

GEOLOGICAL DEPARTMENT
Southwestern Gas Co.
Independence, Kansas

Company Emerald Oil Co. Farm Kukuk Well No. 2
 State Kansas County Gowley S. 24 T. 32 R. 4
 Commenced Drilling _____ Completed 9026-22 Elev. 1247
 Shot _____ Qts. from _____ to _____ I. P. 130 bbls R. P. _____
 Casing: _____ Casing: _____ Casing: _____
 Casing: _____ Casing: _____ Casing: _____
 Tubing _____ Caged at _____ Packer at _____

| | | | | |
|------------|-------|---------|-------------|------------|
| soil | 5 | | lime | 658 |
| lime | 110 | | gas and | 666 |
| shale | 115 | | shale | 673 |
| lime | 120 | | lime | 678 |
| red rock | 130 | | shale | 690 |
| lime | 135 | | lime | 693 |
| shale | 150 | | shale | 713 |
| lime | 165 | | lime | 720 |
| shale | 175 | | shale | 800 |
| sandy lime | 185 | 3 B W @ | lime | 803 |
| lime | 205 | 160 | shale | 883 |
| slate | 210 | | lime | 910 |
| red rock | 220 | | water sand | 920 |
| lime | 230 | | shale | 935 |
| shale | 240 | | lime | 945 |
| lime | 250 | | shale | 965 |
| shale | 260 | | lime | 970 |
| lime | 285 | | shale | 975 |
| red rock | 290 | | lime | 978 |
| lime | 295 | | shale | 985 |
| slate | 505 | | lime | 987 |
| lime | 310 | | shale | 995 |
| shale | 320 | | red rock | 1000 |
| lime | 350 | | shale | 1050 |
| red rock | 390 | | lime | 1074 |
| lime | 398 | | shale | 1079 |
| shale | 400 | | lime | 1090 |
| lime | 450 | | shale | 1100 |
| shale | 460 | | lime | 1113(1113) |
| red rock | 463 | | shale | 1120 |
| lime | 475 | | lime | 1140 |
| shale | 485 | | shale | 1200 |
| lime | 495 | | lime | 1245 |
| shale | 540 | | shale | 1275 |
| lime | 560 | | lime | 1305 |
| shale | 570 | | lime shale | 1320 |
| lime | 575 | | lime | 1383 |
| shale | 595 | | shale | 1390 |
| lime | 598 | | lime | 1393 |
| shale | 610 | | shale | 1415 |
| lime | 630 | | sand | 1425 |
| shale(655) | 565 ? | | sandy shale | 1430 |

(over)

LOCATION

| | | | |
|-------|-------|-------|-------|
| N | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| S | | | |

..... Ft. from North Line of qr. sec.

..... Ft. from South Line of qr. sec.

..... Ft. from East Line of qr. sec.

..... Ft. from West Line of qr. sec.

shale 1442
 lime 1448
 oil sand 1475

TEST

| | | | | |
|-----------------|------------------------------------|---------|-------|--------------------------|
| Through | Pitot Tube Test of 192 | | | 192 |
| In Tubing | Used | Mercury | Water | Open Gauge Test Shows |
| | Reading | | | |
| In Casing | Vol. Cu. Ft. | | | Lbs. |