Case No:
2903
Large
Exhibits

SCHLUMBERGER

LATEROLOG

SCHLUMBERGER WELL SURVEYING CORPORATION

COUNTY LEA
FIELD or LOCATION UNDESIGNATED
WELL # 1 GULF STATE
COMPANY COASTAL STATES GAS PRODUCING COMPANY

COMPANY COASTAL STATES GAS PRODUCING COMPANY
WELL # 1 GULF STATE
FIELD UNDESIGNATED
LOCATION SEC. 20-17S-36E
COUNTY LEA
STATE NEW MEXICO

Other Surveys
SGR, MLL

Location of Well
1980' FROM N/L
2310' FROM W/L

Ex 3
Cs 2903

Elevation: K.B.: 3890.2
D.F.: 3888.7
or G.L.: 3875.8

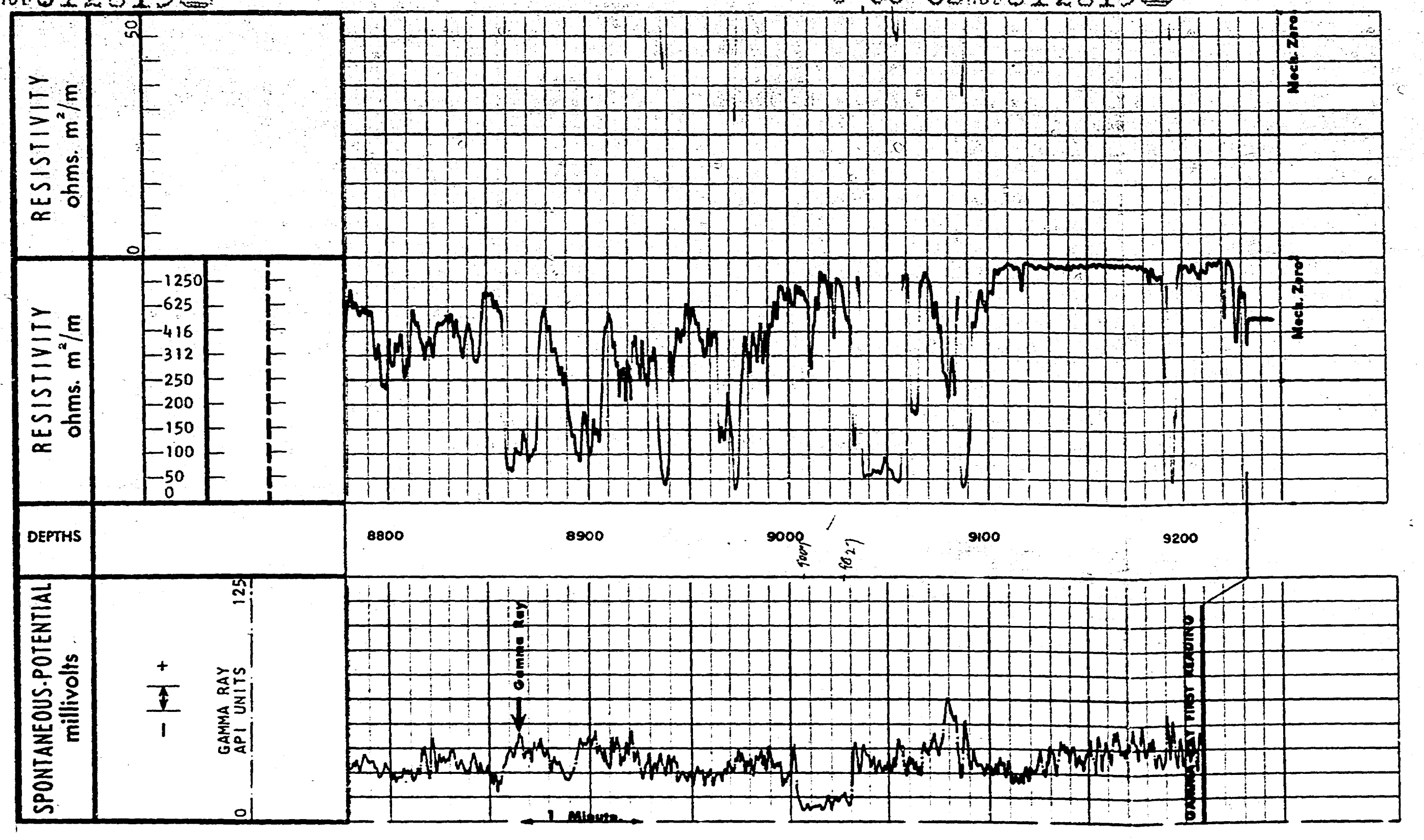
FOLD HERE

Log Depths Measured From KB 14.4 Ft. above GL

RUN No.	ONE		
Date	8-6-63		
First Reading	9233		
Last Reading	8800	Fluids	
Feet Measured	433		
Csg. Schlum.	-		
Csg. Driller	3520		
Depth Reached	9238		
Bottom Driller	9235		
Mud Nat.	SALT GEL, STARCH		
Dens. | Visc.	9.1 | 35	|	|
Mud Resist.	.073 @ 80 °F	@ °F	@ °F
" Res. BHT	.048 @ 130 °F	@ °F	@ °F
" pH	6.0 @ °F	@ °F	@ °F
" Wtr. Loss	9.4 CC 30 min	CC 30 min	CC 30 min
" Rmf	.067 @ 80 °F	@ °F	@ °F
" Rmc	- @ °F	@ °F	@ °F
Bit Size	7 7/8"		
Laterolog 3	o = 6" ℓ = 5'	o = ℓ =	o = ℓ =
Laterolog 7	o = n =	o = n =	o = n =
Opr. Rig Time	1 HOUR		
Truck No.	3701-HOBBS		
Recorded By	BROWN		
Witness	STATON		

REMARKS

8-06-63 HDB 012815
8-06-63 HDB 012815



RESISTIVITY ohms. m²/m
50
0
RESISTIVITY ohms. m²/m
1250
625
416
312
250
200
150
100
50
0
DEPTHS
SPONTANEOUS-POTENTIAL millivolts
GAMMA RAY API UNITS 0 125
+ −

COMPANY COASTAL STATES GAS PRODUCING CO.
WELL # 1 GULF STATE
FIELD UNDESIGNATED
COUNTY LEA STATE NEW MEXICO

Rm .043 @ 130 °F
Rmf .067 @ 80 °F
Rmc @ °F
BHT 130 °F

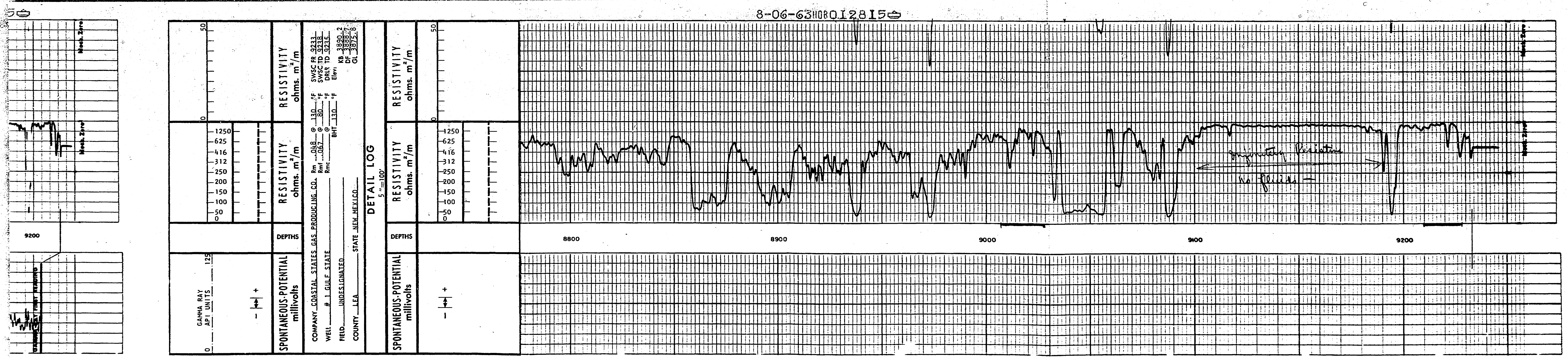
SWSC FR 9233
SWSC TD 9238
DRLR TD 9235
Elev: KB 3890.2
DF 3888.7
GL 3875.8

DETAIL LOG

5" = 100'

RESISTIVITY ohms. m²/m
50
0
RESISTIVITY ohms. m²/m
1250
625
416
312
250
200
150
100
50
0
DEPTHS
SPONTANEOUS-POTENTIAL millivolts
+ −

8-06-63H0B012815



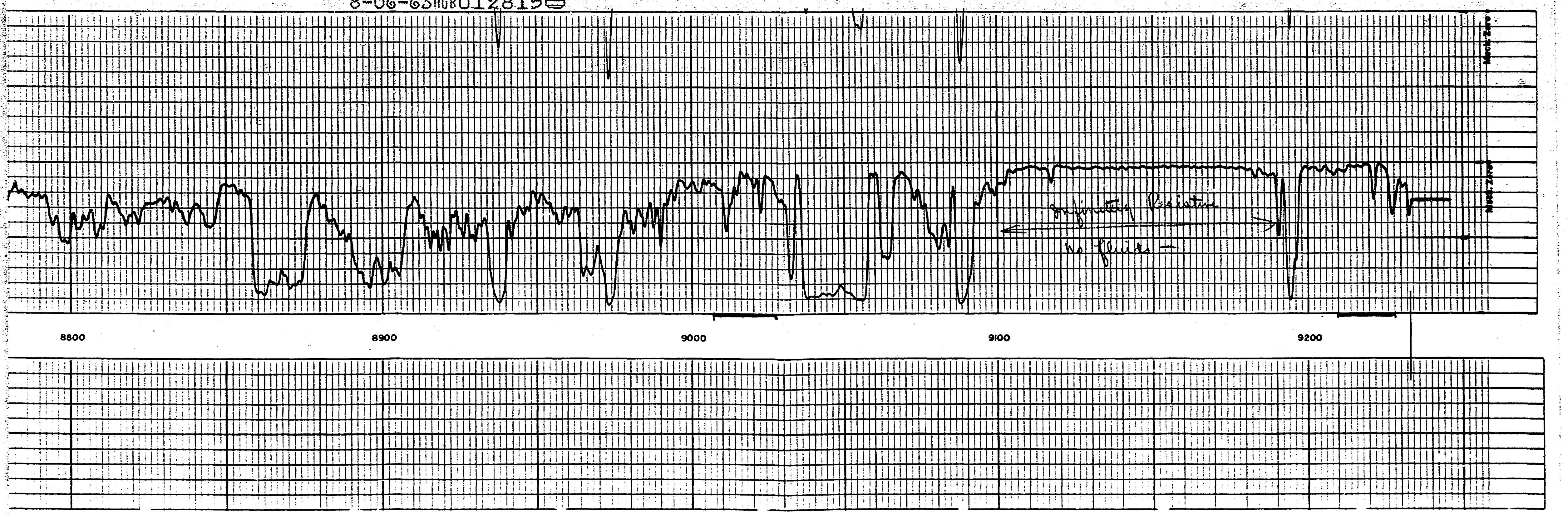
COMPANY COASTAL STATES GAS PRODUCING CO. Rm .048 @ 130 °F SWSC FR 9233
WELL # 1 GULF STATE Rmf .067 @ 80 °F SWSC TD 9238
FIELD UNDESIGNATED Rmc @ °F DRLR TD 9235
BHT 130 °F Elev: KB 3890.2
DF 3888.7
GL 3875.8
COUNTY LEA STATE NEW MEXICO

DETAIL LOG
5" = 100'

[illegible] Resistive
No fluids

V.R.N.C.F. MICROGRAPHICS
BEST AVAILABLE COPY

8-06-63H080I28I5



Impermeable Resistive

no fluids

SPONTANEOUS-POTENTIAL
millivolts

− +

DEPTHS

RESISTIVITY
ohms. m²/m

0
50
100
150
200
250
312
416
625
1250

RESISTIVITY
ohms. m²/m

0
50

COMPANY COASTAL STATES GAS PRODUCING CO.

WELL # 1 GULF STATE

FIELD UNDESIGNATED

COUNTY LEA STATE NEW MEXICO

Rm .048 @ 130 °F
Rmf .067 @ 80 °F
Rmc @ °F
BHT 130 °F

SWSC FR 9233
SWSC TD 9238
DRLR TD 9235
Elev: KB 3890.2
DF 3888.7
GL 3875.8

SCHLUMBERGER

SONIC LOG

COUNTY LEA
FIELD or LOCATION UNDESIGNATED
WELL # 1 GULF STATE
COMPANY COASTAL STATES GAS PRODUCING COMPANY

COMPANY COASTAL STATES GAS PRODUCING COMPANY
WELL # 1 GULF STATE
FIELD UNDESIGNATED
LOCATION SEC. 20-17S-36E
COUNTY LEA
STATE NEW MEXICO

Other Surveys
LL, MLL

Location of Well
1980' FROM N/L
2310' FROM W/L

Ex 2
Cx 2923

Elevation: K.B.: 3890.2
D.F.: 3888.7
or G.L.: 3875.8

Log Depths Measured From KB 14.4 Ft. above GL

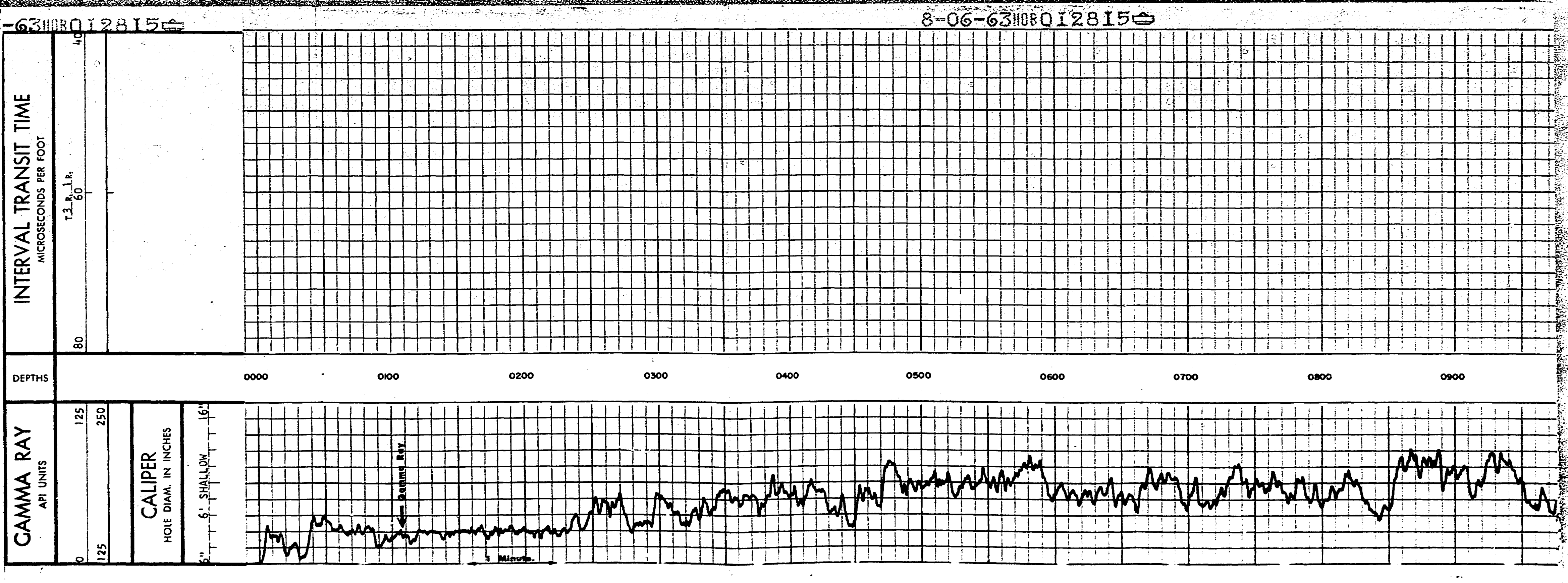
RUN No.	ONE		
Date	8-6-63		
First Reading	9229		
Last Reading	0	Lithology porosity	
Feet Measured	9229		
Csg. Schlum.	3523		
Csg. Driller	3520		
Depth Reached	9238		
Bottom Driller	9235		
Mud Nat.	SALT GEL STARCH		
Dens. | Visc.	9.1 | 35	|	|
Mud Resist.	.073 @ 80 °F	@ °F	@ °F
" Res. BHT	.048 @ 130 °F	@ °F	@ °F
" pH	6.0 @ °F	@ °F	@ °F
" Wtr. Loss	9.4 CC 30 min	CC 30 min	CC 30 min
" Rmf	.067 @ 80 °F	@ °F	@ °F
Bit Size	7 7/8"		
Spacing:			
T 3 R₁ 1 R₂	CSG. To TD	To	To
T R₁ R₂	To	To	To
Opr. Rig Time	3 HOURS		
Truck No.	3701-HOBBS		
Recorded By	BROWN		
Witness	STATON		

REMARKS VLC No.: X3 GR: B 64 448 82.5 800 TC 1 LOG SENS. 500 SPEED 42/84 FPM
VLS No.: X1 NOT CENTRALIZED
VLP No.: X4

FOLD HERE

Velocity (feet per second) = 1,000,000 / Interval Transit Time (microseconds per foot)

8-06-63 HOBQ12815



N.M.O.C.C. MICROGRAPHICS

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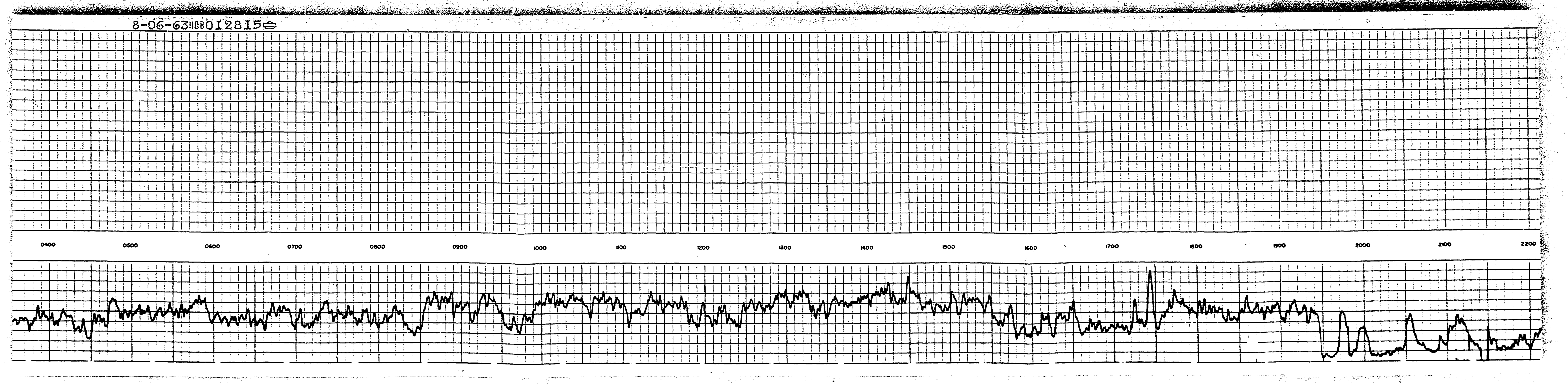

N.M.R.C.P. MICROGRAPHICS

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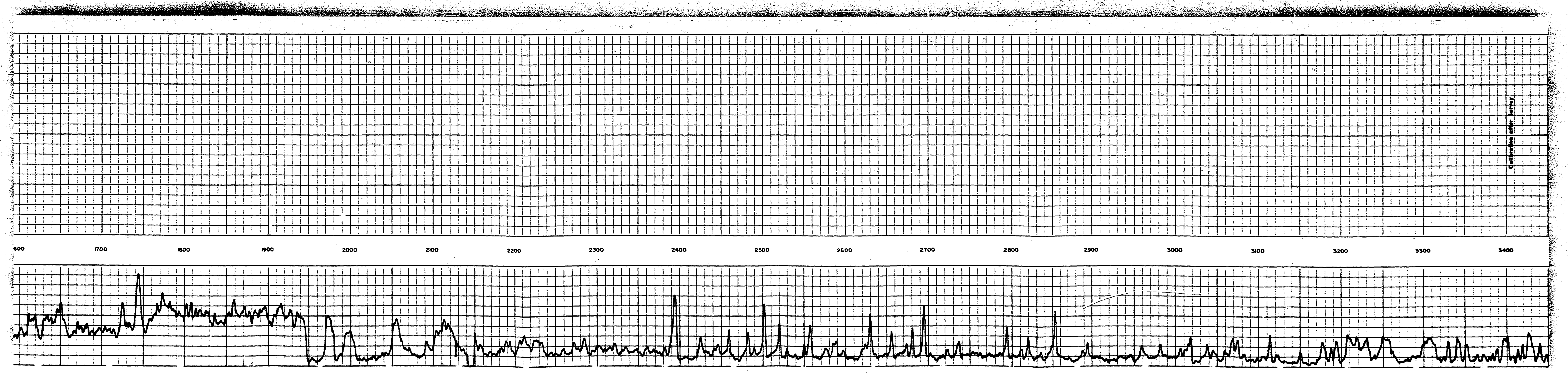
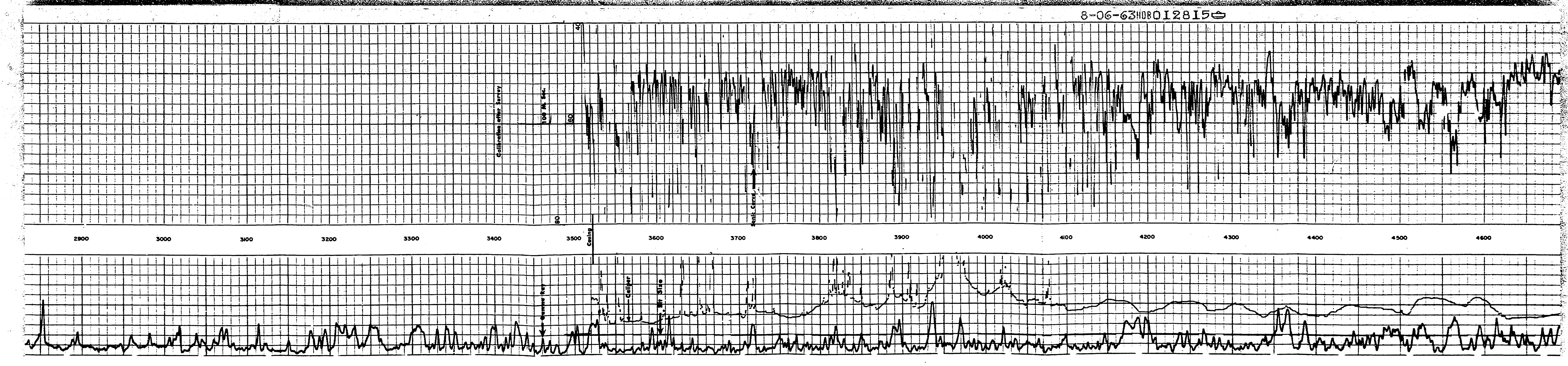

Calibration after Survey
600
1700
1800
1900
2000
2100
2200
2300
2400
2500
2600
2700
2800
2900
3000
3100
3200
3300
3400

8-06-63H08012815



U.S.N.C.F. MICROGRAPHICS

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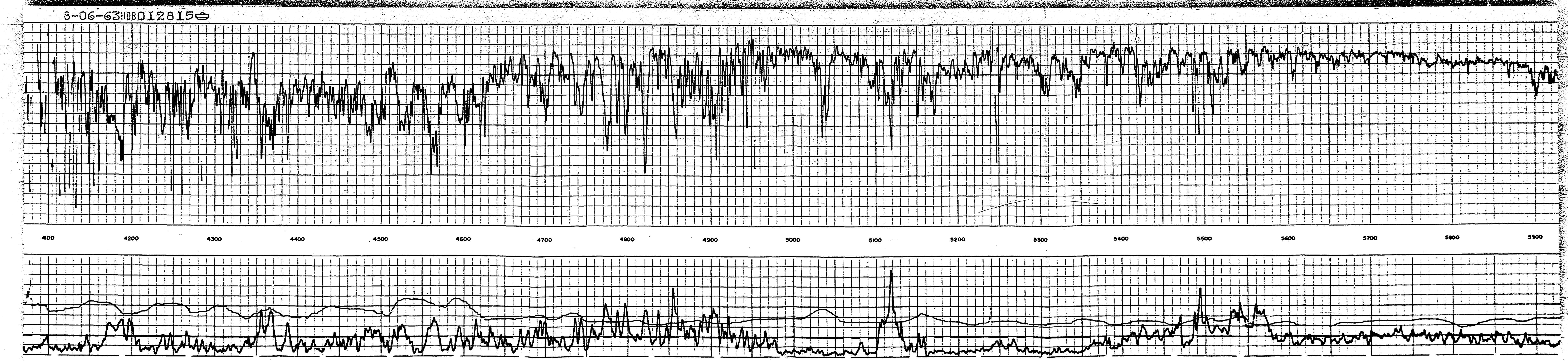

N.R.M.C.F. MICROGRAPHICS

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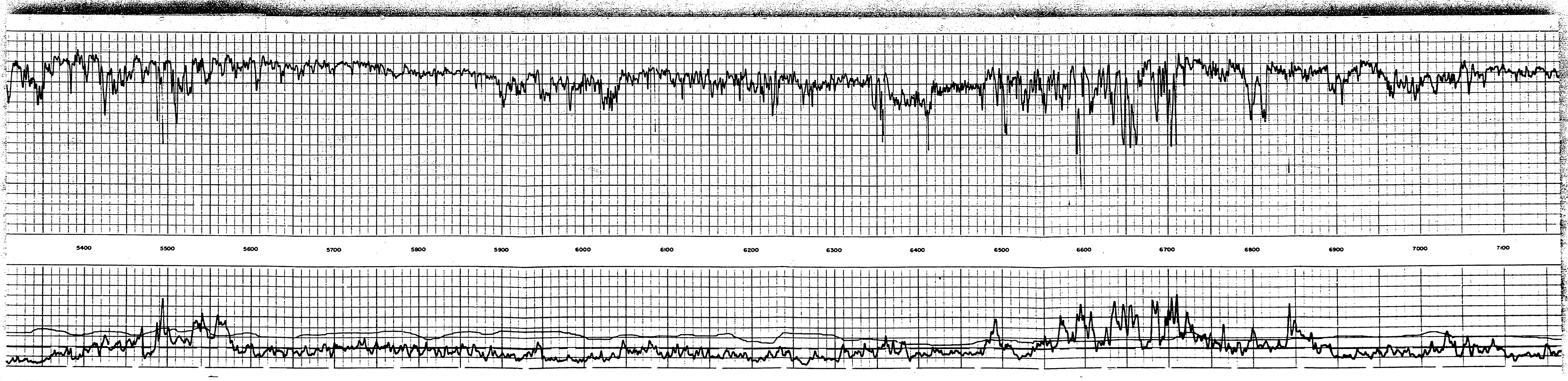
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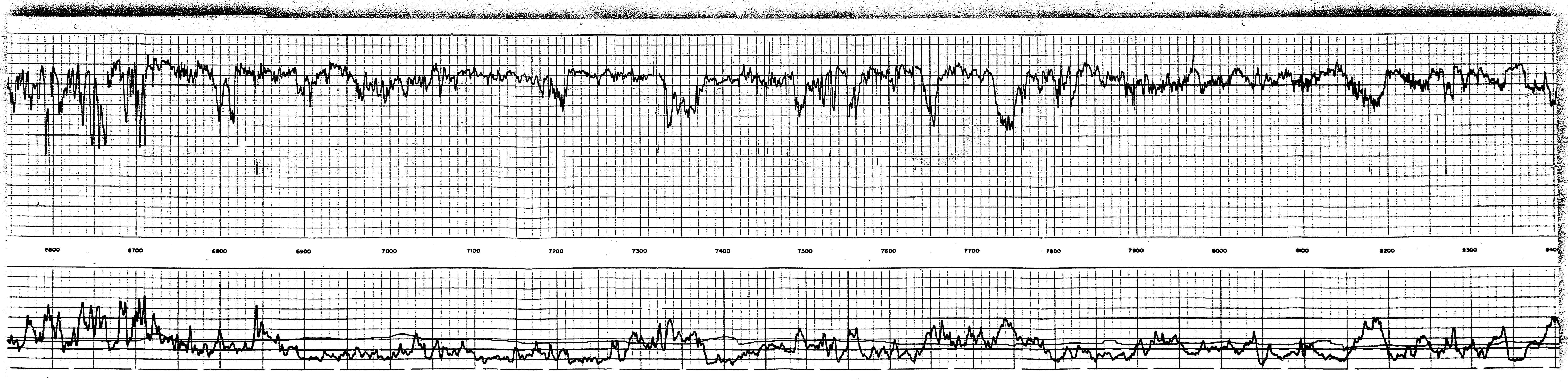
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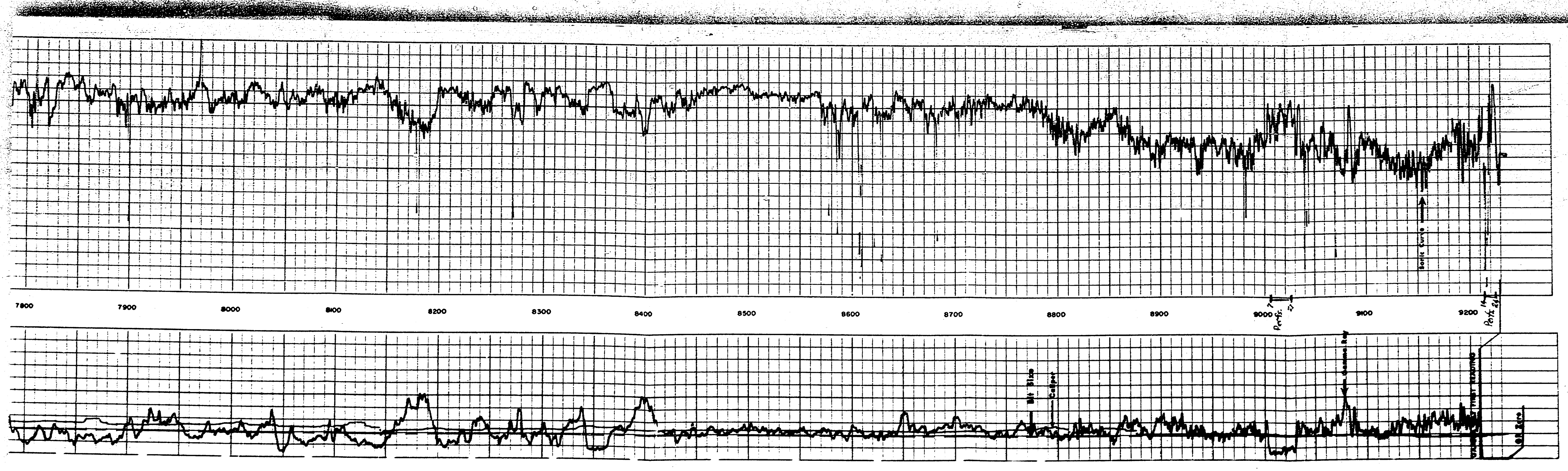


6" 6' SHALLOW 16"

CALIPER
HOLE DIAM. IN INCHES

0 125
125 250

GAMMA RAY
API UNITS

DEPTHS

80 60 40

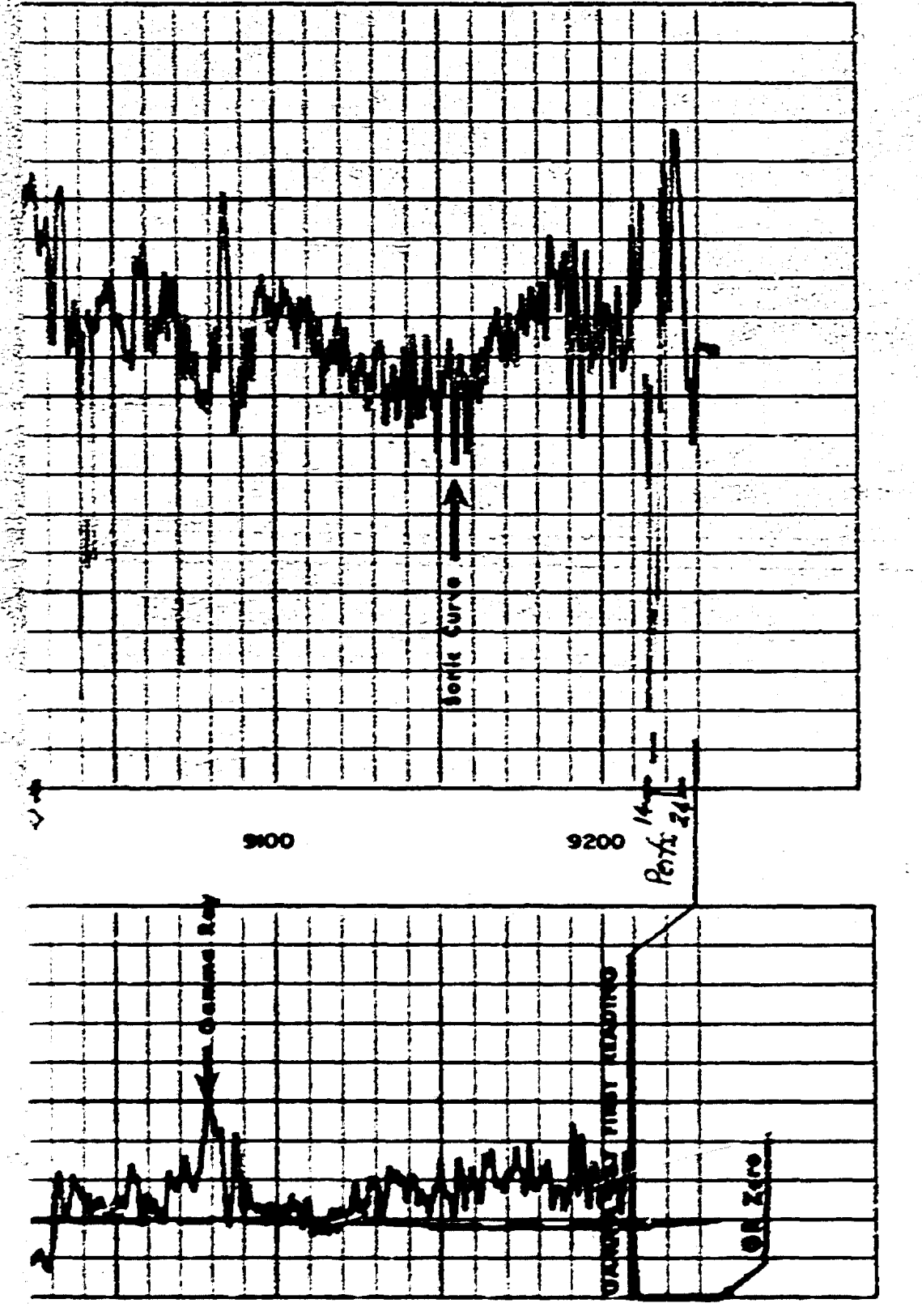
INTERVAL TRANSIT TIME
MICROSECONDS PER FOOT

COMPANY COASTAL STATES GAS PRODUCING COMPANY
WELL # 1 GULF STATE
FIELD UNDESIGNATED
COUNTY LEA STATE NEW MEXICO

SWSC FR 9229
SWSC TD 9238
DRLR TD 9235
Elev: KB 3990.2
DF 3988.7
GL 3975.8

DETAIL LOG

5" = 100'



INTERVAL TRANSIT TIME
MICROSECONDS PER FOOT

40
60
80
T 3 R 1 R

DEPTHS

GAMMA RAY
API UNITS

0
125
125
250

CALIPER
HOLE DIAM. IN INCHES

6" 6' SHALLOW 16"

COMPANY COASTAL STATES GAS PRODUCING COMPANY
WELL # 1 GULF STATE
FIELD UNDESIGNATED
COUNTY LEA STATE NEW MEXICO

SWSC FR 9229
SWSC TD 9238
DRLR TD 9235
Elev: KB 3890.2
DF 3888.7
GL 3875.8

DETAIL LOG
5" = 100'

INTERVAL TRANSIT TIME
MICROSECONDS PER FOOT

40
60'
80
T 3 R 1 R

DEPTHS

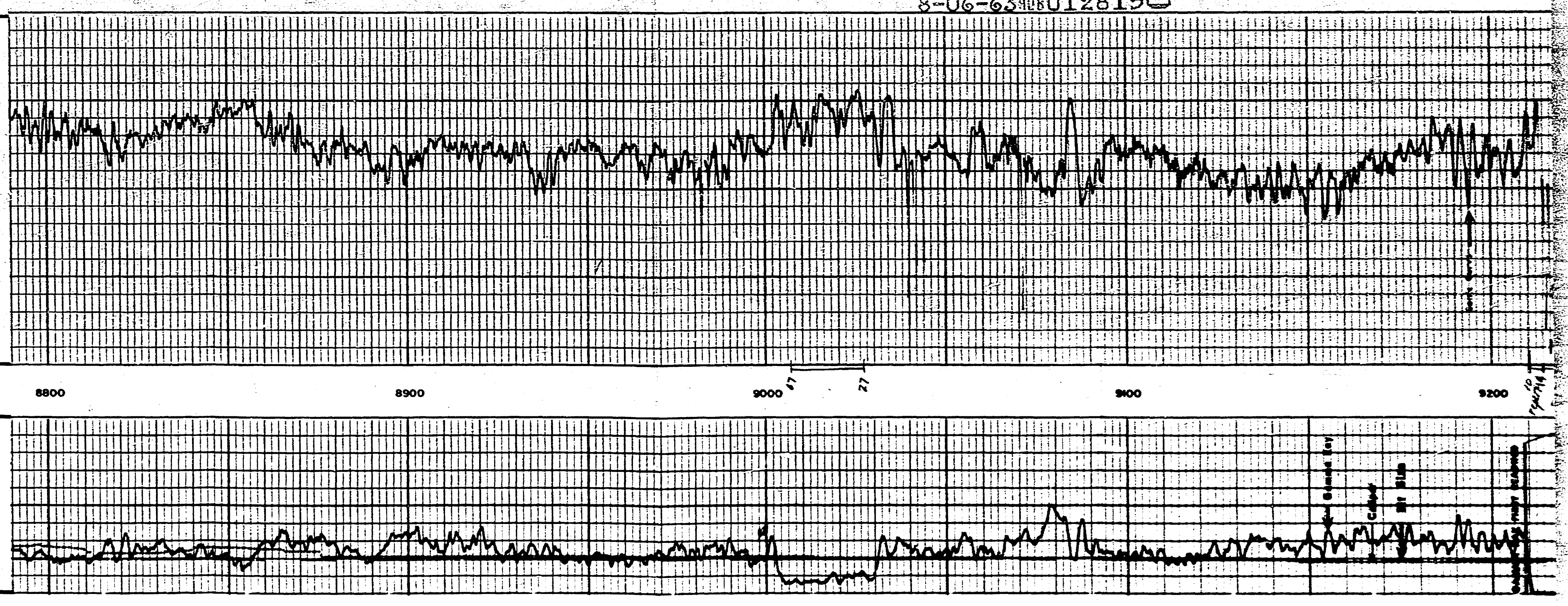
GAMMA RAY
API UNITS

0
125
125
250

CALIPER
HOLE DIAM. IN INCHES

6" 6' SHALLOW 16"

8-06-63 012815



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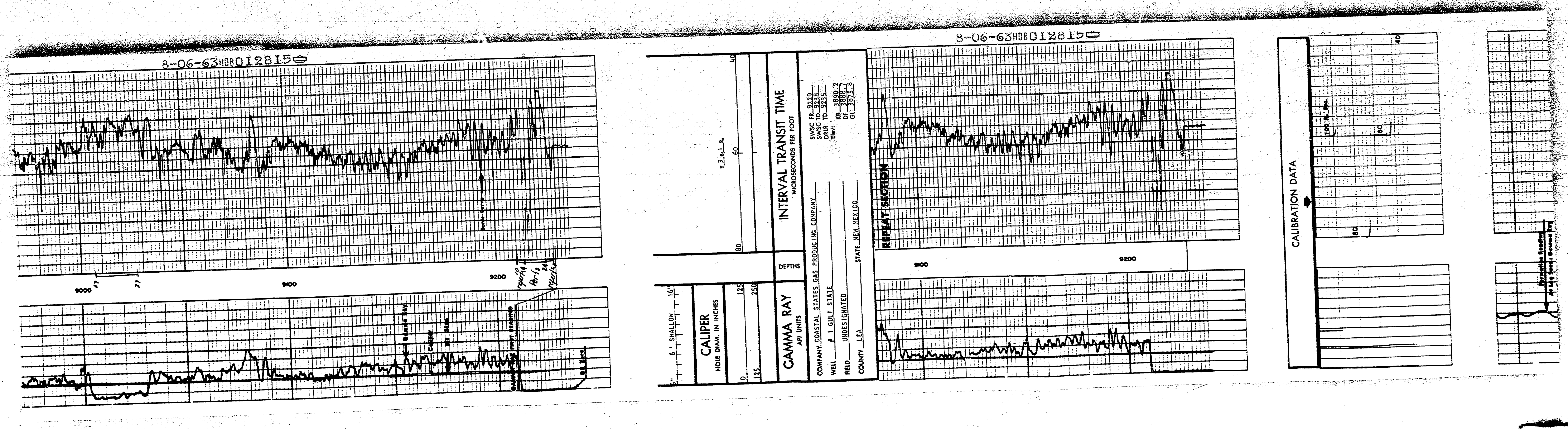


INTERVAL TRANSIT TIME
MICROSECONDS PER FOOT

T 3 R 1 R

80
60
40

DEPTHS

6" 6' SHALLOW 16'

CALIPER
HOLE DIAM. IN INCHES

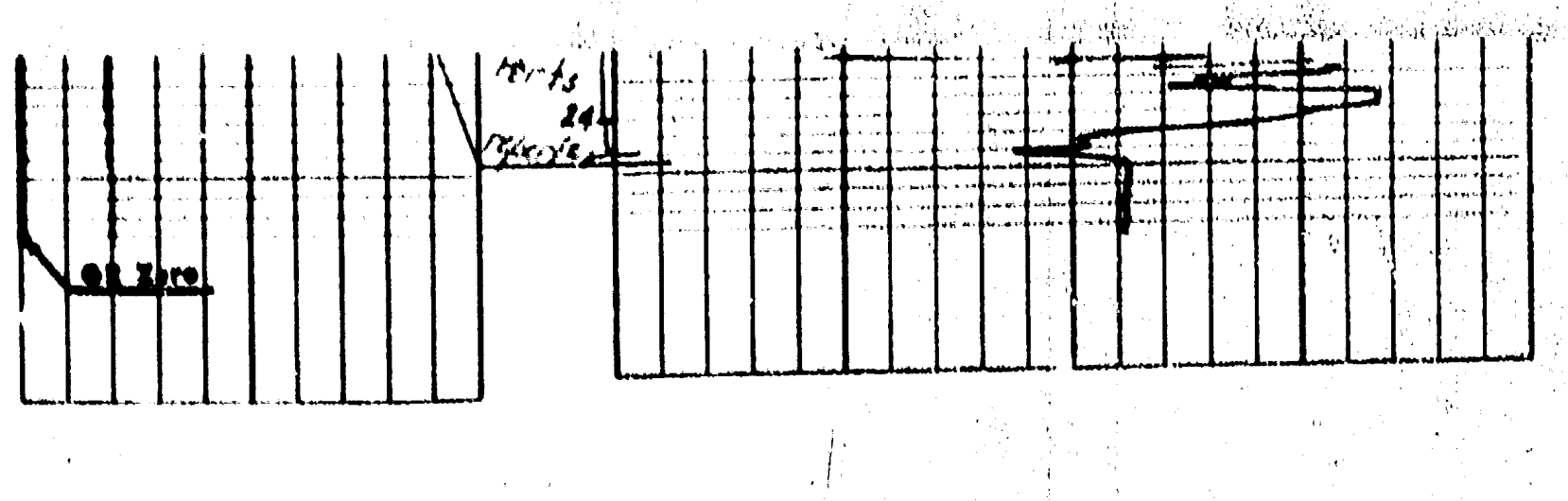
0 125
125 250

GAMMA RAY
API UNITS

SWSC FR 9229
SWSC TD 9238
DRLR TD 9235
Elev: KB 3890.2
DF 3888.7
GL 3875.8

COMPANY COASTAL STATES GAS PRODUCING COMPANY
WELL # 1 GULF STATE
FIELD UNDESIGNATED
COUNTY LEA STATE NEW MEXICO

REPEAT SECTION



6" 6' SHALLOW 16"

CALIPER
HOLE DIAM. IN INCHES

0	125
125	250

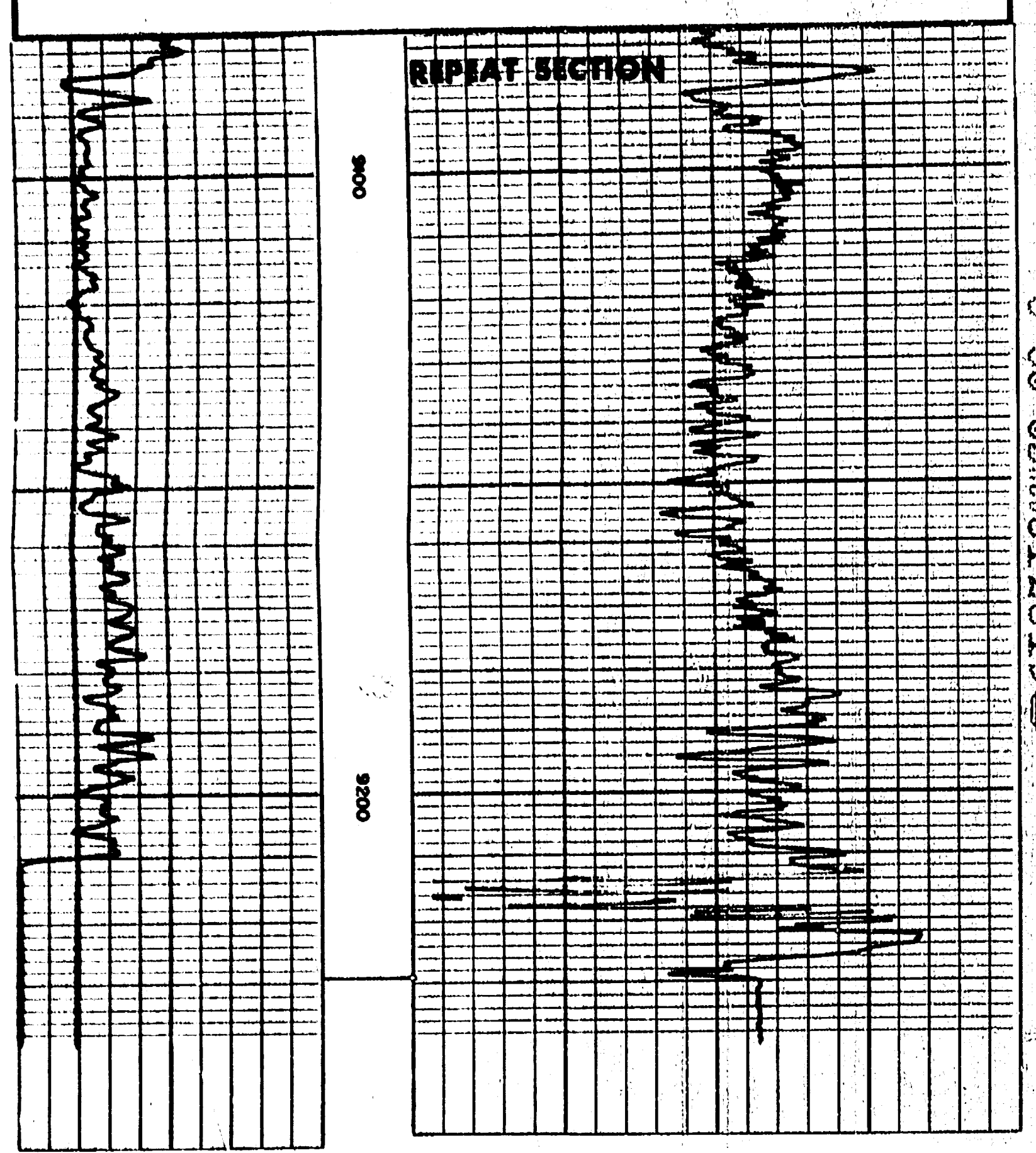
T3R1R

80	60	40

GAMMA RAY API UNITS	DEPTHS	INTERVAL TRANSIT TIME MICROSECONDS PER FOOT

COMPANY COASTAL STATES GAS PRODUCING COMPANY
WELL # 1 GULF STATE
FIELD UNDESIGNATED
COUNTY LEA STATE NEW MEXICO

SWS FR 9229
SWSC TD 9238
DRLR TD 9235
Elev: KB 3890.2
DF 3888.7
GL 3875.8



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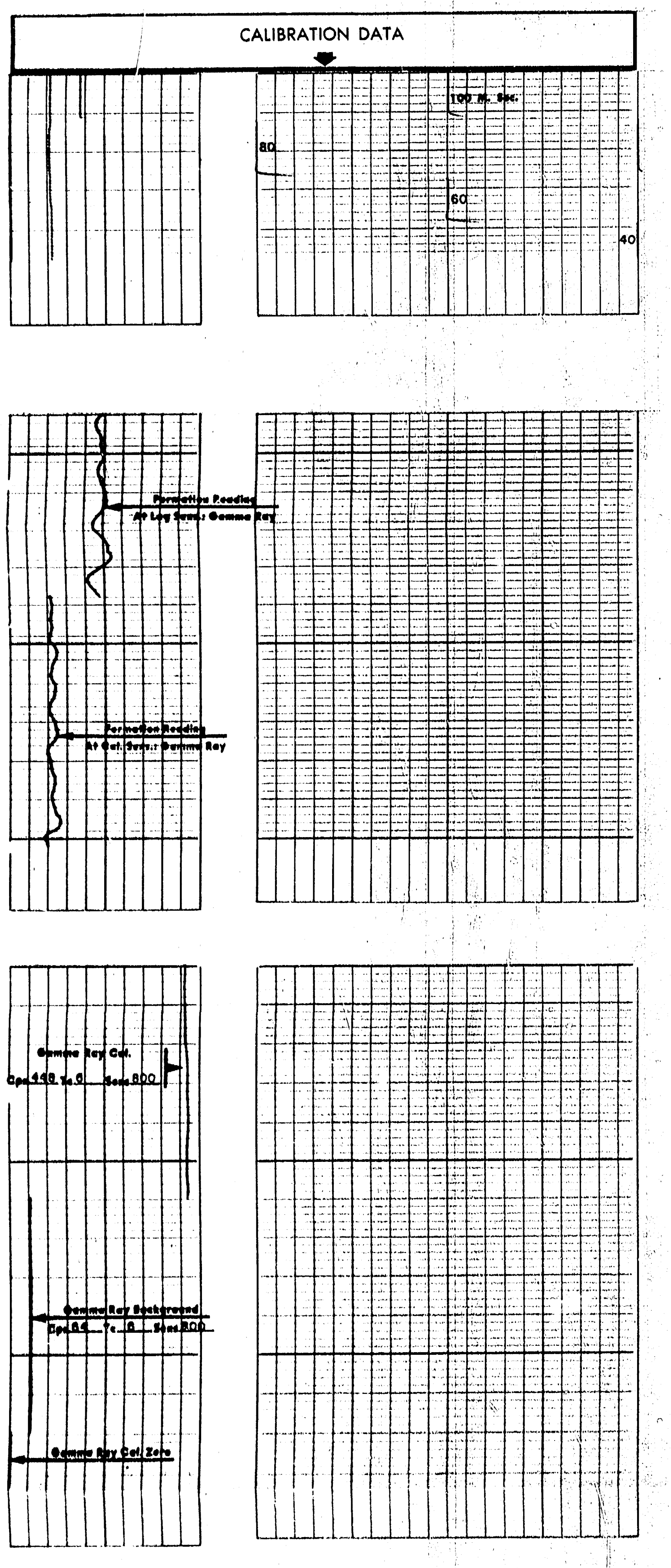


CALIBRATION DATA

COMPANY COASTAL STATES GAS PRODUCING COMPANY
WELL # 1 GULF STATE
FIELD UNDESIGNATED
COUNTY LEA STATE NEW MEXICO

SWSC FR 9229
SWSC TD 9238
DRLR TD 9235
Elev: KB 3890.2
DF 3888.7
GL 3875.8

N.M.O.C.C. MICROGRAPHICS
TRUE REPRODUCIBLE COPY

SCHLUMBERGER

MICROLATEROLOG

SCHLUMBERGER WELL SURVEYING CORPORATION

COUNTY LEA
FIELD or LOCATION UNDESIGNATED
WELL # 1 GULF STATE
COMPANY COASTAL STATES GAS PRODUCING COMPANY

COMPANY COASTAL STATES GAS PRODUCING COMPANY
WELL # 1 GULF STATE
FIELD UNDESIGNATED
LOCATION SEC. 20-17S-36E
COUNTY LEA
STATE NEW MEXICO

Other Surveys
SGR,LL

Location of Well
1980' FROM N/L
2310' FROM W/L

Ex 4
Ca 2903

Elevation: D.F. 3865
K.B. 3890
or G.L. 3875

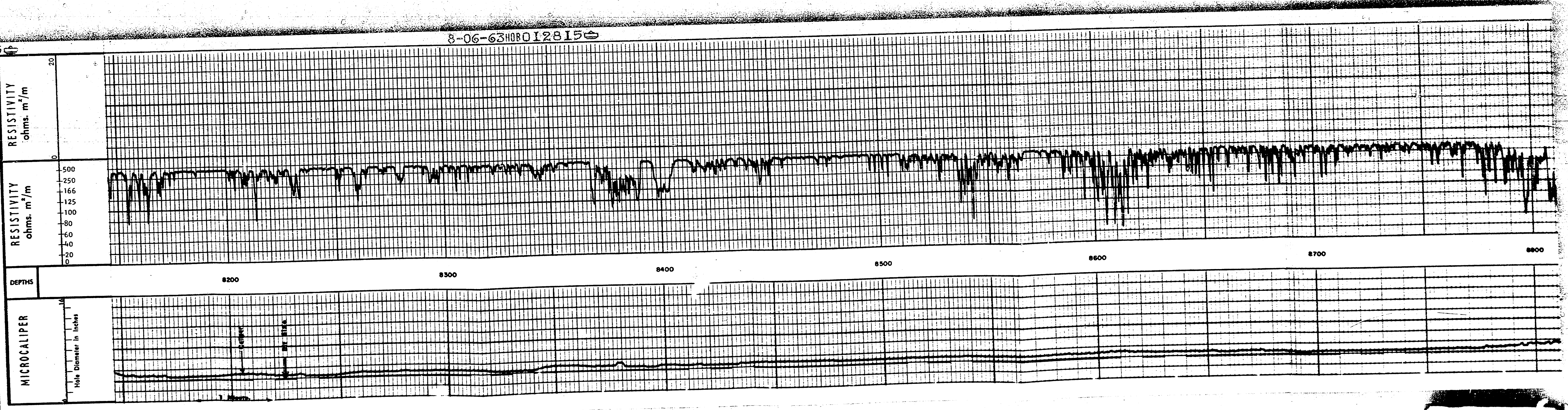
Log Depths Measured From KB 14.4 Ft. above GL

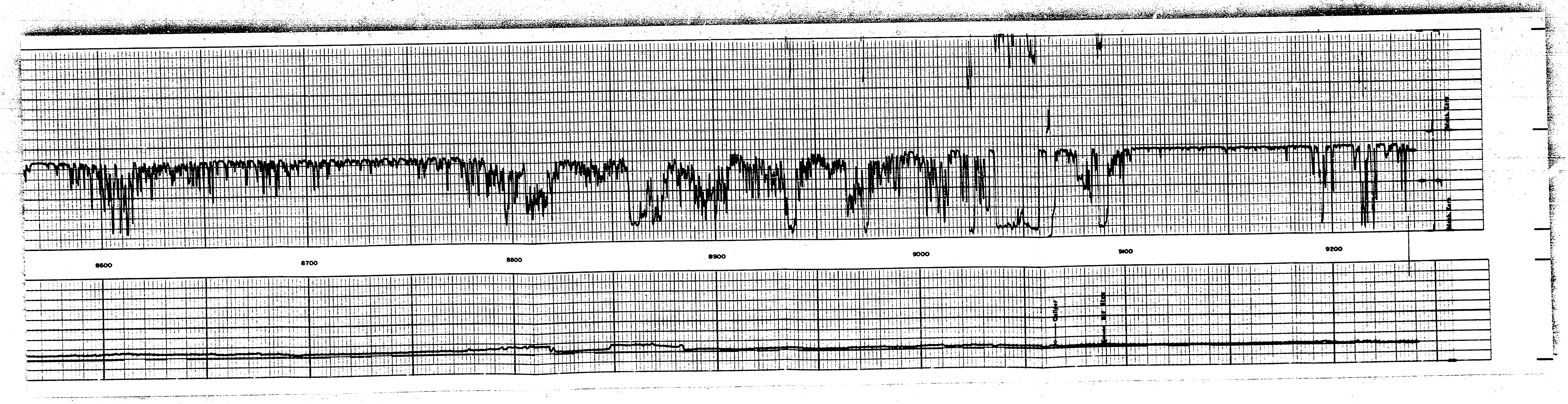
RUN No.	ONE		
Date	8-6-63	Staton	
First Reading	9237		
Last Reading	8200		
Feet Measured	1037		
Depth Reached	9238		
Bottom Driller	9235		
Mud Nat.	SALT GEL, STARCH		
Dens. / Visc.	9.1 / 35		
Mud Resist.	.073 @ 80 °F	@ °F	@ °F
" Res. BHT	.048 @ 130 °F	@ °F	@ °F
" pH	6.0 @ °F	@ °F	@ °F
" Wtr. Loss	9.4 CC 30 min	CC 30 min	CC 30 min
" Rmf	.067 @ 80 °F	@ °F	@ °F
" Rmc	- @ °F	@ °F	@ °F
Bit Size	7 7/8"		
Sonde Type	PML-B		
Pad Type	HYDRAULIC		
Opr. Rig Time	2 HOURS		
Truck No.	3701-HOBBS		
Recorded By	BROWN		
Witness	STATON		

FOLD HERE

REMARKS

8-06-63HOBO12815

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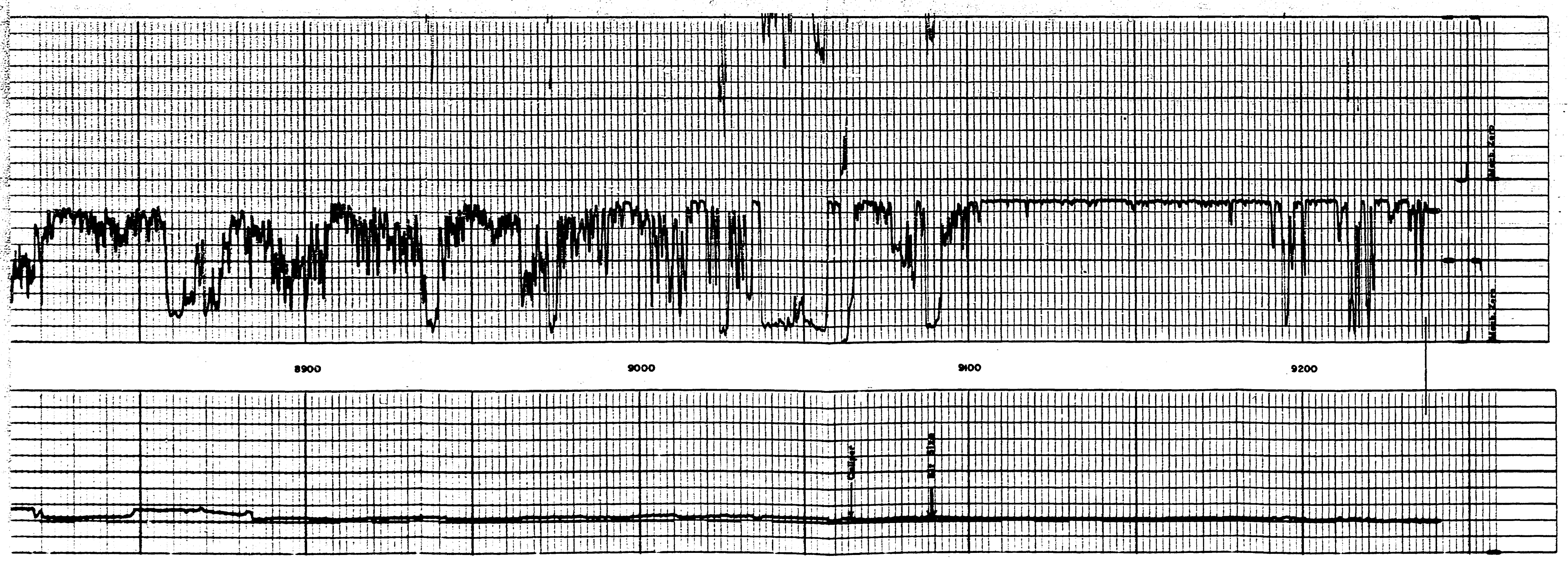
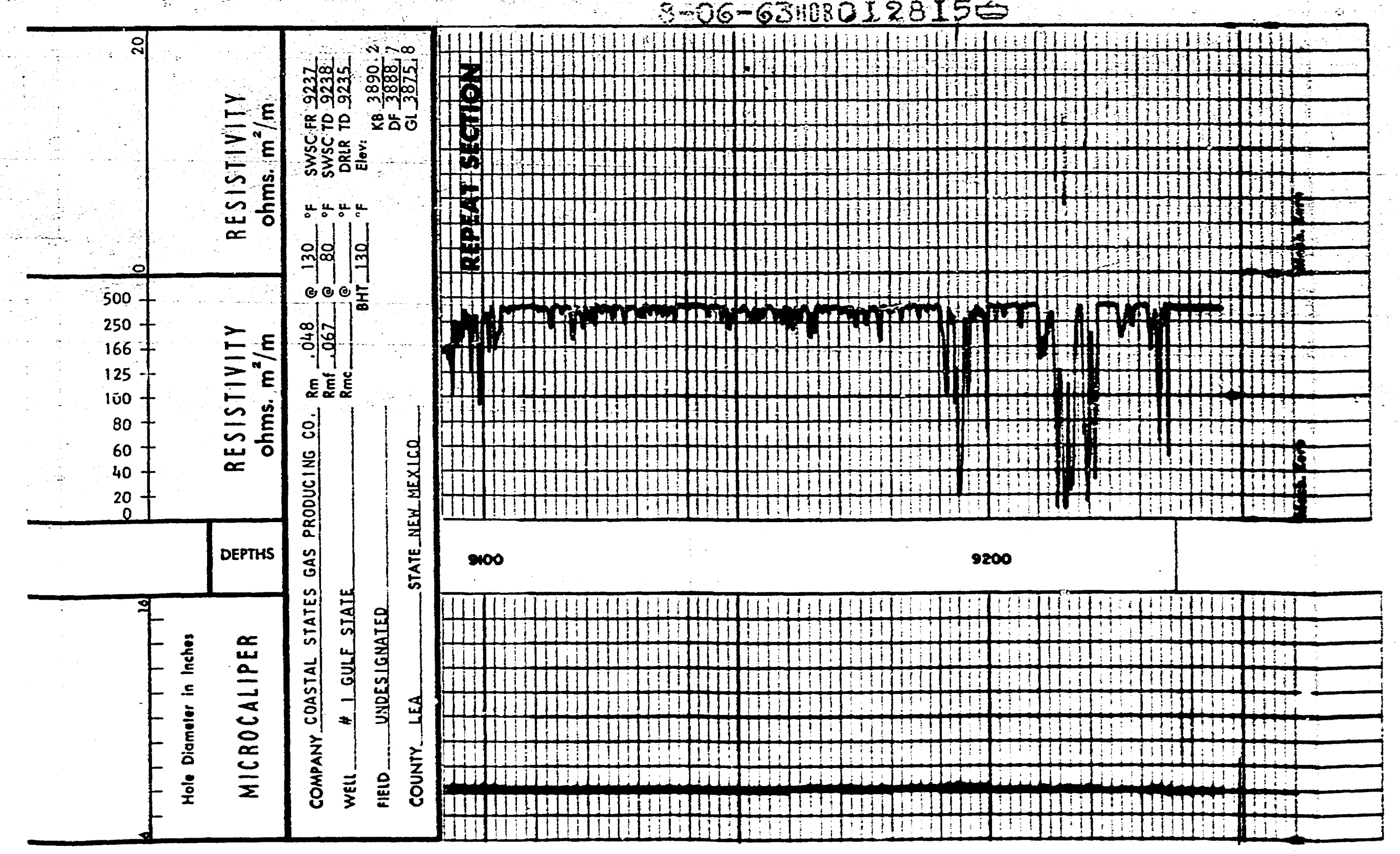
8800
8900
9000
9100
9200
Mech. Zero
Caliper
Bit Size

3-06-63H08012815G





COMPANY COASTAL STATES GAS PRODUCING CO.
WELL # 1 GULF STATE
FIELD UNDESIGNATED
COUNTY LEA STATE NEW MEXICO

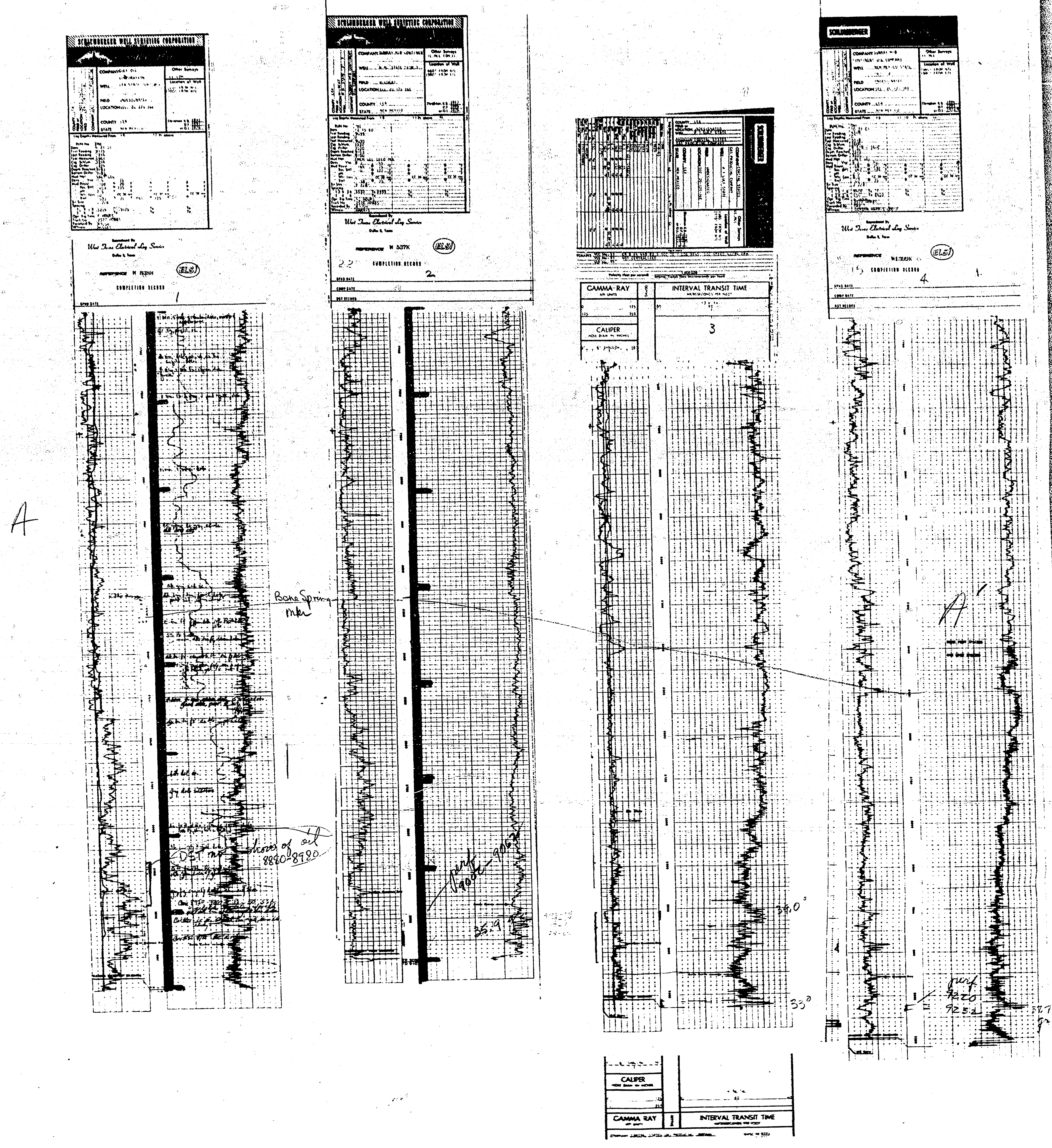
Rm .048 @ 130 °F
Rmf .067 @ 80 °F
Rmc @ °F
BHT 130 °F

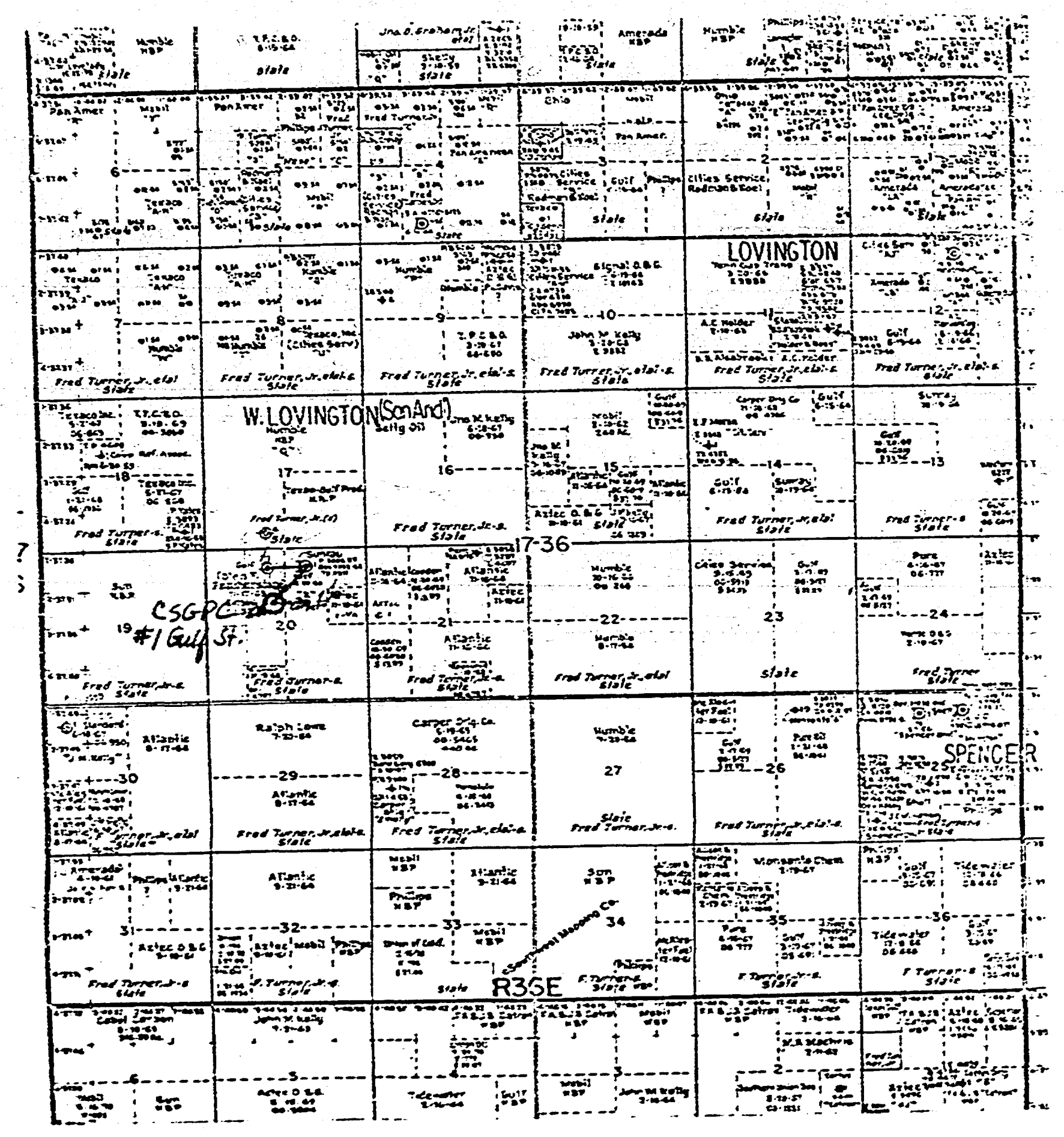
SWSC FR 9237
SWSC TD 9238
DRLR TD 9235
Elev: KB 3890.2
DF 3888.7
GL 3875.8

N.M.O.C.D. MICROGRAPHICS

BEST AVAILABLE COPY

X-Section

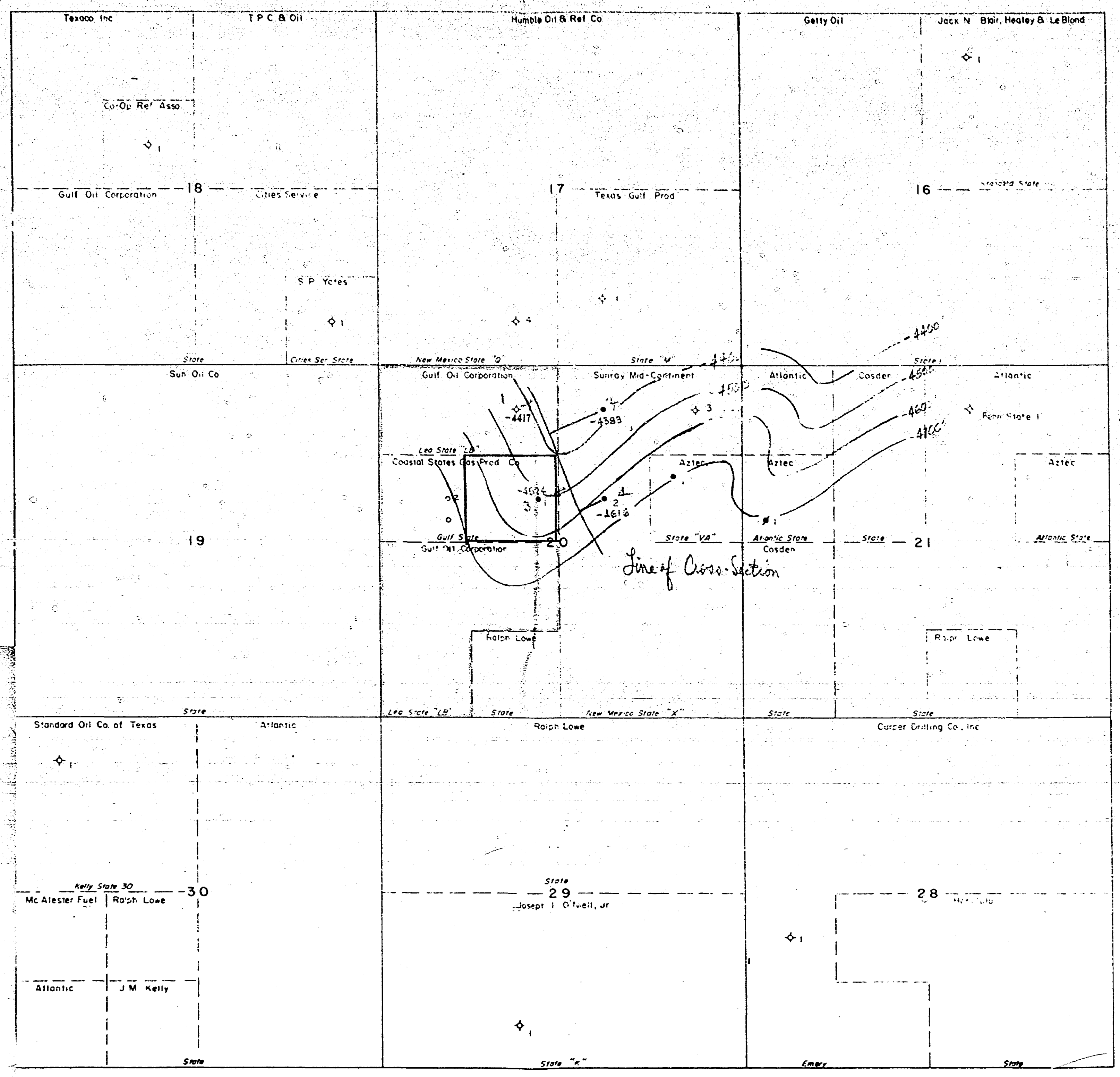



LOVINGTON
W. LOVINGTON (San And)
CSG#C
#1 Gulf St.
36
R35E
34
Fred Turner Jr. State

DOUBLE "A" ABO AREA

R 36 E

N.M.R.C.P. MICROGRAPHICS
BEST AVAILABLE COPY


Texaco Inc
T P C & Oil
Humble Oil & Ref Co
Getty Oil
Jack N Blair, Healey & Le Blond
Co-Op Ref Asso
18
Gulf Oil Corporation
Cities Service
17
Texas Gulf Prod
16
S P Yates
State
Cities Ser State
New Mexico State "Q"
State "M"
Sun Oil Co
Gulf Oil Corporation
Sunray Mid-Continent
Atlantic
Cosden
Atlantic
-4400
-4500
-4600
-4700
-4417
-4583
-4524
-4616
Penn State 1
Lea State "LB"
Coastal States Gas Prod Co
Aztec
Aztec
Aztec
19
Gulf State
Gulf Oil Corporation
20
State "VA"
Atlantic State
Cosden
State
21
Atlantic State
Line of Cross-Section
Ralph Lowe
Ralph Lowe
Lea State "LB"
State
New Mexico State "X"
State
State
Standard Oil Co. of Texas
Atlantic
Ralph Lowe
Carper Drilling Co., Inc
Kelly State 30
30
Mc Alester Fuel
Ralph Lowe
State
29
Joseph I. O'Neill, Jr
28
Atlantic
J M Kelly
State
State "K"
Emery
State

COASTAL STATES GAS PRODUCING CO.

LEASE MAP
T17S, R36E, N.M.P.M.
LEA COUNTY, NEW MEXICO

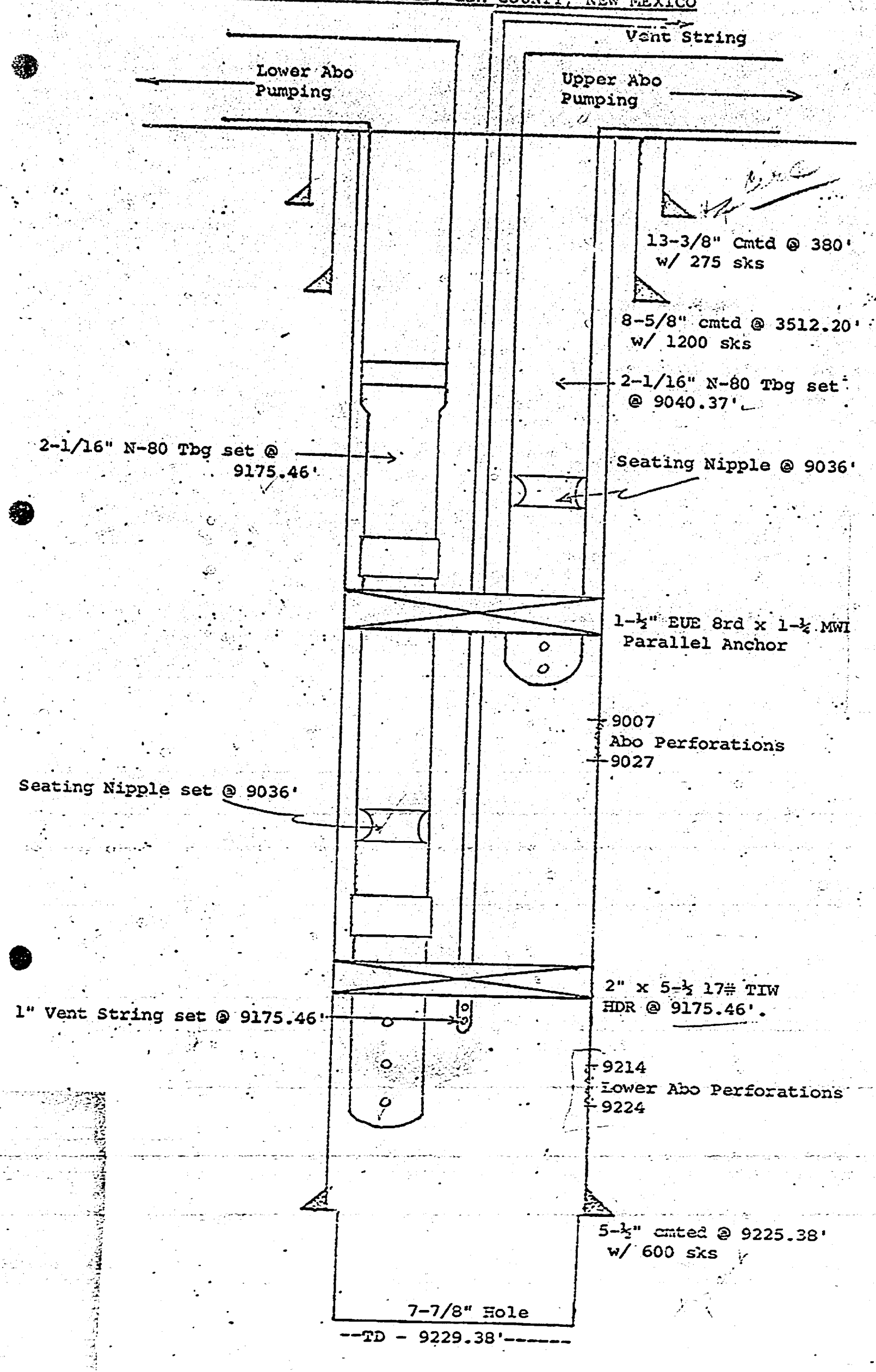
STRUCTURE TOP BONE SPRING

HOBBS NEW MEXICO

Drawn By
Checked By
Approved By
Date October 1963
Scale 1" = 1000'
File No
Drawing Number

N.M.O.C.D. MICROGRAPHICS
BEST AVAILABLE COPY

GULF STATE NO. 1
DOUBLE A ABO FIELD, LEA COUNTY, NEW MEXICO


Vent String
Lower Abo Pumping
Upper Abo Pumping
13-3/8" Cmtd @ 380' w/ 275 sks
8-5/8" cmtd @ 3512.20' w/ 1200 sks
2-1/16" N-80 Tbg set @ 9040.37'
2-1/16" N-80 Tbg set @ 9175.46'
Seating Nipple @ 9036'
1-½" EUE 8rd x 1-½ MWI Parallel Anchor
9007
Abo Perforations
9027
Seating Nipple set @ 9036'
2" x 5-½ 17# TIW HDR @ 9175.46'.
1" Vent String set @ 9175.46'
9214
Lower Abo Perforations
9224
5-½" cmted @ 9225.38' w/ 600 sks
7-7/8" Hole
--TD - 9229.38'------

NEW MEXICO OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO

6-1-56

PACKER-SETTING AFFIDAVIT
(Dual Completions)

STATE OF New Mexico)
)ss
County of Lea)

[illegible], being first duly sworn according to law, upon his oath deposes and says:

That he is of lawful age and has full knowledge of the facts herein below set out.

That he is employed by [illegible] Tool & Supply Company in the capacity of [illegible] and as such is its authorized agent.

That on October [illegible], 19 63, he personally supervised the setting of a [illegible] (Make and Type of Packer) in Coastal States [illegible] Producing Company (Operator)'s [illegible] (lease) Well No. 1, located in Unit Letter F, Section 20, Township 17, Range 36, NMPM, Lea County, New Mexico.

That said packer was set at a subsurface depth of [illegible] feet, said depth measurement having been furnished by [illegible] Tool & Supply Company.

That the purpose of setting this packer was to effect a seal in the annular space between the two strings of pipe where the packer was set so as to prevent the commingling, within the well-bore, of fluids produced from a stratum below the packer with fluids produced from a stratum above the packer. That this packer was properly set and that it did, when set, effectively and absolutely seal off the annular space between the two strings of pipe where it was set in such manner as that it prevented any movement of fluids across the packer.

[illegible] Tool & Supply Company
(Company)

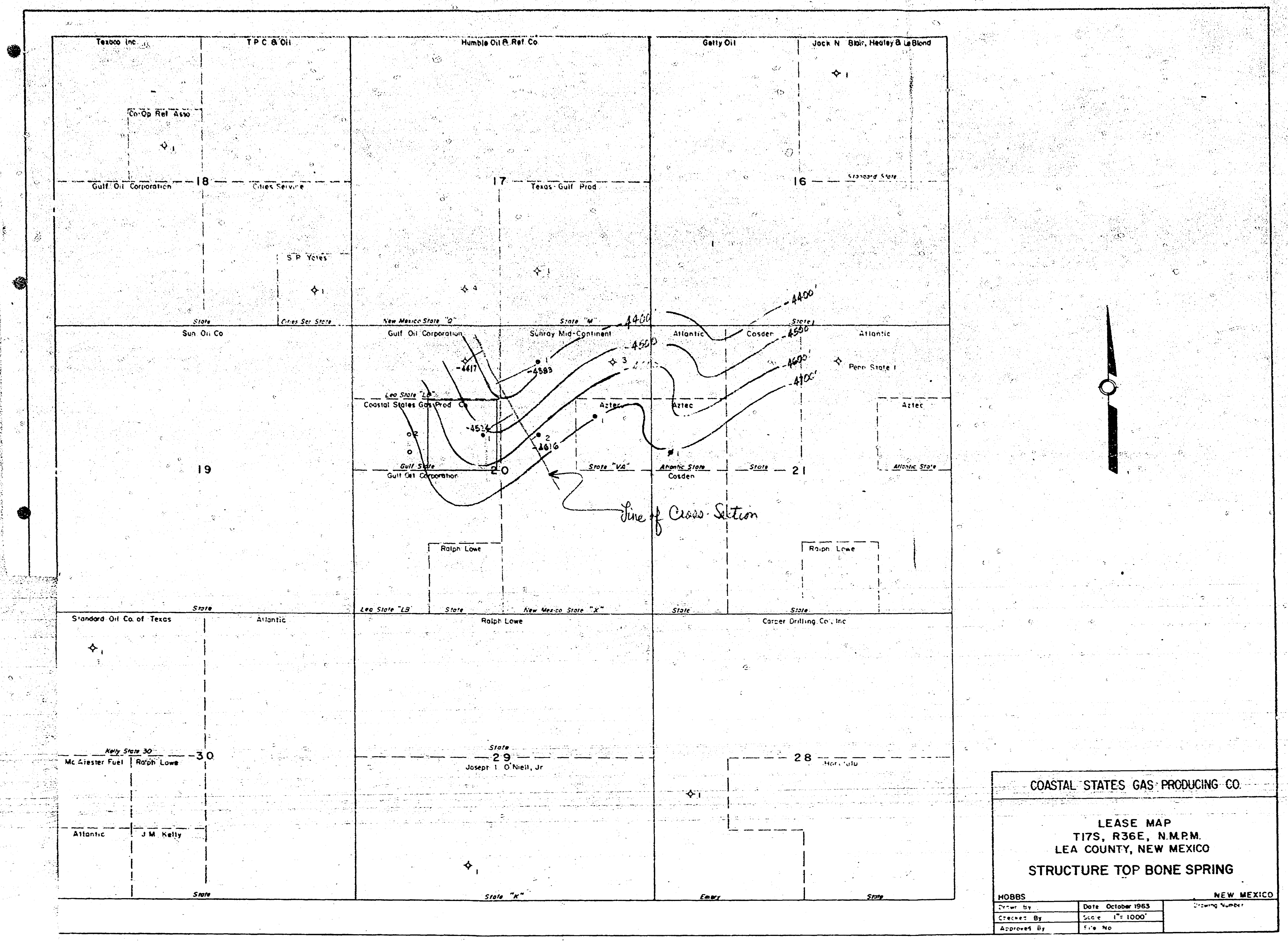
(Its Agent)

Subscribed and sworn to before me this the 7th day of October AD, 19 63.

Notary Public in and for the County of Lea

My Commission Expires 7/12/66.

N.M.O.C.C. MICROGRAPHICS
BEST AVAILABLE COPY


Texaco Inc
T P C & Oil
Co-Op Ref Asso
18
Gulf Oil Corporation
Cities Service
S P Yates
Humble Oil & Ref Co
17
Texas Gulf Prod
Getty Oil
Jack N. Blair, Healey & LeBlond
16
Standard State
State
New Mexico State "Q"
State "M"
Sun Oil Co
Gulf Oil Corporation
Sunray Mid-Continent
Atlantic
Cosden
Atlantic
Penn State 1
Lea State "LB"
Coastal States Gas Prod Co
Aztec
Aztec
Aztec
-4417
-4383
-4524
-4616
-4400'
-4400'
-4500
-4500
-4600'
-4700'
19
20
21
Gulf State
Gulf Oil Corporation
State "VA"
Atlantic State
State
Cosden
Atlantic State
Line of Cross Section
Ralph Lowe
Ralph Lowe
Lea State "LB"
State
New Mexico State "X"
State
State
Standard Oil Co. of Texas
Atlantic
Ralph Lowe
Carper Drilling Co., Inc
Kelly State 30
30
Mc Alester Fuel
Ralph Lowe
29
Joseph I. O'Neill, Jr
28
Atlantic
J M Kelly
State
State "K"
Emery
State

COASTAL STATES GAS PRODUCING CO.

LEASE MAP
T17S, R36E, N.M.P.M.
LEA COUNTY, NEW MEXICO

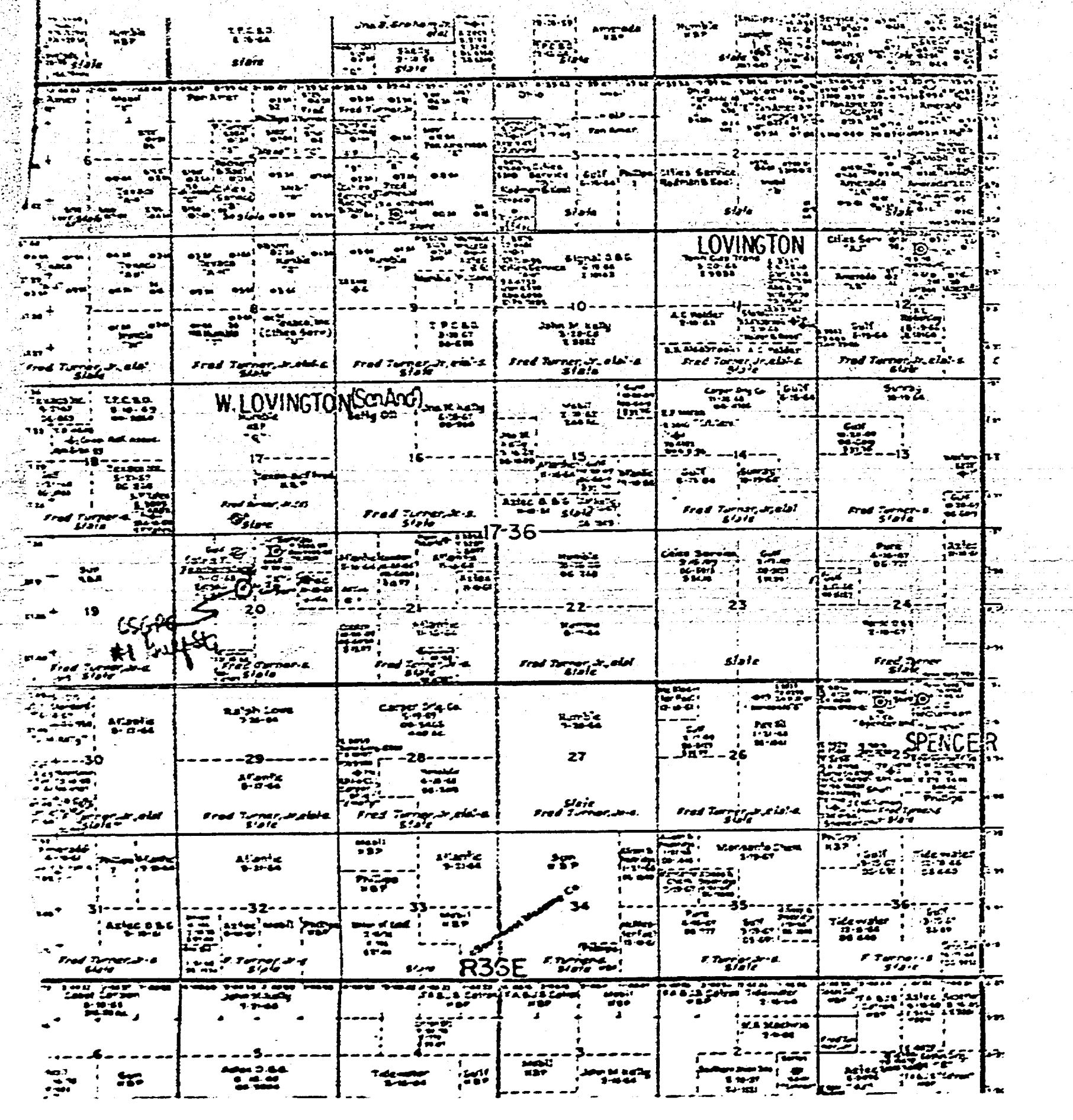
STRUCTURE TOP BONE SPRING

HOBBS NEW MEXICO

Drawn By	Date October 1963	Drawing Number
Checked By	Scale 1" = 1000'	
Approved By	File No	

Cross Section

X-Section



LOVINGTON
W. LOVINGTON (San And)
17-36
SPENCER
R35E
Fred Turner, Jr. etal
State

DOUBLE "A" ABO AREA

R 36 E