

**BOARD OF TRUSTEES MEETING
TUESDAY, SEPTEMBER 23, 2014
6:30 P.M.
AGENDA NO. 2014-09-02 SBM**

CALL TO ORDER BY

Mayor Durkin

PLEDGE OF ALLEGIANCE

ROLL CALL BY CLERK

Ernestine Dobbins

OPEN TO PUBLIC (regarding items on the agenda this evening)

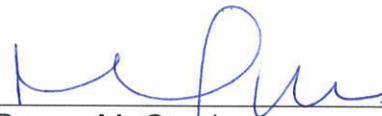
ADMINISTRATION

1. Presentation on Water Well Study
2. Approval of a Redevelopment Agreement between the Village of Glenwood and KLLM Transport
3. Approval of the Commitment Letter for the Line of Credit from M.B. Financial Bank
4. Approval of a Resolution authorizing the Village to initiate the Public Hearing Process that is necessary to add "Medical Marijuana Dispensary" as a permitted use in the M Zoning District
5. Approval of the Final Plat for the Industrial North Resubdivision and authorize Village President, Clerk and Treasurer to execute the Final Plan
6. Approval of the Acquisition for 430 W. 194th St. Glenwood, IL 60425
7. Approval of Request for Executive Closed Session under Section 2 (c) (1) Personnel Section 2 (c) (5) Real Estate and Section 2 (c) (11) Litigation with action to be taken and reason to reconvene

OPEN TO THE PUBLIC

ADJOURNMENT

Sincerely,



Donna M. Gayden
Village Administrator

Posted and distributed 09/19/14



K - PLUS ENGINEERING , L L C

Mr. Kevin Welsh
Village of Glenwood
One Asselborn Way
Glenwood, Illinois 60425

Re: Phase I: Water Well Study
Village of Glenwood
K-Plus Project No. 24042A

Dear Mr. Welsh:

K-Plus Engineering, LLC (K-Plus) is pleased to provide the Village of Glenwood with the results of our Phase I: Water Well Study for a new community supply drinking water well to be located in Glenwood, Illinois.

We are pleased to have this opportunity to offer our services and look forward to working with you on this project.

If you have any questions regarding this proposal, please feel free to contact me at your convenience.

Sincerely,
K-PLUS ENGINEERING

James L. Loring, P.G.
Principal Geologist

Daniel Caplice
Senior Principal Engineer

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PROJECT SUMMARY

K-Plus was asked to complete a study of local water wells, and the local and regional geology to evaluate the potential for the completion of a new community supply water well and associated infrastructure for the Village of Glenwood. The Village is seeking to provide an initial 1,500 gallons per minute of water supply with a potential to increase the pumpage and storage capacity of the system. The estimated initial daily pumpage demand was estimated at 2,160,000.00 gallons per day. Based on a review of the local geology multiple aquifers are present; however, the ability to provide the required pumping capacity and quantities would require utilizing deep aquifers or a combination of shallow and deep wells.

Regional Geology

The rocks making up the Cambrian and Ordovician strata, including those that make up the Cambrian-Ordovician Aquifer (COA), occur at or near the land surface or directly below glacial deposits in parts of north-central and northwestern Illinois and into southern Wisconsin. Recharge to COA occurs in those areas generally through precipitation and surface water recharge which then flows laterally through the aquifer. Groundwater may also recharge the aquifer from other geologic units through leakage or there erosion has resulted in the direct deposition of glacial deposit's overlying the COA. Water entering the aquifer east of a line in western Boone, DeKalb, and LaSalle Counties flows eastward and southward toward Chicago; west of that line, groundwater flows generally west and south. In much northern Illinois bedrock layers slope down to the east-southeast resulting in the COA being buried by several hundred of overlying deposits in the Chicago region.

SYSTEM	SERIES	GROUP	FORMATION	AQUIFER OR CONFINING UNIT	THICKNESS (meters)	DESCRIPTION	
Quaternary	Pleistocene			Sand and gravel aquifers and till, silt, and clay confining units	0-180	Glacial-till, silt, gravel; windblown silt; alluvial silt, sand, gravel	
Pennsylvanian				Confining unit	0-150	Mainly shale, some sandstone, limestone, coal	
Mississippian	Valmeyeran		St. Louis Salem Warsaw Keokuk- Burlington			Limestone, some shale and silty dolomite	
	Kinderhookian				0-180		
Devonian	Upper			Confining unit		Shale, calcareous	
	Middle						
	Lower				0-120	Limestone, some shale	
Silurian	Niagara			Silurian- Devonian aquifer			
	Alexandrian		Kankakee Edgewood		0-140	Dolomite, silty at base	
Ordovician	Cincinnatian	Maquoketa		Confining unit		Shale, locally argillaceous dolomite or limestone	
		Galena				0-75	
		Platteville				0-140	Dolomite and limestone
	Champlainian		Glenwood				Sandstone, shale at top.
			St. Peter			0-200	Sandstone, Basal shale
			Shakopee New Richmond Oneota				Dolomite Sandstone Dolomite
Canadian	Prairie du Chein	Gunter				Sandstone	
		Eminence and Potosi				Dolomite and sandstone	
Cambrian			Franconia	Cambrian-Ordovician aquifer system		Dolomite, sandstone, and shale	
			Ironton		30-400		
			Galesville		20-80	Sandstone, fine-to medium grained.	
				Eau Claire	Confining unit	75-140	Shale siltstone, dolomite, sandstone
	Croixan		Mt. Simon	Mt. Simon aquifer	150-790	Sandstone Sandstone	

Figure 1 - Stratigraphic column for Northeastern Illinois

Regional Ground Water Usage

The earliest known withdrawal from the COA in Chicago was in 1864, when a well was drilled at the corner of Chicago and Western Avenues. Historical reports stated that water flowed out of this well without pumping and initially had pressure to raise water in the well about 80 feet above land surface. By 1900, many wells had been drilled into the COA, causing water levels to decrease beneath Chicago, Joliet, and other major pumping centers. By the mid 1900's water was being pumped from the aquifer at a rate that exceeded the annual naturally occurring recharge. Although withdrawals by Chicago industry began to decline in the 1970s, drinking water demands increased as a result of growing populations in the Chicago metropolitan collar counties until groundwater usage peaked in 1979. By then, water levels had been lowered by as much as 850 feet in Chicago and other major pumping centers, causing an area of depressed water levels in the aquifer that extended throughout northeastern Illinois and into parts of southern Wisconsin.

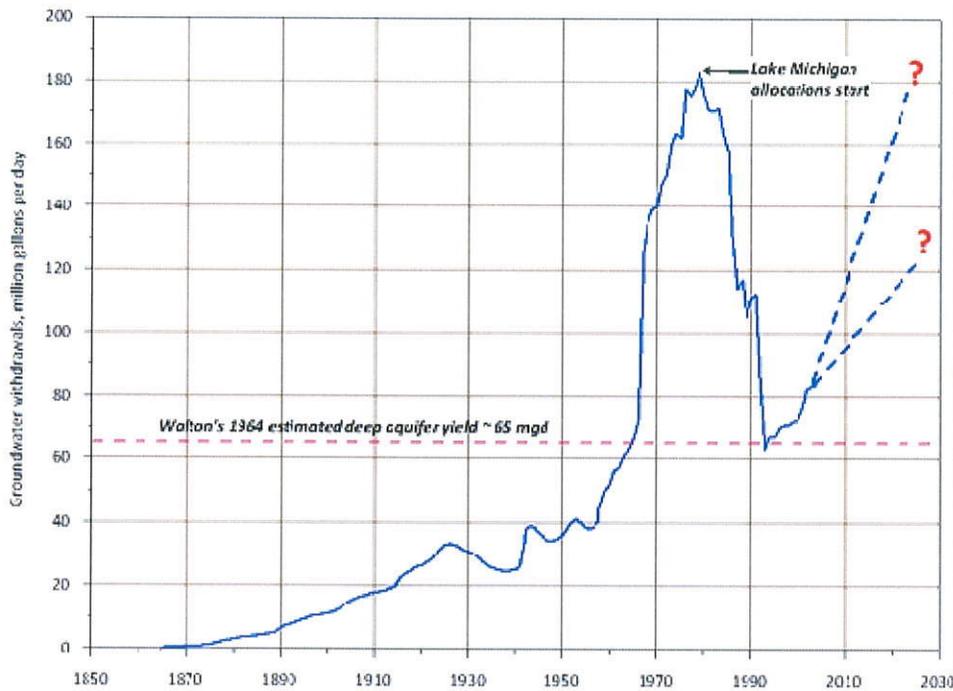


Figure 2 - Deep water aquifer annual withdrawals from 1850-2010

After 1979, withdrawals from the COA decreased as other sources of drinking and industrial water were used, including increased withdrawals from Lake Michigan and diversion of surface water from the Fox River as well as utilizing local shallower aquifers. Concerns regarding elevated radium levels in the COA and other water-quality issues increased the use of other sources of water. Dramatic decreases in withdrawals occurred as some suburban counties began to receive drinking water from Lake Michigan in the early 1990s. Groundwater levels in the COA increased over 250 feet in and near Chicago between 1991 and 1995. Subsequently pumpage levels bottomed out and started to increase in the period after 2000. Continued increases in pumping may again lower water levels in the COA and other aquifers now in use as withdrawals exceed the natural recharge rate.

For more than a century, groundwater has been used by industries throughout the Chicago region and for drinking water in most suburban areas. Many early wells were drilled into sand and gravel near land surface and into the underlying bedrock. Any layer of rock or sediment that can yield useful quantities of water to a well is called an aquifer. In northeastern Illinois four main aquifers are present: sand and gravel within the Quaternary glacial deposits at or near land surface, shallow bedrock composed mostly of dolomite of the Silurian System that underlies the glacial deposits, and two deeper bedrock aquifer systems composed mostly of sandstones of the Cambrian and Ordovician Systems. Of the deep aquifers the uppermost is the most important and more heavily used. It comprises two different geologic units, the Glenwood-St. Peter and the Ironton-Galesville Sandstones that are often grouped together with other rock layers and called the Cambrian-Ordovician Aquifer (COA). Water produced from the deepest bedrock aquifer, the Mt. Simon

Sandstone, is generally too saline for domestic or industrial use, particularly in the southern and eastern parts of the Chicago region. Figure 3 below illustrates the major north communities that utilize the deep COA. The figure is from an Illinois State Geological Survey mid 1980's publication and it should be noted that DesPlaines, Elk Grove Village and Elmhurst no longer use the COA and have been utilizing Lake Michigan water. However new users of the COA include Western Springs and Yorkville replacing prior users.

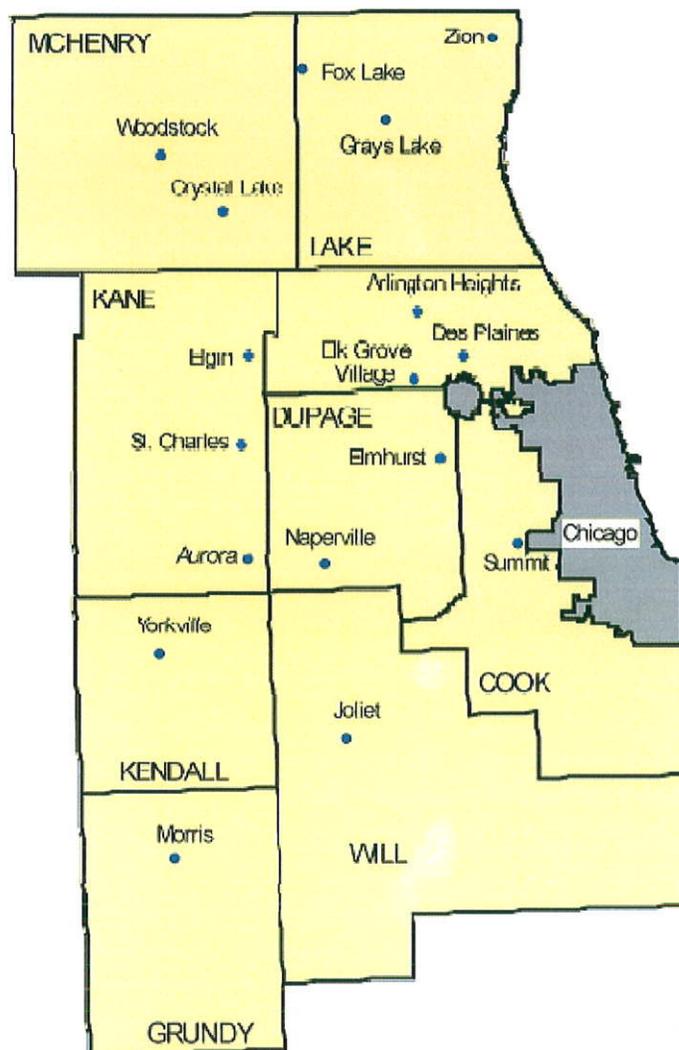


Figure 3 - Northeastern Illinois with major metropolitan deep water aquifer users from 2005.

Water Quality: Deep Aquifers

The most important water quality issues pertaining to deep bedrock (Cambrian-Ordovician) aquifers in northeastern Illinois are elevated levels of naturally occurring radium, barium, and total dissolved solids (TDS).

TDS concentrations generally increase from northwest to southeast across northeastern Illinois. A larger part of Lake, Cook, and Will Counties have TDS concentrations above the secondary drinking water standard (500 milligrams per liter or mg/L), and TDS concentrations in the extreme southeastern part of the area are high enough to make the water unpotable without substantial treatment, which is uneconomical at this time.

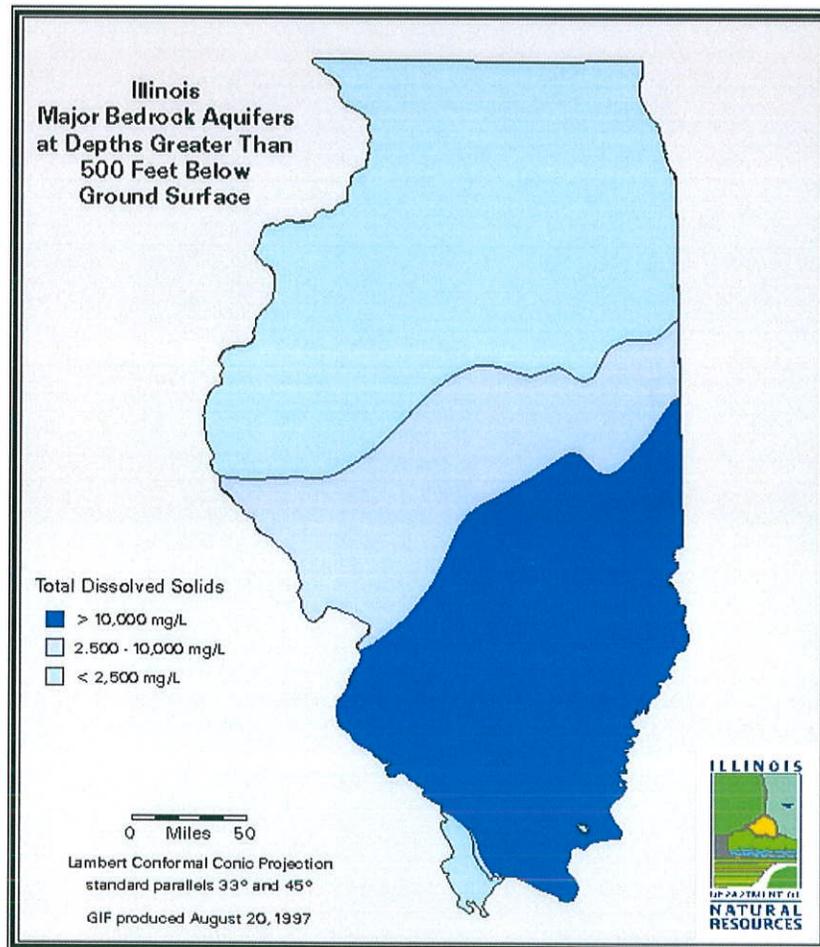


Figure 4 - Total Dissolved Solids in the Major Deep Bedrock Aquifers in Illinois.

In general changes in the COA occur as bedrock dips to the east toward the Michigan Basin. As water moves to the east from the western recharge area the water type changes from a calcium bicarbonate to a sodium bicarbonate to sodium sulfate with increases in TDS. Data from the 1985 Geology, Hydrology, and Water Quality of the Cambrian and Ordovician Systems In Northern Illinois, Illinois State Geological Survey Cooperative Groundwater Report 10 provides TSD water quality data indicating Cook County had TDS concentrations for, 354 to 453 ppm. The report identified the Glenwood #5 water well unfortunately no water quality data was available. The well was listed as completed in 1969 to a depth of 1,785 feet. Current local water quality data was not available however it is anticipated that similar TDS concentrations would generally be in a range up to 500 ppm resulting in a need for post production water treatment.

Radium concentrations above the primary drinking water standard (5 pico curries per liter or pCi/L) are found in water pumped from the deep bedrock aquifers throughout northern Illinois, including all counties in the Chicago metropolitan area. Public water systems reduce radium concentrations by ion-exchange softening, lime softening, filtration, and/or by blending low-radium water from surface water sources or shallow aquifers such as the Silurian Dolomite. Resulting in an increased production cost due to post production treatment.

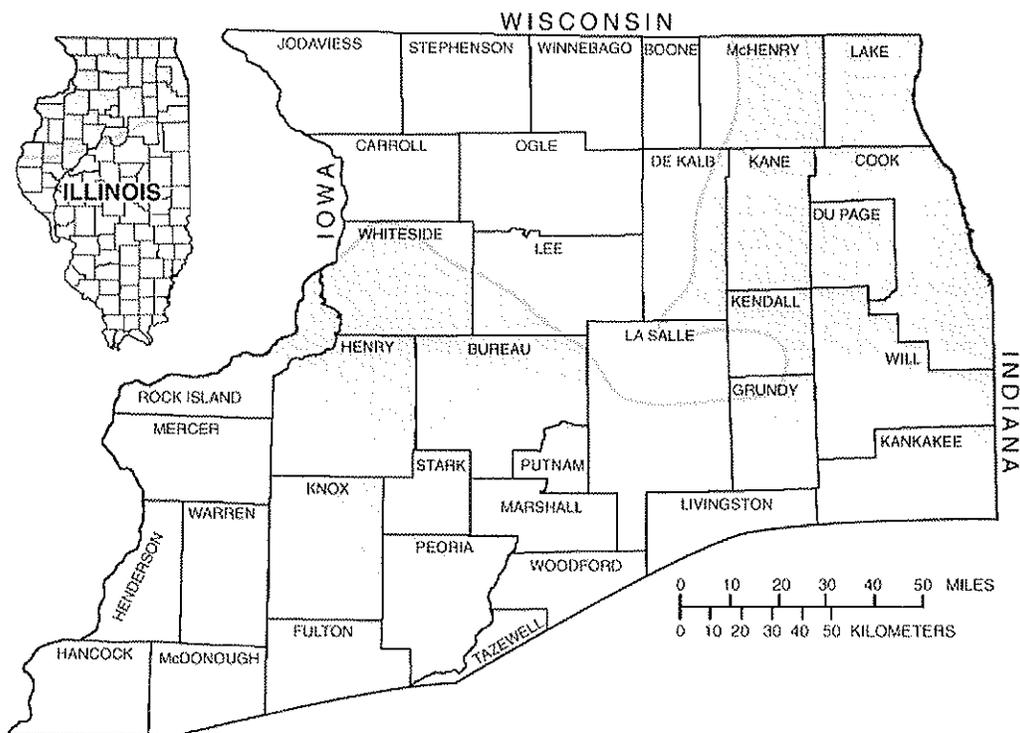


Figure 5 - Areas where combined radium ($^{226}\text{Ra} + ^{228}\text{Ra}$) concentrations exceed 5 pCi/L in the deep bedrock aquifer system.

Barium concentrations above the primary drinking water standard (1 mg/L) are documented in water pumped from the deep bedrock aquifers in the northeastern part of the Chicago metropolitan

area. This includes most of Kane and McHenry Counties and parts of Cook and Lake Counties. Extremely high concentrations (>5 mg/L) occur within the region and pose a health risk. Also Barium levels increase over time, particularly in the deep aquifer. Barium can precipitate out of solution as the mineral barite in wells, resulting in reduced well productivity and high maintenance costs. Barium is removed from drinking water supplies by ion exchange softening and lime softening and would be removed during the same processes involved to remove Radium.

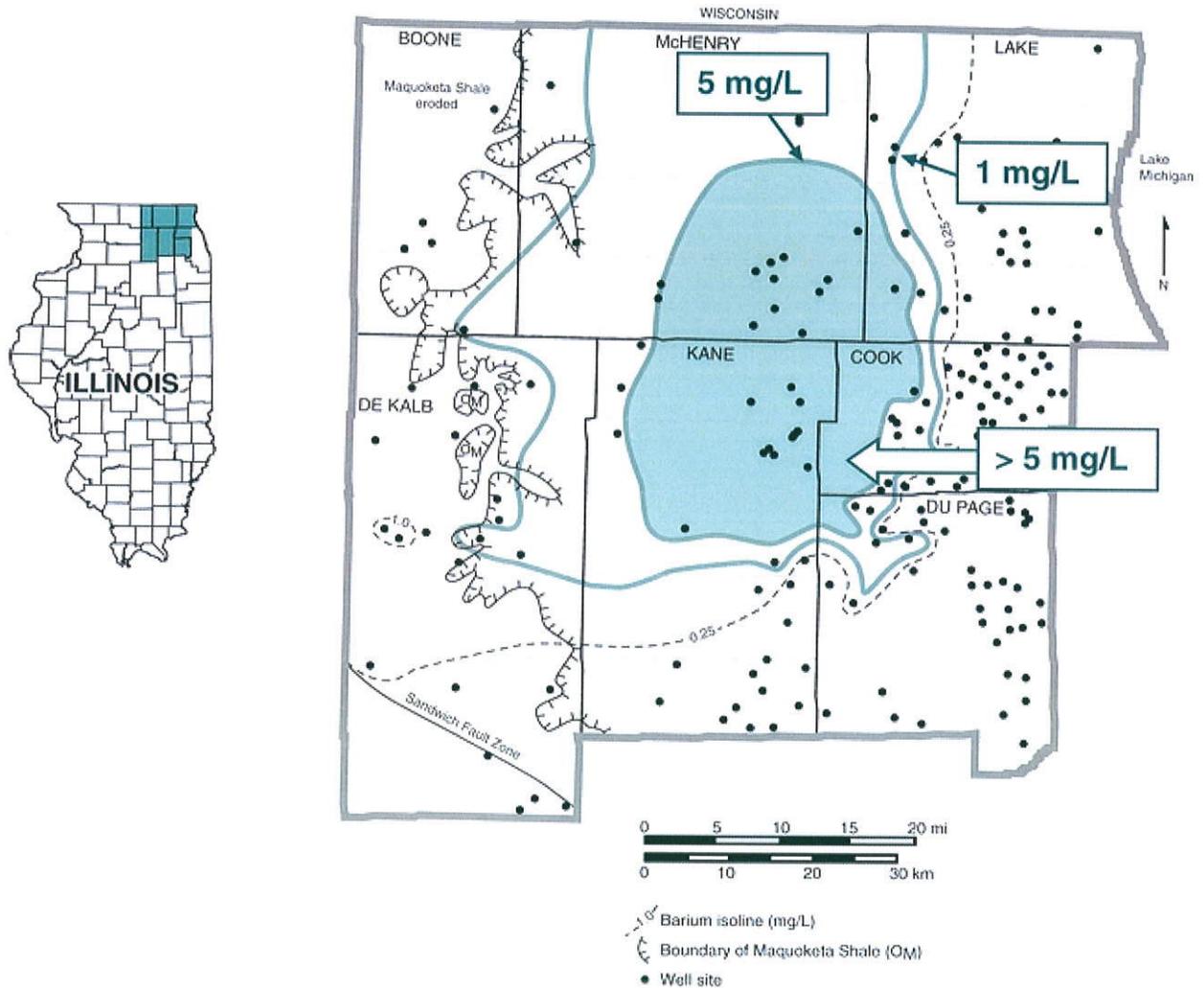


Figure 6 - Areas where Barium exceeds the 5 mg/L concentrations in the deep bedrock aquifer system

In approximately 2005 Illinois State Water Survey began evaluating the threat that increased pumping from the deep bedrock aquifers beneath northeastern Illinois may increase levels of TDS, radium, and barium. Preliminary examination of historical data suggests that while TDS levels have not been increasing in wells open to deep bedrock aquifers in most of northeastern Illinois, levels

may be increasing at some major pumping centers including the municipalities of Joliet and Aurora. The final data regarding the study has not yet been released. Assessments of trends in radium and barium concentrations have not been done, and there is a lack of historical radium data.

Water Quality: Shallow Aquifers

As continued demand adds pressure to the local sources and concern over the quality of the deeper aquifers grows the ability to provide sufficient water resources becomes more critical to local communities. Demands from population growth and development in northeastern Illinois place a heavy demand on water resources. As determined by the Supreme Court and by agreement with other states and Canada, Lake Michigan Diversion U.S. Supreme Court degrees limit Illinois to diverting an average of 3,200 cubic feet per second (cfs) from Lake Michigan. Illinois has exceeded that amount 11 of the 15 years from 1981 through 1995. Essentially, Lake Michigan water is already fully allocated. Add to that the fact that withdrawals from deep bedrock aquifers may also be approaching their sustainable limits, shallow bedrock and overlying sand-and-gravel aquifers are expected to be an important source of additional water to meet the increased demand. Estimates ranging as high as 500 million gallons/day have been published as being available in the shallow aquifers according to the Illinois State Water Survey Report of Investigations (1976).

As opposed to the deeper bedrock aquifers shallow aquifers are more vulnerable to surface contamination. Sources of surface contamination are many and are found throughout the typical community and include: landfills, sewage treatment plants, industrial effluents, atmospheric deposition, septic fields, underground and above ground storage tanks for petroleum products including gasoline and diesel fuel and road runoff from stormwater. The large list of potential contaminants includes various organic classes (e.g., petroleum compounds, solvents and pesticides), toxic metals (e.g., cadmium, lead and chromium), chloride, sulfate, nitrogen, and high total dissolved solids (TDS). Chloride concentrations have been increasing in many shallow wells in northeastern Illinois, primarily due to road salt runoff. The figure below shows a study conducted in Kane County from three different time periods. Data from the first two periods were pulled from the ISWS water quality database, the last is from Kelly (2005). Municipalities are outlined; gray areas indicate aquifer material within 50 ft of the land surface. Though this data is from Kane County, chloride concentrations may be found in local water due to the increasing urbanization of the area. In the future, if not already, elevated chloride levels may be seen in this aquifer.

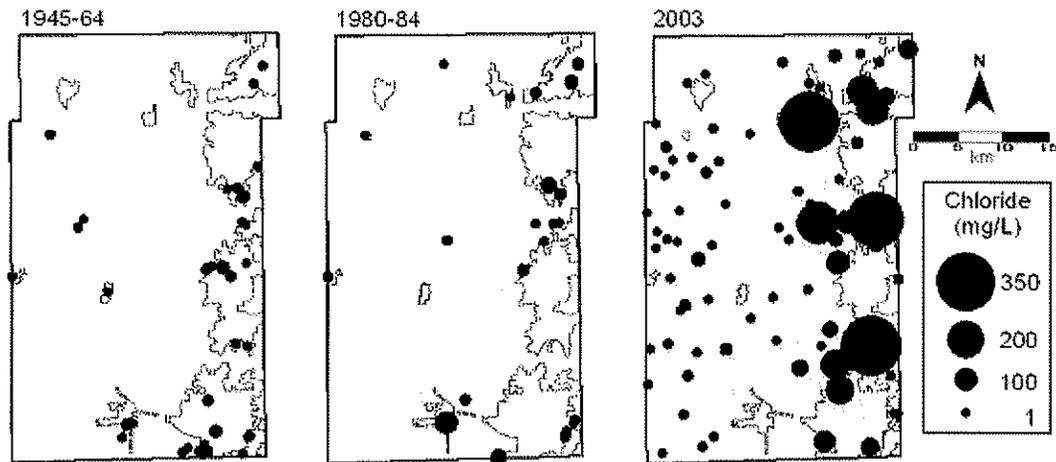


Figure 7 – Increasing chloride concentrations (mg/L) over time

Shallow groundwater quality was reported to be significantly worse in the urban eastern part of Kane County compared to the western rural part of that county. Locally the shallow aquifers have been impacted from local historical sources as has occurred in Sauk Village as result of uncontrolled releases of chlorinated solvents.

The proposed future well site was identified as a lot located within the Glenwood Science Park Subdivision, which was located near Glenwood-Chicago Heights Road north east of the intersection of Holbrook Road (Site). Since this well is proposed in a developing industrial area of Glenwood, K-Plus consulted government databases of registered sites that have experienced releases of contamination, or those businesses that use/store hazardous materials. K-Plus utilized Environmental Data Resources to conduct a standard environmental record search in accordance with the ASTM standards. The specific databases consulted, the publication dates, and the search results are included in a database report included in the Appendix.

The EDR database report identified the following sites within the standard ASTM search radius: one (1) CERCLIS facility; one (1) RCRA-Gen listing; five (5) LUST listings; one (1) UST listing and two (2) SRP enrolled listings.

Glenwood Public Works (19100 Glenwood Chicago Heights Road) was identified on the UST database with four removed Underground Storage Tanks (USTs). Three USTs were identified as 6,000-gallons in size and stored gasoline and diesel fuel. One UST was identified as 600-gallons in size and stored heating oil. This site was not identified on the LUST database, indicating that during the removal no tanks experienced releases.

Landauer Inc. (3 Science Road) to the north of the property was identified on the RCRA-SQG and Finds databases. A RCRA-Small Quantities Generator site stores/produces more than 100 and less than 1,000 kg of hazardous waste per calendar month. This site was registered in 2009 as a SQG, however dating back to 1989 this site was a Large Quantities Generator. Landauer was identified as generating ignitable wastes (D001), corrosive waste (D002), silver (D011) and MEK (D035). No violations were reported for this facility.

These two facilities were the only sites located within 1/8 mile of the property, however at least 11 surrounding area properties were identified on environmental databases within one mile of the property.

Existing Local Ground Water Use:

K-Plus completed a review of Illinois State Water Survey/Geological Survey water well records for a nine section area immediately surrounding the proposed well site within the Village of Glenwood. An Illinois State Geological Survey Questor Custom Map and the results of our well log search are included in the Appendix of the report. The search identified 73 well records with nineteen (19) of the records for shallow wells less than 100 feet in depth, forty-eight (48) records for wells 100 to 500 feet in depth and six (6) records for wells over 500 feet in depth. Generally, but not as a rule, wells completed less than 100 feet are typically completed in shallow sand and gravel aquifers of limited horizontal extend, with wells less than 500 feet in depth completed in the Silurian limestone. Wells deep than 500 feet are typical of the Cambrian-Ordovician Aquifer (COA) Wells that are generally 1000 to 1500 feet in depth.

Of the available well records reviewed, two were for wells completed for the Village of Glenwood #3 and #5 (no information was included in the file from the ISGS regarding Glenwood wells #1, 2 and 4). The Glenwood Village Well #3 was identified as located on Center Street, and listed as completed in 1964 to a total depth of 1789 feet. Geological formation tops were listed as Silurian 40 feet, Maquoketa 482, feet, Galena 665 feet, St Peter 989 feet and the Eau Clarie 1788 feet. According to the driller notes a pumping level of 502 feet was observed after pumping at 745 gpm for 12 hours. Glenwood Village Well #5 was located on E. 192nd Street, and listed as competed in 1969 with a total depth of 1785 feet with geological formation tops were listed as Silurian 44 feet, Maquoketa 473, feet, Galena 680 feet, St Peter 1012, Ironton 1607 feet and the Eau Clarie 1769 feet. All of the public drinking water supply wells were decommissioned and sealed in the approximately 1988-1989 in order to connect to the Lake Michigan drinking water. There is a possibility, depending on the way these wells were decommissioned, to reactivate these old wells to act as test wells in order to provide accurate quality information for the treatment plan.

Providing an estimated depth to geological formation as follows:

Silurian	42 feet
Maquoketa	477 feet
Galena	673 feet
St Peter	1000 feet
Eau Claire	1778 feet

The original well at the Glenwoodie Golf & Country Club (Glenwoodie) was installed in approximately 1930 to a total depth of 269 feet. A second well at the Glenwoodie was installed in 1963 to a total depth of 351 feet. According to the driller notes the static water level was observed at 18 feet. Drawdown water level was noted at 242 feet at 292 gallons per minute for 7.5 hours. A third well was installed in 1987 to a total depth of 475 feet. According to driller notes the pumping level was established at 133 feet when pumping at 400 gpm for 16 hours.

A property to the north of the site at 2 Science Road installed an irrigation supply well in 2003 to a total depth of 780 feet. According to the driller notes, a pumping level of 300 feet was observed when pumping 30 gpm for 2 hours.

K-Plus submitted Freedom of Information Act Requests to the Illinois Environmental Protection Agency (IEPA) Bureau of Water and the Illinois Department of Public Health for more information on the quality of these local wells. However that information has not been received as of the date of this report.

RECOMMENDATIONS

Based on communications with K-Plus the Village would like to be able to provide 1,500 gallons per minute or 2,160,000 gallons of groundwater each day to its system. To safely produce the quantity of water and to assume sustainable yields we offer the following recommendations and options; all will require post production water treatment:

Option one:

The installation of a deep geological well to a depth of approximately 1,800 feet. The well should be proposed to penetrate the geological column to the upper Eau Claire Formation to a depth of approximately 1,800 feet and should be capable of producing the required volume of water assuming appropriate well sizing. Water quality would require surface treatment to reduce TDS, Radium (>5 pCi/L) and Barium (<1 mg/L). Deep aquifer wells can also expect a high iron content and elevated levels of sodium.

Option Two:

The installation of two or three shallow depth wells completed in the Silurian at depths of approximately 500 feet could produce sufficient quantities of water if well diameter is sufficient and good fracturing and porosity are encountered. Surface treatment of the water would be necessary and the shallow aquifers would be more susceptible to local and regional contamination from surface and near surface releases. Shallow depth wells typically show issues with erratic quality.

Option Three:

Completion of a deep and one or two intermediate and/or shallow wells. This option is the most prudent as the deep well could be cycled to reduce aquifer stress and water from the multiple aquifers could be utilized. As drawdown of individual wells occurs the wells could be cycled to reduce overall drawdown and maintain aquifer water levels over a longer period of time.

While the shallow depths can provide short term sufficient quantities both increased local ground water use demand and longer term sustainability of the shallow ground water resources as well as the potential for contamination are in question. The deep aquifers within the region are at or near sustainable yields and recent reports indicate that the peak yields may be approaching with resulting declines in water levels within the deeper aquifers. If unsustainable water levels within the aquifers occur increased post production treatment of the water can be anticipated. In addition installation of multiple wells would allow for rotation of well pumping and "cycling" allowing aquifer stabilization and recharge.

Option Four:

Investigate the condition of the former municipal wells, specifically former Well #3 and former Well #5 to see how they were decommissioned and closed. If these wells were only capped, and are still in good condition, it may be possible to re-open these wells in order to complete the quality tests. And depending on the quality of the well it may also be possible to reopen these wells to connect to the Village supply at a significant cost savings to the Village.

REFERENCES

Changnon, S.A., Jr., G.L. Achtemeier, S.D. Hilberg, H.V. Knapp, R.D. Olson, W.J. Roberts, P.G. Vinzani. 1982. *The 1980-1981 Drought in Illinois: Causes, Dimensions, and Impacts*. ISWS Report of Investigation 102. Illinois State Water Survey, Champaign, IL.

Grannemann, N.G., R.J. Hunt, J.R. Nicholas, T.E. Reilly, and T.C. Winter. 2000. *The Importance of Ground Water in the Great Lakes Region*. U.S. Geological Survey Water-Resources Investigations Report 00-4008. Lansing, MI.

Gilkeson, R.H., Cartwright, K., Cowart, J.B., and Holtzman, R.B., 1983, Hydrogeologic and geochemical studies of selected natural radioisotopes and barium in ground water in Illinois: Illinois Water Resources Center Report no. 83-0180, 93 p.

Kelly, W.R., and S.D. Wilson, 2003. Temporal changes in shallow groundwater quality in Northeastern Illinois. In Research on Agricultural Chemicals in Illinois Groundwater: Status and Future Directions XII, Proceedings of the Ninth Annual Illinois Groundwater Consortium Conference, Makanda, IL, April 22, 2003, <http://www.siu.edu/orda/igc/proceedings/03/kelly.pdf>.

Kelly, W.R., and S. Meyer, 2005. Temporal changes in deep bedrock groundwater quality in northeastern Illinois. Illinois State Water Survey Contract Report 2005-05, Champaign, 40 p.

Kelly, W.R., 2005. Shallow Groundwater Quality Sampling in Kane County: October 2003. Illinois State Water Survey

Kelly, W.R. 2008, Radium and Barium in the Ironton-Galesville Bedrock Aquifer in Northwestern Illinois Final Report, Center for Groundwater Science, Illinois State Water Survey

Lamb, P.J., Editor. 1992. *The 1988-1989 Drought in Illinois: Cause, Dimensions, and Impacts*. ISWS Research Report 121. Illinois State Water Survey, Champaign, IL.

O'Hearn, M., and J.P. Gibb. 1980. *Ground-water discharge to Illinois streams*. Illinois State Water Survey Contract Report 246.

Prickett, T.A., L.R. Hoover, W.H. Baker, and R.T. Sasman. 1964. *Ground-water development in several areas of northeastern Illinois*. Illinois State Water Survey Report of Investigation 47.

Roadcap, G.S., S.J. Cravens, and E.C. Smith. 1993. *Meeting the growing demand for water: an evaluation of the shallow ground-water resources in Will and southern Cook Counties, Illinois*. Illinois State Water Survey Research Report 123.

Sasman, R.T., Benson, C.R., Ludwigs, R.S., and Williams, T.L., 1982, Water-level trends, pumpages, and chemical quality in the Cambrian Ordovician aquifer in Illinois: Illinois State Water Survey Circular 154, 64 p.

Schicht, R.J., J.R. Adams, and J.B. Stall. 1976. *Water resources availability, quality, and cost in northeastern Illinois*. Illinois State Water Survey Report of Investigation 83.

Walton, W.C. 1964. *Future water-level declines in deep sandstone wells in Chicago region*. **Ground Water**, 2 (1): 13-20.

Walker, D.D., S.C. Meyer, and D. Winstanley. 2003. [Uncertainty of estimates of groundwater yield for the Cambrian-Ordovician aquifer in northeastern Illinois](#). Proceedings of Probabilistic Approaches and Groundwater Modeling, American Society of Civil Engineers, Environmental and Water Resources Institute Symposium, Philadelphia.

Walton, W.C. 1962. *Selected analytical methods for well and aquifer evaluation*. Illinois State Water Survey Bulletin 49.

Walton, W.C. 1965. *Ground-water recharge and runoff in Illinois*. Illinois State Water Survey Report of Investigation 48.

Zeizel, A.J., W.C. Walton, R.T. Sasman, and T.A. Prickett. 1962. *Ground-water resources of DuPage County, Illinois*. Illinois State Water Survey and Illinois State Geological Survey Cooperative Report 2.

Visocky, A.P., M.G. Sherrill, and K. Cartwright. 1985. *Geology, Hydrology, and Water Quality of the Cambrian and Ordovician Systems in Northern Illinois*. [Cooperative Groundwater Report 10](#). Illinois State Water Survey and Illinois State Geological Survey, Champaign, IL.

APPENDIX 1

SITE PLANS

PROPOSED PLAT

INDUSTRIAL NORTH RESUBDIVISION

of Lot 2, Lot 3, Outlot A and Outlot B in Industrial North Subdivision in the North Half of the North Half of Section 9, Township 35 North, Range 14 East of the Third Principal Meridian, in Cook County, Illinois

Parcel Identification Numbers: 32-09-200-006-0000, 32-09-200-008-0000, 32-09-200-009-0000

EASEMENT PROVISIONS
An easement for serving the land or other property with electric and communications service is hereby reserved for and granted to:
Commonwealth Edison Company, Comcast and AT&T Illinois

Notwithstanding any term or provision stated above and only to the extent this easement involves the same property that is subject to the non-exclusive easement in favor of Nicor as described in the special warranty deed dated December 27, 2010 and recorded as document number 103641009 December 30, 2010, the terms of this easement shall in all respects be limited by and subject to the terms of the non-exclusive easements in favor of Nicor as described in the special warranty deed dated December 27, 2010 and recorded as document number 103641009 December 30, 2010 with each user being subject to and obligated to comply with all the obligations imposed on the Village that are set forth in the non-exclusive easement in favor of Nicor as described in the special warranty deed dated December 27, 2010.

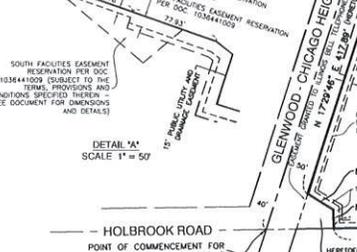
An easement is hereby reserved for and granted to:
Northern Illinois Gas Company d/b/a Nicor Gas Company
Their respective successors and assigns ("Nicor Gas") to install, operate, maintain, repair, replace and remove facilities used in connection with the transmission and distribution of natural gas in, over, under, across along and upon the surface of the property shown on this plat marked "Easement 'Common Area or Area'" and streets and alleys, whether public or private, and the property designated in the Declaration of Condominium on/for the plat as "Common Elements" together with the right to install required service connections over or under the surface of each lot and Common Area or Area to serve improvements thereon, or an adjacent site, or any other site, whether public or private, together with the right to remove obstructions, including but not limited to trees, bushes, roots and fences, as may be necessary to install, operate, maintain, repair, replace, adjust or otherwise use the right to enter upon the property for all such purposes. Obstructions shall not be placed over Nicor Gas facilities or in, upon or over the property depicted on the plat for other purposes without the prior written consent of Nicor Gas. After installation of any such facilities, the grade of the property shall not be altered in a manner so as to interfere with the proper operation and maintenance thereof.

The term "Common Elements" shall have the meaning set forth for such term in Section 805.0/2(a) of the "Condominium Property Act" (Illinois Compiled Statutes, Ch. 765, Sec. 805.0/2(a)), as amended from time to time.
The term "Common Area or Area" is defined as a lot parcel or area of real property, including real property, which is owned and used in common by the beneficial use and enjoyment of which is reserved, even though such areas may be depicted on the plat by other terms.

An easement is hereby reserved for and granted to:
The Village of Glenwood, Illinois.
Their respective successors and assigns, jointly and severally, to install, operate, maintain and remove, from time to time, facilities used in connection with the water system, sanitary sewer system and storm water system, including mains, manholes, ditches, sewers, valves, structures and other components and equipment, but excluding the service to the individual buildings (collectively hereinafter referred to as the "system") in, over, under, across, along and upon the surface of the property shown on the plat and designated as "PUBLIC UTILITY & DRAINAGE EASEMENT" and streets and alleys, whether public or private, together with the right to install required service connections over or under the surface of each lot to serve improvements thereon, or an adjacent site, or any other site, whether public or private, together with the right to remove obstructions, including but not limited to trees, bushes, roots and fences, as may be necessary to install, operate, maintain, repair, replace, adjust or otherwise use the right to enter upon the property for all such purposes. Obstructions shall not be placed over Nicor Gas facilities or in, upon or over the property depicted on the plat for other purposes without the prior written consent of Nicor Gas. After installation of any such facilities, the grade of the property shall not be altered in a manner so as to interfere with the proper operation and maintenance thereof.

Notwithstanding any term or provision stated above and only to the extent this easement involves the same property that is subject to the non-exclusive easement in favor of Nicor as described in the special warranty deed dated December 27, 2010 and recorded as document number 103641009 December 30, 2010, the terms of this easement shall in all respects be limited by and subject to the terms of the non-exclusive easements in favor of Nicor as described in the special warranty deed dated December 27, 2010 and recorded as document number 103641009 December 30, 2010 with each user being subject to and obligated to comply with all the obligations imposed on the Village that are set forth in the non-exclusive easement in favor of Nicor as described in the special warranty deed dated December 27, 2010 and recorded as document number 103641009 December 30, 2010.

It is hereby covenanted that the Drainage Easements shown on this plat shall be graded to conform to the drainage pattern within each block as from time to time or established by the Village Engineer of the Village of Glenwood, Illinois and that obstructions and impediments to the free flow of surface water are not permitted, as is provided by the Ordinances of the Village of Glenwood, Illinois.



Note:
The Public Utility & Drainage Easements (as heretofore established in Industrial North Subdivision, recorded as document number 1108918064) and more particularly located along the easterly and southerly lines of Lot 1, the westerly and southerly lines of Lot 2, the southerly and easterly lines of Outlot B and the northerly line of Lot 3 in said Industrial North Subdivision, have neither public utility nor drainage infrastructure placed within the said easement areas and therefore have been released and abrogated by Village of Glenwood, Illinois per easement release recorded as document number 103641009 December 30, 2010 and recorded as document number 103641009 December 30, 2010 as document number xxxxxxxxxx and replaced and superseded by the Public Utility and Drainage Easements as depicted and established herein.

SURVEYOR'S CERTIFICATE
STATE OF ILLINOIS)
COUNTY OF COOK) SS

I, Don C. Paarlberg, an Illinois Professional Land Surveyor, do hereby state that I have surveyed and subdivided into lots and streets the following described property:
Lot 2, Lot 3, Outlot A and Outlot B all in Industrial North Subdivision, being a subdivision of part of the North Half of the North Half of Section 9, Township 35 North, Range 14 East of the Third Principal Meridian according to the plat thereof recorded March 30, 2011 as document number 1108918064, in Cook County, Illinois.

as shown on the annexed plat and that said plat is a correct representation of said survey and subdivision. Dimensions are in feet and decimal parts thereof. Monuments have been set at all lot corners indicated by a 5/8" iron rod, 24" in length.
I further state that a part of the subject property covered by this plat of subdivision is situated within a Special Flood Area, "Zone X - Area determined to be outside 500-Year Floodplain", as determined by scale from the "Flood Insurance Rate Map - FIRI" for Cook County, Illinois and incorporated area, Map Number 17031007423 panel 742 of 832 effective date August, 19, 2008 & Map Number 17031007423 panel 761 of 832 effective date of August 19, 2008 prepared by Federal Emergency Management Agency (FEMA), as part of the Federal Insurance Administration (Subject to uncertainties, inaccuracies, and scale of said map. Also subject to the uncertainties and inaccuracies associated with scaling from said map).

South Holland, Illinois, July 10, 2012
Certificate Number 035-003243
License Expires November 30, 2012
This professional service conforms to the current Illinois minimum standards for a boundary survey.

STATE OF ILLINOIS)
COUNTY OF COOK) SS

Robinson Engineering, Ltd. does hereby state that a survey has been made at and under its direction to the property described herein for the purpose of subdividing the same into lots as shown hereon.

South Holland, Illinois, July 10, 2012
Thomas R. Long
Director of Engineering

After recording mail to:
Robinson Engineering, Ltd.
17000 South Park Avenue
South Holland, IL 60473
Attention: Survey Department

OWNER'S CERTIFICATE
STATE OF ILLINOIS)
COUNTY OF COOK) SS

The undersigned, VILLAGE OF GLENWOOD, ILLINOIS, a Body Public and Incorporated, as Title holder of the property as described hereon, in the Village of Glenwood, Illinois, does hereby certify that as such Titleholder it has caused said property to be surveyed and subdivided as shown hereon.
Dated this _____ day of _____ A.D. 2012
VILLAGE OF GLENWOOD, ILLINOIS
By: _____ Attest: _____
Kerry Durkin - Village President Carmen Hopkins - Village Clerk

ACKNOWLEDGEMENT
STATE OF ILLINOIS)
COUNTY OF COOK) SS

I, _____ a Notary Public in and for said County in the State of Illinois, do hereby certify that KERRY DURKIN and CARMEN HOPKINS, of the Village of GLENWOOD, personally known to me to be the same persons whose names are subscribed to the foregoing instrument as Village President and Village Clerk respectively, appeared before me this day in person and acknowledged that they signed and delivered the said instrument as their own free and voluntary act and as the free and voluntary act of said VILLAGE, for the uses and purposes therein set forth, and that the said Village Clerk did do then and there acknowledge that he, as Custodian of the Corporate Seal of said VILLAGE, did affix said Seal of said VILLAGE to the said instrument as his own free and voluntary act, and as the free and voluntary act of said VILLAGE, for the uses and purposes therein set forth.

GIVEN UNDER MY HAND AND SEAL THIS _____ DAY OF _____ A.D. 2012
NOTARY PUBLIC

SCHOOL DISTRICT DECLARATION
The owner of the herein described property certifies that to the best of its knowledge and belief the property described herein lies within the following school districts:
ELEMENTARY SCHOOL DISTRICT #187
BLOOM TOWNSHIP HIGH SCHOOL DISTRICT #206
PRAIRIE STATE COMMUNITY COLLEGE DISTRICT #515

VILLAGE OF GLENWOOD, ILLINOIS, THIS _____ DAY OF _____ 2012
By: Carmen Hopkins - Village Clerk
PLAN COMMISSION CERTIFICATE
Approved by the Plan Commission of the Village of Glenwood, Illinois at a meeting held this _____ day of _____ A.D. 2012
By: _____ Chairman

VILLAGE BOARD CERTIFICATE
Approved by the President and Board of Trustees of the Village of Glenwood, Illinois, at a meeting held this _____ day of _____ A.D. 2012
By: _____ Attest: _____
Kerry Durkin - President Carmen Hopkins - Village Clerk

VILLAGE TREASURER CERTIFICATE
I hereby certify that I find no deferred installments of outstanding unpaid special assessments or unpaid current special assessments due against the property described hereon.
By: _____ Village Treasurer

NICOR CERTIFICATE
STATE OF ILLINOIS)
COUNTY OF DUPAGE) SS

The undersigned, NORTHERN ILLINOIS GAS COMPANY, an Illinois Corporation, d/b/a as NICOR Gas Company, located at 1844 Ferry Road, Naperville, IL 60563, having agreed to the relocation of a certain "Covenant Parcel" as described in Special Warranty Deed recorded December 30, 2010 as document number 103641009 in Cook County, Illinois, and designated as "Amended Covenant Parcel" as described in an Agreement recorded XXXXXX XX, 2012 as document number 103641009 in Cook County, Illinois, do hereby acknowledge and agree that the relocation of said "Covenant Parcel" and its subsequent designation as "Amended Covenant Parcel" (shown hereon as Outlot A) is an accurate depiction of the said "Amended Covenant Parcel" as described in said document.
Dated this _____ day of _____ A.D. 2012
NORTHERN ILLINOIS GAS COMPANY d/b/a NICOR Gas Company
By: _____ Attest: _____
Title: _____

ACKNOWLEDGEMENT
STATE OF ILLINOIS)
COUNTY OF _____) SS

I, _____ a Notary Public in and for said County in the State of Illinois, do hereby certify that _____ and _____ of NORTHERN ILLINOIS GAS COMPANY, personally known to me to be the same persons whose names are subscribed to the foregoing instrument, appeared before me this day in person and acknowledged that they signed and delivered the said instrument as their own free and voluntary act and as the free and voluntary act of said VILLAGE, for the uses and purposes therein set forth.

GIVEN UNDER MY HAND AND SEAL THIS _____ DAY OF _____ A.D. 2012
NOTARY PUBLIC

Table with 2 columns: AREAS and square feet. Includes Lot 1 (385,881 sq. ft.), Lot 2 (620,413 sq. ft.), Outlot A (216,782 sq. ft.), AL-MIN DR. (46,368 sq. ft.), and TOTAL AREA IN SUBDIVISION (281,448 sq. ft.).

Send future Tax Bills to:
Village of Glenwood
One Assebborn Way
Glenwood, IL 60425

10-363
ROBINSON ENGINEERING, LTD.
FOR: VILLAGE OF GLENWOOD ONE ASSEBORN WAY GLENWOOD, ILLINOIS 60425
Includes a table for REVISIONS and a table for DRAWING INFORMATION.

APPENDIX 2

WELL REPORTS

120310178500 Bilton Henry 3-35N-14E
Cook Hemingway Richard NE NW SW
Well Status: WATER - Water Well
Comdate: Plugdate: TD: 76
Elevation: Permit #: Permit Date:
Latitude: 41.549116 Longitude: -87.612985

120310178600 Blakmore James 3-35N-14E
Cook Hemingway Richard 80'S line, 660'E line, SW
Well Status: WATER - Water Well
Comdate: 03/01/1940 Plugdate: TD: 110
Elevation: 626' GL Permit #: Permit Date:
Latitude: 41.54282 Longitude: -87.609265

Logs Run: Driller's Log

120310178700 Brooks Geo 3-35N-14E
Cook Hemingway Richard 0'N 0'W of SE/c NE SW SW
Well Status: WATER - Water Well
Comdate: Plugdate: TD: 121
Elevation: Permit #: Permit Date:
Latitude: 41.544464 Longitude: -87.611734

120310179000 Dart Harvey 3-35N-14E
Cook Hemingway Richard NE SW SW
Well Status: WATER - Water Well
Comdate: Plugdate: TD: 72
Elevation: 625' GL Permit #: Permit Date:
Latitude: 41.545393 Longitude: -87.612956

Formations: 259SLRN 30 - Silurian Cook County Study.

120310178800 Dolan 3-35N-14E
Cook Hemingway Richard SW NW SW
Well Status: WATER - Water Well
Comdate: Plugdate: TD: 81
Elevation: Permit #: Permit Date:
Latitude: 41.547251 Longitude: -87.615408

120310178900 **Glenwood Village** 3-35N-14E
Cook Wehling Edwin C NW SW
Well Status: WATER - Water Well
Comdate: 01/01/1946 Plugdate: TD: 150
Elevation: 623' GL Permit #: Permit Date:
Latitude: 41.548183 Longitude: -87.614197

Logs Run: Driller's Log

Formations: 259SLRN 47 - Silurian Cook County Study.

120310036300 **Glenwood Village 3** 3-35N-14E
Cook Wehling Well Works Inc. 1550'S line, 1700'E line, SE
Well Status: WATER - Water Well
Comdate: 02/01/1964 Plugdate: TD: 1789
Elevation: 618' GL Permit #: Permit Date:
Latitude: 41.546873 Longitude: -87.603379

Logs Run: Driller's Log

Formations:	259SLRN	40 -	Silurian	Cook County Study.
	203MQKT	482 -	Maquoketa	Cook County Study.
	202GLEN	665 -	Galena	Cook County Study.
	202SPTR	989 -	St Peter	Cook County Study.
	153ECLR	1788 -	Eau Claire	Cook County Study.

120310179100 Hemingway Richard 3-35N-14E
Cook Hemingway Richard SW SE SW

Well Status: WATER - Water Well
Comdate: Plugdate: TD: 118
Elevation: 629' GL Permit #: Permit Date:

Latitude: 41.543532 Longitude: -87.610508

Logs Run: Driller's Log

Formations:	259SLRN	32 -	Silurian	Cook County Study.
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120310179200 Huesman Armand 3-35N-14E
Cook McCaskey, H. 165'N line, 165'E line, NE NW SW

Well Status: WATER - Water Well
Comdate: 01/01/1940 Plugdate: TD: 110
Elevation: 622' GL Permit #: Permit Date:

Latitude: 41.549594 Longitude: -87.612377

Logs Run: Driller's Log

Formations:	259SLRN	39 -	Silurian	Cook County Study.
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120310179300 Huesmann, Wm. 3-35N-14E
Cook Hemingway Richard NW SE SW

Well Status: WATER - Water Well
Comdate: 06/01/1940 Plugdate: TD: 98
Elevation: 624' TM Permit #: Permit Date:

Latitude: 41.545393 Longitude: -87.610522

Owner Address: Thornton IL
Well Address: Lot: 9, Blk.2 Subd: Franz Czarra's

Casing and Liner Pipe:	Diam. (in.)	Kind and Weight	From(ft)	To(ft)
	4.5	GALV	53	0

Logs Run: Driller's Log

Formations:	259SLRN	53 -	Silurian	Cook County Study.
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Driller's Log:

0 -	5	clay, yellow
5 -	15	clay, blue, hardpan
15 -	20	boulders
20 -	35	gravel & sand
35 -	45	sand & boulders
45 -	53	bkn slabs br,mxd w/boulders & gravel
53 -	98	rk,sft bl fm,cl sms & dry vy sft in pls

120310179400 Jones Rolland 112 3-35N-14E
Cook Wehling Edwin C NW NW SW

Well Status: WATER - Water Well
Comdate: 01/01/1947 Plugdate: TD: 104
Elevation: 621' GL Permit #: Permit Date:

Latitude: 41.549112 Longitude: -87.615419

Logs Run: Driller's Log

Formations: 259SLRN 33 - Silurian Cook County Study.

120310179500 Jung Chas 3-35N-14E
Cook Hemingway Richard SW SE SW
Well Status: WATER - Water Well
Comdate: 10/01/1940 Plugdate: TD: 87
Elevation: 626' GL Permit #: Permit Date:
Latitude: 41.543532 Longitude: -87.610508

Logs Run: Driller's Log

Formations: 259SLRN 66 - Silurian Cook County Study.

120310179600 Kelley Ed 3-35N-14E
Cook Hemingway Richard SE SE SW
Well Status: WATER - Water Well
Comdate: Plugdate: TD: 92
Elevation: 625' GL Permit #: Permit Date:
Latitude: 41.543532 Longitude: -87.608071

Formations: 259SLRN 54 - Silurian Cook County Study.

120310179800 Manthy Heinz 3-35N-14E
Cook Wehling Edwin C SE SE SW
Well Status: WATER - Water Well
Comdate: 01/01/1947 Plugdate: TD: 123
Elevation: 625' GL Permit #: Permit Date:
Latitude: 41.543532 Longitude: -87.608071

Logs Run: Driller's Log

Formations: 259SLRN 26 - Silurian Cook County Study.

120310179700 Paris J 3-35N-14E
Cook Hemingway Richard SE NW SW
Well Status: WATER - Water Well
Comdate: Plugdate: TD: 68
Elevation: 624' GL Permit #: Permit Date:
Latitude: 41.547254 Longitude: -87.612971

Formations: 259SLRN 34 - Silurian Cook County Study.

120312478000 Price Emmett 3-35N-14E
Cook K & K Oil, Inc. NW NE SE
Well Status: WATER - Water Well
Comdate: 09/01/1974 Plugdate: TD: 180
Elevation: 619' GL Permit #: Permit Date:
Latitude: 41.549132 Longitude: -87.600817

Logs Run: Driller's Log

Formations: 259SLRN 57 - Silurian Cook County Study.

120310179900 Queen Ralph 113 3-35N-14E
Cook Wehling Edwin C W2 SW NW

Well Status: WATER - Water Well
 Comdate: 01/01/1947 Plugdate: TD: 99
 Elevation: 602' GL Permit #: Permit Date:
 Latitude: 41.551903 Longitude: -87.615441

Logs Run: Driller's Log

Formations: 259SLRN 33 - Silurian Cook County Study.

120310180000 Rowe 3-35N-14E
 Cook Hemingway Richard NE SW SW
 Well Status: WATER - Water Well
 Comdate: Plugdate: TD: 80
 Elevation: Permit #: Permit Date:
 Latitude: 41.545393 Longitude: -87.612956

120310180100 Stalling U H 3-35N-14E
 Cook Hemingway Richard 650'S line, 550'W line, SW SW
 Well Status: WATER - Water Well
 Comdate: 01/01/1940 Plugdate: TD: 87
 Elevation: 635' GL Permit #: Permit Date:
 Latitude: 41.544392 Longitude: -87.614588

Logs Run: Driller's Log

120310180200 Tattersall, George I 3-35N-14E
 Cook Hemingway Richard 795'S line, 100'W line,
 Well Status: WATER - Water Well
 Comdate: 11/01/1939 Plugdate: TD: 84
 Elevation: 634' GL Permit #: Permit Date:
 Latitude: 41.54479 Longitude: -87.616239

Driller's Log: 0 - 0 S.S.#3845
 0 - 0 total depth 84
 0 - 55 rock

120312778200 Forest Pres.Dist.of Cook Cty. 4-35N-14E
 Cook Stinnett, James R. SE SW NW
 Well Status: WATER - Water Well
 Comdate: 05/26/1978 Plugdate: TD: 200
 Elevation: 628' GL Permit #: 92607 Permit Date: 02/07/1980
 Latitude: 41.550853 Longitude: -87.632525

Owner Address: 536 North Harlem Ave. River Forest IL
 Well Address: Glenwood, IL Lot: Subd: Glenwood North
 Well Type: NCPUB - Noncommunity - Public Water Well

Water Bearing Formation: limestone 75 to 180 ft
 Static Water Level: 85 ft. below casing top of 1 ft. Hole Diam.:
 Pumping Level: 100 ft. when pumping at 15 gpm for 4 hours.
 Casing and Liner Pipe: Diam. (in.) Kind and Weight From(ft) To(ft)
 6 GALVANIZED 19.36# 0 60
 Size hole below casing: 5.6200 in.

Logs Run: Driller's Log

Formations: 259SLRN 28 - Silurian Cook County Study.

Driller's Log: 0 - 3 blk dirt-top soil

3 - 28 rock, dirt-sdy soil
 28 - 58 westland ls & shale
 58 - 200 limestone

120310180300 Geczas Zenon 4-35N-14E
 Cook Hemingway Richard 900'S line, 600'E line, NE
 Well Status: WATER - Water Well
 Comdate: 04/01/1940 Plugdate: TD: 77
 Elevation: 621' GL Permit #: Permit Date:
 Latitude: 41.552505 Longitude: -87.61886

Logs Run: Driller's Log

Formations: 259SLRN 37 - Silurian Cook County Study.

120310042300 **Glenwood Manor Sub** 4-35N-14E
 Cook Wehling Well Works Inc. 2750'N line, 142'W line,
 Well Status: WATER - Water Well
 Comdate: 08/01/1961 Plugdate: TD: 455
 Elevation: 625' GL Permit #: Permit Date:
 Latitude: 41.549812 Longitude: -87.635658

Logs Run: Geologic Tops
Survey Sample Study

Formations: 259SLRN 10 - Silurian Cook County Study.
203MQKT 435 - Maquoketa Cook County Study.

120313412100 Landaver, Inc. 4-35N-14E
 Cook Sharpe, Franklin N. SW SW SE
 Well Status: WATER - Water Well
 Comdate: 04/11/2003 Plugdate: TD: 780
 Elevation: Permit #: Permit Date: 04/07/2003
 Latitude: 41.54344 Longitude: -87.625141

Owner Address: 2 Science Rd. Glenwood IL
Well Address: same as above Lot: Subd:

Well Type: **IRRIG - Irrigation Well**

Water Bearing Formation: limestone 41 to 780 ft
 Static Water Level: 265 ft. below casing top of 2 ft. Hole Diam.: 10 in.
 Pumping Level: 300 ft. when pumping at 30 gpm for 2 hours.
 Casing and Liner Pipe: Diam. (in.) Kind and Weight From(ft) To(ft)
 5 PVC 2 41

Driller's Log: 0 - 20 clay
 20 - 25 broken rock
 25 - 780 limestone

120312489800 Sarnacki F 4-35N-14E
 Cook Wehling Well Works Inc. 810'S line, 340'E line, SW NE
 Well Status: WATER - Water Well
 Comdate: 08/01/1974 Plugdate: TD: 455
 Elevation: Permit #: Permit Date:
 Latitude: 41.552224 Longitude: -87.622792

Logs Run: Driller's Log

120310180400 Strand John 4-35N-14E
 Cook No Company NE SE

Well Status: WATER - Water Well
 Comdate: Plugdate: TD: 110
 Elevation: 621' GL Permit #: Permit Date:
 Latitude: 41.54816 Longitude: -87.619072

Formations: 259SLRN 36 - Silurian Cook County Study.

120310180500 United Church 4-35N-14E
 Cook Hemingway Richard 1252'S line, 0'E line,

Well Status: WATER - Water Well
 Comdate: 01/01/1939 Plugdate: TD: 65
 Elevation: 625' GL Permit #: Permit Date:
 Latitude: 41.546048 Longitude: -87.616616

Logs Run: Driller's Log

Formations: 259SLRN 30 - Silurian Cook County Study.

120310180600 Zentera, Stanley 4-35N-14E
 Cook Hemingway Richard 1677'N 0'W of SE/c

Well Status: WATER - Water Well
 Comdate: 06/01/1940 Plugdate: TD: 84
 Elevation: 624' GL Permit #: Permit Date:
 Latitude: 41.54722 Longitude: -87.616624

Well Address: Lot: 10 Blk.4 Subd: M. K. Sheets

Pumping Level: ft. when pumping at 700 gpm for hours.

Casing and Liner Pipe: Diam. (in.) Kind and Weight From(ft) To(ft)
 5 GALV 0 0

Logs Run: Driller's Log

Formations: 259SLRN 35 - Silurian Cook County Study.

Driller's Log: 0 - 5 sand & clay, yellow
 5 - 20 clay, blue fading to hardpan & boulders
 20 - 34 sand gvl & slabs of bedrock
 34 - 44 forged steel shoe, rock, flinty
 44 - 74 limestone, waterbearing
 74 - 84 stone, blue,sft,no water of any account

120313076300 Bolton Construction 5-35N-14E
 Cook Sharpe, Franklin N. NE SW SW

Well Status: WATER - Water Well
 Comdate: 02/17/1994 Plugdate: TD: 180
 Elevation: 647' GL Permit #: Permit Date: 12/07/1993
 Latitude: 41.54521 Longitude: -87.651842

Well Address: Riegel Oaks Ln. Homewood, IL Lot: #2 Subd: Riegel Oaks

Well Type: PRIV - Private Water Well

Water Bearing Formation: limestone 55 to 180 ft

Static Water Level: 17 ft. below casing top of 1 ft.

Hole Diam.:

Pumping Level: 17 ft. when pumping at 30 gpm for hours.

Casing and Liner Pipe: Diam. (in.) Kind and Weight From(ft) To(ft)

Size hole below casing: 4.75 in.

Formations: 259SLRN 55 - Silurian Cook County Study.

Driller's Log: 0 - 15 clay, 15 - 40 gravel, 40 - 55 clay, 55 - 180 limestone

120310180700 Carsons Mel 2262 5-35N-14E
Cook Wehling Edwin C 120'N line, 90'W line, SW SW

Well Status: WATER - Water Well

Comdate: 07/01/1966 Plugdate: TD: 200

Elevation: 643' GL Permit #: Permit Date:

Latitude: 41.545812 Longitude: -87.655155

Logs Run: Driller's Log

Formations: 259SLRN 54 - Silurian Cook County Study.

120310045900 Glenwood Village 2 5-35N-14E
Cook Wehling Well Works Inc. 2700'N line, 1100'E line,

Well Status: WATER - Water Well

Comdate: 10/01/1962 Plugdate: TD: 427

Elevation: 629' GL Permit #: Permit Date:

Latitude: 41.549932 Longitude: -87.640214

Logs Run: Geologic Tops
Survey Sample Study

Formations: 259SLRN 16 - Silurian Cook County Study.

120313474300 Homewood Flossmoor Pk Dist. 5-35N-14E
Cook Stinnett, David SE NW SE

Well Status: WATER - Water Well

Comdate: 06/10/2005 Plugdate: TD: 860

Elevation: Permit #: Permit Date: 04/29/2005

Latitude: 41.547075 Longitude: -87.642204

Owner Address: 3301 Flossmoor Rd. Flossmoor IL

Well Address: Apollo Park Homewood, IL Lot: Subd: Apollo Park

Well Type: IRRIG - Irrigation Well

Water Bearing Formation: rock 820 to 860 ft

Static Water Level: 12 ft. below casing top of 1 ft.

Hole Diam.: 12 in.

Pumping Level: 300 ft. when pumping at 50 gpm for 1 hours.

Casing and Liner Pipe: Diam. (in.) Kind and Weight From(ft) To(ft)

Driller's Log: 0 - 15 brown clay, 15 - 20 gray clay with gravel, 20 - 470 white rock, 470 - 860 gray rock

120312467300 Lantry Charles 5-35N-14E
 Cook K & K Oil, Inc. SE NW SW
 Well Status: WATER - Water Well
 Comdate: 02/01/1974 Plugdate: TD: 200
 Elevation: 650' GL Permit #: Permit Date:
 Latitude: 41.547075 Longitude: -87.651894

Logs Run: Driller's Log

Formations: 259SLRN 60 - Silurian Cook County Study.

120312989800 R.W. Edwards Const. Co. 5-35N-14E
 Cook Knierim, Phil SW SW SW
 Well Status: WATER - Water Well
 Comdate: 08/30/1990 Plugdate: TD: 160
 Elevation: 627' GL Permit #: Permit Date: 07/16/1990
 Latitude: 41.543349 Longitude: -87.654205

Owner Address: 603 Ridge Rd. Homewood IL
 Well Address: 1401 Riegel Oaks Lane Lot: #2 Subd: Keller's
 Well Type: PRIV - Private Water Well

Water Bearing Formation: rock 80 to 160 ft
 Static Water Level: 80 ft. below casing top of 1 ft. Hole Diam.: 5 in.
 Pumping Level: 120 ft. when pumping at gpm for 2 hours.
 Casing and Liner Pipe: Diam. (in.) Kind and Weight From(ft) To(ft)
 5 BLACK 15# 0 55
 Size hole below casing: 4.3700 in.

Formations: 259SLRN 55 - Silurian Cook County Study.

Driller's Log: 0 - 3 soil
 3 - 40 clay
 40 - 55 sand gravel
 55 - 160 rock

120310180800 Wash Pk Airport 5-35N-14E
 Cook Kramer Claude E NW NE SE
 Well Status: WATER - Water Well
 Comdate: 01/01/1941 Plugdate: TD: 130
 Elevation: 626' GL Permit #: Permit Date:
 Latitude: 41.548947 Longitude: -87.639811

Logs Run: Driller's Log

Formations: 259SLRN 38 - Silurian Cook County Study.

120310181600 Burdett 8-35N-14E
 Cook Hemingway Richard SE NW NW
 Well Status: WATER - Water Well
 Comdate: Plugdate: TD: 104
 Elevation: 631' GL Permit #: Permit Date:
 Latitude: 41.539694 Longitude: -87.651742

Logs Run: Driller's Log

Formations: 259SLRN 36 - Silurian Cook County Study.

120310037600 Chicago Heights 32 8-35N-14E

Well Address: 922 W. 193rd Place Chicago Heights, IL Lot: Subd:

Well Type: PRIV - Private Water Well

Water Bearing Formation: limestone 0 to 0 ft

Static Water Level: 40 ft. below casing top of 1 ft.

Pumping Level: 280 ft. when pumping at 8 gpm for hours.

Hole Diam.:

Casing and Liner Pipe:	Diam. (in.)	Kind and Weight	From(ft)	To(ft)
		DEEPENED WELL	0	0
	5	A53 STEEL	0	0

Driller's Log:

0 - 85	depth of existing well
85 - 165	gray limestone
165 - 365	brown limestone

120312778500 Johns, Fred I 8-35N-14E
Cook Stinnett, James R. SE

Well Status: WATER - Water Well

Comdate: 08/29/1976

Elevation:

Plugdate:

Permit #: 51177

TD: 320

Permit Date: 08/20/1976

Latitude: 41.531601 Longitude: -87.640783

Owner Address: 915 194th St. Holbrook IL

Well Address: Lot: #2 Subd: Holbrooks-1st Addit.

Well Type: PRIV - Private Water Well

Water Bearing Formation: limestone 0 to 0 ft

Static Water Level: 28 ft. below casing top of 1 ft.

Pumping Level: 175 ft. when pumping at 5 gpm for 2 hours.

Hole Diam.: 5 in.

Casing and Liner Pipe:	Diam. (in.)	Kind and Weight	From(ft)	To(ft)
	5	GALVANIZED STEEL 15#	0	48

Size hole below casing: 4.75 in.

Logs Run: Driller's Log

Driller's Log:

0 - 1	top soil-sod
1 - 46	clay & hardpan
46 - 48	silt & clay w/rocks
48 - 48	bedrock

120312778600 Klein, Harold 8-35N-14E
Cook Holleman, Herbert Jr. NE

Well Status: WATER - Water Well

Comdate: 10/16/1979

Elevation:

Plugdate:

Permit #: 90145

TD: 100

Permit Date: 10/09/1979

Latitude: 41.538796 Longitude: -87.640881

Owner Address: 930 West 194th St. Chicago Heights IL

Well Address: Lot: #7 Subd: Holbrooks-1st addit.

Well Type: PRIV - Private Water Well

Water Bearing Formation: limestone 45 to 100 ft

Static Water Level: 8 ft. below casing top of 1 ft.

Pumping Level: 10 ft. when pumping at 15 gpm for 1 hours.

Hole Diam.:

Casing and Liner Pipe:	Diam. (in.)	Kind and Weight	From(ft)	To(ft)
	5	STD STL.GALV 15# FT	0	45

Size hole below casing: 5 in.

Logs Run: Driller's Log

Driller's Log:

0 - 2	soil
2 - 21	yellow clay
21 - 41	blue clay

41 - 45 gravel
45 - 100 limestone

120313471200 Leckrone, Amy 8-35N-14E
Cook Sharpe, Franklin N. NW NE NE

Well Status: WATER - Water Well
Comdate: 10/25/2005 Plugdate: TD: 260
Elevation: Permit #: Permit Date: 10/25/2005
Latitude: 41.541494 Longitude: -87.63971

Owner Address: 918 W. 193rd Place Chicago Hts. IL
Well Address: same as above Lot: Subd:

Well Type: PRIV - Private Water Well

Water Bearing Formation: limestone 40 to 260 ft
Static Water Level: 20 ft. below casing top of 1 ft. Hole Diam.: 9 in.

Pumping Level: 20 ft. when pumping at 12 gpm for 2 hours.
Casing and Liner Pipe: Diam. (in.) Kind and Weight From(ft) To(ft)
5 STEEL -1 40

Driller's Log: 0 - 10 clay
10 - 15 sand
15 - 23 gravel
23 - 260 limestone

120313169200 Spot-Not Car Wash 8-35N-14E
Cook Fykes, Charles N. NE NE NE

Well Status: WATER - Water Well
Comdate: 10/27/1994 Plugdate: TD: 505
Elevation: 616' GL Permit #: Permit Date: 10/13/1994
Latitude: 41.541491 Longitude: -87.637302

Owner Address: 1313 W. 175th Street Homewood IL
Well Address: Halsted & Holbrook Lot: Subd:

Well Type: NPOT - Non Potable Water Well

Water Bearing Formation: limestone 40 to 505 ft
Static Water Level: 140 ft. below casing top of 1 ft. Hole Diam.: 9 in.

Pumping Level: 190 ft. when pumping at gpm for 1 hours.
Casing and Liner Pipe: Diam. (in.) Kind and Weight From(ft) To(ft)
5 A53 15# 0 40

Size hole below casing: 5 in.

Formations: 259SLRN 20 - Silurian Cook County Study.

Driller's Log: 0 - 20 brown clay
20 - 165 gray limestone
165 - 200 brown limestone
200 - 365 gray limestone
365 - 430 brown limestone
430 - 505 gray limestone

120312574700 Stelter Norman 8-35N-14E
Cook Wehling E W NW SE NE

Well Status: WATER - Water Well
Comdate: 11/01/1977 Plugdate: TD: 101
Elevation: 631' GL Permit #: Permit Date:
Latitude: 41.537898 Longitude: -87.639661

Logs Run: Driller's Log

Formations: 259SLRN 22 - Silurian Cook County Study.

120310182000 Tabner Sam 8-35N-14E
 Cook McCaskey, H. NE
 Well Status:
 Comdate: Plugdate: TD: 56
 Elevation: 629' DM Permit #: Latitude: 41.538796 Permit Date: Longitude: -87.640881

Logs Run: Driller's Log

120312778700 Whitfield, James 8-35N-14E
 Cook Wehling, Wendell E. 100'N line, 90'E line, NW SE NE
 Well Status: WATER - Water Well
 Comdate: 11/21/1979 Plugdate: TD: 300
 Elevation: Permit #: 91250 Latitude: 41.538522 Permit Date: 11/07/1979 Longitude: -87.638796

Owner Address: R.R.#2 Box #6 Chicago Heights IL
 Well Type: PRIV - Private Water Well

Static Water Level: 18 ft. below casing top of Hole Diam.: 5 in.
 Pumping Level: 18 ft. when pumping at gpm for hours.
 Casing and Liner Pipe: Diam. (in.) Kind and Weight From(ft) To(ft)
 5 GALVANIZED SEAMLESS -1 40
 Size hole below casing: 4.8700 in.

Logs Run: Driller's Log

Driller's Log: 0 - 5 surface
 5 - 30 clay
 30 - 300 lime

120310069900 Willmer John 76 8-35N-14E
 Cook Hollerman, H. SE NE
 Well Status: WATER - Water Well
 Comdate: 01/01/1968 Plugdate: TD: 109
 Elevation: 631' GL Permit #: Latitude: 41.537002 Permit Date: Longitude: -87.638445

Logs Run: Driller's Log

Formations: 259SLRN 24 - Silurian Cook County Study.

120313308900 Willmer, John 8-35N-14E
 Cook Sharpe, Franklin N. SW SE NE
 Well Status: WATER - Water Well
 Comdate: 12/23/1999 Plugdate: TD: 280
 Elevation: 632' GL Permit #: Latitude: 41.5361 Permit Date: 12/14/1999 Longitude: -87.639636

Owner Address: 933 W. 194th Place Chicago Hts IL
 Well Address: same as above Lot: 4 Subd: Holbrook 1st Adn.
 Well Type: PRIV - Private Water Well

Water Bearing Formation: limestone 41 to 280 ft
 Static Water Level: 40 ft. below casing top of 1 ft. Hole Diam.: 10 in.
 Pumping Level: 80 ft. when pumping at 12 gpm for 2 hours.
 Casing and Liner Pipe: Diam. (in.) Kind and Weight From(ft) To(ft)
 5 ASTM A53B STEEL -1 41

Formations: 259SLRN 18 - Silurian Cook County Study.

Driller's Log: 0 - 18 clay
18 - 23 broken rock
23 - 280 limestone

120312778800 Zagroski, John 8-35N-14E
Cook Holleman, Herbert SE NE

Well Status: WATER - Water Well
Comdate: 03/21/1981 Plugdate: TD: 120
Elevation: 631' GL Permit #: 98548 Permit Date: 02/25/1981
Latitude: 41.537002 Longitude: -87.638445

Owner Address: 925 193rd Place Chicago Heights IL
Well Address: Lot: #4 Subd: Holbrook's-1st addit

Well Type: PRIV - Private Water Well

Water Bearing Formation: limestone 47 to 120 ft

Static Water Level: 22 ft. below casing top of 1 ft.

Hole Diam.:

Pumping Level: 22 ft. when pumping at 15 gpm for 1 hours.

Casing and Liner Pipe: Diam. (in.) Kind and Weight From(ft) To(ft)
5 STD STL.GALV 15# FT 0 47

Size hole below casing: 5 in.

Logs Run: Driller's Log

Formations: 259SLRN 47 - Silurian Cook County Study.

Driller's Log: 0 - 1 soil
1 - 12 yellow clay
12 - 33 sand
33 - 45 blue clay
45 - 47 gravel
47 - 120 limestone

120310416500 Coccia Achille I 9-35N-14E
Cook Wehling Well Works Inc. 600'S line, 550'W line, NW SW

Well Status: WATER - Water Well
Comdate: 04/01/1972 Plugdate: TD: 101
Elevation: 631' GL Permit #: Permit Date:
Latitude: 41.533285 Longitude: -87.633955

Logs Run: Driller's Log

Formations: 259SLRN 30 - Silurian Cook County Study.

120312505900 Danley Lumber Co 9-35N-14E
Cook Wehling Well Works Inc. NW SE NW

Well Status: WATER - Water Well
Comdate: 10/01/1975 Plugdate: TD: 200
Elevation: 630' GL Permit #: Permit Date:
Latitude: 41.537947 Longitude: -87.629941

Logs Run: Driller's Log

Formations: 259SLRN 40 - Silurian Cook County Study.

120312467400 Engelsen Roger 9-35N-14E
Cook K & K Oil, Inc. SE NW NW

Well Status: WATER - Water Well
Comdate: 02/01/1974 Plugdate: TD: 170
Elevation: 628' GL Permit #: Permit Date:
Latitude: 41.539728 Longitude: -87.63241

Logs Run: Driller's Log

Formations: 259SLRN 41 - Silurian Cook County Study.

120313029900 Galderio, Michael 9-35N-14E
Cook Wehling, Richard H. SE SE SE

Well Status: WATER - Water Well
Comdate: 05/17/1991 Plugdate: TD: 220
Elevation: 630' GL Permit #: Permit Date: 05/09/1991
Latitude: 41.528912 Longitude: -87.617602

Owner Address: 90 N. St. Park Forest IL
Well Address: Glenwood Rd. Chicago Hts., IL Lot: Subd:

Well Type: PRIV - Private Water Well
Water Bearing Formation: limestone 38 to 220 ft
Static Water Level: below casing top of Hole Diam.: 5 in.
Casing and Liner Pipe: Diam. (in.) Kind and Weight From(ft) To(ft)
5 GALVANIZED -2 33
Size hole below casing: 5 in.

Formations: 259SLRN 33 - Silurian Cook County Study.

Driller's Log: 0 - 21 clay & gravel
21 - 33 sand & gravel
33 - 220 lime

120313366500 Johnson, Mrs. 9-35N-14E
Cook Walters, Larry NW NW SW

Well Status: WATER - Water Well
Comdate: 07/25/2001 Plugdate: TD: 400
Elevation: Permit #: Permit Date: 07/25/2001
Latitude: 41.534323 Longitude: -87.634767

Owner Address: 445 E. 168th Place South Holland IL
Well Address: 19505 S. Halsted Chicago Heights, IL Lot: Subd:

Well Type: PRIV - Private Water Well
Water Bearing Formation: rock 42 to 400 ft
Static Water Level: 30 ft. below casing top of 1 ft. Hole Diam.: 10 in.
Pumping Level: 378 ft. when pumping at 8 gpm for 4 hours.
Casing and Liner Pipe: Diam. (in.) Kind and Weight From(ft) To(ft)
5 BLACK STEEL -1 42

Driller's Log: 0 - 2 topsoil
2 - 8 clay
8 - 26 sand gravel
26 - 400 rock

120312683000 Jones, Charles 9-35N-14E
Cook Sharpe, Franklin N. 207'S line, 80'W line, NE NW SW

Well Status: WATER - Water Well
Comdate: 01/25/1985 Plugdate: TD: 150
Elevation: 631' GL Permit #: 116359 Permit Date: 01/11/1985
Latitude: 41.533999 Longitude: -87.633249

Well Type: PRIV - Private Water Well
 Water Bearing Formation: limestone 40 to 150 ft
 Casing and Liner Pipe: Diam. (in.) Kind and Weight From(ft) To(ft)
 5 ASTM A53 B 0 40
 Size hole below casing: 4.75 in.

Logs Run: Driller's Log

Formations: 259SLRN 26 - Silurian Cook County Study.

Driller's Log: 0 - 18 clay
 18 - 26 sand
 26 - 30 broken rock
 30 - 150 limestone

120312707300 Knaack, Fredrick 9-35N-14E
 Cook Wehling, Wendell E. 110'S line, 200'W line,

Well Status: WATER - Water Well
 Comdate: 07/10/1985 Plugdate: TD: 260
 Elevation: 633' GL Permit #: 118851 Permit Date: 07/08/1985
 Latitude: 41.528346 Longitude: -87.635162

Owner Address: R.R.#2 Box #154 Chicago Heights IL
 Well Type: PRIV - Private Water Well

Static Water Level: below casing top of Hole Diam.: 5 in.
 Casing and Liner Pipe: Diam. (in.) Kind and Weight From(ft) To(ft)
 5 GALVANIZED 0 37
 Size hole below casing: 4.8700 in.

Logs Run: Driller's Log

Formations: 259SLRN 37 - Silurian Cook County Study.

Driller's Log: 0 - 37 clay
 37 - 260 lime

120313400600 Link, James 9-35N-14E
 Cook Sharpe, Franklin N. NW NW SW

Well Status: WATER - Water Well
 Comdate: 03/13/2002 Plugdate: TD: 400
 Elevation: Permit #: Permit Date: 02/13/2002
 Latitude: 41.534323 Longitude: -87.634767

Owner Address: 921 W. 193rd Place Chicago Hts. IL
 Well Address: 19507 Halsted St. Chicago Heights, IL Lot: 9 Subd: Glen View

Well Type: PRIV - Private Water Well
 Water Bearing Formation: limestone 41 to 400 ft
 Static Water Level: 20 ft. below casing top of 1 ft. Hole Diam.: 10 in.
 Pumping Level: 250 ft. when pumping at 2 gpm for 2 hours.
 Casing and Liner Pipe: Diam. (in.) Kind and Weight From(ft) To(ft)
 5 STEEL ASTM A53B -1 41

Driller's Log: 0 - 16 clay
 16 - 26 sand/gravel
 26 - 400 limestone

120310028000 Northern II Gas Co I 9-35N-14E
 Cook Wehling Well Works Inc. S2 NE NW

Well Status: WATER - Water Well
 Comdate: 07/01/1959 Plugdate: TD: 220
 Elevation: 630' GL Permit #: Permit Date:
 Latitude: 41.539759 Longitude: -87.62875

Logs Run: Driller's Log
 Geologic Tops
 Survey Sample Study

Formations: 701PLSC 0 - 40 Pleistocene
 259SLRN 35 - Silurian
 252WKSH 40 - 195 Waukesha
 252JOLT 195 - 220 Joliet
 Cook County Study.

120313189000 Schavocky, John 9-35N-14E
 Cook Sharpe, Franklin N. SE NW SW

Well Status: WATER - Water Well
 Comdate: 03/15/1996 Plugdate: TD: 400
 Elevation: Permit #: Permit Date: 03/06/1996
 Latitude: 41.532531 Longitude: -87.632299

Owner Address: 771 Coale Rd. Chicago Heights IL
 Well Address: Lot: #20 Subd: Glen View

Well Type: PRIV - Private Water Well

Water Bearing Formation: limestone 41 to 400 ft

Static Water Level: 15 ft. below casing top of

Hole Diam.:

Pumping Level: 200 ft. when pumping at 8 gpm for 2 hours.

Casing and Liner Pipe: Diam. (in.) Kind and Weight From(ft) To(ft)
 5 ASTM A53B STEEL -1 41

Size hole below casing: 5 in.

Driller's Log: 0 - 18 clay
 18 - 27 sand & gravel
 27 - 400 limestone

120312723000 Selvaggio, Randy 9-35N-14E
 Cook Sharpe, Franklin N. NW SW SW

Well Status: WATER - Water Well
 Comdate: 05/23/1986 Plugdate: TD: 340
 Elevation: 632' GL Permit #: 122099 Permit Date: 01/27/1986
 Latitude: 41.530732 Longitude: -87.634711

Owner Address: R. R. #2 Box 102 Chicago Heights IL

Well Address: Lot: 5 Subd: Weberg

Well Type: PRIV - Private Water Well

Water Bearing Formation: limestone 40 to 240 ft

Pumping Level: ft. when pumping at 8 gpm for hours.

Casing and Liner Pipe: Diam. (in.) Kind and Weight From(ft) To(ft)
 5 ASTM A53B 0 41

Size hole below casing: 4.75 in.

Formations: 259SLRN 40 - Silurian
 Cook County Study.

Driller's Log: 0 - 15 clay
 15 - 30 sand
 30 - 40 gravel
 40 - 340 limestone

120313285000 Skyline Pool Assoc 1 9-35N-14E
 Cook Wehling Well Works 60'S 700'E of NW/c NW
 Well Status: WATER - Water Well
 Comdate: 10/01/1963 Plugdate: TD: 355
 Elevation: Permit #: Permit Date:
 Latitude: 41.542249 Longitude: -87.633541

120310182100 Webb Harry 9-35N-14E
 Cook McCaskey, H. SW
 Well Status:
 Comdate: Plugdate: TD: 70
 Elevation: 630' GL Permit #: Permit Date:
 Latitude: 41.531636 Longitude: -87.631064

Logs Run: Driller's Log

Formations: 259SLRN 32 - Silurian Cook County Study.

120313601800 Catholic Cemeteries 2 10-35N-14E
 Cook Wehling, Richard W. SE NE SE
 Well Status: WATER - Water Well
 Comdate: 08/29/2011 Plugdate: TD: 270
 Elevation: Permit #: 031-016 Permit Date: 08/29/2011
 Latitude: 41.532643 Longitude: -87.598257

Owner Address: 1400 S. Wolf Rd. Hillside IL
 Well Address: 19500 Cottage Grove Ave. Glenwood, IL Lot: Subd:

Well Type: COMM - Water Well for Commercial Operation
 Water Bearing Formation: rock 270 to ft
 Static Water Level: below casing top of Hole Diam.: 6 in.
 Casing and Liner Pipe: Diam. (in.) Kind and Weight From(ft) To(ft)
 6 GALV. STEEL -2 45
 Size hole below casing: 6 in.

Driller's Log: 0 - 2 black dirt
 2 - 45 clay
 45 - 270 rock
 270 - 270 shale at

120310147300 Crawford T 1 10-35N-14E
 Cook Wehling Well Works Inc. 50'N line, 350'W line, SW NW NE
 Well Status: WATER - Water Well
 Comdate: 10/01/1971 Plugdate: TD: 135
 Elevation: 622' GL Permit #: Permit Date:
 Latitude: 41.540647 Longitude: -87.605541

Logs Run: Driller's Log

Formations: 259SLRN 36 - Silurian Cook County Study.

120310095800 Glenwood Village 5 10-35N-14E
 Cook Wehling Well Works Inc. 943'N line, 405'E line, NE
 Well Status: WATER - Water Well
 Comdate: 01/01/1969 Plugdate: TD: 1785
 Elevation: 627' GL Permit #: Permit Date:
 Latitude: 41.540003 Longitude: -87.598567

Logs Run: Driller's Log

Formations:	259SLRN	44 -	Silurian	Cook County Study.
	203MQKT	473 -	Maquoketa	Cook County Study.
	202GLEN	680 -	Galena	Cook County Study.
	202SPTR	1012 -	St Peter	Cook County Study.
	153IRNN	1607 -	Ironton	Cook County Study.
	153ECLR	1769 -	Eau Claire	Cook County Study.

120310182200 Glenwoodie Co Club 1 10-35N-14E
Cook Gray Well Drilling 2600'N line, 1550'W line,
Well Status: WATER - Water Well
Compdate: Plugdate: TD: 269
Elevation: 629' GL Permit #: Permit Date:
Latitude: 41.535435 Longitude: -87.610798

Logs Run: Company Sample Study
Driller's Log
Geologic Tops
Survey Sample Study

Formations:	259SLRN	20 -	Silurian	Cook County Study.
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120310182300 Glenwoodie Co Club 2 10-35N-14E
Cook Gray Well Drilling 100'S line, 2600'W line,
Well Status: WATER - Water Well
Compdate: Plugdate: TD: 225
Elevation: 630' GL Permit #: Permit Date:
Latitude: 41.528336 Longitude: -87.606837

Logs Run: Company Sample Study
Driller's Log
Geologic Tops

Formations:	259SLRN	25 -	Silurian	Cook County Study.
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120310016000 Glenwoodie Co Club 3 10-35N-14E
Cook Layne Western Co., Inc. 2440'N line, 1920'W line,
Well Status: WATER - Water Well
Compdate: 05/01/1963 Plugdate: TD: 351
Elevation: 628' GL Permit #: Permit Date:
Latitude: 41.535874 Longitude: -87.609446

Logs Run: Driller's Log

Formations:	259SLRN	32 -	Silurian	Cook County Study.
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120312808000 Glenwoodie Golf & Country Club 10-35N-14E
Cook Wehling, Wendell E. 35'S line, 150'E line, SW NE SW
Well Status: WATER - Water Well
Compdate: 06/18/1987 Plugdate: TD: 475
Elevation: 629' GL Permit #: 131711 Permit Date: 05/14/1987
Latitude: 41.531778 Longitude: -87.609706

Well Type: IRRIG - Irrigation Well
 Static Water Level: 14 ft. below casing top of 1 ft. Hole Diam.: 12 in.
 Pumping Level: 133 ft. when pumping at 400 gpm for 16 hours.
 Casing and Liner Pipe: Diam. (in.) Kind and Weight From(ft) To(ft)
 12 BLACK STEEL 1 54
 Size hole below casing: 11.87 in.
 Formations: 259SLRN 50 - Silurian Cook County Study.
 203MQKT 465 - Maquoketa Cook County Study.

Driller's Log: 0 - 47 clay and gravel
 47 - 50 clay and boulders
 50 - 190 broken lime
 190 - 400 lime - grey & white
 400 - 465 lime
 465 - 475 shale

120310182400 Murphy Lawrence 271 10-35N-14E
 Cook Wehling Edwin C E2 W2 NE
 Well Status: WATER - Water Well
 Comdate: 01/01/1950 Plugdate: TD: 152
 Elevation: 613' GL Permit #: Permit Date:
 Latitude: 41.538972 Longitude: -87.603158

Logs Run: Driller's Log

Formations: 259SLRN 58 - Silurian Cook County Study.

120310049700 Smiley James D 14-35N-14E
 Cook Hollerman, H. 0'S 0'E of NW/c NW NW NW
 Well Status: WATER - Water Well
 Comdate: 01/01/1966 Plugdate: TD: 140
 Elevation: 630' GL Permit #: Permit Date:
 Latitude: 41.528124 Longitude: -87.597023

Logs Run: Driller's Log

Formations: 259SLRN 56 - Silurian Cook County Study.

120312926000 Thackston, Richard 2 33-36N-14E
 Cook Stinnett, James R. SW SW SW
 Well Status: WATER - Water Well
 Comdate: 12/06/1975 Plugdate: TD: 150
 Elevation: 624' GL Permit #: 43222 Permit Date: 11/20/1975
 Latitude: 41.558301 Longitude: -87.635027

Owner Address: 601 Ridge Road Thornton IL

Well Type: COMM - Water Well for Commercial Operation

Water Bearing Formation: limestone 22 to 150 ft

Static Water Level: 7 ft. below casing top of 1 ft. Hole Diam.: 5 in.

Pumping Level: 35 ft. when pumping at 35 gpm for 3 hours.

Casing and Liner Pipe: Diam. (in.) Kind and Weight From(ft) To(ft)
 5 GALV STEEL 15# 0 59

Size hole below casing: 4.75 in.

Formations: 259SLRN 57 - Silurian Cook County Study.

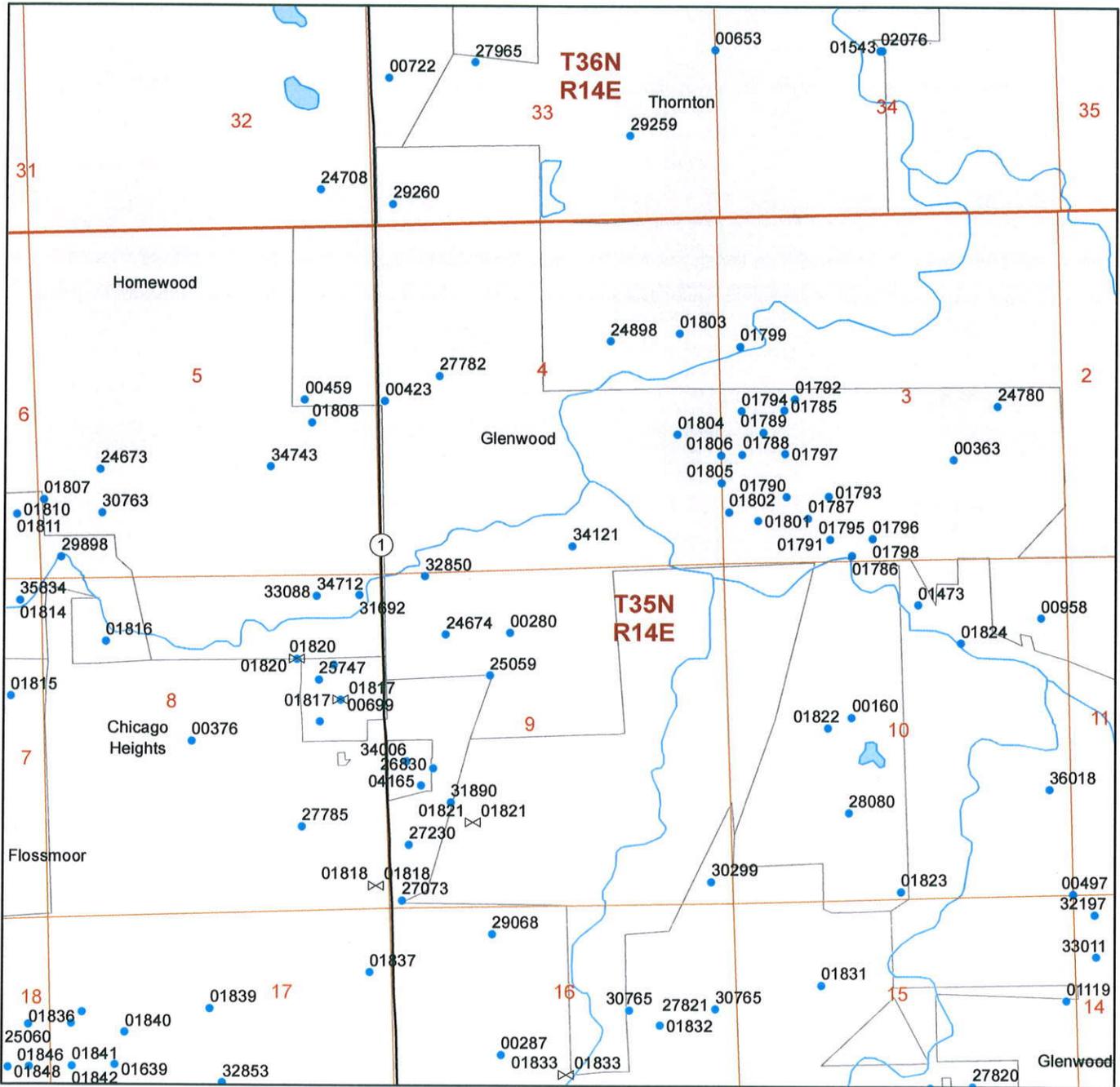
Driller's Log: 0 - 3 black dirt top soil
 3 - 22 sandy heavy w/water

April 1, 2014

Questor Data Extraction

11816

22 -	57	sndy grvl & brkn ls
57 -	59	rock
59 -	150	no record



Explanation					
o	Water	✱	D&A - Gas Show	⌘	Junked
×	Engineering	◇	D&A	⊖	Temporarily Abandoned
•	Oil	✱	Gas Injection	∞	Observation
*	Oil & Gas	o	Gas Storage	⌘	Other Injection
✱	Gas	⊖	Salt Water Disposal	⌘	Other Well Type
⊖	D&A - Oil Show	⌘	Water Injection	+	Unknown
⊖	D&A - Oil & Gas Show	△	Water Supply		
/ through any symbol indicates well is currently plugged					



Illinois State Geological Survey
Questor: Custom Map



Scale: 1:28,108

Displayed data are based upon information supplied to the Illinois State Geological Survey (ISGS) and are not field verified. The ISGS does not guarantee the validity, accuracy, or completeness of these data.

TOWN Homewood TOWNSHIP



Map No. 28

COMPANY R. Hemingway

No.

R. 14E

FARM Burdett

No.

T

Sec. 8

AUTHORITY R. Hemingway

35N

ELEVATION

COLLECTOR S.E. Ekblaw DATE DRILLED

CONFIDENTIAL

No.	STRATA	Thickness		Depth	
		Feet	In.	Feet	In.
Co # 1816				104	
	Depth Cased to 36' 4-1/2" black casing Static level 18'				
	NO ENVELOPE				

ORIGINAL FILED

County Cook
E-DRILL RECORD

Index No. 2808

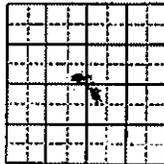
(37727-5M-11-31) 7 Illinois Geological Survey, Urbana. 8-35N-14E



ILLINOIS GEOLOGICAL SURVEY, URBANA

Permit #191	Thickness	Top	Bottom
Clay	8	0	8
Mud	11	8	19
Lime	35	19	54
Gray lime	9	54	63
Lime	380	63	443
Shale	56	443	499
Shale and lime	11	499	510
Lime	10	510	520
Lime and shale	27	520	547
Shale	113	547	660
Lime	323	660	983
Sandstone	182	983	1165
Lime	33	1165	1198
Lime, gray	8	1198	1206
Lime	21	1206	1227
Lime and sand	16	1227	1243
Lime	193	1243	1436
Lime and green shale	29	1436	1465
Sand, lime and shale	11	1465	1476
Lime and shale	21	1476	1497
Lime, sand and green shale	12	1497	1509
Lime, sand and shale	28	1509	1537
Lime	15	1537	1552
Sand and shale	12	1552	1564
Sand	203	1564	1767
Lime and shale	10	1767	1777
			TD
S.S. #52354			
Size of Well: 30" - 0-54'			
23 1/4" to 667' 19" to 1165' 16"			
to 1777'			
Casing: 30" 0-47' . 20" 0-664' cemented.			

COMPANY Wehling Well Works
 ARM City of Chicago Heights NO. 32
 DATE DRILLED November 1965 COUNTY NO. 376
 AUTHORITY Wehling Well Works, Inc.
 ELEVATION
 LOCATION 2690' S line, 2285' W line of SW SW
 COUNTY COOK



8-35N-14E

Town Chicago Heights Township Bloom

Map No. 28

Company H. McCaskey

No.

R. 14E

Farm Eytcheson, George E.

No. 1

T.
35N

Sec.
8

Authority H. McCaskey

Elevation 631 top. map

Collector

Confidential Date Drilled 1940

350' S. line, 200' E. line

No.	Co. # 1818	Strata	Thickness		Depth	
			Feet	In.	Feet	In.
		N. 100' of S. 385' of Lots 14 and 15, Fox, Hood, and McClure's Subd.				
		Soil and yellow clay	9		9	
		Clay, blue	11		20	
		Quicksand	8		28	
		Gravel mixed blue clay	3		31	
		Limerock	30		61	

NO ENVELOPE

u
630

(ORIGINAL FILED)

COUNTY Cook

INDEX NO. 2808

DRILL RECORD

8-35N-14E

(A32187--20M)

ILLINOIS GEOLOGICAL SURVEY, URBANA

(10-40)



Town Chicago Heights Township Bloom

Map No. 28

Company H. McCaskey

No.

R. 14E

Farm Geimer, Raymond

No.

Authority H. McCaskey

T.

Sec.

Elevation

35

N

			X

8

Collector

SE

Confidential

Date Drilled Dec. 1940

NE

No.	Co. #	Strata	Thickness		Depth	
			Feet	In.	Feet	In.
	1819	Lot 5, Block 3, Holbrook Sub.				
		Clay	18		18	
		Gravel and sand	12		30	
		Limerock	30		62	
		Well finished				
		NO ENVELOPE				

COUNTY Cook
DRILL RECORD

INDEX NO. 2808

8-35N-14E

(A32137-20M)

ILLINOIS GEOLOGICAL SURVEY, URBANA

(10-40)



GEOLOGICAL AND WATER SURVEYS WELL RECORD

Property owner Hirsch, Steve Well No. _____
 Address 1218 Halsted Street Chicago Hts. IL
 Well address 922 W. 193rd Place Chicago Heights, IL
 Lot _____ Subd _____ ISWS P# 318433
 Driller Fykes, Charles N. License No. 102-0239
 Permit No. 031-00190-99 Date 12/01/1999
 Water from Limestone County Cook
 at depth _____ to _____ ft. Sec. 8
 Screen: Diam. _____ in. Twp. 35 N
 Length: _____ ft. Slot _____ Rge. 14 E
 Elev. _____

Casing and Liner Pipe NW NE NE

Diam. (in.)	Kind and Weight	From (ft)	To (ft)
5	A53 STEEL	0	
	DEEPEMED WELL	0	

Size hole below casing: _____ in.
 Static level 40 ft. below casing top which is 1 ft.
 above ground level. Pumping level 280 ft. when pumping at 8
 gpm for _____ hours.

Formations passed through	Thickness	Bottom
depth of existing well	85	85
gray limestone	80	165
brown limestone	200	365

Household - Private
 Cook 12-031-33088-00 8-35N-14E

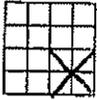
GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner Johns, Fred Well No. #1
 Address 915 194th St. Holbrook IL
 Driller Stinnett, James R. License No. 102-1062

11. Permit No. 51177 Date 08/20/76

12. Water from Limestone 13. County Cook
 at depth _____ to _____ ft.

14. Screen: Diam. _____ in. Sec. 8
 Length: _____ ft. Slot _____ Twp. 35 N
 Rge. 14 E
 Elev. _____



15. Casing and Liner Pipe SE

Diam. (in.)	Kind and Weight	From (ft)	To (ft)
5	GALVANIZED STEEL 15#	0	48

16. Size hole below casing: 4.75 in.
 17. Static level 28 ft. below casing top which is 1 ft. above ground level. Pumping level 175 ft. when pumping at 5 gpm for 2 hours.

18. Formations passed through	Thickness	Bottom
top soil-sod	1	1
clay & hardpan	45	46
silt & clay w/rocks	2	48
bedrock	0	48

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner Klein, Harold Well No. _____
 Address 930 West 194th St. Chicago Heights IL
 Driller Holleman, Herbert Jr. License No. 102-0775
 11. Permit No. 90145 Date 10/09/79
 12. Water from Limestone 13. County Cook
 at depth 45 to 100 ft. Sec. 8
 14. Screen: Diam. _____ in. Twp. 35 N
 Length: _____ ft. Slot _____ Rge. 14 E
 Elev. _____



15. Casing and Liner Pipe NE

Diam. (in.)	Kind and Weight	From (ft)	To (ft)
5	STD STL.GALV 15# FT	0	45

16. Size hole below casing: 5 in.
 17. Static level 8 ft. below casing top which is 1 ft. above ground level. Pumping level 10 ft. when pumping at 15 gpm for 1 hours.

18. Formations passed through	Thickness	Bottom
soil	2	2
yellow clay	19	21
blue clay	20	41
gravel	4	45
limestone	55	100

GEOLOGICAL AND WATER SURVEYS WELL RECORD

Property owner Leckrone, Amy Well No. _____
 Address 918 W. 193rd Place Chicago Hts. IL
 Well address same as above
 Lot _____ Subd _____ ISWS P# 374759
 Driller Sharpe, Franklin N. License No. 102-1773
 Permit No. 031-00151-05 Date 10/25/2005
 Water from limestone County Cook
 at depth 40 to 260 ft. Sec. 8
 Screen: Diam. _____ in. Twp. 35 N
 Length: _____ ft. Slot _____ Rge. 14 E
 Elev. _____

Casing and Liner Pipe NW NE NE

Diam. (in.)	Kind and Weight	From (ft)	To (ft)
5	STEEL	-1	40

Size hole below casing: _____ in.
 Static level 20 ft. below casing top which is 1 ft.
 above ground level. Pumping level 20 ft. when pumping at 12
 gpm for 2 hours.

Formations passed through	Thickness	Bottom
clay	10	10
sand	5	15
gravel	8	23
limestone	237	260

Private Water Well
 Cook 12-031-34712-00 8-35N-14E

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner Spot-Not Car Wash Well No. _____
 Address 1313 W. 175th Street Homewood IL
 Driller Fykes, Charles N. License No. 102-0239
 11. Permit No. 031-00209-94 Date 10/13/94
 12. Water from Limestone 13. County Cook
 at depth 40 to 505 ft. Sec. 8
 14. Screen: Diam. _____ in. Twp. 35 N
 Length: _____ ft. Slot _____ Rge. 14 E
 Elev. _____

15. Casing and Liner Pipe NE NE NE

Diam. (in.)	Kind and Weight	From (ft)	To (ft)
5	A53 15#	0	40

16. Size hole below casing: 5 in.
 17. Static level 140 ft. below casing top which is 1 ft. above ground level. Pumping level 190 ft. when pumping at _____ gpm for 1 hours.

18. Formations passed through	Thickness	Bottom
brown clay	20	20
gray limestone	145	165
brown limestone	35	200
gray limestone	165	365
brown limestone	65	430
gray limestone	75	505

Non Potable

Cook 12-031-31692-00 08-35N-14E

REQUESTED AND MAIL ORIGINATED BY
 SUMMER HEALTH PROTECTION, 535 WEST
 I. DO NOT DETACH GEOLOGICAL/WATER
 PROPER LOCATION

GEOLOGICAL AND WATER SURVEYS WELL RECORD

November 7 1977

10. Property owner Norman Stelter Well No. _____
 Address 932 W. 194th St. Chicago Heights, IL
 Driller W. E. Wehling License No. 102-2
 11. Permit No. 68136 Date Oct. 11, 1977
 12. Water from _____ 13. County Cook

Formation
 at depth _____ to _____ ft. Sec. 8
 14. Screen: Diam. _____ in. Twp. 35N
 Length: _____ ft. Slot _____ Rge. 14E
 NW of SE of NE of above Elev. _____
 15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
5	galv. seamless	+1	40
	cemented in		

SHOW
 LOCATION IN
 SECTION PLAT
 NW SE NE
 (permit)

16. Size Hole below casing: 4/7/8 in.
 17. Static level 20 ft. below casing top which is _____ ft.
 above ground level. Pumping level 20 ft. when pumping at _____
 gpm for _____ hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
Black Dirt	1	1
Clay	21	22
Lime	79	101

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED W. E. Wehling DATE 11/17/77
J. W.

COOK
 630

COUNTY No. 25747

8-35N-14E

Town Chicago Heights Township Bloom

Company H. McCaskey

Farm Tabner, Sam

Authority H. McCaskey

Elevation

Collector

Confidential

No.

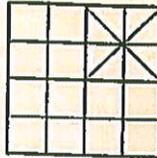
No.

T.
35
N

Map No. 28

R. 14E

Sec.
8



Date Drilled Jan. 1940

No.	Co # 1820	Strata	Thickness		Depth	
			Feet	In.	Feet	In.
		877 W. 193rd Place, Holbrook Subd.				
		Soil and yellow clay	13		13	
		Clay, blue	7		20	
		Quicksand	5		25	
		Gravel	2		27	
		Limerock	29		56	

NO ENVELOPE

ORIGINAL FILED

COUNTY Cook

DRILL RECORD

(A32187-20M)

INDEX NO.

2808

ILLINOIS GEOLOGICAL SURVEY, URBANA

8-35N-14E

(10-40)



GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner Whitfield, James Well No. _____
 Address R.R.#2 Box #6 Chicago Heights IL
 Driller Wehling, Wendell E. License No. 102-0023
 11. Permit No. 91250 Date 11/07/79
 12. Water from _____ 13. County Cook
 at depth _____ to _____ ft. Sec. 8
 14. Screen: Diam. _____ in. Twp. 35 N
 Length: _____ ft. Slot _____ Rge. 14 E
 Elev. _____

15. Casing and Liner Pipe 100' S 90' W NEc NW SE NE

Diam. (in.)	Kind and Weight	From (ft)	To (ft)
5	GALVANIZED SEAMLESS	-1	40

16. Size hole below casing: 4.87 in.
 17. Static level 18 ft. below casing top which is 0 ft. above ground level. Pumping level 18 ft. when pumping at _____ gpm for _____ hours.

18. Formations passed through	Thickness	Bottom
surface	5	5
clay	25	30
lime	270	300

Cook 11 620 12-031-27787-00 08-35N-14E

LOG OF WATER WELL

Property owner John Willmer Well No. 76

Drilled by H. Hallemann Year 1968

Formations passed through	Thick-ness	Depth of Bottom
<u>Soil</u>	<u>1</u>	<u>1</u>
<u>Yellow Clay</u>	<u>15</u>	<u>16</u>
<u>Blue Clay</u>	<u>7</u>	<u>23</u>
<u>Gravel</u>	<u>1</u>	<u>24</u>
<u>Limestone</u>	<u>85</u>	<u>109</u>

COUNTY No. 699

Permit # 4057
 Received 11-27-68

[Continue on back if necessary]
 Finished in limestone at 24 to 109 ft.
 Cased with 5 inch galv casing from 0 to 24 ft.
 and _____ inch _____ from _____ to _____ ft.
 Size hole below casing 5 inch. Static level from surf. 15 ft.
 Tested capacity 10 gal. per min. Temperature _____ °F.
 Water lowered to 16 ft. in. in 1 hrs. _____ min.
 Length of test 1 hrs. _____ min. Screen _____
 Slot _____ Diam. _____ Length _____ Bottom set at _____ ft.

[Show location in Section Plat]

Township name _____ Elev. _____ Sec. 8
 Lot 7, Block 5 in Holbrook's 1st Addn. _____
 Description of location to Chgo Hghts, a _____ Twp. 35N
 subdivision of the SE/4, NE/4 (permit) _____ Rge. 14E



Signed H. Hallemann County Cook

GEOLOGICAL AND WATER SURVEYS WELL RECORD

Property owner Willmer, John Well No. _____

Address 933 W. 194th Place Chicago Hts IL

Well address same as above

Lot 4 Subd Holbrook 1st Addn. ISWS P# 318436

Driller Sharpe, Franklin N. License No. 102-1773

Permit No. 031-00195-99 Date 12/14/1999

Water from Limestone County Cook

at depth 41 to 280 ft. Sec. 8

Screen: Diam. _____ in. Twp. 35 N

Length: _____ ft. Slot _____ Rge. 14 E

Elev. _____



Casing and Liner Pipe SW SE NE

Diam. (in.)	Kind and Weight	From (ft)	To (ft)
5	ASTM A53B STEEL	-1	41

Size hole below casing: _____ in.

Static level 40 ft. below casing top which is 1 ft.

above ground level. Pumping level 80 ft. when pumping at 12

gpm for 2 hours.

Formations passed through	Thickness	Bottom
clay	18	18
broken rock	5	23
limestone	257	280

Household - Private

Cook 12-031-33089-00 8-35N-14E

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner Zagroski, John Well No. _____
 Address 925 193rd Place Chicago Heights IL
 Driller Holleman, Herbert License No. 092-0401
 11. Permit No. 98548 Date 02/25/81
 12. Water from limestone 13. County Cook
 at depth 47 to 120 ft. Sec. 8
 14. Screen: Diam. _____ in. Twp. 35 N
 Length: _____ ft. Slot _____ Rge. 14 E
 Elev. _____



15. Casing and Liner Pipe SE NE

Diam. (in.)	Kind and Weight	From (ft)	To (ft)
5	STD STL.GALV 15# FT	0	47

16. Size hole below casing: 5 in.
 17. Static level 22 ft. below casing top which is 1 ft. above ground level. Pumping level 22 ft. when pumping at 15 gpm for 1 hours.

18. Formations passed through	Thickness	Bottom
soil	1	1
yellow clay	11	12
sand	21	33
blue clay	12	45
gravel	2	47
limestone	73	120

Cook

LI 630

12-031-27788-00

08-35N-14E

DESTROYED AND MAIL ORIGINAL TO STATE DEPT.
STATE OFFICE BUILDING, SPRINGFIELD,
AL / WATER SURVEYS SECTION. BE SURE TO

GEOLOGICAL AND WATER SURVEYS WELL RECORD
Completed 5-3-72

10. Property owner Achille Coccia Well No. 1
Address 778 E. 196th Street, Chicago Heights, Illinois
Driller Wehling Well Works License No. 92-56
11. Permit No. 17392 Date 4-29-72
12. Water from _____ 13. County Cook

Formation _____
at depth _____ to _____ ft. Sec. 9
14. Screen: Diam. _____ in. Twp. 35N
Length: _____ ft. Slot _____ Rge. 14E
600'N 550'E SW SW NW SW Elev. _____



SHOW LOCATION IN SECTION PLAT

15. Casing and Liner Pipe (permit)

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
5	galv. seamless	0	32
	cemented in place		

16. Size Hole below casing: 5 in.
17. Static level 7 ft. below casing top which is _____ ft. above ground level. Pumping level 9 ft. when pumping at 20 gpm for 3 hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
Black dirt	2	2
Clay	22	24
Gravel	6	30
Lime	71	101

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED Wehling Well Works, Inc. DATE 5-10-72

COUNTY No. 4165

OOK

9-35N-14E

REQUESTED AND MAIL ORIGINAL TO STATE
 U OF ENVIRONMENTAL HEALTH, 535 WEST
 1. DO NOT DETACH GEOLOGICAL/WATER
 PROPER WELL LOCATION.

GEOLOGICAL AND WATER SURVEYS WELL RECORD
 Completed 10-13-75

10. Property owner Danley Lumber Company Well No. _____
 Address 1559 N. Mannheim Road, Stone Park, IL
 Driller Wehling Well Works, Inc. License No. 102-2
 11. Permit No. 41817 Date 10-6-75
 12. Water from lime 13. County Cook

at depth _____ to 200 ft. Sec. 9
 14. Screen: Diam. _____ in. Twp. 35N
 Length: _____ ft. Slot _____ Rge. 11E
 Elev. _____

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
8 1/2			
5"	galv. seamless	0	40
	<i>cemented in</i>		

SHOW
 LOCATION IN
 SECTION PLAT
 NW SE NW
 (permit)

16. Size Hole below casing: 5 in.
 17. Static level 17 1/2 ft. below casing top which is _____ ft.
 above ground level. Pumping level _____ ft. when pumping at _____
 gpm for _____ hours. Sub. pump set at 152' TOP

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
Drift	0	40
Lime	40	200

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED Wehling Well Works, Inc. DATE 10-25-75
Wendell E. Wehling
 COUNTY No. 75059

COOK 9-35N-14E

STATE OFFICE BUILDING, SPRINGFIELD,
AL / WATER SURVEYS SECTION. BE SURE TO

GEOLOGICAL AND WATER SURVEYS WELL RECORD
Completed 2-25-74

10. Property owner Roger Engelsen Well No. _____
 Address 750 Hallsbrook Rd Glenwood Ill.
 Driller K&B Well Drilling License No. 102-39
 11. Permit No. 27717 Date Feb 20, 1974
 12. Water from Limestone 13. County Cook
 Formation
 at depth 35 to 170 ft. Sec. 9
 14. Screen: Diam. _____ in. Twp. 35N
 Length: _____ ft. Slot _____ Rge. 14E
 Elev. _____

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
5"	Black 15lbs.	0	41

SHOW LOCATION IN SECTION PLAT SE NW NW (permit)

16. Size Hole below casing: 5 in.
 17. Static level 35 ft. below casing top which is 2 ft. above ground level. Pumping level 63 ft. when pumping at 20 gpm for 4 hours. Submersible pump set at 63'.

18. FORMATIONS PASSED THROUGH	THICKNESS TOP	DEPTH OF BOTTOM
<u>Overburden</u>	<u>0</u>	<u>41</u>
<u>Rock Formation</u>	<u>41</u>	<u>170</u>

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED Paul Krimer DATE 2/26/74

COUNTY No. 24674

COOK

9-35N-14E

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner Galderio, Michael Well No. _____
 Address 90 N. St. Park Forest IL
 Driller Wehling, Richard H. License No. 102-2235

11. Permit No. 031-00068-91 Date 05/09/91

12. Water from Limestone 13. County Cook
 at depth 38 to 220 ft.

14. Screen: Diam. _____ in. Sec. 9
 Length: _____ ft. Slot _____ Rge. 14 E
 Elev. _____



15. Casing and Liner Pipe SE SE SE

Diam. (in.)	Kind and Weight	From (ft)	To (ft)
5	GALVANIZED	-2	33

16. Size hole below casing: 5 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
clay & gravel	21	21
sand & gravel	12	33
lime	187	220

Household - Private

Cook 12-031-30299-00 09-35N-14E

GEOLOGICAL AND WATER SURVEYS WELL RECORD

Property owner Johnson, Mrs. Well No. _____
 Address 445 E. 168th Place South Holland IL
 Well address 19505 S. Halsted Chicago Heights, IL
 Lot _____ Subd _____ ISWS PH 33964B
 Driller Walters, Larry License No. 102-3894
 Permit No. 031-00089-01 Date 07/25/2001
 Water from rock County Cook
 at depth 42 to 400 ft. Sec. 9
 Screen: Diam. _____ in. Twp. 35 N
 Length: _____ ft. Slot _____ Rge. 14 E
 Elev. _____

Casing and Liner Pipe NW NW SW

Diam. (in.)	Kind and Weight	From (ft)	To (ft)
5	BLACK STEEL	-1	42

Size hole below casing: _____ in.
 Static level 30 ft. below casing top which is 1 ft.
 above ground level. Pumping level 378 ft. when pumping at 8
 gpm for 4 hours.

Formations passed through	Thickness	Bottom
topsoil	2	2
clay	6	8
sand gravel	18	26
rock	374	400

Household - Private

Cook 12-031-33665-00 9-35N-14E

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner Jones, Charles Well No. _____
 Address 404 Coale Rd. Chicago Heights IL
 Driller Sharpe, Franklin N. License No. 102-1773
 11. Permit No. 116359 Date 01/11/85
 12. Water from limestone 13. County Cook
 at depth 40 to 150 ft. Sec. 9
 14. Screen: Diam. _____ in. Twp. 35 N
 Length: _____ ft. Slot _____ Rge. 14 E
 Elev. _____



15. Casing and Liner Pipe 207' N 80' E SWc NE NW SW

Diam. (in.)	Kind and Weight	From (ft)	To (ft)
5	ASTM A53 B	0	40

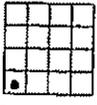
16. Size hole below casing: 4.75 in.
 17. Static level _____ ft. below casing top which is _____ ft.
 above ground level. Pumping level _____ ft. when pumping at _____
 gpm for _____ hours.

18. Formations passed through	Thickness	Bottom
clay	18	18
sand	8	26
broken rock	4	30
limestone	120	150

Cook ⁶³⁰ 12-031-26830-00 09-35N-14E

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner Knaack, Fredrick Well No. _____
 Address R.R.#2 Box #154 Chicago Heights IL
 Driller Wehling, Wendell E. License No. 102-0023
 11. Permit No. 118851 Date 07/08/85
 12. Water from _____ 13. County Cook
 at depth _____ to _____ ft. Sec. 9
 14. Screen: Diam. _____ in. Twp. 35 N
 Length: _____ ft. Slot _____ Rge. 14 E
 Elev. _____



15. Casing and Liner Pipe 110' N 200' E SWc

Diam. (in.)	Kind and Weight	From (ft)	To (ft)
5	GALVANIZED	0	37

16. Size hole below casing: 4.87 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
clay	37	37
lime	223	260

LI 630
 Cook 12-031-27073-00 09-35N-14E

GEOLOGICAL AND WATER SURVEYS WELL RECORD

Property owner Link, James Well No. _____
 Address 921 W. 193rd Place Chicago Hts. IL
 Well address 19507 Halsted St. Chicago Heights, IL
 Lot 9 Subd Glen View ISWS P# 345090
 Driller Sharpe, Franklin N. License No. 102-1773
 Permit No. 031-00024-02 Date 02/13/2002
 Water from limestone County Cook
 at depth 41 to 400 ft. Sec. 9
 Screen: Diam. _____ in. Twp. 35 N
 Length: _____ ft. Slot _____ Rge. 14 E
 Elev. _____

Casing and Liner Pipe NW NW SW

Diam. (in.)	Kind and Weight	From (ft)	To (ft)
5	STEEL ASTM A53B	-1	41

Size hole below casing: _____ in.
 Static level 20 ft. below casing top which is 1 ft.
 above ground level. Pumping level 250 ft. when pumping at 2
 gpm for 2 hours.

Formations passed through	Thickness	Bottom
clay	16	16
sand/gravel	10	26
limestone	374	400

Household - Private

Cook 12-031-34006-00 9-35N-14E

Page 1 ILLINOIS GEOLOGICAL SURVEY, URBANA

Strata	Thickness	Top	Bottom
Top soil		0	5
Clay, yellow		5	15
Clay, blue		15	20
Mud and gravel		20	30
Sand and gravel		30	35
Grey lime, hard		35	55
Grey lime, soft		55	65
Grey lime hard		65	80
Lime grey		80	105
Grey lime, soft		105	145
Grey lime, hard		145	190
Lime, light grey, soft		190	195
Lime, light grey hard		195	220
			TD

Size of well: 12", surface to 220'

Casing: 12" ID, 0' to 38'

Main supply at 150-220'

Static level: 10'

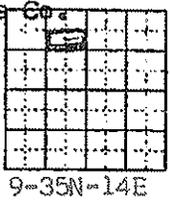
Draw-down: 38'

Yields: 350 gallons per minute.

S. S. #34315

*Future Eastern Division Headquarters,
Glenwood, Illinois.

COMPANY (Wehling Well Works) Northern Ill. Gas Co.
 FIRM * Northern Ill. Gas Co. NO. 1
 DATE DRILLED July 1959 COUNTY NO. 280
 AUTHORITY Wehling Well Works
 ELEVATION 630' E.T.M.
 LOCATION S/2 NE NW
 COUNTY COOK



Strata	Thickness	Top	Bottom
Joliet formation Dolomite, partly silty at top, light buff to light gray, very fine, crystalline	20		220 TD

Kehling Well Works) Northern Ill. Gas Co. No. 111. Gas Co. #1
COUNTY COOK S.S.#34315 9-35N-14E

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner Schavocky, John Well No. _____

Address 771 Coale Rd. Chicago Heights IL

Driller Sharpe, Franklin W. License No. 102-1773

11. Permit No. 031-00029-96 Date 03/06/96

12. Water from Limestone 13. County Cook

at depth 41 to 400 ft. Sec. 9

14. Screen: Diam. _____ in. Twp. 35 N

Length: _____ ft. Slot _____ Rge. 14 E

Elev. _____



15. Casing and Liner Pipe SE NW SW

Diam. (in.)	Kind and Weight	From (ft)	To (ft)
5	ASTM A53B STEEL	-1	41

16. Size hole below casing: 5 in.

17. Static level 15 ft. below casing top which is 0 ft. above ground level. Pumping level 200 ft. when pumping at 8 gpm for 2 hours.

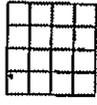
18. Formations passed through	Thickness	Bottom
clay	18	18
sand & gravel	9	27
limestone	373	400

Household - Private

Cook 12-031-31890-00 09-35N-14E

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner Selvaggio, Randy Well No. _____
 Address R. R. #2 Box 102 Chicago Heights IL
 Driller Sharpe, Franklin N. License No. 102-1773
 11. Permit No. 122099 Date 01/27/86
 12. Water from Limestone 13. County Cook
 at depth 40 to 240 ft.
 14. Screen: Diam. _____ in. Sec. 9
 Length: _____ ft. Slot _____ Rge. 14 E
 Elev. _____



15. Casing and Liner Pipe NW SW SW

Diam. (in.)	Kind and Weight	From (ft)	To (ft)
5	ASTM A53B	0	41

16. Size hole below casing: 4.75 in.
 17. Static level _____ ft. below casing top which is _____ ft. above ground level. Pumping level _____ ft. when pumping at 8 gpm for _____ hours.

18. Formations passed through	Thickness	Bottom
clay	15	15
sand	15	30
gravel	10	40
limestone	300	340

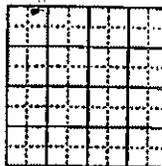


ILLINOIS GEOLOGICAL SURVEY, URBANA

Strata	Thickness	Top	Bottom
<p>Samples from 0-355'</p> <p>S.S. # 44767</p> <p>Received October 1, 1963</p>			

COMPANY Wehling Well Works
 FIRM Skyline Pool Assoc.

NO. 1
 COUNTY NO. 32850



DATE DRILLED
 AUTHORITY
 ELEVATION
 LOCATION
 COUNTY

60' N Line, 700' W Line of NW
 COOK

9-35N-14E

Town Chicago Heights Township

Bloom

Map No. 28

Company H. McCaskey

No.

R. 14E

Farm Webb, Harry

No.

T.

Sec.

Authority H. McCaskey

35N

9

Elevation

Collector

SW

Confidential

Date Drilled July 1941

No.	Co #	Strata	Thickness		Depth	
			Feet	In.	Feet	In.
	1821	Lot 12, Glenview Subd.				
		Soil and yellow clay	10		10	
		Clay, soft, blue	9		19	
		Clay, hard, blue mixed with gravel	5		24	
		Quicksand	4		28	
		Gravel	3		31	
		Hardpan, yellow	1		32	
		Limerock	38		70	

NO ENVELOPE

~~ORIGINAL FILED~~

COUNTY Cook

INDEX NO. 2808

DRILL RECORD

9-35N-14E

(A32187-20M)

ILLINOIS GEOLOGICAL SURVEY, URBANA

(10-40)



GEOLOGICAL AND WATER SURVEYS WELL RECORD

Property Owner Catholic Cemeteries **Well # 2**
 Address 1400 S. Wolf Rd. Hillside, IL
 Well Address 19500 Cottage Grove Ave. Glenwood, IL
 Subd Lot ISWS # 463666
 Driller Wehling, Richard W. License # 102-3589
 Permit # 031-016-11 Date 08/29/2011
 Water From rock Sec. 10
 At Depth 270' To Twp. 35N
 Screen: Diam. Rng. 14E
 Length Slot Elev.



SE NE SE

Casing and Liner Pipe PMT Verifd

Diameter	Kind & Weight	From	To
6"	GALV. STEEL	-2'	45'

Static level ' below casing top which is ' above ground level.

Pumping level ' when pumping at gpm for hours.

Sample Set # 70129 (0' - 270')

Formations Passed Through	Top	Bottom
black dirt	0'	2'
clay	2'	45'
rock	45'	270'
shale at	270'	270'

Water Well for Commercial Operation Total Depth 270'
 Cook 12-031-36018-00 10 - 35N - 14E

STATE OFFICE BUILDING, SPRINGFIELD,
IL / WATER SURVEYS SECTION. BE SURE TO

GEOLOGICAL AND WATER SURVEYS WELL RECORD

Thomas Crawford Completed 11-5-71
10. Property owner Rev. T. Crawford Well No. 1
Address Box 333, Glenwood, Ill. 60425
Driller Wehling Well Works, Inc. license No. 92-56
11. Permit No. 15191 Date Oct. 29, 1971
12. Water from _____ 13. County Cook

Formation
at depth _____ to _____ ft. Sec. 10
14. Screen: Diam. _____ in. Twp. 35N
Length: _____ ft. Slot _____ Rge. 14E
50'S 350'E NWc SW NW NE Elev. _____

	*	

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
5"		0	52

SHOW LOCATION IN SECTION PLAT
50' NL, 350' WL,
SW NW NE
(Permit)

16. Size Hole below casing: 1-7/8" in.
17. Static level 2 1/2 ft. below casing top which is _____ ft. above ground level. Pumping level 28 ft. when pumping at 15 gpm for 3 hours.

18. FORMATIONS PASSED THROUGH

FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
Clay	36	36
lime	99	135

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED Wehling Well Works, Inc. DATE 10-10-71

COUNTY No. 1473

u
620
COOK

10-35N-14E

ILLINOIS GEOLOGICAL SURVEY, URBANA

	Thickness	Top	Bottom
Clay	33		33
Mud & gravel	11		44
Lime	429		473
Shale	207		680
Lime	332		1012
Sand	121		1133
Shale	10		1143
Lime	373		1516
Lime & shale	91		1607
Lime	23		1630
Sand	139		1769
Lime	6		1775
Lime & sand	7		1782
Lime	3		1785
			TD

Casing: 20" 0'-56 1/2' 16" 0'-690' cemented in
12" 1094'-1153'

Hole size: 20" 56 1/2' 19" 694'
15" 1153' 12" 1785'

Static level: 450'

Pumping level: 620' when pumping at 580 gpm
for 24 hrs. Drawdown - 170'

S.S. #56581

COMPANY Wehling Well Works, Inc.
 TOWN Village of Glenwood NO. 5
 DATE DRILLED 1969 COUNTY NO. 958
 AUTHORITY Company
 ELEVATION 627' ± TM
 LOCATION 943' N line, 405' E line, NE
 COUNTY COOK

10-35N-14E

ILLINOIS GEOLOGICAL SURVEY, URBANA

	Thickness	Top	Bottom
<p>Sample Study by Anne M. Graese The Maquoketa Group only Studied in Detail 10-17-80</p> <p>ILURIAN SYSTEM</p> <p>Dolomite - yellowish gray (5Y 8/1) to light olive gray (5Y 6/1), very fine to fine grained, calcareous, pure; trace chert - very light gray (N8)</p> <p>Dolomite - light olive gray (5Y 6/1), mottled with olive gray (5Y 4/1) and dark gray (N3), very fine to fine grained, calcareous, pyritic, argillaceous</p> <p>Dolomite (90%) - light olive gray (5Y 6/1) to medium dark gray (N4), some mottled and speckled with dark gray (N3), argillaceous; shale (10%) - light olive gray (5Y 6/1), weak</p> <p>Brainard Shale</p> <p>Shale (60%) - light olive gray (5Y 6/1) to olive gray (5Y 4/1), weak, silty, some calcareous; dolomite (40%) - dark greenish gray (5GY 4/1) to dark gray (N3), silty, calcareous</p>			
		455	460
		460	465
		465	470
		470	480

COMPANY Wehling Well Works, Inc.
 NAME Village of Glenwood NO. 5
 DATE DRILLED 1969 COUNTY NO. 958
 AUTHORITY A.M. Graese
 ELEVATION 627'± TM
 LOCATION 943'N line, 405'E line, NE
 COUNTY COOK S.S. #56581



10-35N-14E

	Thickness	Top	Bottom
Shale (60%) - light greenish gray (5GY 8/1) to greenish gray (5GY 6/1), silty calcareous; dolomite (40%) - same as above		480	485
Shale (80%) - greenish gray (5GY 6/1) to dark greenish gray (5GY 4/1), silty, weak; dolomite (20%) - same as above		485	490
Shale (60%) - greenish gray (5GY 6/1) to dark greenish gray, silty, weak; dolomite (20%) - same as above		490	495
Dolomite (60%) - same as above; shale (40%) - same as above, some light greenish gray, silty		495	500
Dolomite (90%) - same as above; shale (10%) - same as above		500	505
Dolomite (80%) - same as above; shale (20%) - light olive gray (5Y 6/1) to greenish gray (5GY 6/1), silty		505	510
Dolomite (80%) - same as above; shale (20%) - same as above		510	525
Fort Atkinson Limestone			
Dolomite - yellowish gray (5Y 8/1) to light olive gray (5Y 6/1), mottled and speckled with medium dark gray (N4) to dark gray (N3), coarse grained, calcareous, some pyritic, fossiliferous (crinoids); trace shale - same as above, slightly calcareous		525	530

	Thickness	Top	Bottom
Dolomite (95%) - same as above; shale (5%) - same as above; trace greenish gray (5GY 6/1) dolomite - probably caved		530	535
Shale (60%) - light olive gray (5Y 6/1), silty; dolomite (40%) - same as above		535	540
Dolomite (80%) - same; shale (20%) - same		540	545
Dolomite (60%) - light olive gray (5Y 6/1) to olive gray (5Y 4/1) to medium gray (N5) mottled with dark gray, slightly argillaceous to argillaceous, pyritic, fossiliferous (bryozoans, crinoids); shale (40%) - yellowish gray (5Y 8/1) to light olive gray (5Y 6/1), silty		545	550
Dolomite - yellowish gray (5Y 8/1) mottled with light olive gray (5Y 6/1), olive gray (5Y 4/1) and dark gray (N3), pyritic, fossiliferous (bryozoans, brachiopods) calcareous		550	560
Dolomite (90%) - olive gray (5Y 4/1) mottled with olive gray (5Y 4/1), some pyritic, fine grained, calcareous; shale (10%) - olive gray (5Y 4/1) and light olive gray (5Y 4/1), silty		560	565
Dolomite (95%) - same as above; shale (5%) - same as above		565	570

Wehling Well Works, Inc. Village of Glenwood #5
 COUNTY COOK S.S. #56581 10-35N-14E

	Thickness	Top	Bottom
Dolomite (90%) - same as above; shale (10%) - light olive gray (5Y 6/1) to olive gray (5Y 4/1), silty		570	575
Dolomite (80%) - same as above; shale (20%) - same as above		575	580
Scales Shale			
Shale (80%) - light olive gray (5Y 6/1) to olive gray (5Y 4/1), silty, weak; dolomite (20%) - same as above		580	585
Shale - light olive gray (5Y 6/1) to olive gray (5Y 4/1), weak to mod- erate hard, silty		585	590
Shale (80%) - same as above; trace greenish gray (5GY 6/1); dolomite (20%), similar to above, may be caved		590	610
Shale (95%) - same as above; dolomite (5%) - same as above		610	615
Dolomite (70%) olive gray (5Y 4/1), very fine to fine grained, very argillaceous; shale (30%) - light olive gray (5Y 6/1) to olive gray (5Y 4/1), weak		615	620
Shale - olive gray (5Y 4/1), weak to moderately hard; trace dolomite- same as above		620	630
Shale (60%) - same as above; dolo- mite (40%) - olive gray (5Y 4/1),			

JUNTY Wehling Well Works, Inc. Village of Glenwood #5
COOK S.S. #56581 10-35N-14E

	Thickness	Top	Bottom
very argillaceous, very fine to fine grained		630	635
Shale - same as above; trace dolomite - same as above		635	655
Shale - light olive gray (5Y 6/1), olive gray (5Y 4/1) to olive black (5Y 2/1), weak to tough; trace sandstone - olive gray, fine grained, argillaceous (caved?); trace dolomite - greenish gray (5GY 6/1) to dark greenish gray (5GY 4/1), very fine grained, silty (caved?)		655	660
Shale - light olive gray (5Y 6/1) to greenish gray (5GY 6/1), silty, weak		660	665
Shale - light olive gray (5Y 6/1) to greenish gray (5GY 6/1), weak; trace dolomite - greenish gray (5GY 6/1)		665	680
Shale - olive gray (5Y 4/1) to olive black (5Y 2/1)		680	683
Galena Group			
Dolomite - pale yellowish brown to dark yellowish brown (10YR 4/2) medium grained, relatively pure to slightly argillaceous, pyritic		683	695

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner Glenwoodie Golf & Country Club Well No. _____
 Address 193rd & State St. Glenwood IL
 Driller Wehling, Wendell License No. 102-0023

11. Permit No. 131711 Date 05/14/87

12. Water from _____ 13. County Cook
 at depth _____ to _____ ft.

14. Screen: Diam. _____ in. Sec. 10
 Length: _____ ft. Slot _____ Twp. 35 N
 Rge. 14 E
 Elev. _____



15. Casing and Liner Pipe 35° N 150° W SEC SW NE SW

Diam. (in.)	Kind and Weight	From (ft)	To (ft)
12	BLACK STEEL	1	54

16. Size hole below casing: 11.87 in.

17. Static level 14 ft. below casing top which is 1 ft. above ground level. Pumping level 133 ft. when pumping at 400 gpm for 16 hours.

18. Formations passed through	Thickness	Bottom
clay and gravel	47	47
clay and boulders	3	50
broken lime	140	190
lime - grey & white	210	400
lime	65	465
shale	10	475
<u>SS # 66731 (0-475')</u>		

W 670

Cook 12-031-28080-00 10-35N-14E



TOWN **Glenwood** TOWNSHIP
 COMPANY **Gray Well Drilling Co.**
 FARM **Glenwoodie Country Club** No. 1
 AUTHORITY **E.H. Smith driller** No. 1
 ELEVATION **629 T.M.**
 COLLECTOR _____ DATE DRILLED _____
 CONFIDENTIAL

Map No. **28**
 R. **14E**



2600' N. line, 1550' W. line

No.	Co# 1322 STRATA	Thickness		Depth	
		Feet	In.	Feet	In.
1	Drift - clay, gray	5		5	
2	Same	5		10	
3	Same	5		15	
4	Clay, gray, dolomitic	5		20	
5	Devonian - dolomite, gray and brown, very pyritic mixed with much sand	5		25	
6	Dolomite, gray to light gray, some brown	5		30	
7	Shale, blue, hard, with dolomite like above and sand	5		35	
8	Same	5		40	
9	Dolomite, dark gray to light gray; white chert	5		45	
0	Same	5		50	
1	Dolomite, dark gray and some brown	5		55	
2	Same with considerable sand	5		60	
3	Dolomite, dark slate-gray	5		65	
4	Same	5		70	
5	Same	5		75	
6	Same	5		80	
7	Unlabeled. Same, lighter gray	5		85	
8	Dolomite, light gray	5		90	
9	Dolomite, gray and light gray	5		95	

County **Cook**
 R.—DRILL RECORD

Index No. **2810**
10-35N-14E



SHEET 2 T. 35 R. 14E S. 10
 COMPANY Gray Well Drilling Co HOLE NO. 1

No.	STRATA	Thickness		Depth
		Feet	In.	Feet
20	Same as above	5		100
21	Dolomite, slate-gray	5		105
22	Same	5		110
23	Same	5		115
24	Dolomite, light gray, some darker spots	5		120
25	Dolomite, slate-gray	5		125
26	Same	5		130
27	Same with some lighter gray	5		135
28	Same as above	5		140
29	Same	5		145
30	Dolomite, slate-gray	5		150
31	Same	5		155
32	Label detached - dolomite, light and dark gray	5		160
33	Marked 150-155. Dolomite, very light gray	5		165
34	Dolomite, gray and slate-gray	5		170
35	Dolomite, slate gray	5		175
36	Same	5		180
37	Dolomite, light gray and darker slaty gray	5		185
38	Niagara - dolomite, light gray, much pyrite	5		190
39	Dolomite, light and dark gray	5		195
40	Same, some pyrite	5		200
41	Missing, see No. 17	5		205
42	Dolomite, light gray and dark gray	5		210
43	Dolomite, gray, small bright green spots	5		215

Cook

County
 T.—DRILL RECORD

Index No. 2810

10-35N-14E



SHEET 3 T. 35 R. 14E S. 10
 COMPANY Gray Well Drilling Co. HOLE NO. 1

No.	STRATA	Thickness		Depth	
		Feet	in.	Feet	in.
44	Dolomite, light gray and gray	5		220	
45	Dolomite, light gray, bright green spots	5		225	
46	Dolomite, light gray and gray	5		230	
47	Dolomite, light gray	5		235	
48	Dolomite, slate-gray, and gray	5		240	
49	Dolomite, light gray	5		245	
49A	Marked: last run (?)				
	Dolomite, slate-gray	5		245	
50	Dolomite, light gray	5		250	
51	Same	5		255	
52	Same	5		260	
53	Same	5		265	
54	Same	4		269	

- F. T. Thwaites

Hole size: December 2, 1926.

0-47'6", not stated

47'6"-269', 15"

47'6" of 15 1/2" casing

County Cook
 T.—DRILL RECORD

Index No. 2810

10-35N-14E

Town **Glenwood** Township
 Company **Gray Well Drlg. Co.** No.
 Farm **Glenwoodie Country Club** No. **1** T. **35N** Map No. **28**
 Authority **35N** R. **14E** Sec **10**
 Elevation **629 T. M.**
 Collector
 Confidential Date Drilled **1926**
2600' N. line, 1550' W. line

No.	Strata	Thickness		Depth	
		Feet	In.	Feet	In.
<i>Co⁴ 1822</i>					
	From sample study with interpretations by A. C. Mason				
	PLEISTOCENE SYSTEM				
	Glacial drift, pebbly clay	20		20	
	SILURIAN SYSTEM (?)				
	Dolomite	10		30	
	Shale	10		40	
	Dolomite	229		269	
	A 15" hole to bottom is reported below 47'6" of 15 1/2" casing.				

*u
630*

COUNTY **Cook** INDEX NO. **2810**
 DRILL RECORD

(12880-20M) ILLINOIS GEOLOGICAL SURVEY, URBANA **10-35N-14E** (12-41) 

TOWN **Glenwood** TOWNSHIP
 COMPANY **L. M. Gray, Jr. Co.**
 FARM **Glenwoodie Country Club #1**

Map No. **28**

R. **14E**

AUTHORITY
 ELEVATION **629 T.M.** 35 N

10
 2600' N

COLLECTOR DATE DRILLED

line,

CONFIDENTIAL Restudied by L. E.

1550' W

orkman May 1930

line

No.	STRATA	Thickness		Depth	
		Feet	In.	Feet	In.
	PLEISTOCENE				
	Till, yellow, weathered	15		15	
	Till, dolomitic, sandy yellow	5		20	
	Gravel, composed mostly of dolomite and siltstone	10		30	
	Till, dolomitic, pebbly, brownish gray	10		40	
	CHICAGO (?)				
	Dolomite, argillaceous, silty, partly sandy, green-gray to gray	5		45	
	Siltstone, dolomitic, argillaceous, green-gray; dolomite, white, very finely crystalline	5		50	
	Siltstone, dolomitic, argillaceous, green-gray; dolomite, stony , brown, very fine <i>silty</i>	5		55	
	Siltstone, dolomitic, argillaceous, green-gray to gray	20		75	
	Siltstone, dolomitic, argillaceous, part sandy, buff-gray and green-gray	10		85	
	Dolomite, argillaceous, silty, light gray and green-gray	15		100	
	Siltstone, dolomitic, argillaceous, gray	30		130	

County **Cook**

Index No.

T.—DRILL RECORD

Summary Sample Set #624 **2810** **10-35N-14E**

Illinois Geological Survey, Urbana.

SHEET 2
 COMPANY L.M. Gray, Jr. Co.
 FARM Glenwoodie Country Club
 35 N R. 14 E S. 10
 HOLE NO. 1

No.	STRATA	Thickness		Depth	
		Feet	In.	Feet	In.
	Siltstone, dolomitic, argillaceous, gray, grading to dolomite, argillaceous, brown-gray, very fine	10		140	
	Siltstone, dolomitic, argillaceous, gray	10		150	
	Siltstone, dolomitic, argillaceous, gray, grading to dolomite, gray , light gray, very fine	10		160	
	No sample	5		165	
	Siltstone, dolomitic, argillaceous, light green-gray, and dark gray gray	5		170	
	Siltstone, dolomitic, argillaceous, gray and light green, pyritic	30		200	
	No sample	5		205	
	Siltstone, dolomitic, argillaceous, gray, grading to dolomite, light buff, very fine, pyritic	5		210	
	Siltstone, dolomitic, argillaceous, green-gray	10		220	
	Dolomite, silty , light gray, very fine	10		230	
	Dolomite, silty , light buff-gray, very fine	5		235	
	Dolomite, silty , light brown and green gray, very fine, pyritic	5		240	

County Cook
 T.—DRILL RECORD
 27091—4M—11—29) 2
 Summary Sample Set #624
 Index No. 2810
 10-35N-14E

SHEET 3
 COMPANY
 FARM Glenwoodie Country Club
 HOLE NO. 1
 HOLE NO. 1

No.	STRATA	Thickness		Depth	
		Feet	in.	Feet	in.
	PORT BYRON Dolomite, light gray, very finely crystalline, compact Size hole: 0-47'6", not stated 47'6" - 269, 15" hole 47'6" of 15½" casing	29		269	

County **Cook**

T.-DRILL RECORD

27091-4M-11-29) 2

Index No. ○

Summary Sample Set #624 *2810*
 10-35N-14E



TOWN Glenwood TOWNSHIP
 COMPANY Gray Well Drilling Co.
 FARM Glenwoodie Country No. 2
 AUTHORITY Club No. 2
 ELEVATION 630 T.M.
 COLLECTOR _____ DATE DRILLED _____
 CONFIDENTIAL

Map No. 28

R.		<u>14 E</u>	
T.			Sec.
			<u>10</u>

100' S. line, 2600' W. line

No.	Co # <u>1823</u> STRATA	Thickness		Depth	
		Feet	In.	Feet	In.
	Drift				
	Clay, dark gray to light gray, stained yellow in part	5		5	
	Clay, light buff, dolomitic	5		10	
	Same	15		15	
	Same	5		20	
	Clay, gray, dolomitic	5		25	
	Dolomite, light gray with bluish gray spots much pyrite	5		30	
	Dolomite, slate-gray, shaly	5		35	
	Same	5		40	
	Same	5		45	
	Same	5		50	
	Dolomite, slate-gray, and light gray	5		55	
	Same	5		60	
	Same	5		65	
	Dolomite, slate-gray, shaly	5		70	
	Devonian Dolomite, gray	5		75	
	Dolomite, light slate-gray	5		80	
	Same	5		85	
	Dolomite like above and light gray mixed	5		90	

County Cook

MF

Index No. 2810

T.—DRILL RECORD

SS 625 630

10-35N-14E

(72959-321-8-2)



SHEET 2
 COMPANY Gray Well Drilling Co
 T. 35 N R. 14 E S. 10
 HOLE NO. 2
 ARM Glenwoodie Country Club

No.	STRATA	Thickness		Depth	
		Feet	In.	Feet	In.
	Same	5		95	
	Dolomite, slate-gray, shaly	5		100	
	Same	5		105	
	Same	5		110	
	Same	5		115	
	Same	5		120	
	Same	5		125	
	Dolomite, light gray and gray	5		130	
	Dolomite, slate-gray, shaly	5		135	
	Same	5		140	
	Same	5		145	
	Dolomite, light slaty gray and gray	5		150	
	Same	5		155	
	Dolomite, slaty gray, shaly	5		160	
	Dolomite, light gray	5		165	
	Dolomite, slight slaty gray	5		170	
	Same	5		175	
	Same	5		180	
	Same	5		185	
	Like above with some light gray	5		190	
	<u>Niagara</u> - dolomite, light gray	5		195	
	Dolomite, light gray to gray, darker spots	5		200	
	Dolomite, light gray	5		205	
	Same	5		210	
	Dolomite, light gray, some darker gray	5		215	

County Cook
 T.—DRILL RECORD
 72960—2M—8-27)

MF
 SS 625

Index No. 2810

10-35N-14E



HEET 3
OMPANY T. 35 N.R. 14 R. 10
ARM Gray Well Drilling Co. HOLE NO. 10
 Glenwoodie Country Club HOLE NO. 2

No.	STRATA	Thickness		Depth	
		Feet	In.	Feet	In.
	Dolomite, light gray and light greenish gray, some darker gray	5		220	
	Same	5		225	
	<i>3 1/2" 12" casing</i> <i>33'2" to 225 - 12" hole</i>				

County **Cook**
 T.—DRILL RECORD
 (72960—2M—8-27)

MF
59 625

Index No. **2810**

10-35N-14E

Town **Glenwood** Township
 Company **Gray Well Drig. Co.** No.
 Farm **Glenwoodie Country Club** No. **2** T.
 Authority **35N** Se
 Elevation **630 T. M.** 10

Map No. **28**
 R. **14E**

Collector
 Confidential Date Drilled
100' S. line, 2600' W. line

No.	Co # 1829 Strata	Thickness		Depth	
		Feet	In.	Feet	In.
	From sample study with interpretations by A. C. Mason				
	PLEISTOCENE SYSTEM				
	Glacial drift; pebbly clay	30		30	
	SILURIAN SYSTEM (?)				
	Dolomite	195		225	
	A 12" hole to bottom is reported below 33'2" of 12" casing.				

COUNTY **Cook** INDEX NO. **2810**

DRILL RECORD

(12880-20M)

ILLINOIS GEOLOGICAL SURVEY, URBANA

10-35N-14E

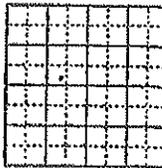
(12-41)

2

ILLINOIS GEOLOGICAL SURVEY, URBANA

Strata	Thickness	Top	Bottom
Top Soil	1	0	1
Yellow clay	8	1	9
Fine reddish sand	18	9	27
Gray gravelly clay	5	27	32
Broken lime (blue-gray)	6	32	38
Blue gray lime	13	38	51
Gray shaley lime	9	51	60
Blue gray lime	14	60	74
Gray shaley lime	82	74	156
Gray and brown lime	13	156	169
Gray lime	28	169	197
Green and light gray lime	6	197	203
Green shale	3	203	206
Light gray shaley lime	4	206	210
Gray, green and brown lime, some shale	28	210	238
Light gray lime	32	238	270
Brown and gray lime	19	270	289
Light gray lime	62	289	351
			TD
hole size 12" 0-351'			
Casing: 12" 0-39'			
Static water level 18'			
Drawdown water level 242' at 292 gallons			
per minute for 7½ hours.			
S.S. #46799			
Received from Naperville office			
in envelope.			

COMPANY Layne-Western
 FARM Glenwoodie Country Club NO. 3
 DATE DRILLED May 1963 COUNTY NO. 160
 AUTHORITY
 ELEVATION 628'
 LOCATION 2440' N Line, 1920' W Line of NW
 COUNTY COOK



10-35M-14E

LOG OF WATER WELL

Property owner Lawrence Murphy Well No. 271

Drilled by E. L. Hebling Year 1950

Formations passed through	Thick-ness	Depth of Bottom
<u>Glacial Drift</u>	<u>58 1/2</u>	
<u>Drilled in Rock</u>	<u>93 5/8</u>	<u>152</u>

COUNTY No. (824)

Finished in 93 5/8' of rock at 58 1/2 to 152 ft.

Cased with 6 inch galv. well casing from 0 to 58 1/8 ft.
and _____ inch from _____ to _____ ft.

Size hole below casing 5 7/8 inch. Static level from surf. 19 ft.

Tested capacity _____ gal. per min. Temperature 52 °F.

Water lowered to _____ ft. _____ in. in _____ hrs. _____ min.

Length of test 3 hrs. _____ min. Screen _____

Slot _____ Diam. _____ Leng.h _____ Bottom set at _____ ft.

[Show location in Section Plat]

Township name _____ Elev. _____ Sec. 10

Description of location Part lying So. of C. of Glenwood Twp. 35N

Super Rd. of E 1/2 of N 1/2 of NE 1/4 of Sec 10 Rge. 14E

Signed E. L. Hebling County Franklin

Copy for Illinois State Geological Survey Index: 10-35N-14E

TOWN **Glenwood** TOWNSHIP
 COMPANY **R. Hemingway** No.
 FARM **Henry Bilton** No. T
 AUTHORITY **R. Hemingway, driller 35N**
 ELEVATION
 COLLECTOR **S. E. Ekblaw** DATE DRILLED
 CONFIDENTIAL

Map No. **28**
 R. ~~19E~~
~~14E~~ Sec. **3**



No.	STRATA	Thickness		Depth	
		Feet	In.	Feet	In.
Co# 1785					
	Depth Plenty of water 4 1/2" well 32' casing Static level 14'			75	10
	NO ENVELOPE				
	ORIGINAL FILED				

County **Cook**
 F.—DRILL RECORD

Index No. **2803**

Town **Glenwood** Township **Bloom** Map No. **28**
 Company **Richard Hemingway** No. **R. 14E**
 Farm **Blakmore, James** No. **T.** Sec **3**
 Authority **Richard Hemingway, Glenwood 35**
 Elevation **626 top. map** N
 Collector
 Confidential Date Drilled **March, 1940**
80' S. line, 660' E. line of SW

C.	Co # 1786	Strata	Thickness		Depth	
			Feet	In.	Feet	In.
		Sand	5		5	
		Yellow clay	10		15	
		Blue clay	10		25	
		Soft mud and gravel	10		35	
		Caving sand, gravels and boulder	25		60	
		Flinty rock	10		70	
		Soft bluish rock	30		100	
		White softrock, water bearing	10		110	
		Well tested at 500 g.p.h. with 18" draw down.				
		Water head 22' from top of ground.				
		NO ENVELOPE				
		ORIGINAL FILED				

COUNTY **Cook**
 DRILL RECORD

INDEX NO. **2803**

3-35N-14E

(A32187-20M)

ILLINOIS GEOLOGICAL SURVEY, URBANA

(10-40)  2

TOWN **Glenwood** TOWNSHIP
 COMPANY **R. Hemingway** No.
 FARM **Geo. Brooks** No.
 AUTHORITY **Richard Hemingway,**
 ELEVATION **driller**
 COLLECTOR **S. E. EKBLAW** DATE DRILLED
 CONFIDENTIAL

Map No. 28
 R. 14E

T 35N Sec. 3

No.	STRATA	Thickness		Depth	
		Feet	In.	Feet	In.
Co # 1787					
	121'3" deep 4 1/2" diameter at base			121	3"
	Cased with 4 1/2 galvanized pipe to 61'				
	Static head 26'8"				
	Soft blue rock at base				
	NO ENVELOPE				
	ORIGINAL FILED				

County **Cook**
 I.—DRILL RECORD

Index No. **2803**
3-35N-14E

TOWN Glenwood TOWNSHIP



Map No. 28

COMPANY R. Hemingway

No.

R. 14E

FARM The Widow Dolan

No.

T

Sec. 3

AUTHORITY R. Hemingway, driller 35N

ELEVATION

COLLECTOR S. E. Ekblaw DATE DRILLED

CONFIDENTIAL

No.	Co # 1788 STRATA	Thickness		Depth	
		Feet	In.	Feet	In.
	Depth			81	
	Cased to 34'				
	Static level 16'				
	Hard rock at base				
	"blamed hard"				
	NO ENVELOPE				
	CONFIDENTIAL				

County **Cook**
 F.—DRILL RECORD

Index No. **2803**

LOG OF WATER WELL

K
 Property owner Glenwood Village Well No. 77
 Drilled by Edwin C. Welling Year 1946

Formations passed through	Thick-ness	Depth of Bottom
<u>Glacial drift</u>	<u>47</u>	
<u>Drilled in rock</u>	<u>103</u>	<u>150</u>
COUNTY No. 1789		

[Continue on back if necessary]
 Finished in 103' at 47 to 150 ft.
 Cased with 6 inch galv. well casing from 0 to 47 ft.
 and inch from to ft.
 Size hole below casing 5 15/16 inch. Static level from surf. 18 ft.
 Tested capacity 35 gal. per min. Temperature 52 °F.
 Water lowered to 5' drawdown in pumping min.
 Length of test 3 hrs. min. Screen 35 gal per min
 Slot Diam. Length Bottom set at ft.

[Show location in Section Plat]

Township name Elev. Sec. 3
 Description of location Lat #6 - Blk. 3 Twp. 35N
Sweet's 3rd addition to Glenwood Rge. 14E
Part of NW 1/4 of SW 1/4 of Sec 3
 Signed Edwin C. Welling County Cook

Copy for Illinois State Geological Survey Index: 3-35N-14E



TOWN Glenwood TOWNSHIP
 COMPANY Richard Hemingway No.
 FARM Dart Harvey No.
 AUTHORITY R. Hemingway
 ELEVATION
 COLLECTOR S. E. Ekblaw
 DRILLED
 CONFIDENTIAL

Map No. 28
 R. 14E

35N	T	Sec. 3

No.	STRATA	Thickness		Depth	
		Feet	In.	Feet	In.
G # 1790					
	Depth			71	8
	Diameter 4 1/2"				
	Casing 43'				
	Static level 11				
	Rock, soft 30'				
	Rock, hard at 70'				
NO ENVELOPE					
ORIGINAL FILED					

County **Cook**
 E.—DRILL RECORD

Index No. **2803**

3-35N-14E



TOWN Glenwood TOWNSHIP
 COMPANY Richard Hemingway No.
 FARM Richard Hemingway No.
 AUTHORITY R. Hemingway
 ELEVATION
 COLLECTOR S.E. Ekblaw DATE DRILLED
 CONFIDENTIAL

Map No. 28
 R. 14E

T
 35N

Sec. 3

No.	Co# 1791 STRATA	Thickness		Depth	
		Feet	In.	Feet	In.
	Drift	86		86	
	Rock	32		118	
	Static level 18'				
	Yield 10 G.P.M.				
NO ENVELOPE					
ORIGINAL FILED					

County Cook
 F.—DRILL RECORD

Index No. 2803

3-35N-14E

Town Glenwood Township Bloom Map No. 28
 Company H. McCaskey No. R. 14E
 Farm Huesman, Armand No. T. 35N
 Authority H. McCaskey Sec. 3
 Elevation 622 top. map
 Collector
 Confidential Date Drilled 1940
 NE NE NW SW

No.	Strata	Thickness		Depth	
		Feet	In.	Feet	In.
10 # 1792	Lot 5, Block 1, Sweet's Third Add.				
	Soil and yellow clay	12		12	
	Clay, blue	15		27	
	Clay, sandy, blue	6		33	
	Clay, hard, blue	5		38	
	Gravel	1		39	
	Limerock	71		110	

NO ENVELOPE

~~ORIGINAL FILED~~

COUNTY Cook INDEX NO. 2803
 DRILL RECORD
 (A32187-20M) ILLINOIS GEOLOGICAL SURVEY, URBANA 3-35N-14E
 (10-40) 

Town **Glenwood** Township **Bloom** Map No. **28**
 Company **Richard Hemingway** No. **R. 14E**
 Farm **Huesmann, Wm.** No. **35** T. **N** Sec. **3**
 Authority **Richard Hemingway** Elevation **624 top. map**

Collector
 Confidential Date Drilled **June 1940**
 Cen. NW SE SW

No.	Strata	Thickness		Depth	
		Feet	In.	Feet	In.
C_o #1793					
	Lot 9, Block 2, Franz Czarras Addn.				
	Clay, yellow	5		5	
	Clay, blue and hardpan	10		15	
	Boulders	5		20	
	Gravel and sand	15		35	
	Sand and boulders	10		45	
	Broken slabs of bed rock mixed with boulders and gravel	8		53	
	Rock, soft, blue formation full of clay seams and dry, very soft in some places	45		98	
	Enough water for the ordinary home in bottom of hole The water rose to 20 $\frac{1}{2}$ ' from the top and stood at 24' with 2" test pump working. Cased 53' with 4 $\frac{1}{2}$ " galvanized pipe with forged steel shoe and covered at top with coupling and standard pipe plug.				
	NO ENVELOPE				

ORIGINAL FILED

COUNTY **Cook**
 DRILL RECORD

INDEX NO. **2803**
3-35N-14E

(A32137-20M)

ILLINOIS GEOLOGICAL SURVEY, URBANA

(10-40)



LOG OF WATER WELL

Property owner Rolland Jones Well No. 112

Drilled by C. C. Wehling Year 1947

Formations passed through	Thick-ness	Depth of Bottom
<u>Glacial drift</u>	<u>33</u>	
<u>Drilled in Rock</u>	<u>71</u>	<u>104</u>
COUNTY No. 1794		

[Continue on back if necessary]

Finished in 71' of rock at 33 to 104 ft.

Cased with 4 inch galv. well casing from 0 to 33 ft.
and _____ inch _____ from _____ to _____ ft.

Size hole below casing 3 1/8 inch. Static level from surf. 16 ft.

Tested capacity 12 gal. per min. Temperature 54 °F.

Water lowered to 4' draw down in _____ hrs. _____ min.

Length of test 3 hrs. _____ min. Screen _____

Slot _____ Diam. _____ Length _____ Bottom set at _____ ft.

[Show location in Section Plat]

Township name Thornton Elev. _____ Sec. 3

Description of location Lot 6 in blk 4 Twp. 35N

NK Sweets subdiv of 57 1/2' 7 1/2' 7 1/2' 7 1/2' Rge. 14E

Signed C. C. Wehling County Cook

Copy for Illinois State Geological Survey Index: 3-35N-14E

Town **Glenwood** Township **Bloom** Map No. **28**
 Company **Richard Hemingway** No. **R. 14E**
 Farm **Jung, Charles** No. **T. 35** Sec. **3**
 Authority **Richard Hemingway** N
 Elevation **626 top. map**
 Collector
 Confidential Date Drilled **Oct. 1940**
NW SW SE SW

No.	Co # 1795 Strata	Thickness		Depth	
		Feet	In.	Feet	In.
	Lot 1, Blk. 10, Young & Campbell's Sub., or S. W. corner Pickens & Clark Sts.				
	Clay	20		20	
	Boulders and gravel	10		30	
	Hardpan	15		45	
	Boulders and gravel	10		55	
	Clay, boulders, gravel and sand, mixed	11		66	
	Total depth			87	
	Cased with 66' of 4½" pipe				
	Water head 21'				
	NO ENVELOPE				
	ORIGINAL FILED				

COUNTY **Cook** INDEX NO. **2803**
 DRILL RECORD **3-35N-14E**
 (A32187-20M) ILLINOIS GEOLOGICAL SURVEY, URBANA (10-40) 

John C. Moore Corporation, Rochester, N. Y. Binder and holes in leaves, each Patented 1908. 377265



TOWN **Glenwood** TOWNSHIP
 COMPANY **Richard Hemingway** No.
 FARM **Ed. Kelley** No.

Map No. **28**
 R. **19E 14E** Sec. **3**

AUTHORITY **R. Hemingway, driller 35N**
 ELEVATION
 COLLECTOR **S.E. EKBLAW** DATE DRILLED
 CONFIDENTIAL

Co. #	STRATA	Thickness		Depth	
		Feet	In.	Feet	In.
1796				92	
Depth Diameter 4 1/2" Cased to 53' 10" Static level 16' Very hard, light gray rock at base					
NO ENVELOPE					
ORIGINAL FILED					

County **Cook** Index No. **2803**
 I.—DRILL RECORD
 67727--5M--11-31) Illinois Geological Survey, Urbana. **3-35N-14E**

LOG OF WATER WELL

Property owner Heinz Maerthly Well No. 88

Drilled by E. C. Wehling Year 1947

Formations passed through	Thick-ness	Depth of Bottom
<u>Glacial Drift</u>	<u>26'</u>	
<u>Drilled in Rock</u>	<u>97</u>	<u>123</u>

COUNTY No. 1798

[Continue on back if necessary]

Finished in 97' of rock at 26' to 123 ft.

Cased with 4 1/2 inch Galv. Well Casing from 0 to 26 ft.

and _____ inch _____ from _____ to _____ ft.

Size hole below casing 4 3/8 inch. Static level from surf. 11 ft.

Tested capacity 12 gal. per min. Temperature 57 °F.

Water lowered to 15' draw down in _____ hrs. _____ min.

Length of test _____ hrs. _____ min. Screen _____

Slot _____ Diam _____ Length _____ Bottom set at _____ ft.

[Show location in Section Plat]

Township name _____ Elev. _____ Sec. 3

Description of location Plot 21 22, on Twp. 35N

Oak St. in Sec. 17 of Greenwood Rge. 14E

Signed E. C. Wehling County Cook

Copy for Illinois State Geological Survey Index: 8-35N-14E



TOWN **Glenwood** TOWNSHIP

Map No. **28**

COMPANY **R. Hemingway** No.

R. **14E**

FARM **J. Paris** No.

T

Sec. **3**

AUTHORITY **R. Hemingway**

35N

ELEVATION

COLLECTOR **S. E. Ekblaw** DATE DRILLED

CONFIDENTIAL

No.	STRATA	Thickness		Depth	
		Feet	In.	Feet	In.
Co # 1797					
	4-1/2" well				
	Depth			68	
	Casing 34'				
	Static level 12'				
	Gray rock, fairly soft at bottom				
	NO ENVELOPE				

ORIGINAL FILED

County **Cook**
F.—DRILL RECORD

Index No. **2803**

(67727-5M-11-31) Illinois Geological Survey, Urbana.

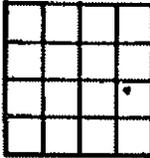
3-35N-14E

DEPARTMENT OF HEALTH PROTECTION, 535 WEST
 I. DO NOT DETACH GEOLOGICAL/WATER
 PROPER WELL LOCATION

GEOLOGICAL AND WATER SURVEYS WELL RECORD

Completed 9-12-74

10. Property owner Emmett Price Well No. _____
 Address 731 Glenwood & Jansing Rd. Glenwood, Ill.
 Driller A. A. Well Drilling License No. 102-29
 11. Permit No. 32841 Date Sept 9 1974
 12. Water from limestone 13. County Cook
 Formation
 at depth 83 to 180 ft. Sec. 3
 14. Screen: Diam. _____ in. Twp. 35N
 Length: _____ ft. Slot _____ Rge. 14E
 Elev. _____



15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
5"	Black 15lbs	0	57

SHOW
 LOCATION IN
 SECTION PLAT
 NW NE SE
 (Permit)

16. Size Hole below casing: 5 in.
 17. Static level 80 ft. below casing top which is 2 ft.
 above ground level. Pumping level 105 ft. when pumping at 20
 gpm for 4 hours. Sub. pump set at 105'

18. FORMATIONS PASSED THROUGH	THICKNESS TOP	DEPTH OF BOTTOM
<u>Overburden</u>	<u>0</u>	<u>57</u>
<u>Rock Formation</u>	<u>57</u>	<u>180</u>

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED Paul Krierim DATE 10/23/74

COUNTY No. 24780

COOK

3-35N-14E

LOG OF WATER WELL

Property owner Ralph Greene Well No. 113

Drilled by E.C. Wehling Year 1947

Formations passed through	Thick-ness	Depth of Bottom
<u>Glacial Drift</u>	<u>33</u>	
<u>Drilled in Rocks</u>	<u>66</u>	<u>99</u>

COUNTY No. 1799

Finished in 66' of rocks at 33 to 99 ft.

Cased with 4" galv. Well Casing from 0 to 33 ft.
and _____ inch from _____ to # ft.

Size hole below casing 3 7/8 inch. Static level from surf. 18 ft.

Tested capacity 12 gal. per min. Temperature 57 °F.

Water lowered to no draw down in _____ hrs. _____ min.

Length of test 3 hrs. _____ min. Screen _____

Slot _____ Diam. _____ Length _____ Bottom set at _____ ft.

Township name Sharon Elev. _____ [Show location in Section Plat]

Description of location Lot # 4 in Blk 3 Sec. 3

AK Sweet Dublin 9 W 57 2' of NW Twp. 35N

1/4 45 W 1/2 of Sec 3 Rge. 14E

Signed E.C. Wehling County Cook

Copy for Illinois State Geological Survey Index: 3-35N-14E

TOWN **Glenwood** TOWNSHIP
 COMPANY **R. Hemingway** No.
 FARM **Rowe** No.
 AUTHORITY **R. Hemingway, driller**
 ELEVATION
 COLLECTOR **S. E. Ekblaw** DATE DRILLED
 CONFIDENTIAL



Map No. **28**
 R. **14E**

T	35N	3	3	3	3

No.	STRATA	Thickness		Depth	
		Feet	In.	Feet	In.
671800	4 1/2" well Depth Cased to 48'8" Static level 20' Rock, very hard at base			80	
	NO ENVELOPE				

~~ORIGINAL FILED~~

Town Glenwood Township Bloom

Map No. 28

Company Richard Hemingway No.

R. 14E

Farm Stalling, U. H. No.

T.

Sec.

Authority Richard Hemingway

35

3

Elevation 635 T. M.

N

Collector

Confidential Date Drilled 1940

650' S. line, 650' W. line

No.	Strata	Thickness		Depth	
		Feet	In.	Feet	In.
C # 1801	Lot 1, Block 4, Job Campbell's First Addition				
	Yellow clay and sand	20		20	
	Blue clay	20		40	
	Clay, sand, and gravel	15		55	
	Shell and loose rock	5		60	
	Hard flinty rock	20		80	
	Soft water bearing rock	7		87	
	Water head 20'				
	Tested at 10 p.m. with a 18" draw down				
	Cased with 4 1/2" galvanized water well pipe				

NO ENVELOPE

~~ORIGINAL FILED~~

COUNTY Cook
DRILL RECORD

INDEX NO. 2803

3-35N-14E

(A32187-20M)

ILLINOIS GEOLOGICAL SURVEY, URBANA

(10-40)



Town **Glenwood** Township **Bloom** Map No. **R. 14E**
 Company **Richard Hemingway** No. **No. 1** T. **35** Sec **3**
 Farm **Tattersall, George** No. **1** N
 Authority **Driller's notebook**
 Elevation **634 top. map**
 Collector
 Confidential Date Drilled **Nov. 1939**
795' S. line, 100' W. line

No.	Co # 1802 Strata	Thickness		Depth	
		Feet	In.	Feet	In.
	Total depth			84	
	Hit rock at 55'				
	Main supply at 78'				
	Water head 11'				
	Draw down 5'				
	500 g.p. hr.				
	4 1/2" well				
	4 1/2" casing to 56' 6"				
	S. S. # 3845				
	NO ENVELOPE				

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner Forest Pres. Dist. of Cook Cty. Well No. _____
 Address 536 North Harlem Ave. River Forest IL
 Driller Stinnett, James R. License No. 102-1062

11. Permit No. 92607 Date 02/07/80

12. Water from Limestone 13. County Cook
 at depth 75 to 180 ft. Sec. 4

14. Screen: Diam. _____ in. Twp. 35 N
 Length: _____ ft. Slot _____ Rge. 14 E
 Elev. _____



15. Casing and Liner Pipe SE SW NW

Diam. (in.)	Kind and Weight	From (ft)	To (ft)
6	GALVANIZED 19.36#	0	60

16. Size hole below casing: 5.62 in.
 17. Static level 85 ft. below casing top which is 1 ft.
 above ground level. Pumping level 100 ft. when pumping at 15
 gpm for 4 hours.

18. Formations passed through	Thickness	Bottom
blk dirt-top soil	3	3
rock, dirt-sdy soil	25	28
westland ls & shale	30	58
limestone	142	200

Town Glenwood Township Bloom Map No. 28
 Company Richard Hemingway No. R. 14E
 Farm Geczas, Zenon No. T.
 Authority Richard Hemingway No. 35 Sec. 4
 Elevation 621 top. map N
 Collector
 Confidential Date Drilled April 1940
 900' S. line, 600' E. line of NE

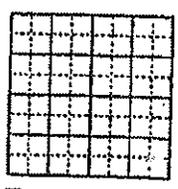
No.	Strata	Thickness		Depth	
		Feet	In.	Feet	In.
C# 1803	Clay, yellow	15		15	
	Hardpan, blue and boulders	12		27	
	Sand gravel and loose slabs of rock	10		37	
	Forged steel drive shoe				
	Rock, hard, flinty, gray	20		57	
	Rock, soft, blue, water bearing	20		77	
	Water head 21'				
	Tested at 500 g.p.h. with 9' draw down				
	Cased with 4½" galvanized pipe				
NO ENVELOPE					
ORIGINAL FILED					

COUNTY Cook INDEX NO. 2804
 DRILL RECORD 4-35N-14E
 (A32187-20M) ILLINOIS GEOLOGICAL SURVEY, URBANA (10-40) 

ILLINOIS GEOLOGICAL SURVEY, URBANA

Strata	Thickness	Top	Bottom
<p>SSA 41239</p> <p>14" Well 0 to 455'</p> <p>Hole record: 20" hole 0 to 33½' 13½" 33½ to 455'</p> <p>Casing record: 20" casing 0 to 33½' 14" liner 0 to 33½' - cemented in.</p>			

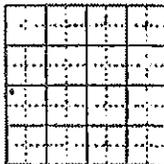
COMPANY Wehling Well Works
ARM Glenwood Manor Subdiv
DATE DRILLED Burnside Const. Co. COUNTY NO. 423
AUTHORITY
ELEVATION
LOCATION 142½' E of W line, 46' N of center
NW¼ of S. 14.
COUNTY Cook 4-35N-14E



ILLINOIS GEOLOGICAL SURVEY, URBANA

Strata	Thickness	Top	Bottom
Summary Sample Study by G. H. Emrick September 9, 1961			
Pleistocene Series			
Soil	5		5
Till, slightly sandy, yellowish-buff, oxidized, leached.	5		10
SILURIAN SYSTEM			
Niagaran Series			
Waukesha Formation			
Dolomite, very silty, little slightly silty, gray, little buffish-gray, very fine to finely crystalline.	15		25
Dolomite, very silty, buffish-gray, very fine to finely crystalline grading to dolomite, very silty, gray to buffish-gray, very fine to finely crystalline.	35		60
Dolomite, very silty, gray to light buffish-gray, very fine to finely crystalline	45		105
Dolomite, partly silty, gray to buff, little brown, fine to very finely crystalline.	35		140
Dolomite, silty, gray to buff, very fine to finely crystalline.	20		160
*Burnside Construction Company			

COMPANY Wehling Well Works
 FARM *Glenwood Manor Subdivision NO.
 DATE DRILLED August, 1961 COUNTY NO. 423
 AUTHORITY G. H. Emrick
 ELEVATION 625' E. T. M.
 LOCATION 142' W line, 2750' N line, sec.
 COUNTY COOK S. S. # 41239



4-35N-14E

Strata	Thickness	Top	Bottom
Dolomite, slightly silty, buff to light grayish-buff, fine to very finely crystalline.	35		195
Dolomite, slightly silty, buff, gray, fine to very finely crystalline.	60		255
Joliet Formation			
Dolomite, light buff to light gray, very fine to finely crystalline.	85		340
Dolomite, slightly silty to silty buffish-gray to buff, very fine to finely crystalline.	13		355
Dolomite, partly slightly silty, buff, little gray to light gray, very fine to finely crystalline, slightly speckled (black).	10		365
Alexandrian Series			
Kankakee Formation			
Dolomite, buff, little light buff, finely crystalline, trace glauconite.	35		400
Edgewood Formation			
Dolomite, slightly silty, slightly cherty to cherty, grayish-buff to buff, very fine to finely crystalline, slightly speckled (black).	35		435
ORDOVICIAN SYSTEM			
Cincinnati Series			
Maquoketa Formation			
Dolomite, very silty, slightly cherty, grayish-buff to buff, fine to very finely crystalline mottled, fossiliferous.	15		450

Wehling Well Works Glenwood Manor Subdivision

COUNTY COOK

S. S. #41239

4-35N-14E

Strata	Thickness	Top	Bottom
<p>Dolomite, very silty, gray to buff, very finely crystalline inter-bedded with shale, light buffish-gray, weak.</p> <p>Hole Record: 20" hole 0 - 33½' 13½" hole 33½' - 455'</p> <p>Casing Record: 20" casing 0 - 33½' 14' liner 0 - 33½' - cemented in.</p>	5		455 TD

Wehling Well Works Glenwood Manor Subdivision
 COUNTY COOK S. S. #41239 4-35N-14E

GEOLOGICAL AND WATER SURVEYS WELL RECORD

Property owner Landaver, Inc. Well No. _____
 Address 2 Science Rd. Glenwood IL
 Well address same as above
 Lot _____ Subd _____ ISWS P# 349635
 Driller Sharpe, Franklin W. License No. 102-1773
 Permit No. 031-00051-03 Date 04/07/2003
 Water from limestone County Cook
 at depth 41 to 780 ft. Sec. 4
 Screen: Diam. _____ in. Twp. 35 N
 Length: _____ ft. Slot _____ Rge. 14 E
 Elev. _____

Casing and Liner Pipe SW SW SE

Diam. (in.)	Kind and Weight	From (ft)	To (ft)
5	PVC	2	41

Size hole below casing: _____ in.
 Static level 265 ft. below casing top which is 2 ft.
 above ground level. Pumping level 300 ft. when pumping at 30
 gpm for 2 hours.

Formations passed through	Thickness	Bottom
clay	20	20
broken rock	5	25
limestone	755	780

Irrigation Well

Cook 12-031-34121-00 4-35N-14E

REQUESTED AND MAIL ORIGINAL TO STATE
 DEPARTMENT OF ENVIRONMENTAL HEALTH, 535 WEST
 1. DO NOT DETACH GEOLOGICAL/WATER
 PROPER LOCATION.

Test Well for Metropolitan Sanitary District
GEOLOGICAL AND WATER SURVEYS WELL RECORD
 Completed 8-27-74

10. Property owner F. Sarnacki Well No. TW 74-4
 Address RR, Glennwood
 Driller Wehling Well Works, Inc License No. 92-598
 11. Permit No. 32133 Date 8-13-74
 12. Water from _____ 13. County cook

Formation
 at depth _____ to _____ ft. Sec. 4
 14. Screen: Diam. _____ in. Twp. 35N
 Length: _____ ft. Slot _____ Rge. 14E
 810' 340' SE SW NE Elev. _____

15. ~~Casing and Liner Pipe~~

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
12	Black steel	0	60
	cemented		

SHOW LOCATION IN SECTION PLAT
 810' SL, 340'
 EL, SW NE
 (permit)

16. Size Hole below casing: 12 in.
 17. Static level 70 ft. below casing top which is _____ ft.
 above ground level. Pumping level 240 ft. when pumping at 393
 gpm for 96 hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF
	TOP	BOTTOM
Drift & Fill	0	25
Lime	25	447
Lime & Shale	447	465

Test well for Metropolitan Sanitary District
 (CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED _____ Wehling Well Works, Inc. DATE 11-23-74

Richard H Wehling
 COOK COUNTY No. 44898
4-35N-14E



TOWN **Glenwood** TOWNSHIP **Bloom** MAP NO. **28**
 COMPANY **Richard Hemingway** NO. **R. 14E**
 FARM **United Church** NO. **T. 35** SEC. **4**
 AUTHORITY **Richard Hemingway** **N**
 ELEVATION **625 top. map**
 COLLECTOR
 CONFIDENTIAL DATE DRILLED **1939**
1252' N. of SE cor.

O.	STRATA	THICKNESS		DEPTH	
		FEET	IN.	FEET	IN.
	C₆# 1805				
	Sand	5		5	
	Clay, yellow	5		10	
	Hard pan	5		15	
	Caving sand and gravel	15		30	
	Rock, solid blue	15		45	
	Rock, soft blue, water bearing	19	6	64	6
	<i>Tested About 500 gals. per hour for 7 hours</i>				
	<i>Water head 17'</i>				
	Lot 1, Block 6, Merrill K. Sweet's First Addition				
	NO ENVELOPE				

COUNTY **Cook** INDEX NO. **2804**
 DRILL RECORD **4-35N-14E**
 (A.6572-15M--10-39) ILLINOIS GEOLOGICAL SURVEY, URBANA

Town **Glenwood** Township **Bloom** Map No. **28**
 Company **Richard Hemingway** No. **R. 14E**
 Farm **Zentera, Stanley** No. **T. 35** Sec. **4**
 Authority **Richard Hemingway** **N**

Elevation **624 top. map**
 Collector
 Confidential Date Drilled **June 1940**
1677' N. of SE corner

No.	Co # 1806 Strata	Thickness		Depth	
		Feet	In.	Feet	In.
	Lot 10, Block 4, M. K. Sheets Sub.				
	Sand and clay, yellow	5		5	
	Clay, blue fading into hardpan and boulders	15		20	
	Sand gravel and slabs of bed rock	14	10	34	10
	Forged steel shoe				
	Rock, flinty	10		44	10
	Limestone, water bearing	30		74	10
	Stone, blue, soft, no water of any account	10		84	10
	Capped with standard cast pipe cap. Well cased with 5" galvanized pipe. Water head 14' 5' draw down at 700 g.p.h.				

NO ENVELOPE

ORIGINAL FILED

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner Metr Sanitry Dst Chicago Well No. #H7449
 Address Calumet Sys Tunnel & Reservoir Chicago IL
 Driller ATEC Associates License No. 2380

11. Permit No. none Date _____

12. Water from _____ 13. County Cook

at depth _____ to _____ ft. Sec. 4
 14. Screen: Diam. _____ in. Twp. 35 N
 Length: _____ ft. Slot _____ Rge. 14 E
 Elev. 610



15. Casing and Liner Pipe SW NE

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
<u>c #13433 (26.3'-486.3')</u>	<u>0</u>	<u>0</u>
<u>no record</u>	<u>486</u>	<u>486</u>

Observation

Cook 12-031-30347-00 4-35N-14E

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner Bolton Construction Well No. _____
 Address 210 Roberts Cove Flossmoor IL
 Driller Sharpe, Franklin N. License No. 102-1773

11. Permit No. 031-00248-93 Date 12/07/93

12. Water from Limestone 13. County Cook
 at depth 55 to 180 ft.

14. Screen: Diam. _____ in. Sec. 5
 Length: _____ ft. Slot _____ Rge. 14 E
 Elev. _____



15. Casing and Liner Pipe NE SW SW

Diam. (in.)	Kind and Weight	From (ft)	To (ft)
5	PVC SDR 21 200#	0	55

16. Size hole below casing: 4.75 in.

17. Static level 17 ft. below casing top which is 1 ft. above ground level. Pumping level 17 ft. when pumping at 30 gpm for _____ hours.

18. Formations passed through	Thickness	Bottom
clay	15	15
gravel	25	40
clay	15	55
limestone	125	180

Household - Private

Cook 12-031-30763-00 05-35N-14E

LOG OF WATER WELL

Property owner Mell Carson Well No 2262

Drilled by E. G. Welling Year July 1966

Formations passed through	Thick-ness	Depth of Bottom
Permit #1189		
clay	45'	
Sand	9'	54'
Rock	146'	200'

COUNTY No. 1807

S.S. # 53405

Received from Naperville office 9-7-66

[Continue on back if necessary]

Finished in 146 ft of rock at 55 to 200 ft.

Cased with 6 inch galv. seamless casing from 0 to 55 ft.
and inch from to ft.

Size hole below casing 5 7/8 inch. Static level from surf. 37 ft.

Tested capacity 55 gal. per min. Temperature 52 °F.

Water lowered to none in. in hrs. min.

Length of test 3 hrs. min. Screen

Slot Diam. Length Bottom set at ft.
[Show location in Section Plat]

Township name Elev. Sec. 5

Description of location 120' S. and 90' E Twp. 35N

NW SW SW Rge. 14E

Signed E. G. Welling COOK County With-Beecher

Copy for Illinois State Geological Survey Index: 5-35N-14E Illinois

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner R.W. Edwards Const. Co. Well No. _____
 Address 603 Ridge Rd. Homewood IL
 Driller Knierim, Phil License No. 102-0841
 11. Permit No. 031-00166-90 Date 07/16/90
 12. Water from rock 13. County Cook
 at depth 80 to 160 ft. Sec. 5
 14. Screen: Diam. _____ in. Twp. 35 N
 Length: _____ ft. Slot _____ Rge. 14 E
 Elev. _____



15. Casing and Liner Pipe SW SW SW

Diam. (in.)	Kind and Weight	From (ft)	To (ft)
5	BLACK 15#	0	55

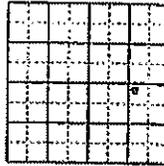
16. Size hole below casing: 4.37 in.
 17. Static level 80 ft. below casing top which is 1 ft. above ground level. Pumping level 120 ft. when pumping at _____ gpm for 2 hours.

18. Formations passed through	Thickness	Bottom
soil	3	3
clay	37	40
sand gravel	15	55
rock	105	160

ILLINOIS GEOLOGICAL SURVEY, URBANA

Strata	Thickness	Top	Bottom
Summary Sample Study by J. E. Roche 1/63.			
Pleistocene Series			
Soil sandy, silty, dark brown, yellow	5		5
Till, silty, calcareous, grayish-buff to buff, sporangites	10		15
Sand and gravel, multicolored	1		16
SILURIAN SYSTEM			
Niagaran Series			
Waukesha Formation			
Siltstone, dolomitic to very dolomitic, light grayish-buff to light buff, tough.	24		40
Siltstone, dolomitic, gray to buffish-gray, tough	55		95
Siltstone, dolomitic, slightly argillaceous, buffish-gray, gray to light gray, tough	40		135
Siltstone, dolomitic, light buffish-gray, light grayish-buff, light gray, tough; little dolomite, slightly silty to very silty, little grayish-buff, sublithographic to very finely crystalline	50		185
Siltstone, dolomitic, partly slightly pyritic, partly slightly glauconitic, light grayish-buff to light buffish-gray, light gray, tough, grading to little dolomite,			

COMPANY Wehling Well Works
 BOREHOLE NO. 2
 LOCATION Village of Glenwood
 DATE DRILLED October 1962 COUNTY NO. 459
 AUTHORITY J. E. Roche
 ELEVATION 629' Est. Topo Map
 LOCATION 2700'N line, 1100'E line, NE
 COUNTY COOK S.S. #43267



5-35N-14E

ILLINOIS GEOLOGICAL SURVEY, URBANA

Strata	Thickness	Top	Bottom
very to extremely silty, light gray to light buffish-gray, sub-lithographic to very finely crystalline, partly speckled	35		220
Dolomite, very silty, light grayish-buff, light buff, light gray, sublithographic to very finely crystalline, grading to little siltstone, dolomitic, light grayish-buff to light gray, tough	25		245
Dolomite, slightly silty to silty, light buff, light grayish-buff, buff, sublithographic to very finely crystalline	55		300
Joliet Formation			
Dolomite, slightly silty, light grayish-buff to light gray, light buff, very fine, sublithographic crystalline	50		350
Dolomite, silty to very silty, light grayish-buff, grayish-buff, sublithographic to very finely crystalline, foraminifera	30		380
Alexanderian Series			
Kankakee Formation			
Dolomite, slightly silty, slight siliceous, light buff, light grayish-buff, very finely crystalline, trace glauconite	10		390
Dolomite, slightly silty, buff to light buff, very finely, little sublithographic crystalline	10		400
Dolomite, becoming silty towards base, slightly cherty, buff, brownish-buff, very finely crystalline, partly brown speckled, partly slightly mottled	26½		426½

TD

Wehling Well Works

Village of Glenwood #2

COUNTY COOK

S.S. #43267

5-35N-14E

Strata	Thickness	Top	Bottom
Casing: 20" 0-42' 14" 0-46' 10" 223-426 $\frac{1}{2}$ ' Perforated			
Hole Record: 20" 0-42' 14" 42-426 $\frac{1}{2}$ '			
Static Water Level 19 Draw Down Water Level 185			
180 gallons per minute per 24 hours.			

COUNTY COOK Wehling Well Works S.S. #43267 Village of Glenwood #2 5-35N-14E

GEOLOGICAL AND WATER SURVEYS WELL RECORD

Property owner Homewood Flossmoor Pk Dist. Well No. _____
 Address 3301 Flossmoor Rd. Flossmoor IL
 Well address Apollo Park Homewood, IL
 Lot _____ Subd Apollo Park ISWS P# _____
 Driller Stirnett, David License No. 102-3654
 Permit No. 031-000048-05 Date 04/29/2005
 Water from rock County Cook
 at depth 820 to 860 ft. Sec. 5
 Screen: Diam. _____ in. Twp. 35 N
 Length: _____ ft. Slot _____ Rge. 14 E
 Elev. _____

Casing and Liner Pipe SE NW SE

Diam. (in.)	Kind and Weight	From (ft)	To (ft)
8	STEEL	0	41

Size hole below casing: _____ in.
 Static level 12 ft. below casing top which is 1 ft.
 above ground level. Pumping level 300 ft. when pumping at 50
 gpm for 1 hours.

Formations passed through	Thickness	Bottom
brown clay	15	15
gray clay with gravel	5	20
white rock	450	470
gray rock	390	860

Irrigation Well

Cook 12-031-34743-00 5-35N-14E

Town Homewood Township Bloom
 Company C. Erwin Kramer No.
 Farm Washington Park Airport No.
 Authority C. Erwin Kramer, Harvey
 Elevation 626 T.M.
 Collector
 Confidential Date Drilled 1941

Map No.
R. 14E

T.					Sec.
					5
35					
N					

NW NE SE

No.	Co # 1808	Strata	Thickness		Depth	
			Feet	In.	Feet	In.
		187th and Halsted Streets				
		Clay	12		12	
		Sand, broken lime, clay, mixed	26		38	
		Limestone, soft, water at 122' 92"			130	
		5" casing set in concrete grout Full gauge 5" to bottom				
		Water level 4' from surface No drawdown at 25 g.p.m.				
		ORIGINAL FILED				
		No Envelope				

COUNTY Cook
DRILL RECORD

SS. 9303

INDEX NO.

5-35N-14E

(12880-20M)

ILLINOIS GEOLOGICAL SURVEY, URBANA

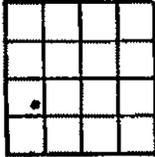
(12-41)



GEOLOGICAL AND WATER SURVEYS WELL RECORD

Completed 2-25-74

10. Property owner Charles Gantry Well No. _____
 Address 7 Royal Oaks, Homewood, Ill.
 Driller B & R Well Drilling License No. 102-29
 11. Permit No. 27805 Date Feb. 22, 1974
 12. Water from Limestone Formation 13. County Cook
 at depth 45 to 200 ft. Sec. 5
 14. Screen: Diam. _____ in. Twp. 35N
 Length: _____ ft. Slot _____ Rge. 14E
 Elev. _____



15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
5	Black 15 lbs	0	60

SHOW LOCATION IN SECTION PLAT SE NW SW (permit)

16. Size Hole below casing: 5 in.
 17. Static level 45 ft. below casing top which is 2 ft. above ground level. Pumping level 84 ft. when pumping at 20 gpm for 4 hours. Submersible pump set at 84'.

18. FORMATIONS PASSED THROUGH	THICKNESS TOP	DEPTH OF BOTTOM
<u>Overburden</u>	<u>0</u>	<u>60</u>
<u>Rock formation</u>	<u>60</u>	<u>200</u>

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED Paul Krueger DATE 2-28-74

COUNTY No. 24673

COOK

5-35N-14E