Docket No. DW 20-184
Exhibit 10

STATE OF NEW HAMPSHIRE

BEFORE THE

PUBLIC UTILITIES COMMISSION

AQUARION WATER COMPANY OF NEW HAMPSHIRE
DOCKET NO. DW 20-184

DIRECT TESTIMONY
OF
CARL MCMORRAN

December 18, 2020

I. INTRODUCTION AND OVERVIEW OF TESTIMONY

Q. Mr. McMorran, please state your name and business address.

A. My name is Carl McMorran, and my business address is 7 Scott Road, Hampton, New Hampshire 03842.

Q. By whom are you employed and in what capacity?

A. I am the Operations Manager for Aquarion Water Company of New Hampshire, Inc. ("Aquarion" or the "Company").

Q. Please describe your educational background.

A. I have a Bachelor's Degree in Biology from Bucknell University and a Master of Environmental Science Degree from Miami University. I have also taken graduate level courses in business administration, and attended and presented at many water works seminars and conferences.

Q. Please describe your business/professional background.

A. I have worked for Aquarion Water Company of New Hampshire, Inc. ("Aquarion" or the "Company") since November 2008. As Operations Manager, I oversee operations, maintenance, capital improvement and administrative activities for the Company.

From April 1999 through October 2008, I served as Production Manager for the Struthers Division of Aqua Ohio. I supervised a 6 million gallon per day ("MGD") surface water treatment plant, was responsible for source water protection and reservoir management activities, and oversaw operations and maintenance for major distribution facilities (tanks, boosters, etc.). I also had interim supervisory duties at other Aqua Ohio production facilities and acted as operations consultant for the City of Campbell (Ohio) water system.

From August 1990 through March 1999, I served as Water Quality / Technical Services Manager for the Bangor (Maine) Water District. I supervised source water protection and watershed management activities, the water quality laboratory, regulatory compliance, cross connection, and metering and service activities.

From June 1982 through July 1990, I worked as an Environmental Protection Specialist for the Susquehanna River Basin Commission, which regulates water resources in Maryland, New York and Pennsylvania. I conducted water quality assessment surveys, water pollution control and hydropower regulation activities.

I currently hold Class IV Water Treatment and Distribution licenses in New Hampshire and Maine. I previously held a Class IV Water System license in Ohio and a Class A Water System license in Pennsylvania. I also held a Lake Manager certification from the North American Lake Management Society from 1995 through 2008.

I am a member of the American Water Works Association, the New England Water Works Association, and the New Hampshire Water Works Association (NHWWA). I have served on the NHWWA Board of Directors since 2014 and as President in 2020.

Q. Have you previously testified before the New Hampshire Public Utilities Commission (the "Commission")?

A. Yes, I provided live testimony before the Commission in Docket No. DW 12-085, written pre-filed testimony in Docket Nos. DW 10-293 and DW 11-238, and in other dockets relating to the Company's water infrastructure and conservation adjustment ("WICA"), Eversource, and Wiggin Way filings.

Q. What is the purpose of your testimony in this proceeding?

A. My testimony will provide an overview of the Company's water system

operations; discuss the Company's cost optimization efforts; discuss rescinding the Eligible Well monitoring requirements from Docket No. DE 97-226; discuss some of the major infrastructure improvements since the Company's last rate case, Docket No. DW 12-085 (particularly the Mill Road Water Treatment Plant, Well 22 and the Little River Water Treatment Plant, and Fixed Base Leak Loggers); and discuss the Company's activities and plans related to PFAS.

Water main replacements, including WICA investments, and other major capital projects are discussed in Dan Lawrence's pre-filed testimony.

II. OVERVIEW OF THE COMPANY'S SYSTEM

Q. **Please provide an overview of Aquarion Water Company of New Hampshire.**

A. Aquarion Water Company of New Hampshire, Inc. was incorporated in 1889 as Hampton Water Company, and first provided water service in July 1907. Since that time, the Company has grown and currently provides water service to an area of approximately 31 square miles in the Towns of Hampton and North Hampton, and in the Rye Beach and Jenness Beach Precincts in the Town of Rye.

The Company's water system functions to provide safe and reliable water service to residents and businesses in the service territory. Safe water is water of sufficient quality to meet State and Federal Safe Drinking Water standards and is achieved through source protection measures, water treatment processes (disinfection and corrosion control), and water quality monitoring. Reliability refers to the water system's ability to meet domestic, business and fire protection expectations for flow rates, volumes and pressures with a minimum of unplanned interruptions.

The Company's water system is operationally and hydraulically integrated to serve all three towns as a single system.

As of December 31, 2019, there were 140.6 miles of transmission and distribution water mains in the system. The Company owns most of the land on which its structures are located. However, some source of supply land is leased (Wells 10, 14 and 16). The Company's distribution center and office are also leased in Hampton.

The water supply for the Company is obtained from 17 wells; ten overburden wells (Wells 5A, 6, 7, 8A, 9, 10, 11, 12, 14 and 16) and seven bedrock wells (Wells 13B, 17, 18, 19, 20, 21 and 22) (see Attachment CM-1 for a schematic of the system showing the sources of supply). Rated maximum production capacity for the Company's sources of supply at present is 4.57 MGD. All wells are monitored and controlled by the Company's Supervisory Control and Data Acquisition ("SCADA") system.

During 2019, the average daily production was 2.02 MGD. The Company's peak day of 3.53 million gallons ("MG") occurred on August 4 and 5. For the year, the Company produced 738 MG of water, of which 583 MG was metered consumption to customers.

The Company's water treatment consists of disinfection and corrosion control. Treatment for Wells 10, 12, 13B, 16, 17, 18 and 19 is consolidated in a facility on Winnicut Road in North Hampton; for Wells 6, 8A, 9, 11, 20 and 21 at a facility on Mill Road in North Hampton; and for Wells 7 and 22 at a facility on Little River Road in Hampton. Treatment for Wells 5A and 14 occurs at each well.

The main pressure zone for the system covers most of the towns of Hampton and North Hampton (see CM-1). Pressure is controlled by the Exeter Road elevated tank. The Mill Road Standpipe and Booster is a pumped storage facility within this zone.

The Hampton Beach Pressure Zone serves the Hampton Beach area, and pressure

is controlled by the Glade Path elevated tank. Water is supplied from the Main Pressure Zone through the Tide Mill Road and Kings Highway pressure reducing valve (PRV) stations, which are both metered.

The Jenness Beach Pressure Zone serves the system in Rye and a small area in North Hampton. Pressure is regulated from the Jenness Beach Booster and the Maple Avenue and Willow Street PRV Stations, all three of which are metered. The Jenness Beach Booster draws from the Jenness Beach Tank.

Tanks, pump stations, pressure reducing valves and chemical feed equipment are monitored and controlled by the SCADA system.

All meters and service connections (up to and including the service line valve) in the system are owned by the Company. As of December 31, 2019, there were 8,219 active metered service connections (including 67 remaining seasonal services), and 316 active fire services. At mid-year 720 seasonal service connections were activated.

III. CHANGES IN WATER TREATMENT PRACTICES

Q. Describe the water treatment practices performed by the Company?

A. The Company's groundwater sources have very good water quality and require minimal treatment in the form of disinfection and corrosion control. All treatment is performed on raw water prior to entry into the distribution system.

Disinfection involves the use of sodium hypochlorite to inactivate pathogens that may occur in the water. Pathogens are rarely, if ever, observed in raw water, however, a level of chlorine is maintained throughout the distribution system to protect water from contamination in the unlikely event that untreated water may enter the system from main breaks, leaks or cross connection events.

Corrosion control involves the adjustment of pH and addition of phosphate products to minimize corrosion in pipes and fixtures. In 2018, the Company had the engineering firm of Tighe and Bond perform a corrosion control study to assure that Lead and Copper Rule requirements were met. This study defined optimum levels of pH and phosphate to minimize corrosion of lead and copper.

Corrosion control is optimized at a pH of approximately 7.4. At facilities where raw water pH is less than 7.4, pH adjustment is accomplished by adding sodium hydroxide (caustic).

Phosphate products bind to minerals that are present in raw water and help reduce corrosion of pipes and fixtures. In addition to reducing lead and copper levels, phosphate also reduces the occurrence of discolored water. The optimum level of phosphate in finished water is 1.0 mg/L of total phosphate and 0.5 mg/L of orthophosphate. The Company currently uses a combination of polyphosphate (sodium hexametaphosphate) and blended orthophosphate to meet these goals, and is gradually moving towards sole use of blended orthophosphate.

Q. What changes has the Company made to water treatment practices since the last rate case?

A. Based on the Tighe & Bond study, the Company implemented changes to reach the higher pH target of 7.4 from the previous levels of 6.8 to 7.2 and to convert to blended orthophosphate.

pH adjustments have been implemented at three treatment stations (Well 5A, Well 7 and Well 14) where caustic feed systems were already in service. Caustic dose rates were simply adjusted to raise finished water pH a few tenths to the new target. Caustic is not applied at the Winnicut Water Treatment Plant ("WTP") because raw water is already at the target pH.

The construction and start up of the Mill Rd WTP in 2020 added pH adjustment capability for all of the Mill Road wells. As described in more detail below, no pH adjustment was previously conducted due to space and safety issues. The new plant included bulk storage and separate chemical feed systems for caustic. The new plant also was the first facility equipped for blended orthophosphate. Both chemicals are dosed at rates proportional to the plant flow rate.

Blended orthophosphate will be implemented at the other treatment stations in coming years.

Q. Have these changes been effective?

A. The effectiveness of these new treatment systems has been confirmed through water quality monitoring. Continuously operating analyzers measure chlorine and pH in finished water at each treatment facility. The Company also collects samples from the distribution system to confirm that targets are met, and to provide feedback for adjusting chemical dosages.

Chlorine dosages are made to sustain a minimum of 0.3 mg/L at the most distant locations in the distribution system to ensure that water quality is protected from contamination. Since starting the Mill Road WTP, pH levels throughout the distribution system are closer to the desired target of 7.4. Phosphate levels are closer to targets (1.0 total phosphorus and 0.5 mg/L orthophosphate) since starting the Mill Road WTP, and will improve once other treatment facilities are converted to orthophosphate.

The effectiveness of these treatment changes is best evidenced by the results of the last round of lead and copper testing (conducted in the third quarter of 2020). Only trace levels of copper were observed, which is normal considering that samples are collected from homes with copper plumbing. More importantly, lead was observed in only 2 of 60 samples, and only at trace levels. This low occurrence rate is a substantial improvement over the previous round conducted

in 2017, when 6 of 31 samples had trace levels of lead. Although the results of both sample rounds met compliance requirements, the goal is to eliminate all lead from drinking water, and these results show substantial progress in that direction.

Q. How have these changes affected chemical doses and expense?

A. Chemical dose rates are optimized by using automated flow pacing systems through SCADA. This programming adjusts chemical feed rates in response to changes in flow rate through each treatment facility. For chlorine and caustic, feed rates are also adjusted based on feedback from continuous chemical analyzers to match target setpoints. The SCADA system monitors these parameters continuously and makes adjustments to chemical feed rates as needed, and without frequent oversight from operators.

Blended orthophosphate is more expensive per unit volume than polyphosphate. The addition of caustic at the Mill Road WTP is also new and will increase total chemical dosages and costs.

These cost increases are partially offset by lower bulk pricing, made possible by the new bulk storage facilities. To minimize costs, chemicals are bid competitively three times per year to obtain the lowest prices.

IV. COST OPTIMIZATION INITIATIVES SINCE THE LAST RATE CASE

Q. What steps has the Company taken to optimize operating expenses since its last rate case?

A. The Company strives to optimize expenses through competitive bidding and other procurement procedures. Between 2011 and 2019, noteworthy expense optimizations have been achieved for purchased power, maintenance of mains and services, transportation and security.

Q. What does the Company do to optimize electricity expense?

A. The Company obtains electricity using multiyear contracts from market suppliers. In 2018, the Company selected EDF Energy Services, LLC to supply electricity to the Company's larger facilities at a flat rate of $0.07902/kwh through December 2021. This rate is approximately 3% lower than the rate of $0.0814/kwh that was in place during the last rate case.

Power costs are also optimized by installing variable frequency drives (VFDs) on most of water pumps. VFDs allow for more energy efficient modulation of pump rates.

Q. What does the Company do to optimize expenses related to maintenance of mains and service connections?

A. Both of these tasks involve excavation of buried mains and services, usually for the purpose of repairing breaks and leaks. The Company optimizes these expenses by seeking competitive pricing from local contractors at least annually, maintaining multiple contractors to call upon, and by paying attention to detail in overseeing this work.

Q. What does the Company do to optimize transportation expense?

A. In 2013, the Company reduced its workforce by one position, which also reduced the number of vehicles on the road by one. The Company routinely replaces one vehicle per year. The vehicle being replaced is typically the oldest and least efficient vehicle in the fleet, and new vehicles typically get better mileage than the vehicles that were replaced.

Q. What does the Company do to optimize security expense?

A. The consolidation of the office and maintenance shops into the current space at 7 Scott Road eliminated one contract security service.

V. PETITION TO END ELIGIBLE WELL MONITORING REQUIREMENTS FROM DOCKET NO. DE 97-226

Q. What is the Eligible Well Monitoring Program?

A. This is a component of the Well Owner's Response Policy implemented in 1997 (refer to Attachment CM-2 for the Settlement Agreement to Docket No. DE 97-226 Exhibit B paragraph 2.1). It was intended to provide private well owners some assurance against possible adverse impacts to their wells from pumping at the Company's production wells.

Q. What are the results of the Eligible Well Monitoring Program?

A. The Company has collected over twenty years of data from the wells. The program included 54 private wells, but has subsequently dwindled to 21 as many well owners have dropped out. As shown in detail in Attachment CM-3 to this testimony, none of the water levels in these wells show any adverse impacts attributable to production well pumping.

Q. Has the Company been contacted by any private well owners regarding any adverse impacts on well levels?

A. I have received no contacts from private well owners on this matter in the 12 years I have been employed by the Company.

Q. What are the benefits to ending the Eligible Well Monitoring Program?

A. The long span of monitoring (over 20 years) produced a large data set that clearly shows that production well pumping has had no impact on private well levels (Attachment CM-3). The program costs between $5,000 and $10,000 per year, but no longer produces any corresponding value, and the Company asks that it be discontinued to reduce expenses.

Q. Do you propose to change any other aspect of the Well Owner's Response Policy?

A. No.

VI. UTILITY PLANT ADDITIONS SINCE THE LAST RATE CASE

Q. Please provide an overview of the capital improvements that the Company has made to its system since its last rate proceeding Docket No. DW 12-085.

A. Please refer to Mr. Lawrence's pre-filed testimony for a comprehensive overview of capital improvements. Below I will discuss projects with the most beneficial operational benefits, specifically the Mill Road WTP (Centralized Treatment), Well 22 and the pending treatment improvements associated with it, and Fixed Base Leak Loggers.

Q. What is the Mill Road WTP (Centralized Treatment)?

A. Please refer to Mr. Lawrence's testimony for details on project cost and schedule. This project consolidated water treatment for all six wells in the Mill Road well field. Previously, water was treated using separate chemical systems at each individual well. The new plant was brought into service in February 2020 and achieved a number of valuable improvements.

The previous chemical feed systems were located in small, inadequately sized buildings that, while allowing for basic treatment requirements, were deficient compared to modern standards for safety, handling and optimized performance. These buildings were holdovers from the original construction in 1950s and 1960s when there were no requirements for treatment. Chemical treatment systems were added at later dates into whatever spaces were available inside these buildings. The new water treatment plant resolves these deficiencies, as described below.

Prior to the construction of the new plant, ten chemical treatment systems were needed to treat water from the six wells. Each required daily visits by operators to resupply chemicals and check on feed equipment status. The new plant reduces these ten chemical feed systems to three. This consolidation improves both operations and maintenance efficiencies. Labor time needed for routine

operations is reduced by simply having fewer locations to visit, and fewer systems to check on.

The need to manually transfer chemicals to day tanks at these six individual wells has been eliminated; saving time and improving safety. Operators no longer have to carry and pour 5 gallon jugs of liquid chlorine into day tanks, nor do they have to carry and mix 40 pound bags of polyphosphate. These improvements reduce their direct exposure to these chemicals, and ergonomic risks of manually carrying these heavy weights.

The previous lack of large enough spaces prevented needed corrosion control treatment. Most of the previous spaces did not have space for caustic feed equipment (day tank, pump and pipes). Even for those that did have enough space, the lack of bulk tanks would have required manual transfer of liquid caustic, which was simply too much of a safety risk to implement.

The new chemical feed systems help optimize performance and cost by providing for more consistent chemical feed rates to meet water quality targets. Chemical feed rates are regulated through SCADA based on plant flow rates and feedback from continuous chemical analyzers.

Reducing the number of chemical feed systems also reduces the scope and cost of maintenance activities since there are fewer pumps, tanks, pipes, etc. that require maintenance. Less equipment to maintain also frees operators' time to work on other maintenance activities.

The new plant was constructed to modern standards for spill containment, in the unlikely event one should occur. The reduction in the number of chemical storage locations and availability of bulk tanks reduces the frequency of chemical deliveries, which further reduces the probability of any spills.

The new plant also has its own backup power system that will keep it running when electrical service power is out.

Q. What is Well 22?

A. Please refer to Mr. Lawrence's testimony for details on project cost and schedule. Well 22 is the culmination of two decades of source exploration efforts. During the late 1990s, the Company had water use restrictions nearly every summer; conditions that were exacerbated by the 2000 drought. Due to the recurring need for summer water restrictions, in 1995 the New Hampshire Department of Environmental Services ("NHDES") implemented a moratorium on new service connections in the Company's territory. The moratorium was lifted in 2003 when Wells 20 and 21 were put into service, with a condition that the Company was to continue to explore for additional sources of supply. Source exploration efforts continued through 2012.

Well 22 was drilled in 2012, but full development was put on hold because demands were declining at that time. Per capita metered consumption was trending downward, and the Company was succeeding in its efforts to reduce lost water. However, long-term planning performed during and after the 2016 drought indicated that an additional source of supply was needed to meet projected demands from long term growth. The Company performed well development and permitting work beginning in 2016 that eventually culminated in putting Well 22 into service in the spring of 2020. As noted in Mr. Lawrence's testimony, the well would have been in service years earlier, but for delays brought about by external issues outside the Company's reasonable control. The additional production capacity available from Well 22 enabled the Company to meet demands during the 2020 drought without having to impose any water use restrictions.

Q. What is the Little River Road WTP?

A. Please refer to Mr. Lawrence's testimony for details on the Little River WTP project cost and schedule. The Little River WTP will treat water from both Well 22 and Well 7.

Well 22 lies on the same property as Well 7. Water pumped from both wells is combined for treatment and discharged at a single entry point to the distribution system. Certain improvements to put Well 22 into operation have already been placed in service. Pipes were installed between Well 22 and the pump house, the electrical service was upgraded to meet the demand of both well pumps, and a pump drive for Well 22 and associated controls and SCADA I/O were also installed.

Construction of a new plant building will start in 2022 with the goal of having chemical feed systems for disinfection and corrosion control functional by the end of that year. The new plant will resolve deficiencies in undersized and sub-standard chemical storage spaces and equipment capacities in the current Well 7 pump house, which is currently treating water from both Wells 7 and 22. The current chemical system also needs chemical handling and safety upgrades to meet current standards.

The new plant will also include an arsenic removal system projected to be fully operational in 2023. Arsenic occurs in Well 22 at levels higher than the 0.5 ug/L Maximum Contaminant Level (MCL) that goes into effect in July 2021. To assure the standard is met water pumped from Well 22 is currently blended with water from Well 7, which restricts use of the full capacity of Well 22. Arsenic removal is projected to be fully operational in 2023.

Q. What is the Fixed Base Leak Logger system?

A. This is a system of acoustic leak loggers that are permanently deployed in the distribution system. Their purpose is to improve leak detection and reduce lost water.

Fixed Base Leak Loggers were first installed in 2019. This system consists of acoustic leak loggers that are permanently deployed on valves in the distribution system. The loggers record noises every day, then transmit the information back to the vendor's server, where it is processed for indications of leaks. If noises are loud enough, the software can perform a correlation indicating the approximate location of a leak. Noises indicative of possible leaks are investigated by field staff, and fixed if confirmed.

A major benefit of this system is that the loggers monitor distribution pipes every day, whereas traditional manual leak detection surveys are conducted intermittently (often months apart). This high frequency of monitoring allows for leaks to be discovered and fixed more quickly. Leaks run unfixed for shorter time periods, thereby reducing lost water.

Sixty loggers were installed on valves in May 2019, and covered 16.2 miles of distribution main (12% of the system). The system identified 3 leaks, and also verified the absence of additional leaks after those leaks identified were repaired.

An additional 60 loggers were installed in 2020, expanding coverage to 30.6 miles of distribution system main (22% of the system). Additional loggers are planned for coming years to fill out coverage of the distribution system.

IV. PERMANANCY OF WICA PROGRAM

Q. Please comment on your view of the WICA program from an operations perspective.

A. The WICA program was implemented with the goals of increasing system reliability, improving service to customers, reducing lost water, extending the time period between rate applications, and avoiding high percentage rate increases and rate shock for the customer. Operationally, WICA has produced benefits in

system reliability, improved service to customer and contributed to reducing lost water.

System reliability and improved service to customer has benefited from the accelerated main replacement schedule. Older water mains have a higher probability of breaks and leaks, and these probabilities increase as the pipes get older. These events cause unplanned service interruptions and inconvenience for residents and businesses. The average main break costs approximately $5,500 to repair, and some have exceeded $10,000. The average main break also interrupts service to 23 service connections for 5 hours; again some impact more people and for longer time periods. The systematic replacement of mains helps reduce the long term costs and consequences of these events.

Since the start of the WICA program, the Company has replaced 23,476 feet (4.4 miles) of water pipes. Main replacement projects have focused on asbestos-cement, cast-iron and galvanized water pipe. These pipe materials have higher frequency of main breaks compared to other materials (see below).

Pipe Material	Breaks / Mile / Year
Asbestos-cement	0.10
Cast-iron	0.13
Copper	0.47
Ductile-iron	0.03
Galvanized	2.09
Other	0.01

Galvanized and copper mains have the highest break risk compared to other materials. Fortunately, most of these mains have been replaced in the last few years (0.2 miles under WICA projects). The remaining WICA projects replaced 3.6 miles of cast-iron pipes and 0.6 miles of asbestos-cement pipes. These pipes were also some of the older mains in the water distribution system, with an average age of 72 years; ranging between 55 and 106 years of age.

The WICA program also assists in long-term infrastructure renewal. Water mains are not immortal, and degrade over time and result, in the absence of replacement, in the increasing breaks, costs and consequences discussed above. Prior to WICA, the Company conducted five main replacement projects between 2003 and 2009. These projects replaced 14,300 feet of main, an average of 2,040 feet of main per year. At this pace, it would take 362 years to replace the system. Expecting underground water pipes to provide satisfactory water service for over three and half centuries does not seem realistic.

The WICA program has assisted the Company in expanding its main replacement program, which with the addition of the 23,476 feet of pipe, has replaced 40,229 feet of pipe in total since 2010. This is a pace that would take 202 years to replace the system; still a larger than desirable number, but substantially improving the long term projection.

Reducing the frequency of main breaks also reduces the volume of water lost from the distribution system. Lost water reduction benefits include preservation of water in source aquifers, and reduced marginal expenses for pumping and treatment. Savings from lost water reduction cannot be quantified to the WICA program because they cannot be separated from other lost water control activities, especially system-wide leak detection efforts and metering accuracy programs.

The benefits described above reflect the success of the WICA program, and justify the value of making it permanent.

V. COMPANY ACTIVITIES AND PLANS RELATED TO PER- AND POLYFLUOROALKYL SUBSTANCES (PFAS)

Q. Describe the scope of PFAS and its impact on Company operations.

A. Please refer to Mr. Walsh's pre-filed testimony for an overview of the Company's work regarding PFAS.

Q. What are PFAS regulations for safe drinking water and how is the Company achieving compliance?

A. No PFAS were regulated in drinking water until the fourth quarter of 2019, when NHDES regulations became effective for four PFAS compounds. Only one of the Company's 17 wells has PFAS concentrations that exceed the MCLs. Well 6 has PFOA levels that exceed the MCL. The Company currently achieves compliance with drinking water standards by blending water from Well 6 with other wells in the Mill Road well field before entering the distribution system. The PFOA level meets the state standard in water at the entry point to the distribution system. However, meeting this blending target restricts use of the full capacity of Well 6.

Q. Will the Company continue to be able to comply with these regulations? If not, what actions are proposed to achieve compliance?

A. The Company's ongoing PFAS monitoring of these wells clearly shows increasing PFAS trends, particularly PFOA in Well 6, that are projected to approach the MCL in just a few years. This problem cannot be resolved simply by shutting off Well 6 because the data shows a plume of PFAS moving into the Mill Road well field that will eventually reach the other wells.

Based on this information, and in light of the need to preserve production capacity to meet current and future demands, the Company is moving forward on a project to install PFAS treatment at the Mill Road well field. It will consist of granular activated carbon "GAC" filter vessels to remove PFAS. Initially, the system will only treat water from Well 6 (which will also allow for use of its full capacity), however, the system is being designed to allow for relatively simple addition of more filters to treat water from more wells, if the need arises.

Q. When will PFAS treatment be in service?

A. Installation of PFAS treatment equipment (in an existing building) is scheduled for the spring of 2021 with the goal of being operational by the summer of 2021.

Q. What are the expected capital costs and operating expenses for PFAS treatment?

Estimated capital cost for the installation of piping and treatment equipment, and renovation of the existing building is described in Mr. Lawrence's testimony.

Annual operations and maintenance expense is projected to increase by approximately $60,000. These expenses are for replacement of GAC media, water quality sampling for process control, and heating of the renovated space where the equipment will be installed.

Q. Does this conclude your testimony?

A. Yes.

Exhibit 1 - Water System

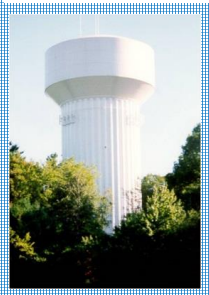
Source and Treatment Facilities

Wells	Water Treatment Facilities
10, 12, 13B, 16, 17, 18, 19	Winnicut Road Water Treatment Plant
Well 14	Well 14
6, 8A, 9, 11, 20, 21	Mill Road Water Treatment Plant
7, 22	Well 7 (current) Little River Road Water Treatment Plant (proposed)
Well 5A	Well 5A

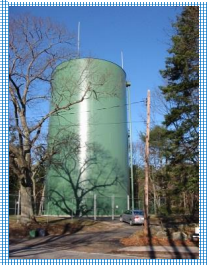
Distribution System

Main Pressure Zone

Exeter Road Tank

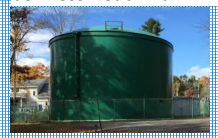


Mill Road Tank



Rye Pressure Zone

Jenness Beach Tank



Hampton Beach Pressure Zone

Glade Path Tank

137 miles of water main

~ 8,600 metered connections

494 fire hydrants

STATE OF NEW HAMPSHIRE
BEFORE THE
PUBLIC UTILITIES COMMISSION

HAMPTON WATER WORKS COMPANY

V.

TOWN OF NORTH HAMPTON AND
TOWN OF NORTH HAMPTON PLANNING BOARD

DOCKET #DE-97-226

PETITION FOR OVERRIDE PURSUANT TO RSA 674:30
AND
ORDER PERMITTING THE LOCATION
OF UTILITY FACILITIES IN NORTH HAMPTON, NEW HAMPSHIRE

SETTLEMENT AGREEMENT

This Settlement Agreement is entered into by and among Hampton Water Works Company ("Hampton"), the Town of North Hampton (the "Town"), the Town of North Hampton Planning Board (the "Planning Board") and the Staff of the New Hampshire Public Utilities Commission (the "Staff"; collectively, the "Parties") to resolve all issues raised in this Docket.

WHEREAS, Hampton proposes to construct, operate and maintain three (3) production wells identified by Hampton as Well Nos. 17, 18, 19 on certain land owned by Hampton located in North Hampton (the "Production Wells"); and

WHEREAS, the Production Wells, associated transmission and distribution pipelines, electric utilities and appurtenant facilities, all as shown on the plans prepared by and for

James Verra and Associates, Inc. and submitted to the Planning Board entitled "Site Plan Winnicut Road, North Hampton, New Hampshire for Hampton Water Works Company" dated November 15, 1996 and revised through May 3, 1997 and other plans attached thereto consisting of a total of five pages which are attached hereto as Exhibit A, are hereinafter collectively referred to as the "Project"; and

WHEREAS, the Project has been proposed by Hampton to meet the service requirements of its customers; and

WHEREAS, Hampton has taken the position that the primary regulatory authority with regard to the Project is the New Hampshire Department of Environmental Services; and

WHEREAS, the Town has taken the position that its ordinances apply to the Project; and

WHEREAS, the objective of the Town and the Planning Board has been to ensure through the application of its ordinances that the operation of the Project will not adversely affect neighboring wells or surface waters or wetlands; and

WHEREAS, Hampton likewise desires to ensure that the subject aquifer and other area water resources will be protected and as evidence thereof has developed and proposed certain programs and policies with respect to private wells, surface waters and wetlands; and

WHEREAS, the Planning Board issued a decision dated September 22, 1997 approving the site plan for the Project, which contained conditions that were unacceptable to Hampton; and

WHEREAS, Hampton appealed the Planning Board's decision to the Rockingham County Superior Court and also requested that this Commission issue an order exempting Hampton from the conditions imposed by the Planning Board; and

WHEREAS, Hampton, the Town and the Planning Board have reached agreement with respect to the terms and conditions under which the Project may be completed and the Production Wells placed into operation, which agreement will meet their respective objectives while avoiding the expense and delay of additional litigation.

NOW, THEREFORE, in consideration of the foregoing and other good and valuable consideration, the Parties agree as follows:

1. Pursuant to RSA 674:30, Hampton Water Works Company ("Hampton") shall be exempt from the conditions imposed by the Planning Board in its decision dated September 22, 1997 and all requirements of the Town of North Hampton Zoning Ordinance, Site Plan Review Regulations or other municipal regulations of the Town pertaining to the Project, subject to the following conditions:

A. Hampton shall implement and maintain the Well Owner Response Policy as set forth on Exhibit B hereto (the "Response Policy"). The Response Policy shall remain in effect for as long as the Production Wells are operated (and any recovery period following the termination of operation) subject to the provisions for amendment or termination set forth therein.

B. Hampton shall implement and maintain the Wetlands and Winnicut River Monitoring Program as set forth on Exhibit C hereto (the "Monitoring Programs").

2. The Parties agree that this Settlement, if approved by the Commission, provides a full resolution of the matters raised by Hampton in this Docket and otherwise between Hampton, the Town and the Planning Board, and their respective officers, employees, officials, attorneys and consultants, with respect to the Project.

3. Upon approval of this Settlement by the Commission, Hampton will withdraw, with prejudice, its appeal of the September 22, 1997 Planning Board decision pending in the Rockingham County Superior Court.

4. The making of this Agreement shall not be deemed in any respect to constitute an admission by any party that any allegation or contention in these proceedings is true or valid.

5. This Agreement is expressly conditioned upon the Commission's acceptance of all of provisions set forth herein without change or condition. If such acceptance is not granted, the Agreement shall be deemed to be null and void and without effect, and shall not be admissible as evidence against any party to this proceeding in any forum or otherwise be used for any purpose whatsoever.

6. The Parties agree to seek approval of this Settlement before the Commission and before any regulatory agencies or courts before whom this matter may be brought.

7. The Commission's acceptance of this Agreement does not constitute continuing approval of or precedent regarding any particular issue in this proceeding.

8. The discussions which have produced this Agreement have been conducted on the understanding that all offers of settlement and discussion relating thereto are and shall be privileged, and shall be without prejudice to the position of any party or participant presenting any such offer or participating in any such discussion, and are not to be used in any manner in connection with this proceeding, any further proceedings or otherwise.

IN WITNESS WHEREOF, the Parties have caused this Agreement to be duly executed in their respective names by their agents, each thereunto duly authorized.

TOWN OF NORTH HAMPTON

By Its Board of Selectmen:

Dated: 13 Oct. 98

By: E. Allen Hines
Name: E. ALLEN HINES

By: George K. Lagassa
Name: GEORGE K. LAGASSA

By: Jack Steiner
Name: JACK STEINER

TOWN OF NORTH HAMPTON
PLANNING BOARD

Dated: 10/8/98

By: P.B. Griffin
Name: P.B. GRIFFIN
Its Chairperson

HAMPTON WATER WORKS COMPANY

Dated: 10/14/98

By: Keith W. Bossung
Keith W. Bossung,
Its Vice President and Manager

NEW HAMPSHIRE PUBLIC UTILITIES COMMISSION STAFF

Dated: _____

By: _____
Name: _____
Title: _____

0117850.WP - October 2, 1998

EXHIBIT B

HAMPTON WATER WORKS COMPANY

WELL OWNER RESPONSE POLICY - TOWN OF NORTH HAMPTON
(Production Well Nos. 17, 18 and 19)

INTRODUCTION AND SUMMARY OF POLICY

This Well Owner Response Policy (the "Policy") for Hampton Water Works Company ("Hampton") has been prepared for the protection of ***Eligible Wells*** located near Hampton's ***Production Wells*** in North Hampton, New Hampshire. As a general policy statement, should a ***Well Owner*** claim that the operation of a ***Production Well*** has ***adversely impacted*** his, her or their ***Eligible Well***, Hampton will respond as if that ***Well Owner*** were a customer of Hampton. In accordance with the procedures detailed in this Policy, Hampton will promptly investigate, no later than seventy-two (72) hours after proper notification, and act in good faith to determine whether the operation of a ***Production Well*** has ***adversely impacted*** such ***Eligible Well*** in the manner claimed. Hampton will provide potable water for drinking and cooking purposes to the ***Well Owner*** within twelve (12) hours of notification, and potable water for other domestic use, up to the ***HUD Standard***, within forty-eight (48) hours of such notification. Hampton will continue to provide such temporary water service throughout its investigation. If it is concluded that the operation of a ***Production Well*** is the source of the ***Well Owner's*** problem, Hampton will take immediate measures to resolve the problem, as detailed in Section 4 of this Policy. Italicized words and phrases in this paragraph have specific meanings and are defined in Section 1 of this Policy.

WELL OWNER RESPONSE POLICY - TOWN OF NORTH HAMPTON
(Production Well Nos. 17, 18 and 19)

This document sets forth the Well Owner Response Policy (the "Policy") of Hampton Water Works Company ("Hampton") for Eligible Wells (as defined below) located in the Town of North Hampton.

1. DEFINITIONS. As used in this Policy, the following terms and phrases shall have the following meanings:

1.1 General Terms and Phrases.

a. ***Construction Details*** shall mean the following construction characteristics of a Well: well depth, well location (bedrock or overburden), depth of well pump, capacity of well pump, type of casing ("open hole" or steel cased), and age.

b. ***Drawdown*** shall mean the distance the Static Water Level of a Well is depressed due to man-made influences (measured in feet).

c. ***HUD Pump Test*** shall mean a constant-rate pumping test, performed by a Licensed Pump Installer, using the pumping equipment existing in the subject Well at the time of the test, for a period of four (4) consecutive hours beginning at a withdrawal rate equal to the HUD Standard. If a Well cannot sustain a withdrawal rate equal to the HUD Standard, the pumping test will be repeated, following recovery, at a lower pumping rate (reduced in 1.0 gallon per minute increments) to determine the rate that such Well can sustain for a period of 4 consecutive hours. The water level in the Well will be measured every fifteen (15) minutes during the pumping test.

d. ***HUD Standard*** shall mean a flow rate of 5 gallons of water per minute for a period of 4 consecutive hours each day (equating to 1,200 gallons of water for said 4 hour period), which is based on the present requirements of the United States Department of Housing and Urban Development for wells serving as a water supply for private domestic use.

e. ***Interference Effects*** shall mean the influence, if any, of any other Well located within a 1,000 foot radius of an Eligible Well.

f. ***Licensed Pump Installer*** shall mean a pump installer certified and licensed by the State of New Hampshire to install pumps for Wells.

g. ***LPI Report*** shall mean a written report issued by a Licensed Pump Installer.

h. ***Monitoring Program*** shall mean the monitoring program described in Section 2 of this Policy.

i. ***Residence*** shall mean a property used as a "Dwelling" as that phrase is defined under the Town of North Hampton Zoning Ordinance.

j. ***Seasonal Variation*** shall mean the natural fluctuation of the Static Water Level during the course of a year.

k. ***Static Water Level*** shall mean the elevation, referenced to the National Geodetic Vertical Datum ("NGVD" commonly known as "sea level"), of the naturally occurring, non-pumping level of the groundwater in a Well at the time of measurement.

1.2 Well Related Terms and Phrases.

a. ***Well*** shall mean a hole or shaft sunk into the earth to observe, sample or withdraw groundwater.

b. ***Residential Well*** shall mean a Well which serves a Residence.

c. ***Eligible Well(s)*** shall mean, individually and/or collectively as the context may require, a Residential Well existing on or before February 1, 1998 on one of the parcels of land listed on Schedule A attached hereto and incorporated herein by reference.

d. ***Replacement Well*** shall mean a Well constructed after February 1, 1998 during the term of this Policy which replaces an Eligible Well.

e. ***Production Well(s)*** shall mean, individually and/or collectively as the context may require, the following Production Wells owned by Hampton: *(i)* Production Well No. 17 located on premises situate in North Hampton, New Hampshire and described in the Town of North Hampton tax records as Lot 23-15; *(ii)* Production Well No. 18 located on premises situate in North Hampton, New Hampshire and described in the Town of North Hampton tax records as Lot 23-17; and *(iii)* Production Well No. 19 located on premises situate in North Hampton, New Hampshire and described in the Town of North Hampton tax records as Lot 23-15.

f. ***Ambient Well*** shall mean the existing, bedrock monitoring Well (EPA Monitoring Well No. GZ 130) located on premises in North Hampton, south of North Road and west of Lafayette Road, described in the Town of North Hampton tax records as Tax Map 17, Lot 29, or similarly situated Well, as agreed upon by Hampton and the Town of North Hampton Board of Selectmen.

g. ***Test Well(s)*** shall mean, individually and/or collectively as the context may require, the following Wells to be monitored during the Monitoring Program: *(i)* the Production Wells, *(ii)* the Eligible Wells, and *(iii)* the Ambient Well.

h. ***Well Owner(s)*** shall mean, individually and/or collectively as the context may require, the owner(s) of an Eligible Well. If a Well Owner elects not to participate in the Monitoring Program pursuant to Paragraph 2.7, below, his, her or their Well will no longer be considered an Eligible Well for purposes of this Policy.

1.3 Yield Related Terms and Phrases.

a. ***Yield*** shall mean the amount of water a Well can produce for a given period of time, based upon: *(i)* the Static Water Level of such Well, taking into consideration Seasonal Variation, *(ii)* the Construction Details of such Well, and *(iii)* Interference Effects, all at the time of measurement.

b. ***Residential Yield*** shall mean the Yield of a Residential Well, as determined by a HUD Pump Test.

c. ***Existing Residential Yield*** shall mean the Residential Yield that an Eligible Well would have continued to achieve at any given point in time during a calendar year, which may fluctuate depending on Seasonal Variation and Interference Effects, but for the operation of the Production Wells.

d. ***Pre-Pumping Yield*** shall mean the first determination of Residential Yield for an Eligible Well, based upon a HUD Pump Test conducted prior to the time the Production Wells commence operation.

e. ***Residential Yield Report*** shall mean a written report issued by a Licensed Pump Installer or other duly qualified expert which presents the results of a HUD Pump Test.

f. *Adverse Impact*, whether used as a noun or an adverb, shall mean or refer to a reduction in the Static Water Level of an Eligible Well, taking Seasonal Variation and Interference Effects into consideration, to an elevation which causes the Residential Yield of such Eligible Well to fall below its Existing Residential Yield.

2. DETERMINATION OF CONSTRUCTION DETAILS, PRE-PUMPING YIELD, SEASONAL VARIATION AND INTERFERENCE EFFECTS; MONITORING PROGRAM.

2.1 Monitoring Period. Prior to and during the operation of the Production Wells for the period set forth below, Hampton, at Hampton's expense, shall establish and maintain a Monitoring Program with respect to the Test Wells to evaluate the Static Water Level table in the vicinity of the Production Wells. The Monitoring Program shall begin on the date the New Hampshire Public Utilities Commission ("PUC") enters a final order in the proceeding presently pending before it, Docket No. DE-97-226, and shall continue for a period of no less than two (2) years from the date Hampton first commences regular operation of a Production Well, during which time Hampton shall integrate the Production Wells into its water system and manage the water system in Hampton's usual and customary manner. At the end of said two (2) year period, Hampton and the Town of North Hampton shall have the right to petition the PUC for an order to modify or terminate this Policy.

2.2 Determination of Construction Details and Pre-Pumping Yield. At the commencement of the Monitoring Program, Hampton will obtain, with the assistance of the applicable land owners, the Construction Details for all Eligible Wells and, at Hampton's sole cost and expense, will conduct a HUD Pump Test with respect to each Eligible Well to determine the Pre-Pumping Yield thereof and prepare a Residential Yield Report with respect to such pump test.

2.3 Determination of Interference Effects. The Interference Effects with respect to Eligible Wells shall be determined at the time the pump test to determine Pre-Pumping Yield is being conducted with respect to such Wells by measuring the Drawdown in other Wells within 1,000 feet of an Eligible Well during such pump test. The largest change in this Drawdown recorded during such determination of Pre-Pumping Yield shall be accepted as the value of the Interference Effects of other Wells with respect to such Eligible Well.

2.4 Measurement of Static Water Level. Hampton will measure the Static Water Level of all Test Wells until the termination of the Monitoring Program as follows:

With respect to the Eligible Wells listed on Schedule B attached hereto and incorporated herein by reference, Hampton will measure the Static Water Level of such Eligible Wells weekly measurements for the first six (6) months of the Monitoring Program and monthly measurements thereafter until the termination of the Monitoring Program.

With respect to all other Test Wells (including all Eligible Wells not listed on Schedule B), Hampton will measure the Static Water Level of such Test Wells quarterly until the termination of the Monitoring Program.

Measurements with respect to Eligible Wells will be taken at the beginning of each week, month or quarter, as applicable, in accordance with a pre-determined schedule.

2.5 Determination and Evaluation of Seasonal Variation in Static Water Levels of Eligible Wells. The natural fluctuations of the Static Water Level in the Eligible Wells shall be based upon fluctuations in the Static Water Level of the bedrock Ambient Well. The evaluation of the impact, if any, of a Production Well on Seasonal Variation shall be made by comparing *(i)* the Static Water Level elevation of the bedrock Ambient Well outside the zone of influence of the Production Wells and the Eligible Wells, prior to pumping the Production Wells, to *(ii)* the Static Water Level elevation of such Wells at the time of a claim by a Well Owner. In other words, a ratio of the Ambient Well (the numerator of which shall be the pre-pumping Static Water Level elevation of the Ambient Well and the denominator of which shall be the Static Water Level elevation of such Ambient Well at the time of a claim by a Well Owner) shall be compared to the ratio of the subject Eligible Well (the numerator of which shall be the pre-pumping Static Water Level elevation of such Eligible Well and the denominator of which shall be the Static Water Level elevation of such Eligible Well at the time of a claim by a Well Owner). If the water level ratio in such Eligible Well is inconsistent (i.e. greater than) the water level ratio of the Ambient Well, taking into consideration reasonable variations in the data and the value for Interference Effects with respect to such Eligible Well, an impact to Seasonal Variation will be deemed to have been the result of pumping the Production Wells. Alternatively, if the ratio method described in this Paragraph 2.5 is inconclusive, Hampton agrees to evaluate the data on the basis of the "t-variable" statistical method, which is calculated by subtracting the mean of the data from each data point and then dividing this difference by the standard deviation of the data (mean and standard deviation shall be re-computed each time a new data point is available).

2.6 Water Quality. Hampton will take appropriate decontamination measures each time it takes water samples or measurements involving downhole equipment from the Test Wells in accordance with recognized industry standards. In addition, Hampton will perform bacterial testing before and after conducting any test to determine the Residential Yield of an Eligible Well.

2.7 Waiver of Right to Participate in Monitoring Program. At the commencement of the Monitoring Program, Hampton will send a letter to each Well Owner extending the opportunity to participate in the Monitoring Program and to be governed exclusively by this Policy. A Well Owner's failure to execute and return such letter to Hampton, which affirmatively indicates an election to participate in the Monitoring Program and to be governed exclusively by this Policy, by the deadline set forth therein, shall constitute a waiver of any obligation by Hampton under this Policy to such Well Owner.

2.8 Replacement Wells. At the time a Replacement Well is installed, the Well Owner shall conduct a HUD Pump Test, at the Well Owner's sole cost and expense, to determine the initial Residential Yield of such Replacement Well, and provide a copy of the Residential Yield Report to Hampton.

3. CLAIMS PROCEDURE.

3.1 Claim Requirements. In the event a Well Owner claims that the operation of a Production Well has adversely impacted his, her or their Well (a "Claimant"), such Claimant must submit an LPI Report prepared at the Claimant's sole cost and expense which *(i)* evaluates the physical condition of such Well and appurtenant equipment, and *(ii)* includes a Residential Yield Report with respect to the Residential Yield of such Well at the time of the Claimant's complaint.

3.2 Evaluation of Claims/Hampton's Obligations. Hampton will have no obligation to respond to a Claimant's complaint until such Claimant submits to Hampton: an LPI Report which establishes that *(i)* equipment failure, well casing deterioration, and/or inferior Well construction is not the source of the Claimant's problem, and *(ii)* the Yield of such Eligible Well is below its Existing Residential Yield. As used in this Policy, "inferior Well construction" shall mean any manner of improper Well construction except improper Well depth. Upon the submission of the evidence described in this Section 3, Hampton shall respond in the manner set forth in Section 4, below.

4. RESPONSE POLICY. Upon satisfaction of the conditions precedent set forth in Section 3, above, Hampton will respond as follows:

4.1 As promptly as possible, and in no case more than twelve (12) hours after receipt of the evidence described in Section 3, above, Hampton, at Hampton's expense, will provide potable water for drinking and cooking purposes to the Well Owner.

4.2 As promptly as possible, and in no case more than forty-eight (48) hours after receipt of the evidence described in Section 3, above, Hampton, at Hampton's expense, will provide potable water for other domestic uses in an amount up to the HUD Standard, and will continue to provide such water service to the Well Owner until *(i)* Hampton restores the Yield of the subject Eligible Well to the Existing Residential Yield in accordance with Paragraph 4.4.a, below, or *(ii)* the Well Owner accepts the findings of Hampton as determined in accordance with Paragraph 4.4.b, below, or *(iii)* the conclusion of the arbitration process conducted in accordance with Section 5, below.

4.3 Within seventy-two (72) hours after receipt of the evidence described in Section 3, above, Hampton will inspect the subject Eligible Well with such experts as Hampton determines to be necessary in its discretion.

4.4 Within thirty (30) days after receipt of the evidence described in Section 3, above, Hampton will determine whether or not the operation of a Production Well has adversely affected the subject Eligible Well, and will render a written decision to the Well Owner with respect to its findings.

a. If Hampton determines that the operation of a Production Well has adversely impacted such Eligible Well, Hampton will reimburse the Well Owner for any fees and expenses incurred in connection with the LPI Report commissioned by the Well Owner, will immediately fashion a remedy appropriate to the situation, at Hampton's expense, from those described below; such remedies will be typically, but not necessarily, exercised in the following order, to provide such Well Owner with a Residential Yield at least equal to the Existing Residential Yield:

(1) Hampton will first reset the pump in such Eligible Well to a greater depth, but no closer than twenty (20) feet from the bottom of the Well, if such remedy is applicable to the situation.

(2) If such action does not restore the Residential Yield of such Eligible Well to the Existing Residential Yield, Hampton will install a larger capacity pump, if such remedy is applicable to the situation.

(3) If such action does not restore the Residential Yield of such Eligible Well to the Existing Residential Yield, Hampton will deepen the Eligible Well, if such remedy is applicable to the situation.

(4) If such action does not restore the Residential Yield of such Eligible Well to the Existing Residential Yield, Hampton will drill a new Well which provides a Residential Yield at least equal to the Existing Residential Yield in a location mutually agreed upon by Hampton and the Well Owner; provided, however, that the Well Owner may, by private agreement with Hampton, accept the current improvements and not require the drilling of a new Well.

(5) If a new Well (as described in Paragraph 4.4.a.(4), above) does not have a Residential Yield which satisfies the Existing Residential Yield, Hampton will install all necessary capital facilities to provide water to the Well Owner; provided, however, that the Well Owner may, by private agreement with Hampton, accept the current improvements and not require the installation of facilities to connect to Hampton's water distribution system. In the event that the Well Owner connects to Hampton's water distribution system, the Well Owner will be responsible to pay for all water thereafter provided by Hampton to the Well Owner at the rate set forth in, and in accordance with, the tariffs approved by the PUC for Hampton's customers, as the same may be modified or replaced from time to time (the "Tariffed Rate").

b. If Hampton concludes that the operation of a Production Well is not the source of the Well Owner's problem, Hampton's obligation to provide temporary water service shall not terminate until the Well Owner accepts Hampton's findings or until the conclusion of the arbitration process conducted in accordance with Section 5, below. Upon the Well Owner's acceptance of Hampton's findings or upon the conclusion of the arbitration process, Hampton's obligation to provide temporary water service shall immediately terminate. If the arbitration process results in a judgment in favor of Hampton, the Well Owner shall reimburse Hampton for all water provided during the period of the arbitration process at the Tariffed Rate(s) in effect during such period.

5. ARBITRATION OF DISPUTES. Any dispute between Hampton and a Well Owner arising out of Hampton's construction or application of this Policy shall be submitted to arbitration in Rockingham County, New Hampshire before an arbitrator who has at least ten years' experience as an arbitrator and who is otherwise mutually acceptable to Hampton and the Well Owner who is a party to the dispute. In the event such Well Owner and Hampton are unable to agree upon a single arbitrator, the dispute shall be decided by a single arbitrator appointed by the Rockingham County Superior Court. Hampton shall file all necessary pleadings, at its expense, to secure the appointment of such arbitrator. Except as expressly set forth herein, such arbitration shall be conducted in accordance with the commercial arbitration rules of the American Arbitration Association. The decision of the arbitrator, made as soon as practicable after submission of the dispute, which shall be set forth in a written opinion and based on appropriate scientific principles, and on applicable law and judicial precedent, shall be binding upon the parties and shall be enforceable as follows: within thirty (30) days of the issuance of such written decision, either party may apply to a court of competent jurisdiction for an order confirming, modifying, or vacating the decision, and upon such application that court shall have the power to review whether, as a matter of law, based on the findings of fact by the arbitrator, the decision should be confirmed, modified or vacated in order to correct any errors of law made by the arbitrator. If the arbitration process results in a judgment in favor of the Well Owner, Hampton shall bear all costs associated with the arbitration (except attorneys' fees incurred by the Well Owner). If the arbitration process results in a judgment in favor of Hampton, Hampton and the Well Owner shall equally share all costs associated with the arbitration (except attorneys' fees). At all times, each party to the arbitration shall be responsible for its own attorneys' fees.

6. STATUS OF LEGAL REPRESENTATIVES, SUCCESSORS, AND ASSIGNS. The benefits and burdens of this Policy shall inure to the benefit of and be binding upon the respective legal successors and assigns of Hampton and the Well Owners.

0121919.WP - October 13, 1998

SCHEDULE A

(PROPERTIES WITH ELIGIBLE WELLS)

1.	**Mary and Dana Washburn** 130 Walnut Avenue North Hampton, NH 03862	**Map 19, Lot 5**
2.	**Robert G. Kinsman** **Christine Kinsman** 128 Walnut Avenue North Hampton, NH 03862	**Map 19, Lot 6**
3.	**Joan C. Coakley** 122 Walnut Avenue North Hampton, NH 03862	**Map 19, Lot 7**
4.	**Benjamin G. Clark** **Florence H. Clark** 131 Walnut Avenue North Hampton, NH 03862	**Map 19, Lot 30**
5.	**John W. Barvenik** 133 Walnut Avenue North Hampton, NH 03862	**Map 19, Lot 31**
6.	**Andrew P. Hayden** **Bobbi C. Hayden** 98 Lovering Road North Hampton, NH 03862	**Map 19, Lot 33**
7.	**Fred D. and Joanne Lebow** 92 Lovering Road North Hampton, NH 03862	**Map 19, Lot 35**

8.	**Russell and Susan MacDonald** 90 Lovering Road North Hampton, NH 03862	**Map 19, Lot 36**
9.	**Dietrich H. Ebert Revocable Trust** **Kathaleen M. Ebert Revocable Trust** 80 Lovering Road North Hampton, NH 03862	**Map 19, Lot 37**
10.	**James A. Berry** **Nancy R. Berry** 74 Lovering Road North Hampton, NH 03862	**Map 19, Lot 39**
11.	**Robert B. Pafford** **Barbara A. Pafford** 72 Lovering Road North Hampton, NH 03862	**Map 19, Lot 40**
12.	**Roger Lebrecht** **Linda J. Lebrecht** 70 Lovering Road North Hampton, NH 03862	**Map 19, Lot 41**
13.	**Timothy J. and Kathy Harned** 66 Lovering Road North Hampton, NH 03862	**Map 19, Lot 43**
14.	**Jackie and Linda Pickering** 67 Lovering Road North Hampton, NH 03862	**Map 19, Lot 47**
15.	**Kathy V. Mollica** 65 Lovering Road North Hampton, NH 03862	**Map 19, Lot 47-01**

16.	**Ruth E. Larkin** 71 Lovering Road North Hampton, NH 03862	**Map 19, Lot 48**
17.	**Timothy and Janice Bastille** 73 Lovering Road North Hampton, NH 03862	**Map 19, Lot 49**
18.	**Darren M. Knight** **Marilyn E. Knight** 87 Lovering Road North Hampton, NH 03862	**Map 19, Lot 51-01**
19.	**Gerald A. Pelletier** **June W. Pelletier** 85 Lovering Road North Hampton, NH 03862	**Map 19, Lot 51-02**
20.	**Andrea D. Freedman** 81 Lovering Road North Hampton, NH 03862	**Map 19, Lot 51-04**
21.	**Richard T. Bettcher** **Leslie J. Bettcher** 95 Lovering Road North Hampton, NH 03862	**Map 19, Lot 53**
22.	**Curtis C. Edmunds** **Lori J. Edmunds** 135 Walnut Avenue North Hampton, NH 03862	**Map 19, Lot 57**
23.	**Armand Turcotte** **Sondra L. Turcotte** 75 Lovering Road North Hampton, NH 03862	**Map 19, Lot 58**

24.	**Charles G. White** **Laurie D. White** 77 Lovering Road North Hampton, NH 03862	**Map 19, Lot 59**
25.	**Kenneth R. Adams** **Dorothy A. Adams** 51 Winnicut Road North Hampton, NH 03862	**Map 22, Lot 28**
26.	**Ronald L. Burris** **Marilyn Burris** 53 Winnicut Road North Hampton, NH 03862	**Map 23, Lot 1**
27.	**Richard A. Batchelder** **Judith Batchelder** P.O. Box 1042 West Lebanon, ME 04027-1042	**Map 23, Lot 2**
28.	**Kenneth and Lillis MacDormand** 61 Winnicut Road North Hampton, NH 03862	**Map 23, Lot 3.01**
29.	**Louis A. Datilio, Sr.** 67 Winnicut Road North Hampton, NH 03862	**Map 23, Lot 6**
30.	**Charles W. Barton Estate** 69 Winnicut Road North Hampton, NH 03862	**Map 23, Lot 7**
31.	**Michael R. Komeski** **Patricia A. Komeski** 82 Winnicut Road North Hampton, NH 03862	**Map 23, Lot 9**

32.	**Bernard and Cynthia Smith** 80 Winnicut Road North Hampton, NH 03862	**Map 23, Lot 10**
33.	**Stephen J. and Suzette Miller** 78 Winnicut Road North Hampton, NH 03862	**Map 23, Lot 11**
34.	**Paul N. and Kathleen Daoust** 76 Winnicut Road North Hampton, NH 03862	**Map 23, Lot 13**
35.	**Stephen R. Szumita** **Carol A. Szumita** 70 Winnicut Road North Hampton, NH 03862	**Map 23, Lot 18**
36.	**Mary G. Davis** **c/o Jane Copp** 68 Winnicut Road North Hampton, NH 03862	**Map 23, Lot 19**
37.	**Peter S. Blaisdell** 64 Winnicut Road North Hampton, NH 03862	**Map 23, Lot 20**
38.	**Carl D. and Sally A. Walker** North Hampton, NH 03862	**Map 23, Lot 21**
39.	**Robert and Betty Ann Noble** 60 Winnicut Road North Hampton, NH 03862	**Map 23, Lot 22**

40.	**Paul S. Cuetara** 58 Winnicut Road North Hampton, NH 03862	**Map 23, Lot 24**
41.	**Joseph B. Hume, III** **Wendy L. Hume** 56 Winnicut Road North Hampton, NH 03862	**Map 23, Lot 25**
42.	**James W. Jackson, Sr.** **James W. Jackson** 52 Winnicut Road North Hampton, NH 03862	**Map 23, Lot 26**
43.	**Peter J. Tutinas** 66 Winnicut Road North Hampton, NH 03862	**Map 23, Lot 27**

0115259.WP

SCHEDULE B

(ELIGIBLE WELLS TO BE MONITORED MORE FREQUENTLY)

1.	**Russell and Susan MacDonald** 90 Lovering Road North Hampton, NH 03862	**Map 19, Lot 36**
2.	**Timothy J. and Kathy Harned** 66 Lovering Road North Hampton, NH 03862	**Map 19, Lot 43**
3.	**Gerald A. Pelletier** **June W. Pelletier** 85 Lovering Road North Hampton, NH 03862	**Map 19, Lot 51-02**
4.	**Richard T. Bettcher** **Leslie J. Bettcher** 95 Lovering Road North Hampton, NH 03862	**Map 19, Lot 53**
5.	**Charles W. Barton Estate** 69 Winnicut Road North Hampton, NH 03862	**Map 23, Lot 7**
6.	**Bernard and Cynthia Smith** 80 Winnicut Road North Hampton, NH 03862	**Map 23, Lot 10**
7.	**Stephen J. and Suzette Miller** 78 Winnicut Road North Hampton, NH 03862	**Map 23, Lot 11**
8.	**Paul S. Cuetara** 58 Winnicut Road North Hampton, NH 03862	**Map 23, Lot 24**

0121925.WP

Exhibit 3

Summary of Eligible Well Monitoring

The Company has conducted a program of monitoring private wells since 1997, for the purpose of assuring that private well use was not compromised by pumping from production wells. After 23 years of data collection, the results show no relationships in water levels between private wells and production wells. Since the monitoring program no longer produces much value, the Company requests the termination of the monitoring program in order to reduce its operating costs (~$10,000 per year).

One requirement of DE97-226 Well Owner's Response Policy Exhibit B paragraph 2.1 was to monitor water levels in private wells relatively near to the Company's newer production wells (16, 17, 18 and 19). It was intended to provide private well owners some assurance against possible adverse impacts to their wells. The term "Eligible Well" refers to the initial selection of private wells to be monitored, which was based on geographic proximity to the production wells.

Monitoring began in 1997. Since then many well owners have dropped out; only 17 private wells are still being monitored (see Figure 1). Monitoring is conducted by an outside contractor at an annual cost of $10,596 (2019).

Twenty-three years of data show no statistically significant relationships in water levels between production wells and private wells. Water level readings were collected monthly, and compared between either Well 16 for private wells in Stratham, and Well 19 for private wells in North Hampton. Well 19 was selected for this analysis because it is the most heavily used of the three closely located bedrock wells (17, 18 and 19). The relationship between private well levels and production wells was evaluated using the correlation coefficient.

The correlation coefficient is a statistical measure of the strength of the relationship between the relative movements of two variables, in this case the water levels in the wells. Correlation coefficient values range between -1.0 and 1.0. A correlation of 1.0 shows a perfect positive correlation, i.e., a change in the production well level would be mirrored by a similar change in the private well (see Figure 2). A correlation of -1.0 shows a perfect negative correlation, i.e., a change in the production well level would be mirrored by an opposite change in the private well. A correlation of 0.0 shows no linear relationship between the movement of the two variables. The strength of the relationship varies in degree based on the value of the correlation coefficient. For example, a value of 0.2 shows there is a positive correlation between two variables, but it is very weak and likely unimportant. Analysts in some fields of study do not consider correlations important until the value surpasses at least 0.8.

Of the 17 wells currently being monitored correlation coefficients ranged from 0.0006 to 0.1351 (Table 1 and Figure 3). The first chart is each set shows the actual levels recorded in each private well and the closest production well. The second chart shows the private well level charted against the level of the nearest production well. A linear trend line is also plotted and the correlation coefficient is displayed.

The very low correlation coefficients and flat trend lines show that water levels in none of the private wells experience any relationships to production well levels. As water levels drop in production wells due to pumping, there is little or no corresponding drop in private well levels. This relationship is also demonstrated by the fact that over the years, no well owners have noticed enough of an impact on their well levels to notify the Company. In fact, many well owners have expressed their inconvenience with the program by dropping out.

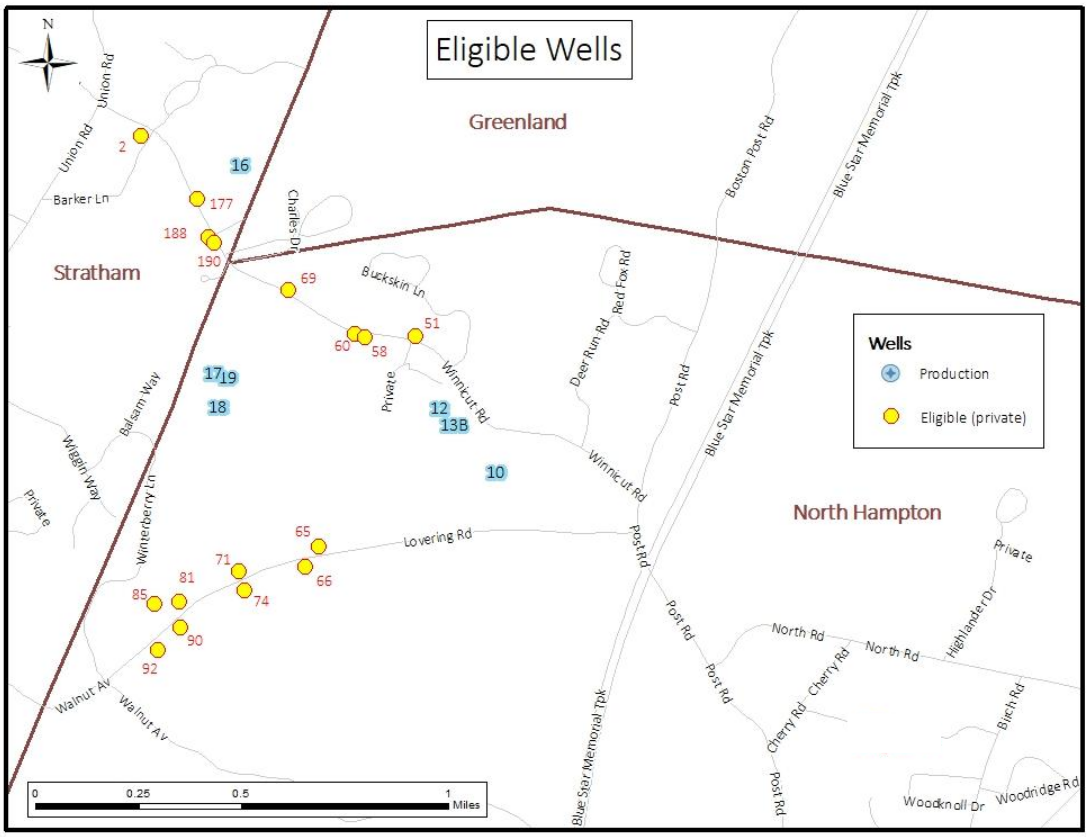


Figure 1 – Map of Aquarion Production Wells and Eligible Private Wells

(Private Wells Identified by Street Address Number)

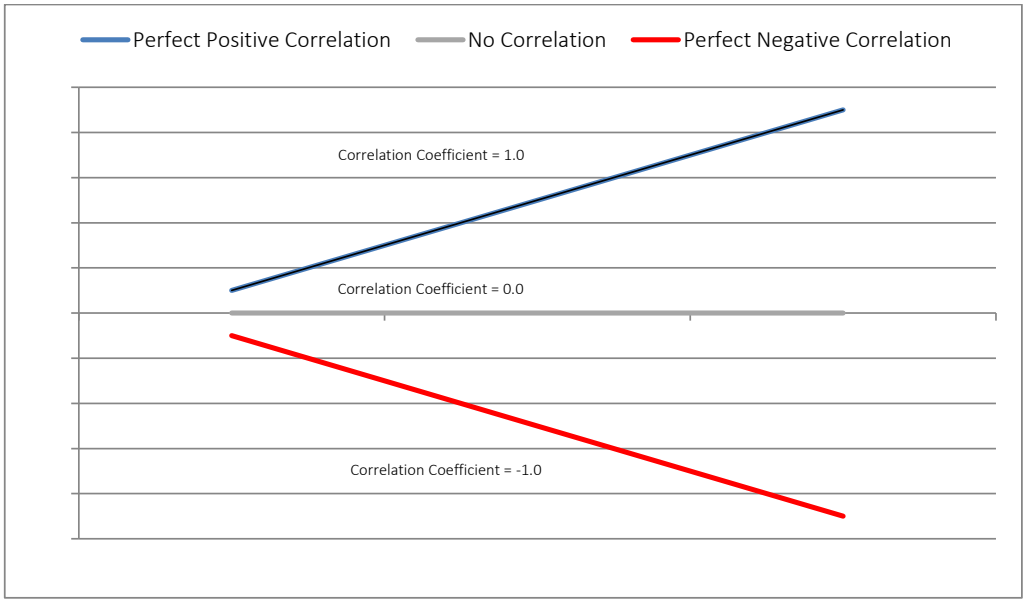


Figure 2 – Description of Correlation Coefficients

Table 1 - Locations and Correlations

Street	#	Correlation Coefficient	To Well	Figures		Table
Barker Ln	2	0.0105	16	4	5	2
High St	12	0.0576	16	6	7	3
Winnicut Rd	177	0.1351	16	8	9	4
Winnicut Rd	188	0.0598	16	10	11	5
Winnicut Rd	190	0.0627	16	12	13	6
Lovering Rd	65	0.0627	19	14	15	7
Lovering Rd	66	0.0271	19	16	17	8
Lovering Rd	71	0.0403	19	18	19	9
Lovering Rd	74	0.0452	19	20	21	10
Lovering Rd	81	0.0260	19	22	23	11
Lovering Rd	85	0.0006	19	24	25	12
Lovering Rd	90	0.0191	19	26	27	13
Lovering Rd	92	0.0074	19	28	29	14
Winnicut Rd	51	0.0140	19	30	31	15
Winnicut Rd	58	0.0136	19	32	33	16
Winnicut Rd	60	0.0007	19	34	35	17
Winnicut Rd	69	0.0523	19	36	37	18

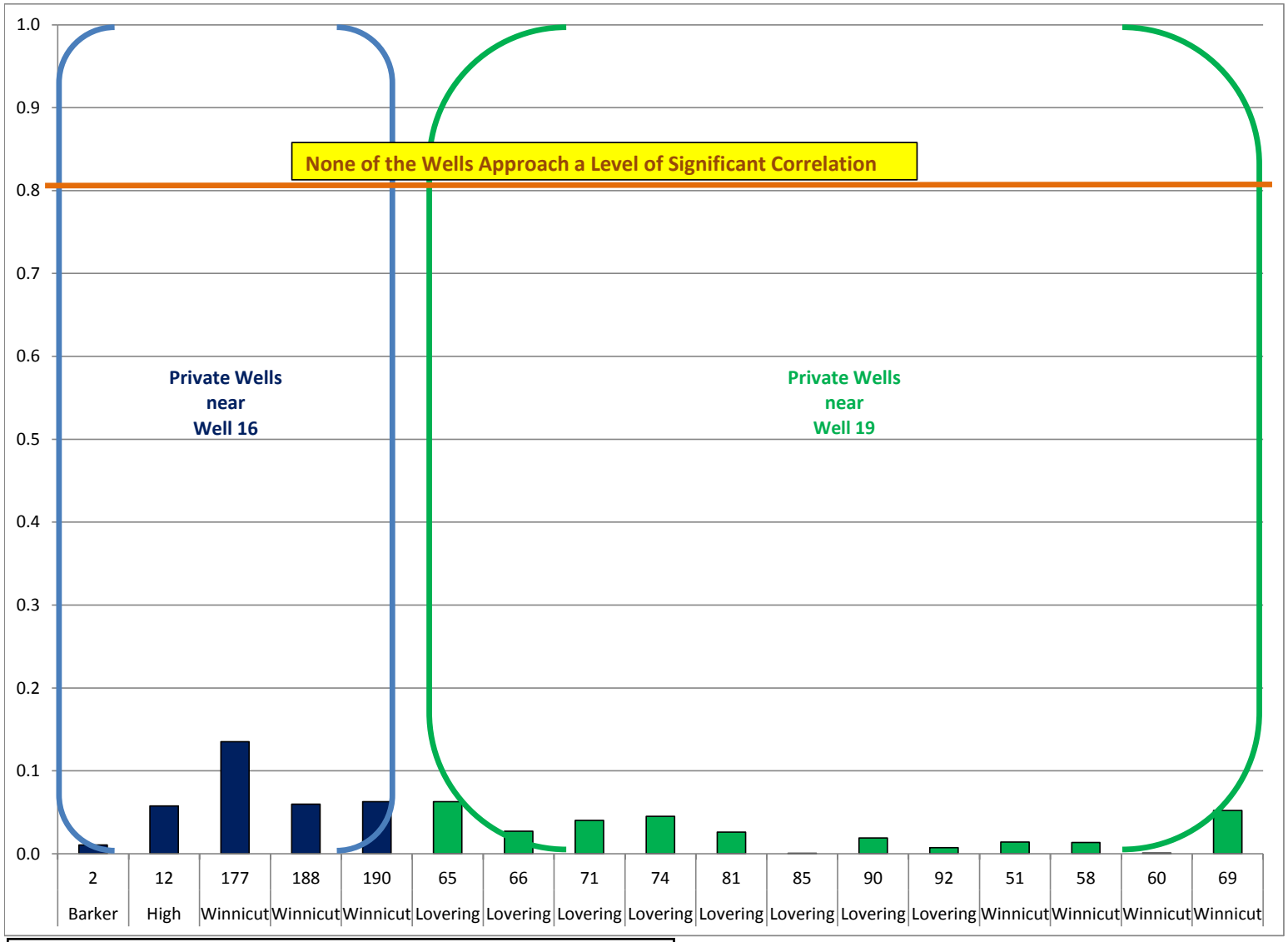


Figure 3 - Correlation Coefficients between Production Wells 16 and 19, and

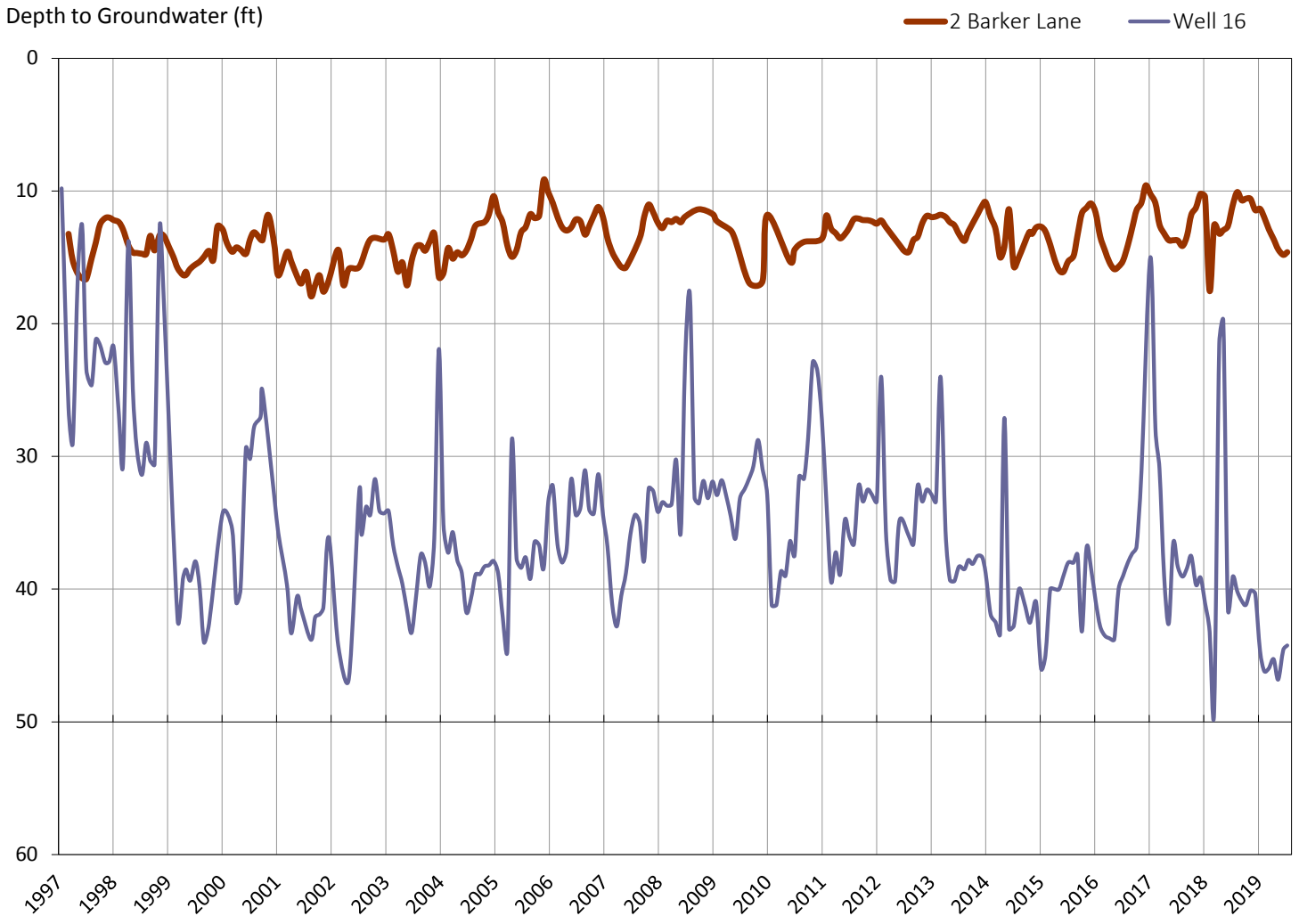


Figure 4 - 2 Barker Lane Water Levels vs. Well 16

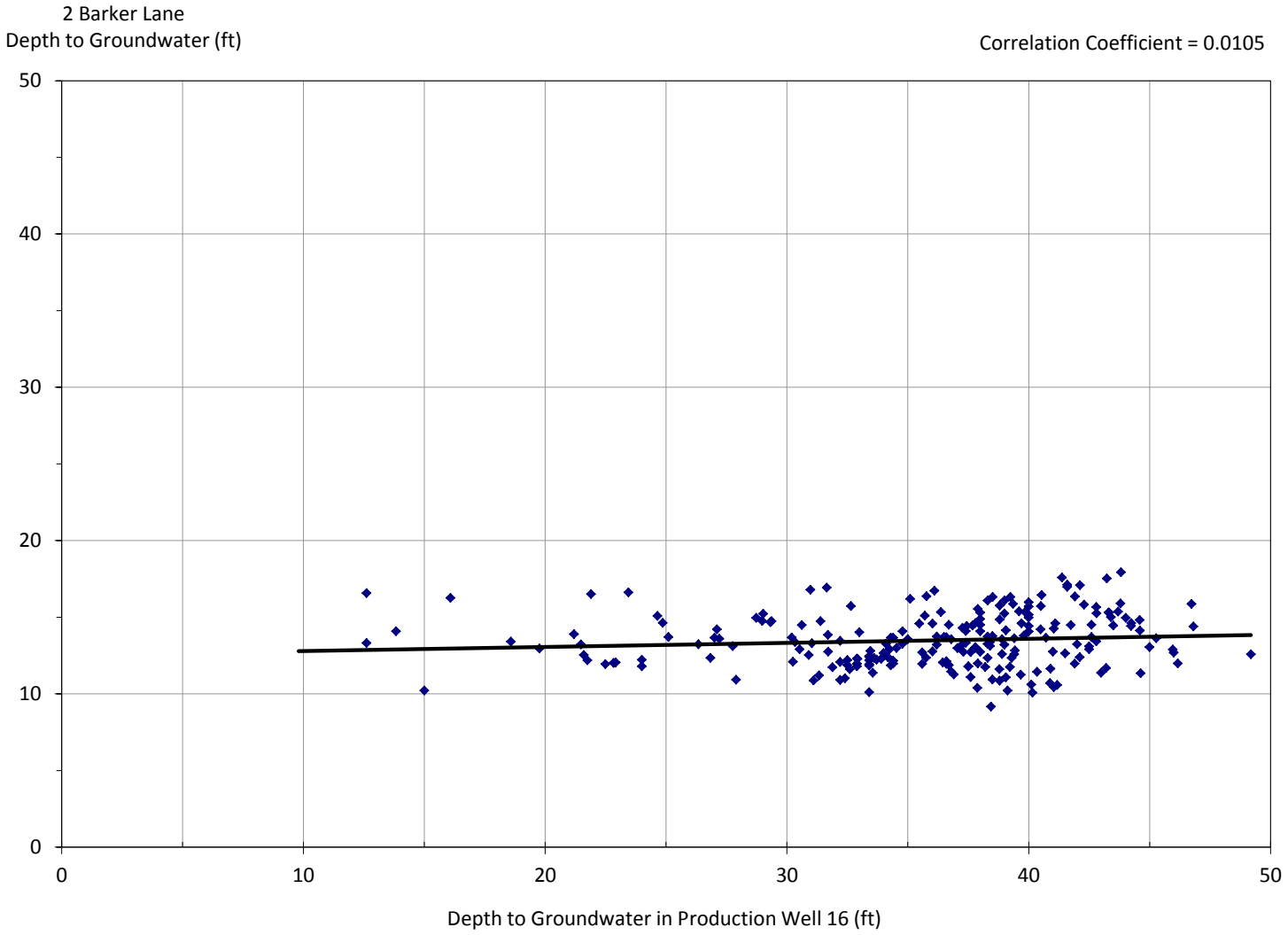


Figure 5 - 2 Barker Lane Well - Correlation of Water Levels vs. Well 16

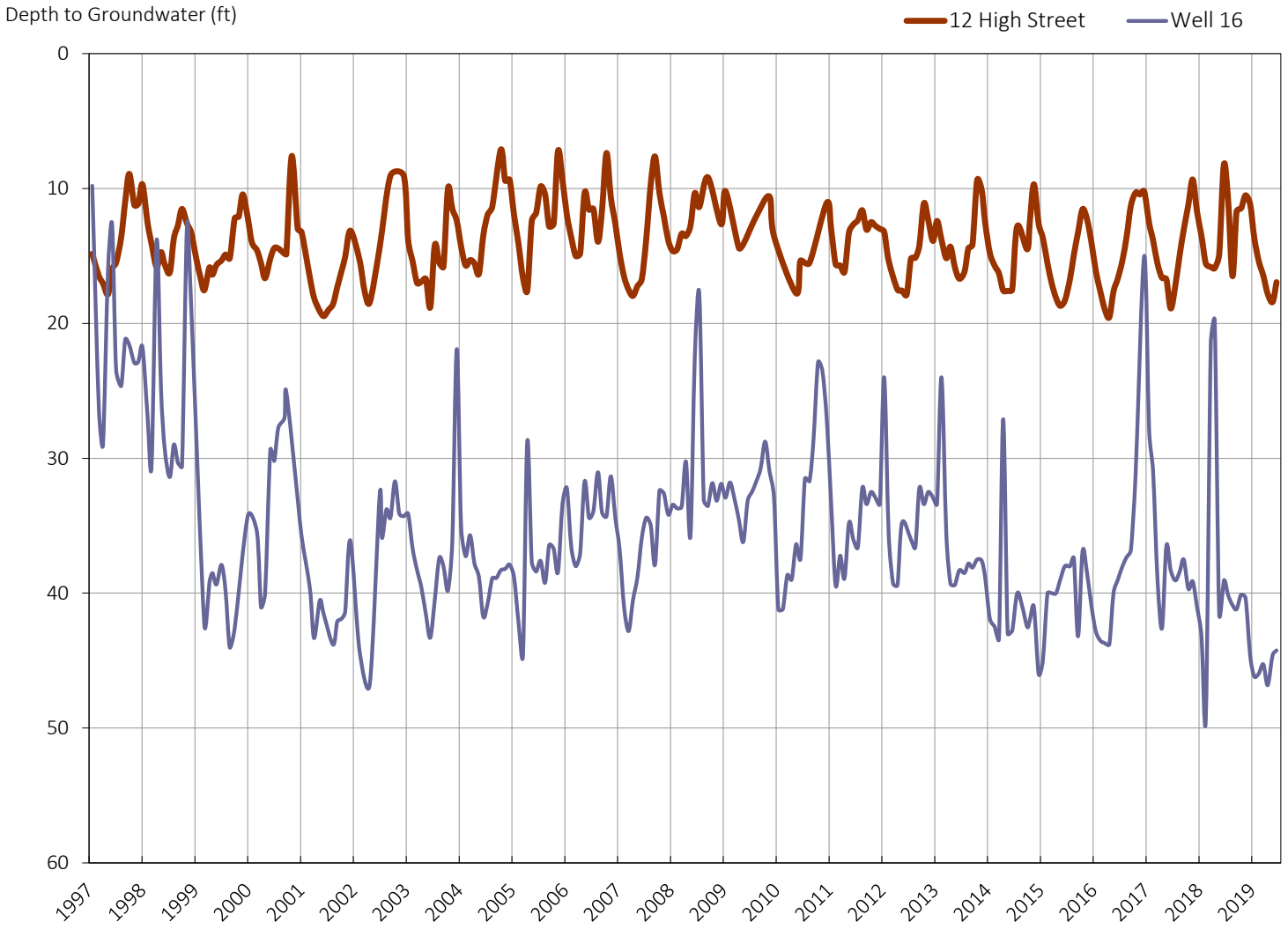


Figure 6 - 12 High Street Water Levels vs. Well 16

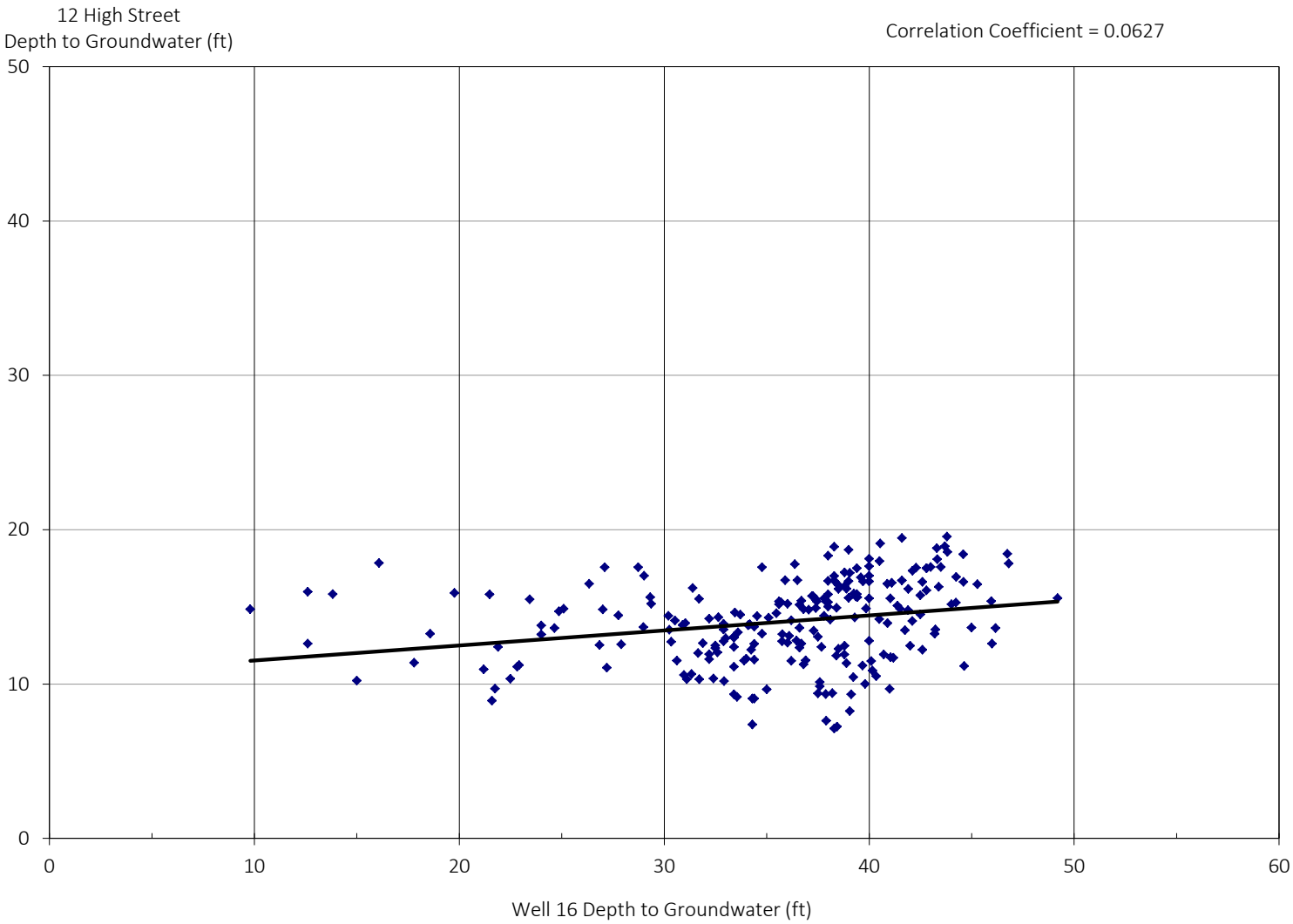


Figure 7 - 12 High Street Well - Correlation of Water Levels vs. Well 16

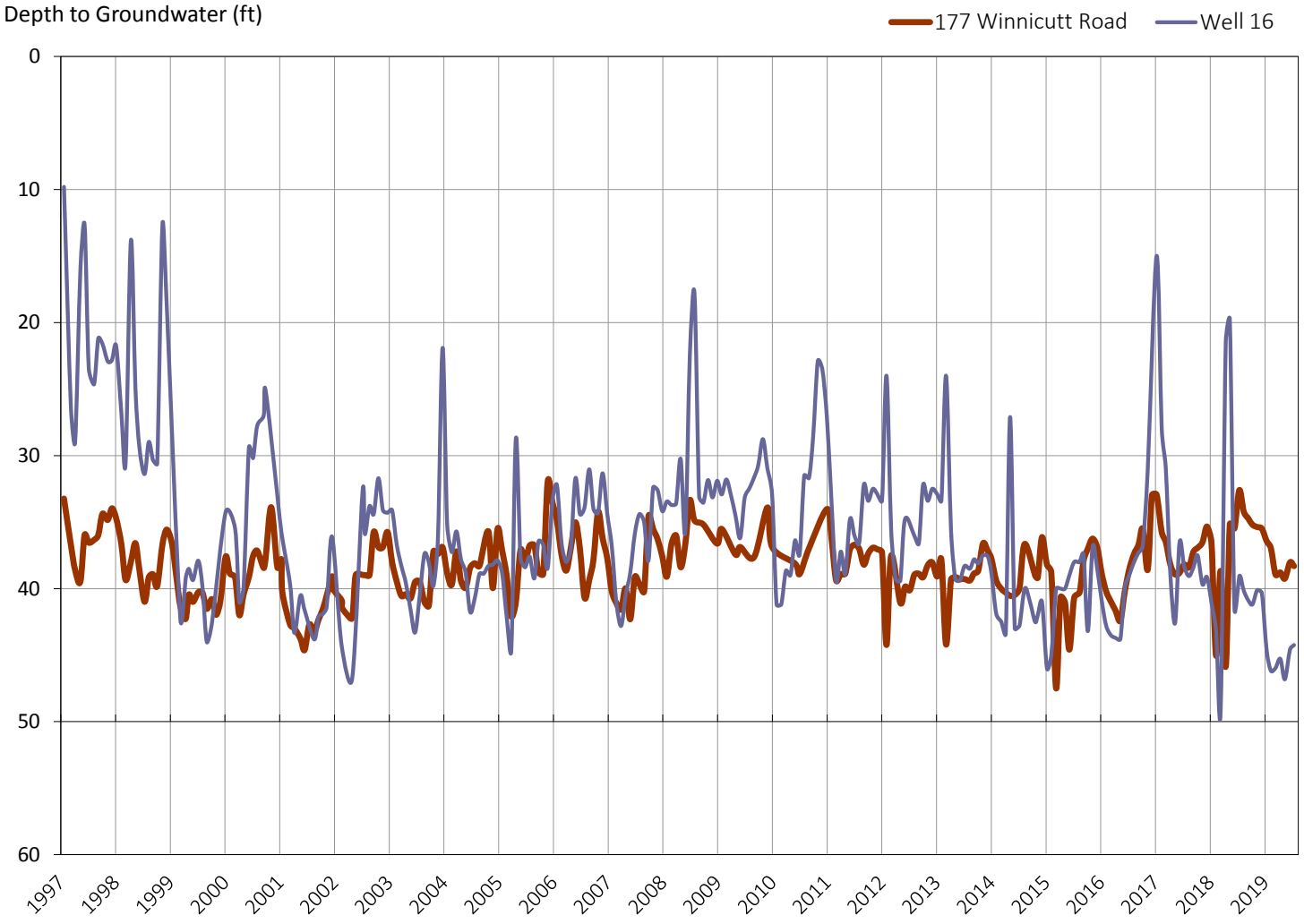


Figure 8 - 177 Winnicut Road Water Levels vs. Well 16

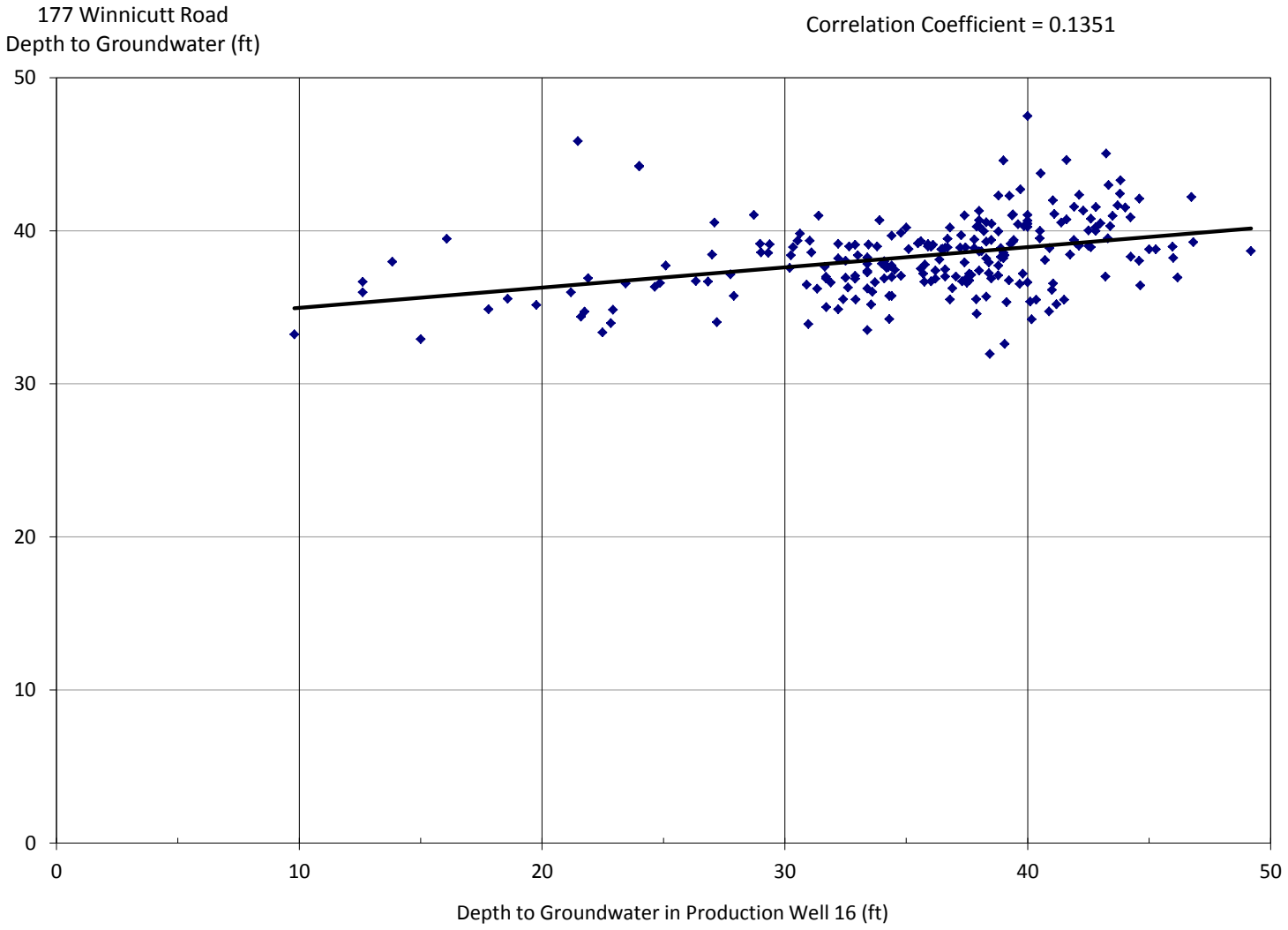


Figure 9 - 177 Winnicutt Road - Correlation of Water Levels vs. Well 16

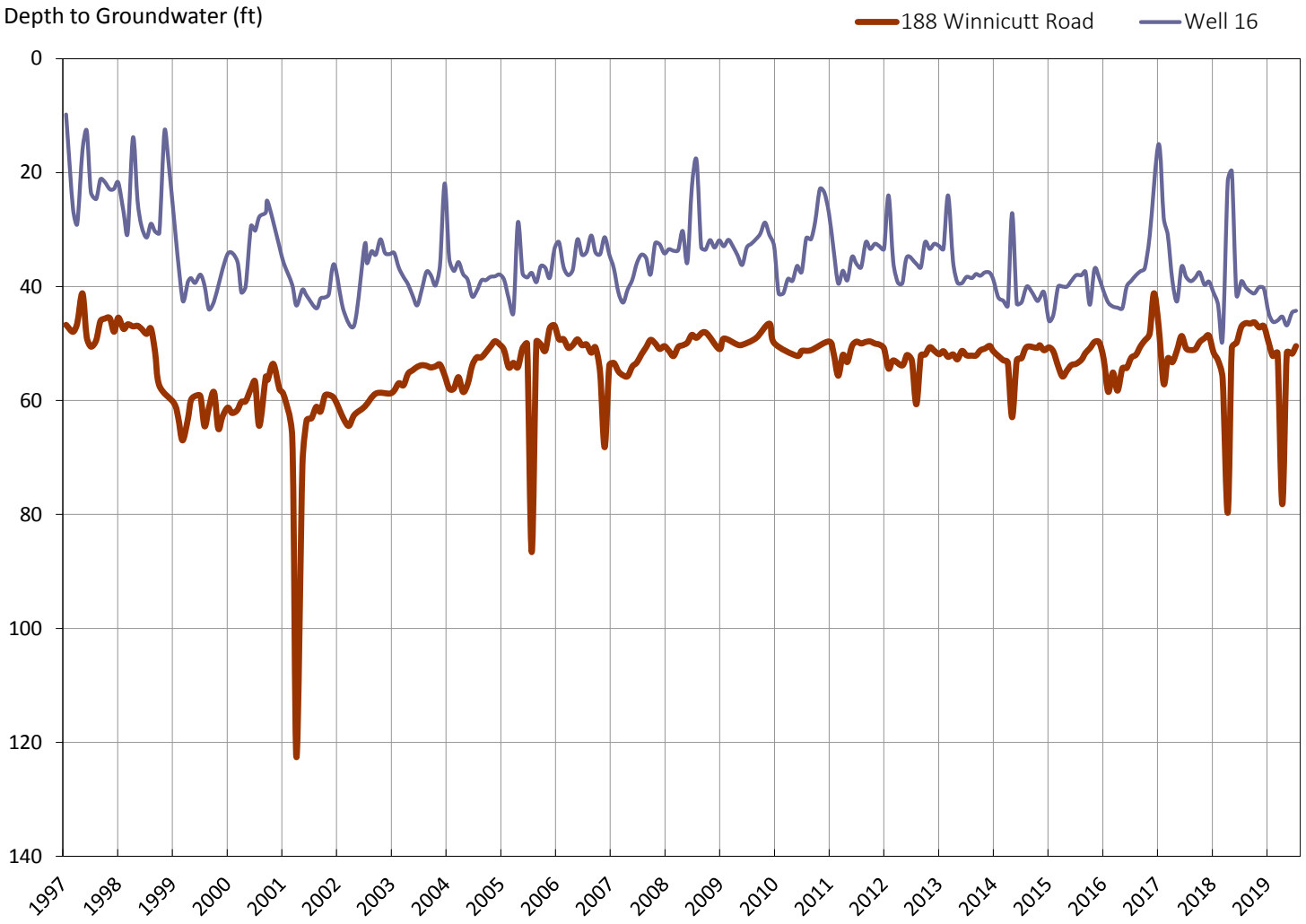


Figure 10 - 188 Winnicut Road Water Levels vs. Well 16

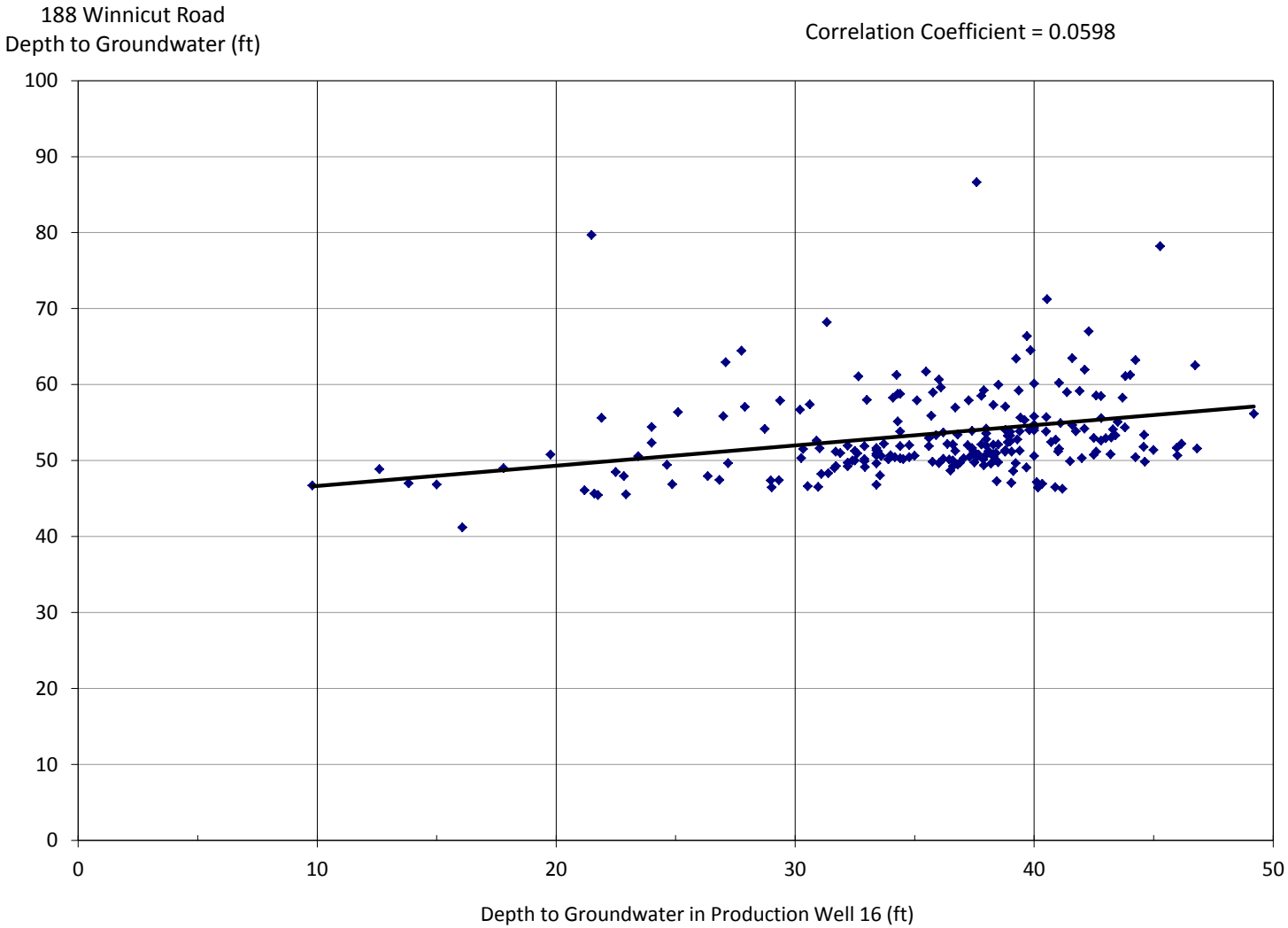


Figure 11 - 188 Winnicutt Road - Correlation of Water Levels vs. Well 16

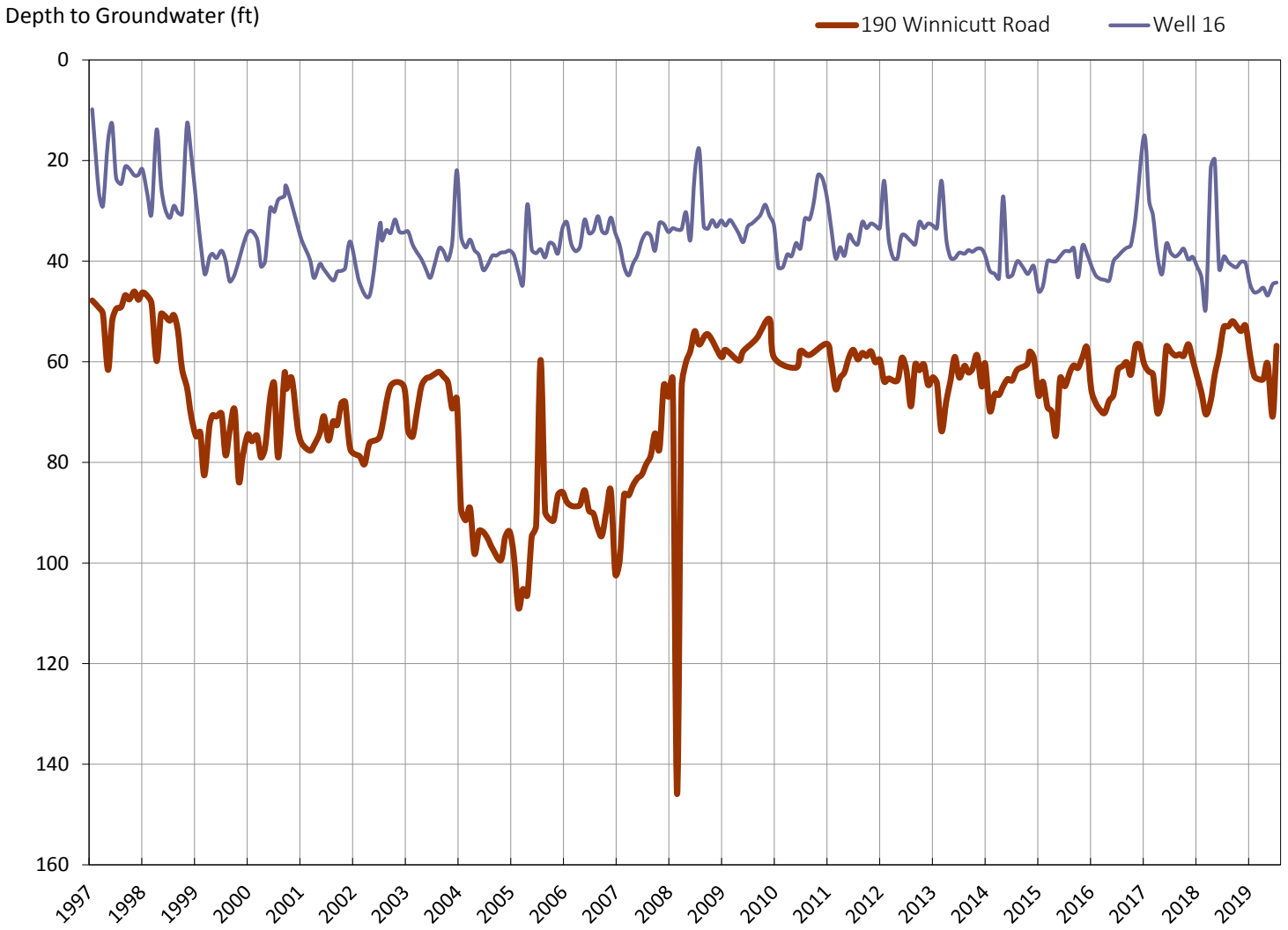


Figure 12 - 190 Winnicut Road Water Levels vs. Well 16

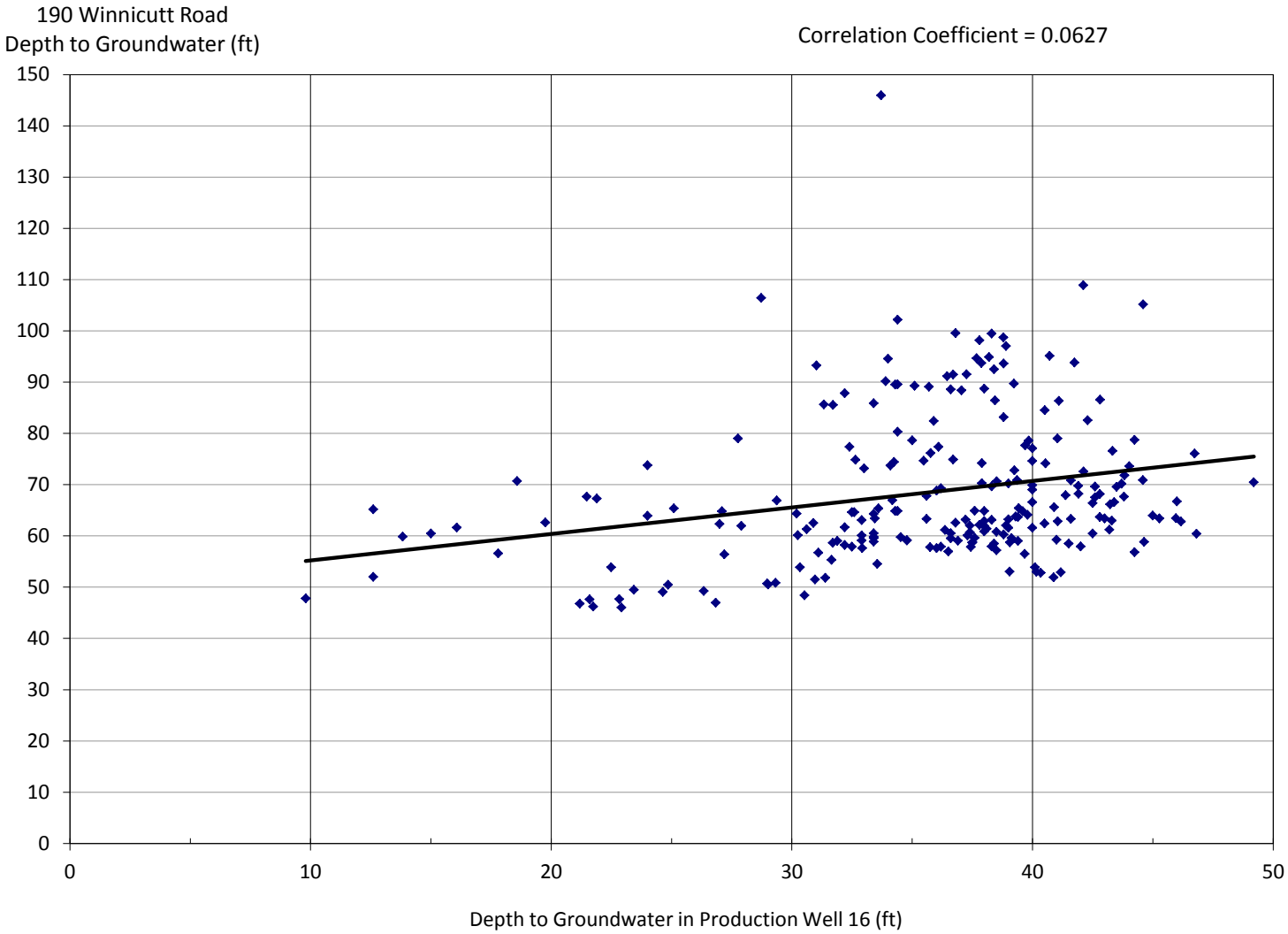


Figure 13 - 190 Winnicutt Road - Correlation of Water Levels vs. Well 16

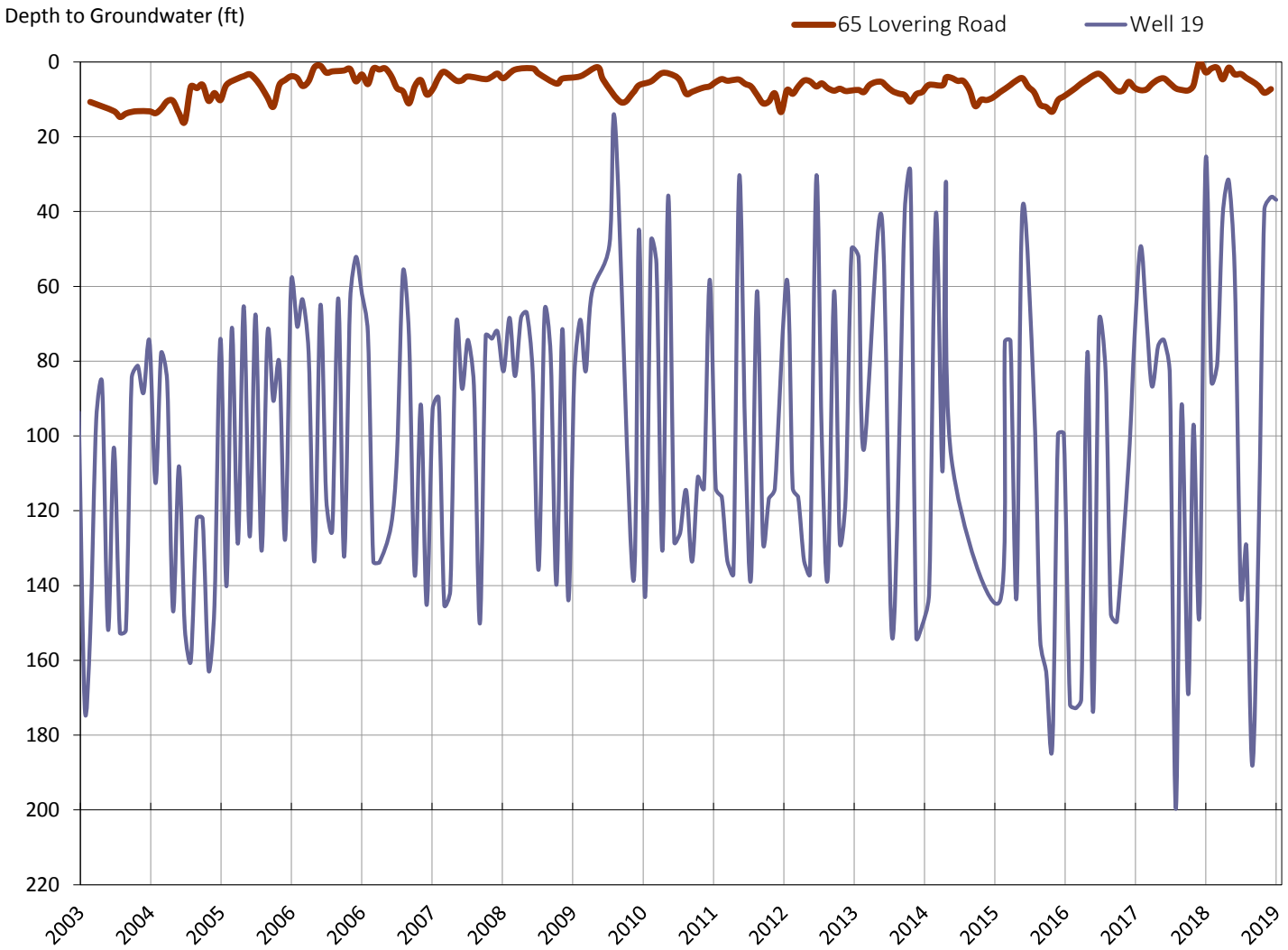


Figure 14 - 65 Lovering Road Water Levels vs. Well 19

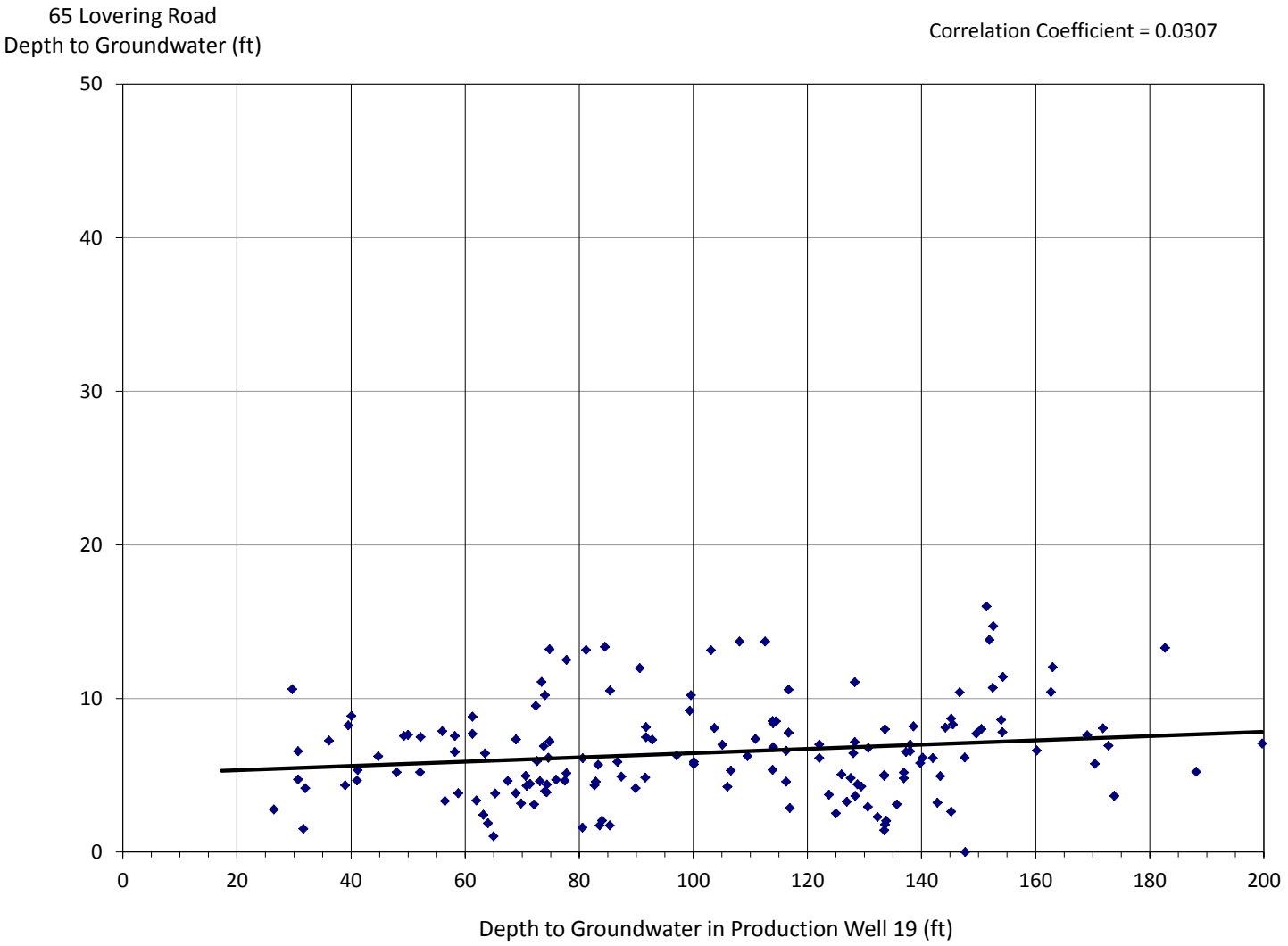


Figure 15 - 65 Lovering Road Well - Correlation of Water Levels vs. Well 19

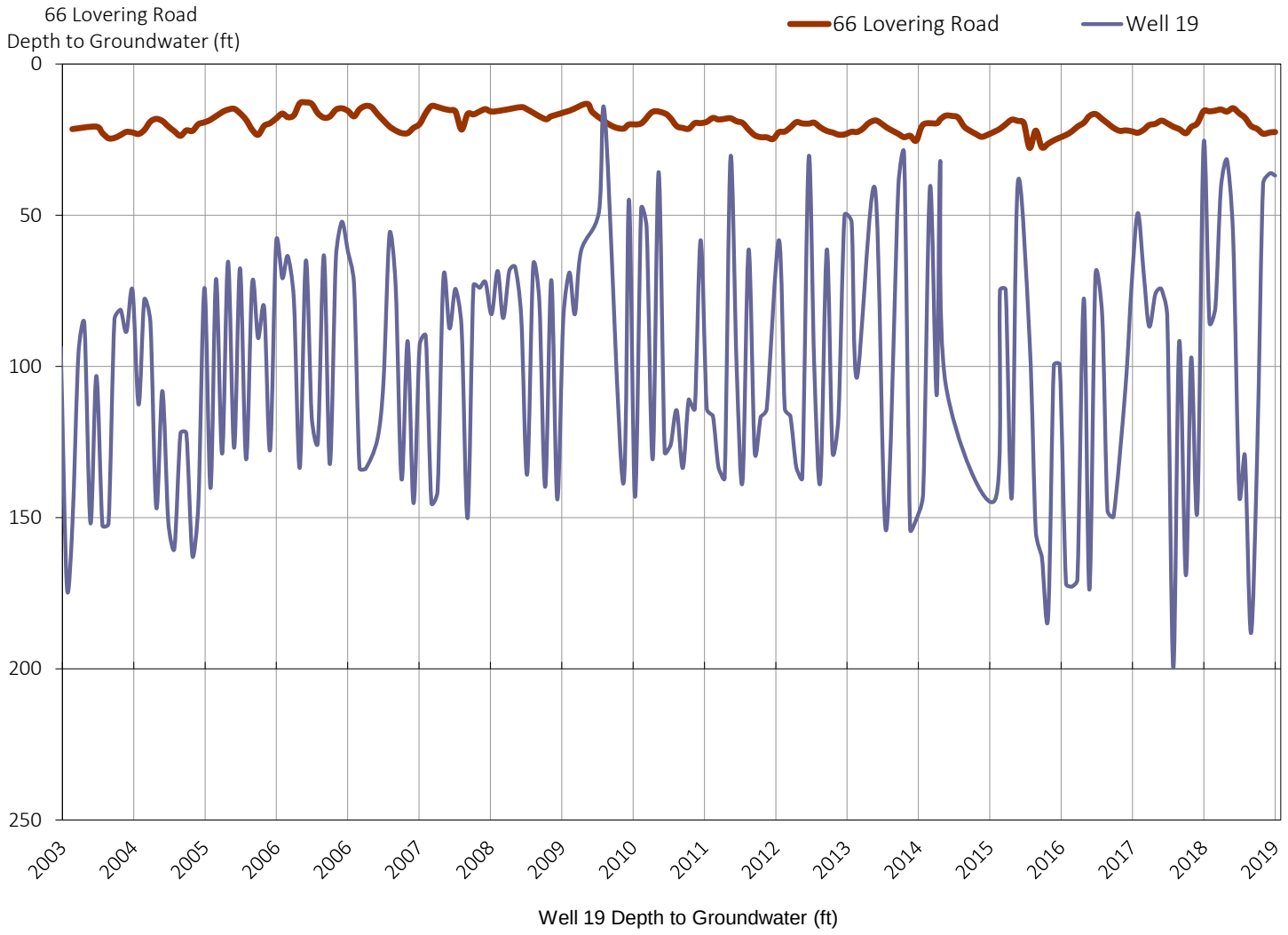


Figure 16 - 66 Lovering Road Water Levels vs. Well 19

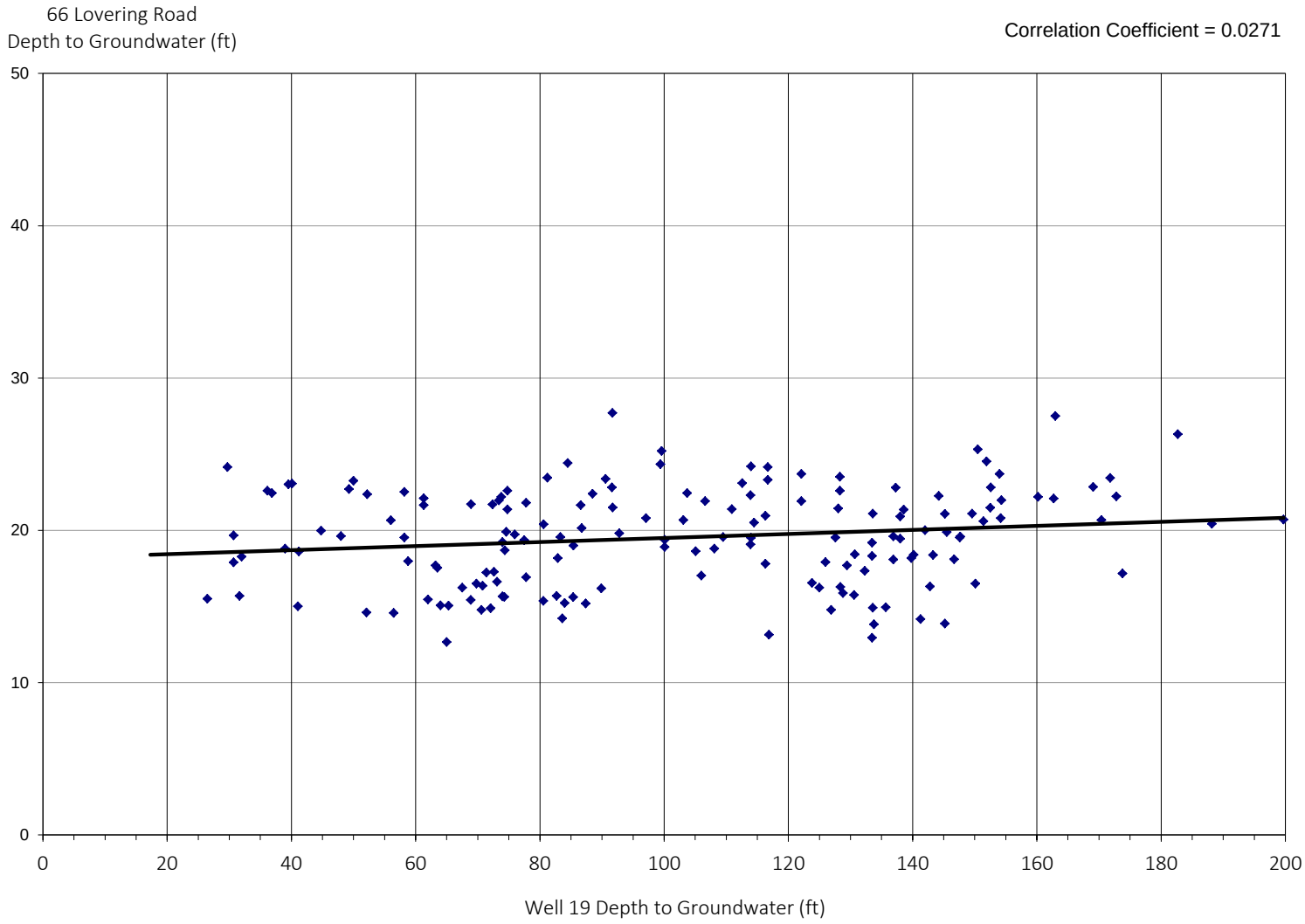


Figure 17 - 66 Lovering Road Well - Correlation of Water Levels vs. Well 19

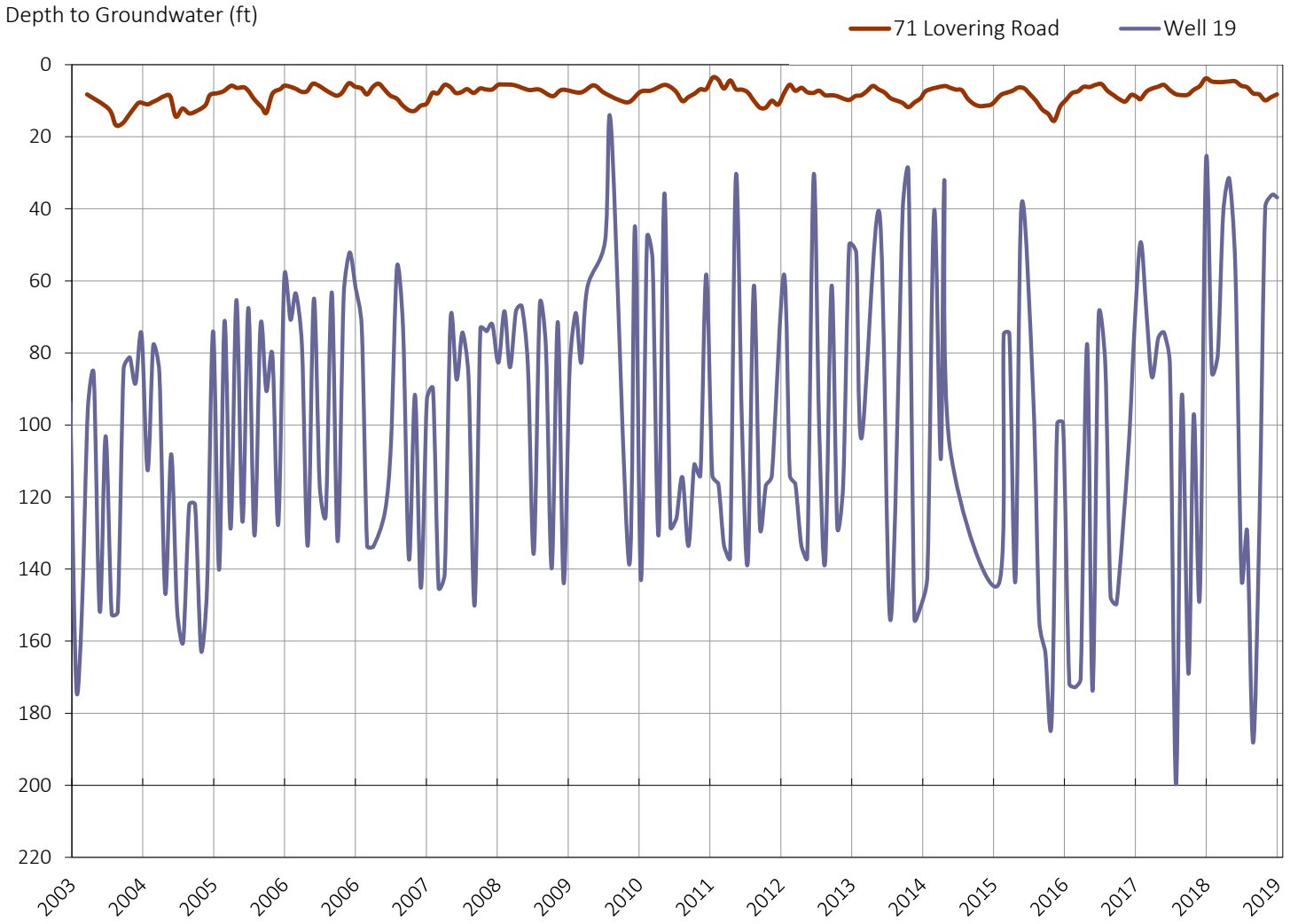


Figure 18 - 71 Lovering Road Water Levels vs. Well 19

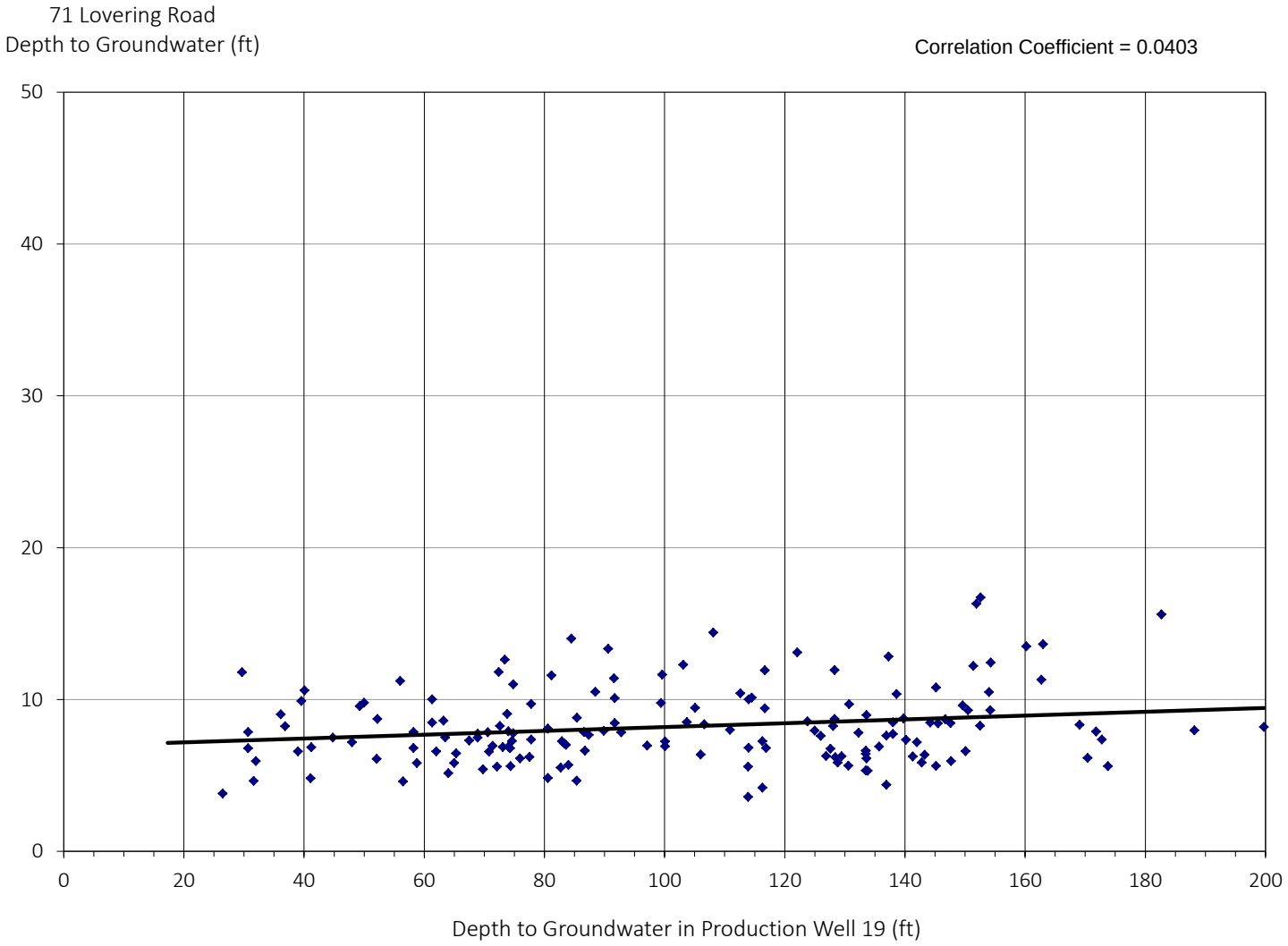


Figure 19 - 71 Lovering Road Well - Correlation of Water Levels vs. Well 19

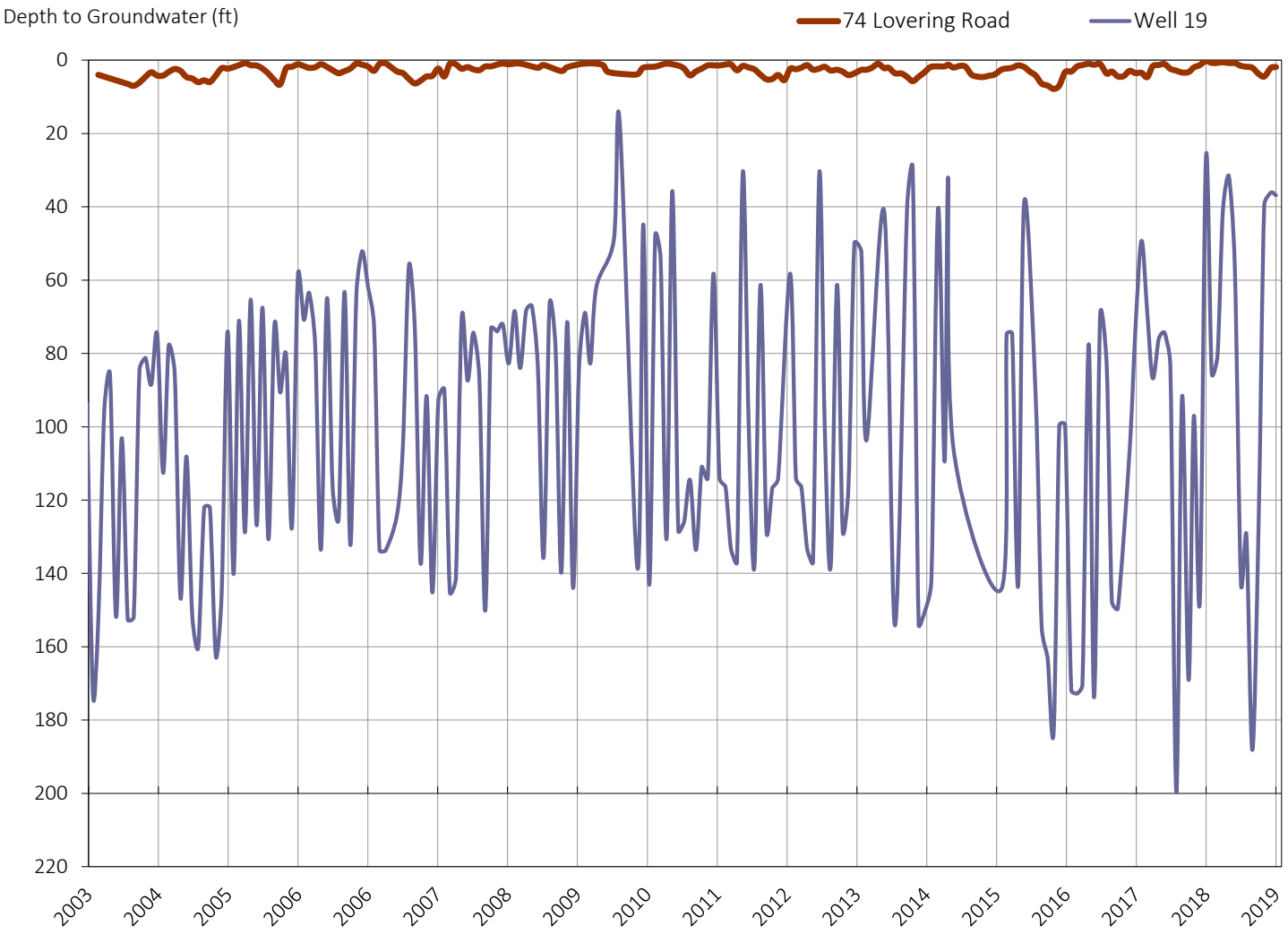


Figure 20 - 74 Lovering Road Water Levels vs. Well 19

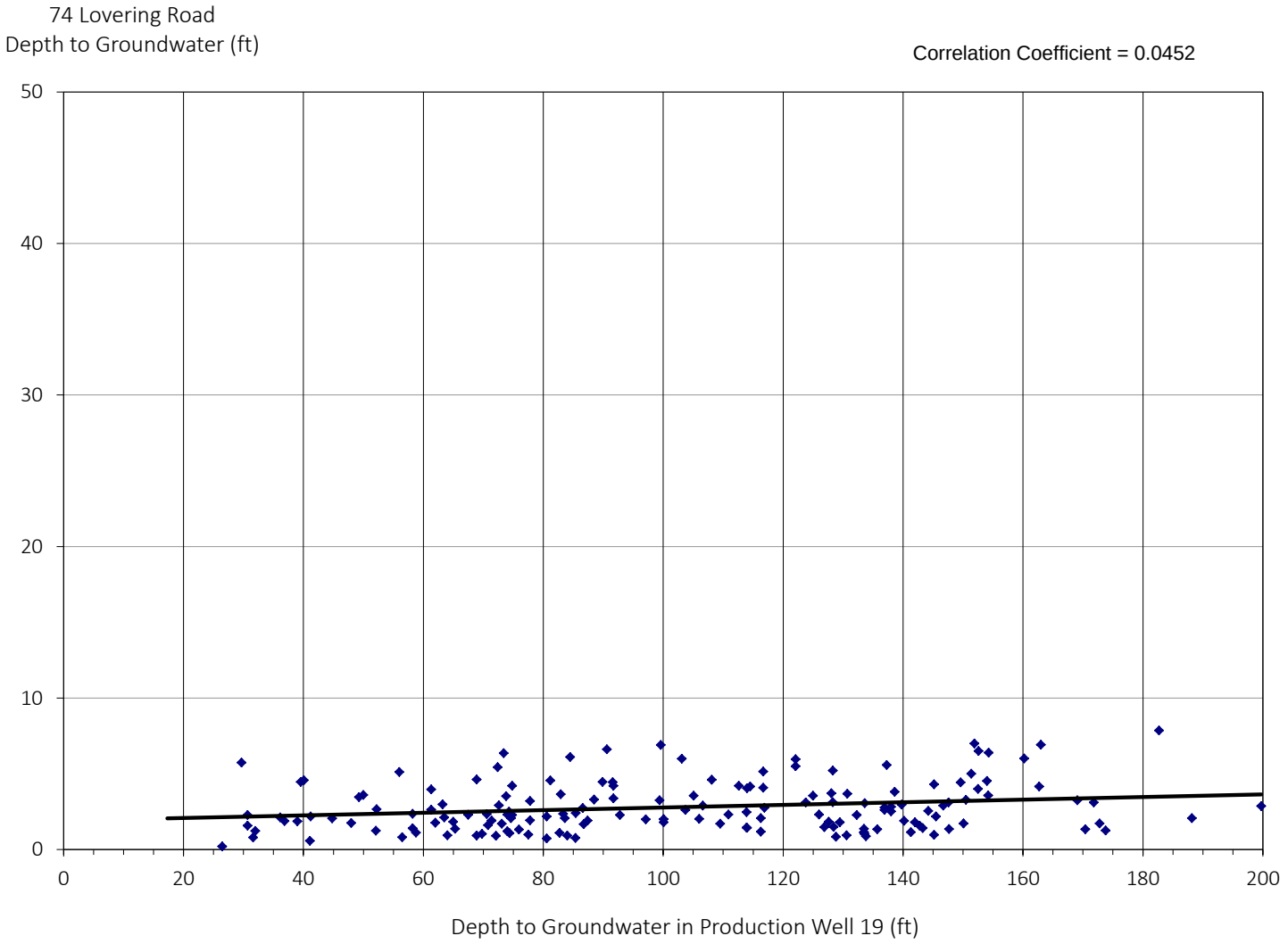


Figure 21 - 74 Lovering Road Well - Correlation of Water Levels vs. Well 19

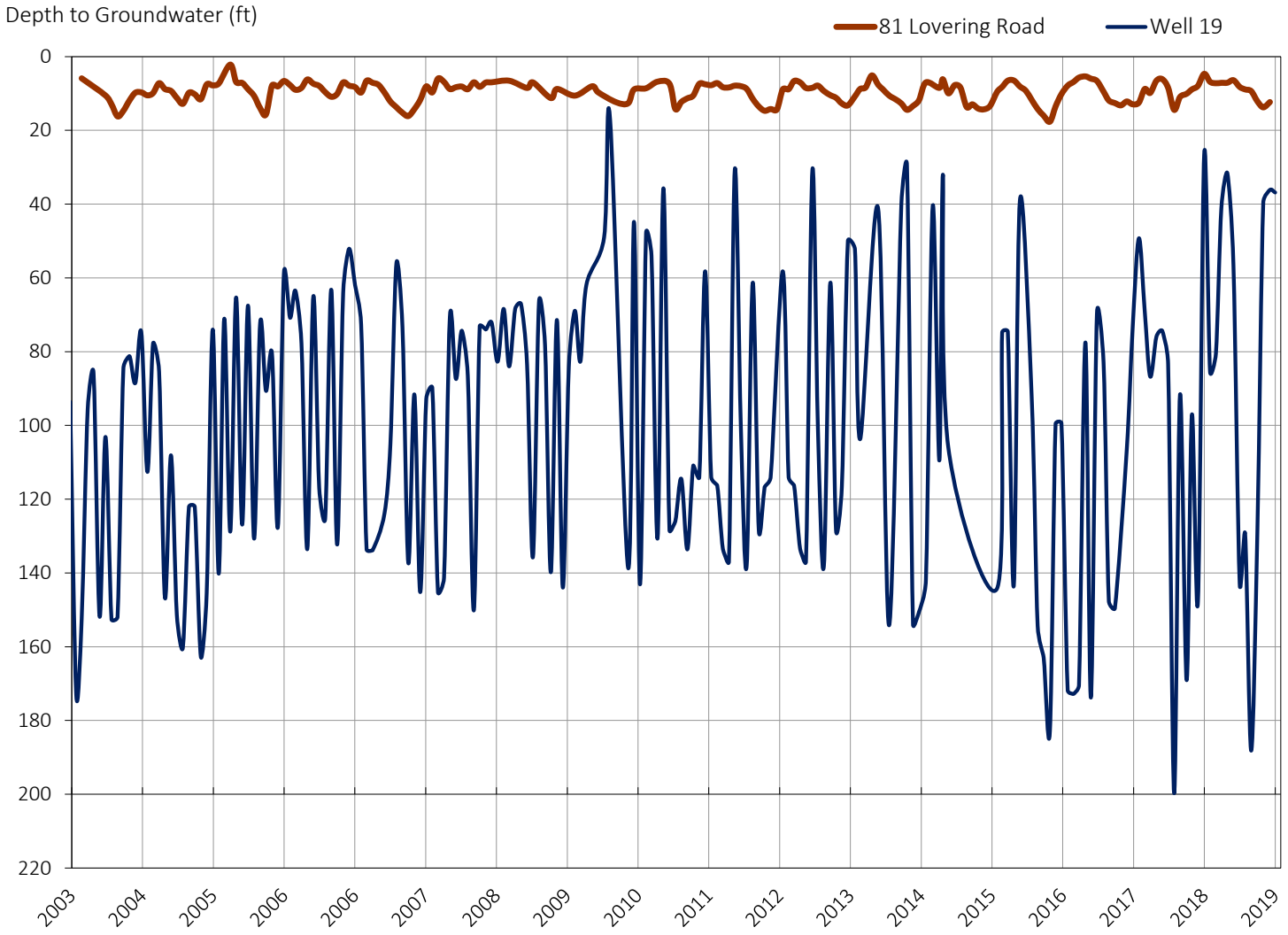


Figure 22 - 81 Lovering Road Water Levels vs. Well 19

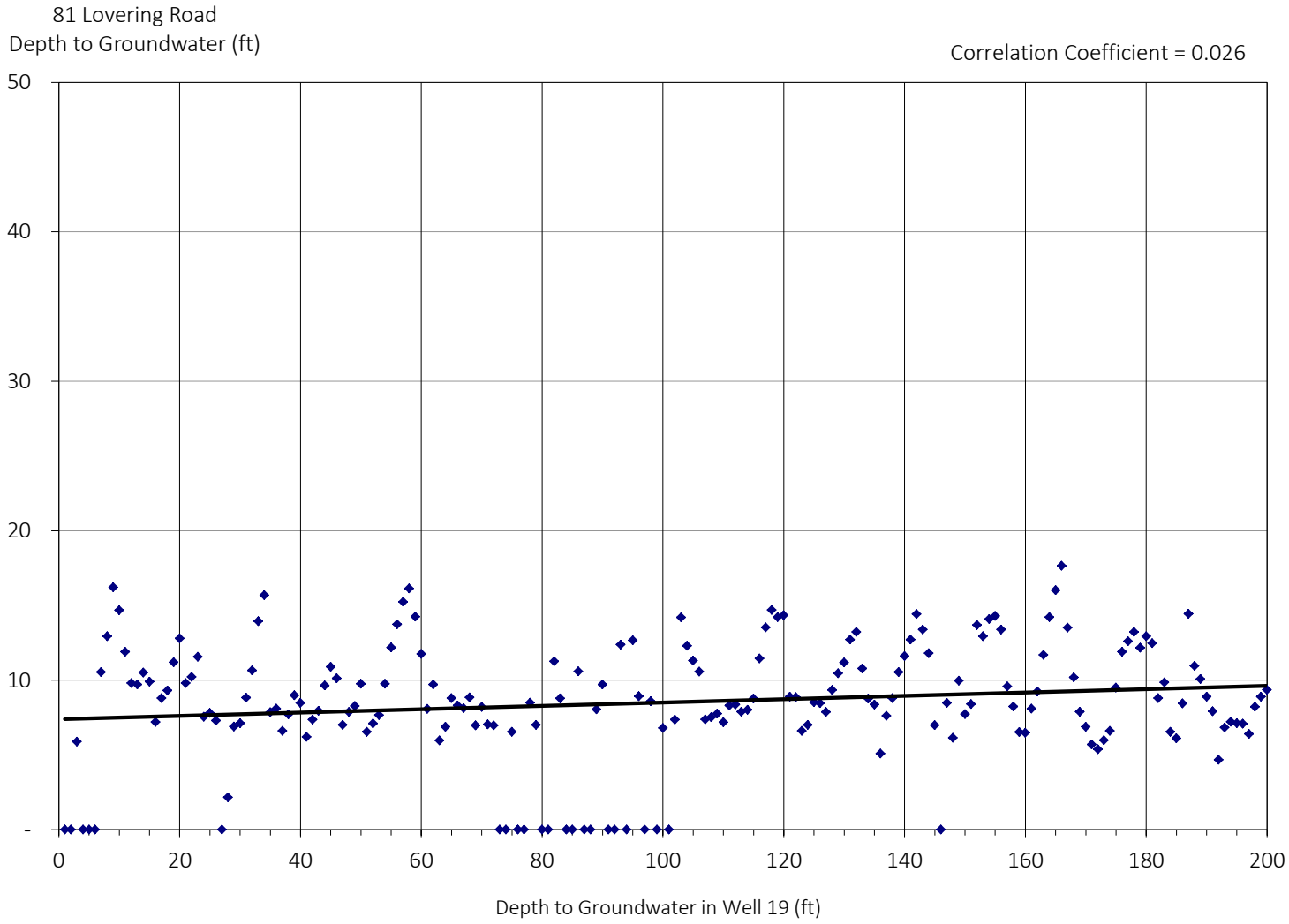


Figure 23 - 81 Lovering Road Well - Correlation of Water Levels vs. Well 19

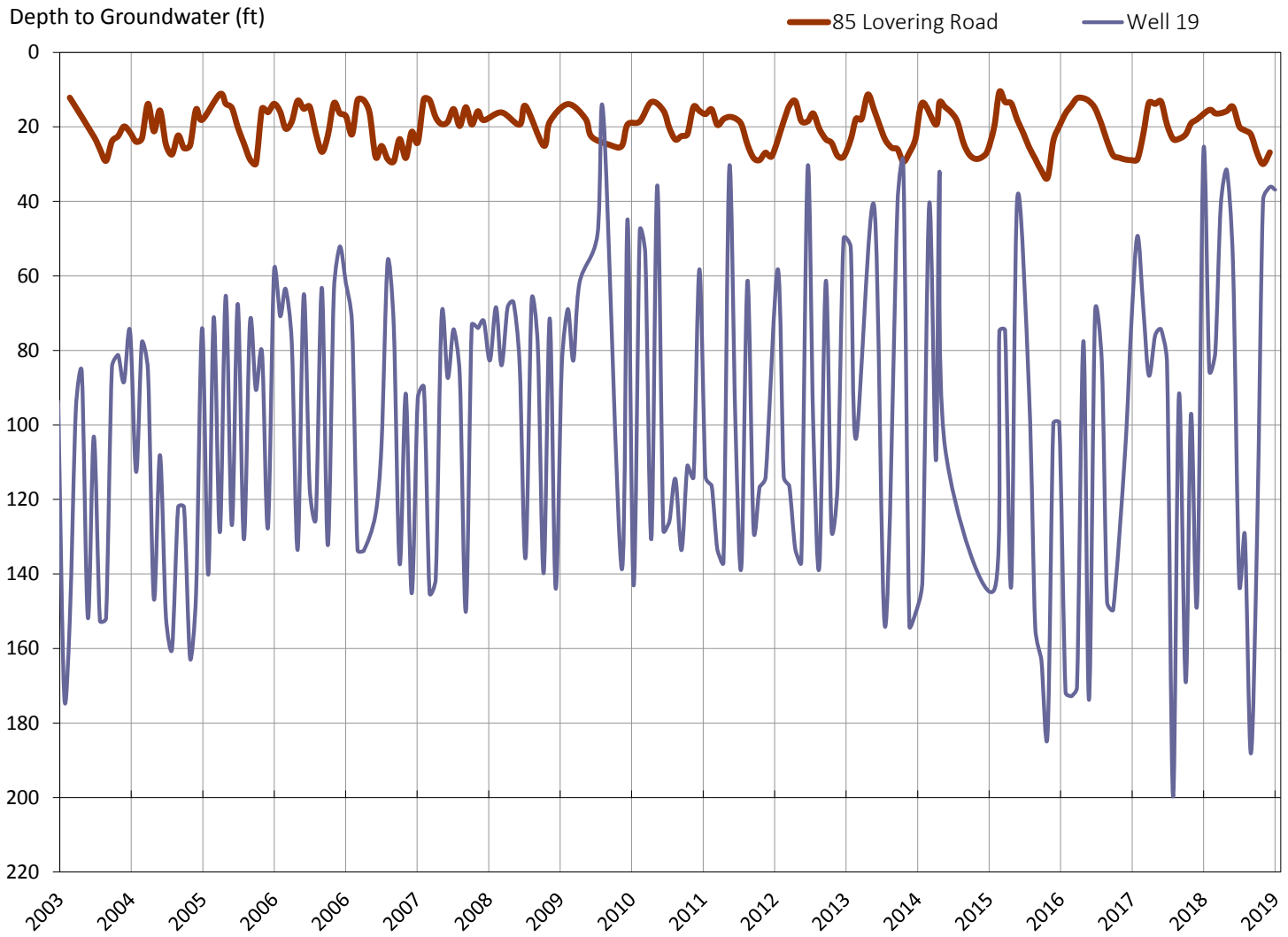


Figure 24 - 85 Lovering Road Water Levels vs. Well 19

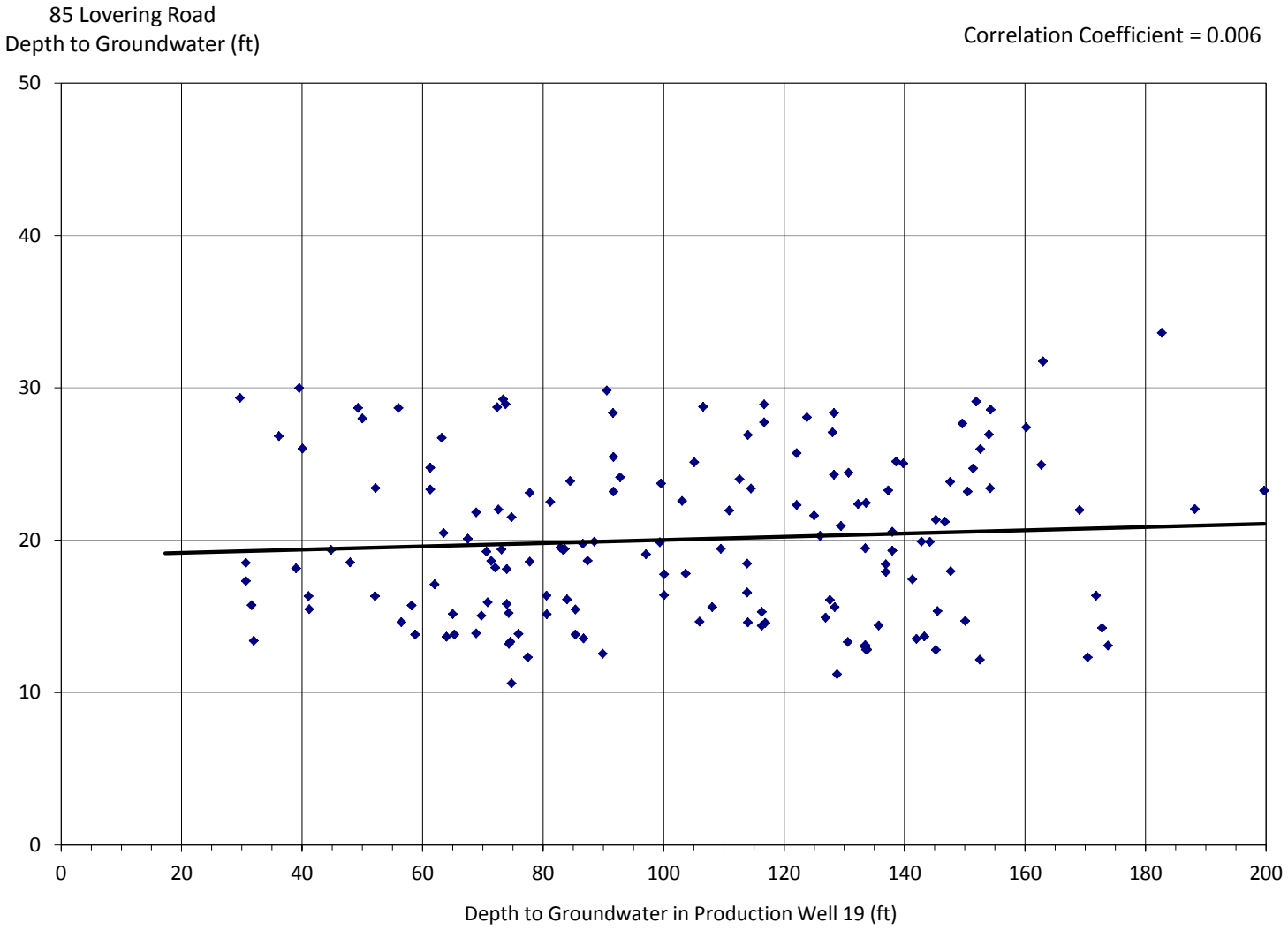


Figure 25 - 85 Lovering Road Well - Correlation of Water Levels vs. Well 19

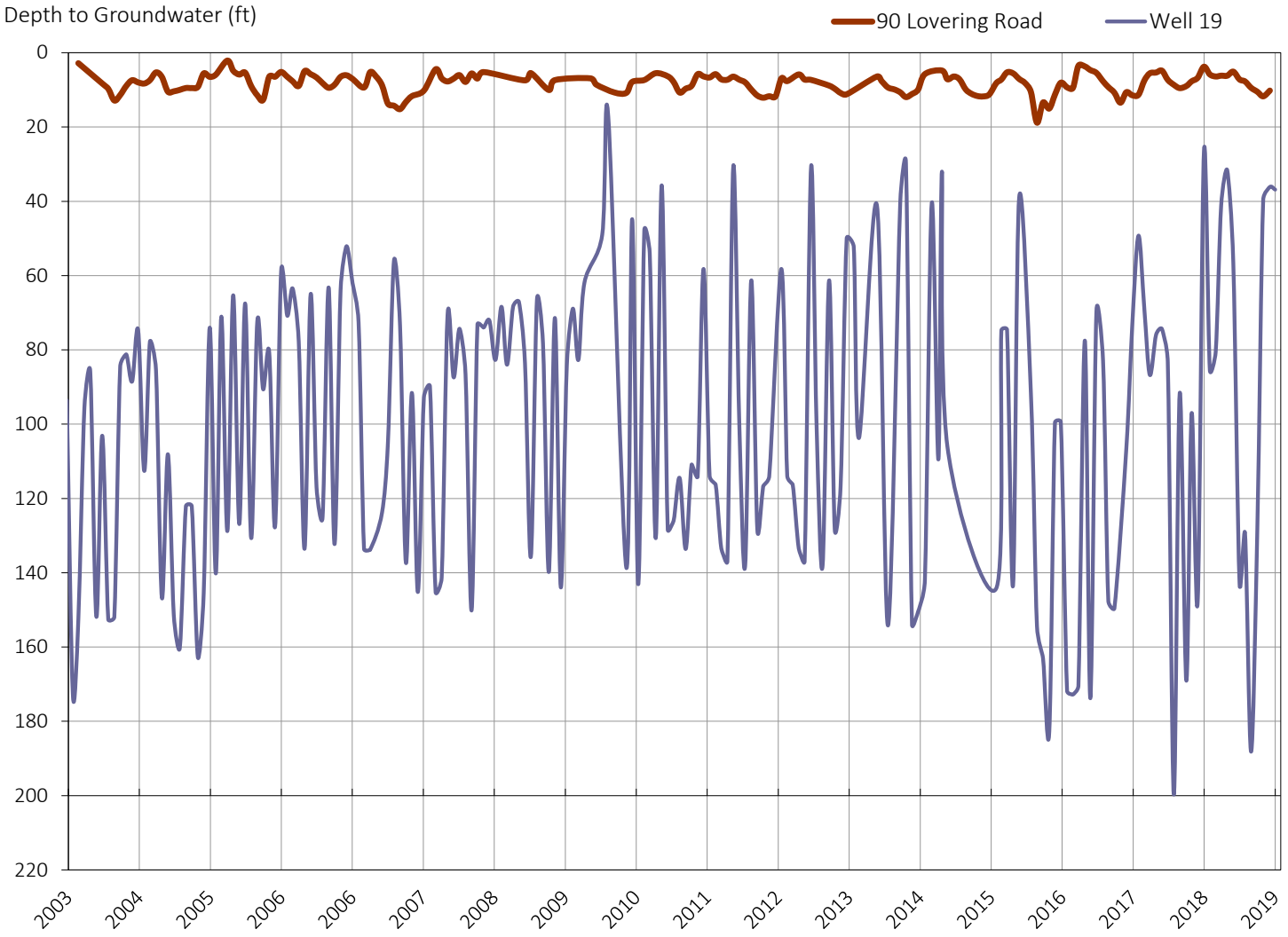


Figure 26 - 90 Lovering Road Water Levels vs. Well 19

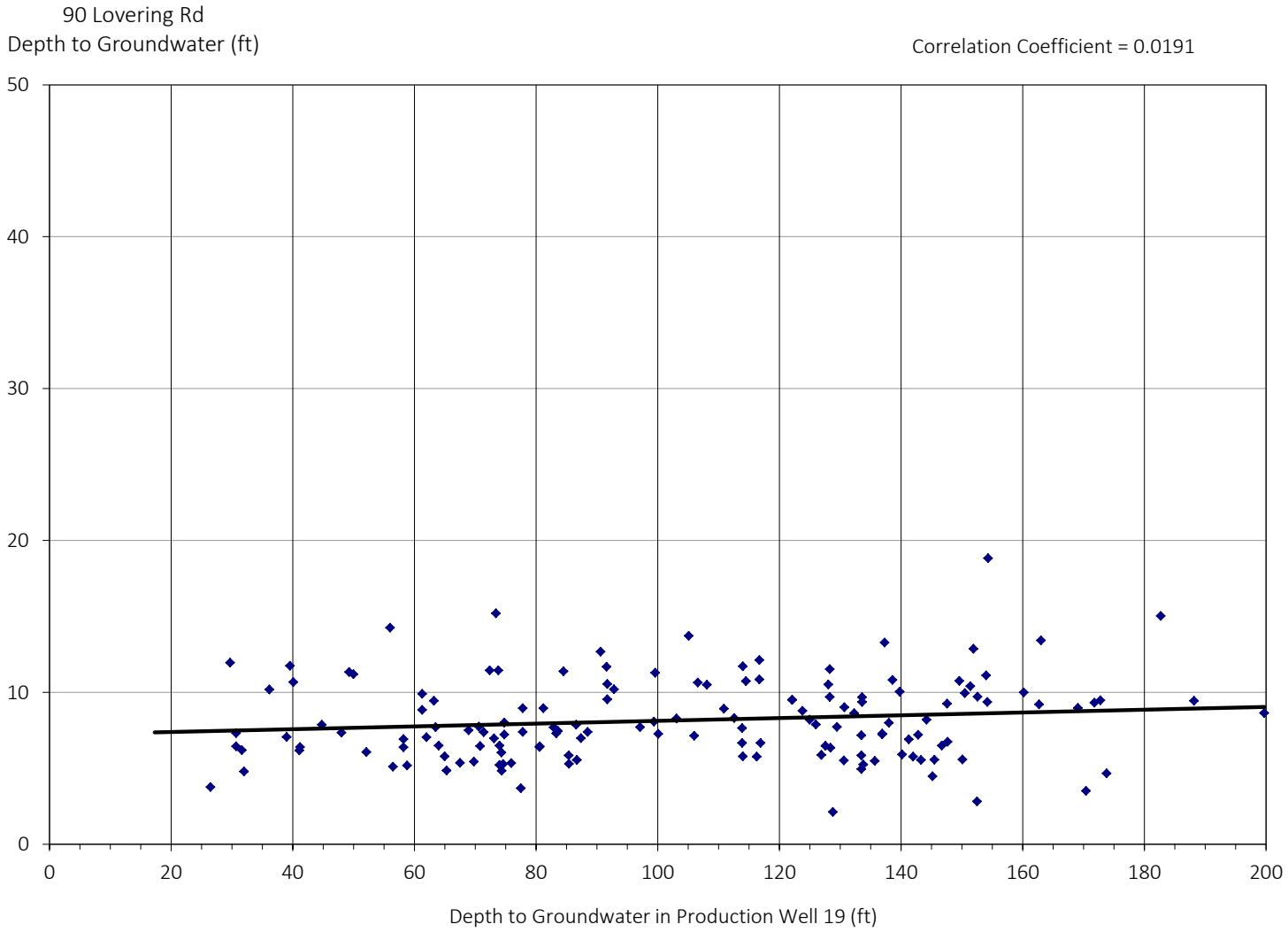


Figure 27 - 90 Lovering Road Well - Correlation of Water Levels vs. Well 19

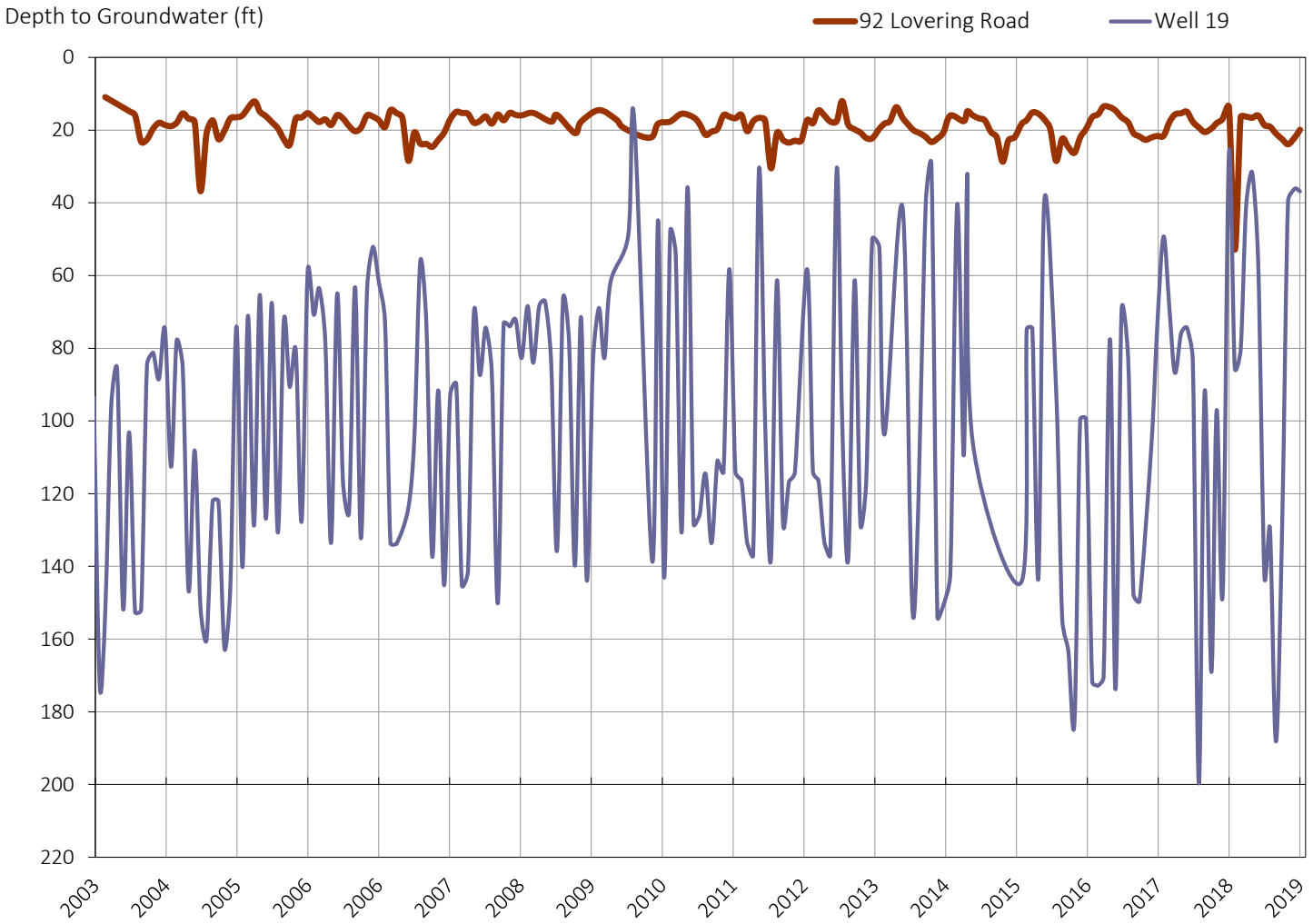


Figure 28 - 92 Lovering Road Water Levels vs. Well 19

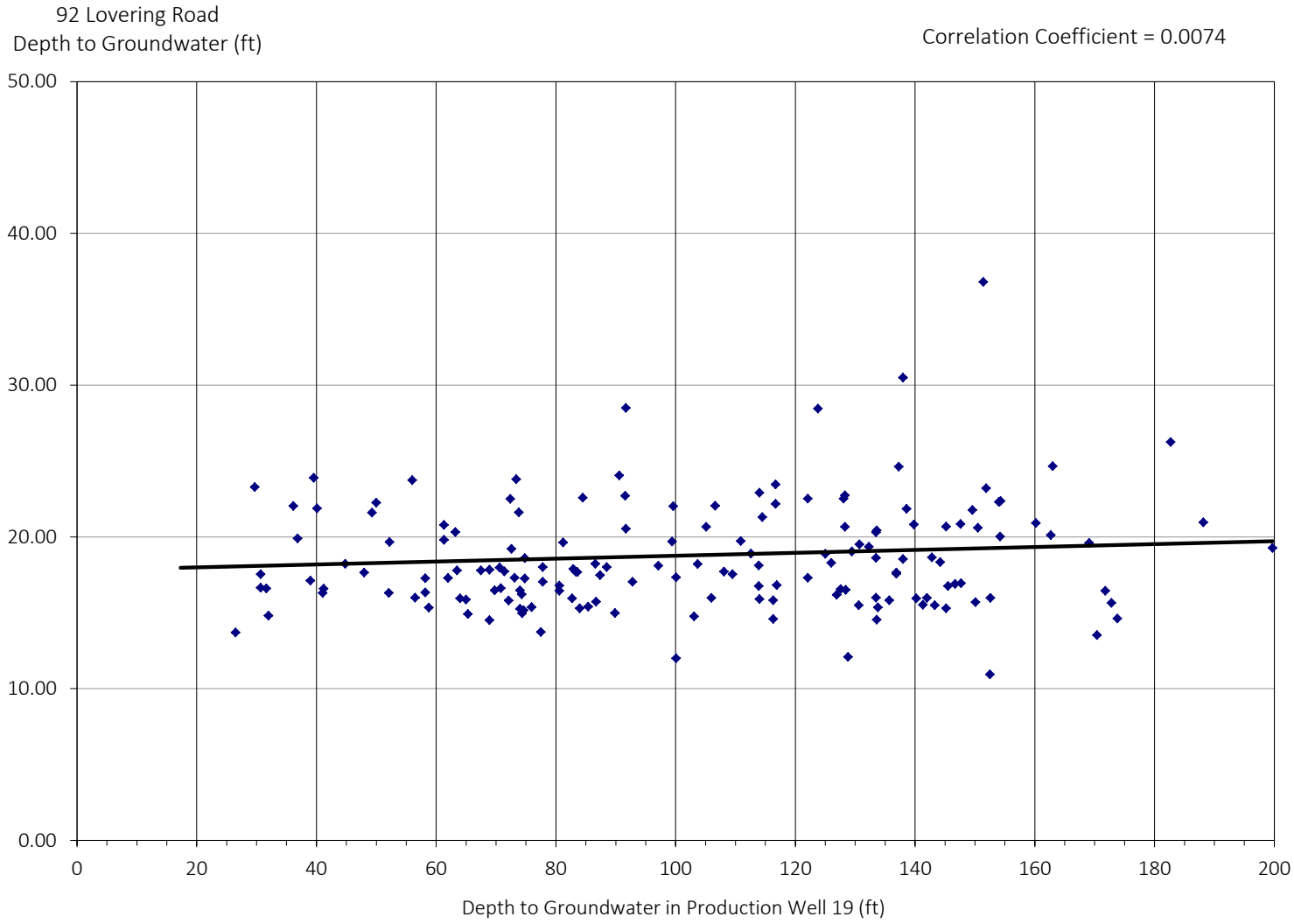


Figure 29 - 92 Lovering Road Well - Correlation of Water Levels vs. Well 19

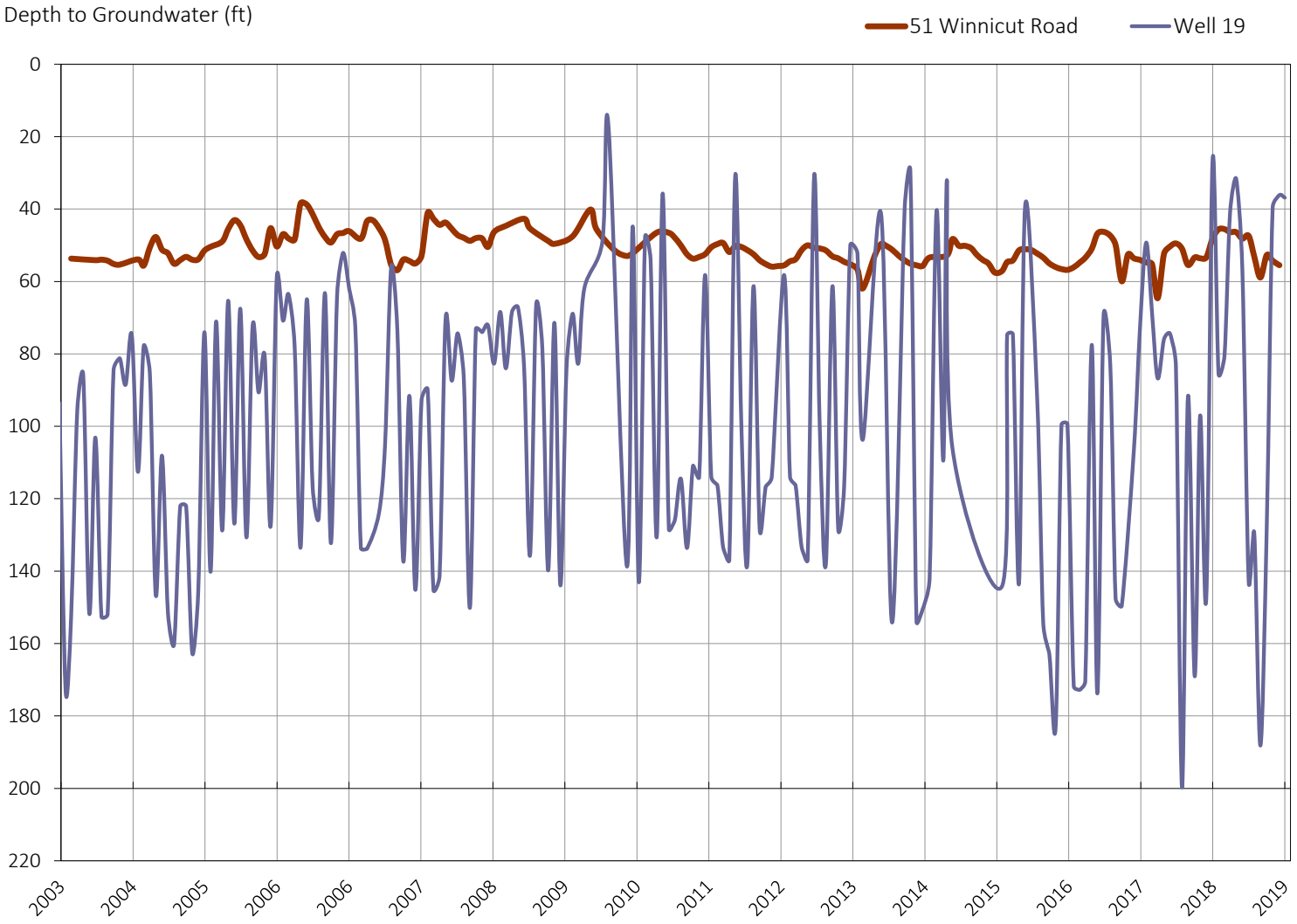


Figure 30 - 51 Winnicut Road Water Levels vs. Well 19

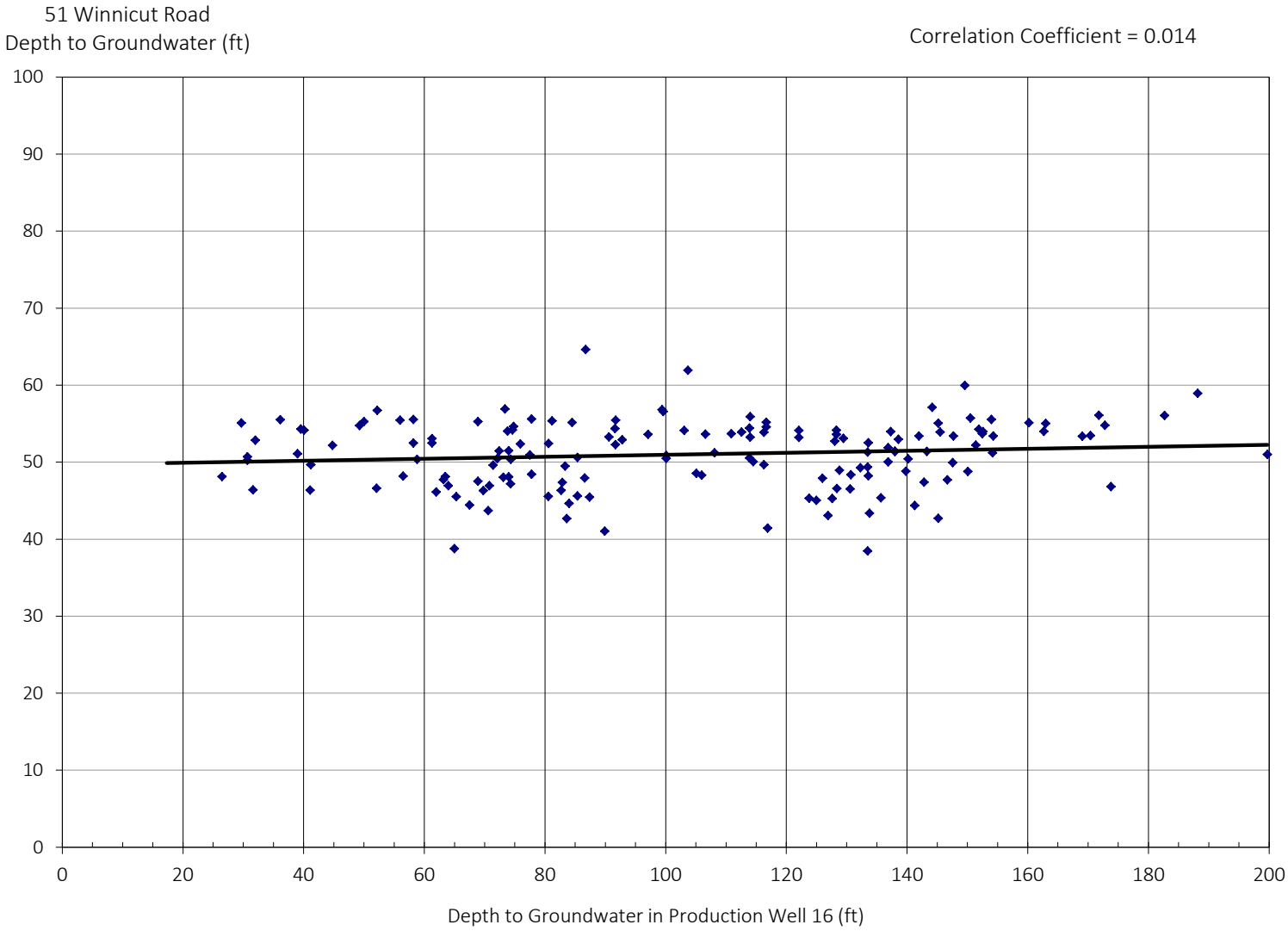


Figure 31 - 51 Winnicut Road Well - Correlation of Water Levels vs. Well 19

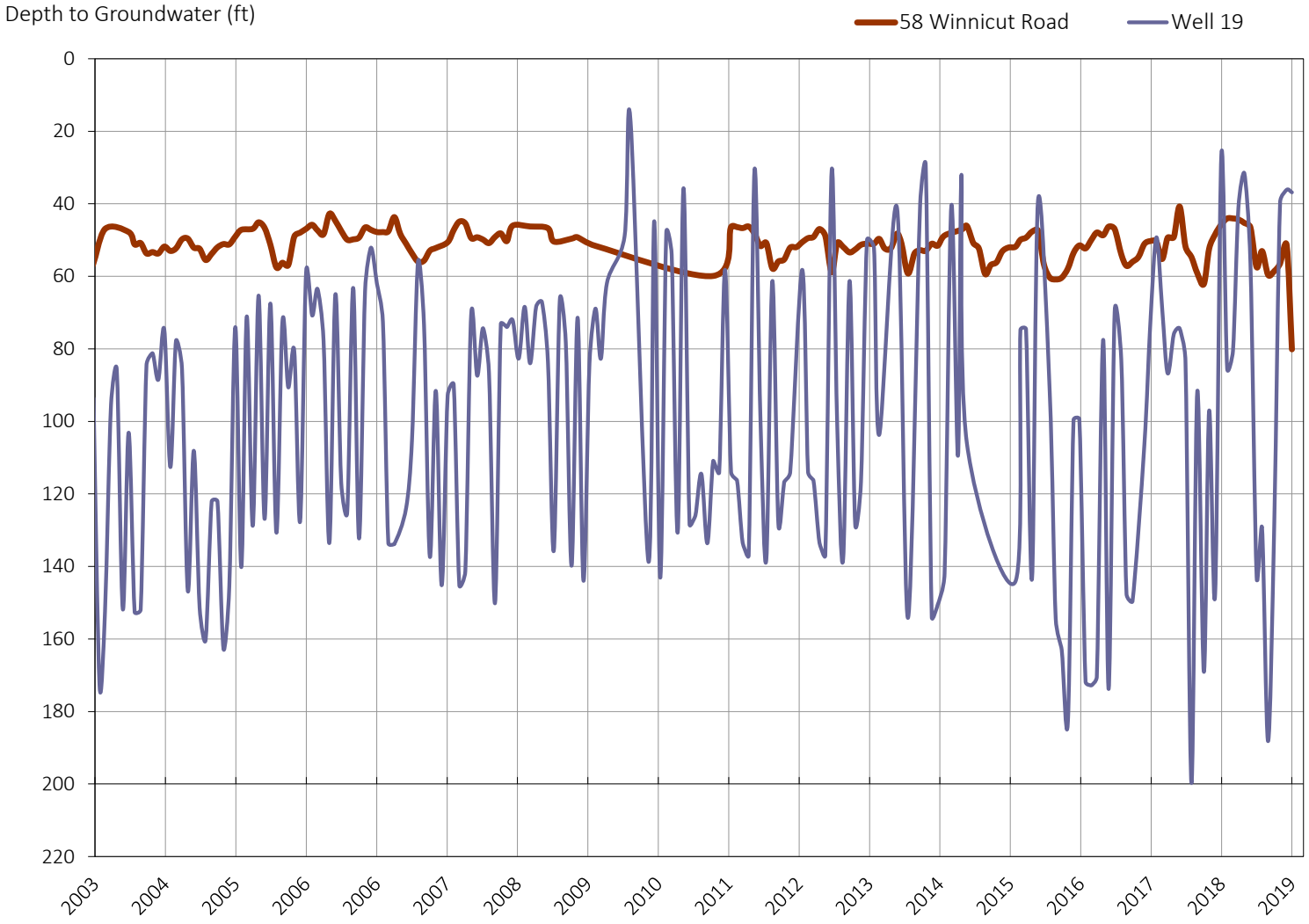


Figure 32- 58 Winnicut Road Water Levels vs. Well 19

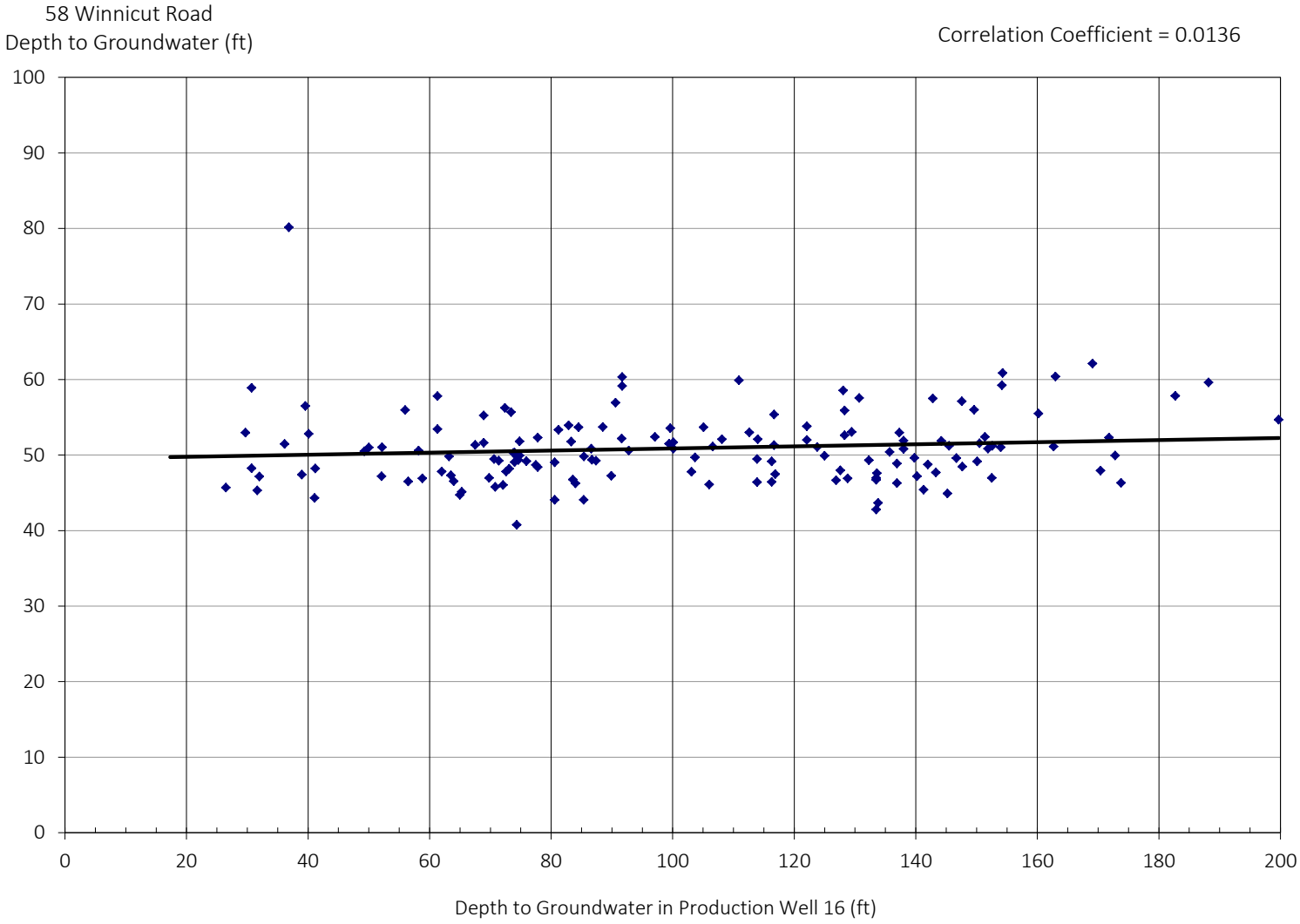


Figure 33 - 58 Winnicut Road Well - Correlation of Water Levels vs. Well 19

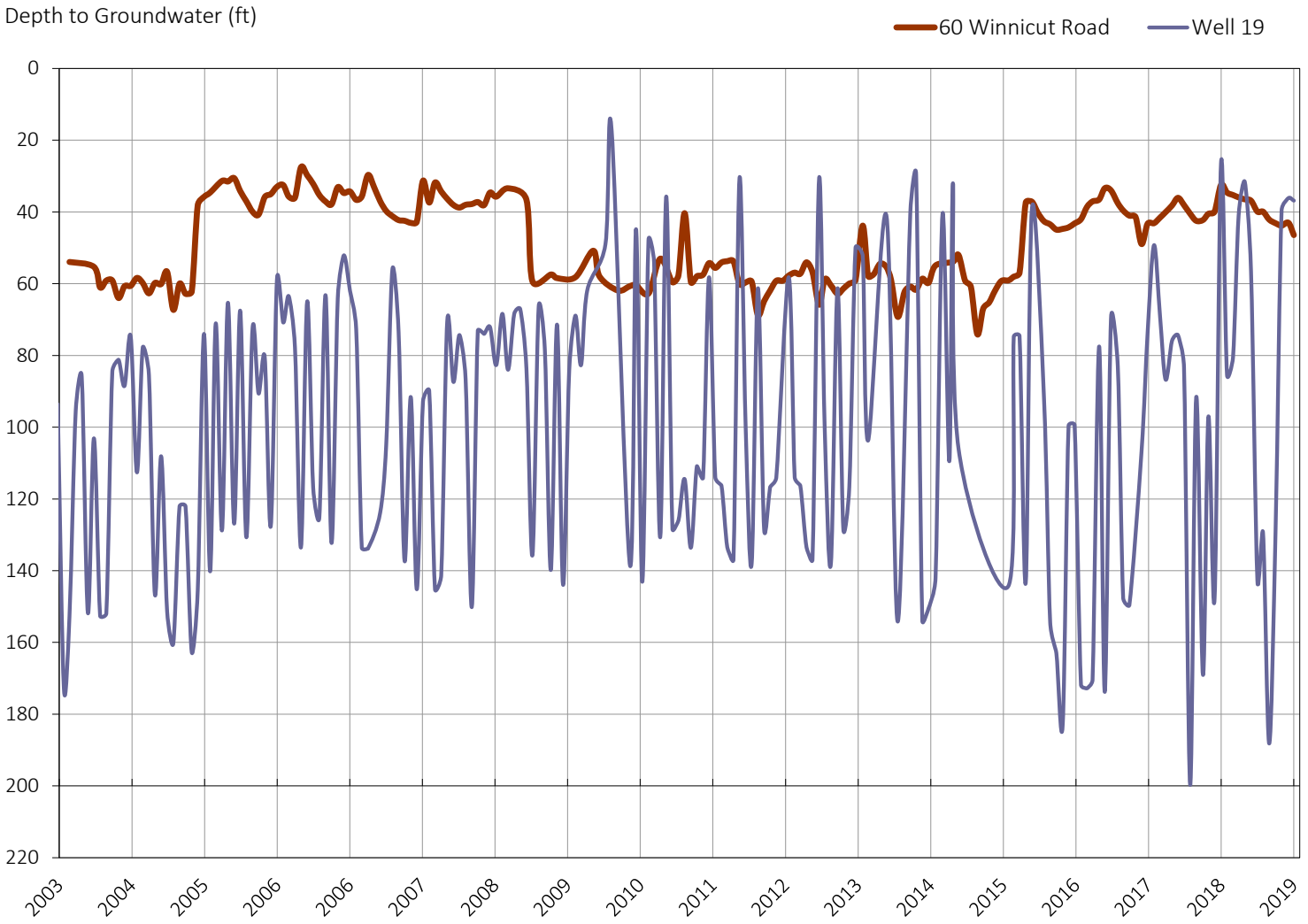


Figure 34 - 60 Winnicut Road Water Levels vs. Well 19

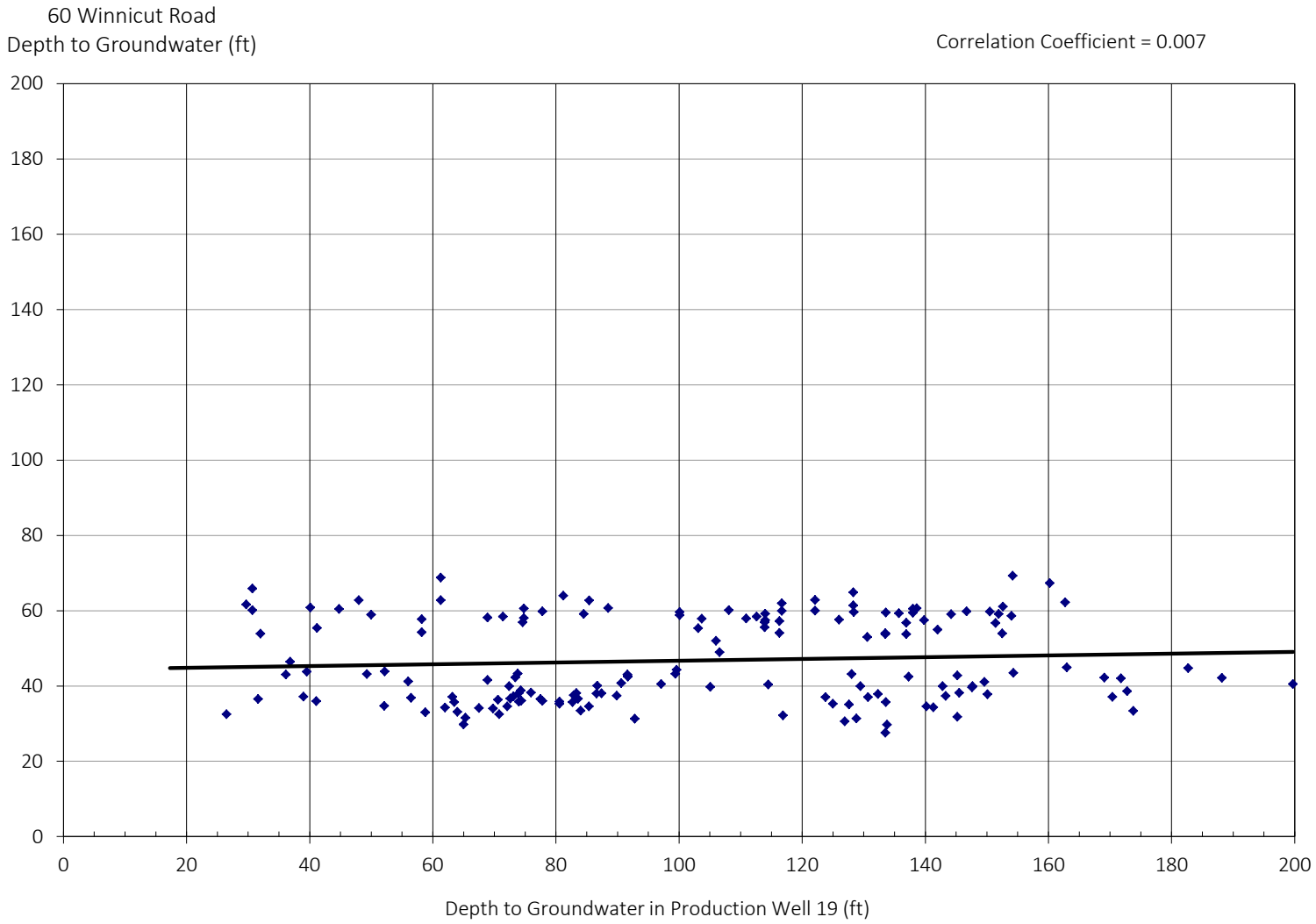


Figure 35 - 60 Winnicut Road Well - Correlation of Water Levels vs. Well 19

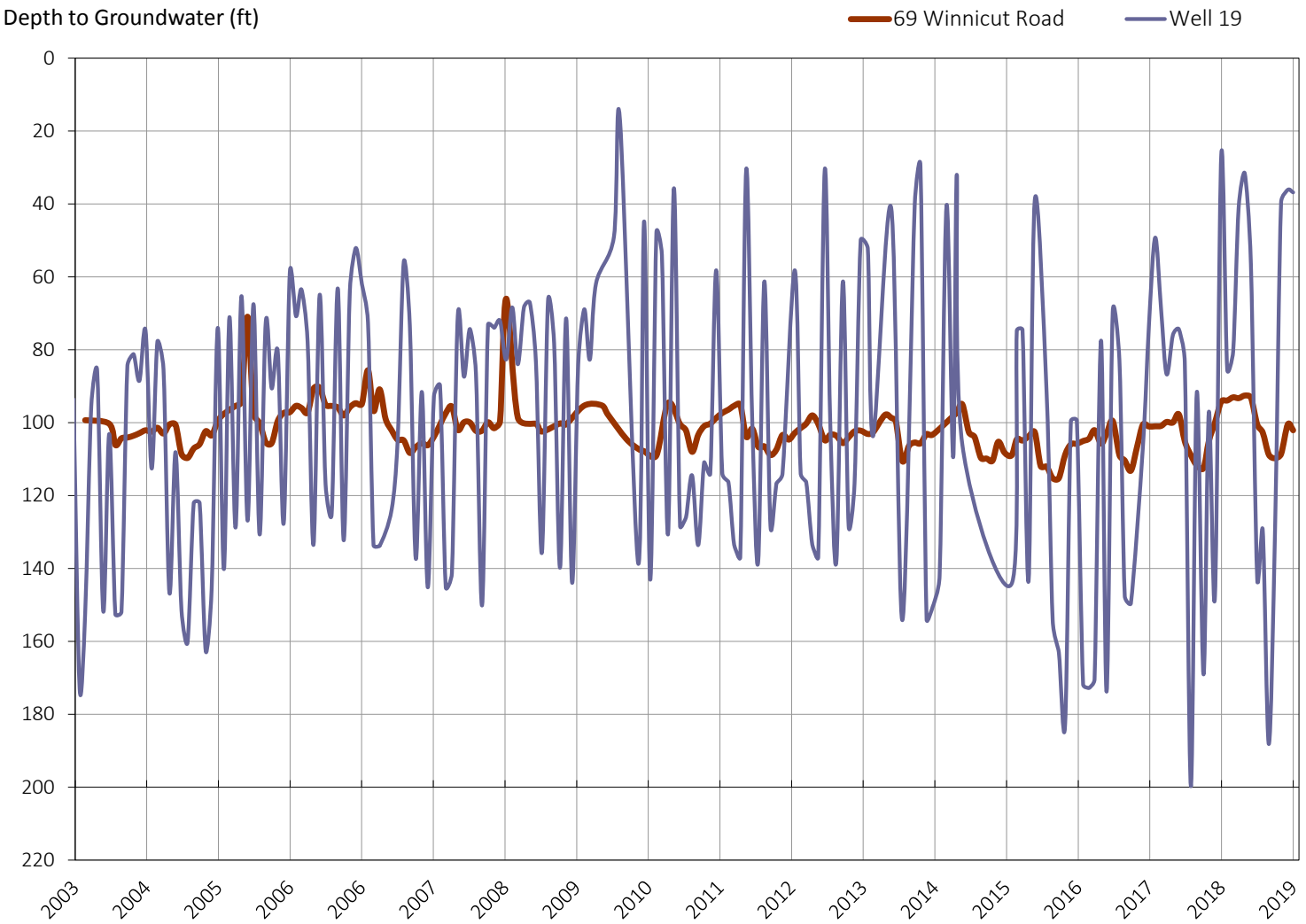


Figure 36 - 69 Winnicut Road Water Levels vs. Well 19

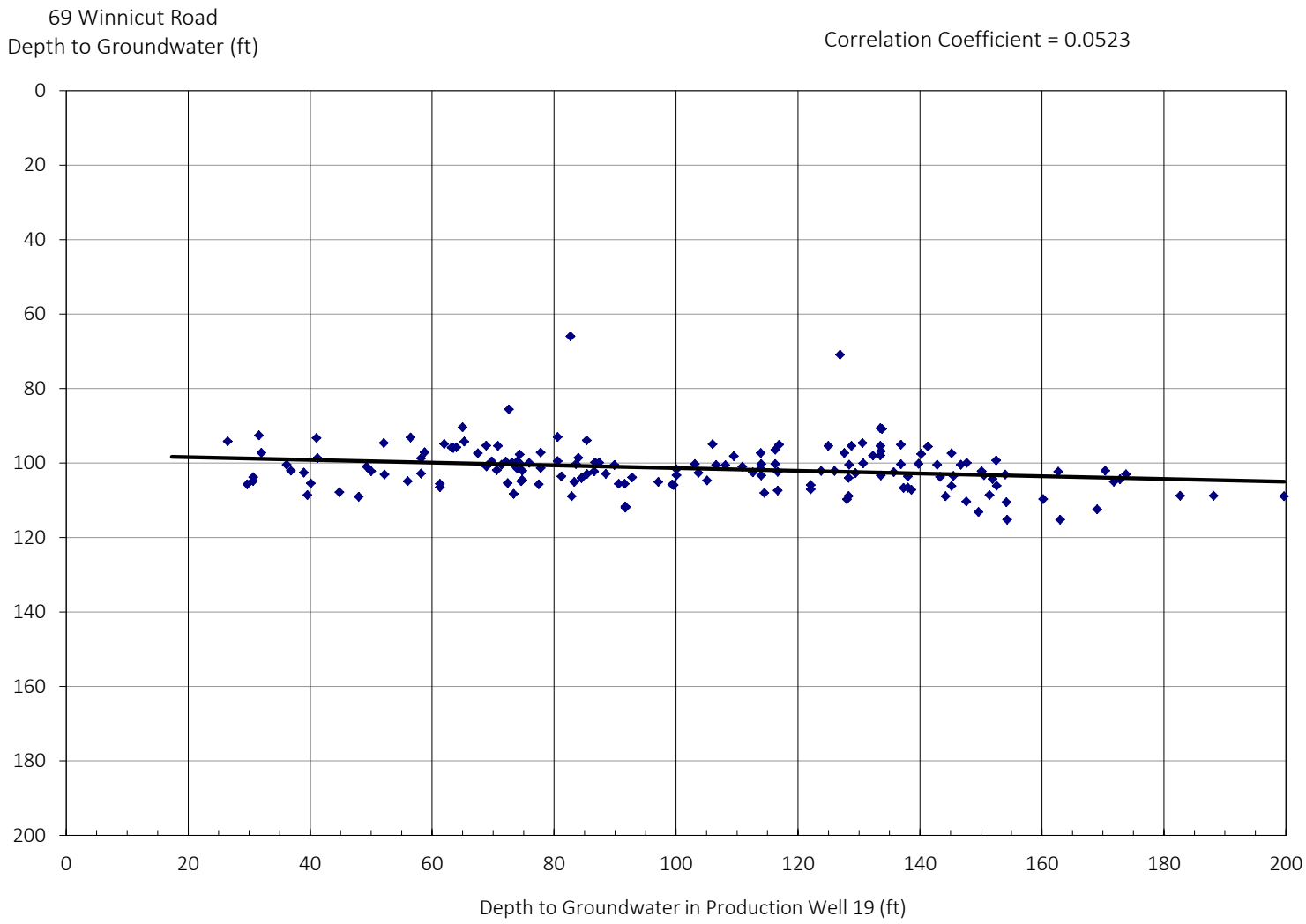


Figure 37 - 69 Winnicut Road Well - Correlation of Water Levels vs. Well 19

Date	Well 16 (ft)	2 Barker Ln (ft)	12 High St (ft)	177 Winnicutt Road (ft)	188 Winnicutt Road (ft)	190 Winnicutt Road (ft)
7/10/1997	9.80	No measurement	14.84	33.23	46.72	47.80
8/25/1997	26.34	13.23	16.49	36.71	47.95	49.23
9/22/1997	29.02	15.22	17.02	38.59	46.47	50.50
10/27/1997	16.08	16.25	17.84	39.48	41.20	61.61
11/24/1997	12.61	16.57	15.97	35.97	48.87	52.00
12/22/1997	23.44	16.62	15.49	36.55	50.55	49.49
1/26/1998	24.64	15.08	13.62	36.34	49.44	49.08
2/23/1998	21.19	13.89	10.95	35.98	46.08	46.76
3/23/1998	21.60	12.53	8.91	34.38	45.64	47.59
4/27/1998	22.92	12.04	11.22	34.84	45.55	46.00
5/25/1998	22.83	12.01	11.12	33.96	47.93	47.66
6/22/1998	21.75	12.19	9.69	34.71	45.45	46.21
7/27/1998	26.84	12.35	12.52	36.68	47.44	46.94
8/24/1998	30.53	12.91	14.11	39.35	46.62	48.42
9/28/1998	13.83	14.08	15.83	37.98	46.99	59.84
10/26/1998	24.86	14.63	14.71	36.58	46.88	50.48
11/23/1998	29.32	14.67	15.63	38.55	47.40	50.84
12/28/1998	31.39	14.73	16.22	40.99	48.31	51.82
1/25/1999	28.98	14.75	13.68	39.15	47.37	50.70
2/22/1999	30.34	13.37	12.73	38.92	51.50	53.85
3/22/1999	30.62	14.48	11.51	39.81	57.37	61.32
4/26/1999	12.61	13.31	12.61	36.66	No measurement	65.18
5/24/1999	18.58	13.40	13.25	35.56	No measurement	70.69
6/28/1999	No measurement	14.27	15.15	36.60	60.48	74.82
7/26/1999	No measurement	14.97	16.52	38.97	63.05	73.97
8/23/1999	42.29	15.81	17.54	41.32	67.00	82.57
9/27/1999	39.25	16.32	15.86	42.28	63.40	72.81

Date	Well 16 (ft)	2 Barker Ln (ft)	12 High St (ft)	177 Winnicutt Road (ft)	188 Winnicutt Road (ft)	190 Winnicutt Road (ft)
10/18/1999	38.51	16.32	16.39	40.46	59.97	70.65
11/15/1999	39.36	15.87	15.67	41.00	59.22	70.87
12/20/1999	37.90	15.54	15.33	40.27	59.23	70.27
1/17/2000	39.85	15.33	14.89	40.30	64.52	78.57
2/15/2000	44.02	14.96	15.17	41.52	61.25	73.59
3/20/2000	42.60	14.51	12.21	40.79	58.55	69.61
4/17/2000	No measurement	15.22	12.08	41.97	64.92	83.75
5/19/2000	No measurement	12.67	10.43	40.93	62.81	78.65
6/19/2000	34.25	12.90	12.22	37.61	61.25	74.43
7/17/2000	No measurement	13.92	14.00	38.87	62.18	75.78
8/21/2000	35.48	14.58	14.58	39.17	61.70	74.67
9/18/2000	41.04	14.25	15.54	41.99	60.23	79.00
10/16/2000	40.00	14.42	16.65	40.46	60.13	77.10
11/21/2000	29.37	14.74	15.19	39.12	57.88	66.92
12/18/2000	30.20	13.67	14.42	37.57	56.69	64.35
1/15/2001	27.76	13.11	14.44	37.15	64.45	79.00
2/27/2001	27.00	13.66	14.83	38.45	55.82	62.32
3/12/2001	25.10	13.70	14.87	37.72	56.38	65.38
4/23/2001	No measurement	11.79	7.59	33.88	53.56	63.25
5/29/2001	33.00	14.01	12.97	38.40	57.98	73.14
6/25/2001	35.77	16.37	13.22	37.79	58.94	76.14
7/1/2001	No measurement	No measurement	No measurement	40.25	No measurement	No measurement
8/22/2001	39.70	14.60	16.64	42.71	66.36	77.64
9/19/2001	43.33	15.30	18.09	42.98	122.60	76.55
10/29/2001	40.54	16.45	19.10	43.75	71.23	74.16
11/26/2001	41.60	16.97	19.46	44.62	63.48	70.81
12/27/2001	No measurement	16.10	19.00	42.70	63.13	75.62

Date	Well 16 (ft)	2 Barker Ln (ft)	12 High St (ft)	177 Winnicutt Road (ft)	188 Winnicutt Road (ft)	190 Winnicutt Road (ft)
1/29/2002	43.82	17.93	18.55	43.29	61.11	71.82
2/26/2002	42.12	17.09	17.33	42.35	61.95	72.54
3/27/2002	41.91	16.35	16.16	41.56	59.15	68.19
4/22/2002	41.38	17.59	15.07	40.53	59.00	67.95
5/28/2002	36.10	16.72	13.12	39.08	59.61	77.39
6/1/2002	No measurement	No measurement	No measurement	39.98	No measurement	No measurement
7/30/2002	44.24	14.42	15.28	40.87	63.23	78.74
8/28/2002	No measurement	No measurement	No measurement	41.40	No measurement	No measurement
9/1/2002	No measurement	17.09	17.59	41.93	64.45	80.34
10/9/2002	46.74	15.86	18.44	42.21	62.53	76.05
11/1/2002	No measurement	No measurement	No measurement	38.98	No measurement	No measurement
12/17/2002	32.65	15.72	14.33	38.98	61.07	74.83
1/1/2003	35.90	No measurement	No measurement	38.98	No measurement	No measurement
2/1/2003	33.80	No measurement	No measurement	38.98	No measurement	No measurement
3/28/2003	34.40	13.66	9.05	35.75	58.78	64.85
4/1/2003	31.70	No measurement	No measurement	36.88	No measurement	No measurement
5/1/2003	34.10	No measurement	No measurement	36.88	No measurement	No measurement
6/1/2003	34.30	13.66	9.05	35.75	58.78	64.85
7/17/2003	34.10	13.26	13.81	38.00	58.26	73.71
8/21/2003	36.70	14.51	15.40	39.47	56.96	74.88
9/25/2003	38.30	16.08	17.00	40.55	57.33	69.67
10/28/2003	39.60	15.38	16.90	40.42	55.32	64.82
11/30/2003	41.60	17.12	16.71	40.74	54.68	63.33
12/22/2003	43.30	15.30	18.80	39.50	54.10	63.00
1/31/2004	40.50	14.20	14.20	39.50	53.80	62.40
2/26/2004	37.40	14.10	15.50	41.00	53.90	62.00
3/24/2004	38.00	14.50	15.80	41.30	54.20	62.90

Date	Well 16 (ft)	2 Barker Ln (ft)	12 High St (ft)	177 Winnicutt Road (ft)	188 Winnicutt Road (ft)	190 Winnicutt Road (ft)
4/23/2004	39.80	13.80	10.00	37.20	54.00	64.10
5/26/2004	36.20	13.20	11.50	37.40	53.70	69.30
6/24/2004	21.90	16.50	12.40	36.90	55.60	67.30
7/28/2004	35.10	16.20	14.30	38.80	57.90	89.30
8/31/2004	37.26	14.30	15.70	39.70	57.90	91.50
9/30/2004	35.70	15.10	15.30	37.20	55.90	89.10
10/21/2004	37.80	14.62	15.55	39.42	58.50	98.15
11/22/2004	38.80	14.85	16.32	39.95	57.10	93.63
12/16/2004	41.75	14.49	13.49	38.44	53.85	93.83
1/25/2005	40.71	13.65	11.91	38.09	52.41	95.14
2/24/2005	38.90	12.60	11.35	38.29	52.40	97.03
3/1/2005	38.88	No measurement	No measurement	No measurement	No measurement	No measurement
4/4/2005	38.30	12.34	7.12	35.69	50.53	99.44
5/4/2005	38.20	11.75	9.41	39.97	49.60	94.88
6/8/2005	37.88	10.38	9.35	35.52	50.14	93.71
7/1/2005	38.79	11.60	11.91	37.09	51.15	98.73
8/1/2005	42.11	12.39	14.08	39.02	54.20	108.92
9/7/2005	44.60	14.13	16.61	42.10	53.38	105.15
10/1/2005	28.73	14.96	17.56	41.03	54.15	106.41
11/1/2005	37.68	14.45	12.40	37.11	50.78	94.65
12/12/2005	38.40	13.12	11.83	37.93	50.05	92.51
1/4/2006	37.60	12.72	9.85	36.76	86.61	59.62
2/23/2006	39.23	11.75	10.44	36.76	49.64	89.70
3/30/2006	36.45	12.04	12.81	38.79	50.11	91.17
4/27/2006	36.70	11.87	12.62	38.91	51.26	91.49
5/26/2006	38.44	9.17	7.23	31.95	47.28	86.45
6/26/2006	33.40	10.10	9.33	33.51	46.82	85.85

Date	Well 16 (ft)	2 Barker Ln (ft)	12 High St (ft)	177 Winnicutt Road (ft)	188 Winnicutt Road (ft)	190 Winnicutt Road (ft)
7/24/2006	32.20	10.90	11.92	34.87	49.23	87.85
8/28/2006	36.60	11.95	13.64	37.47	49.24	88.60
9/27/2006	38.00	12.73	15.01	38.65	50.75	88.72
10/23/2006	37.05	12.98	14.82	37.00	50.27	88.40
11/27/2006	31.71	12.75	10.31	35.01	49.26	85.52
12/28/2006	34.40	12.15	11.57	36.98	50.29	89.56
1/31/2007	33.90	12.28	11.52	40.69	50.16	90.16
2/28/2007	31.03	13.29	13.95	39.35	51.61	93.25
3/31/2007	34.00	12.65	11.64	37.85	50.70	94.54
4/30/2007	34.30	11.85	7.37	34.23	55.15	89.50
5/31/2007	31.33	11.20	10.65	36.21	68.20	85.65
6/27/2007	34.40	11.97	12.60	37.73	53.80	102.15
7/31/2007	36.80	13.57	14.85	40.20	53.40	99.55
8/28/2007	41.10	14.60	16.55	41.10	54.91	86.33
9/30/2007	42.81	15.25	17.51	41.55	55.58	86.55
10/30/2007	40.51	15.72	17.96	39.98	55.72	84.53
11/30/2007	38.80	15.76	17.23	42.30	54.04	83.14
12/31/2007	35.90	No measurement	16.72	39.13	53.34	82.40
1/29/2008	34.40	No measurement	13.71	39.67	51.88	80.30
2/26/2008	35.00	13.56	9.65	40.21	50.64	78.62
3/31/2008	37.90	11.99	7.62	34.57	49.36	74.21
4/30/2008	32.40	11.02	10.35	35.53	49.98	77.36
5/27/2008	32.60	11.61	12.05	36.29	50.95	64.63
6/24/2008	34.18	12.39	13.86	37.59	50.45	66.94
7/25/2008	33.45	12.80	14.63	39.10	51.27	63.40
8/27/2008	33.71	12.24	14.50	36.63	52.20	145.92
9/29/2008	33.60	12.34	13.35	36.01	50.61	65.34

Date	Well 16 (ft)	2 Barker Ln (ft)	12 High St (ft)	177 Winnicutt Road (ft)	188 Winnicutt Road (ft)	190 Winnicutt Road (ft)
10/28/2008	30.25	12.10	13.52	38.39	50.30	60.13
11/30/2008	35.75	12.36	12.77	36.67	49.84	57.78
12/31/2008	22.49	11.93	10.34	33.36	48.48	53.88
1/27/2009	17.80	No measurement	11.37	34.87	48.99	56.56
2/1/2009	33.09	No measurement	No measurement	No measurement	No measurement	No measurement
3/23/2009	33.55	11.38	9.16	35.18	48.03	54.51
4/30/2009	31.84	No measurement	No measurement	No measurement	No measurement	No measurement
5/1/2009	33.15	No measurement	No measurement	No measurement	No measurement	No measurement
6/5/2009	31.89	11.73	12.65	36.62	50.97	59.00
7/29/2009	32.92	12.28	10.19	35.51	49.13	57.61
8/31/2009	31.79	No measurement	No measurement	No measurement	No measurement	No measurement
9/1/2009	33.00	No measurement	No measurement	No measurement	No measurement	No measurement
10/5/2009	34.53	12.98	14.40	37.44	50.20	59.77
11/24/2009	36.20	13.73	14.13	36.87	50.22	57.87
12/1/2009	33.16	No measurement	No measurement	No measurement	No measurement	No measurement
1/1/2010	32.47	No measurement	No measurement	No measurement	No measurement	No measurement
2/25/2010	31.65	16.93	12.00	37.64	49.03	55.34
3/2/2010	30.73	No measurement	No measurement	No measurement	No measurement	No measurement
4/1/2010	28.76	No measurement	No measurement	No measurement	No measurement	No measurement
5/3/2010	30.97	16.79	10.59	33.90	46.51	51.49
6/24/2010	32.90	11.80	13.53	36.87	49.90	59.10
7/1/2010	41.20	No measurement	No measurement	No measurement	No measurement	No measurement
8/1/2010	41.20	No measurement	No measurement	No measurement	No measurement	No measurement
9/7/2010	38.66	No measurement	No measurement	No measurement	No measurement	No measurement
10/1/2010	38.99	No measurement	No measurement	No measurement	No measurement	No measurement
11/2/2010	36.37	15.33	17.77	38.12	52.17	61.16
12/30/2010	37.44	14.42	15.35	38.91	51.29	57.83

Date	Well 16 (ft)	2 Barker Ln (ft)	12 High St (ft)	177 Winnicutt Road (ft)	188 Winnicutt Road (ft)	190 Winnicutt Road (ft)
1/1/2011	31.50	No measurement	No measurement	No measurement	No measurement	No measurement
2/22/2011	31.70	13.84	15.52	36.99	51.17	58.64
3/1/2011	28.60	No measurement	No measurement	No measurement	No measurement	No measurement
4/27/2011	22.90	No measurement	No measurement	No measurement	No measurement	No measurement
5/1/2011	23.50	No measurement	No measurement	No measurement	No measurement	No measurement
6/1/2011	27.20	13.60	11.05	34.02	49.64	56.40
7/1/2011	33.40	11.84	13.06	36.22	51.64	59.82
8/2/2011	39.43	12.83	15.62	39.39	55.65	65.43
9/1/2011	37.22	13.18	15.70	38.90	52.00	63.16
10/3/2011	38.90	13.57	16.18	38.87	53.24	62.06
11/1/2011	34.78	13.26	13.25	37.05	50.43	59.08
12/1/2011	36.02	12.76	12.67	36.70	49.66	57.60
1/3/2012	36.60	12.12	12.35	37.00	49.99	59.51
2/1/2012	32.20	12.08	11.61	38.20	49.71	58.22
3/1/2012	33.40	12.19	13.05	37.37	49.63	58.85
4/2/2012	32.50	12.20	12.49	36.93	49.99	57.89
5/1/2012	32.90	12.29	12.76	37.05	50.19	60.08
6/1/2012	33.40	12.46	12.99	37.27	50.88	59.58
7/1/2012	24.00	12.22	13.21	44.24	54.40	63.90
8/1/2012	35.60	12.71	15.35	37.52	52.96	63.30
9/1/2012	39.30	No measurement	No measurement	No measurement	No measurement	No measurement
10/1/2012	39.40	13.62	17.50	41.07	53.85	63.67
11/1/2012	34.78	14.08	17.56	39.86	52.00	59.16
12/3/2012	No measurement	14.53	17.88	40.12	53.00	61.88
1/3/2013	36.02	14.58	15.20	38.96	60.67	68.84
2/1/2013	36.60	13.69	15.14	38.88	52.10	60.49
3/1/2013	32.20	13.46	14.23	39.15	51.96	61.67

Date	Well 16 (ft)	2 Barker Ln (ft)	12 High St (ft)	177 Winnicutt Road (ft)	188 Winnicutt Road (ft)	190 Winnicutt Road (ft)
4/2/2013	33.40	12.42	11.11	38.25	50.65	60.49
5/1/2013	32.50	11.87	12.32	38.03	51.26	64.60
6/1/2013	32.90	11.97	13.89	39.09	51.88	63.06
7/1/2013	33.40	11.92	12.40	37.83	51.34	64.31
8/1/2013	24.00	11.79	13.79	44.20	52.34	73.78
9/1/2013	35.60	11.95	15.17	39.32	51.90	67.80
10/1/2013	39.30	12.35	14.31	39.14	52.78	63.77
11/1/2013	39.40	12.58	15.82	39.28	51.29	59.00
12/3/2013	38.30	13.25	16.69	39.28	52.07	63.13
1/3/2014	38.50	13.76	16.16	39.39	52.12	60.78
2/1/2014	37.80	13.04	14.41	38.86	52.10	62.13
3/1/2014	38.10	No measurement	14.17	38.66	51.21	61.37
4/2/2014	37.50	11.78	9.39	36.60	50.86	58.67
5/1/2014	37.60	11.09	10.13	37.19	50.41	64.91
6/1/2014	38.80	10.85	12.48	37.73	51.35	60.29
7/1/2014	41.90	11.97	14.78	39.40	No measurement	69.74
8/1/2014	42.50	12.91	15.74	40.02	52.95	66.37
9/1/2014	43.40	15.00	16.30	40.30	53.32	66.58
10/1/2014	27.10	14.21	17.56	40.54	62.94	64.82
11/1/2014	43.00	11.38	17.58	40.48	52.92	63.42
12/3/2014	42.80	15.66	17.51	39.99	52.60	63.70
1/3/2015	40.00	14.98	12.80	36.64	50.60	61.58
2/1/2015	41.00	No measurement	No measurement	No measurement	No measurement	No measurement
3/1/2015	42.50	13.10	14.51	39.00	50.76	60.44
4/2/2015	42.00	13.24	12.47	39.17	50.30	57.94
5/1/2015	41.00	12.75	9.68	36.13	51.18	59.22
6/1/2015	46.00	12.69	12.61	38.22	50.67	66.70

Date	Well 16 (ft)	2 Barker Ln (ft)	12 High St (ft)	177 Winnicutt Road (ft)	188 Winnicutt Road (ft)	190 Winnicutt Road (ft)
7/1/2015	45.00	13.05	13.66	38.79	51.39	63.95
8/1/2015	40.00	14.06	15.55	47.50	53.98	68.99
9/1/2015	40.00	15.16	17.02	40.66	55.79	69.88
10/1/2015	40.00	15.97	18.11	41.04	54.73	74.61
11/1/2015	39.00	16.09	18.70	44.59	53.78	63.22
12/3/2015	38.00	15.30	18.31	40.69	53.55	64.86
1/16/2016	38.00	14.88	16.68	40.29	52.81	61.96
2/16/2016	37.40	13.33	14.92	37.93	51.64	60.70
3/16/2016	43.20	11.68	13.26	37.00	50.83	61.21
4/16/2016	36.90	11.27	11.53	36.24	49.72	59.06
5/16/2016	38.50	10.94	12.28	36.88	49.78	57.17
6/16/2016	40.90	11.64	13.95	38.86	52.75	65.60
7/16/2016	42.80	13.42	16.06	40.22	58.48	68.18
8/16/2016	43.50	14.45	17.58	40.97	55.08	69.56
9/16/2016	43.70	15.37	18.93	41.65	58.27	70.16
10/16/2016	43.80	15.89	19.55	42.42	54.36	67.66
11/16/2016	40.00	15.70	17.63	40.26	54.29	66.59
12/16/2016	39.00	15.24	16.66	38.56	52.50	61.60
1/16/2017	38.00	14.08	15.31	37.39	51.96	60.86
2/16/2017	37.30	12.73	13.46	36.70	50.47	60.08
3/16/2017	36.80	11.45	11.27	35.51	49.46	62.54
4/16/2017	31.10	10.87	10.30	38.58	48.22	56.70
5/16/2017	No measurement	9.58	10.44	32.99	41.18	56.60
6/16/2017	15.00	10.22	10.21	32.92	46.84	60.44
7/16/2017	27.90	10.92	12.57	35.74	57.05	61.97
8/16/2017	30.90	12.53	13.82	36.48	52.62	62.49
9/16/2017	39.00	13.20	15.58	38.21	53.27	70.21

Date	Well 16 (ft)	2 Barker Ln (ft)	12 High St (ft)	177 Winnicutt Road (ft)	188 Winnicutt Road (ft)	190 Winnicutt Road (ft)
10/16/2017	42.60	13.71	16.62	38.93	51.15	67.49
11/16/2017	36.50	13.71	16.72	38.81	48.67	56.97
12/16/2017	38.30	13.73	18.89	38.19	50.83	57.92
1/1/2018	39.06	14.14	17.20	38.40	51.15	58.75
2/1/2018	38.41	13.37	14.93	37.23	50.96	58.49
3/1/2018	37.51	11.80	13.06	36.93	49.75	58.79
4/1/2018	39.68	11.25	11.20	36.52	49.07	56.49
5/1/2018	39.13	10.21	9.33	35.33	48.62	59.56
6/1/2018	41.04	10.44	11.73	36.55	51.53	62.84
7/1/2018	43.23	17.53	13.53	45.05	53.01	66.15
8/1/2018	49.19	12.58	15.57	38.67	56.16	70.45
9/1/2018	21.48	13.22	15.81	45.86	79.68	67.67
10/1/2018	19.76	12.95	15.90	35.15	50.77	62.60
11/1/2018	41.51	12.64	14.88	35.49	49.91	58.50
12/1/2018	39.05	11.07	8.24	32.60	47.07	53.03
1/1/2019	40.16	10.08	10.88	34.22	46.42	52.98
2/1/2019	40.88	10.70	16.50	34.73	46.50	51.90
3/1/2019	41.18	10.58	11.70	35.20	46.28	52.88
4/1/2019	40.11	10.60	11.48	35.37	47.17	53.88
5/1/2019	40.35	11.44	10.50	35.49	46.95	52.81
6/1/2019	44.64	11.34	11.17	36.43	49.83	58.80
7/1/2019	46.17	11.98	13.63	36.95	52.20	62.80
8/1/2019	45.97	12.89	15.37	38.95	51.66	63.44
9/1/2019	45.28	13.63	16.47	38.78	78.20	63.39
10/1/2019	46.82	14.39	17.81	39.25	51.57	60.41
11/1/2019	44.59	14.81	18.41	38.03	51.80	70.88
12/1/2019	44.24	14.61	16.94	38.31	50.45	56.80

Date	Well 19 (ft)	65 Lovering Road (ft)	66 Lovering Road (ft)	71 Lovering Road (ft)	74 Lovering Road (ft)	81 Lovering Rd (ft)	85 Lovering Rd (ft)	90 Lovering Road (ft)	92 Lovering Road (ft)	51 Winnicut Road (ft)	58 Winnicut Road (ft)	60 Winnicut Road (ft)	69 Winnicut Road (ft)
1/1/2003	93.60	No measurement	No measurement	No measurement	No measurement	No measurement	No measurement	No Measurement	No Measurement	No Measurement	No Measurement	No Measurement	No Measurement
2/1/2003	172.90	No measurement	No measurement	No measurement	No measurement	No measurement	No measurement	No Measurement	No Measurement	No Measurement	No Measurement	No Measurement	No Measurement
3/28/2003	152.50	10.69	21.48	8.26	3.99	5.89	12.15	2.82	10.93	53.68	46.96	53.95	99.34
4/1/2003	95.50	No measurement	No measurement	No measurement	No measurement	No measurement	No measurement	No Measurement	No Measurement	No Measurement	No Measurement	No Measurement	No Measurement
5/1/2003	85.90	No measurement	No measurement	No measurement	No measurement	No measurement	No measurement	No Measurement	No Measurement	No Measurement	No Measurement	No Measurement	No Measurement
6/1/2003	151.80	No measurement	No measurement	No measurement	No measurement	No measurement	No measurement	No Measurement	No Measurement	No Measurement	No Measurement	No Measurement	No Measurement
7/17/2003	103.10	13.13	20.67	12.28	5.98	10.54	22.57	8.28	14.76	54.12	47.78	55.31	100.32
8/21/2003	152.60	14.71	22.82	16.71	6.50	12.93	25.98	9.71	15.97	53.97	51.21	61.05	106.13
9/25/2003	151.90	13.80	24.52	16.30	7.00	16.21	29.10	12.87	23.20	54.27	50.83	59.13	104.30
10/28/2003	84.50	13.35	24.41	14.00	6.10	14.68	23.88	11.39	22.58	55.15	53.69	59.13	104.10
11/30/2003	81.20	13.15	23.45	11.59	4.55	11.90	22.50	8.95	19.63	55.35	53.32	64.00	103.60
12/22/2003	88.50	No measurement	22.40	10.50	3.30	9.80	19.90	7.40	18.00	No Measurement	53.70	60.70	102.90
1/31/2004	74.80	13.20	22.60	11.00	4.20	9.70	21.50	8.00	18.60	No Measurement	51.80	60.60	102.10
2/26/2004	112.60	13.70	23.10	10.40	4.20	10.50	24.00	8.30	18.90	53.90	53.00	58.40	102.50
3/24/2004	77.80	12.50	21.80	9.70	3.20	9.90	23.10	7.40	18.00	55.60	52.30	59.80	101.40
4/23/2004	85.40	10.50	19.00	8.80	2.40	7.20	13.80	5.30	15.40	50.60	49.80	62.70	103.00
5/26/2004	146.70	10.40	18.10	8.70	2.90	8.80	21.20	6.50	16.90	47.70	49.60	59.80	100.50
6/24/2004	108.10	13.70	18.80	14.40	4.60	9.30	15.60	10.50	17.70	51.20	52.10	60.10	100.60
7/28/2004	151.40	16.00	20.60	12.20	5.00	11.20	24.70	10.40	36.80	52.20	52.40	56.70	108.60
8/31/2004	160.20	6.60	22.20	13.50	6.00	12.80	27.40	10.00	20.90	55.10	55.50	67.30	109.70
9/30/2004	122.10	7.00	23.70	13.10	5.50	9.80	22.30	9.50	17.30	54.10	53.80	60.00	107.10
10/21/2004	122.10	6.11	21.91	No measurement	5.95	10.22	25.71	9.51	22.51	53.21	52.00	62.83	105.91
11/22/2004	162.70	10.41	22.08	11.30	4.15	11.56	24.94	9.21	20.11	54.00	51.11	62.20	102.35
12/16/2004	145.50	8.30	19.88	8.42	2.18	7.55	15.33	5.57	16.76	53.90	51.20	38.15	103.50
1/25/2005	74.00	10.20	19.23	7.90	2.30	7.80	18.10	6.50	16.47	51.49	49.05	35.82	99.55
2/24/2005	140.20	6.13	18.39	7.35	1.89	7.30	No measurement	5.91	15.94	50.43	47.18	34.60	97.60
3/1/2005	71.10	No measurement	No measurement	No measurement	No measurement	No measurement	No measurement	No Measurement	No Measurement	No Measurement	No Measurement	No Measurement	No Measurement
4/4/2005	128.80	4.40	15.88	5.85	No measurement	2.17	11.20	2.12	12.09	48.95	46.90	31.36	95.40
5/4/2005	65.30	3.80	15.05	6.45	1.37	6.89	13.80	4.85	14.91	45.51	45.11	31.52	94.23
6/8/2005	126.90	3.27	14.77	6.27	1.48	7.12	14.91	5.88	16.18	43.06	46.65	30.57	70.95
7/1/2005	67.50	4.62	16.23	7.29	2.29	8.83	20.09	5.36	17.79	44.43	51.33	34.15	97.38
8/1/2005	130.70	6.78	18.42	9.68	3.68	10.65	24.42	9.02	19.50	48.36	57.56	37.04	100.08
9/7/2005	72.40	9.52	21.70	11.81	5.43	13.95	28.72	11.45	22.50	51.45	56.25	39.95	105.40
10/1/2005	90.60	11.97	23.37	13.34	6.61	15.68	29.82	12.68	24.05	53.26	56.91	40.75	105.64
11/1/2005	80.60	6.10	20.40	8.07	2.18	7.85	15.13	6.45	16.79	52.41	49.03	35.85	99.53
12/12/2005	127.60	4.81	19.53	6.75	1.82	8.10	16.07	6.47	16.55	45.27	47.97	35.05	97.35
1/4/2006	58.80	3.81	17.97	5.81	1.11	6.61	13.80	5.18	15.33	50.35	46.91	33.01	97.15
2/23/2006	70.80	4.31	16.35	6.56	1.61	7.71	15.91	6.46	16.62	46.94	45.79	32.49	95.41
3/30/2006	63.50	6.42	17.54	7.51	2.11	8.99	20.47	7.70	17.78	48.11	47.32	35.73	95.99
4/27/2006	77.80	5.12	16.92	7.36	1.93	8.48	18.59	8.95	17.04	48.42	48.40	36.02	97.22
5/26/2006	133.50	1.41	12.95	5.32	1.11	6.20	12.98	4.95	18.61	38.45	42.77	27.54	90.68
6/26/2006	65.00	1.02	12.67	5.81	1.83	7.35	15.15	5.78	15.87	38.75	44.72	29.78	90.39
7/24/2006	116.90	2.85	13.15	6.80	2.75	7.95	14.57	6.66	16.81	41.44	47.48	32.19	95.08
8/28/2006	125.00	2.51	16.24	7.95	3.55	9.65	21.62	8.20	18.88	45.03	49.91	35.30	95.42
9/27/2006	63.20	2.41	17.70	8.60	2.97	10.89	26.71	9.45	20.31	47.71	49.81	37.10	95.85
10/23/2006	132.30	2.27	17.34	7.81	2.28	10.12	22.36	8.62	19.35	49.26	49.30	37.88	98.04
11/27/2006	64.00	1.87	15.07	5.15	No measurement	7.00	13.66	6.50	15.95	46.95	46.53	33.10	95.79
12/28/2006	52.10	5.18	14.61	6.08	1.23	7.87	16.33	6.07	16.30	46.61	47.18	34.73	94.65
1/31/2007	62.00	3.34	15.46	6.58	1.76	8.27	17.10	7.04	17.28	46.11	47.80	34.29	94.89
2/28/2007	72.60	5.91	17.28	8.25	2.91	9.75	22.01	No Measurement	19.20	No Measurement	47.80	36.63	85.62
3/31/2007	133.60	1.78	14.92	6.12	1.02	6.55	12.81	9.37	14.54	48.20	47.60	35.71	96.80
4/30/2007	133.80	2.02	13.83	5.30	No measurement	7.10	12.81	5.24	15.35	43.35	43.67	29.71	90.87
5/31/2007	No measurement	1.70	14.20	7.04	1.91	7.66	16.21	6.38	16.57	43.12	48.25	33.03	98.95
6/27/2007	123.80	3.72	16.55	8.56	3.11	9.76	28.07	8.78	28.45	45.30	51.05	37.02	102.13
7/31/2007	105.10	6.98	18.62	9.45	3.55	12.18	25.11	13.72	20.66	48.55	53.68	39.73	104.69
8/28/2007	56.00	7.86	20.65	11.21	5.11	13.74	28.67	14.26	23.74	55.45	55.95	41.18	104.88
9/30/2007	73.40	11.07	21.96	12.62	6.36	15.24	29.24	15.20	23.79	56.89	55.67	42.28	108.32
10/30/2007	137.30	6.51	22.80	12.82	5.58	16.13	23.26	13.27	24.63	53.95	52.96	42.47	106.73
11/30/2007	91.60	4.84	22.81	11.39	4.44	14.24	28.35	11.69	22.70	54.35	52.18	43.05	105.64
12/31/2007	145.20	8.68	21.08	10.78	4.29	11.75	21.33	No Measurement	20.68	55.04	No Measurement	42.76	106.21
1/29/2008	92.80	7.31	19.80	7.84	2.27	8.07	24.12	10.20	17.03	52.91	50.60	31.30	103.86
2/26/2008	89.90	4.15	16.19	7.93	4.45	9.71	12.55	No Measurement	14.98	41.02	47.24	37.40	100.55
3/31/2008	145.20	2.62	13.87	5.62	No measurement	5.96	12.79	4.47	15.29	42.70	44.92	31.81	97.42
4/30/2008	141.30	No measurement	14.17	6.24	1.14	6.87	17.43	6.90	15.52	44.36	45.42	34.30	95.60

Date	Well 19 (ft)	65 Lovering Road (ft)	66 Lovering Road (ft)	71 Lovering Road (ft)	74 Lovering Road (ft)	81 Lovering Rd (ft)	85 Lovering Rd (ft)	90 Lovering Road (ft)	92 Lovering Road (ft)	51 Winnicut Road (ft)	58 Winnicut Road (ft)	60 Winnicut Road (ft)	69 Winnicut Road (ft)
5/27/2008	70.60	4.95	14.77	7.83	2.34	8.80	19.25	7.74	17.98	43.71	49.45	36.33	101.98
6/24/2008	87.40	4.91	15.20	7.66	1.90	8.30	18.64	6.98	17.48	45.45	49.23	38.05	99.91
7/25/2008	74.30	3.88	15.63	6.79	2.50	8.12	15.21	6.03	16.21	47.19	49.87	38.79	99.96
8/27/2008	86.60	No measurement	21.65	7.85	2.74	8.85	19.76	7.87	18.23	47.95	50.85	38.01	102.27
9/29/2008	150.10	No measurement	16.50	6.60	1.72	6.97	14.70	5.58	15.70	48.77	49.15	37.80	102.20
10/28/2008	73.10	4.60	16.62	6.86	1.70	8.20	19.38	6.96	17.30	48.03	48.17	37.25	99.89
11/30/2008	74.00	3.96	15.66	6.88	1.20	7.03	15.81	5.21	15.26	48.10	50.30	38.12	101.54
12/31/2008	72.10	3.10	14.89	5.58	No measurement	6.97	18.19	No Measurement	15.81	50.46	46.04	34.60	99.62
1/27/2009	82.70	4.33	15.69	5.51	1.10	No measurement	No measurement	No Measurement	15.95	46.34	No Measurement	35.74	65.99
2/1/2009	68.40	No measurement	No measurement	No measurement	No measurement	No measurement	No measurement	No Measurement	No Measurement	No Measurement	No Measurement	No Measurement	No Measurement
3/23/2009	84.00	2.04	15.23	5.68	No measurement	6.54	16.11	No Measurement	15.28	44.64	46.26	33.41	98.62
4/30/2009	68.40	No measurement	No measurement	No measurement	No measurement	No measurement	No measurement	No Measurement	No Measurement	No Measurement	No Measurement	No Measurement	No Measurement
5/1/2009	67.10	No measurement	No measurement	No measurement	No measurement	No measurement	No measurement	No Measurement	No Measurement	No Measurement	No Measurement	No Measurement	No Measurement
6/5/2009	83.60	1.72	14.21	7.01	2.07	8.50	19.41	7.45	17.68	42.68	46.74	36.60	100.32
7/29/2009	135.70	3.10	14.95	6.90	1.33	7.00	14.40	5.49	15.82	45.36	50.41	59.34	102.46
8/31/2009	66.60	No measurement	No measurement	No measurement	No measurement	No measurement	No measurement	No Measurement	No Measurement	No Measurement	No Measurement	No Measurement	No Measurement
9/1/2009	78.30	No measurement	No measurement	No measurement	No measurement	No measurement	No measurement	No Measurement	No Measurement	No Measurement	No Measurement	No Measurement	No Measurement
10/5/2009	139.80	5.78	18.18	8.74	2.96	11.25	25.04	10.04	20.82	48.82	49.62	57.45	100.22
11/24/2009	71.40	4.43	17.23	6.95	1.91	8.78	18.63	7.37	17.72	49.61	49.24	58.44	100.47
12/1/2009	143.90	No measurement	No measurement	No measurement	No measurement	No measurement	No measurement	No Measurement	No Measurement	No Measurement	No Measurement	No Measurement	No Measurement
1/1/2010	84.10	No measurement	No measurement	No measurement	No measurement	No measurement	No measurement	No Measurement	No Measurement	No Measurement	No Measurement	No Measurement	No Measurement
2/25/2010	68.90	3.82	15.42	7.74	No measurement	10.58	13.88	No Measurement	14.51	47.52	51.61	58.19	95.32
3/2/2010	82.70	No measurement	No measurement	No measurement	No measurement	No measurement	No measurement	No Measurement	No Measurement	No Measurement	No Measurement	No Measurement	No Measurement
4/1/2010	61.90	No measurement	No measurement	No measurement	No measurement	No measurement	No measurement	No Measurement	No Measurement	No Measurement	No Measurement	No Measurement	No Measurement
5/3/2010	No measurement	1.39	13.12	5.74	1.25	8.04	17.78	6.90	17.13	40.15	No Measurement	50.82	95.28
6/24/2010	No measurement	4.90	16.05	7.73	3.20	9.70	22.61	8.60	19.14	45.55	No Measurement	57.94	97.84
7/1/2010	49.00	No measurement	No measurement	No measurement	No measurement	No measurement	No measurement	No Measurement	No Measurement	No Measurement	No Measurement	No Measurement	No Measurement
8/1/2010	17.30	No measurement	No measurement	No measurement	No measurement	No measurement	No measurement	No Measurement	No Measurement	No Measurement	No Measurement	No Measurement	No Measurement
9/7/2010	No measurement	10.81	20.29	9.73	3.82	12.38	24.81	10.70	21.61	51.42	No Measurement	61.90	104.45
10/1/2010	No measurement	No measurement	No measurement	No measurement	No measurement	No measurement	No measurement	No Measurement	No Measurement	No Measurement	No Measurement	No Measurement	No Measurement
11/2/2010	138.60	8.17	21.36	10.35	3.80	12.66	25.16	10.82	21.84	52.97	No Measurement	60.66	107.19
12/30/2010	44.80	6.22	19.97	7.49	2.05	8.93	19.35	7.87	18.23	52.18	No Measurement	60.46	107.84
1/1/2011	143.10	No measurement	No measurement	No measurement	No measurement	No measurement	No measurement	No Measurement	No Measurement	No Measurement	No Measurement	No Measurement	No Measurement
2/22/2011	48.00	5.19	19.61	7.18	1.75	8.59	18.54	7.35	17.65	No Measurement	No Measurement	62.76	109.04
3/1/2011	54.00	No measurement	No measurement	No measurement	No measurement	No measurement	No measurement	No Measurement	No Measurement	No Measurement	No Measurement	No Measurement	No Measurement
4/27/2011	130.60	2.93	15.75	5.64	No measurement	6.80	13.31	5.51	15.49	46.51	No Measurement	53.03	94.64
5/1/2011	35.70	No measurement	No measurement	No measurement	No measurement	No measurement	No measurement	No Measurement	No Measurement	No Measurement	No Measurement	No Measurement	No Measurement
6/1/2011	128.40	3.65	16.28	6.20	1.49	7.36	15.61	6.35	16.51	46.57	No Measurement	59.61	100.46
7/1/2011	126.00	5.05	17.91	7.60	2.30	14.20	20.28	7.88	18.29	47.91	No Measurement	57.63	102.16
8/2/2011	114.50	8.50	20.51	10.12	4.16	12.30	23.39	10.73	21.29	50.06	No Measurement	40.35	108.02
9/1/2011	133.60	7.98	21.10	8.97	3.05	11.31	22.45	9.68	20.42	52.52	No Measurement	59.52	103.37
10/3/2011	110.90	7.36	21.38	8.00	2.30	10.57	21.95	8.92	19.72	53.70	59.90	57.91	100.98
11/1/2011	114.00	6.82	19.51	6.81	1.43	7.38	14.60	5.78	15.89	53.22	No Measurement	57.49	100.28
12/1/2011	58.20	6.50	19.52	6.80	1.40	7.51	15.71	6.38	16.33	52.47	No Measurement	54.26	98.73
1/3/2012	113.90	5.35	19.08	3.58	1.45	7.76	16.56	6.67	16.75	50.55	46.41	55.60	97.35
2/1/2012	116.30	4.57	17.80	4.19	1.17	7.18	15.29	5.77	15.82	49.67	46.44	54.09	96.45
3/1/2012	133.50	5.02	18.32	6.62	1.14	8.30	19.47	7.17	20.30	49.37	46.71	53.73	95.39
4/2/2012	136.90	4.80	18.08	4.37	2.77	8.36	17.91	7.28	17.56	51.88	46.27	53.77	95.07
5/1/2012	30.70	4.72	17.90	6.79	1.57	7.88	17.31	6.44	16.64	50.23	48.24	60.12	103.84
6/1/2012	100.10	5.86	18.90	6.92	2.00	8.02	17.75	7.26	17.33	50.47	51.67	59.65	101.68
7/1/2012	138.00	6.55	19.45	7.72	2.52	8.76	19.31	7.99	30.50	51.35	50.80	59.41	106.64
8/1/2012	61.30	8.80	21.65	10.01	3.97	11.45	24.75	9.90	20.78	52.49	57.81	68.75	106.50
9/1/2012	128.30	11.06	23.51	11.93	5.21	13.53	28.35	11.53	22.73	54.15	55.90	64.88	108.90
10/1/2012	116.70	10.57	24.15	11.92	5.14	14.69	28.91	12.12	23.45	55.18	55.36	61.96	107.41
11/1/2012	114.00	8.38	24.20	10.01	4.04	14.21	26.90	11.71	22.90	55.90	52.09	59.19	103.39
12/3/2012	No measurement	13.41	24.77	11.10	5.45	14.34	27.85	11.78	22.90	55.73	51.96	59.18	104.67
1/3/2013	58.20	7.55	22.52	7.86	2.35	8.89	No measurement	6.92	17.27	55.55	50.58	57.75	102.84
2/1/2013	113.90	8.52	22.30	5.57	2.47	8.86	18.46	7.64	18.12	54.42	49.47	56.92	101.51
3/1/2013	116.30	6.59	20.95	7.24	2.06	6.61	14.38	No Measurement	14.59	53.87	49.15	57.23	100.30
4/2/2013	133.50	4.95	19.19	6.42	1.36	7.00	13.10	5.84	15.99	51.31	46.96	54.04	98.01
5/1/2013	136.90	5.17	19.60	7.62	2.60	8.52	18.41	7.24	17.65	50.02	48.86	56.80	100.36
6/1/2013	30.70	6.55	19.67	7.85	2.28	8.46	18.50	7.32	17.53	50.70	58.89	65.87	104.85

Date	Well 19 (ft)	65 Lovering Road (ft)	66 Lovering Road (ft)	71 Lovering Road (ft)	74 Lovering Road (ft)	81 Lovering Rd (ft)	85 Lovering Rd (ft)	90 Lovering Road (ft)	92 Lovering Road (ft)	51 Winnicut Road (ft)	58 Winnicut Road (ft)	60 Winnicut Road (ft)	69 Winnicut Road (ft)
7/1/2013	100.10	5.71	19.37	7.23	1.80	7.87	16.39	No Measurement	12.00	50.87	50.84	58.81	103.33
8/1/2013	138.00	7.00	20.91	8.49	2.82	9.34	20.55	No Measurement	18.54	51.43	51.90	60.48	103.62
9/1/2013	61.30	7.68	22.10	8.47	2.62	10.46	23.32	8.85	19.80	53.06	53.42	62.81	105.63
10/1/2013	128.30	7.15	22.60	8.71	3.12	11.17	24.29	9.70	20.66	53.61	52.61	61.41	104.03
11/1/2013	116.70	7.77	23.31	9.41	4.07	12.71	27.74	10.84	22.17	54.57	51.32	59.95	102.38
12/3/2013	50.00	7.63	23.25	9.78	3.60	13.22	27.99	11.20	22.25	55.26	50.98	58.91	102.20
1/3/2014	52.20	7.48	22.37	8.71	2.65	10.78	23.41	No Measurement	19.66	56.71	51.02	43.82	103.11
2/1/2014	103.70	8.07	22.45	8.50	2.60	8.77	17.80	No Measurement	18.21	61.92	49.67	57.85	102.66
3/1/2014	No measurement	6.22	21.47	7.41	2.06	8.36	17.90	No Measurement	17.50	No Measurement	52.30	57.36	No Measurement
4/2/2014	No measurement	5.39	19.50	5.90	1.00	5.09	11.31	No Measurement	13.69	52.91	52.29	54.44	97.89
5/1/2014	41.20	5.33	18.61	6.85	2.18	7.62	15.46	6.40	16.59	49.66	48.22	55.42	98.71
6/1/2014	No measurement	6.37	19.20	7.73	2.07	8.80	18.86	7.60	18.09	50.07	50.97	59.02	99.61
7/1/2014	154.20	7.79	20.80	9.28	3.57	10.54	23.40	9.36	20.01	51.22	59.22	69.25	110.55
8/1/2014	No measurement	8.47	22.07	9.96	3.64	11.61	25.61	9.91	20.90	52.93	53.68	62.30	106.35
9/1/2014	40.10	8.85	23.06	10.60	4.57	12.71	26.00	10.67	21.88	54.14	52.81	60.82	105.46
10/1/2014	29.70	10.60	24.15	11.79	5.73	14.43	29.33	11.95	23.28	55.08	52.97	61.66	105.71
11/1/2014	154.00	8.60	23.70	10.48	4.52	13.38	26.93	11.12	22.30	55.53	51.02	58.61	103.13
12/3/2014	150.50	8.00	25.31	9.29	3.28	11.80	23.18	9.94	20.60	55.71	51.54	59.76	103.30
1/3/2015	142.00	6.12	20.00	7.19	1.80	6.99	13.51	5.76	15.98	53.39	48.76	54.94	No Measurement
2/1/2015	40.50	No measurement	No measurement	No measurement	No measurement	No measurement	No measurement	No Measurement	No Measurement	No Measurement	No Measurement	No Measurement	No Measurement
3/1/2015	109.50	6.24	19.56	No measurement	1.70	8.48	19.43	No Measurement	17.54	No Measurement	No Measurement	No Measurement	98.18
4/2/2015	32.00	4.14	18.26	5.94	1.22	6.14	13.39	4.79	14.81	52.83	47.15	53.90	97.29
5/1/2015	106.00	4.24	17.02	6.37	2.01	9.96	14.65	7.14	15.97	48.29	46.10	52.02	94.99
6/1/2015	No measurement	5.06	17.14	6.92	1.56	7.72	16.22	6.40	16.79	50.17	50.82	59.22	102.62
7/1/2015	No measurement	5.09	17.62	7.07	1.76	8.39	18.53	7.16	17.34	50.14	52.34	60.92	103.93
8/1/2015	No measurement	7.60	20.69	9.46	3.96	13.68	24.35	9.90	20.60	50.78	59.37	74.10	109.67
9/1/2015	No measurement	11.80	22.02	10.90	4.47	12.94	27.41	11.05	21.99	52.63	56.90	67.00	109.84
10/1/2015	No measurement	10.09	23.09	11.50	4.60	14.09	28.56	11.65	28.70	54.04	56.12	65.24	110.44
11/1/2015	No measurement	10.18	24.04	11.37	4.27	14.30	28.29	11.77	22.85	55.04	53.16	62.00	105.26
12/3/2015	No measurement	9.52	23.34	10.94	3.89	13.38	26.64	11.24	22.00	57.55	52.07	59.25	108.25
1/16/2016	144.20	8.10	22.26	8.47	2.55	9.58	19.89	8.19	18.33	57.11	51.87	59.08	108.97
2/16/2016	74.80	7.20	21.37	7.78	2.27	8.23	10.60	7.22	17.25	54.64	49.94	58.04	104.59
3/16/2016	74.60	6.13	19.90	7.27	2.06	6.52	13.33	5.28	15.16	54.18	49.34	56.94	104.92
4/16/2016	143.30	4.94	18.37	6.35	1.42	6.48	13.68	5.55	15.49	51.40	47.68	37.38	103.77
5/16/2016	39.00	4.34	18.79	6.58	1.86	8.10	18.15	7.06	17.11	51.10	47.41	37.15	102.60
6/16/2016	No measurement	6.61	19.42	8.30	3.13	9.24	21.59	8.16	19.71	51.29	56.70	40.31	111.94
7/16/2016	91.70	8.12	27.71	10.08	4.20	11.69	25.46	10.54	28.50	52.26	60.32	42.59	112.05
8/16/2016	154.30	11.40	21.97	12.43	6.38	14.21	28.56	18.83	22.36	53.40	60.86	43.47	115.25
9/16/2016	163.00	12.03	27.50	13.64	6.92	16.02	31.73	13.42	24.66	55.03	60.38	44.94	115.24
10/16/2016	182.70	13.29	26.31	15.60	7.85	17.65	33.61	15.03	26.25	56.04	57.83	44.72	108.81
11/16/2016	99.60	10.21	25.20	11.63	6.90	13.51	23.72	11.29	22.02	56.57	53.56	44.30	105.96
12/16/2016	99.40	9.20	24.33	9.76	3.25	10.18	19.85	8.07	19.69	56.80	51.48	43.21	105.78
1/16/2017	171.80	8.05	23.43	7.89	3.11	7.88	16.35	9.32	16.44	56.07	52.31	42.04	105.04
2/16/2017	172.80	6.92	22.23	7.36	1.72	6.87	14.24	9.48	15.65	54.78	49.93	38.62	104.40
3/16/2017	170.40	5.73	20.68	6.15	1.33	5.69	12.30	3.51	13.52	53.45	47.93	37.07	102.08
4/16/2017	77.50	4.63	19.36	6.21	No measurement	5.37	12.30	3.69	13.72	50.93	48.67	36.54	105.74
5/16/2017	173.80	3.65	17.16	5.60	1.25	5.98	13.07	4.67	14.62	46.81	46.30	33.39	103.05
6/16/2017	69.80	3.15	16.50	5.40	1.03	6.60	15.04	5.43	16.48	46.29	46.97	34.00	99.56
7/16/2017	82.90	4.57	18.18	7.24	3.65	9.50	19.51	7.69	17.88	47.35	53.93	37.55	108.93
8/16/2017	147.60	6.15	19.53	8.44	3.10	11.89	23.83	9.25	20.85	49.94	57.12	39.60	110.38
9/16/2017	149.60	7.71	21.10	9.61	4.43	12.60	27.66	10.76	21.77	59.96	56.00	41.05	113.18
10/16/2017	No measurement	7.60	22.06	10.20	4.33	13.22	28.28	13.46	22.67	52.57	54.65	41.44	106.72
11/16/2017	106.60	5.30	21.91	8.36	2.90	12.17	28.75	10.64	22.04	53.62	51.11	48.96	100.54
12/16/2017	73.80	6.88	22.19	9.05	3.52	12.93	28.92	11.45	21.61	54.03	50.29	43.29	101.07
1/1/2018	49.28	7.55	22.70	9.56	3.45	12.48	28.67	11.34	21.60	54.75	50.49	43.15	101.01
2/1/2018	68.91	7.32	21.72	7.49	4.62	8.79	21.81	7.50	17.83	55.25	55.25	41.60	100.91
3/1/2018	86.73	5.86	20.15	6.63	1.67	9.85	13.55	5.55	15.73	64.63	49.36	40.06	99.82
4/1/2018	75.95	4.70	19.73	6.12	1.31	6.54	13.84	5.34	15.36	52.37	49.18	38.22	99.97
5/1/2018	74.36	4.39	18.69	5.61	1.07	6.11	13.19	4.83	14.96	50.37	40.76	36.07	97.75
6/1/2018	83.33	5.68	19.55	7.08	2.36	8.45	19.37	7.30	17.71	49.49	51.76	38.09	105.11
7/1/2018	199.73	7.05	20.70	8.18	2.87	14.44	23.24	8.64	19.27	50.98	54.69	40.51	108.92
8/1/2018	91.71	7.47	21.49	8.45	3.37	10.96	23.19	9.53	20.53	55.45	59.15	42.47	111.72
9/1/2018	169.07	7.60	22.85	8.33	3.24	10.08	21.98	8.97	19.60	53.36	62.12	42.24	112.48
10/1/2018	97.10	6.28	20.80	6.96	1.99	8.90	19.07	7.70	18.10	53.60	52.41	40.50	105.09

Date	Well 19 (ft)	65 Lovering Road (ft)	66 Lovering Road (ft)	71 Lovering Road (ft)	74 Lovering Road (ft)	81 Lovering Rd (ft)	85 Lovering Rd (ft)	90 Lovering Road (ft)	92 Lovering Road (ft)	51 Winnicut Road (ft)	58 Winnicut Road (ft)	60 Winnicut Road (ft)	69 Winnicut Road (ft)
11/1/2018	147.68	No measurement	19.58	5.94	1.35	7.92	17.96	6.74	16.94	53.38	48.45	39.92	99.99
12/1/2018	26.48	2.77	15.51	3.81	No measurement	4.67	No measurement	3.76	13.69	48.12	45.68	32.48	94.21
1/1/2019	85.38	1.73	15.62	4.65	No measurement	6.83	15.45	5.84	52.90	45.61	44.06	34.60	93.95
2/1/2019	80.58	1.58	15.36	4.83	No measurement	7.22	16.36	6.40	16.45	45.54	44.05	35.29	93.06
3/1/2019	41.07	4.65	15.00	4.80	No measurement	7.11	16.32	6.18	16.30	46.35	44.31	35.95	93.30
4/1/2019	31.64	1.50	15.69	4.64	No measurement	7.09	15.73	6.19	16.60	46.38	45.30	36.50	92.58
5/1/2019	56.49	3.32	14.57	4.60	No measurement	6.40	14.62	5.10	15.99	48.17	46.50	36.86	93.14
6/1/2019	142.82	3.20	16.31	5.84	1.56	8.22	19.90	7.20	18.65	47.40	57.47	39.92	100.50
7/1/2019	129.45	4.26	17.70	6.26	1.79	8.90	20.93	7.73	19.04	53.09	53.04	39.92	102.72
8/1/2019	188.18	5.21	20.42	7.97	2.07	9.36	22.03	9.44	20.95	58.92	59.61	42.14	108.80
9/1/2019	128.05	6.43	21.43	8.25	3.70	12.14	27.07	10.51	22.51	52.72	58.56	43.16	109.77
10/1/2019	39.55	8.23	23.02	9.89	4.46	13.76	29.97	11.75	23.89	54.29	56.48	43.81	108.60
11/1/2019	36.15	7.25	22.60	9.02	2.12	12.32	26.83	10.19	22.03	55.51	51.47	43.02	100.48
12/1/2019	36.85	No measurement	22.45	8.24	1.87	No measurement	No measurement	No Measurement	19.90	No Measurement	80.14	46.45	102.11