

|                            |             |                  |                        |                                              |                            |                                |
|----------------------------|-------------|------------------|------------------------|----------------------------------------------|----------------------------|--------------------------------|
| Flow Time                  | 1st 15 Min. | 2nd 45 Min.      | Date                   | 2-23-64                                      | Ticket Number              | 386739                         |
| Closed In Press. Time      | 1st 30 Min. | 2nd 30 Min.      | Kind of Job            | Open Hole                                    | Halliburton District       | Hays                           |
| Pressure Readings          | Field       | Office Corrected | Tester                 | A.A. Berens                                  | Witness                    | Bob Douglass                   |
| Depth Top Gauge            | 3486 Ft.    | no Blanked Off   | Drilling Contractor    | Company tools                                |                            |                                |
| BT. P.R.D. No.             | 294         | 12 Hour Clock    | Elevation              |                                              | Top Packer                 |                                |
| Initial Hydro Mud Pressure |             | 1868             | Total Depth            | 3524'                                        | Bottom Packer              | 3480'                          |
| Initial Closed in Pres.    |             | 109              | Interval Tested        | 3480-3524'                                   | Formation Tested           | Kansas City                    |
| Initial Flow Pres.         | 1 59        | 2 78             | Casing or Hole Size    | 7 7/8"                                       | Casing Perfs. } Top        |                                |
| Final Flow Pres.           | 1 60        | 2 102            | Surface Choke          | 1/4"                                         | Bottom Choke               | 1"                             |
| Final Closed in Pres.      |             | 231              | Size & Kind Drill Pipe | 3 1/2" IF                                    | Drill Collars Above Tester | I.D. - LENGTH<br>2 1/4" x 280' |
| Final Hydro Mud Pressure   |             | 1868             | Mud Weight             | 10                                           | Mud Viscosity              | 43                             |
| Depth Cen. Gauge           |             | Blanked Off      | Temperature            | 100 °F Est.<br>°F Actual                     | Anchor Size & Length       | ID 3.76" X<br>OD 5" 44'        |
| BT. P.R.D. No.             |             | Hour Clock       | Depths Mea. From       | Kelly bushing                                | Depth of Tester Valve      | Ft.                            |
| Initial Hydro Mud Pres.    |             |                  | TYPE AMOUNT            |                                              | Depth Back Pres. Valve     | Ft.                            |
| Initial Closed in Pres.    |             |                  | Cushion                |                                              | Recovered                  | 120' Feet of mud               |
| Initial Flow Pres.         | 1           |                  |                        |                                              | Recovered                  | Feet of                        |
| Final Flow Pres.           | 1           |                  |                        |                                              | Recovered                  | Feet of                        |
| Final Closed in Pres.      |             |                  |                        |                                              | Recovered                  | Feet of                        |
| Final Hydro Mud Pres.      |             |                  | Oil A.P.I. Gravity     |                                              | Water Spec. Gravity        |                                |
| Depth Bot. Gauge           | 3520 Ft.    | yes Blanked Off  | Gas Gravity            |                                              | Surface Pressure           | psi                            |
| BT. P.R.D. No.             | 374         | 12 Hour Clock    | Tool Opened            | 11:35 AM A.M.                                | Tool Closed                | 1:35 PM A.M.                   |
| Initial Hydro Mud Pres.    | -           | 1813             | Remarks                | Open tool with a weak blow for 15 mins.      |                            |                                |
| Initial Closed in Pres.    | 93          | 91               |                        | Closed for 30 mins. Reopen tool with no blow |                            |                                |
| Initial Flow Pres.         | 34          | 1 44<br>2 62     |                        | flush tool with a weak blow for 15 mins.     |                            |                                |
| Final Flow Pres.           | 83          | 1 49<br>2 87     |                        | Closed for 30 mins.                          |                            |                                |
| Final Closed in Pres.      | 188         | 210              |                        | No special reading adaptable.                |                            |                                |
| Final Hydro Mud Pres.      | -           | 1813             |                        |                                              |                            |                                |

FORMATION TEST DATA

5

BERLAND

Well No. 1

Test No. 1

JONES GEBERT OIL INCORPORATED

WICHITA

Owner's District

Lease Owner/Company Name

County

Legal Location

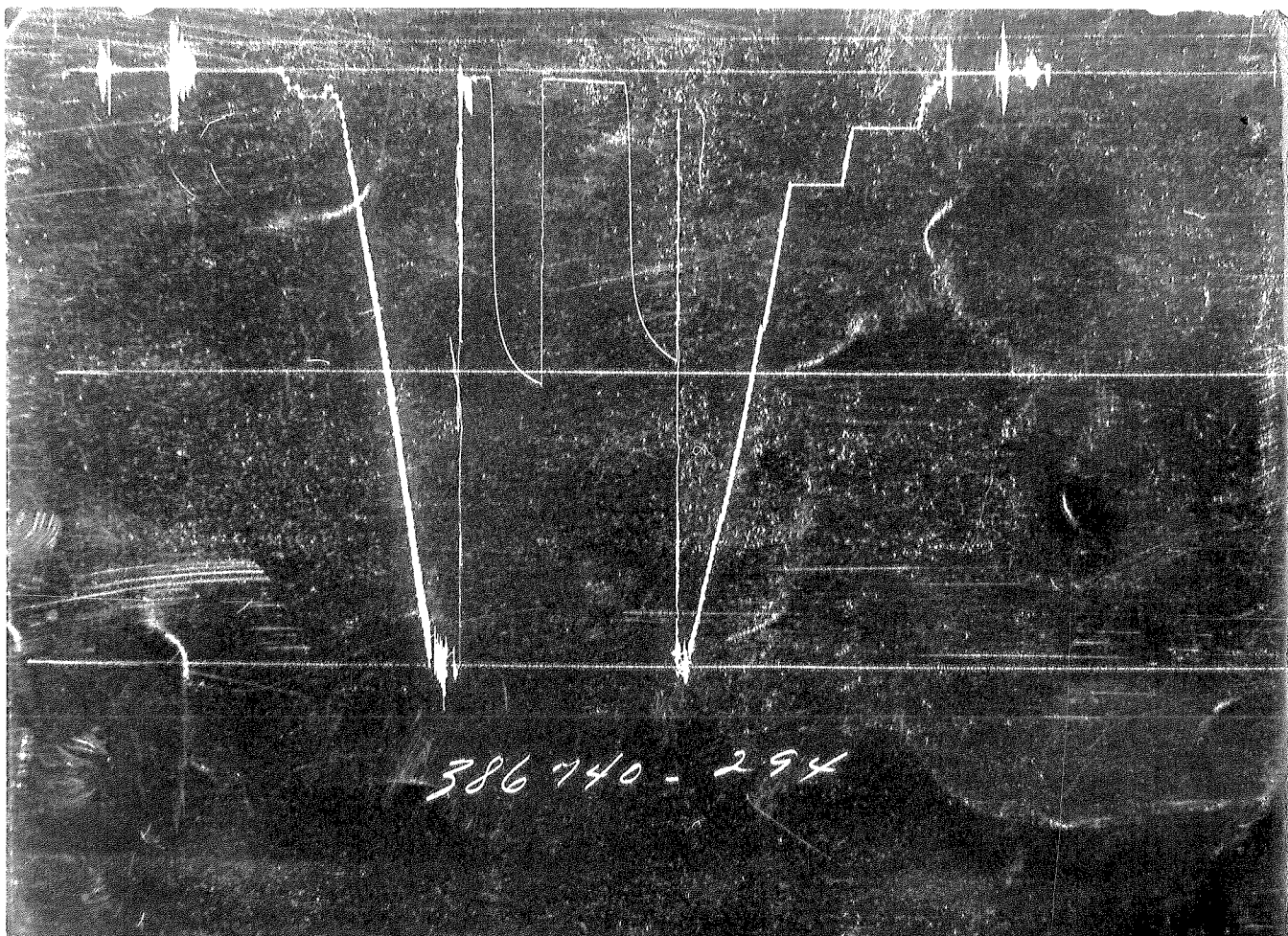
Lease Name

Field Area

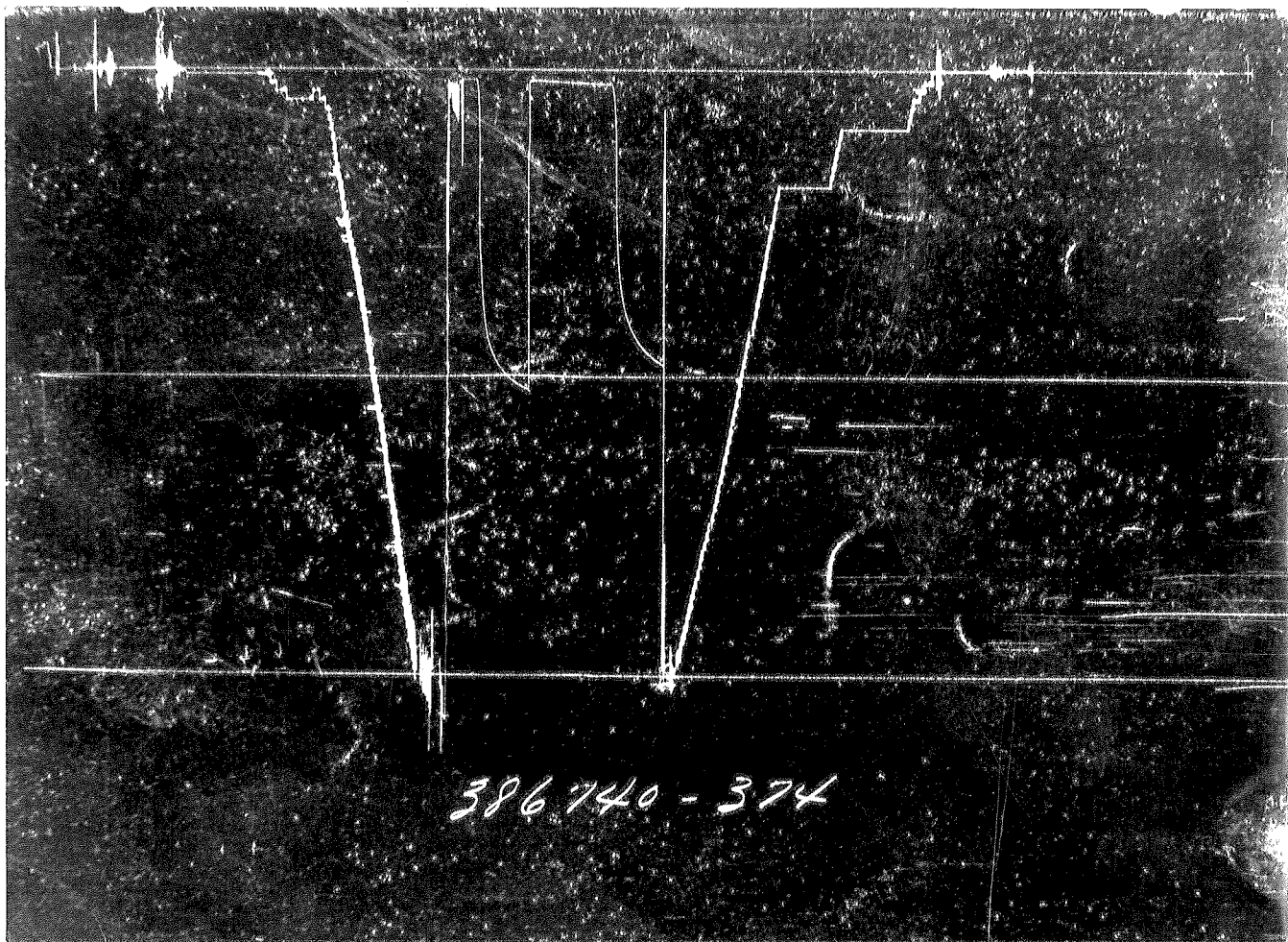
ROCKS

State KANSAS

↑  
PRESSURE  
↓



← TIME →



|                            |             |                  |                        |                                                    |                                |                              |
|----------------------------|-------------|------------------|------------------------|----------------------------------------------------|--------------------------------|------------------------------|
| Flow Time                  | 1st 15 Min. | 2nd 45 Min.      | Date                   | 2-25-64                                            | Ticket Number                  | 386740 S                     |
| Closed In Press. Time      | 1st 30 Min. | 2nd 30 Min.      | Kind of Job            | OPEN HOLE                                          | Halliburton District           | HAYS                         |
| Pressure Readings          | Field       | Office Corrected | Tester                 | A. A. BERENS                                       | Witness                        | BOB DOUGLASS                 |
| Depth Top Gauge            | 3743 Ft.    | No Blanked Off   | Drilling Contractor    | COMPANY TOOLS                                      |                                |                              |
| BT. P.R.D. No.             | 294         | 12 Hour Clock    | Elevation              | 1296' DF                                           | Top Packer                     | 3752'                        |
| Initial Hydro Mud Pressure | -           | 1961             | Total Depth            | 3763'                                              | Bottom Packer                  | 3758'                        |
| Initial Closed in Pres.    | 1028        | 1043             | Interval Tested        | 3758-3763'                                         | Formation Tested               | Arbuckle                     |
| Initial Flow Pres.         | 25          | 11 33            | Casing or Hole Size    | 7 7/8"                                             | Casing } Top Perfs.            |                              |
| Final Flow Pres.           | 39          | 1 25 41          | Surface Choke          | 1/4"                                               | Bottom Choke                   | 1"                           |
| Final Closed in Pres.      | 960         | 963              | Size & Kind Drill Pipe | 3 1/2" IF                                          | Drill Collars Above Tester     | I.D. - LENGTH<br>2 1/4" X 80 |
| Final Hydro Mud Pressure   | -           | 1961             | Mud Weight             | 10                                                 | Mud Viscosity                  | 41                           |
| Depth Cen. Gauge           |             | Blanked Off      | Temperature            | 104                                                | Anchor Size & Length           | ID 3.76" X 5" OD 5"          |
| BT. P.R.D. No.             |             | Hour Clock       | Depths Mea. From       | KB                                                 | Depth of Tester Valve          | Ft.                          |
| Initial Hydro Mud Pres.    |             |                  | TYPE AMOUNT            |                                                    | Depth Back Pres. Valve         | Ft.                          |
| Initial Closed in Pres.    |             |                  | Cushion                | none                                               |                                |                              |
| Initial Flow Pres.         | 1           |                  | Recovered              | 3                                                  | Feet of Free Oil               |                              |
| Final Flow Pres.           | 2           |                  | Recovered              | 57                                                 | Feet of Very Salty oil cut mud |                              |
| Final Flow Pres.           | 1           |                  | Recovered              |                                                    | Feet of                        |                              |
| Final Closed in Pres.      | 2           |                  | Recovered              |                                                    | Feet of                        |                              |
| Final Hydro Mud Pres.      |             |                  | Oil A.P.I. Gravity     |                                                    | Water Spec. Gravity            |                              |
| Depth Bot. Gauge           | 3759 Ft.    | Yes Blanked Off  | Gas Gravity            |                                                    | Surface Pressure               | psi                          |
| BT. P.R.D. No.             | 374         | 12 Hour Clock    | Tool Opened            | 3:20 PM                                            | A.M. P.M. Tool Closed          | 5:20 PM A.M. P.M.            |
| Initial Hydro Mud Pres.    |             | 1968             | Remarks                | Tool opened with a weak blow for a 15 minute       |                                |                              |
| Initial Closed in Pres.    |             | 1045             |                        | first flow. Rotated tool for a 30 minute initial   |                                |                              |
| Initial Flow Pres.         | 1 38        |                  |                        | closed in pressure. Reopened tool with a weak blow |                                |                              |
| Final Flow Pres.           | 2 42        |                  |                        | for a 45 minute second flow. Took a 30 minute      |                                |                              |
| Final Flow Pres.           | 1 31        |                  |                        | final closed in pressure.                          |                                |                              |
| Final Closed in Pres.      | 2 47        |                  |                        |                                                    |                                |                              |
| Final Hydro Mud Pres.      |             | 965              |                        |                                                    |                                |                              |
| Final Hydro Mud Pres.      |             | 1968             |                        |                                                    |                                |                              |

FORMATION TEST DATA

BERLAND

Lease Name

Well No.

Test No.

JONES GIBERT OIL COMPANY

Lease Owner/Company Name

County

ROOKS

State KANSAS

WICHITA, KS.

Owner's District

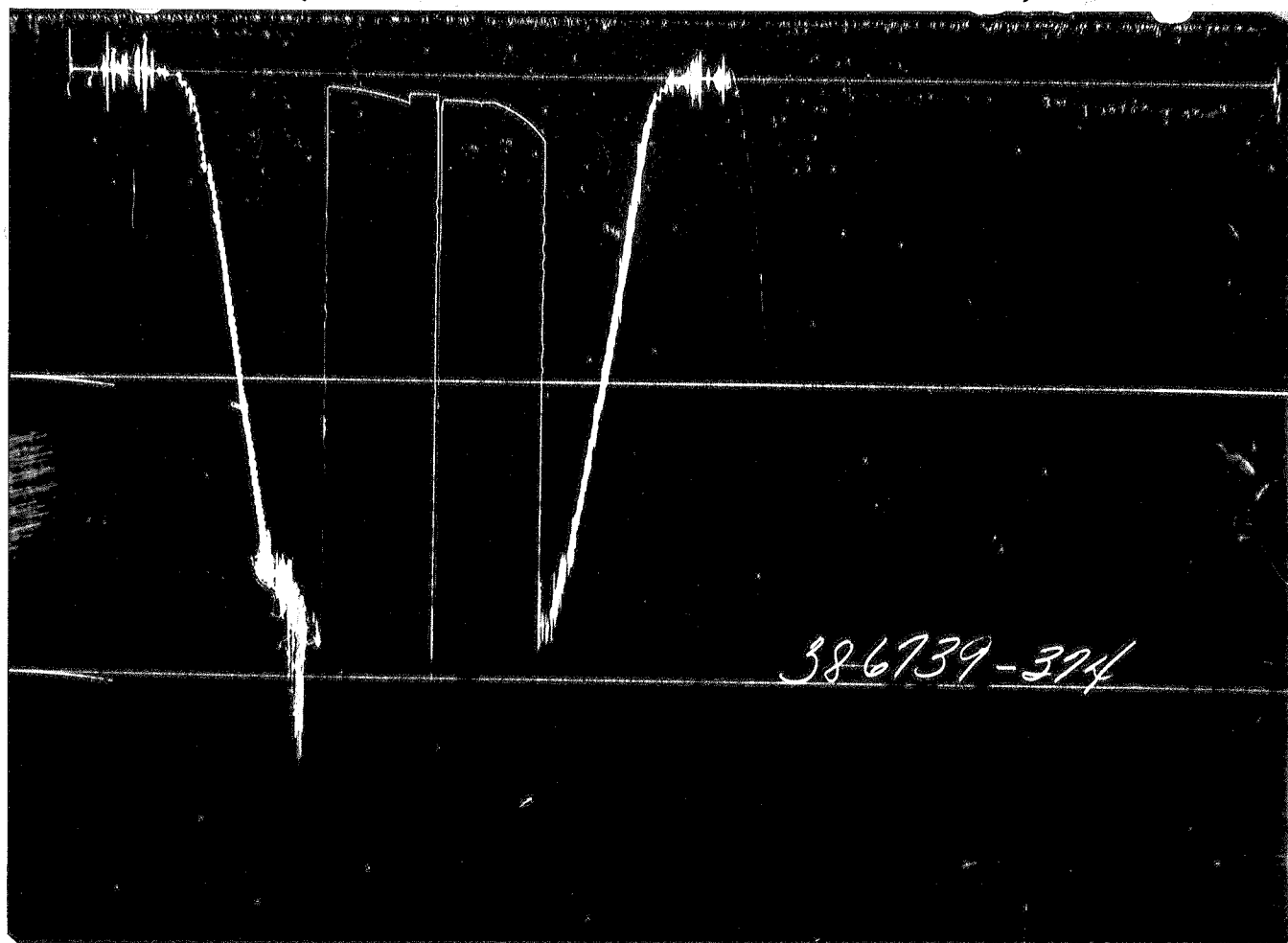
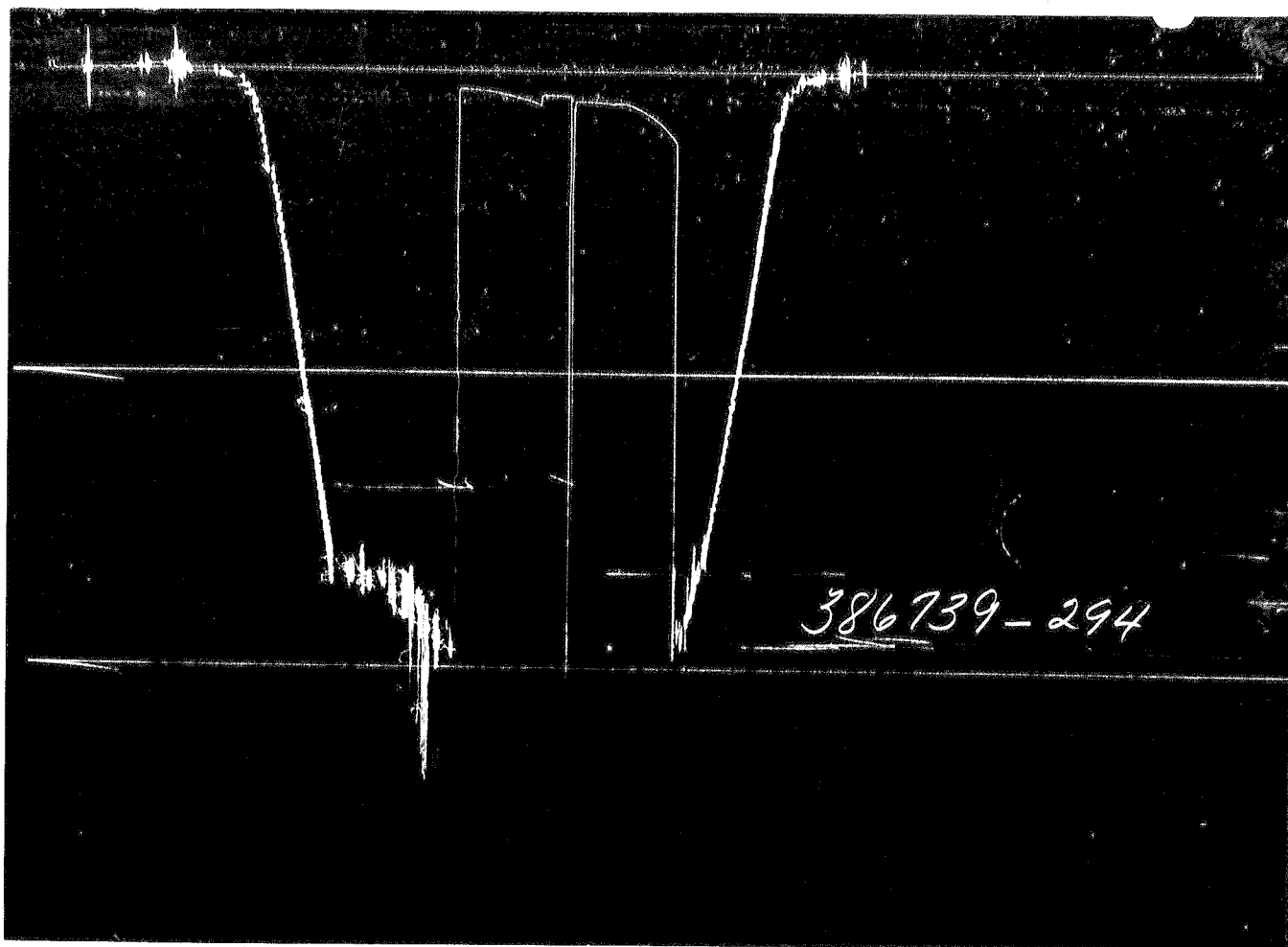
| Gauge No. 294     |                     |                        | Depth 3743                 |                                 |                        | Clock 12 hour       |                        | Ticket No. 386740        |                                 |                        |
|-------------------|---------------------|------------------------|----------------------------|---------------------------------|------------------------|---------------------|------------------------|--------------------------|---------------------------------|------------------------|
| 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 $\frac{t + \theta}{\theta}$ | PSIG<br>Temp.<br>Corr. | Time Defl.<br>.000" | PSIG<br>Temp.<br>Corr. | Time Defl.<br>.000"      | Log $\frac{t + \theta}{\theta}$ | PSIG<br>Temp.<br>Corr. |
| P <sub>0</sub>    | .000                | 11                     | .000                       |                                 | 25                     | .000                | 33                     | .000                     |                                 | 41                     |
| P <sub>1</sub>    | .114                | 25                     | .0205                      |                                 | 639                    | .065                | 30                     | .021                     |                                 | 303                    |
| P <sub>2</sub>    |                     |                        | .0410                      |                                 | 848                    | .130                | 32                     | .042                     |                                 | 731                    |
| P <sub>3</sub>    |                     |                        | .0615                      |                                 | 914                    | .195                | 36                     | .063                     |                                 | 808                    |
| P <sub>4</sub>    |                     |                        | .0820                      |                                 | 952                    | .260                | 37                     | .084                     |                                 | 852                    |
| P <sub>5</sub>    |                     |                        | .1025                      |                                 | 979                    | .325                | 41                     | .105                     |                                 | 882                    |
| P <sub>6</sub>    |                     |                        | .1230                      |                                 | 998                    |                     |                        | .126                     |                                 | 905                    |
| P <sub>7</sub>    |                     |                        | .1435                      |                                 | 1014                   |                     |                        | .147                     |                                 | 925                    |
| P <sub>8</sub>    |                     |                        | .1640                      |                                 | 1026                   |                     |                        | .168                     |                                 | 940                    |
| P <sub>9</sub>    |                     |                        | .1845                      |                                 | 1035                   |                     |                        | .189                     |                                 | 952                    |
| P <sub>10</sub>   |                     |                        | .2050                      |                                 | 1043                   |                     |                        | .210                     |                                 | 963                    |

| Gauge No. 374   |                     |                        | Depth 3759          |                                 |                        | Clock 12 hour       |                        |                     |                                 |                        |
|-----------------|---------------------|------------------------|---------------------|---------------------------------|------------------------|---------------------|------------------------|---------------------|---------------------------------|------------------------|
|                 | Time Defl.<br>.000" | PSIG<br>Temp.<br>Corr. | Time Defl.<br>.000" | Log $\frac{t + \theta}{\theta}$ | PSIG<br>Temp.<br>Corr. | Time Defl.<br>.000" | PSIG<br>Temp.<br>Corr. | Time Defl.<br>.000" | Log $\frac{t + \theta}{\theta}$ | PSIG<br>Temp.<br>Corr. |
| P <sub>0</sub>  | .000                | 38                     | .000                |                                 | 31                     | .000                | 42                     | .000                |                                 | 47                     |
| P <sub>1</sub>  | .110                | 31                     | .021                |                                 | 646                    | .065                | 36                     | .021                |                                 | 476                    |
| P <sub>2</sub>  |                     |                        | .042                |                                 | 848                    | .130                | 39                     | .042                |                                 | 729                    |
| P <sub>3</sub>  |                     |                        | .063                |                                 | 916                    | .195                | 42                     | .063                |                                 | 808                    |
| P <sub>4</sub>  |                     |                        | .084                |                                 | 954                    | .260                | 44                     | .084                |                                 | 854                    |
| P <sub>5</sub>  |                     |                        | .105                |                                 | 980                    | .325                | 47                     | .105                |                                 | 887                    |
| P <sub>6</sub>  |                     |                        | .126                |                                 | 1000                   |                     |                        | .126                |                                 | 909                    |
| P <sub>7</sub>  |                     |                        | .147                |                                 | 1015                   |                     |                        | .147                |                                 | 927                    |
| P <sub>8</sub>  |                     |                        | .168                |                                 | 1028                   |                     |                        | .168                |                                 | 942                    |
| P <sub>9</sub>  |                     |                        | .189                |                                 | 1038                   |                     |                        | .189                |                                 | 955                    |
| P <sub>10</sub> |                     |                        | .210                |                                 | 1045                   |                     |                        | .210                |                                 | 965                    |

|                  |  |  |   |   |  |  |   |  |  |         |
|------------------|--|--|---|---|--|--|---|--|--|---------|
| Reading Interval |  |  | 3 | 9 |  |  | 3 |  |  | Minutes |
| REMARKS:         |  |  |   |   |  |  |   |  |  |         |
|                  |  |  |   |   |  |  |   |  |  |         |
|                  |  |  |   |   |  |  |   |  |  |         |

PRESSURE



EACH HORIZONTAL LINE EQUAL TO 1000 P.S.I.

|                            |             |                  |                        |                                                    |                                   |                                |
|----------------------------|-------------|------------------|------------------------|----------------------------------------------------|-----------------------------------|--------------------------------|
| Flow Time                  | 1st 15 Min. | 2nd 45 Min.      | Date                   | 2-26-64                                            | Ticket Number                     | 386741 - S                     |
| Closed In Press. Time      | 1st 30 Min. | 2nd 30 Min.      | Kind of Job            | OPEN HOLE                                          | Halliburton District              | HAYS, KS.                      |
| Pressure Readings          | Field       | Office Corrected | Tester                 | BERENS                                             | Witness                           | DOUGLASS                       |
| Depth Top Gauge            | 3747' Ft.   | NO Blanked Off   | Drilling Contractor    | JONES - GEBERT OIL COMPANY                         |                                   |                                |
| BT. P.R.D. No.             | 294         | 12 Hour Clock    | Elevation              | 2196' D.F.                                         | Top Packer                        | -                              |
| Initial Hydro Mud Pressure | 2000        | 1971             | Total Depth            | 3767'                                              | Bottom Packer                     | 3763'                          |
| Initial Closed in Pres.    | 1057        | 1058             | Interval Tested        | 3763' - 3767'                                      | Formation Tested                  | ARB                            |
| Initial Flow Pres.         | 34          | 1 50<br>2 55     | Casing or Hole Size    | 7 7/8"                                             | Casing Perfs.                     | Top -<br>Bot. -                |
| Final Flow Pres.           | 68          | 1 45<br>2 68     | Surface Choke          | 1 1/4"                                             | Bottom Choke                      | 1"                             |
| Final Closed in Pres.      | 971         | 984              | Size & Kind Drill Pipe | 3 1/2" I.F.                                        | Drill Collars Above Tester        | I.D. - LENGTH<br>2 1/2" x 80'  |
| Final Hydro Mud Pressure   | 2045        | 1961             | Mud Weight             | 10                                                 | Mud Viscosity                     | 41                             |
| Depth Cen. Gauge           | Ft.         | Blanked Off      | Temperature            | 106                                                | Anchor Size ID                    | 3.76" X 4"                     |
| BT. P.R.D. No.             |             | Hour Clock       | Depths Mea. From       | KELLY BUSHING                                      | Depth of Tester Valve             | - Ft.                          |
| Initial Hydro Mud Pres.    |             |                  | Cushion                | NONE                                               | Depth Back Pres. Valve            | - Ft.                          |
| Initial Closed in Pres.    |             |                  | Recovered              | 90'                                                | Feet of very slightly oil cut mud | Med. From Tester Valve         |
| Initial Flow Pres.         | 1           |                  | Recovered              |                                                    | Feet of                           |                                |
| Final Flow Pres.           | 1           |                  | Recovered              |                                                    | Feet of                           |                                |
| Final Closed in Pres.      | 2           |                  | Recovered              |                                                    | Feet of                           |                                |
| Final Hydro Mud Pres.      |             |                  | Oil A.P.I. Gravity     | -                                                  | Water Spec. Gravity               | -                              |
| Depth Bot. Gauge           | Ft.         | Blanked Off      | Gas Gravity            | -                                                  | Surface Pressure                  | 0# psi                         |
| BT. P.R.D. No.             |             | Hour Clock       | Tool Opened            | 10:20 AM                                           | A.M. P.M.                         | Tool Closed 12:21 PM A.M. P.M. |
| Initial Hydro Mud Pres.    |             |                  | Remarks                | Tool opened for a 15 minute first flow with        |                                   |                                |
| Initial Closed in Pres.    |             |                  |                        | a fair blow. Rotated tool for a 30 minute initial  |                                   |                                |
| Initial Flow Pres.         | 1           |                  |                        | closed in pressure. Tool reopened with a very weak |                                   |                                |
| Final Flow Pres.           | 2           |                  |                        | blow. Took a 30 minute final closed in pressure.   |                                   |                                |
| Final Closed in Pres.      | 1           |                  |                        | Slid tool 3' to 4' to bottom.                      |                                   |                                |
| Final Hydro Mud Pres.      | 2           |                  |                        |                                                    |                                   |                                |

FORMATION TEST DATA

Lease Name  
BERLAND

Well No.  
1

Test No.  
3

Lease Owner/Company Name  
JONES - GEBERT OIL COMPANY

Owner's District  
WICHITA, KANSAS

Legal Location  
Sec. - Twp. - Rng.  
20 - 10 - 19

Field Area

County

ROOKS

State

KANSAS

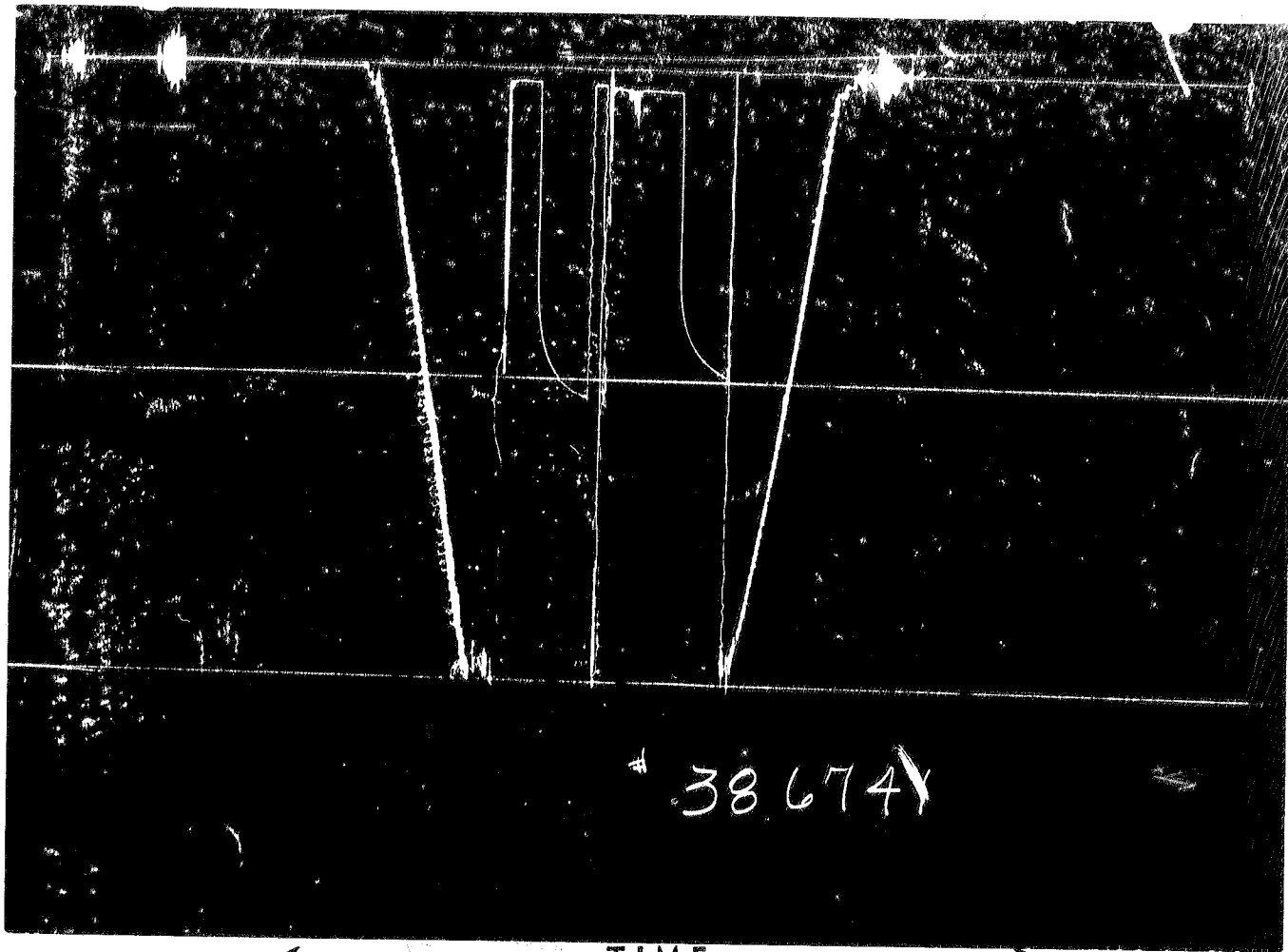
| Gauge No. 294     |                     | Depth 3747'            |                            | Clock 12 hour                 |                        | Ticket No. 386741   |                        |                          |                               |                        |
|-------------------|---------------------|------------------------|----------------------------|-------------------------------|------------------------|---------------------|------------------------|--------------------------|-------------------------------|------------------------|
| 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 $\frac{t+\theta}{\theta}$ | PSIG<br>Temp.<br>Corr. | Time Defl.<br>.000" | PSIG<br>Temp.<br>Corr. | Time Defl.<br>.000"      | Log $\frac{t+\theta}{\theta}$ | PSIG<br>Temp.<br>Corr. |
| P <sub>0</sub>    | .000                | 50                     | .000                       |                               | 45                     | .000                | 55                     | .000                     |                               | 68                     |
| P <sub>1</sub>    | .023                | 44                     | .0209                      |                               | 834                    | .0676               | 61                     | .0203                    |                               | 766                    |
| P <sub>2</sub>    | .046                | 42                     | .0418                      |                               | 909                    | .1352               | 65                     | .0406                    |                               | 836                    |
| P <sub>3</sub>    | .069                | 42                     | .0627                      |                               | 950                    | .2028               | 64                     | .0609                    |                               | 873                    |
| P <sub>4</sub>    | .092                | 44                     | .0836                      |                               | 979                    | .2704               | 66                     | .0812                    |                               | 902                    |
| P <sub>5</sub>    | .115                | 45                     | .1045                      |                               | 1009                   | .338                | 68                     | .1015                    |                               | 923                    |
| P <sub>6</sub>    |                     |                        | .1254                      |                               | 1022                   |                     |                        | .1218                    |                               | 939                    |
| P <sub>7</sub>    |                     |                        | .1463                      |                               | 1036                   |                     |                        | .1421                    |                               | 953                    |
| P <sub>8</sub>    |                     |                        | .1672                      |                               | 1043                   |                     |                        | .1624                    |                               | 965                    |
| P <sub>9</sub>    |                     |                        | .1881                      |                               | 1052                   |                     |                        | .1827                    |                               | 975                    |
| P <sub>10</sub>   |                     |                        | .209                       |                               | 1058                   |                     |                        | .203                     |                               | 984                    |

|                    |  |       |  |       |  |           |  |
|--------------------|--|-------|--|-------|--|-----------|--|
| Gauge No.          |  | Depth |  | Clock |  | hour      |  |
| P <sub>0</sub>     |  |       |  |       |  |           |  |
| P <sub>1</sub>     |  |       |  |       |  |           |  |
| P <sub>2</sub>     |  |       |  |       |  |           |  |
| P <sub>3</sub>     |  |       |  |       |  |           |  |
| P <sub>4</sub>     |  |       |  |       |  |           |  |
| P <sub>5</sub>     |  |       |  |       |  |           |  |
| P <sub>6</sub>     |  |       |  |       |  |           |  |
| P <sub>7</sub>     |  |       |  |       |  |           |  |
| P <sub>8</sub>     |  |       |  |       |  |           |  |
| P <sub>9</sub>     |  |       |  |       |  |           |  |
| P <sub>10</sub>    |  |       |  |       |  |           |  |
| Reading Interval 3 |  | 3     |  | 9     |  | 3 Minutes |  |
| REMARKS:           |  |       |  |       |  |           |  |
|                    |  |       |  |       |  |           |  |
|                    |  |       |  |       |  |           |  |

**SPECIAL PRESSURE DATA**

PRESSURE



TIME

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

BERLAND

Lease Name

Well No.

Test No.

JONES GEBERT OIL INCORPORATED

Lease Owner/Company Name

WICHITA

Owner's District

Legal Location  
Sec. - Twp. - Rng.

SEC. 20 - 10 - 19

Field Area

WILDCAT

County

ROOKS

State

KANSAS

|                            |             |                  |                        |                                                                |                            |                           |
|----------------------------|-------------|------------------|------------------------|----------------------------------------------------------------|----------------------------|---------------------------|
| Flow Time                  | 1st 14 Min. | 2nd 60 Min.      | Date                   | 2-27-64                                                        | Ticket Number              | 386716 S                  |
| Closed In Press. Time      | 1st 32 Min. | 2nd 30 Min.      | Kind of Job            | OPEN HOLE TEST                                                 | Halliburton District       | HAYS                      |
| Pressure Readings          | Field       | Office Corrected | Tester                 | MR. SELLERS                                                    | Witness                    | MR. DOUGLASS              |
| Depth Top Gauge            | 3768 Ft.    | NO Blanked Off   | Drilling Contractor    | COMPANY TOOLS                                                  |                            |                           |
| BT. P.R.D. No.             | 374         | 12 Hour Clock    | Elevation              | 2196' D.F.                                                     | Top Packer                 | 3760'                     |
| Initial Hydro Mud Pressure | -           | 1920             | Total Depth            | 3874'                                                          | Bottom Packer              | 3766'                     |
| Initial Closed in Pres.    | -           | 1085             | Interval Tested        | 3766'-3874'                                                    | Formation Tested           | ARBUCKLE                  |
| Initial Flow Pres.         | -           | 1 54             | Casing or Hole Size    | 7 7/8"                                                         | Casing } Top               |                           |
| Final Flow Pres.           | -           | 2 227            | Surface Choke          | 1"                                                             | Perfs. } Bot.              | -                         |
| Final Closed in Pres.      | -           | 1 208            | Size & Kind Drill Pipe | 3 1/2" I.F.                                                    | Bottom Choke               | 1"                        |
| Final Hydro Mud Pressure   | -           | 2 591            | Mud Weight             | 9.9                                                            | Drill Collars Above Tester | I.D. - LENGTH<br>2" x 90' |
| Depth Cen. Gauge           | -           | 1074             | Temperature            | 100 °F Est.<br>°F Actual                                       | Mud Viscosity              | 47                        |
| BT. P.R.D. No.             | -           | 1909             | Depths Mea. From       | DERRICK FLOOR                                                  | Anchor Size & Length       | ID OD - X                 |
| Initial Hydro Mud Pres.    | -           | -                | Cushion                | -                                                              | Depth of Tester Valve      | - Ft.                     |
| Initial Closed in Pres.    | -           | -                | Recovered              | 60 Water<br>540 Feet of Muddy oil                              | Depth Back Pres. Valve     | - Ft.                     |
| Initial Flow Pres.         | -           | 1                | Recovered              | 180 Feet of Oily water                                         |                            |                           |
| Final Flow Pres.           | -           | 2                | Recovered              | 120 Feet of Slightly oil cut water                             |                            |                           |
| Final Closed in Pres.      | -           | 1                | Recovered              | 450 Feet of Very slightly water cut<br>very highly oil cut mud |                            |                           |
| Final Hydro Mud Pres.      | -           | 2                | Oil A.P.I. Gravity     | -                                                              | Water Spec. Gravity        | 1.040                     |
| Depth Bot. Gauge           | 3780 Ft.    | YES Blanked Off  | Gas Gravity            | -                                                              | Surface Pressure           | - psi                     |
| BT. P.R.D. No.             | 294         | 12 Hour Clock    | Tool Opened            | 5:19                                                           | A.M. Tool Closed           | 7:05 A.M. P.M.            |
| Initial Hydro Mud Pres.    | 1973        | 1908             | Remarks                | Opened tool for 14 minute 1st flow. Closed                     |                            |                           |
| Initial Closed in Pres.    | 1100        | 1089             |                        | tool for 32 minute initial closed in pressure.                 |                            |                           |
| Initial Flow Pres.         | 68          | 2 62             |                        | Reopened tool for 60 minute 2nd flow with good                 |                            |                           |
| Final Flow Pres.           | 603         | 2 221            |                        | blow throughout test. Closed tool for 30 minute                |                            |                           |
| Final Closed in Pres.      | 1083        | 1078             |                        | final closed in pressure. 9' Porisity                          |                            |                           |
| Final Hydro Mud Pres.      | 1964        | 1903             |                        |                                                                |                            |                           |

FORMATION TEST DATA

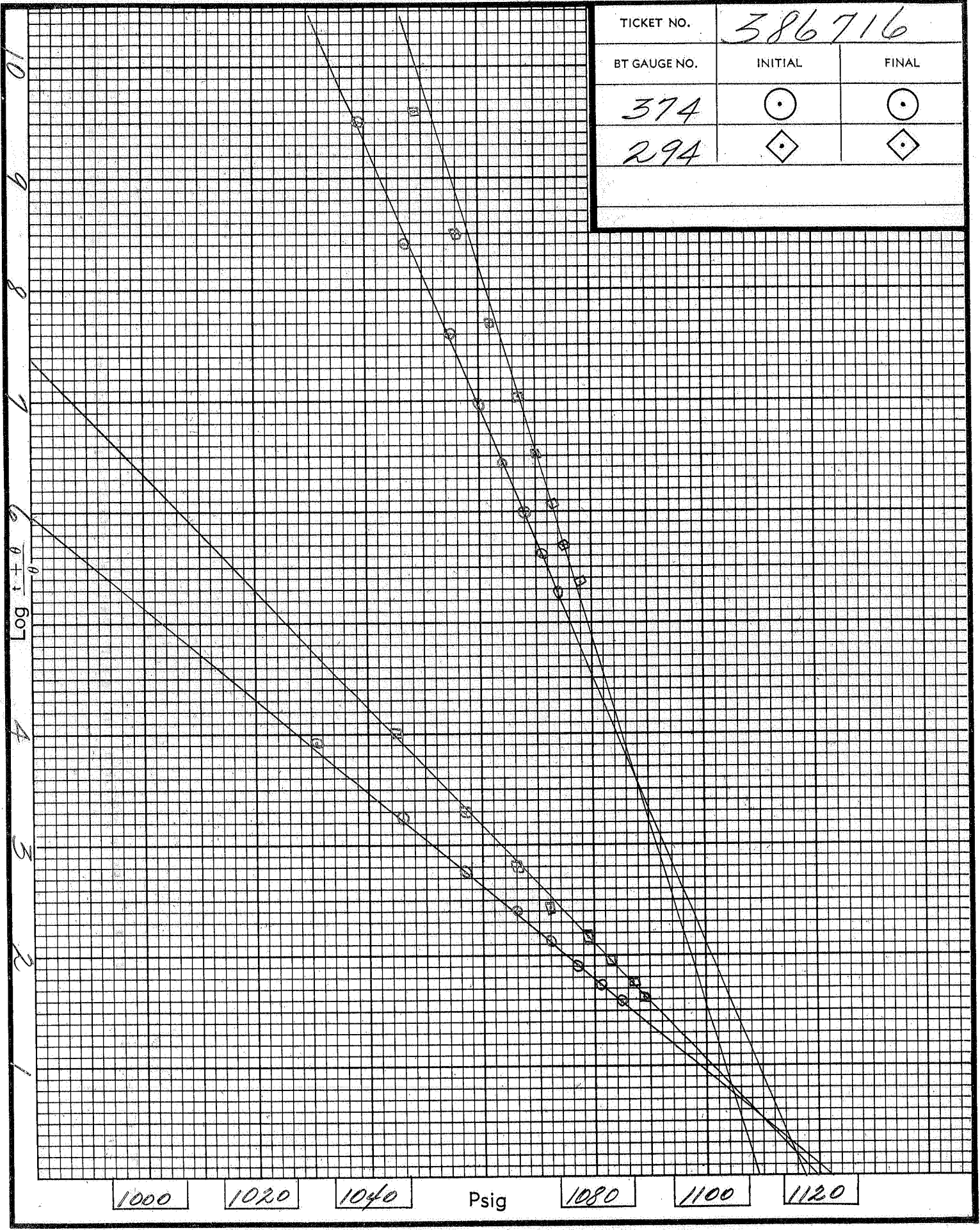
| Gauge No. 374     |                  |     | Depth 3768'                |                               |                  | Clock 12 hour      |                  | Ticket No. 386716        |                               |                  |
|-------------------|------------------|-----|----------------------------|-------------------------------|------------------|--------------------|------------------|--------------------------|-------------------------------|------------------|
| 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             | 54  | .000                       |                               | 208              | .000               | 227              | .000                     |                               | 591              |
| P <sub>1</sub>    | .0143            | 77  | .0226                      | .734                          | 966              | .1045              | 342              | .0218                    | 1.394                         | 1003             |
| P <sub>2</sub>    | .0286            | 107 | .0452                      | .507                          | 1009             | .2090              | 445              | .0436                    | 1.110                         | 1026             |
| P <sub>3</sub>    | .0429            | 128 | .0678                      | .394                          | 1031             | .3135              | 527              | .0654                    | .950                          | 1039             |
| P <sub>4</sub>    | .0572            | 151 | .0904                      | .324                          | 1046             | .4180              | 591              | .0872                    | .841                          | 1047             |
| P <sub>5</sub>    | .0715            | 171 | .1130                      | .275                          | 1057             |                    |                  | .1090                    | .760                          | 1055             |
| P <sub>6</sub>    | .0858            | 189 | .1356                      | .240                          | 1066             |                    |                  | .1308                    | .696                          | 1060             |
| P <sub>7</sub>    | .1000            | 208 | .1582                      | .213                          | 1072             |                    |                  | .1526                    | .643                          | 1064             |
| P <sub>8</sub>    |                  |     | .1808                      | .191                          | 1077             |                    |                  | .1744                    | .599                          | 1068             |
| P <sub>9</sub>    |                  |     | .2034                      | .174                          | 1081             |                    |                  | .1962                    | .561                          | 1071             |
| P <sub>10</sub>   |                  |     | .2260                      | .159                          | 1085             |                    |                  | .2180                    | .528                          | 1074             |

| Gauge No. 294    |                  |     | Depth 3780'      |                               |                  | Clock 12 hour    |                  |                  |                               |                  |
|------------------|------------------|-----|------------------|-------------------------------|------------------|------------------|------------------|------------------|-------------------------------|------------------|
| 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             | 62  | .000             |                               | 221              | .000             | 231              | .000             |                               | 596              |
| P <sub>1</sub>   | .0146            | 95  | .0225            | .743                          | 988              | .1043            | 343              | .0213            | 1.404                         | 1019             |
| P <sub>2</sub>   | .0292            | 120 | .0450            | .514                          | 1022             | .2086            | 448              | .0426            | 1.120                         | 1036             |
| P <sub>3</sub>   | .0438            | 137 | .0675            | .400                          | 1045             | .3129            | 529              | .0639            | .960                          | 1049             |
| P <sub>4</sub>   | .0584            | 164 | .0900            | .329                          | 1057             | .4170            | 596              | .0852            | .851                          | 1056             |
| P <sub>5</sub>   | .0730            | 186 | .1125            | .280                          | 1066             |                  |                  | .1065            | .769                          | 1062             |
| P <sub>6</sub>   | .0876            | 199 | .1350            | .244                          | 1072             |                  |                  | .1278            | .704                          | 1067             |
| P <sub>7</sub>   | .1020            | 221 | .1575            | .217                          | 1079             |                  |                  | .1491            | .651                          | 1070             |
| P <sub>8</sub>   |                  |     | .1800            | .195                          | 1083             |                  |                  | .1704            | .607                          | 1073             |
| P <sub>9</sub>   |                  |     | .2025            | .177                          | 1087             |                  |                  | .1917            | .569                          | 1075             |
| P <sub>10</sub>  |                  |     | .2250            | .162                          | 1089             |                  |                  | .2130            | .536                          | 1078             |

| Reading Interval 2 |  | 3.2 |  | 15 |  | 3 |  | Minutes |
|--------------------|--|-----|--|----|--|---|--|---------|
| REMARKS:           |  |     |  |    |  |   |  |         |



|              |         |       |
|--------------|---------|-------|
| TICKET NO.   | 386716  |       |
| BT GAUGE NO. | INITIAL | FINAL |
| 374          |         |       |
| 294          |         |       |
|              |         |       |

# Liquid Production

|                                                 |         |      |      |                         |                        |
|-------------------------------------------------|---------|------|------|-------------------------|------------------------|
| B.T. Gauge Numbers                              |         | 374  | 294  | Ticket Number           | 386716                 |
| Initial Hydrostatic                             |         | 1920 | 1908 | Elevation               | 2196 ft.               |
| Final Hydrostatic                               |         | 1909 | 1903 | Indicated Production    | 1st Flow<br>bbbls. day |
| 1st Flow                                        | Initial | 54   | 62   | Total Flow              | bbbls. day             |
|                                                 | Final   | 208  | 221  | Drill Collar Length     | 90 ft.                 |
| Initial Closed In Pressure                      |         | 1085 | 1089 | Drill Collar I.D.       | 2" in.                 |
| 2nd Flow                                        | Initial | 227  | 231  | Drill Pipe Factor       | .0066 bbls. ft.        |
|                                                 | Final   | 591  | 596  | Hole Size               | 7.87 in.               |
| Final Closed In Pressure                        |         | 1074 | 1078 | Footage Tested          | 9' ft.                 |
| Extrapolated Static Pressure                    | Initial | 1122 | 1120 | Mud Weight              | 9.9 lbs. gal.          |
|                                                 | Final   | 1118 | 1110 | Viscosity, Oil or Water | 80.0 cp                |
| Slope $\frac{\text{psi}}{\text{cycle}}$<br>P-10 | Initial | 884  | 930  | Oil API Gravity         | 19                     |
|                                                 | Final   | 1034 | 1049 | Water Specific Gravity  |                        |

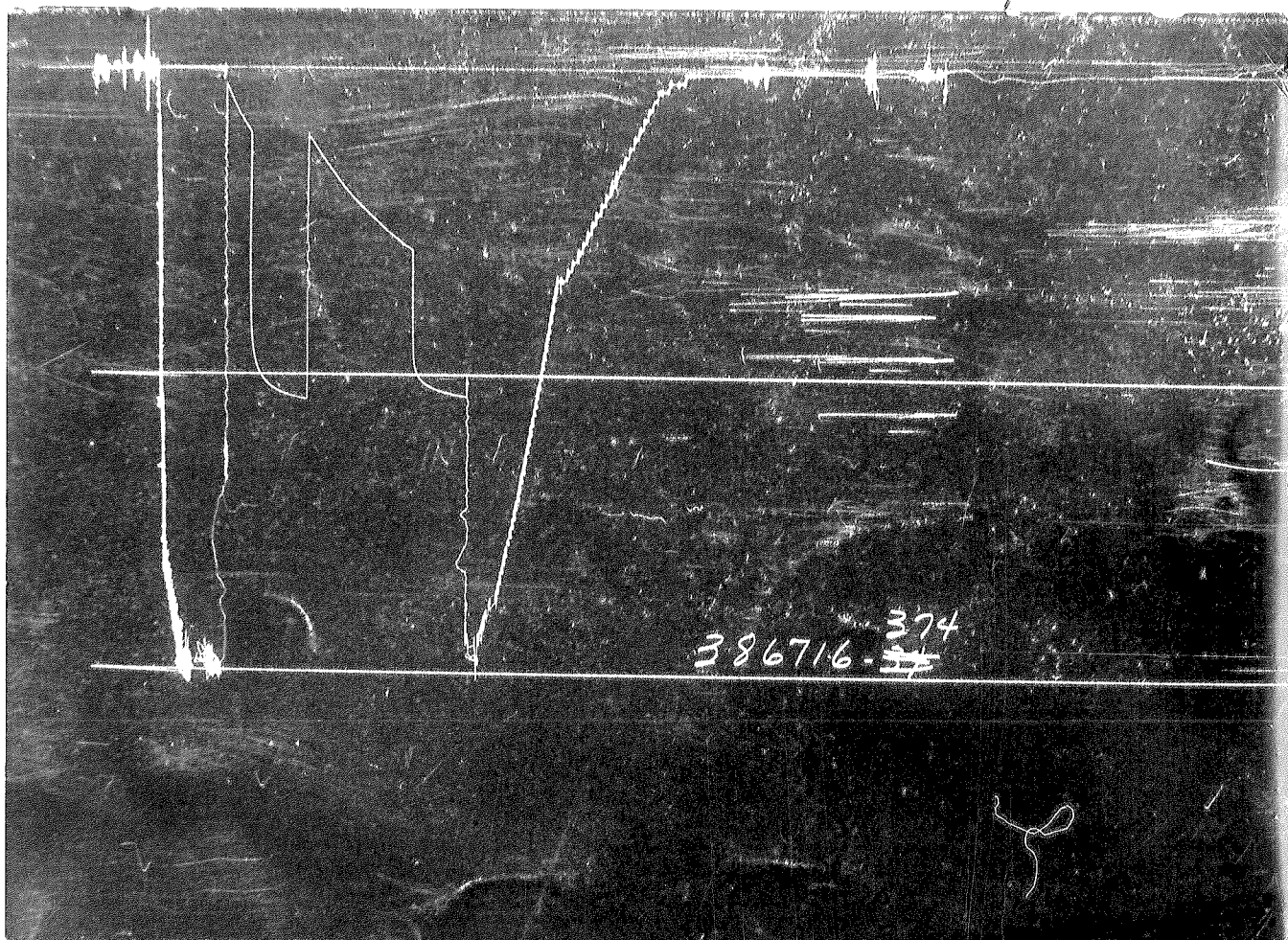
Remarks:

## SUMMARY

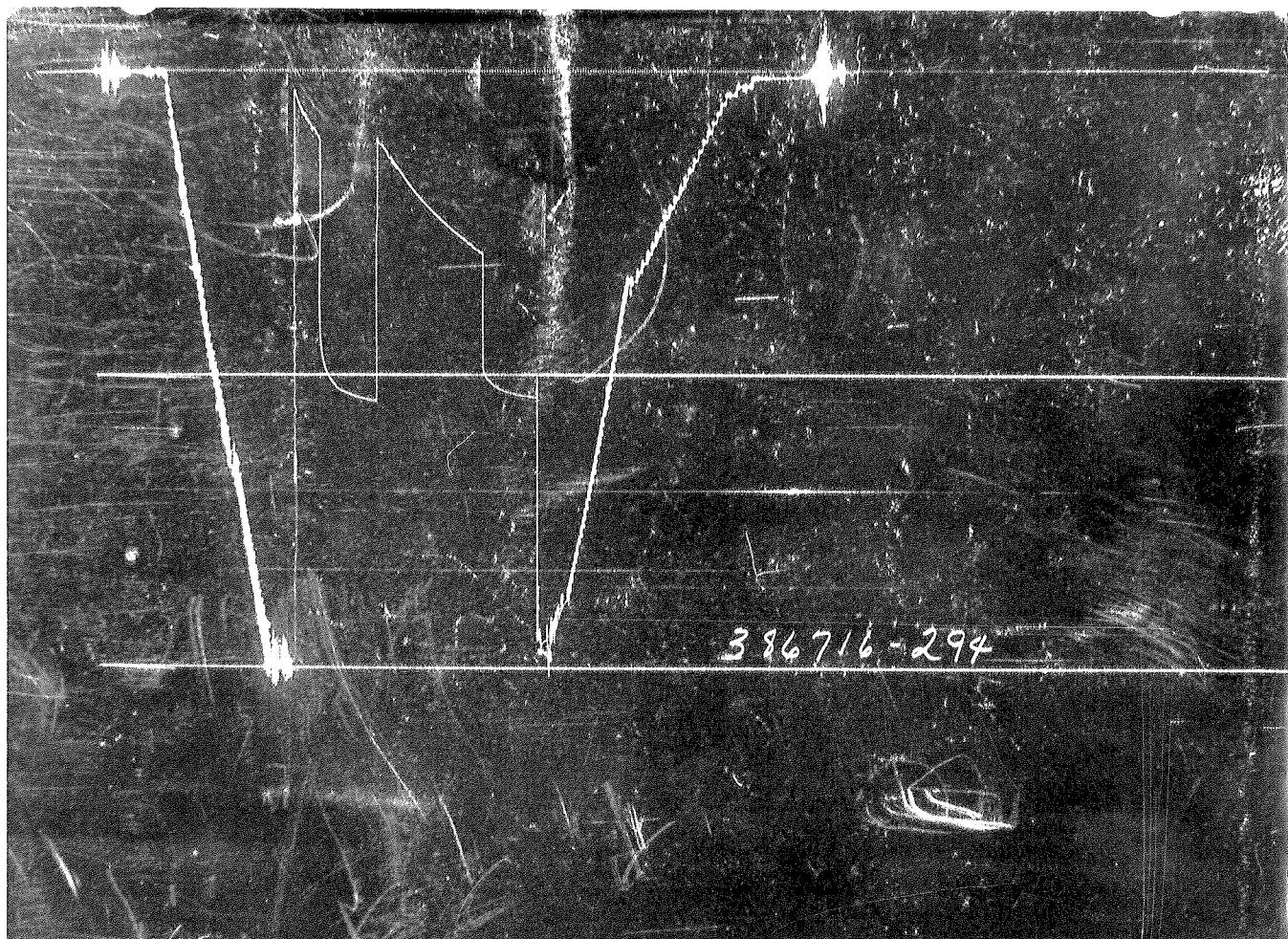
|                                        |                                                | Gauge No. 374/3768' |        | Gauge No. 294/3780' |        |            |
|----------------------------------------|------------------------------------------------|---------------------|--------|---------------------|--------|------------|
| Product                                | Equation                                       | Initial             | Final  | Initial             | Final  | Units      |
| Production                             | $Q = \frac{1440 R}{t}$                         | 236.                | 129.   | 236.                | 131.   | bbbls. day |
| Transmissability                       | $\frac{Kh}{\mu} = \frac{162.6 Q}{m}$           | 161.                | 250.   | 202.                | 350.   | md. ft. cp |
| Indicated Flow Capacity                | $Kh = \frac{Kh}{\mu} \mu$                      | 12922.              | 20058. | 16186.              | 28065. | md. ft.    |
| Average Effective Permeability         | $K = \frac{Kh}{h}$                             |                     |        |                     |        | md.        |
|                                        | $K_i = \frac{Kh}{h_i}$                         | 1435.               | 2228.  | 1798.               | 3118.  | md.        |
| Damage Ratio                           | $DR = .183 \frac{P_s - P_f}{m}$                | .703                | 1.148  | .865                | 1.542  | —          |
| Theoretical Potential w/Damage Removed | $Q_1 = Q DR$                                   | 236.                | 148.   | 236.                | 202.   | bbbls. day |
| Approx. Radius of Investigation        | $b \approx \sqrt{Kt}$ or $\sqrt{Kt_0}$         |                     |        |                     |        | ft.        |
|                                        | $b_1 \approx \sqrt{K_1 t}$ or $\sqrt{K_1 t_0}$ | 141.                | 406.   | 158.                | 480.   | ft.        |
| Potentiometric Surface *               | $Pot. = EI - CD + 2.319 P_s$                   | 1029                | 1020   | 1013                | 990.   | ft.        |

**NOTICE:** These calculations are based upon information furnished by you and taken from Drill Stem Test pressure charts, and are furnished for your information. In furnishing such calculations and evaluations based thereon, Halliburton is merely expressing its opinion. You agree that Halliburton makes no warranty express or implied as to the accuracy of such calculations or opinions, and that Halliburton shall not be liable for any loss or damage, whether due to negligence or otherwise, in connection with such calculations and opinions.

↑  
PRESSURE  
↓



← TIME →



Each Horizontal Line Equal to 1000 psi