



rend #1 State Mobil - Summary

The Trend No. 1 State Mobil was drilled to test the Mississippian rocks with the Spergen Dolomite as the primary objective. Although several porous zones were encountered in the Mississippian section, the Spergen Dolomite in the interval 5177 - 5186 was the only zone which carried oil shows. The samples showed low porosity but had fluorescence and would give an oil cut. A drillstem test was run in the interval 5178 - 5188 but recovered only 70' of muddy water.

The Mississippian section in the No. 1 State Mobil is thin in comparison to the two closest control wells even though structurally lower than the two control wells. The change in section appears to be mainly in the Spergen section, and the "X" marker, normally a reliable correlation point, is subject to interpretation.

There were no other zones of interest in the samples or on the logs. The well was plugged and abandoned as directed by the Colorado Oil and Gas Conservation Commission on July 10, 1969.

CHRONOLOGICAL HISTORY

Trend No. 1 State Mobil

1969

- June 13 Spud at 3:00 PM. Drilled 12 $\frac{1}{2}$ " hole to 250'
Set 7 joints 8 5/8" surface casing. WOC 11 hrs.
- June 14 Drilled out casing shoe at 11:45 AM
Drilled 7 7/8 hole to 1436'
Bit No. 1 - Security S3S at 250'
Survey $\frac{1}{2}$ at 800'
- June 15 Drilled to 2235'
Bit No. 2 - Security S3T at 1543'
Bit No. 3 - Security S4T at 2023'
Survey 1 at 1543', 1 $\frac{1}{2}$ at 2000'
- June 16 Drilled to 2457'
Stuck in hole while making connection
Spotted crude oil and Pipe Lax
- June 17 Stuck in hole
Spotted crude oil
- June 18 Stuck in hole
Spotted crude oil
- June 19 Loosed pipe
Drilled to 2722'
Bit No. 4 - Security S4T at 2487'
- June 20 Drilled to 3047'
Bit No. 5 - Security S4T at 2753
Bit No. 6 - Security M4N at 2963
- June 21 Drilled to 3320'
Lost circulation at 3132'
Bit No. 7 - Security M4N at 3220'
- June 22 Drilled to 3615'
Bit No. 8 - Security M4N at 3451'
- June 23 Drilled to 3852'
Bit No. 9 - Security M4N at 3638'
Bit No. 10 - Security S88 at 3852'
Survey 3/4 at 3638', 3/4 at 3800'
- June 24 Drilled to 4071'
Stuck pipe on connection

Trend No. 1 State Mobil - Chronological History

1969

June 25-

July 2 Stuck in hole - washing over

July 2 Resumed drilling at 5:00 PM
Drilled to 4125'

July 3 Drilled to 4390'

July 4 Drilled to 4600'
Bit No. 11 - Security S88 at 4545'
Mud Wt 9.6 Vis 44 WL 7.6

July 5 Drilled to 4866'

July 6 Drilled to 5122'

July 7 Drilled to 5247'
Bit No. 12 - Security S88 at 5245'

July 8 Drilled to 5386'
Prep to log
Mud Wt 9.6 Vis 52 WL 5.2

July 9 Ran Schlumberger Induction Electrical Log,
Compensated Formation Density Log, and
Sidewall Neutron Porosity Log
Prep to test

July 10 Ran DST No. 1 5178' - 5188'
Ran plugs
P & A

BIT RECORD

Trend No. 1 State Mobil

| <u>Bit No.</u> | <u>Size</u> | <u>Make</u> | <u>Type</u> | <u>Out</u> | <u>Footage</u> | <u>Hours</u> |
|----------------|-------------|-------------|-------------|------------|----------------|--------------|
| 1 | 7 7/8 | Security | S3S New | 1543 | 1293 | 13 |
| 2 | 7 7/8 | Security | S3T New | 2023 | 480 | 10 1/2 |
| 3 | 7 7/8 | Security | S4T New | 2487 | 464 | 11 1/4 |
| 4 | 7 7/8 | Security | S4T New | 2753 | 266 | 10 |
| 5 | 7 7/8 | Security | S4T New | 2963 | 210 | 9 3/4 |
| 6 | 7 7/8 | Security | M4N New | 3220 | 257 | 15 |
| 7 | 7 7/8 | Security | M4N New | 3451 | 231 | 14 1/2 |
| 8 | 7 7/8 | Security | M4N New | 3638 | 187 | 11 3/4 |
| 9 | 7 7/8 | Security | M4N New | 3852 | 214 | 15 1/2 |
| 10 | 7 7/8 | Security | S88 New | 4545 | 693 | 58 1/4 |
| 11 | 7 7/8 | Security | S88 New | 5145 | 600 | 50 3/4 |
| 12 | 7 7/8 | Security | S88 New | 5386 | 241 | 32 |

DRILLING TIME LOG

Trend No. 1 State Mobil

5' drilling time from 2100' - TD

| | |
|-----------|---|
| 2100-2200 | 3-3-3-3-3-3-3-3-3-3-3-3-4-5-5-5-5-6-6-10 |
| 2200-2300 | 8-7-6-5-8-7-9-10-10-9-7-5-6-6-7-11-13-7-7-8 |
| 2300-2400 | 8-6-8-8-9-12-12-11-9-6-6-8-8-10-10-10-6-6-6-9 |
| 2400-2500 | 14-9-10-14-14-7-9-12-11-10-14-14-11-13-12-14-11-11-26-25 |
| 2500-2600 | 23-21-19-15-15-15-10-9-8-8-9-8-8-8-7-7-6-6-6-4 |
| 2600-2700 | 6-6-5-5-6-7-5-7-7-7-10-8-9-8-8-12-12-7-7-13 |
| 2700-2800 | 13-18-11-11-12-10-12-13-19-10-12-12-11-9-7-9-9-7-9-10 |
| 2800-2900 | 5-6-5-6-8-9-7-9-10-10-10-12-15-14-18-16-10-14-16-16 |
| 2900-3000 | 16-16-20-18-19-18-20-20-22-22-20-20-20-21-27-19-15-15-15-15 |
| 3000-3100 | 15-20-17-14-17-16-16-18-17-14-15-14-15-18-16-16-15-18-17-21 |
| 3100-3200 | 22-22-22-23-18-19-13-13-13-6-7-9-11-12-18-18-16-13-13-13 |
| 3200-3300 | 21-23-22-21-17-16-14-15-16-13-18-18-23-19-14-13-19-18-18-16 |
| 3300-3400 | 14-12-14-18-17-23-23-19-24-23-21-20-20-22-21-23-18-19-20-24 |
| 3400-3500 | 21-18-19-25-25-23-24-23-26-25-21-18-22-25-25-26-21-16-15-12 |
| 3500-3600 | 14-15-15-17-19-15-13-15-16-21-17-14-20-21-19-21-24-21-16-24 |
| 3600-3700 | 20-16-21-23-22-21-25-21-19-15-18-16-17-8-8-13-14-21-20-22 |
| 3700-3800 | 20-15-12-11-17-25-23-26-25-29-29-18-28-23-26-29-29-29-29-29 |
| 3800-3900 | 28-34-39-25-28-13-14-11-12-33-40-34-34-28-20-15-21-29-34-21 |
| 3900-4000 | 19-17-14-14-30-27-19-22-25-15-13-19-18-24-24-17-15-17-7-12 |
| 4000-4100 | 16-20-15-15-15-23-20-25-25-18-16-20-27-20-22-18-x-x-29-28 |
| 4100-4200 | 22-22-23-25-23-19-22-24-22-13-18-27-26-26-22-17-26-18-31-29 |
| 4200-4300 | 30-25-17-14-20-23-36-28-14-10-20-35-31-26-25-26-25-27-25-26 |

Trend No. 1 State Mobil - Drilling Time

| | |
|-----------|---|
| 4300-4400 | 29-26-18-24-24-23-25-22-32-31-24-16-20-18-18-21-27-29-24-25 |
| 4400-4500 | 21-22-25-27-30-34-36-28-31-27-22-28-27-25-29-26-24-28-26-21 |
| 4500-4600 | 23-26-23-25-24-24-25-24-28-33-29-29-31-30-33-31-29-25-26-28 |
| 4600-4700 | 32-19-22-20-22-27-40-27-24-14-23-35-27-29-24-25-23-31-26-18 |
| 4700-4800 | 23-30-35-23-22-20-18-27-23-19-20-15-22-27-17-29-22-32-40-34 |
| 4800-4900 | 31-26-28-29-30-22-21-37-29-20-23-26-26-22-29-18-19-20-24-28 |
| 4900-5000 | 27-26-20-20-26-24-21-26-26-24-27-20-27-26-20-20-20-20-20 |
| 5000-5100 | 20-23-25-25-23-25-25-24-17-16-14-10-20-43-28-27-32-32-30-22 |
| 5100-5200 | 24-37-42-30-31-36-38-38-39-61-60-67-32-28-25-29-28-26-36-32 |
| 5200-5300 | 37-48-31-43-63-59-57-41-55-43-49-54-51-53-45-33-46-46-42-34 |
| 5300-5385 | 33-29-32-31-29-25-25-26-24-24-28-37-26-21-36-34-50 |

WELL SUMMARY

Well Name: Trend #1 State Mobil
Location: NW SW 36, 16S-48W, Cheyenne Co., Colo.
Elevation: GL 4166.4 KB 4176
Contractor: Sterling Drilling Co, Sterling, Kansas
Commenced: June 13, 1969
Completed: July 10, 1969
Casing: 235' (7 joints) of 85/8, 24.7 lb. casing,
landed at 245' KB, cemented with 180 sacks
regular cement plus 3% CaCl. Plug down
9:45 PM, June 13, 1969
Logging: Schlumberger, Fort Morgan, Colo.
Truck No. 3833
Induction Electrical 5386' - 248'
Sidewall Neutron 5386' - 3386'
Compensated Density 5386' - 3386'
Drilling Fluid: Gel Chemical
Cores: None
Drillstem Tests: #1 5178 - 5188 (Spergen)
Open 5", Shut In 30", Open 60", Shut In 60"
Very weak blow ($\frac{1}{2}$ " of water) during initial
open period. Very faint blow (occasional
bubble) during final open period. Recovered
70' of muddy water.
IHP 2612 FHP 2577
IFP 25 FFP 49
ISIP 1038 FSIP 1021
Total Depth: Driller 5386 Schlumberger 5387
Classification: Dry Hole

LOG FORMATION TOPS

Trend No. 1 State Mobil

PERMIAN

| | | |
|--------------|------|---------|
| Blaine | 2189 | (+1987) |
| Stone Corral | 2490 | (+1686) |

PENNSYLVANIAN

| | | |
|----------|------|---------|
| Shawnee | 3644 | (+ 532) |
| Lansing | 3866 | (+ 310) |
| Marmaton | 4277 | (- 101) |
| Cherokee | 4431 | (- 255) |
| Atoka | 4619 | (- 443) |
| Morrow | 4819 | (- 643) |
| Keyes | 5032 | (- 856) |

MISSISSIPPIAN

| | | |
|-------------|------|---------|
| St. Louis | 5074 | (- 898) |
| "X" Marker | 5158 | (- 982) |
| Warsaw | 5236 | (-1060) |
| Osage Shale | 5284 | (-1108) |
| St. Joe | 5314 | (-1138) |
| Kinderhook | 5350 | (-1174) |

ORDOVICIAN

| | | |
|-------------|------|---------|
| Arbuckle | 5367 | (-1191) |
| Total Depth | 5387 | (-1121) |

RECEIVED

JUL 22 1969

SAMPLE DESCRIPTIONS

COLO. OIL & GAS CONS. COMM.

Trend No. 1 State Mobil

Samples to 3650 not lagged

- 2400-2410 Shale, dark grey to grey green, fissile, Shale, brick red, blocky, trace Shale, green, waxey, bentonitic, trace Anhydrite, white, fine crystalline, trace Limestone, white, chalky
- 2410-2420 Shale, dark grey and brick red as above, much anhydrite, white as above, trace Anhydrite, brick red, fine crystalline
- 2420-2430 Shale, dark grey and veri-colored, much anhydrite, white and brick red, fine crystalline
- 2430-2440 As above, more brick red shale
- 2440-2450 As above, much loose sand grains, coarse, (surface ?)
- 2450-2460 Missing
- 2460-2480 Shale, brick red and veri-colored, much anhydrite in red shale, Anhydrite, white and brick red, fine crystalline
- 2480-2490 Shale, brick red, blocky, slightly silty in part, imbedded anhydrite crystals, much Anhydrite, white and brick red, fine crystalline, slight trace Sandstone, light grey, fine grained, sub-rounded, fair sorting, friable, poor porosity, no show
- 2490-2500 Shale, brick red with anhydrite as above, trace Shale, veri-colored, slight trace Sandstone, as above
- 2500-2510 Shale, brick red and veri-colored as above, much Anhydrite, white and clear, fine grained, granular, and coarse crystalline
- 2510-2520 Shale, as above, Anhydrite, 30% as above
- 2520-2530 As above, some anhydrite, brick red
- 2530-2540 Anhydrite, white, buff and clear, granular and medium to coarse crystalline, Shale, 30%, brick red and veri-colored
- 2540-2550 Anhydrite, as above and brick red, Shale, red as above, much Shale, green, waxey, trace Shale, green and red, mottled

Trend No. 1 State Mobil - Sample Descriptions

- 2550-2570 Missing
- 2570-2580 Shale, brick red as above, some Anhydrite, as above
- 2580-2600 Shale, red as above, Anhydrite, buff, white and clear, fine grained and coarse crystalline, much Shale, green, waxy, trace Shale, red and green mottled
- 2600-2620 As above, trace Shale, black, fissile, carbonaceous
- 2620-2630 As above, Shale, black as above 10%
- 2630-2660 As above, trace Shale, chocolate brown, blocky
- 2660-2750 Shale, brick red, blocky, anhydritic, trace Shale, green, waxey, green and red mottled, black, grey, and dark brown, trace Anhydrite, brick red and white, fine granular and coarse crystalline, trace Sandstone, light yellowish-grey, very fine grained, dirty, sub-angular, good sorting, friable, no show, (Samples are contaminated with crude oil used to free stuck pipe)
- 2750-2760 Shale, brick red, as above, minor amounts Shale, veri-colored as above and Anhydrite as above, trace Sandstone, brick red, fine grained, tight
- 2760-2770 As Above, slight increase in Sandstone, as above
- 2770-2780 As above, trace only Sandstone, as above
- 2780-2790 As above, trace Bentonite, light grey
- 2790-2900 Shale, brick red, blocky, anhydritic, varying amounts of Shale, dark grey, sub-fissile, green, and dark brown, and Anhydrite, white and buff, fine granular and coarse crystalline, traces Sandstone, fine grained, light grey to dark grey, dark varieties slightly glauconitic, traces Limestone, light tan, lithographic, traces Bentonite, grey
- 3600-3610 Shale, rust, blocky, Shale, dark grey to black, blocky to sub-fissile, trace Shale, grey green, green, bentonitic, and grey, silty, trace Limestone, tan, fossiliferous, trace Limestone, purple
- 3610-3630 Shale, rust, black, grey and grey green, as above, trace siltstone, grey, grey green and rust, trace Anhydrite, white, coarse crystalline, trace Limestone, purple and chalky
- 3630-3640 As above, trace bentonite, grey

Trend No. 1 State Mobil - Sample Descriptions

Samples lagged from 3650 - TD

- 3640-3650 As above, much Limestone, light grey-tan and buff, very fine crystalline, dense,
- 3650-3660 Shale, various varieties as above, trace Limestone as above, trace Limestone, fossils, trace Limestone, brown
- 3660-3680 Limestone, tan to buff, trace chalky, very fine crystalline, dense, Shale, rust, grey-black, green, trace siltstone, grey and green, trace Anhydrite, coarse crystalline
- 3680-3690 As above, more Limestone, trace Limestone, tan, abundant fossils
- 3690-3700 Limestone, as above, trace Limestone, dark tan and grey and tan mottled
- 3700-3720 Limestone, grey to buff and white, very fine crystalline, dense, much Shale, rust, trace Shale, green, waxey and black, carbonaceous, trace Limestone with abundant fossils
- 3720-3740 As above, trace Shale, purple, calcareous
- 3740-3760 As above, trace Limestone, tan
- 3770-3790 Shale, dark grey and black, fissile to sub-fissile, Shale, rust, blocky and dark rust, silty, Limestone, tan, grey, buff and white (chalky), mostly very fine crystalline, dense, trace fossiliferous and oolitic, trace Sandstone, light grey-green, mushy
- 3790-3800 Shale, dark grey and black as above, Limestone, as above, less Shale, rust
- 3800-3810 Limestone, tan, buff and white (chalky), mostly very fine crystalline, dense, trace fossils, slightly silty in part, much Shale, black as above, trace Sandstone, grey
- 3810-3830 Limestone, as above, trace Limestone, dark brown, much Shale, black as above
- 3830-3840 As above, more Limestone, dark brown
- 3840-3860 Limestone, light tan to buff, mostly very fine crystalline, dense, trace to abundant fossils, trace Limestone, dark brown, much Shale, dark grey and rust, trace Siltstone, light grey

Trend No. 1 State Mobil - Sample Descriptions

- 3860-3880 Sandstone, light grey, very fine grained, calcareous, some Sandstone, grey to grey-green, very fine grained, argillaceous, very calcareous, trace Limestone, very fine crystalline, dense
- 3880-3900 Limestone, buff-light tan, very fine crystalline, some fine to medium crystalline, dense, trace fossils, trace Sandstone, as above
- 3900-3910 Limestone, tan to light tan to buff, trace white, fine to medium crystalline, some with abundant fossils, some evidence of fossil porosity infilled with anhydrite
- 3910-3920 Limestone, as above, trace Limestone, dark tan, very fine crystalline, dense, and Limestone, dark brown, abundant fossils, trace Sandstone, very fine grained, light grey to grey-green, calcareous
- 3920-3940 Limestone, tan to buff, very fine crystalline, dense, trace Limestone, dark tan to brown, medium crystalline, abundant fossils
- 3940-3950 Limestone, as above, and Limestone, tan to dark brown and grey, oolitic
- 3950-3960 Limestone, tan to buff, very fine crystalline, dense, and Limestone, tan to brown, oolitic
- 3960-3970 Limestone, tan and buff, very fine crystalline, dense, trace fine to medium crystalline, and Limestone, dark tan to brown and grey, oolitic, trace poor inter-crystalline porosity, minor amounts Shale, dark grey, rust, dark maroon, and green with scattered sand grains
- 3970-3980 Limestone, as above, more oolitic, trace poor to good inter-crystalline porosity, slight trace fluorescence, no cut, trace Limestone, dark brown, dense, with associated chert fragments
- 3980-4010 As above, becoming less porous and less fossiliferous
- 4010-4030 Limestone, light grey-tan to buff, very fine crystalline dense, trace medium crystalline, Limestone, tan to brown, oolitic, trace Limestone, dark brown, minor amounts Shale, dark grey, rust and maroon, trace Sandstone, light grey, very fine grained, calcareous
- 4030-4040 Limestone, as above, trace Limestone, dark grey-brown, argillaceous
- 4040-4060 Limestone, as above, trace Siltstone, dark grey, calcareous, grades to silty shale, trace Chert, dark grey-brown with white spicules

Trend No. 1 State Mobil - Sample Descriptions

- 4060-4090 Mostly cavings from washover
- 4090-4110 Limestone, buff and light tan, very fine crystalline, dense, trace Shale, green, blocky, calcareous, silty
- 4110-4120 As above, Much Shale, rust and maroon
- 4120-4130 Shale, dark maroon and grey, and Limestone, light grey-tan to buff, very fine crystalline, dense, some sucrosic, trace pinpoint porosity, trace Sandstone, light grey, very fine grained, calcareous
- 4130-4150 Sandstone, light grey, very fine grained, calcareous, and Limestone, light grey-tan to buff, very fine crystalline, mostly dense, trace pinpoint and poor inter-crystalline porosity, trace Shale, black
- 4150-4160 Limestone, as above, some porosity
- 4160-4180 Limestone, dark grey-brown, very fine crystalline, dense, argillaceous, trace Limestone, tan and buff, as above
- 4180-4200 Limestone, tan and buff, very fine to fine to medium crystalline, dense, trace micro and macro fossils, trace Limestone, dark grey-brown, as above
- 4200-4210 Limestone, grey-tan to buff as above, trace dark grey-brown, trace micro fossils, trace Limestone, buff, chalky
- 4210-4220 Limestone, as above, trace Limestone with abundant micro fossils
- 4220-4230 Limestone, grey-tan and buff, as above, trace pinpoint porosity, trace micro fossils
- 4230-4240 Limestone, as above, more porosity, trace Limestone, brown, granular
- 4240-4270 Limestone, dark grey-brown to tan to buff, very fine to medium crystalline, dense, trace Limestone, granular, as above
- 4270-4290 Limestone, as above, generally darker, slight trace Chaetetes Coral?, trace Sandstone, light grey, fine grained, calcareous
- 4290-4300 Limestone, as above, trace Shale, green, silty
- 4300-4320 Limestone, dark grey-tan to buff, very fine crystalline, dense, slight trace pinpoint porosity, trace Shale, dark maroon and grey, trace Sandstone, light grey, very fine grained

Trend No. 1 State Mobil - Sample Descriptions

- 4320-4340 Shale, dark maroon and grey, trace dark rust and black, trace green, waxey, occasionally mottled with maroon, Limestone, dark grey-brown to buff, very fine to medium crystalline, mostly dense, trace good to excellent small vuggy and inter-crystalline porosity, no show, trace dead oil stain
- 4340-4350 Shale and Limestone, as above, trace Sandstone, light grey, fine grained, calcareous
- 4350-4360 Limestone, grey-tan to buff, very fine crystalline, dense, trace fine to medium crystalline with pinpoint and small vuggy porosity
- 4360-4370 Limestone, dark grey-brown to tan to buff, very fine crystalline, trace fine to medium crystalline, slightly to very fossiliferous, trace pinpoint and poor inter-crystalline porosity
- 4370-4380 Limestone, as above, much Chaetetes Coral
- 4380-4400 As above, trace only Chaetetes
- 4400-4410 Limestone, as above, trace Limestone, granular, trace Shale, dark grey
- 4410-4420 Limestone, as above, generally darker, trace Siltstone, interbedded with black shale, trace Chert, dark grey-brown
- 4420-4430 As above, more chert
- 4430-4440 Limestone, becoming darker and more shaley, trace chert, dark grey and brown
- 4440-4450 Limestone, dark brown, much Shale, dark grey to black, carbonaceous, trace Chert, dark brown
- 4450-4460 As above
- 4460-4480 As above, less shale
- 4480-4540 Limestone, dark grey-brown to tan to buff, very fine crystalline, dense, occasionally very fossiliferous, much Shale, dark grey and black, carbonaceous, trace Chert, milky
- 4540-4610 Limestone, grey-tan to buff, very fine crystalline, dense, trace fossils, and Shale, dark grey and black, blocky to sub-fissile, carbonaceous, trace bentonite, grey, sandy, trace chert, dark brown
- 4610-4620 Shale, as above, becoming more splintery, Limestone, as above, 10%

Trend No. 1 State Mobil - Sample Descriptions

- 4620-4630 As above, trace Shale, dark grey-brown
- 4630-4760 Shale, dark grey and black, blocky to sub-fissile, splintery, carbonaceous, and varying amounts of Limestone, grey-brown to tan, very fine to fine crystalline, dense, fossiliferous in part, trace chert, dark brown
- 4760-4820 Limestone, dark grey-brown to tan, very fine crystalline, dense, and Shale, dark grey to black, fissile to sub-fissile, splintery, carbonaceous, trace Shale, dark grey, bituminous, sandy, grades to Sandstone, bituminous and argillaceous, trace Dolomite, dark brown, fine crystalline, argillaceous
- 4820-4850 Limestone, generally darker than above, Shale, as above, traces Dolomite and bituminous Shale - Sandstone, as above
- 4850-4870 Limestone, grey-tan to buff, very fine crystalline, dense, fossiliferous in part, and Shale, dark grey to black, fissile to sub-fissile, carbonaceous, trace Sandstone, dark brown, very fine grained, quartzitic
- 4870-4890 Shale, as above, becoming less carbonaceous, trace Shale, grey-green, waxey, minor amounts Limestone and Sandstone as above, trace Sandstone, grey, fine to medium grained, slightly glauconitic
- 4890-4900 Shale, dark grey as above, trace coal
- 4900-5030 Shale, dark grey to black, fissile to sub-fissile, splintery in part, some carbonaceous, trace Shale, grey-green and grey-brown, trace Limestone, dark grey-brown to tan, very fine crystalline, dense, trace fossils, trace Sandstone, grey, very fine grained, slightly calcareous
- 5030-5050 Shale, as above, Limestone, 10%, Grey-brown to tan, fine to medium crystalline, dense, trace fossils, trace glauconite, contains some coarse quartz grains, trace Sandstone, coarse grained, quartzitic,
- 5050-5060 - Circ. Shale, dark grey to black, sub-fissile, splintery in part, trace only Limestone, very fine crystalline, abundant fossils, trace Dolomite, brown, very fine crystalline, trace fluorescence, no cut
- 5060-5080 Shale, as above, trace Limestone, mostly appears as calcite replacement of fossil fragments, little bedded limestone

Trend No. 1 State Mobil - Sample Descriptions

- 5080-5090 Limestone, tan, very fine crystalline, dense, trace chalky, trace Limestone, medium crystalline, dense, some fossils, trace glauconite
- 5090-5110 Limestone, very fine crystalline to lithographic, some medium crystalline with fossils, trace chalky, Dolomite, light brown, fine crystalline, granular, good vuggy porosity, fluorescence (mineral) no cut, trace Sandstone, grey, fine to medium grained
- 5110-5120 Limestone, as above, trace Shale, grey-green, slight trace only Dolomite, as above
- 5120-5130 Limestone, as above, trace Dolomite, light tan, very fine crystalline, granular, slight fluorescence
- 5130-5140 Dolomite, as above with small vuggy porosity, fair fluorescence, no cut, Limestone, dark tan, very fine crystalline to lithographic, trace Chert, milky
- 5140-5150 Shale, dark grey and black (caves?), Dolomite, as above, trace Limestone, as above, much Chert, milky and grey
- 5150-5160 Limestone, grey-tan to buff, very fine crystalline, dense, some oolitic, trace Dolomite, light brown, granular, faint mineral fluorescence, much Chert, as above
- 5160-5170 Limestone, as above with trace vuggy porosity, trace Dolomite, grey-brown, medium crystalline, oolitic in part
- 5170-5180 Dolomite, grey-brown to tan, mottled, fine to medium crystalline, some vuggy and inter-crystalline porosity, oolitic in part, grades to dolomitic limestone to Limestone, no fluorescence
- 5180-5190 Dolomite, grey-brown, fine to medium crystalline, argillaceous, grades to calcareous dolomite, to dolomitic limestone to limestone, medium crystalline, fossiliferous, trace Dolomite, brown, fine crystalline, granular, poor vuggy and inter-crystalline porosity, fluorescence and oil cut
- 5190-5200 As above, trace Dolomite with fluorescence and oil cut, much Limestone, tan to dark tan, very fine crystalline to lithographic
- 5200-5210 Dolomite, light grey-tan to grey-buff, very fine crystalline, argillaceous, calcareous, trace Dolomite, dark brown, granular, no porosity, trace Limestone, tan to dark tan, very fine crystalline to lithographic, trace chert, grey, trace Shale, grey-green, splintery, slightly dolomitic

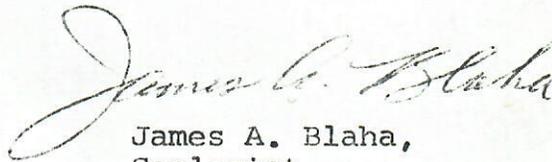
Trend No. 1 State Mobil - Sample Descriptions

- 5210-5230 Generally as above, much caves
- 5230-5240 Dolomite, grey-tan very fine crystalline, dense, argillaceous, much chert, white, grey and dark brown, occasionally mottled, trace Limestone, dark brown, medium crystalline, abundant fossils
- 5240-5250 Dolomite, as above, occasionally mottled with grey, Limestone, as above, trace Shale, grey-green, waxey, trace Shale, black, nodular, trace Chert, dark tan and white
- 5250-5270 Limestone, brown-tan to buff, coarse crystalline, also medium and fine crystalline, trace Dolomite, grey-tan, mottled, much chert, grey and milky, trace Shale, grey-green, waxey, some with glauconite, trace Dolomite, white, granular, sandy, grades to dolomitic sandstone, mineral fluorescence, no cut, much chert, milky and grey
- 5270-5280 Dolomite, as above, with scattered vuggy and inter-crystalline porosity, no show
- 5280-5300 Dolomite, light grey-tan, very fine crystalline, with disseminated glauconite and scattered chert spicules, Dolomite, light brown-tan, as above, trace Limestone, coarse crystalline, brown-tan, much chert, milky and grey, mottled in part, trace fossils, trace disseminated glauconite, trace geodal chert
- 5300-5310 Dolomite, light grey-tan as above, trace Dolomite, brown, fine to medium crystalline, with massive glauconite, much Chert, white, milky and grey, trace geodal chert, trace Limestone, dark brown, very fine crystalline to lithographic
- 5310-5330 Limestone, dark brown, very fine crystalline to lithographic, some Limestone, tan, trace Dolomite, with disseminated glauconite, as above, trace chert, as above
- 5330-5340 Limestone, dark brown as above, trace Limestone, fine to medium crystalline and chalky, some chert, white, milky and tan
- 5340-5350 Limestone, dark brown as above, some Limestone, medium to coarse crystalline, trace Dolomite, light tan, very fine crystalline, argillaceous, scattered glauconite, trace chert as above, trace Sandstone, white, fine to medium grained, very poorly sorted, angular and sub-rounded grains, trace very large grains

Trend No. State Mobil - Sample Descriptions

- 5350-5360 Sandstone, white, fine to medium grained, some very coarse grains, fair to very poorly sorted, slightly dolomitic, trace loose quartz pebbles
- 5360-5370 Sandstone, as above, becoming more buff, Dolomite, brown-tan fine to medium crystalline, dense, trace loose sand grains, large, round, trace Shale, light grey-green, trace large Dolomite Rhombs, clear and opaque
- 5370-5386 Dolomite, brown-tan to tan, argillaceous, fine to medium crystalline, some coarse crystalline, scattered vuggy porosity, some showing rhombic crystal growth in vugs, trace large Dolomite Rhombs, clear and opaque, trace Shale, light green, waxey

Samples deposited at American Stratigraphic Company,
Denver, Colorado


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