

Appendix 5
GROUNDWATER REPORT

APPENDIX 5: GROUNDWATER REPORT

LEGGETTE, BRASHEARS & GRAHAM, INC.

PROFESSIONAL GROUND-WATER AND ENVIRONMENTAL ENGINEERING SERVICES

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January 27, 2006

Mr. Michael Nowicki
Ecological Solutions, LLC
1248 Southford Road
Southbury, CT 06488

RE: Hilltop Manor
23-Lot Subdivision
(T) East Fishkill, New York

Dear Mr. Nowicki:

The following are the results of the simultaneous 24-hour pumping test on the wells located on Lots 8 and 16 on the above-referenced site, including an offsite well monitoring program. It is proposed that the parcel be subdivided into 23 single-family residential lots. The pumping test and well monitoring program was conducted to demonstrate the yield potential of wells on the respective lots, with special attention to determining the possibility of water-level interference in the adjacent neighboring offsite wells following concerns of the homeowners.

The testing guidelines were proposed to meet the Dutchess County Department of Health (DCDOH)/New York State Department of Health CSFP 625 testing and sampling guidelines. In addition, address requirements outlined in the scoping document for the DEIS.

Ground-Water Demand

As noted on the engineering plans provided for the project, a four-bedroom, single-family residence is conservatively estimated to require a water supply of 520 gpd (gallons per day). This demand is based on the assumptions that each bedroom in a single-family residence will require 130 gpd. For the 23 proposed residences, the 520 gpd implies that the average withdrawal from the underlying bedrock aquifer would total approximately 11,960 gpd or about 8.3 gpm (gallons per minute).

Because each residence will be served by a septic system, approximately 85 percent of the ground water withdrawn would be returned to the aquifer through percolation from the

septic-system leachfields. Some of the water returned through the septic-system leachfields will recharge the bedrock aquifer with renovated wastewater. As a result, the total consumptive use (or water lost) from the ground-water system would be primarily through evapotranspiration, landscape irrigation, car washing and recreational uses. The total consumptive use (or water lost) of ground water would be approximately 1,795 gpd (about 1.2 gpm) for the proposed development, or about 78 gpd per individual residence.

BEDROCK AQUIFER

The bedrock aquifer that underlies the entire study region is the principal source of ground water in the area where sand and gravel aquifers are not available for development of water supply. The bedrock aquifer is the typical supply source for domestic wells in rural settings. The prolific bedrock aquifer in the study region consists of sedimentary rock types.

Wappingers Group (OEw)

A majority of the study parcel and study region is underlain by the Wappingers Group (OEw) which consists of dark gray to gray-black limestone-dolomite units. This unit is sometimes locally referred to as the "Stockbridge Limestone". There are a significant amount of data on wells completed in this unit in the County. There are several wells in Dutchess County that produce between 100 to 300 gpm from the Wappingers Group, and this unit offers large potential for ground-water development where this rock occurs within the Town. Several wells recently drilled in the Town of East Fishkill under the supervision of Leggette, Brashears & Graham, Inc. (LBG) are reported to yield as high as 150 gpm.

Similar to other carbonate units, the unit is relatively brittle and contains numerous open fractures. The carbonate units are relatively soluble and, consequently, some fractures have been widened by dissolution. The carbonate units likely exhibit low to moderate permeability based on the porosity of the bedrock unit and secondary permeability caused by the presence of many interconnected fractures and dissolution cavities can be low to high. Water is contained in fractures, joints, bedding planes, solution cavities and other secondary openings in the bedrock units.

Wells completed in the limestone units in this bedrock unit would likely yield in the higher range of the estimate due to enlargement of fractures, joints and bedding planes in the formation by solution activity; and in areas the bedrock unit can induce recharge from overlying saturated sand and gravel deposits and wetland areas. The aquifer is suitable for development of domestic wells requiring yields of about 5 gpm.

The water table below the study parcel ranges from 25 to 85 feet in depth. The following summarizes the ranges in depth to water reported at respective lots drilled to date.

Lot	Depth to Water (feet)
4	60-65
8	35-55
13	60-75
19	25-35

The lot locations are shown on figure 1. Seasonal water-level changes in Dutchess County in the bedrock fluctuate about 15 to 20 feet in depth. Deeper water-levels are exhibited during long-term drought conditions, as higher water levels are exhibited during above average precipitation events. The depth to water will not impact onsite construction of basements, roads, storm-water detention ponds, etc.

GROUND-WATER BALANCE

A ground-water balance compares the available recharge to a property with the estimated water-supply demand of a proposed development. This comparison determines if the property is self-sufficient in providing the water that will be required by the proposed development, or whether the proposed water demand exceeds the available recharge. If the projected demand exceeds the estimated available recharge, periodically ground-water recharge would have to be drawn from beyond the property boundaries. For sites with tight water balances, water availability within the watershed becomes important to determine if the proposed demand would oversubscribe the available resource. If onsite recharge meets or exceeds the proposed demand, the water supply should be reliable and not adversely affect the aquifer in offsite areas.

The region within a 2,500-foot radius from Hilltop Manor parcel utilizes rural water-supply sources developed from individual domestic wells and utilizes septic-system leach fields which recharge water to the aquifer system. No significant consumptive water use is inventoried within a 2,500-foot radius of the site.

Ground-Water Recharge Analysis

The annual precipitation for Dutchess County is about 43 inches per year. A large portion of the precipitation is returned to the atmosphere by evaporation, transpired by vegetation and returned to streams and lakes as surface runoff. Only a small portion of the total precipitation infiltrates the soil to eventually reach and recharge the ground-water system in the bedrock. Recharge rates determined from long-duration studies in New York and western Connecticut has been used to estimate the available recharge to the proposed development. A ground-water study of the Beacon-Fishkill area (Snively, 1980) indicates that the average recharge rate for glacial-till covered bedrock is approximately 8 inches during average years and 5 inches for the one-year-in-30 drought. A study completed for the Orange County Water Authority (LBG, 2003) indicated from historical precipitation data (1880 to 2002) that the average drought precipitation is approximately 69 percent of the average annual precipitation in Orange County.

LBG estimates the recharge to the 40-acre study parcel to be about 25,000 gpd under normal precipitation and 17,250 gpd under drought conditions. The recharge to the property is more than sufficient to support the consumptive use (1,795 gpd) of the proposed subdivision under normal and drought conditions. Based on the drought scenario, the consumption demand would be less than 10.4 percent of the total recharge to the property.

Test Well

Five test wells were completed by P. F. Beal and Sons, Inc. (Beal) in December 2005 on Lots 4, 8, 13, 16 and 19. A copy of the well completion reports are located in Appendix I. A summary of the well completion reports are as follows:

Well	Depth (ft)	Yield (gpm)
Lot 4 Well	305	10
Lot 8 Well	325	8
Lot 13 Well	610	1
Lot 16 Well	305	10
Lot 19 Well	200	7

Background

Beal installed a ½-horsepower submersible pump in each of the pumping wells at a depth of 150 feet. A dip tube was installed with the pump for the collection of precise water-level readings utilizing an M-scope (electric drop line) and dedication pressure transducer at specific time intervals. The flow rate from the well was measured with a low-flow meter and stopwatch/pre-measured bucket (5 gallons) for accuracy.

The objective of the pumping test was to pump the wells at rates which would equal or exceed 1.5 times the estimated total subdivision water demands over a 24-hour duration test and demonstrate yields of 5 gpm or greater as outlined in CSFP 625 protocol. LBG pumped each well at a rate of 7 gpm for the entire test, for a total combined yield for 14 gpm or about 20,160 gpd. The total ground-water withdrawals from the two wells during the test was about 1.7 times the water demands of the proposed subdivision.

Pumping Test

The testing program began with the start-up of the well on Lot 8 at 1135 hours; proceeded by Lot 16 at 1205 hours on January 18, 2006. The wells were pumped at a constant rate of 7 gpm and demonstrate a stabilized yield and drawdown for the last four hours of the test as required. The pumps in each well were shut down following a 24-hour pumping duration. The hydrographs for the pumping wells on Lots 8 and 16 are located in Appendix II.

After the test was terminated, recovery measurements were made in the wells for a period of about 24 hours. The water-level plots given in Appendix II show the water level recovered adequately and was fully recovered in less than 24 hours of shutdown of the test.

WELL MONITORING PROGRAM

During the 24-hour pumping test on the wells on Hilltop Manor, a well monitoring program was conducted involving 7 wells located adjacent to the study parcel; and 3 onsite monitoring wells located on lots 4, 13 and 19. The offsite well monitoring program was conducted to determine potential water-level interference effects, if any, from the 24-hour pumping test on the wells on the Hilltop Manor property at rates which exceeded the estimated water demands of the proposed 23 individual wells on the subdivision parcel.

The offsite wells are shown on figure 1. Between January 16 and January 20, 2006, a water-level interference study was conducted of the offsite wells. The water-level data and hydrographs for the monitoring wells are located in Appendix III.

The hydrographs of the offsite wells indicate many fluctuations in water level from their own domestic use (example, showering, laundry, etc.). Typical fluctuation from domestic water use show a rapid decline (drawdown) in the water level from the pumping of the well for domestic use, followed by a steady rise in the water level after the pump turns off. The 12 Hammer Drive hydrograph shows a good example of the water-level fluctuations from use. A majority of the offsite wells indicate a 1 to 6-foot rise in the water level from a significant rain event shortly after the start of the test on January 18, 2006. Following the end of the rain event, the water levels for the respective hydrographs resume a slight region water-level decline prior to shut down of the test and following completion of the test events. This trend continues without any discernable change following shut down of the test. It is likely a noticeable rise in the water-level of the monitoring wells would be observed on the respective hydrographs following shut down of the test, if offsite wells were hydraulically-connected to onsite Hilltop Manor pumping wells and impacted from ground-water withdrawals during the test event. The hydrographs for the seven offsite wells indicates no discernable drawdown interference effects from pumping the wells on the Hilltop Manor property. Similarly, the hydrographs for onsite wells indicate no discernable drawdown interference effects. The water-level data from the dedicated pressure transducer for the Lot 19 well malfunctioned and a technician will attempt to retrieve the data at a later date.

WATER QUALITY

The wells were sampled on January 19, 2006 following the 24-hour pumping duration to obtain representative water samples from the respective wells. The wells were sampled for the parameters required by DCDOH for individual domestic wells. The water-quality reports are located in Appendix IV.

The water-quality analysis for the wells on Lots 8 and 16 meet NYSDOH drinking water standards.

CONCLUSIONS

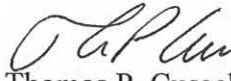
- The bedrock aquifer underlying the study parcel has good potential to yield adequate water (5 gpm) for the proposed domestic wells. Four of the five wells exceed the 5 gpm criteria. The well on Lot 13 yielded 1 gpm at the completed depth of 610 feet. The well will be hydrofractured to attempt to open the water-bearing fractures to increase the yield of the well. If this procedure is not successful, the well will be deepened to increase the yield above the minimum yield requirement of 2 gpm. The New York State Department of Health CSFP 625 guides for "individual domestic wells" recommends that wells servicing a private dwelling have a minimum yield of 5 gpm. When the yield for an individual well is less than 5 gpm, but greater than or equal to 2 gpm, supplemental storage coupled with repumping at 5 gpm is recommended. Well yields less than 2 gpm should not be utilized.
- Recharge to the property is more than sufficient to support the consumptive use of the proposed subdivision under normal and drought conditions.
- The data strongly indicate ground-water withdrawals from the 23-lot Hilltop Manor subdivision would have no significant water-level interference effects on neighboring offsite wells. LBG gave consideration that 85 percent of the water will be returned to the ground-water system through the septic system; in addition, onsite recharge significantly exceeds the consumptive use of the project. In addition, data from

offsite well monitoring program conducted during the 24-hour simultaneous test of wells on Lots 8 and 16 at greater than 1.5 times the estimated water demands of the project indicated no discernible water-level interference effects on offsite wells.

- The water-quality results from the wells on Lots 8 and 16 meets NYSDOH drinking water standards. Water quality from the underlying aquifer is considered good and acceptable for domestic use.

Very truly yours,

LEGGETTE, BRASHEARS & GRAHAM, INC.


Thomas P. Cusack
Principal



TPC:ng

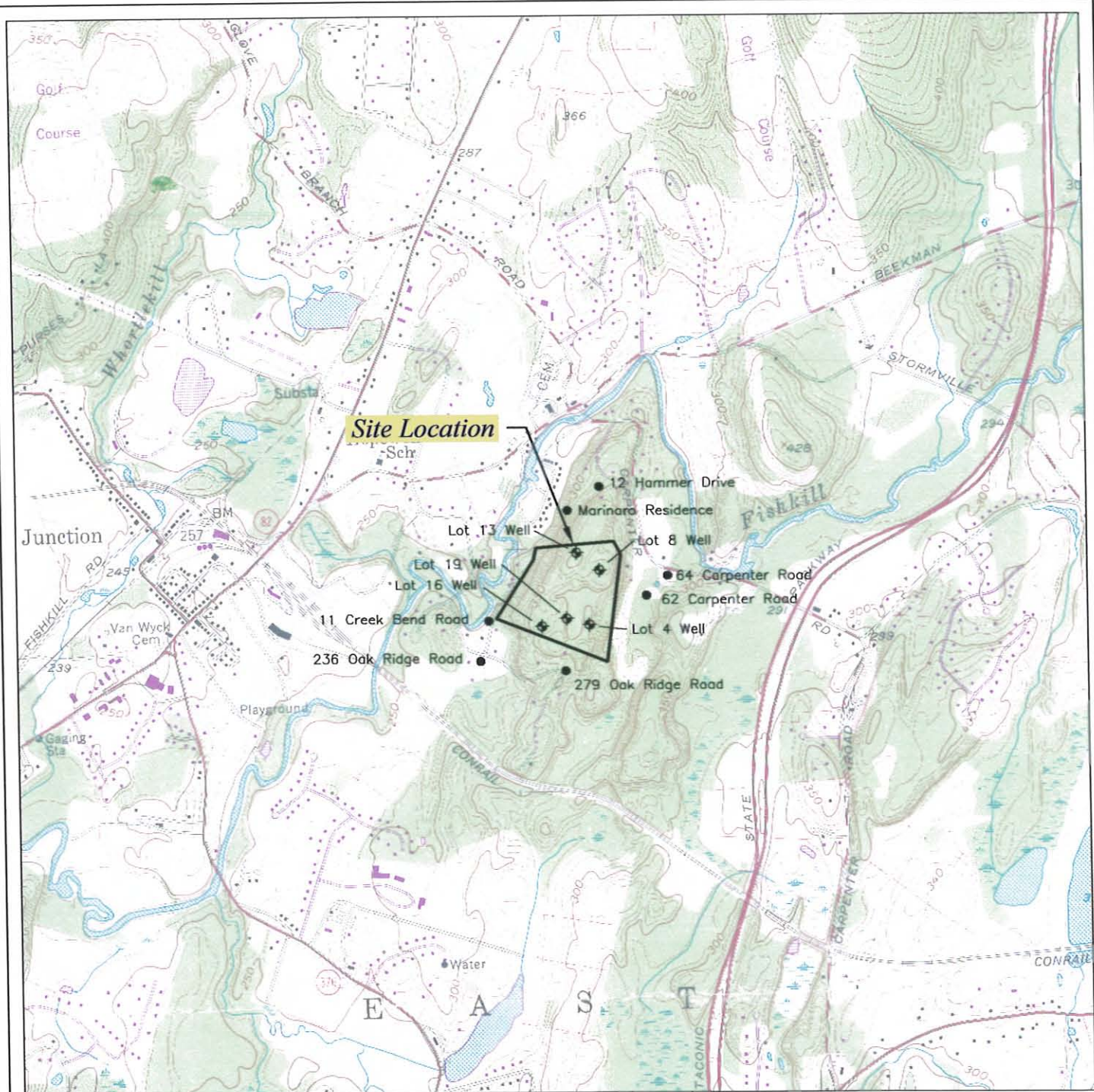
Enclosures

cc: Frank Marinaro

Mike Gillespie, P.E.

H:\Hilltop Manor\2006\Hilltop manor ltr.doc

FIGURE



SOURCE: USGS TOPOGRAPHIC QUADRANGLE HOPE WELL JUNCTION, NEW YORK (PHOTOREVISED 1981)



QUADRANGLE LOCATION



SCALE IN FEET

HILLTOP MANOR SUBDIVISION (T) EAST FISHKILL, NEW YORK

SITE AND WELL LOCATION MAP

DATE	REVISED	PREPARED BY:
		LEGGETTE, BRASHEARS & GRAHAM, INC.
		Professional Ground-Water and Environmental Engineering Services
		126 Monroe Turnpike
		Trumbull, CT 06611
		(203) 452-3100
DRAWN:	PGR	CHECKED: TPC
		DATE: 1/27/06
		FIGURE: 1



APPENDIX I

DCHD-WWC	WELL COMPLETION REPORT				OFFICE USE ONLY	
GROUND ELEVATION _____ ft.	DUTCHESS COUNTY • HEALTH DEPARTMENT				NYS GRID NO. E _____	
WELL COMPLETION DATE _____	387 MAIN MALL POUGHKEEPSIE, NEW YORK 12601-3316				NYS GRID NO. N _____	
	(914) 486-3404 Fax (914) 473-6001				SOURCE LOG NO. _____	
	PLEASE PRINT OR TYPE Hilltop Manor Lot 4					
WELL LOCATION	STREET ADDRESS: Hilltop Manor Subd., Lot #4, East Fishkill, NY				TOWN/VILLAGE/CITY: _____ TAX GRID NUMBER: 051045702885725	
WELL OWNER	NAME: ECFM, Inc., 10 Carpenter Road, Hopewell Junction, NY 12533				ADDRESS: _____ <input type="checkbox"/> PRIVATE <input type="checkbox"/> PUBLIC	
USE OF WELL	<input type="checkbox"/> RESIDENTIAL <input type="checkbox"/> BUSINESS <input type="checkbox"/> INDUSTRIAL		<input type="checkbox"/> PUBLIC SUPPLY <input type="checkbox"/> FARM <input type="checkbox"/> INSTITUTIONAL		<input type="checkbox"/> AIR/COND./HEAT PUMP <input checked="" type="checkbox"/> TEST/OBSERVATION <input type="checkbox"/> STAND-BY	
	<input type="checkbox"/> ABANDONED <input type="checkbox"/> OTHER (specify) _____					
AMOUNT OF USE	YIELD SOUGHT <u>5</u> gpm./NO. PEOPLE SERVED _____ / EST. OF DAILY USAGE _____ gal.					
REASON FOR DRILLING	<input type="checkbox"/> NEW SUPPLY <input type="checkbox"/> REPLACE EXISTING SUPPLY		<input type="checkbox"/> PROVIDE ADDITIONAL SUPPLY <input type="checkbox"/> DEEPEN EXISTING WELL		<input checked="" type="checkbox"/> TEST/OBSERVATION	
DEPTH DATA	WELL DEPTH <u>305</u> ft.		STATIC WATER LEVEL <u>30</u> ft.		DATE MEASURED <u>12/21/05</u>	
DRILLING EQUIPMENT	<input checked="" type="checkbox"/> ROTARY <input type="checkbox"/> WELL POINT		<input checked="" type="checkbox"/> COMPRESSED AIR PERCUSSION <input type="checkbox"/> CABLE PERCUSSION		<input type="checkbox"/> DUG <input type="checkbox"/> OTHER (specify): _____	
WELL TYPE	<input type="checkbox"/> SCREENED <input type="checkbox"/> OPEN END CASING		<input checked="" type="checkbox"/> OPEN HOLE IN BEDROCK		<input type="checkbox"/> OTHER	
CASING DETAILS	TOTAL LENGTH <u>52</u> ft.		MATERIALS: <input checked="" type="checkbox"/> STEEL <input type="checkbox"/> PLASTIC <input type="checkbox"/> OTHER			
	LENGTH BELOW GRADE <u>51</u> ft.		JOINTS: <input type="checkbox"/> WELDED <input checked="" type="checkbox"/> THREADED <input type="checkbox"/> OTHER			
	DIAMETER <u>6</u> in.		SEAL: <input checked="" type="checkbox"/> CEMENT GROUT <input type="checkbox"/> BENTONITE <input type="checkbox"/> OTHER			
	WEIGHT PER FOOT <u>19</u> lb./ft.		DRIVE SHOE: <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		LINER: <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
SCREEN DETAILS	DIAMETER (in)		SLOT SIZE		LENGTH (ft)	
	DEPTH TO SCREEN (ft)		DEVELOPED?			
	FIRST		SECOND		<input type="checkbox"/> YES <input type="checkbox"/> NO HOURS _____	
GRAVEL PACK	<input type="checkbox"/> YES <input type="checkbox"/> NO		GRAVEL SIZE: _____		DIAMETER OF PACK _____ in. TOP DEPTH _____ ft. BOTTOM DEPTH _____ ft.	
WELL YIELD TEST				WELL LOG		
METHOD: <input checked="" type="checkbox"/> PUMPED <input checked="" type="checkbox"/> COMPRESSED AIR <input type="checkbox"/> BAILED <input type="checkbox"/> OTHER				If more detailed formation descriptions or sieve analyses are available, please attach.		
If detailed pumping tests were done is information attached? <input type="checkbox"/> YES <input type="checkbox"/> NO				FORMATION DESCRIPTION		
WELL DEPTH ft.	DURATION hr. min.	DRAWDOWN ft.	YIELD gpm.	DEPTH FROM SURFACE ft.	Water Bearing	Well Diameter In
305'	6 hr.	265'	10	15		
				15		
				52		
				305		
IF AVAILABLE, PLEASE COMPLETE: WATER <input type="checkbox"/> CLEAR TEMP. _____ QUALITY <input type="checkbox"/> CLOUDY HARDNESS _____ <input type="checkbox"/> COLORED ANALYZED? <input type="checkbox"/> YES <input type="checkbox"/> NO ANALYSIS ATTACHED? <input type="checkbox"/> YES <input type="checkbox"/> NO				SITE MAP: A SITE MAP MUST BE ATTACHED SHOWING LOCATION OF WELL AND DISTANCES TO AT LEAST TWO LANDMARKS AND ANY POTENTIAL POLLUTION SOURCES.		
PUMP INFORMATION				WELL DRILLER NAME P. F. Beal & Sons, Inc. DATE 1/26/06 ADDRESS 4 Putnam Ave. Brewster, NY 10509 SIGNATURE <i>Adam L. Beal</i>		
TYPE _____	CAPACITY _____					
MAKER _____	DEPTH _____					
MODEL _____	VOLTAGE _____	HP _____				

DCHD-WWC	WELL COMPLETION REPORT			OFFICE USE ONLY				
GROUND ELEVATION _____ ft.	DUTCHESS COUNTY • HEALTH DEPARTMENT			NYS GRID NO. E				
WELL COMPLETION DATE _____	387 MAIN MALL POUGHKEEPSIE, NEW YORK 12601-3316			NYS GRID NO. N				
	(914) 486-3404 Fax (914) 473-6001			SOURCE LOG. NO.				
PLEASE PRINT OR TYPE Hilltop Manor Lot #8								
WELL LOCATION	STREET ADDRESS: Hilltop Manor Subd., Lot #8, East Fishkill, NY			TOWN/VILLAGE/CITY: _____ TAX GRID NUMBER: 05645702885725				
WELL OWNER	NAME: ECFM, Inc., 10 Carpenter Rd, Hopewell Junction, NY 12533				ADDRESS: _____			
USE OF WELL	<input type="checkbox"/> RESIDENTIAL <input type="checkbox"/> PUBLIC SUPPLY <input type="checkbox"/> AIR/COND./HEAT PUMP <input type="checkbox"/> ABANDONED <input type="checkbox"/> BUSINESS <input type="checkbox"/> FARM <input checked="" type="checkbox"/> TEST/OBSERVATION <input type="checkbox"/> OTHER (specify) _____ <input type="checkbox"/> INDUSTRIAL <input type="checkbox"/> INSTITUTIONAL <input type="checkbox"/> STAND-BY <input type="checkbox"/> _____							
AMOUNT OF USE	YIELD SOUGHT <u>5</u> gpm./NO. PEOPLE SERVED _____ / EST. OF DAILY USAGE _____ gal.							
REASON FOR DRILLING	<input type="checkbox"/> NEW SUPPLY <input type="checkbox"/> PROVIDE ADDITIONAL SUPPLY <input checked="" type="checkbox"/> TEST/OBSERVATION <input type="checkbox"/> REPLACE EXISTING SUPPLY <input type="checkbox"/> DEEPEN EXISTING WELL							
DEPTH DATA	WELL DEPTH <u>325</u> ft.	STATIC WATER LEVEL <u>20</u> ft.	DATE MEASURED <u>12/20/05</u>					
DRILLING EQUIPMENT	<input checked="" type="checkbox"/> ROTARY <input checked="" type="checkbox"/> COMPRESSED AIR PERCUSSION <input type="checkbox"/> DUG <input type="checkbox"/> WELL POINT <input type="checkbox"/> CABLE PERCUSSION <input type="checkbox"/> OTHER (specify): _____							
WELL TYPE	<input type="checkbox"/> SCREENED <input type="checkbox"/> OPEN END CASING <input checked="" type="checkbox"/> OPEN HOLE IN BEDROCK <input type="checkbox"/> OTHER							
CASING DETAILS	TOTAL LENGTH <u>52</u> ft.	MATERIALS: <input checked="" type="checkbox"/> STEEL <input type="checkbox"/> PLASTIC <input type="checkbox"/> OTHER						
	LENGTH BELOW GRADE <u>51</u> ft.	JOINTS: <input type="checkbox"/> WELDED <input checked="" type="checkbox"/> THREADED <input type="checkbox"/> OTHER						
	DIAMETER <u>6</u> in.	SEAL: <input checked="" type="checkbox"/> CEMENT GROUT <input type="checkbox"/> BENTONITE <input type="checkbox"/> OTHER						
	WEIGHT PER FOOT <u>19</u> lb./ft.	DRIVE SHOE: <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	LINER: <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO					
SCREEN DETAILS		DIAMETER (in)	SLOT SIZE	LENGTH (ft)	DEPTH TO SCREEN (ft)			
	FIRST							
	SECOND							
GRAVEL PACK	<input type="checkbox"/> YES <input type="checkbox"/> NO	GRAVEL SIZE: _____	DIAMETER OF PACK _____ in.	TOP DEPTH _____ ft.	BOTTOM DEPTH _____ ft.			
	WELL YIELD TEST		WELL LOG					
METHOD: <input checked="" type="checkbox"/> PUMPED <input checked="" type="checkbox"/> COMPRESSED AIR <input type="checkbox"/> BAILED <input type="checkbox"/> OTHER		If detailed pumping tests were done is information attached? <input type="checkbox"/> YES <input type="checkbox"/> NO		If more detailed formation descriptions or sieve analyses are available, please attach.				
WELL DEPTH ft.	DURATION hr. min.	DRAWDOWN ft.	YIELD gpm.	DEPTH FROM SURFACE ft.	Water Bearing	Well Diameter In	FORMATION DESCRIPTION	CODE
325'	6 hr.	285'	8	37			Drilling in overburden clay and boulders	
							Hit rock at 37'	
				37			Drilling in rock, set casing, grouted	
				52			Drilling in rock shale	
IF AVAILABLE, PLEASE COMPLETE: WATER <input type="checkbox"/> CLEAR TEMP. _____ QUALITY <input type="checkbox"/> CLOUDY HARDNESS _____ <input type="checkbox"/> COLORED ANALYZED? <input type="checkbox"/> YES <input type="checkbox"/> NO ANALYSIS ATTACHED? <input type="checkbox"/> YES <input type="checkbox"/> NO								
PUMP INFORMATION TYPE _____ CAPACITY _____ MAKER _____ DEPTH _____ MODEL _____ VOLTAGE _____ HP _____								
SITE MAP: A SITE MAP MUST BE ATTACHED SHOWING LOCATION OF WELL AND DISTANCES TO AT LEAST TWO LANDMARKS AND ANY POTENTIAL POLLUTION SOURCES.								
WELL DRILLER NAME P. F. Beal & Sons, Inc.						DATE <u>1/26/06</u>		
ADDRESS 4 Putnam Avenue Brewster, NY 10509						SIGNATURE <i>Adam L. Beal</i>		

DCHD-WWC GROUND ELEVATION _____ ft. WELL COMPLETION DATE _____	<h3 style="margin:0;">WELL COMPLETION REPORT</h3> <p style="margin:0;">DUTCHESS COUNTY • HEALTH DEPARTMENT 387 MAIN MALL POUGHKEEPSIE, NEW YORK 12601-3316 (914) 486-3404 Fax (914) 473-6001</p> <p style="margin:0;">PLEASE PRINT OR TYPE <u>Hilltop Manor lot #13</u></p>	OFFICE USE ONLY NYS GRID NO. <u>E</u> NYS GRID NO. <u>N</u> SOURCE LOG. NO. _____
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WELL LOCATION	STREET ADDRESS: <u>Hilltop Manor Subd., Lot #13, East Fishkill, NY</u>	TOWN/VILLAGE/CITY: _____
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WELL OWNER	NAME: <u>ECFM, Inc., 10 Carpenter Rd, Hopewell Junction, NY 12533</u>	ADDRESS: _____
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USE OF WELL	<input type="checkbox"/> RESIDENTIAL <input type="checkbox"/> PUBLIC SUPPLY <input type="checkbox"/> AIR/COND./HEAT PUMP <input type="checkbox"/> ABANDONED <input type="checkbox"/> BUSINESS <input type="checkbox"/> FARM <input checked="" type="checkbox"/> TEST/OBSERVATION <input type="checkbox"/> OTHER (specify) _____ <input type="checkbox"/> INDUSTRIAL <input type="checkbox"/> INSTITUTIONAL <input type="checkbox"/> STAND-BY <input type="checkbox"/> _____
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AMOUNT OF USE	YIELD SOUGHT <u>5</u> gpm./NO. PEOPLE SERVED _____ / EST. OF DAILY USAGE _____ gal.
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REASON FOR DRILLING	<input type="checkbox"/> NEW SUPPLY <input type="checkbox"/> PROVIDE ADDITIONAL SUPPLY <input checked="" type="checkbox"/> TEST/OBSERVATION <input type="checkbox"/> REPLACE EXISTING SUPPLY <input type="checkbox"/> DEEPEN EXISTING WELL
----------------------------	---

DEPTH DATA	WELL DEPTH <u>610</u> ft.	STATIC WATER LEVEL <u>30</u> ft.	DATE MEASURED <u>12/23/05</u>
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DRILLING EQUIPMENT	<input checked="" type="checkbox"/> ROTARY <input checked="" type="checkbox"/> COMPRESSED AIR PERCUSSION <input type="checkbox"/> DUG <input type="checkbox"/> WELL POINT <input type="checkbox"/> CABLE PERCUSSION <input type="checkbox"/> OTHER (specify): _____
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WELL TYPE	<input type="checkbox"/> SCREENED <input type="checkbox"/> OPEN END CASING <input checked="" type="checkbox"/> OPEN HOLE IN BEDROCK <input type="checkbox"/> OTHER
------------------	--

CASING DETAILS	TOTAL LENGTH <u>52</u> ft.	MATERIALS: <input checked="" type="checkbox"/> STEEL <input type="checkbox"/> PLASTIC <input type="checkbox"/> OTHER
	LENGTH BELOW GRADE <u>51</u> ft.	JOINTS: <input type="checkbox"/> WELDED <input checked="" type="checkbox"/> THREADED <input type="checkbox"/> OTHER
	DIAMETER <u>6</u> in.	SEAL: <input checked="" type="checkbox"/> CEMENT GROUT <input type="checkbox"/> BENTONITE <input type="checkbox"/> OTHER
	WEIGHT PER FOOT <u>19</u> lb./ft.	DRIVE SHOE: <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO LINER: <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO

SCREEN DETAILS	DIAMETER (in)	SLOT SIZE	LENGTH (ft)	DEPTH TO SCREEN (ft)	DEVELOPED?
	FIRST				<input type="checkbox"/> YES <input type="checkbox"/> NO HOURS _____
	SECOND				

GRAVEL PACK	<input type="checkbox"/> YES <input type="checkbox"/> NO GRAVEL SIZE: _____	DIAMETER OF PACK _____ in.	TOP DEPTH _____ ft.	BOTTOM DEPTH _____ ft.
--------------------	--	----------------------------	---------------------	------------------------

WELL YIELD TEST			
METHOD: <input checked="" type="checkbox"/> PUMPED <input checked="" type="checkbox"/> COMPRESSED AIR <input type="checkbox"/> BAILED <input type="checkbox"/> OTHER			
If detailed pumping tests were done is information attached? <input type="checkbox"/> YES <input type="checkbox"/> NO			
WELL DEPTH ft.	DURATION hr. min.	DRAWDOWN ft.	YIELD gpm.
610'	6 hr.	570'	1

WELL LOG				
If more detailed formation descriptions or sieve analyses are available, please attach.				
DEPTH FROM SURFACE	Water Bearing	Well Diameter In	FORMATION DESCRIPTION	CODE
ft.	ft.			
Land Surface	5		Drilling in overburden clay and boulders Hit rock at 5'	
	5	52	Drilling in rock, set casing, grouted	
	52	610	Drilling in rock shale	

IF AVAILABLE, PLEASE COMPLETE:	
WATER <input type="checkbox"/> CLEAR TEMP. _____	QUALITY <input type="checkbox"/> CLOUDY HARDNESS _____
<input type="checkbox"/> COLORED ANALYZED? <input type="checkbox"/> YES <input type="checkbox"/> NO	ANALYSIS ATTACHED? <input type="checkbox"/> YES <input type="checkbox"/> NO

PUMP INFORMATION	
TYPE _____	CAPACITY _____
MAKER _____	DEPTH _____
MODEL _____	VOLTAGE _____ HP _____

SITE MAP: A SITE MAP MUST BE ATTACHED SHOWING LOCATION OF WELL AND DISTANCES TO AT LEAST TWO LANDMARKS AND ANY POTENTIAL POLLUTION SOURCES.	
WELL DRILLER NAME <u>P. F. Beal & Sons, Inc.</u>	DATE <u>1/26/06</u>
ADDRESS <u>4 Putnam Avenue</u>	SIGNATURE <u>Adam L. Beal</u>
<u>Brewster, NY 10509</u>	

DCHD-WWC	WELL COMPLETION REPORT	OFFICE USE ONLY
GROUND ELEVATION _____ ft.	DUTCHESS COUNTY • HEALTH DEPARTMENT 387 MAIN MALL POUGHKEEPSIE, NEW YORK 12601-3316 (914) 486-3404 Fax (914) 473-6001	NYS GRID NO. E _____ N _____
WELL COMPLETION DATE _____	PLEASE PRINT OR TYPE Hilltop Manor Lot #16	SOURCE LOG NO. _____

WELL LOCATION STREET ADDRESS: Hilltop Manor Subd., Lot #16, East Fishkill, NY TOWN/VILLAGE/CITY: _____ TAX GRID NUMBER: **05645702885125**

WELL OWNER NAME: ECFM, In., 10 Carpenter Rd, Hopewell Junction, NY 12533 ADDRESS: _____ PRIVATE PUBLIC

USE OF WELL

<input type="checkbox"/> RESIDENTIAL	<input type="checkbox"/> PUBLIC SUPPLY	<input type="checkbox"/> AIR/COND./HEAT PUMP	<input type="checkbox"/> ABANDONED
<input type="checkbox"/> BUSINESS	<input type="checkbox"/> FARM	<input checked="" type="checkbox"/> TEST/OBSERVATION	<input type="checkbox"/> OTHER (specify) _____
<input type="checkbox"/> INDUSTRIAL	<input type="checkbox"/> INSTITUTIONAL	<input type="checkbox"/> STAND-BY	<input type="checkbox"/> _____

AMOUNT OF USE YIELD SOUGHT 5 gpm./NO. PEOPLE SERVED _____ / EST. OF DAILY USAGE _____ gal.

REASON FOR DRILLING

<input type="checkbox"/> NEW SUPPLY	<input type="checkbox"/> PROVIDE ADDITIONAL SUPPLY	<input checked="" type="checkbox"/> TEST/OBSERVATION
<input type="checkbox"/> REPLACE EXISTING SUPPLY	<input type="checkbox"/> DEEPEN EXISTING WELL	

DEPTH DATA WELL DEPTH 305 ft. STATIC WATER LEVEL 30 ft. DATE MEASURED 12/23/05

DRILLING EQUIPMENT

<input checked="" type="checkbox"/> ROTARY	<input checked="" type="checkbox"/> COMPRESSED AIR PERCUSSION	<input type="checkbox"/> DUG
<input type="checkbox"/> WELL POINT	<input type="checkbox"/> CABLE PERCUSSION	<input type="checkbox"/> OTHER (specify): _____

WELL TYPE

<input type="checkbox"/> SCREENED	<input type="checkbox"/> OPEN END CASING	<input checked="" type="checkbox"/> OPEN HOLE IN BEDROCK	<input type="checkbox"/> OTHER
-----------------------------------	--	--	--------------------------------

CASING DETAILS

TOTAL LENGTH <u>52</u> ft.	MATERIALS: <input checked="" type="checkbox"/> STEEL <input type="checkbox"/> PLASTIC <input type="checkbox"/> OTHER
LENGTH BELOW GRADE <u>51</u> ft.	JOINTS: <input type="checkbox"/> WELDED <input checked="" type="checkbox"/> THREADED <input type="checkbox"/> OTHER
DIAMETER <u>6</u> in.	SEAL: <input checked="" type="checkbox"/> CEMENT GROUT <input type="checkbox"/> BENTONITE <input type="checkbox"/> OTHER
WEIGHT PER FOOT <u>19</u> lb./ft.	DRIVE SHOE: <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO LINER: <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO

SCREEN DETAILS

	DIAMETER (in)	SLOT SIZE	LENGTH (ft)	DEPTH TO SCREEN (ft)	DEVELOPED?
FIRST					
SECOND					<input type="checkbox"/> YES <input type="checkbox"/> NO

GRAVEL PACK

<input type="checkbox"/> YES <input type="checkbox"/> NO	GRAVEL SIZE: _____	DIAMETER OF PACK _____ in.	TOP DEPTH _____ ft.	BOTTOM DEPTH _____ ft.
--	--------------------	----------------------------	---------------------	------------------------

WELL YIELD TEST

METHOD: PUMPED COMPRESSED AIR BAILED OTHER

If detailed pumping tests were done is information attached? YES NO

WELL DEPTH ft.	DURATION hr. min.	DRAWDOWN ft.	YIELD gpm.
305'	6 hr.	265'	10

WELL LOG If more detailed formation descriptions or sieve analyses are available, please attach.

DEPTH FROM SURFACE ft.	Water Bearing	Well Diameter In	FORMATION DESCRIPTION	CODE
Land Surface			Drilling in overburden clay and boulders	
12			Hit rock at 12'	
12			Drilling in rock, set casing, grouted	
52			Drilling in rock shale	

IF AVAILABLE, PLEASE COMPLETE:

WATER CLEAR TEMP. _____

QUALITY CLOUDY HARDNESS _____

COLORED ANALYZED? YES NO

ANALYSIS ATTACHED? YES NO

PUMP INFORMATION

TYPE _____ CAPACITY _____

MAKER _____ DEPTH _____

MODEL _____ VOLTAGE _____ HP _____

SITE MAP: A SITE MAP MUST BE ATTACHED SHOWING LOCATION OF WELL AND DISTANCES TO AT LEAST TWO LANDMARKS AND ANY POTENTIAL POLLUTION SOURCES.

WELL DRILLER NAME: P. F. Beal & Sons, Inc. DATE: 1/27/06

ADDRESS: 4 Putnam Ave. SIGNATURE: *Adam L. Beal*

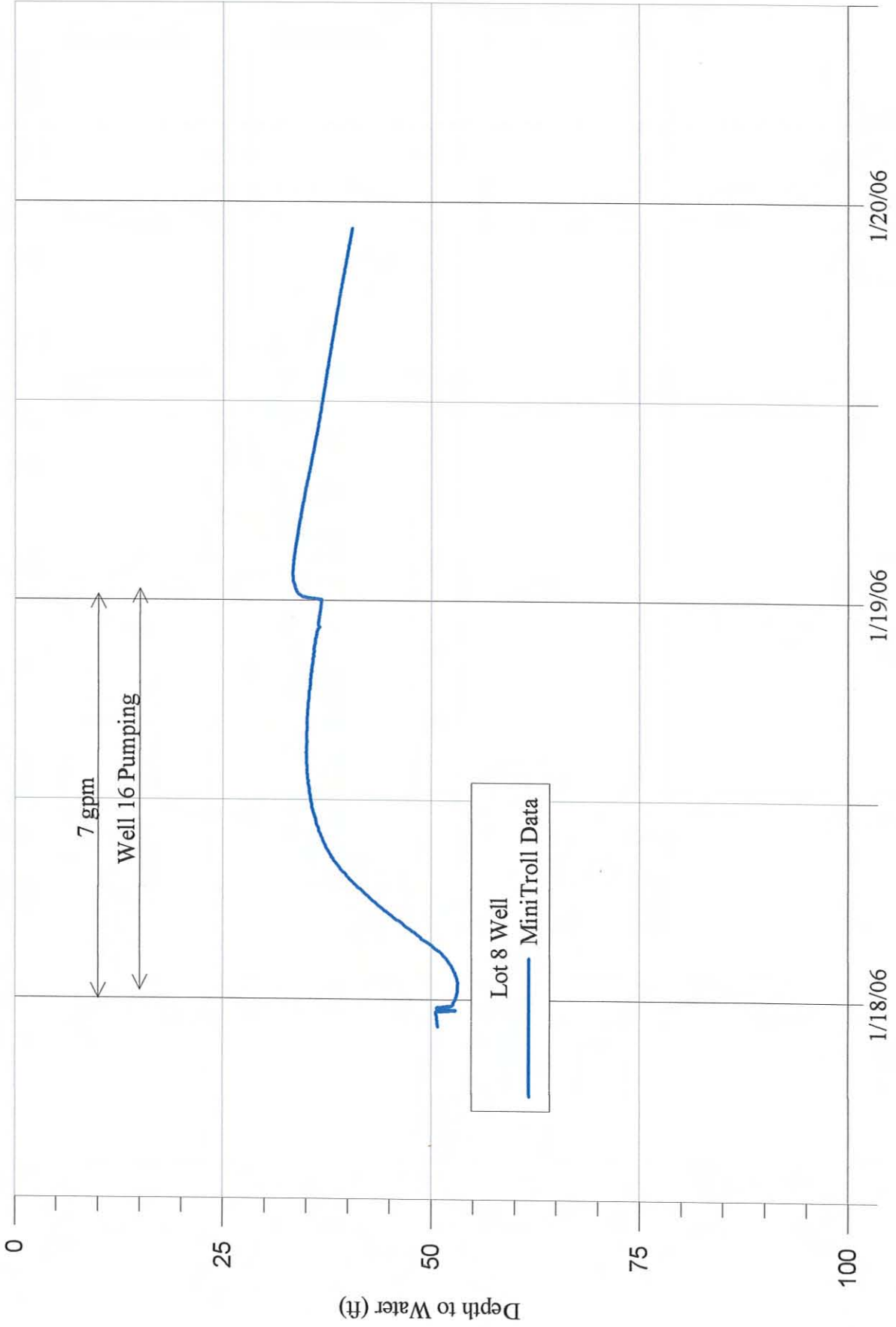
Brewster, NY 10509

DCHD-WWC GROUND ELEVATION _____ ft. WELL COMPLETION DATE _____	WELL COMPLETION REPORT DUTCHESS COUNTY • HEALTH DEPARTMENT 387 MAIN MALL POUGHKEEPSIE, NEW YORK 12601-3316 (914) 486-3404 Fax (914) 473-6001 # PLEASE PRINT OR TYPE <u>HILLTOP MANOR Lot 19</u>	OFFICE USE ONLY NYS GRID NO. <u>E</u> _____ <u>N</u> _____ SOURCE LOG. NO. _____																																		
WELL LOCATION STREET ADDRESS: Hilltop Manor Subd., Lot #19, East Fishkill, NY TOWN/VILLAGE/CITY: _____ TAX GRID NUMBER: <u>05645702885725</u>																																				
WELL OWNER NAME: ECFM, Inc., 10 Carpenter Rd, Hopewell Junction, NY 12533 ADDRESS: _____		<input type="checkbox"/> PRIVATE <input type="checkbox"/> PUBLIC																																		
USE OF WELL 1 - primary <input type="checkbox"/> RESIDENTIAL <input type="checkbox"/> PUBLIC SUPPLY <input type="checkbox"/> AIR/COND./HEAT PUMP <input type="checkbox"/> ABANDONED 2 - secondary <input type="checkbox"/> BUSINESS <input type="checkbox"/> FARM <input checked="" type="checkbox"/> TEST/OBSERVATION <input type="checkbox"/> OTHER (specify) _____ <input type="checkbox"/> INDUSTRIAL <input type="checkbox"/> INSTITUTIONAL <input type="checkbox"/> STAND-BY <input type="checkbox"/> _____																																				
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IF AVAILABLE, PLEASE COMPLETE: WATER <input type="checkbox"/> CLEAR TEMP. _____ QUALITY <input type="checkbox"/> CLOUDY HARDNESS _____ <input type="checkbox"/> COLORED ANALYZED? <input type="checkbox"/> YES <input type="checkbox"/> NO ANALYSIS ATTACHED? <input type="checkbox"/> YES <input type="checkbox"/> NO																																				
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APPENDIX II

**HILLTOP MANOR SUBDIVISION
EAST FISHKILL, NEW YORK**

Hydrograph of Lot 8 Well
During the 24-Hour Pumping Test of Lot 8 & 16 Wells
January 18-19, 2006



**HILLTOP MANOR SUBDIVISION
EAST FISHKILL, NEW YORK
Lot 8 Well**

**Water-Level Readings During the 24-Hour Pumping Test
On Lot 8 and 16 Wells January 18-19, 2006**

Date	Time	DTW (feet)	Drawdown (feet)	Elapsed Time (minutes)	Remarks
1/18/2006	10:22:43	50.832	0	-97.28	
1/18/2006	10:27:43	50.809	-0.023	-92.28	
1/18/2006	10:32:43	50.791	-0.041	-87.28	
1/18/2006	10:37:43	50.782	-0.05	-82.28	
1/18/2006	10:42:43	50.757	-0.075	-77.28	
1/18/2006	10:47:43	50.742	-0.09	-72.28	
1/18/2006	10:52:43	50.743	-0.089	-67.28	
1/18/2006	10:57:43	50.711	-0.121	-62.28	
1/18/2006	11:02:43	50.644	-0.188	-57.28	
1/18/2006	11:07:43	50.63	-0.202	-52.28	
1/18/2006	11:12:43	50.594	-0.238	-47.28	
1/18/2006	11:17:43	50.563	-0.269	-42.28	
1/18/2006	11:22:43	52.952	2.12	-37.28	
1/18/2006	11:27:43	50.751	-0.081	-32.28	
1/18/2006	11:32:43	50.69	-0.142	-27.28	
1/18/2006	11:37:43	52.413	1.581	-22.28	11:35 Well 8 start pump
1/18/2006	11:42:43	52.7	1.868	-17.28	7 gpm
1/18/2006	11:47:43	52.679	1.847	-12.28	
1/18/2006	11:52:43	52.715	1.883	-7.28	
1/18/2006	11:57:43	52.855	2.023	-2.28	
1/18/2006	12:02:43	52.934	2.102	2.72	12:00 Well 16 start pump
1/18/2006	12:07:43	52.983	2.151	7.72	
1/18/2006	12:12:43	53.019	2.187	12.72	
1/18/2006	12:17:43	53.098	2.266	17.72	
1/18/2006	12:22:43	53.116	2.284	22.72	
1/18/2006	12:27:43	53.189	2.357	27.72	
1/18/2006	12:32:43	53.207	2.375	32.72	
1/18/2006	12:37:43	53.164	2.332	37.72	
1/18/2006	12:42:43	53.208	2.376	42.72	
1/18/2006	12:47:43	53.195	2.363	47.72	
1/18/2006	12:52:43	53.225	2.393	52.72	
1/18/2006	12:57:43	53.231	2.399	57.72	
1/18/2006	13:02:43	53.286	2.454	62.72	
1/18/2006	13:07:43	53.164	2.332	67.72	
1/18/2006	13:12:43	53.128	2.296	72.72	
1/18/2006	13:17:43	53.079	2.247	77.72	
1/18/2006	13:22:43	53.024	2.192	82.72	
1/18/2006	13:27:43	52.951	2.119	87.72	
1/18/2006	13:32:43	52.866	2.034	92.72	
1/18/2006	13:37:43	52.896	2.064	97.72	
1/18/2006	13:42:43	52.768	1.936	102.72	
1/18/2006	13:47:43	52.677	1.845	107.72	
1/18/2006	13:52:43	52.641	1.809	112.72	
1/18/2006	13:57:43	52.543	1.711	117.72	7 gpm

1/18/2006	14:02:43	52.47	1.638	122.72	7 gpm
1/18/2006	14:07:43	52.336	1.504	127.72	
1/18/2006	14:12:43	52.208	1.376	132.72	
1/18/2006	14:17:43	52.099	1.267	137.72	
1/18/2006	14:22:43	51.995	1.163	142.72	
1/18/2006	14:27:43	51.892	1.06	147.72	
1/18/2006	14:32:43	51.733	0.901	152.72	
1/18/2006	14:37:43	51.526	0.694	157.72	
1/18/2006	14:42:43	51.429	0.597	162.72	
1/18/2006	14:47:43	51.289	0.457	167.72	
1/18/2006	14:52:43	51.106	0.274	172.72	
1/18/2006	14:57:43	50.893	0.061	177.72	
1/18/2006	15:02:43	50.68	-0.152	182.72	
1/18/2006	15:07:43	50.393	-0.439	187.72	
1/18/2006	15:12:43	50.241	-0.591	192.72	
1/18/2006	15:17:43	50.046	-0.786	197.72	
1/18/2006	15:22:43	49.803	-1.029	202.72	
1/18/2006	15:27:43	49.504	-1.328	207.72	
1/18/2006	15:32:43	49.297	-1.535	212.72	
1/18/2006	15:37:43	48.987	-1.845	217.72	
1/18/2006	15:42:43	48.84	-1.992	222.72	
1/18/2006	15:47:43	48.676	-2.156	227.72	
1/18/2006	15:52:43	48.408	-2.424	232.72	
1/18/2006	15:57:43	48.225	-2.607	237.72	
1/18/2006	16:02:43	48.018	-2.814	242.72	
1/18/2006	16:07:43	47.787	-3.045	247.72	
1/18/2006	16:12:43	47.586	-3.246	252.72	
1/18/2006	16:17:43	47.306	-3.526	257.72	
1/18/2006	16:22:43	47.025	-3.807	262.72	
1/18/2006	16:27:43	46.8	-4.032	267.72	
1/18/2006	16:32:43	46.636	-4.196	272.72	
1/18/2006	16:37:43	46.422	-4.41	277.72	
1/18/2006	16:42:43	46.179	-4.653	282.72	
1/18/2006	16:47:43	45.953	-4.879	287.72	
1/18/2006	16:52:43	45.685	-5.147	292.72	
1/18/2006	16:57:43	45.509	-5.323	297.72	
1/18/2006	17:02:43	45.289	-5.543	302.72	
1/18/2006	17:07:43	45.058	-5.774	307.72	
1/18/2006	17:12:43	44.808	-6.024	312.72	
1/18/2006	17:17:43	44.625	-6.207	317.72	
1/18/2006	17:22:43	44.369	-6.463	322.72	
1/18/2006	17:27:43	44.217	-6.615	327.72	
1/18/2006	17:32:43	44.01	-6.822	332.72	
1/18/2006	17:37:43	43.772	-7.06	337.72	
1/18/2006	17:42:43	43.62	-7.212	342.72	
1/18/2006	17:47:43	43.419	-7.413	347.72	
1/18/2006	17:52:43	43.2	-7.632	352.72	
1/18/2006	17:57:43	42.993	-7.839	357.72	
1/18/2006	18:02:43	42.81	-8.022	362.72	
1/18/2006	18:07:43	42.627	-8.205	367.72	
1/18/2006	18:12:43	42.463	-8.369	372.72	
1/18/2006	18:17:43	42.286	-8.546	377.72	
1/18/2006	18:22:43	42.036	-8.796	382.72	
1/18/2006	18:27:43	41.933	-8.899	387.72	
1/18/2006	18:32:43	41.732	-9.1	392.72	
1/18/2006	18:37:43	41.555	-9.277	397.72	7 gpm

1/18/2006	18:42:43	41.36	-9.472	402.72	7 gpm
1/18/2006	18:47:43	41.109	-9.723	407.72	
1/18/2006	18:52:43	40.97	-9.862	412.72	
1/18/2006	18:57:43	40.769	-10.063	417.72	
1/18/2006	19:02:43	40.629	-10.203	422.72	
1/18/2006	19:07:43	40.452	-10.38	427.72	
1/18/2006	19:12:43	40.251	-10.581	432.72	
1/18/2006	19:17:43	40.178	-10.654	437.72	
1/18/2006	19:22:43	40.013	-10.819	442.72	
1/18/2006	19:27:43	39.843	-10.989	447.72	
1/18/2006	19:32:43	39.745	-11.087	452.72	
1/18/2006	19:37:43	39.538	-11.294	457.72	
1/18/2006	19:42:43	39.368	-11.464	462.72	
1/18/2006	19:47:43	39.264	-11.568	467.72	
1/18/2006	19:52:43	39.081	-11.751	472.72	
1/18/2006	19:57:43	39.014	-11.818	477.72	
1/18/2006	20:02:43	38.837	-11.995	482.72	
1/18/2006	20:07:43	38.746	-12.086	487.72	
1/18/2006	20:12:43	38.581	-12.251	492.72	
1/18/2006	20:17:43	38.417	-12.415	497.72	
1/18/2006	20:22:43	38.283	-12.549	502.72	
1/18/2006	20:27:43	38.24	-12.592	507.72	
1/18/2006	20:32:43	38.033	-12.799	512.72	
1/18/2006	20:37:43	37.996	-12.836	517.72	
1/18/2006	20:42:43	37.905	-12.927	522.72	
1/18/2006	20:47:43	37.789	-13.043	527.72	
1/18/2006	20:52:43	37.704	-13.128	532.72	
1/18/2006	20:57:43	37.6	-13.232	537.72	
1/18/2006	21:02:43	37.485	-13.347	542.72	
1/18/2006	21:07:43	37.398	-13.434	547.72	
1/18/2006	21:12:43	37.314	-13.518	552.72	
1/18/2006	21:17:43	37.29	-13.542	557.72	
1/18/2006	21:22:43	37.174	-13.658	562.72	
1/18/2006	21:27:43	37.082	-13.75	567.72	
1/18/2006	21:32:43	36.985	-13.847	572.72	
1/18/2006	21:37:43	36.961	-13.871	577.72	
1/18/2006	21:42:43	36.9	-13.932	582.72	
1/18/2006	21:47:43	36.82	-14.012	587.72	
1/18/2006	21:52:43	36.764	-14.068	592.72	
1/18/2006	21:57:43	36.686	-14.146	597.72	
1/18/2006	22:02:43	36.589	-14.243	602.72	
1/18/2006	22:07:43	36.485	-14.347	607.72	
1/18/2006	22:12:43	36.516	-14.316	612.72	
1/18/2006	22:17:43	36.443	-14.389	617.72	
1/18/2006	22:22:43	36.393	-14.439	622.72	
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1/18/2006	22:32:43	36.241	-14.591	632.72	
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1/18/2006	22:52:43	36.089	-14.743	652.72	
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1/18/2006	23:02:43	35.979	-14.853	662.72	
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1/19/2006	3:32:43	35.059	-15.773	932.72	
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1/19/2006	9:22:43	36.045	-14.787	1282.72	
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1/19/2006	11:22:43	36.673	-14.159	1402.72	
1/19/2006	11:27:43	36.697	-14.135	1407.72	
1/19/2006	11:32:43	36.747	-14.085	1412.72	
1/19/2006	11:37:43	36.741	-14.091	1417.72	
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1/19/2006	11:47:43	36.819	-14.013	1427.72	
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1/19/2006	11:57:43	36.839	-13.993	1437.72	12:00 Well 16 pump off
1/19/2006	12:02:43	36.85	-13.982	1442.72	7 gpm
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1/19/2006	12:37:43	33.779	-17.053	1477.72	
1/19/2006	12:42:43	33.709	-17.123	1482.72	
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1/19/2006	18:22:43	34.814	-16.018	1822.72	
1/19/2006	18:27:43	34.845	-15.987	1827.72	
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1/19/2006	19:02:43	35.075	-15.757	1862.72	
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1/19/2006	21:57:43	36.226	-14.606	2037.72	
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1/19/2006	22:17:43	36.349	-14.483	2057.72	
1/19/2006	22:22:43	36.379	-14.453	2062.72	
1/19/2006	22:27:43	36.403	-14.429	2067.72	
1/19/2006	22:32:43	36.434	-14.398	2072.72	
1/19/2006	22:37:43	36.464	-14.368	2077.72	

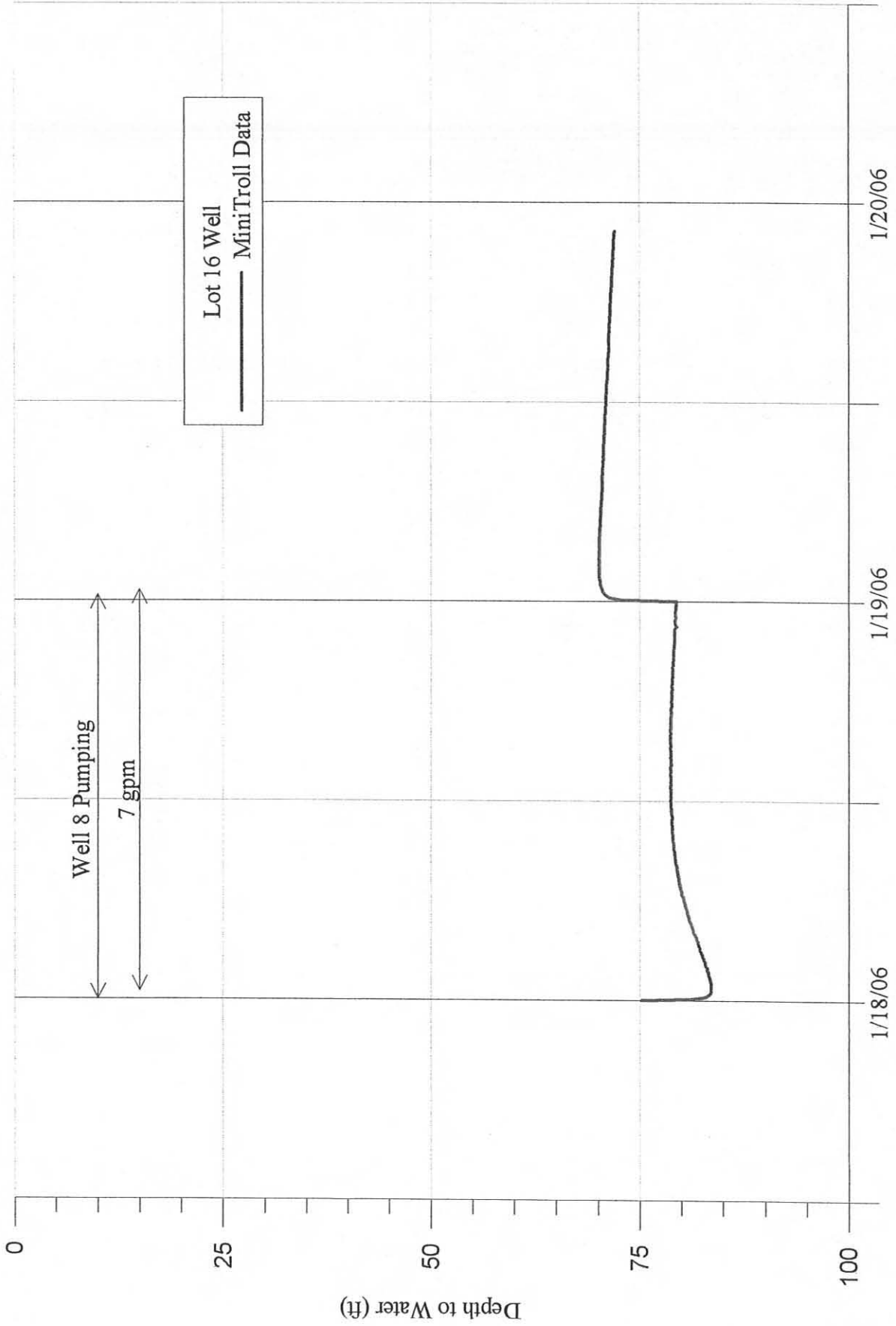
1/19/2006	22:42:43	36.488	-14.344	2082.72	
1/19/2006	22:47:43	36.518	-14.314	2087.72	
1/19/2006	22:52:43	36.553	-14.279	2092.72	
1/19/2006	22:57:43	36.578	-14.254	2097.72	
1/19/2006	23:02:43	36.614	-14.218	2102.72	
1/19/2006	23:07:43	36.639	-14.193	2107.72	
1/19/2006	23:12:43	36.669	-14.163	2112.72	
1/19/2006	23:17:43	36.694	-14.138	2117.72	
1/19/2006	23:22:43	36.724	-14.108	2122.72	
1/19/2006	23:27:43	36.748	-14.084	2127.72	
1/19/2006	23:32:43	36.779	-14.053	2132.72	
1/19/2006	23:37:43	36.797	-14.035	2137.72	
1/19/2006	23:42:43	36.828	-14.004	2142.72	
1/19/2006	23:47:43	36.864	-13.968	2147.72	
1/19/2006	23:52:43	36.889	-13.943	2152.72	
1/19/2006	23:57:43	36.919	-13.913	2157.72	
1/20/2006	0:02:43	36.95	-13.882	2162.72	
1/20/2006	0:07:43	36.98	-13.852	2167.72	
1/20/2006	0:12:43	37.004	-13.828	2172.72	
1/20/2006	0:17:43	37.036	-13.796	2177.72	
1/20/2006	0:22:43	37.06	-13.772	2182.72	
1/20/2006	0:27:43	37.085	-13.747	2187.72	
1/20/2006	0:32:43	37.11	-13.722	2192.72	
1/20/2006	0:37:43	37.14	-13.692	2197.72	
1/20/2006	0:42:43	37.17	-13.662	2202.72	
1/20/2006	0:47:43	37.201	-13.631	2207.72	
1/20/2006	0:52:43	37.224	-13.608	2212.72	
1/20/2006	0:57:43	37.255	-13.577	2217.72	
1/20/2006	1:02:43	37.28	-13.552	2222.72	
1/20/2006	1:07:43	37.31	-13.522	2227.72	
1/20/2006	1:12:43	37.335	-13.497	2232.72	
1/20/2006	1:17:43	37.365	-13.467	2237.72	
1/20/2006	1:22:43	37.389	-13.443	2242.72	
1/20/2006	1:27:43	37.414	-13.418	2247.72	
1/20/2006	1:32:43	37.438	-13.394	2252.72	
1/20/2006	1:37:43	37.463	-13.369	2257.72	
1/20/2006	1:42:43	37.493	-13.339	2262.72	
1/20/2006	1:47:43	37.511	-13.321	2267.72	
1/20/2006	1:52:43	37.536	-13.296	2272.72	
1/20/2006	1:57:43	37.572	-13.26	2277.72	
1/20/2006	2:02:43	37.597	-13.235	2282.72	
1/20/2006	2:07:43	37.621	-13.211	2287.72	
1/20/2006	2:12:43	37.645	-13.187	2292.72	
1/20/2006	2:17:43	37.676	-13.156	2297.72	
1/20/2006	2:22:43	37.706	-13.126	2302.72	
1/20/2006	2:27:43	37.729	-13.103	2307.72	
1/20/2006	2:32:43	37.761	-13.071	2312.72	
1/20/2006	2:37:43	37.786	-13.046	2317.72	
1/20/2006	2:42:43	37.815	-13.017	2322.72	
1/20/2006	2:47:43	37.845	-12.987	2327.72	
1/20/2006	2:52:43	37.871	-12.961	2332.72	
1/20/2006	2:57:43	37.9	-12.932	2337.72	
1/20/2006	3:02:43	37.924	-12.908	2342.72	
1/20/2006	3:07:43	37.95	-12.882	2347.72	
1/20/2006	3:12:43	37.974	-12.858	2352.72	
1/20/2006	3:17:43	38.005	-12.827	2357.72	

1/20/2006	3:22:43	38.029	-12.803	2362.72	
1/20/2006	3:27:43	38.054	-12.778	2367.72	
1/20/2006	3:32:43	38.078	-12.754	2372.72	
1/20/2006	3:37:43	38.108	-12.724	2377.72	
1/20/2006	3:42:43	38.133	-12.699	2382.72	
1/20/2006	3:47:43	38.162	-12.67	2387.72	
1/20/2006	3:52:43	38.193	-12.639	2392.72	
1/20/2006	3:57:43	38.217	-12.615	2397.72	
1/20/2006	4:02:43	38.241	-12.591	2402.72	
1/20/2006	4:07:43	38.26	-12.572	2407.72	
1/20/2006	4:12:43	38.291	-12.541	2412.72	
1/20/2006	4:17:43	38.321	-12.511	2417.72	
1/20/2006	4:22:43	38.352	-12.48	2422.72	
1/20/2006	4:27:43	38.375	-12.457	2427.72	
1/20/2006	4:32:43	38.406	-12.426	2432.72	
1/20/2006	4:37:43	38.436	-12.396	2437.72	
1/20/2006	4:42:43	38.467	-12.365	2442.72	
1/20/2006	4:47:43	38.491	-12.341	2447.72	
1/20/2006	4:52:43	38.517	-12.315	2452.72	
1/20/2006	4:57:43	38.552	-12.28	2457.72	
1/20/2006	5:02:43	38.57	-12.262	2462.72	
1/20/2006	5:07:43	38.607	-12.225	2467.72	
1/20/2006	5:12:43	38.631	-12.201	2472.72	
1/20/2006	5:17:43	38.656	-12.176	2477.72	
1/20/2006	5:22:43	38.686	-12.146	2482.72	
1/20/2006	5:27:43	38.718	-12.114	2487.72	
1/20/2006	5:32:43	38.747	-12.085	2492.72	
1/20/2006	5:37:43	38.773	-12.059	2497.72	
1/20/2006	5:42:43	38.803	-12.029	2502.72	
1/20/2006	5:47:43	38.834	-11.998	2507.72	
1/20/2006	5:52:43	38.863	-11.969	2512.72	
1/20/2006	5:57:43	38.887	-11.945	2517.72	
1/20/2006	6:02:43	38.918	-11.914	2522.72	
1/20/2006	6:07:43	38.942	-11.89	2527.72	
1/20/2006	6:12:43	38.979	-11.853	2532.72	
1/20/2006	6:17:43	39.003	-11.829	2537.72	
1/20/2006	6:22:43	39.033	-11.799	2542.72	
1/20/2006	6:27:43	39.064	-11.768	2547.72	
1/20/2006	6:32:43	39.094	-11.738	2552.72	
1/20/2006	6:37:43	39.125	-11.707	2557.72	
1/20/2006	6:42:43	39.155	-11.677	2562.72	
1/20/2006	6:47:43	39.186	-11.646	2567.72	
1/20/2006	6:52:43	39.216	-11.616	2572.72	
1/20/2006	6:57:43	39.247	-11.585	2577.72	
1/20/2006	7:02:43	39.277	-11.555	2582.72	
1/20/2006	7:07:43	39.314	-11.518	2587.72	
1/20/2006	7:12:43	39.344	-11.488	2592.72	
1/20/2006	7:17:43	39.375	-11.457	2597.72	
1/20/2006	7:22:43	39.405	-11.427	2602.72	
1/20/2006	7:27:43	39.436	-11.396	2607.72	
1/20/2006	7:32:43	39.466	-11.366	2612.72	
1/20/2006	7:37:43	39.497	-11.335	2617.72	
1/20/2006	7:42:43	39.527	-11.305	2622.72	
1/20/2006	7:47:43	39.557	-11.275	2627.72	
1/20/2006	7:52:43	39.594	-11.238	2632.72	
1/20/2006	7:57:43	39.624	-11.208	2637.72	

1/20/2006	8:02:43	39.655	-11.177	2642.72	
1/20/2006	8:07:43	39.685	-11.147	2647.72	
1/20/2006	8:12:43	39.71	-11.122	2652.72	
1/20/2006	8:17:43	39.746	-11.086	2657.72	
1/20/2006	8:22:43	39.777	-11.055	2662.72	
1/20/2006	8:27:43	39.807	-11.025	2667.72	
1/20/2006	8:32:43	39.838	-10.994	2672.72	
1/20/2006	8:37:43	39.868	-10.964	2677.72	
1/20/2006	8:42:43	39.899	-10.933	2682.72	
1/20/2006	8:47:43	39.929	-10.903	2687.72	
1/20/2006	8:52:43	39.96	-10.872	2692.72	
1/20/2006	8:57:43	39.99	-10.842	2697.72	
1/20/2006	9:02:43	40.021	-10.811	2702.72	
1/20/2006	9:07:43	40.051	-10.781	2707.72	
1/20/2006	9:12:43	40.081	-10.751	2712.72	
1/20/2006	9:17:43	40.112	-10.72	2717.72	
1/20/2006	9:22:43	40.142	-10.69	2722.72	
1/20/2006	9:27:43	40.173	-10.659	2727.72	
1/20/2006	9:32:43	40.209	-10.623	2732.72	
1/20/2006	9:37:43	40.24	-10.592	2737.72	
1/20/2006	9:42:43	40.27	-10.562	2742.72	
1/20/2006	9:47:43	40.301	-10.531	2747.72	
1/20/2006	9:52:43	40.331	-10.501	2752.72	
1/20/2006	9:57:43	40.362	-10.47	2757.72	
1/20/2006	10:02:43	40.392	-10.44	2762.72	
1/20/2006	10:07:43	40.423	-10.409	2767.72	
1/20/2006	10:12:43	40.453	-10.379	2772.72	
1/20/2006	10:17:43	40.477	-10.355	2777.72	
1/20/2006	10:22:43	40.514	-10.318	2782.72	

**HILLTOP MANOR SUBDIVISION
EAST FISHKILL, NEW YORK**

Hydrograph of Lot 16 Well
During the 24-Hour Pumping Test of Lot 8 & 16 Wells
January 18-19, 2006



**HILLTOP MANOR SUBDIVISION
EAST FISHKILL, NEW YORK
Lot 16 Well**

**Water-Level Readings During the 24-Hour Pumping Test
On Lot 8 and 16 Wells January 18-19, 2006**

Date	Time	DTW (feet)	Drawdown (feet)	Elapsed Time (minutes)	Remarks
1/18/2006	12:00:23	75.178	0	0.37	
1/18/2006	12:05:23	81.191	6.013	5.37	
1/18/2006	12:10:23	82.587	7.409	10.37	
1/18/2006	12:15:23	83.015	7.837	15.37	
1/18/2006	12:20:23	83.252	8.074	20.37	
1/18/2006	12:25:23	83.468	8.29	25.37	
1/18/2006	12:30:23	83.533	8.355	30.37	
1/18/2006	12:35:23	83.558	8.38	35.37	
1/18/2006	12:40:23	83.598	8.42	40.37	
1/18/2006	12:45:23	83.579	8.401	45.37	
1/18/2006	12:50:23	83.623	8.445	50.37	
1/18/2006	12:55:23	83.601	8.423	55.37	
1/18/2006	13:00:23	83.558	8.38	60.37	
1/18/2006	13:05:23	83.515	8.337	65.37	
1/18/2006	13:10:23	83.472	8.294	70.37	
1/18/2006	13:15:23	83.49	8.312	75.37	11:35 Well 8 start pump
1/18/2006	13:20:23	83.425	8.247	80.37	
1/18/2006	13:25:23	83.382	8.204	85.37	
1/18/2006	13:30:23	83.32	8.142	90.37	
1/18/2006	13:35:23	83.296	8.118	95.37	
1/18/2006	13:40:23	83.231	8.053	100.37	12:00 Well 16 start pump
1/18/2006	13:45:23	83.213	8.035	105.37	7 gpm
1/18/2006	13:50:23	83.101	7.923	110.37	
1/18/2006	13:55:23	83.123	7.945	115.37	
1/18/2006	14:00:23	83.037	7.859	120.37	
1/18/2006	14:05:23	82.972	7.794	125.37	
1/18/2006	14:10:23	82.886	7.708	130.37	
1/18/2006	14:15:23	82.864	7.686	135.37	
1/18/2006	14:20:23	82.842	7.664	140.37	
1/18/2006	14:25:23	82.735	7.557	145.37	
1/18/2006	14:30:23	82.691	7.513	150.37	
1/18/2006	14:35:23	82.627	7.449	155.37	
1/18/2006	14:40:23	82.54	7.362	160.37	
1/18/2006	14:45:23	82.54	7.362	165.37	
1/18/2006	14:50:23	82.432	7.254	170.37	
1/18/2006	14:55:23	82.346	7.168	175.37	
1/18/2006	15:00:23	82.281	7.103	180.37	
1/18/2006	15:05:23	82.238	7.06	185.37	
1/18/2006	15:10:23	82.217	7.039	190.37	
1/18/2006	15:15:23	82.152	6.974	195.37	
1/18/2006	15:20:23	82.109	6.931	200.37	
1/18/2006	15:25:23	82.023	6.845	205.37	
1/18/2006	15:30:23	82.001	6.823	210.37	
1/18/2006	15:35:23	81.915	6.737	215.37	7 gpm

1/18/2006	15:40:23	81.828	6.65	220.37	7 gpm
1/18/2006	15:45:23	81.828	6.65	225.37	
1/18/2006	15:50:23	81.764	6.586	230.37	
1/18/2006	15:55:23	81.656	6.478	235.37	
1/18/2006	16:00:23	81.634	6.456	240.37	
1/18/2006	16:05:23	81.462	6.284	245.37	
1/18/2006	16:10:23	81.44	6.262	250.37	
1/18/2006	16:15:23	81.397	6.219	255.37	
1/18/2006	16:20:23	81.314	6.136	260.37	
1/18/2006	16:25:23	81.267	6.089	265.37	
1/18/2006	16:30:23	81.224	6.046	270.37	
1/18/2006	16:35:23	81.138	5.96	275.37	
1/18/2006	16:40:23	81.098	5.92	280.37	
1/18/2006	16:45:23	81.008	5.83	285.37	
1/18/2006	16:50:23	80.947	5.769	290.37	
1/18/2006	16:55:23	80.944	5.766	295.37	
1/18/2006	17:00:23	80.879	5.701	300.37	
1/18/2006	17:05:23	80.836	5.658	305.37	
1/18/2006	17:10:23	80.75	5.572	310.37	
1/18/2006	17:15:23	80.706	5.528	315.37	
1/18/2006	17:20:23	80.685	5.507	320.37	
1/18/2006	17:25:23	80.642	5.464	325.37	
1/18/2006	17:30:23	80.577	5.399	330.37	
1/18/2006	17:35:23	80.516	5.338	335.37	
1/18/2006	17:40:23	80.494	5.316	340.37	
1/18/2006	17:45:23	80.448	5.27	345.37	
1/18/2006	17:50:23	80.404	5.226	350.37	
1/18/2006	17:55:23	80.34	5.162	355.37	
1/18/2006	18:00:23	80.318	5.14	360.37	
1/18/2006	18:05:23	80.278	5.1	365.37	
1/18/2006	18:10:23	80.232	5.054	370.37	
1/18/2006	18:15:23	80.192	5.014	375.37	
1/18/2006	18:20:23	80.059	4.881	380.37	
1/18/2006	18:25:23	80.059	4.881	385.37	
1/18/2006	18:30:23	80.059	4.881	390.37	
1/18/2006	18:35:23	79.994	4.816	395.37	
1/18/2006	18:40:23	79.973	4.795	400.37	
1/18/2006	18:45:23	79.908	4.73	405.37	
1/18/2006	18:50:23	79.887	4.709	410.37	
1/18/2006	18:55:23	79.865	4.687	415.37	
1/18/2006	19:00:23	79.843	4.665	420.37	
1/18/2006	19:05:23	79.8	4.622	425.37	
1/18/2006	19:10:23	79.779	4.601	430.37	
1/18/2006	19:15:23	79.757	4.579	435.37	
1/18/2006	19:20:23	79.735	4.557	440.37	
1/18/2006	19:25:23	79.692	4.514	445.37	
1/18/2006	19:30:23	79.649	4.471	450.37	
1/18/2006	19:35:23	79.649	4.471	455.37	
1/18/2006	19:40:23	79.606	4.428	460.37	
1/18/2006	19:45:23	79.584	4.406	465.37	
1/18/2006	19:50:23	79.541	4.363	470.37	
1/18/2006	19:55:23	79.541	4.363	475.37	
1/18/2006	20:00:23	79.52	4.342	480.37	
1/18/2006	20:05:23	79.455	4.277	485.37	
1/18/2006	20:10:23	79.455	4.277	490.37	
1/18/2006	20:15:23	79.369	4.191	495.37	7 gpm

1/18/2006	20:20:23	79.369	4.191	500.37	7 gpm
1/18/2006	20:25:23	79.347	4.169	505.37	
1/18/2006	20:30:23	79.326	4.148	510.37	
1/18/2006	20:35:23	79.304	4.126	515.37	
1/18/2006	20:40:23	79.282	4.104	520.37	
1/18/2006	20:45:23	79.239	4.061	525.37	
1/18/2006	20:50:23	79.261	4.083	530.37	
1/18/2006	20:55:23	79.218	4.04	535.37	
1/18/2006	21:00:23	79.175	3.997	540.37	
1/18/2006	21:05:23	79.131	3.953	545.37	
1/18/2006	21:10:23	79.131	3.953	550.37	
1/18/2006	21:15:23	79.11	3.932	555.37	
1/18/2006	21:20:23	79.11	3.932	560.37	
1/18/2006	21:25:23	79.11	3.932	565.37	
1/18/2006	21:30:23	79.045	3.867	570.37	
1/18/2006	21:35:23	79.027	3.849	575.37	
1/18/2006	21:40:23	79.023	3.845	580.37	
1/18/2006	21:45:23	79.023	3.845	585.37	
1/18/2006	21:50:23	79.002	3.824	590.37	
1/18/2006	21:55:23	79.023	3.845	595.37	
1/18/2006	22:00:23	78.98	3.802	600.37	
1/18/2006	22:05:23	78.98	3.802	605.37	
1/18/2006	22:10:23	78.916	3.738	610.37	
1/18/2006	22:15:23	78.959	3.781	615.37	
1/18/2006	22:20:23	78.937	3.759	620.37	
1/18/2006	22:25:23	78.937	3.759	625.37	
1/18/2006	22:30:23	78.959	3.781	630.37	
1/18/2006	22:35:23	78.894	3.716	635.37	
1/18/2006	22:40:23	78.916	3.738	640.37	
1/18/2006	22:45:23	78.894	3.716	645.37	
1/18/2006	22:50:23	78.916	3.738	650.37	
1/18/2006	22:55:23	78.894	3.716	655.37	
1/18/2006	23:00:23	78.937	3.759	660.37	
1/18/2006	23:05:23	78.872	3.694	665.37	
1/18/2006	23:10:23	78.851	3.673	670.37	
1/18/2006	23:15:23	78.851	3.673	675.37	
1/18/2006	23:20:23	78.829	3.651	680.37	
1/18/2006	23:25:23	78.808	3.63	685.37	
1/18/2006	23:30:23	78.829	3.651	690.37	
1/18/2006	23:35:23	78.808	3.63	695.37	
1/18/2006	23:40:23	78.765	3.587	700.37	
1/18/2006	23:45:23	78.765	3.587	705.37	
1/18/2006	23:50:23	78.786	3.608	710.37	
1/18/2006	23:55:23	78.786	3.608	715.37	
1/18/2006	0:00:23	78.743	3.565	720.37	
1/18/2006	0:05:23	78.721	3.543	725.37	
1/18/2006	0:10:23	78.786	3.608	730.37	
1/18/2006	0:15:23	78.721	3.543	735.37	
1/18/2006	0:20:23	78.765	3.587	740.37	
1/18/2006	0:25:23	78.765	3.587	745.37	
1/18/2006	0:30:23	78.765	3.587	750.37	
1/18/2006	0:35:23	78.765	3.587	755.37	
1/18/2006	0:40:23	78.786	3.608	760.37	
1/18/2006	0:45:23	78.743	3.565	765.37	
1/18/2006	0:50:23	78.743	3.565	770.37	
1/18/2006	0:55:23	78.743	3.565	775.37	7 gpm

1/18/2006	1:00:23	78.765	3.587	780.37	7 gpm
1/18/2006	1:05:23	78.7	3.522	785.37	
1/18/2006	1:10:23	78.746	3.568	790.37	
1/18/2006	1:15:23	78.765	3.587	795.37	
1/18/2006	1:20:23	78.765	3.587	800.37	
1/18/2006	1:25:23	78.786	3.608	805.37	
1/18/2006	1:30:23	78.746	3.568	810.37	
1/18/2006	1:35:23	78.743	3.565	815.37	
1/19/2006	1:40:23	78.743	3.565	820.37	
1/19/2006	1:45:23	78.765	3.587	825.37	
1/19/2006	1:50:23	78.765	3.587	830.37	
1/19/2006	1:55:23	78.743	3.565	835.37	
1/19/2006	2:00:23	78.743	3.565	840.37	
1/19/2006	2:05:23	78.746	3.568	845.37	
1/19/2006	2:10:23	78.811	3.633	850.37	
1/19/2006	2:15:23	78.765	3.587	855.37	
1/19/2006	2:20:23	78.765	3.587	860.37	
1/19/2006	2:25:23	78.765	3.587	865.37	
1/19/2006	2:30:23	78.786	3.608	870.37	
1/19/2006	2:35:23	78.743	3.565	875.37	
1/19/2006	2:40:23	78.743	3.565	880.37	
1/19/2006	2:45:23	78.765	3.587	885.37	
1/19/2006	2:50:23	78.743	3.565	890.37	
1/19/2006	2:55:23	78.786	3.608	895.37	
1/19/2006	3:00:23	78.768	3.59	900.37	
1/19/2006	3:05:23	78.743	3.565	905.37	
1/19/2006	3:10:23	78.743	3.565	910.37	
1/19/2006	3:15:23	78.743	3.565	915.37	
1/19/2006	3:20:23	78.765	3.587	920.37	
1/19/2006	3:25:23	78.743	3.565	925.37	
1/19/2006	3:30:23	78.721	3.543	930.37	
1/19/2006	3:35:23	78.746	3.568	935.37	
1/19/2006	3:40:23	78.721	3.543	940.37	
1/19/2006	3:45:23	78.743	3.565	945.37	
1/19/2006	3:50:23	78.743	3.565	950.37	
1/19/2006	3:55:23	78.743	3.565	955.37	
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1/19/2006	4:05:23	78.765	3.587	965.37	
1/19/2006	4:10:23	78.721	3.543	970.37	
1/19/2006	4:15:23	78.743	3.565	975.37	
1/19/2006	4:20:23	78.721	3.543	980.37	
1/19/2006	4:25:23	78.765	3.587	985.37	
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1/19/2006	4:35:23	78.765	3.587	995.37	
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1/19/2006	4:45:23	78.786	3.608	1005.37	
1/19/2006	4:50:23	78.786	3.608	1010.37	
1/19/2006	4:55:23	78.808	3.63	1015.37	
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1/19/2006	5:05:23	78.808	3.63	1025.37	
1/19/2006	5:10:23	78.851	3.673	1030.37	
1/19/2006	5:15:23	78.808	3.63	1035.37	
1/19/2006	5:20:23	78.829	3.651	1040.37	
1/19/2006	5:25:23	78.808	3.63	1045.37	
1/19/2006	5:30:23	78.808	3.63	1050.37	
1/19/2006	5:35:23	78.786	3.608	1055.37	7 gpm

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1/19/2006	5:45:23	78.872	3.694	1065.37	
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1/19/2006	6:00:23	78.829	3.651	1080.37	
1/19/2006	6:05:23	78.851	3.673	1085.37	
1/19/2006	6:10:23	78.894	3.716	1090.37	
1/19/2006	6:15:23	78.872	3.694	1095.37	
1/19/2006	6:20:23	78.897	3.719	1100.37	
1/19/2006	6:25:23	78.894	3.716	1105.37	
1/19/2006	6:30:23	78.916	3.738	1110.37	
1/19/2006	6:35:23	78.916	3.738	1115.37	
1/19/2006	6:40:23	78.894	3.716	1120.37	
1/19/2006	6:45:23	78.937	3.759	1125.37	
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1/19/2006	6:55:23	78.916	3.738	1135.37	
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1/19/2006	7:10:23	78.959	3.781	1150.37	
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1/19/2006	7:30:23	79.002	3.824	1170.37	
1/19/2006	7:35:23	79.002	3.824	1175.37	
1/19/2006	7:40:23	78.959	3.781	1180.37	
1/19/2006	7:45:23	79.002	3.824	1185.37	
1/19/2006	7:50:23	78.98	3.802	1190.37	
1/19/2006	7:55:23	79.023	3.845	1195.37	
1/19/2006	8:00:23	78.98	3.802	1200.37	
1/19/2006	8:05:23	78.959	3.781	1205.37	
1/19/2006	8:10:23	79.067	3.889	1210.37	
1/19/2006	8:15:23	79.045	3.867	1215.37	
1/19/2006	8:20:23	79.023	3.845	1220.37	
1/19/2006	8:25:23	79.067	3.889	1225.37	
1/19/2006	8:30:23	79.11	3.932	1230.37	
1/19/2006	8:35:23	79.088	3.91	1235.37	
1/19/2006	8:40:23	79.11	3.932	1240.37	
1/19/2006	8:45:23	79.11	3.932	1245.37	
1/19/2006	8:50:23	79.088	3.91	1250.37	
1/19/2006	8:55:23	79.131	3.953	1255.37	
1/19/2006	9:00:23	79.153	3.975	1260.37	
1/19/2006	9:05:23	79.11	3.932	1265.37	
1/19/2006	9:10:23	79.153	3.975	1270.37	
1/19/2006	9:15:23	79.175	3.997	1275.37	
1/19/2006	9:20:23	79.175	3.997	1280.37	
1/19/2006	9:25:23	79.175	3.997	1285.37	
1/19/2006	9:30:23	79.218	4.04	1290.37	
1/19/2006	9:35:23	79.218	4.04	1295.37	
1/19/2006	9:40:23	79.218	4.04	1300.37	
1/19/2006	9:45:23	79.239	4.061	1305.37	
1/19/2006	9:50:23	79.218	4.04	1310.37	
1/19/2006	9:55:23	79.239	4.061	1315.37	
1/19/2006	10:00:23	79.239	4.061	1320.37	
1/19/2006	10:05:23	79.239	4.061	1325.37	
1/19/2006	10:10:23	79.218	4.04	1330.37	
1/19/2006	10:15:23	79.261	4.083	1335.37	7 gpm

1/19/2006	10:20:23	79.261	4.083	1340.37	7 gpm
1/19/2006	10:25:23	79.304	4.126	1345.37	
1/19/2006	10:30:23	79.52	4.342	1350.37	
1/19/2006	10:35:23	79.369	4.191	1355.37	
1/19/2006	10:40:23	79.304	4.126	1360.37	
1/19/2006	10:45:23	79.282	4.104	1365.37	
1/19/2006	10:50:23	79.261	4.083	1370.37	
1/19/2006	10:55:23	79.326	4.148	1375.37	
1/19/2006	11:00:23	79.347	4.169	1380.37	
1/19/2006	11:05:23	79.39	4.212	1385.37	
1/19/2006	11:10:23	79.304	4.126	1390.37	
1/19/2006	11:15:23	79.369	4.191	1395.37	
1/19/2006	11:20:23	79.347	4.169	1400.37	
1/19/2006	11:25:23	79.369	4.191	1405.37	
1/19/2006	11:30:23	79.39	4.212	1410.37	
1/19/2006	11:35:23	79.412	4.234	1415.37	
1/19/2006	11:40:23	79.412	4.234	1420.37	
1/19/2006	11:45:23	79.433	4.255	1425.37	
1/19/2006	11:50:23	79.455	4.277	1430.37	
1/19/2006	11:55:23	79.433	4.255	1435.37	
1/19/2006	12:00:23	79.541	4.363	1440.37	
1/19/2006	12:05:23	72.723	-2.455	1445.37	
1/19/2006	12:10:23	71.756	-3.422	1450.37	
1/19/2006	12:15:23	71.324	-3.854	1455.37	
1/19/2006	12:20:23	71.044	-4.134	1460.37	
1/19/2006	12:25:23	70.85	-4.328	1465.37	
1/19/2006	12:30:23	70.724	-4.454	1470.37	
1/19/2006	12:35:23	70.634	-4.544	1475.37	
1/19/2006	12:40:23	70.551	-4.627	1480.37	
1/19/2006	12:45:23	70.461	-4.717	1485.37	
1/19/2006	12:50:23	70.418	-4.76	1490.37	
1/19/2006	12:55:23	70.378	-4.8	1495.37	
1/19/2006	13:00:23	70.335	-4.843	1500.37	
1/19/2006	13:05:23	70.314	-4.864	1505.37	
1/19/2006	13:10:23	70.292	-4.886	1510.37	
1/19/2006	13:15:23	70.27	-4.908	1515.37	
1/19/2006	13:20:23	70.249	-4.929	1520.37	
1/19/2006	13:25:23	70.227	-4.951	1525.37	
1/19/2006	13:30:23	70.227	-4.951	1530.37	7 gpm
1/19/2006	13:35:23	70.227	-4.951	1535.37	12:00 Well 16 pump off
1/19/2006	13:40:23	70.206	-4.972	1540.37	Recovery Measurements
1/19/2006	13:45:23	70.206	-4.972	1545.37	12:05 Well 8 pump off
1/19/2006	13:50:23	70.184	-4.994	1550.37	
1/19/2006	13:55:23	70.184	-4.994	1555.37	
1/19/2006	14:00:23	70.184	-4.994	1560.37	
1/19/2006	14:05:23	70.184	-4.994	1565.37	
1/19/2006	14:10:23	70.163	-5.015	1570.37	
1/19/2006	14:15:23	70.163	-5.015	1575.37	
1/19/2006	14:20:23	70.166	-5.012	1580.37	
1/19/2006	14:25:23	70.166	-5.012	1585.37	
1/19/2006	14:30:23	70.163	-5.015	1590.37	
1/19/2006	14:35:23	70.163	-5.015	1595.37	
1/19/2006	14:40:23	70.166	-5.012	1600.37	
1/19/2006	14:45:23	70.188	-4.99	1605.37	
1/19/2006	14:50:23	70.184	-4.994	1610.37	
1/19/2006	14:55:23	70.163	-5.015	1615.37	

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1/19/2006	15:05:23	70.188	-4.99	1625.37	
1/19/2006	15:10:23	70.188	-4.99	1630.37	
1/19/2006	15:15:23	70.209	-4.969	1635.37	
1/19/2006	15:20:23	70.209	-4.969	1640.37	
1/19/2006	15:25:23	70.209	-4.969	1645.37	
1/19/2006	15:30:23	70.209	-4.969	1650.37	
1/19/2006	15:35:23	70.209	-4.969	1655.37	
1/19/2006	15:40:23	70.231	-4.947	1660.37	
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1/19/2006	15:50:23	70.231	-4.947	1670.37	
1/19/2006	15:55:23	70.231	-4.947	1675.37	
1/19/2006	16:00:23	70.252	-4.926	1680.37	
1/19/2006	16:05:23	70.252	-4.926	1685.37	
1/19/2006	16:10:23	70.274	-4.904	1690.37	
1/19/2006	16:15:23	70.274	-4.904	1695.37	
1/19/2006	16:20:23	70.274	-4.904	1700.37	
1/19/2006	16:25:23	70.274	-4.904	1705.37	
1/19/2006	16:30:23	70.274	-4.904	1710.37	
1/19/2006	16:35:23	70.296	-4.882	1715.37	
1/19/2006	16:40:23	70.296	-4.882	1720.37	
1/19/2006	16:45:23	70.296	-4.882	1725.37	
1/19/2006	16:50:23	70.317	-4.861	1730.37	
1/19/2006	16:55:23	70.317	-4.861	1735.37	
1/19/2006	17:00:23	70.339	-4.839	1740.37	
1/19/2006	17:05:23	70.339	-4.839	1745.37	
1/19/2006	17:10:23	70.36	-4.818	1750.37	
1/19/2006	17:15:23	70.36	-4.818	1755.37	
1/19/2006	17:20:23	70.382	-4.796	1760.37	
1/19/2006	17:25:23	70.382	-4.796	1765.37	
1/19/2006	17:30:23	70.403	-4.775	1770.37	
1/19/2006	17:35:23	70.403	-4.775	1775.37	
1/19/2006	17:40:23	70.403	-4.775	1780.37	
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1/19/2006	17:55:23	70.425	-4.753	1795.37	
1/19/2006	18:00:23	70.447	-4.731	1800.37	
1/19/2006	18:05:23	70.45	-4.728	1805.37	
1/19/2006	18:10:23	70.468	-4.71	1810.37	
1/19/2006	18:15:23	70.472	-4.706	1815.37	
1/19/2006	18:20:23	70.472	-4.706	1820.37	
1/19/2006	18:25:23	70.493	-4.685	1825.37	
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1/19/2006	18:35:23	70.493	-4.685	1835.37	
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1/19/2006	18:45:23	70.515	-4.663	1845.37	
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1/19/2006	18:55:23	70.515	-4.663	1855.37	
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1/19/2006	19:05:23	70.536	-4.642	1865.37	
1/19/2006	19:10:23	70.536	-4.642	1870.37	
1/19/2006	19:15:23	70.558	-4.62	1875.37	
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1/19/2006	19:25:23	70.558	-4.62	1885.37	
1/19/2006	19:30:23	70.579	-4.599	1890.37	
1/19/2006	19:35:23	70.579	-4.599	1895.37	

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1/19/2006	19:45:23	70.601	-4.577	1905.37	
1/19/2006	19:50:23	70.623	-4.555	1910.37	
1/19/2006	19:55:23	70.623	-4.555	1915.37	
1/19/2006	20:00:23	70.623	-4.555	1920.37	
1/19/2006	20:05:23	70.623	-4.555	1925.37	
1/19/2006	20:10:23	70.644	-4.534	1930.37	
1/19/2006	20:15:23	70.644	-4.534	1935.37	
1/19/2006	20:20:23	70.644	-4.534	1940.37	
1/19/2006	20:25:23	70.666	-4.512	1945.37	
1/19/2006	20:30:23	70.666	-4.512	1950.37	
1/19/2006	20:35:23	70.687	-4.491	1955.37	
1/19/2006	20:40:23	70.666	-4.512	1960.37	
1/19/2006	20:45:23	70.666	-4.512	1965.37	
1/19/2006	20:50:23	70.687	-4.491	1970.37	
1/19/2006	20:55:23	70.709	-4.469	1975.37	
1/19/2006	21:00:23	70.709	-4.469	1980.37	
1/19/2006	21:05:23	70.687	-4.491	1985.37	
1/19/2006	21:10:23	70.709	-4.469	1990.37	
1/19/2006	21:15:23	70.73	-4.448	1995.37	
1/19/2006	21:20:23	70.73	-4.448	2000.37	
1/19/2006	21:25:23	70.73	-4.448	2005.37	
1/19/2006	21:30:23	70.752	-4.426	2010.37	
1/19/2006	21:35:23	70.774	-4.404	2015.37	
1/19/2006	21:40:23	70.774	-4.404	2020.37	
1/19/2006	21:45:23	70.774	-4.404	2025.37	
1/19/2006	21:50:23	70.774	-4.404	2030.37	
1/19/2006	21:55:23	70.795	-4.383	2035.37	
1/19/2006	22:00:23	70.795	-4.383	2040.37	
1/19/2006	22:05:23	70.817	-4.361	2045.37	
1/19/2006	22:10:23	70.817	-4.361	2050.37	
1/19/2006	22:15:23	70.838	-4.34	2055.37	
1/19/2006	22:20:23	70.838	-4.34	2060.37	
1/19/2006	22:25:23	70.838	-4.34	2065.37	
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1/19/2006	22:40:23	70.86	-4.318	2080.37	
1/19/2006	22:45:23	70.881	-4.297	2085.37	
1/19/2006	22:50:23	70.881	-4.297	2090.37	
1/19/2006	22:55:23	70.881	-4.297	2095.37	
1/19/2006	23:00:23	70.903	-4.275	2100.37	
1/19/2006	23:05:23	70.903	-4.275	2105.37	
1/19/2006	23:10:23	70.925	-4.253	2110.37	
1/19/2006	23:15:23	70.925	-4.253	2115.37	
1/19/2006	23:20:23	70.946	-4.232	2120.37	
1/19/2006	23:25:23	70.946	-4.232	2125.37	
1/19/2006	23:30:23	70.946	-4.232	2130.37	
1/19/2006	23:35:23	70.968	-4.21	2135.37	
1/19/2006	23:40:23	70.968	-4.21	2140.37	
1/19/2006	23:45:23	70.968	-4.21	2145.37	
1/19/2006	23:50:23	70.989	-4.189	2150.37	
1/19/2006	23:55:23	70.989	-4.189	2155.37	
1/19/2006	0:00:23	71.011	-4.167	2160.37	
1/19/2006	0:05:23	71.011	-4.167	2165.37	
1/19/2006	0:10:23	71.011	-4.167	2170.37	
1/19/2006	0:15:23	71.033	-4.145	2175.37	

1/19/2006	0:20:23	71.033	-4.145	2180.37	
1/19/2006	0:25:23	71.033	-4.145	2185.37	
1/19/2006	0:30:23	71.033	-4.145	2190.37	
1/19/2006	0:35:23	71.054	-4.124	2195.37	
1/19/2006	0:40:23	71.054	-4.124	2200.37	
1/19/2006	0:45:23	71.076	-4.102	2205.37	
1/19/2006	0:50:23	71.097	-4.081	2210.37	
1/19/2006	0:55:23	71.097	-4.081	2215.37	
1/19/2006	1:00:23	71.097	-4.081	2220.37	
1/19/2006	1:05:23	71.097	-4.081	2225.37	
1/19/2006	1:10:23	71.119	-4.059	2230.37	
1/19/2006	1:15:23	71.14	-4.038	2235.37	
1/19/2006	1:20:23	71.14	-4.038	2240.37	
1/19/2006	1:25:23	71.162	-4.016	2245.37	
1/19/2006	1:30:23	71.162	-4.016	2250.37	
1/19/2006	1:35:23	71.162	-4.016	2255.37	
1/20/2006	1:40:23	71.184	-3.994	2260.37	
1/20/2006	1:45:23	71.184	-3.994	2265.37	
1/20/2006	1:50:23	71.205	-3.973	2270.37	
1/20/2006	1:55:23	71.205	-3.973	2275.37	
1/20/2006	2:00:23	71.227	-3.951	2280.37	
1/20/2006	2:05:23	71.23	-3.948	2285.37	
1/20/2006	2:10:23	71.23	-3.948	2290.37	
1/20/2006	2:15:23	71.252	-3.926	2295.37	
1/20/2006	2:20:23	71.252	-3.926	2300.37	
1/20/2006	2:25:23	71.248	-3.93	2305.37	
1/20/2006	2:30:23	71.27	-3.908	2310.37	
1/20/2006	2:35:23	71.27	-3.908	2315.37	
1/20/2006	2:40:23	71.27	-3.908	2320.37	
1/20/2006	2:45:23	71.291	-3.887	2325.37	
1/20/2006	2:50:23	71.291	-3.887	2330.37	
1/20/2006	2:55:23	71.291	-3.887	2335.37	
1/20/2006	3:00:23	71.313	-3.865	2340.37	
1/20/2006	3:05:23	71.335	-3.843	2345.37	
1/20/2006	3:10:23	71.313	-3.865	2350.37	
1/20/2006	3:15:23	71.335	-3.843	2355.37	
1/20/2006	3:20:23	71.335	-3.843	2360.37	
1/20/2006	3:25:23	71.356	-3.822	2365.37	
1/20/2006	3:30:23	71.356	-3.822	2370.37	
1/20/2006	3:35:23	71.356	-3.822	2375.37	
1/20/2006	3:40:23	71.356	-3.822	2380.37	
1/20/2006	3:45:23	71.356	-3.822	2385.37	
1/20/2006	3:50:23	71.356	-3.822	2390.37	
1/20/2006	3:55:23	71.356	-3.822	2395.37	
1/20/2006	4:00:23	71.378	-3.8	2400.37	
1/20/2006	4:05:23	71.381	-3.797	2405.37	
1/20/2006	4:10:23	71.381	-3.797	2410.37	
1/20/2006	4:15:23	71.403	-3.775	2415.37	
1/20/2006	4:20:23	71.403	-3.775	2420.37	
1/20/2006	4:25:23	71.403	-3.775	2425.37	
1/20/2006	4:30:23	71.421	-3.757	2430.37	
1/20/2006	4:35:23	71.421	-3.757	2435.37	
1/20/2006	4:40:23	71.442	-3.736	2440.37	
1/20/2006	4:45:23	71.442	-3.736	2445.37	
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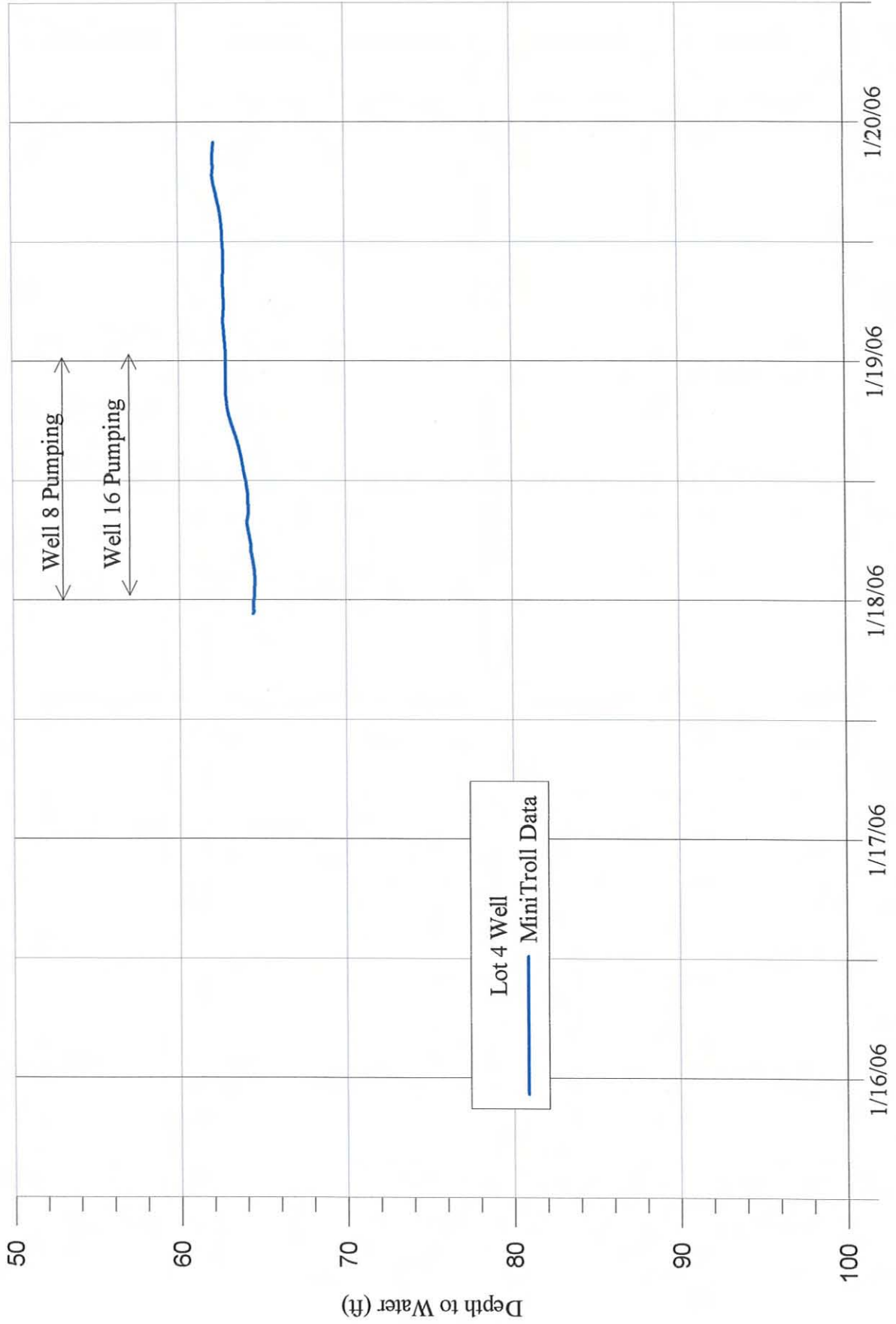
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1/20/2006	5:15:23	71.511	-3.667	2475.37	
1/20/2006	5:20:23	71.511	-3.667	2480.37	
1/20/2006	5:25:23	71.511	-3.667	2485.37	
1/20/2006	5:30:23	71.529	-3.649	2490.37	
1/20/2006	5:35:23	71.532	-3.646	2495.37	
1/20/2006	5:40:23	71.529	-3.649	2500.37	
1/20/2006	5:45:23	71.554	-3.624	2505.37	
1/20/2006	5:50:23	71.554	-3.624	2510.37	
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1/20/2006	6:00:23	71.575	-3.603	2520.37	
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1/20/2006	6:10:23	71.597	-3.581	2530.37	
1/20/2006	6:15:23	71.597	-3.581	2535.37	
1/20/2006	6:20:23	71.618	-3.56	2540.37	
1/20/2006	6:25:23	71.618	-3.56	2545.37	
1/20/2006	6:30:23	71.618	-3.56	2550.37	
1/20/2006	6:35:23	71.615	-3.563	2555.37	
1/20/2006	6:40:23	71.64	-3.538	2560.37	
1/20/2006	6:45:23	71.637	-3.541	2565.37	
1/20/2006	6:50:23	71.637	-3.541	2570.37	
1/20/2006	6:55:23	71.658	-3.52	2575.37	
1/20/2006	7:00:23	71.68	-3.498	2580.37	
1/20/2006	7:05:23	71.68	-3.498	2585.37	
1/20/2006	7:10:23	71.68	-3.498	2590.37	
1/20/2006	7:15:23	71.701	-3.477	2595.37	
1/20/2006	7:20:23	71.701	-3.477	2600.37	
1/20/2006	7:25:23	71.723	-3.455	2605.37	
1/20/2006	7:30:23	71.701	-3.477	2610.37	
1/20/2006	7:35:23	71.726	-3.452	2615.37	
1/20/2006	7:40:23	71.748	-3.43	2620.37	
1/20/2006	7:45:23	71.748	-3.43	2625.37	
1/20/2006	7:50:23	71.77	-3.408	2630.37	
1/20/2006	7:55:23	71.77	-3.408	2635.37	
1/20/2006	8:00:23	71.791	-3.387	2640.37	
1/20/2006	8:05:23	71.791	-3.387	2645.37	
1/20/2006	8:10:23	71.813	-3.365	2650.37	
1/20/2006	8:15:23	71.813	-3.365	2655.37	
1/20/2006	8:20:23	71.813	-3.365	2660.37	
1/20/2006	8:25:23	71.813	-3.365	2665.37	
1/20/2006	8:30:23	71.813	-3.365	2670.37	
1/20/2006	8:35:23	71.834	-3.344	2675.37	
1/20/2006	8:40:23	71.856	-3.322	2680.37	
1/20/2006	8:45:23	71.856	-3.322	2685.37	
1/20/2006	8:50:23	71.852	-3.326	2690.37	
1/20/2006	8:55:23	71.874	-3.304	2695.37	
1/20/2006	9:00:23	71.874	-3.304	2700.37	
1/20/2006	9:05:23	71.896	-3.282	2705.37	
1/20/2006	9:10:23	71.896	-3.282	2710.37	
1/20/2006	9:15:23	71.917	-3.261	2715.37	
1/20/2006	9:20:23	71.917	-3.261	2720.37	
1/20/2006	9:25:23	71.939	-3.239	2725.37	
1/20/2006	9:30:23	71.917	-3.261	2730.37	
1/20/2006	9:35:23	71.942	-3.236	2735.37	

1/20/2006	9:40:23	71.96	-3.218	2740.37	
1/20/2006	9:45:23	71.96	-3.218	2745.37	
1/20/2006	9:50:23	71.96	-3.218	2750.37	
1/20/2006	9:55:23	71.982	-3.196	2755.37	
1/20/2006	10:00:23	71.982	-3.196	2760.37	
1/20/2006	10:05:23	71.985	-3.193	2765.37	
1/20/2006	10:10:23	72.007	-3.171	2770.37	
1/20/2006	10:15:23	72.028	-3.15	2775.37	
1/20/2006	8:42:43	39.899	-35.279	2682.72	
1/20/2006	8:47:43	39.929	-35.249	2687.72	
1/20/2006	8:52:43	39.96	-35.218	2692.72	
1/20/2006	8:57:43	39.99	-35.188	2697.72	
1/20/2006	9:02:43	40.021	-35.157	2702.72	
1/20/2006	9:07:43	40.051	-35.127	2707.72	
1/20/2006	9:12:43	40.081	-35.097	2712.72	
1/20/2006	9:17:43	40.112	-35.066	2717.72	
1/20/2006	9:22:43	40.142	-35.036	2722.72	
1/20/2006	9:27:43	40.173	-35.005	2727.72	
1/20/2006	9:32:43	40.209	-34.969	2732.72	
1/20/2006	9:37:43	40.24	-34.938	2737.72	
1/20/2006	9:42:43	40.27	-34.908	2742.72	
1/20/2006	9:47:43	40.301	-34.877	2747.72	
1/20/2006	9:52:43	40.331	-34.847	2752.72	
1/20/2006	9:57:43	40.362	-34.816	2757.72	
1/20/2006	10:02:43	40.392	-34.786	2762.72	
1/20/2006	10:07:43	40.423	-34.755	2767.72	
1/20/2006	10:12:43	40.453	-34.725	2772.72	
1/20/2006	10:17:43	40.477	-34.701	2777.72	
1/20/2006	10:22:43	40.514	-34.664	2782.72	

APPENDIX III

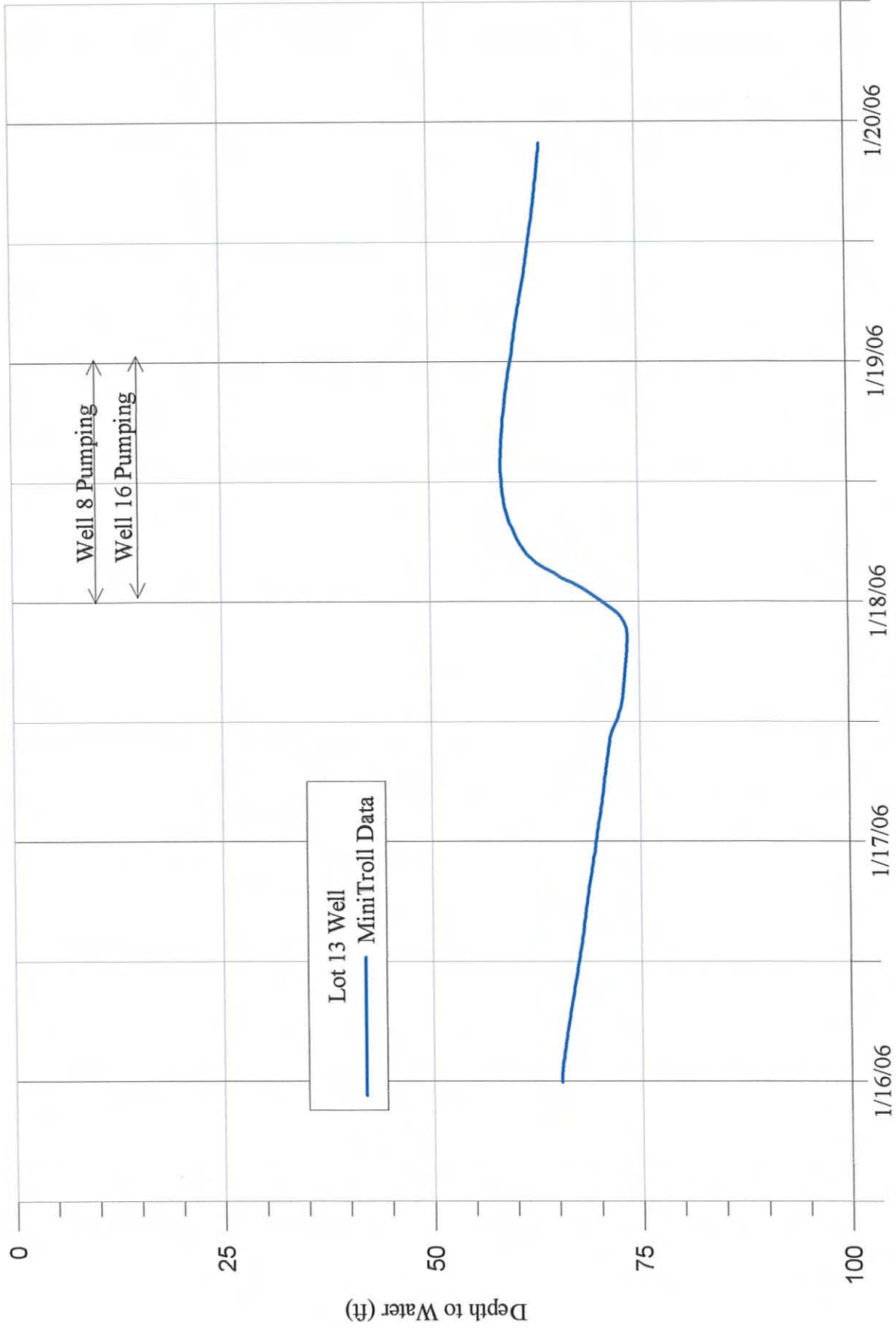
**HILLTOP MANOR SUBDIVISION
EAST FISHKILL, NEW YORK**

Hydrograph of Lot 4 Well
During the 24-Hour Pumping Test of Lot 8 & 16 Wells
January 18-19, 2006



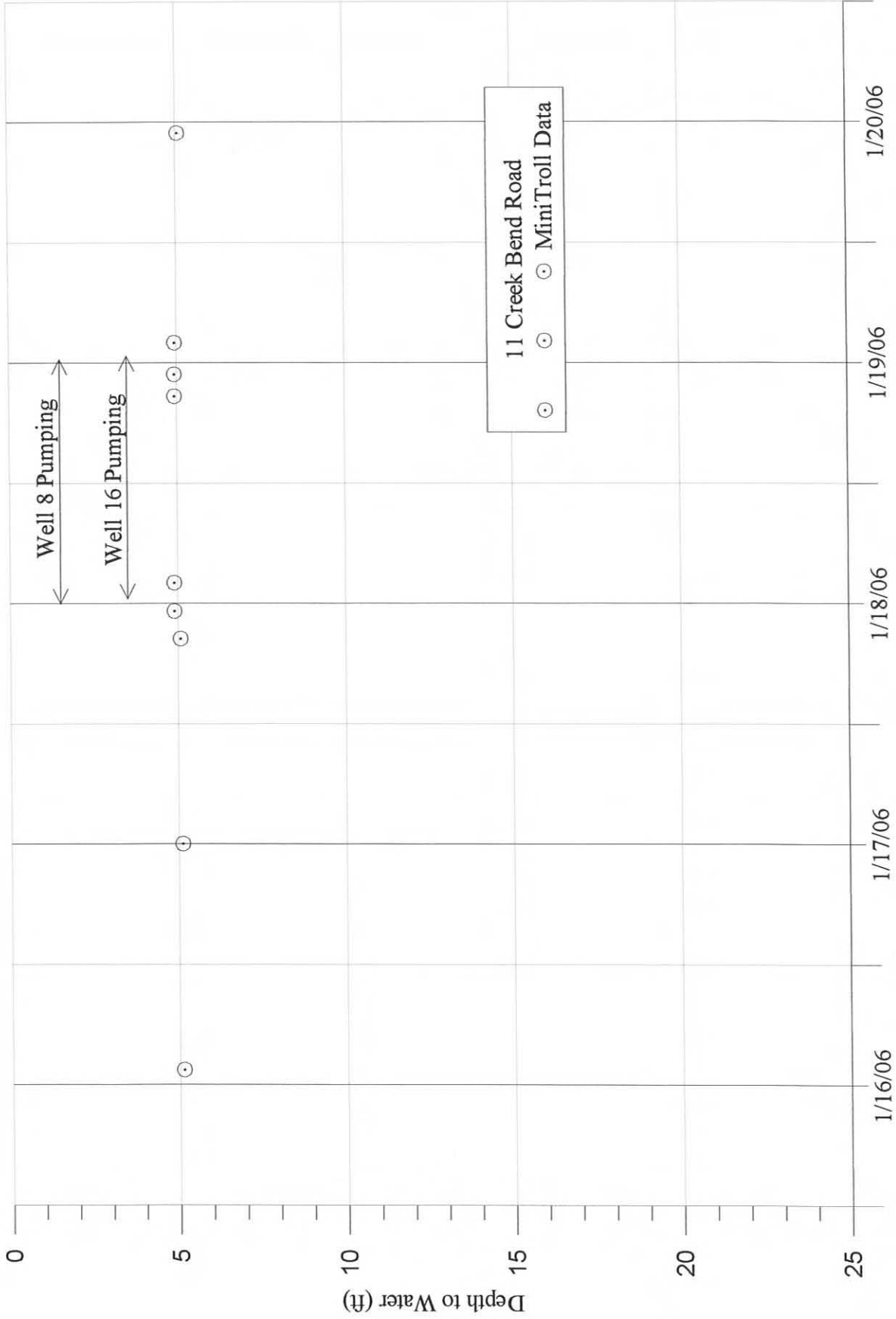
**HILLTOP MANOR SUBDIVISION
EAST FISHKILL, NEW YORK**

Hydrograph of Lot 13 Well
During the 24-Hour Pumping Test of Lot 8 & 16 Wells
January 18-19, 2006



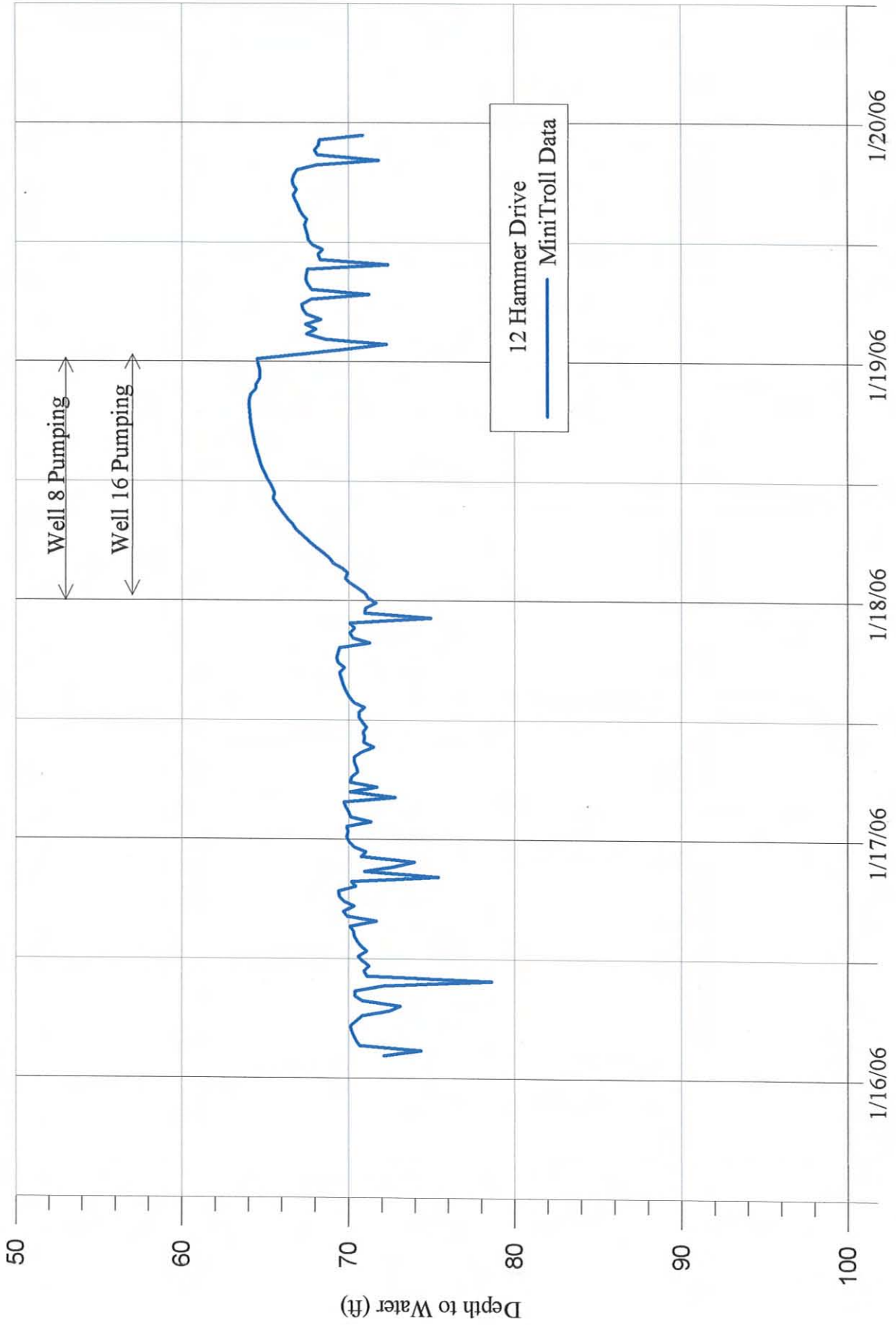
HILLTOP MANOR SUBDIVISION EAST FISHKILL, NEW YORK

Hydrograph of Schara Residence, 11 Creek Bend Road
During the 24-Hour Pumping Test of Lot 8 & 16 Wells
January 18-19, 2006



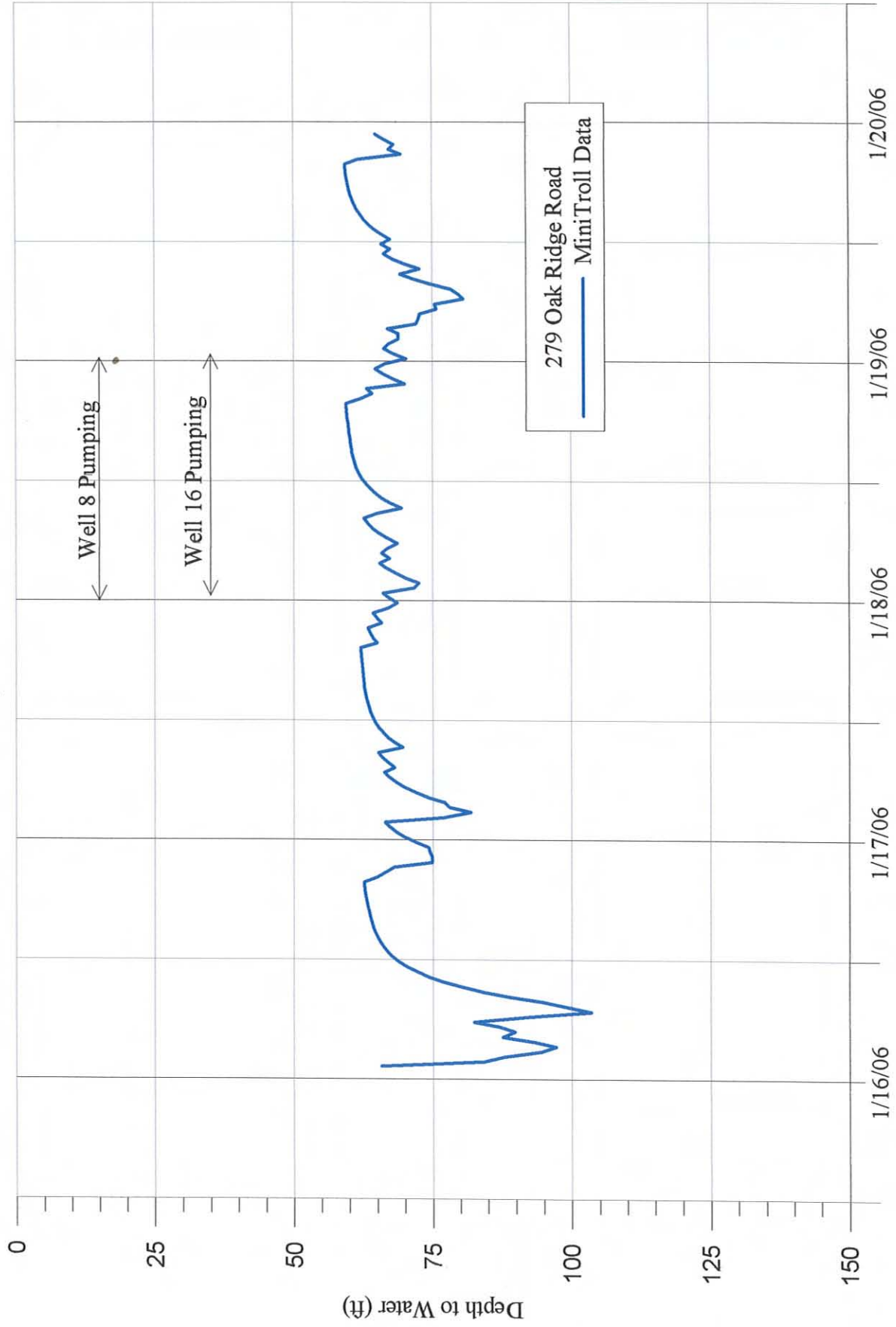
**HILLTOP MANOR SUBDIVISION
EAST FISHKILL, NEW YORK**

Hydrograph of 12 Hammer Drive
During the 24-Hour Pumping Test of Lot 8 & 16 Wells
January 18-19, 2006



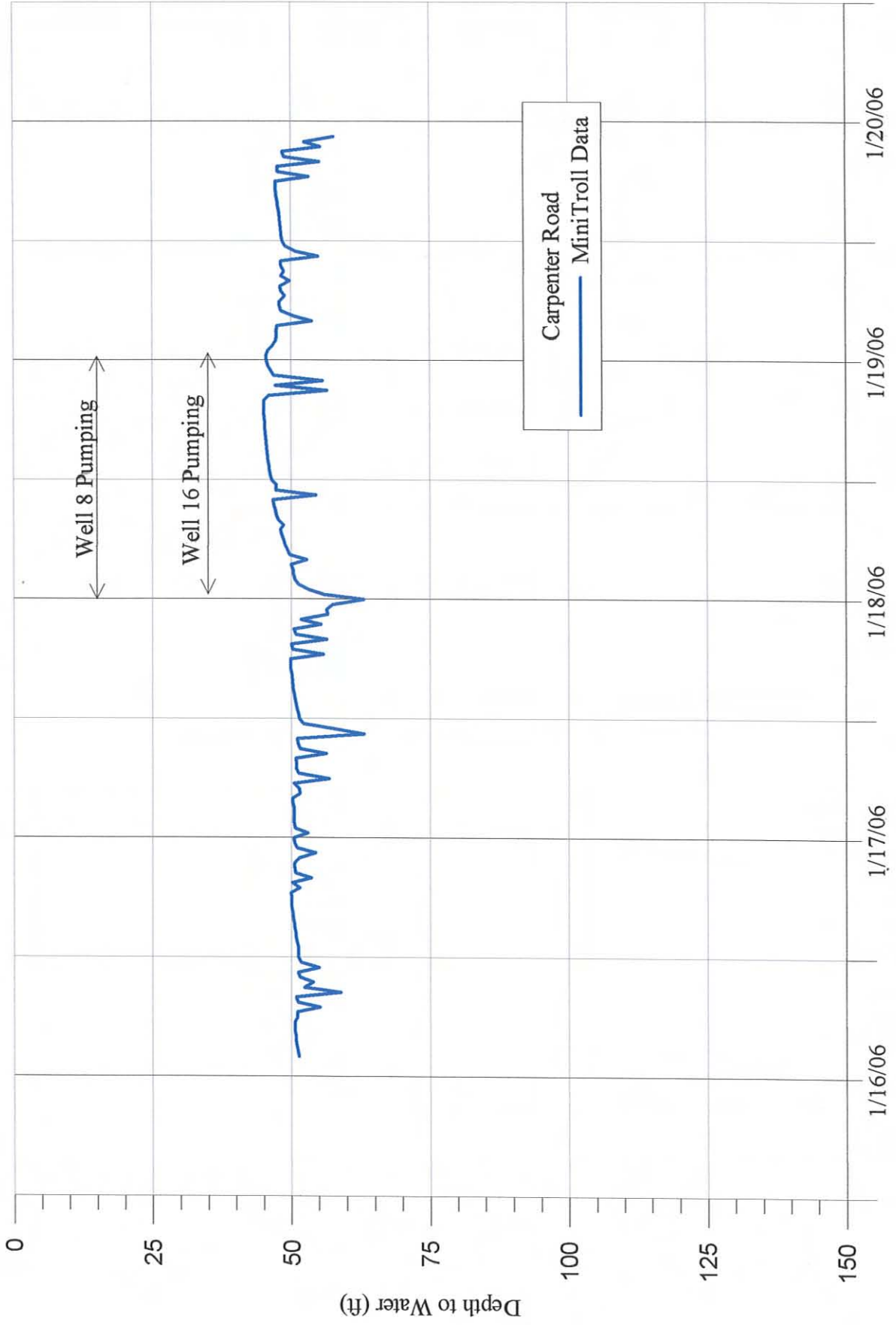
**HILLTOP MANOR SUBDIVISION
EAST FISHKILL, NEW YORK**

Hydrograph of Erich Residence, 279 Oak Ridge Road
During the 24-Hour Pumping Test of Lot 8 & 16 Wells
January 18-19, 2006



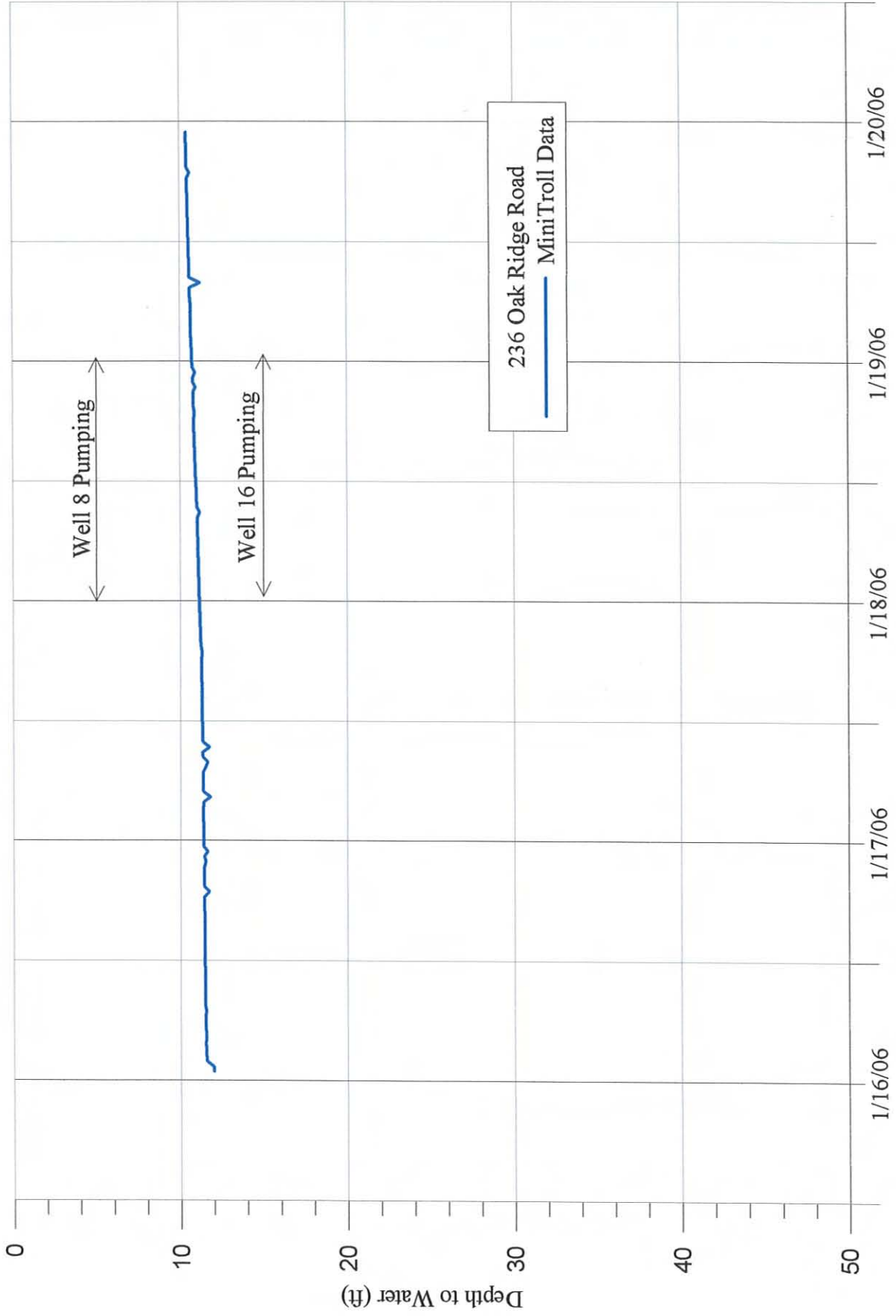
**HILLTOP MANOR SUBDIVISION
EAST FISHKILL, NEW YORK**

Hydrograph of Marinaro Residence, Carpenter Road
During the 24-Hour Pumping Test of Lot 8 & 16 Wells
January 18-19, 2006



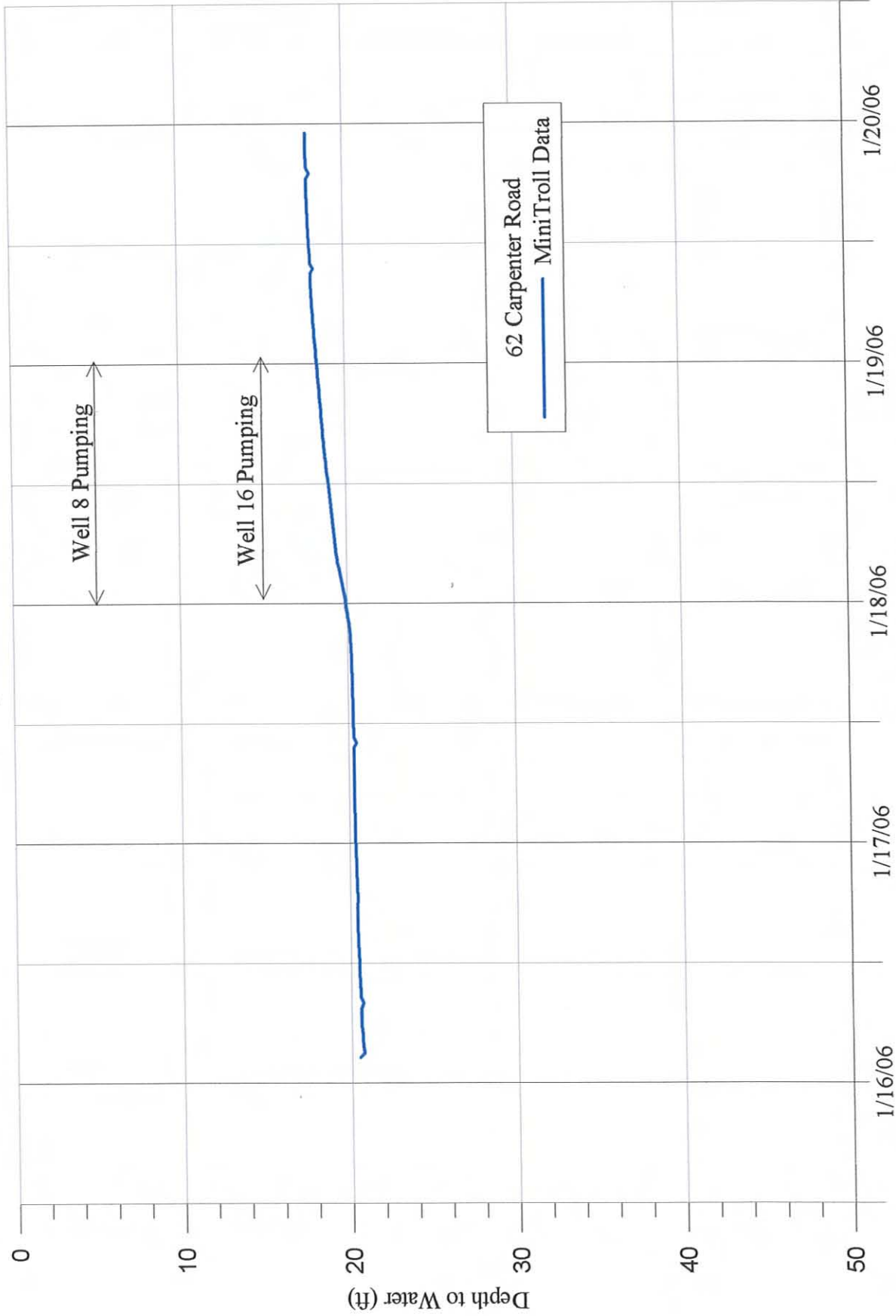
**HILLTOP MANOR SUBDIVISION
EAST FISHKILL, NEW YORK**

Hydrograph of Erich Residence, 236 Oak Ridge Road
During the 24-Hour Pumping Test of Lot 8 & 16 Wells
January 18-19, 2006



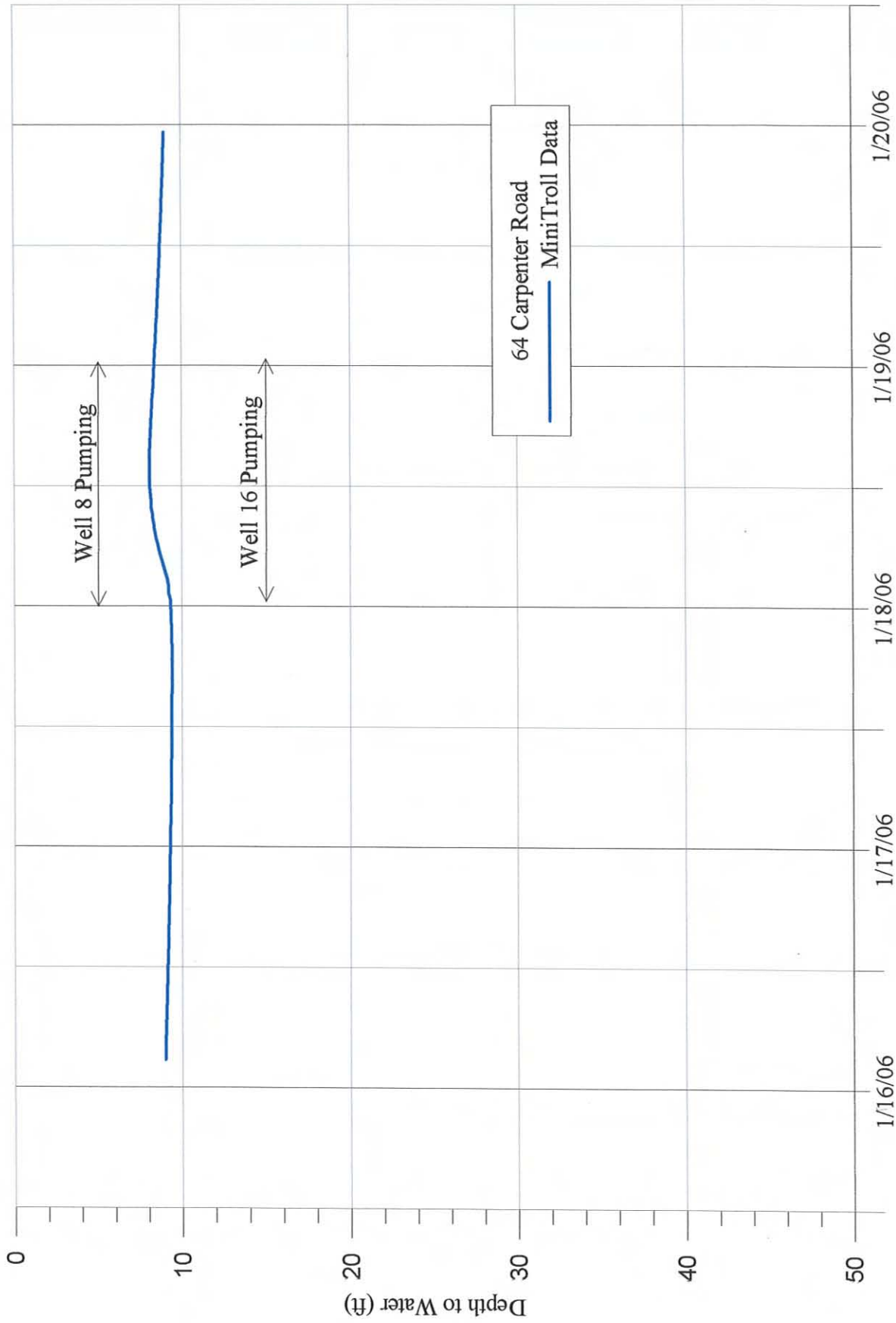
**HILLTOP MANOR SUBDIVISION
EAST FISHKILL, NEW YORK**

Hydrograph of O'Donnell Residence, 62 Carpenter Road
During the 24-Hour Pumping Test of Lot 8 & 16 Wells
January 18-19, 2006



**HILLTOP MANOR SUBDIVISION
EAST FISHKILL, NEW YORK**

Hydrograph of Sabellico Residence, 64 Carpenter Road
During the 24-Hour Pumping Test of Lot 8 & 16 Wells
January 18-19, 2006



APPENDIX IV

YORK

ANALYTICAL LABORATORIES, INC.

Technical Report

prepared for

Leggette Brashears & Graham
4 Research Drive, Suite 301
Shelton, CT 06484
Attention: Andrew Linton

Report Date: 1/25/2006
Re: Client Project ID: Hilltop Manor, E. Fishkill, NY
York Project No.: 06010475

CT License No. PH-0723

New York License No. 10854



120 RESEARCH DRIVE

STRATFORD, CT 06615

(203) 325-1371

FAX (203) 357-0166

Report Date: 1/25/2006
 Client Project ID: Hilltop Manor, E. Fishkill, NY
 York Project No.: 06010475

Leggette Brashears & Graham
 4 Research Drive, Suite 301
 Shelton, CT 06484
 Attention: Andrew Linton

Purpose and Results

This report contains the analytical data for the sample(s) identified on the attached chain-of-custody received in our laboratory on 01/19/06. The project was identified as your project "Hilltop Manor, E. Fishkill, NY."

The analyses were conducted utilizing appropriate EPA, Standard Methods, and ASTM methods as detailed in the data summary tables .

All samples were received in proper condition meeting the NELAC acceptance requirements for environmental samples except those indicated under the Notes section of this report.

All the analyses met the method and laboratory standard operating procedure requirements except as indicated under the Notes section of this report, or as indicated by any data flags, the meaning of which is explained in the attachment to this report, if applicable.

The results of the analyses, which are all reported on an as-received basis unless otherwise noted, are summarized in the following table(s).

Analysis Results

Client Sample ID			Well 8		Well 16	
York Sample ID			06010475-01		06010475-02	
Matrix			WATER		WATER	
Parameter	Method	Units	Results	MDL	Results	MDL
Volatiles,524.2 list +MTBE	EPA 524.2	ug/L	---	---	---	---
1,1,1,2-Tetrachloroethane			Not detected	0.5	Not detected	0.5
1,1,1-Trichloroethane			Not detected	0.5	Not detected	0.5
1,1,2,2-Tetrachloroethane			Not detected	0.5	Not detected	0.5
1,1,2-Trichloroethane			Not detected	0.5	Not detected	0.5
1,1-Dichloroethane			Not detected	0.5	Not detected	0.5
1,1-Dichloroethylene			Not detected	0.5	Not detected	0.5
1,1-Dichloropropylene			Not detected	0.5	Not detected	0.5
1,2,3-Trichlorobenzene			Not detected	0.5	Not detected	0.5
1,2,3-Trichloropropane			Not detected	0.5	Not detected	0.5
1,2,3-Trimethylbenzene			Not detected	0.5	Not detected	0.5
1,2,4-Trichlorobenzene			Not detected	0.5	Not detected	0.5
1,2,4-Trimethylbenzene			Not detected	0.5	Not detected	0.5
1,2-Dibromo-3-chloropropane			Not detected	0.5	Not detected	0.5
1,2-Dibromoethane			Not detected	0.5	Not detected	0.5
1,2-Dichlorobenzene			Not detected	0.5	Not detected	0.5
1,2-Dichloroethane			Not detected	0.5	Not detected	0.5

YORK

Client Sample ID			Well 8		Well 16	
York Sample ID			06010475-01		06010475-02	
Matrix			WATER		WATER	
Parameter	Method	Units	Results	MDL	Results	MDL
1,2-Dichloroethylene (Total)			Not detected	0.5	Not detected	0.5
1,2-Dichloropropane			Not detected	0.5	Not detected	0.5
1,3,5-Trimethylbenzene			Not detected	0.5	Not detected	0.5
1,3-Dichlorobenzene			Not detected	0.5	Not detected	0.5
1,3-Dichloropropane			Not detected	0.5	Not detected	0.5
1,3-Dichloropropylene			Not detected	0.5	Not detected	0.5
1,4-Dichlorobenzene			Not detected	0.5	Not detected	0.5
2,2-Dichloropropane			Not detected	0.5	Not detected	0.5
2-Chlorotoluene			Not detected	0.5	Not detected	0.5
4-Chlorotoluene			Not detected	0.5	Not detected	0.5
Benzene			Not detected	0.5	Not detected	0.5
Bromobenzene			Not detected	0.5	Not detected	0.5
Bromochloromethane			Not detected	0.5	Not detected	0.5
Bromodichloromethane			Not detected	0.5	Not detected	0.5
Bromoform			Not detected	0.5	Not detected	0.5
Bromomethane			Not detected	0.5	Not detected	0.5
Carbon tetrachloride			Not detected	0.5	Not detected	0.5
Chlorobenzene			Not detected	0.5	Not detected	0.5
Chloroethane			Not detected	0.5	Not detected	0.5
Chloroform			Not detected	0.5	Not detected	0.5
Chloromethane			Not detected	0.5	Not detected	0.5
Dibromochloromethane			Not detected	0.5	Not detected	0.5
Dibromomethane			Not detected	0.5	Not detected	0.5
Dichlorodifluoromethane			Not detected	0.5	Not detected	0.5
Ethylbenzene			Not detected	0.5	Not detected	0.5
Hexachlorobutadiene			Not detected	0.5	Not detected	0.5
Isopropylbenzene			Not detected	0.5	Not detected	0.5
Methyl tert-butyl ether (MTBE)			Not detected	0.5	Not detected	0.5
Methylene chloride			Not detected	0.5	Not detected	0.5
Naphthalene			Not detected	0.5	Not detected	0.5
n-Butylbenzene			Not detected	0.5	Not detected	0.5
n-Propylbenzene			Not detected	0.5	Not detected	0.5
o-Xylene			Not detected	0.5	Not detected	0.5
p- & m-Xylenes			Not detected	0.5	Not detected	0.5
p-Isopropyltoluene			Not detected	0.5	Not detected	0.5
sec-Butylbenzene			Not detected	0.5	Not detected	0.5
Styrene			Not detected	0.5	Not detected	0.5
tert-Butylbenzene			Not detected	0.5	Not detected	0.5
Tetrachloroethylene			Not detected	0.5	Not detected	0.5
Toluene			Not detected	0.5	Not detected	0.5
Trichloroethylene			Not detected	0.5	Not detected	0.5
Trichlorofluoromethane			Not detected	0.5	Not detected	0.5
Vinyl chloride			Not detected	0.5	Not detected	0.5
Alkalinity-Total	SM 2320B	mg/L	242	10.0	447	10.0
Arsenic	EPA 200.7	mg/L	Not detected	0.004	Not detected	0.004
Barium	EPA 200.7	mg/L	Not detected	0.010	0.011	0.010
Beryllium	EPA 200.7	mg/L	Not detected	0.0005	Not detected	0.0005
Cadmium	EPA 200.7	mg/L	Not detected	0.002	Not detected	0.002
Chloride	EPA 300	mg/L	2.37	0.5	2.58	0.5
Cyanide, total	EPA 335.2	mg/L	Not detected	0.01	Not detected	0.01
Chromium	EPA 200.7	mg/L	Not detected	0.005	Not detected	0.005

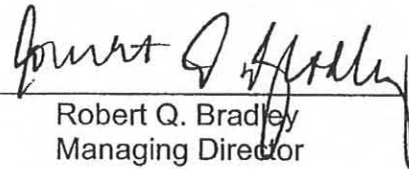
YORK

Client Sample ID			Well 8		Well 16	
York Sample ID			06010475-01		06010475-02	
Matrix			WATER		WATER	
Parameter	Method	Units	Results	MDL	Results	MDL
Iron	EPA 200.7	mg/L	0.005	0.005	Not detected	0.005
Hardness, total	SM 2340B	mg/L CaCO3	255	1.0	276	1.0
Mercury	EPA 245.1	mg/L	Not detected	0.0002	Not detected	0.0002
Manganese	EPA 200.7	mg/L	Not detected	0.005	Not detected	0.005
Sodium	EPA 200.7	mg/L	0.816	0.20	1.20	0.20
Nickel	EPA 200.7	mg/L	Not detected	0.005	Not detected	0.005
Nitrite	EPA300	mg/L	Not detected	0.05	Not detected	0.05
Nitrate	EPA 300	mg/L	Not detected	0.05	0.06	0.05
Lead	EPA 200.7	mg/L	Not detected	0.003	Not detected	0.003
pH	EPA 150.1	units	7.51	---	7.35	---
Antimony	EPA 200.7	mg/L	Not detected	0.002	Not detected	0.002
Selenium	EPA 200.7	mg/L	Not detected	0.005	Not detected	0.005
Sulfate	EPA 300	mg/L	10.0	0.2	17.7	0.2
Total Coliform	EPA9221A	col./100ml.	Absent	0	Absent	0
Thallium	EPA 200.7	mg/L	Not detected	0.010	Not detected	0.010
Turbidity	EPA 180.1	NTU	0.12	0	0.42	0

Units Key: For Waters/Liquids: mg/L = ppm ; ug/L = ppb For Soils/Solids: mg/kg = ppm ; ug/kg = ppb

Notes for York Project No. 06010475

1. The MDL (Minimum Detectable Limit) reported is adjusted for any dilution necessary due to the levels of target and/or non-target analytes and matrix interference. This MDL is the REPORTING LIMIT and is based upon the lowest standard utilized for calibration where applicable.
2. Samples are retained for a period of thirty days after submittal of report, unless other arrangements are made.
3. York's liability for the above data is limited to the dollar value paid to York for the referenced project.
4. This report shall not be reproduced without the written approval of York Analytical Laboratories, Inc.
5. All samples were received in proper condition for analysis with proper documentation.
6. All analyses conducted met method or Laboratory SOP requirements.
7. It is noted that the Lead and Thallium analyses reported herein were subcontracted to Phoenix Environmental Laboratories; Manchester, CT; and, Coliform analyses to Brooks Laboratories; Norwalk, CT.

Approved By: 
Robert Q. Bradley
Managing Director

Date: 1/25/2006

YORK

YORK

ANALYTICAL LABORATORIES, INC.

120 RESEARCH DRIVE
STRATFORD, CT 06615

(203) 325-1371 FAX (203) 357-0166

Field Chain-of-Custody Record

06010475

Company Name <u>CBG</u> <u>Trombull, CT</u>	Report To: <u>Andrew</u> <u>Cinton</u>	Invoice To: <u>CBG</u>	Project ID/No. <u>Tullop Manor</u> <u>E. Fishkill, NY</u>	Samples Collected By (Signature) 	Name (Printed) <u>Andrew Cinton</u>
---	--	---------------------------	---	--------------------------------------	--

Sample No.	Location/ID	Date Sampled	Sample Matrix			ANALYSES REQUESTED	Container Description(s)
			Water	Soil	Air		
1	well 8	1/19/06 1030	<input checked="" type="checkbox"/>			see attached	6
2	well 6	1/19/06 1045	<input checked="" type="checkbox"/>			see attached	6

Chain-of-Custody Record	
Bottles Relinquished from Lab by 	Date/Time <u>1/19/06 1330</u>
Bottles Received in Field by	Date/Time
Sample Relinquished by 	Date/Time <u>1/19/06 1336</u>
Sample Received in LAB by 	Date/Time
Comments/Special Instructions	
Turn-Around Time Standard <u> </u> RUSH(define) <u> </u>	

LEGGETTE, BRASHEARS & GRAHAM, INC.

PROFESSIONAL GROUNDWATER AND ENVIRONMENTAL ENGINEERING SERVICES

4 RESEARCH DRIVE, SUITE 301
SHELTON, CT 06484
(203) 929-8555
FAX (203) 926-9140
www.lbgweb.com

March 8, 2013

Mr. Brian Stokosa, P.E.
M. Gillespie & Associates
Consulting Engineering, PLLC
847 State Route 376
Wappingers Falls, NY 12590

RE:
23-Lot
(T)

Hilltop Manor
Subdivision
East Fishkill, New York

Dear Mr. Stokosa:

As requested, Leggette, Brashears & Graham, Inc. (LBG) is responding to completeness comments from AKRF dated January 28, 2013. The response relates to the following comment.

SETTINGS, ANTICIPATED IMPACTS AND MITIGATION

6. The pumping test report, included in Appendix 5, indicates that a “significant” precipitation event occurred shortly after the start of the 24-hour pumping test. The hydrographs show that the water level in the pumping wells was directly affected by the rain event. The report should include information on the rain event and how rain water recharge may have affected the yield analysis for the aquifer.

The simultaneous pumping test of Wells 8 and 16 began in January 18, 2006 with the start-up of Well 8 at 11:35 am, followed by Well 16 at 12 pm. Most of the rain on that day occurred from about 10:00 am to 2:00 pm with a total rain fall of 1.16 inch. The rain event is attributed to the rising pumping water level in both wells for the initial duration of the test, however, the rise eventually discontinues and both wells reported significant drawdown stabilize for the last 8 hours (Well 8) to 12 hours (Well 16) of the test. The stabilization achieved for both wells is more than the required 6 hours and significantly more than the minimum 4-hour requirement defined by Appendix 5-B (Standards for Water Wells, NYSDOH).

In addition the final stabilized pumping water levels in Wells 8 and 16 were reported to be about 36.8 feet and 79.5 feet, respectively. With well completion depths for Well 8 at 325 feet and Well 16 at 305 feet, there is a significant amount of available drawdown in these

wells below the stabilized pumping water at the individual pumping rates of 7 gpm (gallons per minute). The hydrograph of Wells 8 and 16 during the pumping test event are presented in Appendix I.

To further address the concerns, LBG did a 180-day projection of the respective stabilized pumping water level decline for each well, assuming “no precipitation” during the 180-day period. The hydrograph of the 180-day projection are presented in Appendix II. The hydrographs indicate a significant amount of available drawdown in each of the wells at the end of the 180-day period.

The additional data summarized above for the 24-hour simultaneous pumping test for the wells on Lots 8 and 16 at greater than 1.5 times the estimated water demand of the project further supports that the proposed groundwater withdrawals are achievable and sustainable.

Should you have any questions, please to not hesitate to contact me.

Very

truly yours,

LEGGE

TTE, BRASHEARS & GRAHAM, INC.



Thomas P. Cusack, CPG
Vice President

Senior

TPC:cmm

Enclosures

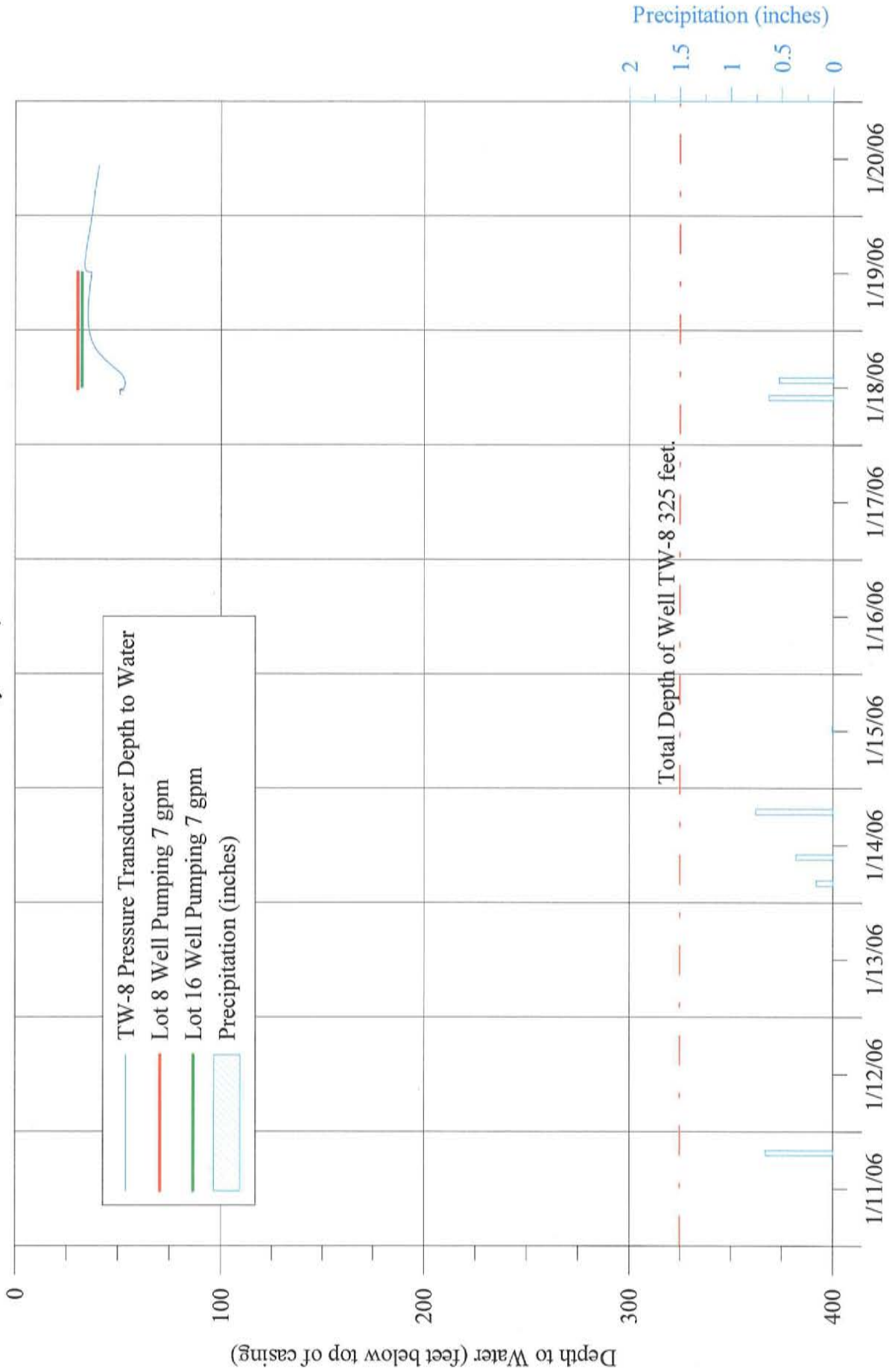
cc: Scott Bryant – Town Engineer

H:\Hilltop Manor\2013\23-Lot Subdivision Ltr.doc

APPENDIX I

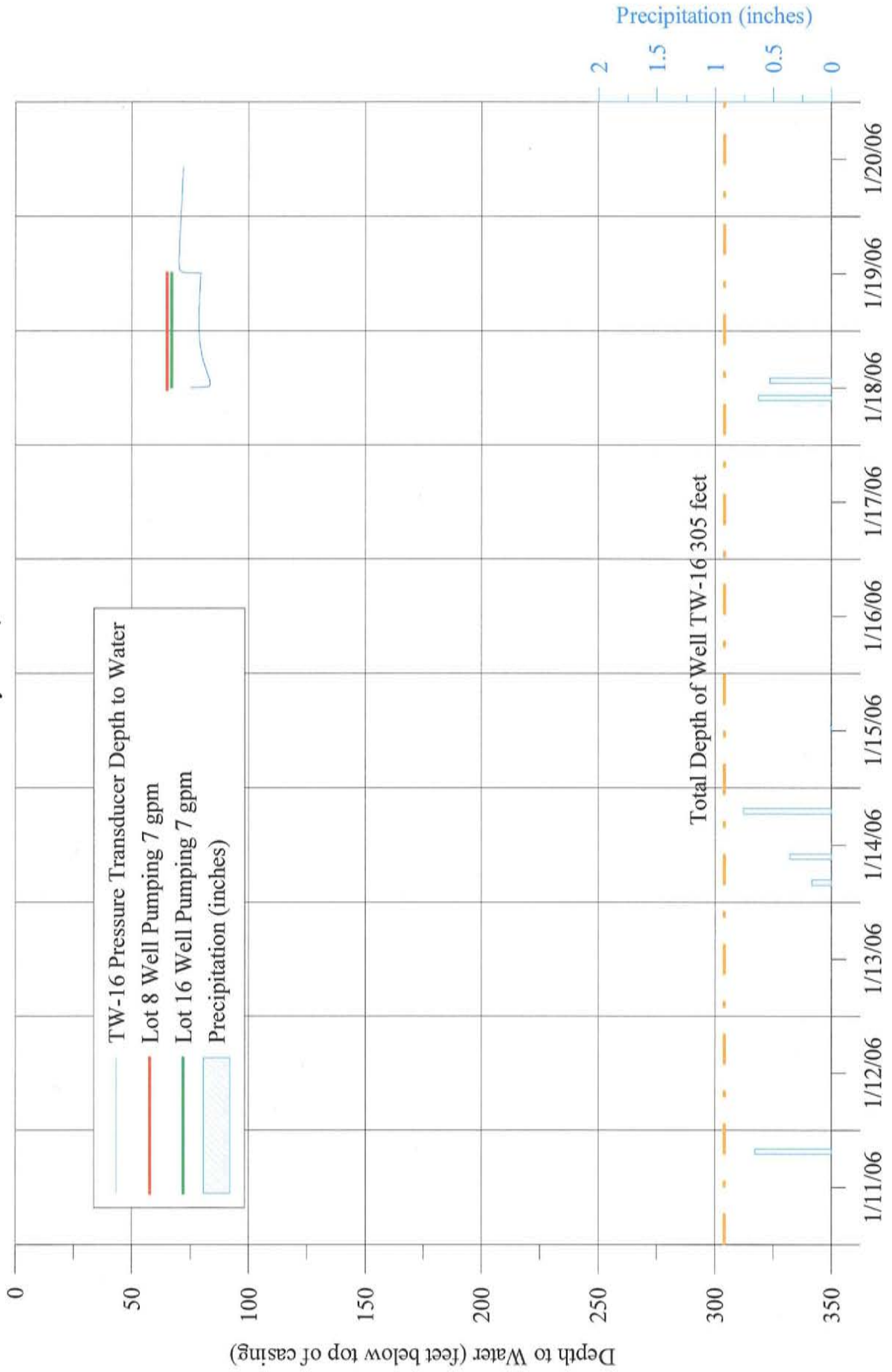
HILLTOP MANOR SUBDIVISION EAST FISHKILL, NEW YORK

Hydrograph of Lot 8 Well
During the 24-Hour Pumping Test of Lot 8 & 16 Wells
January 18-19, 2006



HILLTOP MANOR SUBDIVISION EAST FISHKILL, NEW YORK

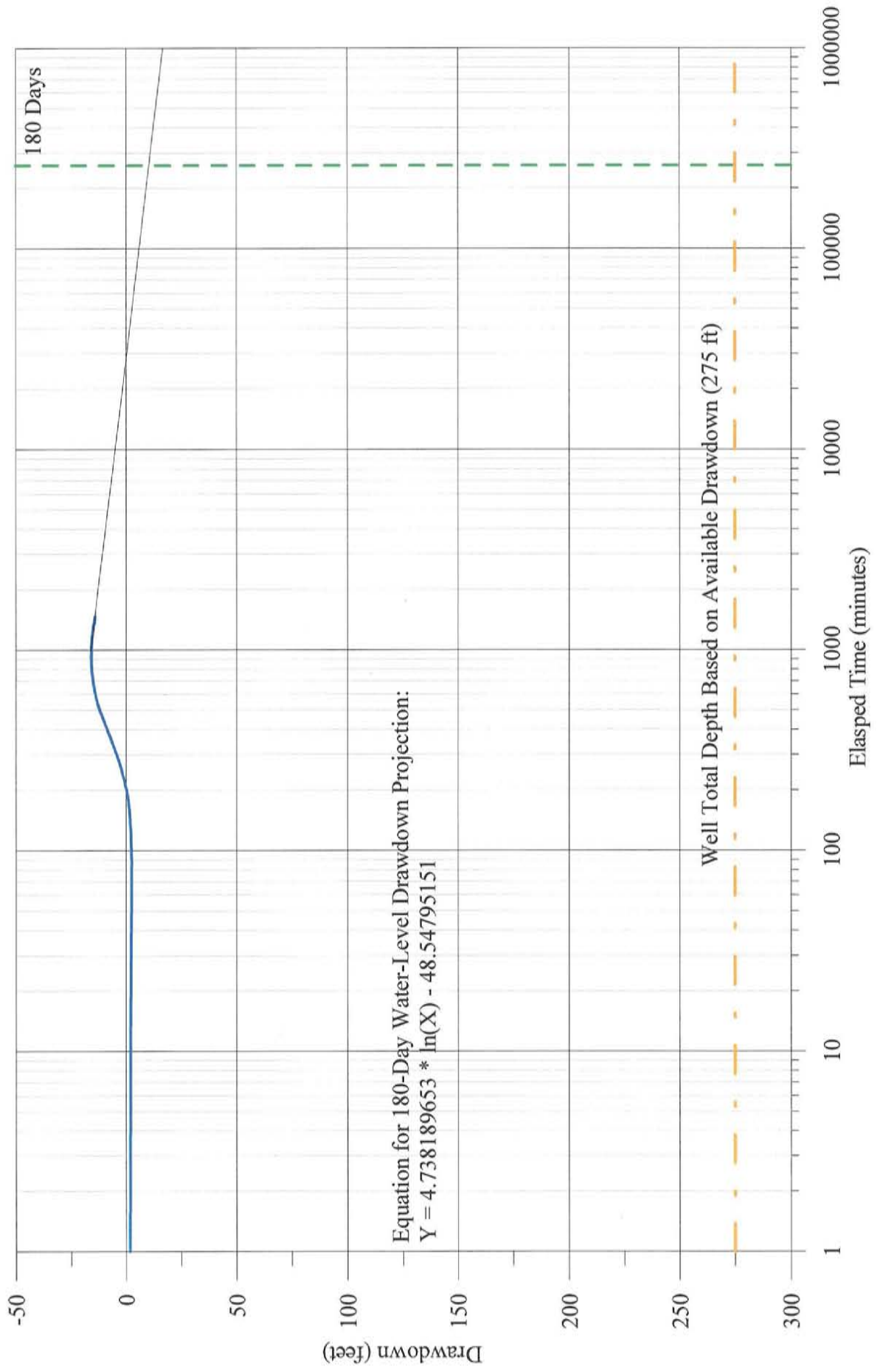
Hydrograph of Lot 16 Well
During the 24-Hour Pumping Test of Lot 8 & 16 Wells
January 18-19, 2006



APPENDIX II

HILLTOP MANOR SUBDIVISION EAST FISHKILL, NEW YORK

180-Day Water-level Drawdown Projection for Lot 8 Well
From the 24-Hour Pumping Test of Lot 8 & 16 Wells
January 18-19, 2006



HILLTOP MANOR SUBDIVISION EAST FISHKILL, NEW YORK

180-Day Water-level Drawdown Projection for Lot 16 Well
From the 24-Hour Pumping Test of Lot 8 & 16 Wells
January 18-19, 2006

