APPENDIX E

HYDROGEOLOGIC INVESTIGATION

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APPENDIX E.1

CLINTON LANDFILL NO. 3
HYDROGEOLOGIC INVESTIGATION

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Certification by Professional Geologist

In accordance with Section 60 of The Professional Geologist Licensing Act, I, John Robert Berry, an Illinois Licensed Professional Geologist, (Illinois License Number 196-000267, expires 3-31-2005) certify that this evaluation of the geologic and hydrogeologic conditions was prepared by me and that the information contained within is true and accurate to the best of my belief.

Signature:

John R. Berry, P.G.
Senior Hydrogeologist

SEAL:

Date February 28th, 2005

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812.314 DESCRIPTION OF HYDROGEOLOGY

812.314.1 Hydrogeologic Site Investigation (811.315)

A. Published Information Review

A number of published sources were consulted in order to obtain information regarding the climatic, geologic and hydrogeologic conditions in the site region. Published sources consulted included reports and water well logs from the Illinois State Geological Survey (ISGS), water well logs from the Illinois State Water Survey (ISWS), DeWitt Bi-County Health Department, topographic maps from the United States Geological Survey (USGS), and climatic information from the National Oceanic and Atmospheric Administration (NOAA).

Potable water well logs from the ISGS, ISWS, DeWitt Bi-County Health Department are provided in Appendix 812.314-A. Average monthly temperature and rainfall data obtained from NOAA are summarized in Appendix 812.314-B. An area topographic map is provided on Figure 812.314-1.

B. Soil Borings, Groundwater Monitoring Wells and Piezometers

Site geologic and hydrogeologic conditions have been investigated by drilling 29 soil borings on the Clinton Landfill No. 3 site and correlating geologic information from 10 soil borings previously drilled at the adjacent existing Clinton Landfill No. 2 site. The 29 soil borings drilled on the proposed expansion area were conducted in six phases. The drilling program was conducted under the direction of an Illinois Licensed Professional Engineer (P.E.) with field activities and soil descriptions conducted by an Illinois Licensed Professional Geologist (LPG). Boring logs, with Unified Soil Classification System (USCS) soil descriptions (where available), soil sampling details, and well completion details are provided in Appendix 812.314-C. Boring locations are shown on Figure 812.314-2 of this document.

Boring Nos. EX-1 through EX-3 were drilled at the site in December of 1996 by SKS Engineers (SKS) under the direction of a PDC LPG. These borings were drilled using 8-inch outside diameter hollow stem augers (HSA) to depths of approximately 100 to 109.5 feet below ground surface (bgs). Samples were collected at continuous intervals utilizing a standard 5-foot split spoon sampler. The samples were logged in the field by

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PDC who selected representative samples for laboratory testing. The borings were grouted closed by pumping either a cement/bentonite or bentonite slurry through the augers using a tremie pipe while the augers were slowly extracted.

Boring Nos. EX-4 through EX-7 were drilled at the site in March through April 2000 by SKS under the direction of a PDC LPG. Boring EX-4 was drilled near the topographical low area of the site and borings EX-5 and EX-6 were drilled near the topographical high areas of the site. These borings were drilled using 8-inch outside diameter HSA to approximately 59 to 94 feet bgs. Samples were collected at continuous intervals utilizing a 5-foot standard split spoon sampler or thin-wall Shelby tube. These borings (EX-4 through EX-7) were converted into piezometers. These piezometers were labeled with the same nomenclature as the borings (i.e., EX-4 for boring EX-4, etc.).

Boring Nos. EX-8 and EX-9 were drilled in April 2001. These borings were drilled by SKS under the direction of a PDC LPG. The borings were drilled using 8 inch outside diameter HSA. These borings were converted into piezometers at their completion. Piezometers EX-8S and EX-8D are nested piezometers and are within 10 feet of each other. Prior to the installation of the nest, the deeper boring (EX-8D) was advanced first with the geology recorded from continuous sampling activities utilizing a 5-foot standard split spoon sampler. At the completion of the boring, the piezometer was installed. Next, a review of the boring log indicated a potential need for a shallow piezometer to monitor a water-bearing unit at a higher elevation. The boring for the shallow piezometer (EX-8S) was then advanced within 10 feet of the deeper boring with no samples being collected. Once the boring was completed to the desired depth/elevation, the piezometer was installed.

Boring Nos. EX-10 and EX-11 were drilled in December 2001 and February 2002, respectively. These borings were drilled by SKS under the direction of a PDC LPG. The borings were drilled using 8 inch outside diameter HSA to depths of approximately 48 to 76 feet bgs. Samples were collected at continuous intervals utilizing a standard 5-foot split spoon sampler. The samples were logged in the field by PDC personnel who selected representative samples for laboratory testing. Boring EX-10 was converted into a piezometer at completion. Boring EX-11 was grouted closed by pumping a bentonite slurry through the augers using a tremie pipe while the augers were slowly extracted.

Boring Nos. EX-12 through EX-24 were drilled in December 2002 through February 2003. These borings

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were drilled by SKS under the direction of a PDC LPG. The borings were drilled using 8-inch outside diameter HSA to depths of approximately 41 to 99.5 feet below ground surface (bgs). Samples were collected at continuous intervals utilizing a standard 5-foot split spoon sampler. The samples were logged in the field by PDC who selected representative samples for laboratory testing. Borings EX-12, EX-13, EX-14, EX-15, EX-17, EX-19, EX-20, EX-21, EX-22, EX-23, and EX-24 were converted into piezometers at their completion. A shallow well was installed within 10 feet of existing wells EX-12, EX-22, and EX-23, resulting in a nested pair of wells (shallow and deep) at each location. Borings EX-16 and EX-18 was grouted closed after their completion by pumping a bentonite slurry through the augers using a tremie pipe while the augers were slowly extracted.

The most recent phase of drilling was conducted in October 2003. Boring Nos. EX-25 through EX-29 and the installation of piezometer EX-21S were drilled under the direction of a PDC LPG. The borings were drilled around the south-eastern portion of the proposed facility. The borings were drilled using 8-inch outside diameter HSA to depths of approximately 69 to 79.5 feet bgs. Samples were collected at continuous intervals utilizing a standard 5-foot split spoon sampler. Borings EX-25 through EX-29 were grouted closed by pumping a bentonite slurry through the augers using a tremie pipe while the augers were slowly extracted.

Boring CSM-1 was drilled near the center of the adjacent Clinton Landfill No. 2 site in June 1995 by SKS under the direction of PDC. The purpose of this boring was to document the subsurface geology beyond elevation 590 Mean Sea Level (MSL) and to document the presence of the Mahomet Sand which was believed to be present below the facility. The soil boring confirmed the subsurface geology with the literature (ISGS publications) and with nearby well logs. The geologic units were uniform and correlated with the geology recorded on the adjacent well logs and with regional geologic literature. The boring was drilled using 8-inch HSA at a starting elevation of approximately 636 MSL to a final depth of approximately 156 feet bgs, or 480 MSL, and was continuously sampled utilizing a 5-foot long continuous sampler and a 2-foot long split spoon. The samples were logged in the field by PDC who selected representative samples for laboratory testing. The boring was grouted closed by pumping a cement/bentonite slurry through the augers using a tremie pipe while the augers were slowly extracted.

Boring Nos. B22, G46D, G51D, P223D, G40D, B20, GMD8, G39D, and B-11 were previously drilled along the eastern edge of the adjacent Clinton Landfill No. 2 facility (or western edge of the proposed facility) as part

of permitting and monitoring of the existing facility. Information from these nine borings was used to interpolate the geology of the proposed expansion area.

C. Field Hydraulic Testing and Data Interpretation

PDC has performed in-situ aquifer testing on the piezometers at the proposed Clinton Landfill No. 3 facility. The aquifer testing consisted of rising head and falling head slug test which were performed to estimate the hydraulic conductivity of the saturated unit in which each well is screened.

Falling head slug test procedures consisted of displacing the water level within a well to an elevation higher than the static level. Stainless steel pressure transducers/data recorders were installed within the wells to monitor and record changes in head pressure/water level. These transducers monitored and recorded the water level changes over time until the wells recovered to within 95 percent of the static level. This water level data over time was stored within a portable computer for retrieval and analysis at a later time.

Rising head tests procedures consisted of depressing the water levels within a well below the static level. Stainless steel pressure transducers/data recorders were installed within the well to monitor and record changes in head pressure/water level. These transducers monitored and recorded the water level changes over time until the levels recovered to within 95% of the static level. This water level data over time was stored within a portable computer for retrieval and analysis at a later date.

Once the slug tests were complete, the test data were entered into the software program titled *Aquifer Test* by Waterloo Hydrogeologic, Inc. This program estimates the hydraulic conductivity of the aquifer at the well from the time-recharge data recorded by the data recorders. The hydraulic conductivities of the wells were estimated using the Hvorslev Method. Slug test data and *Aquifer Test* output files and graphs are included in Appendix 812.314-D. Test results are summarized in Table 812.314-1.

D. Laboratory Testing

Laboratory testing of hydraulic conductivity, grain-size distribution, Atterberg limits, density, porosity, ion/cation exchange capacity, total organic carbon and other parameters have been conducted in phases which correspond to the soil boring phases. The tests were performed using the appropriate American Society for Testing and Materials (ASTM) test protocols. Laboratory test data are provided in Section 812.305 (Appendix

812.305-A) of this application. Hydraulic conductivity and pertinent test results are summarized in Table 812.314-2. Table 812.314-3 is provided to show a summary of total organic carbon content test results and Table 812.314-4 is provided to show a summary of soil ion-cation exchange capacity test results. The laboratory data for the soil total organic carbon content results and ion-cation exchange capacity test results are provided in Appendix 812.314-E

In addition to the soils testing, extensive groundwater sampling and testing has been performed to characterize the groundwater quality spatially and with depth. Groundwater quality test data are addressed in Section 812.317 of this application.

812.314.2 Site Description

Clinton Landfill No. 3 is located approximately 1-1/4 miles south of the city of Clinton, Illinois and ½-mile east of Illinois Highway 51. The Clinton Landfill No. 3 area lies directly east of the existing operating facility (Clinton Landfill No. 2) which consists of an approximate 80-acre parcel, of which approximately 63.9 acres is permitted by the Illinois Environmental Protection Agency (IEPA) to operate as a Solid Waste Management Facility. The majority of the proposed expansion area lies within the southwest quarter of Section 11, and the North one-half of the Northwest quarter of Section 14, Township19 North, Range 2 East of the 3rd Principal Meridian, DeWitt County, Illinois.

Figure 812.314-1 is provided to show the location of the Clinton Landfill No. 3. The site is located within the Bloomington Ridged Plain Region of the Till Plains Section of the Central Lowland Physiographic Province. The proposed site is situated in an area of glaciated uplands, bordering Salt Creek. Salt Creek is located approximately 600 feet south of the subject facility. Land use in the region is predominately agricultural, (i.e. row crops and livestock) with some rural single family dwellings scattered throughout the area.

Clinton Landfill No. 3 comprises approximately 225 acres and currently is primarily crop land and timber land. A 5-acre residential parcel (owned by CLI) exists in the eastern portion of the site. The area surrounding the landfill site has a surface water drainage flow direction to the southwest leading into Salt Creek. Relief at the site ranges from a maximum elevation of 729 feet Above Mean Sea Level (AMSL) to approximately 660 feet AMSL.

812.314.3 Climatic Aspects of Study Area

The climate in Illinois is classified as continental. Temperature and precipitation vary significantly both in time and space. Weather patterns are primarily dependent upon the interaction of the different continental air masses over the state. Because of the size of the state, its length north to south, and various climate factors such as temperature and precipitation, normal measurements will vary by several inches of rainfall or 5 to 10 degrees from the north (Chicago area) to the south (at junction of the Ohio and Mississippi Rivers).

The nearest temperature and precipitation data obtained was from the NOAA station in East St. Louis, Illinois, included in the Hydrologic Evaluation of Landfill Performance (HELP) model documentation. Key data are summarized below:

Mean monthly temperatures (degrees Fahrenheit):

- December, January, February: 34, 29, 34
- March, April, May: 43, 56, 66
- June, July, August: 75, 79, 77
- September, October, November 70, 58, 45

Average annual precipitation: 31-33 inches

The prevailing wind direction is southerly.

812.314.4 Regional Geology

The surficial deposits in the DeWitt county region consist of an average of approximately 200 feet of overburden soils which are the direct result of glacial activity that occurred during the geological-aged Pleistocene Epoch. Underlying these glacial-derived soils is Pennsylvanian-aged bedrock of the Bond and Modesto Formations. During the Pleistocene Epoch, glaciers from the earliest glacial advancements eroded deep valleys into the bedrock in central Illinois. One of these valleys is known as the Mahomet Bedrock Valley which occupies a major portion of east-central Illinois and directly underlies the Clinton Landfill site. Subsequent glaciation from the Wisconsinan, Illinoian and pre-Illinoian glacial stages filled in and buried the

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Mahomet Bedrock Valley. Geologic cross-sections of glacial deposits in DeWitt County as surveyed by Hunt and Kempton (1977) are shown as Figures 812.314-3 and 812.314-4 (Figure 812.314-3 provides the plan of Sections). This section presents the sequence of glacial till and outwash deposits which resulted from Wisconsinan, Illinoian and pre-Illinoian glaciation. Figure 812.314-5 is provided to show the Pleistocene stratigraphy of east-central Illinois.

The three episodes of glaciation, the Wisconsinan, Illinoian and pre-Illinoian, deposited an array of sediments on the DeWitt County region. The various soils that are expected to be present in the site vicinity are discussed in detail below. The material descriptions are from Wilman and Frye (1970), Lineback (1970), Hunt and Kempton (1977 and 1991) and Hansel (1996). These deposits are likely to be present in the region of the proposed CLI expansion area.

A. Modern Soil

The topsoil which is expected to cover most of the site consists of a weathered organic profile developed in loess overlying the glacial deposits. This soil is developed on any sediment that underlies the surface. The Modern Soil ranges in thickness from several inches to several feet.

B. Cahokia Alluvium

The Cahokia Alluvium is the youngest deposit mapped in DeWitt County. It ranges from 5 to 20 feet in thickness and occurs along major river valleys. It consists of silts, sands, and some organic material, or the products of erosion and slopewash from upland deposits. This material is present in Salt Creek, which is located south of the site.

C. Henry Formation of the Mason Group

The Henry Formation consists of well sorted, well bedded sand and gravel outwash deposited in valley trains as a result of glaciation. Lenses of clay, silt, organic debris, wood and shells can locally occur in the sand and gravel of the Henry Formation. The formation includes terrace deposits of former valley trains. Minor amounts may be present at the site. The Henry Formation extends from Wisconsin south into McHenry

County trending southwest to Peoria County where it trends southeast to Shelby County, then eastward into Indiana.

D. Peoria Silt of the Mason Group

Four to seven feet of Peoria Silt is expected to be present in the site vicinity. The unit consists of yellow-tan massive loess and includes the Modern Soil in the surface. Locally, the loess may be clay-enriched by the B-zone of the Modern Soil, or by slopewash and colluvium deposited with the windblown silt. It grades from sandy silt in the bluffs of major source valleys to clayey silt away from the bluffs, where it typically is thinner and weathered. It exists throughout Illinois, and regionally from Minnesota north to Louisiana south, east to Ohio and west to Kansas. The Wisconsinan age Peoria Silt has an expandable clay mineral content ranging from 28% to 80%; 15%-74% illite; and 5%-20% kaolinite and chlorite.

E. Morton Tongue of the Peoria Silt, Mason Group

The Morton Tongue consists of a gray to tan calcareous, massive fossiliferous silt bounded by sharp contacts at the top and bottom. It appears locally in DeWitt County as a thin grayish silt layer between deposits of the Tiskilwa Formation and the underlying Robein Member of the Roxana Silt. It exists as a belt that is approximately 30 miles wide and stretches from Bureau County in the north to Shelby County in the south. The Morton Tongue of the Peoria Silt has 46%-76% expandable clay minerals; 12%-30% illite; and 11%-24% kaolinite and chlorite.

F. Tiskilwa Formation, Wisconsinan Wedron Group

The Tiskilwa Formation of the Wisconsinan Wedron Group consists of calcareous, red gray to gray, medium textured clay that contains lenses of gravel, sand, silt, and clay. Typically it oxidizes to red-brown, brown, or yellow brown. The Tiskilwa Formation is volumetrically the largest formation of the Wedron Group. It was deposited as part of the Shelbyville ground moraine in the site vicinity. The Tiskilwa Formation consists of an upper boundary member (Piatt Member) and a lower boundary member (Delavan Member) which are quite similar and often undistinguishable. The two members of the Tiskilwa Formation do not always occur together. The formation trends from Kane County in the north to McLean County in the south, and as far west as western Bureau County. Typical textural composition for the Wisconsinan Tiskilwa Formation is reported

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by Willman and Frye (1970) as 27%-30% sand; 34%-38% silt; and 34%-37% clay. Clay minerals range from 6%-20% expandables; 64%-72% illite; and 12%-30% kaolinite and chlorite. The Delevan Member of the Tiskilwa Formation has a typical textural composition of 30%-32% sand; 39%-41% silt; and 27%-31% clay. Clay minerals for the Tiskilwa Formation range from 8%-19% expandables; 67%-81% illite; and 9%-22% kaolinite and chlorite (Willman and Frye, 1970).

G. Roxana Silt

The Roxana Silt is primarily loess, but it locally contains some sand, and commonly the basal unit is silt, sand, and clay colluvium. It is pinkish-tan to yellow-gray in color. It is present throughout the state of Illinois and has an overall north to south lateral extent ranging from Minnesota to Louisiana. The Wisconsinan age Roxana Silt has clay minerals ranging from 46%-54% expandables; 8%-15% illite; and 38%-42% kaolinite and chlorite.

H. Robein Silt Member of the Roxana Silt

The Robein Silt member consists of silts, sandy silts, organic silts, and peat. It is usually a rich dark brown, or even black in color. It is easily recognized and has been dated as 21,000 to 28,000 radiocarbon years before present (B.P.). The organic silts generate methane gas, which is reported to be frequently present in water wells in the area. It is generally less than 5 feet thick, and in many localities it only attains a thickness of a few inches. It is discontinuous in the subsurface over a majority of Illinois. The Robein Member of the Roxana Silt has clay minerals ranging from 9%-77% expandables; 8%-65% illite; and 14%-50% kaolinite and chlorite (Willman and Frye, 1970). No published resources were located on the typical textural composition of this unit.

I. Sangamon Geosol

The Sangamon Geosol is characterized by a brown to black organic-rich soil which was formed by the accumulation of organic debris and silt from sheetwash and possibly eolian deposits. It commonly ranges from 1 to 5 feet in thickness and is present in most of Illinois from the northern border with Wisconsin south to the northern tip of Johnson County in southern Illinois.

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J. Berry Clay Member, Illinoian Glasford Formation

The Berry Clay is an accreted soil consisting of clay, silt and sparse small pebbles, and is commonly 2 to 5 feet thick. This member is commonly greenish-blue in color which makes it distinguishable. It occurs at isolated localities throughout the area of Illinoian Drift. The Berry Clay is listed by Willman and Frye (1970) as having 73%-82% expandable clay minerals; 10%-21% illite; and 6%-8% kaolinite and chlorite. Published resources indicating the typical textural composition of the Berry Clay were not found to exist.

K. Radnor Till Member, Illinoian Glasford Formation

The Radnor Till Member is gray silty clay that is compact, and exhibits a high illite content. The Radnor Till Member exists throughout central and east central Illinois and occurs below the Berry Clay. The Radnor Till Member has a typical textural composition of 15%-29% sand; 46%-55% silt; and 25%-30% clay. Clay minerals range from 2%-16% expandables; 66%-84% illite; and 8%-29% kaolinite and chlorite (Willman and Others, 1975).

L. Roby Silt Member, Illinoian Glasford Formation

The Roby Silt Member contains silt, clay, sand and locally contains a fauna of fossil mollusks. The Roby Silt member occurs below the Radnor Till Member, and above the Vandalia Till Member. It can be up to 13 feet in thickness. The Roby Silt is in the earliest part of the Jubileean Substage of the Illinoian Stage. It is a proglacial deposit of the advancing glacier that deposited the Radnor Till, and it was subsequently overridden by that glacier.

M. Vandalia Till Member, Illinoian Glasford Formation

The Vandalia Till Member is generally a sandy, gray, compact clay till with lenticular bodies of silt, sand, and gravel. It is commonly 25 to 50 feet thick, but it is sometimes thicker in some of the valleys in the area. It occurs widely in south-central and east-central Illinois.

N. Smithboro Till Member, Illinoian Glasford Formation

The Smithboro Till Member consists of gray, compact, silty clay till. It is bounded below by its contact with the Yarmouth Soil, or older soils, and at the top by the overlying Mulberry Grove Member (if present) or

Vandalia Till Member. It occurs widely in south-central and east-central Illinois.

O. Yarmouth Soil, Kansan Banner Formation

The Yarmouth Soil is an in-situ soil profile deeply developed in tills of the Banner Formation. It consists of accretionary deposits of fine sediment and organic material. It occurs predominantly in the western and central parts of Illinois.

P. Tilton Till Member, Kansan Banner Formation

The Tilton Till Member is gray, calcareous, hard, silty, sandy clay till. The unit contains considerable silt, sand, and gravel, particularly near its upper and lower boundaries. The lateral extents of the Tilton Till is not addressed in any of the literature reviewed.

Q. Hillary Till Member, Kansan Banner Formation

The Hillary Till Member is reddish brown, calcareous, massive, hard clay till. The units lower part is slightly darker, and its upper part commonly contains streaks of silt. It occurs predominantly in east-central Illinois, most markedly in the Danville area.

R. Harmattan Till Member, Kansan Banner Formation

The Harmattan Till Member is largely a gray, calcareous, dense, hard clay till, but its upper part contains lenticular bodies of gravelly sand. This unit is present mostly in the eastern portions of Illinois.

S. Mahomet Sand Member, Kansan Banner Formation

The Mahomet Sand Member consists of pro-Kansan sand and gravel outwash and contains many silt beds. It exists primarily in the deep bedrock valleys of central and east-central Illinois in thicknesses up to 150 feet. Much thinner deposits of basal sand and gravel outwash of Kansan or Illinoian age may overlie bedrock outside of the bedrock valleys as well. Both the Mahomet Sand Member, where it is present, and basal sands and gravels form good aquifers.

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T. Bedrock

Figure 812.314-6 is provided to show a stratigraphic section of the bedrock directly beneath the glacial deposits in DeWitt County, Illinois. Bedrock of the Bond and Modesto Formations of the Pennsylvanian System directly underlie the glacial deposits at the site. Bedrock of the Bond and Modesto Formations consist primarily of shale and sandstone with some thin but significant beds of limestone and coal. The Pennsylvanian-aged rocks range in thickness from 350 to 800 feet. Underlying these rocks is a sequence of interbedded shales, sandstones, limestones and dolomites of the Lower Chesterian, the Valmeyeran, and the Kinderhookian Series of the Mississippian system. The top portion of the Mississippian System is eroded beneath the Pennsylvanian System strata in Dewitt County and has an estimated overall thickness of approximately 800 feet. Figure 812.314-7 is provided to show the bedrock surface topography in Dewitt County.

812.314.5 Structural Features

A literature review was conducted to identify regional bedrock structural features. As shown on Figure 812.314-8, few regional bedrock structural features have been identified in the site region. The nearest identified features are the Clinton syncline and Downs anticline located about 3 and 7 miles northeast of the site, respectively. No evidence of faulting has been found in the region of the site. The nearest known or suspected active faults are associated with the Wabash Valley and Rend Lake Fault systems located about 135 miles southeast and south of the site, respectively. A map showing the location of these faults is provided as Figure 812.314-9.

The site seismicity is controlled by earthquakes that originate in the fault systems of southern Illinois and southeastern Missouri. However, because of the distance of these active fault system from the site, relatively mild ground shaking (expressed as horizontal acceleration) would be expected at the site due to seismic activity. A map showing the estimated horizontal bedrock acceleration with a 90 percent probability of not being exceeded in 250 years is provided as Figure 812.314-10.

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812.314.6 Regional Hydrogeology

Withdrawal of groundwater from the glacial material in the region is limited. These deposits often contain well stratified, alternating high and low hydraulic conductivity layers that commonly produce numerous perched and/or confined flow conditions. These conditions are only found when a well is screened in large sand/gravel seam within the glacial silty clay. Although generally the yield from these perched aquifers is low, probabilities of larger yields from sand and gravel deposits are higher along bedrock valleys where the sand and gravel deposits are much thicker. Speculation on regional groundwater flow is difficult because of hydraulic anisotropy within the glacial sediments

Records of wells in the vicinity of the site were obtained from the ISGS, ISWS and Dewitt County Health Department were reviewed. The water well logs indicate that the bedrock is seldom accessed for domestic water supplies in this area due in part to the thickness and higher yield capacity of the Mahomet Sand aquifer which overlies the Pennsylvanian bedrock. Withdrawal from the bedrock aquifers at greater depths would be too highly mineralized for consumption.

A. Water Wells in Site Vicinity

Logs of all water supply wells within 2 miles of the facility that are available from the ISGS, ISWS and Bi-County Health Department are provided in Appendix 812.314-A. Locations of these wells are also shown on the Area Well Location Map provided in Appendix 812.314-A. A summary of these wells is provided in Table 812.314-5.

Locations of wells and probable wells were investigated in the site region. Aerial photographs were reviewed and a visual reconnaissance of the area was conducted to try to locate all potable wells in the site region. Dwellings in the area, for which no water well log was available or listed, was assumed to have a well. These probable well locations are shown on the Area Well Location Map in Appendix 812.314-A.

After reviewing well record documents of water wells nearest to the vicinity of the proposed Clinton Landfill No. 3 facility, 21 wells that are within 3,000 feet of the proposed waste boundary were selected for further study. These wells are designated as; 10-1, 10-2, 10-3, 10-4, 10-5, 10-6, 10-8, 10-10, 10-11, 10-12, 10-13, 11-1, 11-2, 11-3, 14-1, 14-2, 14-3, 14-4, 14-5, 15-12, and 15-13. Refer to the Area Well Location Map, included

in Appendix 812.314-A, to view the location of these wells in relation to the proposed Clinton Landfill No. 3. A detailed study of the construction of these wells was performed to determine their screen depth, screen elevation, geologic unit screened, casing depths, and use. This study was limited, however, due to lack of detailed information on well reports/logs which were obtained from the ISGS, ISWS and Bi-County Health Department. From the study the following information was obtained:

- Well numbers 10-1 and 10-2 are listed by both the ISWS and ISGS as domestic water supply wells. They are both located approximately 1,000 feet west of the proposed Clinton Landfill No. 3. 10-1 consists of a 4 inch diameter casing extending from 3 feet bgs to 274 feet bgs. Then a 6 feet long by 4 inch diameter screen is placed at a depth of 273 to 279 feet bgs which correlates to an elevation of approximately 392 to 386 feet AMSL. The water bearing unit is a sand and gravel deposit which occurs from 223 feet bgs to 279 feet bgs or elevation 442 to 386 feet AMSL. Well 10-2 consists of a 4 inch diameter casing and a 4 feet long by 4 inch diameter screen that is placed in a water bearing sand unit that occurs from 212 feet bgs to 265 feet bgs or elevation 438 to 385 feet AMSL. The length of the casing and the depth of the screen were not reported in the reports/logs. The well is terminated at a depth of 265 feet bgs or approximately 385 feet AMSL. Considering the screened elevations of these wells, it is believed that the wells are screened in the Mahomet Sand.

- Well number 10-3 is only listed by the ISWS and is reported as a domestic water supply well. The well is reported to have a depth of only 16 feet bgs (approximately 674 feet AMSL). There is a footnote on the well report that states "water supplied from spring". This implies that the well is screened in a shallow perched zone. Well 10-3 is located approximately 3,200 feet west of the CLI facility in a mobile home park. No information was given regarding the casing depth, screen elevation, or geologic unit screened. It is believed that the well is no longer in use since it is reported that the mobile home park has two domestic wells.

- Well numbers 10-4 and 10-5 are both listed in the ISWS reports and only 10-4 is listed in the ISGS logs. The wells are listed as domestic water supply wells and are located approximately 2,500 feet west of the proposed Clinton Landfill No. 3 in the same mobile home park as Well 10-3. Well 10-4 is reported to extend to a depth of 260 feet bgs, or approximately 395 feet AMSL. The well consists of a 4 inch diameter casing extending from 3 feet bgs to 256 feet bgs and a 4 feet long by 4 inch diameter

screen that is placed in a sand unit that occurs from 195 feet bgs to 260 feet bgs or elevation 438 to 385 feet AMSL. Well 10-5 is reported to extend to a depth of 241 feet bgs, or approximately 434 feet AMSL. No information was found on the casing depth, geologic unit screened, or the screen elevation of well 10-5. Considering the reported elevation of both wells, it is believed that they are screened in the Mahomet Sand Member.

- Well number 10-6 is only listed on the ISWS reports as a domestic well with an overall depth of 76 feet bgs, or approximately 654 feet AMSL. The well is located approximately 3,000 feet west-northwest of the proposed Clinton Landfill No. 3. The proposed monitoring zone beneath the CLI facility is near the elevation that well 10-6 is terminated.

- Well 10-8 is listed on the ISGS logs as a landfill soil boring. The soil boring is located at the northwest corner of the existing CLI facility. It is reported at a depth of 41.5 feet bgs, which is approximately 684.5 feet AMSL. It is assumed that this boring was backfilled immediately after its completion and is of no concern to this study.

- Well number 10-10 is listed by the ISWS and ISGS and is owned by CLI. The well consists of 5 inch diameter casing extending from 2 feet above ground surface to 277 feet bgs and a 4 feet long by 5 inch diameter screen. The screen is set in a sand unit that occurs from 264 feet bgs to 281 feet bgs. The well is terminated at a depth of 281 feet bgs which correlates to elevation 444 feet AMSL. Due to the well depth, it is most likely screened in the Mahomet Sand Member. This well is used by CLI to provide potable water to the current facility office.

- Well number 10-11 is listed by the ISWS and ISGS and is utilized for irrigation. It consists of a 5 inch diameter casing from 2 feet bgs to a depth of 273 feet bgs. The casing is attached to a 7 feet long by 5 inch diameter screen that is placed in a sand unit that occurs from 236 feet bgs to 280 feet bgs. The well is terminated at a depth of 280 feet bgs, or elevation 427 feet AMSL. Due to the wells depth, it is believed to be screened in the Mahomet Sand Member.

- Well Number 10-12 is listed by the ISWS and ISGS and is utilized as a domestic water supply well. No information was found on the casing depth or screen elevation of this well. The well is listed as being placed in a sand and gravel unit that is located from 86 to 88 feet bgs, approximately elevation

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639 to 637 feet AMSL. The well is located approximately 3,000 feet west-northwest of the proposed Clinton Landfill No. 3.

- Well number 10-13 is listed by both the ISWS and ISGS and is a domestic well located more than 3,000 feet to the northwest of the proposed expansion area. It consists of a 5 inch diameter casing that is placed at 1 foot above ground surface to a depth of 284 feet bgs. The casing is followed by a 4 feet long by 5 inch diameter screen that is placed in sand at an elevation of 441 feet AMSL to 437 feet AMSL. Due to the depth of the well, it is believed that well is screened in the Mahomet Sand Member.

- Well number 11-1 is listed by the ISWS and ISGS and is a domestic well located approximately 1,700 feet east of the proposed expansion area. The well is cased with 4 inch diameter black pipe to a depth of 131 feet bgs. A 4 feet long by 4 inch diameter screen is placed in a water bearing gravel unit to an elevation of approximately 579 feet AMSL. The well was reported to have a low yield rate of 5 gallons per minute with a head loss of 72 feet in 1 hour of pumping.

- Well number 11-2 is listed by both the ISWS and ISGS. It is a domestic well that is located within the proposed Clinton Landfill No. 3. The well consists of a 5 inch diameter casing that extends from 1 foot bgs to a depth of 141 feet bgs. The casing is followed by a 4 feet long by 5 inch diameter screen that is set in a sand unit that occurs from 141 feet bgs to 145 feet bgs. The well is terminated at 145 feet bgs which correlates to approximately elevation 580 feet AMSL. Due to the location of this well on the facility, it will be abandoned in accordance with Illinois Department of Public Health (IDPH) standards. Proper well abandonment forms will also be submitted to the DeWitt County Health Department.

- Well number 11-3 is a domestic well that is listed by the ISWS and ISGS. It is located more than 2,500 feet north of the proposed Clinton Landfill No. 3. The well has a 4 inch diameter casing that extends from the ground surface to a depth of 100 feet bgs. The casing is followed by a 3 feet long by 4 inch diameter screen that is placed in a sand and gravel unit that occurs from 97 feet bgs to 103 feet bgs. The well is terminated at an approximate elevation of 619 feet AMSL.

- Well number 14-1 is only listed on the ISWS and Bi-County Health Department records. It is a domestic well that is located approximately 1,700 feet east-southeast of the proposed Clinton Landfill

No. 3. The well has a 5 inch diameter casing that extends from the ground surface to a depth of 266 feet bgs. The casing is followed by a 8 feet long by 5 inch diameter stainless steel screen that is placed in a fine- to medium-grained sand unit that occurs from 230 feet bgs to 274 feet bgs. The well is terminated at an approximate elevation of 401 feet AMSL. Considering this well's depth, it is believed to be screened in the Mahomet Sand Member.

- Well number 14-2 is only listed on the ISWS records. It is a domestic well that is located approximately 350 feet east of the proposed Clinton Landfill No. 3. No information was found regarding the casing depth, screen elevation, or geologic unit screened. It extends to a depth of 68 feet bgs, or approximate elevation 652 feet AMSL.

- Well number 14-3 is listed on the ISWS and Bi-County Health Department records. It is a domestic well that is located approximately 2,000 feet east-southeast of the proposed CLI expansion area. The well has a 5 inch diameter casing that extends from the ground surface to a depth of 239 feet bgs. The casing is followed by a 4 feet long by 5 inch diameter stainless steel screen that is placed in a sand and gravel unit that occurs from 235 feet bgs to 246 feet bgs. The well is terminated at an approximate elevation of 452 feet AMSL. Considering this well's depth, it is believed to be screened in the Mahomet Sand Member.

- Well number 14-4 is listed by the ISWS and ISGS and is a domestic well located approximately 1,150 feet east-southeast of the proposed expansion area. The well has a 5 inch diameter casing that extends from the ground surface to a depth of 238 feet bgs. The casing is followed by a 8 feet long by 5 inch diameter stainless steel screen that is placed in a sand unit that occurs from 173 feet bgs to 246 feet bgs. The well is terminated at an approximate elevation of 429 feet AMSL. Considering this well's depth, it is believed to be screened in the Mahomet Sand Member.

- Well number 14-5 is listed by the ISWS and ISGS and is a domestic well located approximately 2,250 feet east-southeast of the proposed expansion area. The well has a 5 inch diameter casing that extends from the ground surface to a depth of 283 feet bgs. The casing is followed by a 8 feet long by 5 inch diameter stainless steel screen that is placed in a sand unit that occurs from 207 feet bgs to 283 feet bgs. The well is terminated at an approximate elevation of 357 feet AMSL. Considering this well's depth, it is believed to be screened in the Mahomet Sand Member.

- Well number 15-12 is a bridge boring that was advanced for engineering purposes. Its total depth was 40.8 feet bgs which corresponds to an approximate elevation of 607 feet AMSL. It is assumed that this boring was backfilled immediately after its completion and is of no concern to this study.

- Well number 15-13 is listed by both the ISWS and ISGS. It is an industrial/commercial water well that is located 3,000 feet west-southwest of the proposed expansion area. It is constructed of a 5 inch diameter casing from 1 foot above ground surface to 226 feet bgs which is followed by a 4 feet long by 5 inch diameter screen. The screen is placed in a sand unit that is encountered at a depth of 172 feet bgs. The well is terminated at a depth of 230 feet bgs, or elevation 413 feet AMSL. Due to the depth of this well, it is believed to be screened in the Mahomet Sand Member.

The City of Clinton derives its community water supply from the Mahomet Sand Member aquifer (Hlinka, 1987). According to the ISWS, the City of Clinton has eleven wells all of which are screened in sand and gravel at depths ranging from 328 to 361 feet bgs. These wells are located approximately 8,600 to 10,500 feet north and north-west of the Clinton Landfill No. 3. Weldon Springs, located east north-east of the proposed Clinton Landfill No. 3, has twelve wells according to the ISWS. These wells are located approximately 3,900 to 6,700 feet east northeast of the proposed Clinton Landfill No. 3 (see Area Well Location Map in Appendix 812.314-A). These wells are screened in sand and gravel at depths ranging from 38 feet to 141 feet below ground surface.

812.314.7 Site Geology

A. Cross Sections

Information from the field investigations was used to compile nine cross-sections that span the site and include the eastern most edge of the existing Clinton Landfill No. 2 site. Geologic cross-sections A through K are provided as Drawing Nos. P-XS2 through P-XS8 (full size drawings attached). Drawing No. P-XS1 shows boring/well locations and plan of sections. Logs of onsite borings, monitoring well and construction details are included in Appendix 812.314-C. It should be noted that soil boring data from the east side of the existing CLI No. 2 facility were used to corroborate geologic information for the proposed expansion area and are provided in Appendix 812.314-C.

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B. Overburden

Soil stratigraphy beneath the site is complex, as would be expected in a glaciated region. Sections A through K show the stratigraphic relationship of the unconsolidated materials. These soils were deposited through several modes of deposition which accounts for the complexity of the stratifications. Soil types encountered during the field investigations primarily consist of clays, silts, organic deposits, and sands. In review of the boring data for the site, there appears to be distinct stratigraphic units on site, although each unit may not be continuous across the site.

The upper-most (Wisconsinan-age) soil stratigraphy beneath the site is relatively complex. These soils were deposited during several periods of deposition which account for the complexity of the stratifications. The uppermost units are interpreted as consisting of surficial loessal deposits (Peoria Silt) and Wisconsinan deposits (brown and gray silty clays, clayey silts and sands of the Tiskilwa Formation).

The Tiskilwa Formation is approximately 70 feet thick except where eroded in the present day drainages. The Tiskilwa Formation soils encountered at the site are primarily described as brown, stiff to hard silty clay. The lower portions of this formation is described as gray, medium stiff to very stiff clay. Outwash deposits, consisting of dense to a very dense saturated sands and silts, of the Tiskilwa Formation were encountered at approximate elevation 695 to 705 feet AMSL along the northern edge of the facility, 655 to 675 feet AMSL at the northwestern edge of the facility, and at approximate elevation 668 to 675 feet AMSL at boring EX-3 located at approximately the center of the facility. Eight vertical laboratory hydraulic conductivity tests were performed on the clayey soils of the Tiskilwa Formation. The vertical hydraulic conductivity (k_v) ranged from 2.73×10^{-8} to 8.6×10^{-9} centimeters per second (cm/sec).

The Roxana Silt and Robein Silt Member of the Mason Group of the Wisconsinan Stage underlie the Tiskilwa Formation. This unit consists of dark brown medium stiff to stiff organic silty clay and silt, with peat. This unit was encountered at an approximate elevation of 673 to 658 feet AMSL over the majority of the site except along the south-eastern portion of the facility where it appears to have eroded away. This unit is a marker for the division between the Wisconsinan and Illinoian Stages. Figures 812.314-11 and 812.314-12 are provided to show the elevation of the top and bottom of the Roxana-Robein Silt Member, and Figure 812.314-13 is provided to show the thickness. Four vertical laboratory hydraulic conductivity tests were performed on the soils of the Roxana Silt and Robein Silt Member. The vertical hydraulic conductivity (k_v) ranged from 4.13 x

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10^{-8} to 1.55 x 10^{-8} cm/sec. Groundwater was not noted in the Roxana Silt and Robein Silt Member as evidenced in Piezometer EX-10, which is screened in this unit. Numerous excavations at the CLI No. 2 facility have also not encountered water in this unit based upon observations and conversations with the site manager.

Glacial deposits of the Sangamonian substage were encountered beneath the Roxana Silt and Robein Silt Member. These soils primarily consist of hard silty clays, with few interbeds of clayey silts and sand deposits. The sand deposits associated with these soils are interpreted as being outwash deposits. Most of these outwash units appear to be discontinuous across the site. The upper-most unit encountered in the deposits is interpreted as the Berry Clay Member. This unit is distinguishable due to it's blue-green/blue-gray color. The Berry Clay unit ranges in thickness from 0 to 10 feet at the facility. Nine vertical laboratory hydraulic conductivity tests were performed on the clayey soils of this formation. The k_v ranged from 8.43 x 10^{-8} cm/sec to 1.35 x 10^{-8} cm/sec. This unit is somewhat continuous across the proposed Clinton Landfill No. 3 except where it has been eroded.

The next unit encountered is interpreted as the Radnor Till Member. Nine vertical laboratory hydraulic conductivity tests were performed on the clayey soils of this formation. The k_v ranged from 9.36 x 10^{-8} cm/sec to 1.64 x 10^{-8} cm/sec. The few sand deposits associated with these soils are interpreted as being outwash deposits. Two outwash sand units were identified in the Radnor Till Member at the site. The first unit, termed herein as the Upper Radnor Till Sand, was encountered in the south-eastern portion of the facility at the site at approximate elevation 653 to 650 ft. AMSL. This unit was encountered in borings EX-3, EX-5, EX-6, EX-21, EX-22, EX-23, and EX-28. Figures 812.314-14 and 812.314-15 are provided to show the elevation of the top and bottom of the Upper Radnor Till Sand, and Figure 812.314-16 is provided to show the thickness. Three piezometers were installed to monitor this unit, EX-21S, EX-22S, and EX-23S. Insitu-slug testing on these piezometers revealed hydraulic conductivities in the Upper Radnor Till sand to range from 1.26 x 10^{-4} cm/sec to 7.94 x 10^{-6} cm/sec.

The next outwash sand unit encountered in the Radnor Till Member is termed herein as the Lower Radnor Till Sand. This unit was encountered in many of the borings at the site around approximate elevation 644 to 640 ft. AMSL at the site. However, this unit is not continuous across the facility. Figures 812.314-17 and 812.314-18 are provided to show the elevation of the top and bottom of the Lower Radnor Till Sand, and Figure 812.314-19 is provided to show the thickness. Insitu-slug testing was conducted on piezometers which are screened in

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the Lower Radnor Till Sand. The results ranged from 1.28 x 10^{-3} cm/sec. to 3.17 x 10^{-5} cm/sec.

The next unit encountered (in most boring locations) is interpreted as an intra-till organic soil within the Radnor Till Member and is termed herein as the Organic Soil. This unit is unnamed according to literature research. It most likely represents an inter-glacial substage during Illinoian glaciation between the Jubileean and Monican Substages. Figure 812.314-5 shows this unit as an organic soil at the base of the Radnor Till Member. The unit consists of organic deposits (with peat), silt, clay, and sand that range in thickness from 1.3 to 10 feet across the site. This deposit is present at the site at an approximate elevation of 637 to 627 feet AMSL. In-situ slug testing revealed hydraulic conductivity values ranging from 2.66 x 10^{-3} to 9.04 x 10^{-6} cm/sec. Figures 812.314-20 and 812.314-21 are provided to show the elevation of the top and bottom of Organic Soil, and Figure 812.314-22 is provided to show the thickness.

The next unit that is encountered is interpreted as consisting of silty clays, clayey silts, silts and outwash sands of the Vandalia Till Member. This unit is interpreted to be encountered at an approximate elevation 630 AMSL. Two laboratory k_v tests were performed on the clayey soils in this unit. The laboratory k_v test results ranged from 1.87 x 10^{-8} to 1.7 x 10^{-8} cm/sec.

The Smithboro Till Member, the Yarmouth Soil, which is a marker between the Illinoian and pre-Illinoian (Kansan) glaciation period, the Tilton Till Member, Hillary Till Member, and finally the Mahomet Sand Member of the Kansan Banner Formation were encountered during the drilling of boring CSM-1 at the Clinton Landfill No. 2 site. These units are well below the invert of the proposed Clinton Landfill No. 3 as shown on the geologic cross sections.

The last unit encountered is interpreted as the Mahomet Sand Member of the Kansan Banner Formation. This unit was encountered at approximate elevation 487 ft. AMSL during drilling activities of boring CSM-1 at the Clinton Landfill No. 2 site.

C. Bedrock

Bedrock was not encountered during drilling activities at the site. The bedrock is assumed to be present at elevations ranging from 400 to 450 ft. MSL as shown on Figure 812.314-7, which shows the bedrock surface topography of DeWitt County, Illinois. Geologic cross-section I (Drawing No. PXS-7) shows that bedrock

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was encountered at approximate elevation 400 ft. AMSL at water well 14-1, which is located approximately 1700 feet southeast of the facility.

812.314.8 Site Hydrogeology

The overburden deposits comprise the uppermost aquifers at the proposed Clinton Landfill No. 3 facility. Three water-bearing units within the overburden deposits have been identified. While other water-bearing units are present at the site, the three units identified are interpreted as being the upper-most water-bearing units below the proposed Clinton Landfill No. 3 floor. The first unit, interpreted as an outwash sand of the Radnor Till Member, is located at an approximate elevation of 653 to 647 feet AMSL. This unit is termed herein the Upper Radnor Till Sand. The next unit, also interpreted as an outwash sand, is present at an approximate elevation of 644 to 637 feet AMSL beneath the facility. This unit is termed herein the Lower Radnor Till Sand. The final unit encountered is an organic soil which is at an approximate elevation of 643 to 627 feet AMSL across the site.

Table 812.314-6 is provided to show a summary of the piezometers currently installed at the facility including unit monitored and screen elevation.

A. Upper Radnor Till Sand

The Upper Radnor Till Sand attains a maximum thickness of 2.8 feet at piezometer EX-22S. Piezometers EX-21S, EX-22S, and EX-23S are screened in this unit in the southeastern portion of the facility. Figure 812.314-14 is provided to show the elevation of the top of sand. Figure 812.314-15 is provided to show the bottom elevation of the sand and Figure 812.314-16 is provided to show the thickness of the sand at the facility. Piezometers EX-21S, EX-22S, and EX-23S are screened in the "upper-most aquifer" in the eastern and southern portions of the facility. Water level measurements were obtained from these piezometers during the four quarters of 2003 and 2004. Four contour maps showing the potentiometric surface in this sand unit during the four quarters of 2004 were prepared. These maps are presented as Figures 812.314-23 through 812.314-26. Groundwater elevations (Fourth Quarter 2004) are shown on the Geologic Cross-sections (Drawing Nos. P-XS2 through P-XS8). Historical water levels are summarized in Table 812.314-7 and shown graphically in Appendix 812.314-F.

The potentiometric contour maps show the groundwater flow of the Upper Radnor Till Sand is toward the

southeast. For the time period monitored, the potentiometric elevations in the individual wells range from as high as 677.42 ft. AMSL in piezometer EX-23S to as low as 660.32 ft. AMSL in EX-21S.

Flow rates within the Upper Radnor Till Sand under the site were calculated using Darcy's Law in the forms: V = KI, to estimate average flow velocity; and V = KI/n_e to estimate interstitial flow velocity. The flow rate (v) was calculated using the geometric mean hydraulic conductivity value (k) from the in-situ hydraulic conductivity test data. An effective porosity (n_e) of 0.35 (US EPA, 1990) and average hydraulic gradient (I) of 7.87×10^{-3} were used. The flow rate calculations are shown on Table 812.314-8.

B. Lower Radnor Till Sand

The Lower Radnor Till Sand attains a maximum thickness of 5.3 feet at piezometer EX-7S. Piezometers EX-4, EX-5, EX-6, EX-7, EX8S, EX-12S, EX-19, and EX-21S are screened in this unit at the facility. Figure 812.314-17 is provided to show the elevation of the top of sand. Figure 812.314-18 is provided to show the bottom elevation of the sand and Figure 812.314-19 is provided to show the thickness of the sand at the facility. Water level measurements were obtained from these piezometers during the four quarters of 2003 and 2004. Four contour maps showing the potentiometric surface in this sand unit during the four quarters of 2004 were prepared. These maps are presented as Figures 812.314-27 through 812.314-30. Groundwater elevations (Fourth Quarter 2004) are shown on the Geologic Cross-sections (attached as Drawing Nos. P-XS2 through P-XS8) Historical water levels are summarized in Table 812.314-7 and shown graphically in Appendix 812.314-F.

The potentiometric contour maps show the groundwater flow of the Lower Radnor Till Sand is toward the southeast. For the time period monitored, the potentiometric elevations in the individual wells range from as as high as 691.82 in piezometer EX-15 to as low as 639.89 in EX-19.

Flow rates within the Lower Radnor Till Sand under the site were calculated using Darcy's Law in the forms: V = KI, to estimate average flow velocity; and V = KI/n_e to estimate interstitial flow velocity. The flow rate (v) was calculated using the geometric mean hydraulic conductivity value (k) from the in-situ hydraulic conductivity test data for the "upper-most aquifer". An effective porosity (n_e) of 0.35 (USEPA, 1990) and average hydraulic gradient (I) of 1.24×10^{-2} were used. The flow rate calculations are shown on Table 812.314-8.

C. Organic Soil

The Organic Soil attains a maximum thickness of 10 feet at well G23D which is located on the west side of the site. Piezometers EX-11, EX-12D, EX-13, EX-7, EX-14, EX-17, EX-20, and EX-24 are screened in this unit at the facility. Figure 812.314-20 is provided to show the elevation of the this unit. Figure 812.314-21 is provided to show the bottom elevation and Figure 812.314-22 is provided to show the thickness of the unit at the facility. Water level measurements were obtained from these piezometers during the four quarters of 2003 and 2004. Four contour maps showing the potentiometric surface in this sand unit during the four quarters of 2004 were prepared. These maps are presented as Figures 812.314-31 through 812.314-34. Groundwater elevations (Fourth Quarter 2004) are shown on the Geologic Cross-sections (Drawing Nos. P-XS2 through P-XS8). Historical water levels are summarized in Table 812.314-7 and shown graphically in Appendix 812.314-F.

The potentiometric contour maps show the groundwater flow of the Organic Soil is toward the southwest. For the time period monitored, the potentiometric elevations in the individual wells range from as high as 675.77 in piezometer EX-24 to as low as 659.18.89 in EX-20.

Flow rates within the Organic Soil under the site were calculated using Darcy's Law in the forms: $V = KI$, to estimate average flow velocity; and $V = KI/n_e$ to estimate interstitial flow velocity. The flow rate (v) was calculated using the geometric mean hydraulic conductivity value (k) from the in-situ hydraulic conductivity test data for the "upper-most aquifer". An effective porosity (n_e) of 0.45 (US EPA, 1990) and average hydraulic gradient (I) of 6.06×10^{-3} were used. The flow rate calculations are shown on Table 812.314-8.

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812.314.9 References

- Berggren, D., Hunt, C. S., 1979, *A Guide to the Geology of the Farmer City Area, DeWitt County, Illinois*: Illinois State Geological Survey Field Trip Guide Leaflet 1979B, Champaign, Illinois, 28p.
- Clegg, K. E., 1972, Subsurface Geology and Coal Resources of the Pennsylvanian System in DeWitt, McLean, and Piatt Counties, Illinois: Illinois State Geological Survey Circular 473, Champaign, Illinois, 25p.
- Domenico, P. A., Schwartz, F. W., 1992, *Physical and Chemical Hydrogeology*: John Wiley & Sons, New York, New York, 824p.
- Fetter, C. W., 1993, *Contaminant Hydrogeology*: Macmillan Publishing Company, New York, New York, 458p.
- Follmer, L. R., McKay, E. D., Lineback, J. A., Gross, D. L., Willman, H. B., King, J. E., King, F. B., Miller, N. G., 1979, *Wisconsinan, Sangamonian, and Illinoian Stratigraphy in Central Illinois*: Illinois State Geological Survey Guidebook 13, Champaign, Illinois, 139p.
- Freeze, R. A., Cherry, J. A., 1979, *Groundwater*: Prentice Hall, Englewood Cliffs, New Jersey, 604p.
- Geraghty & Miller, Inc., 1989, *AQTESOLV (Version 1.1R4)*.
- Hansel, A. K., Johnson, W. H., 1996, Wedron and Mason Groups: *Lithostratigraphic Reclassification of Deposits of the Wisconsin Episode, Lake Michigan Lobe Area*: Illinois State Geological Survey Bulletin 104, Champaign, Illinois, 116p.
- Heigold, P.C., Larson, T. H., 1990, *Seismicity of Illinois*: Illinois State Geological Survey Environmental Geology Notes 133, Champaign, Illinois, 20p.
- Illinois Environmental Protection Agency, 1994, LPC-PA 19: Instructions for a Significant Modification Demonstrating Compliance with 35 IAC, Subtitle G, Part 814, Subpart C, Springfield, Illinois.

100% recycled paper

- Illinois Environmental Protection Agency, 1992, LPC-PA2: Instructions for the Application for a Permit to Develop a Non-Hazardous Landfill, Springfield, Illinois.

- Kempton, J. P., Herzog, B. L., 1996, *Mapping the Mahomet Sand and Other Aquifers of DeWitt and Piatt Counties*: Illinois State Geological Survey Open File Series 1996-9, Champaign, Illinois, 13p.

- Kempton, J. P., Johnson, W. H., Heigold, P. C., Cartwright, K., 1991, Mahomet Bedrock Valley in East-Central Illinois; Topography, Glacial Drift Stratigraphy, and Hydrogeology; Geology and Hydrogeology of the Teays-Mahomet Bedrock Valley System: Geological Society of America, Special Paper 258, Boulder, Colorado, p. 1-2, 91-124; 125-128.

- Kempton, J. P., Visocky, A. P., 1992, *Regional Groundwater Resources in Western McLean and Eastern Tazewell Counties with Emphasis on the Mahomet Bedrock Valley*: Illinois State Geological Survey and Illinois State Water Survey Cooperative Groundwater Report 13, Champaign, Illinois, 41p.

- Neuman, S. P., 1990, *Universal Scaling Of Hydraulic Conductivities And Dispersivities In Geologic Media*, Water Resource Research, 26(8): American Geophysical Union, Washington, D.C., pp. 1749-1758.

- Panno, S. V., Hackley, K. C., Cartwright, K., Liu, C. L., 1994, Hydrochemistry of the Mahomet Bedrock Valley Aquifer, East-Central Illinois; Indicators of Recharge and Ground-Water Flow: Ground Water, v. 32, no. 4, p. 591–604.

- Piskin, K., Bergstrom, R. E., 1975, *Glacial Drift in Illinois; Thickness and Character*: Illinois State Geological Survey Circular 490, Champaign, Illinois, 34p.

- Rowe, R. K., Booker, J. R., 1992, *MIGRATE: Analysis of 2-D Pollutant Migration in a Non-Homogeneous Soil System*, third printing, Geotechnical Research Centre, The University of Western Ontario, London, Ontario, 86p.

- Sara, M. N., 1994, Standard Handbook for Solid and Hazardous Waste Facility Assessments, Lewis Publishers, p 5-57.

100% recycled paper

- Stephenson, D. A., 1967, *Hydrogeology of Glacial Deposits of the Mahomet Bedrock Valley in East-Central Illinois*: Illinois State Geological Survey Circular 409, Champaign, Illinois, 51p.

- U.S. EPA, 1986, The Hydrogeologic Evaluation of Landfill Performance (HELP) Model, Cincinnati, Ohio.

- U.S. EPA, 1990, A Subtitle D Landfill Application Manual for the Multimedia Exposure Assessment Model (MULTMED): Environmental Research Laboratory, Office of Reasearch and Development, U.S. EPA, Athens, GA.

- Willman, H. B., Atherton, E., Buschbach, T. C., Collinson, C., Frye, J. C., Hopkins, M. E., Lineback, J. A., Simon, J. A., 1975, *Handbook of Illinois Stratigraphy*: Illinois State Geological Survey Bulletin 95, Champaign, Illinois, 261p.

- Willman, H. B., Frye, J. C., 1970, *Pleistocene Stratigraphy of Illinois*: Illinois State Geological Survey Bulletin 94, Champaign, Illinois, 204p.

- Wilson, S. D., Kempton, J. P., Lott, R. B., 1994, *The Sankoty-Mahomet Aquifer in the Confluence Area of the Mackinaw and Mahomet Bedrock Valleys, Central Illinois*: Illinois State Geological Survey and Illinois State Water Survey Cooperative Ground-Water Report 16, Champaign, Illinois, 64p.

TABLES

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TABLE 812.314-1

SUMMARY OF SLUG TEST RESULTS

Clinton Landfill No. 3

Well No.	Geologic Unit	Hvorslev Method		
		Hydraulic Conductivity (K), cm/sec.		Geometric
		Falling Head (K_f)	Rising Head (K_r)	Mean K (cm/sec.)
EX-22S	Upper Radnor Till Sand	9.39E-05	1.36E-04	1.13E-04
EX-23S	Upper Radnor Till Sand	1.13E-05	7.94E-06	9.47E-06
EX-21S	Upper Radnor Till Sand	1.50E-04	1.73E-04	1.61E-04
			Geometric Mean, all wells:	**5.57E-05**

Well No.	Geologic Unit	Hvorslev Method		
		Hydraulic Conductivity (K), cm/sec.		Geometric
		Falling Head (K_f)	Rising Head (K_r)	Mean K (cm/sec.)
EX-12S	Lower Radnor Till Sand	3.22E-04	2.70E-04	2.95E-04
EX-4	Lower Radnor Till Sand	3.12E-05	3.22E-05	3.17E-05
EX-5	Lower Radnor Till Sand	1.49E-03	1.10E-03	1.28E-03
EX-6	Lower Radnor Till Sand	4.66E-03	4.00E-03	4.32E-03
EX-8S	Lower Radnor Till Sand	9.93E-04	8.63E-04	9.26E-04
EX-21	Lower Radnor Till Sand	5.23E-04	4.76E-04	4.99E-04
			Geometric Mean, all wells:	**5.37E-04**

Well No.	Geologic Unit	Hvorslev Method		
		Hydraulic Conductivity (K), cm/sec.		Geometric
		Falling Head (K_f)	Rising Head (K_r)	Mean K (cm/sec.)
EX-12D	Organic Soil	5.97E-05	7.75E-05	6.80E-05
EX-13	Organic Soil	6.77E-06	4.23E-06	5.35E-06
EX-14	Organic Soil	1.14E-05	6.88E-06	8.86E-06
EX-17	Organic Soil	2.76E-05	1.81E-05	2.24E-05
EX-20	Organic Soil	8.68E-05	8.59E-05	8.63E-05
EX-22D	Organic Soil	1.07E-04	8.09E-05	9.30E-05
EX-23D	Organic Soil	2.64E-03	2.69E-03	2.66E-03
EX-24	Organic Soil	3.79E-05	4.94E-05	4.33E-05
			Geometric Mean, all wells:	**5.35E-05**

Note: cm/sec. = centimeters per second

TABLE 812-314-2
SUMMARY OF LABORATORY TESTING OF SITE SOILS
Clinton Landfill No. 3

Geologic Unit	Boring No.	Sample Elevation ft. (AMSL)	Soil Type	Kv (cm/sec.)	Dry Density (gm/cc)	Porosity (n)
Tiskilwa Formation	EX-21	688	Silty Clay	2.73E-08	1.98	0.275
Tiskilwa Formation	CLG1&2*	689.9	Silty Clay	NT	2.04	0.241
Tiskilwa Formation	B-20	703.3	Clayey Silt	8.60E-09	NM	NM
Tiskilwa Formation	EX-13	680	Silty Clay	2.24E-08	2.03	0.237
Tiskilwa Formation	EX-16	677.5	Silty Clay	1.71E-08	2.02	0.275
Tiskilwa Formation	EX-17	685	Silty Clay	1.66E-08	1.96	0.281
Tiskilwa Formation	EX-23	676	Sandy Clay	1.22E-08	2.20	0.265
Tiskilwa Formation	EX-24	695	Silty Clay	1.40E-08	2.15	0.237
Roxanna/Robein	EX-13	670	Clayey Silt	1.55E-08	1.18	0.539
Roxanna/Robein	EX-16	667.5	Organic Clay	4.13E-08	1.1	0.574
Roxanna/Robein	EX-21	670	Sandy Clay	2.58E-08	2.04	0.259
Roxanna/Robein	EX-24	670	Sandy Clay	3.56E-08	1.95	0.265
Roxanna/Robein	CLG 5*	662.9	Silty Clay	NT	1.52	0.425
Berry Clay	CLG3&4*	665.9	Silty Clay	NT	2.05	0.235
Berry Clay	EX-6	661	Silty Clay	1.35E-08	1.84	0.379
Berry Clay	EX-7	658.8	Silty Clay	8.43E-08	1.9	0.379
Berry Clay	EX-13	660	Silty Clay	1.78E-08	1.89	0.338
Berry Clay	EX-16	659.8	Silty Clay	3.42E-08	1.98	0.270
Berry Clay	EX-19	658	Silty Clay	2.71E-08	1.72	0.333
Berry Clay	EX-21	662	Silty Clay	1.87E-08	1.86	0.301
Berry Clay	EX-24	665	Silty Clay	3.26E-08	1.79	0.333
Berry Clay	EX-24	659	Silty Clay	6.29E-08	1.69	0.355
Radnor Till	EX-16	645	Silty Clay	7.66E-08	2.09	0.194
Radnor Till	EX-19	649	Silty Clay	5.93E-08	2.23	0.206
Radnor Till	EX-23	648.5	Silty Clay	4.92E-08	1.87	0.219
Radnor Till	EX-4	644.53	Silty Clay	4.20E-08	2.22	0.233
Radnor Till	EX-4	659.53	Silty Clay	5.79E-08	2.16	0.283
Radnor Till	EX-5	657.97	Silty Clay	2.05E-08	2.17	0.276
Radnor Till	EX-5	647.97	Silty Clay	1.64E-08	2.32	0.197
Radnor Till	EX-6	644.24	Silty Clay	2.91E-08	2.12	0.446
Radnor Till	EX-7	643.8	Silty Clay	9.36E-08	2.35	0.174
Vandalia Till	P223D-1A	623.15	Silty Clay	1.87E-08	2.11	NM
Vandalia Till	B-11 (P-11)	626.5	Clayey Silt	1.70E-08	NM	NM

Mean Kv Value by Formation

Radnor Till Mean:	4.94E-08
Berry Clay Mean:	3.64E-08
Roxanna/Robein Mean:	2.96E-08
Tiskilwa Formation Mean:	1.69E-08
Berry Clay/Radnor Mean:	4.33E-08
Vandalia Till Mean:	1.79E-08

Mean n Value by Formation

Radnor Till Mean:	0.248
Berry Clay Mean:	0.325
Roxanna/Robein Mean:	0.413
Tiskilwa Formation Mean:	0.259
Berry Clay/Radnor Mean:	0.286

Notes:
1) ft. AMSL = Elevation in feet above mean sea level
2) Kv = vertical hydraulic conductivity
3) cm/sec. = centimeters per second
4) gm/cc = grams per cubic centimeter
5) * CLG boring was advanced next to B-23
6) NM = Not measured

TABLE 812.314-3
TOTAL ORGANIC CONTENT
FROM SELECTED BORINGS
Clinton Landfill No. 3

Boring ID Number	Geologic Unit	Sample Elev. (ft-MSL)	Date Collected	Total Organic Content (%)
EX-14	Berry Clay	659	12/16/2002	8.8
	Radnor Till	642	12/16/2002	1.4
EX-13	Roxanna Silt	671	12/20/2002	10.0
	Radnor Till	655.5	12/20/2002	1.8
	Berry Clay	661.5	12/20/2002	1.8
	Organic Soil	633	12/23/2002	3.0
EX-12	Berry Clay	660	12/27/2002	2.0
EX-17	Berry Clay	657	1/3/2003	2.0
EX-15	Tiskilwa Formation	673	1/7/2003	0.94
	Berry Clay	662	1/7/2003	1.8
	Radnor Till	657	1/7/2003	0.93
	Radnor Till	646	1/7/2003	0.53
EX-24	Radnor Till	643	1/9/2003	0.54
	Sangamon Soil	636	1/9/2003	3.7
EX-16	Tiskilwa Formation	672.5	1/15/2003	1.00
	Tiskilwa Formation	669.5	1/15/2003	1.1
	Roxanna Silt	668	1/15/2003	7.9
	Organic Soil	634	1/15/2003	7.3
EX-18	Radnor Till	649	1/20/2003	1.2
	Radnor Till	641	1/20/2003	0.56
	Radnor Till	638	1/20/2003	0.49
	Organic Soil	632	1/20/2003	1.9
EX-19	Roxanna Silt	663	1/22/2003	2.5
	Radnor Till	646	1/22/2003	0.57
EX-20	Roxanna Silt	665	1/31/2003	2.20
	Radnor Till	645	2/3/2003	1.1
EX-21	Tiskilwa Formation	690	1/29/2003	1.4
	Tiskilwa Formation	675	1/29/2003	1.6
	Roxanna Silt	670	1/30/2003	5.7
	Radnor Till	652	1/30/2003	1.0
	Radnor Till	643	1/30/2003	0.93
EX-22	Berry Clay	660	1/28/2003	1.4
	Radnor Till	655	1/28/2003	2.5
	Radnor Till	648	1/28/2003	1.3
	Radnor Till	644	1/28/2003	1.4

Notes:

1. Samples collected from 5-foot split-spoon sampler.
2. ft-MSL = feet above Mean Sea Level datum; value was estimated by PDC Technical Services, Inc. field personnel based on ground surface elevation data provided by SKS Engineers, Inc. at the time of sample collection.
3. Total Organic Content = by American Society for Testing and Materials (ASTM) Standard D2974-00 *"Standard Test Methods for Moisture, Ash, and Organic Matter of Peat and Other Organic Soils".*
4. % = Percent

TABLE 812.314-4
SOIL CATION EXCHANGE CAPACITY RESULTS
Clinton Landfill No. 3

Soil Boring	Ground Surface Elevation (Ft. AMSL)	Sample Depth (ft-bgs)	Sample Elevation (Ft. AMSL)	Cation Exchange Capacity (CEC) Result (meq/100g)
EX-4	724.53	67	657.53	0.8
EX-4	724.53	82	642.53	1.65
EX-5	727.97	72	655.97	0.95
EX-5	727.97	82	645.97	1.38
EX-5	727.97	91.5	636.47	1.65
EX-6	694.24	31	663.24	2.6
EX-6	694.24	52	642.24	1.38
EX-7	691.8	31	660.8	2.25
EX-7	691.8	46	645.8	0.95

Notes:
1) Ground Surface Elevation is elevation at time soil boring was drilled
2) Ft. AMSL = Feet Above Mean Sea Level
3) ft-bgs = feet below ground surface
4) meq/100g = milliequivalents per 100 grams
5) Cation Exchange Capacity analysis performed by PDC Laboratories, Inc. - Peoria, IL.

TABLE 812.314-5

POTABLE WATER WELL DATA SUMMARY – WELLS WITHIN 2 MILES

Clinton Landfill No. 3

Well No.	Well Location	Distance from Site (feet)	Boring Completion Depth (ft. bgs)	Approx. Water Bearing Unit Elev. (ft. AMSL)	Date Installed	Use	Aquifer Type
1-A	T19N-R2E, Section 1	7200	35	N/A	08/00/1944	Domestic	NR
1-1	T19N-R2E, Section 1	7700	90	668	08/05/1941	Domestic	Unconsolidated
1-2	T19N-R2E, Section 1	6200	129	612	10/25/1975	Domestic	Unconsolidated
1-3	T19N-R2E, Section 1	6700	75	675	00/00/1971	Community Supply	Unconsolidated
2-1	T19N-R2E, Section 2	6450	320	482	09/11/1996	Domestic	Unconsolidated
2-2	T19N-R2E, Section 2	4750	314	487	10/16/1997	State Highway Dept.	Unconsolidated
2-3	T19N-R2E, Section 2	4700	96	644	08/20/1940	Domestic	Unconsolidated
2-4	T19N-R2E, Section 2	6500	323	492	07/01/1992	Domestic	Unconsolidated
2-5	T19N-R2E, Section 2	5200	17	725	NR	Monitoring	Unconsolidated
2-6	T19N-R2E, Section 2	5350	17	725	NR	Monitoring	Unconsolidated
2-7	T19N-R2E, Section 2	5200	17	725	NR	Monitoring	Unconsolidated
2-8	T19N-R2E, Section 2	4950	17	725	NR	Monitoring	Unconsolidated
2-9	T19N-R2E, Section 2	4750	17	725	NR	Monitoring	Unconsolidated
2-10	T19N-R2E, Section 2	4900	10	723	NR	Monitoring	Unconsolidated
2-11	T19N-R2E, Section 2	7700	335	N/A	04/21/1997	Dry Hole	N/A
3-1	T19N-R2E, Section 3	4900	291	458	08/00/1988	Domestic	Unconsolidated
3-2	T19N-R2E, Section 3	4650	290	463	10/22/1987	Industrial/Comm.	Unconsolidated
3-3	T19N-R2E, Section 3	5100	34	N/A	00/00/1926	Domestic	Unconsolidated
3-4	T19N-R2E, Section 3	4800	295	595	03/24/1999	Domestic	Unconsolidated
3-5	T19N-R2E, Section 3	5100	335	N/A	05/20/1997	Soil Boring	Bedrock
3-6	T19N-R2E, Section 3	5600	173	550	12/00/1945	Industrial/Comm.	Unconsolidated
3-7	T19N-R2E, Section 3	6000	288	456	05/21/1992	Domestic	Unconsolidated
3-8	T19N-R2E, Section 3	6000	283	470	05/28/1992	Domestic	Unconsolidated
3-9	T19N-R2E, Section 3	5800	93	631	04/15/1980	Domestic	Unconsolidated
3-10	T19N-R2E, Section 3	6200	280	450	11/08/1945	Industrial/Comm.	Unconsolidated

TABLE 812.314-5

POTABLE WATER WELL DATA SUMMARY – WELLS WITHIN 2 MILES

Clinton Landfill No. 3

Well No.	Well Location	Distance from Site (feet)	Boring Completion Depth (ft. bgs)	Approx. Water Bearing Unit Elev. (ft. AMSL)	Date Installed	Use	Aquifer Type
3-11	T19N-R2E, Section 3	6400	286	444	11/00/1993	Domestic	Unconsolidated
3-12	T19N-R2E, Section 3	6400	286	445	11/00/1993	Domestic	Unconsolidated
3-13	T19N-R2E, Section 3	6400	289	441	11/00/1993	Domestic	Unconsolidated
3-14	T19N-R2E, Section 3	6400	289	N/A	11/00/1993	Domestic	Unconsolidated
3-15	T19N-R2E, Section 3	6400	286	444	11/00/1993	Domestic	Unconsolidated
3-16	T19N-R2E, Section 3	7600	302	412	06/23/1992	Domestic	Unconsolidated
3-17	T19N-R2E, Section 3	6850	315	465	11/10/1998	Domestic	Unconsolidated
3-18	T19N-R2E, Section 3	7200	86	N/A	07/00/1935	Soil Boring	Unconsolidated
3-19	T19N-R2E, Section 3	8600	303	437	07/26/1991	Community Supply	NR
3-20	T19N-R2E, Section 3	9000	150	570	00/00/1900	Domestic	NR
4-A	T19N-R2E, Section 4	5800	86	NR	11/00/1939	NR	NR
4-1	T19N-R2E, Section 4	8400	142	601	06/29/1978	Industrial/Comm.	Unconsolidated
4-2	T19N-R2E, Section 4	8400	138	604	09/12/1978	Industrial/Comm.	Unconsolidated
4-3	T19N-R2E, Section 4	10200	140	585	06/19/2000	Domestic	Unconsolidated
4-4	T19N-R2E, Section 4	10050	291	439	08/02/2000	Domestic	Unconsolidated
4-5	T19N-R2E, Section 4	7100	294	431	09/08/1998	Domestic	Bedrock
4-6	T19N-R2E, Section 4	7300	276	449	08/18/1999	Domestic	Unconsolidated
4-7	T19N-R2E, Section 4	7400	136	590	00/00/1964	Domestic	Unconsolidated
4-8	T19N-R2E, Section 4	8750	79	646	07/16/1995	Domestic	Unconsolidated
4-9	T19N-R2E, Section 4	8600	128	614	11/20/1971	Domestic	Unconsolidated
4-10	T19N-R2E, Section 4	9600	35	685	00/00/1900	Domestic	NR
4-11	T19N-R2E, Section 4	9800	36	694	00/00/0000	Domestic	Unconsolidated
4-13	T19N-R2E, Section 4	10500	144	586	06/24/2001	Domestic	Unconsolidated
6-6	T19N-R3E, Section 6	9800	320	475	10/04/1984	Non-Community	Unconsolidated
8-1	T19N-R3E, Section 8	9000	195	530	08/26/1966	Domestic	Unconsolidated
8-2	T19N-R3E, Section 8	8800	243	482	06/00/1972	Domestic	Unconsolidated

TABLE 812.314-5

POTABLE WATER WELL DATA SUMMARY – WELLS WITHIN 2 MILES

Clinton Landfill No. 3

Well No.	Well Location	Distance from Site (feet)	Boring Completion Depth (ft. bgs)	Approx. Water Bearing Unit Elev. (ft. AMSL)	Date Installed	Use	Aquifer Type
8-3	T19N-R3E, Section 8	8900	127	601	10/15/1972	Domestic	Unconsolidated
9-1	T19N-R2E, Section 9	5750	96	636	00/00/1951	Domestic	Unconsolidated
9-2	T19N-R2E, Section 9	5750	88	647	00/00/1916	Domestic	NR
9-3	T19N-R2E, Section 9	7700	155	570	00/00/1900	Domestic	Unconsolidated
9-4	T19N-R2E, Section 9	7900	143	592	09/16/1939	Domestic	Unconsolidated
9-5	T19N-R2E, Section 9	10600	275	477	05/21/1999	Domestic	Unconsolidated
9-6	T19N-R2E, Section 9	10650	284	454	06/22/1990	Domestic	Unconsolidated
9-7	T19N-R2E, Section 9	6900	143	577	NR	Domestic	NR
10-1	T19N-R2E, Sect. 10	900	279	442	11/00/1976	Domestic	Unconsolidated
10-2	T19N-R2E, Sect. 10	900	265	438	07/00/1977	Domestic	Unconsolidated
10-3	T19N-R2E, Sect. 10	3200	16	674	00/00/1900	Domestic	NR
10-4	T19N-R2E, Sect. 10	3000	260	395	08/25/1968	Domestic	Unconsolidated
10-5	T19N-R2E, Sect. 10	3200	241	434	05/12/1967	Domestic	Unconsolidated
10-6	T19N-R2E, Sect. 10	3000	76	654	11/00/1930	Domestic	NR
10-7	T19N-R2E, Sect. 10	4400	104	630	05/14/1984	Domestic	Unconsolidated
10-8	T19N-R2E, Sect. 10	2600	415	N/A	02/15/1974	Soil Boring	N/A
10-9	T19N-R2E, Sect. 10	5200	510	N/A	01/02/1968	Soil Boring	N/A
10-10	T19N-R2E, Sect. 10	1700	281	461	05/11/1988	Industrial/Comm.	Unconsolidated
10-11	T19N-R2E, Sect. 10	3000	280	474	09/00/1988	Irrigation	Unconsolidated
10-12	T19N-R2E, Sect. 10	3000	88	629	07/12/1973	Domestic	Unconsolidated
10-13	T19N-R2E, Sect. 10	2800	288	473	05/31/1995	Domestic	Unconsolidated
10-14	T19N-R2E, Sect. 10	5450	18	NR	07/00/1975	Monitoring	NR
10-15	T19N-R2E, Sect. 10	4500	293	Dry Hole	05/30/1995	Domestic	N/A
10-16	T19N-R2E, Sect. 10	4500	85	660	09/12/1995	Domestic	Unconsolidated
10-17	T19N-R2E, Sect. 10	4500	130	610	00/00/1912	Domestic	NR
11-1	T19N-R2E, Sect. 11	1650	134	579	09/16/1942	Domestic	Unconsolidated
11-2	T19N-R2E, Sect. 11	On-site	145	583	04/09/1996	Domestic	Unconsolidated

TABLE 812.314-5

POTABLE WATER WELL DATA SUMMARY – WELLS WITHIN 2 MILES

Clinton Landfill No. 3

Well No.	Well Location	Distance from Site (feet)	Boring Completion Depth (ft. bgs)	Approx. Water Bearing Unit Elev. (ft. AMSL)	Date Installed	Use	Aquifer Type
11-3	T19N-R2E, Sect. 11	2500	103	625	11/05/1945	Domestic	Unconsolidated
12-A	T19N-R2E, Sect. 12	7900	6	714	00/00/0000	NR	NR
12-1	T19N-R2E, Sect. 12	6500	82	567	06/07/1984	Domestic	Unconsolidated
12-2	T19N-R2E, Sect. 12	6000	8	635	00/00/1900	Domestic	NR
12-3	T19N-R2E, Sect. 12	5100	142	533	03/20/1977	Domestic	Unconsolidated
12-4	T19N-R2E, Sect. 12	4400	70	682	12/10/1980	Domestic	Unconsolidated
12-5	T19N-R2E, Sect. 12	4600	145	572	09/03/1996	Domestic	Unconsolidated
12-6	T19N-R2E, Sect. 12	3800	25	704	04/05/1946	Domestic	Unconsolidated
12-7	T19N-R2E, Sect. 12	5600	141	560	00/00/1995	Unused	NR
12-8	T19N-R2E, Sect. 12	5800	141	554	07/08/1994	Highway Dept.	Unconsolidated
12-9	T19N-R2E, Sect. 12	6450	135	557	00/00/1939	Sealed	NR
12-10	T19N-R2E, Sect. 12	5800	60	660	00/00/1959	Community Supply	NR
12-11	T19N-R2E, Sect. 12	5700	47	665	00/00/1949	Sealed	NR
12-12	T19N-R2E, Sect. 12	3900	140	600	00/00/1975	Community Supply	NR
12-13	T19N-R2E, Sect. 12	7300	57	668	00/00/1955	Abandoned	NR
12-14	T19N-R2E, Sect. 12	3700	68	662	07/03/1971	Domestic	Unconsolidated
12-15	T19N-R2E, Sect. 12	6200	57	663	00/00/0000	Monitoring	Unconsolidated
12-16	T19N-R2E, Sect. 12	5050	75	650	00/00/1893	Domestic	NR
12-17	T19N-R2E, Sect. 12	6100	Surface	N/A	NR	Spring	N/A
12-18	T19N-R2E, Sect. 12	6500	38	687	00/00/1955	Community Supply	NR
12-19	T19N-R2E, Sect. 12	6700	73	NR	00/00/1950	Community Supply	NR
12-20	T19N-R2E, Sect. 12	6500	10	N/A	00/00/1940	Abandoned	N/A
13-1	T19N-R2E, Sect. 13	6300	127	598	10/02/1943	Domestic	Unconsolidated
13-2	T19N-R2E, Sect. 13	6100	120	N/A	00/00/0000	Soil Boring	N/A

TABLE 812.314-5

POTABLE WATER WELL DATA SUMMARY – WELLS WITHIN 2 MILES

Clinton Landfill No. 3

Well No.	Well Location	Distance from Site (feet)	Boring Completion Depth (ft. bgs)	Approx. Water Bearing Unit Elev. (ft. AMSL)	Date Installed	Use	Aquifer Type
13-3	T19N-R2E, Sect. 13	6300	270	430	06/24/2000	Domestic	Unconsolidated
13-4	T19N-R2E, Sect. 13	6300	282	454	04/27/1990	Domestic	Unconsolidated
13-5	T19N-R2E, Sect. 13	5800	108	597	05/14/1992	Domestic	NR
13-6	T19N-R2E, Sect. 13	7950	60	655	00/00/1920	Domestic	NR
13-7	T19N-R2E, Sect. 13	3700	276	375	10/26/1999	Domestic	Unconsolidated
13-8	T19N-R2E, Sect.. 13	3750	81	605	09/01/1999	Domestic	Unconsolidated
13-9	T19N-R2E, Sect. 13	6550	38	617	11/14/1989	Domestic	NR
13-10	T19N-R2E, Sect. 13	7000	70	605	00/00/1909	Domestic	Unconsolidated
13-11	T19N-R2E, Sect. 13	7550	108	592	07/02/1992	Domestic	Unconsolidated
14-1	T19N-R2E, Sect. 14	1700	274	410	05/17/2000	Domestic	Bedrock
13-12	T19N-R2E, Sect. 13	3900	286	429	05/19/2003	Domestic	Unconsolidated
14-2	T19N-R2E, Sect. 14	350	68	652	05/14/1963	Domestic	Unconsolidated
14-3	T19N-R2E, Sect. 14	2000	243	452	08/21/2001	Domestic	Unconsolidated
14-4	T19N-R2E, Sect. 14	1150	246	502	03/26/2002	Domestic	Unconsolidated
14-5	T19N-R2E, Sect. 14	2250	283	433	04/23/2002	Domestic	Unconsolidated
15-1	T19N-R2E, Sect. 15	5000	264	451	06/29/1977	Domestic	Unconsolidated
15-2	T19N-R2E, Sect. 15	5100	253	468	04/19/1978	Domestic	Unconsolidated
15-3	T19N-R2E, Sect. 15	5150	260	465	04/19/1978	Domestic	Unconsolidated
15-4	T19N-R2E, Sect. 15	5000	245	468	04/19/1978	Domestic	Unconsolidated
15-5	T19N-R2E, Sect. 15	4750	248	485	04/19/1978	Domestic	Unconsolidated
15-6	T19N-R2E, Sect. 15	5500	290	416	11/02/1970	Domestic	Unconsolidated
15-7	T19N-R2E, Sect. 15	6250	236	439	08/09/1961	Domestic	Unconsolidated
15-8	T19N-R2E, Sect. 15	6250	222	430	00/00/1962	Domestic	Unconsolidated
15-9	T19N-R2E, Sect. 15	4800	251	425	00/00/1971	Domestic	NR
15-10	T19N-R2E, Sect. 15	3800	70	590	04/22/1941	Domestic	Unconsolidated
15-11	T19N-R2E, Sect. 15	3800	13	645	00/00/1921	Domestic	Unconsolidated
15-12	T19N-R2E, Sect. 15	2700	41	607	06/00/1959	Test Hole	N/A

TABLE 812.314-5

POTABLE WATER WELL DATA SUMMARY – WELLS WITHIN 2 MILES

Clinton Landfill No. 3

Well No.	Well Location	Distance from Site (feet)	Boring Completion Depth (ft. bgs)	Approx. Water Bearing Unit Elev. (ft. AMSL)	Date Installed	Use	Aquifer Type
15-13	T19N-R2E, Sect. 15	3250	230	470	09/24/1985	Industrial/Comm.	Unconsolidated
15-14	T19N-R2E, Sect. 15	4900	242	445	10/24/2001	Domestic	Unconsolidated
16-1	T19N-R2E, Sect. 16	7700	280	484	05/05/1988	Domestic	Unconsolidated
16-2	T19N-R2E, Sect. 16	9400	71	604	00/00/1964	Domestic	Unconsolidated
16-3	T19N-R2E, Sect. 16	10700	110	590	00/00/1928	Domestic	NR
16-4	T19N-R2E, Sect. 16	5800	74	571	10/09/2001	Domestic	Unconsolidated
16-5	T19N-R2E, Sect. 16	6000	74	N/A	07/24/2001	Domestic	NR
17-1	T19N-R2E, Sect. 17	11300	242	433	00/00/1963	Domestic	Unconsolidated
17-2	T19N-R2E, Sect. 17	11800	302	373	11/08/1989	Domestic	Unconsolidated
18-1	T19N-R3E, Sect. 18	10600	90	640	00/00/1967	Domestic	Unconsolidated
18-2	T19N-R3E, Sect. 18	10350	157	593	09/19/1994	Domestic	Unconsolidated
18-3	T19N-R3E, Sect. 18	9300	22	705	00/00/1900	Domestic	NR
18-4	T19N-R3E, Sect. 18	9100	166	586	05/10/1971	Domestic	Unconsolidated
18-6	T19N-R3E, Sect. 18	9800	167	606	06/15/1995	Domestic	Unconsolidated
18-7	T19N-R3E, Sect. 18	9950	164	593	05/15/1993	Domestic	Unconsolidated
18-9	T19N-R3E, Sect. 18	9400	151	559	05/10/2002	Domestic	Unconsolidated
18-10	T19N-R3E, Sect. 18	10300	304	472	06/19/2001	Domestic	Unconsolidated
19-3	T19N-R3E, Sect. 19	9700	80	650	00/00/1900	Domestic	NR
21-1	T19N-R2E, Sect. 21	10800	302	423	06/11/1997	Domestic	Unconsolidated
21-2	T19N-R2E, Sect. 21	10550	110	590	10/18/1943	Domestic	Unconsolidated
21-3	T19N-R2E, Sect. 21	8550	232	495	10/18/1978	Domestic	Unconsolidated
21-4	T19N-R2E, Sect. 21	10100	69	661	07/02/1991	Domestic	Unconsolidated
21-5	T19N-R2E, Sect. 21	7600	90	638	11/00/1945	Domestic	Unconsolidated
21-6	T19N-R2E, Sect. 21	10500	97	613	04/00/1972	Domestic	Unconsolidated
21-7	T19N-R2E, Sect. 21	10600	296	419	08/27/2001	Domestic	Unconsolidated
21-8	T19N-R2E, Sect. 21	12000	296	488	07/23/2001	Domestic	Unconsolidated
22-1	T19N-R2E, Sect. 22	9900	86	635	12/08/1999	Domestic	Unconsolidated

TABLE 812.314-5

POTABLE WATER WELL DATA SUMMARY – WELLS WITHIN 2 MILES

Clinton Landfill No. 3

Well No.	Well Location	Distance from Site (feet)	Boring Completion Depth (ft. bgs)	Approx. Water Bearing Unit Elev. (ft. AMSL)	Date Installed	Use	Aquifer Type
22-2	T19N-R2E, Sect. 22	9950	93	605	00/00/1900	Domestic	Unconsolidated
22-3	T19N-R2E, Sect. 22	7300	150	575	00/00/1916	Domestic	NR
22-4	T19N-R2E, Sect. 22	7350	300	400	08/31/1998	Domestic	Unconsolidated
22-5	T19N-R2E, Sect. 22	5850	260	478	12/00/1979	Domestic	Unconsolidated
22-6	T19N-R2E, Sect. 22	5650	77	639	06/11/1947	Industrial/Comm.	Unconsolidated
22-7	T19N-R2E, Sect. 22	9700	76	629	10/19/2001	Domestic	Unconsolidated
22-8	T19N-R2E, Sect. 22	9350	76	632	10/10/2001	Domestic	Unconsolidated
22-9	T19N-R2E, Sect. 22	10750	88	613	06/26/2002	Domestic	Unconsolidated
23-1	T19N-R2E, Sect. 23	6400	93	625	06/12/1943	Domestic	Unconsolidated
23-2	T19N-R2E, Sect. 23	6250	150	575	00/00/1921	Domestic	NR
23-3	T19N-R2E, Sect. 23	5800	145	NR	00/00/1918	Domestic	Unconsolidated
23-4	T19N-R2E, Sect. 23	4750	28	699	11/15/1989	Domestic	NR
24-2	T19N-R2E, Sect. 24	9600	292	486	08/15/1994	Domestic	Unconsolidated
24-3	T19N-R2E, Sect. 24	9300	125	605	00/00/1920	Domestic	NR
24-4	T19N-R2E, Sect. 24	8200	150	575	00/00/1920	Domestic	NR
26-2	T19N-R2E, Sect. 26	10550	130	605	00/00/1916	Domestic	NR
33-1	T20N-R2E, Sect. 33	9200	115	620	07/26/1946	Domestic	Unconsolidated
33-4	T20N-R2E, Sect. 33	10100	29	701	09/30/1987	Domestic	Unconsolidated
33-5	T20N-R2E, Sect. 33	11400	120	638	01/13/2003	Domestic	Unconsolidated
34-1	T20N-R2E, Sect. 34	9300	105	611	05/26/1992	Domestic	NR
34-2	T20N-R2E, Sect. 34	9700	360	N/A	05/11/1972	Test Hole	N/A
34-3	T20N-R2E, Sect. 34	9800	356	369	01/00/1973	Industrial/Comm.	Unconsolidated
34-4	T20N-R2E, Sect. 34	9900	320	N/A	11/16/1971	Test Hole	N/A
34-5	T20N-R2E, Sect. 34	9950	339	N/A	11/18/1971	Test Hole	N/A
34-6	T20N-R2E, Sect. 34	10450	360	NR	00/00/1954	Test Well	NR
34-7	T20N-R2E, Sect. 34	10300	100	635	10/10/1941	Domestic	Unconsolidated
34-8	T20N-R2E, Sect. 34	10550	338	434	00/00/1973	Community	NR

TABLE 812.314-5

POTABLE WATER WELL DATA SUMMARY – WELLS WITHIN 2 MILES

Clinton Landfill No. 3

Well No.	Well Location	Distance from Site (feet)	Boring Completion Depth (ft. bgs)	Approx. Water Bearing Unit Elev. (ft. AMSL)	Date Installed	Use	Aquifer Type
						Supply	
34-9	T20N-R2E, Sect. 34	10500	346	435	00/00/1972	Community Supply	NR
34-11	T20N-R2E, Sect. 34	10500	372	N/A	00/00/1954	Test Hole	N/A
34-12	T20N-R2E, Sect. 34	10300	349	NR	00/00/1954	Test Well	N/A
34-15	T20N-R2E, Sect. 34	9600	360	NR	00/00/1923	NR	NR
34-17	T20N-R2E, Sect. 34	10200	345	385	00/00/1948	NR	NR
34-18	T20N-R2E, Sect. 34	10300	345	385	00/00/1954	Test Hole	N/A
34-21	T20N-R2E, Sect. 34	10000	361	379	00/00/1946	NR	NR
34-22	T20N-R2E, Sect. 34	8750	105	630	06/24/1992	Domestic	Unconsolidated
35-1	T20N-R2E, Sect. 35	8300	81	642	08/15/1971	Domestic	Unconsolidated
35-2	T20N-R2E, Sect. 35	9600	324	402	00/00/1962	Non-Community	NR
35-5	T20N-R2E, Sect. 35	10550	78	658	02/00/1946	Domestic	Unconsolidated
36-1	T20N-R2E, Sect. 36	10600	65	N/A	00/00/1925	Domestic	Unconsolidated
36-2	T20N-R2E, Sect. 36	10450	57	N/A	00/00/0000	Domestic	Unconsolidated

Notes:

1) ft. bgs = feet below ground surface
2) ft. AMSL = feet above mean sea level
3) N/A = Not Applicable
4) NR = Not Reported
5) Sources: Illinois State Water Survey (Private Well Database and PIC's Database) and Illinois State Geological Survey

TABLE 812.314-6
PIEZOMETER INFORMATION
CLINTON LANDFILL NO. 3

Well	Surface Grade (ft. AMSL)	Well Depth (ft. bgs)	Geologic Unit Monitored	Screen Elevation (ft. AMSL)	Elevation Top of Sand Pack (ft. AMSL)	Unit	Unit Elevation (ft. AMSL)	Unit Thickness (ft.)
EX-4	724.53	93.5	Lower Radnor Till Sand	631.38 - 641.03	643.33	Sand	635.53 - 638.28	2.75
EX-5	727.97	92	Lower Radnor Till Sand	636.32 - 646	648.47	Sand	637.47 - 640.97	3.5
EX-6	694.24	57.9	Lower Radnor Till Sand	636.69 - 646.37	651.74	Sand	635.8 - 641.1	5.3
EX-7	691.8	58	Lower Radnor Till Sand	634.15 - 643.91	646.3	Sand	635.8 - 641.1	5.3
EX-8S	654.1	22.5	Lower Radnor Till Sand	631.64 - 641.52	646.1	Sand	634.8 - 640	5.2
EX-9	648.3	27.5	Alluvial Deposits	620.85 - 630.59	633	Clayey/Sandy Silt, Sand, Gravelly Sand	619.3 - 632.8	13.5
EX-12S	705.4	65.5	Lower Randor Till Sand	640.25 - 649.88	651.88	Sand	643.2 - 644.3	1.1
EX-12D	705.4	77	Organic Soil	629.75 -639.37	642.15	Sand & Gravel	633.65 -637.4	3.75
EX-13	722.6	94	Organic Soil	628.64 - 638.42	640.6	Clayey Silt, Silt, Peat	631.05 - 634.8	3.75
EX-14	726.8	93	Organic Soil	634.14 - 643.84	645.8	Clayey Silt, Silt, Peat	641.2 - 643.7	2.5
EX-15	731.1	92.5	Lower Radnor Till Sand	638.94 - 648.65	651.1	Sand	638.8 - 641.9	3.1
EX-17	715	86.5	Organic Soil	628.84 - 638.47	641	Sand, Clayey Silt, Peat	632.5 - 635.85	3.35
EX-19	718.4	84	Lower Radnor Till Sand	634.44 - 644.22	647	Sand, Clayey Silt	637.4 - 640.9	3.5
EX-20	673.5	43	Organic Soil	631.34 - 641.11	644	Sand	632.0 -634.0	2
EX-21D	701	66.8	Lower Radnor Till Sand	634.24 643.88	646.5	Sand	637 - 640.4	3.4
EX-21S	700.4	57.6	Upper Randor Till Sand	643.13 - 652.83	654.9	Silty Sand	647.4 - 650.00	2.6
EX-22S	667	17.8	Upper Randor Till Sand	649.18 - 658.95	661	Sand, Clayey Sand	651.1 - 653.9	2.8
EX-22D	667.1	40.2	Organic Soil	627.24 - 636.97	639.1	Sand, Clayey Silt, Peat	627.3 - 631.8	4.5
EX-23S	711	69	Upper Randor Till Sand	642.34 - 652.01	657	Sand, Gravelly Sand	641.8 - 651.4	9.6
EX-23D	710.8	87.5	Organic Soil	623.3 - 633.41	635.3	Clayey Silt, Sand, Peat	622.8 631.6	8.8
EX-24	727.4	97.5	Organic Soil	630.25 - 639.94	641.94	Silt, Peat, Clayey Silt, Sandy Silt	632.3 -637.4	5.1

Notes:

1. ft. AMSL = feet above mean sea level
2. ft. bgs = feet below ground surface
3. ft. = feet

TABLE 812.314-7

Groundwater Elevations - 2003 through 2004

Clinton Landfill No. 3

Well	3/21/2003	6/17/2003	8/25/2003	10/15/2003	1/15/2004	4/28/2004	8/31/2004	11/18/2004
EX-4	691.44	691.17	691.50	691.08	691.08	691.60	691.59	691.43
EX-5	672.60	672.69	671.76	671.77	673.00	673.33	672.94	672.81
EX-6	672.05	672.11	671.14	671.11	672.03	672.80	672.37	672.26
EX-7	644.52	643.81	643.03	643.00	645.00	645.48	648.09	645.90
EX-8S	646.49	646.19	643.99	643.66	646.27	646.84	645.92	646.13
EX-12S	665.39	665.46	664.55	664.33	664.47	665.44	665.61	665.23
EX-12D	664.41	664.89	662.76	662.53	663.52	663.52	665.01	663.94
EX-13	670.54	670.76	669.90	669.86	669.85	670.44	670.92	669.50
EX-14	678.72	678.06	678.23	678.35	678.36	678.85	680.05	678.65
EX-15	691.66	691.48	691.17	691.28	691.32	691.82	691.79	691.64
EX-17	665.26	665.43	665.10	664.97	665.01	665.72	666.16	665.50
EX-19	639.95	639.89	640.10	640.34	640.98	641.68	644.79	642.00
EX-20	658.23	658.93	657.48	657.19	659.18	660.67	659.81	659.25
EX-21S	NA	NA	NA	660.32	661.61	664.00	662.74	662.48
EX-21D	658.15	658.23	656.35	656.12	657.98	659.10	658.24	658.29
EX-22S	664.02	663.65	660.06	659.53	663.67	664.16	664.08	664.40
EX-22D	665.61	665.29	663.94	663.40	665.54	666.45	665.57	665.70
EX-23S	673.91	673.82	673.10	673.05	673.67	677.42	674.09	674.01
EX-23D	673.61	673.65	672.73	672.76	673.60	674.28	673.91	673.81
EX-24	675.56	675.73	675.06	675.08	675.49	676.21	675.98	675.77

Notes:

1) Values are in feet Above Mean Sea Level (ft. AMSL)
2) NA = Not Applicable. Well EX-21S was not installed

TABLE 812.314-8
Flow Rates in the Water Bearing Units
Clinton Landfill No. 3

Quarter Water Table Elevation Measured	Groundwater Gradient (i) (feet/foot)	Groundwater Flow Velocity (V) (feet/day)
Upper Radnor Till		
1st Quarter of 2004	7.85E-03	3.54E-03
2nd Quarter of 2004	8.74E-03	3.94E-03
3rd Quarter of 2004	7.39E-03	3.34E-03
4th Quarter of 2004	7.51E-03	3.39E-03
Average =	7.87E-03	3.55E-03
Lower Radnor Till		
1st Quarter of 2004	1.23E-02	5.36E-02
2nd Quarter of 2004	1.23E-02	5.36E-02
3rd Quarter of 2004	1.16E-02	5.06E-02
4th Quarter of 2004	1.22E-02	5.29E-02
Average =	1.21E-02	5.27E-02
Organic Soil		
1st Quarter of 2004	5.90E-03	1.99E-03
2nd Quarter of 2004	5.62E-03	1.90E-03
3rd Quarter of 2004	5.85E-03	1.98E-03
4th Quarter of 2004	5.97E-03	2.02E-03
Average =	5.83E-03	1.97E-03

Notes:

1. Hydraulic gradients (i) for the Upper Radnor Till sand is estimated using potentiometric data from wells EX-21S and EX-23S.
   Hydraulic gradients (i) for the Lower Radnor Till sand is estimated using potentiometric from wells EX-7 and EX-15.
   Hydraulic gradients (i) for the Organic Soil are estimated using potentiometric data data from wells EX-20 and EX-24.
2. Average groundwater flow velocity, V = K i/n.
3. Average hydraulic conductivity (K): Upper Radnor Till sand = 1.58E-01 feet per day;
   Lower Radnor Till sand = 1.52 feet per day;
   Organic Soil = 1.52E-01 feet per day;
4. n = Effective porosity of the Upper and Lower Radnor Till sands = 0.35 (from published ranges).
   n = Effective porosity of the Organic Soil = 0.45 (from published ranges).

FIGURES

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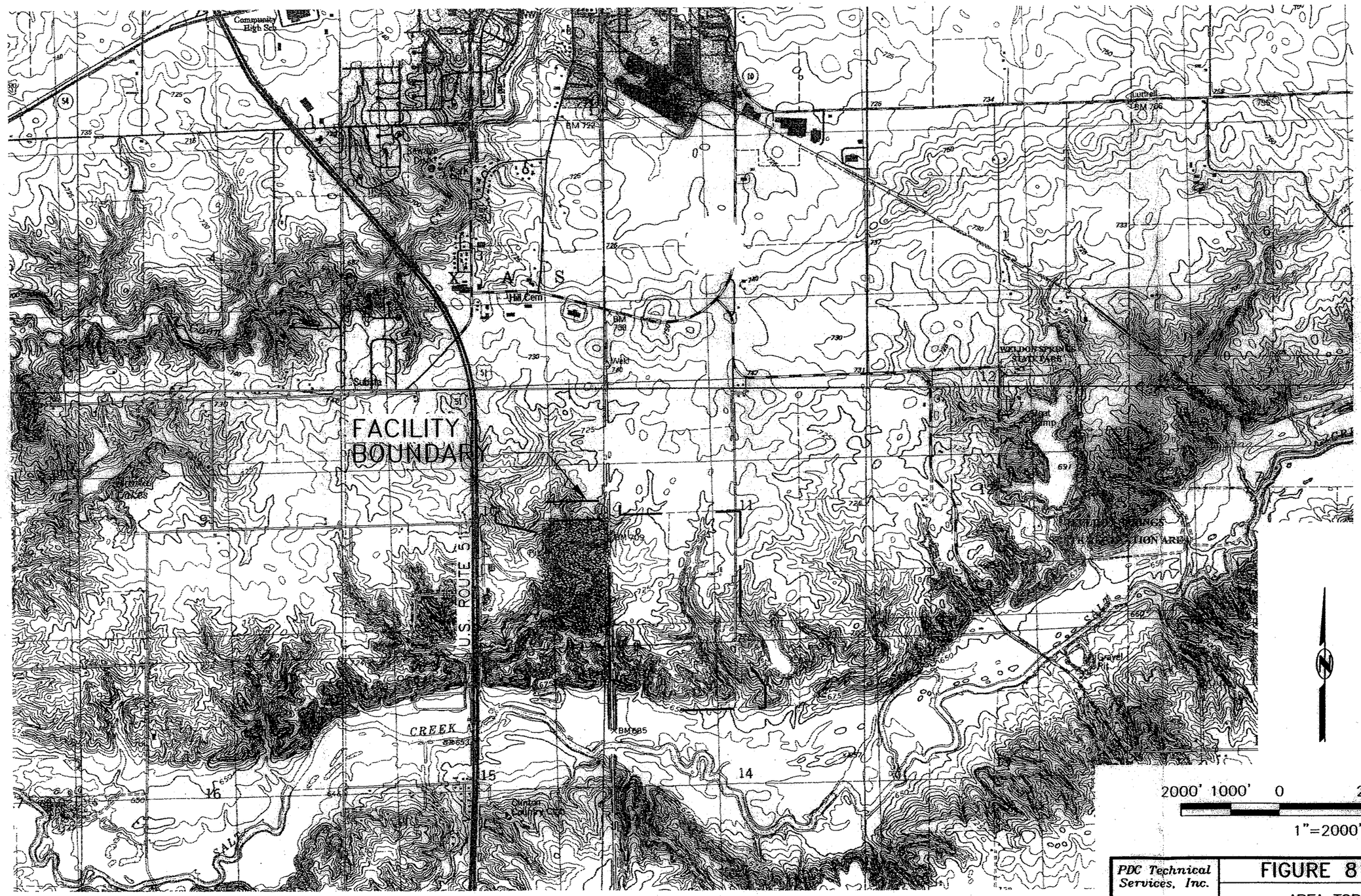

SOURCE: CLINTON (2001), MAROA (2001); ILLINOIS QUAD PHOTO MAPS, USGS 7.5' TOPOGRAPHIC MAPS

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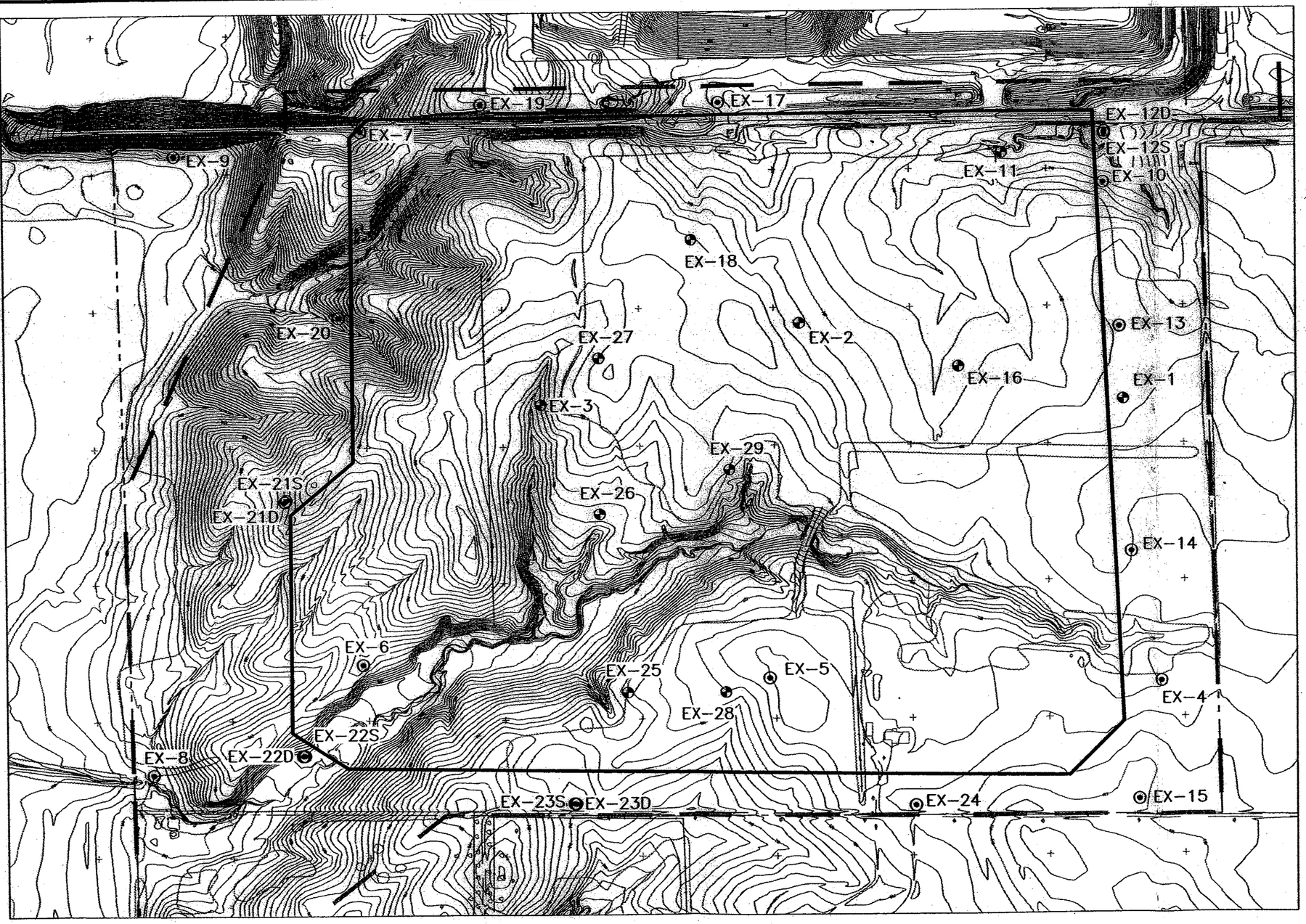
FIGURE 812.314-1

AREA TOPOGRAPHY

CLINTON LANDFILL NO. 3

CLINTON, ILLINOIS

PROJECT NO. 91-118



LEGEND

- PIEZOMETER
- BORING
- PROPERTY LINE
- FACILITY BOUNDARY
- PROPOSED WASTE BOUNDARY

400' 200' 0 400' 800'

1"=400'

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Peoria, Illinois

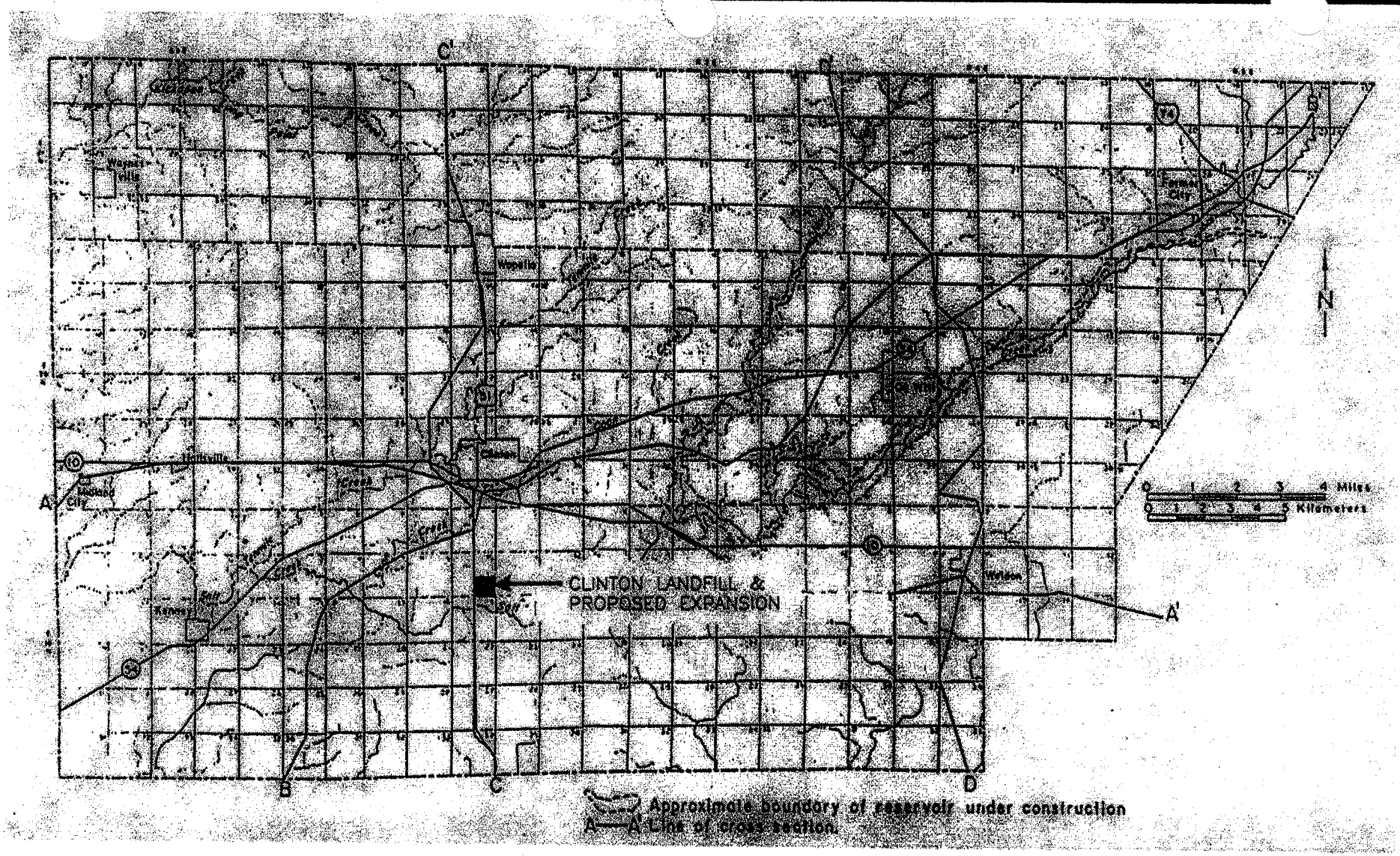
FIGURE 812.314-2

SITE PLAN WITH BORING LOCATIONS

CLINTON LANDFILL NO. 3

CLINTON, ILLINOIS

PROJECT NO. 91-118



REPRODUCED FROM HUNT & KEMPTON (1977), FIGURE 1

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Peoria, Illinois

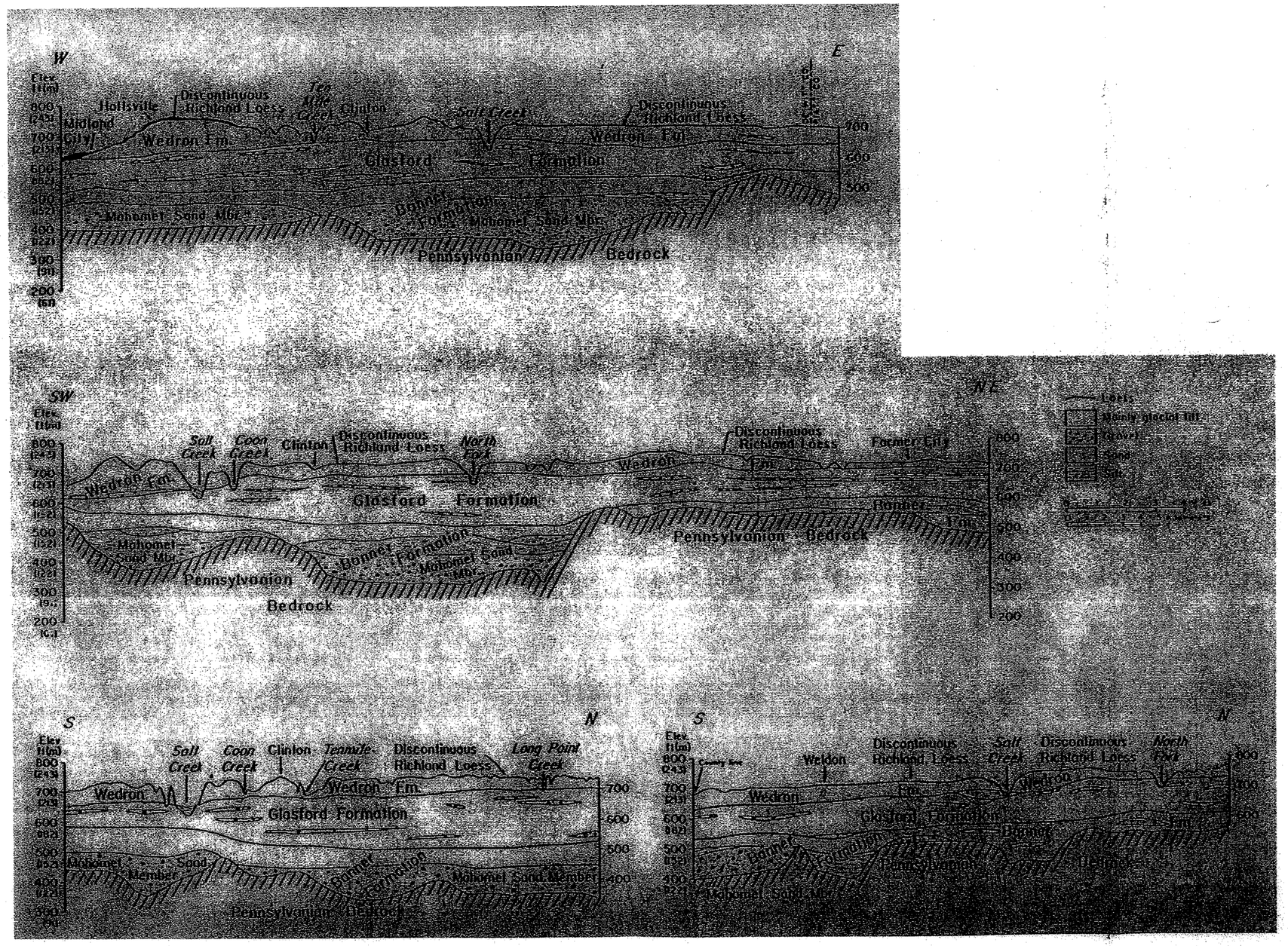
FIGURE 812.314-3

PLAN OF REGIONAL CROSS SECTIONS DE WITT COUNTY, ILLINOIS

CLINTON LANDFILL NO. 3

CLINTON, ILLINOIS

PROJECT NO. 91-118



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Peoria, Illinois

FIGURE 812.314-4

GENERALIZED CROSS SECTIONS OF THE UNCONSOLIDATED GEOLOGIC MATERIALS

CLINTON LANDFILL NO. 3

CLINTON, ILLINOIS

PROJECT NO. 91-118

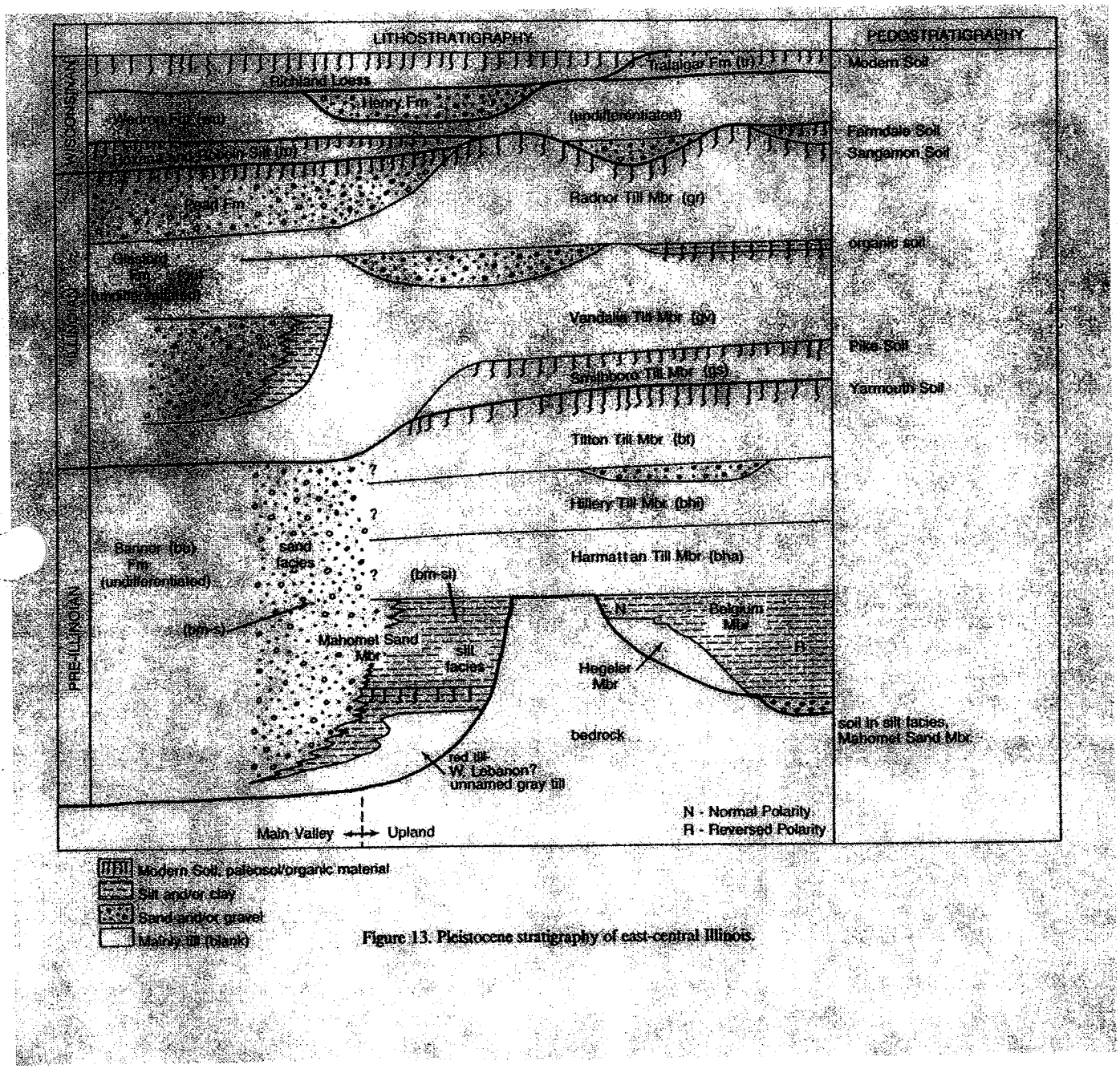
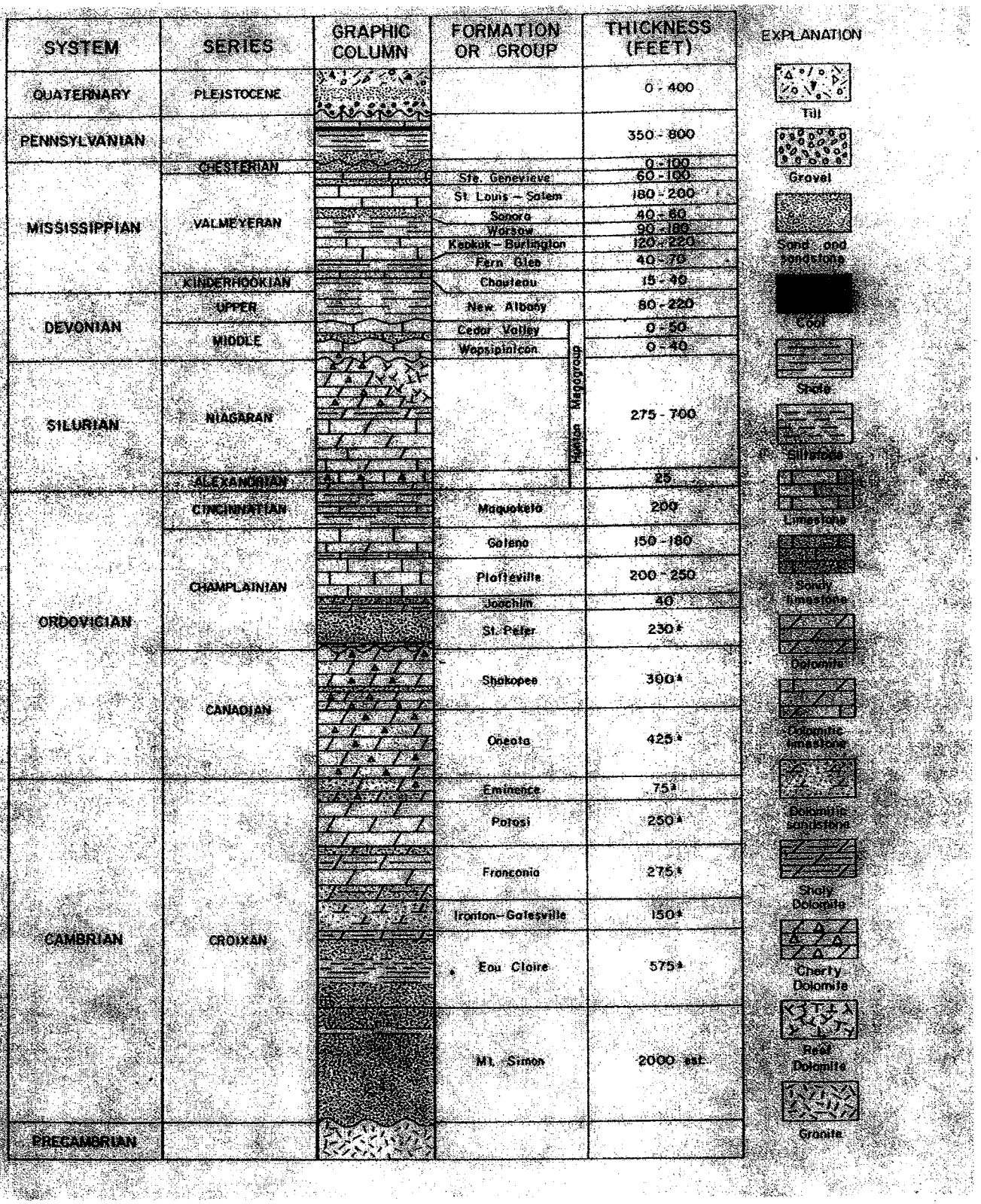


Figure 13. Pleistocene stratigraphy of east-central Illinois.

(KEMPTON ET. AL. 1991)

Illinois Licensed Professional Design Firm 184-001145	PDC Technical Services, Inc. Peoria, Illinois	FIGURE 812.314-5 PLEISTOCENE STRATIGRAPHY OF EAST-CENTRAL ILLINOIS CLINTON LANDFILL NO. 3 CLINTON, ILLINOIS PROJECT NO. 91-118



(HOWARD, 1962, FIGURE 2)

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Peoria, Illinois

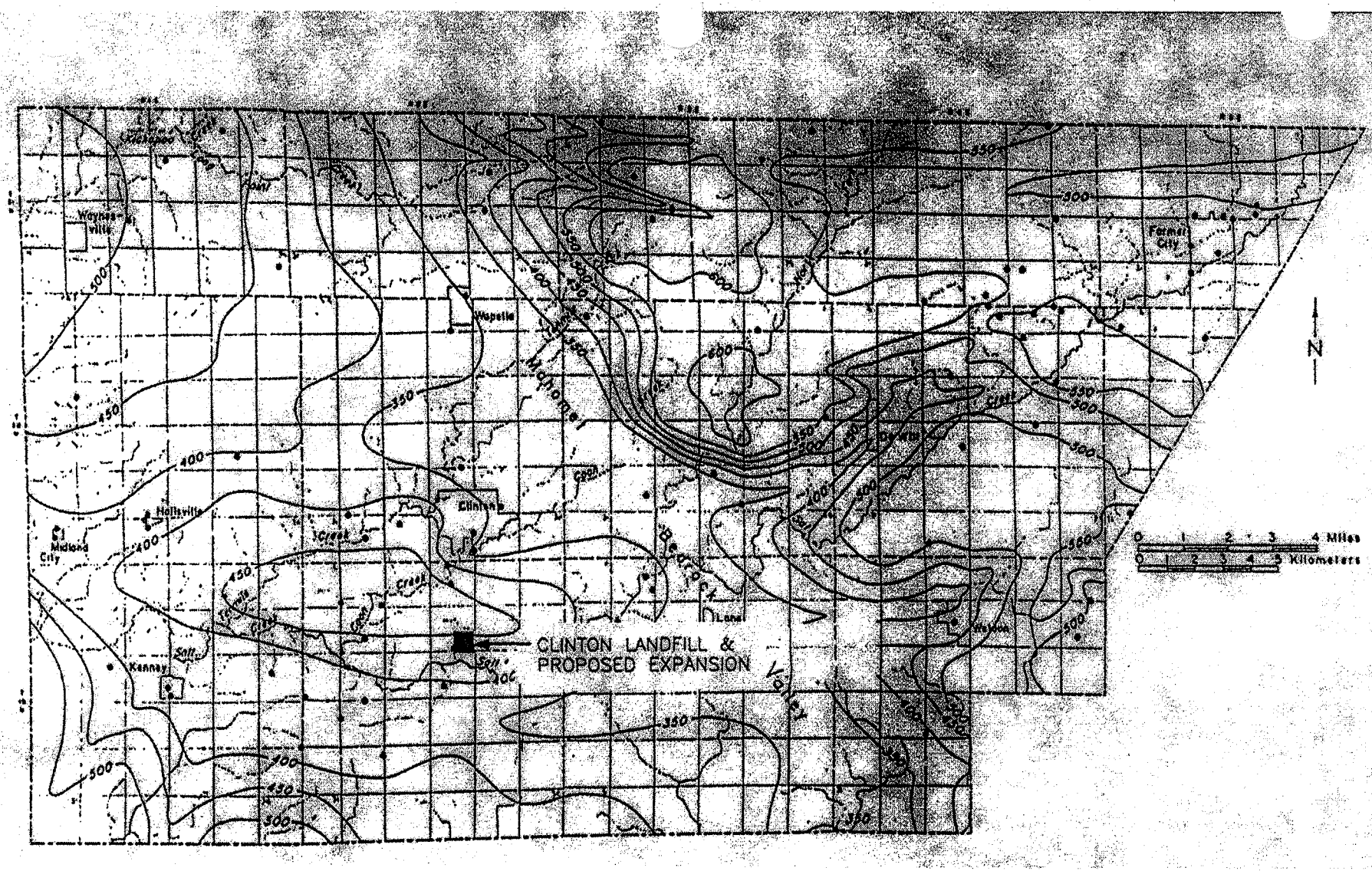
FIGURE 812.314-6

ROCK UNITS UNDER DE WITT COUNTY, ILLINOIS

CLINTON LANDFILL NO. 3

CLINTON, ILLINOIS

PROJECT NO. 91-118



REPRODUCED FROM HUNT & KEMPTON (1977), FIGURE 3

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Peoria, Illinois

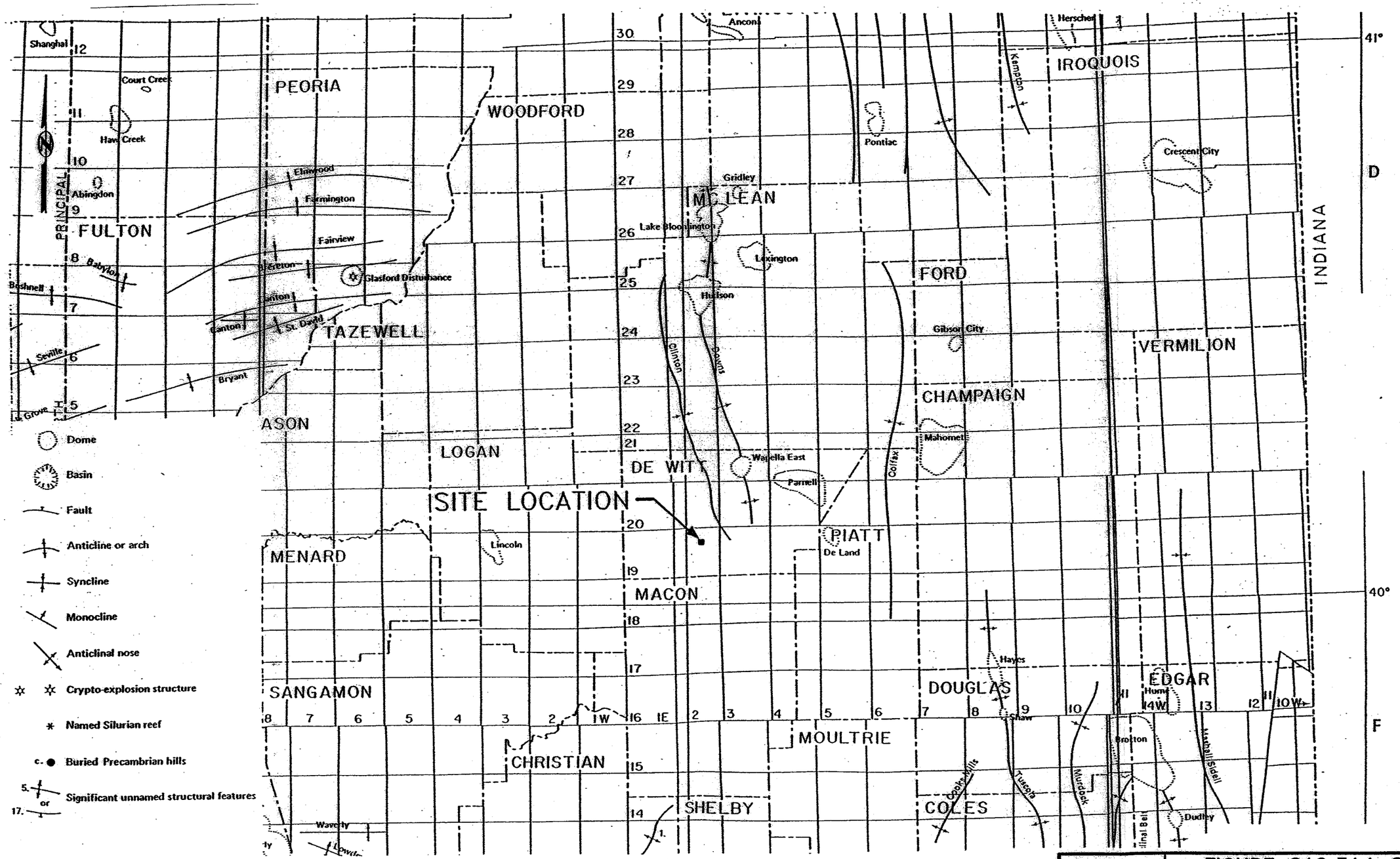
FIGURE 812.314-7

BEDROCK SURFACE TOPOGRAPHY
DE WITT COUNTY, ILLINOIS

CLINTON LANDFILL NO. 3

CLINTON, ILLINOIS

PROJECT NO. 91-118



Source: STRUCTURAL FEATURES OF ILLINOIS
Circular 519 Plate 1
Illinois Institute of Natural Resources
State Geological Survey Division

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Peoria, Illinois

FIGURE 812.314-8

SITE FEATURE MAP

CLINTON LANDFILL NO. 3

CLINTON, ILLINOIS

PROJECT NO. 91-118

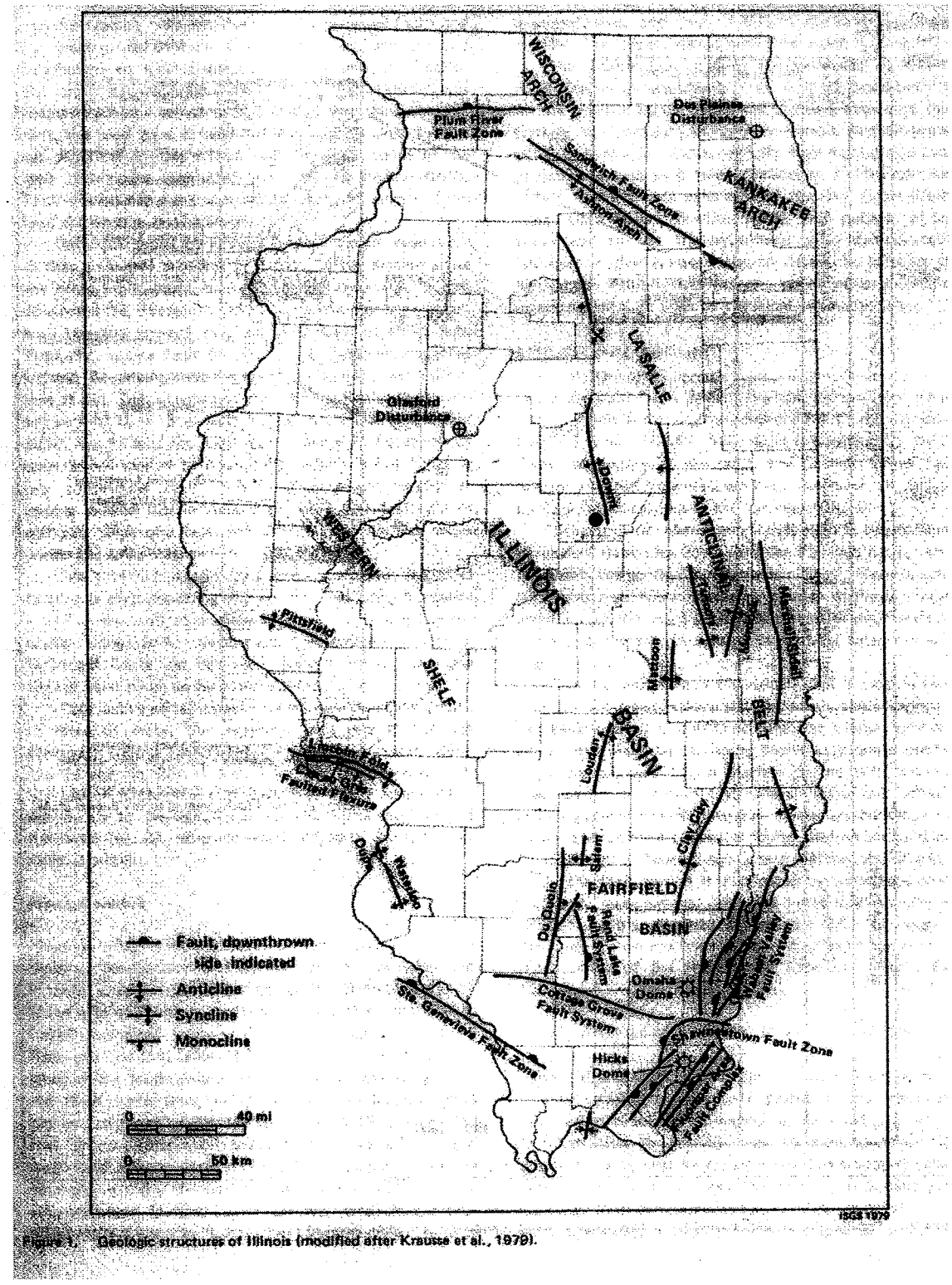

Figure 1. Geologic structures of Illinois (modified after Krausse et al., 1979).

SOURCE: Keys, John N. and Nelson, W. John. "The Rend Lake Fault System in Southern Illinois". Circular 153, Illinois State Geological Survey; Urbana, Illinois, 1980.

● – SITE LOCATION

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Peoria, Illinois

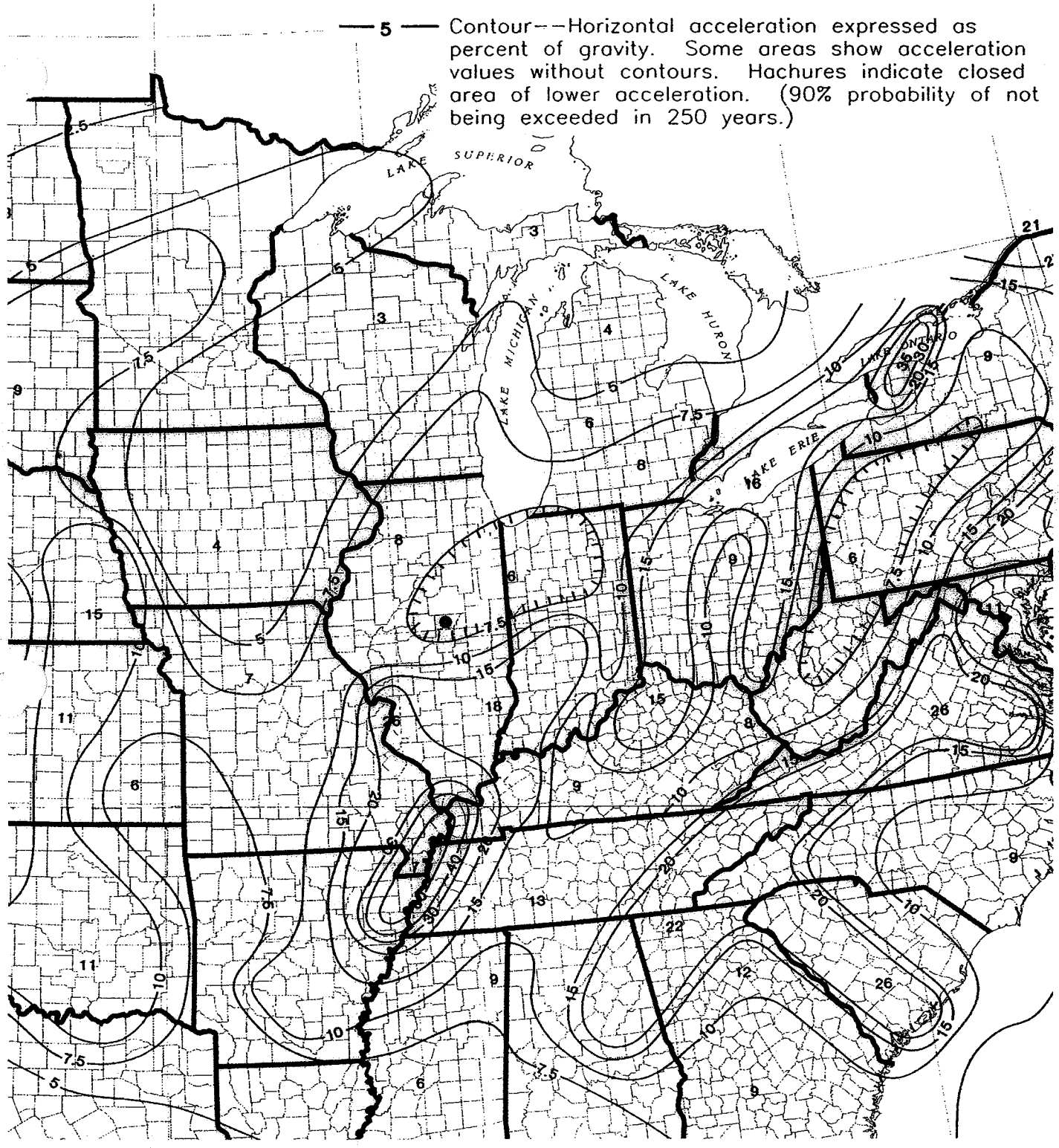
FIGURE 812.314-9

GEOLOGIC STRUCTURE MAP

CLINTON LANDFILL NO. 3

CLINTON, ILLINOIS

PROJECT NO. 91-143



(S. T. ALGERMISSEN, D. M. PERKINS, P. C. THENHAUS, S. L. HANSON, AND B. L. BENDER, 1990)

● – SITE LOCATION

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Peoria, Illinois

FIGURE 812.314-10

PROBABILISTIC EARTHQUAKE ACCELERATION AND VELOCITY MAP

CLINTON LANDFILL NO. 3

CLINTON, ILLINOIS

PROJECT NO. 91-143

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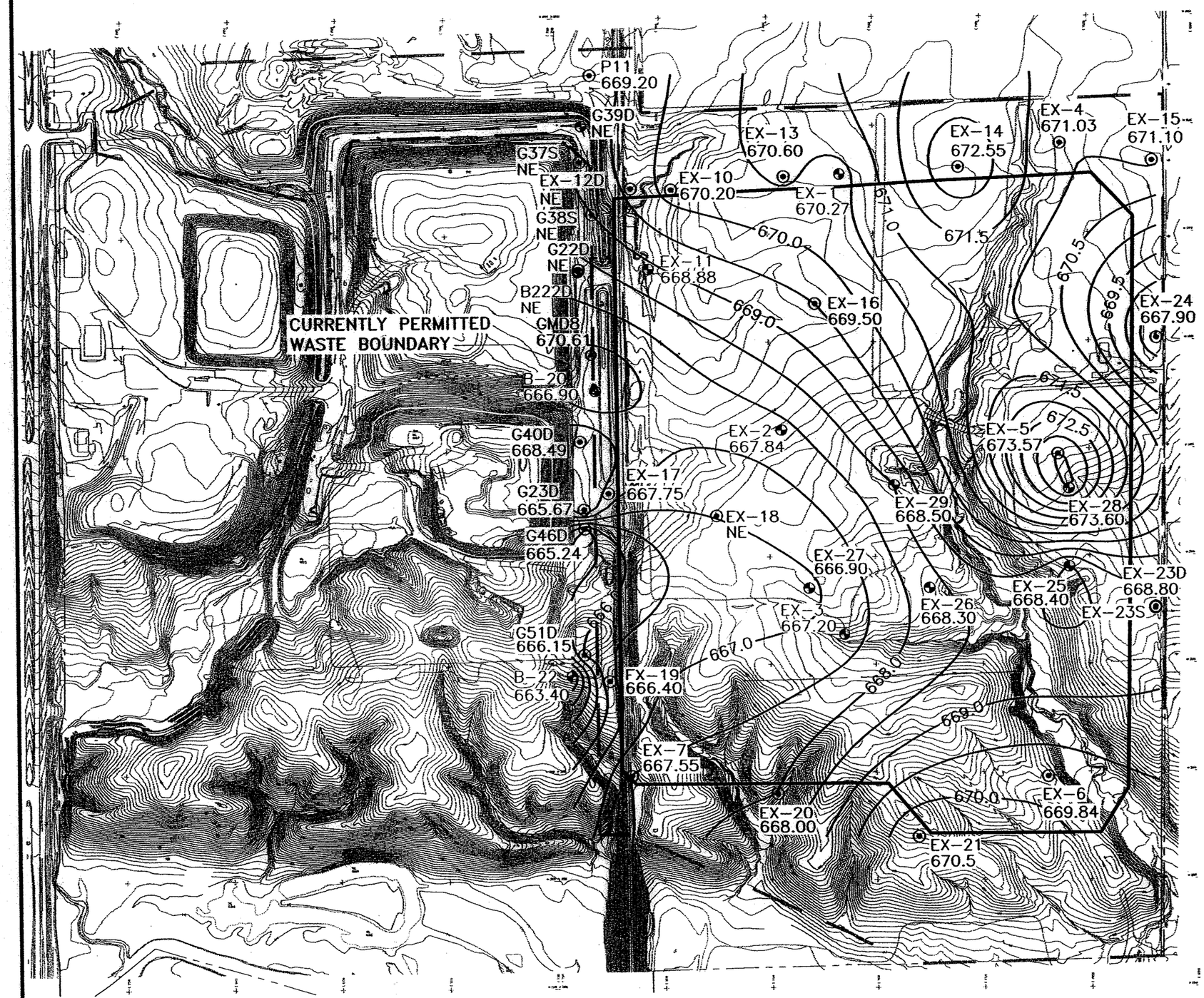

500' 250' 0 500' 100'

1"=500'

LEGEND

- SOIL BORING
- PIEZOMETER
- GAS MONITORING WELL
- 671.5 — ELEVATION CONTOUR (FEET-MEAN SEA LEVEL) TOP OF ROXANA SILT-ROBEIN MEMBER
- 673.60 — ELEVATION (FEET-MEAN SEA LEVEL) TOP OF ROXANA SILT-ROBEIN MEMBER
- NE — ROXANA SILT-ROBEIN MEMBER NOT ENCOUNTERED
- PROPERTY LINE
- FACILITY BOUNDARY
- PROPOSED WASTE BOUNDARY

NOTE: ONLY THOSE BORINGS EXTENDING TO THE EXPECTED ELEVATION OF THE ROXANA SILT-ROBEIN MEMBER ARE SHOWN.

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FIGURE 812.314-11

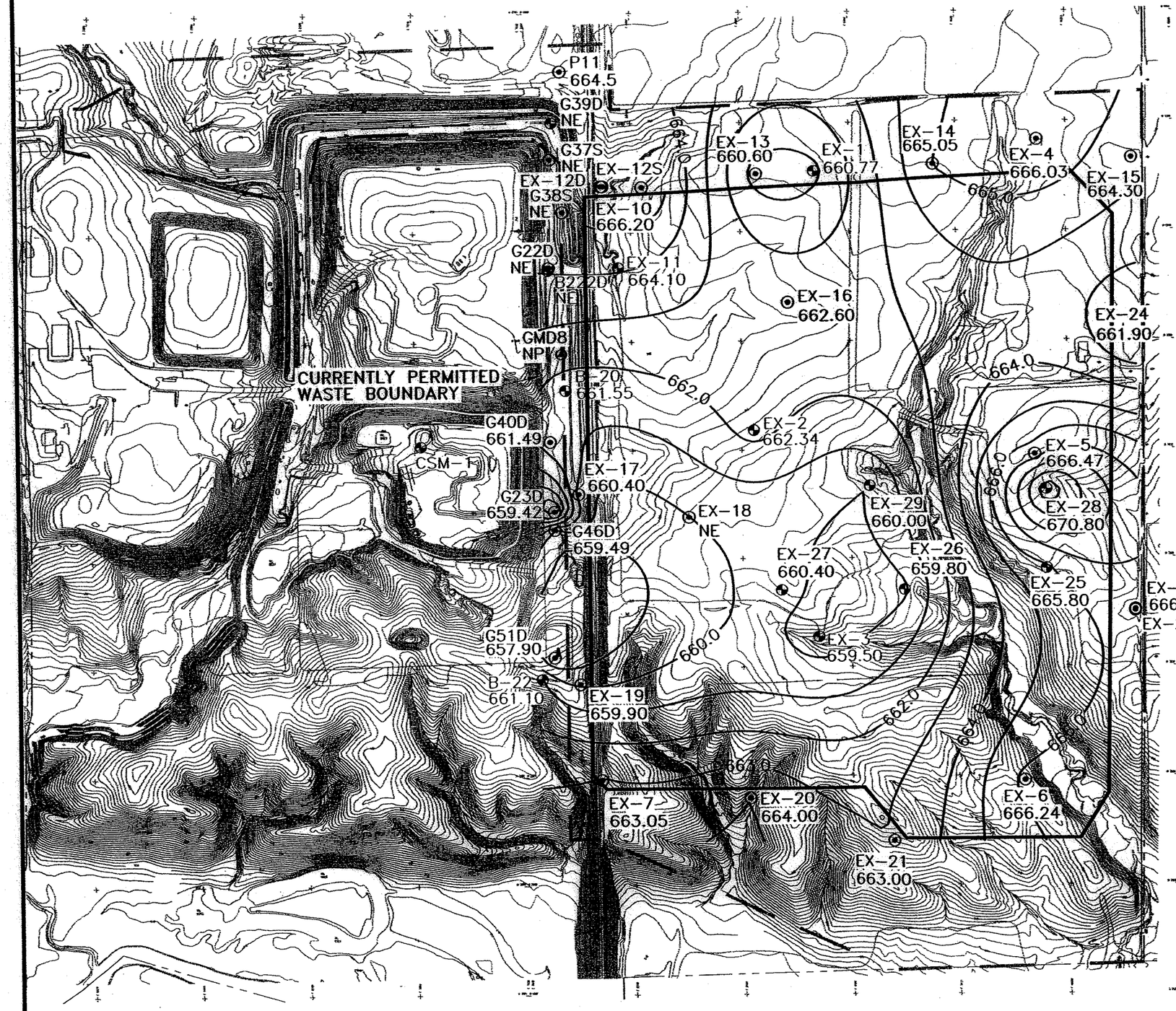
ELEVATION OF THE TOP OF ROXANA SILT-ROBEIN MEMBER

CLINTON LANDFILL NO. 3

CLINTON, ILLINOIS

PROJECT NO. 91-118.02

CAD DWG NO:91118966 EMPLOYEE NO: 89736 DATE/TIME: 02/16/05 16:57 ACAD-15.



500' 250' 0 500' 100'

1"=500'

LEGEND

- SOIL BORING
- PIEZOMETER
- GAS MONITORING WELL
- 664.0 — ELEVATION CONTOUR (FEET-MEAN SEA LEVEL) BOTTOM OF ROXANA SILT-ROBEIN MEMBER
- 666.47 — ELEVATION (FEET-MEAN SEA LEVEL) BOTTOM OF ROXANA SILT-ROBEIN MEMBER
- NE — ROXANA SILT NOT ENCOUNTERED
- NP — ROXANA SILT NOT FULLY PENETRATED
- PROPERTY LINE
- FACILITY BOUNDARY
- PROPOSED WASTE BOUNDARY

NOTE: ONLY THOSE BORINGS EXTENDING TO THE EXPECTED ELEVATION OF THE ROXANA SILT-ROBEIN MEMBER ARE SHOWN.

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FIGURE 812.314-12

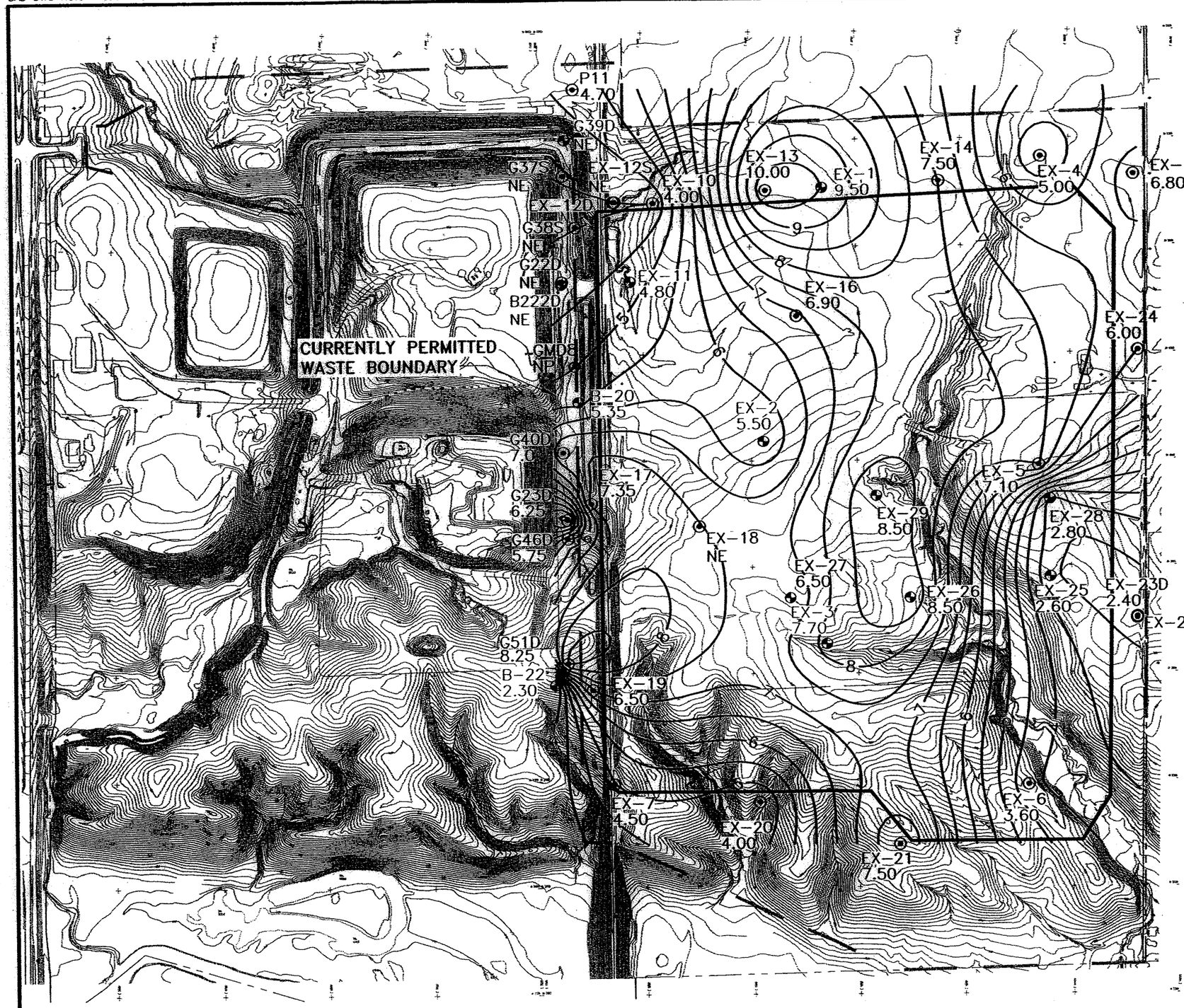
ELEVATION OF THE BOTTOM OF ROXANA SILT-ROBEIN MEMBER

CLINTON LANDFILL NO. 3

CLINTON, ILLINOIS

PROJECT NO. 91-118.02

CAD DWG NO:91118964 EMPLOYEE NO: 89736 DATE/TIME: 02/16/05 17:13 ACAD-15.



500' 250' 0 500' 1000'

1"=500'

LEGEND

- SOIL BORING
- PIEZOMETER
- GAS MONITORING WELL
- 5 — THICKNESS CONTOUR–ROXANA SILT–ROBEIN MEMBER (FEET)
- 7 — THICKNESS–ROXANA SILT–ROBEIN MEMBER (FEET)
- NE — ROXANA SILT–ROBEIN MEMBER NOT ENCOUNTERED
- NP — ROXANA SILT–ROBEIN MEMBER NOT FULLY PENETRATED
- PROPERTY LINE
- FACILITY BOUNDARY
- PROPOSED WASTE BOUNDARY

NOTE: ONLY THOSE BORINGS EXTENDING TO THE EXPECTED ELEVATION OF THE ROXANA SILT–ROBEIN MEMBER ARE SHOWN.

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Peoria, Illinois

FIGURE 812.314-13

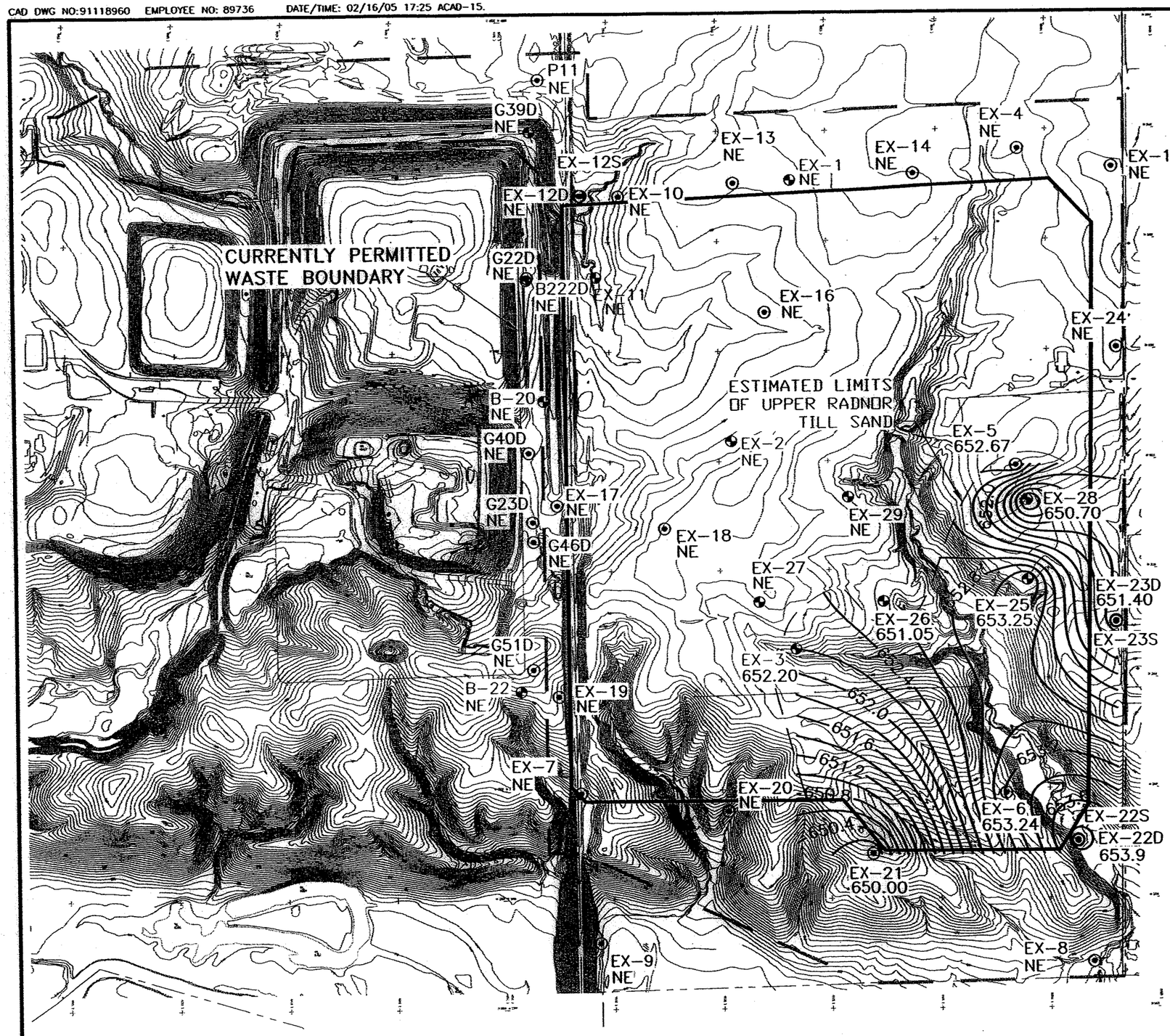
THICKNESS OF THE ROXANA SILT–ROBEIN MEMBER

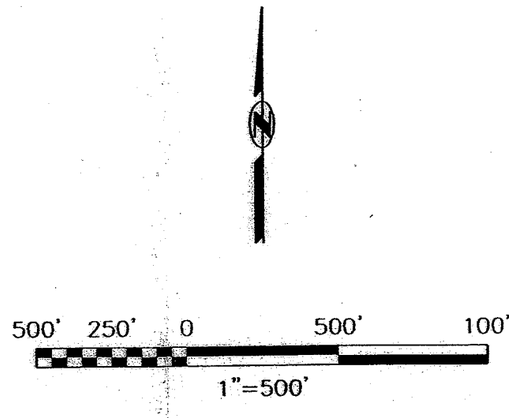
CLINTON LANDFILL NO. 3

CLINTON, ILLINOIS

PROJECT NO. 91-118.02

CAD DWG NO:91118960 EMPLOYEE NO: 89736 DATE/TIME: 02/16/05 17:25 ACAD-15.





LEGEND

- SOIL BORING
- WELL
- 651.2 — ELEVATION CONTOUR (FEET-MEAN SEA LEVEL) TOP OF UPPER RADNOR TILL SAND
- 653.25 — ELEVATION (FEET-MEAN SEA LEVEL) TOP OF UPPER RADNOR TILL SAND
- NE — RADNOR TILL SAND NOT ENCOUNTERED
- PROPERTY LINE
- FACILITY BOUNDARY
- PROPOSED WASTE BOUNDARY

NOTE: ONLY THOSE BORINGS EXTENDING TO THE EXPECTED ELEVATION OF THE RADNOR TILL SAND ARE SHOWN.

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FIGURE 812.314-14

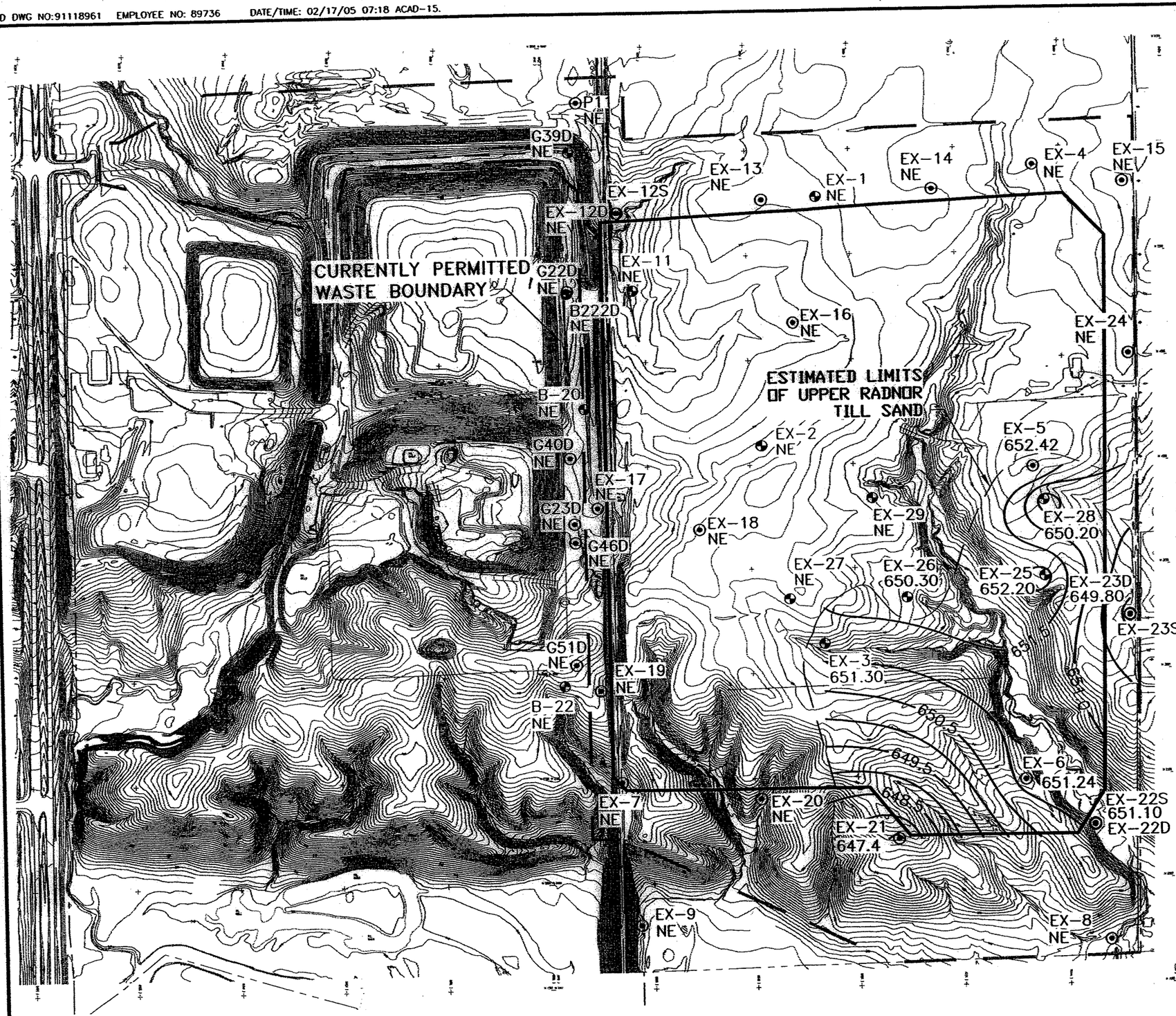
ELEVATION OF THE TOP OF UPPER RADNOR TILL MEMBER SAND

CLINTON LANDFILL NO. 3

CLINTON, ILLINOIS

PROJECT NO. 91-118.02

CAD DWG NO:91118961 EMPLOYEE NO: 89736 DATE/TIME: 02/17/05 07:18 ACAD-15.



LEGEND

- SOIL BORING
- PIEZOMETER
- 649.5 — ELEVATION CONTOUR (FEET-MEAN SEA LEVEL) BOTTOM OF UPPER RADNOR TILL SAND
- 652.20 — ELEVATION (FEET-MEAN SEA LEVEL) BOTTOM OF UPPER RADNOR TILL SAND
- NE — RADNOR TILL SAND NOT ENCOUNTERED
- PROPERTY LINE
- FACILITY BOUNDARY
- PROPOSED WASTE BOUNDARY

NOTE: ONLY THOSE BORINGS EXTENDING TO THE EXPECTED ELEVATION OF THE RADNOR TILL SAND ARE SHOWN.

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FIGURE 812.314-15

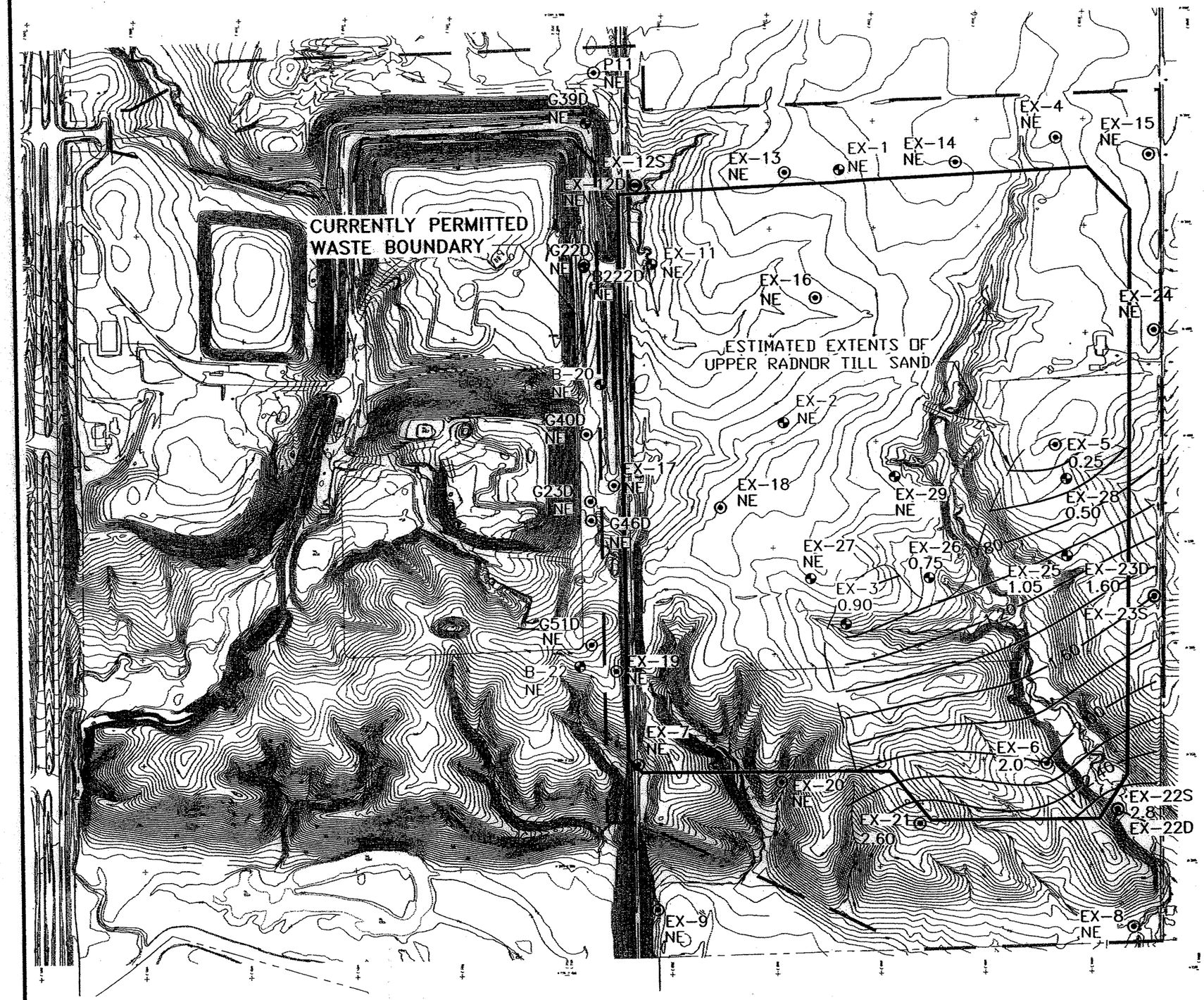
ELEVATION OF THE BOTTOM OF UPPER RADNOR TILL MEMBER SAND

CLINTON LANDFILL NO. 3

CLINTON, ILLINOIS

PROJECT NO. 91-118.02

CAD DWG NO:91118962 EMPLOYEE NO: 89736 DATE/TIME: 02/17/05 07:21 ACAD-15.



500' 250' 0 500' 1000'

1"=500'

LEGEND

◓	SOIL BORING
⊙	PIEZOMETER
NE	RADNOR TILL SAND NOT ENCOUNTERED
—1.20—	THICKNESS CONTOUR – UPPER RADNOR TILL SAND (FEET)
1.05	THICKNESS UPPER RADNOR TILL SAND (FEET)
———	PROPERTY LINE
— — —	FACILITY BOUNDARY
———	PROPOSED WASTE BOUNDARY

NOTE: ONLY THOSE BORINGS EXTENDING TO THE EXPECTED ELEVATION OF THE RADNOR TILL SAND ARE SHOWN.

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FIGURE 812.314-16

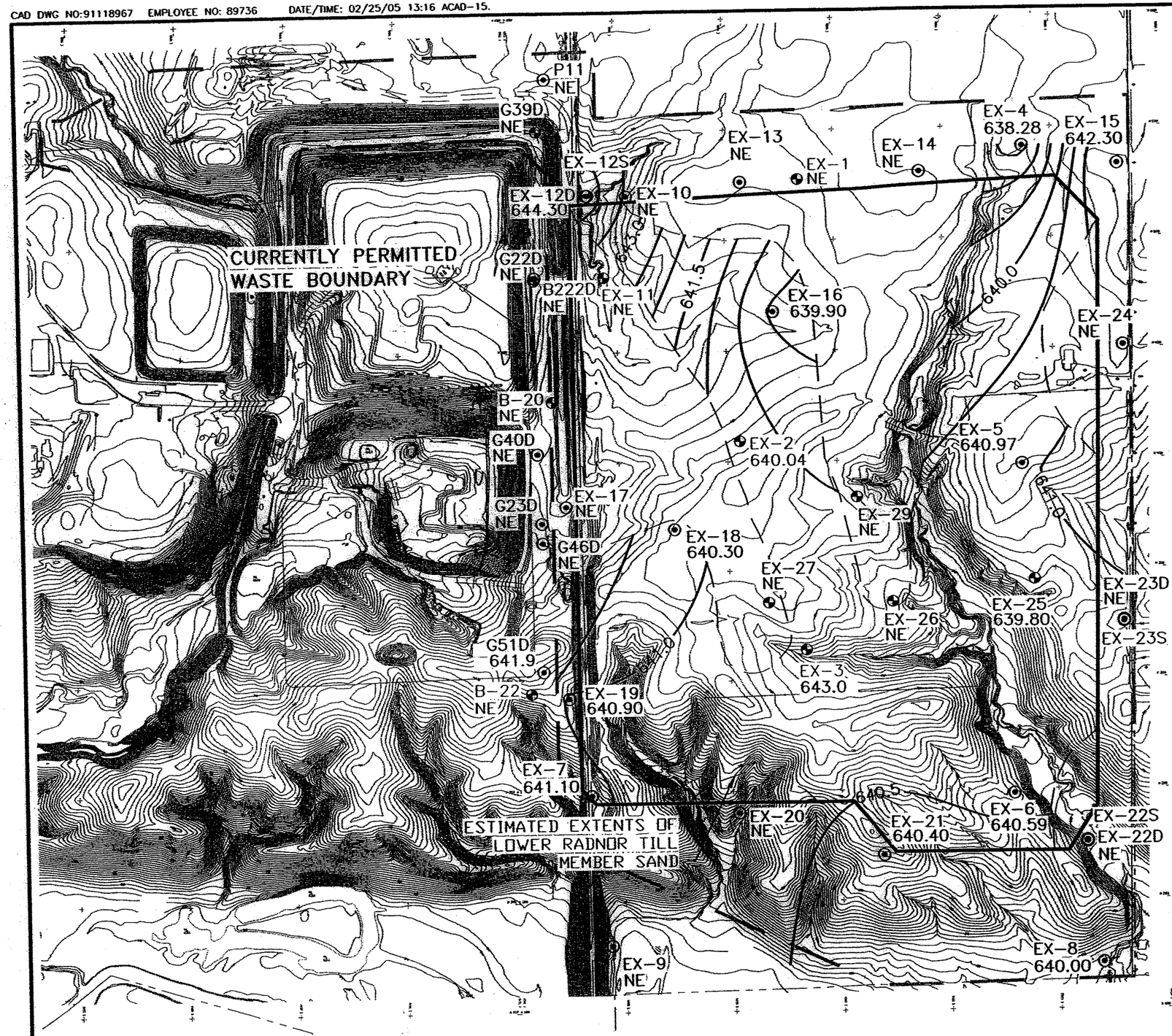
THICKNESS OF RADNOR UPPER TILL MEMBER SAND

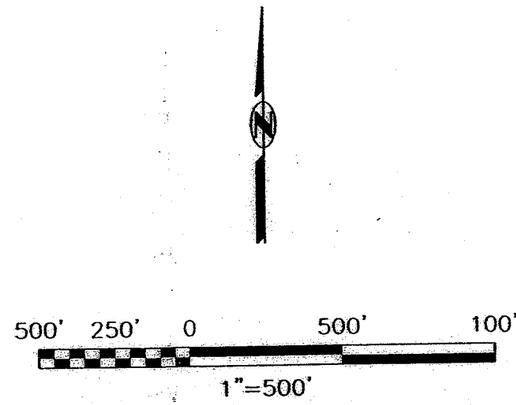
CLINTON LANDFILL NO. 3

CLINTON, ILLINOIS

PROJECT NO. 91-118.02

CAD DWG NO:91118967 EMPLOYEE NO: 89736 DATE/TIME: 02/25/05 13:16 ACAD-15.





LEGEND

⊕	SOIL BORING
⊙	WELL
641.0	ELEVATION CONTOUR (FEET-MEAN SEA LEVEL) TOP OF LOWER RADNOR TILL SAND
639.80	ELEVATION (FEET-MEAN SEA LEVEL) TOP OF LOWER RADNOR TILL SAND
NE	RADNOR TILL SAND NOT ENCOUNTERED
- - - - - -	PROPERTY LINE
— — —	FACILITY BOUNDARY
———	PROPOSED WASTE BOUNDARY

NOTE: ONLY THOSE BORINGS EXTENDING TO THE EXPECTED ELEVATION OF THE RADNOR TILL SAND ARE SHOWN.

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FIGURE 812.314-17

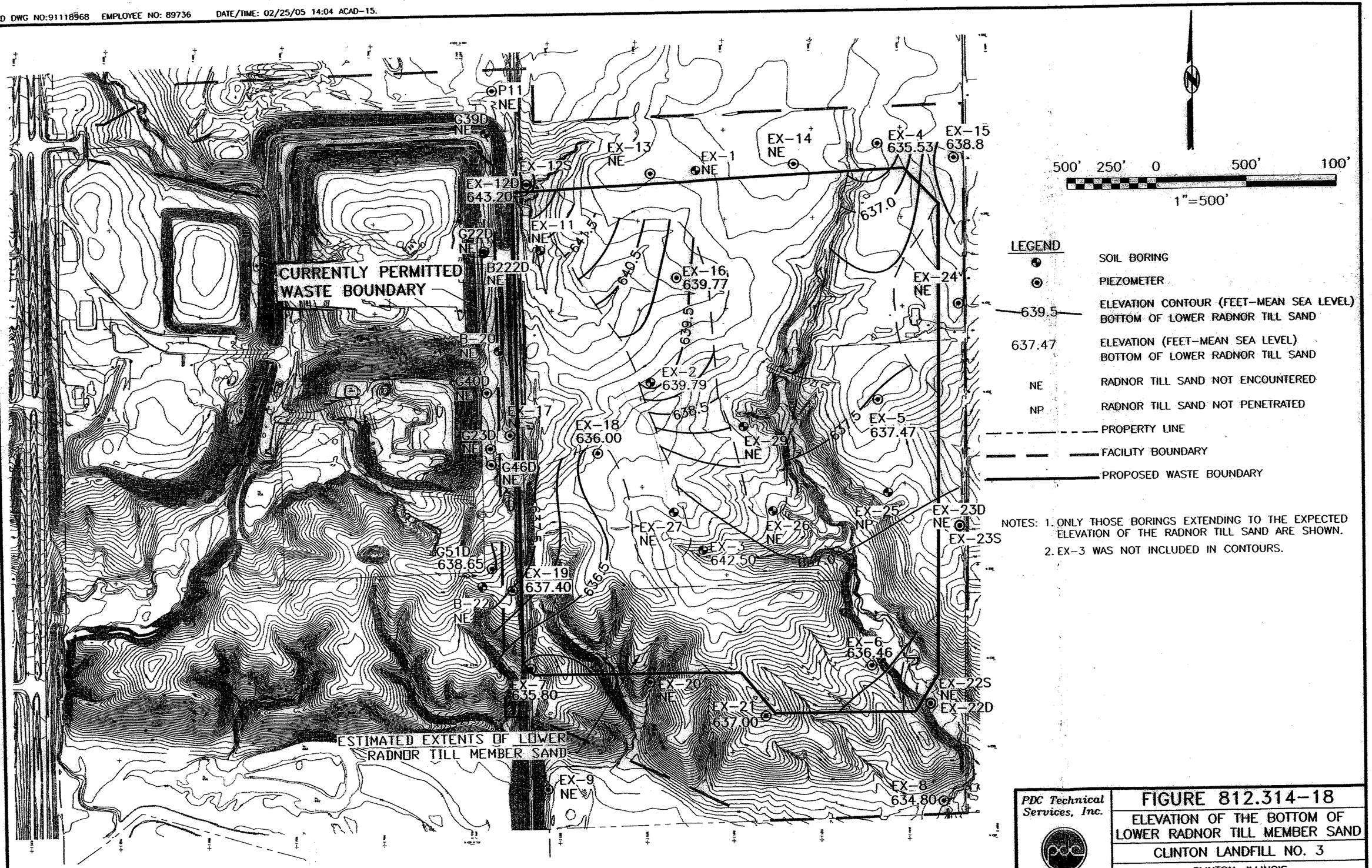
ELEVATION OF THE TOP OF LOWER RADNOR TILL MEMBER SAND

CLINTON LANDFILL NO. 3

CLINTON, ILLINOIS

PROJECT NO. 91-118.02

CAD DWG NO:91118968 EMPLOYEE NO: 89736 DATE/TIME: 02/25/05 14:04 ACAD-15.



NOTES: 1. ONLY THOSE BORINGS EXTENDING TO THE EXPECTED ELEVATION OF THE RADNOR TILL SAND ARE SHOWN.
2. EX-3 WAS NOT INCLUDED IN CONTOURS.

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Peoria, Illinois

FIGURE 812.314-18

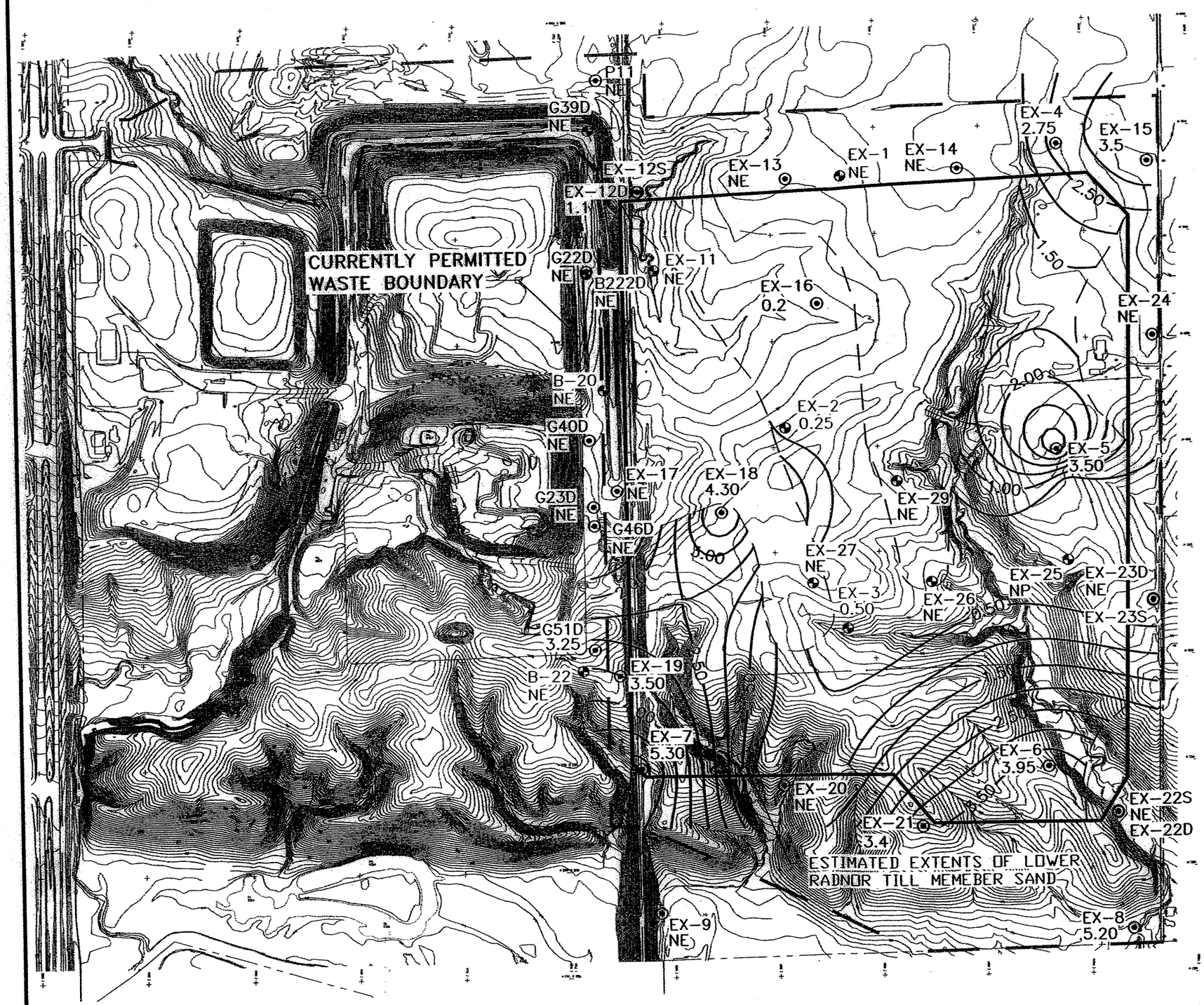
ELEVATION OF THE BOTTOM OF LOWER RADNOR TILL MEMBER SAND

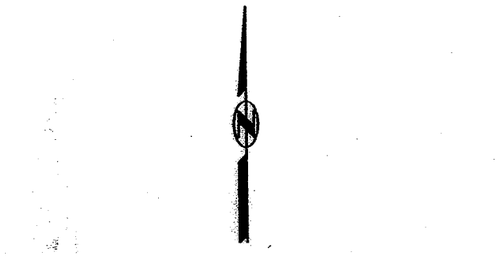
CLINTON LANDFILL NO. 3

CLINTON, ILLINOIS

PROJECT NO. 91-118.02

CAD DWG NO:91118969 EMPLOYEE NO: 89736 DATE/TIME: 02/25/05 14:44 ACAD-15.





LEGEND

●	SOIL BORING
⊙	PIEZOMETER
NE	RADNOR TILL SAND NOT ENCOUNTERED
NP	RADNOR TILL SAND NOT PENETRATED
—1.50—	THICKNESS CONTOUR – LOWER RADNOR TILL SAND (FEET)
3.95	THICKNESS LOWER RADNOR TILL SAND (FEET)
———	PROPERTY LINE
— — —	FACILITY BOUNDARY
———	PROPOSED WASTE BOUNDARY

NOTE: ONLY THOSE BORINGS EXTENDING TO THE EXPECTED ELEVATION OF THE RADNOR TILL SAND ARE SHOWN.

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FIGURE 812.314-19

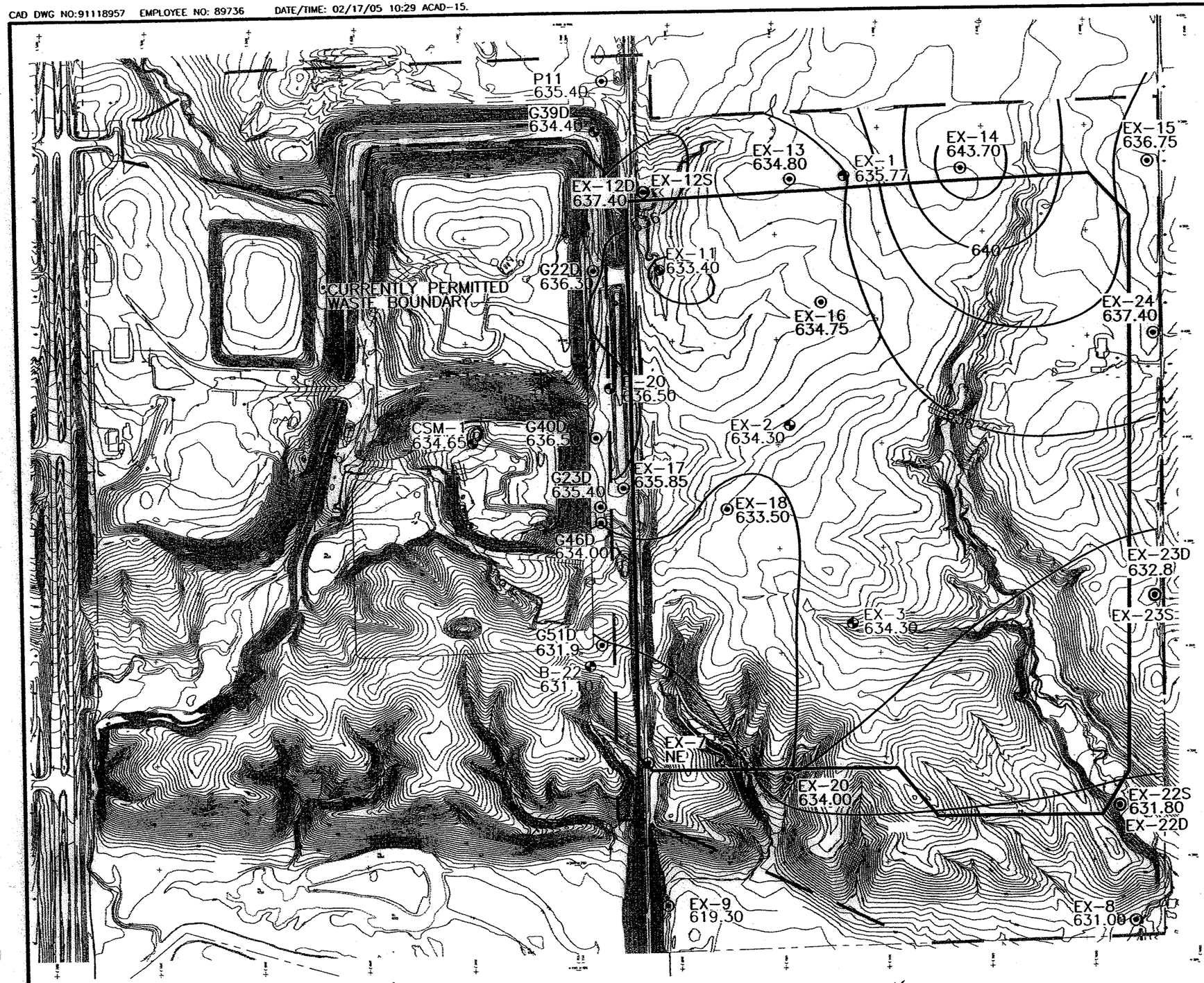
THICKNESS OF LOWER RADNOR TILL MEMBER SAND

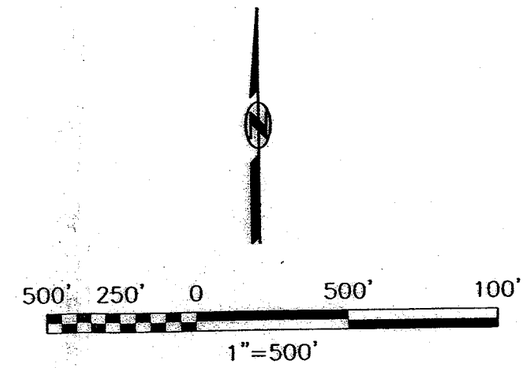
CLINTON LANDFILL NO. 3

CLINTON, ILLINOIS

PROJECT NO. 91-118.02

CAD DWG NO:91118957 EMPLOYEE NO: 89736 DATE/TIME: 02/17/05 10:29 ACAD-15.





LEGEND

●	SOIL BORING
⊙	PIEZOMETER
636	ELEVATION CONTOUR (FEET-MEAN SEA LEVEL), TOP OF ORGANIC SOIL
634.30	ELEVATION (FEET-MEAN SEA LEVEL) TOP OF ORGANIC SOIL
NE	ORGANIC SOIL NOT ENCOUNTERED
	PROPERTY LINE
	FACILITY BOUNDARY
	PROPOSED WASTE BOUNDARY

NOTE: ONLY THOSE BORINGS EXTENDING TO THE EXPECTED ELEVATION OF THE ORANIC SOIL ARE SHOWN.

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Peoria, Illinois

FIGURE 812.314-20

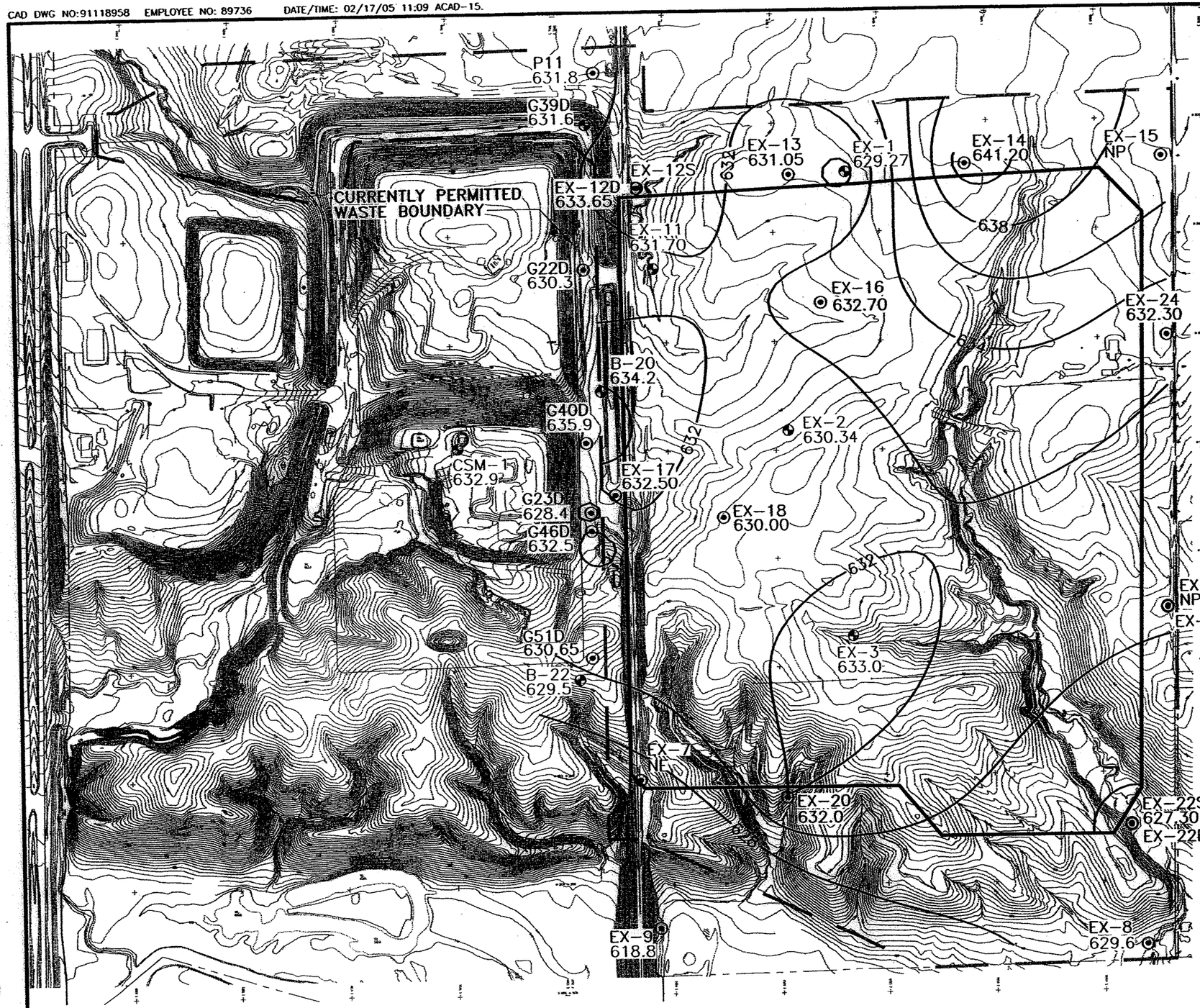
ELEVATION OF THE TOP OF THE ORGANIC SOIL

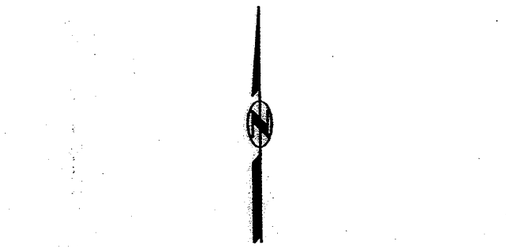
CLINTON LANDFILL NO. 3

CLINTON, ILLINOIS

PROJECT NO. 91-118.02

CAD DWG NO:91118958 EMPLOYEE NO: 89736 DATE/TIME: 02/17/05 11:09 ACAD-15.





LEGEND

●	SOIL BORING
⊙	PIEZOMETER
632	ELEVATION CONTOUR (FEET-MEAN SEA LEVEL) BOTTOM OF ORGANIC SOIL
632.70	ELEVATION (FEET-MEAN SEA LEVEL) BOTTOM OF ORGANIC SOIL
NE	ORGANIC SOIL NOT ENCOUNTERED
NP	ORGANIC SOIL NOT PENETRATED
	PROPERTY LINE
	FACILITY BOUNDARY
	PROPOSED WASTE BOUNDARY

NOTES: 1. ONLY THOSE BORINGS EXTENDING TO THE EXPECTED ELEVATION OF THE ORGANIC SOIL ARE SHOWN.

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FIGURE 812.314-21

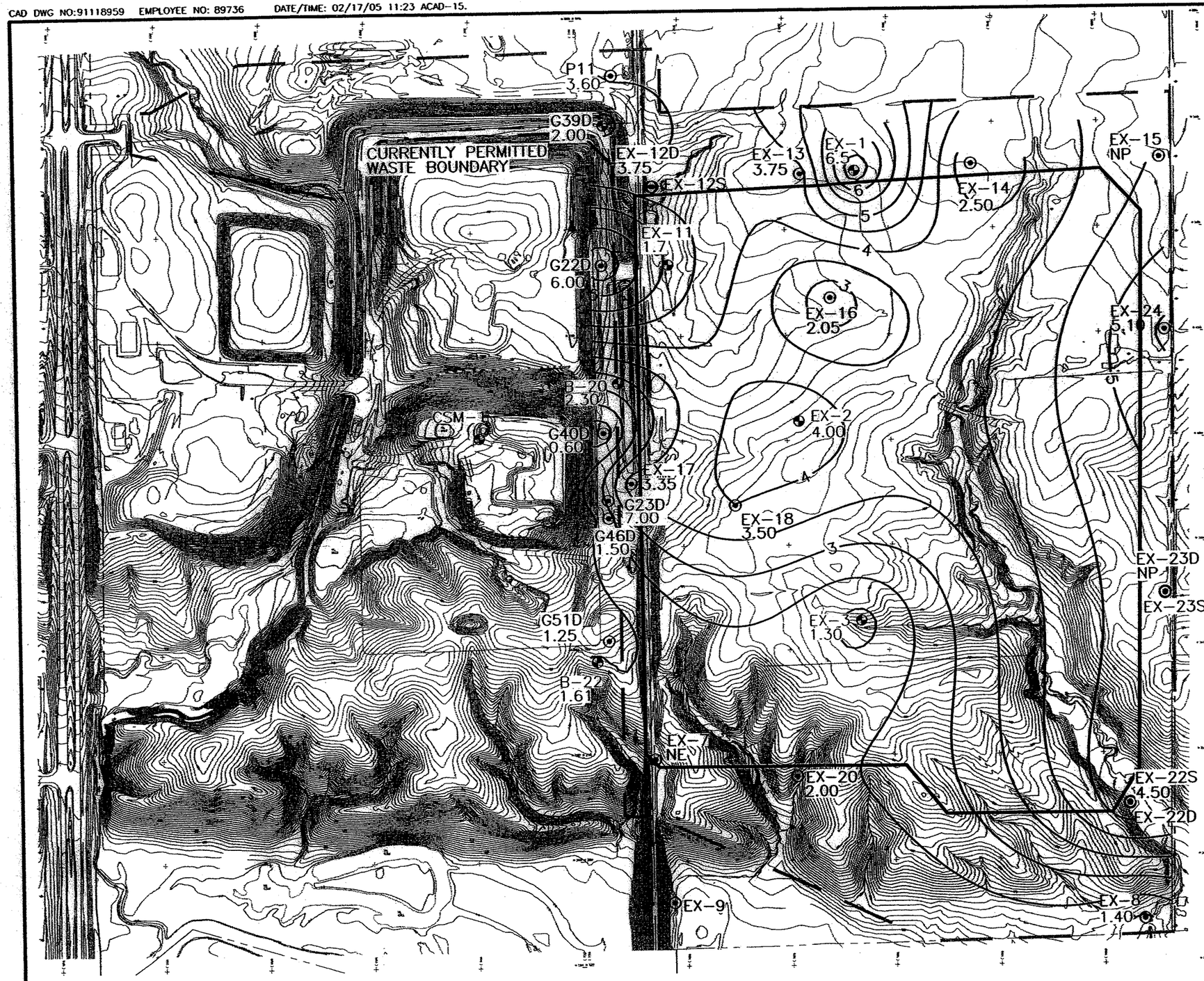
ELEVATION OF THE BOTTOM OF THE ORGANIC SOIL

CLINTON LANDFILL NO.3

CLINTON, ILLINOIS

PROJECT NO. 91-118.02

CAD DWG NO:91118959 EMPLOYEE NO: 89736 DATE/TIME: 02/17/05 11:23 ACAD-15.



500' 250' 0 500' 100'

1"=500'

LEGEND

●	SOIL BORING
⊙	PIEZOMETER
—5—	THICKNESS CONTOUR (FEET–MEAN SEA LEVEL) ORGANIC SOIL
5.0	ELEVATION (FEET–MEAN SEA LEVEL) ORGANIC SOIL
NE	ORGANIC SOIL NOT ENCOUNTERED
NP	ORGANIC SOIL NOT PENETRATED
———	PROPERTY LINE
— — —	FACILITY BOUNDARY
———	PROPOSED WASTE BOUNDARY

NOTES: 1. ONLY THOSE BORINGS EXTENDING TO THE EXPECTED ELEVATION OF THE ORGANIC SOIL ARE SHOWN.
2. G23D NOT INCLUDED IN CONTOURS.

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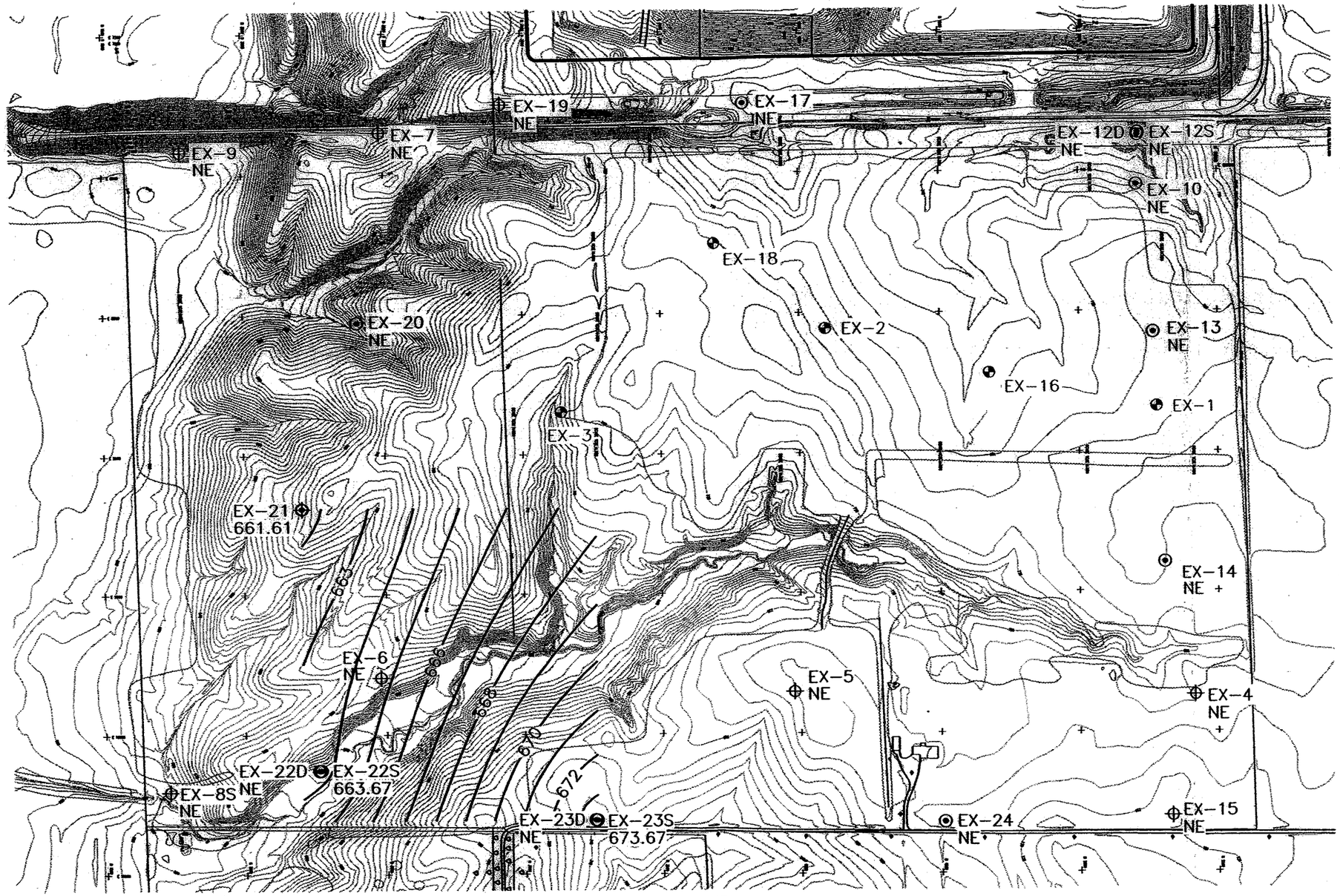
FIGURE 812.314-22

THICKNESS OF THE ORGANIC SOIL

CLINTON LANDFILL NO. 3

CLINTON, ILLINOIS

PROJECT NO. 91-118.02



LEGEND

⊕	PIEZOMETER MONITORING RANDOR TILL SAND
⊙	PIEZOMETER
673.67	POTENTIOMETRIC ELEVATION
◕	BORING
—672—	POTENTIOMETRIC CONTOUR LINE
NE	UPPER RADNOR TILL NOT ENCOUNTERED

400' 200' 0 400' 800'

1"=400'

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FIGURE 812.314-23

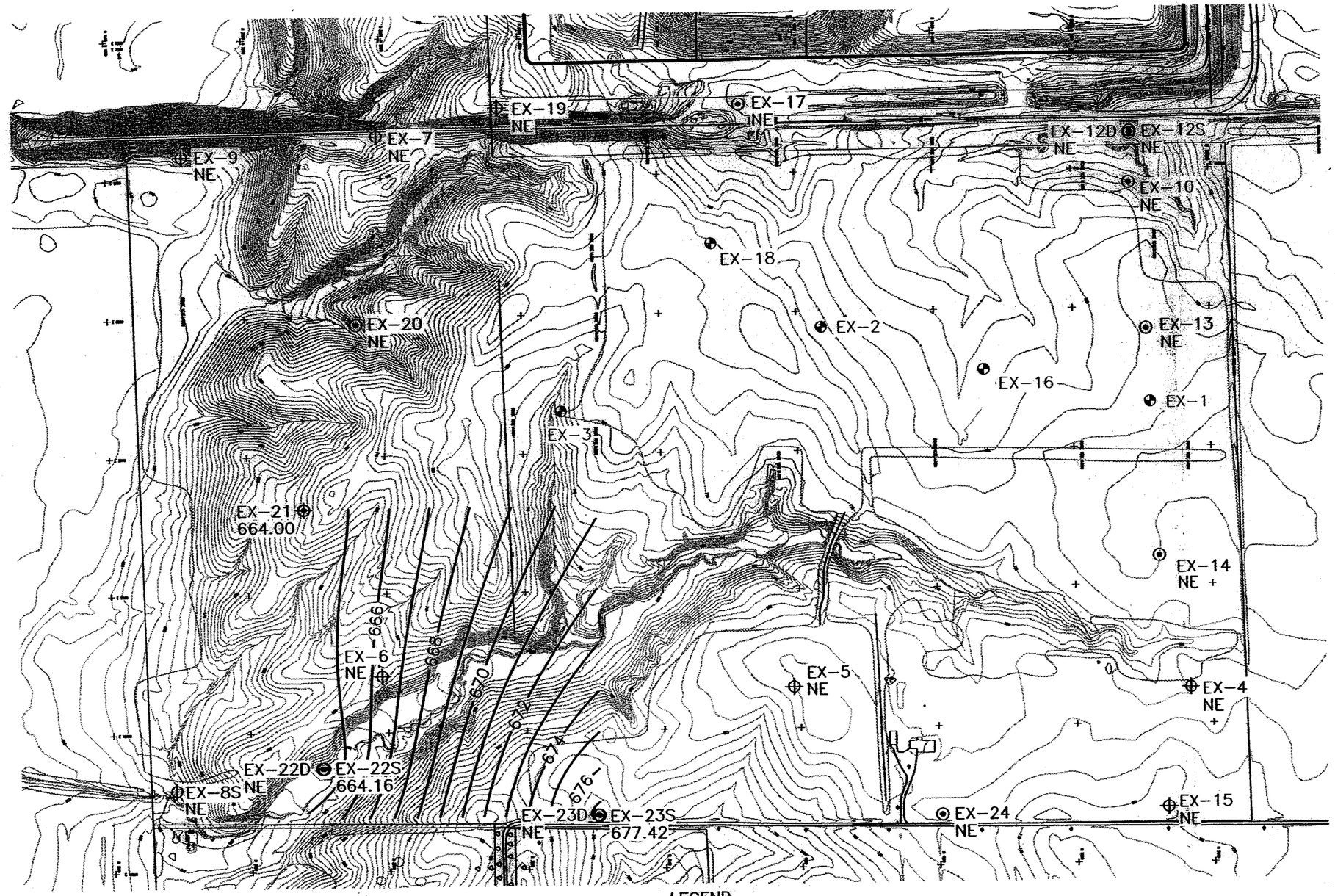
1ST QUARTER 2004 POTENTIOMETRIC CONTOURS-UPPER RADNOR TILL SAND

CLINTON LANDFILL, INC.

CLINTON, ILLINOIS

PROJECT NO. 91-118

CAD DWG NO:911181019 EMPLOYEE NO: 89736 DATE/TIME: 02/17/05 11:59 ACAD-15.



LEGEND

- PIEZOMETER MONITORING RANDOR TILL SAND
- PIEZOMETER
- 664.16 POTENTIOMETRIC ELEVATION
- BORING
- —672— POTENTIOMETRIC CONTOUR LINE
- NE UPPER RADNOR TILL NOT ENCOUNTERED

400' 200' 0 400' 800'

1"=400'

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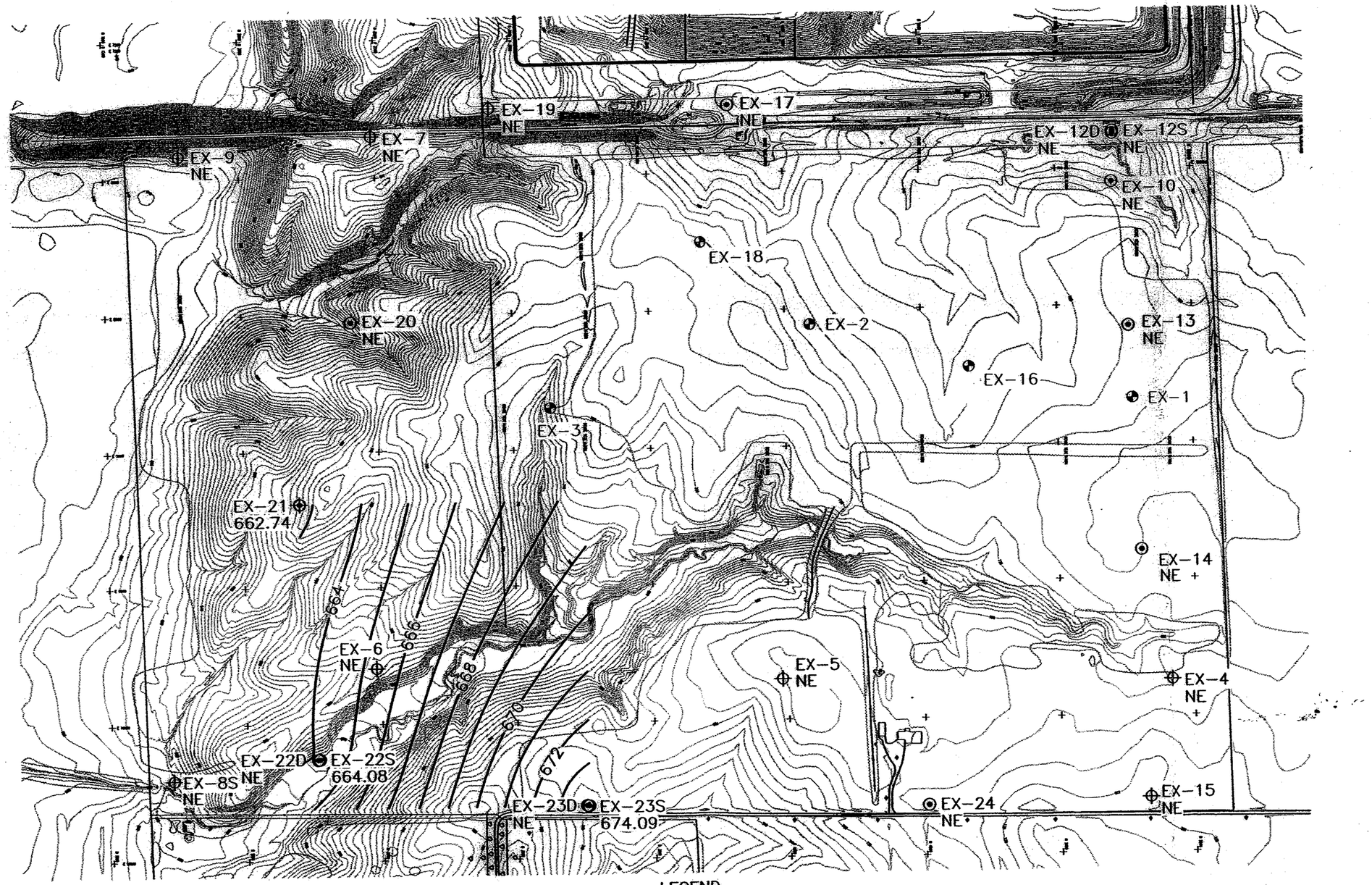
FIGURE 812.314-24

2ND QUARTER 2004 POTENTIOMETRIC CONTOURS-UPPER RADNOR TILL SAND

CLINTON LANDFILL, INC.

CLINTON, ILLINOIS

PROJECT NO. 91-118



LEGEND

- ⊕ PIEZOMETER MONITORING RANDOR TILL SAND
- ⊙ PIEZOMETER
- 664.08 POTENTIOMETRIC ELEVATION
- ◕ BORING
- —672— POTENTIOMETRIC CONTOUR LINE
- NE UPPER RADNOR TILL NOT ENCOUNTERED

400' 200' 0 400' 800'

1"=400'

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Peoria, Illinois

FIGURE 812.314-25

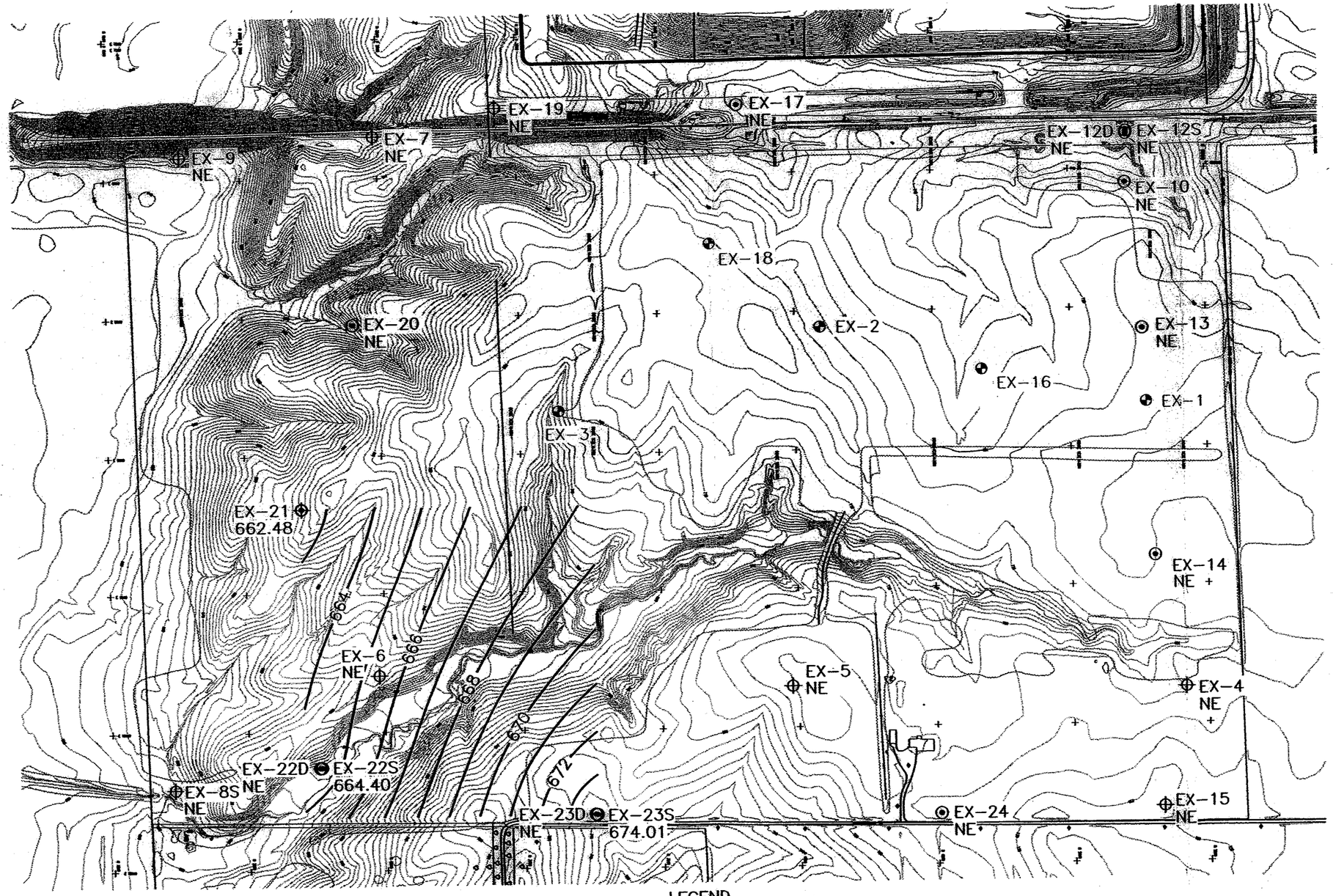
3RD QUARTER 2004 POTENTIOMETRIC CONTOURS-UPPER RADNOR TILL SAND

CLINTON LANDFILL, INC.

CLINTON, ILLINOIS

PROJECT NO. 91-118

CAD DWG NO:911181021 EMPLOYEE NO: 89736 DATE/TIME: 02/17/05 11:09 ACAD-15.



LEGEND

- ⊕ PIEZOMETER MONITORING RANDOR TILL SAND
- ⊙ PIEZOMETER
- 664.40 POTENTIOMETRIC ELEVATION
- ◕ BORING
- —672— POTENTIOMETRIC CONTOUR LINE
- NE UPPER RADNOR TILL NOT ENCOUNTERED

400' 200' 0 400' 800'

1"=400'

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Peoria, Illinois

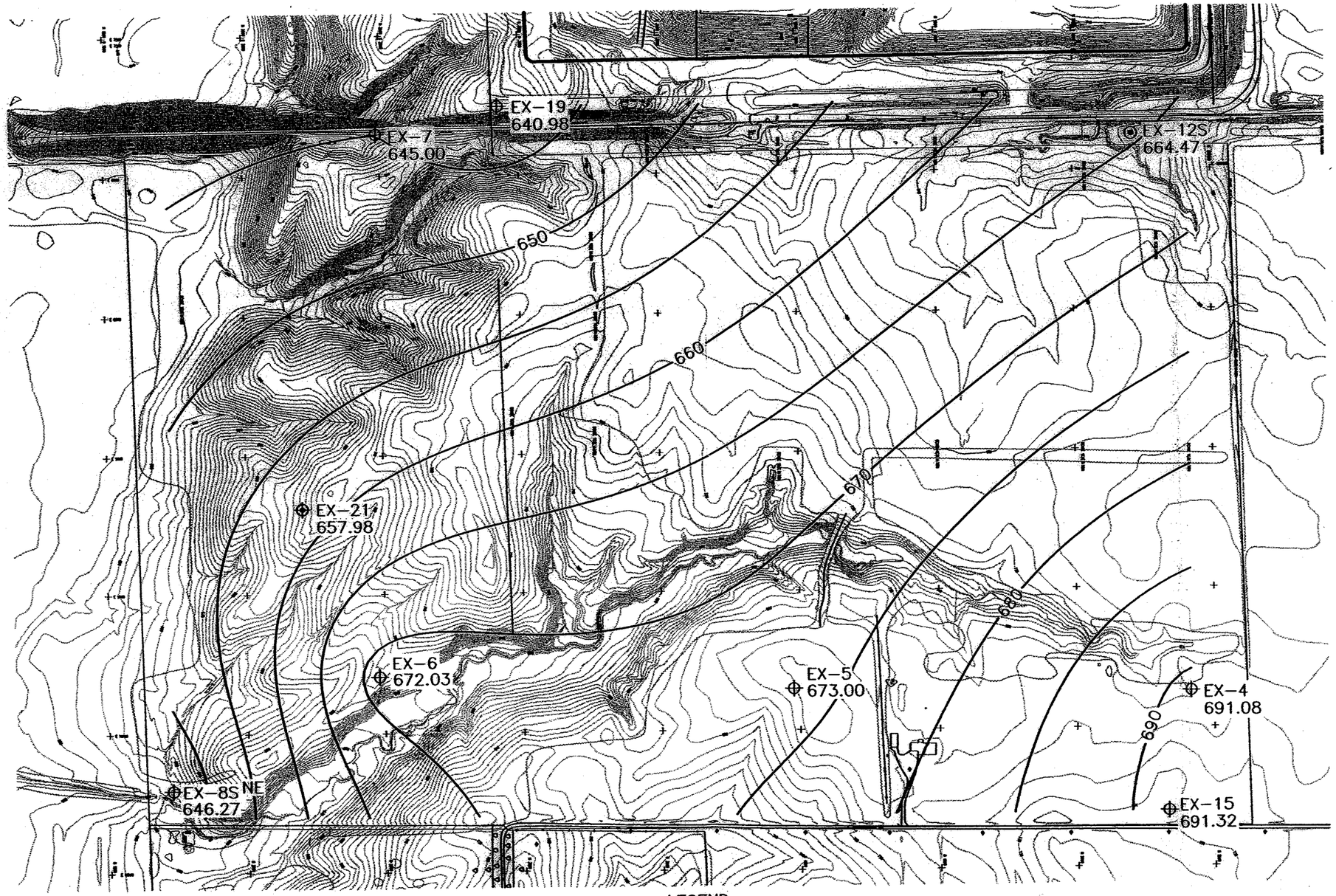
FIGURE 812.314-26

4TH QUARTER 2004 POTENTIOMETRIC CONTOURS-UPPER RADNOR TILL SAND

CLINTON LANDFILL, INC.

CLINTON, ILLINOIS

PROJECT NO. 91-118



LEGEND

- PIEZOMETER MONITORING RANDOR TILL SAND
- PIEZOMETER
- 673.00 POTENTIOMETRIC ELEVATION
- BORING
- —680— POTENTIOMETRIC CONTOUR LINE

400' 200' 0 400' 800'

1"=400'

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Peoria, Illinois

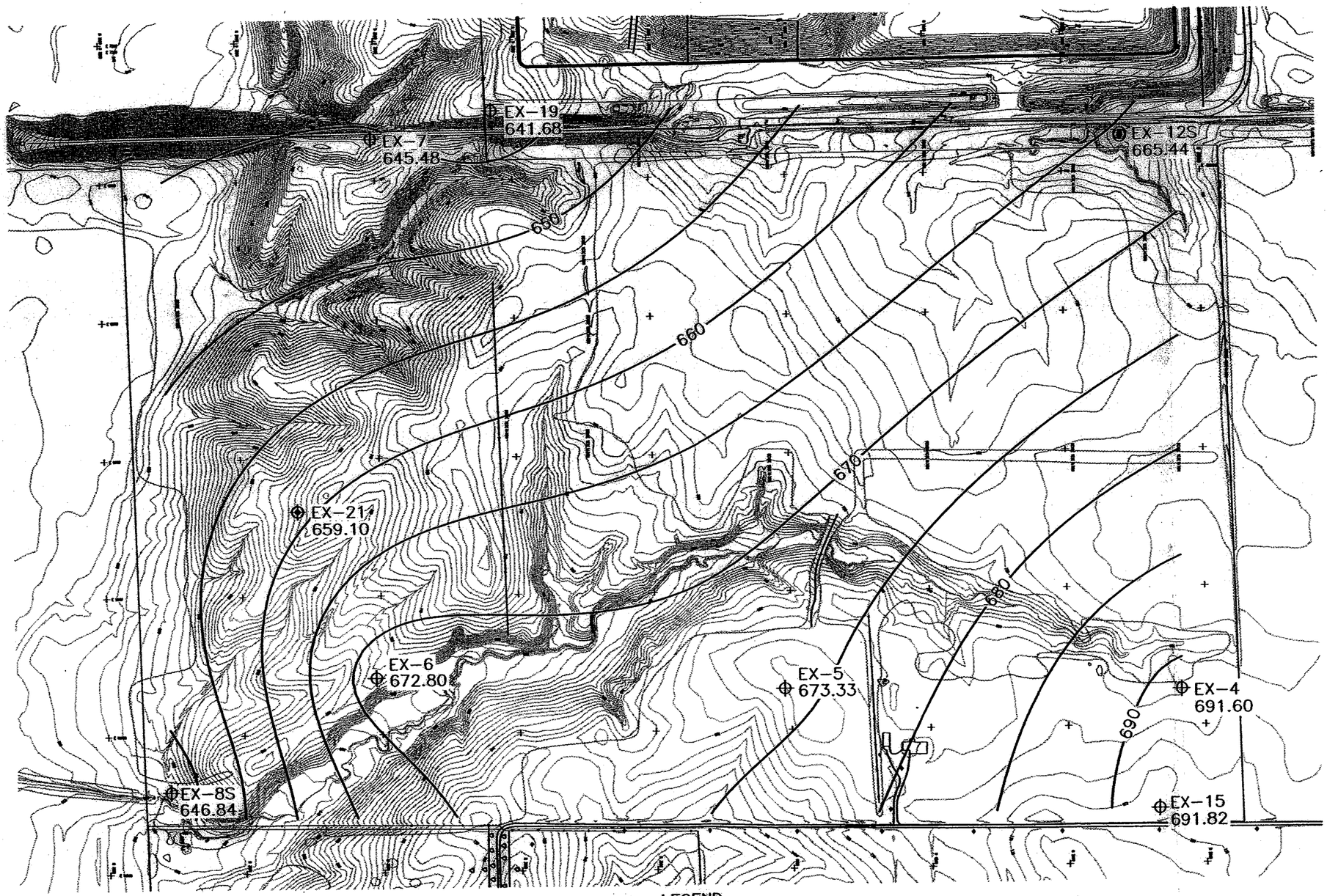
FIGURE 812.314-27

1ST QUARTER 2004 POTENTIOMETRIC CONTOURS-LOWER RADNOR TILL SAND

CLINTON LANDFILL, INC.

CLINTON, ILLINOIS

PROJECT NO. 91-118



LEGEND

- PIEZOMETER MONITORING RANDOR TILL SAND
- PIEZOMETER
- 646.84 POTENTIOMETRIC ELEVATION
- BORING
- —670— POTENTIOMETRIC CONTOUR LINE

400' 200' 0 400' 800'

1"=400'

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Peoria, Illinois

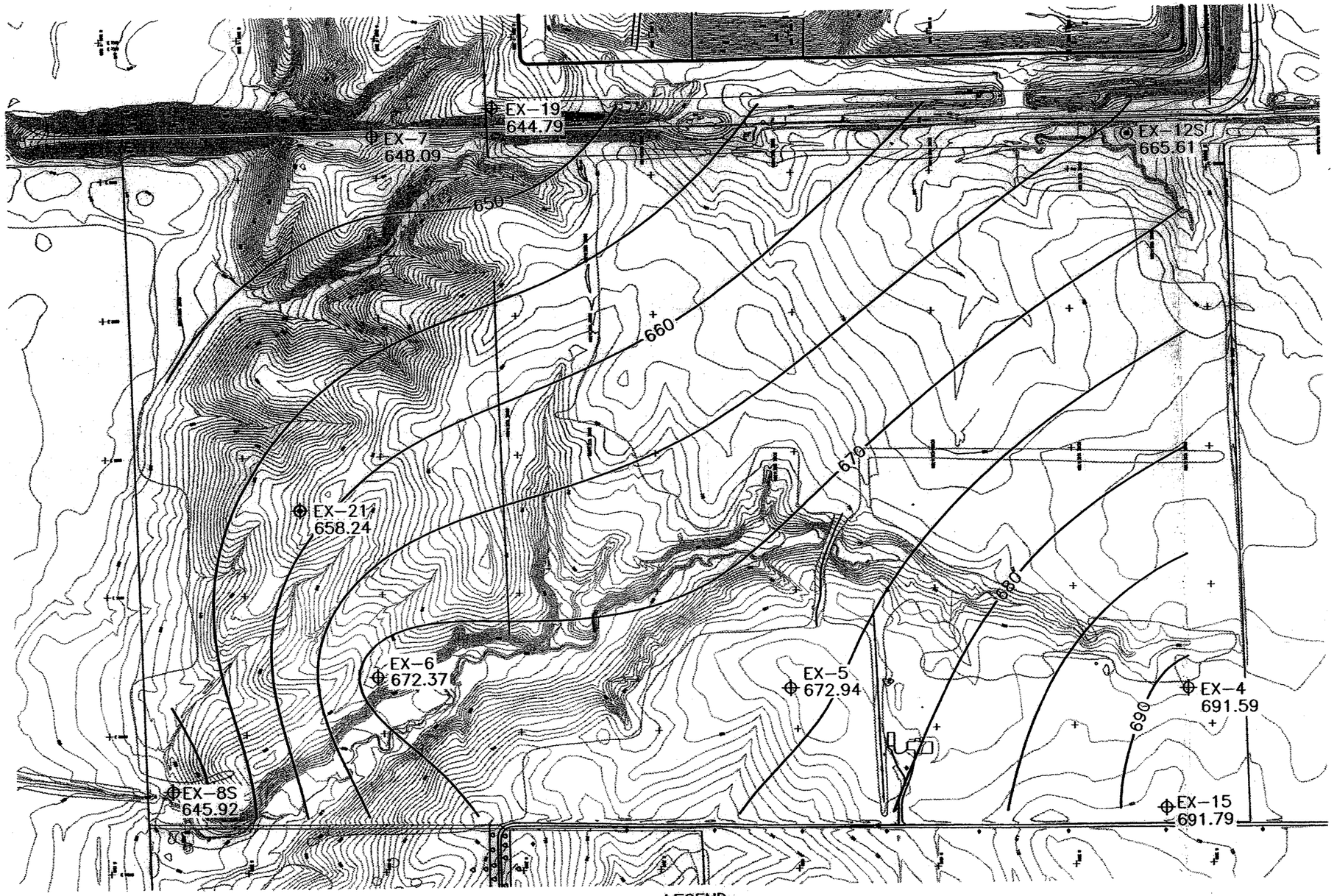
FIGURE 812.314-28

2ND QUARTER 2004 POTENTIOMETRIC CONTOURS-LOWER RADNOR TILL SAND

CLINTON LANDFILL, INC.

CLINTON, ILLINOIS

PROJECT NO. 91-118



LEGEND

- PIEZOMETER MONITORING RANDOR TILL SAND
- PIEZOMETER
- 645.92 POTENTIOMETRIC ELEVATION
- BORING
- —670— POTENTIOMETRIC CONTOUR LINE

400' 200' 0 400' 800'

1"=400'

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Peoria, Illinois

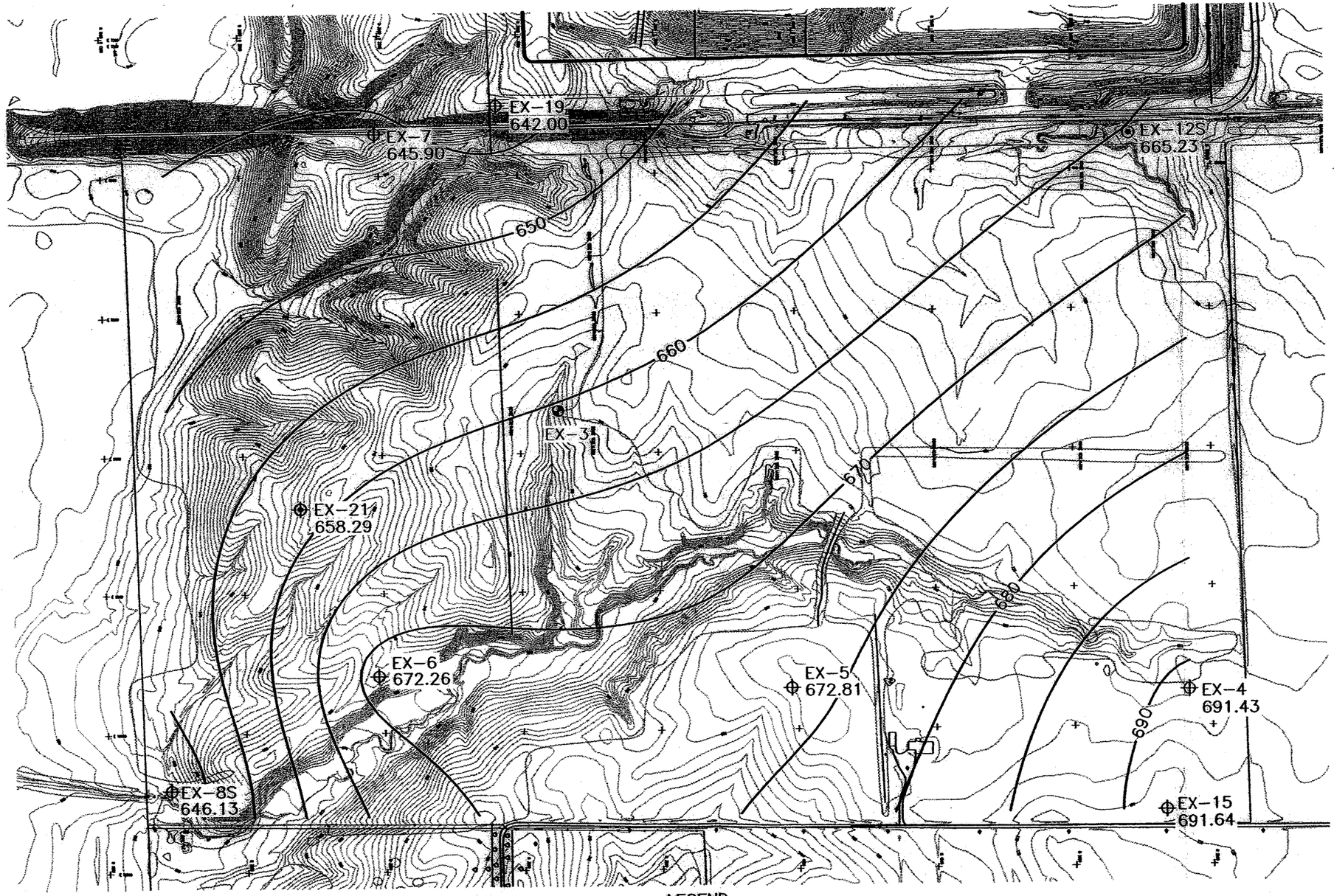
FIGURE 812.314-29

3RD QUARTER 2004 POTENTIOMETRIC CONTOURS-LOWER RADNOR TILL SAND

CLINTON LANDFILL, INC.

CLINTON, ILLINOIS

PROJECT NO. 91-118



LEGEND

- PIEZOMETER MONITORING RANDOR TILL SAND
- PIEZOMETER
- 646.13 POTENTIOMETRIC ELEVATION
- BORING
- —670— POTENTIOMETRIC CONTOUR LINE

400' 200' 0 400' 800'

1"=400'

Illinois Licensed Professional Design Firm 184-001145

PDC Technical Services, Inc.
Peoria, Illinois

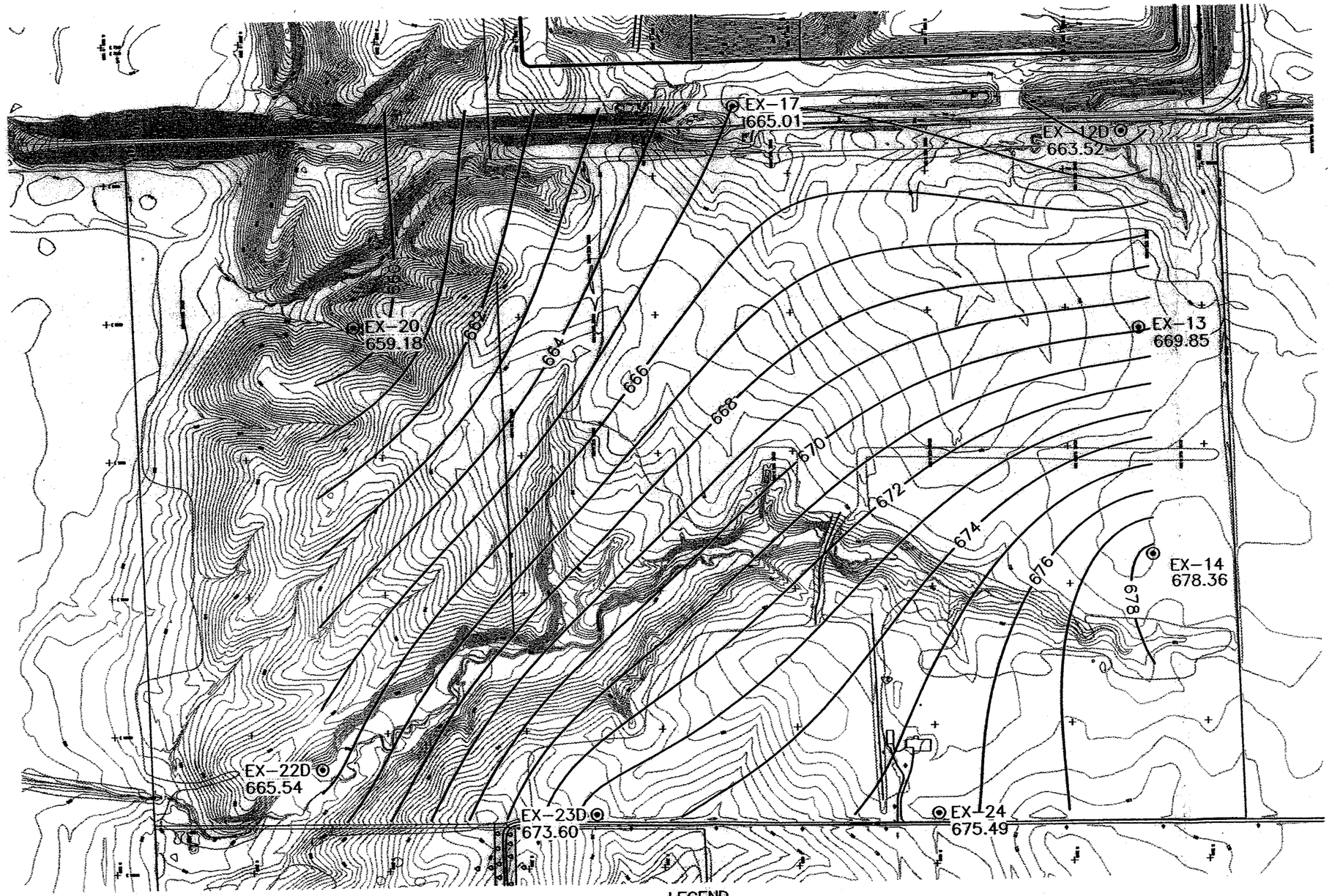
FIGURE 812.314-30

4TH QUARTER 2004 POTENTIOMETRIC CONTOURS-LOWER RADNOR TILL SAND

CLINTON LANDFILL, INC.

CLINTON, ILLINOIS

PROJECT NO. 91-118



LEGEND

⊙	PIEZOMETER
665.54	POTENTIOMETRIC ELEVATION
⊕	BORING
672	POTENTIOMETRIC CONTOUR LINE
NP	ORGANIC SOIL NOT PENETRATED

400' 200' 0 400' 800'

1"=400'

Illinois Licensed Professional Design Firm 184-001145

PDC Technical Services, Inc.
Peoria, Illinois

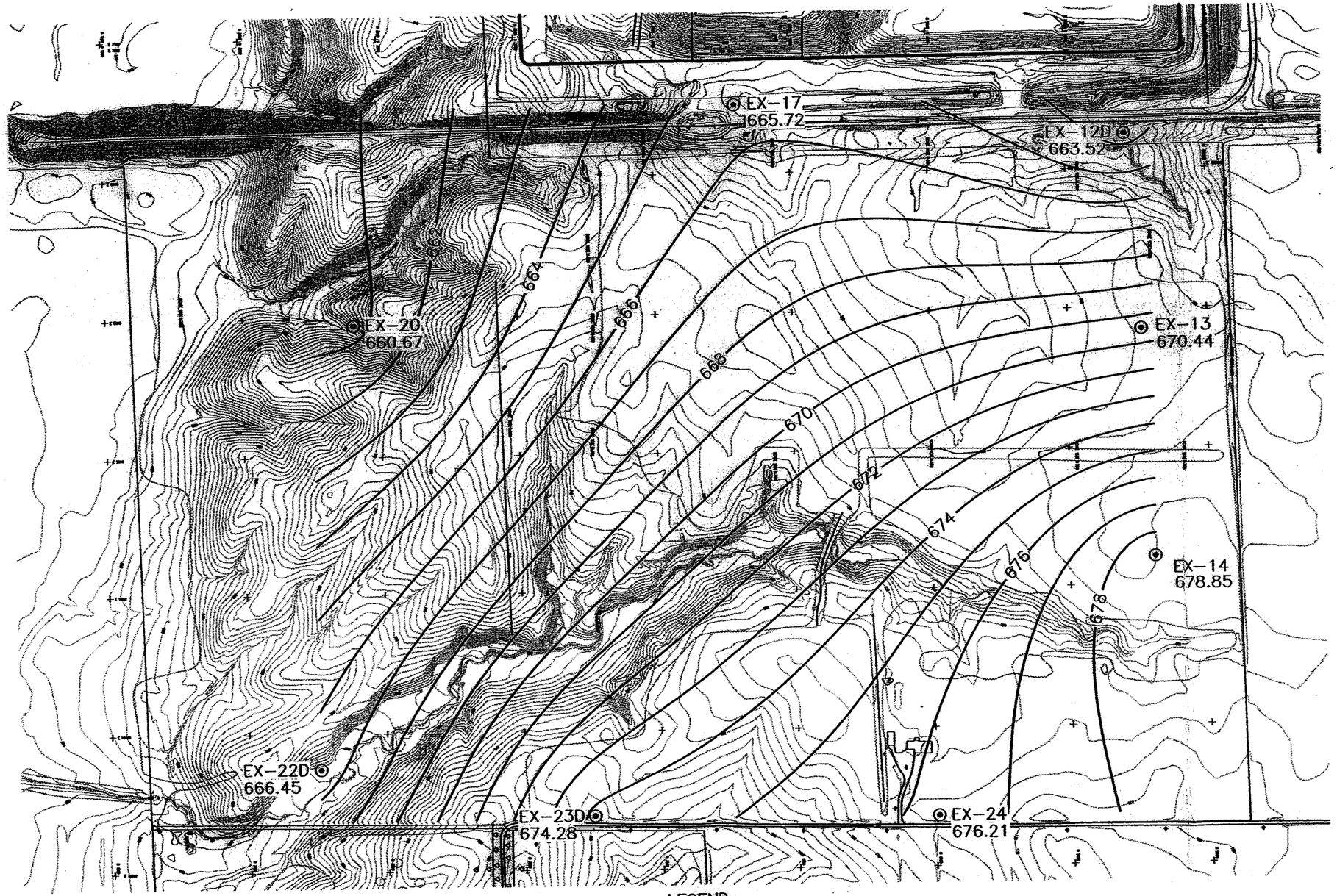
FIGURE 812.314-31

1ST QUARTER 2004 POTENTIOMETRIC CONTOURS-ORGANIC SOIL

CLINTON LANDFILL, INC.

CLINTON, ILLINOIS

PROJECT NO. 91-118



LEGEND

- ⊙ PIEZOMETER
- 663.94 POTENTIOMETRIC ELEVATION
- ◔ BORING
- —674— POTENTIOMETRIC CONTOUR LINE
- NP ORGANIC SOIL NOT PENETRATED

400' 200' 0 400' 800'

1"=400'

Illinois Licensed Professional Design Firm 184-001145

PDC Technical Services, Inc.
Peoria, Illinois

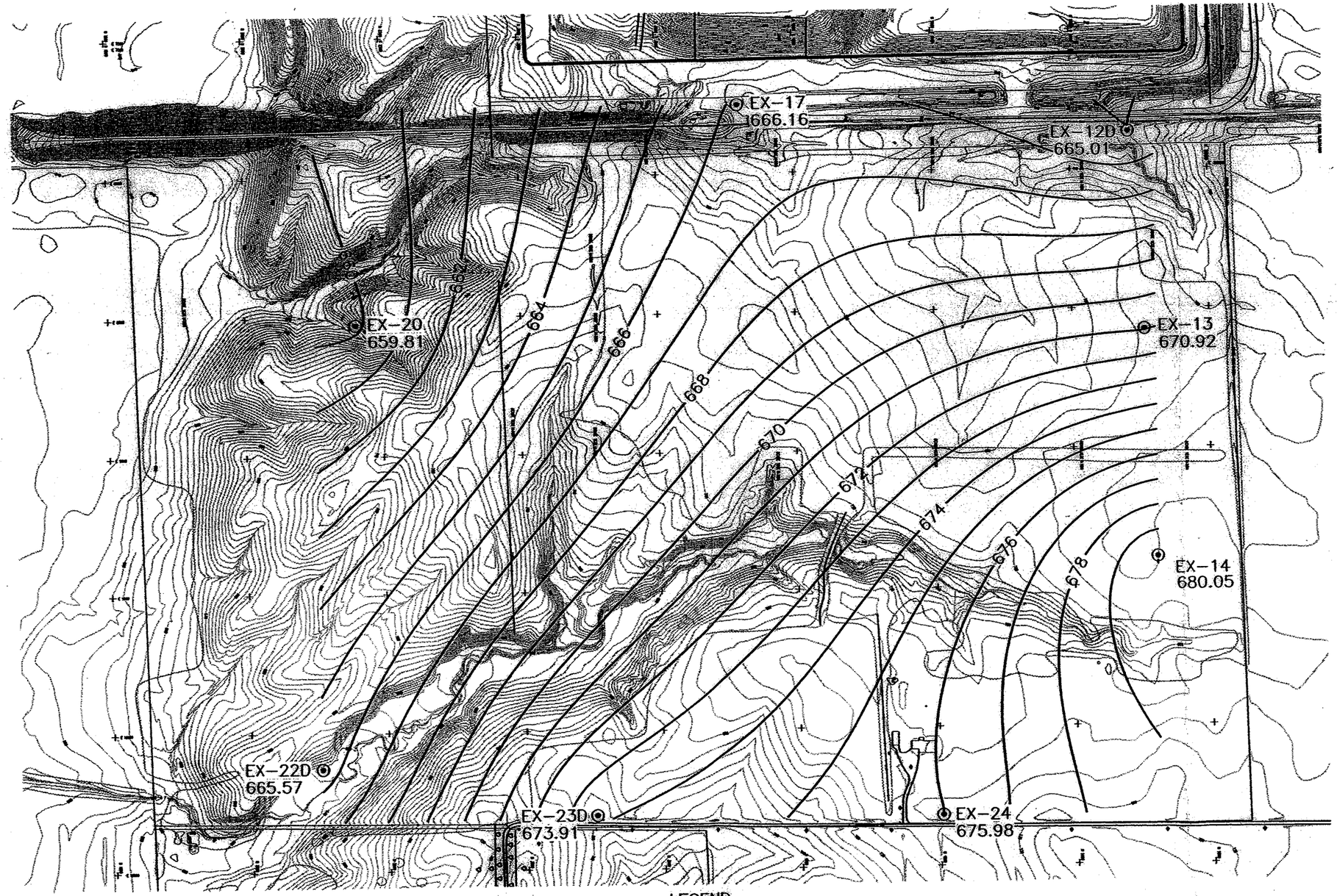
FIGURE 812.314-32

2ND QUARTER 2004 POTENTIOMETRIC CONTOURS-ORGANIC SOIL

CLINTON LANDFILL, INC.

CLINTON, ILLINOIS

PROJECT NO. 91-118



LEGEND

⊙	PIEZOMETER
665.57	POTENTIOMETRIC ELEVATION
◕	BORING
674	POTENTIOMETRIC CONTOUR LINE
NP	ORGANIC SOIL NOT PENETRATED

400' 200' 0 400' 800'

1"=400'

Illinois Licensed Professional Design Firm 184-001145

PDC Technical Services, Inc.
Peoria, Illinois

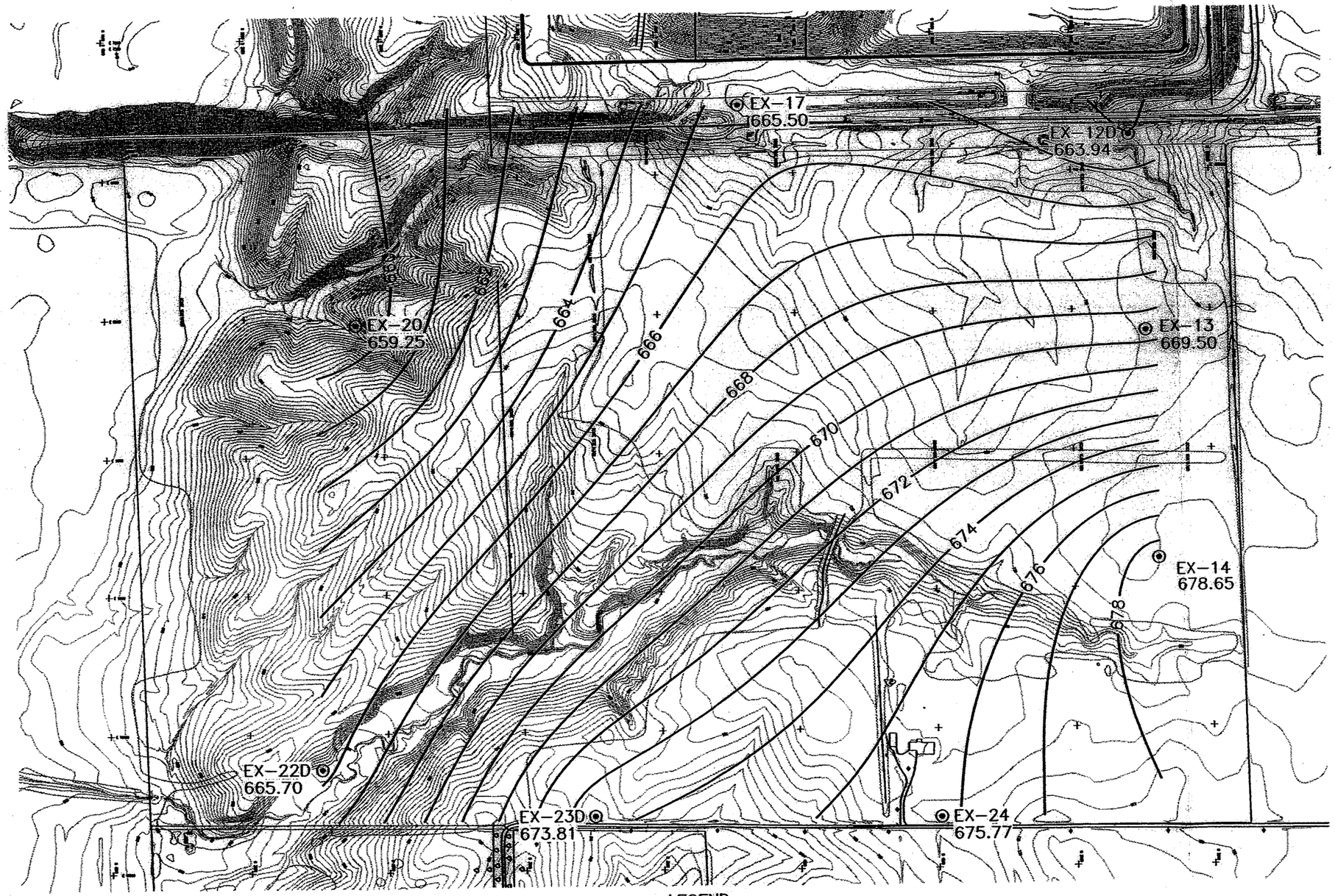
FIGURE 812.314-33

3RD QUARTER 2004 POTENTIOMETRIC CONTOURS-ORGANIC SOIL

CLINTON LANDFILL, INC.

CLINTON, ILLINOIS

PROJECT NO. 91-118



LEGEND

⊙	PIEZOMETER
665.70	POTENTIOMETRIC ELEVATION
◔	BORING
— 674 —	POTENTIOMETRIC CONTOUR LINE
NP	ORGANIC SOIL NOT PENETRATED

400' 200' 0 400' 800'

1"=400'

Illinois Licensed Professional Design Firm 184-001145

PDC Technical Services, Inc.
Peoria, Illinois

FIGURE 812.314-34

4TH QUARTER 2004 POTENTIOMETRIC CONTOURS-ORGANIC SOIL

CLINTON LANDFILL, INC.

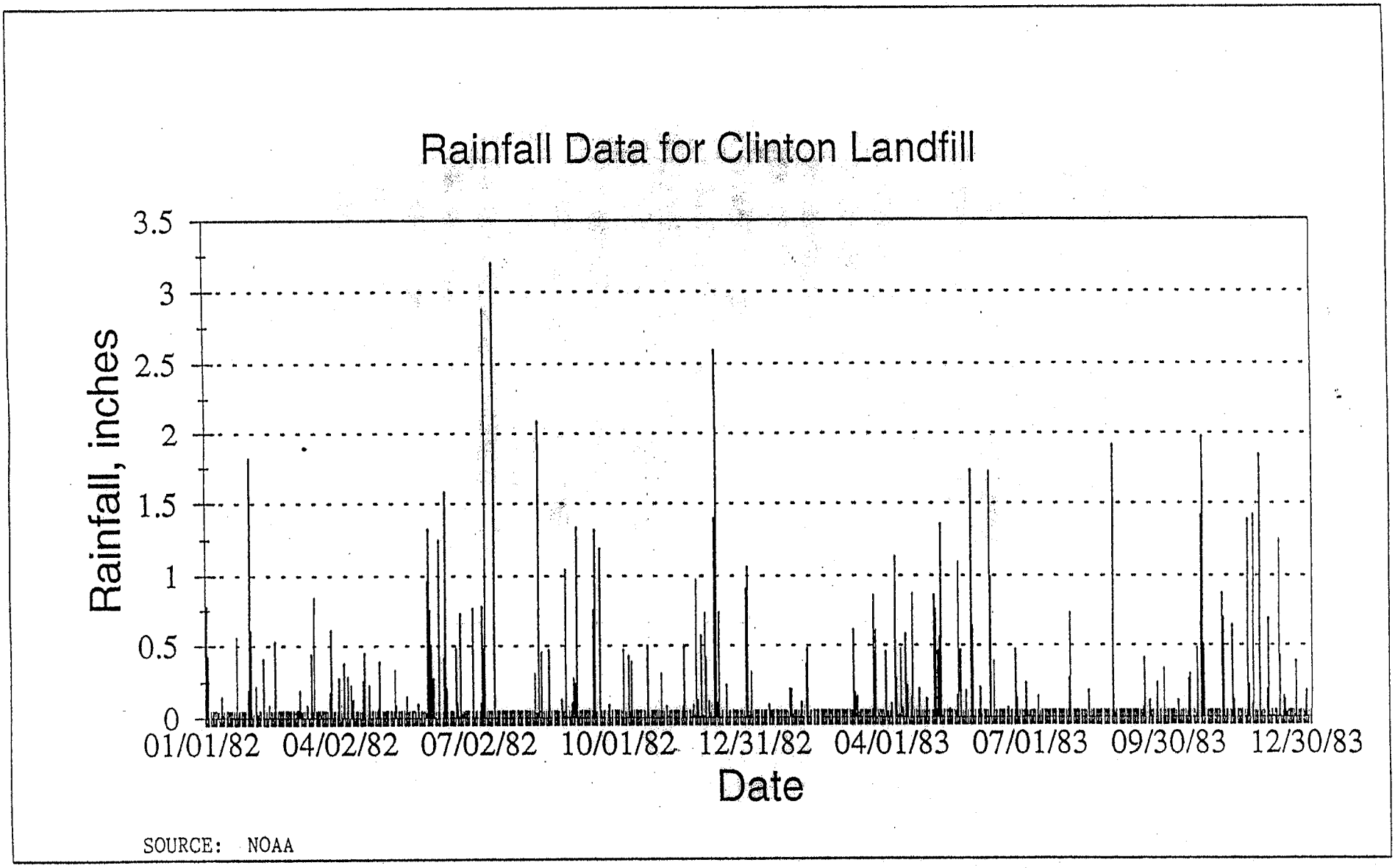
CLINTON, ILLINOIS

PROJECT NO. 91-118

APPENDIX E.2

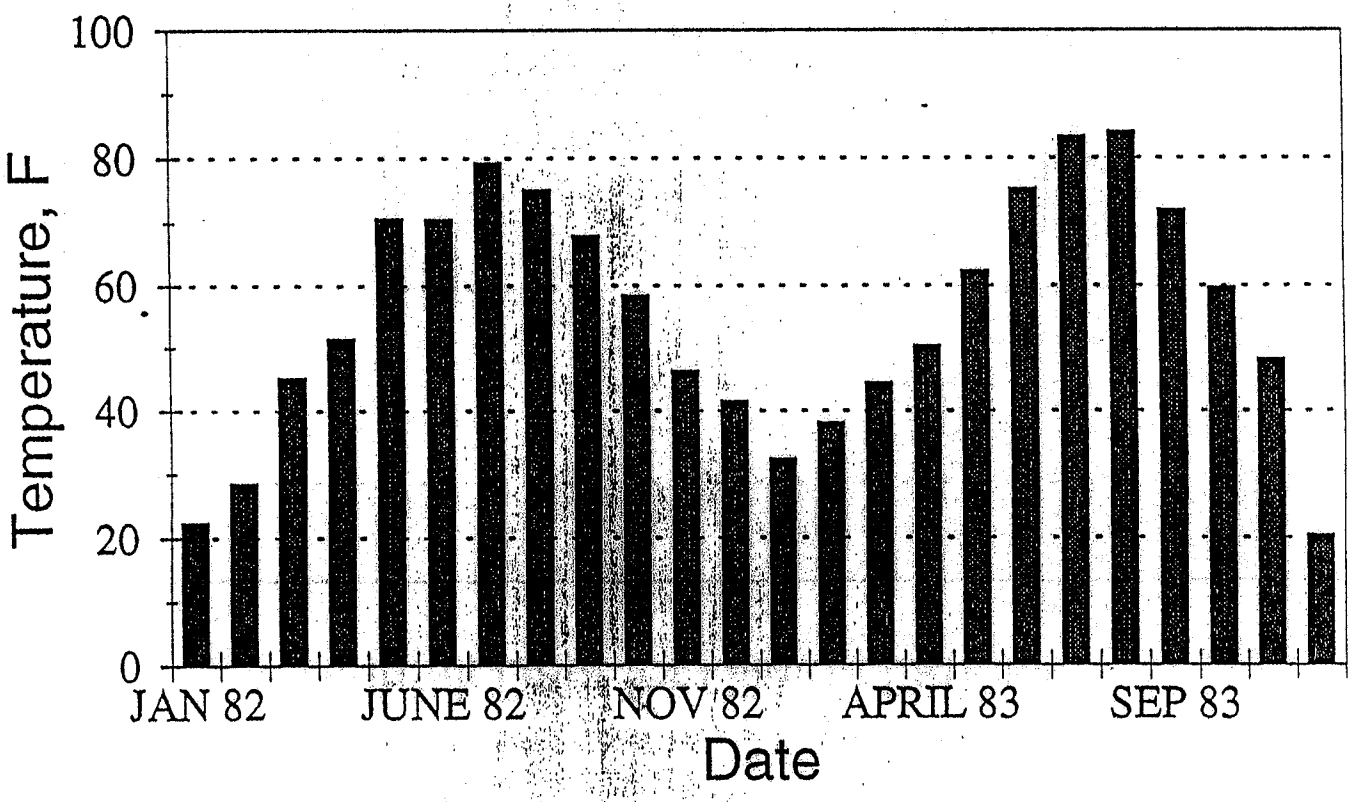
CLIMATE DATA

Shaw®


Rainfall Data for Clinton Landfill
Rainfall, inches
3.5
3
2.5
2
1.5
1
0.5
0
01/01/82
04/02/82
07/02/82
10/01/82
12/31/82
04/01/83
07/01/83
09/30/83
12/30/83
Date

SOURCE: NOAA

Average Monthly Temperature
Clinton Landfill, Inc.



SOURCE: NOAA

APPENDIX E.3

REGIONAL WATER WELLS

Shaw®

TABLE 812.314-5

POTABLE WATER WELL DATA SUMMARY – WELLS WITHIN 2 MILES

Clinton Landfill No. 3

Well No.	Well Location	Distance from Site (feet)	Boring Completion Depth (ft. bgs)	Approx. Water Bearing Unit Elev. (ft. AMSL)	Date Installed	Use	Aquifer Type
1-A	T19N-R2E, Section 1	7200	35	N/A	08/00/1944	Domestic	NR
1-1	T19N-R2E, Section 1	7700	90	668	08/05/1941	Domestic	Unconsolidated
1-2	T19N-R2E, Section 1	6200	129	612	10/25/1975	Domestic	Unconsolidated
1-3	T19N-R2E, Section 1	6700	75	675	00/00/1971	Community Supply	Unconsolidated
2-1	T19N-R2E, Section 2	6450	320	482	09/11/1996	Domestic	Unconsolidated
2-2	T19N-R2E, Section 2	4750	314	487	10/16/1997	State Highway Dept.	Unconsolidated
2-3	T19N-R2E, Section 2	4700	96	644	08/20/1940	Domestic	Unconsolidated
2-4	T19N-R2E, Section 2	6500	323	492	07/01/1992	Domestic	Unconsolidated
2-5	T19N-R2E, Section 2	5200	17	725	NR	Monitoring	Unconsolidated
2-6	T19N-R2E, Section 2	5350	17	725	NR	Monitoring	Unconsolidated
2-7	T19N-R2E, Section 2	5200	17	725	NR	Monitoring	Unconsolidated
2-8	T19N-R2E, Section 2	4950	17	725	NR	Monitoring	Unconsolidated
2-9	T19N-R2E, Section 2	4750	17	725	NR	Monitoring	Unconsolidated
2-10	T19N-R2E, Section 2	4900	10	723	NR	Monitoring	Unconsolidated
2-11	T19N-R2E, Section 2	7700	335	N/A	04/21/1997	Dry Hole	N/A
3-1	T19N-R2E, Section 3	4900	291	458	08/00/1988	Domestic	Unconsolidated
3-2	T19N-R2E, Section 3	4650	290	463	10/22/1987	Industrial/Comm.	Unconsolidated
3-3	T19N-R2E, Section 3	5100	34	N/A	00/00/1926	Domestic	Unconsolidated
3-4	T19N-R2E, Section 3	4800	295	595	03/24/1999	Domestic	Unconsolidated
3-5	T19N-R2E, Section 3	5100	335	N/A	05/20/1997	Soil Boring	Bedrock
3-6	T19N-R2E, Section 3	5600	173	550	12/00/1945	Industrial/Comm.	Unconsolidated
3-7	T19N-R2E, Section 3	6000	288	456	05/21/1992	Domestic	Unconsolidated
3-8	T19N-R2E, Section 3	6000	283	470	05/28/1992	Domestic	Unconsolidated
3-9	T19N-R2E, Section 3	5800	93	631	04/15/1980	Domestic	Unconsolidated
3-10	T19N-R2E, Section 3	6200	280	450	11/08/1945	Industrial/Comm.	Unconsolidated

TABLE 812.314-5

POTABLE WATER WELL DATA SUMMARY – WELLS WITHIN 2 MILES

Clinton Landfill No. 3

Well No.	Well Location	Distance from Site (feet)	Boring Completion Depth (ft. bgs)	Approx. Water Bearing Unit Elev. (ft. AMSL)	Date Installed	Use	Aquifer Type
3-11	T19N-R2E, Section 3	6400	286	444	11/00/1993	Domestic	Unconsolidated
3-12	T19N-R2E, Section 3	6400	286	445	11/00/1993	Domestic	Unconsolidated
3-13	T19N-R2E, Section 3	6400	289	441	11/00/1993	Domestic	Unconsolidated
3-14	T19N-R2E, Section 3	6400	289	N/A	11/00/1993	Domestic	Unconsolidated
3-15	T19N-R2E, Section 3	6400	286	444	11/00/1993	Domestic	Unconsolidated
3-16	T19N-R2E, Section 3	7600	302	412	06/23/1992	Domestic	Unconsolidated
3-17	T19N-R2E, Section 3	6850	315	465	11/10/1998	Domestic	Unconsolidated
3-18	T19N-R2E, Section 3	7200	86	N/A	07/00/1935	Soil Boring	Unconsolidated
3-19	T19N-R2E, Section 3	8600	303	437	07/26/1991	Community Supply	NR
3-20	T19N-R2E, Section 3	9000	150	570	00/00/1900	Domestic	NR
4-A	T19N-R2E, Section 4	5800	86	NR	11/00/1939	NR	NR
4-1	T19N-R2E, Section 4	8400	142	601	06/29/1978	Industrial/Comm.	Unconsolidated
4-2	T19N-R2E, Section 4	8400	138	604	09/12/1978	Industrial/Comm.	Unconsolidated
4-3	T19N-R2E, Section 4	10200	140	585	06/19/2000	Domestic	Unconsolidated
4-4	T19N-R2E, Section 4	10050	291	439	08/02/2000	Domestic	Unconsolidated
4-5	T19N-R2E, Section 4	7100	294	431	09/08/1998	Domestic	Bedrock
4-6	T19N-R2E, Section 4	7300	276	449	08/18/1999	Domestic	Unconsolidated
4-7	T19N-R2E, Section 4	7400	136	590	00/00/1964	Domestic	Unconsolidated
4-8	T19N-R2E, Section 4	8750	79	646	07/16/1995	Domestic	Unconsolidated
4-9	T19N-R2E, Section 4	8600	128	614	11/20/1971	Domestic	Unconsolidated
4-10	T19N-R2E, Section 4	9600	35	685	00/00/1900	Domestic	NR
4-11	T19N-R2E, Section 4	9800	36	694	00/00/0000	Domestic	Unconsolidated
4-13	T19N-R2E, Section 4	10500	144	586	06/24/2001	Domestic	Unconsolidated
6-6	T19N-R3E, Section 6	9800	320	475	10/04/1984	Non-Community	Unconsolidated
8-1	T19N-R3E, Section 8	9000	195	530	08/26/1966	Domestic	Unconsolidated
8-2	T19N-R3E, Section 8	8800	243	482	06/00/1972	Domestic	Unconsolidated

TABLE 812.314-5

POTABLE WATER WELL DATA SUMMARY – WELLS WITHIN 2 MILES

Clinton Landfill No. 3

Well No.	Well Location	Distance from Site (feet)	Boring Completion Depth (ft. bgs)	Approx. Water Bearing Unit Elev. (ft. AMSL)	Date Installed	Use	Aquifer Type
8-3	T19N-R3E, Section 8	8900	127	601	10/15/1972	Domestic	Unconsolidated
9-1	T19N-R2E, Section 9	5750	96	636	00/00/1951	Domestic	Unconsolidated
9-2	T19N-R2E, Section 9	5750	88	647	00/00/1916	Domestic	NR
9-3	T19N-R2E, Section 9	7700	155	570	00/00/1900	Domestic	Unconsolidated
9-4	T19N-R2E, Section 9	7900	143	592	09/16/1939	Domestic	Unconsolidated
9-5	T19N-R2E, Section 9	10600	275	477	05/21/1999	Domestic	Unconsolidated
9-6	T19N-R2E, Section 9	10650	284	454	06/22/1990	Domestic	Unconsolidated
9-7	T19N-R2E, Section 9	6900	143	577	NR	Domestic	NR
10-1	T19N-R2E, Sect. 10	900	279	442	11/00/1976	Domestic	Unconsolidated
10-2	T19N-R2E, Sect. 10	900	265	438	07/00/1977	Domestic	Unconsolidated
10-3	T19N-R2E, Sect. 10	3200	16	674	00/00/1900	Domestic	NR
10-4	T19N-R2E, Sect. 10	3000	260	395	08/25/1968	Domestic	Unconsolidated
10-5	T19N-R2E, Sect. 10	3200	241	434	05/12/1967	Domestic	Unconsolidated
10-6	T19N-R2E, Sect. 10	3000	76	654	11/00/1930	Domestic	NR
10-7	T19N-R2E, Sect. 10	4400	104	630	05/14/1984	Domestic	Unconsolidated
10-8	T19N-R2E, Sect. 10	2600	415	N/A	02/15/1974	Soil Boring	N/A
10-9	T19N-R2E, Sect. 10	5200	510	N/A	01/02/1968	Soil Boring	N/A
10-10	T19N-R2E, Sect. 10	1700	281	461	05/11/1988	Industrial/Comm.	Unconsolidated
10-11	T19N-R2E, Sect. 10	3000	280	474	09/00/1988	Irrigation	Unconsolidated
10-12	T19N-R2E, Sect. 10	3000	88	629	07/12/1973	Domestic	Unconsolidated
10-13	T19N-R2E, Sect. 10	2800	288	473	05/31/1995	Domestic	Unconsolidated
10-14	T19N-R2E, Sect. 10	5450	18	NR	07/00/1975	Monitoring	NR
10-15	T19N-R2E, Sect. 10	4500	293	Dry Hole	05/30/1995	Domestic	N/A
10-16	T19N-R2E, Sect. 10	4500	85	660	09/12/1995	Domestic	Unconsolidated
10-17	T19N-R2E, Sect. 10	4500	130	610	00/00/1912	Domestic	NR
11-1	T19N-R2E, Sect. 11	1650	134	579	09/16/1942	Domestic	Unconsolidated
11-2	T19N-R2E, Sect. 11	On-site	145	583	04/09/1996	Domestic	Unconsolidated

TABLE 812.314-5

POTABLE WATER WELL DATA SUMMARY – WELLS WITHIN 2 MILES

Clinton Landfill No. 3

Well No.	Well Location	Distance from Site (feet)	Boring Completion Depth (ft. bgs)	Approx. Water Bearing Unit Elev. (ft. AMSL)	Date Installed	Use	Aquifer Type
11-3	T19N-R2E, Sect. 11	2500	103	625	11/05/1945	Domestic	Unconsolidated
12-A	T19N-R2E, Sect. 12	7900	6	714	00/00/0000	NR	NR
12-1	T19N-R2E, Sect. 12	6500	82	567	06/07/1984	Domestic	Unconsolidated
12-2	T19N-R2E, Sect. 12	6000	8	635	00/00/1900	Domestic	NR
12-3	T19N-R2E, Sect. 12	5100	142	533	03/20/1977	Domestic	Unconsolidated
12-4	T19N-R2E, Sect. 12	4400	70	682	12/10/1980	Domestic	Unconsolidated
12-5	T19N-R2E, Sect. 12	4600	145	572	09/03/1996	Domestic	Unconsolidated
12-6	T19N-R2E, Sect. 12	3800	25	704	04/05/1946	Domestic	Unconsolidated
12-7	T19N-R2E, Sect. 12	5600	141	560	00/00/1995	Unused	NR
12-8	T19N-R2E, Sect. 12	5800	141	554	07/08/1994	Highway Dept.	Unconsolidated
12-9	T19N-R2E, Sect. 12	6450	135	557	00/00/1939	Sealed	NR
12-10	T19N-R2E, Sect. 12	5800	60	660	00/00/1959	Community Supply	NR
12-11	T19N-R2E, Sect. 12	5700	47	665	00/00/1949	Sealed	NR
12-12	T19N-R2E, Sect. 12	3900	140	600	00/00/1975	Community Supply	NR
12-13	T19N-R2E, Sect. 12	7300	57	668	00/00/1955	Abandoned	NR
12-14	T19N-R2E, Sect. 12	3700	68	662	07/03/1971	Domestic	Unconsolidated
12-15	T19N-R2E, Sect. 12	6200	57	663	00/00/0000	Monitoring	Unconsolidated
12-16	T19N-R2E, Sect. 12	5050	75	650	00/00/1893	Domestic	NR
12-17	T19N-R2E, Sect. 12	6100	Surface	N/A	NR	Spring	N/A
12-18	T19N-R2E, Sect. 12	6500	38	687	00/00/1955	Community Supply	NR
12-19	T19N-R2E, Sect. 12	6700	73	NR	00/00/1950	Community Supply	NR
12-20	T19N-R2E, Sect. 12	6500	10	N/A	00/00/1940	Abandoned	N/A
13-1	T19N-R2E, Sect. 13	6300	127	598	10/02/1943	Domestic	Unconsolidated
13-2	T19N-R2E, Sect. 13	6100	120	N/A	00/00/0000	Soil Boring	N/A

TABLE 812.314-5

POTABLE WATER WELL DATA SUMMARY – WELLS WITHIN 2 MILES

Clinton Landfill No. 3

Well No.	Well Location	Distance from Site (feet)	Boring Completion Depth (ft. bgs)	Approx. Water Bearing Unit Elev. (ft. AMSL)	Date Installed	Use	Aquifer Type
13-3	T19N-R2E, Sect. 13	6300	270	430	06/24/2000	Domestic	Unconsolidated
13-4	T19N-R2E, Sect. 13	6300	282	454	04/27/1990	Domestic	Unconsolidated
13-5	T19N-R2E, Sect. 13	5800	108	597	05/14/1992	Domestic	NR
13-6	T19N-R2E, Sect. 13	7950	60	655	00/00/1920	Domestic	NR
13-7	T19N-R2E, Sect. 13	3700	276	375	10/26/1999	Domestic	Unconsolidated
13-8	T19N-R2E, Sect.. 13	3750	81	605	09/01/1999	Domestic	Unconsolidated
13-9	T19N-R2E, Sect. 13	6550	38	617	11/14/1989	Domestic	NR
13-10	T19N-R2E, Sect. 13	7000	70	605	00/00/1909	Domestic	Unconsolidated
13-11	T19N-R2E, Sect. 13	7550	108	592	07/02/1992	Domestic	Unconsolidated
14-1	T19N-R2E, Sect. 14	1700	274	410	05/17/2000	Domestic	Bedrock
13-12	T19N-R2E, Sect. 13	3900	286	429	05/19/2003	Domestic	Unconsolidated
14-2	T19N-R2E, Sect. 14	350	68	652	05/14/1963	Domestic	Unconsolidated
14-3	T19N-R2E, Sect. 14	2000	243	452	08/21/2001	Domestic	Unconsolidated
14-4	T19N-R2E, Sect. 14	1150	246	502	03/26/2002	Domestic	Unconsolidated
14-5	T19N-R2E, Sect. 14	2250	283	433	04/23/2002	Domestic	Unconsolidated
15-1	T19N-R2E, Sect. 15	5000	264	451	06/29/1977	Domestic	Unconsolidated
15-2	T19N-R2E, Sect. 15	5100	253	468	04/19/1978	Domestic	Unconsolidated
15-3	T19N-R2E, Sect. 15	5150	260	465	04/19/1978	Domestic	Unconsolidated
15-4	T19N-R2E, Sect. 15	5000	245	468	04/19/1978	Domestic	Unconsolidated
15-5	T19N-R2E, Sect. 15	4750	248	485	04/19/1978	Domestic	Unconsolidated
15-6	T19N-R2E, Sect. 15	5500	290	416	11/02/1970	Domestic	Unconsolidated
15-7	T19N-R2E, Sect. 15	6250	236	439	08/09/1961	Domestic	Unconsolidated
15-8	T19N-R2E, Sect. 15	6250	222	430	00/00/1962	Domestic	Unconsolidated
15-9	T19N-R2E, Sect. 15	4800	251	425	00/00/1971	Domestic	NR
15-10	T19N-R2E, Sect. 15	3800	70	590	04/22/1941	Domestic	Unconsolidated
15-11	T19N-R2E, Sect. 15	3800	13	645	00/00/1921	Domestic	Unconsolidated
15-12	T19N-R2E, Sect. 15	2700	41	607	06/00/1959	Test Hole	N/A

TABLE 812.314-5

POTABLE WATER WELL DATA SUMMARY – WELLS WITHIN 2 MILES

Clinton Landfill No. 3

Well No.	Well Location	Distance from Site (feet)	Boring Completion Depth (ft. bgs)	Approx. Water Bearing Unit Elev. (ft. AMSL)	Date Installed	Use	Aquifer Type
15-13	T19N-R2E, Sect. 15	3250	230	470	09/24/1985	Industrial/Comm.	Unconsolidated
15-14	T19N-R2E, Sect. 15	4900	242	445	10/24/2001	Domestic	Unconsolidated
16-1	T19N-R2E, Sect. 16	7700	280	484	05/05/1988	Domestic	Unconsolidated
16-2	T19N-R2E, Sect. 16	9400	71	604	00/00/1964	Domestic	Unconsolidated
16-3	T19N-R2E, Sect. 16	10700	110	590	00/00/1928	Domestic	NR
16-4	T19N-R2E, Sect. 16	5800	74	571	10/09/2001	Domestic	Unconsolidated
16-5	T19N-R2E, Sect. 16	6000	74	N/A	07/24/2001	Domestic	NR
17-1	T19N-R2E, Sect. 17	11300	242	433	00/00/1963	Domestic	Unconsolidated
17-2	T19N-R2E, Sect. 17	11800	302	373	11/08/1989	Domestic	Unconsolidated
18-1	T19N-R3E, Sect. 18	10600	90	640	00/00/1967	Domestic	Unconsolidated
18-2	T19N-R3E, Sect. 18	10350	157	593	09/19/1994	Domestic	Unconsolidated
18-3	T19N-R3E, Sect. 18	9300	22	705	00/00/1900	Domestic	NR
18-4	T19N-R3E, Sect. 18	9100	166	586	05/10/1971	Domestic	Unconsolidated
18-6	T19N-R3E, Sect. 18	9800	167	606	06/15/1995	Domestic	Unconsolidated
18-7	T19N-R3E, Sect. 18	9950	164	593	05/15/1993	Domestic	Unconsolidated
18-9	T19N-R3E, Sect. 18	9400	151	559	05/10/2002	Domestic	Unconsolidated
18-10	T19N-R3E, Sect. 18	10300	304	472	06/19/2001	Domestic	Unconsolidated
19-3	T19N-R3E, Sect. 19	9700	80	650	00/00/1900	Domestic	NR
21-1	T19N-R2E, Sect. 21	10800	302	423	06/11/1997	Domestic	Unconsolidated
21-2	T19N-R2E, Sect. 21	10550	110	590	10/18/1943	Domestic	Unconsolidated
21-3	T19N-R2E, Sect. 21	8550	232	495	10/18/1978	Domestic	Unconsolidated
21-4	T19N-R2E, Sect. 21	10100	69	661	07/02/1991	Domestic	Unconsolidated
21-5	T19N-R2E, Sect. 21	7600	90	638	11/00/1945	Domestic	Unconsolidated
21-6	T19N-R2E, Sect. 21	10500	97	613	04/00/1972	Domestic	Unconsolidated
21-7	T19N-R2E, Sect. 21	10600	296	419	08/27/2001	Domestic	Unconsolidated
21-8	T19N-R2E, Sect. 21	12000	296	488	07/23/2001	Domestic	Unconsolidated
22-1	T19N-R2E, Sect. 22	9900	86	635	12/08/1999	Domestic	Unconsolidated

TABLE 812.314-5

POTABLE WATER WELL DATA SUMMARY – WELLS WITHIN 2 MILES

Clinton Landfill No. 3

Well No.	Well Location	Distance from Site (feet)	Boring Completion Depth (ft. bgs)	Approx. Water Bearing Unit Elev. (ft. AMSL)	Date Installed	Use	Aquifer Type
22-2	T19N-R2E, Sect. 22	9950	93	605	00/00/1900	Domestic	Unconsolidated
22-3	T19N-R2E, Sect. 22	7300	150	575	00/00/1916	Domestic	NR
22-4	T19N-R2E, Sect. 22	7350	300	400	08/31/1998	Domestic	Unconsolidated
22-5	T19N-R2E, Sect. 22	5850	260	478	12/00/1979	Domestic	Unconsolidated
22-6	T19N-R2E, Sect. 22	5650	77	639	06/11/1947	Industrial/Comm.	Unconsolidated
22-7	T19N-R2E, Sect. 22	9700	76	629	10/19/2001	Domestic	Unconsolidated
22-8	T19N-R2E, Sect. 22	9350	76	632	10/10/2001	Domestic	Unconsolidated
22-9	T19N-R2E, Sect. 22	10750	88	613	06/26/2002	Domestic	Unconsolidated
23-1	T19N-R2E, Sect. 23	6400	93	625	06/12/1943	Domestic	Unconsolidated
23-2	T19N-R2E, Sect. 23	6250	150	575	00/00/1921	Domestic	NR
23-3	T19N-R2E, Sect. 23	5800	145	NR	00/00/1918	Domestic	Unconsolidated
23-4	T19N-R2E, Sect. 23	4750	28	699	11/15/1989	Domestic	NR
24-2	T19N-R2E, Sect. 24	9600	292	486	08/15/1994	Domestic	Unconsolidated
24-3	T19N-R2E, Sect. 24	9300	125	605	00/00/1920	Domestic	NR
24-4	T19N-R2E, Sect. 24	8200	150	575	00/00/1920	Domestic	NR
26-2	T19N-R2E, Sect. 26	10550	130	605	00/00/1916	Domestic	NR
33-1	T20N-R2E, Sect. 33	9200	115	620	07/26/1946	Domestic	Unconsolidated
33-4	T20N-R2E, Sect. 33	10100	29	701	09/30/1987	Domestic	Unconsolidated
33-5	T20N-R2E, Sect. 33	11400	120	638	01/13/2003	Domestic	Unconsolidated
34-1	T20N-R2E, Sect. 34	9300	105	611	05/26/1992	Domestic	NR
34-2	T20N-R2E, Sect. 34	9700	360	N/A	05/11/1972	Test Hole	N/A
34-3	T20N-R2E, Sect. 34	9800	356	369	01/00/1973	Industrial/Comm.	Unconsolidated
34-4	T20N-R2E, Sect. 34	9900	320	N/A	11/16/1971	Test Hole	N/A
34-5	T20N-R2E, Sect. 34	9950	339	N/A	11/18/1971	Test Hole	N/A
34-6	T20N-R2E, Sect. 34	10450	360	NR	00/00/1954	Test Well	NR
34-7	T20N-R2E, Sect. 34	10300	100	635	10/10/1941	Domestic	Unconsolidated
34-8	T20N-R2E, Sect. 34	10550	338	434	00/00/1973	Community	NR

TABLE 812.314-5

POTABLE WATER WELL DATA SUMMARY – WELLS WITHIN 2 MILES

Clinton Landfill No. 3

Well No.	Well Location	Distance from Site (feet)	Boring Completion Depth (ft. bgs)	Approx. Water Bearing Unit Elev. (ft. AMSL)	Date Installed	Use	Aquifer Type
						Supply	
34-9	T20N-R2E, Sect. 34	10500	346	435	00/00/1972	Community Supply	NR
34-11	T20N-R2E, Sect. 34	10500	372	N/A	00/00/1954	Test Hole	N/A
34-12	T20N-R2E, Sect. 34	10300	349	NR	00/00/1954	Test Well	N/A
34-15	T20N-R2E, Sect. 34	9600	360	NR	00/00/1923	NR	NR
34-17	T20N-R2E, Sect. 34	10200	345	385	00/00/1948	NR	NR
34-18	T20N-R2E, Sect. 34	10300	345	385	00/00/1954	Test Hole	N/A
34-21	T20N-R2E, Sect. 34	10000	361	379	00/00/1946	NR	NR
34-22	T20N-R2E, Sect. 34	8750	105	630	06/24/1992	Domestic	Unconsolidated
35-1	T20N-R2E, Sect. 35	8300	81	642	08/15/1971	Domestic	Unconsolidated
35-2	T20N-R2E, Sect. 35	9600	324	402	00/00/1962	Non-Community	NR
35-5	T20N-R2E, Sect. 35	10550	78	658	02/00/1946	Domestic	Unconsolidated
36-1	T20N-R2E, Sect. 36	10600	65	N/A	00/00/1925	Domestic	Unconsolidated
36-2	T20N-R2E, Sect. 36	10450	57	N/A	00/00/0000	Domestic	Unconsolidated

Notes:

1) ft. bgs = feet below ground surface
2) ft. AMSL = feet above mean sea level
3) N/A = Not Applicable
4) NR = Not Reported
5) Sources: Illinois State Water Survey (Private Well Database and PIC's Database) and Illinois State Geological Survey

ILLINOIS
DEPARTMENT OF
NATURAL
RESOURCES

Illinois State Water Survey

Main Office • 2204 Griffith Drive • Champaign, IL 61820-7495 • *Tel (217) 333-2210* • *Fax (217) 333-6540*
Peoria Office • P.O. Box 697 • Peoria, IL 61652-0697 • *Tel (309) 671-3196* • *Fax (309) 671-3106*

SWS

12/17/2004

Mr. Mike Cameron
PDC Technical Services
4349 Southport Road
Peoria, IL 61615

Dear Mr. Cameron:

As you requested during our telephone conversation on December 16, 2004, we are enclosing printouts from our Private Well Database and Public, Industrial, Commercial Survey (PICS) Database for the following locations:

COUNTY	TOWNSHIP	RANGE	SECTIONS
DEWITT	19 NORTH	2 EAST	01-04, 09-16, 21-27
DEWITT	19 NORTH	3 EAST	06, 07, 18, 19
DEWITT	20 NORTH	2 EAST	33-36

No available information is indicated on the printout by the statement "0 records were found for the specified locations." Also enclosed are explanations of the Illinois State Water Survey Private Well and PICS Databases.

The data included in the Private Well Database are those non-municipal wells which are known to the Illinois State Water Survey, and the PICS Database is an inventory of municipal well information and large industrial groundwater users. We may not have a copy of well records for these groundwater users.

The enclosed statement reflects the charges for this request which includes a $35.00 query fee for PICS information, a $35.00 query fee for Private well information, and a $0.10 per page charge for 26 pages, plus a $5.00 shipping and handling fee, totaling $77.60.

If you have any questions or if I can be of further assistance, please call.

Sincerely,

Susie Casey

Susie Dodd-Casey
Associate Supportive Scientist
Groundwater Section
Phone: (217) 333-9043

Enclosures as stated

ILLINOIS STATE WATER SURVEY

2204 Griffith Drive
Champaign, IL 61820-7495
217) 333-4300
Fax: (217) 244-0777

INVOICE/ STATEMENT

SOLD TO:
Mike Cameron
PDC Technical Services
4349 Southport Road
Peoria, IL 61615

SHIP TO:
Mr. Mike Cameron
PDC Technical Services
4349 Southport Road
Peoria, IL 61615

INVOICE NUMBER: GW05-649
INVOICE DATE: 12/17/2004
CUSTOMER REF. :
PROJECT :

SALES PERSON: sdodd

DESCRIPTION	AMOUNT
PICS Database Query	$35.00
Private Well Database Query	$35.00
Charge for 26 pages/lines @ $0.10	$2.60
SUBTOTAL	$72.60
S & H	$5.00
TOTAL DUE	$77.60

PAID
12/30/04
ck#25718

MAKE CHECK PAYABLE TO: UNIVERSITY OF ILLINOIS -- IL State Water Survey
Attention: Administration
NET 30 DAYS
Please return a COPY of the invoice with payment

For Accounting Use Only: Credit Fund 301750 740005 740018 A02

ILLINOIS STATE WATER SURVEY
PICS DATABASE EXPLANATION

SWS ID	ISWS Facility ID Number
NAME	Facility Name
WELL #	ISWS Point Source Well/Intake Number
STATUS	Point Source Status of Well/Intake
	A = Abandoned - no longer in existence, no affidavit on file, or do not know if it has been filled in C = Capped - cap attached to top D = Disconnected - disconnected from system E = Emergency - available for standby use I = In Use - produces major portion of water O = Observation - used for water level measurements S = Sealed - filled in U = Unused - exists but not used
FIPS	County Code Number
TWN	Civil Township
RNG	Range
SEC	Section
PLOT	10-acre Plot Location within the Section
DEPTH	Depth (well to nearest ft)
TYPE LOG	D = Driller's log O = Other X = Chemical C = Correlated log S = Sample study log - = Log not available
YEAR	Year Point Source Initially Constructed
DRILLER	Well Drilling Contractor of Well

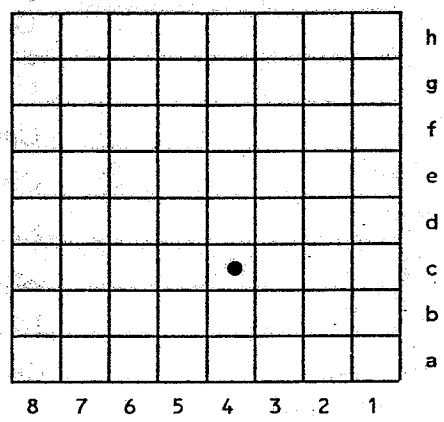
May 2002

ISWS 10-ACRE PLOT LOCATION SYSTEM

The following is an explanation of the ISWS Private Well Database location system.

The location system uses Township, Range, and Section. The location consists of five parts: County abbreviation, Township, Range, Section, and coordinate within the section (subsection or 10-acre plot). Sections are divided into rows of 1/8-mile squares. Each 1/8-mile square contains 10 acres and corresponds to a quarter of a quarter of a quarter section. A normal section of 1 square mile contains 8 rows of 1/8-mile squares; an odd-sized section contains more or fewer rows. Rows are numbered from east to west and lettered from south to north as shown in the diagram.

Example: St. Clair County, FIP No. 163
T2N, R10W
Section 23



The location of the well shown above is 163 2N10W-23.4c. The well point is located at the center of this 10-acre plot.

ILLINOIS STATE WATER SURVEY

PRIVATE WELL DATABASE EXPLANATION

WID	Illinois State Water Survey Identification Number
FIPS	County Code Number
TWN	Civil Township
RNG	Range
SEC	Section
PLOT	10-acre Plot Location within the Section
OWNER	Well Owner
DRILLER	Well Drilling Contractor of Well
DATE DRILLED	Date Initially Drilled
DEPTH	Depth (well to nearest ft)
RECORD TYPE	Record Type (types of information on file) R - Construction Report G - Geology S - Sealed A - Affidavit C - Chemical Analysis I - Inventory X - Indicates Comment in Owners Field Something Unusual O - Any Other Type of Record P - Pump Installation
USE	Well Use (two-letter code indicating the usage of the well) CO - Conservation CS - Community Supply DO - Domestic DW - De-Watering IC - Industrial/Commercial IN - Injection Well IR - Irrigation MO - Monitoring NC - Non-Community NW - Non-Well Source OB - Observation PK - Park RC - Recovery Well RW - Relief Well SC - School ST - State

USE

(Continued)
TB - Test Boring
TH - Test Hole
TW - Test Well
~ - Unknown

WELL TYPE

Well Type (two-letter code indicating the type of well)
BLANK - Assumed Drilled
BD - Bored
DL - Drilled
DU - Dug (Being Phased Out)
DR - Driven
NW - Non-Well
SP - Sand Point
SG - Spring
~ - Assumed Drilled or Possibly Unknown

AQUIFER TYPE

Aquifer Type (two-letter code indicating aquifer type)
BR - Bedrock
DH - Dry Hole
SW - Surface Water
UN - Unconsolidated
~ - Unknown

STAT LVL Static Level - Reported non-pumping water level
PUMP LVL Pumping Level - Reported water level during initial pumping of the well
PUMP GPM Pumping GPM - Gallons per minute at time of well construction

THE DATA IN THE PRIVATE WELL DATABASE IS A LISTING OF THE NON-COMMUNITY WELLS WHICH ARE KNOWN TO THE ILLINOIS STATE WATER SURVEY (ISWS). THIS INFORMATION HAS BEEN ENTERED VERBATIM FROM WELL LOGS SUBMITTED BY THE DRILLER, FROM CHEMICAL ANALYSIS REPORTS, FROM WELL SEALING FORMS, OR WELL INVENTORY FORMS FROM THE 1930-34 WELL SURVEY AND OTHER SPECIAL PROJECTS. THE ACCURACY OF THIS DATA IS CONTROLLED BY THOSE WHO SUBMITTED THE FORM. INFORMATION IN THE PRIVATE WELL DATABASE HAS NOT BEEN VERIFIED.

Illinois State Water Survey Private Well Database

Thursday, December 16, 2004

County: DEWITT

Township: 19N

Range: 02E

Sections: 01-04,09-16,21-27

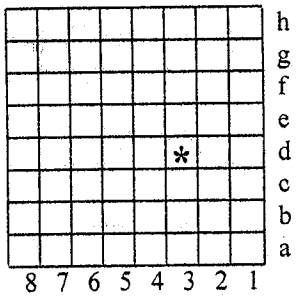
Records Found: 163

Questions: Contact the Illinois State Water Survey's Ground Water Division @(217)-333-9043

Publication: Please cite the Illinois State Water Survey's Private Well Database in all publications based wholly or partially on this information.

Note: The data in the Private Well Database is a listing of non-municipal wells which are known to the Illinois State Water Survey (ISWS). This information has been entered verbatim from well logs submitted by the driller, chemical analysis reports, well sealing forms, well inventory forms from the 1930-1934 well survey, and other special projects. The accuracy of this data is controlled by those submitting the forms. Information in the Private Well Database has not been verified.

This data cannot be resold or redistributed. The Illinois State Water Survey must be acknowledged in any use of this material.



Location of a 10-acre-plot within a section:

The origin can be found at the lower right-hand-corner of an 8 x 8 grid. In this example, the well is in the 10-acre plot '3d'.

WID	FIPS	TWN	RNG	SEC	PLOT	OWNER	DRILLER	DATE	DEPTH	TYPE	USE	TYPE	TYPE	LVL	VL	GPM
214768	039		02E	01		J F ZIEGLER		08/00/1944	35	C	DO	--	--			
214769	039	19N	02E	01	7F	J FRANK ZIEGLER - 1948	NEWBERRY	08/05/1941	90	RG	DO	--	UN	60	80	5
tenant-Sprague																
213968	039	19N	02E	01	8D	PAUL AFRAGUE	DE MENT	10/25/1975	129	RG	DO	--	UN	80	95	6
260832	039	19N	02E	02		REVERE WARE CORP. #201-S	MARLO	12/19/1992	20	R	MO	DL	--			
260834	039	19N	02E	02		REVERE WARE CORPORATION #VE-1	MARLO	12/18/1992	17	RG	MO	BD	UN			
260835	039	19N	02E	02		REVERE WARE CORPORATION #VE-2	MARLO	12/18/1992	17	RG	MO	DL	UN			
260836	039	19N	02E	02		REVERE WARE CORPORATION #VE-3	MARLO	12/16/1992	17	RG	MO	DL	UN			
260837	039	19N	02E	02		REVERE WARE CORPORATION #VE-4	MARLO	12/18/1992	17	RG	MO	BD	UN			
260838	039	19N	02E	02		REVERE WARE CORPORATION #VE-5	MARLO	12/17/1992	17	RG	MO	DL	UN			
291306	039	19N	02E	02	1E	DON COUVE #2	LAYTEN	09/11/1996	320	RG	DO	DL	UN	140	141	8
299641	039	19N	02E	02	3C	DEWITT CO. HIGHWAY DEPT.	MASHBURN DRLG/ROBERT	10/16/1997	314	RG	ST	DL	UN	136	145	30
214492	039	19N	02E	02	4C	J A CLARK (HARRY LITSINBEGER	WOOLLEN BROS	08/20/1940	96	RG	DO	--	UN	40	70	5
Paul A Sprague-1963																
237237	039	19N	02E	02	7F	DAN HAYNES #1	MASHBURN JR	07/01/1992	323	RG	DO	--	UN	121	125	10
220094	039	19N	02E	03		J A BOLIN MEAT SHOP	WOOLLEN	12/01/1945	173	RG	IC	--	UN	70		6
309384	039	19N	02E	03	2C	FRANK RUSSEL	JOHN GAZA	03/24/1999	295	RG	DO	DL	UN	134	159	

WID	FIPS	TWN	RNG	SEC	PLOT	OWNER	DRILLER	DATE	DEPTH	TYPE	USE	TYPE	TYPE LVL	LVL	GPM
220031	039	19N	02E	03	2G	CLINTON SANITARY DIST	WOOL	07/00/1935	86	RGC	IC	--	UN	72	15
296599	039	19N	02E	03	3C	DEWITT CO. HIGHWAY DEPT.	MASHBURN DRLG/ROBERT	05/20/1997	335	RGS	ST	--	BR		
NO WELL COMPLETED ACCORDING TO LOG HOLE SEALED.								Sealed: 5/20/97							
308098	039	19N	02E	03	3F	DOUG & LEILANI MAXWELL	KICKAPOO DRLG./DALE	11/10/1998	315	RG	DO	DL	UN	130	138	15
213970	039	19N	02E	03	4B	WELBY CYRULIK #1	MASHBURN JR	10/22/1987	290	RG	IC	--	UN	126	132	25
Dans Country Market																
213972	039	19N	02E	03	4B	CROSS BROS #1	MARSHBURN BROS	08/00/1988	291	RG	DO	--	UN	126	128	15
213985	039	19N	02E	03	4C	C WANNEBO		00/00/1926	34	O	DO	--	--			
213986	039	19N	02E	03	4D	EARL HOLT #2	DE MENT	04/15/1980	93	RG	DO	--	UN	40	60	5
356987	039	19N	02E	03	4D	TOOL EXC	SCOTT TOOL	00/00/0000	20	A	IN	DU	~~			
								Sealed: 6/16/03								
260206	039	19N	02E	03	4E	DAVE WATERS CONST. #1193	MASHBURN BROS.	11/00/1993	286	RG	DO	DL	UN	125	135	46
LOT 7 WOODHAVEN ESTES.																
246267	039	19N	02E	03	4E	DAVE WATERS CONST.	MASHBURN BROS.	11/00/1993	286	RG	DO	--	UN	126	135	35
Woodhaven Estes. Lot 4																
246268	039	19N	02E	03	4E	DAVE WATERS CONST.	MASHBURN BROS.	11/00/1993	289	RG	DO	--	UN	125	130	40
Wood Haven Eswtes. Lot 12																
246269	039	19N	02E	03	4E	DAVE WATERS CONST.	MASHBURN BROS.	11/00/1993	289	RG	DO	--	UN	126	132	40
Lot 13																
246270	039	19N	02E	03	4G	DAVE WATERS CONST.	MASHBURN BROS.	11/00/1993	286	RG	DO	--	UN	126	134	35
Wood Haven Lot 14																
220045	039	19N	02E	03	5D	NICKELS IMPLEMENT CO	WOOLLEN	11/08/1945	280	RG	IC	--	UN	125	143	7
232063	039	19N	02E	03	6C	JIM POLEN #3	MASHBURN BROS	05/28/1992	283	RG	DO	--	UN	123	130	40

WID	FIPS	TWN	RNG	SEC	PLOT	OWNER	DRILL	DATE	DEPTH	TYPE	USE	TYPE	TYPE	LVL	VL	GPM
232064	039	19N	02E	03	6C	JIM POLEN #2 LOT 13	MASHBURN BROS	05/21/1992	288	RG	DO	--	UN	121	135	40
213988	039	19N	02E	03	6H	L A PHACES	KIRBY	00/00/1900	150	O	DO	--	--			
232065	039	19N	02E	03	7E	JACK DUPREE #1	MASHBURN JR	06/23/1992	302	RG	DO	--	UN	119	124	30
231230	039	19N	02E	03	7G	TEXAS TOWNSHIP #1	WASHBURN BROS	07/26/1991	303	RG	CS	--	UN	121	135	35
213990	039	19N	02E	04	1F	ROBT SHORT	DE MENT	11/20/1971	128	RG	DO	--	UN	49	55	10
213991	039	19N	02E	04	1H	G ADAMS		00/00/1900	35	O	DO	BD	--			
213992	039	19N	02E	04	2B	CARL HOLTZ	DE MENT	00/00/1964	136	R	DO	--	UN			
288866	039	19N	02E	04	2E	BELINDA RITTENHOUSE #1	MASHBURN	07/16/1995	79	RG	DO	DL	UN	42	47	12
220050	039	19N	02E	04	4A	S & K ENTERPRISES #1	EATON	06/29/1978	142	RG	IC	--	UN	54	62	60
220051	039	19N	02E	04	4A	S & K ENTERPRISES	EATON	09/12/1978	138	RG	IC	--	UN	49	62	60
213994 gravel bottom	039	19N	02E	04	6H	W I CACKLEY		00/00/1900	36	OG	DO	--	UN			
324875	039	19N	02E	04	7A	JAMES E. UNDERWOOD	MASHBURN DRILLING	08/02/2000	291	RG	DO	DL	UN	133	136	12
323145	039	19N	02E	04	7A	RICK WOOLRIDGE	MASHBURN DRILLING	06/19/2000	140	RG	DO	DL	UN	73	92	12
305531	039	19N	02E	04	8A	CRAIG & JULIE HINDS	MASHBURN DRLG/ROBERT	09/08/1998	294	RG	DO	DL	BR	141	166	10
324873	039	19N	02E	04	8A	FFRED CRUTCHFIELD #1	MASHBURN DRILLING	08/18/1999	276	RG	DO	DL	UN	125	127	12

WID	FIPS	TWN	RNG	SEC	PLOT	OWNER	DRIL	DATE	DEPTH	TYPE	USE	TYPE	TYPE	LVL	VL	GPM
331868	039	19N	02E	04	8A	MERLE CRUTCHER #1	MASHBURN DRILLING	06/24/2001	144	RG	DO	DL	UN	80	101	12
258711	039	19N	02E	04	8H	MIKE NORRIS #1	MASHBURN	04/22/1994	273	RG	DO	DL	UN	114	118	12
214100	039	19N	02E	09		LEONARD W INGHAM		00/00/1930		O	DO	SG	UN			
214101	039	19N	02E	09	1E	CLYDE WADE	KIRBY	00/00/1916	88	O	DO	--	--			
214494	039	19N	02E	09	1E	CLYDE WAD 1963	WOOLLEN BROS	00/00/1951	96	RG	DO	--	UN	60	72	5
deepened from 88' to 96'																
339565	039	19N	02E	09	2A	RODNEY PURDUE #1	KICKAPOO DRILLING	11/14/2001	277	RG	DO	DL	UN	114	116	13
214495	039	19N	02E	09	4D	E U HULLINGER-1948	NEWBERRY	09/16/1939	143	RG	DO	--	UN	90	95	5
214102	039	19N	02E	09	4D	CHAS STRAUGE	STRAUGE	00/00/1900	155	OG	DO	--	UN			
went through a vein of water bearing sand																
365645	039	19N	02E	09	7H	GARY STEPHENS #!	MASHBURN WELL DRILLING/ROBERT	09/24/2004	280	RG	DO	DL	BR	115	117	15
311387	039	19N	02E	09	8C	SID & KRISTA ROHRSCHEIB #1	MASHBURN DRLG/ROBERT	05/21/1999	275	RG	DO	DL	BR	127	129	15
348870	039	19N	02E	09	8D	SHELBY CYRVLICK #1	MASHBURN WELL DRILLING/ROBERT	07/02/2003	282	RG	DO	DL	BR	123	129	40
LOT 1 BANTA LAKES SUBD.																
222141	039	19N	02E	09	8E	EMILY BANTA	MASHBURN BROS	06/22/1990	284	RG	DO	--	UN	114	118	15
344047	039	19N	02E	10	1A	CLINTON LANDFILL, INC. #G-51D	SKS ENGINEERS/TODD SKINNER	09/16/2002	115	RG	MO	DL	UN			
344048	039	19N	02E	10	1A	CLINTON LANDFILL, INC. #G-52D	SKS ENGINEERS,INC/TODD	09/09/2002	118	RG	MO	DL	UN			
357710	039	19N	02E	10	1B	CLINTONLANDFILL, INC.	JOHN BERRY	00/00/2000 Sealed: 8/15/03	58	A	MO	DL				

WID	FIPS	TWN	RNG	SEC	PLOT	OWNER	DRILLER	DATE	DEPTH	TYPE	USE	TYPE	TYPE	LVL	VL	GPM
214103	039	N	02E	10	2A	MAX WALDEN #2	MASHBURN	11/00/1976	279	RG	DO	--	UN	98	00	10
214104	039	19N	02E	10	2B	MAX WALDEN #1	MASHBURN	07/00/1977	265	RG	DO	--	UN	90	94	10
214105	039	19N	02E	10	3E	CLINTON LANDFILL #1	MASHBURN	05/11/1988	281	RG	IC	--	UN	108	112	60
340907	039	19N	02E	10	4E	CLINTON LANDFILL, INC. #EX-11	SKS ENGINEERS, INC./SKINNER	02/13/2002	76	RGO	MO	BD	UN			
INTENDED TO INSTALL UNIT TO BE MONITORIED DRY SO NO WELL INSTALLED BACKFILLED																
340904	039	19N	02E	10	4E	CLINTON LANDFILL, INC. #T-56D	SKS ENGINEER INC./SKINNER	12/10/2001	48	RGA	MO	BD	UN			
340905	039	19N	02E	10	4E	CLINTON LANDFILL, INC. #T-57D	SKS ENGINEERS, INC./SKINNER	12/27/2001	50	RGO	MO	BD	UN			
268702	039	19N	02E	10	4G	WARREN MARTIN	MASHBURN	05/31/1995	288	RG	DO	DL	UN	125	129	15
214106	039	19N	02E	10	5A	CHESTER IVES	IVES	00/00/1900	16	O	DO	BD	--			
water supplied from spring																
214109	039	19N	02E	10	5D	WM QUEERFELD	WOOLLEN BROS	11/00/1930	76	OC	DO	--	--			
214110	039	19N	02E	10	5E	LARRY CISCO	DE MENT	07/12/1973	88	RG	DO	--	UN	40	47	6
214111	039	19N	02E	10	5E	CARL LAWS #1	MASHBURN BROS	09/00/1988	280	RG	IR	--	UN	118	121	15
214112	039	19N	02E	10	6H	C H MOORE ESTATE	KIRBY	00/00/1912	130	O	DO	--	--			
277159	039	19N	02E	10	6H	C.H. MOORE ESTATE #2	SIMS, JR.	05/30/1995	293	RG	DO	--	DH			
280161	039	19N	02E	10	6H	C.H. MOORE TRUST ESTATE	LUTTRELL DRILLING	09/12/1995	85	RG	DO	BD	UN			

WID	FIPS	TWN	RNG	SEC	PLOT	OWNER	DRIL	DATE	DEPTH	TYPE	USE	TYPE	TYPE	LVL	LVL	GPM
214113	039	19N	02E	10	7C	STAN IRVIN #1	LAYT	05/14/1984	104	RG	DO	--	UN	56		
220000	039	19N	02E	10	8G	CITY OF CLINTON		07/00/1975	18	C	MO	--	--			
214556	039	19N	02E	11	2B	WM ADAMS 1948	WOOLLEN	09/16/1942	134	RG	DO	--	UN	53	125	5
332617	039	19N	02E	11	4B	CLINTON LANDFILL, INC. #EX-5	SKS ENGINEERS	04/04/2000	92	RG	MO	DL	UN	55		
214557	039	19N	02E	11	4H	MRS J P GILLEN/MARY GILLEN1948	NEWBERRY	11/05/1945	103	RG	DO	--	UN	60	66	5
287498	039	19N	02E	11	5C	GARY WARD	MASHBURN	04/09/1996	145	RG	DO	DL	UN	67	74	12
332606	039	19N	02E	11	5D	CLINTON LANDFILL, INC. #EX-4	SKS ENGINEERS	04/06/2000	94	RG	MO	BD	UN	33		
332605	039	19N	02E	11	6A	CLINTON LANDFILL, INC. #EX-3	SKS & ASSOCIATES	12/04/1996	100	RG	MO	DL	UN			
332604	039	19N	02E	11	7B	CLINTON LANDFILL, INC. #EX-2	SKS & ASSOCIATES	12/06/1996	109	RG	MO	BD	UN			
332603	039	19N	02E	11	7D	CLINTON LANDFILL,INC. #EX-1	SKS & ASSOCIATES	12/03/1996	109	RG	MO	BD	UN			
340906	039	19N	02E	11	8D	CLINTON LANDFIL, INC. #EX-10	SKS ENGINEERS, INC./SKINNER	12/11/2001	49	RGO	MO	BD	UN			
214115	039	19N	02E	12	3A	TERRY WILLIS LOT #1	DE MENT	06/07/1984	82	RG	DO	--	UN	14		10
214117	039	19N	02E	12	4A	JOHN WILLIS		00/00/1900	8	OC	DO	SG	--			
265931	039	19N	02E	12	4E	ST OF IL/WELDON SPRINGS PK #10	SHADOW MFG/HATFIELD	07/08/1994	141	RGC	ST	DL	UN			
SHOWER HOUSE-DAY USE AREA																
214116	039	19N	02E	12	5A	TERRY WILLIS #3 LOT 1	DE MENT	03/20/1977	142	RG	DO	--	UN	40	45	10

WID	FIPS	TWN	RNG	SEC	PLOT	OWNER	DRILLER	DATE	DEPTH	TYPE	USE	TYPE	TYPE	LVL	LVL	GPM
214118	039	19N	02E	12	6A	WALTER BERRY	DE ME	12/10/1980	70	RG	DO	DR	UN			
214119	039	19N	02E	12	6H	C M HARTSOCK		00/00/1893	75	O	DO	--	--			
214496	039	19N	02E	12	7D	WM ADAMS-1948	WOOLLEN	04/05/1946	25	RG	DO	--	UN	5	17	4
214120	039	19N	02E	12	8G	JOHN HOLT #2	DE MENT	07/03/1971	68	RG	DO	--	UN	40	45	5
214121	039	19N	02E	13		JAMES L MONNORW		00/00/1909	70	OG	DO	BD	UN			
214122	039	19N	02E	13		C H MOORE TRUST ESTATE	MOORES HARDWARE P&H	11/14/1989	38	A	DO	BD	--			
David & Roger Massey Farm Operators																
214123	039	19N	02E	13	1E	S LILLIARD		00/00/1920	60	O	DO	--	--			
214124	039	19N	02E	13	4D	LARRY AUSTIN #1	MASHBURN JR	04/27/1990	282	RG	DO	--	UN	125	150	17
323766	039	19N	02E	13	4D	LARRY BAKER	S & J DRILLING	06/24/2000	270	RG	DO	DL	UN	66	86	30
232067	039	19N	02E	13	5D	ARLEN LEBEGUE #1	MARSHBURN JR	07/02/1992	108	RG	DO	--	UN	5	10	15
214770	039	19N	02E	13	6A	SOLOMAN WEAVER	WOOLLEN BROS	10/02/1943	127	RG	DO	--	UN	60	64	6
G F Weaver-1963																
320017	039	19N	02E	13	7G	PAT DANISON	MASHBURN DRILLING	10/26/1999	276	RG	DO	DL	UN	96	99	15
349752	039	19N	02E	13	7H	DAVID RUSSELL #1	MASHBURN WELL DRILING/ROBERT	05/24/2003	286	RG	DO	DL	UN	115	117	15
312531	039	19N	02E	13	7H	LARRY MCGUIRE #1	MASHBURN DRILLING CO	09/01/1999	81	RG	DO	DL	UN	49	51	12
336335	039	19N	02E	14	1F	ERIC & HALLIE COOK #1	KICKAPOO DRILLING	08/21/2001	246	RG	DO	DL	UN	88	89	11

WID	FIPS	YN	RNG	SEC	PLOT	OWNER	DRIL	DATE	DEPTH	TYPE	USE	TYPE	TYPE	LVI	LVL	GPM
344376	039	N	02E	14	1G	BRIAN WILLIAMS #1	MASH N WELL DRILLING/ROBERT	03/29/2002	283	RG	DO	DL	UN	104	109	15
344375	039	19N	02E	14	2G	MIKE KROEGER #1	MASHBURN WELL DRILLING/ROBERT	06/05/2002	246	RG	DO	DL	UN	70	73	12
323143	039	19N	02E	14	2G	GARY & DOLORES WARD #1	MASHBURN DRILLING	05/17/2000	274	RG	DO	DL	BR	84	87	15
214125	039	19N	02E	14	4H	C D PERKINSON	MASHBURN BROS	05/14/1963	68	R	DO	--	UN			6
332621	039	19N	02E	14	5G	CLINTON LANDFILL, INC. #EX-8S	SKS ENGINEERS	03/29/2001	44	RG	MO	DL	UN	7		
332622	039	19N	02E	14	5G	CLINTON LANDFILL INC #EX-8D	SKS ENGINEERS	03/29/2001	44	RG	MO	DL	UN			
332619	039	19N	02E	14	5H	CLINTON LANDFILL INC. #EX-6	SKS ENGINEERS	04/03/2000	59	RG	MO	DL	UN	22		
332623	039	19N	02E	14	8G	CLINTON LANDFILL, INC.#EX-9	SKS ENGINEERS	03/28/2001	44	RG	MO	DL	UN	11		
332620	039	19N	02E	14	8H	CLINTON LANDFILL INC. #EX-7	SKS ENGINEERS	03/30/2000	69	RG	MO	DL	UN	64		
214126 lot 51	039	19N	02E	15		CENTRAL ILL BUILDING & LOAN	MASHBURN JR	05/19/1978	264	RG	DO	--	UN	78	76	30
214127	039	19N	02E	15		CENTRAL ILL BLDG & LOAN LOT 32	MASHBURN UR	03/19/1978	248	RG	DO	--	UN	47	55	65
214128	039	19N	02E	15		CENTRAL ILL BLDG & LOAN LOT 39	MASHBURN JR	12/00/1978	245	RG	DO	--	UN	45	50	60
214129	039	19N	02E	15		CENTRAL ILL BLDG & LOAN LOT 48	MASHBURN JR	12/00/1978	260	RG	DO	--	UN	55	60	60
214130	039	19N	02E	15		CENTRAL ILL BLDG & LOAN LOT 44	MASHBURN	12/00/1978	253	RG	DO	--	UN	60	65	60
338945 COUNTRY CLUB ACRES SUBD.	039	19N	02E	15	5D	MARVIN MURPHY #1	KICKAPOO DRILLING	12/07/2001	242	RG	DO	DL	UN	46	46	15

WID	FIPS	TWN	RNG	SEC	PLOT	OWNER	DRILL	DATE	DEPTH	TYPE	USE	TYPE	TYPE	LVL	YL	GPM
214771	039	N	02E	15	5E	MRS WM HARTSOCK	HALL	04/22/1941	70	RG	DO	--	UN	8	18	6
W H Hartsock Est-1948																
214131	039	19N	02E	15	5E	MRS E HARTSOCK		00/00/1921	13	OG	DO	BD	UN			
sand and gravel bottom																
214132	039	19N	02E	15	5G	MARTIN AUCTION CO #1	MASHBURN JR	09/24/1985	230	RG	IC	--	UN	56	57	15
214133	039	19N	02E	15	6B	JIM BRAY & LANE #1	MASHBURN BROS	11/02/1970	290	RG	DO	--	UN	89	91	17
214134	039	19N	02E	15	6D	F SHEPHERD	KIRBY	00/00/1917	251	O	DO	--	--			
214135	039	19N	02E	15	8C	TOM CYRULIK	MASHBURN BROS	08/09/1961	236	R	DO	--	UN		90	12
214136	039	19N	02E	15	8C	CYRULIK	MASHBURN	00/00/1962	222	R	DO	--	UN			
349756	039	19N	02E	16		BOB & KAREN HILL	MASHBURN DRILLING/ROBERT	08/23/2003	263	RG	DO	DL	UN	78	84	20
214137	039	19N	02E	16	1A	GREG LICHTENWALTE2 #1	MASHBURN	05/05/1988	280	RG	DO	--	UN	112	120	60
335534	039	19N	02E	16	1D	HAROLD BRUSO	LUTTRELL DRILLING	10/09/2001	74	RG	DO	BD	UN			
365266	039	19N	02E	16	1H	PHIL & CONNNIE BROWN	CHUCK NELSON	00/00/0000	33	A	DO	DL				
								Sealed: 12/8/03								
214138	039	19N	02E	16	6F	GLEN REESE	DE MENT	00/00/1964	71	R	DO	--	UN			
214139	039	19N	02E	16	8H	M BARNDT	WOOLEN BROS	00/00/1928	110	O	DO	--	--			
214156	039	19N	02E	21	1G	ORVILLE E WILLOUGHBY #11	DE MENT	10/18/1978	232	RG	DO	--	UN	110	130	8
214773	039	19N	02E	21	2D	THOMAS O BRIAN	WOOLLEN BROS	10/18/1943	110	RG	DO	--	UN	76	78	5
B J-1963																

WID	FIPS	TWN	RNG	SEC	PLOT	OWNER	DRIL	DATE	DEPTH	TYPE	USE	TYPE	TYPE	LVL	VL	GPM
214157	039	19N	02E	21	3A	LAVERNE EICH	WOOLLEN	04/00/1972	97	RG	DO	--	UN	60	60	10
296598	039	19N	02E	21	3C	WILLIAM CURRY	MASHBURN DRLG/ROBERT	06/11/1997	302	RG	DO	DL	UN	115	119	15
334584	039	19N	02E	21	6D	ZACK HOWELL #1	MASHBURN DRILLING	08/27/2001	296	RG	DO	DL	UN	126	129	15
231241	039	19N	02E	21	7G	DAN SNYDER #1	MASHBURN BROS	07/02/1991	69	RG	DO	--	UN	36	43	15
214158	039	19N	02E	22	1E	C H MOORE ESTATE	KIRBY	00/00/1916	150	OC	DO	--	--			
214159	039	19N	02E	22	4H	TOM MICHAELS #1	MASHBURN JR	12/00/1979	260	RG	DO	--	UN	102	103	15
220114	039	19N	02E	22	4H	W H O W RADIO STATION	WOOLLEN	06/11/1947	77	RG	IC	--	UN		6	6
337604	039	19N	02E	22	5B	TERRY HAMMER	MASHBURN DRILLING	10/19/2001	76	RG	DO	DL	UN	54	55	12
214160	039	19N	02E	22	5B	H WHITEHEAD	TATMAN & WARD	00/00/1900	93	OG	DO	--	UN			
went through 23' of gv & hit a hard surface well was stopped in the gv vein																
320018	039	19N	02E	22	5B	TERRY HAMMER #1	MASHBURN DRILLING	12/08/1999	86	RG	DO	DL	UN	48	49	12
343381	039	19N	02E	22	6B	MIKE BRAY #1	MASHBURN DRILLING/ROBERT	08/03/2002	88	RG	DO	DL	UN	56	57	12
305327	039	19N	02E	22	6G	MIKE CYRULICK	MASHBURN DRLG/ROBERT	08/31/1998	300	RG	DO	DL	UN	126	128	15
214161	039	19N	02E	23		C H MOORE TRUST ESTATE	MOORES HARDWARE P&H	11/15/1989	28	A	DO	BD	--			
Kelly Hiter Farm Operator																
214162	039	19N	02E	23	1G	C H MOORE ESTATE	KIRBY	00/00/1921	150	O	DO	--	--			
214774	039	19N	02E	23	4F	C H MOORE ESTATE	WOOLLEN BROS	06/12/1943	93	RG	DO	--	UN	65	75	60
C H Moore-1963																

WID	FIPS	TWN	RNG	SEC	PLOT	OWNER	DRILLER	DATE	DEPTH	TYPE	USE	TYPE	TYPE	LVL	LVL	GPM
214163	039	19N	02E	23	4G	C H MOORE ESTATE	KIRBY	00/00/1918	145	OG	DO	--	UN			
in sand vein																
214164	039	19N	02E	24	1A	S LILLIARD		00/00/1900	50	O	DO	--	--			
260825	039	19N	02E	24	1G	E. W. ANDREWS TRUST #1	MASHBURN	08/15/1994	292	RG	DO	DL	UN	122	126	12
214165	039	19N	02E	24	1H	SARAH LILLIARD		00/00/1920	125	O	DO	--	--			
214166	039	19N	02E	24	3H	SARAH LILLIARD		00/00/1920	150	O	DO	--	--			
214775	039	19N	02E	25	7G	NELLIE POND-1948	NEWBERRY	04/31/1943	109	RG	DO	--	UN	25	40	5
214167	039	19N	02E	26	1A	IDA MAYALL	KIRBY	00/00/1914	110	O	DO	--	--			
214168	039	19N	02E	26	5H	H RAY	KIRBY	00/00/1916	130	O	DO	--	--			
214169	039	19N	02E	27	2F	F R MARLOW	WHITEHEAD	00/00/1900	19	O	DO	--	--			
246271	039	19N	02E	27	4D	GLENN MARLOW	MASHBURN	11/24/1993	280	RG	DO	--	UN	115	120	20
214827	039	19N	02E	27	4E	HERBERT O MARLOW	WOOLLEN	00/00/1939	116	OG	DO	--	UN	70	90	6
Gas Flow Measurement																
214170	039	19N	02E	27	5A	JOHN HOFFMAN	BRADEN	00/00/1910	158	O	DO	--	--			
214171	039	19N	02E	27	5A	HOFFMAN ESTATE	LENTZ	09/26/1950	120	R	DO	--	UN			
214172	039	19N	02E	27	5D	F W BROWNING	BRADEN	00/00/1910	120	O	DO	--	--			

Thursday, Decem. . 16, 2004

County: DEWITT

Township: 19N

Range: 02E

Sections: 01-04,09-16,21-27

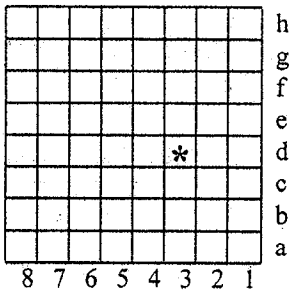
Records Found: 15

Questions: Contact the Illinois State Water Survey's Ground Water Division @(217)-333-9043

Publication: Please cite the Illinois State Water Survey's PICS (Public-industrial-Commercial) Database in all publications based wholly or partially on this information.

Note: The data in the PICS Database is a listing of municipal and commercial wells which are known to the Illinois State Water Survey (ISWS). This information was initially entered from public water supply data and supplemented with the Illinois State Water Inventory Project data. This database is updated as additional information is received and verified.

This data cannot be resold or redistributed. The Illinois State Water Survey must be acknowledged in any use of this material.



Location of a 10-acre-plot within a section:

The origin can be found at the lower right-hand-corner of an 8 x 8 grid. In this example, the well is in the 10-acre plot '3d'.

SWSID	FIPS	TWN	RNG	SEC	PLOT	NAME	WELL ID	#	DEPTH	STATUS	SEALED	TYPE	YEAR	DRILLER
03969500	039	[illegible]	02E	01	4A	WELDON SPRINGS STATE PARK	42	5	75	U	--	37	1971	MASH. N BROS
03990500	039	19N	02E	09	2H	HICKORY MANOR SUBD	10949	1	143	U		33		
03995185	039	19N	02E	10	5A	RIDGEVIEW MHP	1132	2	260	U	--	33	1968	BRUCE MASHBURN
03995185	039	19N	02E	10	5A	RIDGEVIEW MHP	1131	1	241	U	--	33	1967	WOOLLEN BROS
03969500	039	19N	02E	12		WELDON SPRINGS STATE PARK	10947	100	6	I	--	37	--	--
03969500	039	19N	02E	12		WELDON SPRINGS STATE PARK	10948	101	9	I	--	37	--	--
03969500	039	19N	02E	12	2F	WELDON SPRINGS STATE PARK	10941	4	57	A	--	37	1955	WOOLLEN BROS
03969500	039	19N	02E	12	3E	WELDON SPRINGS STATE PARK	10940	3	135	S	--	37	1939	WOOLLEN BROS
03969500	039	19N	02E	12	4E	WELDON SPRINGS STATE PARK	10939	2	60	I	--	37	1959	G C MASHBURN & SONS
03969500	039	19N	02E	12	4E	WELDON SPRINGS STATE PARK	10938	1	47	S	1975	37	1949	WOOLLEN BROS
03969500	039	19N	02E	12	4E	WELDON SPRINGS STATE PARK	14409	10	141	U	--	37	1995	SHADOW MANUFACTURING
03969500	039	19N	02E	12	4H	WELDON SPRINGS STATE PARK	10944	7	73	I	--	37	1950	--

SWSID	FIPS	TWN	RNG	SEC	PLOT	NAME	ID	#	DEPTH	STATUS	SEALED	TYPE	YEAR	DRIL
03969500	039	19N	02E	12	4H	WELDON SPRINGS STATE PARK	10945	8	38	I	--	37	1955	WOOL BROS
03969500	039	19N	02E	12	4H	WELDON SPRINGS STATE PARK	10943	6	10	A	--	37	1940	--
03969500	039	19N	02E	12	7E	WELDON SPRINGS STATE PARK	10946	9	275	I	--	37	1975	SIMS DRILLING CO

Thursday, December 16, 2004

County: DEWITT

Township: 19N

Range: 03E

Sections: 06,07,18,19

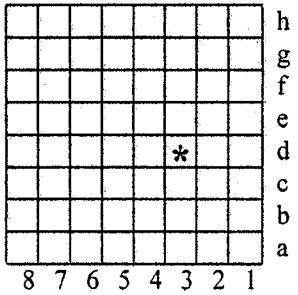
Records Found: 24

Questions: Contact the Illinois State Water Survey's Ground Water Division @(217)-333-9043

Publication: Please cite the Illinois State Water Survey's Private Well Database in all publications based wholly or partially on this information.

Note: The data in the Private Well Database is a listing of non-municipal wells which are known to the Illinois State Water Survey (ISWS). This information has been entered verbatim from well logs submitted by the driller, chemical analysis reports, well sealing forms, well inventory forms from the 1930-1934 well survey, and other special projects. The accuracy of this data is controlled by those submitting the forms. Information in the Private Well Database has not been verified.

This data cannot be resold or redistributed. The Illinois State Water Survey must be acknowledged in any use of this material.



Location of a 10-acre-plot within a section:

The origin can be found at the lower right-hand-corner of an 8 x 8 grid. In this example, the well is in the 10-acre plot '3d'.

WID	FIPS	TWN	RNG	SEC	PLOT	OWNER	DRIL	DATE	DEPTH	TYPE	USE	TYPE	TYPE	LVL	LVL	GPM
212993	039	19N	03E	06	1C	JERRY JORDON #2	SIMS	08/11/1989	70	RG	DO	--	UN	40		15
342484	039	19N	03E	06	1D	ROGER CYRULICK #1	MASHBURN WELL DIRLLING/ROBERT	04/09/2002	302	RG	DO	DL	UN	126	129	30
LOT 3 COUNTRY MANOR ESTES.																
363663	039	19N	03E	06	5B	EUNICE HARBACH TRUST #1	MASHBURN WELL DRILLING/ROBERT	08/10/2004	302	RG	DO	DL	UN	117	120	15
232078	039	19N	03E	06	5D	MARY JORDAN #2	SIMS JR	12/10/1992	320	RG	DO	--	UN	119		15
212994	039	19N	03E	06	6F	MICHAEL R ARNOLD	COPPENBARGER	08/10/1981	61	RG	DO	--	UN	12	40	18
220101	039	19N	03E	06	7A	DEWITT COUNTY SPORTSMAN CLUB	LAYTON	10/04/1984	320	RG	NC	--	UN	120	122	10
#2																
212995	039	19N	03E	06	7G	N W LUTTRELL	KELLY	00/00/1875	43	O	DO	BD	--			
288493	039	19N	03E	07	1D	BOB BIEBER	MASHBURN	07/12/1996	282	RG	DO	DL	UN	121	127	15
290189	039	19N	03E	07	1D	DON REARDEN, JR.	MASHBURN	08/17/1996	282	RG	DO	DL	UN	116	121	15
222149	039	19N	03E	07	4A	DICK DOUGLAS #1	MASHBURN BROS	11/07/1990	258	RG	DO	--	UN	97	99	15
213011	039	19N	03E	18	1C	CARL REYNOLDS #4	DE MENT	06/15/1972	62	RG	DO	--	UN	40	43	6
213012	039	19N	03E	18	1G	BERNARD HARROLD	MASHBURN	00/00/1952	122	OGC	DO	--	UN			
gas flow measurement																
344377	039	19N	03E	18	4F	TODD GULLETT	MASHBURN DRILLING/ROBERT	07/17/2002	304	RG	DO	DL	UN	133	136	15
213013	039	19N	03E	18	6A	BOB FATHEREE		00/00/1967	90	OGC	DO	--	UN			
262349	039	19N	03E	18	6B	RODNEY & PAM ROGERS #1	LAYTEN	09/19/1994	157	RG	DO	DL	UN	49	68	

WID	FIPS	TWN	RNG	SEC	PLOT	OWNER	DRILL'	DATE	DEPTH	TYPE	USE	TYPE	TYPE	LVL	'L	GPM
242542	039	.N	03E	18	6E	SHELLY MATHERLY	SIMS	05/15/1993	164	RG	DO	--	UN	64		
271348	039	19N	03E	18	6E	JOHN SMITH #1	LAYTEN	06/15/1995	167	RG	DO	DL	UN	45	58	12
331750	039	19N	03E	18	7E	KEVIN HEIDEN #1	MASHBURN DRILLING	06/19/2001	151	RG	DO	DL	UN	47	51	12
213014	039	19N	03E	18	8A	J CROSNO		00/00/1900	22	O	DO	BD	--			
213015	039	19N	03E	18	8A	BOB FATHEREE	WOOLLEN	05/10/1971	166	RG	DO	--	UN	60	60	10
213016	039	19N	03E	19	1A	FRANK STOUTENBOUROUGH	MASHBURN	00/00/1963	156	O	DO	--	UN			
213017	039	19N	03E	19	1H	A DAY	MIRE	00/00/1904	88	OG	DO	--	UN		25	5
213018	039	19N	03E	19	8A	S LILLIARD	WOOLEN	00/00/1927	101	O	DO	--	--			
213019	039	19N	03E	19	8H	S LILLIARD		00/00/1900	80	O	DO	--	--			

Thursday, Decemb.. 16, 2004

County: DEWITT

Township: 19N

Range: 03E

Sections: 06,07,18,19

Records Found: 0

Questions: Contact the Illinois State Water Survey's Ground Water Division @(217)-333-9043

Publication: Please cite the Illinois State Water Survey's PICS (Public-industrial-Commercial) Database in all publications based wholly or partially on this information.

Note: The data in the PICS Database is a listing of municipal and commercial wells which are known to the Illinois State Water Survey (ISWS). This information was initially entered from public water supply data and supplemented with the Illinois State Water Inventory Project data. This database is updated as additional information is received and verified.

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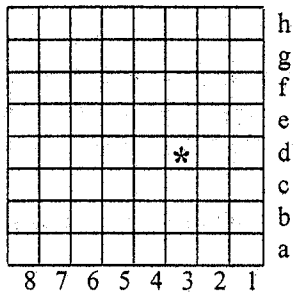


Location of a 10-acre-plot within a section:

The origin can be found at the lower right-hand-corner of an 8 x 8 grid. In this example, the well is in the 10-acre plot '3d'.

Thursday, December 16, 2004

County: DEWITT

Township: 20N

Range: 02E

Sections: 33-36

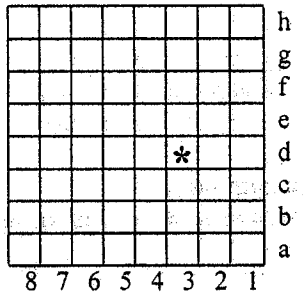
Records Found: 39

Questions: Contact the Illinois State Water Survey's Ground Water Division @(217)-333-9043

Publication: Please cite the Illinois State Water Survey's Private Well Database in all publications based wholly or partially on this information.

Note: The data in the Private Well Database is a listing of non-municipal wells which are known to the Illinois State Water Survey (ISWS). This information has been entered verbatim from well logs submitted by the driller, chemical analysis reports, well sealing forms, well inventory forms from the 1930-1934 well survey, and other special projects. The accuracy of this data is controlled by those submitting the forms. Information in the Private Well Database has not been verified.

This data cannot be resold or redistributed. The Illinois State Water Survey must be acknowledged in any use of this material.



Location of a 10-acre-plot within a section:

The origin can be found at the lower right-hand-corner of an 8 x 8 grid. In this example, the well is in the 10-acre plot '3d'.

WID	FIPS	TWN	RNG	SEC	PLOT	OWNER	DRILLER	DATE	DEPTH	TYPE	USE	TYPE	TYPE	LVL	LVL	GPM
347792	039	0N	02E	33	2D	TAMARA SPENCER #1	KICKAPOO DRLG./MARK LAYTEN	03/27/2003	120	RG	DO	DL	UN	46	47	8
216169	039	20N	02E	33	2F	JAMES BRAY #1	MASHBURN	09/08/1970	110	RG	DO	--	UN	35	38	17
298238	039	20N	02E	33	2G	MIKE BRAY	MASHBURN DRLG/ROBERT	10/02/1997	103	RG	DO	DL	UN	38	42	15
216170	039	20N	02E	33	4A	CARL WALKER	NEWBERRY	07/26/1946	115	RG	DO	--	UN	50	85	5
269096	039	20N	02E	33	4F	NORMAN EVANS #2	LAYTEN	06/14/1995	140	RG	DO	DL	UN	50	63	
216171	039	20N	02E	33	5D	RAYMOND NORTH #3	LAYTEN	09/19/1984	122	RG	IC	--	UN	49	60	100
363865	039	20N	02E	33	5D	NORTH FERTILIZER SERVICE	KICKAPOO DRILLING/MARK	00/00/0000 Sealed: 5/11/04	103	A	IC	DL				
216173	039	20N	02E	33	5G	RUSSELL LILLARD	WOOLLEN	07/11/1944	278	RG	DO	--	UN	120	130	8
216172	039	20N	02E	33	6H	CECILE LILLARD	WOOLLEN	04/15/1944	280	RG	DO	--	BR	139	209	4
216413	039	20N	02E	33	7E	GENE MURPHY	LUTTRELL	09/30/1987	29	RG	DO	BD	UN			
220074	039	20N	02E	33	7E	SHEEHY ESTATE		00/00/1900	60	OG	DO	BD	--			
West Side Park Estates Mobile Home Park/mud bottom																
216414	039	20N	02E	33	8H	GALE G FINFROCK	WOOLLEN	07/08/1972	94	RG	DO	--	UN	39	40	10
213764	039	20N	02E	34		ALFRED STONE #1	WOOLLEN	00/00/1942	83	OG	DO	--	UN	12		4
location?																
219997	039	20N	02E	34		CLINTON #4	LAYNE WESTERN	00/00/1954	372	RG	TH	--	--			
220041	039	20N	02E	34	1C	MARCO CHEMICALS #1	MASHBURN	01/00/1973	356	RG	IC	--	UN	116	126	200

WID	FIPS	TWN	RNG	SEC	PLOT	OWNER	DRILLER	DATE	DEPTH	TYPE	USE	TYPE	TYPE	LVL	LVL	GPM
220001	039	N	02E	34	1E	CITY OF CLINTON #2-72	LAYNE WESTERN	10/16/1972	350	RGIC	TW	--	UN		117	300
232066	039	20N	02E	34	2B	CTI INVESTMENT #1	MASHBURN JR	06/24/1992	105	RG	DO	--	UN	45	50	10
Cleary Bldgs																
219998	039	20N	02E	34	2C	CITY OF CLINTON #1-71	VOPAT	11/16/1971	320	RG	TH	--	--			
219996	039	20N	02E	34	2D	CITY OF CLINTON #3-54	LAYNE WESTERN	00/00/1954	343	RG	TH	--	--			
220042	039	20N	02E	34	2G	MCCULLOM THEATER		00/00/1936	131	OGC	IC	--	--		100	50
Pleistocene																
219999	039	20N	02E	34	3C	CITY OF CLINTON #2-71	VOPAT	11/18/1971	339	RG	TH	--	--			
219994	039	20N	02E	34	3D	CITY OF CLINTON #54-1	LAYNE WESTERN	00/00/1954	360	RG	TW	--	--			
219995	039	20N	02E	34	3D	CITY OF CLINTON #54-2	LAYNE WESTERN	00/00/1954	349	RG	TW	--	--			
216415	039	20N	02E	34	6D	FRED POLLOCK	WOOLLEN	10/10/1941	100	RG	DO	--	UN	46	49	5
361636	039	20N	02E	34	6E	SCOTT BAUM	ROBERT MASHBURN	00/00/0000	56	A	DO	BD	~~			
								Sealed: 6/12/04								
216416	039	20N	02E	35		LOYD WARNER	WOOLLEN	04/07/1945	67	RG	DO	--	UN	16	56	5
216417	039	20N	02E	35		IRVEN AMMAN	WOOLLEN	02/01/1946	78	RG	DO	--	UN	15		6
216418	039	20N	02E	35		CANFIELD FARM	HAYES	00/00/1960		O	DO	--	--			
216419	039	20N	02E	35	1H	W J JASPER	NEWBERRY	01/10/1945	150	RG	DO	--	UN	35	53	4
216420	039	20N	02E	35	4A	JOHN ARMSTRONG	WOOLLEN	08/15/1971	81	RG	DO	--	UN	17	50	

WID	FIPS	N	RNG	SEC	PLOT	OWNER	DRIL	DATE	DEPTH	TYPE	USE	TYPE	TYPE	LVL	VL	GPM
220095	039	20N	02E	35	4C	CLINTON SWIM CLUB	MASHB...N	00/00/1962	324	O	NC	--	--			
216421	039	20N	02E	35	5E	FOREST THOMPSON	WOLLEN	08/26/1947	84	RG	DO	--	UN	10	12	9
216422	039	20N	02E	35	6E	WAYNE RICKGAVER	MASHBURN	12/00/1972	331	RG	DO	--	UN	105	121	120
216423	039	20N	02E	36	2H	ERNEST SHIELDS		00/00/1900	31	DO	DO	--	--		30	5
216424	039	20N	02E	36	5B	C M WARNER	KIRBY	00/00/1925	65	OG	DO	--	UN			
bottom of well in course gravel vein																
216425	039	20N	02E	36	6G	S A STIVERS	ARGO	00/00/1880	8	OC	DO	BD	--			
well is fed from spring windmill pumps water into tank																
216426	039	20N	02E	36	6H	S A STIVERS	NEWBERRY	07/06/1944	68	RG	DO	--	UN	11	18	7
289282	039	20N	02E	36	6H	CHET MEARS	MASHBURN	08/19/1996	81	RG	DO	DL	UN	10	17	15
216427	039	20N	02E	36	8C	DALTON	DEMENT	00/00/0000	57	O	DO	--	UN			

Thursday, Decembe_ _6, 2004

County: DEWITT

Township: 20N

Range: 02E

Sections: 33-36

Records Found: 16

Questions: Contact the Illinois State Water Survey's Ground Water Division @ (217)-333-9043

Publication: Please cite the Illinois State Water Survey's PICS (Public-industrial-Commercial) Database in all publications based wholly or partially on this information.

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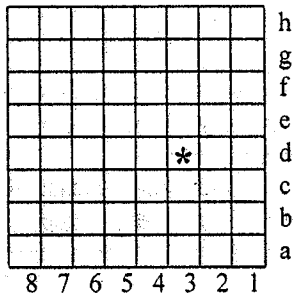

Location of a 10-acre-plot within a section:

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SWSID	FIP	WN	RNG	SEC	PLOT	NAME	ID	#	DEPTH	STATUS	SEALED	TYPE	YEAR	DRI
03995225	039	20N	02E	33		WEST SIDE MHP		5		P		33		
03995225	039	20N	02E	33	2H	WEST SIDE MHP	1141	2	112	A	--	33	1974	WOOLLEN BROS
03995225	039	20N	02E	33	2H	WEST SIDE MHP	1142	3	86	I	--	33	1975	WOOLLEN BROS
03995225	039	20N	02E	33	2H	WEST SIDE MHP	1144	4	118	A	--	33	1987	G E MASHBURN, JR
03995225	039	20N	02E	33	4H	WEST SIDE MHP	1143	1	108	A	--	33	1973	EARL D WOOLLEN
03990050	039	20N	02E	34	1D	CLINTON	1153	8	352	I	--	33	1973	LAYNE-WESTERN CO
03990050	039	20N	02E	34	1D	CLINTON	1152	9	348	I	--	33	1972	LAYNE-WESTERN CO
03990050	039	20N	02E	34	2D	CLINTON	1147	6	345	I	--	33	1948	LAYNE-WESTERN CO
03990050	039	20N	02E	34	2D	CLINTON	1146	4	345	S	1982	33	1948	LAYNE-WESTERN CO
03990050	039	20N	02E	34	2D	CLINTON	1145	7	346	U	--	33	1954	LAYNE-WESTERN CO
03990050	039	20N	02E	34	3D	CLINTON	1150	5	360	S	1982	33	1946	LAYNE-WESTERN CO
03990050	039	20N	02E	34	3D	CLINTON	1149	1	341	S	<1986	33	1913	IRA DEMENT

SWSID	FIPS	TWN	RNG	SEC	PLOT	NAME	PR ID	#	DEPTH	STATUS	SEALED	TYPE	YEAR	DRILLER
03990050	039	[illegible]	02E	34	3D	CLINTON	[illegible]	2	358	S	1957	33	1914	OMER [illegible]SEY
03990050	039	20N	02E	34	3D	CLINTON	1151	3	360	I	--	33	1923	EBERT & SON
03990050	039	20N	02E	35	7F	CLINTON	5448	10	370	I	--	33	1989	LAYNE-WESTERN CO
03990050	039	20N	02E	35	9F	CLINTON	5449	11	370	I	--	33	1989	LAYNE-WESTERN CO

GEOLOGICAL AND WATER SURVEYS WELL RECORD

Property owner Russell, David Well No. #1
Address 308 N. Irving Mason City IL
Well address R.R. Clinton, IL
Lot 2 & 3 Subd Riddle ISWS P# 349752
Driller Mashburn, Robert License No. 102-3084
Permit No. 039-008-03 Date 05/19/2003
Water from sand County DeWitt
at depth 225 to 286 ft.
Screen: Diam. 5 in.
Length: 8 ft. Slot

Sec. 13
Twp. 19 N
Rge. 2 E
Elev.

NE NW NW

Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (ft)	To (ft)
5	PVC SDR 21	-1	278
5	SS SCREEN 15 & 20	278	286

Size hole below casing: _____ in.
Static level 116 ft. below casing top which is 1 ft. above ground level. Pumping level 118 ft. when pumping at 15 gpm for 2 hours.

Formations passed through	Thickness	Bottom
topsoil	2	2
yellow clay	14	16
gray clay	41	57
drift	3	60
green clay	5	65
gray clay	160	225
sand	61	286

Private Water Well

DeWitt 12-039-21618-00 13-19N-2E

GEOLOGICAL AND WATER SURVEYS WELL RECORD

Property owner Williams, Brian Well No. #1
Address P.O. Box 208 McLean IL
Well address RR 2 Box 102 W Clinton, IL
Lot ____ Subd ____ ISWS P# 344376
Driller Mashburn, Robert License No. 102-3084
Permit No. 039-010-02 Date 04/23/2002
Water from sand County DeWitt
at depth 207 to 283 ft. Sec. 14
Screen: Diam. 5 in. Twp. 19 N
Length: 8 ft. Slot 12 Rge. 2 E
Elev. ____

SE NE NE

Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (ft)	To (ft)
5	PVC SDR 21	-1	275
5	SS SCREEN	275	283

Size hole below casing: ____ in.
Static level 105 ft. below casing top which is 1 ft.
above ground level. Pumping level 110 ft. when pumping at 15
gpm for 2 hours.

Formations passed through	Thickness	Bottom
yellow clay	17	17
gray clay	47	64
drift	3	67
green clay	3	70
gray clay	137	207
sand	76	283

Household - Private

DeWitt 12-039-21552-00 14-19N-2E

GEOLOGICAL AND WATER SURVEYS WELL RECORD

Property owner Kroeger, Mike Well No. #1
Address 645 W. Jefferson Clinton IL
Well address RR 1 Clinton, IL
Lot _____ Subd _____ ISWS P# 344375
Driller Mashburn, Robert License No. 102-3084
Permit No. 039-006-02 Date 03/26/2002
Water from sand County DeWitt
at depth 173 to 246 ft.
Screen: Diam. 5 in.
Length: 8 ft. Slot 15
Sec. 14
Twp. 19 N
Rge. 2 E
Elev. _____

SW NE NE

Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (ft)	To (ft)
5	PVC SDR 21	-1	238
5	SS SCREEN	238	246

hole below casing: _____ in.
ic level 71 ft. below casing top which is 1 ft.
e ground level. Pumping level 74 ft. when pumping at 12
gpm for 2 hours.

Formations passed through	Thickness	Bottom
yellow clay	16	16
gray clay	35	51
drift	3	54
green clay	4	58
gray clay	44	102
sand	2	104
gray clay	69	173
sand	73	246

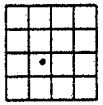
Household - Private

DeWitt 12-039-21553-00 14-19N-2E

GEOLOGICAL AND WATER SURVEYS WELL RECORD

Property owner Murphy, Marvin Well No. #1
Address R.R. 2 Box 155 clinton IL
Well address same as above
Lot _____ Subd _____ ISWS P# 338945
Driller Layten, James License No. 102-2243
Permit No. 039-036-01 Date 10/24/2001
Water from medium gravel County DeWitt
at depth 230 to 242 ft.
Screen: Diam. 5 in.
Length: 4 ft. Slot 20

Sec. 15
Twp. 19 N
Rge. 2 E
Elev. _____



NE NE SW

Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (ft)	To (ft)
5	SDR 21	-1	200
5	SDR 17	200	231
5	STAINLESS STL SCREEN	231	235

Size hole below casing: _____ in.
Static level 46 ft. below casing top which is 1 ft.
above ground level. Pumping level 47 ft. when pumping at 15
gpm for _____ hours.

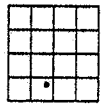
Formations passed through	Thickness	Bottom
black dirt	3	3
rocky gravel	2	5
yellow sand & gravel	7	12
gray clay	8	20
sand	1	21
gray clay	16	37
sand & gravel	2	39
gray clay	27	66
sand & gravel	3	69

Household - Private

DeWitt 12-039-21520-00 15-19N

GEOLOGICAL AND WATER SURVEYS WELL RECORD

Property owner Harbach, Eunice Trust Well No. #1
Address 41 Jericho Rd. Clinton IL
Well address R.R. Clinton, IL
Lot _____ Subd _____ ISWS P# 363663
Driller Mashburn, Robert License No. 102-3084
Permit No. 039-018-04 Date 07/22/2004
Water from sand County DeWitt
at depth 228 to 302 ft.
Screen: Diam. 5 in.
Length: 8 ft. Slot _____
Sec. 6
Twp. 19 N
Rge. 3 E
Elev. _____



Casing and Liner Pipe NE SE SW

Diam. (in.)	Kind and Weight	From (ft)	To (ft)
5	PVC SDR 21	-1	294
5	SS SCREEN SLOT 15/20	294	302

Size hole below casing: _____ in.
Static level 118 ft. below casing top which is 1 ft. above ground level. Pumping level 121 ft. when pumping at 15 gpm for 2 hours.

Formations passed through	Thickness	Bottom
topsoil	7	7
yellow clay	12	19
gray clay	49	68
drift	2	70
green clay	3	73
gray clay	155	228
sand	74	302

Private Water Well

DeWitt 12-039-21630-00 6-19N-3E

Formations passed through (continued)	Thickness	Bottom
gray clay	86	155
fine to medium sand	25	180
fine to medium sand & gravel	20	200
medium sand & gravel	30	230
medium gravel	12	242

Household - Private

DeWitt 12-039-21520-00 15-19N

GEOLOGICAL AND WATER SURVEYS WELL RECORD

Property owner Bruso, Harold & Sandra Well No. _____
Address 1131 Pineview Ct. Decatur IL
Well address R.R. 2 Box 258 AA Clinton, IL
Lot _____ Subd _____ ISWS P# 335534
Driller Luttrell, James License No. 092-7020
Permit No. 039-018-01 Date 07/24/2001
Water from _____ County DeWitt
at depth _____to_____ft. Sec. 16
Screen: Diam._____in. Twp. 19 N
Length:_____ft. Slot _____ Rge. 2 E
Elev. _____

NE NE SE

Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (ft)	To (ft)
12	HOLE PLUG	9	10
36	CONCRETE TILE	10	64

Size hole below casing: _____in.
Static level _____ft. below casing top which is _____ft.
above ground level. Pumping level 0 ft.when pumping at _____
gpm for_____hours.

Formations passed through	Thickness	Bottom
black dirt	2	2
yellow clay	16	18
blue clay	37	55
gray sand & gravel	3	58
blue clay	16	74

Household - Private

DeWitt 12-039-21511-00 16-19N-2E

GEOLOGICAL AND WATER SURVEYS WELL RECORD

Property owner Gullett, Todd Well No. #1
Address RR 1 Box 235 Towanda IL
Well address RR 4 Clinton, IL
Lot _____ Subd _____ ISWS P# 344377
Driller Mashburn, Robert License No. 102-3084
Permit No. 039-012-02 Date 05/10/2002
Water from sand County DeWitt
at depth 253 to 304 ft.
Screen: Diam. 5 in.
Length: 8 ft. Slot 15

Sec. 18
Twp. 19 N
Rge. 3 E
Elev. ____

NW SW NE

Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (ft)	To (ft)
5	PVC SDR 21	-2	296
5	SS SCREEN	296	304

Size hole below casing: _____ in.
Static level 134 ft. below casing top which is 2 ft.
above ground level. Pumping level 137 ft. when pumping at 15
gpm for 2 hours.

Formations passed through	Thickness	Bottom
yellow clay	19	19
gray clay	48	67
drift	3	70
green clay	6	76
gray clay	177	253
sand & gravel	51	304

Household - Private

DeWitt 12-039-21551-00 18-19N-3E

GEOLOGICAL AND WATER SURVEYS WELL RECORD

Property owner Howell, Zack Well No. #1
Address Rt. 1 Box 323 Maroa IL
Well address same as above
Lot _____ Subd _____ ISWS P# 334584
Driller Mashburn, Robert License No. 102-3084
Permit No. 039-017-01 Date 07/23/2001
Water from sand County DeWitt
at depth 232 to 296 ft.
Screen: Diam. 5 in.
Length: 8 ft. Slot 15

Sec. 21
Twp. 19 N
Rge. 2 E
Elev. ____

NW NE SW

Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (ft)	To (ft)
5	PVC SDR 21	-1	288
5	SS SCREEN 15 & 20	288	296

Size hole below casing: _____ in.
Static level 127 ft. below casing top which is 1 ft. above ground level. Pumping level 130 ft. when pumping at 15 gpm for 2 hours.

Formations passed through	Thickness	Bottom
topsoil	2	2
yellow clay	17	19
gray clay	64	83
sand	3	86
gray clay	146	232
sand	64	296

Household - Private

DeWitt 12-039-21507-00 21-19N-2E

GEOLOGICAL AND WATER SURVEYS WELL RECORD

Property owner Bray, Mike Well No. #1
Address P.O. Box 222 Clinton IL
Well address 225 N. Little Galilee Rd. Clinton, IL
Lot _____ Subd _____ ISWS P# 343381
Driller Mashburn, Robert License No. 102-3084
Permit No. 039-021-02 Date 06/26/2002
Water from sand County DeWitt
at depth 67 to 88 ft.
Screen: Diam. 5 in.
Length: 4 ft. Slot 20

Sec. 22
Twp. 19 N
Rge. 2 E
Elev. _____

NW SE SW

Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (ft)	To (ft)
5	PVC SDR 21	-1	84
5	SS SCREEN	84	88

Size hole below casing: _____ in.
Static level 57 ft. below casing top which is 1 ft. above ground level. Pumping level 58 ft. when pumping at 12 gpm for 2 hours.

Formations passed through	Thickness	Bottom
topsoil	2	2
yellow clay	15	17
gray clay	50	67
sand & gravel	21	88
gray clay at	0	88

Household - Private

DeWitt 12-039-21558-00 22-19N

GEOLOGICAL AND WATER SURVEYS WELL RECORD

Property owner Hammer, Terry Well No. _____
Address Rt. 2 Box 118 Clinton IL
Well address 941 Little Galilee Rd. Clinton, IL
Lot _____ Subd _____ ISWS P# 337604
Driller Mashburn, Robert License No. 102-3084
Permit No. 039-032-01 Date 10/10/2001
Water from sand County DeWitt
at depth 58 to 76 ft.
Screen: Diam. 5 in.
Length: 4 ft. Slot 15

Sec. 22
Twp. 19 N
Rge. 2 E
Elev. _____

NE SE SW

Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (ft)	To (ft)
5	PVC SDR 21	-1	72
5	STAINLESS STL SCREEN	72	76

Size hole below casing: _____ in.
Static level 55 ft. below casing top which is 1 ft.
above ground level. Pumping level 56 ft. when pumping at 12
gpm for 2 hours.

Formations passed through	Thickness	Bottom
topsoil	2	2
yellow clay	17	19
gray clay	39	58
sand & gravel	18	76

Household - Private

DeWitt 12-039-21515-00 22-19N-2E

GEOLOGICAL AND WATER SURVEYS WELL RECORD

Property owner Spencer, Tamara Well No. #1
Address R.R. 1 Box 238 Clinton IL
Well address same as above
Lot _____ Subd _____ ISWS P# 347792
Driller Layten, James License No. 102-2243
Permit No. 039-001-03 Date 01/13/2003
Water from sand & gravel County DeWitt
at depth 99 to 112 ft.
Screen: Diam. 5 in.
Length: 4 ft. Slot 20

Sec. 33
Twp. 20 N
Rge. 2 E
Elev. _____

NW NE SE

Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (ft)	To (ft)
5	SDR 21	-1	108
5	STAINLESS STL SCREEN	108	112

Size hole below casing: _____ in.
Static level 47 ft. below casing top which is 1 ft. above ground level. Pumping level 48 ft. when pumping at 8 gpm for _____ hours.

Formations passed through	Thickness	Bottom
black fill	3	3
yellow clay	3	6
yellow sand & gravel	2	8
gray clay	20	28
sand & gravel with gray clay	4	32
gray clay	4	36
sand & gravel	3	39
gray clay	3	42
sand & gravel	2	44

Private Water Well

DeWitt 12-039-21626-00 33-20N

GEOLOGICAL AND WATER SURVEYS WELL RECORD

Property owner Weldon Springs State Park Well No. #7

Address

Well address ISWS P#

Lot Subd License No.

Driller Date 01/01/1971

Permit No. County DeWitt

Water from

at depth to ft.

Screen: Diam. 4 in.

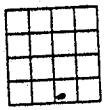
Length: 3 ft. Slot 18

Sec. 1

Twp. 19 N

Rge. 2 E

Elev.



50' N 2600' W SEc

Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (ft)	To (ft)
		0	
		0	
		-3	69
4	STEEL		

Size hole below casing: in.

Static level ft. below casing top which is ft.

above ground level. Pumping level 0 ft. when pumping at

gpm for hours.

Formations passed through	Thickness	Bottom

Noncommunity - Public

DeWitt 12-039-21530-00 1-19N-2E

Formations passed through (continued)	Thickness	Bottom
gray clay	2	46
sand & gravel	6	52
sand & gravel, firm with sandy clay	2	54
sand & gravel, fimer with clay	3	57
gray clay	2	59
sand & gravel with gray clay	7	66
gray clay	16	82
green clay	5	87
gray clay	12	99
sand & gravel	13	112
gray clay	8	120

Private Water Well

DeWitt 12-039-21626-00 33-20N

Town Clinton Township Texas Map No.

Company Woollen Brothers No. R. 2E

Farm Ziegler, Frank No. T. Sec.

Authority Woollen Brothers, Wapella 19 1

Elevation 768 TM N

Collector

Confidential Date Drilled 1941

1711' N. line, 1269' W. line

No.	Strata	Thickness Feet	Thickness In.	Depth Feet	Depth In.
	Co. no. 110				
	Top soil	3		3	
	Clay, yellow	28		31	
	Gravel, dirty, yellow	12		43	
	Sand, dirty, gray	15		58	
	Clay, blue	28	6	86	6
	Sand and gravel	3		89	6
	Water level 60' from surface				
	20' drawdown at 5 g.p.m.				
	3' Johnson strainer, 14 slot				
	80' 1¼" drop pipe				
	2½" cylinder				
	4" well				
	Myers 94 pump head				

[redacted] NO ENVELOPE

COUNTY Dewitt INDEX NO.

DRILL RECORD 1-19N-2E

(12500—20M) ILLINOIS GEOLOGICAL SURVEY, URBANA (12-41)

REQUESTED AND MAIL ORIGINAL TO STATE
ONSUMER HEALTH PROTECTION, 535 WEST
2761. DO NOT DETACH GEOLOGICAL/WATER
DE PROPER[illegible] LOCAT[illegible]

GEOLOGICAL AND WATER SURVEYS WELL RECORD

Completed 10-25-75

10. Property owner Paul Sprague Well No. _____
Address Clinton R.3 Ill
Driller Ray DeWitt License No. 92-68
11. Permit No. 43089 Date Oct 16-73
12. Water from gravel Formation 13. County DeWitt
at depth 125 to 129 ft.
14. Screen: Diam. 4 in.
Length: 3 ft. Slot .026
Sec. 1
Twp. 19N.
Rge. 2E.
Elev. 730 Ft

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
4½	O.D. 11 lbs.		

SHOW LOCATION IN SECTION PLAT
300'NL 100'WL
SW (permit)

16. Size Hole below casing: _____ in.
17. Static level 80 ft. below casing top which is 1 ft. above ground level. Pumping level 95 ft. when pumping at 6 gpm for 4 hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
Top soil	3	3
Yellow Clay	27	30
Blue Clay	95	125
Sand	4	129

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED Ray DeWitt DATE 5/17/76

DEWITT COUNTY No. 7656

1-191

LOG OF WATER WELL

Property owner J. A. Clark Well No. 1

Drilled by Wollan Bros Year 1940

Formations passed through	Thickness	Depth of Bottom
Co. No. 111		
Soil	1	1
Yellow clay	14	15
Blue clay	50	65
Gravel & shale	1	66
Blue clay	4	70
Grit & gravel	4	74
Green clay	8	82
Hard Pan	5	87
Sand & gravel	2	89
Hard Pan	4	93
Sand & gravel (some gas)	3	96

[Continue on back if necessary]

Finished in sand & gravel at 93 to 96 ft.

Cased with 4 inch Belle Fitting from 0 to ft.

and inch from to ft.

Size hole below casing inch. Static level from surf 40 ft.

Tested capacity 5 gal. per min. Temperature °F.

Water lowered to 70 ft. in. in 1 hrs. min.

Length of test 1 hrs. min. Screen Johnson B.

Slot 25 Diam. 4 Length 3 Bottom set at 96 ft.

[Show location in Section Plat]

Township name Jerseyville Elev. 740 A

Description of location 10' E. 14 20's. NW. Cor. SE Cor. NE Quarter

Sec. 2 Twp. 4N Rge. 12

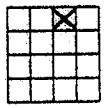
Signed [illegible] County [illegible]

Copy for Illinois State Geological Survey Index: 2-4N-12E

GEOLOGICAL AND WATER SURVEYS WELL RECORD

Property owner DeWitt Co. Highway Depart. Well No. _____
Address _____
Well address Co. Hwy. #1 Clinton, IL
Lot _____ Subd _____ ISWS P# 299641
Driller Mashburn, Robert License No. 102-3084
Permit No. 03901297 Date 04/21/1997
Water from sand County DeWitt
at depth 250 to 314 ft.
Screen: Diam. 5 in.
Length: 12 ft. Slot 12

Sec. 2
Twp. 19 N
Rge. 2 E
Elev. _____



NW NE

Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (ft)	To (ft)
5	PVC SDR 21	-1	303

Size hole below casing: _____ in.
Static level 137 ft. below casing top which is 1 ft. above ground level. Pumping level 146 ft. when pumping at 30 gpm for 2 hours.

Formations passed through	Thickness	Bottom
yellow clay	17	17
gray clay	43	60
drift	6	66
green clay	4	70
gray clay	15	85
sand	4	89
gray clay	161	250
silty fine sand	25	275
medium sand	39	314

Semi-Private

DeWitt 12-039-21309-00 2-19N-

Formations passed through (continued)	Thickness	Bottom
limestone at	0	314

Semi-Private

DeWitt 12-039-21309-00 2-19N-2E

GEOLOGICAL AND WATER SURVEYS WELL RECORD

Property owner Dewitt Co. Highway Dept. Well No. _____
Address 923 S. Sherman Clinton IL
Well address Co. Hwy. 1 Clinton, IL
Lot _____ Subd _____ ISWS P# _____
Driller Mashburn, Robert License No. 102-3084
Permit No. 03901297 Date 04/21/1997
Water from dry hole County DeWitt
at depth _____ to _____ ft.
Screen: Diam. _____ in.
Length: _____ ft. Slot _____

Sec. 2
Twp. 19 N
Rge. 2 E
Elev. _____

NW NE

Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (ft)	To (ft)

Size hole below casing: _____ in.
Static level _____ ft. below casing top which is _____ ft. above ground level. Pumping level _____ ft. when pumping at _____ gpm for _____ hours.

Formations passed through	Thickness	Bottom
yellow clay	14	14
gray clay	53	67
sand	1	68
drift	4	72
green clay	7	79
gray clay	11	90
green clay	3	93
gray clay	53	146
sand	2	148

Commercial Operation - Business

DeWitt 12-039-21318-00 2-19N-.

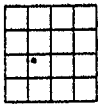
Formations passed through (continued)	Thickness	Bottom
gray clay	1	149
broken sand streaks & clay	5	154
gray clay	41	195
soft gray clay	90	285
soft sandy	2	287
soft grey clay brownish	36	323
shale	12	335

Commercial Operation - Business

DeWitt 12-039-21318-00 2-19N-2E

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner Revere Ware Corp. Well No. #VE-1
Address 1000 S. Sherman Clinton IL
Driller Crank, Tim / Marlo John License No. 092-6857
11. Permit No. none Date
12. Water from 13. County DeWitt
at depth to ft.
14. Screen: Diam. 3 in.
Length: 1 ft. Slot .01
Sec. 2
Twp. 19 N
Rge. 2 E
Elev.



15. Casing and Liner Pipe NW NE SW

Diam. (in.)	Kind and Weight	From (ft)	To (ft)
3	PVC SCH 80	0	7

16. Size hole below casing: in.
17. Static level ft. below casing top which is ft. above ground level. Pumping level ft. when pumping at gpm for hours.

18. Formations passed through	Thickness	Bottom
clayey silt	17	17

Pollution Control

DeWitt 12-039-21145-00 02-19N E

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner Revere Ware Corp Well No. #VE-2
Address 1000 S. Sherman Clinton IL
Driller Crank, Tim / Marlo John License No. 092-6857
11. Permit No. none Date
12. Water from 13. County DeWitt
at depth to ft. Sec. 2
14. Screen: Diam. 3 in. Twp. 19 N
Length: 1 ft. Slot .01 Rge. 2 E
Elev.

NW NE SW

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (ft)	To (ft)
3	PVC SCH 80	0	7

16. Size hole below casing: in.
17. Static level ft. below casing top which is ft. above ground level. Pumping level ft. when pumping at gpm for hours.

18. Formations passed through	Thickness	Bottom
clayey silt	17	17

Pollution Control

DeWitt 12-039-21146-00 02-19N-02E

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner Revere Ware Corp. Well No. #VE-3
    Address 1000 S. Sherman Clinton IL
    Driller Crank, Tim / Mario John License No. 092-6857
11. Permit No. none Date
12. Water from 13. County DeWitt
    at depth ____ to ____ ft.
14. Screen: Diam. 3 in.
    Length: 10 ft. Slot .01
    Sec. 2
    Twp. 19 N
    Rge. 2 E
    Elev. ____

NW NE SW

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (ft)	To (ft)
3	PVC RISER	1	7

16. Size hole below casing: ____ in.
17. Static level ____ ft. below casing top which is ____ ft. above ground level. Pumping level ____ ft. when pumping at ____ gpm for ____ hours.

18. Formations passed through	Thickness	Bottom
clayey silt	17	17

Pollution Control

DeWitt 12-039-21147-00 02-19 2E

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner Revere Ware Corp. Well No. #VE-4
Address 1000 S. Sherman Clinton IL
Driller Crank, Tim / Marlo John License No. 092-6857
11. Permit No. none Date
12. Water from ____ to ____ ft.
at depth ____ to ____ ft.
14. Screen: Diam. 3 in.
Length: 1 ft. Slot .01
13. County DeWitt
Sec. 2
Twp. 19 N
Rge. 2 E
Elev. ____

NW NE SW

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (ft)	To (ft)
3	PVC SCH 80	0	7

16. Size hole below casing: ____ in.
17. Static level ____ ft. below casing top which is ____ ft. above ground level. Pumping level ____ ft. when pumping at ____ gpm for ____ hours.

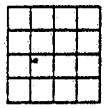
18. Formations passed through	Thickness	Bottom
clayey silt	17	17

Pollution Control

DeWitt 12-039-21148-00 02-19N-02E

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner Revere Ware Corp. Well No. #VE-5
Address 1000 S. Sherman Clinton IL
Driller Crank, Tim / Marlo John License No. 092-6857
11. Permit No. none Date
12. Water from 13. County DeWitt
at depth to ft. Sec. 2
14. Screen: Diam. 3 in. Twp. 19 N
Length: 1 ft. Slot .01 Rge. 2 E
Elev.



15. Casing and Liner Pipe NW NE SW

Diam. (in.)	Kind and Weight	From (ft)	To (ft)
3	PVC SCH 80	0	7

16. Size hole below casing: in.
17. Static level ft. below casing top which is ft. above ground level. Pumping level ft. when pumping at gpm for hours.

18. Formations passed through	Thickness	Bottom
clayey silt	17	17

Pollution Control

DeWitt 12-039-21149-00 02-19N 2E

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner Haynes, Dan Well No. #1
Address R.R. #2 P.O. Box #84D Clinton IL
Driller Mashburn, Grover C. Jr. License No. 102-1930
11. Permit No. 03900692 Date 05/14/92
12. Water from sand 13. County DeWitt
at depth 230 to 323 ft. Sec. 2
14. Screen: Diam. 4 in. Twp. 19 N
Length: 4 ft. Slot 20 Rge. 2 E
Elev. 721.7M

NE SW NW

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (ft)	To (ft)
4	PVC SDR 21	-1	319

16. Size hole below casing: _____ in.
17. Static level 122 ft. below casing top which is 1 ft. above ground level. Pumping level 125 ft. when pumping at 10 gpm for 2 hours.

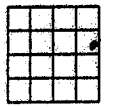
18. Formations passed through	Thickness	Bottom
yellow clay	22	22
blue clay	50	72
brown drift	4	76
green clay	3	79
hard gray clay	151	230
silty sand	60	290
fine sand	12	302
medium sand	13	315
medium to coarse sand	8	323

Household - Private

DeWitt 12-039-21014-00 02-19N-02E

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner Couve, Don Well No. #2
Address R.R. #4 Box #244 Clinton IL
Driller Layten, James License No. 102-2243
11. Permit No. 03901896 Date 08/27/96
12. Water from sand & gravel 13. County DeWitt
at depth 255 to 320 ft.
14. Screen: Diam. 5 in.
Length: 4 ft. Slot 20
Sec. 2
Twp. 19 N
Rge. 2 E
Elev. ____



15. Casing and Liner Pipe SE SE NE

Diam. (in.)	Kind and Weight	From (ft)	To (ft)
5	SDR 21	-1	240
5	SDR 17	240	301

16. Size hole below casing: _____ in.
17. Static level 141 ft. below casing top which is 1 ft. above ground level. Pumping level 142 ft. when pumping at 8 gpm for _____ hours.

18. Formations passed through	Thickness	Bottom
yellow clay	5	5
yellow gravel	9	14
gray clay	3	17
gray gravel	5	22
streaks of sand & gravel	3	25
gray clay	8	33
sand	1	34
gray clay	42	76
sand & gravel	1	77

Household - Private

DeWitt 12-039-21252-00 02-191 2E

18. Formations passed through (continued)	Thickness	Bottom
gray clay	78	155
sand	2	157
gray clay	34	191
gravel	1	192
gray clay	23	215
streak of gravel	2	217
gray clay	19	236
sand	10	246
gravelly streak of gray clay	6	252
gray clay - soft	3	255
fine to medium sand	41	296
medium to coarse sand some gravel	11	307
medium to coarse sand	13	320

QUESTED AND MAIL ORIGINAL TO STATE
UMER HEALTH PROTECTION, 535 WEST
1. DO N[illegible]ETACH G[illegible]LOGICAL/WATER
PROPER[illegible]LOCA[illegible].

GEOLOGICAL AND WATER SURVEYS WELL RECORD

Completed April 15, 1980

10. Property owner Egil Holt Well No. 2
Address Clinton, IL
Driller Ray DeMent License No. 092-00686
11. Permit No. 193299 Date 4/1/80
12. Water from Sand 13. County DeWitt
Formation
at depth 89 to 93 ft.
14. Screen: Diam. 4 in.
Length: 3 ft. Slot 20

Sec. 3
Twp. 19N
Rge. 2E
Elev. ____

SHOW LOCATION IN SECTION PLAT
300'NL 100'WL
SE (permit)

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
4	Steel 11# per ft	0	93

16. Size Hole below casing: 0 in.
17. Static level 40 ft. below casing top which is 1 ft. above ground level. Pumping level 60 ft. when pumping at 5 gpm for 12 hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
Top soil	0	4
Yellow clay	22	26
Blue clay	63	89
Sand	4	93

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED Ray DeMent DATE 4/15/80

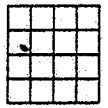
COUNTY No. 20754

DEWITT

3-19N-2E

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner Dupree, Jack Well No. #1
Address R.R. #2 Clinton IL
Driller Mashburn, Grover C. Jr. License No. 102-1930
11. Permit No. 03900912 Date 06/08/92
12. Water from sand 13. County DeWitt
at depth 278 to 302 ft. Sec. 3
14. Screen: Diam. 5 in. Twp. 19 N
Length: 4 ft. Slot 12 Rge. 2 E
Elev.



15. Casing and Liner Pipe SE SW NW

Diam. (in.)	Kind and Weight	From (ft)	To (ft)
5	SDR 21 PVC	-1	298

16. Size hole below casing: _____ in.
17. Static level 120 ft. below casing top which is 1 ft. above ground level. Pumping level 124 ft. when pumping at 30 gpm for 2 hours.

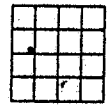
18. Formations passed through	Thickness	Bottom
yellow clay	20	20
blue clay	54	74
brown drift	2	76
green clay	3	79
gray clay	199	278
fine sand	24	302
limestone at	0	302

Household - Private

DeWitt 12-039-21015-00 03-19N-02E

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner Cyrulik, Welby Well No. #1
Address Rt. #2 Clinton IL
Driller Meshburn, Grover C. Jr. License No. 102-1930
11. Permit No. 136231 Date 10/15/87
12. Water from sand 13. County DeWitt
at depth 270 to 290 ft. Sec. 3
14. Screen: Diam. 5 in. Twp. 19 N
Length: 8 ft. Slot 12 Rge. 2 E
Elev. 735TM



15. Casing and Liner Pipe NW SW SE

Diam. (in.)	Kind and Weight	From (ft)	To (ft)
.5	PVC SDR 21	-1	282

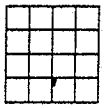
16. Size hole below casing: _____ in.
17. Static level 126 ft. below casing top which is 1 ft. above ground level. Pumping level 132 ft. when pumping at 25 gpm for 3 hours.

18. Formations passed through	Thickness	Bottom
yellow clay	16	16
blue clay	40	56
brown drift	3	59
grey clay	109	168
dirty sand	6	174
grey clay	96	270
sand	20	290
limestone	0	290

DeWitt 12-039-20831-00 03-19N-2E

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner Cross Brothers Well No. #1
Address R.R. #2 P.O. Box #82 Clinton IL
Driller Mashburn, Grover C. Jr. License No. 102-1930
11. Permit No. 004056 Date 07/25/88
12. Water from sand 13. County DeWitt
at depth 272 to 291 ft. Sec. 3
14. Screen: Diam. 5 in. Twp. 19 N
Length: 4 ft. Slot 12 Rge. 2 E
Elev. 730 TM



15. Casing and Liner Pipe NW SW SE

Diam. (in.)	Kind and Weight	From (ft)	To (ft)
5	PVC SDR 21	-1	287

16. Size hole below casing: _____ in.
17. Static level 126 ft. below casing top which is 1 ft. above ground level. Pumping level 128 ft. when pumping at 15 gpm for 2 hours.

18. Formations passed through	Thickness	Bottom
yellow clay	16	16
gray clay	46	62
brown dirt	12	74
green clay	4	78
gray clay	172	250
soft sandy clay	22	272
fine/medium sand	19	291
limestone at	0	291

Household - Private

DeWitt 12-039-20922-00 03-19N-02E

TOWN

COMPANY Woollen Bros.

FARM Beline

DATE DRILLED December 1945

AUTHORITY Woollen Bros.

COLLECTOR

TOWNSHIP Texas NO. T. 19N R. 2E SEC. 3

ELEVATION ~~780 Wolfe~~ 725 TM

NW cor. of SE

Co. No. 112

No.	Strata	Thickness Feet	Thickness In.	Depth Feet	Depth In.
	Soil, yellow clay	13		13	
	Blue clay	18		31	
	Blue sand bed	2		33	
	Hard blue clay	31		64	
	Drift wood	4		68	
	Green clay	6		74	
	Gas			74	
	Hardpan	50		124	
	Gravel; 2 g.p.m.	2		126	
	Grey hardpan, very hard	24		150	
	6" seam of sand				
	Gray hardpan, hard	8		158	
	Fine dirty sand	1		159	
	Grey hardpan	11		170	
	Sand, gravel				
	Total depth			173	

NO ENVELOPE

4" hole
173' of 4" pipe, black
Drawn down very little at 6 g.p.m. for 2 hrs.
Water clear
Water level 70'
Finished on sand & gravel to 173'
Black Pipe, medium, maybe broken.
Myers Jet Electric Pump. Length 90'.
Size 1¼ & I". ½ H.P.
Large pit size..
New model Myers, pumping about 3½ G.P.M.
well has gas [redacted] bothered a Mongomery
Ward Pump. Make it lose prime.

COUNTY Dewitt

SAMPLE SET NO. 5-19N-

GEOLOGICAL AND WATER SURVEYS WELL RECORD

Property owner Maxwell, Doug & Leilani Well No. _____
Address 509 E. Washington Pontiac IL
Well address R.R. Clinton, IL
Lot _____ Subd _____ ISWS P# 308098
Driller Layten, James License No. 102-2243
Permit No. 039-043-98 Date 10/13/1998
Water from sand & gravel County DeWitt
at depth 245 to 306 ft.
Screen: Diam. 5 in.
Length: 4 ft. Slot 20

Sec. 3
Twp. 19 N
Rge. 2 E
Elev. ____

NE SW NE

Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (ft)	To (ft)
5	SDR 21	-1	298

Size hole below casing: _____ in.
Static level 131 ft. below casing top which is 1 ft. above ground level. Pumping level 139 ft. when pumping at 15 gpm for _____ hours.

Formations passed through	Thickness	Bottom
yellow clay	14	14
gray clay	19	33
gravel	2	35
gray clay	43	78
gray clay & gravel	3	81
gray clay	60	141
gray clay & gravel	1	142
gray clay	53	195
yellow clay	17	212

Household - Private

DeWitt 12-039-21378-00 3-19N-2E

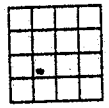
Formations passed through (continued)	Thickness	Bottom
gray clay	8	220
sand & clay	10	230
fine sand & clay	5	235
fine sand	5	240
fine sand & clay	5	245
fine sand	15	260
sand & gravel	16	276
fine medium sand & gravel	14	290
medium sand & gravel	16	306
limestone	9	315

Household - Private

DeWitt 12-039-21378-00 3-19N-2E

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner Polen, Jim Well No. #2
    Address R.R. #2 Clinton IL
    Driller Mashburn, Grover C. Jr. License No. 102-1930
11. Permit No. 03901392 Date 07/24/92
12. Water from sand 13. County DeWitt
    at depth 279 to 288 ft. Sec. 3
14. Screen: Diam. 5 in. Twp. 19 N
    Length: 8 ft. Slot 10 Rge. 2 E
    Elev. ____



SW NE SW

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (ft)	To (ft)
5	PVC SDR21	-1	280

16. Size hole below casing: _____ in.
17. Static level 128 ft. below casing top which is 1 ft. above ground level. Pumping level 135 ft. when pumping at 40 gpm for 2 hours.

18. Formations passed through	Thickness	Bottom
yellow clay	24	24
blue clay	48	72
brown drift	3	75
green clay	7	82
gray clay	197	279
fine clean sand	9	288
limestone at	0	288

Household - Private

DeWitt 12-039-21016-00 03-19N-02E

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner Polen, Jim Well No. #3
Address R.R. #2 P.O. Box #322A Clinton IL
Driller Mashburn, Grover C. Jr. License No. 102-1930
11. Permit No. 03901492 Date 07/24/92
12. Water from sand 13. County DeWitt
at depth 265 to 283 ft. Sec. 3
14. Screen: Diam. 5 in. Twp. 19 N
Length: 8 ft. Slot 10 Rge. 2 E
Elev. ____

SW NE SW

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (ft)	To (ft)
5	PVC SDR 21	-1	275

16. Size hole below casing: _____ in.
17. Static level 124 ft. below casing top which is 1 ft. above ground level. Pumping level 130 ft. when pumping at 40 gpm for 2 hours.

18. Formations passed through	Thickness	Bottom
yellow clay	25	25
blue clay	45	70
brown drift	6	76
green clay	6	82
gray clay	183	265
fine clean sand	18	283
limestone at	0	283

Household - Private

DeWitt 12-039-21017-00 03-19 2E

TOWN

TOWNSHIP Texas R. 2E

COMPANY Woollen Bros. NO. FT. SEC.

FARM Nickels, Archie NO. 19N 3

DATE DRILLED November 1945

AUTHORITY Woollen Bros. 730 ETM

COLLECTOR ELEVATION 715 Rolfe

NE cor. of SW

Co. No. 114

Strata	Thickness Feet	Thickness In.	Depth Feet	Depth In.
Soil, yellow clay	16		16	
Blue clay	41		57	
Drift wood	7		64	
Green clay	6		70	
Gray hardpan, hard	10		80	
Gray hardpan, soft	4		84	
Hardpan, hard	4		88	
Sand; 2 g.p.m. water	1		89	
Brown drift wood	2½		91½	
Sand, gravel	3		94½	
Gray hardpan, hard	27½		122	
Gravel, coarse; 1 g.p.m.	2		124	
Hardpan	19		143	
Seam gravel (no water)			143	
Hardpan	15		158	
Dirty sand	1		159	
Hardpan, hard	5		164	
Hardpan, med.	6		170	
Sand, gravel	2		172	
Hardpan	11		183	
Sand, gravel	1		184	
Hardpan, hard	8		192	
Gravel, dry	1		193	
Yellowish hardpan	22		215	
Sand dry	1		216	
Hardpan, med.	49		265	
Blueish clay	11		276	
Sand, gravel	4		280	
Clay, shale				
Total depth			280	

COUNTY DeWitt 3-19N-2E

SAMPLE SET NO.

(84107—30M—8-45) 2

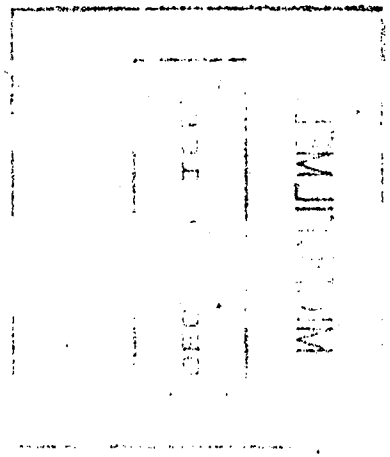
ILLINOIS GEOLOGICAL SURVEY, URBANA

SHEET 2 T. 19N R. 2E S. 3

COMPANY Woollen Bros. NO.

FARM Nickels, Archie NO.

).	Strata	Thickness Feet	Thickness In.	Depth Feet	Depth In.
	4" hole 277' of pipe Drawn down 18' at 7 g.p.m. for 1 hr. Water dirty Water level 125' Finished in sand, gravel at 277' to 280'				

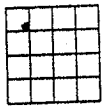


ORIGINAL FILED

COUNTY DeWitt 3-19N-

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner Texas Township Building Well No. #1
Address R.R. #2 Clinton IL
Driller Mashburn, Grover C. Jr. License No. 102-1930
11. Permit No. 03900691 Date 06/25/91
12. Water from sand 13. County DeWitt
at depth 283 to 303 ft. Sec. 3
14. Screen: Diam. 5 in. Twp. 19 N
Length: 4 ft. Slot 15 Rge. 2 E
Elev. 715FM



SE NW NW

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (ft)	To (ft)
5	PVC SDR 21	0	299

16. Size hole below casing: _____ in.
17. Static level 128 ft. below casing top which is 1 ft. above ground level. Pumping level 135 ft. when pumping at 35 gpm for 3 hours.

18. Formations passed through	Thickness	Bottom
yellow clay	24	24
blue clay	44	68
drift	3	71
green clay	3	74
gray clay	209	283
sand	20	303
limestone at	0	303

Noncommunity - Public

DeWitt 12-039-21000-00 03-19N-02E

GEOLOGICAL AND WATER SURVEYS WELL RECORD

Property owner Russell, Frank Well No. _____
Address 618 E. Macon St. Clinton IL
Well address 602 E. Van Buren Clinton, IL
Lot _____ Subd _____ ISWS P# 309384
Driller Gaza, John Edward License No. 102-2631
Permit No. 03905598 Date 12/16/1998
Water from top of casing County DeWitt
at depth 135 to 195 ft.
Screen: Diam. 3 in.
Length: 4 ft. Slot 15

Sec. 3
Twp. 19 N
Rge. 2 E
Elev. _____

SW NE SE

Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (ft)	To (ft)
5	SDR 21	-1	191

Size hole below casing: 3 in.
Static level 135 ft. below casing top which is 1 ft. above ground level. Pumping level 160 ft. when pumping at _____ gpm for 2 hours.

Formations passed through	Thickness	Bottom
brown silt clay trace light sand & gvl	20	20
sand clay gry v hard neutralized polymer	250	270
fine sand gray	10	280
sand gray medium-coarse - water	15	295

Semi-Private

DeWitt 12-039-21386-00 3-19N-2E

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner Waters, Dave Constr. Well No. _____
    Address 600 E. Van Buren Clinton IL
    Driller Washburn, Grover C. Jr. License No. 102-1930
11. Permit No. 03901593 Date 06/17/93
12. Water from sand 13. County DeWitt
    at depth 270 to 286 ft. Sec. 3
14. Screen: Diam. 5 in. Twp. 19 N
    Length: 8 ft. Slot 10 Rge. 2 E
    Elev. _____

SW SW NE

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (ft)	To (ft)
5	PVC SDR 21	-1	278

16. Size hole below casing: _____ in.
17. Static level 127 ft. below casing top which is 1 ft. above ground level. Pumping level 135 ft. when pumping at 35 gpm for 2 hours.

18. Formations passed through	Thickness	Bottom
yellow clay	21	21
blue clay	43	64
brown drift	2	66
green clay	4	70
gray clay	200	270
fine sand	16	286
limestone at	0	286

Household - Private

DeWitt 12-039-21037-00 03-19N-02E

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner Waters, Dave Construction Well No. _____
    Address 600 E. Van Buren Clinton IL
    Driller Mashburn, Grover C. Jr. License No. 102-1930
11. Permit No. 03901493 Date 06/17/93
12. Water from sand 13. County DeWitt
    at depth 271 to 286 ft.
14. Screen: Diam. 5 in.
    Length: 8 ft. Slot 10

Sec. 3
Twp. 19 N
Rge. 2 E
Elev. _____

SW SW NE

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (ft)	To (ft)
5	PVC SDR 21	-1	278

16. Size hole below casing: _____ in.
17. Static level 126 ft. below casing top which is 1 ft. above ground level. Pumping level 135 ft. when pumping at 40 gpm for 2 hours.

18. Formations passed through	Thickness	Bottom
yellow clay	19	19
blue clay	41	60
brown drift	4	64
green clay	7	71
gray clay	200	271
fine sand	15	286
limestone at	0	286

Household - Private

DeWitt 12-039-21158-00 03-191 2E

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner Waters, Dave Constr. Well No. _____
Address 600 E. Van Buren Clinton IL
Driller Mashburn, Grover C. Jr. License No. 102-1930
11. Permit No. 03901693 Date 06/17/93
12. Water from sand 13. County DeWitt
at depth 274 to 289 ft. Sec. 3
14. Screen: Diam. 5 in. Twp. 19 N
Length: 8 ft. Slot 10 Rge. 2 E
Elev. _____

SW SW NE

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (ft)	To (ft)
5	PVC SDR 21	-1	281

16. Size hole below casing: _____ in.
17. Static level 127 ft. below casing top which is 1 ft. above ground level. Pumping level 132 ft. when pumping at 40 gpm for 2 hours.

18. Formations passed through	Thickness	Bottom
yellow clay	20	20
blue clay	46	66
brown drift	4	70
green clay	104	174
gray clay	97	271
fine sand	18	289
limestone at	0	289

Household - Private

DeWitt 12-039-21036-00 03-19N-02E

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner Waters, Dave Constr. Well No. _____
Address 600 E. Van Buren Clinton IL
Driller Mashburn, Grover C. Jr. License No. 102-1930
11. Permit No. 03902593 Date 09/15/93
12. Water from sand 13. County DeWitt
at depth 271 to 286 ft.
14. Screen: Diam. 5 in.
Length: 8 ft. Slot 10
Sec. 3
Twp. 19 N
Rge. 2 E
Elev. _____

NE SW SW

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (ft)	To (ft)
5	PVC SDR 21	-1	278

16. Size hole below casing: _____ in.
17. Static level 127 ft. below casing top which is 1 ft. above ground level. Pumping level 134 ft. when pumping at 35 gpm for 2 hours.

18. Formations passed through	Thickness	Bottom
yellow clay	21	21
blue clay	47	68
brown drift	5	73
green clay	4	77
gray clay	194	271
fine sand	15	286
limestone at	0	286

Household - Private

DeWitt 12-039-21038-00 03-19N 2E

Town Clinton Township Texas R. 2E

Company A. K. Qualls No.

Farm Moore, Fred F. No.

Authority Fred F. Moore, Manteno

Elevation

Collector

Confidential Date Drilled Nov. 1939

T. 19 N

Sec. 4 NW

No. Co. No. 115 Strata	Thickness Feet	Thickness In.	Depth Feet	Depth In.
Soil, black	2		2	
Clay, yellow	20		22	
Clay, blue	10		32	
Quicksand	20		52	
Hardpan	20		72	
Clay, blue	7		79	
Sand and gravel, veins of water. Small vein of water found above quicksand but was not sufficient.	7		86	
6" casing				

NO ENVELOPE

[redacted]

COUNTY Dewitt 4-19N-2E

(40M-7-37) ILLINOIS GEOLOGICAL SURVEY, URBANA (1-43)

EQUESTED AND MAIL ORIGINAL TO STATE
SUMER HEALTH PROTECTION, 535 WEST
1. DO NOT DETACH GEOLOGICAL/WATER
PROPER[illegible] LOCAT[illegible].

GEOLOGICAL AND WATER SURVEYS WELL RECORD

Completed 6-29-78

10. Property owner S&K ENTERPRISES Well No. 1
Address RR.2 CLINTON ILL
Driller ZANE EATON License No. 103-122
11. Permit No. 76267 Date 6-29-1978
12. Water from SAND Formation 13. County DEWITT
at depth 134 to 142 ft.
14. Screen: Diam. 4 in.
Length: 8 ft. Slot 14

Sec. 4
Twp. 19N
Rge. 2E
Elev. 740ETH BM

SHOW LOCATION IN SECTION PLAT
SW SW SE
(permit)

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
4"	200LB PVC	0	134

16. Size Hole below casing: 4 in.
17. Static level 54 ft. below casing top which is 0 ft. above ground level. Pumping level 62 ft. when pumping at 60 gpm for 1 hours. Sub. pump setat 105'

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
YELLOW CLAY	16	16
BLUE CLAY	30	46
SAND	1	47
GRAY CLAY	28	75
SAND	1	76
GREEN CLAY	58	134
SAND	8	142

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED Zane Eaton DATE 8-15-78

COUNTY No. 20695

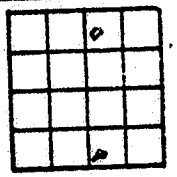
QUESTED AND MAIL ORIGINAL TO STATE
MER HEALTH PROTECTION, 535 WEST
. DO NOT DETACH GEOLOGICAL/WATER
PROPER[illegible] LOCAT[illegible]

GEOLOGICAL AND WATER SURVEYS WELL RECORD

Completed 9-12-78

10. Property owner Sauk Enterprise Well No. 1
Address R.R. 2 Clinton, Il.
Driller Zayle Eaton License No. 102-133
11. Permit No. 76268 Date 6-29-78
12. Water from SAND Formation 13. County DEWITT
at depth 131 to 138 ft.
14. Screen: Diam. 4 in.
Length: 8 ft. Slot 12-14

Sec. 4
Twp. 19N.
Rge. 2E.
Elev. ____



SHOW LOCATION IN SECTION PLAT

SW SW SE (permit)

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
4	200 LB PVC	0	130

16. Size Hole below casing: 4 in.
17. Static level 49 ft. below casing top which is 63 ft. above ground level. Pumping level 62 ft. when pumping at 60 gpm for 2 hours. Sub. pump set at 120'

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
TOP SOIL	17	17
BLUE CLAY	13	30
GRAY CLAY	15	45
GREEN CLAY	25	70
GRAY CLAY	61	131
SAND CLEAN	7	138

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED Zayle Eaton DATE 1-2-79

COUNTY No. 106.96

DEWITT

4-19N-2E

GEOLOGICAL AND WATER SURVEYS WELL RECORD

Property owner Woolridge, Rick Well No. _____
Address R.R. 3 Box 238 Clinton IL
Well address R.R. Clinton, IL
Lot _____ Subd _____ ISWS P# 323145
Driller Mashburn, Robert License No. 102-3084
Permit No. 039-019-00 Date 05/23/2000
Water from sand County DeWitt
at depth 136 to 140 ft.
Screen: Diam. 5 in.
Length: 4 ft. Slot 15

Sec. 4
Twp. 19 N
Rge. 2 E
Elev. _____

SE SW SW

Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (ft)	To (ft)
5	PVC SDR 21	-1	136
5	STAINLESS STL SCREEN	136	140

Size hole below casing: _____ in.
Static level 74 ft. below casing top which is 1 ft. above ground level. Pumping level 93 ft. when pumping at 12 gpm for 2 hours.

Formations passed through	Thickness	Bottom
yellow clay	15	15
gray clay	13	28
sand	7	35
gray clay	27	62
drift	3	65
green clay	5	70
gray clay	66	136
sand	4	140
gray clay at	0	140

Household - Private

DeWitt 12-039-21443-00 4-19N-

GEOLOGICAL AND WATER SURVEYS WELL RECORD

Property owner Underwood, James E. Well No. _____
Address Box 383 Wapella IL
Well address R.R. Clinton, IL
Lot _____ Subd _____ ISWS P# 324875
Driller Mashburn, Robert License No. 102-3084
Permit No. 039-027-00 Date 06/27/2000
Water from sand County DeWitt
at depth 277 to 291 ft. Sec. 4
Screen: Diam. 5 in. Twp. 19 N
Length: 8 ft. Slot 10 Rge. 2 E
Elev. _____

SE SW SW

Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (ft)	To (ft)
5	PVC SDR 21	-1	283
5	STAINLESS STL SCREEN	283	291

Size hole below casing: _____ in.
Static level 134 ft. below casing top which is 1 ft.
above ground level. Pumping level 137 ft. when pumping at 12
gpm for 2 hours.

Formations passed through	Thickness	Bottom
yellow clay	17	17
gray clay	54	71
drift	4	75
green clay	6	81
gray clay	196	277
fine to medium sand	14	291
limestone at	0	291

Household - Private

DeWitt 12-039-21453-00 4-19N-2E

GEOLOGICAL AND WATER SURVEYS WELL RECORD

Property owner Hinds, Craig, Julie Well No. _____
Address 285 1600th Ave. Mt. Pulaski IL
Well address R. #1 Clinton, IL
Lot _____ Subd _____ ISWS P# 305531
Driller Mashburn, Robert License No. 102-3084
Permit No. 03902998 Date 08/31/1998
Water from sand County DeWitt
at depth 286 to 290 ft.
Screen: Diam. 5 in.
Length: 4 ft. Slot 10

Sec. 4
Twp. 19 N
Rge. 2 E
Elev. _____

SW SW SW

Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (ft)	To (ft)
5	PVC SDR 21	-1	286

Size hole below casing: _____ in.
Static level 142 ft. below casing top which is 1 ft. above ground level. Pumping level 167 ft. when pumping at 10 gpm for 2 hours.

Formations passed through	Thickness	Bottom
topsoil	2	2
yellow clay	16	18
gray clay	54	72
drift	3	75
green clay	5	80
gray clay	60	140
sand	3	143
gray clay	124	267
fine silty sand no water loss	19	286

Household - Private

DeWitt 12-039-21355-00 4-19N-2E

Formations passed through (continued)	Thickness	Bottom
fine sand	4	290
silty sand no water loss	4	294
limestone at	0	294

Household - Private

DeWitt 12-039-21355-00 4-19N-2E

GEOLOGICAL AND WATER SURVEYS WELL RECORD

Property owner Crutchfield, Fred Well No. #1
Address 74 Sommerset Dr. Clinton IL
Well address R.R. Clinton, IL
Lot _____ Subd _____ ISWS P# 324873
Driller Mashburn, Robert License No. 102-3084
Permit No. 039-027-99 Date 07/26/1999
Water from sand County DeWitt
at depth 250 to 276 ft.
Screen: Diam. 5 in.
Length: 8 ft. Slot 12

Sec. 4
Twp. 19 N
Rge. 2 E
Elev. _____

SW SW SW

Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (ft)	To (ft)
5	PVC	-1	268
5	STAINLESS STL SCREEN	268	276

Size hole below casing: _____ in.
Static level 126 ft. below casing top which is 1 ft. above ground level. Pumping level 128 ft. when pumping at 12 gpm for 2 hours.

Formations passed through	Thickness	Bottom
topsoil	2	2
yellow sand	8	10
yellow clay	11	21
gray clay	12	33
sand	2	35
gray clay	25	60
sand	2	62
drift	4	66
green clay	8	74

Household - Private

DeWitt 12-039-21455-00 4-19N-

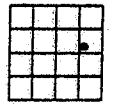
Formations passed through (continued)	Thickness	Bottom
gray clay	176	250
fine sand	10	260
medium sand	16	276

Household - Private

DeWitt 12-039-21455-00 4-19N-2E

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner Rittenhouse, Belinda Well No. #1
Address 18 Bradley Ct. Clinton IL
Driller Mashburn, Robert License No. 102-3084
11. Permit No. 03900896 Date 06/27/96
12. Water from sand 13. County DeWitt
at depth 74 to 79 ft. Sec. 4
14. Screen: Diam. 5 in. Twp. 19 N
Length: 4 ft. Slot 12 Rge. 2 E
Elev. ____



15. Casing and Liner Pipe SW SE NE

Diam. (in.)	Kind and Weight	From (ft)	To (ft)
5	PVC SDR 21	-1	75

16. Size hole below casing: _____ in.
17. Static level 43 ft. below casing top which is 1 ft. above ground level. Pumping level 48 ft. when pumping at 12 gpm for 2 hours.

18. Formations passed through	Thickness	Bottom
yellow clay	16	16
gray clay	12	28
drift	4	32
green clay	5	37
gray clay	37	74
medium sand	5	79
gray clay at	0	79

Household - Private

DeWitt 12-039-21238-00 04-19 2E

TO AND MAIL ORIGINAL TO STATE DE-
ATE OFFICE BUILDING, SPRINGFIELD,
WATER SURVEYS SECTION. BE SURE TO

GEOLOGICAL AND WATER SURVEYS WELL RECORD

Completed 11-20-71

). Property owner Rolf Short Well No. _____

Address Clinton Ill

Driller Ray Nesmith License No. 93-68

1. Permit No. DeW 12817 Date Nov. 11-71

2. Water from sand & gravel 13. County DeWitt
Formation

at depth 116 to 138 ft.

4. Screen: Diam. 4 in.
Length: 4 ft. Slot .625

Sec. 4
Twp. 19N.
Rge. 2E.
Elev. 725 Est
DM

SHOW LOCATION IN SECTION PLAT
NE SE NE
(permit)

5. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
	10.79 - Standard Pipe		

16. Size Hole below casing: 6 in.

17. Static level 50 ft. below casing top which is 1 ft. above ground level. Pumping level 55 ft. when pumping at 10 gpm for 2 hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
Top soil	4	4
yellow Clay	25	29
Blue Clay	51	80
Brown drift	7	87
Grey drift	8	95
Hard Pan	21	116
Sand + gravel	12	138

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED _____ DATE _____

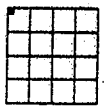
COUNTY No. 567

DEWITT

4-19N-2E

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner Norris, Mike Well No. #1
Address 620 West White Clinton IL
Driller Mashburn, Robert License No. 102-3084
11. Permit No. 03903793 Date 12/09/93
12. Water from sand 13. County DeWitt
at depth 266 to 273 ft.
14. Screen: Diam. 5 in.
Length: 4 ft. Slot 12
Sec. 4
Twp. 19 N
Rge. 2 E
Elev. 735 FT



15. Casing and Liner Pipe NW NW NW

Diam. (in.)	Kind and Weight	From (ft)	To (ft)
5	SDR 21 PVC	-1	269

16. Size hole below casing: _____ in.
17. Static level 115 ft. below casing top which is 1 ft. above ground level. Pumping level 118 ft. when pumping at 12 gpm for 2 hours.

18. Formations passed through	Thickness	Bottom
clay	21	21
gray clay	11	32
sand	6	38
gray clay	58	96
green clay	7	103
gray clay	163	266
medium sand	7	273
limestone at	0	273

Household - Private

DeWitt 12-039-21124-00 04-19N E

GEOLOGICAL AND WATER SURVEYS WELL RECORD

Property owner Crutcher, Merle & Margaret Well No. #1
Address 923 E. Johnson Clinton IL
Well address R.R. 1 Clinton, IL
Lot _____ Subd _____ ISWS P# 331868
Driller Mashburn, Robert License No. 102-3084
Permit No. 039-009-01 Date 05/07/2001
Water from sand County DeWitt
at depth 140 to 144 ft.
Screen: Diam. 5 in.
Length: 4 ft. Slot 15

Sec. 4
Twp. 19 N
Rge. 2 E
Elev. ____

SW SW SW

Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (ft)	To (ft)
5	PVC SDR 21	-1	140
5	STAINLESS STL SCREEN	140	144

Size hole below casing: _____ in.
Static level 81 ft. below casing top which is 1 ft.
above ground level. Pumping level 102 ft. when pumping at 12
gpm for 2 hours.

Formations passed through	Thickness	Bottom
topsoil	2	2
yellow clay	17	19
gray clay	48	67
drift	3	70
green clay	5	75
gray clay	65	140
sand	4	144
gray clay at	0	144

Household - Private

DeWitt 12-039-21484-00 4-19N-2E

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner Dewitt Cty Sportsman Club Well No. #2
    Address R. R. #4 Clinton IL
    Driller Layten, James G. License No. 102-2243
11. Permit No. 115011 Date 09/26/84
12. Water from sand & gravel 13. County DeWitt
    at depth 225 to 320 ft. Sec. 6
14. Screen: Diam. 5 in. Twp. 19 N
    Length: 4 ft. Slot 20 Rge. 3 E
    Elev. ____

SE SW SW

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (ft)	To (ft)
5	SDR 21	0	306

16. Size hole below casing: _____ in.
17. Static level 121 ft. below casing top which is 1 ft. above ground level. Pumping level 122 ft. when pumping at 10 gpm for 1 hours.

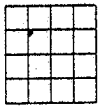
18. Formations passed through	Thickness	Bottom
no record	30	30
sand & gravel	1	31
no record	5	36
sand & gravel	3	39
no record	12	51
sand & gravel	1	52
no record	69	121
sand & gravel	1	122
no record	3	125

DeWitt 12-039-20941-00 06-19N-03E

18. Formations passed through (continued)	Thickness	Bottom
sand & gravel	1	126
no record	13	139
sand & gravel	1	140
no record	15	155
sand & gravel	2	157
no record	4	161
sand & gravel	1	162
no record	63	225
fine-coarse sand	95	320

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner Arnold, Michael R. Well No. _____
    Address Rt. #4 Box #253 Clinton IL
    Driller Coppenbarger, Floyd Lyle License No. 102-2391
11. Permit No. 100789 Date 08/04/81
12. Water from gravel 13. County DeWitt
    at depth 48 to 58 ft. Sec. 6
    Twp. 19 N
    Rge. 3 E
    Elev. 735
14. Screen: Diam. 5 in.
    Length: 4 ft. Slot 20



15. Casing and Liner Pipe NW SE NW

Diam. (in.)	Kind and Weight	From (ft)	To (ft)
5	STEEL 15# A53 GB	0	58

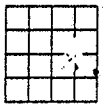
16. Size hole below casing: _____ in.
17. Static level 12 ft. below casing top which is 1 ft. above ground level. Pumping level 40 ft. when pumping at 18 gpm for 5 hours.

18. Formations passed through	Thickness	Bottom
yellow clay	30	30
blue clay	18	48
coarse gravel	10	58
blue clay	3	61

DeWitt 12-039-20779-00 06-19N-03E

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner Jordan, Jerry & Mary Well No. #2
Address R.R. #1 P.O. Box #108 Weldon IL
Driller Sims, Ronald M. Sr. License No. 102-1724
11. Permit No. 013393 Date 07/28/89
12. Water from sand 13. County DeWitt
at depth 60 to 70 ft.
14. Screen: Diam. 4 in.
Length: 4 ft. Slot 15
Sec. 6
Twp. 19 N
Rge. 3 E
Elev. ____



15. Casing and Liner Pipe SE NE SE

Diam. (in.)	Kind and Weight	From (ft)	To (ft)
4	SDR 21 PVC	0	66

16. Size hole below casing: _____ in.
17. Static level 40 ft. below casing top which is 1 ft. above ground level. Pumping level _____ ft. when pumping at 15 gpm for 1 hours.

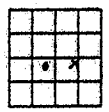
18. Formations passed through	Thickness	Bottom
top soil	1	1
sandy brown soil	3	4
gravelly brown clay	11	15
firm gravelly clay	20	35
sand streaks	1	36
soft gray clay	1	37
coarse gravel, some clay streaks	23	60
coarse sand	10	70

Household - Private

DeWitt 12-039-20963-00 06-19N-03E

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner Jordan, Mary C. Well No. #2
    Address R.R. #4 Box 3253G Clinton IL
    Driller Sims, Ronald M. Jr. License No. 102-3423
11. Permit No. 03902192 Date 11/30/92
12. Water from sand 13. County DeWitt
    at depth 290 to 320 ft. Sec. 6
14. Screen: Diam. 5 in. Twp. 19 N
    Length: 4 ft. Slot 14 Rge. 3 E
    Elev. 730



> 2 corrected

15. Casing and Liner Pipe NE NW SW E

Diam. (in.)	Kind and Weight	From (ft)	To (ft)
5	SDR 21 PVC	0	316

16. Size hole below casing: _____ in.
17. Static level 120 ft. below casing top which is 1 ft. above ground level. Pumping level _____ ft. when pumping at 15 gpm for 1 hours.

18. Formations passed through	Thickness	Bottom
brown dirt	1	1
brown clay	15	16
gray clay	22	38
sandy gray clay with sandstone at 38'	9	47
sandy gray clay with sandstone at 47'	10	57
sticky sandy gray clay	14	71
gray clay	57	128
sandy gray clay with sandstone at 168'	40	168
gray clay with sandstone at 184'	16	184

Household - Private

DeWitt 12-039-21040-00 06-19N 3E

18. Formations passed through (continued)	Thickness	Bottom
gray clay	56	240
fine-medium silty gray sand	50	290
fine-coarse sand	30	320

(2840—50M—12-64)

ILLINOIS GEOLOGICAL SURVEY, URBANA

	Thickness	Top	Bottom
Total Depth			1225
Casing: 8 5/8" - 216' 3½" - 650', drill pipe			
Dry and abandoned. Plugged August 1, 1965.			
Drillers log filed. Drilling time log filed. Electric log not run - Company.			
S.S. #52436			
The William Nixon #1 well did not reach its objective depth, due to trouble experienced by the drilling contractor and no electric log was run on this well. (Co. letter dated October 29, 1965.)			

COMPANY A. G. Hill
FARM Nixon, William NO. 1
DATE DRILLED August 1, 1965 COUNTY NO. 442
AUTHORITY
ELEVATION 725' G.L. Permit
LOCATION 330'N. Line, 330'W. Line of NE SW

NOV 15 1965

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner Bieber, Bob Well No. #1
Address R.R. #1 Box #111 Carlock IL
Driller Mashburn, Robert License No. 102-3084
11. Permit No. 03900796 Date 06/20/96
12. Water from sand 13. County DeWitt
at depth 230 to 282 ft.
14. Screen: Diam. 5 in.
Length: 4 ft. Slot 20
Sec. 7
Twp. 19 N
Rge. 3 E
Elev. ____

NE NE SE

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (ft)	To (ft)
5	PVC SDR 21	-1	278

16. Size hole below casing: _____ in.
17. Static level 122 ft. below casing top which is 1 ft. above ground level. Pumping level 128 ft. when pumping at 15 gpm for 2 hours.

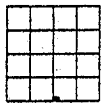
18. Formations passed through	Thickness	Bottom
yellow clay	19	19
gray clay	31	50
sand	2	52
gray clay	75	127
drift	6	133
gray clay	97	230
fine sand	18	248
medium sand	17	265
coarse sand	17	282

Household - Private

DeWitt 12-039-21239-00 07-19N-03E

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner Douglas, Dick Well No. #1
Address 605 S Jackson Clinton IL
Driller Mashburn, Grover C. Jr. License No. 102-1930
11. Permit No. 018880 Date 08/15/90
12. Water from sand 13. County DeWitt
at depth 215 to 258 ft.
14. Screen: Diam. 5 in.
Length: 4 ft. Slot 20
Sec. 7
Twp. 19 N
Rge. 3 E
Elev.



15. Casing and Liner Pipe SW SW SE

Diam. (in.)	Kind and Weight	From (ft)	To (ft)
5	PVC SDR 21	-1	254

16. Size hole below casing: _____ in.
17. Static level 98 ft. below casing top which is 1 ft. above ground level. Pumping level 99 ft. when pumping at _____ gpm for 2 hours.

18. Formations passed through	Thickness	Bottom
yellow clay	24	24
blue clay	38	62
brown drift	5	67
green clay	7	74
gray clay	141	215
fine sand	20	235
medium	11	246
coarse sand	12	258

Household - Private

DeWitt 12-039-20971-00 07-19N-03E

LOG OF WATER WELL

Property owner Glenn McBride, Weldon, Ill. Well No. 1

Drilled by Waller Bros, Wapella Year 1940.

Formations passed through	Thickness	Depth of Bottom
Soil Co. No. 146	1	1
Yellow Clay	15	16
Blue Clay	46	62
Soft "	1	63
Stem Clay	10	73
Hard Pan	4	77
Sand & gravel	3	80

[Continue on back if necessary]

Finished in Gravel at 77 to 80 ft.

Cased with 4 inch Black pipe from 0 to 77 ft.

and inch from to ft.

Size hole below casing inch. Static level from surf. 29 ft.

Tested capacity 5- gal. per min. Temperature °F.

Water lowered to ft. in. in 5- hrs. min.

Length of test 6 hrs. min. Screen Johnson

Slot 25- Diam. 3½" Length 4 Bottom set at 80 ft.

[Show location in Section Plat]

Township name Creek Elev.

Description of location 600' W. & 144' S. of

NW. Cor. NE.

Sec. 7

Twp. 19N

Rge. 3E

Street Wapella County DeWitt

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner Rearden, Don Well No. _____
Address 777 Christopher Forsyth IL
Driller Washburn, Robert License No. 102-3084
11. Permit No. 03901196 Date 07/09/96
12. Water from sand 13. County DeWitt
at depth 225 to 282 ft. Sec. 7
14. Screen: Diam. 5 in. Twp. 19 N
Length: 4 ft. Slot 15 Rge. 3 E
Elev. _____

NE NE SE

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (ft)	To (ft)
5	PVC SDR 21	-1	278

16. Size hole below casing: _____ in.
17. Static level 117 ft. below casing top which is 1 ft. above ground level. Pumping level 122 ft. when pumping at 15 gpm for 2 hours.

18. Formations passed through	Thickness	Bottom
yellow clay	19	19
gray clay	39	58
sand	3	61
gray clay	63	124
drift	7	131
green clay	3	134
gray clay	91	225
fine sand	15	240
medium sand	42	282

Household - Private

DeWitt 12-039-21250-00 07-19N-03E

Town Clinton Township Texas Map No.
Company Woollen Brothers No. R. 2E
Farm Hullinger, E. V. No. T. Sec.
Authority Woollen Brothers, Wapella 9
Elevation 735 TM Datum 19
Collector N
Confidential Date Drilled 1939

204' N. line, 332' W. line of NW SE

No. Co. No. 119 Strata	Thickness Feet	Thickness In.	Depth Feet	Depth In.
Top soil	4		4	
Clay, yellow	12		16	
Clay, blue	60		76	
Driftwood	2		78	
Clay, green	4		82	
Hardpan	8		90	
2" of sand at Hardpan			90	
Sand and gravel	48		138	
	5		143	

Water struck at 138'
Water level from surface 90'
Capacity tested to 5 g.p.m.
Water lowered to 95'

4" casing
3' Cook screen, diam. 3 3/4", size slot 25
2½" red jacket cylinder
108' of 1¼" drop pipe
108' of 3/8" iron pump rod

NO ENVELOPE

~~ORIGINAL FILED~~

COUNTY Dewitt INDEX NO.
DRILL RECORD 9-19N-2E

GEOLOGICAL AND WATER SURVEYS WELL RECORD

Property owner Rohrscheib, Sid & Krista Well No. #1
Address R.R. #21 Box #52 Bloomington IL
Well address R.R. Clinton, IL
Lot _____ Subd _____ ISWS P# 311387
Driller Mashburn, Robert License No. 102-3084
Permit No. 03901899 Date 05/05/1999
Water from sand County DeWitt
at depth 247 to 275 ft.
Screen: Diam. 5 in.
Length: 8 ft. Slot 12

Sec. 9
Twp. 19 N
Rge. 2 E
Elev. ____

SW NW SW

Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (ft)	To (ft)
5	PVC SDR 21	-1	267

Size hole below casing: _____ in.
Static level 128 ft. below casing top which is 1 ft. above ground level. Pumping level 130 ft. when pumping at 15 gpm for 2 hours.

Formations passed through	Thickness	Bottom
topsoil	2	2
yellow clay	19	21
gray clay	47	68
drift	3	71
green clay	6	77
gray clay	170	247
fine sand	8	255
medium sand	20	275
limestone at	0	275

Household - Private

DeWitt 12-039-21395-00 9-19N-2E

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner Banta, Emily Well No. _____
Address 15 Bradley Ct. Clinton IL
Driller Mashburn, Grover C. Jr. License No. 102-1930
11. Permit No. 017974 Date 05/16/90
12. Water from sand 13. County DeWitt
at depth 264 to 284 ft. Sec. 9
14. Screen: Diam. 5 in. Twp. 19 N
Length: 4 ft. Slot 15 Rge. 2 E
Elev. 735 TM

SW SW NW

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (ft)	To (ft)
5	PVC SDR 21	-2	280

16. Size hole below casing: _____ in.
17. Static level 116 ft. below casing top which is 2 ft. above ground level. Pumping level 118 ft. when pumping at 15 gpm for 1 hours.

18. Formations passed through	Thickness	Bottom
yellow clay	24	24
blue clay	34	58
green clay	3	61
gray clay	203	264
medium sand	20	284
limestone at	0	284

Household - Private

DeWitt 12-039-20958-00 09-19N-02E

FICE BUILDING, SPRINGFIELD,
URVEYS SECTION. BE SURE TO

GEOLOGICAL WATER SURVEYS WATER WELL RECORD

Completed 11-76

10. Dept. Mines and Minerals permit No. 70087 Year 78
11. Property owner MAX WALDEN Well No. 2
Address Clinton Ill
Driller B.E. MASHBURN License No. 92-520
12. Water from Sand & Gravel Formation 13. County DeWitt
at depth 223 to 279 ft.
14. Screen: Diam. 4 in.
Length: 6 ft. Slot 15

Sec. 10
Twp. 19N
Rng. 2E
Elev. 665

SHOW LOCATION IN SECTION PLAT
120'NL, 420'WL,
SW SE SE
(permit)

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
4	T+C 11 lbs	3	274

16. Size Hole below casing: 4 in.
17. Static level 98 ft. below casing top which is 1 ft. above ground level. Pumping level 100 ft. when pumping at 10 gpm for 4 hours. **Sub. pump set at 120'**

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
yellow clay	22	22
blue clay	23	45
sandy blue clay	17	62
green clay	12	74
grey clay Hard gritty	149	223
sand & gravel	56	279
(CONTINUE ON SEPARATE SHEET IF NECESSARY)		

SIGNED Bruce Mashburn DATE Jan. 78

TYPED

COUNTY No. 20699

DEWITT

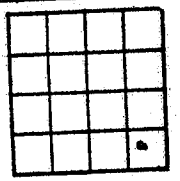
10-19N-2E

ICE BUILDING, SPRINGFIELD,
RVEYS SECTION. BE SURE TO

GEOLOGICAL WATER SURVEYS WATER WELL RECORD

Completed 7-77

0. Dept. Mines and Minerals permit No. 70086 Year 77
1. Property owner Max Walden Well No. 1
   Address CLINTON Ill
   Driller BE Mashburn License No. 92-520
2. Water from Sand (Formation)
   at depth 212 to 265 ft.
13. County DeWITT
    Sec. 10
    Twp. 19N
    Rng. 2E
    Elev. 650
14. Screen: Diam. 4 in.
    Length: 4 ft. Slot 15



SHOW LOCATION IN SECTION PLAT
70'SL, 110'EL, NW SE SE (permit)

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
4	T+C 11 lbs.		

16. Size Hole below casing: 4 in.
17. Static level 90 ft. below casing top which is 1 ft. above ground level. Pumping level 94 ft. when pumping at 10 gpm for 4 hours. **Sub. pump set at 120'**

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
yellow clay	20	20
blue "	16	36
sand & gravel	4	40
green clay	11	51
grey clay hard gritty	161	212
sand & gravel	53	265
(CONTINUE ON SEPARATE SHEET IF NECESSARY)		

SIGNED Bruce Mashburn DATE Jan. 78

FILED

COUNTY No. 20,700

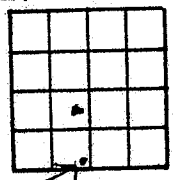
FICE BUILDING, SPRINGFIELD,
SURVEYS SECTION. BE SURE TO

GEOLOGICAL WATER SURVEYS WATER WELL RECORD

Completed 8-25-68

10. Dept. Mines and Minerals permit No. NF4713 Year 68
11. Property owner MAX WALDEN Well No. 1
    Address Route 51 - CLINTON, Ill.
    Driller B.E. MASHBURN License No. 92-520
12. Water from Sand (Formation) 13. County DEWITT
    at depth 256 to 260 ft.
14. Screen: Diam. 4 in.
    Length: 4 ft. Slot 16

Sec. 10
Twp. 19N
Rng. 2E
Elev. 655



SHOW LOCATION IN SECTION PLAT

350' SL, 200' EL of SW (permit)

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
4	T+C 11 lbs	3	256

16. Size Hole below casing: 4 in.
17. Static level 79 ft. below casing top which is 1 ft. above ground level. Pumping level 80 ft. when pumping at 14 gpm for 3 hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
yellow clay	21	21
blue clay	24	45
green clay	5	50
grey clay-sandy	30	85
Hard grey clay	34	119
dark grey clay - hard	76	195
sand + gravel	65	260
(CONTINUE ON SEPARATE SHEET IF NECESSARY)		

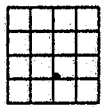
SIGNED Bruce E. Mashburn DATE Sept. 25, 68

COUNTY No. 3559

DEWITT 10-19N-2E

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner Irvin, Stan Well No. #1
    Address R. R. #2 Clinton IL
    Driller Layten, James G. License No. 102-2243
11. Permit No. 112245 Date 05/09/84
12. Water from gravel 13. County DeWitt
    at depth 95 to 104 ft. Sec. 10
14. Screen: Diam. 5 in. Twp. 19 N
    Length: 4 ft. Slot 20 Rge. 2 E
    Elev. ____



15. Casing and Liner Pipe SE NW SW

Diam. (in.)	Kind and Weight	From (ft)	To (ft)
5	SDR 21	0	99
5			

16. Size hole below casing: _____ in.
17. Static level 56 ft. below casing top which is 0 ft. above ground level. Pumping level _____ ft. when pumping at _____ gpm for _____ hours.

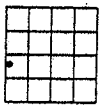
18. Formations passed through	Thickness	Bottom
no record	53	53
sand & gravel	4	57
no record	21	78
sand & gravel	2	80
no record	1	81
sand & gravel	4	85
no record	10	95
sand & gravel	9	104

DeWitt 12-039-20939-00 10-19N 2E

GEOLOGICAL AND WATER SURVEYS WELL RECORD

Property owner Cyrulick, Shelby Well No. _____
Address R.R. 2 Box 132 W Clinton IL
Well address R.R. 2 Clinton, IL
Lot 1 Subd Banta Lakes ISWS P# 348870
Driller Mashburn, Robert License No. 102-3084
Permit No. 039-013-03 Date 06/16/2003
Water from sand County DeWitt
at depth 262 to 282 ft.
Screen: Diam. 5 in.
Length: 8 ft. Slot _____

Sec. 9
Twp. 19 N
Rge. 2 E
Elev. _____



NW NW SW

Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (ft)	To (ft)
5	PVC SDR 21	-1	274
5	SS SCREEN 12 & 15	274	282

Size hole below casing: _____ in.
Static level 124 ft. below casing top which is 1 ft. above ground level. Pumping level 130 ft. when pumping at 40 gpm for 2 hours.

Formations passed through	Thickness	Bottom
topsoil	2	2
yellow clay	17	19
gray clay	45	64
drift	4	68
green clay	5	73
gray clay	189	262
sand	20	282
limestone at	0	282

Private Water Well

DeWitt 12-039-21622-00 9-19N-2E

GEOLOGICAL AND WATER SURVEYS WELL RECORD

Property owner Purdue, Rodney Well No. #1
Address 310 S. College Apt. A Lincoln IL
Well address 875E 450N Heritage Rd. Clinton, IL
Lot _____ Subd _____ ISWS P# 339565
Driller Layten, James License No. 102-2243
Permit No. 039-035-01 Date 10/24/2001
Water from sand & gravel County DeWitt
at depth 235 to 265 ft.
Screen: Diam. 5 in.
Length: 4 ft. Slot 20

Sec. 9
Twp. 19 N
Rge. 2 E
Elev. _____

SW SE SE

Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (ft)	To (ft)
5	SDR 21	-1	210
5	SDR 17	210	270
5	STAINLESS STL SCREEN	270	274

Size hole below casing: _____ in.
Static level 115 ft. below casing top which is 1 ft. above ground level. Pumping level 117 ft. when pumping at 13 gpm for _____ hours.

Formations passed through	Thickness	Bottom
topsoil	2	2
yellow clay	13	15
gray clay	14	29
gray clay with gravel streaks	2	31
gray clay	19	50
sand & gravel	1	51
gray clay	32	83
sand & gravel	1	84
gray clay	9	93

Household - Private

DeWitt 12-039-21527-00 9 19N 2E

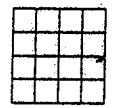
Formations passed through (continued)	Thickness	Bottom
sand & gravel	3	96
gray clay	39	135
sand & gravel	2	137
gray clay	98	235
fine to medium sand	30	265
medium to coarse sand	10	275
shale & limestone	2	277

Household - Private

DeWitt 12-039-21527-00 9-19N-2E

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner Clinton Landfill, Inc. Well No. #1
Address R.R. #2 P.O. Box #557 Clinton IL
Driller Mashburn, Grover C. Jr. License No. 102-1930
11. Permit No. 000586 Date 03/17/88
12. Water from sand 13. County DeWitt
at depth 238 to 281 ft.
14. Screen: Diam. 5 in.
Length: 4 ft. Slot 15
Sec. 10
Twp. 19 N
Rge. 2 E
Elev. 725'M



15. Casing and Liner Pipe NE NE SE

Diam. (in.)	Kind and Weight	From (ft)	To (ft)
5	PVC SDR 21	-2	277

16. Size hole below casing: _____ in.
17. Static level 108 ft. below casing top which is 2 ft. above ground level. Pumping level 112 ft. when pumping at 60 gpm for 2 hours.

18. Formations passed through	Thickness	Bottom
yellow clay	16	16
gray clay	57	73
sand & gravel	17	90
gray clay	148	238
fine sand	26	264
medium/coarse sand	17	281

Household - Private

DeWitt 12-039-20872-00 10-19N 2E

EQUESTED AND MAIL ORIGINAL TO STATE
516, STATE OFFICE BUILDING, SPRINGFIELD,
ICAL / WATER SURVEYS SECTION. BE SURE TO

GEOLOGICAL AND WATER SURVEYS WELL RECORD

Completed July 12, 1973

10. Property owner Larry Creed Well No. _____
Address Atlanta Ill
Driller Ray McDermott License No. 92-68
11. Permit No. NP 19737 Date June 8-73
12. Water from Sand & gravel 13. County DeWitt
Formation
at depth 86 to 88 ft.
14. Screen: Diam. normal
Length: _____ ft. Slot _____

Sec. 10
Twp. 19N.
Rge. 2E.
Elev. _____

SHOW LOCATION IN SECTION PLAT
100'SL, 200'EL
NW
(permit)

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)

16. Size Hole below casing: normal in.
17. Static level 40 ft. below casing top which is 1 ft. above ground level. Pumping level 47 ft. when pumping at 6 gpm for 18 hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
Top soil	3	3
Yellow Clay	22	25
Blue Clay	61	86
Sand & gravel	2	88

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED Ray McDermott DATE Dec. 2-73

DEWITT

COUNTY No. 612

10-19N-2E

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner Martin, Warren Well No. _____
Address R.R. #2, Box #218 Clinton IL
Driller Mashburn, Robert License No. 102-3084
11. Permit No. 03900595 Date 04/18/95
12. Water from sand 13. County DeWitt
at depth 252 to 288 ft.
14. Screen: Diam. 5 in.
Length: 4 ft. Slot 15
Sec. 10
Twp. 19 N
Rge. 2 E
Elev. ____

SW NW NE

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (ft)	To (ft)
5	PVC SDR 21	-1	284

16. Size hole below casing: _____ in.
17. Static level 126 ft. below casing top which is 1 ft. above ground level. Pumping level 130 ft. when pumping at 15 gpm for 2 hours.

18. Formations passed through	Thickness	Bottom
yellow clay	14	14
gray clay	36	50
sand	2	52
drift	6	58
green clay	14	72
gray clay	180	252
fine sand	15	267
fine to medium sand	21	288
limestone at	0	288

Household - Private

DeWitt 12-039-21185-00 10-19N E

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner Moore, C.H. Trust Estate Well No. #2
Address 121 S. Center St. Clinton IL
Driller Sims, R. Marc Jr. License No. 102-3423
11. Permit No. 03901295 Date 05/30/95
12. Water from dry hole 13. County DeWitt
at depth _____ to _____ ft.
14. Screen: Diam. _____ in.
Length: _____ ft. Slot _____
Sec. 10
Twp. 19 N
Rge. 2 E
Elev. _____

NW NE NW

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (ft)	To (ft)

16. Size hole below casing: _____ in.
17. Static level _____ ft. below casing top which is _____ ft. above ground level. Pumping level _____ ft. when pumping at _____ gpm for _____ hours.

18. Formations passed through	Thickness	Bottom
top soil	1	1
brown clay	9	10
yellow sand & gravel	4	14
gray clay	46	60
sand & gravel	2	62
gravelly gray clay	8	70
gray clay	24	94
sand streak	1	95
gravelly gray clay	6	101

Household - Private

DeWitt 12-039-21200-00 10-19N-02E

18. Formations passed through (continued)	Thickness	Bottom
interlayered sand gray clay	5	106
sandy gray clay	5	111
fine to medium gray sand	3	114
gray clay	21	135
sand streak	1	136
gray sandy clay	33	169
boulder	1	170
fine gray sand	1	171
sandy gray clay	120	291
limestone - bedrock	2	293

LOG OF WATER WELL

Property owner William Adams Well No. 1

Drilled by Wooden Bros Year 1942

Formations passed through	Thickness	Depth of Bottom
soil	1	1
Yellow Clay Co. no. 118	19	20
Blue Clay	2	22
Blue Clay & Gravel	10	32
Blue Clay & Gravel soft	5	37
Blue Clay & Gravel	6	43
Blue Clay & Gravel soft	2	45
Blue Clay	17	62
Blue Clay & Gravel	5	67
Blue Clay & Gravel soft	25	92
Sand Rock soft	25	123
Sand Rock	8	131
gravel	2	133
Sand Rock	1	134

RECEIVED
DEC 5 1942
ILLINOIS STATE
GEOLOGICAL SURVEY

[Continue on back if necessary]

Finished in gravel at 131 to 133 ft.

Cased with 4 inch Reb fittings from 0 to 131 ft.

and inch from to ft.

Size hole below casing inch. Static level from surf. 53 ft.

Tested capacity 5 gal. per min. Temperature °F.

Water lowered to 123 ft. in. in 1 hrs. min.

Length of test hrs. min. Screen Johnson

Slot 30 Diam. 4 Length 4 Bottom set at 134 ft.

[Show location in Section Plat]

Township name Joplin Elev. 718 Sec. 11

Description of location NE SW Twp. 29N

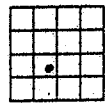
Rge. 2E

Signed [illegible] County Lincoln

Copy for Illinois State Geological Survey Index 13-19N-2E

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner Ward, Gary Well No. _____
Address #8 Harbord Dr. Bloomington IL
Driller Mashburn, Robert License No. 102-3084
11. Permit No. 039-00296 Date 02/16/96
12. Water from sand 13. County DeWitt
at depth 141 to 145 ft.
14. Screen: Diam. 5 in.
Length: 4 ft. Slot 12
Sec. 11
Twp. 19 N
Rge. 2 E
Elev. ____



15. Casing and Liner Pipe SE NE SW

Diam. (in.)	Kind and Weight	From (ft)	To (ft)
5	PVC SDR 21	-1	141

16. Size hole below casing: _____ in.
17. Static level 68 ft. below casing top which is 1 ft. above ground level. Pumping level 75 ft. when pumping at 12 gpm for 2 hours.

18. Formations passed through	Thickness	Bottom
yellow clay	15	15
gray clay	52	67
fine sand	2	69
gray clay	72	141
fine to medium sand	4	145

Household - Private

DeWitt 12-039-21234-00 11-1. 2E

TOWN

TOWNSHIP Texas

R. 2E

COMPANY Woollen Bros.

NO.

T. 19N

SEC. 11

FARM Gillen, Mrs. J.P.

NO.

DATE DRILLED November 1945

AUTHORITY Woollen Bros.

COLLECTOR

ELEVATION 722 Rolfe

NW cor. of NE

No. Co. no. 119 Strata	Thickness Feet	Thickness In.	Depth Feet	Depth In.
Soil, yellow clay	12		12	
Blue clay	47		59	
Dirty sand, gravel; little water	1		60	
Blue clay	7		67	
Gas	1		68	
Drift	4		72	
Green clay	8		80	
Hardpan	17		97	
Sand, gravel	6		103	
Total depth			103	

4" hole
100' of pipe, black
Drawn down 6' at 5 g.p.m. for 2 hrs.
Water clear
Water level 60'
Finished in sand, gravel at 97' to 103'

Black Pipe, loose
Armke Johnson Screen, Size 4", Length 3,
Slot 30.
New Red Jacket Pump, Length 90, Size 1¼,
Way Rod 3/8, Cylinders 2½.

[redacted] NO ENVELOPE

COUNTY DeWitt

11-19N-2E

SAMPLE SET NO.

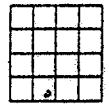
(8107—10M—5-45)

ILLINOIS GEOLOGICAL SURVEY

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner Willis, Terry Well No. #2
    Address R.R. #2 Box #94 Clinton IL
    Driller Layten, James License No. 102-2243
11. Permit No. 03902296 Date 09/03/96
12. Water from gravel 13. County DeWitt
    at depth 130 to 143 ft.
14. Screen: Diam. 5 in.
    Length: 4 ft. Slot 20

Sec. 12
Twp. 19 N
Rge. 2 E
Elev. ____



15. Casing and Liner Pipe SE SE SW

Diam. (in.)	Kind and Weight	From (ft)	To (ft)
5	SDR 21	-1	138

16. Size hole below casing: _____ in.
17. Static level 39 ft. below casing top which is 1 ft. above ground level. Pumping level 41 ft. when pumping at 10 gpm for _____ hours.

18. Formations passed through	Thickness	Bottom
yellow clay	22	22
yellow gravel	2	24
yellow clay	3	27
gray clay	15	42
gray gravel	1	43
gray clay	17	60
dirty gravel	10	70
gray clay	5	75
dirty gravel	8	83

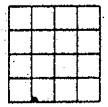
Household - Private

DeWitt 12-039-21253-00 12-1 02E

18. Formations passed through (continued)	Thickness	Bottom
gray clay	47	130
gravel	13	143
gray clay	2	145

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner Berry, Walter Well No. _____
    Address R.R. #2 Clinton IL
    Driller DeMent, Ray License No. 092-0686
11. Permit No. 97668 Date 12/02/80
12. Water from sand 13. County DeWitt
    at depth 28 to 70 ft. Sec. 12
14. Screen: Diam. _____ in. Twp. 19 N
    Length: _____ ft. Slot _____ Rge. 2 E
    Elev. _____



SW SE SW

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (ft)	To (ft)
4	STEEL 11# FT	0	70

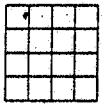
16. Size hole below casing: _____ in.
17. Static level 70 ft. below casing top which is 2 ft. above ground level. Pumping level 70 ft. when pumping at 15 gpm for 24 hours.

18. Formations passed through	Thickness	Bottom
top soil	4	4
yellow clay	18	22
blue clay	20	42
sand	28	70

DeWitt 12-039-20777-00 12-19N -E

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner Holt, Joe W. Well No. #2
    Address Clinton IL
    Driller DeMent, Ray License No. 92-68
11. Permit No. NF 10856 Date 05/10/71
12. Water from sand 13. County DeWitt
    at depth 64 to 68 ft. Sec. 12
14. Screen: Diam. 4 in. Twp. 19 N
    Length: 4 ft. Slot .025 Rge. 2 E
    Elev. 727



15. Casing and Liner Pipe 580'S 1200'E NWc

Diam. (in.)	Kind and Weight	From (ft)	To (ft)
4	STANDARD PIPE	0	64

Fld Verifd

16. Size hole below casing: _____ in.
17. Static level 40 ft. below casing top which is 1 ft. above ground level. Pumping level 45 ft. when pumping at 5 gpm for 2 hours.

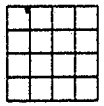
18. Formations passed through	Thickness	Bottom
top soil	3	3
yellow clay	18	21
blue clay	43	64
sand & gravel	4	68

DeWitt 12-039-00560-00 12-19N-2E

GEOLOGICAL AND WATER SURVEYS WELL RECORD

Property owner Weldon Springs State Park Well No. _____
Address _____
Well address IEPA Well #03900180
Lot _____ Subd _____ ISWS P# _____
Driller _____ License No. _____
Permit No. _____ Date _____
Water from _____ County DeWitt
at depth _____ to _____ ft.
Screen: Diam. _____ in.
Length: _____ ft. Slot _____

Sec. 12
Twp. 19 N
Rge. 2 E
Elev. _____



NW NW NE

Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (ft)	To (ft)

Size hole below casing: _____ in.
Static level _____ ft. below casing top which is _____ ft.
above ground level. Pumping level 0 ft. when pumping at _____
gpm for _____ hours.

Formations passed through	Thickness	Bottom

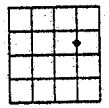
Noncommunity - Public

DeWitt 12-039-21540-00 12-19N

GEOLOGICAL AND WATER SURVEYS WELL RECORD

Property owner Weldon Springs State Park Well No. #4
Address Clinton IL
Well address
Lot Subd ISWS P#
Driller Woollen Brothers License No. 21970
Permit No. Date 05/01/1995
Water from sand & gravel County DeWitt
at depth 53 to 57 ft.
Screen: Diam. 4 in.
Length: 4 ft. Slot

Sec. 12
Twp. 19 N
Rge. 2 E
Elev.



1700' S 1320' W NEc

Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (ft)	To (ft)

Size hole below casing: in.
Static level ft. below casing top which is ft.
above ground level. Pumping level 0 ft. when pumping at 6
gpm for 1 hours.

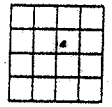
Formations passed through	Thickness	Bottom
soil & yellow clay	18	18
blue clay	22	40
brown drift	3	43
green clay	5	48
rock ledge	1	49
gray hardpan	4	53
sand & gravel	4	57

Noncommunity - Public

DeWitt 12-039-21531-00 12-19N-2E

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner Weldon Springs State Park Well No. #5
    Address
    Driller Truax Traer Coal Co. License No. 0
11. Permit No. 0 Date
12. Water from coarse sand 13. County DeWitt
    at depth 57 to 60 ft. Sec. 12
14. Screen: Diam. 4 in. Twp. 19 N
    Length: 3 ft. Slot 16 Rge. 2 E
    Elev. 720



15. Casing and Liner Pipe 3300'N 3100'E SWc

Diam. (in.)	Kind and Weight	From (ft)	To (ft)
4	ID	0	57

Fld Verifd

16. Size hole below casing: 4 in.
17. Static level 36 ft. below casing top which is 0 ft. above ground level. Pumping level 42 ft. when pumping at 12 gpm for 1 hours.

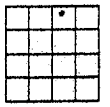
18. Formations passed through	Thickness	Bottom
ss #34188	0	0
yellow clay	15	15
yellow clay- sand mixed	3	18
yellow sand & gravel	14	32
yellow sand - soft	22	54
sand - dirty and stickey	1	55
blue sand & gravel - coarse	5	60

DeWitt 12-039-00024-00 12-19 E

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner Weldon Springs State Park Well No. _____
Address _____
Driller Woollen Brothers License No. 21970
11. Permit No. _____ Date _____
12. Water from _____ 13. County DeWitt
at depth _____ to _____ ft.
14. Screen: Diam. _____ in.
Length: _____ ft. Slot 25

Sec. 12
Twp. 19 N
Rge. 2 E
Elev. _____



15. Casing and Liner Pipe 660'S 2310'W NEc

Diam. (in.)	Kind and Weight	From (ft)	To (ft)
6		-2	

16. Size hole below casing: _____ in.
17. Static level 1 ft. below casing top which is 0 ft. above ground level. Pumping level 6 ft. when pumping at 15 gpm for _____ hours.

18. Formations passed through	Thickness	Bottom
top soil	1	1
hard yellow clay	11	12
common blue clay	14	26
sand & gravel	1	27
blue clay	5	32
sand & gravel	6	38

Household - Private

DeWitt 12-039-21180-00 12-19N-2E

...STED AND MAIL ORIGINAL TO STATE DE-
STATE OFFICE BUILDING, SPRINGFIELD,
...L / WATER SURVEYS SECTION. BE SURE TO

GEOLOGICAL AND WATER SURVEYS WELL RECORD

Completed 5-20-77

10. Property owner Jerry Willis Well No. 3
Address RR 4 Clinton, Ill
Driller Ray DeMent License No. 72-68
11. Permit No. 60056 Date 5/5/77
12. Water from Sand (Formation) 13. County DeWitt
at depth ____ to 142 ft.
14. Screen: Diam. 4 in.
Length: 3 ft. Slot .025
Sec. 12
Twp. 19N
Rge. 2E
Elev. ____

SHOW LOCATION IN SECTION PLAT
Lot #1, SE SE SW (permit)

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
4 SDR	Steel - 11# per ft.	0	142

16. Size Hole below casing: 10 in.
17. Static level 40 ft. below casing top which is 1 ft. above ground level. Pumping level 45 ft. when pumping at 10 gpm for 2 hours.

18. FORMATIONS PASSED THROUGH	~~THICKNESS~~ TOP	DEPTH OF BOTTOM
~~Topsoil~~ Topsoil	0	35
Yellow clay	35	92
Blue clay	92	127
Sand	127	142

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED Ray DeMent DATE 5/20/77

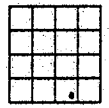
COUNTY No. 20.701

DEWITT

12-19N-2E

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner Willis, Terry Well No. _____
Address R. R. #2 Clinton IL
Driller DeMent, Ray License No. 092-0686
11. Permit No. 111824 Date 04/10/84
12. Water from sand 13. County DeWitt
at depth 82 to 82 ft. Sec. 12
14. Screen: Diam. _____ in. Twp. 19 N
Length: _____ ft. Slot _____ Rge. 2 E
Elev. 710TM



15. Casing and Liner Pipe 100' N 200' W SEc SW SE

Diam. (in.)	Kind and Weight	From (ft)	To (ft)
4	STEEL 11#/FT	0	82

16. Size hole below casing: _____ in.
17. Static level 14 ft. below casing top which is 0 ft. above ground level. Pumping level _____ ft. when pumping at 10 gpm for _____ hours.

18. Formations passed through	Thickness	Bottom
top soil	2	2
yellow clay	36	38
blue clay	44	82
sand top	0	82

DeWitt 12-039-20940-00 12-19N-02E

TOWN

TOWNSHIP

COMPANY Woollen Bros. NO.

FARM Adams, William NO.

DATE DRILLED April 1946

AUTHORITY Woollen Bros.

COLLECTOR

ELEVATION

SW

T. 19N R. 2E SEC. 12

Co. No. 120 Strata	Thickness Feet	Thickness In.	Depth Feet	Depth In.
Soil, yellow clay	15		15	
Yellow sand	6		21	
Blue sand	2		23	
Blue gravel	2		26	
Clay				
Total depth			25	

4" hole
Drawn down 12' at 4 g.p.m. for 2 hrs.
Water clear
Water level 4½'
Finished in sand, gravel at 21' to 25'

Pipe Loose
Johnson Everdur Screen, Size 4",
Lenght 4', Slot 14.
Burks Shallow Well Pump Length 21,
Size 1", 1/4 H.P. Electric

[redacted] NO ENVELOPE

COUNTY Dewitt

SAMPLE SET NO.

~~21~~-19N-~~2~~
12

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner State of IL Capital Dev. Board Well No. _____
Address Straton Building Springfield IL
Driller Hatfield, Larry License No. 102-0742
11. Permit No. 03901594 Date 07/15/94
12. Water from _____ 13. County DeWitt
at depth _____ to _____ ft.
14. Screen: Diam. 5 in.
Length: 8 ft. Slot 30
Sec. 12
Twp. 19 N
Rge. 2 E
Elev. _____

NE NE SW

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (ft)	To (ft)
5	PVC	0	133

16. Size hole below casing: _____ in.
17. Static level _____ ft. below casing top which is _____ ft. above ground level. Pumping level _____ ft. when pumping at _____ gpm for _____ hours.

18. Formations passed through	Thickness	Bottom
top soil	2	2
red clay	23	25
yellow clay	20	45
blue clay	50	95
blue sandy clay	15	110
blue clay	9	119
gravel w/fine sand	12	131
gray medium coarse gravel	10	141

Noncommunity - Public

DeWitt 12-039-21177-00 12-19N-02E

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner Willis, Terry Well No. #3
Address RR #4 Clinton IL
Driller DeMent, Ray License No. 92-68
11. Permit No. 60056 Date 05/05/77
12. Water from sand 13. County DeWitt
at depth ____ to 142 ft.
14. Screen: Diam. 4 in.
Length: 3 ft. Slot .025
Sec. 12
Twp. 19 N
Rge. 2 E
Elev. ____

SE SE SW

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (ft)	To (ft)
5	STEEL 11# PER FT.	0	142

16. Size hole below casing: ____ in.
17. Static level 40 ft. below casing top which is 1 ft. above ground level. Pumping level 45 ft. when pumping at 10 gpm for 2 hours.

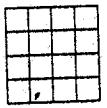
18. Formations passed through	Thickness	Bottom
top soil	35	35
yellow clay	57	92
blue clay	35	127
sand	15	142

DeWitt 12-039-20701-00 12-19

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner Weaver, Solomon Well No. _____
Address _____
Driller Truax Traer Coal Co. License No. 0
11. Permit No. _____ Date _____
12. Water from _____ 13. County DeWitt
at depth _____ to _____ ft.
14. Screen: Diam. _____ in.
Length: _____ ft. Slot _____

Sec. 13
Twp. 19 N
Rge. 2 E
Elev. 727



100'N 1500'E SWc

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (ft)	To (ft)

Fld Verifd

16. Size hole below casing: _____ in.
17. Static level _____ ft. below casing top which is _____ ft. above ground level. Pumping level _____ ft. when pumping at _____ gpm for _____ hours.

18. Formations passed through	Thickness	Bottom
ss #12964	0	0
no sample	95	95
sand, silty, calcareous	5	100
silt, calcareous, trace humus	5	105
silt, calcareous, trace humus	5	110
no sample	5	115
silt,sandy,calcareous,trace humus	5	120

DeWitt 12-039-00122-00 13-19N-2E

GEOLOGICAL AND WATER SURVEYS WELL RECORD

Property owner Baker, Larry Well No. _____
Address 5464 N. Oakland Forsyth IL
Well address _____
Lot _____ Subd _____ ISWS P# 323766
Driller Gaza, John Edward License No. 102-2631
Permit No. 039-024-00 Date 06/01/2000
Water from top of casing County DeWitt
at depth 67 to 270 ft.
Screen: Diam. 3 in.
Length: 4 ft. Slot .012
Sec. 13
Twp. 19 N
Rge. 2 E
Elev. _____

NW NW SE

Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (ft)	To (ft)
5	SDR 21	-1	266
3	STAINLESS STL SCREEN	266	270

Size hole below casing: _____ in.
Static level 67 ft. below casing top which is 1 ft. above ground level. Pumping level 87 ft. when pumping at 30 gpm for 1 hours.

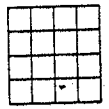
Formations passed through	Thickness	Bottom
silt clay brown trace sand trace gravel	15	15
silt clay brn-gray trace sand & gravel	10	25
silt clay gray little sand trace gravel	45	70
silt clay peat dark brown	5	75
till sand & gravel very hard	105	180
sand brown fine-medium	15	195
silt clay gray trace sand	30	225
sand fine-medium brown	25	250
sand medium-coarse with gravel	20	270

Household - Private

DeWitt 12-039-21440-00 13-19N

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner Austin, Larry Well No. #1
Address 220 N. Pine Maroa IL
Driller Mashburn, Grover C. Jr. License No. 102-1930
11. Permit No. 017298 Date 03/29/90
12. Water from sand 13. County DeWitt
at depth 236 to 282 ft. Sec. 13
14. Screen: Diam. 5 in. Twp. 19 N
Length: 4 ft. Slot 15 Rge. 2 E
Elev. 730



1000' N 2550' W SEc Fld Verifc

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (ft)	To (ft)
5	SDR 21 PVC	-2	278

16. Size hole below casing: _____ in.
17. Static level 125 ft. below casing top which is 2 ft. above ground level. Pumping level 150 ft. when pumping at 17 gpm for 4 hours.

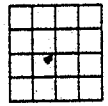
18. Formations passed through	Thickness	Bottom
yellow clay	22	22
blue clay	40	62
brown drift	3	65
green clay	6	71
gray clay	165	236
fine sand	34	270
fine/medium sand	12	282

Household - Private

DeWitt 12-039-20960-00 13-19N-2E

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner LeBegue, Arlene Well No. #1
    Address R.R. #2 P.O. Box #102D Clinton IL
    Driller Mashburn, Grover C. Jr. License No. 102-1930
11. Permit No. 03900592 Date 05/14/92
12. Water from sand 13. County DeWitt
    at depth 103 to 108 ft. Sec. 13
14. Screen: Diam. 4 in. Twp. 19 N
    Length: 4 ft. Slot 20 Rge. 2 E
    Elev.



NE NE SW

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (ft)	To (ft)
4	PVC SDR 21	-1	104

16. Size hole below casing: _____ in.
17. Static level 6 ft. below casing top which is 1 ft. above ground level. Pumping level 10 ft. when pumping at 15 gpm for 2 hours.

18. Formations passed through	Thickness	Bottom
yellow clay	26	26
blue clay	28	54
brown drift	2	56
green clay	2	58
gray clay	45	103
sand & gravel	5	108
gray clay at	0	108

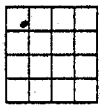
Household - Private

DeWitt 12-039-21018-00 13-19 E

GEOLOGICAL AND WATER SURVEYS WELL RECORD

Property owner Danison, Pat Well No. _____
Address 503 Portland Clinton IL
Well address R.R. Clinton, IL
Lot 7 Subd _____ ISWS P# 320017
Driller Mashburn, Robert License No. 102-3084
Permit No. 039-032-99 Date 09/30/1999
Water from sand County DeWitt
at depth 222 to 276 ft.
Screen: Diam. 5 in.
Length: 8 ft. Slot 12

Sec. 13
Twp. 19 N
Rge. 2 E
Elev. _____



Casing and Liner Pipe SE NW NW

Diam. (in.)	Kind and Weight	From (ft)	To (ft)
5	PVC	-1	268
5	STAINLESS STL SCREEN	268	276

Size hole below casing: _____ in.
Static level 97 ft. below casing top which is 1 ft. above ground level. Pumping level 100 ft. when pumping at 15 gpm for 2 hours.

Formations passed through	Thickness	Bottom
yellow clay & sand	10	10
yellow clay	11	21
gray clay	20	41
sand	2	43
gray clay	28	71
drift	3	74
green clay	7	81
gray clay	141	222
sand	54	276

Household - Private

DeWitt 12-039-21412-00 13-19N-2E

GEOLOGICAL AND WATER SURVEYS WELL RECORD

Property owner McGuire, Larry Well No. #1
Address 514 S. Quincy Clinton IL
Well address R.R. 1 Clinton, IL
Lot _____ Subd _____ ISWS P# 312531
Driller Mashburn, Robert License No. 102-3084
Permit No. 039-028-99 Date 08/05/1999
Water from sand County DeWitt
at depth 51 to 81 ft.
Screen: Diam. 5 in.
Length: 4 ft. Slot 20

Sec. 13
Twp. 19 N
Rge. 2 E
Elev. _____

NE NW NW

Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (ft)	To (ft)
5	PVC SDR 21	-1	77
5	STAINLESS STL SCREEN	77	81

Size hole below casing: _____ in.
Static level 50 ft. below casing top which is 1 ft. above ground level. Pumping level 52 ft. when pumping at 12 gpm for 2 hours.

Formations passed through	Thickness	Bottom
yellow clay	28	28
gray clay	23	51
medium to coarse sand	14	65
coarse sand & gravel	16	81

Household - Private

DeWitt 12-039-21413-00 13-19

GEOLOGICAL AND WATER SURVEYS WELL RECORD

Property owner Ward, Gary & Dolores Well No. #1
Address R.R. 2 Box 84Q Clinton IL
Well address R.R. 2 Box 102P Clinton, IL
Lot _____ Subd _____ ISWS P# 323143
Driller Mashburn, Robert License No. 102-3084
Permit No. 039-007-00 Date 03/22/2000
Water from sand County DeWitt
at depth 200 to 274 ft. Sec. 14
Screen: Diam. 5 in. Twp. 19 N
Length: 8 ft. Slot 12 Rge. 2 E
Elev. _____

SW NE NE

Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (ft)	To (ft)
5	PVC SDR 21	-1	266
5	STAINLESS STL SCREEN	266	274

Size hole below casing: _____ in.
Static level 85 ft. below casing top which is 1 ft. above ground level. Pumping level 88 ft. when pumping at 15 gpm for 2 hours.

Formations passed through	Thickness	Bottom
yellow clay	16	16
gray clay	37	53
drift	2	55
green clay	4	59
gray clay	141	200
fine sand	30	230
fine to medium sand	44	274
limestone at	0	274

Household - Private

DeWitt 12-039-21445-00 14-19N-2E

GEOLOGICAL AND WATER SURVEYS WELL RECORD

Property owner Cook, Eric & Hallie Well No. #1
Address 1217 Gettyberg Dr. Bloomington IL
Well address R.R. Clinton, IL
Lot _____ Subd _____ ISWS P# 336335
Driller Layten, James License No. 102-2243
Permit No. 039-013-01 Date 06/28/2001
Water from sand & gravel County DeWitt
at depth 235 to 246 ft.
Screen: Diam. 5 in.
Length: 4 ft. Slot 20

Sec. 14
Twp. 19 N
Rge. 2 E
Elev. ____

NE SE NE

Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (ft)	To (ft)
5	SDR 21	-1	198
5	SDR 17	199	239
5	STAINLESS STL SCREEN	239	243

Size hole below casing: _____ in.
Static level 89 ft. below casing top which is 1 ft. above ground level. Pumping level 90 ft. when pumping at 11 gpm for _____ hours.

Formations passed through	Thickness	Bottom
yellow clay	10	10
yellow gravel	2	12
yellow clay	6	18
yellow gravel	10	28
gray clay	4	32
peat	3	35
gray clay	3	38
green clay	7	45
gray clay with some gravel	67	112

Household - Private

DeWitt 12-039-21518-00 14-19N-2E

Formations passed through (continued)	Thickness	Bottom
gravel	2	114
gray clay	5	119
gravel with clay	2	121
gray clay	9	130
gravel with gray clay	10	140
gray clay	22	162
gravel with gray clay	2	164
gray clay	46	210
fine sand with gravel	25	235
medium sand & gravel	11	246

Household - Private

DeWitt 12-039-21518-00 14-19N-2E

EQUESTED AND MAIL ORIGINAL TO STATE
SUMER HEALTH PROTECTION, 535 WEST
761. DO NOT DETACH GEOLOGICAL/WATER
E PROPER LOCAT

GEOLOGICAL AND WATER SURVEYS WELL RECORD

Completed 5-19-78

10. Property owner CENTRAL ILL BUILDING Well No. 1 LOT 51
Address CLINTON COUNTRY CLUB ACRES
Driller GC MASHBURN JR License No. 102-193
11. Permit No. 63028 Date JUNE 29 1977
12. Water from SAND Formation 13. County DEWITT
at depth 224 to 264 ft.
14. Screen: Diam. 4 in.
Length: 8 ft. Slot 12 55
Sec. 15
Twp. 19N
Rge. 2E
Elev. ____

SHOW LOCATION IN SECTION PLAT
Lot#51, Cntry, Clyb Acres, NE SW (permit)

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
4	BLK STEEL 11#	+2	256

16. Size Hole below casing: ____ in.
17. Static level 78 ft. below casing top which is 2 ft. above ground level. Pumping level 86 ft. when pumping at 30 gpm for 2 hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
TOP SOIL	2	2
YELLOW CLAY	18	20
BLUE CLAY	50	70
BROWN DRIFT	2	72
GREEN CLAY	4	76
GREY CLAY	148	224
SAND	40	264
STOPPED AT 264'		

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED [signature] DATE May 30 - 78

COUNTY No. 20706

DEWITT

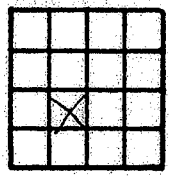
UESTED AND MAIL ORIGINAL TO STATE
SUMER HEALTH PROTECTION, 535 WEST
61. DO NOT ATTACH GEOLOGICAL/WATER
E PROPER LOCATI

GEOLOGICAL AND WATER SURVEYS WELL RECORD

Completed 12-78

10. Property owner CENTRAL ILL Boat Corp Well No. 3 Lot 44
    Address 211 S Quincy Clinton
    Driller EC MASHBURN Sr License No. 102 193
11. Permit No. 73242 Date April 19-78
12. Water from SAND Formation 13. County DEWITT
    at depth 212 to 253 ft.
14. Screen: Diam. 4 in.
    Length: 2 ft. Slot 12

Sec. 15
Twp. 19N
Rge. 2E
Elev. ____



15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
4	BLK STEEL 11#	-4	245

SHOW LOCATION IN SECTION PLAT
Lot#44, Cntry Club Acres, NE SW (permit)

16. Size Hole below casing: ____ in.
17. Static level 60 ft. below casing top which is 2 ft. above ground level. Pumping level 65 ft. when pumping at 60 gpm for 2 hours. Sub. pump set at 88'

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
YELLOW CLAY	16	16
GREY CLAY	196	212
FINE SAND	25	237
COURSE SAND	16	253
LIME STONE AT 253'		

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED E C Mashburn Sr DATE 5-5-79

COUNTY No. 20.704

DEWITT

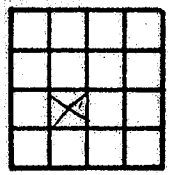
15-19N-2E

QUESTED AND MAIL ORIGINAL TO STATE
UMER HEALTH PROTECTION, 535 WEST
1. DO NOT ATTACH GEOLOGICAL/WATER
PROPER LOCATI

GEOLOGICAL AND WATER SURVEYS WELL RECORD

Completed 12-78

10. Property owner CENTRAL Ill Bldg Hldgs Well No. 1 LOT 48
Address 211 S QUINCY CLINTON
Driller G.C. MASHBURN JR License No. 102 193
11. Permit No. 73247 Date APRIL 19-78
12. Water from SAND Formation 13. County DEWITT
at depth 215 to 260 ft.
14. Screen: Diam. 4 in.
Length: 2 ft. Slot 20
Sec. 15
Twp. 19N
Rge. 2E
Elev. ____



15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
4	BLK STEEL 11#	-3	252

SHOW LOCATION IN SECTION PLAT
Lot#48, Cntry Club Acres, NE SW (permit)

16. Size Hole below casing: — in.
17. Static level 55 ft. below casing top which is 2 ft. above ground level. Pumping level 60 ft. when pumping at 60 gpm for 2 hours. Sub. pump set at 88'

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
YELLOW CLAY	18	18
GREY CLAY	197	215
FINE SAND	20	235
COURSE SAND	25	260
LIME STONE AT 260		

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED [signature] (TITLE) DATE Jan 5 - 79

COUNTY No. 20205

15-19N-2E

...UESTED AND MAIL ORIGINAL TO STATE
...MER HEALTH PROTECTION, 535 WEST
. DO NOT DETACH GEOLOGICAL/WATER
PROPER... LOCATI...

GEOLOGICAL AND WATER SURVEYS WELL RECORD

Completed 12-78

10. Property owner CENTRAL ILL. BLDRS Well No. 2 LOT 39
    Address 211 S QUINCY CLINTON
    Driller GC MASHBURN JR License No. 102 193
11. Permit No. 73249 Date APRIL 19 78
12. Water from SAND Formation 13. County DEWITT
    at depth 180 to 245 ft.
14. Screen: Diam. 4 in.
    Length: 8 ft. Slot 20

Sec. 15
Twp. 19N
Rge. 2E
Elev. ____

SHOW LOCATION IN SECTION PLAT

Lot #39, Cntry Clubb Acres, NE SW (permit)

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
4	BLK STEEL 11#	-3	237

16. Size Hole below casing: ____ in.
17. Static level 45 ft. below casing top which is 2 ft. above ground level. Pumping level 50 ft. when pumping at 60 gpm for 2 hours. Sub. pump set at 88'

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
YELLOW CLAY	16	16
GREY CLAY	164	180
FINE SAND	40	220
COURSE SAND	25	245
LIMESTONE AT 245		

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED GC Mashburn Jr DATE JAN 5 - 79

COUNTY No. 20.703

DEWITT

15-19N-2E

...UESTED AND MAIL ORIGINAL TO STATE
...MER HEALTH PROTECTION, 535 WEST
DO NOT DETACH GEOLOGICAL/WATER
...ROPER ... LOCATI...

GEOLOGICAL AND WATER SURVEYS WELL RECORD

Completed 12-78

10. Property owner CENTRAL ILL BLDG + LOAN Well No. 2 LOT 32
Address 211 S QUINCY CLINTON
Driller GC MACHBURN JR License No. 102 193
11. Permit No. 73250 Date APRIL 19 - 78
12. Water from SAND Formation
at depth 190 to 242 ft.
13. County DEWITT
Sec. 15
Twp. 19N
Rge. 2E
Elev. ____

14. Screen: Diam. 4 in.
Length: 7 ft. Slot 20

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
4	BLK STEEL 11#	-3	240

SHOW LOCATION IN SECTION PLAT

Lot #32, Cntry Club Acres, NE SW (permit)

16. Size Hole below casing: ____ in.
17. Static level 47 ft. below casing top which is 2 ft. above ground level. Pumping level 55 ft. when pumping at 65 gpm for 2 hours. Sub. pump set at 88'

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
YELLOW CLAY	16	16
GREY CLAY	174	190
FINE SAND	30	220
COURSE SAND	28	248
LIMESTONE AT 248		

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED H C Machburn Jr DATE Jan 5-79

COUNTY No. 20.702

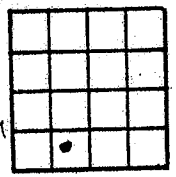
15-19N-2E

GEOLOGICAL WATER SURVEYS WATER WELL RECORD

Completed November 2, 1970

10. Dept. Mines and Minerals permit No. NE 09555 Year 1970
11. Property owner Jim GRAY + LANE Well No. 1
Address RT 2 CLINTON
Driller MASHBURN BROS License No. 92-203
12. Water from SAND Formation 13. County DEWITT
at depth 284 to 290 ft.
14. Screen: Diam. 4 in.
Length: 6 ft. Slot 18 + 16

Sec. 15
Twp. 19N
Rng. 2E
Elev. 718 Bm



SHOW LOCATION IN SECTION PLAT
250' SL, 100' WL of NW SE SW (permit)

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
4	BLK STEEL 11#	+1	284

16. Size Hole below casing: NONE in.
17. Static level 89 ft. below casing top which is 1 ft. above ground level. Pumping level 91 ft. when pumping at 17 gpm for 2 hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
YELLOW CLAY	22	22
BLUE CLAY	42	64
BROWN DRIFT	2	66
GRAY CLAY	166	232
FINE SAND	48	280
COURSE SAND + GRAVEL	10	290
NOT THRU SAND AT 290		
(CONTINUE ON SEPARATE SHEET IF NECESSARY)		

SIGNED Mashburn Bros DATE Nov 9, 1970

COUNTY No. 546

DEWITT

15-19N-2E

Town Clinton Township Texas Map No.
Company Woollen Brothers No. R. 2E
Farm Hartsock, Wm. No. T. Sec. 15
Authority Woollen Brothers, Wapella 19 N
Elevation
Collector
Confidential Date Drilled 1941
51' S. line, 90' E. line of NW

No.	Co. no. 123 Strata	Thickness Feet	Thickness In.	Depth Feet	Depth In.
	Soil	2		2	
	Clay, yellow and gravel	20		22	
	Clay, blue	12		34	
	Drift, black	4		38	
	Clay, green	4		42	
	Clay, gray	28		70	
	Did not go into vein				
	Water flowed 8' above ground level				
	4" well				
	No screen				

NO ENVELOPE

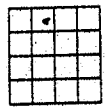
[redacted]

COUNTY Dewitt INDEX NO.
DRILL RECORD 15-1[illegible]E

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner Martin Auction Co. Well No. #1
    Address Rt. #2 Clinton IL
    Driller Mashburn, Grover C. Jr. License No. 102-1930
11. Permit No. 118605 Date 06/24/85
12. Water from sand 13. County DeWitt
    at depth 172 to 230 ft.
14. Screen: Diam. 5 in.
    Length: 4 ft. Slot 18

Sec. 15
Twp. 19 N
Rge. 2 E
Elev. 643



1200' S 2450' E NWc Fld Verif

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (ft)	To (ft)
5	SDR 21 PVC	-1	226

16. Size hole below casing: _____ in.
17. Static level 56 ft. below casing top which is 1 ft. above ground level. Pumping level 57 ft. when pumping at 15 gpm for 1 hours.

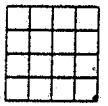
18. Formations passed through	Thickness	Bottom
yellow clay	18	18
blue clay	26	44
brown drift	2	46
green clay	2	48
grey clay	124	172
fine sand	23	195
coarse sand	35	230

Commercial Operation - Business

DeWitt 12-039-20796-00 15-19N-2E

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner Lichtenwalter, Greg Well No. #1
    Address R.R. #2 Clinton IL
    Driller Mashburn, Grover C. Jr. License No. 102-1930
11. Permit No. 000511 Date 03/11/88
12. Water from sand 13. County DeWitt
    at depth 226 to 280 ft. Sec. 16
14. Screen: Diam. 5 in. Twp. 19 N
    Length: 4 ft. Slot 15 Rge. 2 E
    Elev. 710 Ft M SH



15. Casing and Liner Pipe SE SE SE

Diam. (in.)	Kind and Weight	From (ft)	To (ft)
5	PVC	-1	276

16. Size hole below casing: _____ in.
17. Static level 112 ft. below casing top which is 1 ft. above ground level. Pumping level 120 ft. when pumping at 60 gpm for 2 hours.

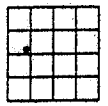
18. Formations passed through	Thickness	Bottom
yellow clay	14	14
gray clay	54	68
brown drift	4	72
green clay	3	75
gray clay	65	140
dirty sand	2	142
gray clay	84	226
fine sand	38	264
coarse sand	16	280

Household - Private

DeWitt 12-039-20873-00 16-19 2E

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner Rogers, Rodney & Pam Well No. #1
Address 402 N. Madison Clinton IL
Driller Layten, James License No. 102-2243
11. Permit No. 03902394 Date 08/19/94
12. Water from sand & gravel 13. County DeWitt
at depth 152 to 157 ft.
14. Screen: Diam. 5 in.
Length: 4 ft. Slot 20
Sec. 18
Twp. 19 N
Rge. 3 E
Elev. ____



15. Casing and Liner Pipe SE SW NW

Diam. (in.)	Kind and Weight	From (ft)	To (ft)
5	SDR 21	-1	152

16. Size hole below casing: _____ in.
17. Static level 50 ft. below casing top which is 1 ft. above ground level. Pumping level 68 ft. when pumping at _____ gpm for 30 hours.

18. Formations passed through	Thickness	Bottom
yellow clay	20	20
gray clay	23	43
gravel	3	46
gray clay	4	50
gravel	8	58
gray clay	5	63
green clay	3	66
gray clay	19	85
gravel	2	87

Household - Private

DeWitt 12-039-21152-00 18-19N-03E

18. Formations passed through (continued)	Thickness	Bottom
gray clay	21	108
streaks of gravel	2	110
sand & gravel (dirty)	2	112
gray clay	1	113
sand & gravel (dirty)	2	115
gray clay	29	144
sand & gravel	1	145
gray clay	7	152
sand & gravel	5	157

GEOLOGICAL AND WATER SURVEYS WELL RECORD

Property owner Heiden, Kevin Well No. #1
Address Rt. 1 Box 25 Wapella IL
Well address Route 4 Box 2714 Clinton, IL
Lot _____ Subd _____ ISWS P# 331750
Driller Mashburn, Robert License No. 102-3084
Permit No. 039-044-00 Date 10/30/2000
Water from sand County DeWitt
at depth 146 to 151 ft.
Screen: Diam. 5 in.
Length: 4 ft. Slot 12

Sec. 18
Twp. 19 N
Rge. 3 E
Elev. _____

SE SW NW

Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (ft)	To (ft)
5	PVC SDR 21	-1	147
5	STAINLESS STL SCREEN	147	151

Size hole below casing: _____ in.
Static level 48 ft. below casing top which is 1 ft. above ground level. Pumping level 52 ft. when pumping at 12 gpm for 2 hours.

Formations passed through	Thickness	Bottom
yellow clay	18	18
gray clay	44	62
drift	2	64
green clay	9	73
gray clay	73	146
sand	5	151
gray clay at	0	151

Household - Private

DeWitt 12-039-21481-00 18-19N-3E

STATE OFFICE BUILDING, SPRINGFIELD,
AL / WATER SURVEYS SECTION. BE SURE TO

GEOLOGICAL AND WATER SURVEYS WELL RECORD

Completed 6-15-72

10. Property owner Carl Reynolds Well No. 4
Address Dee Star 2 Lt.
Driller Ray DeMent License No. 97-68
11. Permit No. NW 14514 Date May-5-72
12. Water from Sand (Formation) 13. County DeWitt
at depth 57 to 62 ft.
14. Screen: Diam. 4 in.
Length: 4 ft. Slot .025
Sec. 18
Twp. 19N
Rge. 3 E
Elev. 733 TM BM

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
4"	11 lbs per ft.		
	1 ft. above ground	to	
	58 ft.		

SHOW LOCATION IN SECTION PLAT
200' SL, 100' EL of NE SE (permit)

16. Size Hole below casing: 6 in.
17. Static level 40 ft. below casing top which is 1 ft. above ground level. Pumping level 43 ft. when pumping at 6 gpm for 2 hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
Top soil	3	3
Yellow Clay	24	27
Blue Clay	30	57
Sand	5	62

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED Ray DeMent DATE June 1-72

COUNTY No. 588

DEWITT 18-. 3E

16. STATE OFFICE BUILDING, SPRINGFIELD, CAL / WATER SURVEYS SECTION. BE SURE TO

GEOLOGICAL AND WATER SURVEYS WELL RECORD

Completed 5-10-71

10. Property owner Bob Fatheree Well No. _____
Address R#4 Clinton, Ill.
Driller Earl Woollen License No. 92-556
11. Permit No NE 0265 Date 3-8-71
12. Water from Sand + Gravel (Formation) 13. County DeWitt
at depth 159 to 166 ft.
14. Screen: Diam. 4" in.
Length: 3 ft. Slot .020
Sec. 18
Twp. 19N
Rge. 3E
Elev. 735 BM

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
4"	V.S	0	163

SHOW LOCATION IN SECTION PLAT
SW SW SW
(permit)

16. Size Hole below casing: _____ in.
17. Static level 60 ft. below casing top which is 1 ft. above ground level. Pumping level 60 ft. when pumping at 10 gpm for 6 hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
Yellow Clay	16	16
Blue Clay	46	62
Drift	1	63
Green Clay	3	66
Gray Hardpan	11	77
Drift	5	82
Green Clay	10	92
Hardpan	67	159
Sand + Gravel	7	166

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED Earl Woollen DATE 5-24-71

COUNTY No. 557

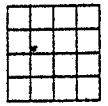
DEWITT

A

18-19N-3E

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner Smith, John Well No. #1
Address R.R. #4 Box #2715 Clinton IL
Driller Layten, James License No. 102-2243
11. Permit No. 03901095 Date 05/16/95
12. Water from gravel 13. County DeWitt
at depth 144 to 167 ft.
14. Screen: Diam. 5 in.
Length: 4 ft. Slot 20
Sec. 18
Twp. 19 N
Rge. 3 E
Elev. ____



15. Casing and Liner Pipe SW SE NW

Diam. (in.)	Kind and Weight	From (ft)	To (ft)
5	SDR 21	-1	143
5	SDR 21	147	163

16. Size hole below casing: _____ in.
17. Static level 45 ft. below casing top which is 0 ft. above ground level. Pumping level 58 ft. when pumping at 12 gpm for _____ hours.

18. Formations passed through	Thickness	Bottom
yellow clay	16	16
gray clay	31	47
peat	8	55
gray clay	25	80
gravel	1	81
gray clay	55	136
gravel	1	137
gray clay	7	144
gravel	3	147

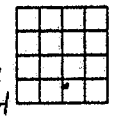
Household - Private

DeWitt 12-039-21190-00 18-19N 3E

18. Formations passed through (continued)	Thickness	Bottom
gray clay	16	163
gravel	4	167
gray clay at	0	167

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner Matherly, Shelby Well No. #1
Address 238 Manor Hill Rd. Clinton IL
Driller Sims, Ronald M. Jr. License No. 102-3423
11. Permit No. 03900493 Date 03/12/93
12. Water from sand 13. County DeWitt
at depth 157 to 164 ft.
14. Screen: Diam. 5 in.
Length: 4 ft. Slot 14
Sec. 18
Twp. 19 N
Rge. 3 E
Elev. 730 DM BH



15. Casing and Liner Pipe NW SW SE

Diam. (in.)	Kind and Weight	From (ft)	To (ft)
5	SDR 21 PVC	0	160

16. Size hole below casing: _____ in.
17. Static level 65 ft. below casing top which is 1 ft. above ground level. Pumping level _____ ft. when pumping at 20 gpm for 1 hours.

18. Formations passed through	Thickness	Bottom
brown dirt	1	1
brown clay	14	15
gray clay	57	72
interlayered gray & brown clay	8	80
gray clay w/gravel streak at 97'	53	133
sand streak	1	134
gray clay	8	142
sand streak	1	143
sandy gray clay	14	157

Household - Private

DeWitt 12-039-21041-00 18-1)3E

18. Formations passed through (continued)	Thickness	Bottom
fine to coarse sand	7	164
gray clay at	0	164

GEOLOGICAL AND WATER SURVEYS WELL RECORD

Property owner Curry, William L. Well No. _____
Address Maroa IL
Well address RR Clinton, IL
Lot _____ Subd _____ ISWS P#_____
Driller Mashburn, Robert License No. 102-3084
Permit No. 03901197 Date 04/17/1997
Water from sand County DeWitt
at depth 227 to 302 ft.
Screen: Diam. 5 in.
Length: 4 ft. Slot 20

Sec. 21
Twp. 19 N
Rge. 2 E
Elev. _____

SE NW SE

Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (ft)	To (ft)
5	PVC SDR 21	-1	298

Size hole below casing: _____in.
Static level 116 ft. below casing top which is 1 ft. above ground level. Pumping level 120 ft. when pumping at 15 gpm for 2 hours.

Formations passed through	Thickness	Bottom
yellow clay	17	17
gray clay	55	72
drift	2	74
green clay	3	77
gray clay	150	227
fine sand	28	255
medium sand	30	285
medium to coarse sand	17	302

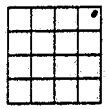
Household - Private

DeWitt 12-039-21319-00 21-19N

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner Willoughby, Orville E. Well No. #11
    Address RR De Witt IL
    Driller DeMent Ray License No. 92-686
11. Permit No. 80231 Date 10/02/78
12. Water from sand 13. County DeWitt
    at depth 205 to 232 ft.
14. Screen: Diam. 4 in.
    Length: 3 ft. Slot .012

Sec. 21
Twp. 19 N
Rge. 2 E
Elev. 690



15. Casing and Liner Pipe 150'S 200'W NEc

Diam. (in.)	Kind and Weight	From (ft)	To (ft)
4	STEEL 11# PER FT.	0	232

Fld Verifd

16. Size hole below casing: _____ in.
17. Static level 110 ft. below casing top which is 1 ft. above ground level. Pumping level 130 ft. when pumping at 8 gpm for 3 hours.

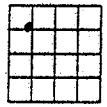
18. Formations passed through	Thickness	Bottom
top soil	3	3
yellow clay	17	20
blue clay	120	140
dirty sand	1	141
hardpan	64	205
sand	27	232

DeWitt 12-039-20709-00 21-19N-2E

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner Snyder, Dan Well No. #1
    Address R.R. #2 P.O. Box #122 Clinton IL
    Driller Mashburn, Grover C. Jr. License No. 102-1930
11. Permit No. 03900791 Date 06/27/91
12. Water from sand 13. County DeWitt
    at depth 64 to 69 ft.
14. Screen: Diam. 5 in.
    Length: 4 ft. Slot 18

Sec. 21
Twp. 19 N
Rge. 2 E
Elev. 730?M BY



15. Casing and Liner Pipe SE NW NW

Diam. (in.)	Kind and Weight	From (ft)	To (ft)
5	PVC SDR 21	-2	65

16. Size hole below casing: _____ in.
17. Static level 38 ft. below casing top which is 2 ft. above ground level. Pumping level 43 ft. when pumping at 15 gpm for 2 hours.

18. Formations passed through	Thickness	Bottom
yellow clay	19	19
gray clay	45	64
sand & gravel	5	69
gray clay at	0	69

Household - Private

DeWitt 12-039-21003-00 21-19 :E

TOWN TOWNSHIP Texas R. 2E

COMPANY Woollen Brs. NO. T. SEC.

FARM Whitehead, Harvey NO. 19N 21

DATE DRILLED November 1945

AUTHORITY Woollen Bros.

COLLECTOR ELEVATION 723 Rolfe

NE cor. of NE

No.	Co. no 127 Strata	Thickness Feet	Thickness In.	Depth Feet	Depth In.
	Soil, yellow clay			0-16	
	Blue clay	46		62	
	Like dry gravel				
	Gravel, water	28		90	
	Total depth			90	
	4" hole				
	87' of pipe				
	No draw down				
	5 g.p.m. for 1 hour				
	Water clear				
	Water level 62'				
	Finished in gravel at 62' to 90'				
	Pipe loose, can be slotted at 62 - 90				
	Cook Brass Screen, Size 4", Length 3, Slot 25.				
	Owners Pump				
	[redacted] NO ENVELOPE				

COUNTY DeWitt 21-19N-2E

SAMPLE SET NO.

(84107—20M—8-45)

ILLINOIS GEOLOGICAL SURVEY, URBANA

STATE OFFICE BUILDING, SPRINGFIELD,
AL / WATER SURVEYS SECTION. BE SURE TO

GEOLOGICAL AND WATER SURVEYS WELL RECORD

Completed 4-72

10. Property owner LaVerne Eich Well No. _____
Address Rt 2 Clinton, Ill.
Driller Earl Woollen License No. 92-556
11. Permit No. 14054 Date 3-29-72
12. Water from Sand + Gravel 13. County DeWitt
Formation
at depth 94 to 97 ft.
14. Screen: Diam. 4 in.
Length: 3 ft. Slot .025
Sec. 21
Twp. 19N
Rge. 2E
Elev. _____

SHOW LOCATION IN SECTION PLAT
SE SW SE
(permit)

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
4	US 12#	0	94

16. Size Hole below casing: _____ in.
17. Static level 60 ft. below casing top which is 1 ft. above ground level. Pumping level 60 ft. when pumping at 10 gpm for 2 hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
Soil + yellow	16	16
Blue CLAY	40	56
Drift	1	57
Green CLAY	8	65
Gray Hardpan	29	94
Sand + Gravel	3	97
CLAY		

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED Earl Woollen DATE May 9 '72

COUNTY No. 321

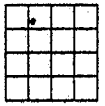
DEWITT

21-19N-2E

GEOLOGICAL AND WATER SURVEYS WELL RECORD

Property owner Cyrulick, Mike Well No. _____
Address Rt. #1 Box #293C Clinton IL
Well address same as above
Lot _____ Subd _____ ISWS P# 305327
Driller Mashburn, Robert License No. 102-3084
Permit No. 03902898 Date 08/19/1998
Water from sand County DeWitt
at depth 235 to 300 ft.
Screen: Diam. 5 in.
Length: 8 ft. Slot 15

Sec. 22
Twp. 19 N
Rge. 2 E
Elev. ____



Casing and Liner Pipe SW NE NW

Diam. (in.)	Kind and Weight	From (ft)	To (ft)
5	PVC SDR 21	-1	292

Size hole below casing: _____ in.
Static level 127 ft. below casing top which is 1 ft.
above ground level. Pumping level 129 ft. when pumping at 15
gpm for 2 hours.

Formations passed through	Thickness	Bottom
topsoil	2	2
yellow clay	16	18
gray clay	43	61
drift	2	63
green clay	6	69
gray clay	166	235
fine sand	20	255
medium to coarse sand	45	300

Household - Private

DeWitt 12-039-21357-00 22-19N-2E

JESTED AND MAIL ORIGINAL TO STATE
IMER HEALTH PROTECTION, 535 WEST
. DO NOT DETACH GEOLOGICAL/WATER
ROPER LOCATIO

GEOLOGICAL AND WATER SURVEYS WELL RECORD

Completed December, 1979

10. Property owner TOM MICHAELS Well No. 1
Address RT 2 CLINTON
Driller GC MASHBURN JR License No. 102-193
11. Permit No. 91414 Date NOV 15-79
12. Water from SAND Formation 13. County DEWITT
at depth 227 to 260 ft.
14. Screen: Diam. 4 in.
Length: 4 ft. Slot 18
Sec. 22
Twp. 19N
Rge. 2E
Elev. TOUTH B4

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
5	SDR 21 PVC	+1	256

SHOW LOCATION IN SECTION PLAT
400 'NL 500 'WL
NW NE
(permit)

16. Size Hole below casing: ——— in.
17. Static level 102 ft. below casing top which is 1 ft. above ground level. Pumping level 103 ft. when pumping at 15 gpm for 2 hours. Sub pump set at 125'.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
YELLOW CLAY	16	16
GREY CLAY	211	227
FINE SAND	18	245
COURSE SAND	15	260
STOPPED AT 260		

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED [signature] DATE JAN 3-1980

DEWITT COUNTY No. 20756 22 -2E

22-19N-2E

COMPANY Woollen Bros. NO.
FARM Radio Station W.H.O.W. NO.
DATE DRILLED 6/47 (Tenant-Oliver Rhea)
AUTHORITY Woollen Bros.
COLLECTOR
ELEVATION 705 ETM
20' N. line, 30' W. line of NE

No.	Co. No. 128 Strata	Thickness Feet	Thickness In.	Depth Feet	Depth In.
	Soil and yellow clay	7		7	
	Yellow sand	5		12	
	Blue clay	38		50	
	Green clay	12		62	
	Gray clay	14		76	
	Gray gravel	1		77	
	Finished in gray gravel at 76'-77'				
	4" hole				
	75½' of 4" pipe				
	Drawn down 6' at 6 g.p.m. for 1 hr.				
	Water sandy				
	Pipe loose				
	Cook Screen, Size 4", Length 3', Slot 40				
	Pump loaned. Small hand pump head 2-18-1¼ pipe. 1 short joint 16'. 1-2½ brass cylinder.				

[redacted] NO ENVELOPE

COUNTY Dewitt 22-19N-2E
SAMPLE SET NO.
62159—20M—9-49

ILLINOIS GEOLOGICAL SURVEY, URBANA

GEOLOGICAL AND WATER SURVEYS WELL RECORD

Property owner Hammer, Terry Well No. #1
Address R.R. 1 Box 156A Maroa IL
Well address same as above
Lot _____ Subd _____ ISWS P# 320018
Driller Mashburn, Robert License No. 102-3084
Permit No. 039-038-99 Date 11/23/1999
Water from sand County DeWitt
at depth 65 to 86 ft.
Screen: Diam. 5 in.
Length: 4 ft. Slot 20

Sec. 22
Twp. 19 N
Rge. 2 E
Elev. _____

NE SE SW

Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (ft)	To (ft)
5	PVC SDR 21	-1	82
5	STAINLESS STL SCREEN	82	86

Size hole below casing: _____ in.
Static level 49 ft. below casing top which is 1 ft. above ground level. Pumping level 50 ft. when pumping at 12 gpm for 2 hours.

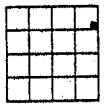
Formations passed through	Thickness	Bottom
topsoil	2	2
yellow clay	16	18
gray clay	47	65
coarse sand & gravel	21	86

Household - Private

DeWitt 12-039-21415-00 22-19N

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner E. W. Andrews Trust Well No. _____
Address R.R. #2 Box #108 Clinton IL
Driller Mashburn, Robert License No. 102-3084
11. Permit No. 03901894 Date 07/26/94
12. Water from sand 13. County DeWitt
at depth 244 to 292 ft.
14. Screen: Diam. 5 in.
Length: 4 ft. Slot 15
Sec. 24
Twp. 19 N
Rge. 2 E
Elev. 733 Ftd BM



15. Casing and Liner Pipe SE NE NE

Diam. (in.)	Kind and Weight	From (ft)	To (ft)
5	PVC SDR 21	-1	288

16. Size hole below casing: _____ in.
17. Static level 123 ft. below casing top which is 1 ft. above ground level. Pumping level 126 ft. when pumping at 12 gpm for 2 hours.

18. Formations passed through	Thickness	Bottom
yellow clay	18	18
gray clay	47	65
green clay	25	90
gray clay	20	110
drown drift	3	113
gray clay	50	163
sand	7	170
hard gray clay	74	244
fine sand	28	272

Household - Private

DeWitt 12-039-21141-00 24-19N-02E

18. Formations passed through (continued)	Thickness	Bottom
medium sand	20	292

TOWN
TOWNSHIP
R. 2E

COMPANY Woollen Bros.
NO.
T. 20N
SEC. 33

FARM Walker, Carl
NO.

DATE DRILLED 1946

AUTHORITY Woollen Bros.

COLLECTOR
ELEVATION SW cor. SE

Co. No. 220

Strata	Thickness Feet	Thickness In.	Depth Feet	Depth In.
Soil and yellow clay	16		16	
Blue clay	13		29	
Blue sand bed	4		33	
Blue clay	30		63	
Fine dirty sand and gas	3		66	
Drift wood, brown	2		68	
Dark clay	3		71	
Green clay	8		79	
Dirty sand and gravel	3		82	
Gray hardpan	32		114	
Gravel	1		115	
Clay				

Finished in gravel at 114 to 115'

4" hole
112' of 4" pipe
Drawn down 35' at 5 g.p.m. for 2 hrs.
Water clear; level 50'
Medium Pipe
Cook Brass Screen, Size 4",
Length 3', Slot 25.

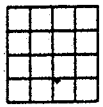
[redacted] NO ENVELOPE [redacted]

COUNTY Dewitt 33-20N-2E
SAMPLE SET NO.
(54107—20M—6-45)

ILLINOIS GEOLOGICAL SURVEY, URBANA

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner Murphy, Gene Well No. _____
Address R. R. #1 Box 241 Clinton IL
Driller Luttrell, Gerald Dean License No. 092-3318
11. Permit No. 135497 Date 09/28/87
12. Water from sand & gravel 13. County DeWitt
at depth 15 to 44 ft.
14. Screen: Diam._____in.
Length:_____ft. Slot _____
Sec. 33
Twp. 20 N
Rge. 2 E
Elev. _____



15. Casing and Liner Pipe SE SW NW

Diam. (in.)	Kind and Weight	From (ft)	To (ft)
6	SCH 21	0	10
36	TILE	10	44

16. Size hole below casing: _____in.
17. Static level _____ft. below casing top which is _____ft. above ground level. Pumping level_____ft. when pumping at _____ gpm for_____hours.

18. Formations passed through	Thickness	Bottom
top soil	3	3
grey dirt	12	15
ylw sand & gvl mix	29	44

DeWitt 12-039-20827-00 33-20N E

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner Cleary Buildings Well No. #1
Address % CT 1 Investments R.R. #2 Clinton IL
Driller Mashburn, Grover C. Jr. License No. 102-1930
11. Permit No. 03900892 Date 05/26/92
12. Water from sand 13. County DeWitt
at depth 99 to 105 ft. Sec. 34
14. Screen: Diam. 5 in. Twp. 20 N
Length: 4 ft. Slot 15 Rge. 2 E
Elev. ____

NW SE SE

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (ft)	To (ft)
5	PVC SDR 21	-1	101

16. Size hole below casing: _____ in.
17. Static level 46 ft. below casing top which is 1 ft. above ground level. Pumping level 50 ft. when pumping at 10 gpm for 2 hours.

18. Formations passed through	Thickness	Bottom
yellow clay	18	18
blue clay	43	61
brown drift	3	64
green clay	4	68
gray clay	31	99
sand	6	105
gray clay at	0	105
WELL CONSTRUCTED		

Household - Private

DeWitt 12-039-21026-00 34-20N-02E

LOG OF WATER WELL

Property owner Mrs. Willie Pond, Clinton Well No. 1

Drilled by Woolley Bros., Wapella Year 1943

Formations passed through Co. No. 129	Thickness	Depth of Bottom
soil	1	1
yellow clay	16	17
blue clay	10	27
sandy clay	10	37
blue clay	18	55
light sandy clay	10	65
hard pan	36	101
gravel	3	104

[Continue on back if necessary]

Finished in gravel at 101 to 104 ft.

Cased with 4 inch Ashpipe from 0 to 101 ft.

and inch from to ft.

Size hole below casing inch. Static level from surf. 26 ft.

Tested capacity 5 gal. per min. Temperature °F.

Water lowered to 40 ft. in. in hrs. min.

Length of test hrs. min. Screen Cook Iron

Slot 25 Diam 3¾ Length 3 ft. Bottom set at 104

[Show location in Section Plat]

Township name Jasper Elev. 720 ft. Sec. 20

Description of location SE NW NW Twp. 81 N

1070' N. Line 1120' W. Line of NW Rge. 19 W

Signed [illegible] County

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner Marlow, Glenn Well No. #1
Address R.R. #1 Box #331 Maroa IL
Driller Mashburn, Robert License No. 102-3084
11. Permit No. 03903193 Date 11/17/93
12. Water from sand 13. County DeWitt
at depth 233 to 280 ft.
14. Screen: Diam. 4 in.
Length: 4 ft. Slot 15
Sec. 27
Twp. 19 N
Rge. 2 E
Elev. 725 ETM BH

NW NW SE

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (ft)	To (ft)
4	PVC SDR 21	-1	276

16. Size hole below casing: _____ in.
17. Static level 116 ft. below casing top which is 1 ft. above ground level. Pumping level 120 ft. when pumping at 20 gpm for 2 hours.

18. Formations passed through	Thickness	Bottom
top soil	3	3
yellow clay	11	14
gray clay	76	90
brown drift	5	95
green clay	10	105
grey clay	128	233
fine sand	17	250
medium - coarse sand	30	280

Household - Private

DeWitt 12-039-21039-00 27-19N-02E

LOG OF WATER WELL

Property owner Herbert Marlow Well No. 2

Drilled by Woodley Bros. Year

Formations passed through	Thickness	Depth of Bottom
soil Co. no. 109	2	2
yellow clay	12	14
blue clay	69	83
gravel		
Permit gravel		
Permit Gravel		
Permit issued April 1, 1940.		

[Continue on back if necessary]

Finished in Blue clay at 83 to ft.

Cased with 4 inch Tiles from 0 to ft.

and inch from to ft.

Size hole below casing inch. Static level from surf. ft.

Tested capacity very weak pressure gal. per min. Temperature °F.

Water lowered to ft. in. in hrs. min.

Length of test hrs. min. Screen None

Slot Diam. Length Bottom set at ft.

[Show location in Section Plat]

Township name Dunbridge Elev.

Description of location 50 W. of Well #4 NE NE NE SW NE NE

Section Second Principal County DeWitt Sec. 27 Twp. 19N Rge. 1E

Copyright Illinois State Geological Survey

GEOLOGICAL WATER SURVEYS WATER WELL RECORD

Completed September 8, 1970

10. Dept. Mines and Minerals permit No. NF 09004 Year 1970

11. Property owner JAMES BRAY Well No. 1

Address 722 N. ALEXANDER CLINTON

Driller MASHBURN BROS License No. 92-203

12. Water from SAND Formation 13. County DEWITT

at depth 95 to 110 ft.

14. Screen: Diam. 4 in.

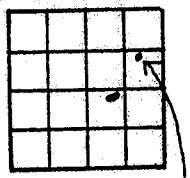
Length: 4 ft. Slot 20

Sec. 33

Twp. 20N

Rng. 2E

Elev.



SHOW LOCATION IN SECTION PLAT

NE/c NW SE NE (permit)

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
4	BLK STEEL 11#	-3-6"	106

16. Size Hole below casing: NONE in.

17. Static level 36 ft. below casing top which is 1 ft. above ground level. Pumping level 38 ft. when pumping at 17 gpm for 3 hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
YELLOW CLAY	17	17
BLUE CLAY	8	25
BROWN SAND	8	33
GRAY CLAY	62	95
SAND + GRAVEL	15	110
NOT THRU SAND AT 110'		
(CONTINUE ON SEPARATE SHEET IF NECESSARY)		

SIGNED Mashburn Bros DATE Sept 26-70

COUNTY NO. 5512

DEWITT

33-20N-2E

GEOLOGICAL AND WATER SURVEYS WELL RECORD

Property owner Bray, Mike Well No. _____
Address P.O. Box #222 Clinton IL
Well address Rt. #1 Clinton, IL
Lot _____ Subd _____ ISWS P# 298238
Driller Mashburn, Robert License No. 102-3084
Permit No. 03903397 Date 09/25/1997
Water from sand County DeWitt
at depth 90 to 103 ft.
Screen: Diam. 5 in.
Length: 4 ft. Slot 15

Sec. 33
Twp. 20 N
Rge. 2 E
Elev. _____

SW NE NE

Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (ft)	To (ft)
5	PVC SDR 21	-1	99

Size hole below casing: _____ in.
Static level 39 ft. below casing top which is 1 ft. above ground level. Pumping level 43 ft. when pumping at 15 gpm for 2 hours.

Formations passed through	Thickness	Bottom
yellow clay	15	15
gray clay	43	58
drift	3	61
green clay	3	64
gray clay	26	90
fine to medium sand	13	103
gray clay at	0	103

Household - Private

DeWitt 12-039-21304-00 33-20N-2...

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner Evans, Norman Well No. #2
Address R.R. #1 Box #235 Clinton IL
Driller Layten, James License No. 102-2243
11. Permit No. 03900395 Date 03/10/95
12. Water from gravel 13. County DeWitt
at depth 105 to 120 ft.
14. Screen: Diam. 5 in.
Length: 4 ft. Slot 20
Sec. 33
Twp. 20 N
Rge. 2 E
Elev. ____

NE NE SW

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (ft)	To (ft)
5	SDR 21 PLASTIC	-1	115

16. Size hole below casing: _____ in.
17. Static level 51 ft. below casing top which is 1 ft. above ground level. Pumping level 64 ft. when pumping at 25 gpm for _____ hours.

18. Formations passed through	Thickness	Bottom
yellow clay	13	13
gray clay	72	85
peat	5	90
green clay	12	102
dirty gravel	3	105
good gravel	15	120
gravelly clay	3	123
gravel	2	125
gray clay	15	140

Household - Private

DeWitt 12-039-21063-00 33-20N-02E

STATE OFFICE BUILDING, SPRINGFIELD,
AL / WATER SURVEYS SECTION. BE SURE TO

GEOLOGICAL AND WATER SURVEYS WELL RECORD

Completed 7-8-72

10. Property owner Gale FinFrock Well No. _____
Address R #2 Clinton
Driller Earl Woolley License No. 92-556
11. Permit No. NP 15453 Date 7-6-72
12. Water from Sand & Gravel (Formation) 13. County DeWitt
at depth 91 to 94 ft. Sec. 33
14. Screen: Diam. 4 in. Twp. 20N
Length: 3 ft. Slot .015 Rge. 2E
Elev. _____

SHOW LOCATION IN SECTION PLAT
NW NW NW
(permit)

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
4"	US -12#	0	91

16. Size Hole below casing: _____ in.
17. Static level 40 ft. below casing top which is 1 ft. above ground level. Pumping level 40 ft. when pumping at 10 gpm for 2 hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
Soil & yellow clay	18	18
Blue clay	51	69
Drift	1	70
Green clay	11	81
Gray Hardpan	7	88
Sand & gravel	6	94

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED Earl Woolley DATE Jul. 9-72

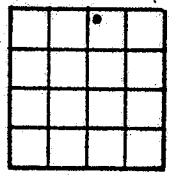
COUNTY No. 58.1...

ESTED AND MAIL ORIGINAL TO STATE DE-
STATE OFFICE BUILDING, SPRINGFIELD,
CAL / WATER SURVEYS SECTION. BE SURE TO

GEOLOGICAL AND WATER SURVEYS WELL RECORD

Completed 6-12-73

10. Property owner G. G. Finfrock Well No. _____
Address RR# Clinton, Ill
Driller Earl Woollen License No. 102-119
11. Permit No. NW 9407 Date 6-7-73
12. Water from Sand Formation 13. County DeWitt
at depth ____ to ____ ft.
14. Screen: Diam. 4 in.
Length: 4 ft. Slot .015
Sec. 33
Twp. 20N
Rge. 2E
Elev. _____



SHOW LOCATION IN SECTION PLAT
NW NW NE
(permit)

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
4	15 12#	0	104

16. Size Hole below casing: _____ in.
17. Static level 38 ft. below casing top which is 2 ft. above ground level. Pumping level 82 ft. when pumping at 7 gpm for 4 hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
Soil + yellow	13	13
blue clay	51	64
Drift	2	66
Green clay	7	73
Gray Hardpan	31	104
Fine Sand	4	108

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED Earl Woollen DATE Aug 5 73

DEWITT

COUNTY No. 600

33-20N-2E

ILLINOIS GEOLOGICAL SURVEY, URBANA

Permit # 27813 CABLE TOOLS	Thickness	Top	Bottom
Yellow clay		0	14
Bleu clay		14	63
Fine sand, some gravel (water bearing)		63	65
Green clay		65	75
Gray hardpan		75	109
Fine sand, some gravel, a little coal water bearing		109	112 TD

Hole record: 6" 0 - 112'
Casing record: 6" +1.5 - 109'
Screen record: 4' of 6" nominal Howard Smith stainless steel screen slot # 20, set 108 - 112'; exposed 3' from 109 - 112'; no gravel pack

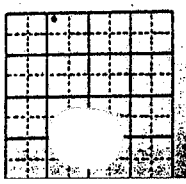
Chief aquifer: sand and gravel 109 - 112' and 63 -65'
Nonpumping level 32.70' below measuring point
Pumping level 107.35' below measuring point after pumping at approximately 9 gpm for 3 hours

Measuring point for above measurements: top of casing; 1.5' above ground level

*Trailer Park (Westside Park Estates)

NO ENVELOPE

COMPANY Earl D. Woollen
FARM *Finfrock, Gale D. NO. 2
DATE DRILLED September 21, 1974 COUNTY NO. 20622
AUTHORITY State Water Survey
ELEVATION 720' T.M.
LOCATION 100' N line, 1583' W line, NW



ILLINOIS GEOLOGICAL SURVEY, URBANA

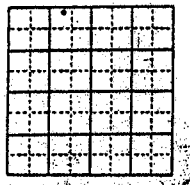
ABLE TOOLS	Thickness	Top	Bottom
lack soil and blue clay mix (some methane gas at 27')		0	27
lue clay		27	39
ack sand (fine)		39	41
reen clay		41	50
ray hard pan clay		50	84
and and gravel (fine sand and some coarse gravel - water bearing)		84	86
ray clay at		86	
otal Depth			86

ole record: 4" 0 - 86'
asing: 4" + .5' - 84'
creen record: 3' of 4" nominal Johnson stainless steel screen slot # 20; set from 83 - 86', screen exposed from 84 - 86', no gravel pack
hief aquifer: sand and gravel 84 - 86'
onpumping level: 7.53' below measuring point
umping level: 52.69' below measuring point after pumping at Approximately 7.5 gpm for 3 hours
easuring point for above measurements: top of casing, .5' above ground level

* G.G. Finfrock
** 1 mile west of Clinton on north side of route # 10

O ENVELOPE

MPANY Woollen Drilling Company
RM *Westside Park Estates NO. 3
TE DRILLED September 9, 1975 COUNTY NO. 20636
THORITY State Water Survey
EVATION 700' T.M.
CATION **125' N line, 1800' W line, NW
UNTY DEWITT



33-20N-2E

TOWN — TOWNSHIP Clintonia R2E

COMPANY Woollen Bros. NO. T. SEC.

FARM Lillard, Russel NO. 20N 33

DATE DRILLED July 1944

AUTHORITY Woollen Bros. 720 ETM

COLLECTOR ELEVATION 700 Rolfe

SE NE NW

Co. No. 219

No.	Strata	Thickness Feet	Thickness In.	Depth Feet	Depth In.
	Soil, yellow clay	16		16	
	Blue clay	29		45	
	Gravel	1		46	
	Gravel, clay	9		55	
	Blue clay	17		73	
	Drift, brown	2		75	
	Green clay	5		80	
	Gray hardpan	27		107	
	Hardpan, hard	8		115	
	Gravel 2 or 3 in.				
	Hardpan, soft	11		128	
	Hardpan, hard	4		132	
	Gravel; 4 g.p.m. for 30 min.	2		134	
	Hardpan	9		143	
	Gravel	1		144	
	Hardpan, hard	20		164	
	Gravel; no water	1		165	
	Hardpan, gray, hard	43		208	
	Drift	2		210	
	Green clay	2		212	
	Yellow clay	16		228	
	Gray clay	4		232	
	Yellowish blue	36		268	
	Blue clay	7		275	
	Sand, water	3		278	
	Blue clay				
	4" hole				
	275' of pipe				
	8 g.p.m. for 2 hrs.				

COUNTY 33-20N-2

SHEET 2 T. 20N R. 2E S. 33

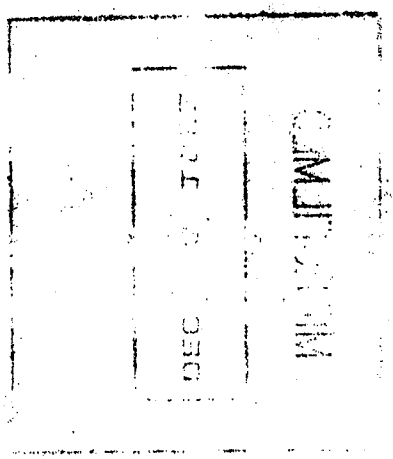
COMPANY Woollen Bros.

FARM Lillard, Russel

NO.

NO.

o.	Strata	Thickness Feet	Thickness In.	Depth Feet	Depth In.
	Water clear Water level 120' Finished in sand & gravel at 275' to 278' (All numbers taken from original log)				



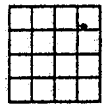
COUNTY DeWitt 33-20N-2E

SAMPLE SET NO.

(84107—20M—6-45) ILLINOIS GEOLOGICAL SURVEY, URBANA

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner North, Raymond Well No. #3
Address R. R. #1 Clinton IL
Driller Layten, James G. License No. 102-2243
11. Permit No. 114667 Date 09/12/84
12. Water from gravel 13. County DeWitt
at depth 101 to 122 ft.
14. Screen: Diam. 6 in.
Length: 8 ft. Slot 50
Sec. 33
Twp. 20 N
Rge. 2 E
Elev. ____



NE NE SW

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (ft)	To (ft)
6	PLASTIC	0	107

16. Size hole below casing: _____ in.
17. Static level 50 ft. below casing top which is 1 ft. above ground level. Pumping level 60 ft. when pumping at 100 gpm for 1 hours.

18. Formations passed through	Thickness	Bottom
clay	45	45
sand & gravel	2	47
clay	3	50
sand & gravel	17	67
clay	34	101
sand & gravel	21	122

DeWitt 12-039-20945-00 33-20N -2E

STATE OFFICE BUILDING, SPRINGFIELD,
/WATER SURVEYS SECTION. BE SURE TO

GEOLOGICAL AND WATER SURVEYS WELL RECORD

Completed 1-73

10. Property owner MARCO CHEMICALS Well No. 1
Address SOUTH CLINTON ST CLINTON
Driller MASHBURN BROS License No. 92-203
11. Permit No. NE 175 F 4 Date FEB 1973
12. Water from SAND + GRAVEL 13. County DEWITT
Formation
at depth 341 to 356 ft.
14. Screen: Diam. 6 in.
Length: 15 ft. Slot 20

Sec. 34
Twp. 20N
Rge. 2E
Elev. 710

SHOW LOCATION IN SECTION PLAT
40' SL, 80' EL of SE NE SE (permit)

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
6	BLK STEEL 19.15	+2	341

16. Size Hole below casing: _____ in.
17. Static level 118 ft. below casing top which is 2 ft. above ground level. Pumping level 126 ft. when pumping at 200 gpm for 4 hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
Yellow CLAY	17	17
GREY CLAY	55	72
BLUE SAND + GRAVEL	6	78
HARD GREY CLAY	194	272
FINE SAND	46	318
SOFT GREY CLAY	10	328
COURSE SAND + GRAVEL	28	356
NOT THRU SAND AT 356		

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED [signature] DATE Feb 8-73

COUNTY No. 593

DEWITT

34-20N-2E

(3)

Co. 221

LOG OF WATER WELL

Property owner City of Clinton Test Well No. 54-1

Drilled by Layne-Western Co. Aurora Year 1954

Formations passed through	Thickness	Depth of Bottom
Brown soil	4½	4½
Red-brown clay (soft)	5	9½
Yellow clay (soft) boulders	2	11½
Brown-gray clay (soft)	3	14½
Blue-gray clay	6	20½
Loose fine sand to med. gravel (brown)	5	25½
turning to gray-will "jet"	5	30½
Soft blue-gray clay (pebbles & stones embedded)	3	33½
Tight coarse sand & gravel (continued back)	3½	37

Finished in Shale to 340' S.S.I #24530

Cased with 12" inch from 0 to 100' ft.

Permit issued February 22, 1954 from to ft.

and inch from to ft.

Size hole 12" inch Static level from surface ft.

Tested capacity gal. per min. Temperature °F.

Water lowered to ft. in. hrs. min.

Length of test hrs. min. Screen

Slot Diam. Length Bottom set at ft.

Township Name Clintonia Elev. 1225 [Show location in Section Plat]

Description of location Approx. 220' S. & 220' E. of NW Cor. Sec. 34 Twp. 20N

Rge. 5E

Name

County DeWitt

LOG OF WATER WELL

Loose coarse gray sand (will jet)	3	36
Sandy blue-gray clay, streaked with brown soil & peat	5	41
Peat	6	47
Sandy blue-gray clay (soft)	4	51
Sandy gray clay (limestone shells) fairly hard	19	70
Cemented sand, clay and gravel (hard)	5	75
Loose fine sand to coarse gravel (will jet)	3	78
Sandy clay	2	80
Loose sand & gravel streaks clay	2	82
Cemented sand, clay & gravel "Hardpan" (Very hard from 100' to 123')	41	123
Tight coarse sand to med. gravel	2	125
Cemented sand, clay & gravel (Occasional streak loose sand)	38	163
Tight clean coarse sand (streaks of substance similar to soapstone)	8	171
Sand, clay & gravel (Hard)	16	187
Gray clay (soft)	12	199
Sand, clay and gravel (fairly soft)	21	220
Loose clean sand & med. gravel (loose will jet)	3	223
Tight sand, clay & gravel (mostly sand)	19	242
Tight coarse sand & gravel (wood & peat)	10	252
Tight coarse sand & fine gravel	30	282
Tight coarse sand & coarser gravel	10	292
Tight coarse sand & fine gravel (6		
		302
		382
	20	352
	3	

Town Clinton Township Clintonia Map No.

Company Woollen Brothers No. R. 2E

Farm Pollock, Fred No. T. Sec. 34

Authority Woollen Brothers, Wapella

Elevation 20

Collector N

Confidential Date Drilled 1941

69' N. line, 1188' E. line of SW

No.	Co. No. 221 Strata	Thickness Feet	Thickness In.	Depth Feet	Depth In.
	Soil	1		1	
	Clay, yellow	17		18	
	Clay, blue	21		39	
	Sand, blue and gas	2		41	
	Clay, blue	14		45	
	Sand and gravel	2		47	
	Clay, blue	10		57	
	Sand, brown and gas	3		60	
	Clay, blue	10		70	
	Driftwood	2		72	
	Clay, green	10		82	
	Hardpan	1		83	
	Sand and gravel, no water	10		93	
	Hardpan, very hard	5		98	
	Sand, clean and gravel	2		100	

Water level 46' from ground surface
Water lowered 3' at 5 g.p.m.

3' of #25 slot Johnson armco screen
5 g.p.m. jet pump set at 55'

NO ENVELOPE [redacted]

COUNTY Dewitt INDEX NO.

DRILL RECORD 34-20-[illegible]

(36941—50M—2-67)2

ILLINOIS GEOLOGICAL SURVEY, URBANA

Permit # NF 18534

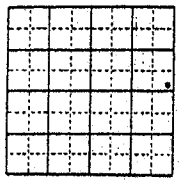
	Thickness	Top	Bottom
Brown clay and fill		0	5
Brown clay		5	11
Gray clay		11	15
Fine sand		15	17
Gray clay		17	32
Peat		32	34
Hard gray gravelly clay		34	123
Hard gray gravelly clay, caving		123	129
Very hard gravelly clay (gray)		129	179
Softer gray gravelly clay, caving		179	243
Fine sand, trace of clay		243	285
Medium coarse sand, trace of fine sand		285	315
Medium coarse sand, some gravel, trace of fine sand		315	343
Medium coarse sand, some gravel, trace fine sand, some peat and coal		343	348
Shale and coal		348	352
Total Depth			352

Casing: 255' of 30" outside diameter, .375" wall, steel with welded joints from +2 - 253'
274' of 18" outside diameter, .375" wall, Armco iron with welded joints from +2 - 276'

Hole record: 38" 0 - 285'
30" 285 - 352'

Screen record: 62' of 18 3/4" outside diameter stainless with welded joints from 276 - 338'

COMPANY Layne-Western Company
FARM City of Clinton NO. 8
DATE DRILLED July 19, 1973 COUNTY NO. 309
AUTHORITY Company
ELEVATION 710' T.M.
LOCATION 2500' N line, 85' E line, NE
COUNTY DEWITT



34-20N-2E

	Thickness	Top	Bottom
Screen: 60' of .060" slot openings			
Cemented from 0 - 25'; gravel pack from 210 - 340' with # 2 Muscatine well pack			
Static level 103'; pumping level 111' after 5 hours pumping at 620 g.p.m.			
Length of test: 8 hours			
S.S. # 59001			

(91182—20M—4-54.

ILLINOIS GEOLOGICAL SURVEY, URBANA

Strata	Thickness	Top	Bottom
Gravelly yellow clay	8	0	8
Loose coarse sand & med. gravel (boulders)	3	8	11
Soft sandy blue clay	12	11	33
Peat & black soil	4	33	37
Soft gray-green clay	7	37	44
Gravelly green clay (boulders 48 to 51')	12	44	56
Gray-blue clay, gravel embedded	8	56	64
Loose coarse clean sand & gravel	23	64	87
Hard gray clay	½	87	87*
Loose coarse gravel	2½	87	89*
Gravelly gray-blue clay (boulders 95')	6	89	95
Soft sandy gray clay (pebbles and stones embedded)	19	95	114
Hard sandy gray clay (used rock bit) boulders 114 & 130'	22	114	136
Sand in gravelly clay	19	136	155
Sand, gravel and clay, tight Occassional streak gravel or large stones	27	155	182
Tight sand and gravel & gray clay	5	182	187
Fairly loose fine sand to med. gravel	12	187	199
Soft sandy gray clay	4	199	203
Fairly loose fine sand - clay streaks	6	203	209
Soft sandy gray clay	29	209	238
Tight dirty fine sand	14	238	252
Fairly loose dirty fine sand gradually getting cleaner, also			

OMPANY Layne-Western
ARM Clinton NO. 4
ATE DRILLED 1954 COUNTY NO. 224
UTHORITY V.H. Moore
EVATION 715' ±
OCATION Ap. ~~460~~ 1460'S & ~~1500~~ 'E of center
OUNTY DEWITT

34-20N-2E

Strata	Thickness	Top	Bottom
a little bit of med. gravel last 20', pretty clean	44	252	296
Loose fine sand to med. gravel	15	296	311
Very coarse sand & gravel	11	311	322
Coarse sand & gravel (more sand than above)	10	322	332
Very coarse sand & gravel	10	332	342
Very coarse sand & gravel	7	342	349
Thin streak black shale, then greenish-white, then blue-green	23	349	372 TD

Finished in shale at 349 to 372'
Size hole 3"

* as copied from driller's log

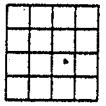
Location changed as of company letter 12/31/54
ap. 450' S, 1450' E of center
ap. NW NE SE

.S. # 25046

GEOLOGICAL AND WATER SURVEYS WELL RECORD

Property owner Clinton, City Well No. # 3
Address
Well address is west of plant
Lot Subd ISWS P#
Driller Ebert & Sons License No. 104853
Permit No. Date
Water from County DeWitt
at depth to ft.
Screen: Diam. in.
Length: ft. Slot

Sec. 34
Twp. 20 N
Rge. 2 E
Elev. 730



2329' N 1610' W SEc

Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (ft)	To (ft)
12	CASING	0	340
8	IRON SCREEN .25" HOL	340	360

Size hole below casing: in.
Static level 118 ft. below casing top which is 0 ft. above ground level. Pumping level 148 ft. when pumping at 250 gpm for 5 hours.

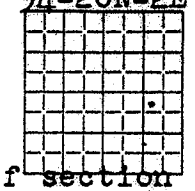
Formations passed through	Thickness	Bottom
no record	360	360

Municipal Water Supply

DeWitt 12-039-21474-00 34-20N-2E

34-20N-2E

COMPANY Layne-Western Co. NO.
FARM Clinton City Well NO. 4
DATE DRILLED July 1948
AUTHORITY Layne-Western Co.
COLLECTOR ELEVATION
Ap. 2200' S. line, 1150' E. line of section



No.	Co. no. 226 Strata	Thickness Feet	Thickness In.	Depth Feet	Depth In.
	Surface			0-5	
	Yellowish sand			10	
	Sand, white, soft, well flows at 68'			75	
	Brown sand, hard			80	
	Gravel, very cemented, hard			115	
	Fine gravel, med.			120	
	Fine soft sand 122-126			125	
	Gravel and hard pan, hard			135	
	Clean coarse gravel 136-139			140	
	Coarse muddy sand			145	
	Sand at 145 soft			150	
	Sand very fine soft			155	
	Sand cemented, hard			185	
	Gravel clean, takes mud, soft			220	
	Gravel, very coarse, takes mud, clean, soft			225	
	Coarse clean gravel, soft			285	
	Coarse gravel, little sand, soft			300	
	Sand, coarse, clean, takes mud, soft			330	
	Coarse gravel			335	
	Gravel, coarse, clean, soft			340	
	Hard pan at 344			345	

Finished in sand & gravel
6" id. casing to 308'.
Below casing is 20' exposed screen, below which the well is backfilled with gravel.

SS# 18252 NO ENVELOPE

COUNTY DeWitt 34-20N
SAMPLE SET NO. 18252

JWF 4-64

LOG OF WATER WELL

Co.# 223 (3)

owner City of Clinton Test Well No. 54-3

Drilled by Layne Western Co., Aurora Year 1954

Formations passed through	Thickness	Depth of Bottom
Black Soil	4	4
Gravelly yellow clay	3	7
Hard sandy blue-gray clay (large stones & Boulders)	7	14
Soft sandy blue-gray clay	7	21
Peat or brown soil - wood	6	27
Soft sandy green clay, gravel & boulders at 36'	13	40
Grn. - blue clay turning to blue-gray	14	54
gravel & stone embedded	9	63
Loose clean coarse sand & gravel	3	73
Loose clean coarse sand & gravel streaks of peat		

[Continue on back if necessary]

Finished in shale at 341 to 343 ft.

S.S. #24532

Cased with inch from 0 to ft.

and inch from to ft.

Size hole ~~below casing~~ 3 inch. Static level from surf. ft.

Tested capacity gal. per min. Temperature °F.

Water lowered to ft. in. in hrs. min.

Length of test hrs. min. Screen

Slot Diam. Length Bottom set at ft.

[Show location in Section Plat]

Township name Clintonia Elev. 700±

Description of location Approx. 250'S. & 1550'E. of center of Sec.

Sec. 34

Twp. 20 N.

Rge. 2 E

Signed County DeWitt

DEWITT

Copy for Illinois State Geological Survey Index:

34-20N-2E

34-20N-2E

COMPANY Layne-Western Company NO. 6
FARM Clinton City NO. 5
DATE DRILLED 1945 Co. no. 225
AUTHORITY S. W. S.
COLLECTOR ELEVATION 725 Rolfe

450' N. line, 760' W. line of SE

No.	Strata	Thickness Feet	Thickness In.	Depth Feet	Depth In.
	250' W. of Quincy St. and 50' N. of I.C.R.R. switchline				
	No log				
	Casing record:				
	26" O.D. casing - surface - 312'				
	17" O.D. casing - surface - 211½'				
	Approx. 14" swedge nipple between 14" and 12" casing				
	12" I.D. casing - 211½'-321½'				
	39½' of 12" I.D. Layne shutter screen from 321½'-361'				
	12" concrete plug at bottom of screen				
	30 yds of gravel pack				

ORIGINAL FILED

COUNTY Dewitt 34-20N-2
SAMPLE SET NO. 13379

424
vg

LOG OF WATER WELL

Co. #222

Property owner City of Clinton Test Well No. 54-2

Drilled by Layne Western Co. Year 1954

Formations passed through	Thickness	Depth of Bottom
Fill-cinders, soil & bricks	2	2
Black Soil	3	5
Yellow Clay	2	7
Loose fine sand to coarse gravel	6	13
Tight fine to coarse sand (dirty) blue clay	14	27
Peat, wood, silty fine to coarse gray sand	6	33
Tight dirty silty fine to coarse gray sand	8	41
Loose coarse sand	3	44
Tight dirty silty fine to coarse sand	15	59

[Continue on back if necessary]

Finished in Shale at 346 to 349 ft.

S.S. #24531 Cased with inch from 0 to ft.

and inch from to ft.

e hole below casing 3 inch. Static level from surf. ft.

Tested capacity gal. per min. Temperature °F.

Water lowered to ft. in. in hrs. min.

Length of test hrs. min. Screen

Slot Diam. Length Bottom set at ft.

[Show location in Section Plat]

Township name Clintonia Elev. 709.1

Description of location Approx. 150' S. & E. of NE corner of Sec. 24

Signed County, Dewitt

Date

Copy to Illinois State Geological Survey

Loose coarse sand & fine gravel 10
Tight coarse gravel, clay 69
Sand, clay & gravel, (mod. gravel) Log cont'd
than above) (very hard
used pulldowns) Loose
gravel 135 to 138') 41 151
Fairly loose med. gravel 7 158
Gravelly clay, very hard used mull base
downs, 171 to 173 loose 22 180
Gravelly clay mud clay than above
not as hard)
Sandy gray clay (sort) 35 215
Tight gilty fine sand (more 21 236
Tight silty fine sand (small amount
f. med. gravel)
Fairly loose fine sand (more
gravel than above)
Tight coarse clean gravel
Black shale turning to grn. blue 3

from to mat. formation

brn mott loyal state iron stains

and in of bored to W ater

Screen min. ft. Length of leaf

Diam. Depth Bottom set at

Bottom Diam. Depth Bottom Diam.

Size Slot Length Size Slot Length

Diameter of hole Type of perforator used

Date started JUN 1954 Date completed JUN 1954

ACKNOWLEDGED

Contractor's Signature

Remarks:

CW-32-25

LOG OF WATER WELL

Tight coarse sand and fine gravel	3	76
Cemented sand, clay & gravel Hard, boulders 84'	54	130
Fairly loose fine sand	1	131
Tight gravelly clay	2	133
Loose fine sand	2	135
Soft sandy blue clay	8	143
Fairly loose fine sand to med gravel	8	151
Gravelly hard gray clay	34	185
Tight fine sand - gray clay	5	190
Sandy gray clay (very soft) occasional streak gravel & green-clay	40	230
Fairly loose fine sand (small amount med. gravel)	50	280
Tight coarse sand & gravel (believe its from up hole)	10	290
Tight clean coarse gravel	29	319
Tight fine sand	11	330
Hard sandy gray clay - gravelly	9	341
Black Shale	2	343

ACKNOWLEDGED

John C. Moore Corporation, Rochester, N. Y. Binder and holes in leaves, each Patented 1906. 386790

TOWN Clinton TOWNSHIP

COMPANY Woollen Bros. No.

FARM Clinton Theater No.

AUTHORITY Woollen Bros.

ELEVATION

COLLECTOR J.P.G. DATE DRILLED

CONFIDENTIAL 1936

Map No. 7

R. 2E

T. 20 N

Sec. 34?

No. C-7513

STRATA	Thickness Feet	Thickness In.	Depth Feet	Depth In.
Soil	8		8	
Yellow clay	10		18	
Blue clay	37		55	
Driftwood	2		57	
Green clay	15		72	
Sand		8	72	8
Hardpan with seams of gravel	51	10	124	6
Sand and gravel	5	6	130	
Clay to			130	6

#20 Johnson Screen 123' 10" to 130' 6"

Static 36"

Pumped 50 g.p.m. with drawdown to 100'

NO ENVELOPE

[redacted]

County DeWitt Index No. 07

T.—DRILL RECORD

John C. Moore Corporation, Rochester, N. Y. Binder and holes in leaves, each Patented 1906.

MOORE'S MODERN METHODS

TOWN Clinton TOWNSHIP DeWitt MAP NO. 7

COMPANY Clinton Ice Company R 2E

FARM 2 1 T 20 N SEC. 34?

AUTHORITY

ELEVATION HOLE NO.

COLLECTOR H. O. Ewney DATE DRILLED 1921

Co. #514

No.	STRATA	THICKNESS FEET	THICKNESS IN.	DEPTH FEET	DEPTH IN.
	Clay, yellow	2		8	
	Clay, blue or grey	8		16	
	Clay, sandy	8		24	
	Clay, some sand	31		55	
	Drift, (a few inches)				
	Clay, brown or grey	5		60	
	Clay, grey	13		73	
	Sand and gravel	1		74	
	Clay & gravel, grey	21		95	
	Sand	2		97	
	Clay, grey	14		111	
	Sand and gravel	5		116	
	Hardpan, clay, grey, some gravel	51		167	
	Drift		6	167	6
	Clay, grey	5	6	173	
	Clay, green or blue	4		177	
	Clay, green	5		182	
	Hardpan, brown, grey	79		261	
	Sand, fine (filled casing 45 feet)	12		273	
	Sand, called liver, very fine (6 or 8 inches)				
	Sand and gravel, good	44		317	
	Sand and gravel, coarse	13		330	
	Sand, very fine	23		353	
	Sand, coarse	11		364	
	Layers of finer and coarser sand but about the same	10		374	

NO ENVELOPE

County Dept. Index No.

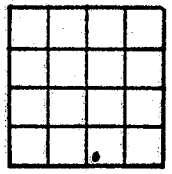
DRILL RECORD

STATE OFFICE BUILDING, SPRINGFIELD,
AL / WATER SURVEYS SECTION. BE SURE TO

GEOLOGICAL AND WATER SURVEYS WELL RECORD

Completed 8-15-71

10. Property owner John Armstrong Well No. _____
Address Wapella, Ill
Driller Earl Woollen License No. 92-556
11. Permit No. DF 11802 Date 7-29-71
12. Water from Sand + Gravel Formation 13. County DeWitt
at depth 78 to 81 ft. Sec. 35
14. Screen: Diam. 4 in. Twp. 20N
Length: 3 ft. Slot .025 Rge. 2E
Elev. _____



SHOW LOCATION IN SECTION PLAT
SW SW SE
(permit)

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
4"	V-S	0	78

16. Size Hole below casing: _____ in.
17. Static level 18 ft. below casing top which is 1 ft. above ground level. Pumping level 50 ft. when pumping at _____ gpm for 2 hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
soil + yellow	17	17
Blue clay	33	50
drift	2	52
green clay	9	61
Gray bouldery	17	78
sand + gravel	3	81
blue clay		

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

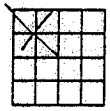
SIGNED Earl Woollen DATE Aug 30-71

COUNTY No. 564

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner West Side Park Well No. #4
Address Route 10 West Clinton IL
Driller Mashburn, Grover C. Jr. License No. 102-1930
11. Permit No. 135539 Date 09/29/87
12. Water from sand 13. County DeWitt
at depth 111 to 118 ft.
14. Screen: Diam. 5 in.
Length: 8 ft. Slot 20

Sec. 34
Twp. 20 N
Rge. 2 E
Elev. ____



15. Casing and Liner Pipe NW

Diam. (in.)	Kind and Weight	From (ft)	To (ft)
5	SDR 21 PVC	-2	111

16. Size hole below casing: _____ in.
17. Static level 42 ft. below casing top which is 2 ft. above ground level. Pumping level 55 ft. when pumping at 50 gpm for 2 hours.

18. Formations passed through	Thickness	Bottom
yellow clay	22	22
blue clay	38	60
brown drift	5	65
green clay	7	72
grey clay	37	109
grey sand	1	110
grey clay	1	111
clean sand & gravel	7	118
grey clay	0	118

DeWitt 12-039-20828-00 34-20N-02E

TOWN

TOWNSHIP

COMPANY Woollen Bros. NO.

FARM Ammon, Irvin NO.

DATE DRILLED February 1946

AUTHORITY Woollen Bros.

COLLECTOR

ELEVATION

N W cor. of SW

T. 20N R. 2E SEC. 35

Co. No. 229

No.	Strata	Thickness Feet	Thickness In.	Depth Feet	Depth In.
	Soil, yellow clay	18		18	
	Blue clay	23		41	
	Sand, dirty	1		42	
	Gray clay	6		48	
	Brown drift	5		53	
	Green clay	5		58	
	Gray hardpan, hard	16		72	
	Gravel, sand	6		78	
	Gravel				
	4" hole				
	75' 9" of pipe				
	No drawdown at 6 g.p.m. for 1 hr.				
	Water fairly clear				
	Water level 15'				
	Finished in sand, gravel at 72' to 78'				
	Pipe loose				
	Cook Brass Screen, Size 4", Length 3', Slot 25.				
	Electric Pump.				

NO ENVELOPE [redacted]

COUNTY Dewitt

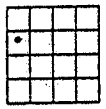
SAMPLE SET NO.

35-20N-2.

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner Clinton, City of Well No. #10
Address Clinton IL
Driller Layne-Western Co. License No. 092-1400
11. Permit No. E892296A Date 06/12/89
12. Water from sand & gravel 13. County DeWitt
at depth 300 to 370 ft.
14. Screen: Diam. 16 in.
Length: 60 ft. Slot .05

Sec. 35
Twp. 20 N
Rge. 2 E
Elev. 725



1950'S 800'E NWc

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (ft)	To (ft)
16	STEEL .375"	-2	300

16. Size hole below casing: _____ in.
17. Static level 127 ft. below casing top which is 0 ft. above ground level. Pumping level 140 ft. when pumping at 1032 gpm for 6 hours.

18. Formations passed through	Thickness	Bottom
SS #66784 (0'-365')	0	0
brown very silty sandy clay	13	13
gray silty sandy clay	9	22
gray sand & gravel with clay seams	6	28
hard gray very sandy silty clay	13	41
organic brown silt (peat)	4	45
soft dark gray clay	3	48
blue gray sandy silty clay	8	56
hard gry sandy silty clay, some gravel	13	69

Municipal Water Supply

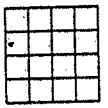
DeWitt 12-039-21112-00 35-20N-2E

18. Formations passed through (continued)	Thickness	Bottom
sand	4	73
hard gray sandy silty clay, some gravel	84	157
sand @ 97-99,107-109, 137-140, 146-150	0	157
dark brown organic clay, trace wood	11	168
hard blue gray sandy silty clay	7	175
hard gray & brown sandy silty clay	4	179
brn gry silty sandy clay, sd & silt seam	69	248
gray very fine to medium sand	9	257
gray clayey silt	3	260
gray fine-coarse sand with silty seams	33	293
gray fine sand-small gravel, fine seams	37	330
fine to coarse sand	1	331
gry fine snd-small gravel, coarse layers	20	351
gray fine sand-coarse gravel, some coal	10	361
soft coal	4	365
gray shale with lime lenses	5	370

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner Clinton, City of Well No. #11
Address Clinton IL
Driller Layne-Western Co. License No. 092-1400
11. Permit No. E8922968 Date 06/12/89
12. Water from sand & gravel 13. County DeWitt
at depth 300 to 370 ft.
14. Screen: Diam. 16 in.
Length: 60 ft. Slot .05

Sec. 35
Twp. 20 N
Rge. 2 E
Elev. 720



1900'S 50'E NWc

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (ft)	To (ft)
16	STEEL .375"	-3	300

16. Size hole below casing: _____ in.
17. Static level 122 ft. below casing top which is 0 ft. above ground level. Pumping level 137 ft. when pumping at 1180 gpm for 3 hours.

18. Formations passed through	Thickness	Bottom
ss #66785 (0'-365')	0	0
brown silty clay	10	10
gray silty clay	4	14
gray sand & gravel with clay seams	9	23
gray sandy silty clay	15	38
brown peat	5	43
soft dark gray clay	4	47
blue gray sandy silty clay	4	51
gry sandy silty clay, gravel-sand layers	54	105

Municipal Water Supply

DeWitt 12-039-21113-00 35-20N-2E

18. Formations passed through (continued)	Thickness	Bottom
sand & gravel	2	107
gry sandy silty clay, gravel-sand layers	56	163
blue gray silt & sand w/clay seams	7	170
hard blue sandy silty clay w/silt seams	7	177
hard brown & gray sandy silty clay	8	185
brn gry sandy silty clay, grvl-boulders	65	250
sand with clay & silt seams	9	259
clayey silt	2	261
tight very fine coarse sand	29	290
fine to coarse sand	10	300
fine sand-small gravel, slighty dirty	15	315
as above w/ layers of gravel & boulders	45	360
fine sand to coarse gravel with coal	5	365
soft shale with lime lenses	5	370

TOWN

TOWNSHIP Clintonia R. 2E

COMPANY Woollen Bros.

FARM Jasper, W. J.

NO. T. 20N

SEC. 35

DATE DRILLED December 1944

AUTHORITY Woollen Bros.

COLLECTOR

ELEVATION 720± Rolfe

300' N. line, 60' E. line of NE

No.	Strata	Thickness Feet	Thickness In.	Depth Feet	Depth In.
	No. 230				
	Soil	2		2	
	Yellow clay	12		14	
	Blue clay	24		38	
	Driftwood	4		42	
	Green clay	7		49	
	Hardpan	10		59	
	Gravel; 4 g.p.m.	1		60	
	Clay	11		71	
	Sand, little water	1		72	
	Hardpan	3		75	
	Dirty gravel	1		76	
	Hardpan	71		147	
	Sand, gravel	3		150	
	rotal depth			150	

147' of 4" pipe
Drawn down 53' to water at 3½ g.p.m.
Water level 35'
Finished in sand, gravel at 147' to 150'
Pipe loose and bent

Johnson Armco Screen, Size 3 3/4,
Length 3', Slot 25.

NO ENVELOPE [redacted]

COUNTY Dewitt

35-20N-2E

SAMPLE SET NO.
(84107—20M—6-45) 2

ILLINOIS GEOLOGICAL SURVEY, URBANA

GEOLOGICAL WATER SURVEYS WATER WELL RECORD

Completed 12-72

10. Dept. Mines and Minerals permit No. NE 17173 Year 72

11. ★ Property owner WAYNE RICKGAUER Well No. 1

Address 304 S. JACKSON ST

Driller MASHBURN BROS License No. 92-203

12. Water from SAND Formation 13. County DEWITT

at depth 321 to 331 ft.

14. Screen: Diam. 6 in.

Length: 10 ft. Slot 20

★ Catfish Farm

Sec. 35

Twp. 20N

Rng. 2E

Elev. 725

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
6	BIK STEEL 19#	+1	321

SHOW LOCATION IN SECTION PLAT

2200' NL, 1400' WL of NW(permit)

16. Size Hole below casing: NONE in.

17. Static level 107 ft. below casing top which is 2 ft. above ground level. Pumping level 121 ft. when pumping at 120 gpm for 4 hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
TOP SOIL	3	3
YELLOW CLAY	13	16
BLUE CLAY	19	35
BROWN DRIFT	5	40
GREEN CLAY	8	48
GREY CLAY	24	72
SANDY GRAVEL	6	78
GREY CLAY	67	145
BROWN DRIFT	5	150
GRAY CLAY	104	254
FINE SAND	56	310
FINE TO MEDIUM SAND	8	319
FINE TO COURSE SAND-SOME GRAVEL	13	331
NOT THRU SAND AT 331'		
(CONTINUE ON SEPARATE SHEET IF NECESSARY)		

SIGNED Mashburn Bros DATE Dec 18-72

S.S. # 58931

COUNTY No. 591

DEWITT 35 20N 2E

35-20N-2E

COMPANY Woollen Bros. NO.

FARM Thompson, F. NO.

DATE DRILLED 8/47

AUTHORITY Woollen Bros.

COLLECTOR ELEVATION

SE SE NW

No.	Strata	Thickness Feet	Thickness In.	Depth Feet	Depth In.
No. 228					
	Soil & yellow clay	14		14	
	Blue clay	27		41	
	Seam of gas			41	
	Brown drift	9		50	
	Green clay	6		56	
	Hardpan	24		80	
	Gray s and and gravel	4		84	
	Finished in gray sand and gravel at 4" hole		80'-84'		
	80' of 4" pipe				
	Drawn down 2' at 9 g.p.m.for 1 hr.				
	Water dirty				
	Water level 10'				
	Black, tight pipe				
	Cook Screen, Size 4", Length 4', Slot 30.				

NO ENVELOPE

COUNTY Dewitt 35-20N-2E

SAMPLE SET NO.

(24159—20M—9-46)

ILLINOIS GEOLOGICAL SURVEY, URBANA

TOWN

COMPANY Woollen Bros

FARM Warner, Lloyd

DATE DRILLED April 1945

AUTHORITY Woollen Bros.

COLLECTOR

TOWNSHIP Clintonia

NO. T. 20N

ELEVATION 720± Wolfe

R. 2E

SEC. 35

NE cor. of NW

No. 231

Strata	Thickness Feet	Thickness In.	Depth Feet	Depth In.
Soil, yellow clay	16		16	
Blue clay	20		36	
Sand, gas, water	6		42	
Green clay	11		53	
Hardpan, hard	8		61	
Hardpan, soft	2½		63½	
Hardpan, hard		6	64	
Gravel	2½		66½	
Clay				
Total depth			66½	

4" hole
65' of pipe
Drawn down 40' at 5 g.p.m. for 1 hr.
Water clear
Finished in gravel at 64' to 66½'

Pipe loose
Cook Brass Screen, Size 4", Length 3',
Slot 25.

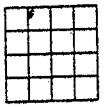
NO ENVELOPE [redacted]

COUNTY Dewitt

SAMPLE SET NO. 35-20N-1

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner Mears, Chet Well No. _____
Address R.R. #3 Box #196 Clinton IL
Driller Mashburn, Robert License No. 102-3084
11. Permit No. 03901696 Date 07/23/96
12. Water from sand 13. County DeWitt
at depth 73 to 81 ft.
14. Screen: Diam. 5 in.
Length: 4 ft. Slot 15
Sec. 36
Twp. 20 N
Rge. 2 E
Elev. _____



15. Casing and Liner Pipe NW NE NW

Diam. (in.)	Kind and Weight	From (ft)	To (ft)
5	PVC SDR 21	-1	77

16. Size hole below casing: _____ in.
17. Static level 11 ft. below casing top which is 1 ft. above ground level. Pumping level 18 ft. when pumping at 15 gpm for 2 hours.

18. Formations passed through	Thickness	Bottom
yellow clay	14	14
gray clay	3	17
sand	3	20
gray clay	22	42
drift	4	46
green clay	5	51
gray clay	22	73
medium sand	8	81
gray clay at	0	81

Household - Private

DeWitt 12-039-21245-00 36-20N-02E

TOWN

COMPANY Woollen Bros.

FARM Stiver Estate

DATE DRILLED 1944

AUTHORITY Woollen Bros.

COLLECTOR

TOWNSHIP Clintonia NO. T. 20N

R. 2E

SEC. 36

ELEVATION 720± Rolfe

70' N. line, 1000' E. line of NW

No. Co. No. 232 Strata	Thickness Feet	Thickness In.	Depth Feet	Depth In.
Soil	2		2	
Yellow clay	13		15	
Blue clay	26		41	
Driftwood	4		45	
Green clay	7		52	
Hardpan	11		63	
Sand, gravel	4		67	
Drift	½		67½	
Total depth			67½	
4" hole				
64½' of 4" pipe				
7' drawdown at 7 g.p.m.				
Water slighty dirty				
Water level 11'				
Finished in sand, gravel at 63' to 67'				
Pipe Loose				
Johnson Armco Screen, Size 3 3/4,				
Length 3', Slot 25.				

NO ENVELOPE [redacted]

COUNTY Dewitt

SAMPLE SET NO.

36-20N-

APPENDIX E.4

COAL MINING

Shaw®

State Geological Survey

Dewitt County

Quicklinks

Coal Mines - Map and directory of coal mines
Coal Resources - Coal elevation, depth, and thickness maps
Coal Logs - Non-confidential coal logs from the Coal Section's stratigraphic database

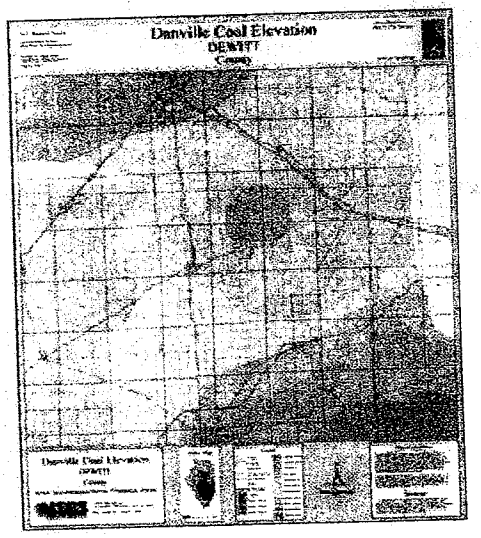
Coal Mines

There has not been any mining in Dewitt County.

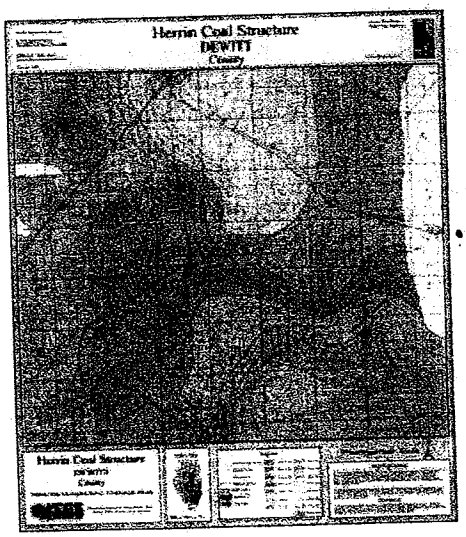
Coal Resources

DeWitt County structural elevation, depth, thickness, sulfur, and chlorine maps. Scale 1:100,000. Pdf files.

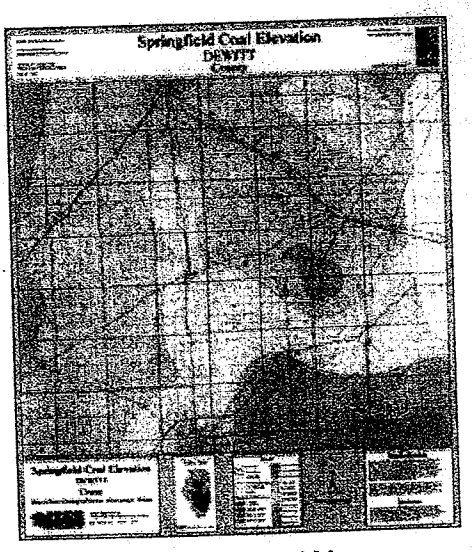
Elevation



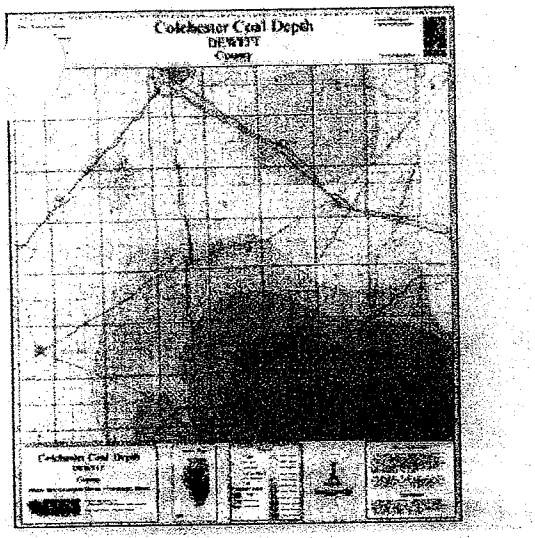
Danville Coal Map



Herrin Coal Map

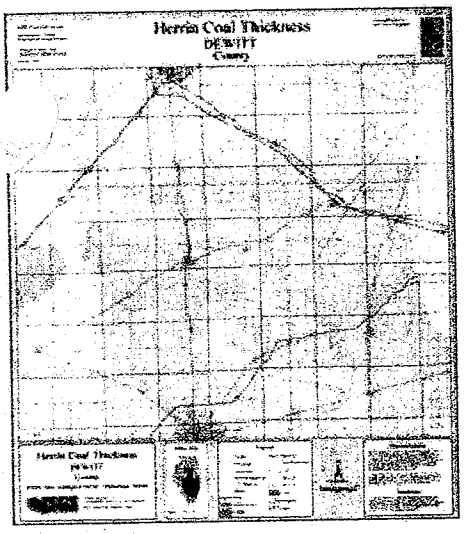


Springfield Coal Map

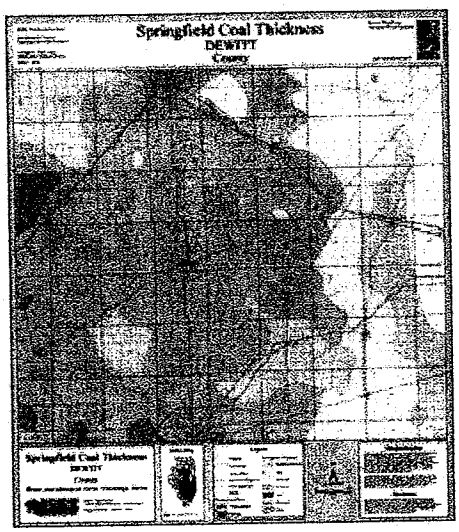


Colchester Coal Map

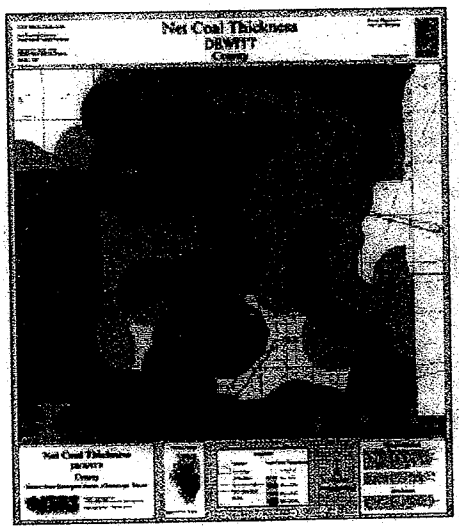
Thickness



Herrin Coal Map



Springfield Coal Map



Net Coal Thickness

Sulfur

The df file listed above contains non-confidential coal log descriptions from the Coal Section's stratigraphic database in the y listed.

Click here to download the raw .dbf files from which the entire stratigraphic database derives (if such files are what you really want; most users will only want and need the .pdf files).

Each coal log has a "header" element that contains location information, log type, log source and other information (see sample below).

Sample location: COUNTY: SALINE 7S - R 6E SECTION: 35 NWSE 330S 330W

This log is from a borehole located in Saline County, Township 7 South, Range 6 East, northwest quarter of the southeast quarter of section 35, 330 feet from the South section line, and 330 feet from the West section line.

Beneath the header is information on the geology for that data point. The Coal Section stratigraphic database from which this .pdf file derives is a multi-project database which contains drill hole and outcrop descriptions of Pennsylvanian stratigraphy in Illinois. Consequently, the level of detail and accuracy in the data and their interpretation vary (sometimes widely,) with the geologist, project type, or original data source. Multiple descriptions of a particular location may be present. Note that both the coal stratigraphic database and this .pdf listing are only a subset of the total amount of data available from the ISGS Geologic Records Library archives, and reflect only coal-specific data and interpretations of past and present Coal Section geologists. They are not a comprehensive listing of all data that may be available from the ISGS.

Updated: 8/2/2005 RJJ

APPENDIX E.5

SOIL BORING AND MONITORING WELL COMPLETION REPORTS

Shaw®

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

Project Name CLINTON LANDFILL, INC. – PROPOSED EXPANSION AREA — Sheet 1 of 4
Project Location CLINTON, ILLINOIS — Project No. 91-118
Boring No. EX-1 — Surface Elev. 722.77 — Boring Type HSA — Completion Depth 109.5
Coordinates: (X) N 5276.45 (Y) E 8837.99 — Drilling Contractor SKS & ASSOCIATES
Date Started 12-2-96 — Date Completed 12-3-96 — Driller TODD SKINNER — Rig No. MOBILE B-57
Logged By J. BERRY — Backfilled (Y/N) Y — Backfill Material BENSEAL SLURRY
Surface Conditions CORNFIELD (HARVESTED) — If "No" explain

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	q_p (tsf)	PID (PPM) eV LAMP 10.6 __ 11.7 __	CHEMICAL	GEOTECHNICAL SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
1	CS	60									CLAYEY SILT (ML); Dark brown, soft, moist, with organics	
				1.0					721.52			
								2			SILTY CLAY (CL); Yellow brown, firm, moist, with organics	
				1.0								
2	CS	60						4				
				1.0								
								6				
				1.25				8			grades brown, stiff, trace gravel, organics out	
	CS	60										
				0.25				10			grades wet from 10.5' to 12.2'	
								12			grades moist	Collected geotech. sample from 13'-14'
				1.25								
4	CS	60						14				
				1.25				16			grades gray	
				1.25				18			Hit water @ 19.0 ▽	
5	CS	55										
				1.5				20				
								22				
									700.27		SAND (SP); Gray, loose, saturated, trace clay, medium to fine grained sand	
								24	698.77		SILTY CLAY (CL); Gray, stiff, moist	
6	CS	30		1.5					698.27		GRAVEL & SAND (GP-SP); Gray, loose, saturated, small grained gravel & coarse grained sand	
									697.52			
								26			SILTY CLAY (CL); Gray, stiff, moist, with gravel and cobbles	
				1.5								
								28				
7	CS	49										

CAD DWG NO:91118237 EMPLOYEE NO: 9834 DATE/TIME: 12/23/96 09:56:04 ACD-12_

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

Project Name CLINTON LANDFILL, INC. – PROPOSED EXPANSION AREA — Sheet 2 of 4
Project Location CLINTON, ILLINOIS — Project No. 91–118
Boring No. EX–1 — Surface Elev. 722.77 — Boring Type HSA — Completion Depth 109.5
Coordinates: (X) N 5276.45 (Y) E 8837.99 — Drilling Contractor SKS & ASSOCIATES
Date Started 12–2–96 — Date Completed 12–3–96 — Driller TODD SKINNER — Rig No. MOBILE B–57
Logged By J. BERRY — Backfilled (Y/N) Y — Backfill Material BENSEAL SLURRY
Surface Conditions CORNFIELD (HARVESTED) — If "No" explain

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	q_p (tsf)	PID (PPM) eV LAMP 10.6 __ 11.7 __	CHEMICAL	GEOTECHNICAL	SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
7	CS	49										SILTY CLAY (CL); Gray, stiff, moist, with gravel & cobbles	
				1.5					32				
												~~grades trace gravel, cobbles out~~	
				1.25					34				
8	CS	60											
				1.75					36				
				2.0					38				
				2.75								grades very stiff	
9	CS	60							40				
				2.25									
									42				
				2.25					44				
10	CS	60											
				2.75					46				
				2.25					48				
11	CS	60							50				
				2.75									
				0.25					52	670.27			
				0.25						669.27		~~SILT (OL); Gray and brown, soft, moist, with peat~~	
12	CS	60							54			PEAT (Pt); Brown, soft, moist, with wood fibers	
				0.25									~~Collected geotech.~~ sample from 55'–56'
									56				
				0.5					58			grades with gray silty clay @58.2	
13	CS	60											

CAD DWG NO:91118238 EMPLOYEE NO: 9834 DATE/TIME: 12/23/96 09:56:51 ACD–12_

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

Project Name CLINTON LANDFILL, INC. – PROPOSED EXPANSION AREA — Sheet 3 of 4
Project Location CLINTON, ILLINOIS — Project No. 91–118
Boring No. EX–1 — Surface Elev. 722.77 — Boring Type HSA — Completion Depth 109.5
Coordinates: (X) N 5276.45 (Y) E 8837.99 — Drilling Contractor SKS & ASSOCIATES
Date Started 12–2–96 — Date Completed 12–3–96 — Driller TODD SKINNER — Rig No. MOBILE B–57
Logged By J. BERRY — Backfilled (Y/N) Y — Backfill Material BENSEAL SLURRY
Surface Conditions CORNFIELD (HARVESTED) — If "No" explain

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	q_u (tsf)	PID (PPM) eV LAMP 10.6 __ 11.7 __	CHEMICAL	GEOTECHNICAL SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
13	CS	60		0.5							PEAT (Pt); Brown, soft, moist, with wood fibers	
								62	660.77			
				1.25							SILTY CLAY (CL); Green gray, stiff, moist, trace gravel	
				1.25				64				Collected geotech. sample from 63'–64'
14	CS	60										
				4.0+				66			grades hard	
								68				
				4.0+								
15	CS	40						70			grades gray	
								72				
				4.0+								
				4.0+				74				
								76				Auger refusal at 75.5' Rock in hole; blind drill to get past.
16	CS	30		4.0+								
				4.0+				78				Collected geotech. sample from 78'–79'
17	CS	60										
								80	642.77			
									642.27		SILT (ML); Gray, moist, trace clay	
				4.0+							SILTY CLAY (CL); Gray, hard, moist, trace gravel & organics	
								82				
				4.0+								
18	CS	60						84				
				4.0+								
								86				
									635.77			
				1.0							PEAT (Pt); Brown and dark brown, firm, moist	
				1.0				88				
19	CS	30										

CAD DWG NO:91118239 EMPLOYEE NO: 9834 DATE/TIME: 12/23/96 09:57:41 ACD–12_

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

Project Name CLINTON LANDFILL, INC. – PROPOSED EXPANSION AREA — Sheet 4 of 4

Project Location CLINTON, ILLINOIS — Project No. 91-118

Boring No. EX-1 — Surface Elev. 722.77 — Boring Type HSA — Completion Depth 109.5

Coordinates: (X) N 5276.45 (Y) E 8837.99 — Drilling Contractor SKS & ASSOCIATES

Date Started 12-2-96 Date Completed 12-3-96 — Driller TODD SKINNER — Rig No. MOBILE B-57

Logged By J. BERRY — Backfilled (Y/N) Y — Backfill Material BENSEAL SLURRY

Surface Conditions CORNFIELD (HARVESTED) — If "No" explain

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	q_u (tsf)	PID (PPM) eV LAMP 10.6 __ 11.7 __	CHEMICAL	GEOTECHNICAL	SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
19	CS	30										PEAT (Pt); Brown and dark brown, firm, moist	
										631.27			
									92			SILTY SAND (SM); Gray, loose, saturated, fine grained sand	
				1.5						629.27			
									94			SILTY CLAY (CL); Gray, stiff, moist, trace gravel	
20	CS	57										grades hard	
				4.0+					96				Collected geotech. sample from 95'-96'
				4.0+					98				
21	CS	48								623.27			
									100			SILTY SAND (SM); Gray, loose, saturated, fine grained sand	
									102	620.77			
												SILT (ML); Gray, loose, saturated, trace clay	
				4.0+						619.27			
22	CS	60							104			SILTY CLAY (CL); Dark gray, hard, moist, trace gravel	
				4.0+									
									106				
				4.0+					108				
										613.27			
									110			End of boring @109.5'	
									112				
									114				
									116				
									118				

CAD DWG NO:91118240 EMPLOYEE NO: 9834 DATE/TIME: 12/23/96 09:58:34 ACD-12_

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

Project Name CLINTON LANDFILL, INC. – PROPOSED EXPANSION AREA — Sheet 1 of 4
Project Location CLINTON, ILLINOIS — Project No. 91–118
Boring No. EX–2 — Surface Elev. 721.34 — Boring Type HSA — Completion Depth 109.5
Coordinates: (X) N 4092.30 (Y) E 8556.31 — Drilling Contractor SKS & ASSOCIATES
Date Started 12–5–96 Date Completed 12–6–96 — Driller TODD SKINNER — Rig No. MOBILE B–57
Logged By J. BERRY — Backfilled (Y/N) Y Backfill Material BENSEAL SLURRY
Surface Conditions CORNFIELD (HARVESTED) — If "No" explain

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	q_u (tsf)	PID (PPM) eV LAMP 10.6 __ 11.7 __	CHEMICAL	GEOTECHNICAL	SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
1	CS	60							0	720.34		CLAYEY SILT (ML); Dark brown, soft, with organics	
												SILTY CLAY (CL); Brown mottled with yellow, firm, moist, trace organics	
				0.5					2				
2	CS	60		1.0					4				
				0.75					6			grades organics out	
									8				
3	CS	60		0.75									
									10			grades brown mottled with gray, trace gravel	
				1.0									
									12				
												grades gray, stiff	
4	CS	60		1.25					14				
									16				
				1.5									
									18				
5	CS	60											
									20				
									22	699.34		SAND (SP); Gray, loose, moist, fine grained sand, trace silt & clay	
6	CS	60							24				
									26				
									28				
7	CS	55											

CAD DWG NO:91118241 EMPLOYEE NO: 9834 DATE/TIME: 12/23/96 10:03:34 ACD–12_

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

Project Name CLINTON LANDFILL, INC. – PROPOSED EXPANSION AREA — Sheet 2 of 4
Project Location CLINTON, ILLINOIS — Project No. 91–118
Boring No. EX–2 — Surface Elev. 721.34 — Boring Type HSA — Completion Depth 109.5
Coordinates: (X) N 4092.30 (Y) E 8556.31 — Drilling Contractor SKS & ASSOCIATES
Date Started 12–5–96 Date Completed 12–6–96 — Driller TODD SKINNER — Rig No. MOBILE B–57
Logged By J. BERRY — Backfilled (Y/N) Y Backfill Material BENSEAL SLURRY
Surface Conditions CORNFIELD (HARVESTED) — If "No" explain

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	q_p (tsf)	PID (PPM) eV LAMP 10.6 __ 11.7 __	CHEMICAL	GEOTECHNICAL	SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
7	CS	55							32			SAND (SP); Gray, loose, moist, fine grained sand, trace silt & clay	
8	CS	60							34	687.34		SILT (ML); Gray, loose, moist, trace fine grained sand, trace clay	
										686.34		SAND (SP); Gray, loose, saturated, fine grained sand, trace silt & clay	
									36	685.34		SILT (ML); Gray, moist, trace fine sand & clay	
				1.5						684.59		SILTY CLAY (CL); Gray, stiff, moist, trace gravel	
9	CS	60							38				
				2.5					40			grades very stiff	
				2.75					42				
10	CS	60							44				
				2.75					46				
				2.5					48				
11	CS	60							50				
				2.5					52				
12	CS	60							54	667.84 667.34		SILT (ML); Gray, loose, moist, trace clay	
												PEAT (Pt); Gray–brown, moist, with silt, trace clay	
									56			grades near black with wood fibers @56.0'	
				1.0					58	663.34		CLAYEY SILT (ML); Dark brown, moist, firm	Old organic topsoil
13	CS	60		1.25						662.34		SILTY CLAY (CL); Gray, stiff, moist, trace gravel, high plasticity clay	

CAD DWG NO:91118242 EMPLOYEE NO: 9834 DATE/TIME: 12/23/96 10:07:29 ACD–12_

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

Project Name CLINTON LANDFILL, INC. – PROPOSED EXPANSION AREA Sheet 3 of 4

Project Location CLINTON, ILLINOIS Project No. 91-118

Boring No. EX-2 Surface Elev. 721.34 Boring Type HSA Completion Depth 109.5

Coordinates: (X) N 4092.30 (Y) E 8556.31 Drilling Contractor SKS & ASSOCIATES

Date Started 12-5-96 Date Completed 12-6-96 Driller TODD SKINNER Rig No. MOBILE B-57

Logged By J. BERRY Backfilled (Y/N) Y Backfill Material BENSEAL SLURRY

Surface Conditions CORNFIELD (HARVESTED) If "No" explain

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	q_u (tsf)	PID (PPM) eV LAMP 10.6 __ 11.7 __	CHEMICAL	GEOTECHNICAL	SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
13	CS	60										SILTY CLAY (CL); Gray, stiff, moist, trace gravel, ~~high plasticity clay~~	
				1.5					62				
													Collected geotech. sample from 62'-63'
				2.5					64			grades gray & green, very stiff	
14	CS	60											
												grades gray	
				3.0					66				
				2.75					68				
15	CS	60											
				2.5					70				
									72				
				3.75									
16	CS	60							74				
				4.0+								grades hard	
									76				
				4.0+					78				
17	CS	49											
									80				
				4.0+								3" saturated sand seam at 81.3' (medium to coarse grained)	
									82				
18	CS	58							84				
				4.0+									
									86				
				0.25						634.34		PEAT (Pt); Brown, moist, soft	
									88			grades mottled with black @88.2'	
										632.34		~~SANDY CLAY (CL); Reddish-gray, wet, soft, trace~~ gravel	
19	CS	60		0.5									

CAD DWG NO:91118243 EMPLOYEE NO: 9834 DATE/TIME: 12/23/96 10:12:30 ACD-12_

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

Project Name CLINTON LANDFILL, INC. – PROPOSED EXPANSION AREA — Sheet 4 of 4
Project Location CLINTON, ILLINOIS — Project No. 91–118
Boring No. EX–2 — Surface Elev. 721.34 — Boring Type HSA — Completion Depth 109.5
Coordinates: (X) N 4092.30 (Y) E 8556.31 — Drilling Contractor SKS & ASSOCIATES
Date Started 12–5–96 — Date Completed 12–6–96 — Driller TODD SKINNER — Rig No. MOBILE B–57
Logged By J. BERRY — Backfilled (Y/N) Y — Backfill Material BENSEAL SLURRY
Surface Conditions CORNFIELD (HARVESTED) — If "No" explain

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	q_u (tsf)	PID (PPM) eV LAMP 10.6 __ 11.7 __	CHEMICAL	GEOTECHNICAL	SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
19	CS	60								630.34		SANDY CLAY (CL); Reddish–gray, wet, soft, trace gravel	
				4.0+								SILTY CLAY (CL); Gray, hard, moist, trace gravel	
							■		92				Collected geotech. sample from 91'–92'
20	CS	60							94				
				4.0+									
							■		96				Collected geotech. sample from 96'–97'
				4.0+					98				
21	CS	50											
				4.0+					100				
							■		102				Collected geotech. sample from 102'–103'
				4.0+									
22	CS	60							104				
									106				
							■						Collected geotech. sample from 107'–108'
				4.0+					108				
									110			End of boring @109.5'	
									112				
									114				
									116				
									118				

CAD DWG NO:91118244 EMPLOYEE NO: 9834 DATE/TIME: 12/23/96 10:15:40 ACD–12_

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

Project Name CLINTON LANDFILL, INC. – PROPOSED EXPANSION AREA — Sheet 1 of 4
Project Location CLINTON, ILLINOIS — Project No. 91–118
Boring No. EX–3 — Surface Elev. 712.00 — Boring Type HSA — Completion Depth 100.0
Coordinates: (X) N 3138.14 (Y) E 8847.01 — Drilling Contractor SKS & ASSOCIATES
Date Started 12–3–96 Date Completed 12–4–96 — Driller TODD SKINNER — Rig No. MOBILE B–57
Logged By J. BERRY — Backfilled (Y/N) Y — Backfill Material BENSEAL SLURRY
Surface Conditions GRASS — If "No" explain

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	q_u (tsf)	PID (PPM) eV LAMP 10.6 __ 11.7 __	CHEMICAL	GEOTECHNICAL	SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
1	CS	48								711.50		CLAYEY SILT (OL); Dark brown, soft, moist, with orgenics	
				0.75					2			SILTY CLAY (CL); Brown, firm, moist, with orgenics	
				1.0					4			grades trace orgenics	
2	CS	60											
				0.75					6	706.00		SANDY CLAY (CL); Brown, firm, moist	
									8			grades more sand	
										703.10		SAND (SP); Brown, loose, moist, fine grained, trace silt	
3	CS	60							10			grades saturated @11.2'	
									12	700.30		SILT (ML); Gray, moist, trace clay	
									14				
4	CS	60										grades with sand	
									16				
									18			2" saturated sand seam @17.9'	
				1.25						693.00		SILTY CLAY (CL); Dark gray, stiff, moist, trace gravel	
5	CS	60							20				
				1.5					22				
				1.5					24			2" sand seam @24.6'	
6	CS	55		1.75								grades trace sand	
									26				
										685.00		SAND (SW); Dark gray, medium dense, saturated, medium to fine grained sand	
									28				

CAD DWG NO:91118245 EMPLOYEE NO: 9834 DATE/TIME: 12/23/96 13:36:37 ACD-12_

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

Project Name CLINTON LANDFILL, INC. – PROPOSED EXPANSION AREA — Sheet 2 of 4
Project Location CLINTON, ILLINOIS — Project No. 91–118
Boring No. EX–3 — Surface Elev. 712.00 — Boring Type HSA — Completion Depth 100.0
Coordinates: (X) N 3138.14 (Y) E 8847.01 — Drilling Contractor SKS & ASSOCIATES
Date Started 12–3–96 Date Completed 12–4–96 — Driller TODD SKINNER — Rig No. MOBILE B–57
Logged By J. BERRY — Backfilled (Y/N) Y Backfill Material BENSEAL SLURRY
Surface Conditions GRASS — If "No" explain

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	q_u (tsf)	PID (PPM) eV LAMP 10.6 __ 11.7 __	CHEMICAL	GEOTECHNICAL	SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
7	CS	60							32			SAND (SW); Gray, loose, saturated, fine to coarse grained, trace gravel and clay	
									34				
				3.0						677.50		SILTY CLAY (CL); Gray, very stiff, moist, trace gravel	
8	CS	48		4.0+					36			grades hard @36.0'	
				2.5									
				2.25					38			grades very stiff @39.0'	
9	CS	58							40				
				2.0									
									42				Collected geotech. sample from 42.5'–43.5'
				2.0									
									44				
										667.20		SILT (ML); Gray, saturated, trace fine sand & clay	
10	CS	60								666.50		PEAT (Pt); Brown, firm, moist, trace clay & silt	
				0.75					46				
												grades dark brown	
									48				
				0.75								grades near black	
11	CS	60							50	661.50		CLAYEY SILT (ML); Dark brown to black, stiff, moist, trace organics	Old organic topsoil
									52	659.50		SILTY CLAY (CL); Dark gray, stiff, moist, trace gravel, high plasticity clay	Collected geotech. sample from 53.5'–54.5'
				1.5					54				
12	CS	56										1" saturated sand seam @55.8' (medium grained)	
				1.5					56			1" saturated sand seam @56.4' (medium grained)	
												1" saturated sand seam @58.1' (medium grained)	
				1.5					58				
										652.20		SILTY SAND (SM); Gray, loose, saturated	

CAD DWG NO:91118246 EMPLOYEE NO: 9834 DATE/TIME: 12/23/96 13:43:09 ACD-12_

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

Project Name CLINTON LANDFILL, INC. – PROPOSED LANDFILL EXPANSION — Sheet 3 of 4
oject Location CLINTON, ILLINOIS — Project No. 91–118
Boring No. EX–3 — Surface Elev. 712.00 — Boring Type HSA — Completion Depth 100.0
Coordinates: (X) N 3138.14 (Y) E 8847.01 — Drilling Contractor SKS & ASSOCIATES
Date Started 12–3–96 — Date Completed 12–4–96 — Driller TODD SKINNER — Rig No. MOBILE B–57
Logged By J. BERRY — Backfilled (Y/N) Y — Backfill Material BENSEAL SLURRY
Surface Conditions GRASS — If "No" explain

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	q_u (tsf)	PID (PPM) eV LAMP 10.6 __ 11.7 __	CHEMICAL	GEOTECHNICAL	SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
13	CS	58								651.30		SILTY SAND (SM); Gray, loose, saturated	
												SILTY CLAY (CL); Gray, hard, moist, trace gravel	
				4.0+					62				
				4.0+					64			1" saturated sand seam @64.3'	
14	CS	60											
				4.0+					66				
				4.0+					68				
				4.0+						643.00		SAND (SW); Gray, loose, saturated, medium grained, with clay	
										642.50		SILTY CLAY (CL); Gray, hard, moist, trace gravel	
15	CS	60							70				
									72				
												3" saturated sand seam @74.0' (medium grained)	
									74				
16	CS	60		4.0+									
				4.0+					76				
												SANDY SILT (ML); Gray, wet, trace clay, fine grained sand	
										634.30			
									78	634.00		SILT (OL); Dark brown, firm, wet, with organics, trace clay	
				4.0+						633.00		SILTY CLAY (CL); Gray, hard, moist, trace gravel	
17	CS	60		4.0+					80				
				4.0+					82				Collected geotech. sample from 82'–83'
									84				
18	CS	60											
				4.0+					86				
				4.0+					88				

CAD DWG NO:91118247 EMPLOYEE NO: 9834 DATE/TIME: 12/23/96 13:50:12 ACD–12_

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

Project Name CLINTON LANDFILL, INC. – PROPOSED EXPANSION AREA — Sheet 4 of 4
Project Location CLINTON, ILLINOIS — Project No. 91-118
Boring No. EX-3 — Surface Elev. 712.00 — Boring Type HSA — Completion Depth 100.0
Coordinates: (X) N 3138.14 (Y) E 8847.01 — Drilling Contractor SKS & ASSOCIATES
Date Started 12-3-96 — Date Completed 12-4-96 — Driller TODD SKINNER — Rig No. MOBILE B-57
Logged By J. BERRY — Backfilled (Y/N) Y — Backfill Material BENSEAL SLURRY
Surface Conditions GRASS — If "No" explain

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	q_u (tsf)	PID (PPM) eV LAMP 10.6 __ 11.7 __	CHEMICAL	GEOTECHNICAL	SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
19	CS	60		4.0+								SILTY CLAY (CL); Gray, hard, moist, trace gravel	
									92				
				4.0+									
									94				
20	CS	60		4.0+									
									96				
												3" saturated medium to fine grained sand seam @97.8'	
				4.0+					98				
				2.0						613.00		SANDY CLAY (CL); Gray, firm, moist, trace gravel	
									100	612.50		SILTY CLAY (CL); Gray, firm, moist, trace gravel	
										612.00		End of boring @100.0'	
									102				
									104				
									106				
									108				
									110				
									112				
									114				
									116				
									118				

CAD DWG NO:91118248 EMPLOYEE NO: 9834 DATE/TIME: 12/23/96 13:53:06 ACD-12_

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

Project Name CLINTON LANDFILL, INC. Sheet 1 of 4

oject Location CLINTON, ILLINOIS Project No. 91-118

Boring No. EX-4 Surface Elev. 724.53 Boring Type HSA Completion Depth 94.0'

Coordinates: (X) 5413.35 (Y) 9871.23 Drilling Contractor SKS ENGINEERS, INC.

Date Started 4-6-00 Date Completed 4-6-00 Driller TODD SKINNER Rig No. MOBILE B-57

Logged By J. BERRY Backfilled (Y/N) N Backfill Material

Surface Conditions BARE GROUND If "No" explain INSTALLED MONITORING WELL EX-4

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	q_p (tsf)	PID (PPM) eV LAMP 10.6 __ 11.7 __	CHEMICAL	GEOTECHNICAL	SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
1	CS	36								723.53		CLAYEY SILT (ML); Dark brown, stiff, moist, with roots, trace fine sand	
				2.0					2			SILTY CLAY (CL); Light brown mottled orange, very stiff, trace iron oxide staining	
				2.0					4				
2	CS	60		0.5								grades firm	
									6			3" wet SAND & GRAVEL seam @6'	
				0.5									
				1.0					8	716.03		SILTY CLAY (CL); Brown, stiff, moist, trace gravel	
3	CS	60											
				1.5					10				
												grades mottled gray	
				1.5					12				
				1.5						711.53		SILTY CLAY (CL); Gray, stiff, moist, trace gravel	
4	CS	60							14				
				1.5									
									16				
				1.75									
									18	706.33		SAND (SW); Gray, dense, wet to saturated, fine to medium grained, trace silt	
5	CS	60											
									20				
										703.03		SILTY CLAY (CL); Gray, hard, moist, trace gravel & fine sand	
				4.0+					22				
				4.0+									
6	CS	60							24	700.03			
				4.0+						699.43		SAND (SP); Gray, dense, saturated, medium grained, trace silt	
									26			SILTY CLAY (CL); Gray, hard, moist, trace gravel 2" sand seam @26.5'	
				4.0+					28				
7	CS	60											

CAD DWG NO:91118473 EMPLOYEE NO: 9834 DATE/TIME: 05/09/00 08:04 ACAD-14.

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

Project Name CLINTON LANDFILL, INC. Sheet 2 of 4

Project Location CLINTON, ILLINOIS Project No. 91-118

Boring No. EX-4 Surface Elev. 724.53 Boring Type HSA Completion Depth 94.0'

Coordinates: (X) 5413.35 (Y) 9871.23 Drilling Contractor SKS ENGINEERS, INC.

Date Started 4-6-00 Date Completed 4-6-00 Driller TODD SKINNER Rig No. MOBILE B-57

Logged By J. BERRY Backfilled (Y/N) N Backfill Material

Surface Conditions BARE GROUND If "No" explain INSTALLED MONITORING WELL EX-4

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	q_p (tsf)	PID (PPM) eV LAMP 10.6 __ 11.7 __	CHEMICAL / GEOTECHNICAL / SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
7	CS	60								SILTY CLAY (CL); Gray, hard, moist, trace gravel	
				4.0+			32				
								691.53			Collected sample for grain size.
										SAND (SW); Gray, dense, saturated, fine to coarse grained, trace silt & gravel	
8	CS	60					34				
										grades trace cobbles @36'	
							36				
							38				Difficult drilling
								685.33			
9	CS	3								SILTY CLAY (CL); Gray, hard, moist, trace gravel	
							40				
							42				
										grades stiff	
10	CS	60		1.5			44				
				1.5			46				
				1.75							
							48				
										grades hard	
11	CS	60		4.0+			50				
							52				
				4.0+							
								671.03			
12	CS	60		1.25			54	670.03		SILTY CLAY/CLAYEY SILT (CL-ML); Dark brown, stiff, moist, trace fine sand & peat (old organic topsoil)	
										PEAT (Pt); Brown, dense, moist, wood fragments, trace fine grained sand & clay	
							56				
							58				
				1.5				666.03		SILTY CLAY (CH); Gray, stiff, moist, trace gravel	
13	CS	60									

CAD DWG NO:91118474 EMPLOYEE NO: 9834 DATE/TIME: 11/07/00 10:15 ACAD-14.

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

Project Name CLINTON LANDFILL, INC. Sheet 3 of 4

Project Location CLINTON, ILLINOIS Project No. 91-118

Boring No. EX-4 Surface Elev. 724.53 Boring Type HSA Completion Depth 94.0'

Coordinates: (X) 5413.35 (Y) 9871.23 Drilling Contractor SKS ENGINEERS, INC.

Date Started 4-6-00 Date Completed 4-6-00 Driller TODD SKINNER Rig No. MOBILE B-57

Logged By J. BERRY Backfilled (Y/N) N Backfill Material

Surface Conditions BARE GROUND If "No" explain INSTALLED MONITORING WELL EX-4

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	q_u (tsf)	PID (PPM) eV LAMP 10.6 __ 11.7 __	CHEMICAL	GEOTECHNICAL SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
13	CS	60		1.5							SILTY CLAY (CH); Gray, stiff, moist, trace gravel	
								62				
				1.5							grades blue-gray @62.8'	
											grades with sand @63.3'	
									660.78			
14	CS	60						64			SILTY CLAY (CL); Gray, hard, moist, trace gravel	Pushed Shelby tube from 64'-66'.
												Collected geotech. ~~sample from 66'-67'.~~
				4.0+				66				Collected TOC and CEC sample from 67'.
				4.0+				68				
15	CS	60										
				4.0+				70				
								72				
				4.0+								
16	CS	60						74				
				4.0+								
								76				
				4.0+				78				
17	CS	60										Pushed Shelby tube from 79'-81'.
				4.0+				80				Collected geotech. ~~sample from 81'-82'.~~
												Collected TOC and CEC sample from 82'.
								82				
									641.93		SANDY CLAY (CL); Gray, hard, moist, trace gravel	
				4.0+					641.53		SILTY CLAY (CL); Gray, hard, moist, trace gravel	
18	CS	58						84				
				4.0+								
								86				
									638.28		SAND (SP); Gray, dense, saturated, fine grained, with silt, trace medium to coarse grained sand	Collected geotech. ~~sample from 86.5'-87.5'~~ for grain size.
								88				
									635.53			
19	CS	56									SILTY CLAY (CL); Gray, hard, moist, trace gravel	

CAD DWG NO:91118475 EMPLOYEE NO: 9834 DATE/TIME: 05/09/00 08:56 ACAD-14.

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

Project Name CLINTON LANDFILL, INC. Sheet 4 of 4

Project Location CLINTON, ILLINOIS Project No. 91-118

Boring No. EX-4 Surface Elev. 724.53 Boring Type HSA Completion Depth 94.0'

Coordinates: (X) 5413.35 (Y) 9871.23 Drilling Contractor SKS ENGINEERS, INC.

Date Started 4-6-00 Date Completed 4-6-00 Driller TODD SKINNER Rig No. MOBILE B-57

Logged By J. BERRY Backfilled (Y/N) N Backfill Material

Surface Conditions BARE GROUND If "No" explain INSTALLED MONITORING WELL EX-4

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	q_u (tsf)	PID (PPM) eV LAMP 10.6 __ 11.7 __	CHEMICAL	GEOTECHNICAL	SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
19	CS	56										SILTY CLAY (CL); Gray, hard, moist, trace gravel	
				4.0+					92				
				4.0+					94	630.53		End of boring @94.0'	
									96				
									98				
									100				
									102				
									104				
									106				
									108				
									110				
									112				
									114				
									116				
									118				

CAD DWG NO:91118476 EMPLOYEE NO: 9834 DATE/TIME: 05/09/00 08:39 ACAD-14.

PDC TECHNICAL SERVICES, INC.
WELL COMPLETION REPORT

Project #: 91-118 Project Location: CLINTON, ILLINOIS Well #: EX-4

Project Name: CLINTON LANDFILL, INC. Borehole #: EX-4

State Plane Coordinate: (X) N 5413.35 (Y) E 9871.23 (or) Latitude: ° ' " Longitude: ° ' "

Surveyed By: SHIVE-HATTERY ILL. Registration #: 035-002809

Drilling Contractor: SKS ENGINEERS, INC. Driller: TODD SKINNER

Drilling Method: 4 1/4" I.D. HSA Drilling Fluids (type):

Logged By: J. BERRY Date Started: 4-6-00 Date Finished: 4-6-00

Notes:

Annular Space Details

Type of Surface Seal: CONCRETE

Type of Annular Sealant: CEMENT-BENTONITE GROUT

Installation Method: TREMIE PIPE

Type of Bentonite Seal: BENSEAL SLURRY
(Granular, Pellet, Slurry)

Installation Method: TREMIE PIPE

Setting Time: 30 MINUTES

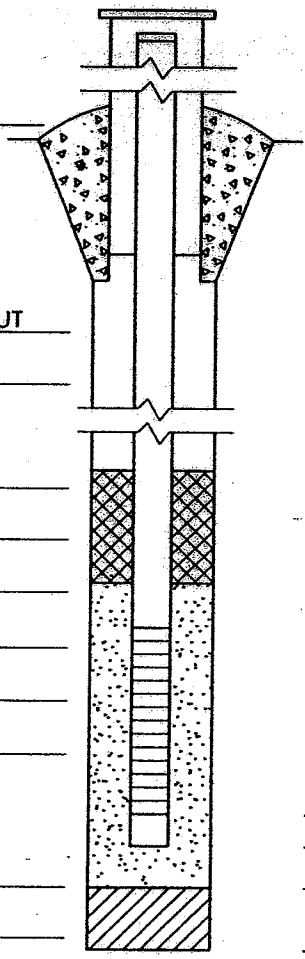
Type of Sand Pack: SILICA SAND

Grain Size: 20-40 MESH

Installation Method: POURED, SURGED

Type of Backfill Material: SILICA SAND
(If Applicable)

Installation Method: POURED



Elevations (MSL-referenced to a National Geodetic Vertical Datum)	Depths (Feet above or below ground surface to .01 feet)	
727.67	3.14	Top of Protective Casing
727.33	2.80	Top of Riser Pipe
724.53	0.00	Ground Surface
721.53	3.00	Top of annular sealant
646.33	78.20	Top of Seal
643.33	81.20	Top of Sand Pack
641.03	83.50	Top of Screen
631.38	93.15	Bottom of Screen
631.03	93.50	Bottom of Well
631.03	93.50	Top of Backfill (If Applicable)
630.53	93.50	Bottom of Borehole

Well Construction Materials

	SS304	SS316	PTFE	PVC	Other
tective casing					4" SQ. STEEL
Riser pipe from 0.00 to 23.11 (feet below ground surface)				X	
Riser pipe from 23.11 to 83.50 (feet below ground surface)	X				
Screen	X				

Casing Measurements

Diameter of borehole (in)	8.0
ID of riser pipe (in)	2.0
Protective casing length (ft)	5.00
Riser pipe length (ft) (include stickup)	86.30
Screen length (1st slot to last slot, ft)	9.65
Bottom of screen to end cap (ft)	0.35
Total length of casing (riser+screen+end cap) (ft)	96.30
Screen slot size	0.010

CAD DWG NO:91118477 EMPLOYEE NO: 9834 DATE/TIME: 05/09/00 09:17 ACAD-14.

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

Project Name CLINTON LANDFILL, INC. Sheet 1 of 4

Project Location CLINTON, ILLINOIS Project No. 91-118

Boring No. EX-5 Surface Elev. 727.97 Boring Type HSA Completion Depth 92.23'

Coordinates: (X) N 3975.99 (Y) E 9852.94 Drilling Contractor SKS ENGINEERS, INC.

Date Started 4-4-00 Date Completed 4-4-00 Driller TODD SKINNER Rig No. MOBILE B-57

Logged By J. BERRY Backfilled (Y/N) N Backfill Material

Surface Conditions BARE GROUND If "No" explain INSTALLED MONITORING WELL EX-5

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	q_u (tsf)	PID (PPM) eV LAMP 10.6 __ 11.7 __	CHEMICAL	GEOTECHNICAL	SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
1	CS	48								727.22		CLAYEY SILT (ML); Dark brown, stiff, moist, with root fragments	
				1.25									
									2			SILTY CLAY (CL); Light brown mottled gray, stiff, moist, trace fine sand	
				1.25									
2	CS	60		0.5					4				
										722.22			
				0.5					6			SILTY CLAY (CL); Brown, firm, moist, trace gravel	
				0.5					8				
3	CS	60											
				1.0					10			grades stiff	
									12				
				1.0									
4	CS	60							14			grades mottled gray	
				1.0									
									16				
				1.0								grades gray	
									18				
5	CS	60		1.0						708.67		3" CLAYEY SILT seam @19.3'	
									20				
				1.0									
									22				
				1.0									
6	CS	50							24				
				1.0									
									26				
				1.25									
									28				
7	CS	60											

CAD DWG NO:91118478 EMPLOYEE NO: 9834 DATE/TIME: 05/09/00 09:42 ACAD-14.

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

Project Name CLINTON LANDFILL, INC. Sheet 2 of 4
Project Location CLINTON, ILLINOIS Project No. 91-118
Boring No. EX-5 Surface Elev. 727.97 Boring Type HSA Completion Depth 92.23'
Coordinates: (X) N 3975.99 (Y) E 9852.94 Drilling Contractor SKS ENGINEERS, INC.
Date Started 4-4-00 Date Completed 4-4-00 Driller TODD SKINNER Rig No. MOBILE B-57
Logged By J. BERRY Backfilled (Y/N) N Backfill Material
Surface Conditions BARE GROUND If "No" explain INSTALLED MONITORING WELL EX-5

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	q_u (tsf)	PID (PPM) eV LAMP 10.6 __ 11.7 __	CHEMICAL	GEOTECHNICAL	SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
7	CS	60										SILTY CLAY (CL); Gray, stiff, moist, trace gravel	
				3.0					32			grades very stiff	
				4.0+					34			grades hard	
8	CS	55											
				4.0+					36				
				4.0+					38				
				4.0+									
	CS	42							40				
				1.5								grades stiff	
				1.5					42				
10	CS	58							44				
				1.5									
				1.25					46				
									48				
11	CS	60											
				2.25					50			grades very stiff	
				2.5					52				
12	CS	60		0.5					54	673.57		CLAYEY SILT (ML); Gray, firm, moist, with organics (wood fragments)	
				0.5					56				
									58			grades wood fragments out	
13	CS	60											

CAD DWG NO:91118479 EMPLOYEE NO: 9834 DATE/TIME: 05/09/00 09:14 ACAD-14.

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

Project Name CLINTON LANDFILL, INC. Sheet 3 of 4

Project Location CLINTON, ILLINOIS Project No. 91-118

Boring No. EX-5 Surface Elev. 727.97 Boring Type HSA Completion Depth 92.23'

Coordinates: (X) N 3975.99 (Y) E 9852.94 Drilling Contractor SKS ENGINEERS, INC.

Date Started 4-4-00 Date Completed 4-4-00 Driller TODD SKINNER Rig No. MOBILE B-57

Logged By J. BERRY Backfilled (Y/N) N Backfill Material

Surface Conditions BARE GROUND If "No" explain INSTALLED MONITORING WELL EX-5

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	q_u (tsf)	PID (PPM) eV LAMP 10.6 __ 11.7 __	CHEMICAL	GEOTECHNICAL SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
13	CS	60									CLAYEY SILT (ML); Gray, firm, moist, trace fine sand & gravel	
									666.47			
				1.25				62			SILTY CLAY (CL); Blue gray, stiff, moist, trace sand & gravel	
14	CS	60		1.5				64				
											grades light gray, very stiff	
				3.5				66				
								68	659.72			
15	CS	60							659.17		SAND (SW); Gray, dense, wet, trace clay & silt, fine to medium grained sand	Pushed Shelby tube from 69'-71'
				2.5				70			SILTY CLAY (CL); Light gray, very stiff, moist, trace gravel	Collected geotech. sample from 71'-72'
												Collected TOC and CEC sample from 72'-73'
				2.5				72				
16	CS	60						74				
											3" wet SILTY SAND (SM) @75.3'	
								76				
											4" wet SILT (ML) @77.6'	
				4.0+				78			grades hard	
17	CS	60										Pushed Shelby tube from 79'-81'
				4.0+				80				Collected geotech. sample from 81'-82'
								82				
18	CS	60		4.0+				84				
				4.0+				86				
									640.97		SAND (SW); Gray, very dense, saturated, fine to coarse grained, trace gravel, silt, & clay	Collected geotech. sample from 87'-89'
								88				
19	CS	36										

CAD DWG NO:91118480 EMPLOYEE NO: 9834 DATE/TIME: 11/07/00 10:50 ACAD-14.

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

Project Name CLINTON LANDFILL, INC. Sheet 4 of 4

Project Location CLINTON, ILLINOIS Project No. 91-118

Boring No. EX-5 Surface Elev. 727.97 Boring Type HSA Completion Depth 92.23'

Coordinates: (X) N 3975.99 (Y) E 9852.94 Drilling Contractor SKS ENGINEERS, INC.

Date Started 4-4-00 Date Completed 4-4-00 Driller TODD SKINNER Rig No. MOBILE B-57

Logged By J. BERRY Backfilled (Y/N) N Backfill Material

Surface Conditions BARE GROUND If "No" explain INSTALLED MONITORING WELL EX-5

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	q_p (tsf)	PID (PPM) eV LAMP 10.6 __ 11.7 __	CHEMICAL	GEOTECHNICAL	SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
19	CS	36								637.47		SAND (SW); Gray, very dense, saturated, fine to coarse grained, trace silt & clay	Collected geotech. samples from 90.5'-91.5'
									92	635.74		SILTY CLAY (CL); Gray, hard, moist, trace gravel	Collected samples for TOC & CEC @91.5'
												End of boring @92.23'	
									94				
									96				
									98				
									100				
									102				
									104				
									106				
									108				
									110				
									112				
									114				
									116				
									118				

CAD DWG NO:91118481 EMPLOYEE NO: 9834 DATE/TIME: 11/07/00 10:11 ACAD-14.

PDC TECHNICAL SERVICES, INC.
WELL COMPLETION REPORT

Project #: 91-118 Project Location: CLINTON, ILLINOIS Well #: EX-5

Project Name: CLINTON LANDFILL, INC. Borehole #: EX-5

State Plane Coordinate: (X) N 3975.99 (Y) E 9852.94 (or) Latitude: ° ' " Longitude: ° ' "

Surveyed By: SHIVE-HATTERY ILL. Registration #: 035-002809

Drilling Contractor: SKS ENGINEERS, INC. Driller: TODD SKINNER

Drilling Method: 4 1/4" I.D. HSA Drilling Fluids (type):

Logged By: J. BERRY Date Started: 4-4-00 Date Finished: 4-5-00

Notes:

Annular Space Details

Type of Surface Seal: CONCRETE

Type of Annular Sealant: CEMENT-BENTONITE GROUT

Installation Method: TREMIE PIPE

Type of Bentonite Seal: BENSEAL SLURRY
(Granular, Pellet, Slurry)

Installation Method: TREMIE PIPE

Setting Time: 30 MINUTES

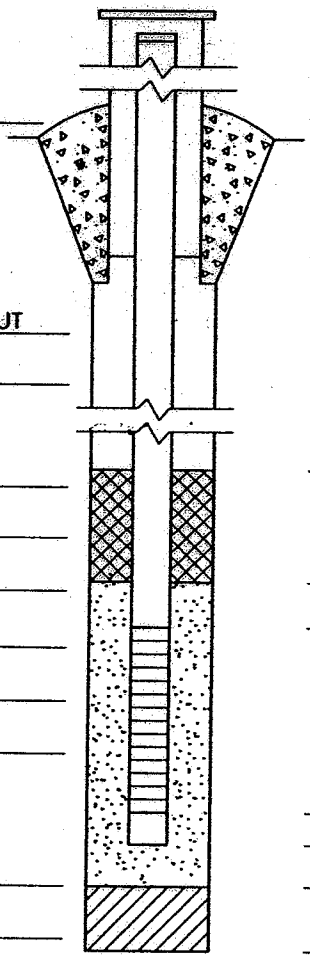
Type of Sand Pack: SILICA SAND

Grain Size: 20-40 MESH

Installation Method: POURED, SURGED

Type of Backfill Material: SILICA SAND
(If Applicable)

Installation Method: POURED



Elevations (MSL-referenced to a National Geodetic Vertical Datum)	Depths (Feet above or below ground surface to .01 feet)	
730.73	2.76	Top of Protective Casing
730.36	2.39	Top of Riser Pipe
727.97	0.00	Ground Surface
724.97	3.00	Top of annular sealant
651.47	76.50	Top of Seal
648.47	79.50	Top of Sand Pack
646.00	81.97	Top of Screen
636.32	91.65	Bottom of Screen
635.97	92.00	Bottom of Well
635.97	92.00	Top of Backfill (If Applicable)
635.74	92.23	Bottom of Borehole

Well Construction Materials

	SS304	SS316	PTFE	PVC	Other
Protective casing					4" SQ. STEEL
Riser pipe from 0.00 to 71.68 (feet below ground surface)				X	
Riser pipe from 71.68 to 81.97 (feet below ground surface)	X				
Screen	X				

Casing Measurements

Diameter of borehole (in)	8.00
ID of riser pipe (in)	2.0
Protective casing length (ft)	5.00
Riser pipe length (ft) (include stickup)	84.36
Screen length (1st slot to last slot, ft)	9.68
Bottom of screen to end cap (ft)	0.35
Total length of casing (riser+screen+end cap) (ft)	94.39
Screen slot size	0.010

CAD DWG NO:91118482 EMPLOYEE NO: 9834 DATE/TIME: 05/09/00 10:04 ACAD-14.

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

Project Name CLINTON LANDFILL, INC. Sheet 1 of 2

Project Location CLINTON, ILLINOIS Project No. 91-118

Boring No. EX-6 Surface Elev. 694.24 Boring Type HSA Completion Depth 58.8'

Coordinates: (X) N 2479.10 (Y) E 9798.27 Drilling Contractor SKS ENGINEERS, INC.

Date Started 4-3-00 Date Completed 4-3-00 Driller TODD SKINNER Rig No. MOBILE B-57

Logged By J. BERRY Backfilled (Y/N) N Backfill Material

Surface Conditions BARE GROUND If "No" explain INSTALLED MONITORING WELL EX-6

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	q_p (tsf)	PID (PPM) eV LAMP 10.6 __ 11.7 __	CHEMICAL	GEOTECHNICAL	SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
1	CS	48		0.5					0	693.49		CLAYEY SILT (ML); Black, soft, moist, with root fragments	
				1.5								SILTY CLAY (CL); Light brown, stiff, moist, trace gravel & root fragments	
									2				
				2.5								grades very stiff	
2	CS	60							4				
				3.0									
									6				
				3.0					8				
3	CS	60											
				3.5					10				
				4.0+					12				
												grades hard	
4	CS	60		4.0+					14			grades dark brown	
				3.0					16			grades mottled gray, very stiff	
				3.0					18				
5	CS	14		1.0								grades gray, stiff	
									20				
				1.0									
									22				
				1.0									
6	CS	60							24	669.84			
												CLAYEY SILT (ML); Gray-black, stiff, moist, trace peat	
									26	668.24		PEAT (Pt); Brown, moist, trace clay & fine sand	
				0.5					28	666.24		SILTY CLAY (CL); Gray, soft, moist, trace sand	
7	CS	60											

CAD DWG NO:91118483 EMPLOYEE NO: 9834 DATE/TIME: 11/07/00 10:26 ACAD-14.

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

Project Name CLINTON LANDFILL, INC. Sheet 2 of 2

Project Location CLINTON, ILLINOIS Project No. 91-118

Boring No. EX-6 Surface Elev. 694.24 Boring Type HSA Completion Depth 58.8'

Coordinates: (X) N 2479.10 (Y) E 9798.27 Drilling Contractor SKS ENGINEERS, INC.

Date Started 4-3-00 Date Completed 4-3-00 Driller TODD SKINNER Rig No. MOBILE B-57

Logged By J. BERRY Backfilled (Y/N) N Backfill Material

Surface Conditions BARE GROUND If "No" explain INSTALLED MONITORING WELL EX-6

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	q_u (tsf)	PID (PPM) eV LAMP 10.6 __ 11.7 __	CHEMICAL	GEOTECHNICAL	SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
7	CS	60		1.0								SILTY CLAY (CL); Gray, stiff, moist, trace gravel	Collected TOC and CEC sample at 31'
									32				
				1.0								grades blue-gray	Pushed Shelby tube from 32'-34'
									34				
8	CS	60		1.0									Collected geotech. sample from 34'-35'
									36				
				1.0								grades light gray	
									38				
				2.25								grades very stiff	
9	CS	60							40				
				2.5						653.24			
									42			SILTY SAND (SM); Gray, dense, wet, trace clay	
												grades more silty	
				2.5						651.24		SILTY CLAY (CL); Gray, very stiff, moist, trace gravel	
10	CS	60		4.0+					44			grades hard, with sand & gravel	
										648.74			
				4.0+					46	648.24		SAND (SW); Gray, dense, wet, medium to fine grained, trace clay & silt	
												SILTY CLAY (CL); Gray, hard, wet, trace gravel	
				4.0+					48				
11	CS	55											Pushed Shelby tube from 49'-51'
				1.5					50			grades stiff	
													Collected geotech. sample from 51'-52'
				1.0					52				Collected TOC and CEC sample from 52'-53'
										640.59			
12	CS	48							54			SAND (SW); Gray, very dense, wet, fine to medium grained, trace clay & silt	
												grades with coarse grained sand	Collected geotech. sample from 55'-56'
									56				
										636.64			
				4.0+					58			SILTY CLAY (CL); Gray, hard, moist, trace gravel	
										635.44		End of boring @58.8'	

CAD DWG NO:91118484 EMPLOYEE NO: 9834 DATE/TIME: 11/07/00 10:11 ACAD-14.

PDC TECHNICAL SERVICES, INC.
WELL COMPLETION REPORT

Project #: 91-118 Project Location: CLINTON, ILLINOIS Well #: EX-6

Project Name: CLINTON LANDFILL, INC. Borehole #: EX-6

State Plane Coordinate: (X) N 2479.10 (Y) E 9798.27 (or) Latitude: ° ' " Longitude: ° ' "

Surveyed By: SHIVE-HATTERY ILL. Registration #: 035-002809

Drilling Contractor: SKS ENGINEERS, INC. Driller: TODD SKINNER

Drilling Method: 4 1/4" I.D. HSA Drilling Fluids (type):

Logged By: J. BERRY Date Started: 4-3-00 Date Finished: 4-3-00

Notes:

Annular Space Details

Type of Surface Seal: CONCRETE

Type of Annular Sealant: CEMENT-BENTONITE GROUT

Installation Method: TREMIE PIPE

Type of Bentonite Seal: BENSEAL SLURRY
(Granular, Pellet, Slurry)

Installation Method: TREMIE PIPE

Setting Time: 45 MINUTES

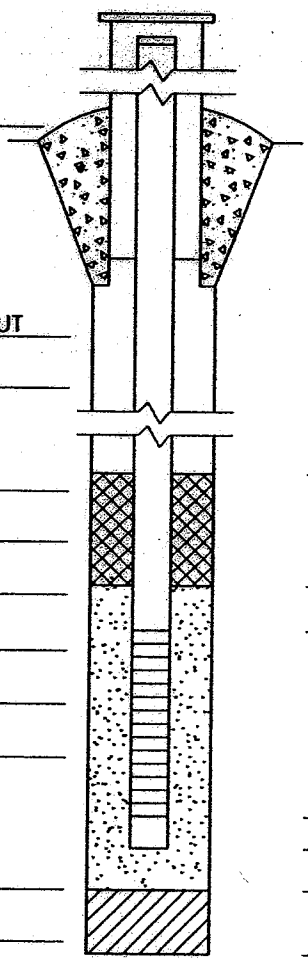
Type of Sand Pack: SILICA SAND

Grain Size: 20-40 MESH

Installation Method: POURED, SURGED

Type of Backfill Material: SILICA SAND
(If Applicable)

Installation Method: POURED



Elevations (MSL-referenced to a National Geodetic Vertical Datum)	Depths (Feet above or below ground surface to .01 feet)	
697.15	2.91	Top of Protective Casing
696.67	2.43	Top of Riser Pipe
694.24	0.00	Ground Surface
691.24	3.00	Top of annular seolant
651.74	42.50	Top of Seal
648.74	45.50	Top of Sand Pack
646.37	47.87	Top of Screen
636.69	57.55	Bottom of Screen
636.34	57.90	Bottom of Well
636.34	57.90	Top of Backfill (If Applicable)
635.44	58.80	Bottom of Borehole

Well Construction Materials

	SS304	SS316	PTFE	PVC	Other
Protective casing					4" SQ. STEEL
Riser pipe from 0.00 to 37.60 (feet below ground surface)				X	
Riser pipe from 37.60 to 47.87 (feet below ground surface)	X				
Screen	X				

Casing Measurements

Diameter of borehole (in)	8.00
ID of riser pipe (in)	2.0
Protective casing length (ft)	5.00
Riser pipe length (ft) (include stickup)	50.30
Screen length (1st slot to last slot, ft)	9.68
Bottom of screen to end cap (ft)	0.35
Total length of casing (riser+screen+end cap) (ft)	60.33
Screen slot size	0.010

CAD DWG NO:91118485 EMPLOYEE NO: 9834 DATE/TIME: 05/09/00 10:00 ACAD-14.

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

Project Name CLINTON LANDFILL, INC. Sheet 1 of 3

Project Location CLINTON, ILLINOIS Project No. 91-118

Boring No. EX-7 Surface Elev. 691.80 Boring Type HSA Completion Depth 69.2'

Coordinates: (X) N 2485.65 (Y) E 7850.33 Drilling Contractor SKS ENGINEERS, INC.

Date Started 3-30-00 Date Completed 3-30-00 Driller TODD SKINNER Rig No. MOBILE B-57

Logged By J. BERRY Backfilled (Y/N) N Backfill Material

Surface Conditions CINDERS (RAILROAD R.O.W.) If "No" explain INSTALLED MONITORING WELL EX-7

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	q_u (tsf)	PID (PPM) eV LAMP 10.6 ___ 11.7 ___	CHEMICAL	GEOTECHNICAL	SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
1	CS	0							0			CLAYEY SILT (ML); Dark brown to black, soft, moist, with cinders & fine sand, trace cobbles	
									2	689.30		SILTY CLAY (CL); Light brown, soft, moist to wet, trace gravel	
2	CS	60		0.5					4				
				1.0					6			grades stiff, moist	
				1.0					8				
3	CS	60							10				
				1.25					12			grades very stiff	
				2.5					14				
4	CS	60		2.75					16			grades dark brown mottled gray	
				2.75					18				
5	CS	14							20			grades gray	
				2.25					22				
									24	667.55		wet SILTY SAND from 23.8' to 24.2'	
6	CS	60		0.5						666.40		CLAYEY SILT (ML); Gray, soft, moist to wet, trace fine sand & wood fragments	
									26			PEAT (Pt); Gray-brown, moist, with clay, trace silt & fine sand	
									28	663.05			
7	CS	60		0.25								SILTY CLAY (CL); Black, soft, moist, with organics, trace fine sand & gravel (old topsoil)	

CAD DWG NO:91118486 EMPLOYEE NO: 9834 DATE/TIME: 05/09/00 10:02 ACAD-14.

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

Project Name CLINTON LANDFILL, INC. Sheet 2 of 3

Project Location CLINTON, ILLINOIS Project No. 91-118

Boring No. EX-7 Surface Elev. 691.80 Boring Type HSA Completion Depth 69.2'

Coordinates: (X) N 2485.66 (Y) E 7850.33 Drilling Contractor SKS ENGINEERS, INC.

Date Started 3-30-00 Date Completed 3-30-00 Driller TODD SKINNER Rig No. MOBILE B-57

Logged By J. BERRY Backfilled (Y/N) N Backfill Material

Surface Conditions CINDERS (RAILROAD R.O.W.) If "No" explain INSTALLED MONITORING WELL EX-7

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	q. (tsf)	PID (PPM) eV LAMP 10.6 __ 11.7 __	CHEMICAL	GEOTECHNICAL	SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
7	CS	36										SILTY CLAY (CL); Gray, very stiff, moist, trace gravel (very silty)	
				2.0									Collected TOC and CEC sample from 31'.
8	ST	24							32				Pushed Shelby tube from 32'-34'.
9	CS	60		2.0					34			SILTY CLAY (CL); Blue-gray, very stiff, moist, trace fine sand & gravel	
													Collected geotech. sample from 36'-37'.
				2.5					36				
				3.5									
				4.0+					38			grades hard	
10	CS	60										grades gray	
									40				
				4.0+									
									42				
										648.30			
11	CS	36		4.0+					44	647.90		SAND (SP); Gray, medium dense, saturated, trace silt, fine grained	
												SILTY CLAY (CL); Gray, hard, moist, trace gravel & fine sand	Collected TOC and CEC sample from 45'.
				4.0+					46				Collected geotech. sample from 46'-47'.
12	ST	12											Pushed Shelby tube from 47'-49'.
				4.0+					48				
13	CS	52											
									50				
										641.10			
												SAND (SW); Gray, dense, saturated, trace silt & clay, fine to coarse grained	
									52			grades fine to medium grained	Collected geotech. sample from 52'-54'.
14	CS	36							54				
									56	635.80			
				2.5								SILTY CLAY (CL); Gray, very stiff, moist, trace gravel & sand	
15	CS	24											
				4.0+					58			grades hard	
16	CS	60		4.0+									

CAD DWG NO:91118487 EMPLOYEE NO: 9834 DATE/TIME: 05/09/00 10:35 ACAD-14.

PDC TECHNICAL SERVICES, INC.
WELL COMPLETION REPORT

Project #: 91-118 Project Location: CLINTON, ILLINOIS Well #: EX-7

Project Name: CLINTON LANDFILL, INC. Borehole #: EX-7

State Plane Coordinate: (X) N 2485.65 (Y) E 7850.33 (or) Latitude: ° ' " Longitude: ° ' "

Surveyed By: SHIVE-HATTERY ILL. Registration #: 035-002809

Drilling Contractor: SKS ENGINEERS, INC. Driller: TODD SKINNER

Drilling Method: 4 1/4" I.D. HSA Drilling Fluids (type):

Logged By: J. BERRY Date Started: 3-30-00 Date Finished: 3-31-00

Notes:

Elevations (MSL-referenced to a National Geodetic Vertical Datum)	Depths (Feet above or below ground surface to .01 feet)	
694.93	3.13	Top of Protective Casing
694.60	2.80	Top of Riser Pipe
691.80	0.00	Ground Surface
688.80	3.00	Top of annular sealant
649.30	42.50	Top of Seal
646.30	45.50	Top of Sand Pack
643.91	47.89	Top of Screen
634.15	57.65	Bottom of Screen
633.80	58.00	Bottom of Well
633.80	58.00	Top of Backfill (If Applicable)
622.60	69.20	Bottom of Borehole

Annular Space Details

Type of Surface Seal: CONCRETE

Type of Annular Sealant: CEMENT-BENTONITE GROUT

Installation Method: TREMIE PIPE

Type of Bentonite Seal: BENSEAL SLURRY (Granular, Pellet, Slurry)

Installation Method: TREMIE PIPE

Setting Time: 30 MINUTES

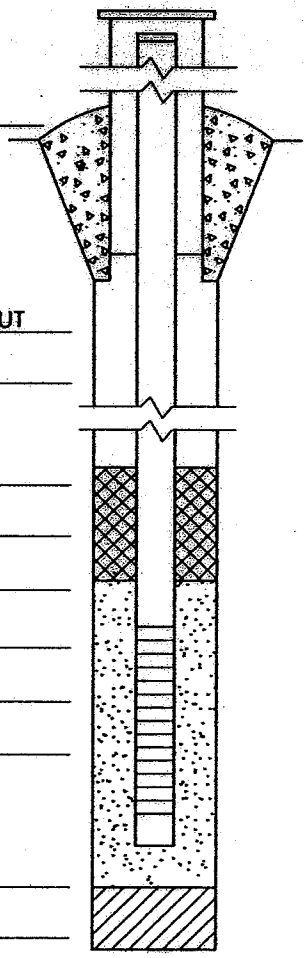
Type of Sand Pack: SILICA SAND

Grain Size: 20-40 MESH

Installation Method: POURED, SURGED

Type of Backfill Material: SILICA SAND (If Applicable)

Installation Method: POURED



Well Construction Materials

	SS304	SS316	PTFE	PVC	Other
Protective casing					4" SQ. STEEL
Riser pipe from 0.00 to 37.62 (feet below ground surface)				X	
Riser pipe from 37.62 to 47.89 (feet below ground surface)	X				
Screen	X				

Casing Measurements

Diameter of borehole (in)	8.0
ID of riser pipe (in)	2.0
Protective casing length (ft)	5.00
Riser pipe length (ft) (include stickup)	50.69
Screen length (1st slot to last slot, ft)	9.76
Bottom of screen to end cap (ft)	0.35
Total length of casing (riser+screen+end cap) (ft)	60.80
Screen slot size	0.010

CAD DWG NO:91118489 EMPLOYEE NO: 9834 DATE/TIME: 05/09/00 11:52 ACAD-14.

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

Project Name CLINTON LANDFILL, INC.–PROPOSED EXPANSION — Sheet 1 of 2
Project Location CLINTON, IL. — Project No. 91118.02
Boring No. EX–8 — Surface Elev. 654.00 — Boring Type HSA — Completion Depth 44.50'
Coordinates: (X) N 1723.89 (Y) E 10205.48 — Drilling Contractor SKS ENGINEERS, INC.
Date Started 03/29/01 Date Completed 03/29/01 — Driller TODD SKINNER — Rig No. MOBILE B–57
Logged By JOHN BERRY — Backfilled (Y/N) N Backfill Material
Surface Conditions BARE GROUND — If "No" explain INSTALLED MONITORING WELL EX–8D

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	q_u (tsf)	PID (PPM) eV LAMP 10.6 __ 11.7 __	CHEMICAL	GEOTECHNICAL	SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
1	CS	40							0			CLAYEY SILT (ML); [Topsoil] Black, moist, with root fragments, trace sand	
									2				
									4				
2	CS	60								649.00		SILTY CLAY (CL); Brown, wet, with gravel & sand	
									6	648.00		SILTY CLAY (CL); Light brown, stiff, moist, trace gravel	
				1.75								grades hard	
				+4.0					8				
				+4.0									
	CS	60							10			grades gray	
				+4.0									
									12				
				+4.0						641.00		SANDY CLAY (CL); Gray, stiff, moist to wet, trace gravel	
				1.0					14	640.00		GRAVELLY SAND, Gray; fine to coarse sand; with small grained gravel, with clay	
4	CS	20										SAND (SW); Gray, medium to coarse, trace gravel and silt	
									16				
5	CS	30											
									18				
6	CS	60								634.80		SILTY CLAY (CL); Gray,hard, moist, trace gravel	
				+4.0					20				
				+4.0					22				
										631.00		CLAYEY SILT (ML); Gray, hard, moist to wet; trace organics, sand seam 1" @ 23.75	
7	CS	60		+4.0					24	629.60		SILTY CLAY (CL); Gray; hard; moist; trace gravel	
				+4.0					26				
				+4.0					28				
8	CS	60											

CAD DWG NO:91118568 EMPLOYEE NO: 89525 DATE/TIME: 05/03/01 11:02 ACAD–14.

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

Project Name CLINTON LANDFILL, INC.–PROPOSED EXPANSION — Sheet 2 of 2

Project Location CLINTON, IL. — Project No. 91118.02

Boring No. EX–8 — Surface Elev. 654.00 — Boring Type HSA — Completion Depth 44.50'

Coordinates: (X) N 1723.89 (Y) E 10205.48 — Drilling Contractor SKS ENGINEERS, INC.

Date Started 03/29/01 — Date Completed 03/29/01 — Driller TODD SKINNER — Rig No. MOBILE B–57

Logged By JOHN BERRY — Backfilled (Y/N) N — Backfill Material

Surface Conditions BARE GROUND — If "No" explain INSTALLED MONITORING WELL EX–8D

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	q_p (tsf)	PID (PPM) eV LAMP 10.6 __ 11.7 __	CHEMICAL	GEOTECHNICAL	SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
9	CS	60		+4.0								SILTY CLAY (CL); Gray, hard, moist; trace gravel	
				+4.0					32				
10	CS	60		+4.0					34				
										618.50		SAND (SW); Gray, saturated, fine to coarse grain trace gravel & silt	
									36				
				+4.0					38	616.00		SILTY CLAY (CL); Gray; hard; moist; trace gravel	
11	CS	60							40				
				+4.0									
									42				
				+4.0									
									44				
										609.50		End of boring @44.50	
									46				
									48				
									50				
									52				
									54				
									56				
									58				

CAD DWG NO:91118569 EMPLOYEE NO: DATE/TIME: 05/03/01 11:52 ACAD–14.

PDC TECHNICAL SERVICES, INC.
WELL COMPLETION REPORT

Project #: 91-118.02 Project Location: CLINTON, ILLINOIS Well #: EX-8D

Project Name: CLINTON LANDFILL, INC. PROPOSED EXPANSION Borehole #: EX-8

State Plane Coordinate: (X) N 1723.89 (Y) E 10205.48 (or) Latitude: ° ' " Longitude: ° ' "

Surveyed By: SKS ENGINEERS, INC. ILL. Registration #:

Drilling Contractor: SKS ENGINEERS, INC. Driller: TODD SKINNER

Drilling Method: HSA Drilling Fluids (type): NONE

Logged By: J. BERRY Date Started: 03/29/01 Date Finished: 03/29/01

Notes:

Annular Space Details

Type of Surface Seal: CONCRETE

Type of Annular Sealant: BENSEAL

Installation Method: TREMIE PIPE

Type of Bentonite Seal: PELLETS
(Granular, Pellet, Slurry)

Installation Method: POURED

Setting Time: 30 MINUTES

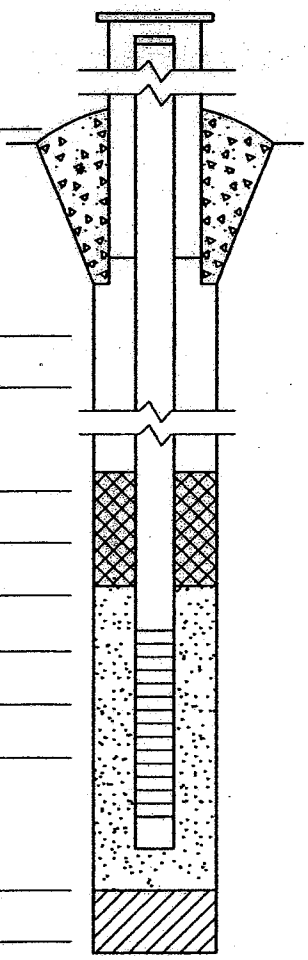
Type of Sand Pack: SILICA

Grain Size: 20 - 40 MESH

Installation Method: POURED, SURGED

Type of Backfill Material: SILICA SAND
(If Applicable)

Installation Method: POURED



Elevations (MSL-referenced to a National Geodetic Vertical Datum)	Depths (Feet above or below ground surface to .01 feet)	
656.93	2.93	Top of Protective Casing
656.59	2.59	Top of Riser Pipe
654.00	0.00	Ground Surface
651.00	3.00	Top of annular sealant
625.80	28.20	Top of Seal
622.80	31.20	Top of Sand Pack
620.65	33.35	Top of Screen
610.88	43.12	Bottom of Screen
610.84	43.16	Bottom of Well
610.84	43.16	Top of Backfill (If Applicable)
609.50	44.50	Bottom of Borehole

Well Construction Materials

	SS304	SS316	PTFE	PVC	Other
tective casing					4" SQ. STEEL
Riser pipe from 0.00 to 12.26 (feet below ground surface)				X	
Riser pipe from 12.26 to 33.35 (feet below ground surface)	X				
Screen	X				

Casing Measurements

Diameter of borehole (in)	8.00
ID of riser pipe (in)	2.00
Protective casing length (ft)	5.00
Riser pipe length (ft) (Include stickup)	35.94
Screen length (1st slot to last slot, ft)	9.77
Bottom of screen to end cap (ft)	0.04
Total length of casing (riser+screen+end cap) (ft)	45.75
Screen slot size	0.010

CAD DWG NO:91118572 EMPLOYEE NO: 89525 DATE/TIME: 05/03/01 09:41 ACAD-14.

PDC TECHNICAL SERVICES, INC.
WELL COMPLETION REPORT

Project #: 91-118.02 Project Location: CLINTON, ILLINOIS Well #: EX-8S

Project Name: CLINTON LANDFILL, INC. PROPOSED EXPANSION Borehole #: EX-8

State Plane Coordinate: (X) N 1728.82 (Y) E 10203.08 (or) Latitude: ° ' " Longitude: ° ' "

Surveyed By: SKS ENGINEERS, INC. ILL. Registration #:

Drilling Contractor: SKS ENGINEERS, INC. Driller: TODD SKINNER

Drilling Method: HSA Drilling Fluids (type): NONE

Logged By: J. BERRY Date Started: 03/29/01 Date Finished: 03/29/01

Notes:

Annular Space Details

Type of Surface Seal: CONCRETE

Type of Annular Sealant: BENSEAL

Installation Method: TREMIE PIPE

Type of Bentonite Seal: PELLETS
(Granular, Pellet, Slurry)

Installation Method: POURED

Setting Time: 35 MINUTES

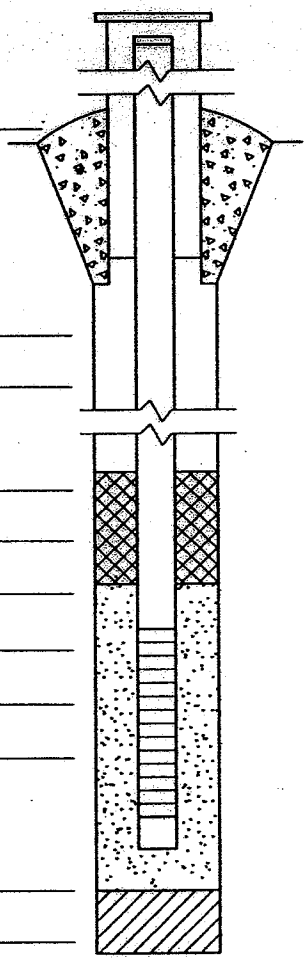
Type of Sand Pack: SILICA

Grain Size: 20 - 40 MESH

Installation Method: POURED, SURGED

Type of Backfill Material: N/A
(If Applicable)

Installation Method:



Elevations (MSL-referenced to a National Geodetic Vertical Datum)	Depths (Feet above or below ground surface to .01 feet)	
657.15	3.05	Top of Protective Casing
656.81	2.71	Top of Riser Pipe
654.10	0.00	Ground Surface
651.10	3.00	Top of annular sealant
646.10	8.00	Top of Seal
644.10	10.00	Top of Sand Pack
641.52	12.58	Top of Screen
631.64	22.46	Bottom of Screen
631.60	22.50	Bottom of Well
		Top of Backfill (If Applicable)
631.60	22.5	Bottom of Borehole

Well Construction Materials

	SS304	SS316	PTFE	PVC	Other
Protective casing					4" SQ. STEEL
Riser pipe from 0.00 to 2.34 (feet below ground surface)				X	
Riser pipe from 2.34 to 12.58 (feet below ground surface)	X				
Screen	X				

Casing Measurements

Diameter of borehole (in)	8.00
ID of riser pipe (in)	2.00
Protective casing length (ft)	5.00
Riser pipe length (ft) (include stickup)	15.29
Screen length (1st slot to last slot, ft)	9.88
Bottom of screen to end cap (ft)	0.04
Total length of casing (riser+screen+end cap) (ft)	25.21
Screen slot size	0.010

CAD DWG NO:91118573 EMPLOYEE NO: 89525 DATE/TIME: 05/03/01 10:54 ACAD-14.

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

Project Name CLINTON LANDFILL, INC.–PROPOSED EXPANSION — Sheet 1 of 2
Project Location CLINTON, IL. — Project No. 91118.02
Boring No. EX–9 — Surface Elev. 648.30 — Boring Type HSA — Completion Depth 44.50'
Coordinates: (X) N 1771.449 (Y) E 7915.36 — Drilling Contractor SKS ENGINEERS, INC.
Date Started 03/28/01 — Date Completed 03/28/01 — Driller TODD SKINNER — Rig No. MOBILE B–57
Logged By JOHN BERRY — Backfilled (Y/N) Y — Backfill Material
Surface Conditions BARE GROUND — If "No" explain

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	q_u (tsf)	PID (PPM) eV LAMP 10.6 __ 11.7 __	CHEMICAL	GEOTECHNICAL SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
1	CS	45						0			CLAYEY SILT (ML); Dark brown, moist, trace gravel	
									646.80			
				1.0				2			SANDY CLAY (CL); Light brown, stiff; moist	
2	CS	43						4	644.30		CLAYEY SAND (SC); Brown, moist, fine to med. grained sand, trace gravel	
								6			grades with more sand	
								8	640.3		CLAYEY SILT (ML); Black; moist; trace organics (old organic topsoil)	
3	CS	53							638.80		SILTY CLAY (CL); Light brown mottled gray; stiff to firm; trace find sand & gravel	
				0.75				10				
				1.0				12				
4	CS	60		1.0				14				
									632.80		CLAYEY SILT (ML); Gray, wet; trace sand	
								16	631.80		SANDY SILT (ML); Gray; wet	
								18			grades with more sand	
									629.80		SAND (SW); Gray, saturated, fine to med. grained, trace silt	
5	CS	30						20				
6	CS	30						22				
											grades fine to coarse; trace gravel & silt	
7	CS	20						24	624.30		GRAVELLY SAND (GW); Gray, wet, with clay, trace silt	
8	CS	30						26	621.80		SILTY SAND (SM); Gray; fine grained sand, saturated	
								28			grades with more silt	
9	CS	60		+4.0					619.30		CLAYEY SILT (ML); Gray; hard; moist to damp; trace gravel; laminated	
									618.80			

CAD DWG NO:91118570 EMPLOYEE NO: 89525 DATE/TIME: 05/03/01 11:33 ACAD–14.

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

Project Name CLINTON LANDFILL, INC.–PROPOSED EXPANSION — Sheet 2 of 2
Project Location CLINTON, IL. — Project No. 91118.02
Boring No. EX–9 — Surface Elev. 648.30 — Boring Type HSA — Completion Depth 44.50'
Coordinates: (X) N 1779.49 (Y) E 7915.36 — Drilling Contractor SKS ENGINEERS, INC.
Date Started 03/28/01 — Date Completed 03/28/01 — Driller TODD SKINNER — Rig No. MOBILE B–57
Logged By JOHN BERRY — Backfilled (Y/N) Y — Backfill Material STET
Surface Conditions BARE GROUND — If "No" explain INSTALLED MONITORING WELL EX–9 6' SOUTH

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	q_p (tsf)	PID (PPM) eV LAMP 10.6 __ 11.7 __	CHEMICAL	GEOTECHNICAL	SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
9	CS	60		+4.0								SILTY CLAY (CL); Gray, hard, moist; trace gravel	
									32				
				+4.0									
10	CS	60							34				
				+4.0					36				
									38				
	CS	60		+4.0									
									40				
				+4.0					42				
									44	603.80		End of boring @44.50	
									46				
									48				
									50				
									52				
									54				
									56				
									58				

CAD DWG NO:91118571 EMPLOYEE NO: 89525 DATE/TIME: 05/03/01 11:28 ACAD–14.

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

Project Name CLINTON LANDFILL NO.3 Sheet 1 of 2

Project Location CLINTON, IL. Project No. 91118.02

Boring No. EX-10 Surface Elev. 711.2 Boring Type HSA Completion Depth 49.10'

Coordinates: (X) N 5207.17 (Y) E 8049.41 Drilling Contractor SKS ENGINEERS, INC.

Date Started 12/11/01 Date Completed 12/11/01 Driller TODD SKINNER Rig No. MOBILE B-57

Logged By JOHN BERRY Backfilled (Y/N) N Backfill Material

Surface Conditions SILTY CLAY If "No" explain INSTALLED PIEZOMETER EX-10

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	q_u (tsf)	PID (PPM) eV LAMP 10.6 __ 11.7 __	CHEMICAL	GEOTECHNICAL SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
1	CS	47						0			SILTY CLAY (CL); Dark brown, stiff, moist, with root fragments	
				1.5				2				
				+4.0				4	707.20		grades yellow-brown and hard with less clay	
2	CS	58									SILT (ML); Yellow-brown, hard, dry (little moisture)	
									706.20		CLAYEY SILT (ML); Yellow-brown, hard, dry, trace gravel	
				+4.0				6				
											grades mottled gray with more clay	
				+4.0				8				
3	CS	50										
								10	700.95		SILT (ML); Yellow-brown, hard, dry, trace fine sand	pushed shelby tube from 10.5' to 11.5'
				+4.0					699.70			
								12	698.95		CLAYEY SILT (ML); Yellow-brown, hard, dry, trace gravel	collected sample from 12.5' to 13.5' for geotechnical tests
				+4.0							SILTY CLAY (CL); Gray, hard, moist, trace gravel	
4	CS	60						14				
				+4.0								
								16				
				3.25				18				
5	CS	60		2.75								
								20			grades stiff	
				1.5								
								22				
				1.5								
6	CS	30						24				
				1.5								
								26				
				1.5							grades with sand	
								28				
7	CS	60										

CAD DWG NO:91118676 EMPLOYEE NO: 89525 DATE/TIME: 01/28/02 11:47 ACAD-14.

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

Project Name CLINTON LANDFILL NO.3 Sheet 2 of 2

oject Location CLINTON, IL. Project No. 91118.02

Boring No. EX-10 Surface Elev. 711.20 Boring Type HSA Completion Depth 49.10'

Coordinates: (X) N 5207.17 (Y) E 8049.41 Drilling Contractor SKS ENGINEERS, INC.

Date Started 12/11/01 Date Completed 12/11/01 Driller TODD SKINNER Rig No. MOBILE B-57

Logged By JOHN BERRY Backfilled (Y/N) N Backfill Material

Surface Conditions SILTY CLAY If "No" explain INSTALLED PIEZOMETER EX-10

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	q, (tsf)	PID (PPM) eV LAMP 10.6 __ 11.7 __	CHEMICAL	GEOTECHNICAL	SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
7cont.	CS	60		2.0								SILTY CLAY (CL); Gray, stiff, moist; trace gravel	
	ST												pushed shelby tube from 31' to 33'
									32				
				1.25									
8	CS	60							34				
				1.75									
									36				
				1.75									
									38				
9	ST												pushed shelby tube from 39' to 41'
									40				split spoon from 41' to 43'
10	SS	24	38							670.20			
										699.70		CLAYEY SILT (ML); Brown-black, very stiff, moist with organics, trace fine sand	
									42			PEAT (OL); Brown-black, moist, some clay, trace fine sand	
11	CS	12											
12	CS	60							44	666.70			
										666.20		ORGANIC SILT (OL); Black, moist, trace clay	
				1.5								SILTY CLAY (CL); Blue-gray, moist, stiff to very stiff, trace fine sand and gravel	
				2.25					46				
				1.25					48				
										662.10		End of boring @49.10'	
									50				
									52				
									54				
									56				
									58				

CAD DWG NO:91118677 EMPLOYEE NO: 89525 DATE/TIME: 01/28/02 11:31 ACAD-14.

PDC TECHNICAL SERVICES, INC.
WELL COMPLETION REPORT

Project #: 91-118.02 Project Location: CLINTON, ILLINOIS Well #: EX-10

Project Name: CLINTON LANDFILL, INC. PROPOSED EXPANSION Borehole #: EX-10

State Plane Coordinate: (X) N 5207.17 (Y) E 8049.41 (or) Latitude: ° ' " Longitude: ° ' "

Surveyed By: SKS ENGINEERS, INC. ILL. Registration #:

Drilling Contractor: SKS ENGINEERS, INC. Driller: TODD SKINNER

Drilling Method: HSA Drilling Fluids (type): NONE

Logged By: J. BERRY Date Started: 12/11/01 Date Finished: 12/11/01

Notes:

Annular Space Details

Type of Surface Seal: CONCRETE

Type of Annular Sealant: BENSEAL

Installation Method: TREMIE PIPE

Type of Bentonite Seal: PELLETS
(Granular, Pellet, Slurry)

Installation Method: POURED

Setting Time: 30 MINUTES

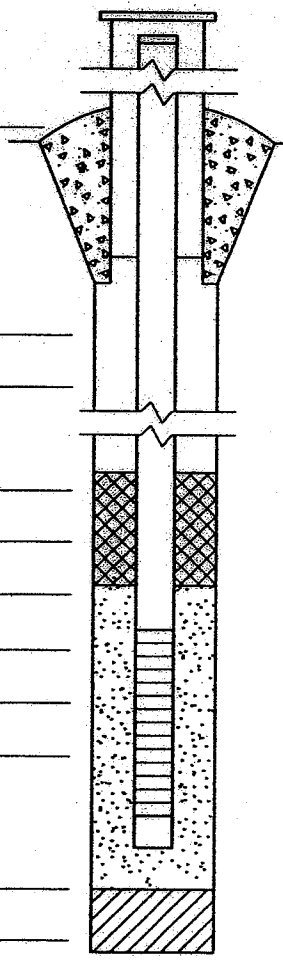
Type of Sand Pack: SILICA

Grain Size: 40 MESH

Installation Method: POURED

Type of Backfill Material: SILICA SAND
(If Applicable)

Installation Method: POURED



Elevations (MSL-referenced to a National Geodetic Vertical Datum)	Depths (Feet above or below ground surface to .01 feet)	
n/a	n/a	Top of Protective Casing
n/a	n/a	Top of Riser Pipe
711.20	0.00	Ground Surface
708.20	3.00	Top of annular seolant
676.80	34.4	Top of Seal
674.80	36.4	Top of Sand Pack
672.84	38.36	Top of Screen
663.32	47.88	Bottom of Screen
662.77	48.43	Bottom of Well
662.77	48.43	Top of Backfill (If Applicable)
662.10	49.10	Bottom of Borehole

Well Construction Materials

	SS304	SS316	PTFE	PVC	Other
Protective casing					4" SQ. STEEL
Riser pipe from 0.00 to 38.36 (feet below ground surface)				X	
Riser pipe from ____ to ____ (feet below ground surface)					
Screen	X				

Casing Measurements

Diameter of borehole (in)	8.00
ID of riser pipe (in)	2.00
Protective casing length (ft)	5.00
Riser pipe length (ft) (Include stickup)	40.52
Screen length (1st slot to last slot, ft)	9.52
Bottom of screen to end cap (ft)	0.55
Total length of casing (riser+screen+end cap) (ft)	50.59
Screen slot size	10 SLOT

CAD DWG NO:91118682 EMPLOYEE NO: 89525 DATE/TIME: 01/28/02 15:22 ACAD-14.

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

Project Name CLINTON LANDFILL, INC. PROPOSED EXPANSION — Sheet 1 of 3
Project Location CLINTON, IL. — Project No. 91118.02
Boring No. EX-11 — Surface Elev. 705.7 — Boring Type HSA — Completion Depth 76.0'
Coordinates: (X) N 4839.3 (Y) E 7941.4 — Drilling Contractor SKS ENGINEERS, INC.
Date Started 2/13/02 — Date Completed 2/13/02 — Driller TODD SKINNER — Rig No. MOBILE B-57
Logged By JOHN BERRY — Backfilled (Y/N) Y — Backfill Material BENSEAL GROUT
Surface Conditions FARM FIELD — If "No" explain

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	q_u (tsf)	PID (PPM) eV LAMP 10.6 __ 11.7 __	CHEMICAL	GEOTECHNICAL SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
1	CS	49						0			CLAYEY SILT (ML); Dark brown, soft, moist, with organics (root fragments)	
								2	703.70		SILTY CLAY (CL); Brown mottled gray, stiff, moist, trace root fragments	
				1.0								
2	CS	60						4	700.70		grades soft, wet	
				0.5								
								6				
				2.0				8	696.95		SILTY CLAY (CL); Brown, very stiff, moist, trace gravel and fine sand	
3	CS	60		3.0				10	695.20		SILTY CLAY (CL); Gray, hard, moist, trace gravel and fine sand	
				+4.0								
				+4.0				12				
4	ST	24						14				pushed shelby tube from 14.5' to 16.5'
5	CS	36						16				
				+4.0								
				+4.0				18				
6	CS	60						20				
				+4.0								
								22				
				+4.0								
				+4.0				24				
7	CS	60							680.70		grades very stiff	
				3.0				26				
				2.75				28				
				3.0								
8	CS	60		3.0								

CAD DWG NO:91118696 EMPLOYEE NO: 89540 DATE/TIME: 01/28/02 11:47 ACAD-14.

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

Project Name CLINTON LANDFILL, INC, PROPOSED EXPANSION — Sheet 2 of 3
ject Location CLINTON, IL. — Project No. 91118.02
oring No. EX-11 — Surface Elev. 705.7 — Boring Type HSA — Completion Depth 76.0'
Coordinates: (X) N 4839.3 (Y) E 7941.4 — Drilling Contractor SKS ENGINEERS, INC.
Date Started 2/13/02 Date Completed 2/13/02 — Driller TODD SKINNER — Rig No. MOBILE B-57
Logged By JOHN BERRY — Backfilled (Y/N) Y Backfill Material BENSEAL GROUT
Surface Conditions FARM FIELD — If "No" explain

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	q_p (tsf)	PID (PPM) eV LAMP 10.6 __ 11.7 __	CHEMICAL	GEOTECHNICAL	SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
8cont.	CS	60										SILTY CLAY (CL); Gray, very stiff, moist, trace gravel and fine sand	
				2.0					32				
				1.5					34	671.70		grades stiff	
9	CS	60											
									36				
										668.88		1" Silty Sand layer, moist	
				1.0						668.80		CLAYEY SILT (CL); Brown, stiff, moist, with organics	
				1.0					38	667.70		PEAT (OL); Brown-black, stiff, moist, with organics (root fragments) and silt	
10	CS	60		1.0					40				
										665.20		grades with clay	
				1.5						664.10			
									42			SILTY CLAY (CL); Blue-gray, stiff, moist	Berry Clay
				1.5									
11	CS	60							44				
				1.5									
				1.25					46	659.70		SILTY CLAY (CL); Gray, stiff, moist, trace gravel and fine sand	
				1.5					48				
12	CS	60											
				2.5					50	655.20		Grades very stiff	
									52				
										652.70		Grades hard	
				+4.0					54				
13	CS	57											
				+4.0					56				
				+4.0					58				
14	CS	58											

CAD DWG NO:91118697 EMPLOYEE NO: 89540 DATE/TIME: 01/28/02 11:31 ACAD-14.

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

Project Name CLINTON LANDFILL, INC, PROPOSED EXPANSION — Sheet 3 of 3
Project Location CLINTON, IL. — Project No. 91118.02
Boring No. EX-11 — Surface Elev. 705.7 — Boring Type HSA — Completion Depth 76.0'
Coordinates: (X) N 4839.3 (Y) E 7941.4 — Drilling Contractor SKS ENGINEERS, INC.
Date Started 2/13/02 — Date Completed 2/13/02 — Driller TODD SKINNER — Rig No. MOBILE B-57
Logged By JOHN BERRY — Backfilled (Y/N) Y — Backfill Material BENSEAL GROUT
Surface Conditions FARM FIELD — If "No" explain

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	q_u (tsf)	PID (PPM) eV LAMP 10.6 __ 11.7 __	CHEMICAL	GEOTECHNICAL	SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
14cont	CS	58										SILTY CLAY (CL); Gray, hard, moist, trace gravel and fine sand	
				+4.0					62				
				+4.0					64				
15	CS	60											
				+4.0					66				
				+4.0					68				
										636.70			
16	CS	60		1.0					70	635.80		SANDY CLAY (CL); Gray, stiff, moist, with gravel	
				1.25								SILTY CLAY (CL); Gray, stiff, moist, trace gravel	
				1.25					72				
										633.40		SAND (SW); Gray, fine to medium grain, with clay and trace gravel	Sangamon Soil
									74	631.70			
17	CS	18		1.5								SILTY CLAY (CL); Gray, stiff, moist, trace gravel	
				1.75					76	629.70		End of Boring @ 76.0'	
									78				
									80				
									82				
									84				
									86				
									88				

CAD DWG NO:91118698 EMPLOYEE NO: 89540 DATE/TIME: 01/28/02 11:31 ACAD-14.

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

ject Name CLINTON LANDFILL, INC. Sheet 1 of 3

ject Location CLINTON, IL. Project No. 91-118

Boring No. EX-12 Surface Elev. 705.4' Boring Type HSA Completion Depth 77.0'

Coordinates: (X) N 5212.26 (Y) E 7864.57 Drilling Contractor SKS ENGINEERS, INC.

Date Started 12/26/02 Date Completed 12/31/02 Driller TODD SKINNER Rig No. MOBILE B-57

Logged By JOHN BERRY Backfilled (Y/N) N Backfill Material

Surface Conditions If "No" explain INSTALLED MONITORING WELL EX-12

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	q_u (tsf)	PID (PPM) eV LAMP 10.6 11.7	CHEMICAL / GEOTECHNICAL SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
1	CS	50						704.40		CLAYEY SILT (ML); Yellowish brown (10YR 4/4), moist, w/root fragments	
							2			SILTY CLAY (CL); Yellowish brown (10YR 4/6), moist, stiff, trace gravel	
				1.0							
				1.0				701.65			
2	CS	60		1.25			4	701.15		SILT (ML); Yellowish brown (10YR 6/8), moist	
										SILTY CLAY (CL); Yellowish brown (10YR 4/6), moist, stiff, trace gravel	
				3.0			6			grades very stiff	
				3.5			8				
	CS	60									
				3.0			10				
				–				693.90			
				+4.0			12			SILTY CLAY (CL); Dark gray (10YR 4/1), moist hard, trace gravel	
				+4.0							
4	CS	60					14				
				2.5						grades very stiff	
							16				
				2.5			18				
5	CS	60									
				2.25			20				
				2.5			22				
6	CS	60		2.5			24				
										grades stiff	
				2.0			26				
				1.75			28				
7	CS	60									

CAD DWG NO:91118798 EMPLOYEE NO: 89525 DATE/TIME: 03/06/03 13:26 ACAD-15.

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

iect Name CLINTON LANDFILL, INC. Sheet 2 of 3

ject Location CLINTON, IL. Project No. 91-118

Boring No. EX-12 Surface Elev. 705.4' Boring Type HSA Completion Depth 77.0'

Coordinates: (X) N 5212.26 (Y) E 7864.57 Drilling Contractor SKS ENGINEERS, INC.

Date Started 12/26/02 Date Completed 12/31/02 Driller TODD SKINNER Rig No. MOBILE B-57

Logged By JOHN BERRY Backfilled (Y/N) N Backfill Material

Surface Conditions If "No" explain INSTALLED MONITORING WELL EX-12

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	q_u (tsf)	PID (PPM) eV LAMP 10.6 __ 11.7 __	CHEMICAL	GEOTECHNICAL	SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
7	CS	60								675.40		SILTY CLAY (CL); Dark gray (10YR 4/1), moist, stiff, trace gravel	
				2.25					32	673.20		SAND & GRAVEL (SP); Dark gray (10YR 4/1), damp to moist, w/clay, fine to coarse sand	
8	CS	50							34				
									36				
									38				
	CS	50							40			grades wet to saturated	
									42			grades gravel out	
10									44	660.80		~~SILTY CLAY (CL); Blue green (Gley 2 5/10BG)~~, moist, stiff, trace gravel	TOC Sample @ 660.0
				1.25					46				
				+4.0						658.50		SILTY CLAY (CL); Gray (10YR 5/1), moist, hard, trace gravel	
				+4.0					48				
11	CS	60							50				
				+4.0									
				+4.0					52				
12	CS	60							54			grades dark gray (10YR 4/1)	
									56				
									58				
12	CS	60											

CAD DWG NO:91118799 EMPLOYEE NO: 89525 DATE/TIME: 03/06/03 13:33 ACAD-15.

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

oject Name CLINTON LANDFILL, INC. Sheet 3 of 3

oject Location CLINTON, IL. Project No. 91-118

Boring No. EX-12 Surface Elev. 705.4' Boring Type HSA Completion Depth 77.0'

Coordinates: (X) N 5212.26 (Y) E 7864.57 Drilling Contractor SKS ENGINEERS, INC.

Date Started 12/26/02 Date Completed 12/31/01 Driller TODD SKINNER Rig No. MOBILE B-57

Logged By JOHN BERRY Backfilled (Y/N) N Backfill Material

Surface Conditions If "No" explain INSTALLED MONITORING WELL EX-12

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	q_u (tsf)	PID (PPM) eV LAMP 10.6 __ 11.7 __	CHEMICAL	GEOTECHNICAL	SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
12	CS	60		+4.0						645.40		SILTY CLAY (CL); Dark gray (10YR 4/1), moist, hard, trace gravel	
										644.30			
				+4.0					62	643.20		SAND (SP); Dark gray (10YR 4/1), saturated, fine to coarse grained	
												SILTY CLAY (CL); Gray (10YR 6/1), moist, hard, trace gravel	
13	CS	50							64				
				+4.0									
									66				
				+4.0									
									68	637.40			
14	CS	42										SAND + GRAVEL (SP); Gray (10YR 6/1), saturated, fine to coarse grained	
									70				
										633.65			
				+4.0					72			SILTY CLAY (CL); Gray (10YR 6/1), moist, hard, trace gravel	
15	CS	48											
				+4.0					74				
				+4.0					76				
										628.40			
												End of boring @77.0'	
									78				
									80				
									82				
									84				
									86				
									88				

CAD DWG NO:91118800 EMPLOYEE NO: 89525 DATE/TIME: 03/06/03 13:16 ACAD-15.

PDC TECHNICAL SERVICES, INC.
WELL COMPLETION REPORT

Project #: 91-118 Project Location: CLINTON, IL. Well #: EX-12D

Project Name: CLINTON LANDFILL, INC. Borehole #: EX-12D

State Plane Coordinate: (X) N 5212.26 (Y) E 7864.57 (or) Latitude: ° ' " Longitude: ° ' "

Surveyed By: SKS ENGINEERS, INC. ILL. Registration #:

Drilling Contractor: SKS ENGINEERS, INC. Driller: TODD SKINNER

Drilling Method: HOLLOW STEM AUGER Drilling Fluids (type): NONE

Logged By: J. BERRY Date Started: 12/26/02 Date Finished: 12/31/02

Notes:

Annular Space Details

Type of Surface Seal: CONCRETE

Type of Annular Sealant: BENSEAL

Installation Method: TREMIE PIPE

Type of Bentonite Seal: BENTONITE SLURRY
(Granular, Pellet, Slurry)

Installation Method: TREMIE

Setting Time: 30 MINUTES

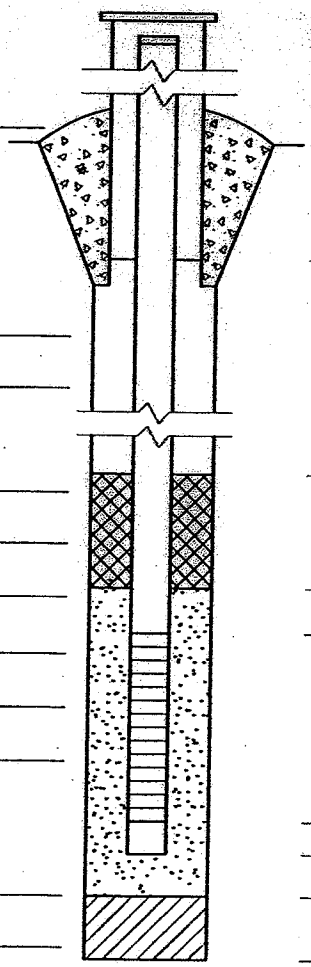
Type of Sand Pack: SILICA SAND

Grain Size: 40 MESH

Installation Method: POURED

Type of Backfill Material: SILICA SAND
(If Applicable)

Installation Method: POURED



Elevations (MSL-referenced to a National Geodetic Vertical Datum)	Depths (Feet above or below ground surface to .01 feet)	
708.02	2.62	Top of Protective Casing
707.68	2.28	Top of Riser Pipe
705.40	0.00	Ground Surface
702.40	3.00	Top of annular sealant
645.15	60.25	Top of Seal
642.15	63.25	Top of Sand Pack
639.37	66.03	Top of Screen
629.75	75.65	Bottom of Screen
629.40	76.00	Bottom of Well
629.40	76.00	Top of Backfill (If Applicable)
628.40	77.00	Bottom of Borehole

Well Construction Materials

	SS304	SS316	PTFE	PVC	Other
rotective casing					4" SQ. STEEL
Riser pipe from 0.00 to 35.69 (feet below ground surface)				X	
Riser pipe from 35.69 to 66.03 (feet below ground surface)	X				
Screen	X				

Casing Measurements

Diameter of borehole (in)	8.00
ID of riser pipe (in)	2.00
Protective casing length (ft)	5.00
Riser pipe length (ft) (Include stickup)	68.31
Screen length (1st slot to last slot, ft)	9.62
Bottom of screen to end cap (ft)	0.35
Total length of casing (riser+screen+end cap) (ft)	78.28
Screen slot size	10 SLOT

CAD DWG NO:91118841 EMPLOYEE NO: 89525 DATE/TIME: 03/14/03 16:42 ACAD-15.

PDC TECHNICAL SERVICES, INC.
WELL COMPLETION REPORT

Project #: 91-118 Project Location: CLINTON, IL. Well #: EX-12S

Project Name: CLINTON LANDFILL, INC. Borehole #: EX-12S

State Plane Coordinate: (X) N 5211.82 (Y) E 7822.99 (or) Latitude: ° ' " Longitude: ° ' "

Surveyed By: SKS ENGINEERS, INC. ILL. Registration #:

Drilling Contractor: SKS ENGINEERS, INC. Driller: TODD SKINNER

Drilling Method: HOLLOW STEM AUGER Drilling Fluids (type): NONE

Logged By: J. BERRY Date Started: 12/31/02 Date Finished: 01/02/03

Notes:

Annular Space Details

Type of Surface Seal: CONCRETE

Type of Annular Sealant: BENSEAL

Installation Method: TREMIE PIPE

Type of Bentonite Seal: BENTONITE SLURRY
(Granular, Pellet, Slurry)

Installation Method: TREMIE

Setting Time: 30 MINUTES

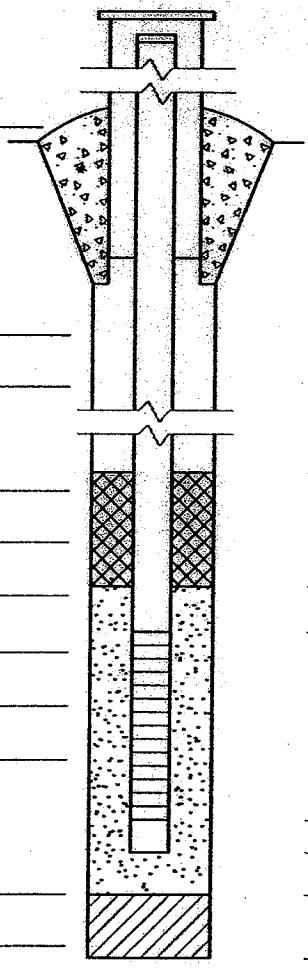
Type of Sand Pack: SILICA SAND

Grain Size: 40 MESH

Installation Method: POURED

Type of Backfill Material: SILICA SAND
(If Applicable)

Installation Method: POURED



Elevations (MSL-referenced to a National Geodetic Vertical Datum)	Depths (Feet above or below ground surface to .01 feet)	
707.99	2.59	Top of Protective Casing
707.67	2.27	Top of Riser Pipe
705.40	0.00	Ground Surface
702.40	3.00	Top of annular sealant
653.88	51.52	Top of Seal
651.88	53.52	Top of Sand Pack
649.88	55.52	Top of Screen
640.25	65.15	Bottom of Screen
639.90	65.50	Bottom of Well
639.90	65.50	Top of Backfill (If Applicable)
639.40	66.00	Bottom of Borehole

Well Construction Materials

	SS304	SS316	PTFE	PVC	Other
...tective casing					4" SQ. STEEL
Riser pipe from 0.00 to 25.11 (feet below ground surface)				X	
Riser pipe from 25.11 to 55.52 (feet below ground surface)	X				
Screen					

Casing Measurements

Diameter of borehole (in)	8.00
ID of riser pipe (in)	2.00
Protective casing length (ft)	5.00
Riser pipe length (ft) (include stickup)	57.79
Screen length (1st slot to last slot, ft)	9.63
Bottom of screen to end cap (ft)	0.35
Total length of casing (riser+screen+end cap) (ft)	67.77
Screen slot size	10 SLOT

CAD DWG NO:91118822 EMPLOYEE NO: 89525 DATE/TIME: 03/07/03 10:28 ACAD-15.

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

Project Name CLINTON LANDFILL, INC. Sheet 1 of 4

Project Location CLINTON, IL. Project No. 91-118

Boring No. EX-13 Surface Elev. 722.60' Boring Type HSA Completion Depth 94.5'

Coordinates: (X) N 5264.54 (Y) E 8574.98 Drilling Contractor SKS ENGINEERS, INC.

Date Started 12/19/02 Date Completed 9/26/02 Driller TODD SKINNER Rig No. MOBILE B-57

Logged By JOHN BERRY Backfilled (Y/N) N Backfill Material

Surface Conditions WET PLOWED FIELD If "No" explain INSTALLED MONITORING WELL EX-13

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	q_u (tsf)	PID (PPM) eV LAMP 10.6 __ 11.7 __	CHEMICAL	GEOTECHNICAL	SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
1	CS	52								721.60		CLAYEY SILT (ML); Dark brown, wet, w/root fragments	
				1.0					2			SILTY CLAY (CL); Brown mottled w/orange, moist, stiff, trace root fragments	
				1.0					4				
2	CS	60										grades root fragments out	
				1.0					6				
				1.0					8				
3	CS	36		1.5					10	713.60		SILTY CLAY (CL); Brown, moist, stiff, some sand, trace gravel	
				1.5					12	711.10		SILTY CLAY (CL); Brown, moist, stiff, trace gravel	
	ST	24											
				2.0					14	708.60		SILTY CLAY (CL); Gray, moist, very stiff, trace gravel	
4	CS	60		2.5									
				2.0					16				
				2.0					18				
5	CS	60											
				2.0					20				
				2.25					22				
				2.25					24				
6	CS	60											
				2.5					26				
				2.5					28				
				2.75									
7	CS	60											

CAD DWG NO:91118777 EMPLOYEE NO: 89525 DATE/TIME: 03/06/03 13:23 ACAD-15.

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

Project Name CLINTON LANDFILL, INC. Sheet 2 of 4

Project Location CLINTON, IL. Project No. 91-118

Boring No. EX-13 Surface Elev. 722.6' Boring Type HSA Completion Depth 94.5'

Coordinates: (X) N 5264.54 (Y) E 8574.98 Drilling Contractor SKS ENGINEERS, INC.

Date Started 12/19/02 Date Completed 12/26/02 Driller TODD SKINNER Rig No. MOBILE B-57

Logged By JOHN BERRY Backfilled (Y/N) N Backfill Material

Surface Conditions WET PLOWED FIELD If "No" explain INSTALLED MONITORING WELL EX-13

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	q_u (tsf)	PID (PPM) eV LAMP 10.6 __ 11.7 __	CHEMICAL	GEOTECHNICAL	SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
7	CS	60		2.5								SILTY CLAY (CL); Gray, moist, very stiff, trace gravel	
									32				
				2.5									
									34				
8	CS	60											
				3.0					36				
				2.5					38				
				2.75									
9	CS	60		2.75					40				
												1" sand layer @ 681.2	
				2.5					42				
	ST	24"											
	ST	20"							44				
10	CS	60											
									46				
				2.75									
									48				
11	CS	60		2.5									
									50				
				2.0									TOC Sample @ 671.0
	ST	24"							52	670.60		PEAT (OL); Dark brown, moist, w/clay	
	ST	24"											
12	CS	60							54	668.60			
										5687.20		SILTY SAND (SW); Fine grained, moist, w/clay	
												PEAT (OL); Dark brown/black, moist, w/clay	
									56				
										665.60			
				1.0								SILTY CLAY (CL); Black, moist, stiff, w/root fragments (old organic topsoil)	
				1.0					58				
13	CS	50											

CAD DWG NO:91118778 EMPLOYEE NO: 89525 DATE/TIME: 03/06/03 13:54 ACAD-15.

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

Project Name CLINTON LANDFILL, INC. Sheet 3 of 4
oject Location CLINTON, IL. Project No. 91-118
Boring No. EX-13 Surface Elev. 722.6' Boring Type HSA Completion Depth 94.5'
Coordinates: (X) N 5264.54 (Y) E 8574.98 Drilling Contractor SKS ENGINEERS, INC.
Date Started 12/19/02 Date Completed 12/26/02 Driller TODD SKINNER Rig No. MOBILE B-57
Logged By JOHN BERRY Backfilled (Y/N) N Backfill Material
Surface Conditions WET PLOWED FIELD If "No" explain INSTALLED MONITORING WELL EX-13

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	q_u (tsf)	PID (PPM) eV LAMP 10.6 __ 11.7 __	CHEMICAL	GEOTECHNICAL	SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
14	CS	30		1.0								SILTY CLAY (CL): Black, moist, stiff	
												~~grades gray w/trace sand @ 661.3~~	
				1.25		■							TOC Sample @ 660.5
									62	660.60		SILTY CLAY (CL): Blue-green, moist, trace gravel	
									64				
15	CS	42											
									66	656.60			
				1.75		■						SILTY CLAY (CL): Gray, moist, stiff, trace gravel	TOC Sample @ 655.5
										655.60			
				2.0								CLAYEY SILT (ML): Gray, moist, stiff	
				3.25					68	654.35		SILTY CLAY (CL): Gray, moist, very stiff, trace gravel	
16	CS	60		4.0								grades hard @ 652.8	
									70				
				+4.0									
									72				
				+4.0									
17	CS	60							74				
				+4.0									
									76				
				+4.0									
				+4.0					78				
18	CS	60											
				+4.0					80			grades damp	
				+4.0					82				
				+4.0									
19	CS	60							84				
				+4.0									
									86				
				4.0									
				0.5					88	634.80		CLAYEY SILT (ML): Brown, wet to saturated, stiff, w/organics	
20	CS	60		0.5								grades gray @ 633.2	

CAD DWG NO:91118779 EMPLOYEE NO: 89525 DATE/TIME: 03/06/03 13:10 ACAD-15.

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

Project Name CLINTON LANDFILL, INC. Sheet 4 of 4

oject Location CLINTON, IL. Project No. 91-118

Boring No. EX-13 Surface Elev. 722.6' Boring Type HSA Completion Depth 94.5'

Coordinates: (X) N 5264.54 (Y) E 8574.98 Drilling Contractor SKS ENGINEERS, INC.

Date Started 12/19/02 Date Completed 12/26/02 Driller TODD SKINNER Rig No. MOBILE B-57

Logged By JOHN BERRY Backfilled (Y/N) N Backfill Material

Surface Conditions WET PLOWED FIELD If "No" explain INSTALLED MONITORING WELL EX-13

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	q_u (tsf)	PID (PPM) eV LAMP 10.6 __ 11.7 __	CHEMICAL	GEOTECHNICAL	SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
20	CS	60		0.5					92	631.05		CLAYEY SILT (ML); Gray, wet to saturated, w/organics grades w/sand @ 631.3	
									94	628.10		SILTY CLAY (CL); Gray, hard, moist, trace gravel End of boring @94.5'	
									96				
									98				
									100				
									102				
									104				
									106				
									108				
									110				
									112				
									114				
									116				
									118				

CAD DWG. NO:91118780 EMPLOYEE NO: 89525 DATE/TIME: 03/06/03 13:10 ACAD-15.

PDC TECHNICAL SERVICES, INC.
WELL COMPLETION REPORT

Project #: 91-118 Project Location: CLINTON, IL. Well #: EX-13

Project Name: CLINTON LANDFILL, INC. Borehole #: EX-13

State Plane Coordinate: (X) N 5264.54 (Y) E 8574.98 (or) Latitude: ___ ' ___ " ___ Longitude: ___ ' ___ " ___

Surveyed By: SKS ENGINEERS, INC. ILL. Registration #: ___

Drilling Contractor: SKS ENGINEERS, INC. Driller: TODD SKINNER

Drilling Method: HOLLOW STEM AUGER Drilling Fluids (type): NONE

Logged By: J. BERRY Date Started: 12/19/02 Date Finished: 12/23/02

Notes: ___

Annular Space Details

Type of Surface Seal: CONCRETE

Type of Annular Sealant: BENSEAL

Installation Method: TREMIE PIPE

Type of Bentonite Seal: BENTONITE SLURRY
(Granular, Pellet, Slurry)

Installation Method: TREMIE

Setting Time: 30 MINUTES

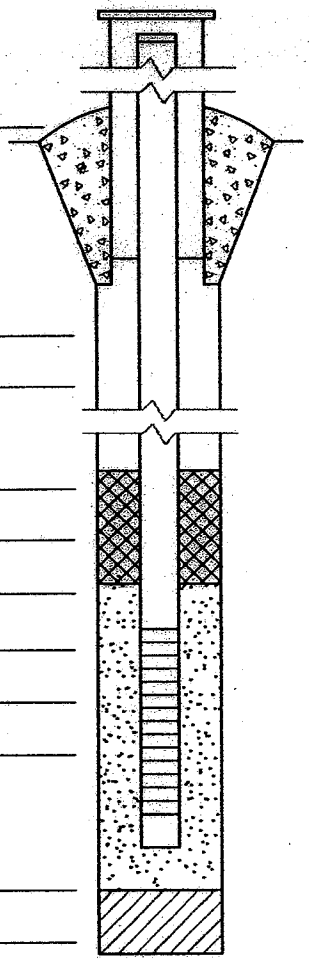
Type of Sand Pack: SILICA SAND

Grain Size: 40 MESH

Installation Method: POURED

Type of Backfill Material: SILICA SAND
(If Applicable)

Installation Method: POURED



Elevations (MSL-referenced to a National Geodetic Vertical Datum)	Depths (Feet above or below ground surface to .01 feet)	
725.54	2.85	Top of Protective Casing
725.19	2.59	Top of Riser Pipe
722.60	0.00	Ground Surface
719.60	3.00	Top of annular sealant
643.60	79.00	Top of Seal
640.60	82.00	Top of Sand Pack
638.42	84.18	Top of Screen
628.64	93.96	Bottom of Screen
628.60	94.00	Bottom of Well
628.60	94.00	Top of Backfill (If Applicable)
628.10	94.50	Bottom of Borehole

Well Construction Materials

	SS304	SS316	PTFE	PVC	Other
Protective casing					4" SQ. STEEL
Riser pipe from 0.00 to 43.82 (feet below ground surface)				X	
Riser pipe from 43.82 to 84.18 (feet below ground surface)	X				
Screen					

Casing Measurements

Diameter of borehole (in)	8.00
ID of riser pipe (in)	2.00
Protective casing length (ft)	5.00
Riser pipe length (ft) (Include stickup)	86.77
Screen length (1st slot to last slot, ft)	9.78
Bottom of screen to end cap (ft)	.04
Total length of casing (riser+screen+end cap) (ft)	96.59
Screen slot size	10 SLOT

CAD DWG NO:91118823 EMPLOYEE NO: 89525 DATE/TIME: 03/07/03 10:14 ACAD-15.

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

Project Name CLINTON LANDFILL, INC. Sheet 1 of 4

Project Location CLINTON, IL. Project No. 91-118

Boring No. EX-14 Surface Elev. 726.8' Boring Type HSA Completion Depth 93.5'

Coordinates: (X) N 5302.88 (Y) E 9396.78 Drilling Contractor SKS ENGINEERS, INC.

Date Started 12/13/02 Date Completed 12/18/02 Driller TODD SKINNER Rig No. MOBILE B-57

Logged By JOHN BERRY Backfilled (Y/N) N Backfill Material

Surface Conditions PICKED CORN FIELD If "No" explain INSTALLED MONITORING WELL EX-14

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	q_u (tsf)	PID (PPM) eV LAMP 10.6 __ 11.7 __	CHEMICAL	GEOTECHNICAL	SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
1	CS	48								725.80		CLAYEY SILT (ML); Dark brown, moist , w/root frogments	
												SILTY CLAY (CL); Brown, mottled yellow, very stiff, moist, trace gravel	
				2.0					2				
				2.0									
2	CS	60							4				
				2.0								grades stiff	
				1.0					6				
				1.0					8				
3	CS	60											
				1.0					10				
				1.25					12			grades mottled gray & stiff	
4	CS	60							14				
				1.5									
									16			grades gray	
				1.5					18				
5	CS	60											
				1.5					20				
				1.5					22				
				2.0									
6	CS	60							24			grades hard	
				+4.0									
									26				
									28			SANDY CLAY (CL); Gray, hard, moist, w/small grained gravel	
				+4.0						697.80			
7	CS	60		2.5						697.30		SILTY CLAY (CL); Gray, very stiff, moist; trace gravel	

CAD DWG NO:91118773 EMPLOYEE NO: 89525 DATE/TIME: 03/06/03 13:44 ACAD-15.

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

Project Name CLINTON LANDFILL, INC. Sheet 2 of 4

ect Location CLINTON, IL. Project No. 91-118

ring No. EX-14 Surface Elev. 726.8' Boring Type HSA Completion Depth 93.5'

Coordinates: (X) N 5302.88 (Y) E 9396.78 Drilling Contractor SKS ENGINEERS, INC.

Date Started 12/13/02 Date Completed 12/18/02 Driller TODD SKINNER Rig No. MOBILE B-57

Logged By JOHN BERRY Backfilled (Y/N) N Backfill Material

Surface Conditions PICKED CORN FIELD If "No" explain INSTALLED MONITORING WELL EX-14

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	q_u (tsf)	PID (PPM) eV LAMP 10.6 __ 11.7 __	CHEMICAL	GEOTECHNICAL	SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
7	CS	60		2.5								SILTY CLAY (CL); Gray, very stiff, moist, trace gravel	
									32				
				2.5									
				+4.0					34			grades hard	
8	CS	60											
				+4.0					36				
									38				
				+4.0									
	CS	60							40				
				1.5								grades stiff	
									42				
				1.5									
									44				
10	CS	60											
				2.35					46			grades very stiff	
				2.25					48				
				2.25									
11	CS	60											
				2.5					50				
				2.25					52				
12	CS	53							54	672.55		CLAYEY SILT (ML); Gray, wet to saturated, with fine grained sand	
									56				
				2.5					58	668.80		CLAYEY SILT (ML); Dark brown, very stiff, moist, w/organics	
13	CS	50		2.5									

CAD DWG NO:91118774 EMPLOYEE NO: 89525 DATE/TIME: 03/06/03 13:52 ACAD-15.

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

Project Name CLINTON LANDFILL, INC. Sheet 3 of 4

ject Location CLINTON, IL. Project No. 91-118

ring No. EX-14 Surface Elev. 726.8' Boring Type HSA Completion Depth 93.5'

Coordinates: (X) N 5302.88 (Y) E 9396.78 Drilling Contractor SKS ENGINEERS, INC.

Date Started 12/13/02 Date Completed 12/18/02 Driller TODD SKINNER Rig No. MOBILE B-57

Logged By JOHN BERRY Backfilled (Y/N) N Backfill Material

Surface Conditions PICKED CORN FIELD If "No" explain INSTALLED MONITORING WELL EX-14

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	q_u (tsf)	PID (PPM) eV LAMP 10.6 __ 11.7 __	CHEMICAL	GEOTECHNICAL	SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
13	CS	50								666.05		CLAYEY SILT (ML); Dark brown, very stiff, moist, with organics	
										665.05		SAND (SW); Gray, fine grained, saturated, trace silt & clay	
				2.25					62			SILTY CLAY (CL); Blue-green/gray, very stiff, moist, trace gravel	
				2.25									
				2.0					64	662.80		SILTY CLAY (CL); Light gray, very stiff, moist, trace gravel	
14	CS	60											
				3.0					66				
				3.5									TOC Sample @ 659.0
									68				
				+4.0								grades hard	
	CS	60							70				
				+4.0									
									72				
				+4.0									
16	CS	30							74				
				+4.0									
				+4.0					76				
				+4.0					78			grades with gravel from 648.8 to 648.0	
17	CS	60											
				+4.0					80				
				+4.0									
									82				
				3.0						643.70		CLAYEY SILT (ML); Dark brown/black, very stiff, moist, w/organics, trace sand	
18	CS	60							84	642.10		SILT (ML); Gray, wet to saturated, trace organics	
										641.20		SILTY CLAY (CL); Gray, moist, hard, w/ fine sand	
				+4.0					86				
				+4.0					88				
19	CS	48											

CAD DWG NO:91118775 EMPLOYEE NO: 89525 DATE/TIME: 03/06/03 13:05 ACAD-15.

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

Project Name CLINTON LANDFILL, INC. Sheet 4 of 4

Project Location CLINTON, IL. Project No. 91-118

Boring No. EX-14 Surface Elev. 726.8' Boring Type HSA Completion Depth 93.5'

Coordinates: (X) N 5302.88 (Y) E 9396.78 Drilling Contractor SKS ENGINEERS, INC.

Date Started 12/13/02 Date Completed 12/18/02 Driller TODD SKINNER Rig No. MOBILE B-57

Logged By JOHN BERRY Backfilled (Y/N) N Backfill Material

Surface Conditions PICKED CORN FIELD If "No" explain INSTALLED MONITORING WELL EX-14

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	q_u (tsf)	PID (PPM) eV LAMP 10.6 __ 11.7 __	CHEMICAL	GEOTECHNICAL	SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
19	CS	48										SILTY CLAY (CL); Gray, hard, moist, trace gravel	
									92				
										633.30		End of boring @93.5'	
									94				
									96				
									98				
									100				
									102				
									104				
									106				
									108				
									110				
									112				
									114				
									116				
									118				

CAD DWG NO:91118776 EMPLOYEE NO: 89525 DATE/TIME: 03/06/03 13:60 ACAD-15.

PDC TECHNICAL SERVICES, INC.
WELL COMPLETION REPORT

Project #: 91-118 Project Location: CLINTON, IL. Well #: EX-14

Project Name: CLINTON LANDFILL, INC. Borehole #: EX-14

State Plane Coordinate: (X) N 5302.88 (Y) E 9396.78 (or) Latitude: ° ' " Longitude: ° ' "

Surveyed By: SKS ENGINEERS, INC. ILL. Registration #:

Drilling Contractor: SKS ENGINEERS, INC. Driller: TODD SKINNER

Drilling Method: HOLLOW STEM AUGER Drilling Fluids (type): NONE

Logged By: J. BERRY Date Started: 12/13/02 Date Finished: 12/18/02

Notes:

Annular Space Details

Type of Surface Seal: CONCRETE

Type of Annular Sealant: BENSEAL GROUT

Installation Method: TREMIE PIPE

Type of Bentonite Seal: BENTONITE SLURRY
(Granular, Pellet, Slurry)

Installation Method: TREMIE

Setting Time: 30 MINUTES

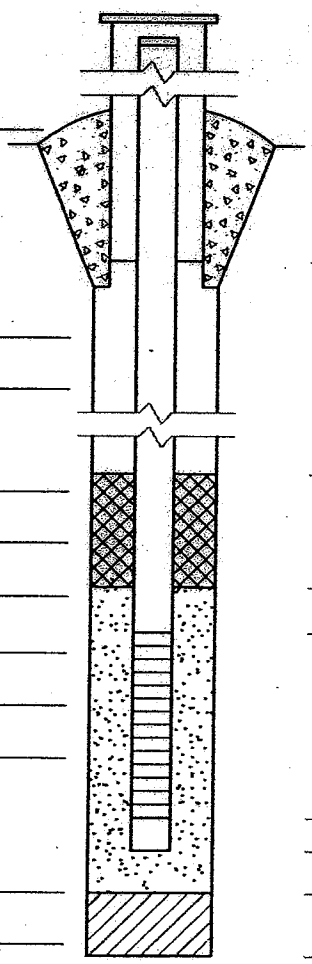
Type of Sand Pack: SILICA SAND

Grain Size: 40 MESH

Installation Method: POURED

Type of Backfill Material: SILICA SAND
(If Applicable)

Installation Method: POURED



Elevations (MSL-referenced to a National Geodetic Vertical Datum)	Depths (Feet above or below ground surface to .01 feet)	
729.41	2.61	Top of Protective Casing
728.97	2.17	Top of Riser Pipe
726.80	0.00	Ground Surface
723.80	3.00	Top of annular sealant
648.80	78.00	Top of Seal
645.80	81.00	Top of Sand Pack
643.84	82.96	Top of Screen
634.14	92.66	Bottom of Screen
633.80	93.30	Bottom of Well
633.80	93.00	Top of Backfill (If Applicable)
633.30	93.50	Bottom of Borehole

Well Construction Materials

	SS304	SS316	PTFE	PVC	Other
Protective casing					4" SQ. STEEL
Riser pipe from 0.00 to 42.64 (feet below ground surface)					
Riser pipe from 42.64 to 82.96 (feet below ground surface)	X				
Screen	X				

Casing Measurements

Diameter of borehole (in)	8.00
ID of riser pipe (in)	2.00
Protective casing length (ft)	5.00
Riser pipe length (ft) (Include stickup)	85.13
Screen length (1st slot to last slot, ft)	9.70
Bottom of screen to end cap (ft)	0.34
Total length of casing (riser+screen+end cap) (ft)	95.17
Screen slot size	10 SLOT

CAD DWG NO:91118824 EMPLOYEE NO: 89525 DATE/TIME: 03/07/03 10:02 ACAD-15.

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

Project Name CLINTON LANDFILL, INC. Sheet 1 of 4

Project Location CLINTON, IL. Project No. 91-118

Boring No. EX-15 Surface Elev. 731.1' Boring Type HSA Completion Depth 94.5'

Coordinates: (X) N 5328.65 (Y) E 10301.36 Drilling Contractor SKS ENGINEERS, INC.

Date Started 01/06/03 Date Completed 01/08/03 Driller TODD SKINNER Rig No. MOBILE B-57

Logged By JOHN BERRY Backfilled (Y/N) N Backfill Material

Surface Conditions PLOWED FIELD If "No" explain INSTALLED MONITORING WELL EX-15

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	q_u (tsf)	PID (PPM) eV LAMP 10.6 __ 11.7 __	CHEMICAL	GEOTECHNICAL	SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
1	CS	52								730.10		CLAYEY SILT (ML); Black (10YR 2/1), moist to wet	
				1.75					2			SILTY CLAY (CL); Dark yellowish brown (10YR 4/4), ~~stiff, moist, trace gravel~~	
				1.75					4				
2	CS	60										~~grades hard~~	
				1.0					6				
				1.25					8				
3	CS	60											
				1.0					10				
				1.0					12	719.10		SILTY CLAY (CL); Gray (10YR 5/1), stiff, moist, ~~trace gravel~~	
				1.0					14				
4	CS	60											
				1.0					16				
				1.5					18				
5	CS	60		+4.0								~~2" sandy silt @ 711.8~~	
									20			grades dark gray (10YR 4/1)	
				+4.0					22				
				+4.0					24				
6	CS	60		3.0								~~grades very stiff~~	
				3.0					26				
				1.75								~~grades stiff~~	
				1.75					28				
7	CS	60											

CAD DWG NO:91118804 EMPLOYEE NO: 89525 DATE/TIME: 03/06/03 13:30 ACAD-15.

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

Project Name CLINTON LANDFILL, INC. Sheet 2 of 4

Project Location CLINTON, IL. Project No. 91-118

Boring No. EX-15 Surface Elev. 731.1' Boring Type HSA Completion Depth 94.5'

Coordinates: (X) N 5328.65 (Y) E 10301.36 Drilling Contractor SKS ENGINEERS, INC.

Date Started 01/6/03 Date Completed 01/08/03 Driller TODD SKINNER Rig No. MOBILE B-57

Logged By JOHN BERRY Backfilled (Y/N) N Backfill Material

Surface Conditions PLOWED FIELD If "No" explain INSTALLED MONITORING WELL EX-15

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	q_u (tsf)	PID (PPM) eV LAMP 10.6 __ 11.7 __	CHEMICAL	GEOTECHNICAL	SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
7	CS	60		1.0						701.10		SILTY CLAY (CL); Dark gray (10YR 4/1), stiff, moist, trace gravel	
				1.0									
				1.0					32				
				3.0									
8	CS	60							34			grades very stiff	
				1.5								grades stiff	
									36				
				1.5									
				1.75					38				
9	CS	60											
				2.25					40			grades very stiff	
				2.25					42				
10	CS								44				
				2.0									
									46				
				2.25									
				2.25					48				
11	CS	60											
				2.0					50				
				+4.0					52			grades hard	
				+4.0									
12	CS								54			grades stiff	
				1.75									
									56				
				1.75									
									58				TOC Sample @ 673.0
13	CS	48								671.80		SAND (SP); Gray, (10YR 4/1), saturated, very dense, fine to coarse grained	

CAD DWG NO:91118805 EMPLOYEE NO: 89525 DATE/TIME: 03/06/03 13:43 ACAD-15.

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

Project Name CLINTON LANDFILL, INC. Sheet 3 of 4

Project Location CLINTON, IL. Project No. 91-118

Boring No. EX-15 Surface Elev. 731.1' Boring Type HSA Completion Depth 94.5'

Coordinates: (X) N 5328.65 (Y) E 10301.36 Drilling Contractor SKS ENGINEERS, INC.

Date Started 01/06/03 Date Completed 01/08/03 Driller TODD SKINNER Rig No. MOBILE B-57

Logged By JOHN BERRY Backfilled (Y/N) N Backfill Material

Surface Conditions PLOWED FIELD If "No" explain INSTALLED MONITORING WELL EX-15

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	q_u (tsf)	PID (PPM) eV LAMP 10.6 __ 11.7 __	CHEMICAL	GEOTECHNICAL	SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
13	CS	48								671.10		SAND (SP); Gray (10YR 4/1), dense, saturated, fine to medium grained, trace gravel & clay	
									62				
									64			grades w/ large grained gravel	
14	CS	29											
									66				
										664.30			
15	CS	30		1.25					68			SILTY CLAY (CL); Blue green (Gley 2 4/10G), stiff, moist, trace gravel	
										661.70			
16	CS	60		+4.0					70			SILTY CLAY (CL); Gray (10YR 5/1), hard, moist, trace gravel	
				+4.0									
									72				
				+4.0									
17	CS	60				■			74				TOC Sample @ 657.0
				3.5								grades dark gray (10YR 4/1), very stiff	
									76				
				3.75									
									78				
18	CS	60		3.75									
									80			grades hard	
				+4.0									
									82				
				+4.0									
19	CS	60							84				
				+4.0		■							TOC Sample @ 646.0
									86				
				1.5						643.85		CLAYEY SILT (ML); Dark gray (10YR 4/1), stiff, moist, trace gravel & sand	
									88				
										642.30		SILT & SAND (SM); Gray (10YR 4/1), saturated	
20	CS	60								641.90		SAND (SP); Dark gray (10YR 4/1), saturated, very dense, fine to coarse grained, trace silt	

CAD DWG NO:91118806 EMPLOYEE NO: 89525 DATE/TIME: 03/06/03 14:08 ACAD-15.

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

oject Name CLINTON LANDFILL, INC. Sheet 4 of 4

oject Location CLINTON, IL. Project No. 91-118

Boring No. EX-15 Surface Elev. 731.1' Boring Type HSA Completion Depth 94.5'

Coordinates: (X) N 5328.65 (Y) E 10301.36 Drilling Contractor SKS ENGINEERS, INC.

Date Started 01/06/03 Date Completed 01/08/03 Driller TODD SKINNER Rig No. MOBILE B-57

Logged By JOHN BERRY Backfilled (Y/N) N Backfill Material

Surface Conditions PLOWED FIELD If "No" explain INSTALLED MONITORING WELL EX-15

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	q_u (tsf)	PID (PPM) eV LAMP 10.6 __ 11.7 __	CHEMICAL	GEOTECHNICAL	SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
20	CS	60								641.10		SAND (SP); Dark gray (10YR 4/1), very dense, saturated, fine to coarse grained	
				+4.0					92	638.80		SILTY CLAY (CL); Dark gray (10YR 4/1), hard, moist, trace gravel	
				+4.0									
									94	636.75		CLAYEY SILT (ML); Brown (10YR 4/3), moist to wet, trace organics	
										636.60		End of boring @94.5'	
									96				
									98				
									100				
									102				
									104				
									106				
									108				
									110				
									112				
									114				
									116				
									118				

CAD DWG NO:91118807 EMPLOYEE NO: 89525 DATE/TIME: 03/06/03 14:56 ACAD-15.

PDC TECHNICAL SERVICES, INC.
WELL COMPLETION REPORT

Project #: 91-118 Project Location: CLINTON, IL. Well #: EX-15

Project Name: CLINTON LANDFILL, INC. Borehole #: EX-15

State Plane Coordinate: (X) N 5328.65 (Y) E 10301.36 (or) Latitude: ° ' " Longitude: ° ' "

Surveyed By: SKS ENGINEERS, INC. ILL. Registration #:

Drilling Contractor: SKS ENGINEERS, INC. Driller: TODD SKINNER

Drilling Method: HOLLOW STEM AUGER Drilling Fluids (type): NONE

Logged By: J. BERRY Date Started: 01/06/03 Date Finished: 01/08/03

Notes:

Annular Space Details

Type of Surface Seal: CONCRETE

Type of Annular Sealant: BENSEAL

Installation Method: TREMIE PIPE

Type of Bentonite Seal: SLURRY
(Granular, Pellet, Slurry)

Installation Method: TREMIE

Setting Time: 30 MINUTES

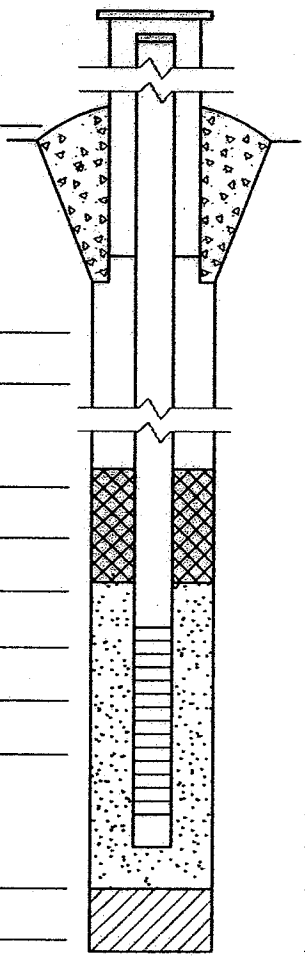
Type of Sand Pack: SILICA SAND

Grain Size: 40 MESH

Installation Method: POURED

Type of Backfill Material: SILICA SAND
(If Applicable)

Installation Method: POURED



Elevations (MSL-referenced to a National Geodetic Vertical Datum)	Depths (Feet above or below ground surface to .01 feet)	
734.10	3.00	Top of Protective Casing
733.73	2.63	Top of Riser Pipe
731.10	0.00	Ground Surface
728.10	3.00	Top of annular sealant
654.10	77.00	Top of Seal
651.10	80.00	Top of Sand Pack
648.63	82.47	Top of Screen
638.94	92.16	Bottom of Screen
638.60	92.50	Bottom of Well
638.60	92.50	Top of Backfill (If Applicable)
636.60	94.50	Bottom of Borehole

Well Construction Materials

	SS304	SS316	PTFE	PVC	Other
Protective casing					4" SQ. STEEL
Riser pipe from 0.00 to 42.26 (feet below ground surface)				X	
Riser pipe from 42.26 to 82.47 (feet below ground surface)	X				
Screen	X				

Casing Measurements

Diameter of borehole (in)	8.00
ID of riser pipe (in)	2.00
Protective casing length (ft)	5.00
Riser pipe length (ft) (Include stickup)	85.10
Screen length (1st slot to last slot, ft)	9.69
Bottom of screen to end cap (ft)	0.34
Total length of casing (riser+screen+end cap) (ft)	95.13
Screen slot size	10 SLOT

CAD DWG NO:91118825 EMPLOYEE NO: 89525 DATE/TIME: 03/07/03 10:42 ACAD-15.

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

Project Name CLINTON LANDFILL, INC. Sheet 1 of 4

Project Location CLINTON, IL. Project No. 91-118

Boring No. EX-16 Surface Elev. 717.0' Boring Type HSA Completion Depth 99.5'

Coordinates: (X) N 4676.37 (Y) E 8713.38 Drilling Contractor SKS ENGINEERS, INC.

Date Started 01/14/03 Date Completed 01/16/03 Driller TODD SKINNER Rig No. MOBILE B-57

Logged By JOHN BERRY Backfilled (Y/N) Y Backfill Material BENTONITE GROUT

Surface Conditions PICKED CORN FIELD If "No" explain

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	q_u (tsf)	PID (PPM) eV LAMP 10.6 __ 11.7 __	CHEMICAL	GEOTECHNICAL	SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
1	CS	50							0	715.80		CLAYEY SILT (ML); Black (10YR 2/1), moist, trace root fragments	
				1.25					2			~~SILTY CLAY (CL); Yellowish brown (10YR 5/6),~~ stiff, moist	
				1.5					4				
2	CS	60											
				0.75					6			grades soft	
				0.75					8				
				1.25								grades stiff	
3	CS	60							10				
				1.5									
				1.25					12				
4	CS	60		2.5					14	702.80		SILTY CLAY (CL); Dark gray (10YR 5/1), very stiff, moist, trace gravel	
				2.75					16				
				+4.0					18			grades hard	
				+4.0									
5	CS	60							20				
				+4.0									
				2.5					22			grades very stiff	
				1.75									
6	CS	60							24			~~grades stiff~~	
				1.5								CLAYEY SILT seam (wet) from 691.7 to 691.5	
				1.5					26				
				1.5					28				
7	CS	60											

CAD DWG NO:91118787 EMPLOYEE NO: 89525 DATE/TIME: 03/11/03 11:30 ACAD-15.

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

Project Name CLINTON LANDFILL, INC. Sheet 2 of 4

Project Location CLINTON, IL. Project No. 91-118

Boring No. EX-16 Surface Elev. 717.0' Boring Type HSA Completion Depth 99.5'

Coordinates: (X) N 4676.37 (Y) E 8713.38 Drilling Contractor SKS ENGINEERS, INC.

Date Started 01/14/03 Date Completed 01/16/03 Driller TODD SKINNER Rig No. MOBILE B-57

Logged By JOHN BERRY Backfilled (Y/N) Y Backfill Material BENTONITE GROUT

Surface Conditions PICKED CORNFIELD If "No" explain

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	q_u (tsf)	PID (PPM) eV LAMP 10.6 __ 11.7 __	CHEMICAL	GEOTECHNICAL SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
7	CS	60		1.75					687.00		SILTY CLAY (CL); Dark gray (10YR 5/1), stiff, moist, trace gravel	
				+4.0							grades hard	
								32				
				+4.0								
				2.5				34			grades very stiff	
8	CS	60										
				2.0				36				
				1.5							grades stiff	
				1.5				38				
9	CS	60										
								40				
								42				
				2.25							grades very stiff	
10	CS			2.25				44				TOC Sample @ 672.5
				2.5				46				
									669.50		SILTY SAND (SW); Gray, wet, trace clay	
									669.25		SILT (OL); Gray, w/organics, wet, trace clay	TOC Sample @ 669.25
								48	669.00		CLAYEY SILT (CL); Brown (10YR 4/2) w/organics	
									668.00		moist, grades w/more organics	
11	CS	60									PEAT (Pt); Brown (10YR 4/3), moist, w/clay, w/wood fragments	
								50				
								52				
									664.00		SILTY CLAY (CL); Dark brown (10YR 4/3), stiff, moist, trace gravel, very clayey	
				1.5				54				
12	CS	F		2.0					662.60		SILTY CLAY (CL); Blue green (Gley2 5/5B), very stiff, moist, trace gravel & sand	
				2.25				56				
								58				
									658.00		SILTY CLAY (CL); Gray (10YR 5/1), very stiff, moist, trace gravel	
13	CS	50		1.0								

CAD DWG NO:91118788 EMPLOYEE NO: 89525 DATE/TIME: 03/11/03 11:07 ACAD-15.

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

ect Name CLINTON LANDFILL, INC. Sheet 3 of 4

ect Location CLINTON, IL. Project No. 91-118

oring No. EX-16 Surface Elev. 717.0' Boring Type HSA Completion Depth 99.5'

Coordinates: (X) N 4676.37 (Y) E 8713.38 Drilling Contractor SKS ENGINEERS, INC.

Date Started 01/14/03 Date Completed 01/16/03 Driller TODD SKINNER Rig No. MOBILE B-57

Logged By JOHN BERRY Backfilled (Y/N) Y Backfill Material BENTONITE GROUT

Surface Conditions PICKED CORN FIELD If "No" explain

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	q_u (tsf)	PID (PPM) eV LAMP 10.6 __ 11.7 __	CHEMICAL	GEOTECHNICAL	SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
13	CS	50		2.5						657.00		SILTY CLAY (CL); Gray (10 YR 5/1), very stiff, moist, trace gravel & fine sand	
												Sand seam from 656.2 to 656.1	
				2.25					62				
14	CS	60		+4.0					64			grades hard	
				+4.0					66				
				+4.0					68			grades damp	
	CS	60											
				+4.0					70				
				+4.0					72				
16	CS	30							74			~~grades dark gray (10YR 4/1)~~	
				+4.0									
									76				
				+4.0								Sand seam from ~~639.9 to 639.7~~ (wet), fine to coarse grained	
									78				
17	CS	60											
				+4.0					80				
				+4.0									
				1.5					82	634.75			
										634.50		SILT (ML); Gray, wet, trace organics	
				1.5		■						CLAYEY SILT (ML); Brown (10YR 4/3), stiff, moist to wet, w/organics	TOC Sample @ 634.0
									84	632.70		grades dark gray (10YR 4/1) @ 633.1	
18	CS	60		+4.0								~~SILTY CLAY (CL); Gray (10YR 5/1), hard, moist,~~ trace gravel	
				+4.0					86				
				+4.0					88				
19	CS	60											

CAD DWG NO:91118789 EMPLOYEE NO: 89525 DATE/TIME: 03/11/03 11:07 ACAD-15.

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

Project Name CLINTON LANDFILL, INC. Sheet 4 of 4

Project Location CLINTON, IL. Project No. 91-118

Boring No. EX-16 Surface Elev. 717.0' Boring Type HSA Completion Depth 99.5'

Coordinates: (X) N 4676.37 (Y) E 8713.38 Drilling Contractor SKS ENGINEERS, INC.

Date Started 01/14/03 Date Completed 01/16/03 Driller TODD SKINNER Rig No. MOBILE B-57

Logged By JOHN BERRY Backfilled (Y/N) Y Backfill Material BENTONITE GROUT

Surface Conditions PICKED CORN FIELD If "No" explain

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	q_u (tsf)	PID (PPM) eV LAMP 10.6 __ 11.7 __	CHEMICAL	GEOTECHNICAL	SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
19	CS	60		+4.0						627.00		SILTY CLAY (CL); Gray, (10YR 5/1), hard, moist, trace gravel	
				+4.0					92				
				+4.0									
20	CS	60							94				
				+4.0									
									96				
				+4.0									
									98				
										617.50		End of boring @99.5'	
									100				
									102				
									104				
									106				
									108				
									110				
									112				
									114				
									116				
									118				

CAD DWG NO:91118790 EMPLOYEE NO: 89525 DATE/TIME: 03/11/03 11:48 ACAD-15.

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

Project Name CLINTON LANDFILL, INC. Sheet 1 of 3
Project Location CLINTON, IL. Project No. 91-118
Boring No. EX-17 Surface Elev. 715.0' Boring Type HSA Completion Depth 87.0'
Coordinates: (X) N 3801.67 (Y) E 7752.77 Drilling Contractor SKS ENGINEERS, INC.
Date Started 01/02/03 Date Completed 01/06/03 Driller TODD SKINNER Rig No. MOBILE B-57
Logged By JOHN BERRY Backfilled (Y/N) N Backfill Material
Surface Conditions If "No" explain INSTALLED MONITORING WELL EX-17

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	q_u (tsf)	PID (PPM) eV LAMP 10.6 __ 11.7 __	CHEMICAL	GEOTECHNICAL	SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
1	CS	54							0			SILTY CLAY (CL); Dark gray (10YR 4/1), very stiff, moist, trace gravel	FILL
				3.0					2				
				3.5					4				
2	CS	60											
				+4.0					6			grades hard	
									8				
				+4.0									
3	CS	60							10				
				+4.0									
									12			grades dark brown/black w/ cinders (10YR 2/1)	
				+4.0									
									14			grades dark brown (10YR 4/2)	
4	CS	60											
				2.5					16				
									18	697.00			ORIGINAL GROUND SURFACE
				1.75						696.00		SILTY CLAY (CL); Dark brown/black (10YR 2/1), stiff, moist, trace gravel & roots	
5	CS	60		2.25					20			SILTY CLAY (CL); Brown (10YR 2/4), very stiff, moist, trace gravel	
									22				
				2.0									
6	CS	60		2.25					24				
				1.25									
				3.5					26				
				+4.0									
				+4.0					28			grades hard	
7	CS	60		3.0									

CAD DWG NO:91118801 EMPLOYEE NO: 89525 DATE/TIME: 03/06/03 14:41 ACAD-15.

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

oject Name CLINTON LANDFILL, INC. Sheet 2 of 3

oject Location CLINTON, IL. Project No. 91-118

Boring No. EX-17 Surface Elev. 715.0' Boring Type HSA Completion Depth 87.0'

Coordinates: (X) N 3801.67 (Y) E 7752.77 Drilling Contractor SKS ENGINEERS, INC.

Date Started 01/02/03 Date Completed 01/06/03 Driller TODD SKINNER Rig No. MOBILE B-57

Logged By JOHN BERRY Backfilled (Y/N) N Backfill Material

Surface Conditions If "No" explain INSTALLED MONITORING WELL EX-17

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	q_u (tsf)	PID (PPM) eV LAMP 10.6 __ 11.7 __	CHEMICAL / GEOTECHNICAL / SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
7	CS	ST						685.00		SILTY CLAY (CL); Dark gray (10YR 4/1), very stiff, moist, trace gravel & sand	
				2.5			32				
				3.0			34				
8	CS	60									
				2.5			36				
							38	677.50		CLAYEY SAND (SC); Dark gray (10YR 4/1), moist to wet, fine to coarse grained sand	
9	CS	59		2.5				675.40			
							40			~~SILTY CLAY (CL); Dark gray (10YR 4/1), very stiff,~~ moist, trace gravel	
										1" sand seam @ 673.5	
				2.5			42				
				2.5							
10	CS	60					44				
				2.0							
				2.0			46				
								667.75			
								667.50		SILTY SAND (SM); Dark gray (10YR 4/1), moist	
				1.0			48			PEAT (Pt); Brown (10YR 4/3), very stiff, moist, w/silt & clay and wood fragments	
11	CS	60									
				1.0			50				
				1.0			52				
								662.50		~~SILTY CLAY (CL); Black (10YR 2/1), stiff, moist,~~ trace organics and sand	
12	CS	60		1.0			54				
				1.5				660.40		~~SILTY CLAY (CL); Dark gray (10YR 4/1), stiff,~~ moist, trace sand & gravel	
							56			grades bluish gray (Gley2 5/1) @ 659.5	
				1.5							
				3.0			58			grades very stiff	TOC Sample @ 657.0
13	CS	60									

CAD DWG NO:91118802 EMPLOYEE NO: 89525 DATE/TIME: 03/06/03 14:18 ACAD-15.

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

oject Name CLINTON LANDFILL, INC. Sheet 3 of 3

oject Location CLINTON, IL. Project No. 91-118

Boring No. EX-17 Surface Elev. 715.0' Boring Type HSA Completion Depth 87.0'

Coordinates: (X) N 3801.67 (Y) E 7752.77 Drilling Contractor SKS ENGINEERS, INC.

Date Started 1/02/03 Date Completed 1/06/03 Driller TODD SKINNER Rig No. MOBILE B-57

Logged By JOHN BERRY Backfilled (Y/N) N Backfill Material

Surface Conditions If "No" explain INSTALLED MONITORING WELL EX-17

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	q_u (tsf)	PID (PPM) eV LAMP 10.6 __ 11.7 __	CHEMICAL	GEOTECHNICAL	SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
13	CS	60		1.5						655.00		SILTY CLAY (CL); Bluish gray (Gley2 5/1), stiff, moist, trace gravel	
										654.25		SILTY CLAY (CL); Gray (10YR 5/1), stiff, moist, trace gravel	
				1.5					62			1" sand seam @ 653.4	
												grades very stiff	
				3.0					64				
14	CS	60		+4.0								grades hard	
									66				
				+4.0									
									68				
				+4.0									
5	CS	60										3" sand seam @ 645.7	
				+4.0					70				
				+4.0					72				
16	CS	60		+4.0					74				
									76				
				+4.0									
									78				
										635.85		SILTY SAND (SM); Gray (10YR 5/1), saturated, trace clay	
17	CS	36								635.50		SAND (SP); Gray (10YR 5/1), saturated, dense, fine to medium grained	
									80				
										634.00		SILT (ML); Gray (10YR 5/1), wet, with peat	
										633.60		CLAYEY SILT (ML); Dark gray (10YR 4/1), wet, trace organics	
18	CS	50							82	632.50		SILTY CLAY (CL); Gray (10YR 5/1), hard, moist, trace gravel	
									84				
									86			1" silt layer (moist) @ 629.2	
										628.00		End of boring @87.0'	
									88				

CAD DWG NO:91118803 EMPLOYEE NO: 89525 DATE/TIME: 03/06/03 14:14 ACAD-15.

PDC TECHNICAL SERVICES, INC.
WELL COMPLETION REPORT

oject #: 91-118 Project Location: CLINTON, IL. Well #: EX-17

Project Name: CLINTON LANDFILL, INC. Borehole #: EX-17

State Plane Coordinate: (X) N 3801.67 (Y) E 7752.77 (or) Latitude: ° ' " Longitude: ° ' "

Surveyed By: SKS ENGINEERS, INC. ILL. Registration #:

Drilling Contractor: SKS ENGINEERS, INC. Driller: TODD SKINNER

Drilling Method: HOLLOW STEM AUGER Drilling Fluids (type): NONE

Logged By: J. BERRY Date Started: 01/02/03 Date Finished: 01/06/03

Notes:

Annular Space Details

Type of Surface Seal: CONCRETE

Type of Annular Sealant: BENSEAL

Installation Method: TREMIE PIPE

Type of Bentonite Seal: SLURRY
(Granular, Pellet, Slurry)

Installation Method: TREMIE

Setting Time: 35 MINUTES

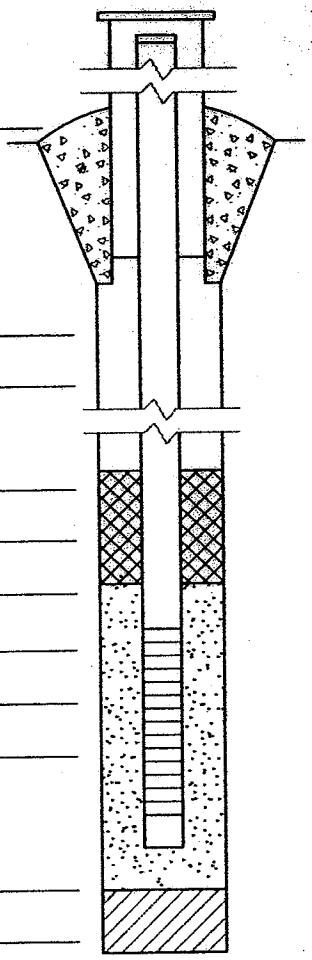
Type of Sand Pack: SILICA SAND

Grain Size: 40 MESH

Installation Method: POURED

Type of Backfill Material: SILICA SAND
(If Applicable)

Installation Method: POURED



Elevations (MSL-referenced to a National Geodetic Vertical Datum)	Depths (Feet above or below ground surface to .01 feet)	
717.74	3.00	Top of Protective Casing
717.38	2.38	Top of Riser Pipe
715.00	0.00	Ground Surface
712.00	3.00	Top of annular sealant
643.50	71.50	Top of Seal
641.00	74.00	Top of Sand Pack
638.47	76.53	Top of Screen
628.84	86.16	Bottom of Screen
628.50	86.50	Bottom of Well
628.50	86.50	Top of Backfill (If Applicable)
628.00	87.00	Bottom of Borehole

Well Construction Materials

	SS304	SS316	PTFE	PVC	Other
otective casing					4" SQ. STEEL
Riser pipe from 0.00 to 46.19 (feet below ground surface)				X	
Riser pipe from 46.19 to 76.53 (feet below ground surface)	X				
Screen	X				

Casing Measurements

Diameter of borehole (in)	8.00
ID of riser pipe (in)	2.00
Protective casing length (ft)	5.00
Riser pipe length (ft) (Include stickup)	78.91
Screen length (1st slot to last slot, ft)	9.63
Bottom of screen to end cap (ft)	0.34
Total length of casing (riser+screen+end cap) (ft)	88.88
Screen slot size	10 SLOT

CAD DWG NO:91118826 EMPLOYEE NO: 89525 DATE/TIME: 03/07/03 11:12 ACAD-15.

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

oject Name CLINTON LANDFILL, INC. Sheet 1 of 4

roject Location CLINTON, IL. Project No. 91-118

Boring No. EX-18 Surface Elev. 725.0 Boring Type HSA Completion Depth 99.5

Coordinates: (X) N 3693.60 (Y) E 8249.50 Drilling Contractor SKS ENGINEERS, INC.

Date Started 1/16/03 Date Completed 1/21/03 Driller TODD SKINNER Rig No. MOBILE B-57

Logged By JOHN BERRY Backfilled (Y/N) Y Backfill Material BENTONITE GROUT

Surface Conditions SILTY CLAY If "No" explain

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	q_u (tsf)	PID (PPM) eV LAMP 10.6 __ 11.7 __	CHEMICAL	GEOTECHNICAL	SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
1	CS	F										SILTY CLAY (CL); Brown, (10YR 4/3), stiff, moist, trace gravel	
				1.5									
				2.0					2			grades yellowish brown (10YR 5/4)	
2	CS	60							4			grades soft	
				0.75									
									6				
				0.75									
									8			grades brown (10YR 4/3)	
3	CS	F											
				0.75					10				
				2.75					12				
4	CS	60		1.5					14			grades stiff	
										710.00			
				1.5					16			SILTY CLAY (CL); Dark gray, (10YR 4/1), stiff, moist, trace gravel	
				1.75					18				
5	CS	60											
									20				
									22	703.00		SANDY SILT (SM); Dark gray, (10YR 4/1), wet, trace clay	
												CLAYEY SILT (ML); Dark gray (10YR 4/1), stiff,	
									24	700.70		moist, trace fine sand	
6	CS	60		1.25						700.25		SILTY CLAY (CL); Dark gray (10YR 4/1), moist, trace gravel	
									26				
				+4.0								grades hard	
				+4.0					28			2" gravel & sand seam @ 696.9	
7	CS	60											

CAD DWG NO:91118783 EMPLOYEE NO: 89525 DATE/TIME: 03/11/03 13:07 ACAD-15.

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

Project Name CLINTON LANDFILL, INC. Sheet 2 of 4

Project Location CLINTON, IL. Project No. 91-118

Boring No. EX-18 Surface Elev. 725.0 Boring Type HSA Completion Depth 99.5'

Coordinates: (X) N 3693.60 (Y) E 8249.50 Drilling Contractor SKS ENGINEERS, INC.

Date Started 1/16/03 Date Completed 1/21/03 Driller TODD SKINNER Rig No. MOBILE B-57

Logged By JOHN BERRY Backfilled (Y/N) Y Backfill Material BENTONITE GROUT

Surface Conditions SILTY CLAY If "No" explain

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	q_p (tsf)	PID (PPM) eV LAMP 10.6 __ 11.7 __	CHEMICAL	GEOTECHNICAL	SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
7	CS	60		2.25						695.00		SILTY CLAY (CL); Dark gray (10YR 4/1), very stiff, moist, trace gravel	
									32				
				2.25									
				2.0					34				
8	CS	60											
				2.75					36				
				3.0					38				
				3.0									
9	CS	60							40				
				2.5									
									42				
				2.5									
									44				
10	CS	60		2.75									
									46				
				2.5									
									48				
				2.5									
11	CS	55								676.00		SAND & GRAVEL; Dark gray (10YR 4/1), moist, fine to coarse sand w/gravel	
									50				
												grades saturated	
									52				
												grades trace clay	
12	CS	40							54				
									56				
									58				
												~~grades w/clay~~	
13	CS	49											

CAD DWG NO:91118784 EMPLOYEE NO: 89525 DATE/TIME: 03/11/03 13:20 ACAD-15.

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

Project Name CLINTON LANDFILL, INC. Sheet 3 of 4

Project Location CLINTON, IL. Project No. 91-118

Boring No. EX-18 Surface Elev. 725.0' Boring Type HSA Completion Depth 99.5'

Coordinates: (X) N 3693.60 (Y) E 8249.50 Drilling Contractor SKS ENGINEERS, INC.

Date Started 01/16/03 Date Completed 01/21/03 Driller TODD SKINNER Rig No. MOBILE B-57

Logged By JOHN BERRY Backfilled (Y/N) Y Backfill Material BENTONITE GROUT

Surface Conditions SILTY CLAY If "No" explain

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	q_u (tsf)	PID (PPM) eV LAMP 10.6 __ 11.7 __	CHEMICAL	GEOTECHNICAL	SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
13	CS	49								665.00		SAND & GRAVEL (SP); Dark gray (10YR 4/1), saturated, fine to coarse sand, w/clay	
									62				
									64				
14	CS	43											
									66				
									68				
										656.00			
5	CS	57		+4.0					70			SILTY CLAY (CL); Dark gray (10YR 4/1), hard, moist, trace gravel	
				+4.0					72				
				+4.0					74				
16	CS	58											
				+4.0					76				
						■							TOC Sample @ 649.1
				+4.0					78				
17	CS	60											
				+4.0					80			grades damp	
				+4.0					82				
						■			84				TOC Sample @ 641.1
18	CS	52		+4.0						640.30		SANDY CLAY (CL); Dark gray (10YR 4/1), stiff, moist	
				1.5						639.50			
				1.0					86			CLAYEY SILT (ML); Dark gray (10YR 4/1), stiff, moist to wet, trace fine sand	
				1.25		■							TOC Sample @ 638.1
				1.25					88				
										636.00		SILTY CLAY (CL); Dark gray (10YR 4/1), very stiff, moist, trace gravel	
19	CS	55		2.25									

CAD DWG NO:91118785 EMPLOYEE NO: 89525 DATE/TIME: 03/11/03 13:27 ACAD-15.

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

Project Name CLINTON LANDFILL, INC. Sheet 4 of 4

Project Location CLINTON, IL. Project No. 91-118

Boring No. EX-18 Surface Elev. 725.0' Boring Type HSA Completion Depth 99.5'

Coordinates: (X) N 3693.60 (Y) E 8249.50 Drilling Contractor SKS ENGINEERS, INC.

Date Started 01/16/03 Date Completed 01/21/03 Driller TODD SKINNER Rig No. MOBILE B-57

Logged By JOHN BERRY Backfilled (Y/N) Y Backfill Material BENTONITE GROUT

Surface Conditions SILTY CLAY If "No" explain

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	q_u (tsf)	PID (PPM) eV LAMP 10.6 __ 11.7 __	CHEMICAL	GEOTECHNICAL	SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
19	CS	55								635.00		SILTY CLAY (CL); Dark gray (10YR 4/1), firm, moist, trace gravel	
				0.75						633.50		CLAYEY SILT (ML); Dark gray (10YR 4/1), moist to wet, trace fine sand	
									92			grades mottled brown, w/organics	
				1.0		■							TOC Sample @ 632.10
									94	631.00		CLAYEY SAND (SC); Dark gray (10YR 4/1), moist to wet, trace gravel	
20	CS	48								630.00		SILTY CLAY (CL); Dark gray (10YR 4/1), hard, moist, trace gravel	
				+4.0									
									96				
				+4.0									
				+4.0					98				
										625.50		End of boring @99.5'	
									100				
									102				
									104				
									106				
									108				
									110				
									112				
									114				
									116				
									118				

CAD DWG NO:91118786 EMPLOYEE NO: 89525 DATE/TIME: 03/11/03 13:18 ACAD-15.

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

oject Name CLINTON LANDFILL, INC. Sheet 1 of 3

oject Location CLINTON, IL. Project No. 91-118

Boring No. EX-19 Surface Elev. 718.4 Boring Type HSA Completion Depth 84.0'

Coordinates: (X) N 2925.20 (Y) E 7753.10 Drilling Contractor SKS ENGINEERS, INC.

Date Started 01/21/03 Date Completed 01/27/03 Driller TODD SKINNER Rig No. MOBILE B-57

Logged By JOHN BERRY Backfilled (Y/N) N Backfill Material

Surface Conditions SILTY CLAY (BARE GROUND) If "No" explain INSTALLED MONITORING WELL EX-19

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	q_p (tsf)	PID (PPM) eV LAMP 10.6 __ 11.7 __	CHEMICAL	GEOTECHNICAL	SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
1	CS	48								717.40		CLAYEY SILT (ML); Dark brown (10YR 2/2), moist, w/root fragments	
				1.75					2			SILTY CLAY (CL); Yellowish brown (10YR 5/6), stiff, moist, w/root fragments	
				2.0					4				
2	CS	60								713.40			
				2.5								SILTY CLAY (CL); Dark yellowish brown (10YR 4/4), very stiff, moist, trace gravel	
				2.25					6				
				2.25					8				
3	CS	60											
				2.5					10				
												grades mottled gray	
				2.25					12				
				1.25						705.40		SILTY CLAY (CL); Dark gray (10YR 4/1), stiff, moist, trace gravel	
4	CS	60							14				
				1.75									
									16				
				1.75									
									18				
5	CS	60		1.75									
									20				
				1.75									
									22				
				3.25								grades very stiff	
6	CS	60		1.25					24	693.90		CLAYEY SILT (ML); Dark gray (10YR 4/1), stiff, moist, trace fine sand	
				1.0					26				
				1.0									
				+4.0					28				
										689.80		SILTY CLAY (CL); Dark gray (10YR 4/1), hard, moist, trace gravel	
7	CS	60											

CAD DWG NO:91118813 EMPLOYEE NO: 89525 DATE/TIME: 03/06/03 14:53 ACAD-15.

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

Project Name CLINTON LANDFILL, INC. Sheet 2 of 3
Project Location CLINTON, IL. Project No. 91-118
Boring No. EX-19 Surface Elev. 718.4 Boring Type HSA Completion Depth 84.0'
Coordinates: (X) N 2925.20 (Y) E 7753.10 Drilling Contractor SKS ENGINEERS, INC.
Date Started 01/21/03 Date Completed 01/27/03 Driller TODD SKINNER Rig No. MOBILE B-57
Logged By JOHN BERRY Backfilled (Y/N) N Backfill Material
Surface Conditions SILTY CLAY (BARE GROUND) If "No" explain INSTALLED MONITORING WELL EX-19

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	q_u (tsf)	PID (PPM) eV LAMP 10.6 __ 11.7 __	CHEMICAL	GEOTECHNICAL	SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
7	CS	60		+4.0						688.40		SILTY CLAY (CL); Dark gray (10YR 4/1), hard, moist, trace gravel	
									32	686.40		CLAYEY SILT (ML); Dark gray (10YR 4/1), hard, moist	
				+4.0						685.65		SILTY CLAY (CL); Dark gray (10YR 4/1), hard, moist, trace gravel	
				+4.0					34			grades very stiff	
8	CS	60		3.25									
									36				
				2.5									
									38				
				2.25								grades stiff	
	CS	60		1.25					40				
				1.25					42				
				1.25					44				
10	CS	60											
									46				
	ST	12											
									48				
				+4.0								grades hard	
11	CS	60		3.0					50				
				1.25								1" silty sand seam, loose @ 666.4	
									52	666.40		CLAYEY SILT (ML); Brown (10YR 5/1), stiff, moist, w/organics	
				3.0						664.90		PEAT (Pt); Brown (10YR 4/3), stiff, moist, w/wood fragments	
12	CS	F							54				TOC Sample @ 663.0
				2.75					56				
										661.40		SILTY CLAY (CL); Gray (10YR 4/2), stiff, moist, trace organics	
				1.5					58	659.90		SILTY CLAY (CL); Blue gray (Gley 2 5/5B), stiff, moist, trace gravel	
13	CS	F		1.0									

CAD DWG NO:91118814 EMPLOYEE NO: 89525 DATE/TIME: 03/06/03 14:36 ACAD-15.

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

Project Name CLINTON LANDFILL, INC. Sheet 3 of 3
Project Location CLINTON, IL. Project No. 91-118
Boring No. EX-19 Surface Elev. 718.4 Boring Type HSA Completion Depth 84.0'
Coordinates: (X) N 2925.20 (Y) E 7753.10 Drilling Contractor SKS ENGINEERS, INC.
Date Started 01/21/03 Date Completed 01/27/03 Driller TODD SKINNER Rig No. MOBILE B-57
Logged By JOHN BERRY Backfilled (Y/N) N Backfill Material
Surface Conditions SILTY CLAY (BARE GROUND) If "No" explain INSTALLED MONITORING WELL EX-19

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	q_u (tsf)	PID (PPM) eV LAMP 10.6 __ 11.7 __	CHEMICAL	GEOTECHNICAL SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
13	CS	F							658.40		SILTY CLAY (CL); Blue gray (Gley 2 5/5B), stiff, moist, trace gravel	
				1.5				62			grades blue green	
				0.5				64			grades soft	
14	CS	60		+4.0					653.90		CLAYEY SILT (ML); Blue gray (Gley 2 5/5B), hard, moist, trace organics	
				+4.0				66				
									651.40		SILTY CLAY (CL); Gray (10YR 4/1), hard, moist, trace gravel	
				+4.0				68				
15	CS	60		+4.0								
								70				
				+4.0								
								72			grades trace organics	
									645.80		CLAYEY SILT (ML); Gray (10YR 5/1), hard, moist, trace gravel	TOC Sample @ 646.0
				+4.0					645.10			
16	CS	30		+4.0				74			SILTY CLAY (CL); Gray (10YR 5/1), hard, moist, trace gravel	
								76				
									640.90			
								78	640.40		SAND (SP); Gray (10YR 4/1), loose, moist, fine grained, trace gravel	
17	CS	30									CLAYEY SILT (ML); Gray (10YR 5/1), soft, wet, trace fine sand	
								80	638.40		SAND (SP); Mottled brown (10YR 4/1 + 5/1), loose, saturated, trace gravel, trace clay	
									637.40		SILTY CLAY (CL); Gray (10YR 5/1), hard, moist, trace gravel	
								82				
								84	634.40		End of boring @ 84.0'	
								86				
								88				

CAD DWG NO:91118815 EMPLOYEE NO: 89525 DATE/TIME: 03/06/03 14:36 ACAD-15.

PDC TECHNICAL SERVICES, INC.
WELL COMPLETION REPORT

Project #: 91-118 Project Location: CLINTON, IL. Well #: EX-19

Project Name: CLINTON LANDFILL, INC. Borehole #: EX-19

State Plane Coordinate: (X) N 2925.20 (Y) E 7753.10 (or) Latitude: ___ ' ___ ' ___ " Longitude: ___ ' ___ ' ___ "

Surveyed By: SKS ENGINEERS, INC. ILL. Registration #:

Drilling Contractor: SKS ENGINEERS, INC. Driller: TODD SKINNER

Drilling Method: HOLLOW STEM AUGER Drilling Fluids (type): NONE

Logged By: J. BERRY Date Started: 01/21/03 Date Finished: 01/27/03

Notes:

Annular Space Details

Type of Surface Seal: CONCRETE

Type of Annular Sealant: BENSEAL

Installation Method: TREMIE PIPE

Type of Bentonite Seal: SLURRY
(Granular, Pellet, Slurry)

Installation Method: TREMIE

Setting Time: 30 MINUTES

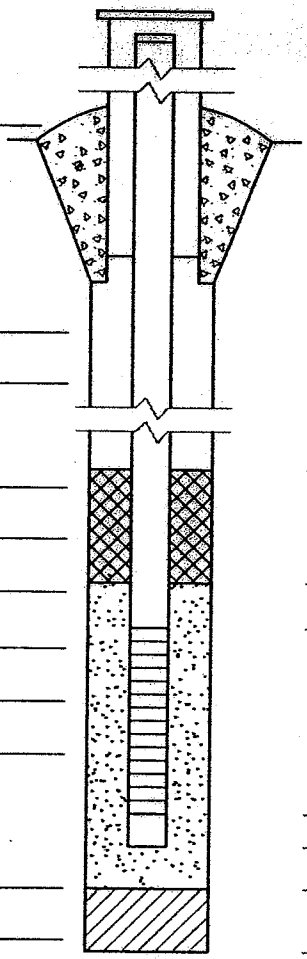
Type of Sand Pack: SILICA SAND

Grain Size: 40 MESH

Installation Method: POURED

Type of Backfill Material: SILICA SAND
(If Applicable)

Installation Method: POURED



Elevations (MSL-referenced to a National Geodetic Vertical Datum)	Depths (Feet above or below ground surface to .01 feet)	
721.30	2.90	Top of Protective Casing
720.98	2.58	Top of Riser Pipe
718.40	0.00	Ground Surface
715.40	3.00	Top of annular sealant
649.90	68.50	Top of Seal
647.00	71.40	Top of Sand Pack
644.22	74.18	Top of Screen
634.44	83.96	Bottom of Screen
634.40	84.00	Bottom of Well
		Top of Backfill (If Applicable)
634.40	84.00	Bottom of Borehole

Well Construction Materials

	SS304	SS316	PTFE	PVC	Other
Protective casing					4" SQ. STEEL
Riser pipe from 0.00 to 63.87 (feet below ground surface)				X	
Riser pipe from 63.87 to 74.18 (feet below ground surface)	X				
Screen					

Casing Measurements

Diameter of borehole (in)	8.00
ID of riser pipe (in)	2.00
Protective casing length (ft)	5.00
Riser pipe length (ft) (Include stickup)	76.76
Screen length (1st slot to last slot, ft)	9.78
Bottom of screen to end cap (ft)	0.04
Total length of casing (riser+screen+end cap) (ft)	86.58
Screen slot size	10 SLOT

CAD DWG NO:91118827 EMPLOYEE NO: 89525 DATE/TIME: 03/07/03 13:26 ACAD-15.

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

Project Name CLINTON LANDFILL, INC. Sheet 1 of 2

Project Location CLINTON, IL. Project No. 91-118

Boring No. EX-20 Surface Elev. 673.5' Boring Type HSA Completion Depth 43.0'

Coordinates: (X) N 2401.08 (Y) E 8527.68 Drilling Contractor SKS ENGINEERS, INC.

Date Started 01/31/03 Date Completed 02/03/03 Driller TODD SKINNER Rig No. MOBILE B-57

Logged By M. KUHN Backfilled (Y/N) N Backfill Material

Surface Conditions TOPSOIL If "No" explain INSTALLED MONITORING WELL EX-20

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	q_p (tsf)	PID (PPM) eV LAMP 10.6 __ 11.7 __	CHEMICAL	GEOTECHNICAL	SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
1	CS	48		2.5					0			SILTY CLAY (CL); Brown (10YR 4/2), very stiff, damp, trace gravel	
				+4.0					2			grades hard	
				+4.0									
2	CS	60		+4.0					4				
										668.00			
				2.0					6			CLAYEY SILT (ML); Gray (10YR 4/1), mottled brown (10 YR 4/2), stiff, damp, trace organics	
										666.00			
				1.5					8			SILTY CLAY (CL); Brown (10YR 4/2), stiff, damp, trace gravel, trace organics	
3	CS	60		1.25		■				664.00			TOC Sample @ 664.0
									10			SILTY CLAY (CL); Greenish gray (Gley 2 4/1), stiff, damp, trace gravel	
				1.25									
									12				
				2.0									
4	CS	60		1.0					14				
				1.25					16				
										656.70		SAND (SP); Gray (10YR 5/1), loose, moist	
										655.80			
				2.0					18			SILTY CLAY (CL); Gray (10YR 5/1), stiff, damp, trace gravel	
5	CS	60		1.5									
									20	653.50		CLAYEY SILT (ML); Gray (10YR 5/1), hard, damp, trace gravel	
				+4.0									
									22				
				+4.0									
6	CS	34		+4.0					24				
				+4.0					26				
									28				
7	CS	42		+4.0		■							TOC Sample @ 645.0

CAD DWG NO:91118808 EMPLOYEE NO: 89525 DATE/TIME: 03/06/03 15:22 ACAD-15.

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

Project Name CLINTON LANDFILL, INC. Sheet 2 of 2

Project Location CLINTON, IL. Project No. 91-118

Boring No. EX-20 Surface Elev. 673.5' Boring Type HSA Completion Depth 43.0'

Coordinates: (X) N 2401.08 (Y) E 8527.68 Drilling Contractor SKS ENGINEERS, INC.

Date Started 01/31/03 Date Completed 02/03/03 Driller TODD SKINNER Rig No. MOBILE B-57

Logged By M. KUHN Backfilled (Y/N) N Backfill Material

Surface Conditions TOPSOIL If "No" explain INSTALLED MONITORING WELL EX-20

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	q_u (tsf)	PID (PPM) eV LAMP 10.6 __ 11.7 __	CHEMICAL	GEOTECHNICAL	SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
7				+4.0						643.50		CLAYEY SILT (ML); Gray (10YR 5/1), hard, damp, trace gravel, trace sand	
									32				
				3.0								grades very stiff	
									34				
8	CS	60		2.5								grades moist	
									36				
				2.25									
									38				
				3.0									
9	CS	38								634.00		SAND (SW); Gray (10YR 4/1), loose, wet	
									40				
										632.00		CLAYEY SILT (ML); Gray (10YR 4/1), hard, damp, trace gravel	
				+4.0					42	630.50		End of boring @43.0'	
									44				
									46				
									48				
									50				
									52				
									54				
									56				
									58				

CAD DWG NO:91118809 EMPLOYEE NO: 89525 DATE/TIME: 03/06/03 15:40 ACAD-15.

PDC TECHNICAL SERVICES, INC.
WELL COMPLETION REPORT

Project #: 91-118 Project Location: CLINTON, IL. Well #: EX-20

Project Name: CLINTON LANDFILL, INC. Borehole #: EX-20

State Plane Coordinate: (X) N 2401.08 (Y) E 8527.68 (or) Latitude: ___ ' ___ ' _____ " Longitude: ___ ' ___ ' _____ "

Surveyed By: SKS ENGINEERS, INC. ILL. Registration #: _____

Drilling Contractor: SKS ENGINEERS, INC. Driller: TODD SKINNER

Drilling Method: HOLLOW STEM AUGER Drilling Fluids (type): NONE

Logged By: M. KUHN Date Started: 01/31/03 Date Finished: 02/03/03

Notes: _____

Annular Space Details

Type of Surface Seal: CONCRETE

Type of Annular Sealant: BENSEAL

Installation Method: TREMIE PIPE

Type of Bentonite Seal: SLURRY
(Granular, Pellet, Slurry)

Installation Method: TREMIE

Setting Time: 30 MINUTES

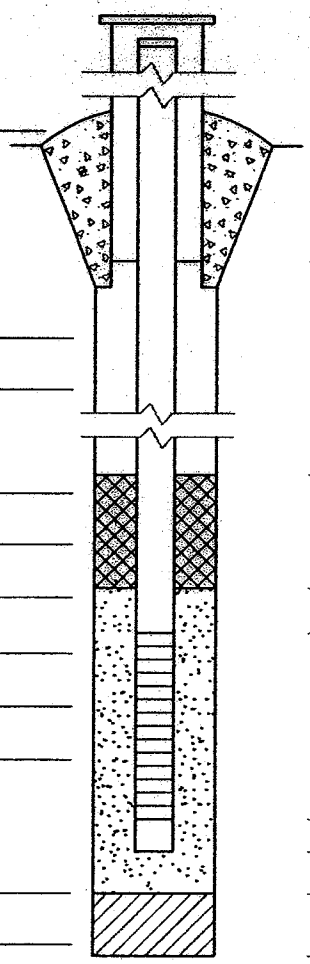
Type of Sand Pack: SILICA SAND

Grain Size: 40 MESH

Installation Method: POURED

Type of Backfill Material: SILICA SAND
(If Applicable)

Installation Method: POURED



Elevations (MSL-referenced to a National Geodetic Vertical Datum)	Depths (Feet above or below ground surface to .01 feet)	
676.47	2.97	Top of Protective Casing
676.18	2.68	Top of Riser Pipe
673.50	0.00	Ground Surface
670.50	3.00	Top of annular sealant
647.00	26.50	Top of Seal
644.00	29.50	Top of Sand Pack
641.11	32.39	Top of Screen
631.34	42.16	Bottom of Screen
631.00	42.50	Bottom of Well
631.00	42.50	Top of Backfill (If Applicable)
630.50	43.00	Bottom of Borehole

Well Construction Materials

	SS304	SS316	PTFE	PVC	Other
Protective casing					4" SQ. STEEL
Riser pipe from 0.00 to 12.10 (feet below ground surface)				X	
Riser pipe from 12.10 to 32.39 (feet below ground surface)	X				
Screen	X				

Casing Measurements

Diameter of borehole (in)	8.00
ID of riser pipe (in)	2.00
Protective casing length (ft)	5.00
Riser pipe length (ft) (Include stickup)	35.07
Screen length (1st slot to last slot, ft)	9.77
Bottom of screen to end cap (ft)	0.34
Total length of casing (riser+screen+end cap) (ft)	45.18
Screen slot size	10 SLOT

CAD DWG NO:91118828 EMPLOYEE NO: 89525 DATE/TIME: 03/07/03 13:35 ACAD-15.

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

Sheet 1 of 3

ject Name CLINTON LANDFILL, INC. Project No. 91-118

ject Location CLINTON, IL.

Boring No. EX-21 Surface Elev. 701.0' Boring Type HSA Completion Depth 67.4'

Coordinates: (X) N 2202.60 (Y) E 9192.47 Drilling Contractor SKS ENGINEERS, INC.

Date Started 01/29/03 Date Completed 01/30/03 Driller TODD SKINNER Rig No. MOBILE B-57

Logged By M. KUHN Backfilled (Y/N) N Backfill Material

Surface Conditions TOPSOIL If "No" explain INSTALLED MONITORING WELL EX-21

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	q, (tsf)	PID (PPM) eV LAMP 10.6 __ 11.7 __	CHEMICAL	GEOTECHNICAL SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
1	CS	54									CLAYEY SILT (ML); Brownish orange (7.5YR 4/4), stiff, damp, trace organics, trace sand	
				2.0				2				
				+4.0							grades hard	
2	CS	60		4.0				4				
				2.5				6			2" sand lense; Brown (7.5 YR 4/2), loose, damp @ 693.9	
				2.0				8	693.25		SILTY CLAY (CL); Brown-orange (7.5YR 4/4), very stiff, damp, trace gravel, trace sand	
3	CS	30		2.5				10				
				2.5				12				TOC Sample @ 690.0
4	CS	30						14				
				2.5				16				
				3.0				18				
5	CS	60		3.0				20	681.50		SILTY CLAY (CL); Gray (10YR 5/2), very stiff, damp, trace gravel	
				2.0				22				
				2.5				24	677.00			
6	CS	60		+4.0					676.50		SAND (SP); Orange (7.5YR 4/2), loose, moist, trace gravel (fine grained)	
				4.0				26			SILTY CLAY (CL); Gray (10YR 4/1), hard, moist, trace gravel, trace sand	TOC Sample @ 675.0
				+4.0				28				
7	CS	28										

CAD DWG NO:91118810 EMPLOYEE NO: 89525 DATE/TIME: 03/06/03 15:55 ACAD-15.

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

Project Name CLINTON LANDFILL, INC. Sheet 2 of 3
Project Location CLINTON, IL. Project No. 91-118
Boring No. EX-21 Surface Elev. 701.0' Boring Type HSA Completion Depth 67.4'
Coordinates: (X) N 2202.60 (Y) E 9192.47 Drilling Contractor SKS ENGINEERS, INC.
Date Started 01/29/03 Date Completed 01/30/03 Driller TODD SKINNER Rig No. MOBILE B-57
Logged By M. KUHN Backfilled (Y/N) N Backfill Material
Surface Conditions TOPSOIL If "No" explain INSTALLED MONITORING WELL EX-21

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	q_u (tsf)	PID (PPM) eV LAMP 10.6 __ 11.7 __	CHEMICAL	GEOTECHNICAL	SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
7										670.50		SILTY CLAY (CL); Gray (10YR 4/1), hard, moist, trace gravel, trace sand	
				1.75					32			CLAYEY SILT (ML); Dark gray (10YR 3/1), stiff, damp, trace organics and sand	TOC Sample @ 670.0
				1.0									
8	CS	60		1.0					34				
				1.5					36				
				1.5									
				4.0					38	663.00		SILTY CLAY (CL); Blue green (Gley 2 5/10BG), hard, damp, trace gravel	
	CS	60		+4.0					40				
				+4.0					42				
				3.75						657.50		SILTY CLAY (CL); Gray (10YR 5/1), very stiff, damp, trace gravel	
10	CS	60		2.5					44				
				3.5					46	655.50		CLAYEY SILT (ML); Gray (10YR 5/1), very stiff, damp, trace gravel, trace sand	
				2.5					48				TOC Sample @ 652.0
11	CS	60		2.5									
									50	650.00		SILTY SAND (SM); Gray (10YR 5/1), loose, moist	
				+4.0					52				
12	CS	60		+4.0					54	647.40		CLAYEY SILT (ML); Gray (10YR 5/1), hard, damp, trace gravel, trace sand	
				+4.0					56				
				4.0					58				TOC Sample @ 643.0
13	CS	48											

CAD DWG NO:91118811 EMPLOYEE NO: 89525 DATE/TIME: 03/06/03 15:34 ACAD-15.

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

Sheet 3 of 3

Project Name CLINTON LANDFILL, INC. Project No. 91-118

Project Location CLINTON, IL.

Boring No. EX-21 Surface Elev. 701.4 Boring Type HSA Completion Depth 67.4'

Coordinates: (X) N (Y) E Drilling Contractor SKS ENGINEERS, INC.

Date Started 01/29/03 Date Completed 01/30/03 Driller TODD SKINNER Rig No. MOBILE B-57

Logged By M. KUHN Backfilled (Y/N) N Backfill Material

Surface Conditions TOPSOIL If "No" explain INSTALLED MONITORING WELL EX-21

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	q_u (tsf)	PID (PPM) eV LAMP 10.6 ___ 11.7 ___	CHEMICAL	GEOTECHNICAL SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
13									641.40		CLAYEY SILT (ML); Gray (10YR 5/1), hard, damp, trace gravel, trace sand	
									640.40		SAND (SP); Gray (10YR 5/1), loose, wet, trace gravel	
								62				
								64				
14	CS	36		+4.0					637.00		CLAYEY SILT (ML); Gray (10YR 5/1), hard, damp, trace gravel, trace sand	
								66				
				+4.0					634.00		End of boring @67.4'	
								68				
								70				
								72				
								74				
								76				
								78				
								80				
								82				
								84				
								86				
								88				

CAD DWG NO:91118812 EMPLOYEE NO: 9834 DATE/TIME: 02/27/03 10:11 ACAD-15.

PDC TECHNICAL SERVICES, INC.
WELL COMPLETION REPORT

oject #: 91-118 Project Location: CLINTON, IL. Well #: EX-21

Project Name: CLINTON LANDFILL, INC. Borehole #: EX-21

State Plane Coordinate: (X) N 2202.60 (Y) E 9192.47 (or) Latitude: ___ ' ___ " Longitude: ___ ' ___ "

Surveyed By: SKS ENGINEERS, INC. ILL. Registration #: ___

Drilling Contractor: SKS ENGINEERS, INC. Driller: TODD SKINNER

Drilling Method: HOLLOW STEM AUGER Drilling Fluids (type): NONE

Logged By: M. KUHN Date Started: 01/30/03 Date Finished: 01/30/03

Notes: ___

Annular Space Details

Type of Surface Seal: CONCRETE

Type of Annular Sealant: BENSEAL

Installation Method: TREMIE PIPE

Type of Bentonite Seal: SLURRY
(Granular, Pellet, Slurry)

Installation Method: TREMIE

Setting Time: 30 MINUTES

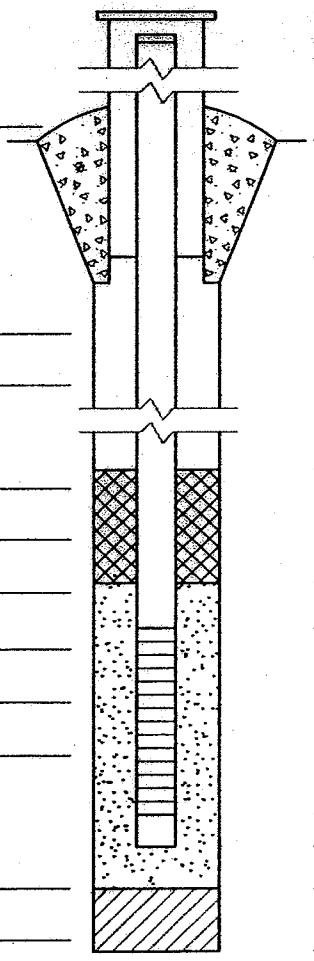
Type of Sand Pack: SILICA SAND

Grain Size: 40 MESH

Installation Method: POURED

Type of Backfill Material: SILICA SAND
(If Applicable)

Installation Method: POURED



Elevations (MSL-referenced to a Notional Geodetic Vertical Datum)	Depths (Feet above or below ground surface to .01 feet)	
704.17	3.17	Top of Protective Casing
703.84	2.84	Top of Riser Pipe
701.00	0.00	Ground Surface
698.00	3.00	Top of annular sealant
649.50	51.50	Top of Seal
646.50	54.50	Top of Sand Pack
643.88	57.12	Top of Screen
634.24	66.76	Bottom of Screen
634.20	66.80	Bottom of Well
634.20	66.80	Top of Backfill (If Applicable)
633.60	67.40	Bottom of Borehole

Well Construction Materials

	SS304	SS316	PTFE	PVC	Other
rotective casing					4" SQ. STEEL
Riser pipe from 0.00 to 36.85 (feet below ground surface)				X	
Riser pipe from 36.85 to 57.12 (feet below ground surface)	X				
Screen	X				

Casing Measurements

Diameter of borehole (in)	8.00
ID of riser pipe (in)	2.00
Protective casing length (ft)	5.00
Riser pipe length (ft) (Include stickup)	59.96
Screen length (1st slot to last slot, ft)	9.64
Bottom of screen to end cap (ft)	0.04
Total length of casing (riser+screen+end cap) (ft)	69.64
Screen slot size	10 SLOT

CAD DWG NO:91118829 EMPLOYEE NO: 89525 DATE/TIME: 03/07/03 13:17 ACAD-15.

PDC TECHNICAL SERVICES, INC.
WELL COMPLETION REPORT

Project #: 91-118 Project Location: CLINTON, ILLINOIS Well #: EX-21S

Project Name: CLINTON LANDFILL, INC. Borehole #: EX-21S

State Plane Coordinate: (X) N 2196.90 (Y) E 9198.08 (or) Latitude: ° ' " Longitude: ° ' "

Surveyed By: SKS ENGINEERS, INC. ILL. Registration #:

Drilling Contractor: SKS ENGINEERS, INC. Driller: DAVE BALDWIN

Drilling Method: HOLLOW STEM AUGER Drilling Fluids (type): N/A

Logged By: J. BERRY Date Started: 10/6/2003 Date Finished: 10/7/2003

Notes:

Annular Space Details

Type of Surface Seal: CONCRETE

Type of Annular Sealant: BENSEAL SLURRY

Installation Method: TREMIE

Type of Bentonite Seal: SLURRY
(Granular, Pellet, Slurry)

Installation Method: TREMIE

Setting Time: 30 MINUTES

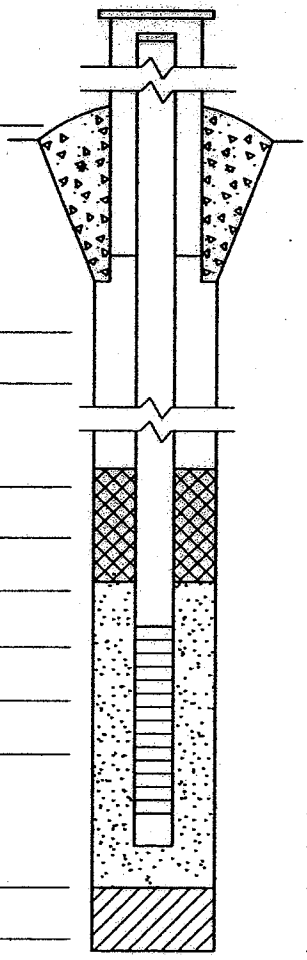
Type of Sand Pack: SILICA SAND

Grain Size: 40 MESH

Installation Method: POURED

Type of Backfill Material: SILICA SAND
(If Applicable)

Installation Method: POURED



Elevations (MSL-referenced to a National Geodetic Vertical Datum)	Depths (Feet above or below ground surface to .01 feet)	
703.47	3.07	Top of Protective Cas
703.14	2.74	Top of Riser Pipe
700.4	0.00	Ground Surface
697.4	3.0	Top of annular sealan
656.9	43.50	Top of Seal
654.90	45.50	Top of Sand Pack
652.83	47.57	Top of Screen
643.13	57.27	Bottom of Screen
642.79	57.61	Bottom of Well
642.79	57.61	Top of Backfill (If Applicable)
642.40	58.00	Bottom of Borehole

Well Construction Materials

	SS304	SS316	PTFE	PVC	Other
Protective casing					4" SQ. STEEL
Riser pipe from 0.00 to 37.32 (feet below ground surface)				X	
Riser pipe from 37.32 to 47.57 (feet below ground surface)	X				
Screen	X				

Casing Measurements

Diameter of borehole (in)	8.00
ID of riser pipe (in)	2.0
Protective casing length (ft)	5.0
Riser pipe length (ft) (include stickup)	50.08
Screen length (1st slot to last slot, ft)	9.70
Bottom of screen to end cap (ft)	0.34
Total length of casing (riser+screen+end cap) (ft)	60.35
Screen slot size	.010

CAD DWG NO:91118891 EMPLOYEE NO: 89736 DATE/TIME: 10/24/03 14:32 ACAD-15.

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

Project Name CLINTON LANDFILL, INC. Sheet 1 of 2

Project Location CLINTON, IL. Project No. 91-118

Boring No. EX-22D Surface Elev. 667.10' Boring Type HSA Completion Depth 41.0'

Coordinates: (X) N 2257.44 (Y) E 10128.22 Drilling Contractor SKS ENGINEERS, INC.

Date Started 01/28/03 Date Completed 01/29/03 Driller TODD SKINNER Rig No. MOBILE B-57

Logged By M. KUHN Backfilled (Y/N) N Backfill Material

Surface Conditions TOPSOIL If "No" explain INSTALLED MONITORING WELL EX-22D

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	q_u (tsf)	PID (PPM) eV LAMP 10.6 __ 11.7 __	CHEMICAL / GEOTECHNICAL SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
1	CS	48		2.0						CLAYEY SILT (ML); Dark brown (10YR 3/3), very stiff, trace organics & root fragments	
							2	665.40		SILTY CLAY (CL); Brown (10YR 5/1), very stiff, damp, trace root fragments	
				2.25							
							4			grades soft	
2	CS	38		0.5							
							6			grades firm	TOC Sample @ 660.0
				0.75							
							8				
	CS	46		0.75							
							10				
				2.0				656.30		SILTY CLAY (CL); Gray (Gley 2 5/5BG), mottled brown (10YR 5/1), stiff, damp, trace fine sand	TOC Sample @ 655.0
							12				
								653.90		SAND (SP); Gray (Gley 2 5/5BG), loose, wet, w/coarse gravel	
4	CS	58					14				
							16	651.10		CLAYEY SAND (SC); Gray (Gley 2 5/5BG), dense, damp, trace gravel	
				3.5			18	648.60		SILTY CLAY (CL); Gray (Gley 2 5/5BG), very stiff, moist, trace gravel	TOC Sample @ 648.0
5	CS	60									
				3.0			20				
				3.5			22				TOC Sample @ 644.0
6	CS	60		+4.0			24			grades hard	
				+4.0			26				
				+4.0			28				
7	CS	38		+4.0							

CAD DWG NO:91118816 EMPLOYEE NO: 89525 DATE/TIME: 03/06/03 15:06 ACAD-15.

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

Project Name CLINTON LANDFILL, INC. Sheet 2 of 2

Project Location CLINTON, IL. Project No. 91-118

Boring No. EX-22D Surface Elev. 667.10' Boring Type HSA Completion Depth 41.0'

Coordinates: (X) N 2257.44 (Y) E 10128.22 Drilling Contractor SKS ENGINEERS, INC.

Date Started 01/28/03 Date Completed 01/29/03 Driller TODD SKINNER Rig No. MOBILE B-57

Logged By M. KUHN Backfilled (Y/N) N Backfill Material

Surface Conditions TOPSOIL If "No" explain INSTALLED MONITORING WELL EX-22D

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	q_p (tsf)	PID (PPM) eV LAMP 10.6 __ 11.7 __	CHEMICAL	GEOTECHNICAL SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
7				+4.0					637.10		SILTY CLAY (CL); Gray (Gley 2 5/5BG), hard, moist, trace gravel	
								32				
				+4.0								
								34				
8	CS	60		+4.0								
									631.80		SAND (SP); Gray (Gley 2 5/5BG), loose, wet, trace gravel	
				+4.0				36				
											CLAYEY SILT (ML); Gray (Gley 2 5/5BG), mottled brown (10YR 5/1), stiff, damp, trace sand, trace organics	
				1.0				38	629.10			
									628.30		PEAT (Pt), Brown (10YR 5/1), mottled gray (Gley 2 5/5BG), firm, damp, trace wood frogments	
	CS	24		2.5					627.30			
				2.0				40			SILTY CLAY (CL); Gray (Gley 2 5/5BG), mottled brown (10YR 5/1), very stiff, damp, trace gravel	
									626.10			
											End of boring @41.0'	
								42				
								44				
								46				
								48				
								50				
								52				
								54				
								56				
								58				

CAD DWG NO:91118817 EMPLOYEE NO: 89525 DATE/TIME: 03/06/03 16:11 ACAD-15.

PDC TECHNICAL SERVICES, INC.
WELL COMPLETION REPORT

ject #: 91-118 Project Location: CLINTON, IL. Well #: EX-22D

roject Name: CLINTON LANDFILL, INC. Borehole #: EX-22D

State Plane Coordinate: (X) N 2257.44 (Y) E 10128.22 (or) Latitude: ° ' " Longitude: ° ' "

Surveyed By: SKS ENGINEERS, INC. ILL. Registration #:

Drilling Contractor: SKS ENGINEERS, INC. Driller: TODD SKINNER

Drilling Method: HOLLOW STEM AUGER Drilling Fluids (type): NONE

Logged By: J. BERRY Date Started: 01/28/03 Date Finished: 01/29/03

Notes:

Elevations (MSL-referenced to a Notional Geodetic Vertical Datum)	Depths (Feet above or below ground surface to .01 feet)	
669.44	2.34	Top of Protective Casing
669.14	2.04	Top of Riser Pipe
667.10	0.00	Ground Surface
664.10	3.00	Top of annular sealant
642.10	25.00	Top of Seal
639.10	28.00	Top of Sand Pack
636.97	30.13	Top of Screen
627.24	39.86	Bottom of Screen
626.90	40.20	Bottom of Well
629.90	40.20	Top of Backfill (If Applicable)
626.35	40.75	Bottom of Borehole

Annular Space Details

Type of Surface Seal: CONCRETE

Type of Annular Sealant: BENSEAL

Installation Method: TREMIE PIPE

Type of Bentonite Seal: BENSEAL
(Granular, Pellet, Slurry)

Installation Method: TREMIE

Setting Time: 30 MINUTES

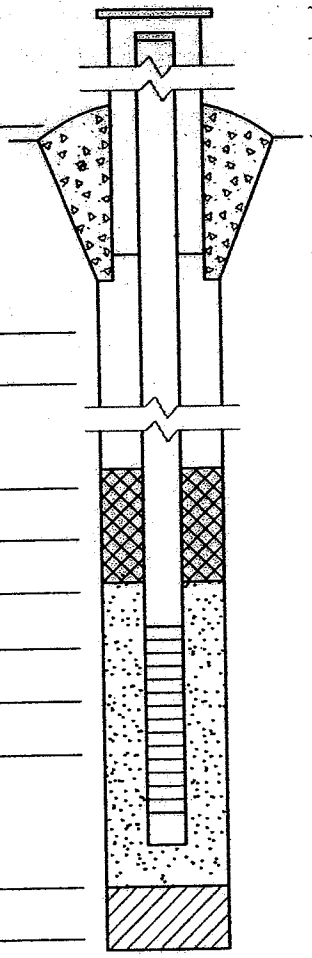
Type of Sand Pack: SILICA SAND

Grain Size: 40 MESH

Installation Method: POURED

Type of Backfill Material: SILICA SAND
(If Applicable)

Installation Method: POURED



Well Construction Materials

	SS304	SS316	PTFE	PVC	Other
rotective cosing					4" SQ. STEEL
Riser pipe from 0.00 to 9.86 (feet below ground surface)					
Riser pipe from 9.86 to 30.13 (feet below ground surface)	X				
Screen	X				

Casing Measurements

Diameter of borehole (in)	8.00
ID of riser pipe (in)	2.00
Protective casing length (ft)	5.00
Riser pipe length (ft) (Include stickup)	32.17
Screen length (1st slot to last slot, ft)	9.73
Bottom of screen to end cap (ft)	0.34
Total length of casing (riser+screen+end cap) (ft)	42.24
Screen slot size	10 SLOT

CAD DWG NO:91118831 EMPLOYEE NO: 89525 DATE/TIME: 03/07/03 14:43 ACAD-15.

PDC TECHNICAL SERVICES, INC.
WELL COMPLETION REPORT

s #: 91-118 Project Location: CLINTON, IL. Well #: EX-22S

ject Name: CLINTON LANDFILL, INC. Borehole #: EX-22S

State Plane Coordinate: (X) N 2264.01 (Y) E 10127.55 (or) Latitude: ___ ' ___ ' ___ " Longitude: ___ ' ___ ' ___ "

Surveyed By: SKS ENGINEERS, INC. ILL. Registration #: ___

Drilling Contractor: SKS ENGINEERS, INC. Driller: TODD SKINNER

Drilling Method: HOLLOW STEM AUGER Drilling Fluids (type): NONE

Logged By: J. BERRY Date Started: 01/28/03 Date Finished: 01/29/03

Notes: ___

Annular Space Details

Type of Surface Seal: CONCRETE

Type of Annular Sealant: BENTONITE PELLET

...llation Method: POURED

Type of Bentonite Seal: PELLET
(Granular, Pellet, Slurry)

Installation Method: POURED

Setting Time: 30 MINUTES

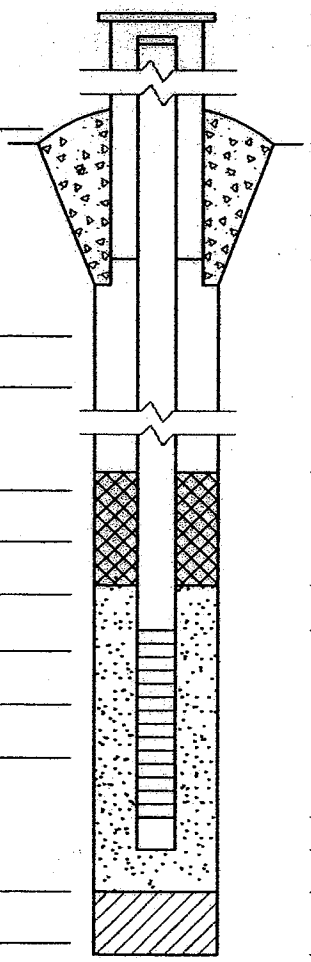
Type of Sand Pack: SILICA SAND

Grain Size: 40 MESH

Installation Method: POURED

Type of Backfill Material: SILICA SAND
(If Applicable)

Installation Method: POURED



Elevations (MSL–referenced to a National Geodetic Vertical Datum)	Depths (Feet above or below ground surface to .01 feet)	
669.70	2.70	Top of Protective Casing
669.33	2.33	Top of Riser Pipe
667.00	0.00	Ground Surface
664.50	3.00	Top of annular sealant
663.00	4.00	Top of Seal
661.00	6.00	Top of Sand Pack
658.95	8.05	Top of Screen
649.18	17.82	Bottom of Screen
648.84	18.16	Bottom of Well
648.84	18.16	Top of Backfill (If Applicable)
648.80	18.20	Bottom of Borehole

Well Construction Materials

	SS304	SS316	PTFE	PVC	Other
...ive casing					4" SQ. STEEL
Riser pipe from 0.00 to 8.05 (feet below ground surface)	X				
Riser pipe from ___ to ___ (feet below ground surface)					
Screen	X				

Casing Measurements

Diameter of borehole (in)	8.00
ID of riser pipe (in)	2.00
Protective casing length (ft)	5.00
Riser pipe length (ft) (include stickup)	10.38
Screen length (1st slot to last slot, ft)	9.77
Bottom of screen to end cap (ft)	0.34
Total length of casing (riser+screen+end cap) (ft)	20.49
Screen slot size	10 SLOT

AD DWG NO:91118830 EMPLOYEE NO: 89525 DATE/TIME: 03/07/03 14:59 ACAD-15.

PDC TECHNICAL SERVICES, INC.
WELL COMPLETION REPORT

Pr #: 91-118 Project Location: CLINTON, IL. Well #: EX-23S

Name: CLINTON LANDFILL, INC. Borehole #: EX-23

State Plane Coordinate: (X) N 3252.74 (Y) E 10306.07 (or) Latitude: ° ' " Longitude: ° ' "

Surveyed By: SKS ENGINEERS, INC. ILL. Registration #:

Drilling Contractor: SKS ENGINEERS, INC. Driller: TODD SKINNER

Drilling Method: HOLLOW STEM AUGER Drilling Fluids (type): NONE

Logged By: J. BERRY Date Started: 01/10/03 Date Finished: 01/14/03

Notes:

Annular Space Details

Type of Surface Seal: CONCRETE

Type of Annular Sealant: BENSEAL

lation Method: TREMIE PIPE

Type of Bentonite Seal: SLURRY
(Granular, Pellet, Slurry)

Installation Method: TREMIE

Setting Time: 35 MINUTES

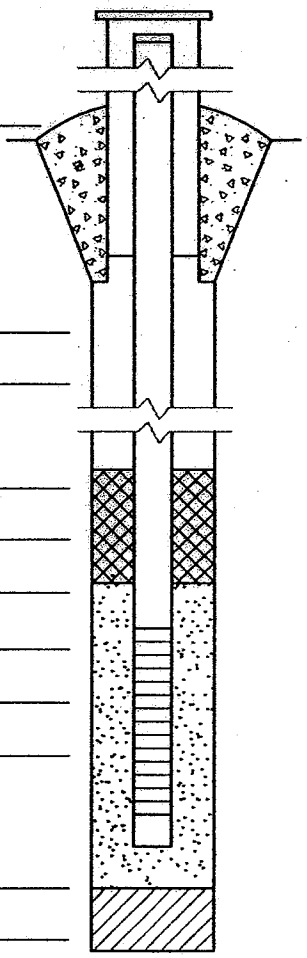
Type of Sand Pack: SILICA SAND

Grain Size: 40 MESH

Installation Method: POURED

Type of Backfill Material: SILICA SAND
(If Applicable)

Installation Method: POURED



Elevations (MSL-referenced to a National Geodetic Vertical Datum)	Depths (Feet above or below ground surface to .01 feet)	
713.70	2.70	Top of Protective Casing
713.28	2.28	Top of Riser Pipe
711.00	0.00	Ground Surface
708.00	3.00	Top of annular sealant
657.01	53.99	Top of Seal
654.01	56.99	Top of Sand Pack
652.01	58.99	Top of Screen
642.34	68.66	Bottom of Screen
642.00	69.00	Bottom of Well
642.00	69.00	Top of Backfill (If Applicable)
640.50	70.5	Bottom of Borehole

Well Construction Materials

	SS304	SS316	PTFE	PVC	Other
e casing					4" SQ. STEEL
ser pipe from 0.00 to 38.83 (feet below ground surface)					
ser pipe from 38.83 to 58.99 (feet below ground surface)	X				
reen	X				

Casing Measurements

Diameter of borehole (in)	8.00
ID of riser pipe (in)	2.00
Protective casing length (ft)	5.00
Riser pipe length (ft) (include stickup)	61.27
Screen length (1st slot to last slot, ft)	9.67
Bottom of screen to end cap (ft)	0.34
Total length of casing (riser+screen+end cap) (ft)	71.28
Screen slot size	10 SLOT

DWG NO:91118832 EMPLOYEE NO: 89525 DATE/TIME: 03/07/03 14:09 ACAD-15.

PDC TECHNICAL SERVICES, INC.
WELL COMPLETION REPORT

ct #: 91-118 Project Location: CLINTON, IL. Well #: EX-23D

ect Name: CLINTON LANDFILL, INC. Borehole #: EX-23D

State Plane Coordinate: (X) N 3259.29 (Y) E 10307.13 (or) Latitude: ° ' " Longitude: ° ' "

Surveyed By: SKS ENGINEERS, INC. ILL. Registration #:

Drilling Contractor: SKS ENGINEERS, INC. Driller: TODD SKINNER

Drilling Method: HOLLOW STEM AUGER Drilling Fluids (type): NONE

Logged By: J. BERRY Date Started: 01/10/03 Date Finished: 01/14/03

Notes:

Annular Space Details

Type of Surface Seal: CONCRETE

Type of Annular Sealant: BENSEAL

Installation Method: TREMIE PIPE

Type of Bentonite Seal: SLURRY
(Granular, Pellet, Slurry)

Installation Method: TREMIE

Setting Time: 30 MINUTES

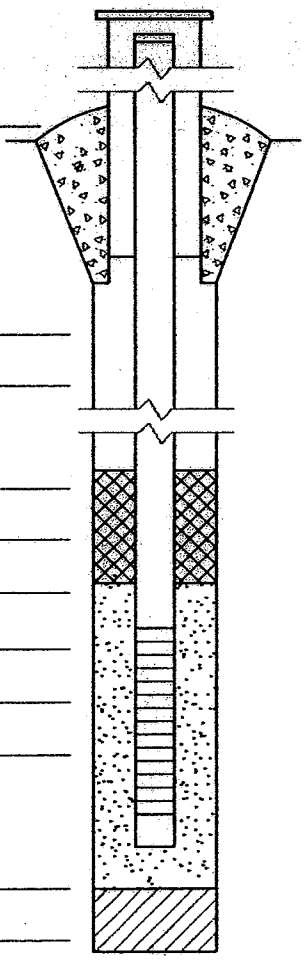
Type of Sand Pack: SILICA SAND

Grain Size: 40 MESH

Installation Method: POURED

Type of Backfill Material: SILICA SAND
(If Applicable)

Installation Method: POURED



Elevations (MSL-referenced to a National Geodetic Vertical Datum)	Depths (Feet above or below ground surface to .01 feet)	
713.80	3.00	Top of Protective Casing
713.41	2.61	Top of Riser Pipe
710.80	0.00	Ground Surface
707.80	3.00	Top of annular sealant
638.30	72.50	Top of Seal
635.30	75.50	Top of Sand Pack
633.41	77.39	Top of Screen
623.72	87.08	Bottom of Screen
623.30	87.50	Bottom of Well
623.30	87.50	Top of Backfill (If Applicable)
622.80	88.00	Bottom of Borehole

Well Construction Materials

	SS304	SS316	PTFE	PVC	Other
ctive casing					4" SQ. STEEL
ser pipe from 0.00 to 37.17 (feet below ground surface)				X	
Riser pipe from 37.17 to 77.39 (feet below ground surface)	X				
Screen	X				

Casing Measurements

Diameter of borehole (in)	8.00
ID of riser pipe (in)	2.00
Protective casing length (ft)	5.00
Riser pipe length (ft) (include stickup)	80.00
Screen length (1st slot to last slot, ft)	9.69
Bottom of screen to end cap (ft)	0.42
Total length of casing (riser+screen+end cap) (ft)	90.11
Screen slot size	10 SLOT

CAD DWG NO:91118833 EMPLOYEE NO: 89525 DATE/TIME: 03/07/03 14:41 ACAD-15.

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

r Name CLINTON LANDFILL, INC. Sheet 1 of 3

Location CLINTON, IL. Project No. 91-118

ing No. EX-23 Surface Elev. 710.8' Boring Type HSA Completion Depth 88.0'

oordinates: (X) N 3259.29 (Y) E 10307.13 Drilling Contractor SKS ENGINEERS, INC.

ate Started 01/10/03 Date Completed 01/14/03 Driller TODD SKINNER Rig No. MOBILE B-57

ogged By JOHN BERRY Backfilled (Y/N) N Backfill Material

urface Conditions PICKED CORN FIELD If "No" explain INSTALLED MONITORING WELL EX-23S

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	q_p (tsf)	PID (PPM) eV LAMP 10.6 __ 11.7 __	CHEMICAL	GEOTECHNICAL	SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
1	CS	48										CLAYEY SILT (ML); Black (10YR 2/1), moist, trace root fragments	
				1.0					2	708.40		SILTY CLAY (CL); Brown (10YR 4/3), stiff, moist, trace root fragments	
2	CS	60		1.5					4				
				1.75					6				
				1.5					8				
	CS	60							10				
				2.0								grades very stiff	
				2.5					12				
				3.0									
4	CS	60							14	696.80		SILTY CLAY (CL); Dark gray (10YR 4/1), very stiff, moist, trace gravel	
				3.5					16				
				4.0					18			grades hard	
				+4.0									
5	CS	60		3.75					20			grades very stiff	
				3.5					22				
				3.75					24				
6	CS	60											
				3.75					26				
				3.5					28				
7	CS	60		2.5									

AD DWG NO:91118791 EMPLOYEE NO: 89525 DATE/TIME: 03/06/03 16:28 ACAD-15.

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

Name CLINTON LANDFILL, INC. Sheet 2 of 3

Location CLINTON, IL. Project No. 91-118

Boring No. EX-23 Surface Elev. 710.8' Boring Type HSA Completion Depth 88.0'

Coordinates: (X) N 3259.29 (Y) E 10307.13 Drilling Contractor SKS ENGINEERS, INC.

Date Started 01/10/03 Date Completed 01/14/03 Driller TODD SKINNER Rig No. MOBILE B-57

Logged By JOHN BERRY Backfilled (Y/N) N Backfill Material

Surface Conditions PICKED CORNFIELD If "No" explain INSTALLED MONITORING WELL EX-23S

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	q_u (tsf)	PID (PPM) eV LAMP 10.6 __ 11.7 __	CHEMICAL	GEOTECHNICAL SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
7				2.5					680.80		SILTY CLAY (CL); Dark gray (10YR 4/1), very stiff, moist	
								32				
				2.5								
				2.5				34				
8	CS	ST										
								36				
				2.0				38	672.80		CLAYEY SILT (ML); Dark gray (10YR 4/1), stiff, moist, w/fine sand	
	S	60		2.0					671.30		SILTY CLAY (CL); Dark gray (10YR 4/1), stiff, moist, trace gravel	
				2.0				40			1" sand @ 41.2'	
				1.75				42	668.80		SILT (ML); Gray (10YR 5/1), moist	
									668.30		PEAT (Pt); Very dark brown (10YR 2/2), stiff, moist, w/clay, layered	
10	CS	60		2.25				44	666.40		SILTY CLAY (CL); Dark gray (10YR 4/1), mottled blue-green, very stiff, moist, very clayey	
				2.25				46				
				2.25				48				
11	CS	60							661.20		SILTY CLAY (CL); Greenish gray (Gley 1 5/5G), very stiff, trace gravel	
				2.5				50				
				2.25				52	658.80		SILTY CLAY (CL); Gray (10YR 5/1), very stiff, moist, trace gravel	
12	CS	F		2.5				54				
				2.5				56				
				2.5				58				
13	CS	ST							651.40		SAND (SW); Gray (10YR 5/1), wet, fine to medium grained	

CAD DWG NO:91118792 EMPLOYEE NO: 89525 DATE/TIME: 03/06/03 16:46 ACAD-15.

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

Name CLINTON LANDFILL, INC. Sheet 3 of 3
Location CLINTON, IL. Project No. 91-118
ring No. EX-23 Surface Elev. 710.8' Boring Type HSA Completion Depth 88.0'
ordinates: (X) N 3259.29 (Y) E 10307.13 Drilling Contractor SKS ENGINEERS, INC.
te Started 01/10/03 Date Completed 01/14/03 Driller TODD SKINNER Rig No. MOBILE B-57
gged By JOHN BERRY Backfilled (Y/N) N Backfill Material
rface Conditions PICKED CORN FIELD If "No" explain INSTALLED MONITORING WELL EX-23S

NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	q_p (tsf)	PID (PPM) eV LAMP 10.6 __ 11.7 __	CHEMICAL	GEOTECHNICAL SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
3	CS	ST							650.80		SAND (SW), Gray (10YR 5/1), wet, fine to medium grained	
				2.5					649.80		SILTY CLAY (CL); Dark gray (10YR 4/1), very stiff, moist, trace gravel	
								62	649.30		SANDY SILT (ML); Dark gray (10YR 4/1), wet to saturated, trace gravel	
									647.80		GRAVELLY CLAY (CL), Dark gray (10YR 4/1), wet, trace sand	
14	CS	48		2.5				64	646.80		SILTY CLAY (CL); Dark gray (10YR 4/1), very stiff, moist	
									645.50		CLAYEY SAND (SC), Dark gray (10YR 4/1), wet to saturated grades to sandy clay, wet + soft @ 643.3'	
				0.5				66				
				0.5				68			SILTY CLAY (CL); Dark gray (10YR 4/1), moist, hard, trace gravel	
		12		+4.0					641.80			
	CS	60		+4.0				70	641.30		CLAYEY SILT (ML); Gray (10YR 5/1), hard, damp, trace sand, trace gravel	
				+4.0				72				
									637.30		SAND (SP); Gray (10YR 5/1), loose, damp, trace gravel	
17	CS	42		+4.0				74	636.70		CLAYEY SILT (ML); Gray (10YR 4/1), hard, damp, trace gravel	
				+4.0				76				
								78	632.80		CLAYEY SILT (ML); Very dark gray (10YR 3/1), mottled black (10YR 2/1), hard, damp, trace gravel, trace organics	
18	CS	54							631.60		SAND (SP); Gray (10YR 4/1), loose, wet, fine grained	
								80				
								82				
									627.30		PEAT (OL); Very dark gray (10YR 3/1), mottled black (10YR 2/1), hard, damp, trace organics	
19	CS	36						84				
								86				
								88	622.80		End of boring @ 88.0'	

CAD DWG NO:91118793 EMPLOYEE NO: 89525 DATE/TIME: 03/07/03 09:52 ACAD-15.

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

Name CLINTON LANDFILL, INC. — Sheet 1 of 4
Location CLINTON, IL. — Project No. 91-118
g No. EX-24 — Surface Elev. 727.4' — Boring Type HSA — Completion Depth 98.0'
ordinates: (X) N 4509.36 (Y) E 10317.42 — Drilling Contractor SKS ENGINEERS, INC.
ate Started 01/08/03 Date Completed 01/10/03 — Driller TODD SKINNER — Rig No. MOBILE B-57
ogged By JOHN BERRY — Backfilled (Y/N) N — Backfill Material
urface Conditions GRASS COVER — If "No" explain INSTALLED MONITORING WELL EX-24

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	q_u (tsf)	PID (PPM) eV LAMP 10.6 __ 11.7 __	CHEMICAL	GEOTECHNICAL	SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
1	CS	54							0	726.70		CLAYEY SILT (ML); Dark brown (10YR 2/2), moist w/root fragments	
				0.75					2			SILTY CLAY (CL); Yellowish brown (10YR 5/6), soft, moist, trace gravel	
				1.0					4			grades dark yellowish brown (10YR 4/4)	
2	CS	60										grades stiff	
				1.25					6				
				1.25					8				
				1.25									
	S	60							10				
				1.25									
				1.25					12				
4	CS	60							14	713.10		SILTY CLAY (CL); Dark gray (10YR 4/1), stiff, moist, trace gravel	
				1.0					16				
				1.0					18				
5	CS	60		1.5					20				
				1.25					22				
				1.25					24				
6	CS	60											
				1.25					26				
				1.5									
				2.25					28			grades very stiff	
7	CS	ST											

CAD DWG NO:91118794 EMPLOYEE NO: 89525 DATE/TIME: 03/07/03 09:35 ACAD-15.

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

rc Name CLINTON LANDFILL, INC. Sheet 2 of 4

Location CLINTON, IL. Project No. 91-118

...g No. EX-24 Surface Elev. 727.4' Boring Type HSA Completion Depth 98.0'

oordinates: (X) N 4509.36 (Y) E 10317.42 Drilling Contractor SKS ENGINEERS, INC.

ate Started 01/08/03 Date Completed 01/10/03 Driller TODD SKINNER Rig No. MOBILE B-57

ogged By JOHN BERRY Backfilled (Y/N) N Backfill Material

urface Conditions GRASS COVER If "No" explain INSTALLED MONITORING WELL EX-24

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	q_u (tsf)	PID (PPM) eV LAMP 10.6 __ 11.7 __	CHEMICAL	GEOTECHNICAL	SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
7	CS									697.40		SILTY CLAY (CL); Dark gray (10YR 4/1), stiff, moist, trace gravel	
									32				
				2.0								grades very stiff	
8	CS	60							34				
				2.75									
									36				
				3.0									
									38				
	S	60		3.25									
									40				
				3.5									
									42				
10	CS	60		3.75									
									44				
				3.5									
									46				
				3.75									
									48				
11	CS	60											
				2.5					50				
				2.75					52				
				2.5									
									54				
12	CS	60											
				2.5					56				
				2.5					58				
13	CS	60		0.5						667.90		CLAYEY SILT (ML); Dark brown (10YR 2/2), soft, moist, w/organics	

CAD DWG NO:91118795 EMPLOYEE NO: 89525 DATE/TIME: 03/07/03 09:38 ACAD-15.

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

Name CLINTON LANDFILL, INC. Sheet 3 of 4
Location CLINTON, IL. Project No. 91-118
No. EX-24 Surface Elev. 727.4' Boring Type HSA Completion Depth 98.0'
Coordinates: (X) N 4509.36 (Y) E 10317.42 Drilling Contractor SKS ENGINEERS, INC.
Date Started 01/08/03 Date Completed 01/10/03 Driller TODD SKINNER Rig No. MOBILE B-57
Logged By JOHN BERRY Backfilled (Y/N) N Backfill Material
Surface Conditions GRASS COVER If "No" explain INSTALLED MONITORING WELL EX-24

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	q_u (tsf)	PID (PPM) eV LAMP 10.6 __ 11.7 __	CHEMICAL	GEOTECHNICAL SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
13	CS	55		0.5					667.40		CLAYEY SILT (ML); Dark brown (10YR 2/2), soft, moist, w/organics	
									665.90		PEAT (Pt); Dark brown (10YR 2/2), moist, very fibrous wood fragments, w/clay	
								62				
								64	663.40		SILTY CLAY (CL); Black (10YR 2/1), soft, moist, very clayey	
14	CS	60		0.5							grades very stiff + dark gray (10YR 4/1) trace gravel	
				2.25				66				
				2.25							grades blue-gray (Gley 2 5/10G)	
				2.25				68				
1	S	60										
				2.25				70				
				+4.0					656.80		SILTY CLAY (CL); Gray (10YR 5/1), hard, moist, trace gravel	
								72				
				+4.0								
16	CS	60						74				
								76				
								78				
				+4.0					648.40		SANDY CLAY (CL); Dark gray (10YR 4/1), soft, moist to wet, trace to some gravel (20%)	
17	CS	60		0.75					647.40			
				+4.0				80			SILTY CLAY (CL); Dark gray (10YR 4/1), hard, moist, trace gravel	
				+4.0				82				
				+4.0								
18	CS	60						84				TOC Sample @ 643.1
				+4.0							grades damp	
								86				
				+4.0								
				+4.0				88				
19	CS	60										

CAD DWG NO:91118796 EMPLOYEE NO: 88525 DATE/TIME: 03/07/03 09:30 ACAD-15.

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

Obj Name CLINTON LANDFILL, INC. Sheet 4 of 4

Location CLINTON, IL. Project No. 91-118

g No. EX-24 Surface Elev. 727.4' Boring Type HSA Completion Depth 98.0'

ordinates: (X) N 4509.36 (Y) E 10317.42 Drilling Contractor SKS ENGINEERS, INC.

te Started 01/08/03 Date Completed 01/10/03 Driller TODD SKINNER Rig No. MOBILE B-57

gged By JOHN BERRY Backfilled (Y/N) N Backfill Material

rface Conditions GRASS COVER If "No" explain INSTALLED MONITORING WELL EX-24

NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	q_u (tsf)	PID (PPM) eV LAMP 10.6 __ 11.7 __	CHEMICAL	GEOTECHNICAL SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
19	CS	60				■			637.40		SILT (ML); Gray, (10YR 4/1), saturated, trace clay	
									637.00		PEAT (Pt); Brown (10YR 4/3), wet, w/silt, trace clay	TOC Sample @ 636.0
				1.0				92	635.40		CLAYEY SILT (ML); Gray, (10YR 4/1), soft, wet, trace organics	
				0.75					633.80		SANDY SILT (ML); Gray, (10YR 4/1), saturated, trace organics	
20	CS	42		+4.0				94	632.30		SILTY CLAY (CL); Gray, (10YR 4/4), hard, moist, trace gravel	
				3.0				96			2" medium grained sand @ 631.5 grades very stiff	
				+4.0							grades hard	
								98	629.40		End of boring @98.0'	
								100				
								102				
								104				
								106				
								108				
								110				
								112				
								114				
								116				
								118				

CAD DWG NO:91118797 EMPLOYEE NO: 89525 DATE/TIME: 03/07/03 09:54 ACAD-15.

PDC TECHNICAL SERVICES, INC.
WELL COMPLETION REPORT

t #: 91-118 Project Location: CLINTON, IL. Well #: EX-24

ject Name: CLINTON LANDFILL, INC. Borehole #: EX-24

State Plane Coordinate: (X) N 4509.36 (Y) E 10317.42 (or) Latitude: ___ ___ ___ Longitude: ___ ___ ___

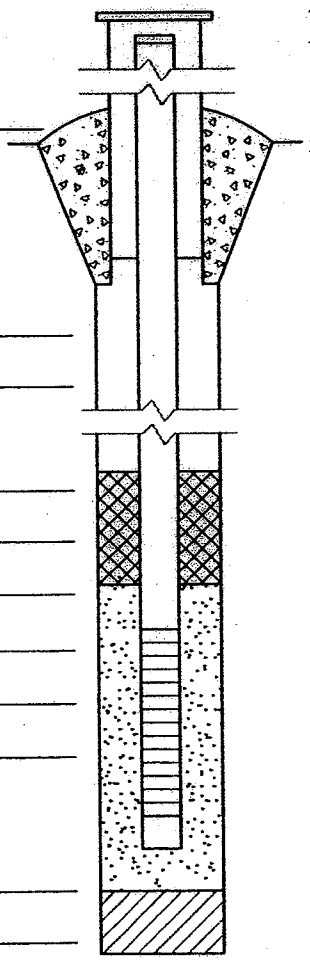
Surveyed By: SKS ENGINEERS, INC. ILL. Registration #:

Drilling Contractor: SKS ENGINEERS, INC. Driller: TODD SKINNER

Drilling Method: HOLLOW STEM AUGER Drilling Fluids (type): NONE

Logged By: J. BERRY Date Started: 01/07/03 Date Finished: 01/10/03

Notes:



Elevations (MSL-referenced to a National Geodetic Vertical Datum)	Depths (Feet above or below ground surface to .01 feet)	
730.09	2.69	Top of Protective Casing
729.73	2.33	Top of Riser Pipe
727.40	0.00	Ground Surface
724.40	3.00	Top of annular sealant
643.90	83.50	Top of Seal
641.94	85.46	Top of Sand Pack
639.94	87.46	Top of Screen
630.25	97.15	Bottom of Screen
629.90	97.50	Bottom of Well
629.90	97.50	Top of Backfill (If Applicable)
629.40	98.00	Bottom of Borehole

Annular Space Details

Type of Surface Seal: CONCRETE

Type of Annular Sealant: BENSEAL

tallation Method: TREMIE PIPE

Type of Bentonite Seal: SLURRY
(Granular, Pellet, Slurry)

Installation Method: TREMIE

Setting Time: 35 MINUTES

Type of Sand Pack: SILICA SAND

Grain Size: 40 MESH

Installation Method: TREMIE

Type of Backfill Material: SILICA SAND
(If Applicable)

Installation Method: POURED

Well Construction Materials

	SS304	SS316	PTFE	PVC	Other
ctive casing					4" SQ. STEEL
er pipe from 0.00 to 47.28 (feet below ground surface)				X	
Riser pipe from 47.28 to 87.46 (feet below ground surface)	X				
Screen					

Casing Measurements

Diameter of borehole (in)	8.00
ID of riser pipe (in)	2.00
Protective casing length (ft)	5.00
Riser pipe length (ft) (include stickup)	89.79
Screen length (1st slot to last slot, ft)	9.69
Bottom of screen to end cap (ft)	0.35
Total length of casing (riser+screen+end cap) (ft)	99.83
Screen slot size	10 SLOT

CAD DWG NO:91118834 EMPLOYEE NO: 89525 DATE/TIME: 03/07/03 14:45 ACAD-15.

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

o Name CLINTON LANDFILL, INC. Sheet 1 of 3

Location CLINTON, IL. Project No. 91-118

g No. EX-25 Surface Elev. 717.0 Boring Type HSA Completion Depth 79.0'

ordinates: (X) N 3449.8 (Y) E 9903.1 Drilling Contractor SKS ENGINEERS, INC.

te Started 10/13/03 Date Completed 10/17/03 Driller DAVE BALDWIN Rig No. MOBIL B-57

gged By J. BERRY Backfilled (Y/N) Y Backfill Material BENSEAL GROUT

rface Conditions BARE SOIL If "No" explain

NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	q_u (tsf)	PID (PPM) eV LAMP 10.6 11.7	CHEMICAL	GEOTECHNICAL SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
1	CS	28						0	716.0		CLAYEY SILT (ML); Brown (10YR 4/3), moist, trace root fragments	
				1.5				2			SILTY CLAY (CL); Brown (10YR 4/3), stiff, moist, trace root fragments	
				1.5				4				
2	CS	60		+4.0							grades hard	
				+4.0				6				
				+4.0				8				
3		60						10			grades Mottled Gray (10YR 6/1)	
				+4.0								
				1.5				12	705.0		SILTY CLAY (CL); Gray (10YR 6/1) mottled brown, stiff, moist, trace gravel	
				1.5				14				
4	CS	60									grades very stiff	
				2.25				16				
				3.0				18			1" sand seam, brown, wet @18.5'	
5	CS	20						20	697.0		SAND (SW); Brown (10YR 5/3), loose, saturated, medium to fine grained, trace silt & clay	
								22			grades fine to coarse grained	
6	CS	28						24	692.9		SILTY CLAY (CL); Gray (10YR 5/1), stiff, moist, trace gravel	
				1.5				26				
				1.5				28				
7	CS	25										

D DWG NO:91118879 EMPLOYEE NO: 9834 DATE/TIME: 10/23/03 14:07 ACAD-15.

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

Name CLINTON LANDFILL, INC. Sheet 2 of 3
Location CLINTON, IL. Project No. 91-118
No. EX-25 Surface Elev. 717.0 Boring Type HSA Completion Depth 79.0'
ordinates: (X) N 3449.8 (Y) E 9903.1 Drilling Contractor SKS ENGINEERS, INC.
te Started 10/13/03 Date Completed 10/17/03 Driller DAVE BALDWIN Rig No. MOBIL B-57
gged By J. BERRY Backfilled (Y/N) Y Backfill Material BENSEAL GROUT
rface Conditions BARE SOIL If "No" explain

NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	q_u (tsf)	PID (PPM) eV LAMP 10.6 __ 11.7 __	CHEMICAL	GEOTECHNICAL SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
7	CS	25		1.75							SILTY CLAY (CL); Gray (10YR 5/1), stiff, moist, trace gravel	
								32				
				1.75								
								34				
3	CS	60		1.5								
								36				
				1.5								
								38				
9		60		1.75								
								40				
								42				
				1.75								
				2.25							grades very stiff	
0	CS	60						44				
				2.5								
								46				
				2.75								
				1.0				48	668.4		CLAYEY SILT (ML); Gray (10YR 5/1) mottled brown, very stiff, moist, with organics	
1	CS	60							667.5		ORGANIC SILT (OL); Gray-brown (10YR 5/1), stiff, moist, trace clay	
				1.0				50				
				1.0					665.8		SILTY CLAY (CL); Blue-green (Gley2 5/5B), stiff, moist, trace gravel	
				1.25				52				
2	CS	60		1.75								
								54				
				2.0								
								56				
				2.0								
								58				
3	CS	60		2.0								

DWG NO:91118880 EMPLOYEE NO: 9834 DATE/TIME: 10/24/03 10:07 ACAD-15.

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

Pr[illegible] Name CLINTON LANDFILL, INC. Sheet 3 of 3

[illegible]t Location CLINTON, IL. Project No. 91-118

[illegible]g No. EX-25 Surface Elev. 717.0 Boring Type HSA Completion Depth 79.0'

Coordinates: (X) N 3449.8 (Y) E 9903.1 Drilling Contractor SKS ENGINEERS, INC.

Date Started 10/13/03 Date Completed 10/17/03 Driller DAVE BALDWIN Rig No. MOBIL B-57

Logged By J. BERRY Backfilled (Y/N) Y Backfill Material BENSEAL GROUT

Surface Conditions BARE SOIL If "No" explain

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	q_u (tsf)	PID (PPM) eV LAMP 10.6 __ 11.7 __	CHEMICAL	GEOTECHNICAL	SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
13	CS	60								656.5			
										656.0		CLAYEY SILT (ML); Gray (10YR 6/1), stiff, moist, trace fine sand	
									62			SILTY SAND (SM); Gray (10YR 6/1), dense, wet, trace clay	
										654.0		CLAYEY SILT (ML); Gray (10YR 6/1), stiff, moist, trace fine sand	
										653.25		SAND (SW); Gray (10YR 6/1), dense, wet, fine to medium grained, trace silt & clay	
14	CS	49							64	652.2		grades with silt @64.4'	
				+4.0								SILTY CLAY (CL); Gray (10YR 5/1), hard, moist, trace gravel	
				+4.0					66				
				+4.0					68				
	CS	60											
				+4.0					70				
				+4.0					72				
				+4.0									
16	CS	60							74				
									76				
										639.8		SAND (SP); Gray (10YR 5/1), very dense, saturated, medium grained, trace gravel	
									78			(5% fine, 80% medium, 10% coarse, 5% gravel)	
										638.0		End of boring @79.0'	
									80				
									82				
									84				
									86				
									88				

CAD DWG NO:91118881 EMPLOYEE NO: 9834 DATE/TIME: 10/24/03 10:31 ACAD-15.

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

Project Name CLINTON LANDFILL, INC. Sheet 1 of 3
Location CLINTON, ILLINOIS Project No. 91-118
Boring No. EX-26 Surface Elev. 707.3 Boring Type HSA Completion Depth 69.0'
Coordinates: (X) N 3353.81 (Y) E 9248.47 Drilling Contractor SKS ENGINEERS, INC.
Date Started 10-9-03 Date Completed 10-13-03 Driller DAVE BALDWIN Rig No. MOBIL B-57
Logged By J. BERRY Backfilled (Y/N) Y Backfill Material BENSEAL GROUT
Surface Conditions BARE SOIL If "No" explain

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	q_u (tsf)	PID (PPM) eV LAMP 10.6 __ 11.7 __	CHEMICAL	GEOTECHNICAL	SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
1	CS	48								706.55		CLAYEY SILT (ML); Brown (10YR 4/3), moist, trace root fragments	
				2.0					2			SILTY CLAY (CL); Brown (10YR 4/3), stiff, moist, trace root fragments grades mottled tan @2.5'	
				2.0					4	703.55		CLAYEY SILT (ML); Gray (10YR 6/1) mottled yellowish brown (10YR 5/6), stiff, moist	
2	CS	60											
				2.75					6			grades more silt, trace sand	
				2.0						701.0		SILTY CLAY (CL); Brown (10YR 4/3), stiff, moist, trace gravel	
				2.0					8				
	CS	60											
				2.0					10			grades mottled gray (10YR 5/1) grades hard	
				+4.0									
									12	695.3		SILTY CLAY (CL); Gray (10YR 5/1), hard, moist, trace gravel	
				+4.0									
4	CS	60							14				
				2.5								grades very stiff	
				2.5					16				
									18				
5	CS	60		2.0									
				2.25					20				
				2.25					22				
6	CS	55		+4.0					24			grades hard	
				+4.0					26				
				+4.0					28				
7	CS	25		2.0								grades stiff	

CAD DWG NO:91118882 EMPLOYEE NO: 9834 DATE/TIME: 10/24/03 12:38 ACAD-15.

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

o Name CLINTON LANDFILL, INC. Sheet 2 of 3

Location CLINTON, ILLINOIS Project No. 91-118

No. EX-26 Surface Elev. 707.3 Boring Type HSA Completion Depth 69.0'

ordinates: (X) N 3353.81 (Y) E 9248.47 Drilling Contractor SKS ENGINEERS, INC.

te Started 10-9-03 Date Completed 10-13-03 Driller DAVE BALDWIN Rig No. MOBIL B-57

gged By J. BERRY Backfilled (Y/N) Y Backfill Material BENSEAL GROUT

rface Conditions BARE SOIL If "No" explain

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	q_u (tsf)	PID (PPM) eV LAMP 10.6 __ 11.7 __	CHEMICAL	GEOTECHNICAL SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
7	CS	25		1.75							SILTY CLAY (CL); Gray (10YR 5/1), stiff, moist, ~~trace gravel~~	
				1.5				32				
											grades very stiff	
8	CS	50		2.5				34				
				2.5				36				
				1.0				38	669.9		CLAYEY SILT (ML); Gray (10YR 5/1), stiff, moist, with fine sand	
	S	50						40	668.3		SAND (SP); Gray (10YR 5/1), loose, wet, fine grained, with clay, trace silt	
				1.25				42	664.7		~~CLAYEY SILT (ML); Gray (10YR 6/1) mottled~~ brown, stiff, moist, with organics	
				1.25					663.7		PEAT (Pt); Dark brown (10YR 3/3), stiff, moist, with clay and wood fragments	
10	CS	50						44				
				1.5				46				
				1.75					659.8		SILTY CLAY (CL); Very dark greenish brown (10YR 3/2), stiff, moist, trace gravel and organics	
				1.75				48	658.8		SILTY CLAY (CL); Dark bluish gray (Gley2 5/5BG), stiff, moist, trace gravel	
11	CS	60										
				1.5				50				
				1.25				52	655.1		SILTY CLAY (CL); Light gray (10YR 7/1), stiff, moist, trace gravel	
				1.0							3" moist clayey silt seam with fine sand @53.3'	
12	CS	55		+4.0				54			grades gray (10YR 5/1), hard	
								56	651.05		SAND (SW); Gray (10YR 5/1), loose, saturated,	
				+4.0					650.3		fine to medium grained, trace silt & clay	
								58			~~SILTY CLAY (CL); Gray (10YR 5/1), hard, moist,~~ trace gravel	
13	CS	60		+4.0								

AD DWG NO:91118883 EMPLOYEE NO: 9834 DATE/TIME: 10/28/03 14:42 ACAD-15.

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

Name CLINTON LANDFILL, INC. Sheet 3 of 3
Location CLINTON, ILLINOIS Project No. 91-118
g No. EX-26 Surface Elev. 707.3 Boring Type HSA Completion Depth 69.0'
oordinates: (X) N 3353.81 (Y) E 9248.47 Drilling Contractor SKS ENGINEERS, INC.
ate Started 10-9-03 Date Completed 10-13-03 Driller DAVE BALDWIN Rig No. MOBIL B-57
ogged By J. BERRY Backfilled (Y/N) Y Backfill Material BENSEAL GROUT
urface Conditions BARE SOIL If "No" explain

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	q_u (tsf)	PID (PPM) eV LAMP 10.6 __ 11.7 __	CHEMICAL	GEOTECHNICAL	SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
13	CS	60										SILTY CLAY (CL); Gray (10YR 6/1), hard, moist, ~~trace gravel~~	
				+4.0					62				
				1.25								grades stiff	
14	CS	60		+4.0					64			grades hard ~~1" sandy clay seam @64.9'~~	
				+4.0					66				
				+4.0					68				
										638.3		End of boring @69.0'	
									70				
									72				
									74				
									76				
									78				
									80				
									82				
									84				
									86				
									88				

AD DWG NO:91118884 EMPLOYEE NO: 9834 DATE/TIME: 10/28/03 15:55 ACAD-15.

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

Name CLINTON LANDFILL, INC. Sheet 1 of 3
Location CLINTON, ILLINOIS Project No. 91-118
No. EX-27 Surface Elev. 723.9 Boring Type HSA Completion Depth 84.0'
Coordinates: (X) N 3353.81 (Y) E 8678.60 Drilling Contractor SKS ENGINEERS, INC.
Date Started 10-7-03 Date Completed 10-9-03 Driller DAVE BALDWIN Rig No. MOBIL B-57
Logged By J. BERRY Backfilled (Y/N) Y Backfill Material BENSEAL GROUT
Surface Conditions HARVESTED BEAN FIELD If "No" explain

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	q_u (tsf)	PID (PPM) eV LAMP 10.6 __ 11.7 __	CHEMICAL	GEOTECHNICAL	SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
1	CS	12										CLAYEY SILT (ML); Brown (10YR 5/3), stiff, damp, with organics	
				1.0					2	721.9		SILTY CLAY (CL); Dark yellowish brown (10YR 6/4), stiff, moist, trace organics & gravel	
				1.25					4				
2	CS	60											
				1.25					6				
				1.25					8				
	CS	60							10				
				1.25					12			grades mottled gray (10YR 5/1)	
										710.5		SILTY CLAY (CL); Gray (10YR 5/1), stiff, moist, trace gravel	
4	CS	40		1.5					14				
				1.5					16				
										706.4		SILTY SAND (SM); Gray (10YR 5/1), loose, wet to saturated, trace clay	
									18	705.4		SILTY CLAY (CL); Gray (10YR 5/1), very stiff, moist, trace gravel & fine sand	
5	CS	60		2.0					20				
				2.25					22			grades hard	
				+4.0					24				
6	CS	45											
				+4.0					26				
										697.4		SAND (SW); Gray (10YR 5/1), loose, wet, fine to coarse grained, trace silt & clay	
									28	696.9		SILTY CLAY (CL); Gray (10YR 5/1), hard, moist, trace gravel	
				+4.0									
7	CS	60											

CAD DWG NO:91118885 EMPLOYEE NO: 9834 DATE/TIME: 10/24/03 16:32 ACAD-15.

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

Name CLINTON LANDFILL, INC. Sheet 2 of 3

Location CLINTON, ILLINOIS Project No. 91-118

ng No. EX-27 Surface Elev. 723.9 Boring Type HSA Completion Depth 84.0'

oordinates: (X) N 3353.81 (Y) E 8678.60 Drilling Contractor SKS ENGINEERS, INC.

ate Started 10-7-03 Date Completed 10-9-03 Driller DAVE BALDWIN Rig No. MOBIL B-57

ogged By J. BERRY Backfilled (Y/N) Y Backfill Material BENSEAL GROUT

urface Conditions HARVESTED BEAN FIELD If "No" explain

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	q_u (tsf)	PID (PPM) eV LAMP 10.6 __ 11.7 __	CHEMICAL	GEOTECHNICAL	SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
7	CS	60										SILTY CLAY (CL); Gray (10YR 5/1), hard, moist, ~~trace gravel & organics~~	
				+4.0					32				
				+4.0					34				
8	CS	60											
				+4.0					36				
				+4.0									
				3.25					38			~~grades very stiff~~	
	CS	60											
				3.25					40				
				3.5					42				
10	CS	60		3.25					44			~~grades hard~~	
									46				
				+4.0									
									48				
11	CS	60		+4.0									
									50				
				+4.0									
									52				
				2.25									
12	CS	60							54			grades very stiff	
				2.25									
									56			SILTY SAND (SM); Gray (10YR 5/1), loose, wet, trace clay	
										666.9			
				2.0					58	666.4		ORGANIC SILT (OL); Dark grayish brown (10YR 4/2), very stiff, moist, with clay, trace root fragments & fine sand	
												~~PEAT (Pt); Very dark brown (10YR 2/2), very stiff,~~	
13	CS	60		2.0						664.9		moist, trace clay & silt, with root fragments	

AD DWG NO:91118886 EMPLOYEE NO: 9834 DATE/TIME: 10/24/03 16:27 ACAD-15.

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

o' Name CLINTON LANDFILL, INC. Sheet 3 of 3

Location CLINTON, ILLINOIS Project No. 91-118

No. EX-27 Surface Elev. 723.9 Boring Type HSA Completion Depth 84.0'

ordinates: (X) N 3353.81 (Y) E 8678.60 Drilling Contractor SKS ENGINEERS, INC.

te Started 10-7-03 Date Completed 10-9-03 Driller DAVE BALDWIN Rig No. MOBIL B-57

gged By J. BERRY Backfilled (Y/N) Y Backfill Material BENSEAL GROUT

rface Conditions HARVESTED BEAN FIELD If "No" explain

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	q_p (tsf)	PID (PPM) eV LAMP 10.6 __ 11.7 __	CHEMICAL	GEOTECHNICAL	SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
13	CS	60										PEAT (Pt); Dark brown (10YR 2/2), very stiff, moist, trace clay & silt, with root and wood fragments	
				2.0					62				
				2.5						660.4			
14	CS	60							64			SILTY CLAY (CL); Gray (10YR 5/1), very stiff, moist, trace gravel	
				2.0						658.65			
									66			SILTY CLAY (CL); Bluish gray (Gley2 5/5B), very stiff, moist, trace gravel	
				2.0									
									68				
15		60		2.0									
									70	653.9		CLAYEY SILT (ML); Gray (10YR 5/1), very stiff, moist, trace gravel & organics	
				2.25									
									72				
				2.0						650.5			
16	CS	60							74			SILTY CLAY (CL); Gray (10YR 5/1), very stiff, moist, trace gravel	
				3.0									
									76			grades hard	
				+4.0									
				+4.0					78				
17	CS	60											
				+4.0					80				
				+4.0					82				
									84	639.9		End of boring @84.0'	
									86				
									88				

AD DWG NO:91118887 EMPLOYEE NO: 9834 DATE/TIME: 10/24/03 16:59 ACAD-15.

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

Pr Name CLINTON LANDFILL, INC. Sheet 1 of 3

:t Location CLINTON, ILLINOIS Project No. 91-118

.ing No. EX-28 Surface Elev. 723.7 Boring Type HSA Completion Depth 79.5'

Coordinates: (X) N 3814.4 (Y) E 9903.4 Drilling Contractor SKS ENGINEERS, INC.

Date Started 10-15-03 Date Completed 10-16-03 Driller DAVE BALDWIN Rig No. MOBIL B-57

Logged By J. BERRY Backfilled (Y/N) Y Backfill Material BENSEAL GROUT

Surface Conditions HARVESTED BEAN FIELD If "No" explain

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	q_p (tsf)	PID (PPM) eV LAMP 10.6 __ 11.7 __	CHEMICAL	GEOTECHNICAL	SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
1	CS	48		1.0						722.7		CLAYEY SILT (ML); Brown (10YR 5/3), stiff, moist, ~~trace root fragments~~	
				2.25					2			SILTY CLAY (CL); Brown (10YR 5/3), very stiff, moist	
												grades mottled white (10YR 8/1)	
2	CS	60							4	718.95			
				1.0								SILTY CLAY (CL); Brown (10YR 5/3), stiff, moist, trace gravel	
				0.75					6				
				1.0					8				
	CS	48											
				1.0					10				
									12	711.7		SAND (SW); Brown (10YR 5/3), loose, wet, fine to ~~coarse grained, trace gravel & clay~~	
4	CS	40		1.5					14	709.7		SILTY CLAY (CL); Gray (10YR 5/1), stiff, moist, ~~trace gravel~~	
				1.5					16				
				1.5					18			grades mottled brown	
5	CS	20								704.7		SAND (SW); Brown (10YR 5/3), loose, saturated, ~~medium to coarse grained, trace silt & clay~~	
				1.5					20	702.7		SILTY CLAY (CL); Gray (10YR 5/1), stiff, moist, ~~trace gravel~~	
6	CS	59							22				
				1.5					24				
									26				
				1.75					28				
7	CS	60											

CAD DWG NO:91118888 EMPLOYEE NO: 9834 DATE/TIME: 10/23/03 09:06 ACAD-15.

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

Name CLINTON LANDFILL, INC. Sheet 2 of 3
Location CLINTON, ILLINOIS Project No. 91-118
Boring No. EX-28 Surface Elev. 723.7 Boring Type HSA Completion Depth 79.5'
Coordinates: (X) N 3814.4 (Y) E 9903.4 Drilling Contractor SKS ENGINEERS, INC.
Date Started 10-15-03 Date Completed 10-16-03 Driller DAVE BALDWIN Rig No. MOBIL B-57
Logged By J. BERRY Backfilled (Y/N) Y Backfill Material BENSEAL GROUT
Surface Conditions HARVESTED BEAN FIELD If "No" explain

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	q_u (tsf)	PID (PPM) eV LAMP 10.6 __ 11.7 __	CHEMICAL	GEOTECHNICAL SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
7	CS	60		+4.0							SILTY CLAY (CL); Gray (10YR 5/1), hard, moist, trace gravel	
				+4.0				32				
								34			grades very stiff	
8	CS	60		3.0								
				1.75				36			grades stiff	
				1.25				38				
	CS	60						40				
				2.0								
				1.75				42				
				1.5								
10	CS	60						44				
				2.0								
								46				
				2.0								
				1.75				48				
									674.6			
11	CS	60		1.25				50			CLAYEY SILT (ML); Gray (10YR 5/1), stiff, moist, trace fine sand	
											grades dark brown (10YR 3/3), trace organics [old organic topsoil from 50' to 50.4']	
				1.25				52				
									670.8			
				3.0				54			SILTY CLAY (CL); Bluish gray (Gley2 5/10BG), very stiff, moist, trace gravel	
12	CS	60		3.0								
				2.75				56				
									666.8			
				1.75				58			SILTY CLAY (CL); Gray (10YR 6/1), stiff, moist, trace gravel & fine sand	
				1.75								
13	CS	60		3.5							grades very stiff	

CAD DWG NO:91118889 EMPLOYEE NO: 9834 DATE/TIME: 10/23/03 10:17 ACAD-15.

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

Project Name CLINTON LANDFILL, INC. Sheet 3 of 3

Project Location CLINTON, ILLINOIS Project No. 91-118

Boring No. EX-28 Surface Elev. 723.7 Boring Type HSA Completion Depth 79.5'

Coordinates: (X) N 3814.4 (Y) E 9903.4 Drilling Contractor SKS ENGINEERS, INC.

Date Started 10-15-03 Date Completed 10-16-03 Driller DAVE BALDWIN Rig No. MOBIL B-57

Logged By J. BERRY Backfilled (Y/N) Y Backfill Material BENSEAL GROUT

Surface Conditions HARVESTED BEAN FIELD If "No" explain

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	q_u (tsf)	PID (PPM) eV LAMP 10.6 __ 11.7 __	CHEMICAL	GEOTECHNICAL SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
13	CS	60		+4.0							SILTY CLAY (CL); Gray (10YR 6/1), hard, moist, trace gravel	
								62			grades slightly mottled dark greenish gray	
				+4.0								
				+4.0								
14	CS	60						64				
				2.0							grades stiff	
								66	657.45		CLAYEY SILT (ML); Gray mottled greenish gray (10YR 6/1), stiff, moist, with fine sand	
									657.20		SILTY CLAY (CL); Gray mottled greenish gray (10YR 6/1), stiff, moist, trace gravel	
								68	655.70		CLAYEY SILT (ML); Gray mottled greenish gray (10YR 6/1), stiff, moist, with fine sand	
				2.0					655.20		SILTY CLAY (CL); Gray mottled greenish gray (10YR 6/1), stiff, moist, trace gravel	
15	CS	60						70			grades gray (10YR 5/1), hard @70'	
				+4.0								
				+4.0				72			SAND (SW); Gray (10YR 5/1), dense, saturated, trace clay, medium to coarse grained	
									650.70		SILTY CLAY (CL); Gray (10YR 5/1), hard, moist, trace gravel	
16	CS	60		+4.0				74	650.20			
				+4.0				76				
				+4.0				78				
									644.20		End of boring @79.5'	
								80				
								82				
								84				
								86				
								88				

CAD DWG NO:91118890 EMPLOYEE NO: 89736 DATE/TIME: 01/07/05 15:12 ACAD-15.

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

Project Name CLINTON LANDFILL, INC. Sheet 1 of 3

Project Location CLINTON, IL. Project No. 91-118

Boring No. EX-29 Surface Elev. 718.0 Boring Type HSA Completion Depth 79.0'

Coordinates: (X) N 3833.6 (Y) E 9088.5 Drilling Contractor SKS ENGINEERS, INC.

Date Started 10/17/03 Date Completed 10/20/03 Driller DAVE BALDWIN Rig No. MOBIL B-57

Logged By J. BERRY Backfilled (Y/N) Y Backfill Material BENSEAL GROUT

Surface Conditions HARVESTED BEAN FIELD If "No" explain

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	q_u (tsf)	PID (PPM) eV LAMP 10.6 __ 11.7 __	CHEMICAL	GEOTECHNICAL	SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
1	CS	35		1.0								CLAYEY SILT (ML); Brownish yellow (10YR 6/6), stiff, moist, trace root fragments	
				3.5						717.0			
									2			SILTY CLAY (CL); Brownish yellow (10YR 6/6), very stiff, moist, trace organics	
				3.5									
2	CS	60							4				
				3.5						712.8		SILTY CLAY (CL); Yellowish brown (10YR 5/4), very stiff, moist, trace gravel	
									6				
				3.5									
									8				
	CS	60		2.0								grades stiff	
									10				
				1.5						706.8		SILTY CLAY (CL); Gray (10YR 5/1) mottled brown (10YR 4/3), stiff, moist, trace gravel	
									12				
				1.5								grades gray (10YR 5/1)	
4	CS	60		+4.0					14			grades hard	
				+4.0					16				
				+4.0					18				
5	CS	60											
				+4.0					20				
				+4.0					22				
				+4.0									
6	CS	60		3.0					24			grades very stiff	
				2.25									
				+4.0					26			grades hard	
				+4.0					28				
7	CS	60											

CAD DWG NO:91118876 EMPLOYEE NO: 9834 DATE/TIME: 10/24/03 15:39 ACAD-15.

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

Obj Name CLINTON LANDFILL, INC. Sheet 2 of 3

Location CLINTON, IL. Project No. 91-118

g No. EX-29 Surface Elev. 718.0 Boring Type HSA Completion Depth 79.0'

ordinates: (X) N 3833.6 (Y) E 9088.5 Drilling Contractor SKS ENGINEERS, INC.

te Started 10/17/03 Date Completed 10/20/03 Driller DAVE BALDWIN Rig No. MOBIL B-57

gged By J. BERRY Backfilled (Y/N) Y Backfill Material BENSEAL GROUT

rface Conditions HARVESTED BEAN FIELD If "No" explain

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	q_u (tsf)	PID (PPM) eV LAMP 10.6 __ 11.7 __	CHEMICAL	GEOTECHNICAL	SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
7	CS	60		3.0								SILTY CLAY (CL); Gray (10YR 5/1), very stiff, moist, trace gravel	
				2.25					32				
8	CS	50							34				
				2.25					36				
				2.75					38				
9		50							40				
				2.5					42				
				2.25					44				
10	CS	60											
				2.5					46				
				2.25					48				
				1.75								grades very stiff	
11	CS	60		3.25						668.5		CLAYEY SILT (ML); Gray (10YR 5/1), very stiff, moist, trace fine sand	
				3.5					50				
				3.75						667.0		ORGANIC SILT (OL); Brown (10YR 4/3), very stiff, moist, mottled black with organics	
				3.75					52	665.5		PEAT (Pt); Very dark brown (10YR 2/2), very stiff, moist, with wood and root fragments	
12	CS	60							54				
				1.25						662.5		ORGANIC CLAYEY SILT (ML); Very dark brown (10YR 2/2), stiff, moist, with trace organics	
				1.25					56			grades more clay	
				1.75					58	660.0		SILTY CLAY (CL); Blue-gray (Gley2 5/5B), stiff, moist, trace gravel	
13	CS	60											

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

Pr Name CLINTON LANDFILL, INC. Sheet 3 of 3

t Location CLINTON, IL. Project No. 91-118

ing No. EX-29 Surface Elev. 718.0 Boring Type HSA Completion Depth 79.0'

Coordinates: (X) N 3833.6 (Y) E 9088.5 Drilling Contractor SKS ENGINEERS, INC.

Date Started 10/17/03 Date Completed 10/20/03 Driller DAVE BALDWIN Rig No. MOBIL B-57

Logged By J. BERRY Backfilled (Y/N) Y Backfill Material BENSEAL GROUT

Surface Conditions HARVESTED BEAN FIELD If "No" explain

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	q_u (tsf)	PID (PPM) eV LAMP 10.6 __ 11.7 __	CHEMICAL	GEOTECHNICAL SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
13	CS	60		2.0				62			SILTY CLAY (CL); Blue-gray (Gley2 5/5B); very stiff, moist, trace gravel	
				2.0								
								64				
14	CS	60		2.0					652.8			
				1.0					652.5		CLAYEY SILT (ML); Gray (10YR 5/1), stiff, moist, trace fine sand	
				+4.0				66			SILTY CLAY (CL); Gray (10YR 5/1), hard, moist, trace gravel	
				+4.0				68				
	CS	60										
				+4.0				70				
				+4.0				72				
				2.75							grades very stiff	
16	CS	50						74				
				2.5								
								76				
				2.75				78				
									639.0		End of boring @79.0'	
								80				
								82				
								84				
								86				
								88				

CAD DWG NO:91118878 EMPLOYEE NO: 9834 DATE/TIME: 10/24/03 15:14 ACAD-15.

TYPE OR I IRMLY WITH BLACK INK PEN, THIS
FORM MUST B COMPLETED WITHIN 30 DAYS OF COMPLETION
AND SENT TO THE APPROPRIATE HEALTH DEPARTMENT

G ICAL AND WATER SURVEY WELL RECORD

1. Date boring Well Completed 2-13-02
2. Use: [ ] Domestic [ ] Irrigation [ ] Commercial [ ] Livestock
[X] Monitoring [X] Other Intended to install well unit to be monitored
3. Type of Well: was dry so no well was installed. Boring backfilled.
a. Bored Well: Hole Diameter 8.00 in. Depth 76.0 ft.
Casing Diameter N/A in. Buried Slab: [ ]Yes [ ]No
b. Driven Well: Drive Pipe Diameter _____ in. Depth _____ ft.
c. Drilled Well: Well Diameter _____ in. Depth _____ ft.
Casing Diameter _____ in. Type _____ Joint _____

Casing Grout:

Kind	Oversized Drill Hole(In)	From(ft)	To(ft)
Bensal Grout	8.00	0.0	76.0

Finished In: Unconsolidated [ ] Gravel Pack: [ ]Yes [ ]No
Rock [ ] Grain Size _____

4. Well Disinfected? [ ]Yes [ ]No
5. Date Permanent Pump Installed _____
6. Licensed Pump Contractor _____
License Number _____
7. Pitless Adapter Installed? [ ]Yes [ ]No
Manufacturer _____ Model _____
Attached to Casing - How? [ ] Screwed On [ ] Welded [ ] Compression
8. Type of Well Cap _____
9. Tank Working Cycle _____ gallons Captive Air: [ ]Yes [ ]No
10. Pump and Equipment Disinfected? [ ]Yes [ ]No

General Comments: (If dry hole, fill out log & indicate how hole was sealed.)

11. Permit Number N/A Date Issued _____
12. Property Owner Clinton Landfill, Inc. Well # EX-11 Boring
13. Drilling Company Name SKS Engineers, Inc.
14. Name of Person who drilled the well Todd Skinner
15. Well Site Address Rt. 51 South Clinton, IL
16. Twnshp Name Texas Land ID# _____
17. Subdivision Name _____ Lot _____ Elevation 705.7 ft.
18. Location: Cnty DeWitt Sect 10 Twnshp 19N Range 2E
SW Quarter of the SW Quarter of the NE Quarter
19. Casing and Liner Pipe: N/A

Dia (In)	Type	From(ft)	To (ft)

20. Screen:
Diameter — in.
Length — ft.
Slot Size —
Material —

21. Water from None at depth — ft. to — ft.
22. Static Level _____ ft. below casing top which is _____ in. above ground level.
Pumping Level _____ ft. Pumping _____ gpm for _____ hours.
23. Earth Materials Passed Through

	Depth Top(ft)	Depth Bottom(ft)
Clayey Silt (ML) Dk Brn, organics	0.0	2.0
Silty Clay (CL) Brown-gray, roots	2.0	8.8
Silty Clay (CL) Brown, tr. gravel & sand	8.8	10.5
Silty Clay (CL) Gray, tr. gravel & sand	10.5	36.8
Clayey Silt (ML) Brown, organics	36.8	38.0
Peat (OL) Brown-blk, organics & silt	38.0	41.6
Silty Clay (CL) Blue-gray [Berry Clay]	41.6	46.0
Silty Clay (CL) Gray, tr. gravel & sand	46.0	69.0
Sandy Clay (CL) Gray with gravel	69.0	69.9
Silty Clay (CL) Gray, tr. gravel	69.9	72.3
Sand (SW) Gray, w/clay and tr. gravel	72.3	74.0
Silty Clay (CL) Gray, tr. gravel	74.0	—
Boring terminated at		76.0
Backfilled w/ Bensal Grout to surface		

Continue on back of sheet if necessary

_____ Licensed Contractor Signature

_____ License Number

Illinois Department of Public Health
Division of Environmental Health - 525 W. Jefferson
Springfield, IL 62761

IMPORTANT NOTICE. This State Agency is requesting disclosure of information that is necessary to accomplish the statutory purpose as outlined under Public Act 85-0863. Disclosure of this information is mandatory. This form has been approved by the Forms Management Center.

IL 482-0126 Printed by Authority of the State of Illinois P.O. PRT3030244 6.5M 6/98

11/95

(SEE REVERSE SIDE FOR ADDITIONAL INFORMATION)

WHITNEY & ASSOCIATES
INCORPORATED
2406 West Nebraska Avenue
PEORIA, ILLINOIS 61604

BORING LOG

BORING NO. B-11
DATE 1-30-89
W. & A. FILE NO. 2703
SHEET 1 OF 11
PROJECT CLINTON MUNICIPAL LANDFILL
BORING LOCATION N. 5738.18; E. 7681.24
BORING TYPE Hollow-Stem Auger
SOIL CLASSIFICATION SYSTEM U.S.B.S.C.
GROUND SURFACE ELEVATION 715.5
BORING DISCONTINUED AT ELEVATION 597.2

LOCATION Clinton, Illinois
DRILLED BY Winslow
WEATHER CONDITIONS Partly Cloudy and Mild
SEEPAGE WATER ENCOUNTERED AT ELEVATION 688.4
GROUND WATER ELEVATION AT 24+ HRS. 677.4
GROUND WATER ELEVATION AT COMPLETION 668.4

DESCRIPTION	DEPTH IN FEET	SAMPLE TYPE	N	Qp	Qu	Dd	Mc
BROWN AND GRAY-BROWN SILTY CLAY		SS	3 7				
BROWN MOTTLED ORANGE-BROWN SILTY CLAY							
BROWN MOTTLED GRAY AND ORANGE-BROWN SILTY CLAY	4	SS	7 13				
BROWN AND ORANGE-BROWN, WEATHERED GLACIAL SILTY CLAY TILL WITH SAND LENSES		SS	6 10				
GRAY-BROWN MOTTLED BROWN, WEATHERED GLACIAL SILTY CLAY TILL	8	SS	8 14				
706.10		SS	12 17				
GRAY, UNWEATHERED GLACIAL SILTY CLAY TILL	12	SS	8 15				
		SS	6 15				
	16	SS	9 16				
		SS	11 27				
GRAY, UNWEATHERED GLACIAL SILTY CLAY TILL WITH OCCASIONAL SAND LENSES							
GRAY, UNWEATHERED GLACIAL SILTY CLAY TILL	20	SS	22 42				
		SS	19 26				
	24	SS	14 28				
		SS	15 27				

N - BLOWS DELIVERED PER FOOT BY A 140 LB. HAMMER FALLING 30 INCHES
SS - SPLIT SPOON SAMPLE
ST - SHELBY TUBE SAMPLE

Qp - CALIBRATED PENETROMETER READING - T.S.F.
Qu - UNCONFINED COMPRESSIVE STRENGTH - T.S.F.
Dd - NATURAL DRY DENSITY - P.C.F.
Mc - NATURAL MOISTURE CONTENT - %

BORING LOG
(CONTINUATION)

BORING NO. B-11 DATE 1-30-89

PROJECT Clinton Municipal Landfill SHEET 2 OF 11

LOCATION Clinton, Illinois W. & A. FILE NO. 2703

DESCRIPTION	DEPTH IN FEET	SAMPLE TYPE	N	Q_p	Q_u	D_d	M_c
SEE SHEET 1 OF 11		SS	9 18				
	30	SS	8 21				
		SS	9 23				
GRAY (DRY) SAND SEAM							
GRAY, UNWEATHERED GLACIAL SILTY CLAY TILL	34	SS	13 24				
		SS	15 29				
	38	SS	13 22				
		SS	11 26				
	42	ST	24" Recovery				
		SS	14 21				
GRAY, FINE-GRAINED SAND SEAM							
GRAY-BROWN SANDY SILT (SLIGHTLY ORGANIC)	46	SS	10 19				
BROWN PEAT		SS	16 68				
	50	SS	27 48				
		SS	9 21				
GRAY, UNWEATHERED GLACIAL SILTY CLAY TILL	54	SS	17 40				
BLUE-GRAY, UNWEATHERED GLACIAL SILTY CLAY TILL		SS	19 26				

N - BLOWS DELIVERED PER FOOT BY A 140 LB. HAMMER FALLING 30 INCHES
SS - SPLIT SPOON SAMPLE
ST - SHELBY TUBE SAMPLE

Q_p - CALIBRATED PENETROMETER READING - T.S.F.
Q_u - UNCONFINED COMPRESSIVE STRENGTH - T.S.F.
D_d - NATURAL DRY DENSITY - P.C.F.
M_c - NATURAL MOISTURE CONTENT - %

WHITNEY & ASSOCIATES
PEORIA, ILLINOIS

BORING LOG
(CONTINUATION)

BORING NO. B-11 DATE 1-31-89

PROJECT Clinton Municipal Landfill SHEET 3 OF 11
LOCATION Clinton, Illinois W. & A. FILE NO. 2703

DESCRIPTION	DEPTH IN FEET	SAMPLE TYPE	N	Q_p	Q_u	D_d	Mc
GRAY, UNWEATHERED GLACIAL SILTY CLAY TILL WITH OCCASIONAL SAND LENSES		SS	11 25				
GRAY, UNWEATHERED GLACIAL SILTY CLAY TILL	60	SS	11 27				
		SS	25 44				
	64	SS	29 63				
		SS	22 54				
	68	SS	29 43				
GRAY SILTY SAND		SS	23 70				
	72	SS	45 61				
GRAY, UNWEATHERED GLACIAL SANDY CLAY TILL		SS	21 52				
	76	SS	31 43				
GRAY, MEDIUM-GRAINED SAND WITH SOME FINE-GRAINED GRAVEL		SS	104/4"				
GRAY, UNWEATHERED GLACIAL SANDY CLAY TILL	80	SS	134/12"				
GRAY, FINE- TO MEDIUM-GRAINED SAND WITH TRACE OF FINE-GRAINED GRAVEL		SS	81 98				
	84	SS	21 30	16" Recovery			
GRAY, UNWEATHERED GLACIAL SILTY CLAY TILL		SS	19 29	16" Recovery			

N - BLOWS DELIVERED PER FOOT BY A 140 LB. HAMMER FALLING 30 INCHES
SS - SPLIT SPOON SAMPLE
ST - SHELBY TUBE SAMPLE

Q_p - CALIBRATED PENETROMETER READING - T.S.F.
Q_u - UNCONFINED COMPRESSIVE STRENGTH - T.S.F.
D_d - NATURAL DRY DENSITY - P.C.F.
Mc - NATURAL MOISTURE CONTENT - %

WHITNEY & ASSOCIATES
PEORIA, ILLINOIS

BORING LOG
(CONTINUATION)

BORING NO. B-11

DATE 2-03-89

PROJECT Clinton Municipal Landfill

LOCATION Clinton, Illinois

SHEET 4 OF 11

W. & A. FILE NO. 2703

DESCRIPTION	DEPTH IN FEET	SAMPLE TYPE	N	Q_p	Q_u	Dd	Mc
SEE SHEET 3 OF 11		SS	29 51	14" Recovery			
	90	ST	(2")				
		SS	45 66	18" Recovery			
	94	SS	49 69	23" Recovery			
		SS	37 74	20" Recovery			
	98	SS	50 70	24" Recovery			
		SS	49 75	23" Recovery			
	102	SS	60 101	24" Recovery			
		SS	25 65	24" Recovery			
GRAY, UNWEATHERED GLACIAL SANDY CLAY TILL WITH OCASSIONAL SAND LENSES	106	SS	108/9"	9" Recovery			
		SS	110/7"	7" Recovery			
	110	SS	103/5"	5" Recovery			
		SS	107/6"	6" Recovery			
GRAY, UNWEATHERED GLACIAL SILTY CLAY TILL	114	SS	103/5"	5" Recovery			
		SS	114/9"	9" Recovery			

N - BLOWS DELIVERED PER FOOT BY A 140 LB. HAMMER FALLING 30 INCHES
SS - SPLIT SPOON SAMPLE
ST - SHELBY TUBE SAMPLE

Q_p - CALIBRATED PENETROMETER READING - T.S.F.
Q_u - UNCONFINED COMPRESSIVE STRENGTH - T.S.F.
Dd - NATURAL DRY DENSITY - P.C.F.
Mc - NATURAL MOISTURE CONTENT - %

BORING LOG
(CONTINUATION)

BORING NO. B-11 DATE 2-03-89

PROJECT Clinton Municipal Landfill SHEET 5 OF 11
LOCATION Clinton, Illinois W. & A. FILE NO. 2703

DESCRIPTION	DEPTH IN FEET	SAMPLE TYPE	N	Qp	Qu	Dd	Mc
SEE SHEET 4 OF 11		SS	115/5"	5" Recovery			
		SS	111/4	4" Recovery			
EXPLORATORY BORING DISCONTINUED	120						
	124						
	128						
	132						
	136						
	140						
	144						

N - BLOWS DELIVERED PER FOOT BY A 140 LB. HAMMER FALLING 30 INCHES
SS - SPLIT SPOON SAMPLE
ST - SHELBY TUBE SAMPLE

Qp - CALIBRATED PENETROMETER READING - T.S.F.
Qu - UNCONFINED COMPRESSIVE STRENGTH - T.S.F.
Dd - NATURAL DRY DENSITY - P.C.F.
Mc - NATURAL MOISTURE CONTENT - %

WHITNEY & ASSOCIATES
PEORIA, ILLINOIS

TELEPHONE
309 673-2121

TESTS
DESIGN
REPORTS
ANALYSIS
INSPECTION
CONSTRUCTION
INVESTIGATIONS

Winslow
INSTALLED BY

WHITNEY & ASSOCIATES
INCORPORATED

2406 West Nebraska Avenue
PEORIA, ILLINOIS 61604

SPECIALISTS IN—
SOILS - PORTLAND CEMENT CONCRETE
STEEL - BITUMINOUS CONCRETE
CONSTRUCTION MATERIALS
AGGREGATES - ASPHALT - POZ-O-PAC

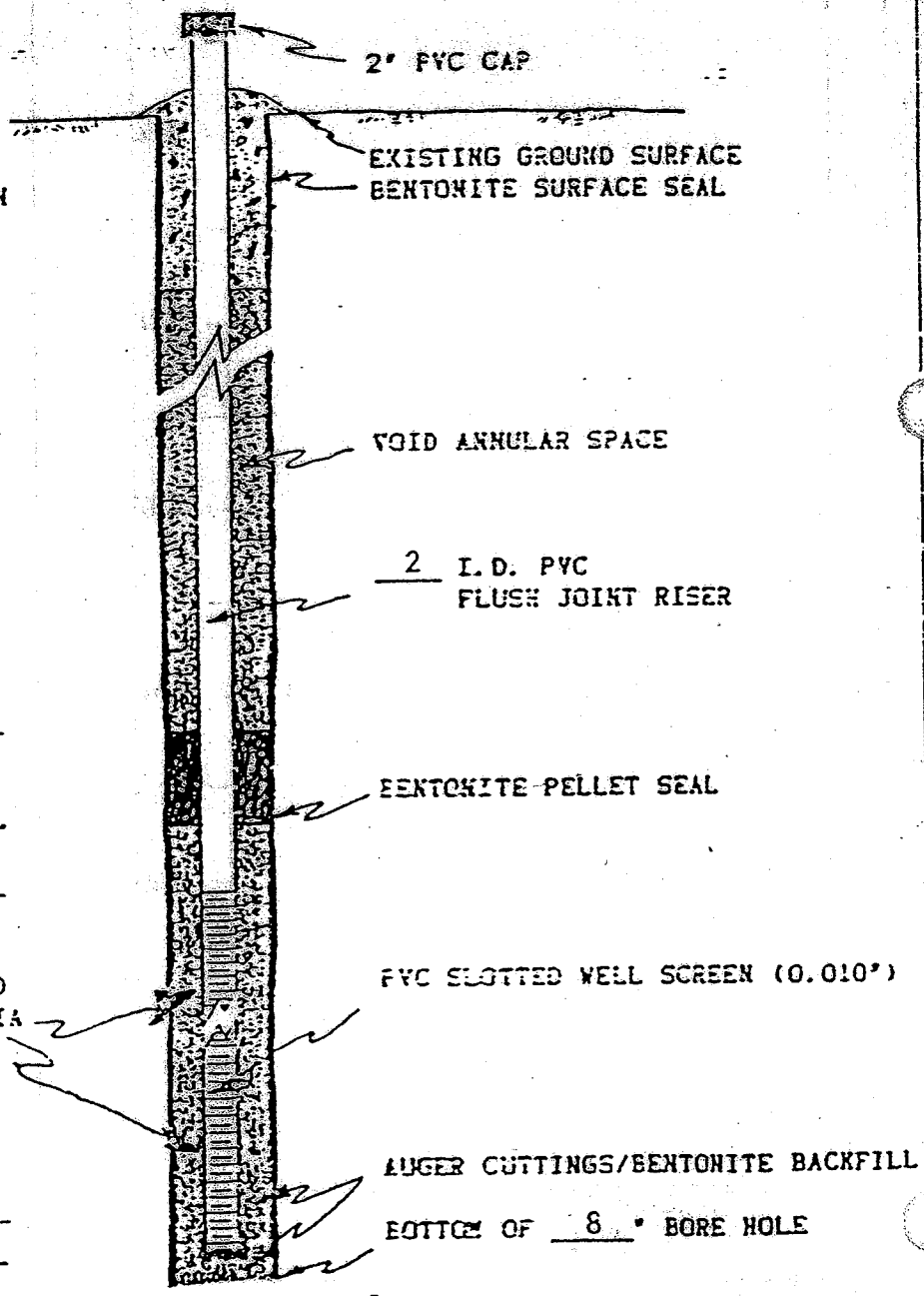
SOILS AND GRAVEL SURVEYS
MATERIALS QUALITY CONTROL
SOIL MECHANICS AND
FOUNDATION ENGINEERING
DRILLING - CORING - TESTING

2-03-89
DATE

TYPICAL PIEZOMETER DIAGRAM

PROJECT Clinton Municipal Landfill
LOCATION Clinton, Illinois
MONITORING WELL LOCATION Boring B-11

MONITORING WELL NO. _____
INSTALLATION DATE 2-03-89



BENCH MARK _____

WHITNEY & ASSOCIATES
PEORIA, ILLINOIS

WATER WELL SEALING FORM

Illinois Department of Public Health
525 West Jefferson Street
Springfield, Illinois 62761

This form shall be submitted to this Department not more than 30 days after a potable water well, boring or monitoring well is sealed. Such wells are to be sealed not more than 30 days after they are abandoned in accordance with the sealing requirements in the Water Well Construction Code.

1. Ownership (Name of Controlling Party) CLINTON LANDFILL, INC.

2. Well Location: P-11 Clinton Landfill, Inc.
(Address - Lot #)
Clinton (City) Dewitt (County)

General Description: Section 10 Township 19N

Range 2E

3. Year Drilled 1989

4. Drilling Permit No. (and date, if known) _____

5. Type of Well: Bored _____ Drilled x Other _____

6. Total Depth 118.5' Diameter (inches) 2"

7. Formation clear of obstruction x yes _____ no

If no, depth - location of obstruction _____

8. DETAILS OF PLUGGING*

Filled with Volclay Grout (Cement or other Materials) From 2' To 118.5' feet

Kind of plug Bentonite Chips From 0' To 2' feet

Filled with _____ From _____ To _____ feet

Kind of plug _____ From _____ To _____ feet

Filled with _____ From _____ To _____ feet

Kind of plug _____ From _____ To _____ feet

9. CASING RECORD

Upper 3 feet of casing removed x Yes _____ No _____

If well casing consists of brick, stone, concrete blocks, porous tile, or other porous material, casing was removed to a depth of 10 feet below the surface. Yes x No _____

10. Date Well was Sealed October (month) 31 (day) 1989 (year)

11. Licensed water well driller or other person approved by the Department performing well sealing

Geral Eberhardt
(Name)
26 N 035 Hazel Lane (Address) Wheaton (City) Illinois (State)
092007129
(License Number)

Important Notice
This State Agency is requesting disclosure of information that is necessary to accomplish the statutory purpose as outlined under Public Act 83-1063. Disclosure of this information is mandatory. This form has been approved by the Forms Management Center.

IL 482-0631

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

oject Name CLINTON LANDFILL, INC. Sheet 1 of 1

Project Location CLINTON, ILLINOIS Project No. 91-118

Boring No. CSM-1 Surface Elev. 636.4 Boring Type HSA & ROTARY WASH Completion Depth 156.0'

Coordinates: (X) N 4025 (Y) E 7028 Drilling Contractor SKS

Date Started 6-28-95 Date Completed 7-14-95 Driller TODD SKINNER Rig No. MOBILE B-57

Logged By J. BERRY Backfilled (Y/N) Y Backfill Material CEMENT/BENTONITE GROUT

Surface Conditions BARE GROUND If "No" explain

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	Q_P (TSF)	PID (PPM) eV LAMP 10.6 ___ 11.7 ___	CHEMICAL	GEOTECHNICAL SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
1	CS	60						0			SILTY CLAY (CL); Gray, stiff, damp	
								1				
									634.65		SILT (MH); Gray, stiff, wet, some sand	
								2				
								3				
									632.90		SILTY CLAY (CL); Gray, hard, damp, trace gravel	
				>4.5				4				
2	CS	60						5				
				3.5				6				
								7				Collected sample #1 for CEC & TOC
				4.0				8				
								9				
				>4.5								
3	ST	20						10				
								11				
4	CS	36		>4.5				12				
				>4.5				13				
								14				
5	CS	60		>4.5								

CAD DWG NO:91118128 EMPLOYEE NO: 9834 DATE/TIME: 02/02/96 15:40:59 ACD-12_

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

ject Name CLINTON LANDFILL, INC. Sheet 2 of 11

oject Location CLINTON, ILLINOIS Project No. 91-118

Boring No. CSM-1 Surface Elev. 636.4 Boring Type HSA & ROTARY WASH Completion Depth 156.0'

Coordinates: (X) N 4025 (Y) E 7028 Drilling Contractor SKS

Date Started 6-28-95 Date Completed 7-14-95 Driller TODD SKINNER Rig No. MOBILE B-57

Logged By J. BERRY Backfilled (Y/N) Y Backfill Material CEMENT/BENTONITE GROUT

Surface Conditions BARE GROUND If "No" explain

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	Q_p (TSF)	PID (PPM) eV LAMP 10.6 __ 11.7 __	CHEMICAL	GEOTECHNICAL	SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
												SILTY CLAY (CL); Gray, hard, damp, with gravel (continued)	
				>4.5					16				Collected sample #2 for CEC & TOC
									17				
				>4.5					18				
									19				
6	ST	21							20				
									21				
7	CS	36							22				
				4.0					23			grades very stiff	
				>4.5					24			grades hard	
8	CS	48							25				
									26				
									27				
									28				
										607.90		CLAYEY SAND (SC); Gray, loose, wet	
9	ST	6							29	607.40		SILTY CLAY (CL); Gray, hard, damp, trace gravel	
10	CS	54		>4.5									

CAD DWG NO:91118129 EMPLOYEE NO: 9834 DATE/TIME: 02/02/96 15:42:27 ACD-12_

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

Project Name CLINTON LANDFILL, INC. Sheet 3 of

Project Location CLINTON, ILLINOIS Project No. 91-118

Boring No. CSM-1 Surface Elev. 636.4 Boring Type HSA & ROTARY WASH Completion Depth 156.0'

Coordinates: (X) N 4025 (Y) E 7028 Drilling Contractor SKS

Date Started 6-28-95 Date Completed 7-14-95 Driller TODD SKINNER Rig No. MOBILE B-57

Logged By J. BERRY Backfilled (Y/N) Y Backfill Material CEMENT/BENTONITE GROUT

Surface Conditions BARE GROUND If "No" explain

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	Q_P (TSF)	PID (PPM) eV LAMP 10.6 __ 11.7 __	CHEMICAL	GEOTECHNICAL	SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
										606.40		SAND (SP); Gray, loose, wet, medium to coarse grained, trace gravel	
				>4.5					31	605.40		SILTY CLAY (CL); Gray, hard, damp, trace gravel	
										604.65		SAND (SP); Gray-brown, loose, saturated, fine to medium grained	
				>4.5					32	603.90		SILTY CLAY (CL); Gray, hard, damp, trace gravel	
									33				
									34				
11	CS	60											
				4.0					35			grades very stiff	
				>4.5					36			grades hard	
									37				
									38				
				>4.5									
									39	597.40			
										597.15		SAND (SP); Gray, loose, wet, fine to medium grained, trace silt	
12	CS	60										SILTY CLAY (CL); Gray, hard, damp, trace gravel	
				>4.5					40				
									41			grades some gravel, some silt	
				>4.5					42				
									43				
				>4.5					44				
13	CS	60											

CAD DWG NO:91118130 EMPLOYEE NO: 9834 DATE/TIME: 02/02/96 15:43:23 ACD-12_

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

oject Name CLINTON LANDFILL, INC. Sheet 4 of 11

roject Location CLINTON, ILLINOIS Project No. 91-118

Boring No. CSM-1 Surface Elev. 636.4 Boring Type HSA & ROTARY WASH Completion Depth 156.0'

Coordinates: (X) N 4025 (Y) E 7028 Drilling Contractor SKS

Date Started 6-28-95 Date Completed 7-14-95 Driller TODD SKINNER Rig No. MOBILE B-57

Logged By J. BERRY Backfilled (Y/N) Y Backfill Material CEMENT/BENTONITE GROUT

Surface Conditions BARE GROUND If "No" explain

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	Q_p (TSF)	PID (PPM) eV LAMP 10.6 __ 11.7 __	CHEMICAL	GEOTECHNICAL	SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
												SILTY CLAY (CL); Gray, hard, damp, some gravel, some silt (continued)	
				>4.5					46				
									47				
									48	588.40		SAND (SP); Gray, loose, saturated, fine grained, trace silt	
									49			grades trace gravel, fine to medium grained, trace silt out	blow-in in augers
14	CS	0							50				
									51			grades medium to coarse grained	
									52				
									53				could not wash out
									54				beat split spoon to verify
15	CS	0							55			grades with gravel	
									56				overdrilled to find silty clay
									57	579		SILTY CLAY (CL); Gray, very stiff, damp, some gravel	
									58				
16	SS	12							59				
17	CS	60		4.0									

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

roject Name CLINTON LANDFILL, INC. Sheet 5 of

Project Location CLINTON, ILLINOIS Project No. 91-118

Boring No. CSM-1 Surface Elev. 636.4 Boring Type HSA & ROTARY WASH Completion Depth 156.0'

Coordinates: (X) N 4025 (Y) E 7028 Drilling Contractor SKS

Date Started 6-28-95 Date Completed 7-14-95 Driller TODD SKINNER Rig No. MOBILE B-57

Logged By J. BERRY Backfilled (Y/N) Y Backfill Material CEMENT/BENTONITE GROUT

Surface Conditions BARE GROUND If "No" explain

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	Q_p (TSF)	PID (PPM) 9V LAMP 10.6 11.7	CHEMICAL	GEOTECHNICAL	SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
												SILTY CLAY (CL); Gray, very stiff, damp, trace gravel (continued)	
				>4.5					61			grades hard	
									62				
				4.0					63			grades very stiff	
									64	572.40			
				>4.5						572.15		SAND (SP); Gray, loose, wet, fine-medium grained, trace silt	
18	CS	60							65			SILTY CLAY (CL); Gray, hard, damp, trace gravel	
				4.0									
									66	570.40		SAND (SP); Gray, loose, wet, fine-medium grained	
				4.0					67	569.40		SILTY CLAY (CL); Gray, very stiff, damp, trace gravel	
									68	568.15		SAND (SP); Gray, loose, wet, fine-medium grained	
				>4.5					69	567.65		SILTY CLAY (CL); Gray, very stiff, damp, some gravel	
19	ST											grades very stiff to hard, trace gravel	
									70				
20	CS	48							71				
				>4.5					72				
									73	563.15		SAND (SP); Gray, loose, saturated, fine to medium grained, with silt	
									74				
21	CS	29											

CAD DWG NO:91118132 EMPLOYEE NO: 9834 DATE/TIME: 02/02/96 15:47:19 ACD-12

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

Project Name CLINTON LANDFILL, INC. Sheet 6 of 11
Project Location CLINTON, ILLINOIS Project No. 91-118
Boring No. CSM-1 Surface Elev. 636.4 Boring Type HSA & ROTARY WASH Completion Depth 156.0'
Coordinates: (X) N 4025 (Y) E 7028 Drilling Contractor SKS
Date Started 6-28-95 Date Completed 7-14-95 Driller TODD SKINNER Rig No. MOBILE B-57
Logged By J. BERRY Backfilled (Y/N) Y Backfill Material CEMENT/BENTONITE GROUT
Surface Conditions BARE GROUND If "No" explain

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	Q_p (TSF)	PID (PPM) eV LAMP 10.6 __ 11.7 __	CHEMICAL	GEOTECHNICAL SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
									560.90		SAND (SP); Gray, loose, saturated, medium to fine grained, with silt (continued)	
											SILTY CLAY (CL); Gray, hard, damp, with gravel	
				>4.5				76				
22	SS	12	>100					77				
23	CS	20	>100	>4.5				78				
								79				
				>4.5				80				
24	SS	12	>100	>4.5				81				Switched to rotary wash drilling at 80.5' (EL. 555.90)
25	SS	12	>100	>4.5				82				
								83				
								84				
26	SS	4	>100	>4.5				85				
								86				
27	SS	14	>100	>4.5				87				
								88				
28	SS	11	>100	>4.5				89				

CAD DWG NO:91118133 EMPLOYEE NO: 9834 DATE/TIME: 02/02/96 15:49:52 ACD-12_

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

Project Name CLINTON LANDFILL, INC. Sheet 7 of 1

Project Location CLINTON, ILLINOIS Project No. 91-118

Boring No. CSM-1 Surface Elev. 636.4 Boring Type HSA & ROTARY WASH Completion Depth 156.0'

Coordinates: (X) N 4025 (Y) E 7028 Drilling Contractor SKS

Date Started 6-28-95 Date Completed 7-14-95 Driller TODD SKINNER Rig No. MOBILE B-57

Logged By J. BERRY Backfilled (Y/N) Y Backfill Material CEMENT/BENTONITE GROUT

Surface Conditions BARE GROUND If "No" explain

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	Q_p (TSF)	PID (PPM) eV LAMP 10.6 __ 11.7 __	CHEMICAL	GEOTECHNICAL	SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
												SILTY CLAY (CL); Gray, hard, damp, with gravel (continued)	
29	SS	6	>100	>4.5				X	91				Switched to 300 lb/ 24" stroke hammer at 91.0'
30	SS	8	>100	>4.5									
									92				
31	SS	14	>100	>4.5					93				
									94				
				>4.5									
32	SS	18	>100	>4.5					95				
				>4.5					96				
										539.9			
												SANDY SILT (ML); Gray, hard, damp, some clay	
33	SS	10	>100	>4.5					97				
									98	538.4			
												SILTY CLAY (CL); Gray, hard, damp, trace gravel	
34	SS	17	>100	>4.5					99				
				>4.5					100				
35	SS	10	>100	>4.5					101				
				>4.5					102				
36	SS	10	>100	>4.5					103				
37	SS	21	56	>4.5					104				

CAD DWG NO:91118134 EMPLOYEE NO: 9834 DATE/TIME: 02/02/96 15:52:14 ACD-12

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

Sheet 8 of 11

Project Name CLINTON LANDFILL, INC. Project No. 91-118

Project Location CLINTON, ILLINOIS

Boring No. CSM-1 Surface Elev. 636.4 Boring Type HSA & ROTARY WASH Completion Depth 156.0'

Coordinates: (X) N 4025 (Y) E 7028 Drilling Contractor SKS

Date Started 6-28-95 Date Completed 7-14-95 Driller TODD SKINNER Rig No. MOBILE B-57

Logged By J. BERRY Backfilled (Y/N) Y Backfill Material CEMENT/BENTONITE GROUT

Surface Conditions BARE GROUND If "No" explain

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	Q_p (TSF)	PID (PPM) eV LAMP 10.6 11.7	CHEMICAL	GEOTECHNICAL SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
											SILTY CLAY (CL); Gray, hard, damp, trace gravel (continued)	
								106				
38	SS	24	31	>4.5								
								107				
				>4.5								
								108				
39	SS	24	23	>4.5								
								109				
				>4.5								
								110				
40	ST	12	>100									
				>4.5				111				
41	SS	24	24	>4.5				112				
								113				
42	SS	24	20	>4.5				114				
				>4.5				115				
				3.25					520.90		SILTY CLAY (CL); Dark brown, very stiff, damp, trace gravel, some peat	
43	SS	24	31	3.25				116				
											grades hard	
				>4.5				117				
				>4.5								
44	SS	24	27	>4.5				118				
								119				
				>4.5								

CAD DWG NO:91118135 EMPLOYEE NO: 9834 DATE/TIME: 02/02/96 15:52:45 ACD-12

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

Project Name CLINTON LANDFILL, INC. Sheet 9 of

Project Location CLINTON, ILLINOIS Project No. 91-118

Boring No. CSM-1 Surface Elev. 636.4 Boring Type HSA & ROTARY WASH Completion Depth 156.0'

Coordinates: (X) N 4025 (Y) E 7028 Drilling Contractor SKS

Date Started 6-28-95 Date Completed 7-14-95 Driller TODD SKINNER Rig No. MOBILE B-57

Logged By J. BERRY Backfilled (Y/N) Y Backfill Material CEMENT/BENTONITE GROUT

Surface Conditions BARE GROUND If "No" explain

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	Q_P (TSF)	PID (PPM) eV LAMP 10.6 11.7	CHEMICAL	GEOTECHNICAL SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
45	SS	24	20	>4.5							SILTY CLAY (CL); Dark brown, hard, damp, trace gravel, some peat (continued)	
				3.75				121				
				>4.5					514.90		SILTY CLAY (CL); Gray, hard, damp, trace gravel (continued)	
46	SS	24	16	3.25				122				
				4.0								
				4.0				123			grades very stiff	
											grades green-gray	
47	SS	24	25	>4.5				124				
				>4.5				125			grades trace organics (wood)	
48	SS	20	18	4.0				126				
				4.0				127				
49	SS	22	18	>4.5				128				
				>4.5				129			grades organics out, mottled gray-brown	
50	SS	24	18	>4.5				130				
				>4.5				131				
51	SS	24	19	4.25				132				
				4.0				133				
52	SS	24	26	>4.5				134				
									501.90		SILTY CLAY (CL); Brown, hard, damp, trace gravel	

CAD DWG NO:91118136 EMPLOYEE NO: 9834 DATE/TIME: 02/02/96 15:53:17 ACD-12

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

ject Name CLINTON LANDFILL, INC. Sheet 10 of 11

ject Location CLINTON, ILLINOIS Project No. 91-118

Boring No. CSM-1 Surface Elev. 636.4 Boring Type HSA & ROTARY WASH Completion Depth 156.0'

Coordinates: (X) N 4025 (Y) E 7028 Drilling Contractor SKS

Date Started 6-28-95 Date Completed 7-14-95 Driller TODD SKINNER Rig No. MOBILE B-57

Logged By J. BERRY Backfilled (Y/N) Y Backfill Material CEMENT/BENTONITE GROUT

Surface Conditions BARE GROUND If "No" explain

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	Q_p (TSF)	PID (PPM) eV LAMP 10.6 __ 11.7 __	CHEMICAL	GEOTECHNICAL SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
											SILTY CLAY (CL); Brown, hard, damp, trace gravel (continued)	
								136				
53	SS	24	17	>4.5								
								137				
				>4.5								
								138				
54	SS	24	20	>4.5								
								139				
				>4.5								
								140				
55	SS	24	16	>4.5								
								141				
											grades very stiff	
				2.75				142				
56	SS	24	10	2.75								
								143				
				2.75							~~grades trace organics (wood)~~	
								144				
57	SS	24	25	2.5								
								145				
				2.5								
								146				
58	SS	24	18	2.5							~~grades organics out~~	
								147				
				2.5								
								148				
	SS	20	10	2.75								
								149				
									486.90		SANDY SILT (ML); Gray, firm, saturated, fine grained sand, laminated	

CAD DWG NO:91118137 EMPLOYEE NO: 9834 DATE/TIME: 02/02/96 15:56:05 ACD-12_

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

Project Name CLINTON LANDFILL, INC. Sheet 11 of 11

Project Location CLINTON, ILLINOIS Project No. 91-118

Boring No. CSM-1 Surface Elev. 636.4 Boring Type HSA & ROTARY WASH Completion Depth 156.0'

Coordinates: (X) N 4025 (Y) E 7028 Drilling Contractor SKS

Date Started 6-28-95 Date Completed 7-14-95 Driller TODD SKINNER Rig No. MOBILE B-57

Logged By J. BERRY Backfilled (Y/N) Y Backfill Material CEMENT/BENTONITE GROUT

Surface Conditions BARE GROUND If "No" explain

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	Q_p (TSF)	PID (PPM) eV LAMP 10.6 — 11.7 —	CHEMICAL	GEOTECHNICAL	SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
60	SS	22	19							485.90		SANDY SILT (ML); Gray, firm, saturated, fine grained sand, laminated (continued)	
												SAND (SP); Gray, medium dense, saturated, fine grained with silt	
									151				
									152				
61	SS	24	31										
									153	483.40		SANDY SILT (ML); Gray, firm, saturated	
									154	482.40		SAND (SP); Gray, medium dense, saturated, fine grained, with silt	
?	SS	24	19										
									155				
									156	480.40		End of boring @ 156.0'	
									157				
									158				
									159				
									160				
									161				
									162				
									163				
									164				

CAD DWG NO:91118138 EMPLOYEE NO: 9834 DATE/TIME: 02/02/96 15:56:42 ACD-12

B-123

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

Project CLINTON LANDFILL, INC. Job No. 91C-118

Project Location CLINTON, ILLINOIS Boring Type HSA

Boring Designation B-CLG Elev. 704.15 Total Depth 85.0'

Date Started 8-31-93 Date Completed 8-31-93 Logged By JOHN BERRY

Drilling Contractor WHITNEY & ASSOCIATES

Driller STEVE WINSLOW Rig No. CME 75 Backfilled (Y/N) Y

Surface Conditions GRASS

SAMPLE NUMBER	SAMPLE TYPE	RECOVERED (INCHES)	SET 6"	2ND 6"	3RD 6"	"N" VALUE	QP (TSF)	DEPTH (FEET)	SAMPLE TYPE	LOG	DESCRIPTION OF MATERIAL	REMARKS, PHOTOIONIZATION DETECTOR READINGS (ppm)
								0			TOPSOIL; with organics	
								1			SILTY CLAY (CL); Brown, moist, trace gravel	
								2				
								4				
								6				
								8				
								10				
								12				
1	ST							13				Pushed tube. Collected CLG-1 for geotech. analysis
								14				
2	ST							15			grades gray	Pushed tube. Collected CLG-2 for geotech. analysis
								16				
								18				
								20				
								22				
								24				
								26				
								28				

CAD DWG NO:91C11827 EMPLOYEE NO: 982 DATE/TIME: 10/08/93 12:49:54 ACD-12

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

Sheet 2 of

Project CLINTON LANDFILL, INC. Job No. 91C-116

Project Location CLINTON, ILLINOIS Boring Type HSA

Boring Designation B-CLG Elev. Total Depth 85.0'

Date Started 8-31-93 Date Completed 8-31-93 Logged By JOHN BERRY

Drilling Contractor WHITNEY & ASSOCIATES

Driller STEVE WINSLOW Rig No. CME 75 Backfilled (Y/N) Y

Surface Conditions GRASS

SAMPLE NUMBER	SAMPLE TYPE	RECOVERED (INCHES)	SET 6"	2ND 6"	3RD 6"	"N" VALUE	QP (TSF)	DEPTH (FEET)	SAMPLE TYPE	LOG	DESCRIPTION OF MATERIAL	REMARKS, PHOTOIONIZATION DETECTOR READINGS (ppm)
								32			SILTY CLAY (CL); Gray, moist, trace gravel	
								34				
								36				
								38				
3	AS							40			FORMER TOPSOIL; with organics	Grab sample from cutting. Collected CLG-3 for geotech. analysis
											SAND	
4	ST							42			SILTY CLAY (CL); Gray, moist, trace gravel	Pushed tube. Collected CLG-4 for geotech. analysis
								44				
								46				
								48				
								50				
								52				
								54				
								56				
								58				

CAD DWG NO:91C11828 EMPLOYEE NO: 982 DATE/TIME: 10/08/93 12:46:32 ACD-12

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

Project CLINTON LANDFILL, INC. Job No. 91C-118
Project Location CLINTON, ILLINOIS Boring Type HSA
Boring Designation B-CLG Elev. Total Depth 85.0'
Date Started 8-31-93 Date Completed 8-31-93 Logged By JOHN BERRY
Drilling Contractor WHITNEY & ASSOCIATES
Driller STEVE WINSLOW Rig No. CME 75 Backfilled (Y/N) Y
Surface Conditions GRASS

SAMPLE NUMBER	SAMPLE TYPE	RECOVERED (INCHES)	SET 6"	2ND 6"	3RD 6"	"N" VALUE	QP (TSF)
CLG-5	SS	10	81	37	–	118	
CLG-7	SS	8	>50/6"			–	–
G-8	SS	24	23	25	57/50	82	–
CLG-9	SS	24	–	–	36/30	36	–
CLG-10	SS	24	–	–	17/28	17	–

DEPTH (FEET)	SAMPLE TYPE	LOG	DESCRIPTION OF MATERIAL	REMARKS, PHOTOIONIZATION DETECTOR READINGS (ppm)
62			SILTY SAND (SW); Gray, damp, trace clay and gravel	
64			CLAY (CL); Gray, damp, trace gravel	
66			SILTY SAND (SW); Gray, damp, trace gravel and clay	
68				
70				
72			SAND (SP); Gray, wet, trace silt	
74				
76				Had 1 foot blowin
78			SILTY CLAY	
80				Had 1 foot blowin
82			SILTY SAND; Trace clay	
84				
86			End of boring @ 85.0'	
88				

WHITNEY & ASSOCIATES
INCORPORATED
2406 West Nebraska Avenue
PEORIA, ILLINOIS 61604

BORING LOG

BORING NO. B-20
DATE 3-07-89
W. & A. FILE NO. 2703
SHEET 1 OF 5
PROJECT CLINTON MUNICIPAL LANDFILL
LOCATION Clinton, Illinois
BORING LOCATION N. 4280.713; E. 7696.857
DRILLED BY Winslow
BORING TYPE Hollow-Stem Auger
WEATHER CONDITIONS Partly Cloudy & Mild
SOIL CLASSIFICATION SYSTEM U.S.B.S.C.
SEEPAGE WATER ENCOUNTERED AT ELEVATION 687.3
GROUND SURFACE ELEVATION 712.3
GROUND WATER ELEVATION AT 24+ HRS. -
BORING DISCONTINUED AT ELEVATION 594.3
GROUND WATER ELEVATION AT COMPLETION 661.8

DESCRIPTION	DEPTH IN FEET	SAMPLE TYPE	N	Q_p	Q_u	D_d	M_c
BROWN SILTY CLAY		SS	8 12	15" Recovery			
	4	SS	13 16	15" Recovery			
		SS	12 14	19" Recovery			
	8	SS	9 21	17" Recovery			
BROWN, WEATHERED GLACIAL SILTY CLAY TILL		3" ST		16" Recovery			
	12	SS	15 20	23" Recovery			
		SS	16 27	22" Recovery			
	16	SS	14 24	24" Recovery			
GRAY, SILTY CLAY LOAM		SS	13 23	24" Recovery			
	20	SS	12 29	24" Recovery			
GRAY AND BROWN, WEATHERED GLACIAL SILTY CLAY TILL WITH SAND LENSES		SS	14 24	22" Recovery			
	24	SS	21 28	24" Recovery			
GRAY, UNWEATHERED GLACIAL SILTY CLAY TILL		SS	11 25	19" Recovery			

N - BLOWS DELIVERED PER FOOT BY A 140 LB. HAMMER FALLING 30 INCHES
SS - SPLIT SPOON SAMPLE
ST - SHELBY TUBE SAMPLE

Q_p - CALIBRATED PENETROMETER READING - T.S.F.
Q_u - UNCONFINED COMPRESSIVE STRENGTH - T.S.F.
D_d - NATURAL DRY DENSITY - P.C.F.
M_c - NATURAL MOISTURE CONTENT - %

BORING LOG
(CONTINUATION)

BORING NO. B-20 DATE 3-07-89

PROJECT Clinton Municipal Landfill SHEET 2 OF 5
LOCATION Clinton, Illinois W & A FILE NO. 2703

DESCRIPTION	DEPTH IN FEET	SAMPLE TYPE	N	Q_p	Q_u	D_d	Mc
SEE SHEET 1 OF 5		SS	10 19	21" Recovery			
	30	3" ST		24" Recovery			
		SS	21 39	24" Recovery			
	34	SS	19 37	24" Recovery			
		SS	14 30	23" Recovery			
	38	SS	32 58	23" Recovery			
		SS	30 42	17" Recovery			
	42	SS	29 45	17" Recovery			
		SS	19 35	24" Recovery			
	46	3" ST		No Recovery			
DARK BROWN, OLD ORGANIC TOPSOIL		SS	35 48	15" Recovery			
DARK BROWN SILTY CLAY (ORGANIC)	50	SS	40 60	17" Recovery			
DARK BROWN, OLD ORGANIC TOPSOIL							
GRAY, UNWEATHERED GLACIAL SILTY CLAY TILL		SS	21 30	23" Recovery			
	54	3" ST		24" Recovery			
		SS	13 22	23" Recovery			

N - BLOWS DELIVERED PER FOOT BY A 140 LB. HAMMER FALLING 30 INCHES
SS - SPLIT SPOON SAMPLE
ST - SHELBY TUBE SAMPLE

Q_p - CALIBRATED PENETROMETER READING - T.S.F.
Q_u - UNCONFINED COMPRESSIVE STRENGTH - T.S.F.
D_d - NATURAL DRY DENSITY - P.C.F.
Mc - NATURAL MOISTURE CONTENT - %

WHITNEY & ASSOCIATES
PEORIA, ILLINOIS

BORING LOG
(CONTINUATION)

BORING NO. B-20 DATE 3-07-89

PROJECT Clinton Municipal Landfill SHEET 3 OF 5
LOCATION Clinton, Illinois W. & A. FILE NO. 2703

DESCRIPTION	DEPTH IN FEET	SAMPLE TYPE	N	Qp	Qu	Dd	Mc
SEE SHEET 2 OF 5		SS	18 39	24" Recovery			
	60	SS	18 52	20" Recovery			
		SS	25 45	22" Recovery			
	64	SS	54 97/10"	19" Recovery			
		SS	102 -	12" Recovery			
	68	SS	28 50	21" Recovery			
GRAY, SILT		SS	20 80	15" Recovery			
	72	SS	113/10"	9" Recovery			
GRAY, UNWEATHERED GLACIAL SILTY CLAY TILL		SS	111/10"	10" Recovery			
	76	SS	98 -	12" Recovery			
GRAY-BROWN MOTTLED DARK BROWN SILT LOAM (OLD ORGANIC TOPSOIL)		SS	25 68	20" Recovery			
GRAY, UNWEATHERED GLACIAL SANDY CLAY TILL WITH OCCASIONAL SAND SEAMS	80	SS	24 40	24" Recovery			
GRAY, UNWEATHERED GLACIAL SANDY CLAY TILL		SS	20 48	24" Recovery			
	84	3" ST		9" Recovery			
		SS	30 61	21" Recovery			

N - BLOWS DELIVERED PER FOOT BY A 140 LB. HAMMER FALLING 30 INCHES
SS - SPLIT SPOON SAMPLE
ST - SHELBY TUBE SAMPLE

Qp - CALIBRATED PENETROMETER READING - T.S.F.
Qu - UNCONFINED COMPRESSIVE STRENGTH - T.S.F.
Dd - NATURAL DRY DENSITY - P.C.F.
Mc - NATURAL MOISTURE CONTENT - %

WHITNEY & ASSOCIATES
PEORIA, ILLINOIS

BORING LOG
(CONTINUATION)

BORING NO. B-20 DATE 3-07-89

PROJECT Clinton Municipal Landfill SHEET 4 OF 5

LOCATION Clinton, Illinois W. & A. FILE NO. 2703

DESCRIPTION	DEPTH IN FEET	SAMPLE TYPE	N	Q_p	Q_u	D_d	M_c
SEE SHEET 3 OF 5		SS	65 106/8"	19" Recovery			
GRAY, UNWEATHERED GLACIAL SANDY CLAY TILL WITH OCCASIONAL SAND LENSES	90	SS	75 103/11"	22" Recovery			
		SS	95 -	12" Recovery			
	94	SS	66 104/10"	21" Recovery			
		SS	104 -	12" Recovery			
	98	SS	55 99/10"	20" Recovery			
		SS	88 -	12" Recovery			
	102	SS	90 -	12" Recovery			
		SS	121/10"	No Recovery			
	106	SS	115/9"	9" Recovery			
		SS	125/6"	5" Recovery			
	110	SS	107/7"	7" Recovery			
GRAY, UNWEATHERED GLACIAL SILTY CLAY TILL		SS	103/3"	3" Recovery			
	114	SS	99/3"	3" Recovery			
		SS	102/3"	3" Recovery			

N - BLOWS DELIVERED PER FOOT BY A 140 LB. HAMMER FALLING 30 INCHES
SS - SPLIT SPOON SAMPLE
ST - SHELBY TUBE SAMPLE

Q_p - CALIBRATED PENETROMETER READING - T.S.F.
Q_u - UNCONFINED COMPRESSIVE STRENGTH - T.S.F.
D_d - NATURAL DRY DENSITY - P.C.F.
M_c - NATURAL MOISTURE CONTENT - %

WHITNEY & ASSOCIATES
PEORIA, ILLINOIS

BORING LOG
(CONTINUATION)

BORING NO. B-20

DATE 3-07-89

PROJECT Clinton Municipal Landfill

LOCATION Clinton, Illinois

SHEET 5 OF 5

W. & A. FILE NO. 2703

DESCRIPTION	DEPTH IN FEET	SAMPLE TYPE	N	Q_p	Q_u	D_d	M_c
SEE SHEET 4 OF 5		SS	111/2"	2" Recovery			
EXPLORATORY BORING DISCONTINUED	120						
	124						
	128						
	132						
	136						
	140						
	144						

N - BLOWS DELIVERED PER FOOT BY A 140 LB. HAMMER FALLING 30 INCHES
SS - SPLIT SPOON SAMPLE
ST - SHELBY TUBE SAMPLE

Q_p - CALIBRATED PENETROMETER READING - T.S.F.
Q_u - UNCONFINED COMPRESSIVE STRENGTH - T.S.F.
D_d - NATURAL DRY DENSITY - P.C.F.
M_c - NATURAL MOISTURE CONTENT - %

WHITNEY & ASSOCIATES
PEORIA, ILLINOIS

WHITNEY & ASSOCIATES
INCORPORATED
2406 West Nebraska Avenue
PEORIA, ILLINOIS 61604

BORING LOG

BORING NO. B-22
DATE 3-20-89
W. & A. FILE NO. 2703
SHEET 1 OF 5
PROJECT CLINTON MUNICIPAL LANDFILL
BORING LOCATION N. 2949.011; E. 7579.987
BORING TYPE Hollow-Stem Auger
SOIL CLASSIFICATION SYSTEM U.S.B.S.C.
GROUND SURFACE ELEVATION 723.6
BORING DISCONTINUED AT ELEVATION 597.3

LOCATION Clinton, Illinois
DRILLED BY Winslow
WEATHER CONDITIONS Partly Cloudy & Cool
SEEPAGE WATER ENCOUNTERED AT ELEVATION 699.7
GROUND WATER ELEVATION AT 24+ HRS. 689.6
GROUND WATER ELEVATION AT COMPLETION 684.6

DESCRIPTION	DEPTH IN FEET	SAMPLE TYPE	N	Qp	Qu	Dd	Mc
BROWN SILTY CLAY		SS	6 12	13" Recovery			
	4	SS	12 26	16" Recovery			
		SS	8 22	22" Recovery			
*Lost Tube; Sample was poor after tube was recovered	8	2" ST		No Recovery *			
BROWN AND GRAY-BROWN MOTTLED ORANGE-BROWN, WEATHERED GLACIAL SILTY CLAY TILL		SS	21 37	22" Recovery			
	12	2" ST		24" Recovery			
		SS	18 28	19" Recovery			
	16	SS	11 24	22" Recovery			
		SS	15 24	23" Recovery			
	20	2" ST		22" Recovery			
BROWN, FINE- TO MEDIUM-GRAINED SAND (DAMP)		SS	25 35	16" Recovery			
BROWN, FINE- TO MEDIUM-GRAINED SAND (WET)	24	SS	28 37	15" Recovery			
		2" ST		21" Recovery			

N - BLOWS DELIVERED PER FOOT BY A 140 LB. HAMMER FALLING 30 INCHES
SS - SPLIT SPOON SAMPLE
ST - SHELBY TUBE SAMPLE

Qp - CALIBRATED PENETROMETER READING - T.S.F.
Qu - UNCONFINED COMPRESSIVE STRENGTH - T.S.F
Dd - NATURAL DRY DENSITY - P.C.F.
Mc - NATURAL MOISTURE CONTENT - %

BORING LOG
(CONTINUATION)

BORING NO. B-22 DATE 3-20-89

PROJECT Clinton Municipal Landfill SHEET 2 OF 5
LOCATION Clinton, Illinois W. & A. FILE NO. 2703

DESCRIPTION	DEPTH IN FEET	SAMPLE TYPE	N	Q_p	Q_u	D_d	M_c
SEE SHEET 1 OF 5		SS	12 17	24" Recovery			
GRAY, UNWEATHERED GLACIAL SANDY CLAY TILL WITH OCCASIONAL SAND SEAMS	30	SS	5 13	13" Recovery			
		2" ST		24" Recovery			
	34	SS	9 12	20" Recovery			
		SS	8 12	22" Recovery			
	38	SS	8 35				
GRAY SILT							
GRAY, UNWEATHERED GLACIAL SANDY CLAY TILL WITH CONSIDERABLE SAND SEAMS		SS	52 96/10"	20" Recovery			
GRAY, FINE- TO MEDIUM-GRAINED SAND	42	SS	58 93/6"	16" Recovery			
GRAY, MEDIUM- TO COARSE-GRAINED SAND WITH CONSIDERABLE FINE-GRAINED GRAVEL		SS	59 104/6"	18" Recovery			
GRAY, MEDIUM-GRAINED SAND	46	SS	49 97/6"	20" Recovery			
		SS	72	13" Recovery			
GRAY, FINE- TO MEDIUM-GRAINED SAND	50	SS	81	10" Recovery			
		SS	74	9" Recovery			
GRAY, UNWEATHERED GLACIAL SANDY CLAY TILL	54	SS	38 80	10" Recovery			
		SS	40 82	9" Recovery			

N - BLOWS DELIVERED PER FOOT BY A 140 LB. HAMMER FALLING 30 INCHES
SS - SPLIT SPOON SAMPLE
ST - SHELBY TUBE SAMPLE

Q_p - CALIBRATED PENETROMETER READING - T.S.F.
Q_u - UNCONFINED COMPRESSIVE STRENGTH - T.S.F.
D_d - NATURAL DRY DENSITY - P.C.F.
M_c - NATURAL MOISTURE CONTENT - %

WHITNEY & ASSOCIATES
PEORIA, ILLINOIS

BORING LOG
(CONTINUATION)

BORING NO. B-22 DATE 3-20-89

PROJECT Clinton Municipal Landfill SHEET 3 OF 5

LOCATION Clinton, Illinois W. & A. FILE NO. 2703

DESCRIPTION	DEPTH IN FEET	SAMPLE TYPE	N	Qp	Qu	Dd	Mc
GRAY, UNWEATHERED GLACIAL SILTY CLAY TILL WITH OCCASIONAL SAND LENSES		SS	32 69	10" Recovery			
	60	SS	14 48	16" Recovery			
DARK GRAY AND DARK BROWN OLD ORGANIC TOPSOIL		SS	29			*	
*Attempted 2" ST broke off in hole. Attempted recovery with SS.							
GRAY, UNWEATHERED GLACIAL SILTY CLAY TILL	64	SS		No Recovery			
		SS	18 48	24" Recovery			
	68	SS	19 48	24" Recovery			
GRAY, UNWEATHERED GLACIAL SANDY CLAY TILL		SS	22 42	22" Recovery			
	72	2" ST		16" Recovery			
		SS	51 72	23" Recovery			
	76	SS	58 79/6"	18" Recovery			
		SS	26 96/9"	20" Recovery			
	80	SS	91/12"	12" Recovery			
		SS	89/12"	10" Recovery			
GRAY, UNWEATHERED GLACIAL SILTY CLAY TILL WITH SAND SEAM	84	SS	42 57	18" Recovery			
		SS	39 50	20" Recovery			

N - BLOWS DELIVERED PER FOOT BY A 140 LB. HAMMER FALLING 30 INCHES
SS - SPLIT SPOON SAMPLE
ST - SHELBY TUBE SAMPLE

Qp - CALIBRATED PENETROMETER READING - T.S.F.
Qu - UNCONFINED COMPRESSIVE STRENGTH - T.S.F.
Dd - NATURAL DRY DENSITY - P.C.F.
Mc - NATURAL MOISTURE CONTENT - %

WHITNEY & ASSOCIATES
PEORIA, ILLINOIS

BORING LOG
(CONTINUATION)

BORING NO. B-22 DATE 3-20-89

PROJECT Clinton Municipal Landfill SHEET 4 OF 5

LOCATION Clinton, Illinois W. & A. FILE NO. 2703

DESCRIPTION	DEPTH IN FEET	SAMPLE TYPE	N	Q_p	Q_u	D_d	Mc
SEE SHEET 3 OF 4		SS	21 47	24" Recovery			
	90	SS	36 97/6"	18" Recovery			
		SS	102/7"	7" Recovery			
	94	SS	30 104/7"	19" Recovery			
DARK GRAY SILT (ORGANIC)		SS	102/6"	No Recovery			
GRAY, UNWEATHERED GLACIAL SILTY CLAY TILL	96	SS	57 69	24" Recovery			
		SS	53 95	24" Recovery			
	102	SS	93/6"	7" Recovery			
		SS	91/5"	5" Recovery			
	106	SS	114 -	7" Recovery			
		SS	108 -	10" Recovery			
	110	SS	93 -	10" Recovery			
		SS	104 -	10" Recovery			
	114	SS	90/4"	No Recovery			
		SS	54 39	17" Recovery			

N - BLOWS DELIVERED PER FOOT BY A 140 LB. HAMMER FALLING 30 INCHES
SS - SPLIT SPOON SAMPLE
ST - SHELBY TUBE SAMPLE

Q_p - CALIBRATED PENETROMETER READING - T.S.F.
Q_u - UNCONFINED COMPRESSIVE STRENGTH - T.S.F.
D_d - NATURAL DRY DENSITY - P.C.F.
Mc - NATURAL MOISTURE CONTENT - %

WHITNEY & ASSOCIATES
PEORIA, ILLINOIS

BORING LOG
(CONTINUATION)

BORING NO. B-22 DATE 3-20-89

PROJECT Clinton Municipal Landfill SHEET 5 OF 5

LOCATION Clinton, Illinois W. & A. FILE NO. 2703

DESCRIPTION	DEPTH IN FEET	SAMPLE TYPE	N	Q_p	Q_u	D_d	M_c
SEE SHEET 4 OF 5		SS	112/7"	6" Recovery			
	120	SS	126/3"	No Recovery			
		SS	133/4"	No Recovery			
	124	SS	200/2"	2" Recovery			
		SS	-	No Recovery			
EXPLORATORY BORING DISCONTINUED	128						
	132						
	136						
	140						
	144						

N - BLOWS DELIVERED PER FOOT BY A 140 LB. HAMMER FALLING 30 INCHES
SS - SPLIT SPOON SAMPLE
ST - SHELBY TUBE SAMPLE

Q_p - CALIBRATED PENETROMETER READING - T.S.F.
Q_u - UNCONFINED COMPRESSIVE STRENGTH - T.S.F.
D_d - NATURAL DRY DENSITY - P.C.F.
M_c - NATURAL MOISTURE CONTENT - %

WHITNEY & ASSOCIATES
PEORIA, ILLINOIS

PROJECT CLINTON LANDFILL, INC., DEWITT COUNTY, ILLINOIS

CLIENT ANDREWS ENVIRONMENTAL ENGINEERING, INC.,

BORING 122 DATE STARTED 10-17-89 DATE COMPLETED 10-19-89 JOB 27.702

ELEVATIONS

GROUND SURFACE 726.25

END OF BORING 630.25

WATER TABLE

AT END OF BORING

24 HOURS

WHILE DRILLING

DISTANCE BELOW SURFACE IN

	SAMPLE NO.	SAMPLE TYPE	N	WC	Q_u	γ_{DRY}	DEPTH	ELEV.	SOIL DESCRIPTIONS
OL	1	SS	10		4.0		0.75	725.5	Brown clayey TOPSOIL, trace sand, moist (OL)
	2	SS	12		1.75				
	3	SS	9		1.25				
	4	SS	8		2.25				
	5	SS	14		1.75				Tough to very tough light brown silty CLAY, trace sand, small gravel, moist (CL)
CL	6	SS	12		2.25				
	7	SS	14		1.5				
	8	SS	18		0.75		16.0	710.25	
	9	SS	16		1.0				Tough dark grayish brown silty CLAY, trace sand, small gravel, moist (CL)
CL	10	SS	15		1.75		20.0	706.26	
	11	SS	18						Tough to very tough brown silty CLAY, mottled gray, trace sand, small to large gravel, moist (CL)
	12	SS	26		1.5				
CL	13	SS	25		2.5				
	14	SS	29		2.5		27.0	699.25	
CL	15	SS	28		2.75				Very tough dark brownish gray very silty CLAY, little sand, trace small to large gravel, moist (CL)
	16	SS	81				30.25	696.00	
SW							31.50	694.75	Very dense fine to coarse SAND and small to large gravel, wet (SW)
	17 A/B	SS	46		2.75				Very dense gray very silty fine SAND, few thin clay layers (1"-3" thick) from 32'-34', wet (SM)
SM	18	SS	99/11"						
	19 A/B	SS	57		4.0		37.0	689.25	Hard dark gray very silty CLAY, little sand, trace small to large gravel, moist (CL)
CL							38.0	688.25	
SM	20	SS	54						Very dense gray silty fine SAND, wet (SM)

PROJECT CLINTON LANDFILL, INC., DEWITT COUNTY, ILLINOIS

CLIENT ANDREWS ENVIRONMENTAL ENGINEERING, INC.

BORING 122 cont. DATE STARTED 10-17-89 DATE COMPLETED 10-19-89 JOB 27,702

ELEVATIONS

GROUND SURFACE 726.25

END OF BORING 630.25

WATER TABLE

AT END OF BORING

24 HOURS

WHILE DRILLING

		LENGTH RECOVERY	SAMPLE NO.	SAMPLE TYPE	N	WC	Q_U	γ_{DRY}	DEPTH	ELEV.	SOIL DESCRIPTIONS
40	SM		21	SS	43						Very dense gray silty fine SAND, wet (SM)
			22	SS	30				43.75	682.50	
45	CL		23	SS	49		4.5				Hard dark gray very silty CLAY, little sand, trace small to large gravel, few thin silt layers (1/2" - 2" thick), moist (CL)
			24	SS	41		4.5		47.0	679.25	
	SC		25	SS	45						Very dense gray clayey fine SAND, some silt, few thin clay layers (1/2" - 1" thick), wet (SC)
50			26	SS	30		4.5		51.0	675.25	
	CL		27	SS	70/11"		4.5				Hard dark gray very silty CLAY, little sand, trace small to large gravel, moist (CL)
			28	SS	50/5"				54.0	672.25	
55	SW		29	SS	53						Very dense gray fine to coarse SAND, little small to large gravel, wet (SW)
			30	SS	50/5"				57.0	668.75	
60			31	SS	50/1"						Very dense gray fine to coarse SAND, and small to large gravel, trace silt, wet (SW) cobbles and boulders from 59'-62'
			32	SS	56						
65	SW		33	SS	50/6"						
			34	SS	59						
			35	SS	63						
70			36	SS	45		4.5+		71.0	655.25	
			37	SS	48		4.25				
	CL		38	SS	46		4.0				Hard dark gray very silty CLAY, little sand, trace small to large gravel, few thin clayey silt layers (3"-6" thick), moist (CL)
			39	SS	62		4.5+				
80			40	SS	31		2.75				

PROJECT CLINTON LANDFILL, INC., DEWITT COUNTY, ILLINOIS

CLIENT ANDREWS ENVIRONMENTAL ENGINEERING, INC.

BORING 122 cont. DATE STARTED 10-17-89 DATE COMPLETED 10-19-89 JOB 27,702

ELEVATIONS

GROUND SURFACE 726.25

END OF BORING 630.25

WATER TABLE

AT END OF BORING

24 HOURS

WHILE DRILLING

DISTANCE BELOW SURFACE IN FEET		LENGTH RECOVERY	SAMPLE NO.	SAMPLE TYPE	N	WC	Q_u	γ_{DRY}	DEPTH	ELEV.	SOIL DESCRIPTIONS
80											
			41	SS	42		3.5				Hard dark gray very silty CLAY, little sand, trace small to large gravel, few thin clayey silt layers (3"-6" thick), moist (CL)
			42	SS	50/5"		3.75				
85	CL		43	SS	70/6"						
			44	SS	00/6"						
			45	SS	65/6"						
90									90.0	636.25	
			46	SS	74/6"						Very dense gray fine to medium SAND, trace coarse sand, wet (SM)
	SM		47	SS	50/5"						
95			48	SS	74				95.0	631.25	Very dense brownish gray clayey SILT, very moist (ML)
	ML-CL								95.5	630.75	Hard greenish gray very silty CLAY, little sand, trace small gravel, moist (CL)
			End of Boring at 96.0 feet								
100											
105											
110											
120											

Monitoring Well B-122
Installation Notes

SS 304 Screen	90'-100'
SS 304 Riser	50'- 90'
Silica Sand	88'-100'
Bentonite Chips	85'- 88'
Volclay Grout	2'- 85'

Square design zinc plated steel protector casing concreted into place over riser pipe.

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

Project Name CLINTON LANDFILL, INC. Project No. 91-118

Project Location CLINTON, ILLINOIS Completion Depth 130'

Boring No. B222D Surface Elev. 704.1 Boring Type HSA

Coordinates: (X) N 4829.38 (Y) E 7621.35 Drilling Contractor SKS & ASSOCIATES, INC.

Date Started 11-10-95 Date Completed 11-15-95 Driller TODD SKINNER Rig No. MOBILE B-57

Logged By J. BERRY Backfilled (Y/N) Y Backfill Material CEMENT-BENTONITE GROUT

Surface Conditions SILTY CLAY (BARE GROUND) If "No" explain

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	Q_P (TSF)	PID (PPM) eV LAMP 10.6 __ 11.7 __	CHEMICAL	GEOTECHNICAL	SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
												SEE BORING LOG G22D FOR CONTINUOUS SAMPLING OF TOP 72.5 FEET.	
									62				
									64				
									66				
									68				
									70				
									72				
1	CS	30		4.5+						631.6		SILTY CLAY (CL); Gray, very stiff, moist, trace gravel	
										630.6		SAND (SP); Gray, medium grain, saturated, with silt	
				4.5+					74	629.6		SILTY CLAY (CL); Gray, very stiff, moist, trace gravel	
2	CS	57								628.7		SAND (SP); Gray, medium to coarse grain, saturated, with clay	
									76				
									78				
										625.1		SILTY CLAY (CL); Gray, very stiff, moist, trace gravel	
				4.0+					80				
3	CS	54											
				4.5+					82				
												5" medium grain, wet sand @ 84.1'	
									84				
4	CS	48								619.1		SANDY CLAY (CL); Gray, wet, medium to coarse grain sand, trace gravel	
				4.5+					86	617.7		SILTY CLAY (CL); Gray, very stiff, moist, trace gravel	
				4.5+					88				

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

roject Name CLINTON LANDFILL, INC. Sheet 2 of

Project Location CLINTON, ILLINOIS Project No. 91-118

Boring No. B222D Surface Elev. 704.1 Boring Type HSA Completion Depth 130'

Coordinates: (X) N 4829.38 (Y) E7621.35 Drilling Contractor SKS & ASSOCIATES, INC.

Date Started 11-10-95 Date Completed 11-15-95 Driller TODD SKINNER Rig No. MOBILE B-57

Logged By J. BERRY Backfilled (Y/N) Y Backfill Material CEMENT-BENTONITE GROUT

Surface Conditions SILTY CLAY (BARE GROUND) If "No" explain

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	Q_p (TSF)	PID (PPM) ev LAMP 10.6 — 11.7 —	CHEMICAL	GEOTECHNICAL	SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
5	CS	60		4.5+								SILTY CLAY (CL); Gray, very stiff, moist, trace gravel	
				4.5+					92				
				4.5+					94				Collected sample 22D for TOC & CEC analyses.
6	CS	60										3" saturated, medium to coarse grain sand @ 95.6'	
				4.5+					96				
				4.5+					98				
7	CS	60							100				
				4.5+					102			2" wet silt seam @ 101.9'	
				4.5+					104			2" wet, medium grain sand @ 104.9'	
8	CS	60		4.5+					106			2" wet, fine to medium grain sand @ 105.8'	
				4.5+					108				
				4.5+					110				
9	CS	48										2" wet, medium grain sand @ 111.2'	
				4.5+					112				
				4.5+					114				
10	CS	50		4.0									
				2.5					116				
				2.0					118			3" wet silt seam @ 118.9'	

CAD DWG NO:91118177 EMPLOYEE NO: 9834 DATE/TIME: 02/02/96 16:10:14 ACD-12_

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

Project Name CLINTON LANDFILL, INC. Sheet 3 of 3

Project Location CLINTON, ILLINOIS Project No. 91-118

Boring No. B222D Surface Elev. 704.1 Boring Type HSA Completion Depth 130'

Coordinates: (X) N 4829.38 (Y) E 7621.35 Drilling Contractor SKS & ASSOCIATES, INC.

Date Started 11-10-95 Date Completed 11-15-95 Driller TODD SKINNER Rig No. MOBILE B-57

Logged By J. BERRY Backfilled (Y/N) Y Backfill Material CEMENT-BENTONITE GROUT

Surface Conditions SILTY CLAY (BARE GROUND) If "No" explain

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	Q_p (TSF)	PID (PPM) eV LAMP 10.6 11.7	CHEMICAL	GEOTECHNICAL SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
11	CS	0									SILTY CLAY (CL); Gray, very stiff, moist, trace gravel	Rock in end of sampler
								122				
								124				
12	SS	10	90+	4.5+			X	126				
13	CS	48		4.5+								
				4.5+				128				
				4.5+				130	574.1		End of boring @130.0'	
								132				
								134				
								136				
								138				
								140				
								142				
								144				
								146				
								148				

CAD DWG NO:91118178 EMPLOYEE NO: 9834 DATE/TIME: 02/02/96 16:07:58 ACD-12_

PROJECT CLINTON LANDFILL, INC., DEWITT COUNTY, ILLINOIS

CLIENT ANDREWS ENVIRONMENTAL ENGINEERING, INC.

BORING 123 DATE STARTED 10-23-89 DATE COMPLETED 10-23-89 JOB 27,702

ELEVATIONS

GROUND SURFACE 703.92

END OF BORING 627.92

WATER TABLE

AT END OF BORING

24 HOURS

WHILE DRILLING

DISTANCE BELOW SURFACE IN FEET

LENGTH RECOVERY	SAMPLE NO.	SAMPLE TYPE	N	WC	Q_u	%DRY	DEPTH	ELEV.	SOIL DESCRIPTIONS
OL	1	SS	4				0.75	703.17	Dark brown clayey TOPSOIL, moist (OL)
ML									Firm brown clayey SILT, little fine sand, moist (ML)
	2	SS	10		3.75		2.5	701.42	
CL	3	SS	11		2.0				Very tough light brown silty CLAY, trace sand, small gravel, moist (CL)
							6.5	697.42	
SP	4	SS	14		4.25		7.0	696.92	Firm brown fine SAND, trace silt, damp (SP)
	5	SS	19		3.25				Very tough brown silty CLAY, mottled gray, trace sand, small gravel, moist (CL)
CL	6	SS	13		3.0				
	7	SS	26		2.25		13.5	690.42	
	8	SS	10		3.75				Very tough gray silty CLAY, trace sand, small to large gravel, moist (CL)
CL	9	SS	33		3.25				
	10	SS	16		2.5		20.0	683.92	
	11	SS	24		1.5				Tough gray silty CLAY, little sand, trace small to large gravel, moist (CL)
CL	12	SS	10		1.0				
	13	SS	16		4.5+		24.5	679.42	
CL	14	SS	12		4.5+				Hard gray silty CLAY, little sand, trace small to large gravel, moist (CL)
	15A	SS	16		3.25		29.5	674.42	
SP	15B						30.0	673.92	Firm gray fine to medium SAND, damp (SP)
	16	SS	24		3.5				Very tough to hard gray silty CLAY, trace sand, small to large gravel, moist (CL)
CL	17	SS	27		4.5+		34.0	669.92	
	18	SS	22		2.0				Tough gray silty CLAY, trace sand, small to large gravel, moist (CL)
	19	SS	31		1.75		38.25	665.67	
OL/Pt	20	SS	17						Brown organic silty CLAY and PEAT (OL/PT)

PROJECT CLINTON LANDFILL, INC., DEWITT COUNTY, ILLINOIS

CLIENT ANDREWS ENVIRONMENTAL ENGINEERING, INC.

BORING 123 cont. DATE STARTED 10-23-89 DATE COMPLETED 10-24-89 JOB 27,702

ELEVATIONS

GROUND SURFACE 703.92

END OF BORING 627.92

WATER TABLE

AT END OF BORING

24 HOURS

WHILE DRILLING

DISTANCE BELOW SURFACE IN FEET

	LENGTH	RECOVERY	SAMPLE NO.	SAMPLE TYPE	N	WC	Q_U	% DRY	DEPTH	ELEV.	SOIL DESCRIPTIONS
40											
OL/Pt			21	SS	46						Brown organic silty CLAY and PEAT (OL/Pt)
									42.0	661.92	
OL			22	SS	7		1.0				Dark gray to black organic silty CLAY, trace sand, roots, very moist (OL)
									44.5	659.42	
45 CL			23	SS	17		2.5				Very tough gray silty CLAY, trace sand, small gravel, moist (CL)
									46.0	657.92	
			24	SS	17		2.25				
CL			25	SS	25		2.5				Tough to very tough greenish gray silty CLAY, trace sand, small gravel, roots, moist (CL)
50			26	SS	15		1.5				
									52.0	653.92	
			27	SS	18		3.5				
55			28	SS	27		4.5+				
CL			29	SS	26		2.0				Very tough to hard dark gray very silty CLAY, little sand, trace small to large gravel, moist (CL)
			30	SS	20		4.5+				
60			31	SS	36		4.5+				
									62.0	643.92	
			32 A/B	SS	87		4.5+				
65 CL			33	SS	59		4.5+				Hard dark gray very silty CLAY, some sand, trace small to large gravel, moist (CL)
			34	SS	84/6"		4.5+				
			35 A/B	SS	35		4.5+		68.5	635.42	
70 ML/Pt											Dark brown clayey SILT and PEAT, little fine sand, very moist (ML/Pt)
			36	SS	62				71.0	632.92	
SM			37	SS	61						Very dense gray silty fine SAND, few thin silt seams, wet (SM)
75			38 A/B	SS	57		4.5+		75.5	628.42	
CL											Hard dark gray very silty CLAY, little sand, trace small to large gravel, moist (CL)
			End of Boring at 76.0 feet								

PROJECT CLINTON LANDFILL, INC., DEWITT COUNTY, ILLINOIS

CLIENT ANDREWS ENVIRONMENTAL ENGINEERING, INC.

BORING 123 cont. DATE STARTED 10-23-89 DATE COMPLETED 10-24-89 JOB 27,702

ELEVATIONS

GROUND SURFACE 703.92

END OF BORING 627.92

WATER TABLE

AT END OF BORING

24 HOURS

WHILE DRILLING

LENGTH / RECOVERY	SAMPLE NO.	SAMPLE TYPE	N	WC	Q_u	γ_{DRY}	DEPTH	ELEV.	SOIL DESCRIPTIONS

DISTANCE BELOW SURFACE IN FT

80
85
90
95
100
105
110
115

Monitoring Well B-123

Installation Notes

SS 304 Screen	71'-81'
SS 304 Riser	41'-71'
Silica Sand	69'-81'
Bentonite Chips	66'-69'
Volclay Grout	2'-66'

Square design zinc plated steel locking protector casing concreted into place over riser pipe.

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

Project Name CLINTON LANDFILL, INC. Sheet 1 of 3

Project Location CLINTON, ILLINOIS Project No. 91-118

Boring No. P223D Surface Elev. 704.15 Boring Type HSA Completion Depth 127'

Coordinates: (X) N 3721.55 (Y) E 7641.36 Drilling Contractor SKS & ASSOCIATES, INC.

Date Started 9-14-95 Date Completed 9-18-95 Driller TODD SKINNER Rig No. MOBILE B-57

Logged By J. BERRY Backfilled (Y/N) N Backfill Material

Surface Conditions SILTY CLAY (BARE GROUND) If "No" explain INSTALLED PIEZOMETER P223D

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	Q_p (TSF)	PID (PPM) eV LAMP 10.6 __ 11.7 __	CHEMICAL	GEOTECHNICAL	SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
												SEE BORING LOG G23D FOR CONTINUOUS SAMPLING OF TOP 70 FEET.	

CAD DWG NO:91118140 EMPLOYEE NO: 9834 DATE/TIME: 10/13/95 08:02:22 ACD-12_

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

Project Name CLINTON LANDFILL, INC. Sheet 2 of 3

Project Location CLINTON, ILLINOIS Project No. 91-118

Boring No. P223D Surface Elev. 704.15 Boring Type HSA Completion Depth 127'

Coordinates: (X) N 3721.55 (Y) E 7641.36 Drilling Contractor SKS & ASSOCIATES, INC.

Date Started 9-14-95 Date Completed 9-18-95 Driller TODD SKINNER Rig No. MOBILE B-57

Logged By J. BERRY Backfilled (Y/N) N Backfill Material

Surface Conditions SILTY CLAY (BARE GROUND) If "No" explain INSTALLED PIEZOMETER P223D

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	N_c^* VALUE	Q_p (TSF)	PID (PPM) eV LAMP 10.6 11.7	CHEMICAL / GEOTECHNICAL SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
1	CS	60	–	–	–			634.15		ORGANIC PEAT AND SILT (PT); Dark gray to black, saturated, with clay	Collected G-23D-1 for Arsenic analysis from 71.5'-73.5'
							72	631.90		SANDY SILT (ML); Gray, saturated, with clay	
							74	629.65		SILTY CLAY (CL); Gray, moist	
2	CS	24	–	–	–		76				
							78	626.15		SANDY CLAY (CL); Red-brown, saturated, with silt	Collected G-23D-2 for Arsenic analysis from 78'-79.5'
				4.5+				625.40		SILTY CLAY (CL); Gray, hard, moist, trace gravel	
3	ST	24	–	–	–		80	624.15		SAND (SP); Gray, loose, wet, trace clay, medium to coarse grained	Pushed Shelby tube from 80'-82', for sample # P223D-1A Upper 1' of tube is sand
								623.15		SILTY CLAY (CL); Gray, hard, moist, trace gravel	
4	CS	36	–	–	–		82	621.65		SAND (SP); Gray, wet, trace clay, medium to coarse grained	Collected P223D-2 for TOC and CEC analysis from 83'-84'
				4.5+				621.15		SILTY CLAY (CL); Gray, moist, trace gravel	
5	CS	23	–	–	–		84				
				4.5+			86				
6	ST	0	–	–	–		88				Pushed Shelby tube from 90'-92', for sample # P223D-1B Tube bent, no sample obtained
7	CS	29	–	–	–		90				
				4.5+			92			2" fine to medium grained sand seam @93.4'	Collected P223D-1 for TOC and CEC analysis from 93'-94'
				4.5+			94				
8	CS	60	–	–	–		96				
				4.5+			98			silt seam (dry) from 99.2' to 99.4'	
				4.5+							

CAD DWG NO:91118141 EMPLOYEE NO: 9834 DATE/TIME: 10/13/95 08:04:24 ACD-12_

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

ect Name CLINTON LANDFILL, INC. Sheet 2 of 4

ject Location CLINTON, ILLINOIS Project No. 91-118

Boring No. G39D Surface Elev. 700.60 Boring Type HSA Completion Depth 104.67'

Coordinates: (X) 5503.02 (Y) 7639.74 Drilling Contractor TESTING SERVICES CORPORATION

Date Started 11-4-97 Date Completed 11-6-97 Driller BRUNO WILLIAMSON Rig No. MOBILE B-61

Logged By M. CAMERON Backfilled (Y/N) Y Backfill Material CEMENT-BENTONITE GROUT

Surface Conditions GRASS If "No" explain

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	q_u (tsf)	PID (PPM) eV LAMP 10.6 __ 11.7 __	CHEMICAL	GEOTECHNICAL SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
15	SS	12						32			SAND (SW); Gray, dense, damp, coarse to very fine grained, trace gravel, trace clay 2" silty clay seam @30.7' 1" clay seam @31.4'	
16	SS	12										
17	SS	12						34			1" clay seam @33.8'	
18	SS	7						36			grades with gravel @36.0'	Hit water @ 37.0' ▽
19	SS	17						38	661.85		SILTY CLAY (CL); Blue-gray, very stiff, moist, trace sand, mottled with yellow-brown oxidation stains	
				2.5				40				
20	SS	6									grades gray	
				2.25				42				
21	SS	6										Piece of gravel blocked spoon.
22	SS	20		4.5+				44			grades hard	
				4.5+								
								46				Wash out augers with rig water; lost seal. Drilled to 48', resume sampling.
23	SS	18		4.5+				48			grades trace gravel	
				4.5+								
24	SS	12		4.5				50			grades damp/moist	
				4.5+								
25	SS	20		4.5+				52				
				4.5+								
								54				Rock blocked spoon, blind drill to 56.0'
	SS	8		4.3				56				Spoon refusal after 8" @56', auger to 58'.
	SS	12		4.5+								
28	SS	f		4.5+				58				
				4.5+								

CAD DWG NO:91118287 EMPLOYEE NO: 9834 DATE/TIME: 03/25/98 12:29 ACAD-14.

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

Project Name CLINTON LANDFILL, INC. Sheet 3 of 4

Project Location CLINTON, ILLINOIS Project No. 91-118

Boring No. G39D Surface Elev. 700.60 Boring Type HSA Completion Depth 104.67'

Coordinates: (X) 5503.02 (Y) 7639.74 Drilling Contractor TESTING SERVICES CORPORATION

Date Started 11-4-97 Date Completed 11-6-97 Driller BRUNO WILLIAMSON Rig No. MOBILE B-61

Logged By M. CAMERON Backfilled (Y/N) Y Backfill Material CEMENT-BENTONITE GROUT

Surface Conditions GRASS If "No" explain

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	q_u (tsf)	PID (PPM) eV LAMP 10.6 11.7	CHEMICAL	GEOTECHNICAL SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
29	SS	0	–	–								No recovery on two tries
								62				
30	SS	18	–	4.5+								
								64				
31	SS	18	–	4.5+								
											1" SAND (SW) seam @65.75'	
								66	634.35		SAND (SP); Gray, dense, saturated, very fine grained	
32	SS	22	–	–					633.60		SILT (ML); Dark gray with black (organic rich) very stiff, moist, with very fine sand	
								68				
3	SS	2	–	–					631.60		SILTY CLAY (CL); Gray, hard, moist, with sand, trace gravel	
								70				
34	SS	24	–	4.5+								
								72				
35	SS	24	–	4.5+								
								74				
36	SS	17	–	4.5+								
								76				
37	SS	22	–	–								
				4.5								
								78				
38	SS	18	–	–								
				4.5+								
								80				
39	SS	22	–	–								
				4.5								
								82				
40	SS	22	–	–								
				4.5+								
								84				
41	SS	22	–	–								
				4.5+								
								86				
42	SS	17	–	–								
				4.5+								
								88				
43	SS	14	–	–					612.10		SILTY SANDY CLAY (CL); Gray, hard, damp, trace gravel	

CAD DWG NO:91118288 EMPLOYEE NO: 9834 DATE/TIME: DATE/TIME

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

Project Name CLINTON LANDFILL, INC. Sheet 4 of 4

Project Location CLINTON, ILLINOIS Project No. 91-118

Boring No. G39D Surface Elev. 700.60 Boring Type HSA Completion Depth 104.67'

Coordinates: (X) 5503.02 (Y) 7639.74 Drilling Contractor TESTING SERVICE CORPORATION

Date Started 11-4-97 Date Completed 11-6-97 Driller BRUNO WILLIAMSON Rig No. MOBILE B-61

Logged By M. CAMERON Backfilled (Y/N) Y Backfill Material CEMENT-BENTONITE GROUT

Surface Conditions GRASS If "No" explain

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	q_u (tsf)	PID (PPM) 11.7 eV LAMP 10.6	CHEMICAL	GEOTECHNICAL SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
44	SS	12	–	–					609.60		2" seam SAND (SP); Gray, dense, saturated, fine grained, with silt and clay; @90.8'	Various spoon refusals as marked; augered ahead and resumed sampling.
45	SS	6	–	–				92			SILTY CLAY (CL); Gray, hard, moist, trace sand and gravel	
46	SS	17	–	–							grades dark gray, damp-dry	
47	SS	18	–	4.5+				94				
48	SS	21	–	4.5+				96				
49	SS	9	–	4.5+				98				
50	SS	16	–	4.5+				100				
51	SS	6	–	4.5+				102				
52	SS	5	–	–								
53	SS	8	–	4.5+				104	595.93		End of boring @104.67'	
								106				
								108				
								110				
								112				
								114				
								116				
								118				

CAD DWG NO:91118289 EMPLOYEE NO: 9834 DATE/TIME: 03/31/98 09:29 ACAD-14.

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

oject Name CLINTON LANDFILL — Sheet 1 of 4
oject Location CLINTON, ILLINOIS — Project No. 91-118
Boring No. G40D — Surface Elev. 705.49 — Boring Type HSA — Completion Depth 108.5'
Coordinates: (X) 4044.05 (Y) 7624.37 — Drilling Contractor TESTING SERVICE CORPORATION
Date Started 10/20/97 Date Completed 10/23/97 — Driller BRUNO WILLIAMSON — Rig No. MOBILE B-61
Logged By JOHN BERRY — Backfilled (Y/N) N Backfill Material
Surface Conditions BROWN SILTY CLAY — If "No" explain INSTALLED WELL G40D

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	q_u (tsf)	PID (PPM) eV LAMP 10.6 — 11.7 —	CHEMICAL	GEOTECHNICAL SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
											SILTY CLAY (CL); Brown, trace gravel (FILL)	
								2				
1	SS	24		3.5							SILTY CLAY (CL); Brown mottled with gray, very stiff, moist, trace gravel	
				3.5				4				
2	SS	24		4.0+							grades hard	
				4.0+				6				
3	SS	12		4.0+								
	SS	22						8			3" seam moist large gravel @8.9'	
				1.5					696.00		SILTY CLAY (CL): Brown, very stiff, moist-wet, trace gravel	
5	SS							10				10-12'; no recovery
												12-14'; no recovery
6	SS							12				
7	SS	24		1.5				14	691.50		SILTY CLAY (CL); Dark brown to black, stiff moist to wet, trace gravel & organics	
				2.0								
8	SS	24		2.5				16	689.50		SILTY CLAY (CL); Brown, very stiff, moist, trace gravel	
											grades gray mottled with brown	
9	SS	24		4.0+				18				
				4.0+								
10	SS	24		4.0+				20				
				4.0+								
11	SS	24		4.0+				22				
				4.0+							grades gray	
12	SS	24						24				
				2.5							grades very stiff	
	SS	24		2.5				26				
				2.5								
14	SS	24						28			2" saturated, coarse grained sand @29.1'	
				2.5								

CAD DWG NO:91118329 EMPLOYEE NO: 9834 DATE/TIME: 03/25/98 14:01 ACAD-14.

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

ject Name CLINTON LANDFILL — Sheet 2 of 4

ject Location CLINTON, ILLINOIS — Project No. 91-118

Boring No. G40D — Surface Elev. 705.49 — Boring Type HSA — Completion Depth 108.5'

Coordinates: (X) 4044.05 (Y) 7624.37 — Drilling Contractor TESTING SERVICE CORPORATION

Date Started 10/20/97 Date Completed 10/23/97 — Driller BRUNO WILLIAMSON — Rig No. MOBILE B-61

Logged By JOHN BERRY — Backfilled (Y/N) N Backfill Material

Surface Conditions BROWN SILTY CLAY — If "No" explain INSTALLED WELL G40D

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	q_u (tsf)	PID (PPM) eV LAMP 10.6 11.7	CHEMICAL	GEOTECHNICAL SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
15	SS	24		2.5							SILTY CLAY (CL); Gray, very stiff, moist, trace gravel and organics	
				4.0+							2" seam clayey sand - wet to saturated; @30.9'	
								32			grades hard @31.9'	
16	SS	24		2.5							grades very stiff	
				2.5								
								34				
17	SS	24		2.5								
				2.5								
								36				
18	SS	24							668.49		SANDY SILT (SM); Wet, dense, fine to medium sand	
									667.89			
								38			PEAT (PT) Brown-black, moist, dense, trace silt	
19	SS	24										
								40				
20	SS	24										
								42				
21	SS	24							662.49		SILTY CLAY (CL); Dark brown-black, firm, moist, old organic topsoil, trace organics and gravel	
				1.0					661.49			
22	SS	24		1.0				44			SILTY CLAY (CL); Blue-gray, stiff, moist, trace gravel and organics	
23	SS	24		1.5				46				
				1.5							grades gray	
24	SS	16		1.5				48			grades organics out	
				1.5								
25	SS	18		1.5				50				
				2.0								
26	SS	24		4.0+				52			grades hard	
				4.0+								
27	SS	24		4.0+				54				
	SS	24		4.0+				56				
29	SS	24		4.0+				58				

CAD DWG NO:91118330 EMPLOYEE NO: 9834 DATE/TIME: 03/25/98 15:27 ACAD-14.

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

oject Name CLINTON LANDFILL — Project No. 91-118

Project Location CLINTON, ILLINOIS

Boring No. G40D — Surface Elev. 705.49 — Boring Type HSA — Completion Depth 108.5'

Coordinates: (X) 4044.05 (Y) 7624.37 — Drilling Contractor TESTING SERVICE CORPORATION

Date Started 10/20/98 Date Completed 10/23/98 — Driller BRUNO WILLIAMSON — Rig No. MOBILE B-61

Logged By JOHN BERRY — Backfilled (Y/N) N Backfill Material

Surface Conditions BROWN SILTY CLAY — If "No" explain INSTALLED WELL G40D

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	q_u (tsf)	PID (PPM) eV LAMP 10.6 11.7	CHEMICAL	GEOTECHNICAL	SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
30	SS	24		4.0+								SILTY CLAY (CL); Gray, moist, hard, trace gravel	
												3" seam of medium to fine grained sand @61.4'	
31	SS	24							62				
				4.0+									
32	SS	24							64				
				4.0+									
33	SS	24		4.0+					66				
				4.0+									
34	SS	24		4.0+					68				
										636.49		PEAT (Pt); Brown-black, dense, moist to wet, trace gravel	
35	SS	24		4.0+					70	635.89		SILTY CLAY (CL); Gray, moist, hard, trace gravel	
				4.0+									
36	SS	24		4.0+					72				
										632.49		SAND (SP); Gray, dense, wet, medium to fine grained, trace silt	
37	SS	24		4.0+					74	631.49		SILTY CLAY (CL); Gray, moist, hard, trace gravel	
38	SS	24		4.0+					76				
39	SS	24		4.0+					78				
40	SS	24		4.0+					80				
41	SS	24		4.0+					82				
42	SS	24		4.0+					84				
43	SS	20		4.0+					86				
44	SS			4.0+					88				

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

Project Name CLINTON LANDFILL — Sheet 4 of 4
Project Location CLINTON, ILLINOIS — Project No. 91-118
Boring No. G40D — Surface Elev. 705.49 — Boring Type HSA — Completion Depth 108.5'
Coordinates: (X) 4044.05 (Y) 7624.37 — Drilling Contractor TESTING SERVICE CORPORATION
Date Started 10/20/98 Date Completed 10/23/98 — Driller BRUNO WILLIAMSON — Rig No. MOBILE B-61
Logged By JOHN BERRY — Backfilled (Y/N) N Backfill Material
Surface Conditions BROWN SILTY CLAY — If "No" explain INSTALLED WELL G40D

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	q_u (tsf)	PID (PPM) eV LAMP 10.6 __ 11.7 __	CHEMICAL	GEOTECHNICAL SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
45	SS	20		4.0+							SILTY CLAY (CL); Gray, moist, hard, trace gravel	
46	SS	18		4.0+				92				
47	SS	0						94				No recovery from 94 – 96'
48	SS	6		4.0+				96				
49	SS	23						98	607.24		SILTY SAND (SM); Gray, saturated, dense, fine to medium grained, trace clay (same)	
50	SS	6		4.0+				100	605.99		SILTY CLAY (SM); Gray, moist, hard, trace gravel	
51	SS	10		4.0+				102				No recovery from 104 – 106'
52	SS	0						104				
53	SS	18		4.0+				106				
								108	596.99		End of boring @108.5'	
								110				
								112				
								114				
								116				
								118				

CAD DWG NO:91118332 EMPLOYEE NO: 9834 DATE/TIME: 03/25/98 15:19 ACAD-14.

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

Project Name CLINTON LANDFILL, INC. Sheet 1 of

Project Location CLINTON, ILLINOIS Project No. 91-118

Boring No. G46D Surface Elev. 709.49 Boring Type HSA Completion Depth 116.5'

Coordinates: (X) 3629.606 (Y) 7644.785 Drilling Contractor SKS ENGINEERS, INC.

Date Started 10/19/98 Date Completed 10/20/98 Driller TODD SKINNER Rig No. MOBILE B-57

Logged By J. BERRY Backfilled (Y/N) N Backfill Material

Surface Conditions BARE SOIL (ACCESS ROAD) If "No" explain INSTALLED MONITORING WELL G46D

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	q_p (tsf)	PID (PPM) eV LAMP 10.6 — 11.7	CHEMICAL	GEOTECHNICAL	SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
1	CS	54		4.0+					0			SILTY CLAY (CL); Brown-mottled gray, hard, moist trace gravel and fine sand	
									2				
												1" sand seam (medium grain) @ 3.4'	
2	CS	60		1.5					4			grades stiff	
				1.5					6				
				1.5					8				
3	CS	60							10				
				1.5					12			grades gray mottled with brown	
				1.5					14			grades gray	
4	CS	60											
				4.0+					16				
				4.0+					18				
												3" sandy silt seam at 18.7' – saturated	
5	CS	49								690.24		CLAYEY SILT (ML); Gray, hard, damp to moist, trace fine sand	
									20	689.49		SILTY SAND (SM); Gray; dense, saturated, fine grained	
										688.24		SILT (ML); Gray, dense, moist, with clay	
									22				
				4.0+					24	685.49		SILTY CLAY (CL); Gray, hard, moist, trace gravel and fine sand	
6	CS	60										grades stiff	
				1.5					26				
				1.5					28				
7	CS	60											

CAD DWG NO:91118416 EMPLOYEE NO: 9859 DATE/TIME: 12/18/98 16:36 ACAD-14.

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

Project Name CLINTON LANDFILL, INC. Sheet 2 of 4
Project Location CLINTON, ILLINOIS Project No. 91-118
Boring No. G46D Surface Elev. 709.49 Boring Type HSA Completion Depth 116.5'
Coordinates: (X) 3629.606 (Y) 7644.785 Drilling Contractor SKS ENGINEERS, INC.
Date Started 10/19/98 Date Completed 10/20/98 Driller TODD SKINNER Rig No. MOBILE B-57
Logged By J. BERRY Backfilled (Y/N) N Backfill Material
Surface Conditions BARE SOIL (ACCESS ROAD) If "No" explain INSTALLED MONITORING WELL G46D

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	q_p (tsf)	PID (PPM) eV LAMP 10.6 __ 11.7 __	CHEMICAL	GEOTECHNICAL	SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
7	CS	60		1.5								SILTY CLAY (CL); Gray, stiff, moist, trace gravel and fine sand	
									32				
				3.0								grades very stiff	
				4.0+					34				
8	CS	60										grades hard	
				3.0					36			grades very stiff	
				2.5									
				2.5					38				
9	CS	60											
				1.5					40			grades stiff	
				1.5					42				
10	CS	60							44	665.24		PEAT (PT); Brown, dense, moist, trace clay and fine sand	
									46			grades clay out	
												grades black	
				0.5					48	660.99		SILTY CLAY (OH); Soft, black, with organics, high plasticity, old organic topsoil	
11	CS	58								659.49			
				1.5					50			SILTY CLAY (CL); Gray, stiff, moist, trace gravel and fine sand	
				1.5									
									52			grades blue-gray	
				1.5									
12	CS	60							54				
				1.75								grades gray	
									56				
				4.0+									
									58			grades hard	
13	CS	55											

CAD DWG NO:91118417 EMPLOYEE NO: 9859 DATE/TIME: 12/18/98 16:40 ACAD-14.

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

Project Name CLINTON LANDFILL, INC. Sheet 3 of 4

Project Location CLINTON, ILLINOIS Project No. 91-118

Boring No. G46D Surface Elev. 709.49 Boring Type HSA Completion Depth 116.5'

Coordinates: (X) 3629.606 (Y) 7644.785 Drilling Contractor SKS ENGINEERS, INC.

Date Started 10/19/98 Date Completed 10/20/98 Driller TODD SKINNER Rig No. MOBILE B-57

Logged By J. BERRY Backfilled (Y/N) N Backfill Material

Surface Conditions BARE SOIL (ACCESS ROAD) If "No" explain INSTALLED MONITORING WELL G46D

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	q_u (tsf)	PID (PPM) eV LAMP 10.6 ___ 11.7 ___	CHEMICAL	GEOTECHNICAL	SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
13	CS	55		1.5								SILTY CLAY (CL); Gray, stiff, moist, trace gravel and fine sand	
				1.5					62				
										646.49		CLAYEY SILT (ML); Gray, stiff, moist	
										645.99		SANDY CLAY (CL); Gray, stiff, wet	
									64	645.49			
14	CS	58		2.25								SILTY CLAY (CL); Gray, very stiff, moist, trace gravel and fine sand	
				4.0+								grades hard	
				4.0+					66				
									68				
				4.0+									
15	CS	57											
				4.0+					70				
				4.0+					72			2" medium grain sand at 71.9', wet	
									74				
16	CS	60		4.0+									
										633.99		PEAT (PT); Brown, hard, moist to wet, trace sand	
									76	633.74		SILT (ML); Gray, dense, wet to saturated, with clay	
										632.99			
				4.0+						632.49		SANDY SILT (ML); Gray, dense, saturated	
									78			SILTY CLAY (CL); Gray, hard, moist, trace gravel and fine sand	
17	CS	60								630.24		SILT (ML); Gray, dense, wet to sat., trace clay	
									80	629.49		SAND (SW); Gray, dense, saturated, fine to med. grain, trace clay	
				4.0+						628.99		SILTY CLAY (CL); Gray, hard, moist, trace gravel and fine sand	
									82				
										626.49		SAND (SP); Gray, dense, saturated, fine grain, trace silt and clay	
				4.0+						625.99			
18	CS	60							84			SILTY CLAY (CL); Gray, hard, moist, trace gravel and fine sand	
				4.0+									
									86				
				4.0+									
									88				
19	CS	60											

CAD DWG NO:91118418 EMPLOYEE NO: 9859 DATE/TIME: 01/21/99 11:28 ACAD-14.

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

ject Name CLINTON LANDFILL, INC. Sheet 4 of 4

Project Location CLINTON, ILLINOIS Project No. 91-118

Boring No. G46D Surface Elev. 709.49 Boring Type HSA Completion Depth 116.5'

Coordinates: (X) 3629.606 (Y) 7644.785 Drilling Contractor SKS ENGINEERS, INC.

Date Started 10/19/98 Date Completed 10/20/98 Driller TODD SKINNER Rig No. MOBILE B-57

Logged By J. BERRY Backfilled (Y/N) N Backfill Material

Surface Conditions BARE SOIL (ACCESS ROAD) If "No" explain INSTALLED MONITORING WELL G46D

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	N" VALUE	q (tsf)	PID (PPM) eV LAMP 10.6 11.7	CHEMICAL	GEOTECHNICAL	SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
19	CS	60										SILTY CLAY (CL); Gray, hard, moist, trace gravel and fine sand	
				4.0+					92				
20	CS	60		4.0+					94				
				4.0+					96				
				4.0+					98				
1	CS	60											
									100				
				4.0+									
									102			grades damp, trace gravel	
				4.0+									
									104				
22	CS	60											
				4.0+									
									106	603.24		SAND (SP); Gray, dense, fine to coarse grained, saturated, trace gravel and clay	
										602.24		SILTY CLAY (CL); Gray, hard, moist, trace gravel and fine sand	
				4.0+					108				
23	CS	60											
									110	598.99		SILTY SAND (SM); Gray, dense, saturated, trace clay	
				4.0+						598.49		SILTY CLAY (CL); Gray, hard, moist, trace gravel and fine sand	
									112				
				4.0+									
									114				
24	CS	24											
				4.0+									
									116	592.99		End of boring @116.5'	
									118				

CAD DWG NO:91118419 EMPLOYEE NO: 9859 DATE/TIME: 12/18/98 16:48 ACAD-14.

PDC TECHNICAL SERVICES, INC.
WELL COMPLETION REPORT

Project #: 91-118 Project Location: CLINTON, ILLINOIS Well #: P223D

Project Name: CLINTON LANDFILL, INC. Borehole #: P223D

State Plane Coordinate: (X) N 3721.55 (Y) E 7641.36 (or) Latitude: ° ' " Longitude: ° ' "

Surveyed By: FARNSWORTH & WYLIE P.C. ILL. Registration #: 2285

Drilling Contractor: SKS & ASSOCIATES, INC. Driller: TODD SKINNER

Drilling Method: HSA Drilling Fluids (type):

Logged By: J. BERRY Date Started: 9-14-95 Date Finished: 9-18-95

Notes: P223D INSTALLED AS A PIEZOMETER

Annular Space Details

Type of Surface Seal: CONCRETE

Type of Annular Sealant: CEMENT BENTONITE GROUT

Installation Method: TREMIE PIPE

Type of Bentonite Seal: BENSEAL SLURRY
(Granular, Pellet, Slurry)

Installation Method: TREMIE PIPE

Setting Time: 30 MINUTES

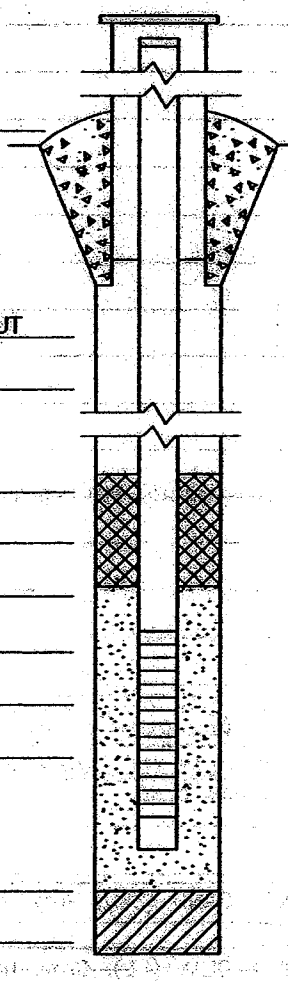
Type of Sand Pack: SILICA SAND

Grain Size: 10-20 MESH

Installation Method: HAND PLACEMENT OF SATURATED SILICA SAND

Type of Backfill Material: N/A
(If Applicable)

Installation Method:



Elevations (MSL-referenced to a National Geodetic Vertical Datum)	Depths (Feet above or below ground surface to .01 feet)	
706.63	2.48	Top of Protective Casing
706.25	2.10	Top of Riser Pipe
704.15	0.00	Ground Surface
701.15	3.00	Top of annular sealant
591.01	113.14	Top of Seal
589.01	115.14	Top of Sand Pack
587.05	117.10	Top of Screen
577.33	126.82	Bottom of Screen
577.05	127.10	Bottom of Well
N/A	N/A	Top of Backfill (If Applicable)
576.87	127.28	Bottom of Borehole

Well Construction Materials

	SS304	SS316	PTFE	PVC	Other
Protective casing					SQUARE STEEL
Riser pipe from 0.00 to 97.10 (feet below ground surface)				X	
Riser pipe from 97.10 to 117.10 (feet below ground surface)	X				
Screen	X				

Casing Measurements

Diameter of borehole (in)	8
ID of riser pipe (in)	2
Protective casing length (ft)	5.0
Riser pipe length (ft) (include stickup)	11
Screen length (1st slot to last slot, ft)	9.7
Bottom of screen to end cap (ft)	0.28
Total length of casing (riser+screen+end cap) (ft)	130.33
Screen slot size	0.010

CAD DWG NO:91118151 EMPLOYEE NO: 9834 DATE/TIME: 10/13/95 10:57:11 ACD-12

Illinois Environmental Protection Agency — Well Completion Report

County: Dewitt — Well #: B-122 G22D

Name: CLINTON LANDFILL, INC. — Grid Coordinate: Northing ____ Easting ____

Drilling Contractor: TESTING SERVICE CORPORATION — Date Drilled Start: 10-17-89

Driller: Greg Donovan — Geologist: Darin Delaney — Date Completed: 10-19-89

Drilling Method: Mud Rotary — Drilling Fluids (type): Bentonite

Annular Space Details

Type of Surface Seal: Concrete

Type of Annular Sealant: Volclay Grout

Amount of cement: # of bags ____ lbs. per bag ____

Amount of bentonite: # of bags ____ lbs. per bag ____

Type of Bentonite Seal (Granular, Pellet): Holeplug 3/8" chips

Amount of bentonite: # of Bags 1 lbs. per bag 50

Type of Sand Pack: 10-20 grade silica

Type of Sand: Colorado

Amount of Sand: # of bags 3 lbs. per bag 50

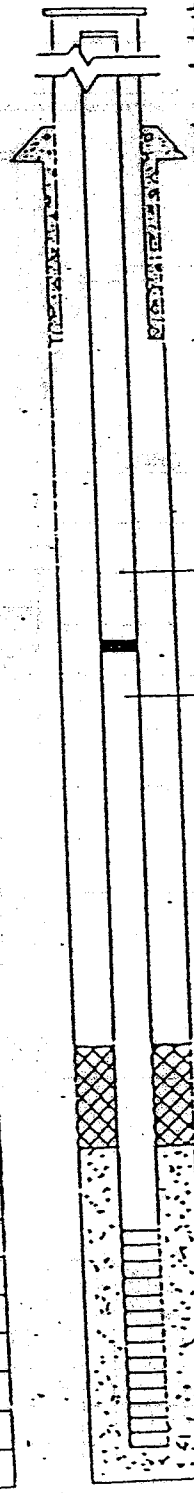
Well Construction Materials

	Stainless Steel Specify Type	Teflon Specify Type	PVC Specify Type	Other Specify Type
Riser coupling joint				
Riser pipe above w.t.			sch 40	
Riser pipe below w.t.	304			
Screen	304			
Coupling joint screen to riser				
Protective casing	4"x4"x5'			

Measurements to .01 ft. (where applicable)

Riser pipe length	92.0 feet
Protective casing length	5.0 feet
Screen length	10.0 feet
Bottom of screen to end cap	0.8 inch
Top of screen to first joint	0.29 feet
Total length of casing	
Screen slot size	0.010 inches
# of openings in screen	31500
Diameter of borehole (in)	6 inches
ID of riser pipe (in)	2 inches

Elevations — .01 ft.



728.96 ____ MSL Top of Protective Casing

728.17 ____ MSL Top of Riser Pipe

____ ____ ft. Casing Stickup

726.8 ____ MSL Ground Surface

726.8 ____ ft. Top of Surface seal

724.8 ____ ft. Top of annular sealant

GRADE LOWERED AT THIS WELL, SEE REVISED IEPA WELL COMPLETION REPORT

641.8 ____ ft. Top of Seal

____ 3. ft. Total Seal Interval

638.8 ____ ft. Top of Sand

636.8 ____ ft. Top of Screen

____ 10' ft. Total Screen Interval

626.8 ____ ft. Bottom of Screen

626.8 ____ ft. Bottom of Borehole

PDC TECHNICAL SERVICES, INC.
WELL COMPLETION REPORT

Project #: 91-118 Project Location: CLINTON, ILLINOIS Well #: G38S

Project Name: CLINTON LANDFILL Borehole #: G38S

State Plane Coordinate: (X) 5094.58 (Y) 7687.31 (or) Latitude: ° ' " Longitude: ° ' "

Surveyed By: SHIVE-HATTERY ILL. Registration #:

Drilling Contractor: TESTING SERVICE CORPORATION Driller: BRUNO WILLIAMSON

Drilling Method: HSA Drilling Fluids (type):

Logged By: MIKE CAMERON Date Started: 11-13-97 Date Finished: 11-13-97

Notes:

Annular Space Details

Type of Surface Seal: CONCRETE

Type of Annular Sealant: CEMENT-BENTONITE GROUT

Installation Method: TREMIE

Type of Bentonite Seal: PELLETS
(Granular, Pellet, Slurry)

Installation Method: POURED

Setting Time: 30 MINUTES

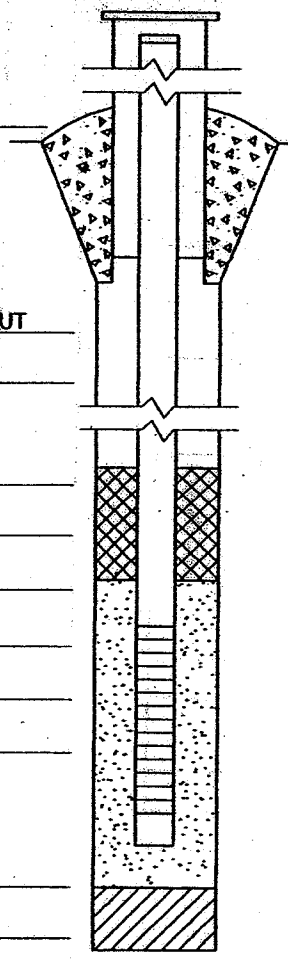
Type of Sand Pack: QUARTZ

Grain Size: # 5

Installation Method: POURED

Type of Backfill Material: QUARTZ SAND
(If Applicable)

Installation Method: POURED



Elevations (MSL-referenced to a National Geodetic Vertical Datum)	Depths (Feet above or below ground surface to .01 feet)	
702.02	3.10	Top of Protective Cc
701.19	2.50	Top of Riser Pipe
698.92	0.00	Ground Surface
698.12	0.80	Top of annular seal
674.12	24.80	Top of Seal
672.02	26.90	Top of Sand Pack
668.71	30.21	Top of Screen
658.97	39.95	Bottom of Screen
658.92	40.00	Bottom of Well
658.92	40.00	Top of Backfill (If Applicable)
657.92	41.00	Bottom of Borehole

Well Construction Materials

	SS304	SS316	PTFE	PVC	Other
Protective casing					4" SQ. STEEL
Riser pipe from 0.00 to 24.98 (feet below ground surface)				X	
Riser pipe from 0.00 to 30.21 (feet below ground surface)	X				
Screen	X				

Casing Measurements

Diameter of borehole (in)	8.00
ID of riser pipe (in)	2.00
Protective casing length (ft)	5.00
Riser pipe length (ft) (Include stickup)	32.5
Screen length (1st slot to last slot, ft)	9.74
Bottom of screen to end cap (ft)	0.05
Total length of casing (riser+screen+end cap) (ft)	42.5(
Screen slot size	0.01

CAD DWG NO:91118323 EMPLOYEE NO: 9860 DATE/TIME: 02/03/98 13:59:29 ACD-12_

PDC TECHNICAL SERVICES, INC.
WELL COMPLETION REPORT

Project #: 91-118 Project Location: CLINTON, ILLINOIS Well #: G40D

Project Name: CLINTON LANDFILL Borehole #: G40D

State Plane Coordinate: (X) 4044.05 (Y) 7624.37 (or) Latitude: ° ' " Longitude: ° ' "

Surveyed By: SHIVE-HATTERY ILL. Registration #: 035-002809

Drilling Contractor: TESTING SERVICE CORPORATION Driller: BRUNO WILLIAMSON

Drilling Method: HSA Drilling Fluids (type):

Logged By: JOHN BERRY Date Started: 10/20/97 Date Finished: 10/23/97

Notes:

Annular Space Details

Type of Surface Seal: CONCRETE

Type of Annular Sealant: CEMENT-BENTONITE GROUT

Installation Method: TREMIE PIPE

Type of Bentonite Seal: CHIPS
(Granular, Pellet, Slurry)

Installation Method: HAND POURED

Setting Time: 14 HOURS

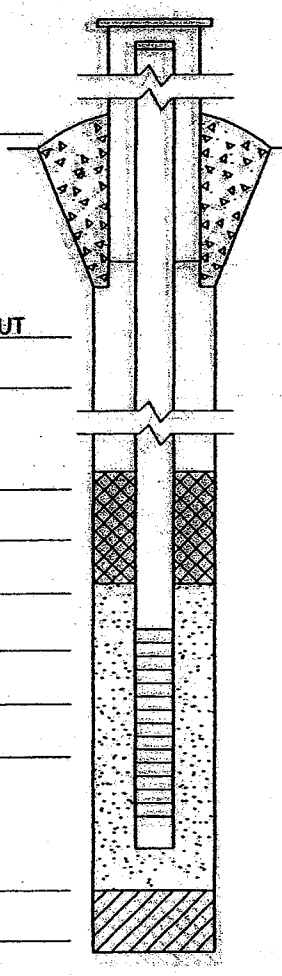
Type of Sand Pack: SILICA

Grain Size: #5

Installation Method: HAND POURED

Type of Backfill Material: SAND
(If Applicable)

Installation Method: HAND POURED



Elevations (MSL-referenced to a National Geodetic Vertical Datum)	Depths (Feet above or below ground surface to .01 feet)	
708.41	2.92	Top of Protective Casing
707.75	2.26	Top of Riser Pipe
705.49	0.00	Ground Surface
702.49	3.00	Top of annular sealant
612.19	93.30	Top of Seal
609.99	95.50	Top of Sand Pack
607.39	98.10	Top of Screen
597.53	107.96	Bottom of Screen
597.49	108.00	Bottom of Well
597.49	108.00	Top of Backfill (if Applicable)
596.99	108.50	Bottom of Borehole

Well Construction Materials

	SS304	SS316	PTFE	PVC	Other
otective casing					4" SQ. STEEL
Riser pipe from 0.00 to 42.87 (feet below ground surface)				X	
Riser pipe from 42.87 to 98.10 (feet below ground surface)	X				
Screen	X				

Casing Measurements

Diameter of borehole (in)	8.00
ID of riser pipe (in)	2.00
Protective casing length (ft)	5.00
Riser pipe length (ft) (Include stickup)	100.36
Screen length (1st slot to last slot, ft)	9.86
Bottom of screen to end cap (ft)	0.04
Total length of casing (riser+screen+end cap) (ft)	110.26
Screen slot size	0.01

CAD DWG NO:91118333 EMPLOYEE NO: 9834 DATE/TIME: 08/14/98 08:09 ACAD-14.

PDC TECHNICAL SERVICES, INC.
WELL COMPLETION REPORT

Project #: 91-118 Project Location: CLINTON, ILLINOIS Well #: G46D

Project Name: CLINTON LANDFILL, INC. Borehole #: G46D

State Plane Coordinate: (X) 3629.606 (Y) 7644.785 (or) Latitude: ___ ___ ___" Longitude: ___ ___ ___"

Surveyed By: SHIVE-HATTERY ILL. Registration #: 035-003068

Drilling Contractor: SKS ENGINEERS, INC. Driller: TODD SKINNER

Drilling Method: HOLLOW STEM AUGER Drilling Fluids (type): NONE

Logged By: J. BERRY Date Started: 10/19/98 Date Finished: 10/20/98

Notes:

Annular Space Details

Type of Surface Seal: CONCRETE

Type of Annular Sealant: CEMENT-BENTONITE GROUT

Installation Method: TREMIE PIPE

Type of Bentonite Seal: BENTONITE SLURRY
(Granular, Pellet, Slurry)

Installation Method: TREMIE PIPE

Setting Time: 30 MINUTES

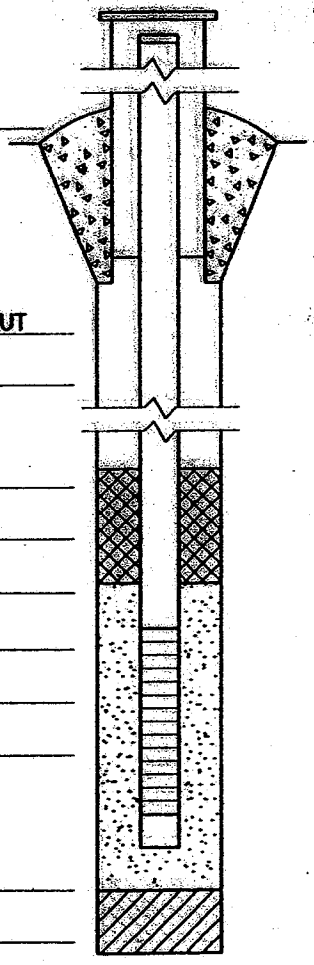
Type of Sand Pack: SILICA SAND

Grain Size: 20 - 40 MESH

Installation Method: POURED

Type of Backfill Material: SILICA SAND
(If Applicable)

Installation Method: POURED



Elevations (MSL-referenced to a National Geodetic Vertical Datum)	Depths (Feet above or below ground surface to .01 feet)	
712.04	2.55	Top of Protective Casing
711.69	2.20	Top of Riser Pipe
709.49	0.00	Ground Surface
706.49	3.00	Top of annular seal ant
610.39	99.10	Top of Seal
606.39	103.10	Top of Sand Pack
603.84	105.65	Top of Screen
594.03	115.46	Bottom of Screen
593.99	115.50	Bottom of Well
593.99	115.50	Top of Backfill (If Applicable)
592.99	116.50	Bottom of Borehole

Well Construction Materials

	SS304	SS316	PTFE	PVC	Other
Protective casing					4" SQUARE STEEL
Riser pipe from 0.00 to 55.32 (feet below ground surface)				X	
Riser pipe from 55.32 to 105.65 (feet below ground surface)	X				
Screen	X				

Casing Measurements

Diameter of borehole (in)	8.00
ID of riser pipe (in)	2.00
Protective casing length (ft)	5.00
Riser pipe length (ft) (include stickup)	107.8
Screen length (1st slot to last slot, ft)	9.8
Bottom of screen to end cap (ft)	0.04
Total length of casing (riser+screen+end cap) (ft)	117.70
Screen slot size	0.010

CAD DWG NO:91118425 EMPLOYEE NO: 9834 DATE/TIME: 03/02/99 11:21 ACAD-14.

PDC TECHNICAL SERVICES, INC.
WELL COMPLETION REPORT

Project #: 91-118 Project Location: CLINTON, ILLINOIS Well #: G37S

Project Name: CLINTON LANDFILL Borehole #: G37S

State Plane Coordinate: (X) 5336.43 (Y) 7631.88 (or) Latitude: ° ' " Longitude: ° ' "

Surveyed By: SHIVE-HATTERY ILL. Registration #: 035-002809

Drilling Contractor: TESTING SERVICE CORPORATION Driller: BRUNO WILLIAMSON

Drilling Method: HSA Drilling Fluids (type):

Logged By: M. CAMERON Date Started: 11-10-97 Date Finished: 11-11-97

Notes:

Annular Space Details

Type of Surface Seal: CONCRETE

Type of Annular Sealant: CEMENT-BENTONITE GROUT

Installation Method: TREMIE PIPE

Type of Bentonite Seal: SLURRY
(Granular, Pellet, Slurry)

Installation Method: TREMIE PIPE

Setting Time: 1.5 HOURS

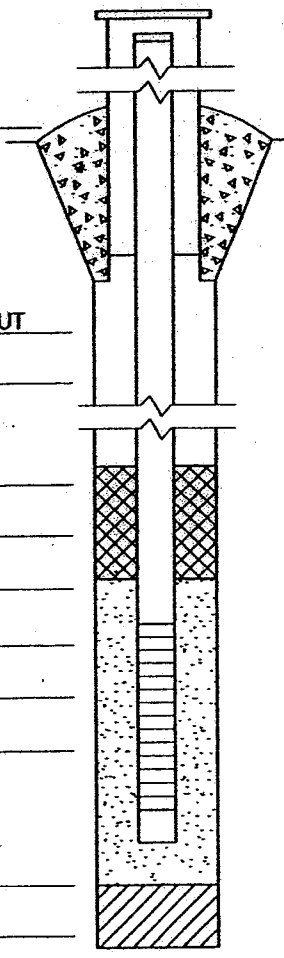
Type of Sand Pack: QUARTZ

Grain Size: #5

Installation Method: POURED, SURGED

Type of Backfill Material: QUARTZ SAND
(If Applicable)

Installation Method: POURED



Elevations (MSL-referenced to a National Geodetic Vertical Datum)	Depths (Feet above or below ground surface to .01 feet)	
704.72	3.01	Top of Protective Casing
704.24	2.53	Top of Riser Pipe
701.71	0.00	Ground Surface
697.71	4.00	Top of annular sealant
678.71	23.00	Top of Seal
674.71	27.00	Top of Sand Pack
670.50	31.21	Top of Screen
660.76	40.95	Bottom of Screen
660.71	41.00	Bottom of Well
		Top of Backfill (If Applicable)
658.71	43.00	Bottom of Borehole

Well Construction Materials

	SS304	SS316	PTFE	PVC	Other
Protective casing					4" SQ. STEEL
Riser pipe from 0.00 to 30.98 (feet below ground surface)				X	
Riser pipe from 30.98 to 31.21 (feet below ground surface)	X				
Screen	X				

Casing Measurements

Diameter of borehole (in)	8.00
ID of riser pipe (in)	2.00
Protective casing length (ft)	5.00
Riser pipe length (ft) (Include stickup)	33.74
Screen length (1st slot to last slot, ft)	9.74
Bottom of screen to end cap (ft)	.05
Total length of casing (riser+screen+end cap) (ft)	43.53
Screen slot size	0.01

CAD DWG NO:91118311 EMPLOYEE NO: 9834 DATE/TIME: 04/02/98 11:02 ACAD-14.

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

Project Name CLINTON LANDFILL, INC. Sheet 1 of 4
Project Location CLINTON, IL. Project No. 91-118
Boring No. G51D Surface Elev. 726.9 Boring Type HSA Completion Depth 114.5'
Coordinates: (X) N 3048.92 (Y) E 7637.33 Drilling Contractor SKS ENGINEERS, INC.
Date Started 9/10/02 Date Completed 9/16/02 Driller TODD SKINNER Rig No. MOBILE B-57
Logged By JOHN BERRY Backfilled (Y/N) N Backfill Material
Surface Conditions BARE GROUND If "No" explain INSTALLED MONITORING WELL G51D

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	q_u (tsf)	PID (PPM) eV LAMP 10.6 11.7	CHEMICAL	GEOTECHNICAL	SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
1	CS	50							0			SILTY CLAY (CL) (FILL); Brown- mottled gray, trace gravel	
									2				
									4				
2	CS	60								722.40		SILTY CLAY (CL); Brown, moist, very stiff, trace gravel	
				2.5					6				
				2.25					8				
				2.5									
3	CS	60							10				
				2.0									
									12				
				2.5									
4	CS	60		2.25					14	712.65		SILTY CLAY (CL); Gray, moist, very stiff, trace gravel	
				1.5					16			grades stiff	
				2.5					18			grades very stiff	
5	CS	50											
				2.5					20				
									22	704.90		SAND (SW); Brown, damp, dense, fine grained, silt	
6	CS	60							24			grades trace gravel	
									26				
									28				
7	CS	60		3.5						697.15		SILTY CLAY(CL); Dark gray, moist, very stiff, trace clay	

CAD DWG NO:91118735 EMPLOYEE NO: 89525 DATE/TIME: 09/30/02 15:25 ACAD-15.

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

Project Name CLINTON LANDFILL, INC. Sheet 2 of 4
Project Location CLINTON, IL. Project No. 91-118
Boring No. G51D Surface Elev. 726.9 Boring Type HSA Completion Depth 114.5'
Coordinates: (X) N 3048.92 (Y) E 7637.33 Drilling Contractor SKS ENGINEERS, INC.
Date Started 9/10/02 Date Completed 9/16/02 Driller TODD SKINNER Rig No. MOBILE B-57
Logged By JOHN BERRY Backfilled (Y/N) N Backfill Material
Surface Conditions BARE GROUND If "No" explain INSTALLED MONITORING WELL G51D

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	q_u (tsf)	PID (PPM) eV LAMP 10.6 11.7	CHEMICAL	GEOTECHNICAL	SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
7	CS	60										SILTY CLAY (CL); Dark gray, moist, very stiff, trace gravel	
				3.5					32				
				3.5					34				
8	CS	60											
				3.5					36				
				3.0					38				
9	CS	60		3.5					40				
				+4.0								grades hard	
									42				
				+4.0					44				
10	CS	60										grade very stiff	
				3.0					46				
				2.5					48				
11	CS	60		2.5					50				
				2.5					52				
12	CS	60							54				
				2.5									
									56				
				2.5									
				2.5					58				
13	CS	60											

CAD DWG NO:91118736 EMPLOYEE NO: 89525 DATE/TIME: 09/30/02 15:36 ACAD-15.

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

oject Name CLINTON LANDFILL, INC. Sheet 3 of 4

Project Location CLINTON, IL Project No. 91-118

Boring No. G51D Surface Elev. 726.9 Boring Type HSA Completion Depth 114.5'

Coordinates: (X) N 3048.92 (Y) E 7637.33 Drilling Contractor SKS ENGINEERS, INC.

Date Started 9/10/02 Date Completed 9/16/02 Driller TODD SKINNER Rig No. MOBILE B-57

Logged By JOHN BERRY Backfilled (Y/N) N Backfill Material

Surface Conditions BARE GROUND If "No" explain INSTALLED MONITORING WELL G51D

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	q_u (tsf)	PID (PPM) eV LAMP 10.6 __ 11.7 __	CHEMICAL	GEOTECHNICAL SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
13	CS	60		3.0					666.15		SILTY CLAY (CL); Gray, moist, very stiff, trace gravel and fine sand	
											CLAYEY SILT (ML); Dark brown-black, moist, very stiff, w/organics	
				2.0				62				
									663.40		PEAT (OL); Black, moist, trace clay and fine sand	
14	CS	60						64				
									662.15		CLAYEY SILT (ML); Black, moist, very stiff, trace wood fragments	
				2.5				66			wood fragments grades out	
											grades w/ more clay	
				2.5				68				
									657.90			
15	CS	60		3.0				70			SILTY CLAY (CL); Blue-green, moist, very stiff, trace gravel	
									655.15			
				3.0				72			SILTY CLAY (CL); Gray, moist, very stiff, trace gravel	
16	CS	60		+4.0				74			grades hard	
				+4.0				76				
				+4.0				78				
17	CS	60										
								80				
				+4.0				82				
											SAND (SW); Gray, dense, wet to saturated, fine grained, trace silt	
									643.15			
18	CS	60						84	642.90		SILTY CLAY (CL); Gray, moist, hard, trace gravel	
									641.90		SANDY CLAY (CL); Gray, wet, trace gravel	
									641.40		SILTY SAND (SM); Gray, wet, trace gravel and clay	
								86	642.90		SAND (SW); Gray, saturated, dense, fine to coarse grained, trace silt	
								88				
				1.0					638.65		SILTY CLAY (CL); Gray, moist to wet, stiff, trace gravel	
19	CS	60		2.0							grades very stiff	

CAD DWG NO:91118737 EMPLOYEE NO: 89525 DATE/TIME: 09/30/02 15:34 ACAD-15.

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

Project Name CLINTON LANDFILL, INC. Sheet 4 of 4

Project Location CLINTON, IL. Project No. 91-118

Boring No. G51D Surface Elev. 726.90 Boring Type HSA Completion Depth 114.5'

Coordinates: (X) N 3048.92 (Y) E 7637.33 Drilling Contractor SKS ENGINEERS, INC.

Date Started 9/10/02 Date Completed 9/16/02 Driller TODD SKINNER Rig No. MOBILE B-57

Logged By JOHN BERRY Backfilled (Y/N) N Backfill Material

Surface Conditions BARE GROUND If "No" explain INSTALLED MONITORING WELL G51D

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	q_u (tsf)	PID (PPM) eV LAMP 10.6 __ 11.7 __	CHEMICAL	GEOTECHNICAL	SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
19	CS	60		+4.0					92			SILTY CLAY (CL); Gray, moist, hard, trace gravel 1" fine SAND (black)@ 91.3'	
				+4.0					94				
20	CS	60								631.90			
				2.5						631.15		CLAYEY SILT (ML); Gray, moist to wet, very stiff, w/ organics	
									96	630.65		SILTY SAND (SM); Gray, moist to wet, trace clay	
				+4.0								SILTY CLAY (CL); Gray, moist, hard, trace gravel	
21	CS	60							98				
				+4.0					100				
									102				
				+4.0									
22	CS	60							104				
				+4.0									
									106				
				+4.0									
									108	619.15			
										618.65		SAND (SW); Gray, saturated, very dense, fine to coarse grained, trace clay and silt	
23	CS	60		+4.0								SILTY CLAY (CL); Gray, moist, hard, trace gravel	
									110				
				+4.0									
									112				
				+4.0									
									114	612.40		End of boring @114.5'	
									116				
									118				

PDC TECHNICAL SERVICES, INC.
WELL COMPLETION REPORT

Project #: 91-118 Project Location: CLINTON, IL. Well #: G51D

Project Name: CLINTON LANDFILL, INC. Borehole #: G51D

State Plane Coordinate: (X) N 3048.92 (Y) E 7637.33 (or) Latitude: ° ' " Longitude: ° ' "

Surveyed By: SKS ENGINEERS, INC. IL. Registration #:

Drilling Contractor: SKS ENGINEERS, INC. Driller: TODD SKINNER

Drilling Method: HOLLOW STEM AUGER Drilling Fluids (type): NONE

Logged By: J. BERRY Date Started: 9/10/02 Date Finished: 9/16/02

Notes:

Annular Space Details

Type of Surface Seal: CONCRETE

Type of Annular Sealant: BENSEAL

Installation Method: TREMIE PIPE

Type of Bentonite Seal: BENTONITE PELLETS
(Granular, Pellet, Slurry)

Installation Method: POURED

Setting Time: 1 HOUR

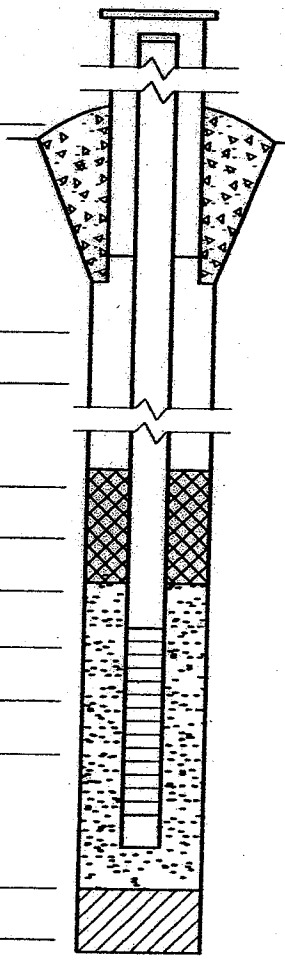
Type of Sand Pack: SILICA SAND

Grain Size: 40 MESH

Installation Method: POURED

Type of Backfill Material: SILICA SAND
(If Applicable)

Installation Method: POURED



Elevations (MSL—referenced to a National Geodetic Vertical Datum)	Depths (Feet above or below ground surface to .01 feet)	
729.51	2.61	Top of Protective Casing
729.14	2.24	Top of Riser Pipe
726.90	0.00	Ground Surface
723.90	3.00	Top of annular sealant
627.00	99.90	Top of Seal
625.00	101.90	Top of Sand Pack
622.41	104.49	Top of Screen
612.68	114.22	Bottom of Screen
612.64	114.26	Bottom of Well
612.64	114.26	Top of Backfill (If Applicable)
612.40	114.50	Bottom of Borehole

Well Construction Materials

	SS304	SS316	PTFE	PVC	Other
tective casing					4" SQ. STEEL
Riser pipe from 0.00 to 54.12 (feet below ground surface)				X	
Riser pipe from 54.12 to 104.49 (feet below ground surface)	X				
Screen	X				

Casing Measurements

Diameter of borehole (in)	8.00
ID of riser pipe (in)	2.00
Protective casing length (ft)	5.00
Riser pipe length (ft) (include stickup)	106.73
Screen length (1st slot to last slot, ft)	9.73
Bottom of screen to end cap (ft)	0.04
Total length of casing (riser+screen+end cap) (ft)	116.27
Screen slot size	10 SLOT

CAD DWG NO:91118747 EMPLOYEE NO: 89525 DATE/TIME: 10/01/02 09:05 ACAD-15.

14-3

Kickapoo Drilling Co. - Well & Pump Record

405 W. Main Downs, IL 61736 (309) 378-4003

Permit # 039-013-01

Date August 21, 2001 **Phone** (309)662-8097

Name Eric and Hallie Cook
RR
Clinton, Il 61727

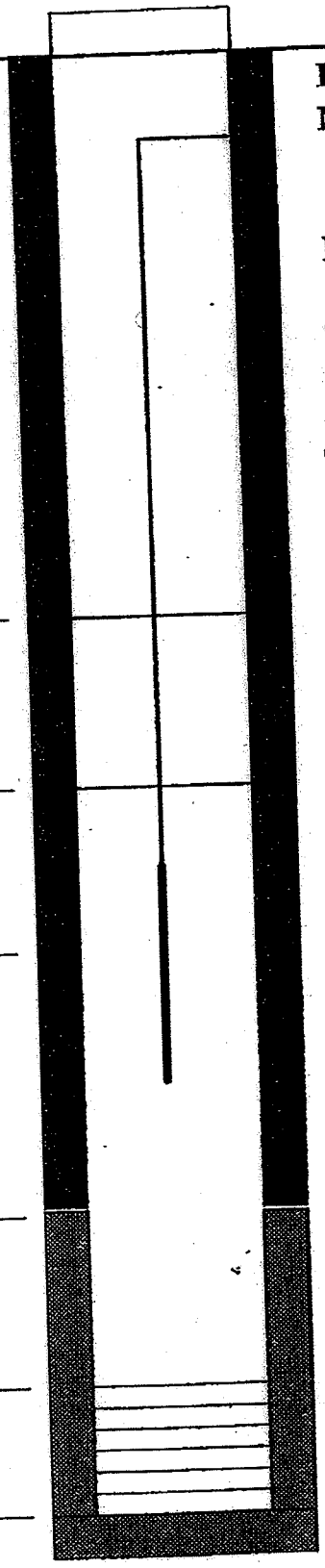
Directions 1 mile South of Weldon Springs State Park on the Right Side of the Road.

Well Size 5" **Well Depth** 243'

Pump Model 5A8 1/2hp Aermotor Sub. Pump

Drop Pipe 120' of 1" Sch 80 Drop Pipe

Tank Size WM14-wb Well Mate in Basement



Static Water Level 89.2'

Pumping 11 **GPM**

Pumping Water Level 89.8'

Pump Intake At 126'

Top of Gravel Pack

Top of Screen 239'

Bottom of Screen 243'

LOG

0 -	10	Yellow Clay
10 -	12	Yellow Gravel
12 -	18	Yellow Clay
18 -	28	Yellow Gravel
28 -	32	Gray Clay
32 -	35	Peat
35 -	38	Gray Clay
38 -	45	Green Clay
45 -	112	Gray Clay w/ Some Gravel
112 -	114	Gravel
114 -	119	Gray Clay
119 -	120.5	Gravel w/ Clay
120.5 -	130	Gray Clay
130 -	140	Gravel w/ Gray Clay
140 -	162	Gray Clay
162 -	164	Gravel w/ Gray Clay
164 -	210	Gray Clay
210 -	235	Fine Sand w/ Gravel
235 -	246+	Med Sand and Gravel

Bottom of Well is at 243'

Well Cons[illegible] Report

14-1 (14-1)

Date 7-3-00

TYPE OR PRESS FIRMLY WITH BLACK INK PEN
COMPLETE WITHIN 30 DAYS OF WELL COMPLETION
AND SEND TO THE APPROPRIATE HEALTH DEPARTMENT

1. Type of Well: a. **Driven** Well: Casing diam. _____ in. Depth _____ ft.
b. **Bored** Well: Buried Slab [ ] Yes [ ] No
Hole Diameter ____ in. to ____ ft.; ____ in. to ____ ft.; ____ in. to ____ ft.
c. **Drilled** Well: PVC casing Formation packer set at depth of _____ ft.
Hole Diameter 9 in. to 274 ft.; ____ in. to ____ ft.; ____ in. to ____ ft.

Type of Grout	# of Bags	Grout Weight	From (ft.)	To (ft.)	Tremie Depth (ft.)
Bentonite	35	9#	250	0	250

d. **Drilled** Well: **Steel** Casing - - Mechanically Driven [ ] Yes [ ] No
Hole Diameter ____ in. to ____ ft.; ____ in. to ____ ft.; ____ in. to ____ ft.

Type of Grout	# of Bags	Grout Weight	From (ft.)	To (ft.)	Tremie Depth (ft.)

e. Well finished within: [X] Unconsolidated Materials [ ] Bedrock

f. Kind of Gravel Sand Pack	Grain Size/Supplier #	From (ft.)	To (ft.)
WASHED SAND	#1	274	250

2. Well Use: [X] Domestic [ ] Irrigation [ ] Commercial [ ] Livestock
[ ] Monitoring [ ] Other _____
3. Date Well Completed: 5-17-00 Well Disinfected [X] Yes [ ] No
Driller's estimated well yield 100 gpm
4. Date Permanent Pump Installed 6-29-00
5. Pump Capacity 15 gpm Set at (depth) 165 ft.
6. Pitless Adapter Model and Manufacturer: Campbell Epoxy
7. Well Cap Type and Manufacturer Bakerd Fiberglass PVC
8. Pressure Tank: Working Cycle 40 gals. Captive Air: [X] Yes [ ] No
9. Pump System Disinfected: [X] Yes [ ] No
10. Name of Pump Company Sand

11. Pump Installer: _____ License # _____
12. Robert Markham License # 102-003084
Licensed Pump Contractor Signature

Illinois Department of Public Health
Division of Environmental Health
525 W. Jefferson Street
Springfield, IL 62761

DO Not write on these lines

IMPORTANT NOTICE: This State Agency is requesting disclosure of information that is necessary to accomplish the statutory purpose as outlined under Public Act 85-0863. DISCLOSURE OF THIS INFORMATION IS MANDATORY. This form has been approved by the Forms Management Center.
IL 482-0126 rev. 12/98

GEOLOGICAL & WATER SURVEY WELL RECORD

13. Property Owner Coopers & Dolores Wilkes Well # 1
14. Driller Robert Markham License # 102-003084 15.
Name of Drilling Company Markham Well Drilling 16.
Permit No. 039007 00 Date Issued 3-22-00
17. Date Drilling Started 5-16-00
18. Well SITE address RR 2 Box 107 P Clinton 19.
Township Name Texas Land ID # _____ 20.
Subdivision Name _____ Lot # _____ 21.
Location: a. County DeWitt
b. Township 19 N Range 2 E Section 14
c. SW Quarter NE Quarter NE Quarter
d. coordinates: _____ Site Elevation _____ ft.(msl)

For Survey Use Only

22. Casings, Liners*, & Screen Information

Diam. (in.)	Material	Joint	Slot Size	From (ft.)	To (ft.)
5	STAINLESS	WELDED	12-15	274	266
5	PVC SCH 21	SOCKET		266	+1

(*) _____
(List reason for liner, type of upper and lower seals installed)

23. Water from SAND at a depth of 200 ft. to 274 ft.
a. static water level 35 ft. below casing which is 12 in. above ground
b. pumping level [illegible] ft. pumping 15 gpm after pumping for 2 hours

24. Earth Materials Passed Through	From (ft.)	To (ft.)
Yellow Clay	0	16
Grey Clay	16	53
DRIFT	53	55
Green Clay	55	59
Grey Clay	59	200
Fine SAND	200	230
Fine to MED SANDS	230	274
Limestone	274	

(If DRY HOLE, fill out log & indicate how hole was sealed)

Robert Markham 102-003084
25. Licensed Water Well Contractor Signature License Number

TOE BUILDING, SPRINGFIELD,
URVEYS SECTION. BE SURE TO

10-2

GEOLOGICAL WATER SURVEYS WATER WELL RECORD

Completed 7-77

10. Dept. Mines and Minerals permit No. 70086 Year 77
11. Property owner Max Walden Well No. 1
Address Clinton Ill
Driller BE Mashburn License No. 92-520
12. Water from Sand Formation 13. County DeWitt
at depth 212 to 265 ft.
14. Screen: Diam. 4 in.
Length: 4 ft. Slot 15

Sec. 10
Twp. 19N
Rng. 2E
Elev. 650

SHOW LOCATION IN SECTION PLAT
70'SL, 110'EL,
NW SE SE
(permit)

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
4	T+C 11 lbs.		

16. Size Hole below casing: 4 in.
17. Static level 90 ft. below casing top which is 1 ft. above ground level. Pumping level 94 ft. when pumping at 10 gpm for 4 hours. Sub. pump set at 120'

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
yellow clay	20	20
blue "	16	36
sand & gravel	4	40
green clay	11	51
grey clay hard gritty	161	212
sand & gravel	53	265
(CONTINUE ON SEPARATE SHEET IF NECESSARY)		

SIGNED Bruce Mashburn DATE Jan. 78

COUNTY No. 20700

10-19N-2E

E BUILDING, SPRINGFIELD,
/EYS SECTION. BE SURE TO

10-1

GEOLOGICAL WATER SURVEYS WATER WELL RECORD

Completed 11-76

. Dept. Mines and Minerals permit No. 70087 Year 78
. Property owner MAX WALDEN Well No. 2
Address Clinton Ill
Driller B.E. MASHBURN License No. 92-520
. Water from Sand & Gravel 13. County DeWitt
Formation
at depth 223 to 279 ft.
4. Screen: Diam. 4 in.
Length: 6 ft. Slot 15

Sec. 10
Twp. 19N
Rng. 2E
Elev. 665

SHOW LOCATION IN SECTION PLAT
120'NL, 420'WL,
SW SE SE
(permit)

5. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
4	T+C 11 lbs	3	276

16. Size Hole below casing: 4 in.
17. Static level 95 ft. below casing top which is 1 ft. above ground level. Pumping level 100 ft. when pumping at 10 gpm for 4 hours. Sub. pump set at 120'

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
yellow clay	22	22
blue clay	23	45
sandy blue clay	17	62
green clay	12	74
grey clay Hard gritty	149	223
sand & gravel	56	279
(CONTINUE ON SEPARATE SHEET IF NECESSARY)		

SIGNED Bruce Mashburn DATE Jan. 78

COUNTY No. 20699

10-19N-2E

FICE BUILDING, SPRINGFIELD,
URVEYS SECTION. BE SURE TO

(10-4)

GEOLOGICAL WATER SURVEYS WATER WELL RECORD

Completed 8-25-68

10. Dept. Mines and Minerals permit No. NF4713 Year 68
11. Property owner MAX WALDEN Well No. 1
    Address Route 51 - CLINTON, ILL.
    Driller B.E. MASHBURN License No. 92-520
12. Water from Sand (Formation) 13. County DEWITT
    at depth 256 to 260 ft.
14. Screen: Diam. 4 in.
    Length: 4 ft. Slot 16

Sec. 10
Twp. 19N
Rng. 2E
Elev. 655

SHOW LOCATION IN SECTION PLAT
350' SL, 200' EL of SW (permit)

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
4	T+C 11 lbs	3	256

16. Size Hole below casing: 4 in.
17. Static level 79 ft. below casing top which is 1 ft. above ground level. Pumping level 80 ft. when pumping at 14 gpm for 3 hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
yellow clay	21	21
blue clay	24	45
green clay	5	50
grey clay-sandy	30	85
Hard grey clay	34	119
dark grey clay - hard	76	195
sand + gravel	65	260
(CONTINUE ON SEPARATE SHEET IF NECESSARY)		

SIGNED Bruce E. Mashburn DATE Sept. 25, 68

COUNTY No. 59

10-19N-2E

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

Project Name CLINTON LANDFILL, INC. Sheet 1 of 3
Project Location CLINTON, IL. Project No. 91-118
Boring No. EX-29 Surface Elev. 718.0 Boring Type HSA Completion Depth 79.0'
Coordinates: (X) N 3833.6 (Y) E 9088.5 Drilling Contractor SKS ENGINEERS, INC.
Date Started 10/17/03 Date Completed 10/20/03 Driller DAVE BALDWIN Rig No. MOBIL B-57
Logged By J. BERRY Backfilled (Y/N) Y Backfill Material BENSEAL GROUT
Surface Conditions HARVESTED BEAN FIELD If "No" explain

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	q_u (tsf)	PID (PPM) eV LAMP 10.6 ___ 11.7 ___	CHEMICAL	GEOTECHNICAL	SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
1	CS	35		1.0						717.0		CLAYEY SILT (ML); Brownish yellow (10YR 6/6), stiff, moist, trace root fragments	
				3.5								SILTY CLAY (CL); Brownish yellow (10YR 6/6), very stiff, moist, trace organics	
									2				
				3.5									
2	CS	60							4				
				3.5						712.8		SILTY CLAY (CL); Yellowish brown (10YR 5/4), very stiff, moist, trace gravel	
									6				
				3.5									
									8				
3	CS	60		2.0								grades stiff	
									10				
				1.5						708.8		SILTY CLAY (CL); Gray (10YR 5/1) mottled brown (10YR 4/3), stiff, moist, trace gravel	
									12				
				1.5								grades gray (10YR 5/1)	
4	CS	60		+4.0					14			grades hard	
				+4.0					16				
				+4.0					18				
5	CS	60											
				+4.0					20				
				+4.0					22				
				+4.0									
6	CS	60		3.0					24			grades very stiff	
				2.25									
				+4.0					26			grades hard	
				+4.0					28				
7	CS	60											

CAD DWG NO:91118878 EMPLOYEE NO: 9834 DATE/TIME: 10/24/03 15:39 ACAD-15.

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

Project Name CLINTON LANDFILL, INC. Sheet 2 of 3
Project Location CLINTON, IL. Project No. 91-118
Boring No. EX-29 Surface Elev. 718.0 Boring Type HSA Completion Depth 79.0'
Coordinates: (X) N 3833.6 (Y) E 9088.5 Drilling Contractor SKS ENGINEERS, INC.
Date Started 10/17/03 Date Completed 10/20/03 Driller DAVE BALDWIN Rig No. MOBIL B-57
Logged By J. BERRY Backfilled (Y/N) Y Backfill Material BENSEAL GROUT
Surface Conditions HARVESTED BEAN FIELD If "No" explain

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	N VALUE	q_u (tsf)	PID (PPM) eV LAMP 10.6 __ 11.7 __	CHEMICAL / GEOTECHNICAL SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
7	CS	60		3.0						SILTY CLAY (CL); Gray (10YR 5/1), very stiff, moist, trace gravel	
							32				
				2.25							
							34				
8	CS	50									
				2.25			36				
							38				
				2.75							
9	CS	50					40				
				2.5							
							42				
				2.25							
10	CS	60					44				
				2.5							
							46				
				2.25							
				1.75			48			grades very stiff	
11	CS	60		3.25				668.5		CLAYEY SILT (ML); Gray (10YR 5/1), very stiff, moist, trace fine sand	
				3.5			50				
				3.75				667.0		ORGANIC SILT (OL); Brown (10YR 4/3), very stiff, moist, mottled black with organics	
				3.75			52	665.5		PEAT (PT); Very dark brown (10YR 2/2), very stiff, moist, with wood and root fragments	
							54				
12	CS	60									
				1.25				662.5		ORGANIC CLAYEY SILT (ML); Very dark brown (10YR 2/2), stiff, moist, with trace organics	
							56				
				1.25						grades more clay	
				1.75			58	660.0		SILTY CLAY (CL); Blue-gray (Gley2 5/5B), stiff, moist, trace gravel	
13	CS	60									

CAD DWG NO:91118877 EMPLOYEE NO: 9834 DATE/TIME: 10/24/03 15:08 ACAD-15.

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

Project Name CLINTON LANDFILL, INC. Sheet 3 of 3
Project Location CLINTON, IL. Project No. 91-118
Boring No. EX-29 Surface Elev. 718.0 Boring Type HSA Completion Depth 79.0'
Coordinates: (X) N 3833.6 (Y) E 9088.5 Drilling Contractor SKS ENGINEERS, INC.
Date Started 10/17/03 Date Completed 10/20/03 Driller DAVE BALDWIN Rig No. MOBIL B-57
Logged By J. BERRY Backfilled (Y/N) Y Backfill Material BENSEAL GROUT
Surface Conditions HARVESTED BEAN FIELD If "No" explain

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	q_u (tsf)	PID (PPM) eV LAMP 10.6 ___ 11.7 ___	CHEMICAL	GEOTECHNICAL	SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
13	CS	60		2.0								SILTY CLAY (CL); Blue-gray (Gley2 5/5B); very stiff, moist, trace gravel	
				2.0					82				
									84				
14	CS	60		2.0									
				1.0						652.8 652.5		CLAYEY SILT (ML); Gray (10YR 5/1), stiff, moist, trace fine sand	
				+4.0					86			SILTY CLAY (CL); Gray (10YR 5/1), hard, moist, trace gravel	
				+4.0					88				
15	CS	60											
				+4.0					90				
				+4.0					92				
				2.75								grades very stiff	
16	CS	50							94				
				2.5									
									96				
				2.75					98				
										639.0		End of boring @79.0'	
									100				
									102				
									104				
									106				
									108				
									110				

CAD DWG NO:91118878 EMPLOYEE NO: 9834 DATE/TIME: 10/24/03 15:14 ACAD-15.

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

Project Name CLINTON LANDFILL, INC. Sheet 1 of 12
Project Location CLINTON, ILLINOIS Project No. 91-118
Boring No. EX-30 Surface Elev. 718.90 Boring Type ROTO-SONIC Completion Depth 345.0'
Coordinates: (X) N: 3819.80 (Y) E: 9081.60 Drilling Contractor BOART LONGYEAR
Date Started 8-9-05 Date Completed 8-10-05 Driller JON WEEKS Rig No. 1512 GP24-300R5
Logged By J. KELLY & A. WHELPLEY Backfilled (Y/N) Y Backfill Material BENSEAL GROUT
Surface Conditions SOYBEAN FIELD If "No" explain

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	q_u (tsf)	PID (PPM) eV LAMP 10.6 ___ 11.7 ___	CHEMICAL	GEOTECHNICAL SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
											BLIND DRILL TO 75' (WITHIN 10' OF EX-29)	
								2				
								4				
								6				
								8				
								10				
								12				
								14				
								16				
								18				
								20				
								22				
								24				
								26				
								28				

CAD DWG NO:911181078 EMPLOYEE NO: 89738 DATE/TIME: 08/30/05 15:47 ACAD-15.

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

Project Name CLINTON LANDFILL, INC. Sheet 2 of 12
Project Location CLINTON, ILLINOIS Project No. 91-118
Boring No. EX-30 Surface Elev. 718.90 Boring Type ROTO-SONIC Completion Depth 345.0'
Coordinates: (X) N: 3819.80 (Y) E: 9081.60 Drilling Contractor BOART LONGYEAR
Date Started 6-9-05 Date Completed 6-10-05 Driller JON WEEKS Rig No. 1512 GP24-300R5
Logged By J. KELLY & A. WHELPLEY Backfilled (Y/N) Y Backfill Material BENSEAL GROUT
Surface Conditions SOYBEAN FIELD If "No" explain

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	q_u (tsf)	PID (PPM) eV LAMP 10.6 11.7	CHEMICAL	GEOTECHNICAL	SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
									32			BLIND DRILL TO 75' (WITHIN 10' OF EX-29)	
									34				
									36				
									38				
									40				
									42				
									44				
									46				
									48				
									50				
									52				
									54				
									56				
									58				

CAD DWG NO:911181077 EMPLOYEE NO: 89738 DATE/TIME: 08/30/05 15:36 ACAD-15.

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

Project Name CLINTON LANDFILL, INC. Sheet 3 of 12
Project Location CLINTON, ILLINOIS Project No. 91-118
Boring No. EX-30 Surface Elev. 718.90 Boring Type ROTO-SONIC Completion Depth 345.0'
Coordinates: (X) N: 3819.80 (Y) E: 9081.60 Drilling Contractor BOART LONGYEAR
Date Started 6-9-05 Date Completed 6-10-05 Driller JON WEEKS Rig No. 1512 GP24-300R5
Logged By J. KELLY & A. WHELPLEY Backfilled (Y/N) Y Backfill Material BENSEAL GROUT
Surface Conditions SOYBEAN FIELD If "No" explain

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	q_u (tsf)	PID (PPM) eV LAMP 10.8 11.7	CHEMICAL	GEOTECHNICAL	SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
												BLIND DRILL TO 75' (WITHIN 10' OF EX-29)	
									62				
									64				
									66				
									68				
									70				
									72				
									74				
										643.90			
1	CS	FR		+4.0					76			SILTY CLAY (CL); Dark gray (10YR 4/1), hard, moist, trace gravel	
				+4.0									
				+4.0								SAND (SP); Dark gray (10YR 4/1), wet, trace gravel	
				+4.0					78	641.15			
										640.65		SILTY CLAY (CL); Dark gray (10YR 4/1), hard, moist, trace gravel	
				2.0					80				
				+4.0					82			grades very dark grayish-brown (10YR 3/2)	
				+4.0									
				+4.0					84	634.90		CLAYEY SILT (ML); Dark grayish brown (10YR 4/2), hard, moist, trace organics	
2	CS	FR		+4.0						633.90			
									86	633.40		CLAYEY SAND (SC); Dark grayish-brown (10YR 4/2), moist, trace gravel	
												SILTY CLAY (CL); Gray (10YR 5/1), hard, moist, trace gravel	
									88				
			3.5										

CAD DWG NO:911181078 EMPLOYEE NO: 89738 DATE/TIME: 07/01/05 08:35 ACAD-15.

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

Project Name CLINTON LANDFILL, INC. Project No. 91-118

Project Location CLINTON, ILLINOIS

Boring No. EX-30 Surface Elev. 718.90 Boring Type ROTO-SONIC Completion Depth 345.0'

Coordinates: (X) N: 3819.80 (Y) E: 9081.60 Drilling Contractor BOART LONGYEAR

Date Started 6-9-05 Date Completed 6-10-05 Driller JON WEEKS Rig No. 1512 GP24-300R5

Logged By J. KELLY & A. WHELPLEY Backfilled (Y/N) Y Backfill Material BENSEAL GROUT

Surface Conditions SOYBEAN FIELD If "No" explain

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	N VALUE	q_u (tsf)	PID (PPM) eV LAMP 10.6 11.7	CHEMICAL	GEOTECHNICAL	SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
				+4.0								SILTY CLAY (CL); Gray (10YR 5/1), hard, moist, trace gravel	
				+4.0					92	626.65		CLAYEY SAND (SC); Gray (10YR 5/1), wet, well-graded, trace gravel, fine-medium grained	
				+4.0						626.40		SILTY CLAY (CL); Gray (10YR 5/1), hard, moist, trace gravel	
									94				
3	CS	FR		+4.0									
				+4.0					96				
				+4.0									
				+4.0					98				
				+4.0									
				+4.0					100				
				+4.0									
				+4.0									
				+4.0					102				
				+4.0									
				+4.0					104				
4	CS	FR		+4.0									
				+4.0					106				
				+4.0									
				+4.0					108				
				+4.0									
				+4.0					110			grades dark gray (10YR 4/1), damp	
				+4.0									
				+4.0									
				+4.0					112				
				+4.0									
				+4.0					114				
5	CS	FR		+4.0									
				+4.0					116				
				+4.0									
				+4.0					118				
				+4.0									

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

Project Name CLINTON LANDFILL, INC. Project No. 91-118
Project Location CLINTON, ILLINOIS
Boring No. EX-30 Surface Elev. 718.90 Boring Type ROTO-SONIC Completion Depth 345.0'
Coordinates: (X) N: 3819.80 (Y) E: 9081.60 Drilling Contractor BOART LONGYEAR
Date Started 6-9-05 Date Completed 6-10-05 Driller JON WEEKS Rig No. 1512 GP24-300R5
Logged By J. KELLY & A. WHELPLEY Backfilled (Y/N) Y Backfill Material BENSEAL GROUT
Surface Conditions SOYBEAN FIELD If "No" explain

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	q_u (tsf)	PID (PPM) eV LAMP 10.6 ___ 11.7 ___	CHEMICAL	GEOTECHNICAL	SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
				+4.0								SILTY CLAY (CL); Gray (10YR 5/1), hard, moist, trace gravel	
				+4.0									
				+4.0					122				
				+4.0									
									124	594.40		SAND (SP); Light brownish-gray (10YR 6/2), loose, wet, with trace gravel, fine-medium grained	
6	CS	FR											
				+4.0					126	592.60		SILTY CLAY (CL); Dark gray (10YR 4/1), hard, moist,	
				<0.5								grades soft, wet with sand	
				+4.0					128			grades hard	
				0.5						589.60		CLAYEY SAND (SC); Dark gray (10YR 4/1), soft, moist, fine grained, trace gravel	
									130				
				2.5						587.10		SILTY CLAY (CL); Dark gray (10YR 4/1), very stiff	
				+4.0					132			grades damp, hard	
				+4.0									
				+4.0					134				
7	CS	FR		+4.0									
				+4.0					136				
				+4.0									
				+4.0					138				
				+4.0									
				+4.0					140				
				+4.0									
				+4.0								SAND (SW); dark gray (10YR 4/1), moist, well graded, fine to medium grained	
				+4.0					142	576.60			
				+4.0						576.27		SILTY CLAY (CL); Dark gray (10YR 4/1), very stiff	
				+4.0					144				
				+4.0									
8	CS	FR		+4.0									
				+4.0					146			1" Sand seam @ 147'	
				+4.0									
				+4.0					148				
				+4.0								4" Clayey Sand (SC) layer @ 150'	

CAD DWG NO:91118108O EMPLOYEE NO: 89738 DATE/TIME: 07/01/05 10:23 ACAD-15.

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

Project Name CLINTON LANDFILL, INC. Sheet 6 of 12
Project Location CLINTON, ILLINOIS Project No. 91-118
Boring No. EX-30 Surface Elev. 718.90 Boring Type ROTO-SONIC Completion Depth 345.0'
Coordinates: (X) N: 3819.80 (Y) E: 9081.60 Drilling Contractor BOART LONGYEAR
Date Started 6-9-05 Date Completed 6-10-05 Driller JON WEEKS Rig No. 1512 GP24-300R5
Logged By J. KELLY & A. WHELPLEY Backfilled (Y/N) Y Backfill Material BENSEAL GROUT
Surface Conditions SOYBEAN FIELD If "No" explain

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	q_u (tsf)	PID (PPM) eV LAMP 10.6 11.7	CHEMICAL	GEOTECHNICAL SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
				+4.0							grades damp to moist, trace sand, gravel	
				+4.0								
				+4.0				152				
				+4.0								
				+4.0				154				
9	CS	FR		+4.0								
				+4.0				156				
				+4.0								
				+4.0				158				
				+4.0								
				+4.0				160				
				+4.0								
				+4.0				162				
				+4.0								
				+4.0				164				
10	CS	FR	+4									
				+4.0				166				
				+4.0								
				+4.0				168			grades wet, soft	
				0.5								
				+4.0				170			grades damp, hard	
				+4.0								
								172	546.90		SAND (SP); Light brownish gray (10YR 6/2), moist to wet, fine grained	
								174			SILTY CLAY (CL); Gray (10YR 5/1), hard, moist, trace gravel	
									543.90			
11	CS	FR		+4.0					543.40		CLAYEY SAND (SC); Gray, wet, fine grained, grades to gravelly clay, hard and damp	
				+4.0				176	542.40		SILTY CLAY (CL); Gray (10YR 5/1), hard, dry, trace gravel	
				+4.0								
				+4.0				178				
				+4.0								

CAD DWG NO:911181081 EMPLOYEE NO: 89736 DATE/TIME: 07/01/05 10:58 ACAD-15.

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

Project Name CLINTON LANDFILL, INC. Sheet 7 of 12

Project Location CLINTON, ILLINOIS Project No. 91-118

Boring No. EX-30 Surface Elev. 718.90 Boring Type ROTO-SONIC Completion Depth 345.0'

Coordinates: (X) N: 3819.80 (Y) E: 9081.60 Drilling Contractor BOART LONGYEAR

Date Started 6-9-05 Date Completed 6-10-05 Driller JON WEEKS Rig No. 1512 GP24-300R5

Logged By J. KELLY & A. WHELPLEY Backfilled (Y/N) Y Backfill Material BENSEAL GROUT

Surface Conditions SOYBEAN FIELD If "No" explain

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	q. (tsf)	PID (PPM) eV LAMP 10.6 ___ 11.7 ___	CHEMICAL / GEOTECHNICAL SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
								538.40		SAND (SP); Gray (10YR 5/1), moist, fine to medium grained	
				+4.0				537.90		SILTY CLAY (CL); Gray (10YR 5/1), hard, damp, trace gravel	
				+4.0			182				
				+4.0							
				+4.0			184				
				+4.0							
				+4.0			186				
				+4.0							
				+4.0			188				
				+4.0							
				+4.0			190				
				+4.0							
				+4.0			192				
12	CS	FR		+4.0							
				+4.0			194				
				+4.0							
				+4.0			196				
				+4.0							
								521.90		SAND (SP); Gray (10YR 5/1), wet, fine to medium grained	
								521.40		SILTY CLAY (CL); Gray (10YR 5/1), hard, damp, trace gravel	
				+4.0			198				
				+4.0							
							200	518.90		SAND (SP); Gray (10YR 5/1), wet, fine to medium grained	
							202	516.40		SILTY CLAY (CL); Gray (10YR 5/1), hard, damp, trace gravel	
				+4.0							
				+4.0			204				
13	CS	FR		+4.0							
				+4.0			206				
				+4.0							
				+4.0			208				
				+4.0							

CAD DWG NO:911181082 EMPLOYEE NO: 89736 DATE/TIME: 07/01/05 10:25 ACAD-15.

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

Project Name CLINTON LANDFILL, INC. Sheet 8 of 12
Project Location CLINTON, ILLINOIS Project No. 91-118
Boring No. EX-30 Surface Elev. 718.90 Boring Type ROTO-SONIC Completion Depth 345.0'
Coordinates: (X) N: 3819.80 (Y) E: 9081.60 Drilling Contractor BOART LONGYEAR
Date Started 6-9-05 Date Completed 6-10-05 Driller JON WEEKS Rig No. 1512 GP24-300R5
Logged By J. KELLY & A. WHELPLEY Backfilled (Y/N) Y Backfill Material BENSEAL GROUT
Surface Conditions SOYBEAN FIELD If "No" explain

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	q_u (tsf)	PID (PPM) eV LAMP 10.6 11.7	CHEMICAL/GEOTECHNICAL SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
				+4.0							
				+4.0							
				+4.0			212			grades with organics, trace to some sand	
				+4.0				505.40		CLAYEY SILT (ML); Gray (10YR 5/1), hard, moist, trace sand, gravel	
				+4.0			214				
14	CS	15.8		+4.0							
				+4.0			216				
				+4.0							
				3.5			218			grades mottled greenish-gray	
				3.5				499.90		SILTY CLAY (CL); Greenish-gray (Gley 5/5 GY), very stiff, moist	
				3.0			220				
				3.0							
				3.0			222				
				3.0							
				3.0			224			grades mottled gray, trace organics	
				3.0							
				3.0			226			grades gray (10YR 4/1), trace organics, trace gravel	
				3.0							
				3.0			228				
				3.0							
				3.0				489.15		SAND (SP); Grayish-brown (10YR 5/2), moist to wet, poorly graded, fine grained	
15	CS	16.6					230				
							232				
							234				
							236				
							238			grades wet, trace silt, organics	

CAD DWG NO:911181083 EMPLOYEE NO: 89736 DATE/TIME: 07/01/05 10:52 ACAD-15.

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

Project Name CLINTON LANDFILL, INC. Sheet 9 of 12
Project Location CLINTON, ILLINOIS Project No. 91-118
Boring No. EX-30 Surface Elev. 718.90 Boring Type ROTO-SONIC Completion Depth 345.0'
Coordinates: (X) N: 3819.80 (Y) E: 9081.60 Drilling Contractor BOART LONGYEAR
Date Started 6-9-05 Date Completed 6-10-05 Driller JON WEEKS Rig No. 1512 GP24-300R5
Logged By J. KELLY & A. WHELPLEY Backfilled (Y/N) Y Backfill Material BENSEAL GROUT
Surface Conditions SOYBEAN FIELD If "No" explain

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	q_u (tsf)	PID (PPM) eV LAMP 10.6 __ 11.7 __	CHEMICAL	GEOTECHNICAL SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
								242			SAND (SP); Grayish-brown (10YR 5/2), wet, poorly graded, fine grained	
								244				
16	CS	198						246				
								248				
								250			grades dark grayish-brown, medium grained, trace gravel	
								252				
								254				
								256				
								258				
								260			2" silty clay layer, trace organics	
								262				
								264				
17	CS	192						266				
								268				

CAD DWG NO:911181084 EMPLOYEE NO: 89736 DATE/TIME: 07/01/05 10:41 ACAD-15.

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

Project Name CLINTON LANDFILL, INC. Sheet 10 of 12

Project Location CLINTON, ILLINOIS Project No. 91-118

Boring No. EX-30 Surface Elev. 718.90 Boring Type ROTO-SONIC Completion Depth 345.0'

Coordinates: (X) N: 3819.80 (Y) E: 9081.60 Drilling Contractor BOART LONGYEAR

Date Started 6-9-05 Date Completed 6-10-05 Driller JON WEEKS Rig No. 1512 GP24-300R5

Logged By J. KELLY & A. WHELPLEY Backfilled (Y/N) Y Backfill Material BENSEAL GROUT

Surface Conditions SOYBEAN FIELD If "No" explain

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	"N" VALUE	q_u (tsf)	PID (PPM) eV LAMP 10.6 __ 11.7 __	CHEMICAL	GEOTECHNICAL	SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
									272			SAND (SP); Grayish-brown (10YR 5/2), wet, poorly graded, fine grained	
												grades fine grained, brown (10YR 5/3)	
									274				
16	CS	19B							276				
									278				
									280				
												grades medium grained	
									282				
									284				
18	CS	0							286				lost sample retainer no recovery
									288				
									290				
									292				
									294				
									296				
									298				

CAD DWG NO:911181085 EMPLOYEE NO: 89736 DATE/TIME: 07/01/05 10:37 ACAD-15.

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

Project Name CLINTON LANDFILL, INC. Project No. 91-118
Project Location CLINTON, ILLINOIS
Boring No. EX-30 Surface Elev. 718.90 Boring Type ROTO-SONIC Completion Depth 345.0'
Coordinates: (X) N: 3819.80 (Y) E: 9081.60 Drilling Contractor BOART LONGYEAR
Date Started 6-9-05 Date Completed 6-10-05 Driller JON WEEKS Rig No. 1512 GP24-300R5
Logged By J. KELLY & A. WHELPLEY Backfilled (Y/N) Y Backfill Material BENSEAL GROUT
Surface Conditions SOYBEAN FIELD If "No" explain

SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	N VALUE	q_u (tsf)	PID (PPM) eV LAMP 10.6 ___ 11.7 ___	CHEMICAL (BOTTOM)	SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
								302			SAND (SP); Grayish-brown (10YR 5/2), wet, poorly graded, fine grained	
								304				
									413.90			
19	CS	12.4						306			SAND (SW); Brown (10YR 5/3), wet, fine to coarse, trace gravel	
								308				
								310				
								312			increasing gravel content	
								314				
								316				
									401.90		WEATHERED SHALE; Greenish-gray (5/5 GY), hard, dry, well competed	
								318				
								320				
								322			grades competent @ 322.0'	
								324				
								326				
								328				
									389.90		LIMESTONE, some shale interlayered	

CAD DWG NO:911181088 EMPLOYEE NO: 89736 DATE/TIME: 07/01/05 10:38 ACAD-15.

PDC TECHNICAL SERVICES, INC.
LOG OF BORING

Project Name CLINTON LANDFILL, INC. Sheet 12 of 12

Project Location CLINTON, ILLINOIS Project No. 91-118

Boring No. EX-30 Surface Elev. 718.90 Boring Type ROTO-SONIC Completion Depth 345.0'

Coordinates: (X) N: 3819.80 (Y) E: 9081.60 Drilling Contractor BOART LONGYEAR

Date Started 6-9-05 Date Completed 6-10-05 Driller JON WEEKS Rig No. 1512 GP24-300R5

Logged By J. KELLY & A. WHELPLEY Backfilled (Y/N) Y Backfill Material BENSEAL GROUT

Surface Conditions SOYBEAN FIELD If "No" explain

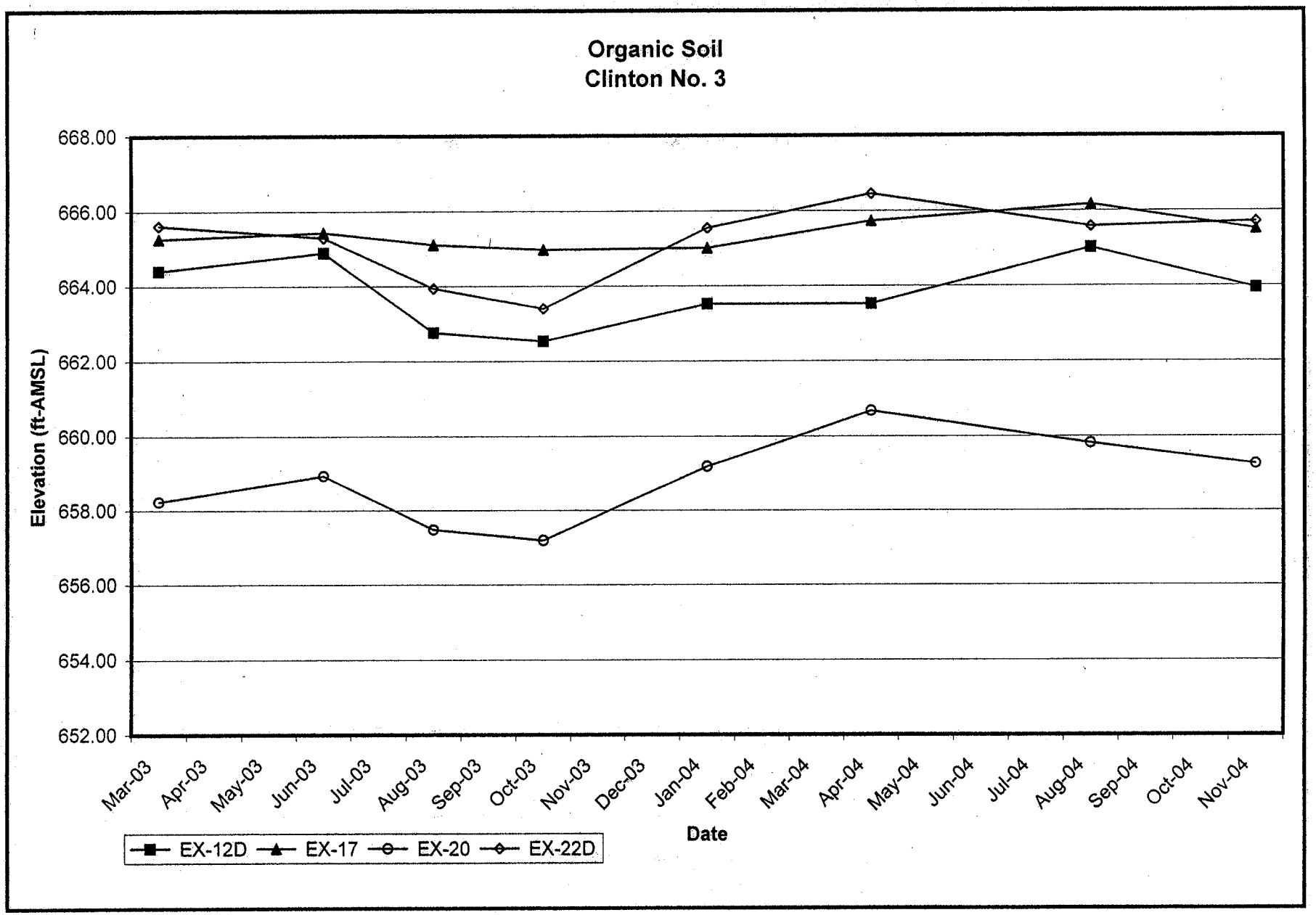
SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (INCHES)	'N' VALUE	q_u (tsf)	PID (PPM) eV LAMP 10.6 ___ 11.7 ___	CHEMICAL	GEOTECHNICAL	SAMPLE TYPE	DEPTH (FEET)	ELEVATION	GRAPHIC LOG	DESCRIPTION OF MATERIAL	REMARKS
									332			LIMESTONE, some shale interlayered	
									334				
									336				
									338				
									340				
									342				
									344				
										373.70		End of boring @345.0'	
									348				
									348				
									350				
									352				
									354				
									356				
									358				

CAD DWG NO:91118108? EMPLOYEE NO: 89736 DATE/TIME: 07/01/05 11:28 ACAD-15.

APPENDIX E.6

HISTORICAL GROUNDWATER ELEVATIONS

Shaw®



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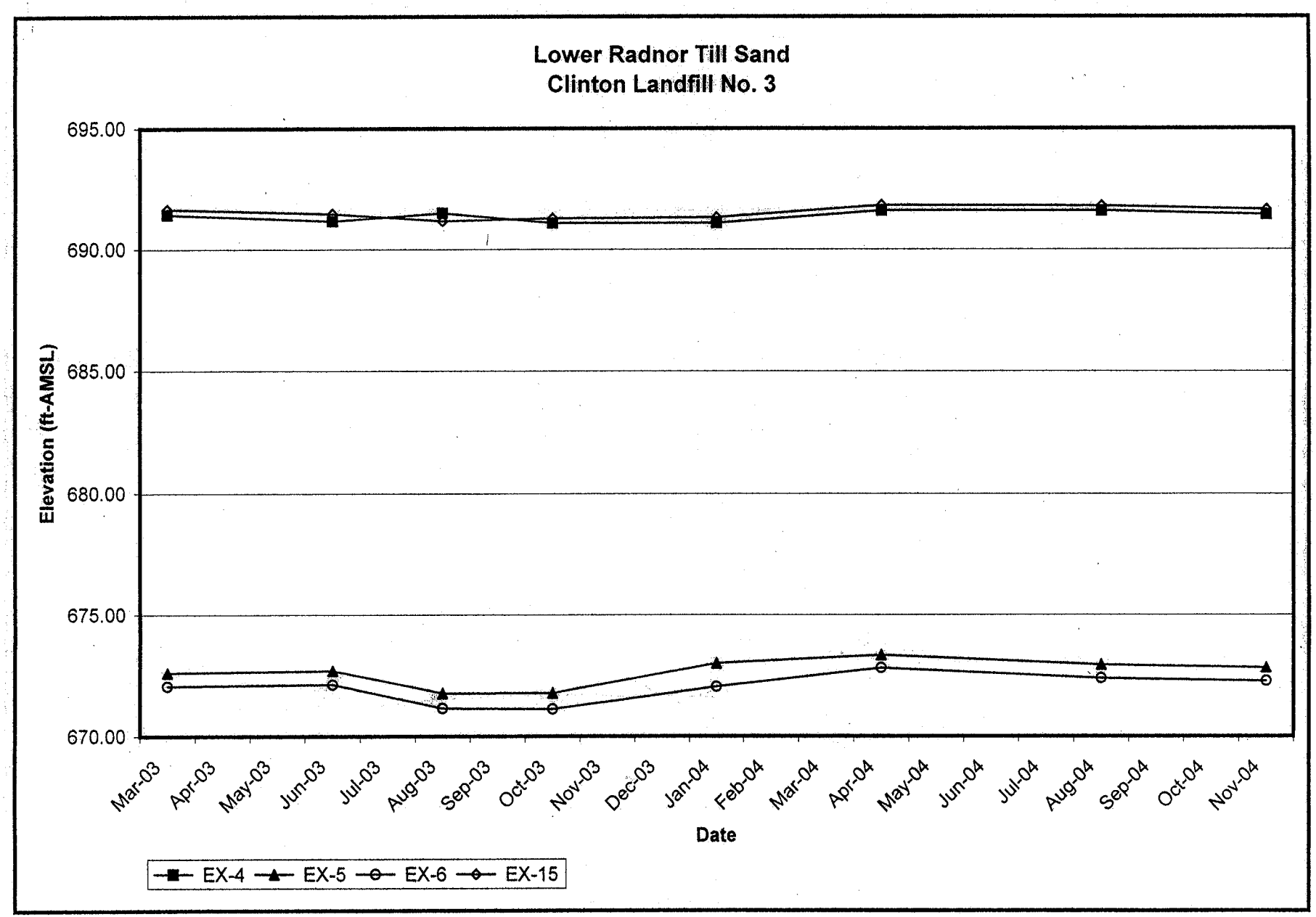
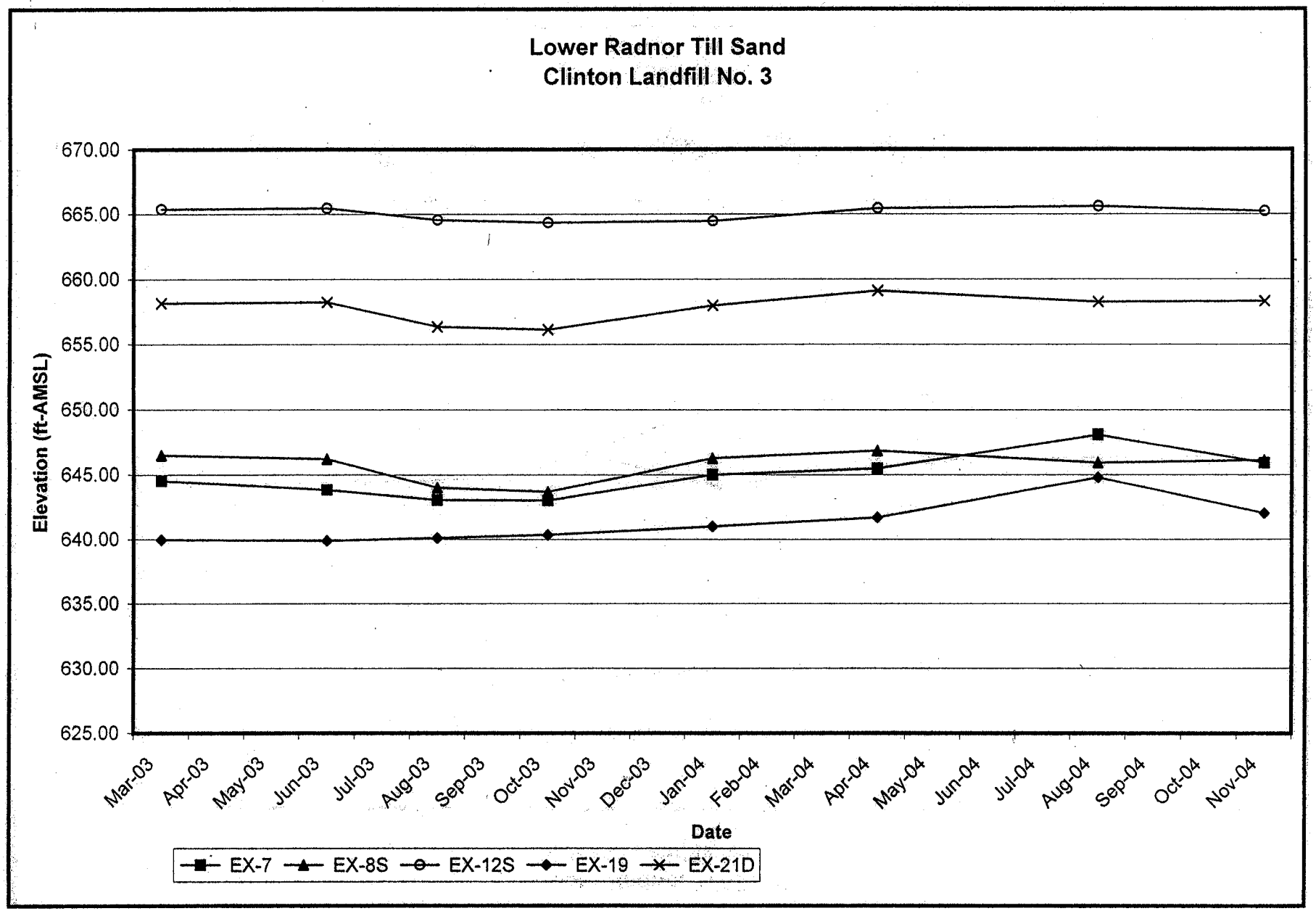

Lower Radnor Till Sand
Clinton Landfill No. 3
695.00
690.00
685.00
680.00
675.00
670.00
Elevation (ft-AMSL)
Mar-03
Apr-03
May-03
Jun-03
Jul-03
Aug-03
Sep-03
Oct-03
Nov-03
Dec-03
Jan-04
Feb-04
Mar-04
Apr-04
May-04
Jun-04
Jul-04
Aug-04
Sep-04
Oct-04
Nov-04
Date
EX-4
EX-5
EX-6
EX-15


Lower Radnor Till Sand
Clinton Landfill No. 3
Elevation (ft-AMSL)
670.00
665.00
660.00
655.00
650.00
645.00
640.00
635.00
630.00
625.00
Mar-03
Apr-03
May-03
Jun-03
Jul-03
Aug-03
Sep-03
Oct-03
Nov-03
Dec-03
Jan-04
Feb-04
Mar-04
Apr-04
May-04
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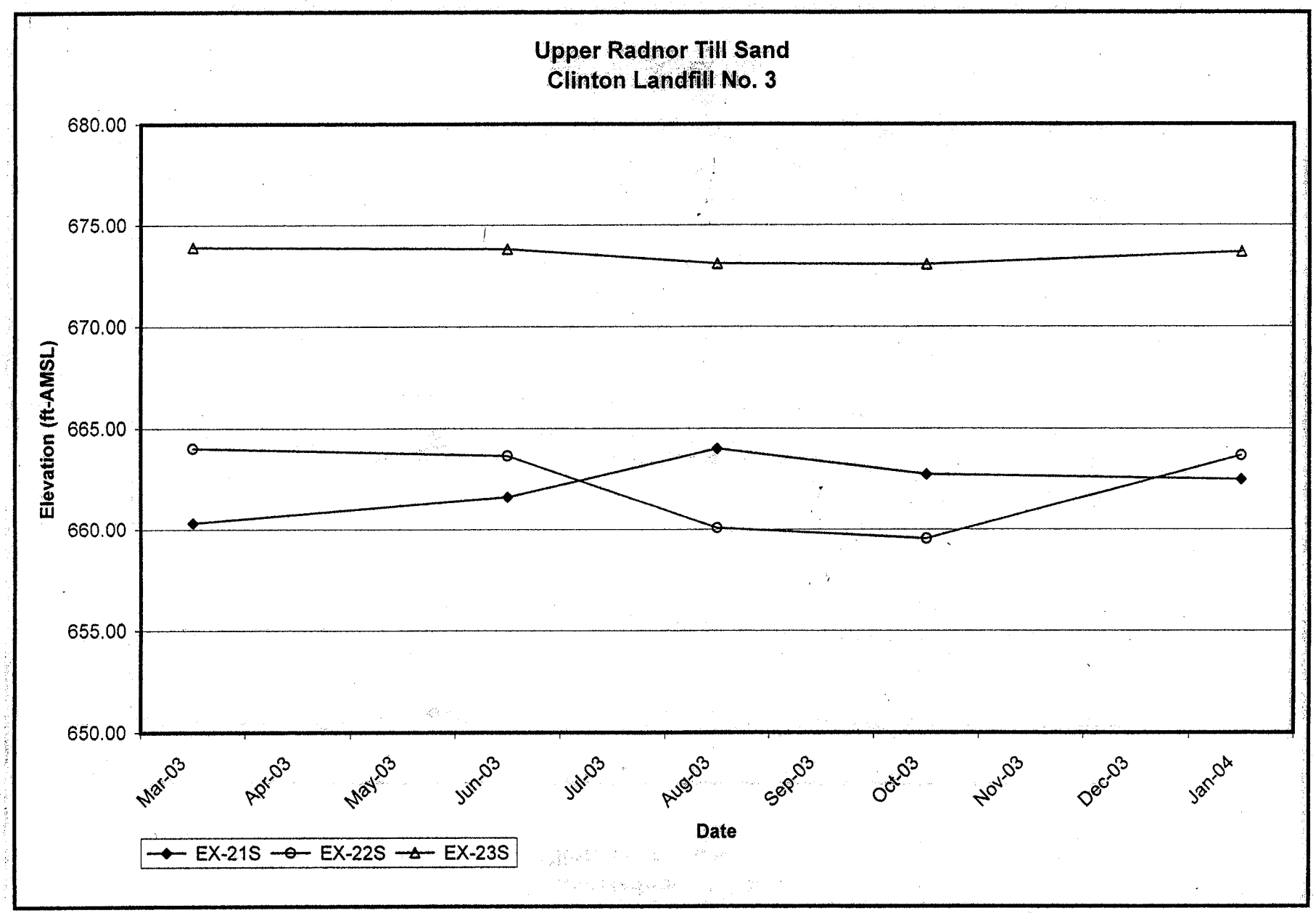
EX-19
EX-21D


Upper Radnor Till Sand
Clinton Landfill No. 3
680.00
675.00
670.00
665.00
660.00
655.00
650.00
Elevation (ft-AMSL)
Mar-03
Apr-03
May-03
Jun-03
Jul-03
Aug-03
Sep-03
Oct-03
Nov-03
Dec-03
Jan-04
Date
EX-21S
EX-22S
EX-23S