

|                            |               |                  |                        |                                                   |                             |                          |                   |
|----------------------------|---------------|------------------|------------------------|---------------------------------------------------|-----------------------------|--------------------------|-------------------|
| Flow Time                  | 1st 6 Min.    | 2nd 60 Min.      | Date                   | 2-13-62                                           | Ticket Number               | 326495                   | S                 |
| Closed In Press. Time      | 1st 32 Min.   | 2nd 30 Min.      | Kind of Job            | OPEN HOLE                                         | Halliburton District        | HAYS                     |                   |
| Pressure Readings          | Field         | Office Corrected | Tester                 | ALVIN BERENS                                      | Witness                     | EARL MABRY               |                   |
| Depth Top Gauge            | 3164 Ft.      | No Blanked Off   | Drilling Contractor    | LEBEN DRLG. CO.                                   |                             |                          |                   |
| BT. P.R.D. No.             | 232           | 12 Hour Clock    | Elevation              | 2063' DF                                          | Top Packer                  | -                        |                   |
| Initial Hydro Mud Pressure | 1865          | 1642             | Total Depth            | 3235'                                             | Bottom Packer               | 3173'                    |                   |
| Initial Closed in Pres.    | 910           | 1004             | Interval Tested        | 3173-3235'                                        | Formation Tested            | Kansas City              |                   |
| Initial Flow Pres.         | 35            | 1 12<br>2 43     | Casing or Hole Size    | 7 7/8"                                            | Casing Perfs. { Top<br>Bot. |                          |                   |
| Final Flow Pres.           | 75            | 1 24<br>2 78     | Surface Choke          | 1/4"                                              | Bottom Choke                | 5/8"                     |                   |
| Final Closed in Pres.      | 818           | 845              | Size & Kind Drill Pipe | 4 1/2" -900 Flex                                  | Drill Collars Above Tester  | -                        |                   |
| Final Hydro Mud Pressure   | 1825          | 1630             | Mud Weight             | 9.9                                               | Mud Viscosity               | 41                       |                   |
| Depth Cen. Gauge           | 3226 Ft.      | yes Blanked Off  | Temperature            | 101 °F Est.<br>°F Actual                          | Anchor Size & Length        | ID 4<br>OD 5             | X 62              |
| BT. P.R.D. No.             | 1462          | 12 Hour Clock    | Depths Mea. From       | KB                                                | Depth of Tester Valve       | 3159                     | Ft.               |
| Initial Hydro Mud Pres.    |               | 1677             | TYPE AMOUNT            |                                                   | Depth Back Pres. Valve      |                          | Ft.               |
| Initial Closed in Pres.    |               | 1042             | Cushion                | none                                              |                             |                          |                   |
| Initial Flow Pres.         | 1 59<br>2 76  |                  | Recovered              | 122                                               | Feet of                     | Oil & gas cut mud        |                   |
| Final Flow Pres.           | 1 63<br>2 114 |                  | Recovered              | 60                                                | Feet of                     | slight oil & gas cut mud |                   |
| Final Closed in Pres.      |               | 879              | Recovered              |                                                   | Feet of                     |                          |                   |
| Final Hydro Mud Pres.      |               | 1661             | Oil A.P.I. Gravity     |                                                   | Water Spec. Gravity         |                          |                   |
| Depth Bot. Gauge           |               | Blanked Off      | Gas Gravity            |                                                   | Surface Pressure            |                          | psi               |
| BT. P.R.D. No.             |               | Hour Clock       | Tool Opened            | 4:05 PM                                           | A.M. P.M.                   | Tool Closed              | 6:13 PM A.M. P.M. |
| Initial Hydro Mud Pres.    |               |                  | Remarks                | Tool opened at 4:05 PM for a 6 min. first         |                             |                          |                   |
| Initial Closed in Pres.    |               |                  |                        | flow. Closed tool at 4:11 PM for a 32 min. ICIP.  |                             |                          |                   |
| Initial Flow Pres.         | 1<br>2        |                  |                        | Reopened tool at 4:43 PM for a 60 minute final    |                             |                          |                   |
| Final Flow Pres.           | 1<br>2        |                  |                        | flow. Took a 30 min. FCIP. Weak blow for 11 mins. |                             |                          |                   |
| Final Closed in Pres.      |               |                  |                        |                                                   |                             |                          |                   |
| Final Hydro Mud Pres.      |               |                  |                        |                                                   |                             |                          |                   |

FORMATION TEST DATA

SPECIAL PRESSURE DATA

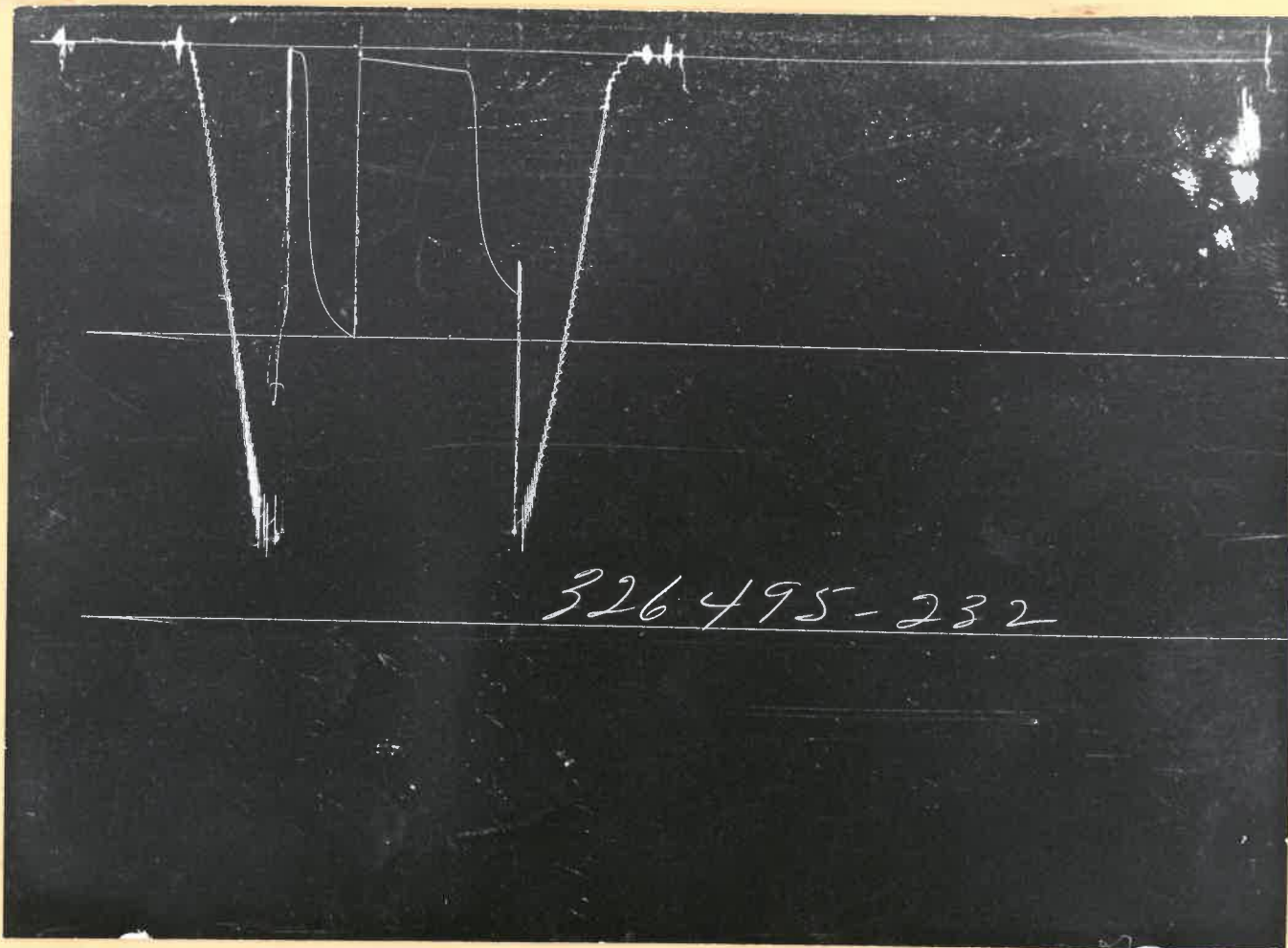
SMITH  
Legal Location  
Sec. - Twp. - Rng. 15 10 16  
Lease Name  
U-1  
Well No.  
1  
Test No.  
CITIES SERVICE PETROLEUM COMPANY  
Lease Owner/Company Name  
County  
Rooks  
State  
Kansas  
Owner's District  
HAYS  
15-10-16-24

| Gauge No. 232     |                      |                        | Depth 3164                 |                                 |                        | Clock 12 hour        |                        | Ticket No. 326495        |                                 |                        |
|-------------------|----------------------|------------------------|----------------------------|---------------------------------|------------------------|----------------------|------------------------|--------------------------|---------------------------------|------------------------|
| 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                 | 12                     | .000                       |                                 | 24                     | .000                 | 43                     | .000                     |                                 | 78                     |
| P <sub>1</sub>    | .0133                | 16                     | .0233                      |                                 | 127                    | .105                 | 48                     | .0215                    |                                 | 135                    |
| P <sub>2</sub>    | .0267                | 20                     | .0466                      |                                 | 599                    | .210                 | 58                     | .0430                    |                                 | 352                    |
| P <sub>3</sub>    | .040                 | 24                     | .0699                      |                                 | 782                    | .315                 | 68                     | .0645                    |                                 | 588                    |
| P <sub>4</sub>    |                      |                        | .0932                      |                                 | 857                    | .420                 | 78                     | .0860                    |                                 | 677                    |
| P <sub>5</sub>    |                      |                        | .1165                      |                                 | 904                    |                      |                        | .1075                    |                                 | 727                    |
| P <sub>6</sub>    |                      |                        | .1398                      |                                 | 934                    |                      |                        | .2190                    |                                 | 764                    |
| P <sub>7</sub>    |                      |                        | .1631                      |                                 | 959                    |                      |                        | .1505                    |                                 | 791                    |
| P <sub>8</sub>    |                      |                        | .1864                      |                                 | 977                    |                      |                        | .1720                    |                                 | 812                    |
| P <sub>9</sub>    |                      |                        | .2097                      |                                 | 992                    |                      |                        | .1935                    |                                 | 830                    |
| P <sub>10</sub>   |                      |                        | .2330                      |                                 | 1004                   |                      |                        | .2150                    |                                 | 845                    |

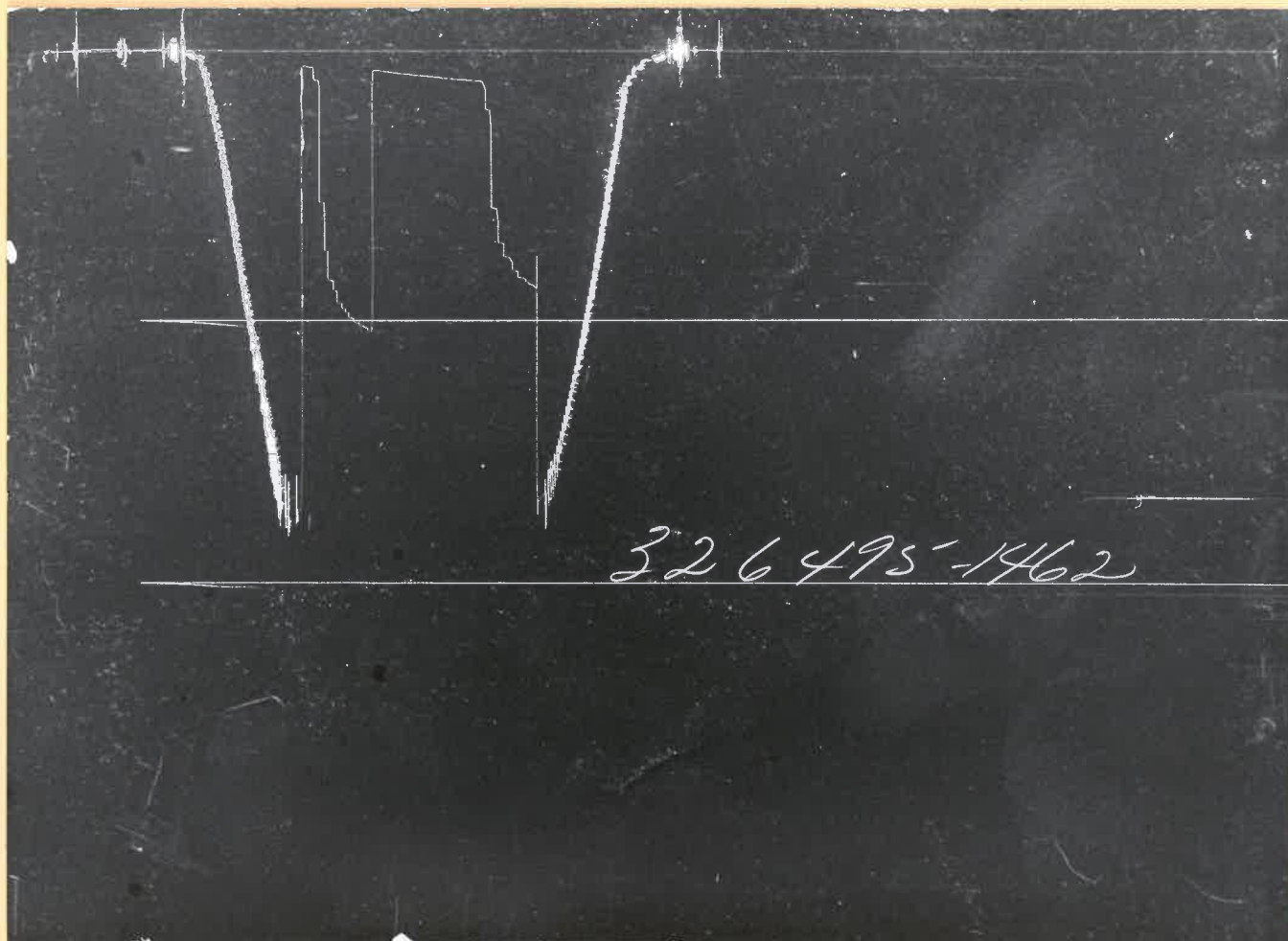
| Gauge No.        |      |    | 1462                                          |  |      | Depth 3226 |     |      | Clock |     | 12 |   | hour |  |         |
|------------------|------|----|-----------------------------------------------|--|------|------------|-----|------|-------|-----|----|---|------|--|---------|
| P <sub>0</sub>   | .000 | 59 | .000                                          |  | 63   | .000       | 76  | .000 |       | 114 |    |   |      |  |         |
| P <sub>1</sub>   | .043 | 63 | .226                                          |  | 1042 | .422       | 114 | .212 |       | 879 |    |   |      |  |         |
| P <sub>2</sub>   |      |    |                                               |  |      |            |     |      |       |     |    |   |      |  |         |
| P <sub>3</sub>   |      |    |                                               |  |      |            |     |      |       |     |    |   |      |  |         |
| P <sub>4</sub>   |      |    | DID NOT CUT UP DUE TO STAIRSTEPPING OF GAUGE: |  |      |            |     |      |       |     |    |   |      |  |         |
| 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 |      |    | 2                                             |  |      | 3.2        |     |      | 15    |     |    | 3 |      |  | Minutes |
| REMARKS:         |      |    |                                               |  |      |            |     |      |       |     |    |   |      |  |         |
|                  |      |    |                                               |  |      |            |     |      |       |     |    |   |      |  |         |
|                  |      |    |                                               |  |      |            |     |      |       |     |    |   |      |  |         |

## SPECIAL PRESSURE DATA

↑  
PRESSURE  
↓



← TIME →



|                            |             |                  |                                             |                                    |                            |                        |                |
|----------------------------|-------------|------------------|---------------------------------------------|------------------------------------|----------------------------|------------------------|----------------|
| Flow Time                  | 1st Min. 5  | 2nd Min. 60      | Date                                        | 2-14-62                            | Ticket Number              | 326448                 | S              |
| Closed In Press. Time      | 1st Min. 30 | 2nd Min. 30      | Kind of Job                                 | OPEN HOLE                          | Halliburton District       | HAYS                   |                |
| Pressure Readings          | Field       | Office Corrected | Tester                                      | BOONE                              | Witness                    | MABRY                  |                |
| Depth Top Gauge            | 3228 Ft.    | No Blanked Off   | Drilling Contractor                         | LEBEN DRILLING COMPANY             |                            |                        |                |
| BT. P.R.D. No.             | 232         | 12 Hour Clock    | Elevation                                   | 2063' DF                           | Top Packer                 |                        |                |
| Initial Hydro Mud Pressure | 1740        | 1738             | Total Depth                                 | 3263'                              | Bottom Packer              | 3237'                  |                |
| Initial Closed in Pres.    | 1125        | 1139             | Interval Tested                             | 3237-3263'                         | Formation Tested           | Kansas City            |                |
| Initial Flow Pres.         | 55          | 1 25<br>2 97     | Casing or Hole Size                         | 7 7/8"                             | Casing Perfs.              | Top Bot.               |                |
| Final Flow Pres.           | 435         | 1 65<br>2 449    | Surface Choke                               |                                    | Bottom Choke               | 5/8"                   |                |
| Final Closed in Pres.      | 1090        | 1099             | Size & Kind Drill Pipe                      | 4 1/2"                             | Drill Collars Above Tester | I.D. - LENGTH<br>2.764 |                |
| Final Hydro Mud Pressure   | 1700        | 1714             | Mud Weight                                  | 9.9                                | Mud Viscosity              | 41                     |                |
| Depth Cen. Gauge           |             |                  | Temperature                                 | 92                                 | Anchor Size & Length       | ID 5"<br>OD 4" X 26'   |                |
| BT. P.R.D. No.             |             |                  | Depths Mea. From                            | KB                                 | Depth of Tester Valve      | 3227                   | Ft.            |
| Initial Hydro Mud Pres.    |             |                  | Cushion                                     | None                               | Depth Back Pres. Valve     |                        | Ft.            |
| Initial Closed in Pres.    |             |                  | Recovered                                   | 870 Feet of                        | Free live oil              |                        |                |
| Initial Flow Pres.         |             | 1                | Recovered                                   | 360 Feet of                        | Heavily gas cut oil        |                        |                |
| Final Flow Pres.           |             | 1                | Recovered                                   |                                    |                            |                        |                |
| Final Closed in Pres.      |             | 2                | Recovered                                   |                                    |                            |                        |                |
| Final Hydro Mud Pres.      |             |                  | Oil A.P.I. Gravity                          |                                    | Water Spec. Gravity        |                        |                |
| Depth Bot. Gauge           | 3254 Ft.    | Yes Blanked Off  | Gas Gravity                                 |                                    | Surface Pressure           |                        | psi            |
| BT. P.R.D. No.             | 1462        | 12 Hour Clock    | Tool Opened                                 | 5:52                               | A.M. P.M.                  | Tool Closed            | 7:27 A.M. P.M. |
| Initial Hydro Mud Pres.    |             | 1774             | Remarks                                     | Opened for 5 min. 1st flow. Closed |                            |                        |                |
| Initial Closed in Pres.    |             | 1152             | for 30 min. ICIP. Reopened with a very      |                                    |                            |                        |                |
| Initial Flow Pres.         |             | 1 71<br>2 109    | strong blow. for 60 min. 2nd flow. Gas to   |                                    |                            |                        |                |
| Final Flow Pres.           |             | 1 74<br>2 464    | surface in 60 min. Closed for 30 min. FCIP. |                                    |                            |                        |                |
| Final Closed in Pres.      |             | 1113             | 900' Flex wt.                               |                                    |                            |                        |                |
| Final Hydro Mud Pres.      |             | 1714             |                                             |                                    |                            |                        |                |

FORMATION TEST DATA

SPECIAL PRESSURE DATA

| Gauge No. 232     |                  |                  | Depth 3228'                |                                 |                  | Clock 12 hour      |                  | Ticket No. 326148        |                                 |                  |
|-------------------|------------------|------------------|----------------------------|---------------------------------|------------------|--------------------|------------------|--------------------------|---------------------------------|------------------|
| 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             | 25               | .000                       |                                 | 65               | .000               | 97               | .000                     |                                 | 449              |
| P <sub>1</sub>    | .006             | 33               | .0216                      |                                 | 998              | .105               | 211              | .0213                    |                                 | 996              |
| P <sub>2</sub>    | .012             | 44               | .0432                      |                                 | 1079             | .210               | 315              | .0426                    |                                 | 1035             |
| P <sub>3</sub>    | .018             | 49               | .0648                      |                                 | 1104             | .315               | 387              | .0639                    |                                 | 1056             |
| P <sub>4</sub>    | .024             | 57               | .0864                      |                                 | 1117             | .420               | 449              | .0852                    |                                 | 1069             |
| P <sub>5</sub>    | .030             | 65               | .1080                      |                                 | 1126             |                    |                  | .1065                    |                                 | 1078             |
| P <sub>6</sub>    |                  |                  | .1296                      |                                 | 1129             |                    |                  | .1278                    |                                 | 1083             |
| P <sub>7</sub>    |                  |                  | .1512                      |                                 | 1133             |                    |                  | .1491                    |                                 | 1089             |
| P <sub>8</sub>    |                  |                  | .1728                      |                                 | 1135             |                    |                  | .1704                    |                                 | 1093             |
| P <sub>9</sub>    |                  |                  | .1944                      |                                 | 1137             |                    |                  | .1917                    |                                 | 1097             |
| P <sub>10</sub>   |                  |                  | .2160                      |                                 | 1139             |                    |                  | .2130                    |                                 | 1099             |

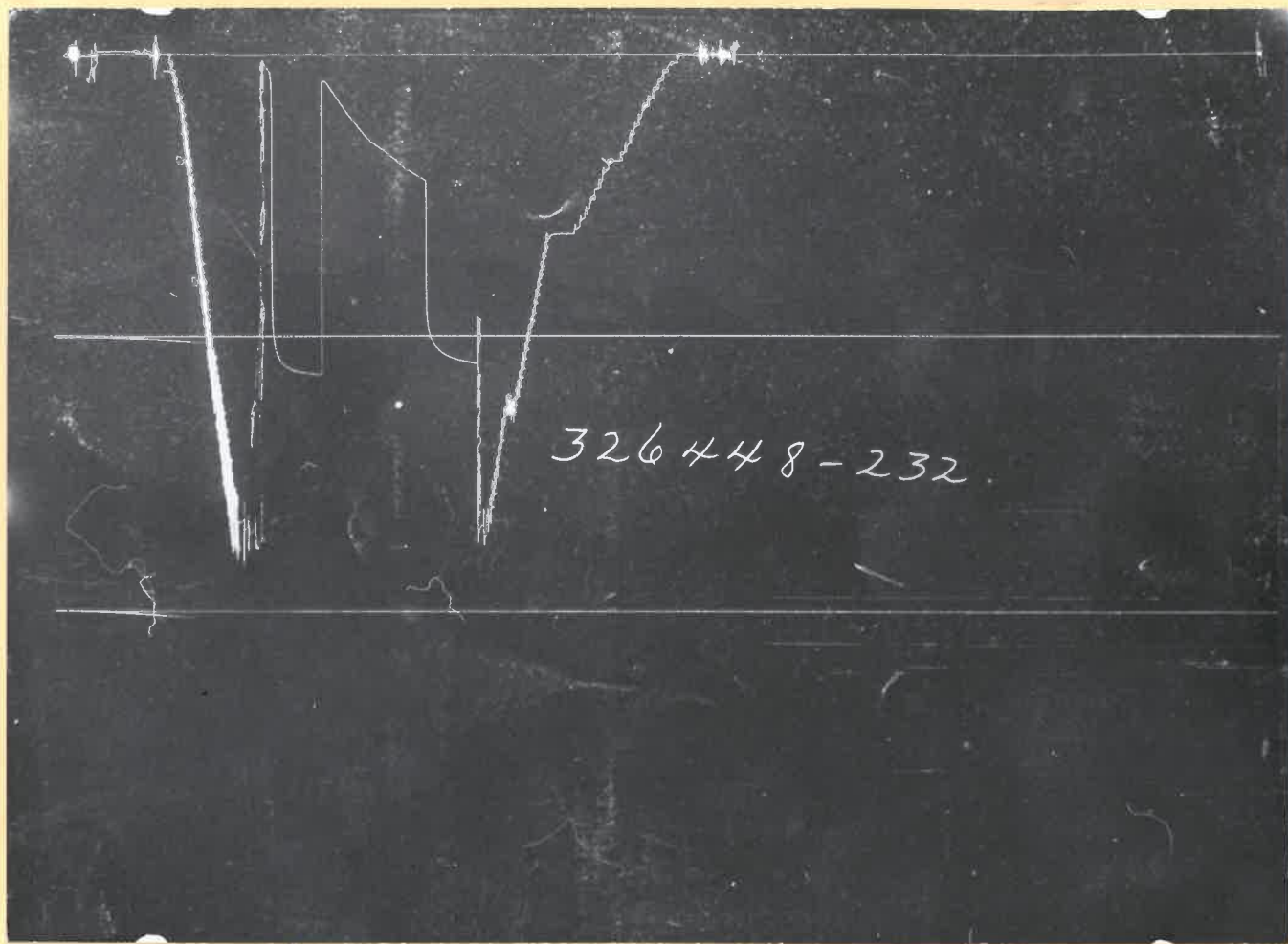
| Gauge No. 1462  |      |    | Depth 3254' |  |      | Clock 12 hour |     |       |  |      |
|-----------------|------|----|-------------|--|------|---------------|-----|-------|--|------|
| P <sub>0</sub>  | .000 | 71 | .000        |  | 74   | .000          | 109 | .000  |  | 1464 |
| P <sub>1</sub>  | .023 | 74 | .0212       |  | 1035 | .108          | 232 | .0202 |  | 1030 |
| P <sub>2</sub>  |      |    | .0424       |  | 1105 | .216          | 335 | .0404 |  | 1060 |
| P <sub>3</sub>  |      |    | .0636       |  | 1123 | .324          | 411 | .0606 |  | 1075 |
| P <sub>4</sub>  |      |    | .0848       |  | 1133 | .432          | 464 | .0808 |  | 1086 |
| P <sub>5</sub>  |      |    | .1060       |  | 1140 |               |     | .1010 |  | 1093 |
| P <sub>6</sub>  |      |    | .1272       |  | 1143 |               |     | .1212 |  | 1098 |
| P <sub>7</sub>  |      |    | .1484       |  | 1146 |               |     | .1414 |  | 1103 |
| P <sub>8</sub>  |      |    | .1696       |  | 1149 |               |     | .1616 |  | 1107 |
| P <sub>9</sub>  |      |    | .1908       |  | 1151 |               |     | .1818 |  | 1110 |
| P <sub>10</sub> |      |    | .2120       |  | 1152 |               |     | .2020 |  | 1113 |

Reading Interval 1 3 15 3 Minutes

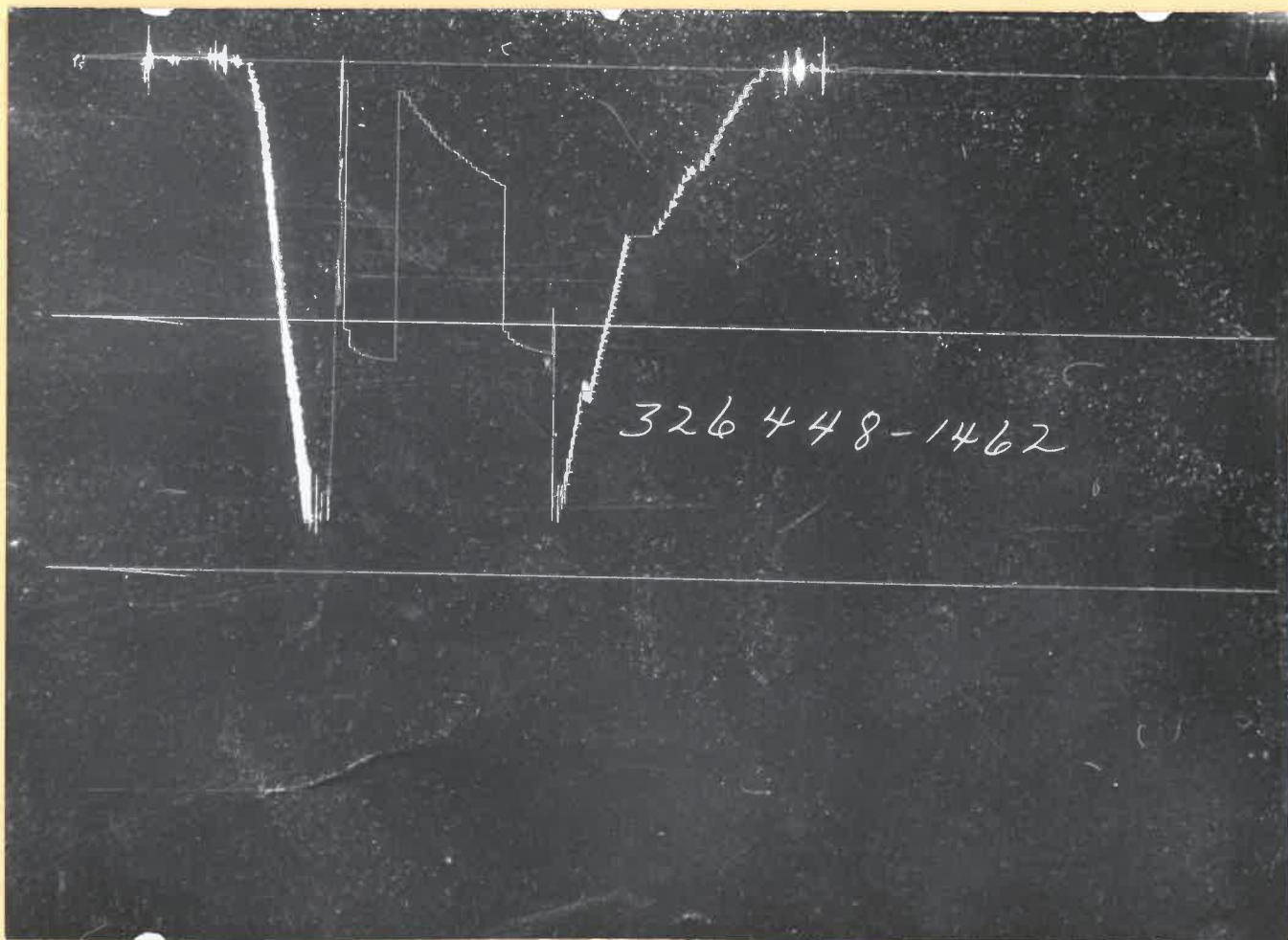
REMARKS: BT 1462 indicates stair-stepping

## SPECIAL PRESSURE DATA

PRESSURE



TIME



|                            |           |      |                  |             |                        |                                                     |                             |                               |                |              |
|----------------------------|-----------|------|------------------|-------------|------------------------|-----------------------------------------------------|-----------------------------|-------------------------------|----------------|--------------|
| Flow Time                  | 1st<br>5  | Min. | 2nd<br>60        | Min.        | Date                   | 2-14-62                                             |                             | Ticket Number                 | 326449 S       |              |
| Closed In Press. Time      | 1st<br>30 | Min. | 2nd<br>30        | Min.        | Kind of Job            | Open hole test                                      |                             | Halliburton District          | Hays           |              |
| Pressure Readings          | Field     |      | Office Corrected |             | Tester                 | Boone                                               |                             | Witness                       | Mabry          |              |
| Depth Top Gauge            | 3256      | Ft.  | NO               | Blanked Off | Drilling Contractor    | Leren Drilling Company                              |                             |                               |                |              |
| BT. P.R.D. No.             | 232       |      | 12               | Hour Clock  | Elevation              | 2063'                                               | Top Packer                  | 3259'                         |                |              |
| Initial Hydro Mud Pressure | 1750      |      | 1672             |             | Total Depth            | 3300'                                               | Bottom Packer               | 3265'                         |                |              |
| Initial Closed in Pres.    | 1125      |      | 1123             |             | Interval Tested        | 3265'-3300'                                         | Formation Tested            | Kansas City                   |                |              |
| Initial Flow Pres.         | 90        |      | 1 16<br>2 91     |             | Casing or Hole Size    | 7 7/8"                                              | Casing Perfs. { Top<br>Bot. | { -                           |                |              |
| Final Flow Pres.           | 380       |      | 1 54<br>2 387    |             | Surface Choke          | -                                                   | Bottom Choke                | 5/8"                          |                |              |
| Final Closed in Pres.      | 1070      |      | 1071             |             | Size & Kind Drill Pipe | 4 1/2" FH                                           | Drill Collars Above Tester  | I.D. - LENGTH<br>2.76" x 900' |                |              |
| Final Hydro Mud Pressure   | 1680      |      | 1664             |             | Mud Weight             | 9.9                                                 | Mud Viscosity               | 43                            |                |              |
| Depth Cen. Gauge           |           | Ft.  |                  | Blanked Off | Temperature            | 92                                                  | °F Est.<br>°F Actual        | Anchor Size & Length          | ID 4"<br>OD 5" | X 35'        |
| BT. P.R.D. No.             |           |      |                  | Hour Clock  | Depths Mea. From       | Kelly Bushings                                      | Depth of Tester Valve       | 3242' Ft.                     |                |              |
| Initial Hydro Mud Pres.    |           |      |                  |             | Cushion                | -                                                   | Depth Back Pres. Valve      | - Ft.                         |                |              |
| Initial Closed in Pres.    |           |      |                  |             | Recovered              | 1020                                                | Feet of                     | Free oil                      |                |              |
| Initial Flow Pres.         |           |      | 1<br>2           |             | Recovered              | 240                                                 | Feet of                     | Gas cut oil                   |                |              |
| Final Flow Pres.           |           |      | 1<br>2           |             | Recovered              |                                                     | Feet of                     |                               |                |              |
| Final Closed in Pres.      |           |      |                  |             | Recovered              |                                                     | Feet of                     |                               |                |              |
| Final Hydro Mud Pres.      |           |      |                  |             | Oil A.P.I. Gravity     | 39 @ 57°                                            | Water Spec. Gravity         | -                             |                |              |
| Depth Bot. Gauge           | 3294      | Ft.  | YES              | Blanked Off | Gas Gravity            | -                                                   | Surface Pressure            | - psi                         |                |              |
| BT. P.R.D. No.             | 1462      |      | 12               | Hour Clock  | Tool Opened            | 7:35                                                | A.M.<br>P.M.                | Tool Closed                   | 9:10           | A.M.<br>P.M. |
| Initial Hydro Mud Pres.    |           |      | 1699             |             | Remarks                | Opened tool for 5 minute 1st flow. Closed           |                             |                               |                |              |
| Initial Closed in Pres.    |           |      | 1157             |             |                        | tool for 30 minute initial closed in pressure.      |                             |                               |                |              |
| Initial Flow Pres.         |           |      | 1 93<br>2 121    |             |                        | Reopened tool for 60 minute 2nd flow with good      |                             |                               |                |              |
| Final Flow Pres.           |           |      | 1 98<br>2 419    |             |                        | blow decreasing to weak blow in 60 minutes.         |                             |                               |                |              |
| Final Closed in Pres.      |           |      | 1105             |             |                        | Closed tool for 30 minute final closed in pressure. |                             |                               |                |              |
| Final Hydro Mud Pres.      |           |      | 1671             |             |                        |                                                     |                             |                               |                |              |

FORMATION TEST DATA

SPECIAL PRESSURE DATA

SMITH  
Lease Name

Well No.

Test No.

CITIES SERVICE PETROLEUM COMPANY  
Lease Owner/Company Name

County

ROOKS

State

KANSAS

Owner's District

15-105-16W

| Gauge No.         |                  | 232              |                            | Depth                           |                  | 3256'              |                  | Clock            |                                 | 12 hour          |  | Ticket No. |  | 326449 |  |
|-------------------|------------------|------------------|----------------------------|---------------------------------|------------------|--------------------|------------------|------------------|---------------------------------|------------------|--|------------|--|--------|--|
| 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             | 16               | .000                       |                                 | 54               | .000               | 91               | .000             |                                 | 387              |  |            |  |        |  |
| P <sub>1</sub>    | .006             | 25               | .0216                      |                                 | 923              | .1045              | 182              | .0213            |                                 | 904              |  |            |  |        |  |
| P <sub>2</sub>    | .012             | 32               | .0432                      |                                 | 1026             | .2090              | 272              | .0426            |                                 | 967              |  |            |  |        |  |
| P <sub>3</sub>    | .018             | 39               | .0648                      |                                 | 1065             | .3135              | 331              | .0639            |                                 | 997              |  |            |  |        |  |
| P <sub>4</sub>    | .024             | 46               | .0864                      |                                 | 1085             | .4180              | 387              | .0852            |                                 | 1020             |  |            |  |        |  |
| P <sub>5</sub>    | .030             | 54               | .1080                      |                                 | 1099             |                    |                  | .1065            |                                 | 1036             |  |            |  |        |  |
| P <sub>6</sub>    |                  |                  | .1296                      |                                 | 1107             |                    |                  | .1278            |                                 | 1046             |  |            |  |        |  |
| P <sub>7</sub>    |                  |                  | .1512                      |                                 | 1113             |                    |                  | .1491            |                                 | 1054             |  |            |  |        |  |
| P <sub>8</sub>    |                  |                  | .1728                      |                                 | 1117             |                    |                  | .1704            |                                 | 1061             |  |            |  |        |  |
| P <sub>9</sub>    |                  |                  | .1944                      |                                 | 1119             |                    |                  | .1917            |                                 | 1066             |  |            |  |        |  |
| P <sub>10</sub>   |                  |                  | .2160                      |                                 | 1123             |                    |                  | .2130            |                                 | 1071             |  |            |  |        |  |

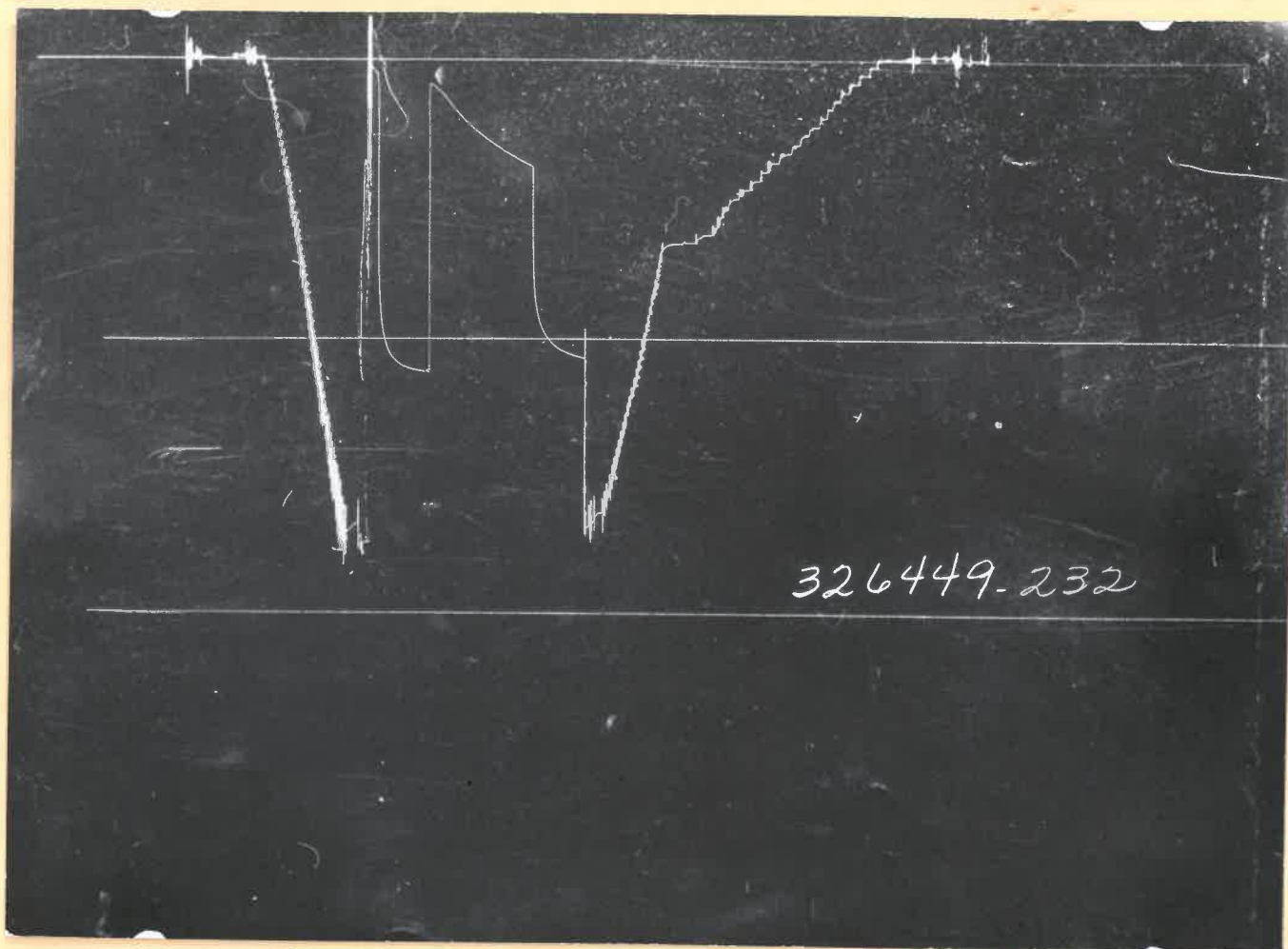
| Gauge No.          |      |    | Depth |  |       | Clock |      | hour      |  |       |
|--------------------|------|----|-------|--|-------|-------|------|-----------|--|-------|
| 1462               |      |    | 3294' |  |       | 12    |      |           |  |       |
| P <sub>0</sub>     | .000 | 93 | .000  |  | 98    | .000  | 121  | .000      |  | 419   |
| P <sub>1</sub>     | .036 | 98 | .0195 |  | 1039  | .1033 | 211  | .0224     |  | 1000  |
| P <sub>2</sub>     |      |    | .0390 |  | 1091  | .2066 | 308  | .0448     |  | 1033  |
| P <sub>3</sub>     |      |    | .0585 |  | 1126  | .3099 | 379  | .0672     |  | 1055  |
| P <sub>4</sub>     |      |    | .0780 |  | 1128  | .4130 | 419* | .0896     |  | 1069  |
| P <sub>5</sub>     |      |    | .0975 |  | 1142  |       |      | .1120     |  | 1080  |
| P <sub>6</sub>     |      |    | .1170 |  | 1144  |       |      | .1344     |  | 1084  |
| P <sub>7</sub>     |      |    | .1365 |  | 1149  |       |      | .1568     |  | 1094  |
| P <sub>8</sub>     |      |    | .1560 |  | 1152  |       |      | .1792     |  | 1097  |
| P <sub>9</sub>     |      |    | .1755 |  | 1155  |       |      | .2016     |  | 1105  |
| P <sub>10</sub>    |      |    | .1950 |  | 1157* |       |      | .2240     |  | 1105* |
| Reading Interval 1 |      |    | 3     |  |       | 15    |      | 3 Minutes |  |       |

REMARKS:

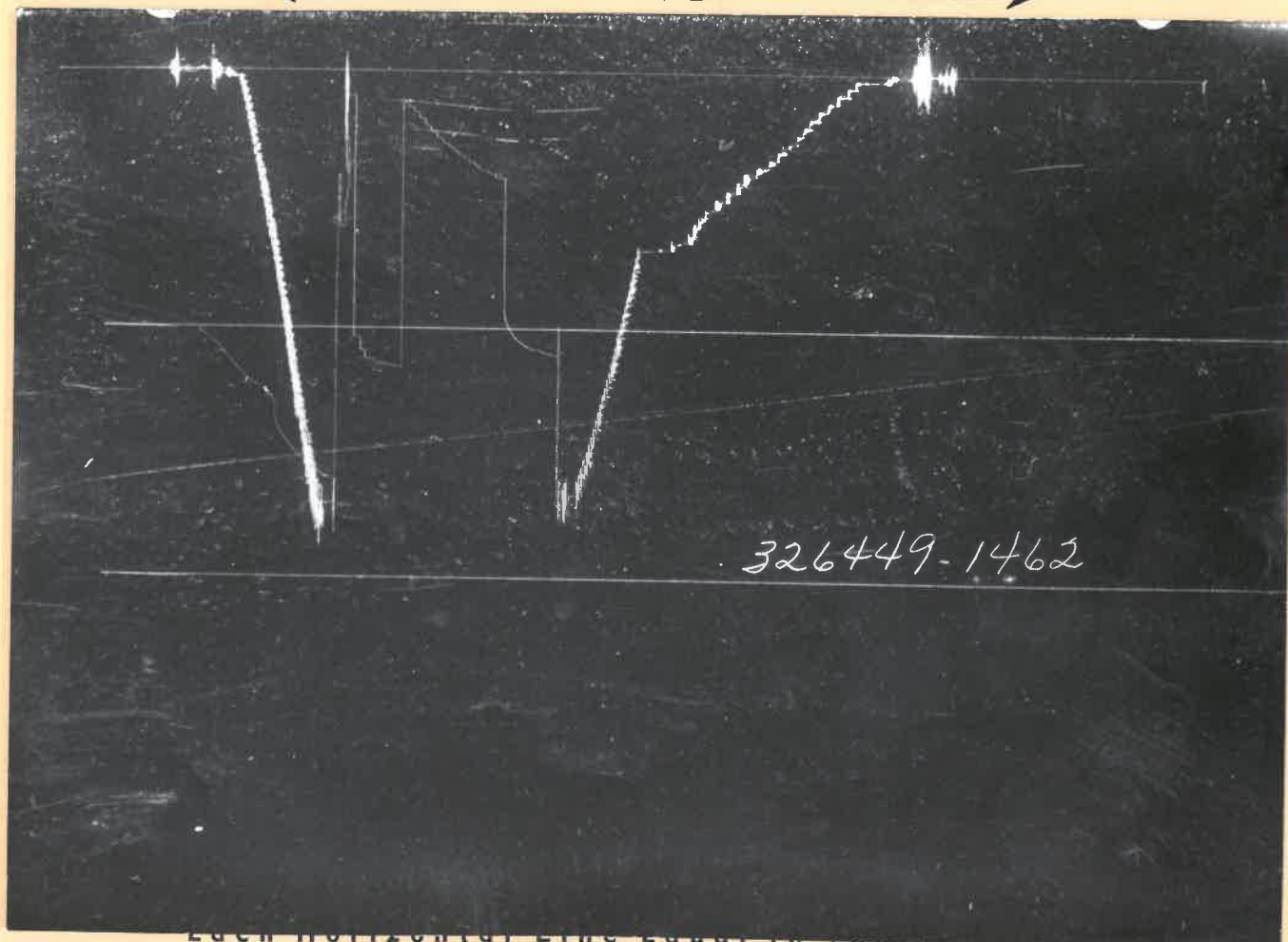
\*Chart indicates stair-stepping

## SPECIAL PRESSURE DATA

↑  
PRESSURE  
↓



← TIME →



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

|                            |             |                  |                        |                                  |                            |                           |
|----------------------------|-------------|------------------|------------------------|----------------------------------|----------------------------|---------------------------|
| Flow Time                  | 1st 6 Min.  | 2nd 60 Min.      | Date                   | 2-15-62                          | Ticket Number              | 326450 S                  |
| Closed In Press. Time      | 1st 30 Min. | 2nd 32 Min.      | Kind of Job            | OPEN HOLE                        | Halliburton District       | HAYS, KS.                 |
| Pressure Readings          | Field       | Office Corrected | Tester                 | H. W. BOONE                      | Witness                    | EARL MABRY                |
| Depth Top Gauge            | 3299 Ft.    | No Blanked Off   | Drilling Contractor    | LEBEN DR.G. CO.                  |                            |                           |
| BT. P.R.D. No.             | 232         | 12 Hour Clock    | Elevation              | 2063' DF                         | Top Packer                 | -                         |
| Initial Hydro Mud Pressure | 1750        | 1714             | Total Depth            | 3348'                            | Bottom Packer              | 3308                      |
| Initial Closed in Pres.    | 1070        | 1075             | Interval Tested        | 3308-3348'                       | Formation Tested           | Kansas City               |
| Initial Flow Pres.         | 30          | 17               | Casing or Hole Size    | 7 7/8"                           | Casing Perfs.              | Top Bot.                  |
| Final Flow Pres.           | 110         | 26               | Surface Choke          | -                                | Bottom Choke               | 5/8"                      |
| Final Closed in Pres.      | 1050        | 1058             | Size & Kind Drill Pipe | 4 1/2" FH                        | Drill Collars Above Tester | 900' flex length ID 2.764 |
| Final Hydro Mud Pressure   | 1730        | 1713             | Mud Weight             | 10                               | Mud Viscosity              | 44                        |
| Depth Cen. Gauge           | 3343 Ft.    | yes Blanked Off  | Temperature            | 92 °F Est. °F Actual             | Anchor Size & Length       | ID 4 OD 5 X 40            |
| BT. P.R.D. No.             | 1462        | 12 Hour Clock    | Depths Mea. From       | KB                               | Depth of Tester Valve      | 3295' Ft.                 |
| Initial Hydro Mud Pres.    |             | 1733             | Cushion                | none                             | Depth Back Pres. Valve     | Ft.                       |
| Initial Closed in Pres.    |             | 1099             | Recovered              | 1625                             | Feet of gas in drill pipe  |                           |
| Initial Flow Pres.         | 1 45        | 2 66             | Recovered              | 75                               | Feet of oil & gas cut mud  |                           |
| Final Flow Pres.           | 1 52        | 2 132            | Recovered              | 120                              | Feet of gas & mud cut oil  |                           |
| Final Closed in Pres.      |             | 1080             | Recovered              | 60                               | Feet of Oil gas cut mud    |                           |
| Final Hydro Mud Pres.      |             | 1720             | Oil A.P.I. Gravity     |                                  | Water Spec. Gravity        |                           |
| Depth Bot. Gauge           | Ft.         | Blanked Off      | Gas Gravity            |                                  | Surface Pressure           | psi                       |
| BT. P.R.D. No.             |             | Hour Clock       | Tool Opened            | 1:24 Pm                          | A.M. P.M. Tool Closed      | 3:00 PM A.M. P.M.         |
| Initial Hydro Mud Pres.    |             |                  | Remarks                | Very weak blow, dead in 40 mins. |                            |                           |
| Initial Closed in Pres.    |             |                  |                        |                                  |                            |                           |
| Initial Flow Pres.         | 1           |                  |                        |                                  |                            |                           |
| Final Flow Pres.           | 2           |                  |                        |                                  |                            |                           |
| Final Closed in Pres.      |             |                  |                        |                                  |                            |                           |
| Final Hydro Mud Pres.      |             |                  |                        |                                  |                            |                           |

FORMATION TEST DATA

SPECIAL PRESSURE DATA

SMITH  
Lease Name  
U-1  
Well No.  
Test No.  
CITIES SERVICE PETROLEUM CO.  
Lease Owner/Company Name  
PLAINVILLE  
Owner's District  
15402-16W

Legal Location  
Sec. - Twp. - Rng. 15 10 16  
Field Area  
Wildcat  
County  
Rocks  
State  
Kansas

| Gauge No. 232     |                  |                  | Depth 3299                 |                               |                  | Clock 12 hour      |                  | Ticket No. 326450        |                               |                  |
|-------------------|------------------|------------------|----------------------------|-------------------------------|------------------|--------------------|------------------|--------------------------|-------------------------------|------------------|
| 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             | 17               | .000                       |                               | 26               | .000               | 47               | .000                     |                               | 110              |
| P <sub>1</sub>    | .009             | 21               | .0215                      |                               | 527              | .103               | 59               | .023                     |                               | 830              |
| P <sub>2</sub>    | .018             | 24               | .0430                      |                               | 1013             | .206               | 77               | .046                     |                               | 995              |
| P <sub>3</sub>    | .027             | 26               | .0645                      |                               | 1050             | .309               | 93               | .069                     |                               | 1028             |
| P <sub>4</sub>    |                  |                  | .0860                      |                               | 1063             | .412               | 110              | .092                     |                               | 1039             |
| P <sub>5</sub>    |                  |                  | .1075                      |                               | 1069             |                    |                  | .115                     |                               | 1046             |
| P <sub>6</sub>    |                  |                  | .1290                      |                               | 1072             |                    |                  | .138                     |                               | 1050             |
| P <sub>7</sub>    |                  |                  | .1505                      |                               | 1073             |                    |                  | .161                     |                               | 1052             |
| P <sub>8</sub>    |                  |                  | .1720                      |                               | 1074             |                    |                  | .181                     |                               | 1055             |
| P <sub>9</sub>    |                  |                  | .1935                      |                               | 1075             |                    |                  | .207                     |                               | 1056             |
| P <sub>10</sub>   |                  |                  | .2150                      |                               | 1075             |                    |                  | .230                     |                               | 1058             |

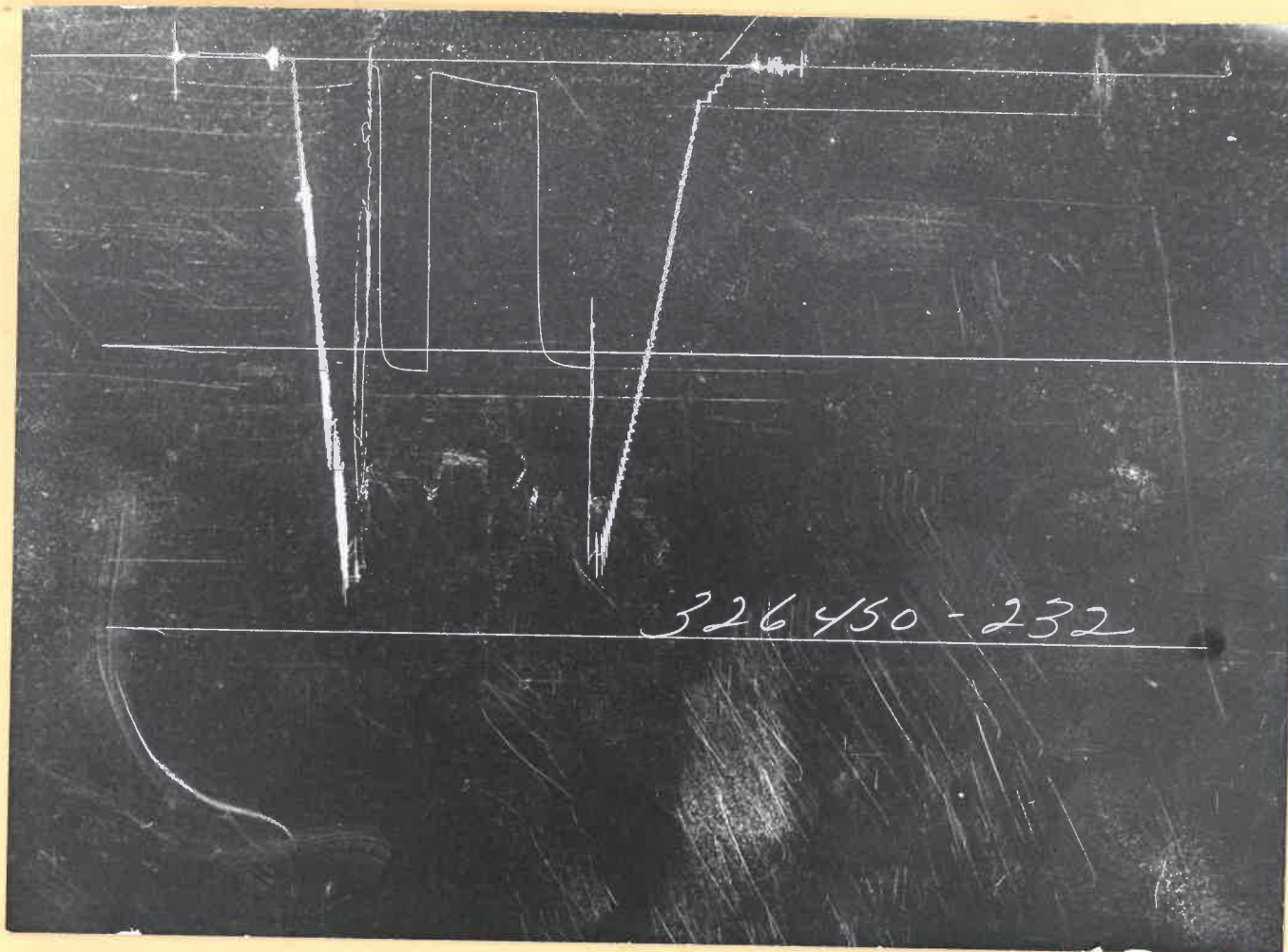
| Gauge No. 1462  |                  |                  | Depth 3343       |                               |                  | Clock 12 hour    |                  |                  |                               |                  |
|-----------------|------------------|------------------|------------------|-------------------------------|------------------|------------------|------------------|------------------|-------------------------------|------------------|
|                 | 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             | 45               | .000             |                               | 52               | .000             | 66               | .000             |                               | 132              |
| P <sub>1</sub>  | .006 *           | 52               | .020             |                               | 817              | .109             | 83               | .0205            |                               | 1021             |
| P <sub>2</sub>  |                  |                  | .040             |                               | 1050             | .218             | 99               | .0410            |                               | 1048             |
| P <sub>3</sub>  |                  |                  | .060             |                               | 1074             | .327             | 120              | .0615            |                               | 1060             |
| P <sub>4</sub>  |                  |                  | .080             |                               | 1084             | .436             | 132              | .0820            |                               | 1066             |
| P <sub>5</sub>  |                  |                  | .100             |                               | 1092             |                  |                  | .1025            |                               | 1070             |
| P <sub>6</sub>  |                  |                  | .120             |                               | 1094             |                  |                  | .1230            |                               | 1073             |
| P <sub>7</sub>  |                  |                  | .140             |                               | 1097             |                  |                  | .1435            |                               | 1075             |
| P <sub>8</sub>  |                  |                  | .160             |                               | 1098             |                  |                  | .1640            |                               | 1077             |
| P <sub>9</sub>  |                  |                  | .180             |                               | 1099             |                  |                  | .1845            |                               | 1078             |
| P <sub>10</sub> |                  |                  | .200             |                               | 1099             |                  |                  | .2050            |                               | 1080             |

Reading Interval 2 3 15 3.2 Minutes

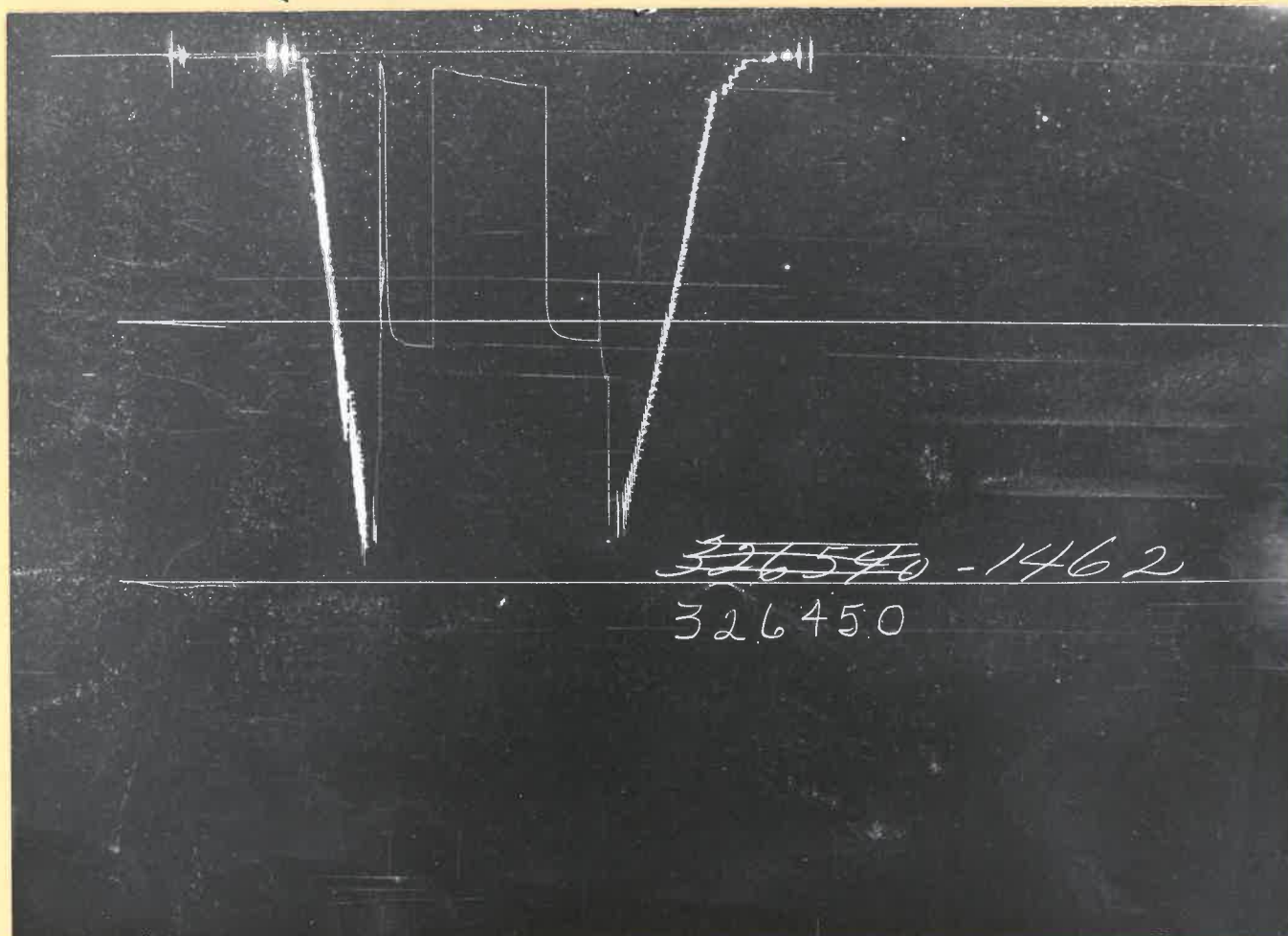
REMARKS: \* Time Questionable

## SPECIAL PRESSURE DATA

↑ PRESSURE ↓



← TIME →



|                            |           |      |                  |             |                        |                                                                           |  |                            |                         |   |     |
|----------------------------|-----------|------|------------------|-------------|------------------------|---------------------------------------------------------------------------|--|----------------------------|-------------------------|---|-----|
| Flow Time                  | 1st<br>5  | Min. | 2nd<br>60        | Min.        | Date                   | 2-16-62                                                                   |  | Ticket Number              | 326451                  |   | S   |
| Closed In Press. Time      | 1st<br>30 | Min. | 2nd<br>30        | Min.        | Kind of Job            | OPEN HOLE                                                                 |  | Halliburton District       | HAYS                    |   |     |
| Pressure Readings          | Field     |      | Office Corrected |             | Tester                 | BOONE                                                                     |  | Witness                    | MABRY                   |   |     |
| Depth Top Gauge            | 3329      | Ft.  | No               | Blanked Off | Drilling Contractor    | LEBEN DRILLING COMPANY                                                    |  |                            |                         |   |     |
| BT. P.R.D. No.             | 232       |      | 12               | Hour Clock  | Elevation              | 2063' DF                                                                  |  | Top Packer                 |                         |   |     |
| Initial Hydro Mud Pressure | 1770      |      | 1775             |             | Total Depth            | 3385'                                                                     |  | Bottom Packer              | 3338'                   |   |     |
| Initial Closed in Pres.    | 1070      |      | 1066             |             | Interval Tested        | 3338-3385'                                                                |  | Formation Tested           | Kansas City             |   |     |
| Initial Flow Pres.         |           | 1    | 5                |             | Casing or Hole Size    | 7 7/8"                                                                    |  | Casing Perfs.              | Top Bot.                |   |     |
| Final Flow Pres.           |           | 1    | 5                |             | Surface Choke          |                                                                           |  | Bottom Choke               | 5/8"                    |   |     |
| Final Closed in Pres.      | 365       |      | 357              |             | Size & Kind Drill Pipe | 4 1/2" FH                                                                 |  | Drill Collars Above Tester | I.D. - LENGTH<br>2.764" |   |     |
| Final Hydro Mud Pressure   | 1730      |      | 1737             |             | Mud Weight             | 9.8                                                                       |  | Mud Viscosity              | 46                      |   |     |
| Depth Cen. Gauge           |           | Ft.  |                  | Blanked Off | Temperature            | 92                                                                        |  | Anchor Size & Length       | ID 4" OD 5"             | X | 47' |
| BT. P.R.D. No.             |           |      |                  | Hour Clock  | Depths Mea. From       | KB                                                                        |  | Depth of Tester Valve      | 3324' Ft.               |   |     |
| Initial Hydro Mud Pres.    |           |      |                  |             | TYPE                   | AMOUNT                                                                    |  | Depth Back Pres. Valve     | Ft.                     |   |     |
| Initial Closed in Pres.    |           |      |                  |             | Cushion                | None                                                                      |  |                            |                         |   |     |
| Initial Flow Pres.         |           | 1    |                  |             | Recovered              | 30                                                                        |  | Feet of Watery mud         | Mea. From Tester Valve  |   |     |
| Final Flow Pres.           |           | 2    |                  |             | Recovered              |                                                                           |  | Feet of                    |                         |   |     |
| Final Closed in Pres.      |           | 1    |                  |             | Recovered              |                                                                           |  | Feet of                    |                         |   |     |
| Final Hydro Mud Pres.      |           | 2    |                  |             | Recovered              |                                                                           |  | Feet of                    |                         |   |     |
| Depth Bot. Gauge           | 3379      | Ft.  | Yes              | Blanked Off | Oil A.P.I. Gravity     |                                                                           |  | Water Spec. Gravity        |                         |   |     |
| BT. P.R.D. No.             | 1462      |      | 12               | Hour Clock  | Gas Gravity            |                                                                           |  | Surface Pressure           | psi                     |   |     |
| Initial Hydro Mud Pres.    |           |      | 1761             |             | Tool Opened            | 4:45                                                                      |  | Tool Closed                | 6:20                    |   |     |
| Initial Closed in Pres.    |           |      | 1103             |             | Remarks                | Opened for 5 min. 1st flow. Closed for 30 min. ICIP. Reopened with a very |  |                            |                         |   |     |
| Initial Flow Pres.         |           | 1    | 44               |             |                        | weak blow. for 60 min. 2nd flow. Closed                                   |  |                            |                         |   |     |
| Final Flow Pres.           |           | 2    | 51               |             |                        | for 30 min. FCIP.                                                         |  |                            |                         |   |     |
| Final Closed in Pres.      |           | 1    | 40               |             |                        |                                                                           |  |                            |                         |   |     |
| Final Hydro Mud Pres.      |           | 2    | 51               |             |                        |                                                                           |  |                            |                         |   |     |
| Final Closed in Pres.      |           |      | 395              |             |                        |                                                                           |  |                            |                         |   |     |
| Final Hydro Mud Pres.      |           |      | 1732             |             |                        |                                                                           |  |                            |                         |   |     |

FORMATION TEST DATA

SPECIAL PRESSURE DATA

SMITH  
Lease Name

U 1  
Well No.

5  
Test No.

CITIES SERVICE PETROLEUM CO.  
Lease Owner/Company Name

PLAINVILLE  
Owner's District

Legal Location  
Sec. - Twp. - Rng.

15-10-16

Field Area

WILDCAT

County

ROCKS

State

KANSAS

5

15-10-16 W

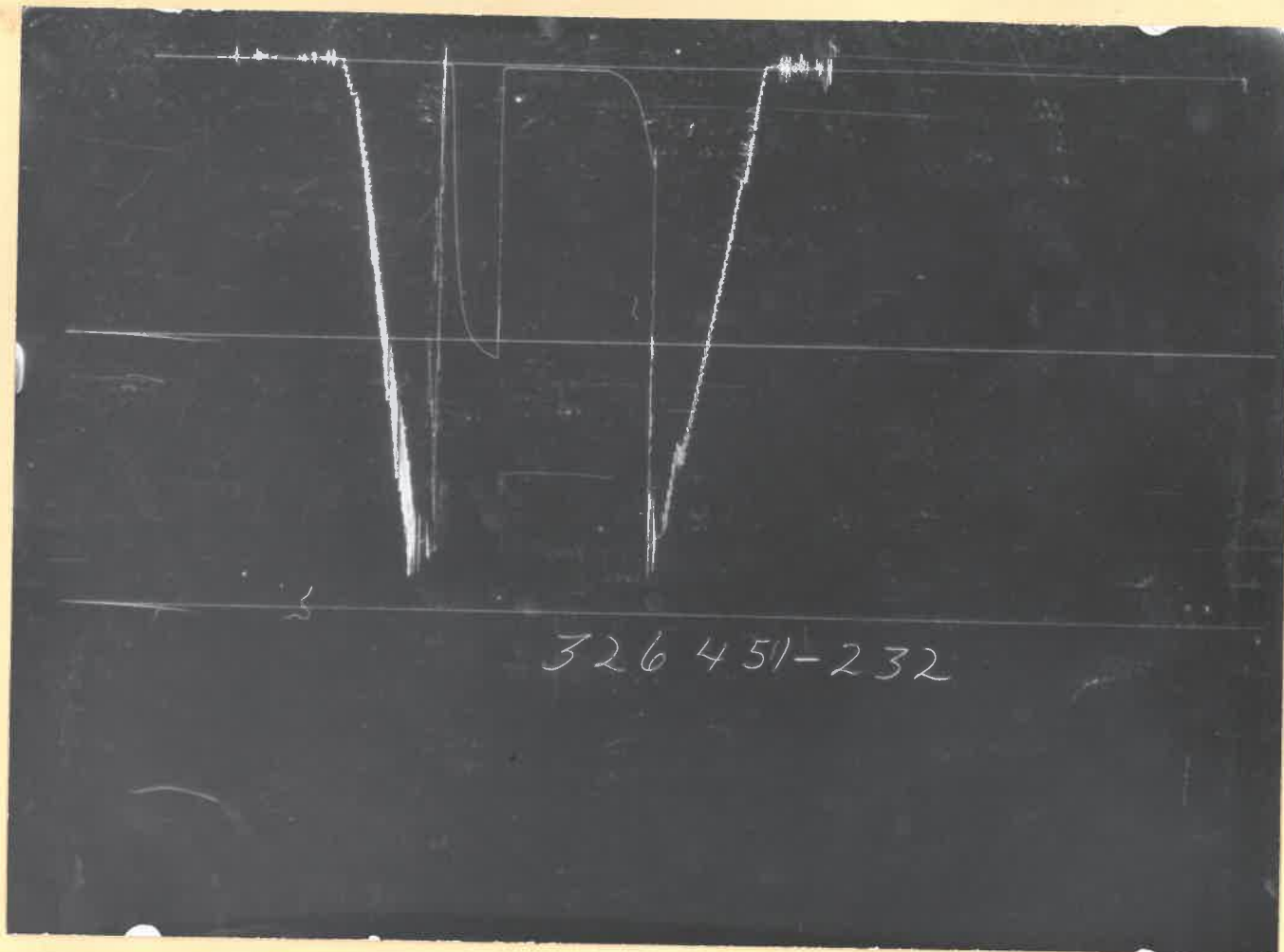
| Gauge No.         |                  | 232              |                            | Depth                         |                  | 3329'              |                  | Clock            |                               | 12 hour          |  | Ticket No. |  | 326451 |  |
|-------------------|------------------|------------------|----------------------------|-------------------------------|------------------|--------------------|------------------|------------------|-------------------------------|------------------|--|------------|--|--------|--|
| 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             | 5                | .000                       |                               | 5                | .000               | 18               | .000             |                               | 15               |  |            |  |        |  |
| P <sub>1</sub>    | .029             | 5                | .0217                      |                               | 356              | .421               | 15               | .020             |                               | 20               |  |            |  |        |  |
| P <sub>2</sub>    |                  |                  | .0434                      |                               | 689              |                    |                  | .040             |                               | 29               |  |            |  |        |  |
| P <sub>3</sub>    |                  |                  | .0651                      |                               | 856              |                    |                  | .060             |                               | 39               |  |            |  |        |  |
| P <sub>4</sub>    |                  |                  | .0868                      |                               | 944              |                    |                  | .080             |                               | 53               |  |            |  |        |  |
| P <sub>5</sub>    |                  |                  | .1085                      |                               | 989              |                    |                  | .100             |                               | 74               |  |            |  |        |  |
| P <sub>6</sub>    |                  |                  | .1302                      |                               | 1014             |                    |                  | .120             |                               | 103              |  |            |  |        |  |
| P <sub>7</sub>    |                  |                  | .1519                      |                               | 1033             |                    |                  | .140             |                               | 151              |  |            |  |        |  |
| P <sub>8</sub>    |                  |                  | .1736                      |                               | 1047             |                    |                  | .160             |                               | 214              |  |            |  |        |  |
| P <sub>9</sub>    |                  |                  | .1953                      |                               | 1058             |                    |                  | .180             |                               | 289              |  |            |  |        |  |
| P <sub>10</sub>   |                  |                  | .2170                      |                               | 1066             |                    |                  | .200             |                               | 357              |  |            |  |        |  |

| Gauge No. 1462   |         | Depth 3379' |  | Clock 12 hour |           |
|------------------|---------|-------------|--|---------------|-----------|
| P <sub>0</sub>   | .000 44 | .000        |  | 40            | .000 51   |
| P <sub>1</sub>   | .023 40 | .0223       |  | 141           | .1062 45  |
| P <sub>2</sub>   |         | .0446       |  | 644           | .2121 47  |
| P <sub>3</sub>   |         | .0669       |  | 856           | .3186 49  |
| P <sub>4</sub>   |         | .0892       |  | 964           | .4250 51  |
| P <sub>5</sub>   |         | .1115       |  | 1027          |           |
| P <sub>6</sub>   |         | .1338       |  | 1062          |           |
| P <sub>7</sub>   |         | .1561       |  | 1078          |           |
| P <sub>8</sub>   |         | .1784       |  | 1089          |           |
| P <sub>9</sub>   |         | .2007       |  | 1095          |           |
| P <sub>10</sub>  |         | .2230       |  | 1103          |           |
| Reading Interval |         | 3           |  | 15            | 3 Minutes |

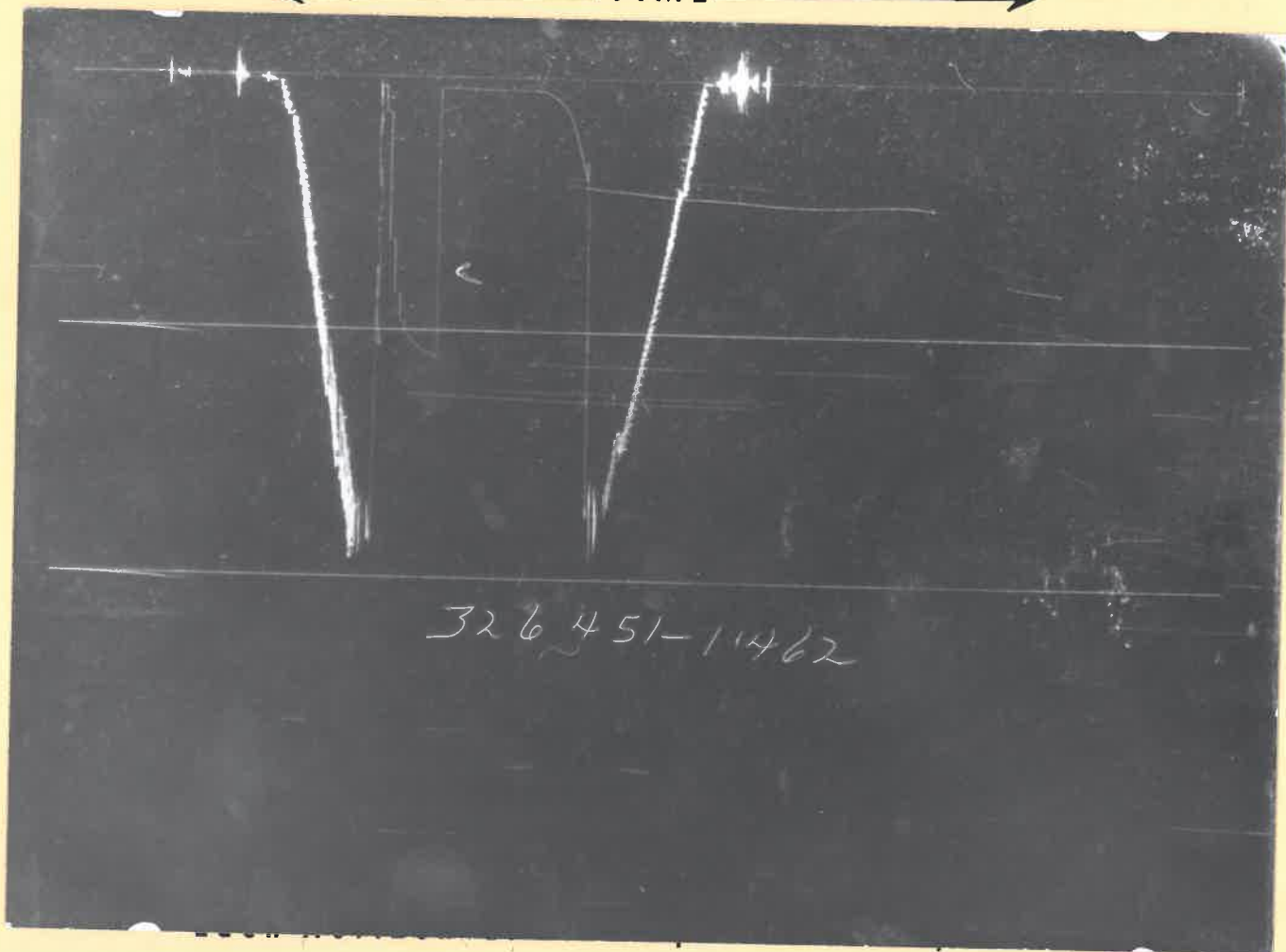
REMARKS: BT 1462 indicates stair-stepping

## SPECIAL PRESSURE DATA

↑  
PRESSURE  
↓



← TIME →



|                            |           |      |                  |      |                                           |                                  |  |                              |                   |  |
|----------------------------|-----------|------|------------------|------|-------------------------------------------|----------------------------------|--|------------------------------|-------------------|--|
| Flow Time                  | 1st<br>5  | Min. | 2nd<br>60        | Min. | Date                                      | 2-16-62                          |  | Ticket Number                | 326496 S          |  |
| Closed In Press. Time      | 1st<br>30 | Min. | 2nd<br>30        | Min. | Kind of Job                               | OPEN HOLE                        |  | Halliburton District         | HAYS              |  |
| Pressure Readings          | Field     |      | Office Corrected |      | Tester                                    | BERENS                           |  | Witness                      | MABRY             |  |
| Depth Top Gauge            | 3385 Ft.  |      | No Blanked Off   |      | Drilling Contractor                       | LEBEN DRILLING COMPANY           |  |                              |                   |  |
| BT. P.R.D. No.             | 232       |      | 12 Hour Clock    |      | Elevation                                 | 2063' DF                         |  | Top Packer                   |                   |  |
| Initial Hydro Mud Pressure |           |      | 1775             |      | Total Depth                               | 3417'                            |  | Bottom Packer                | 3394'             |  |
| Initial Closed in Pres.    | 1110      |      | 1117             |      | Interval Tested                           | 3417-3394'                       |  | Formation Tested             | Kansas City       |  |
| Initial Flow Pres.         | 5         |      | 1 6              |      | Casing or Hole Size                       | 7 7/8"                           |  | Casing Perfs. { Top          |                   |  |
|                            | 5         |      | 2 15             |      |                                           |                                  |  | Bot.                         |                   |  |
| Final Flow Pres.           | 20        |      | 1 6              |      | Surface Choke                             | 1/4"                             |  | Bottom Choke                 | 5/8"              |  |
|                            |           |      | 2 14             |      |                                           |                                  |  |                              | I.D. - LENGTH     |  |
| Final Closed in Pres.      | 765       |      | 780              |      | Size & Kind Drill Pipe                    | 4 1/2" API FH                    |  | Drill Collars Above Tester   | 900' Flex wt.     |  |
| Final Hydro Mud Pressure   |           |      | 1767             |      | Mud Weight                                | 9.9                              |  | Mud Viscosity                | 44                |  |
| Depth Cen. Gauge           |           |      |                  |      | Temperature                               | 101 °F Est. °F Actual            |  | Anchor Size & Length         | ID 4" OD 5" X 23' |  |
| BT. P.R.D. No.             |           |      |                  |      | Depths Mea. From                          | KB                               |  | Depth of Tester Valve        | 3382' Ft.         |  |
| Initial Hydro Mud Pres.    |           |      |                  |      | TYPE                                      | AMOUNT                           |  | Depth Back Pres. Valve       | Ft.               |  |
|                            |           |      |                  |      | Cushion                                   | None                             |  |                              |                   |  |
| Initial Closed in Pres.    |           |      |                  |      | Recovered                                 | 27 Feet of                       |  | Mud with a small show of oil |                   |  |
| 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           | 3410 Ft.  |      | Yes Blanked Off  |      | Gas Gravity                               |                                  |  | Surface Pressure             | psi               |  |
| BT. P.R.D. No.             | 1462      |      | 12 Hour Clock    |      | Tool Opened                               | 5:32 A.M. P.M.                   |  | Tool Closed                  | 7:37 A.M. P.M.    |  |
| Initial Hydro Mud Pres.    |           |      | 1769             |      | Remarks                                   | Opened for 5 min. 1st flow, with |  |                              |                   |  |
| Initial Closed in Pres.    |           |      | 1131             |      | a weak blow. Closed for 30 min. ICIP.     |                                  |  |                              |                   |  |
| Initial Flow Pres.         |           |      | 1 23             |      | Reopened for 60 min. 2nd flow. Closed for |                                  |  |                              |                   |  |
| Final Flow Pres.           |           |      | 2 34             |      | 30 min. FCIP.                             |                                  |  |                              |                   |  |
| Final Closed in Pres.      |           |      | 1 23             |      |                                           |                                  |  |                              |                   |  |
| Final Hydro Mud Pres.      |           |      | 2 31             |      |                                           |                                  |  |                              |                   |  |
| Final Closed in Pres.      |           |      | 760              |      |                                           |                                  |  |                              |                   |  |
| Final Hydro Mud Pres.      |           |      | 1760             |      |                                           |                                  |  |                              |                   |  |

FORMATION TEST DATA

SPECIAL PRESSURE DATA

SMITH  
Lease Name

U 1  
Well No.

6  
Test No.

CITIES SERVICE PETROLEUM COMPANY  
Lease Owner/Company Name

County

ROOKS

State

KANSAS

HAYS  
Owner's District

Legal Location  
Sec. - Twp. - Rng.

15-10-16

Field Area

Mea. From Tester Valve

5

15-10-16 W

| Gauge No.         |                  | 232              |                            | Depth                         |                  | 3385'              |                  | Clock            |                               | 12               |  | hour |  | Ticket No. |  | 326496 |  |
|-------------------|------------------|------------------|----------------------------|-------------------------------|------------------|--------------------|------------------|------------------|-------------------------------|------------------|--|------|--|------------|--|--------|--|
| 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             | 6                | .000                       |                               | 6                | .000               | 15               | .000             |                               | 14               |  |      |  |            |  |        |  |
| P <sub>1</sub>    | .032             | 6                | .0213                      |                               | 66               | .414               | 14               | .0215            |                               | 16               |  |      |  |            |  |        |  |
| P <sub>2</sub>    |                  |                  | .0426                      |                               | 370              |                    |                  | .0430            |                               | 24               |  |      |  |            |  |        |  |
| P <sub>3</sub>    |                  |                  | .0639                      |                               | 679              |                    |                  | .0645            |                               | 34               |  |      |  |            |  |        |  |
| P <sub>4</sub>    |                  |                  | .0852                      |                               | 874              |                    |                  | .0860            |                               | 50               |  |      |  |            |  |        |  |
| P <sub>5</sub>    |                  |                  | .1065                      |                               | 977              |                    |                  | .1075            |                               | 81               |  |      |  |            |  |        |  |
| P <sub>6</sub>    |                  |                  | .1278                      |                               | 1026             |                    |                  | .1290            |                               | 140              |  |      |  |            |  |        |  |
| P <sub>7</sub>    |                  |                  | .1491                      |                               | 1064             |                    |                  | .1505            |                               | 267              |  |      |  |            |  |        |  |
| P <sub>8</sub>    |                  |                  | .1704                      |                               | 1088             |                    |                  | .1720            |                               | 462              |  |      |  |            |  |        |  |
| P <sub>9</sub>    |                  |                  | .1917                      |                               | 1105             |                    |                  | .1935            |                               | 648              |  |      |  |            |  |        |  |
| P <sub>10</sub>   |                  |                  | .2130                      |                               | 1117             |                    |                  | .2150            |                               | 780              |  |      |  |            |  |        |  |

| Gauge No.       |      | Depth |       | Clock |      | hour |    |
|-----------------|------|-------|-------|-------|------|------|----|
| 1462            |      | 3410' |       | 12    |      |      |    |
| P <sub>0</sub>  | .000 | 23    | .000  |       | 23   | .000 | 34 |
| P <sub>1</sub>  | .022 | 23    | .0223 |       | 84   | .418 | 31 |
| P <sub>2</sub>  |      |       | .0446 |       | 658  |      |    |
| P <sub>3</sub>  |      |       | .0669 |       | 661  |      |    |
| P <sub>4</sub>  |      |       | .0892 |       | 957  |      |    |
| P <sub>5</sub>  |      |       | .1115 |       | 1022 |      |    |
| P <sub>6</sub>  |      |       | .1338 |       | 1063 |      |    |
| P <sub>7</sub>  |      |       | .1561 |       | 1089 |      |    |
| P <sub>8</sub>  |      |       | .1784 |       | 1113 |      |    |
| P <sub>9</sub>  |      |       | .2007 |       | 1125 |      |    |
| P <sub>10</sub> |      |       | .2230 |       | 1131 |      |    |

Reading Interval

3

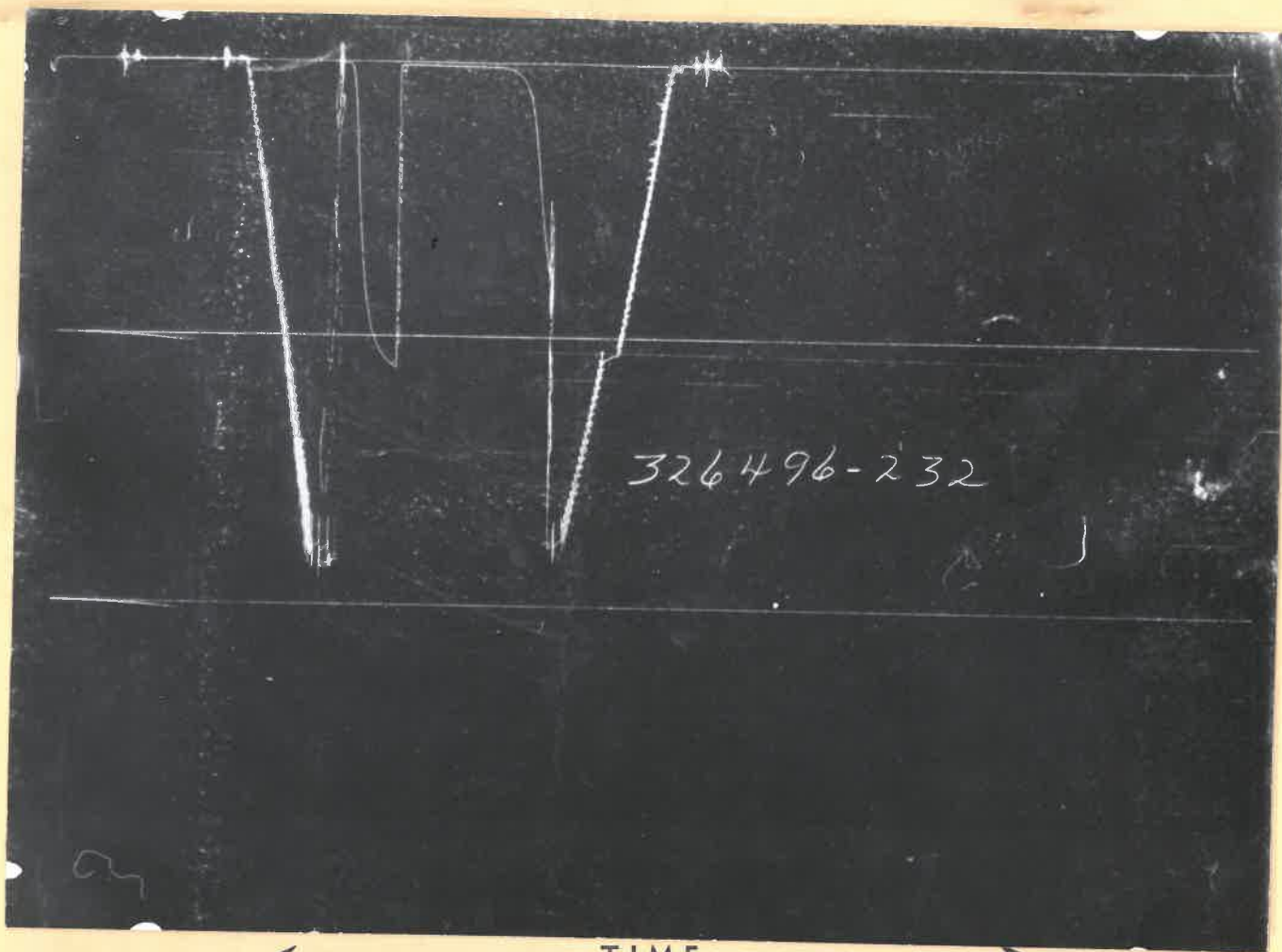
3

Minutes

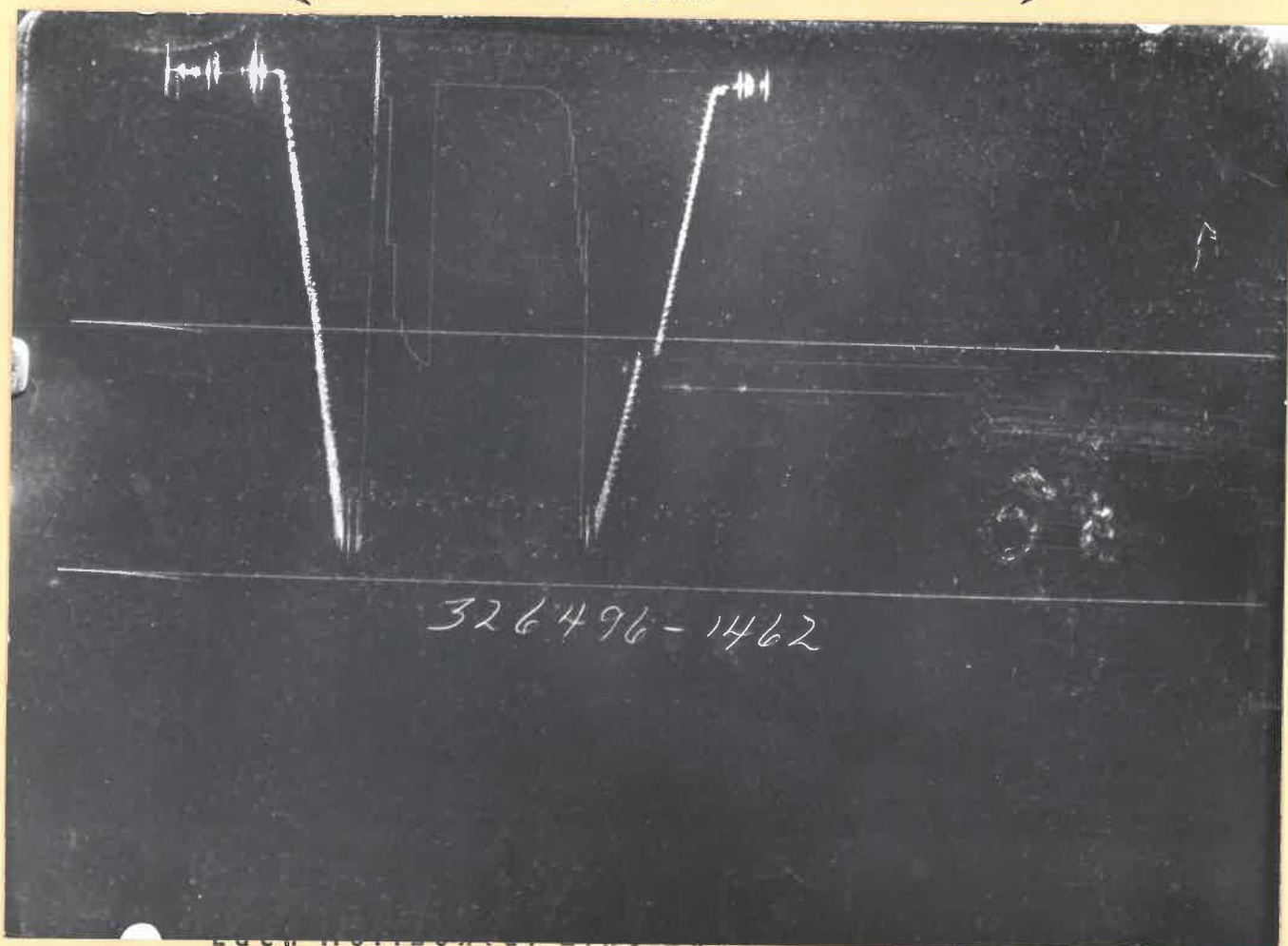
REMARKS: BT 1462 was lined in & out of the hole, due to absence of baseline.  
BT 1462 indicates stair-stepping.

## SPECIAL PRESSURE DATA

PRESSURE



TIME



|                            |                  |                  |                        |                                                     |                            |              |                        |
|----------------------------|------------------|------------------|------------------------|-----------------------------------------------------|----------------------------|--------------|------------------------|
| Flow Time                  | 1st 7 Min.       | 2nd 70 Min.      | Date                   | 2-17-62                                             | Ticket Number              | 326497       | 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                    | VICTOR LYNCH |                        |
| Depth Top Gauge            | 3417 Ft.         | No Blanked Off   | Drilling Contractor    | Leben Drilling Co.                                  |                            |              |                        |
| BT. P.R.D. No.             | 232              | 12 Hour Clock    | Elevation              | 2063' DF                                            | Top Packer                 |              |                        |
| Initial Hydro Mud Pressure | -                | 1801             | Total Depth            | 3488'                                               | Bottom Packer              | 3426'        |                        |
| Initial Closed in Pres.    | 1135             | 1152             | Interval Tested        | 3426-3488'                                          | Formation Tested           | Kansas City  |                        |
| Initial Flow Pres.         | 0                | 1 6              | Casing or Hole Size    | 7 7/8"                                              | Casing Perfs.              | Top Bot.     |                        |
| Final Flow Pres.           | 10               | 1 24             | Surface Choke          | 1/4"                                                | Bottom Choke               | 5/8"         |                        |
| Final Closed in Pres.      | 22               | 2 25             | Size & Kind Drill Pipe | 4 1/2" -900 Flex                                    | Drill Collars Above Tester |              | I.D. - LENGTH          |
| Final Hydro Mud Pressure   | -                | 1801             | Mud Weight             | 9.8                                                 | Mud Viscosity              | 46           |                        |
| Depth Cen. Gauge           | 3480 Ft.         | yes Blanked Off  | Temperature            | 102 °F Est. °F Actual                               | Anchor Size & Length       | ID 5 OD 4    | X 62                   |
| BT. P.R.D. No.             | 1462             | 12 Hour Clock    | Depths Mea. From       | KB                                                  | Depth of Tester Valve      | 3414         | Ft.                    |
| Initial Hydro Mud Pres.    | TESTER FAILED TO |                  | Cushion                | none                                                | Depth Back Pres. Valve     | 3411         | Ft.                    |
| Initial Closed in Pres.    | ENGAGE SYLUS     |                  | Recovered              | 60                                                  | Feet of Muddy Saltwater    |              | Mea. 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           |                  | Blanked Off      | Gas Gravity            |                                                     | Surface Pressure           |              | psi                    |
| BT. P.R.D. No.             |                  | Hour Clock       | Tool Opened            | 12:15 PM                                            | A.M. P.M.                  | Tool Closed  | 2:32 PM A.M. P.M.      |
| Initial Hydro Mud Pres.    |                  |                  | Remarks                | Tool opened with weak blow for a 7 min. first       |                            |              |                        |
| Initial Closed in Pres.    |                  |                  |                        | flow. Closed tool for a 30 min. ICIP. Reopened tool |                            |              |                        |
| Initial Flow Pres.         | 1                |                  |                        | with weak blow for a 70 min. final flow. Took a     |                            |              |                        |
| Final Flow Pres.           | 2                |                  |                        | 30 min. final closed in pressure.                   |                            |              |                        |
| Final Closed in Pres.      |                  |                  |                        |                                                     |                            |              |                        |
| Final Hydro Mud Pres.      |                  |                  |                        |                                                     |                            |              |                        |

FORMATION TEST DATA

SPECIAL PRESSURE DATA

SMITH  
 Lease Name  
 U-1  
 Well No.  
 7  
 Test No.  
 CITIES SERVICE PETROLEUM COMPANY  
 Lease Owner/Company Name  
 COUNTY ROOKS  
 STATE KANSAS  
 RUSSELL KS  
 Owner's District

5-T

15-105-16W

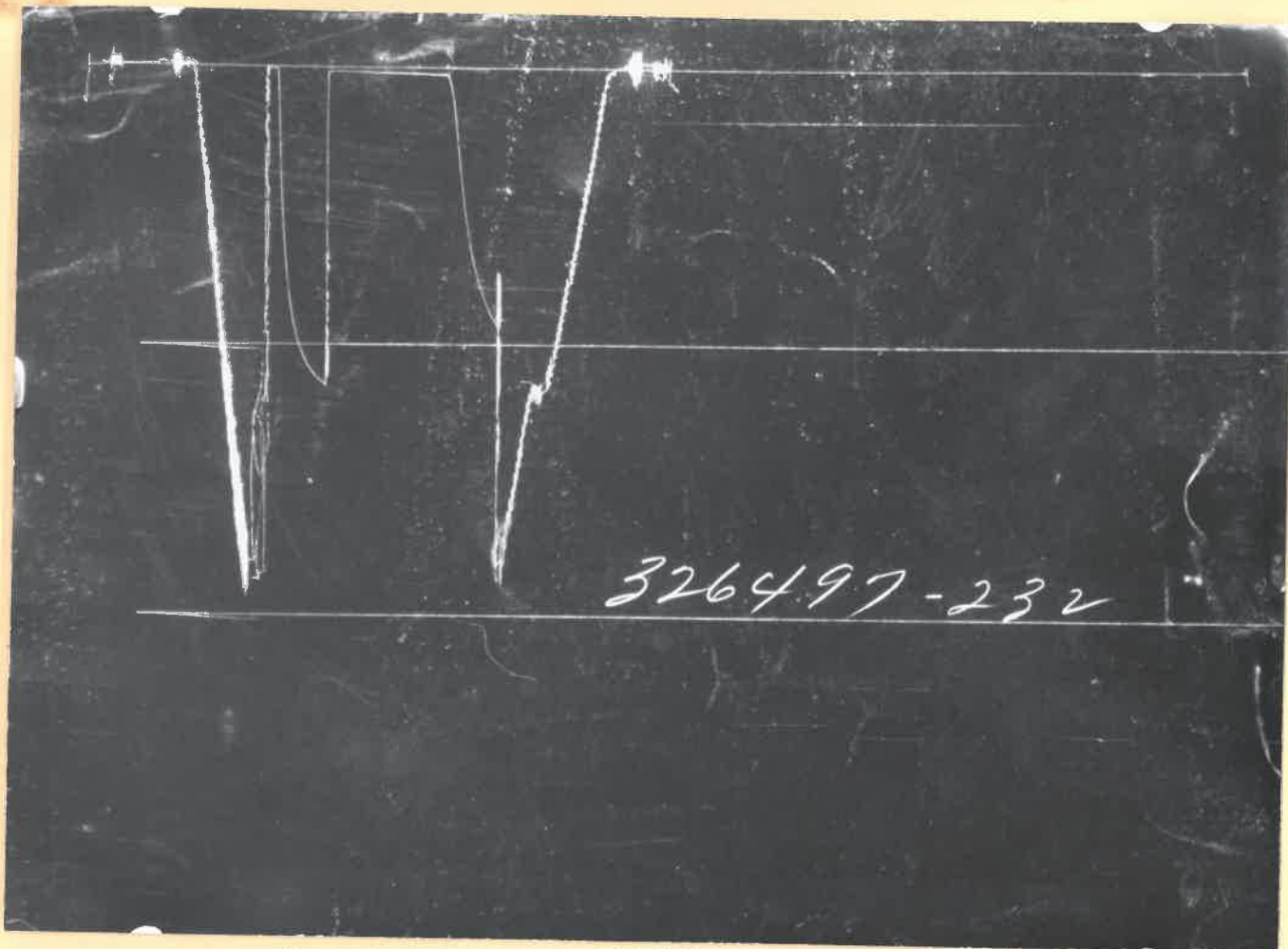
| Gauge No. 232     |                  | Depth 3417                 |                  | Clock 12 hour              |                    | Ticket No. 326497 |                          |                  |                            |                  |
|-------------------|------------------|----------------------------|------------------|----------------------------|--------------------|-------------------|--------------------------|------------------|----------------------------|------------------|
| First Flow Period |                  | Initial Closed In Pressure |                  |                            | Second Flow Period |                   | Final Closed In Pressure |                  |                            |                  |
|                   | Time Defl. .000" | PSIG Temp. Corr.           | Time Defl. .000" | Log $\frac{t + \theta}{e}$ | PSIG Temp. Corr.   | Time Defl. .000"  | PSIG Temp. Corr.         | Time Defl. .000" | Log $\frac{t + \theta}{e}$ | PSIG Temp. Corr. |
| P <sub>0</sub>    | .000             | 6                          | .000             |                            | 7                  | .000              | 24                       | .000             |                            | 25               |
| P <sub>1</sub>    | .035             | 7                          | .0212            |                            | 395                | .484              | 25                       | .0217            |                            | 69               |
| P <sub>2</sub>    |                  |                            | .0424            |                            | 688                |                   |                          | .0434            |                            | 213              |
| P <sub>3</sub>    |                  |                            | .0636            |                            | 852                |                   |                          | .0651            |                            | 400              |
| P <sub>4</sub>    |                  |                            | .0848            |                            | 953                |                   |                          | .0868            |                            | 551              |
| P <sub>5</sub>    |                  |                            | .1060            |                            | 1015               |                   |                          | .1085            |                            | 665              |
| P <sub>6</sub>    |                  |                            | .1272            |                            | 1061               |                   |                          | .1302            |                            | 747              |
| P <sub>7</sub>    |                  |                            | .1484            |                            | 1094               |                   |                          | .1519            |                            | 808              |
| P <sub>8</sub>    |                  |                            | .1696            |                            | 1118               |                   |                          | .1736            |                            | 860              |
| P <sub>9</sub>    |                  |                            | .1908            |                            | 1137               |                   |                          | .1953            |                            | 902              |
| P <sub>10</sub>   |                  |                            | .2120            |                            | 1152               |                   |                          | .2170            |                            | 933              |

| Gauge No. 1462   |                   | Depth 3480 |  | Clock 12 hour |  |
|------------------|-------------------|------------|--|---------------|--|
| P <sub>0</sub>   | STYLUS DISENGAGED |            |  |               |  |
| 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 Minutes     |  |
| REMARKS:         |                   |            |  |               |  |
|                  |                   |            |  |               |  |
|                  |                   |            |  |               |  |

## SPECIAL PRESSURE DATA

162

↑  
PRESSURE  
↓



← TIME →

