

|                            |             |                  |                        |                                                                                                                                                                                                                                                 |                            |                            |
|----------------------------|-------------|------------------|------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|----------------------------|
| Flow Time                  | 1st Min. 15 | 2nd Min. 60      | Date                   | 6-6-64                                                                                                                                                                                                                                          | Ticket Number              | 399343 S                   |
| Closed In Press. Time      | 1st Min. 45 | 2nd Min. 60      | Kind of Job            | OPEN HOLE                                                                                                                                                                                                                                       | Halliburton District       | PRATT                      |
| Pressure Readings          | Field       | Office Corrected | Tester                 | G.L. SHAUERS                                                                                                                                                                                                                                    | Witness                    | DEAN CARTER                |
| Depth Top Gauge            | 3317 Ft.    | Blanked Off      | Drilling Contractor    | STICKLE DRILLING COMPANY                                                                                                                                                                                                                        |                            |                            |
| BT. P.R.D. No.             | 1830        | 12 Hour Clock    | Elevation              | 2255' DF                                                                                                                                                                                                                                        | Top Packer                 | 3330'                      |
| Initial Hydro Mud Pressure | 1768        | 1773             | Total Depth            | 3440'                                                                                                                                                                                                                                           | Bottom Packer              |                            |
| Initial Closed in Pres.    | 1105        | 1106             | Interval Tested        | 3330' - 3440' (16')                                                                                                                                                                                                                             | Formation Tested           | Tarkio                     |
| Initial Flow Pres.         | 37          | 1 45             | Casing or Hole Size    | 7 7/8"                                                                                                                                                                                                                                          | Casing Perfs. { Top Bot.   |                            |
| Final Flow Pres.           | 232         | 1 232            | Surface Choke          | 1"                                                                                                                                                                                                                                              | Bottom Choke               | 3/4"                       |
| Final Closed in Pres.      | 1058        | 1074             | Size & Kind Drill Pipe | 4 1/2" API FH                                                                                                                                                                                                                                   | Drill Collars Above Tester | 2 1/4" - 270'              |
| Final Hydro Mud Pressure   | 1750        | 1752             | Mud Weight             | 9.8                                                                                                                                                                                                                                             | Mud Viscosity              | 38                         |
| Depth Cen. Gauge           |             | Blanked Off      | Temperature            | 106 °F Est. °F Actual                                                                                                                                                                                                                           | Anchor Size & Length       | ID 3.84" X 50'             |
| BT. P.R.D. No.             |             | Hour Clock       | Depths Mea. From       | Kelly Bushing                                                                                                                                                                                                                                   | Depth of Tester Valve      | 60' - drill pipe 3316' Ft. |
| Initial Hydro Mud Pres.    |             |                  | TYPE                   | AMOUNT                                                                                                                                                                                                                                          | Depth Back Pres. Valve     |                            |
| Initial Closed in Pres.    |             |                  | Cushion                |                                                                                                                                                                                                                                                 |                            |                            |
| Initial Flow Pres.         | 1           |                  | Recovered              | 450                                                                                                                                                                                                                                             | Feet of muddy salt water.  |                            |
| Final Flow Pres.           | 2           |                  | Recovered              | 540                                                                                                                                                                                                                                             | Feet of salt water.        |                            |
| Final Closed in Pres.      | 1           |                  | Recovered              |                                                                                                                                                                                                                                                 | Feet of                    |                            |
| Final Hydro Mud Pres.      | 2           |                  | Recovered              |                                                                                                                                                                                                                                                 | Feet of                    |                            |
| Depth Bot. Gauge           | 3436 Ft.    | Blanked Off      | Oil A.P.I. Gravity     |                                                                                                                                                                                                                                                 | Water Spec. Gravity        |                            |
| BT. P.R.D. No.             | 1831        | 12 Hour Clock    | Gas Gravity            |                                                                                                                                                                                                                                                 | Surface Pressure           | psi                        |
| Initial Hydro Mud Pres.    | 1847        | 1841             | Tool Opened            | 6:12 A.M.                                                                                                                                                                                                                                       | A.M. P.M. Tool Closed      | 9:12 A.M. A.M. P.M.        |
| Initial Closed in Pres.    | 1162        | 1169             | Remarks                | Opened tool for a 15 minute first flow with a fair blow. Closed tool for a 45 minute initial closed in pressure. Reopened tool for a 60 minute second flow with a fair blow through test. Closed tool for a 60 minute final closed in pressure. |                            |                            |
| Initial Flow Pres.         | 111         | 1 116            |                        |                                                                                                                                                                                                                                                 |                            |                            |
| Final Flow Pres.           | 307         | 2 303            |                        |                                                                                                                                                                                                                                                 |                            |                            |
| Final Closed in Pres.      | 307         | 1 300            |                        |                                                                                                                                                                                                                                                 |                            |                            |
| Final Hydro Mud Pres.      | 558         | 2 575            |                        |                                                                                                                                                                                                                                                 |                            |                            |
| Final Closed in Pres.      | 1125        | 1135             |                        |                                                                                                                                                                                                                                                 |                            |                            |
| Final Hydro Mud Pres.      | 1819        | 1827             |                        |                                                                                                                                                                                                                                                 |                            |                            |

# FORMATION TEST DATA

5

PARTON

Lease Name

Well No.

Test No.

SUNRAY D.X. OIL COMPANY

Lease Owner/Company Name

KANSAS

Owner's District

Legal Location

C NE SE 3 27 19

Field Area

QUAKER

County

KIOWA

State

KANSAS

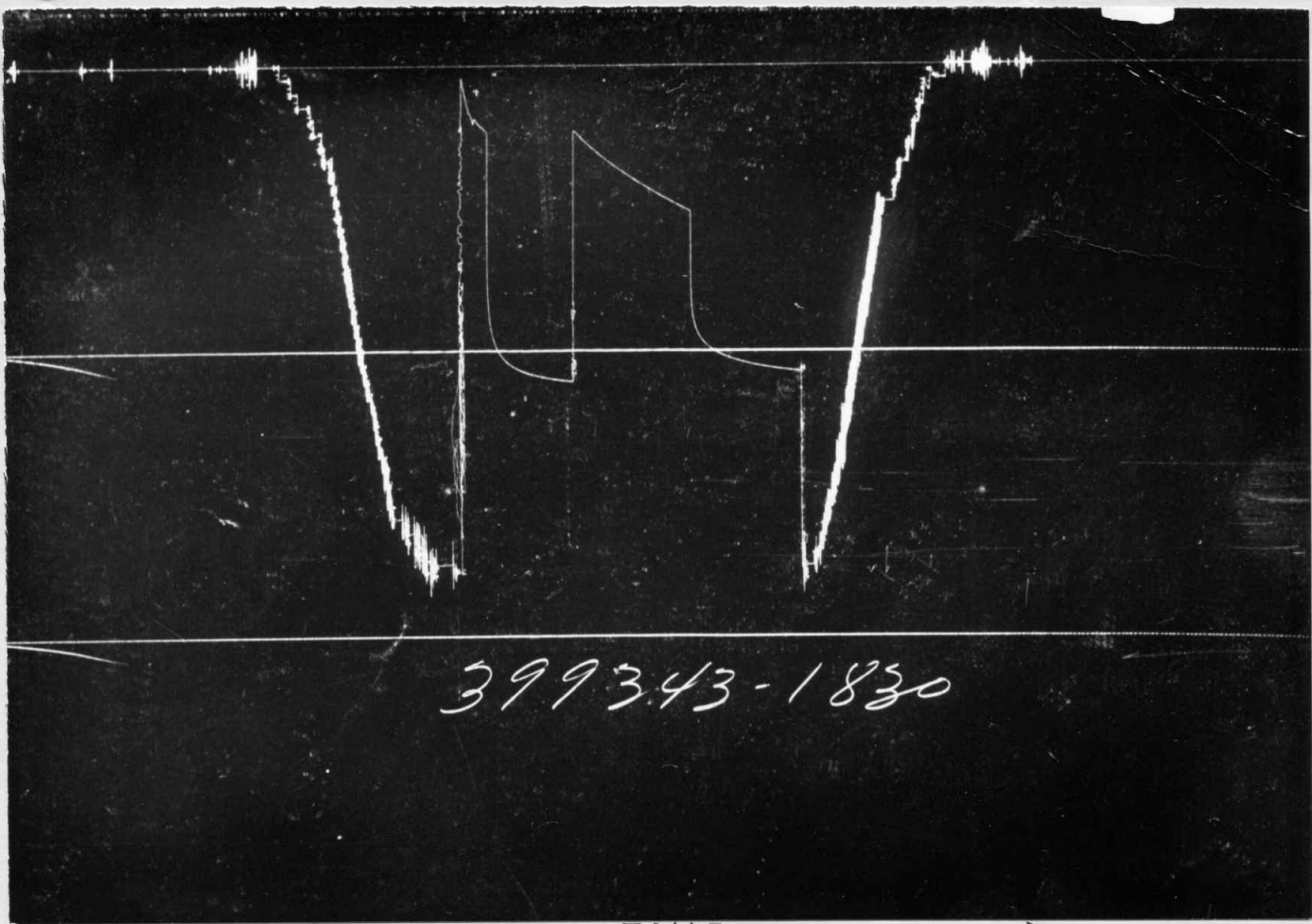
| Gauge No. 1830    |                     |                        | Depth 3317'                |                           |                        | Clock 12 hour       |                        | Ticket No. 399343        |                           |                        |
|-------------------|---------------------|------------------------|----------------------------|---------------------------|------------------------|---------------------|------------------------|--------------------------|---------------------------|------------------------|
| First Flow Period |                     |                        | Initial Closed In Pressure |                           |                        | Second Flow Period  |                        | Final Closed In Pressure |                           |                        |
|                   | Time Defl.<br>.000" | PSIG<br>Temp.<br>Corr. | Time Defl.<br>.000"        | Log $\frac{t+\phi}{\phi}$ | PSIG<br>Temp.<br>Corr. | Time Defl.<br>.000" | PSIG<br>Temp.<br>Corr. | Time Defl.<br>.000"      | Log $\frac{t+\phi}{\phi}$ | PSIG<br>Temp.<br>Corr. |
| P <sub>0</sub>    | .000                | 45                     | .000                       |                           | 235                    | .000                | 232                    | .000                     |                           | 515                    |
| P <sub>1</sub>    | .019                | 84                     | .0312                      |                           | 985                    | .1073               | 323                    | .0401                    |                           | 961                    |
| P <sub>2</sub>    | .038                | 183                    | .0624                      |                           | 1032                   | .2146               | 396                    | .0802                    |                           | 996                    |
| P <sub>3</sub>    | .057                | 197                    | .0936                      |                           | 1055                   | .3219               | 459                    | .1203                    |                           | 1017                   |
| P <sub>4</sub>    | .076                | 217                    | .1248                      |                           | 1070                   | .4290               | 515                    | .1604                    |                           | 1032                   |
| P <sub>5</sub>    | .095                | 235                    | .1560                      |                           | 1081                   |                     |                        | .2005                    |                           | 1043                   |
| P <sub>6</sub>    |                     |                        | .1872                      |                           | 1089                   |                     |                        | .2406                    |                           | 1051                   |
| P <sub>7</sub>    |                     |                        | .2184                      |                           | 1095                   |                     |                        | .2807                    |                           | 1059                   |
| P <sub>8</sub>    |                     |                        | .2496                      |                           | 1100                   |                     |                        | .3208                    |                           | 1064                   |
| P <sub>9</sub>    |                     |                        | .2808                      |                           | 1104                   |                     |                        | .3609                    |                           | 1069                   |
| P <sub>10</sub>   |                     |                        | .3120                      |                           | 1106                   |                     |                        | .4010                    |                           | 1074                   |

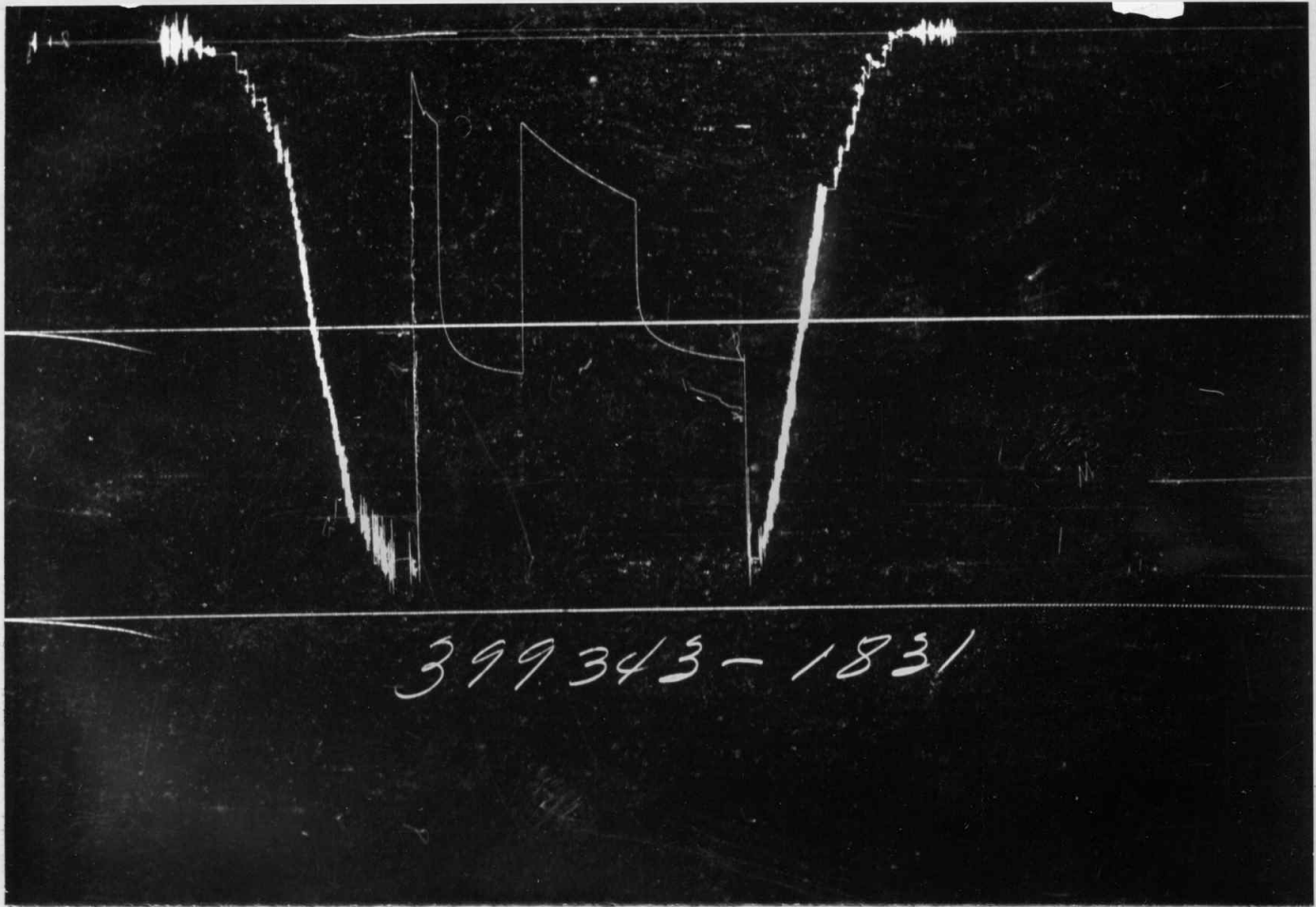
| Gauge No. 1831   |       |     | Depth 3436' |  |      | Clock 12 hour |     |       |         |      |
|------------------|-------|-----|-------------|--|------|---------------|-----|-------|---------|------|
| P <sub>0</sub>   | .000  | 116 | .000        |  | 300  | .000          | 303 | .000  |         | 575  |
| P <sub>1</sub>   | .0186 | 187 | .0301       |  | 1044 | .1035         | 385 | .0389 |         | 1019 |
| P <sub>2</sub>   | .0372 | 246 | .0602       |  | 1090 | .2070         | 460 | .0778 |         | 1057 |
| P <sub>3</sub>   | .0558 | 260 | .0903       |  | 1114 | .3105         | 521 | .1167 |         | 1079 |
| P <sub>4</sub>   | .0744 | 281 | .1204       |  | 1131 | .4140         | 575 | .1556 |         | 1093 |
| P <sub>5</sub>   | .0930 | 300 | .1505       |  | 1142 |               |     | .1945 |         | 1104 |
| P <sub>6</sub>   |       |     | .1806       |  | 1151 |               |     | .2334 |         | 1112 |
| P <sub>7</sub>   |       |     | .2107       |  | 1157 |               |     | .2723 |         | 1119 |
| P <sub>8</sub>   |       |     | .2408       |  | 1163 |               |     | .3112 |         | 1125 |
| P <sub>9</sub>   |       |     | .2709       |  | 1167 |               |     | .3501 |         | 1130 |
| P <sub>10</sub>  |       |     | .3010       |  | 1169 |               |     | .3890 |         | 1135 |
| Reading Interval |       | 3   |             |  | 4.5  |               |     | 15    |         |      |
|                  |       |     |             |  |      |               |     | 6     | Minutes |      |
| REMARKS:         |       |     |             |  |      |               |     |       |         |      |
|                  |       |     |             |  |      |               |     |       |         |      |
|                  |       |     |             |  |      |               |     |       |         |      |

**SPECIAL PRESSURE DATA**

↑  
PRESSURE  
↓



← TIME →



Each Horizontal Line Equal to 1000 p.s.i.

PARTON

Lease Name

Well No.

Test No.

SUNRAY D X OIL COMPANY

Lease Owner/Company Name

KANSAS  
Owner's DistrictLegal Location  
Sec. - Twp. - Rng.

3 27S 19W C NE SE

Field  
Area

QUAKER

County

KIOWA

State  
KANSAS

|                            |           |      |                  |             |                        |                                                                                                  |                                               |                                |
|----------------------------|-----------|------|------------------|-------------|------------------------|--------------------------------------------------------------------------------------------------|-----------------------------------------------|--------------------------------|
| Flow Time                  | 1st<br>15 | Min. | 2nd<br>60        | Min.        | Date                   | 6-9-64                                                                                           | Ticket Number                                 | 389446 S                       |
| Closed In Press. Time      | 1st<br>45 | Min. | 2nd<br>65        | Min.        | Kind of Job            | OPEN HOLE                                                                                        | Halliburton District                          | PRATT                          |
| Pressure Readings          | Field     |      | Office Corrected |             | Tester                 | L. J. CLINE                                                                                      | Witness                                       | D. CARTER                      |
| Depth Top Gauge            | 4359      | Ft.  | no               | Blanked Off | Drilling Contractor    | STICKLE DRILLING COMPANY                                                                         |                                               |                                |
| BT. P.R.D. No.             | 526       |      | 12               | Hour Clock  | Elevation              | Est. 2270' KB                                                                                    | Top Packer                                    | --                             |
| Initial Hydro Mud Pressure | 2313      |      | 2298             |             | Total Depth            | 4385'                                                                                            | Bottom Packer                                 | 4357'                          |
| Initial Closed in Pres.    | 1195      |      | 1195             |             | Interval Tested        | 4357' - 4385' (28')                                                                              | Formation Tested                              | Kansas City                    |
| Initial Flow Pres.         | 26        | 1    | 29               |             | Casing or Hole Size    | 7 7/8"                                                                                           | Casing Perfs.                                 | Top<br>Bot.                    |
| Final Flow Pres.           | 132       | 2    | 146              |             | Surface Choke          | 1"                                                                                               | Bottom Choke                                  | 3/4"                           |
| Final Closed in Pres.      | 1186      |      | 1183             |             | Size & Kind Drill Pipe | 4 1/2" FH                                                                                        | Drill Collars Above Tester                    | I.D. - LENGTH<br>2 1/4" X 270' |
| Final Hydro Mud Pressure   | 2277      |      | 2274             |             | Mud Weight             | 9.8                                                                                              | Mud Viscosity                                 | 43                             |
| Depth Cen. Gauge           |           | Ft.  |                  | Blanked Off | Temperature            | 114                                                                                              | Anchor Size & Length                          | ID 3.87"<br>OD 5" X 28'        |
| BT. P.R.D. No.             |           |      |                  | Hour Clock  | Depths Mea. From       | Kelly Bushing                                                                                    | Depth of Tester Valve                         | 4363 Ft.                       |
| Initial Hydro Mud Pres.    |           |      |                  |             | TYPE                   | AMOUNT                                                                                           | Depth Back Pres. Valve                        | -- Ft.                         |
| Initial Closed in Pres.    |           |      |                  |             | Cushion                | --                                                                                               |                                               |                                |
| Initial Flow Pres.         |           | 1    |                  |             | Recovered              | 60                                                                                               | Feet of gas cut mud with trace of oil.        |                                |
| Final Flow Pres.           |           | 2    |                  |             | Recovered              | 180                                                                                              | Feet of gas cut watery mud with trace of oil. |                                |
| Final Closed in Pres.      |           | 1    |                  |             | Recovered              | 360                                                                                              | Feet of water.                                |                                |
| Final Hydro Mud Pres.      |           |      |                  |             | Recovered              |                                                                                                  | Feet of                                       |                                |
| Depth Bot. Gauge           | 4381      | Ft.  | yes              | Blanked Off | Oil A.P.I. Gravity     |                                                                                                  | Water Spec. Gravity                           | 1.125 @ 88 Deg.                |
| BT. P.R.D. No.             | 231       |      | 12               | Hour Clock  | Gas Gravity            |                                                                                                  | Surface Pressure                              | psi                            |
| Initial Hydro Mud Pres.    | 2333      |      | 2313             |             | Tool Opened            | 1:15 P.M.                                                                                        | Tool Closed                                   | 4:20 P.M.                      |
| Initial Closed in Pres.    | 1208      |      | 1206             |             | Remarks                | Opened tool for a 15 minute first flow with a weak blow increasing to fair blow throughout test. |                                               |                                |
| Initial Flow Pres.         | 36        | 1    | 44               |             |                        | Closed tool for a 45 minute initial closed in pres-                                              |                                               |                                |
| Final Flow Pres.           | 135       | 2    | 158              |             |                        | sure. Reopened tool for a 60 minute second flow.                                                 |                                               |                                |
| Final Closed in Pres.      | 1189      |      | 1197             |             |                        | Closed tool for a 65 minute final closed in pres-                                                |                                               |                                |
| Final Hydro Mud Pres.      | 2306      |      | 2290             |             |                        | sure.                                                                                            |                                               |                                |

FORMATION TEST DATA

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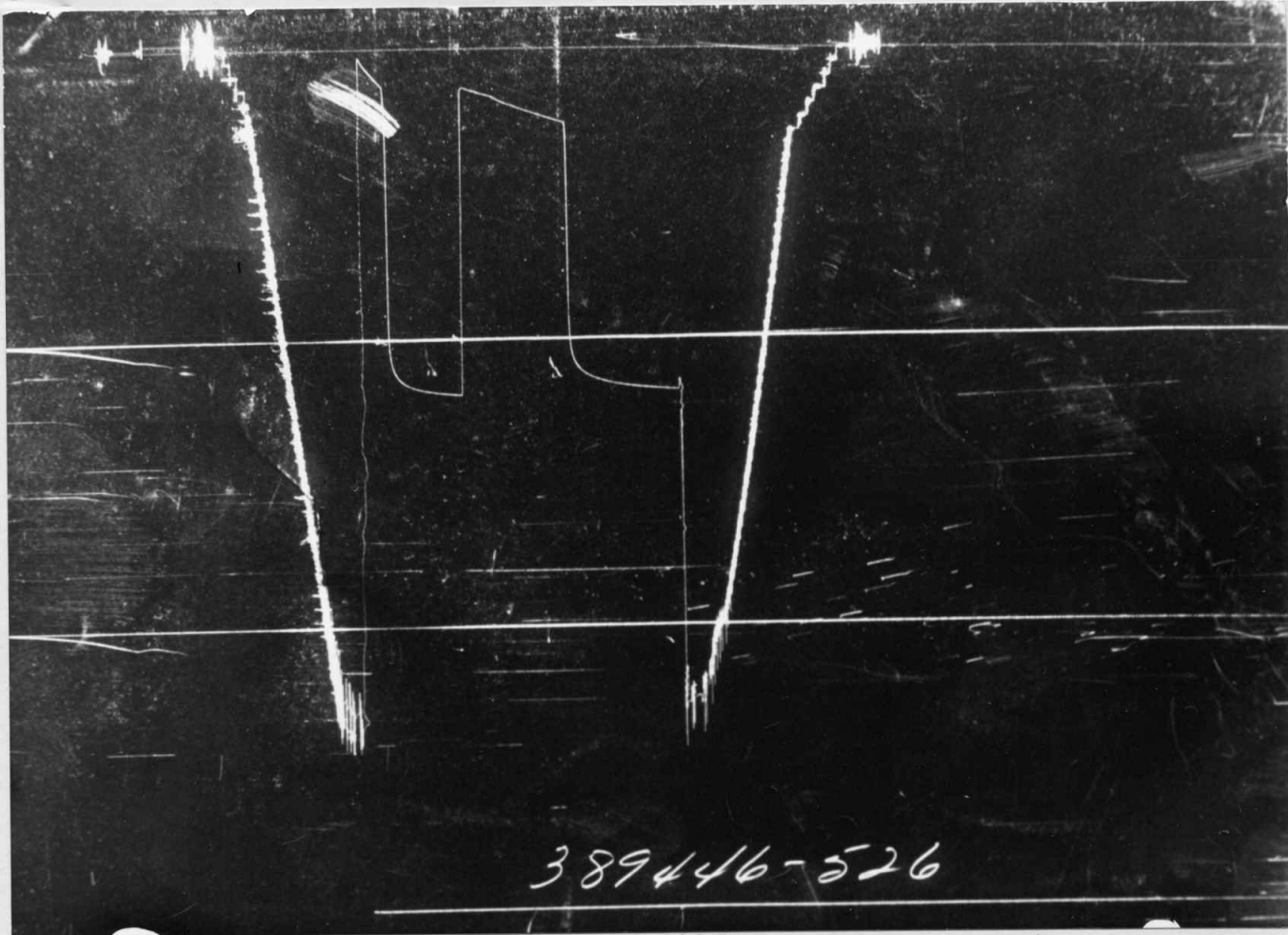


| Gauge No. 526     |                  |                  | Depth 4359'                |                               |                  | Clock 12 hour      |                  | Ticket No. 389446        |                               |                  |
|-------------------|------------------|------------------|----------------------------|-------------------------------|------------------|--------------------|------------------|--------------------------|-------------------------------|------------------|
| First Flow Period |                  |                  | Initial Closed In Pressure |                               |                  | Second Flow Period |                  | Final Closed In Pressure |                               |                  |
|                   | Time Defl. .000" | PSIG Temp. Corr. | Time Defl. .000"           | Log $\frac{t+\theta}{\theta}$ | PSIG Temp. Corr. | Time Defl. .000"   | PSIG Temp. Corr. | Time Defl. .000"         | Log $\frac{t+\theta}{\theta}$ | PSIG Temp. Corr. |
| P <sub>0</sub>    | .000             | 29               | .000                       |                               | 132              | .000               | 146              | .000                     |                               | 256              |
| P <sub>1</sub>    | .0184            | 55               | .0299                      |                               | 1100             | .1018              | 161              | .0437                    |                               | 1102             |
| P <sub>2</sub>    | .0368            | 76               | .0598                      |                               | 1145             | .2036              | 198              | .0874                    |                               | 1133             |
| P <sub>3</sub>    | .0552            | 95               | .0897                      |                               | 1163             | .3054              | 228              | .1311                    |                               | 1149             |
| P <sub>4</sub>    | .0736            | 114              | .1196                      |                               | 1173             | .4070              | 256              | .1748                    |                               | 1158             |
| P <sub>5</sub>    | .0920            | 132              | .1495                      |                               | 1180             |                    |                  | .2185                    |                               | 1166             |
| P <sub>6</sub>    |                  |                  | .1794                      |                               | 1184             |                    |                  | .2622                    |                               | 1171             |
| P <sub>7</sub>    |                  |                  | .2093                      |                               | 1188             |                    |                  | .3059                    |                               | 1175             |
| P <sub>8</sub>    |                  |                  | .2392                      |                               | 1190             |                    |                  | .3496                    |                               | 1179             |
| P <sub>9</sub>    |                  |                  | .2691                      |                               | 1193             |                    |                  | .3933                    |                               | 1181             |
| P <sub>10</sub>   |                  |                  | .2990                      |                               | 1195             |                    |                  | .4370                    |                               | 1183             |

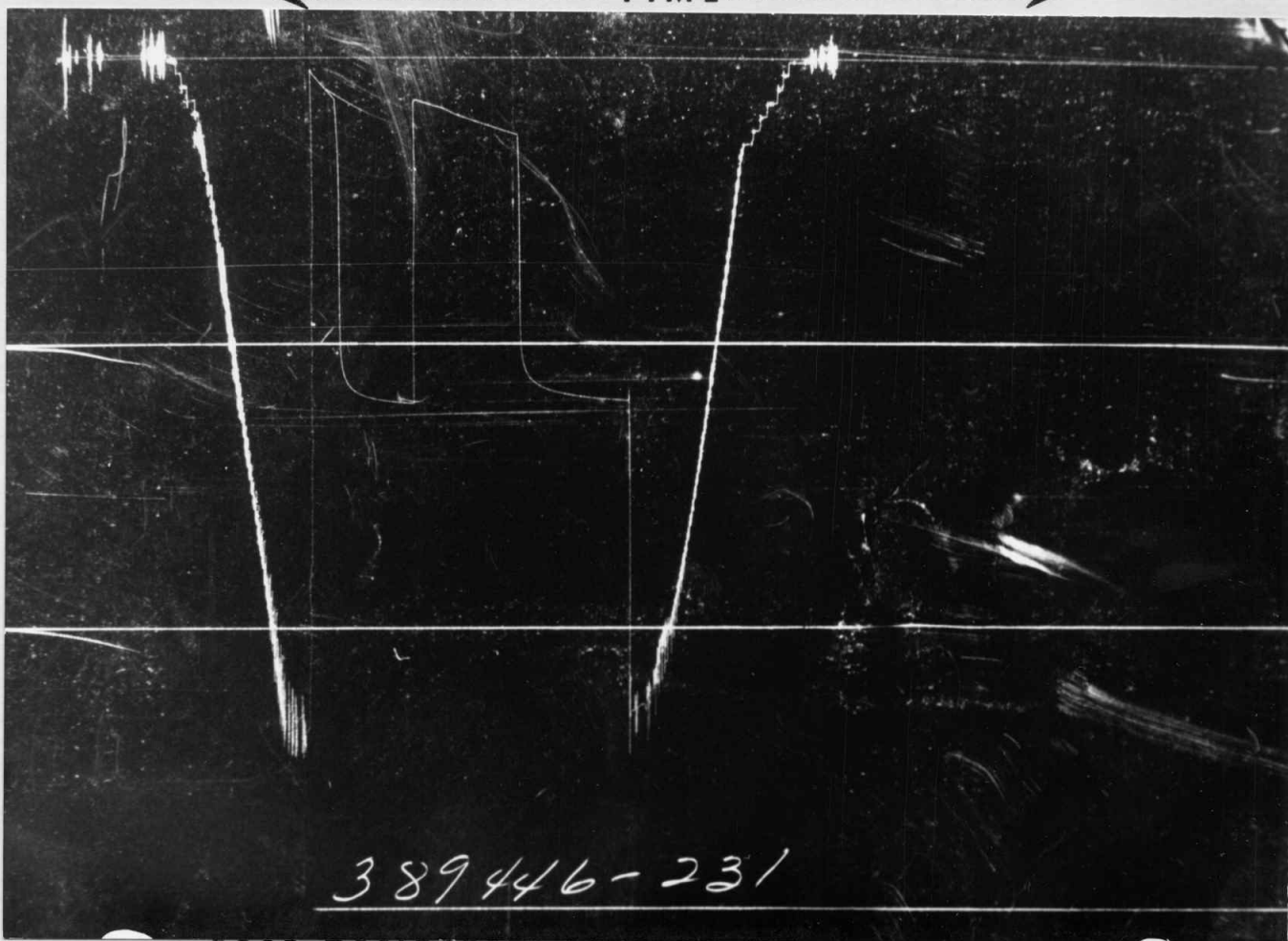
| Gauge No. 231      |       |     | Depth 4381' |  |      | Clock 12 hour |     |             |  |      |
|--------------------|-------|-----|-------------|--|------|---------------|-----|-------------|--|------|
| P <sub>0</sub>     | .000  | 44  | .000        |  | 143  | .000          | 158 | .000        |  | 269  |
| P <sub>1</sub>     | .0188 | 67  | .0314       |  | 1065 | .102          | 172 | .0438       |  | 1109 |
| P <sub>2</sub>     | .0376 | 88  | .0628       |  | 1146 | .204          | 209 | .0876       |  | 1145 |
| P <sub>3</sub>     | .0564 | 106 | .0942       |  | 1171 | .306          | 240 | .1314       |  | 1161 |
| P <sub>4</sub>     | .0752 | 125 | .1256       |  | 1183 | .408          | 269 | .1752       |  | 1171 |
| P <sub>5</sub>     | .0940 | 143 | .1570       |  | 1190 |               |     | .2190       |  | 1178 |
| P <sub>6</sub>     |       |     | .1884       |  | 1196 |               |     | .2628       |  | 1184 |
| P <sub>7</sub>     |       |     | .2198       |  | 1199 |               |     | .3066       |  | 1189 |
| P <sub>8</sub>     |       |     | .2512       |  | 1203 |               |     | .3504       |  | 1191 |
| P <sub>9</sub>     |       |     | .2826       |  | 1205 |               |     | .3942       |  | 1195 |
| P <sub>10</sub>    |       |     | .3140       |  | 1206 |               |     | .4380       |  | 1197 |
| Reading Interval 3 |       |     | 4.5         |  |      | 15            |     | 6.5 Minutes |  |      |
| REMARKS:           |       |     |             |  |      |               |     |             |  |      |

**SPECIAL PRESSURE DATA**

↑  
PRESSURE  
↓



← TIME →



Each horizontal line equal to 1000 p.s.i.