

DGS core 3562

core description  
begins at 2794'

Allen-Shawnee  
Vistron Corporation #1  
permit 67 WDW #4

VISTRON CORPORATION Standard Oil Company (Ohio) # 1  
Industrial Disposal Well State Permit 67IWDW #4  
Location: 130' FSL and 72' FEL of SE $\frac{1}{4}$  of Section 2,  
Shawnee Township, Allen County, Ohio

Elevation  
864.2 GL  
872.2 KB

<u>DEPTH</u>	<u>DESCRIPTION</u>
0270-0280	Dolomite, white to cream, coarse crystalline, sucrosic porosity. Trace of argillaceous grey mottling.
0280-0320	Dolomite, grey, crystalline, sucrosic porosity, trace of cream dolomite, pyritic. pin point vugging.
0320-0350	Dolomite, grey, crystalline, pyritic, argillaceous.
0350-0360	Dolomite, white to greyish white, coarsely crystalline with good sucrosic porosity and pin point vugging. Trace of finely disseminated glauconite pellets.
0360-0370	As above with excellent porosity and concentrations of glauconitic dolomite. Scattered mineral fluorescence.
0370-0420	Dolomite, white to greyish white, coarsely crystalline with excellent sucrosic porosity and pinpoint vugging. Pyrite fragments and trace of argillaceous grey dolomite.
0420-0434	Shale, grey, pyritic, calcareous. Trace of dolomite from above. <u>10 minute circulation</u> : As above <u>20 minute circulation</u> : 100% shale
0434-0590	Shale, grey. Abundant white crystalline limestone and dolomite fragments. Limonite and hematite fragments and traces of iron stained chert.
0590-0675	Shale, grey, calcareous. Faint trace of white crystalline limestone.
0675-0680	(Missing)
0680-0700	Shale, grey, calcareous. Faint trace of white crystalline limestone.
0700-0705	Limestone, grey, brown, crystalline, tight.
0705-0710	Shale, grey, calcareous. 40%.
0710-0775	Limestone, cream, crystalline. 20% grey shale. Shale, grey, very calcareous. Trace pyrite. Trace bioclastic limestone.
0775-0795	Shale, grey, very calcareous, abundant limestone fragments, clear to white, crystalline.
0795-0805	Shale, grey, calcareous.
0805-0950	Shale, grey, calcareous, pyrite nodules, minor amounts of bioclastic limestone.
0950-1060	Shale, brown, calcareous, minor amounts of bioclastic limestone and carbonaceous flakes.
1060-1090	Shale, grey, brown, micaceous, calcareous, bioclastic.
1090-1200	Shale, reddish brown, calcareous, pyrite nodules.



**DEEP WELL POLLUTION CONTROL CORP.**  
426 WHITTLE AVENUE OLNEY, ILLINOIS 62450  
AREA CODE 618-393-7076

1200-1205 Shale, reddish brown, calcareous.  
 1205-1210 As above  
 1210-1215 As above  
 1215-1225 (Missing)  
 1225-1250 Shale, reddish brown, calcareous.  
 1250-1255 Shale, reddish brown, calcareous, trace pyrite.  
 1255-1270 Shale, reddish brown, calcareous, pyritic.  
 1270-1275 TRENTON, Dolomite, cream, fine crystalline,  
 pyritic. Scattered hydrocarbon fluorescence,  
 odor.  
 1275-1280 Dolomite, light brown, crystalline, pyritic.  
 Scattered hydrocarbon fluorescence, odor.  
 1280-1285 Dolomite, cream, fine crystalline, pyritic.  
 Scattered hydrocarbon fluorescence, odor.  
 Trace bentonite.  
 1285-1290 Dolomite, light brown, crystalline, faint hydro-  
 carbon fluorescence and odor, brown mottling,  
 pyritic, argillaceous.  
 1290-1295 Dolomite, cream, crystalline, faint hydrocarbon  
 fluorescence and odor. Trace grey shale.  
 1295-1300 Dolomite, cream, crystalline, faint hydrocarbon  
 fluorescence and odor, brown staining. Trace  
 chalky limestone.  
 1300-1320 Limestone, light brown, crystalline to chalky,  
 some dolomitic. Trace dark brown calcareous shale.  
 1320-1330 Limestone, light to medium brown, crystalline to  
 chalky, fossiliferous. Slightly argillaceous.  
 1330-1340 Limestone, light to dark brown, crystalline to  
 chalky, fossiliferous, slightly argillaceous.  
 1340-1350 As above  
 1350-1375 Limestone, light to dark brown, fine crystalline,  
 partly compact, trace chert, fossiliferous, pyritic.  
 1375-1390 As above.  
 1390-1395 Limestone, cream, fine crystalline, dolomitic,  
 faint brown mottling.  
 1395-1400 Limestone, light brown, fine crystalline, trace  
 dark brown argillaceous limestone. Slightly  
 dolomitic.  
 1400-1415 Limestone, light brown, fine crystalline, fossil-  
 iferous, probably stylolitic, traces of dark brown  
 limestone fragments.  
 1415-1425 As above with traces of grey argillaceous  
 limestone.  
 1425-1440 Limestone, light brown, fine crystalline, fossil-  
 iferous, trace dark brown argillaceous limestone.  
 Fair fluorescence from 1435-1440. No odor.  
 1440-1450 Limestone, tan, lithographic.  
 1450-1475 Limestone, tan, lithographic, trace fine crystalline.  
 1475-1500 As above.  
 1500-1525 Limestone, tan, lithographic, calcite "birdseyes!"  
 Trace white lithographic limestone.



1525-1530	Limestone, tan to white, lithographic to fine crystalline, pyritic.
1530-1535	As above with trace of smokey chert.
1535-1550	Limestone, tan, fine crystalline to lithographic.
1550-1560	Limestone, tan, lithographic, trace fine crystalline argillaceous.
1560-1575	Limestone, tan, fine crystalline, clastic appearance. Fossiliferous.
1575-1600	Limestone, tan with greyish cast, compact, fossiliferous.
1600-1605	Limestone, tan, fine crystalline, pyritic, argillaceous grey mottling.
1605-1620	Limestone, tan, fine crystalline, pyritic, argillaceous grey mottling, trace of white crystalline limestone, slightly dolomitic.
1620-1630	(Missing)
1630-1645	Limestone, tan, white, fine crystalline, trace of calcareous blue grey shale, pyritic.
1645-1650	Limestone, tan, fine crystalline.
1650-1660	Dolomite, tan, crystalline, fine cuttings, possibly good porosity area, calcic.
1660-1665	Limestone, tan, crystalline, dolomitic, fossiliferous.
1665-1670	Limestone, tan, crystalline, micro-oolitic, slightly dolomitic in part.
1670-1675	Limestone, tan, crystalline, trace blue grey shale.
1675-1700	Limestone, tan, lithographic to crystalline, compact, trace of grey and brown mottling with pyrite.
1700-1750	Limestone, tan, dense compact to fine crystalline, trace of white limestone, crystalline to chalky.
1750-1755	Limestone, tan, compact crystalline, trace grey argillaceous, pyritic, dolomitic limestone.
1755-1765	Limestone, tan, compact crystalline. Shale, grey, calcareous, pyritic, 20%.
1765-1800	Limestone, tan, crystalline to lithographic.
1800-1820	Limestone, tan, crystalline, slightly argillaceous.
1820-1825	<u>GULL RIVER</u> , Dolomite, white, crystalline.
	Limestone, white. Trace micro fractured with calcite filling. Trace blue green shale, arenaceous, dolomitic, glauconitic.
1825-1840	Limestone, tan to light brown, white, crystalline, argillaceous, pyritic. Trace of blue green shale.
1840-1850	<u>KNOX DOLOMITE</u> , Dolomite, smokey, white, crystalline, pyritic, fine grained sand grains. Very faint trace of blue green shale.
1850-1860	Dolomite, greyish white, crystalline, pyritic.
1860-1900	Dolomite, greyish white, trace cream, crystalline, pyritic.
1900-1910	(Missing)



1910-1935	Dolomite, greyish white, trace cream, crystalline. Very faint trace of blue green glauconitic shale. Trace of very fine rounded sand, pyritic.
1935-1950	Dolomite, greyish white, cream, crystalline sucrosic porosity, very pyritic, trace blue green shale.
1950-1960	Dolomite, cream to light brown, white, crystalline, fair sucrosic porosity in part, very pyritic as disseminated inclusions. Trace very fine sand.
1960-1970	Dolomite, light brown, cream, crystalline, sucrosic porosity, pyritic. Trace very fine sand.
1970-2000	Dolomite, cream, light brown, crystalline, trace pyrite. Trace very fine sand.
2000-2025	Dolomite, cream, fine crystalline, trace pyrite.
2025-2045	Dolomite, cream, trace brown mottling, crystalline, pinpoint vugs, sucrosic porosity, trace fine rounded clear sand grains.
2045-2085	Dolomite, cream, crystalline, oolitic in part with light brown oolites in cream matrix, secondary alteration and cementation.
2085-2100	Dolomite, cream, crystalline to compact, very faint trace of glauconite. Trace of oolitic structure as in 2045-2085.
2100-2120	Dolomite, cream, crystalline, pyritic.
2120-2125	Dolomite, cream crystalline, oolitic as in 2045-2085.
2125-2140	Dolomite, cream, crystalline, sucrosic porosity, pinpoint vugs, trace blue grey shale, glauconitic.
2140-2145	Dolomite, cream, crystalline, pyritic.
2145-2165	Dolomite, cream, crystalline, oolitic structure as in 2045-2085. Trace of fine sand.
2165-2180	Dolomite, white, fine crystalline. Trace glauconite, pyritic.
2180-2200	Dolomite, white to cream, crystalline, pyritic.
2200-2220	Dolomite, light to dark brown, crystalline to compact. Argillaceous, pyritic. Trace of white crystalline dolomite.
2220-2225	Dolomite, light brown to cream, crystalline, pyritic, faintly argillaceous.
2225-2230	Dolomite, white, crystalline, pyritic, faint trace of finely disseminated glauconite.
2230-2240	Dolomite, tan to medium brown, fine crystalline to compact, argillaceous, pyritic, trace of white dolomite from 2225-2230. Trace of fine sand.
2240-2245	Dolomite, white, crystalline, sucrosic porosity, finely disseminated glauconite, (bright green). Trace of dolomite from 2230-2240. Trace of fine sand.
2245-2250	Dolomite, white, tan, brown, crystalline to compact, argillaceous in part, finely disseminated glauconite.
2250-2260	Dolomite, cream, crystalline, trace of glauconite, sucrosic porosity.



- 2260-2270 Dolomite, cream to tan, crystalline, trace of glauconite, pyritic as inclusions.
- 2270-2275 Dolomite, dark brown to tan, trace of cream, crystalline, glauconitic, argillaceous. Trace of pseudo-oolitic structure with dark oolites in light colored brown matrix.
- 2275-2300 Dolomite, grey, brown, crystalline to compact. Pseudo-oolitic structure as in 2270-2275. Argillaceous grey and brown dolomite, common with glauconitic and pyritic inclusions. Trace of grey dolomite shale.
- 2300-2320 Dolomite, grey, crystalline, glauconitic, argillaceous. 50%. Shale grey, dolomitic, arenaceous. 50%. Trace of cream, crystalline dolomite.
- 2320-2370 Dolomite, cream, coarse crystalline, sucrosic porosity, trace of rounded clear sand grains, and trace of light brown dolomite grains, sub-rounded.
- 2370-2375 Dolomite, cream, fine to coarse crystalline, trace sucrosic porosity. Trace fine sand and pyrite.
- 2375-2380 Dolomite, white, crystalline, pinpoint vugs. Trace of fine sand.
- 2380-2390 Dolomite, cream, crystalline, pyritic. In part coarse crystalline with sucrosic porosity. Trace of fine sand.
- 2390-2405 Dolomite, cream to tan, crystalline, sucrosic porosity. Trace of argillaceous grey mottling. Very pyritic (nodules). Trace fine sand.
- 2405-2420 Dolomite, cream, crystalline, very faint trace argillaceous mottling.
- 2420-2435 Dolomite, grey, crystalline, impure, very glauconitic with disseminated green glauconite pellets throughout matrix. Argillaceous with fine rounded sand grains.
- 2435-2445 Dolomite, grey (smokey), crystalline, impure, very glauconitic with disseminated glauconite pellets throughout matrix. 10-25% grey shale with glauconite pellets disseminated through matrix. Concentration of fine sand increasing. (Mudding up hole)
- 2445-2495 Shale, grey, intensely glauconitic with disseminated glauconite pellets. 50%. Dolomite, as in 2435-2445 interval. Small amount of fine sand. Dolomite is argillaceous, siliceous.
- 2495-2535 Dolomite, grey to tan, crystalline, very glauconitic with evenly disseminated bright green glauconite pellets, argillaceous, trace of sand grains (caving badly).
- 2535-2560 Dolomite, medium brown to grey, crystalline to chalky, very impure, argillaceous, very glauconitic, some dolomite grades to dolomitic shale. (caving badly)



- 2560-2580 Dolomite, grey to cream, crystalline, very impure, argillaceous, very glauconitic. Siliceous in areas, trace of sand. Limonitic and hematitic staining. (caving badly).
- 2580-2600 Dolomite, grey, brown, white, crystalline to compact, glauconitic. Impure, argillaceous.
- 2600-2605 (Missing)
- 2605-2610 Dolomite, light brown, grey, white, crystalline, very glauconitic. Impure, argillaceous grading into glauconitic dolomitic shale. Red hematitic nodules and fragments. Fine sand in dolomite matrix.
- 2610-2615 As above with hematitic staining in dolomite.
- 2615-2620 As above with trace of hematitic shale.
- 2620-2625 (Missing)
- 2625-2630 Dolomite, light brown to grey, crystalline, very glauconitic (pellets), very argillaceous, trace of hematitic fragments. Fine sand in dolomite matrix up to 25%.
- 2630-2650 Dolomite, grey, crystalline, very glauconitic, argillaceous. Fine sand in the dolomite matrix up to 30-40%. Hematitic pellets in Matrix.
- 2650-2655 (Missing)
- 2655-2660 Dolomite, grey to light brown, crystalline, heavily glauconitic (pellets), arenaceous, fine sand 20%, subangular to rounded. Trace hematitic shale and hematitic staining, siliceous dolomite.
- 2660-2680 As above with trace of light cream dolomite with chalky texture.
- 2680-2685 Dolomite, grey, argillaceous, crystalline, abundantly glauconitic, hematitic shale, pyrite, pinkish brown mottling of dolomite. Trace of dense crystalline dolomite with pseudo-oolitic structure, dark oolites against white background. 5-10% fine sand floating in dolomite.
- 2685-2715 Dolomite, grey to light brown (pinkish cast), crystalline, very glauconitic, argillaceous, (grading into dolomitic shale), hematitic shale (5-15%) and staining.
- 2715 (30 minute circulation sample) Shale, red, hematitic 50%. Sandy dolomite, as above.
- 2715-2720 Dolomite, grey, light brown, crystalline, heavily glauconitic with 10-15% fine grained sand. Trace of chalky dolomite and hematitic shale.
- 2720-2750 Dolomite, light brown, grey, crystalline, heavily glauconitic with only minor amounts of sand. Small amount of hematitic shale. (25%).
- 2750-2760 Dolomite, grey, light brown, crystalline to chalky, heavily glauconitic, arenaceous, pyritic, fine floating sand in matrix. Very argillaceous. Varying amounts of hematitic shale with glauconite.



- 2760-2770 Shale, grey, hematitic, glauconitic, dolomitic.  
Dolomite, grey-grey brown, crystalline, glauconitic  
with fine to medium sand.
- 2770-2775 As above with small amount of glauconitic sand-  
stone.
- 2775-2780 Dolomite, grey to light brown, crystalline, very  
glauconitic (green pellets). Shale, grey, glauconitic.  
Increasing concentration of fine, rounded sand.
- 2780-2785 Sandstone, fine to medium, subangular to rounded,  
clean. Dolomite as above, with minor amounts of  
shale.
- 2785-2790
- 2792 Sandstone, as above.  
(Circulation sample) Sandstone, fine to medium,  
rounded, clean.

Pipe strapped coming out of hole at 2794 feet. Hole depth adjusted to 2794 feet for core point.

Samples examined wet under 10X to 20X Stero-Zoom binocular microscope under Geoscope light. All samples monitored under UV light for fluorescence.



## CORE DESCRIPTION

- 2794-2797 Sandstone, pinkish grey with brown and black mottlings, fine to very fine grained, rounded to subangular, calcareous, grey shale lamination (hairline), scattered flakes of carbonaceous material. Very argillaceous at base as hairline laminations.
- 2797-2798 Sandstone, grey with greenish cast, red-brown hematitic mottlings, medium grained, well sorted, angular sand in a fine grain matrix as bands. Glauconitic (pellets), slightly calcareous and carbonaceous.
- 2798-2803 Sandstone, pinkish grey with greenish cast, fine to very fine grained, subangular to angular, calcareous, very argillaceous, glauconite pellets disseminated through matrix along with glauconite clay toward base.
- 2803-2805 Siltstone, light grey, interbedded fine sand with glauconite pellets, grey clay, calcareous.
- 2805-2806 Sandstone, pinkish grey with green cast, fine grained, rounded to subangular. Very glauconitic (pellets) and calcareous.
- 2806-2808 Sandstone, pinkish grey with green cast, fine grained, rounded to subangular glauconitic (pellets) disseminated through matrix and in multiple thin bedding laminations. Several dull red angular clay fragments in sand, calcareous. Thin red brown clay lamination toward base.
- 2808-2809 Siltstone, green, interbedded sand and purple hairline clay lamination. Abundantly fossiliferous, glauconitic (pellets and fine glauconitic clay). Calcareous.
- 2809-2811 Sandstone, pinkish grey with green cast, fine grained, subangular to rounded, very glauconitic (pellets and clay inclusions), fine purple grey clay lamination. Black mottling in lower part, Calcareous.
- 2811-2812 Dolomite, grey, chalky. 40% fine to medium grained angular to rounded sand floating in matrix.
- 2812-2813 Sandstone, greenish grey with thin pinkish grey banding, fine grained, subangular to rounded, very glauconitic (pellets), thin argillaceous pyritic seams, slightly calcareous. Cherty inclusions near base.
- 2813-2814 Dolomitic sandstone, greenish to pinkish grey, highly glauconitic (pellets), fossil fragments, fine to medium grained, rounded to subangular.
- 2814-2818 Sandstone, grey, medium to fine grained, rounded to subangular, dolomitic cementation in part, scattered carbonaceous fragments with glauconitic shale banding at base (pyritic).



- 2818-2820 Sandstone, light pinkish grey to grey, fine grained, subangular, glauconitic (pellets), calcareous. Multiple hairline purple clay laminations.
- 2820-2821 Sandstone, grey, medium to fine grained rounded to subangular. Scattered carbonaceous fragments.
- 2821-2829 Sandstone, pinkish grey, fine to medium grained, subangular to rounded, dolomitic cementation in part, thin clay laminations in wavy form, thin tight cherty areas in upper part, solution cavities and vertical fracture at base as well as glauconitic.
- 2829-2831 Sandstone, greenish grey, fine to medium grained, subangular to rounded, very glauconitic (pellets), purple clay laminations and fragments, carbonaceous fragments (fossiliferous).
- 2831-2833 Sandstone, pinkish grey, fine to medium grained, subangular to rounded, very glauconitic in lower part, abundant carbonaceous fossil fragments, calcareous. Grades from fairly clean at top to impure and highly argillaceous at base.
- 2833-2838 Sandstone, pinkish grey, fine to medium grained, rounded to subangular, some dolomite cementation, well sorted and clean.
- 2838-2841 Sandstone, pinkish grey, fine to medium grained, rounded to subangular, faintly cross bedded in upper part, hairline wavy bedding laminations and grey mottling. Band of dark grey argillaceous at base. Fairly clean.
- 2841-2843 Sandstone, pinkish grey, fine grained, clay content high, very argillaceous with bedding laminations. Dark grey inclusions and argillaceous band near base.
- 2843-2846 Sandstone, pinkish grey, fine grained, rounded to subangular, very argillaceous, reddish brown mottling, hairline bedding laminations.
- 2846-2847 As above with a 2 inch band of coarse to very coarse sand in lower half.
- 2847-2851 Sandstone, pinkish grey, fine to medium grained, rounded to subangular, hematitic staining and mottling, multiple thin and hairline clay laminations from 2848.5 feet to base. Two inch band of coarse sand at 2849.3 feet.
- 2851-2852 Sandstone, pinkish grey, fine to medium grained, rounded to subangular, very pyritic. Scattered brown and black mottling, heavily laminated with thin shale streaks.
- 2852-2855 Sandstone, grey, fine grained, rounded to subangular, argillaceous, laminated at top, mottled reddish browns, carbonaceous flakes and fossil fragments from 2853 feet to base.



- 2855-2856 Sandstone, pinkish grey, fine grained, rounded to subangular. Argillaceous with multiple hair-line clay laminations. One inch band of coarse sand near top and one inch lense of coarse sand near center.
- 2856-2857 Siltstone, grey, interbedded fine laminations of pinkish grey sand and black carbonaceous shale.
- 2857-2861 Sandstone, pinkish grey, fine to medium grained, rounded to subangular, faintly calcareous, fossil casts, thin black clay laminations at top.
- 2861-2862 Sandstone, grey, faint pinkish cast, medium grained with trace of fine grained, rounded to globular, well sorted, frosted, friable. Two inch band of coarse sand in upper part.
- 2862-2869 Sandstone, pinkish grey, fine grained, rounded to subangular, grey clay laminations increasing toward base. Faintly calcareous.
- 2869-2871 Siltstone, light grey, multiple black carbonaceous shale lamination interbedded with fine sand. Interval from 2870.5 feet to base is coarse grey sand.
- 2871-2874 Sandstone, pinkish grey, fine to coarse grained, subangular to angular. Many black carbonaceous fossil fragments. Faintly calcareous. Fine glauconite pellets (bright green), from 2872 feet to base. Scattered fine grey clay laminations.
- 2874-2875 Siltstone, red brown to green, highly glauconitic (pellets). Interbedded fine sand and shale. Very fossiliferous, faintly calcareous. Lower part pinkish white laminated sand.
- 2875-2878 Sandstone, greenish grey to pinkish grey, fine to coarse grained, two inch band of coarse pinkish grey sand in dark green matrix in upper half of 2875-2876 interval. Cross-bedding between 2876-2877 feet, very glauconitic and clayey in lower and upper zone. Abundant fossil fragments, calcareous. Some fossils partly pyritized.
- 2878-2879 Siltstone, dark grey to greenish grey, highly glauconitic with dark grey clay and interbedded sand. Fossil fragments. Multiple hairline laminations with a band of red-brown sand near base.
- 2879-2883 Sandstone, green, fine grained, glauconitic with fine interbedded clay laminations. Faintly calcareous. Clay has muscovite mica flakes and sand has fossil fragments.
- 2883-2885 Sandstone, pinkish light brown, fine grained, angular to rounded, inclusions of grey clay and clay laminations, trace of fine carbonaceous fossil fragments. Bands of greenish black glauconitic sand in extreme upper and middle



- section of the interval. Thin laminations of red brown micaceous (biotite) clay in lower part of section.
- 2885-2888 Sandstone, light pinkish brown, fine grained, angular to rounded, few hairline laminations and finely disseminated grey clay.
- 2888-2890 Sandstone, as above with inclusions of grey clay (pyritic). Cast of cephalopod or coral preserved by sand.
- 2890-2891 Sandstone, pinkish grey, heavily laminated. Fairly well preserved brachiopod, possibly Lingulepis (upper cambrian).
- 2891-2892 Sandstone, pinkish grey, fine grained, angular to rounded, high clay concentration, faintly calcareous.
- 2892-2900 Sandstone, pinkish grey, fine grained, heavily laminated, very argillaceous, one inch thick band of dark grey shale at 2894 feet. Abundantly fossiliferous with casts of Lingulepis (?) and other brachiopods in upper part, fragments and carbonaceous flakes in lower part. Grey clay occurs as bands and inclusions.
- 2900-2903 Sandstone, pinkish grey, multiple laminations near center of interval, concentration of black carbonaceous shale lamination in upper part. Blending lenses of coarse red-brown sand into argillaceous impure shaley zone near base. Clay inclusions near base are pyritic and micaceous.
- 2903-2905 Sandstone, pinkish grey, fine grained, angular to rounded, micaceous, carbonaceous flakes, sparingly fossiliferous, fairly clean.
- 2905-2906 Sandstone, as above, becoming argillaceous with black carbonaceous lamination (hairline). Sparingly fossiliferous as casts and carbonaceous fossil fragments.
- 2906-2910 Sandstone, grey, very impure, fine lamination of black clay shale and fine pinkish grey sand. Grey clay inclusions, micaceous, fossiliferous. Carbonaceous flakes.
- 2910-2912 Sandstone, pinkish grey, fine grained, angular to rounded, argillaceous with grey clay bands (pyritic) Carbonaceous flakes and lamination. Glauconitic (pellets) toward base.
- 2912-2914 Siltstone, greenish black, very glauconitic. Interbedded fine sand and black shale.
- 2914-2915 Sandstone, light brown, fine grained, scattered carbonaceous flakes, traces of grey clay inclusions. Sparingly glauconitic. Fairly clean.
- 2915-2919 Sandstone, pinkish grey, fine grained, angular to rounded, fine clay disseminated through matrix and also as inclusions. Fossil casts, black carbonaceous fragments in upper part. Some clay lamination.



- 2919-2920 Sandstone, pinkish grey, fine to medium grained, subangular to rounded, frosted, high volume of finely disseminated grey clay (micaceous).
- 2920-2922 Sandstone, as above, increasing clay content (pyritic), one inch band of very coarse sand at 2920.3 feet and two inch band at 2921.7 feet. Sand grey white, globular to subangular, frosted, white clay and silica cementation, finely disseminated pyrite crystals.
- 2922-2925 Sandstone, pinkish grey, fine to medium grained, subangular to rounded, clay inclusions, faint trace of carbonaceous flakes. Limited amount of hair-line lamination, hematitic mottling. Longitudinal inclusion one inch thick in lower part.
- 2925-2926 Sandstone as above, rounded coarse sand grains becoming common. Small solution channels visible, multiple thin lamination in center.
- 2926-2927 Sandstone, pinkish grey, medium grained, sparse lamination, one inch band of coarse sand near center has purplish cast, globular to rounded, frosted, friable, clay cementation, clean sand.
- 2927-2932 Sandstone, pinkish grey to brown, fine to medium grained, rounded to subangular, frosted, clay cementation in part, with clay inclusions toward base containing muscovite mica and pyrite.
- 2932-2933 Sandstone, fine concentration of pyrite crystals along bedding plane.
- 2933-2934 Sandstone as above with thin clay lamination and trace of vertical fracture.
- 2934-2937 Sandstone, grey to light brown, fine to medium grained, subangular to rounded, becoming slightly argillaceous at base.
- 2937-2938 Sandstone, light pinkish brown, fine grained, subangular to rounded, heavily laminated, very argillaceous, carbonaceous flakes.
- 2938-2939 Siltstone, grey, interbedded lamination of pinkish grey fine sand and black micaceous shale.
- 2939-2946 Sandstone, grey to greenish grey, fine to medium grained, angular to rounded, very argillaceous (fine grey clay), abundant carbonaceous flakes and black micaceous shale lamination. Glauconitic (pellets and clay) toward base. Cross-bedded in grey sand 2939.5 to 2940.0 feet.
- 2946-2947 Sandstone, pinkish light brown, fine grained, micaceous, alternating bands of light brown sand at center and coarse two inch red-white sand toward base. Abundant carbonaceous flakes, trace hairline black shale lamination.



- 2947-2948 Sandstone, light brown with mottled greys, fine grained, very argillaceous, (grey clay) with traces of black lamination. Carbonaceous flakes.
- 2948-2952 Sandstone, light grey, fine to coarse, angular to rounded, frosted, argillaceous, carbonaceous flakes (fossil fragments), black micaceous shale inclusions, becoming heavily laminated toward base with pyritic, micaceous hairline grey shale.
- 2952-2957 Sandstone, pinkish grey, medium to very coarse, rounded to globular, clay and silica cementation, pyritic, partly friable, frosted. Coarse sand lenses occur in medium grain matrix at 2952.3 feet, 2953.7 feet, scattered through 2954-2955, 2956.5 feet. grading into coarse sand at 2956.8 feet.
- 2957-2964 Sandstone, pinkish light brown to grey, medium to coarse grained, subangular to globular, frosted, clay and silica cementation, friable in part, clean. Sparse lamination alternating bands of light pinkish brown and grey sand, cross-bedding between 2961.0-2961.5 feet, 2962-2964 feet.
- 2964-2967 Sandstone, grey to red-brown, coarse, rounded to globular, frosted, heavily laminated, argillaceous. Sparingly fossiliferous from 2965-2966 feet, cross-bedded toward base. Beginning at 2966.5 feet coarse, grey sand, subangular to rounded grains frosted, pyritic, well sorted, has upper surface exhibiting pitting and ridges that are probably ripple marking.
- 2967-2973 Sandstone, pinkish grey to grey, fine to medium at top grading into coarse sand at base, subangular to rounded, frosted, clay and silica cementation, minor grey shale inclusions. Cross-bedded between 2971-2972 feet. Sparse lamination, fairly clean.
- 2973-2975 Sandstone, white, fine to very coarse grained, rounded to globular, poorly sorted, two distinct size grains white clay cementation, friable. Small solution cavaties with partial pyrite and clay fillings, clean with good porosity and permeability.
- 2975-2981 Sandstone, grey and pinkish light brown, rounded to subangular, fine to very coarse grained, two distinct grain sizes, fine grains are part of clay cementation, friable. Micaceous with small solution cavaties between 2977-2979 feet. Sparingly laminated with greenish grey shale in upper part.
- 2981-2982 Sandstone, grey, coarse, in upper three inches followed by five inch band of siltstone, grey, pyritic, with interbedded sand. Remainder of



- interval is coarse grey sand grading to pinkish light brown sand at base. Latter has bright green lamination and faint trace of cross-bedding.
- 2982-2988 Sandstone, varying colors from light pinkish brown, grey to mottled green, fine to very coarse sand in zonation, generally globular to rounded, traces of argillaceous lamination and inclusions of glauconitic shale. Faint traces of cross-bedding between 2986-2987 feet. Coarse sand cemented in part with clay and has fine solution cavities between 2985-2986 feet. Argillaceous lamination is micaceous and pyritic. Clay content increases toward base and becomes concentrated as inclusions.
- 2988-2992 Sandstone, grey with green cast, red and green mottling, coarse grained, rounded to subangular, hematitic staining on grains, grey to green clay cementation, very small solution cavities at top, friable. Green glauconitic clay and red-brown hematitic lamination.
- 2992-2993 Sandstone, green with red-brown mottling, coarse to very coarse grained, subangular, uniform hematitic brown staining of grains, surfaces coated with pyrite crystals and secondary quartz. Cementation is pyrite, glauconitic clay and silica, heavily laminated with red hematitic, micaceous shale.
- 2993-2995 Sandstone, grey to light green, coarse, rounded to subangular, frosted, friable, trace yellow staining, white clay and green glauconitic clay cementation.
- 2995-2997 Sandstone, light brown with green cast, coarse grained, subangular to rounded, light brown staining of grains, glauconitic clay. Lamination of red hematitic, micaceous shale. Sand grains have crystal faces present and pyritic coating.
- 2997-2999 Sandstone, grey with green cast, very coarse (some grit size), rounded to globular, frosted, yellow, bright green, bright red staining of grains, cemented with glauconitic clay, friable. Thin dark green glauconitic clay lamination.
- 2999-3000 Sandstone, greyish green to brown, coarse, rounded to subangular, frosted, ferruginous and glauconitic clay.
- 3000-3001 Sandstone, greyish white with light greenish grey cast, medium to coarse, subangular to rounded, abundant glauconitic clay cementation and scattered inclusions. Friable.
- 3001-3003 Sandstone, white, green, light brown, medium to coarse, subangular to rounded, light brown staining of some grains, ferruginous and



- 3003-3005 glauconitic shale lamination and mottling. Sandstone, greyish white, fine to coarse grained, rounded to globular, poorly sorted, greenish white clay cementation. Sand grains with red and yellow staining. Amethyst variety of quartz as well as unidentified black sand grains. Friable.
- 3005-3010 Sandstone, red, hematitic, fine to medium grained, subangular to rounded. Faint traces of grey green clay. Band of white sand present with sharp line dividing it from red sand at 3008-3009 feet.
- 3010-3011 Sandstone, thin banded red and grey, hematitic fine to coarse, iron stained, subangular to globular, inclusions of red, micaceous, hematitic shale.
- 3011-3012 Sandstone, greyish white, coarse to very coarse, subangular to rounded, clean. Thin bands of grey-green clay indicate bedding with very coarse grains scattered through matrix. Cross-bedded. Red hematitic, micaceous shale inclusion.
- 3012-3013 Sandstone, red, hematitic, fine to medium grained, tight.
- 3013-3014 Sandstone, greyish white, coarse to very coarse, subangular to rounded, clean. Grey green clay.
- 3014-3015 Sandstone, red, hematitic, medium to coarse, subangular to globular, hematitic stained grains.
- 3015-3017 Sandstone, red, mottled white with sharp division between colors, fine to medium grained, subangular to rounded. Friable. Trace of coarse sand.
- 3017-3018 Sandstone, red, hematitic, with mottled white sand (has purple cast), fine to coarse, frosted, various hues of hematitic staining of grains, subangular to rounded.
- 3018-3033 Sandstone, red hematitic, medium to coarse, mostly coarse, subangular to globular, mostly rounded, hematitic stained grains, friable, differences in red hue indicate stratification. Some bands of grey sand alternating with red sand, and lenses of grey sand. Cross-bedded between 3026-3030 feet. Becoming mottled with dark red and light red sand toward base, with traces of green grey glauconitic clay.
- 3033-3034 Sandstone, red, hematitic, well cemented, fine to very coarsed grained, subangular to rounded, silica and pyrite cementation, (fine pyrite coating on sand grains), grains stained light brown. Many grains part before cement when broken. Green glauconite pellets and bands of glauconitic shale at 3033.5 feet.
- 3034-3035 Sandstone, red, hematitic, as above, with black lamination in extreme lower part. Upper part has three inch bands of cream, medium to coarse sand angular to rounded, with several feldspar grains. Tightly cemented with silica.



- 3035-3036 Sandstone, red, brown, fine to coarse, subangular to rounded, hematitic stained, abundant red clay, scattered glauconitic clay inclusions. Band of grey sand at 3035.3 feet, lower part of section cross-bedded.
- 3036-3038 Sandstone, grey, purple, medium to very coarse, subangular to globular, frosted, friable, interbedded purple (hematitic) and grey sand exhibits cross-bedded. Amethyst variety of quartz, rounded hematitic shale grains with sand. Traces of glauconitic shale nodules (green).
- 3038-3039 Sandstone, light brown, quartzitic, (breaks across sand grains), grains stained light brown, coarse grained, tight.
- 3039-3047 Sandstone, purple interfingered with greyish white, medium to coarse grained, subangular to globular, grains covered with hematite stain, friable in part, mostly silica cementation. Bright orange feldspathic clay lamination at 3042.5 feet. Sand from 3043.5 feet to base has many grains of citrine variety of quartz. Amethyst variety also fairly common in sample. Conglomeratic at 3046 feet in one inch band.
- 3047-3051 Conglomerate, composed of colorless, amethyst, and citrine quartz pebbles. Many pebbles are globular, all are rounded and etched. Dominant color is purple to dull red interfingered with grey. Bright orange staining along with hematitic staining of grains. Well cemented with silica. Interval from 3048-3051 feet quartzitic in nature. Cross-bedded from 3046.5 to 3047 feet and from 3047.7 to 3051 feet.
- 3051-3058 Sandstone, red-brown to yellowish grey, interbedded and interfingered, argillaceous, medium to coarse grained, subangular to rounded, tightly cemented with silica, ferruginous staining, stratification and cross-bedding indicated by hues of dark red. Glauconitic clay pellets and lamination from 3053 feet to base. Becomes hematitic, micaceous siltstone in several zones at base.
- 3058-3060 Sand, grey to red brown, medium to coarse grained, rounded, amethyst, citrine and rose quartz grains common. Faint lamination of grey clay. Well cemented at top with silica. Grey clay throughout matrix.
- 3060-3061 Sandstone, red browns, greenish grey, impure argillaceous, grading into bands of grey and red heavily micaceous shale.
- 3061-3067 Sandstone, dull red to grey, medium to coarse grained, rounded to subangular, hematitic, cemented



- with ferruginous clay and grey clay, friable. Sand grains are stained red-brown. Inclusions of grey sand and grey clay as well as alternating grey bands of sand, grading to very coarse grey sand at base.
- 3067-3068 Sandstone, white, coarse grained, rounded to subangular, clean. Silica cementation, tightly cemented. Several varieties of quartz grains present.
- 3068-3072 Sandstone, dull red to pinkish grey, interbedded, fine to coarse grained, subangular to rounded, well cemented with silica in part. Thin red hematitic lamination, red staining of sand grains.
- 3072-3078 (Not recovered)
- 3078-3081 Sandstone, red to white, interfingering, coarse, subangular to globular, hematitic stained sand. Conglomeritic at 3079.5 feet in one inch band. Stratification indicated by different hues of red and contrasting white bands against red and vice versa.
- 3081-3085 Conglomerate, quartz pebbles, angular with rounded edges in pinkish grey matrix of coarse sand alternating with dark red brown conglomerate with hematitic stained sand matrix.
- 3085-3093 Sandstone, alternating and interfingering red and grey sandstone. Medium to very coarse, rounded, partially ferruginous, hematitic clay cementation, some grey clay cementation. Amethyst, rose, citrine, and smokey varieties of quartz present in sand. Sand grains are pitted and grooved. Small amount of mica. Cross-bedded at top with scattered fine lamination throughout. Friable.
- 3093-3095 Sandstone, light brown, medium grained, well cemented with silica, almost quartzitic.
- 3095-3104 Sandstone, red to brown, grey, interbedded and interfingering coloration, different red and brown hues indicate stratification, medium to coarse sand grains, angular to rounded, pitted and grooved sand surfaces, much ferruginous staining and coating of sand grains. Highly argillaceous. Friable. Becoming conglomeritic toward base. Vertical fracture at 3095-3096'.
- 3104-3121 Conglomerate, and interbedded sandstone as above. Interval highly crossbedded. Zone at 3110-3111' has angular fragments of red hematitic shale in fine grained matrix, resembling breccia. Conglomerate at top is very hematitic, pebbles and sand are coated with oxide, have angular shape with rounded edges, pitted and grooved. Sand has traces of glauconite and mica throughout.



- 3121-3124 Sandstone, red, hematitic, medium to coarse grained, grains are subangular to rounded, coated with hematite.
- 3124-3126 Sandstone, white to grey, red, very coarse to grit, some fine to coarse, rounded to subangular, feldspathic, with traces of little altered quartz. Clay cementation, friable. Crossbedded.
- 3126-3130 Sandstone, dull red, fine to coarse grained, rounded to subangular, very hematitic, all grains coated with hematitic oxide. Grading into a conglomerate at base.
- 3130-3132 Sandstone, dull red, fine grained, hematitic, quartzitic, high degree of silica cementation. Vertical fractures extensive with slickenside surfaces very shiny and smooth. Hard, tight.

Total depth of core at 3132 feet.

Grain size after Wentworth Scale.

Cores examined both at site and with dry chip under binocular microscope.



ELECTRICAL LOGGING

Gamma Ray, Compensated Formation Density, Caliper, Spontaneous Potential, Induction and Laterolog electrical logs were run in the Vistron Corporation Industrial Disposal Well. Geologic formation units as defined by the Gamma Ray log are as follows:

Glacial drift	0000-0032 feet
Cayugan	0032-0210
Lockport	0210-0408
Medina-Clinton	0408-0593
Reedsville Fm.	0593-1252
Trenton Dolomite	1252-1294
Eggleston Limestone	1294-1426
Black River Limestone	1426-1776
Gull River Limestone	1776-1809
Glenwood Shale	1809-1811
Trempealeau Dolomite	1811-2282
Maynardville Dolo.	2282-2398
Conasauga Shale	2398-2476
Rome Dolomite	2476-2596
Shady Dolomite	2596-2780
Mt. Simon Sandstone	2780-3132

HYDROCARBON SHOWS

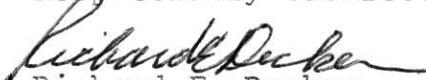
A small show of oil was recorded in the Trenton dolomite between 1270 to 1300 feet. Hydrocarbon odor and scattered fluorescence were noted during sample analysis. The dolomite in this zone appears generally tight in the samples and does not have high porosity on the density log recorded in the well. The show on the electrical logs correlates to 1252 to 1282 feet because of uncorrected sample lag. A second small show by fluorescence only was observed between 1435 to 1440 feet. Since hydrocarbon odor or oil cut was not associated with this show and it can not be found on the electrical logs it is judged to be non-commercial. Shows were not recorded in the Trempealeau dolomite zone in this well although the well is apparently structurally high at the unconformity.



POTENTIAL DISPOSAL ZONES

The only zone with the necessary thickness, porosity, permeability, and salt water bearing characteristics for industrial disposal in the Vistron Corporation well is the Mt. Simon sandstone found between 2780 and 3132 feet. The Mt. Simon section in this well is 352 feet thick and is composed almost entirely of sandstone. The Mt. Simon sand is fine grained near the top and becomes coarser with depth and conglomeritic at its base. The color of the sand varies from pinkish grey to grey in the upper section and becomes progressively redder and more hematitic toward the base. Generally, the degree of cementation decreases with depth, due in part to the presence of clay as the prime cementing agent. Examination of dry core chips indicates moderate to good permeability and porosity throughout the cored section. The presence of heavily laminated siltstone and clay layers scattered through the sandstone section will probably result in zonation of injected industrial waste fluids within the disposal zone itself.

Respectfully submitted,



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DEEP WELL POLLUTION CONTROL CORPORATION

February 12, 1968

DWPCC #5002

