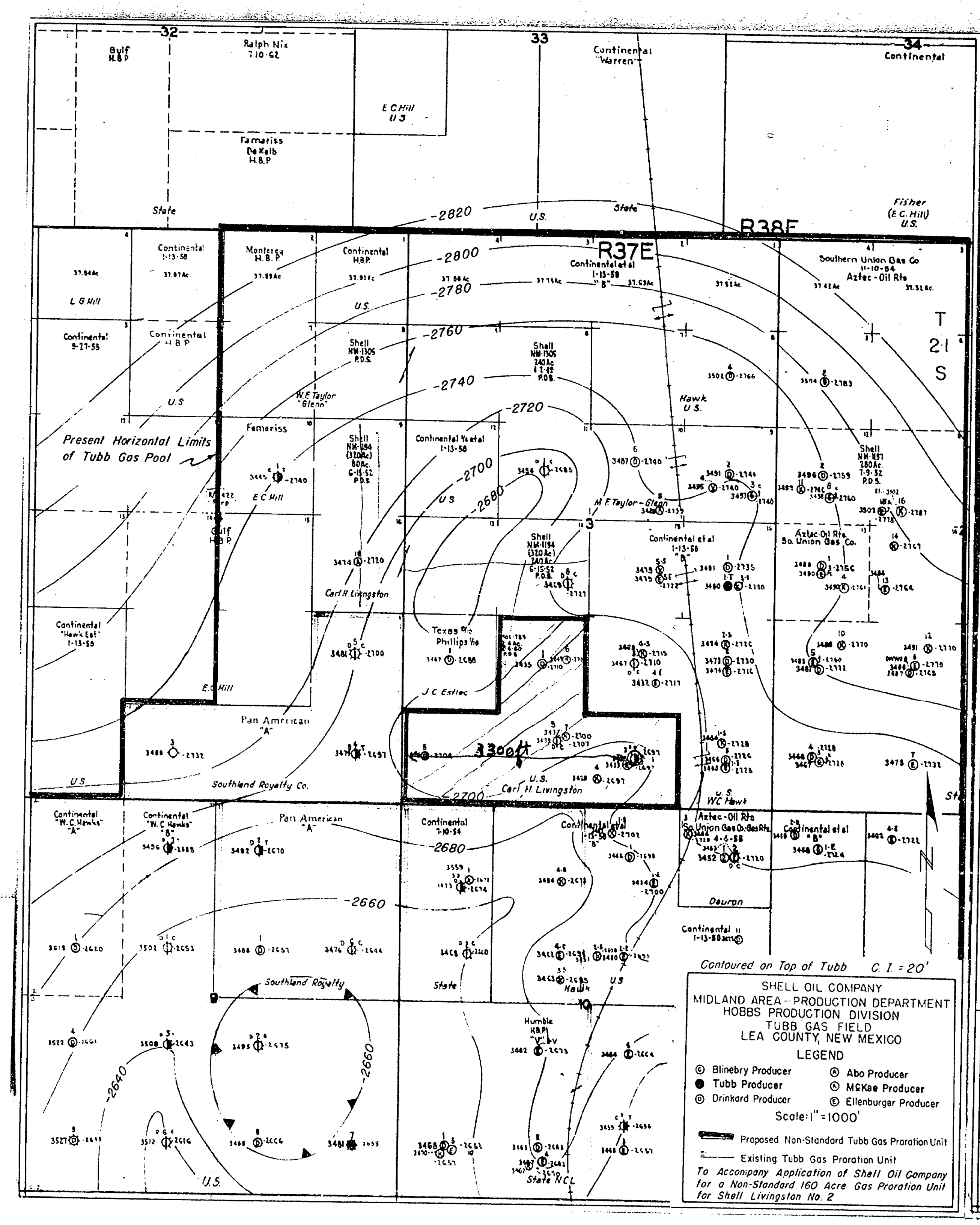
SEMU-McKEE LEASE

BATTERY DETAIL

CASE:1288
EXHIBIT:2

205

206


R37E
R38E
T 21 S
Present Horizontal Limits of Tubb Gas Pool
-2820
-2800
-2780
-2760
-2740
-2720
-2700
-2680
-2660
-2640
3300ft
Contoured on Top of Tubb C. I. = 20'
SHELL OIL COMPANY
MIDLAND AREA - PRODUCTION DEPARTMENT
HOBBS PRODUCTION DIVISION
TUBB GAS FIELD
LEA COUNTY, NEW MEXICO
LEGEND
Blinebry Producer
Tubb Producer
Drinkard Producer
Abo Producer
McKee Producer
Ellenburger Producer
Scale: 1" = 1000'
Proposed Non-Standard Tubb Gas Proration Unit
Existing Tubb Gas Proration Unit
To Accompany Application of Shell Oil Company for a Non-Standard 160 Acre Gas Proration Unit for Shell Livingston No. 2

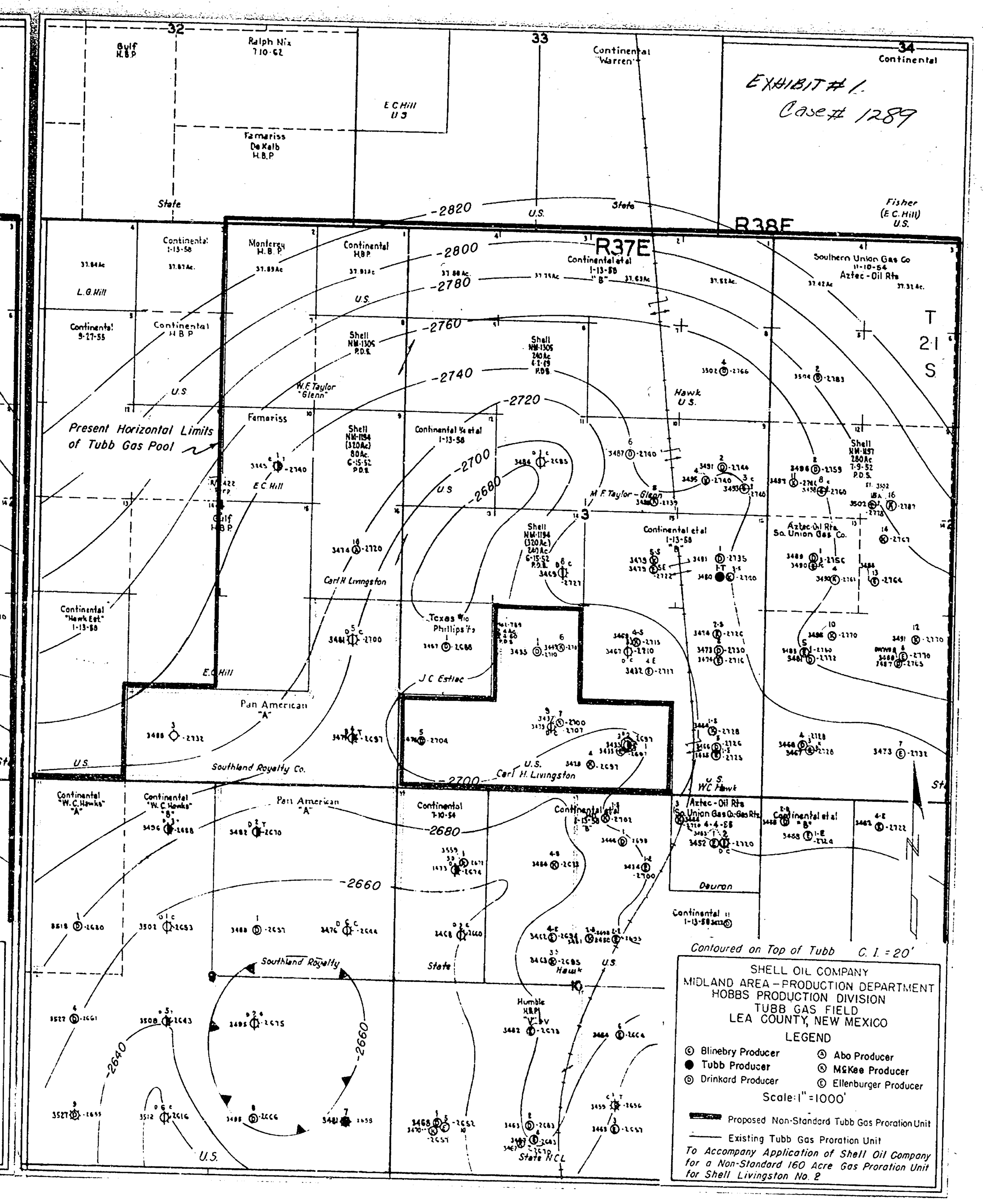


EXHIBIT # 1.
Case # 1289
R37E
R38E
T 21 S
Present Horizontal Limits of Tubb Gas Pool
Contoured on Top of Tubb C. I. = 20'
SHELL OIL COMPANY
MIDLAND AREA - PRODUCTION DEPARTMENT
HOBBS PRODUCTION DIVISION
TUBB GAS FIELD
LEA COUNTY, NEW MEXICO
LEGEND
Blinebry Producer
Tubb Producer
Drinkard Producer
Abo Producer
McKee Producer
Ellenburger Producer
Scale: 1" = 1000'
Proposed Non-Standard Tubb Gas Proration Unit
Existing Tubb Gas Proration Unit
To Accompany Application of Shell Oil Company for a Non-Standard 160 Acre Gas Proration Unit for Shell Livingston No. 2

FORM 241 R-NATIONAL WILLARD

THIS FORM CONFORMS TO API RP 33

RADIOACTIVITY LOG

WELEX JET SERVICES, Inc.

EXHIBIT #2 Case 1289 FILE NO. File

Location of Well	COMPANY SHELL OIL COMPANY
	WELL LIVINGSTON NO. 2
	FIELD DRINKARD - TUBB
	COUNTY LEA STATE NEW MEXICO
	LOCATION UNIT M, SEC. 2, T - 21, R - 37 E

COMPANY SHELL OIL COMPANY
WELL LIVINGSTON NO. 2
FIELD DRINKARD - TUBB
COUNTY LEA STATE NEW MEXICO
LOCATION UNIT M, SEC. 2, T - 21, R - 37 E

LOG MEAS. FROM	DERRICK FLOOR	ELEV. 3433'
DRLG. MEAS. FROM	DERRICK FLOOR	ELEV. 3433'
PERM. DATUM	8 5/8" CASING HEAD FLANGE	ELEV. 3423'

TYPE OF LOG	GAMMA RAY	
RUN NO.	ONE	
DATE	5-2-57	
JOB NO.	86-30118 &	102-695
TOTAL DEPTH (DRILLER)	6674	
EFFECTIVE DEPTH (DRILLER)	6615	
TOTAL DEPTH (R/A LOG)	6618	
TOP OF LOGGED INTERVAL	3100	
BOTTOM OF LOGGED INTERVAL	6616	
TYPE OF FLUID IN HOLE	MUD	
FLUID LEVEL	FULL	
MAXIMUM RECORDED TEMPERATURE		
NEUTRON SOURCE STRENGTH & TYPE		
SOURCE SPACING—IN.		
DETECTOR CLASS	SCINT.	
DETECTOR TYPE	P 4 0 1	
LENGTH OF MEASURING DEVICE—IN.	5'	
O.D. OF INSTRUMENT—IN.	3 5/8	
TIME CONSTANT—SECONDS	2.0	
LOGGING SPEED FT./MIN. 5" -	20	
STATISTICAL VARIATION—IN.	0.3	
SENSITIVITY REFERENCE	0 933	
RECORDED BY	DEPUE &	YATES
WITNESSED BY	MR. DUVALL	

BEFORE THE OIL CONSERVATION COMMISSION SANTA FE, NEW MEXICO
CASE 1289

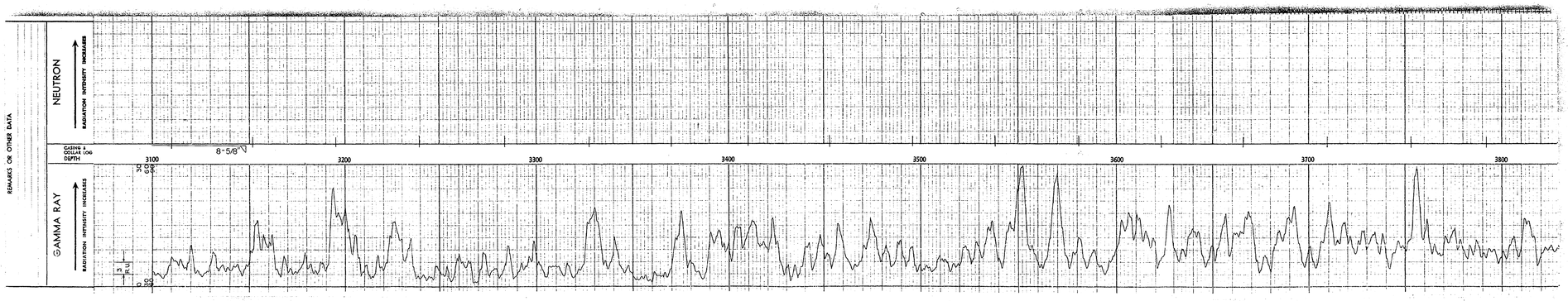
CASING RECORD

SIZE—IN.	WT.—LB	INTERVAL FROM WELL RECORD	INTERVAL FROM R/A LOG
13 3/8		0 To 225'	To
8 5/8		0 To 3118'	To
5 1/2	15.5	0 To 6674'	To
		To	To

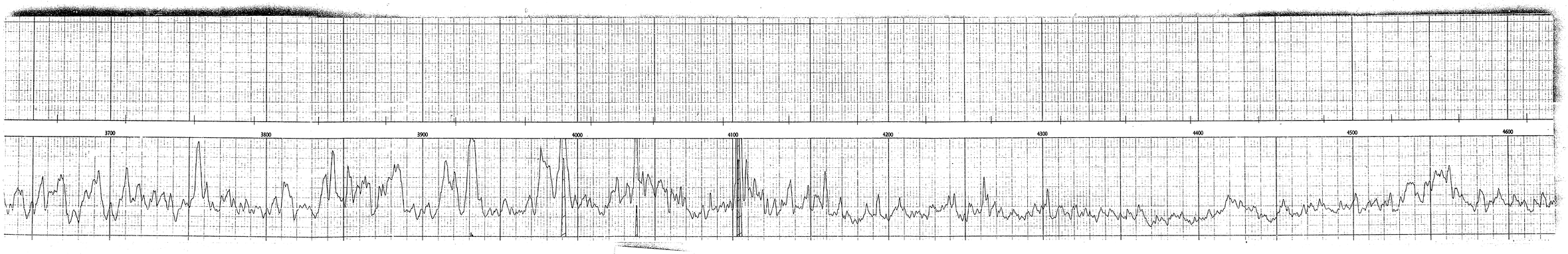
BORE HOLE

BIT SIZE IN.	INTERVAL FROM WELL RECORD	INTERVAL FROM R/A LOG
	To	To
	To	To
7 7/8	To	To
	To	To
	To	To

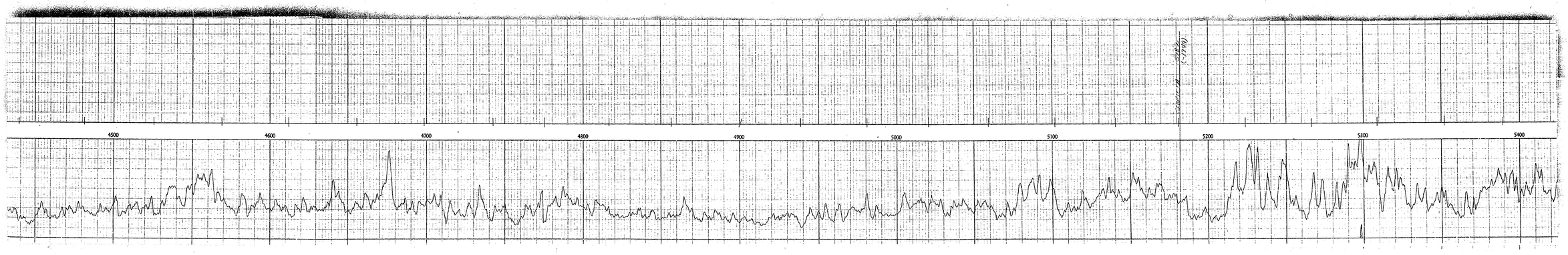
207


NEUTRON
RADIATION INTENSITY INCREASES
CASING & COLLAR LOG DEPTH
8-5/8"
3100
3200
3300
3400
3500
3600
3700
3800
GAMMA RAY
RADIATION INTENSITY INCREASES
REMARKS OR OTHER DATA

208



209



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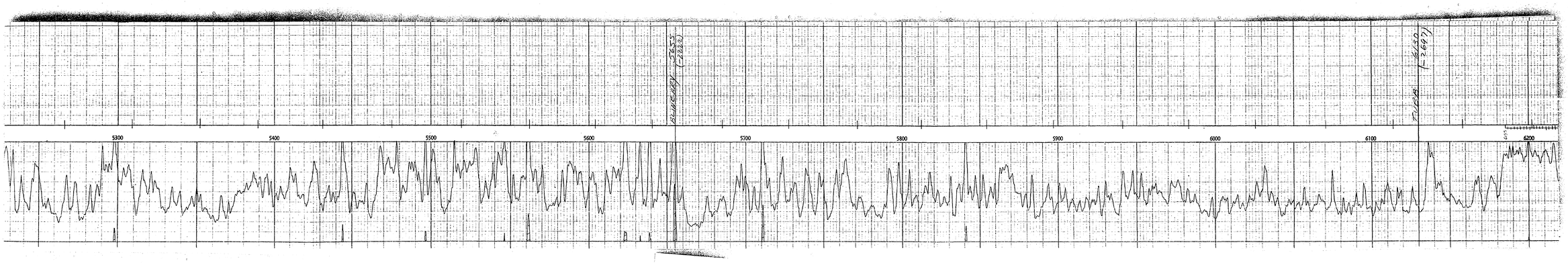

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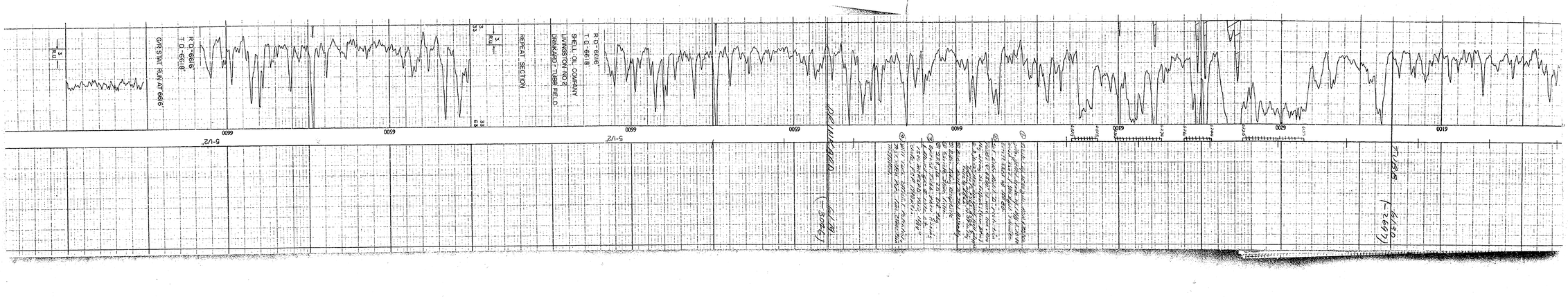

SHELL OIL COMPANY
LIVINGSTON NO 2
DRINKARD-TUBB FIELD
REPEAT SECTION
R.D. 6618'
T.D. 6618'
G/R STAT RUN AT 6616
5-1/2"
6600
6500
6400
6300
6200
6100
DRINKARD
TUBB

213

THE WESTERN COMPA

GAMMATRON

Simultaneous Radioactivity Log

COMPANY: SHELL OIL COMPANY

WELL: STATE C & 2

FIELD: EUNICE

COUNTY: LEA STATE: N.MEX.

LOCATION: 1650'FNL-330'FEL, SEC.24
T-21-S, R-35-E,

LOCATION

Unit H

FILE NO.

LOG NO. 25767

LOG MEAS. FROM: 10' ABOVE GROUND LEVEL ELEV. 3626

DRLG. MEAS. FROM: 10' ABOVE GROUND LEVEL ELEV. 3626

PERM. DATUM: GROUND LEVEL ELEV. 3616

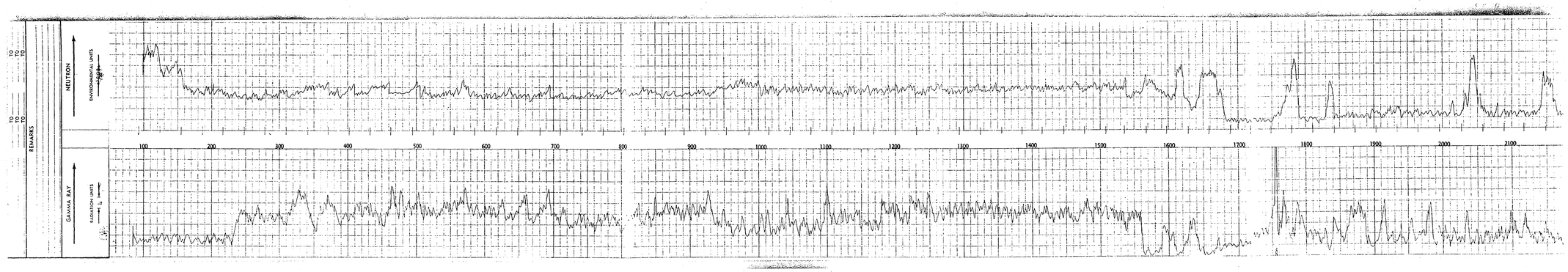
COMPANY SHELL OIL COMPANY
WELL STATE C & 2
FIELD EUNICE
COUNTY LEA STATE N.MEX.
LOCATION 1650'FNL-330'FEL SEC.24 T-21-S R-35-E

TYPE OF LOG	G/R	N/N
RUN NO.	1-ON	1-ON
DATE	5-26-57	5-28-57
TOTAL DEPTH (DRILLER)		
EFFECTIVE DEPTH (DRILLER)		
EFFECTIVE DEPTH (WESTERN)	3811	3811
TOP OF LOGGED INTERVAL	SURF.	SURF.
BOTTOM OF LOGGED INTERVAL	3758.5	3809.5
TYPE OF FLUID IN HOLE	OIL	OIL
FLUID LEVEL	FULL	FULL
SOURCE STRENGTH & TYPE		51043
SOURCE SPACING		12.5
DETECTOR CLASS	SCINT.	SCINT.
DETECTOR TYPE	0401	DENS
DETECTOR LENGTH	4	4
O.D. OF INSTRUMENT IN	3 5/8	3 5/8
TIME CONSTANT SEC.	2x0	2x0
LOGGING SPEED FT. MIN.	30-60	30-60
STATISTICAL VARIATION	RECORDED	RECORDED
SENSITIVITY REFERENCE	G-933	D-358
RECORDED BY	ROSS	
WITNESSED BY	MR. OFFIELD	

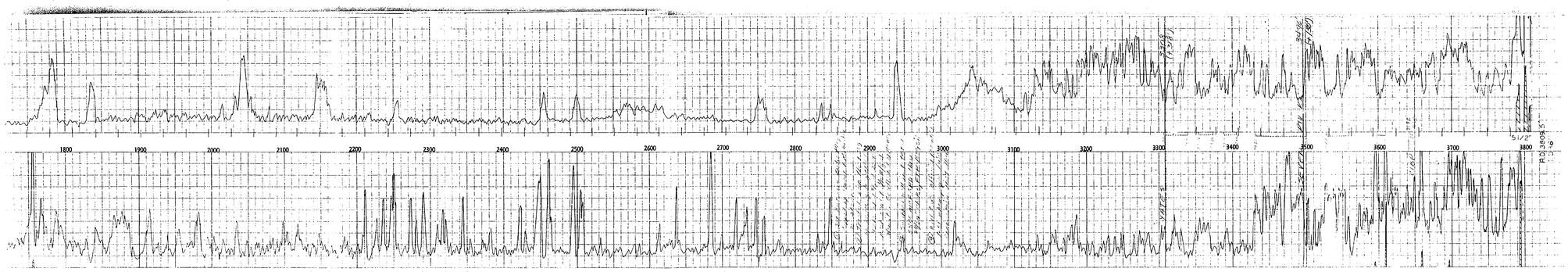
EXHIBIT #2
Case 1290

CASING RECORD ___ INTERVAL ___

BIT SIZE	CASING	WT. LB.	FROM WELL RECORD		FROM RA LOG
	1/2	1..	S...F.	TO 3[illegible]	TO


TD
TD
TD
TD
REMARKS
NEUTRON
ENVIRONMENTAL UNITS
GAMMA RAY
RADIATION UNITS
100
200
300
400
500
600
700
800
900
1000
1100
1200
1300
1400
1500
1600
1700
1800
1900
2000
2100

214


1800
1900
2000
2100
2200
2300
2400
2500
2600
2700
2800
2900
3000
3100
3200
3300
3400
3500
3600
3700
3800

215

SCHLUMBERGER WELL SURVEYING CORPORATION

HOUSTON, TEXAS

SCHLUMBERGER

Induction-Electrical Log

COUNTY	Lea
FIELD or LOCATION	Wildcat
WELL	A.B. Coates C #6
COMPANY	Tidewater Oil Co.

COMPANY TIDEWATER OIL CO.

Other Surveys: LL GRN ML TDM

WELL A.B. COATES C #6

Location of Well: 660' f N/L, 1980' f E/L

FIELD WILDCAT

LOCATION SEC. 24-25S-37E

COUNTY LEA

STATE NEW MEXICO

Elevation: D.F.: 3083, K.B.: 3084, or G.L.: 3073

FILING No.

RUN No.	1
Date	5-17-57
First Reading	7888
Last Reading	4858
Feet Measured	3030
Csg. Schlum.	4858
Csg. Driller	4860
Depth Reached	7894
Bottom Driller	7885
Depth Datum	KB 11.0' Abv. GL
Mud Nat.	Chem.-Gel
Dens. Visc.	9.3 49-58
Mud Resist.	1.0 @ 64 F
Res. BHT	.63 @ 104 F
Rmf	.54 @ 104 F
Rmc	.85 @ 104 F
pH	@ F
Wtr. Loss	6.0 - 8.4 CC 30 min.
Bit Size	8 3/4"
Spcgs.—AM	16"
IND.	5FF 40
Opr. Rig Time	2 Hrs.
Truck No.	1760-Hobbs
Recorded By	Howe
Witness	Owen

Tidewater

BEFORE THE OIL CONSERVATION COMMISSION SANTA FE, NEW MEXICO
Tidewater EXHIBIT No. 2
CASE

REMARKS: GR: 852 - 450 - 100 - 400; LOG: sens. 300; TC1; speed 3000 & 5000'/Hr.; SO 1 1/2" USED

Cartridge No. IRC - A - 258
Panel No. IRP - B - 135
Sonde No. IRS - C - 274

CONDUCTIVITY millimhos/m = 1000 / ohms. m²/m — INDUCTION 200, 0, 400

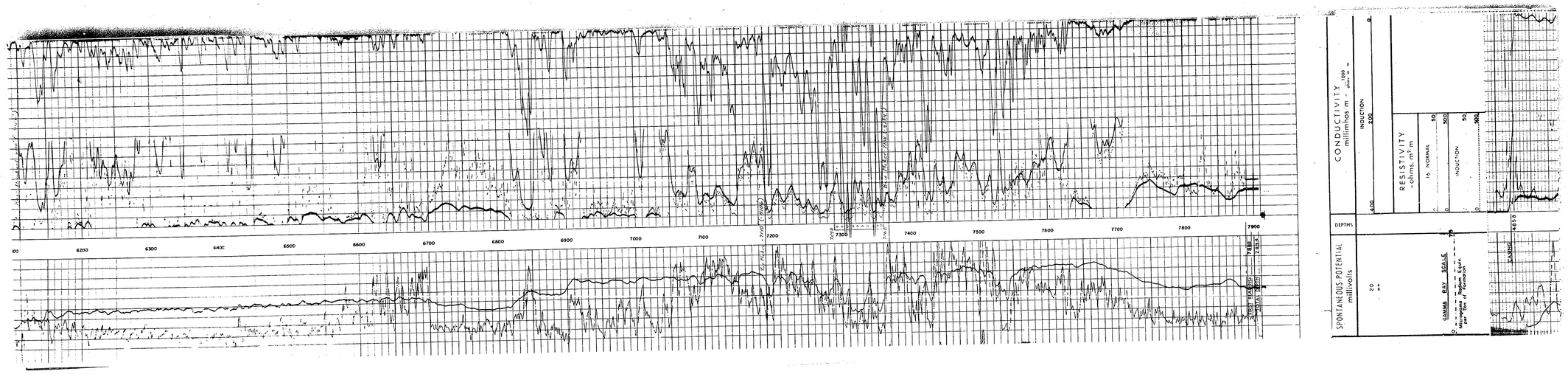
RESISTIVITY -ohms. m²/m — 16" NORMAL 0–50, 0–500; INDUCTION 0–50, 0–500

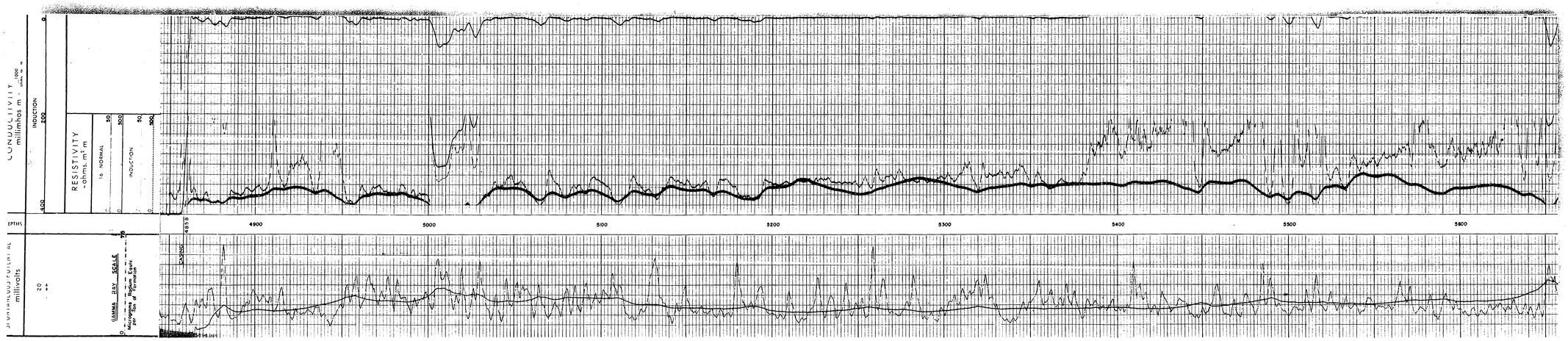
DEPTHS

SPONTANEOUS-POTENTIAL millivolts — 20, − +

GAMMA RAY SCALE Micrograms Radium Equiv per Ton of Formation 0 – 75

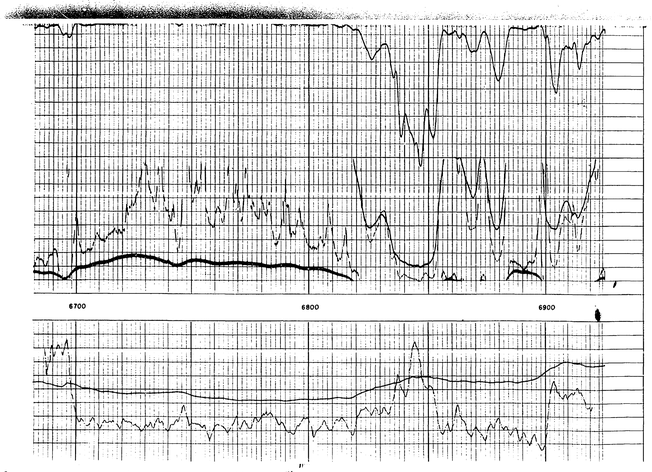
216

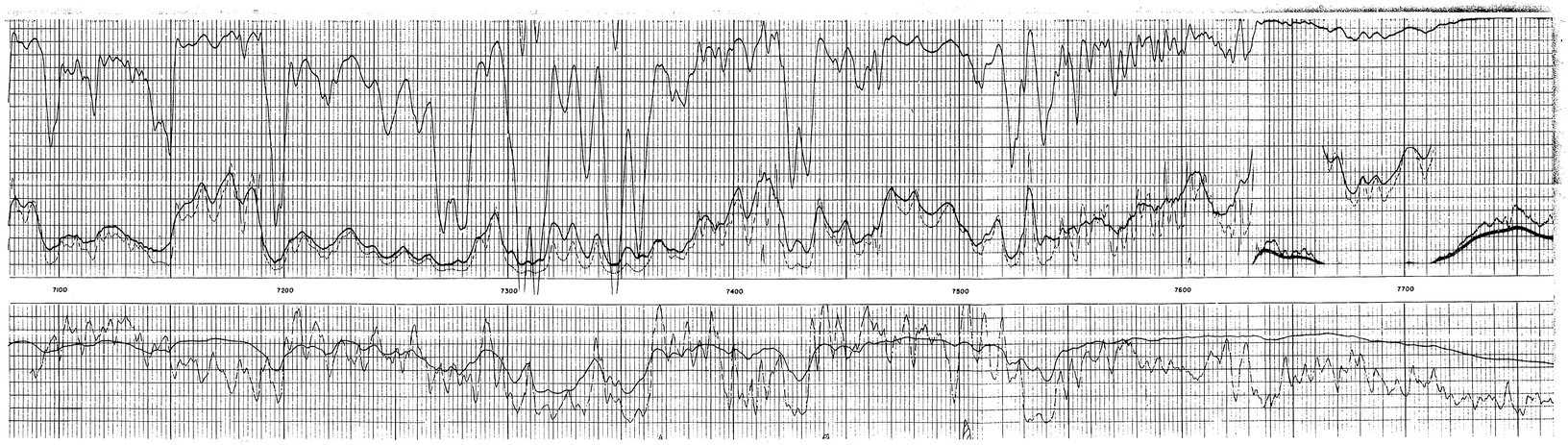

CONDUCTIVITY
millimhos m⁻¹
INDUCTION
RESISTIVITY
ohms, m² m
16 NORMAL
INDUCTION
DEPTHS
SPONTANEOUS POTENTIAL
millivolts
GAMMA RAY SCALE
Counts per Minute
per Box of Formation
CASING
6200
6300
6400
6500
6600
6700
6800
6900
7000
7100
7200
7300
7400
7500
7600
7700
7800
7900


CONDUCTIVITY
millimhos m
INDUCTION
RESISTIVITY
ohms m² m
16 NORMAL
INDUCTION
DEPTHS
4900
5000
5100
5200
5300
5400
5500
5600
SPONTANEOUS POTENTIAL
millivolts
GAMMA RAY SCALE
Micrograms Radium Equiv. per Ton of Formation

218

5500
5600
5700
5800
5900
6000
6100
6700
6800
6900





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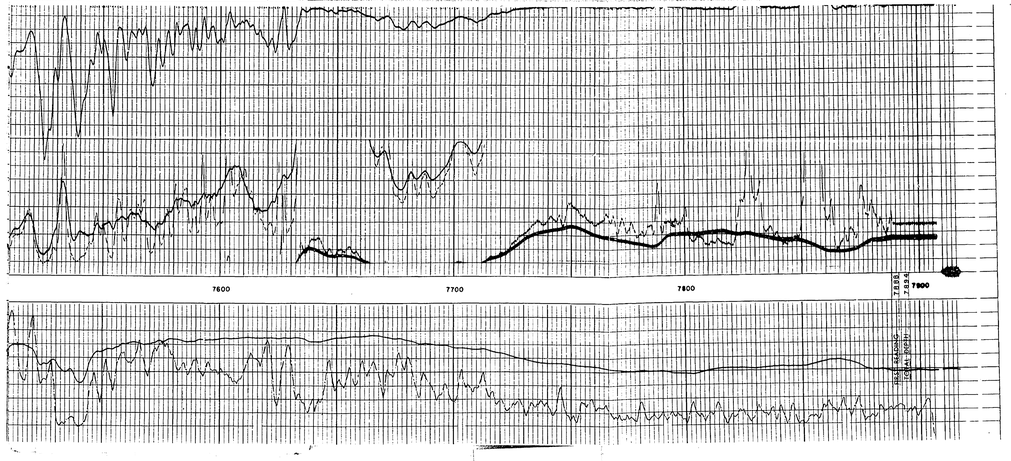
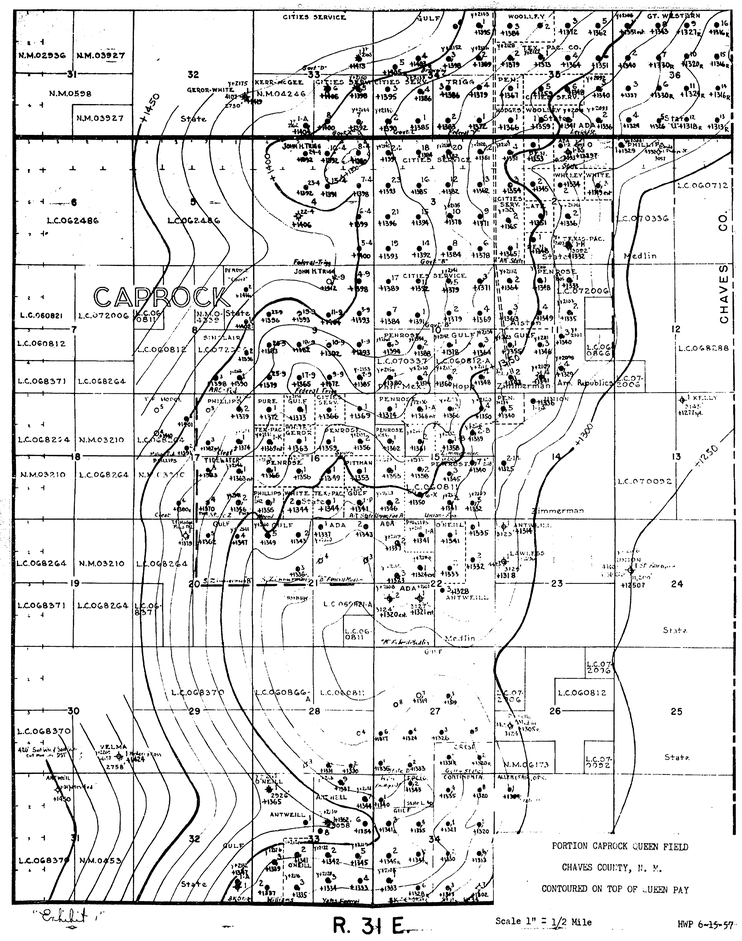


TIDEWATER OIL COMPANY
A. B. COATES, G
W. DIXIE FIELD
LEA COUNTY, NEW MEXICO

221



222

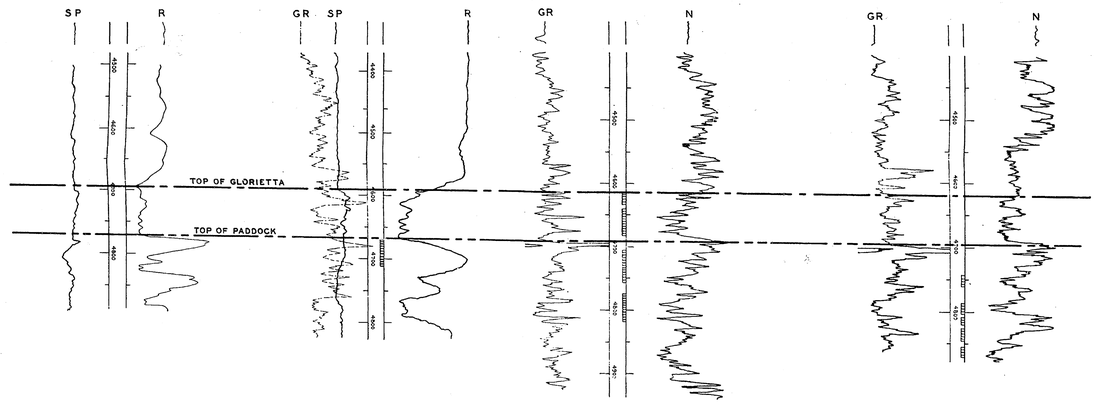
"Exhibit 1"

FORTION CAPROCK QUEEN FIELD
CHAVES COUNTY, N. M.
CONTOURED ON TOP OF QUEEN PAY

Scale 1" = 1/2 Mile

HWP 6-15-57

NORTH - SOUTH CROSS-SECTION
OF JUSTIS GAS POOL
LEA COUNTY, NEW MEXICO



WESTERN GAS CO.
EATON NO.1
SEC 12 T. 25 S.-R.37 E.

TIDEWATER OIL CO.
COATES NO.1 "C"
SEC 24 T.25S - R.37E.

EL PASO NATURAL GAS
CARLSON FEDERAL 1-B
SEC 25 T.25S.- R.37E.

GULF OIL CORP.
ARNOTT RAMSEY NO.3 "F"
SEC 36 T.25S - R.37E.

EXHIBIT NO. 3

223

NORTH - SOUTH CROSS - SECTION
OF JUSTIS GAS POOL
LEA COUNTY, NEW MEXICO

WESTERN GAS CO.
EATON NO.1
SEC 12 T.25 S.-R.37 E.

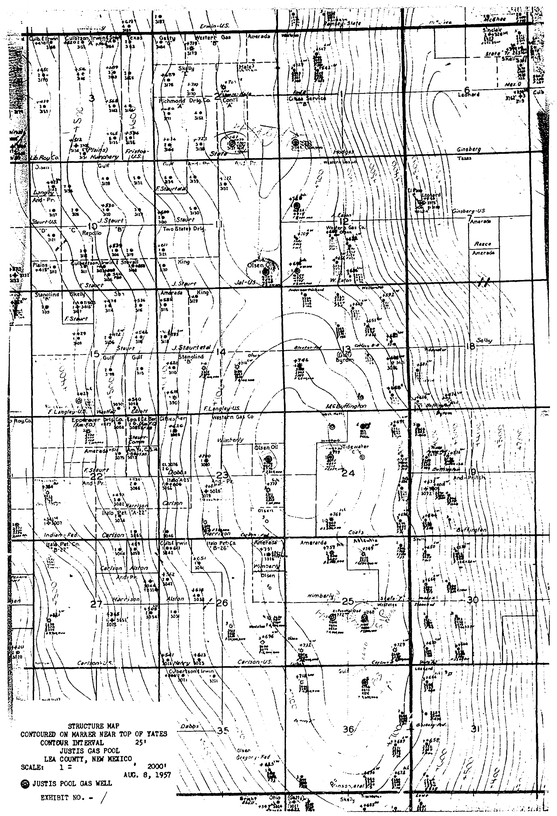
TIDEWATER OIL CO.
COATES NO.1 'C'
SEC 24 T.25S - R.37E.

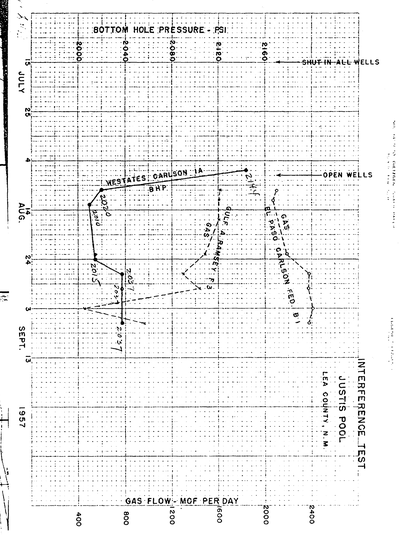
EL PASO NATURAL GAS
CARLSON FEDERAL I-B
SEC 25 T.25S.- R.37E.

GULF OIL CORP
ARNOTT RAMSEY NO.3 'F'
SEC 36 T.25 S - R.37E.

EXHIBIT NO.

224





LANE WELLS COMPANY

Radioactivity Log

EXHIBIT "B-1"

COMPANY: AMBASSADOR OIL CORP.

WELL: STATE "S" NO. 1

FIELD: CAPROCK QUEENS

LOCATION: SE 1/4 OF SW 1/4 OF SEC. 1, T-13-S, R-32-E

COUNTY: CHAVES STATE: N. MEX.

Well Location

LOG ZERO	GROUND LEVEL	ELEV. 4407
DRLG. ZERO	GROUND LEVEL	ELEV. 4407
PERM. DATUM	GROUND LEVEL	ELEV. 4397

TYPE OF LOG	GAMMA RAY	N/NEUTRON		
RUN NO.	ONE-ON	ONE-ON		
DATE	1-11-57	1-11-57		
TOTAL DEPTH (DRILLER) & LINE	3052	3052		
EFFECTIVE DEPTH (DRILLER)	3045	3045		
TOP OF LOGGED INTERVAL	SURFACE	SURFACE		
BOTTOM OF LOGGED INTERVAL	3029	3041		
TYPE OF FLUID IN HOLE	OIL	OIL		
FLUID LEVEL		2956		
MAXIMUM RECORDED TEMP.				
SOURCE STRENGTH & TYPE		SLOA3		
SOURCE SPACING — IN.		13.5		
LENGTH OF MEAS. DEVICE — IN.	4	4		
O.D. OF INSTRUMENT — IN.	3 3/8	3 5/8		
TIME CONSTANT — SECONDS	2.0-0.9	2.0-0.9		
LOGGING SPEED FT./MIN.	30-60	30-60		
STATISTICAL VARIATION — IN.	RECORDED	RECORDED		
SENSITIVITY REFERENCE	0933	D368		
DETECTOR GLASS	SCINT.	SCINT.		
DETECTOR TYPE	DG01	D581		
RECORDED BY	SCHLOTTERBACK			
WITNESSED BY	ZUCKRACKER	MCCRACKEN		

WELL RECORD

RUN	BIT SIZE	CASING	WT.—LB.	FROM WELL RECORD		FROM LOG	
ONE	10 3/4	8 5/8	28	SURFACE	TO 298	SURFACE	TO 304
ONE	7 7/8	5 1/2	15.5	SURFACE	TO 2993	SURFACE	TO 2966
ONE	4 7/8			2993	TO 3045	2966	TO 3043
					TO		TO
					TO		TO

LANE WELLS COMPANY

Radioactivity Log

EXHIBIT "B-2"

COMPANY: AMBASSADOR OIL CORP.

WELL: STATE "S" NO. 2

FIELD: CAPROCK QUEENS

LOCATION: NW 1/4 OF NE 1/4 OF SEC. 12, T-13-S, R-32-E

COUNTY: CHAVES STATE: N. MEX.

Well Location

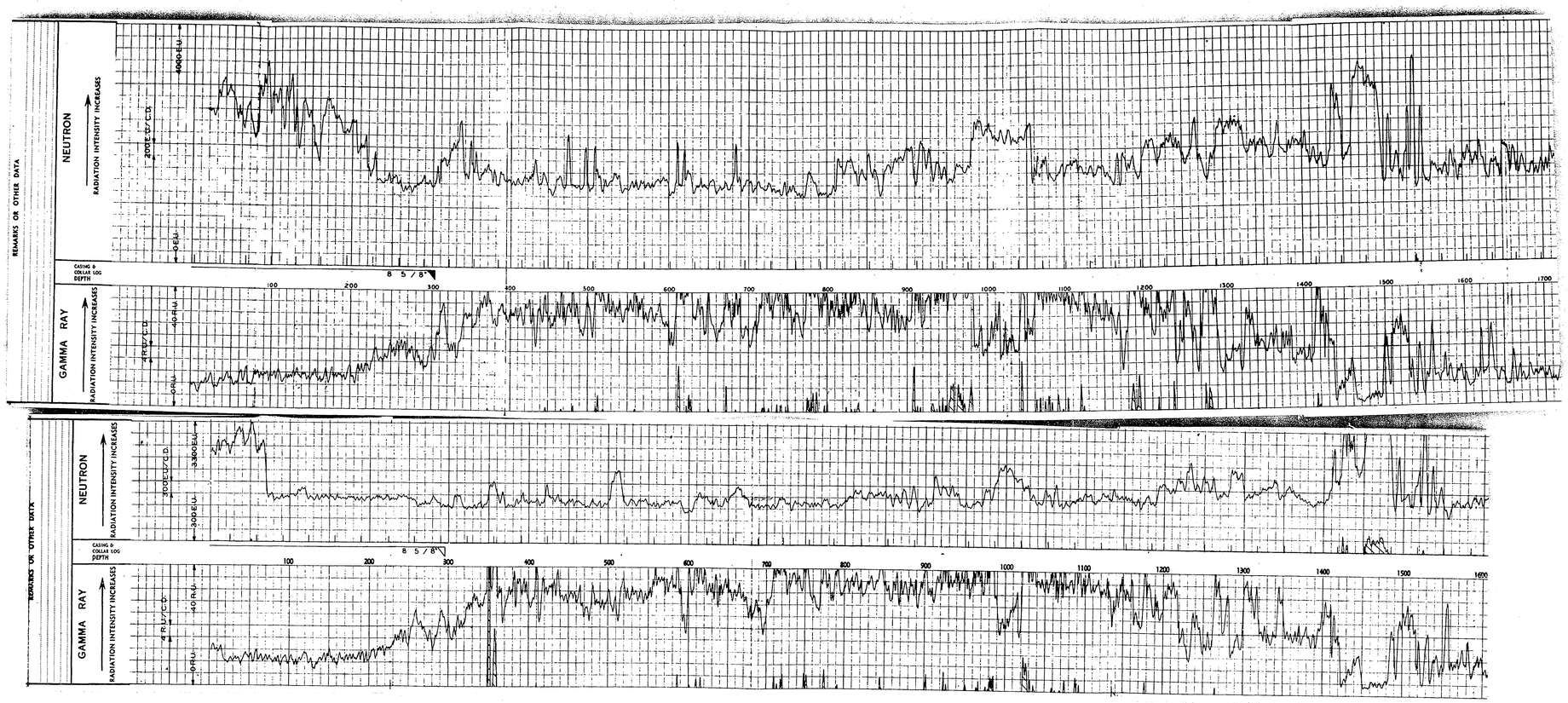
LOG ZERO	GROUND LEVEL	ELEV. 4405
DRLG. ZERO	GROUND LEVEL	ELEV. 4405
PERM. DATUM	TOP 7" CASING	ELEV. 4405

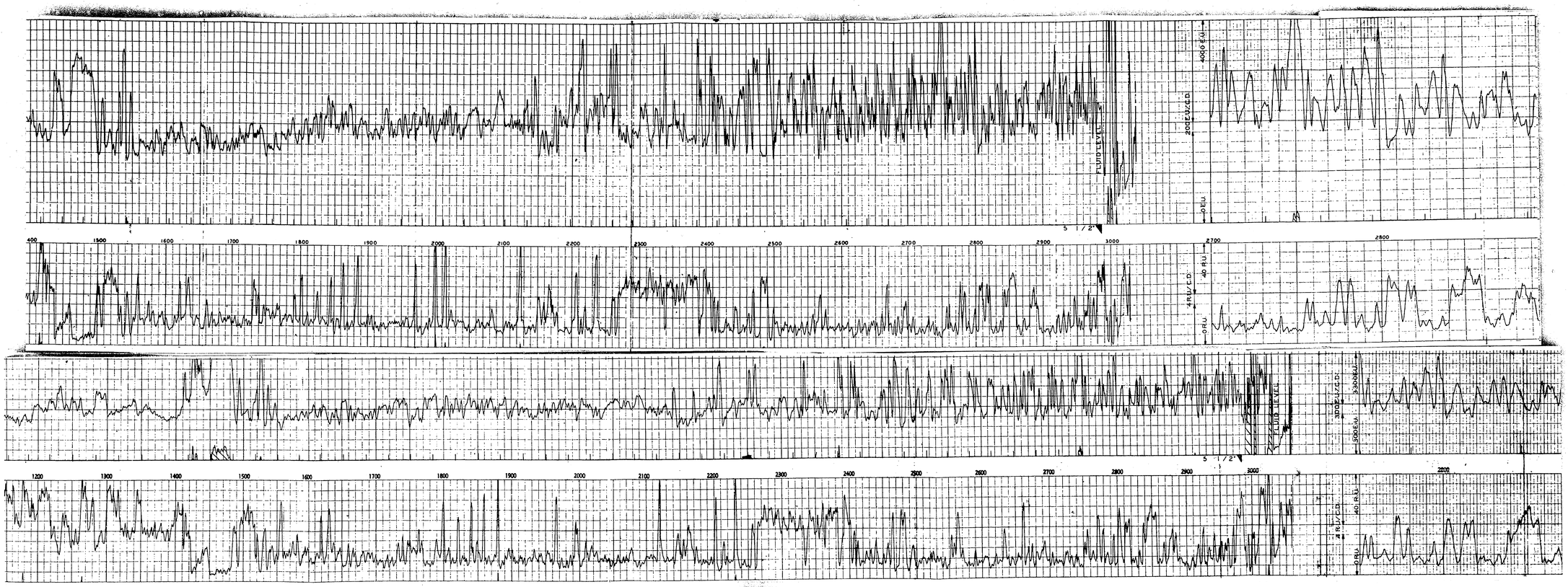
TYPE OF LOG	GAMMA RAY	N/NEUTRON		
RUN NO.	ONE-ON	ONE-ON		
DATE	2-28-57	2-28-57		
TOTAL DEPTH (DRILLER)	3065	3065		
EFFECTIVE DEPTH (DRILLER)	3065	3065		
TOP OF LOGGED INTERVAL	SURFACE	SURFACE		
BOTTOM OF LOGGED INTERVAL	3058	3058		
TYPE OF FLUID IN HOLE	OIL	OIL		
FLUID LEVEL		3030		
MAXIMUM RECORDED TEMP.				
SOURCE STRENGTH & TYPE		SLOA3		
SOURCE SPACING — IN.		13.5		
LENGTH OF MEAS. DEVICE — IN.	4	4		
O.D. OF INSTRUMENT — IN.	3 5/8	3 5/8		
TIME CONSTANT — SECONDS	2.0-0.9	2.0-0.9		
LOGGING SPEED FT./MIN.	30-60	30-60		
STATISTICAL VARIATION — IN.	RECORDED	RECORDED		
SENSITIVITY REFERENCE	0933	D368		
DETECTOR GLASS	SCINT.	SCINT.		
DETECTOR TYPE	DG01	D581		
RECORDED BY	DUCKWORTH	DUCKWORTH		
WITNESSED BY	MACCRACKEN	MACCRACKEN		

WELL RECORD

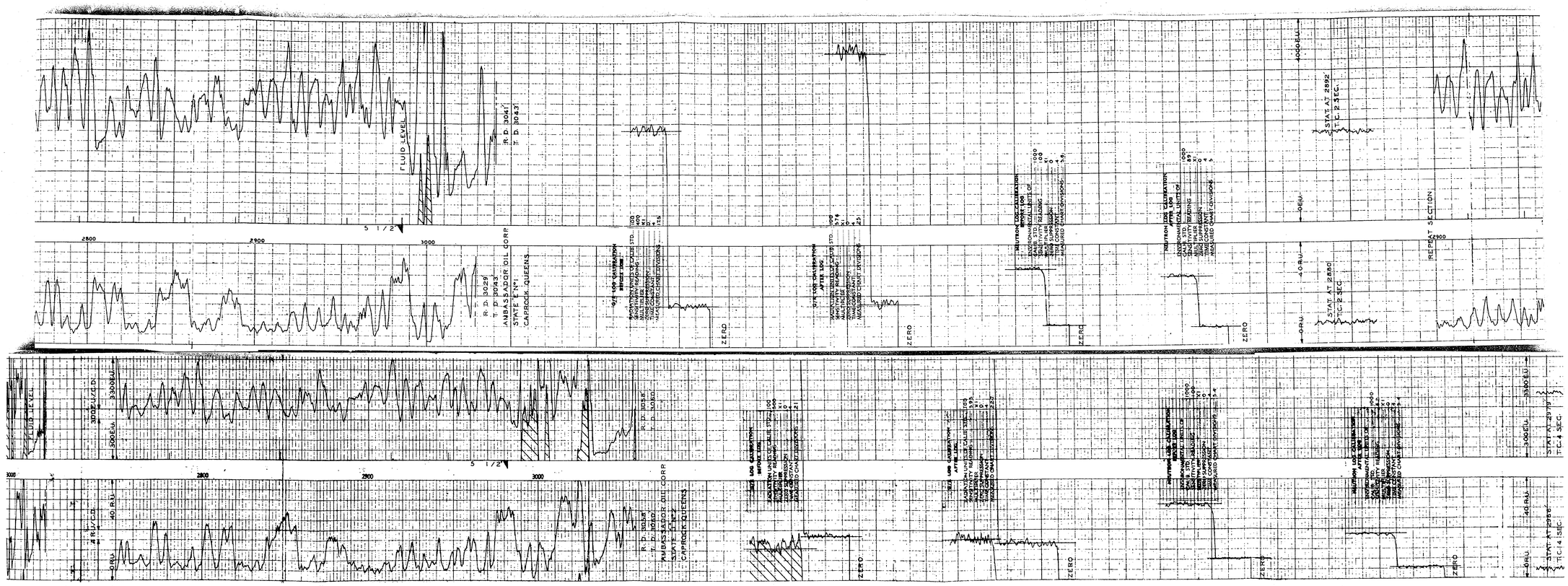
RUN	BIT SIZE	CASING	WT.—LB.	FROM WELL RECORD		FROM LOG	
ONE	10 3/4	8 5/8		SURFACE	TO 295	SURFACE	TO
ONE	7 7/8	5 1/2	15.5	SURFACE	TO 2989	SURFACE	TO 2982
ONE	4 3/4			2989	TO 3065	2982	TO 3060
					TO		TO
					TO		TO

225

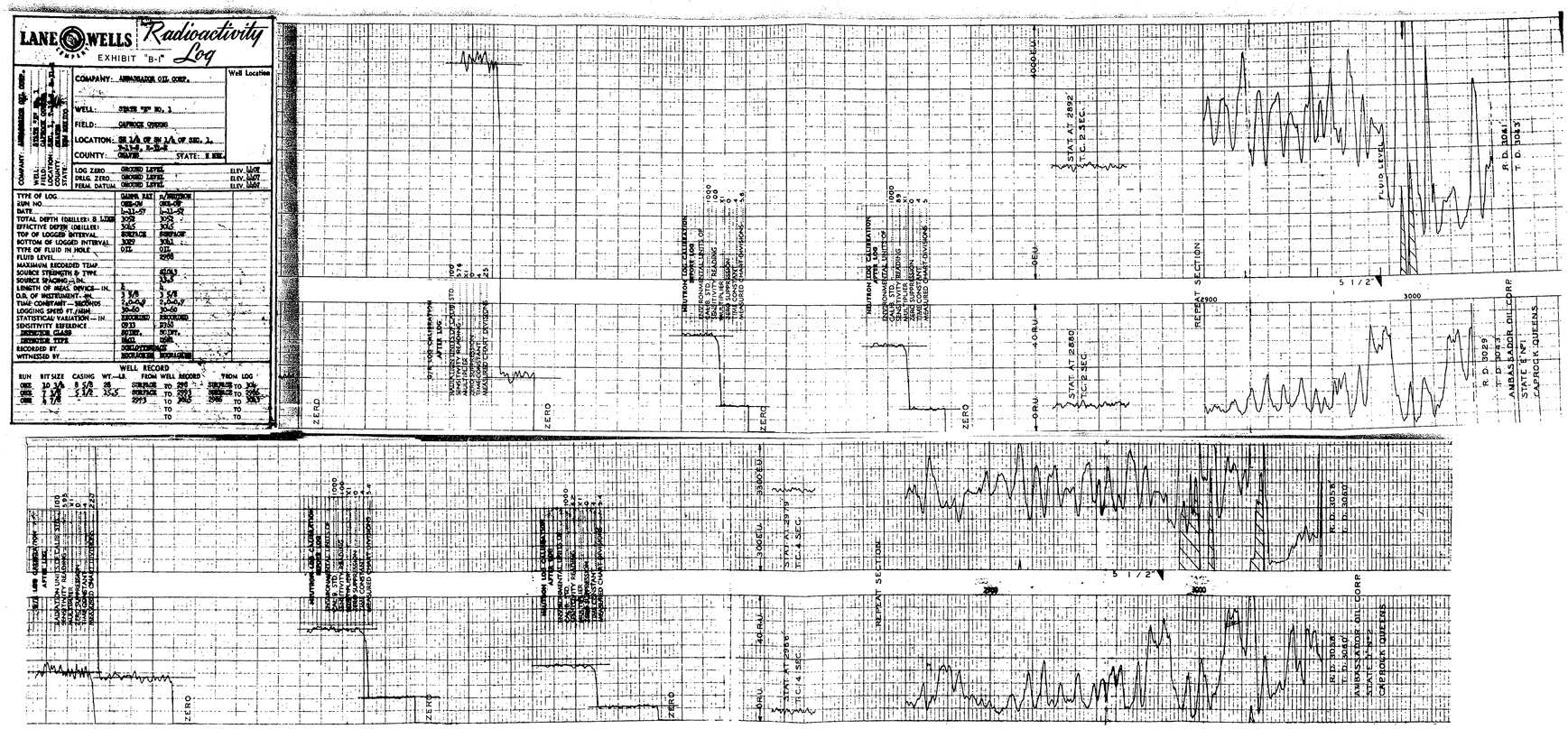

REMARKS OR OTHER DATA
NEUTRON
RADIATION INTENSITY INCREASES
4000 E.U.
200 E.U./C.D.
0 E.U.
CASING & COLLAR LOG DEPTH
8 5/8"
GAMMA RAY
RADIATION INTENSITY INCREASES
40 R.U.
4 R.U./C.D.
0 R.U.
100
200
300
400
500
600
700
800
900
1000
1100
1200
1300
1400
1500
1600
1700


FLUID LEVEL
5 1/2
200 E.U./C.D.
400 E.U.
0 E.U.
1400
1500
1600
1700
1800
1900
2000
2100
2200
2300
2400
2500
2600
2700
2800
2900
3000
2700
2800
40 R.U.
0 R.U.
1 R.U./C.D.
1200
1300
1400
1500
1600
1700
1800
1900
2000
2100
2200
2300
2400
2500
2600
2700
2800
2900
3000
2200
300 E.U./C.D.
3000 E.U.
0 E.U.
2 R.U./C.D.
40 R.U.
0 R.U.

227


FLUID LEVEL
R. D. 3041'
T. D. 3043'
5 1/2"
2800
2900
3000
R. D. 3029'
T. D. 3043'
AMBASSADOR OIL CORP
STATE "E" N°1
CAPROCK-QUEENS
GR LOG CALIBRATION
BEFORE LOG
ZERO
NEUTRON LOG CALIBRATION
BEFORE LOG
ZERO
1000 EU
STAT AT 2892
TIC 2 SEC.
DEV.
REPEAT SECTION
2900
3300 EU
300 EU
40 R.U.
0 R.U.
STAT AT 2918'
TIC 4 SEC.

228


LANE WELLS
Radioactivity Log
EXHIBIT "B-1"
COMPANY: AMBASSADOR OIL CORP.
WELL: STATE "F" NO. 1
FIELD: CAPROCK QUEENS
LOCATION: SE 1/4 OF SW 1/4 OF SEC. 3, T-13-S, R-31-E
COUNTY: CHAVES STATE: N. MEX.
Well Location
LOG ZERO GROUND LEVEL ELEV. 4408
DRLG. ZERO GROUND LEVEL ELEV. 4407
PERM. DATUM GROUND LEVEL ELEV. 4397
TYPE OF LOG GAMMA RAY N/NEUTRON
RUN NO. ONE-ON ONE-ON
DATE 5-11-57 5-11-57
TOTAL DEPTH (DRILLER) & LTOR 3029 3029
EFFECTIVE DEPTH (DRILLER) 3045 3045
TOP OF LOGGED INTERVAL SURFACE SURFACE
BOTTOM OF LOGGED INTERVAL 3029 3041
TYPE OF FLUID IN HOLE OIL OIL
FLUID LEVEL 2898
MAXIMUM RECORDED TEMP.
SOURCE STRENGTH & TYPE 400 MG
SOURCE SPACING (I) IN. 13.5
LENGTH OF MEAS. DEVICE—IN. 5 5
O.D. OF INSTRUMENT—IN. 3 3/8 3 3/8
TIME CONSTANT—SECONDS 1.0-0.7 1.0-0.7
LOGGING SPEED FT./MIN. 30-60 30-60
STATISTICAL VARIATION—IN. RECORDED RECORDED
SENSITIVITY REFERENCE 0913 2150
DETECTOR GLASS BOTTOM BOTTOM
DETECTOR TYPE 1821 2084
RECORDED BY SCHLUMBERGER
WITNESSED BY MCCULLOUGH MCCULLOUGH
WELL RECORD
RUN BIT SIZE CASING WT.—LB. FROM WELL RECORD FROM LOG
ONE 10 3/4 8 5/8 28 SURFACE TO 295 SURFACE TO 304
ONE 7 7/8 5 1/2 15.5 SURFACE TO 2991 SURFACE TO 3045
ONE 4 7/8 2913 TO 3045 ONE TO 3045
TO TO
TO TO
GAMMA RAY CALIBRATION PER LOG
RADIATION UNITS CALCULATED FROM
SENSITIVITY READING
BACKGROUND SUPPRESSION
ZERO SUPPRESSION
MEASURED CHART DIVISIONS
NEUTRON LOG CALIBRATION PER LOG
NEUTRON TOOL CONSTRUCTION
ENVIRONMENTAL UNITS OF
SENSITIVITY READING
BACKGROUND SUPPRESSION
ZERO SUPPRESSION
TIME CONSTANT
MEASURED CHART DIVISIONS
NEUTRON LOG CALIBRATION PER LOG
ENVIRONMENTAL UNITS OF
SENSITIVITY READING
BACKGROUND SUPPRESSION
ZERO SUPPRESSION
TIME CONSTANT
MEASURED CHART DIVISIONS
ZERO
40 R.U.
STAT. AT 2892
T.C. 2 SEC.
GEO.
REPEAT SECTION
2900
3000
5 1/2"
CORR.
R.D. 3041
T.D. 3043
R.D. 3029'
T.D. 3043'
AMBASSADOR OIL CORP.
STATE "F" NO. 1
CAPROCK QUEENS
3900 E.U.
STAT. AT 2979
T.C. 4 SEC.
STAT. AT 2986
R.D. 3015'
T.D. 3017'

229

LANE WELLS COMPANY

Radioactivity Log

EXHIBIT "B-3"

COMPANY: AMBASSADOR OIL COMPANY
WELL: STATE "B" NO. 2
FIELD: CAPROCK QUEENS
LOCATION: NE 1/4 OF NE 1/4 SEC. 12, T-13-S, R-31-E
COUNTY: CHAVES STATE: N MEX.

Well Location

LOG ZERO	GROUND LEVEL	ELEV. 4386
DRLG. ZERO	GROUND LEVEL	ELEV. 4386
PERM. DATUM	GROUND LEVEL	ELEV. 4386

	GAMMA RAY	N/NEUTRON		
TYPE OF LOG				
RUN NO.	ONE-ON	ONE-ON		
DATE	3-25-57	3-25-57		
TOTAL DEPTH (DRILLER)	3062	3062		
EFFECTIVE DEPTH (DRILLER)	3062	3062		
TOP OF LOGGED INTERVAL	SURFACE	SURFACE		
BOTTOM OF LOGGED INTERVAL	3035.5	3035.5		
TYPE OF FLUID IN HOLE	OIL	OIL		
FLUID LEVEL		2993		
MAXIMUM RECORDED TEMP.				
SOURCE STRENGTH & TYPE		81043		
SOURCE SPACING — IN.		13.75		
LENGTH OF MEAS. DEVICE — IN.	4	4		
O.D. OF INSTRUMENT — IN.	3 5/8	3 5/8		
TIME CONSTANT — SECONDS	2.0-0.9	2.0-0.9		
LOGGING SPEED FT./MIN.	30-60	30-60		
STATISTICAL VARIATION — IN.	RECORDED	RECORDED		
SENSITIVITY REFERENCE	0933	D368		
DETECTOR CLASS	SCINT.	SCINT.		
DETECTOR TYPE	D401	D401		
RECORDED BY	SCHLOTTERBACK			
WITNESSED BY	MCCRACKEN	MCCRACKEN		

WELL RECORD

RUN	BIT SIZE	CASING	WT.—LB.	FROM WELL RECORD		FROM LOG	
ONE	10 3/4	8 5/8		SURFACE	TO 298	SURFACE	TO 307
ONE	7 7/8	5 1/2		SURFACE	TO 2981	SURFACE	TO 2982
ONE	4 7/8			2981	TO 3062	2982	TO 3037.5
					TO		TO
					TO		TO

LANE WELLS COMPANY

Radioactivity Log

EXHIBIT "B-4"

COMPANY: AMBASSADOR OIL CORP.
WELL: STATE "B" NO. 1
FIELD: CAPROCK QUEENS
LOCATION: SE OF NW OF SEC. 12, T-13-S, R-31-E
COUNTY: CHAVES STATE: N MEX.

Well Location

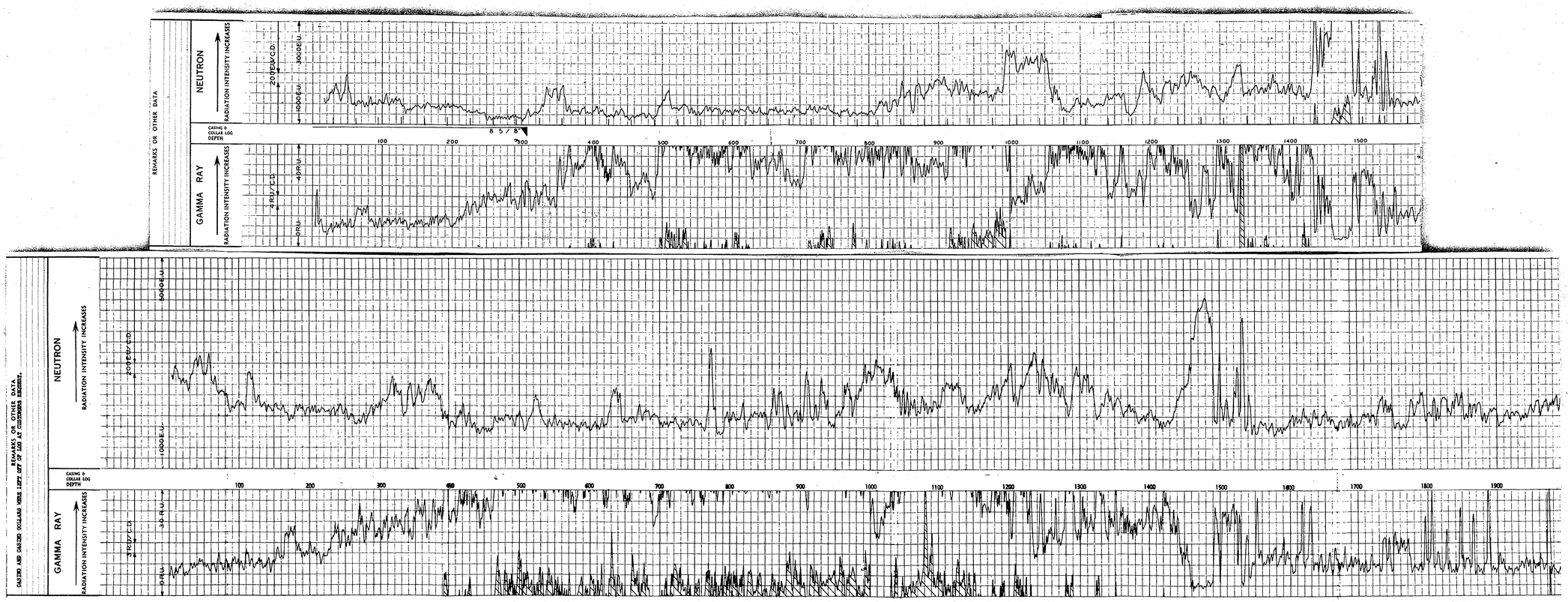
LOG ZERO	GROUND LEVEL	ELEV. 4400
DRLG. ZERO	GROUND LEVEL	ELEV. 4400
PERM. DATUM	GROUND LEVEL	ELEV. 4400

	GAMMA RAY	N/NEUTRON		
TYPE OF LOG				
RUN NO.	ONE-ON	ONE-ON		
DATE	3-30-57	3-31-57		
TOTAL DEPTH (DRILLER) 3 LINE	3051	3051		
EFFECTIVE DEPTH (DRILLER)	3051	3051		
TOP OF LOGGED INTERVAL	SURFACE	SURFACE		
BOTTOM OF LOGGED INTERVAL	3049	3049		
TYPE OF FLUID IN HOLE	WATER	WATER		
FLUID LEVEL		2958		
MAXIMUM RECORDED TEMP.				
SOURCE STRENGTH & TYPE		81043		
SOURCE SPACING — IN.		13.5		
LENGTH OF MEAS. DEVICE — IN.	4	4		
O.D. OF INSTRUMENT — IN.	3 5/8	3 5/8		
TIME CONSTANT — SECONDS	2.0-0.9	2.0-0.9		
LOGGING SPEED FT./MIN.	30-60	30-60		
STATISTICAL VARIATION — IN.	RECORDED	RECORDED		
SENSITIVITY REFERENCE	0933	D368		
DETECTOR CLASS	SCINT.	SCINT.		
DETECTOR TYPE	D401	D401		
RECORDED BY	DOCKADORN	DOCKADORN		
WITNESSED BY	MCCRACKEN	MCCRACKEN		

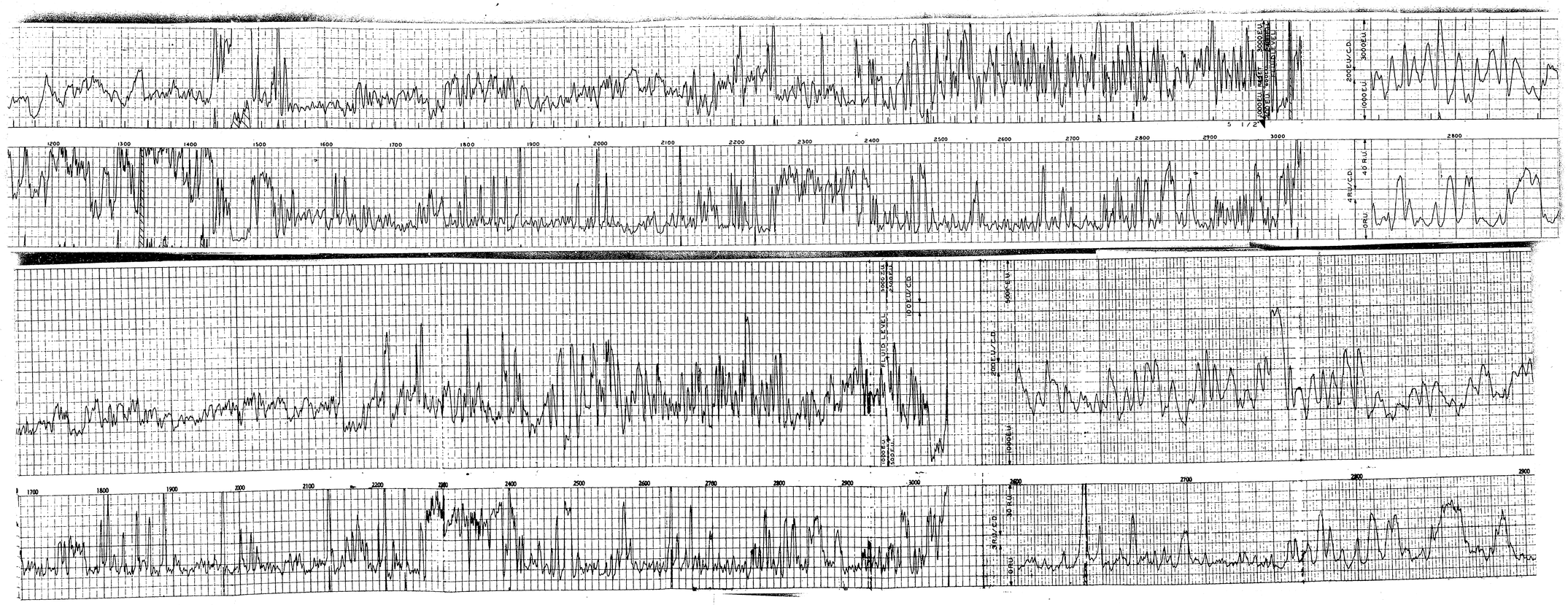
WELL RECORD

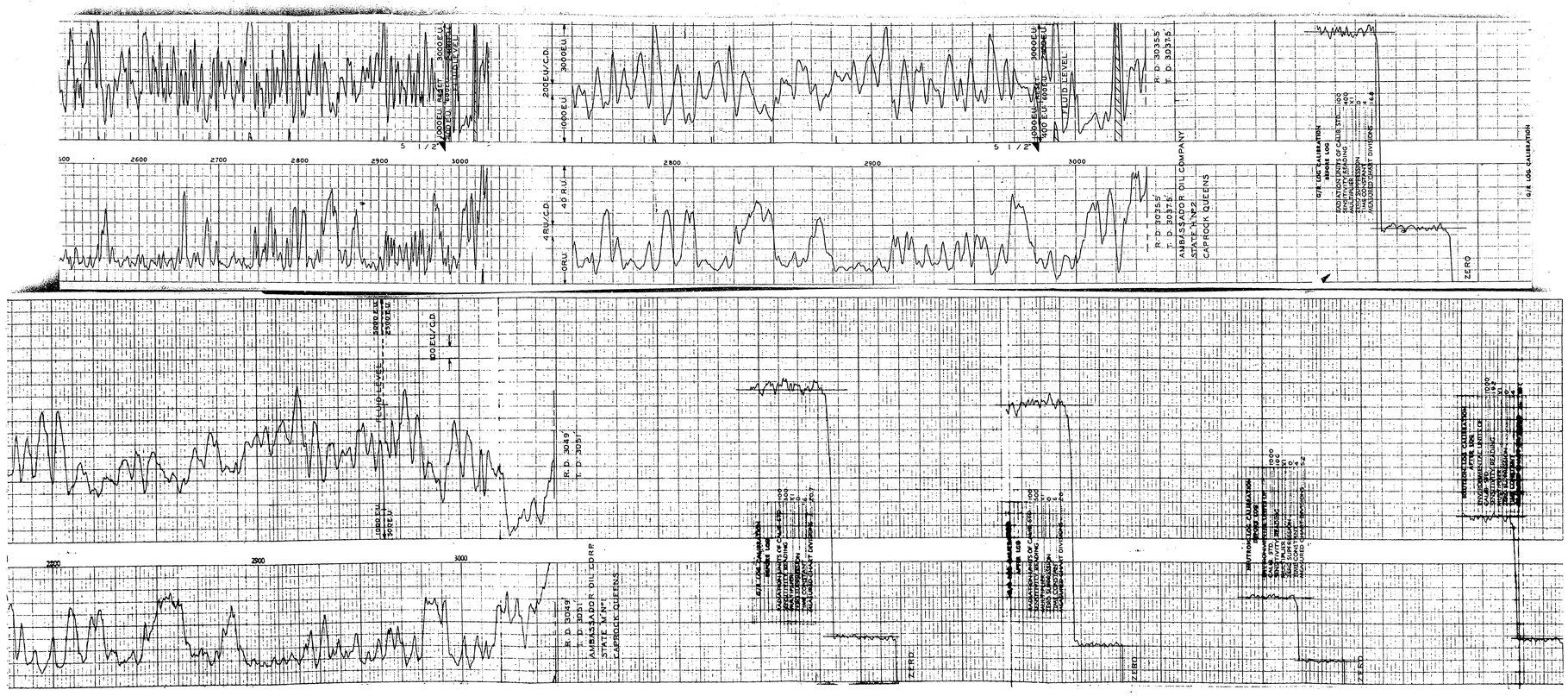
RUN	BIT SIZE	CASING	WT.—LB.	FROM WELL RECORD	FROM LOG
				TO	TO
				TO	TO
				TO	TO
				TO	TO
				TO	TO

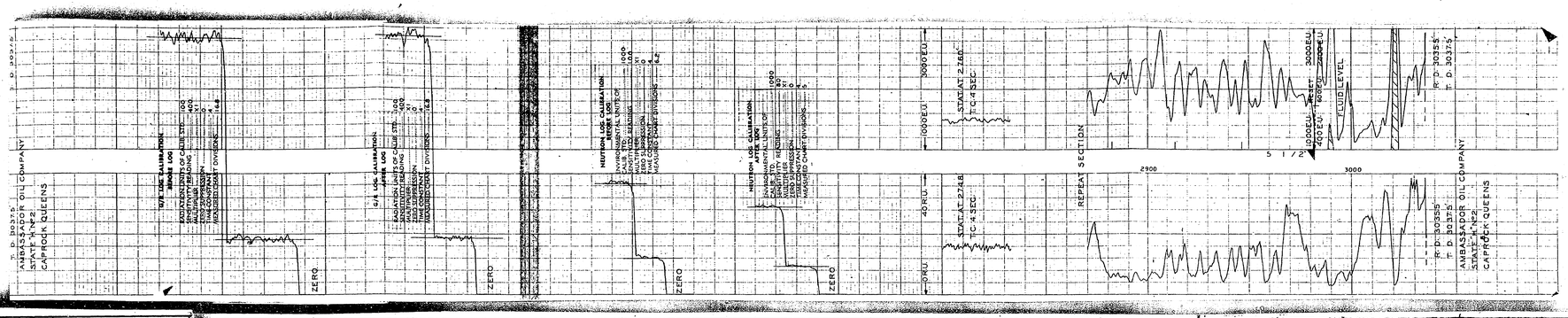
230

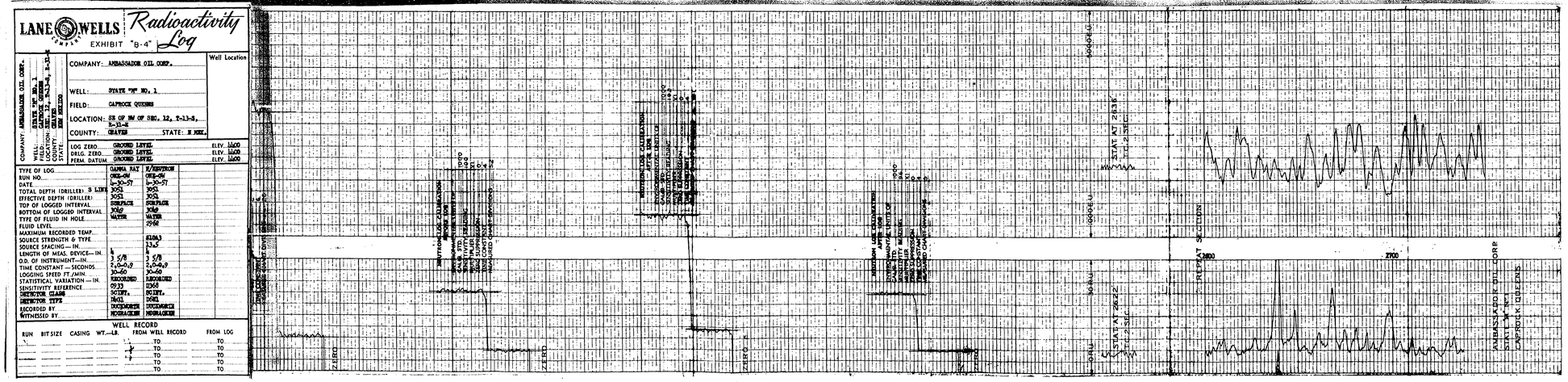

NEUTRON
RADIATION INTENSITY INCREASES
200E.U./C.D.
1000E.U.
3000E.U.
CASING & COLLAR LOG DEPTH
8 5/8
GAMMA RAY
RADIATION INTENSITY INCREASES
4RU/C.D.
0RU.
4RU.
REMARKS OR OTHER DATA
100
200
300
400
500
600
700
800
900
1000
1100
1200
1300
1400
1500
NEUTRON
RADIATION INTENSITY INCREASES
5000E.U.
2000E.U./C.D.
1000E.U.
CASING & COLLAR LOG DEPTH
GAMMA RAY
RADIATION INTENSITY INCREASES
75RU/C.D.
0RU.
30 RU.
REMARKS OR OTHER DATA
CASING AND CASING COLLARS WERE LEFT OFF OF LOG AT CUSTOMERS REQUEST.
100
200
300
400
500
600
700
800
900
1000
1100
1200
1300
1400
1500
1600
1700
1800
1900

231

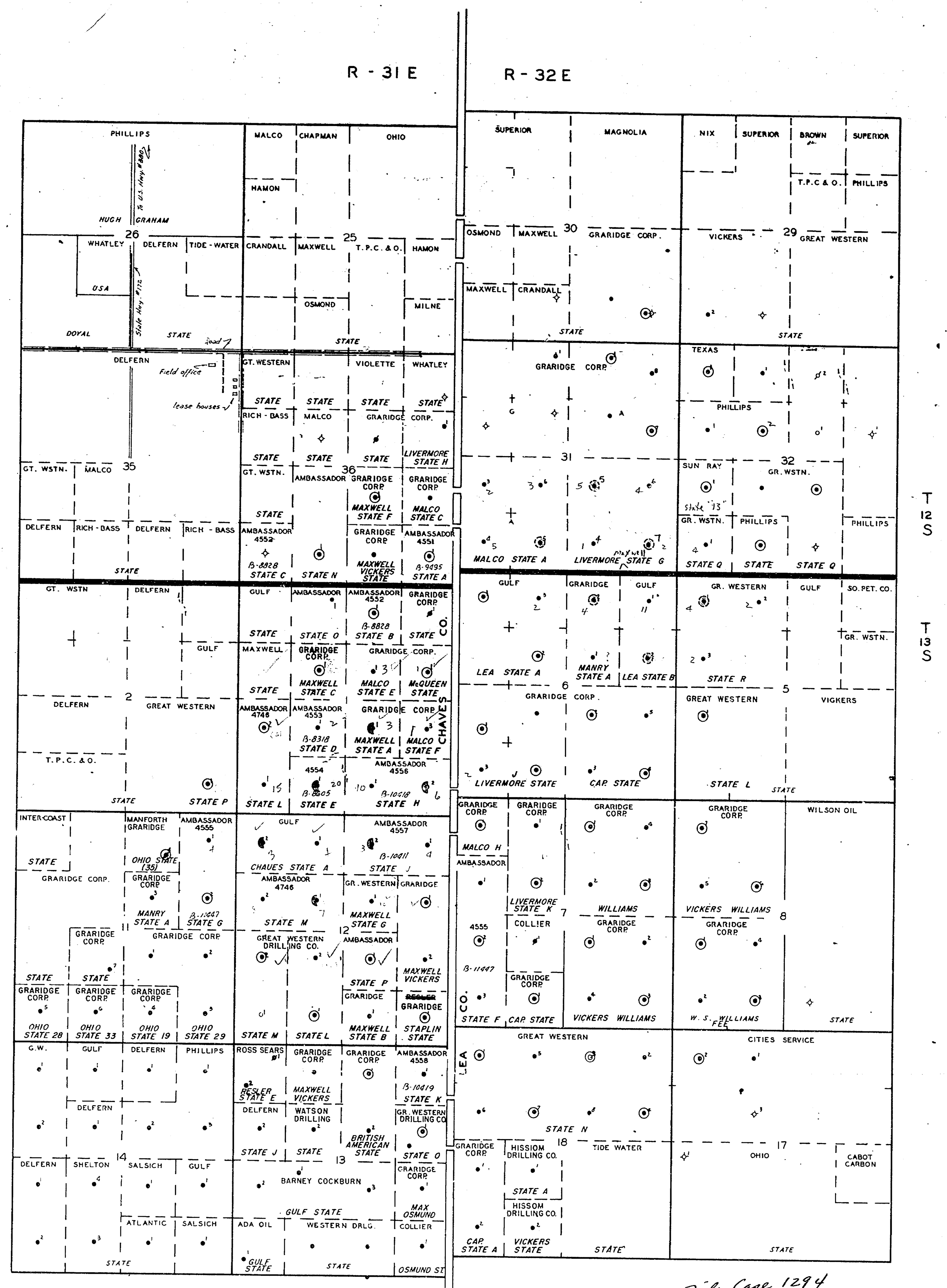

1200
1300
1400
1500
1600
1700
1800
1900
2000
2100
2200
2300
2400
2500
2600
2700
2800
2900
3000
2800
5 1/2"
200EU/CD
3000EU
1000EU
4RU/CD
40 R.U
0RU
1700
1800
1900
2000
2100
2200
2300
2400
2500
2600
2700
2800
2900
3000
2600
2700
2800
2900
100EU/CD
500 EU
0EU
20RU/CD
10 R.U
0RU


AMBASSADOR OIL COMPANY
STATE LEASE
CAPROCK QUEENS
R.D. 3035'
T.D. 3057'
FLUID LEVEL
ZERO
5 1/2"
2500
2600
2700
2800
2900
3000


T. D. 30375
AMBASSADOR OIL COMPANY
STATE "A" NO. 2
CAPROCK QUEENS
SHOOT LOG
ZERO
REPEAT SECTION
2900
3000
5 1/2
FLUID LEVEL
R.D. 30355
T. D. 30375
STAT. AT 2.660
STAT. AT 2748
T.C. 4 SEC.


LANE WELLS COMPANY
Radioactivity Log
EXHIBIT "B-4"
COMPANY: AMBASSADOR OIL CORP.
WELL: STATE "A" NO. 1
FIELD: CAPROCK QUEENS
LOCATION: SEC. 12, T-13-S, R-31-E
COUNTY: CHAVES STATE: N. MEX.
Well Location
LOG ZERO GROUND LEVEL ELEV. 3400
DRLG. ZERO GROUND LEVEL ELEV. 3400
PERM. DATUM GROUND LEVEL ELEV. 3408
GAMMA RAY / NEUTRON
RUN NO. ONE-ONE / ONE-ONE
DATE 1-30-57 / 1-30-57
TOTAL DEPTH (DRILLER) 3 LINE 3052 / 3052
EFFECTIVE DEPTH (DRILLER) 3052 / 3051
TOP OF LOGGED INTERVAL SURFACE / SURFACE
BOTTOM OF LOGGED INTERVAL 3040 / 3049
TYPE OF FLUID IN HOLE WATER / WATER
FLUID LEVEL 29.62
MAXIMUM RECORDED TEMP.
SOURCE STRENGTH & TYPE Ra-Be
SOURCE SPACING — IN. 13.5
LENGTH OF MEAS. DEVICE — IN. 6
O.D. OF INSTRUMENT — IN. 3 5/8 / 3 5/8
TIME CONSTANT — SECONDS 2.0-0.9 / 2.0-0.9
LOGGING SPEED FT./MIN. 30-60 / 30-60
STATISTICAL VARIATION — IN. RECORDED / RECORDED
SENSITIVITY REFERENCE 0.2 / 1268
DETECTOR GAIN SCINT. / SCINT.
DETECTOR TYPE 7H41 / D281
RECORDED BY DOCUMENTS / DOCUMENTS
WITNESSED BY MCGRAGHAM / MCGRAGHAM
WELL RECORD
RUN BIT SIZE CASING WT.—LB. FROM WELL RECORD FROM LOG
TO TO
SHOOT LOG
ZERO
REPEAT SECTION
2600
2700
STAT. AT 2835
STAT. AT 2622
T.C. 2 SEC.
AMBASSADOR OIL CORP.
STATE "A" NO. 1
CAPROCK QUEENS

234



File Case 1294

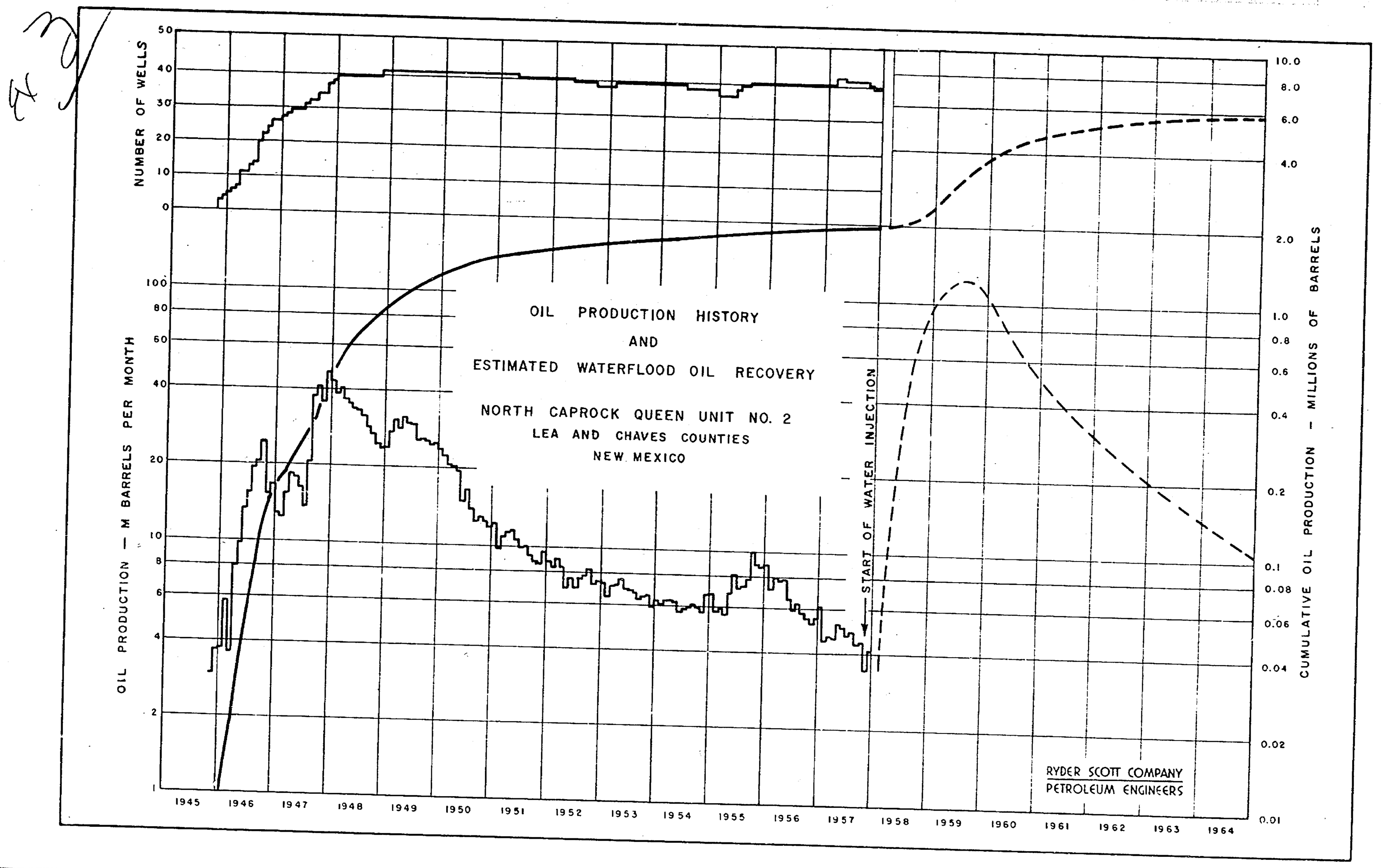
◐ PILOT INJECTION WELLS
◯ CURRENT INJECTION WELLS IN FIELD
○ FUTURE INJECTION PATTERN FOR FULL SCALE FLOOD

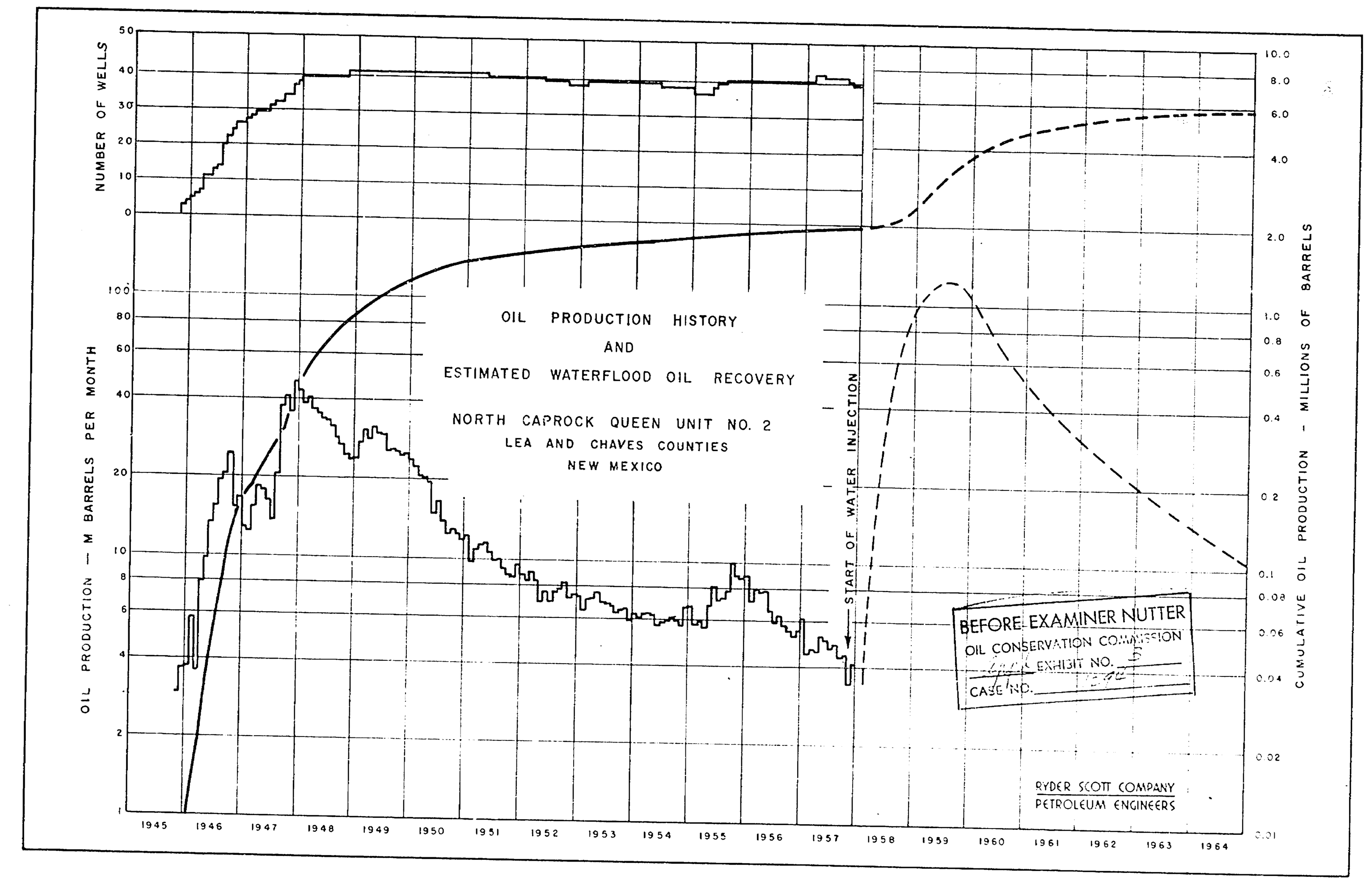
EXHIBIT "A"
CAPROCK AREA
CHAVES & LEA CO'S, NEW MEXICO

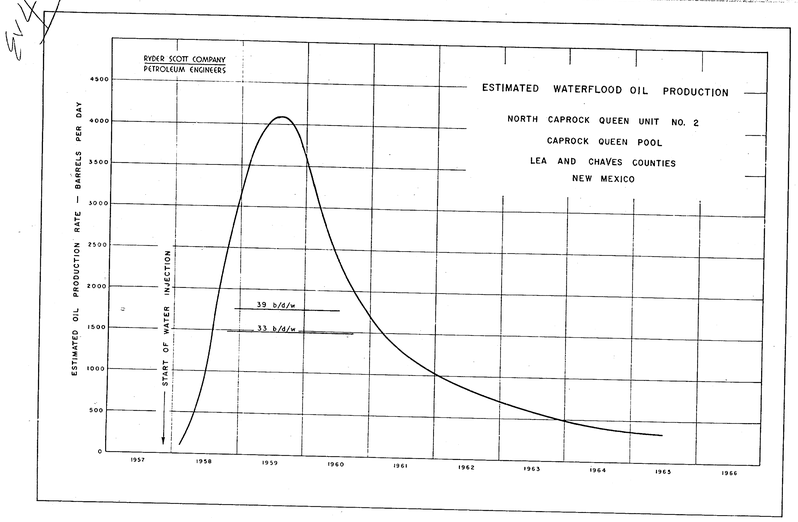
PROPOSED WATER - FLOOD PROJECT Nº 27
AMBASSADOR OIL CORP. WATER - FLOOD DIV.

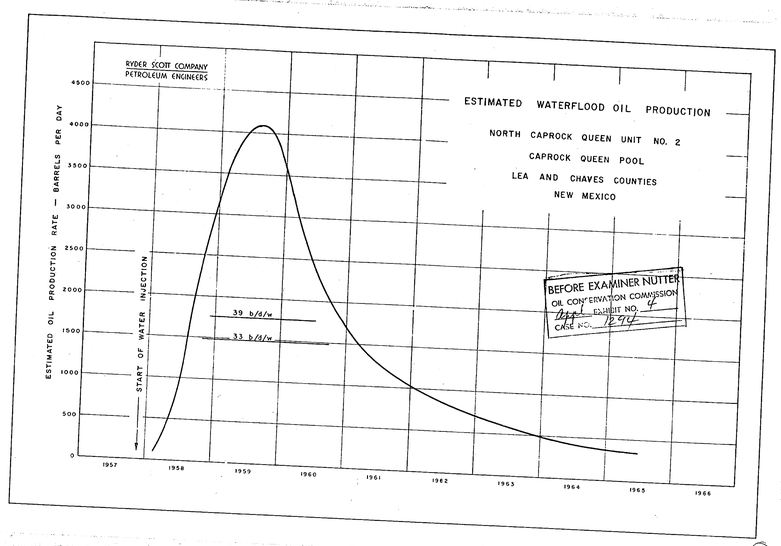
ONE MILE

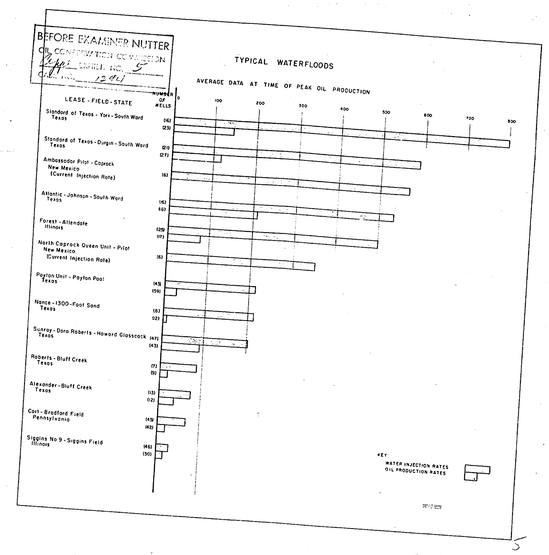
235

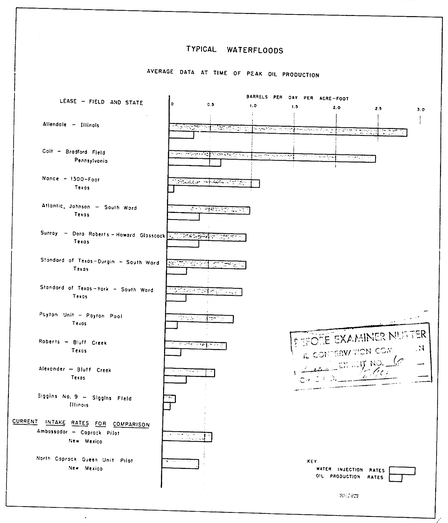


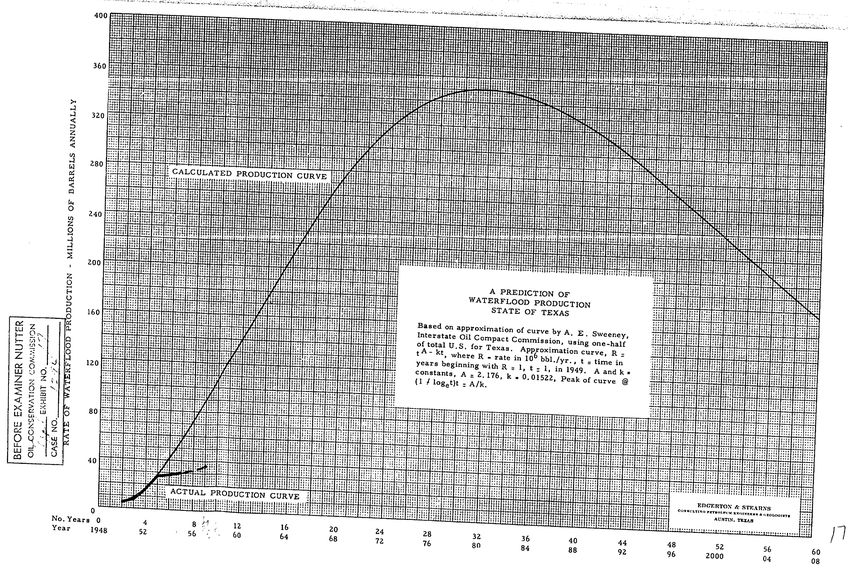












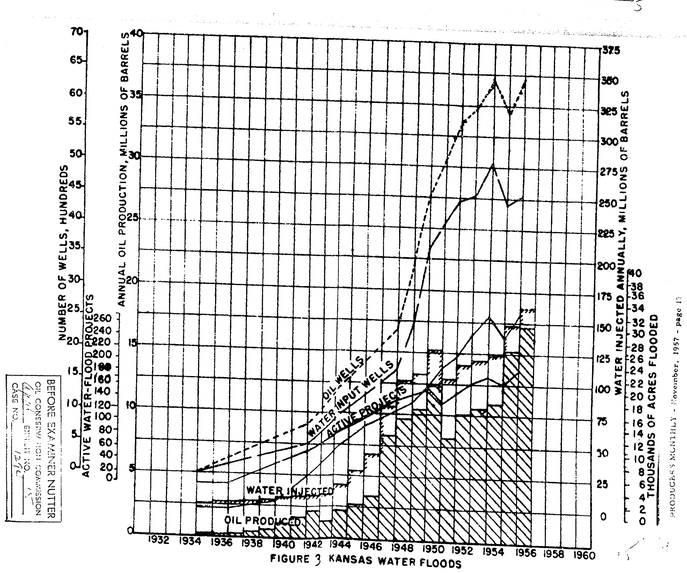


FIGURE 3 KANSAS WATER FLOODS

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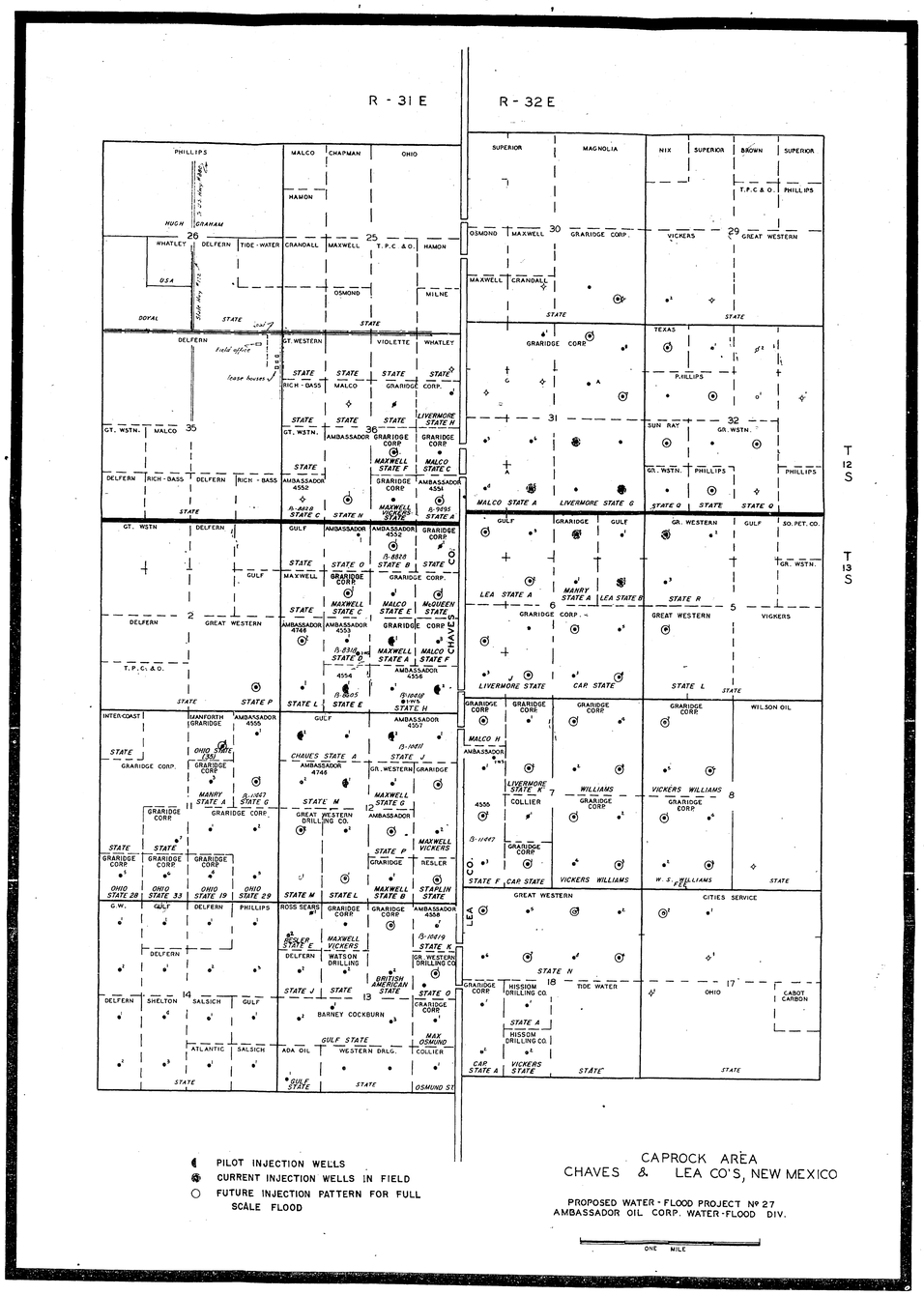

● PILOT INJECTION WELLS
◉ CURRENT INJECTION WELLS IN FIELD
○ FUTURE INJECTION PATTERN FOR FULL SCALE FLOOD

CAPROCK AREA
CHAVES & LEA CO'S, NEW MEXICO

PROPOSED WATER-FLOOD PROJECT Nº 27
AMBASSADOR OIL CORP. WATER-FLOOD DIV.

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LANE WELLS COMPANY

CALIPER LOG

COMPANY: AMBASSADOR OIL CORP.
WELL: STATE "M" NO. 1
FIELD: CAPROCK QUEENS
LOCATION: SE OF NW OF SEC. 12, T-13-S, R-31-E
COUNTY: CHAVES STATE: N MEX.

Well Location

		ELEV.
LOG ZERO	GROUND LEVEL	4400
DRLG. ZERO	GROUND LEVEL	4408
PERM. DATUM	GROUND LEVEL	4400

TYPE OF LOG	CALIPER					
RUN NO.	ONE-ON					
DATE	1-30-57					
TOTAL DEPTH (DRILLER'S LOG)	3051					
EFFECTIVE DEPTH (DRILLER)	3051					
TOP OF LOGGED INTERVAL	3012					
BOTTOM OF LOGGED INTERVAL	3050					
TYPE OF FLUID IN HOLE						
FLUID LEVEL						
MAXIMUM RECORDED TEMP.						
SOURCE STRENGTH & TYPE						
SOURCE SPACING — IN.						
LENGTH OF MEAS. DEVICE — IN.						
O.D. OF INSTRUMENT — IN.						
TIME CONSTANT — SECONDS						
LOGGING SPEED FT./MIN.	30					
STATISTICAL VARIATION — IN.						
SENSITIVITY REFERENCE						
RECORDED BY	DICKSMITH					
WITNESSED BY	MCGRAGEN					

WELL RECORD

RUN	BIT SIZE	CASING	WT.—LB.	FROM WELL RECORD		FROM LOG	
					TO		TO
					TO		TO
					TO		TO
					TO		TO
					TO		TO

REMARKS OR OTHER DATA

CASING WAS LEFT OUT OF 100 AT CUSTOMER'S REQUEST.

3000

R.D. 3050'
T.D. 3051'

AMBASSADOR OIL COMPANY
STATE "M" NO. 1
CAPROCK QUEENS

LANE WELLS COMPANY

CALIPER LOG

COMPANY: AMBASSADOR OIL COMPANY
WELL: STATE "M" NO. 2
FIELD: CAPROCK QUEENS
LOCATION: NE 1/4 OF NE 1/4 OF SEC. 12, T-13-S, R-31-E
COUNTY: CHAVES STATE: N MEX.

Well Location

		ELEV.
LOG ZERO	GROUND LEVEL	4386
DRLG. ZERO	GROUND LEVEL	4386
PERM. DATUM	GROUND LEVEL	4386

TYPE OF LOG	CALIPER					
RUN NO.	ONE-ON					
DATE	2-2-57					
TOTAL DEPTH (DRILLER)	3062					
EFFECTIVE DEPTH (DRILLER)	3062					
TOP OF LOGGED INTERVAL	2982					
BOTTOM OF LOGGED INTERVAL	3035.5					
TYPE OF FLUID IN HOLE	OIL					
FLUID LEVEL						
MAXIMUM RECORDED TEMP.						
SOURCE STRENGTH & TYPE						
SOURCE SPACING — IN.						
LENGTH OF MEAS. DEVICE — IN.	36					
O.D. OF INSTRUMENT — IN.	3 1/8					
TIME CONSTANT — SECONDS						
LOGGING SPEED FT./MIN.	20					
STATISTICAL VARIATION — IN.						
SENSITIVITY REFERENCE						
RECORDED BY	SCHLOTTERBACK					
WITNESSED BY	MCGRAGEN					

WELL RECORD

RUN	BIT SIZE	CASING	WT.—LB.	FROM WELL RECORD		FROM LOG	
ONE	10 3/4	8 5/8		SURFACE	TO 298	SURFACE	TO 307
ONE	7 7/8	5 1/2		SURFACE	TO 2981	SURFACE	TO 2982
ONE	4 7/8			2981	TO 3062	2982	TO 3037.5
					TO		TO
					TO		TO

REMARKS OR OTHER DATA

5 1/2" @ 2981'
T.D. 3062'

AMBASSADOR OIL COMPANY
STATE "M" NO. 2
CAPROCK QUEENS

GRARIDGE CORPORATION

OIL PRODUCTION RATE FOR ENTIRE CAPROCK FIELD

LEA AND CHAVES COUNTIES, NEW MEXICO

OIL PRODUCTION RATE — BARRELS PER DAY

PRIMARY OIL PRODUCTION

1948 1949

ESTIMATED WATERFLOOD OIL PRODUCTION
400 B/D WATER INJECTION PER INTAKE WELL.
CONSTANT RATE OF DEVELOPMENT AT 4480 ACRES PER YEAR.
5 YEARS TO DEVELOP 22,400 ACRES STARTING JANUARY 1, 1958.

ESTIMATED WATERFLOOD OIL PRODUCTION
80 B/D WATER INJECTION PER INTAKE WELL.
CONSTANT RATE OF DEVELOPMENT AT 4480 ACRES PER YEAR.
5 YEARS TO DEVELOP 22,400 ACRES STARTING JANUARY 1, 1958.

BEFORE EXAMINER NUTTER
OIL CONSERVATION COMMISSION
EXHIBIT NO. 8
CASE NO. 1294

238

LANE WELLS COMPANY

Radioactivity Log

COMPANY: AMBASSADOR OIL CORP.

WELL: STATE "M" NO. 1

FIELD: CAPROCK QUEENS

LOCATION: SE 1/4 OF SW 1/4 OF SEC. 12, T-13-S, R-31-E

COUNTY: CHAVES STATE: N. MEX.

Well Location

LOG ZERO	GROUND LEVEL		ELEV. 4100
DRLG. ZERO	GROUND LEVEL		ELEV. 4100
PERM. DATUM	GROUND LEVEL		ELEV. 4100

	GAMMA RAY	N/NEUTRON
TYPE OF LOG	GR-CCL	GR-CCL
RUN NO.	ONE	ONE
DATE	1-30-57	1-30-57
TOTAL DEPTH (DRILLER)	3051	3051
EFFECTIVE DEPTH (DRILLER)	3051	3051
TOP OF LOGGED INTERVAL	SURFACE	SURFACE
BOTTOM OF LOGGED INTERVAL	3049	3049
TYPE OF FLUID IN HOLE	WATER	WATER
FLUID LEVEL		2952
MAXIMUM RECORDED TEMP.		
SOURCE STRENGTH & TYPE		51Cs3
SOURCE SPACING — IN.		13.5
LENGTH OF MEAS. DEVICE — IN.		
O.D. OF INSTRUMENT — IN.	3 5/8	3 5/8
TIME CONSTANT — SECONDS	2.0-0.9	2.0-0.9
LOGGING SPEED FT./MIN.	30-60	30-60
STATISTICAL VARIATION — IN.	RECORDED	RECORDED
SENSITIVITY REFERENCE	0933	D365
DETECTOR GLASS	SCINT.	SCINT.
DETECTOR TYPE	D601	D601
RECORDED BY	DUCKWORTH	DUCKWORTH
WITNESSED BY	MCCRACKEN	MCCRACKEN

WELL RECORD

RUN	BIT SIZE	CASING	WT.—LB.	FROM WELL RECORD		FROM LOG	
ONE	10 3/4	8 5/8	28	SURFACE	TO 298	SURFACE	TO 304
ONE	7 7/8	5 1/2	15.5	SURFACE	TO 2993	SURFACE	TO 2965
ONE	7 7/8			2993	TO 3051	2965	TO 3043
					TO		TO
					TO		TO

REMARKS OR OTHER DATA

NEUTRON — RADIATION INTENSITY INCREASES

200 E.U./C.D. — 1000 E.U. — 0 E.U.

CASING & COLLAR LOG DEPTH — 8 5/8"

GAMMA RAY — RADIATION INTENSITY INCREASES

4 R.U./C.D. — 40 R.U. — 0 R.U.

100 200 300 400 500 600 700 800 900 1000 1100 1200 1300 1400 1500 1600

LANE WELLS COMPANY

Radioactivity Log

COMPANY: AMBASSADOR OIL CORP.

WELL: STATE "M" NO. 1

FIELD: CAPROCK QUEENS

LOCATION: SE 1/4 OF SW 1/4 OF SEC. 12, T-13-S, R-31-E

COUNTY: CHAVES STATE: N. MEX.

Well Location

NEUTRON — RADIATION INTENSITY INCREASES

200 E.U./C.D. — 1000 E.U. — 0 E.U.

CASING & COLLAR LOG DEPTH — 8 5/8"

GAMMA RAY — RADIATION INTENSITY INCREASES

4 R.U./C.D. — 40 R.U. — 0 R.U.

100 200 300 400 500 600 700 800 900 1000 1100 1200 1300 1400 1500 1600

LANE WELLS COMPANY

Radioactivity Log

COMPANY: AMBASSADOR OIL CORP.

WELL: STATE "M" NO. 1

FIELD: CAPROCK QUEENS

LOCATION: SE 1/4 OF SW 1/4 OF SEC. 12, T-13-S, R-31-E

COUNTY: CHAVES STATE: N. MEX.

Well Location

NEUTRON — RADIATION INTENSITY INCREASES

200 E.U./C.D. — 1000 E.U. — 0 E.U.

CASING & COLLAR LOG DEPTH — 8 5/8"

GAMMA RAY — RADIATION INTENSITY INCREASES

4 R.U./C.D. — 40 R.U. — 0 R.U.

100 200 300 400 500 600 700 800 900 1000 1100 1200 1300 1400 1500

LANE WELLS COMPANY

Radioactivity Log

COMPANY: AMBASSADOR OIL CORP.

WELL: STATE "M" NO. 1

FIELD: CAPROCK QUEENS

LOCATION: SE OF NW OF SEC. 12, T-13-S, R-31-E

COUNTY: CHAVES STATE: N. MEX.

Well Location

NEUTRON — RADIATION INTENSITY INCREASES

200 E.U./C.D. — 1000 E.U. — 0 E.U.

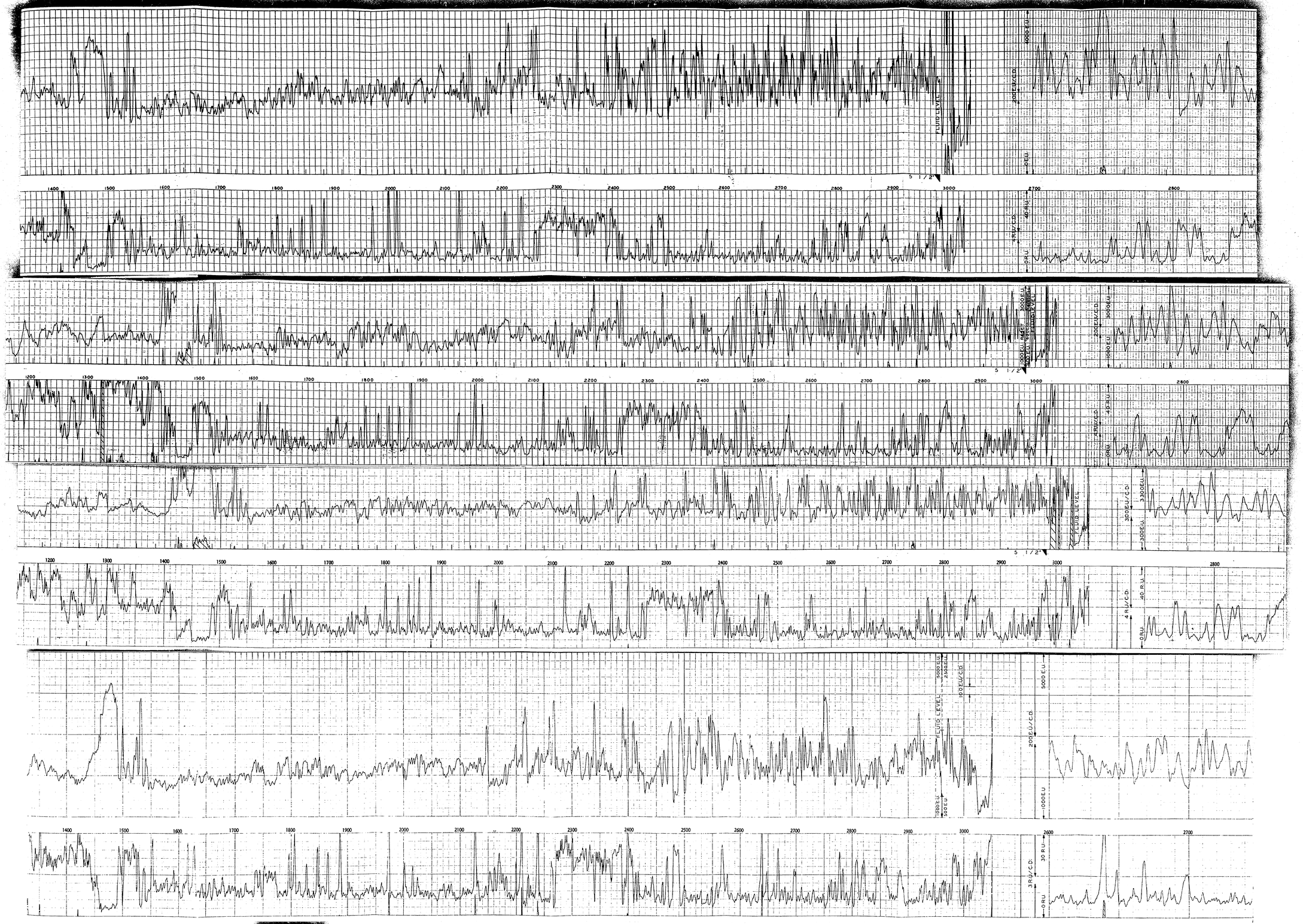
CASING & COLLAR LOG DEPTH — 8 5/8"

GAMMA RAY — RADIATION INTENSITY INCREASES

3 R.U./C.D. — 30 R.U. — 0 R.U.

100 200 300 400 500 600 700 800 900 1000 1100 1200 1300 1400 1500 1600

239


FLUID LEVEL
5 1/2"
1000 E.U.
200 E.U./C.D.
0 E.U.
40 R.U.
4 R.U./C.D.
0 R.U.
5000 E.U.
1000 E.U.
300 E.U./C.D.
30 R.U.
3 R.U./C.D.

240

FLUID LEVEL
R.D. 3047'
T.D. 3049'
AMBASSADOR OIL CORP.
STATE "A" N°1
CAPROCK QUEENS
5 1/2"
2800
2900
3000
GR LOG CALIBRATION
BEFORE LOG
RADIATION UNITS OF CALIB. STD. 100
SENSITIVITY READING 500
ZERO SUPPRESSION 0
MEASURED CHART DIVISIONS 6.4
GR LOG CALIBRATION
AFTER LOG
RADIATION UNITS OF CALIB. STD. 100
SENSITIVITY READING 500
ZERO SUPPRESSION 0
MEASURED CHART DIVISIONS 6.7
NEUTRON LOG CALIBRATION
BEFORE LOG
ENVIRONMENTAL UNITS OF 1000
CALIB. STD. 100
SENSITIVITY READING 50
MULTIPLIER X1
ZERO SUPPRESSION 0
TIME CONSTANT 4
MEASURED CHART DIVISIONS 6.4
NEUTRON LOG CALIBRATION
AFTER LOG
ENVIRONMENTAL UNITS OF 1000
CALIB. STD. 100
SENSITIVITY READING 50
MULTIPLIER X1
ZERO SUPPRESSION 0
TIME CONSTANT 4
MEASURED CHART DIVISIONS 5.4
ZERO
STAT AT 2892'
T.C. 2 SEC.
STAT AT 2880'
T.C. 2 SEC.
STAT AT 2765'
T.C. 4 SEC.
REPEAT SECTION
FLUID LEVEL
3090 E.U.
2500 E.U.
600 E.U./C.D.
1000 E.U.
500 E.U.
2700
2800
2900
3000
40 R.U./C.D.
4 R.U./C.D.
0 R.U.
300 E.U./C.D.
3000 E.U.
2000 E.U./C.D.
1000 E.U.
0 E.U.
40 R.U.

241

LANE WELLS COMPANY

Radioactivity Log

Well Location

COMPANY: AMBASSADOR OIL CORP.

WELL: STATE "M" NO. 1

FIELD: CAPROCK QUEENS

LOCATION: SE 1/4 OF NW 1/4 OF SEC. 12, T-13-S, R-31-E

COUNTY: CHAVES STATE: N MEX.

LOG ZERO	GROUND LEVEL	ELEV. 4006
DRLG. ZERO	GROUND LEVEL	ELEV. 4006
PERM. DATUM	GROUND LEVEL	ELEV. 4006

	GAMMA RAY	N/NEUTRON
TYPE OF LOG	ONE-ON	ONE-ON
RUN NO.	ONE-ON	ONE-ON
DATE	1-30-57	1-30-57
TOTAL DEPTH (DRILLER)	3051	3051
EFFECTIVE DEPTH (DRILLER)	3051	3051
TOP OF LOGGED INTERVAL	SURFACE	SURFACE
BOTTOM OF LOGGED INTERVAL	3049	3049
TYPE OF FLUID IN HOLE	WATER	WATER
FLUID LEVEL		2962
MAXIMUM RECORDED TEMP.		81043
SOURCE STRENGTH & TYPE		13.5
SOURCE SPACING — IN.		L
LENGTH OF MEAS. DEVICE — IN.	L	1 5/8
O.D. OF INSTRUMENT — IN.	3 5/8	3.625
TIME CONSTANT — SECONDS	2.0-0.9	2.0-0.9
LOGGING SPEED FT./MIN.	30-60	30-60
STATISTICAL VARIATION — IN.	RECORDED	RECORDED
SENSITIVITY REFERENCE	0933	0368
DETECTOR CLASS	SCINT.	SCINT.
DETECTOR TYPE	1821	1001
RECORDED BY	ENDEMANN	ENDEMANN
WITNESSED BY	MCCRACKEN	MCCRACKEN

WELL RECORD

RUN	BIT SIZE	CASING	WT—LB.	FROM WELL RECORD		FROM LOG	
ONE	10 3/4	8 5/8	28	SURFACE	TO 295	SURFACE	TO 297
ONE	7 7/8	5 1/2	15.5	SURFACE	TO 2993	SURFACE	TO 2995.5
ONE	L 7/8			2993	TO 3049	2995.5	TO 3049
					TO		TO
					TO		TO

LANE WELLS COMPANY

Radioactivity Log

Well Location

COMPANY: AMBASSADOR OIL CORP.

WELL: STATE "M" NO. 1

FIELD: CAPROCK QUEENS

LOCATION: SE OF NW OF SEC. 12, T-13-S, R-31-E

COUNTY: CHAVES STATE: N MEX.

LOG ZERO	GROUND LEVEL	ELEV. 4006
DRLG. ZERO	GROUND LEVEL	ELEV. 4006
PERM. DATUM	GROUND LEVEL	ELEV. 4006

	GAMMA RAY	N/NEUTRON
TYPE OF LOG	ONE-ON	ONE-ON
RUN NO.	ONE-ON	ONE-ON
DATE	1-30-57	1-30-57
TOTAL DEPTH (DRILLER)	3051	3051
EFFECTIVE DEPTH (DRILLER)	3051	3051
TOP OF LOGGED INTERVAL	SURFACE	SURFACE
BOTTOM OF LOGGED INTERVAL	3049	3049
TYPE OF FLUID IN HOLE	WATER	WATER
FLUID LEVEL		2962
MAXIMUM RECORDED TEMP.		81043
SOURCE STRENGTH & TYPE		13.5
SOURCE SPACING — IN.		L
LENGTH OF MEAS. DEVICE — IN.	L	1 5/8
O.D. OF INSTRUMENT — IN.	3 5/8	3.625
TIME CONSTANT — SECONDS	2.0-0.9	2.0-0.9
LOGGING SPEED FT./MIN.	30-60	30-60
STATISTICAL VARIATION — IN.	RECORDED	RECORDED
SENSITIVITY REFERENCE	0933	0368
DETECTOR CLASS	SCINT.	SCINT.
DETECTOR TYPE	1821	1001
RECORDED BY	ENDEMANN	ENDEMANN
WITNESSED BY	MCCRACKEN	MCCRACKEN

WELL RECORD

RUN	BIT SIZE	CASING	WT—LB.	FROM WELL RECORD		FROM LOG	
ONE	10 3/4	8 5/8	28	SURFACE	TO 295	SURFACE	TO 297
ONE	7 7/8	5 1/2	15.5	SURFACE	TO 2993	SURFACE	TO 2995.5
ONE	L 7/8			2993	TO 3049	2995.5	TO 3049
					TO		TO
					TO		TO

LANE WELLS COMPANY

Radioactivity Log

Well Location

COMPANY: AMBASSADOR OIL CORP.

WELL: STATE "M" NO. 1

FIELD: CAPROCK QUEENS

LOCATION: SE OF NW OF SEC. 12, T-13-S, R-31-E

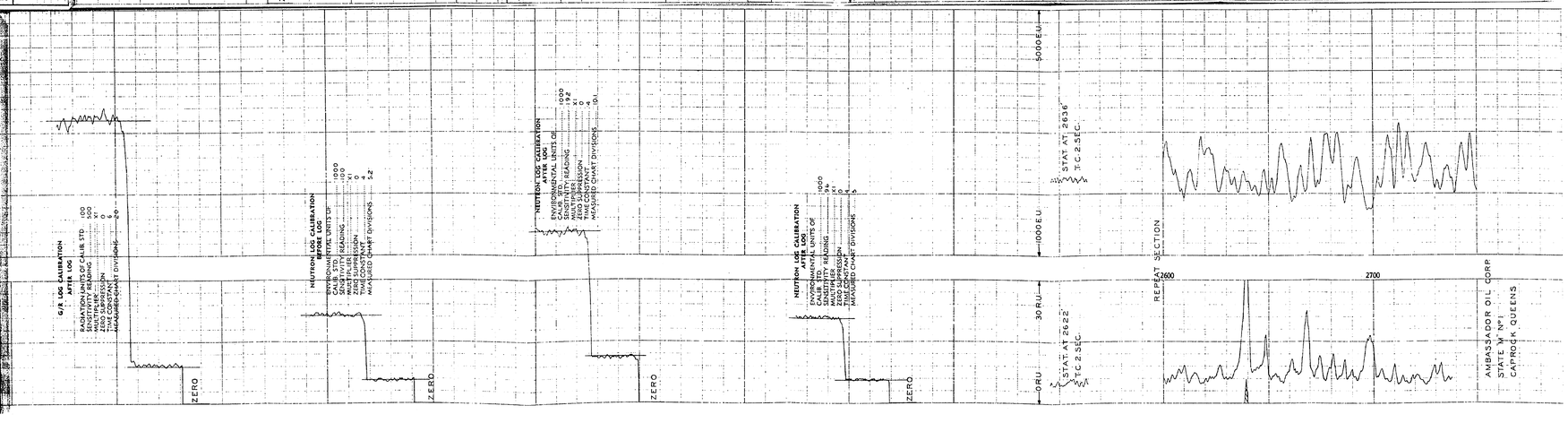
COUNTY: CHAVES STATE: N MEX.

LOG ZERO	GROUND LEVEL	ELEV. 4000
DRLG. ZERO	GROUND LEVEL	ELEV. 4000
PERM. DATUM	GROUND LEVEL	ELEV. 4000

	GAMMA RAY	N/NEUTRON
TYPE OF LOG		
RUN NO.		
DATE	1-30-57	1-30-57
TOTAL DEPTH (DRILLER)	3051	3051
EFFECTIVE DEPTH (DRILLER)	3051	3051
TOP OF LOGGED INTERVAL	SURFACE	SURFACE
BOTTOM OF LOGGED INTERVAL	3049	3049
TYPE OF FLUID IN HOLE	WATER	WATER
FLUID LEVEL		2962
MAXIMUM RECORDED TEMP.		
SOURCE STRENGTH & TYPE		13.5
SOURCE SPACING — IN.		L
LENGTH OF MEAS. DEVICE — IN.	L	1 5/8
O.D. OF INSTRUMENT — IN.	3 5/8	3.625
TIME CONSTANT — SECONDS	2.0-0.9	2.0-0.9
LOGGING SPEED FT./MIN.	30-60	30-60
STATISTICAL VARIATION — IN.	RECORDED	RECORDED
SENSITIVITY REFERENCE	0933	0368
DETECTOR CLASS	SCINT.	SCINT.
DETECTOR TYPE	1821	1001
RECORDED BY	ENDEMANN	ENDEMANN
WITNESSED BY	MCCRACKEN	MCCRACKEN

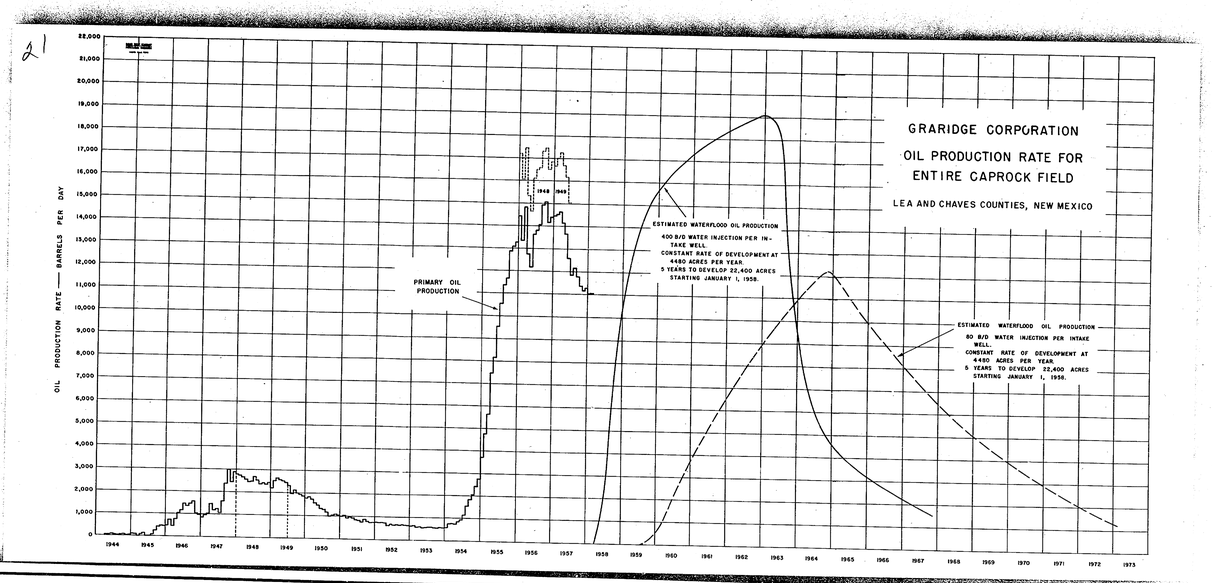
WELL RECORD

RUN	BIT SIZE	CASING	WT—LB.	FROM WELL RECORD		FROM LOG	
					TO		TO
					TO		TO
					TO		TO
					TO		TO
					TO		TO

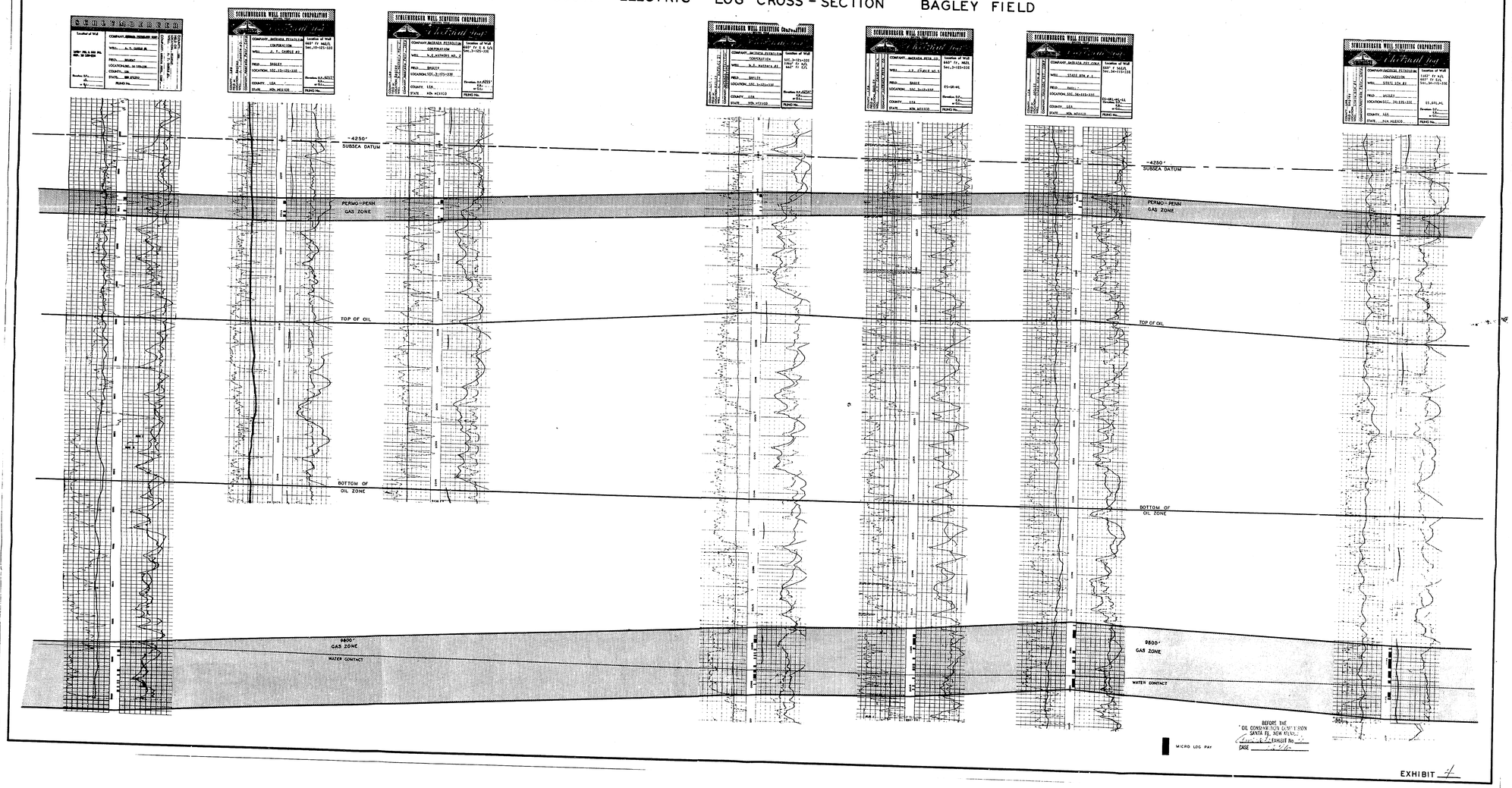


242

21



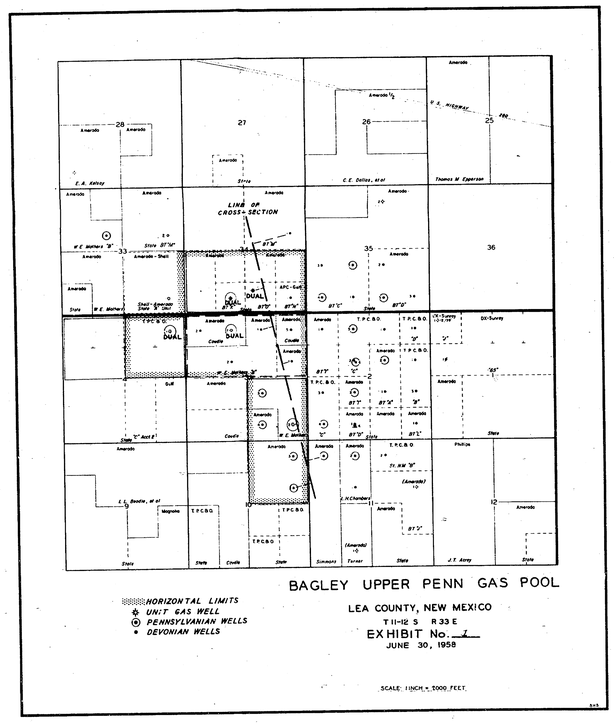
NORTH — SOUTH ELECTRIC LOG CROSS-SECTION BAGLEY FIELD

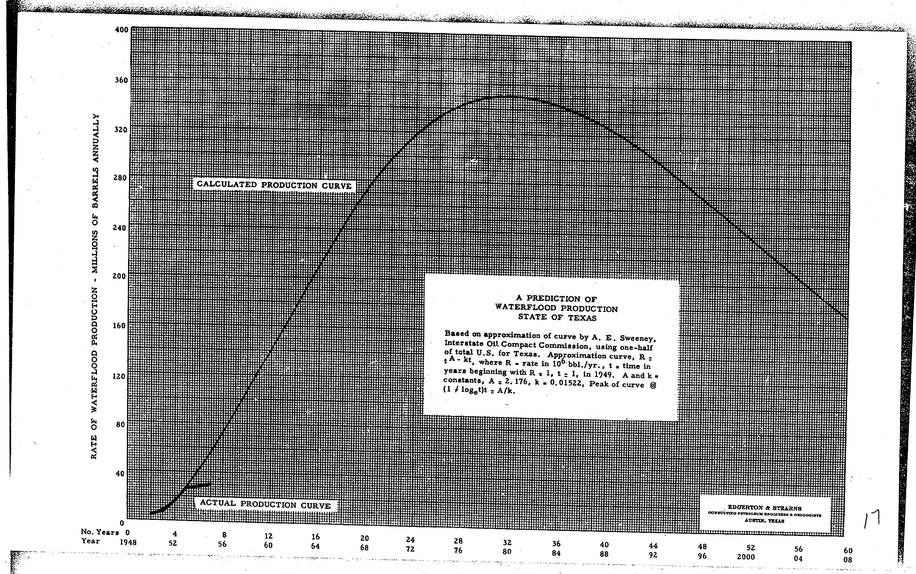


243

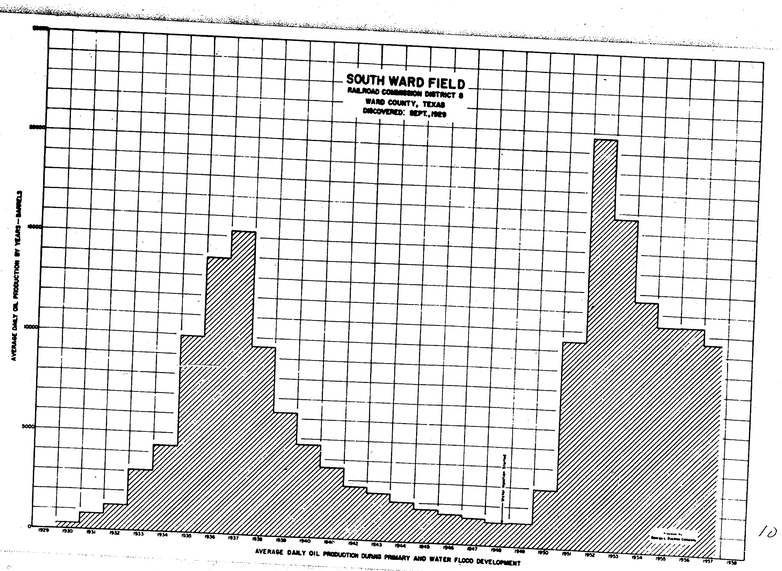
BEFORE THE OIL CONSERVATION COMMISSION SANTA FE, NEW MEXICO
EXHIBIT No. 4
CASE

EXHIBIT 4

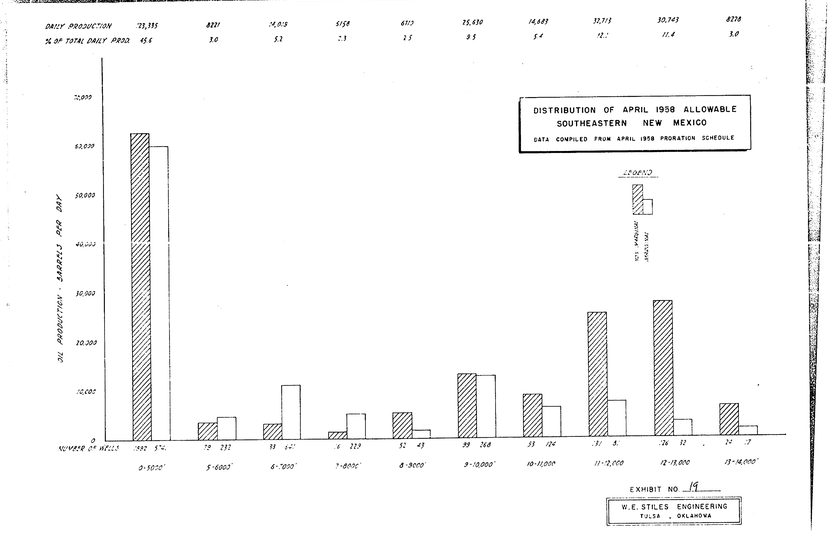

LINE OF CROSS-SECTION
DUAL
BAGLEY UPPER PENN GAS POOL
LEA COUNTY, NEW MEXICO
T 11-12 S R 33 E
EXHIBIT No. 1
JUNE 30, 1958
HORIZONTAL LIMITS
UNIT GAS WELL
PENNSYLVANIAN WELLS
DEVONIAN WELLS
SCALE: 1 INCH = 2000 FEET.

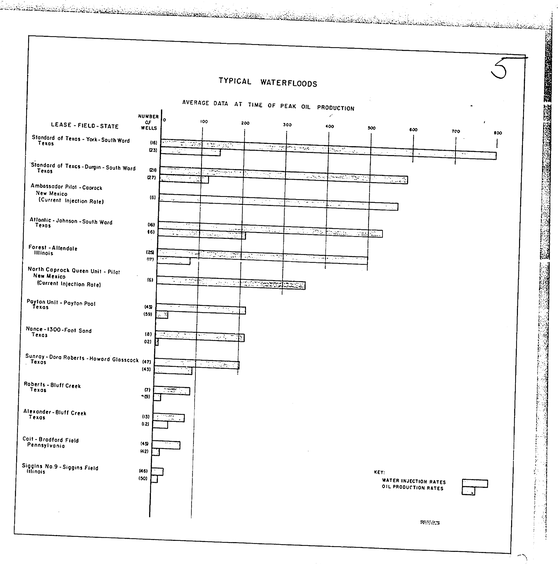

RATE OF WATERFLOOD PRODUCTION - MILLIONS OF BARRELS ANNUALLY
CALCULATED PRODUCTION CURVE
ACTUAL PRODUCTION CURVE
A PREDICTION OF WATERFLOOD PRODUCTION STATE OF TEXAS
Based on approximation of curve by A. E. Sweeney, Interstate Oil Compact Commission, using one-half of total U.S. for Texas. Approximation curve, R = tA - kt², where R = rate in 10⁶ bbl./yr., t = time in years beginning with R = 1, t = 1, in 1949. A and k = constants, A = 2.176, k = 0.01522. Peak of curve @ (1 / log_e)t = A/k.
EDGERTON & STEARNS
PETROLEUM ENGINEERS & GEOLOGISTS
AUSTIN, TEXAS
No. Years
Year

17

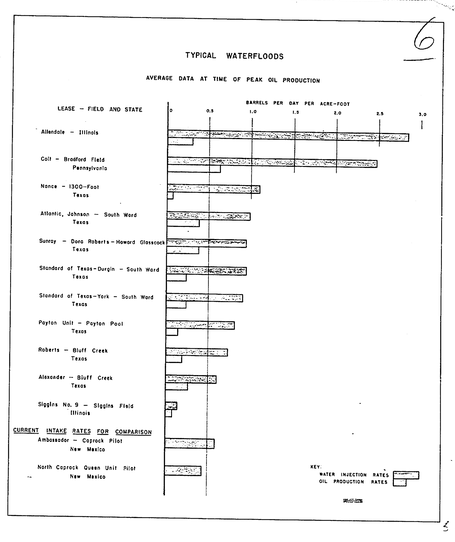

SOUTH WARD FIELD
RAILROAD COMMISSION DISTRICT 8
WARD COUNTY, TEXAS
DISCOVERED: SEPT., 1929
AVERAGE DAILY OIL PRODUCTION BY YEARS — BARRELS
AVERAGE DAILY OIL PRODUCTION DURING PRIMARY AND WATER FLOOD DEVELOPMENT

10

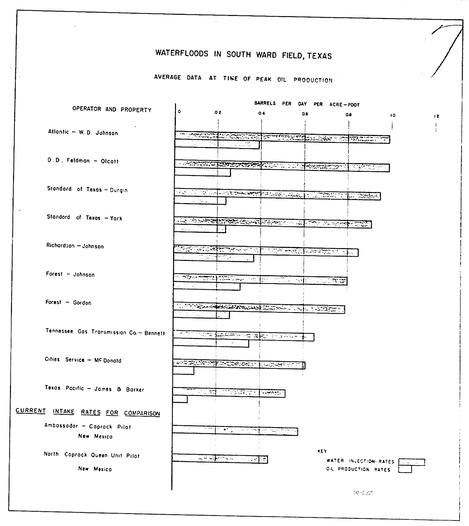

DISTRIBUTION OF APRIL 1958 ALLOWABLE
SOUTHEASTERN NEW MEXICO
DATA COMPILED FROM APRIL 1958 PRORATION SCHEDULE
LEGEND
OIL PRODUCTION - BARRELS PER DAY
NUMBER OF WELLS
0-5000'
5-6000'
6-7000'
7-8000'
8-9000'
9-10,000'
10-11,000'
11-12,000
12-13,000
13-14,000'
EXHIBIT NO. 19
W. E. STILES ENGINEERING
TULSA, OKLAHOMA


TYPICAL WATERFLOODS
AVERAGE DATA AT TIME OF PEAK OIL PRODUCTION
LEASE - FIELD - STATE
NUMBER OF WELLS
Standard of Texas - York - South Ward Texas
Standard of Texas - Durgin - South Ward Texas
Ambassador Pilot - Cosrock New Mexico (Current Injection Rate)
Atlantic - Johnson - South Ward Texas
Forest - Allendale Illinois
North Coprock Queen Unit - Pilot New Mexico (Current Injection Rate)
Peyton Unit - Peyton Pool Texas
Nance - 1300-Foot Sand Texas
Sunray - Dora Roberts - Howard Glasscock Texas
Roberts - Bluff Creek Texas
Alexander - Bluff Creek Texas
Coit - Bradford Field Pennsylvania
Siggins No. 9 - Siggins Field Illinois
KEY:
WATER INJECTION RATES
OIL PRODUCTION RATES

5


TYPICAL WATERFLOODS
AVERAGE DATA AT TIME OF PEAK OIL PRODUCTION
LEASE — FIELD AND STATE
BARRELS PER DAY PER ACRE-FOOT
Allendale — Illinois
Coit — Bradford Field Pennsylvania
Nance — 1300-Foot Texas
Atlantic, Johnson — South Ward Texas
Sunray — Dora Roberts — Howard Glasscock Texas
Standard of Texas — Durgin — South Ward Texas
Standard of Texas — York — South Ward Texas
Peyton Unit — Peyton Pool Texas
Roberts — Bluff Creek Texas
Alexander — Bluff Creek Texas
Siggins No. 9 — Siggins Field Illinois
CURRENT INTAKE RATES FOR COMPARISON
Ambassador — Coprock Pilot New Mexico
North Coprock Queen Unit Pilot New Mexico
KEY
WATER INJECTION RATES
OIL PRODUCTION RATES

6


WATERFLOODS IN SOUTH WARD FIELD, TEXAS
AVERAGE DATA AT TIME OF PEAK OIL PRODUCTION
OPERATOR AND PROPERTY
BARRELS PER DAY PER ACRE-FOOT
Atlantic — W. D. Johnson
D. D. Feldman — Olcott
Standard of Texas — Durgin
Standard of Texas — York
Richardson — Johnson
Forest — Johnson
Forest — Gordon
Tennessee Gas Transmission Co. — Bennett
Cities Service — McDonald
Texas Pacific — James B. Barker
CURRENT INTAKE RATES FOR COMPARISON
Ambassador — Coprock Pilot New Mexico
North Coprock Queen Unit Pilot New Mexico
KEY
WATER INJECTION RATES
OIL PRODUCTION RATES

7

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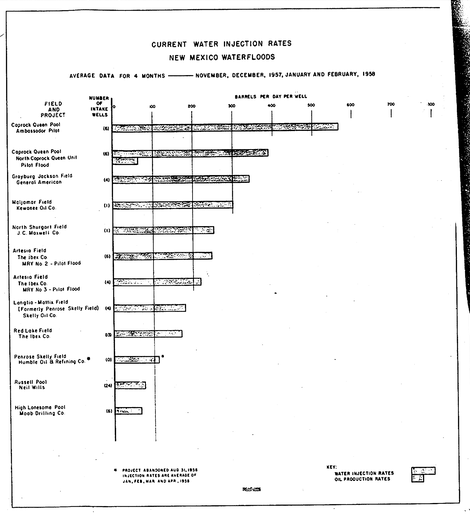
Ex 8



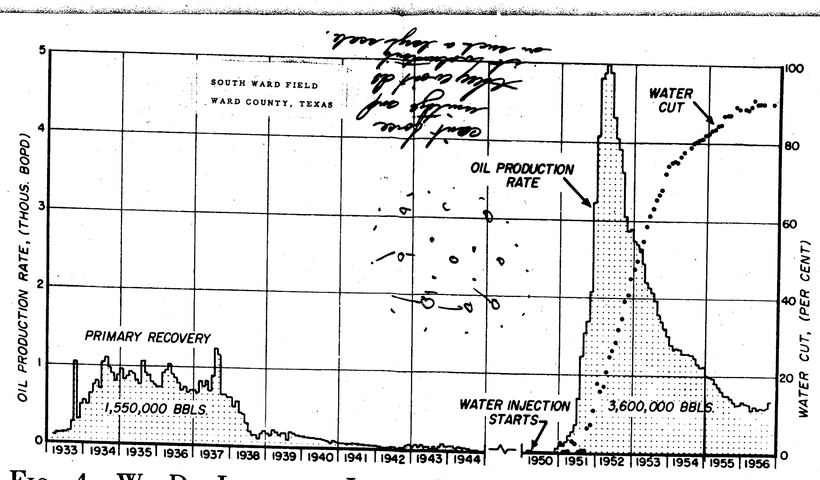


FIG. 4—W. D. JOHNSON LEASE PERFORMANCE HISTORY, PRIMARY AND SECONDARY PRODUCING LIFE.

PETROLEUM TECHNOLOGY - October, 1957 - page 283

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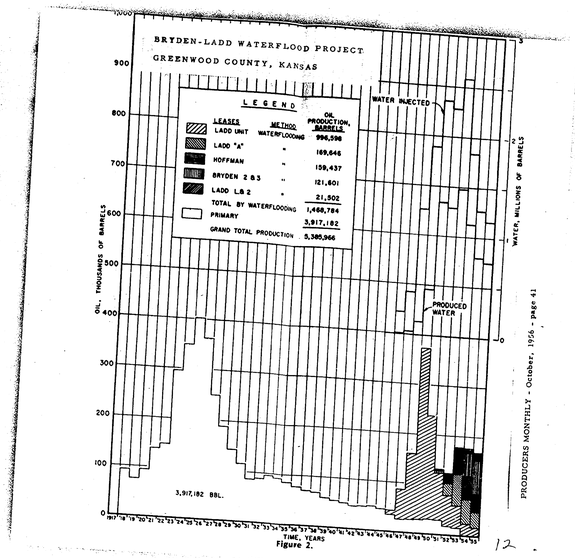

Figure 2.

PRODUCERS MONTHLY - October, 1956 - page 41

12

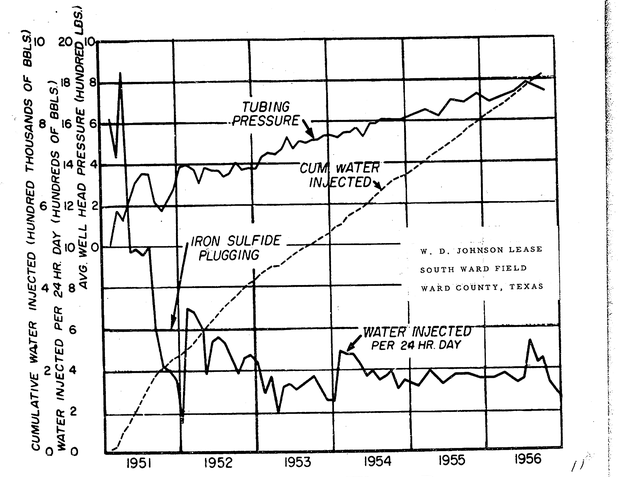

FIG. 3—TYPICAL INJECTION WELL PERFORMANCE DATA.

PETROLEUM TECHNOLOGY - October, 1957 - page 283

11

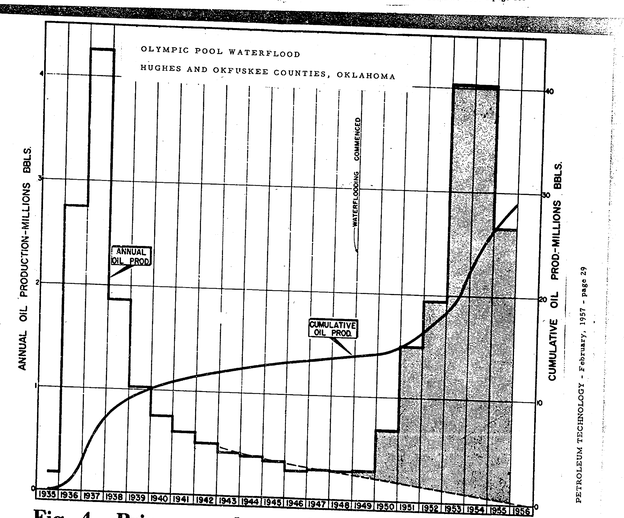

Fig. 4—Primary and secondary production history of entire pool.

PETROLEUM TECHNOLOGY - February, 1957 - page 29

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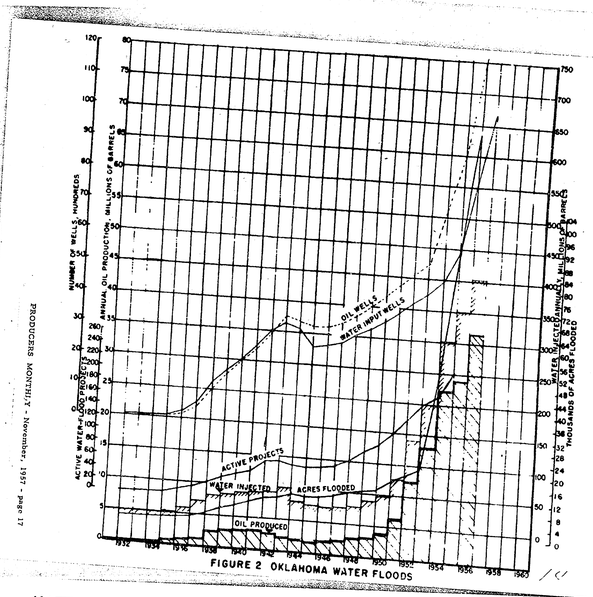

FIGURE 2 OKLAHOMA WATER FLOODS

PRODUCERS MONTHLY - November, 1957 - page 17

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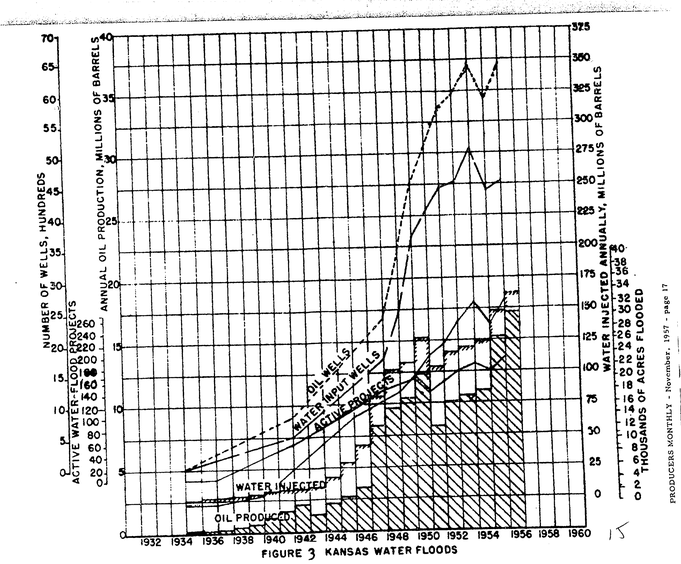

FIGURE 3 KANSAS WATER FLOODS

PRODUCERS MONTHLY - November, 1957 - page 17

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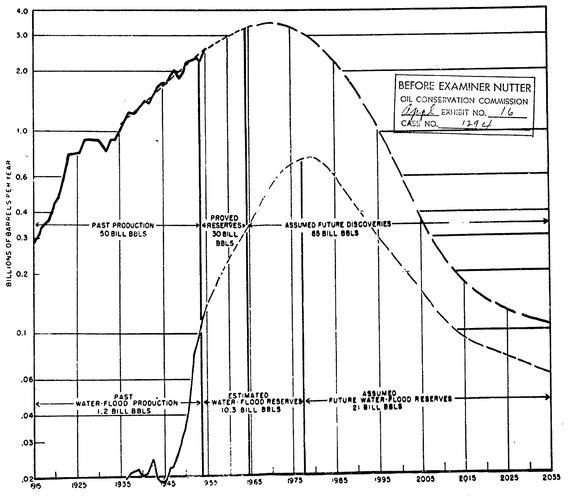

Figure 2

PRODUCERS MONTHLY - April, 1956 - page 22

16

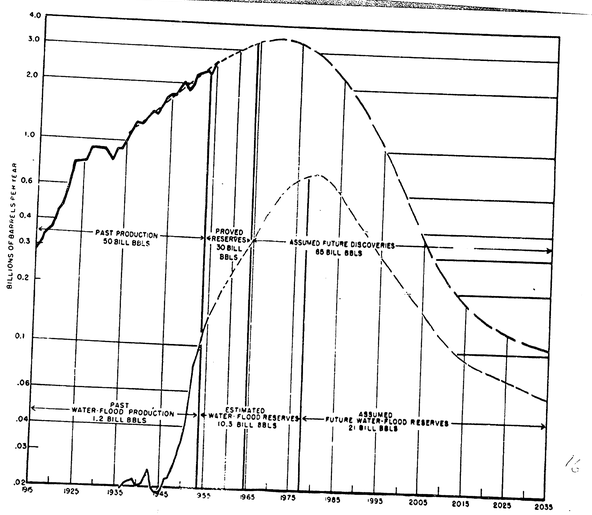

Figure 2

PRODUCERS MONTHLY - April, 1956 - page 22

16

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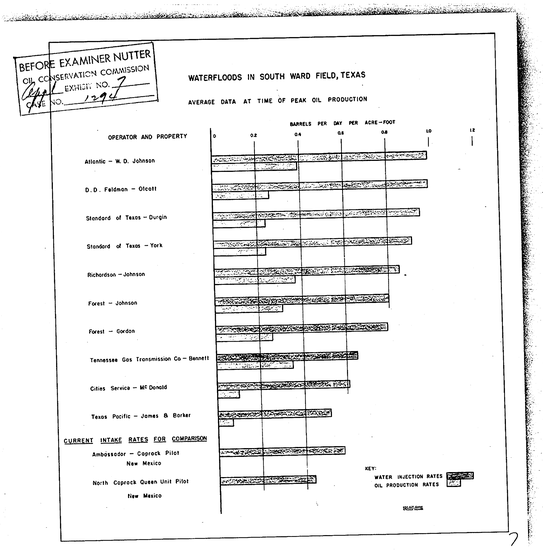

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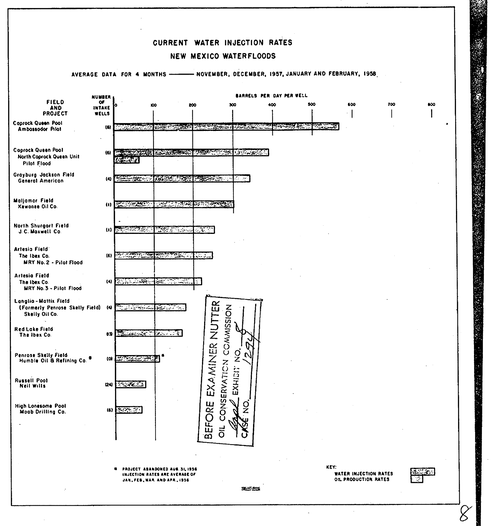

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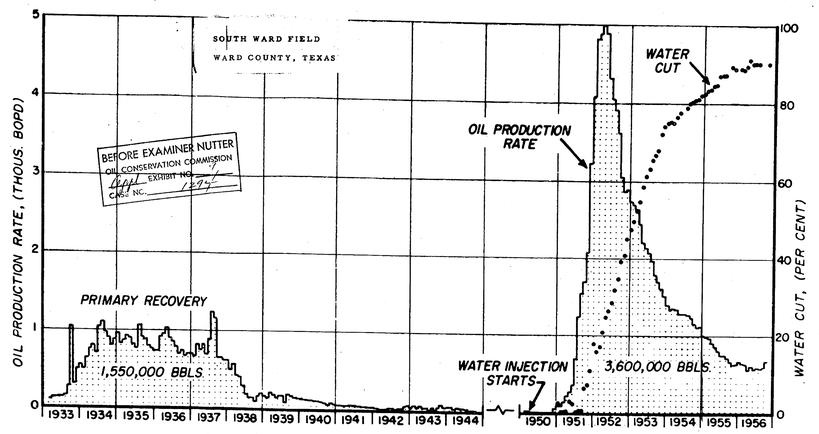
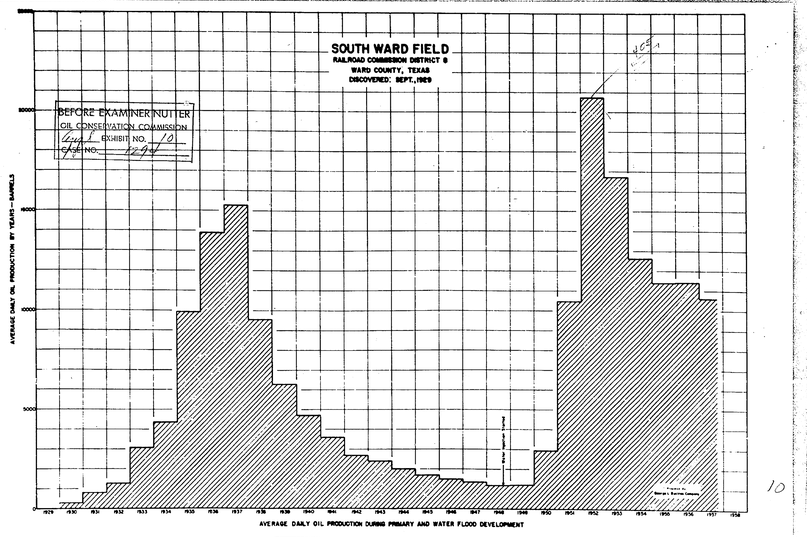


FIG. 4—W. D. JOHNSON LEASE PERFORMANCE HISTORY, PRIMARY AND SECONDARY PRODUCING LIFE.

PETROLEUM TECHNOLOGY - October, 1957 - page 283

9



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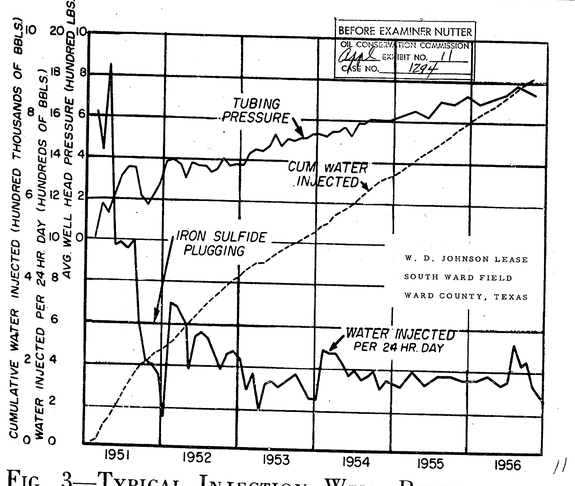

FIG. 3—TYPICAL INJECTION WELL PERFORMANCE DATA.

PETROLEUM TECHNOLOGY - October, 1957 - page 283

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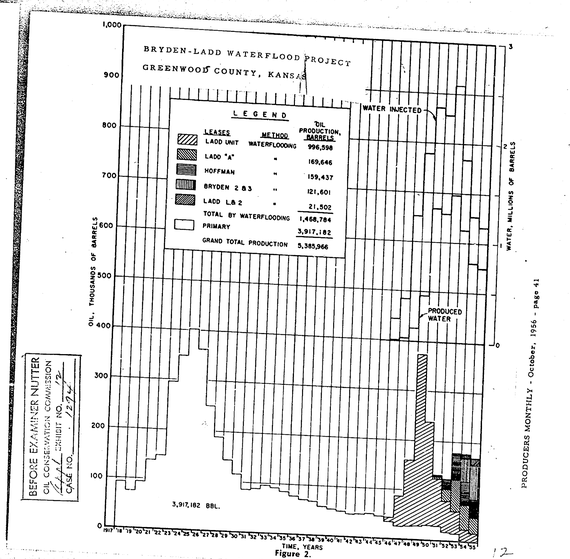

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246

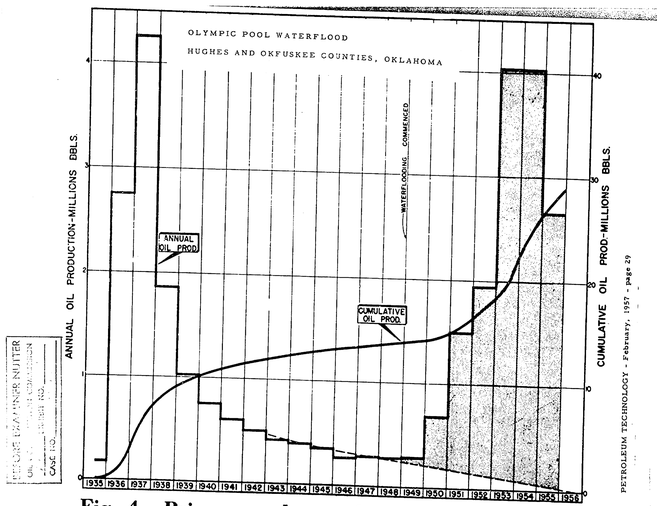
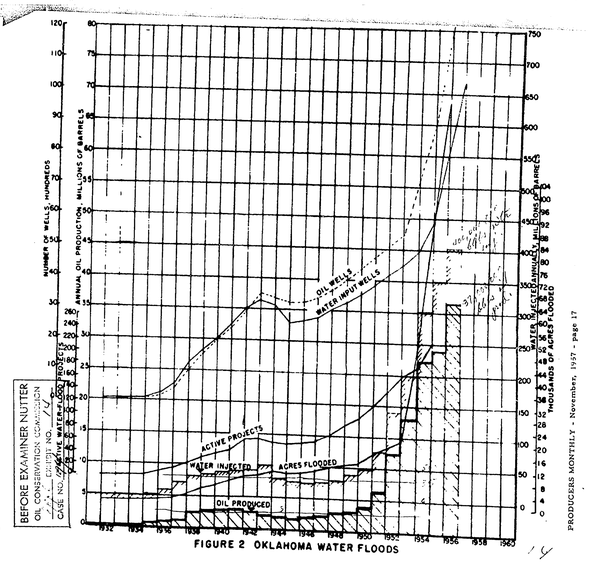


Fig. 4—Primary and secondary production history of entire pool.

13



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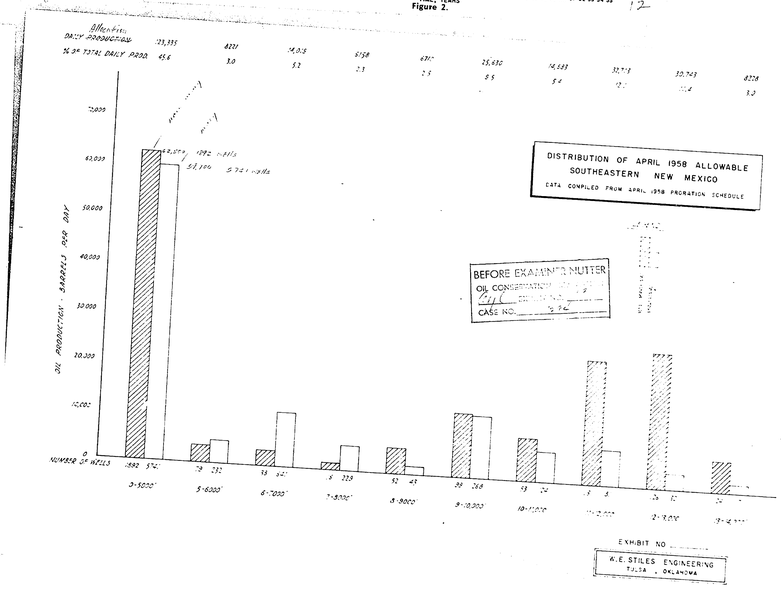


15

SCHLUMBERGER WELL SURVEYING CORPORATION

Electrical Log

COMPANY MC KAY & PAYNE

WELL BEARDON #1

FIELD UNDESIGNATED

LOCATION SEC. 19-29N-10W

COUNTY SAN JUAN

STATE NEW MEXICO

Other Surveys: ML

Location of Well: SEC. 19-29N-10W

Elevation: D.F. 5507' K.B. or G.L. 5502'

FILING No.

RUN No.	ONE				
Date	7-10-57				
First Reading	1764				
Last Reading	109				
Feet Measured	1655				
Csg. Schlum.	102				
Csg. Driller	105				
Depth Reached	1765				
Bottom Driller	1785				
Depth Datum	KB				
Mud Mat.	GEL				
Dens. / Visc.	11	--			
Mud Resis.	4.89 50°	@ °	@ °	@ °	@ °
" Res. BHT	2.59 85°	@ °	@ °	@ °	@ °
Rmf	2.29 85°	@ °	@ °	@ °	@ °
Rmc	2.29 85°	@ °	@ °	@ °	@ °
pH	--	@ °	@ °	@ °	@ °
Wtr. Loss	-- CC 30 min.	CC 30 min.	CC 30 min.	CC 30 min.	CC 30 min.
Bit Size	7 7/8"				
Specs.—AM	16"				
A M	64"				
AO	18'8"				
Opr. Rig Time	HR				
Truck No.	1786FARM				
Recorded By	HAMILTON				
Witness	HARRIS				

REMARKS: MUD FROM MUD PIT

RESISTIVITY ohms. m²/m — NORMAL 100 1000 0 — LATERAL 100 1000 0

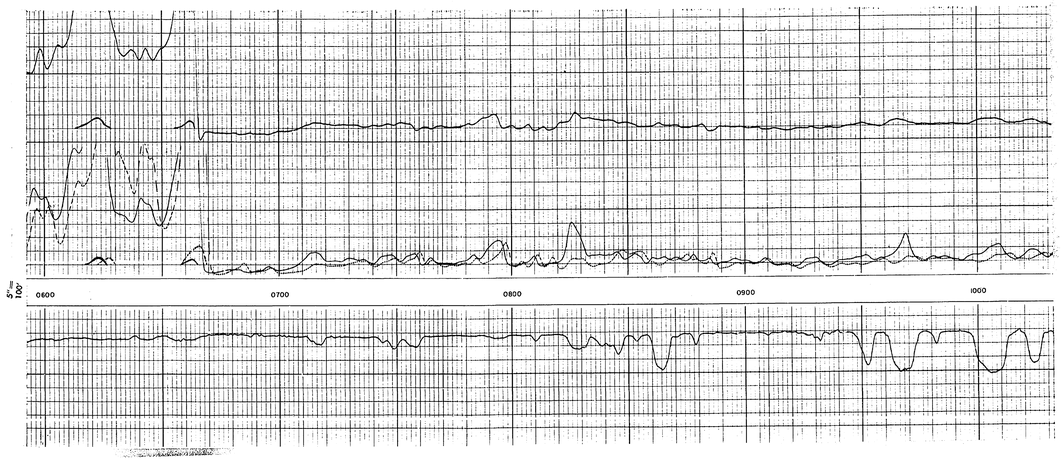
RESISTIVITY ohms. m²/m — LONG NORMAL 100 1000 0

DEPTHS 2" = 100 — CSG 1702

SPONTANEOUS-POTENTIAL millivolts — 10 (+ / −)

0200 0300 0400 0500 0600 0700 0800 0900 1000 1100 1200 1300 1400 1500 1600 1700

247



248

0800
0900
1000
1100
1200
1300
1400
1500
0800
0900
1000
1100
1200
1300
1400
1500

SCHLUMBERGER WELL SURVEYING CORPORATION

Electrical Log

COUNTY SAN JUAN, N. M.
FIELD or LOCATION UNDESIGNATED
WELL BEARDON #1
COMPANY MC KAY & PAYNE

COMPANY MC KAY & PAYNE

WELL BEARDON #1

FIELD UNDESIGNATED

LOCATION SEC. 19-29N-10W

COUNTY SAN JUAN

STATE NEW MEXICO

Other Surveys
ML

Location of Well
SEC. 19-29N-10W

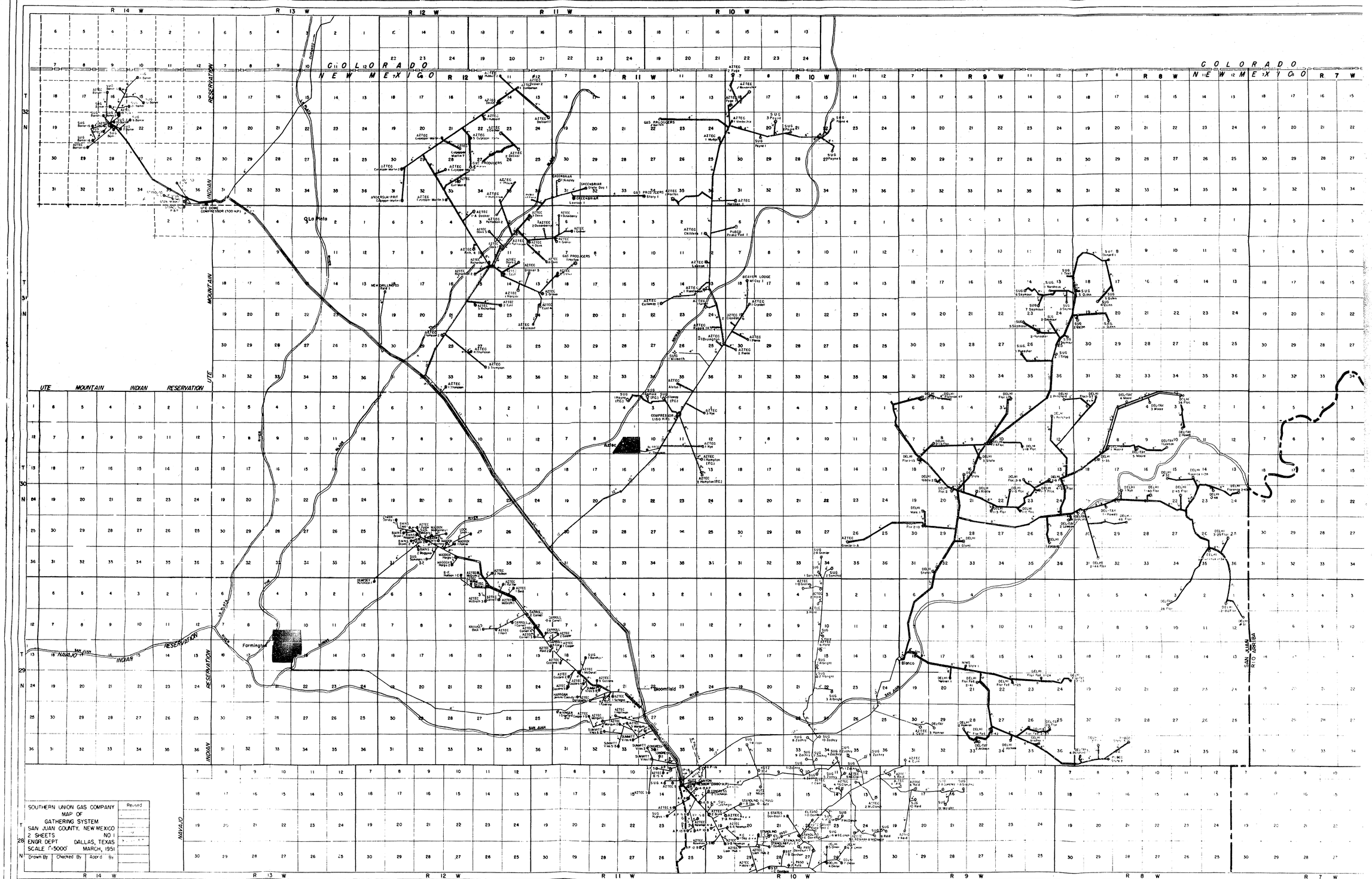
Elevation: D.F. 5507'
K.B.
or G.L. 5502'

FILING No.

RUN No.	ONE												
Date	10-57												
First Reading	1764												
Last Reading	102												
Feet Measured	1662												
Csg. Schlum.	105												
Csg. Driller	105												
Depth Reached	1765												
Bottom Driller	1765												
Depth Datum	KB												
Mud Nat.	GEL												
Dens. \ Visc.	11 \ --												
Mud Resist.	4.80 50°F	@	°F	@	°F	@	°F	@	°F	@	°F		
" Res. BHT	2.69 85°F	@	°F	@	°F	@	°F	@	°F	@	°F		
Rmf	2.20 85°F	@	°F	@	°F	@	°F	@	°F	@	°F		
Rmc	2.76 85°F	@	°F	@	°F	@	°F	@	°F	@	°F		
" pH	--	@	°F	@	°F	@	°F	@	°F	@	°F		
" Wtr. Loss	-- CC 30 min.		CC 30 min.		CC 30 min.		CC 30 min.		CC 30 min.				
Bit Size	7 7/8"												
Spcgs.—A.M.	161'												
A. M	64'												
AO	18'8"												
Opr. Rig Time	11 HR												
Truck No.	176 FARM												
Recorded By	HAMILTON												
Witness	HARRIS												

Tie Maps - Steele-Sundheim
Sept 4 '58

250



SOUTHERN UNION GAS COMPANY
MAP OF
GATHERING SYSTEM
SAN JUAN COUNTY, NEW MEXICO
2 SHEETS NO 1
ENGR DEPT DALLAS, TEXAS
SCALE 1"-5000' MARCH, 1951

Revised	

Drawn By	Checked By	Apprd By

251

BEFORE THE
OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO
EXHIBIT No. 1
CASE 2693

252

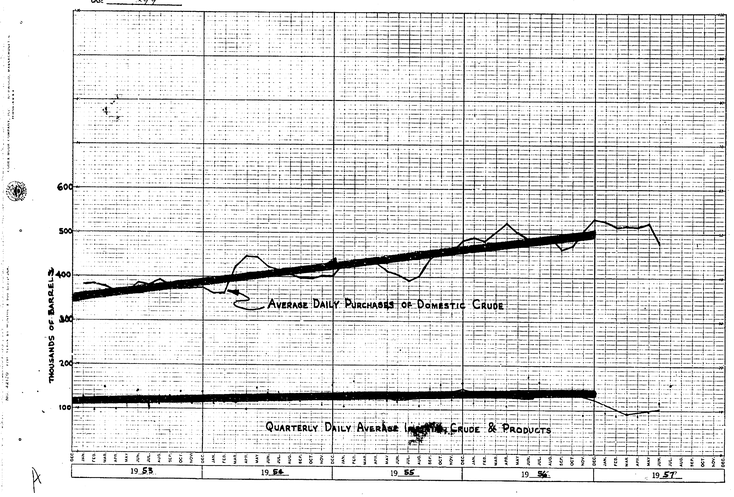
COLORADO
NEW MEXICO

R 13 W | R 12 W | R 11 W | R 10 W | R 9 W | R 8 W | R 7 W | R 6 W

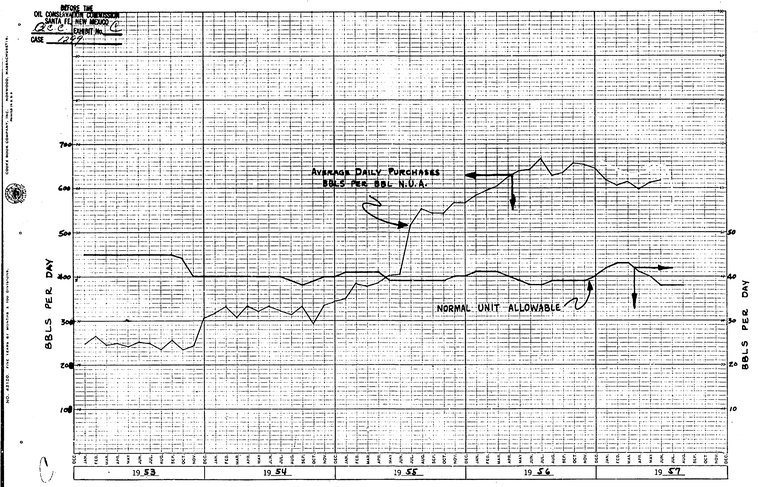
T 32 N
T 31 N
T 30 N
T 29 N
T 28 N

La Plata
San Juan
Rio Arriba
Aztec
Bloomfield
Blanco
COUNTY
COUNTY
RIVER
MESA
MOUNTAIN

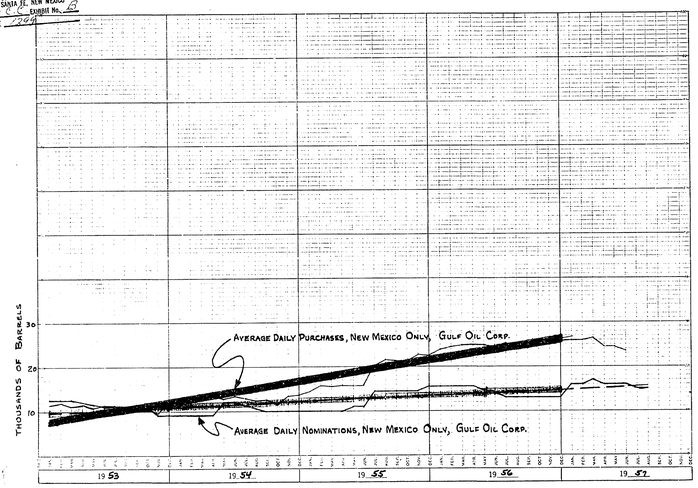
BEFORE THE
OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO
EXHIBIT No. A
CASE 244



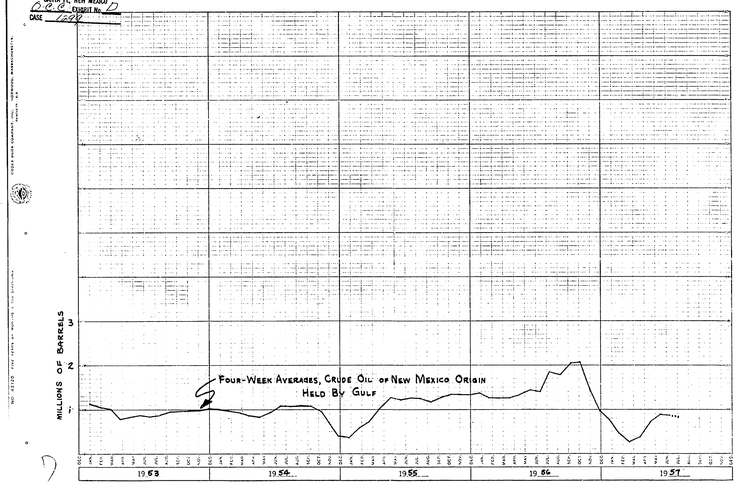
BEFORE THE
OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO
EXHIBIT No. C
CASE 1229



BEFORE THE
OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO
EXHIBIT No. B
CASE 1229



BEFORE THE
OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO
EXHIBIT No. D
CASE 1229



253

254

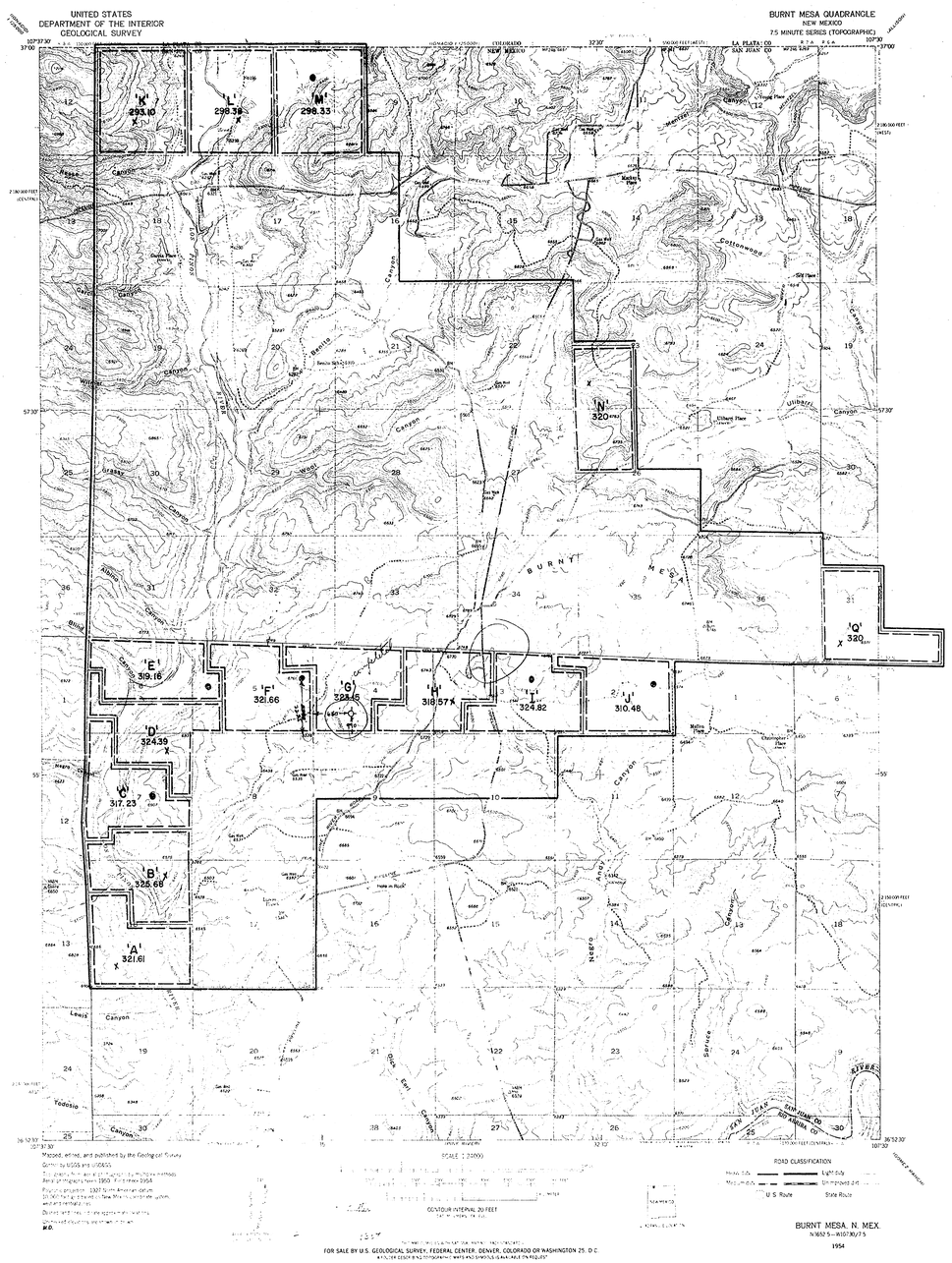

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
BURNT MESA QUADRANGLE
NEW MEXICO
7.5 MINUTE SERIES (TOPOGRAPHIC)
'K' 293.10
'L' 298.38
'M' 298.33
'N' 320
'O' 320
'E' 319.16
'F' 321.66
'G' 323.5
'H' 318.57
'I' 324.82
'J' 310.48
'D' 324.39
'C' 317.23
'B' 325.68
'A' 321.61
BURNT MESA
Canyon
Mapped, edited, and published by the Geological Survey
SCALE 1:24000
CONTOUR INTERVAL 20 FEET
ROAD CLASSIFICATION
Light duty
U.S. Route
State Route
BURNT MESA, N. MEX.
N3652.5—W10730/7.5
1954
FOR SALE BY U.S. GEOLOGICAL SURVEY, FEDERAL CENTER, DENVER, COLORADO OR WASHINGTON 25, D.C.

Exhibit 1

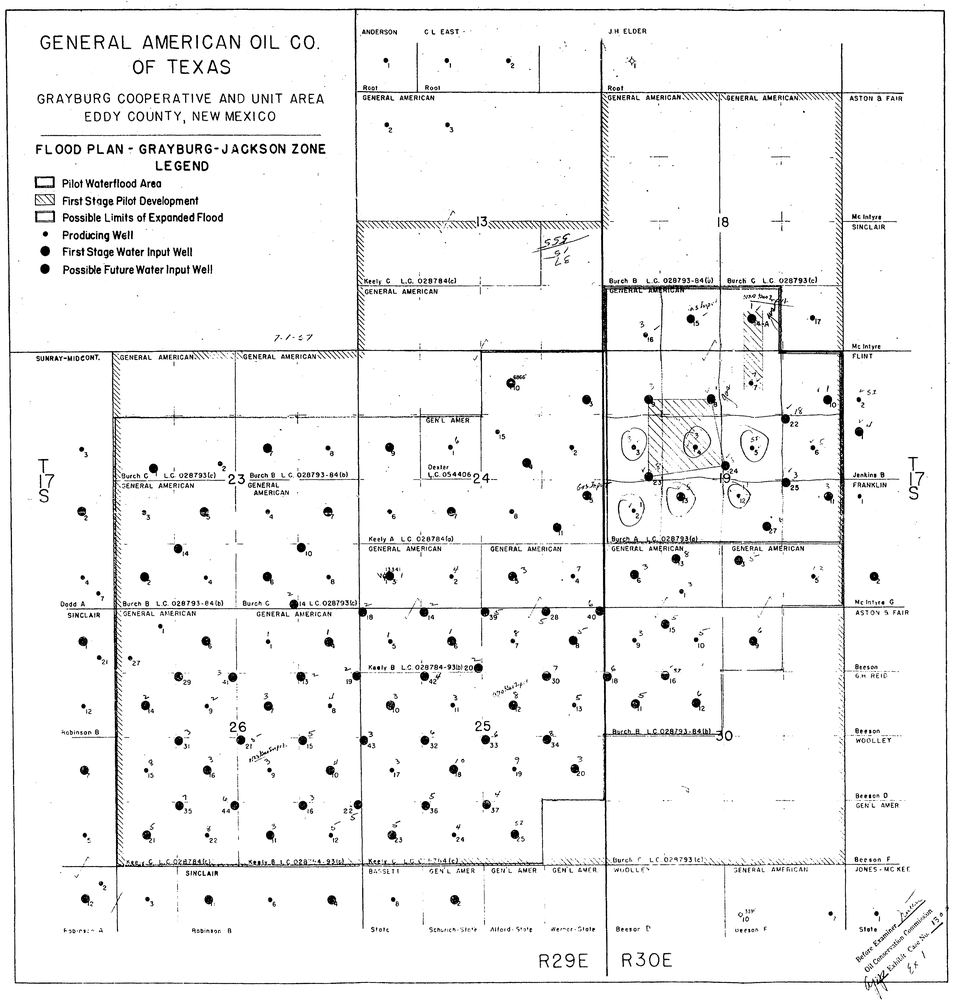
GENERAL AMERICAN OIL CO. OF TEXAS

GRAYBURG COOPERATIVE AND UNIT AREA
EDDY COUNTY, NEW MEXICO

FLOOD PLAN - GRAYBURG-JACKSON ZONE
LEGEND

- Pilot Waterflood Area
- First Stage Pilot Development
- Possible Limits of Expanded Flood
- Producing Well
- First Stage Water Input Well
- Possible Future Water Input Well

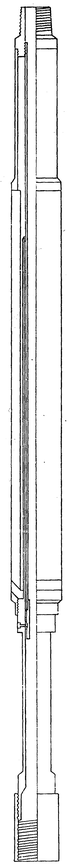
7-1-57



255

Before Examiner Nutter
Oil Conservation Commission
Case No. 1342 Exhibit No. 1

Before Examiner
Oil Conservation Commission
Case No. 1290
Exhibit
Ex. 3

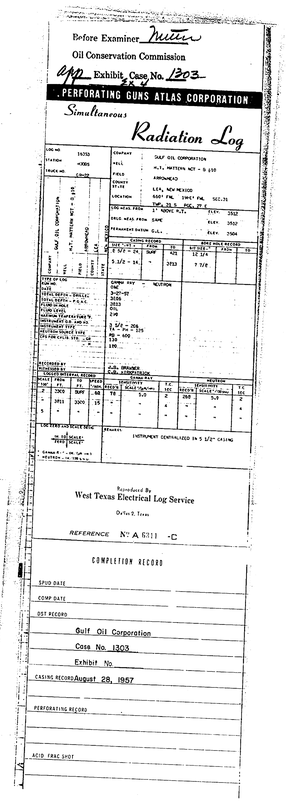


SCHEMATIC DIAGRAM
ANCHOR TYPE
FORMATION PACKER

MAIN OFFICE OCC
1957 JUL 24 PM 1:23

256

257



Before Examiner Mutter

Oil Conservation Commission

Exhibit Case No. 1303

PERFORATING GUNS ATLAS CORPORATION

Simultaneous

Radiation Log

COMPANY GULF OIL CORPORATION

WELL M.L. MITTEN NCT - B #58

FIELD ARKANSAS

COUNTY-STATE LEA, NEW MEXICO

LOCATION 1650' FNL 2140' FWL SEC. 25 TWP. 22 S RGE. 37 E

Log Meas. From 1" Above K.B. Elev. 3552

Drlg. Meas. From GAR Elev. 3552

Permanent Datum G.L. Elev. 3504

Reproduced By
West Texas Electrical Log Service
Ortez, Texas

REFERENCE No. A 6311 -C

COMPLETION RECORD

SPUD DATE

COMP. DATE

DST RECORD

Gulf Oil Corporation

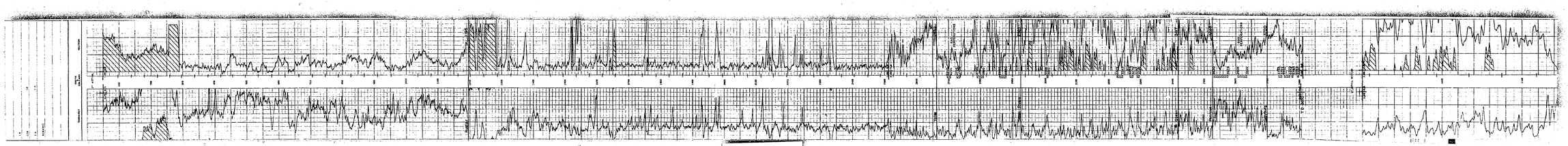
Case No. 1303

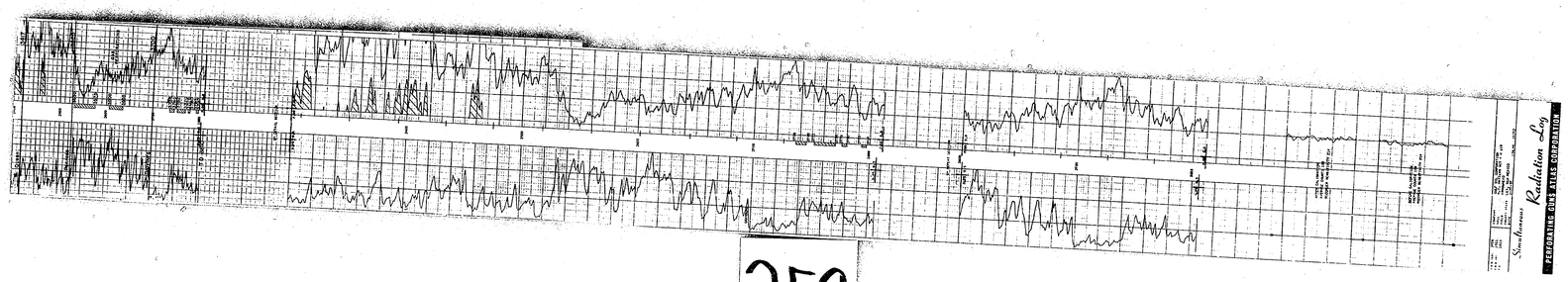
Exhibit No.

CASING RECORD August 28, 1957

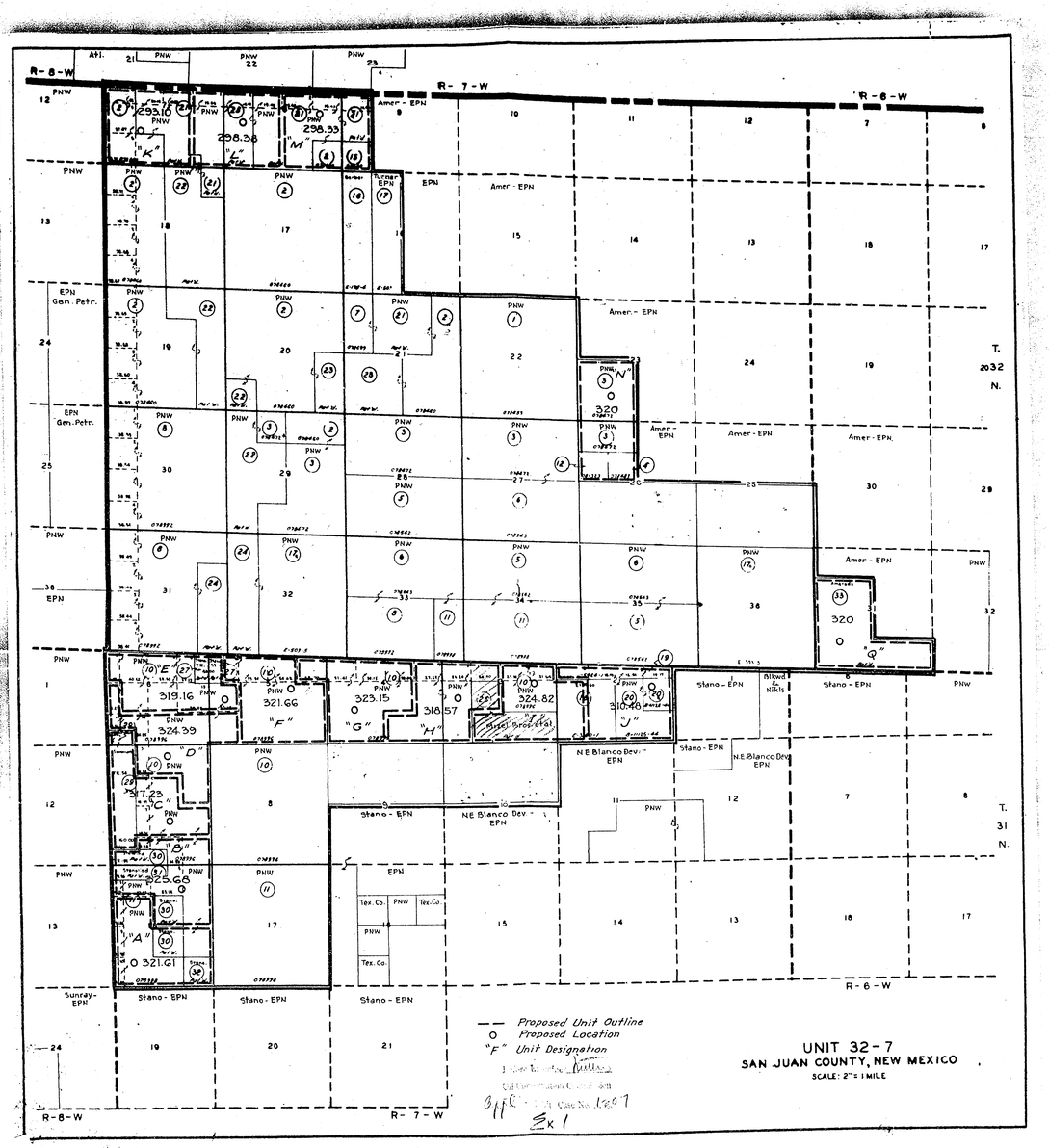
PERFORATING RECORD

ACID FRAC SHOT

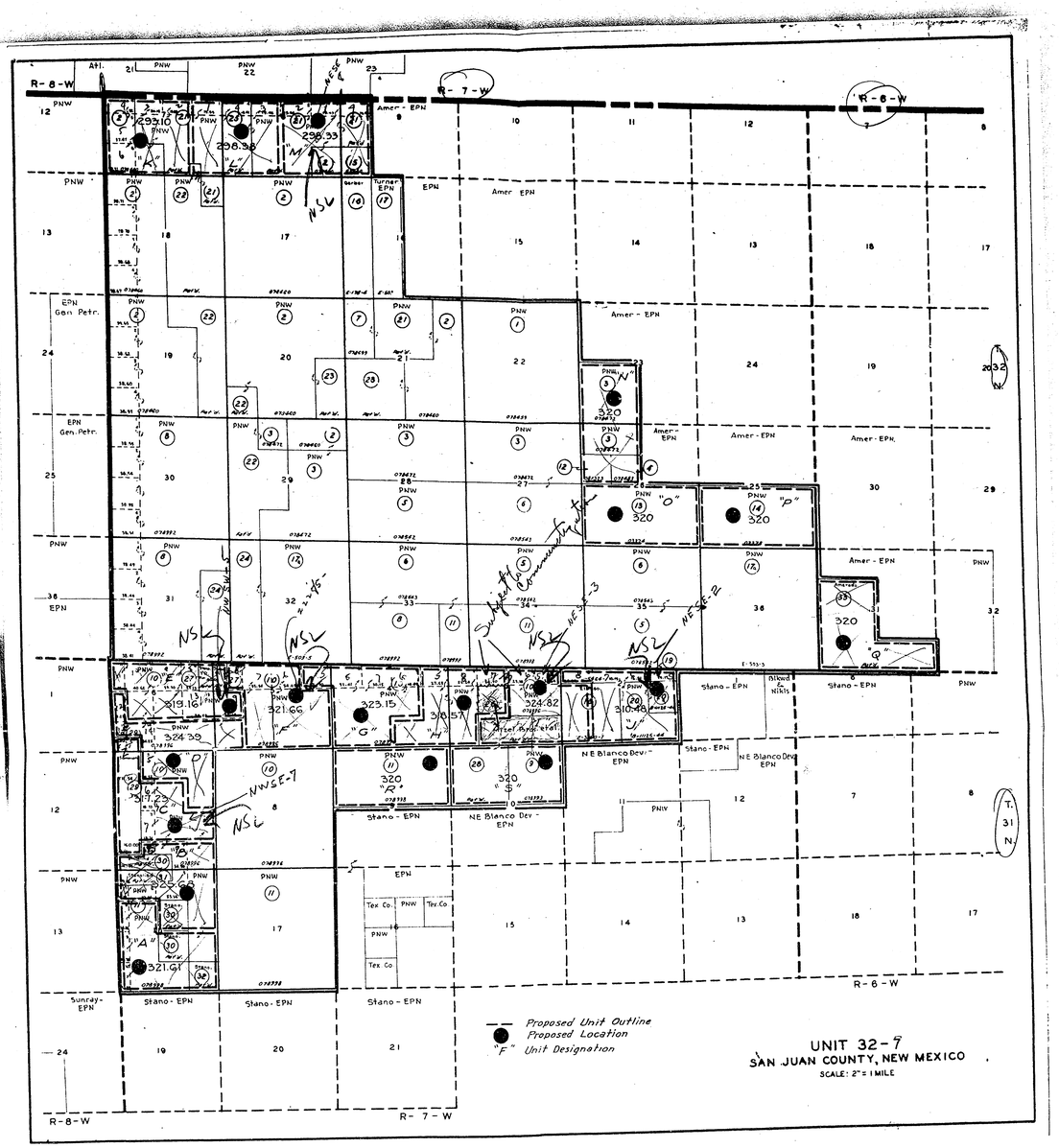



Radiation Log
PERFORATING GUN & TUBING CORRELATION

260


R-8-W
R-7-W
R-8-W
T. 32 N.
T. 31 N.
R-8-W
R-7-W
R-8-W
Proposed Unit Outline
Proposed Location
"F" Unit Designation
UNIT 32-7
SAN JUAN COUNTY, NEW MEXICO
SCALE: 2"= 1 MILE

261

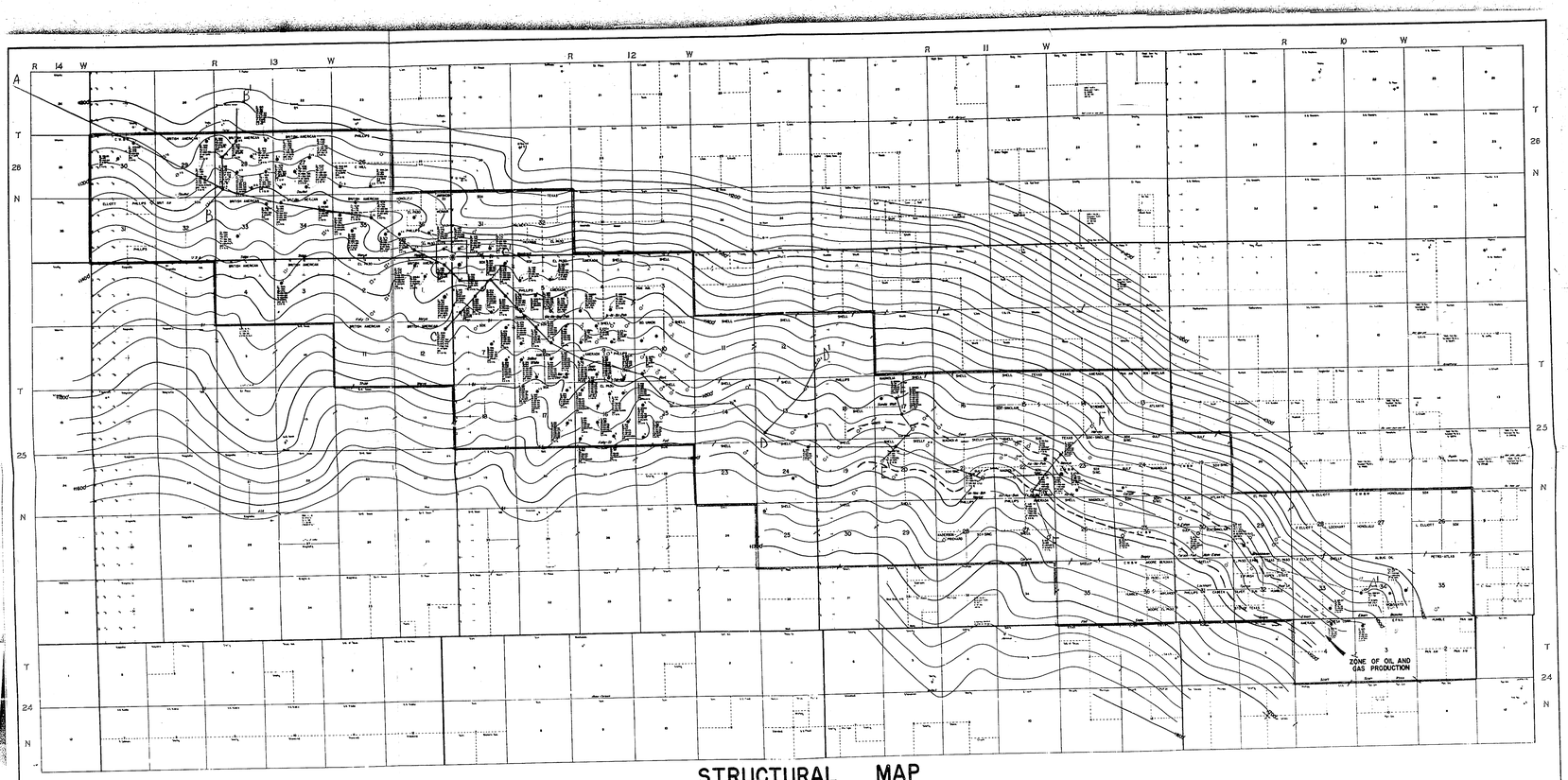

R-8-W
R-7-W
R-8-W
Amer-EPN
PNW
EPN
Gen. Petr.
Stano-EPN
NE Blanco Dev.-EPN
Sunray-EPN
Tex. Co.
Turner
Gerber
Proposed Unit Outline
Proposed Location
"F" Unit Designation
UNIT 32-7
SAN JUAN COUNTY, NEW MEXICO
SCALE: 2" = 1 MILE
T. 31 N.

P. O. BOX 2039
TULSA 2, OKLAHOMA

Bisti Field, San Juan County,
New Mexico
80 acre spacing hearing
Sept. 18, 1957
Case No. 1308
Exhibits 1-13

262

263



STRUCTURAL MAP

DATUM: TOP LOWER GALLUP FORMATION

CONTOUR INTERVAL 20'

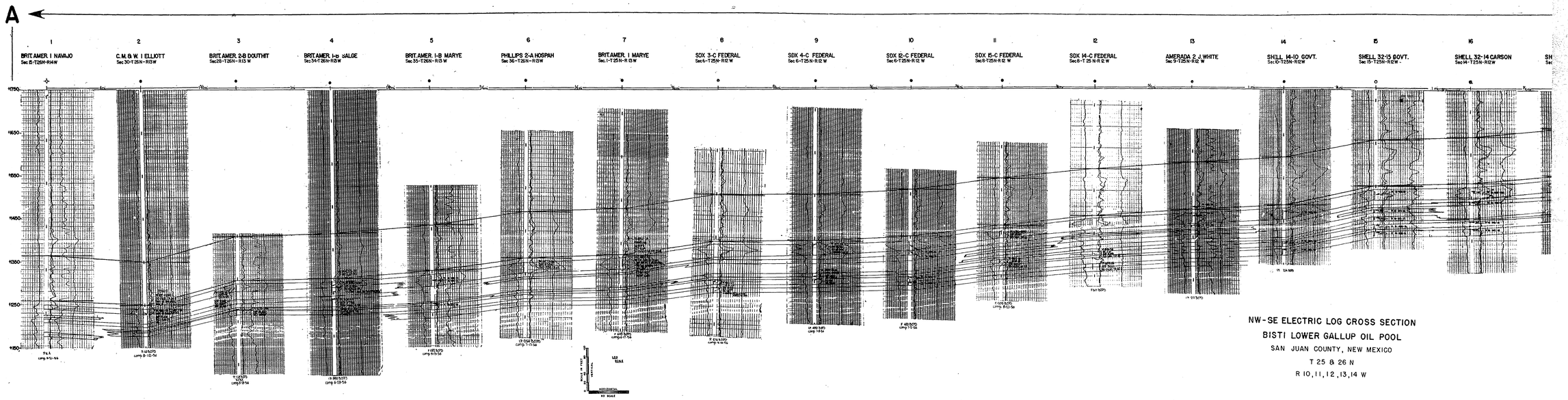
SUNRAY MID-CONTINENT OIL CO

BISTI LOWER GALLUP OIL POOL
Portions of
Township 25 & 26 N., Ranges 10, 11, 12 & 13 W.,
County San Juan, State New Mexico.

SCALE 4" = 1 MILE
PREPARED BY EXPLORATION DRAFTING SECTION

SUNRAY MID-CONTINENT OIL COMPANY
EXHIBIT NO. 5 CASE NO. 1308

C2-162



NW-SE ELECTRIC LOG CROSS SECTION

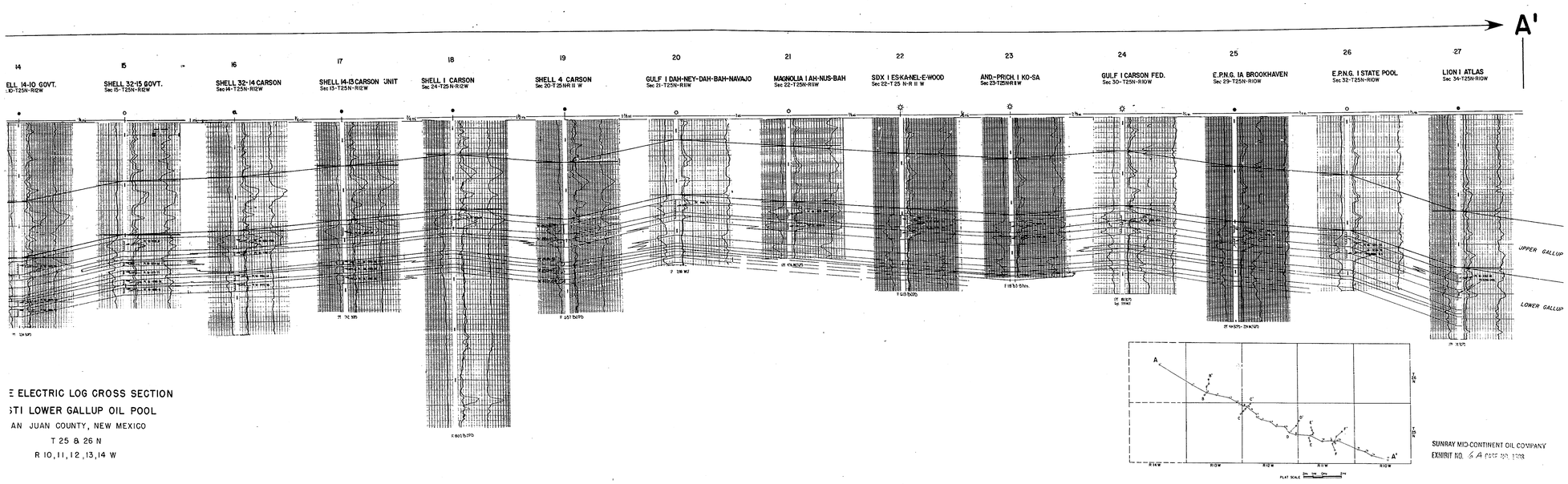
BISTI LOWER GALLUP OIL POOL

SAN JUAN COUNTY, NEW MEXICO

T 25 & 26 N

R 10, 11, 12, 13, 14 W

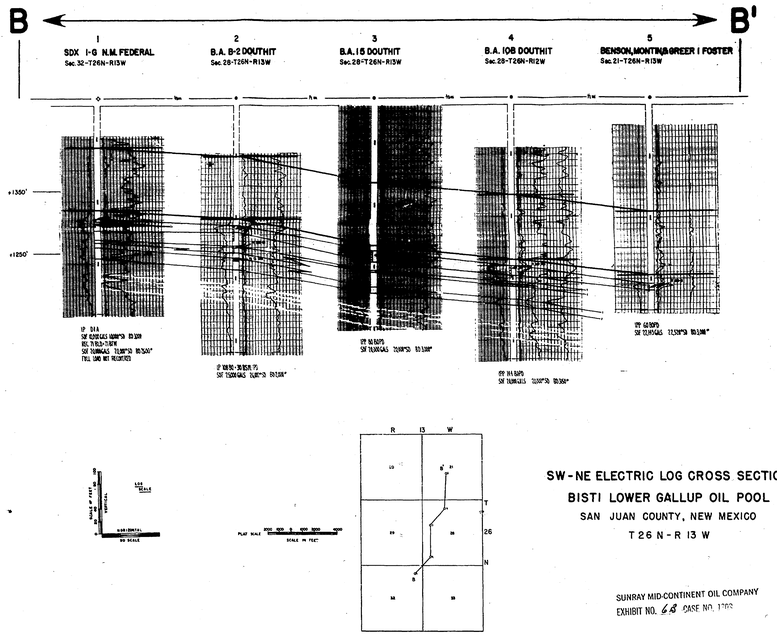
264



E ELECTRIC LOG CROSS SECTION
STI LOWER GALLUP OIL POOL
AN JUAN COUNTY, NEW MEXICO
T 25 & 26 N
R 10, 11, 12, 13, 14 W

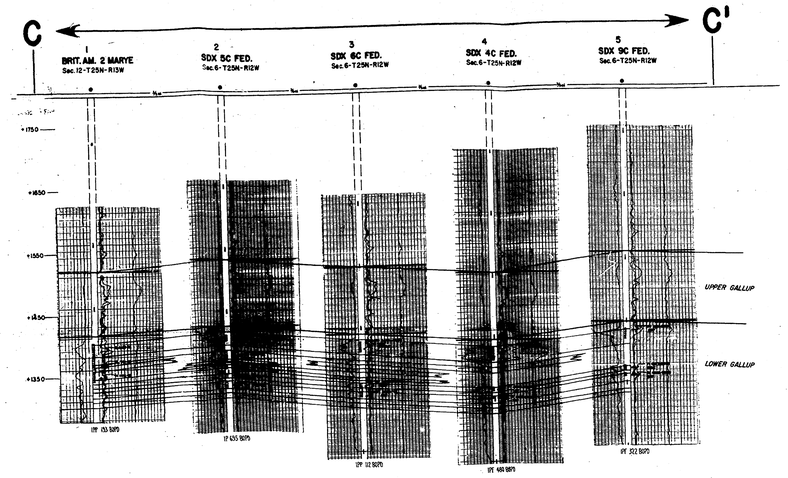
SUNRAY MID-CONTINENT OIL COMPANY
EXHIBIT NO. 6-A CASE NO. 1508

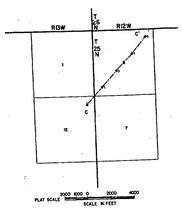
265



SW-NE ELECTRIC LOG CROSS SECTION
BISTI LOWER GALLUP OIL POOL
SAN JUAN COUNTY, NEW MEXICO
T 26 N - R 13 W

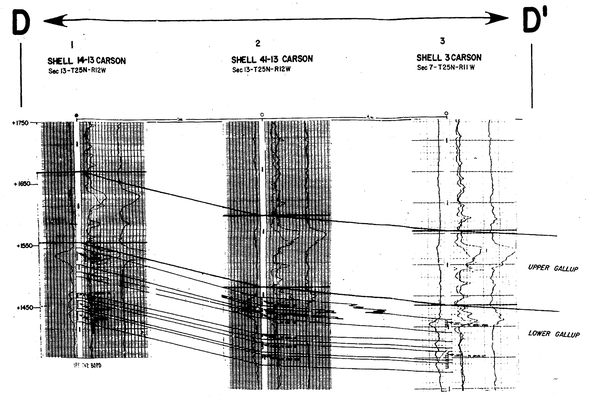
SUNRAY MID-CONTINENT OIL COMPANY
EXHIBIT NO. 6B CASE NO. 1308

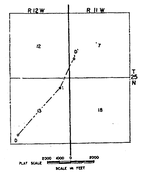




NE-SW ELECTRIC LOG CROSS SECTION
BISTI LOWER GALLUP OIL POOL
SAN JUAN COUNTY, NEW MEXICO
T 25 N -- R 12 & 13 W

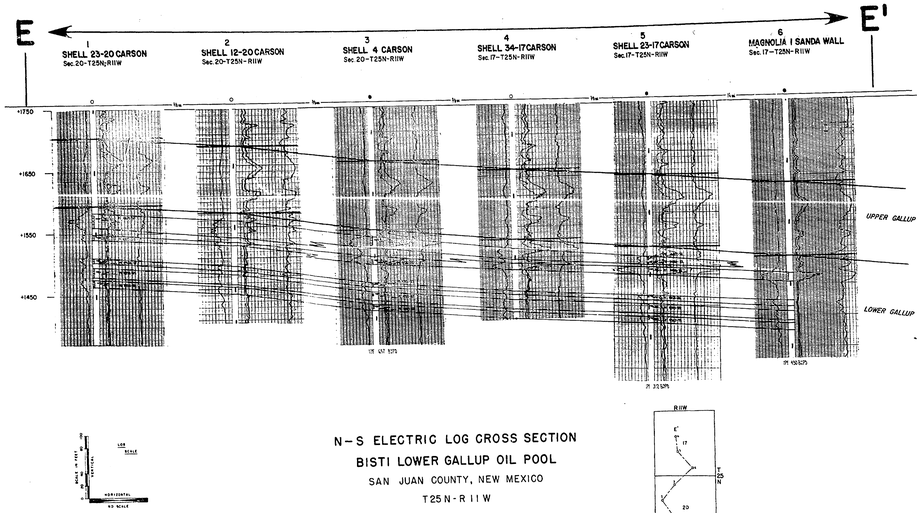
SUNRAY MID-CONTINENT OIL COMPANY
EXHIBIT NO. 6C CASE NO. 1308

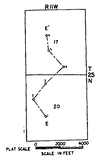




NE-SW ELECTRIC LOG CROSS SECTION
BISTI LOWER GALLUP OIL POOL
SAN JUAN COUNTY, NEW MEXICO
T 25 N -- R 11 & 12 W

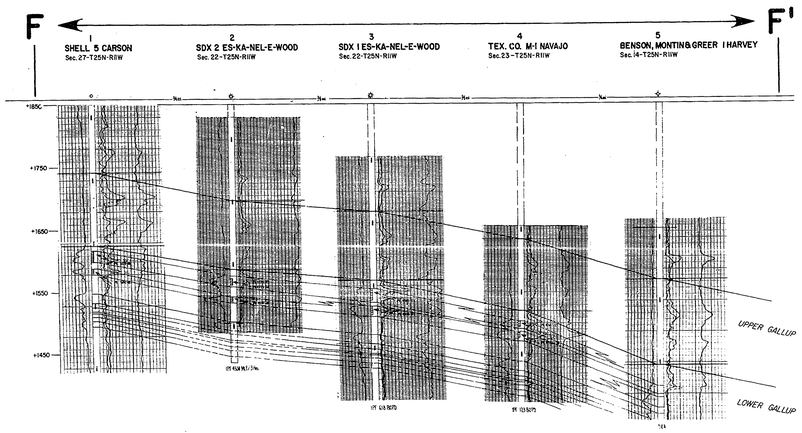
SUNRAY MID-CONTINENT OIL COMPANY
EXHIBIT NO. 6D CASE NO. 1308

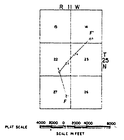




N-S ELECTRIC LOG CROSS SECTION
BISTI LOWER GALLUP OIL POOL
SAN JUAN COUNTY, NEW MEXICO
T 25 N - R 11 W

SUNRAY MID-CONTINENT OIL COMPANY
EXHIBIT NO. 6E CASE NO. 1308





SW-NE ELECTRIC LOG CROSS SECTION
BISTI LOWER GALLUP OIL POOL
SAN JUAN COUNTY, NEW MEXICO
T 25 N - R 11 W

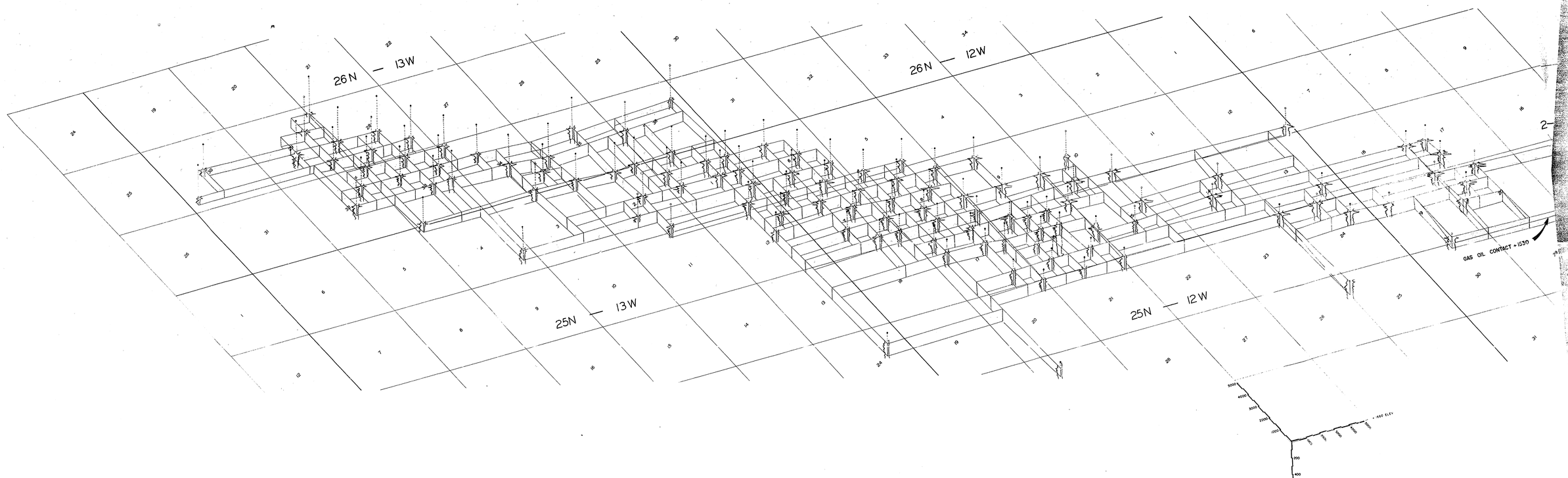
SUNRAY MID-CONTINENT OIL COMPANY
EXHIBIT NO. 6F CASE NO. 1308

266

THREE DIMENSIONAL DRAWING

BISTI LOWER GALLUP OIL POOL

SAN JUAN COUNTY, NEW MEXICO

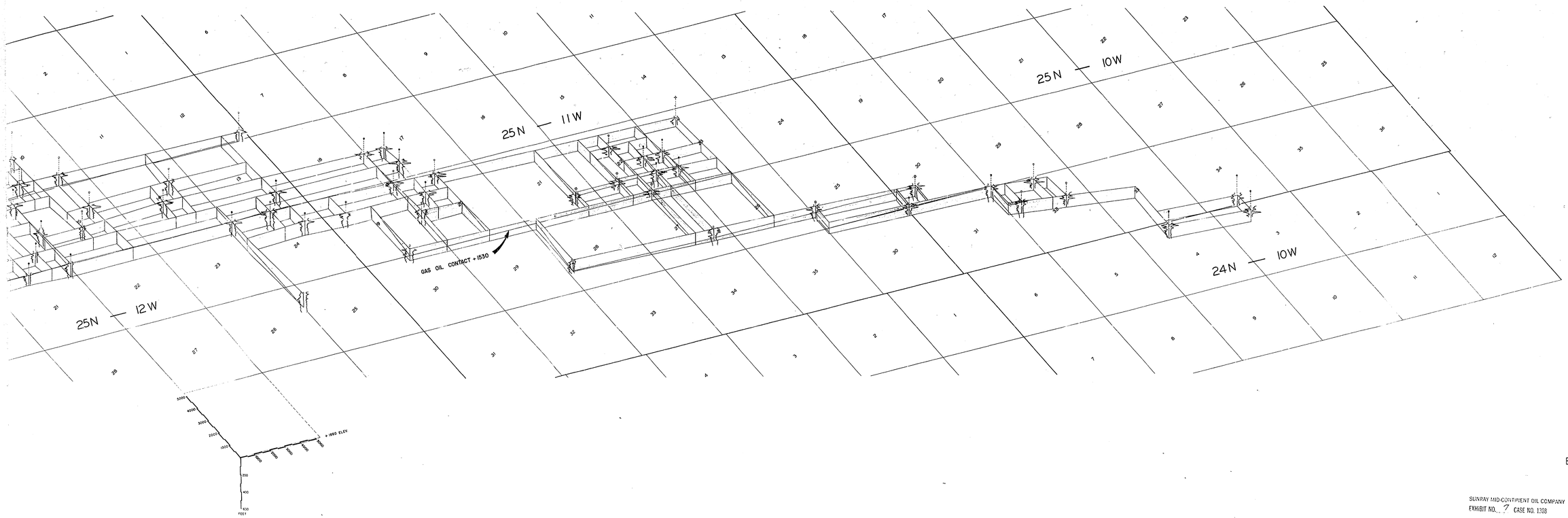


267

THREE DIMENSIONAL DRAWING

BISTI LOWER GALLUP OIL POOL

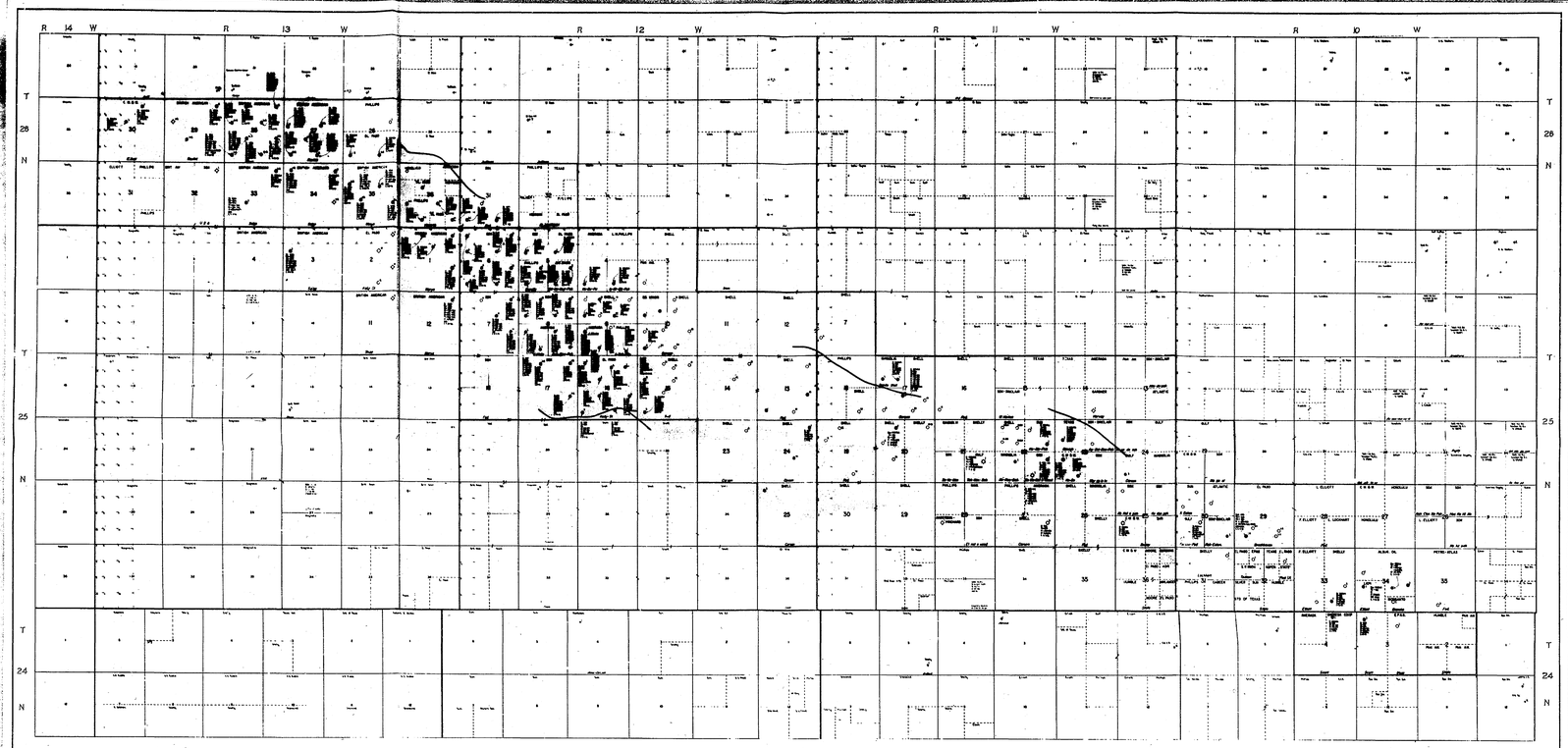
SAN JUAN COUNTY, NEW MEXICO



E 2 – 58

SUNRAY MID-CONTINENT OIL COMPANY
EXHIBIT NO. 7 CASE NO. 1308

268

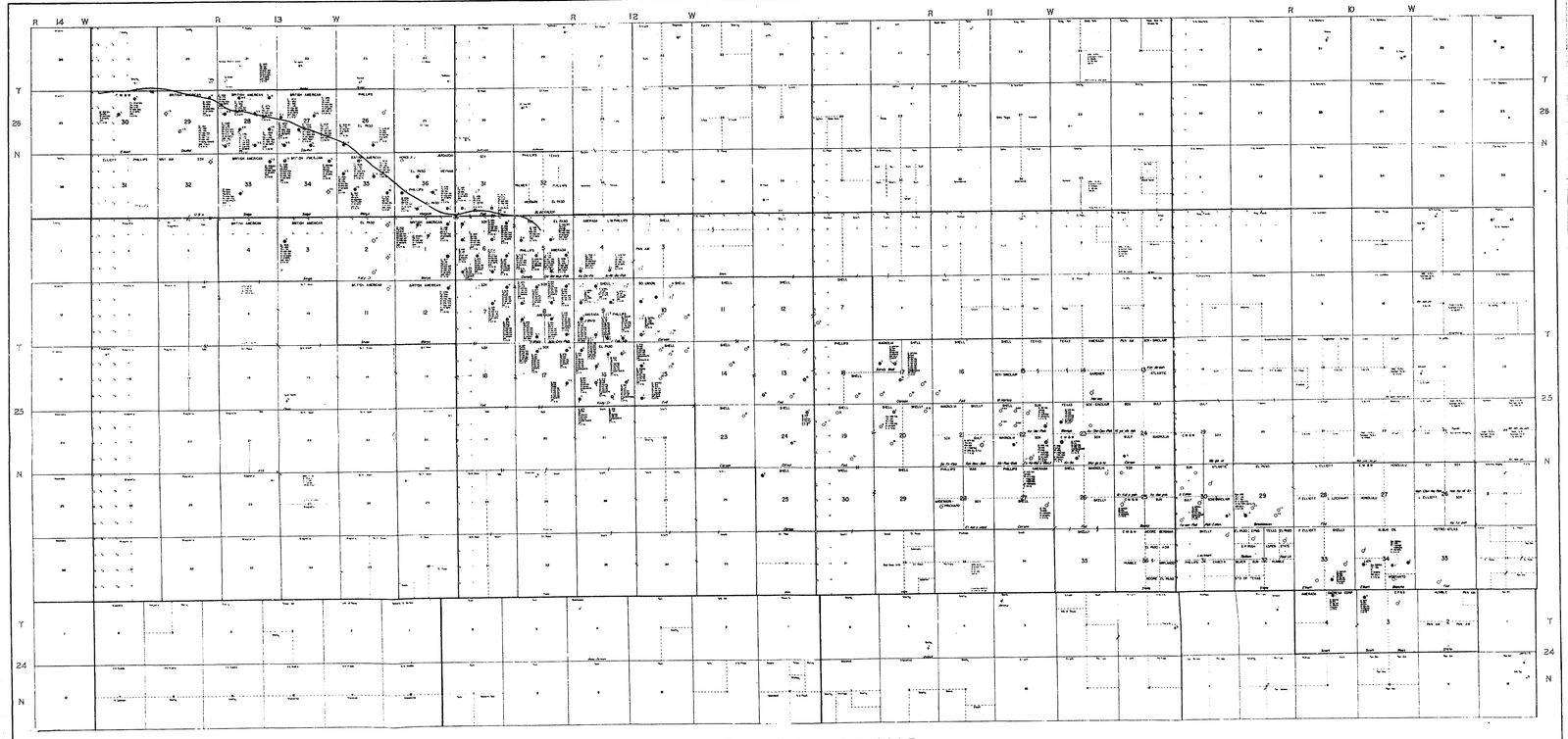


DISTRIBUTION MAP

UPPER SAND MEMBER
LOWER GALLUP FORMATION

SUNRAY MID-CONTINENT OIL COMPANY
EXHIBIT NO. 8A CASE NO. 1308

SUNRAY MID-CONTINENT OIL CO.
BISTI LOWER GALLUP OIL POOL
Portions of
Townships 23 & 24 N., Ranges 13 & 14 W.
County, San Juan State, New Mexico
SCALE IN FEET
PREPARED BY EXPLORATION DRAFTING SECTION



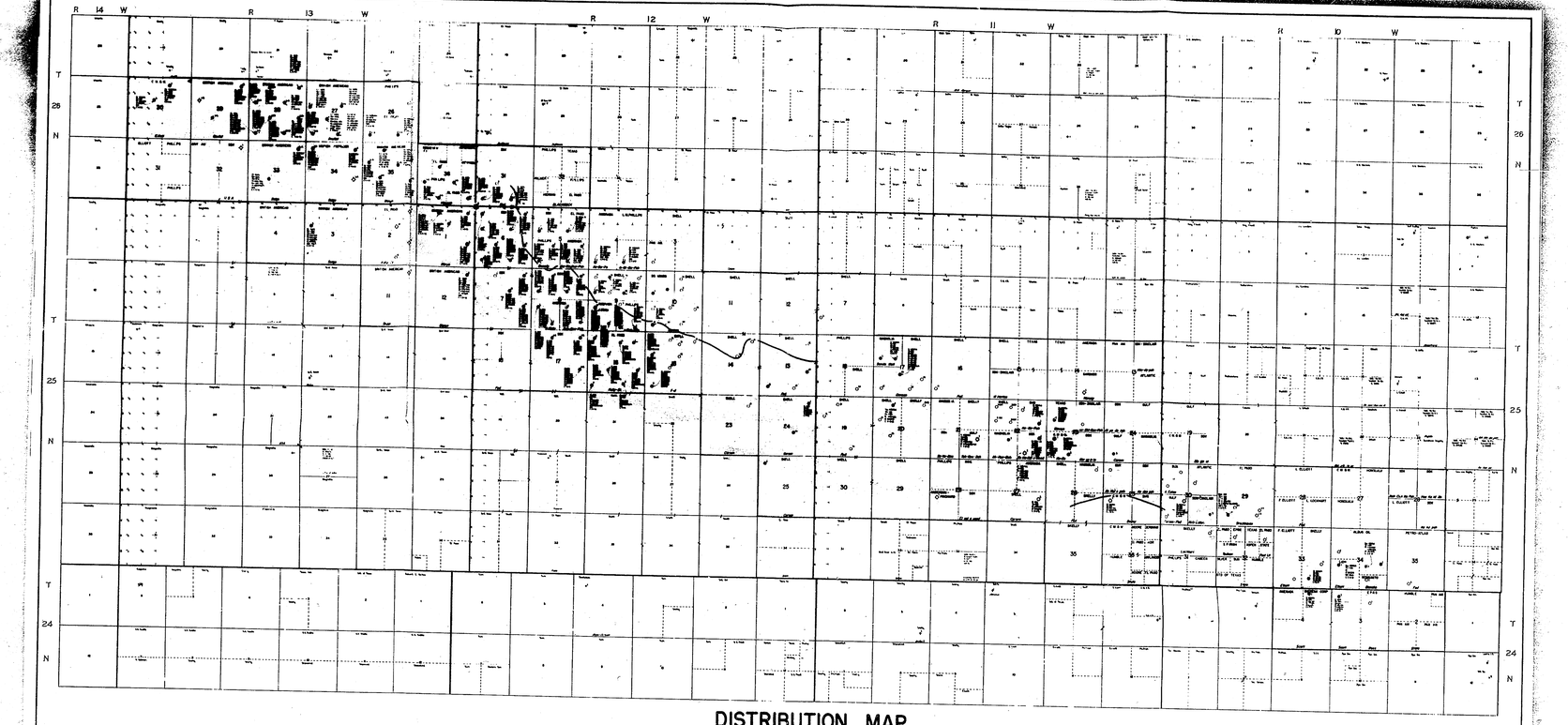
DISTRIBUTION MAP

SECOND SAND MEMBER
LOWER GALLUP FORMATION

SUNRAY MID-CONTINENT OIL COMPANY
EXHIBIT NO. 8B CASE NO. 1308

SUNRAY MID-CONTINENT OIL CO.
BISTI LOWER GALLUP OIL POOL
Portions of
Townships 23 & 24 N., Ranges 13 & 14 W.
County, San Juan State, New Mexico
SCALE IN FEET
PREPARED BY EXPLORATION DRAFTING SECTION

269



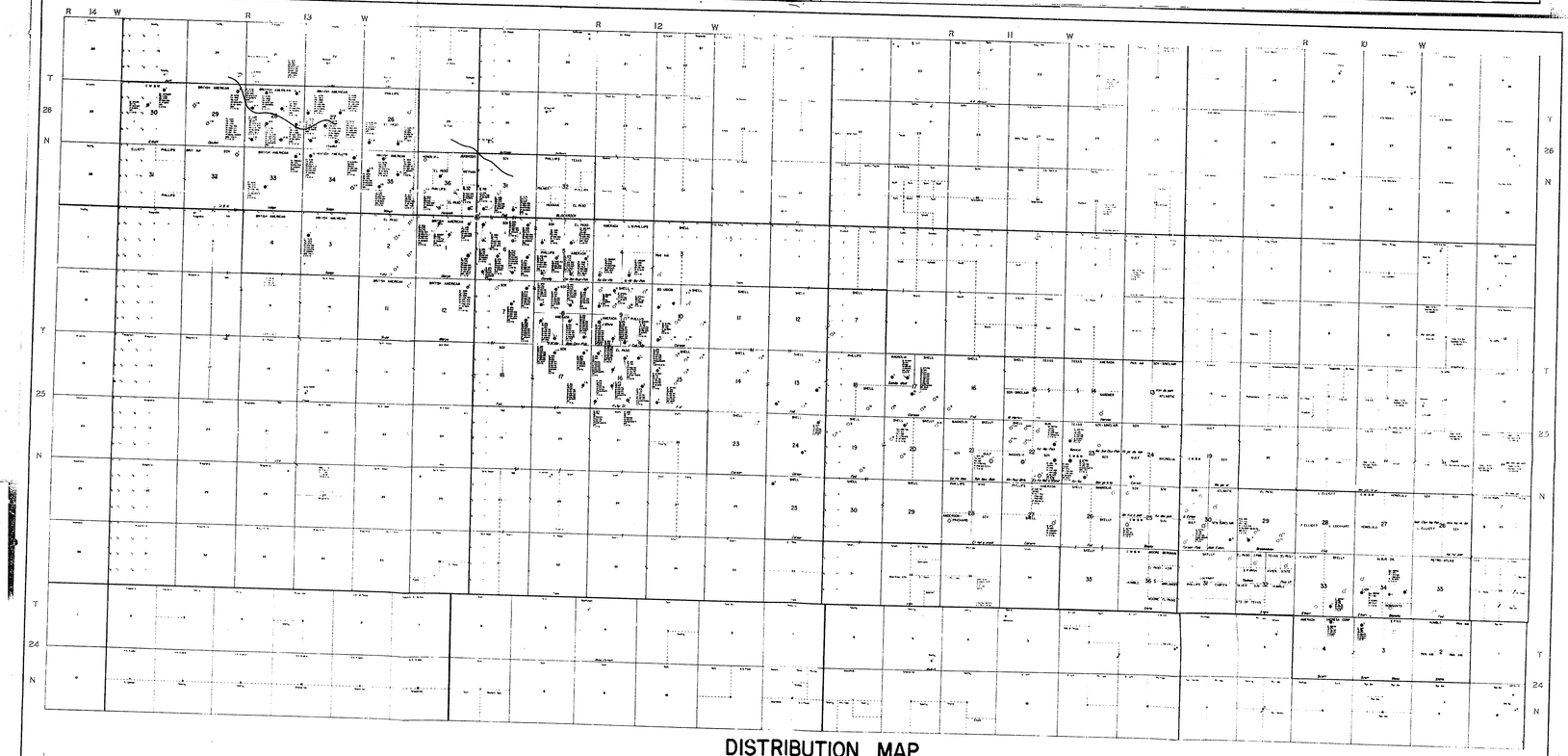
DISTRIBUTION MAP

THIRD SAND MEMBER

LOWER GALLUP FORMATION

SUNRAY MID-CONTINENT OIL COMPANY
EXHIBIT NO. 8C CASE NO. 1308

SUNRAY MID-CONTINENT OIL CO
BISTI LOWER GALLUP OIL POOL
Portions of
Township 25 & 26 N., Ranges 10 & 12, & 13 W.
County San Juan State New Mexico
PREPARED BY EXPLORATION DRAFTING SECTION



DISTRIBUTION MAP

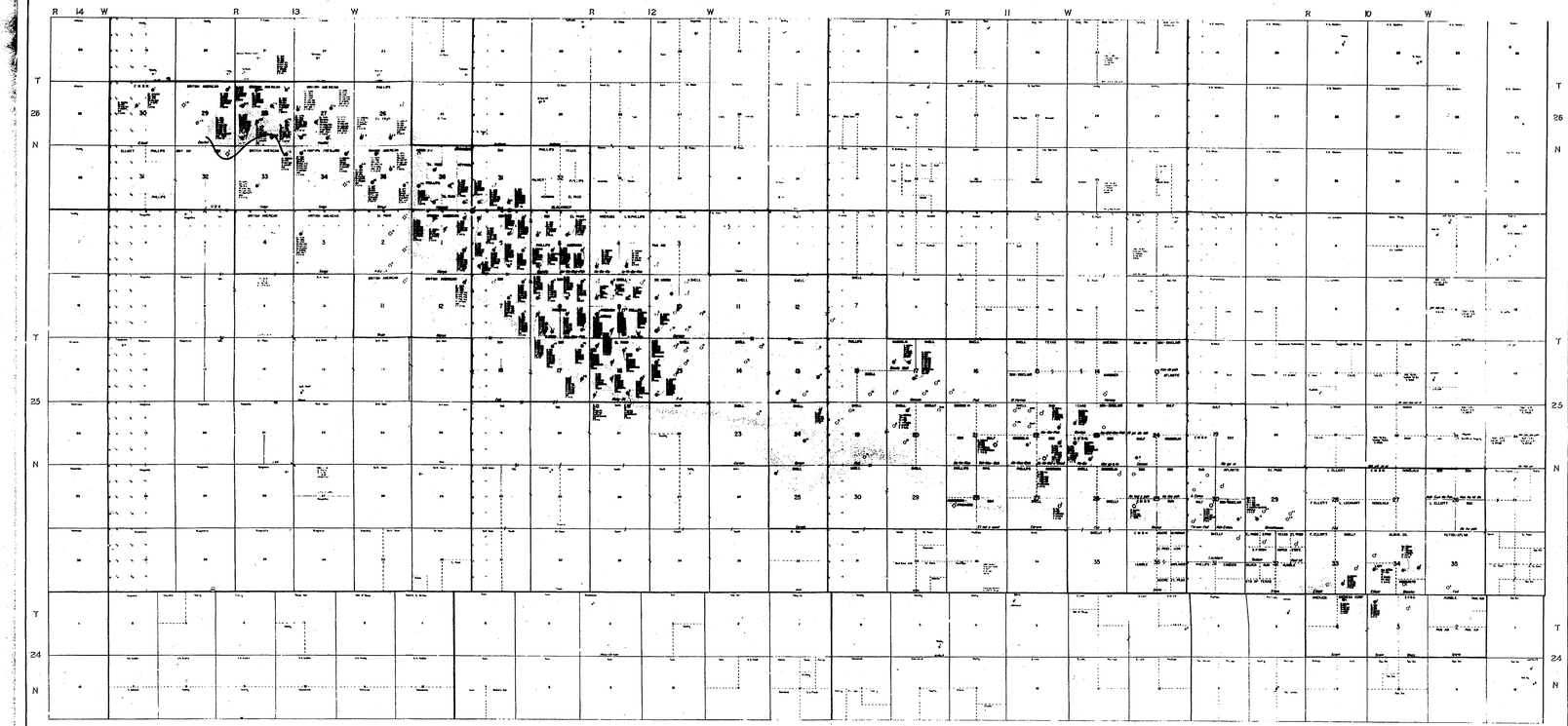
FOURTH SAND MEMBER

LOWER GALLUP FORMATION

SUNRAY MID-CONTINENT OIL COMPANY
EXHIBIT NO. 8D CASE NO. 1308

SUNRAY MID-CONTINENT OIL CO
BISTI LOWER GALLUP OIL POOL
Portions of
Township 25 & 26 N., Ranges 10 & 12, & 13 W.
County San Juan State New Mexico
PREPARED BY EXPLORATION DRAFTING SECTION

270



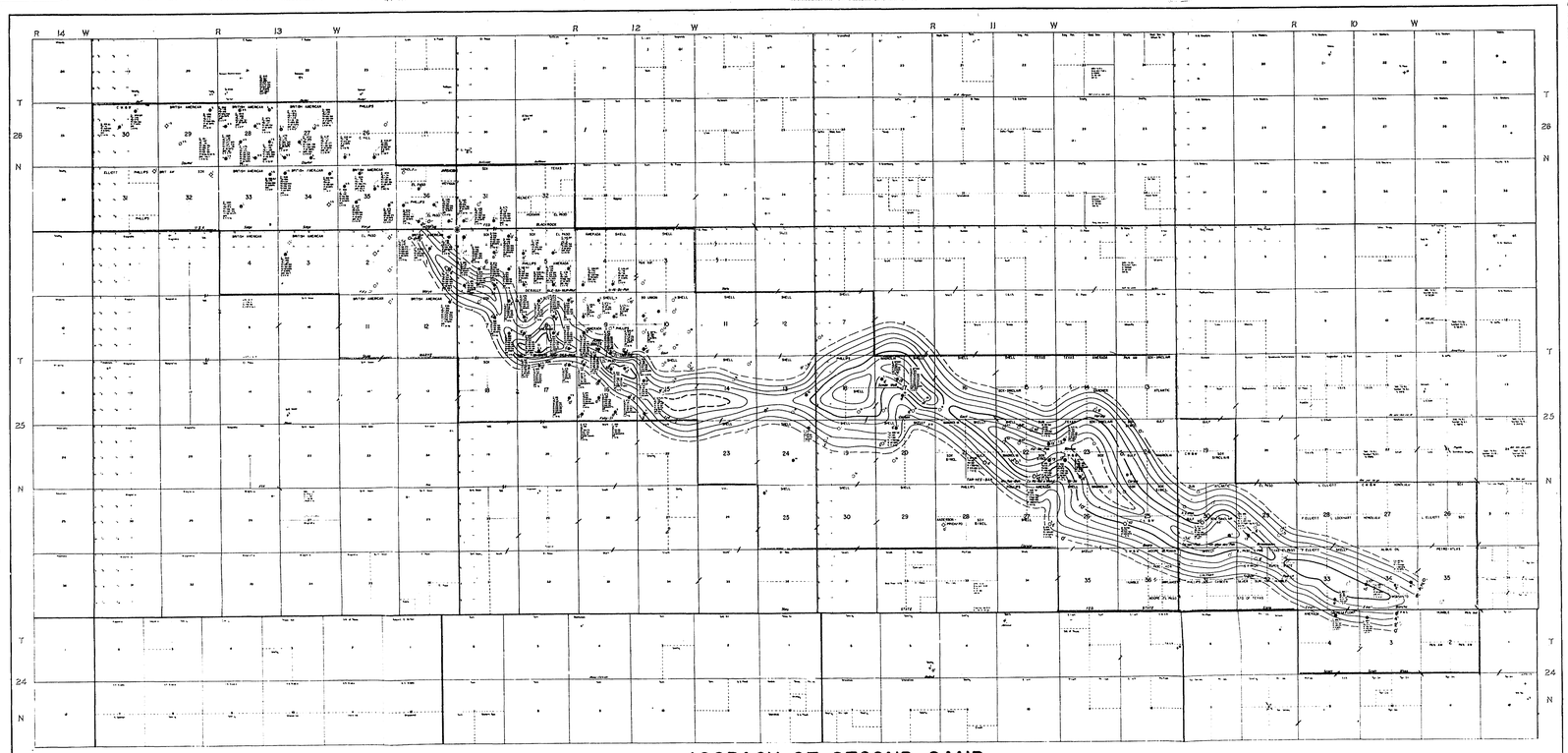
DISTRIBUTION MAP

FIFTH SAND MEMBER

LOWER GALLUP FORMATION

SUNRAY MID-CONTINENT OIL COMPANY
EXHIBIT NO. 5E CASE NO. 1308

SUNRAY MID-CONTINENT OIL CO
BISTI LOWER GALLUP OIL POOL
Portions of
Township 25 & 26 N., Ranges 10 thru 12 & 13 W.
County San Juan State New Mexico
SCALE 1" = 1000'
DATE OF PLOT
PREPARED BY EXPLORATION DRAFTING SECTION



ISOPACH OF SECOND SAND

LOWER GALLUP FORMATION

BASED ON MICROLOG SEPARATION

CONTOUR INTERVAL 2'

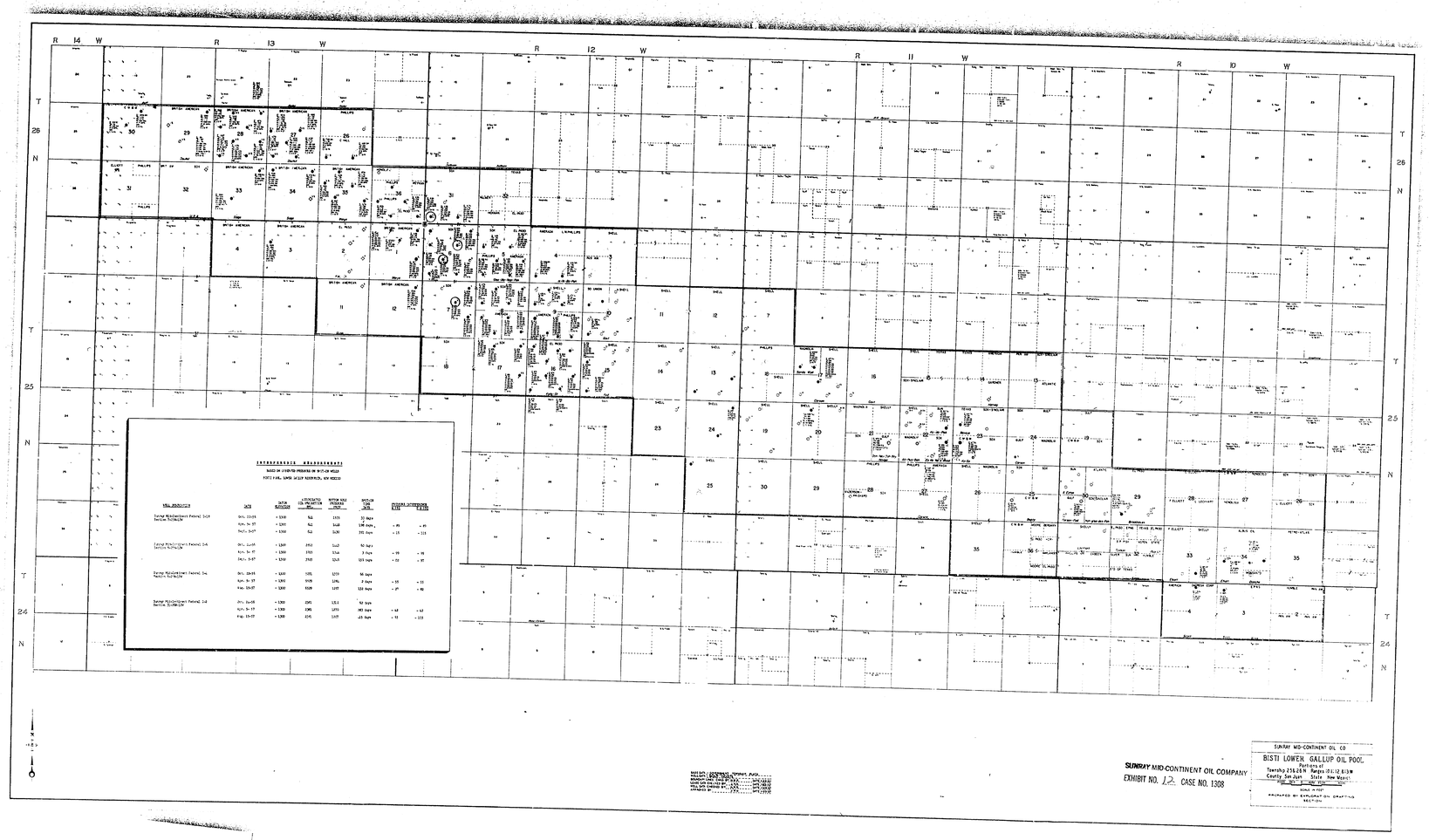
SUNRAY MID-CONTINENT OIL COMPANY
EXHIBIT NO. [illegible]

SUNRAY MID-CONTINENT OIL COMPANY
EXHIBIT NO. 4 CASE NO. 1308

SUNRAY MID-CONTINENT OIL CO
BISTI LOWER GALLUP OIL POOL
Portions of
Township 25 & 26 N., Ranges 10 thru 12 & 13 W.
County San Juan State New Mexico
SCALE 1" = 1000'
DATE OF PLOT
PREPARED BY EXPLORATION DRAFTING SECTION

2711

C2-164

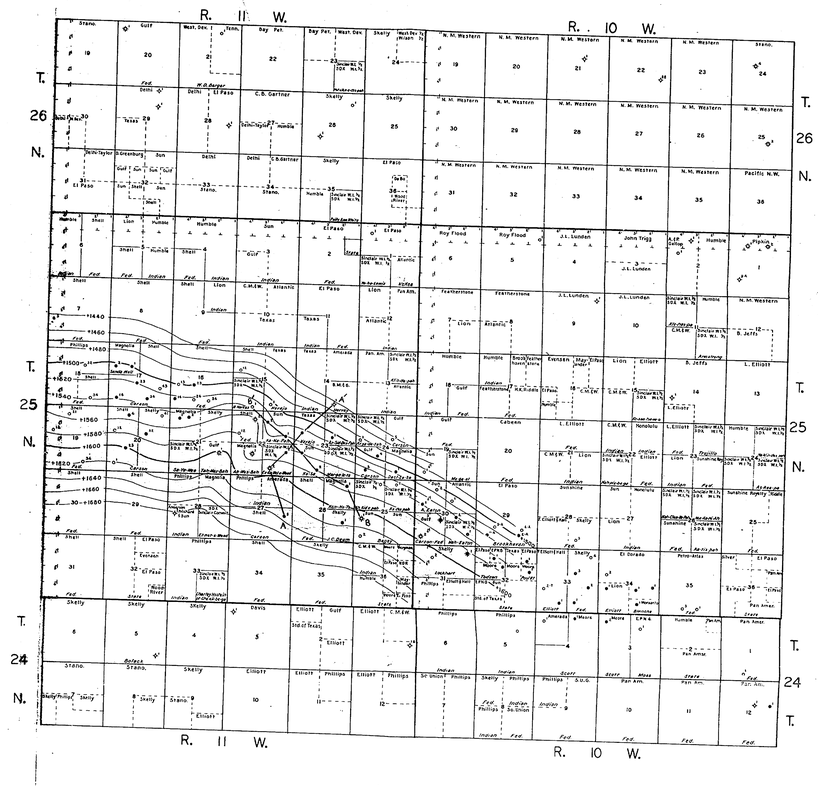

R 14 W
R 13 W
R 12 W
R 11 W
R 10 W
T 26 N
T 25 N
T 24 N
INTERFERENCE ANALYSIS
BASED ON OFFSET PRODUCERS ON BISTI-GB WELLS
FORT PARK, SUNRAY MESA RESERVOIR, NEW MEXICO
WELL IDENTITY
DATE
STABILIZED OIL PRODUCTION
BOTTOM HOLE PRESSURE
DAYS ON TEST
INTERFERENCE EFFECT
Sunray Mid-Continent Federal 3-29 Section 29,T25N,R12W
Orig. 10-55
Apr. 56-57
Incr. 5-57
+ 1300
+ 1300
+ 1300
641
641
641
1455
1448
1430
168 days
391 days
- 49
- 15
- 49
- 115
Sunray Mid-Continent Federal 3-6 Section 6,T24N,R12W
Orig. 11-55
Apr. 56-57
Incr. 5-57
+ 1300
+ 1300
+ 1300
1951
1951
2161
1442
1344
1214
92 days
3 days
125 days
- 19
+ 22
- 19
+ 97
Sunray Mid-Continent Federal 3-4 Section 4,T24N,R12W
Orig. 10-55
Apr. 56-57
Mar. 56-57
+ 1300
+ 1300
+ 1300
1491
1908
1669
1259
1246
1397
96 days
2 days
133 days
- 15
- 29
- 11
+ 82
Sunray Mid-Continent Federal 3-2 Section 2,T24N,R12W
Orig. 10-55
Apr. 56-57
Mar. 56-57
+ 1300
+ 1300
+ 1300
2091
1745
1545
1311
1272
1267
92 days
180 days
-45 days
+ 43
+ 43
+ 93
- 123
WELL NO. - CONTINUOUS TAKING, PSIG
WELL NO. - SHUT-IN PRESSURE, PSIG
WELL NO. - FLOWING BHP, PSIG
WELL NO. - SHUT-IN BHP, PSIG
WELL NO. - CHANGE IN BHP, PSIG
INTERFERENCE EFFECT, PSIG
SUNRAY MID-CONTINENT OIL COMPANY
EXHIBIT NO. 12 CASE NO. 1308
SUNRAY MID-CONTINENT OIL CO
BISTI LOWER GALLUP OIL POOL
San Juan County, New Mexico
Township 25 & 26 N., Ranges 11 & 12 W.
County San Juan State New Mexico
SCALE IN FEET
PREPARED BY EXPLORATION DRAFTING SECTION

272

Sinclair Oil & Gas Company
Ex. 1-3
Referring Hrld 12/18/57
Case No. 1308
Bisti Field, San Juan Co, N. Mex.

MAIN OFFICE DOD
1959 JUL 19 AM 8:50

273

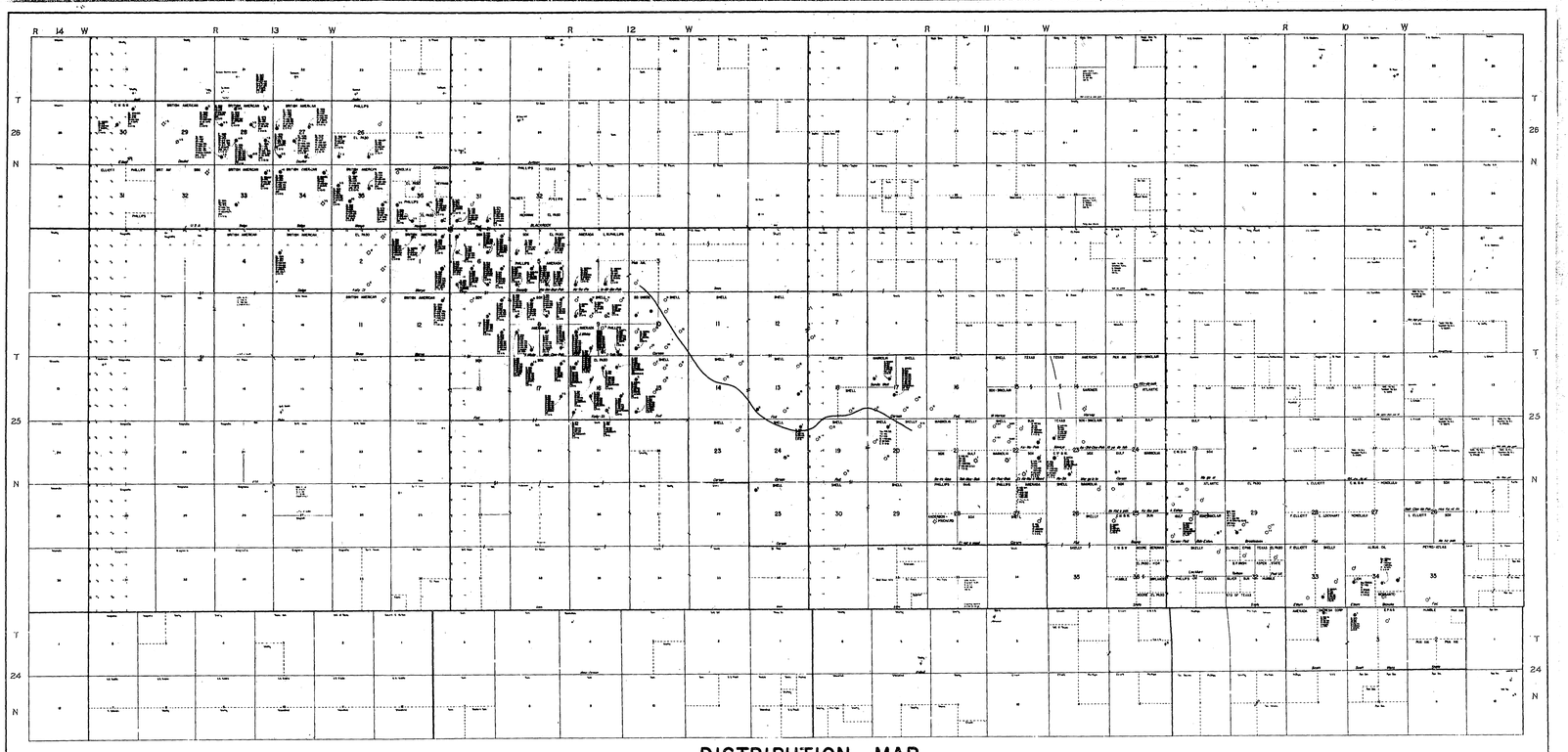


SINCLAIR OIL & GAS COMPANY
PRODUCTION DEPT DENVER, COLORADO
ENGINEERING SECTION

BISTI LOWER GALLUP OIL POOL
SAN JUAN COUNTY, NEW MEXICO
STRUCTURAL MAP
DATUM: TOP OF LOWER GALLUP FORMATION
CONTOUR INTERVAL 20'

DATE: DEC. 4, 1957		SCALE: 1" = 4000'
APPROVED	DRAWN BY R.A.E.	FILE NO. B-2

EX. 1



DISTRIBUTION MAP

SIXTH SAND MEMBER

LOWER GALLUP FORMATION

SUNRAY MID-CONTINENT OIL COMPANY
EXHIBIT NO. 8F CASE NO. 1208

SUNRAY MID-CONTINENT OIL CO
NISTI LOWER GALLUP OIL POOL
Outline of
Township 25 & 26 N., Ranges 10 to 14 W.
County San Juan State New Mexico
SCALE 1" = 1 MILE
MADE & PUT
PREPARED BY EXPLORATION DRAFTING SECTION

274

B

B'

ANDERSON - PRICHARD * 1 H. BEDAY
Sec. 25-T25N-R11W

2650'

MAGNOLIA * 1 KEN-NO-TO
Sec. 28-T25N-R11W

2650'

SUN OIL * 2 HEIRS OF KO-SA
Sec. 23-T25N-R11W

1900'

SUN OIL * 1 HEIRS OF KO-SA
Sec. 23-T25N-R11W

1900'

SUN OIL * 1 HEIRS OF KA-NA-PAH
Sec. 22-T25N-R11W

1900'

SUN OIL * 2 HEIRS OF KA-NA-PAH
Sec. 22-T25N-R11W

1800'

SDX * 1 H. PLATERO
Sec. 15-T25N-R11W

+1800
+1700
+1600
+1500
+1400
+1300

I.P.F. 3,432 MCF6/D thru 3/4" choke, Perf. 5050-5060.

I.P.F. 45 BOPD, 11,850 G.O.R., Perf. 5034-5050.

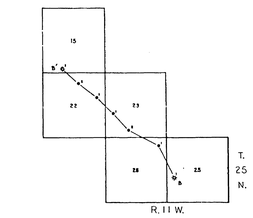
I.P.F. 115 80/12 hrs. thru 24/64" choke, Perf. 4952-4969.

I.P.F. 300 BOPD, 1043 G.O.R., Perf. 4946-4988.

I.P.F. 250 BOPD after sand-oil fract. Perf. 4910-4925 & 4933-4946.

I.P.F. 130 BOPD after sand-oil fract. Perf. 4896-4906 & 4909-4925

I.P.F 555 MCFGPD dry gas thru 3/8" choke, Perf. 4892-4903



100 0 1000 2000
HORIZONTAL SCALE: FEET

SINCLAIR OIL & GAS COMPANY
PRODUCTION DEPT DENVER, COLORADO
ENGINEERING SECTION

BISTI LOWER GALLUP OIL POOL

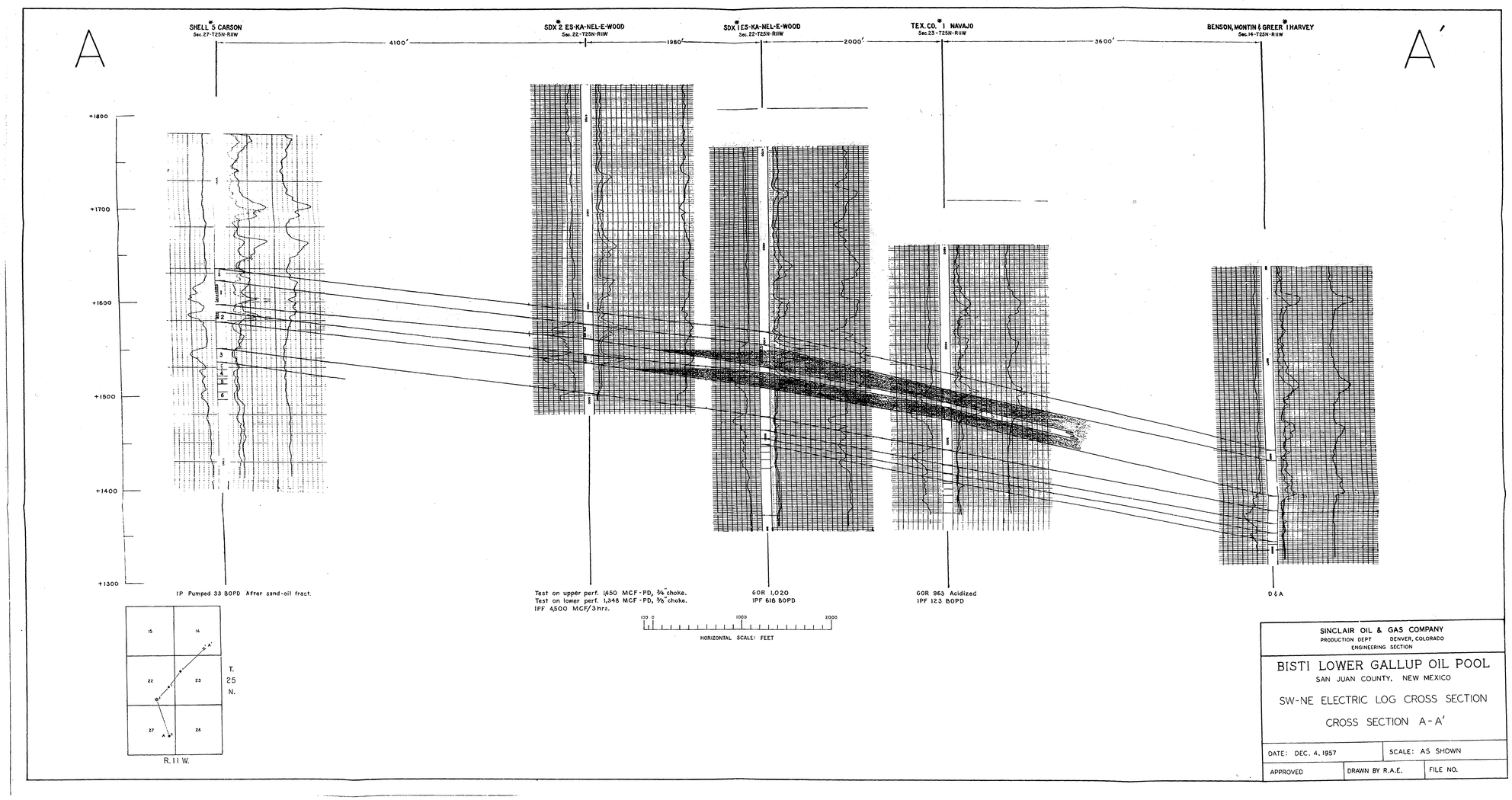
SAN JUAN COUNTY, NEW MEXICO

SE-NW ELECTRIC LOG CROSS SECTION

CROSS SECTION B-B'

DATE: DEC. 4, 1957	SCALE: AS SHOWN
APPROVED	DRAWN BY R.A.E. FILE NO.

215



SINCLAIR OIL & GAS COMPANY
PRODUCTION DEPT DENVER, COLORADO
ENGINEERING SECTION

BISTI LOWER GALLUP OIL POOL

SAN JUAN COUNTY, NEW MEXICO

SW-NE ELECTRIC LOG CROSS SECTION

CROSS SECTION A-A'

DATE: DEC. 4, 1957	SCALE: AS SHOWN	
APPROVED	DRAWN BY R.A.E.	FILE NO.

276

R11W R10W

T 25 N

T 24 N

GULF

CARSON-FEDERAL

TAN-HEZ-BAH-HEIRS

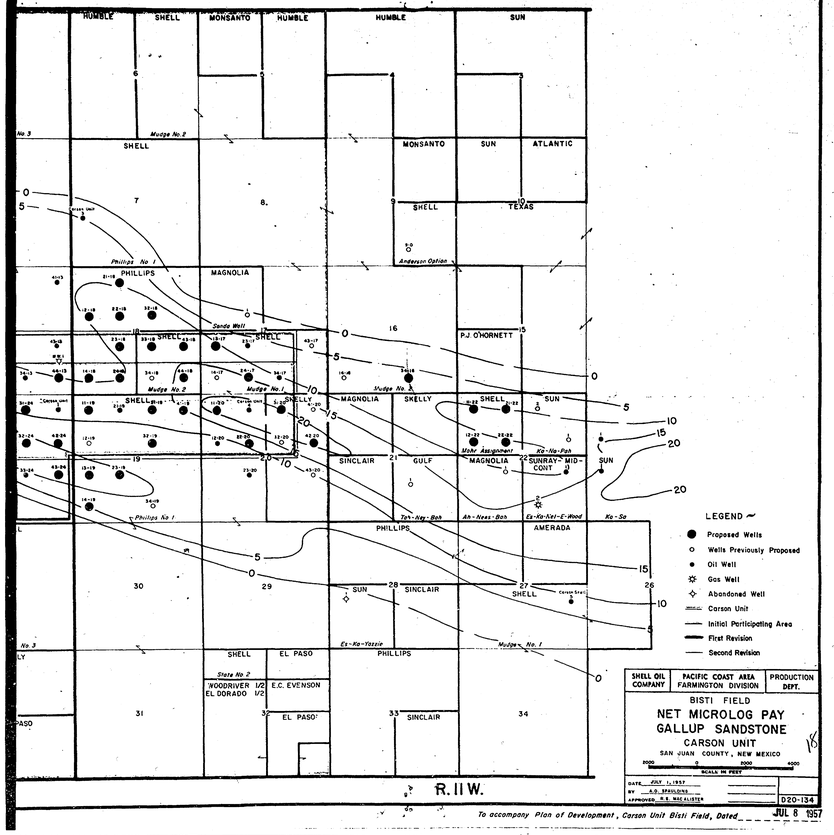
GULF OIL CORPORATION
ROCKY MOUNTAIN PRODUCTION ZONE
DENVER, COLORADO

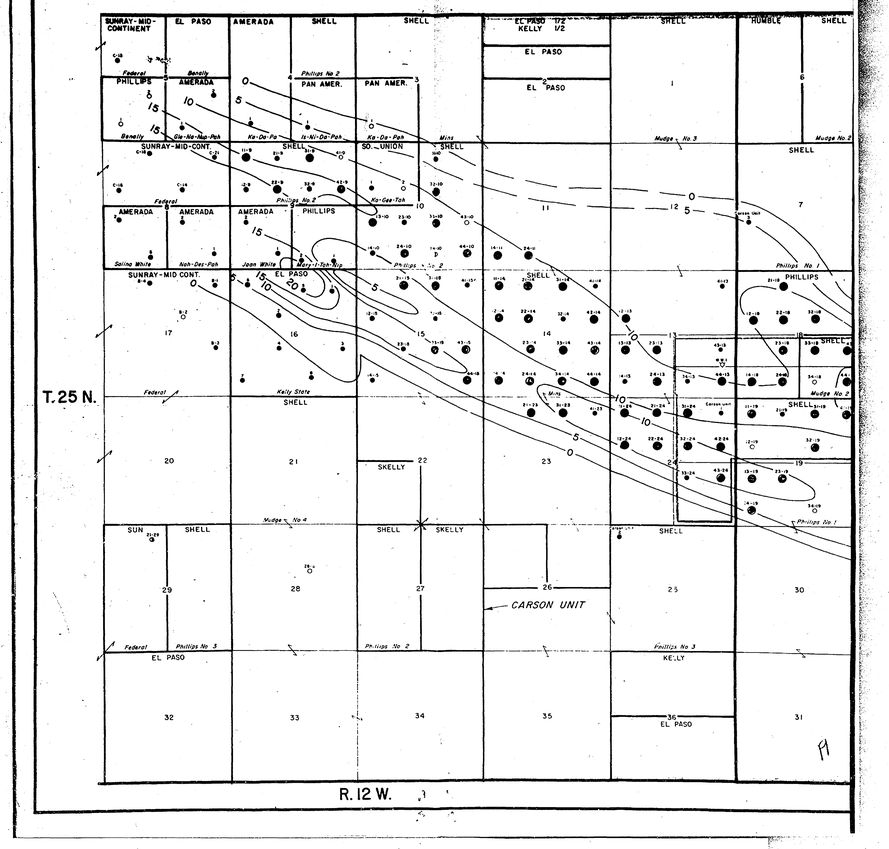
CARSON AREA
T 24 & 25 N - R 10 & 11 W
SAN JUAN CO., NEW MEXICO

- OIL WELL
- GAS WELL
- WELL LOCATION
- PERMITTED LOCATION UNDER APPLICATION

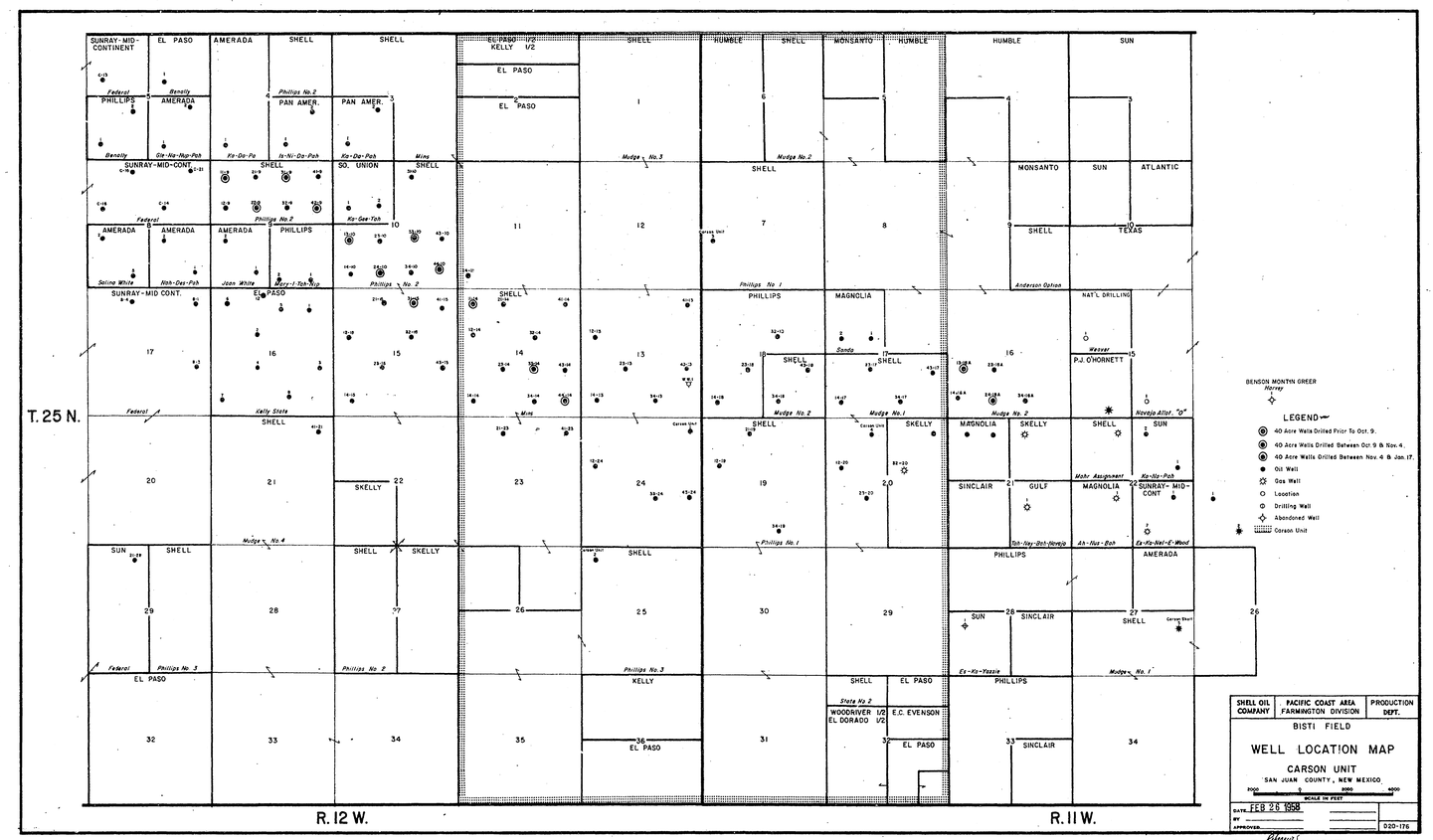
N

217





278



SHELL EXHIBIT No. 1

SUNRAY MID-CONTINENT OIL COMPANY
EXHIBIT NO. 7 CASE NO. 1308

SUNRAY MID-CONTINENT OIL CO
BISTI LOWER GALLUP OIL POOL
San Juan County, New Mexico
Scale 1"=1"
Prepared by
Engineering Department
Date Jan 31st 1958

LEGEND
FEDERAL
STATE
NAVAJO

67.7 %
23.3 %
9.0 %

T 24 N
T 25 N
T 26 N
R 10 W
R 11 W
R 12 W
R 13 W
R 14 W

DRILLING SCHEDULE
CARSON UNIT PLAN OF DEVELOPMENT
DATE JUL 8 1957

1957
1958

M.E. [illegible]

SHELL OIL COMPANY
DRILLING DEVELOPMENT
BISTI FIELD
SAN JUAN COUNTY, NEW MEXICO
80 Acre Units
40 Acre Units

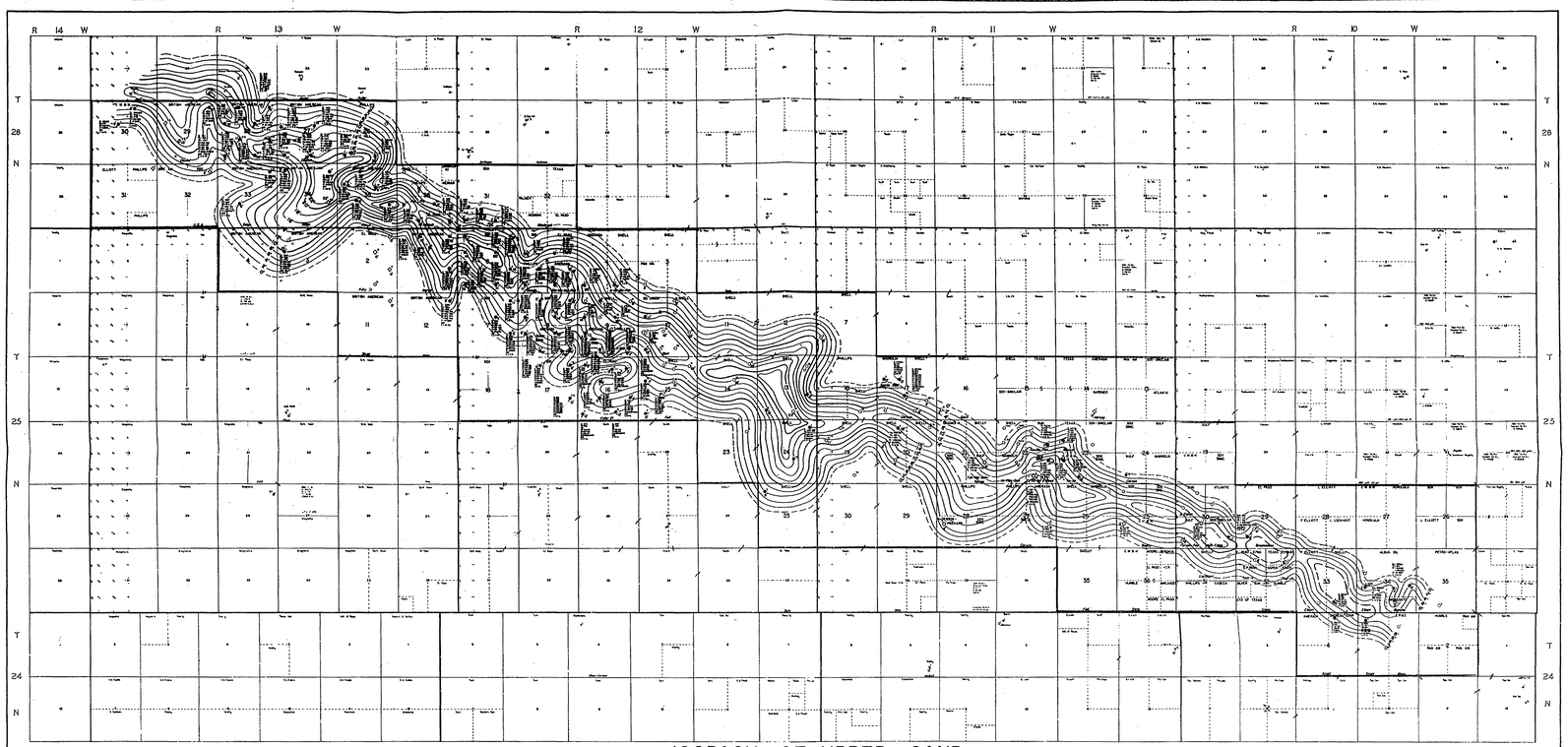
1957 1958
FARMINGTON, NEW MEXICO
FEBRUARY 26, 1958

NMOCC ORDER NO. R-1068-B
NMOCC ORDER NO. R-1068-A
NMOCC ORDER NO. R-1068

Case 1308 Sunray Exhibit #2

17

379



ISOPACH OF UPPER SAND

LOWER GALLUP FORMATION

BASED ON MICROLOG SEPARATION

CONTOUR INTERVAL 2'

SUNRAY MID-CONTINENT OIL COMPANY
EXHIBIT NO. 5 CASE NO. 1308

SUNRAY MID-CONTINENT OIL CO
BISTI LOWER GALLUP OIL POOL
Portions of
Township 25 & 26 N., Ranges 11 & 12 W., N.M.P.M.
County San Juan, State New Mexico
SCALE 1" = 1320'
PREPARED BY EXPLORATION DRAFTING SECTION

C2-163

280

SCHLUMBERGER WELL SURVEYING CORPORATION
Electrical Log

COMPANY SHELL OIL COMPANY
WELL CARSON #1
FIELD WILDCAT
LOCATION SEC. 24-25N-12W
COUNTY SAN JUAN
STATE NEW MEXICO

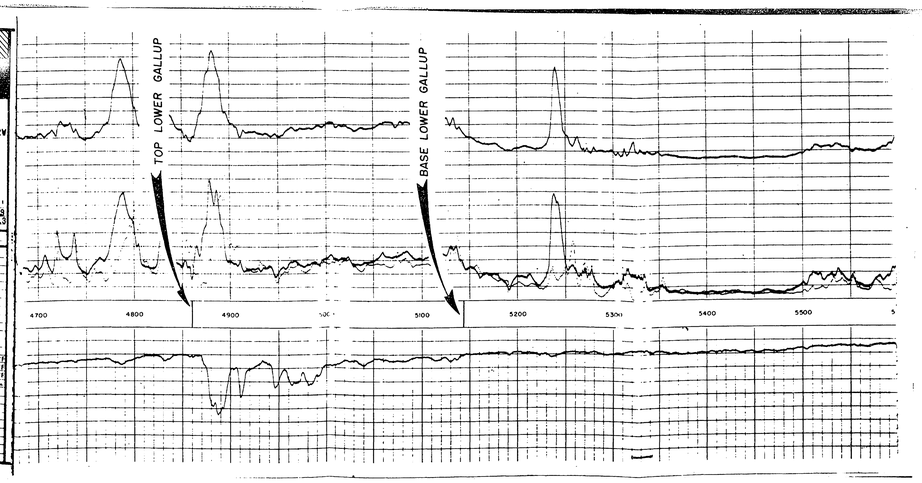
Location of Well
660' FR N/L
660' FR E/L
SEC. 24-25N-12W

ES (ML)

Elevation: D.F. 6436'
K.B. 6438'
or G.L. 6427.5

FILING No.

COMPANY SHELL OIL COMPANY
WELL CARSON #1
FIELD WILDCAT
COUNTY SAN JUAN N.M.

RUN No.	TWO									
Date	8-11-55									
First Reading	5980									
Last Reading	5015									
Feet Measured	965									
Csg. Schlum.	227									
Csg. Driller	228									
Depth Reached	5981									
Bottom Driller	5980									
Depth Datum	KB									
Mud Mat.	CHEM									
" Density	9.6									
" Viscosity	64									
" Resist.	2.60 @ 83°F	@	°F	@	°F	@	°F	@	°F	
" Res. Bht	1.30 @ 135°F	@	°F	@	°F	@	°F	@	°F	
" pH	10 @ °F	@	°F	@	°F	@	°F	@	°F	
" Wtr. Loss	2 CC 30 min.	CC 30 min.		CC 30 min.		CC 30 min.		CC 30 min.		
Max. Temp. °F	135									
Bit Size	7 7/8"									
Spogs.—AM	15'									
A M	64'									
AO	181'8"									
Opr. Rig Time	2 HRS									
Truck No.	2783 FARM									
Recorded By	HAMILTON									
Witnessed By	KNIGHT									

SUNRAY MID-CONTINENT OIL COMPANY
EXHIBIT NO. 2 CASE NO. 1308