

CLIFFS MINERALS, INC.
EASTERN GAS SHALES PROJECT
OHIO WELL #8, NOBLE COUNTY

PHASE I REPORT
FIELD OPERATIONS - MARCH 1980

CLIFFS MINERALS, INC.
EASTERN GAS SHALES PROJECT
OHIO WELL #8, NOBLE COUNTY

PHASE I REPORT

FIELD OPERATIONS - MARCH 1980

WELL DATA

Permit No.: 2255

Issued to: Donahue, Anstey & Morrill
8 Arlington Street
Boston, Massachusetts 02116

Well No.: EGSP Ohio #8 - D, A M #1

Lease: Harold F. and Margaret M. Schockling

County: Noble

Township: Enoch

Section: 18, NW 1/4
960 Feet S.L., & 510 Feet E.L.

Proposed Total Depth: 4,200 Feet

Elevation: Ground Level: 860 Feet
KB = GL + 13 Feet

Drilling Contractor: Ray Resources
Charleston, West Virginia

Oil & Gas Inspector: Dick Shockley
Route #1, 46 W. Main Street
Quaker City, Ohio 43773
Phone: 614/679-3205

Geological Consultants: Barrett & Conrad
New Concord, Ohio

Core Point:

The initial core point of 1,750 feet was reached on March 5, 1980. The second core point of 3,085 feet was reached on March 9.

Formations Cored:

Bedford, Chagrin, Huron, Olentangy, Rhinestreet, Columbus.

Total Depth:

Total cored depth of 4,151 feet was reached on March 22, 1980; 75 feet of rathole were then drilled by conventional means prior to geophysical logging.

General:

Overall, the coring of this well proceeded smoothly. The initial intent of coring continuously from 1,750 to 4,150 feet was revised after the first few runs when a decision was made not to core the total thickness of the Chagrin Shale. Coring was suspended at 2,085 feet and resumed at 3,085 feet. A total of 1,401 feet of core in 25 runs was recovered between March 5 and March 22. During that time plug drilling the 1,000 feet of Chagrin Shale between the cored zones (2,085' to 3,085') took about 24 hours; rig maintenance (mostly on the booster compressor) took about 36 hours. Cliffs' field personnel were rotated at about the midpoint of the operation (March 14).

The gas chromatograph first showed gas encountered while plug-drilling in the Chagrin Shale. Subsequent occurrences in deeper zones were indicated by increases in gas quantity. Numerous gas shows were noted in the core beginning at 3,100 (+) feet. These occurrences were identified during initial core examination and are indicated on the lithologic log as initial gas shows. Natural fractures were encountered between 3,473 and 3,476 feet, between 3,554 and 3,592 feet, and between 3,827 and 3,832 feet.

Gamma radiation from the core was measured with a scintillometer and a graph of the readings is appended to this report. Barret and Conrad were responsible for monitoring the geophysical logging of the well.

CLIFFS MINERALS, INC.
EASTERN GAS SHALES PROJECT

RUN REPORT

DATE: March 4, 1980

WELL NAME: EGSP OH #8

RUN NO. _____

_____ FORMATION

Geolograph Depth: _____

Feet Cored: _____

Feet Recovered: _____

Coring Depth Reached at _____ - _____

Coring Stopped at _____ - _____

Core on Surface at _____ - _____

REMARKS: A three-man team arrived on well site in Caldwell, Noble County, at 4:30 P.M. Casing set at 1,650'; presently at 1,660'. Core point set at 1,750' with first core expected on ground by 12:00 noon tomorrow.

KCl mist will be used for coring.

CLIFFS MINERALS, INC.
EASTERN GAS SHALES PROJECT

RUN REPORT

DATE: March 5, 1980

WELL NAME: EGSP OH #8

RUN NO. _____

_____ FORMATION

Geolograph Depth: _____

Feet Cored: _____

Feet Recovered: _____

Coring Depth Reached at _____ - _____

Coring Stopped at _____ - _____

Core on Surface at _____ - _____

REMARKS: Difficulty with drilling out plug - core barrel was not connected
with drill stem until 9:00 A.M.

32 feet cut by 7:00 P.M. Core now expected at 2:00 A.M.

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EASTERN GAS SHALES PROJECT

RUN REPORT

DATE: March 6, 1980

WELL NAME: EGSP OH #8

RUN NO. 01

Cleveland FORMATION

Geolograph Depth: (1,750' to 1,807.70' - Cliffs')
1,750' to 1,808' - geolograph

Feet Cored: 58'

Feet Recovered: 57.70'

Coring Depth Reached at 12:05 P.M. - 3/5/80

Coring Stopped at 10:55 P.M. - 3/5/80

Core on Surface at 12:55 A.M. - 3/6/80

REMARKS: Drilling rate avg. 7 min./1', except in intervals from 1,750' to 1,757' and 1,777' to 1,784', where the drilling rate avg. 13 min./1' and 9 min./1', respectively, where larger concentrations of siltstone existed. Connection made at 1,785' (25 min.) and 1,790' (20 min.). Gas recorder registering 5 units. Core in good shape, mainly silty mudstone and siltstone, dark greenish gray (5GY 4/1) and greenish gray (5GY 6/1). Few initial gas shows noted at 1,776' to 1,778'. No natural fractures present.

CLIFFS MINERALS, INC.
EASTERN GAS SALES PROJECT

RUN REPORT

DATE: March 6, 1980

WELL NAME: EGSP OH #8

RUN NO. 02

Cleveland FORMATION
Geolograph Depth: (1,807.70' to 1,865.34' - Cliffs')
1,808' to 1,866' - geolograph

Feet Cored: 58'

Feet Recovered: 57.64'

Coring Depth Reached at 2:17 A.M. - 3/6/80

Coring Stopped at 12:00 P.M. - 3/6/80

Core on Surface at 1:50 P.M. - 3/6/80

REMARKS: Coring rate avg. 5 min./1' (range: 4 - 7 min./1'). Connection at 1,822' took 22 min., and 30 min. at 1,854'. Core in good shape and consists mainly of silty mudstone and siltstone, greenish gray (5GY 6/1). Few initial gas shows at 1,858' to 1,859' and 1,863' to 1,864'. No natural fractures present.

CLIFFS MINERALS, INC.
EASTERN GAS SHALES PROJECT

RUN REPORT

DATE: March 7, 1980

WELL NAME: EGSP OH #8

RUN NO. 3

Cleveland FORMATION

Geolograph Depth: (1,865.34' to 1,924.07' - Cliffs')
1,866' to 1,924' - geolograph

Feet Cored: 58'

Feet Recovered: 58.78'

Coring Depth Reached at 3:55 P.M. - 3/6/80

Coring Stopped at 2:03 A.M. - 3/7/80

Core on Surface at 3:55 A.M. - 3/7/80

REMARKS: Coring rate avg. 6 min./1' first 25', increasing to an avg. of 8 - 9 min./1' last 33' of interval (range: 4 - 11 min./1'). Connections made at 1,886' (22 min.) and 1,916' (20 min.). Core in good shape, consisting of silty mudstone and siltstone, dark greenish gray (5GY 4/1) and greenish gray (5GY 6/1). One natural vertical fracture occurs from 1,881' to 1,887'.

CLIFFS MINERALS, INC.
EASTERN GAS SHALES PROJECT

RUN REPORT

DATE: March 7, 1980

WELL NAME: EGSP OH #8

RUN NO. 04

Cleveland-Chagrin FORMATION

Geolograph Depth: (1,924.07' to 1,982.64' - Cliffs')
1,924' to 1,982' - geolograph

Feet Cored: 58'

Feet Recovered: 58.57'

Coring Depth Reached at 6:25 A.M. - 3/7/80

Coring Stopped at 2:54 P.M. - 3/7/80

Core on Surface at 4:25 P.M. - 3/7/80

REMARKS: Coring rate avg. 5 min./1' (range: 4 - 6 min./1'. Connections 1,946' (40 min.) and 1,978' (25 min.)). Cored interval is silty mudstone and siltstone, greenish gray (5GY 6/1) and dark greenish gray (5G 4/1). Several gas shows noted.

Numerous shell fragments spotted throughout all intervals of core.

No mineralized fractures present.

CLIFFS MINERALS, INC.
EASTERN GAS SHALES PROJECT

RUN REPORT

DATE: March 8, 1980

WELL NAME: EGSP OH #8

RUN NO. 05

Cleveland-Chagrin FORMATION

Geolograph Depth: (1,982.64' to 2,028.71' - Cliffs')
1,982' to 2,027' - geolograph

Feet Cored: 45'

Feet Recovered: 46.18'

Coring Depth Reached at 6:45 P.M. - 3/7/80

Coring Stopped at 1:46 A.M. - 3/8/80

Core on Surface at 4:20 A.M. - 3/8/80

REMARKS: Coring rate avg. 7 min./1' (range: 4 - 10 min./1'). Connection at 2,010' took 21 min.

Compressor booster broke down, causing an early hole tripout.

Recovered core in good shape, consisting mainly of silty mudstone and siltstone, dark greenish gray (5G 4/1) and greenish gray (5GY 6/1). Initial gas shows noted from 1,995' to 1,997'. No mineralized fractures present.

All cores thus far have been very clean when initially removed from plastic sleeves, as opposed to mud or soap covered.

CLIFFS MINERALS, INC.
EASTERN GAS SHALES PROJECT

RUN REPORT

DATE: March 8, 1980

WELL NAME: EGSP OH #8

RUN NO. 06

Chagrin FORMATION

Geolograph Depth: (2,028.71' to 2,087.58' - Cliffs')
2,028' to 2,086' - geolograph

Feet Cored: 58'

Feet Recovered: 58.88'

Coring Depth Reached at 7:00 A.M. - 3/8/80

Coring Stopped at 3:10 P.M. - 3/8/80

Core on Surface at 5:40 P.M. - 3/8/80

REMARKS: Coring rate avg. 5 min./1' (range: 4 - 7 min./1'). Connections at 1,940' (55 min.) and 2,072' (35 min.).

Clean core in good shape, consisting mainly of silty mudstone and siltstone, greenish gray (5GY 6/1) and dark greenish gray (5G 4/1).

The decision was made to suspend coring at 2,085', rotary drill 1,000' to 3,085', and resume coring.

Drilling will be with air.

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EASTERN GAS SHALES PROJECT

RUN REPORT

DATE: March 9, 1980

WELL NAME: EGSP OH #8

RUN NO. _____

_____ FORMATION

Geolograph Depth: _____

Feet Cored: _____

Feet Recovered: _____

Coring Depth Reached at _____ - _____

Coring Stopped at _____ - _____

Core on Surface at _____ - _____

REMARKS: Rotary drilling began 11:00 P.M. (3/8/80) and reached a depth of 2,917' by 4:00 P.M. (3/9/80).

At 8:00 P.M., Christensen core hand reported to us that the compressor booster once again broke down. Rotary drilling had been completed and the hole was being "soaped out" at the time. The rig is to be shut down until tomorrow afternoon, whereupon a mechanic is scheduled to check the equipment.

CLIFFS MINERALS, INC.
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RUN REPORT

DATE: March 10, 1980

WELL NAME: EGSP OH #8

RUN NO. _____

_____ FORMATION

Geograph Depth: _____

Feet Cored: _____

Feet Recovered: _____

Coring Depth Reached at _____ - _____

Coring Stopped at _____ - _____

Core on Surface at _____ - _____

REMARKS: It was determined that the blower on the booster was in need of repair.

Repairs completed; drilling commenced.

CLIFFS MINERALS, INC.
EASTERN GAS SHALES PROJECT

RUN REPORT

DATE: March 11, 1980

WELL NAME: EGSP OH #8

RUN NO. 07

Upper Huron FORMATION
(3,085.00' to 3,144.33' - Cliffs')
Geolograph Depth: 3,085' to 3,144' - geolograph

Feet Cored: 59'

Feet Recovered: 59.33

Coring Depth Reached at 6:35 A.M. - 3/11/80

Coring Stopped at 3:25 P.M. - 3/11/80

Core on Surface at 6:30 P.M. - 3/11/80

REMARKS: Clean core, in good shape. Coring rate avg. 5 min./1' (range: 5 - 7 min./1'). Connection at 3,108' (60 min.) and 3,138' (35 min.). Silty mudstone and siltstone core is more fractured than previous runs; much higher level of gas is registered on Baroid's gas recorder. At \approx 3,110', a gradational color change begins from a dusky yellow green (5GY 5/2) to a greenish gray (5GY 6/1), and medium dark gray (N4).

Few initial gas shows.

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RUN REPORT

DATE: March 12, 1980

WELL NAME: EGSP OH #8

RUN NO. 08

Upper Huron FORMATION

Geograph Depth: (3,144.33' to 3,202.00' - Cliffs')
3,144' to 3,202' - geograph

Feet Cored: 58'

Feet Recovered: 57.67'

Coring Depth Reached at 11:02 P.M. - 3/11/80

Coring Stopped at 8:40 A.M. - 3/12/80

Core on Surface at 11:00 A.M. - 3/12/80

REMARKS: Coring rate avg. 7 min./1' (range: 4 - 12 min./1'). Connection at 3,170' took 34 min.

Clean core in good shape. Cored interval consisted mainly of a silty mudstone and siltstone, dark gray (N3) and greenish gray (5GY 6/1).

No mineralized fractures present. No gas shows.

CLIFFS MINERALS, INC.
EASTERN GAS SHALES PROJECT

RUN REPORT

DATE: March 13, 1980

WELL NAME: EGSP OH #8

RUN NO. 09

Upper Huron FORMATION
(3,202.00 ' to 3,260.18' - Cliffs')
Geolograph Depth: 3,202' to 3,260' - geolograph

Feet Cored: 58'

Feet Recovered: 58.18'

Coring Depth Reached at 2:45 P.M. - 3/12/80
Coring Stopped at 9:45 P.M. - 3/12/80
Core on Surface at 1:00 A.M. - 3/13/80

REMARKS: Coring rate avg. 4 - 5 min./1'. Connection made at 3,232' (25 min.).

Cored interval is silty mudstone and siltstone; it exhibits a color gradation from dark gray (N3) and greenish gray (5G 6/1) to medium dark gray (N4) and greenish gray (5GY 6/1) at \pm 3,214'.

Several initial gas shows. No mineralized fractures.

CLIFFS MINERALS, INC.
EASTERN GAS SHALES PROJECT

RUN REPORT

DATE: March 13, 1980

WELL NAME: EGSP OH #8

RUN NO. 10

Upper Huron FORMATION
Geolograph Depth: (3,260.18' to 3,318.57' - Cliffs')
 3,260' to 3,318' - geolograph
Feet Cored: 58'
Feet Recovered: 58.39'
Coring Depth Reached at 4:53 A.M. - 3/13/80
Coring Stopped at 11:50 A.M. - 3/13/80
Core on Surface at 2:10 P.M. - 3/13/80

REMARKS: Coring rate avg. 4 min./1' (range: 3 - 5 min./1'). Connections were made at 3,264' (23 min.) and 3,296' (40 min.).

Gas shows appear throughout interval.

Top 30' of core is silty mudstone, medium dark gray (N4) and greenish gray (5GY 6/1), grading to olive black (5Y 2/1) and greenish black (5GY 2/1).

No mineralized fractures present.

CLIFFS MINERALS, INC.
EASTERN GAS SHALES PROJECT

RUN REPORT

DATE: March 14, 1980

WELL NAME: EGSP OH #8

RUN NO. 11

Upper Huron FORMATION
Geolograph Depth: (3,318.57' to 3,376.23' - Cliffs')
 3,318' to 3,376' - geolograph

Feet Cored: 58'

Feet Recovered: 57.66'

Coring Depth Reached at 5:38 P.M. - 3/13/80

Coring Stopped at 12:27 A.M. - 3/14/80

Core on Surface at 3:30 A.M. - 3/14/80

REMARKS: Coring rate avg. 3 - 4 min./1' (range: 2 - 5 min./1'). Connections made at 3,326' (27 min.) and 3,358' (33 min.).

Core in good shape, consisting mainly of silty mudstone, olive gray (5Y 4/1), olive black (5Y 2/1), and dusky yellow green (5GY 6/1).

No mineralized fractures present.

CLIFFS MINERALS, INC.
EASTERN GAS SHALES PROJECT

RUN REPORT

DATE: March 14, 1980

WELL NAME: EGSP OH #8

RUN NO. 12

Huron FORMATION

Geolograph Depth: 3,376' to 3,434'

Feet Cored: 58'

Feet Recovered: 58.57'

Coring Depth Reached at 7:30 A.M. - 3/14/80

Coring Stopped at 2:50 P.M. - 3/14/80

Core on Surface at 5:32 P.M. - 3/14/80

REMARKS: Mudstone and siltstone (5GY 4/1) dark green gray and olive black (5Y 2/1). Gas shows in upper 1/2. Coring rate ≈5 min./ft.. G.R. ≈60-70 cps. No problems.

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RUN REPORT

DATE: March 15, 1980

WELL NAME: EGSP OH #8

RUN NO. 13

Lower Huron FORMATION

Geolograph Depth: 3,434' to 3,492'

Feet Cored: 58'

Feet Recovered: 58.67'

Coring Depth Reached at 9:22 P.M. - 3/14/80

Coring Stopped at 4:37 A.M. - 3/15/80

Core on Surface at 7:08 A.M. - 3/15/80

REMARKS: Coring rate: 3 - 5 min./ft. Possible contact with Olentangy at 3,477'. Gas shows throughout upper 1/2 of core. Mudstone, olive gray (5Y 4/1), olive black (5Y 2/1), and dusky yellow green (5GY 5/2). No problems.

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EASTERN GAS SHALES PROJECT

RUN REPORT

DATE: March 16, 1980

WELL NAME: EGSP OH #8

RUN NO. 14

Olentangy FORMATION

Geolograph Depth: 3,492' to 3,552'

Feet Cored: 58'

Feet Recovered: 58.71'

Coring Depth Reached at 11:50 A.M. - 3/15/80

Coring Stopped at 9:31 P.M. - 3/15/80

Core on Surface at 12:25 A.M. - 3/16/80

REMARKS: Rig broke down for ~3 hours. Rate: 4 - 5 min./ft. Good core.
No problems. Few gas shows. Geolograph moved up 2 ft.

CLIFFS MINERALS, INC.
EASTERN GAS SHALES PROJECT

RUN REPORT

DATE: March 16, 1980

WELL NAME: EGSP OH #8

RUN NO. 15

Olentangy FORMATION

Geolograph Depth: 3,552' to 3,610'

Feet Cored: 58'

Feet Recovered: 58.76'

Coring Depth Reached at 5:00 A.M. - 3/16/80

Coring Stopped at 12:32 P.M. - 3/16/80

Core on Surface at 3:00 P.M. - 3/16/80

REMARKS: Rate: 3 - 5 min./ft. Mudstone, dark greenish gray (5G 4/1) and olive black (5Y 2/1). Gas shows in the olive black mudstone. Several large vertical fractures. No problems.

CLIFFS MINERALS, INC.
EASTERN GAS SHALES PROJECT

RUN REPORT

DATE: March 17, 1980

WELL NAME: EGSP OH #8

RUN NO. 16

Olentangy FORMATION

Geolograph Depth: 3,610' to 3,668'

Feet Cored: 58'

Feet Recovered: 58.75'

Coring Depth Reached at 7:00 P.M. - 3/16/80

Coring Stopped at 2:05 A.M. - 3/17/80

Core on Surface at 5:10 A.M. - 3/17/80

REMARKS: Mudstone, olive black (5Y 2/1) and dark greenish gray (5G 4/1).
No natural fractures. No problems. Rain.

CLIFFS MINERALS, INC.
EASTERN GAS SHALES PROJECT

RUN REPORT

DATE: March 17, 1980

WELL NAME: EGSP OH #8

RUN NO. 17

Olentangy FORMATION

Geolograph Depth: 3,668' to 3,726'

Feet Cored: 58'

Feet Recovered: 59.18'

Coring Depth Reached at 9:32 A.M. - 3/17/80

Coring Stopped at 5:09 P.M. - 3/17/80

Core on Surface at 8:10 P.M. - 3/17/80

REMARKS: Rate: 4 - 5 min./ft. Mudstone, dark greenish gray (5G 4/1) and olive black (5Y 2/1). No natural fractures. Few gas shows in darker zones. No problems.

CLIFFS MINERALS, INC.
EASTERN GAS SHALES PROJECT

RUN REPORT

DATE: March 18, 1980

WELL NAME: EGSP OH #8

RUN NO. 18

Olentangy FORMATION

Geolograph Depth: 3,726' to 3,786'

Feet Cored: 58'

Feet Recovered: 59.42'

Coring Depth Reached at 12:52 A.M. - 3/18/80

Coring Stopped at 7:50 A.M. - 3/18/80

Core on Surface at 10:15 A.M. - 3/18/80

REMARKS: Rate: 2 - 4 min./ft. Mudstone, dark greenish gray (5G 4/1) and olive black (5Y 2/1). No natural fractures. G.R. ~60-70 cps. Barry Barret here. No problems. Geolograph moved up 2 ft.

CLIFFS MINERALS, INC.
EASTERN GAS SHALES PROJECT

RUN REPORT

DATE: March 19, 1980

WELL NAME: EGSP OH #8

RUN NO. 19

Olentangy FORMATION

Geolograph Depth: 3,786' to 3,846'

Feet Cored: 58'

Feet Recovered: 59.09'

Coring Depth Reached at 3:43 P.M. - 3/18/80

Coring Stopped at 10:25 P.M. - 3/18/80

Core on Surface at 1:30 A.M. - 3/19/80

REMARKS: Rate: 3 - 5 min./ft. Mudstone, dark greenish gray (5G 4/1) and olive black (5Y 2/1). Few gas shows in dark zones. One long natural fracture. No problems. Geolograph moved up 2 ft.

CLIFFS MINERALS, INC.
EASTERN GAS SHALES PROJECT

RUN REPORT

DATE: March 19, 1980

WELL NAME: EGSP OH #8

RUN NO. 20

Olentangy FORMATION

Geolograph Depth: 3,846' to 3,904'

Feet Cored: 58'

Feet Recovered: 59.06'

Coring Depth Reached at 5:59 A.M. - 3/19/80

Coring Stopped at 2:20 P.M. - 3/19/80

Core on Surface at 5:35 P.M. - 3/19/80

REMARKS: Rate: 2 - 4 min./ft. Mudstone, dark greenish gray (5G 4/1) and olive black (5Y 2/1). One large natural fracture (calcite filled). Gamma ray = 55 - 70 cps. No problems.

CLIFFS MINERALS, INC.
EASTERN GAS SHALES PROJECT

RUN REPORT

DATE: March 20, 1980

WELL NAME: EGSP OH #8

RUN NO. 21

Olentangy FORMATION

Geolograph Depth: 3,904' to 3,964'

Feet Cored: 58'

Feet Recovered: 59.64'

Coring Depth Reached at 8:55 P.M. - 3/19/80

Coring Stopped at 3:33 A.M. - 3/20/80

Core on Surface at 6:05 A.M. - 3/20/80

REMARKS: Rate: 3 - 4 min./ft. Mudstone, dark greenish gray (5G 4/1) and olive black (5Y 2/1). Several vertical fractures. G.R. readings 50 - 90 cps. Geolograph moved up 2 ft.

CLIFFS MINERALS, INC.
EASTERN GAS SHALES PROJECT

RUN REPORT

DATE: March 20, 1980

WELL NAME: EGSP OH #8

RUN NO. 22

Geneseo FORMATION

Geolograph Depth: 3,964' to 4,024'

Feet Cored: 58'

Feet Recovered: 58.77'

Coring Depth Reached at 9:30 A.M. - 3/20/80

Coring Stopped at 3:45 P.M. - 3/20/80

Core on Surface at 6:12 P.M. - 3/20/80

REMARKS: Mudstone, dark greenish gray (5G 4/1) and olive black (5Y 2/1).
Gamma Ray = 50 - 60 cps. Several groups of petal fractures, one slickensided zone and one vertical calcite-filled fracture. Contact with Geneseo at \approx 4,004'. Geolograph moved up 2 ft.

CLIFFS MINERALS, INC.
EASTERN GAS SHALES PROJECT

RUN REPORT

DATE: March 21, 1980

WELL NAME: EGSP OH #8

RUN NO. 23

Geneseo Formation

Geolograph Depth: 4,024' to 4,082'

Feet Cored: 58'

Feet Recovered: 58.45'

Coring Depth Reached at 9:22 P.M. - 3/20/80

Coring Stopped at 3:19 A.M. - 3/21/80

Core on Surface at 6:10 A.M. - 3/21/80

REMARKS: Rate: 2 - 4 min./ft. Mudstone, olive black (5Y 2/1) and dark greenish gray (5G 4/1). Two small vertical fractures. Gamma ray = 50 - 70 cps. Gas shows throughout dark zones. No problems.

CLIFFS MINERALS, INC.
EASTERN GAS SHALES PROJECT

RUN REPORT

DATE: March 21, 1980

WELL NAME: EGSP OH #8

RUN NO. 24

Lower Olentangy Formation

Geolograph Depth: 4,082' to 4,140'

Feet Cored: 58'

Feet Recovered: 58.73'

Coring Depth Reached at 9:43 A.M. - 3/21/80

Coring Stopped at 4:00 P.M. - 3/21/80

Core on Surface at 6:37 P.M. - 3/21/80

REMARKS: Rate: 3 - 4 min./ft. Mudstone, olive black (5Y 2/1). Gas shows throughout. No natural fractures. G.R. = 50 - 60 cps. No problems.

CLIFFS MINERALS, INC.
EASTERN GAS SHALES PROJECT

RUN REPORT

DATE: March 22, 1980

WELL NAME: EGSP OH #8

RUN NO. 25

Marcellus &
Onondaga Formation

Geolograph Depth: 4,140' to 4,152'

Feet Cored: 10'

Feet Recovered: 8.81'

Coring Depth Reached at 11:47 P.M. - 3/21/80

Coring Stopped at 1:50 A.M. - 3/22/80

Core on Surface at 5:25 A.M. - 3/22/80

REMARKS: Mudstone, olive black (5Y 2/1); gas shows throughout; no fractures.
Three feet of limestone cut @ rate of 20 min./ft. Geolograph moved up 2 ft.

DEPTH	FRACTURES	WELL NO.	OHIO #8
		RUN NO.	1
		DATE	3/6/80
		LITHOLOGIC DESCRIPTION	
1750		Silty mudstone, dark greenish gray (5G 4/1) and greenish gray (5G 6/1), in thin bands. No pyrite or sedimentary structures, noncalcareous.	
1751		Silty mudstone and siltstone, dark greenish gray (5G 4/1) and greenish gray (5GY 6/1). Iron stained siltstone band at .2', dusky yellow (5Y 6/4), ~2 cm thick. Noncalcareous without pyrite.	
1752		Silty mudstone and siltstone, dark greenish gray (5G 4/1) and greenish gray (5GY 6/1). At .8' turbated zone of silty mudstone and siltstone, also burrowing present. Noncalcareous without pyrite.	
1753		*1,752.29/.57 Mound	
1754		Siltstone, greenish gray (5GY 6/1). At .6' a turbated zone of siltstone and silty mudstone, ~3 cm thick. Noncalcareous without pyrite.	
1755		Silty mudstone and siltstone, greenish gray (5GY 6/1) and dusky yellow (5Y 6/4), iron stain appears occasionally throughout. No pyrite. Noncalcareous.	
1756		Silty mudstone and siltstone, dark greenish gray (5GY 4/1) and greenish gray (5GY 6/1), in irregular thin bands. Noncalcareous without pyrite.	
1757		Silty mudstone and siltstone, dark greenish gray (5GY 4/1) and greenish gray (5GY 6/1). Top 1/2 is highly turbated with numerous near vertical burrows. Occasional dusky yellow (5Y 6/4) stained siltstone. Noncalcareous.	
1758		Silty mudstone, dark greenish gray (5GY 4/1) and dusky yellow (5Y 6/4), in irregular bands. Noncalcareous without pyrite.	
1759		Silty mudstone, dark greenish gray (5GY 4/1) and greenish gray (5GY 6/1), in thin bands. Noncalcareous without pyrite.	
1759		Silty mudstone, greenish gray (5GY 6/1) and dark greenish gray (5GY 4/1), in discreet thin bands. Noncalcareous without pyrite.	

DEPTH	FRACTURES	WELL NO.	OHIO #8	
		RUN NO.	1	x Gas Shows (initial) * Samples Taken
		DATE	3/6/80	LITHOLOGIC DESCRIPTION
1760		Silty mudstone, dark greenish gray (5GY 4/1) and greenish gray (5GY 6/1), in thin bands. No pyrite, noncalcareous. Dusky yellow (5Y 6/4) siltstone zone at .8' exhibiting ripple marks at top interface.		
1761		Silty mudstone, dark greenish gray (5GY 4/1) and greenish gray (5GY 6/1), in gradational bands. Noncalcareous without pyrite.		
1762		Silty mudstone, greenish gray (5GY 6/1) and dark greenish gray (5GY 4/1), in discreet bands. Noncalcareous without pyrite.		
1763		*1,762.28/.60 Mound		
1764		Silty mudstone and siltstone, greenish gray (5GY 6/1) and dark greenish gray (5GY 4/1), these appear as both interfingered and stratified. Noncalcareous without pyrite.		
1765		Silty mudstone and siltstone, greenish gray (5GY 6/1) and dark greenish gray (5GY 4/1). Small amount of burrowing in the top 1/2. Oblique section of a shell fragment at .9'. Noncalcareous without pyrite.		
1766		Silty mudstone and siltstone, dark greenish gray (5GY 4/1) and greenish gray (5GY 6/1). At .5' iron stained siltstone zone, dusky yellow (5Y 6/4) ~2 cm thick. Noncalcareous without pyrite.		
1767		Silty mudstone and siltstone, interfingered dark greenish gray (5GY 4/1) and greenish gray (5GY 6/1). Shell fragments at .3'. Noncalcareous without pyrite.		
1768		Silty mudstone and siltstone, turbated greenish gray (5GY 6/1) and dark greenish gray (5GY 4/1). Iron stained zone at .5' of siltstone. Noncalcareous without pyrite.		
1769		Silty mudstone and siltstone, turbated dark greenish gray (5GY 4/1) and greenish gray (5GY 6/1). At .2' calcareous siltstone ~2 cm thick. Remainder of the interval is noncalcareous without pyrite.		
1769		Silty mudstone and siltstone, dark greenish gray (5GY 4/1) and grayish green (10GY 5/2), mildly turbated. Noncalcareous without pyrite.		

DEPTH	FRACTURES	WELL NO.	OHIO #8		
		RUN NO.	1	x Gas Shows (initial)	* Samples Taken
		DATE	3/6/80	LITHOLOGIC	DESCRIPTION
1770		Silty mudstone and siltstone, mildly turbated dark greenish gray (5GY 4/1) and greenish gray (5GY 6/1). Iron stained siltstone, dusky yellow (5Y 6/4). Noncalcareous without pyrite.			
1771		*1,770.57/.75 Juniata			
1772		Silty mudstone and siltstone, interfingered dark greenish gray (5GY 4/1) and greenish gray (5GY 6/1). Iron stained siltstone, dusky yellow (5Y 6/1) at .6'. Noncalcareous without pyrite.			
1773		Silty mudstone and siltstone, discreet bands of greenish gray (5GY 6/1) and dark greenish gray (5GY 4/1). Noncalcareous without pyrite.			
1773		*1,772.60/.92 Mound			
1774		Silty mudstone and siltstone, thin bands of dark greenish gray (5GY 4/1) and greenish gray (5GY 6/1). Noncalcareous without pyrite.			
1775		Silty mudstone and siltstone, dark greenish gray (5GY 4/1) and greenish gray (5GY 6/1). Siltstone at .3' and .6' ~2 cm thick. Noncalcareous without pyrite.			
1776		Silty mudstone and siltstone, turbated dark greenish gray (5GY 4/1) and greenish gray (5GY 6/1). Middle 1/3 has shell fragments and iron stained siltstone, dusky yellow (5Y 6/4). Noncalcareous without pyrite.			
x 1777		Silty mudstone and siltstone, greenish gray (5GY 6/1) and dark greenish gray (5G 4/1), mildly turbated. Noncalcareous without pyrite.			
x 1778		Silty mudstone and siltstone, dark greenish gray (5GY 4/1) and greenish gray (5GY 6/1), in thin bands. Noncalcareous without pyrite.			
x 1779		Silty mudstone and siltstone, greenish gray (5GY 6/1) and dark greenish gray (5GY 4/1). Burrowing found throughout. Noncalcareous without pyrite.			
1779		Silty mudstone and siltstone, dark greenish gray (5GY 4/1) and greenish gray (5GY 6/1). Top 1/2 is bioturbated, bottom 1/2 is thinly banded. Noncalcareous without pyrite.			

DEPTH	FRACTURES	WELL NO.	OHIO #8	
		RUN NO.	1	x Gas Shows (initial) * Samples Taken
		DATE	3/6/80	LITHOLOGIC DESCRIPTION
1780		Silty mudstone and siltstone, greenish gray (5GY 6/1) and dark greenish gray (5GY 4/1), entire interval is mildly turbated. Noncalcareous without pyrite.		
1781		Silty mudstone and siltstone, turbated greenish gray (5GY 6/1) and dark greenish gray (5GY 4/1). Burrowing in the lower 1/3 of the interval. Noncalcareous without pyrite.		
1782		Silty mudstone and siltstone, highly turbated greenish gray (5GY 6/1) and dark greenish gray (5GY 4/1). Shell fragments at .5' ~3 cm thick. Noncalcareous without pyrite.		
1783		*1,782.63/.88 Mound		
1784		Silty mudstone and siltstone, highly turbated dark greenish gray (5GY 4/1) and greenish gray (5GY 6/1). Noncalcareous without pyrite.		
1785		Silty mudstone and siltstone, highly turbated dark greenish gray (5GY 4/1) and greenish gray (5GY 6/1). At .8' oblique shell fragment. Remainder of the interval is noncalcareous without pyrite.		
1786		Silty mudstone and siltstone, mildly turbated greenish gray (5GY 6/1) and dark greenish gray (5GY 4/1). Noncalcareous without pyrite.		
1787		Silty mudstone and siltstone, turbated dark greenish gray (5GY 4/1) and greenish gray (5GY 6/1). Noncalcareous without pyrite.		
1788		Silty mudstone and siltstone, mildly turbated greenish gray (5GY 6/1) and dark greenish gray (5GY 4/1). Siltstone zone at .8'. Noncalcareous without pyrite.		
1789		Silty mudstone and siltstone, turbated dark greenish gray (5GY 4/1) and greenish gray (5GY 6/1). Noncalcareous without pyrite.		

DEPTH	FRACTURES	WELL NO.	OHIO #8		
		RUN NO.	1	x Gas Shows (initial)	* Samples Taken
		DATE	3/6/80	LITHOLOGIC	DESCRIPTION
1790		Silty mudstone and siltstone, dark greenish gray (5GY 4/1) and greenish gray (5GY 6/1), slightly turbated. Noncalcareous without pyrite.			
1791		Silty mudstone and siltstone, greenish gray (5GY 6/1) and dark greenish gray (5GY 4/1). At .5' siltstone zone. The interval is slightly turbated. Noncalcareous without pyrite.			
1792		Silty mudstone and siltstone, greenish gray (5G 6/1) and light bluish gray (5B 7/1), in thin bands. Noncalcareous without pyrite.			
1793		*1,792.13/.37 Mound			
1794		Silty mudstone and siltstone, in thin bands of greenish gray (5GY 6/1) and dark greenish gray (5GY 4/1). Noncalcareous without pyrite.			
1795		Silty mudstone and siltstone in turbated zones, greenish gray (5GY 6/1) and dark greenish gray (5GY 4/1). Noncalcareous without pyrite.			
1796		Same as above.			
1797		Silty mudstone and siltstone, greenish gray (5GY 6/1) and dark greenish gray (5GY 4/1). Interval is slightly turbated. Noncalcareous without pyrite.			
1798		Silty mudstone and siltstone, dark greenish gray (5GY 4/1) and light gray (N7). Shell fragments at .3' and .7'. Interval is slightly turbated. Noncalcareous without pyrite.			
1799		Silty mudstone and siltstone, dark greenish gray (5GY 4/1) and light gray (N7), mildly turbated. The siltstone exhibits scour features at the interfaces. Noncalcareous without pyrite.			

DEPTH	FRACTURES	WELL NO.	OHIO #8		
		RUN NO.	1	x Gas Shows (initial)	* Samples Taken
		DATE	3/6/80	LITHOLOGIC DESCRIPTION	
1800		Silty mudstone and siltstone, light gray (N7) and greenish gray (5GY 4/1). Siltstone exhibits scour features at the interfaces. Interval is mildly turbated. Noncalcareous without pyrite.			
1801		*1,800.40/.71 USGS			
1802		Silty mudstone and siltstone, greenish gray (5GY 4/1) and light gray (N7), mildly turbated. Noncalcareous without pyrite.			
1803		Same as above.			
1804		*1,802.16/.50 Mound			
1805		Silty mudstone and siltstone, light gray (N7) and greenish gray (5GY 4/1), mildly turbated. Entire interval is noncalcareous without pyrite.			
1806		Same as above.			
1807		Same as above.			
1808		Siltstone and silty mudstone. Top 1/2 is siltstone, light gray (N7) and greenish gray (5GY 4/1), bottom 1/2 is silty mudstone. Noncalcareous without pyrite.			
1809		Silty mudstone and siltstone, light gray (N7) and greenish gray (5GY 4/1), slightly turbated. Noncalcareous without pyrite.			
		Same as above.			
		.7			

DEPTH	FRACTURES	WELL NO.	OHIO #8	
		RUN NO.	2	x Gas Shows (initial) * Samples Taken
		DATE	3/6/80	LITHOLOGIC DESCRIPTION
1807		Silty mudstone and siltstone, greenish gray (5GY 6/1) and dark greenish gray (5GY 4/1), in very thin bands with some interfingering. Noncalcareous without pyrite.		
1808		Silty mudstone and mudstone, greenish gray (5GY 6/1) and dark greenish gray (5GY 4/1). At .5' oblique section of a shell. Noncalcareous without pyrite.		
1809		Silty mudstone and mudstone, dark greenish gray (5GY 4/1) and greenish gray (5GY 6/1), in disseminated thin bands. Noncalcareous without pyrite.		
1810		Silty mudstone and mudstone, greenish gray (5GY 6/1). Siltstone band in middle of interval. Fossil fragment at .2'. Noncalcareous without pyrite.		
1811		Silty mudstone and siltstone, dark greenish gray (5G 4/1) and greenish gray (5G 6/1). Calcareous fossil fragment at .4'. Interval is non-calcareous without pyrite.		
1812		Silty mudstone and mudstone, greenish gray (5GY 6/1), in thin bands. Calcareous fossil fragments occur throughout the interval. Interval is noncalcareous without pyrite.		
1813		*1,812.15/.42 Mound		
1814		Silty mudstone and siltstone in thin bands, greenish gray (5GY 6/1). Siltstone is dusky yellow (5Y 6/4) iron stained. Noncalcareous without pyrite.		
1815		Silty mudstone and siltstone, dark greenish gray (5G 4/1) and greenish gray (5GY 6/1), some iron stain, dusky yellow (5Y 6/4), in thin bands. Noncalcareous without pyrite.		
1816		Silty mudstone and siltstone, dark greenish gray (5GY 4/1), greenish gray (5GY 6/1), and light gray (N7). Iron stained siltstone in the middle of the interval, calcareous. Interval is noncalcareous without pyrite.		
1816		Silty mudstone and siltstone, greenish gray (5GY 6/1) and light gray (N7), in thin bands. Shell fragment at .5'. Noncalcareous without pyrite.		

DEPTH	FRACTURES	WELL NO.	OHIO #8	LITHOLOGIC DESCRIPTION
		RUN NO.	2	
		DATE	3/6/80	
1817		Silty mudstone and siltstone, light gray (N7) and dark greenish gray (5GY 4/1), in thin bands. Noncalcareous, no pyrite or fossils.		
1818		Silty mudstone and siltstone, greenish gray (5GY 6/1) and light gray (N7), in thin bands. At .8' chevron (∩) shaped calcite-filled structure. Noncalcareous without pyrite.		
1819		Silty mudstone and siltstone, greenish gray (5GY 6/1) and light gray (N7), in thin bands. Noncalcareous without pyrite.		
1820		Silty mudstone and siltstone, dark greenish gray (5GY 4/1) and greenish gray (5GY 6/1). Top 1/2 is mildly turbated. Noncalcareous without pyrite.		
1821		*1,820.42/.63 Juniata		
1822		Silty mudstone, dark greenish gray (5GY 4/1) and greenish gray (5GY 6/1), in thin bands. Noncalcareous without pyrite.		
1823		Silty mudstone and siltstone, greenish gray (5GY 6/1) and dark greenish gray (5GY 4/1). At .9' shell fragments. Interval is thinly banded, noncalcareous, without pyrite.		
1823		*1,822.52/.80 Mound		
1824		Silty mudstone and siltstone, dark greenish gray (5GY 4/1) and greenish gray (5GY 6/1), in thin bands. Calcareous fossils at .2' and .9'. Interval is noncalcareous without pyrite.		
1824		Silty mudstone and siltstone, light olive gray (5Y 6/4) and dark greenish gray (5GY 4/1). Top 1/3 is predominately siltstone with scour features. Noncalcareous without pyrite.		
1825		Silty mudstone, grayish green (10GY 5/2), siltstone lens at ± .5'.		
1826		Silty mudstone, grayish green (10GY 5/2); laminations of siltstone, grayish yellow green (5GY 7/2), top 1/2 of interval.		

DEPTH	FRACTURES	WELL NO.	OHIO #8	
		RUN NO.	2	x Gas Shows (initial) * Samples Taken
		DATE	3/6/80	LITHOLOGIC DESCRIPTION
1827		Silty mudstone, grayish green (10GY 5/2), at .9' there is a siltstone band, grayish yellow green (5GY 7/2) that is cross laminated.		
1828				
1829		Silty mudstone, laminated dusky yellow green (5GY 5/2) and grayish green (5GY 7/2) and dark greenish gray (5GY 4/1).		
1830		Same as above.		
1831		Silty mudstone, grayish green (10GY 5/2), grayish yellow green (5GY 7/2), band of light olive gray (5GY 6/1) 2 cm at .4'; calcareous shell concretion at .2'; interval is calcareous.		
1832		Silty mudstone, grayish green (10GY 5/2) and grayish yellow green (5GY 7/7), disturbed thin beds. Noncalcareous.		
1833		Same as above. *1,832.35/.70 Mound		
1834		Silty mudstone, grayish green (10GY 5/2) and grayish yellow green (5GY 7/2), thinly laminated. Band of dusky yellow (5Y 6/4) at .1'; siltstone laminated, light gray (N7) at .9'.		
1835		Silty mudstone, grayish green (10GY 5/2) and grayish yellow green (5GY 7/2) thinly laminated. Pyrite in bottom 1/4.		
1836		Same as above.		
1836		Silty mudstone, grayish green (10GY 5/2) and grayish yellow green (5GY 7/2), thinly laminated. Band of light olive gray (5Y 5/6) at .1'.		

DEPTH	FRACTURES	WELL NO. OHIO #8	RUN NO. 2	x Gas Shows (initial) * Samples Taken	DATE 3/6/80	LITHOLOGIC DESCRIPTION
1837		Silty mudstone, grayish green (10GY 5/2) and grayish yellow green (5GY 7/2), thinly laminated. Noncalcareous without pyrite.				
1838		Silty mudstone and siltstone, dark greenish gray (5GY 4/1) and light gray (N7). Siltstones are planar laminated; a lens of light olive gray (5Y 5/2) at .3'.				
1839		Silty mudstone, dark greenish gray (5GY 4/1), with laminations of siltstone top 1/2 of interval. Noncalcareous.				
1840		Same as above with siltstone laminations throughout the interval.				
1841		Silty mudstone, dark greenish gray (5GY 4/1) and greenish gray (5GY 6/1), disturbed laminations; siltstone laminations top 1/4 of interval.				
1842		Silty mudstone, dark greenish gray (5GY 4/1) and greenish gray (5GY 6/1), bioturbated thin beds, disturbed siltstone laminations throughout, thin siltstone bed at .2' with sole marks.				
1843		*1,842.31/.60 Mound Same as above without thin siltstone band at .2'.				
1844		Silty mudstone, dark greenish gray (5GY 4/1) and greenish gray (5GY 6/1), disturbed thin laminations of siltstone throughout. Band of light olive brown (5Y 5/6) at .9'.				
1845		Silty mudstone, dark greenish gray (5GY 4/1) and greenish gray (5GY 6/1), disturbed thin laminations of siltstone throughout. Noncalcareous.				
1846		Silty mudstone, dark greenish gray (5GY 4/1) and greenish gray (5GY 6/1), disturbed siltstone laminations throughout. A planar laminated siltstone thin bed at .1'.				

DEPTH	FRACTURES	WELL NO.	OHIO #8		
		RUN NO.	2	x Gas Shows (initial)	* Samples Taken
		DATE	3/6/80	LITHOLOGIC DESCRIPTION	
1847		Silty mudstone, dark greenish gray (5GY 4/1) and greenish gray (5GY 6/1), disturbed siltstone laminations throughout, scour features at .2'.			
1848		Same as above with the scour feature at .5'; light olive gray (5Y 5/2) also occurs in the interval.			
1849		Silty mudstone and siltstone, dark greenish gray (5GY 4/1), greenish gray (5GY 6/1), and yellow gray (5Y 7/2), disturbed siltstone bed at .1'; siltstone is calcareous. Laminations throughout with scour features in top 1/2 of interval.			
1850		Same as above with scour features, calcareous siltstone in top 1/2, cross laminated.			
1851		*1,850.48/.76 USGS			
1852		Silty mudstone, dark greenish gray (5GY 4/1), greenish gray (5GY 6/1), and light gray (N7), bioturbated with siltstones throughout.			
1853		Same as above.			
1853		*1,852.35/.68 Mound			
1854		Silty mudstone and siltstones, dark greenish gray (5GY 4/1), greenish gray (5GY 6/1), and light gray (N7), disturbed thin beds and thick laminations; burrowing bottom 1/2 of interval.			
1854		Same as above.			
1855		Silty mudstone and siltstone, light gray (N7) and dark greenish gray (5GY 4/1), zones are mildly turbated. Noncalcareous without pyrite.			
1856		Silty mudstone and siltstone, light gray (N7) and dark greenish gray (5GY 4/1), zones are heavily turbated with numerous burrows in middle of the interval. Scour features at siltstone/silty mudstone interfaces. Noncalcareous without pyrite.			

DEPTH	FRACTURES	WELL NO.	OHIO #8	
		RUN NO.	2	x Gas Shows (initial) * Samples Taken
		DATE	3/6/80	LITHOLOGIC DESCRIPTION
1857		Silty mudstone and siltstone, light gray (N7) and greenish gray (5GY 6/1), turbated with numerous burrows. Siltstone has scour features at the interfaces. Noncalcareous without pyrite.		
1858		Silty mudstone and siltstone, greenish gray (5GY 6/1) and light gray (N7), turbated with burrows. Siltstone has scour features. Noncalcareous without pyrite.		
1859		Silty mudstone and siltstone, light gray (N7) and greenish gray (5GY 6/1). Interval is slightly turbated, scour features associated with the siltstone. Noncalcareous without pyrite.		
1860		Silty mudstone and siltstone, greenish gray (5GY 6/1) and dark greenish gray (5GY 4/1). Interval is mildly turbated. Noncalcareous without pyrite.		
1861		Silty mudstone and siltstone, greenish gray (5GY 6/1) and light olive gray (5GY 6/1). Iron stains on siltstone. Interval is mildly turbated. Noncalcareous without pyrite.		
1862		Silty mudstone and siltstone with increasing silt content, greenish gray (5GY 6/1) and dark greenish gray (5GY 4/1). Heavily turbated; shell fragments at mid 1/3. Noncalcareous without pyrite.		
1863		*1,862.42/.70 Mound		
1864		Siltstone, greenish gray (5GY 6/1) and dark greenish gray (5GY 4/1). Heavily turbated, shell fragments found throughout. Noncalcareous without pyrite.		
1865		Silty mudstone and siltstone, greenish gray (5GY 6/1) and dark greenish gray (5GY 4/1). Turbated with scour features at the interfaces. Noncalcareous without pyrite.		
1866		Silty mudstone and siltstone, dark greenish gray (5GY 4/1) and greenish gray (5GY 6/1). Turbated with scour features. Noncalcareous without pyrite.		
	.34			

DEPTH	FRACTURES	WELL NO.	OHIO #8	x Gas Shows (initial)
		RUN NO.	3	* Samples Taken
		DATE	3/7/80	LITHOLOGIC DESCRIPTION
1865		Silty Mudstone and siltstone, interfingered dark greenish gray (5GY 4/1) and greenish gray (5GY 6/1). Noncalcareous; without pyrite.		
1866		Silty mudstone and siltstone, dark greenish gray (5GY 4/1) and greenish gray (5GY 6/1). Top 1/2 is turbated with burrows. Noncalcareous; without pyrite.		
1867		Silty mudstone and siltstone, greenish gray (5GY 6/1) and dark greenish gray (5GY 4/1) in thin beds. No pyrite; noncalcareous.		
1868		Silty mudstone and siltstone, dark greenish gray (5GY 4/1) and greenish gray (5GY 6/1). Top 1/2 is slightly turbated; iron stained. Siltstone, dusky yellow (5Y 6/4) at top. Noncalcareous; without pyrite.		
1869		Silty mudstone and siltstone, greenish gray (5GY 6/1) and dark greenish gray (5GY 4/1), in thin beds. Top 1/3 is slightly turbated; scour features at the interfaces. Iron stain present. Noncalcareous; without pyrite.		
1870		Silty mudstone and siltstone, dark greenish gray (5GY 4/1) and greenish gray (5GY 6/1) and light gray (N7) in very thin beds. Noncalcareous; without pyrite.		
1871		* 1,870.43/.62 Juniata		
1872		Silty mudstone and siltstone, dark greenish gray (5GY 4/1), greenish gray (5GY 6/1), and dusky yellow (5Y 6/4) iron stain; in thin beds with slight turbation. No pyrite; noncalcareous.		
1873		Silty mudstone and siltstone, dark greenish gray (5GY 4/1), greenish gray (5GY 6/1), and light gray (N7). Siltstone has wavy bedding with scour features. Burrows in top 1/2. Noncalcareous; without pyrite. * 1,872.31/.63 Mound		
1874		Silty mudstone and siltstone, dark greenish gray (5GY 4/1), greenish gray (5GY 6/1), and light gray (N7). Top 1/2 is turbated; bottom 1/2 thin beds. Scour features at .1'. Noncalcareous; without pyrite.		

DEPTH	FRACTURES	WELL NO.	OHIO #8	x Gas Shows (initial)
		RUN NO.	3	* Samples Taken
		DATE	3/7/80	LITHOLOGIC DESCRIPTION
1875		Silty mudstone and siltstone, dark greenish gray (5GY 4/1), greenish gray (5GY 6/1), and light gray (N7). Top 1/2 is turbated, bottom 1/2 in very thin beds. Scour features at .1'. No pyrite; noncalcareous.		
1876		Silty mudstone and siltstone, dark greenish gray (5GY 4/1) and greenish gray (5GY 6/1). Interval is turbated, with burrows in the middle of the interval. Noncalcareous; without pyrite.		
1877		Silty mudstone and siltstone, greenish gray (5GY 6/1) and dark greenish gray (5GY 4/1). Burrows at .1' with siltstones predominately in the bottom of the interval. Turbated, without pyrite; noncalcareous.		
1878		Siltstone and silty mudstone, greenish gray (5G 6/1) and (5GY 6/1) in thin beds. No pyrite; noncalcareous.		
1879		Silty mudstone and siltstone, greenish gray (5GY 6/1) and dark greenish gray (5GY 4/1) in thin beds. Turbated zone at .1', ~3 cm thick. No pyrite; noncalcareous.		
1880		Silty mudstone and mudstone, greenish gray (5GY 6/1) and dark greenish gray (5GY 4/1). Bottom 3/4 is turbated, top 1/4 thin bedded. No pyrite; noncalcareous.		
1881		Silty mudstone and siltstone, greenish gray (5GY 6/1) and dark greenish gray (5GY 4/1). Interval is turbated; scour features at the interfaces. Noncalcareous; without pyrite.		
1882		Silty mudstone and siltstone, greenish gray (5GY 6/1) and dark greenish gray (5GY 4/1), in thin beds. Middle 1/3 is bioturbated, noncalcareous; without pyrite. * 1,882.57/.88 Mound		
1883		Silty mudstone and siltstone, greenish gray (5GY 6/1), dark greenish gray (5GY 4/1), and light gray (N7), in thin beds. Siltstone has wavy bedding. No pyrite; noncalcareous.		
1884		Silty mudstone and siltstone, greenish gray (5GY 6/1), dark greenish gray (5GY 4/1), and medium light gray (N6), in thin beds. Middle 1/3 is turbated siltstone. No pyrite; noncalcareous.		

DEPTH	FRACTURES	WELL NO.	OHIO #8	x Gas Shows (initial)
		RUN NO.	3	* Samples Taken
		DATE	3/7/80	LITHOLOGIC DESCRIPTION
1885		Silty mudstone, greenish gray (5G 6/1) and 5GY 6/1), in thin beds. Shell fragments (calcareous) at .1'. Interval is noncalcareous; without pyrite.		
1886		Silty mudstone and siltstone, greenish gray (5GY 6/1) and dark greenish gray (5GY 4/1), in thin beds. Calcareous shell fragments at .4'. Interval is noncalcareous; without pyrite.		
1887		Silty mudstone and siltstone, greenish gray (5GY 6/1) and dark greenish gray (5GY 4/1), in thin beds. Turbated zones in middle and bottom of interval. No pyrite; noncalcareous.		
1888		Silty mudstone and siltstone, light gray (N7), greenish gray (5GY 6/1), and dark greenish gray (5GY 4/1). Entire interval is turbated with shell fragments at .6'. No pyrite; noncalcareous.		
1889		Silty mudstone and siltstone, greenish gray (5GY 6/1) and dark greenish gray (5GY 4/1). Entire interval is turbated with scour features at at the interfaces. No pyrite; noncalcareous.		
1890		Silty mudstone and siltstone, greenish gray (5GY 6/1) and medium light gray (N6). Interval is turbated with numerous burrows, some shell fragments in bottom 1/4. No pyrite; noncalcareous.		
1891		Silty mudstone and siltstone, dark greenish gray (5GY 4/1), greenish gray (5GY 6/1), and medium light gray (N6). Interval is turbated with some burrows in middle 1/3. Noncalcareous; without pyrite.		
1892		Silty mudstone and siltstone, dark greenish gray (5GY 4/1), greenish gray (5G 6/1), and medium light gray (N6). Entire interval is turbated with burrows at .5'. Noncalcareous; without pyrite. * 1,892.14/.38 Mound		
1893		Silty mudstone and siltstone, greenish gray (5G 6/1), dark greenish gray (5G 4/1), and medium light gray (N6), in thin beds except middle 1/3 which is turbated. Noncalcareous; without pyrite.		
1894		Silty mudstone and siltstone, greenish gray (5GY 6/1), dark greenish gray (5G 4/1). Top and bottom 1/3 is turbated with numerous burrows. Noncalcareous; without pyrite.		

DEPTH	FRACTURES	WELL NO. OHIO #8	x Gas Shows (initial)
		RUN NO. 3	* Samples Taken
		DATE 3/7/80	LITHOLOGIC DESCRIPTION
1895		Silty mudstone and siltstone, greenish gray (5GY 6/1) and dark greenish gray (5G 4/1). Top 2/3 is turbated with numerous burrows, bottom 1/2 is disturbed laminations. Noncalcareous; without pyrite.	
1896		Silty mudstone and siltstone, light gray (N7), greenish gray (5GY 6/1), and dark greenish gray (5GY 4/1). Top 1/3 is siltstone with scour features; bottom 2/3 silty mudstone. Noncalcareous; without pyrite.	
1897		Silty mudstone and siltstone, greenish gray (5GY 6/1), medium light gray (N6), and dark greenish gray (5GY 4/1). Entire interval is turbated. Pyrite filled burrows bottom 1/3. Noncalcareous.	
1898		Silty mudstone and siltstone, dark greenish gray (5G 4/1), medium light gray (N6), and greenish gray (5GY 6/1). Siltstone is cross-laminated, some interfingering and turbated. Noncalcareous; without pyrite.	
1899		x Gas Show	
1899		Silty mudstone and siltstone, dark greenish gray (5G 4/1), greenish gray (5GY 6/1), and medium light gray (N6), in thin beds. Scour features at the interfaces. Noncalcareous; without pyrite.	
1900		Silty mudstone and siltstone, greenish gray (5GY 6/1) and dark greenish gray (5G 4/1). Turbated with shell fragments throughout. Noncalcareous; without pyrite.	
1901		* 1,900.49/.73 USGS	
1901		Silty mudstone and siltstone, greenish gray (5GY 6/1), dark greenish gray (5GY 4/1). Interval is heavily turbated, numerous burrows throughout. Noncalcareous; without pyrite.	
1902		Silty mudstone and siltstone, dark greenish gray (5G 4/1), greenish gray (5GY 6/1). Interval is heavily turbated, numerous burrows throughout. No pyrite; noncalcareous.	
1903		* 1,902.53/.77 Mound	
1903		Silty mudstone and siltstone, greenish gray (5GY 6/1) and dark greenish gray (5G 4/1). Interval is turbated, with shell fragments in the top 2/3. Noncalcareous; without pyrite.	
1904		Silty mudstone and siltstone, dark greenish gray (5G 4/1) and greenish gray (5GY 6/1), in disturbed thin beds. Noncalcareous; without pyrite.	

DEPTH	FRACTURES	WELL NO.	OHIO #8	x Gas Shows (initial)
		RUN NO.	3	* Samples Taken
		DATE	3/7/80	LITHOLOGIC DESCRIPTION
1905		Silty mudstone and siltstone, greenish gray (5G 6/1), dark greenish gray (5GY 4/1). Interval is heavily turbated with burrows in lower 1/4. Light olive gray (5Y 6/1) band at .3'. Noncalcareous; without pyrite.		
1906		Silty mudstone and siltstone, dark greenish gray (5GY 4/1) and greenish gray (5GY 6/1). Top 2/3 is turbated, bottom 1/3 disturbed thin beds. Burrows in top 1/3. Noncalcareous; without pyrite.		
1907		Silty mudstone and siltstone, dark greenish gray (5GY 4/1) and greenish gray (5GY 6/1), in disturbed thin beds. Burrows in top 1/2 at siltstone/mudstone interfaces. Noncalcareous; without pyrite.		
1908		Silty mudstone and siltstone, greenish gray (5GY 6/1) and dark greenish gray (5G 4/1). Interval is mildly turbated with scour features at interfaces. Calcareous siltstone ~3 cm thick at .7'. No pyrite.		
1909		Silty mudstone and siltstone, greenish gray (5GY 6/1) and dark greenish gray (5G 4/1). Entire interval is heavily turbated. Shell fragments at .7'. Noncalcareous; without pyrite.		
x 1910		Silty mudstone and siltstone, greenish gray (5GY 6/1) and dark greenish gray (5G 4/1). Top 1/2 mildly disturbed bedding, bottom 1/2 is heavily turbated with burrows. Noncalcareous; without pyrite.		
x 1911		Silty mudstone and siltstone, light olive gray (5Y 6/1), greenish gray (5GY 6/1). Interval is turbated with scour features at the interfaces. Noncalcareous; without pyrite.		
1912		Silty mudstone and siltstone, greenish gray (5GY 6/1), greenish black (5G 2/1), and dark greenish gray (5GY 4/1). Interval is heavily turbated with burrows throughout. Calcareous siltstone at .9'. No pyrite.		
1913		* 1,912.46/.78 Mound		
1914		Silty mudstone and siltstone, greenish gray (5GY 6/1) and dark greenish gray (5GY 4/1). Interval is turbated with limy mudstone at .3'. Interfingering in middle 1/3. Top 2' is highly calcareous. No pyrite.		
1914		Silty mudstone and siltstone, dark greenish gray (5GY 4/1) and greenish gray (5GY 6/1). Interval is turbated. Shell fragments at .8'. Noncalcareous; without pyrite.		

DEPTH	FRACTURES	WELL NO.	OHIO #8	x Gas Shows (initial)
		RUN NO.	3	* Samples Taken
		DATE	3/7/80	LITHOLOGIC DESCRIPTION
1915		Silty mudstone and siltstone, dark greenish gray (5GY 4/1) and greenish gray (5GY 6/1). Interval is heavily (highly) turbated with shell fragments at .5'. Noncalcareous; without pyrite.		
1916		Silty mudstone and siltstone, dark greenish gray (5GY 4/1) and greenish gray (5GY 6/1). Top 2/3 is highly turbated, bottom 1/3 is thin bedded. At .5', a 2 cm thick biostrome (calcareous); no pyrite.		
1917		Silty mudstone and siltstone, dark greenish gray (5G 4/1) and greenish gray (5GY 6/1). Top 2/3 mildly disturbed bedding, bottom 1/3 turbated with numerous burrows and shell fragments. No pyrite; noncalcareous.		
1918		Silty mudstone and siltstone, greenish gray (5GY 6/1) and dark greenish gray (5G 4/1). Top 1/4 calcareous siltstone zone, bottom 3/4 is highly turbated with shell fragments throughout. No pyrite.		
1919		Silty mudstone and siltstone, greenish gray (5GY 6/1) and dark greenish gray (5G 4/1). Interval is turbated with siltstone zone at .5' ~2 cm thick. Noncalcareous; without pyrite.		
1920		Silty mudstone and siltstone, light olive gray (5Y 6/1), greenish gray (5G 6/1), and dark greenish gray (5GY 4/1). Top 1/2 is highly turbated with numerous burrows and shell fragments. Bottom 1/2 is thinly bedded. Noncalcareous; without pyrite.		
1921		* 1,920.53/.73 Juniata		
1922		Silty mudstone and siltstone, greenish gray (5GY 6/1) and dark greenish gray (5G 4/1). Top and bottom 1/3 thin bedded, middle 1/3 is turbated, scour features at the interfaces. Noncalcareous; without pyrite.		
1923		Silty mudstone and siltstone, greenish gray (5GY 6/1) and dark greenish gray (5G 4/1). Interval is turbated. Scour features at the interfaces. Noncalcareous; without pyrite. * 1,922.21/.52 Mound		
1924		Silty mudstone and siltstone, dark greenish gray (5G 4/1) and greenish gray (5GY 6/1). Interval is mildly turbated; scour features at the interfaces. Noncalcareous; without pyrite.		
		Silty mudstone and siltstone, greenish gray (5GY 6/1). Noncalcareous.		
		.07		

DEPTH	FRACTURES	WELL NO.	OHIO #8	x Gas Shows (initial)
		RUN NO.	4	* Samples Taken
		DATE	3/7/80	LITHOLOGIC DESCRIPTION
1925		Silty mudstone and siltstone, dark greenish gray (5G 4/1) and greenish gray (5G 6/1), in thin beds. Burrowing at .5'. Noncalcareous; without pyrite.		
1926		Silty mudstone and siltstone, greenish gray (5GY 6/1), dark greenish gray (5GY 4/1), and greenish gray (5G 6/1), in disturbed thin beds. Dusky yellow (5Y 6/4) stain on siltstone at .2'. Noncalcareous; without pyrite.		
1927		Silty mudstone and siltstone, dark greenish gray (5GY 4/1) and greenish gray (5G 6/1), in thin beds. Noncalcareous; without pyrite.		
1928		Silty mudstone and siltstone, greenish gray (5GY 6/1) and dark greenish gray (5GY 4/1). Interval is turbated, with shell fragments throughout. Noncalcareous; without pyrite.		
1929		Silty mudstone and siltstone, dark greenish gray (5G 4/1) and greenish gray (5GY 6/1). Top 2/3 is silty mudstone, bottom 1/3 is silt, mildly turbated. Noncalcareous; without pyrite.		
1930		Siltstone, greenish gray (5GY 6/1) and dark greenish gray (5G 4/1). Top 1/3 is greenish gray (5GY 6/1). Gas show at color boundary. Noncalcareous; without pyrite.		
1931		Silty mudstone and siltstone, greenish gray (5GY 6/1) and dark greenish gray (5G 4/1). Top 1/2 is thinly bedded, bottom 1/2 mildly turbated with burrows. No pyrite; noncalcareous.		
1932		Silty mudstone and siltstone, greenish gray (5GY 6/1) and dark greenish gray (5G 4/1), disturbed thin beds. Burrows throughout. Calcareous siltstone band at .9'. * 1,932.61/.90 Mound		
1933		Silty mudstone and siltstone, greenish gray (5GY 6/1) and dark greenish gray (5GY 4/1). Top 1/3 is siltstone (calcareous), bottom 2/3 is disturbed thin beds. Noncalcareous; without pyrite.		
1934		Silty mudstone and siltstone, dark greenish gray (5GY 4/1) and greenish gray (5GY 6/1). The top 1/3 is thinly bedded; the bottom 2/3 is turbated with burrows. Noncalcareous; without pyrite.		

x

DEPTH	FRACTURES	WELL NO.	OHIO #8	
		RUN NO.	4	x Gas Shows (initial) * Samples Taken
		DATE	3/7/80	LITHOLOGIC DESCRIPTION
1935		Silty mudstone and siltstone, greenish gray (5GY 6/1) and dark greenish gray (5G 4/1). Interval is turbated with burrows in bottom 1/2. No pyrite; noncalcareous.		
1936				
1937		Silty mudstone and siltstone, greenish gray (5GY 6/1) and dark greenish gray (5G 4/1). Interval is turbated with burrows throughout. Non-calcareous; without pyrite.		
1938		Silty mudstone and mudstone, greenish gray (5GY 6/1) and dark greenish gray (5G 4/1). Top 1/2 is thinly bedded, bottom 1/2 has disturbed thin beds. Burrows in bottom 1/4. Noncalcareous; without pyrite.		
1939		Silty mudstone and siltstone, dark greenish gray (5G 4/1) and greenish gray (5GY 6/1) in disturbed thin beds. Burrowing and shell fragments noted in the middle of the interval. No pyrite; noncalcareous.		
1940		Silty mudstone, greenish gray (5GY 6/1) and dark greenish gray (5G 4/1). Interval is turbated with shell fragments throughout. Noncalcareous; without pyrite.		
1941		Silty mudstone and siltstone, dark greenish gray (5G 4/1) and greenish gray (5GY 6/1). In disturbed thin beds; noncalcareous; without pyrite.		
1942		Silty mudstone and siltstone, dark greenish gray (5G 4/1) and greenish gray (5GY 6/1). Top 1/2 turbated with burrows, bottom 1/2 is wavy with disturbed thin beds. Noncalcareous; without pyrite.		
1943		Silty mudstone and siltstone, greenish gray (5GY 6/1) and dark greenish gray (5G 4/1). In thin beds, mild calcareous siltstone band at .2'. Remainder is noncalcareous; without pyrite.		
		*1,942.26/.44 Mound		
x 1944		Silty mudstone and siltstone, greenish gray (5GY 6/1), dark greenish gray (5G 4/1), with thin band of olive gray (5Y 6/1). In thin beds, scour features at middle 1/3. Noncalcareous; without pyrite.		
		Silty mudstone and siltstone, greenish gray (5GY 6/1) and dark greenish gray (5G 4/1). Top 1/3 and bottom 1/3 is thinly bedded. Middle 1/3 is turbated. Scour features at the interfaces. Noncalcareous; without pyrite.		

DEPTH	FRACTURES	WELL NO.	OHIO #8	
		RUN NO.	4	x Gas Shows (initial) * Samples Taken
		DATE	3/7/80	LITHOLOGIC DESCRIPTION
1945		Silty mudstone and siltstone, greenish gray (5GY 6/1) and dark greenish gray (5G 4/1), thinly bedded with scour features at the interfaces. Noncalcareous; without pyrite.		
1946		Silty mudstone and siltstone, dark greenish gray (5G 4/1) and greenish gray (5GY 6/1). In disturbed thin beds with scour features at the interfaces. No pyrite; noncalcareous.		
1947		Silty mudstone and siltstone, greenish gray (5GY 6/1) and dark greenish gray (5G 4/1), in thin beds. Noncalcareous; without pyrite.		
1948		Silty mudstone and siltstone, greenish gray (5GY 6/1) and dark greenish gray (5G 4/1), in disturbed thin beds with scour features at the interfaces. No pyrite; noncalcareous.		
1949		Silty mudstone and siltstone, dark greenish gray (5G 4/1) and greenish gray (5GY 6/1). Interval is highly turbated with burrows throughout. Noncalcareous; without pyrite.		
1950		Silty mudstone and siltstone, dark greenish gray (5G 4/1) and greenish gray (5GY 6/1). Mildly turbated bedding, scour features at the interfaces. Siltstone band ~3 cm thick. Noncalcareous; without pyrite.		
1951		Silty mudstone and siltstone, greenish gray (5GY 6/1) and dark greenish gray (5G 4/1) in thin beds. Turbated zone from .2' - .5'. Noncalcareous; without pyrite.		
1952		Silty mudstone and siltstone, light gray (N7) and medium bluish gray (5B 5/1), in thin beds. Noncalcareous; without pyrite.		
1953		*1,952.28/.58 Mound		
		Silty mudstone and siltstone, medium light gray (N6) and medium bluish gray (5B 5/1). Top 2/3 is turbated, bottom 1/3 in thin beds. Noncalcareous; without pyrite.		
1954		Silty mudstone and siltstone, medium bluish gray (5B 5/1) with dusky yellow (5Y 6/4) stain on the siltstone. Top 2/3 is turbated, mildly calcareous siltstone band at .7'.		

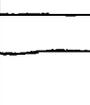
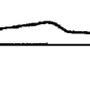
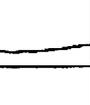
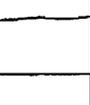
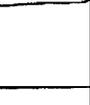
DEPTH	FRACTURES	WELL NO. OHIO #8	x Gas Shows (initial)
		RUN NO. 4	* Samples Taken
		DATE 3/7/80	LITHOLOGIC DESCRIPTION
1955		Silty mudstone and siltstone, medium bluish gray (5B 5/1) and light gray (N7). Top 1/2 is turbated, bottom 1/2 in thin beds. Noncalcareous; without pyrite.	
1956		Silty mudstone and siltstone, medium bluish gray (5B 5/1) and medium light gray (N6). Interval is turbated with scour features at .9'. No pyrite; noncalcareous.	
1957		Silty mudstone and siltstone, medium bluish gray (5B 5/1) and medium light gray (N6). Top 1/2 is turbated, bottom 1/2 thinly bedded. Shell fragments at .5'. Noncalcareous; without pyrite.	
1958		Silty mudstone and siltstone, greenish gray (5G 6/1) and light gray (N9). Top 1/2 is thinly bedded. Bottom 1/2 is turbated with a siltstone at .7'. Noncalcareous; without pyrite.	
x 1959		Silty mudstone and siltstone, greenish gray (5G 6/1) and light gray (N7). Interval is turbated. Noncalcareous; without pyrite. Burrowing throughout.	
x 1960		Silty mudstone and siltstone, greenish gray (5G 6/1) and light gray (N7). Interval is turbated, shell fragments at .9' with burrowing throughout. Noncalcareous; without pyrite.	
x 1961		Silty mudstone and siltstone, light gray (N7) and greenish gray (5G 6/1). In thin beds, burrowing throughout. Scour features at .5'. Noncalcareous; without pyrite.	
x 1962		Silty mudstone and siltstone, light gray (N7) and greenish gray (5G 6/1). Top and bottom 1/3 thinly bedded, middle 1/3 is turbated. Noncalcareous; without pyrite.	
x 1963		* 1,962.54/.81 Mound	
		Silty mudstone and siltstone, light gray (N7) and greenish gray (5G 6/1). Top and bottom 1/3 is thinly bedded, middle 1/3 is turbated. Scour features at the interfaces. No pyrite; noncalcareous.	
1964		Silty mudstone and siltstone, greenish gray (5G 6/1) and light gray (N7). Thinly bedded. Noncalcareous; without pyrite.	

DEPTH	FRACTURES	WELL NO.	OHIO #8	x Gas Shows (initial)
		RUN NO.	4	* Samples Taken
		DATE	3/7/80	LITHOLOGIC DESCRIPTION
1965		Silty mudstone and siltstone, greenish gray (5G 6/1) and light gray (N7), top 1/2 is mildly turbated. Shell fragments throughout. Noncalcareous; without pyrite.		
1966		Silty mudstone and siltstone, light gray (N7) and greenish gray (5G 6/1). Top 1/2 is turbated; shell fragments throughout. No pyrite; noncalcareous.		
1967		Silty mudstone and siltstone, light gray (N7) and greenish gray (5G 6/1). Entire interval is turbated. Shell fragments throughout. Noncalcareous; without pyrite.		
1968		Silty mudstone and siltstone, medium bluish gray (5B 5/1) and greenish gray (5GY 6/1). Interval is turbated with burrowing throughout. Noncalcareous; without pyrite.		
1969		Silty mudstone and siltstone, greenish gray (5GY 6/1) and medium bluish gray (5B 5/1). Top 3/4 in disturbed thin beds, bottom 1/4 mildly turbated. Noncalcareous; without pyrite.		
1970		Silty mudstone and siltstone, greenish gray (5GY 6/1) and dark greenish gray (5G 4/1). Top 1/3 in thin beds, bottom 2/3 is turbated. Noncalcareous; without pyrite. * 1,970.57/.75 Juniata		
1971		Silty mudstone and siltstone, greenish gray (5GY 6/1) and greenish gray (5G 6/1). Interval is turbated. Noncalcareous; without pyrite.		
1972		Silty mudstone and siltstone, greenish gray (5GY 6/1) and greenish gray (5G 6/1). Interval is turbated. No pyrite and noncalcareous. * 1,972.17/.52 Mound		
1973		Silty mudstone and siltstone, greenish grays (5GY 6/1, 5G 6/1). Interval is mildly turbated, shell fragments throughout. Noncalcareous; without pyrite.		
1974		Silty mudstone and siltstone, greenish grays (5GY 6/1, 5G 6/1). Disturbed thin beds, scour features at the interfaces. Burrowing throughout. Noncalcareous; without pyrite.		

DEPTH	FRACTURES	WELL NO.	OHIO #8	x Gas Shows (initial)
		RUN NO.	4	* Samples Taken
		DATE	3/7/80	LITHOLOGIC DESCRIPTION
1975		Silty mudstone and siltstone, greenish gray (5GY 6/1) and medium bluish gray (5B 4/1), in distinct thin beds. Scour features at the interface. Noncalcareous; without pyrite.		
1976		Silty mudstone and siltstone, medium bluish gray (5B 5/1) and greenish gray (5GY 6/1), in disturbed thin beds, shell fragments at .9'. Noncalcareous; no pyrite.		
1977		Silty mudstone and siltstone, greenish gray (5GY 6/1) and medium bluish gray (5B 5/1) in disturbed thin beds. Noncalcareous; without pyrite.		
1978		Silty mudstone and siltstone, medium bluish gray (5B 5/1) and greenish gray (5GY 6/1), in disturbed thin beds. No pyrite; noncalcareous.		
1979		Silty mudstone and siltstone, greenish gray (5GY 6/1) and medium bluish gray (5B 5/1), in disturbed thin beds, burrowing in bottom 1/4. Noncalcareous; without pyrite.		
1980		Silty mudstone and siltstone, greenish gray (5GY 6/1) and dark greenish gray (5GY 4/1). In thin beds, bottom 1/4 is interfingered, burrows in top 1/4. Noncalcareous; without pyrite. * 1,982.13/.44 Mound		
1981		Silty mudstone and siltstone, dark greenish gray (5G 4/1) and greenish gray (5GY 6/1), in thin beds. Noncalcareous; without pyrite.		
1982		Silty mudstone and siltstone, greenish gray (5GY 6/1) and dark greenish gray (5G 4/1) in thin beds. No pyrite; noncalcareous.		
1983	.53			
1984				

DEPTH	FRACTURES	WELL NO.	OHIO #8	x Gas Shows (initial)
		RUN NO.	5	* Samples Taken
		DATE	3/8/80	LITHOLOGIC DESCRIPTION
1982		Silty mudstone, dark greenish gray (5G 4/1). Noncalcareous; without pyrite.		
1983		Silty mudstone, dark greenish gray (5G 4/1) and light olive gray (5Y 6/1), in thin beds. Siltstone bands at .5' and .7'. Scour features at the interface. Noncalcareous; without pyrite.		
1984		Silty mudstone and siltstone, dark greenish gray (5G 4/1) and light olive gray (5Y 6/1), in thin beds. Burrowing at .7' with scour features. Noncalcareous; without pyrite.		
1985		Silty mudstone and siltstone, dark greenish gray (5G 4/1) and light olive gray (5Y 6/1), in thin beds. Scour features at the interfaces. Noncalcareous; without pyrite.		
1986		Silty mudstone and siltstone, light olive gray (5Y 6/1) and dark greenish gray (5G 4/1), in thin beds. Siltstone predominant in bottom 1/2, with scour features. Noncalcareous; without pyrite.		
1987		Silty mudstone and siltstone, dark greenish gray (5G 4/1) and light olive gray (5Y 6/1), in thin beds. Scour features at the interfaces. No pyrite; noncalcareous.		
1988		Silty mudstone and siltstone, light olive gray (5Y 6/1) and dark greenish gray (5G 4/1), in thin beds. Burrowing in the top 1/4; scour features at the interfaces. Noncalcareous; without pyrite.		
1989		Silty mudstone and siltstone, dark greenish gray (5G 4/1) and light olive gray (5Y 6/1), in thin beds. Siltstone band at .8', ~4 cm thick. Noncalcareous; without pyrite.		
1990		Silty mudstone and siltstone, dark greenish gray (5G 4/1) and greenish gray (5GY 6/1), in thin beds. Biostrome at .3', scour features at the interfaces. Noncalcareous; without pyrite.		
1991		Silty mudstone and siltstone, greenish gray (5GY 6/1) and dark greenish gray (5G 4/1), in thin beds. Middle 1/3 is turbated, scour features at .9'. Noncalcareous; without pyrite.		

DEPTH	FRACTURES	WELL NO.	OHIO #8	x Gas Shows (initial)
		RUN NO.	5	* Samples Taken
		DATE	3/8/80	LITHOLOGIC DESCRIPTION
1992		Silty mudstone and siltstone, greenish gray (5GY 6/1) and dark greenish gray (5G 4/1), in thin beds. Calcareous siltstone band at .5', ~3 cm thick. Shell fragments at .9'. Noncalcareous; without pyrite. * 1,992.36/.64 Mound		
1993		Silty mudstone and siltstone, dark greenish gray (5G 4/1) and greenish gray (5GY 6/1) in thin beds. Burrows throughout the interval. Noncalcareous; without pyrite.		
1994		Silty mudstone and siltstone, greenish gray (5 GY 6/1) and dark greenish gray (5G 4/1), in thin beds. Shell fragments in the bottom 2/3. No pyrite; noncalcareous.		
1995		Silty mudstone and siltstone, greenish gray (5GY 6/1) and dark greenish gray (5G 4/1). Top 1/2 is thin bedded. Calcareous siltstone band at .5' ~4 in. thick. Remainder is noncalcareous; without pyrite.		
x 1996		Silty mudstone and siltstone, dark greenish gray (5G 4/1) and greenish gray (5GY 6/1), in thin beds. Burrowing throughout with shell fragments in the top 1/4. Siltstone band at .8' with scour features. Noncalcareous; without pyrite.		
x 1997		Silty mudstone and siltstone, greenish gray (5GY 6/1) and dark greenish gray (5G 4/1), in mildly turbated beds with burrows throughout. Noncalcareous; without pyrite.		
x 1998		Silty mudstone and siltstone, greenish gray (5GY 6/1) and dark greenish gray (5G 4/1). Top and bottom 1/3's are thin beds, middle 1/3 is interfingered. Burrows throughout with scour features at the interfaces. Noncalcareous; without pyrite.		
1999		Silty mudstone and siltstone, greenish gray (5GY 6/1) and dark greenish gray (5G 4/1), in disturbed thin beds. Burrows in bottom 1/4. Noncalcareous; without pyrite.		
2000		Silty mudstone and siltstone, greenish gray (5GY 6/1) and dark greenish gray (5G 4/1) in thin beds. Siltstones are interlaminated. Noncalcareous; without pyrite. * 2,000.49/.76 USGS		
2001		Silty mudstone and siltstone, dark greenish gray (5G 4/1) and greenish gray (5G 4/1), in thin beds. Burrows in bottom 1/4, mildly calcareous siltstone lense at .6', ~2 cm thick. Remainder is noncalcareous; without pyrite.		

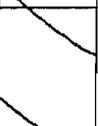
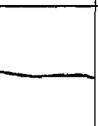
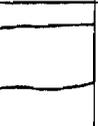
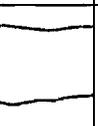
DEPTH	FRACTURES	WELL NO.	OHIO #8	x Gas Shows (initial)
		RUN NO.	5	* Samples Taken
		DATE	3/8/80	LITHOLOGIC DESCRIPTION
2002		Silty mudstone and siltstone, dark greenish gray (5G 4/1), light gray (N7), and light olive gray (5Y 6/1), in disturbed thin beds. Burrows in top 1/2 with shell fragments. Noncalcareous; without pyrite.		
2003		Silty mudstone and siltstone, dark greenish gray (5G 4/1) and light olive gray (5Y 6/1), in disturbed thin beds, burrows throughout. Noncalcareous; without pyrite.		
2004		Silty mudstone and siltstone, dark greenish gray (5G 4/1) greenish gray (5GY 6/1), in thin beds, burrows throughout. Noncalcareous; without pyrite.		
2005		Silty mudstone and siltstone, dark greenish gray (5G 4/1) and greenish gray (5GY 6/1) in mildly turbated thin beds. Burrows throughout. Noncalcareous; without pyrite.		
2006		Silty mudstone and siltstone, dark greenish gray (5G 4/1) and greenish gray (5GY 6/1). Top 1/4 is turbated, .8' cross-laminated siltstone. Noncalcareous; without pyrite.		
2007		Silty mudstone and siltstone, greenish gray (5GY 6/1) and dark greenish gray (5G 4/1). Top 1/2 predominately siltstone, bottom 1/2 slightly turbated silty mudstone. Burrowing throughout. Noncalcareous; without pyrite.		
2008		Silty mudstone and siltstone, greenish gray (5GY 6/1) and dark greenish gray (5G 4/1), in thin beds. Scour features at the interfaces with burrows throughout. Noncalcareous; without pyrite.		
2009		Silty mudstone and siltstone, greenish gray (5GY 6/1) and dark greenish gray (5G 4/1), thinly bedded. Burrowing throughout; scour features at the interfaces. Noncalcareous; without pyrite.		
2010		Silty mudstone and siltstone, greenish gray (5GY 6/1) and dark greenish gray (5G 4/1), thinly bedded with top 1/3 being turbated. Noncalcareous; without pyrite.		
2011		Silty mudstone and siltstone, greenish gray (5GY 6/1) and dark greenish gray (5G 4/1). Bottom 1/4 is turbated with burrows; top 3/4 thinly bedded. Noncalcareous; without pyrite.		

DEPTH	FRACTURES	WELL NO.	OHIO #8	x Gas Shows (initial)
		RUN NO.	5	* Samples Taken
		DATE	3/8/80	LITHOLOGIC DESCRIPTION
2012		Silty mudstone and siltstone, greenish gray (5GY 6/1) and light gray (N7), in disturbed thin beds. Light olive gray (5Y 6/1) band at .5', ~2 cm thick. Burrowing throughout. Noncalcareous; without pyrite.		
2013		Silty mudstone and siltstone, greenish gray (5GY 6/1) and light gray (N7). Turbated throughout, burrowing in bottom 1/3. No pyrite; noncalcareous.		
2014		Silty mudstone and siltstone, light gray (N7) and dark greenish gray (5G 4/1), in disturbed thin beds, scour features at the interfaces. Noncalcareous; without pyrite.		
2015		Silty mudstone and siltstone, dark greenish gray (5GY 4/1) and light gray (N7), in thin beds which are mildly turbated. Scour features at the interfaces. No pyrite; noncalcareous.		
2016		Silty mudstone and siltstone, dark greenish gray (5GY 4/1) and light gray (N7), in thin beds. Middle 1/3 is turbated; scour features at the interfaces. Noncalcareous; without pyrite.		
2017		Silty mudstone and siltstone, light gray (N7) and dark greenish gray (5GY 4/1), thinly bedded with middle 1/3 being turbated. Scour features at the interfaces. No pyrite; noncalcareous.		
2018		Silty mudstone and siltstone, dark greenish gray (5GY 4/1) and light gray (N7). Entire interval is turbated. No pyrite; noncalcareous.		
2019		Silty mudstone and siltstone, light gray (N7) and dark greenish gray (5G 4/1). Interval is turbated. Noncalcareous; without pyrite.		
2020		Silty mudstone and siltstone, dark greenish gray (5G 4/1) and light gray (N7). Interval is turbated. No pyrite; noncalcareous. * 2,020.46/.65 Juniata		
2021		Silty mudstone and siltstone, dark greenish gray (5G 4/1) and light gray (N7). Thinly bedded with middle 1/3 being turbated. Burrows in middle 1/3. Noncalcareous; without pyrite.		

DEPTH.	FRACTURES	<p>WELL NO. OHIO #8</p> <p>RUN NO. 5</p> <p>DATE 3/8/80</p> <p style="text-align: right;">x Gas Shows (initial) * Samples Taken</p> <p style="text-align: right;">LITHOLOGIC DESCRIPTION</p>
2022		Silty mudstone and siltstone, dark greenish gray (5GY 4/1) and light gray (N7). In disturbed thin beds, middle 1/3 is bioturbated. Non-calcareous; without pyrite.
2023		Siltstone and silty mudstone, light gray (N7) and dark greenish gray (5GY 4/1), in disturbed thin beds, burrows in lower 1/4. Noncalcareous; without pyrite.
2024		Silty mudstone and siltstone, dark greenish gray (5GY 4/1) and light gray (N7), disturbed thin beds. Burrows in the top 1/2. Noncalcareous; without pyrite.
2025		Silty mudstone and siltstone, light gray (N7) and dark greenish gray (5GY 4/1). Top 1/2 highly calcareous siltstone, bottom 1/2 disturbed thin beds. Scour features at the interface. No pyrite.
2026		Silty mudstone and siltstone, greenish gray (5GY 6/1) and dark greenish gray (5GY 4/1). Turbated in lower 3/4. Top 1/4 in thin beds. Noncalcareous; with burrows in bottom 1/2.
2027		Silty mudstone and siltstone, greenish gray (5GY 6/1), light gray (N7), and dark greenish gray (5GY 4/1). Disturbed thin beds. Noncalcareous; without pyrite.
2028		Silty mudstone and siltstone, light gray (N7), greenish gray (5GY 6/1), and dark greenish gray (5GY 4/1), in thin beds. No pyrite; noncalcareous.

.70

DEPTH	FRACTURES	WELL NO.	OHIO #8	x Gas Shows (initial)
		RUN NO.	6	* Samples Taken
		DATE	3/8/80	LITHOLOGIC DESCRIPTION
2028		Silty mudstone and siltstone, greenish gray (5GY 6/1) and dark greenish gray (5GY 4/1). Interval is turbated. Noncalcareous; without pyrite.		
2029		Silty mudstone and siltstone, greenish gray (5G 6/1) and dark greenish gray (5G 4/1). In thin beds, siltstone is cross laminated with scour features at the interface. Noncalcareous; without pyrite.		
2030		Silty mudstone and mudstone, greenish gray (5G 6/1) and dark greenish gray (5G 4/1). In thin beds, scour features at the interface. Silty mudstone, light olive gray (5Y 6/1), band ~2 cm thick at .3'. Noncalcareous; without pyrite.		
2031		Silty mudstone and siltstone, greenish gray (5G 6/1) and dark greenish gray (5G 4/1). In thin beds. Noncalcareous; without pyrite. Shell fragments at .2'.		
2032		Silty mudstone and siltstone greenish gray (5G 6/1) and dark greenish gray (5G 4/1), in disturbed thin beds. No pyrite; noncalcareous.		
2033		Silty mudstone and siltstone, greenish gray (5GY 6/1) and dark greenish gray (5G 4/1), in disturbed thin beds. Noncalcareous; without pyrite.		
2034		Silty mudstone and siltstone, greenish gray (5GY 6/1) and dark greenish gray (5G 4/1), in thin beds. No pyrite; noncalcareous.		
2035		Silty mudstone and siltstone, greenish gray (5GY 6/1) and dark greenish gray (5G 4/1). Top 1/2 is turbated, bottom 1/2 thinly bedded. Shell fragments at .5'. Noncalcareous; without pyrite.		
2036		Silty mudstone and siltstone, greenish gray (5GY 6/1) and dark greenish gray (5G 4/1), in thin beds. Siltstone is cross laminated. Noncalcareous; without pyrite.		
2037		Silty mudstone and siltstone, greenish gray (5GY 6/1) and dark greenish gray (5G 4/1), in thin beds. Noncalcareous; without pyrite.		

DEPTH	FRACTURES	WELL NO. OHIO #8	x Gas Shows (initial)
		RUN NO. 6	* Samples Taken
		DATE 3/8/80	LITHOLOGIC DESCRIPTION
2038		Silty mudstone and siltstone, dark greenish gray (5G 4/1) and greenish gray (5GY 6/1). Interval is turbated, calcareous siltstone lens at .5'. Remainder is noncalcareous; without pyrite.	
2039		Silty mudstone and siltstone, dark greenish gray (5G 4/1) and greenish gray (5GY 6/1). Entire interval is turbated with burrows in top 1/2. Noncalcareous; without pyrite.	
2040		Silty mudstone and siltstone, dark greenish gray (5G 4/1) and greenish gray (5GY 6/1), in thin beds. Noncalcareous; without pyrite.	
2041		Silty mudstone and siltstone, greenish grays (5G 5/1, 5G 6/1). Top and bottom 1/3's in thin beds, middle 1/3 is turbated. Scour features at the interfaces. Noncalcareous; without pyrite.	
2042		Silty mudstone and siltstone, greenish grays (5G 5/1, 5G 6/1), in thin beds. Scour features at .4'. Noncalcareous; without pyrite.	
2043		Silty mudstone and siltstone, medium bluish gray (5B 5/1) and medium light gray (N6). Top 1/2 is highly turbated, with bottom 1/2 bedding highly disturbed. Noncalcareous; without pyrite.	
2044		Silty mudstone and siltstone, medium bluish gray (5B 5/1) and medium light gray (N6). Interval is highly turbated.	
2045		Silty mudstone and siltstone, dark greenish gray (5G 4/1) and greenish gray (5GY 6/1). Interval is mildly turbated with distorted thin beds. Noncalcareous; without pyrite.	
2046		Silty mudstone, dark greenish gray (5G 4/1) and greenish gray (5GY 6/1), in thin beds. Siltstone stringer or lamination at .3'. Noncalcareous; without pyrite.	
2047		Silty mudstone and siltstone, dark greenish gray (5G 4/1) and greenish gray (5GY 6/1). Top 1/4 is siltstone, bottom 3/4 thin bedded, silty mudstone, siltstone. Burrows throughout. Noncalcareous; without pyrite.	

DEPTH	FRACTURES	WELL NO. OHIO #8	x Gas Shows (initial)
		RUN NO. 6	* Samples Taken
		DATE 3/8/80	LITHOLOGIC DESCRIPTION
2048		Silty mudstone and siltstone, dark greenish gray (5G 4/1) and greenish gray (5GY 6/1). Entire interval is turbated. Noncalcareous; without pyrite.	
2049		Silty mudstone and siltstone, dark greenish gray (5G 4/1) and greenish gray (5GY 6/1), in thin beds. Top and bottom 1/3 beds are mildly disturbed. Noncalcareous; without pyrite.	
2050		Silty mudstone and siltstone, greenish gray (5GY 6/1) and dark greenish gray (5G 4/1) in disturbed thin beds. Noncalcareous; without pyrite.	
2051		Silty mudstone and siltstone, greenish gray (5GY 6/1) and dark greenish gray (5G 4/1). Interval is highly turbated. Siltstone lens at .5'. Burrows throughout. Noncalcareous; without pyrite.	
2052		Silty mudstone and siltstone, greenish gray (5GY 6/1) and dark greenish gray (5G 4/1). Interval is highly turbated. Siltstone band at .5'. Noncalcareous; without pyrite.	
2053		Silty mudstone and siltstone, greenish gray (5GY 6/1) and dark greenish gray (5G 4/1), in thin beds. Scour features at the interface. Noncalcareous; without pyrite.	
2054		Silty mudstone and siltstone, greenish gray (5GY 6/1) and dark greenish gray (5G 4/1) in thin beds. Top 1/4 mildly disturbed. Noncalcareous; without pyrite.	
2055		Silty mudstone and siltstone, greenish gray (5GY 6/1) and dark greenish gray (5G 4/1) in thin beds. Noncalcareous; without pyrite.	
2056		Silty mudstone and siltstone, greenish gray (5GY 6/1) and dark greenish gray (5G 4/1). Interval is turbated, burrows are throughout. Noncalcareous; without pyrite.	
2057		Silty mudstone and siltstone, greenish gray (5GY 6/1) and dark greenish gray (5G 4/1). Interval is turbated, noncalcareous; without pyrite.	

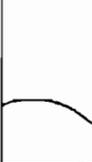
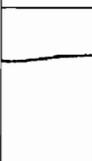
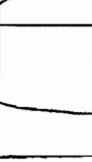
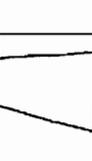
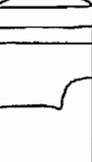
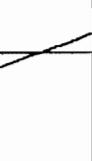
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DEPTH	FRACTURES	WELL NO.	OHIO #8	x Gas Shows (initial)
		RUN NO.	6	* Samples Taken
		DATE	3/8/80	LITHOLOGIC DESCRIPTION
2058		Silty mudstone and siltstone, greenish gray (5GY 6/1) and dark greenish gray (5G 4/1), in thin beds. Scour features at the interfaces. Non-calcareous; without pyrite.		
2059		Silty mudstone and siltstone, dark greenish gray (5G 4/1) and greenish gray (5GY 6/1), in disturbed thin beds. Scour features at the interfaces. No pyrite; noncalcareous.		
2060		Silty mudstone and siltstone, dark greenish gray (5G 4/1) and greenish gray (5GY 6/1). Interval is turbated, noncalcareous; without pyrite.		
x 2061		Silty mudstone and siltstone, dark greenish gray (5GY 4/1) and greenish gray (5GY 6/1), in mildly disturbed thin beds. No pyrite; noncalcareous.		
x 2062		Silty mudstone and siltstone, greenish gray (5GY 6/1) and dark greenish gray (5GY 4/1), interval is turbated. Noncalcareous; without pyrite.		
2063		Silty mudstone and siltstone, dark greenish gray (5GY 4/1) and greenish gray (5G 6/1). In thin beds, scour features at the interfaces. Non-calcareous; without pyrite.		
2064		Silty mudstone and siltstone, greenish gray (5GY 6/1) and dark greenish gray (5G 4/1), in thin disturbed beds. Noncalcareous; without pyrite.		
2065		Silty mudstone and siltstone, greenish gray (5GY 6/1) and dark greenish gray (5GY 4/1), thinly bedded with middle 1/3 turbated, burrows in top 1/2. Noncalcareous; without pyrite.		
2066		Silty mudstone and siltstone, greenish gray (5G 6/1) and dark greenish gray (5GY 4/1). Interval is high turbated. Noncalcareous; without pyrite.		
2067		Silty mudstone and siltstone, dark greenish gray (5GY 4/1) and greenish gray (5GY 6/1), in thin beds with bottom 1/4 mildly disturbed. Burrows in bottom 1/2. Noncalcareous; without pyrite.		

DEPTH	FRACTURES	WELL NO.	OHIO #8	x Gas Shows (initial)
		RUN NO.	6	* Samples Taken
		DATE	3/8/80	LITHOLOGIC DESCRIPTION
2068		Silty mudstone and siltstone, dark greenish gray (5GY 4/1) and greenish gray (5GY 6/1), interval is slightly turbated. Scour features at the interfaces, shell fragments in the bottom 1/2. Noncalcareous; without pyrite.		
2069		Silty mudstone and siltstone, light gray (N7), dark greenish gray (5GY 4/1), and greenish gray (5G 6/1). Top 1/3 in thin beds, bottom 2/3 is turbated, burrows in the bottom 1/4. Noncalcareous; without pyrite.		
2070		Silty mudstone and siltstone, greenish gray (5G 6/1) and dark greenish gray (5GY 4/1). Entire interval is turbated. Burrows in bottom 1/2. Noncalcareous; without pyrite. * 2,070.66/.83 Juniata		
2071		Silty mudstone and siltstone, greenish gray (5G 6/1), light gray (N7), and dark greenish gray (5GY 4/1), in disturbed thin beds. Scour features in the interfaces. Noncalcareous; without pyrite.		
2072		Silty mudstone and siltstone, dark greenish gray (5GY 4/1) and light gray (N7). Top 1/4 in thin beds, bottom 3/4 mildly turbated. Noncalcareous; without pyrite.		
2073		Silty mudstone and siltstone, dark greenish gray (5GY 4/1) and greenish gray (5GY 6/1), in thin beds. Scour features in the interfaces.		
2074		Silty mudstone and siltstone, greenish gray (5GY 6/1) and dark greenish gray (5G 4/1) in disturbed thin beds, burrow features throughout. Scour features at the interfaces. Noncalcareous; without pyrite.		
2075		Silty mudstone and siltstone, dark greenish gray (5G 4/1), light gray (N7), and greenish gray (5G 6/1). Interval is turbated, burrows in lower 1/4. Noncalcareous; without pyrite.		
2076		Silty mudstone and siltstone, light gray (N7), dark greenish gray (5GY 4/1), and greenish gray (5G 4/1). Top 1/4 in thin beds, bottom 3/4 is highly turbated. Noncalcareous; without pyrite.		
2077		Silty mudstone and siltstone, light gray (N7), greenish gray (5G 6/1), and dark greenish gray (5G 4/1), in thin beds. Scour features at the interface. Noncalcareous; without pyrite.		

DEPTH	FRACTURES	WELL NO.	OHIO #8	x Gas Shows (initial)
		RUN NO.	6	* Samples Taken
		DATE	3/8/80	LITHOLOGIC DESCRIPTION
2078		Silty mudstone and siltstone, light gray (N7) and dark greenish gray (5G 4/1). Entire interval is turbated. Noncalcareous; without pyrite.		
2079		Silty mudstone and siltstone, dark greenish gray (5G 4/1) and greenish gray (5GY 6/1), in disturbed thin beds. Scour features at the interface. Noncalcareous; without pyrite.		
2080		Silty mudstone and siltstone, dark greenish gray (5G 4/1) and greenish gray (5GY 6/1). Top 1/4 is turbated with burrows; bottom 3/4 in thin beds. Scour features at the interface. Noncalcareous; without pyrite.		
2081		Silty mudstone and siltstone, greenish gray (5G 6/1) and dark greenish gray (5GY 4/1) in disturbed thin beds. Burrows in lower 1/4. Noncalcareous; without pyrite.		
2082		Silty mudstone and siltstone, light gray (N7) and dark greenish gray (5G 4/1), thinly bedded. Noncalcareous; without pyrite.		
2083		Silty mudstone and siltstone, light gray (N7), dark greenish gray (5GY 4/1), and greenish gray (5G 6/1). Top and bottom 1/3's thin bedded, middle 1/3 is mildly turbated, scour features at the interface. Noncalcareous; without pyrite.		
2084		Silty mudstone and siltstone, greenish gray (5GY 6/1) and dark greenish gray (5GY 4/1), in thin beds. Burrows in bottom 1/2. Scour features at the interfaces. Noncalcareous; without pyrite.		
2085		Silty mudstone and siltstone, dark greenish gray (5G 4/1) and greenish gray (5GY 6/1), in disturbed thin beds. Noncalcareous; without pyrite.		
2086		Silty mudstone and siltstone, dark greenish gray (5G 4/1) and light gray (N7). Entire interval is turbated. Burrows in middle 1/3. Noncalcareous; without pyrite.		
2087		Silty mudstone and siltstone, dark greenish gray (5GY 4/1) and light gray (N7), turbated. Noncalcareous; without pyrite.		

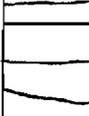
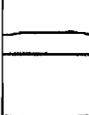
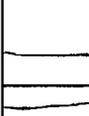
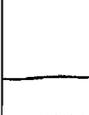
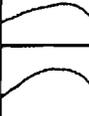
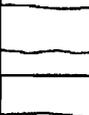
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DEPTH	FRACTURES	WELL NO.	OHIO #8	x Gas Shows (initial)
		RUN NO.	7	* Samples Taken
		DATE	3/11/80	LITHOLOGIC DESCRIPTION
3085		Silty mudstone and siltstone, dusky yellow (5Y 6/4) and grayish olive (10Y 4/2), thinly bedded. Light olive brown (5Y 5/0) band at .2'. Calcareous siltstone zone at .8'. Disseminated pyrite at .9'.		
3086		Silty mudstone and siltstone, dusky yellow green (5GY 5/2). Calcareous siltstone band at .3', ~3 cm thick. Noncalcareous; without pyrite.		
3087		Silty mudstone, dusky yellow green (5GY 5/2), massive. Noncalcareous; without pyrite. * 3,087.36/.60 Mound		
3088		Silty mudstone, dusky yellow green (5GY 5/2), with a band of dark gray (N3) at ~.8'. Noncalcareous; without pyrite.		
3089		Silty mudstone and siltstone, dusky yellow green (5GY 5/2). Siltstone band of pale olive (10Y 6/2) at .5'. Ellipsoidal concretion at .6', light olive brown (5Y 5/6). Noncalcareous; without pyrite.		
3090		Silty mudstone and siltstone, dusky yellow green (5GY 5/2). Band of dark gray (N2) at ~.2'. Dusky yellow (5Y 6/4) siltstone band at .6', ~2 cm thick. Turbated band at .9'. Noncalcareous; without pyrite.		
3091		Silty mudstone, dusky yellow green (5GY 5/2) and dark gray (N2), in thin beds. Siltstone laminations, greenish gray (5GY 6/1) in middle 1/3. Noncalcareous; without pyrite.		
3092		Silty mudstone and siltstone, dusky yellow green (5GY 5/2), dark gray (N3), and dark greenish gray (5GY 4/1), in thin beds. Siltstones have scour features in top and bottom 1/4. Noncalcareous; without pyrite.		
3093		Silty mudstone and siltstone, grayish green (10GY 5/2), dark gray (N3), and light olive gray (5Y 6/1), thinly bedded. Thin noncalcareous siltstone band at .3', ~2 cm thick. No pyrite.		
3094		Silty mudstone and siltstone, grayish green (10GY 5/2), dark green (5GY 4/1), thinly bedded. Siltstone is in the top and bottom 1/4's. Noncalcareous; without pyrite.		

DEPTH	FRACTURES	WELL NO.	OHIO #8	x Gas Shows (initial)
		RUN NO.	7	* Samples Taken
		DATE	3/11/80	LITHOLOGIC DESCRIPTION
3095		Silty mudstone and siltstone, dusky yellow green (5GY 5/2), dark gray (N3), in thin beds. Light olive gray (5Y 6/1) band at .2'. Siltstones are cross laminated. Noncalcareous; without pyrite.		
3096		Silty mudstone and siltstone, dusky yellow green (5GY 5/2), dark gray (N3) and greenish gray (5GY 6/1), in thin beds. Singular siltstone band, cross laminated, noncalcareous at .5'. No pyrite.		
3097		Silty mudstone, greenish gray (10GY 5/2), massive, noncalcareous; without pyrite.		
3098		Silty mudstone, greenish gray (10GY 5/2) and dark gray (N3), in thin beds, noncalcareous; without pyrite.		
3099		Silty mudstone and siltstone, greenish gray (10GY 5/2), dark gray (N3), and dusky yellow (5Y 6/4), in thin beds. Siltstone is cross laminated and mildly calcareous.		
3100		Silty mudstone, greenish gray (10GY 5/2), dark gray (N3), and greenish gray (5GY 6/2), thinly bedded. Turbated zone at .2', ~2 cm thick. Noncalcareous; without pyrite. * 3,100.40/.50 Juniata		
3101		Silty mudstone, greenish gray (10GY 5/2), dark gray (N3), and light olive brown (5Y 5/6) in thin beds. Light olive brown (5Y 5/6) band at .2' and .8'. Noncalcareous; without pyrite.		
3102		Silty mudstone and siltstone, greenish gray (10GY 5/2), dark gray (N3), and light olive brown (5Y 5/6), thinly bedded. Siltstone predominant in top 1/3. Light olive brown (5Y 5/6) siltstone lense in middle. Turbated zone at bottom 1/4.		
3103		Silty mudstone and siltstone, greenish gray (10GY 5/2), dark gray (N3), thinly bedded. Siltstone at .2' band. Light olive brown (5Y 5/0) band at .2'. Noncalcareous; without pyrite.		
3104		Silty mudstone and siltstone, greenish gray (10GY 5/2), dark gray (N3), and medium dark gray (N4), thinly bedded, scour features at the interfaces. Noncalcareous; without pyrite.		

DEPTH	FRACTURES	WELL NO. OHIO #8	x Gas Shows (initial)
		RUN NO. 7	* Samples Taken
		DATE 3/11/80	LITHOLOGIC DESCRIPTION
3105		Silty mudstone and siltstone, dusky yellow green (5GY 5/2), dark gray (N3), and greenish gray (5GY 6/1), thinly bedded. Turbated zone from .5' - .7', siltstone laminations at .9'. Noncalcareous; without pyrite.	
3106		Silty mudstone and siltstone, dusky yellow green (5GY 5/2), dark green (N3), and greenish gray (5GY 6/1), in thin beds. Lens of silty mudstone at .3', dark green (N3). Siltstone bands and laminations in bottom 1/2. Noncalcareous.	
3107		Silty mudstone, dark gray (N3) and dusky yellow green (5GY 5/2), thinly bedded. Noncalcareous; without pyrite.	
3108		Silty mudstone and siltstone, dark gray (N3) and greenish gray (5GY 6/1), in thin beds. Pyrite laminations at .5'. Laminated bed of silty mudstone at .6', ~3 cm thick. Noncalcareous.	
3109		Silty mudstone and siltstone, dark gray (N3), greenish gray (5GY 6/1), in thin beds. Siltstone bed from .5' - .8'. Cross laminations and planar laminations. Noncalcareous; without pyrite.	
3110		Silty mudstone and siltstone, medium dark gray (N4) and greenish gray (5GY 6/1), in thin beds. Siltstone nodules at .6'. Noncalcareous; without pyrite.	
3111		Silty mudstone and siltstone, medium dark gray (N4) and greenish gray (5GY 6/1), in thin beds. Siltstone at .6' with scour features at the interface. Noncalcareous; without pyrite.	
3112		Silty mudstone and siltstone, medium dark gray (N4) and greenish gray (5GY 6/1), in thin beds. Siltstone laminations in the top 1/2. Disseminated pyrite and nodules in bottom 1/2. Noncalcareous.	
3113		Silty mudstone and siltstone, medium dark gray (N4) and greenish gray (5GY 6/1), in thin beds. Noncalcareous; without pyrite.	
3114		Silty mudstone and siltstone, greenish gray (5GY 6/1), dusky yellow (5Y 6/4), and dark gray (N3). Siltstone beds at .2' and .6' with scour features, cross laminations. Calcareous; no pyrite.	

DEPTH	FRACTURES	WELL NO. OHIO #8	x Gas Shows (initial)
		RUN NO. 7	* Samples Taken
		DATE 3/11/80	LITHOLOGIC DESCRIPTION
3115		Silty mudstone, greenish gray (5GY 6/1) and dark gray (N3), thinly bedded. Dark gray (N3) beds are laminated with greenish gray (5GY 6/1). Noncalcareous; without pyrite.	
3116		Silty mudstone and siltstone, greenish gray (5GY 6/1) and dark gray (N3), thinly bedded. Disseminated pyrite and convolute nodules in bottom 1/2. Noncalcareous.	
3117		Silty mudstone and siltstone, greenish gray (5GY 6/1), yellowish gray (5Y 8/1), and dark gray (N3), thinly bedded and laminated. Siltstone concretions, light olive gray (5Y 6/1), ellipsoidal at .9' with wavy pyrite at its base.	
3118		Silty mudstone and siltstone, greenish gray (5GY 6/1), yellowish gray (5Y 8/1), and dark gray (N3), thinly bedded and laminated. Pyrite throughout. Noncalcareous.	
3119		Silty mudstone and siltstone, greenish gray (5GY 6/1), yellowish gray (5Y 8/1), and dark gray (N3), thinly bedded. Pyrite/mudstone concretions at .5', and disseminated pyrite laminations at .8'. Noncalcareous.	
3120		Silty mudstone and siltstone, greenish gray (5GY 6/1) and dark gray (N3), thinly bedded. Laminated siltstone/mudstone band at .8'. Noncalcareous; no pyrite. * 3,120.35/.66 USGS	
3121		Silty mudstone and siltstone, greenish gray (5GY 6/1) and dark gray (N3). Siltstone band, cross laminations with scour features at .9'. In thin beds. Noncalcareous; without pyrite.	
3122		Silty mudstone and siltstone, greenish gray (5GY 6/1) and dark gray (N3), thinly bedded. Pale olive (10Y 6/2) band at .9'. Siltstone with scour features at .2', cross lamination at .9'.	
3123		Silty mudstone and siltstone, greenish gray (5GY 6/1) and dark gray (N3). Middle 1/3 is burrowed. Siltstones are cross laminated and noncalcareous. Pyrite lamination at .7'.	
3124		Silty mudstone, greenish gray (5GY 6/1) and medium dark gray (N4), in thin beds. Pyrite laminations at .7' and .5'. Noncalcareous.	

DEPTH	FRACTURES	WELL NO.	OIHO #8		
		RUN NO.	7	x Gas Shows (initial)	* Samples Taken
		DATE	3/11/80	LITHOLOGIC DESCRIPTION	
3125		Silty mudstone and siltstone, greenish gray (5GY 6/1) and medium dark gray (N4). Siltstone at .3' and .8', cross laminations with scour features. Thinly bedded. Noncalcareous; without pyrite.			
3126		Silty mudstone and siltstone, greenish gray (5GY 6/1) and medium dark gray (N4), thinly bedded (medium dark gray (N4) laminations). Convolute pyrite laminations at .9'. Interval is noncalcareous.			
3127		Silty mudstone and siltstone, greenish gray (5GY 6/1) and medium dark gray (N4), thinly bedded. Medium dark gray (N4) beds are laminated. Noncalcareous; without pyrite.			
3128		Silty mudstone, greenish gray (5GY 6/1) and medium dark gray (N4), thinly bedded. Bottom 1/4 is burrowed. No pyrite; calcareous.			
3129		Silty mudstone, greenish gray (5GY 6/1), and lamina, medium dark gray (N4), in thin beds. Noncalcareous; without pyrite.			
3130		Silty mudstone and siltstone, greenish gray (5GY 6/1), and lamina, medium dark gray (N4), in thin beds. Calcareous siltstone lens at .5'. No pyrite.			
3131		Silty mudstone and siltstone, laminated, medium dark gray (N4), and greenish gray (5GY 6/1), in thin beds. Wavy pyrite at .4'. Non-calcareous.			
3132		Silty mudstone and siltstone, greenish gray (5GY 6/1), and lamina, medium dark gray (N4), in thin beds. Single pyrite nodule at .5'. Noncalcareous.			
3133		Silty mudstone and siltstone, greenish gray (5GY 6/1) and medium dark gray (N4). Top 1/4 is laminated, medium dark gray (N4), silty mudstone. Bottom 3/4 is turbated. Calcareous siltstone at .5'. Pyrite nodule at .9'.			
3134		Silty mudstone and siltstone, greenish gray (5GY 6/1), and lamina, medium dark gray (N4), in thin beds. Noncalcareous; without pyrite.			

DEPTH	FRACTURES	WELL NO. OHIO #8	x Gas Shows (initial)
		RUN NO. 7	* Samples Taken
		DATE 3/11/80	LITHOLOGIC DESCRIPTION
3135		Silty mudstone, dark gray (N3) and greenish gray (10GY 5/2), thinly bedded. Dark gray (N3) silty mudstone is laminated. Bottom 1/4 is turbated and burrowed. Without pyrite; noncalcareous.	
3136		Silty mudstone, dark gray (N3) and greenish gray (10GY 6/1), in thin beds. Siltstone bands at .9', ripple laminations and noncalcareous. No pyrite.	
3137		Silty mudstone, dark gray (N3) and greenish gray (10GY 5/2), thinly bedded. Noncalcareous; without pyrite.	
3138		Silty mudstone, thinly laminated, dark gray (N3) and greenish gray (10GY 5/2), thinly bedded. No pyrite; noncalcareous.	
3139		Silty mudstone, greenish gray (10GY 5/2) and laminated dark gray (N3), in thin beds. Noncalcareous; without pyrite.	
3140		Silty mudstone, laminated dark gray (N3) and greenish gray (10GY 5/2), in thin beds. Noncalcareous; no pyrite.	
3141		Silty mudstone, laminated dark gray (N3) with laminations (>1 cm) of greenish gray (10GY 5/2). Noncalcareous; without pyrite.	
3142		Silty mudstone, laminated dark gray (N3), with laminations (>1 cm) of greenish gray (10GY 5/2). Pyrite nodule at .5'. Noncalcareous.	
3143		Silty mudstone, laminated dark gray (N3), greenish gray (10GY 5/2), and greenish gray (10GY 6/1), thinly bedded. Noncalcareous; without pyrite.	
3144		Silty mudstone, greenish gray (10GY 5/2) and laminated dark gray (N3), thinly bedded. Noncalcareous; without pyrite.	

DEPTH	FRACTURES	WELL NO.	OHIO #8	x Gas Shows (initial)
		RUN NO.	8	* Samples Taken
		DATE	3/12/80	LITHOLOGIC DESCRIPTION
3145		Silty mudstone, greenish gray (5GY 6/1) and dark gray (N3). Massive, with a singular band of dark gray (N3). Noncalcareous; without pyrite.		
3146		Silty mudstone and siltstone, greenish gray (5GY 6/1) and dark gray (N3), thin beds, noncalcareous; without pyrite.		
3147		Silty mudstone, greenish gray (5GY 6/1) and dark gray (N3), thinly bedded. Turbated zone at .9'. Noncalcareous; without pyrite.		
3148		Silty mudstone, greenish gray (5GY 6/1) and dark gray (N3), thinly bedded. Calcareous siltstone/mudstone band at .2', ~2 cm thick and planar laminated. Also at .5'. No pyrite.		
3149		Silty mudstone, greenish gray (5GY 6/1) and dark gray (N3), thinly bedded. Band of dark greenish gray (5G 4/1), ~3 cm thick at .8'. Noncalcareous; without pyrite.		
3150		Silty mudstone and siltstone, greenish gray (5GY 6/1) and dark gray (N3), thinly bedded. Siltstone band of pale olive (10Y 6/2) with scour features and disturbed beds at its base at .3'. Pyrite at the base of the siltstone. * 3,150.65/.84 Juniata		
3151		Silty mudstone and siltstone, greenish gray (5GY 6/1), dark gray (N3), and pale olive (10Y 6/2), thinly bedded. Siltstones are calcareous, pyrite in bottom 1/2. Remainder of interval is noncalcareous.		
3152		Silty mudstone and siltstone, greenish gray (5GY 6/1), dark gray (N3), and pale olive (10Y 6/2) in thin beds. Siltstones are calcareous with disseminated pyrite.		
3153		Silty mudstone and siltstone, greenish gray (5GY 6/1) and dark gray (N3), thinly bedded. Pyrite nodules with calcareous nucleus at .2'. Remainder of the interval is noncalcareous.		
3154		Silty mudstone, greenish gray (5GY 6/1) and dark gray (N3), thinly bedded. Oblate calcareous siltstone concretion at .1'; no pyrite. The remainder of the interval is noncalcareous.		

DEPTH	FRACTURES	WELL NO.	OHIO #8	x Gas Shows (initial)
		RUN NO.	8	* Samples Taken
		DATE	3/12/80	LITHOLOGIC DESCRIPTION
3155		Silty mudstone and siltstone, greenish gray (5GY 6/1) and dark gray (N3), thinly bedded. Noncalcareous; without pyrite.		
3156		Silty mudstone and siltstone, greenish gray (5GY 6/1), dark gray (N3), and pale olive (10Y 6/2), thinly bedded. Siltstone is planar laminated and slightly calcareous; without pyrite.		
3157		Silty mudstone and siltstone, greenish gray (5GY 6/1), dark gray (N3), and pale olive (10Y 6/2), thinly bedded. Pyrite nodule in bottom 1/4. Interval is noncalcareous.		
3158		Silty mudstone and siltstone, greenish gray (5GY 6/1), dark gray (N3), and pale olive (10Y 6/2), thinly bedded. Calcareous siltstone in the bottom 1/2. Interbedded convolute pyrite at the silty mudstone interfaces.		
3159		Silty mudstone and siltstone, greenish gray (5GY 6/1) and dark gray (N3), in thin beds. Siltstone zones in bottom 1/2 are calcareous band of light olive brown (5Y 5/6), ~3 cm thick at .2'. No pyrite.		
3160		Silty mudstone and siltstone, grayish green (10GY 5/2), dark gray (N3), and greenish gray (5GY 6/1), in thin beds. Dark gray (N3) silty mudstone in laminated pyrite in bottom 3/4, burrows in bottom 1/4, with mildly disturbed bedding.		
3160		Silty mudstone, grayish green (10GY 5/2), dark gray (N3) and greenish gray (5GY 6/1) in thin beds. Top 1/4 is burrowed with disturbed beds. Noncalcareous; without pyrite.		
3162		Silty mudstone and siltstone, greenish gray (5GY 6/1) and dark gray (N3), in thin beds. Calcareous cross-laminated siltstone band at .8', burrowing at .9'. No pyrite; remainder of interval noncalcareous.		
3163		Silty mudstone and siltstone, greenish gray (5GY 6/1), grayish green (10GY 5/2), and dark gray (N3), in thin beds. Single siltstone band at .5', ~2 cm thick. Noncalcareous; without pyrite.		
3164		Silty mudstone, greenish gray (5GY 6/1) and dark gray (N3), in thin beds. Grayish green (10GY 5/2) band at .4'. Interval is noncalcareous; without pyrite.		

DEPTH	FRACTURES	WELL NO.	OHIO #8	x Gas Shows (initial)
		RUN NO.	8	* Samples Taken
		DATE	3/12/80	LITHOLOGIC DESCRIPTION
3165		Silty mudstone and siltstone, greenish gray (5GY 6/1), dark gray (N3), and grayish green (10GY 5/2), in thin beds. Siltstone bed at .9', ~2 cm thick. Ripple and planar laminations. Noncalcareous; without pyrite.		
3166		Silty mudstone, dark gray (N3) and greenish gray (5GY 6/1), in thin beds. Noncalcareous; without pyrite.		
3167		Silty mudstone, dark gray (N3) and greenish gray (5GY 6/1), in thin beds. No pyrite; noncalcareous.		
3168		Silty mudstone, greenish gray (5GY 6/1) and dark gray (N3), thinly bedded. Siltstones are planar laminated, noncalcareous; no pyrite.		
3169		Silty mudstone and siltstone, dark greenish gray (5GY 4/1) and dark gray (N3), in thin beds. Noncalcareous; without pyrite.		
3170		Silty mudstone and siltstone, greenish gray (5GY 6/1), dark greenish gray (5GY 4/1), and dark gray (N3), thinly bedded. Siltstone is planar laminated at .5', ~3 cm thick, noncalcareous; without pyrite.		
3171		* 3,170.45/.73 USGS		
3172		Silty mudstone and siltstone, greenish gray (5GY 6/1), dark greenish gray (5GY 4/1), and dark gray (N3), thinly bedded. At .3' siltstone band, ~2 cm thick, noncalcareous. Dark gray (N3), silty mudstone is laminated.		
3173		Silty mudstone, dark gray (N3) and dark greenish gray (5GY 4/1), thinly bedded. Noncalcareous; without pyrite.		
3174		Silty mudstone, dark gray (N3), with a single band of greenish gray (5GY 6/1) at .3'. Noncalcareous; without pyrite.		
3174		Silty mudstone and siltstone, dark gray (N3), greenish gray (5GY 6/1), and dark greenish gray (5GY 4/1). Siltstone band from .2' - .5', mildly calcareous. The interval has no pyrite.		

DEPTH	FRACTURES	WELL NO.	OHIO #8	x Gas Shows (initial)
		RUN NO.	8	* Samples Taken
		DATE	3/12/80	LITHOLOGIC DESCRIPTION
3175		Silty mudstone and siltstone, dark gray (N3), greenish gray (5GY 6/1), and dark greenish gray (5GY 4/1), thinly bedded. Siltstone in top and bottom 1/4. Concentration of pyrite nodules at .5'. Noncalcareous.		
3176		Silty mudstone and siltstone, dark gray (N3), greenish gray (5GY 6/1), and dark greenish gray (5GY 4/1). Siltstone at .5' - .8', ripple laminated, pyrite concentrations at .4'. Noncalcareous.		
3177		Silty mudstone and siltstone, dark gray (N3), greenish gray (5GY 6/1), and dark greenish gray (5GY 4/1), in thin beds. Disseminated pyrite laminations at .5'. Noncalcareous.		
3178		Silty mudstone and siltstone, dark gray (N3), greenish gray (5GY 6/1), and dark greenish gray (5GY 4/1), in thin beds. Siltstones predominant in bottom 1/3, calcareous. No pyrite.		
3179		Silty mudstone and siltstone, dark gray (N3) and greenish gray (5GY 6/1). Siltstone single lamination at .1'. No pyrite; noncalcareous.		
3180		Silty mudstone, dark gray (N3) and greenish gray (5GY 6/1). Siltstone lamination at .1'. Noncalcareous; without pyrite,		
3181		Silty mudstone and siltstone, dark gray (N3), greenish gray (5GY 6/1), in thin beds. Siltstone is in top and bottom 1/4, ripple laminated and noncalcareous; no pyrite. Vertical mineralized fracture at .4' extending through the interval.		
3182		Silty mudstone and siltstone, dark gray (N3), greenish gray (5GY 6/1), and dark greenish gray (5GY 4/1), in thin beds. Dark gray (N3), silty mudstone in laminations. Siltstone at .5', ~3 cm thick, ripple laminated and calcareous.		
3183		Silty mudstone and siltstone, dark gray (N3), greenish gray (5GY 6/1), and dark greenish gray (5GY 4/1), thinly bedded. Siltstone in top 1/3, ripple laminations. Noncalcareous; without pyrite.		
3184		Silty mudstone and siltstone, dark gray (N3), greenish gray (5GY 6/1), and dark greenish gray (5GY 4/1), in thin beds. Siltstones in top 1/3. Dark gray (N3) silty mudstone is in laminations. Noncalcareous; without pyrite.		

DEPTH	FRACTURES	WELL NO.	OHIO #8	x Gas Shows (initial)
		RUN NO.	8	* Samples Taken
		DATE	3/12/80	LITHOLOGIC DESCRIPTION
3185		Silty mudstone and siltstone, dark gray (N3), greenish gray (5GY 6/1), and dark greenish gray (5GY 4/1), thinly bedded. Siltstone bed in middle 1/3, cross laminated and planar laminated, noncalcareous. Entire interval is noncalcareous; without pyrite. Continuation of mineralized fracture.		
3186		Silty mudstone and siltstone, dark gray (N3), greenish gray (5GY 6/1), and dark greenish gray (5GY 4/1), thinly bedded. Highly calcareous siltstone bed at .4', ~.3' thick. Remainder of the interval is noncalcareous; without pyrite. Fracture terminates at ~.7'.		
3187		Silty mudstone and siltstone, dark greenish gray (5G 4/1). Thick siltstone lamination at .1', ~2 cm thick. Noncalcareous; without pyrite. # 3,187.40/.80 Mound		
3188		Silty mudstone and siltstone, dark gray (N3), greenish gray (5GY 6/1), and dark greenish gray (5GY 4/1), thinly bedded. Silty mudstone, dark gray (N3), laminations in top 1/2. Interval is noncalcareous; without pyrite.		
3189		Silty mudstone and siltstone, dark gray (N3), greenish gray (5GY 6/1), and dark greenish gray (5GY 4/1). Siltstone laminations ~1 cm thick at .4', .7' and .9'. Interval is thinly bedded. Noncalcareous; without pyrite.		
3190		Silty mudstone, greenish gray (5GY 6/1) and dark greenish gray (5GY 4/1), thinly bedded. Laminations of dark gray (N3) throughout. Band of light olive gray (5Y 6/1) at .5', ~2 cm thick. Noncalcareous; without pyrite.		
3191		Silty mudstone and siltstone, dark greenish gray (5G 4/1), greenish gray (5GY 6/1), thinly bedded. Highly calcareous siltstone bed at .8'. Band of light olive gray (5Y 6/1) at .1', ~2 cm thick. No pyrite.		
3192		Silty mudstone and siltstone, dark greenish gray (5G 4/1) and greenish gray (5GY 6/1), thinly bedded. Noncalcareous; without pyrite.		
3193		Silty mudstone and siltstone, dark greenish gray (5G 4/1) and greenish gray (5GY 6/1), thinly bedded with middle 1/3 being laminated. Noncalcareous; without pyrite.		
3194		Silty mudstone and siltstone, dark greenish gray (5G 4/1) and greenish gray (5GY 6/1), in mildly disturbed thin beds. Siltstones are planar laminated, noncalcareous; no pyrite.		

DEPTH	FRACTURES	WELL NO.	OHIO #8	x Gas Shows (initial)
		RUN NO.	9	* Samples Taken
		DATE	3/12/80	LITHOLOGIC DESCRIPTION
3202		Silty mudstone, dark greenish gray (5GY 4/1) and dark gray (N3), thinly bedded. Noncalcareous; without pyrite.		
3203		S. A. A.		
3204		Silty mudstone, dark gray (N3) and dark greenish gray (5GY 4/1) in thin beds. Noncalcareous; without pyrite.		
3205		Silty mudstone and siltstone, dark greenish gray (5G 4/1) and dark gray (N3), thinly bedded. Calcareous siltstone at .8' extending through the interval. Pyrite-filled burrows throughout. * 3,205.42/.65 Juniata		
3206		Silty mudstone and siltstone, greenish gray (5G 6/1) and dark gray (N3), thinly bedded. Pyrite nodules throughout, with a lens at .8'. Noncalcareous.		
3207		Silty mudstone and siltstone, greenish gray (5G 6/1) and dark gray (N3), thinly bedded. Pyrite lens at .7' with nodules throughout. Noncalcareous.		
3208		Silty mudstone, greenish gray (5G 6/1) and dark gray (N3), thinly bedded. Pyrite in top 1/2. Noncalcareous.		
3209		Silty mudstone, greenish gray (5G 6/1) and dark gray (N3), thinly bedded with dark gray (N3) laminated silty mudstone. Noncalcareous; without pyrite.		
3210		Silty mudstone and siltstone, greenish gray (5G 6/1) and dark gray (N3), thinly bedded. Siltstone is yellowish gray (5Y 8/1) in top 1/2, with concretions and ripple laminated. Noncalcareous.		
3211		Silty mudstone and siltstone, greenish gray (5G 6/1) and dark gray (N3), thinly bedded. Siltstone band at .5', slightly calcareous. No pyrite.		

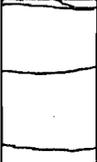
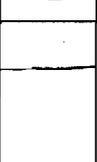
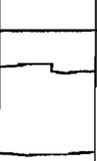
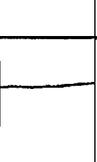
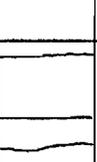
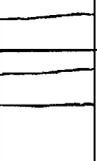
DEPTH	FRACTURES	WELL NO.	OHIO #8	x Gas Shows (initial)
		RUN NO.	9	* Samples Taken
		DATE	3/12/80	LITHOLOGIC DESCRIPTION
3212		Silty mudstone and siltstone, greenish gray (5G 6/1) and dark gray (N3), thinly bedded. Siltstone is pale olive (10Y 6/2) at .3', ~2 cm thick, cross laminated. Bottom .3' is turbated. Noncalcareous; without pyrite.		
3213		Silty mudstone, dark gray (N3) and greenish gray (5GY 6/1). Dark gray (N3) is in laminations. Noncalcareous; without pyrite.		
3214		Silty mudstone, dark gray (N3) and greenish gray (5GY 6/1), thinly bedded. Siltstone band at .9', ripple laminated. Noncalcareous; no pyrite.		
3215		Silty mudstone, greenish gray (5GY 6/1) and medium dark gray (N4), thinly bedded. Siltstone lens at .5', calcareous. No pyrite.		
3216		Silty mudstone and siltstone, greenish gray (5GY 6/1) and medium dark gray (N4). Top 1/2 is siltstone, highly calcareous. Bottom 1/2 is turbated. Noncalcareous; without pyrite.		
3217		Silty mudstone, greenish gray (5GY 6/1) and medium dark gray (N4), very thin beds or thickly laminated. Siltstone lens, pale olive (10Y 6/2), calcareous at .4'.		
3218		Silty mudstone, greenish gray (5GY 6/1) and medium dark gray (N4), thinly bedded or thickly laminated. Noncalcareous; without pyrite.		
3219		Silty mudstone and siltstone, greenish gray (5GY 6/1) and medium dark gray (N4), thinly bedded, with siltstone in bottom 1/2. Siltstone is slightly calcareous and ripple laminated. No pyrite.		
3220		Silty mudstone, greenish gray (5GY 6/1) and medium dark gray (N4), thinly bedded. Siltstone lamination at .9'. Noncalcareous; no pyrite. * 3,220.38/.63 USGS		
3221		Silty mudstone, greenish gray (5GY 6/1) and medium dark gray (N4), thinly bedded. Bottom 1/2 beds are slightly disturbed. Calcareous siltstone laminations at ~.3'. No pyrite.		

DEPTH	FRACTURES	WELL NO.	OHIO #8	x Gas Shows (initial)
		RUN NO.	9	* Samples Taken
		DATE	3/12/80	LITHOLOGIC DESCRIPTION
3222		Silty mudstone, greenish gray (5GY 6/1) and medium dark gray (N4), disturbed thin beds. Pyrite nodules in middle 1/3. Noncalcareous.		
3223		Silty mudstone, greenish gray (5GY 6/1) and medium dark gray (N4), thinly bedded. Siltstone bed at .8', ~2 cm thick, noncalcareous. No pyrite.		
3224		Silty mudstone, greenish gray (5GY 6/1) and medium dark gray (N4), thinly bedded. Siltstone in laminations. Bottom 1/4 is turbated. Elongated pyrite nodule at .6'. Noncalcareous.		
3225		Silty mudstone, greenish gray (5GY 6/.) and medium dark gray (N4) in thin beds. Top 1/4 is turbated. Pyrite nodules throughout. Noncalcareous.		
x				
3226		Silty mudstone, greenish gray (5GY 6/1) and medium dark gray (N4), thinly bedded. Top 1/2 is turbated. Pyrite nodules at .1'. Noncalcareous.		
x				
3227		Silty mudstone, medium dark gray (N4), with thin band of greenish gray (5GY 6/1) at .8'. Noncalcareous; without pyrite.		
x				
3228		Silty mudstone, medium dark gray (N4) and greenish gray (5GY 6/1), thinly bedded. Noncalcareous; without pyrite.		
x				
3229		Silty mudstone, medium dark gray (N4) and greenish gray (5GY 6/1), thinly bedded. Top .1' is turbated. Siltstone laminations at .2'. Noncalcareous; without pyrite.		
x				
3230		Silty mudstone, medium dark gray (N4) and greenish black (5G 2/1). Top 3/4 is greenish black (5G 2/1) with laminations of dark greenish gray (5GY 4/1). Bottom 1/4 is turbated with burrows. Noncalcareous; without pyrite.		
3231		Silty mudstone, medium dark gray (N4) and greenish black (5G 2/1), thinly bedded. No pyrite; noncalcareous.		

DEPTH	FRACTURES	WELL NO. OHIO #8	x Gas Shows (initial)
		RUN NO. 9	* Samples Taken
		DATE 3/12/80	LITHOLOGIC DESCRIPTION
3232		Silty mudstone, medium dark gray (N4) and grayish black (5G 2/1), thinly bedded. Noncalcareous; without pyrite.	
3233		Silty mudstone, medium dark gray (N4) and grayish black (5G 2/1), thinly bedded to thickly laminated. Pyrite laminations in top and bottom 1/3. Planar laminated siltstone band at .8'. Noncalcareous; without pyrite.	
3234		Silty mudstone, medium dark gray (N4) and grayish black (5G 2/1), thinly bedded. Burrows in top 1/4. Pyrite laminations in the 5G 2/1 beds. Noncalcareous.	
3235		Silty mudstone, medium dark gray (N4) and greenish gray (5GY 6/1), thinly bedded. Pyrite laminations at base of dark gray (N4) beds. Wavy pyrite stringer at .9' and nodules throughout; noncalcareous.	
3236		Silty mudstone and siltstone, medium dark gray (N4), greenish gray (5GY 6/1), and pale olive (10Y 6/1), alternating thin beds, noncalcareous; pyrite in disseminated laminations and nodules.	
3237		Silty mudstone, medium dark gray (N4) and greenish gray (5GY 6/1), thickly laminated to thinly bedded. Pyrite in top 1/4. Noncalcareous.	
3238		Silty mudstone, medium dark gray (N4) and greenish gray (5GY 6/1), thinly bedded. Siltstone and pyrite laminations at .7'. Noncalcareous; without pyrite.	
3239		Silty mudstone and siltstone, medium dark gray (N4) and greenish gray (5GY 6/1), thinly bedded. Siltstone band is planar laminated at .5'. Noncalcareous; without pyrite.	
3240		Silty mudstone, medium dark gray (N4) and greenish gray (5GY 6/1), thinly bedded. Noncalcareous; without pyrite.	
3241		Silty mudstone, medium dark gray (N4) and greenish gray (5GY 6/1), thinly bedded. Noncalcareous; without pyrite.	

DEPTH	FRACTURES	WELL NO.	OHIO #8	x Gas Shows (initial)
		RUN NO.	9	* Samples Taken
		DATE	3/12/80	LITHOLOGIC DESCRIPTION
3242		Silty mudstone and siltstone, medium dark gray (N4), greenish gray (5GY 6/1), and pale olive (10Y 6/1), thinly bedded. Siltstone in top 1/2 slightly calcareous, ripple laminated. Noncalcareous; no pyrite.		
3243		Silty mudstone and siltstone, medium dark gray (N4), greenish gray (5GY 6/1), and pale olive (10Y 6/1), thinly bedded. Siltstones are planar laminated. Noncalcareous; without pyrite.		
3244		Silty mudstone and siltstone, medium dark gray (N4), greenish gray (5GY 6/1), and pale olive (10Y 6/1), thinly bedded. Siltstone is ripple laminated, ~3 cm thick at .3'. Noncalcareous; pyrite in bottom 1/4.		
3245		Silty mudstone and siltstone, medium dark gray (N4), greenish gray (5GY 6/1), and pale olive (10Y 6/1), thinly bedded. Bottom 1/4 is turbated. Noncalcareous; pyrite nodule at .9'.		
3246		Silty mudstone, medium dark gray (N4) and greenish gray (5GY 6/1). Top 1/2 is slightly turbated. Bottom 1/2 is thickly laminated to thinly bedded. Noncalcareous; without pyrite.		
x 3247		Silty mudstone, medium dark gray (N4) and greenish gray (5GY 6/1). Top 1/2 slightly turbated. Bottom 1/2 is thickly laminated to thinly bedded. Noncalcareous; pyrite nodules in bottom 1/4.		
x 3248		Silty mudstone, medium dark gray (N4) and greenish gray (5GY 6/1). Thinly bedded. Siltstone lens at .8', noncalcareous; no pyrite.		
3249		Silty mudstone, medium dark gray (N4) and greenish gray (5GY 6/1). Thinly bedded. Siltstone laminations ~1 cm thick at .4', noncalcareous. No pyrite.		
3250		Silty mudstone, medium dark gray (N4) and greenish gray (5GY 6/1), thinly bedded. Siltstone laminations in top 1/3, lens at .9'. Noncalcareous; without pyrite.		
3251		Silty mudstone, medium dark gray (N4) and greenish gray (5GY 6/1), siltstone in top and bottom. Turbated sequence at .5' - .8'. Noncalcareous; without pyrite.		

DEPTH	FRACTURES	WELL NO.	OHIO #8	x Gas Shows (initial)
		RUN NO.	9	* Samples Taken
		DATE	3/12/80	LITHOLOGIC DESCRIPTION
3252		Silty mudstone, medium dark gray (N4) and greenish gray (5GY 6/1), thinly bedded; top 1/4 slightly disturbed. Siltstone at .8', ~2 cm thick, planar laminated, noncalcareous. No pyrite.		
3253		Silty mudstone, medium dark gray (N4) and greenish gray (5GY 6/1), thinly bedded. Siltstone in middle 1/3, scour features. Noncalcareous; no pyrite.		
3254		Silty mudstone, medium dark gray (N4) and greenish gray (5GY 6/1), thinly bedded. Siltstone beds are planar laminated, noncalcareous in top, middle, and bottom. No pyrite.		
3255		Silty mudstone and siltstone, medium dark gray (N4) and greenish gray (5GY 6/1), in laminated thin beds. Noncalcareous; without pyrite.		
		* 3,255.63/.84 Juniata		
3256		Silty mudstone and siltstone, medium dark gray (N4) and greenish gray (5GY 6/1), thinly bedded. Siltstone in bottom 1/2 is planar laminated. Turbated zone at .5', ~2 cm thick. Noncalcareous; without pyrite.		
3257		Silty mudstone and siltstone, medium dark gray (N4) and greenish gray (5GY 6/1), in alternating thin beds. Siltstone is planar laminated, noncalcareous; no pyrite.		
3258		Silty mudstone and siltstone, medium dark gray (N4) and greenish gray (5GY 6/1), in alternating thin beds. Siltstone is planar laminated, noncalcareous; no pyrite.		
3259		Silty mudstone and siltstone, medium dark gray (N4) and greenish gray (5GY 6/1), in alternating thin beds. Siltstone is planar laminated, noncalcareous; no pyrite.		
3260		Siltstone, greenish gray (5GY 6/1), ripple laminated, noncalcareous.		
3261		.18		

DEPTH	FRACTURES	WELL NO.	OHIO #8	x Gas Shows (initial)
		RUN NO.	10	* Samples Taken
		DATE	3/13/80	LITHOLOGIC DESCRIPTION
3260		Silty mudstone, dark greenish gray (5GY 4/1) and medium dark gray (N4), thinly bedded. Siltstone laminations in middle 1/3. Noncalcareous; no pyrite.		
3261		Silty mudstone and siltstone, dark greenish gray (5GY 4/1), medium dark gray (N4), thinly bedded. Siltstone in bottom 1/2, pale olive (10Y 6/2), laminated, noncalcareous. No pyrite.		
3262		Silty mudstone and siltstone, dark greenish gray (5GY 4/1), medium dark gray (N4), thinly bedded. Siltstone laminations in top 1/4, pale olive (10Y 6/2), ripple laminated, noncalcareous. Band of light olive gray (5Y 6/1) at .5'. No pyrite.		
3263		Silty mudstone and siltstone, dark greenish gray (5GY 4/1), medium dark gray (N4), and pale olive (10Y 6/2), thinly bedded. Noncalcareous; without pyrite.		
3264		Silty mudstone, dark greenish gray (5GY 4/1) and medium dark gray (N4), thinly bedded. Siltstone laminations in middle 1/3, noncalcareous. No pyrite.		
3265		Silty mudstone, dark greenish gray (5GY 4/1) and medium dark gray (N4), thinly bedded. Medium dark gray (N4) beds are laminated. Siltstone laminations at .8', ~2 cm thick. Noncalcareous, planar laminated. No pyrite.		
3266		Silty mudstone, dark greenish gray (5GY 4/1) and medium dark gray (N4), alternating thin beds. Siltstone laminations in top 1/4, noncalcareous; no pyrite.		
3267		Silty mudstone, dark greenish gray (5GY 4/1) and medium dark gray (N4), thinly bedded. Siltstone at very bottom extending through the interval, yellowish gray (5Y 8/1), noncalcareous. No pyrite.		
3268		Silty mudstone, dark greenish gray (5GY 4/1) and medium dark gray (N4), thinly bedded. Siltstone lens at .7', planar laminated, noncalcareous. No pyrite.		
3269		Silty mudstone, dark greenish gray (5GY 4/1) and medium dark gray (N4), thinly bedded. Siltstone band at .9', ripple laminated, noncalcareous. No pyrite.		

DEPTH	FRACTURES	WELL NO.	OHIO #8	x Gas Shows (initial)
		RUN NO.	10	* Samples Taken
		DATE	3/13/80	LITHOLOGIC DESCRIPTION
3270		Silty mudstone, dark greenish gray (5GY 4/1) and medium dark gray (N4), thinly bedded. Siltstone and top and bottom, yellowish gray (5Y 8/1), noncalcareous, ripple laminated, no pyrite. * 3,270.59/.89 USGS		
3271		Silty mudstone, dark greenish gray (5GY 4/1) and medium dark gray (N4), thinly bedded. Siltstone laminations in bottom 1/2, noncalcareous. No pyrite.		
3272		Silty mudstone and siltstone, dark greenish gray (5GY 4/1), medium dark gray (N4) and yellowish gray (5Y 8/1), thinly bedded. Siltstone in bottom 1/3, ripple laminated, noncalcareous. No pyrite.		
3273		Silty mudstone and siltstone, dark greenish gray (5GY 4/1), medium dark gray (N4) and yellowish gray (5Y 8/1), thinly bedded. Siltstone in bottom 1/3, ripple laminated, noncalcareous. No pyrite.		
3274		Silty mudstone, dark greenish gray (5GY 4/1) and medium dark gray (N4), in laminated thin beds. Noncalcareous; without pyrite.		
3275		Silty mudstone, dark greenish gray (5GY 4/1) and medium dark gray (N4), in laminated thin beds. Turbated zone at .2', ~2 cm thick. Dusky yellow (5Y 6/4) band at .9'. Noncalcareous; without pyrite.		
3276		Silty mudstone, dark greenish gray (5GY 4/1) and medium dark gray (N4), thinly bedded. Dusky yellow (5Y 6/4) bands in top 1/2. Noncalcareous; without pyrite.		
3277		Silty mudstone, dark greenish gray (5GY 4/1) and medium dark gray (N4), in laminated thin beds. Noncalcareous; without pyrite.		
3278		Silty mudstone, dark greenish gray (5GY 4/1) and medium dark gray (N4), thickly laminated to thinly bedded. Siltstone lens at .7', noncalcareous. No pyrite.		
3279		Silty mudstone, dark greenish gray (5GY 4/1) and medium dark gray (N4), laminated. Noncalcareous; no pyrite.		

DEPTH	FRACTURES	WELL NO.	OHIO #8	x Gas Shows (initial)
		RUN NO.	10	* Samples Taken
		DATE	3/13/80	LITHOLOGIC DESCRIPTION
3280		Silty mudstone, dark greenish gray (5GY 4/1) and medium dark gray (N4), laminated. Siltstone band at .3', mildly calcareous. No pyrite.		
3281		Silty mudstone and siltstone, greenish gray (5GY 6/1) and medium dark gray (N4), thinly bedded. Siltstone in top 1/2, mildly calcareous. Burrows at .8', ~2 cm thick. No pyrite.		
3282		Silty mudstone, greenish gray (5GY 6/1) and medium dark gray (N4), thickly laminated to thinly bedded, mildly calcareous. No pyrite.		
3283		Silty mudstone, greenish gray (5GY 6/1) and medium dark gray (N4), laminated, calcareous. Band of dusky yellow (5Y 6/4) at .9'. No pyrite.		
3284		Silty mudstone, greenish gray (5GY 6/1) and medium dark gray (N4), laminated. Top 1/4 is turbated. Slightly calcareous; without pyrite.		
3285		Silty mudstone, greenish gray (5GY 6/1) and medium dark gray (N4), thickly laminated to thinly bedded. Siltstone band at .3', planar laminated, slightly calcareous; no pyrite.		
3286		Silty mudstone, greenish gray (5GY 6/1) and medium dark gray (N4), thinly bedded. Siltstone beds in top 1/2, mildly calcareous. Bottom 1/4 is mildly turbated. No pyrite.		
3287		Silty mudstone, greenish black (5G 2/1) and olive gray (5Y 4/1), thickly laminated to thinly bedded. Siltstone laminations at .9'. Interval is noncalcareous; without pyrite. * 3,287.15/.50 Mound		
3288		Silty mudstone, greenish black (5G 2/1) and olive gray (5Y 4/1), turbated. Noncalcareous; without pyrite.		
3289		Silty mudstone, greenish black (5G 2/1) and olive gray (5Y 4/1), turbated. Noncalcareous; without pyrite.		

DEPTH	FRACTURES	WELL NO.	OHIO #8	x Gas Shows (initial)
		RUN NO.	10	* Samples Taken
		DATE	3/13/80	LITHOLOGIC DESCRIPTION
3290		Silty mudstone, greenish black (5G 2/1) and olive gray (5Y 4/1), thinly bedded. Siltstone lens at .3'. Pyrite in bottom 1/4. Noncalcareous.		
3291		Silty mudstone, olive black (5Y 2/1), with lense of olive gray (5Y 4/1) at .8'. Noncalcareous; without pyrite.		
3292		Silty mudstone, olive black (5Y 2/1) and olive gray (5Y 4/1), thinly bedded. Bottom 1/4 is turbated with pyrite nodules. Noncalcareous.		
3293		Silty mudstone, olive black (5Y 2/1) and olive gray (5Y 4/1), thinly bedded. Top 1/4 is turbated. Siltstone laminations at .5'. Noncalcareous; without pyrite.		
3294		Silty mudstone, olive black (5Y 2/1) and olive gray (5Y 4/1), thinly bedded. Middle 1/3 is turbated with burrows. Noncalcareous; without pyrite.		
3295		Silty mudstone, olive gray (5Y 4/1), noncalcareous; without pyrite.		
3296		Silty mudstone, olive gray (5Y 4/1), light olive gray (5Y 6/1), laminated at .1'. Single pyrite nodule in center. Noncalcareous.		
3297		Silty mudstone, olive gray (5Y 4/1), with laminations of light olive gray (5Y 6/1), in top and bottom 1/4. Noncalcareous; without pyrite.		
3298		Silty mudstone, olive gray (5Y 4/1), with turbated zone ~2 cm thick at .4'. Bottom 1/4 has bands of greenish gray (5GY 6/1). Noncalcareous.		
3299		Silty mudstone, olive gray (5Y 4/1), with turbated zones in top and bottom 1/4. Noncalcareous; without pyrite.		

DEPTH	FRACTURES	WELL NO.	OHIO #8	x Gas Shows (initial)
		RUN NO.	10	* Samples Taken
		DATE	3/13/80	LITHOLOGIC DESCRIPTION
3300		Silty mudstone, olive gray (5Y 4/1), with single mudstone lamination at .1'. Noncalcareous; without pyrite.		
3301		Silty mudstone, olive gray (5Y 4/1), with turbated zone in top 1/8. Noncalcareous; without pyrite.		
3302		Silty mudstone, dark greenish gray (5GY 4/1) and olive black (5Y 2/1), thinly bedded. Top 1/2 is turbated. Noncalcareous; without pyrite.		
3303		Silty mudstone, olive black (5Y 2/1). Turbated zone of olive black (5Y 2/1) and olive gray (5Y 4/1) at .2', ~2 cm thick, with burrows. Noncalcareous; without pyrite.		
3304		Silty mudstone, olive black (5Y 2/1), with indistinct thin bands of olive gray (5Y 4/1) in bottom 1/4. Noncalcareous; without pyrite.		
3305		Silty mudstone, olive black (5Y 2/1), with thin band of olive gray (5Y 4/1) at .2'. Noncalcareous; without pyrite. * 3,305.68/.88 Juniata		
3306		Silty mudstone, olive black (5Y 2/1), with thin band of greenish gray (5GY 6/1) at .3'. Noncalcareous; without pyrite. * 3,306.32/.66 Terra Tek		
3307		Silty mudstone, olive black (5Y 2/1), noncalcareous; without pyrite.		
3308		Silty mudstone, olive black (5Y 2/1) and greenish black (5GY 2/1), laminated siltstone, wavy band at .9'. Noncalcareous; without pyrite.		
3309		Silty mudstone, olive black (5Y 2/1) and greenish black (5GY 2/1), thinly bedded. Turbated in top and bottom 1/3. Noncalcareous; without pyrite.		

DEPTH	FRACTURES	WELL NO.	OHIO #8	x Gas Shows (initial)
		RUN NO.	10	* Samples Taken
		DATE	3/13/80	LITHOLOGIC DESCRIPTION
3310		Silty mudstone, olive black (5Y 2/1) and greenish black (5GY 2/1), thinly bedded, noncalcareous; no pyrite.		
3311		Silty mudstone, olive black (5Y 2/1) and greenish black (5GY 2/1), thinly bedded, noncalcareous; no pyrite.		
3312		Silty mudstone, olive black (5Y 2/1) and greenish black (5GY 2/1), thinly bedded. Band of greenish gray (5GY 6/1) at .3'. Noncalcareous; without pyrite.		
3313		Silty mudstone, olive black (5Y 2/1) and greenish black (5GY 2/1), laminated. Noncalcareous; without pyrite.		
3314		Silty mudstone, olive black (5Y 2/1) and greenish black (5GY 2/1), laminated. Noncalcareous; without pyrite.		
3315		Silty mudstone, greenish black (5GY 2/1). Ripple-laminated siltstone band at .4'. Noncalcareous; no pyrite.		
3316		Silty mudstone, greenish black (5GY 2/1). Noncalcareous; without pyrite.		
3317		Silty mudstone, greenish black (5GY 2/1), with a slightly calcareous siltstone band at .5', ~2 cm thick, ripple laminated. No pyrite.		
3318		Silty mudstone, greenish black (5GY 2/1), noncalcareous; without pyrite.		
3319				
	.52			

DEPTH	FRACTURES	WELL NO.	OHIO #8	x Gas Shows (initial)
		RUN NO.	11	* Samples Taken
		DATE	3/14/80	LITHOLOGIC DESCRIPTION
3319		Silty mudstone, greenish black (5GY 2/1), noncalcareous; no pyrite.		
		Silty mudstone, greenish black (5GY 2/1), single band of olive gray (5Y 2/1), noncalcareous, no pyrite.		
3320				
		Silty mudstone, greenish black (5GY 2/1), noncalcareous; no pyrite.		
		* 3,320.43/.76 USGS		
3321				
		Silty mudstone, greenish black (5GY 2/1), laminations of olive gray (5Y 4/1) throughout. Noncalcareous; no pyrite.		
3322				
		Silty mudstone, greenish black (5GY 2/1), laminations of olive gray (5Y 4/1) throughout. Small pyrite nodules throughout; noncalcareous.		
3323				
		Silty mudstone, greenish black (5GY 2/1), laminations of olive gray (5Y 4/1) throughout. Small pyrite nodules; noncalcareous.		
3324				
		Silty mudstone, greenish black (5GY 2/1), laminations of olive gray (5Y 4/1) throughout. Small pyrite nodules; noncalcareous.		
3325				
		Silty mudstone, greenish black (5GY 2/1), laminations of olive gray (5Y 4/1) throughout. Small pyrite nodules; noncalcareous.		
3326				
		Silty mudstone, greenish black (5GY 2/1), siltstone/pyrite laminations in lower 1/4, noncalcareous.		
3327				
		Silty mudstone, olive black (5Y 2/1) and dusky yellow green (5GY 5/2), disturbed thin beds in lower 1/2 with some burrowing. Noncalcareous; no pyrite.		
3328				
		Silty mudstone, olive black (5Y 2/1) and dusky yellow green (5GY 5/2). Top 1/4 has disturbed thin beds with burrows; siltstone laminations at top and bottom, with pyrite nodules at bottom.		

DEPTH	FRACTURES	WELL NO.	OHIO #8	x Gas Shows (initial)
		RUN NO.	11	* Samples Taken
		DATE	3/14/80	LITHOLOGIC DESCRIPTION
3329		Silty mudstone, olive black (5Y 2/1), pyrite nodules in middle of interval, noncalcareous.		
3330		Silty mudstone, olive black (5Y 2/1) and dusky yellow green (5GY 5/2), middle 1/3 has disturbed thin beds with burrows. Noncalcareous; no pyrite.		
3331		Silty mudstone, olive black (5Y 2/1), with laminations of dusky yellow green (5GY 5/2) throughout, noncalcareous.		
3332		Silty mudstone, olive black (5Y 2/1), dusky yellow green (5GY 5/2), laminated throughout, noncalcareous.		
3333		Silty mudstone, olive black (5Y 2/1), olive gray (5Y 4/1), top 1/4 laminated. Noncalcareous; no pyrite.		
3334		Silty mudstone, olive black (5Y 2/1) and olive gray (5Y 4/1), laminated. Noncalcareous; no pyrite.		
3335		Silty mudstone, olive black (5Y 2/1) and olive gray (5Y 4/1), laminated. Noncalcareous; no pyrite.		
3336		Silty mudstone, olive black (5Y 2/1) and olive gray (5Y 4/1), laminated. Noncalcareous; no pyrite.		
3337		Silty mudstone, olive black (5Y 2/1) and olive gray (5Y 4/1), top 3/4 highly turbated. Noncalcareous; no pyrite.		
3338		Silty mudstone, olive black (5Y 2/1), noncalcareous; no pyrite. Bottom 1/2 gradationally changes color to greenish gray (5GY 6/1).		

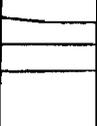
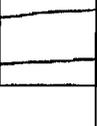
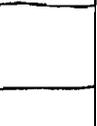
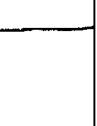
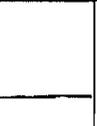
DEPTH	FRACTURES	WELL NO.	OHIO #8	x Gas Shows (initial)
		RUN NO.	11	* Samples Taken
		DATE	3/14/80	LITHOLOGIC DESCRIPTION
3339		Silty mudstone, greenish gray (5GY 6/1) and dark greenish gray (5GY 4/1). Middle 1/3 has disturbed thin beds, pyrite throughout; noncalcareous.		
3340		Silty mudstone, greenish gray (5GY 6/1), dark greenish gray (5GY 4/1), and olive black (5Y 2/1), middle 1/3 has disturbed thin beds with burrows. Noncalcareous; no pyrite.		
3341		Silty mudstone, greenish gray (5GY 6/1), dark greenish gray (5GY 4/1), and olive black (5Y 2/1), turbated, noncalcareous. No pyrite.		
3342		Silty mudstone, greenish gray (5GY 6/1) and olive black (5Y 2/1), top 1/2 primarily olive black (5Y 2/1), with disturbed laminations of greenish gray (5GY 6/1). Noncalcareous; no pyrite.		
3343		Silty mudstone, greenish gray (5GY 6/1) and olive black (5Y 2/1), lower 3/4 highly turbated with burrows. Noncalcareous; no pyrite.		
3344		Silty mudstone, greenish gray (5GY 6/1) and olive black (5Y 2/1). Bottom 1/4 has disturbed thin beds; top 3/4 (5Y 2/1) noncalcareous. No pyrite.		
3345		Silty mudstone, greenish gray (5GY 6/1) and olive gray (5Y 4/1). Turbated thin beds with burrows top and bottom 1/4. Noncalcareous; no pyrite.		
3346		Silty mudstone, greenish gray (5GY 6/1) and olive gray (5Y 4/1). Highly turbated with burrows throughout. Noncalcareous; no pyrite.		
3347		Silty mudstone, greenish gray (5GY 6/1) and olive gray (5Y 4/1), bio-turbated thin beds, pyrite stringer at .2'. Noncalcareous; no pyrite.		
3348		Silty mudstone, greenish gray (5GY 6/1) and olive gray (5Y 4/1) in ill-defined thin beds. Noncalcareous; no pyrite.		

DEPTH	FRACTURES	WELL NO.	OHIO #8	x Gas Shows (initial)
		RUN NO.	11	* Samples Taken
		DATE	3/14/80	LITHOLOGIC DESCRIPTION
3349		Silty mudstone, olive black (5Y 2/1), with laminations of olive gray (5Y 4/1) in middle 1/3. Noncalcareous; no pyrite.		
3350		Silty mudstone, olive black (5Y 2/1) and dusky yellow green (5GY 5/2), in alternating thin beds; lower 1/3 laminated. Noncalcareous; no pyrite.		
3351		Silty mudstone, olive black (5Y 2/1) and dusky yellow green (5GY 5/2). Top 1/4 is (5GY 5/2); bottom 3/4 laminated with (5Y 2/1) and (5GY 5/2). Noncalcareous; no pyrite.		
3352		Silty mudstone, olive black (5Y 2/1) and dusky yellow green (5GY 5/2). Top 1/3 is (5Y 2/1), and bottom 2/3 is highly turbated with (5Y 2/1) and (5GY 5/2). Noncalcareous; no pyrite.		
3353		Silty mudstone and siltstone, olive black (5Y 2/1), dusky yellow green (5GY 5/2), and light olive gray (5Y 6/1). Top 1/4 is turbated, middle 1/3 thinly bedded. Siltstone bed at .8' is ripple laminated and slightly calcareous.		
3354		Silty mudstone, olive black (5Y 2/1) and dusky yellow green (5GY 5/2). Top 1/2 is (5Y 2/1), bottom 1/2 is turbated with (5Y 2/1) and (5GY 5/2).		
3355		Silty mudstone, olive black (5Y 2/1) and dusky yellow green (5GY 5/2). Top 3/4 is bioturbated; bottom 1/4 olive black (5Y 2/1), noncalcareous. * 3,355.56/.81 Juniata		
3356		Silty mudstone, dusky yellow green (5GY 5/2) and grayish green (5GY 6/1), highly turbated with burrows in top 1/2. Noncalcareous; no pyrite.		
3357		Silty mudstone, dusky yellow green (5GY 5/2) and grayish green (5GY 6/1), highly turbated with burrows. Bottom 1/2 siltstone concretions, light brownish gray (5YR 6/1), highly calcareous.		
3358		Silty mudstone, greenish gray (5GY 6/1) and olive black (5Y 2/1). Top 1/2 and bottom 1/4 highly turbated with burrows. Convolute pyrite stringer at .8'. Noncalcareous.		

DEPTH	FRACTURES	WELL NO. OHIO #8	x Gas Shows (initial)
		RUN NO. 11	* Samples Taken
		DATE 3/14/80	LITHOLOGIC DESCRIPTION
3359		Silty mudstone, greenish gray (5GY 6/1) and olive black (5Y 2/1). Highly turbated with burrows, noncalcareous; no pyrite.	
3360			
3361		Silty mudstone, greenish gray (5GY 6/1) and olive black (5Y 2/1), convolute pyrite at .9'.	
3362		Silty mudstone, olive black (5Y 2/1) and olive gray (5Y 4/1), laminated throughout. Convolute pyrite stringers in top 1/4, noncalcareous.	
3363		Silty mudstone, olive black (5Y 2/1) and olive gray (5Y 4/1). Top 1/2 is (5Y 2/1) with (5Y 4/1) laminations at .3'. Bottom 1/4 bioturbated, pyrite nodules at .9', noncalcareous.	
3364		Silty mudstone, olive black (5Y 2/1) and olive gray (5Y 4/1), laminated throughout. Noncalcareous; no pyrite.	
3365		Silty mudstone, light olive gray (5Y 6/1), greenish gray (5GY 6/1), and brownish black (5YR 2/1). Top 3/4 bioturbated; bottom 1/4 has disturbed thin beds, pyrite nodules. Noncalcareous.	
3366		Silty mudstone, light olive gray (5Y 6/1), greenish gray (5GY 6/1), and brownish black (5YR 2/1). Top 1/2 highly bioturbated; bottom 1/2 (5Y 2/1) noncalcareous; no pyrite.	
3367		Silty mudstone, olive black (5Y 2/1) and dusky yellow green (5GY 5/2). Top 7/8 is (5Y 2/1); bottom 1/8 is turbated with (5Y 2/1) and (5GY 5/2). Noncalcareous.	
3368		Silty mudstone, olive gray (5Y 4/1) and dusky yellow green (5GY 5/2); entire interval highly turbated, with burrows in bottom 1/2. Noncalcareous.	
		Silty mudstone, olive gray (5Y 4/1) and dusky yellow green (5GY 5/2). Top 1/2 highly turbated; bottom 1/2 laminated with (5GY 5/2) and (5Y 4/1). Noncalcareous.	

DEPTH	FRACTURES	WELL NO.	OHIO #8	x Gas Shows (initial)
		RUN NO.	11	* Samples Taken
		DATE	3/14/80	LITHOLOGIC DESCRIPTION
3369		Silty mudstone, olive gray (5Y 4/1) and dusky yellow green (5GY 5/2), laminated throughout, noncalcareous.		
3370		Silty mudstone, olive gray (5Y 4/1) and dusky yellow green (5GY 5/2). Laminated throughout, noncalcareous. * 3,370.21/.63 USGS		
3371		Silty mudstone, olive gray (5Y 4/1) and dusky yellow green (5GY 5/2). Laminated, noncalcareous, no pyrite.		
3372		Silty mudstone, olive gray (5Y 4/1) and dusky yellow green (5GY 5/2). Laminated, noncalcareous, no pyrite.		
3373		Silty mudstone, olive gray (5Y 4/1) and dusky yellow green (5GY 5/2). Top 3/4 laminated with (5Y 4/1) and 5GY 5/2). A band of dusky yellow green (5GY 5/2) at .8', pyrite nodules at base.		
3374		Silty mudstone, olive gray (5Y 4/1) and dusky yellow green (5GY 5/2), laminated throughout. Noncalcareous; no pyrite.		
3375		Silty mudstone, olive gray (5Y 4/1) and dusky yellow green (5GY 5/2), laminated throughout. Noncalcareous; no pyrite.		
3376		Silty mudstone, olive gray (5Y 4/1) and dusky yellow green (5GY 5/2), laminated throughout. Noncalcareous; no pyrite.		

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DEPTH	FRACTURES	WELL NO.	OHIO #8	x Gas Shows (initial)
		RUN NO.	12	* Samples Taken
		DATE	3/14/80	LITHOLOGIC DESCRIPTION
3376		Mudstone, greenish black (5GY 2/1), greenish gray (5GY 5/1), thickly laminated, thin bedded.		
3377		Same as above.		
3378		Mudstone and siltstone, thickly laminated to thin bedded, greenish gray (5GY 5/1), olive black (5Y 2/1).		
3379		Mudstone, greenish gray (5GY 5/1), olive black (5Y 2/1), thickly laminated to thin bedded; much pyrite is present as blebs.		
3380		Mudstone and siltstone, greenish gray (5GY 5/1), olive black (5Y 2/1), thickly laminated to thin bedded. Siltstone is ripple laminated and load cast. Pyrite lenses; siltstone is calcareous.		
3381		Mudstone and siltstone, thinly laminated to thin bedded, greenish gray (5GY 5/1), dark greenish gray (5GY 4/1), and olive black (5Y 2/1). Single siltstone bed is ripple laminated, load cast. Pyrite lenses.		
3382		Same as above.		
3383		Mudstone, dark greenish gray (5GY 3/1), greenish gray (5GY 5/1), thickly laminated to thin bedded. Dark greenish gray very predominant. Pyrite lenses.		
3384		Mudstone, dark greenish gray (5GY 4/1), greenish black (5GY 2/1), and light greenish gray (5GY 6/1), thickly laminated to thin bedded. Bio-turbated. Pyrite lens.		
3385		Mudstone, dark greenish gray (5GY 4/1), greenish black (5GY 2/1), and light olive gray (5Y 6/1), thickly laminated.		

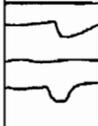
DEPTH	FRACTURES	WELL NO.	OHIO #8	x Gas Shows (initial)
		RUN NO.	12	* Samples Taken
		DATE	3/14/80	LITHOLOGIC DESCRIPTION
3386		Mudstone, dark greenish gray (5GY 4/1), greenish black (5GY 2/1), and greenish gray (5GY 6/1), thickly laminated to thin bedded. Calcareous throughout.		
3387				
3388		Mudstone and silty mudstone, greenish gray (5GY 6/1) and greenish black (5GY 2/1), thinly laminated to thick bedded. Calcareous; heavily bioturbated. Pyrite nodules. * 3,387.22/.55 Mound		
3389		Mudstone and siltstone, greenish gray (5GY 5/1) and greenish black (5GY 2/1), very light gray (N8), thickly laminated to thin bedded, bioturbated. Mudstone is calcareous.		
3390		Mudstone and siltstone, greenish gray (5GY 5/1), greenish black (5GY 2/1), and very light gray (N8), thickly laminated to thin bedded, bioturbated. Mudstone is calcareous.		
3391		Mudstone and silty mudstone, greenish gray (5GY 6/1), greenish black (5GY 2/1), thickly laminated to thin bedded. Bioturbated. Silty mudstone is calcareous.		
3392		Silty mudstone and mudstone, greenish gray (5GY 6/1) and greenish black (5GY 2/1), thickly laminated to thin bedded. Septarian nodule dominates silty mudstone interval; calcareous.		
3393		Mudstone, greenish gray (5GY 6/1) and greenish black (5GY 2/1), thickly laminated to thin bedded. Bioturbated.		
3394		Mudstone, greenish gray (5GY 6/1) and greenish black (5GY 2/1), thickly laminated to thin bedded. Bioturbated; upper interval very calcareous.		
3395		Mudstone, greenish black (5GY 2/1) and greenish gray (5GY 6/1), thickly laminated to thin bedded. Bioturbated. Pyrite lens; calcareous.		
		Mudstone, greenish gray (5GY 6/1), dark greenish gray (5GY 4/1), and light olive gray (5Y 6/1), thickly laminated to thin bedded.		

DEPTH	FRACTURES	WELL NO.	OHIO #8	x Gas Shows (initial)
		RUN NO.	12	* Samples Taken
		DATE	3/14/80	LITHOLOGIC DESCRIPTION
3396		Mudstone, greenish black (5GY 2/1), dark greenish gray (5GY 4/1), greenish gray (5GY 6/1), thickly laminated. Gradational colors. Bioturbated.		
3397		Mudstone, greenish black (5GY 2/1), dark greenish gray (5GY 4/1), greenish gray (5GY 6/1), thickly laminated. Gradational colors. Bioturbated. Pyrite occurs in thin laminations.		
3398		Mudstone, greenish black (5GY 2/1), dark greenish gray (5GY 4/1), greenish gray (5GY 6/1), thickly laminated. Gradational colors. Bioturbated. Pyrite occurs in thin laminations.		
3399		Mudstone, greenish black (5GY 2/1), dark greenish gray (5GY 4/1), greenish gray (5GY 6/1), thickly laminated. Gradational colors. Bioturbated. Pyrite occurs in thin laminations.		
3400		Mudstone, greenish black (5GY 2/1), dark greenish gray (5GY 4/1), and greenish gray (5GY 6/1), thickly laminated. Gradational colors except for a few beds. Bioturbated.		
3401		Mudstone, dark greenish gray (5GY 4/1), greenish black (5GY 2/1), and greenish gray (5GY 6/1), thickly laminated. Gradational colors.		
3402		Mudstone, greenish black (5GY 2/1), olive gray (5Y 4/1), and greenish gray (5GY 5/1), thickly laminated to thin bedded. Pyrite laminations.		
3403		Mudstone, dark greenish gray (5GY 4/1), greenish black (5GY 2/1), and light olive gray (5Y 6/1), thickly laminated to thin bedded. Bioturbated.		
3404		Mudstone and siltstone, greenish black (5GY 2/1), greenish gray (5GY 4/1), olive gray (5Y 4/1), and light olive gray (5Y 6/1), thinly laminated to thin bedded; bioturbated. Siltstone is cross laminated, load cast; slightly calcareous.		
3405		Mudstone and siltstone, greenish black (5GY 2/1), greenish gray (5GY 4/1), olive gray (5Y 4/1), and light olive gray (5Y 6/1), thinly laminated to thin bedded; bioturbated. Siltstone is cross laminated, load cast; slightly calcareous. * 3,405.37/.79 Juniata		

DEPTH	FRACTURES	WELL NO.	OHIO #8	x Gas Shows (initial)
		RUN NO.	12	* Samples Taken
		DATE	3/14/80	LITHOLOGIC DESCRIPTION
3406		Mudstone and siltstone, greenish gray (5GY 6/1), greenish black (5GY 2/1), dark greenish gray (5Y 4/1). Thickly laminated, bioturbated. Siltstone ripple laminated, load cast, scour surface.		
3407		Mudstone and siltstone, dark greenish gray (5GY 4/1), greenish black (5GY 2/1), greenish gray (5GY 6/1), and light olive gray (5Y 6/1), thinly laminated to thin bedded. Bioturbated; ripple laminated.		
3408		Mudstone and siltstone, greenish gray (5GY 6/1), light olive gray (5Y 6/1), and dark greenish gray (5GY 2/1), bioturbated. Siltstone is ripple laminated, load cast.		
3409		Mudstone and siltstone, greenish black (5GY 2/1), dark greenish gray (5GY 4/1), and light olive gray (5Y 6/1), thickly laminated to thin bedded. Pyrite flecks. Siltstone is ripple laminated.		
3410		Mudstone and siltstone, greenish black (5GY 2/1), dark greenish gray (5GY 4/1), and light olive gray (5Y 6/1), thickly laminated to thin bedded. Pyrite flecks. Siltstone is ripple laminated.		
3411		Mudstone and siltstone, greenish gray (5GY 6/1), dark greenish gray (5GY 4/1), thickly laminated to thin bedded. Siltstone shows scour surfaces; is calcareous. Bioturbated.		
3412		Mudstone, greenish gray (5GY 6/1), dark greenish gray (5GY 4/1), and greenish black (5GY 2/1), thickly laminated to thin bedded. Pyrite flecks; bioturbated.		
3413		Mudstone, greenish gray (5GY 6/1), dark greenish gray (5GY 4/1), and greenish black (5GY 2/1), thickly laminated to thin bedded. Pyrite flecks; bioturbated.		
3414		Mudstone and siltstone, greenish gray (5GY 4/1), greenish black (5GY 2/1), and light gray (N7), thickly laminated to thin bedded; bioturbated. Siltstone shows scour surfaces, ripple laminations.		
3415		Mudstone and siltstone, greenish gray (5GY 6/1), greenish black (5GY 2/1), and light gray (N7).		

DEPTH	FRACTURES	WELL NO.	OHIO #8	x Gas Shows (initial)
		RUN NO.	12	* Samples Taken
		DATE	3/14/80	LITHOLOGIC DESCRIPTION
3416		Mudstone and siltstone, greenish gray (5GY 6/1), dark greenish gray (5GY 4/1), greenish black (5GY 5/1), and very light gray (N8), thickly laminated to thin bedded. Indurated laminations, calcareous siltstone.		
3417		Mudstone and siltstone, greenish gray (5GY 6/1), dark greenish gray (5GY 4/1), greenish black (5GY 5/1), and very light gray (N8), thickly laminated to thin bedded. Indurated laminations, calcareous siltstone.		
3418		Mudstone and siltstone, greenish gray (5GY 6/1), dark greenish gray (5GY 4/1), greenish black (5GY 5/1), and very light gray (N8), thickly laminated to thin bedded. Indurated laminations, calcareous siltstone.		
3419		Mudstone and siltstone, greenish gray (5GY 6/1), dark greenish gray (5GY 4/1), greenish black (5GY 5/1), and very light gray (N8), thickly laminated to thin bedded. Indurated laminations, calcareous siltstone.		
3420		Mudstone and siltstone, greenish gray (5GY 6/1), dark greenish gray (5GY 4/1), greenish black (5GY 5/1), and very light gray (N8), thickly laminated to thin bedded. Indurated laminations, calcareous siltstone.		
3421		Mudstone, dark greenish gray (5GY 4/1), greenish black (5GY 2/1), thickly laminated to thin bedded. Slightly bioturbated; pyrite nodule. * 3,420.30/.71 USGS		
3422		Mudstone, dark greenish gray (5GY 4/1), greenish black (5GY 2/1), thickly laminated to thin bedded. Slightly bioturbated; pyrite nodule.		
3423		Mudstone, greenish gray (5GY 6/1), dark greenish gray (5GY 4/1), and greenish black (5GY 2/1), thickly laminated to thin bedded. Bioturbated.		
3424		Mudstone, dark greenish gray (5GY 4/1), greenish gray (5GY 6/1), greenish black (5GY 2/1), and light gray (N7), thinly laminated to thin bedded. Bioturbated; cut and fill (?).		
3425		Mudstone, dark greenish gray (5GY 4/1), greenish gray (5GY 6/1), greenish black (5GY 2/1), and light gray (N7), thinly laminated to thin bedded. Bioturbated; cut and fill (?). Siltstone is present.		
		Mudstone, dark greenish gray (5GY 4/1), greenish gray (5GY 6/1), greenish black (5GY 2/1), and light gray (N7), thinly laminated to thin bedded. Bioturbated; cut and fill (?). Concretion is present.		
		<i>concretion</i>		

DEPTH	FRACTURES	WELL NO.	OHIO #8	x Gas Shows (initial)
		RUN NO.	12	* Samples Taken
		DATE	3/14/80	LITHOLOGIC DESCRIPTION
3426		Mudstone, greenish gray (5GY 6/1), dark greenish gray (5GY 4/1), and light olive gray (5Y 6/1), thinly laminated to thin bedded. Very calcareous.		
3427		Mudstone, greenish gray (5GY 6/1), dark greenish gray (5GY 4/1), and greenish black (5GY 2/1), thickly laminated to thin bedded. Slightly bioturbated.		
3428		Mudstone, greenish gray (5GY 6/1), dark greenish gray (5GY 4/1), and greenish black (5GY 2/1), thickly laminated to thin bedded. Slightly bioturbated.		
3429		Mudstone, olive gray (5Y 4/1), dark greenish gray (5GY 4/1), and greenish black (5GY 2/1), thickly laminated to thin bedded. Bioturbated; pyrite.		
3430		Mudstone, olive gray (5Y 4/1), dark greenish gray (5GY 4/1), and greenish black (5GY 2/1), thickly laminated to thin bedded. Bioturbated; pyrite. Silty lens, light olive gray (5Y 6/1).		
3431		Mudstone and siltstone, olive gray (5Y 4/1), olive black (5Y 2/1). Siltstone is ripple laminated, load cast.		
3432		Mudstone, olive black (5Y 2/1), olive gray (5Y 4/1).		
3433		Mudstone and siltstone. Siltstone is ripple laminated and load cast.		
3434		Mudstone, olive gray (5Y 4/1), olive black (5Y 2/1), bioturbated.		
3435				

DEPTH	FRACTURES	WELL NO.	OHIO #8	x Gas Shows (initial)
		RUN NO.	13	* Samples Taken
		DATE	3/15/80	LITHOLOGIC DESCRIPTION
3434				
3435				Mudstone, greenish gray (5GY 6/1) and olive black (5Y 2/1), thickly laminated to thin bedded. Bioturbated. Two pyrite lenses, slightly calcareous edges.
3436				Mudstone, greenish gray (5GY 6/1) and olive black (5Y 2/1), thickly laminated to thin bedded. Bioturbated. Two pyrite lenses, slightly calcareous edges. * 3,436.12/.50 Terra Tek
3437				Mudstone, greenish gray (5GY 6/1) and olive black (5Y 2/1), thickly laminated to thin bedded. Bioturbated. Two prominent, slightly calcareous pyrite lenses. * 3,437.15/.63 Mound
3438				Mudstone, greenish gray (5GY 6/1) and olive black (5Y 2/1), thickly laminated to thin bedded. Noncalcareous pyrite lenses; slightly bioturbated.
3439				Mudstone and siltstone, olive gray (5Y 4/1), olive black (5Y 2/1), and light olive gray (5Y 6/1), thinly laminated to thin bedded, bioturbated. Siltstone is cross laminated, load cast.
3440				Mudstone and siltstone, olive gray (5Y 5/1), olive black (5Y 2/1), and light gray (N7), thinly laminated to thin bedded. Mudstone is bioturbated. A few siltstone laminations.
3441				Mudstone and siltstone, olive black (5Y 2/1), olive gray (5Y 4/1), and light olive gray (5Y 6/1), thinly laminated to thin bedded; bioturbated. Siltstone is cross laminated, calcareous.
3442				Mudstone and siltstone, olive black (5Y 2/1), olive gray (5Y 4/1), and light olive gray (5Y 6/1), thinly laminated to thin bedded; bioturbated. Siltstone is cross laminated, calcareous. Pyrite disseminated grains and laminations.
3443				Mudstone, olive black (5Y 2/1) and olive gray (5Y 2/1), thickly laminated to thin bedded. Gradational colors in dark zones.

DEPTH	FRACTURES	WELL NO.	OHIO #8	x Gas Shows (initial)
		RUN NO.	13	* Samples Taken
		DATE	3/15/80	LITHOLOGIC DESCRIPTION
3444		Mudstone, olive black (5Y 2/1) and olive gray (5Y 2/1), thickly laminated to thin bedded. Gradational colors in dark zones. Pyrite nodule.		
3445		Mudstone, olive gray (5Y 5/1) and olive black (5Y 2/1), thickly laminated to thin bedded. Bioturbated.		
3446		Mudstone and siltstone, olive gray (5Y 5/1), olive black (5Y 2/1), and light greenish gray (5GY 7/1). Siltstone is ripple laminated and load cast. Pyrite laminations. * 3,447.17/.57 Mound		
3447		Mudstone, olive black (5Y 2/1) and olive gray (5Y 4/1), thickly laminated to thin bedded. Gradational colors within light and dark zones. Bioturbated.		
3448		Mudstone, olive black (5Y 2/1) and olive gray (5Y 4/1), thickly laminated to thin bedded. Gradational colors within light and dark zones. Bioturbated.		
3449		Mudstone, olive black (5Y 2/1) and olive gray (5Y 4/1), thickly laminated to thin bedded. Gradational colors within light and dark zones. Bioturbated.		
3450		Mudstone, olive gray (5Y 5/1) and olive black (5Y 2/1), thickly laminated to thin bedded. Bioturbated. Pyrite lens and bleb.		
3451		Mudstone, olive gray (5Y 5/1) and olive black (5Y 2/1), thinly laminated to thin bedded. Cross laminations (?) and very bioturbated. Pyrite flecks.		
3452		Mudstone, olive gray (5Y 5/1) and olive black (5Y 2/1), thinly laminated to thin bedded. Cross laminations (?) and very bioturbated. Pyrite flecks.		
3453		Mudstone, olive gray (5Y 5/1), olive black (5Y 2/1), thickly laminated to thin bedded; bioturbated. Gradational colors, pyrite laminations.		

x

DEPTH	FRACTURES	WELL NO.	OHIO #8	x Gas Shows (initial)
		RUN NO.	13	* Samples Taken
		DATE	3/15/80	LITHOLOGIC DESCRIPTION
3454		Mudstone, olive gray (5Y 5/1), olive black (5Y 2/1), thickly laminated to thin bedded; bioturbated. Gradational colors, pyrite laminations.		
3455		Mudstone, olive black (5Y 2/1) and olive gray (5Y 4/1), thickly laminated to thin bedded. Olive black predominant; gradational colors. * 3,455.11/.44 Juniata		
3456		Mudstone, olive black (5Y 2/1) and olive gray (5Y 4/1), thickly laminated to thin bedded. Olive black predominant; gradational colors. Pyrite grains.		
3457		Mudstone, olive gray (5Y 5/1) and olive black (5Y 2/1), thinly laminated to thin bedded. Pyrite flecks. Silty mudstone zone, light olive gray (5Y 6/1). * 3,457.17/.56 Mound		
3458		Mudstone, olive black (5Y 2/1) and olive gray (5Y 4/1), cross laminations (?) and bioturbated. Gradational colors.		
3459		Mudstone, olive black (5Y 2/1) and olive gray (5Y 4/1), cross laminated (?) and bioturbated. Gradational colors.		
3460		Mudstone, olive gray (5Y 5/1) and olive black (5Y 2/1), thickly laminated to thin bedded.		
3461		Mudstone, olive gray (5Y 5/1) and olive black (5Y 2/1), thickly laminated to thin bedded.		
3462		Silty mudstone and mudstone, olive gray (5Y 5/1) and olive black (5Y 2/1), thickly laminated to thin bedded.		
3463		Silty mudstone and mudstone, olive gray (5Y 5/1) and olive black (5Y 2/1), thickly laminated to thin bedded. Bioturbated.		

DEPTH	FRACTURES	WELL NO.	OHIO #8	x Gas Shows (initial)
		RUN NO.	13	* Samples Taken
		DATE	3/15/80	LITHOLOGIC DESCRIPTION
3464		Silty mudstone, greenish gray (5GY 5/1) and olive black (5Y 2/1), thickly laminated to thin bedded. Bioturbated; pyrite flecks. Greenish gray predominates.		
3465		Silty mudstone and mudstone, greenish gray (5GY 5/1) and olive black (5Y 2/1), thickly laminated to thin bedded. Pyrite flecks.		
3466		Mudstone, silty mudstone, and siltstone, olive black (5Y 2/1), olive gray (5Y 5/1), and light gray (N7), thickly laminated to thin bedded. Bioturbated. Siltstone is cross laminated and slightly calcareous. * 3,466.44/.85 Mound		
3467		Mudstone and silty mudstone, olive gray (5Y 5/1) and olive black (5Y 2/1), thinly laminated to thin bedded. Pyrite lens; slightly calcareous. Siltstone is slightly calcareous.		
3468		Mudstone and silty mudstone, olive black (5Y 2/1) and olive gray (5Y 5/1), thinly laminated to thin bedded. Bioturbated; disseminated pyrite. Silty mudstone is calcareous.		
3469		Silty mudstone, mudstone and siltstone, olive gray (5Y 5/1), olive black (5Y 2/1), and light gray (N7), thinly laminated to thin bedded. Two concretionary lenses (greenish gray); pyrite in concretionary band. Calcareous throughout. * 3,469.37/.73 USGS		
3470		Mudstone, silty mudstone, and siltstone, olive gray (5Y 5/1), olive black (5Y 2/1), and light gray (N7), thinly laminated to thin bedded; bioturbated. Disseminated greenish pyrite; calcareous throughout.		
3471		Mudstone, olive black (5Y 2/1), olive gray (5Y 4/1), thickly laminated to thin bedded. Gradational colors; olive black predominates. Calcareous pyrite lens. * 3,471.09/.46 Terra Tek		
3472		Silty mudstone, mudstone, and siltstone, olive gray (5Y 4/1), olive black (5Y 2/1), and light olive gray (5Y 6/1), thinly laminated to thin bedded. Slightly bioturbated. Siltstone is cross laminated, load cast. Calcareous pyrite lens.		
3473		Mudstone and silty mudstone, olive black (5Y 2/1), olive gray (5Y 4/1), thinly laminated to thin bedded; bioturbated. Silty mudstone is slightly calcareous.		

DEPTH	FRACTURES	WELL NO.	OHIO #8	x Gas Shows (initial)
		RUN NO.	13	* Samples Taken
		DATE	3/15/80	LITHOLOGIC DESCRIPTION
3474		Mudstone and silty mudstone, olive black (5Y 2/1) and olive gray (5Y 4/1), thinly laminated to thin bedded; bioturbated. Silty mudstone is slightly calcareous.		
3475		Silty mudstone and mudstone, olive gray (5Y 4/1) and olive black (5Y 2/1), thickly laminated to thin bedded. Large amounts of pyrite (lenses and blebs). Silty mudstone calcareous, slightly bioturbated.		
3476		Silty mudstone and mudstone, olive gray (5Y 5/1) and olive black (5Y 2/1), thickly laminated to thin bedded. Large amounts pyrite (blebs, lenses). Silty mudstone is calcareous; slightly bioturbated.		
3477		Silty mudstone and mudstone, greenish gray (5GY 6/1) and olive black (5Y 2/1), thinly laminated to thin bedded; bioturbated. Silty mudstone is calcareous.		
3478		* 3,477.27/.68 Mound		
3479		Silty mudstone and mudstone, greenish gray (5GY 6/1) and olive black (5Y 2/1), thinly laminated to thin bedded; bioturbated. Silty mudstone is calcareous.		
3480		Silty mudstone, light olive gray (5Y 6/1), dark greenish gray (5GY 4/1), and light gray (N7). Concretionary calcareous band (light gray) and siltstone blebs. Thickly laminated to thin bedded.		
3481		Silty mudstone and mudstone, greenish gray (5GY 6/1) and olive black (5Y 2/1), thinly laminated to thin bedded; bioturbated. Silty mudstone is calcareous.		
3482		Silty mudstone and mudstone, greenish gray (5GY 6/1) and olive black (5Y 2/1), thinly laminated to thin bedded. Silty mudstone is calcareous. Very bioturbated.		
3483		Silty mudstone and mudstone, greenish gray (5GY 6/1) and olive black (5Y 2/1), thinly laminated to thin bedded; bioturbated. Silty mudstone is calcareous.		
		Silty mudstone and mudstone, greenish gray (5GY 6/1) and olive black (5Y 2/1), thinly laminated to thin bedded; bioturbated. Calcareous in zones.		

DEPTH	FRACTURES	WELL NO.	OHIO #8	x Gas Shows (initial)
		RUN NO.	13	* Samples Taken
		DATE	3/15/80	LITHOLOGIC DESCRIPTION
3484		Silty mudstone and mudstone, greenish gray (5GY 6/1) and olive black (5Y 2/1), thinly laminated to thin bedded; bioturbated. Calcareous in zones.		
3485		Silty mudstone and mudstone, greenish gray (5GY 6/1) and greenish black (5GY 2/1), and light gray (N7), thickly laminated to thin bedded. Siltstone blebs; bioturbated.		
3486		Silty mudstone and mudstone, greenish gray (5GY 6/1), greenish black (5GY 2/1) and light gray (N7), thickly laminated to thin bedded. Siltstone blebs; bioturbated.		
3487		Silty mudstone, mudstone, and siltstone, olive gray (5Y 5/1), olive black (5Y 2/1), and light gray (N7), thinly laminated to thin bedded. Bioturbated. Concretionary zone, calcareous siltstone, light olive gray (5Y 6/1). Siltstone blebs and cross laminations. * 3,487.25/.57 Mound		
3488		Silty mudstone and mudstone, olive gray (5Y 5/1), olive black (5Y 2/1), and light gray (N7), thinly laminated to thin bedded. Siltstone blebs; bioturbated. Siltstone cross laminations, load casts.		
3489		Silty mudstone and mudstone, olive gray (5Y 5/1), olive black (5Y 2/1), thinly laminated to thin bedded; bioturbated. Gradational color. Concretionary band is calcareous, greenish gray (5GY 6/1).		
3490		Silty mudstone and mudstone, greenish gray (5GY 6/1), olive black (5Y 2/1), and light olive gray (5Y 6/1). Calcareous zone (light olive gray).		
3491		Silty mudstone and mudstone, greenish gray (5GY 6/1), olive black (5Y 2/1), and light olive gray (5Y 6/1). Calcareous concretionary band, light gray (N7).		
3492		Mudstone, silty mudstone, and siltstone, greenish gray (5GY 6/1), olive gray (5Y 4/1), olive black (5Y 2/1), and light gray (N7), thinly laminated to thin bedded. Siltstone is cross laminated, slumped. Silty mudstone is calcareous.		

DEPTH	FRACTURES	WELL NO.	OHIO #8	x Gas Shows (initial)
		RUN NO.	14	* Samples Taken
		DATE	3/16/80	LITHOLOGIC DESCRIPTION
3493		Silty mudstone and mudstone, greenish gray (5GY 6/1) and olive black (5Y 2/1), thickly laminated to thin bedded. Very bioturbated. Pyrite burrows.		
3494		Silty mudstone and mudstone, greenish gray (5GY 6/1) and olive black (5Y 2/1), thickly laminated to thin bedded. Very bioturbated.		
3495		Silty mudstone and mudstone, greenish gray (5GY 6/1) and olive black, thickly laminated to thin bedded. Very bioturbated.		
3496		Silty mudstone and mudstone, greenish gray (5GY 6/1) and olive black (5Y 2/1), thickly laminated to thin bedded. Very bioturbated.		
3497		Silty mudstone and mudstone, greenish gray (5GY 6/1) and olive black (5Y 2/1), thickly laminated to thin bedded. Very bioturbated. * 3,497.28/.71 Mound		
3498		Silty mudstone and mudstone, greenish gray (5GY 6/1) and olive black (5Y 2/1), thickly laminated to thin bedded. Bioturbated.		
3499		Silty mudstone and mudstone, greenish gray (5GY 6/1) and olive black (5Y 2/1), thickly laminated to thin bedded. Bioturbated; single pyrite burrow.		
3500		Silty mudstone and mudstone, greenish gray (5GY 6/1) and olive black (5Y 2/1), thickly laminated to thin bedded. Very bioturbated.		
3401		Mudstone and silty mudstone, olive black (5Y 2/1) and greenish gray (5GY 6/1), thickly laminated to thin bedded. Concretionary zone, light greenish gray (5GY 8/1), calcareous. Very bioturbated.		
3502		Mudstone and silty mudstone, olive black (5Y 2/1) and greenish gray (5GY 6/1), thickly laminated to thin bedded. Several small concretionary zones. Very bioturbated.		

DEPTH	FRACTURES	<p>WELL NO. OHIO #8</p> <p>RUN NO. 14</p> <p>DATE 3/16/80</p> <p style="text-align: right;">x Gas Shows (initial) * Samples Taken</p> <p style="text-align: center;">LITHOLOGIC DESCRIPTION</p>
3503		Silty mudstone and siltstone, greenish gray (5GY 6/1) and olive black (5Y 2/1), thickly laminated to thin bedded. Bioturbated. Siltstone is very calcareous.
3504		Silty mudstone and siltstone, greenish gray (5GY 7/1) and olive black (5Y 2/1), thickly laminated to thin bedded. Bioturbated. Siltstone is very calcareous.
3505		Silty mudstone and mudstone, greenish gray (5GY 6/1) and olive black (5Y 2/1), thickly laminated to very thin bedded. Bioturbated. * 3,505.08/.42 Juniata
3506		Silty mudstone and mudstone, greenish gray (5GY 6/1) and olive black (5Y 2/1), thickly laminated to thin bedded. Bioturbated.
3507		Silty mudstone and mudstone, greenish gray (5GY 6/1) and olive black (5Y 2/1), thickly laminated to thin bedded; bioturbated. Slightly calcareous throughout. * 3,507.42/.83 Mound
3708		Silty mudstone and mudstone, greenish gray (5GY 6/1), olive black (5Y 2/1), and yellowish gray (5Y 8/1), thickly laminated to thin bedded. Bioturbated. Yellow gray is calcareous.
3709		Silty mudstone and mudstone, greenish gray (5GY 6/1), olive black (5Y 2/1), and yellowish gray (5Y 8/1), thickly laminated to thin bedded.
3510		Mudstone and silty mudstone, olive black (5Y 2/1) and greenish gray (5GY 6/1), thinly laminated to thin bedded; bioturbated. Pyrite burrows.
3511		Mudstone and silty mudstone, olive black (5Y 2/1) and greenish gray (5GY 6/1), thinly laminated to thin bedded; bioturbated. Pyrite burrows. Predominantly silty mudstone, greenish gray (5GY 6/1).
3512		Silty mudstone and mudstone, greenish gray (5GY 6/1), olive black (5Y 2/1), and yellowish gray (5Y 8/1), thickly laminated to thin bedded. Yellowish gray is calcareous.

DEPTH	FRACTURES	WELL NO.	OHIO #8	x Gas Shows (initial)
		RUN NO.	14	* Samples Taken
		DATE	3/16/80	LITHOLOGIC DESCRIPTION
3513		Silty mudstone and mudstone, greenish gray (5GY 6/1) and olive black (5Y 2/1), thickly laminated to thin bedded.		
3514		Silty mudstone, mudstone, and siltstone, greenish gray (5GY 6/1), olive black (5Y 2/1), and yellowish gray (5Y 8/1). Thickly laminated to thin bedded; yellowish gray siltstone is load cast. Remaining yellowish gray is concretionary, calcareous.		
3515		Silty mudstone, greenish gray (5GY 6/1), dark greenish gray (5G 4/1), and yellowish gray (5Y 8/1), thickly laminated to thin bedded. Yellowish gray is concretionary; calcareous zone .2' thick.		
3516		Silty mudstone, greenish gray (5GY 6/1), olive black (5Y 2/1), yellowish gray (5Y 8/1), thickly laminated to thin bedded. Very bioturbated. Yellowish gray is concretionary; calcareous zone is <.1'.		
3517		Silty mudstone, greenish gray (5GY 6/1), yellowish gray (5Y 8/1), and olive black (5Y 2/1). Yellowish gray is concretionary; calcareous zone is .3' thick. Also, lower .75' is calcareous. * 3,517.27/.67 Mound		
3518		Silty mudstone, greenish gray (5GY 6/1), yellowish gray (5Y 8/1), and olive black (5Y 2/1). Yellowish gray is concretionary, .1' thick. Entire interval is calcareous.		
3519		Silty mudstone, greenish gray (5GY 6/1), yellowish gray (5Y 8/1), and olive black (5Y 2/1). Yellowish gray silty mudstone predominates but is slightly calcareous.		
3520		Mudstone and silty mudstone, olive black (5Y 2/1), greenish gray (5GY 6/1), and yellowish gray (5Y 8/1), thinly laminated to thin bedded. Very bioturbated. Yellowish gray is calcareous. * 3,520.25/.64 USGS		
3521		Mudstone and silty mudstone, olive black (5Y 2/1) and greenish gray (5GY 6/1), thinly laminated to thin bedded. Very bioturbated.		
3522		Silty mudstone and mudstone, greenish gray (5GY 6/1), light greenish gray (5GY 8/1), and olive black (5Y 2/1), thinly laminated to thin bedded. Bioturbated.		

DEPTH	FRACTURES	WELL NO.	OHIO #8	x Gas Shows (initial)
		RUN NO.	14	* Samples Taken
		DATE	3/16/80	LITHOLOGIC DESCRIPTION
3523		Silty mudstone and mudstone, greenish gray (5GY 6/1), light greenish gray (5GY 8/1), and olive black (5Y 2/1), thinly laminated to thin bedded. Bioturbated; with pyrite nodules and lenses.		
3524		Silty mudstone and mudstone, greenish gray (5GY 6/1), light greenish gray (5GY 8/1), and olive black (5Y 2/1), thinly laminated to thin bedded. Bioturbated; no pyrite.		
3525		Silty mudstone and mudstone, greenish gray (5GY 6/1), light greenish gray (5GY 8/1), and olive black (5Y 2/1), thickly laminated to thin bedded. Bioturbated; pyrite nodules.		
3526		Silty mudstone and mudstone, greenish gray (5GY 6/1), light greenish gray (5GY 8/1), and olive black (5Y 2/1), thickly laminated to thin bedded. Bioturbated; pyrite nodules.		
3527		Silty mudstone and mudstone, greenish gray (5GY 6/1), light greenish gray (5GY 8/1), and olive black (5Y 2/1), thickly laminated to thin bedded. Bioturbated; pyrite nodules. * 3,527.45/.80 Mound		
3528		Mudstone and silty mudstone, olive black (5Y 2/1) and greenish gray (5GY 6/1), thickly laminated to thin bedded. Bioturbated. Pyrite fecal pellet ; calcareous edges.		
3529		Silty mudstone and mudstone, greenish gray (5GY 6/1), light greenish gray (5GY 8/1), and olive black (5Y 2/1), thickly laminated to thin bedded. Bioturbated; pyrite burrows. Silty laminations, calcareous.		
3530		Silty mudstone and mudstone, greenish gray (5GY 6/1), light greenish gray (5GY 8/1), and olive black (5Y 2/1), thickly laminated to thin bedded. Bioturbated; pyrite burrows. Silty laminations, calcareous.		
3531		Silty mudstone, light greenish gray (5GY 8/1), dark greenish gray (5GY 4/1), and yellowish gray (5Y 8/1). Bioturbated. Yellowish gray is a concretionary, calcareous zone.		
3532		Silty mudstone and mudstone, greenish gray (5GY 6/1), light greenish gray (5GY 8/1), and olive black (5Y 2/1), thickly laminated to thin bedded. Bioturbated.		

DEPTH	FRACTURES	WELL NO.	OHIO #8	x Gas Shows (initial)
		RUN NO.	14	* Samples Taken
		DATE	3/16/80	LITHOLOGIC DESCRIPTION
3533		Silty mudstone and mudstone, greenish gray (5GY 6/1), light greenish gray (5GY 8/1), and olive black (5Y 2/1), thickly laminated to thin bedded; bioturbated. Increasing olive black mudstone content. Silty laminations with load cast.		
3534		Mudstone and silty mudstone, olive black (5Y 2/1) and greenish gray (5GY 6/1), thickly laminated to thin bedded. Bioturbated; pyrite burrows.		
3535		Mudstone and silty mudstone, olive black (5Y 2/1) and greenish gray (5GY 6/1), thickly laminated to thin bedded. Bioturbated; pyrite burrows.		
3536		Mudstone and silty mudstone, olive black (5Y 2/1) and greenish gray (5GY 6/1), thickly laminated to thin bedded. Bioturbated; pyrite burrows. Calcareous at 3,537.6'.		
3537		Silty mudstone, yellowish gray (5Y 8/1), and dark greenish gray (5GY 4/1), thin bedded. Yellowish gray is calcareous, concretionary. Entire interval is calcareous. * 3,537.15/.50 Mound		
3538		Silty mudstone, yellowish gray (5Y 8/1), and dark greenish gray (5GY 4/1), thin bedded. Yellowish gray is calcareous, concretionary. Entire interval is calcareous. Concretionary zone is .1'.		
3539		Silty mudstone and siltstone, dark greenish gray (5GY 4/1) and yellowish gray (5Y 8/1), thinly laminated to thin bedded. Siltstone is cross laminated, load cast, and is calcareous. Lower 1/2' is calcareous.		
3540		Silty mudstone and siltstone, dark greenish gray (5GY 4/1), olive black (5Y 2/1), and yellowish gray (5Y 8/1), thinly laminated to thin bedded. Siltstone is cross laminated, load cast, and calcareous. Interval is calcareous.		
3541		Silty mudstone, mudstone, and siltstone, greenish gray (5GY 6/1), olive black (5Y 2/1), yellowish gray (5Y 8/1), thickly laminated to thin bedded. Bioturbated; siltstone is load cast.		
3542		Silty mudstone and mudstone, greenish gray (5GY 6/1), dark greenish gray (5G 4/1), and olive black (5Y 2/1), thickly laminated to thin bedded. Lower 3/4 all silty mudstone, calcareous.		

DEPTH	FRACTURES	WELL NO.	OHIO #8	x Gas Shows (initial)
		RUN NO.	14	* Samples Taken
		DATE	3/16/80	LITHOLOGIC DESCRIPTION
3543		Silty mudstone and siltstone, dark greenish gray (5G 4/1) and yellowish gray (5Y 8/1), thickly laminated to thin bedded. Siltstone is very calcareous, some is load cast. Entire interval is calcareous.		
3544		Silty mudstone and siltstone, dark greenish gray (5G 4/1) and yellowish gray (5Y 8/1), thickly laminated to thin bedded. Siltstone is very calcareous, some is load cast. Entire interval is very calcareous.		
3545		Silty mudstone and siltstone, dark greenish gray (5G 4/1) and yellowish gray (5Y 8/1), thickly laminated to thin bedded. Siltstone is very calcareous. Silty mudstone is noncalcareous.		
3546		Silty mudstone and siltstone, dark greenish gray (5G 4/1) and yellowish gray (5Y 8/1), thickly laminated to thin bedded. Siltstone is very calcareous; silty mudstone is noncalcareous.		
3547		Silty mudstone and mudstone, greenish gray (5GY 6/1) and olive black (5Y 2/1), thickly laminated to thin bedded. Bioturbated. Last .2' is calcareous. * 3,547.15/.55 Mound		
3548		Silty mudstone and siltstone (5G 4/1) and yellowish gray (5Y 8/1), thickly laminated to thin bedded. One siltstone unit is fragmented bedding. Entire interval is calcareous.		
3549		Silty mudstone and siltstone (5G 4/1) and yellowish gray (5Y 8/1), thickly laminated to thin bedded. One siltstone unit is fragmented bedding. Entire interval is calcareous; bioturbated.		
3550		Mudstone, greenish gray (5GY 6/1) and olive black (5Y 2/1), thickly laminated to thin bedded; bioturbated.		
3551		Silty mudstone and mudstone, greenish gray (5GY 6/1) and olive black (5Y 2/1), thickly laminated to thin bedded; bioturbated.		
3552		Silty mudstone and mudstone, greenish gray (5GY 6/1) and olive black (5Y 2/1), thickly laminated to thin bedded; bioturbated.		

DEPTH	FRACTURES	WELL NO.	OHIO #8	x Gas Shows (initial)
		RUN NO.	15	* Samples Taken
		DATE	3/16/80	LITHOLOGIC DESCRIPTION
3552		Silty mudstone, greenish gray (5G 6/1), and olive black (5Y 2/1), thickly laminated to thin bedded. Bioturbated; calcareous.		
3553		Silty mudstone, greenish gray (5G 6/1) and olive black (5Y 2/1), thickly laminated to thin bedded. Bioturbated; calcareous in zones.		
3554		Silty mudstone, greenish gray (5G 6/1) and olive black (5Y 2/1), thickly laminated to thin bedded; very calcareous.		
3555		Silty mudstone, greenish gray (5G 6/1) and olive black (5Y 2/1), thickly laminated to thin bedded. Very calcareous; bioturbated. * 3,555.34/.61 Juniata		
3556		<i>mineralized calcite</i>		
3557		Silty mudstone and mudstone, greenish gray (5G 6/1) and olive black (5Y 2/1), thickly laminated to thin bedded. Very bioturbated. Definite light and dark zones. Silty mudstone is very calcareous. Yellowish gray (5Y 8/1) is a concretionary zone.		
3558		Silty mudstone, greenish gray (5G 6/1), dark greenish gray (5G 4/1), and yellowish gray (5Y 8/1), thickly laminated to thin bedded. Gradational colors. Yellowish gray is concretionary, calcareous; entire interval is very calcareous. * 3,557.43/.76 Mound		
3559		Silty mudstone, greenish gray (5G 6/1), dark greenish gray (5G 4/1), and yellowish gray (5Y 8/1), thickly laminated to thin bedded. Gradational colors. Yellow gray is concretionary, calcareous. Entire interval is very calcareous. Trace - silty mudstone, olive black (5Y 2/1), calcareous in zones.		
3560		Silty mudstone, greenish gray (5G 6/1), dark greenish gray (5G 4/1), and yellowish gray (5Y 8/1), thickly laminated to thin bedded. Gradational colors. Yellowish gray is concretionary, calcareous; entire interval very calcareous. Trace - silty mudstone, olive black (5Y 2/1), bioturbated. Calcareous in zones.		
3561		Silty mudstone, greenish gray (5G 6/1), yellowish gray (5Y 8/1), and olive black (5Y 2/1), thickly laminated to thin bedded. Very calcareous throughout. <i>mineralized calcite</i>		

DEPTH	FRACTURES	WELL NO.	OHIO #8	x Gas Shows (initial)
		RUN NO.	15	* Samples Taken
		DATE	3/16/80	LITHOLOGIC DESCRIPTION
3562		Silty mudstone, and mudstone, light greenish gray (5G 8/1), greenish gray (5G 6/1), and olive black (5Y 2/1), thickly laminated to thin bedded. Bioturbated; pyrite burrows. Silty mudstone is calcareous.		
3563		Silty mudstone, greenish gray (5G 6/1), yellowish gray (5Y 8/1), thickly laminated to thin bedded. Load casts; calcareous throughout.		
3564		Silty mudstone, siltstone, greenish gray (5G 6/1), olive black (5Y 2/1), and yellowish gray (5Y 8/1), thickly laminated to thin bedded. Load casts; calcareous throughout.		
3565		Silty mudstone and siltstone, greenish gray (5GY 6/1), yellowish gray (5Y 8/1), and olive black (5Y 2/1), thickly laminated to thin bedded. Siltstone shows load casts; calcareous to very calcareous.		
3566		Silty mudstone and siltstone, greenish gray (5GY 6/1), yellowish gray (5Y 8/1), and olive black (5Y 2/1), thickly laminated to thin bedded. Siltstone shows load casts; calcareous zones.		
3567		Silty mudstone and siltstone, greenish gray (5GY 6/1), yellowish gray (5Y 8/1), and olive black (5Y 2/1), thickly laminated to thin bedded. Siltstone shows load casts; calcareous to very calcareous. * 3,567.11/.53 Mound		
3568		Silty mudstone and siltstone, greenish gray (5GY 6/1), yellowish gray (5Y 8/1), and olive black (5Y 2/1), thickly laminated to thin bedded. Siltstone is load cast; very calcareous.		
3569		Silty mudstone and mudstone, greenish gray (5GY 6/1), very light gray (N8), and olive black (5Y 2/1), thickly laminated to thin bedded. Bioturbated; silty mudstone is calcareous.		
3570		Silty mudstone, siltstone, and mudstone, greenish gray (5GY 6/1), olive black (5Y 2/1), and yellowish gray (5Y 8/1), thinly laminated to thin bedded. Bioturbated; siltstone and silty mudstone is calcareous. Pyrite laminations. * 3,770.16/.46 USGS		
3571		Silty mudstone, siltstone, and mudstone, greenish gray (5GY 6/1), olive black (5Y 2/1), and yellowish gray (5Y 8/1), thinly laminated to thin bedded. Siltstone and silty mudstone is calcareous; pyrite burrows.		

DEPTH	FRACTURES	WELL NO.	OHIO #8	x Gas Shows (initial)
		RUN NO.	15	* Samples Taken
		DATE	3/16/80	LITHOLOGIC DESCRIPTION
3572		Silty mudstone, greenish gray (5GY 6/1) and olive black (5Y 2/1), thickly laminated to thin bedded. Calcareous throughout.		
3573		Silty mudstone and mudstone, greenish gray (5GY 6/1), and olive gray (5Y 2/1), thickly laminated to thin bedded. Very bioturbated; pyrite burrows, laminations.		
3574		Silty mudstone and mudstone, greenish gray (5GY 6/1) and olive gray (5Y 2/1), thickly laminated to thin bedded. Very bioturbated; pyrite burrows, laminations.		
3575		Silty mudstone and mudstone, greenish gray (5GY 6/1) and olive black (5Y 2/1), thin bedded; bioturbated. Pyrite burrows anhydrite filled (?). Silty mudstone is calcareous.		
3576		Silty mudstone and siltstone, greenish gray (5GY 6/1), olive black (5Y 2/1), and yellowish gray (5Y 8/1), thickly laminated to thin bedded. Slightly bioturbated.		
3577		Silty mudstone, yellowish gray (5Y 8/1) and dark greenish gray (5GY 4/1), thickly laminated to thin bedded. Gradational colors; calcareous throughout. * 3,577.14/ .50 Mound		
3578		Silty mudstone and mudstone, light greenish gray (5GY 8/1) and olive black (5Y 2/1), thickly laminated to thin bedded; bioturbated. Silty mudstone in lower .5' is calcareous.		
3579		Silty mudstone, greenish gray (5GY 8/1) and yellowish gray (5Y 8/1), thinly bedded; calcareous throughout.		
3580		Silty mudstone, greenish gray (5GY 8/1), yellowish gray (5Y 8/1), and dark greenish gray (5Y 4/1), thinly bedded; calcareous throughout.		
3581		Silty mudstone, dark greenish gray (5G 4/1), greenish gray (5GY 6/1), and yellowish gray (5Y 8/1), thickly laminated to thin bedded. Calcareous throughout.		

DEPTH	FRACTURES	WELL NO.	OHIO #8	x Gas Shows (initial)
		RUN NO.	15	* Samples Taken
		DATE	3/16/80	LITHOLOGIC DESCRIPTION
3582		Silty mudstone and mudstone, greenish gray (5GY 6/1) and olive black (5Y 2/1), thickly laminated to thin bedded. Mudstone is slightly calcareous. Pyrite burrows.		
3583		Silty mudstone, greenish gray (5GY 6/1), dark greenish gray (5GY 4/1), and yellowish gray (5Y 8/1), thickly laminated to thin bedded. Pyrite laminations; calcite crystals; lower .75' is calcareous.		
3584		Silty mudstone, greenish gray (5GY 6/1), dark greenish gray (5GY 4/1), and yellowish gray (5Y 8/1), thickly laminated to thin bedded. Pyrite laminations; calcareous throughout.		
3585		Silty mudstone, greenish gray (5GY 6/1), dark greenish gray (5GY 4/1), and yellowish gray (5Y 8/1), thickly laminated to thin bedded. Pyrite laminations; calcareous throughout.		
3586		Silty mudstone, greenish gray (5GY 6/1), dark greenish gray (5GY 4/1), and yellowish gray (5Y 8/1), thickly laminated to thin bedded. Pyrite laminations; calcareous throughout.		
3587		Silty mudstone and mudstone, greenish gray (5GY 6/1), yellowish gray (5Y 8/1), and olive black (5Y 2/1), thickly laminated to thin bedded. Concretionary, calcareous zones; yellowish gray silty mudstone very calcareous.		
3588		Silty mudstone, greenish gray (5GY 6/1), dark greenish gray (5GY 4/1), and yellowish gray (5Y 8/1), thinly laminated to very thin bedded. Calcareous throughout. Concretion is yellowish gray. * 3,588.37/.80 Mound		
3589		Silty mudstone, greenish gray (5GY 6/1), dark greenish gray (5GY 4/1), and yellowish gray (5Y 8/1), thinly laminated to very thin bedded. Calcareous throughout. Concretionary yellowish gray.		
3590		Silty mudstone, greenish gray (5GY 6/1) and olive black (5Y 2/1), thinly laminated to thin bedded. Greenish gray is calcareous.		
3591		Silty mudstone and mudstone, greenish gray (5GY 6/1) and olive black (5Y 2/1), thickly laminated to very thin bedded. Very bioturbated; pyrite burrows.		

DEPTH	FRACTURES	WELL NO.	OHIO #8	x Gas Shows (initial)
		RUN NO.	15	* Samples Taken
		DATE	3/16/80	LITHOLOGIC DESCRIPTION
3592		Silty mudstone and mudstone, greenish gray (5GY 6/1) and olive black (5Y 2/1), thickly laminated to very thin bedded. Very bioturbated; pyrite burrows.		
3593		Silty mudstone and mudstone, greenish gray (5GY 6/1), dark greenish gray (5G 4/1), and olive black (5Y 2/1), thickly laminated to thin bedded. Bioturbated.		
3594		Silty mudstone and mudstone, greenish gray (5GY 6/1) and olive black (5Y 2/1), thinly laminated to thin bedded. Pyrite burrows, some are calcareous. Silty mudstone is slightly calcareous.		
3595		Silty mudstone, greenish gray (5GY 6/1), yellowish gray (5GY 8/1), and olive black (5Y 2/1), thickly laminated to thin bedded. Calcareous throughout, especially yellowish gray.		
3596		Silty mudstone, siltstone, greenish gray (5GY 6/1), light gray (N7), and olive black (5Y 2/1), thickly laminated to thin bedded. Siltstone is load cast, very calcareous. Calcareous throughout.		
3597		Silty mudstone, mudstone, and siltstone, greenish gray (5GY 6/1), olive black (5Y 2/1), and light gray (N7), thickly laminated to thin bedded. Bioturbated; siltstone is load cast, calcareous. Pyrite burrows. * 3,597.21/.54 Mound		
3598		Silty mudstone, mudstone and siltstone, greenish gray (5GY 6/1), olive black (5Y 2/1), and light gray (N7), thickly laminated to thin bedded. Bioturbated; siltstone is load cast, calcareous.		
3599		Mudstone and silty mudstone, olive black (5Y 2/1) and greenish gray (5GY 6/1), thinly laminated to thin bedded. Bioturbated; pyrite burrows anhydrite filled (?).		
3600		Mudstone and silty mudstone, olive black (5Y 2/1) and greenish gray (5GY 6/1), thinly laminated to thin bedded. Bioturbated; pyrite burrows anhydrite filled (?). Silty mudstone predominates. Silty mudstone in lower .5' is calcareous, thickly laminated to thin bedded.		
3601		Silty mudstone, greenish gray (5GY 6/1), olive gray (5Y 4/1), greenish gray (5GY 8/1), and very light gray (N8), thickly laminated to thin bedded. Calcareous throughout except one zone in upper .5'.		

DEPTH	FRACTURES	WELL NO.	OHIO #8	x Gas Shows (initial)
		RUN NO.	15	* Samples Taken
		DATE	3/16/80	LITHOLOGIC DESCRIPTION
3602		Silty mudstone, mudstone and siltstone, greenish gray (5GY 6/1), olive gray (5Y 4/1), greenish gray (5GY 6/1), and very light gray (N8). Siltstone is cross laminated.		
3603		Silty mudstone, greenish gray (5GY 6/1), light greenish gray (5GY 8/1), and olive black (5Y 2/1), thickly laminated to thin bedded. Bioturbated; calcareous zone in upper .5'.		
3604		Silty mudstone and mudstone, greenish gray (5GY 6/1) and olive black (5Y 2/1), thickly laminated to thin bedded. Bioturbated, pyrite burrows. Silty mudstone in lower .75' is calcareous.		
3605		Silty mudstone and mudstone, greenish gray (5GY 6/1), olive black (5Y 2/1), thickly laminated to thin bedded. Pyrite burrows. Upper interval is light and grades to dark. Silty mudstone in upper .5' is calcareous.		
3606		* 3,605.45/.77 Juniata		
		Mudstone, olive black (5Y 2/1) and greenish gray (5GY 6/1), thickly laminated to thin bedded. Bioturbated; pyrite laminations.		
3607				
		Silty mudstone, mudstone, and siltstone, greenish gray (5GY 6/1), olive black (5Y 2/1), and yellowish gray (5Y 8/1), thickly laminated to thin bedded. Yellowish gray siltstone is cross laminated, load cast; bioturbated. Pyrite laminations (calcite). Silty mudstone very calcareous.		
3608		* 3,607.41/.87 Mound		
		Silty mudstone, greenish gray (5GY 6/1) and olive black (5Y 2/1), thickly laminated to thin bedded. Bioturbated; pyrite burrows; calcareous throughout.		
3609				
		Silty mudstone, greenish gray (5GY 6/1) and olive black (5Y 2/1), thickly laminated to thin bedded. Bioturbated; calcareous throughout.		
3610				
		Silty mudstone and mudstone, greenish gray (5GY 6/1) and olive black (5Y 2/1), thin bedded. Bioturbated; silty mudstone is calcareous.		

DEPTH	FRACTURES	WELL NO.	OHIO #8	x Gas Shows (initial)
		RUN NO.	16	* Samples Taken
		DATE	3/17/80	LITHOLOGIC DESCRIPTION
.94 3611				
3612		Silty mudstone, siltstone, and mudstone, greenish gray (5GY 6/1), olive black (5Y 2/1), and light greenish gray (5GY 8/1), thickly laminated to thin bedded. Pyrite laminations, 5 mm. Siltstone and silty mudstone is calcareous; bioturbated.		
3613		Silty mudstone, greenish gray (5GY 6/1) and olive gray (5Y 4/1), thickly laminated to thin bedded. Calcareous throughout.		
3614		Silty mudstone and mudstone, greenish gray (5GY 6/1) and olive black (5Y 2/1), thin bedded; bioturbated. Pyrite laminations 5 mm thick; silty mudstone is calcareous.		
3615		Silty mudstone, greenish gray (5GY 6/1) and olive gray (5Y 4/1), thickly laminated to thin bedded. Pyrite pellets. Yellowish gray (5Y 8/1) concretionary band, very calcareous. Calcareous throughout.		
3616		Silty mudstone and mudstone, greenish gray (5GY 6/1) and olive black (5Y 2/1), thickly laminated to thin bedded. Pyrite laminations; bioturbated. One light zone and one dark zone. Silty mudstone is calcareous. * 3,616.39/.79 Mound		
3617		Silty mudstone, greenish gray (5GY 6/1) and olive black (5Y 2/1), thickly laminated to thin bedded. Calcareous throughout. Many pyrite burrows; anhydrite filled (?).		
3618		Silty mudstone, greenish gray (5GY 6/1) and olive black (5Y 2/1), thickly laminated to thin bedded. Calcareous throughout; bioturbated.		
3619		Silty mudstone and mudstone, greenish gray (5GY 6/1) and olive black (5Y 2/1), thickly laminated to thin bedded. Very bioturbated. Much pyrite in laminations and burrows. Silty mudstone; pyrite nodules; calcareous.		
		Silty mudstone, light olive gray (5Y 6/1) and olive gray (5Y 4/1), thickly laminated to thin bedded. Pyrite burrows; calcareous throughout.		

DEPTH	FRACTURES	WELL NO.	OHIO #8	x Gas Shows (initial)
		RUN NO.	16	* Samples Taken
		DATE	3/17/80	LITHOLOGIC DESCRIPTION
3620		Silty mudstone and mudstone, light olive gray (5Y 6/1) and olive black (5Y 2/1), thickly laminated to thin bedded. Light yellowish gray (5Y 8/1) concretion. Bioturbated; pyrite burrows. Silty mudstone is calcareous.		
3621		* 3,620.49/.88 USGS		
3622		Silty mudstone and mudstone, light olive gray (5Y 6/1) and olive black (5Y 2/1), thickly laminated to thin bedded. Light yellowish gray (5Y 8/1) concretion. Bioturbated; pyrite burrows. Silty mudstone is calcareous. Predominately mudstone, olive black (5Y 2/1).		
3623		Mudstone, olive black (5Y 2/1), thin bedded. Pyrite nodules and laminations. x Gas Show		
3624		Mudstone and silty mudstone, olive black (5Y 2/1) and olive gray (5Y 4/1), thin bedded. Small pyrite lenses. * 3,623.10/.48 Terra Tek		
3625		Silty mudstone, olive gray (5Y 5/1) and olive black (5Y 3/1), thickly laminated to very thin bedded. Gradational colors, very bioturbated. Many pyrite burrows; burrows are calcareous.		
3626		Mudstone, greenish gray (5GY 6/1), olive gray (5Y 4/1), and olive black (5Y 2/1), thickly laminated to thin bedded. Bioturbated. Pyrite burrows; calcareous. Interval is calcareous in zones.		
3627		Mudstone and silty mudstone, olive black (5Y 2/1) and greenish gray (5GY 6/1), thickly laminated to thin bedded. Very bioturbated, cross laminated (?). Silty mudstone is calcareous; pyrite laminations.		
3628		Silty mudstone, light greenish gray (5GY 8/1), greenish gray (5GY 6/1), brownish gray (5YR 4/1), thickly laminated to thin bedded. Light zones are calcareous. Pyrite laminations. * 3,627.16/.66 Mound		
3629		Silty mudstone and siltstone, dark greenish gray (5GY 4/1), greenish gray (5GY 6/1), brownish gray (5YR 4/1), and light olive gray (5Y 6/1), thickly laminated to thin bedded. Light olive gray is a concretionary zone. Siltstone is load cast.		
		Mudstone and silty mudstone, light olive gray (5Y 6/1) and brownish gray (5YR 4/1), thickly laminated to thin bedded. Bioturbated. Silty mudstone is calcareous.		

DEPTH	FRACTURES	WELL NO.	OHIO #8	x Gas Shows (initial)
		RUN NO.	16	* Samples Taken
		DATE	3/17/80	LITHOLOGIC DESCRIPTION
3630		Mudstone, silty mudstone, and siltstone, greenish gray (5GY 6/1), brownish gray (5YR 4/1), and light olive gray (5Y 6/1), thickly laminated. Bioturbated; silty mudstone is calcareous.		
3631		Silty mudstone and mudstone, light olive gray (5Y 6/1), greenish gray (5GY 6/1), and brownish black (5YR 2/1), thickly laminated to thin bedded. Bioturbated; silty mudstone is calcareous; silt-filled burrows.		
3632		Silty mudstone and mudstone, light olive gray (5Y 6/1), greenish gray (5GY 6/1), and brownish black (5YR 2/1), thickly laminated to thin bedded. Bioturbated; silty mudstone is calcareous; silt-filled burrows.		
3633		Silty mudstone, greenish gray (5GY 6/1), light olive gray (5Y 6/1), and olive gray (5Y 4/1), thickly laminated to thin bedded. Bioturbated; silt-filled burrows. Upper .75' is calcareous.		
3634		Mudstone and silty mudstone, greenish gray (5GY 6/1), yellowish gray (5Y 8/1), and brownish gray (5YR 4/1), thinly laminated to thin bedded. Silty mudstone is calcareous.		
3635		Mudstone and silty mudstone, greenish gray (5GY 6/1), yellowish gray (5Y 8/1), and brownish gray (5YR 4/1), thinly to thickly laminated; bioturbated. Silty mudstone is calcareous.		
3636		Mudstone and silty mudstone, greenish gray (5G 6/1) and olive black (5Y 2/1), thinly laminated to thin bedded. Very bioturbated; pyrite burrows. Silt-filled laminations; vitrinite; silty mudstone is calcareous.		
3637		* 3,637.48/.86 Mound		
3638		Silty mudstone and siltstone, greenish gray (5G 6/1) and light greenish gray (5G 8/1), thinly laminated to thin bedded.		
3639		Silty mudstone and mudstone, greenish gray (5G 6/1), greenish gray (5GY 6/1), and olive black (5Y 2/1), thinly laminated to thin bedded. Bioturbated; silt-filled laminations; silty mudstone is calcareous.		
		Silty mudstone, greenish gray (5GY 6/1) and olive black (5Y 2/1), thickly laminated to thin bedded. Light olive gray (5Y 6/1) calcareous concretionary zone. Silt-filled burrows; silty mudstone is calcareous.		

DEPTH	FRACTURES	WELL NO.	OHIO #8	x Gas Shows (initial)
		RUN NO.	16	* Samples Taken
		DATE	3/17/80	LITHOLOGIC DESCRIPTION
3640		Mudstone, silty mudstone and siltstone, greenish gray (5GY 6/1), brownish gray (5YR 4/1), and light olive gray (5Y 6/1), thickly laminated. Bioturbated; silty mudstone is calcareous. Increasing olive black (5Y 2/1) mudstone, very bioturbated.		
3641		Silty mudstone, greenish gray (5G 6/1), greenish gray (5GY 6/1), and olive black (5Y 2/1), thickly laminated to thin bedded. Bioturbated; silt-filled laminations.		
3642		Mudstone and silty mudstone, greenish gray (5GY 6/1) and olive gray (5Y 4/1), thickly laminated to thin bedded. Bioturbated. Yellow gray (5Y 8/1) concretionary zone, calcareous. Calcareous throughout.		
3643		Mudstone, silty mudstone, and siltstone, greenish gray (5GY 6/1), olive gray (5Y 4/1), and yellowish gray (5Y 8/1), thickly laminated to thin bedded. Siltstone laminations and silt-filled burrows. Calcareous throughout.		
3644		Mudstone and silty mudstone, olive black (5Y 2/1), light olive gray (5Y 6/1), and yellowish gray (5Y 8/1), thinly laminated to thin bedded. Bioturbated; silty mudstone is calcareous.		
3645		Mudstone, silty mudstone, and siltstone, greenish gray (5G 6/1), light olive gray (5Y 6/1), and olive black (5Y 2/1), thinly laminated to thin bedded. Bioturbated. Siltstone is cross laminated and load cast. Silty mudstone is calcareous.		
3646		Silty mudstone, greenish gray (5G 6/1), light olive gray (5Y 6/1), and olive gray (5Y 4/1), thickly laminated to thin bedded. Silt-filled laminations are calcareous throughout.		
3647		Silty mudstone, mudstone, and siltstone, greenish gray (5G 6/1), light olive gray (5Y 6/1), and olive gray (5Y 4/1), thickly laminated to thin bedded. Slightly bioturbated. Siltstone is load cast. * 3,647.14/.55 M		
3648		Silty mudstone, mudstone, and siltstone, greenish gray (5G 6/1), light olive gray (5Y 6/1), and olive gray (5Y 4/1), thickly laminated to thin bedded. Slightly bioturbated. Siltstone is load cast; calcareous in zones.		
3649		Silty mudstone, mudstone and siltstone, greenish gray (5G 6/1), light olive gray (5Y 6/1), and olive gray (5Y 4/1), thickly laminated to thin bedded. Slightly bioturbated. Siltstone is load cast; calcareous in zones.		

DEPTH	FRACTURES	WELL NO.	OHIO #8	x Gas Shows (initial)
		RUN NO.	16	* Samples Taken
		DATE	3/17/80	LITHOLOGIC DESCRIPTION
3650		Silty mudstone, mudstone, and siltstone, greenish gray (5G 6/1), light olive gray (5Y 6/1), and olive gray (5Y 4/1), thickly laminated to thin bedded. Slightly bioturbated. Siltstone is load cast; calcareous throughout.		
3651		Silty mudstone and siltstone, greenish gray (5GY 6/1), light greenish gray (5GY 8/1), yellowish gray (5Y 8/1), and olive gray (5Y 4/1), thickly laminated to thin bedded. Siltstone is cross laminated, load cast, very calcareous. Calcareous throughout.		
3652		Mudstone and silty mudstone, light greenish gray (5G 8/1), and olive gray (5Y 4/1), thinly laminated to thin bedded. Bioturbated; silt-filled burrows. Silty mudstone is calcareous.		
3653		Silty mudstone and mudstone, greenish gray (5GY 6/1), greenish gray (5G 6/1), yellowish gray (5Y 8/1), and olive gray (5Y 4/1), thickly laminated to thin bedded. One laminated load cast. Silty mudstone is calcareous.		
3654		Silty mudstone, greenish gray (5GY 6/1), dark greenish gray (5G 4/1), and yellowish gray (5Y 8/1), thickly laminated to thin bedded. Silt-filled burrows; load cast. Calcareous throughout.		
3655		Silty mudstone, greenish gray (5GY 6/1), dark greenish gray (5G 4/1), and yellowish gray (5Y 8/1), thickly laminated to thin bedded. Silt-filled burrows; load cast. Calcareous throughout. * 3,655.19/.69 Juniata		
3656		Silty mudstone, greenish gray (5GY 6/1), dark greenish gray (5G 4/1), and yellowish gray (5Y 8/1), thickly laminated to thin bedded. Silt-filled burrows; load cast. Calcareous throughout. With mudstone, olive black (5Y 2/1). Bioturbated.		
3657		Silty mudstone and siltstone, greenish gray (5G 6/1), olive gray (5Y 4/1), and yellow gray (5Y 8/1). Siltstone is cross laminated, very calcareous. Calcareous throughout; thickly laminated to thin bedded. * 3,657.13/.53 Mound		
3658		Silty mudstone and siltstone, greenish gray (5G 6/1), olive gray (5Y 4/1), and yellowish gray (5Y 8/1). Siltstone is cross laminated, very calcareous. Calcareous throughout. Thickly laminated to thin bedded.		
3659		Silty mudstone and siltstone, greenish gray (5GY 6/1), olive black (5Y 2/1), and light greenish gray (5GY 8/1), thinly laminated to thin bedded. Bioturbated. Siltstone is cross laminated and load cast. Silt-filled burrows. Silty mudstone and siltstone is calcareous.		

DEPTH	FRACTURES	WELL NO.	OHIO #8	x Gas Shows (initial)
		RUN NO.	16	* Samples Taken
		DATE	3/17/80	LITHOLOGIC DESCRIPTION
3660		Silty mudstone and siltstone, greenish gray (5GY 6/1), olive black (5Y 2/1), and light greenish gray (5GY 8/1), thinly laminated to thin bedded. Bioturbated. Siltstone is cross laminated and load cast. Silt-filled burrows. Silty mudstone and siltstone is calcareous. Predominantly silty mudstone.		
3661		Silty mudstone and siltstone, greenish gray (5G 6/1), olive gray (5Y 4/1), thickly laminated to thin bedded. Slightly bioturbated. Light zones are calcareous.		
3662		Silty mudstone and siltstone, greenish gray (5G 6/1), olive gray (5Y 4/1), thickly laminated to thin bedded. Slightly bioturbated. Light zones are calcareous.		
3663		Silty mudstone and siltstone, greenish gray (5G 6/1), light greenish gray (5Y 8/1), and olive gray (5Y 4/1), thickly laminated to thin bedded. Siltstone slightly load cast. Very calcareous throughout.		
3664		* 3,663.37/.87 Terra Tek		
3665		Silty mudstone and siltstone, greenish gray (5G 6/1), light greenish gray (5Y 8/1), and olive gray (5Y 4/1), thickly laminated to thin bedded. Siltstone slightly load cast. Very calcareous throughout.		
3666		Silty mudstone and siltstone, greenish gray (5G 6/1), light greenish gray (5Y 8/1), and olive gray (5Y 4/1), thickly laminated to thin bedded. Siltstone slightly load cast. Very calcareous throughout.		
3667		Silty mudstone and siltstone, greenish gray (5G 6/1), light greenish gray (5Y 8/1), and olive gray (5Y 4/1), thickly laminated to thin bedded. Siltstone slightly load cast. Very calcareous throughout; bioturbated. Light zones only are calcareous. Mud-filled crack 3,666.8'.		
3668		Mudstone and silty mudstone, light greenish gray (5GY 8/1), olive gray (5Y 4/1), and olive black (5Y 2/1), thinly to thickly laminated. Very bioturbated; burrows.		
3668		* 3,667.08/.54 Mound		
3669		Mudstone and silty mudstone, light greenish gray (5GY 8/1), olive gray (5Y 4/1), and olive black (5Y 2/1), thinly to thickly laminated. Very bioturbated; burrows.		
3669		Silty mudstone and mudstone, light greenish gray (5GY 8/1), greenish gray (5G 6/1), and olive gray (5Y 4/1), thinly laminated to thin bedded. Bioturbated; pyrite burrows. Silty mudstone is calcareous.		
	END			

DEPTH	FRACTURES	WELL NO.	OHIO #8	
		RUN NO.	17	x Gas Shows (initial) * Samples Taken
		DATE	3/17/80	LITHOLOGIC DESCRIPTION
3679		Silty mudstone, greenish gray (5GY 6/1), olive gray (5Y 4/1), and medium bluish gray (5B 5/1), thinly laminated to thin bedded. Calcareous throughout. Silt-filled laminations.		
3680		Same as above. Concretionary zones, yellowish gray (5Y 8/1), thinly laminated to very thin bedded.		
3681		Same as above. Thickly laminated to thin bedded. Load cast present. Concretionary bands.		
3682		Same as above. No concretionary bands. Silt-filled burrows.		
3683		Silty mudstone, greenish gray (5GY 6/1), olive gray (5Y 4/1), and yellowish gray (5Y 8/1), thickly laminated to thin bedded. Concretionary zone, yellowish gray (5Y 8/1), very calcareous. Calcareous throughout.		
3684		Same as above. Bioturbated. Calcite crystals.		
3685		Silty mudstone, greenish gray (5GY 6/1) and olive gray (5Y 4/1), thickly laminated to thin bedded. Bioturbated. Light zones calcareous in zones.		
3686		Same as above. Bioturbated in lower .3'.		
3687		Silty mudstone and siltstone, greenish gray (5GY 6/1), yellowish gray (5Y 8/1), and olive gray (5Y 4/1), thickly laminated to thin bedded. Siltstone load cast present. Small pyrite lenses.		
3688		*3,687.18/.57 Mound		
		Silty mudstone and siltstone, greenish gray (5GY 6/1), yellowish gray (5Y 8/1), and olive gray (5Y 4/1), thinly laminated to thin bedded. Siltstone load cast present, fragmented bedding, cross laminated. Calcareous throughout. Bioturbated.		

DEPTH	FRACTURES	WELL NO.	OHIO #8	
		RUN NO.	17	x Gas Shows (initial) * Samples Taken
		DATE	3/17/80	LITHOLOGIC DESCRIPTION
3689		Silty mudstone, greenish gray (5GY 6/1), olive gray (5Y 4/1), and yellowish gray (5Y 8/1). Silt-filled laminations. Concretionary zone, yellowish gray (5Y 8/1), calcareous. Calcareous throughout.		
3690		Same as above. Bioturbated.		
3691		Same as above. Silt-filled burrows.		
3692		Silty mudstone, greenish gray (5GY 6/1), olive gray (5Y 4/1), olive black (5Y 2/1), and yellowish gray (5Y 8/1), thickly laminated to very thin bedded. Silt-filled laminations. Light zones calcareous.		
3693		Same as above. Bioturbated. Thickly laminated to thin bedded.		
3694		Silty mudstone and siltstone, greenish gray (5GY 6/1), light greenish gray (5GY 8/1), and olive gray (5Y 4/1), thickly laminated to thin bedded. Siltstone load cast present. Upper 3/4 calcareous.		
3695		Same as above. Greenish gray (5GY 6/1) calcareous zones. Calcareous throughout.		
3696		Same as above. Greenish gray (5GY 6/1) calcareous zones. Calcareous throughout.		
3697		Silty mudstone, greenish gray (5GY 6/1), light greenish gray (5GY 8/1), medium bluish gray (5B 5/1), thickly laminated to thin bedded. Greenish gray (5GY 6/1) concretionary zone. Load cast present.		
3698		*3,697.43/.86 Mound		
		Silty mudstone, greenish gray (5GY 6/1) and olive gray (5Y 4/1), thickly laminated to very thin bedded. Bioturbated. Silt-filled laminations.		

DEPTH	FRACTURES	WELL NO.	OHIO #8	
		RUN NO.	17	x Gas Shows (initial) * Samples Taken
		DATE	3/17/80	LITHOLOGIC DESCRIPTION
3699		Silty mudstone and siltstone, light greenish gray (5GY 8/1), olive black (5Y 2/1), and greenish gray (5GY 6/1), thickly laminated to thin bedded. Bioturbated. Pyrite laminations; silt-filled burrows. Light zones calcareous.		
3700		Silty mudstone, light greenish gray (5GY 8/1), olive gray (5Y 4/1), and greenish gray (5GY 6/1), thickly laminated. Slightly bioturbated. Pyrite laminations.		
3701		Same as above. Thinly laminated to thin bedded. Silt-filled laminations. Very bioturbated.		
3702		Silty mudstone, greenish gray (5G 6/1), yellowish gray (5Y 8/1), and olive gray (5Y 4/1), thickly laminated to thin bedded. Bioturbated. Concretionary band, yellowish gray (5Y 8/1), very calcareous. Calcareous throughout.		
3703		Same as above. Calcareous in zones.		
3704		Same as above. More olive gray. Silt-filled burrows. Light zones calcareous.		
3705		Silty mudstone and siltstone, greenish gray (5GY 6/1), light greenish gray (5GY 8/1), and olive gray (5Y 4/1), thinly laminated to thin bedded. Very bioturbated. Siltstone load cast present. Light zones calcareous.		
3706		*3,705.21/.55 Juniata		
3707		Same as above. Thinly laminated to very thin bedded. Siltstone calcareous.		
3708		Silty mudstone and siltstone, olive gray (5Y 4/1), greenish gray (5GY 6/1), and light greenish gray (5GY 8/1), thinly to thickly laminated. Siltstone load cast present. Pyrite burrows.		
		*3,707.52/.93 Mound		
		Same as above. Thinly laminated to thin bedded. Lower 1/3 calcareous.		
	out			

DEPTH	FRACTURES	WELL NO.	OHIO #8		
		RUN NO.	17	x Gas Shows (initial)	* Samples Taken
		DATE	3/17/80	LITHOLOGIC DESCRIPTION	
3709		Silty mudstone, greenish gray (5GY 6/1) and olive gray (5Y 4/1), thickly laminated. Calcareous throughout.			
3710		Same as above. Concretionary band, yellowish gray (5Y 8/1).			
3711		Silty mudstone, greenish gray (5GY 6/1) and olive gray (5Y 4/1), thickly laminated. Ripple lamination. Calcareous throughout.			
3712		Silty mudstone, greenish gray (5GY 6/1), olive gray (5Y 4/1), and yellowish gray (5Y 8/1), thickly laminated. Silt-filled laminations very calcareous. Slightly bioturbated. Calcareous throughout.			
3713		Same as above. Thickly laminated to thin bedded.			
3714		Same as above. Thickly laminated to thin bedded.			
3715		Silty mudstone and siltstone, greenish gray (5GY 6/1), olive gray (5Y 4/1), and yellowish gray (5Y 8/1), thickly laminated to thin bedded. Very bioturbated. Siltstone load cast present.			
3716		Silty mudstone and mudstone, greenish gray (5GY 6/1), olive gray (5Y 4/1), and olive black (5Y 2/1), thickly laminated to thin bedded. Bioturbated. Light zones are calcareous.			
3717		Silty mudstone, greenish gray (5GY 6/1), olive gray (5Y 4/1), and yellowish gray (5Y 8/1), thickly laminated to thin bedded. Bioturbated. Calcareous throughout.			
3718		*3,717.13/.64 Mound			
		Silty mudstone, light greenish gray (5GY 8/1), greenish gray (5G 6/1), olive gray (5Y 4/1), and olive black (5Y 2/1), thickly laminated to thin bedded. Bioturbated. Silt-filled burrows. Calcareous except olive black.			

DEPTH	FRACTURES	WELL NO.	OHIO #8
		RUN NO.	17
		DATE	3/17/80
		LITHOLOGIC DESCRIPTION	
3719		Silty mudstone and siltstone, olive gray (5Y 4/1), olive black (5Y 2/1), greenish gray (5GY 6/1), and light olive gray (5GY 8/1), thinly to thickly laminated. Bioturbated. Siltstone load cast present. Pyrite burrows.	
3720		Silty mudstone, greenish gray (5GY 6/1), light greenish gray (5GY 8/1), olive gray (5Y 4/1), and olive black (5Y 2/1), thinly laminated to thin bedded. Bioturbated. Pyrite burrows. Calcareous throughout.	
3721		*3,720.31/.89 USGS	
		Same as above. No bioturbations.	
3722		Mudstone and siltstone, greenish gray (5GY 6/1), medium bluish gray (5G 5/1), and light greenish gray (5GY 8/1), thickly laminated to thin bedded. Siltstone load cast present. Pyrite lamination (~3 mm). Calcareous throughout.	
3723		Silty mudstone, greenish gray (5GY 6/1), olive gray (5Y 4/1), and light greenish gray (5GY 8/1), thickly laminated to thin bedded. Slightly bioturbated. Calcareous throughout.	
3724		Same as above. Thinly to thickly laminated. Load cast present.	
3725		Silty mudstone and siltstone, greenish gray (5GY 6/1), medium bluish gray (5B 5/1), and light greenish gray (5GY 8/1), thinly laminated to thin bedded. Siltstone load cast present. Calcareous throughout.	
3726		Silty mudstone and mudstone, greenish gray (5GY 6/1), olive gray (5Y 4/1), and olive black (5Y 2/1), thickly laminated to thin bedded. Bioturbated. Pyritized burrows slightly calcareous. Upper 3/4 is calcareous.	
3727		*3,726.54/.84 Tera Tek	
		Silty mudstone, greenish gray (5GY 6/1) and olive gray (5Y 4/1), thickly laminated to thin bedded. Calcareous throughout.	
3728		*3,727.22/.67 Mound	
		Same as above.	
	.87		

DEPTH	FRACTURES	WELL NO.	OHIO #8		
		RUN NO.	18	x Gas Shows (initial)	* Samples Taken
		DATE	3/18/80	LITHOLOGIC	DESCRIPTION
3729					
3730					Mudstone, olive black (5Y 2/1) and greenish gray (5GY 6/1), thickly laminated to thin bedded. Bioturbated. Small pyrite lenses, some are slightly calcareous.
3731					Same as above. No pyrite.
3732					Mudstone, greenish gray (5GY 6/1), olive black (5Y 2/1), and olive gray (5Y 4/1), thickly laminated to thin bedded. Bioturbated.
3733					Mudstone, olive black (5Y 2/1), olive gray (5Y 4/1), and greenish gray (5GY 6/1), thickly laminated to thin bedded. Small pyrite lenses, some are calcareous.
3734					Same as above. Thickly laminated.
3735					Mudstone, greenish gray (5GY 6/1), olive black (5Y 2/1), olive gray (5Y 4/1), and light olive gray (5Y 6/1), thickly laminated to thin bedded. Bioturbated. Pyrite laminations. Light olive gray (5Y 6/1) mudstone load cast present. Light zones are calcareous.
3736					Mudstone, greenish gray (5GY 6/1) and light greenish gray (5GY 8/1), thinly laminated to thin bedded. Calcareous throughout.
3737					Mudstone, olive black (5Y 2/1), olive gray (5Y 4/1), and greenish gray (5GY 6/1), thickly laminated to thin bedded. Very bioturbated. Mud-filled burrows, pyrite-filled burrows and laminations. Light zones are calcareous.
					Mudstone and siltstone, greenish gray (5GY 6/1), olive gray (5Y 4/1), and light gray (N7), thickly laminated to thin bedded. Siltstone load cast present. Calcareous throughout the interval.
					*3,737.15/.65 Mound

DEPTH	FRACTURES	WELL NO.	OHIO #8	
		RUN NO.	18	x Gas Shows (initial) * Samples Taken
		DATE	3/18/80	LITHOLOGIC DESCRIPTION
3738		Same as above.		
3739		Same as above. Concretionary zone, yellowish gray (5Y 8/1), very calcareous.		
3740		Mudstone, greenish gray (5GY 6/1), olive gray (5Y 4/1), and yellowish gray (5Y 8/1), thickly laminated to thin bedded. Concretionary zone yellowish gray (5Y 8/1), calcareous. Calcareous throughout.		
3741		Mudstone, greenish gray (5GY 6/1), olive gray (5Y 4/1), and yellowish gray (5Y 8/1), thickly laminated to thin bedded. Yellowish gray (5Y 8/1) is mudstone, fragmented bedding, calcareous. Calcareous throughout.		
3742		Same as above.		
3743		Mudstone, greenish gray (5GY 6/1), olive gray (5Y 4/1), and light greenish gray (5GY 8/1), thinly laminated to thin bedded. Calcareous in zones; most are light zones.		
3744		Mudstone and silty mudstone, greenish gray (5GY 6/1), olive gray (5Y 4/1), and light greenish gray (5GY 8/1), thinly laminated to thin bedded. Bioturbated. Silty mudstone load cast present. Pyrite burrows and laminations are calcareous. Light zones are calcareous.		
3745		Mudstone, greenish gray (5GY 6/1), olive gray (5Y 4/1), and very light gray (N8), thickly laminated to thin bedded. Very light gray (N8) is slightly ripple laminated and load cast is present. Calcareous throughout.		
3746		Mudstone, greenish gray (5GY 8/1), olive gray (5Y 4/1), very light gray (N8), and yellowish gray (5Y 8/1), thickly laminated to very thin bedded. Yellowish gray (5Y 8/1) is mudstone, load cast present (?).		
3747		Mudstone, greenish gray (5G 6/1), olive gray (5Y 4/1), olive black (5Y 2/1), and light greenish gray (5GY 8/1), thickly laminated to thin bedded. Bio-turbated. Light greenish gray (5GY 8/1) is load cast. Light zones are calcareous. *3,747.27/.70 Mound		

DEPTH	FRACTURES	WELL NO.	OHIO #8	LITHOLOGIC DESCRIPTION
		RUN NO.	18	
		DATE	3/18/80	
3748		Same as above. Pyrite burrows, laminations.		
3749		Mudstone, greenish gray (5G 6/1), olive gray (5Y 4/1), and very light gray (N8), thickly laminated to very thin bedded. Light zones are load cast, very calcareous. Calcareous throughout.		
3750		Same as above.		
3751		Mudstone, greenish gray (5G 6/1), olive gray (5Y 4/1), and light gray (N7), thickly laminated to very thin bedded.		
3752		Mudstone, greenish gray (5GY 6/1), olive black (5Y 2/1), olive gray (5Y 4/1), and light gray (N7), thickly laminated to thin bedded. Very bioturbated. Pyrite burrows; laminations. Light gray (N7) is calcareous.		
3753		Mudstone, greenish gray (5GY 6/1), olive black (5Y 2/1), olive gray (5Y 4/1), and light gray (N7), thickly laminated to thin bedded. Bioturbated. Mud-filled burrows. Pyrite burrows.		
3754		Mudstone, greenish gray (5GY 6/1) and olive gray (5Y 4/1), thickly laminated to thin bedded. Calcareous throughout.		
3755		Same as above. Load casts.		
3756		*3,755.30/.59 Juniata		
		Mudstone, greenish gray (5GY 6/1), olive gray (5Y 4/1), olive black (5Y 2/1), and light gray (N7), thickly laminated to thin bedded. Silt-filled burrows. Bioturbated. Light zones are calcareous.		
3757		Mudstone, greenish gray (5GY 6/1), olive gray (5Y 4/1), olive black (5Y 2/1), and light gray (N7), thickly laminated to thin bedded. Slightly bioturbated. Pyrite burrows.		
		*3,757.19/.62 Mound		

DEPTH	FRACTURES	WELL NO.	OHIO #8		
		RUN NO.	18	x Gas Shows (initial)	* Samples Taken
		DATE	3/18/80	LITHOLOGIC DESCRIPTION	
3758		Mudstone and siltstone, greenish gray (5G 6/1), olive gray (5Y 4/1), and very light gray (N8), thickly laminated to thin bedded. Siltstone is load cast. Calcareous throughout.			
3759		Same as above with mudstone, yellowish gray (5Y 8/1) zone. Dark zones are noncalcareous.			
3760		Same as above. Thickly laminated to thin bedded. Light greenish gray (5GY 8/1) is very calcareous.			
3761		Mudstone and siltstone, greenish gray (5GY 6/1), olive gray (5Y 4/1), and very light gray (N8), thickly laminated. Bioturbated. Siltstone is load cast. Mudstone predominates.			
3762		Mudstone and siltstone, greenish gray (5GY 6/1), olive black (5Y 2/1), olive gray (5Y 4/1), and light gray (N7), thickly laminated. Bioturbated. Pyrite burrows. Siltstone is load cast; calcareous.			
3763		Same as above. Light zones calcareous.			
3764		Mudstone and silty mudstone, greenish gray (5G 6/1), olive gray (5Y 4/1), and very light gray (N8), thickly laminated to thin bedded. Slightly bioturbated. Calcareous throughout. Silty mudstone very calcareous.			
3765		Same as above. Dark zones noncalcareous.			
3766		Mudstone and siltstone, greenish gray (5G 6/1), olive gray (5Y 4/1), yellowish gray (5Y 8/1), and very light gray (N8), thickly laminated. Yellowish gray (5Y 8/1) mudstone is load cast (?). Calcareous except olive gray.			
3767		Mudstone and siltstone, greenish gray (5G 6/1), olive gray (5Y 4/1), and light greenish gray (5GY 8/1), thickly laminated to very thin bedded. Pyrite burrows. Slightly bioturbated. Siltstone load cast. Calcareous in zones (mostly light zones). *3,767.10/.60 Mound			

DEPTH	FRACTURES	WELL NO.	OHIO #8
		RUN NO.	18
		DATE	3/18/80
		LITHOLOGIC DESCRIPTION	
3768		Mudstone and silty mudstone, greenish gray (5G 6/1), olive gray (5Y 4/1), olive black (5Y 2/1), and light greenish gray (5GY 8/1), thickly laminated to thin bedded. Very bioturbated. Light zones are calcareous.	
3769		Mudstone, greenish gray (5G 6/1) and olive gray (5Y 4/1), thickly laminated to thin bedded. Slightly bioturbated. Greenish gray (5G 6/1) is calcareous. Pyrite burrows.	
3770		Same as above. Calcareous throughout.	
3771		*3,770.41/.78 USGS	
		Mudstone, greenish gray (5G 6/1), olive gray (5Y 4/1), and light greenish gray (5GY 8/1), thickly laminated. Small amount of load casting. Some greenish gray (5G 6/1) is calcareous in zones.	
3772		Mudstone and silty mudstone, greenish gray (5G 6/1), olive gray (5Y 4/1), and light greenish gray (5GY 8/1), thickly laminated. Slightly bioturbated. Small amount load cast. Greenish gray (5G 6/1) is calcareous.	
3773		Mudstone and silty mudstone, greenish gray (5GY 6/1), olive gray (5Y 4/1), light greenish gray (5GY 8/1), and olive black (5Y 2/1), thickly laminated. Bioturbated. Silty mudstone load cast. Pyrite burrows. Some greenish gray (5GY 6/1) is calcareous.	
3774		Same as above.	
3775		Mudstone and silty mudstone, greenish gray (5GY 6/1), olive gray (5Y 4/1), and light greenish gray (5GY 8/1), thickly laminated to very thin bedded. Bioturbated. Silty mudstone is ripple laminated, load cast. Calcareous throughout.	
3776		Same as above. Some greenish gray (5GY 6/1) is calcareous, light greenish gray (5GY 8/1) is very calcareous. No load casts, ripple laminations. Pyrite blebs.	
3777		Mudstone, greenish gray (5G 6/1), olive gray (5Y 4/1), light olive gray (5Y 6/1), and light gray (N7), thickly laminated. Bioturbated. Very light zones are calcareous, load cast.	
		*3,777.33/.82 Mound	

DEPTH	FRACTURES	WELL NO.	OHIO #8	LITHOLOGIC DESCRIPTION	
		RUN NO.	18		x Gas Shows (initial) * Samples Taken
		DATE	3/18/80		
3778		Mudstone and silty mudstone, greenish gray (5G 6/1), olive black (5Y 2/1), olive gray (5Y 4/1), and light greenish gray (5GY 8/1), thickly laminated to thin bedded. Bioturbated, load cast. Pyrite burrows. Light zones are calcareous.			
3779		Same as above.			
3780		Mudstone and silty mudstone, greenish gray (5G 6/1), olive gray (5Y 4/1), and very light gray (N8), thickly laminated. Silty mudstone ripple laminated, load cast, very calcareous. Some greenish gray (5G 6/1) is calcareous.			
3781		Mudstone and silty mudstone, greenish gray (5G 6/1), dark greenish gray (5G 4/1) and very light gray (N8), thinly laminated to thin bedded. Silty mudstone, load cast. Greenish gray (5G 6/1) is calcareous..			
3782		Same as above. Concretionary zone, light olive gray (5Y 6/1), non-calcareous. Bioturbated.			
3783		Same as above. No concretionary zone.			
3784		Same as above. Noncalcareous.			
3785		Mudstone and silty mudstone, light greenish gray (5G 8/1), olive black (5Y 2/1), olive gray (5Y 4/1), and very light gray (N8), thickly laminated to thin bedded. Bioturbated, load cast. Pyrite burrows. Calcareous.			
3786		Mudstone, greenish gray (5G 6/1) and olive gray (5Y 4/1), thickly laminated to thin bedded. Calcareous throughout.			
3787		Mudstone and silty mudstone, greenish gray (5G 6/1), olive gray (5Y 4/1), yellowish gray (5Y 8/1), and light olive gray (5Y 6/1), thickly laminated to very thin bedded. Silty mudstone, load cast. Very calcareous throughout.			
3788		*3,787.31/.70 Mound			

DEPTH	FRACTURES	WELL NO.	OHIO #8	
		RUN NO.	19	x Gas Shows (initial) * Samples Taken
		DATE	3/19/80	LITHOLOGIC DESCRIPTION
3788		Mudstone, medium bluish gray (5B 5/1) and greenish gray (5GY 6/1), thickly laminated to thin bedded. Most of the interval is calcareous.		
3789		Mudstone and silty mudstone, greenish gray (5GY 6/1), dark greenish gray (5GY 4/1), olive black (5Y 2/1), and light gray (N7), thickly laminated to very thin bedded. Ripple laminated, load cast.		
3790		Mudstone, dark greenish gray (5GY 4/1) and greenish gray (5GY 6/1), thinly laminated to thin bedded. Slightly bioturbated. Pyrite nodules. > 50% of interval is calcareous.		
3791		Mudstone, greenish gray (5GY 6/1), dark greenish gray (5GY 4/1), and light gray (N7), thickly laminated to thin bedded. Slightly bioturbated. Pyrite burrows. Calcareous throughout.		
3792		Same as above. No pyrite.		
3793		Same as above. No pyrite.		
3794		Mudstone, dark greenish gray (5GY 4/1), greenish gray (5GY 6/1), gray black (5GY 2/1), and yellowish gray (5Y 8/1), thinly to thickly laminated. Yellowish gray (5Y 8/1) load cast; very calcareous. Upper 3/4 slightly calcareous.		
3795		Silty mudstone and mudstone, greenish gray (5GY 6/1), olive black (5Y 2/1), olive gray (5Y 4/1), thinly laminated to thin bedded. Pyrite burrows. Light zones are calcareous.		
3796		Mudstone and silty mudstone, greenish gray (5G 6/1), olive gray (5Y 4/1), and very light gray (N7), thickly laminated. Silty mudstone, load cast, ripple laminated. Calcareous throughout.		
3797		Same as above. Mudstone, yellowish gray (5Y 8/1) zone is very calcareous.		
*3,797.06/.55 Mound				

DEPTH	FRACTURES	WELL NO.	OHIO #8	
		RUN NO.	19	x Gas Shows (initial) * Samples Taken
		DATE	3/19/80	LITHOLOGIC DESCRIPTION
3798		Same as above. No yellowish gray (5Y 8/1). Upper 1/2 is calcareous.		
3799		Mudstone and silty mudstone, olive black (5Y 2/1), greenish gray (5GY 6/1), and light gray (N7), thinly laminated to thin bedded. Pyrite laminations, burrows. Light zones are calcareous.		
3800		Mudstone, olive black (5Y 2/1), greenish gray (5GY 6/1), and light gray (N7), thinly to thickly laminated. Calcareous throughout.		
3801		Mudstone and silty mudstone, greenish gray (5G 6/1), light greenish gray (5GY 8/1), olive black (5Y 2/1), and very light gray (N8), thinly to thickly laminated. 90% of interval is calcareous.		
3802		Same as above.		
3803		Mudstone, greenish gray (5G 6/1), dark greenish gray (5G 4/1), olive gray (5Y 4/1), thinly to thickly laminated. Pyrite burrows, laminations. Calcareous throughout.		
3804		Mudstone and silty mudstone, greenish gray (5G 6/1), dark greenish gray (5G 4/1), olive gray (5Y 4/1), and very light gray (N7). Silty mudstone is load cast. Pyrite burrows, laminations. Calcareous throughout.		
3805		Mudstone and silty mudstone, greenish gray (5GY 6/1), dark greenish gray (5GY 4/1), olive gray (5Y 4/1), and light gray (N7), thinly to thickly laminated. Silty mudstone, load cast. Calcareous throughout.		
3806		*3,805.31/.67 Juniata		
		Same as above. Pyrite lenses.		
3807		Same as above. No silty mudstone.		
		*3,807.18/.60 Mound		

DEPTH	FRACTURES	WELL NO.	OHIO #8	
		RUN NO.	19	x Gas Shows (initial) * Samples Taken
		DATE	3/19/80	LITHOLOGIC DESCRIPTION
3808		Mudstone, greenish gray (5GY 6/1), dark greenish gray (5GY 4/1), olive gray (5Y 4/1), thickly laminated to thin bedded. Pyrite laminations, burrows. Slightly bioturbated.		
3809		Mudstone, dark greenish gray (5GY 4/1), greenish gray (5GY 6/1), thickly laminated to thin bedded. Calcareous .1' zone.		
3810		Same as above.		
3811		Mudstone, greenish gray (5GY 6/1), dark greenish gray (5GY 4/1), thickly laminated. Pyrite laminations and burrows. Light olive gray (5Y 6/1) concretion. Calcareous throughout.		
3812		Mudstone, greenish gray (5GY 6/1), dark greenish gray (5GY 4/1), and light gray (N7), thinly to thickly laminated. Pyrite laminations and burrows. Light olive gray (5Y 6/1) concretion. Calcareous throughout.		
3813		Mudstone, greenish gray (5GY 6/1), dark greenish gray (5GY 4/1), thinly to thickly laminated. Pyrite nodules, laminations. Light zones are calcareous.		
3814		Mudstone, dark greenish gray (5GY 4/1), greenish gray (5GY 6/1), light gray (N7), thickly laminated to thin bedded. Pyrite burrows. Light zones are calcareous. Slightly bioturbated.		
3815		Mudstone, greenish gray (5GY 6/1), dark greenish gray (5GY 4/1), and light gray (N7), thinly to thickly laminated. Slightly bioturbated. Pyrite burrows. Calcareous throughout.		
3816		Same as above.		
3817		Mudstone, dark greenish gray (5GY 4/1), greenish gray (5GY 6/1), thickly laminated to very thin bedded. Bioturbated. Light olive gray (5Y 6/1) concretion, very calcareous. Calcareous throughout. *3,817.26/.74 Mound		

DEPTH	FRACTURES	WELL NO.	OHIO #8	
		RUN NO.	19	x Gas Shows (initial) * Samples Taken
		DATE	3/19/80	LITHOLOGIC DESCRIPTION
3818		Mudstone, dark greenish gray (5GY 4/1), greenish gray (5GY 6/1), gray black (5GY 2/1), thickly laminated to very thin bedded. Calcareous in zones.		
3819		Same as above. Slightly bioturbated. Pyrite burrows.		
3820		Mudstone, dark greenish gray (5GY 4/1), greenish black (5GY 2/1), greenish gray (5GY 6/1), thickly laminated to thin bedded. Pyrite burrows, nodules. Light zones are calcareous. *3,820.44/.79 USGS		
3821		Mudstone, greenish gray (5GY 6/1), dark greenish gray (5GY 4/1), and gray black (5GY 2/1), thinly to thickly laminated. Slightly bioturbated. Light zones are calcareous.		
3822		Mudstone, greenish gray (5GY 6/1), gray black (5GY 2/1), and dark greenish gray (5GY 4/1), thinly laminated to thin bedded. Pyrite burrows. Light zones are calcareous.		
3823		Mudstone, greenish gray (5GY 6/1), gray black (5GY 2/1), thickly laminated. Pyrite burrows. Light zones are calcareous.		
3824		Mudstone, dark greenish gray (5GY 4/1), greenish gray (5GY 6/1), and gray black (5GY 2/1), thickly laminated to very thin bedded. Greenish gray (5GY 6/1) concretionary zone.		
3825		Same as above with mudstone, yellowish gray (5Y 8/1), very calcareous. Greenish gray (5GY 6/1) concretionary zone.		
3826		Mudstone, greenish gray (5GY 6/1), dark greenish gray (5GY 4/1), and olive black (5Y 2/1), thickly laminated. Slightly bioturbated. Pyrite laminations. Light zones are calcareous.		
3827		Mudstone, gray black (5GY 2/1) and greenish gray (5GY 4/1), thickly laminated to thin bedded. Pyrite burrows and laminations. Slightly bioturbated. Light zones are calcareous. *3,827.22/.62 Mound		

DEPTH	FRACTURES	WELL NO.	OHIO #8	LITHOLOGIC DESCRIPTION
		RUN NO.	19	
		DATE	3/19/80	
3828		Same as above.		
3829		Mudstone, dark greenish gray (5GY 4/1), greenish gray (5GY 6/1), and gray black (5GY 2/1), thickly laminated. Light zones are calcareous.		
3830		Same as above.		
3831		Same as above.		
3832		Same as above. Pyrite lens. Light olive gray (5Y 6/1) concretionary zone.		
3833		Mudstone, dark greenish gray (5G 4/1), gray black (5GY 2/1), and greenish gray (5GY 6/1), thickly laminated to very thin bedded. Slightly calcareous. Slightly bioturbated.		
3834		Same as above. Pyrite burrows.		
3835	 Petal fractures (core induced).	Mudstone, greenish gray (5GY 6/1) and gray black (5GY 2/1), thickly laminated to thin bedded. Pyrite burrows. Light zones are calcareous.		
3836		Mudstone, greenish gray (5GY 6/1) and gray black (5GY 2/1), thickly laminated. Calcareous throughout.		
3837		Same as above. Slightly calcareous.		
		*3,837.39/.81 Mound		

DEPTH	FRACTURES	WELL NO.	OHIO #8	
		RUN NO.	19	x Gas Shows (initial) * Samples Taken
		DATE	3/19/80	LITHOLOGIC DESCRIPTION
3838		Mudstone and siltstone, dark greenish gray (5GY 4/1), greenish gray (5GY 6/1), and very light gray (N8), thickly laminated to thin bedded. Siltstone ripple laminated, scour surface, very calcareous.		
3839		Mudstone, dark greenish gray (5GY 4/1) and gray black (5GY 2/1), thickly laminated. Pyrite burrows. Calcareous .2' zone.		
3840		Mudstone, gray black (5GY 2/1) and dark greenish gray (5GY 4/1), thickly laminated to thin bedded.		
3841		Mudstone, gray black (5GY 2/1), greenish gray (5GY 6/1), and dark greenish gray (5GY 4/1), thinly laminated to thin bedded. Load casts. Light zones are calcareous.		
3842		Mudstone, dark greenish gray (5GY 4/1), greenish gray (5GY 6/1), and gray black (5GY 2/1), thickly laminated to thin bedded. Light zones are calcareous.		
3843		Same as above. Calcareous in thin zones (\pm 1 cm).		
3844		Mudstone, dark greenish gray (5GY 4/1), greenish gray (5GY 6/1), gray black (5GY 2/1), and very light gray (N8), thinly laminated to thin bedded. Very light gray (N8) zone is calcareous. Slightly calcareous throughout.		
3845		Mudstone, dark greenish gray (5GY 4/1), gray black (5GY 2/1), and very light gray (N8), thickly laminated to very thin bedded. Pyrite lamination. Yellowish gray (5Y 7/2) concretionary zone, very calcareous. Calcareous throughout.		
3846		Mudstone, dark greenish gray (5GY 4/1), gray black (5GY 2/1), thickly laminated to very thin bedded. Calcareous in (\pm) 1 cm zones.		
3847		*3,846.22/.63 Mound		
	END			

DEPTH	FRACTURES	WELL NO.	OHIO #8	
		RUN NO.	20	x Gas Shows (initial) * Samples Taken
		DATE	3/19/80	LITHOLOGIC DESCRIPTION
3848	<u>.38</u> <u>XXX</u>	Rubble		
		Mudstone, greenish gray (5G 6/1), dark greenish gray (5G 4/1), and gray black (5GY 2/1).		
3849		Same as above. Pyrite.		
3850		Same as above. Pyrite.		
3851		Same as above. Pyrite.		
3852		Mudstone and silty mudstone, greenish gray (5G 6/1), dark greenish gray (5G 4/1), light olive gray (5Y 6/1), yellowish gray (5Y 8/1), very light gray (N7), thickly laminated. Light olive gray (5Y 6/1) and yellowish gray (5Y 8/1) concretion. Silty mudstone ripple laminated.		
3853		Mudstone and silty mudstone, greenish gray (5G 6/1), dark greenish gray (5G 4/1), yellowish gray (5Y 8/1), and very light gray (N7), thickly laminated. Yellowish gray (5Y 8/1) is load cast. Silty mudstone ripple laminated.		
3854		Mudstone, greenish gray (5G 6/1), dark greenish gray (5G 4/1), and yellowish gray (5Y 8/1), thickly laminated. Yellowish gray (5Y 8/1) is very calcareous mudstone. Calcareous throughout.		
3855		Same as above.		
3856		Mudstone, greenish gray (5G 6/1) and dark greenish gray (5G 4/1), thickly laminated. Calcareous in thick laminations.		
		*3,855.22/.59 Juniata		
		Mudstone, dark greenish gray (5G 4/1) and olive black (5Y 2/1), thickly laminated to thin bedded. Bioturbated.		

DEPTH	FRACTURES	WELL NO.	OHIO #8	
		RUN NO.	20	x Gas Shows (initial) * Samples Taken
		DATE	3/19/80	LITHOLOGIC DESCRIPTION
3857		Mudstone, greenish gray (5G 6/1) and dark greenish gray (5G 4/1), thickly laminated. Pyrite burrows.		
3858		*3,857.24/.68 Mound		
		Same as above. No pyrite.		
3859		Mudstone, greenish gray (5G 6/1), dark greenish gray (5G 4/1), and yellowish gray (5G 8/1), thickly laminated. Yellowish gray (5G 8/1) is load cast, very calcareous. Pyrite burrows. Light zones are calcareous.		
3860		Same as above. No pyrite.		
3861		Same as above.		
3862		Mudstone, dark greenish gray (5G 4/1), gray black (5GY 2/1), olive gray (5Y 4/1), and yellowish gray (5Y 8/1), thickly laminated to thin bedded. Pyrite burrows. Yellowish gray (5Y 8/1) load cast, very calcareous. Calcareous throughout.		
3863		Mudstone, greenish gray (5G 6/1), dark greenish gray (5G 4/1), and light olive gray (5Y 6/1), thickly laminated to thin bedded. Light olive gray (5Y 6/1) load cast, very calcareous. Calcareous in a few zones.		
3864		Mudstone, greenish gray (5G 6/1) and dark greenish gray (5G 4/1), thickly laminated. Silt-filled laminations. Lighter zones are calcareous.		
3865		Mudstone, olive black (5Y 2/1) and greenish gray (5GY 6/1), thickly laminated to thin bedded. Lower 1/4 is calcareous.		
3866		Mudstone, greenish gray (5GY 6/1) and olive black (5Y 2/1), thickly laminated. Small very light gray (N8) fragment, calcareous. Lighter zones are calcareous.		

DEPTH	FRACTURES	WELL NO.	OHIO #8	
		RUN NO.	20	x Gas Shows (initial) * Samples Taken
		DATE	3/19/80	LITHOLOGIC DESCRIPTION
3867		Same as above. Many pyrite burrows, consolidated, very calcareous.		
3868		*3,867.18/.60 Mound		
3869		Same as above. No pyrite.		
3870		Mudstone, greenish gray (5GY 6/1), olive black (5Y 2/1), and light gray (N7), thickly laminated. Light zones are calcareous. Pyrite burrows, calcareous.		
3871		Mudstone, greenish gray (5GY 6/1), grayish black (5G 2/1), and light gray (N7), thickly laminated. Light zones are slightly calcareous. Pyrite burrows. *3,870.34/.74 USGS		
3872		Same as above. No pyrite.		
3873		Mudstone, greenish gray (5G 6/1), grayish black (5G 2/1), and light greenish gray (5G 8/1), thickly laminated. Pyrite burrows, calcareous. Light greenish gray (5G 8/1) load cast, calcareous.		
3874		Mudstone, dark greenish gray (5G 4/1), grayish black (5G 2/1), and light olive gray (5Y 6/1), thickly laminated to thin bedded. Pyrite laminations.		
3875		Same as above. Pyrite nodule (+ 2 cm).		
3876		Mudstone, olive gray (5Y 4/1) and olive black (5Y 2/1), thickly laminated to thin bedded. Pyrite lenses.		
3876		Mudstone, olive black (5Y 2/1), olive gray (5Y 4/1), and greenish gray (5GY 6/1), thickly laminated to thin bedded. Pyrite burrows. Light zones are calcareous.		

DEPTH	FRACTURES	WELL NO.	OHIO #8
		RUN NO.	20
		DATE	3/19/80
		LITHOLOGIC DESCRIPTION	
3877		Mudstone, greenish gray (5GY 6/1) and olive gray (5Y 4/1), thickly laminated to thin bedded. Pyrite laminations and burrows. Pyrite is calcareous. Light zones and some dark zones calcareous.	
3878	Closed nat'l. fractures	*3,877.12/.52 Mound	
3879		Mudstone, light bluish gray (5B 7/1) and olive gray (5Y 4/1), thickly laminated. Pyrite laminations are calcareous. Interval mostly calcareous.	
3880	Calci Cement	Same as above. Light olive gray (N7) concretionary zone. No pyrite.	
3881		Mudstone, light bluish gray (5B 7/1), light gray (N7), and olive black (5Y 2/1), thickly laminated to thin bedded. Small pyrite blebs. Light zones are calcareous.	
3882		Mudstone, medium light gray (N6) and olive gray (5Y 4/1), thickly laminated to very thin bedded. Yellowish gray (5Y 8/1) concretionary zone, very calcareous. Pyrite burrow and nodule, calcareous. Interval calcareous.	
3883		Mudstone, medium light gray (N6), olive gray (5Y 4/1), and olive black (5Y 2/1), thickly laminated to thin bedded. Small pyrite burrow. Calcareous in zones.	
3884		Mudstone, olive gray (5Y 4/1) and olive black (5Y 2/1), thickly laminated to thin bedded. Light zones are calcareous.	
3885		Same as above. Pyrite laminations, calcareous.	
3886		Mudstone, greenish gray (5G 6/1) and olive gray (5Y 4/1), thickly laminated to very thin bedded. Pyrite nodule, calcareous. Olive gray (5Y 4/1) concretion, calcareous. Light mudstone is calcareous; olive gray (5Y 4/1) noncalcareous.	
		Same as above. Pyrite laminations, calcareous.	

DEPTH	FRACTURES	WELL NO.	OHIO #8	
		RUN NO.	20	x Gas Shows (initial) * Samples Taken
		DATE	3/19/80	LITHOLOGIC DESCRIPTION
3887		Mudstone, greenish gray (5GY 6/1) and olive gray (5Y 4/1), thickly laminated to thin bedded. Pyrite burrows. Calcareous light zones.		
3888		*3,887.25/.69 Mound		
3889		Mudstone, medium light gray (N6) and olive gray (5Y 4/1), thickly laminated to thin bedded. Some light zones are calcareous.		
3890		Mudstone, grayish black (5GY 2/1) and olive gray (5Y 4/1), thickly laminated to thin bedded.		
3891		Mudstone, greenish gray (5GY 6/1), olive gray (5Y 4/1), and olive black (5Y 2/1), thickly laminated to thin bedded. Some light zones are calcareous.		
3892		Same as above. Yellowish gray (5Y 8/1) concretion, very calcareous.		
3893		Mudstone, greenish gray (5G 6/1) and olive gray (5Y 4/1), thickly laminated. Light olive gray (N7) concretion, very calcareous.		
3894		Mudstone, olive black (5Y 2/1) and olive gray (5Y 4/1), thickly laminated to thin bedded. Slightly bioturbated. Pyrite; undulating laminations.		
3895		Same as above. Increasing olive black (5Y 2/1) mudstone. Small pyrite lamination, calcareous.		
3896		Same as above. No pyrite.		
		Mudstone, greenish gray (5GY 6/1) and olive black (5Y 2/1), thickly laminated. Slightly bioturbated.		

x

DEPTH	FRACTURES	WELL NO.	OHIO #8
		RUN NO.	20
		DATE	3/19/80
		LITHOLOGIC DESCRIPTION	
3897		Mudstone, olive black (5Y 2/1) greenish gray (5GY 6/1), and olive gray (5Y 4/1), thin bedded.	
3898		*3,897.15/.56 Mound	
		Same as above. Thickly laminated to thin bedded.	
3899		Mudstone, greenish gray (5GY 6/1) and olive black (5Y 2/1), thickly laminated to thin bedded. Bioturbated. Calcareous lens shapes. Concretion calcareous.	
3900		Same as above. Thickly laminated to very thin bedded. No concretion.	
3901		Mudstone, olive black (5Y 2/1), olive gray (5Y 4/1), and light olive gray (5Y 6/1), thickly laminated to thin bedded. Slightly bioturbated.	
3902		Mudstone and siltstone, greenish gray (5GY 6/1), olive gray (5Y 4/1), and light greenish gray (5GY 8/1), thickly laminated to thin bedded. Ripple laminations. Light olive gray (5Y 6/1) concretionary zone.	
3903		Mudstone, greenish gray (5GY 6/1), olive black (5Y 2/1), and olive gray (5Y 4/1), thickly laminated to thin bedded. Slightly bioturbated. Pyrite burrows, slightly calcareous.	
3904		Mudstone and siltstone, greenish gray (5GY 6/1), olive black (5Y 2/1), olive gray (5Y 4/1), and very light gray (N8), thinly laminated to thin bedded. Siltstone slightly load cast, calcareous. Bioturbated.	
3905		Mudstone, olive black (5Y 2/1) and olive gray (5Y 4/1), thickly laminated to thin bedded.	
3906		*3,905.38/.65 Juniata	
		Mudstone, olive black (5Y 2/1).	
	END		

DEPTH	FRACTURES	WELL NO.	OHIO #8
		RUN NO.	21
		DATE	3/20/80
		LITHOLOGIC DESCRIPTION	
3936		Mudstone, olive black (5Y 2/1) and light olive gray (5Y 6/1), thinly laminated to thin bedded. Bioturbated. Calcareous in lens shapes. Dolomite-filled horizontal fracture. Pyrite laminations.	
3937		Same as above. Olive gray (5Y 4/1) concretion, very calcareous.	
3938	concretion	Mudstone, olive black (5Y 2/1), olive gray (5Y 4/1), and greenish gray (5GY 6/1), thickly laminated to thin bedded. Bioturbated. Pyrite laminations. Bioturbated. Dolomite-filled horizontal fracture.	
3939		*3,938.23/.70 Mound	
		Same as above.	
3940		Mudstone, olive black (5Y 2/1) and light olive gray (5Y 6/1), thickly laminated to thin bedded. Pyrite burrows, undulating laminations, calcareous. Vitrinite. Dolomite-filled fracture.	
3941		Mudstone, olive black (5Y 2/1) and light olive gray (5Y 6/1), thickly laminated to thin bedded. Pyrite burrows, undulated laminations, some calcareous. Light zones are calcareous.	
3942		Mudstone, greenish gray (5G 6/1), dark greenish gray (5GY 4/1), and olive gray (5Y 4/1), thickly laminated to thin bedded. Bioturbated. Pyrite burrows. Light olive gray (5Y 6/1) concretion, very calcareous.	
3943		Mudstone, olive black (5Y 2/1) and olive gray (5Y 4/1), thickly laminated to thin bedded. Much pyrite - nodules, laminations, calcareous. Slightly bioturbated.	
3944		Same as above. Olive gray (5Y 4/1) concretion, very calcareous.	
3945		Mudstone, olive black (5Y 2/1) and olive gray (5Y 4/1), thickly laminated to thin bedded. Pyrite burrows. Single light lamination is calcareous.	

DEPTH	FRACTURES	WELL NO.	OHIO #8
		RUN NO.	21
		DATE	3/20/80
		LITHOLOGIC DESCRIPTION	
3946		Same as above. Bioturbated. Much pyrite - burrows, laminations, some is calcareous.	
3947		*3,946.31 / .73 Mound	
3948		Mudstone, greenish gray (5GY 6/1), olive gray (5Y 4/1), and olive black (5Y 2/1), thickly laminated to thin bedded. Pyrite burrows, calcareous. Slightly bioturbated.	
3949		Same as above. Light olive gray (5Y 6/1) concretion, very calcareous.	
3950		Mudstone, greenish gray (5GY 6/1), olive gray (5Y 4/1), and olive black (5Y 2/1), thickly laminated to thin bedded. Some light zones are calcareous.	
3951		Mudstone, medium light gray (N6) and olive black (5Y 2/1), thickly laminated to thin bedded.	
3952		Same as above. Zones of disseminated pyrite, calcareous.	
3953		Mudstone, medium light gray (N6), olive black (5Y 2/1), and very light gray (N8), thickly laminated to thin bedded. Light olive gray (5Y 6/1) concretion, very calcareous. Very light gray zones are calcareous. Bioturbated.	
3954		Mudstone, medium light gray (N6) and olive black (5Y 2/1), thickly laminated to thin bedded. Bioturbated. Disseminated pyrite.	
3955		Mudstone, olive black (5Y 2/1) and light olive gray (5Y 6/1), thickly laminated to thin bedded. Bioturbated. Pyrite laminations, blebs.	
		Mudstone, olive gray (5Y 5/1) and olive black (5Y 2/1), thin bedded. Pyrite-filled lamination.	

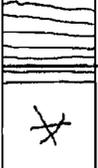
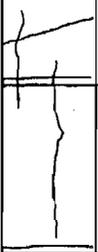
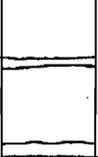
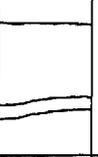
DEPTH	FRACTURES	WELL NO.	OHIO #8		
		RUN NO.	21	x Gas Shows (initial)	* Samples Taken
		DATE	3/20/80	LITHOLOGIC DESCRIPTION	
3956		Mudstone, olive gray (5Y 5/1) and olive black (5Y 2/1), thickly laminated to thin bedded. Pyrite disseminated grains and laminations, calcareous.			
3957		*3,956.21/.56 Juniata			
		Mudstone, medium light gray (N6) and olive gray (5Y 4/1), thickly laminated to thin bedded. Light olive gray (5Y 6/1) concretionary zone, partly calcareous.			
3958		*3,957.37/.76 Mound			
		Mudstone and silty mudstone, medium light gray (N6), olive black (5Y 2/1), olive gray (5Y 4/1), and yellowish gray (5Y 8/1), thickly laminated to thin bedded. Bioturbated. Silty mudstone is ripple laminated, very calcareous.			
3959		Mudstone, medium light gray (N6) and olive black (5Y 2/1), thickly laminated to thin bedded. Bioturbated. Light olive gray (5Y 6/1) concretionary zone, calcareous.			
3960		Same as above.			
3961		Mudstone, medium light gray (N6) and olive black (5Y 2/1), thickly laminated to thin bedded. Pyrite laminations.			
3962		Same as above. Pyrite disseminated grains.			
3963		Mudstone, olive gray (5Y 4/1), olive black (5Y 2/1), and light olive gray (5Y 6/1), thickly laminated to thin bedded. Bioturbated.			
3964		Same as above.			
3965		Mudstone and silty mudstone, medium light gray (N6), light gray (N7), and very light gray (N8), thickly laminated to thin bedded. Silty mudstone ripple laminated, calcareous.			

DEPTH	FRACTURES	WELL NO.	OHIO #8
		RUN NO.	22
		DATE	3/20/80
		LITHOLOGIC DESCRIPTION	
3967		Mudstone, medium gray (N5).	
3968		Mudstone, medium gray (N5) and brownish black (5YR 2/1), thickly laminated to thin bedded. Bioturbated. *3,967.42/.84 Mound	
3969		Mudstone and silty mudstone, medium gray (N5), brownish black (5YR 2/1) and very light gray (N8), thickly laminated to thin bedded. Bioturbated. Silty mudstone ripple laminated. Light olive gray (5Y 6/1) concretionary zone, calcareous.	
3970		Mudstone, medium gray (N5) and brownish black (5YR 2/1), thickly laminated to thin bedded. Light olive gray (5Y 6/1) concretionary zone. Very calcareous throughout.	
3971		Mudstone, medium gray (N5) and brownish black (5YR 2/1), thickly laminated to thin bedded. Slightly bioturbated. Calcareous throughout. *3,970.40/.73 USGS	
3972		Same as above.	
3973		Mudstone and silty mudstone, medium gray (N5), light olive gray (5Y 6/1), and light gray (N7), thin bedded. Silty mudstone (light gray) is slightly ripple laminated. Very calcareous throughout.	
3974		Same as above. Light olive gray (5Y 6/1) concretion, very calcareous.	
3975		Mudstone and silty mudstone, medium gray (N5), light gray (N7), and brownish black (5YR 2/1), thickly laminated to thin bedded. Bioturbated. Silty mudstone is ripple laminated. Very calcareous throughout.	
		Mudstone, medium gray (N5), olive black (5Y 2/1), and olive gray (5Y 4/1), thickly laminated to thin bedded. Bioturbated. Slightly calcareous.	

DEPTH	FRACTURES	WELL NO.	OHIO #8	
		RUN NO.	22	x Gas Shows (initial) * Samples Taken
		DATE	3/20/80	LITHOLOGIC DESCRIPTION
3976		Mudstone, olive gray (5Y 5/1) and olive black (5Y 2/1), thickly laminated to thin bedded. Bioturbated. Slightly calcareous.		
3977		Mudstone and silty mudstone, olive gray (5Y 4/1), olive black (5Y 2/1), and medium light gray (N6), thickly laminated to thin bedded. Bioturbated. Ripple laminated. Calcareous throughout.		
3978		Mudstone, medium light gray (N6) and brownish black (5YR 2/1), thickly laminated to thin bedded. Bioturbated. Pyrite laminations and burrows. Light olive gray (5Y 6/1) concretionary zone very calcareous. Calcareous throughout.		
3979		*3,978.07/.60 Mound		
3980	P.F.	Mudstone, greenish gray (5G 6/1) and brownish black (5YR 2/1), thickly laminated to thin bedded. Slightly bioturbated. Pyrite disseminated grains. Very calcareous throughout.		
3981		Mudstone, greenish gray (5GY 6/1) and greenish gray (5G 6/1), thickly laminated to thin bedded. Light olive gray (5Y 6/1) concretionary zones, very calcareous. Calcareous throughout.		
3982	dbl. P.F.	Mudstone, brownish black (5YR 2/1), olive gray (5Y 4/1), and greenish gray (5Y 4/1), thin bedded.		
3983	P.F.	Mudstone, greenish gray (5GY 6/1) and brownish black (5YR 2/1), thickly laminated to thin bedded. Light olive gray (5Y 6/1) concretionary zones, very calcareous. Very calcareous throughout (except brownish black).		
3984	P.F.	Mudstone, greenish gray (5G 6/1) and olive black (5Y 2/1), thickly laminated to thin bedded. Pyrite lenses and laminations. Calcareous around rim. Calcareous throughout.		
3985	dbl. P.F.	Mudstone, olive gray (5Y 4/1) and brownish black (5YR 2/1), thinly laminated to thin bedded. Light zones are calcareous. Bioturbated.		
		Mudstone.		

DEPTH	FRACTURES	WELL NO.	OHIO #8	
		RUN NO.	22	x Gas Shows (initial) * Samples Taken
		DATE	3/20/80	LITHOLOGIC DESCRIPTION
3986	P.F.			
3987				
3988	P.F.			
	P.F.			
	P.F.			
		Mudstone, greenish gray (5GY 6/1) and brownish black (5YR 2/1), thickly laminated to thin bedded. Light olive gray (5Y 6/1) concretionary zone. Disseminated pyrite grains.		
3989		*3,988.30/.83 Mound		
		Same as above.		
3990	P.F.			
		Mudstone, light olive gray (5GY 6/1), thickly laminated to thin bedded. Very bioturbated.		
3991		P.F. set		
		Mudstone, brownish black (5YR 2/1), thickly laminated to thin bedded. Disseminated pyrite grains.		
3992		Same as above.		
3993				
		Mudstone and siltstone, brownish black (5YR 2/1), olive gray (5Y 4/1), and light olive gray (5Y 6/1), thickly laminated to thin bedded. Pyrite nodule. Siltstone slightly calcareous.		
3994				
		Mudstone, greenish gray (5GY 5/1) and brownish black (5YR 2/1), thickly laminated to thin bedded. Pyrite laminations and disseminated grains. Calcareous in zones.		
3995	P.F.			
	P.F.			
		Mudstone, dark greenish gray (5G 4/1) and light olive gray (5Y 6/1), very thin bedded to thin bedded. Calcareous throughout.		
	P.F.			

DEPTH	FRACTURES	WELL NO.	OHIO #8
		RUN NO.	22
		DATE	3/20/80
		LITHOLOGIC DESCRIPTION	
4006		Mudstone, olive black (5Y 2/1) and olive gray (5Y 4/1), thickly laminated to thin bedded. Bioturbated. Calcite-filled fracture. Noncalcareous.	
4007		Mudstone, greenish black (5GY 2/1), light greenish gray (5GY 6/1), and olive gray (5Y 4/1), thickly laminated to thin bedded. Light zones in lower 1/4 are calcareous.	
4008		*4,007.45/.86 Mound	
4009		Mudstone, olive black (5Y 2/1) and olive gray (5Y 4/1), thickly laminated to thin bedded. Bioturbated.	
4010		Same as above. Small pyrite blebs present.	
4011		Mudstone, olive gray (5Y 4/1) and olive black (5Y 2/1), thickly laminated to thin bedded. Pyrite blebs.	
4012		Mudstone, olive black (5Y 2/1) and olive gray (5Y 4/1), thickly laminated to thin bedded. Pyrite bleb. Calcareous.	
4013		Same as above.	
4014		Same as above. Calcite-filled fracture.	
4015		Mudstone, olive gray (5Y 4/1) and olive black (5Y 2/1), thinly to thickly laminated. Calcareous. Horizontal calcite-filled fractures.	
		Mudstone, olive gray (5Y 4/1) and olive black (5Y 2/1), thickly laminated to thin bedded.	

DEPTH	FRACTURES	WELL NO.	OHIO #8	
		RUN NO.	23	x Gas Shows (initial) * Samples Taken
		DATE	3/21/80	LITHOLOGIC DESCRIPTION
4024				
4025				Mudstone, olive black (5Y 2/1) and olive gray (5Y 4/1), thickly laminated to thin bedded. Calcareous .1' zone.
4026				Same as above. Noncalcareous.
4027				Same as above. More olive gray (5Y 4/1). Bioturbated.
4028				*4,027.45/.87 Mound
4029				Mudstone and silty mudstone, olive black (5Y 2/1), olive gray (5Y 4/1), and light olive gray (5Y 6/1), thickly laminated to thin bedded. Slightly calcareous.
4030				Silty mudstone, olive black (5Y 2/1), olive gray (5Y 2/1), and greenish gray (5GY 6/1), thickly laminated to thin bedded. Light zones calcareous.
4031				Mudstone, olive black (5Y 2/1) and olive gray (5Y 4/1), thickly laminated to thin bedded. Calcareous .1' zone.
4032				Same as above. Pyrite lens. Calcareous throughout.
4033				Same as above. Increasing olive gray. Calcareous throughout.
4033				Mudstone, olive black (5Y 2/1) and olive gray (5Y 4/1), thickly laminated to thin bedded. Calcareous throughout.

DEPTH	FRACTURES	WELL NO.	OHIO #8
		RUN NO.	23
		DATE	3/21/80
		LITHOLOGIC DESCRIPTION	
4034		Same as above.	
4035		Same as above. Pyrite lenses. Slightly calcareous to calcareous throughout.	
4036		Mudstone, olive black (5Y 2/1) and olive gray (5Y 4/1), thickly laminated to thin bedded. Two pyrite laminations, calcareous. Calcareous throughout.	
4037		Same as above.	
4038		*4,037.10/.52 Mound	
4039		Same as above. Pyrite laminations, shell fragments.	
4040		Same as above. Pyrite laminations, no shell fragments. Calcareous in zones.	
4041		Mudstone, olive black (5Y 2/1) and olive gray (5Y 4/1), thickly laminated. Pyrite lamination. Calcareous throughout.	
4042		Mudstone and silty mudstone, olive black (5Y 2/1) and olive gray (5Y 4/1), thickly laminated. Calcareous <10% interval.	
4043		Mudstone and silty mudstone, olive black (5Y 2/1) and olive gray (5Y 4/1), thickly laminated. Several pyrite laminations. Calcareous throughout.	
		Mudstone, olive black (5Y 2/1), olive gray (5Y 4/1), and light olive gray (5Y 6/1), thickly laminated.	

DEPTH	FRACTURES	WELL NO.	OHIO #8
		RUN NO.	23
		DATE	3/21/80
		LITHOLOGIC DESCRIPTION	
4044		Mudstone, olive black (5Y 2/1) and olive gray (5Y 4/1), thickly laminated. 60% of interval is calcareous.	
4045		Same as above. Small pyrite lens.	
4046		Same as above. Light zones calcareous. Thickly laminated to thin bedded.	
4047		Mudstone, olive gray (5Y 4/1), olive black (5Y 2/1), and light olive gray (5Y 6/1), thickly laminated to thin bedded. Pyrite lamination (+ 3 mm thick). Disseminated grains. Some light zones are calcareous.	
4048		*4,047.22/.62 Mound	
4049	P.F.	Same as above. Pyrite laminations and lenses, calcareous. Interval is noncalcareous.	
	P.F.	*4,048.51/.88 Terra Tek	
4050		Mudstone, olive black (5Y 2/1) and olive gray (5Y 4/1), thickly laminated to thin bedded. Pyrite laminations. Small percent is calcareous.	
4051		Same as above. Pyrite burrows, laminations. Concretion with pyrite in center. Calcareous in concretion vicinity.	
4052		Mudstone, olive black (5Y 2/1) and olive gray (5Y 4/1), thickly laminated to thin bedded.	
4053		Mudstone, olive gray (5Y 4/1) and olive black (5Y 2/1), thickly laminated to thin bedded. Pyrite laminations. Bioturbated. Calcareous .1' zone.	
		Mudstone, olive black (5Y 2/1), olive gray (5Y 4/1), greenish gray (5GY 6/1), thickly laminated to thin bedded. Much pyrite - laminations, burrows. Calcareous in zones.	

x

DEPTH	FRACTURES	WELL NO.	OHIO #8	
		RUN NO.	23	x Gas Shows (initial) * Samples Taken
		DATE	3/21/80	LITHOLOGIC DESCRIPTION
4054		Mudstone, olive black (5Y 2/1) and greenish gray (5GY 6/1), thickly laminated. Calcareous throughout.		
4055		Same as above. Bioturbated. Pyrite lenses. Calcareous.		
4056		*4,055.32/.65 Juniata		
4057		Mudstone, light olive gray (5Y 6/1) and olive black (5Y 2/1), thickly laminated to thin bedded. Pyrite laminations and lenses; some are calcareous.		
4058		Mudstone, olive gray (5Y 4/1) and olive black (5Y 2/1), thinly to thickly laminated. Calcareous. *4,057.25/.60 Mound		
4059		Same as above. Pyrite laminations and pellets.		
4060		Mudstone, olive black (5Y 2/1) and olive gray (5Y 2/1), thickly laminated. Limestone fragment. Pyrite undulating lamination.		
4061		Same as above. Increasing olive gray (5Y 4/1). Pyrite lamination, calcareous. Light zones are calcareous.		
4062		Mudstone, olive black (5Y 2/1) and olive gray (5Y 4/1), thickly laminated to thin bedded. Pyrite laminations and burrows. Lower 3/4' and light zones are calcareous.		
4063		Same as above. Siltstone, very light gray (N8), ripple laminated.		
4064		Mudstone and siltstone, olive gray (5Y 4/1), olive black (5Y 2/1), and greenish gray (5GY 6/1), thinly to thickly laminated. Siltstone load cast. Pyrite lamination. Most of interval is calcareous.		

DEPTH	FRACTURES	WELL NO.	OHIO #8
		RUN NO.	23
		DATE	3/21/80
		LITHOLOGIC DESCRIPTION	
4065		Same as above. Slightly bioturbated. Dolomite-filled fracture.	
4066			
4067		Mudstone, olive gray (5Y 4/1), olive black (5Y 2/1), and greenish gray (5GY 6/1), thickly laminated. Colors are graduated. Several dolomite-filled fractures. *4,066.25/.63 Mound	
4068		Mudstone and siltstone, olive gray (5Y 4/1), olive black (5Y 2/1), light olive gray (5Y 6/1), and light gray (N7), thickly laminated to thin bedded. Siltstone load cast. 75% of interval is calcareous.	
4069		Limestone and mudstone, light gray (N7), light olive gray (5Y 6/1), olive gray (5Y 4/1) and olive black (5Y 2/1), thickly laminated to thin bedded. Mudstone is calcareous.	
4070		Mudstone, olive black (5Y 2/1), olive gray (5Y 4/1), and light olive gray (5Y 6/1), thickly laminated to thin bedded. Pyrite lamination, burrows. Light zones and pyrite laminations are calcareous.	
4071		Mudstone and siltstone, olive black (5Y 2/1) and light olive gray (5Y 6/1), thickly laminated to thin bedded. Siltstone, small percent of mudstone are calcareous.	
4072		Same as above. Pyrite lenses. *4,071.19/.63 USGS	
4073		Mudstone and siltstone, olive gray (5Y 4/1), olive black (5Y 2/1), and light gray (N7), thickly laminated to thin bedded. Siltstone ripple laminated, load cast.	
4074		Same as above. Siltstone is calcareous. Pyrite burrows.	
		Mudstone and siltstone, olive gray (5Y 4/1), olive black (5Y 2/1), and greenish gray (5GY 6/1), thickly laminated to thin bedded. Siltstone is calcareous.	

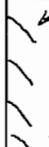
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x

x

DEPTH	FRACTURES	WELL NO.	OHIO #8	
		RUN NO.	23	x Gas Shows (initial) * Samples Taken
		DATE	3/21/80	LITHOLOGIC DESCRIPTION
4075		Mudstone and siltstone, olive black (5Y 2/1), olive gray (5Y 4/1), and light olive gray (5Y 6/1), thickly laminated to thin bedded. Siltstone ripple laminated and load cast, calcareous.		
4076		Mudstone, olive black (5Y 2/1) and olive gray (5Y 4/1), thickly laminated to thin bedded. Slightly bioturbated.		
4077		*4,076.21/.68 Terra Tek		
4078		Mudstone and siltstone, olive black (5Y 2/1), olive gray (5Y 4/1), and light olive gray (5Y 6/1), thickly laminated to thin bedded. Bioturbated. Siltstone load cast, calcareous. Pyrite laminations very valcareous. *4,077.18/.60 Mound		
4079		Same as above. Very calcareous .3' zone.		
4080		Mudstone and siltstone, olive black (5Y 2/1), olive gray (5Y 4/1), and light gray (N7), thickly laminated to thin bedded. Calcareous. Pyrite lenses, calcareous.		
4081		Same as above. Light zones and siltstone are calcareous.		
4082		Mudstone, olive black (5Y 2/1), light olive gray (5Y 6/1), and olive gray (5Y 4/1), thickly laminated to thin bedded. Bioturbated. Calcareous throughout.		
4083		Mudstone, olive gray (5Y 5/1) and olive black (5Y 2/1), thickly laminated to thin bedded. Pyrite laminations. Light zones are calcareous.		

DEPTH	FRACTURES	WELL NO.	OHIO #8	
		RUN NO.	24	x Gas Shows (initial) * Samples Taken
		DATE	3/21/80	LITHOLOGIC DESCRIPTION
4083		Mudstone, greenish black (5GY 2/1) and greenish gray (5GY 6/1), thickly laminated to thin bedded. Calcareous in zone.		
4084		Mudstone, olive black (5Y 2/1) and olive gray (5Y 4/1), thickly laminated to thin bedded. Pyrite laminations, noncalcareous.		
4085		Mudstone, olive black (5Y 2/1), thick bedded, calcareous. <u>NOTE</u> : ENTIRE RUN BELOW THIS POINT IS CALCAREOUS.		
4086		Same as above. Calcite-filled horizontal fracture. Calcareous.		
4087		*4,086.26/.70 Mound		
		Same as above. Shell fragments.		
4088		Same as above. Pyrite lenses.		
4089		Mudstone, olive gray (5Y 4/1) and olive black (5Y 2/1), thickly laminated to thin bedded. Pyrite lenses. Calcareous throughout.		
4090		Mudstone, olive black (5Y 2/1) and olive gray (5Y 4/1), thickly laminated. Pyrite lenses. Calcareous.		
4091		Same as above.		
4092		Same as above. Pyrite nodules, lenses, laminations.		

DEPTH	FRACTURES	WELL NO.	OHIO #8
		RUN NO.	24
		DATE	3/21/80
		LITHOLOGIC DESCRIPTION	
4093		Same as above. Pyrite lenses, single large lamination (+ 3 mm).	
4094		<i>Petal Frac. Set</i> Mudstone, olive black (5Y 2/1) and olive gray (5Y 4/1), thinly to thickly laminated. Pyrite laminations, blebs. Calcareous.	
4095		Mudstone and limey mudstone, olive black (5Y 2/1), olive gray (5Y 4/1), and light olive gray (5Y 6/1), thinly laminated to thin bedded. Pyrite laminations. Calcareous.	
4096		Mudstone and limey mudstone, olive black (5Y 2/1) and olive gray (5Y 4/1), thinly laminated to thin bedded. Pyrite lenses. Calcareous.	
4097		<i>Tensional Frac. on a concretion</i> Mudstone, olive black (5Y 2/1) and olive gray (5Y 4/1), thinly to thickly laminated. Pyrite lamination (~3 mm thick), pyrite blebs, small laminations. Calcareous.	
4098		*4,097.27/.73 Mound	
4099		Same as above. Pyrite blebs, thin laminations.	
4100		Same as above. pyrite blebs, thin lamination.	
4101		Same as above. Pyrite blebs, thin laminations.	
4102		Mudstone, olive black (5Y 2/1) and olive gray (5Y 4/1), thinly to thickly laminated. Pyrite blebs, thin laminations. Calcareous.	

DEPTH	FRACTURES	WELL NO.	OHIO #8
		RUN NO.	24
		DATE	3/21/80
		LITHOLOGIC DESCRIPTION	
4113		Same as above. No disseminated pyrite grains. Pyrite laminations are present. Calcareous.	
4114		Same as above. Pyrite blebs and lenses.	
4115		Same as above. Pyrite lenses.	
4116		Mudstone, olive gray (5Y 4/1) and olive black (5Y 2/1), thinly to thickly laminated. Pyrite laminations.	
4117		Same as above.	
4118		*4,117.23/.63 Mound	
4119		Mudstone, olive black (5Y 2/1) and olive gray (5Y 4/1), thinly to thickly laminated. Pyrite, single large lamination (+ 3 mm thick), and small laminations. Calcareous.	
4120		Same as above. Very calcareous. No large pyrite lamination.	
4121		Same as above. Increasing olive gray (5Y 4/1) content. No large pyrite lamination. *4,120.17/.52 USGS	
4122		Same as above. Large pyrite lamination (+ 3 mm), blebs.	
		Mudstone, olive black (5Y 2/1) and olive gray (5Y 4/1), thinly to thickly laminated. Pyrite laminations. Very calcareous.	

DEPTH	FRACTURES	WELL NO.	OHIO #8	LITHOLOGIC DESCRIPTION
		RUN NO.	24	
		DATE	3/21/80	
4123		Mudstone, olive gray (5Y 4/1) and olive black (5Y 2/1), thinly to thickly laminated. Pyrite laminations. Very calcareous.		
4124		Same as above. Large pyrite lamination (\pm 3 mm), and small laminations.		
4125		Mudstone, olive black (5Y 2/1) and olive gray (5Y 4/1), thinly to thickly laminated. Pyrite lenses, blebs. Very calcareous.		
4126		Mudstone, olive black (5Y 2/1), thick bedded. Pyrite, small blebs; single large, undulating lamination (\pm 3 mm). Very calcareous.		
4127		Same as above. No large pyrite lamination.		
x 4128		*4,127.39/.82 Mound		
4129		Mudstone, olive black (5Y 2/1) and olive gray (5Y 4/1), thickly laminated to thin bedded. Pyrite, disseminated grains, laminations. Very calcareous.		
x 4130		Mudstone, olive black (5Y 2/1) and olive gray (5Y 4/1), thinly to thickly laminated. Slightly bioturbated. Very calcareous.		
x 4131		Mudstone, olive black (5Y 2/1) and olive gray (5Y 4/1), thinly to thickly laminated. Pyrite laminations. Very calcareous.		
x 4132		Mudstone, olive black (5Y 2/1) and olive gray (5Y 4/1), thinly to thickly laminated. Pyrite, single large, undulating lamination, small laminations. Very calcareous.		
		Mudstone, olive gray (5Y 4/1) and olive black (5Y 2/1), thinly to thickly laminated. Pyrite laminations. Very calcareous.		

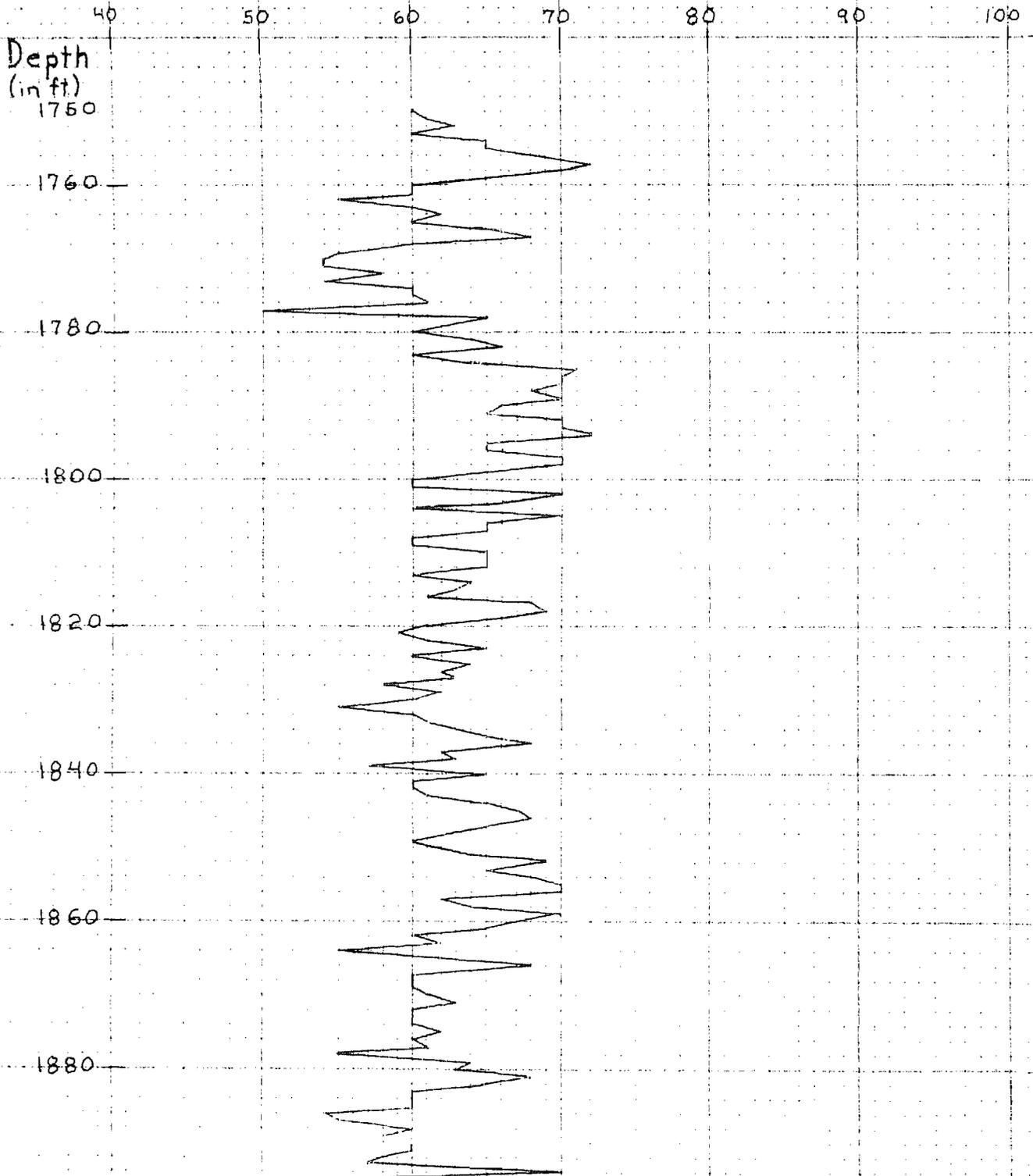
DEPTH	FRACTURES	WELL NO.	OHIO #8
		RUN NO.	24
		DATE	3/21/80
		LITHOLOGIC DESCRIPTION	
4133		Same as above.	
4134			
4135		Mudstone, olive black (5Y 2/1) and olive gray (5Y 4/1), thinly to thickly laminated. Pyrite laminations. Very calcareous.	
		Same as above.	
4136		Same as above.	
4137		*4,136.30/.75 Mound	
		Same as above.	
4138		Mudstone, olive black (5Y 2/1) and olive gray (5Y 4/1), thinly to thickly laminated. Several sharply defined olive gray (5Y 4/1) beds. Pyrite blebs. Very calcareous.	
4139		Mudstone, olive black (5Y 2/1). Pyrite laminations.	
4140		*4,139.37/.74 Terra Tek	
		Same as above. Single large, undulating pyrite lamination, small laminations.	
x 4141		Mudstone, olive black (5Y 2/1) and olive gray (5Y 4/1), thinly to thickly laminated. Several sharply defined olive gray (5Y 4/1) zones. Pyrite laminations. Very calcareous.	
4142			

DEPTH	FRACTURES	WELL NO.	OHIO #8	
		RUN NO.	25	x Gas Shows (initial) * Samples Taken
		DATE	3/22/80	LITHOLOGIC DESCRIPTION
4142		Mudstone, olive black (5Y 2/1) and olive gray (5Y 4/1), thinly to thickly laminated. Pyrite laminations and grains. Calcareous throughout.		
4143		Same as above.		
4144		Mudstone, olive black (5Y 2/1), thick bedded. Pyrite lamination.		
4145		Same as above. Pyrite lamination (several mm thick).		
4146		Mudstone, olive black (5Y 2/1) and olive gray (5Y 4/1), thin bedded. Calcareous zones (60% of interval).		
4147		*4,146.42/.85 Mound		
4148		Mudstone and limestone, olive black (5Y 2/1) and olive gray (5Y 4/1), thickly laminated to thin bedded. Contact with limestone at 1,147.7'.		
4149		Limestone, light olive gray (5Y 6/1) and greenish gray (5GY 6/1), gradual changes, thickly laminated to thin bedded.		
4150		Same as above.		
		Same as above.		
		84 END		

OHIO # 8

SCINTILLOMETER READINGS

Counts Per Second



1900 50 60 70 80 90 100

1920

1940

1960

1980

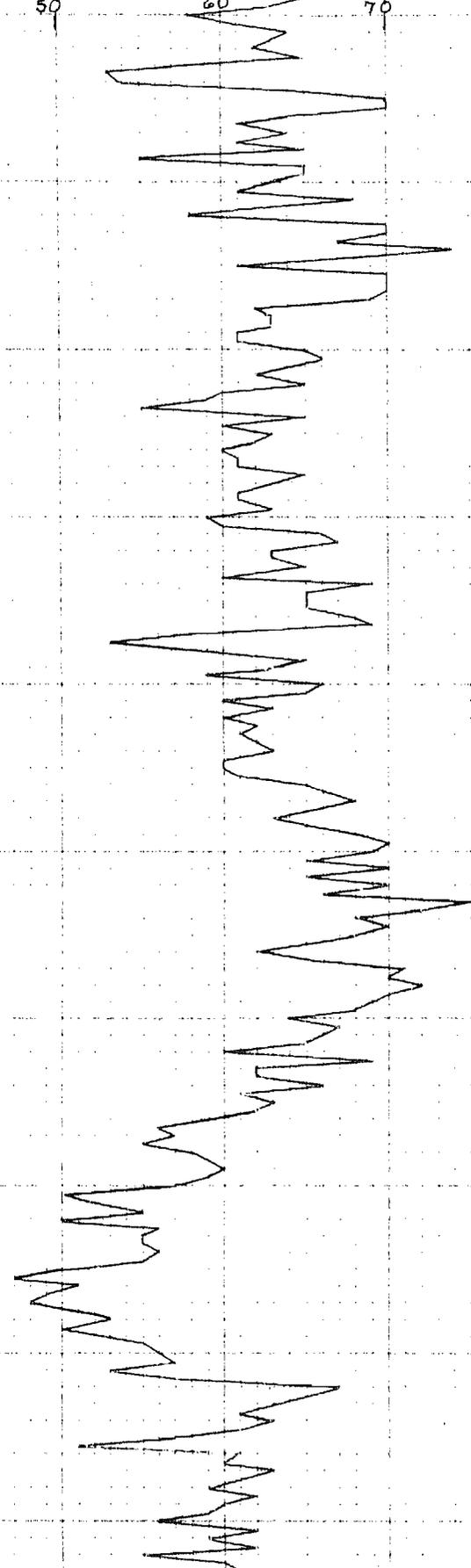
2000

2020

2040

2060

2080



2090

Plug Drilled 2087'-3085'

3080

3100

3120

3140

3160

3180

3200

3220

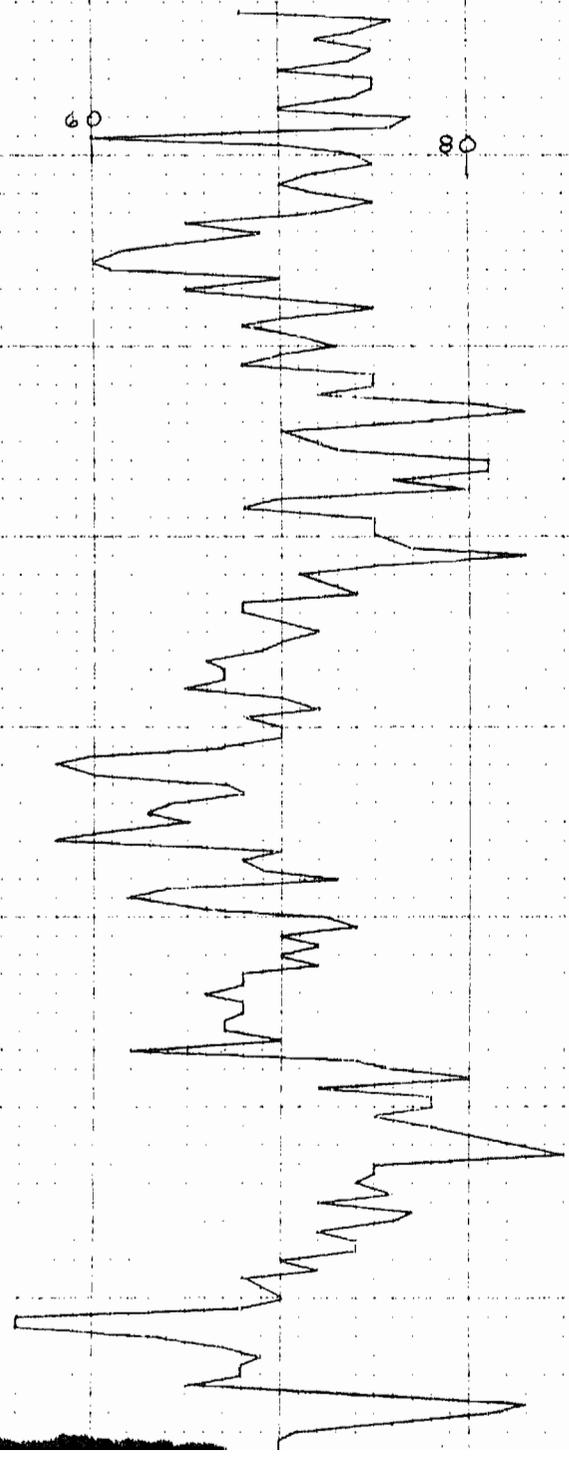
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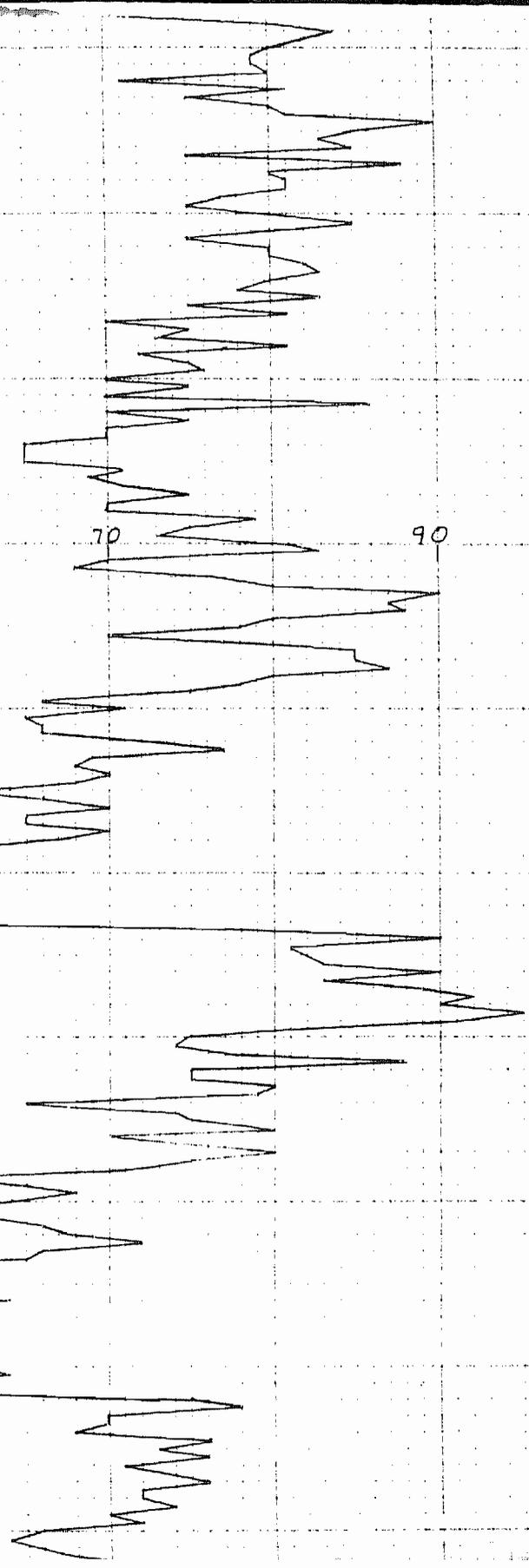
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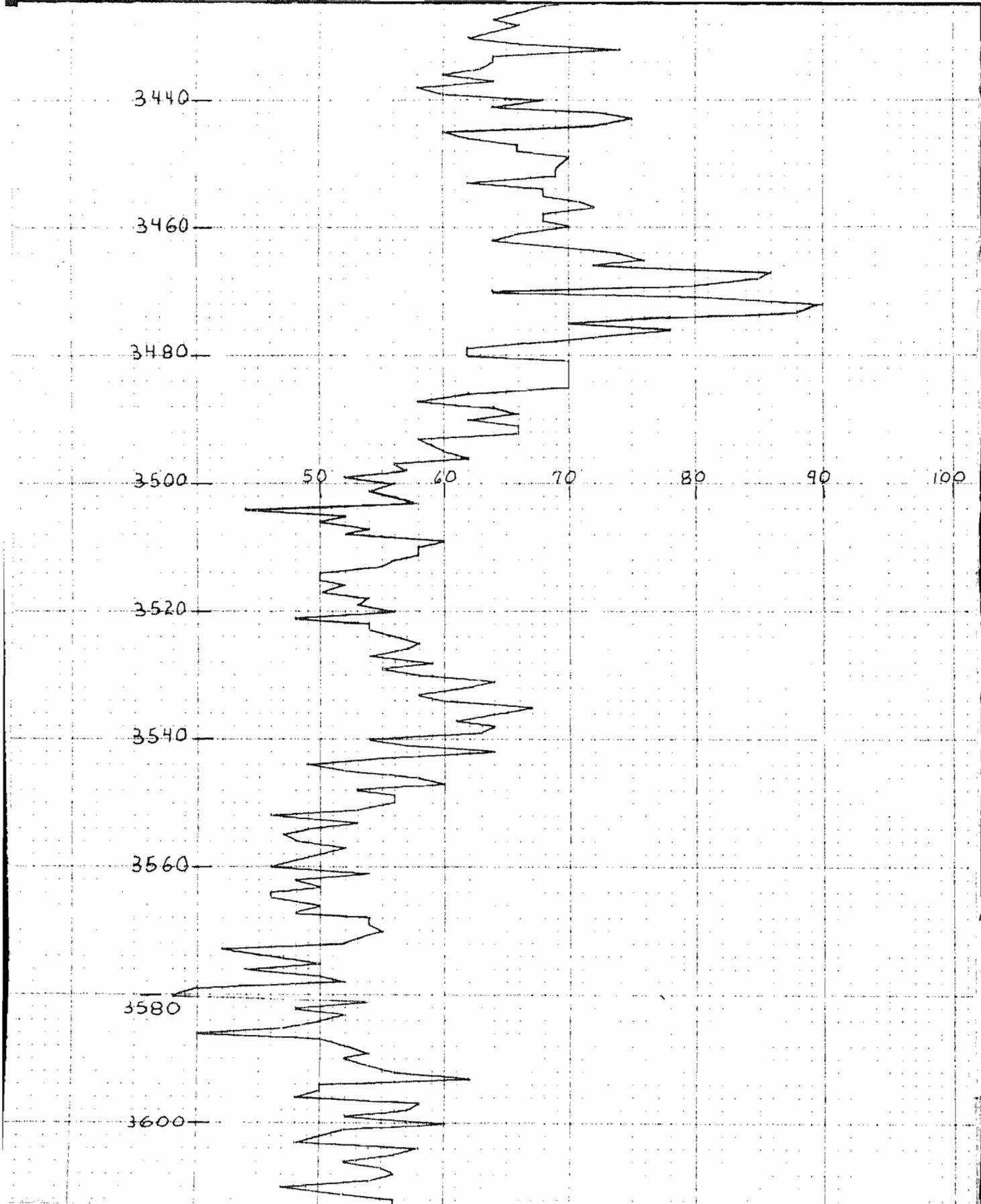
100



3240
3260
3280
3300
3320
3340
3360
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3420

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3620

3640

3660

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3700

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3800

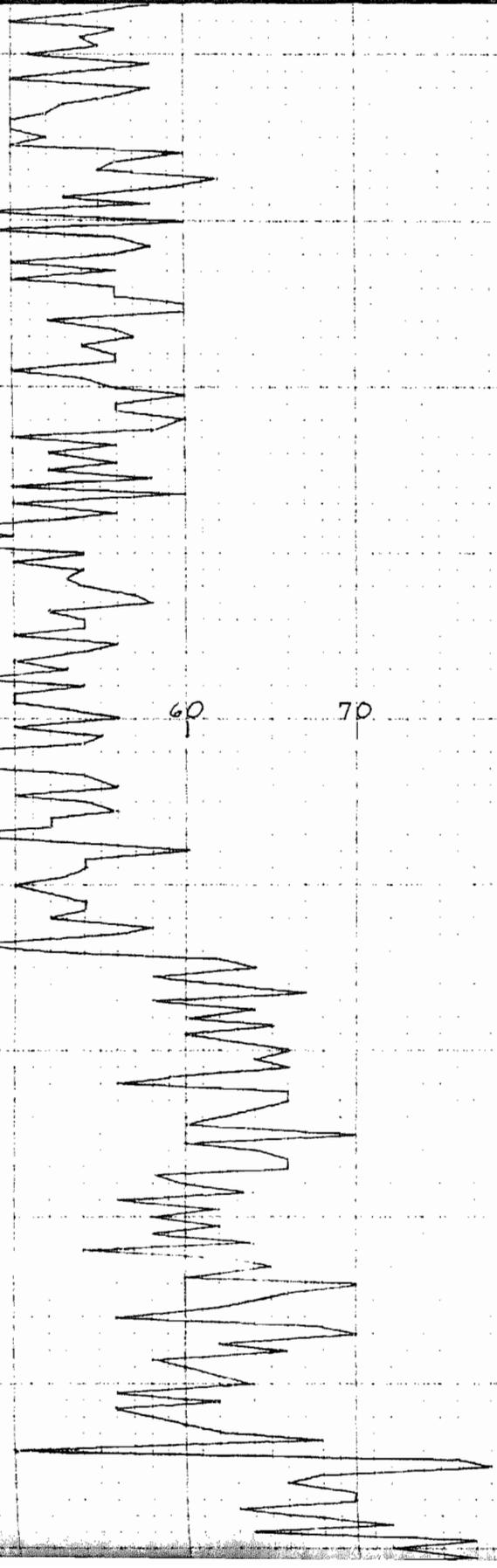
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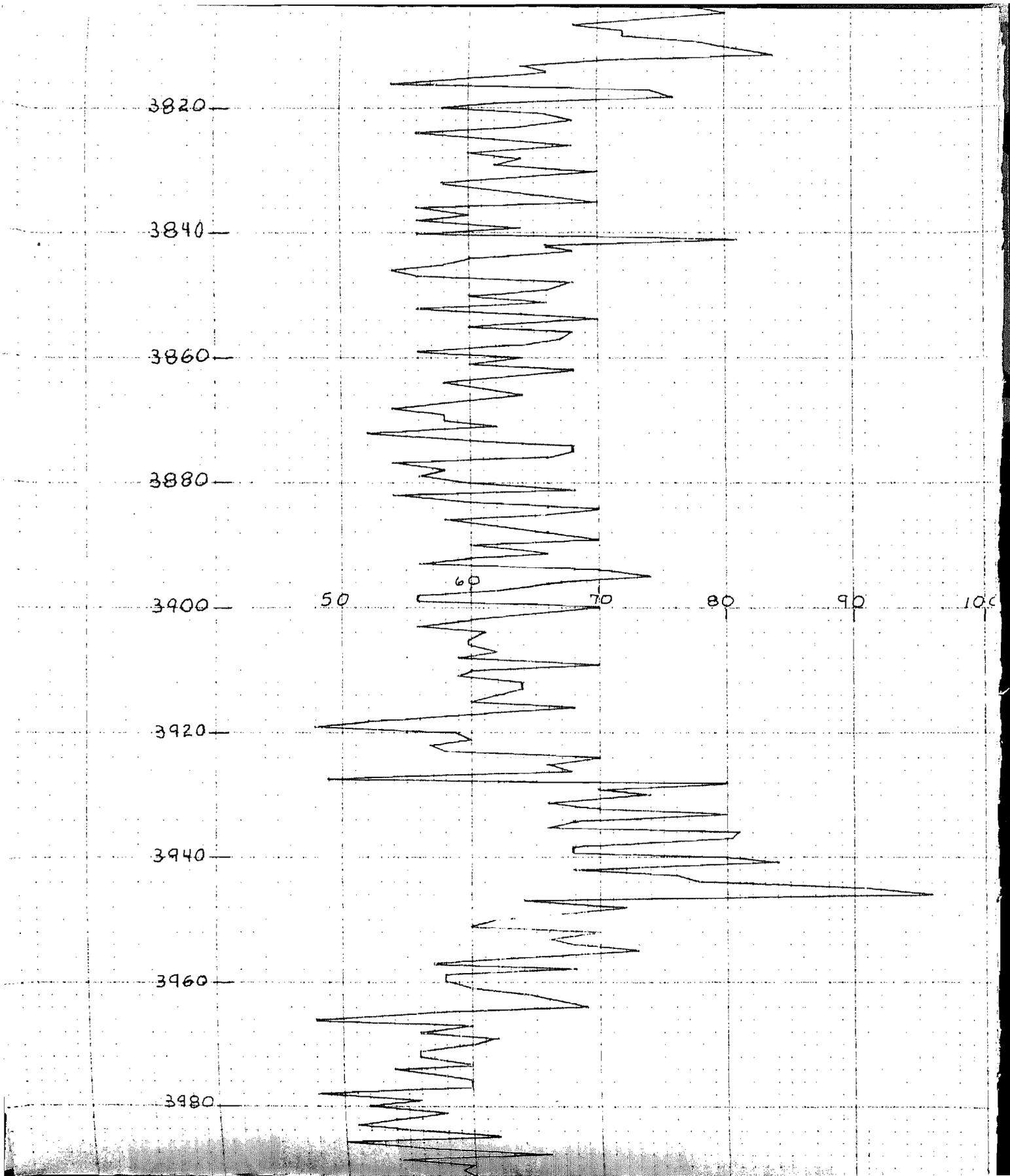
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100





4000

4020

4040

4060

4080

4100

4120

4140

4160

50

60

70

80

90

100

