

COMPANY **KEWANEE OIL COMPANY** DATE ON **4/6/57** FILE NO. **CP-6-836 TMI**  
 WELL **LARKIN NO. 5** DATE OFF **4/9/57** ENGRS. **DONOHUE**  
 FIELD **HALLET** FORMATION **AS NOTED** ELEV. **2514' CM**  
 COUNTY **HODGEMAN** STATE **KANSAS** DRLG. FLD. **WATER BASE MUD** CORES **DIAMOND**  
 LOCATION **SE SEC 15-22S-25W** REMARKS **SAMPLED AS NOTED**

## Special Analysis CORE REPORT

SAND LIMESTONE CONGLOMERATE CHERT   
 SHALE DOLOMITE VUGS FRACTURES

These analyses, opinions or interpretations are based on observations and material supplied by the client to whom, and for whose exclusive and confidential use, this report is made. The interpretations or opinions expressed represent the best judgment of Core Laboratories, Inc. (all errors and omissions excepted); but Core Laboratories, Inc. and its officers and employees, assume no responsibility and make no warranty or representations as to the productivity, proper operation, or profitability of any oil, gas or other mineral well or sand in connection with which such report is used or relied upon.

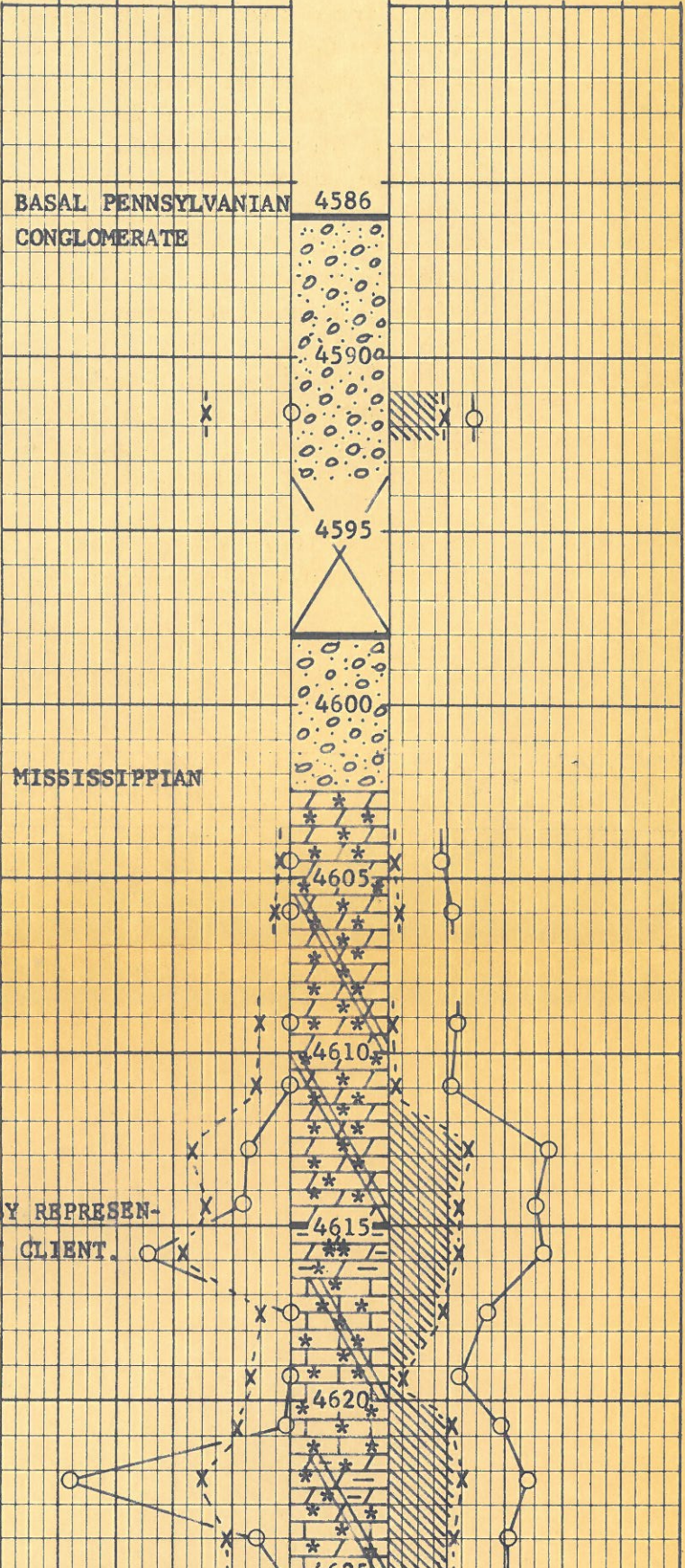
PERMEABILITY, Maximum  $\circ-\circ$   
MILLIDARCYs  
40 30 20 10 0

TOTAL WATER  $\circ-\circ$   
PERCENT PORE SPACE  
80 60 40 20 0

POROSITY X---X  
PERCENT  
40 30 20 10 0

OIL SATURATION X---X  
PERCENT PORE SPACE  
0 20 40 60 80

| SAMPLE NUMBER                               | DEPTH FEET  | PERMEABILITY MILLIDARCYs |      | POROSITY % | RESIDUAL SATURATION % PORE SPACE |             |
|---|-------------|--------------------------|------|------------|----------------------------------|-------------|
|   |             | MAX.                     | 90°  |            | OIL                              | TOTAL WATER |
| * - DENOTES PLUG PERMEABILITY MEASUREMENTS. |             |                          |      |            |                                  |             |
| SAMPLED BY CLI ENGINEER                     |             |                          |      |            |                                  |             |
| 1   | 4591.0-92.3 | 0.2*                     |      | 14.4       | 18.8                             | 71.4        |
| SAMPLED BY REPRESENTATIVE OF CLIENT.        |             |                          |      |            |                                  |             |
| 2   | 4603.6-05.5 | <0.1                     | <0.1 | 2.1        | 3.3                              | 81.8        |
| 3   | 4605.5-06.5 | <0.1*                    |      | 2.6        | 3.8                              | 79.1        |
| 4   | 4608.3-09.9 | <0.1                     | <0.1 | 4.6        | 1.7                              | 77.1        |
| 5   | 4609.9-11.9 | <0.1                     | <0.1 | 5.7        | 2.1                              | 78.7        |
| 6   | 4611.9-13.8 | 6.8                      | 6.0  | 17.1       | 26.7                             | 45.0        |
| 7   | 4613.8-15.0 | 8.3*                     |      | 14.0       | 23.9                             | 50.5        |
| 8   | 4615.0-16.7 | 24*                      |      | 17.7       | 24.3                             | 47.6        |
| 9   | 4616.7-18.5 | <0.1*                    |      | 5.1        | 17.6                             | 66.6        |
| 10  | 4618.5-20.0 | <0.1                     | <0.1 | 6.7        | 4.6                              | 76.0        |
| 11  | 4620.0-21.6 | 1.4                      | 1.3  | 9.1        | 21.3                             | 62.5        |
| 12  | 4621.6-23.0 | 38*                      |      | 15.3       | 25.3                             | 53.0        |
| 13  | 4623.0-25.0 | 6.1                      | 3.0  | 10.9       | 23.1                             | 59.0        |



SAMPLED BY REPRESENTATIVE OF CLIENT.

|    |             |       |      |      |      |      |
|----|-------------|-------|------|------|------|------|
| 13 | 4623.0-25.0 | 6.1   | 3.0  | 10.9 | 23.1 | 59.0 |
| 14 | 4625.0-26.0 | 0.1*  |      |      |      |      |
| 15 | 4626.0-27.5 | <0.1  | <0.1 | 9.4  | 10.9 | 63.9 |
| 16 | 4627.5-29.5 | <0.1* |      | 6.3  | 12.3 | 66.9 |
| 17 | 4629.5-31.5 | 2.3   | 1.9  | 10.1 | 7.2  | 80.6 |
| 18 | 4631.5-33.5 | <0.1  | <0.1 | 8.9  | 0.7  | 94.0 |
| 19 | 4633.5-35.0 | <0.1  | <0.1 | 11.5 | 3.4  | 86.1 |
| 20 | 4635.0-36.5 | 5.8*  |      | 11.3 | 17.1 | 64.7 |
| 21 | 4636.5-38.4 | <0.1* |      | 9.9  | 16.7 | 63.3 |
| 22 | 4638.4-39.6 | <0.1* |      | 5.7  | 12.7 | 64.6 |
| 23 | 4640.1-41.7 | 1.5   | <0.1 | 13.6 | 5.3  | 72.3 |
| 24 | 4641.7-42.2 | <0.1  | <0.1 | 12.4 | 5.7  | 75.4 |

SAMPLED BY CLI ENGINEER.

|    |             |      |      |      |     |      |
|----|-------------|------|------|------|-----|------|
| 25 | 4651.0-52.6 | <0.1 | <0.1 | 12.0 | 2.2 | 82.2 |
| 26 | 4652.6-54.4 | <0.1 | <0.1 | 13.1 | TR  | 90.3 |
| 27 | 4654.4-56.4 | <0.1 | <0.1 | 11.1 | TR  | 88.3 |

