

| | | | | |
|------------|--------|---|-------------|------------------------|
| STATE | UTAH | | COMPANY | Phillips Petroleum Co. |
| COUNTY | BEAVER | | FARM | |
| BLOCK | | | WELL SURVEY | Observation Well #4 |
| SEC. | 33 | | | |
| T. | R. | TOTAL DEPTH 1760' | | |
| (X) | | CONTRACTOR CXM Drilling | | |
| | | COMMENCED 2/5/77 | | |
| | | COMPLETED 2/25/77 | | |
| ALTITUDE | | REMARKS Logged by C. Kline & R. Forrest - Re-log by G. Chadburn | | |
| PRODUCTION | | CASING RECORD | | |

SHOT QUARTS BETWEEN
TIME RATE SCALE: 1/10" = MINUTES
Kroftbill 450 TULSA, OKLAHOMA 74101 PRINTED IN U.S.A.

| | | TIME RATE:-1/10" SQUARES | | |
|-----|--|--------------------------|--|--|
| 0 | | | | |
| 10 | | | | |
| 20 | | | | |
| 30 | | | | |
| 40 | | | | |
| 50 | | | | |
| 60 | | | | |
| 70 | | | | |
| 80 | | | | |
| 90 | | | | |
| 100 | | | | |
| 110 | | | | |
| 120 | | | | |

ALLUVIAL + DECOMPOSED
QUARTZ MUDSTONE
NO RHYOLITIC COMPONENT
COARSE GRAINS

ALLUVIAL GRANITE WASH
A.A. ARKOSIC

ALLUVIAL GRANITE WASH
SUBROUND GRAINS
MAGNETITE PRESENT

ALLUVIAL GRANITE WASH
A.A.

ALLUVIAL GRANITE WASH
A.A.

ALLUVIAL GRANITE WASH
A.A.

ALLUVIAL GRANITE WASH
A.A.

ALLUVIAL GRANITE WASH
MEDIUM TO COARSE
GRAIN SIZE

ALLUVIAL GRANITE WASH
CALCITE CEMENT PRESENT
ON SOME GRAINS

ALLUVIAL GRANITE WASH
A.A.

ALLUVIAL GRANITE WASH
FINE TO medium grains

ALLUVIAL GRANITE WASH
A.A.

ALLUVIAL GRANITE WASH
FINE TO COARSE SUB-

| | | | | | | | |
|---|--------|-------------|--|--|--|--|--|
| STATE | | | COMPANY | | | | |
| COUNTY | | | FARM | | | | |
| BLOCK | | | WELL NO. | | | | |
| SEC. | | | SURVEY | | | | |
| T. | R. | TOTAL DEPTH | | | | | |
| | | CONTRACTOR | | | | | |
| | | COMMENCED | | | | | |
| | | COMPLETED | | | | | |
| | | ALTITUDE | | | | | |
| | | REMARKS | | | | | |
| | | PRODUCTION | | | | | |
| OF PHILLIPS PETROLEUM CO. | | | | | | | |
| CASING RECORD | | | | | | | |
| WITHOUT PRIOR WRITTEN APPROVAL | | | | | | | |
| DATA MAY NOT BE RELEASED | | | | | | | |
| CONFILED | | | | | | | |
| SI NOV 19 1970 J SIHL | | | | | | | |
| SHOT | QUARTS | BETWEEN | | | | | |
| | | | TIME RATE SCALE: 1/10" = MINUTES | | | | |
| | | | Kroftbill 450 TULSA, OKLAHOMA 74101 PRINTED IN U.S.A. | | | | |
| 190 | | | TIME RATE:-1/10" SQUARES | | | | |
| 200 | | | ALLUVIAL GRANITE WASH A.A. | | | | |
| 210 | | | ALLUVIAL GRANITE WASH FINE TO medium grains | | | | |
| 220 | | | ALLUVIAL GRANITE WASH FINE TO COARSE GRAINS | | | | |
| 230 | | | ALLUVIAL GRANITE WASH A.A. CALCIUM CEMENT STILL PRESENT ON SOME GRAINS | | | | |
| 240 | | | ALLUVIAL GRANITE WASH A.A. BIOTITE CONCENTRATED ON SOME GRAINS | | | | |
| 250 | | | ALLUVIAL GRANITE WASH A.A. | | | | |
| 260 | | | ALLUVIAL GRANITE WASH FINE TO medium grains | | | | |
| 270 | | | ALLUVIAL GRANITE WASH ORANGE-BROWN STAIN IN SOME GRAINS | | | | |
| 280 | | | ALLUVIAL GRANITE WASH FINE TO medium grains | | | | |
| 290 | | | ALLUVIAL GRANITE WASH A.A. | | | | |
| 300 | | | ALLUVIAL GRANITE WASH A.A. MAGNETITE PRESENT | | | | |
| 310 | | | ALLUVIAL GRANITE WASH | | | | |

| STAGE | | COMPANY | FARM | WELL |
|------------|--------|-------------|------|------|
| COUNTY | | | | |
| CLOCK | SURVEY | | | |
| SEC. | | | | |
| T. | R. | TOTAL DEPTH | | |
| | | | | |
| | | CONTRACTOR | | |
| | | COMMENCED | | |
| | | COMPLETED | | |
| | | REMARKS | | |
| PRODUCTION | | | | |

CASING RECORD

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SHOT QUARTS BETWEEN

TIME RATE SCALE: 1/10" = MINUTES

Kraftbit 450 TULSA, OKLAHOMA 74101 PRINTED IN U.S.A.

TIME RATE-1/10" SQUARES

| | | |
|-----|---------|------------------------|
| 380 | 4 13 2 | ALLUVIAL GRANITE WASH |
| | D D | A.A. |
| | D 4 3 | |
| 390 | 0 0 0 | ALLUVIAL GRANITE WASH |
| | D 0 1 3 | A.A. |
| 400 | 0 1 2 0 | ALLUVIAL GRANITE WASH |
| | D 4 | FINE GRAINS |
| 410 | 0 4 2 | ALLUVIAL GRANITE WASH |
| | F F | A.A. MAGNETITE PRESENT |
| 420 | 0 0 0 | ALLUVIAL GRANITE WASH |
| | D D | A.A. |
| 430 | 0 0 0 | ALLUVIAL GRANITE WASH |
| | D 0 2 | FINE TO MEDIUM GRAINS |
| 440 | 1 3 0 0 | SOME MAGNETITE |
| | D 0 0 | ALLUVIAL GRANITE WASH |
| 450 | D 1 3 | A.A. |
| | D 0 0 | ALLUVIAL GRANITE WASH |
| | G G | A.A. MAGNETITE > |
| 460 | D 1 2 5 | ALLUVIAL GRANITE WASH |
| | D 0 5 | A.A. |
| | D D | |
| 470 | D 1 3 | ALLUVIAL GRANITE WASH |
| | E 1 B | A.A. SOME MAGNETITE |
| 480 | E 1 B | ALLUVIAL GRANITE WASH |
| | B 0 B | A.A. BIOTITE > |
| 490 | 0 0 B | ALLUVIAL GRANITE WASH |
| | E G | A.A. |
| 500 | D 2 D | ALLUVIAL GRANITE WASH |
| | D D | FINE GRAINS |

| STAGE | | COMPANY | FARM | WELL NO. |
|------------|--------|-------------|------|----------|
| COUNTY | | | | |
| BLOCK | SURVEY | | | |
| SEC. | | | | |
| T. | R. | TOTAL DEPTH | | |
| | | | | |
| | | CONTRACTOR | | |
| | | COMMENCED | | |
| | | COMPLETED | | |
| | | REMARKS | | |
| PRODUCTION | | | | |

CASING RECORD

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SHOT QUARTS BETWEEN

TIME RATE SCALE: 1/10" = MINUTES

Kraftbit 450 TULSA, OKLAHOMA 74101 PRINTED IN U.S.A.

| | | |
|-----|-----|--|
| 570 | D D | RECEMENTED GRANITE WASH |
| 580 | D D | GRANITE STAINED QUARTZ & FELDSPAR GRAINS |
| | D D | RECEMENTED GRANITE WASH |
| 590 | D D | A.A. K-FELDSPAR GRAINS RECEMENTED |
| | D D | RECEMENTED GRANITE WASH |
| 600 | D D | A.A. |
| | D D | RECEMENTED GRANITE WASH |
| 610 | D D | A.A. K-FELDSPAR > 10% |
| 620 | D D | RECEMENTED GRANITE WASH |
| | D D | A.A. |
| 630 | D D | RECEMENTED GRANITE WASH |
| | D D | CALCITE CEMENTED GRAINS PREDOMINATE |
| 640 | D D | RECEMENTED GRANITE WASH |
| | D D | A.A. |
| 650 | D D | RECEMENTED GRANITE WASH |
| | D D | FINE GRAINS |
| 660 | D D | RECEMENTED GRANITE WASH |
| | D D | A.A. |
| 670 | D D | RECEMENTED GRANITE WASH |
| | D D | FEW GRAINS ORANGE-BROWN STAINED (ALTERATION) |
| 680 | D D | RECEMENTED GRANITE WASH |
| | D D | ORANGE-BROWN STAINED GRAINS INCREASING |
| 690 | D D | RECEMENTED GRANITE WASH |
| | D D | BIOTITE INCREASING |
| | D D | RECEMENTED GRANITE WASH |

| SHOT | QUARTS | BETWEEN |
|--------------------------|---|-------------------|
| TIME RATE SCALE: 1/10" = | MINUTES | |
| HEAD/BIT 450 | TULSA, OKLAHOMA 74101 | PRINTED IN U.S.A. |
| | TIME RATE: 1/10" SQUARES | |
| 760 | RECEMENTED GRANITE WASH A.A. | |
| 770 | RECEMENTED GRANITE WASH A.A. SOME BIOTITE ALTERED TO CHLORITE | |
| 780 | RECEMENTED GRANITE WASH A.A. | |
| 790 | RECEMENTED GRANITE WASH A.A. | |
| 800 | RECEMENTED GRANITE WASH A.A. | |
| 810 | RECEMENTED GRANITE WASH A.A. | |
| 820 | RECEMENTED GRANITE WASH A.A. | |
| 830 | RECEMENTED GRANITE WASH A.A. | |
| 840 | RECEMENTED GRANITE WASH A.A. | |
| 850 | RECEMENTED GRANITE WASH A.A. BIOTITE INCREASING | |
| 860 | RECEMENTED GRANITE WASH A.A. | |
| 870 | RECEMENTED GRANITE WASH A.A. SOME MAGNETITE | |
| 880 | RECEMENTED GRANITE WASH A.A. | |

| | | | |
|------------|----|-------------|----------|
| STAT | | COMPANY | |
| COUNTY | | FARM | WELL NO. |
| BLOCK | | SURVEY | |
| SEC. | | | |
| T. | R. | TOTAL DEPTH | |
| | | CONTRACTOR | |
| | | COMMENCED | |
| | | COMPLETED | |
| ALTITUDE | | REMARKS | |
| PRODUCTION | | | |

CASING RECORD

| SHOT | QUARTS | BETWEEN |
|--------------------------|--|--------------------------|
| TIME RATE SCALE: 1/10" = | | MINUTES |
| Kroftbill 450 | TULSA, OKLAHOMA 74101 | PRINTED IN U.S.A. |
| 950 | | TIME RATE: 1/10" SQUARES |
| 960 | RECEMENTED GRANITE WASH A.A. YELLOW INCLUSIONS | |
| 970 | RECEMENTED GRANITE WASH A.A. | |
| 980 | RECEMENTED GRANITE WASH A.A. | |
| 990 | RECEMENTED GRANITE WASH A.A. | |
| 1000 | RECEMENTED GRANITE WASH A.A. | |
| 1010 | RECEMENTED GRANITE WASH A.A. LESS BIOTITE | |
| 1020 | RECEMENTED GRANITE WASH A.A. | |
| 1030 | RECEMENTED GRANITE WASH A.A. | |
| 1040 | RECEMENTED GRANITE WASH A.A. | |
| 1050 | RECEMENTED GRANITE WASH A.A. CHIP SIZE INCREASING | |
| 1060 | RECEMENTED GRANITE WASH A.A. BIOTITE INCREASING | |
| 1070 | RECEMENTED GRANITE WASH | |

| STATE | | COMPANY | FARM | WELL |
|------------|-------|-------------|------|------|
| COUNTY | BLOCK | SURVEY | | |
| SEC. | | | | |
| T. | R. | TOTAL DEPTH | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| ALTITUDE | | CONTRACTOR | | |
| | | COMMENCED | | |
| | | COMPLETED | | |
| | | REMARKS | | |
| PRODUCTION | | | | |

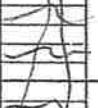
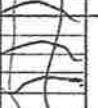
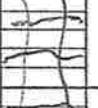
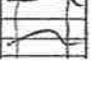
CASING RECORD

SHOT QUARTS BETWEEN

TIME RATE SCALE: 1/10" = MINUTES

Kraftbill 450 TULSA, OKLAHOMA 74101 PRINTED IN U.S.A.

TIME RATE: -1/10" SQUARES

| | | |
|------|---|---|
| 1140 |  | RECEMENTED GRANITE WASH A.A. |
| 1150 |  | RECEMENTED GRANITE WASH A.A. |
| 1160 |  | RECEMENTED GRANITE WASH A.A. |
| 1170 |  | RECEMENTED GRANITE WASH A.A. SOME QUARTZ GRAINS YELLOWISH |
| 1180 |  | RECEMENTED GRANITE WASH A.A. SOME MAGNETITE |
| 1190 |  | RECEMENTED GRANITE WASH A.A. |
| 1200 |  | RECEMENTED GRANITE WASH A.A. |
| 1210 |  | RECEMENTED GRANITE WASH PREVALENT MUSCOVITE |
| 1220 |  | RECEMENTED GRANITE WASH A.A. |
| 1230 |  | RECEMENTED GRANITE WASH A.A. |
| 1240 |  | RECEMENTED GRANITE WASH LESS MUSCOVITE |
| 1250 |  | RECEMENTED GRANITE WASH A.A. |
| 1260 |  | RECEMENTED GRANITE WASH A.A. |

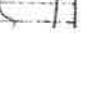
| STATE | | COMPANY | FARM | WELL NO. |
|------------|-------|-------------|------|----------|
| COUNTY | BLOCK | SURVEY | | |
| SEC. | | | | |
| T. | R. | TOTAL DEPTH | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| ALTITUDE | | CONTRACTOR | | |
| | | COMMENCED | | |
| | | COMPLETED | | |
| | | REMARKS | | |
| PRODUCTION | | | | |

CASING RECORD

SHOT QUARTS BETWEEN

TIME RATE SCALE: 1/10" = MINUTES

Kraftbill 450 TULSA, OKLAHOMA 74101 PRINTED IN U.S.A.

| | | |
|------|---|---|
| 1330 |  | RECEMENTED GRANITE WASH BIOTITE ALTERATED RED BROWNISH (MANGANESE) OXIDIZED (CALCITE?) |
| 1340 |  | RECEMENTED GRANITE WASH LITTLE CHLORITE & MAGNETITE |
| 1350 |  | RECEMENTED GRANITE WASH A.A. |
| 1360 |  | RECEMENTED GRANITE WASH REDISH BROWN STAIN ON SOME QUARTZ GRAINS? HEMATITE? |
| 1370 |  | RECEMENTED GRANITE WASH SOME MAGNETITE |
| 1380 |  | RECEMENTED GRANITE WASH A.A. |
| 1390 |  | RECEMENTED GRANITE WASH LESS BIOTITE, SOME MUSCOVITE |
| 1400 |  | RECEMENTED GRANITE WASH GRANODIORITE GRAINS 10% SOME MUSCOVITE |
| 1410 |  | RECEMENTED GRANITE WASH FINE GRAINED |
| 1420 |  | RECEMENTED GRANITE WASH A.A. SOME MUSCOVITE YELLOW-ORANGE ALTERATION |
| 1430 |  | RECEMENTED GRANITE WASH A.A. |
| 1440 |  | RECEMENTED GRANITE WASH A.A. |
| 1450 |  | RECEMENTED GRANITE WASH |

| STATE | | COMPANY | |
|---|-------------|---------|--|
| COUNTY | FARM | WELL | |
| BLOCK | SURVEY | | |
| SEC. | | | |
| T. R. | TOTAL DEPTH | | |
| | CONTRACTOR | | |
| | COMMENCED | | |
| | COMPLETED | | |
| ALTITUDE | REMARKS | | |
| PRODUCTION | | | |
| CASING RECORD | | | |
| SHOT | QUARTS | BETWEEN | |
| TIME RATE SCALE: 1/10 ⁶ = | | MINUTES | |
| Kraftbill 450 TULSA, OKLAHOMA 74101 PRINTED IN U.S.A. | | | |
| TIME RATE:-1/10 ⁶ SQUARES | | | |

1520 RECENTED GRANITE WASH
 AA. GREEN MINERAL EPIDOTE
 INCREASING MINOR PYRITE IN SOME
 1530 RECENTED GRANITE WASH
 SOME EPIDOTE, NO PYRITE
 BIOTITE ALBEDO TO CALCITE
 1540 RECENTED GRANITE WASH
 VERY FINE GRAINED
 IRREGULAR INCREASING
 1550 FELDSPAR RX-GRANODIORITE
 ABUNDANT GREEN MINERALS
 PYRITE IN VEINS
 1560 BASEMENT
 AA. ABUNDANT MAGNETITE
 1570 BASEMENT
 AA. NO PYRITE.
 1580 BASEMENT
 AA. BIOTITE INCREASING
 1590 BASEMENT
 AA. LITTLE PYRITE
 FELDSPAR
 1600 BASEMENT
 ABUNDANT BIOTITE
 SOME MAGNETITE
 1610 BASEMENT
 AA. GRANODIORITE
 EQUIGRANULAR-IRREGULAR
 1620 BASEMENT
 ABUNDANT MUSCITE
 SOME HEMATITE
 1630 BASEMENT
 ABUNDANT BIOTITE
 SOME MAGNETITE
 1640 BASEMENT
 AA.

| STATE | | COMPANY | |
|---|-------------|----------|--|
| COUNTY | FARM | WELL NO. | |
| BLOCK | SURVEY | | |
| SEC. | | | |
| T. R. | TOTAL DEPTH | | |
| | CONTRACTOR | | |
| | COMMENCED | | |
| | COMPLETED | | |
| ALTITUDE | REMARKS | | |
| PRODUCTION | | | |
| CASING RECORD | | | |
| SHOT | QUARTS | BETWEEN | |
| TIME RATE SCALE: 1/10 ⁶ = | | MINUTES | |
| Kraftbill 450 TULSA, OKLAHOMA 74101 PRINTED IN U.S.A. | | | |
| TIME RATE:-1/10 ⁶ SQUARES | | | |

1710 BASEMENT
 1720 VERY FINE GRAINS
 ABUNDANT BIOTITE
 1730 BASEMENT
 FELDSPAR QUARTZ BIOTITE
 LOSS OF EPIDOTE DIVERSIFICATION
 1740 BASEMENT
 A. A.
 1750 BASEMENT
 A. A. SOME REDDISH PINE
 STAIN IN FEW GRAINS
 1760 BASEMENT
 GRANODIORITE
 QUARTZ & FELDSPAR
 & BIOTITE GRAINS