

CORE LABORATORIES, INC.

*Petroleum Reservoir Engineering*

DALLAS, TEXAS

April 21, 1959

EGH

REPLY TO  
707 MID-CONTINENT BLDG.  
TULSA, OKLAHOMA

Continental Oil Company  
Box 161  
Great Bend, Kansas

Attention: Mr. Bill Huebner

Subject: Core Analysis  
Mathes No. 3 Well  
Grant-Simpson Field  
Harper County, Kansas

Gentlemen:

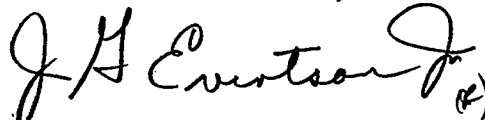
From 4667.9 to 4692.0 feet, Simpson dolomite formation exhibits low residual oil saturations and high total water saturations and the interval is considered to be predominantly water productive.

Samples were selected for analysis by an engineer of Core Laboratories, Inc. as directed by a representative of Continental Oil Company and analyzed in the Oklahoma City laboratory. The analysis results are presented in tabular and graphical forms on the accompanying Coregraph.

We sincerely appreciate this opportunity to be of service.

Very truly yours,

Core Laboratories, Inc.



J. G. Evertson, Jr.,  
District Manager

JGE:HC:jw

7 cc. - Addressee

2 cc. - Mr. Jim Curry

Continental Oil Company  
Wichita, Kansas

COMPANY CONTINENTAL OIL COMPANY DATE ON 4-15-59 FILE NO. CP-10-307-TMI  
 WELL MATHES NO. 3 DATE OFF 4-16-59 ENGRS. DONOHUE  
 FIELD GRANT-SIMPSON FORMATION DOLOMITE ELEV. 1505' DF  
 COUNTY HARPER STATE KANSAS DRLG. FLD. WATER BASE MUD CORES DIAMOND  
 LOCATION NE SW NE SEC 29-T31S-R7W REMARKS SAMPLED BY CLI ENGINEER AS DIRECTED

# Special Analysis

## CORE REPORT

2-4 → EGH  
 6-9 → SMP S

SAND  LIMESTONE  CONGLOMERATE  CHERT   
 SHALE  DOLOMITE  VERTICAL FRACTURES 

TAB  
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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.

\* Denotes plugged permeability

PERMEABILITY, Maximum ○—○  
 MILLIDARCYs  
 40 30 20 10 0

TOTAL WATER ○—○  
 PERCENT PORE SPACE  
 80 60 40 20

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 |
| 14-17         | 18-23       | 27                       | F     | 24-26      | 40-41                            | 42-44       |
|               |             | 28-33                    | 34-39 |            |                                  |             |
| 1             | 4667.9-69.8 | 15                       | 1.5   | 6.9        | 3.6                              | 84.1        |
| 2             | 69.8-71.3   | 1.5                      | 0.2   | 6.4        | 3.3                              | 86.1        |
| 3             | 71.3-73.0   | 1.0                      | 0.4   | 6.6        | 3.2                              | 94.6        |
| 4             | 73.0-74.6   | 0.6                      | 0.4   | 7.2        | 2.5                              | 86.5        |
| 5             | 74.6-76.4   | <0.1                     | <0.1  | 5.3        | 3.6                              | 83.9        |
| 6             | 76.4-76.8   | <0.1                     | *     | 8.2        | 5.2                              | 91.2        |
| 7             | 76.8-78.6   | 2.3                      | <0.1  | 6.1        | 2.3                              | 76.1        |
| 8             | 78.6-80.2   | <0.1                     | <0.1  | 6.6        | 1.5                              | 86.7        |
| 9             | 80.2-82.0   | <0.1                     | <0.1  | 6.2        | 6.6                              | 75.3        |
| 10            | 82.0-83.9   | <0.1                     | <0.1  | 3.5        | 7.4                              | 79.3        |
| 11            | 83.9-85.5   | 1.1                      | <0.1  | 6.5        | 4.0                              | 73.2        |
| 12            | 85.5-87.5   | <0.1                     | *     | 7.4        | 4.9                              | 81.2        |
| 13            | 87.5-89.0   | 3.1                      | 2.5   | 7.4        | 5.0                              | 77.0        |
| 14            | 89.0-90.6   | 12                       | 4.7   | 7.0        | 5.7                              | 71.9        |
| 15            | 4690.6-92.0 | 53                       | 15    | 8.5        | 5.5                              | 75.6        |

