SAMPLE ANALYSIS REPORT

SHAWVER ARMOUR, INC.

"ELMER" HUFFMAN NO. 1

SW SE NE SEC. 18-30S-1E

SUMNER COUNTY, KANSAS

BY

DON D. SHAWVER

March 3, 1960

Shawver Armour, Inc.
817 Central Building
Wichita, Kansas

RE: Shawver-Armour, Inc.
"Elmer" Huffman # 1
SW SE NE Sec. 18-30S-1E
Sumner County, Kansas

Gentlemen:

The following is a sample analysis report on the above captioned test.

The well was under geological supervision from 2860' to 3052", 3360' to 3456', and 3800' to 3942' Rotary Total Depth. Samples were examined from 2300' to 3942' Rotary Total Depth.

All tops and zones of porosity are based on kelly bushing measurements.

ELEVATION: 1255 K.B.

| SAMPLE TOPS | | | ELECTRIC LOG TOPS | |
|---|---|---|---|---|
| Stalnaker Sand | 2481 | (-1226) | | |
| Kansas City Lime | 2813 | (-1558) | 2813 | (-1558) |
| Base Kansas City | 3052 | (-1797) | 2042 | (-1787) |
| Mississippian | 3417 | (-2162) | 3417 | (-2162) |
| Kinderhook | 3808 | (-2553) | 3806 | (-2551) |
| Simpson Sand | 3862 | (-2607) | 3859 | (-2604) |
| Arbuckle | 3936 | (-2681) | 3934 | (-2679) |
| Rotary Total Depth | 3942 | (-2687) | 3939 | (-2684) |

STRUCTURAL COMPARISON

| | Shawver-Armour, Inc. *Huffman #1 | Shawver-Armour, Inc. Seydell #1-A | Messman-Rinehart *Winstead # 1 |
|---|---|---|---|
| | | (Approx. 1/2 mi NE) | (Approx. 1/2 mi SE) |
| Simpson Sand | (-2604) | (-2590) | (-2608) |

ZONES OF POROSITY AND/OR STAINING

KANSAS CITY LIME SECTION

| | |
|---|---|
| 2868' - 2862' | Cream, fine crystalline and sucrosic, cherty, mealy limestone. Fair to poor porostiy. No show. |
| 2868' - 2872' | Dense creamy tan limestone trace of vugular porosity. No show. |
| 2875' - 2900' | Dense, gray-tan limestone. Streaks of fossiliferous porosity. No show. |
| 2920' - 2926' | Poorly developed mottled oolitic and oocastic cream-tan limestone. No show. |
| 2932' - 2935' | Cream fossiliferous oolitic porous limestone. No show. |
| 2952' - 2959' | Fine dense gray limestone. Streaks of oocastic porosity. No show. |

MISSISSIPPIAN SECTION

| | |
|---|---|
| 3417' - 3422' | Pale gray-green, and yellow semi-translucent fresh vitreous chert. No show. |
| 3422' - 3508' | Cream and gray coarse crystalling and dense cherty limestone. No show. |

SIMPSON SAND SECTION

| | |
|---|---|
| 3859' - 3864' | White, fine to medium tight sub-angular sandstone. No show. |
| 3864' - 3918' | White to glassy fine sub-angular slightly glauconitic tight sand. No show. |
| 3918' - 3934' | Same - Very shaly. |

ARBUCKLE SECTION

| | |
|---|---|
| 3934' - 3939' | Cream to gray crystalline dolomite. No show. |

REMARKS:

Because of the lack of any shows of oil it was recommended, and appproval granted, for the Huffman No. 1 to be plugged as a dry hole.

Yours truly,

Don Shawver

DON D. SHAWVER, PETROLEUM GEOLOGIST

DDS/mm

SHAWVER-ARMOUR, INC. (ELMER) HUFFMAN # 1

FACTS PERTINENT TO THE DRILLING

OF THE

SHAWVER-ARMOUR, INC. (ELMER) HUFFMAN NO. 1

SW SE NE SEC. 18-30S-1E

SUMNER COUNTY, KANSAS

CONTRACTOR: SHAWVER-ARMOUR, INC. DRILLERS: F. C. DERBY
FRED GERSTNER
L. A. DURANT

TOOL PUSHER: PAUL HORSCH

SPUD DATE: FEBRUARY 14, 1960 COMPLETION DATE: FEBRUARY 28, 1960

+ + + +

Shawver-Armour, Inc.

March 3, 1960
(Elmer) Huffman # 1

| DEPTH<br>1' Intervals<br>********** | MINUTES | REMARKS |
|---|---|---|
| 2300 | 1-2-2-1-1/1-2-2-2-1 | |
| 10 | 2-1-1-2-1/2-1-1-1-2 | |
| 20 | 2-2-2-2-1/1-2-1-2-2 | 2327 Conn |
| 30 | 2-1-1-1-2/2-1-2-1-1 | |
| 40 | 2-2-2-2-2/2-2-2-2-1 | |
| 50 | 1-3-2-2-2/2-2-3-3-5 | 2358 Conn |
| 60 | 6-5-4-5-5/6-4-4-5-5 | |
| 70 | 6-3-4-3-4/4-4-3-4-3 | |
| 80 | 4-5-4-2-3/4-3-4-3-4 | |
| 90 | 2-2-3-3-4/4-3-4-3-3 | 2390 Conn |
| 2400 | 4-3-3-3-3/3-2-3-3-2 | |
| 10 | 3-3-4-5-5/5-6-6-5-6 | |
| 20 | 4-2-4-3-3/5-3-3-3-4 | 2421 Conn |
| 30 | 3-4-3-4-3/5-4-5-3-4 | |
| 40 | 3-4-4-3-4/4-4-3-4-4 | |
| 50 | 4-4-*()-3-4/5-4-5-5-3 | *()-Kelly Corr. |
| 60 | 4-5-4-5-4/2-1-1-1-1 | |
| 70 | 1-1-1-2-2/2-3-2-5-4 | |
| 80 | 4-2-2-1-1/½-½-1-½-½ | 2484 Conn |
| 90 | ½-1-½-1-1/1-½-½-1-1 | |
| 2500 | 1-1-1-1-1/1-1-1-2-1 | |
| 10 | 1-1-1-1-1-/1-1-1-1-1 | 2516 Conn |
| 20 | 3-2-1-1-2/1-1-1-1-1 | |
| 30 | 1-1-1-1-1/1-1-2-1-1 | |
| 40 | 2-1-1-1-1/2-2-1-1-1 | 2547 Conn |
| 50 | 1-1-1-1-½/½-½-½-½-½ | |
| 60 | 1-½-½-½-½/1-1-1-1-1 | |
| 70 | 1-1-1-2-1/1-1-1-1-1 | 2579 Conn |
| 80 | 1-1-1-1-1/1-1-1-1-1 | |
| 90 | 1-1-1-2-1/1-1-1-1-1 | |
| 2600 | 3-2-1-2-2/2-3-4-3-3 | |
| 10 | 3-2-2-2-3/3-3-2-2-2 | 2610 Conn |
| 20 | 3-3-3-2-3/3-3-3-3-3 | |
| 30 | 3-2-2-3-3/3-3-3-3-3 | |
| 40 | 2-2-2-3-3/3-3-3-2-2 | 2642 Conn |
| 50 | 3-4-4-3-2/2-4-4-3-3 | |
| 60 | 3-2-3-3-4/4-3-3-3-6 | |
| 70 | 3-4-3-2-2/3-3-3-4-4 | 2673 Conn |
| 80 | 2-3-3-3-2/2-4-2-3-3 | |
| 90 | 4-3-3-3-3/3-2-3-3-3 | |

March 3, 1960

Shawver-Armour, Inc. (Elmer) Huffman # 1

| DEPTH | MINUTES | REMARKS |
|---|---|---|
| 1' Intervals | | |
| ********** | | |
| 2700 | 3-3-4-3-3/2-2-3-3-2 | 2705 Conn |
| 10 | 2-3-3-3-3/3-2-3-3-3 | |
| 20 | 2-2-3-3-3/3-3-3-3-3 | |
| 30 | 3-4-3-3-4/5-3-3-3-3 | 2736 Conn |
| 40 | 3-3-3-3-3/3-4-3-3-2 | |
| 50 | 2-3-3-3-3/3-3-3-3-3 | |
| 60 | 3-2-2-2-3/3-5-5-3-3 | 2768 Conn |
| 70 | 3-3-3-3-2/3-3-4-3-4 | |
| 80 | 4-4-3-2-3/3-4-4-4-3 | |
| 90 | 3-3-3-4-3/4-4-5-5-4 | 2799 Conn |
| 2800 | 3-4-4-5-3/4-4-4-3-4 | |
| 10 | 4-3-3-5-6/5-4-4-6-4 | |
| 20 | 5-3-4-3-3/4-5-4-4-3 | |
| 30 | 3-3-5-5-6/5-3-3-3-2 | 2831 Conn |
| 40 | 3-2-2-2-4/3-2-3-3-2 | |
| 50 | 5-3-3-3-3/3-2-2-2-1 | |
| 60 | 2-3-4-4-6/9-11-6-4-3 | 2863 Conn |
| 70 | 3-4-11-10-8/5-4-5-5-4 | |
| 80 | 3-4-3-3-2/1½-3½-3-4-3 | |
| 90 | 3-2-3-2-2/3-1½-1½-2-3 | 2893 Conn |
| 2900 | 4-4-7-7-3//4-2-4-3-4 | |
| 10 | 3-3-3-3-4/4-4-6-4-4 | |
| 20 | 2-3-3-3-2/2-2-3-4-6 | |
| 30 | 6-5-2-1-2/6-5-3-5-4 | |
| 40 | 5-4-4-8-7/11-2-1-4-5 | |
| 50 | 7-6-3-2-3/3-4-3-4-5 | 2957 Conn |
| 60 | 4-4-6-6-4/6-6-6-6-6 | |
| 70 | 8-7-8-7-9/8-7-9-8-6 | |
| 80 | 5-8-7-7-4/9-4-10-5-7 | 2988 Conn |
| 90 | 5-4-4-3-3/4-4-5-4-5 | |
| 3000 | 4-5-6-5-7/6-7-6-7-7 | |
| 10 | 7-7-7-7-9/10-5-6-7-7 | |
| 20 | 6-6-5-5-8/6-6-7-7-6 | |
| 30 | 7-8-9-8-6/11-6-7-9-8 | |
| 40 | 9-9-9-7-9/8-7-7-6-8 | |
| 50 | 10-7-6-7-6/6-6-8-6-6 | 3051 Conn |
| 60 | 7-6-5-5-5/4-4-4-4-4 | |
| 70 | 5-8-5-7-8/6-5-5-5-3 | |
| 80 | 4-4-5-5-8/5-7-10-8-8 | |
| 90 | 7-8-4-4-3/5-5-5-5-4 | |

Shawver-Armour, Inc.

March 3, 1960
(Elmer) Huffman #1

| DEPTH | MINUTES | REMARKS |
|---|---|---|
| 1' Intervals | | |
| ********** | | |
| 3100 | 5-6-5-5-4/4-4-4-4-4 | |
| 10 | 5-4-4-4-3/3-4-4-5-5 | 3114 Conn |
| 20 | 6-5-4-5-4/4-4-4-3-4 | |
| 30 | 4-5-4-5-4/4-4-4-4-3 | |
| 40 | 4-4-4-5-5/5-6-6-6-7 | 3146 Conn |
| 50 | 6-5-4-5-5/6-5-5-5-5 | |
| 60 | 5-6-5-5-5/5-5-5-4-5 | |
| 70 | 8-7-5-6-4/5-6-6-4-5 | Conn 3177 - Kelly Corr. |
| 80 | 5-5-4-6-5/4-4-5-4-5 | |
| 90 | 5-5-5-5-4/5-5-5-4-4 | |
| 3200 | 5-5-6-5-4/3-2-1-3-3 | 3208 Conn |
| 10 | 4-3-3-6-7/5-4-5-5-5 | |
| 20 | 5-6-6-5-6/5-5-5-6-6 | |
| 30 | 6-5-6-6-5/6-4-3-2-3 | 3239 Conn |
| 40 | 3-3-3-2-4/3-2-3-6-6 | |
| 50 | 7-8-5-5-5/6-5-6-6-4 | |
| 60 | 6-6-7-3-4/2-3-3-3-3 | |
| 70 | 5-4-5-4-5/4-7-10-5-4 | 3272 Conn |
| 80 | 10-6-5-5-7/5-8-5-6-5 | |
| 90 | 6-7-5-6-6/5-5-6-5-5 | |
| 3300 | 5-6-5-7-5/6-7-5-7-5 | 3302 Conn |
| 10 | 4-2-5-2-2/2-5-4-7-3 | |
| 20 | 3-4-6-8-5/6-4-6-7-5 | |
| 30 | 4-5-4-5-3/3-2-3-3-2 | 3334 Conn |
| 40 | 2-6-4-3-3/5-5-5-3-3 | |
| 50 | 4-6-5-6-6/6-6-3-9-8 | |
| 60 | 4-4-5-4-5/6-4-5-4-5 | 3366 Conn |
| 70 | 10-5-4-7-5/5-4-4-7-5 | |
| 80 | 6-6-6-5-7/5-5-4-3-5 | |
| 90 | 3-5-5-5-10/10-9-3-2-2 | 3397 Conn |
| 3400 | 3-4-2-2-3/6-6-7-10-9 | |
| 10 | 6-10-5-4-5/6-6-6-8-6 | |
| 20 | 6-9-11-7-9/7-11-10-8-7 | 3429 Conn |
| 30 | 9-7-5-10-10/14-8-8-6-14 | |
| 40 | 11-11-17-10-13/12-10-12-12-16 | |
| 50 | 12-13-13-16-21/8-11-14-15-16 | |
| 60 | 8-10-12-11-9/16-13-11-14-11 | 3460 Conn |
| 70 | 14-11-12-13-11/14-10-10-12-13 | |
| 80 | 12-13-12-11-14/12-11-16-10-14 | |
| 90 | 12-13-10-8-9/10-7-10-9-10 | 3492 Conn |

Shawver-Armour, Inc.

March 3, 1960
(Elmer) Huffman # 1

| DEPTH | MINUTES | REMARKS |
|---|---|---|
| 1' Intervals | | |
| ********** | | |
| 3500 | 12-11-13-15-11/10-10-13-8-7 | |
| 10 | 11-8-9-10-8/10-10-8-7-9 | |
| 20 | 8-8-9-8-9/9-10-11-9-9 | 3524 Conn |
| 30 | 7-11-12-12-11/13-12-11-10-8 | |
| 40 | 12-11-10-10-11/10-9-9-10-9 | |
| 50 | 8-10-8-12-10/9-11-12-13-15 | 3555 Conn |
| 60 | 13-14-10-10-9/13-16-17-17-8 | |
| 70 | 7-8-8-10-10-/10-9-10-9-10 | |
| 80 | 11-9-9-10-7/6-5-7-9-14 | 3586 Conn |
| 90 | 8-8-13-8-10/13-13-10-9-11 | |
| 3600 | 11-10-10-9-11/15-11-12-10-10 | |
| 10 | 11-16-10-9-12/14-16-10-13-9 | 3617 Conn |
| 20 | 8-12-12-10-11/15-10-11-14-12 | |
| 30 | 11-13-11-10-11/12-13-12-14-10 | |
| 40 | 14-11-10-13-13/11-11-12-6-6 | |
| 50 | 7-6-6-67/7-8-7-8-7 | |
| 60 | 6-7-9-7-7/8-8-9-7-9 | |
| 70 | 7-6-10-10-9/6-6-7-8-8 | |
| 80 | 8-8-8-9-8/9-9-10-9-8 | 3680 Conn |
| 90 | 10-11-9-11-13/10-12-14-14-10 | |
| 3700 | 11-12-16-12-15/15-15-11-14-10 | |
| 10 | 10-11-16-11-16/18-14-12-12-16 | 3711 Conn |
| 20 | 15-17-17-16-7/6-10-8-6-7 | |
| 30 | 8-8-8-10-7/7-6-5-6-8 | |
| 40 | 8-8-7-5-8/7-8-5-6-8 | 3743 Conn |
| 50 | 7-6-7-6-8/7-6-6-7-6 | |
| 60 | 7-6-6-7-6/7-6-6-6-5 | |
| 70 | 9-7-8-7-6/8-7-9-7-10 | 3774 Conn |
| 80 | 8-9-9-8-10/9-9-9-8-7 | |
| 90 | 6-6-6-5-6/6-5-8-6-6 | |
| 3800 | 10-10-12-13-10/8-8-10-8-6 | 3805 Conn |
| 10 | 10-7-7-8-8/8-8-6-8-9 | |
| 20 | 7-5-8-7-8/7-7-7-6-8 | |
| 30 | 9-12-10-10-11/9-8-8-12-14 | 3837 Conn |
| 40 | 11-10-15-11-11/15-8-9-10-12 | |
| 50 | 9-9-10-8-8-/11-12-10-9-10 | |
| 60 | 8-11-3-12-6/9-3-5-11-14 | 3865 Conn |
| 70 | 3-4-6-12-9/6-7-10-8-17 | |
| 80 | 16-7-8-11-10/10-10-8-5-4 | |
| 90 | 5-4-3-6-7/5-8-5-4-9 | 3895 Conn |

Shawver-Armour, Inc.

March 3, 1960
(Elmer) Huffman # 1

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I' Intervals
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| | |
|---|---|
| 3900 | 7-10-10-5-5/5-5-5-5-6 |
| 10 | 9-4-6-6-4/3-3-3-4-3 |
| 20 | 5-4-5-5-6/5-6-9-10-8 |
| 30 | 11-7-8-9-7/6-10-13-7-5 |
| 40 | 10-13 |