

LOG OF WELL

Southwestern Gas Co.
Independence, Kansas

Company J. B. Grieves Farm Totland Well No. 1
 State Kansas County Greenwood S. 22 T. 24 R. 9
 Commenced Drilling _____ Completed _____ Elev. _____
 Shot _____ Qts. from _____ to _____ I. P. _____ R. P. _____
 Casing: 6' 10 1/2" Casing: 640' 12 1/2" Casing: 1300' 10"
 Casing: 575' 8 1/2" Casing: 2325' 6-5/8" Casing: _____
 Tubing _____ Caged at _____ Packer at _____

| | | | | |
|-----------|-----|--------|-------------|-------------|
| soil | 20 | | lime | 960 |
| shale | 32 | | shale | 980 |
| lime | 35 | | sand | 1015 H.F.W. |
| shale | 90 | | shale | 1025 |
| red shale | 96 | | sand | 1035 |
| shale | 250 | | shale | 1080 1040 |
| lime | 255 | | sand | 1055 |
| shale | 280 | | shale | 1135 |
| lime | 286 | | lime | 1165 |
| shale | 310 | | shale | 1170 |
| lime | 315 | | lime | 1265 |
| shale | 345 | | shale | 1270 |
| lime | 355 | | lime | 1280 |
| shale | 380 | | lime | 1440 |
| sand | 390 | oil | shale | 1575 |
| shale | 465 | | lime | 1745 |
| lime | 470 | | shale | 1850 |
| shale | 490 | | lime | 1855 |
| lime | 500 | | shale | 1875 |
| shale | 525 | | lime | 1890 |
| lime | 530 | | shale | 1950 |
| shale | 565 | | lime | 1955 |
| lime | 615 | | shale | 1985 |
| shale | 625 | H.F.W. | lime | 1995 |
| lime | 630 | | shale | 2070 |
| sand | 640 | water | sand | 2080 |
| shale | 680 | | shale | 2180 |
| lime | 715 | | shale | 2190 |
| shale | 720 | | sand | 2195 |
| lime | 730 | | shale | 2210 |
| shale | 760 | | red shale | 2215 |
| lime | 770 | | green shale | 2230 |
| shale | 800 | | sandy shale | 2280 |
| lime | 805 | | shale | 2330 |
| shale | 815 | | lime | 2688 |
| sand | 825 | water | shale | 2758 |
| lime | 830 | | sand | 2770 |
| shale | 870 | | | |
| lime | 890 | | | |
| shale | 900 | | | |
| lime | 920 | | | |
| shale | 925 | | | |

Plated

W. L. Stryker Est.

22-24-9E