ROCHESTER & PITTSBURGH COAL CO
DRILL HOLE #IND-D-1798- -
SCALE: 1"= 10 LOG TYPE:
COORDINATE TYPE: R & P
N/S= 1429.00
E/W= -9189.00 EST.
7 1/2' QUAD: ERNEST
TWP: RAYNE
SURF OWNER: SAM NASTASE
LOGGED BY: WJC
SURF ELEV: 1118.00 TD: 319.00
STRAT INT: 19 MAHONING
TO: 24 LOWER KITTANNING

INDD1720

DARK GY SHALE W/SANDSTONE STREAKS 323 6.90 281.50
DARK GY MASSIVE SANDY SHALE 324 6.00 287.50
LIGHT GRAY GN SHALE 134 6.60 294.10
GY CROSSBEDDED SANDSTONE 541 11.30 305.40
LIGHT GY GN SH & INTERBEDDED SANDSTONE 332 1.70 307.10
DARK GY MASSIVE SANDY SHALE 324 1.60 308.70
GY SANDSTONE W/SHALE STREAKS 543 0.60 309.30
DARK GY SHALE W/SANDSTONE STREAKS 323 0.80 310.10
COMMON BANDED COAL 021 0.60 310.70
DARK GY SHALE W/SANDSTONE STREAKS 323 1.80 312.50
DARK GY MASSIVE SANDY SHALE 324 3.20 315.70
LIGHT GY GN SANDY FIRECLAY 337 9.80 325.50
LIGHT GY GN SH W/SANDSTONE STREAKS 333 20.10 345.60
LIGHT GY GN SH W/SANDSTONE STREAKS 333 11.10 356.70
GY SH PEB CONGLOMERATE 742 2.30 359.00
CRYSTALLIZED QUARTZ PEB CONGLOMERATE 754 0.90 359.90
GY ROCK PEB CONGLOMERATE 745 2.10 362.00
GY SH PEB CONGLOMERATE 742 0.50 362.50
COMMON BANDED COAL 021 0.10 362.60 020
GY SH PEB CONGLOMERATE 742 1.00 363.60
LIGHT GY GN SANDY FIRECLAY 337 19.70 383.30
LIGHT GRAY GN FIRECLAY 137 5.80 389.10
LIGHT GY GN MASSIVE SANDY SHALE 334 3.00 392.10
GY SANDSTONE W/SHALE STREAKS 543 3.90 396.00
LIGHT GY GN SH & INTERBEDDED SANDSTONE 332 1.20 397.20
GY SANDSTONE W/SHALE STREAKS 543 6.00 403.20
LIGHT GY GN MASSIVE SANDY SHALE 334 6.20 409.40
LIGHT GY GN SANDY FIRECLAY 337 2.80 412.20
LIGHT GY GN SH & INTERBEDDED SANDSTONE 332 1.80 414.00
GY SANDSTONE W/SHALE STREAKS 543 1.00 415.00
LIGHT GY GN SH W/SANDSTONE STREAKS 333 2.20 417.20
COAL W/BONE STREAKS 023 0.30 417.50
LIGHT GY GN SH W/SANDSTONE STREAKS 333 1.10 418.60
COAL W/PYRITE STREAKS 029 1.00 419.60 022-U
LIGHT GY GN SANDY FIRECLAY 337 5.20 424.80
GY MASSIVE SANDSTONE 544 9.10 433.90
LIGHT GY GN SH & INTERBEDDED SANDSTONE 332 3.10 437.00
DARK GY SHALE W/SANDSTONE STREAKS 323 6.00 443.00
COMMON BANDED COAL 021 0.71 443.71 022-L
COAL W/BONE STREAKS 023 1.42 445.13 022-L
LIGHT GRAY GN FIRECLAY 137 2.07 447.20
NODULAR FN GRND LS 906 4.20 451.40
DARK GRAY FIRECLAY 127 0.50 451.90
MASSIVE FN GRND LS 904 0.50 452.40
DARK GRAY FIRECLAY 127 1.20 453.60
LIGHT GY GN MASSIVE SANDY SHALE 334 3.50 457.10
LIGHT GY GN SH W/SANDSTONE STREAKS 333 5.00 462.10
GY SANDSTONE W/SHALE STREAKS 543 5.20 467.30
LIGHT GY GN SH & INTERBEDDED SANDSTONE 332 6.20 473.50
DARK GRAY SHALE 124 6.50 480.00
DARK GY MASSIVE SANDY SHALE 324 1.70 481.70
LIGHT GY GN SH W/SANDSTONE STREAKS 333 1.70 483.40
GY SANDSTONE W/SHALE STREAKS 543 11.80 495.20
DARK GY SHALE W/SANDSTONE STREAKS 323 3.80 499.00
COAL W/BONE STREAKS 023 1.00 500.00 023
BONE W/COAL STREAKS 033 0.70 500.70 023
LIGHT GY GN SANDY FIRECLAY 337 3.30 504.00
LIGHT GY GN SH W/SANDSTONE STREAKS 333 6.00 510.00
GY SANDSTONE W/SHALE STREAKS 543 2.30 512.30
LIGHT GY GN SH & INTERBEDDED SANDSTONE 332 3.30 515.60
GY SH PEB CONGLOMERATE 742 1.10 516.70
LIGHT GY GN SH W/SANDSTONE STREAKS 333 2.80 519.50
DARK GRAY SHALE W/COAL STREAKS 123 1.50 521.00
SLUMPED SANDSTONE 015 0.50 521.50
COAL W/BONE STREAKS 023 0.90 522.40
DARK GRAY FIRECLAY 127 1.60 524.00

TOTAL DEPTH = 524.00
FRI, MAR 12, 1993, 9:26 AM

INDD1798

CASING OR SURFACE MATERIAL 001 23.00 23.00
LIGHT GY GN SANDY FIRECLAY 337 8.10 31.10
DARK GRAY SHALE W/COAL STREAKS 123 4.50 35.60
LIGHT GRAY GN FIRECLAY 137 2.50 38.10
DARK GRAY FIRECLAY 127 0.50 38.60
DARK GRAY FIRECLAY 127 1.20 39.80
DARK GRAY SANDY FIRECLAY 327 1.40 41.20
DARK GRAY FIRECLAY 127 1.60 42.80
DARK GRAY SHALE 124 5.20 48.00
DARK GRAY SANDY FIRECLAY 327 2.90 50.90
MASSIVE IRONSTONE 074 0.50 51.40
LIGHT GY GN MASSIVE SANDY SHALE 334 14.70 66.10
MASSIVE IRONSTONE 074 0.50 66.60
DARK GRAY SANDY FIRECLAY 327 3.60 70.20
DARK GRAY SANDY FIRECLAY 327 0.70 70.90
GY MASSIVE SANDSTONE 544 6.10 77.00
GY MASSIVE SANDSTONE 544 5.20 82.20
GY MASSIVE SANDSTONE 544 4.40 86.60
GY MASSIVE SANDSTONE 544 3.90 90.50
GY CROSSBEDDED SANDSTONE 541 1.00 91.50
GY MASSIVE SANDSTONE 544 6.50 98.00
GY SANDSTONE W/SHALE STREAKS 543 0.42 98.42 020
COMMON BANDED COAL 021 2.00 100.42 020
DARK GRAY SHALE 124 0.50 100.92 020
COMMON BANDED COAL 021 4.00 104.92 020
DARK GRAY FIRECLAY 127 1.68 106.60 020
DARK GRAY SANDY FIRECLAY 327 1.70 108.30
DARK GY SHALE W/SANDSTONE STREAKS 323 3.00 111.30
DARK GRAY SHALE 124 0.50 111.80
BLACK FIRECLAY 117 0.80 112.60
MASSIVE FN GRND LS 904 1.30 113.90
DARK GRAY FIRECLAY 127 0.90 114.80
MASSIVE FN GRND LS 904 9.00 123.80
LIGHT GRAY GN FIRECLAY 137 0.70 124.50
MASSIVE FN GRND LS 904 10.60 135.10
DARK GRAY FIRECLAY 127 2.50 137.60
NODULAR FN GRND LS 906 0.50 138.10
LIGHT GRAY GN FIRECLAY 137 0.60 138.70
LAYERED FN GRND LS 902 0.90 139.60
DARK GRAY FIRECLAY 127 2.20 141.80
BONE W/COAL STREAKS 033 0.29 142.09 021
DARK GRAY FIRECLAY 127 0.81 142.90
MASSIVE FN GRND LS 904 1.50 144.40
LIGHT GRAY GN FIRECLAY 137 2.40 146.80
LIGHT GY GN SANDY FIRECLAY 337 1.50 148.30
LIGHT GY GN SH W/SANDSTONE STREAKS 333 4.50 152.80
LIGHT GRAY GN SHALE 134 3.40 156.20
BLACK FIRECLAY 117 0.50 156.70
GY SH PEB CONGLOMERATE 742 0.50 157.20
LIGHT GRAY GN FIRECLAY 137 1.30 158.50
LIGHT GY GN SH W/SANDSTONE STREAKS 333 7.60 166.10
LIGHT GY GN SH W/SANDSTONE STREAKS 333 2.10 168.20
GY SANDSTONE W/SHALE STREAKS 543 5.00 173.20
DARK GY SHALE W/SANDSTONE STREAKS 323 9.40 182.60
COAL W/BONE STREAKS 023 2.83 185.43 022
LIGHT GRAY GN FIRECLAY 137 2.07 187.50
GY MASSIVE SANDSTONE 544 0.50 188.00
LIGHT GY GN MASSIVE SANDY SHALE 334 9.70 197.70
LIGHT GY GN SH W/SANDSTONE STREAKS 333 18.30 216.00
LIGHT GY GN SANDY FIRECLAY 337 5.20 221.20
GY SH PEB CONGLOMERATE 742 0.80 222.00
LIGHT GY GN SANDY FIRECLAY 337 1.60 223.60
GY SANDSTONE W/SHALE STREAKS 543 4.60 228.20
GY MASSIVE SANDSTONE 544 10.20 238.40
LIGHT GY GN SANDY FIRECLAY 337 1.00 239.40
LIGHT GY GN SH W/SANDSTONE STREAKS 333 5.90 245.30
LIGHT GRAY GN SHALE 134 1.90 247.20
COAL W/SHALE LAYERS 027 0.71 247.91 023
COMMON BANDED COAL 021 0.79 248.70 023
LIGHT GRAY GN FIRECLAY 137 2.50 251.20
LIGHT GRAY GN FIRECLAY 137 2.00 253.20
LIGHT GY GN SH W/SANDSTONE STREAKS 333 1.80 255.00
GY ROOTED SANDSTONE 547 0.50 255.50
GY SANDSTONE W/SHALE STREAKS 543 2.90 258.40
GY MASSIVE SANDSTONE 544 1.50 259.90
LIGHT GY GN SH W/SANDSTONE STREAKS 333 5.00 264.90
LIGHT GRAY GN SHALE 134 1.20 266.10
COAL W/BONE STREAKS 023 0.40 266.50
DARK GRAY FIRECLAY 127 2.80 269.30
LIGHT GRAY GN FIRECLAY 137 2.80 272.10
GY MASSIVE SANDSTONE 544 0.90 273.00
LIGHT GRAY GN SHALE 134 1.60 274.60
LIGHT GRAY GN FIRECLAY 137 0.60 275.20

LIGHT GRAY GN FIRECLAY 137 3.80 279.00
GY SANDSTONE W/SHALE STREAKS 543 3.10 282.10
LIGHT GY GN SH W/SANDSTONE STREAKS 333 4.30 286.40
GY SANDSTONE W/SHALE STREAKS 543 17.60 304.00
LIGHT GY GN SH W/SANDSTONE STREAKS 333 6.10 310.10
LIGHT GRAY GN FIRECLAY 137 0.60 310.70
LIGHT GY GN SH W/SANDSTONE STREAKS 333 0.80 311.50
LIGHT GRAY GN FIRECLAY 137 0.50 312.00
COAL W/SHALE LAYERS 027 0.58 312.58 024
LIGHT GRAY GN FIRECLAY 137 1.22 313.80
LIGHT GRAY GN FIRECLAY 137 3.20 317.00
GY SANDSTONE W/SHALE STREAKS 543 1.20 318.20
GY MASSIVE SANDSTONE 544 0.80 319.00

TOTAL DEPTH = 319.00
FRI, MAR 12, 1993, 9:43 AM

ROCHESTER & PITTSBURGH COAL CO
DRILL HOLE #IND-D-1995- -
SCALE: 1"= 10 LOG TYPE:
COORDINATE TYPE: R & P
N/S= 7410.00
E/W= -15823.00 EST.
7 1/2' QUAD: ERNEST
TWP: WASHINGTON
SURF OWNER: BUD DAVIS
LOGGED BY: DST
SURF ELEV: 1370.00 TD: 613.00
STRAT INT: 16 WOODS RUN
TO: 24 LOWER KITTANNING

INDD1995

CASING OR SURFACE MATERIAL 001 24.00 24.00
LIGHT GY GN MASSIVE SANDY SHALE 334 2.80 26.80
RED & GN SANDY CLAYSTONE W/LS NODS 457 5.70 32.50
RED SHALE 164 4.80 37.30
RED & GREEN SHALE 154 3.30 40.60
LIGHT GRAY GN SHALE 134 2.30 42.90
LIGHT GRAY GN FIRECLAY 137 1.10 44.00
LIGHT GY GN SH W/SANDSTONE STREAKS 333 5.20 49.20
DARK GY SHALE & INTERBEDDED SANDSTONE 322 1.10 50.30
LIGHT GY GN MASSIVE SANDY SHALE 334 0.80 51.10
COAL W/PYRITE STREAKS 029 0.50 51.60
DARK GRAY FIRECLAY 127 1.00 52.60
LIGHT GRAY GN FIRECLAY 137 1.60 54.20
LIGHT GY GN SANDY FIRECLAY 337 1.40 55.60
LIGHT GY/GN SANDY FIRECLAY W/LS NODS 437 3.00 58.60
LIGHT GY GN MASSIVE SANDY SHALE 334 7.90 66.50
LIGHT GY GN SH W/SANDSTONE STREAKS 333 2.00 68.50
LIGHT GY GN SH W/SANDSTONE STREAKS 333 0.50 69.00
LIGHT GY GN SH W/SANDSTONE STREAKS 333 1.00 70.00
LIGHT GY GN SH & INTERBEDDED SANDSTONE 332 3.40 73.40
GY SANDSTONE W/SHALE STREAKS 543 10.10 83.50
GY MASSIVE SANDSTONE 544 10.90 94.40
GY SANDSTONE W/SHALE STREAKS 543 8.90 103.30
SLUMPED SANDY SHALE 014 2.00 105.30
DARK GY MASSIVE SANDY SHALE 324 4.80 110.10
DARK GY SHALE W/SANDSTONE STREAKS 323 11.40 121.50
COAL HORIZON 002 0.01 121.51 016
LIGHT GRAY GN FIRECLAY 137 1.59 123.10
LIGHT GY GN MASSIVE SANDY SHALE 334 0.90 124.00
LIGHT GY GN SH & INTERBEDDED SANDSTONE 332 1.70 125.70
GY MASSIVE SANDSTONE 544 0.90 126.60
LIGHT GY GN SH W/SANDSTONE STREAKS 333 7.30 133.90
LIGHT GY GN SH & INTERBEDDED SANDSTONE 332 1.20 135.10
GY SANDSTONE W/SHALE STREAKS 543 2.10 137.20
LIGHT GY GN SH W/SANDSTONE STREAKS 333 1.20 138.40
LIGHT GY GN MASSIVE SANDY SHALE 334 8.90 147.30
LIGHT GY GN MASSIVE SANDY SHALE 334 6.40 153.70
DARK GY MASSIVE SANDY SHALE 324 14.80 168.50
BLACK SANDY SHALE W/FOSSIL SHELLS 319 5.30 173.80 017-F
COAL HORIZON 002 0.01 173.81 017
LIGHT GY GN FIRECLAY W/LS NODS 237 0.59 174.40
LIGHT GRAY GN FIRECLAY 137 1.70 176.10
LIGHT GY GN MASSIVE SANDY SHALE 334 2.50 178.60
LIGHT GY GN SH & INTERBEDDED SANDSTONE 332 7.70 186.30
LIGHT GY GN SH W/SANDSTONE STREAKS 333 0.90 187.20
LIGHT GY GN SH W/SANDSTONE STREAKS 333 1.10 188.30
LIGHT GY GN SH W/SANDSTONE STREAKS 333 17.30 205.60
DARK GY SHALE W/SANDSTONE STREAKS 323 16.20 221.80
DARK GY MASSIVE SANDY SHALE 324 2.30 224.10
BLACK SHALE 114 2.20 226.30
BLACK SHALE W/FOSSIL SHELLS 119 0.60 226.90 018-F
COAL W/BONE STREAKS 023 0.20 227.10
DARK GY SHALE W/SANDSTONE STREAKS 323 5.80 232.90
COAL W/PYRITE STREAKS 029 0.40 233.30 018
DARK GRAY SANDY FIRECLAY 327 0.70 234.00
LIGHT GY GN SANDY FIRECLAY 337 2.50 236.50
LIGHT GY GN SH W/SANDSTONE STREAKS 333 7.00 243.50
GY SANDSTONE W/SHALE STREAKS 543 0.50 244.00
LIGHT GY GN MASSIVE SANDY SHALE 334 1.70 245.70
LIGHT GRAY GN FIRECLAY 137 0.50 246.20
LIGHT GRAY GN SHALE 134 1.10 247.30
DARK GRAY SHALE 124 0.90 248.20
LIGHT GY GN SANDY FIRECLAY 337 1.60 249.80
LIGHT GY GN SANDY FIRECLAY 337 1.80 251.60
LIGHT GY GN SANDY FIRECLAY 337 4.80 256.40
LIGHT GY GN SH & INTERBEDDED SANDSTONE 332 5.00 261.40
LIGHT GY GN MASSIVE SANDY SHALE 334 4.00 265.40
DARK GRAY FIRECLAY 127 1.20 266.60
LIGHT GRAY GN SHALE 134 2.60 269.20
LIGHT GRAY GN FIRECLAY 137 0.50 269.70
COAL HORIZON 002 0.01 269.71 019
DARK GRAY SANDY FIRECLAY 327 4.79 274.50
LIGHT GY GN SH W/SANDSTONE STREAKS 333 2.30 276.80

IMAPs # 10892