Friesen DRILLERS

Proposed Expansion of the Dugald Municipal Well Field Rural Municipality of Springfield

July 2024

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Report to:

The Rural Municipality of Springfield

and

THE MANITOBA WATER SERVICES BOARD

Manitoba Water Services Board

Proposed Expansion of the Dugald Municipal Well Field
Rural Municipality of Springfield

July 26, 2024

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  - Reeve and Council
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  - Mr. Mark Prydun, P.Eng.

- Manitoba Environment and Climate Change.
  - Ms. Kylene Wiseman, P.Geo.

Study Team

The study team consisted of the following individuals:

- Friesen Drillers Limited
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  - Ms. Paulynn Estrella-Legal, B.Sc.(Mn.E.), P.Eng. – Hydrogeological Engineer
  - Mr. Justin Neufeld, P.Geo. – Groundwater Geologist
  - Mr. Peter Friesen – Lead Driller
  - Mr. Paul Sharples – Field Supervisor
  - Mr. Jason Friesen – Operations Manager

Notes

This study will utilize imperial measures, with the exception of water quality data and some velocity information, which will use metric measures. Use of the investigation results will follow the limitations and disclaimer in the report. Some of the data collected during this study was obtained from Manitoba Sustainable Development. Friesen Drillers has made no attempts to verify the information. It is assumed to be correct. The reports collected for background research on this aquifer have been obtained from public sources.

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Executive Summary

Friesen Drillers was retained by the Manitoba Water Services Board (MWSB) and the Rural Municipality of Springfield (RM) to undertake a hydrogeological investigation for a proposed expansion of the Dugald municipal groundwater supply well field. The RM has experienced continued growth and increased demand on the existing municipal water supply. As proposed, the well field would expand into SW29-10-6EPM in the RM of Springfield, approximately one mile south of the original municipal wells. The site lies approximately four miles east of the community of Dugald.

Since the completion of the initial Dugald Well Field in 2019, population growth projections for the RM have been updated. The revised 10-Year (2035) and 20-Year (2045) projections indicated a total groundwater demand of 1,200 and 1,600 dam^3/year, respectively. The revised figures reflected an increase of about 1,000 dam^3/year above the existing licence groundwater allocation of 646 dam^3/year.

It is understood that early stages of the proposed development could have the WTP operate with one or two treatment trains, each with an instantaneous raw water flow of about 42 L/s (665.7 U.S.G.P.M.) or a combined 84 L/s (1,332 U.S.G.P.M.). In later development phases, a third treatment train could be installed to bring the total instantaneous flow to 126 L/s (1,997 U.S.G.P.M.). It should be noted that the WTP demands were based on a 20-hour operating day (AE, 2024).

The current expansion program included the construction of two new 12-inch diameter screened wells (Well 3-West, and Well 4-East) which were installed into the Winnipeg Formation Sandstone Aquifer. A 72-hour (3 day) pumping test was completed on Well 4 (East) to assess the aquifer response to increased pumping. The water level recovery was also monitored for a period of weeks following the test. Approximately 174 feet of drawdown was observed in the pumping well after the 72-hour period at a rate of 500 U.S.G.P.M. (~31.6 L/s). However, the drawdown decreased significantly with distance from the pump well. Aquifer levels recovered to pre pumping conditions after the cessation of pumping.

The monitoring well network for the pumping test included a combination of private domestic wells, provincial observation wells, and RM-owned multi-level monitoring wells. The combination of monitoring wells resulted in 34 monitoring points, which allowed for monitoring in all directions from the central pumping well in both the Carbonate and Sandstone Aquifers.

Several proposed pumping scenarios were analyzed in the report, including drawdown calculations for the instantaneous WTP requirements and the projected annual water demands of the proposed development. In these analyses, the proposed increase in municipal pumping was likely to generate some additional drawdown in the Sandstone Aquifer that would be observed beyond the natural seasonal and climatic fluctuations. Drawdown in the Carbonate Aquifer was significantly muted, with drawdown typically amounting to only a small fraction (<5%) of the sandstone drawdown.

During the proposed well field operation, the municipal pumping was shown to generate moderate amounts of drawdown (9-10 ft.) within about ½ mile surrounding the well site in the 5-year demand scenario. This amount of drawdown was shown to be feasible for most existing wells, as there is sufficient available drawdown present in the area. However, it will be incumbent on the RM to address potential third party well interference effects with existing groundwater users in the area. These efforts would be undertaken on a site-by-site basis using site specific information.

The groundwater quality was relatively consistent throughout the aquifer tests. Groundwater quality from the production wells was similar to the previous results obtained from area. The groundwater supply wells were considered non-GUDI. Fluoride was noted to be present in concentrations exceeding the Maximum Acceptable Concentration for drinking water as set out by Health Canada. Aspects of the groundwater geochemistry would be addressed as part of the WTP process.

It was recommended that the application proceed for the expansion of municipal groundwater supply at 29-10-6EPM. This would include an application for a Class 2 Environment Act Licence. Additional monitoring and reporting are recommended to monitor the aquifers in the area. Additional recommendations are contained in the report.

Proposed Expansion of the Dugald Municipal Well Field

Rural Municipality of Springfield

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4 INTRODUCTION

Friesen Drillers Limited is pleased to present this report to detail the results of our investigation for a proposed expansion to the municipal groundwater supply in the Rural Municipality of Springfield (RM).

The current project involved test drilling, monitoring well installations, production well construction, aquifer pumping tests, geochemistry sampling, and hydrogeological analysis.

5 SCOPE OF SERVICES

The scope of work developed for the current project included the following components:

- Complete a third-party well inventory. This is a key aspect of regulatory approvals and is needed to demonstrate that existing third party wells around the proposed pumping sites will not be adversely affected by the withdrawals.
- Install test/monitoring wells – Install two multilevel test/monitoring wells within the right of ways near the existing wellfield site. These wells would be valuable for groundwater monitoring purposes for both the current testing and the longer term monitoring in the future.
- Construct Pumping Wells -Two 12-inch diameter screened production wells completed into the Sandstone Aquifer. The wells would be constructed in the same manner as the previous municipal supply wells.
- Establish a monitoring network of instrumented observation wells. Selected wells would have data recording transducers installed.
- Conduct a 72 Hour pumping test on the one new production test well. The second test well would be tested for short term pumping capacity.
- Collect groundwater samples to be sent to an accredited laboratory for analysis of routine geochemistry, stable environmental isotope parameters.
- Undertake a hydrogeological analysis and generate a final report for licence applications. The report would include the following aspects:
    - A review of the groundwater development history within the region.
    - Description of local and regional geological/hydrogeological conditions.
    - Review of historical hydrograph and meteorological data.
    - Assessment of existing groundwater users and groundwater development.
    - Pumping test analyses and determination of aquifer hydraulic parameters.
    - Projected aquifer drawdown calculations and estimated long term impacts to aquifer and nearby groundwater users.
    - Detailed well inventory with a minimum radius of 2.0 mile from the production wells.

6 HISTORICAL CONTEXT – WATER SUPPLIES IN SPRINGFIELD

6.1 EARLY TIMES

The RM of Springfield was formed as Manitoba's first Rural Municipality in 1880. The area was set as a rural area located east of the City of Winnipeg and the City of St. Boniface. The new RM was named "Springfield" due to the presence of numerous naturally occurring springs located near Birds Hill and near the central part of the RM. The area was primarily developed as a farming area, although aggregate extraction began very early on.

Due to the lack of surface water in the area, groundwater was quickly located in the subsurface geology in the area. These deposits were accessed through well drilling and the hand digging of wells to use as a water supply.

Although the area was mainly rural, several small communities developed in Oakbank, Dugald, and Anola. Private water wells continued to serve as the main water supply for these communities. Within Oakbank, it became commonplace to drill or construct one well, and connect multiple residences and businesses.

From the 1880's until the early 1970's, no organized regional water supply system was in place. Due to the close proximity of the City of Winnipeg, a small industrial area developed in the far western area of the RM. Some of the water supplies developed in these areas were licensed with the province and were used to supply water for process, industrial use, and fire protection. As the majority of the area was rural, few other water rights licenses were issued.

By the 1960's, the communities had grown only slightly, and the same water supply and sewerage systems prevailed. The ongoing practice of connecting multiple homes to a single private well also continued.

6.2 1970'S TO THE 1990'S

Things began to change in Oakbank in the late 1970's. In the southeast part of the town, the first major residential subdivision began. Large numbers of private homes were built in the area, and the first sewer system was installed, using lift stations and lagoons as treatment. The subdivision developer elected to install individual private water wells at each private residence. At the time, most of the water wells drilled were constructed using 4.5-inch diameter insert threaded galvanized casing. Further, as brass domestic pitless units were not yet available, the majority of well hook ups were undertaken with galvanized products.

Over time, the galvanized products began to corrode and break down with exposure to the active groundwater quality in town. This resulted in numerous bacteriological and nitrate issues that are still present within the town. As a result, the Province of Manitoba Groundwater Management Section studied the issue and prepared a brief report of the results (Betcher, 1991). The report concluded that the groundwater quality in the Town of Oakbank was complex, due to the recharge dynamics of the area (Betcher, 1991). The investigation work concluded that groundwater in the town had been impacted from casing failures due to corrosion and from deep drilling into saline parts of the Winnipeg Formation (Betcher, 1991).

By the mid 1990's, concern was noted amongst residents and the RM regarding the bacteriological issues within the town of Oakbank. In response, the RM elected to install a town water supply (Heatherdale Wellfield) for the remaining development in the town, which would ultimately occur in the westerly areas. As a result, many older areas of Oakbank remain on individual private wells, while the newer parts of town are connected to a municipal water supply.

6.3 1990's – Heatherdale Wellfield

As a result of the provincial report and concerns from residents, a town water supply system was developed for Oakbank in the early 1990's. The RM retained ID Engineering to develop the water supply.

Due to the lower transmissive conditions in the carbonate bedrock, and the ongoing issues with bacteriological issues in domestic wells in the town, ID Engineering recommended moving towards the unconfined Birds Hill Glacio-Fluvial complex. ID Engineering also retained the services of A.D. Woodbury, Ph.D. P.Eng. to act as their hydrogeological consultant.

Through test drilling and analysis, the ID Engineering group developed a water supply at the Moosenose Ridge, which is a glacial outwash deposit of sand and gravel lying off the main part of the glacio-fluvial complex.

The test drilling in the Moosenose Ridge revealed a highly transmissive unconfined sand and gravel deposit. From the test drilling, two supply wells were installed, and a pipeline was constructed to a small treatment plant in Oakbank. These wells were placed in service in the mid 1990's.

At the time of construction, ID Engineering and their consulting hydrogeologist recommended some strict environmental sampling and well head protection studies. This is due to the fact that the water supply was sourced from a small unconfined aquifer that has little or no protective cover. At the time of the installation of the RM water supply, all applicable regulations were followed.

6.4 2000s – Walkerton Outbreak and Changes to Manitoba Regulation

In 2000, regulations concerning the protection of groundwater and surface water supplies for towns and cities was changed as a result of the Walkerton E. Coli outbreak in southern Ontario. Very quickly afterwards, regulations related to the protection of municipal water supplies were changed to address aspects of well head protection and surface water treatment requirements. As a result of these changes, basic chlorination of surface water was no longer acceptable, and strong definitions existed as to what is surface water and what is groundwater.

As a result of these post Walkerton regulatory changes, several new government departments were created in Manitoba, along with the new regulations. The Office of Drinking Water would now oversee municipal water supplies.

In 2013, the RM retained Friesen Drillers to assess the well head capture zone for the Moosenose supply wells. The results of the assessment indicated a water source was considered groundwater under direct influence of surface water (GUDI), a designation that requires additional treatment under current regulations. Due to the inherent risks associated with the Moosenose supply, a further study was commissioned to locate possible alternative water sources for the municipality. The results were detailed in a final report by Friesen Drillers (2016). The new alternative groundwater source was intended to provide additional well head protection over the Moosenose wells and to provide supplemental water supply capacity to meet future population growth within the community.

6.5 2010 to 2019 – Dugald Wellfield Development

Following recommendations of the 2016 desktop study, an extensive field-testing program was undertaken in 2017-2018 to select a new wellfield location (FDL, 2019a). One of the key aspects of this program was to select a water supply that was under confined conditions to provide additional protection of the municipal water supply. The test program included test well drilling, water quality sampling, and aquifer capacity testing.

In addition, a public consultation process was undertaken by Landmark Planning and Design. In consultations with RM staff and the water treatment plant design consultant, WSP, two new municipal supply wells were constructed into the confined Sandstone Aquifer, at a location approximately four miles east of Dugald. The wellfield locations are shown on the following page in Figure 1. Although the technical and regulatory aspects of the project met with success, a few local residences required additional sampling and monitoring considerations, and two private domestic well replacements were undertaken by the RM.

In 2019 the RM applied for Water Rights (Licence No. 2019-107) and Environment Act (Licence No. 3303) licenses to authorize the newly constructed Dugald municipal groundwater supply. The application requested an additional allocation of 323 dam^3/year; at the time, the additional allocation was projected to meet the RM demands through the year 2041 (WSP, 2018). The new Dugald wellfield was put into operation in 2021. A copy of the Water Rights and Environment Act licences are attached.

6.6 2019 TO PRESENT - PROPOSED EXPANSION TO THE DUGALD WELLFIELD

Since the completion of the initial Dugald Wellfield in 2019, population growth projections for the RM have been updated. The revised projections suggest a total groundwater demand of 1,600 dam^3/year would be needed to meet the future needs of the RM municipal system. This revised figure reflects an increase of about 1,000 dam^3/year above the existing licence allocation of 646 dam^3/year.

In 2022, the RM commissioned an appraisal of technical considerations for the proposed water supply expansion. Friesen Drillers conducted a desktop review and generated a report to summarize the results and provide recommendations. A copy of the report is included in Appendix A.

7 POPULATION TRENDS AND WATER USE

The RM of Springfield has experienced continuous population growth in recent years. Based on Canadian Census data, the total population of Springfield was 16,142 (Statistics Canada, 2021). A majority of the growth occurred in the communities of Oakbank and Dugald in the form of new residential developments. The projected 20-year combined population of Oakbank and Dugald was estimated to be 21,460 (AE, 2024).

At the present time, there is still a large population in the older parts of the two towns that are not connected to the RM municipal water supply system. It is our understanding that the RM intends to connect the remaining residents to the water supply system over time.

Currently, water use in both Oakbank and Dugald is approximately 200 L/person/day (WSP, 2018), with the average use dropping per year over the last several years. This is below the Canadian average (Government of Canada, 2019). The relatively low per capita water consumption rates are reflective of active programs by the RM to curtail water use. It should also be noted that nationally, per capita water rates are also declining.

A combined water use record for the Oakabank and Duglad municipal water system has been reported since 2020 (MECC, 2024). From available data, reported water use ranged from 130 $dam^{.3}$/year in 2022, to 284 $dam^{.3}$/year in 2021.

8 WATER SUPPLY REQUIREMENTS

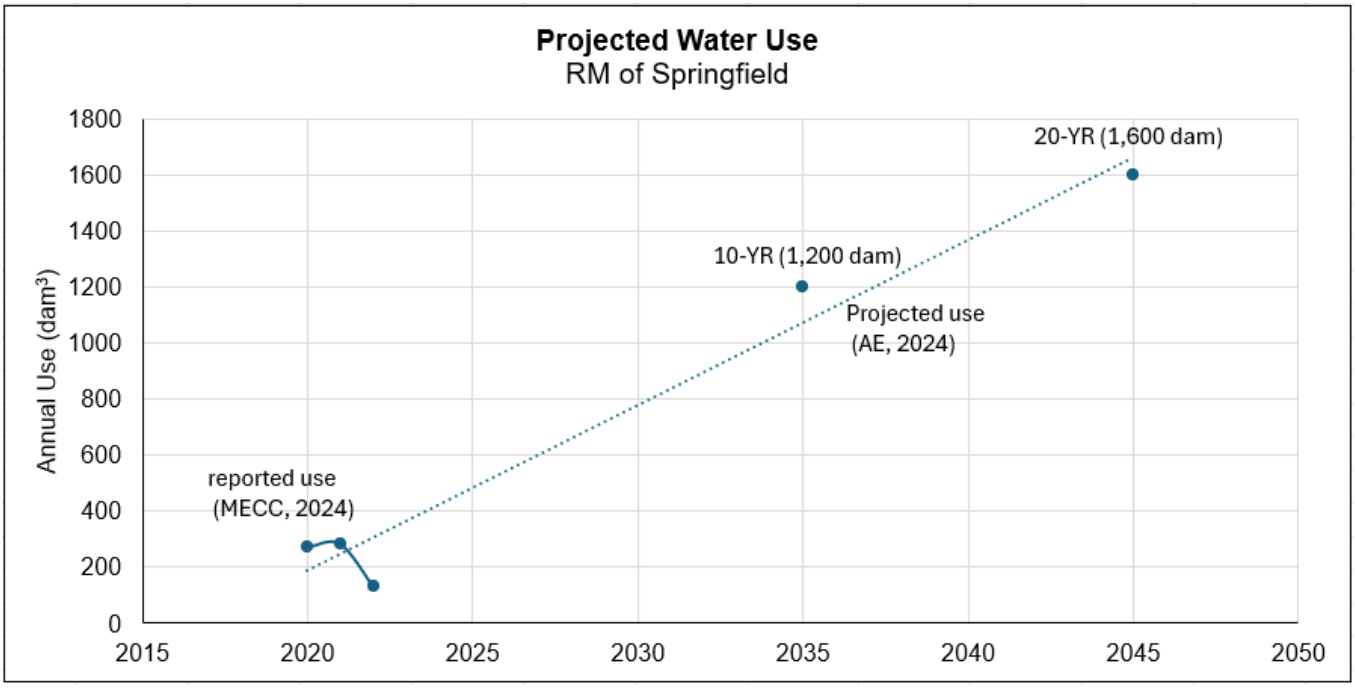
The current project would result in a combined municipal water supply system for Dugald and Oakbank. The expanded groundwater supply from the Dugald well field would replace the existing Oakbank supply wells which are developed from the Moosenose Aquifer (Heatherdale wells). It is the author's understanding that the RM intends to decommission the Heatherdale wells in the near future.

A new centrally located Water Treatment Plant (WTP) would be constructed at a site between the two communities. The 20-year peak raw water demand for the new WTP was projected to be 126 L/s, or 1,997 U.S.G.P.M. (AE, 2024). However, in the first phase of the proposed development, the WTP would operate on two treatment trains, which would have an instantaneous raw water demand of 84 L/s or 1,332 U.S.G.P.M. (AE, 2024).

The maximum instantaneous flow rate of the current Water Rights licence is 2,091 U.S.G.P.M. (2019-107). Previous licences have stated that 966 U.S.G.P.M. could be pumped from the Healtherdale wells, which would result in 1,125 U.S.G.P.M. from the original Dugald well field. Pumping the entire water supply from an expanded Dugald well field would reflect an increase of 966 U.S.G.P.M. above previous pumping rates at the Dugald well field.

A plot of the recently reported water use and projected water demands is shown as Figure 1. According to projections by the RM and AE, the Year 20 (2045) total annualized groundwater allocation requested for the expanded Dugald well field would be 1,600 dam^3/year, or 1,297 acre feet/year. This reflects an increase of 954 dam^3/year above the current Water Rights Licence allocation (2019-107). The projected Year 10 (2035) allocation would be 1,200 dam^3/year, or 973 acre feet/year (MWSB, 2024). This would reflect an increase of 554 dam^3/year above the current Water Rights Licence

Figure 1 – Projected Water Use (20 Year)



(Data source – MECC, 2024; and Associated Engineering, 2024)

6 RATIONALE FOR WELL LOCATIONS

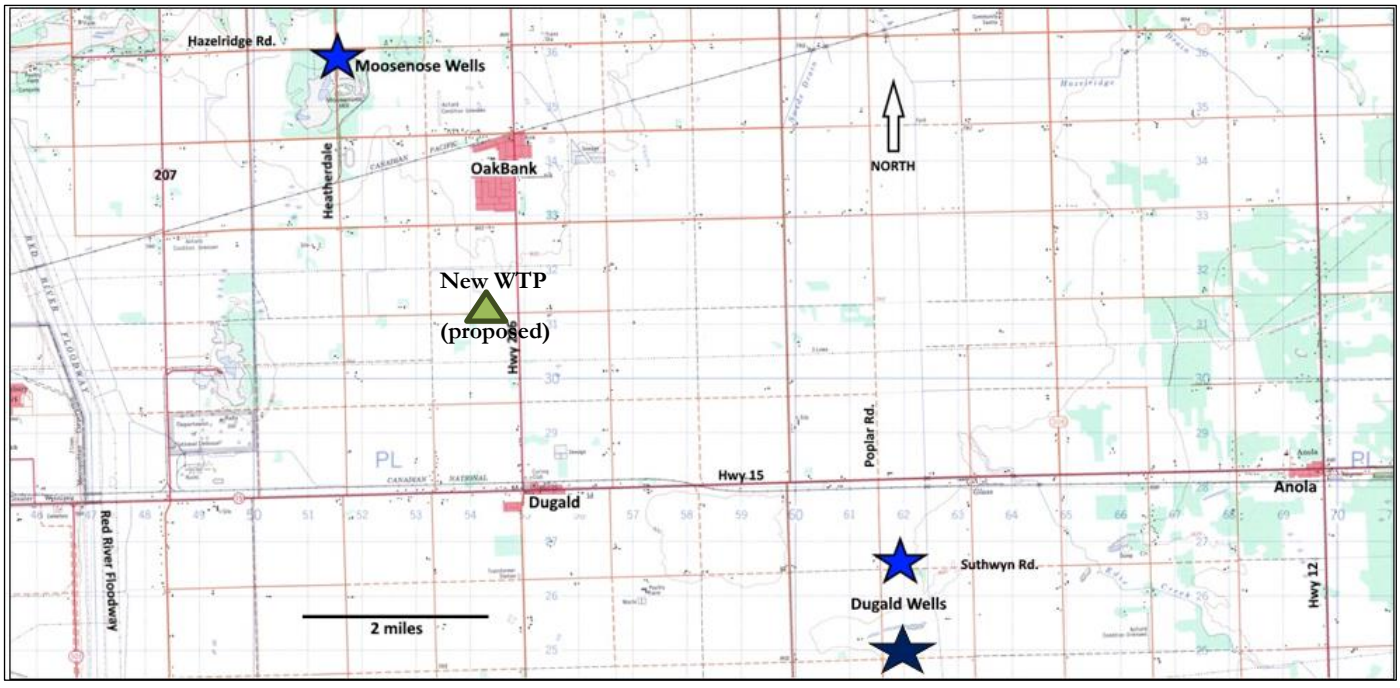
The location of the new Dugald wellfield has several notable benefits over the original Moosenose Ridge wellfield. Many of the benefits are derived from the doubly confined aquifer conditions and large geographical extent of the Winnipeg Formation Sandstone Aquifer. These conditions provide natural wellhead and source water protections and expansion potential for the municipal supply.

The unit thickness and grain size of the Sandstone Aquifer is consistent in the region which typically reduces the amount of test work needed to develop new production wells. This characteristic provides both time and cost savings over the fractured Carbonate Aquifer, which typically requires extensive test work to identify suitable well locations.

Groundwater geochemistry in the Sandstone Aquifer tends to improve in the east-southeastward directions from Dugald. As a result, it is anticipated that gradual expansion to fresher water in the southeast would have a positive impact on the water treatment process.

The Winnipeg Formation Sandstone Aquifer is shown to be a reliable groundwater source at the Dugald wellfield location. The aquifer is geographically extensive and receives regular freshwater recharge. In addition, the capacity of new supply wells in the Sandstone Aquifer is relatively predictable. Based on considerations of aquifer capacity, source water protection, and consistency of groundwater geochemistry, it was recommended that any new municipal supply wells also be constructed into the Sandstone Aquifer.

Figure 2 – Location of existing municipal supply wells and proposed new WTP



7 REGULATORY SETTING

In Manitoba, groundwater and surface water lying in areas of provincial control are property of the Crown under the Water Rights Act (C.C.S.M. W80). The Act provides a domestic exemption for groundwater use according to a specific domestic criterion. Water uses which are not included in the domestic exemption must be authorized with a Water Rights Licence from the province.

Water Rights licences are issued on the basis of first-in-time, first-in-right (also known as the prior allocation system), which means that earlier applicants receive precedence over later applicants. For some aquifers in Manitoba, the physical boundaries of the aquifer have been clearly defined and allocation limits have been placed on the amount of water that is available for licensed users. In the case of the RM of Springfield municipal system, only the first-in-time, first-in-right principle is applicable, as there have been no limits placed on groundwater allocation from the sandstone aquifer. It should also be noted that in many areas, aquifers may or may not be considered as sensitive. This designation typically relates to the nature of the confining conditions, or to the presence of saline water below the aquifer. It is important to note that sensitivity does not mean that an aquifer can not be safely and effectively developed for use.

The water rights licensing process is available to all landowners (or entity having legal right of access to the property) for any type of proposed water use meeting the requirements (MCWS, 2013). In this process, a Groundwater Exploration Permit is obtained from the province prior to starting any of the investigation. A number of clauses and requirements are detailed in the GEP application. During the permit application, the final water use volume does not have to be determined at the time of application. In many cases, the volume may not be known, or testing may be required to determine the final volume. In all cases, the application would simply include an estimate of the maximum flow rate of testing that may occur on the site. It is often not possible to determine the final allocation before testing.

Once the permit has been applied for and approved by the province, the exploration program would start. Most GEP's require that the exploration work be supervised by a hydrogeological engineer or hydrogeologist registered with Engineers Geoscientists Manitoba. Hydrogeology is an engineering discipline that is regulated by the Professional Engineering and Geoscientific Act in the Province of Manitoba. If the test work is successful, the landowner will provide a final requested volume total for the testing, and the hydrogeologist/hydrogeological engineer will supervise the testing and prepare a report for submission to the province for review. If the report is suitable, the province will issue a license for the requested volume that has been tested and determined by the hydrogeologist.

It should be noted that the Water Rights Act is not subject to a public review process. The departmental hydrogeology staff review the applications and issue licenses under the authority provided to them under the Act. It is also important to note that groundwater in Manitoba is not owned by the residents in any area, or the RM that the aquifer happens to be present under.

7.1 EXISTING WATER RIGHTS LICENSES – RM OF SPRINGFIELD

The RM of Springfield currently holds one Water Rights licence for the Oakbank and Dugald water supply (Moosenose and Dugald well fields), and a separate licence for the Anola municipal water supply. Copies of the current licences are included in Appendix B.

7.1.1 Licence No. 2019-107 - Dugald and Moosenose Well Fields

A new Water Rights Licence (No. 2019-107) was issued for the entire Oakbank-Dugald municipal system, which includes both the Moosenose wellfield at NE30-11-5E, and the Dugald wellfield at SW32-10-6E.

The licence noted the following conditions:

- Total annual allocation of 646.6 dam3/year (524.20 acre-ft./year).
- Maximum instantaneous flow rate of 0.1320 m3/second (2,091 U.S.G.P.M.).
- Operation of supply wells only permitted while aquifer water levels are above the bottom of the well casing in each supply well.
- License valid until September 20, 2036.

It should be noted that the Water Rights Licence (2019-107) does not specify allocations or pumping rates between the two wellfields. However, based on the above information, the new Dugald wellfield was inferred to have the following operating parameters.

- Total annual allocation: 323.3 dam^3/year (262.1 acre-ft./year).
- Maximum instantaneous flow rate: 0.071 m^3/second (1,125 U.S.G.P.M.). This rate equates to 562.5 U.S.G.P.M. (35.5 L/s) per well.

7.1.2 New Water Rights Application - 2024

Friesen Drillers submitted an application for a Groundwater Exploration Permit (GEP) in January 2024. The application requested an expanded groundwater diversion allocation of up to 1,297 acre-feet/year (1,600 dam^3/year), although it was acknowledged that this estimate could change based on the testing and analysis. A GEP was issued by MECC–WULS on January 25, 2024.

A number of conditions were noted on the permit, which corresponded with the defined scope of work for the hydrogeology project. The authorization permit allowed for the testing of the wells under the supervision of a consulting hydrogeologist or hydrogeological engineer licensed with Engineers, Geoscientists Manitoba (EGM).

A copy of the GEP application and subsequent authorization is attached as Appendix C.

7.2 ENVIRONMENT ACT LICENSE

In the event that a requested groundwater supply exceeds 200 dam^3/year, a Class 2 Environment Act License is required under the Environment Act of the Province. The current proposed expansion of the Dugald well field up to 1,600 dam^3/year would require a new Environment Act License application.

When a new water supply is developed which exceeds the requirement, or an existing water supply that already exceeds the requirement is modified, an Environment Act Proposal is prepared by the proponent for the project. This proposal usually involves the identification of any potential environmental effects from the water supply diversion. The proposal usually identifies potential third party impacts and possible effects. Mitigation measures are usually proposed and evaluated. The proposal is usually advertised for public comment and review. Often times, environmental groups and organizations review these proposals to ensure that environmental effects are taken into consideration. In the event that there is a significant amount of public opposition to a potential project, the Minister of may order the Clean Environment Commission to hold public hearings to review the project and the proposed concerns. Although these public hearings are rare, they have been held for water supply projects in Manitoba in the past.

Copies of Environment Act Proposals are also submitted to various organizations within governments for comments and review. Often, water supply proposals involving groundwater use are reviewed by the Provincial Groundwater Management Section. If the environmental impacts are deemed to be minor, or the

mitigation proposals are acceptable, the director will issue an Environment Act License for the development or project.

The requirement for environment act assessments for water supplies was put into force in the mid 1990's. As a result of this requirement, several water supply systems that did not originally obtain an Environment Act License would be requested to undertake this aspect upon a request for additional groundwater use allocation.

8 SITE SETTING

The communities of Dugald and Oakbank are located east of the City of Winnipeg along Provincial Trunk Highway 15. Due to their close proximity to the city, and the strong agriculture industry in the area, the town has experienced one of the fastest growth rates in the province. As noted, significant growth has been experienced largely as construction of residential housing.

The Oakbank/Dugald area lies firmly within the Red River Drainage Basin. Typically, surface drainage is directed towards the Red River and Red River Floodway which flows through Winnipeg, into the Lake Winnipeg system, and ultimately discharges into Hudson's Bay. The climate in the area is continental and shows typical variability of seasons and precipitation. According to Environment Canada, precipitation is around 500 to 525 mm/year, although it has been noted to be increasing over the last 40 years (Environment Canada, 2024). The average temperature in southern Manitoba is about 3.3 degrees Celsius (Environment Canada, 2024)

Surface drainage in the area is typically directed to the major ditching, which directs flows to the river. Several small surface water features drain the area, the largest of which is Cooks Creek, which extends in the north-south direction approximately 300 m (~1,000 ft) to the east of the eastern most production well. The area is generally of low topographical relief with the exception of the Birds Hill glacial features located northwest of Oakbank.

The proposed well site lies four miles east and two miles south from Dugald, at the intersection of Poplar Road and Mission Road, in what is predominantly an agricultural/rural area.

Surrounding the proposed well-field testing area, the following land use is present:

- North: Agricultural lands and rural residential properties. A Manitoba Hydro power transmission corridor extends east-west immediately north of the new well sites. The existing RM supply wells are located one mile to the north.
- East: Cooks Creek, agricultural lands, and rural residential properties.
- South: Agricultural lands and rural residential properties. The City of Winnipeg water supply aqueduct lies about one mile south.
- West: Rural residential properties and agricultural lands.

The proposed well location is shown as Figure 3.

Figure 3 – Existing and Proposed Wellsite Locations

(Source – Google Earth, 2024)

9 REGIONAL GEOLOGY

9.1 BEDROCK GEOLOGY

The RM of Springfield, situated on the eastern fringes of the Western Canadian Sedimentary Basin (WCSB), comprises a large area that is geologically complex. The WCSB is a widespread wedge shaped sedimentary basin, the extent of which is shown in Figure 4.

The WCSB extends throughout the central Canadian plains and underlies about 1.4 million km^2 (Alberta Geological Survey, 2009). The basin extends north into the Northwest Territories, west to the eastern flanks of the Rocky Mountains, and east into central Manitoba. A large portion of the basin extends across the international border into the northwest United States.

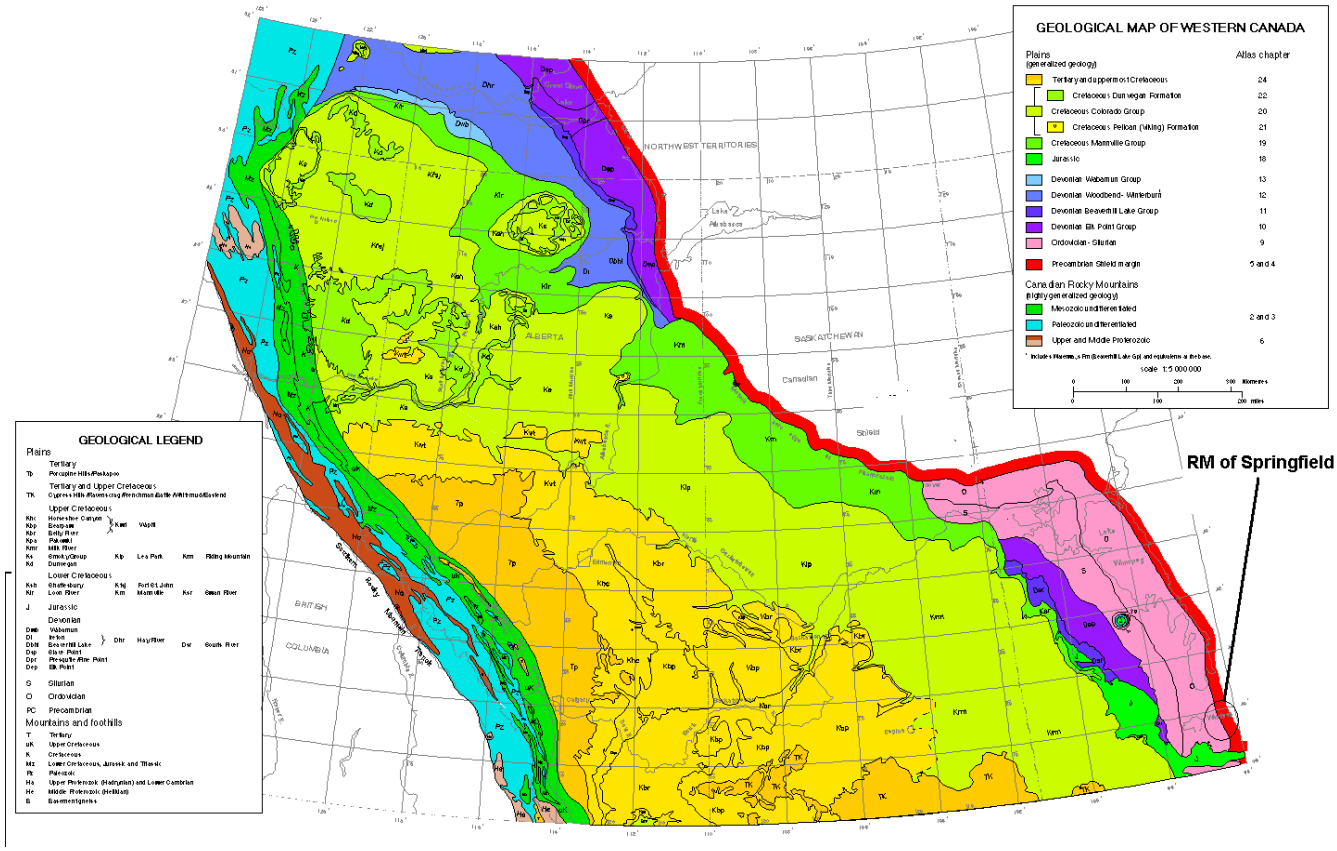
Precambrian igneous and metamorphic rocks form the basal geologic unit across the WCSB. Within the RM of Springfield, there have been few test holes completed into the Precambrian, due to the depths present, and the availability of groundwater in the overlying sedimentary bedrock. Figure 5 shows the general stratigraphy across southeastern Manitoba. Through a review of the available three-dimensional geological mapping completed by the Manitoba Geological Survey (MGS), Precambrian bedrock is expected to lie at a depth of about 570 feet in the western portions of the RM, to 270 feet in the east (Matile and Keller, 2011). A weathered, mafic volcanic breccia forms the upper surface of the Precambrian (Bezys, 1992).

Immediately overlying the Precambrian surface is the Ordovician basal clastic Winnipeg Formation. The Winnipeg Formation is composed predominantly of weakly cemented marine silica sandstones with some interbedded marine shales (McCabe, 1978). The Winnipeg Formation follows an approximate westerly dip of

30 feet per mile towards the centre of the basin (McCabe, 1978). In the RM of Springfield area, the sandstone sequence is approximately 50 to 75 feet in thickness. The Winnipeg Formation contains an anomalous thickening of the sequence which is known as the Carmen Sand. Generally, the formation is very poorly cemented across the southeast, which has resulted in collapsing conditions within the borehole. A major factor for the hydraulic conductivity of the sandstone is the extent of cementation, which is generally not well studied. The cementing materials include carbonate, silica, iron oxides, iron sulfides, gypsum and kaolinitic clay (McCabe, 1978). Betcher et al. (1995) note that the sandstone transforms conformably into the overlying interbedded marine shales, which act as a highly effective aquitard between the basal clastic Winnipeg Formation and the overlying Ordovician carbonate bedrock.

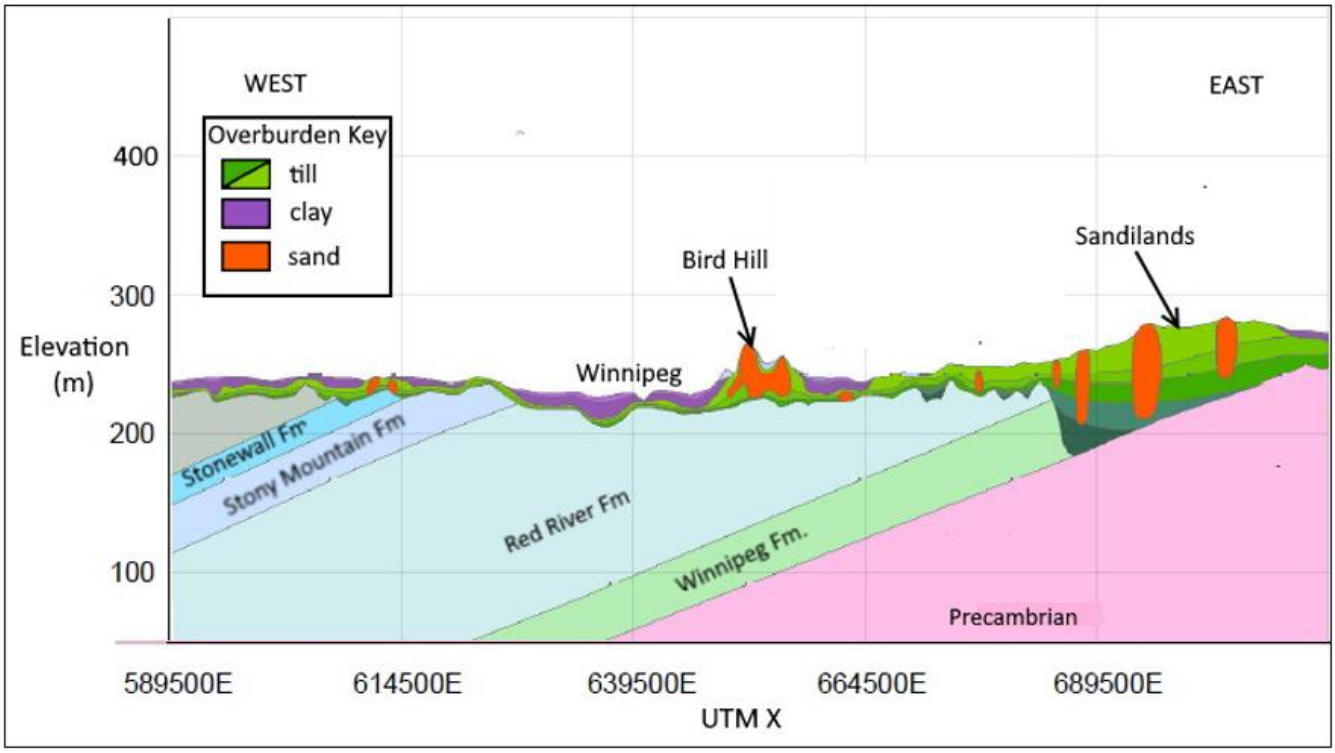
Overlying the Winnipeg Formation sandstone is a thick sequence of sedimentary rocks which compose the bulk of the WCSB. The formations within the WCSB slope to the west, towards the centre of the basin. The sedimentary rocks within the RM of Springfield are Paleozoic in age and were deposited between about 438 to 505 million years before present (Freeze and Cherry, 1979). The Ordovician Red River Formation forms the main sub crop throughout the RM of Springfield. It is composed of mottled dolomite at the base topped by carbonate-evaporite cycles, although subsequent evaporite solution has obscured the full carbonate-evaporite cycle in the area (MB Energy and Mines, 1998). The Red River Formation is weathered to variable degrees, containing both zones with minor fracturing and zones with extensive fracturing and solution cavities (Render, 1970).

Figure 4 - WCSB showing location of RM of Springfield.



(Source - Alberta Geological Survey, 2009)

Figure 5 – Geological Cross-section



(Source – Matile and Keller, 2012)

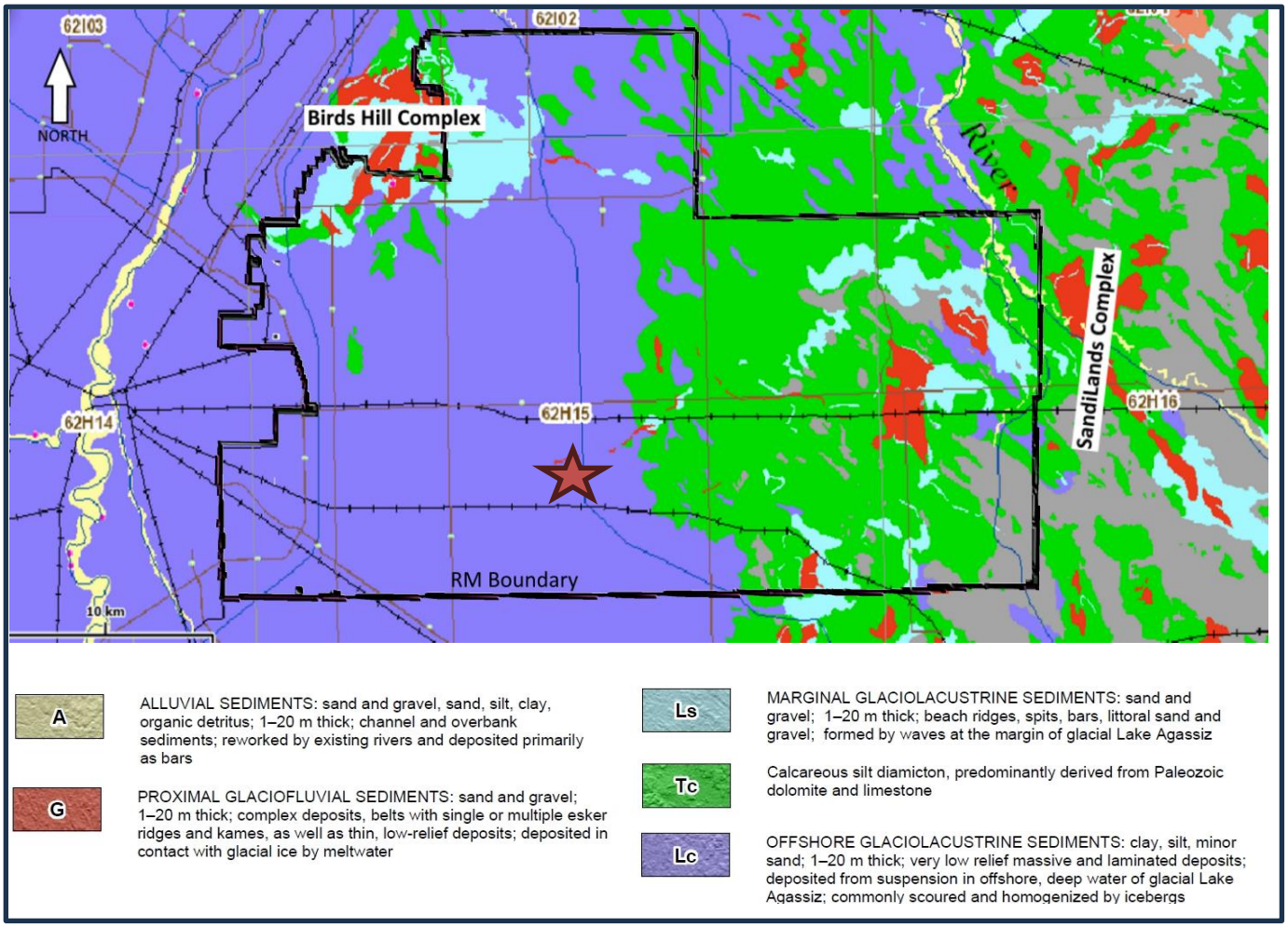
9.2 SURFICIAL GEOLOGY

The surficial geology within the RM of Springfield is composed predominantly of Quaternary clay and till material with local deposits of sand and gravel. The sediments have been fairly well studied and mapped in the region (Matile and Keller, 2004). Figure 6 illustrates the distribution of the surficial deposits in the region including the RM.

Previous work on the quaternary geology of southern Manitoba have outlined a detailed history of glacial activity in the region (Teller, 1976). Several episodes of glacial advance and retreat, along with proglacial lakes have resulted in the general distribution of sediments observed today. Towards the east of the region, extensive deposits of glacial till (diamicton) with scattered glaciofluvial sand and gravel form a regional upland area.

The upland area slopes towards the west and transitions into a low relief landscape composed predominantly of lacustrine clay material. At the northwest extent of the RM lies the Birds Hill Glaciofluvial Complex. This glacially deposited feature is composed of a complex assortment of silts, sand, gravel, till and clay material deposited within a depression in the upper surface of the carbonate bedrock (Render, 1986). The geology and hydrogeology of the Birds Hill complex is discussed further in subsequent sections of this report.

Figure 6 – Surficial geology of the RM of Springfield.



(Modified source – Matile and Keller, 2004)

10 REGIONAL HYDROGEOLOGY

10.1 BEDROCK AQUIFERS

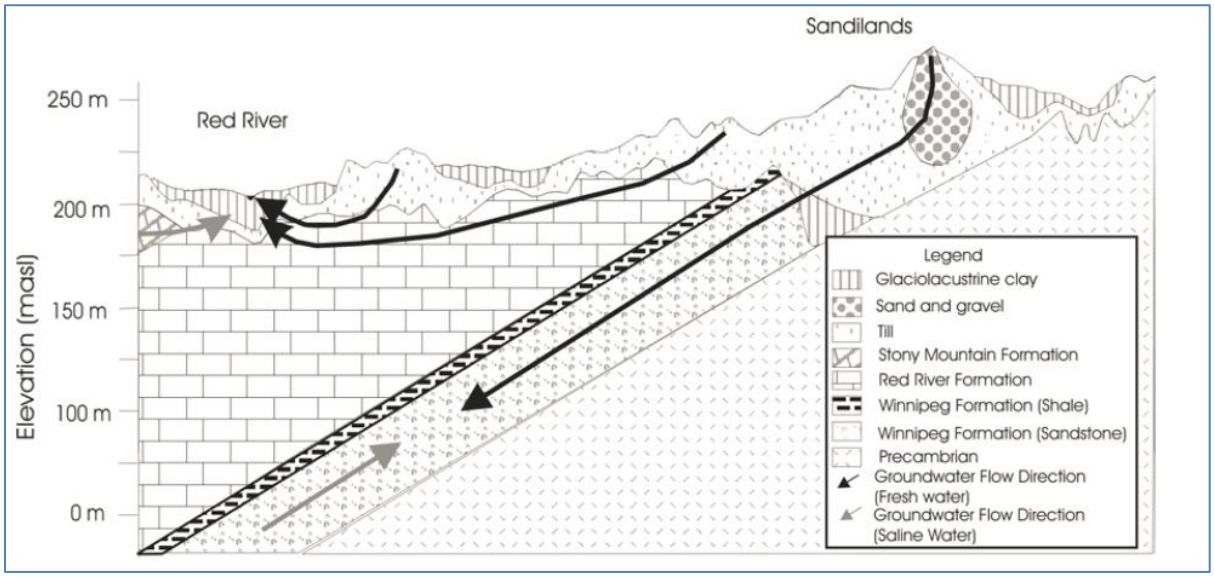
Two major aquifers underly the Springfield region: The Carbonate Aquifer System (Carbonate), and the Winnipeg Formation Sandstone Aquifer (Sandstone). The Carbonate Aquifer forms the most geologically extensive and widely developed groundwater source in Manitoba, especially in the southeast and Interlake regions of the Province (Betcher, et al., 1995). The Red River Formation (RRF) composes the main carbonate aquifer unit in the RM of Springfield. Due to the slope of the WCSB, the RRF has a greater thickness towards the western boundary of the RM, where it has a total thickness of about 350 feet. Towards the east, the formation gradually pinches out. The carbonate rock generally has very poor primary porosity of less than 1.0 % (Render, 1970). The main porosity within the carbonate bedrock occurs within the secondary joints, bedding planes, fractures, and karstic features that are extremely common in many parts of the carbonate bedrock (Render, 1970). Due to variability in the number, size, type and interconnected nature of the permeable features, well yields can vary substantially over relatively short distances depending on the fractures encountered while drilling the well.

The Sandstone Aquifer underlies the carbonate aquifer throughout the RM. The sandstone is generally well sorted and composed of very fine to fine grained, well rounded silica sand (Betcher, et al., 1995). The composition of the sandstone aquifer makes an assessment of the hydraulic conductivity, defined as the ease with which water can flow through the pore space, applicable. Unlike the carbonate aquifer which can only transmit groundwater through fractures, the sandstone aquifer is typically poorly consolidated and transmits groundwater through interstitial pore space. As a result, the hydraulic conductivity of the sandstone is relatively uniform at about 2.5 x 10^{-5} m/s and, given the relatively constant formational thickness, is generally expected to have a uniform value for transmissivity (Betcher, et al., 2008).

10.2 GROUNDWATER RECHARGE/DISCHARGE

Recharge to the aquifers occurs from a major sand and gravel moraine series that lies to the east, known as the Sandilands area. Within the Sandilands, coarse sands, gravels, silts and clays lie directly on the bedrock sub crop of both Paleozoic sequences. These highland moraines accept snow melt run off and rainfall and impose an elevated hydraulic head on the regional groundwater systems. The exact amount of groundwater recharge to the formations has not been determined by research. This recharge dynamic is presented in Betcher and Ferguson (2003) and shown as Figure 7.

Figure 7 – Schematic Groundwater Recharge Dynamics – Southeastern Manitoba.



(Source: Betcher and Ferguson, 2003)

The Birds Hill Glaciofluvial complex also forms a significant source of groundwater recharge to the regional aquifers (Render, 1970; Betcher, et al., 1995). Due to the highly permeable nature of the sands and gravels deposited in the area, captured precipitation has direct access to the carbonate aquifer (Render, 1970). Static water levels in the carbonate aquifer and overlying sands and gravels have been measured throughout the Birds Hill area by staff from MSD. This monitoring has concluded that groundwater mounding has occurred from the extensive recharge, which has resulted in radially outward flow within the carbonate aquifer from the complex. Overall, static water levels in the Birds Hill Glacio-Fluvial complex are quite a bit higher than that of the carbonate aquifer, and generally follow the local surface relief. In some locations, the water level may be at or above grade, resulting in seepage onto the ground surface.

Groundwater discharge in the area occurs through a variety of means. The carbonate aquifer is known to discharge into the Red River Floodway, and into other creeks, drains and streams. There is also evidence to suggest that some groundwater is discharged into the Red River near the City of Winnipeg. In addition, a

significant amount of groundwater likely discharges into Lake Winnipeg (Betcher et. al., 1995). Further, extensive domestic, agricultural and municipal groundwater well consumption occurs on the aquifer. Groundwater discharge in the Winnipeg Formation occurs predominantly through domestic, farm and municipal well pumping, and basal discharge into Lake Winnipeg.

10.3 POTENTIOMETRIC SURFACE AND GROUNDWATER FLOW

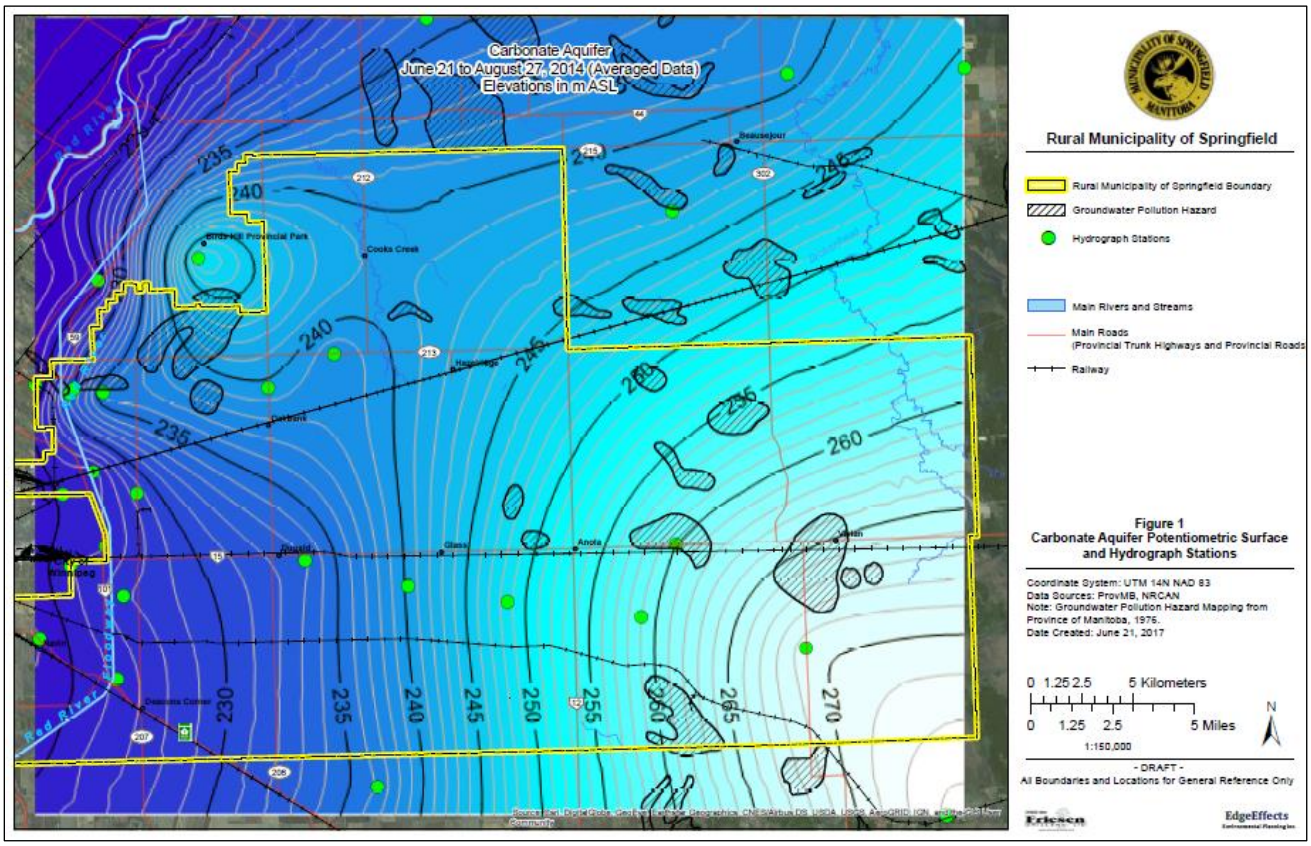
Groundwater flow in both the sandstone and carbonate aquifers is from east to west in the Springfield area. The potentiometric surfaces in the carbonate and sandstone aquifers within the Springfield area are shown as Figures 8 and 9 It is evident from these figures that groundwater flow directions and hydraulic heads are similar in both formations.

Groundwater flow in the Winnipeg Formation sandstone is through the weakly cemented, poorly consolidated quartzose sandstone. The thin marine shale sequence acts as an aquitard between the sandstone and carbonate aquifers.

The hydraulic gradient in the carbonate aquifer in the Springfield area was determined to be about 8.49 x 10^{-4}. The flow direction in the sandstone was determined to be almost the same, with a similar gradient.

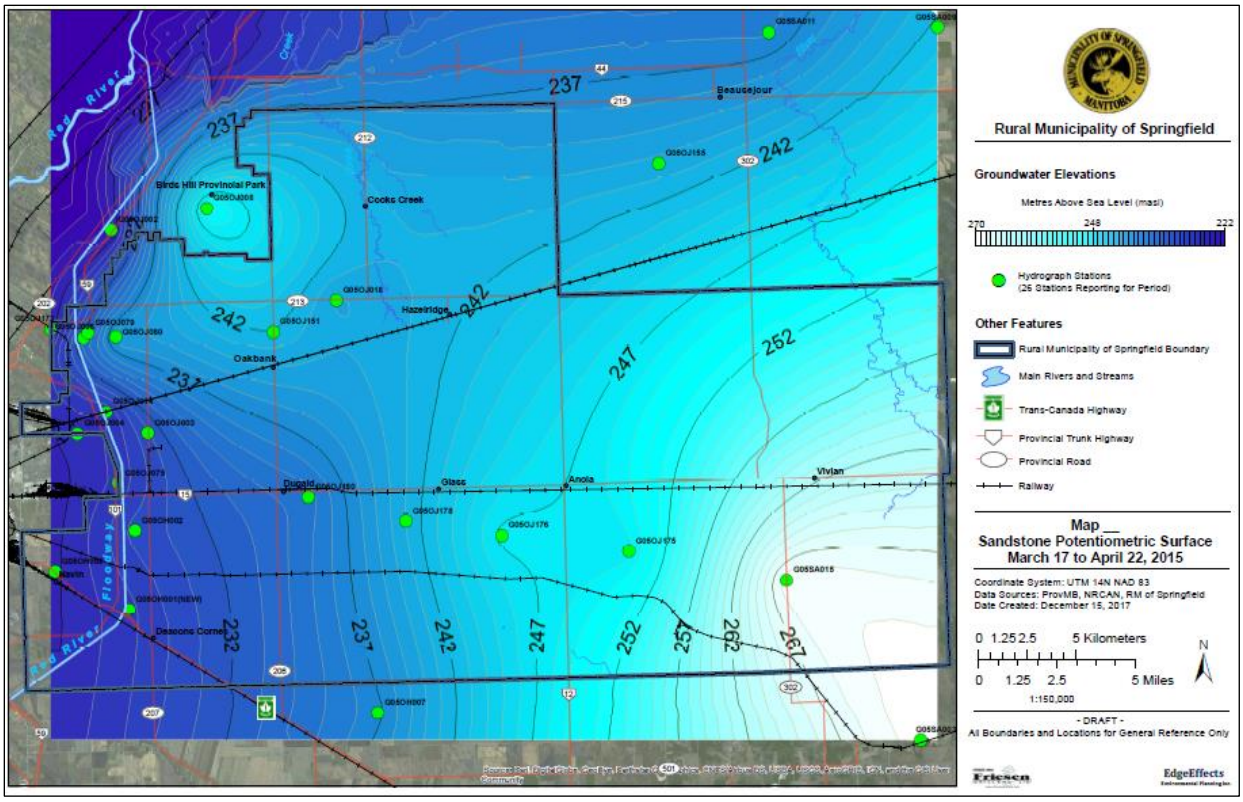
The carbonate bedrock in the southeastern area of Manitoba generally has a high permeability, with transmissivity values ranging from 30,000 to 150,000 U.S.G.P.D./ft. Due to the fractured rock nature of the aquifer, the permeability varies substantially with distance. Wang et al. (2008) determined the hydraulic conductivity of the Winnipeg Formation Sandstone to be about 2.38 x 10^{-5} m/s. Assuming about 100 feet on average for a formation thickness, the transmissivity was estimated to be 5,000 U.S.G.P.D./ft. on average.

Figure 8 – Groundwater Flow in the Carbonate Aquifer – RM of Springfield.



(Data source: Hydata, 2018)

Figure 9 – Groundwater Flow in the Sandstone Aquifer – RM of Springfield.



(Data source: Hydata, 2018)

10.4 HYDROGRAPH REVIEW

In order to review the regional groundwater flow directions and the long-term response in the carbonate and sandstone aquifers over the last 50 years across the Springfield area, many hydrograph stations were accessed for potentiometric elevations. The provincial stations within the RM are provided in Table 1. The locations of the observation wells are shown in Figure 10.

The majority of groundwater development in the RM occurs along the western boundary with the City of Winnipeg. This includes the Red River Floodway, the Navin Road area, The Springfield industrial area, and the towns of Dugald and Oakbank. This corridor also contains the greatest density of carbonate aquifer hydrograph observation stations.

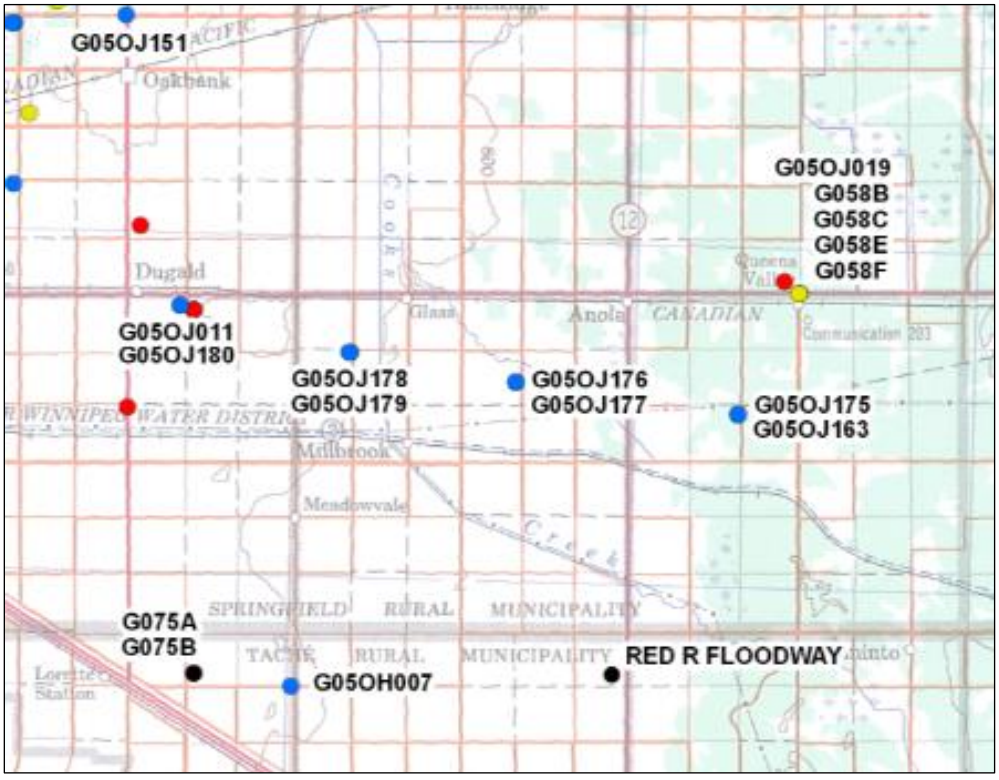
Total annual precipitation data has been recorded in the region since the late 1800s. A plot of total annual precipitation for the Springfield region is shown as Figure 11. The precipitation record is much longer than the period of observation for groundwater monitoring, which began in the Springfield area in the early 1960s. The average long term (1875-2023) annual precipitation for the Springfield region was 544 mm (Environment Canada, 2024). The lower image in Figure 11 shows precipitation data plotted as deviation from mean, with a plot of the rolling 5, 10 and 20 year average to illustrate the fluctuations in precipitation levels over time.

It is apparent from Figure 11 that annual precipitation has been above the long term average since about 1990. A trend of increasing precipitation is apparent from the early 1990s, with an average of 620 mm/year over the most recent 25-year period. It is also apparent that annual precipitation is cyclical, with highs and lows in the 5 year rolling average on a roughly decade scale. The range in total annual precipitation is fairly significant, with some years having more than 800 mm and others less than 400 mm.

Table 1 - Provincial Monitoring Stations

Table 1 Hydrograph Stations near Dugald/Glass				
No.	**Station Identifier**	**Location**	**Start Year**	**Aquifer**
1	G05OJ011	NW35-10-5E	1963	Carbonate
2	G05OJ163	NW21-10-7E	2000	Carbonate
3	G05OJ175	NW21-10-7E	2006	Sandstone
4	G05OJ176	SW26-10-6E	2006	Sandstone
5	G05OJ177	SE26-10-6E	2006	Carbonate
6	G05OJ178	SW32-10-6E	2006	Sandstone
7	G05OJ179	SW32-10-6E	2006	Carbonate
8	G05OJ180	NW35-10-5E	2006	Sandstone

Figure 10 – Provincial Observation Well Locations.



Legend: Blue – active; Yellow – Inactive; Red – Sealed; Black - Unknown (Source – Hydata, 2014)

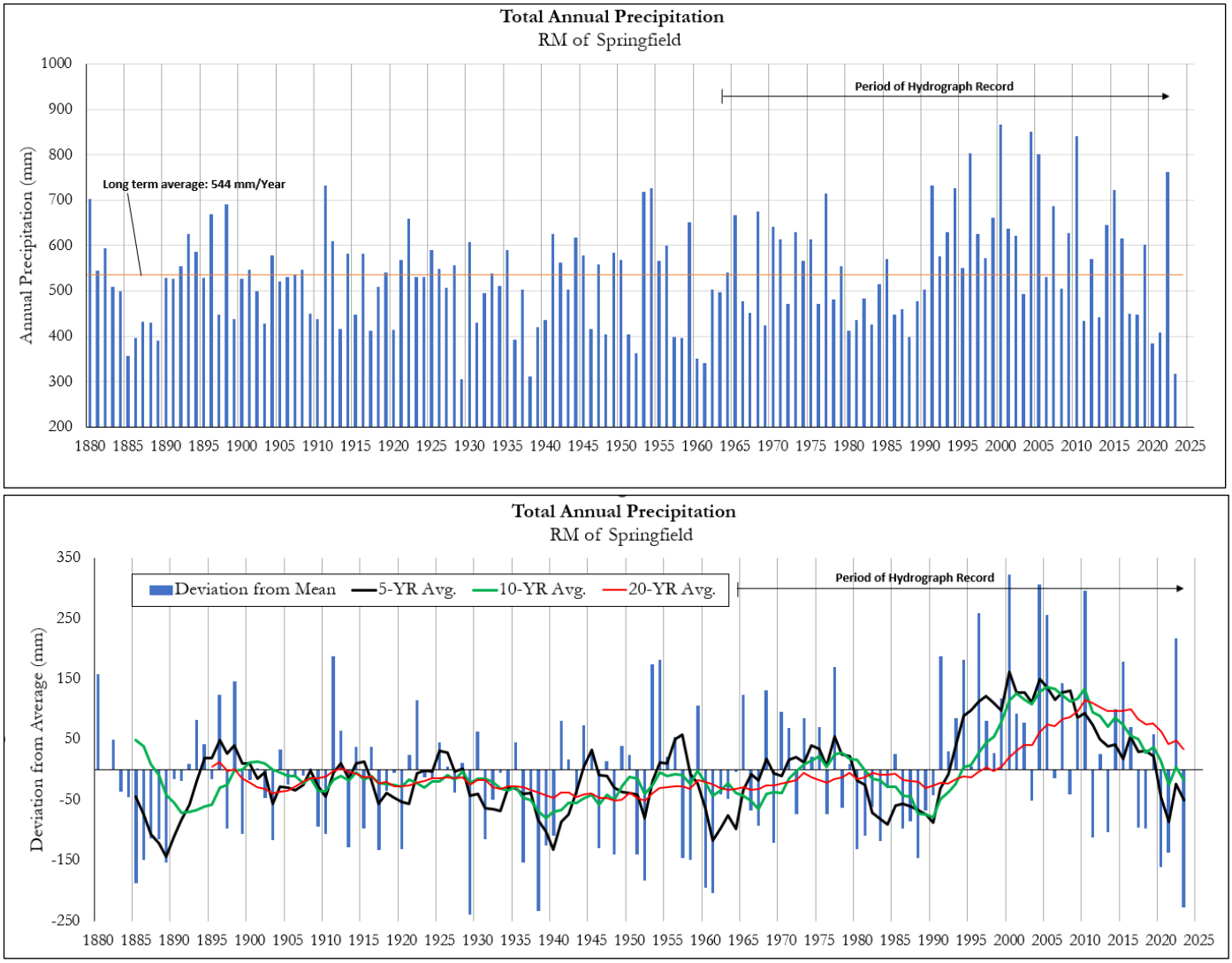
The longest running hydrograph charts are located near the Red River Floodway within the RM of Springfield. These sites report about 10 to 15 feet of static water level decline after the initial construction of the floodway in the mid 1960's to the mid 1990's. Static water levels were noted to steadily decline until gradual stabilization around the 1990's, when a new "state of nature" was noted to occur. This trend was apparent from station G05OH007 which is shown as Figure 12. The carbonate aquifer was discharging into the floodway low flow

channel during this period, which still continues to this day to some extent. Following major event, water levels were noted to be relatively stable, with normal seasonal and climatic variations occurring. The aquifer responds reasonably quickly to spring recharge.

In 2006/2007, the province began investigating groundwater resources in the southeast. A number of hydrograph stations in the carbonate aquifer were twinned with stations in the Winnipeg Formation (Figure 10). Provincial stations OJ178/OJ179 are located one mile north of the proposed new Springfield production wells. A hydrograph plot from these two stations is shown in Figures 13 and 14.

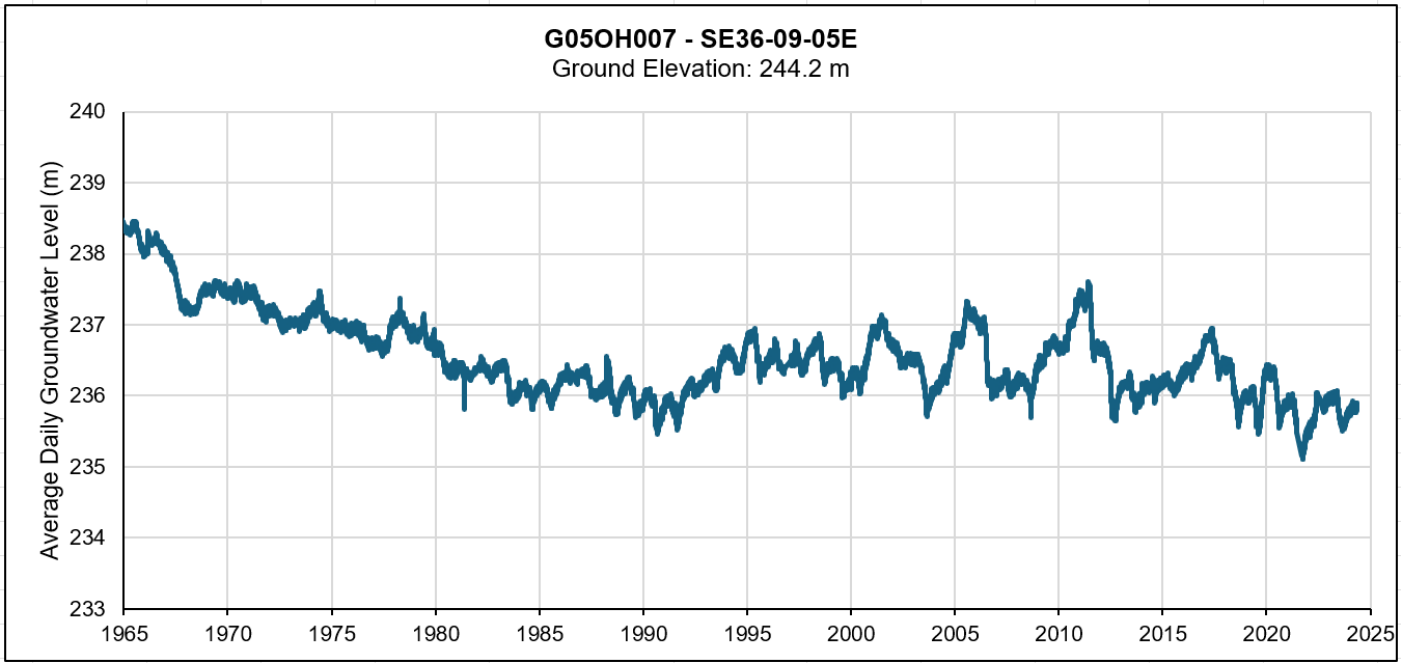
It is apparent from Figures 13 and 14 that groundwater levels fluctuate regularly based on seasonal and climatic influences. The total range of water level fluctuations measured during the observation period was approximately 8.4 ft. (2.5 m). Groundwater levels and fluctuations are noted to be similar between the carbonate and sandstone aquifers. Groundwater elevations in the area are shown to be relatively close to the surface. The deepest static water level recorded in the carbonate and sandstone aquifers was 11.2 and 9.2 ft. below grade, respectively. Overall, the local groundwater level in the sandstone aquifer appears to be approximately 0.5 feet higher on average than that of the carbonate aquifer (Hydata, 2018).

Figure 11 – Long Term Total Annual Precipitation – RM of Springfield.



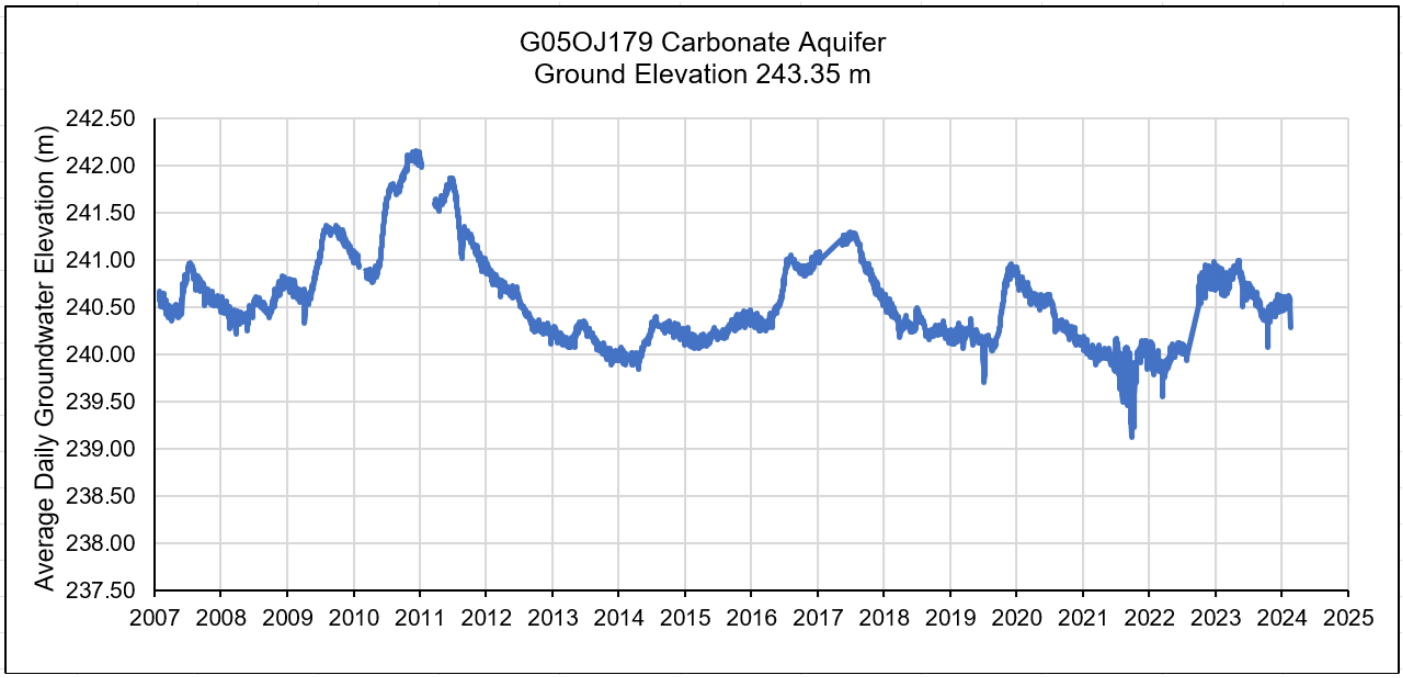
(Data source – Environment Canada, 2024)

Figure 12 – Long Term Hydrograph Plot – G05OH007 - Carbonate Aquifer.



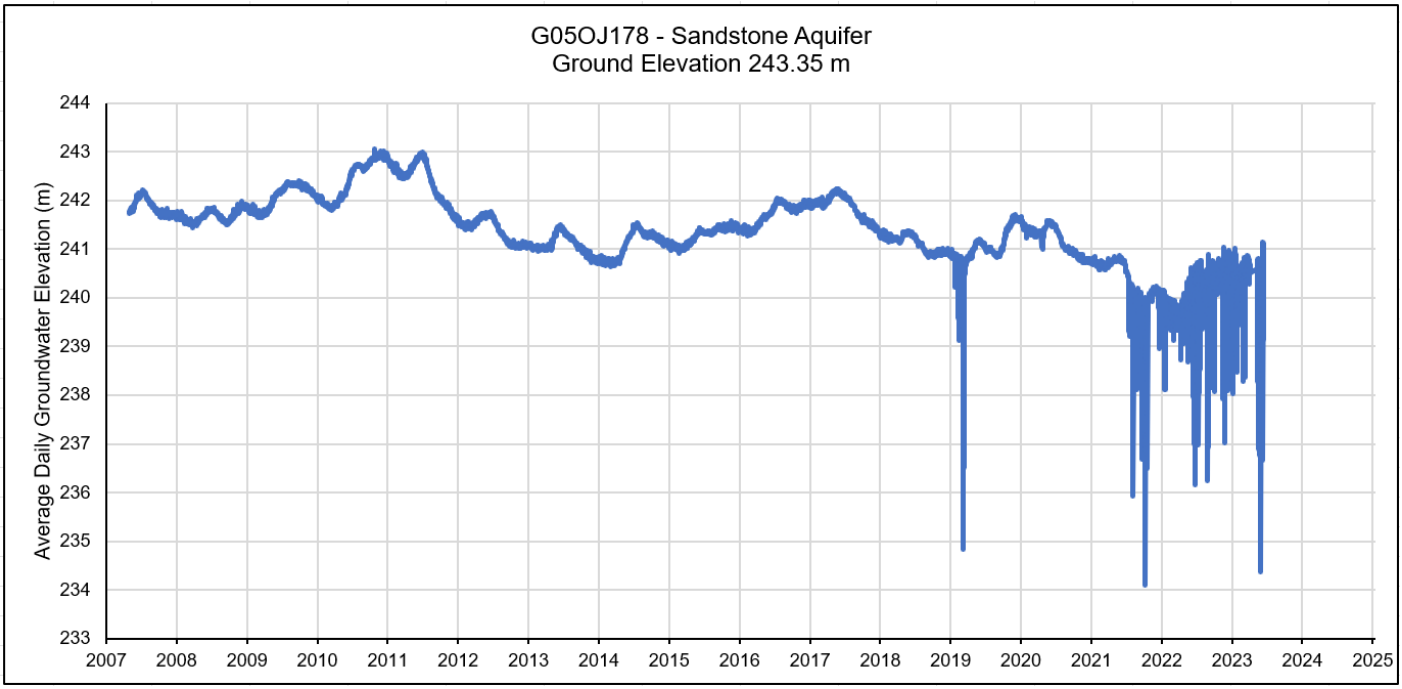
(Data source – Hydata, 2024)

Figure 13 – Hydrograph Plot G05OJ179 - Carbonate Aquifer



(Data source – Hydata, 2024)

Figure 14 – Hydrograph Plot G05OJ178 - Sandstone Aquifer



(Data source – Hydata, 2024)

10.5 Interconnection of Regional Aquifers

Inter-formational flow between the Carbonate and Sandstone Aquifers has been of considerable interest in the area (Betcher, 1986). As stated previously, the thin marine shale sequence overlying the sandstone is thought to be a highly effective aquitard, thereby isolating the two units. Betcher (1986) suggested the significant geochemical differences between the two formations as evidence of the effectiveness of the aquitard. In the Winnipeg area, the Winnipeg Formation shale separates the saline/brackish glaciogenic groundwater of the formation with the overlying freshwater of the carbonate aquifer.

It is highly likely that some fluid movement occurs through the Winnipeg Formation shale. However, applying the Ghyben-Herzberg relationship, the similar hydraulic heads between the two aquifers would be expected to yield little fluid transfer between the two formations. In reviewing the theory of saline/fresh water boundaries in porous media aquifers, we note the Ghyben-Herzberg relation, which states that in the event of a 1.0 foot drop in the static water level of an unconfined coastal aquifer, the saline water interface will rise approximately 40 feet (Freeze and Cherry, 1979). The extent of the fluid movement between the two formations across the Winnipeg Formation shale is not completely known at this time.

Betcher and Ferguson (2003) reported that in some parts of southeastern Manitoba, particularly near the City of Steinbach, interconnecting boreholes have resulted in localized losses in the naturally softened groundwater from the Winnipeg Formation and localized water quality changes in the carbonate aquifer. They further estimated that the volumetric discharge between the carbonate aquifer and sandstone aquifer is approximately 750 L/day (0.14 U.S.G.P.M) for every 1.0 meter (3.3 ft.) of head difference between the two aquifer formations, as shown in Figure 15.

In 2007, six new sandstone monitoring wells were installed within the RM of Springfield, as part of a larger groundwater investigation for the southeast. This program has allowed for water levels in the Sandstone to be compared with those in the overlying carbonate aquifer system. To review the difference in static water levels between the carbonate aquifer and the underlying sandstone aquifer, hydrograph records from stations

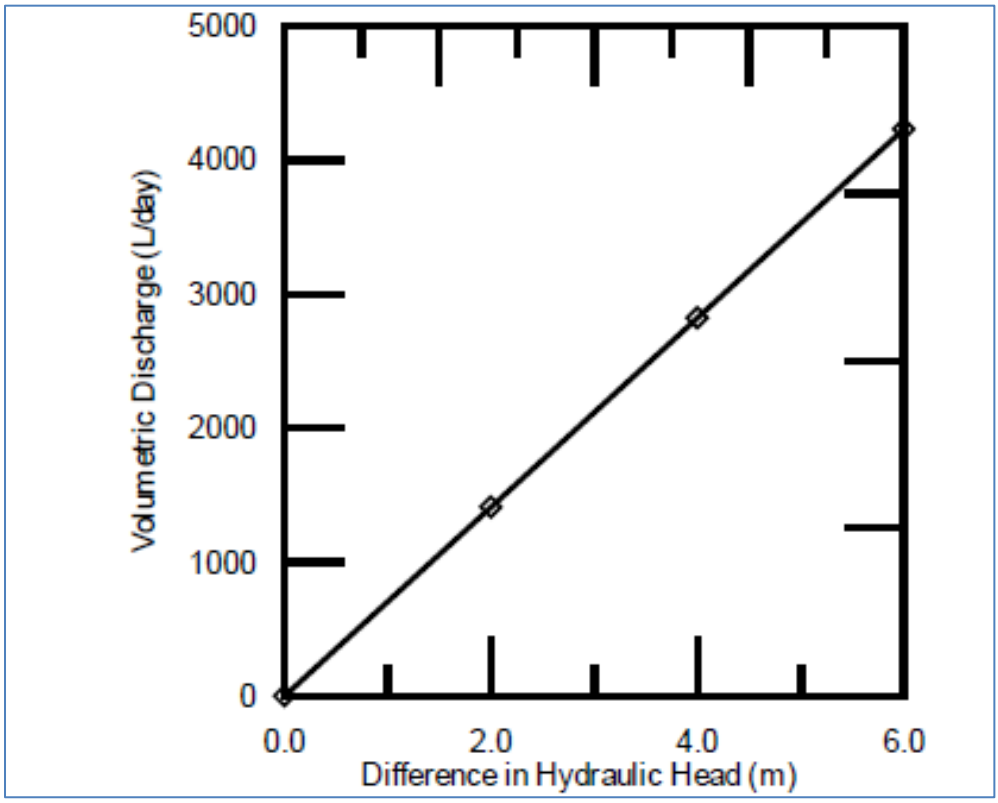
in both aquifers were plotted together. Figures 16 and 17 shows composite plots of two paired sandstone/ carbonate hydrographs in the western and eastern regions of the RM of Springfield.

The hydrograph records from both aquifers show nearly identical seasonal and yearly fluctuations in groundwater levels although the overall difference in head is shown to change throughout the RM. Within the eastern portions of the RM, the static water level in the carbonate aquifer is up to 12 feet above the static water level in the Sandstone. With increasing distance westerly from the Sandilands recharge zone, the head difference between the two aquifers gradually decreases. At the approximate location of Glass, MB, the static water levels in both aquifers are nearly equal. Westerly from Glass, the head difference between the two aquifers increases again, however with the Sandstone static water levels becoming increasing higher than the carbonate water levels. The water levels in the Sandstone are about 3 to 4 feet higher than the carbonate at the western extent of the RM.

In addition to the hydraulic relationship between the two aquifers, there is also a geochemical relationship. The testing conducted during this investigation provides further evidence of the relationship between the carbonate and sandstone aquifers which will be discussed in further detail in the following sections.

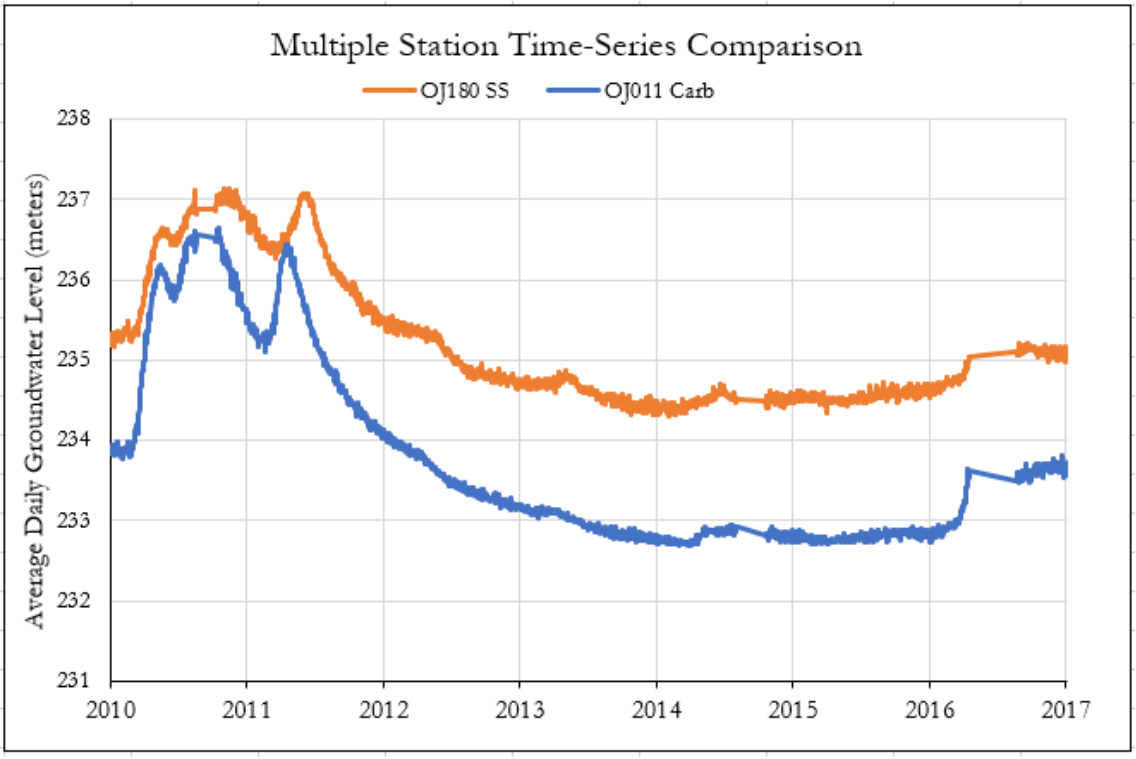
The difference in head between the carbonate and sandstone aquifers indicates the hydraulic gradient and the direction of groundwater flow between two units. The flow direction has implications for local aquifer hydraulics. In addition, the hydraulic gradient indicates which aquifer would be the site for inter-aquifer mixing. This can influence changes to the geochemistry of each aquifer and can have consequences for well design and groundwater resource development. A well connecting both aquifers in the east of the RM would result in carbonate groundwater mixing down into the sandstone aquifer. An interconnecting well in the west of the RM would result in sandstone groundwater flowing up and mixing in the carbonate aquifer.

Figure 15 – Volumetric Discharge between the Carbonate and Sandstone Aquifers



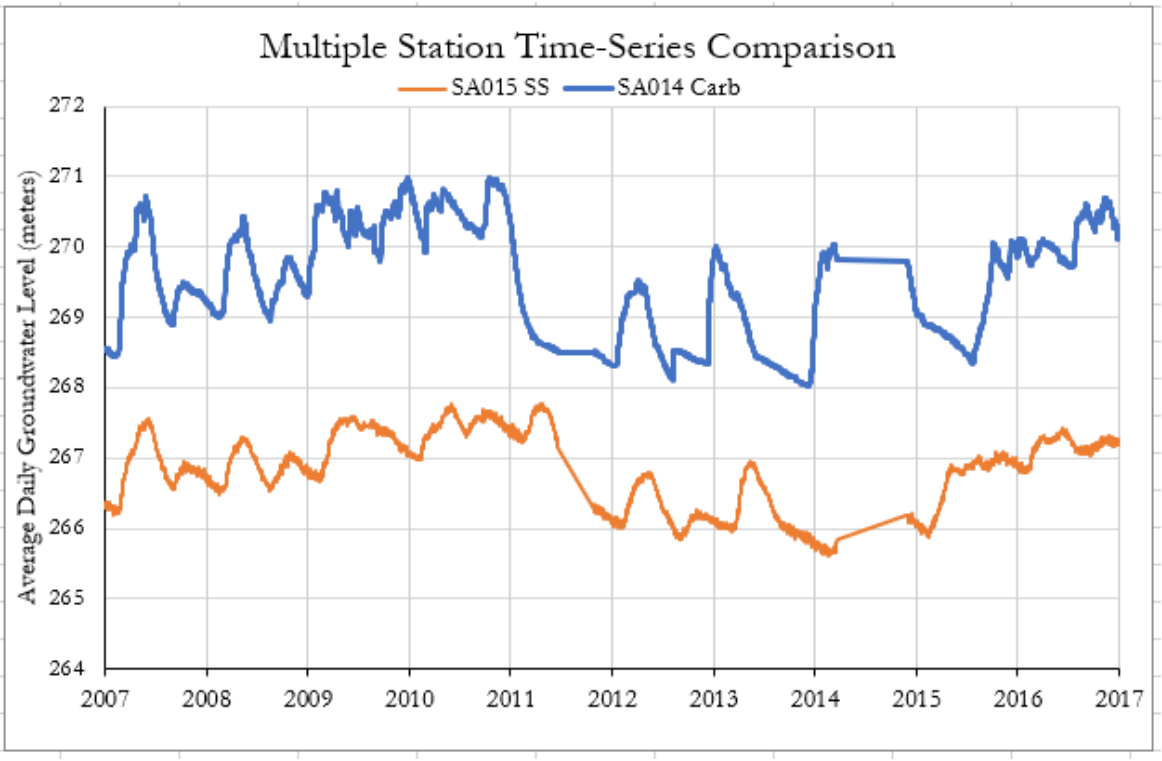
(Source: Betcher and Ferguson, 2003)

Figure 16 – Multi-station Hydrograph Comparison - West RM



(Data source: Hydata, 2018)

Figure 17 – Multi-station Hydrograph Comparison - East RM



(Data source: Hydata, 2018)

10.6 GROUNDWATER GEOCHEMISTRY

Groundwater geochemistry in the two bedrock aquifers in the southeast of Manitoba is complex. It has been proposed that both aquifers contained saline or brackish groundwater in the geologic past, prior to the start of the Pleistocene glaciations (Betcher et al., 1995; Ferguson et al., 2003). Due to the recharge dynamics of the modern moraine features, both aquifers began to receive a large annual influx of freshwater. The freshwater gradually formed a wedge in the southeast portion of the province.

To assess the regional groundwater geochemistry throughout the RM, groundwater samples from provincial hydrograph stations and municipal wells were reviewed. A summary of results is provided in Table 2. The major ion concentrations were plotted on a trilinear diagram, shown as Figure 18.

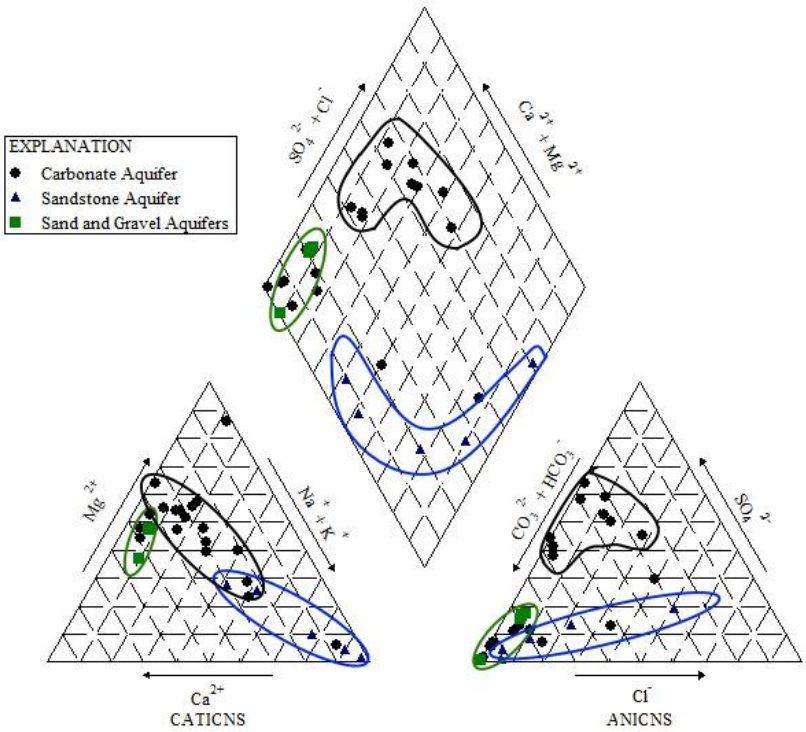
The geochemistry of each aquifer system is discussed in the following subsections.

Table 2 – Comparison of sandstone and carbonate aquifer routine geochemistry.

Table 2 Comparison of Carbonate and Sandstone Aquifers in the RM			
Parameter	**Carbonate Aquifer**	**Sandstone Aquifer**	**Sand & Gravel**
Calcium (Ca)	1.5-220 mg/L	6.7-46 mg/L	53-70 mg/L
Magnesium (Mg)	7.3-220 mg/L	1.8-24 mg/L	30-40 mg/L
Sodium (Na)	2.5-210 mg/L	65-380 mg/L	8.6-14 mg/L
Potassium (K)	1.1-12 mg/L	7.2-14 mg/L	2.3-3.5 mg/L
Bicarbonate (HCO_3)	200-680 mg/L	310-380 mg/L	270-350 mg/L
Chloride (Cl)	0.87-12 mg/L	12-310 mg/L	0.87-12 mg/L
Sulphate (SO_4)	5.8-970 mg/L	1.8-150 mg/L	1.6-49 mg/L
TDS	240-1,800 mg/L	270->2,000 mg/L	290-310 mg/L

(Data source – Hydata, 2014; Friesen Drillers, 2017)

Figure 18 – Regional groundwater chemistry - Carbonate, Sandstone, and Sand & Gravel Aquifers.



Note: The range of quality in the Carbonate, Sandstone, and Sand and Gravel aquifers is outlined in black, blue and green, respectively. (Data sources – Hydata, 2014; Friesen Drillers, 2017)

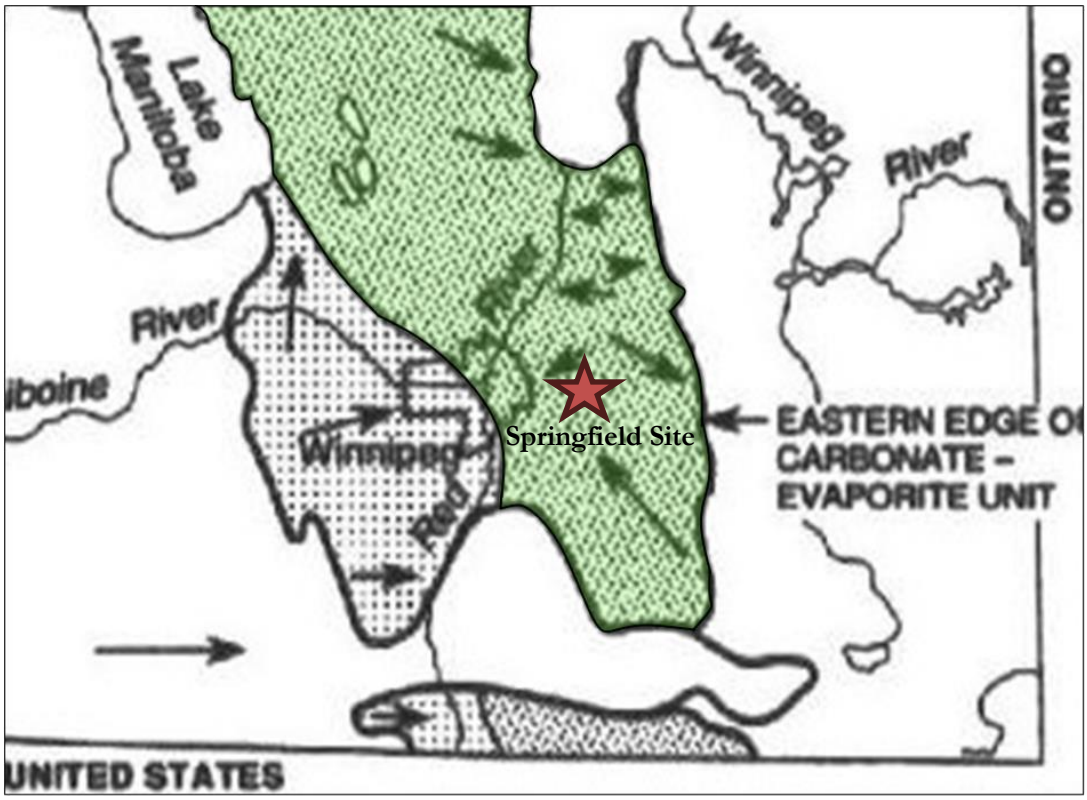
10.6.1 Carbonate Aquifer

Groundwater quality in the carbonate aquifer system is complex and is representative of the proximity to recharge areas. As groundwater flows away from the recharge areas, the amount of TDS increases in the form of sodium, potassium and sulfate and to a lesser extent, chloride (Betcher, et al., 1995). The ionic composition reflects a transition from subglacial recharge mixed with modern meteoric recharge to subglacial recharge mixed with older saline waters (Ferguson et al., 2003). The freshwater portion of the carbonate aquifer is shown in Figure 19.

Regionally, groundwater geochemistry ranges from good quality, Ca-Mg-HCO_3 type groundwater to poorer quality, Na-K-Cl/Sulfate type groundwater (Phipps et al., 2008). Better quality groundwater is generally located towards the south and east of the region and gradually deteriorates towards the north and west, as would be expected from the regional flow dynamics. Three types of groundwater are mapped within the RM. Most of the RM contains relatively good quality, Mg-Ca-HCO_3 type groundwater. The south central to western portions of the RM contain reasonably good Mg-Ca-HCO_3, SO4 type groundwater, and the southwest corner of the RM contains lower quality, Na, Mg, Ca-SO4, HCO_3, Cl type groundwater. Ionic concentrations in the groundwater generally increase down gradient, as the groundwater accumulates more dissolved components as it passes through the subsurface.

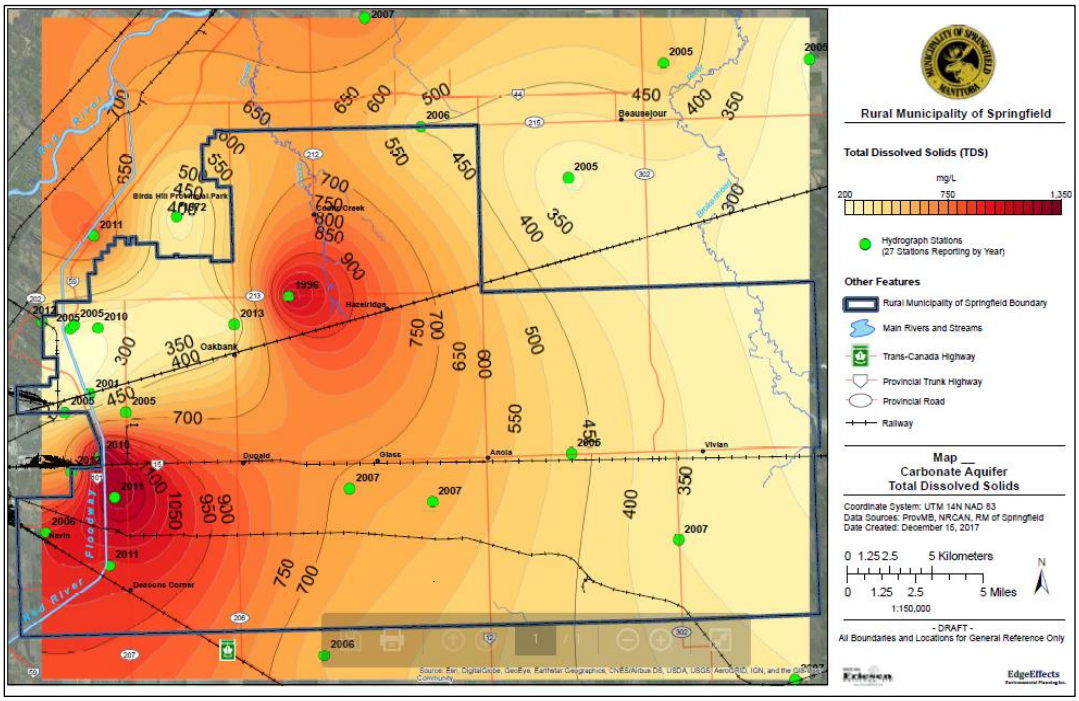
Groundwater quality is the poorest in western areas of the RM, along the Red River Floodway, where total dissolved solids (TDS) can exceed 1,200 mg/L (Hydata, 2014). A TDS map is shown in Figure 20. Around the Birds Hill Glacio-Fluvial complex, groundwater quality is somewhat improved with lower TDS content. Overall, post glacial water is actively moving through the system from east to west, and radially outwards from the Birds Hill complex (Render, 1970). This situation has developed a complex groundwater quality arrangement within the RM of Springfield.

Figure 19 – Freshwater Areas - Carbonate Aquifer



Note: freshwater areas shaded in green; saline areas are west of Red River; arrows indicate flow direction. (Source – Betcher et al., 1995)

Figure 20 – Total Dissolved Solids in the Carbonate Aquifer, RM of Springfield.



(Data source – Hydata, 2018)

10.6.2 Sandstone Aquifer

Similar to the carbonate aquifer, groundwater quality in the sandstone aquifer generally deteriorates towards the west (Betcher et al., 1995). A map of the freshwater area in the sandstone is shown in Figure 21. The flushing action of modern freshwater recharge through the aquifer has acted as a natural softening process in the Winnipeg Formation. However, the freshwater has not moved uniformly through the aquifer, as shown by Phipps et al, (2008). Three end-member groundwater types have been identified within the sandstone in southeastern Manitoba: basin brines, subglacial recharge, and modern recharge (Fergusson et al., 2003).

Sandstone groundwater is fresh at the southeastern extent of the RM, where it is composed of modern recharge. However, towards the north and west, the water quality becomes increasingly brackish, and composed of larger proportions of subglacial recharge. The saline/freshwater boundary represents the transition from subglacial recharge to increasingly saline waters. Betcher (1986) estimated that the location of the saline/freshwater boundary in the sandstone aquifer is dynamic and migrates northward at a rate of about 10 m/yr. It is not known if the water quality boundary continues to advance in the west.

Many wells have been drilled through the carbonate aquifer and left open into the underlying sandstone where the water quality is saline. Due to the borehole interconnection of the two aquifers, water quality in the sandstone may be affected by the overlying carbonate aquifer water. This has also caused some issues with contamination of the freshwater portion of the carbonate aquifer. Due to the interconnectivity of the aquifers in the Dugald and Oakbank areas, it has long been speculated that the water quality has changed in both aquifers.

Figure 21 – Winnipeg Formation Geochemistry

Note – Green shaded area contains TDS values less than 1 g/L (1,000 mg/L) (< 1 g/L is fresh); Springfield well site indicated by red star. (Modified source – Betcher, et al., 1995)

10.6.3 Nitrate

Another parameter of concern for groundwater quality is the concentration of nitrate, a common contaminant in groundwater. Sources of nitrate include leaching or runoff from agricultural and fertilizer use, sewage and manure, or as product of excess ammonia or nitrification (Freeze and Cherry, 1979). The recommended MAC for nitrate in drinking water is 10 mg/L (Health Canada, 2023). Bottle fed babies subjected to nitrate in groundwater above the recommended MAC are shown to have a higher risk of developing methaemoglobinaemia (blue baby syndrome) and thyroid gland problems (Health Canada, 2023). An elevated nitrate concentration in groundwater is a serious issue if the groundwater is regularly consumed in an untreated manner (Health Canada, 2023). The key problem with nitrate is that the mere presence indicates that groundwater in the area is interacting with surface activities, and a negative result is occurring (Freeze and Cherry, 1979). In addition, unlike bacteriological parameters, it is unlikely for nitrate to naturally attenuate in the subsurface and reduction of the concentration generally requires dilution. The concentration of nitrate in groundwater generally accumulates with time and can be challenging to address on a regional scale.

From the available data, nitrate concentrations within the RM are below the MAC and were below detection limits in most of the groundwater samples (Hydata, 2014). An exception is the area around Dugald, where station G05OJ011 (carbonate) has reported values as high as 4.23 mg/L (Hydata, 2014). It should be noted that the sandstone station at the same location reported nitrate concentrations of 0.54 mg/L (Hydata, 2014). In addition, stations located north of the RM boundaries have reported extreme nitrate values in excess of 19.0 mg/L (Hydata, 2014). The station farthest north within the RM is G05OJ164 (carbonate), has reported nitrate concentrations in the range of 2.5-3.5 mg/L (Hydata, 2014).

The full extent of the elevated nitrate is not known at this time for each of the reported locations. As the groundwater flow direction at the north of the RM is in the north/northwest direction, migration of any plumes towards the south and into the RM would be unlikely, as they would be against the natural hydraulic gradient. However, further monitoring and groundwater sampling should be conducted to characterize the nitrate concentrations in these areas.

10.6.4 Fluoride

In parts of southeastern Manitoba, fluoride above the MAC of 1.5 mg/L has been reported, especially in the sandstone aquifer, within the RM of Tache. Elevated fluoride concentrations in groundwater have also been observed within the RM of Springfield (Betcher et al., 2003). The closest provincial wells to the Dugald wellfield reported concentrations of 0.15 mg/L (Hydata, 2024). Groundwater samples collected previously from the Dugald municipal supply wells reported fluoride values of around 1.8 mg/L (Friesen Drillers, 2019).

The presence of the saline-freshwater boundary in the sandstone aquifer may have some influence on the increased fluoride concentrations (Betcher et al., 2003). Further, the underlying Precambrian rocks may also be a factor for fluoride concentrations in the sandstone aquifer.

10.6.5 Environmental Isotopes

During previous field investigations by the province, groundwater samples in southeast Manitoba were collected for the analysis of the stable environmental isotopes of ^{18}oxygen and deuterium. The ratios of the main isotopes that comprise the water molecule ($^{18}O/^{16}O$) and $^{2}H/^{1}H$ are important for hydrogeological investigations (Freeze and Cherry, 1979). The units are presented in delta (δ) units as parts per thousand or ‰, relative to standard mean oceanic water (SMOW) (Freeze and Cherry, 1979).

The isotopic composition of water dictates the freezing and vapour points, which leads to variable concentrations as a result of freezing, condensation, melting, and evaporation (Freeze and Cherry, 1979). As water is evaporated from the ocean, there is a decline in the ^{18}O concentration by a specific amount. As the vapor condenses, the precipitation has a higher ^{18}O concentration. This process continues as the vapor

moves inland and undergoes many cycles of condensation and evaporation. This fact makes deuterium and ^{18}O very useful for hydrogeological investigations, as the origin and mixing of different waters can be determined.

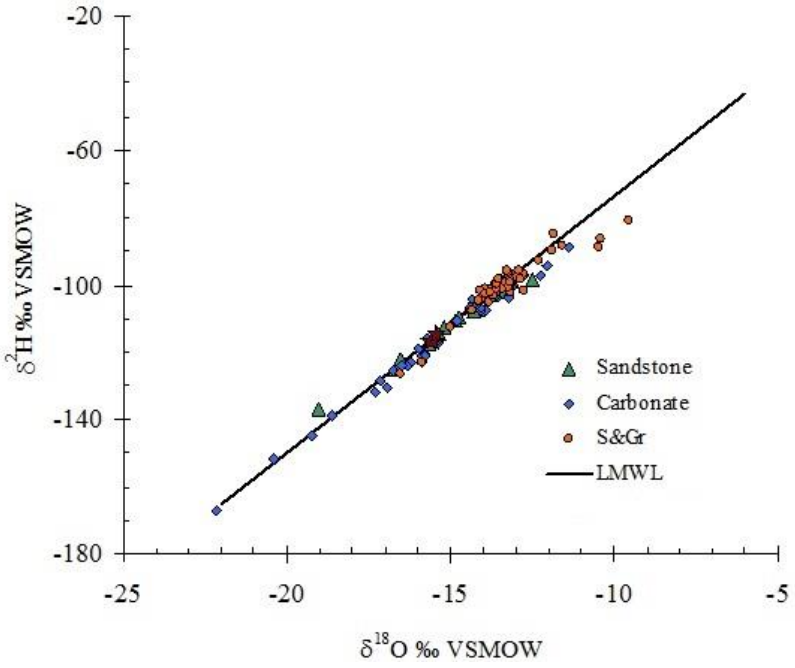
In order to determine the changes from local precipitation, deuterium and ^{18}O results are plotted to determine the local meteoric water line, which represents the typical concentration of modern precipitation events in the southeast. It should be noted that the term, meteoric water, refers to water which is derived from precipitation and includes water found at the surface and in the shallow subsurface, including rivers and lakes.

Phipps et al. (2008), conducted sampling of approximately 50 provincial monitoring wells in 2008, as part of the southeast groundwater study. These results were plotted against a local meteoric water line, which was determined to be $\delta^2H = 7.6 \cdot \delta^{18}O + 2.2$, which is the virtually the same as the local meteoric water line (LMWL) for the Gimli area (IAEA, 2012). This plot is shown as Figure 22. The various aquifers in the southeast are distinguished in the plot.

The reported values indicate a range in isotopic concentration. However, nearly all groundwater samples plot along the LMWL, which suggests the water has undergone little modification since falling as precipitation. There is an indication of a slight slope change resulting from snow melt infiltration at the upper ranges of the plot, where sample points follow an evaporitic trend line (Fritz & Clark, 1997). The evaporitic isotopic values are predominantly from samples collected from sand and gravel aquifers, mostly obtained from the recharge moraine area. It should be noted that highly depleted samples are shown to the left on the local meteoric water line, which indicate recharge under very different climatic conditions. This is likely hold over water from the Pleistocene glaciations .

The isotope results indicate that modern groundwater is generally found in sand and gravel aquifers and in the eastern portions of the bedrock aquifers. Groundwater in both the carbonate and sandstone aquifers exhibits a full range of isotopic composition, from modern to preglacial, with older waters typically located towards the west. These results are further evidence of the westerly flow regime through the region.

Figure 22 – Isotope Plot - Southeast Manitoba



(Source – Phipps et al., 2008)

10.6.6 Sand and Gravel Aquifers

Groundwater quality in the sand and gravel aquifers within the RM boundary, with a few notable exceptions, is not well documented. Some development has occurred in the Birds Hill Glacio-Fluvial Complex. In general, groundwater from sand and gravel aquifers is relatively fresh with low TDS content. This is anticipated as sand and gravel aquifers in the RM are generally zones of recharge for fresh meteoric water to access the underlying carbonate aquifer. In many cases, groundwater in sand and gravel aquifers contains elevated concentrations of iron. In addition, the typically shallow burial depth and unconfined aquifer conditions of many sand and gravel aquifers generally increase the potential for elevated nitrate concentrations and bacteriological risks. Local monitoring is important where sand and gravel aquifers are developed for water supplies.

11 SITE INVESTIGATIONS

11.1 DESKTOP WELL INVENTORY

11.1.1 Inventory Results

A well inventory of groundwater users present within a minimum radius of 1-mile was noted as a condition of the GEP. However, due to the relatively large size of the project, the inventory radius was expanded to 1.5 miles for the purposes of the analysis. The inventory was carried out using air photos, satellite imagery, and the provincial water well database (GWDRILL, 2022).

The provincial database contained a record for 33 individual wells within 1.5-mile radius of the new test wells. The inventory results are attached in Appendix D.

The construction dates of the reported wells ranged from pre-1964 to 2021. In total, 23 of the reviewed wells (about 70%) were constructed prior to 1990. This suggested that a majority of existing wells were hooked up using galvanised fittings and products. As these materials are subject to corrosion, it is likely that many of the existing connections are in a poor condition.

The well logs noted construction using 4-inch diameter steel or 5-inch diameter PVC casing. Despite the high static water levels, few wells appeared to be equipped with single line suction systems. Most wells appeared to be equipped with submersible pumping systems.

Total well depths ranged from 40 to 325 ft., with an average total depth of 167 ft. below grade. From the records, 18 wells were completed in the carbonate, seven wells in the sandstone, and eight wells did not contain construction information on the log (GWDRILL, 2022).

A range of well capacities was reported, with test rates between 2 and 463 U.S.G.P.M., and an average flow rate of about 30 U.S.G.P.M. (GWDRILL, 2022).

In general, existing wells in the area appear to have a fairly large amount (~80 ft. or more) of available drawdown and sufficient hydraulic capacities for domestic applications.

11.1.2 Closest Third-Party Domestic Wells

The closest private well to the RM west well (Well 3) was approximately 2,300 ft. northwest (Domestic Site 1), while the closest well to RM east well (Well 4) was approximately 2,900 ft. to the northeast (Domestic Site 2). The domestic site locations are shown in Figure 23. An overview of each domestic well site is provided in the following paragraphs. An analysis of potential well interference impacts is detailed in Section 14.1 of this report.

For Domestic Site 1, the available logs for indicated three wells present at the site as follows:

- House well 1 was completed into a seam of sand and gravel at a total depth of 40 ft. below grade.
- House well 2 was completed into the carbonate aquifer to a depth of 91 ft. below grade.
- A log for the Barn well did not include any construction information, although it was assumed to be completed into the carbonate at a total depth of 95 ft. below grade.

For Domestic Site 2, the well log indicated a single water well completed into the Winnipeg Formation sandstone aquifer (GWDRILL, 2022). The well was constructed in 2021 using PVC casing installed to a depth of 255 ft. below grade. Based on the construction and testing data, the well would have operating water levels in the range of about 15-25 ft. below grade (GWDRILL, 2022). Based on the deepest possible pump setting, these conditions would allow for approximately 25 ft. of available drawdown.

Figure 23 – Nearby Private Wells

11.1.3 Licensed Groundwater Users

In addition to the inspection of private water wells, a review of licensing files for the area was conducted. The WULS was contacted for a list of water rights licenses exceeding 50 dam^3/year in the area. Typical hog barns and major agricultural operations require this allocation or greater for operations. Through a review of the files, the closest licensed user was noted to be Parrish and Heimbecker, located approximately 1.5 miles north. The P&H site has two wells completed into the sandstone aquifer (GWDRILL, 2022).

11.2 Test Drilling and Monitoring Well Installations

Friesen Drillers mobilized to site in February 2024. Two monitoring wells and two production test wells were installed. The wells were located either on lands owned by the RM, or within the provincial right of way along municipal roads. The well locations are shown in Figure 24.

Prior to drilling any test wells, the proposed test sites were reviewed with the staff from the RM of Springfield. All underground and overhead services were cleared and marked by their respective utilities prior to any drilling. Aspects of water clean-up and drainage was also reviewed at each location.

Both of the monitoring wells (MW24-01 and MW24-02) were constructed using five-inch diameter PVC casing set through the overburden into the upper bedrock. The PVC casing was grouted into place using bentonite. The borehole was then advance open hole through the carbonate bedrock and into the Winnipeg Formation Sandstone. A two-inch diameter PVC liner was then installed into the sandstone aquifer using k-packers/shale traps to isolate the two aquifers. After construction, each well was equipped with a locking cap. Details of the monitoring well construction are provided in Table 3.

Table 3 – Construction Details - Monitoring Wells

Table 3 New Monitoring Well Construction Details Water Supply Expansion - RM of Springfield, Manitoba						
Well ID	**Tag#**	**UTM X**	**UTM Y**	**Casing (from to)**	**Total Well Depth**	**Completion**
MW24-01	10236	661592	5525550	5-inch PVC (0-99 ft.)	278 ft. below grade	Carbonate/Sandstone
MW24-02	10237	662167	5525061	5-inch PVC (0-139 ft.)	259 ft. below grade	Carbonate/Sandstone

Figure 24 – Location of New Test Wells and Monitoring Wells

(Source – Google Earth, 2024)

In total, two new monitoring wells were completed into both the carbonate and sandstone aquifers. The nested well construction allowed for simultaneous monitoring and sampling of both the sandstone and carbonate aquifers at each location.

11.3 PRODUCTION WELL CONSTRUCTION AND DESIGN

Two production test wells, identified as Well 3 (East) and Well 4 (West), were installed in the current project. Details of the test well construction are provided in Table 4. Complete geological and borehole construction logs for the wells are attached as Appendix E.

The well designs were based on the local geology, as noted from test drilling. Friesen Drillers has collected a large number of samples from the Winnipeg Formation sandstone over the years across the southeastern Manitoba region and has noted very little variation. Generally speaking, the formation is highly consistent in terms of the grain size and a screen slot size of 15 to 20 slot tends to work extremely well throughout the area. Visual inspection of the formation showed that the sandstone was slightly finer, and therefore, it was decided to run 15 slot screens with a .55 Unimin™ graded filter pack. This combination has worked extremely well across the southeastern Manitoba area.

Each well was designed to have a full 12 inch diameter completion to the base of the sandstone formation. The screen sections were to be 60 feet in length and consist of 12 inch diameter (I.D.) pipe sized screens. Assuming 0.158 inch thickness of “V” wire stainless steel for a setting depth of 330 feet, the screen would have a maximum transmitting capacity of 13.1 U.S.G.P.M./foot at the screen manufacturers recommended intake velocity of 0.1 ft/sec. With 60 feet of screen, the maximum screen capacity would be 786 U.S.G.P.M.

Each production well was installed using a Foremost Barber Industries DR-24 Dual Rotary™ casing advancement drill rig. The lower drive was used to set 16 inch diameter casing to a depth of 90 feet below grade. The carbonate bedrock was drilled open hole with compressed air using a 15 inch diameter bit to a depth of 250 feet. The Hecla beds (brightly coloured shales) were noted as the formation began to transition into the sandstone. At the base of the carbonate formation, the drilling technique was changed to clean water circulation, so the sandstone formation could be drilled with as little disturbance as possible. The sandstone was drilled with this technique to depths of 315-325 feet below grade.

Table 4 – Construction Details - Production Test Wells

Table 4
Monitoring Well Construction Details
Water Supply Expansion - RM of Springfield, Manitoba

Well ID	Tag#	UTM X	UTM Y	Well Casing	Well Screen	Completion
Well 3 (west)	10184	661760	5525050	12-inch steel (0-252 ft. b.g.)	12-inch; 15-slot (252-312 ft. b.g.)	Sandstone
Well 4 (east)	10185	662141	5525060	12-inch steel (0-255 ft. b.g.)	12-inch; 15-slot (255-315 ft. b.g.)	Sandstone

Note: b.g. – below grade.

The filter screen in each production well was 60 ft. in length, with a 12-inch pipe-size diameter. All screens were stainless-steel construction, with a wire-wound design and an intake size of 15-slot (0.015 inches). The screens were equipped with centralizers every 20 feet and were sand packed in place using 0.55 Unimin silica sand.

After the screen was installed, the 12-inch diameter steel well casing was extended to surface. The casing was noted to be black welded steel with a 0.375 inch wall thickness. The annular space between the 15 inch borehole and 12 inch diameter casing was filled with bentonite chips from on top of the sand pack at

approximately 240 below grade. From 240 feet below grade to 90 feet, clean washed gravel was placed. From 90 feet to surface, bentonite chips and gravel were placed by surface pouring.

Following the drilling and well construction, each well was initially developed for a 4 hour period with compressed air from the service compressor of the drill rig. The compressor was used to surge the well and remove fines from the screen and aquifer formation. In order to remove fines and improve the screen efficiency, Friesen Drillers mobilized a Cyclone 36 cable tool surge block rig to the site. The rig utilizes a mechanical surging motion that, when combined with an air compressor, will develop a well screen and lift the fines to surface. The entire screen section of both wells was developed for approximately 30 hours total.

Following the well construction, each well site location was marked using a portable GPS unit. It should be noted that the GPS readings were subject to a normal error (+/- 4 m). A well tag was assigned to each well, with Well 3 (West) getting Tag #10184, and Well 4 (East) Tag #10185. Both wells were sealed with temporary well seals. The water levels in the east and west wells were noted to be 9.9 and 12.7 feet below grade, respectively.

11.4 Pumping Tests Short-Term Capacity Testing – Well 3 (West)

A short term capacity test was conducted on Well 3 (West) to determine the pumping capacity and hydraulic parameters of the well. The test was performed using a 25 HP submersible pump and motor at a depth of 200 feet below grade. Power was supplied by an on-site portable generator.

The pumping test conducted on February 28, 2024. Details of the pumping test are shown in Table 5. The flow rate was maintained by using a 5 by 6 inch orifice meter. The flow meter was checked regularly throughout the test. Water levels were monitored using a Powers M-scope well sounder in the pumping well.

Based on the testing, The specific capacity of Well 3 (West) was noted to 3.1 U.S.G.P.M./ft. This result was similar to previous wells in the area. For example, the existing Springfield supply wells had a reported specific capacity in the range of 2.9 - 3.2 U.S.G.P.M./ft. (Friesen Drillers, 2019). The full pumping test data is contained in Appendix G.

Table 5 – Capacity Test Details – Well 3 (West)

Table 5 Short Term Capacity Test – Well 3 (West) Water Supply Expansion - RM of Springfield, Manitoba				
Pump Well	**Pumping Time**	**Static Water Level**	**Pumping Water Level**	**Average Pumping Rate**
Well 3 (West Well)	240 minutes	13.0 feet	187.3 feet	548 U.S.G.P.M.

(Source – Friesen Drillers, 2024)

11.4.1 72-hour Pumping Test – Well 4 (East)

To assess the aquifer hydraulic parameters and to determine how the confined sandstone aquifer will respond to pumping, a 72-hour (4,320 minute) pumping test was carried out on the Production Well 4 (East). The testing duration was stated in the scope of work and approved by MECC-WULS. The pumping test duration was chosen to firmly establish the drawdown around the pumping well. The test duration would also aide in the analysis of interconnections between the carbonate and sandstone aquifers. Water level recovery after shutdown was to be monitored to at least 90% of the pre pumping water level.

A 25 HP Berkeley submersible pump and motor was installed in the Well 4 (East) at a depth of 240 feet below grade. Power was supplied by an on-site portable generator. During the installation and set-up, the pump and motor were tested for less than one hour to determine the well yield. This allowed the discharge valve to be set. This was undertaken approximately one day before the actual 72-hour test began.

Drainage was a consideration in the planning of the pumping test due to the snow-packed ditches and high discharge rate. A pipeline was established to direct water east to Cooks Creek. Prior to testing, the RM cleared the ditches of snow and ice. Discharge water was made to flow into the creek, which then flowed north and out of the area. The pumping test discharge set up is shown as Figure 25.

The pumping test commenced on March 4 and was completed on March 7, 2024. Details of the pumping test are shown in Table 6. The full pumping test data is contained in Appendix G. The flow rate was maintained by using a 5 by 6 inch orifice meter. The flow meter was checked regularly throughout the test. Water levels were monitored using a Powers M-scope well sounder in the pumping well.

Table 6 – Pumping Test Details – 72-Hour Test

Table 6
Pumping Test Details – 72-Hour Pumping Test
Water Supply Expansion – RM of Springfield, Manitoba

Pumping Well	Pumping Time	Static Water Level	Pumping Water Level	Average Pumping Rate
Well 4 (East)	4,320 minutes	11.4 feet below grade	184.6 feet below grade	500 U.S.G.P.M.

(Source – Friesen Drillers, 2024)

Figure 25 – Discharge Set Up

(Source – Friesen Drillers, 2024)

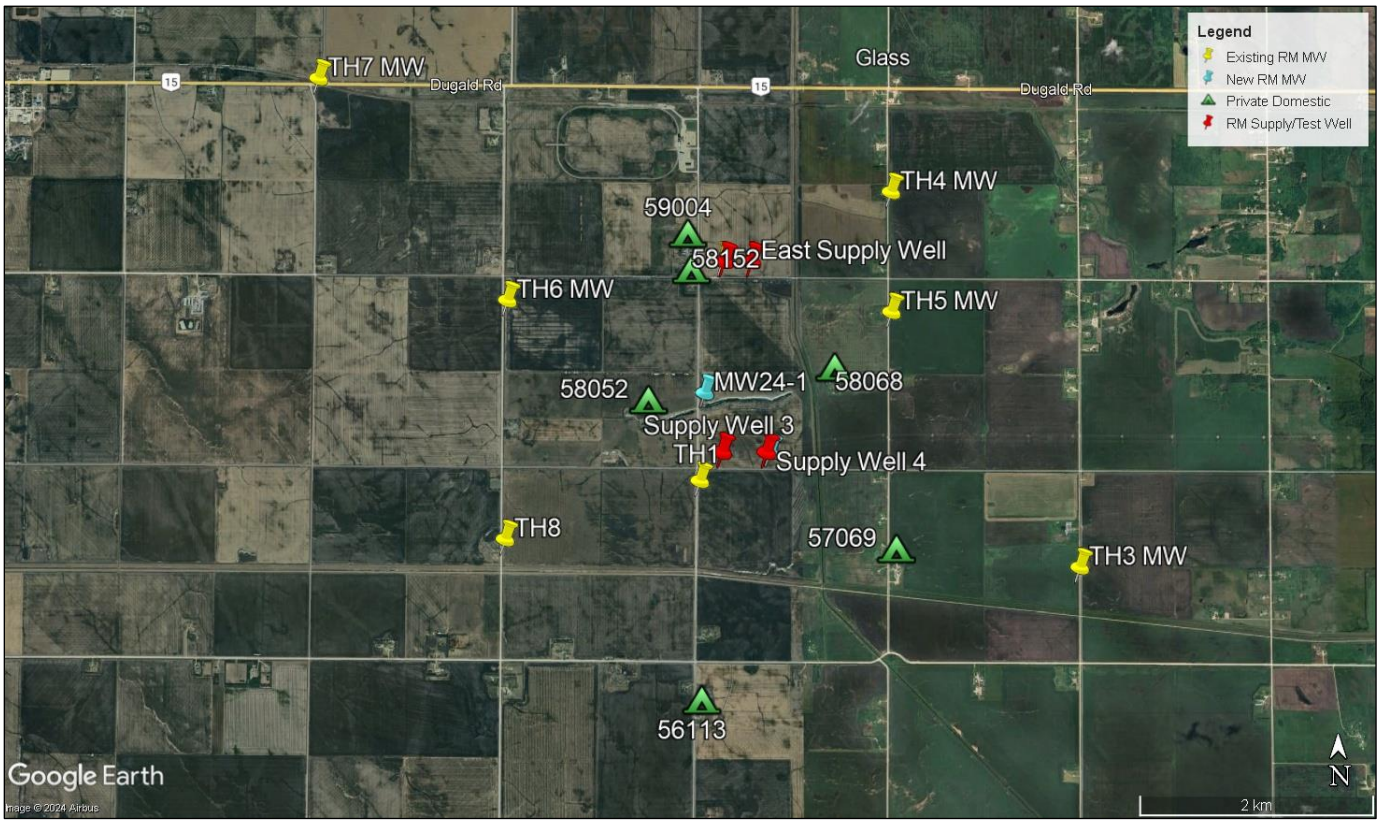
11.4.2 Aquifer Monitoring

An extensive network of monitoring wells was implemented to record the drawdown response to pumping in both the sandstone and carbonate aquifers. The monitoring well network included a combination of private domestic wells (6 wells), provincial observation wells (6 wells), and RM-owned monitoring wells (11 multi-level wells). The combination of monitoring wells resulted in 34 monitoring points, which allowed for monitoring in all directions from the central pumping well. A map of the monitoring network is shown in Figure 26. Details of the monitoring network are contained in Table 7.

Solinst M30/F100 automatic, data recording pressure transducers were installed in selected observation wells. The transducers used were the non-vented type, which require barometric pressure correction. A barometric pressure logger was deployed to the site for use in data correction. The transducers were set to record data on five minute intervals and were installed about one week before the 72 hour pumping/recovery test. The majority of the instruments were removed about one week after the 72-hour pumping test, with a few stations being left in place for a longer monitoring duration.

The corrected transducer plots and water level measurements are attached as Appendix F.

Figure 26 – Monitoring Network for 72-hour Pumping Test



(Google Earth, 2024)

Table 7 – Monitoring Wells Radial Distance to Pump Well

Table 7 Monitoring Well Details Expanded Water Supply - RM of Springfield, Manitoba			
Well Name	**Well Completion**	**Distance from Pump Well**	**Ground Elevation**
TH-2	Sandstone/carbonate	5,536 ft.	243.5 m
TH-03	Sandstone/carbonate	9,564 ft.	246.0 m
TH-05	Sandstone/carbonate	5,312 ft.	244.0 m
TH-06[1]	Sandstone/carbonate	8,485 ft.	243.2 m
TH-08	Sandstone/carbonate	7,751 ft.	243.9 m
TH24-1[1]	Sandstone/carbonate	2,414 ft.	246.8 m
TH24-2[1]	Sandstone/carbonate	85 ft.	244.0 m
Well 3 (West)[1]	Sandstone	1,250 ft.	244.4 m
Well 4 (East)[1]	Sandstone	0 ft.	244.1 m

Note: [1] Coordinates and elevation data obtained from handheld GPS device; all other location data obtained from land surveyor, as reported by Friesen Drillers (2019).

11.4.3 Geochemical Sampling

During the 72-hour pumping test of Well 4 (East), field measurements of basic water quality (Electrical Conductivity (EC), pH, Turbidity) were collected. The field instruments were calibrated prior to the test.

A summary of the testing results is shown in Table 8. The full set of field measurements are plotted in Figure 27. During the 72-hour test, values for EC ranged from 810 to 920 µS/cm, for pH ranged from 7.5 to 8.3, and for turbidity ranged from 1.2 to 9.9 NTU (Friesen Drillers, 2024).

Table 8 – Field Quality Parameters – 72-Hour Pump Test

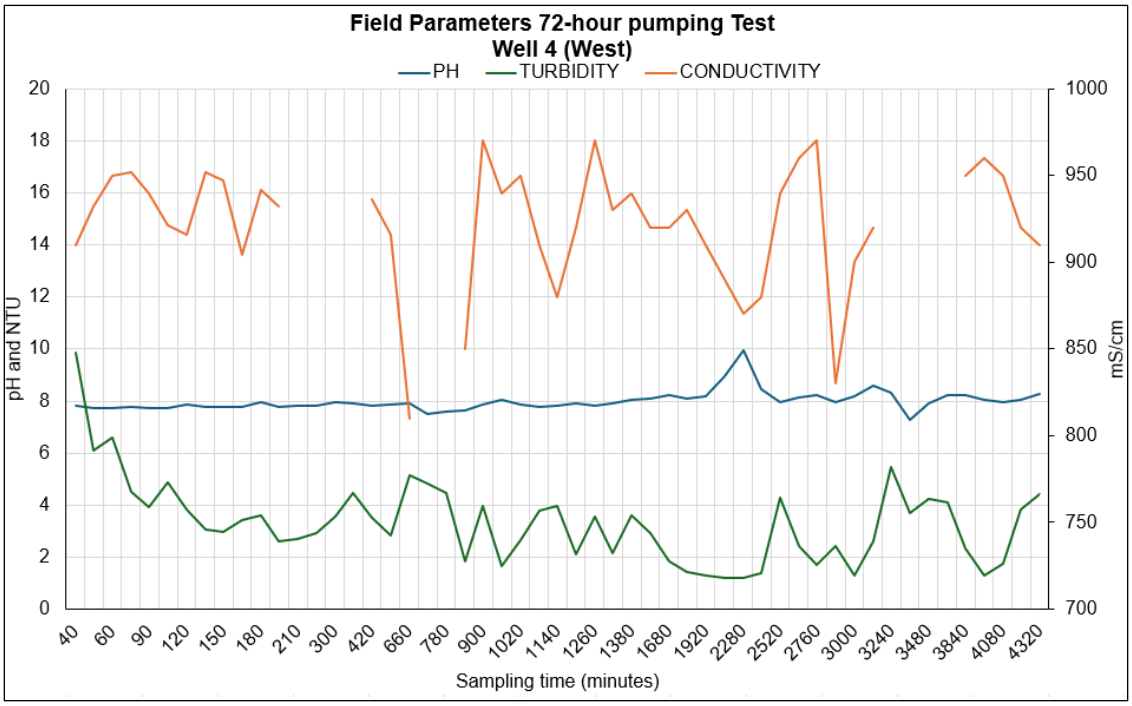
Table 8 Field Measurements – 72-Hour Pumping Test Water Supply Expansion - RM of Springfield, Manitoba			
Pumping Time	**Electrical Conductivity**	**pH**	**Turbidity**
0 hours	910 µS/cm	7.84	9.87 NTU
12 hours	810 µS/cm	7.50	4.81 NTU
24 hours	920 µS/cm	8.09	2.94 NTU
48 hours	830 µS/cm	7.94	2.43 NTU
72 hours	910 µS/cm	8.29	1.20 NTU

Measurement collected from pumping of Well 4 (east) (Data source – Friesen Drillers, 2024)

In addition to field measurements, groundwater samples were collected from the pumping discharge every 12-hours in laboratory supplied analytical sample bottles. The samples were submitted to ALS Laboratories for analysis of routine geochemistry parameters and metals scan. Groundwater samples were also analyzed for stable environmental isotopes ^{18}oxygen and deuterium. The samples for isotope analysis are shipped to a laboratory at the University of Waterloo.

The results of the laboratory geochemistry analyses are discussed in the Section 13.4 of this report.

Figure 27 – Monitoring Network for 72-hour Pumping Test



Measurement collected from pumping of Well 4 (east) (Data source – Friesen Drillers, 2024)

12 DATA ANALYSIS

12.1 AQUIFER HYDRAULIC PARAMETER ANALYSIS

The Theis (1935) method is the most common approach for analyzing the results from aquifer pumping tests in confined aquifers. Critical assumptions integral to the method are detailed as follows:

- Darcy's law is valid.
- The aquifer is horizontal and constant thickness.
- The aquifer is infinite in areal extent.
- The aquifer is bounded by impermeable strata above and below.
- Isotropic hydraulic conductivity.
- Head always remains above the top of the pumped aquifer.
- All water level changes are due to pumping.
- Infinitesimal diameter of well.
- Fully penetrating the aquifer formation.
- Perfectly efficient well.
- Single pumping well.
- Constant pumping rate.
- Constant storage properties through time.
- The head is known everywhere prior to pumping.

Through a review of the above, it is apparent that some of the assumptions for the current analysis are not fully satisfied for the Theis (1935) approach. For example, the aquifer is not infinite in areal extent, and conditions are not isotropic. However, the Theis (1935) approach is highly idealized to the assessment of the aquifer and represents the state of the art for the determination of aquifer parameters. The method has been found to be reasonably workable for aquifer engineering evaluation, all over the world, for more than 80 years. In this case, conditions of the Theis (1935) approach are not being severely violated and the methodology provides for good comparisons to other regional work conducted in the area.

The Cooper-Jacob (1946) method was used primarily since emphasis is not placed on early time measurements. During the analysis, the $t_{critical}$ was assumed to be less than approximately 30 minutes for casing storage; therefore, data previous to 30 minutes were not considered in the analysis.

The pumping well configuration was nearly fully penetrating, as the production wells were screened over a 60 foot interval below the shale marker beds at the top of the sandstone formation. Test holes drilled in the area and background data/reports available for the regions provide evidence to suggest that the aquifer is relatively isotropic, especially as compared to the overlying carbonate aquifer, and that aquifer conditions are fairly repeatable throughout the region. Following standard practise, the aquifer was assumed to be Theissian, although this may or may not be totally correct in this instance. It was further assumed that skin effects for the supply well would be minimal after the development and jetting procedures.

The pumping test data was entered into AQTESOLV software (Version 4.5 Professional), for analysis of confined aquifer hydraulic parameters. The data was analyzed using the Cooper-Jacob (1946) (both time and distance drawdown), and the Theis (1935) methods, although similar results should be expected as the Cooper-Jacob method is a straight-line approximation of the Theis method. To determine the acceptability of the results, a derivative analysis was also used (Bourdet et al., 1989).

The hydraulic parameters inferred from the data are shown in Table 9. A plot of the drawdown versus time data is shown as Figure 28. The Theis (1935), Cooper-Jacob (1946) drawdown vs. time, and distance vs distance methods, and the Theis Recovery (1935) methods are shown as Figures 29-32.

Table 9 – Aquifer Hydraulic Parameters

Table 9 Aquifer Hydraulic Parameters – 72 hour Pumping Test Water Supply Expansion - RM of Springfield, Manitoba		
	Well 4 (East)	
Drawdown	184.6 ft. @ 500 U.S.GPM – 4,320 minutes (72 hours)	
Static Water Level	11.4 ft. below top of casing	
Specific Capacity	2.7 U.S.G.P.M./ft.	
Method	**Transmissivity**	**Storativity**
Theis Method[1]	7,100 U.S.G./day/ft.	5.6×10^{-5}
Cooper - Jacob Method[2] (time)	7,100 U.S.G./day/ft.	5.6×10^{-5}
Cooper - Jacob Method[2] (distance)	7,100 U.S.G./day/ft.	5.6×10^{-5}
Theis Recovery Method[3]	7,100 U.S.G./day/ft.	N.A.
Graphical Method	7,100 U.S.G./day/ft.	N.A.
Notes [1] Theis (1935) method using AQTESOLV (Version 4.5 Professional) [2] Cooper - Jacob (1946) method using AQTESOLV (Version 4.5 Professional) [3] Theis Recovery (1935) method using AQTESOLV (Version 4.5 Professional)		

(Source - Friesen Drillers, 72-hour Pumping Test Data, 2024)

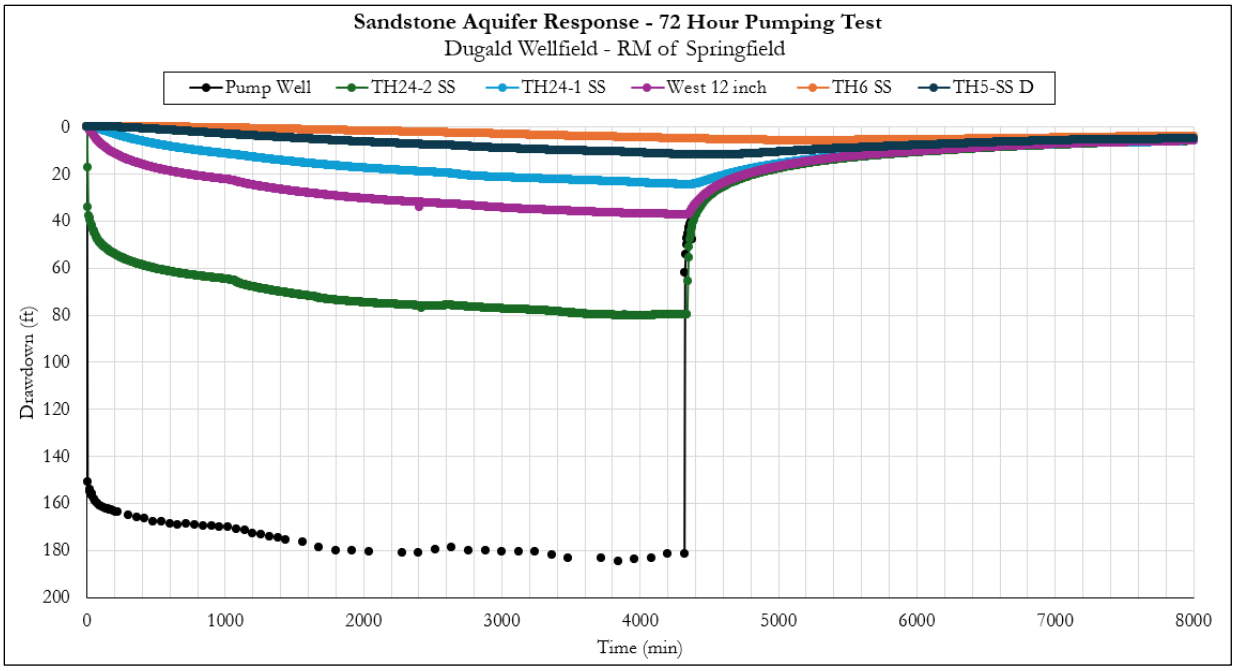
Through testing, the confined Sandstone Aquifer was inferred to have a transmissivity value of 7,100 U.S.G./day/ft. The storage coefficient was inferred to be 5.6×10^{-5}. the transmissivity value inferred from the test equates to a hydraulic conductivity of 1.7×10^{-5} m/s (15.8 ft./day). This is consistent with published values for the Winnipeg Formation sandstone aquifer (Betcher et al., 1995).

The results from the pumping test suggest that conditions at the new well sites are similar to those reported previously for the Sandstone Aquifer in the area (Friesen Drillers, 2019). The results are a reasonable representation of the aquifer condition in the region (Betcher et al., 1995).

The drawdown cone generated in the sandstone after 72 hours of pumping is shown as Figure 33. It is apparent from the plot that drawdown developed with a geometry characterized by very steep sides and a limited areal extent. Although drawdown in the pumping well was nearly 185 feet, drawdown in the closest monitoring well, MW24-02, 85 ft. away, was only 80 feet. The drawdown continued to diminish with increased distance from the pumping well. Drawdown in the closest domestic well (2,900 ft. away) was measured to be about 21 ft. after 72 hours of continuous pumping.

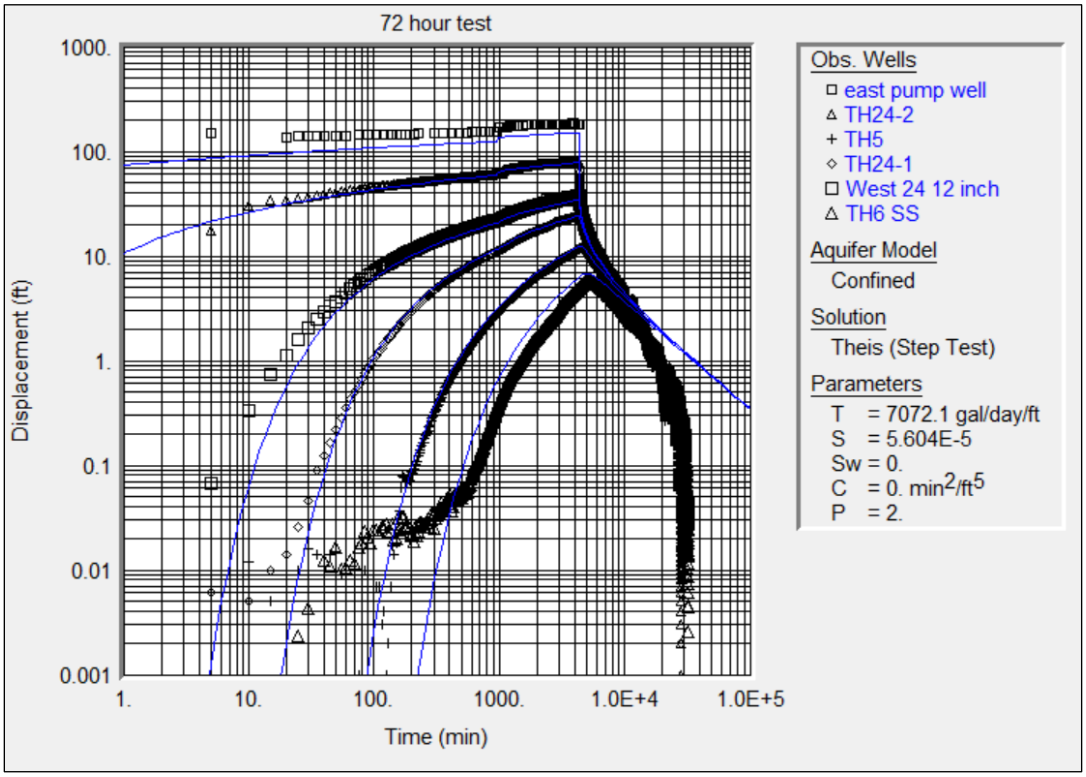
The drawdown deep drawdown cone was expected, as transmissive conditions in the sandstone aquifer are relatively low overall. Drawdown cones that develop in lower transmissive conditions tend to be deep and of limited areal extent (Freeze and Cherry, 1979). Consequently, impacts from the pumping at the Springfield wellfield, while significant in the pumping well, would not extend a far distance from the well site.

Figure 28 - Drawdown versus Time – 72-Hour Test



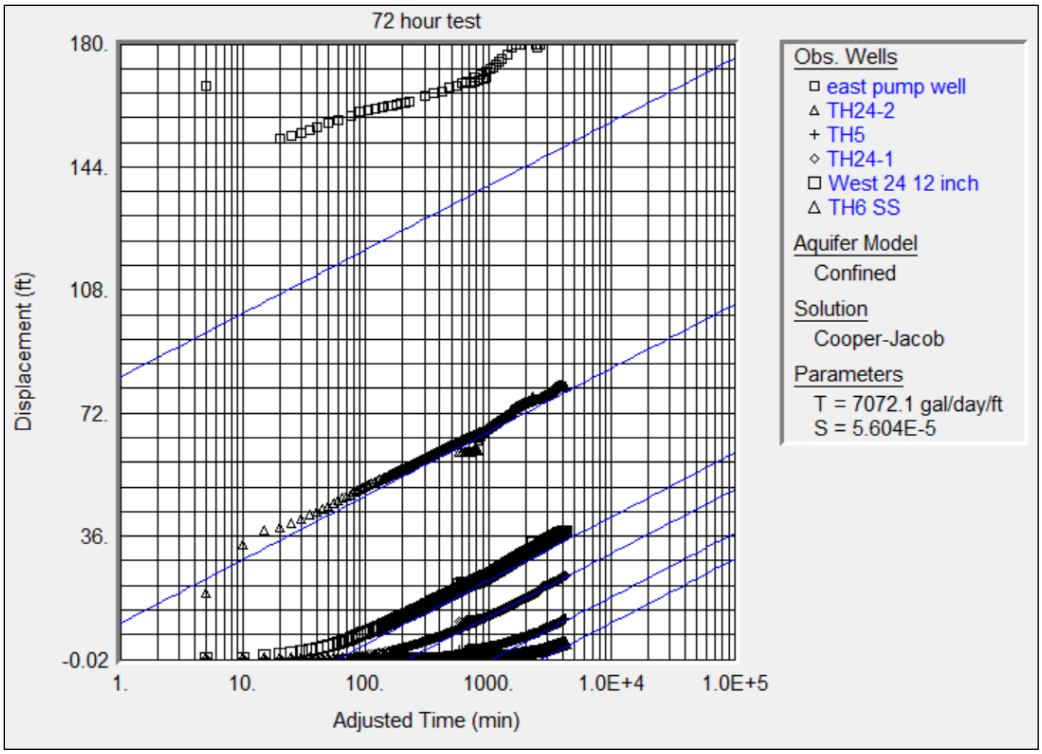
(Source – Friesen Drillers, 2024)

Figure 29 - Theis (1935) Plot – 72-hour test



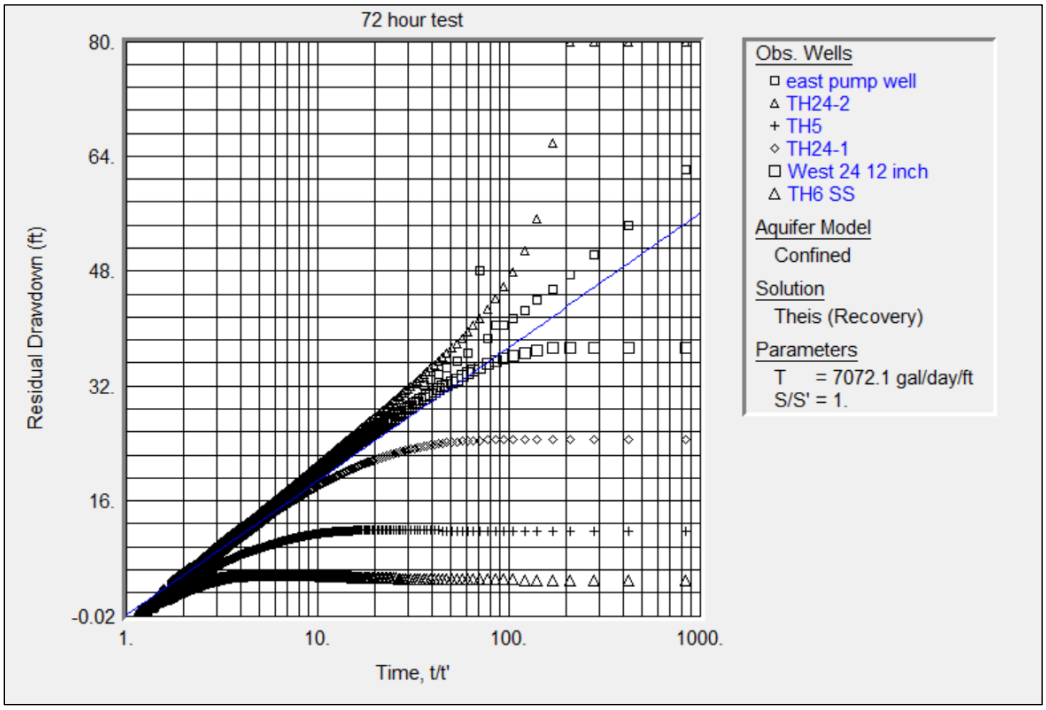
The constant pumping rate was 500 U.S.G.P.M. The derivative was used in the analysis, although was not plotted for clarity due to the number of observation wells used.
(Source – Friesen Drillers, 2024)

Figure 30 - Cooper–Jacob (1946) Time versus Drawdown – 72-Hour Test



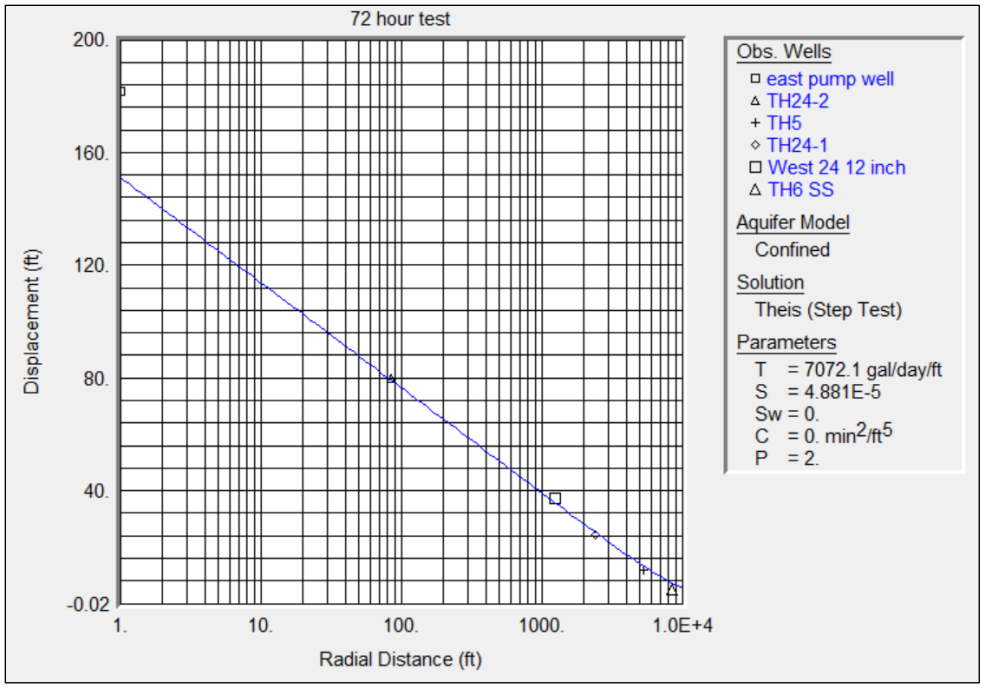
Constant pumping rate @ 500 U.S.G.P.M.
(Source – Friesen Drillers, 2024)

Figure 31 - Theis (1946) Recovery Plot – East Production Well



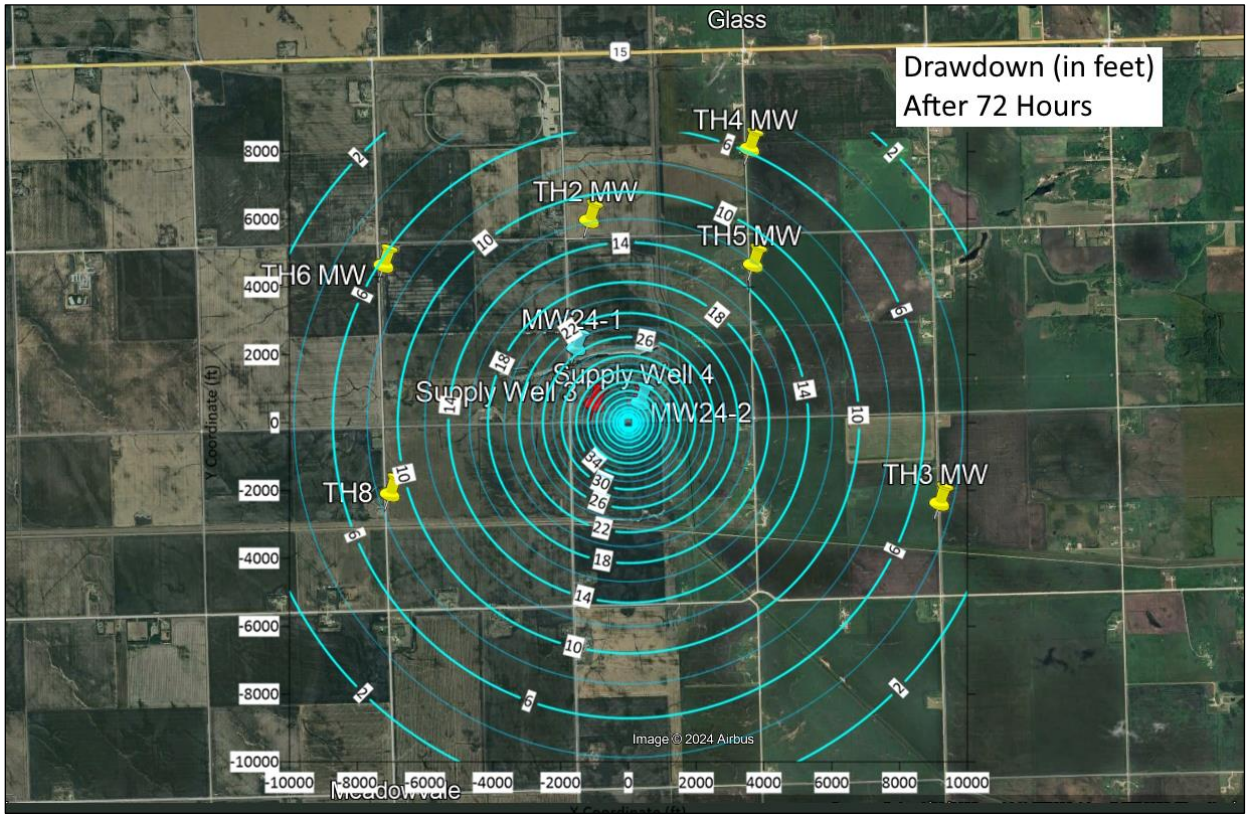
Constant pumping rate @ 500 U.S.G.P.M.
(Source – Friesen Drillers, 2024)

Figure 32 – Cooper-Jacob Distance Drawdown – 72-Hour Test



Constant pumping rate @ 500 U.S.G.P.M.
(Source – Friesen Drillers, 2024)

Figure 33 - Drawdown in the Sandstone Aquifer – 72 hours



Note: Sandstone Aquifer drawdown (in feet), after 72 hours of pumping at 500 U.S.G.P.M.
(Source – Friesen Drillers, 2024)

12.2 New Supply Well Pumping Capacity

An assessment of the new supply well hydraulic performance was undertaken to determine pumping capacities. The well capacity details are shown in Table 10. Based on the analysis, the new production wells appear to support pumping in a duty/standby configuration up to a maximum instantaneous flow rate of 600 U.S.G.P.M. per well, under normal conditions. This flow rate is limited by the specific capacity of the wells and the amount of available drawdown. As both of these parameters can vary over time, the overall well capacities may also fluctuate.

If supply wells #3 and #4 are pumped simultaneously, the resultant flow rate would reduce to 510-550 U.S.G.P.M. per well, for a combined rate of 1,060 U.S.G.P.M. (66.9 L/s).The reduced combined flow rate is due to interference effects between the pumping wells.

Table 10 – Maximum Pumping Rates– New Production Wells

Table 10 Maximum Pumping Rates– New Production Wells Dugald Municipal Wellfield, SW29-10-6EPM				
Duty/Standby				
Well ID	**Configuration**	**Specific Capacity[1]**	**Available Drawdown[2]**	**Maximum Pumping Rate[3]**
Well 3 (West)	Duty/Standby	3.0 U.S.G.P.M./ft.	215 ft.	640 U.S.G.P.M.
Well 4 (East)	Duty/Standby	2.8 U.S.G.P.M./ft.	215 ft.	600 U.S.G.P.M.
			Maximum Instantaneous Rate (Duty/Standby):	**600 U.S.G.P.M.**
Simultaneous Well Pumping				
Well ID	**Configuration**	**Specific Capacity[1]**	**Available Drawdown[2]**	**Maximum Pumping Rate[3]**
Well 3 (West)	Simultaneous	3.0 U.S.G.P.M./ft.	185 ft.	550 U.S.G.P.M.
Well 4 (East)	Simultaneous	2.8 U.S.G.P.M./ft.	185 ft.	510 U.S.G.P.M.
			Combined Maximum Instantaneous Rate (Simultaneous):	**1,060 U.S.G.P.M.**

Notes:
[1] Specific capacity from the current testing results.
[2] Available drawdown calculated as difference between a 20 ft. static level and 15 ft. above casing bottom.
- An additional 30 ft. of drawdown from well interference was assumed for the Simultaneous Pumping Scenario.
[3] Available drawdown multiplied by specific capacity.

12.3 Hydraulic Response of the Carbonate Aquifer

The hydraulic analysis thus far has focused on the Sandstone Aquifer. However, interactions between the Sandstone and overlying Carbonate Aquifer are an important aspect of the hydrogeology in southeastern Manitoba. As the carbonate is commonly developed for domestic use, it is important to address the potential for third party impacts in the Carbonate Aquifer which may result from pumping from the Sandstone Aquifer.

The interconnectivity of the two bedrock aquifers is highly variable throughout southeastern Manitoba. The extent of hydraulic interconnection is controlled partly by the number of multi-completion wells and by the thickness of shale which separates the two aquifer units (Betcher et al, 1995). For example, in the Steinbach area, the response of both aquifers to pumping is nearly identical, regardless of which aquifer is pumped (Friesen Drillers, 2014). At the Dugald well field in Springfield, the hydraulic interconnection was noted to be weaker, with a dampened drawdown response observed in the non-pumping aquifer (Friesen Drillers, 2019).

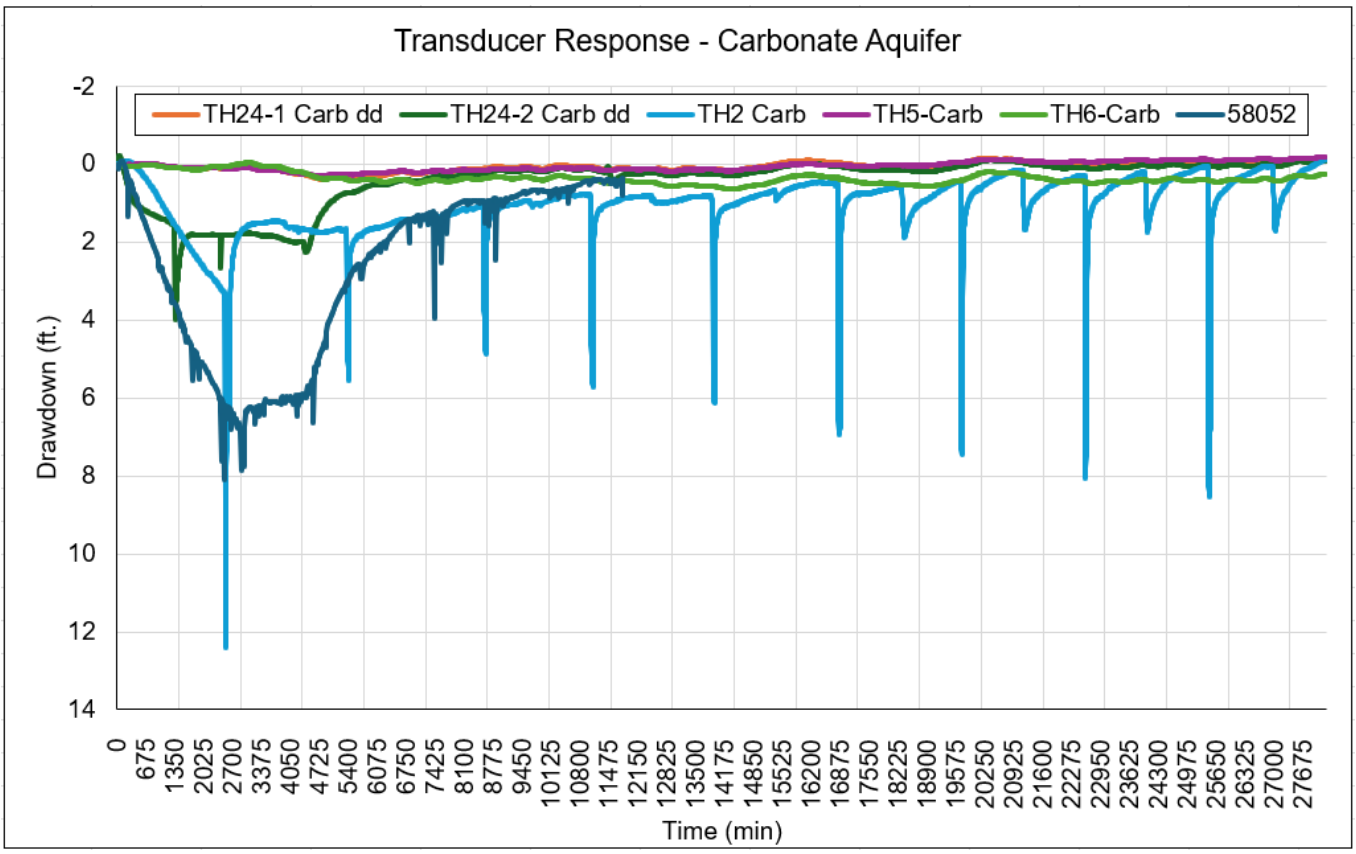
During the 72-hour pumping test, the Carbonate Aquifer was monitored using data recording pressure transducers in monitoring wells surrounding the pumping well. These transducers were programmed to measure groundwater levels at 5 minute intervals. A plot of transducer records from monitoring wells in the Carbonate Aquifer is shown in Figure 34. Figures 35 and 36 show transducer plots from both the Sandstone and Carbonate Aquifers as measured in the same monitoring well (TH24-1 and TH24-2).

It was apparent from the monitoring data that comparably minor amounts of drawdown resulted in the Carbonate Aquifer during the 72 hour pumping test. For example, in TH24-2, about 2.3 feet of drawdown was recorded in the Carbonate Aquifer, while about 79.8 ft. of drawdown was recorded in the Sandstone Aquifer. In TH24-1, drawdown was even less, with only 0.3 feet of drawdown observed in the Carbonate Aquifer for 24.4 ft. of drawdown in the Sandstone Aquifer. Drawdown in the nearest domestic carbonate well was noted to be about six feet at the end of the pumping test. These results suggest that the Carbonate Aquifer response tends to be less than about 5% of the Sandstone Aquifer response at a given location.'

It should also be noted that drawdown in the Carbonate Aquifer did not appear to follow a typical Theis (1935) drawdown curve geometry. Instead, drawdown appeared more consistent with borehole leakance, which suggested that the hydraulic connection between the carbonate and sandstone is likely dominated by wells interconnecting both aquifers. As a result, the drawdown response of the carbonate aquifer is likely to vary in areas around the pumping wells, depending on the number of nearby interconnecting wells that are present.

Based on the hydrogeology, the sand and gravel esker noted at the nearby domestic site would be considered as a local extension of the Carbonate Aquifer. This is consistent with how the province has treated the Birds Hill Glaciofluvial complex in previous studies (Render, 1970; Betcher et al., 1995). As a result, pumping from the Sandstone Aquifer could be expected to generate drawdown influences in the sand and gravel that are similar to those observed in in the Carbonate Aquifer.

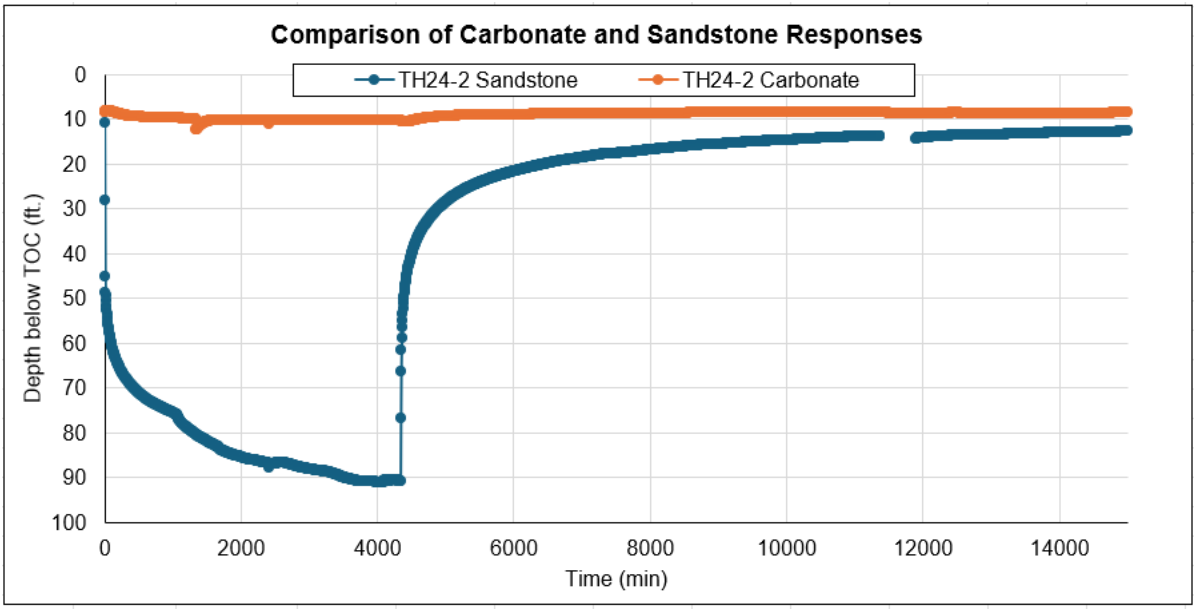
Figure 34 - Transducer Hydrograph Records from Wells in the Carbonate Aquifer.



(Friesen Drillers Pumping Test Data, 2019)

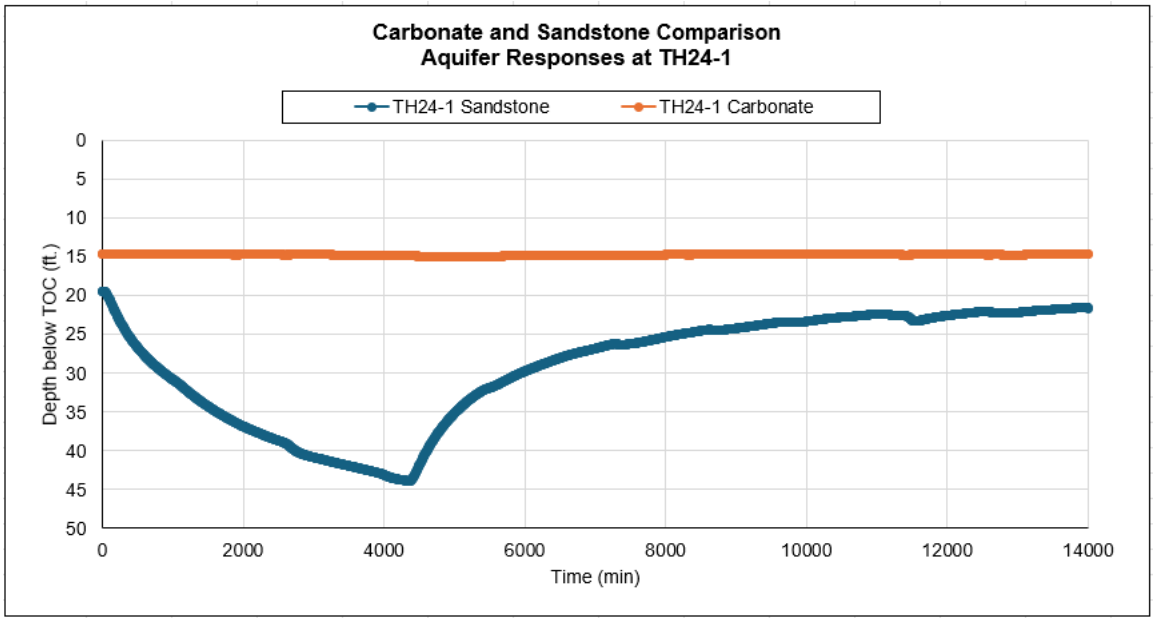
Based on the three day pumping test results, the proposed operation of the expanded municipal groundwater supply from the Sandstone Aquifer would be expected to generate small amounts (less than 6 feet) of drawdown in the local Carbonate Aquifer. However, the drawdown would likely be well within the seasonal and climatic fluctuations observed on the regional hydrographs (Hydata, 2024). Existing monitoring wells in the area should be preserved and monitored regularly to check these assumptions with the proposed expansion to municipal pumping.

Figure 35 – Carbonate and Sandstone Comparison – TH24-02



(Friesen Drillers Pumping Test Data, 2024)

Figure 36 – Carbonate and Sandstone Comparison – TH24-01



(Friesen Drillers Pumping Test Data, 2024)

12.4 GROUNDWATER GEOCHEMISTRY

During the 72-hour pumping test on the Well 4 (East), a total of three groundwater sample sets were collected and submitted to for laboratory analysis. In addition, one set of samples was collected during the capacity test on Well 3 (West). The groundwater samples were collected in laboratory supplied sample bottles. All samples were analyzed by ALS Laboratories in Winnipeg (WP2405686). The stable environmental isotopic analysis was conducted by EIL Laboratory at the University of Waterloo, Ontario. A copy of the laboratory analytical results is attached in Appendix H.

The major results are shown as Table 11. Figure 37 depicts the Tri-Linear plot comparing the on-site results with the regional provincial observation wells.

Nitrates were not detected in any of the pumping or observation wells. While nitrates levels are not of significant concern at present, ongoing monitoring of the water quality in the area is recommended to detect any rising trends with the nitrate levels and take pre-emptive measures, such as public education and awareness, and recommending the sealing of abandoned water wells.

Fluoride was detected at levels above the Maximum Recommended Concentration (MAC) of 1.5 mg/L as set out by Health Canada (2023) as guidelines for drinking water quality. The fluoride concentrations in samples collected during the 24 hour pumping test ranged from 1.78 to 1.80 mg/L. It should be noted that the elevated fluoride concentrations were identified prior to the selection of the well locations. It is our understanding that the water treatment process has been designed with this information in mind.

Turbidity measurements reported from the laboratory ranged from 2.08 to 0.14 NTU (ALS WP2405686). The higher values were noted from the samples collected earlier in the pumping test duration. It is apparent that some amount of turbidity should be expected from the raw water. Turbidity is a natural result of the geology, and values tend to fluctuate with pumping, especially in newly constructed wells. However, the turbidity commonly stabilizes after a period of consistent pumping. Pretreatment for turbidity may be necessary.

Figure 38 depicts the isotopic results presented against the standard mean oceanic water line for the area (IAEA, 2012).

The groundwater samples collected from the East and West Production Wells match well with the regional results for the SMOW in the area. The deuterium level is approximately -124.00 ‰, with an ^{18}O level of about -17.0 ‰. This indicates a slight mixture between modern meteoric groundwater and older, glaciogenic water. The results suggest that the groundwater has undergone negligible isotopic modification. Generally speaking, the results suggest that groundwater at the site has not undergone significant alteration since it fell as precipitation. This may change somewhat with pumping throughout time, although it is not expected to change significantly due to the regional flow system that is present.

The groundwater at the site is defined as a Sodium/Bicarbonate type, with very minimal change in quality apparent throughout the course of the pumping test. The results plotted in the middle of the regional cluster on the Tri-Liner plot and showed very minor variation or change.

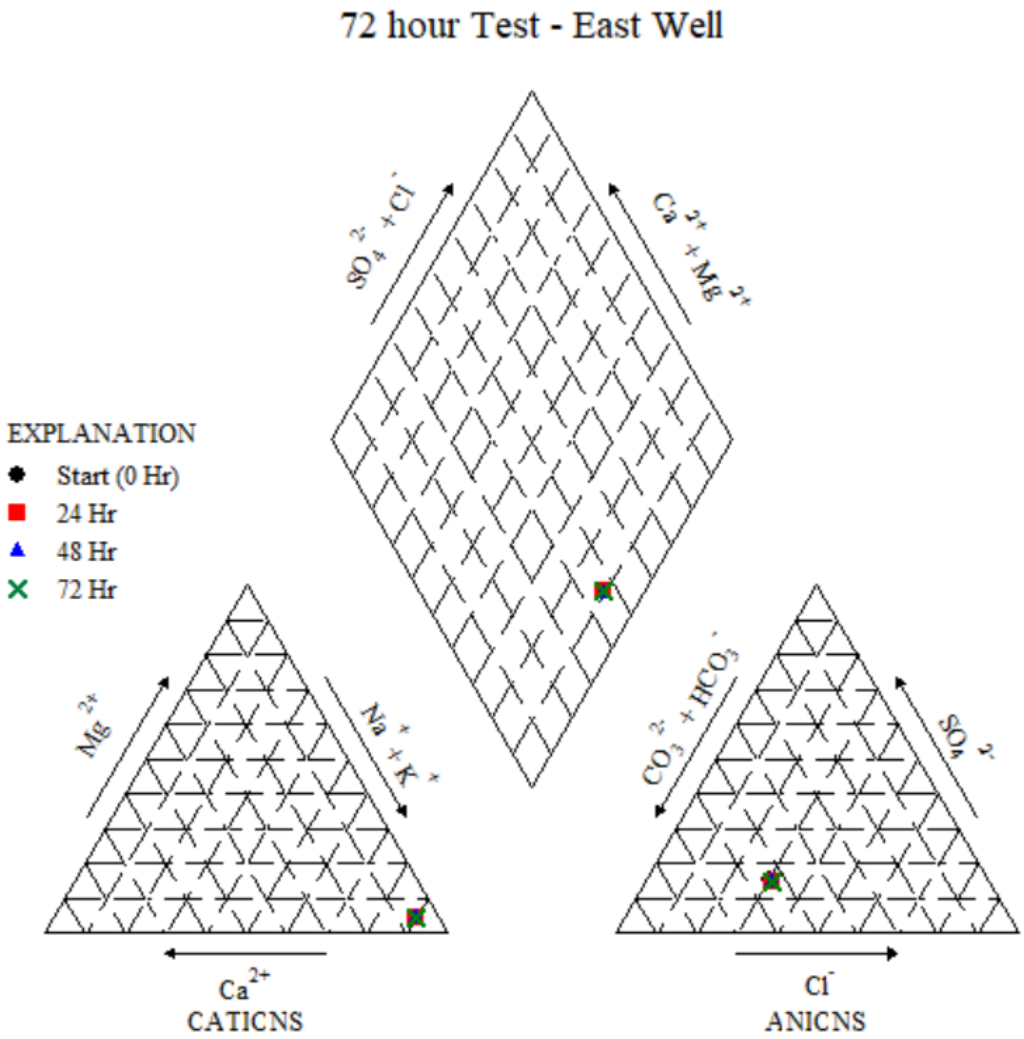
Based on the geochemistry results and the geologically confined setting of the Sandstone Aquifer, the new municipal groundwater supply wells are considered at this time to be non-GUDI (groundwater under direct influence of surface water. However, this determination should be reviewed periodically with regular geochemistry sampling and analysis .

Table 11 – Groundwater Analysis Results – 72-Hour Pumping Test

Table 11 Groundwater Analysis Results – 72-Hour Pump Test Proposed Water Supply - RM of Springfield, Manitoba						
Time	**TDS**	**Calcium**	**Chloride**	**Nitrate**	**Oxygen δ ^{18}0 (‰ V- SMOW)**	**Deuterium δD (‰ V- SMOW)**
0 hours	722 mg/L	8.32 mg/L	123 mg/L	<0.040 mg/L	-14.99	-113.09
24 hours	722 mg/L	8.24 mg/L	123 mg/L	<0.040 mg/L	-14.96	-113
48 hours	715 mg/L	8.14 mg/L	124 mg/L	<0.040 mg/L		
72 hours	634 mg/L	7.93 mg/L	123 mg/L	<0.040 mg/L	-15.24	-113

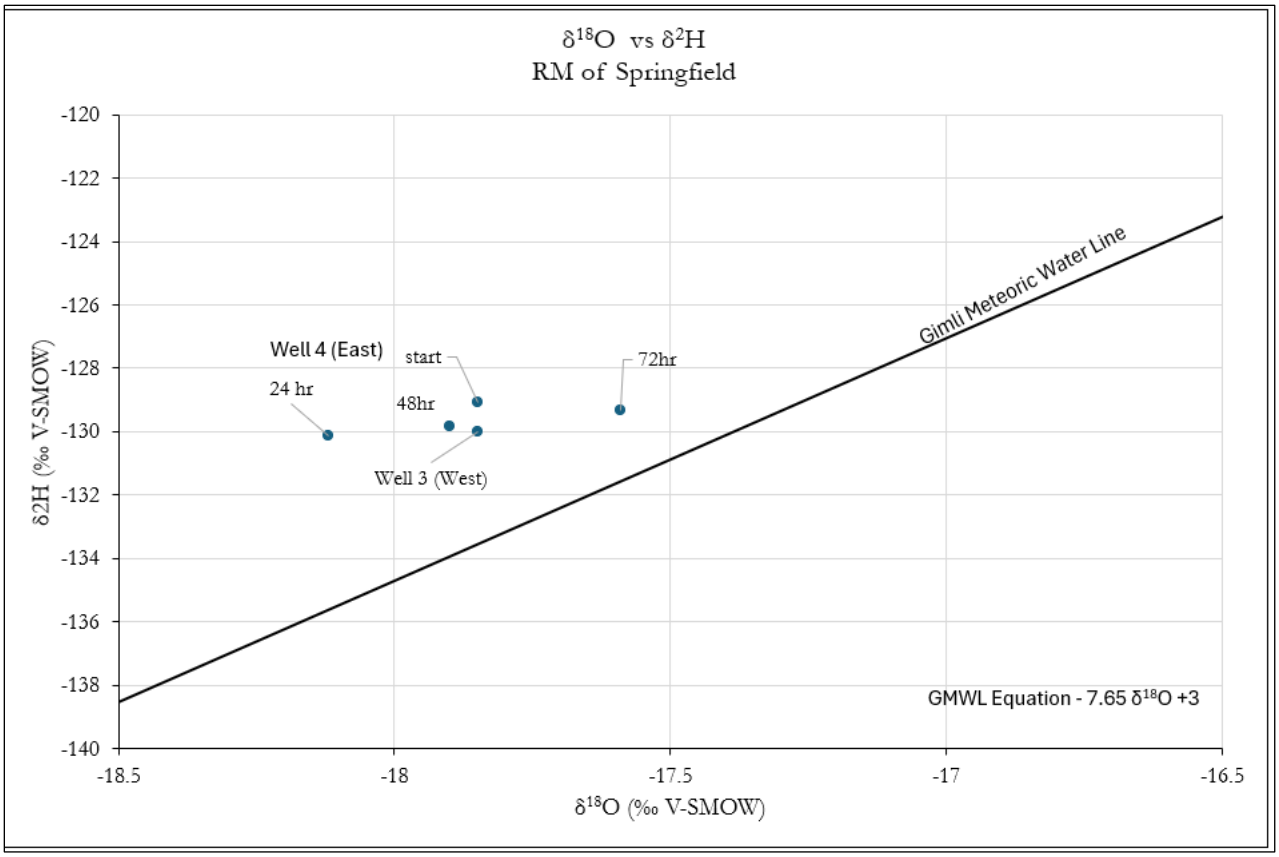
(Data source - ALS WP2405686, 2024)

Figure 37 – Piper Plot of Geochemistry Results



(Source: ALS WP2405686 and Hydata, 2024)

Figure 38 – Plot of Stable Environmental Isotopes



(Source: ALS WP2405686; IAEA, 2012)

13 DISCUSSIONS

13.1 WELL INTERFERENCE – 72 HOUR PUMPING TEST

As per the conditions of the Groundwater Exploration Permit, the Rural Municipality of Springfield, as the proponent of the water supply project, is responsible to correct any existing water supplies that are negatively impacted as a result of a new municipal groundwater supply. It should be noted that this responsibility is limited to issues related to the operation of the new groundwater supply, such as increased drawdown caused by pumping. The proponent is not legally responsible for pre-existing plumbing issues or for problems that are not attributed to the new production wells. The proponent is responsible to resolve interference issues to the satisfaction of the Minister.

There were no reported water supply disruptions received during the 72-hour pumping test. However, two reports were received in relation to the pumping test, one prior to the start of the test, and a second received a day after the test concluded. The cause of the reported issues appeared to be related to the well hookup in both cases. The amount of available drawdown in the area would be sufficient with a submersible well pump installation.

It is understood that the RM plans to address potential long term third party impacts on a case by case basis. The solutions will be determined based on site specific conditions and completed with input from a qualified hydrogeological engineer/hydrogeologist.

13.2 CURRENT STATE OF NATURE IN THE LOCAL AQUIFER SYSTEM

The existing Dugald municipal supply wells have been in operation since 2021. As a result, pumping impacts to the local aquifer system could be considered as the current state of nature for groundwater users in the area. To assess the influence of the current municipal pumping, hydrograph records from several provincial monitoring stations in the area were reviewed. The monitoring well locations are shown in Figure 39. A composite hydrograph plot with precipitation between 2007-2022 is shown in Figure 40. A more detailed plot of the data from 2021-2023 is shown in Figure 41.

As noted from the climate review, dry conditions had been observed in recent years (2016-2021), which contributed to below average regional groundwater levels within the Sandstone and Carbonate Aquifers during these times. The drier climatic conditions added complexity to the assessment of drawdown impacts from existing municipal pumping. The apparent drawdown generated by pumping was somewhat exaggerated by background seasonal and climatic fluctuations. To control for regional climatic effects, hydrograph stations located both upgradient and downgradient from the Dugald well field were included in the analysis.

The regional hydrograph records reflected a gradual lowering of groundwater levels through 2020 and 2021, until the wet spring of 2022. The lower water elevations were observed in all monitoring wells, which suggested that lower water levels were a regional phenomenon and not a result of localized pumping influences.

In a typical year, hydrographs reflect a steady decline in groundwater levels during the winter months (Hydata, 2014). This decline is typically interrupted by spring recharge from snowmelt, which causes water levels to rise abruptly. In 2021, spring recharge was negligible and the declining winter water level trends continued

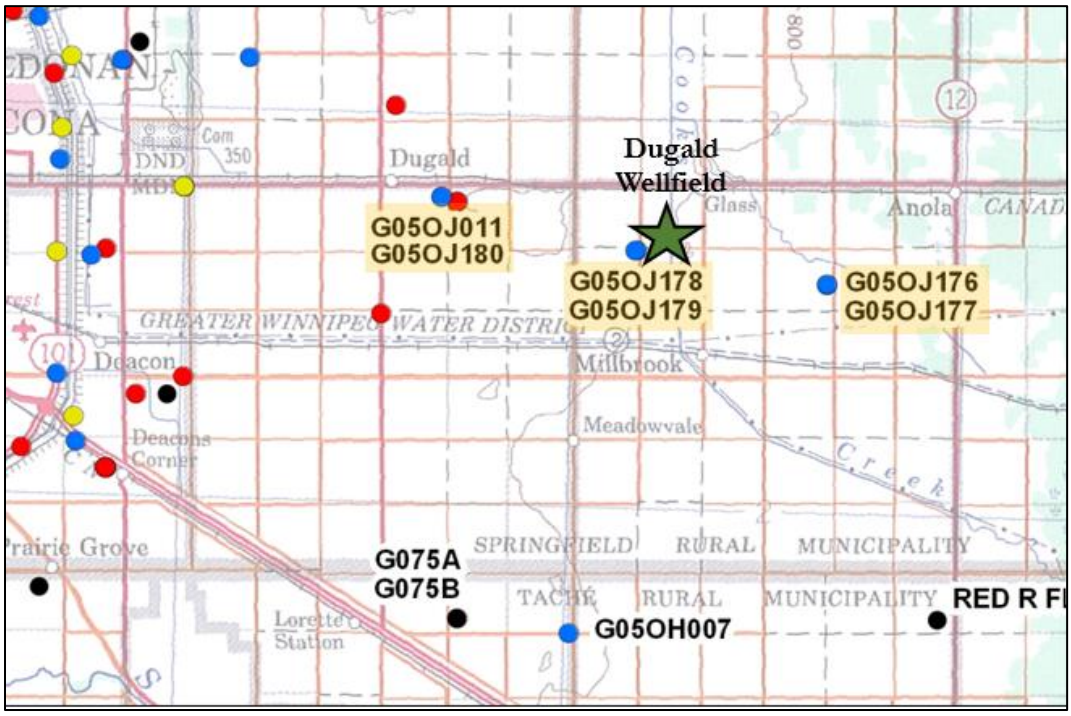
through the entire year (Environment Canada, 2024). Due to the extended water level decline, aquifer levels approached chart record lows in many stations throughout the province (Hydata, 2024).

In the spring of 2022, major precipitation and snowmelt events brought an end to the declining water level trends. The potentiometric surface in the Carbonate and Sandstone Aquifers rose quickly throughout the region. Groundwater elevation increases were commonly reported to be on the order of 3 m or about 10 ft. (Figures 39 and 40).

From an analysis of regional monitoring data, municipal pumping from the Dugald well field was shown to generate up to about 1.5 m (about 5.0 ft.) of drawdown in the Sandstone Aquifer after two years of operation. The amount of drawdown diminished significantly with distance from the wells. Drawdown impacts from current municipal pumping were not observed in provincial monitoring wells located up or down gradient from the Dugald Wellfield. Overall, it was noted that all hydrographs show a strong correlation to climatic conditions.

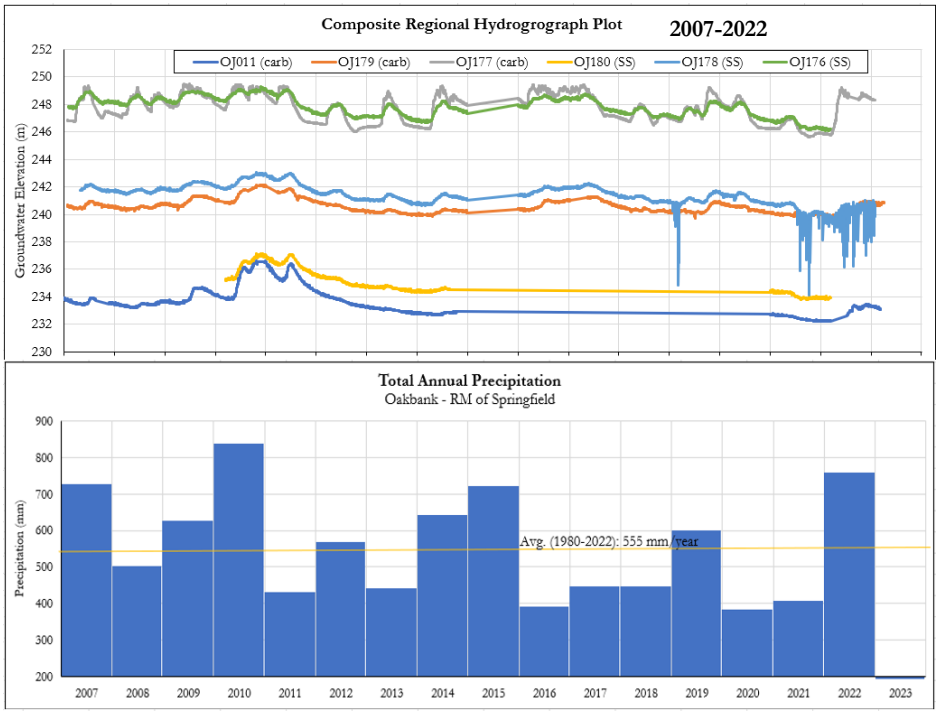
The Carbonate Aquifer around the well field appears to be consistent with regional conditions reported both up and down-gradient from the well field. This suggests that a very limited amount of long-term drawdown has been generated in the Carbonate Aquifer at the well field to date.

Figure 39 – Groundwater monitoring stations around the Dugald wellfield location



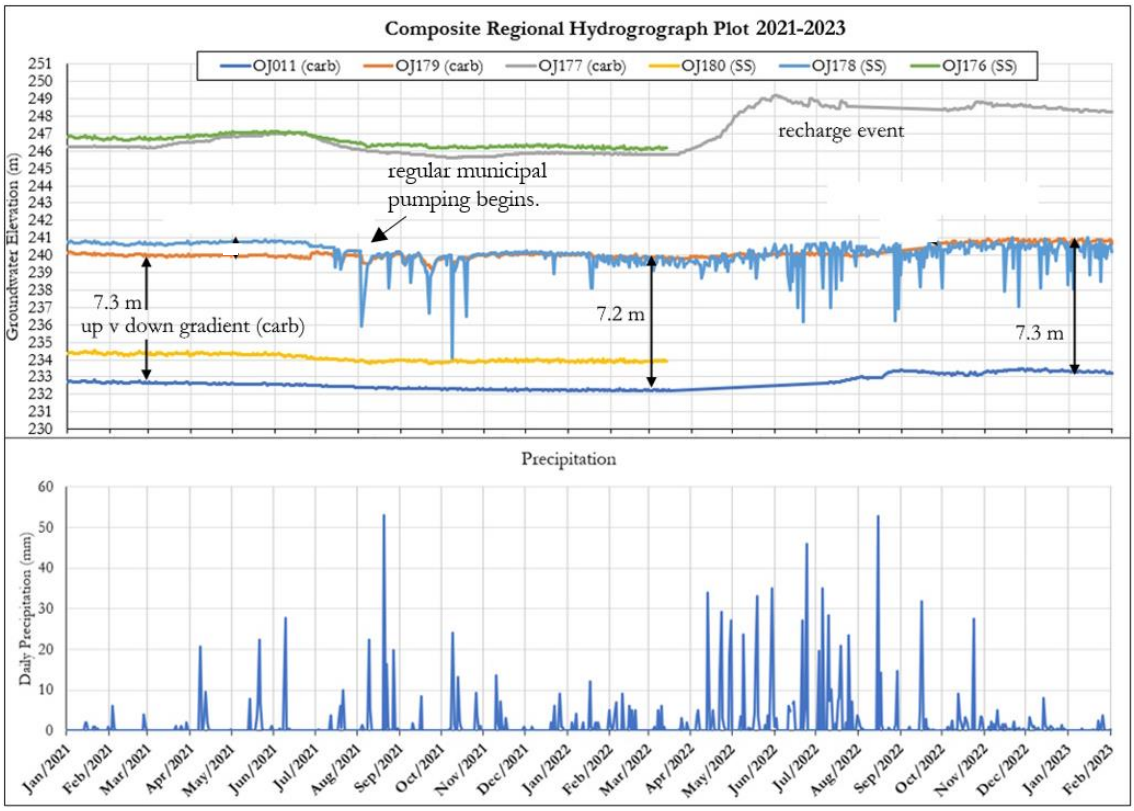
(Source – Hydata, 2014)

Figure 40 – Longer term (2007-2023) hydrograph response from the Dugald well field



(Data sources – Hydata, 2024; Environment Canada, 2024)

Figure 41 – Detailed hydrograph response to current municipal pumping- Dugald well field



(Data sources – Hydata, 2024; Environment Canada, 2024)

13.3 Additional Drawdown Projected From Increased Municipal Pumping

It is understood that the early stages of the proposed development would have the WTP operate with one or two treatment trains. Each treatment train would require an instantaneous raw water flow of 42 L/s (665.7 U.S.G.P.M.) or a combined 84 L/s (1,332 U.S.G.P.M.) (AE, 2024). In later development phases, it is understood that a third treatment train could be installed to bring the total instantaneous flow to 126 L/s (1,997 U.S.G.P.M.). It should be noted that the WTP demands were based on a 20-hour operating day (AE, 2024).

It should also be noted that the existing municipal Wells 1 and 2 were rated to produce 563 U.S.G.P.M. (35.5 L/s) each, or 900 U.S.G.P.M. (56.7 L/s) during simultaneous pumping (Friesen Drillers, 2019).

To assess potential offsite impacts of the proposed pumping, the Theis (1935) equation was used to calculate water level for both long term and short term scenarios. The drawdown was also calculated for the Sandstone Aquifer. The drawdown calculations assumed the aquifer parameters determined from the 72-hour pumping test. The results assumed homogenous aquifer conditions and no other pumping wells in operation. The calculations and results are detailed in the following paragraphs.

It is very important to note that the drawdown calculations are very conservative. For example, they assume that no recharge occurs during the pumping and that the wells are pumped continuously for the entire year. As shown from hydrograph records, recharge does occur during the spring snowmelt and during rainfall events. Further, the typical use of municipal systems involves intermittent periods of pumping and recovery, not a single, continuous pumping duration. These assumptions suggest strongly that the actual drawdown amounts would likely be less than predicted.

13.3.1 Stage 1 Development - 1,332 U.S.G.P.M. (84 L/s)

To achieve the Stage 1 flow requirement of 1,332 U.S.G.P.M. (84 L/s), supply Well 3 (West) and Well 4 (East) would need to pump simultaneously at a rate of 385 U.S.G.P.M. (24.3 L/s) each. This assumes that Well 1 and Well 2 would be mechanized to pump 563 U.S.G.P.M. (35.5 L/s) each, in a duty/standby configuration.

The projected short term drawdown from the proposed daily pumping is presented in Table 12. After 20 hours of pumping at combined 1,332 U.S.G.P.M. (from three wells) the drawdown at a distance of ½ mile from the well field was calculated to be approximately seven feet.

Table 12 – Short Term Calculated Drawdown – Stage 1

Table 12 Short Term Drawdown – 20 hour (1 Day) Stage 1 – 84 L/s (1,332 U.S.G.P.M.) Well 1: 563 USGPM; Wells 3 & 4: 385 USGPM each						
Radius from Wells 3 & 4	**250 ft.**	**500 ft.**	**1,000 ft.**	**2,500 ft.**	**5,280 ft. (1 mile)**	**10,560 ft (2 miles)**
Drawdown in Sandstone	36 ft.	19 ft.	15 ft.	7.1 ft.	<0.1 ft.	non-detect
Calculations follow assumptions of the Theis (1935) equation.						

13.3.2 Stage 2 Development – 1,997 U.S.G.P.M. (126 L/s)

To achieve the Stage 2 flow requirement of 1,997 U.S.G.P.M. (126 L/s), supply Well 3 (West) and Well 4 (East) would each need to pump simultaneously at a rate of 549 U.S.G.P.M. (34.6 L/s). This assumes that

supply Well 1 and Well 2 would be mechanized to pump simultaneously at a combined rate of 900 U.S.G.P.M. (56.7 L/s).

The projected short term drawdown from the proposed Stage 2 daily pumping is presented in Table 13. After 20 hours of pumping at combined 1,997 U.S.G.P.M. (from four wells) drawdown at a distance of ½ mile from the wells, was calculated to be about 27 ft.

It should be noted that the required flow rate in Stage 2 exceeds, by a small margin (37 U.S.G.P.M.), the maximum calculated well capacities noted in Table 10. It is possible with the benefit of longer term monitoring data collection and analysis during Stage 1 development, that the rated capacity of the existing four supply well could be adjusted to accommodate the full Stage 2 demand. However, it should also be noted that additional supply wells may be needed. Further, additional wells would be necessary to establish redundancy, as operating a well field at the maximum capacity possible comes with some challenges and potential issues for operation and maintenance.

Table 13 – Short Term Calculated Drawdown – Stage 2

Table 13 Short Term Drawdown – 20 hour (1 Day) Stage 2 – 126 L/s (1,997 U.S.G.P.M.) Well 1&2: 900 USGPM; Wells 3 & 4: 1,060 USGPM						
Radius from Wells 3 & 4	**250 ft.**	**500 ft.**	**1,000 ft.**	**2,500 ft.**	**5,280 ft. (1 mile)**	**10,560 ft (2 miles)**
Drawdown in Sandstone	49 ft.	42 ft.	30 ft.	14 ft.	1.2 ft.	non-detect
Calculations follow assumptions of the Theis (1935) equation.						

13.3.3 Projected Long Term Drawdown

The total annual groundwater allocation requested by the RM for the expanded Dugald well field is 1,200 dam^3/year, or 972.8 acre feet/year. This reflects an increase of 554 dam^3/year above the current Water Rights Licence allocation (2019-107). This volume equates to a continuous pumping rate of 278 U.S.G.P.M. for 365 days. However, it has been noted that the proposed expansion is planned as a phased approach, with total annual usage increasing gradually over time (AE, 2024).

Based on a linear interpretation of the projected water demands, total annual water consumption in 2030 (Year 5) would be approximately 800 dam^3/year, or 154 dam^3/year (77 U.S.G.P.M.) more than the current licenced allocation. At Year 10, the water demand was projected to be approximately 1,200 dam^3/year, or 554 dam^3/year (278 U.S.G.P.M.) more than the current licenced allocation.

The estimated additional drawdown from Year 5 pumping is presented in Table 14. After one year of pumping with no recharge, the additional drawdown at a radial distance of ½ mile from the wellfield, was calculated to be about 9.4 feet. It should be noted that this amount of drawdown would be expected for the Sandstone Aquifer. Drawdown in the Carbonate Aquifer has been shown to be less than 5 percent of the total drawdown in the sandstone, or about 0.5 ft. in the Year 5 projection.

For the projected Year 10 (2035) water demand, the estimated additional drawdown after one year of pumping with no recharge, was calculated to be about 33 feet at a distance of ½ mile. It should be noted that this amount of drawdown would be expected for the Sandstone Aquifer and drawdown in the Carbonate Aquifer

has been shown to be less than 5 percent of the total drawdown in the sandstone, or about 2.0 ft. in the Year 10 projection.

The amount of additional drawdown calculated for the well field in Year 5 was similar to the overall range of fluctuations reported on the hydrographs (approximately 10 ft.). As a result, existing wells in the area should be able to accommodate this range of fluctuations. The year 10 scenario could generate drawdown that exceeds historical seasonal and climate fluctuations for the area. However, based on the available drawdown in the area, existing wells should be able to operate without disruption to service. It is possible that upgraded pumping systems could be needed in situations where shallow hookups with suction line pumps are in use. It is noted that these kinds of upgrades would likely be warranted regardless of whether additional municipal development occurs in the area.

Due to the natural geology of the Dugald area, the cost to install a water well into the sandstone aquifer is greater than in other locations, such as around Steinbach. This is due to the thicker carbonate sequence and greater depths involved. As a result, most domestic wells tended to be completed into the carbonate aquifer, with few extending to the sandstone. These results were also reflected in the well inventory which noted a majority of wells completed in the carbonate aquifer. This is a general benefit for the municipal well field, as drawdown impacts in the carbonate are significantly less than in the sandstone, thereby lowering the potential for third party impacts.

Based on the reported water use, the RM currently uses up to about 285 dam^3 in a single year (MECC, 2024). As such, a phased approach to the total annual allocation would be desirable to allow the aquifer to respond slowly with gradual increases in municipal pumping. A phased approach would also allow for monitoring and hydrogeological analysis to refine projections and designs. A phased approach in the total allocation would also be consistent with the staged development approached taken for the instantaneous flow rates.

Table 14 – Long Term Drawdown – Year 5

Table 14 Projected Drawdown – Year 5 (2030) Estimated Use: 800 dam^3/year total (154 dam^3/year above current licence) 365 Days Pumping at 77 U.S.G.P.M.						
Radius	**1,000 ft.**	**½ mile**	**1-mile**	**1.5-miles**	**2-miles**	**3-miles**
Drawdown	11.8 ft.	9.4 ft.	7.7 ft.	6.7 ft.	5.9 ft.	4.9 ft.
Calculations follow the assumptions of the Theis (1935) equation.						

13.4 Long Term Aquifer Response

The analysis presented in this report indicates that short term drawdown impacts at ½ mile distance could be up to 7.0 ft. in the first development stage, and up to 27 ft. in the second development stage. Further, the long term (annualized) impacts from the proposed withdrawals were projected to be up to 9.4 ft. in Year 5 (2030) and up to 33 ft. in Year 10 (2035). As noted, these values assumed that the entire projected allocation would be removed from the aquifer, and that no recharge would occur during pumping.

The RM of Springfield is located near to major recharge areas in the carbonate and sandstone aquifers in the southeast of Manitoba. Through reviewing all of the regional hydrograph data, the following comments can be made:

- The lower transmissive conditions in the sandstone aquifer result in drawdown cones that are expected to be deep and of limited areal extent.

- The bedrock aquifers are highly responsive to seasonal and climatic factors. Both aquifers appear to be very similar to an open reservoir and pipe analogy. When the water level in the reservoir falls, the potential in the pipe declines rapidly. This means that during prolonged dry periods, static water levels in both aquifers will respond rapidly and decline accordingly. Conversely, during periods of recharge, both aquifers will respond quickly.
- The proposed expansion to the Springfield well field is projected to generate drawdown in the local aquifer that could exceed the historical range for seasonal and climatic fluctuations. However, drawdown of this magnitude has been generated previously in the bedrock aquifers in other parts of southeastern Manitoba without causing significant issue. One such example is the industrial pumping within the Steinbach-Blumenort corridor. In this situation, a relatively large amount of drawdown has been imposed in an area with a relatively large number of domestic groundwater users (Friesen Drillers, 2015). The example highlights how proper well design and mechanization can successfully mitigate well interference impacts.

14 WELL HOOK UP AND MECHANICAL CONSIDERATIONS

The following recommendations should be followed with respect to the mechanical connection to the wells:

- Both wells should be equipped with a center hung, full spool type pitless unit for ease of future servicing. The contract engineer should review the material for the pitless unit construction with the RM prior to specifying the product, although stainless steel is generally recommended. The pitless units should be installed so that no diameter restrictions are placed within the well at the pitless unit/casing connection. The pitless units should be installed concentric with the well casing with a proper hold down assemblies.
- The top of the well screen in Well 3 (West) and Well 4 (East) is at 252 and 255 feet below grade, respectively. A pump/motor should not be placed within the screen. Thus, the deepest recommended pump setting for each well is 250 feet below grade.
- The recommended maximum pumping rate for each well is noted as follows:
    - Stage 1 development: 385 U.S.G.P.M. (24.3 L/s) for Well 3 (West) and Well 4 (East).
    - Stage 2 development: 550 U.S.G.P.M. for Well 3 (West); and 510 U.S.G.P.M. for Well 4 (East).
    - It is noted that the required flow rate for Stage 2 exceeds, by a small margin (37 U.S.G.P.M.), the maximum calculated well capacities. It is possible with the benefit of longer term monitoring during Stage 1 development, that the rated capacity of the existing four supply wells could be revised to accommodate the full Stage 2 demand. However, additional supply wells may be needed. Further, additional wells would be necessary to establish redundancy. Operating a well field at the maximum possible capacity comes with some challenges and potential issues for operation and maintenance.
- Water levels should be monitored closely under operating conditions to ensure that air is not entrained in the system.
- Each well site design and layout should allow for truck access to the well head in the future. There should be sufficient space to maneuver a boom truck for hoisting and installing the pumps and drop pipe. The sites should also have surface drainage away from the wells and the wellhead should be protected from vehicular impact.
- The entire system design should take into account the local water quality. As noted from the sampling, groundwater quality can be expected to fluctuate with prolonged pumping.
- The wells should be permanently vented. A hydrogeologist should assist in this design.

- The water use must be metered, including instantaneous and cumulative flow. Annual records of water use must be submitted to the province as per the water rights act.
- It is important to note that Friesen Drillers Limited did not undertake any design or review of the mechanical engineering design of the piping/delivery system. It should be noted that all piping, selection of submersible pumps, and connections to the wells were beyond the scope of this hydrogeological assessment.

14.1 Turbidity in New Water Wells

It is common for newly constructed water wells, especially those which sit idle for a period of time before commissioning and regular operation, to have some accumulation of sediment and turbidity. Turbidity values tend to fluctuate for a period of time in new wells until they eventually stabilize with prolonged pumping.

The current supply wells were developed with a cable tool, which is a very effective method to remove fines. However, additional well development may be needed at the time of hookup and commissioning, depending on the conditions. Pretreatment for turbidity may also be necessary, depending on the selected treatment process.

15 Conclusions and Recommendations

The following recommendations are provided, based on our investigation for the proposed new municipal water supply in the RM of Springfield:

- It is recommended that the RM proceed with an application for a Water Rights License and an Environmental Act Licence application based on the results of this report.
- Groundwater elevations in both bedrock aquifers were commonly reported to be within 10 ft. of ground surface. This results in approximately 80 ft. or more of available drawdown for existing groundwater users in the region. To accommodate groundwater level fluctuations (from both seasonal/climatic and pumping influences) and to take full advantage of the naturally high groundwater conditions, all supply wells should have modern connections, including the use of submersible electric pumps installed near the bottom of the well casing.
- The transmissive conditions encountered at the site were typical for the sandstone aquifer. The inferred transmissivity was about 7,100 U.S.G.P.D/ft. This was somewhat higher than the regional transmissivity of 5,000 U.S.G.P.D/ft.
- Under normal seasonal and climatic conditions, the current testing suggested that the expanded municipal well field can likely provide the requested instantaneous flow rates for Stage 1 (84 L/s) and Stage 2 (126 L/s) development, as detailed in the previous sections. Additional wells would likely be necessary to establish redundancy.
- The specific capacity of the new municipal production wells (West and East) was 2.8-3.0 U.S.G.P.M./ft. The specific capacity will likely change over time which can impact overall well yield. It is recommended to clean the well screen regularly to maintain well efficiency.
- The requested annual allocation increase to 1,200 dam^3/year (972.8 acre feet/year) represents four times increase above current reported usage. Based on current data, the drawdown impacts of this proposed increase would extend offsite.

- A staged approach to the annual allocation is recommended. Similar to the approach used for the instantaneous flow rate. This would allow the aquifer to respond gradually to the increased pumping. It would also allow for proper monitoring and hydrogeological analysis to refine projections and designs. The addition of more supply wells would also help to lower the individual pumping rates needed. Withdrawing groundwater from a larger portion of the aquifer (i.e. using more wells) would serve to reduce the long term drawdown impacts surrounding each pumping site.
- Based on the estimated water demands in Year 5 (2030) the projected annual water use would be approximately 154 dam^3/year more than the current licence allocation (800 dam^3 in total). This would equate to a continuous pumping rate of 77 USGPM, which would in turn result in additional drawdown impacts of about 9.4 feet at a distance of ½ -mile in the Sandstone Aquifer.
- Based on the estimated water demands in Year 10 (2035) the projected annual water use would be approximately 554 dam^3/year more than the current licence allocation (1,200 dam^3 in total). This would equate to a continuous pumping rate of 278 USGPM, which could in turn result in additional drawdown impacts of up to 33 feet at a distance of ½ -mile in the Sandstone Aquifer.
- The Carbonate Aquifer drawdown response was observed to be up to 6 ft., or less than about 5% of the Sandstone Aquifer response at any given location. The drawdown effects appeared to be controlled predominantly by borehole leakance from wells that interconnect the bedrock formations. Due to this condition, drawdown in the Carbonate Aquifer was expected to vary depending on the number of nearby interconnecting wells that are present. Overall, drawdown in the carbonate was projected to be within seasonal and climatic fluctuations observed on regional hydrographs (Hydata, 2024). Existing monitoring wells in the area should be preserved and monitored regularly to check these assumptions as pumping rates are increased.
- The expected drawdown cones generated from daily pumping were shown to be deep, and generally of limited areal extent. This geometry reduces the potential for offsite impacts. However, given the relatively large proposed extraction rates, some mitigation efforts will likely be needed for the closest third party groundwater users. It is recommended that the RM engage with the residents identified in this investigation to develop a well interference mitigation plan. Each plan should be based on site specific conditions and developed with input from a professional hydrogeological engineer/hydrogeologist.
- Well interference effects should be reviewed regularly as part of the groundwater monitoring plan. As the total annual usage increases, the geometry of the drawdown cone will gradually develop within the aquifer. The overall aquifer response will depend, in part, on how quickly the water demands increase. As a result, the potential for third party impacts should be regularly updated.
- Groundwater geochemistry results were similar to previous results for the area. The Floride concentration was noted to exceed standards for drinking water. The geochemistry data was made available for the design of the water treatment process by others.
- Based on the reported geochemistry and the geologically confined setting of the Sandstone Aquifer, the new municipal groundwater supply wells are considered at this time to be non-GUDI. The ongoing monitoring of groundwater geochemistry and analysis for potential changes or emergent conditions is strongly recommended.
- Test wells TH24-1 and TH24-2 should be maintained for future monitoring and water quality sampling purposes. These wells should be permanently instrumented with data recording transducers to measure groundwater levels on a regular basis.

- The annual Groundwater Monitoring Program implemented for the previous Dugald supply wells should be updated to include the new production wells. The updated program should be designed by a hydrogeologist/ hydrogeological engineer registered to practice in Manitoba. The program should include a review of transducer data from the monitoring wells and of regional hydrograph data from the provincial observation network. In addition, groundwater samples should be collected from the monitoring wells and analyzed for routine geochemical parameters and stable environmental isotopes of ^{18}oxygen and deuterium. The results of the groundwater monitoring program results should be publicly reported.

- The RM should develop and update an Aquifer/Well Head Protection Program for the new municipal wells and develop a contingency plan for the event that the aquifer becomes impacted or unusable in some manner.

- The RM should develop and update a Well Interference Plan to resolve future well interference complaints. The plan should detail the complaint investigation procedure and establish criteria for decisions on complaint resolution. The plan should be designed and implemented under the supervision of a qualified hydrogeologist/hydrogeological engineer.

- In the event of considerably lower regional static water levels in the sandstone aquifer, water levels in the production wells should be monitored regularly. It is recommended that each production well be equipped with automatic data recording pressure transducers to assist the RM in monitoring pumping water levels.

- The new production wells will require regular maintenance. The pump and motor assembly should be removed and inspected at least once every 4 years. It is recommended that the well screens be cleaned with surge blocks during the routine maintenance check.

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17 LIMITATIONS AND DISCLAIMERS

17.1 LIMITATIONS

The scope of this report is limited to the matters expressly covered and is intended solely for the client to whom it is addressed. Friesen Drillers Limited makes no warranties, expressed or implied, including without limitation, as to the marketability of the site, or fitness to a particular use. The assessment was conducted using standard engineering and scientific judgment, principles, and practices, within a practical scope and budget. It is based partially on the observations of the assessor during the site visit in conjunction with archival information obtained from a number of sources, which is assumed to be correct. Except as provided, Friesen Drillers Limited has made no independent investigations to verify the accuracy or completeness of the information obtained from secondary sources or personal interviews. Generally, the findings, conclusions, and recommendations are based on a limited amount of data (e.g. number of boreholes drilled or water quality samples submitted for laboratory analysis) interpolated between sampling points and the actual conditions on the site may vary from that described above. Any findings regarding the site conditions different from those described above upon which this report was based will consequently change Friesen Drillers Limited's conclusions and recommendations.

17.2 DISCLAIMER

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Friesen DRILLERS

Appendix A

Background Hydrogeological Reports

Friesen DRILLERS

April 1, 2022

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Rural Municipality of Springfield
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Dear Phillip,

Subject **Desktop Hydrogeological Study - Dugald Raw Water Field Phase 2 Expansion**
SW32-10-6EPM Rural Municipality of Springfield, Manitoba

Friesen Drillers Limited (FDL) is pleased to present this report to detail the results of a desktop hydrogeological study undertaken for a potential expansion of the Oakbank-Dugald municipal groundwater supply in the Rural Municipality of Springfield (RM).

The study included an appraisal of technical considerations, discussions related to public consultations planning, and reporting to summarize the results and provide recommendations to expand the existing water supply, according to the volumes requested by the RM. The analysis was limited to a desktop review and did not include field work components.

Project Background

A municipal water supply for the communities of Oakbank and Dugald was developed in the early 1990s by ID Engineering (Woodbury, 1995). The municipal system was constructed to mitigate concerns of poor water quality related to aging private domestic supplies and limited well yields due to marginal aquifer conditions within the community of Oakbank.

Due to the low yields and challenging to treat water quality (at the time) in the Carbonate Aquifer around Oakbank, the original municipal supply wells were constructed in the Moosenose Ridge, an unconfined area of the Birds Hill Glacio-Fluvial complex located west of Oakbank. Two supply wells were installed and a pipeline was constructed to a small treatment plant in Oakbank. The distribution was originally limited to Oakbank, although a pipeline to Dugald was eventually constructed. The consulting hydrogeologist also recommended that strict environmental sampling and well head protection studies should be carried out due to the small and unconfined nature of the source aquifer (Woodbury, 1995).

All regulations, applicable at the time of development, were followed in the construction of the Moosenose water supply; however, shortly after the Walkerton, Ontario incident in 2000, regulations related to the protection of municipal water supplies were changed to address aspects of well head protection and surface water treatment requirements. As a result of these changes, basic chlorination of surface water was no longer acceptable and strict definitions were developed to distinguish surface water from groundwater sources. In Manitoba, the Office of Drinking Water was established to oversee municipal water supply operations.

In 2013, FDL was retained to assess the well head capture zone for the Moosenose supply wells. The results indicated that the water source was groundwater under direct influence of surface water (GUDI), a designation that requires additional treatment under current regulations. Due to the inherent risks associated with the Moosenose supply, a study was commissioned to locate an additional water source for the municipal system (FDL, 2016). The new groundwater source was intended to provide additional well head protection over the Moosenose wells and to provide supplemental water supply capacity to meet future population growth within the community.

Following recommendations of the 2016 desktop study, an extensive field-testing program was undertaken in 2017-2018 to select a new wellfield location (FDL, 2019a). One of the key aspects of this program was to select a water supply that was under confined conditions to provide additional protection of the municipal water supply. The test program included test well drilling, water quality sampling, and aquifer capacity testing. In addition, a public consultation process was undertaken by Landmark Planning and Design. In consultations with RM staff and the water treatment plant design consultant, WSP, two new municipal supply wells were constructed into the confined Sandstone Aquifer, at a location approximately four miles east of Dugald. The wellfield locations are shown on the following page in Figure 1. Although the technical and regulatory aspects of the project met with success, a few local residences required additional sampling and monitoring considerations, and two private domestic well replacements were undertaken by the RM.

Project Background (Cont'd)

In 2019 the RM applied for Water Rights (Licence No. 2019-107) and Environment Act (Licence No. 3303) licenses to authorize the newly constructed Dugald municipal groundwater supply. The application requested an additional allocation of 323 dam^3/year; at the time, the additional allocation was projected to meet the RM demands through the year 2041 (WSP, 2018). The new Dugald wellfield was put into operation in 2021. A copy of the Water Rights and Environment Act licences are attached.

The new Water Rights Licence (Licence No. 2019-107) was issued for the entire Oakbank-Dugald municipal system, which includes both the Moosenose wellfield at NE30-11-5E, and the Dugald wellfield at SW32-10-6E.

The licence noted the following conditions:

- Total annual allocation of 646.6 dam^3/year (524.20 acre-ft./year).
- Maximum instantaneous flow rate of 0.1320 m^3/second (2,091 U.S.G.P.M.).
- Operation of supply wells only permitted while aquifer water levels are above the bottom of the well casing in each supply well.
- License valid until September 20, 2036.

The Moosenose wellfield previously operated under licence no. 2016-102, with the following parameters:

- Total annual allocation of 323.3 dam^3/year (262.1 acre-ft./year).
- Maximum instantaneous flow rate of 0.061 m^3/second (966 U.S.G.P.M.).

It should be noted that the current Water Rights Licence (2019-107) does not specify allocations or pumping rates between the two wellfields. However, based on the above information, the new Dugald wellfield was inferred to have the following operating parameters.

- Total annual allocation: 323.3 dam^3/year (262.1 acre-ft./year).
- Maximum instantaneous flow rate: 0.071 m^3/second (1,125 U.S.G.P.M.). This rate equates to 562.5 U.S.G.P.M. (35.5 L/s) per well.

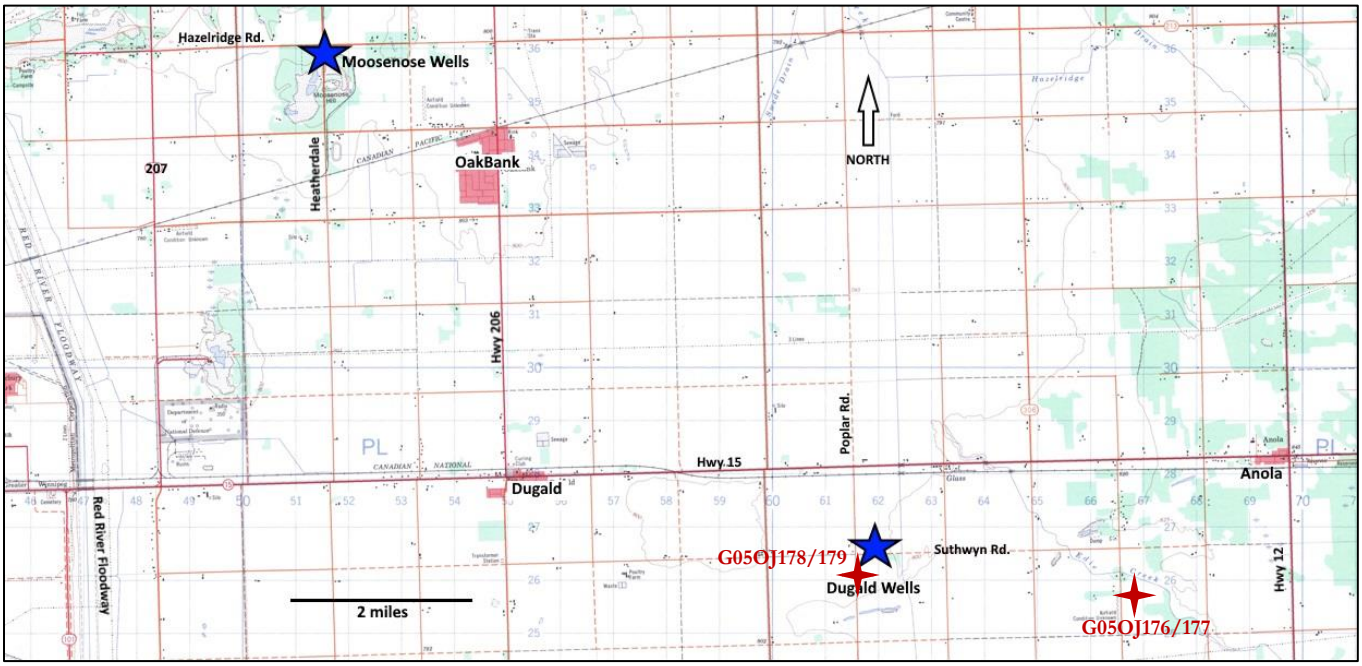

Figure 1 – Location of the Moosenose and Dugald wellfields relative to the Oakbank and Dugald communities; provincial monitoring stations around the Dugald wellfield also shown.

Proposed Water Supply Expansion

The Dugald wellfield was developed to produce a target flow rate of up to 40 L/s (634 U.S.G.P.M.) and an annual allocation of 323.3 dam^3/year. It is understood that these targets were derived from a Stantec Master Plan (2016) and a WSP study (2018). In 2018, the RM determined that a new, supplemental water supply equal to that of the existing Moosenose supply (323.3 dam^3/year, or 262.1 acre-ft./year) would be sufficient to meet the RM water supply needs until 2041 (FDL, 2019a). The contract documents for the work identified 40 L/s as a desired yield target.

Development of the Dugald wellfield included an extensive public consultation process. In this process, the target parameters of the water supply, including the projected annual groundwater allocations, were shared with the public. These details are a vital component in the communications and often form the basis of understanding and trust between members of the public and the project team in general. It is generally understood that population projections have an inherent margin of error; however, where projections are significantly off the mark, the credibility of the project overall is more easily undermined. This situation has the potential to generate challenging conditions for future water supply projects in the immediate area.

It is our understanding that growth projections for the RM have been revised since 2018 and that a total of 1,600 dam^3/year will be necessary to meet the future needs of the RM municipal system (Pers. Comm. – RM Staff, 2021). This represents an increase of about 1,000 dam^3/year, or about two and a half times above the existing allocation. FDL was retained by the RM to review the existing supply systems and provide options for the potential expansion of the municipal water supply.

Scope of Work

The following scope of work was developed for a review and evaluation of the proposed expansion of the municipal water supply:

- Obtain and review available geochemistry and hydrograph data for the area.
- Conduct background technical research to assess aquifer capability and well capacities around the Dugald municipal well field. Include details relating to possible well construction designs, testing requirements, and long-term monitoring plans for new supply wells.
- Discuss the public consultation aspects of the project with consultation professionals and report on the response.
- Prepare a report to summarize the results and provide recommendations for the water supply expansion.

Hydrogeological Conditions

Hydrograph Review

The province maintains a network of groundwater monitoring stations throughout the province. The network includes stations within the RM of Springfield, commonly as paired wells completed into the Carbonate and Sandstone aquifers. One set of stations, G05OJ178/179, is located adjacent to the new Dugald Wellfield (Glass); another set, G05OJ176/177, is located a few miles east of the Dugald wells, at section SW26-10-06E. The monitoring well locations are shown on Figure 1.

The most recent monitoring data from the nearby provincial stations was obtained from the provincial Groundwater Management Section (Hydata, 2021). The most recent monitoring data includes a relatively short period of time with the new Dugald municipal system in operation. Monitoring data from the Sandstone Aquifer is plotted in Figure 2, while data from the Carbonate Aquifer is plotted in Figure 3. The hydrographs allow for a comparison of groundwater levels at the Dugald wellfield with levels outside the radius of pumping influence. This allows the influences from new pumping to be more clearly delineated.

Several comments were provided from a review of the hydrographs:

- Groundwater levels in both aquifers were near the lowest elevations observed on the chart records. This was consistent with regional observations and was attributed to the recent drought conditions experienced in the province. However, overall groundwater levels remained well above the top of the aquifers, with approximately 200 ft. of available drawdown in the Sandstone Aquifer.

Hydrograph Review (Cont'd)

- The duration of pumping from the new wellfield was relatively short. Consequently, the full extend of drawdown development around the wellfield was not observed in the available monitoring data. Additional monitoring will be necessary to assess the full impacts of the new pumping wells over time.

- Fluctuations at stations in the Sandstone Aquifer were strongly correlated over the medium to long-term (OJ176/178 - Figure 2), with a difference of about 6 m between the two stations. New pumping appeared to have lowered static water levels around the wellfield by about 0.7 m (2.3 ft.). Maximum short-term drawdown from municipal pumping was up to 5.4 m (18 ft.) at the sandstone monitoring well (G05OJ178).

- Fluctuations at stations in the Carbonate Aquifer were moderately correlated over the medium to long-term (OJ177/179 - Figure 3), with a difference of 6-9 m between the two stations. Pumping influences appeared to be much less pronounced in the Carbonate Aquifer. Changes in the static water levels at the wellfield appear to be on the order of 0.5 m (1.6 ft.) or less. Maximum short-term drawdown from municipal pumping was up to 0.7 m (2.3 ft.) at the carbonate monitoring well (G05OJ179).

It should be noted that in areas where both bedrock aquifers are fresh, it was common to drill domestic water wells through both formations in search of softer water. As such, many of these multi-aquifer wells still exist in the area, despite this practice being abandoned by the water well industry in the early 1990s. The province took further steps in the most recent amendment to the Groundwater and Water Well Act to ban multi-aquifer completions entirely. Despite these actions, the hydraulic separation between the bedrock aquifer is not guaranteed at all locations. Therefore, diligence must be maintained in the groundwater protection and monitoring requirements. Long term changes in the groundwater quality of the two Paleozoic aquifers tend to occur gradually over time.

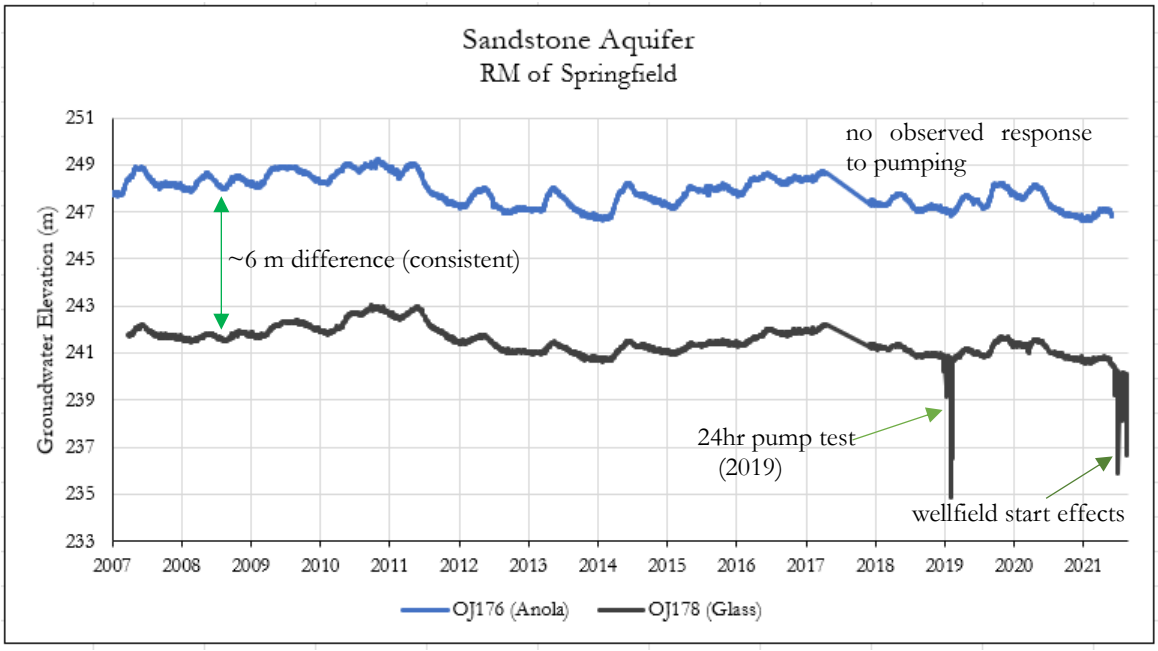

Figure 2 - Provincial stations in the Sandstone Aquifer; RM of Springfield. (Data source – Hydata, 2021)

Hydrograph Review (Cont'd)

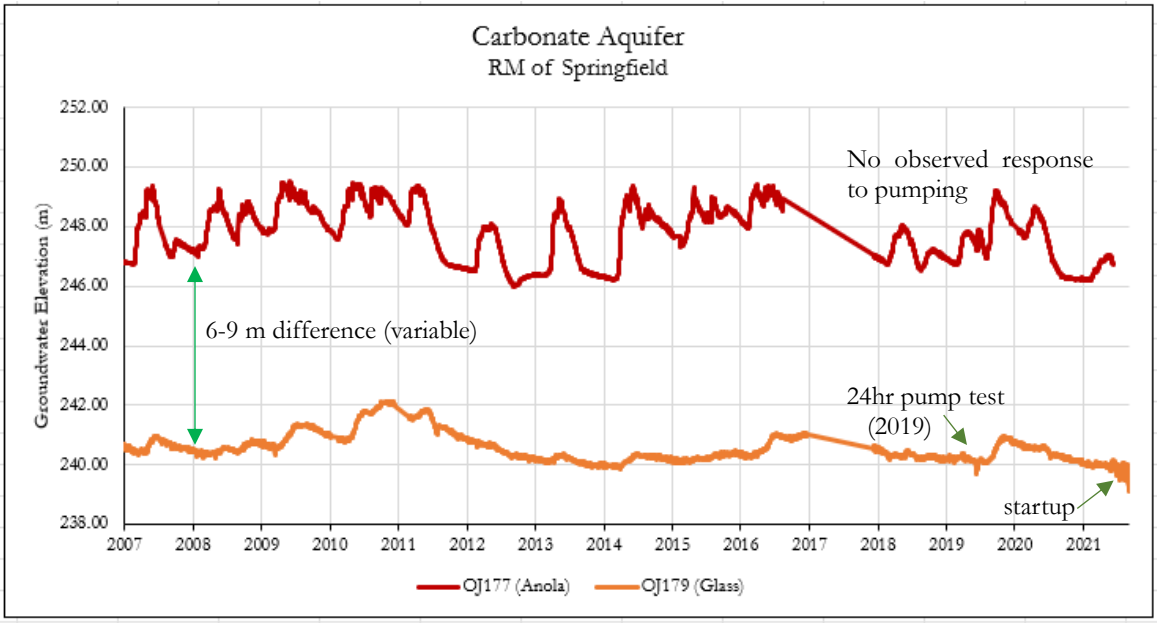

Figure 3 – Provincial stations in the Carbonate Aquifer; RM of Springfield. (Data source – Hydata, 2021)

Groundwater Geochemistry Review

Groundwater geochemistry within the major bedrock aquifers is highly variable throughout the RM of Springfield. It is likely that both the Sandstone and Carbonate aquifers were entirely saline prior to the recent glacial periods (Ferguson et al., 2007). Through numerous cycles of glacial advance and retreat, influxes of freshwater were flushed into the aquifers, gradually displacing saline waters towards the north and west. The current distribution of permeable glacial deposits allows for major recharge zones along the eastern side of the RM. As a result, groundwater quality is typically fresher in the southeast and gradually deteriorates towards the north and west. The continuous freshwater flushing action of new recharge has a natural softening effect on groundwater in the Winnipeg Formation. It has also been noted that the freshwater does not move uniformly through the Carbonate Aquifer (Phipps et al., 2008). Instead, areas where the freshwater flow is less active may result in pockets where the older, poorer groundwater quality is preserved. The saline/freshwater boundary generally represents a transition from subglacial freshwater recharge to ancient basin brines (Betcher, 1986).

Groundwater quality in the Sandstone Aquifer at the new Dugald wellfield location was noted to be suitable for municipal water supply purposes. It was further noted that groundwater quality in the sandstone was slightly fresher in areas east-southeast of the existing production wells (FDL, 2019a/b).

Dugald Municipal Well Field

Well Construction Details

The current municipal production wells were constructed using a similar design and methodology. Each well included full, 12-inch diameter completion to the base of the Winnipeg Formation sandstone (approx. 330 ft. below grade).

The production wells were drilled using a Foremost Barber Industries DR-24 Dual Rotary casing advancement drill rig. The lower drive was used to set 16-inch diameter casing into the carbonate rock at a depth of 75 feet below grade. The carbonate bedrock was drilled open hole with compressed air using a 15-inch diameter bit to a depth of 250 feet. At the base of the carbonate formation, the drilling technique was switched to clean water circulation so that the sandstone formation could be drilled with minimal disturbance. The sandstone was drilled with this technique to a depth of approximately 330 feet below grade.

Well Construction Details (Cont'd)

A stainless steel, wire-wound screen assembly was installed. The well screen was 60 feet long with 12-inch, pipe size diameter and 15-slot (0.015 inch) openings. The screen was equipped with centralizers every 20 feet. The screen was placed into the open borehole filled with clean water, and 0.55 Unimin Silica sand was placed around the screen. 12-inch diameter black welded steel casing (0.375-inch wall thickness) was extended to surface. The annular space between the 16 inch and 12-inch diameter casing was filled with bentonite chips from the top of the sand pack to the top of the shale (~255 ft. - 240 ft. below grade). Washed gravel was placed over the interval of the Carbonate Aquifer (~240-74 ft. below grade) and alternating bentonite chips and washed gravel were placed from 74 ft. to surface.

The well screen was noted to have a maximum transmitting capacity of 13.1 U.S.G.P.M./ft., based on the manufacturers recommended maximum intake velocity of 0.1 ft/sec. With 60 feet of screen, the maximum transmitting capacity of the screen would be 786 U.S.G.P.M.

The well construction described here is typical for the Winnipeg Formation in southeast Manitoba. However, variations in the formation depths and thickness are to be expected. New production wells should be designed and constructed according to site-specific conditions.

Well Field Capacity and Operation Details

It is our understanding that the Dugald supply wells were mechanized with submersible electric pumps that produce 562 U.S.G.P.M. (35.5 L/s) per well. It is also understood that the supply wells are operated in a duty/standby configuration, with only a single well pumping at a time. The associated drawdown at distance resulting from a single pumping well in the Sandstone Aquifer is shown in Table 1. From the Table, drawdown interference effects between the two production wells in the Sandstone Aquifer, located about 1,000 ft. apart, were calculated to be up to about 30 feet.

Wellfield capacity details are shown in Table 2. Based on previous well testing, the existing production wells can sustain a maximum instantaneous flow rate of 562 U.S.G.P.M., under normal conditions (FDL, 2019a). This rate is limited by the specific capacity of the wells along with the amount of available drawdown. As both of these parameters can vary slightly over time, the overall well capacities can also fluctuate over time. If both wells are to be pumped simultaneously, the resultant flow rate would reduce to about 450 U.S.G.P.M. (28.4 L/s) per well, or a combined 900 U.S.G.P.M. (56.8 L/s). The reduction is due to drawdown interference effects between the wells.

Table 1
Calculated Drawdown at Distance – Sandstone Aquifer
Dugald Municipal Wells - Pumping Rate: 562 U.S.G.P.M.

Radius	**500 ft.**	**1,000 ft.**	**2,000 ft.**	**3,000 ft.**	**4,000 ft.**	**5,280 ft. (1 mile)**
Drawdown	36.7 feet	28.0 feet	17.1 feet	11.4 ft.	7.3 ft.	3.4 ft.

Table 1 – Calculated drawdown pumping at a combined rate of 562 U.S.G.P.M. for 24 hours, following Theis (1935) equation.

Table 2
Maximum Pumping Rates – Existing Production Wells
Dugald Municipal Wellfield, SW32-10-6EPM

Duty/Standby				
Well ID	**Configuration**	**Specific Capacity[1]**	**Available Drawdown[2]**	**Maximum Pumping Rate[3]**
West well	Duty/Standby	2.5 U.S.G.P.M./ft.	220 ft.	562 U.S.G.P.M.
East Well	Duty/Standby	2.5 U.S.G.P.M./ft.	220 ft.	562 U.S.G.P.M.
			Maximum Instantaneous Rate (Duty/Standby):	**562 U.S.G.P.M.**
Simultaneous Well Pumping				
Well ID	**Configuration**	**Specific Capacity[1]**	**Available Drawdown[2]**	**Maximum Pumping Rate[3]**
West well	Simultaneous pumping	2.5 U.S.G.P.M./ft.	180 ft.	450 U.S.G.P.M.
East Well	Simultaneous pumping	2.5 U.S.G.P.M./ft.	180 ft.	450 U.S.G.P.M.
			Combined Maximum Instantaneous Rate (Simultaneous):	**900 U.S.G.P.M.**

Notes: [1] Specific capacity from the testing results (FDL, 2019a)
[2] Available drawdowns calculated as the difference between a 20 ft. static water level and 15 ft. above the casing bottom (256 ft.).
- An additional 40 ft. of drawdown from well interference was assumed for the Simultaneous Pumping Scenario.

[3] Available drawdown multiplied by specific capacity.

Table 2 – Hydraulic capacity of existing production wells. (Data source – FDL, 2019a)

Well Field Capacity and Operation Details (Cont'd)

As previously noted, the annual allocation of 323.3 dam^3/year (262.1 acre-ft./year) was based on the RM projections of their future water supply requirements. The current allocation (323.3 dam^3/year) is equivalent to a well pumping continuously at a rate of 200 U.S.G.P.M., or pumping the current wells approximately 20% of the time at maximum capacity. The available information for the supply wells and local aquifer suggests that the annual allocation of the existing wellfield could potentially be increased in the future. However, concerns for third party interference were noted for the existing sites. In general, it is desirable to have new pumping wells operate consistently and to increase pumping rates gradually to allow the natural systems and existing infrastructure to respond to the new conditions and stresses. Consequently, an expansion of allocation for the current supply wells should proceed on the basis of the monitoring results and recommendations that are produced from the analysis of the monitoring data.

Considerations for Well Field Expansion

Regulatory Considerations

The maximum pumping rates and annual groundwater allocations are limited as per conditions of the Water Rights Licence (2019-107). In addition, aspects of the pipeline and water supply infrastructure are also subject to conditions of the Environment Act Licence (No. 3303). Modification or expansion of the existing water supply system will require the existing licences to be revised. In some cases, the revisions can be achieved through a basic amendment process. In other cases, a new application may be necessary. The necessary revision process is at the discretion of the respective governing authorities.

In the author's experience, the license amendment process has been sufficient in cases where the changes or expansions are relatively minor. In situations where changes are more significant, a more extensive application is often necessary. An expansion of the existing Dugald wellfield by 1,000 dam^3/year is likely to require a new application, as this would represent a significant increase. These requirements should be confirmed with the appropriate authorities prior to any new development.

It is important to note that the Environment Act has a public consultation requirement which can add considerable time and effort to a project. The Water Rights Licensing process is done internally by the Drainage and Water Use Licensing Section and does not have the same public requirements.

Technical Considerations

The Winnipeg Formation Sandstone Aquifer is shown to be a reliable groundwater source at the Dugald wellfield location. The aquifer is geographically extensive and receives regular freshwater recharge. In addition, the capacity of new supply wells in the Sandstone Aquifer is relatively predictable and typically requires less extensive testing than the Carbonate Aquifer. Based on considerations of aquifer capacity, source water protection, and consistency of groundwater geochemistry, it is recommended that any new municipal supply wells also be constructed into the Sandstone Aquifer.

The 12-inch diameter well construction is ideally suited to the hydraulics of the Sandstone Aquifer and accommodates pumping equipment that provides the maximum flow rate with the fewest number of wells. A typical 12-inch diameter production well completed into the Sandstone Aquifer could be expected to produce a maximum instantaneous flow rate of up to about 500 U.S.G.P.M. (~32 L/s). If pumping at this rate for 12 hrs per day, with 12 hrs for recovery (50% duty/standby), the annual yield per well would be approximately 400-500 dam^3/year (~320-400 acre-ft./year).

Base on the above assumptions, increasing the total allocation by 1,000 dam^3/year would require approximately 2-3 additional, 12-inch diameter production wells that are efficiently constructed and developed into the Sandstone Aquifer.

As noted in the previous section of this report, pumping wells should be spaced sufficiently apart to minimize pumping interference effects and ensure maximum pumping capacity per well. It is also recognized that a balance must be achieved between adequate well spacing and feasibility of piping infrastructure costs. Based on the calculations presented in this assessment, a minimum well-pair spacing of 1,000-1,500 ft. This would result in about 20-30 ft. of interference drawdown between a given well-pair in the Sandstone Aquifer. It should be noted that additional drawdown could be observed if more wells are added in the nearby vicinity, which would reduce the maximum pumping rate from each well.

Technical Considerations (Cont'd)

The approximate locations recommended for additional municipal supply wells are shown in Figure 4. The new wells should be constructed in a similar manner to the existing supply wells, as described above, with 12-inch diameter steel casing and stainless well screens installed in the Sandstone Aquifer. The top of the sandstone layer is estimate to lie at a depth of 245-280 ft. below grade. Total well depths are estimated to be in the range of 300-340 ft. A test well should be drilled at each new well location to confirm the local stratigraphy and groundwater quality. Each production well should be constructed according to site-specific conditions.

Figure 4 – Proposed locations (approximate) for additional pumping wells (yellow); existing wells plotted in red; existing residential noted in blue. (Source – Google Earth, 2021)

Public Consultations Planning and Well Inventory

The proposed expansion of the municipal groundwater supply is fairly significant and would generate additional observable drawdown around the pumping wells in the Sandstone Aquifer. As new pumping wells are added, the individual drawdown cones would be expected to interact and generate a regional potentiometric surface that is altered from the predevelopment condition. Theses changes will likely be observable at existing private residences in the area. Eight areas with existing residential development, shown on Figure 4, were noted within a mile of the proposed new supply well locations.

It is important to note that it is a responsibility of the RM to ensure that existing groundwater supplies are not negatively impacted by the municipal pumping. This is a condition of the Water Rights License. Consequently, public consultations will be necessary to address the public concerns and mitigate any potential negative impacts to existing groundwater users.

Landmark Planning and Design Inc. (Landmark Planning) completed a public consultation process for the Dugald municipal wellfield development. Their process utilized a Stakeholder Tier System which organized stakeholders (including landowners, residents, organizations, businesses, and adjacent municipalities) based on direct or indirect potential impacts from the project. The key concerns from stakeholders were noted to include sufficiency of water supply, water quality, and the need to mitigate any possible negative impacts on existing wells (Landmark Planning, 2018).

Public Consultations Planning and Well Inventory (Cont'd)

The public engagement process was considered both thorough and adequate for the scale and nature for the project (Landmark Planning, 2018). Participants were generally satisfied that their concerns were understood and would be addressed as the project moved forward. However, well interreference complaints were raised during the initial wellfield development which required notable effort on the part of the project team and the RM to address. It is also noted that public consultations will likely be required according to the Environment Act licensing process for an expanded water supply. The previous events and licensing requirements highlight the importance of a public consultation process to be included as part of any water supply expansion program.

It is anticipated that an expansion of this nature will result in a significant amount of public interest in the area. As the proposed expansion is occurring only a short time after the initial development, it is highly likely that this project could experience difficulties. The residents in the area have been told that the previous project would supply growth for 20 years. This could create some issue with respect to credibility on behalf of the project. Public consultations and an effective strategy to communicate the reasons for the change in annual water allocations will likely be an important aspect of the project.

Conclusions and Recommendations

The location of the new Dugald wellfield has several real benefits over the Moosenose Ridge wellfield, including natural wellhead and source water protections and expansion potential. The benefits are derived from the doubly confined aquifer conditions and large geographical extent of the Winnipeg Formation Sandstone Aquifer. The thickness and grain size of the Sandstone Aquifer is fairly consistent in the region and typically requires minimal test work to develop new production wells. This characteristic provides both time and cost savings over the fractured Carbonate Aquifer, which typically requires extensive test work to identify suitable well locations. The water quality in the Sandstone Aquifer also tends to improve in the east-southeastward directions, which will likely provide further benefit for the water treatment process.

The available information suggests that, from a technical perspective, the allocation of existing Dugald supply wells could likely be increased in the future. However, concerns for third party well interference were noted for the existing development site. In general, it is desirable to have new pumping wells operate consistently and to increase pumping gradually to allow natural systems and existing infrastructure to respond to the new conditions and stresses. Consequently, an expansion of allocation for the current supply wells should proceed on the basis of the ongoing monitoring results and the recommendations that are generated from the monitoring data analyses.

Based on the above comments, it is recommended that any additional municipal water supply requirements be developed from the Sandstone Aquifer in the area of the Dugald wellfield. Although the Dugald wellfield is technically well suited to expansion, attention must also be given to the licensing processes and the potential for third party impacts.

Based on the desktop review, the following recommendations are provided:

- The projected long-term water demands should be reviewed and confirmed prior to proceeding with any expansion projects.
- Licensing requirements for the proposed expansion should be confirmed with the Water Rights Licensing and Environment Act Licensing sections of the province. It should be determined whether an amendment or new application would be required.
- A projected water demand increase of 1,000 dam^3/year, is estimated to require an additional two to three, 12-inch diameter production wells in the Sandstone Aquifer.
- New production well locations are recommended along Mission Road, between Poplar and Millbrook Roads (Figure 4). It is assumed that new production wells could be installed in the municipal right-of-way. This should be confirmed by the RM. It is understood that a small parcel of land was procured to allow for construction and continued access to the existing supply wells. These considerations should also be reviewed by the RM for the proposed expansion areas.
- A public consultation process should be established for the proposed expansion project. This program should build on the existing work that was done in the initial wellfield development. Public consultations should be initiated prior to any test work in the field.

Conclusions and Recommendations (Cont'd)

- If new supply wells are necessary, the following field-testing, analysis and well construction activities should be undertaken:
  - Initiate public consultations.
  - Obtain a Groundwater Exploration Permit (GEP) for the test work from Manitoba Environment, Climate, and Parks (formerly Conservation and Climate).
  - Confirm preferred well locations with RM and establish property/right-of-way boundaries and utility clearances.
  - Drill and construct a 5-inch diameter, PVC cased test well at each proposed well location to confirm local stratigraphy. The top of the sandstone layer was estimate to lie at a depth of 245-280 ft. below grade. Total well depths were estimated to be in the range of 300-340 ft.
  - Collect groundwater samples from each test well and submit to an accredited laboratory for analysis of routine geochemistry and any additional parameters requested by the RM or the WTP design consultants. The groundwater quality should be reviewed and approved by the RM according to the design parameters of the WTP.
  - Confirm the well design for each new production well site; each well should be designed based on site-specific data.
  - Construct 12-inch diameter production well(s) with steel casing and stainless well screens installed in the Sandstone Aquifer. To maximize well efficiencies, the well screens should be 12-inch pipe size diameter.
  - Conduct a pumping test on the new production well according to the provincial licensing requirements. All conditions of the GEP must be following in carrying out the well testing activities. The work should be supervised by a qualified hydrogeologist/ hydrogeological engineer registered in Manitoba.
  - Groundwater samples should be collected from the production wells at intervals throughout the high-rate pumping test. Samples should be submitted to an accredited laboratory for analysis of routine geochemistry and any additional parameters requested by the RM or the WTP design consultants.
  - Generate a final report to detail the testing, well construction and hydrogeological analysis results. The report should satisfy all requirements of the GEP and the Environment Act application process, including a detailed well inventory. Contingent on successful testing outcomes, the report should be suitable for submission to the province, pursuant to a new or amended licence. The report should be sealed by a qualified hydrogeologist/hydrogeological engineer registered in Manitoba.
  - As the proposed expansion represents a significant development within an important regional aquifer system, a numerical groundwater model of the aquifer should be developed. The model would be valuable to evaluate the aquifer response to pumping and would further aid in the ongoing management of the groundwater resources in the region. The modelling work should be undertaken by qualified professional with experience in the development of numerical groundwater models.

We appreciate the opportunity to be of continued service to the RM of Springfield. Please feel free to contact the undersigned with any questions about this work. We can be reached at 204-326-2485.

Sincerely,

Friesen Drillers Limited

[redacted]

Justin Neufeld, B.Sc.(G.Sc.), P.Geo.
Groundwater Geologist

PROVINCE OF MANITOBA [redacted] J. BELL Member 2262 REGISTERED PROFESSIONAL ENGINEER

Reviewed by,

Friesen Drillers Limited

[redacted]

[redacted].), P.Eng.
Hydrogeological Engineer

APEGM Certificate of Authorization Friesen Drillers Limited [redacted] Date: [redacted]

Attachments Water Rights Licence No. 2019-107 – RM of Springfield
Environment Act Licence No. 3303 – RM of Springfield

References

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Limitations

The scope of this report is limited to the matters expressly covered and is intended solely for the client to whom it is addressed. Friesen Drillers Limited makes no warranties, expressed or implied, including without limitation, as to the marketability of the site, or fitness to a particular use. The assessment was conducted using standard engineering and scientific judgment, principles, and practices, within a practical scope and budget. It is based partially on the observations of the assessor during the site visit in conjunction with archival information obtained from a number of sources, which is assumed to be correct. Except as provided, Friesen Drillers Limited has made no independent investigations to verify the accuracy or completeness of the information obtained from secondary sources or personal interviews. Generally, the findings, conclusions, and recommendations are based on a limited amount of data (e.g. number of boreholes drilled or water quality samples submitted for laboratory analysis) interpolated between sampling points and the actual conditions on the site may vary from that described above. Any findings regarding the site conditions different from those described above upon which this report was based will consequently change Friesen Drillers Limited's conclusions and recommendations.

Disclaimer

This Friesen Drillers Limited report has been prepared in response to the specific requests for services from the client to whom it is addressed. The content of this document is not Intended to be relied upon by any person, firm, or corporation, other than the client of Friesen Drillers Limited, to who it is addressed. Friesen Drillers Limited denies any liability whatsoever to other parties who may obtain access to this document by them, without express prior written authority of Friesen Drillers Limited and the client who has commissioned.

Licence to Use Water for Municipal Purposes

Manitoba

Issued in accordance with the provisions
The Water Rights Act and regulations made thereunder.

Project:	Oakbank/Dugald
Licence No.:	**2019-107**
(Previous Lic. No.:	2016-102)
U.T.M.:	651468 E 5536224 N

Subject to the terms and conditions contained in this Licence, the Minister of Sustainable Development authorizes:

The Rural Municipality of Springfield

in the Province of Manitoba (the "LICENSEE") to construct, operate, establish and maintain a project consisting of water well(s), pump(s), transmittal pipeline(s) and other works specific to the type of use (the "WORKS") and divert water from a **Sand and gravel and Sandstone** aquifer located on the following land:

NE 30-11-5 EPM and SW 32-10-6 EPM

as more particularly located and shown on the attached Exhibit "A" for **Municipal** purposes on the following lands:

Oakbank and Dugald Service Area

This licence is issued upon the express condition that it shall be subject to the provisions of The Water Rights Act and Regulation and all amendments thereto and, without limiting the generality of the aforesaid, to the following terms and conditions, namely:

1. The water shall be used solely for **Municipal** purposes.

2. The WORKS shall be operated in accordance with the terms herein contained.

3. a) The maximum rate at which water may be diverted pursuant hereto shall not exceed **0.1320 cubic metres per second (4.66 cubic feet per second)**.

   b) The total quantity of water diverted in any one year shall not exceed **646.60 cubic decametres (524.20 acre feet)**.

4. Water shall not be diverted during any period when the water level in the aquifer is below the casing of any project well.

5. The LICENSEE does hereby remise, release and forever discharge Her Majesty the Queen in Right of the Province of Manitoba, of and from all manner of action, causes of action, claims and demands whatsoever which against Her Majesty the LICENSEE ever had, now has or may hereafter have, resulting from the use of water for **Municipal** purposes.

6. In the event that the rights of others are infringed upon and/or damage to the property of others is sustained as a result of the operation or maintenance of the WORKS and the rights herein granted, the LICENSEE shall be solely responsible and shall save harmless and fully indemnify Her Majesty the Queen in Right of the Province of Manitoba, from and against any liability to which Her Majesty may become liable by virtue of the issue of this Licence and anything done pursuant hereto.

7. This Licence is not assignable or transferable by the LICENSEE and when no longer required by the LICENSEE this Licence shall be returned to the Water Use Licensing Section for cancellation on behalf of the Minister.

8. Upon the execution of this Licence the LICENSEE hereby grants the Minister or the Minister's agents the right of ingress and egress to and from the lands on which the WORKS are located for the purpose of inspection of the WORKS and the LICENSEE shall at all times comply with such directions and/or orders that may be given by the Minister or the Minister's agents in writing from time to time with regard to the operation and maintenance of the WORKS.

9. This Licence may be amended, suspended or cancelled by the Minister in accordance with The Water Rights Act by letter addressed to the LICENSEE at **Box 219, Oakbank, MB, R0E 1J0, Canada** and thereafter this Licence shall be determined to be at an end.

10. Notwithstanding anything preceding in this Licence, the LICENSEE must have legal control, by ownership or by rental,

lease, or other agreement, of the lands on which the WORKS shall be placed and the water shall be used.

11. The term of this Licence shall expire on September 20, 2036 and this Licence shall become effective only on the date of execution hereof by a person so authorized in the Department of Sustainable Development. The LICENSEE may apply for renewal of this Licence not more than 365 days and not less than 90 days prior to the expiry date.

12. This Licence expires automatically upon the loss of the legal control of any of the lands on which the WORKS are located or on which water is used, unless the Licence is transferred or amended by the Minister upon application for Licence transfer or amendment.

13. The LICENSEE shall keep records of daily and annual water use and shall provide a copy of such records to the Water Use Licensing Section not later than February 1st of the following year.

14. A flow meter must be installed, positioned to accurately measure instantaneous pumping rate and accumulative withdrawals from the water source.

15. The LICENSEE does hereby agree to correct, to the satisfaction of the Minister, any water supply problems to wells or other forms of supply, which were constructed and operating prior to the date of the original application for the project and which are partly or wholly attributable, in the opinion of the Minister, to the diversion of water as authorized by this Licence.

16. The LICENSEE shall hold and maintain all other regulatory approvals that may be required and shall comply with all other regulatory requirements for the construction, operation, or maintenance of the WORKS or to divert or use water as provided by this Licence.

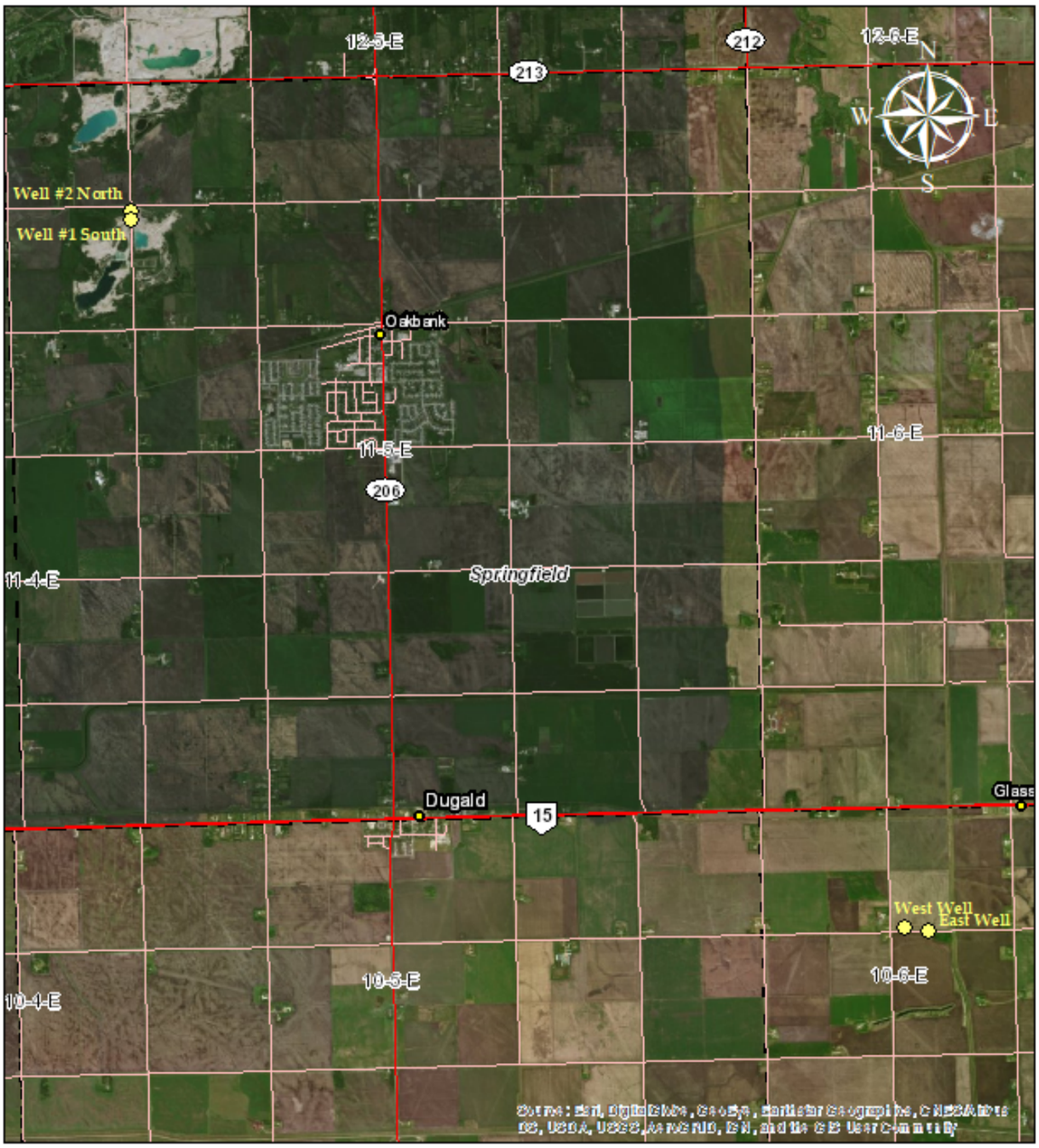
FOR OFFICE USE ONLY

Issued at the City of Winnipeg, in the Province of Manitoba, this _____ day of _____ A.D. 20___.

_____ _____

Print Name Signature

Signed by the Minister charged with the administration of the Water Rights Act (or her/his designate)



LOCATION OF SUPPLY WELLS
IN SW 32-10-6 EPM and NE 30-11-5 EPM
R. M. OF SPRINGFIELD (OAKBANK & DUGALD)
MUNICIPAL PURPOSES

EXHIBIT "A"

THIS PLAN IS AN INTEGRAL PART OF
LICENCE NO. ___2019-107___
ISSUED UNDER THE WATER RIGHTS ACT

1,500 750 0 1,500 Meters

Manitoba
Conservation and Climate
Environmental Stewardship Division
Environmental Approvals Branch
1007 Century Street, Winnipeg, Manitoba R3H 0W4
T 204 945-8321 F 204 945-5229

CLIENT FILE NO.: 6013.00

November 4, 2019

Santokh Singh Randhawa, P. Eng.
Rural Municipality of Springfield
Box 219, 100 Springfield Centre Drive
Oakbank, MB R0E 1J0
Srandhawa@rmofspringfield.ca

Dear Mr. Randhawa:

Enclosed is **Environment Act Licence No. 3303,** issued to **Rural Municipality of Springfield** for the construction and operation of the Development being a groundwater supply, treatment and distribution system in the Rural Municipality of Springfield, in accordance with the Proposal filed under The Environment Act.

Environment Act Licence No. 2105 for the existing north supply system is rescinded by this licence, and provisions for these components of the system are included in the new licence.

In addition to the enclosed Licence requirements, please be informed that all other applicable federal, provincial and municipal regulations and by-laws must be complied with. A Notice of Alteration must be filed with the Director for approval prior to any alteration to the Development as licensed.

If you have any questions on this matter, please contact Nada Suresh, Environment Officer, at 204-945-8214 or Nada.Suresh@gov.mb.ca.

Pursuant to Section 27 of The Environment Act, this licensing decision may be appealed by any person who is affected by the issuance of this Licence to the Minister of Conservation and Climate within 30 days of the date of the Licence.

Yours truly,

[redacted]

Cordella Friesen
Director
The Environment Act

c: S. Kohler/Y. Hawryliuk/N. Suresh: Environmental Compliance and Enforcement
Jeff Bell, Friesen Drillers/Brenda Tesarski, Landmark Planning and Design / Bill Brant, WSP
Bruce Webb: Environmental Approvals
Public Distribution List (page 2)
Public Registries

NOTE: **Confirmation of receipt of this Licence No. 3303 (by the Licencee only) is required by the Director of Environmental Approvals. Please acknowledge receipt by signing in the space below and email a copy of this letter to Bruce.Webb@gov.mb.ca by November 18, 2019.**

On behalf of Rural Municipality of Springfield **Date**

Public Distribution List:

Layton Warren
Heather Erickson
Garry Brown, Melinda Warren and Jack and Cherryl Brown
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Sylvia Vaags
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THE ENVIRONMENT ACT
LOI SUR L'ENVIRONNEMENT

Manitoba

LICENCE

Licence No. / Licence n°: **3303**

Issue Date / Date de délivrance: **November 4, 2019**

In accordance with The Environment Act (C.C.S.M. c. E125)
Conformément à la Loi sur l'environnement (C.P.L.M. c. E125)

Pursuant to Sections 11(1) / Conformément au Paragraphe 11(1)

THIS LICENCE IS ISSUED TO: / CETTE LICENCE EST DONNÉÉ À:

RURAL MUNICIPALITY OF SPRINGFIELD; "the Licencee"

for the construction and operation of the Development being a groundwater supply, treatment and distribution system for municipal purposes in accordance with the proposal and additional information filed under The Environment Act dated August 25, 1994 and December 7, 1994 respectively for the north supply system and the proposal dated May 15, 2019 for the south supply system, and subject to the following specifications, limits, terms and conditions:

DEFINITIONS

In this Licence,

"approved" means approved by the Director or an assigned Environment Officer in writing;

"Director" means an employee so designated pursuant to The Environment Act;

"Environment Officer" means an employee so designated pursuant to The Environment Act; and

GENERAL TERMS AND CONDITIONS

This Section of the Licence contains requirements intended to provide guidance to the Licencee in implementing practices to ensure that the environment is maintained in

such a manner as to sustain a high quality of life, including social and economic development, recreation and leisure for present and future Manitobans.

1. The Development includes the following components:
   North Supply System:
   a) two supply wells in NE 30-11-5E (Heatherdale Road) in an unconfined sand and gravel aquifer;
   b) a pipeline connecting the wells with the Oakbank water treatment plant and reservoir;
   c) a water treatment plant providing chlorination in Oakbank;
   d) a distribution system serving the community of Oakbank;
   e) a pipeline connecting the Oakbank and Dugald water treatment plants and reservoirs;
   South Supply System:
   f) two supply wells in 32-10-6E in the Winnipeg Formation Sandstone Aquifer;
   g) a pipeline connecting the wells with the existing Dugald water treatment plant and reservoir;
   h) a water treatment plant providing chorination in Dugald; and
   i) a distribution system serving the community of Dugald.

2. The Licencee shall at all times maintain a copy of this licence at the Development or at the premises from which the Development's operations are managed.

3. In addition to any of the limits, terms and conditions specified in this Licence, the Licencee shall, upon the request of the Director:
   a) sample, monitor, analyze or investigate specific areas of concern regarding any segment, component or aspect of pollutant storage, containment, treatment, handling, disposal or emission systems, for such pollutants, ambient quality, aquatic toxicity, leachate characteristics and discharge or emission rates, and for such duration and at such frequencies as may be specified;
   b) determine the environmental impact associated with the release of any pollutant from the Development;
   c) conduct specific investigations in response to the data gathered during environmental monitoring programs; or
   d) provide the Director, within such time as may be specified, with such reports, drawings, specifications, analytical data, descriptions of sampling and analytical procedures being used, bioassay data, flow rate measurements and such other information as may from time to time be requested.

4. The Licencee shall submit all information required to be provided to the Director or Environment Officer under this Licence, in written and electronic format, in such form (including number of copies) and of such content as may be required by the Director or Environment Officer, and each submission shall be clearly labeled with the Licence Number and Client File Number associated with this Licence.

5. The Licencee shall construct and operate the water supply system in accordance with Manitoba Regulations under The Public Health Act, The Drinking Water Safety Act, and all operating requirements as recommended by Manitoba Conservation and Climate.

6. The Licencee shall collect and dispose of all used oil products and other regulated hazardous wastes generated by the machinery used in the construction and operation of the Development in accordance with applicable Manitoba Conservation and Climate and legislation requirements.

7. The Licencee shall not permit the interconnection of a private water supply system with the Development.

8. The Licencee shall maintain the water supply wells associated with the Development to prevent the contamination of groundwater by surface water:
   a) entering the well casings through the top of the casings; and
   b) entering the well casings through the sides of the casings.

SPECIFICATIONS, LIMITS, TERMS AND CONDITIONS

Construction - General

9. The Licencee shall notify the assigned Environment Officer not less than two weeks prior to beginning construction of the Development. The notification shall include the intended starting date of construction and the name of the contractor responsible for the construction.

10. The Licencee shall, prior to the construction of the Development, obtain a Permit to Construct or Alter a Public Water System from the Office of Drinking Water of Manitoba Conservation and Climate.

11. The Licencee shall dispose of non-reusable construction debris from the Development at a waste disposal ground operating under the authority of a permit issued pursuant to Manitoba Regulation 37/2016 respecting Waste Management Facilities, or any future amendment thereof, or a Licence issued pursuant to The Environment Act.

12. The Licencee shall comply with the requirements of The Heritage Resources Act, and suspend construction and immediately notify the Historic Resources Branch if heritage resources are encountered during the construction of the Development.

13. The Licencee shall locate fuel storage and equipment servicing areas established for the construction and operation of the Development a minimum distance of 100 metres from any waterbody and 30 metres from any well, and shall comply with the requirements of Manitoba Regulation 188/2001 respecting Storage and Handling of Petroleum Products and Allied Products, or any future amendment thereof.

14. The Licencee shall, during construction and maintenance of the Development, operate, maintain and store all materials and equipment in a manner that prevents any deleterious substances (fuel, oil, grease, hydraulic fluids, coolant, paint, uncured concrete and concrete wash water, etc.) from entering watercourses or any well, and have an emergency spill kit for in-water use available on site during construction.

15. The Licencee shall, in the case of physical or mechanical equipment breakdown or process upset where such breakdown or process upset results or may result in the release of a pollutant in an amount or concentration, or at a level or rate of release, that causes or may cause a significant adverse effect, immediately report the event by calling the 24-hour environmental accident reporting line at 204-944-4888 (toll-free 1-855-944-4888). The report shall indicate the nature of the event, the time and estimated duration of the event and the reason for the event.

16. The Licencee shall, following the reporting of an event pursuant to Clause 15,
    a) identify the repairs required to the mechanical equipment;
    b) undertake all repairs to minimize unauthorized discharges of a pollutant;
    c) complete the repairs in accordance with any written instructions of the Director and/or the Environment Officer; and
    d) submit a report to the Director about the causes of breakdown and measures taken, within one week of the repairs being done.

17. The Licencee shall, during construction and maintenance of the Development, prevent the introduction and spread of foreign aquatic and terrestrial biota by cleaning equipment prior to its delivery to the site of the Development and complying with the requirements of Manitoba Regulation 173/2015 respecting Aquatic Invasive Species, or any future amendment thereof.

18. The Licencee shall revegetate soil exposed during the construction of the Development with native or introduced grasses or legumes. Native species shall be used to revegetate areas where native species existed prior to construction.

Construction – Pipelines

19. The Licencee shall, prior to constructing components of the Development on or adjacent to highway rights-of-way, obtain all necessary approvals from Manitoba Infrastructure.

20. The Licencee shall not release chlorinated water from pipeline testing and startup activities associated with the Development to a surface water body until total residual chlorine concentrations are equal to or less than 0.02 milligrams per litre. Releases of chlorinated water at higher concentrations may be made to vegetated land or dry waterways, provided that total residual chlorine concentrations have decayed to 0.02 milligrams per litre or less before the released water reaches any body of surface water.

21. The Licencee shall construct waterway crossings on flowing waterways by augering, tunneling or boring. Open cut crossings on flowing waterways shall not be made unless prior consultation with Manitoba Conservation and Climate and Department of Fisheries and Oceans staff has occurred and the prior written approval of the Director has been obtained. Dry or non-flowing (i.e. hydraulically unconnected to downstream flowing water) natural and artificial waterways may be crossed with open cut techniques where approval has been obtained where necessary from the authority responsible for the channel.

22. The Licencee shall complete augered, tunneled or bored waterway crossings in accordance with the September, 2004 publication "Planning Horizontal Directional Drilling for Pipeline Construction", published by the Canadian Association of Petroleum Producers, and notify the Environment Officer if a frac out occurs.

23. The Licencee shall, where conditions allow, excavate endpoints for directional drilling operations a minimum of 30 m from the high water mark of third and higher order waterways, and a minimum of 15 m from the high water mark of first and second order waterways.

24. The Licencee shall construct open cut stream crossings associated with the Development in accordance with the methodologies described in the October, 2005 publication "Pipeline Associated Watercourse Crossings Third Edition", published by the Canadian Pipeline Water Crossing Committee, and the May, 1996 publication "Manitoba Stream Crossing Guidelines for the Protection of Fish and Fish Habitat", published by the Department of Fisheries and Oceans and Manitoba Natural Resources.

25. The Licencee shall, where open cut stream crossing techniques are used on intermittent waterways and artificial drainage channels, not construct open cut crossings associated with the Development between March 15 and June 15 of any year.

26. The Licencee shall, where open cut stream crossing techniques are used on intermittent waterways and artificial drainage channels, minimize disturbance to riparian areas and restore the bottom and banks of the waterways to their original elevations and shapes.

27. The Licencee shall not alter local drainage patterns by the construction of the Development.

Decommissioning of Existing Wells

28. The Licencee shall decommission municipal and private wells made redundant by the Development in accordance with the requirements of Manitoba Regulation 215/2015 respecting Well Standards, or any future amendment thereof.

Operation

29. The Licencee shall obtain and maintain classification of the Development pursuant to Manitoba Regulation 77/2003 respecting Water and Wastewater Facility Operators, or any future amendment thereof and maintain compliance with all requirements of the regulation including, but not limited to, the preparation and maintenance of a Table of Organization, Emergency Response Plan and Standard Operating Procedures.

30. The Licencee shall carry out the operation of the Development with individuals properly certified to do so pursuant to Manitoba Regulation 77/2003 respecting Water and Wastewater Facility Operators, or any future amendment thereof.

31. The Licencee shall operate the Development with respect to the volume and rate of water diverted in accordance with a Water Rights licence issued pursuant to The Water Rights Act.

32. The Licencee shall develop, maintain and implement a wellhead protection plan for the wells of the Development that addresses disruption and contamination due to natural disasters, spills of contaminants and vandalism.

33. The Licencee shall develop and implement a groundwater level monitoring program for the Development. The program shall address monitoring well locations, monitoring frequency and equipment to be used in monitoring.

REVIEW AND REVOCATION

A. Environment Act Licence No. 2105 (north supply system) is hereby rescinded.

B. If, in the opinion of the Director, the Licencee has exceeded or is exceeding or has or is failing to meet the specifications, limits, terms, or conditions set out in this Licence, the Director may, temporarily or permanently, revoke this Licence.

C. If, in the opinion of the Director, new evidence warrants a change in the specifications, limits, terms or conditions of this Licence, the Director may require the filing of a new proposal pursuant to Section 11 of The Environment Act.

Cordella Friesen
Director
The Environment Act

Client File No.: **3876.00 (north supply system)**
6013.00 (south supply system)

Friesen DRILLERS

Appendix B

Water Rights Licences – Rural Municipality of Springfield

Licence to Use Water for Municipal Purposes

Manitoba

Issued in accordance with the provisions
The Water Rights Act and regulations made thereunder.

Project:	Oakbank/Dugald
Licence No.:	**2019-107**
(Previous Lic. No.:	2016-102)
U.T.M.:	651468 E 5536224 N

Subject to the terms and conditions contained in this Licence, the Minister of Sustainable Development authorizes:

The Rural Municipality of Springfield

in the Province of Manitoba (the "LICENSEE") to construct, operate, establish and maintain a project consisting of water well(s), pump(s), transmittal pipeline(s) and other works specific to the type of use (the "WORKS") and divert water from a **Sand and gravel and Sandstone** aquifer located on the following land:

NE 30-11-5 EPM and SW 32-10-6 EPM

as more particularly located and shown on the attached Exhibit "A" for **Municipal** purposes on the following lands:

Oakbank and Dugald Service Area

This licence is issued upon the express condition that it shall be subject to the provisions of The Water Rights Act and Regulation and all amendments thereto and, without limiting the generality of the aforesaid, to the following terms and conditions, namely:

1. The water shall be used solely for **Municipal** purposes.

2. The WORKS shall be operated in accordance with the terms herein contained.

3. a) The maximum rate at which water may be diverted pursuant hereto shall not exceed **0.1320 cubic metres per second (4.66 cubic feet per second)**.

   b) The total quantity of water diverted in any one year shall not exceed **646.60 cubic decametres (524.20 acre feet)**.

4. Water shall not be diverted during any period when the water level in the aquifer is below the casing of any project well.

5. The LICENSEE does hereby remise, release and forever discharge Her Majesty the Queen in Right of the Province of Manitoba, of and from all manner of action, causes of action, claims and demands whatsoever which against Her Majesty the LICENSEE ever had, now has or may hereafter have, resulting from the use of water for **Municipal** purposes.

6. In the event that the rights of others are infringed upon and/or damage to the property of others is sustained as a result of the operation or maintenance of the WORKS and the rights herein granted, the LICENSEE shall be solely responsible and shall save harmless and fully indemnify Her Majesty the Queen in Right of the Province of Manitoba, from and against any liability to which Her Majesty may become liable by virtue of the issue of this Licence and anything done pursuant hereto.

7. This Licence is not assignable or transferable by the LICENSEE and when no longer required by the LICENSEE this Licence shall be returned to the Water Use Licensing Section for cancellation on behalf of the Minister.

8. Upon the execution of this Licence the LICENSEE hereby grants the Minister or the Minister's agents the right of ingress and egress to and from the lands on which the WORKS are located for the purpose of inspection of the WORKS and the LICENSEE shall at all times comply with such directions and/or orders that may be given by the Minister or the Minister's agents in writing from time to time with regard to the operation and maintenance of the WORKS.

9. This Licence may be amended, suspended or cancelled by the Minister in accordance with The Water Rights Act by letter addressed to the LICENSEE at **Box 219, Oakbank, MB, R0E 1J0, Canada** and thereafter this Licence shall be determined to be at an end.

10. Notwithstanding anything preceding in this Licence, the LICENSEE must have legal control, by ownership or by rental,

lease, or other agreement, of the lands on which the WORKS shall be placed and the water shall be used.

11. The term of this Licence shall expire on September 20, 2036 and this Licence shall become effective only on the date of execution hereof by a person so authorized in the Department of Sustainable Development. The LICENSEE may apply for renewal of this Licence not more than 365 days and not less than 90 days prior to the expiry date.

12. This Licence expires automatically upon the loss of the legal control of any of the lands on which the WORKS are located or on which water is used, unless the Licence is transferred or amended by the Minister upon application for Licence transfer or amendment.

13. The LICENSEE shall keep records of daily and annual water use and shall provide a copy of such records to the Water Use Licensing Section not later than February 1st of the following year.

14. A flow meter must be installed, positioned to accurately measure instantaneous pumping rate and accumulative withdrawals from the water source.

15. The LICENSEE does hereby agree to correct, to the satisfaction of the Minister, any water supply problems to wells or other forms of supply, which were constructed and operating prior to the date of the original application for the project and which are partly or wholly attributable, in the opinion of the Minister, to the diversion of water as authorized by this Licence.

16. The LICENSEE shall hold and maintain all other regulatory approvals that may be required and shall comply with all other regulatory requirements for the construction, operation, or maintenance of the WORKS or to divert or use water as provided by this Licence.

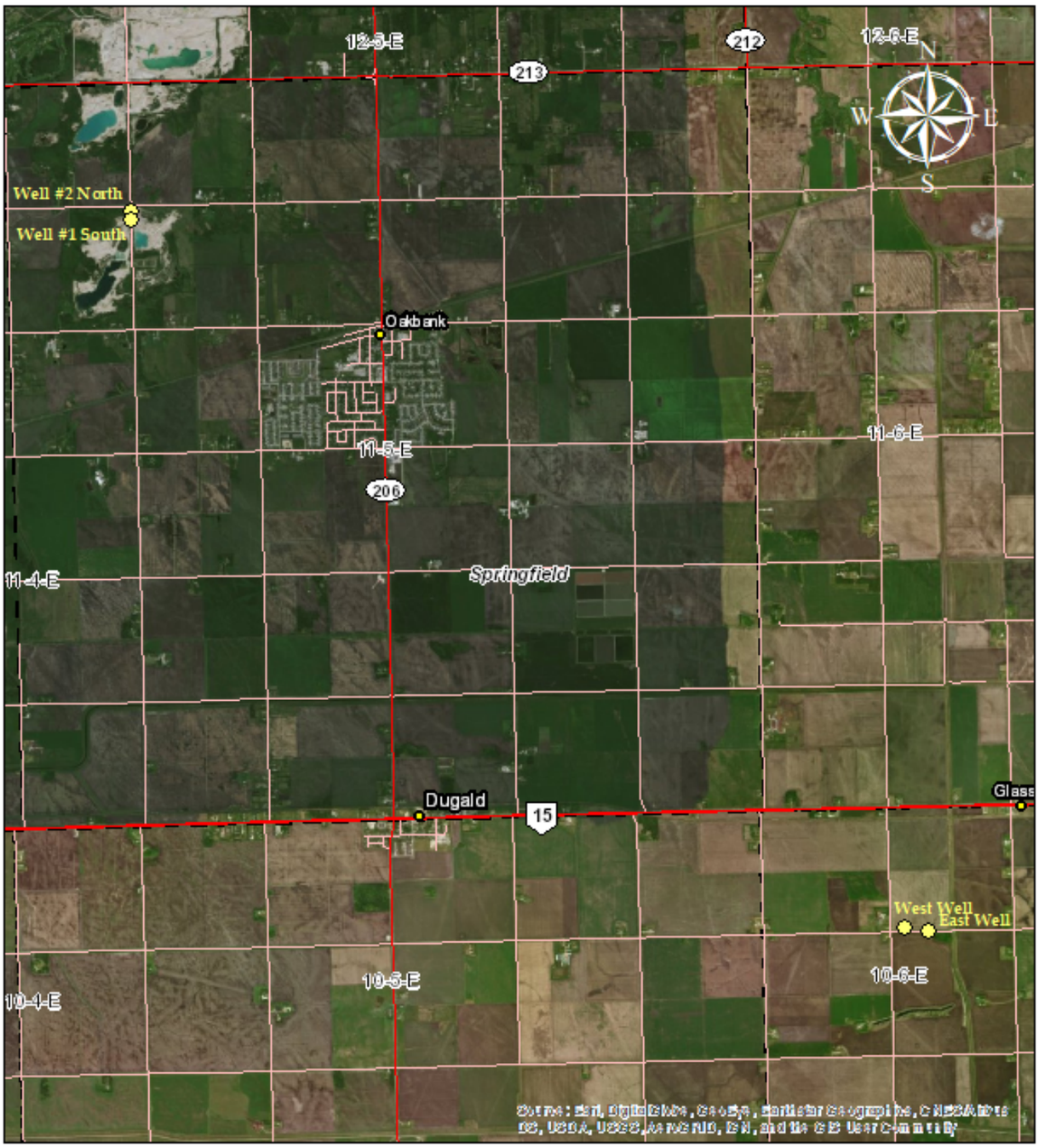
FOR OFFICE USE ONLY

Issued at the City of Winnipeg, in the Province of Manitoba, this _____ day of _____ A.D. 20___.

_____ _____

Print Name Signature

Signed by the Minister charged with the administration of the Water Rights Act (or her/his designate)



LOCATION OF SUPPLY WELLS
IN SW 32-10-6 EPM and NE 30-11-5 EPM
R. M. OF SPRINGFIELD (OAKBANK & DUGALD)
MUNICIPAL PURPOSES

EXHIBIT "A"

THIS PLAN IS AN INTEGRAL PART OF
LICENCE NO. ___2019-107___
ISSUED UNDER THE WATER RIGHTS ACT

1,500 750 0 1,500 Meters

Friesen DRILLERS

Appendix C

Groundwater Exploration Permit Application and Authorization
Rural Municipality of Springfield

Friesen DRILLERS

January 16, 2024

Ms. Kylene Wiseman, P.Geo.
Drainage and Water Rights Licensing Branch
Environment and Climate Change, Government of Manitoba
Box 16, 14 Fultz Blvd Winnipeg MB R3Y 0L6

Dear Kylene,

Subject **Groundwater Exploration Permit Application - Expanded Municipal Groundwater Supply**
Water Rights Licence No. 2019-107 – Oakbank/Dugald
SW29-10-06 EPM, Rural Municipality of Springfield, Manitoba

Friesen Drillers Ltd. has been retained by the Manitoba Water Services Board (MWSB) and the Rural Municipality of Springfield (RM) to undertake a hydrogeological investigation for a proposed expansion to an existing municipal groundwater supply. The investigation is planned to include new well installations, pumping tests, geochemistry sampling, and hydrogeological analysis.

Background

The RM currently operates two wellfields to service the communities of Oakbank and Dugald. The Heatherdale wells are located in the Moosenose Aquifer at NE30-11-5E, and the Dugald wells are completed into the Winnipeg Formation Sandstone aquifer at SW32-10-6E. The current Water Rights Licence (No. 2019-107) was issued in 2019 for the entire Oakbank-Dugald municipal system, including both wellfield sites.

Water Rights licence No. 2019-107 provides for a total annual allocation of 646.6 dam^3/year (524.20 acre-ft./year) and a maximum instantaneous flow rate of 0.1320 m^3/second (2,091 U.S.G.P.M.). At the time of the licensing investigations in 2019, the requested allocation was projected to meet the RM demands through the year 2041 (WSP, 2018). The new Dugald wellfield was put into service in 2021. A copy of the Water Rights licence is attached.

Proposed Expansion Project

In recent years, the RM identified a need to further expand the municipal water supply to meet growing demands. It was also proposed that the existing Heatherdale supply wells could be decommissioned once the newly expanded Dugald wellfield was operational. This would allow the RM to transition away from the unconfined aquifer in the Birds Hill area to the fully confined aquifer source east of Dugald.

Demand growth projections, as provided by the RM, indicated a total annual demand of 1,600 dam^3/year, or about 1,297 acre-ft./year. The maximum combined instantaneous pumping rate was noted to be dependant on future testing results from the new supply wells; however, preliminary estimates were in the range of 2,000 U.S.G.P.M. for the combined system. The requested flow rates and projected annual groundwater allocations may be adjusted in the final report, based on the results of the proposed testing.

The proposed wellfield expansion would include two new supply wells installed one mile south of the existing Dugald Wellfield. The new supply wells would be completed into the Winnipeg Formation Sandstone Aquifer. The proposed area for expansion was identified in previous investigations as having the most favorable conditions for a municipal-scale groundwater development. The new wells would be situated along the north side of Mission Road, east of Poplar Road in SW29-10-06E. The approximate well locations are shown in Figure 1.

A public consultation program for the project is currently underway, lead by the RM and MWSB. Two public open house meetings have already been held prior to any field work. It is understood that the public consultation program is ongoing.

As part of the current project, Friesen Drillers plans to install two new observation wells in the area to monitor aquifer conditions and measure drawdown impacts around the new supply wells. The observation wells are planned to be multi-level completions which would allow for monitoring of both the Sandstone and Carbonate Aquifers. All production and monitoring wells are planned to be drilled along RM

roadways, with permissions from the RM. These new monitoring wells would supplement a fairly extensive monitoring well network that is already in place, as shown in Figure 1.

The construction design of the new supply wells will be based on the local conditions, with 12 inch diameter completion planned. A long term (72 hour) drawdown and recovery test is planned for the new wellfield. During the pumping tests, monitoring instrumentation will be deployed in as many as 25 observation wells across the area, in both the Winnipeg Formation and Carbonate Aquifers. Water quality samples will be collected and sent to an accredited laboratory for routine and stable environmental isotopic analysis. A report detailing the results will be provided after the completion of the project.

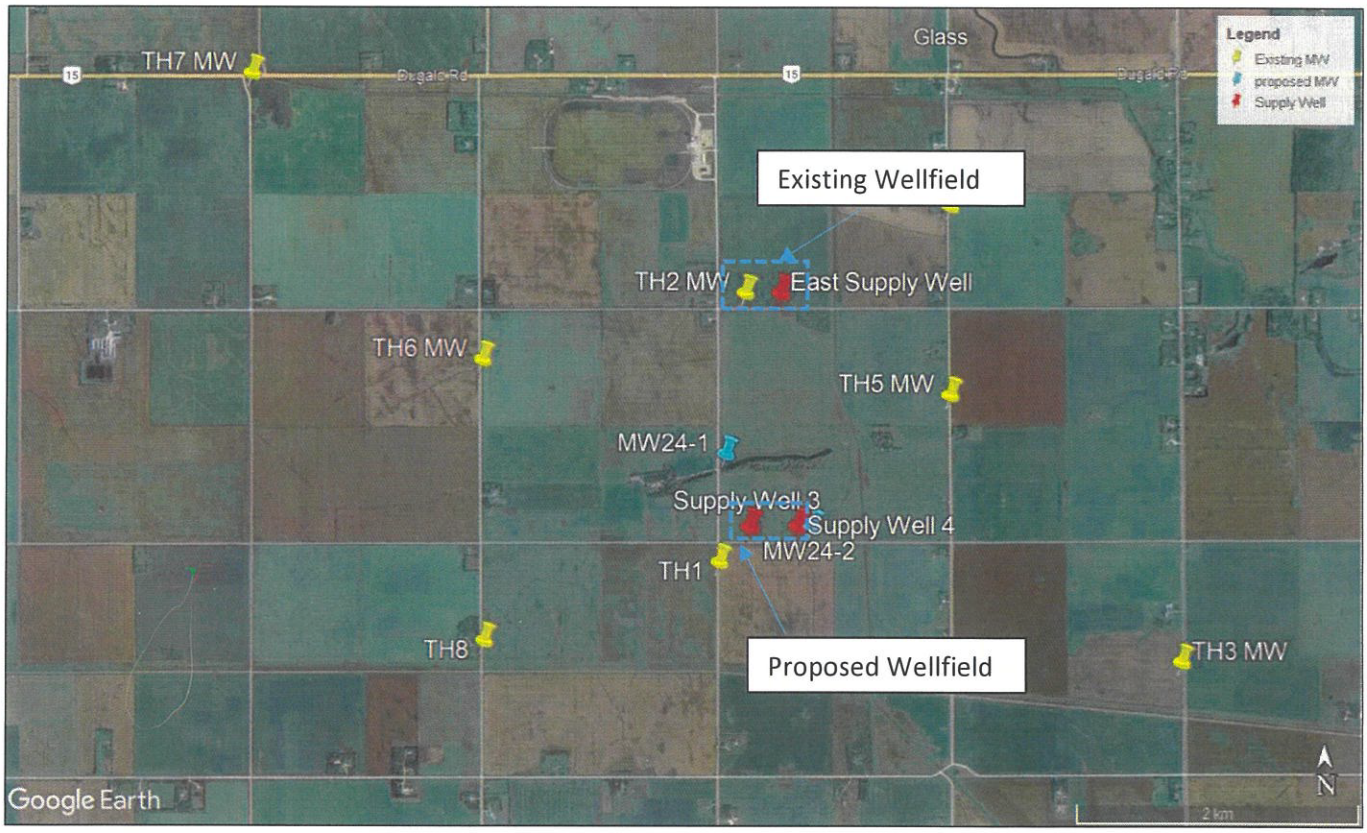


Figure 1 – Locations (approximate) of the Dugald municipal supply and monitoring wells (MW), RM of Springfield. (Source – Google Earth, 2023)

Should you have any questions or require additional information, please feel free to call us at 204-326-2485.

Sincerely,

Friesen Drillers Limited

[redacted]

Justin Neufeld, B.Sc.(G.Sc.), P.Geo.
Groundwater Geologist

Reviewed by,

Friesen Drillers Limited

[redacted]

[redacted]eff Bell, B.Sc.(G.E.), P.Eng.
Hydrogeological Engineer

Attachments Water Rights Licence No. 2019-107 – RM of Springfield

Limitations

The scope of this report is limited to the matters expressly covered and is intended solely for the client to whom it is addressed. Friesen Drillers Limited makes no warranties, expressed or implied, including without limitation, as to the marketability of the site, or fitness to a particular use. The assessment was conducted using standard engineering and scientific judgment, principles, and practices, within a practical scope and budget. It is based partially on the observations of the assessor during the site visit in conjunction with archival information obtained from a number of sources, which is assumed to be correct. Except as provided, Friesen Drillers Limited has made no independent investigations to verify the accuracy or completeness of the information obtained from secondary sources or personal interviews. Generally, the findings, conclusions, and recommendations are based on a limited amount of data (e.g. number of boreholes drilled or water quality samples submitted for laboratory analysis) interpolated between sampling points and the actual conditions on the site may vary from that described above. Any findings regarding the site conditions different from those described above upon which this report was based will consequently change Friesen Drillers Limited's conclusions and recommendations.

Disclaimer

This Friesen Drillers Limited report has been prepared in response to the specific requests for services from the client to whom it is addressed. The content of this document is not intended to be relied upon by any person, firm, or corporation, other than the client of Friesen Drillers Limited, to who it is addressed. Friesen Drillers Limited denies any liability whatsoever to other parties who may obtain access to this document by them, without express prior written authority of Friesen Drillers Limited and the client who has commissioned this document.

Licence to Use Water for
Municipal
Purposes

Manitoba

Issued in accordance with the provisions
The Water Rights Act and regulations made thereunder.

Project:	Oakbank/Dugald
Licence No.:	**2019-107**
(Previous Lic. No.:	2016-102)
U.T.M.:	651468 E 5536224 N

Subject to the terms and conditions contained in this Licence, the Minister of Sustainable Development authorizes:

The Rural Municipality of Springfield

in the Province of Manitoba (the "LICENSEE") to construct, operate, establish and maintain a project consisting of water well(s), pump(s), transmittal pipeline(s) and other works specific to the type of use (the "WORKS") and divert water from a **Sand and gravel and Sandstone** aquifer located on the following land:

NE 30-11-5 EPM and SW 32-10-6 EPM

as more particularly located and shown on the attached Exhibit "A" for **Municipal** purposes on the following lands:

Oakbank and Dugald Service Area

This licence is issued upon the express condition that it shall be subject to the provisions of The Water Rights Act and Regulation and all amendments thereto and, without limiting the generality of the aforesaid, to the following terms and conditions, namely:

1. The water shall be used solely for **Municipal** purposes.

2. The WORKS shall be operated in accordance with the terms herein contained.

3. a) The maximum rate at which water may be diverted pursuant hereto shall not exceed **0.1320 cubic metres per second (4.66 cubic feet per second).**

   b) The total quantity of water diverted in any one year shall not exceed **646.60 cubic decametres (524.20 acre feet).**

4. Water shall not be diverted during any period when the water level in the aquifer is below the casing of any project well.

5. The LICENSEE does hereby remise, release and forever discharge Her Majesty the Queen in Right of the Province of Manitoba, of and from all manner of action, causes of action, claims and demands whatsoever which against Her Majesty the LICENSEE ever had, now has or may hereafter have, resulting from the use of water for **Municipal** purposes.

6. In the event that the rights of others are infringed upon and/or damage to the property of others is sustained as a result of the operation or maintenance of the WORKS and the rights herein granted, the LICENSEE shall be solely responsible and shall save harmless and fully indemnify Her Majesty the Queen in Right of the Province of Manitoba, from and against any liability to which Her Majesty may become liable by virtue of the issue of this Licence and anything done pursuant hereto.

7. This Licence is not assignable or transferable by the LICENSEE and when no longer required by the LICENSEE this Licence shall be returned to the Water Use Licensing Section for cancellation on behalf of the Minister.

8. Upon the execution of this Licence the LICENSEE hereby grants the Minister or the Minister's agents the right of ingress and egress to and from the lands on which the WORKS are located for the purpose of inspection of the WORKS and the LICENSEE shall at all times comply with such directions and/or orders that may be given by the Minister or the Minister's agents in writing from time to time with regard to the operation and maintenance of the WORKS.

9. This Licence may be amended, suspended or cancelled by the Minister in accordance with The Water Rights Act by letter addressed to the LICENSEE at **Box 219, Oakbank, MB, R0E 1J0, Canada** and thereafter this Licence shall be determined to be at an end.

10. Notwithstanding anything preceding in this Licence, the LICENSEE must have legal control, by ownership or by rental,

lease, or other agreement, of the lands on which the WORKS shall be placed and the water shall be used.

11. The term of this Licence shall expire on September 20, 2036 and this Licence shall become effective only on the date of execution hereof by a person so authorized in the Department of Sustainable Development. The LICENSEE may apply for renewal of this Licence not more than 365 days and not less than 90 days prior to the expiry date.

12. This Licence expires automatically upon the loss of the legal control of any of the lands on which the WORKS are located or on which water is used, unless the Licence is transferred or amended by the Minister upon application for Licence transfer or amendment.

13. The LICENSEE shall keep records of daily and annual water use and shall provide a copy of such records to the Water Use Licensing Section not later than February 1st of the following year.

14. A flow meter must be installed, positioned to accurately measure instantaneous pumping rate and accumulative withdrawals from the water source.

15. The LICENSEE does hereby agree to correct, to the satisfaction of the Minister, any water supply problems to wells or other forms of supply, which were constructed and operating prior to the date of the original application for the project and which are partly or wholly attributable, in the opinion of the Minister, to the diversion of water as authorized by this Licence.

16. The LICENSEE shall hold and maintain all other regulatory approvals that may be required and shall comply with all other regulatory requirements for the construction, operation, or maintenance of the WORKS or to divert or use water as provided by this Licence.

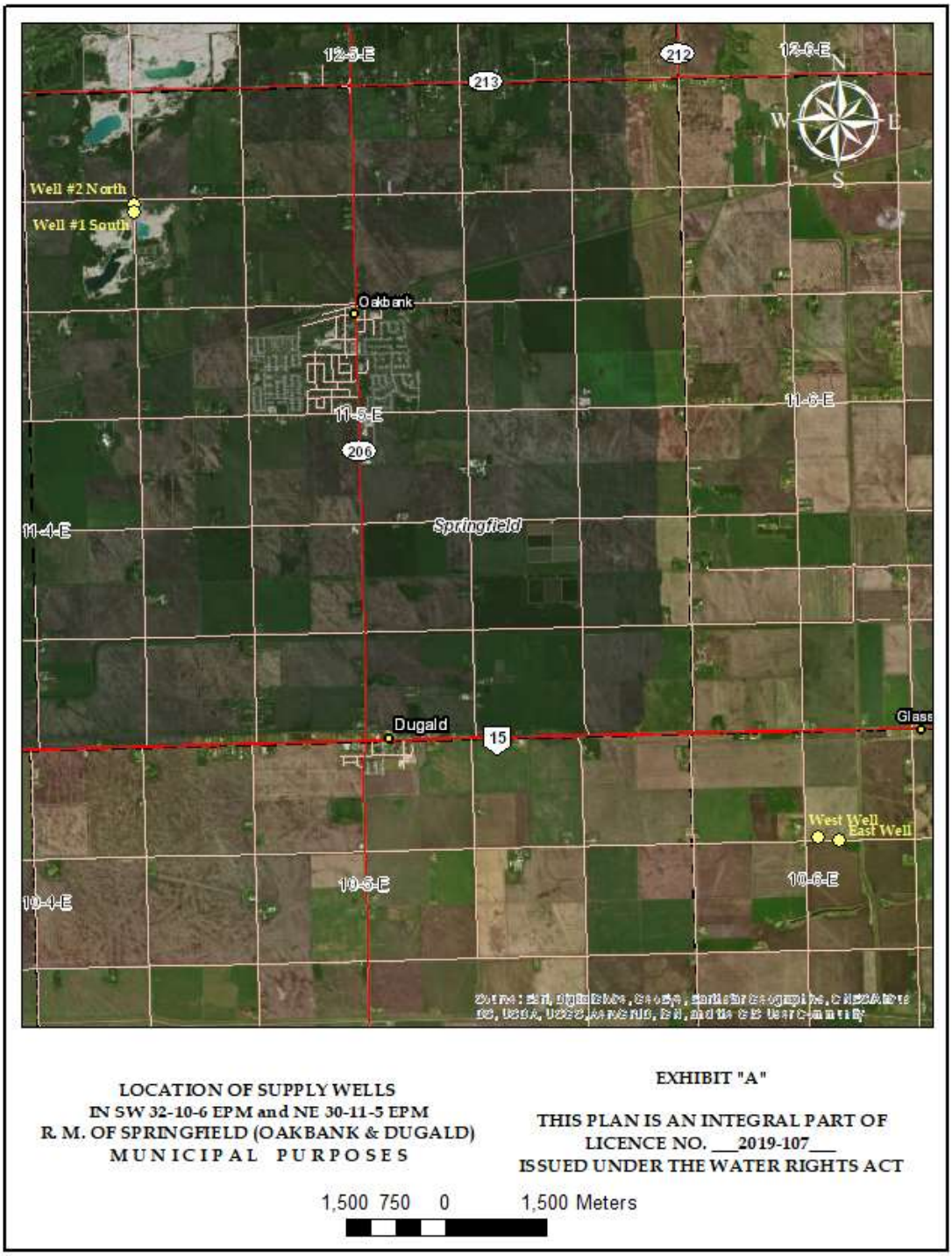
FOR OFFICE USE ONLY

Issued at the City of Winnipeg, in the Province of Manitoba, this _____ day of _____ A.D. 20___.

Print Name

Signature

Signed by the Minister charged with the administration of the Water Rights Act (or her/his designate)



LOCATION OF SUPPLY WELLS
IN SW 32-10-6 EPM and NE 30-11-5 EPM
R. M. OF SPRINGFIELD (OAKBANK & DUGALD)
MUNICIPAL PURPOSES

EXHIBIT "A"

THIS PLAN IS AN INTEGRAL PART OF
LICENCE NO. ___2019-107___
ISSUED UNDER THE WATER RIGHTS ACT

1,500 750 0 1,500 Meters

GROUNDWATER
EXPLORATION
PERMIT

Manitoba

Issued in accordance with the provisions

The Water Rights Act and regulations made thereunder.

Project: Oakbank/Dugald Water Supply Expansion

Subject to the terms and conditions contained in this Groundwater Exploration Permit, the Minister charged with administration of The Water Rights Act authorizes:

Rural Municipality of Springfield

in the province of Manitoba, to explore for groundwater; as well as construct water well(s), install pump(s) and transmittal pipeline(s) (the "WORKS") for **Municipal** purposes on the following land:

SW 29-10-6 EPM

This Groundwater Exploration Permit does not authorize diversion and use of water for **Municipal** purposes.

The WORKS shall be constructed in accordance with the terms and conditions described as follows:

1. This Permit expires within twenty-four (24) months of the date of issuance. Failure to construct all of the necessary WORKS and use water for **Municipal** purposes prior to the permit expiry date may result in cancellation of the application for a Water Rights Licence.

2. This Permit is not transferable or assignable to any other party.

3. The Permittee must have legal access to all lands occupied by the project.

4. The Permittee must hold and maintain all regulatory approvals and requirements for the construction of the WORKS as provided by this Permit.

5. Prior to undertaking any work or construction of any WORKS authorized by this Permit, the Permittee must retain the services of a hydrogeologist registered with Engineers Geoscientists Manitoba, who is required to:
   a. Plan and supervise the drilling of boreholes, test well(s), production well(s), observation well(s) and well pump testing.
   b. Conduct a constant rate pumping test on the proposed production well(s) in accordance with Form H. (https://www.gov.mb.ca/sd/pubs/water/form_h_july.pdf)
   c. Conduct a recovery test for a period equal to pump test or 90% recovery, whichever comes first.
   d. Conduct an inventory of private, agricultural and commercial wells within a one mile radius of the project well(s) site. The inventory may be expanded based on the assessment of the expected area of water level draw-down impact resulting from future pumping.
   e. Install a lockable and permanent two-inch observation well with the location to be determined by the Hydrogeologist if the supply well(s) will be less than 800 m from any existing wells.
   f. Prepare and submit to the Water Use Licensing Section a technical report on the drilling of boreholes and test wells, pump testing of wells, well inventory and water quality sampling. The report must contain: well driller's report for test well(s) production well(s) and observation well(s); a location plan of the well(s) on the property and/or GPS locations of the well(s); an analysis of aquifer pumping tests; and calculations of transmissivity. The report must also indicate if any local wells are expected to be adversely affected by the proposed use of water and where these wells are located. A digital copy of the report must be submitted.

6. The Permittee must cease pumping immediately if any local water supplies are negatively impacted as a result of the pumping tests. The Permittee is also responsible to correct any water supply problems or provide a temporary water supply to anyone whose water supplies are negatively impacted as a result of the tests.

7. The Permittee shall assume any liability that may result from the construction of the WORKS.

8. The Province of Manitoba shall hereby be released from any liability or claims for damages that may result from the construction of the WORKS.

9. The Minister or Minister's agents have the right of unrestricted access for the purpose of inspection of any WORKS constructed under this Permit.

10. The issuance of this Permit does not imply that the Department will extend or renew the Permit in subsequent years.

11. A water use monitoring device must be installed on the pipeline from the supply well(s), positioned to accurately measure instantaneous pumping rate and accumulative withdrawals.

FOR OFFICE USE ONLY

Issued at the City of Winnipeg, in the Province of Manitoba, this 25th day of January A.D. 2024.

Kylene Wiseman [redacted]

Print Name Signature

Signed by the Minister charged with the administration of The Water Rights Act (or her/his designate)

Friesen DRILLERS

Appendix D

Well Inventory – 1.5 Mile Radius
(Not included in the Environment Act submission)

Friesen DRILLERS

Appendix E

Borehole Logs - Production and Test Wells

Well Construction Report

Manitoba

Sheet 1 of 1 — **For PDF submission: Report must be printed on legal size paper (8.5 x 14 inches) and be signed in ink.** — Form No. WELLCON-V01-PDF

Owner Name: RM of Springfield (First / Last)
Mailing Address: 100 Springfield Centre Drive. Box 219
Town/City: Oakbank
Postal Code: R0E 1J0 Phone:
Email:

Well Location: (see note 3; attach sketch if necessary)
Civic Address: Poplar Road & Mission Road
(if different than mailing address)
Quarter: SW Section: 29 Township: 10 Range: 6 ☐E ☐W
Parish: Type & Lot No.:

Well Name: (if applicable) Well 3 - West
Well Identification Tag Number: 10184
Location of Tag ☒ Attached to casing stick-up
☐ Other (specify)

GPS: (see note 4), Accuracy +/- 16 ☒ feet ☐ metres
Latitude (decimal degrees): 49.85601
Longitude (decimal degrees): 96.74950

Rockwood Sensitive Area: ☐ Yes - Permit No. ☒ No

Test Hole (see note 5) - Sealed ☐ Yes ☐ No **or**
Well Use: ☐ test well - Sealed ☐ Yes ☐ No
☒ production/source ☐ recharge/return
☐ monitoring ☐ dewatering ☐ geotechnical
☐ other (specify)

Method of Construction:
☐ auger ☐ bored ☐ backhoe/dug
☐ rotary (mud) ☒ rotary (air)
☒ dual rotary ☐ driven ☐ jetted
☐ other (specify)

Water Use: (Check all that apply)
☐ domestic ☒ public/semi-public ☐ irrigation
☐ commercial/industrial ☐ livestock/poultry
☐ earth energy (heating/cooling)
☐ other (specify)

Lithologic Description: (see notes 6 and 7) - Measure From/To depths from ground surface. Attach another sheet if needed.

From (ft)	To (ft)	Colour	Material Description (use recommended names on guide)	Observations
0	25	Grey	Clay	
25	60	Brown	Till	
60	92	Brown	Gravely Till	
92	241	Brown	Limestone	
241	250	Red & Green	Shale	
250	317	White	Sandstone	
317	323	White & Green	Sandstone with Layers of Shale	
323	326	Green	Shale	
326				
0				

Well Construction: (see note 8) - Measure From/To depths from ground surface. Attach another sheet if needed.

From (ft)	To (ft)	Borehole	Casing	Liner	Open Hole	Well Screen	Surface Seal	Annular Fill	Filter Pack	ID (inches)	OD (inches)	Type of Material (ex: casing and screen material, screen type and slot size, use of shale traps , packers, screen blanks or tail pipes, and type and size of surface seal/annular fill/filter pack material)	Method of Placement (ex: poured, tremie)
0	94	X								16			
94	326	X								14¾			
0	252		X							12	12¾	Welded Black Steel	
252	312					X				12	12¾	Stainless Steel Wirewound - 15 Slot	
240	326								X			Silica Sand - .55	Poured
0	240						X					Envirogrout & Layers of Gravel	Poured

Well Completion: Day 1 Month February Year 20 24
Top of casing 24 inches ☒ags ☐ bgs; Well vented: ☒ Yes ☐ No
Well disinfected: ☒ Yes ☐ No; Well cover installed: ☒ Yes ☐ No
Pitless adapter/unit installed at _____ feet bgs; ☒Not installed

Source of Drilling Water: ☒ Groundwater ☐ Surface water
Water contains a minimum of 10 mg/L free chlorine: ☒ Yes ☐ No
Name/Location of water source: Friesen Drillers Ltd.

Drilling Additives Used: ☒ Yes (list type & quantity) 15 Bags Wyo-Ben Extra High Yield Bentonite ☐ No

Well Yield Test (see note 9),
Date of Test: Day _____ Month _____ Year 20 _____
☒ Same as date of well completion
Static Water Level Before Test _____ feet ☒ bgs ☐ ags
Method of Test: ☐pumping ☐air lift ☐bailing ☐recovery
☐ other (specify)
Water level at end of test _____ feet ☒ bgs ☐ ags
Length of test _____ hours _____ minutes
Estimated rate of discharge _____ ☒IGPM ☐ USGPM

Well Development: ☒ air lifting ☒ surging ☐ pumping ☐ jetting
☐ bailing ☐ hydrofracturing ☐ other (specify)
Water Quality Characteristics: ☒ fresh ☐ salty ☐ clear ☐ cloudy
☐ sediment ☐ odour (specify)

Flowing Artesian Well ☒ No ☐ Yes - If yes, estimated rate of artesian flow _____ ☐IGPM ☐ USGPM Annular space cemented: ☐ Yes ☐ No
Flow control device installed: ☐ Yes ☐ No
Does water leak from around the outside of the casing: ☐ Yes ☒ No

Recommended Pumping Rate: See report ☒IGPM ☐ USGPM with pump intake at 250 feet bgs;
Will your company be installing a pump?: ☐ Yes ☒ No

Remarks (see note 10) See Hydrogeology report for details

Well Drilling Contractor: Company Name: Friesen Drillers Ltd Licence No.: 607-24
Well Driller: Print Name: Peter Friesen / Brad Maessen Signature:

Declaration: I certify that to the best of my knowledge the information provided herein is accurate and true and complies with The Groundwater and Water Well Act.

Well Construction Report

Manitoba

Sheet 1 of 1 — **For PDF submission: Report must be printed on legal size paper (8.5 x 14 inches) and be signed in ink.** — Form No. WELLCON-V01-PDF

Owner Name: RM of Springfield (First / Last)
Mailing Address: 100 Springfield Centre Drive. Box 219
Town/City: Oakbank
Postal Code: R0E 1J0 Phone:
Email:

Well Location: (see note 3; attach sketch if necessary)
Civic Address: Poplar Road & Mission road
(if different than mailing address)
Quarter: SW Section: 29 Township: 10 Range: 6 ☒E ☐W
Parish: Type & Lot No.:

Well Name: (if applicable) Well 4 - East Well
Well Identification Tag Number: 10185
Location of Tag ☒ Attached to casing stick-up
☐ Other (specify)

GPS: (see note 4), Accuracy +/- 11 ☒ feet ☐ metres
Latitude (decimal degrees): 49.85600
Longitude (decimal degrees): 96.74421

Rockwood Sensitive Area: ☐ Yes - Permit No. ☒ No

Test Hole (see note 5) - Sealed ☐ Yes ☐ No **or**
Well Use: ☐ test well - Sealed ☐ Yes ☐ No
☒ production/source ☐ recharge/return
☐ monitoring ☐ dewatering ☐ geotechnical
☐ other (specify)

Method of Construction:
☐ auger ☐ bored ☐ backhoe/dug
☐ rotary (mud) ☒ rotary (air)
☒ dual rotary ☐ driven ☐ jetted
☐ other (specify)

Water Use: (Check all that apply)
☐ domestic ☒ public/semi-public ☐ irrigation
☐ commercial/industrial ☐ livestock/poultry
☐ earth energy (heating/cooling)
☐ other (specify)

Lithologic Description: (see notes 6 and 7) - Measure From/To depths from ground surface. Attach another sheet if needed.

From (ft)	To (ft)	Colour	Material Description (use recommended names on guide)	Observations
0	26	Grey	Clay	
26	60	Brown	Till	
60	90	Brown	Gravely Till	
90	105	Brown	Limestone	
105	109	Brown	Fracked Limestone	
109	239	Brown	Limestone	
239	252	Red & Green	Shale	
252	317	White	Sandstone	
317	321	White & Green	Sandstone With Layers of Shale	
321	326	Green	Shale	

Well Construction: (see note 8) - Measure From/To depths from ground surface. Attach another sheet if needed.

From (ft)	To (ft)	Borehole	Casing	Liner	Open Hole	Well Screen	Surface Seal	Annular Fill	Filter Pack	ID (inches)	OD (inches)	Type of Material (ex: casing and screen material, screen type and slot size, use of shale traps , packers, screen blanks or tail pipes, and type and size of surface seal/annular fill/filter pack material)	Method of Placement (ex: poured, tremie)
0	117	X								16			
117	326	X								14¾			
0	255		X							12	12¾	Welded Black Steel	
255	315					X				12	12¾	Stainless Steel Wirewound - 15 Slot	
240	326								X			Silica Sand - .55	Poured
0	240						X					Envirogrout & Layers of Gravel	Poured

Well Completion: Day 26 Month February Year 20 24
Top of casing 30 inches ☒ags ☐ bgs; Well vented: ☒ Yes ☐ No
Well disinfected: ☒ Yes ☐ No; Well cover installed: ☒ Yes ☐ No
Pitless adapter/unit installed at _____ feet bgs; ☒Not installed

Source of Drilling Water: ☒ Groundwater ☐ Surface water
Water contains a minimum of 10 mg/L free chlorine: ☒ Yes ☐ No
Name/Location of water source: Friesen Drillers Ltd.

Drilling Additives Used: ☒ Yes (list type & quantity) 30 Bags Wyo-Ben Extra High Yield Bentonite ☐ No

Well Yield Test (see note 9),
Date of Test: Day _____ Month _____ Year 20 _____
☒ Same as date of well completion
Static Water Level Before Test _____ feet ☒ bgs ☐ ags
Method of Test: ☐pumping ☐air lift ☐bailing ☐recovery
☐ other (specify)
Water level at end of test _____ feet ☒ bgs ☐ ags
Length of test _____ hours _____ minutes
Estimated rate of discharge _____ ☒IGPM ☐ USGPM

Well Development: ☒ air lifting ☐ surging ☐ pumping ☐ jetting
☐ bailing ☐ hydrofracturing ☐ other (specify)
Water Quality Characteristics: ☒ fresh ☐ salty ☐ clear ☐ cloudy
☐ sediment ☐ odour (specify)

Flowing Artesian Well ☒ No ☐ Yes - If yes, estimated rate of artesian flow _____ ☐IGPM ☐ USGPM Annular space cemented: ☐ Yes ☐ No
Flow control device installed: ☐ Yes ☐ No
Does water leak from around the outside of the casing: ☐ Yes ☒ No

Recommended Pumping Rate: see report ☒IGPM ☐ USGPM with pump intake at 250 feet bgs;
Will your company be installing a pump?: ☐ Yes ☒ No

Remarks (see note 10) See hydrogeology report for pumping rate details

Well Drilling Contractor: Company Name: Friesen Drillers Ltd Licence No.: 607-24
Well Driller: Print Name: Peter Friesen / Brad Maessen Signature:

Declaration: I certify that to the best of my knowledge the information provided herein is accurate and true and complies with The Groundwater and Water Well Act.

Well Construction Report

Manitoba

Sheet 1 of 1 — **For PDF submission: Report must be printed on legal size paper (8.5 x 14 inches) and be signed in ink.** — Form No. WELLCON-V01-PDF

Owner Name: RM of Springfield (First / Last)
Mailing Address: 100 Springfield Centre Drive. Box 219
Town/City: Oakbank
Postal Code: R0E 1J0 Phone:
Email:

Well Location: (see note 3; attach sketch if necessary)
Civic Address
(if different than mailing address)
Quarter: SW Section: 29 Township: 10 Range: 6 ☒E ☐W
Parish: Type & Lot No.:

Well Name: (if applicable) MW 24-1
Well Identification Tag Number: 10236
Location of Tag ☒ Attached to casing stick-up
☐ Other (specify)

GPS: (see note 4), Accuracy +/- 7 ☒ feet ☐ metres
Latitude (decimal degrees) 49.86053
Longitude (decimal degrees) 96.75157

Rockwood Sensitive Area: ☐ Yes - Permit No. ☒ No

Test Hole (see note 5) - Sealed ☐ Yes ☐ No **or**
Well Use: ☐ test well - Sealed ☐ Yes ☐ No
☐ production/source ☐ recharge/return
☒ monitoring ☐ dewatering ☐ geotechnical
☐ other (specify)

Method of Construction:
☐ auger ☐ bored ☐ backhoe/dug
☒ rotary (mud) ☐ rotary (air)
☐ dual rotary ☐ driven ☐ jetted
☐ other (specify)

Water Use: (Check all that apply)
☐ domestic ☐ public/semi-public ☐ irrigation
☐ commercial/industrial ☐ livestock/poultry
☐ earth energy (heating/cooling)
☒ other (specify) monitoring

Lithologic Description: (see notes 6 and 7) - Measure From/To depths from ground surface. Attach another sheet if needed.

From (ft)	To (ft)	Colour	Material Description (use recommended names on guide)	Observations
0	50		Sand & Gravel	
50	97	Grey	Till	
97	247		Limestone	
247	255	Grey / Green	Shale	
255	278	White	Sandstone	
278				
0				
0				
0				
0				

Well Construction: (see note 8) - Measure From/To depths from ground surface. Attach another sheet if needed.

From (ft)	To (ft)	Borehole	Casing	Liner	Open Hole	Well Screen	Surface Seal	Annular Fill	Filter Pack	ID (inches)	OD (inches)	Type of Material (ex: casing and screen material, screen type and slot size, use of shale traps , packers, screen blanks or tail pipes, and type and size of surface seal/annular fill/filter pack material)	Method of Placement (ex: poured, tremie)
0	99	X									7 7/8		
0	99		X							5	5½	Insert Glued PVC	
265	278				X						4¾		
255	265					X				2	2½	Insert Glued PVC - 10 Slot	
0	255			X						2	2½	Insert Glued PVC	
												Shale Traps at 255 Feet, 250 Feet and 245 Feet	

Well Completion: Day 24 Month January Year 20 24
Top of casing 24 inches ☒ags ☐ bgs; Well vented: ☒ Yes ☐ No
Well disinfected: ☒ Yes ☐ No; Well cover installed: ☒ Yes ☐ No
Pitless adapter/unit installed at _____ feet bgs; ☒Not installed

Source of Drilling Water: ☒ Groundwater ☐ Surface water
Water contains a minimum of 10 mg/L free chlorine: ☒ Yes ☐ No
Name/Location of water source Friesen Drillers Ltd.

Drilling Additives Used: ☒ Yes (list type & quantity) 15 Bags Wyo-Ben Extra High Yield Bentonite ☐ No

Well Yield Test (see note 9),
Date of Test: Day _____ Month _____ Year 20 _____
☒ Same as date of well completion
Static Water Level Before Test _____ feet ☒ bgs ☐ ags
Method of Test: ☐pumping ☐air lift ☐bailing ☐recovery
☐ other (specify)
Water level at end of test _____ feet ☒ bgs ☐ ags
Length of test _____ hours _____ minutes
Estimated rate of discharge _____ ☒IGPM ☐ USGPM

Well Development: ☒ air lifting ☐ surging ☐ pumping ☐ jetting
☐ bailing ☐ hydrofracturing ☐ other (specify)
Water Quality Characteristics: ☒ fresh ☐ salty ☐ clear ☐ cloudy
☐ sediment ☐ odour (specify)

Flowing Artesian Well ☒ No ☐ Yes - If yes, estimated rate of artesian flow _____ ☐IGPM ☐ USGPM Annular space cemented: ☐ Yes ☐ No
Flow control device installed: ☐ Yes ☐ No
Does water leak from around the outside of the casing: ☐ Yes ☒ No

Recommended Pumping Rate: N/A ☒IGPM ☐ USGPM with pump intake at N/A feet bgs;
Will your company be installing a pump?: ☐ Yes ☒ No

Remarks (see note 10) See hydrogeology report for details

Well Drilling Contractor: Company Name Friesen Drillers Ltd Licence No. 607-24
Well Driller: Print Name Jonathan Brelis / Zacharia Klassen Signature

Declaration: I certify that to the best of my knowledge the information provided herein is accurate and true and complies with The Groundwater and Water Well Act.

Well Construction Report

Manitoba

Sheet 1 of 1 **For PDF submission: Report must be printed on legal size paper (8.5 x 14 inches) and be signed in ink.** Form No. WELLCON-V01-PDF

Owner Name: RM of Springfield (First / Last)
Mailing Address: 100 Springfield Centre Drive. Box 219
Town/City: Oakbank
Postal Code: R0E 1J0 Phone:
Email:

Well Location: (see note 3; attach sketch if necessary)
Civic Address
(if different than mailing address)
Quarter: SW Section: 29 Township: 10 Range: 6 ☒E ☐W
Parish: Type & Lot No.:

Well Name: (if applicable) MW 24-2
Well Identification Tag Number: 10237
Location of Tag ☒ Attached to casing stick-up
☐ Other (specify)

GPS: (see note 4), Accuracy +/- 10 ☒ feet ☐ metres
Latitude (decimal degrees) 49.85600
Longitude (decimal degrees) 96.74385

Rockwood Sensitive Area: ☐ Yes - Permit No. ☒ No

Test Hole (see note 5) - Sealed ☐ Yes ☐ No **or**
Well Use: ☐ test well - Sealed ☐ Yes ☐ No
☐ production/source ☐ recharge/return
☒ monitoring ☐ dewatering ☐ geotechnical
☐ other (specify)

Method of Construction:
☐ auger ☐ bored ☐ backhoe/dug
☒ rotary (mud) ☐ rotary (air)
☐ dual rotary ☐ driven ☐ jetted
☐ other (specify)

Water Use: (Check all that apply)
☐ domestic ☒ public/semi-public ☐ irrigation
☐ commercial/industrial ☐ livestock/poultry
☐ earth energy (heating/cooling)
☒ other (specify) monitoring

Lithologic Description: (see notes 6 and 7) - Measure From/To depths from ground surface. Attach another sheet if needed.

From (ft)	To (ft)	Colour	Material Description (use recommended names on guide)	Observations
0	1		Organics	
1	25	Grey	Clay	
25	89	Grey	Till	
89	94		Limestone	
94	135		Sink Hole	
135	237		Limestone	
237	248	Grey / Green	Shale	
248	259	White	Sandsonte	
259				
0				

Well Construction: (see note 8) - Measure From/To depths from ground surface. Attach another sheet if needed.

From (ft)	To (ft)	Borehole	Casing	Liner	Open Hole	Well Screen	Surface Seal	Annular Fill	Filter Pack	ID (inches)	OD (inches)	Type of Material (ex: casing and screen material, screen type and slot size, use of shale traps , packers, screen blanks or tail pipes, and type and size of surface seal/annular fill/filter pack material)	Method of Placement (ex: poured, tremie)
0	139	X									7 7/8		
0	139		X							5	5½	Insert Glued PVC	
158	159				X						4¾		
148	158					X				2	2½	PVC - 10 Slot	
				X						2	2½	Insert Glued PVC	
0	148						X					Envirogrout	Tremie
												Shale Traps at 148 Feet, 143 Feet and 138 Feet	

Well Completion: Day 26 Month January Year 20 24
Top of casing 24 inches ☒ags ☐ bgs; Well vented: ☒ Yes ☐ No
Well disinfected: ☒ Yes ☐ No; Well cover installed: ☒ Yes ☐ No
Pitless adapter/unit installed at _____ feet bgs; ☒Not installed

Source of Drilling Water: ☒ Groundwater ☐ Surface water
Water contains a minimum of 10 mg/L free chlorine: ☒ Yes ☐ No
Name/Location of water source Friesen Drillers Ltd.

Drilling Additives Used: ☒ Yes (list type & quantity) 7 Bags Wyo-Ben Extra High Yield Bentonite ☐ No

Well Yield Test (see note 9),
Date of Test: Day_____ Month_____ Year 20_____
☒ Same as date of well completion
Static Water Level Before Test _____ feet ☒ bgs ☐ ags
Method of Test: ☐pumping ☐air lift ☐bailing ☐recovery
☐ other (specify)
Water level at end of test_____ feet ☒ bgs ☐ ags
Length of test_____ hours _____ minutes
Estimated rate of discharge_____ ☒IGPM ☐ USGPM

Well Development: ☒ air lifting ☐ surging ☐ pumping ☐ jetting
☐ bailing ☐ hydrofracturing ☐ other (specify)
Water Quality Characteristics: ☒ fresh ☐ salty ☐ clear ☐ cloudy
☐ sediment ☐ odour (specify)

Flowing Artesian Well ☒ No ☐ Yes - If yes, estimated rate of artesian flow _____ ☐IGPM ☐ USGPM Annular space cemented: ☐ Yes ☐ No
Flow control device installed: ☐ Yes ☐ No
Does water leak from around the outside of the casing: ☐ Yes ☒ No

Recommended Pumping Rate: N/A ☒IGPM ☐ USGPM with pump intake at N/A feet bgs;
Will your company be installing a pump?: ☐ Yes ☒ No

Remarks (see note 10) See hydrogeology report for details

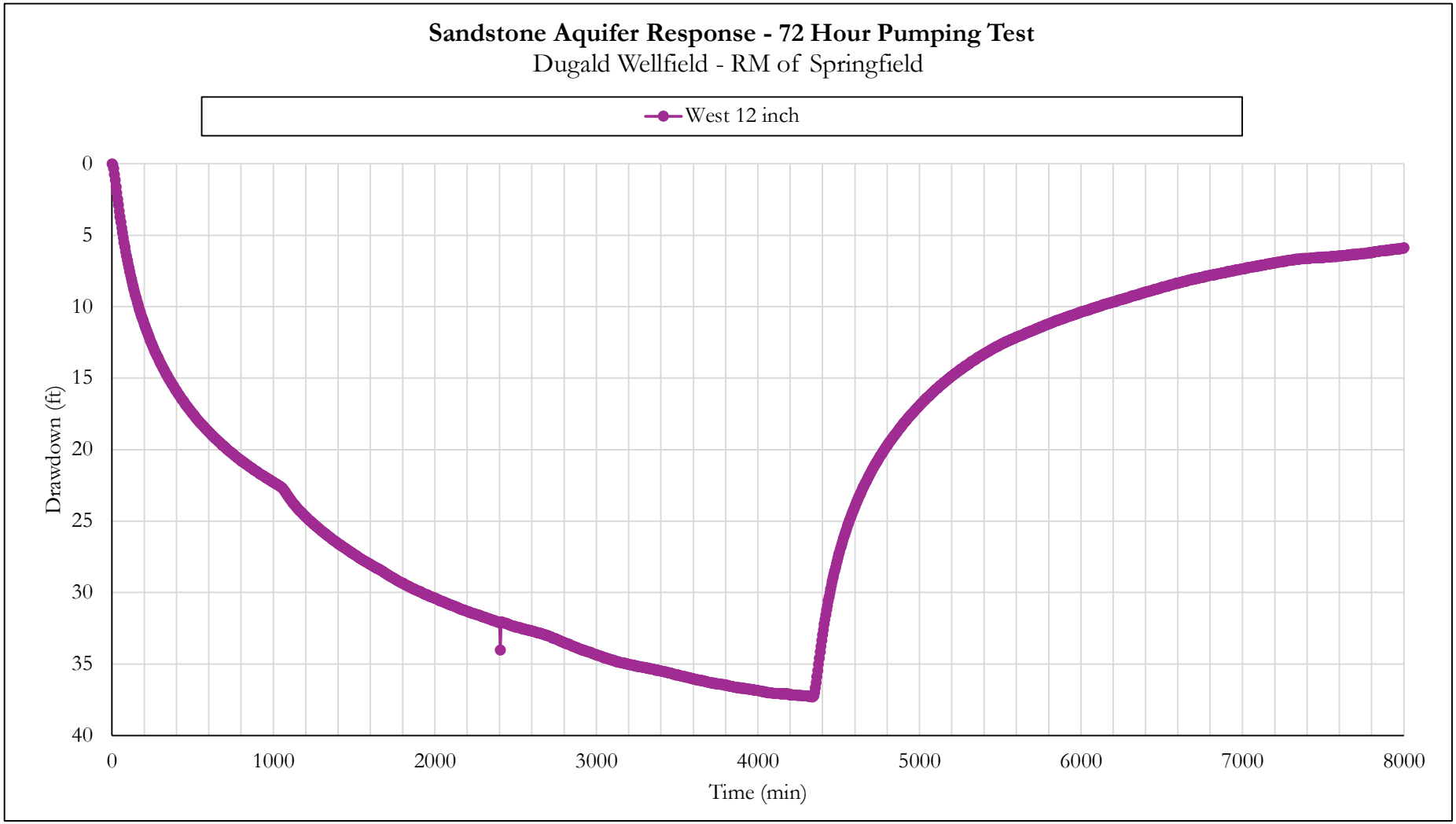
Well Drilling Contractor: Company Name Friesen Drillers Ltd Licence No. 607-24
Well Driller: Print Name Jonathan Brelis / Zacharia Klassen Signature

Declaration: I certify that to the best of my knowledge the information provided herein is accurate and true and complies with The Groundwater and Water Well Act.

Friesen DRILLERS

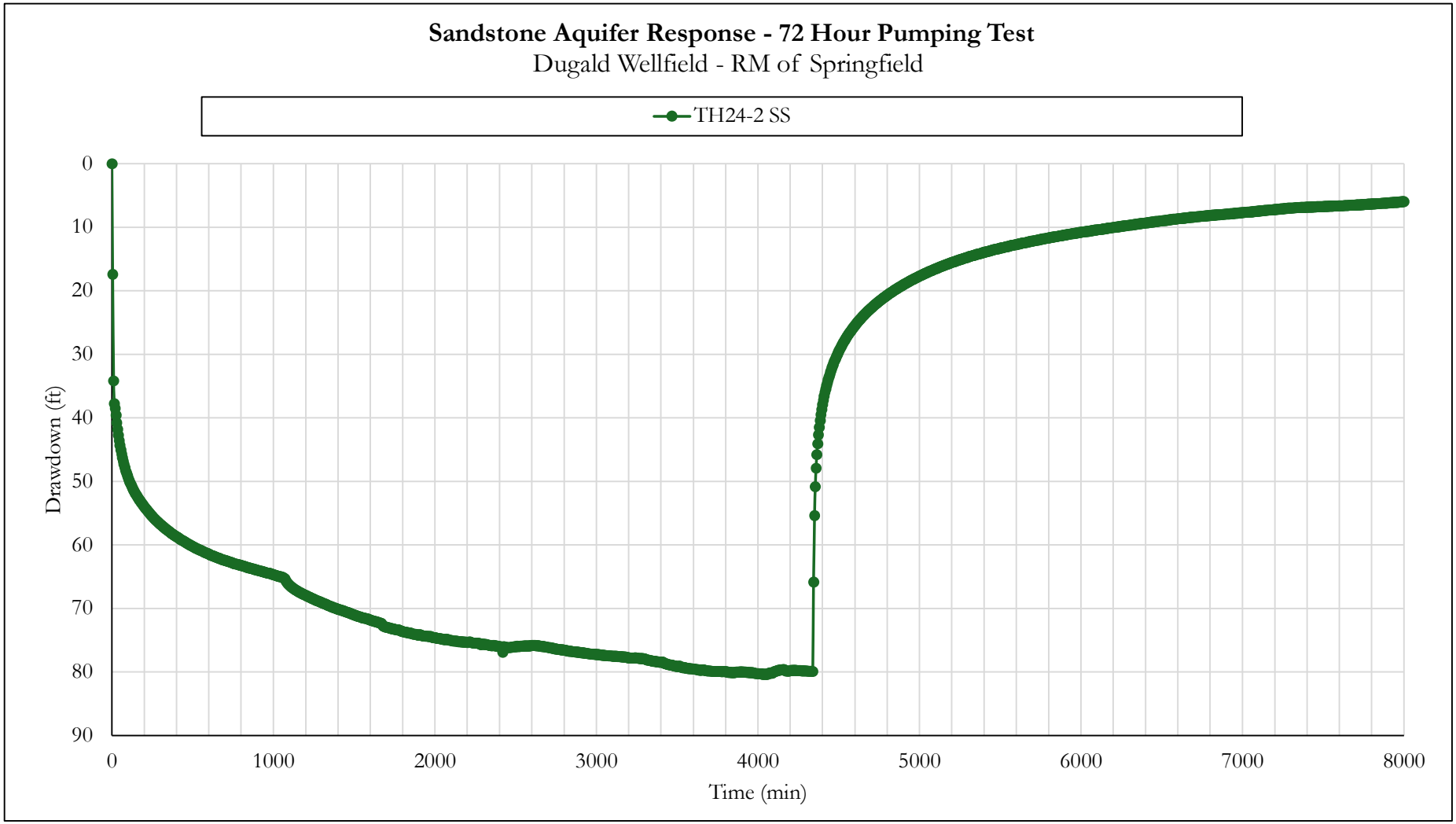
Appendix F

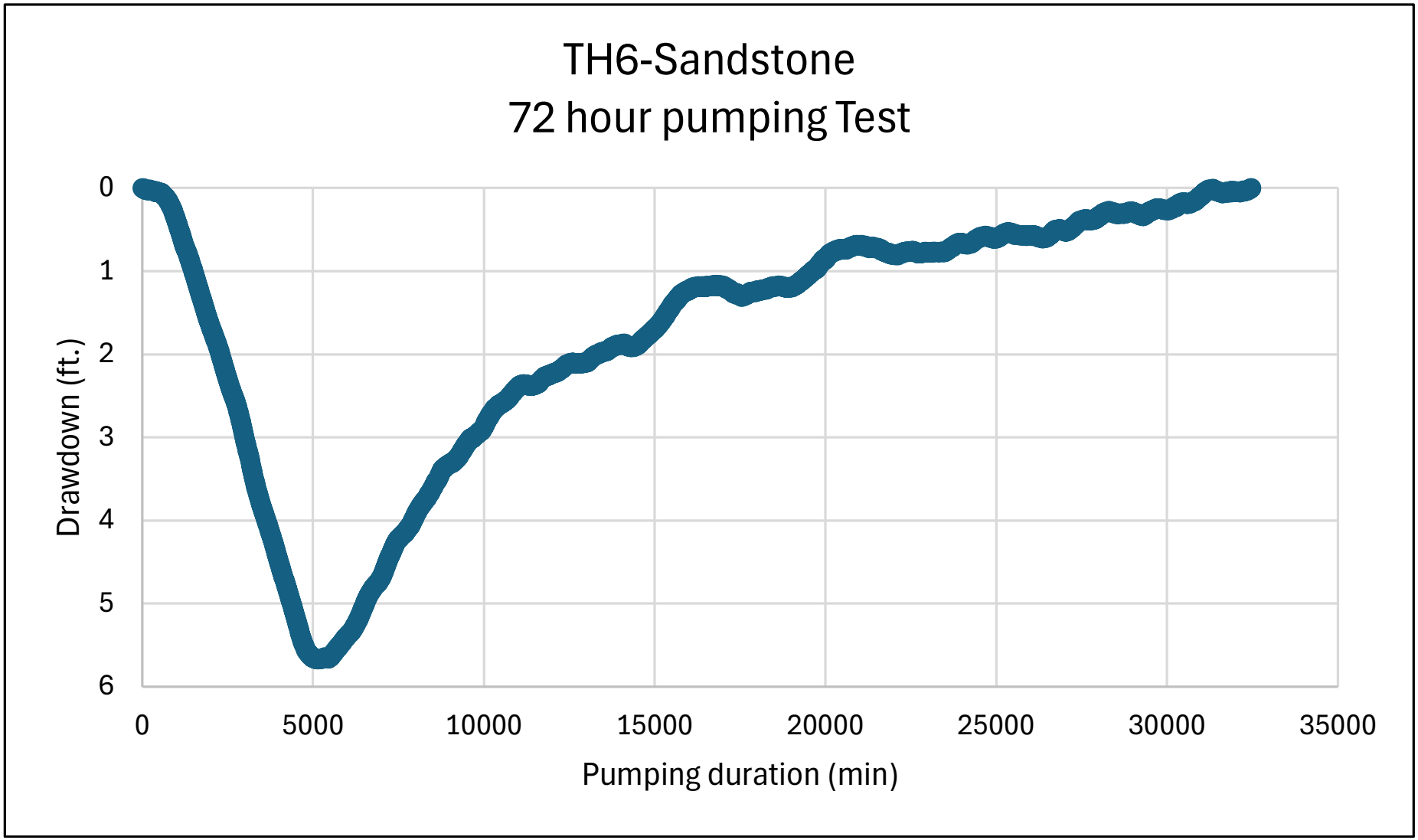
Transducer Plots

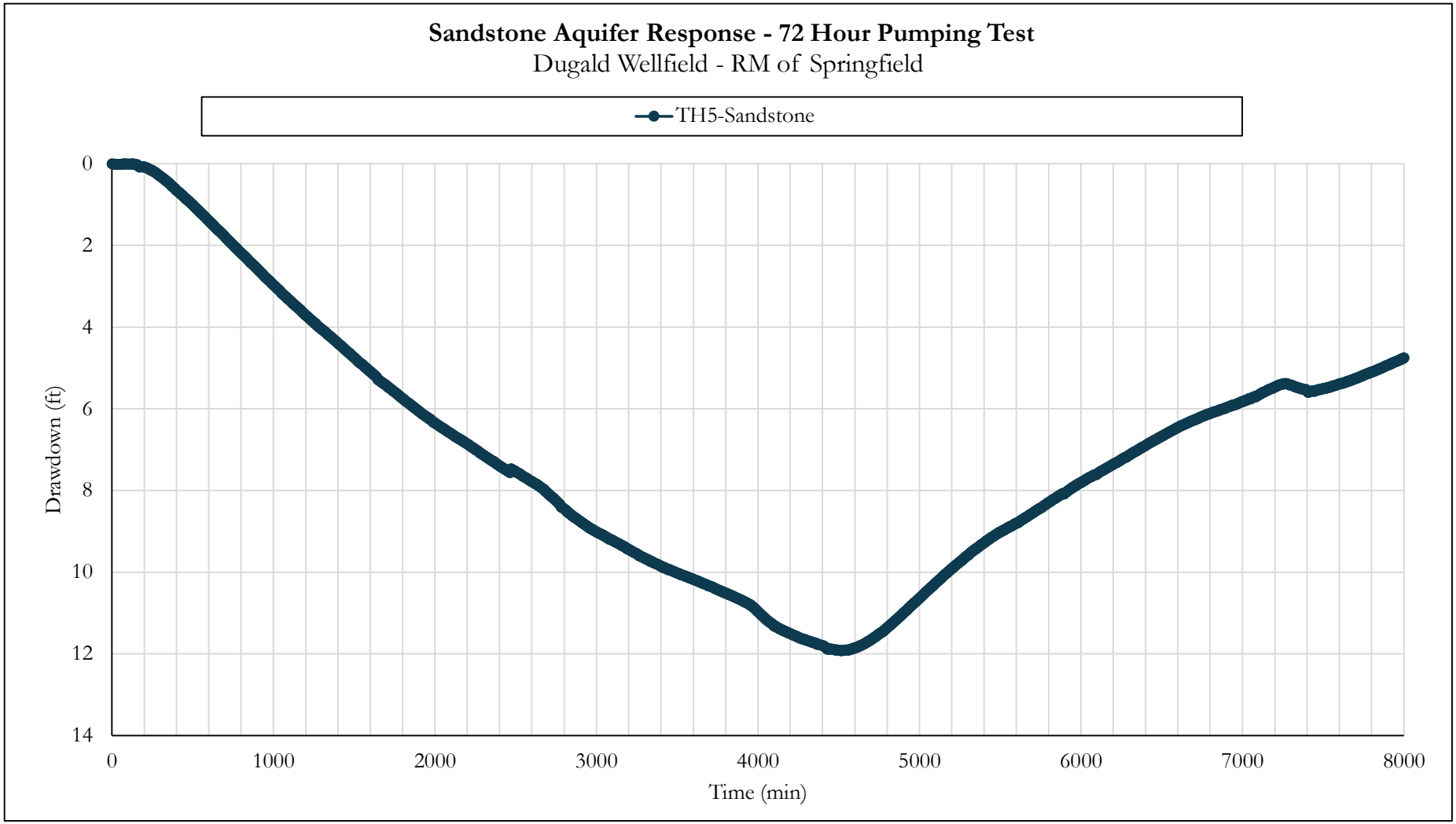

Sandstone Aquifer Response - 72 Hour Pumping Test
Dugald Wellfield - RM of Springfield
West 12 inch
Drawdown (ft)
0
5
10
15
20
25
30
35
40
0
1000
2000
3000
4000
5000
6000
7000
8000
Time (min)

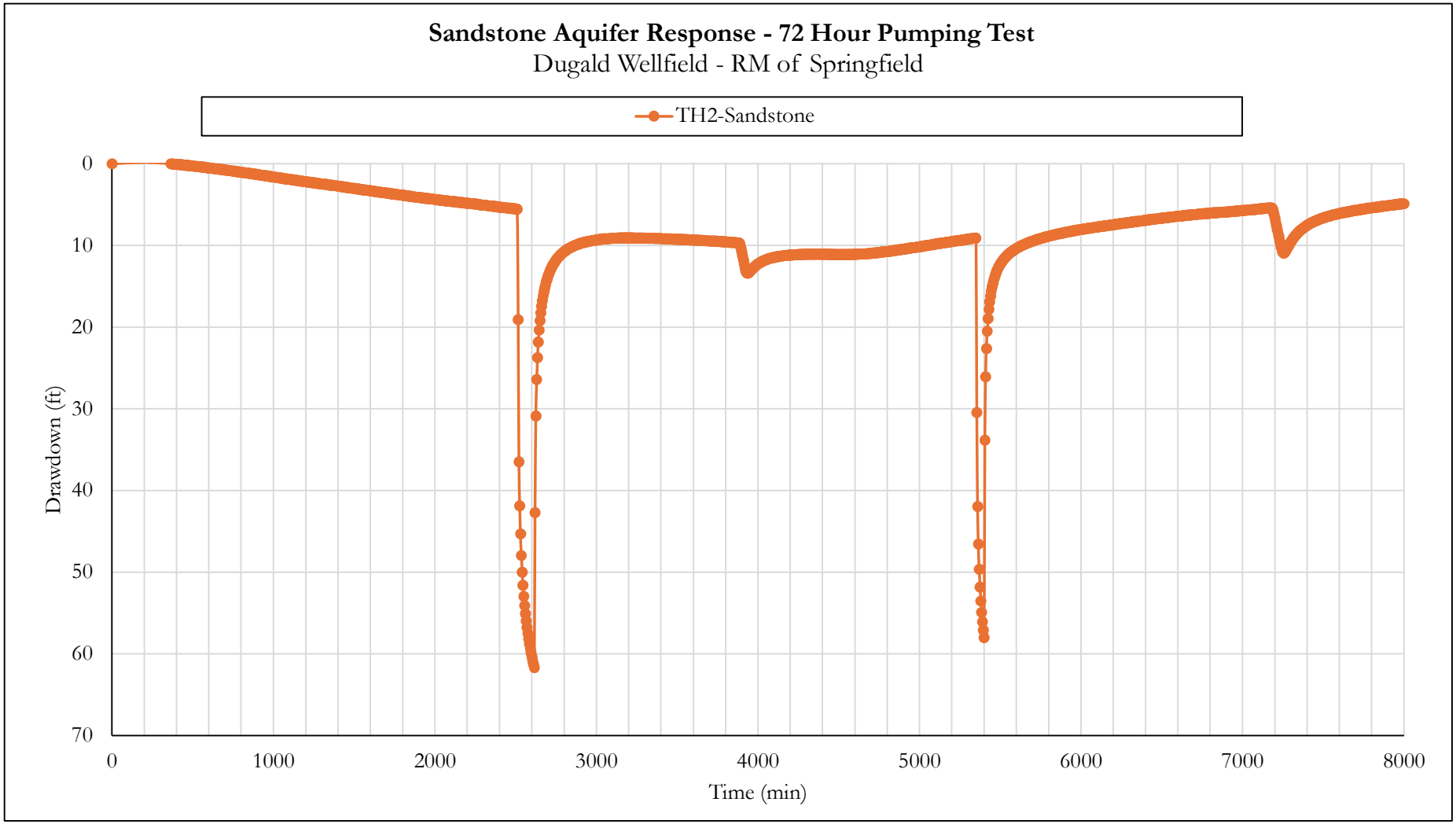
Sandstone Aquifer Response - 72 Hour Pumping Test

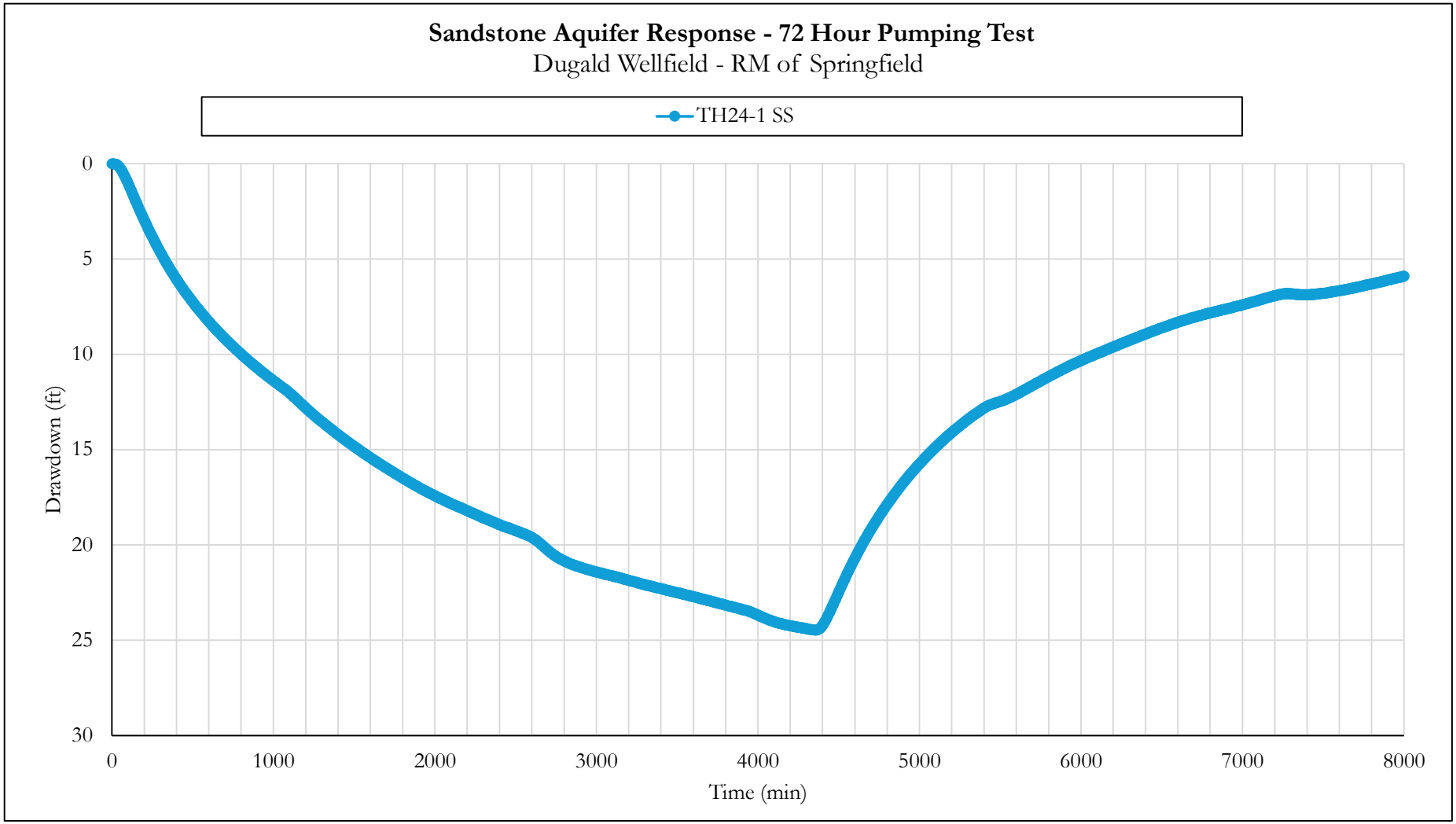
Dugald Wellfield - RM of Springfield

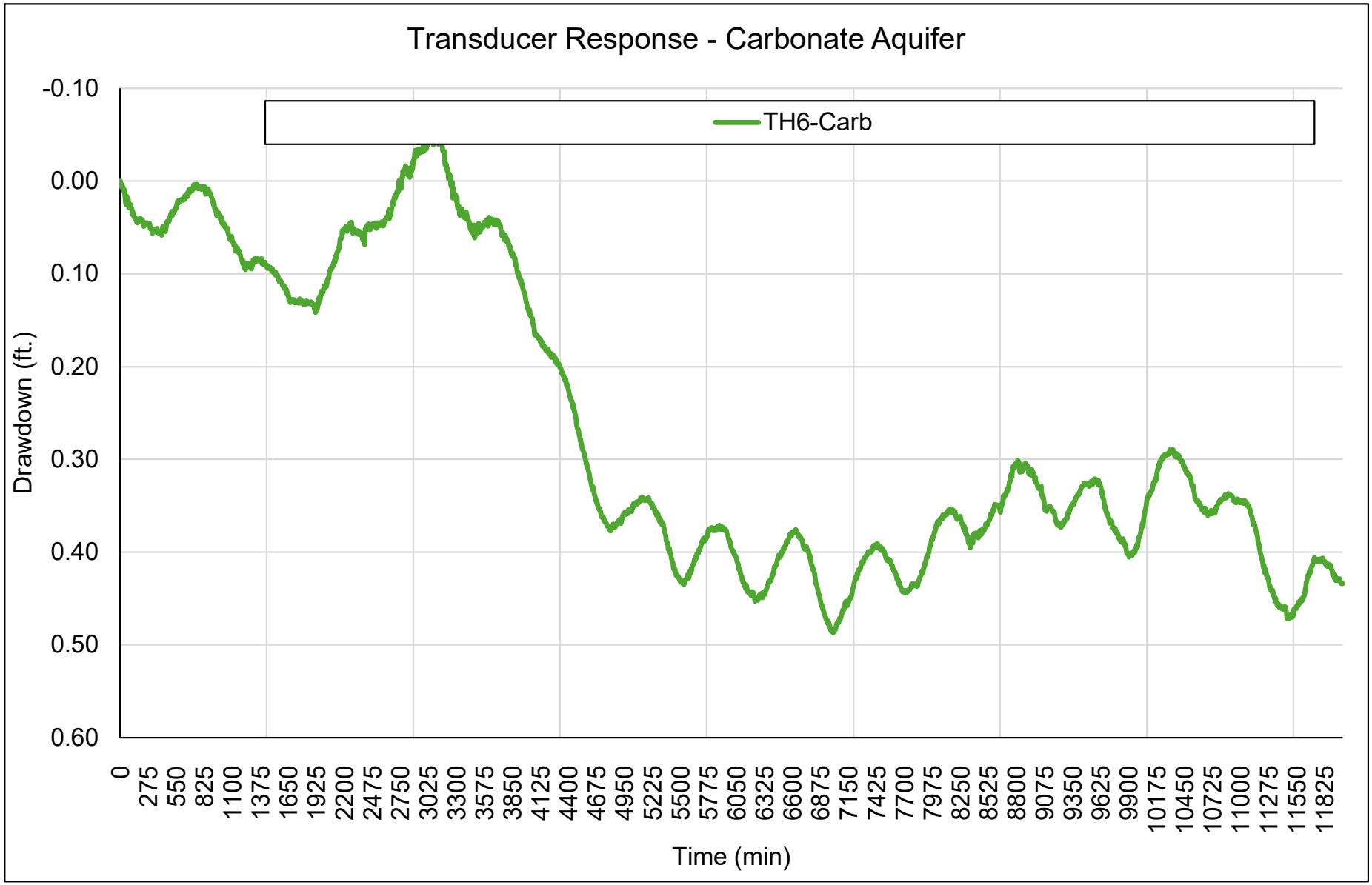


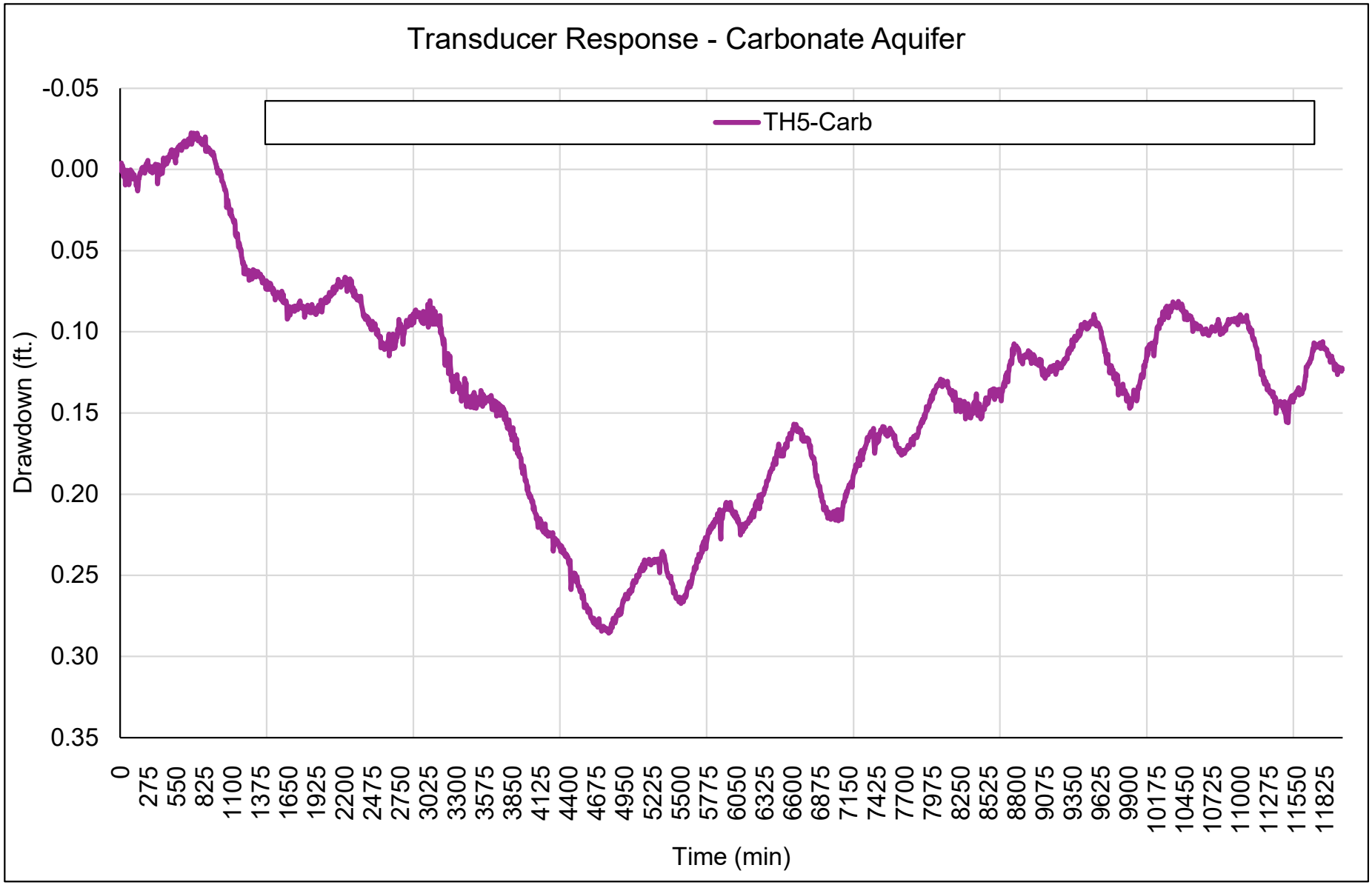

TH6-Sandstone
72 hour pumping Test
Drawdown (ft.)
0
1
2
3
4
5
6
0
5000
10000
15000
20000
25000
30000
35000
Pumping duration (min)

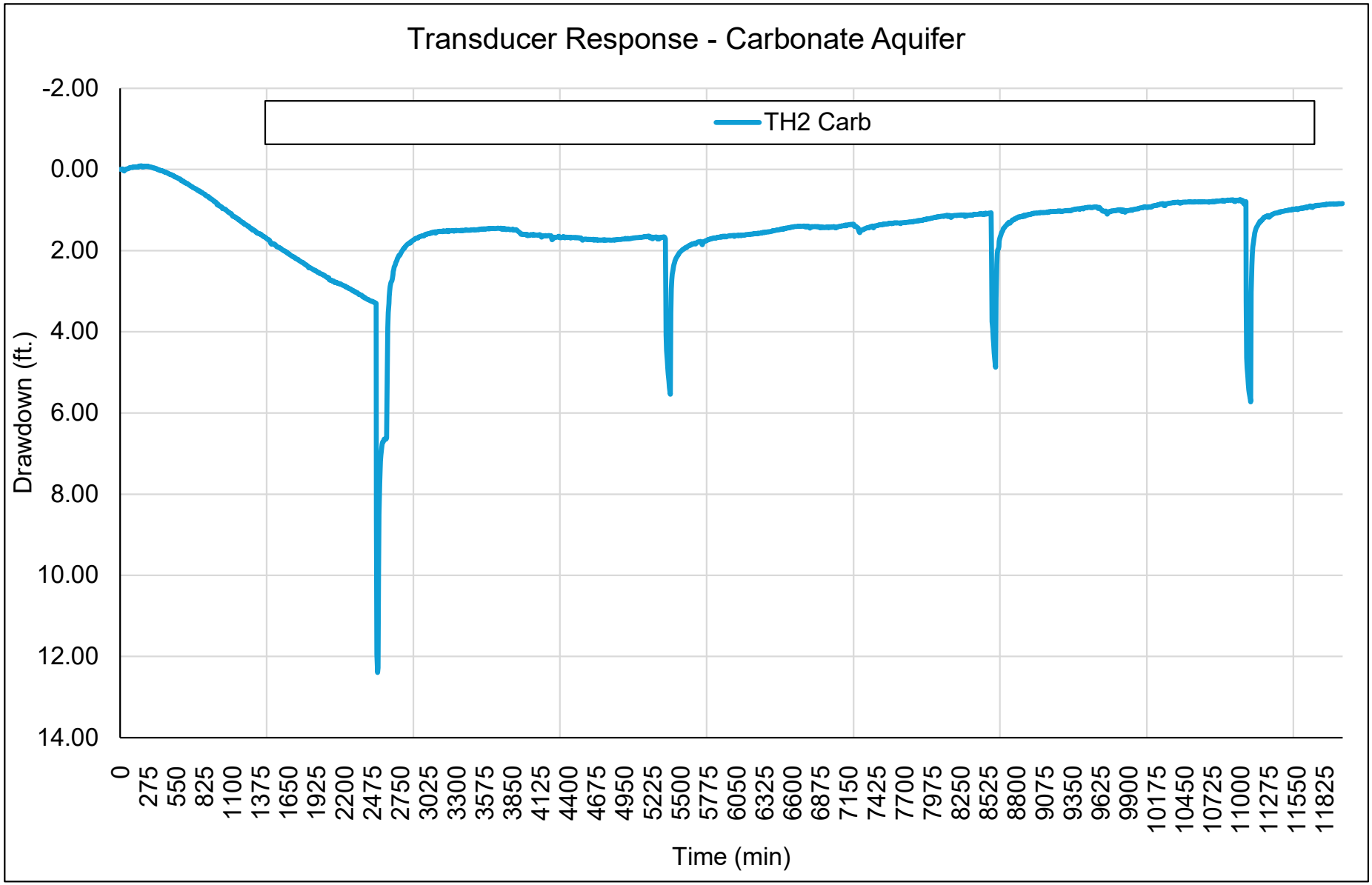

Sandstone Aquifer Response - 72 Hour Pumping Test
Dugald Wellfield - RM of Springfield
TH5-Sandstone
Drawdown (ft)
0
2
4
6
8
10
12
14
0
1000
2000
3000
4000
5000
6000
7000
8000
Time (min)

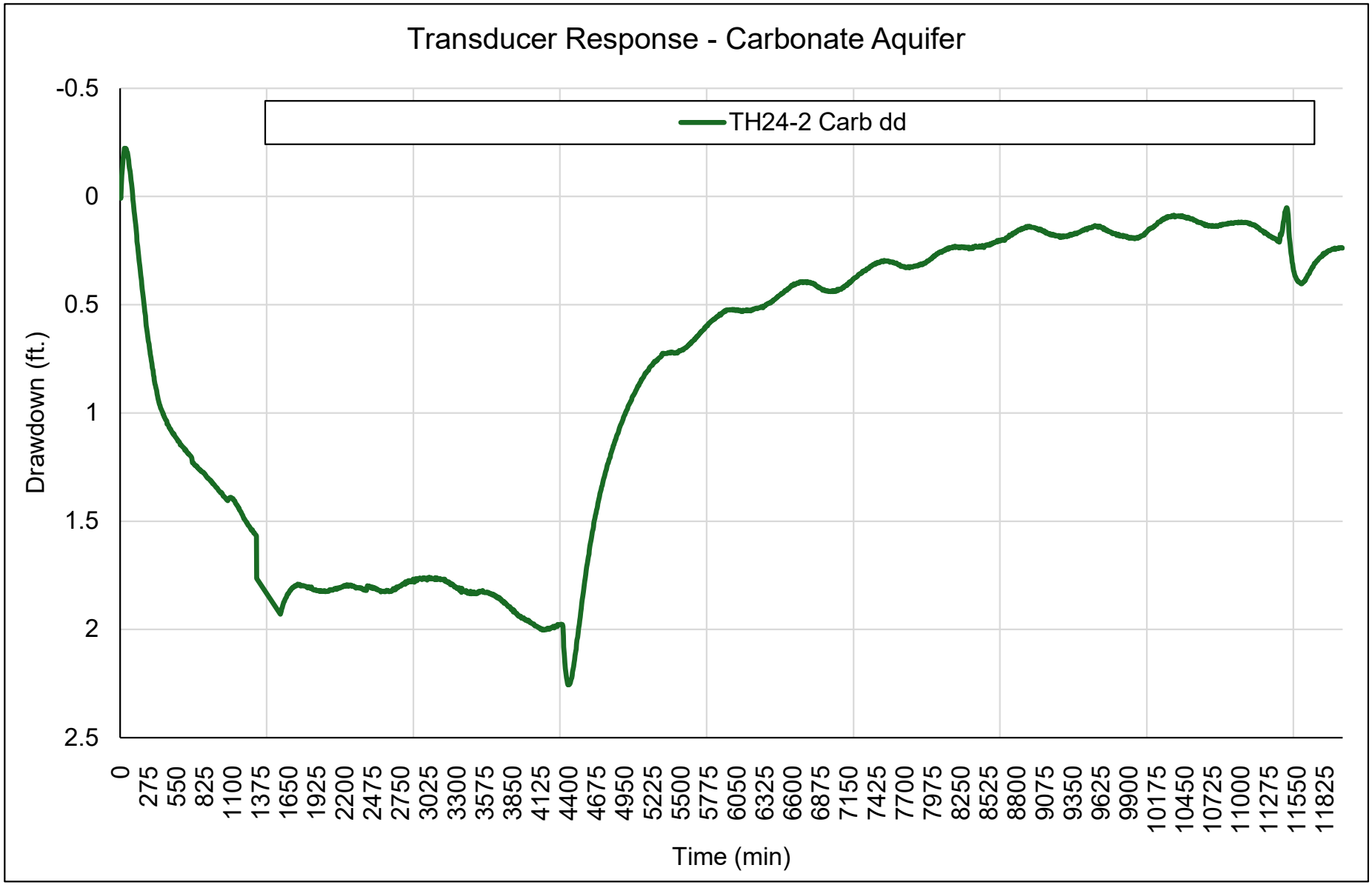

Sandstone Aquifer Response - 72 Hour Pumping Test
Dugald Wellfield - RM of Springfield
TH2-Sandstone
Drawdown (ft)
0
10
20
30
40
50
60
70
0
1000
2000
3000
4000
5000
6000
7000
8000
Time (min)

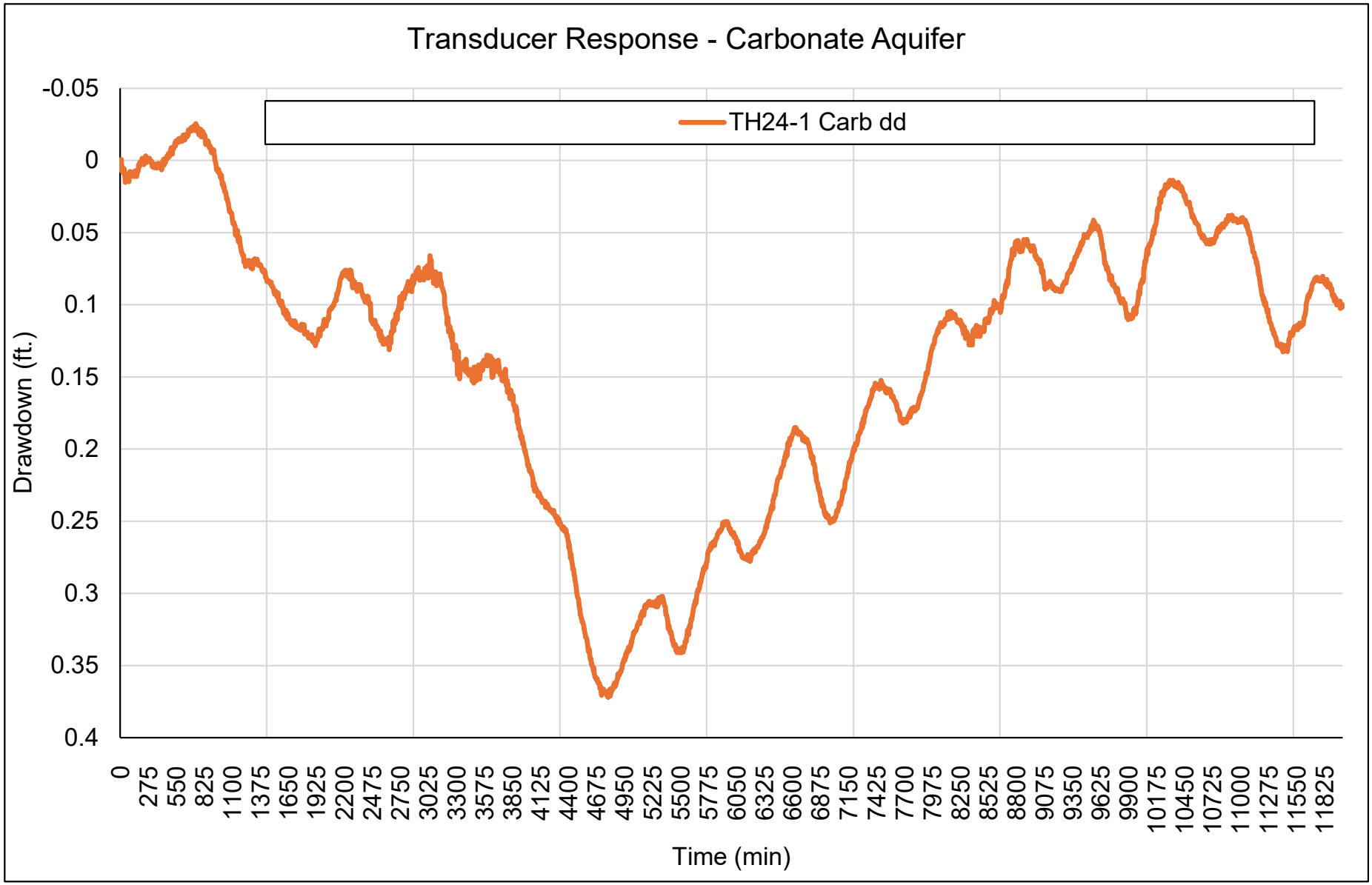

Sandstone Aquifer Response - 72 Hour Pumping Test
Dugald Wellfield - RM of Springfield
TH24-1 SS
Drawdown (ft)
0
5
10
15
20
25
30
0
1000
2000
3000
4000
5000
6000
7000
8000
Time (min)

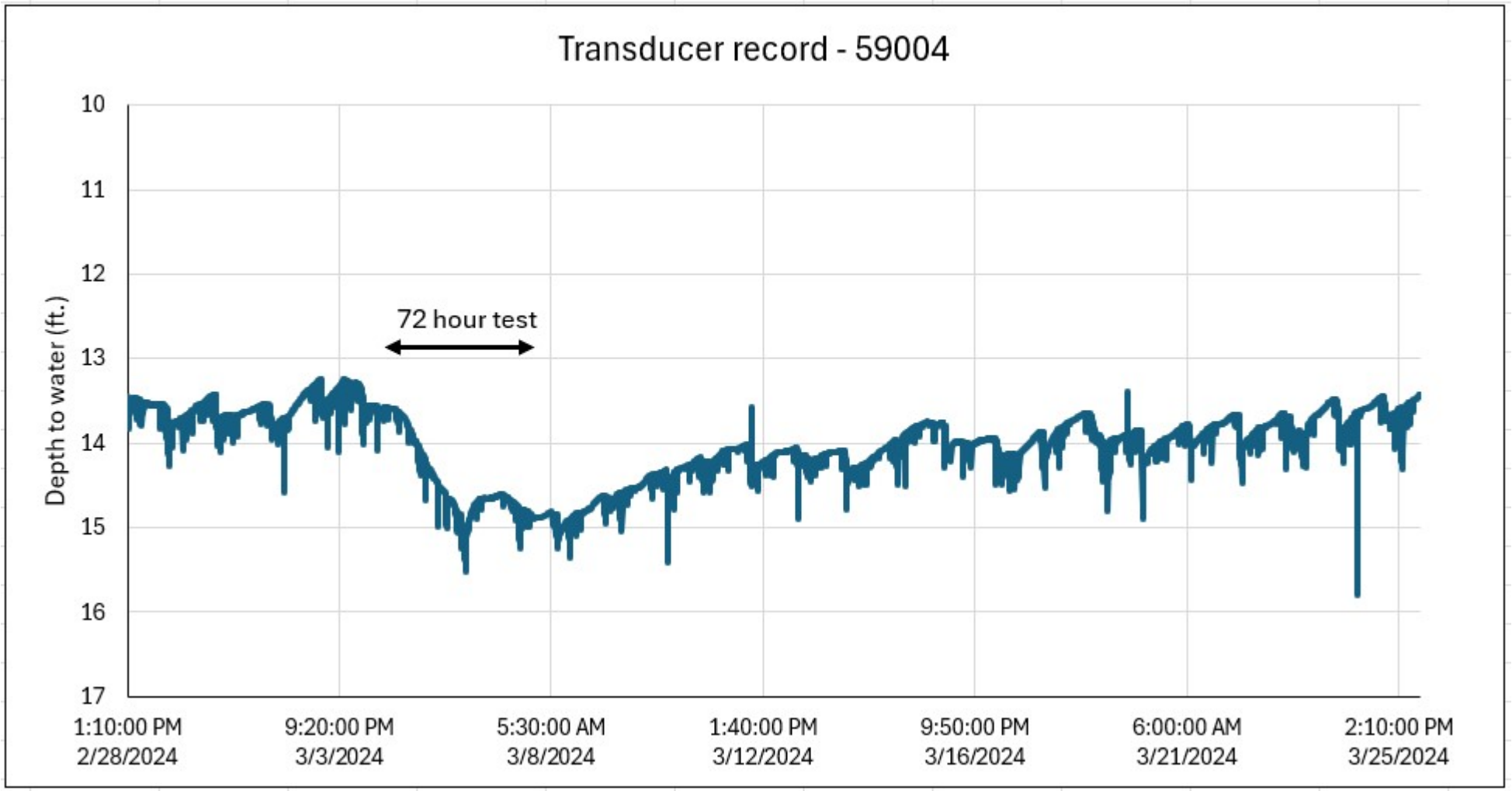

Transducer Response - Carbonate Aquifer
TH6-Carb
Drawdown (ft.)
-0.10
0.00
0.10
0.20
0.30
0.40
0.50
0.60
0
275
550
825
1100
1375
1650
1925
2200
2475
2750
3025
3300
3575
3850
4125
4400
4675
4950
5225
5500
5775
6050
6325
6600
6875
7150
7425
7700
7975
8250
8525
8800
9075
9350
9625
9900
10175
10450
10725
11000
11275
11550
11825
Time (min)

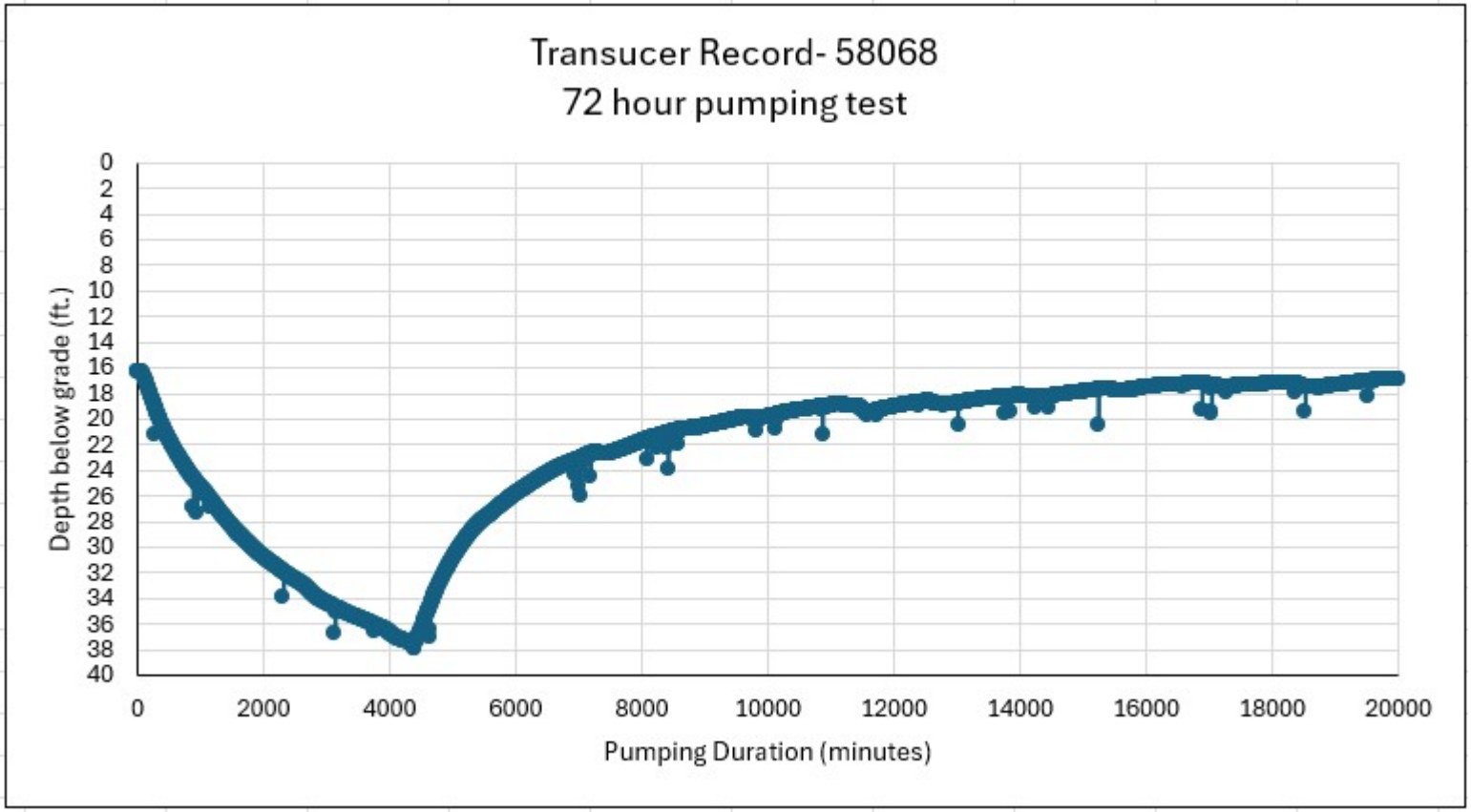

Transducer Response - Carbonate Aquifer
TH5-Carb
Drawdown (ft.)
-0.05
0.00
0.05
0.10
0.15
0.20
0.25
0.30
0.35
0
275
550
825
1100
1375
1650
1925
2200
2475
2750
3025
3300
3575
3850
4125
4400
4675
4950
5225
5500
5775
6050
6325
6600
6875
7150
7425
7700
7975
8250
8525
8800
9075
9350
9625
9900
10175
10450
10725
11000
11275
11550
11825
Time (min)

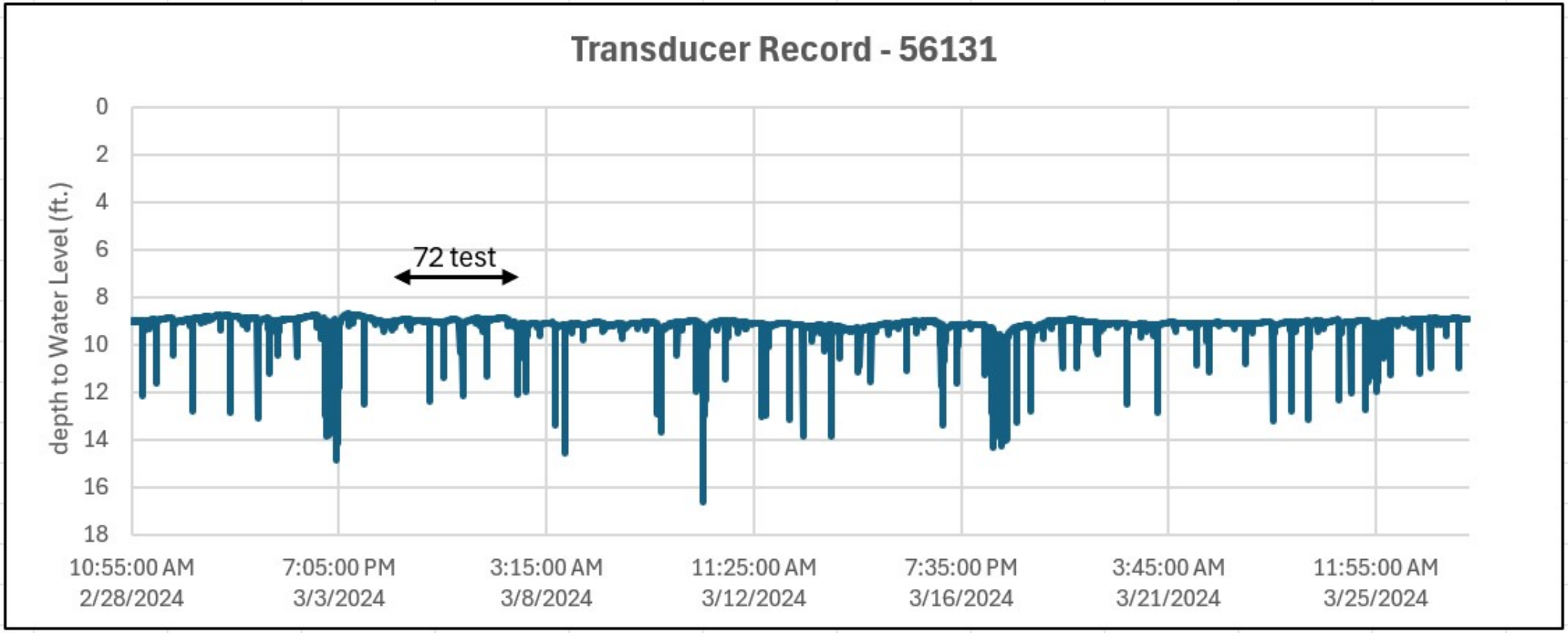

Transducer Response - Carbonate Aquifer
TH2 Carb
Drawdown (ft.)
-2.00
0.00
2.00
4.00
6.00
8.00
10.00
12.00
14.00
0
275
550
825
1100
1375
1650
1925
2200
2475
2750
3025
3300
3575
3850
4125
4400
4675
4950
5225
5500
5775
6050
6325
6600
6875
7150
7425
7700
7975
8250
8525
8800
9075
9350
9625
9900
10175
10450
10725
11000
11275
11550
11825
Time (min)


Transducer Response - Carbonate Aquifer
TH24-2 Carb dd
Drawdown (ft.)
-0.5
0
0.5
1
1.5
2
2.5
0
275
550
825
1100
1375
1650
1925
2200
2475
2750
3025
3300
3575
3850
4125
4400
4675
4950
5225
5500
5775
6050
6325
6600
6875
7150
7425
7700
7975
8250
8525
8800
9075
9350
9625
9900
10175
10450
10725
11000
11275
11550
11825
Time (min)


Transducer Response - Carbonate Aquifer
TH24-1 Carb dd
Drawdown (ft.)
-0.05
0
0.05
0.1
0.15
0.2
0.25
0.3
0.35
0.4
0
275
550
825
1100
1375
1650
1925
2200
2475
2750
3025
3300
3575
3850
4125
4400
4675
4950
5225
5500
5775
6050
6325
6600
6875
7150
7425
7700
7975
8250
8525
8800
9075
9350
9625
9900
10175
10450
10725
11000
11275
11550
11825
Time (min)


Transducer record - 59004
Depth to water (ft.)
10
11
12
13
14
15
16
17
72 hour test
1:10:00 PM
2/28/2024
9:20:00 PM
3/3/2024
5:30:00 AM
3/8/2024
1:40:00 PM
3/12/2024
9:50:00 PM
3/16/2024
6:00:00 AM
3/21/2024
2:10:00 PM
3/25/2024


Transucer Record- 58068
72 hour pumping test
Depth below grade (ft.)
0
2
4
6
8
10
12
14
16
18
20
22
24
26
28
30
32
34
36
38
40
0
2000
4000
6000
8000
10000
12000
14000
16000
18000
20000
Pumping Duration (minutes)


Transducer Record - 56131
depth to Water Level (ft.)
0
2
4
6
8
10
12
14
16
18
72 test
10:55:00 AM
2/28/2024
7:05:00 PM
3/3/2024
3:15:00 AM
3/8/2024
11:25:00 AM
3/12/2024
7:35:00 PM
3/16/2024
3:45:00 AM
3/21/2024
11:55:00 AM
3/25/2024

Friesen DRILLERS

Appendix G

Pumping Test Data

Data Set: \\FRIESSERVICES\Documents\Justin's Engineering Folder\RM of Springfield\Oakbank-Dugald GW Supp
Title: 72 hour test
Date: 07/26/24
Time: 11:58:13

PROJECT INFORMATION

Company: Friesen Drillers Ltd.
Client: MWSB
Project: Oakbank/Dugald
Location: SW29-10-06E
Test Date: March 2024
Test Well: East Pump Well

AQUIFER DATA

Saturated Thickness: 80. ft
Anisotropy Ratio (Kz/Kr): 1.

PUMPING WELL DATA

No. of pumping wells: 1

Pumping Well No. 1: east pump well

X Location: 0. ft
Y Location: 0. ft

Casing Radius: 1. ft
Well Radius: 1. ft

Fully Penetrating Well

No. of pumping periods: 3

Pumping Period Data			
Time (min)	Rate (gal/min)	Time (min)	Rate (gal/min)
0.	450.	4320.	0.
960.	500.		

OBSERVATION WELL DATA

No. of observation wells: 6

Observation Well No. 1: east pump well

X Location: 0. ft
Y Location: 0. ft

Radial distance from east pump well: 0. ft

Fully Penetrating Well

No. of Observations: 79

Observation Data

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
5.	151.	1680.	179.
20.	137.2	1800.	179.9
25.	138.	1920.	180.
30.	138.6	2040.	180.6
35.	139.2	2280.	180.9
40.	139.9	2400.	181.
50.	141.1	2520.	179.9
60.	142.1	2640.	178.9
75.	143.2	2760.	179.9
90.	144.1	2880.	180.3
105.	144.6	3000.	180.6
120.	144.8	3120.	180.8
135.	145.2	3240.	180.4
150.	145.6	3360.	182.
165.	145.7	3480.	183.5
180.	146.	3720.	183.4
195.	146.3	3840.	184.6
210.	146.6	3960.	184.
225.	146.9	4080.	183.5
300.	148.2	4200.	181.5
360.	149.1	4320.	181.7
420.	149.6	4325.	62.18
480.	150.7	4330.	54.33
540.	150.9	4335.	50.18
600.	151.6	4340.	47.53
660.	152.1	4345.	45.5
720.	151.8	4350.	43.98
780.	152.1	4355.	42.58
840.	152.5	4360.	41.38
900.	152.7	4365.	40.4
960.	153.2	4370.	40.52
1020.	170.2	4375.	38.63
1080.	171.1	4380.	47.98
1140.	171.7	4390.	36.58
1200.	172.9	4400.	35.52
1260.	173.3	4410.	34.53
1320.	174.2	4420.	33.6
1380.	174.7	4430.	32.78
1440.	175.6	4440.	32.06
1560.	176.7		

Observation Well No. 2: TH24-2

X Location: 85.4 ft
Y Location: 0. ft

Radial distance from east pump well: 85.4 ft

Fully Penetrating Well

No. of Observations: 5755

Observation Data

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
5.	17.4	1.492E+4	1.869
10.	30.27	1.493E+4	1.867
15.	33.83	1.493E+4	1.861
20.	34.6	1.494E+4	1.854
25.	35.66	1.494E+4	1.847
30.	36.86	1.495E+4	1.856
35.	37.9	1.495E+4	1.846
40.	38.8	1.496E+4	1.847
45.	39.69	1.496E+4	1.848
50.	40.4	1.497E+4	1.84
55.	41.13	1.497E+4	1.837
60.	41.81	1.498E+4	1.828
65.	42.38	1.498E+4	1.823
70.	42.91	1.499E+4	1.829
75.	43.42	1.499E+4	1.82
80.	43.9	1.5E+4	1.814
85.	44.35	1.5E+4	1.82
90.	44.73	1.501E+4	1.82
95.	45.15	1.501E+4	1.808
100.	45.49	1.502E+4	1.808
105.	45.84	1.502E+4	1.806
110.	46.16	1.503E+4	1.81
115.	46.45	1.503E+4	1.804
120.	46.72	1.504E+4	1.806
125.	46.98	1.504E+4	1.804
130.	47.27	1.505E+4	1.79
135.	47.51	1.505E+4	1.81
140.	47.76	1.506E+4	1.796
145.	47.98	1.506E+4	1.786
150.	48.21	1.507E+4	1.788
155.	48.41	1.507E+4	1.788
160.	48.62	1.508E+4	1.777
165.	48.81	1.508E+4	1.783
170.	49.	1.509E+4	1.765
175.	49.17	1.509E+4	1.761
180.	49.38	1.51E+4	1.76
185.	49.55	1.51E+4	1.766
190.	49.72	1.511E+4	1.758
195.	49.9	1.511E+4	1.76
200.	50.07	1.512E+4	1.751
205.	50.23	1.512E+4	1.761
210.	50.38	1.513E+4	1.749
215.	50.54	1.513E+4	1.754
220.	50.71	1.514E+4	1.74
225.	50.85	1.514E+4	1.735
230.	51.01	1.515E+4	1.731
235.	51.16	1.515E+4	1.72
240.	51.3	1.516E+4	1.73
245.	51.45	1.516E+4	1.724
250.	51.59	1.517E+4	1.708
255.	51.73	1.517E+4	1.713

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
260.	51.88	1.518E+4	1.708
265.	51.99	1.518E+4	1.713
270.	52.12	1.519E+4	1.703
275.	52.25	1.519E+4	1.701
280.	52.38	1.52E+4	1.695
285.	52.5	1.52E+4	1.691
290.	52.62	1.521E+4	1.687
295.	52.73	1.521E+4	1.686
300.	52.84	1.522E+4	1.68
305.	52.95	1.522E+4	1.68
310.	53.07	1.523E+4	1.676
315.	53.19	1.523E+4	1.664
320.	53.27	1.524E+4	1.661
325.	53.38	1.524E+4	1.666
330.	53.5	1.525E+4	1.665
335.	53.58	1.525E+4	1.654
340.	53.7	1.526E+4	1.655
345.	53.8	1.526E+4	1.645
350.	53.89	1.527E+4	1.64
355.	53.99	1.527E+4	1.644
360.	54.1	1.528E+4	1.636
365.	54.2	1.528E+4	1.629
370.	54.31	1.529E+4	1.634
375.	54.39	1.529E+4	1.624
380.	54.48	1.53E+4	1.625
385.	54.56	1.53E+4	1.613
390.	54.63	1.531E+4	1.62
395.	54.71	1.531E+4	1.615
400.	54.8	1.532E+4	1.616
405.	54.87	1.532E+4	1.611
410.	54.94	1.533E+4	1.602
415.	55.05	1.533E+4	1.606
420.	55.15	1.534E+4	1.606
425.	55.23	1.534E+4	1.591
430.	55.31	1.535E+4	1.596
435.	55.38	1.535E+4	1.588
440.	55.45	1.536E+4	1.582
445.	55.51	1.536E+4	1.581
450.	55.58	1.537E+4	1.575
455.	55.66	1.537E+4	1.56
460.	55.77	1.538E+4	1.557
465.	55.84	1.538E+4	1.557
470.	55.9	1.539E+4	1.549
475.	55.98	1.539E+4	1.55
480.	56.06	1.54E+4	1.548
485.	56.12	1.54E+4	1.542
490.	56.19	1.541E+4	1.546
495.	56.26	1.541E+4	1.53
500.	56.34	1.542E+4	1.548
505.	56.39	1.542E+4	1.535
510.	56.49	1.543E+4	1.537
515.	56.53	1.543E+4	1.527
520.	56.6	1.544E+4	1.514

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
525.	56.66	1.544E+4	1.516
530.	56.71	1.545E+4	1.512
535.	56.78	1.545E+4	1.519
540.	56.85	1.546E+4	1.51
545.	56.89	1.546E+4	1.505
550.	56.95	1.547E+4	1.513
555.	57.01	1.547E+4	1.508
560.	57.08	1.548E+4	1.523
565.	57.14	1.548E+4	1.505
570.	57.21	1.549E+4	1.498
575.	57.25	1.549E+4	1.494
580.	57.31	1.55E+4	1.5
585.	57.37	1.55E+4	1.491
590.	57.43	1.551E+4	1.502
595.	57.48	1.551E+4	1.499
600.	57.55	1.552E+4	1.493
605.	57.61	1.552E+4	1.501
610.	57.66	1.553E+4	1.503
615.	57.71	1.553E+4	1.501
620.	57.78	1.554E+4	1.48
625.	57.82	1.554E+4	1.485
630.	57.86	1.555E+4	1.502
635.	57.92	1.555E+4	1.494
640.	57.97	1.556E+4	1.497
645.	58.02	1.556E+4	1.494
650.	58.07	1.557E+4	1.496
655.	58.12	1.557E+4	1.496
660.	58.16	1.558E+4	1.502
665.	58.21	1.558E+4	1.495
670.	58.25	1.559E+4	1.493
675.	58.3	1.559E+4	1.499
680.	58.38	1.56E+4	1.492
685.	58.41	1.56E+4	1.493
690.	58.44	1.561E+4	1.491
695.	58.49	1.561E+4	1.5
700.	58.53	1.562E+4	1.49
705.	58.57	1.562E+4	1.5
710.	58.59	1.563E+4	1.484
715.	58.63	1.563E+4	1.484
720.	58.68	1.564E+4	1.5
725.	58.75	1.564E+4	1.484
730.	58.78	1.565E+4	1.483
735.	58.83	1.565E+4	1.475
740.	58.86	1.566E+4	1.494
745.	58.91	1.566E+4	1.47
750.	58.97	1.567E+4	1.496
755.	59.01	1.567E+4	1.479
760.	59.05	1.568E+4	1.498
765.	59.08	1.568E+4	1.483
770.	59.1	1.569E+4	1.48
775.	59.13	1.569E+4	1.468
780.	59.16	1.57E+4	1.47
785.	59.21	1.57E+4	1.469

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
790.	59.26	1.571E+4	1.47
795.	59.29	1.571E+4	1.458
800.	59.31	1.572E+4	1.462
805.	59.34	1.572E+4	1.469
810.	59.37	1.573E+4	1.466
815.	59.42	1.573E+4	1.464
820.	59.46	1.574E+4	1.465
825.	59.52	1.574E+4	1.45
830.	59.55	1.575E+4	1.454
835.	59.59	1.575E+4	1.455
840.	59.65	1.576E+4	1.451
845.	59.66	1.576E+4	1.453
850.	59.69	1.577E+4	1.437
855.	59.73	1.577E+4	1.44
860.	59.78	1.578E+4	1.452
865.	59.82	1.578E+4	1.44
870.	59.85	1.579E+4	1.449
875.	59.89	1.579E+4	1.442
880.	59.94	1.58E+4	1.435
885.	59.96	1.58E+4	1.429
890.	59.98	1.581E+4	1.428
895.	60.02	1.581E+4	1.424
900.	60.05	1.582E+4	1.435
905.	60.1	1.582E+4	1.417
910.	60.15	1.583E+4	1.43
915.	60.17	1.583E+4	1.424
920.	60.19	1.584E+4	1.419
925.	60.22	1.584E+4	1.414
930.	60.26	1.585E+4	1.424
935.	60.3	1.585E+4	1.412
940.	60.34	1.586E+4	1.419
945.	60.37	1.586E+4	1.407
950.	60.43	1.587E+4	1.408
955.	60.46	1.587E+4	1.408
960.	60.5	1.588E+4	1.408
965.	60.53	1.588E+4	1.409
970.	60.55	1.589E+4	1.399
975.	60.56	1.589E+4	1.395
980.	60.59	1.59E+4	1.4
985.	60.65	1.59E+4	1.393
990.	60.68	1.591E+4	1.396
995.	60.72	1.591E+4	1.369
1000.	60.75	1.592E+4	1.389
1005.	60.79	1.592E+4	1.379
1010.	60.84	1.593E+4	1.38
1015.	60.89	1.593E+4	1.38
1020.	60.93	1.594E+4	1.387
1025.	60.97	1.594E+4	1.375
1030.	61.	1.595E+4	1.375
1035.	61.03	1.595E+4	1.381
1040.	61.09	1.596E+4	1.378
1045.	61.14	1.596E+4	1.368
1050.	61.62	1.597E+4	1.366

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
1055.	63.87	1.597E+4	1.371
1060.	64.59	1.598E+4	1.366
1065.	65.	1.598E+4	1.368
1070.	65.33	1.599E+4	1.374
1075.	65.57	1.599E+4	1.366
1080.	65.78	1.6E+4	1.372
1085.	65.96	1.6E+4	1.357
1090.	66.11	1.601E+4	1.354
1095.	66.23	1.601E+4	1.357
1100.	66.36	1.602E+4	1.355
1105.	66.48	1.602E+4	1.353
1110.	66.59	1.603E+4	1.351
1115.	66.7	1.603E+4	1.342
1120.	66.79	1.604E+4	1.354
1125.	66.89	1.604E+4	1.34
1130.	66.97	1.605E+4	1.334
1135.	67.06	1.605E+4	1.337
1140.	67.14	1.606E+4	1.33
1145.	67.21	1.606E+4	1.335
1150.	67.28	1.607E+4	1.324
1155.	67.36	1.607E+4	1.321
1160.	67.44	1.608E+4	1.324
1165.	67.5	1.608E+4	1.328
1170.	67.58	1.609E+4	1.319
1175.	67.64	1.609E+4	1.318
1180.	67.71	1.61E+4	1.321
1185.	67.76	1.61E+4	1.323
1190.	67.81	1.611E+4	1.306
1195.	67.86	1.611E+4	1.313
1200.	67.94	1.612E+4	1.315
1205.	68.	1.612E+4	1.313
1210.	68.07	1.613E+4	1.3
1215.	68.13	1.613E+4	1.312
1220.	68.19	1.614E+4	1.305
1225.	68.27	1.614E+4	1.297
1230.	68.31	1.615E+4	1.306
1235.	68.38	1.615E+4	1.305
1240.	68.44	1.616E+4	1.301
1245.	68.46	1.616E+4	1.295
1250.	68.52	1.617E+4	1.288
1255.	68.6	1.617E+4	1.284
1260.	68.68	1.618E+4	1.295
1265.	68.72	1.618E+4	1.282
1270.	68.75	1.619E+4	1.294
1275.	68.82	1.619E+4	1.291
1280.	68.87	1.62E+4	1.286
1285.	68.93	1.62E+4	1.282
1290.	68.98	1.621E+4	1.281
1295.	69.04	1.621E+4	1.272
1300.	69.08	1.622E+4	1.277
1305.	69.15	1.622E+4	1.279
1310.	69.2	1.623E+4	1.274
1315.	69.25	1.623E+4	1.28

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
1320.	69.3	1.624E+4	1.267
1325.	69.36	1.624E+4	1.272
1330.	69.41	1.625E+4	1.263
1335.	69.48	1.625E+4	1.278
1340.	69.53	1.626E+4	1.265
1345.	69.58	1.626E+4	1.27
1350.	69.63	1.627E+4	1.272
1355.	69.7	1.627E+4	1.267
1360.	69.74	1.628E+4	1.268
1365.	69.8	1.628E+4	1.266
1370.	69.83	1.629E+4	1.259
1375.	69.89	1.629E+4	1.253
1380.	69.94	1.63E+4	1.262
1385.	69.98	1.63E+4	1.271
1390.	70.02	1.631E+4	1.259
1395.	70.06	1.631E+4	1.268
1400.	70.11	1.632E+4	1.266
1405.	70.16	1.632E+4	1.268
1410.	70.2	1.633E+4	1.261
1415.	70.23	1.633E+4	1.264
1420.	70.28	1.634E+4	1.261
1425.	70.33	1.634E+4	1.266
1430.	70.36	1.635E+4	1.255
1435.	70.4	1.635E+4	1.26
1440.	70.45	1.636E+4	1.257
1445.	70.5	1.636E+4	1.253
1450.	70.55	1.637E+4	1.254
1455.	70.59	1.637E+4	1.25
1460.	70.63	1.638E+4	1.24
1465.	70.67	1.638E+4	1.249
1470.	70.71	1.639E+4	1.247
1475.	70.76	1.639E+4	1.244
1480.	70.82	1.64E+4	1.249
1485.	70.87	1.64E+4	1.252
1490.	70.92	1.641E+4	1.257
1495.	70.97	1.641E+4	1.243
1500.	71.03	1.642E+4	1.235
1505.	71.07	1.642E+4	1.253
1510.	71.1	1.643E+4	1.252
1515.	71.14	1.643E+4	1.24
1520.	71.21	1.644E+4	1.233
1525.	71.25	1.644E+4	1.236
1530.	71.28	1.645E+4	1.23
1535.	71.31	1.645E+4	1.234
1540.	71.36	1.646E+4	1.247
1545.	71.41	1.646E+4	1.238
1550.	71.45	1.647E+4	1.24
1555.	71.48	1.647E+4	1.229
1560.	71.49	1.648E+4	1.229
1565.	71.53	1.648E+4	1.223
1570.	71.56	1.649E+4	1.228
1575.	71.59	1.649E+4	1.233
1580.	71.61	1.65E+4	1.222

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
1585.	71.64	1.65E+4	1.231
1590.	71.73	1.651E+4	1.217
1595.	71.77	1.651E+4	1.208
1600.	71.82	1.652E+4	1.226
1605.	71.86	1.652E+4	1.211
1610.	71.92	1.653E+4	1.218
1615.	71.94	1.653E+4	1.215
1620.	71.99	1.654E+4	1.205
1625.	72.03	1.654E+4	1.21
1630.	72.08	1.655E+4	1.215
1635.	72.1	1.655E+4	1.219
1640.	72.12	1.656E+4	1.204
1645.	72.17	1.656E+4	1.207
1650.	72.21	1.657E+4	1.207
1655.	72.26	1.657E+4	1.197
1660.	72.28	1.658E+4	1.196
1665.	72.32	1.658E+4	1.198
1670.	72.39	1.659E+4	1.204
1675.	72.63	1.659E+4	1.202
1680.	72.76	1.66E+4	1.204
1685.	72.81	1.66E+4	1.198
1690.	72.87	1.661E+4	1.191
1695.	72.92	1.661E+4	1.185
1700.	72.96	1.662E+4	1.188
1705.	72.98	1.662E+4	1.196
1710.	73.02	1.663E+4	1.188
1715.	73.04	1.663E+4	1.191
1720.	73.1	1.664E+4	1.188
1725.	73.14	1.664E+4	1.181
1730.	73.17	1.665E+4	1.192
1735.	73.2	1.665E+4	1.189
1740.	73.22	1.666E+4	1.18
1745.	73.24	1.666E+4	1.181
1750.	73.29	1.667E+4	1.184
1755.	73.31	1.667E+4	1.183
1760.	73.33	1.668E+4	1.184
1765.	73.37	1.668E+4	1.163
1770.	73.33	1.669E+4	1.18
1775.	73.35	1.669E+4	1.172
1780.	73.46	1.67E+4	1.159
1785.	73.5	1.67E+4	1.162
1790.	73.56	1.671E+4	1.17
1795.	73.59	1.671E+4	1.175
1800.	73.64	1.672E+4	1.16
1805.	73.67	1.672E+4	1.159
1810.	73.71	1.673E+4	1.171
1815.	73.74	1.673E+4	1.171
1820.	73.75	1.674E+4	1.159
1825.	73.78	1.674E+4	1.152
1830.	73.81	1.675E+4	1.154
1835.	73.83	1.675E+4	1.166
1840.	73.88	1.676E+4	1.147
1845.	73.85	1.676E+4	1.168

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
1850.	73.89	1.677E+4	1.157
1855.	73.96	1.677E+4	1.153
1860.	73.99	1.678E+4	1.154
1865.	74.04	1.678E+4	1.167
1870.	74.05	1.679E+4	1.134
1875.	74.04	1.679E+4	1.158
1880.	74.05	1.68E+4	1.147
1885.	74.09	1.68E+4	1.14
1890.	74.16	1.681E+4	1.142
1895.	74.18	1.681E+4	1.15
1900.	74.19	1.682E+4	1.16
1905.	74.12	1.682E+4	1.153
1910.	74.18	1.683E+4	1.151
1915.	74.23	1.683E+4	1.16
1920.	74.27	1.684E+4	1.144
1925.	74.3	1.684E+4	1.147
1930.	74.32	1.685E+4	1.148
1935.	74.33	1.685E+4	1.137
1940.	74.36	1.686E+4	1.142
1945.	74.37	1.686E+4	1.136
1950.	74.37	1.687E+4	1.137
1955.	74.39	1.687E+4	1.137
1960.	74.41	1.688E+4	1.146
1965.	74.45	1.688E+4	1.152
1970.	74.39	1.689E+4	1.14
1975.	74.41	1.689E+4	1.141
1980.	74.5	1.69E+4	1.151
1985.	74.54	1.69E+4	1.134
1990.	74.57	1.691E+4	1.13
1995.	74.59	1.691E+4	1.131
2000.	74.59	1.692E+4	1.139
2005.	74.63	1.692E+4	1.164
2010.	74.64	1.693E+4	1.134
2015.	74.69	1.693E+4	1.142
2020.	74.73	1.694E+4	1.143
2025.	74.73	1.694E+4	1.138
2030.	74.73	1.695E+4	1.142
2035.	74.78	1.695E+4	1.13
2040.	74.81	1.696E+4	1.13
2045.	74.85	1.696E+4	1.148
2050.	74.87	1.697E+4	1.138
2055.	74.86	1.697E+4	1.135
2060.	74.89	1.698E+4	1.143
2065.	74.91	1.698E+4	1.134
2070.	74.85	1.699E+4	1.137
2075.	74.86	1.699E+4	1.144
2080.	74.89	1.7E+4	1.144
2085.	74.96	1.7E+4	1.139
2090.	75.	1.701E+4	1.152
2095.	75.01	1.701E+4	1.151
2100.	75.03	1.702E+4	1.152
2105.	75.08	1.702E+4	1.172
2110.	75.11	1.703E+4	1.153

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
2115.	75.13	1.703E+4	1.158
2120.	75.13	1.704E+4	1.17
2125.	75.13	1.704E+4	1.167
2130.	75.17	1.705E+4	1.163
2135.	75.14	1.705E+4	1.177
2140.	75.19	1.706E+4	1.186
2145.	75.21	1.706E+4	1.17
2150.	75.22	1.707E+4	1.18
2155.	75.23	1.707E+4	1.181
2160.	75.24	1.708E+4	1.186
2165.	75.26	1.708E+4	1.194
2170.	75.25	1.709E+4	1.195
2175.	75.26	1.709E+4	1.188
2180.	75.29	1.71E+4	1.191
2185.	75.31	1.71E+4	1.198
2190.	75.3	1.711E+4	1.197
2195.	75.3	1.711E+4	1.212
2200.	75.33	1.712E+4	1.21
2205.	75.32	1.712E+4	1.209
2210.	75.29	1.713E+4	1.196
2215.	75.27	1.713E+4	1.197
2220.	75.29	1.714E+4	1.207
2225.	75.37	1.714E+4	1.208
2230.	75.41	1.715E+4	1.222
2235.	75.42	1.715E+4	1.219
2240.	75.43	1.716E+4	1.195
2245.	75.44	1.716E+4	1.217
2250.	75.47	1.717E+4	1.219
2255.	75.45	1.717E+4	1.218
2260.	75.46	1.718E+4	1.227
2265.	75.49	1.718E+4	1.226
2270.	75.5	1.719E+4	1.223
2275.	75.52	1.719E+4	1.214
2280.	75.61	1.72E+4	1.225
2285.	75.67	1.72E+4	1.231
2290.	75.63	1.721E+4	1.227
2295.	75.61	1.721E+4	1.228
2300.	75.62	1.722E+4	1.232
2305.	75.65	1.722E+4	1.226
2310.	75.66	1.723E+4	1.242
2315.	75.66	1.723E+4	1.249
2320.	75.69	1.724E+4	1.245
2325.	75.74	1.724E+4	1.234
2330.	75.76	1.725E+4	1.239
2335.	75.81	1.725E+4	1.241
2340.	75.82	1.726E+4	1.25
2345.	75.84	1.726E+4	1.248
2350.	75.86	1.727E+4	1.251
2355.	75.87	1.727E+4	1.256
2360.	75.83	1.728E+4	1.249
2365.	75.81	1.728E+4	1.251
2370.	75.88	1.729E+4	1.245
2375.	75.89	1.729E+4	1.261

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
2380.	75.89	1.73E+4	1.25
2385.	75.92	1.73E+4	1.254
2390.	75.93	1.731E+4	1.251
2395.	75.99	1.731E+4	1.249
2400.	75.99	1.732E+4	1.252
2405.	76.01	1.732E+4	1.25
2410.	76.04	1.733E+4	1.257
2415.	76.07	1.733E+4	1.247
2420.	76.88	1.734E+4	1.258
2425.	76.	1.734E+4	1.25
2430.	76.03	1.735E+4	1.258
2435.	76.06	1.735E+4	1.268
2440.	76.1	1.736E+4	1.251
2445.	76.11	1.736E+4	1.259
2450.	76.14	1.737E+4	1.262
2455.	76.15	1.737E+4	1.257
2460.	76.15	1.738E+4	1.264
2465.	76.13	1.738E+4	1.251
2470.	76.14	1.739E+4	1.264
2475.	76.08	1.739E+4	1.261
2480.	76.07	1.74E+4	1.257
2485.	76.05	1.74E+4	1.259
2490.	76.03	1.741E+4	1.249
2495.	76.02	1.741E+4	1.253
2500.	76.	1.742E+4	1.27
2505.	76.	1.742E+4	1.257
2510.	75.95	1.743E+4	1.266
2515.	75.97	1.743E+4	1.259
2520.	75.96	1.744E+4	1.258
2525.	75.97	1.744E+4	1.247
2530.	75.95	1.745E+4	1.252
2535.	75.93	1.745E+4	1.249
2540.	75.93	1.746E+4	1.266
2545.	75.92	1.746E+4	1.262
2550.	75.91	1.747E+4	1.257
2555.	75.92	1.747E+4	1.255
2560.	75.9	1.748E+4	1.255
2565.	75.91	1.748E+4	1.264
2570.	75.9	1.749E+4	1.256
2575.	75.89	1.749E+4	1.255
2580.	75.9	1.75E+4	1.245
2585.	75.89	1.75E+4	1.261
2590.	75.87	1.751E+4	1.251
2595.	75.86	1.751E+4	1.249
2600.	75.84	1.752E+4	1.253
2605.	75.82	1.752E+4	1.254
2610.	75.84	1.753E+4	1.254
2615.	75.85	1.753E+4	1.236
2620.	75.85	1.754E+4	1.258
2625.	75.86	1.754E+4	1.252
2630.	75.86	1.755E+4	1.259
2635.	75.86	1.755E+4	1.247
2640.	75.88	1.756E+4	1.255

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
2645.	75.92	1.756E+4	1.248
2650.	75.93	1.757E+4	1.262
2655.	75.95	1.757E+4	1.246
2660.	75.96	1.758E+4	1.231
2665.	75.97	1.758E+4	1.249
2670.	75.98	1.759E+4	1.248
2675.	76.01	1.759E+4	1.253
2680.	76.03	1.76E+4	1.238
2685.	76.06	1.76E+4	1.243
2690.	76.07	1.761E+4	1.239
2695.	76.1	1.761E+4	1.23
2700.	76.13	1.762E+4	1.244
2705.	76.16	1.762E+4	1.233
2710.	76.17	1.763E+4	1.235
2715.	76.2	1.763E+4	1.235
2720.	76.22	1.764E+4	1.226
2725.	76.24	1.764E+4	1.235
2730.	76.27	1.765E+4	1.233
2735.	76.28	1.765E+4	1.226
2740.	76.31	1.766E+4	1.228
2745.	76.35	1.766E+4	1.218
2750.	76.37	1.767E+4	1.226
2755.	76.4	1.767E+4	1.223
2760.	76.42	1.768E+4	1.221
2765.	76.44	1.768E+4	1.22
2770.	76.46	1.769E+4	1.214
2775.	76.48	1.769E+4	1.215
2780.	76.51	1.77E+4	1.207
2785.	76.53	1.77E+4	1.213
2790.	76.52	1.771E+4	1.224
2795.	76.55	1.771E+4	1.221
2800.	76.56	1.772E+4	1.215
2805.	76.59	1.772E+4	1.205
2810.	76.62	1.773E+4	1.2
2815.	76.65	1.773E+4	1.206
2820.	76.66	1.774E+4	1.206
2825.	76.68	1.774E+4	1.196
2830.	76.7	1.775E+4	1.209
2835.	76.72	1.775E+4	1.199
2840.	76.73	1.776E+4	1.192
2845.	76.76	1.776E+4	1.185
2850.	76.77	1.777E+4	1.19
2855.	76.8	1.777E+4	1.176
2860.	76.82	1.778E+4	1.201
2865.	76.83	1.778E+4	1.197
2870.	76.86	1.779E+4	1.183
2875.	76.86	1.779E+4	1.193
2880.	76.88	1.78E+4	1.176
2885.	76.89	1.78E+4	1.173
2890.	76.9	1.781E+4	1.17
2895.	76.92	1.781E+4	1.176
2900.	76.94	1.782E+4	1.176
2905.	76.96	1.782E+4	1.173

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
2910.	76.96	1.783E+4	1.173
2915.	76.98	1.783E+4	1.167
2920.	76.99	1.784E+4	1.173
2925.	77.02	1.784E+4	1.177
2930.	77.04	1.785E+4	1.183
2935.	77.06	1.785E+4	1.167
2940.	77.08	1.786E+4	1.163
2945.	77.1	1.786E+4	1.175
2950.	77.11	1.787E+4	1.164
2955.	77.13	1.787E+4	1.153
2960.	77.15	1.788E+4	1.164
2965.	77.16	1.788E+4	1.158
2970.	77.18	1.789E+4	1.151
2975.	77.17	1.789E+4	1.158
2980.	77.2	1.79E+4	1.156
2985.	77.19	1.79E+4	1.151
2990.	77.22	1.791E+4	1.156
2995.	77.24	1.791E+4	1.163
3000.	77.25	1.792E+4	1.152
3005.	77.27	1.792E+4	1.159
3010.	77.27	1.793E+4	1.15
3015.	77.28	1.793E+4	1.134
3020.	77.3	1.794E+4	1.153
3025.	77.33	1.794E+4	1.145
3030.	77.34	1.795E+4	1.152
3035.	77.34	1.795E+4	1.144
3040.	77.36	1.796E+4	1.146
3045.	77.37	1.796E+4	1.149
3050.	77.38	1.797E+4	1.145
3055.	77.4	1.797E+4	1.146
3060.	77.42	1.798E+4	1.139
3065.	77.43	1.798E+4	1.138
3070.	77.43	1.799E+4	1.139
3075.	77.45	1.799E+4	1.13
3080.	77.45	1.8E+4	1.135
3085.	77.47	1.8E+4	1.139
3090.	77.47	1.801E+4	1.138
3095.	77.49	1.801E+4	1.135
3100.	77.51	1.802E+4	1.129
3105.	77.52	1.802E+4	1.13
3110.	77.55	1.803E+4	1.126
3115.	77.54	1.803E+4	1.127
3120.	77.54	1.804E+4	1.13
3125.	77.54	1.804E+4	1.129
3130.	77.56	1.805E+4	1.133
3135.	77.56	1.805E+4	1.13
3140.	77.57	1.806E+4	1.124
3145.	77.57	1.806E+4	1.112
3150.	77.59	1.807E+4	1.123
3155.	77.61	1.807E+4	1.128
3160.	77.61	1.808E+4	1.125
3165.	77.63	1.808E+4	1.128
3170.	77.63	1.809E+4	1.115

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
3175.	77.64	1.809E+4	1.106
3180.	77.65	1.81E+4	1.109
3185.	77.67	1.81E+4	1.113
3190.	77.73	1.811E+4	1.115
3195.	77.75	1.811E+4	1.11
3200.	77.75	1.812E+4	1.11
3205.	77.77	1.812E+4	1.114
3210.	77.8	1.813E+4	1.113
3215.	77.8	1.813E+4	1.116
3220.	77.8	1.814E+4	1.108
3225.	77.83	1.814E+4	1.104
3230.	77.82	1.815E+4	1.105
3235.	77.83	1.815E+4	1.108
3240.	77.73	1.816E+4	1.113
3245.	77.78	1.816E+4	1.107
3250.	77.81	1.817E+4	1.098
3255.	77.82	1.817E+4	1.096
3260.	77.85	1.818E+4	1.107
3265.	77.86	1.818E+4	1.091
3270.	77.87	1.819E+4	1.099
3275.	77.89	1.819E+4	1.088
3280.	77.9	1.82E+4	1.1
3285.	77.91	1.82E+4	1.092
3290.	77.93	1.821E+4	1.099
3295.	77.94	1.821E+4	1.087
3300.	77.96	1.822E+4	1.085
3305.	78.01	1.822E+4	1.099
3310.	78.06	1.823E+4	1.084
3315.	78.09	1.823E+4	1.098
3320.	78.13	1.824E+4	1.083
3325.	78.15	1.824E+4	1.083
3330.	78.18	1.825E+4	1.09
3335.	78.22	1.825E+4	1.09
3340.	78.23	1.826E+4	1.084
3345.	78.27	1.826E+4	1.081
3350.	78.3	1.827E+4	1.081
3355.	78.3	1.827E+4	1.078
3360.	78.31	1.828E+4	1.068
3365.	78.33	1.828E+4	1.1
3370.	78.37	1.829E+4	1.076
3375.	78.4	1.829E+4	1.078
3380.	78.4	1.83E+4	1.072
3385.	78.43	1.83E+4	1.077
3390.	78.47	1.831E+4	1.087
3395.	78.5	1.831E+4	1.07
3400.	78.45	1.832E+4	1.071
3405.	78.44	1.832E+4	1.075
3410.	78.43	1.833E+4	1.071
3415.	78.57	1.833E+4	1.071
3420.	78.62	1.834E+4	1.066
3425.	78.66	1.834E+4	1.065
3430.	78.7	1.835E+4	1.071
3435.	78.75	1.835E+4	1.069

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
3440.	78.79	1.836E+4	1.062
3445.	78.83	1.836E+4	1.058
3450.	78.85	1.837E+4	1.062
3455.	78.87	1.837E+4	1.057
3460.	78.91	1.838E+4	1.061
3465.	78.94	1.838E+4	1.05
3470.	78.95	1.839E+4	1.055
3475.	79.	1.839E+4	1.057
3480.	79.04	1.84E+4	1.047
3485.	79.06	1.84E+4	1.049
3490.	79.06	1.841E+4	1.061
3495.	79.1	1.841E+4	1.05
3500.	79.13	1.842E+4	1.056
3505.	79.13	1.842E+4	1.057
3510.	79.08	1.843E+4	1.048
3515.	79.07	1.843E+4	1.047
3520.	79.21	1.844E+4	1.064
3525.	79.23	1.844E+4	1.055
3530.	79.29	1.845E+4	1.055
3535.	79.27	1.845E+4	1.055
3540.	79.34	1.846E+4	1.07
3545.	79.31	1.846E+4	1.057
3550.	79.34	1.847E+4	1.07
3555.	79.38	1.847E+4	1.064
3560.	79.41	1.848E+4	1.062
3565.	79.43	1.848E+4	1.072
3570.	79.45	1.849E+4	1.067
3575.	79.46	1.849E+4	1.081
3580.	79.49	1.85E+4	1.087
3585.	79.48	1.85E+4	1.09
3590.	79.5	1.851E+4	1.079
3595.	79.53	1.851E+4	1.082
3600.	79.54	1.852E+4	1.099
3605.	79.53	1.852E+4	1.095
3610.	79.55	1.853E+4	1.099
3615.	79.58	1.853E+4	1.099
3620.	79.6	1.854E+4	1.114
3625.	79.63	1.854E+4	1.11
3630.	79.65	1.855E+4	1.119
3635.	79.69	1.855E+4	1.117
3640.	79.69	1.856E+4	1.122
3645.	79.7	1.856E+4	1.113
3650.	79.75	1.857E+4	1.13
3655.	79.67	1.857E+4	1.13
3660.	79.65	1.858E+4	1.14
3665.	79.66	1.858E+4	1.139
3670.	79.75	1.859E+4	1.14
3675.	79.77	1.859E+4	1.14
3680.	79.79	1.86E+4	1.135
3685.	79.82	1.86E+4	1.136
3690.	79.83	1.861E+4	1.145
3695.	79.84	1.861E+4	1.149
3700.	79.85	1.862E+4	1.144

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
3705.	79.86	1.862E+4	1.156
3710.	79.89	1.863E+4	1.143
3715.	79.88	1.863E+4	1.155
3720.	79.9	1.864E+4	1.155
3725.	79.9	1.864E+4	1.152
3730.	79.91	1.865E+4	1.159
3735.	79.91	1.865E+4	1.164
3740.	79.92	1.866E+4	1.166
3745.	79.92	1.866E+4	1.168
3750.	79.93	1.867E+4	1.158
3755.	79.93	1.867E+4	1.165
3760.	79.92	1.868E+4	1.171
3765.	79.91	1.868E+4	1.167
3770.	79.93	1.869E+4	1.171
3775.	79.93	1.869E+4	1.168
3780.	79.94	1.87E+4	1.175
3785.	79.91	1.87E+4	1.174
3790.	79.93	1.871E+4	1.18
3795.	79.94	1.871E+4	1.178
3800.	79.95	1.872E+4	1.184
3805.	79.98	1.872E+4	1.167
3810.	80.	1.873E+4	1.179
3815.	80.04	1.873E+4	1.173
3820.	80.05	1.874E+4	1.186
3825.	80.06	1.874E+4	1.19
3830.	80.07	1.875E+4	1.187
3835.	80.09	1.875E+4	1.188
3840.	80.09	1.876E+4	1.186
3845.	80.1	1.876E+4	1.183
3850.	80.08	1.877E+4	1.179
3855.	80.09	1.877E+4	1.191
3860.	80.06	1.878E+4	1.179
3865.	80.02	1.878E+4	1.194
3870.	80.03	1.879E+4	1.18
3875.	80.03	1.879E+4	1.177
3880.	80.02	1.88E+4	1.191
3885.	80.01	1.88E+4	1.189
3890.	79.98	1.881E+4	1.184
3895.	80.	1.881E+4	1.188
3900.	80.01	1.882E+4	1.183
3905.	80.	1.882E+4	1.195
3910.	80.02	1.883E+4	1.176
3915.	80.03	1.883E+4	1.189
3920.	80.03	1.884E+4	1.181
3925.	80.01	1.884E+4	1.177
3930.	80.04	1.885E+4	1.186
3935.	80.06	1.885E+4	1.196
3940.	80.05	1.886E+4	1.188
3945.	80.08	1.886E+4	1.195
3950.	80.08	1.887E+4	1.185
3955.	80.1	1.887E+4	1.183
3960.	80.09	1.888E+4	1.188
3965.	80.11	1.888E+4	1.182

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
3970.	80.14	1.889E+4	1.17
3975.	80.18	1.889E+4	1.188
3980.	80.2	1.89E+4	1.178
3985.	80.22	1.89E+4	1.188
3990.	80.25	1.891E+4	1.174
3995.	80.26	1.891E+4	1.171
4000.	80.23	1.892E+4	1.168
4005.	80.27	1.892E+4	1.179
4010.	80.25	1.893E+4	1.177
4015.	80.26	1.893E+4	1.169
4020.	80.3	1.894E+4	1.169
4025.	80.31	1.894E+4	1.171
4030.	80.36	1.895E+4	1.169
4035.	80.38	1.895E+4	1.167
4040.	80.35	1.896E+4	1.165
4045.	80.32	1.896E+4	1.167
4050.	80.37	1.897E+4	1.154
4055.	80.37	1.897E+4	1.158
4060.	80.33	1.898E+4	1.153
4065.	80.29	1.898E+4	1.162
4070.	80.17	1.899E+4	1.153
4075.	80.13	1.899E+4	1.147
4080.	80.16	1.9E+4	1.15
4085.	80.19	1.9E+4	1.158
4090.	80.2	1.901E+4	1.16
4095.	80.06	1.901E+4	1.154
4100.	79.94	1.902E+4	1.145
4105.	79.93	1.902E+4	1.145
4110.	79.9	1.903E+4	1.151
4115.	79.83	1.903E+4	1.142
4120.	79.78	1.904E+4	1.142
4125.	79.75	1.904E+4	1.14
4130.	79.73	1.905E+4	1.139
4135.	79.7	1.905E+4	1.138
4140.	79.68	1.906E+4	1.142
4145.	79.67	1.906E+4	1.135
4150.	79.66	1.907E+4	1.142
4155.	79.64	1.907E+4	1.13
4160.	79.65	1.908E+4	1.128
4165.	79.68	1.908E+4	1.125
4170.	79.79	1.909E+4	1.129
4175.	79.85	1.909E+4	1.118
4180.	79.84	1.91E+4	1.119
4185.	79.88	1.91E+4	1.121
4190.	79.89	1.911E+4	1.115
4195.	79.85	1.911E+4	1.109
4200.	79.77	1.912E+4	1.108
4205.	79.75	1.912E+4	1.102
4210.	79.75	1.913E+4	1.107
4215.	79.75	1.913E+4	1.103
4220.	79.73	1.914E+4	1.105
4225.	79.73	1.914E+4	1.106
4230.	79.74	1.915E+4	1.091

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
4235.	79.74	1.915E+4	1.094
4240.	79.76	1.916E+4	1.101
4245.	79.76	1.916E+4	1.099
4250.	79.76	1.917E+4	1.09
4255.	79.76	1.917E+4	1.091
4260.	79.78	1.918E+4	1.083
4265.	79.78	1.918E+4	1.085
4270.	79.81	1.919E+4	1.08
4275.	79.81	1.919E+4	1.078
4280.	79.81	1.92E+4	1.072
4285.	79.82	1.92E+4	1.078
4290.	79.83	1.921E+4	1.067
4295.	79.84	1.921E+4	1.065
4300.	79.84	1.922E+4	1.054
4305.	79.83	1.922E+4	1.063
4310.	79.86	1.923E+4	1.073
4315.	79.87	1.923E+4	1.053
4320.	79.87	1.924E+4	1.046
4325.	79.88	1.924E+4	1.052
4330.	79.89	1.925E+4	1.051
4335.	79.89	1.925E+4	1.049
4340.	79.9	1.926E+4	1.049
4345.	65.83	1.926E+4	1.027
4350.	55.36	1.927E+4	1.04
4355.	50.82	1.927E+4	1.041
4360.	47.91	1.928E+4	1.03
4365.	45.77	1.928E+4	1.04
4370.	44.08	1.929E+4	1.032
4375.	42.66	1.929E+4	1.025
4380.	41.47	1.93E+4	1.018
4385.	40.42	1.93E+4	1.022
4390.	39.49	1.931E+4	1.02
4395.	38.67	1.931E+4	1.015
4400.	37.91	1.932E+4	1.014
4405.	37.22	1.932E+4	1.012
4410.	36.59	1.933E+4	1.009
4415.	35.99	1.933E+4	1.005
4420.	35.43	1.934E+4	1.009
4425.	34.92	1.934E+4	1.001
4430.	34.44	1.935E+4	0.998
4435.	33.98	1.935E+4	1.002
4440.	33.53	1.936E+4	0.996
4445.	33.13	1.936E+4	1.005
4450.	32.73	1.937E+4	0.986
4455.	32.34	1.937E+4	0.991
4460.	31.99	1.938E+4	0.988
4465.	31.64	1.938E+4	0.975
4470.	31.31	1.939E+4	0.985
4475.	30.98	1.939E+4	0.978
4480.	30.68	1.94E+4	0.978
4485.	30.39	1.94E+4	0.969
4490.	30.11	1.941E+4	0.969
4495.	29.82	1.941E+4	0.965

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
4500.	29.55	1.942E+4	0.953
4505.	29.29	1.942E+4	0.957
4510.	29.04	1.943E+4	0.954
4515.	28.79	1.943E+4	0.957
4520.	28.56	1.944E+4	0.948
4525.	28.32	1.944E+4	0.947
4530.	28.1	1.945E+4	0.946
4535.	27.88	1.945E+4	0.944
4540.	27.66	1.946E+4	0.936
4545.	27.45	1.946E+4	0.926
4550.	27.25	1.947E+4	0.923
4555.	27.06	1.947E+4	0.925
4560.	26.86	1.948E+4	0.921
4565.	26.67	1.948E+4	0.926
4570.	26.48	1.949E+4	0.917
4575.	26.3	1.949E+4	0.919
4580.	26.13	1.95E+4	0.91
4585.	25.96	1.95E+4	0.914
4590.	25.78	1.951E+4	0.914
4595.	25.63	1.951E+4	0.901
4600.	25.45	1.952E+4	0.899
4605.	25.29	1.952E+4	0.891
4610.	25.13	1.953E+4	0.9
4615.	24.98	1.953E+4	0.89
4620.	24.84	1.954E+4	0.895
4625.	24.69	1.954E+4	0.894
4630.	24.54	1.955E+4	0.889
4635.	24.39	1.955E+4	0.888
4640.	24.26	1.956E+4	0.88
4645.	24.1	1.956E+4	0.882
4650.	23.98	1.957E+4	0.886
4655.	23.85	1.957E+4	0.875
4660.	23.72	1.958E+4	0.881
4665.	23.59	1.958E+4	0.866
4670.	23.45	1.959E+4	0.875
4675.	23.34	1.959E+4	0.868
4680.	23.21	1.96E+4	0.867
4685.	23.08	1.96E+4	0.872
4690.	22.97	1.961E+4	0.863
4695.	22.85	1.961E+4	0.864
4700.	22.73	1.962E+4	0.85
4705.	22.61	1.962E+4	0.859
4710.	22.51	1.963E+4	0.857
4715.	22.39	1.963E+4	0.847
4720.	22.28	1.964E+4	0.846
4725.	22.18	1.964E+4	0.837
4730.	22.05	1.965E+4	0.828
4735.	21.96	1.965E+4	0.844
4740.	21.86	1.966E+4	0.831
4745.	21.75	1.966E+4	0.834
4750.	21.64	1.967E+4	0.835
4755.	21.55	1.967E+4	0.834
4760.	21.44	1.968E+4	0.824

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
4765.	21.34	1.968E+4	0.83
4770.	21.25	1.969E+4	0.823
4775.	21.14	1.969E+4	0.829
4780.	21.05	1.97E+4	0.821
4785.	20.97	1.97E+4	0.824
4790.	20.87	1.971E+4	0.825
4795.	20.78	1.971E+4	0.82
4800.	20.67	1.972E+4	0.822
4805.	20.61	1.972E+4	0.811
4810.	20.5	1.973E+4	0.805
4815.	20.42	1.973E+4	0.807
4820.	20.33	1.974E+4	0.822
4825.	20.24	1.974E+4	0.807
4830.	20.16	1.975E+4	0.796
4835.	20.07	1.975E+4	0.791
4840.	19.99	1.976E+4	0.801
4845.	19.9	1.976E+4	0.795
4850.	19.82	1.977E+4	0.781
4855.	19.75	1.977E+4	0.787
4860.	19.66	1.978E+4	0.785
4865.	19.58	1.978E+4	0.789
4870.	19.5	1.979E+4	0.777
4875.	19.42	1.979E+4	0.778
4880.	19.35	1.98E+4	0.779
4885.	19.27	1.98E+4	0.765
4890.	19.19	1.981E+4	0.77
4895.	19.13	1.981E+4	0.756
4900.	19.05	1.982E+4	0.754
4905.	18.97	1.982E+4	0.745
4910.	18.9	1.983E+4	0.756
4915.	18.82	1.983E+4	0.739
4920.	18.75	1.984E+4	0.739
4925.	18.68	1.984E+4	0.756
4930.	18.61	1.985E+4	0.742
4935.	18.55	1.985E+4	0.753
4940.	18.46	1.986E+4	0.751
4945.	18.4	1.986E+4	0.741
4950.	18.34	1.987E+4	0.757
4955.	18.27	1.987E+4	0.741
4960.	18.2	1.988E+4	0.747
4965.	18.14	1.988E+4	0.732
4970.	18.07	1.989E+4	0.752
4975.	18.	1.989E+4	0.745
4980.	17.94	1.99E+4	0.735
4985.	17.89	1.99E+4	0.729
4990.	17.81	1.991E+4	0.724
4995.	17.75	1.991E+4	0.74
5000.	17.69	1.992E+4	0.732
5005.	17.63	1.992E+4	0.722
5010.	17.56	1.993E+4	0.738
5015.	17.51	1.993E+4	0.731
5020.	17.45	1.994E+4	0.743
5025.	17.38	1.994E+4	0.731

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
5030.	17.32	1.995E+4	0.725
5035.	17.26	1.995E+4	0.729
5040.	17.21	1.996E+4	0.738
5045.	17.15	1.996E+4	0.708
5050.	17.09	1.997E+4	0.7
5055.	17.02	1.997E+4	0.741
5060.	16.97	1.998E+4	0.709
5065.	16.92	1.998E+4	0.725
5070.	16.86	1.999E+4	0.717
5075.	16.81	1.999E+4	0.728
5080.	16.75	2.0E+4	0.728
5085.	16.69	2.0E+4	0.713
5090.	16.64	2.001E+4	0.727
5095.	16.59	2.001E+4	0.72
5100.	16.53	2.002E+4	0.718
5105.	16.48	2.002E+4	0.706
5110.	16.43	2.003E+4	0.706
5115.	16.38	2.003E+4	0.714
5120.	16.32	2.004E+4	0.716
5125.	16.27	2.004E+4	0.701
5130.	16.21	2.005E+4	0.709
5135.	16.17	2.005E+4	0.698
5140.	16.11	2.006E+4	0.694
5145.	16.06	2.006E+4	0.692
5150.	16.02	2.007E+4	0.689
5155.	15.97	2.007E+4	0.667
5160.	15.92	2.008E+4	0.688
5165.	15.87	2.008E+4	0.682
5170.	15.82	2.009E+4	0.682
5175.	15.78	2.009E+4	0.675
5180.	15.74	2.01E+4	0.677
5185.	15.69	2.01E+4	0.668
5190.	15.64	2.011E+4	0.66
5195.	15.59	2.011E+4	0.658
5200.	15.54	2.012E+4	0.663
5205.	15.5	2.012E+4	0.672
5210.	15.45	2.013E+4	0.67
5215.	15.41	2.013E+4	0.662
5220.	15.37	2.014E+4	0.658
5225.	15.33	2.014E+4	0.651
5230.	15.28	2.015E+4	0.661
5235.	15.24	2.015E+4	0.65
5240.	15.2	2.016E+4	0.645
5245.	15.15	2.016E+4	0.65
5250.	15.11	2.017E+4	0.653
5255.	15.07	2.017E+4	0.663
5260.	15.01	2.018E+4	0.649
5265.	14.98	2.018E+4	0.664
5270.	14.94	2.019E+4	0.656
5275.	14.89	2.019E+4	0.64
5280.	14.85	2.02E+4	0.649
5285.	14.81	2.02E+4	0.64
5290.	14.76	2.021E+4	0.643

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
5295.	14.73	2.021E+4	0.643
5300.	14.69	2.022E+4	0.634
5305.	14.65	2.022E+4	0.648
5310.	14.6	2.023E+4	0.639
5315.	14.57	2.023E+4	0.64
5320.	14.54	2.024E+4	0.627
5325.	14.49	2.024E+4	0.628
5330.	14.45	2.025E+4	0.63
5335.	14.41	2.025E+4	0.624
5340.	14.38	2.026E+4	0.622
5345.	14.34	2.026E+4	0.618
5350.	14.3	2.027E+4	0.618
5355.	14.26	2.027E+4	0.621
5360.	14.24	2.028E+4	0.612
5365.	14.2	2.028E+4	0.609
5370.	14.15	2.029E+4	0.607
5375.	14.12	2.029E+4	0.608
5380.	14.1	2.03E+4	0.606
5385.	14.06	2.03E+4	0.609
5390.	14.01	2.031E+4	0.601
5395.	13.98	2.031E+4	0.608
5400.	13.94	2.032E+4	0.612
5405.	13.92	2.032E+4	0.609
5410.	13.87	2.033E+4	0.609
5415.	13.84	2.033E+4	0.605
5420.	13.8	2.034E+4	0.603
5425.	13.78	2.034E+4	0.607
5430.	13.74	2.035E+4	0.604
5435.	13.71	2.035E+4	0.605
5440.	13.68	2.036E+4	0.593
5445.	13.64	2.036E+4	0.603
5450.	13.61	2.037E+4	0.596
5455.	13.57	2.037E+4	0.606
5460.	13.55	2.038E+4	0.592
5465.	13.51	2.038E+4	0.601
5470.	13.47	2.039E+4	0.597
5475.	13.44	2.039E+4	0.585
5480.	13.41	2.04E+4	0.593
5485.	13.37	2.04E+4	0.588
5490.	13.34	2.041E+4	0.589
5495.	13.32	2.041E+4	0.583
5500.	13.29	2.042E+4	0.578
5505.	13.26	2.042E+4	0.585
5510.	13.23	2.043E+4	0.584
5515.	13.21	2.043E+4	0.582
5520.	13.18	2.044E+4	0.577
5525.	13.15	2.044E+4	0.585
5530.	13.11	2.045E+4	0.592
5535.	13.07	2.045E+4	0.577
5540.	13.04	2.046E+4	0.58
5545.	13.03	2.046E+4	0.574
5550.	12.99	2.047E+4	0.57
5555.	12.97	2.047E+4	0.571

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
5560.	12.93	2.048E+4	0.584
5565.	12.9	2.048E+4	0.584
5570.	12.87	2.049E+4	0.569
5575.	12.84	2.049E+4	0.58
5580.	12.82	2.05E+4	0.574
5585.	12.79	2.05E+4	0.573
5590.	12.76	2.051E+4	0.575
5595.	12.74	2.051E+4	0.581
5600.	12.7	2.052E+4	0.567
5605.	12.68	2.052E+4	0.573
5610.	12.65	2.053E+4	0.575
5615.	12.62	2.053E+4	0.577
5620.	12.59	2.054E+4	0.575
5625.	12.57	2.054E+4	0.576
5630.	12.55	2.055E+4	0.58
5635.	12.52	2.055E+4	0.568
5640.	12.48	2.056E+4	0.58
5645.	12.46	2.056E+4	0.574
5650.	12.43	2.057E+4	0.571
5655.	12.42	2.057E+4	0.565
5660.	12.38	2.058E+4	0.563
5665.	12.35	2.058E+4	0.567
5670.	12.32	2.059E+4	0.561
5675.	12.3	2.059E+4	0.564
5680.	12.27	2.06E+4	0.56
5685.	12.26	2.06E+4	0.56
5690.	12.23	2.061E+4	0.556
5695.	12.2	2.061E+4	0.565
5700.	12.18	2.062E+4	0.561
5705.	12.14	2.062E+4	0.559
5710.	12.11	2.063E+4	0.558
5715.	12.09	2.063E+4	0.566
5720.	12.07	2.064E+4	0.556
5725.	12.04	2.064E+4	0.547
5730.	12.02	2.065E+4	0.551
5735.	11.99	2.065E+4	0.548
5740.	11.97	2.066E+4	0.549
5745.	11.94	2.066E+4	0.543
5750.	11.92	2.067E+4	0.543
5755.	11.89	2.067E+4	0.537
5760.	11.87	2.068E+4	0.543
5765.	11.84	2.068E+4	0.546
5770.	11.81	2.069E+4	0.541
5775.	11.79	2.069E+4	0.54
5780.	11.77	2.07E+4	0.536
5785.	11.76	2.07E+4	0.534
5790.	11.73	2.071E+4	0.534
5795.	11.69	2.071E+4	0.533
5800.	11.66	2.072E+4	0.525
5805.	11.65	2.072E+4	0.526
5810.	11.63	2.073E+4	0.532
5815.	11.6	2.073E+4	0.525
5820.	11.57	2.074E+4	0.518

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
5825.	11.55	2.074E+4	0.532
5830.	11.54	2.075E+4	0.521
5835.	11.51	2.075E+4	0.518
5840.	11.49	2.076E+4	0.518
5845.	11.46	2.076E+4	0.513
5850.	11.44	2.077E+4	0.511
5855.	11.43	2.077E+4	0.513
5860.	11.39	2.078E+4	0.513
5865.	11.37	2.078E+4	0.515
5870.	11.34	2.079E+4	0.51
5875.	11.32	2.079E+4	0.513
5880.	11.31	2.08E+4	0.502
5885.	11.28	2.08E+4	0.506
5890.	11.25	2.081E+4	0.508
5895.	11.23	2.081E+4	0.498
5900.	11.21	2.082E+4	0.5
5905.	11.19	2.082E+4	0.509
5910.	11.17	2.083E+4	0.507
5915.	11.15	2.083E+4	0.504
5920.	11.13	2.084E+4	0.49
5925.	11.1	2.084E+4	0.493
5930.	11.08	2.085E+4	0.49
5935.	11.05	2.085E+4	0.497
5940.	11.04	2.086E+4	0.494
5945.	11.01	2.086E+4	0.498
5950.	10.98	2.087E+4	0.498
5955.	10.97	2.087E+4	0.493
5960.	10.95	2.088E+4	0.493
5965.	10.93	2.088E+4	0.479
5970.	10.92	2.089E+4	0.489
5975.	10.89	2.089E+4	0.487
5980.	10.87	2.09E+4	0.485
5985.	10.85	2.09E+4	0.48
5990.	10.82	2.091E+4	0.475
5995.	10.81	2.091E+4	0.482
6000.	10.79	2.092E+4	0.484
6005.	10.77	2.092E+4	0.488
6010.	10.74	2.093E+4	0.485
6015.	10.73	2.093E+4	0.484
6020.	10.71	2.094E+4	0.476
6025.	10.69	2.094E+4	0.486
6030.	10.67	2.095E+4	0.476
6035.	10.65	2.095E+4	0.482
6040.	10.63	2.096E+4	0.473
6045.	10.61	2.096E+4	0.49
6050.	10.6	2.097E+4	0.479
6055.	10.58	2.097E+4	0.477
6060.	10.55	2.098E+4	0.486
6065.	10.54	2.098E+4	0.481
6070.	10.52	2.099E+4	0.479
6075.	10.51	2.099E+4	0.485
6080.	10.48	2.1E+4	0.477
6085.	10.46	2.1E+4	0.503

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
6090.	10.44	2.101E+4	0.476
6095.	10.43	2.101E+4	0.483
6100.	10.42	2.102E+4	0.477
6105.	10.39	2.102E+4	0.482
6110.	10.37	2.103E+4	0.474
6115.	10.34	2.103E+4	0.479
6120.	10.34	2.104E+4	0.471
6125.	10.32	2.104E+4	0.472
6130.	10.3	2.105E+4	0.484
6135.	10.28	2.105E+4	0.481
6140.	10.26	2.106E+4	0.475
6145.	10.24	2.106E+4	0.486
6150.	10.22	2.107E+4	0.478
6155.	10.2	2.107E+4	0.465
6160.	10.18	2.108E+4	0.471
6165.	10.16	2.108E+4	0.471
6170.	10.14	2.109E+4	0.479
6175.	10.13	2.109E+4	0.478
6180.	10.1	2.11E+4	0.471
6185.	10.09	2.11E+4	0.469
6190.	10.07	2.111E+4	0.478
6195.	10.06	2.111E+4	0.478
6200.	10.03	2.112E+4	0.489
6205.	10.02	2.112E+4	0.484
6210.	10.	2.113E+4	0.473
6215.	9.986	2.113E+4	0.478
6220.	9.96	2.114E+4	0.477
6225.	9.937	2.114E+4	0.474
6230.	9.919	2.115E+4	0.474
6235.	9.904	2.115E+4	0.468
6240.	9.889	2.116E+4	0.473
6245.	9.861	2.116E+4	0.472
6250.	9.852	2.117E+4	0.474
6255.	9.84	2.117E+4	0.463
6260.	9.811	2.118E+4	0.467
6265.	9.804	2.118E+4	0.477
6270.	9.782	2.119E+4	0.486
6275.	9.759	2.119E+4	0.484
6280.	9.74	2.12E+4	0.479
6285.	9.726	2.12E+4	0.485
6290.	9.712	2.121E+4	0.483
6295.	9.685	2.121E+4	0.474
6300.	9.676	2.122E+4	0.49
6305.	9.655	2.122E+4	0.491
6310.	9.635	2.123E+4	0.48
6315.	9.614	2.123E+4	0.486
6320.	9.607	2.124E+4	0.479
6325.	9.582	2.124E+4	0.49
6330.	9.565	2.125E+4	0.496
6335.	9.55	2.125E+4	0.472
6340.	9.521	2.126E+4	0.493
6345.	9.508	2.126E+4	0.495
6350.	9.495	2.127E+4	0.51

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
6355.	9.467	2.127E+4	0.502
6360.	9.462	2.128E+4	0.505
6365.	9.435	2.128E+4	0.52
6370.	9.427	2.129E+4	0.51
6375.	9.412	2.129E+4	0.509
6380.	9.384	2.13E+4	0.517
6385.	9.371	2.13E+4	0.528
6390.	9.352	2.131E+4	0.528
6395.	9.343	2.131E+4	0.525
6400.	9.323	2.132E+4	0.524
6405.	9.3	2.132E+4	0.532
6410.	9.295	2.133E+4	0.541
6415.	9.268	2.133E+4	0.543
6420.	9.242	2.134E+4	0.548
6425.	9.235	2.134E+4	0.544
6430.	9.211	2.135E+4	0.553
6435.	9.201	2.135E+4	0.542
6440.	9.18	2.136E+4	0.553
6445.	9.161	2.136E+4	0.55
6450.	9.148	2.137E+4	0.547
6455.	9.13	2.137E+4	0.566
6460.	9.107	2.138E+4	0.564
6465.	9.094	2.138E+4	0.57
6470.	9.087	2.139E+4	0.585
6475.	9.061	2.139E+4	0.572
6480.	9.053	2.14E+4	0.573
6485.	9.036	2.14E+4	0.575
6490.	9.014	2.141E+4	0.587
6495.	8.998	2.141E+4	0.576
6500.	8.983	2.142E+4	0.595
6505.	8.963	2.142E+4	0.6
6510.	8.946	2.143E+4	0.608
6515.	8.937	2.143E+4	0.602
6520.	8.916	2.144E+4	0.601
6525.	8.903	2.144E+4	0.603
6530.	8.879	2.145E+4	0.609
6535.	8.869	2.145E+4	0.604
6540.	8.847	2.146E+4	0.615
6545.	8.838	2.146E+4	0.616
6550.	8.82	2.147E+4	0.625
6555.	8.801	2.147E+4	0.623
6560.	8.784	2.148E+4	0.627
6565.	8.773	2.148E+4	0.623
6570.	8.748	2.149E+4	0.632
6575.	8.729	2.149E+4	0.619
6580.	8.728	2.15E+4	0.624
6585.	8.718	2.15E+4	0.621
6590.	8.708	2.151E+4	0.62
6595.	8.679	2.151E+4	0.634
6600.	8.662	2.152E+4	0.633
6605.	8.641	2.152E+4	0.634
6610.	8.633	2.153E+4	0.637
6615.	8.618	2.153E+4	0.634

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
6620.	8.602	2.154E+4	0.635
6625.	8.587	2.154E+4	0.643
6630.	8.574	2.155E+4	0.64
6635.	8.562	2.155E+4	0.643
6640.	8.544	2.156E+4	0.646
6645.	8.54	2.156E+4	0.646
6650.	8.527	2.157E+4	0.64
6655.	8.506	2.157E+4	0.651
6660.	8.499	2.158E+4	0.648
6665.	8.486	2.158E+4	0.649
6670.	8.471	2.159E+4	0.651
6675.	8.456	2.159E+4	0.646
6680.	8.431	2.16E+4	0.646
6685.	8.434	2.16E+4	0.656
6690.	8.421	2.161E+4	0.656
6695.	8.406	2.161E+4	0.652
6700.	8.383	2.162E+4	0.649
6705.	8.382	2.162E+4	0.667
6710.	8.357	2.163E+4	0.648
6715.	8.354	2.163E+4	0.662
6720.	8.328	2.164E+4	0.66
6725.	8.322	2.164E+4	0.655
6730.	8.312	2.165E+4	0.657
6735.	8.303	2.165E+4	0.649
6740.	8.29	2.166E+4	0.669
6745.	8.274	2.166E+4	0.66
6750.	8.251	2.167E+4	0.669
6755.	8.242	2.167E+4	0.665
6760.	8.235	2.168E+4	0.666
6765.	8.221	2.168E+4	0.667
6770.	8.216	2.169E+4	0.676
6775.	8.202	2.169E+4	0.66
6780.	8.188	2.17E+4	0.678
6785.	8.187	2.17E+4	0.668
6790.	8.166	2.171E+4	0.663
6795.	8.152	2.171E+4	0.675
6800.	8.145	2.172E+4	0.68
6805.	8.119	2.172E+4	0.671
6810.	8.117	2.173E+4	0.675
6815.	8.109	2.173E+4	0.668
6820.	8.09	2.174E+4	0.666
6825.	8.084	2.174E+4	0.673
6830.	8.068	2.175E+4	0.67
6835.	8.061	2.175E+4	0.674
6840.	8.062	2.176E+4	0.673
6845.	8.044	2.176E+4	0.666
6850.	8.028	2.177E+4	0.668
6855.	8.026	2.177E+4	0.673
6860.	8.018	2.178E+4	0.661
6865.	8.003	2.178E+4	0.683
6870.	7.988	2.179E+4	0.668
6875.	7.982	2.179E+4	0.683
6880.	7.968	2.18E+4	0.668

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
6885.	7.955	2.18E+4	0.679
6890.	7.951	2.181E+4	0.679
6895.	7.936	2.181E+4	0.668
6900.	7.916	2.182E+4	0.674
6905.	7.912	2.182E+4	0.683
6910.	7.897	2.183E+4	0.683
6915.	7.887	2.183E+4	0.675
6920.	7.88	2.184E+4	0.68
6925.	7.866	2.184E+4	0.683
6930.	7.862	2.185E+4	0.683
6935.	7.843	2.185E+4	0.682
6940.	7.834	2.186E+4	0.671
6945.	7.822	2.186E+4	0.678
6950.	7.806	2.187E+4	0.678
6955.	7.788	2.187E+4	0.678
6960.	7.792	2.188E+4	0.672
6965.	7.773	2.188E+4	0.689
6970.	7.764	2.189E+4	0.684
6975.	7.749	2.189E+4	0.682
6980.	7.736	2.19E+4	0.678
6985.	7.728	2.19E+4	0.67
6990.	7.714	2.191E+4	0.678
6995.	7.705	2.191E+4	0.669
7000.	7.689	2.192E+4	0.678
7005.	7.678	2.192E+4	0.661
7010.	7.673	2.193E+4	0.671
7015.	7.654	2.193E+4	0.675
7020.	7.651	2.194E+4	0.678
7025.	7.636	2.194E+4	0.688
7030.	7.613	2.195E+4	0.685
7035.	7.605	2.195E+4	0.675
7040.	7.604	2.196E+4	0.672
7045.	7.595	2.196E+4	0.685
7050.	7.566	2.197E+4	0.67
7055.	7.558	2.197E+4	0.681
7060.	7.55	2.198E+4	0.681
7065.	7.532	2.198E+4	0.682
7070.	7.529	2.199E+4	0.675
7075.	7.512	2.199E+4	0.674
7080.	7.487	2.2E+4	0.676
7085.	7.487	2.2E+4	0.669
7090.	7.466	2.201E+4	0.677
7095.	7.456	2.201E+4	0.681
7100.	7.444	2.202E+4	0.672
7105.	7.439	2.202E+4	0.657
7110.	7.421	2.203E+4	0.671
7115.	7.409	2.203E+4	0.657
7120.	7.397	2.204E+4	0.669
7125.	7.386	2.204E+4	0.661
7130.	7.375	2.205E+4	0.664
7135.	7.353	2.205E+4	0.671
7140.	7.352	2.206E+4	0.656
7145.	7.335	2.206E+4	0.659

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
7150.	7.326	2.207E+4	0.66
7155.	7.304	2.207E+4	0.663
7160.	7.298	2.208E+4	0.661
7165.	7.293	2.208E+4	0.658
7170.	7.27	2.209E+4	0.665
7175.	7.269	2.209E+4	0.647
7180.	7.249	2.21E+4	0.652
7185.	7.234	2.21E+4	0.656
7190.	7.22	2.211E+4	0.654
7195.	7.207	2.211E+4	0.652
7200.	7.206	2.212E+4	0.648
7205.	7.182	2.212E+4	0.642
7210.	7.179	2.213E+4	0.638
7215.	7.164	2.213E+4	0.641
7220.	7.144	2.214E+4	0.647
7225.	7.131	2.214E+4	0.636
7230.	7.131	2.215E+4	0.64
7235.	7.118	2.215E+4	0.639
7240.	7.108	2.216E+4	0.645
7245.	7.09	2.216E+4	0.638
7250.	7.088	2.217E+4	0.635
7255.	7.074	2.217E+4	0.64
7260.	7.069	2.218E+4	0.632
7265.	7.041	2.218E+4	0.63
7270.	7.041	2.219E+4	0.625
7275.	7.025	2.219E+4	0.629
7280.	7.011	2.22E+4	0.624
7285.	7.015	2.22E+4	0.621
7290.	6.998	2.221E+4	0.625
7295.	6.981	2.221E+4	0.622
7300.	6.97	2.222E+4	0.615
7305.	6.963	2.222E+4	0.62
7310.	6.958	2.223E+4	0.614
7315.	6.951	2.223E+4	0.616
7320.	6.933	2.224E+4	0.612
7325.	6.929	2.224E+4	0.606
7330.	6.917	2.225E+4	0.605
7335.	6.906	2.225E+4	0.606
7340.	6.904	2.226E+4	0.607
7345.	6.901	2.226E+4	0.602
7350.	6.899	2.227E+4	0.606
7355.	6.881	2.227E+4	0.601
7360.	6.87	2.228E+4	0.594
7365.	6.872	2.228E+4	0.602
7370.	6.872	2.229E+4	0.584
7375.	6.867	2.229E+4	0.588
7380.	6.857	2.23E+4	0.591
7385.	6.853	2.23E+4	0.594
7390.	6.845	2.231E+4	0.587
7395.	6.836	2.231E+4	0.589
7400.	6.831	2.232E+4	0.588
7405.	6.825	2.232E+4	0.575
7410.	6.82	2.233E+4	0.587

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
7415.	6.819	2.233E+4	0.575
7420.	6.811	2.234E+4	0.583
7425.	6.799	2.234E+4	0.575
7430.	6.81	2.235E+4	0.579
7435.	6.803	2.235E+4	0.579
7440.	6.79	2.236E+4	0.57
7445.	6.791	2.236E+4	0.572
7450.	6.776	2.237E+4	0.573
7455.	6.773	2.237E+4	0.577
7460.	6.76	2.238E+4	0.569
7465.	6.765	2.238E+4	0.583
7470.	6.754	2.239E+4	0.572
7475.	6.761	2.239E+4	0.579
7480.	6.757	2.24E+4	0.568
7485.	6.749	2.24E+4	0.562
7490.	6.739	2.241E+4	0.576
7495.	6.738	2.241E+4	0.566
7500.	6.735	2.242E+4	0.564
7505.	6.724	2.242E+4	0.578
7510.	6.725	2.243E+4	0.575
7515.	6.714	2.243E+4	0.566
7520.	6.703	2.244E+4	0.567
7525.	6.715	2.244E+4	0.57
7530.	6.703	2.245E+4	0.572
7535.	6.693	2.245E+4	0.558
7540.	6.69	2.246E+4	0.563
7545.	6.688	2.246E+4	0.554
7550.	6.678	2.247E+4	0.561
7555.	6.662	2.247E+4	0.562
7560.	6.671	2.248E+4	0.561
7565.	6.657	2.248E+4	0.556
7570.	6.653	2.249E+4	0.556
7575.	6.654	2.249E+4	0.554
7580.	6.644	2.25E+4	0.556
7585.	6.633	2.25E+4	0.549
7590.	6.635	2.251E+4	0.552
7595.	6.625	2.251E+4	0.548
7600.	6.622	2.252E+4	0.557
7605.	6.615	2.252E+4	0.559
7610.	6.605	2.253E+4	0.556
7615.	6.605	2.253E+4	0.549
7620.	6.6	2.254E+4	0.55
7625.	6.599	2.254E+4	0.549
7630.	6.587	2.255E+4	0.554
7635.	6.587	2.255E+4	0.546
7640.	6.571	2.256E+4	0.552
7645.	6.559	2.256E+4	0.548
7650.	6.566	2.257E+4	0.546
7655.	6.561	2.257E+4	0.555
7660.	6.551	2.258E+4	0.556
7665.	6.546	2.258E+4	0.542
7670.	6.531	2.259E+4	0.549
7675.	6.537	2.259E+4	0.551

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
7680.	6.516	2.26E+4	0.551
7685.	6.519	2.26E+4	0.546
7690.	6.513	2.261E+4	0.548
7695.	6.498	2.261E+4	0.562
7700.	6.49	2.262E+4	0.55
7705.	6.478	2.262E+4	0.555
7710.	6.469	2.263E+4	0.547
7715.	6.468	2.263E+4	0.556
7720.	6.468	2.264E+4	0.555
7725.	6.452	2.264E+4	0.557
7730.	6.449	2.265E+4	0.551
7735.	6.434	2.265E+4	0.561
7740.	6.431	2.266E+4	0.552
7745.	6.423	2.266E+4	0.561
7750.	6.413	2.267E+4	0.557
7755.	6.408	2.267E+4	0.553
7760.	6.394	2.268E+4	0.561
7765.	6.389	2.268E+4	0.553
7770.	6.377	2.269E+4	0.557
7775.	6.373	2.269E+4	0.563
7780.	6.364	2.27E+4	0.571
7785.	6.365	2.27E+4	0.558
7790.	6.346	2.271E+4	0.557
7795.	6.346	2.271E+4	0.558
7800.	6.333	2.272E+4	0.559
7805.	6.328	2.272E+4	0.572
7810.	6.319	2.273E+4	0.576
7815.	6.312	2.273E+4	0.573
7820.	6.307	2.274E+4	0.584
7825.	6.3	2.274E+4	0.581
7830.	6.292	2.275E+4	0.583
7835.	6.286	2.275E+4	0.574
7840.	6.268	2.276E+4	0.583
7845.	6.256	2.276E+4	0.574
7850.	6.248	2.277E+4	0.583
7855.	6.241	2.277E+4	0.576
7860.	6.234	2.278E+4	0.571
7865.	6.224	2.278E+4	0.587
7870.	6.217	2.279E+4	0.584
7875.	6.215	2.279E+4	0.589
7880.	6.194	2.28E+4	0.589
7885.	6.187	2.28E+4	0.587
7890.	6.173	2.281E+4	0.585
7895.	6.167	2.281E+4	0.581
7900.	6.163	2.282E+4	0.586
7905.	6.154	2.282E+4	0.595
7910.	6.129	2.283E+4	0.584
7915.	6.125	2.283E+4	0.596
7920.	6.116	2.284E+4	0.596
7925.	6.11	2.284E+4	0.594
7930.	6.097	2.285E+4	0.6
7935.	6.085	2.285E+4	0.597
7940.	6.084	2.286E+4	0.601

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
7945.	6.076	2.286E+4	0.595
7950.	6.06	2.287E+4	0.605
7955.	6.062	2.287E+4	0.595
7960.	6.06	2.288E+4	0.601
7965.	6.048	2.288E+4	0.596
7970.	6.026	2.289E+4	0.6
7975.	6.015	2.289E+4	0.605
7980.	6.016	2.29E+4	0.614
7985.	6.004	2.29E+4	0.601
7990.	5.981	2.291E+4	0.603
7995.	5.986	2.291E+4	0.601
8000.	5.968	2.292E+4	0.6
8005.	5.964	2.292E+4	0.605
8010.	5.96	2.293E+4	0.6
8015.	5.948	2.293E+4	0.603
8020.	5.94	2.294E+4	0.61
8025.	5.924	2.294E+4	0.602
8030.	5.92	2.295E+4	0.609
8035.	5.912	2.295E+4	0.603
8040.	5.911	2.296E+4	0.607
8045.	5.89	2.296E+4	0.611
8050.	5.886	2.297E+4	0.613
8055.	5.875	2.297E+4	0.607
8060.	5.87	2.298E+4	0.605
8065.	5.864	2.298E+4	0.611
8070.	5.853	2.299E+4	0.61
8075.	5.846	2.299E+4	0.611
8080.	5.832	2.3E+4	0.606
8085.	5.824	2.3E+4	0.606
8090.	5.816	2.301E+4	0.605
8095.	5.816	2.301E+4	0.603
8100.	5.804	2.302E+4	0.611
8105.	5.799	2.302E+4	0.603
8110.	5.789	2.303E+4	0.607
8115.	5.775	2.303E+4	0.603
8120.	5.773	2.304E+4	0.609
8125.	5.764	2.304E+4	0.617
8130.	5.752	2.305E+4	0.599
8135.	5.743	2.305E+4	0.601
8140.	5.742	2.306E+4	0.602
8145.	5.727	2.306E+4	0.604
8150.	5.724	2.307E+4	0.608
8155.	5.717	2.307E+4	0.598
8160.	5.706	2.308E+4	0.597
8165.	5.703	2.308E+4	0.598
8170.	5.688	2.309E+4	0.597
8175.	5.689	2.309E+4	0.592
8180.	5.679	2.31E+4	0.608
8185.	5.669	2.31E+4	0.595
8190.	5.654	2.311E+4	0.588
8195.	5.643	2.311E+4	0.594
8200.	5.654	2.312E+4	0.59
8205.	5.636	2.312E+4	0.588

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
8210.	5.632	2.313E+4	0.596
8215.	5.633	2.313E+4	0.592
8220.	5.623	2.314E+4	0.595
8225.	5.611	2.314E+4	0.587
8230.	5.605	2.315E+4	0.587
8235.	5.595	2.315E+4	0.594
8240.	5.583	2.316E+4	0.584
8245.	5.576	2.316E+4	0.586
8250.	5.581	2.317E+4	0.574
8255.	5.569	2.317E+4	0.588
8260.	5.553	2.318E+4	0.591
8265.	5.552	2.318E+4	0.585
8270.	5.541	2.319E+4	0.58
8275.	5.541	2.319E+4	0.578
8280.	5.528	2.32E+4	0.572
8285.	5.519	2.32E+4	0.583
8290.	5.517	2.321E+4	0.581
8295.	5.508	2.321E+4	0.578
8300.	5.518	2.322E+4	0.572
8305.	5.497	2.322E+4	0.576
8310.	5.497	2.323E+4	0.574
8315.	5.482	2.323E+4	0.567
8320.	5.468	2.324E+4	0.575
8325.	5.467	2.324E+4	0.572
8330.	5.467	2.325E+4	0.574
8335.	5.454	2.325E+4	0.58
8340.	5.453	2.326E+4	0.575
8345.	5.449	2.326E+4	0.574
8350.	5.429	2.327E+4	0.564
8355.	5.429	2.327E+4	0.571
8360.	5.417	2.328E+4	0.571
8365.	5.41	2.328E+4	0.567
8370.	5.404	2.329E+4	0.576
8375.	5.386	2.329E+4	0.568
8380.	5.387	2.33E+4	0.571
8385.	5.371	2.33E+4	0.576
8390.	5.371	2.331E+4	0.579
8395.	5.362	2.331E+4	0.567
8400.	5.351	2.332E+4	0.573
8405.	5.355	2.332E+4	0.574
8410.	5.343	2.333E+4	0.574
8415.	5.333	2.333E+4	0.567
8420.	5.334	2.334E+4	0.561
8425.	5.314	2.334E+4	0.568
8430.	5.311	2.335E+4	0.57
8435.	5.296	2.335E+4	0.566
8440.	5.304	2.336E+4	0.569
8445.	5.293	2.336E+4	0.565
8450.	5.271	2.337E+4	0.569
8455.	5.276	2.337E+4	0.573
8460.	5.258	2.338E+4	0.563
8465.	5.266	2.338E+4	0.563
8470.	5.247	2.339E+4	0.565

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
8475.	5.251	2.339E+4	0.558
8480.	5.242	2.34E+4	0.56
8485.	5.226	2.34E+4	0.553
8490.	5.221	2.341E+4	0.563
8495.	5.213	2.341E+4	0.562
8500.	5.202	2.342E+4	0.56
8505.	5.2	2.342E+4	0.555
8510.	5.199	2.343E+4	0.556
8515.	5.184	2.343E+4	0.561
8520.	5.184	2.344E+4	0.561
8525.	5.171	2.344E+4	0.559
8530.	5.163	2.345E+4	0.56
8535.	5.156	2.345E+4	0.552
8540.	5.15	2.346E+4	0.563
8545.	5.132	2.346E+4	0.554
8550.	5.126	2.347E+4	0.559
8555.	5.121	2.347E+4	0.553
8560.	5.113	2.348E+4	0.548
8565.	5.1	2.348E+4	0.551
8570.	5.098	2.349E+4	0.553
8575.	5.09	2.349E+4	0.549
8580.	5.085	2.35E+4	0.536
8585.	5.076	2.35E+4	0.543
8590.	5.07	2.351E+4	0.551
8595.	5.065	2.351E+4	0.548
8600.	5.06	2.352E+4	0.548
8605.	5.058	2.352E+4	0.543
8610.	5.043	2.353E+4	0.548
8615.	5.042	2.353E+4	0.538
8620.	5.034	2.354E+4	0.537
8625.	5.023	2.354E+4	0.535
8630.	5.027	2.355E+4	0.534
8635.	5.013	2.355E+4	0.536
8640.	5.011	2.356E+4	0.532
8645.	5.004	2.356E+4	0.523
8650.	4.995	2.357E+4	0.529
8655.	4.988	2.357E+4	0.524
8660.	4.979	2.358E+4	0.529
8665.	4.973	2.358E+4	0.532
8670.	4.962	2.359E+4	0.521
8675.	4.959	2.359E+4	0.512
8680.	4.947	2.36E+4	0.52
8685.	4.945	2.36E+4	0.521
8690.	4.927	2.361E+4	0.512
8695.	4.922	2.361E+4	0.511
8700.	4.928	2.362E+4	0.5
8705.	4.924	2.362E+4	0.5
8710.	4.904	2.363E+4	0.498
8715.	4.905	2.363E+4	0.502
8720.	4.891	2.364E+4	0.502
8725.	4.895	2.364E+4	0.503
8730.	4.882	2.365E+4	0.495
8735.	4.879	2.365E+4	0.499

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
8740.	4.862	2.366E+4	0.493
8745.	4.861	2.366E+4	0.497
8750.	4.86	2.367E+4	0.489
8755.	4.858	2.367E+4	0.487
8760.	4.844	2.368E+4	0.483
8765.	4.838	2.368E+4	0.486
8770.	4.839	2.369E+4	0.478
8775.	4.824	2.369E+4	0.481
8780.	4.825	2.37E+4	0.475
8785.	4.831	2.37E+4	0.48
8790.	4.818	2.371E+4	0.473
8795.	4.821	2.371E+4	0.472
8800.	4.812	2.372E+4	0.467
8805.	4.805	2.372E+4	0.466
8810.	4.8	2.373E+4	0.458
8815.	4.805	2.373E+4	0.472
8820.	4.793	2.374E+4	0.452
8825.	4.804	2.374E+4	0.461
8830.	4.799	2.375E+4	0.449
8835.	4.8	2.375E+4	0.455
8840.	4.802	2.376E+4	0.453
8845.	4.791	2.376E+4	0.443
8850.	4.784	2.377E+4	0.442
8855.	4.784	2.377E+4	0.446
8860.	4.772	2.378E+4	0.44
8865.	4.771	2.378E+4	0.444
8870.	4.758	2.379E+4	0.439
8875.	4.753	2.379E+4	0.437
8880.	4.746	2.38E+4	0.427
8885.	4.748	2.38E+4	0.434
8890.	4.742	2.381E+4	0.432
8895.	4.751	2.381E+4	0.431
8900.	4.74	2.382E+4	0.432
8905.	4.737	2.382E+4	0.427
8910.	4.739	2.383E+4	0.425
8915.	4.721	2.383E+4	0.428
8920.	4.722	2.384E+4	0.433
8925.	4.721	2.384E+4	0.425
8930.	4.714	2.385E+4	0.421
8935.	4.722	2.385E+4	0.421
8940.	4.712	2.386E+4	0.409
8945.	4.706	2.386E+4	0.422
8950.	4.698	2.387E+4	0.412
8955.	4.698	2.387E+4	0.415
8960.	4.698	2.388E+4	0.413
8965.	4.677	2.388E+4	0.424
8970.	4.681	2.389E+4	0.412
8975.	4.676	2.389E+4	0.406
8980.	4.68	2.39E+4	0.415
8985.	4.675	2.39E+4	0.417
8990.	4.674	2.391E+4	0.403
8995.	4.658	2.391E+4	0.406
9000.	4.662	2.392E+4	0.398

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
9005.	4.67	2.392E+4	0.41
9010.	4.659	2.393E+4	0.407
9015.	4.659	2.393E+4	0.403
9020.	4.653	2.394E+4	0.4
9025.	4.65	2.394E+4	0.398
9030.	4.65	2.395E+4	0.403
9035.	4.638	2.395E+4	0.4
9040.	4.631	2.396E+4	0.394
9045.	4.628	2.396E+4	0.395
9050.	4.623	2.397E+4	0.401
9055.	4.623	2.397E+4	0.402
9060.	4.625	2.398E+4	0.4
9065.	4.614	2.398E+4	0.402
9070.	4.61	2.399E+4	0.392
9075.	4.609	2.399E+4	0.393
9080.	4.607	2.4E+4	0.4
9085.	4.608	2.4E+4	0.397
9090.	4.596	2.401E+4	0.403
9095.	4.604	2.401E+4	0.403
9100.	4.59	2.402E+4	0.4
9105.	4.585	2.402E+4	0.394
9110.	4.583	2.403E+4	0.416
9115.	4.571	2.403E+4	0.401
9120.	4.568	2.404E+4	0.408
9125.	4.559	2.404E+4	0.417
9130.	4.555	2.405E+4	0.404
9135.	4.552	2.405E+4	0.396
9140.	4.55	2.406E+4	0.394
9145.	4.545	2.406E+4	0.408
9150.	4.544	2.407E+4	0.404
9155.	4.528	2.407E+4	0.396
9160.	4.531	2.408E+4	0.409
9165.	4.519	2.408E+4	0.4
9170.	4.527	2.409E+4	0.409
9175.	4.522	2.409E+4	0.41
9180.	4.509	2.41E+4	0.404
9185.	4.518	2.41E+4	0.405
9190.	4.504	2.411E+4	0.424
9195.	4.494	2.411E+4	0.414
9200.	4.495	2.412E+4	0.422
9205.	4.479	2.412E+4	0.419
9210.	4.478	2.413E+4	0.416
9215.	4.465	2.413E+4	0.427
9220.	4.474	2.414E+4	0.421
9225.	4.466	2.414E+4	0.432
9230.	4.465	2.415E+4	0.432
9235.	4.456	2.415E+4	0.43
9240.	4.452	2.416E+4	0.44
9245.	4.45	2.416E+4	0.442
9250.	4.431	2.417E+4	0.445
9255.	4.439	2.417E+4	0.444
9260.	4.434	2.418E+4	0.44
9265.	4.421	2.418E+4	0.453

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
9270.	4.413	2.419E+4	0.446
9275.	4.415	2.419E+4	0.453
9280.	4.413	2.42E+4	0.448
9285.	4.405	2.42E+4	0.458
9290.	4.402	2.421E+4	0.454
9295.	4.388	2.421E+4	0.462
9300.	4.384	2.422E+4	0.453
9305.	4.375	2.422E+4	0.461
9310.	4.364	2.423E+4	0.47
9315.	4.364	2.423E+4	0.465
9320.	4.358	2.424E+4	0.469
9325.	4.357	2.424E+4	0.474
9330.	4.347	2.425E+4	0.482
9335.	4.334	2.425E+4	0.478
9340.	4.338	2.426E+4	0.483
9345.	4.323	2.426E+4	0.475
9350.	4.329	2.427E+4	0.481
9355.	4.327	2.427E+4	0.481
9360.	4.314	2.428E+4	0.483
9365.	4.313	2.428E+4	0.484
9370.	4.294	2.429E+4	0.486
9375.	4.297	2.429E+4	0.488
9380.	4.288	2.43E+4	0.49
9385.	4.291	2.43E+4	0.487
9390.	4.275	2.431E+4	0.488
9395.	4.271	2.431E+4	0.494
9400.	4.272	2.432E+4	0.49
9405.	4.257	2.432E+4	0.488
9410.	4.264	2.433E+4	0.489
9415.	4.244	2.433E+4	0.491
9420.	4.253	2.434E+4	0.49
9425.	4.231	2.434E+4	0.495
9430.	4.23	2.435E+4	0.493
9435.	4.224	2.435E+4	0.48
9440.	4.214	2.436E+4	0.489
9445.	4.216	2.436E+4	0.482
9450.	4.207	2.437E+4	0.487
9455.	4.205	2.437E+4	0.475
9460.	4.194	2.438E+4	0.478
9465.	4.19	2.438E+4	0.482
9470.	4.193	2.439E+4	0.474
9475.	4.188	2.439E+4	0.471
9480.	4.176	2.44E+4	0.471
9485.	4.171	2.44E+4	0.461
9490.	4.171	2.441E+4	0.474
9495.	4.157	2.441E+4	0.463
9500.	4.154	2.442E+4	0.468
9505.	4.139	2.442E+4	0.468
9510.	4.145	2.443E+4	0.474
9515.	4.146	2.443E+4	0.474
9520.	4.124	2.444E+4	0.462
9525.	4.123	2.444E+4	0.465
9530.	4.112	2.445E+4	0.461

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
9535.	4.116	2.445E+4	0.451
9540.	4.116	2.446E+4	0.454
9545.	4.114	2.446E+4	0.454
9550.	4.095	2.447E+4	0.458
9555.	4.096	2.447E+4	0.467
9560.	4.089	2.448E+4	0.449
9565.	4.078	2.448E+4	0.457
9570.	4.084	2.449E+4	0.446
9575.	4.077	2.449E+4	0.458
9580.	4.065	2.45E+4	0.451
9585.	4.066	2.45E+4	0.452
9590.	4.064	2.451E+4	0.451
9595.	4.06	2.451E+4	0.441
9600.	4.049	2.452E+4	0.445
9605.	4.047	2.452E+4	0.439
9610.	4.045	2.453E+4	0.443
9615.	4.034	2.453E+4	0.448
9620.	4.039	2.454E+4	0.434
9625.	4.028	2.454E+4	0.435
9630.	4.03	2.455E+4	0.451
9635.	4.03	2.455E+4	0.436
9640.	4.028	2.456E+4	0.432
9645.	4.031	2.456E+4	0.439
9650.	4.018	2.457E+4	0.443
9655.	4.176	2.457E+4	0.437
9660.	4.011	2.458E+4	0.444
9665.	4.016	2.458E+4	0.434
9670.	4.065	2.459E+4	0.437
9675.	4.095	2.459E+4	0.437
9680.	4.1	2.46E+4	0.431
9685.	3.989	2.46E+4	0.427
9690.	3.994	2.461E+4	0.423
9695.	4.01	2.461E+4	0.421
9700.	4.097	2.462E+4	0.425
9705.	4.008	2.462E+4	0.422
9710.	4.	2.463E+4	0.418
9715.	4.077	2.463E+4	0.423
9720.	3.991	2.464E+4	0.429
9725.	3.991	2.464E+4	0.428
9730.	4.042	2.465E+4	0.421
9735.	4.02	2.465E+4	0.414
9740.	3.987	2.466E+4	0.415
9745.	3.974	2.466E+4	0.426
9750.	3.979	2.467E+4	0.42
9755.	3.98	2.467E+4	0.417
9760.	3.971	2.468E+4	0.417
9765.	3.952	2.468E+4	0.419
9770.	3.959	2.469E+4	0.422
9775.	3.967	2.469E+4	0.419
9780.	3.957	2.47E+4	0.421
9785.	3.951	2.47E+4	0.415
9790.	3.952	2.471E+4	0.411
9795.	3.954	2.471E+4	0.423

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
9800.	3.941	2.472E+4	0.414
9805.	3.949	2.472E+4	0.424
9810.	3.95	2.473E+4	0.416
9815.	3.943	2.473E+4	0.412
9820.	3.936	2.474E+4	0.412
9825.	3.94	2.474E+4	0.406
9830.	3.932	2.475E+4	0.42
9835.	3.932	2.475E+4	0.411
9840.	3.935	2.476E+4	0.415
9845.	3.933	2.476E+4	0.409
9850.	3.921	2.477E+4	0.408
9855.	3.925	2.477E+4	0.415
9860.	3.916	2.478E+4	0.415
9865.	3.921	2.478E+4	0.417
9870.	3.917	2.479E+4	0.407
9875.	3.926	2.479E+4	0.419
9880.	3.927	2.48E+4	0.421
9885.	3.924	2.48E+4	0.415
9890.	3.919	2.481E+4	0.417
9895.	3.918	2.481E+4	0.425
9900.	3.922	2.482E+4	0.421
9905.	3.905	2.482E+4	0.414
9910.	3.904	2.483E+4	0.417
9915.	3.906	2.483E+4	0.414
9920.	3.907	2.484E+4	0.418
9925.	3.897	2.484E+4	0.414
9930.	3.899	2.485E+4	0.417
9935.	3.89	2.485E+4	0.413
9940.	3.888	2.486E+4	0.402
9945.	3.886	2.486E+4	0.412
9950.	3.872	2.487E+4	0.409
9955.	3.871	2.487E+4	0.411
9960.	3.876	2.488E+4	0.413
9965.	3.875	2.488E+4	0.419
9970.	3.858	2.489E+4	0.409
9975.	3.865	2.489E+4	0.416
9980.	3.86	2.49E+4	0.417
9985.	3.848	2.49E+4	0.411
9990.	3.839	2.491E+4	0.403
9995.	3.839	2.491E+4	0.41
10000.	3.837	2.492E+4	0.402
1.001E+4	3.825	2.492E+4	0.412
1.001E+4	3.818	2.493E+4	0.417
1.002E+4	3.814	2.493E+4	0.415
1.002E+4	3.811	2.494E+4	0.404
1.003E+4	3.804	2.494E+4	0.411
1.003E+4	3.803	2.495E+4	0.405
1.004E+4	3.792	2.495E+4	0.415
1.004E+4	3.791	2.496E+4	0.404
1.005E+4	3.782	2.496E+4	0.405
1.005E+4	3.775	2.497E+4	0.406
1.006E+4	3.778	2.497E+4	0.404
1.006E+4	3.766	2.498E+4	0.404

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
1.007E+4	3.763	2.498E+4	0.41
1.007E+4	3.758	2.499E+4	0.406
1.008E+4	3.749	2.499E+4	0.4
1.008E+4	3.734	2.5E+4	0.402
1.009E+4	3.743	2.5E+4	0.395
1.009E+4	3.732	2.501E+4	0.4
1.01E+4	3.726	2.501E+4	0.402
1.01E+4	3.72	2.502E+4	0.4
1.011E+4	3.716	2.502E+4	0.402
1.011E+4	3.718	2.503E+4	0.396
1.012E+4	3.712	2.503E+4	0.398
1.012E+4	3.703	2.504E+4	0.382
1.013E+4	3.704	2.504E+4	0.403
1.013E+4	3.7	2.505E+4	0.393
1.014E+4	3.686	2.505E+4	0.384
1.014E+4	3.685	2.506E+4	0.39
1.015E+4	3.677	2.506E+4	0.383
1.015E+4	3.669	2.507E+4	0.388
1.016E+4	3.672	2.507E+4	0.378
1.016E+4	3.669	2.508E+4	0.382
1.017E+4	3.66	2.508E+4	0.388
1.017E+4	3.664	2.509E+4	0.382
1.018E+4	3.637	2.509E+4	0.378
1.018E+4	3.637	2.51E+4	0.369
1.019E+4	3.635	2.51E+4	0.372
1.019E+4	3.627	2.511E+4	0.368
1.02E+4	3.611	2.511E+4	0.373
1.02E+4	3.621	2.512E+4	0.366
1.021E+4	3.612	2.512E+4	0.362
1.021E+4	3.599	2.513E+4	0.361
1.022E+4	3.589	2.513E+4	0.36
1.022E+4	3.585	2.514E+4	0.358
1.023E+4	3.59	2.514E+4	0.352
1.023E+4	3.576	2.515E+4	0.35
1.024E+4	3.579	2.515E+4	0.35
1.024E+4	3.563	2.516E+4	0.347
1.025E+4	3.576	2.516E+4	0.345
1.025E+4	3.563	2.517E+4	0.34
1.026E+4	3.558	2.517E+4	0.34
1.026E+4	3.553	2.518E+4	0.337
1.027E+4	3.553	2.518E+4	0.33
1.027E+4	3.542	2.519E+4	0.343
1.028E+4	3.544	2.519E+4	0.34
1.028E+4	3.539	2.52E+4	0.334
1.029E+4	3.534	2.52E+4	0.337
1.029E+4	3.534	2.521E+4	0.323
1.03E+4	3.52	2.521E+4	0.325
1.03E+4	3.517	2.522E+4	0.324
1.031E+4	3.518	2.522E+4	0.324
1.031E+4	3.514	2.523E+4	0.321
1.032E+4	3.497	2.523E+4	0.325
1.032E+4	3.505	2.524E+4	0.316
1.033E+4	3.493	2.524E+4	0.32

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
1.033E+4	3.487	2.525E+4	0.315
1.034E+4	3.492	2.525E+4	0.309
1.034E+4	3.491	2.526E+4	0.308
1.035E+4	3.485	2.526E+4	0.316
1.035E+4	3.473	2.527E+4	0.315
1.036E+4	3.478	2.527E+4	0.308
1.036E+4	3.469	2.528E+4	0.308
1.037E+4	3.477	2.528E+4	0.311
1.037E+4	3.461	2.529E+4	0.309
1.038E+4	3.465	2.529E+4	0.314
1.038E+4	3.448	2.53E+4	0.304
1.039E+4	3.448	2.53E+4	0.303
1.039E+4	3.445	2.531E+4	0.3
1.04E+4	3.44	2.531E+4	0.298
1.04E+4	3.44	2.532E+4	0.305
1.041E+4	3.44	2.532E+4	0.296
1.041E+4	3.433	2.533E+4	0.294
1.042E+4	3.429	2.533E+4	0.295
1.042E+4	3.425	2.534E+4	0.297
1.043E+4	3.423	2.534E+4	0.292
1.043E+4	3.426	2.535E+4	0.3
1.044E+4	3.415	2.535E+4	0.296
1.044E+4	3.412	2.536E+4	0.287
1.045E+4	3.409	2.536E+4	0.298
1.045E+4	3.404	2.537E+4	0.289
1.046E+4	3.403	2.537E+4	0.288
1.046E+4	3.408	2.538E+4	0.288
1.047E+4	3.397	2.538E+4	0.296
1.047E+4	3.393	2.539E+4	0.275
1.048E+4	3.388	2.539E+4	0.282
1.048E+4	3.387	2.54E+4	0.293
1.049E+4	3.384	2.54E+4	0.29
1.049E+4	3.367	2.541E+4	0.297
1.05E+4	3.378	2.541E+4	0.282
1.05E+4	3.369	2.542E+4	0.277
1.051E+4	3.369	2.542E+4	0.291
1.051E+4	3.367	2.543E+4	0.289
1.052E+4	3.367	2.543E+4	0.286
1.052E+4	3.353	2.544E+4	0.296
1.053E+4	3.362	2.544E+4	0.283
1.053E+4	3.352	2.545E+4	0.289
1.054E+4	3.356	2.545E+4	0.278
1.054E+4	3.345	2.546E+4	0.289
1.055E+4	3.348	2.546E+4	0.291
1.055E+4	3.351	2.547E+4	0.304
1.056E+4	3.339	2.547E+4	0.289
1.056E+4	3.337	2.548E+4	0.292
1.057E+4	3.335	2.548E+4	0.293
1.057E+4	3.328	2.549E+4	0.296
1.058E+4	3.317	2.549E+4	0.296
1.058E+4	3.32	2.55E+4	0.293
1.059E+4	3.315	2.55E+4	0.287
1.059E+4	3.314	2.551E+4	0.307

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
1.06E+4	3.308	2.551E+4	0.296
1.06E+4	3.315	2.552E+4	0.3
1.061E+4	3.305	2.552E+4	0.303
1.061E+4	3.306	2.553E+4	0.303
1.062E+4	3.301	2.553E+4	0.31
1.062E+4	3.298	2.554E+4	0.3
1.063E+4	3.287	2.554E+4	0.307
1.063E+4	3.288	2.555E+4	0.301
1.064E+4	3.286	2.555E+4	0.304
1.064E+4	3.281	2.556E+4	0.306
1.065E+4	3.281	2.556E+4	0.301
1.065E+4	3.275	2.557E+4	0.291
1.066E+4	3.266	2.557E+4	0.311
1.066E+4	3.277	2.558E+4	0.296
1.067E+4	3.26	2.558E+4	0.302
1.067E+4	3.26	2.559E+4	0.298
1.068E+4	3.265	2.559E+4	0.298
1.068E+4	3.256	2.56E+4	0.308
1.069E+4	3.251	2.56E+4	0.301
1.069E+4	3.249	2.561E+4	0.299
1.07E+4	3.243	2.561E+4	0.308
1.07E+4	3.232	2.562E+4	0.309
1.071E+4	3.236	2.562E+4	0.308
1.071E+4	3.241	2.563E+4	0.319
1.072E+4	3.225	2.563E+4	0.324
1.072E+4	3.222	2.564E+4	0.31
1.073E+4	3.227	2.564E+4	0.315
1.073E+4	3.219	2.565E+4	0.32
1.074E+4	3.214	2.565E+4	0.319
1.074E+4	3.216	2.566E+4	0.323
1.075E+4	3.204	2.566E+4	0.324
1.075E+4	3.197	2.567E+4	0.329
1.076E+4	3.197	2.567E+4	0.33
1.076E+4	3.193	2.568E+4	0.326
1.077E+4	3.185	2.568E+4	0.329
1.077E+4	3.179	2.569E+4	0.332
1.078E+4	3.182	2.569E+4	0.343
1.078E+4	3.171	2.57E+4	0.343
1.079E+4	3.171	2.57E+4	0.335
1.079E+4	3.164	2.571E+4	0.33
1.08E+4	3.156	2.571E+4	0.34
1.08E+4	3.156	2.572E+4	0.345
1.081E+4	3.154	2.572E+4	0.342
1.081E+4	3.158	2.573E+4	0.342
1.082E+4	3.146	2.573E+4	0.348
1.082E+4	3.145	2.574E+4	0.351
1.083E+4	3.124	2.574E+4	0.347
1.083E+4	3.132	2.575E+4	0.364
1.084E+4	3.122	2.575E+4	0.355
1.084E+4	3.13	2.576E+4	0.345
1.085E+4	3.121	2.576E+4	0.349
1.085E+4	3.115	2.577E+4	0.363
1.086E+4	3.108	2.577E+4	0.364

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
1.086E+4	3.111	2.578E+4	0.364
1.087E+4	3.104	2.578E+4	0.355
1.087E+4	3.103	2.579E+4	0.366
1.088E+4	3.089	2.579E+4	0.357
1.088E+4	3.097	2.58E+4	0.367
1.089E+4	3.09	2.58E+4	0.363
1.089E+4	3.087	2.581E+4	0.355
1.09E+4	3.089	2.581E+4	0.357
1.09E+4	3.079	2.582E+4	0.359
1.091E+4	3.072	2.582E+4	0.367
1.091E+4	3.072	2.583E+4	0.369
1.092E+4	3.072	2.583E+4	0.361
1.092E+4	3.062	2.584E+4	0.372
1.093E+4	3.069	2.584E+4	0.36
1.093E+4	3.056	2.585E+4	0.365
1.094E+4	3.056	2.585E+4	0.36
1.094E+4	3.047	2.586E+4	0.36
1.095E+4	3.051	2.586E+4	0.368
1.095E+4	3.052	2.587E+4	0.366
1.096E+4	3.05	2.587E+4	0.366
1.096E+4	3.039	2.588E+4	0.365
1.097E+4	3.033	2.588E+4	0.371
1.097E+4	3.031	2.589E+4	0.362
1.098E+4	3.033	2.589E+4	0.367
1.098E+4	3.024	2.59E+4	0.371
1.099E+4	3.018	2.59E+4	0.362
1.099E+4	3.019	2.591E+4	0.352
1.1E+4	3.013	2.591E+4	0.36
1.1E+4	3.013	2.592E+4	0.366
1.101E+4	3.003	2.592E+4	0.365
1.101E+4	3.005	2.593E+4	0.366
1.102E+4	2.993	2.593E+4	0.365
1.102E+4	2.998	2.594E+4	0.365
1.103E+4	2.993	2.594E+4	0.359
1.103E+4	2.99	2.595E+4	0.354
1.104E+4	2.984	2.595E+4	0.358
1.104E+4	2.984	2.596E+4	0.366
1.105E+4	2.983	2.596E+4	0.358
1.105E+4	2.979	2.597E+4	0.364
1.106E+4	2.977	2.597E+4	0.36
1.106E+4	2.973	2.598E+4	0.358
1.107E+4	2.965	2.598E+4	0.348
1.107E+4	2.969	2.599E+4	0.359
1.108E+4	2.963	2.599E+4	0.357
1.108E+4	2.962	2.6E+4	0.357
1.109E+4	2.958	2.6E+4	0.357
1.109E+4	2.949	2.601E+4	0.366
1.11E+4	2.962	2.601E+4	0.358
1.11E+4	2.951	2.602E+4	0.357
1.111E+4	2.944	2.602E+4	0.356
1.111E+4	2.954	2.603E+4	0.351
1.112E+4	2.947	2.603E+4	0.362
1.112E+4	2.951	2.604E+4	0.355

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
1.113E+4	2.942	2.604E+4	0.348
1.113E+4	2.94	2.605E+4	0.341
1.114E+4	2.937	2.605E+4	0.346
1.114E+4	2.934	2.606E+4	0.344
1.115E+4	2.934	2.606E+4	0.353
1.115E+4	2.926	2.607E+4	0.352
1.116E+4	2.931	2.607E+4	0.357
1.116E+4	2.926	2.608E+4	0.35
1.117E+4	2.924	2.608E+4	0.346
1.117E+4	2.928	2.609E+4	0.354
1.118E+4	2.931	2.609E+4	0.345
1.118E+4	2.934	2.61E+4	0.347
1.119E+4	2.926	2.61E+4	0.351
1.119E+4	2.924	2.611E+4	0.343
1.12E+4	2.926	2.611E+4	0.339
1.12E+4	2.93	2.612E+4	0.351
1.121E+4	2.924	2.612E+4	0.35
1.121E+4	2.933	2.613E+4	0.34
1.122E+4	2.936	2.613E+4	0.354
1.122E+4	2.931	2.614E+4	0.34
1.123E+4	2.933	2.614E+4	0.335
1.123E+4	2.936	2.615E+4	0.345
1.124E+4	2.938	2.615E+4	0.33
1.124E+4	2.936	2.616E+4	0.346
1.125E+4	2.938	2.616E+4	0.35
1.125E+4	2.942	2.617E+4	0.348
1.126E+4	2.942	2.617E+4	0.341
1.126E+4	2.941	2.618E+4	0.351
1.127E+4	2.936	2.618E+4	0.347
1.127E+4	2.941	2.619E+4	0.343
1.128E+4	2.945	2.619E+4	0.349
1.128E+4	2.947	2.62E+4	0.343
1.129E+4	2.941	2.62E+4	0.344
1.129E+4	2.953	2.621E+4	0.344
1.13E+4	2.948	2.621E+4	0.34
1.13E+4	2.946	2.622E+4	0.344
1.131E+4	2.952	2.622E+4	0.343
1.131E+4	2.951	2.623E+4	0.351
1.132E+4	2.942	2.623E+4	0.343
1.132E+4	2.954	2.624E+4	0.342
1.133E+4	2.954	2.624E+4	0.348
1.133E+4	2.949	2.625E+4	0.346
1.134E+4	2.948	2.625E+4	0.351
1.134E+4	2.959	2.626E+4	0.349
1.135E+4	2.953	2.626E+4	0.348
1.135E+4	2.948	2.627E+4	0.344
1.136E+4	2.95	2.627E+4	0.353
1.136E+4	2.954	2.628E+4	0.345
1.137E+4	2.96	2.628E+4	0.353
1.137E+4	2.947	2.629E+4	0.335
1.138E+4	2.962	2.629E+4	0.351
1.191E+4	3.42	2.63E+4	0.343
1.191E+4	3.405	2.63E+4	0.349

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
1.192E+4	3.393	2.631E+4	0.343
1.192E+4	3.392	2.631E+4	0.348
1.193E+4	3.368	2.632E+4	0.35
1.193E+4	3.374	2.632E+4	0.346
1.194E+4	3.363	2.633E+4	0.336
1.194E+4	3.347	2.633E+4	0.339
1.195E+4	3.342	2.634E+4	0.335
1.195E+4	3.333	2.634E+4	0.347
1.196E+4	3.324	2.635E+4	0.342
1.196E+4	3.32	2.635E+4	0.346
1.197E+4	3.3	2.636E+4	0.342
1.197E+4	3.294	2.636E+4	0.347
1.198E+4	3.286	2.637E+4	0.334
1.198E+4	3.282	2.637E+4	0.345
1.199E+4	3.277	2.638E+4	0.341
1.199E+4	3.264	2.638E+4	0.338
1.2E+4	3.255	2.639E+4	0.335
1.2E+4	3.252	2.639E+4	0.334
1.201E+4	3.244	2.64E+4	0.336
1.201E+4	3.236	2.64E+4	0.33
1.202E+4	3.225	2.641E+4	0.328
1.202E+4	3.213	2.641E+4	0.332
1.203E+4	3.21	2.642E+4	0.332
1.203E+4	3.205	2.642E+4	0.336
1.204E+4	3.197	2.643E+4	0.329
1.204E+4	3.191	2.643E+4	0.341
1.205E+4	3.176	2.644E+4	0.328
1.205E+4	3.177	2.644E+4	0.326
1.206E+4	3.169	2.645E+4	0.325
1.206E+4	3.156	2.645E+4	0.323
1.207E+4	3.155	2.646E+4	0.319
1.207E+4	3.15	2.646E+4	0.317
1.208E+4	3.156	2.647E+4	0.316
1.208E+4	3.139	2.647E+4	0.319
1.209E+4	3.125	2.648E+4	0.323
1.209E+4	3.132	2.648E+4	0.314
1.21E+4	3.122	2.649E+4	0.314
1.21E+4	3.118	2.649E+4	0.316
1.211E+4	3.115	2.65E+4	0.31
1.211E+4	3.103	2.65E+4	0.318
1.212E+4	3.094	2.651E+4	0.31
1.212E+4	3.088	2.651E+4	0.313
1.213E+4	3.086	2.652E+4	0.304
1.213E+4	3.082	2.652E+4	0.3
1.214E+4	3.076	2.653E+4	0.298
1.214E+4	3.07	2.653E+4	0.295
1.215E+4	3.054	2.654E+4	0.297
1.215E+4	3.046	2.654E+4	0.296
1.216E+4	3.046	2.655E+4	0.303
1.216E+4	3.048	2.655E+4	0.293
1.217E+4	3.033	2.656E+4	0.29
1.217E+4	3.042	2.656E+4	0.283
1.218E+4	3.029	2.657E+4	0.292

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
1.218E+4	3.019	2.657E+4	0.282
1.219E+4	3.012	2.658E+4	0.28
1.219E+4	3.005	2.658E+4	0.279
1.22E+4	3.	2.659E+4	0.284
1.22E+4	3.001	2.659E+4	0.276
1.221E+4	2.994	2.66E+4	0.272
1.221E+4	2.986	2.66E+4	0.273
1.222E+4	2.974	2.661E+4	0.26
1.222E+4	2.971	2.661E+4	0.268
1.223E+4	2.961	2.662E+4	0.261
1.223E+4	2.968	2.662E+4	0.26
1.224E+4	2.959	2.663E+4	0.259
1.224E+4	2.951	2.663E+4	0.261
1.225E+4	2.953	2.664E+4	0.256
1.225E+4	2.946	2.664E+4	0.252
1.226E+4	2.932	2.665E+4	0.242
1.226E+4	2.935	2.665E+4	0.251
1.227E+4	2.925	2.666E+4	0.245
1.227E+4	2.917	2.666E+4	0.251
1.228E+4	2.923	2.667E+4	0.238
1.228E+4	2.909	2.667E+4	0.242
1.229E+4	2.902	2.668E+4	0.231
1.229E+4	2.905	2.668E+4	0.231
1.23E+4	2.894	2.669E+4	0.226
1.23E+4	2.878	2.669E+4	0.224
1.231E+4	2.88	2.67E+4	0.224
1.231E+4	2.877	2.67E+4	0.227
1.232E+4	2.872	2.671E+4	0.224
1.232E+4	2.862	2.671E+4	0.218
1.233E+4	2.859	2.672E+4	0.217
1.233E+4	2.855	2.672E+4	0.222
1.234E+4	2.856	2.673E+4	0.218
1.234E+4	2.852	2.673E+4	0.216
1.235E+4	2.845	2.674E+4	0.209
1.235E+4	2.84	2.674E+4	0.212
1.236E+4	2.829	2.675E+4	0.206
1.236E+4	2.816	2.675E+4	0.207
1.237E+4	2.824	2.676E+4	0.212
1.237E+4	2.819	2.676E+4	0.206
1.238E+4	2.808	2.677E+4	0.209
1.238E+4	2.803	2.677E+4	0.21
1.239E+4	2.802	2.678E+4	0.205
1.239E+4	2.8	2.678E+4	0.219
1.24E+4	2.792	2.679E+4	0.206
1.24E+4	2.78	2.679E+4	0.208
1.241E+4	2.773	2.68E+4	0.198
1.241E+4	2.774	2.68E+4	0.208
1.242E+4	2.77	2.681E+4	0.208
1.242E+4	2.765	2.681E+4	0.205
1.243E+4	2.763	2.682E+4	0.203
1.243E+4	2.752	2.682E+4	0.207
1.244E+4	2.752	2.683E+4	0.192
1.244E+4	2.743	2.683E+4	0.195

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
1.245E+4	2.736	2.684E+4	0.205
1.245E+4	2.74	2.684E+4	0.205
1.246E+4	2.738	2.685E+4	0.199
1.246E+4	2.735	2.685E+4	0.193
1.247E+4	2.739	2.686E+4	0.195
1.247E+4	2.724	2.686E+4	0.192
1.248E+4	2.72	2.687E+4	0.186
1.248E+4	2.724	2.687E+4	0.199
1.249E+4	2.719	2.688E+4	0.2
1.249E+4	2.713	2.688E+4	0.189
1.25E+4	2.715	2.689E+4	0.189
1.25E+4	2.705	2.689E+4	0.199
1.251E+4	2.699	2.69E+4	0.193
1.251E+4	2.7	2.69E+4	0.189
1.252E+4	2.689	2.691E+4	0.196
1.252E+4	2.691	2.691E+4	0.193
1.253E+4	2.684	2.692E+4	0.203
1.253E+4	2.699	2.692E+4	0.194
1.254E+4	2.68	2.693E+4	0.198
1.254E+4	2.685	2.693E+4	0.189
1.255E+4	2.678	2.694E+4	0.197
1.255E+4	2.673	2.694E+4	0.199
1.256E+4	2.675	2.695E+4	0.202
1.256E+4	2.666	2.695E+4	0.199
1.257E+4	2.663	2.696E+4	0.204
1.257E+4	2.66	2.696E+4	0.207
1.258E+4	2.661	2.697E+4	0.195
1.258E+4	2.652	2.697E+4	0.203
1.259E+4	2.653	2.698E+4	0.209
1.259E+4	2.647	2.698E+4	0.214
1.26E+4	2.645	2.699E+4	0.198
1.26E+4	2.647	2.699E+4	0.204
1.261E+4	2.64	2.7E+4	0.206
1.261E+4	2.644	2.7E+4	0.207
1.262E+4	2.646	2.701E+4	0.2
1.262E+4	2.64	2.701E+4	0.21
1.263E+4	2.643	2.702E+4	0.2
1.263E+4	2.65	2.702E+4	0.2
1.264E+4	2.649	2.703E+4	0.206
1.264E+4	2.644	2.703E+4	0.207
1.265E+4	2.641	2.704E+4	0.209
1.265E+4	2.648	2.704E+4	0.205
1.266E+4	2.649	2.705E+4	0.199
1.266E+4	2.653	2.705E+4	0.204
1.267E+4	2.649	2.706E+4	0.204
1.267E+4	2.655	2.706E+4	0.211
1.268E+4	2.661	2.707E+4	0.198
1.268E+4	2.651	2.707E+4	0.209
1.269E+4	2.658	2.708E+4	0.196
1.269E+4	2.659	2.708E+4	0.204
1.27E+4	2.662	2.709E+4	0.212
1.27E+4	2.664	2.709E+4	0.218
1.271E+4	2.662	2.71E+4	0.213

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
1.271E+4	2.665	2.71E+4	0.197
1.272E+4	2.67	2.711E+4	0.209
1.272E+4	2.661	2.711E+4	0.212
1.273E+4	2.67	2.712E+4	0.215
1.273E+4	2.667	2.712E+4	0.202
1.274E+4	2.672	2.713E+4	0.211
1.274E+4	2.668	2.713E+4	0.211
1.275E+4	2.686	2.714E+4	0.221
1.275E+4	2.677	2.714E+4	0.217
1.276E+4	2.671	2.715E+4	0.222
1.276E+4	2.677	2.715E+4	0.219
1.277E+4	2.679	2.716E+4	0.232
1.277E+4	2.678	2.716E+4	0.225
1.278E+4	2.684	2.717E+4	0.229
1.278E+4	2.681	2.717E+4	0.235
1.279E+4	2.686	2.718E+4	0.225
1.279E+4	2.686	2.718E+4	0.233
1.28E+4	2.673	2.719E+4	0.236
1.28E+4	2.687	2.719E+4	0.244
1.281E+4	2.686	2.72E+4	0.245
1.281E+4	2.679	2.72E+4	0.242
1.282E+4	2.68	2.721E+4	0.243
1.282E+4	2.678	2.721E+4	0.246
1.283E+4	2.683	2.722E+4	0.244
1.283E+4	2.674	2.722E+4	0.254
1.284E+4	2.686	2.723E+4	0.249
1.284E+4	2.681	2.723E+4	0.251
1.285E+4	2.678	2.724E+4	0.249
1.285E+4	2.683	2.724E+4	0.253
1.286E+4	2.684	2.725E+4	0.249
1.286E+4	2.675	2.725E+4	0.253
1.287E+4	2.676	2.726E+4	0.246
1.287E+4	2.678	2.726E+4	0.259
1.288E+4	2.679	2.727E+4	0.244
1.288E+4	2.678	2.727E+4	0.258
1.289E+4	2.68	2.728E+4	0.258
1.289E+4	2.673	2.728E+4	0.259
1.29E+4	2.679	2.729E+4	0.247
1.29E+4	2.666	2.729E+4	0.25
1.291E+4	2.673	2.73E+4	0.251
1.291E+4	2.669	2.73E+4	0.247
1.292E+4	2.669	2.731E+4	0.248
1.292E+4	2.668	2.731E+4	0.248
1.293E+4	2.672	2.732E+4	0.245
1.293E+4	2.653	2.732E+4	0.251
1.294E+4	2.658	2.733E+4	0.249
1.294E+4	2.656	2.733E+4	0.253
1.295E+4	2.654	2.734E+4	0.244
1.295E+4	2.66	2.734E+4	0.244
1.296E+4	2.649	2.735E+4	0.25
1.296E+4	2.652	2.735E+4	0.245
1.297E+4	2.657	2.736E+4	0.234
1.297E+4	2.652	2.736E+4	0.239

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
1.298E+4	2.644	2.737E+4	0.242
1.298E+4	2.643	2.737E+4	0.246
1.299E+4	2.641	2.738E+4	0.246
1.299E+4	2.632	2.738E+4	0.239
1.3E+4	2.635	2.739E+4	0.233
1.3E+4	2.637	2.739E+4	0.238
1.301E+4	2.638	2.74E+4	0.238
1.301E+4	2.629	2.74E+4	0.237
1.302E+4	2.634	2.741E+4	0.233
1.302E+4	2.623	2.741E+4	0.229
1.303E+4	2.625	2.742E+4	0.231
1.303E+4	2.616	2.742E+4	0.222
1.304E+4	2.625	2.743E+4	0.229
1.304E+4	2.619	2.743E+4	0.214
1.305E+4	2.611	2.744E+4	0.219
1.305E+4	2.618	2.744E+4	0.213
1.306E+4	2.616	2.745E+4	0.218
1.306E+4	2.604	2.745E+4	0.209
1.307E+4	2.608	2.746E+4	0.22
1.307E+4	2.596	2.746E+4	0.213
1.308E+4	2.602	2.747E+4	0.211
1.308E+4	2.602	2.747E+4	0.217
1.309E+4	2.59	2.748E+4	0.216
1.309E+4	2.584	2.748E+4	0.216
1.31E+4	2.58	2.749E+4	0.2
1.31E+4	2.579	2.749E+4	0.214
1.311E+4	2.581	2.75E+4	0.203
1.311E+4	2.564	2.75E+4	0.206
1.312E+4	2.565	2.751E+4	0.202
1.312E+4	2.554	2.751E+4	0.203
1.313E+4	2.561	2.752E+4	0.197
1.313E+4	2.557	2.752E+4	0.196
1.314E+4	2.551	2.753E+4	0.194
1.314E+4	2.554	2.753E+4	0.195
1.315E+4	2.544	2.754E+4	0.188
1.315E+4	2.534	2.754E+4	0.199
1.316E+4	2.531	2.755E+4	0.187
1.316E+4	2.524	2.755E+4	0.189
1.317E+4	2.532	2.756E+4	0.182
1.317E+4	2.524	2.756E+4	0.191
1.318E+4	2.519	2.757E+4	0.188
1.318E+4	2.514	2.757E+4	0.192
1.319E+4	2.507	2.758E+4	0.193
1.319E+4	2.511	2.758E+4	0.18
1.32E+4	2.512	2.759E+4	0.188
1.32E+4	2.499	2.759E+4	0.194
1.321E+4	2.499	2.76E+4	0.182
1.321E+4	2.5	2.76E+4	0.175
1.322E+4	2.496	2.761E+4	0.176
1.322E+4	2.492	2.761E+4	0.184
1.323E+4	2.498	2.762E+4	0.194
1.323E+4	2.491	2.762E+4	0.182
1.324E+4	2.482	2.763E+4	0.183

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
1.324E+4	2.483	2.763E+4	0.195
1.325E+4	2.481	2.764E+4	0.184
1.325E+4	2.472	2.764E+4	0.182
1.326E+4	2.465	2.765E+4	0.179
1.326E+4	2.472	2.765E+4	0.185
1.327E+4	2.465	2.766E+4	0.176
1.327E+4	2.463	2.766E+4	0.171
1.328E+4	2.458	2.767E+4	0.177
1.328E+4	2.465	2.767E+4	0.184
1.329E+4	2.457	2.768E+4	0.188
1.329E+4	2.457	2.768E+4	0.187
1.33E+4	2.446	2.769E+4	0.177
1.33E+4	2.443	2.769E+4	0.177
1.331E+4	2.448	2.77E+4	0.183
1.331E+4	2.443	2.77E+4	0.181
1.332E+4	2.434	2.771E+4	0.176
1.332E+4	2.426	2.771E+4	0.187
1.333E+4	2.422	2.772E+4	0.183
1.333E+4	2.429	2.772E+4	0.173
1.334E+4	2.44	2.773E+4	0.18
1.334E+4	2.424	2.773E+4	0.174
1.335E+4	2.419	2.774E+4	0.166
1.335E+4	2.418	2.774E+4	0.167
1.336E+4	2.413	2.775E+4	0.164
1.336E+4	2.415	2.775E+4	0.178
1.337E+4	2.412	2.776E+4	0.168
1.337E+4	2.404	2.776E+4	0.17
1.338E+4	2.411	2.777E+4	0.17
1.338E+4	2.408	2.777E+4	0.175
1.339E+4	2.406	2.778E+4	0.174
1.339E+4	2.397	2.778E+4	0.165
1.34E+4	2.395	2.779E+4	0.164
1.34E+4	2.393	2.779E+4	0.169
1.341E+4	2.396	2.78E+4	0.168
1.341E+4	2.382	2.78E+4	0.169
1.342E+4	2.386	2.781E+4	0.169
1.342E+4	2.377	2.781E+4	0.165
1.343E+4	2.378	2.782E+4	0.158
1.343E+4	2.38	2.782E+4	0.158
1.344E+4	2.363	2.783E+4	0.163
1.344E+4	2.373	2.783E+4	0.156
1.345E+4	2.379	2.784E+4	0.156
1.345E+4	2.368	2.784E+4	0.16
1.346E+4	2.37	2.785E+4	0.151
1.346E+4	2.371	2.785E+4	0.166
1.347E+4	2.366	2.786E+4	0.153
1.347E+4	2.365	2.786E+4	0.152
1.348E+4	2.363	2.787E+4	0.158
1.348E+4	2.348	2.787E+4	0.146
1.349E+4	2.347	2.788E+4	0.147
1.349E+4	2.355	2.788E+4	0.14
1.35E+4	2.35	2.789E+4	0.138
1.35E+4	2.356	2.789E+4	0.143

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
1.351E+4	2.35	2.79E+4	0.141
1.351E+4	2.342	2.79E+4	0.135
1.352E+4	2.335	2.791E+4	0.14
1.352E+4	2.339	2.791E+4	0.147
1.353E+4	2.34	2.792E+4	0.131
1.353E+4	2.329	2.792E+4	0.131
1.354E+4	2.327	2.793E+4	0.119
1.354E+4	2.328	2.793E+4	0.125
1.355E+4	2.329	2.794E+4	0.127
1.355E+4	2.324	2.794E+4	0.121
1.356E+4	2.33	2.795E+4	0.12
1.356E+4	2.326	2.795E+4	0.12
1.357E+4	2.314	2.796E+4	0.125
1.357E+4	2.329	2.796E+4	0.104
1.358E+4	2.31	2.797E+4	0.112
1.358E+4	2.322	2.797E+4	0.103
1.359E+4	2.303	2.798E+4	0.113
1.359E+4	2.305	2.798E+4	0.108
1.36E+4	2.314	2.799E+4	0.104
1.36E+4	2.301	2.799E+4	0.098
1.361E+4	2.299	2.8E+4	0.095
1.361E+4	2.296	2.8E+4	0.096
1.362E+4	2.293	2.801E+4	0.092
1.362E+4	2.296	2.801E+4	0.088
1.363E+4	2.289	2.802E+4	0.084
1.363E+4	2.294	2.802E+4	0.088
1.364E+4	2.287	2.803E+4	0.087
1.364E+4	2.277	2.803E+4	0.087
1.365E+4	2.282	2.804E+4	0.082
1.365E+4	2.278	2.804E+4	0.08
1.366E+4	2.273	2.805E+4	0.079
1.366E+4	2.273	2.805E+4	0.069
1.367E+4	2.274	2.806E+4	0.083
1.367E+4	2.276	2.806E+4	0.07
1.368E+4	2.262	2.807E+4	0.065
1.368E+4	2.254	2.807E+4	0.063
1.369E+4	2.262	2.808E+4	0.063
1.369E+4	2.255	2.808E+4	0.065
1.37E+4	2.243	2.809E+4	0.062
1.37E+4	2.252	2.809E+4	0.053
1.371E+4	2.245	2.81E+4	0.06
1.371E+4	2.245	2.81E+4	0.053
1.372E+4	2.241	2.811E+4	0.063
1.372E+4	2.248	2.811E+4	0.044
1.373E+4	2.241	2.812E+4	0.05
1.373E+4	2.23	2.812E+4	0.046
1.374E+4	2.226	2.813E+4	0.043
1.374E+4	2.226	2.813E+4	0.048
1.375E+4	2.226	2.814E+4	0.042
1.375E+4	2.224	2.814E+4	0.04
1.376E+4	2.218	2.815E+4	0.034
1.376E+4	2.215	2.815E+4	0.035
1.377E+4	2.214	2.816E+4	0.031

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
1.377E+4	2.216	2.816E+4	0.025
1.378E+4	2.213	2.817E+4	0.037
1.378E+4	2.207	2.817E+4	0.031
1.379E+4	2.207	2.818E+4	0.037
1.379E+4	2.204	2.818E+4	0.024
1.38E+4	2.198	2.819E+4	0.027
1.38E+4	2.196	2.819E+4	0.017
1.381E+4	2.196	2.82E+4	0.021
1.381E+4	2.197	2.82E+4	0.021
1.382E+4	2.191	2.821E+4	0.025
1.382E+4	2.193	2.821E+4	0.015
1.383E+4	2.185	2.822E+4	0.011
1.383E+4	2.189	2.822E+4	0.018
1.384E+4	2.18	2.823E+4	0.013
1.384E+4	2.171	2.823E+4	0.012
1.385E+4	2.177	2.824E+4	0.007
1.385E+4	2.183	2.824E+4	0.006
1.386E+4	2.184	2.825E+4	0.013
1.386E+4	2.177	2.825E+4	-0.002
1.387E+4	2.175	2.826E+4	-0.004
1.387E+4	2.171	2.826E+4	0.005
1.388E+4	2.167	2.827E+4	-0.004
1.388E+4	2.167	2.827E+4	-0.001
1.389E+4	2.161	2.828E+4	-0.002
1.389E+4	2.159	2.828E+4	-0.004
1.39E+4	2.166	2.829E+4	-0.004
1.39E+4	2.152	2.829E+4	-0.015
1.391E+4	2.156	2.83E+4	-0.006
1.391E+4	2.157	2.83E+4	-0.007
1.392E+4	2.153	2.831E+4	0.004
1.392E+4	2.156	2.831E+4	-0.01
1.393E+4	2.15	2.832E+4	-0.012
1.393E+4	2.152	2.832E+4	-0.003
1.394E+4	2.145	2.833E+4	-0.016
1.394E+4	2.146	2.833E+4	-0.003
1.395E+4	2.143	2.834E+4	-0.009
1.395E+4	2.139	2.834E+4	-0.007
1.396E+4	2.14	2.835E+4	-0.009
1.396E+4	2.131	2.835E+4	-0.009
1.397E+4	2.139	2.836E+4	-0.009
1.397E+4	2.139	2.836E+4	-0.017
1.398E+4	2.134	2.837E+4	-0.008
1.398E+4	2.137	2.837E+4	-0.006
1.399E+4	2.124	2.838E+4	-0.008
1.399E+4	2.119	2.838E+4	-0.007
1.4E+4	2.124	2.839E+4	-0.007
1.4E+4	2.137	2.839E+4	-0.003
1.401E+4	2.122	2.84E+4	0.002
1.401E+4	2.122	2.84E+4	0.002
1.402E+4	2.126	2.841E+4	0.003
1.402E+4	2.113	2.841E+4	0.002
1.403E+4	2.13	2.842E+4	0.002
1.403E+4	2.13	2.842E+4	-0.003

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
1.404E+4	2.116	2.843E+4	0.
1.404E+4	2.123	2.843E+4	-0.002
1.405E+4	2.12	2.844E+4	-0.008
1.405E+4	2.121	2.844E+4	0.002
1.406E+4	2.128	2.845E+4	-0.007
1.406E+4	2.12	2.845E+4	0.003
1.407E+4	2.121	2.846E+4	0.002
1.407E+4	2.112	2.846E+4	-0.007
1.408E+4	2.125	2.847E+4	-0.004
1.408E+4	2.128	2.847E+4	0.
1.409E+4	2.13	2.848E+4	0.011
1.409E+4	2.121	2.848E+4	-0.002
1.41E+4	2.128	2.849E+4	0.011
1.41E+4	2.13	2.849E+4	0.001
1.411E+4	2.132	2.85E+4	-0.004
1.411E+4	2.121	2.85E+4	0.007
1.412E+4	2.124	2.851E+4	0.005
1.412E+4	2.133	2.851E+4	-0.005
1.413E+4	2.134	2.852E+4	0.011
1.413E+4	2.127	2.852E+4	0.009
1.414E+4	2.135	2.853E+4	-0.001
1.414E+4	2.138	2.853E+4	0.01
1.415E+4	2.142	2.854E+4	0.001
1.415E+4	2.136	2.854E+4	0.011
1.416E+4	2.147	2.855E+4	0.005
1.416E+4	2.146	2.855E+4	0.011
1.417E+4	2.15	2.856E+4	0.01
1.417E+4	2.15	2.856E+4	0.008
1.418E+4	2.159	2.857E+4	0.012
1.418E+4	2.162	2.857E+4	0.006
1.419E+4	2.154	2.858E+4	0.01
1.419E+4	2.156	2.858E+4	0.02
1.42E+4	2.161	2.859E+4	0.014
1.42E+4	2.155	2.859E+4	0.026
1.421E+4	2.171	2.86E+4	0.023
1.421E+4	2.161	2.86E+4	0.029
1.422E+4	2.164	2.861E+4	0.026
1.422E+4	2.161	2.861E+4	0.025
1.423E+4	2.166	2.862E+4	0.023
1.423E+4	2.174	2.862E+4	0.024
1.424E+4	2.182	2.863E+4	0.026
1.424E+4	2.159	2.863E+4	0.029
1.425E+4	2.165	2.864E+4	0.043
1.425E+4	2.162	2.864E+4	0.032
1.426E+4	2.169	2.865E+4	0.04
1.426E+4	2.163	2.865E+4	0.032
1.427E+4	2.166	2.866E+4	0.031
1.427E+4	2.162	2.866E+4	0.044
1.428E+4	2.166	2.867E+4	0.039
1.428E+4	2.166	2.867E+4	0.034
1.429E+4	2.163	2.868E+4	0.045
1.429E+4	2.167	2.868E+4	0.045
1.43E+4	2.165	2.869E+4	0.035

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
1.43E+4	2.168	2.869E+4	0.035
1.431E+4	2.153	2.87E+4	0.036
1.431E+4	2.154	2.87E+4	0.049
1.432E+4	2.168	2.871E+4	0.051
1.432E+4	2.159	2.871E+4	0.044
1.433E+4	2.167	2.872E+4	0.043
1.433E+4	2.154	2.872E+4	0.045
1.434E+4	2.167	2.873E+4	0.043
1.434E+4	2.149	2.873E+4	0.046
1.435E+4	2.159	2.874E+4	0.05
1.435E+4	2.158	2.874E+4	0.042
1.436E+4	2.155	2.875E+4	0.04
1.436E+4	2.154	2.875E+4	0.049
1.437E+4	2.155	2.876E+4	0.037
1.437E+4	2.15	2.876E+4	0.045
1.438E+4	2.163	2.877E+4	0.038
1.438E+4	2.146	2.877E+4	0.042
1.439E+4	2.15	2.878E+4	0.034
1.439E+4	2.149	2.878E+4	0.033
1.44E+4	2.144	2.879E+4	0.033
1.44E+4	2.138	2.879E+4	0.053
1.441E+4	2.135	2.88E+4	0.044
1.441E+4	2.134	2.88E+4	0.039
1.442E+4	2.138	2.881E+4	0.037
1.442E+4	2.129	2.881E+4	0.043
1.443E+4	2.13	2.882E+4	0.032
1.443E+4	2.136	2.882E+4	0.032
1.444E+4	2.124	2.883E+4	0.028
1.444E+4	2.123	2.883E+4	0.04
1.445E+4	2.12	2.884E+4	0.035
1.445E+4	2.129	2.884E+4	0.02
1.446E+4	2.122	2.885E+4	0.024
1.446E+4	2.115	2.885E+4	0.022
1.447E+4	2.118	2.886E+4	0.029
1.447E+4	2.121	2.886E+4	0.032
1.448E+4	2.121	2.887E+4	0.033
1.448E+4	2.114	2.887E+4	0.023
1.449E+4	2.114	2.888E+4	0.027
1.449E+4	2.096	2.888E+4	0.032
1.45E+4	2.103	2.889E+4	0.027
1.45E+4	2.107	2.889E+4	0.015
1.451E+4	2.105	2.89E+4	0.013
1.451E+4	2.095	2.89E+4	0.021
1.452E+4	2.098	2.891E+4	0.012
1.452E+4	2.085	2.891E+4	0.022
1.453E+4	2.09	2.892E+4	0.016
1.453E+4	2.092	2.892E+4	0.018
1.454E+4	2.089	2.893E+4	0.009
1.454E+4	2.085	2.893E+4	0.02
1.455E+4	2.077	2.894E+4	0.011
1.455E+4	2.074	2.894E+4	0.013
1.456E+4	2.066	2.895E+4	0.014
1.456E+4	2.065	2.895E+4	0.016

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
1.457E+4	2.059	2.896E+4	0.012
1.457E+4	2.053	2.896E+4	0.008
1.458E+4	2.057	2.897E+4	0.021
1.458E+4	2.051	2.897E+4	0.018
1.459E+4	2.052	2.898E+4	0.013
1.459E+4	2.05	2.898E+4	0.02
1.46E+4	2.043	2.899E+4	0.019
1.46E+4	2.042	2.899E+4	0.022
1.461E+4	2.034	2.9E+4	0.017
1.461E+4	2.041	2.9E+4	0.014
1.462E+4	2.029	2.901E+4	0.027
1.462E+4	2.023	2.901E+4	0.018
1.463E+4	2.029	2.902E+4	0.021
1.463E+4	2.025	2.902E+4	0.014
1.464E+4	2.017	2.903E+4	0.017
1.464E+4	2.02	2.903E+4	0.022
1.465E+4	2.022	2.904E+4	0.016
1.465E+4	2.015	2.904E+4	0.018
1.466E+4	2.013	2.905E+4	0.014
1.466E+4	2.	2.905E+4	0.017
1.467E+4	2.01	2.906E+4	0.015
1.467E+4	1.996	2.906E+4	0.021
1.468E+4	1.996	2.907E+4	0.029
1.468E+4	2.007	2.907E+4	0.018
1.469E+4	1.994	2.908E+4	0.025
1.469E+4	1.987	2.908E+4	0.028
1.47E+4	1.988	2.909E+4	0.02
1.47E+4	1.991	2.909E+4	0.016
1.471E+4	1.983	2.91E+4	0.017
1.471E+4	1.989	2.91E+4	0.025
1.472E+4	1.985	2.911E+4	0.028
1.472E+4	1.974	2.911E+4	0.011
1.473E+4	1.969	2.912E+4	0.026
1.473E+4	1.962	2.912E+4	0.033
1.474E+4	1.97	2.913E+4	0.024
1.474E+4	1.961	2.913E+4	0.023
1.475E+4	1.977	2.914E+4	0.023
1.475E+4	1.958	2.914E+4	0.025
1.476E+4	1.959	2.915E+4	0.031
1.476E+4	1.958	2.915E+4	0.027
1.477E+4	1.955	2.916E+4	0.023
1.477E+4	1.95	2.916E+4	0.03
1.478E+4	1.942	2.917E+4	0.029
1.478E+4	1.938	2.917E+4	0.032
1.479E+4	1.937	2.918E+4	0.028
1.479E+4	1.937	2.918E+4	0.031
1.48E+4	1.93	2.919E+4	0.031
1.48E+4	1.933	2.919E+4	0.032
1.481E+4	1.93	2.92E+4	0.032
1.481E+4	1.923	2.92E+4	0.042
1.482E+4	1.912	2.921E+4	0.036
1.482E+4	1.915	2.921E+4	0.035
1.483E+4	1.92	2.922E+4	0.037

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
1.483E+4	1.921	2.922E+4	0.038
1.484E+4	1.911	2.923E+4	0.041
1.484E+4	1.914	2.923E+4	0.032
1.485E+4	1.912	2.924E+4	0.035
1.485E+4	1.904	2.924E+4	0.031
1.486E+4	1.911	2.925E+4	0.039
1.486E+4	1.903	2.925E+4	0.037
1.487E+4	1.896	2.926E+4	0.035
1.487E+4	1.886	2.926E+4	0.03
1.488E+4	1.893	2.927E+4	0.038
1.488E+4	1.892	2.927E+4	0.036
1.489E+4	1.887	2.928E+4	0.036
1.489E+4	1.885	2.928E+4	0.037
1.49E+4	1.881	2.929E+4	0.031
1.49E+4	1.885	2.929E+4	0.032
1.491E+4	1.873	2.93E+4	0.029
1.491E+4	1.868	2.93E+4	0.038
1.492E+4	1.871		

Observation Well No. 3: TH5

X Location: 5313. ft
Y Location: 0. ft

Radial distance from east pump well: 5313. ft

Fully Penetrating Well

No. of Observations: 5400

Observation Data

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
5.	0.003	1.351E+4	1.915
10.	0.012	1.351E+4	1.915
15.	0.005	1.352E+4	1.899
20.	0.009	1.352E+4	1.91
25.	0.01	1.353E+4	1.902
30.	0.016	1.353E+4	1.902
35.	0.014	1.354E+4	1.893
40.	0.01	1.354E+4	1.894
45.	0.014	1.355E+4	1.891
50.	0.015	1.355E+4	1.885
55.	0.009	1.356E+4	1.893
60.	0.004	1.356E+4	1.888
65.	-0.002	1.357E+4	1.882
70.	0.004	1.357E+4	1.881
75.	0.001	1.358E+4	1.883
80.	0.002	1.358E+4	1.884
85.	0.01	1.359E+4	1.872
90.	0.001	1.359E+4	1.868
95.	-0.003	1.36E+4	1.876
100.	0.003	1.36E+4	1.868
105.	0.007	1.361E+4	1.867

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
110.	0.007	1.361E+4	1.87
115.	0.003	1.362E+4	1.859
120.	0.004	1.362E+4	1.86
125.	0.001	1.363E+4	1.854
130.	0.002	1.363E+4	1.851
135.	0.007	1.364E+4	1.848
140.	0.017	1.364E+4	1.845
145.	0.014	1.365E+4	1.846
150.	0.018	1.365E+4	1.837
155.	0.022	1.366E+4	1.836
160.	0.037	1.366E+4	1.836
165.	0.06	1.367E+4	1.838
170.	0.079	1.367E+4	1.832
175.	0.077	1.368E+4	1.823
180.	0.069	1.368E+4	1.831
185.	0.074	1.369E+4	1.828
190.	0.073	1.369E+4	1.817
195.	0.072	1.37E+4	1.822
200.	0.086	1.37E+4	1.813
205.	0.084	1.371E+4	1.817
210.	0.091	1.371E+4	1.808
215.	0.101	1.372E+4	1.802
220.	0.107	1.372E+4	1.806
225.	0.123	1.373E+4	1.799
230.	0.132	1.373E+4	1.802
235.	0.138	1.374E+4	1.793
240.	0.153	1.374E+4	1.793
245.	0.163	1.375E+4	1.788
250.	0.163	1.375E+4	1.79
255.	0.182	1.376E+4	1.787
260.	0.194	1.376E+4	1.784
265.	0.205	1.377E+4	1.784
270.	0.213	1.377E+4	1.781
275.	0.231	1.378E+4	1.776
280.	0.242	1.378E+4	1.775
285.	0.264	1.379E+4	1.778
290.	0.28	1.379E+4	1.772
295.	0.294	1.38E+4	1.771
300.	0.304	1.38E+4	1.761
305.	0.318	1.381E+4	1.762
310.	0.335	1.381E+4	1.765
315.	0.348	1.382E+4	1.758
320.	0.363	1.382E+4	1.759
325.	0.379	1.383E+4	1.755
330.	0.398	1.383E+4	1.752
335.	0.418	1.384E+4	1.754
340.	0.424	1.384E+4	1.75
345.	0.443	1.385E+4	1.748
350.	0.465	1.385E+4	1.748
355.	0.483	1.386E+4	1.742
360.	0.493	1.386E+4	1.741
365.	0.515	1.387E+4	1.736
370.	0.548	1.387E+4	1.737

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
375.	0.559	1.388E+4	1.735
380.	0.573	1.388E+4	1.737
385.	0.593	1.389E+4	1.732
390.	0.601	1.389E+4	1.732
395.	0.636	1.39E+4	1.728
400.	0.65	1.39E+4	1.725
405.	0.667	1.391E+4	1.723
410.	0.684	1.391E+4	1.722
415.	0.698	1.392E+4	1.722
420.	0.718	1.392E+4	1.723
425.	0.732	1.393E+4	1.721
430.	0.757	1.393E+4	1.723
435.	0.766	1.394E+4	1.717
440.	0.792	1.394E+4	1.713
445.	0.807	1.395E+4	1.716
450.	0.824	1.395E+4	1.703
455.	0.849	1.396E+4	1.709
460.	0.856	1.396E+4	1.715
465.	0.88	1.397E+4	1.71
470.	0.898	1.397E+4	1.71
475.	0.917	1.398E+4	1.702
480.	0.924	1.398E+4	1.707
485.	0.953	1.399E+4	1.707
490.	0.965	1.399E+4	1.705
495.	0.991	1.4E+4	1.704
500.	1.003	1.4E+4	1.707
505.	1.024	1.401E+4	1.706
510.	1.047	1.401E+4	1.707
515.	1.069	1.402E+4	1.71
520.	1.086	1.402E+4	1.711
525.	1.102	1.403E+4	1.713
530.	1.121	1.403E+4	1.711
535.	1.142	1.404E+4	1.715
540.	1.168	1.404E+4	1.715
545.	1.178	1.405E+4	1.717
550.	1.203	1.405E+4	1.72
555.	1.217	1.406E+4	1.722
560.	1.236	1.406E+4	1.725
565.	1.26	1.407E+4	1.729
570.	1.277	1.407E+4	1.731
575.	1.295	1.408E+4	1.733
580.	1.313	1.408E+4	1.74
585.	1.335	1.409E+4	1.737
590.	1.358	1.409E+4	1.74
595.	1.377	1.41E+4	1.752
600.	1.397	1.41E+4	1.754
605.	1.417	1.411E+4	1.773
610.	1.44	1.411E+4	1.768
615.	1.45	1.412E+4	1.765
620.	1.477	1.412E+4	1.769
625.	1.492	1.413E+4	1.77
630.	1.51	1.413E+4	1.766
635.	1.539	1.414E+4	1.775

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
640.	1.558	1.414E+4	1.781
645.	1.576	1.415E+4	1.783
650.	1.595	1.415E+4	1.787
655.	1.614	1.416E+4	1.792
660.	1.638	1.416E+4	1.795
665.	1.648	1.417E+4	1.798
670.	1.667	1.417E+4	1.798
675.	1.688	1.418E+4	1.798
680.	1.71	1.418E+4	1.806
685.	1.732	1.419E+4	1.805
690.	1.745	1.419E+4	1.813
695.	1.764	1.42E+4	1.822
700.	1.793	1.42E+4	1.816
705.	1.81	1.421E+4	1.813
710.	1.831	1.421E+4	1.819
715.	1.851	1.422E+4	1.816
720.	1.866	1.422E+4	1.815
725.	1.893	1.423E+4	1.823
730.	1.904	1.423E+4	1.819
735.	1.932	1.424E+4	1.822
740.	1.948	1.424E+4	1.82
745.	1.967	1.425E+4	1.817
750.	1.987	1.425E+4	1.815
755.	2.01	1.426E+4	1.816
760.	2.029	1.426E+4	1.82
765.	2.053	1.427E+4	1.823
770.	2.063	1.427E+4	1.823
775.	2.088	1.428E+4	1.821
780.	2.108	1.428E+4	1.816
785.	2.125	1.429E+4	1.818
790.	2.149	1.429E+4	1.814
795.	2.169	1.43E+4	1.82
800.	2.183	1.43E+4	1.817
805.	2.205	1.431E+4	1.81
810.	2.227	1.431E+4	1.809
815.	2.245	1.432E+4	1.811
820.	2.257	1.432E+4	1.811
825.	2.282	1.433E+4	1.809
830.	2.298	1.433E+4	1.815
835.	2.317	1.434E+4	1.807
840.	2.345	1.434E+4	1.815
845.	2.363	1.435E+4	1.817
850.	2.384	1.435E+4	1.814
855.	2.401	1.436E+4	1.802
860.	2.423	1.436E+4	1.806
865.	2.437	1.437E+4	1.803
870.	2.457	1.437E+4	1.806
875.	2.477	1.438E+4	1.801
880.	2.499	1.438E+4	1.8
885.	2.515	1.439E+4	1.8
890.	2.534	1.439E+4	1.795
895.	2.554	1.44E+4	1.793
900.	2.574	1.44E+4	1.792

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
905.	2.594	1.441E+4	1.786
910.	2.618	1.441E+4	1.784
915.	2.634	1.442E+4	1.782
920.	2.653	1.442E+4	1.78
925.	2.673	1.443E+4	1.781
930.	2.692	1.443E+4	1.777
935.	2.714	1.444E+4	1.771
940.	2.739	1.444E+4	1.772
945.	2.76	1.445E+4	1.771
950.	2.778	1.445E+4	1.768
955.	2.793	1.446E+4	1.764
960.	2.817	1.446E+4	1.76
965.	2.83	1.447E+4	1.759
970.	2.851	1.447E+4	1.759
975.	2.868	1.448E+4	1.754
980.	2.886	1.448E+4	1.751
985.	2.905	1.449E+4	1.754
990.	2.923	1.449E+4	1.753
995.	2.95	1.45E+4	1.76
1000.	2.966	1.45E+4	1.779
1005.	2.985	1.451E+4	1.768
1010.	2.999	1.451E+4	1.776
1015.	3.023	1.452E+4	1.759
1020.	3.038	1.452E+4	1.751
1025.	3.062	1.453E+4	1.749
1030.	3.075	1.453E+4	1.743
1035.	3.095	1.454E+4	1.738
1040.	3.113	1.454E+4	1.734
1045.	3.14	1.455E+4	1.725
1050.	3.167	1.455E+4	1.726
1055.	3.184	1.456E+4	1.722
1060.	3.194	1.456E+4	1.717
1065.	3.217	1.457E+4	1.71
1070.	3.24	1.457E+4	1.708
1075.	3.255	1.458E+4	1.7
1080.	3.268	1.458E+4	1.7
1085.	3.293	1.459E+4	1.69
1090.	3.308	1.459E+4	1.693
1095.	3.319	1.46E+4	1.681
1100.	3.342	1.46E+4	1.685
1105.	3.362	1.461E+4	1.677
1110.	3.376	1.461E+4	1.678
1115.	3.398	1.462E+4	1.672
1120.	3.418	1.462E+4	1.675
1125.	3.432	1.463E+4	1.671
1130.	3.455	1.463E+4	1.667
1135.	3.474	1.464E+4	1.658
1140.	3.488	1.464E+4	1.661
1145.	3.504	1.465E+4	1.659
1150.	3.522	1.465E+4	1.655
1155.	3.543	1.466E+4	1.644
1160.	3.558	1.466E+4	1.642
1165.	3.572	1.467E+4	1.643

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
1170.	3.594	1.467E+4	1.641
1175.	3.617	1.468E+4	1.639
1180.	3.637	1.468E+4	1.633
1185.	3.649	1.469E+4	1.635
1190.	3.671	1.469E+4	1.627
1195.	3.694	1.47E+4	1.623
1200.	3.714	1.47E+4	1.617
1205.	3.723	1.471E+4	1.619
1210.	3.739	1.471E+4	1.616
1215.	3.76	1.472E+4	1.616
1220.	3.781	1.472E+4	1.61
1225.	3.797	1.473E+4	1.607
1230.	3.815	1.473E+4	1.598
1235.	3.838	1.474E+4	1.602
1240.	3.841	1.474E+4	1.602
1245.	3.868	1.475E+4	1.596
1250.	3.882	1.475E+4	1.595
1255.	3.904	1.476E+4	1.587
1260.	3.908	1.476E+4	1.591
1265.	3.94	1.477E+4	1.586
1270.	3.96	1.477E+4	1.577
1275.	3.978	1.478E+4	1.584
1280.	3.989	1.478E+4	1.575
1285.	4.004	1.479E+4	1.575
1290.	4.021	1.479E+4	1.574
1295.	4.045	1.48E+4	1.573
1300.	4.055	1.48E+4	1.568
1305.	4.067	1.481E+4	1.567
1310.	4.089	1.481E+4	1.566
1315.	4.1	1.482E+4	1.555
1320.	4.115	1.482E+4	1.555
1325.	4.134	1.483E+4	1.555
1330.	4.157	1.483E+4	1.552
1335.	4.176	1.484E+4	1.562
1340.	4.19	1.484E+4	1.551
1345.	4.204	1.485E+4	1.547
1350.	4.219	1.485E+4	1.545
1355.	4.24	1.486E+4	1.542
1360.	4.255	1.486E+4	1.536
1365.	4.272	1.487E+4	1.535
1370.	4.289	1.487E+4	1.524
1375.	4.311	1.488E+4	1.531
1380.	4.32	1.488E+4	1.528
1385.	4.34	1.489E+4	1.54
1390.	4.362	1.489E+4	1.525
1395.	4.375	1.49E+4	1.528
1400.	4.399	1.49E+4	1.516
1405.	4.412	1.491E+4	1.514
1410.	4.432	1.491E+4	1.513
1415.	4.44	1.492E+4	1.507
1420.	4.463	1.492E+4	1.504
1425.	4.479	1.493E+4	1.502
1430.	4.498	1.493E+4	1.5

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
1435.	4.52	1.494E+4	1.492
1440.	4.536	1.494E+4	1.491
1445.	4.557	1.495E+4	1.481
1450.	4.568	1.495E+4	1.483
1455.	4.587	1.496E+4	1.478
1460.	4.608	1.496E+4	1.472
1465.	4.622	1.497E+4	1.469
1470.	4.635	1.497E+4	1.468
1475.	4.653	1.498E+4	1.467
1480.	4.672	1.498E+4	1.462
1485.	4.694	1.499E+4	1.459
1490.	4.712	1.499E+4	1.461
1495.	4.73	1.5E+4	1.452
1500.	4.741	1.5E+4	1.454
1505.	4.764	1.501E+4	1.458
1510.	4.777	1.501E+4	1.452
1515.	4.8	1.502E+4	1.445
1520.	4.827	1.502E+4	1.447
1525.	4.837	1.503E+4	1.44
1530.	4.857	1.503E+4	1.444
1535.	4.876	1.504E+4	1.439
1540.	4.887	1.504E+4	1.438
1545.	4.9	1.505E+4	1.439
1550.	4.912	1.505E+4	1.432
1555.	4.932	1.506E+4	1.435
1560.	4.957	1.506E+4	1.428
1565.	4.971	1.507E+4	1.423
1570.	4.988	1.507E+4	1.424
1575.	5.001	1.508E+4	1.417
1580.	5.019	1.508E+4	1.414
1585.	5.043	1.509E+4	1.411
1590.	5.055	1.509E+4	1.404
1595.	5.075	1.51E+4	1.407
1600.	5.091	1.51E+4	1.389
1605.	5.103	1.511E+4	1.4
1610.	5.127	1.511E+4	1.395
1615.	5.141	1.512E+4	1.394
1620.	5.16	1.512E+4	1.393
1625.	5.173	1.513E+4	1.388
1630.	5.191	1.513E+4	1.389
1635.	5.212	1.514E+4	1.376
1640.	5.232	1.514E+4	1.371
1645.	5.278	1.515E+4	1.367
1650.	5.292	1.515E+4	1.364
1655.	5.302	1.516E+4	1.359
1660.	5.313	1.516E+4	1.354
1665.	5.335	1.517E+4	1.361
1670.	5.354	1.517E+4	1.349
1675.	5.362	1.518E+4	1.345
1680.	5.378	1.518E+4	1.339
1685.	5.388	1.519E+4	1.337
1690.	5.405	1.519E+4	1.34
1695.	5.416	1.52E+4	1.336

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
1700.	5.431	1.52E+4	1.33
1705.	5.45	1.521E+4	1.33
1710.	5.473	1.521E+4	1.328
1715.	5.478	1.522E+4	1.318
1720.	5.496	1.522E+4	1.316
1725.	5.507	1.523E+4	1.304
1730.	5.524	1.523E+4	1.31
1735.	5.541	1.524E+4	1.307
1740.	5.557	1.524E+4	1.304
1745.	5.573	1.525E+4	1.298
1750.	5.587	1.525E+4	1.294
1755.	5.602	1.526E+4	1.29
1760.	5.621	1.526E+4	1.287
1765.	5.63	1.527E+4	1.288
1770.	5.652	1.527E+4	1.279
1775.	5.672	1.528E+4	1.271
1780.	5.683	1.528E+4	1.267
1785.	5.703	1.529E+4	1.268
1790.	5.719	1.529E+4	1.276
1795.	5.736	1.53E+4	1.275
1800.	5.749	1.53E+4	1.261
1805.	5.759	1.531E+4	1.264
1810.	5.779	1.531E+4	1.262
1815.	5.804	1.532E+4	1.252
1820.	5.813	1.532E+4	1.249
1825.	5.835	1.533E+4	1.252
1830.	5.845	1.533E+4	1.241
1835.	5.854	1.534E+4	1.24
1840.	5.87	1.534E+4	1.239
1845.	5.889	1.535E+4	1.232
1850.	5.907	1.535E+4	1.229
1855.	5.922	1.536E+4	1.225
1860.	5.934	1.536E+4	1.222
1865.	5.954	1.537E+4	1.22
1870.	5.963	1.537E+4	1.213
1875.	5.983	1.538E+4	1.212
1880.	5.992	1.538E+4	1.206
1885.	6.009	1.539E+4	1.198
1890.	6.023	1.539E+4	1.201
1895.	6.043	1.54E+4	1.208
1900.	6.057	1.54E+4	1.201
1905.	6.072	1.541E+4	1.206
1910.	6.088	1.541E+4	1.214
1915.	6.106	1.542E+4	1.219
1920.	6.12	1.542E+4	1.219
1925.	6.137	1.543E+4	1.222
1930.	6.146	1.543E+4	1.226
1935.	6.16	1.544E+4	1.24
1940.	6.176	1.544E+4	1.238
1945.	6.188	1.545E+4	1.252
1950.	6.203	1.545E+4	1.265
1955.	6.21	1.546E+4	1.269
1960.	6.237	1.546E+4	1.276

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
1965.	6.238	1.547E+4	1.283
1970.	6.257	1.547E+4	1.293
1975.	6.266	1.548E+4	1.309
1980.	6.286	1.548E+4	1.308
1985.	6.314	1.549E+4	1.315
1990.	6.325	1.549E+4	1.327
1995.	6.338	1.55E+4	1.332
2000.	6.352	1.55E+4	1.336
2005.	6.359	1.551E+4	1.333
2010.	6.375	1.551E+4	1.348
2015.	6.388	1.552E+4	1.348
2020.	6.401	1.552E+4	1.362
2025.	6.413	1.553E+4	1.358
2030.	6.43	1.553E+4	1.363
2035.	6.441	1.554E+4	1.362
2040.	6.458	1.554E+4	1.373
2045.	6.467	1.555E+4	1.375
2050.	6.48	1.555E+4	1.383
2055.	6.489	1.556E+4	1.391
2060.	6.506	1.556E+4	1.395
2065.	6.513	1.557E+4	1.386
2070.	6.533	1.557E+4	1.382
2075.	6.549	1.558E+4	1.389
2080.	6.562	1.558E+4	1.39
2085.	6.57	1.559E+4	1.384
2090.	6.584	1.559E+4	1.391
2095.	6.599	1.56E+4	1.378
2100.	6.61	1.56E+4	1.386
2105.	6.618	1.561E+4	1.386
2110.	6.638	1.561E+4	1.387
2115.	6.645	1.562E+4	1.391
2120.	6.664	1.562E+4	1.388
2125.	6.677	1.563E+4	1.378
2130.	6.684	1.563E+4	1.386
2135.	6.7	1.564E+4	1.387
2140.	6.709	1.564E+4	1.374
2145.	6.728	1.565E+4	1.372
2150.	6.737	1.565E+4	1.374
2155.	6.748	1.566E+4	1.367
2160.	6.753	1.566E+4	1.361
2165.	6.772	1.567E+4	1.369
2170.	6.783	1.567E+4	1.361
2175.	6.801	1.568E+4	1.367
2180.	6.802	1.568E+4	1.356
2185.	6.824	1.569E+4	1.351
2190.	6.833	1.569E+4	1.34
2195.	6.846	1.57E+4	1.342
2200.	6.854	1.57E+4	1.336
2205.	6.875	1.571E+4	1.333
2210.	6.882	1.571E+4	1.327
2215.	6.9	1.572E+4	1.326
2220.	6.917	1.572E+4	1.333
2225.	6.931	1.573E+4	1.315

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
2230.	6.944	1.573E+4	1.319
2235.	6.95	1.574E+4	1.312
2240.	6.968	1.574E+4	1.308
2245.	6.98	1.575E+4	1.304
2250.	6.998	1.575E+4	1.302
2255.	7.005	1.576E+4	1.301
2260.	7.019	1.576E+4	1.296
2265.	7.029	1.577E+4	1.289
2270.	7.045	1.577E+4	1.287
2275.	7.071	1.578E+4	1.294
2280.	7.083	1.578E+4	1.283
2285.	7.09	1.579E+4	1.282
2290.	7.108	1.579E+4	1.27
2295.	7.118	1.58E+4	1.269
2300.	7.128	1.58E+4	1.264
2305.	7.143	1.581E+4	1.261
2310.	7.158	1.581E+4	1.254
2315.	7.173	1.582E+4	1.259
2320.	7.183	1.582E+4	1.24
2325.	7.199	1.583E+4	1.244
2330.	7.208	1.583E+4	1.243
2335.	7.223	1.584E+4	1.238
2340.	7.241	1.584E+4	1.243
2345.	7.247	1.585E+4	1.233
2350.	7.258	1.585E+4	1.228
2355.	7.275	1.586E+4	1.236
2360.	7.283	1.586E+4	1.232
2365.	7.289	1.587E+4	1.232
2370.	7.314	1.587E+4	1.225
2375.	7.334	1.588E+4	1.247
2380.	7.337	1.588E+4	1.243
2385.	7.359	1.589E+4	1.234
2390.	7.366	1.589E+4	1.219
2395.	7.382	1.59E+4	1.221
2400.	7.394	1.59E+4	1.203
2405.	7.412	1.591E+4	1.198
2410.	7.418	1.591E+4	1.201
2415.	7.433	1.592E+4	1.191
2420.	7.449	1.592E+4	1.186
2425.	7.456	1.593E+4	1.18
2430.	7.474	1.593E+4	1.182
2435.	7.484	1.594E+4	1.174
2440.	7.49	1.594E+4	1.176
2445.	7.508	1.595E+4	1.167
2450.	7.526	1.595E+4	1.168
2455.	7.529	1.596E+4	1.174
2460.	7.545	1.596E+4	1.172
2465.	7.562	1.597E+4	1.17
2470.	7.47	1.597E+4	1.164
2475.	7.473	1.598E+4	1.164
2480.	7.49	1.598E+4	1.161
2485.	7.502	1.599E+4	1.166
2490.	7.506	1.599E+4	1.165

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
2495.	7.527	1.6E+4	1.153
2500.	7.531	1.6E+4	1.153
2505.	7.55	1.601E+4	1.147
2510.	7.565	1.601E+4	1.142
2515.	7.576	1.602E+4	1.14
2520.	7.583	1.602E+4	1.127
2525.	7.593	1.603E+4	1.132
2530.	7.609	1.603E+4	1.126
2535.	7.621	1.604E+4	1.118
2540.	7.64	1.604E+4	1.121
2545.	7.644	1.605E+4	1.113
2550.	7.661	1.605E+4	1.107
2555.	7.67	1.606E+4	1.104
2560.	7.683	1.606E+4	1.104
2565.	7.692	1.607E+4	1.095
2570.	7.701	1.607E+4	1.093
2575.	7.716	1.608E+4	1.094
2580.	7.735	1.608E+4	1.088
2585.	7.745	1.609E+4	1.085
2590.	7.762	1.609E+4	1.087
2595.	7.775	1.61E+4	1.084
2600.	7.78	1.61E+4	1.076
2605.	7.794	1.611E+4	1.075
2610.	7.806	1.611E+4	1.075
2615.	7.819	1.612E+4	1.074
2620.	7.827	1.612E+4	1.07
2625.	7.841	1.613E+4	1.07
2630.	7.847	1.613E+4	1.068
2635.	7.861	1.614E+4	1.063
2640.	7.883	1.614E+4	1.066
2645.	7.892	1.615E+4	1.062
2650.	7.908	1.615E+4	1.056
2655.	7.921	1.616E+4	1.058
2660.	7.936	1.616E+4	1.049
2665.	7.952	1.617E+4	1.052
2670.	7.961	1.617E+4	1.042
2675.	7.974	1.618E+4	1.044
2680.	8.003	1.618E+4	1.04
2685.	8.03	1.619E+4	1.039
2690.	8.035	1.619E+4	1.037
2695.	8.054	1.62E+4	1.037
2700.	8.078	1.62E+4	1.034
2705.	8.096	1.621E+4	1.035
2710.	8.113	1.621E+4	1.022
2715.	8.131	1.622E+4	1.025
2720.	8.145	1.622E+4	1.029
2725.	8.161	1.623E+4	1.023
2730.	8.181	1.623E+4	1.02
2735.	8.188	1.624E+4	1.016
2740.	8.218	1.624E+4	1.019
2745.	8.234	1.625E+4	1.021
2750.	8.251	1.625E+4	1.014
2755.	8.273	1.626E+4	1.01

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
2760.	8.294	1.626E+4	1.015
2765.	8.31	1.627E+4	1.02
2770.	8.326	1.627E+4	1.011
2775.	8.36	1.628E+4	1.015
2780.	8.401	1.628E+4	1.017
2785.	8.413	1.629E+4	1.018
2790.	8.422	1.629E+4	1.
2795.	8.432	1.63E+4	1.012
2800.	8.446	1.63E+4	1.011
2805.	8.468	1.631E+4	1.004
2810.	8.476	1.631E+4	1.005
2815.	8.509	1.632E+4	1.011
2820.	8.527	1.632E+4	1.015
2825.	8.533	1.633E+4	1.008
2830.	8.556	1.633E+4	1.007
2835.	8.566	1.634E+4	1.007
2840.	8.584	1.634E+4	1.
2845.	8.6	1.635E+4	0.998
2850.	8.613	1.635E+4	0.993
2855.	8.633	1.636E+4	0.993
2860.	8.654	1.636E+4	0.99
2865.	8.661	1.637E+4	0.988
2870.	8.671	1.637E+4	0.991
2875.	8.685	1.638E+4	0.983
2880.	8.702	1.638E+4	0.989
2885.	8.715	1.639E+4	0.985
2890.	8.729	1.639E+4	0.982
2895.	8.743	1.64E+4	0.98
2900.	8.756	1.64E+4	0.976
2905.	8.772	1.641E+4	0.983
2910.	8.784	1.641E+4	0.973
2915.	8.803	1.642E+4	0.973
2920.	8.815	1.642E+4	0.972
2925.	8.823	1.643E+4	0.98
2930.	8.839	1.643E+4	0.973
2935.	8.856	1.644E+4	0.965
2940.	8.869	1.644E+4	0.969
2945.	8.879	1.645E+4	0.971
2950.	8.895	1.645E+4	0.971
2955.	8.915	1.646E+4	0.964
2960.	8.916	1.646E+4	0.965
2965.	8.934	1.647E+4	0.97
2970.	8.942	1.647E+4	0.965
2975.	8.954	1.648E+4	0.96
2980.	8.971	1.648E+4	0.956
2985.	8.975	1.649E+4	0.959
2990.	8.997	1.649E+4	0.963
2995.	8.999	1.65E+4	0.959
3000.	9.009	1.65E+4	0.951
3005.	9.026	1.651E+4	0.951
3010.	9.031	1.651E+4	0.949
3015.	9.042	1.652E+4	0.947
3020.	9.052	1.652E+4	0.947

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
3025.	9.067	1.653E+4	0.952
3030.	9.07	1.653E+4	0.947
3035.	9.083	1.654E+4	0.945
3040.	9.09	1.654E+4	0.939
3045.	9.108	1.655E+4	0.944
3050.	9.112	1.655E+4	0.941
3055.	9.127	1.656E+4	0.941
3060.	9.142	1.656E+4	0.944
3065.	9.152	1.657E+4	0.945
3070.	9.161	1.657E+4	0.938
3075.	9.178	1.658E+4	0.928
3080.	9.193	1.658E+4	0.923
3085.	9.192	1.659E+4	0.921
3090.	9.197	1.659E+4	0.925
3095.	9.215	1.66E+4	0.93
3100.	9.217	1.66E+4	0.92
3105.	9.234	1.661E+4	0.92
3110.	9.246	1.661E+4	0.919
3115.	9.256	1.662E+4	0.918
3120.	9.265	1.662E+4	0.925
3125.	9.279	1.663E+4	0.916
3130.	9.289	1.663E+4	0.921
3135.	9.295	1.664E+4	0.909
3140.	9.303	1.664E+4	0.911
3145.	9.315	1.665E+4	0.91
3150.	9.33	1.665E+4	0.91
3155.	9.345	1.666E+4	0.907
3160.	9.352	1.666E+4	0.91
3165.	9.362	1.667E+4	0.906
3170.	9.372	1.667E+4	0.908
3175.	9.378	1.668E+4	0.905
3180.	9.394	1.668E+4	0.904
3185.	9.408	1.669E+4	0.902
3190.	9.429	1.669E+4	0.894
3195.	9.43	1.67E+4	0.904
3200.	9.443	1.67E+4	0.893
3205.	9.454	1.671E+4	0.905
3210.	9.466	1.671E+4	0.89
3215.	9.474	1.672E+4	0.896
3220.	9.487	1.672E+4	0.884
3225.	9.505	1.673E+4	0.89
3230.	9.513	1.673E+4	0.891
3235.	9.515	1.674E+4	0.878
3240.	9.533	1.674E+4	0.888
3245.	9.539	1.675E+4	0.888
3250.	9.549	1.675E+4	0.887
3255.	9.563	1.676E+4	0.875
3260.	9.588	1.676E+4	0.874
3265.	9.601	1.677E+4	0.881
3270.	9.605	1.677E+4	0.881
3275.	9.608	1.678E+4	0.88
3280.	9.622	1.678E+4	0.88
3285.	9.635	1.679E+4	0.874

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
3290.	9.638	1.679E+4	0.885
3295.	9.648	1.68E+4	0.875
3300.	9.661	1.68E+4	0.878
3305.	9.675	1.681E+4	0.858
3310.	9.681	1.681E+4	0.871
3315.	9.688	1.682E+4	0.876
3320.	9.699	1.682E+4	0.881
3325.	9.71	1.683E+4	0.866
3330.	9.727	1.683E+4	0.875
3335.	9.728	1.684E+4	0.869
3340.	9.737	1.684E+4	0.868
3345.	9.741	1.685E+4	0.863
3350.	9.761	1.685E+4	0.867
3355.	9.775	1.686E+4	0.865
3360.	9.778	1.686E+4	0.865
3365.	9.785	1.687E+4	0.868
3370.	9.798	1.687E+4	0.869
3375.	9.802	1.688E+4	0.871
3380.	9.818	1.688E+4	0.87
3385.	9.818	1.689E+4	0.867
3390.	9.837	1.689E+4	0.863
3395.	9.84	1.69E+4	0.867
3400.	9.855	1.69E+4	0.865
3405.	9.865	1.691E+4	0.861
3410.	9.883	1.691E+4	0.868
3415.	9.881	1.692E+4	0.862
3420.	9.885	1.692E+4	0.865
3425.	9.901	1.693E+4	0.865
3430.	9.905	1.693E+4	0.865
3435.	9.909	1.694E+4	0.863
3440.	9.932	1.694E+4	0.871
3445.	9.937	1.695E+4	0.876
3450.	9.931	1.695E+4	0.879
3455.	9.944	1.696E+4	0.873
3460.	9.95	1.696E+4	0.888
3465.	9.967	1.697E+4	0.879
3470.	9.967	1.697E+4	0.884
3475.	9.978	1.698E+4	0.89
3480.	9.988	1.698E+4	0.895
3485.	9.989	1.699E+4	0.898
3490.	10.	1.699E+4	0.903
3495.	10.01	1.7E+4	0.911
3500.	10.02	1.7E+4	0.909
3505.	10.03	1.701E+4	0.911
3510.	10.04	1.701E+4	0.92
3515.	10.04	1.702E+4	0.927
3520.	10.05	1.702E+4	0.928
3525.	10.07	1.703E+4	0.932
3530.	10.06	1.703E+4	0.933
3535.	10.07	1.704E+4	0.943
3540.	10.08	1.704E+4	0.946
3545.	10.09	1.705E+4	0.954
3550.	10.1	1.705E+4	0.975

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
3555.	10.1	1.706E+4	0.983
3560.	10.11	1.706E+4	0.991
3565.	10.13	1.707E+4	0.979
3570.	10.12	1.707E+4	0.978
3575.	10.14	1.708E+4	0.985
3580.	10.15	1.708E+4	0.984
3585.	10.15	1.709E+4	0.993
3590.	10.15	1.709E+4	1.009
3595.	10.16	1.71E+4	1.022
3600.	10.18	1.71E+4	1.017
3605.	10.18	1.711E+4	1.02
3610.	10.19	1.711E+4	1.018
3615.	10.2	1.712E+4	1.013
3620.	10.21	1.712E+4	1.015
3625.	10.21	1.713E+4	1.01
3630.	10.22	1.713E+4	1.012
3635.	10.24	1.714E+4	1.014
3640.	10.24	1.714E+4	1.014
3645.	10.25	1.715E+4	1.042
3650.	10.26	1.715E+4	1.045
3655.	10.27	1.716E+4	1.044
3660.	10.27	1.716E+4	1.04
3665.	10.28	1.717E+4	1.035
3670.	10.29	1.717E+4	1.031
3675.	10.29	1.718E+4	1.027
3680.	10.31	1.718E+4	1.039
3685.	10.32	1.719E+4	1.05
3690.	10.32	1.719E+4	1.066
3695.	10.34	1.72E+4	1.056
3700.	10.34	1.72E+4	1.048
3705.	10.34	1.721E+4	1.047
3710.	10.36	1.721E+4	1.037
3715.	10.36	1.722E+4	1.041
3720.	10.37	1.722E+4	1.042
3725.	10.38	1.723E+4	1.047
3730.	10.39	1.723E+4	1.046
3735.	10.4	1.724E+4	1.063
3740.	10.41	1.724E+4	1.061
3745.	10.42	1.725E+4	1.071
3750.	10.43	1.725E+4	1.051
3755.	10.44	1.726E+4	1.07
3760.	10.44	1.726E+4	1.059
3765.	10.46	1.727E+4	1.077
3770.	10.46	1.727E+4	1.078
3775.	10.47	1.728E+4	1.073
3780.	10.47	1.728E+4	1.066
3785.	10.49	1.729E+4	1.062
3790.	10.5	1.729E+4	1.065
3795.	10.51	1.73E+4	1.063
3800.	10.52	1.73E+4	1.058
3805.	10.52	1.731E+4	1.057
3810.	10.52	1.731E+4	1.056
3815.	10.54	1.732E+4	1.057

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
3820.	10.54	1.732E+4	1.057
3825.	10.55	1.733E+4	1.053
3830.	10.56	1.733E+4	1.055
3835.	10.58	1.734E+4	1.051
3840.	10.58	1.734E+4	1.057
3845.	10.59	1.735E+4	1.057
3850.	10.6	1.735E+4	1.05
3855.	10.61	1.736E+4	1.045
3860.	10.62	1.736E+4	1.053
3865.	10.62	1.737E+4	1.042
3870.	10.64	1.737E+4	1.039
3875.	10.64	1.738E+4	1.05
3880.	10.65	1.738E+4	1.065
3885.	10.66	1.739E+4	1.059
3890.	10.68	1.739E+4	1.059
3895.	10.68	1.74E+4	1.049
3900.	10.69	1.74E+4	1.047
3905.	10.69	1.741E+4	1.046
3910.	10.71	1.741E+4	1.049
3915.	10.73	1.742E+4	1.064
3920.	10.73	1.742E+4	1.084
3925.	10.74	1.743E+4	1.07
3930.	10.75	1.743E+4	1.061
3935.	10.76	1.744E+4	1.06
3940.	10.77	1.744E+4	1.063
3945.	10.78	1.745E+4	1.047
3950.	10.8	1.745E+4	1.05
3955.	10.8	1.746E+4	1.057
3960.	10.82	1.746E+4	1.054
3965.	10.84	1.747E+4	1.048
3970.	10.85	1.747E+4	1.05
3975.	10.88	1.748E+4	1.047
3980.	10.89	1.748E+4	1.047
3985.	10.91	1.749E+4	1.044
3990.	10.93	1.749E+4	1.04
3995.	10.95	1.75E+4	1.031
4000.	10.97	1.75E+4	1.038
4005.	10.98	1.751E+4	1.04
4010.	11.01	1.751E+4	1.041
4015.	11.03	1.752E+4	1.053
4020.	11.05	1.752E+4	1.048
4025.	11.06	1.753E+4	1.038
4030.	11.08	1.753E+4	1.029
4035.	11.1	1.754E+4	1.038
4040.	11.11	1.754E+4	1.036
4045.	11.14	1.755E+4	1.032
4050.	11.15	1.755E+4	1.038
4055.	11.17	1.756E+4	1.038
4060.	11.19	1.756E+4	1.029
4065.	11.2	1.757E+4	1.031
4070.	11.22	1.757E+4	1.025
4075.	11.23	1.758E+4	1.023
4080.	11.25	1.758E+4	1.029

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
4085.	11.25	1.759E+4	1.016
4090.	11.28	1.759E+4	1.023
4095.	11.29	1.76E+4	1.019
4100.	11.32	1.76E+4	1.015
4105.	11.31	1.761E+4	1.012
4110.	11.33	1.761E+4	1.015
4115.	11.35	1.762E+4	1.021
4120.	11.36	1.762E+4	1.013
4125.	11.37	1.763E+4	1.011
4130.	11.37	1.763E+4	1.005
4135.	11.39	1.764E+4	1.013
4140.	11.39	1.764E+4	1.009
4145.	11.41	1.765E+4	1.014
4150.	11.41	1.765E+4	1.013
4155.	11.43	1.766E+4	1.004
4160.	11.44	1.766E+4	0.993
4165.	11.44	1.767E+4	0.997
4170.	11.45	1.767E+4	0.991
4175.	11.46	1.768E+4	0.999
4180.	11.47	1.768E+4	0.988
4185.	11.48	1.769E+4	0.982
4190.	11.49	1.769E+4	0.982
4195.	11.5	1.77E+4	0.985
4200.	11.51	1.77E+4	0.984
4205.	11.51	1.771E+4	0.979
4210.	11.52	1.771E+4	0.977
4215.	11.54	1.772E+4	0.978
4220.	11.54	1.772E+4	0.973
4225.	11.55	1.773E+4	0.977
4230.	11.56	1.773E+4	0.967
4235.	11.56	1.774E+4	0.974
4240.	11.58	1.774E+4	0.966
4245.	11.58	1.775E+4	0.96
4250.	11.59	1.775E+4	0.956
4255.	11.61	1.776E+4	0.956
4260.	11.61	1.776E+4	0.958
4265.	11.62	1.777E+4	0.96
4270.	11.63	1.777E+4	0.944
4275.	11.64	1.778E+4	0.946
4280.	11.64	1.778E+4	0.958
4285.	11.64	1.779E+4	0.948
4290.	11.65	1.779E+4	0.948
4295.	11.66	1.78E+4	0.951
4300.	11.67	1.78E+4	0.938
4305.	11.67	1.781E+4	0.951
4310.	11.68	1.781E+4	0.939
4315.	11.69	1.782E+4	0.932
4320.	11.69	1.782E+4	0.93
4325.	11.7	1.783E+4	0.931
4330.	11.71	1.783E+4	0.928
4335.	11.71	1.784E+4	0.929
4340.	11.72	1.784E+4	0.93
4345.	11.73	1.785E+4	0.926

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
4350.	11.73	1.785E+4	0.931
4355.	11.73	1.786E+4	0.929
4360.	11.75	1.786E+4	0.928
4365.	11.76	1.787E+4	0.927
4370.	11.76	1.787E+4	0.924
4375.	11.77	1.788E+4	0.919
4380.	11.78	1.788E+4	0.913
4385.	11.78	1.789E+4	0.92
4390.	11.78	1.789E+4	0.924
4395.	11.79	1.79E+4	0.913
4400.	11.8	1.79E+4	0.924
4405.	11.81	1.791E+4	0.913
4410.	11.81	1.791E+4	0.918
4415.	11.82	1.792E+4	0.911
4420.	11.85	1.792E+4	0.914
4425.	11.87	1.793E+4	0.914
4430.	11.89	1.793E+4	0.91
4435.	11.88	1.794E+4	0.914
4440.	11.88	1.794E+4	0.908
4445.	11.88	1.795E+4	0.908
4450.	11.88	1.795E+4	0.906
4455.	11.88	1.796E+4	0.904
4460.	11.89	1.796E+4	0.901
4465.	11.89	1.797E+4	0.902
4470.	11.9	1.797E+4	0.895
4475.	11.89	1.798E+4	0.9
4480.	11.91	1.798E+4	0.899
4485.	11.9	1.799E+4	0.895
4490.	11.91	1.799E+4	0.886
4495.	11.91	1.8E+4	0.893
4500.	11.91	1.8E+4	0.893
4505.	11.91	1.801E+4	0.892
4510.	11.91	1.801E+4	0.893
4515.	11.92	1.802E+4	0.89
4520.	11.92	1.802E+4	0.888
4525.	11.91	1.803E+4	0.887
4530.	11.91	1.803E+4	0.883
4535.	11.91	1.804E+4	0.884
4540.	11.91	1.804E+4	0.886
4545.	11.91	1.805E+4	0.888
4550.	11.9	1.805E+4	0.884
4555.	11.91	1.806E+4	0.883
4560.	11.9	1.806E+4	0.881
4565.	11.9	1.807E+4	0.881
4570.	11.9	1.807E+4	0.881
4575.	11.89	1.808E+4	0.88
4580.	11.88	1.808E+4	0.874
4585.	11.88	1.809E+4	0.874
4590.	11.86	1.809E+4	0.874
4595.	11.86	1.81E+4	0.873
4600.	11.85	1.81E+4	0.87
4605.	11.85	1.811E+4	0.874
4610.	11.85	1.811E+4	0.869

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
4615.	11.83	1.812E+4	0.867
4620.	11.82	1.812E+4	0.867
4625.	11.82	1.813E+4	0.858
4630.	11.8	1.813E+4	0.867
4635.	11.8	1.814E+4	0.868
4640.	11.79	1.814E+4	0.857
4645.	11.78	1.815E+4	0.865
4650.	11.77	1.815E+4	0.858
4655.	11.76	1.816E+4	0.857
4660.	11.75	1.816E+4	0.859
4665.	11.74	1.817E+4	0.853
4670.	11.72	1.817E+4	0.853
4675.	11.71	1.818E+4	0.853
4680.	11.7	1.818E+4	0.854
4685.	11.69	1.819E+4	0.849
4690.	11.68	1.819E+4	0.85
4695.	11.66	1.82E+4	0.85
4700.	11.65	1.82E+4	0.845
4705.	11.64	1.821E+4	0.844
4710.	11.63	1.821E+4	0.844
4715.	11.61	1.822E+4	0.852
4720.	11.6	1.822E+4	0.847
4725.	11.59	1.823E+4	0.846
4730.	11.57	1.823E+4	0.842
4735.	11.56	1.824E+4	0.846
4740.	11.54	1.824E+4	0.844
4745.	11.52	1.825E+4	0.844
4750.	11.51	1.825E+4	0.84
4755.	11.5	1.826E+4	0.838
4760.	11.48	1.826E+4	0.842
4765.	11.48	1.827E+4	0.836
4770.	11.46	1.827E+4	0.84
4775.	11.45	1.828E+4	0.84
4780.	11.43	1.828E+4	0.838
4785.	11.41	1.829E+4	0.842
4790.	11.39	1.829E+4	0.834
4795.	11.38	1.83E+4	0.832
4800.	11.36	1.83E+4	0.825
4805.	11.34	1.831E+4	0.828
4810.	11.32	1.831E+4	0.829
4815.	11.31	1.832E+4	0.85
4820.	11.3	1.832E+4	0.867
4825.	11.27	1.833E+4	0.874
4830.	11.26	1.833E+4	0.86
4835.	11.23	1.834E+4	0.85
4840.	11.22	1.834E+4	0.842
4845.	11.2	1.835E+4	0.838
4850.	11.18	1.835E+4	0.835
4855.	11.17	1.836E+4	0.831
4860.	11.15	1.836E+4	0.832
4865.	11.13	1.837E+4	0.828
4870.	11.11	1.837E+4	0.836
4875.	11.1	1.838E+4	0.842

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
4880.	11.08	1.838E+4	0.843
4885.	11.06	1.839E+4	0.851
4890.	11.04	1.839E+4	0.863
4895.	11.02	1.84E+4	0.871
4900.	11.	1.84E+4	0.87
4905.	10.98	1.841E+4	0.889
4910.	10.97	1.841E+4	0.901
4915.	10.95	1.842E+4	0.91
4920.	10.93	1.842E+4	0.919
4925.	10.91	1.843E+4	0.951
4930.	10.89	1.843E+4	0.955
4935.	10.87	1.844E+4	0.967
4940.	10.85	1.844E+4	0.987
4945.	10.83	1.845E+4	0.987
4950.	10.81	1.845E+4	1.001
4955.	10.8	1.846E+4	1.017
4960.	10.78	1.846E+4	1.026
4965.	10.76	1.847E+4	1.024
4970.	10.75	1.847E+4	1.036
4975.	10.73	1.848E+4	1.053
4980.	10.71	1.848E+4	1.069
4985.	10.69	1.849E+4	1.077
4990.	10.67	1.849E+4	1.076
4995.	10.65	1.85E+4	1.085
5000.	10.64	1.85E+4	1.093
5005.	10.62	1.851E+4	1.1
5010.	10.6	1.851E+4	1.104
5015.	10.58	1.852E+4	1.111
5020.	10.56	1.852E+4	1.112
5025.	10.54	1.853E+4	1.126
5030.	10.52	1.853E+4	1.133
5035.	10.5	1.854E+4	1.136
5040.	10.49	1.854E+4	1.142
5045.	10.47	1.855E+4	1.15
5050.	10.45	1.855E+4	1.148
5055.	10.43	1.856E+4	1.15
5060.	10.41	1.856E+4	1.157
5065.	10.39	1.857E+4	1.154
5070.	10.37	1.857E+4	1.163
5075.	10.36	1.858E+4	1.164
5080.	10.34	1.858E+4	1.163
5085.	10.33	1.859E+4	1.168
5090.	10.3	1.859E+4	1.17
5095.	10.28	1.86E+4	1.172
5100.	10.27	1.86E+4	1.167
5105.	10.25	1.861E+4	1.166
5110.	10.23	1.861E+4	1.182
5115.	10.21	1.862E+4	1.178
5120.	10.19	1.862E+4	1.178
5125.	10.18	1.863E+4	1.173
5130.	10.16	1.863E+4	1.171
5135.	10.14	1.864E+4	1.167
5140.	10.12	1.864E+4	1.175

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
5145.	10.11	1.865E+4	1.173
5150.	10.08	1.865E+4	1.175
5155.	10.07	1.866E+4	1.175
5160.	10.05	1.866E+4	1.169
5165.	10.04	1.867E+4	1.172
5170.	10.02	1.867E+4	1.173
5175.	9.997	1.868E+4	1.169
5180.	9.981	1.868E+4	1.159
5185.	9.96	1.869E+4	1.166
5190.	9.944	1.869E+4	1.168
5195.	9.927	1.87E+4	1.155
5200.	9.907	1.87E+4	1.162
5205.	9.898	1.871E+4	1.157
5210.	9.881	1.871E+4	1.162
5215.	9.863	1.872E+4	1.158
5220.	9.844	1.872E+4	1.153
5225.	9.83	1.873E+4	1.156
5230.	9.811	1.873E+4	1.155
5235.	9.798	1.874E+4	1.152
5240.	9.779	1.874E+4	1.151
5245.	9.759	1.875E+4	1.144
5250.	9.747	1.875E+4	1.142
5255.	9.733	1.876E+4	1.147
5260.	9.712	1.876E+4	1.139
5265.	9.701	1.877E+4	1.141
5270.	9.678	1.877E+4	1.152
5275.	9.657	1.878E+4	1.144
5280.	9.645	1.878E+4	1.143
5285.	9.625	1.879E+4	1.133
5290.	9.607	1.879E+4	1.132
5295.	9.593	1.88E+4	1.133
5300.	9.59	1.88E+4	1.128
5305.	9.567	1.881E+4	1.133
5310.	9.548	1.881E+4	1.118
5315.	9.53	1.882E+4	1.124
5320.	9.51	1.882E+4	1.127
5325.	9.499	1.883E+4	1.119
5330.	9.48	1.883E+4	1.12
5335.	9.468	1.884E+4	1.114
5340.	9.453	1.884E+4	1.122
5345.	9.435	1.885E+4	1.121
5350.	9.421	1.885E+4	1.109
5355.	9.413	1.886E+4	1.107
5360.	9.393	1.886E+4	1.114
5365.	9.381	1.887E+4	1.108
5370.	9.369	1.887E+4	1.101
5375.	9.348	1.888E+4	1.099
5380.	9.333	1.888E+4	1.094
5385.	9.323	1.889E+4	1.096
5390.	9.308	1.889E+4	1.107
5395.	9.291	1.89E+4	1.095
5400.	9.28	1.89E+4	1.114
5405.	9.263	1.891E+4	1.11

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
5410.	9.253	1.891E+4	1.098
5415.	9.229	1.892E+4	1.091
5420.	9.223	1.892E+4	1.091
5425.	9.21	1.893E+4	1.084
5430.	9.195	1.893E+4	1.079
5435.	9.182	1.894E+4	1.074
5440.	9.162	1.894E+4	1.07
5445.	9.152	1.895E+4	1.068
5450.	9.136	1.895E+4	1.072
5455.	9.125	1.896E+4	1.062
5460.	9.113	1.896E+4	1.06
5465.	9.099	1.897E+4	1.058
5470.	9.086	1.897E+4	1.056
5475.	9.071	1.898E+4	1.054
5480.	9.065	1.898E+4	1.049
5485.	9.05	1.899E+4	1.045
5490.	9.033	1.899E+4	1.041
5495.	9.024	1.9E+4	1.037
5500.	9.021	1.9E+4	1.035
5505.	9.002	1.901E+4	1.033
5510.	8.997	1.901E+4	1.032
5515.	8.979	1.902E+4	1.024
5520.	8.972	1.902E+4	1.025
5525.	8.965	1.903E+4	1.025
5530.	8.95	1.903E+4	1.022
5535.	8.94	1.904E+4	1.014
5540.	8.928	1.904E+4	1.019
5545.	8.914	1.905E+4	1.011
5550.	8.904	1.905E+4	1.013
5555.	8.9	1.906E+4	1.002
5560.	8.885	1.906E+4	0.999
5565.	8.873	1.907E+4	1.001
5570.	8.868	1.907E+4	0.998
5575.	8.854	1.908E+4	0.993
5580.	8.846	1.908E+4	0.993
5585.	8.828	1.909E+4	0.992
5590.	8.819	1.909E+4	0.987
5595.	8.81	1.91E+4	0.981
5600.	8.795	1.91E+4	0.974
5605.	8.795	1.911E+4	0.967
5610.	8.789	1.911E+4	0.964
5615.	8.771	1.912E+4	0.963
5620.	8.754	1.912E+4	0.955
5625.	8.743	1.913E+4	0.965
5630.	8.723	1.913E+4	0.97
5635.	8.717	1.914E+4	0.96
5640.	8.703	1.914E+4	0.967
5645.	8.691	1.915E+4	0.953
5650.	8.678	1.915E+4	0.953
5655.	8.663	1.916E+4	0.954
5660.	8.652	1.916E+4	0.946
5665.	8.641	1.917E+4	0.942
5670.	8.629	1.917E+4	0.941

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
5675.	8.619	1.918E+4	0.932
5680.	8.605	1.918E+4	0.936
5685.	8.586	1.919E+4	0.928
5690.	8.575	1.919E+4	0.926
5695.	8.569	1.92E+4	0.924
5700.	8.554	1.92E+4	0.913
5705.	8.537	1.921E+4	0.91
5710.	8.525	1.921E+4	0.9
5715.	8.508	1.922E+4	0.901
5720.	8.497	1.922E+4	0.901
5725.	8.484	1.923E+4	0.902
5730.	8.474	1.923E+4	0.897
5735.	8.466	1.924E+4	0.895
5740.	8.444	1.924E+4	0.883
5745.	8.434	1.925E+4	0.885
5750.	8.43	1.925E+4	0.888
5755.	8.418	1.926E+4	0.884
5760.	8.403	1.926E+4	0.879
5765.	8.393	1.927E+4	0.874
5770.	8.373	1.927E+4	0.872
5775.	8.359	1.928E+4	0.864
5780.	8.347	1.928E+4	0.871
5785.	8.332	1.929E+4	0.86
5790.	8.323	1.929E+4	0.858
5795.	8.301	1.93E+4	0.859
5800.	8.292	1.93E+4	0.852
5805.	8.276	1.931E+4	0.853
5810.	8.27	1.931E+4	0.849
5815.	8.255	1.932E+4	0.84
5820.	8.241	1.932E+4	0.842
5825.	8.228	1.933E+4	0.838
5830.	8.212	1.933E+4	0.835
5835.	8.202	1.934E+4	0.828
5840.	8.193	1.934E+4	0.827
5845.	8.18	1.935E+4	0.824
5850.	8.16	1.935E+4	0.824
5855.	8.148	1.936E+4	0.821
5860.	8.141	1.936E+4	0.821
5865.	8.131	1.937E+4	0.812
5870.	8.112	1.937E+4	0.813
5875.	8.103	1.938E+4	0.803
5880.	8.089	1.938E+4	0.802
5885.	8.077	1.939E+4	0.793
5890.	8.066	1.939E+4	0.793
5895.	8.091	1.94E+4	0.79
5900.	8.067	1.94E+4	0.785
5905.	8.046	1.941E+4	0.789
5910.	8.041	1.941E+4	0.78
5915.	8.023	1.942E+4	0.783
5920.	8.007	1.942E+4	0.774
5925.	7.989	1.943E+4	0.774
5930.	7.972	1.943E+4	0.77
5935.	7.961	1.944E+4	0.765

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
5940.	7.95	1.944E+4	0.756
5945.	7.931	1.945E+4	0.756
5950.	7.916	1.945E+4	0.751
5955.	7.915	1.946E+4	0.754
5960.	7.896	1.946E+4	0.745
5965.	7.888	1.947E+4	0.743
5970.	7.868	1.947E+4	0.737
5975.	7.861	1.948E+4	0.739
5980.	7.847	1.948E+4	0.735
5985.	7.835	1.949E+4	0.733
5990.	7.825	1.949E+4	0.731
5995.	7.812	1.95E+4	0.723
6000.	7.806	1.95E+4	0.725
6005.	7.792	1.951E+4	0.725
6010.	7.777	1.951E+4	0.717
6015.	7.768	1.952E+4	0.711
6020.	7.756	1.952E+4	0.704
6025.	7.745	1.953E+4	0.71
6030.	7.732	1.953E+4	0.701
6035.	7.721	1.954E+4	0.701
6040.	7.707	1.954E+4	0.699
6045.	7.698	1.955E+4	0.698
6050.	7.686	1.955E+4	0.697
6055.	7.674	1.956E+4	0.69
6060.	7.669	1.956E+4	0.685
6065.	7.652	1.957E+4	0.683
6070.	7.642	1.957E+4	0.679
6075.	7.639	1.958E+4	0.682
6080.	7.621	1.958E+4	0.683
6085.	7.613	1.959E+4	0.674
6090.	7.607	1.959E+4	0.674
6095.	7.615	1.96E+4	0.676
6100.	7.589	1.96E+4	0.668
6105.	7.578	1.961E+4	0.662
6110.	7.561	1.961E+4	0.67
6115.	7.545	1.962E+4	0.665
6120.	7.538	1.962E+4	0.661
6125.	7.526	1.963E+4	0.656
6130.	7.515	1.963E+4	0.651
6135.	7.506	1.964E+4	0.649
6140.	7.492	1.964E+4	0.64
6145.	7.484	1.965E+4	0.637
6150.	7.47	1.965E+4	0.641
6155.	7.456	1.966E+4	0.637
6160.	7.447	1.966E+4	0.637
6165.	7.439	1.967E+4	0.634
6170.	7.423	1.967E+4	0.631
6175.	7.416	1.968E+4	0.627
6180.	7.4	1.968E+4	0.626
6185.	7.39	1.969E+4	0.627
6190.	7.378	1.969E+4	0.621
6195.	7.368	1.97E+4	0.621
6200.	7.354	1.97E+4	0.624

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
6205.	7.34	1.971E+4	0.62
6210.	7.335	1.971E+4	0.618
6215.	7.321	1.972E+4	0.615
6220.	7.314	1.972E+4	0.626
6225.	7.307	1.973E+4	0.615
6230.	7.293	1.973E+4	0.605
6235.	7.281	1.974E+4	0.612
6240.	7.264	1.974E+4	0.603
6245.	7.26	1.975E+4	0.591
6250.	7.244	1.975E+4	0.596
6255.	7.234	1.976E+4	0.606
6260.	7.216	1.976E+4	0.602
6265.	7.204	1.977E+4	0.6
6270.	7.193	1.977E+4	0.598
6275.	7.187	1.978E+4	0.592
6280.	7.185	1.978E+4	0.597
6285.	7.171	1.979E+4	0.573
6290.	7.155	1.979E+4	0.575
6295.	7.135	1.98E+4	0.585
6300.	7.131	1.98E+4	0.579
6305.	7.121	1.981E+4	0.574
6310.	7.105	1.981E+4	0.562
6315.	7.09	1.982E+4	0.566
6320.	7.083	1.982E+4	0.566
6325.	7.069	1.983E+4	0.578
6330.	7.054	1.983E+4	0.567
6335.	7.046	1.984E+4	0.575
6340.	7.038	1.984E+4	0.572
6345.	7.026	1.985E+4	0.575
6350.	7.012	1.985E+4	0.575
6355.	6.997	1.986E+4	0.588
6360.	6.99	1.986E+4	0.584
6365.	6.976	1.987E+4	0.586
6370.	6.966	1.987E+4	0.592
6375.	6.947	1.988E+4	0.573
6380.	6.937	1.988E+4	0.58
6385.	6.933	1.989E+4	0.581
6390.	6.92	1.989E+4	0.577
6395.	6.91	1.99E+4	0.582
6400.	6.899	1.99E+4	0.588
6405.	6.88	1.991E+4	0.583
6410.	6.868	1.991E+4	0.591
6415.	6.863	1.992E+4	0.584
6420.	6.844	1.992E+4	0.583
6425.	6.837	1.993E+4	0.588
6430.	6.826	1.993E+4	0.581
6435.	6.816	1.994E+4	0.589
6440.	6.803	1.994E+4	0.589
6445.	6.792	1.995E+4	0.583
6450.	6.78	1.995E+4	0.568
6455.	6.772	1.996E+4	0.582
6460.	6.755	1.996E+4	0.576
6465.	6.744	1.997E+4	0.579

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
6470.	6.738	1.997E+4	0.582
6475.	6.727	1.998E+4	0.592
6480.	6.71	1.998E+4	0.591
6485.	6.7	1.999E+4	0.578
6490.	6.696	1.999E+4	0.589
6495.	6.681	2.0E+4	0.596
6500.	6.669	2.0E+4	0.564
6505.	6.661	2.001E+4	0.575
6510.	6.652	2.001E+4	0.591
6515.	6.639	2.002E+4	0.58
6520.	6.623	2.002E+4	0.582
6525.	6.616	2.003E+4	0.575
6530.	6.61	2.003E+4	0.579
6535.	6.592	2.004E+4	0.578
6540.	6.584	2.004E+4	0.563
6545.	6.569	2.005E+4	0.564
6550.	6.562	2.005E+4	0.558
6555.	6.551	2.006E+4	0.552
6560.	6.54	2.006E+4	0.553
6565.	6.529	2.007E+4	0.546
6570.	6.518	2.007E+4	0.536
6575.	6.508	2.008E+4	0.536
6580.	6.5	2.008E+4	0.537
6585.	6.491	2.009E+4	0.539
6590.	6.477	2.009E+4	0.529
6595.	6.467	2.01E+4	0.535
6600.	6.453	2.01E+4	0.533
6605.	6.447	2.011E+4	0.521
6610.	6.435	2.011E+4	0.531
6615.	6.428	2.012E+4	0.525
6620.	6.409	2.012E+4	0.523
6625.	6.401	2.013E+4	0.522
6630.	6.396	2.013E+4	0.534
6635.	6.386	2.014E+4	0.535
6640.	6.381	2.014E+4	0.526
6645.	6.372	2.015E+4	0.516
6650.	6.359	2.015E+4	0.504
6655.	6.352	2.016E+4	0.505
6660.	6.344	2.016E+4	0.505
6665.	6.336	2.017E+4	0.509
6670.	6.324	2.017E+4	0.502
6675.	6.314	2.018E+4	0.502
6680.	6.304	2.018E+4	0.498
6685.	6.298	2.019E+4	0.495
6690.	6.286	2.019E+4	0.502
6695.	6.277	2.02E+4	0.495
6700.	6.275	2.02E+4	0.487
6705.	6.269	2.021E+4	0.49
6710.	6.26	2.021E+4	0.489
6715.	6.249	2.022E+4	0.482
6720.	6.239	2.022E+4	0.483
6725.	6.236	2.023E+4	0.475
6730.	6.221	2.023E+4	0.48

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
6735.	6.211	2.024E+4	0.493
6740.	6.206	2.024E+4	0.495
6745.	6.194	2.025E+4	0.49
6750.	6.187	2.025E+4	0.486
6755.	6.174	2.026E+4	0.481
6760.	6.169	2.026E+4	0.471
6765.	6.166	2.027E+4	0.472
6770.	6.153	2.027E+4	0.465
6775.	6.144	2.028E+4	0.465
6780.	6.138	2.028E+4	0.464
6785.	6.135	2.029E+4	0.456
6790.	6.13	2.029E+4	0.452
6795.	6.122	2.03E+4	0.451
6800.	6.117	2.03E+4	0.446
6805.	6.105	2.031E+4	0.446
6810.	6.088	2.031E+4	0.449
6815.	6.089	2.032E+4	0.444
6820.	6.084	2.032E+4	0.443
6825.	6.08	2.033E+4	0.443
6830.	6.066	2.033E+4	0.438
6835.	6.062	2.034E+4	0.441
6840.	6.057	2.034E+4	0.44
6845.	6.053	2.035E+4	0.435
6850.	6.047	2.035E+4	0.434
6855.	6.036	2.036E+4	0.431
6860.	6.022	2.036E+4	0.435
6865.	6.022	2.037E+4	0.425
6870.	6.012	2.037E+4	0.428
6875.	6.006	2.038E+4	0.423
6880.	6.003	2.038E+4	0.419
6885.	5.988	2.039E+4	0.423
6890.	5.987	2.039E+4	0.412
6895.	5.981	2.04E+4	0.416
6900.	5.966	2.04E+4	0.412
6905.	5.962	2.041E+4	0.412
6910.	5.957	2.041E+4	0.409
6915.	5.948	2.042E+4	0.411
6920.	5.942	2.042E+4	0.408
6925.	5.927	2.043E+4	0.407
6930.	5.93	2.043E+4	0.404
6935.	5.916	2.044E+4	0.4
6940.	5.908	2.044E+4	0.401
6945.	5.911	2.045E+4	0.406
6950.	5.905	2.045E+4	0.403
6955.	5.896	2.046E+4	0.399
6960.	5.886	2.046E+4	0.403
6965.	5.883	2.047E+4	0.401
6970.	5.871	2.047E+4	0.399
6975.	5.863	2.048E+4	0.414
6980.	5.859	2.048E+4	0.403
6985.	5.844	2.049E+4	0.405
6990.	5.837	2.049E+4	0.4
6995.	5.824	2.05E+4	0.409

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
7000.	5.826	2.05E+4	0.411
7005.	5.812	2.051E+4	0.4
7010.	5.81	2.051E+4	0.401
7015.	5.79	2.052E+4	0.398
7020.	5.796	2.052E+4	0.394
7025.	5.789	2.053E+4	0.396
7030.	5.773	2.053E+4	0.392
7035.	5.763	2.054E+4	0.394
7040.	5.75	2.054E+4	0.392
7045.	5.74	2.055E+4	0.391
7050.	5.756	2.055E+4	0.393
7055.	5.748	2.056E+4	0.392
7060.	5.729	2.056E+4	0.386
7065.	5.717	2.057E+4	0.384
7070.	5.707	2.057E+4	0.389
7075.	5.7	2.058E+4	0.381
7080.	5.705	2.058E+4	0.382
7085.	5.7	2.059E+4	0.378
7090.	5.682	2.059E+4	0.385
7095.	5.666	2.06E+4	0.381
7100.	5.664	2.06E+4	0.376
7105.	5.646	2.061E+4	0.377
7110.	5.639	2.061E+4	0.38
7115.	5.625	2.062E+4	0.374
7120.	5.608	2.062E+4	0.374
7125.	5.606	2.063E+4	0.367
7130.	5.593	2.063E+4	0.368
7135.	5.588	2.064E+4	0.37
7140.	5.575	2.064E+4	0.363
7145.	5.569	2.065E+4	0.36
7150.	5.554	2.065E+4	0.362
7155.	5.546	2.066E+4	0.363
7160.	5.534	2.066E+4	0.354
7165.	5.522	2.067E+4	0.36
7170.	5.516	2.067E+4	0.355
7175.	5.507	2.068E+4	0.353
7180.	5.501	2.068E+4	0.347
7185.	5.49	2.069E+4	0.342
7190.	5.491	2.069E+4	0.35
7195.	5.472	2.07E+4	0.343
7200.	5.465	2.07E+4	0.343
7205.	5.456	2.071E+4	0.344
7210.	5.449	2.071E+4	0.342
7215.	5.438	2.072E+4	0.337
7220.	5.428	2.072E+4	0.339
7225.	5.422	2.073E+4	0.332
7230.	5.416	2.073E+4	0.335
7235.	5.403	2.074E+4	0.336
7240.	5.398	2.074E+4	0.334
7245.	5.396	2.075E+4	0.33
7250.	5.393	2.075E+4	0.331
7255.	5.388	2.076E+4	0.32
7260.	5.388	2.076E+4	0.323

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
7265.	5.381	2.077E+4	0.322
7270.	5.382	2.077E+4	0.326
7275.	5.389	2.078E+4	0.325
7280.	5.391	2.078E+4	0.317
7285.	5.396	2.079E+4	0.315
7290.	5.415	2.079E+4	0.319
7295.	5.415	2.08E+4	0.314
7300.	5.422	2.08E+4	0.313
7305.	5.42	2.081E+4	0.319
7310.	5.43	2.081E+4	0.311
7315.	5.442	2.082E+4	0.308
7320.	5.447	2.082E+4	0.305
7325.	5.457	2.083E+4	0.306
7330.	5.459	2.083E+4	0.301
7335.	5.471	2.084E+4	0.299
7340.	5.481	2.084E+4	0.303
7345.	5.488	2.085E+4	0.301
7350.	5.489	2.085E+4	0.297
7355.	5.5	2.086E+4	0.303
7360.	5.503	2.086E+4	0.3
7365.	5.511	2.087E+4	0.294
7370.	5.51	2.087E+4	0.294
7375.	5.523	2.088E+4	0.299
7380.	5.522	2.088E+4	0.292
7385.	5.526	2.089E+4	0.297
7390.	5.529	2.089E+4	0.284
7395.	5.53	2.09E+4	0.288
7400.	5.551	2.09E+4	0.281
7405.	5.594	2.091E+4	0.288
7410.	5.595	2.091E+4	0.289
7415.	5.58	2.092E+4	0.29
7420.	5.572	2.092E+4	0.286
7425.	5.562	2.093E+4	0.286
7430.	5.571	2.093E+4	0.288
7435.	5.561	2.094E+4	0.298
7440.	5.569	2.094E+4	0.292
7445.	5.561	2.095E+4	0.289
7450.	5.563	2.095E+4	0.289
7455.	5.55	2.096E+4	0.285
7460.	5.544	2.096E+4	0.283
7465.	5.538	2.097E+4	0.281
7470.	5.532	2.097E+4	0.288
7475.	5.526	2.098E+4	0.289
7480.	5.529	2.098E+4	0.282
7485.	5.523	2.099E+4	0.285
7490.	5.514	2.099E+4	0.276
7495.	5.506	2.1E+4	0.283
7500.	5.507	2.1E+4	0.28
7505.	5.499	2.101E+4	0.283
7510.	5.499	2.101E+4	0.29
7515.	5.5	2.102E+4	0.281
7520.	5.491	2.102E+4	0.283
7525.	5.479	2.103E+4	0.277

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
7530.	5.483	2.103E+4	0.274
7535.	5.473	2.104E+4	0.278
7540.	5.467	2.104E+4	0.278
7545.	5.469	2.105E+4	0.277
7550.	5.451	2.105E+4	0.28
7555.	5.444	2.106E+4	0.279
7560.	5.441	2.106E+4	0.271
7565.	5.434	2.107E+4	0.275
7570.	5.429	2.107E+4	0.269
7575.	5.419	2.108E+4	0.273
7580.	5.416	2.108E+4	0.277
7585.	5.413	2.109E+4	0.278
7590.	5.408	2.109E+4	0.274
7595.	5.398	2.11E+4	0.274
7600.	5.388	2.11E+4	0.28
7605.	5.381	2.111E+4	0.277
7610.	5.381	2.111E+4	0.279
7615.	5.384	2.112E+4	0.278
7620.	5.369	2.112E+4	0.275
7625.	5.365	2.113E+4	0.272
7630.	5.359	2.113E+4	0.275
7635.	5.358	2.114E+4	0.274
7640.	5.343	2.114E+4	0.277
7645.	5.334	2.115E+4	0.275
7650.	5.329	2.115E+4	0.273
7655.	5.323	2.116E+4	0.278
7660.	5.318	2.116E+4	0.274
7665.	5.313	2.117E+4	0.276
7670.	5.3	2.117E+4	0.28
7675.	5.296	2.118E+4	0.279
7680.	5.288	2.118E+4	0.288
7685.	5.276	2.119E+4	0.287
7690.	5.276	2.119E+4	0.291
7695.	5.267	2.12E+4	0.298
7700.	5.254	2.12E+4	0.311
7705.	5.252	2.121E+4	0.314
7710.	5.238	2.121E+4	0.317
7715.	5.238	2.122E+4	0.338
7720.	5.227	2.122E+4	0.348
7725.	5.219	2.123E+4	0.357
7730.	5.212	2.123E+4	0.366
7735.	5.2	2.124E+4	0.376
7740.	5.198	2.124E+4	0.395
7745.	5.186	2.125E+4	0.403
7750.	5.171	2.125E+4	0.415
7755.	5.173	2.126E+4	0.434
7760.	5.156	2.126E+4	0.448
7765.	5.15	2.127E+4	0.463
7770.	5.142	2.127E+4	0.47
7775.	5.135	2.128E+4	0.484
7780.	5.126	2.128E+4	0.494
7785.	5.126	2.129E+4	0.502
7790.	5.109	2.129E+4	0.518

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
7795.	5.107	2.13E+4	0.533
7800.	5.097	2.13E+4	0.545
7805.	5.093	2.131E+4	0.547
7810.	5.082	2.131E+4	0.573
7815.	5.077	2.132E+4	0.574
7820.	5.067	2.132E+4	0.583
7825.	5.062	2.133E+4	0.589
7830.	5.052	2.133E+4	0.591
7835.	5.043	2.134E+4	0.604
7840.	5.039	2.134E+4	0.603
7845.	5.023	2.135E+4	0.612
7850.	5.018	2.135E+4	0.61
7855.	5.011	2.136E+4	0.62
7860.	4.998	2.136E+4	0.625
7865.	4.994	2.137E+4	0.622
7870.	4.982	2.137E+4	0.627
7875.	4.974	2.138E+4	0.636
7880.	4.963	2.138E+4	0.635
7885.	4.952	2.139E+4	0.635
7890.	4.945	2.139E+4	0.637
7895.	4.939	2.14E+4	0.641
7900.	4.93	2.14E+4	0.64
7905.	4.925	2.141E+4	0.642
7910.	4.905	2.141E+4	0.653
7915.	4.905	2.142E+4	0.659
7920.	4.892	2.142E+4	0.654
7925.	4.89	2.143E+4	0.666
7930.	4.873	2.143E+4	0.661
7935.	4.865	2.144E+4	0.663
7940.	4.858	2.144E+4	0.665
7945.	4.846	2.145E+4	0.666
7950.	4.847	2.145E+4	0.65
7955.	4.836	2.146E+4	0.664
7960.	4.828	2.146E+4	0.654
7965.	4.817	2.147E+4	0.665
7970.	4.806	2.147E+4	0.668
7975.	4.799	2.148E+4	0.658
7980.	4.787	2.148E+4	0.668
7985.	4.787	2.149E+4	0.669
7990.	4.773	2.149E+4	0.67
7995.	4.762	2.15E+4	0.665
8000.	4.753	2.15E+4	0.668
8005.	4.745	2.151E+4	0.667
8010.	4.737	2.151E+4	0.661
8015.	4.734	2.152E+4	0.659
8020.	4.724	2.152E+4	0.662
8025.	4.713	2.153E+4	0.663
8030.	4.702	2.153E+4	0.659
8035.	4.701	2.154E+4	0.662
8040.	4.694	2.154E+4	0.656
8045.	4.679	2.155E+4	0.651
8050.	4.681	2.155E+4	0.651
8055.	4.666	2.156E+4	0.648

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
8060.	4.662	2.156E+4	0.644
8065.	4.649	2.157E+4	0.644
8070.	4.647	2.157E+4	0.646
8075.	4.637	2.158E+4	0.647
8080.	4.633	2.158E+4	0.647
8085.	4.626	2.159E+4	0.647
8090.	4.616	2.159E+4	0.637
8095.	4.608	2.16E+4	0.635
8100.	4.603	2.16E+4	0.639
8105.	4.59	2.161E+4	0.646
8110.	4.58	2.161E+4	0.644
8115.	4.581	2.162E+4	0.636
8120.	4.568	2.162E+4	0.639
8125.	4.561	2.163E+4	0.639
8130.	4.555	2.163E+4	0.635
8135.	4.548	2.164E+4	0.639
8140.	4.543	2.164E+4	0.634
8145.	4.537	2.165E+4	0.637
8150.	4.522	2.165E+4	0.664
8155.	4.517	2.166E+4	0.683
8160.	4.517	2.166E+4	0.66
8165.	4.504	2.167E+4	0.663
8170.	4.499	2.167E+4	0.657
8175.	4.493	2.168E+4	0.646
8180.	4.496	2.168E+4	0.647
8185.	4.481	2.169E+4	0.64
8190.	4.476	2.169E+4	0.644
8195.	4.47	2.17E+4	0.635
8200.	4.465	2.17E+4	0.637
8205.	4.484	2.171E+4	0.639
8210.	4.496	2.171E+4	0.635
8215.	4.483	2.172E+4	0.628
8220.	4.461	2.172E+4	0.626
8225.	4.449	2.173E+4	0.626
8230.	4.444	2.173E+4	0.626
8235.	4.436	2.174E+4	0.626
8240.	4.435	2.174E+4	0.626
8245.	4.418	2.175E+4	0.619
8250.	4.413	2.175E+4	0.612
8255.	4.417	2.176E+4	0.619
8260.	4.398	2.176E+4	0.61
8265.	4.395	2.177E+4	0.612
8270.	4.39	2.177E+4	0.613
8275.	4.377	2.178E+4	0.61
8280.	4.375	2.178E+4	0.609
8285.	4.367	2.179E+4	0.608
8290.	4.362	2.179E+4	0.618
8295.	4.355	2.18E+4	0.605
8300.	4.362	2.18E+4	0.606
8305.	4.352	2.181E+4	0.603
8310.	4.338	2.181E+4	0.599
8315.	4.336	2.182E+4	0.597
8320.	4.331	2.182E+4	0.601

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
8325.	4.325	2.183E+4	0.599
8330.	4.314	2.183E+4	0.595
8335.	4.312	2.184E+4	0.6
8340.	4.302	2.184E+4	0.597
8345.	4.296	2.185E+4	0.594
8350.	4.295	2.185E+4	0.605
8355.	4.284	2.186E+4	0.606
8360.	4.278	2.186E+4	0.605
8365.	4.269	2.187E+4	0.601
8370.	4.259	2.187E+4	0.587
8375.	4.244	2.188E+4	0.589
8380.	4.245	2.188E+4	0.588
8385.	4.236	2.189E+4	0.598
8390.	4.238	2.189E+4	0.589
8395.	4.225	2.19E+4	0.591
8400.	4.218	2.19E+4	0.58
8405.	4.208	2.191E+4	0.585
8410.	4.209	2.191E+4	0.579
8415.	4.205	2.192E+4	0.583
8420.	4.196	2.192E+4	0.583
8425.	4.203	2.193E+4	0.589
8430.	4.194	2.193E+4	0.581
8435.	4.178	2.194E+4	0.583
8440.	4.19	2.194E+4	0.575
8445.	4.177	2.195E+4	0.576
8450.	4.165	2.195E+4	0.569
8455.	4.183	2.196E+4	0.573
8460.	4.178	2.196E+4	0.574
8465.	4.187	2.197E+4	0.571
8470.	4.164	2.197E+4	0.571
8475.	4.154	2.198E+4	0.58
8480.	4.138	2.198E+4	0.57
8485.	4.134	2.199E+4	0.569
8490.	4.125	2.199E+4	0.565
8495.	4.12	2.2E+4	0.566
8500.	4.111	2.2E+4	0.562
8505.	4.102	2.201E+4	0.565
8510.	4.09	2.201E+4	0.555
8515.	4.084	2.202E+4	0.553
8520.	4.081	2.202E+4	0.555
8525.	4.077	2.203E+4	0.555
8530.	4.061	2.203E+4	0.556
8535.	4.058	2.204E+4	0.55
8540.	4.055	2.204E+4	0.547
8545.	4.033	2.205E+4	0.554
8550.	4.032	2.205E+4	0.548
8555.	4.026	2.206E+4	0.543
8560.	4.017	2.206E+4	0.544
8565.	4.016	2.207E+4	0.552
8570.	4.005	2.207E+4	0.537
8575.	4.	2.208E+4	0.546
8580.	3.99	2.208E+4	0.541
8585.	3.987	2.209E+4	0.539

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
8590.	3.988	2.209E+4	0.532
8595.	3.989	2.21E+4	0.527
8600.	3.975	2.21E+4	0.528
8605.	3.968	2.211E+4	0.531
8610.	3.962	2.211E+4	0.53
8615.	3.956	2.212E+4	0.521
8620.	3.948	2.212E+4	0.518
8625.	3.947	2.213E+4	0.526
8630.	3.939	2.213E+4	0.515
8635.	3.939	2.214E+4	0.515
8640.	3.938	2.214E+4	0.507
8645.	3.931	2.215E+4	0.512
8650.	3.925	2.215E+4	0.508
8655.	3.926	2.216E+4	0.505
8660.	3.917	2.216E+4	0.503
8665.	3.909	2.217E+4	0.5
8670.	3.905	2.217E+4	0.496
8675.	3.895	2.218E+4	0.492
8680.	3.898	2.218E+4	0.496
8685.	3.887	2.219E+4	0.49
8690.	3.881	2.219E+4	0.487
8695.	3.881	2.22E+4	0.487
8700.	3.884	2.22E+4	0.492
8705.	3.876	2.221E+4	0.48
8710.	3.87	2.221E+4	0.486
8715.	3.889	2.222E+4	0.479
8720.	3.877	2.222E+4	0.481
8725.	3.868	2.223E+4	0.48
8730.	3.863	2.223E+4	0.476
8735.	3.854	2.224E+4	0.474
8740.	3.854	2.224E+4	0.468
8745.	3.851	2.225E+4	0.472
8750.	3.845	2.225E+4	0.469
8755.	3.842	2.226E+4	0.464
8760.	3.841	2.226E+4	0.464
8765.	3.838	2.227E+4	0.462
8770.	3.835	2.227E+4	0.461
8775.	3.825	2.228E+4	0.454
8780.	3.834	2.228E+4	0.455
8785.	3.83	2.229E+4	0.451
8790.	3.823	2.229E+4	0.454
8795.	3.829	2.23E+4	0.449
8800.	3.824	2.23E+4	0.45
8805.	3.825	2.231E+4	0.44
8810.	3.817	2.231E+4	0.442
8815.	3.819	2.232E+4	0.445
8820.	3.82	2.232E+4	0.439
8825.	3.821	2.233E+4	0.439
8830.	3.822	2.233E+4	0.438
8835.	3.818	2.234E+4	0.431
8840.	3.819	2.234E+4	0.436
8845.	3.81	2.235E+4	0.434
8850.	3.81	2.235E+4	0.431

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
8855.	3.807	2.236E+4	0.436
8860.	3.802	2.236E+4	0.425
8865.	3.799	2.237E+4	0.425
8870.	3.798	2.237E+4	0.425
8875.	3.796	2.238E+4	0.423
8880.	3.789	2.238E+4	0.427
8885.	3.786	2.239E+4	0.425
8890.	3.787	2.239E+4	0.431
8895.	3.784	2.24E+4	0.419
8900.	3.783	2.24E+4	0.423
8905.	3.771	2.241E+4	0.421
8910.	3.777	2.241E+4	0.418
8915.	3.776	2.242E+4	0.418
8920.	3.771	2.242E+4	0.418
8925.	3.77	2.243E+4	0.414
8930.	3.768	2.243E+4	0.414
8935.	3.766	2.244E+4	0.417
8940.	3.762	2.244E+4	0.413
8945.	3.756	2.245E+4	0.415
8950.	3.754	2.245E+4	0.413
8955.	3.75	2.246E+4	0.41
8960.	3.739	2.246E+4	0.412
8965.	3.736	2.247E+4	0.406
8970.	3.735	2.247E+4	0.403
8975.	3.736	2.248E+4	0.4
8980.	3.732	2.248E+4	0.401
8985.	3.73	2.249E+4	0.403
8990.	3.743	2.249E+4	0.394
8995.	3.737	2.25E+4	0.397
9000.	3.722	2.25E+4	0.398
9005.	3.723	2.251E+4	0.398
9010.	3.716	2.251E+4	0.402
9015.	3.711	2.252E+4	0.399
9020.	3.709	2.252E+4	0.4
9025.	3.707	2.253E+4	0.399
9030.	3.701	2.253E+4	0.394
9035.	3.691	2.254E+4	0.396
9040.	3.693	2.254E+4	0.398
9045.	3.693	2.255E+4	0.387
9050.	3.684	2.255E+4	0.39
9055.	3.681	2.256E+4	0.391
9060.	3.691	2.256E+4	0.397
9065.	3.688	2.257E+4	0.389
9070.	3.684	2.257E+4	0.391
9075.	3.679	2.258E+4	0.39
9080.	3.682	2.258E+4	0.396
9085.	3.679	2.259E+4	0.389
9090.	3.669	2.259E+4	0.394
9095.	3.662	2.26E+4	0.394
9100.	3.663	2.26E+4	0.391
9105.	3.656	2.261E+4	0.393
9110.	3.653	2.261E+4	0.389
9115.	3.637	2.262E+4	0.398

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
9120.	3.635	2.262E+4	0.394
9125.	3.633	2.263E+4	0.399
9130.	3.629	2.263E+4	0.397
9135.	3.625	2.264E+4	0.387
9140.	3.622	2.264E+4	0.398
9145.	3.619	2.265E+4	0.393
9150.	3.613	2.265E+4	0.397
9155.	3.606	2.266E+4	0.394
9160.	3.599	2.266E+4	0.403
9165.	3.601	2.267E+4	0.399
9170.	3.597	2.267E+4	0.4
9175.	3.596	2.268E+4	0.4
9180.	3.591	2.268E+4	0.402
9185.	3.582	2.269E+4	0.403
9190.	3.584	2.269E+4	0.407
9195.	3.574	2.27E+4	0.409
9200.	3.572	2.27E+4	0.427
9205.	3.568	2.271E+4	0.427
9210.	3.564	2.271E+4	0.425
9215.	3.559	2.272E+4	0.432
9220.	3.555	2.272E+4	0.431
9225.	3.549	2.273E+4	0.43
9230.	3.553	2.273E+4	0.435
9235.	3.54	2.274E+4	0.433
9240.	3.537	2.274E+4	0.446
9245.	3.532	2.275E+4	0.451
9250.	3.525	2.275E+4	0.459
9255.	3.52	2.276E+4	0.458
9260.	3.517	2.276E+4	0.461
9265.	3.509	2.277E+4	0.461
9270.	3.508	2.277E+4	0.465
9275.	3.5	2.278E+4	0.468
9280.	3.494	2.278E+4	0.466
9285.	3.49	2.279E+4	0.466
9290.	3.488	2.279E+4	0.474
9295.	3.484	2.28E+4	0.479
9300.	3.47	2.28E+4	0.479
9305.	3.471	2.281E+4	0.486
9310.	3.461	2.281E+4	0.488
9315.	3.455	2.282E+4	0.485
9320.	3.449	2.282E+4	0.492
9325.	3.448	2.283E+4	0.487
9330.	3.44	2.283E+4	0.492
9335.	3.439	2.284E+4	0.497
9340.	3.431	2.284E+4	0.504
9345.	3.428	2.285E+4	0.506
9350.	3.426	2.285E+4	0.508
9355.	3.42	2.286E+4	0.505
9360.	3.414	2.286E+4	0.504
9365.	3.406	2.287E+4	0.51
9370.	3.405	2.287E+4	0.504
9375.	3.394	2.288E+4	0.504
9380.	3.392	2.288E+4	0.507

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
9385.	3.383	2.289E+4	0.505
9390.	3.383	2.289E+4	0.504
9395.	3.374	2.29E+4	0.508
9400.	3.365	2.29E+4	0.523
9405.	3.361	2.291E+4	0.54
9410.	3.36	2.291E+4	0.534
9415.	3.356	2.292E+4	0.528
9420.	3.347	2.292E+4	0.526
9425.	3.343	2.293E+4	0.52
9430.	3.34	2.293E+4	0.515
9435.	3.329	2.294E+4	0.512
9440.	3.328	2.294E+4	0.523
9445.	3.322	2.295E+4	0.52
9450.	3.316	2.295E+4	0.516
9455.	3.319	2.296E+4	0.519
9460.	3.31	2.296E+4	0.514
9465.	3.299	2.297E+4	0.514
9470.	3.303	2.297E+4	0.51
9475.	3.29	2.298E+4	0.515
9480.	3.293	2.298E+4	0.517
9485.	3.292	2.299E+4	0.516
9490.	3.284	2.299E+4	0.512
9495.	3.276	2.3E+4	0.519
9500.	3.274	2.3E+4	0.51
9505.	3.271	2.301E+4	0.506
9510.	3.265	2.301E+4	0.505
9515.	3.259	2.302E+4	0.508
9520.	3.251	2.302E+4	0.505
9525.	3.251	2.303E+4	0.502
9530.	3.244	2.303E+4	0.507
9535.	3.238	2.304E+4	0.5
9540.	3.236	2.304E+4	0.499
9545.	3.229	2.305E+4	0.5
9550.	3.224	2.305E+4	0.504
9555.	3.214	2.306E+4	0.497
9560.	3.218	2.306E+4	0.498
9565.	3.207	2.307E+4	0.497
9570.	3.205	2.307E+4	0.497
9575.	3.198	2.308E+4	0.492
9580.	3.212	2.308E+4	0.492
9585.	3.208	2.309E+4	0.492
9590.	3.202	2.309E+4	0.49
9595.	3.189	2.31E+4	0.488
9600.	3.191	2.31E+4	0.485
9605.	3.185	2.311E+4	0.485
9610.	3.18	2.311E+4	0.483
9615.	3.175	2.312E+4	0.483
9620.	3.168	2.312E+4	0.479
9625.	3.168	2.313E+4	0.483
9630.	3.168	2.313E+4	0.482
9635.	3.165	2.314E+4	0.48
9640.	3.158	2.314E+4	0.473
9645.	3.164	2.315E+4	0.469

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
9650.	3.16	2.315E+4	0.473
9655.	3.16	2.316E+4	0.474
9660.	3.162	2.316E+4	0.474
9665.	3.169	2.317E+4	0.466
9670.	3.158	2.317E+4	0.469
9675.	3.166	2.318E+4	0.464
9680.	3.165	2.318E+4	0.462
9685.	3.177	2.319E+4	0.46
9690.	3.172	2.319E+4	0.458
9695.	3.173	2.32E+4	0.455
9700.	3.183	2.32E+4	0.455
9705.	3.186	2.321E+4	0.453
9710.	3.197	2.321E+4	0.455
9715.	3.203	2.322E+4	0.458
9720.	3.211	2.322E+4	0.454
9725.	3.213	2.323E+4	0.455
9730.	3.213	2.323E+4	0.453
9735.	3.221	2.324E+4	0.451
9740.	3.222	2.324E+4	0.444
9745.	3.227	2.325E+4	0.45
9750.	3.238	2.325E+4	0.445
9755.	3.234	2.326E+4	0.441
9760.	3.242	2.326E+4	0.445
9765.	3.243	2.327E+4	0.447
9770.	3.245	2.327E+4	0.444
9775.	3.245	2.328E+4	0.443
9780.	3.255	2.328E+4	0.444
9785.	3.255	2.329E+4	0.445
9790.	3.251	2.329E+4	0.445
9795.	3.258	2.33E+4	0.438
9800.	3.261	2.33E+4	0.437
9805.	3.268	2.331E+4	0.437
9810.	3.269	2.331E+4	0.439
9815.	3.271	2.332E+4	0.442
9820.	3.264	2.332E+4	0.435
9825.	3.266	2.333E+4	0.432
9830.	3.264	2.333E+4	0.434
9835.	3.264	2.334E+4	0.434
9840.	3.257	2.334E+4	0.434
9845.	3.252	2.335E+4	0.437
9850.	3.257	2.335E+4	0.431
9855.	3.256	2.336E+4	0.434
9860.	3.254	2.336E+4	0.427
9865.	3.248	2.337E+4	0.434
9870.	3.253	2.337E+4	0.43
9875.	3.252	2.338E+4	0.44
9880.	3.251	2.338E+4	0.436
9885.	3.249	2.339E+4	0.433
9890.	3.254	2.339E+4	0.432
9895.	3.255	2.34E+4	0.431
9900.	3.249	2.34E+4	0.419
9905.	3.247	2.341E+4	0.425
9910.	3.252	2.341E+4	0.422

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
9915.	3.252	2.342E+4	0.424
9920.	3.239	2.342E+4	0.419
9925.	3.24	2.343E+4	0.416
9930.	3.233	2.343E+4	0.423
9935.	3.224	2.344E+4	0.418
9940.	3.222	2.344E+4	0.42
9945.	3.222	2.345E+4	0.414
9950.	3.211	2.345E+4	0.411
9955.	3.204	2.346E+4	0.425
9960.	3.204	2.346E+4	0.426
9965.	3.201	2.347E+4	0.431
9970.	3.183	2.347E+4	0.429
9975.	3.192	2.348E+4	0.422
9980.	3.186	2.348E+4	0.419
9985.	3.19	2.349E+4	0.417
9990.	3.176	2.349E+4	0.414
9995.	3.167	2.35E+4	0.408
10000.	3.169	2.35E+4	0.411
1.001E+4	3.154	2.351E+4	0.407
1.001E+4	3.157	2.351E+4	0.401
1.002E+4	3.146	2.352E+4	0.405
1.002E+4	3.135	2.352E+4	0.403
1.003E+4	3.129	2.353E+4	0.399
1.003E+4	3.126	2.353E+4	0.396
1.004E+4	3.121	2.354E+4	0.393
1.004E+4	3.11	2.354E+4	0.398
1.005E+4	3.102	2.355E+4	0.39
1.005E+4	3.095	2.355E+4	0.39
1.006E+4	3.092	2.356E+4	0.392
1.006E+4	3.088	2.356E+4	0.387
1.007E+4	3.073	2.357E+4	0.387
1.007E+4	3.071	2.357E+4	0.381
1.008E+4	3.07	2.358E+4	0.376
1.008E+4	3.054	2.358E+4	0.37
1.009E+4	3.058	2.359E+4	0.372
1.009E+4	3.05	2.359E+4	0.368
1.01E+4	3.043	2.36E+4	0.367
1.01E+4	3.037	2.36E+4	0.37
1.011E+4	3.031	2.361E+4	0.367
1.011E+4	3.024	2.361E+4	0.362
1.012E+4	3.025	2.362E+4	0.356
1.012E+4	3.021	2.362E+4	0.357
1.013E+4	3.012	2.363E+4	0.354
1.013E+4	3.007	2.363E+4	0.35
1.014E+4	2.997	2.364E+4	0.353
1.014E+4	2.997	2.364E+4	0.344
1.015E+4	3.006	2.365E+4	0.345
1.015E+4	3.03	2.365E+4	0.341
1.016E+4	3.014	2.366E+4	0.336
1.016E+4	2.994	2.366E+4	0.336
1.017E+4	2.987	2.367E+4	0.34
1.017E+4	2.97	2.367E+4	0.335
1.018E+4	2.968	2.368E+4	0.336

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
1.018E+4	2.959	2.368E+4	0.329
1.019E+4	2.949	2.369E+4	0.331
1.019E+4	2.947	2.369E+4	0.325
1.02E+4	2.937	2.37E+4	0.322
1.02E+4	2.932	2.37E+4	0.322
1.021E+4	2.926	2.371E+4	0.321
1.021E+4	2.922	2.371E+4	0.317
1.022E+4	2.917	2.372E+4	0.323
1.022E+4	2.913	2.372E+4	0.316
1.023E+4	2.902	2.373E+4	0.312
1.023E+4	2.898	2.373E+4	0.308
1.024E+4	2.889	2.374E+4	0.304
1.024E+4	2.89	2.374E+4	0.31
1.025E+4	2.882	2.375E+4	0.3
1.025E+4	2.887	2.375E+4	0.298
1.026E+4	2.884	2.376E+4	0.296
1.026E+4	2.879	2.376E+4	0.296
1.027E+4	2.861	2.377E+4	0.292
1.027E+4	2.862	2.377E+4	0.295
1.028E+4	2.86	2.378E+4	0.282
1.028E+4	2.855	2.378E+4	0.282
1.029E+4	2.848	2.379E+4	0.284
1.029E+4	2.842	2.379E+4	0.276
1.03E+4	2.851	2.38E+4	0.284
1.03E+4	2.839	2.38E+4	0.283
1.031E+4	2.831	2.381E+4	0.272
1.031E+4	2.832	2.381E+4	0.276
1.032E+4	2.826	2.382E+4	0.278
1.032E+4	2.823	2.382E+4	0.269
1.033E+4	2.81	2.383E+4	0.27
1.033E+4	2.803	2.383E+4	0.267
1.034E+4	2.806	2.384E+4	0.268
1.034E+4	2.8	2.384E+4	0.27
1.035E+4	2.793	2.385E+4	0.269
1.035E+4	2.786	2.385E+4	0.27
1.036E+4	2.784	2.386E+4	0.267
1.036E+4	2.786	2.386E+4	0.26
1.037E+4	2.781	2.387E+4	0.258
1.037E+4	2.778	2.387E+4	0.256
1.038E+4	2.762	2.388E+4	0.26
1.038E+4	2.766	2.388E+4	0.251
1.039E+4	2.766	2.389E+4	0.254
1.039E+4	2.756	2.389E+4	0.252
1.04E+4	2.752	2.39E+4	0.251
1.04E+4	2.752	2.39E+4	0.251
1.041E+4	2.742	2.391E+4	0.259
1.041E+4	2.745	2.391E+4	0.251
1.042E+4	2.743	2.392E+4	0.265
1.042E+4	2.727	2.392E+4	0.261
1.043E+4	2.734	2.393E+4	0.275
1.043E+4	2.733	2.393E+4	0.257
1.044E+4	2.724	2.394E+4	0.265
1.044E+4	2.724	2.394E+4	0.266

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
1.045E+4	2.718	2.395E+4	0.27
1.045E+4	2.732	2.395E+4	0.275
1.046E+4	2.731	2.396E+4	0.267
1.046E+4	2.716	2.396E+4	0.273
1.047E+4	2.708	2.397E+4	0.272
1.047E+4	2.706	2.397E+4	0.279
1.048E+4	2.7	2.398E+4	0.311
1.048E+4	2.703	2.398E+4	0.313
1.049E+4	2.695	2.399E+4	0.307
1.049E+4	2.696	2.399E+4	0.298
1.05E+4	2.684	2.4E+4	0.307
1.05E+4	2.686	2.4E+4	0.286
1.051E+4	2.682	2.401E+4	0.297
1.051E+4	2.683	2.401E+4	0.29
1.052E+4	2.679	2.402E+4	0.3
1.052E+4	2.669	2.402E+4	0.291
1.053E+4	2.67	2.403E+4	0.294
1.053E+4	2.672	2.403E+4	0.304
1.054E+4	2.678	2.404E+4	0.295
1.054E+4	2.668	2.404E+4	0.304
1.055E+4	2.663	2.405E+4	0.302
1.055E+4	2.663	2.405E+4	0.298
1.056E+4	2.657	2.406E+4	0.304
1.056E+4	2.654	2.406E+4	0.314
1.057E+4	2.651	2.407E+4	0.312
1.057E+4	2.651	2.407E+4	0.319
1.058E+4	2.646	2.408E+4	0.324
1.058E+4	2.641	2.408E+4	0.331
1.059E+4	2.633	2.409E+4	0.348
1.059E+4	2.632	2.409E+4	0.358
1.06E+4	2.638	2.41E+4	0.367
1.06E+4	2.628	2.41E+4	0.371
1.061E+4	2.621	2.411E+4	0.388
1.061E+4	2.622	2.411E+4	0.401
1.062E+4	2.619	2.412E+4	0.412
1.062E+4	2.615	2.412E+4	0.421
1.063E+4	2.618	2.413E+4	0.431
1.063E+4	2.61	2.413E+4	0.439
1.064E+4	2.606	2.414E+4	0.447
1.064E+4	2.603	2.414E+4	0.454
1.065E+4	2.595	2.415E+4	0.464
1.065E+4	2.602	2.415E+4	0.481
1.066E+4	2.59	2.416E+4	0.483
1.066E+4	2.593	2.416E+4	0.488
1.067E+4	2.586	2.417E+4	0.496
1.067E+4	2.582	2.417E+4	0.505
1.068E+4	2.585	2.418E+4	0.51
1.068E+4	2.582	2.418E+4	0.516
1.069E+4	2.574	2.419E+4	0.514
1.069E+4	2.575	2.419E+4	0.515
1.07E+4	2.572	2.42E+4	0.529
1.07E+4	2.564	2.42E+4	0.529
1.071E+4	2.562	2.421E+4	0.532

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
1.071E+4	2.552	2.421E+4	0.54
1.072E+4	2.548	2.422E+4	0.537
1.072E+4	2.549	2.422E+4	0.535
1.073E+4	2.543	2.423E+4	0.543
1.073E+4	2.549	2.423E+4	0.544
1.074E+4	2.544	2.424E+4	0.549
1.074E+4	2.536	2.424E+4	0.547
1.075E+4	2.527	2.425E+4	0.556
1.075E+4	2.527	2.425E+4	0.552
1.076E+4	2.521	2.426E+4	0.556
1.076E+4	2.521	2.426E+4	0.559
1.077E+4	2.514	2.427E+4	0.565
1.077E+4	2.513	2.427E+4	0.557
1.078E+4	2.504	2.428E+4	0.559
1.078E+4	2.497	2.428E+4	0.552
1.079E+4	2.495	2.429E+4	0.556
1.079E+4	2.491	2.429E+4	0.558
1.08E+4	2.49	2.43E+4	0.553
1.08E+4	2.497	2.43E+4	0.557
1.081E+4	2.488	2.431E+4	0.556
1.081E+4	2.477	2.431E+4	0.555
1.082E+4	2.479	2.432E+4	0.549
1.082E+4	2.472	2.432E+4	0.549
1.083E+4	2.472	2.433E+4	0.545
1.083E+4	2.463	2.433E+4	0.542
1.084E+4	2.463	2.434E+4	0.544
1.084E+4	2.455	2.434E+4	0.541
1.085E+4	2.454	2.435E+4	0.532
1.085E+4	2.456	2.435E+4	0.531
1.086E+4	2.445	2.436E+4	0.532
1.086E+4	2.444	2.436E+4	0.525
1.087E+4	2.437	2.437E+4	0.521
1.087E+4	2.437	2.437E+4	0.519
1.088E+4	2.434	2.438E+4	0.515
1.088E+4	2.429	2.438E+4	0.516
1.089E+4	2.429	2.439E+4	0.509
1.089E+4	2.421	2.439E+4	0.503
1.09E+4	2.422	2.44E+4	0.517
1.09E+4	2.418	2.44E+4	0.509
1.091E+4	2.411	2.441E+4	0.506
1.091E+4	2.409	2.441E+4	0.492
1.092E+4	2.41	2.442E+4	0.496
1.092E+4	2.405	2.442E+4	0.491
1.093E+4	2.401	2.443E+4	0.484
1.093E+4	2.396	2.443E+4	0.485
1.094E+4	2.397	2.444E+4	0.482
1.094E+4	2.394	2.444E+4	0.482
1.095E+4	2.391	2.445E+4	0.474
1.095E+4	2.392	2.445E+4	0.469
1.096E+4	2.389	2.446E+4	0.471
1.096E+4	2.384	2.446E+4	0.465
1.097E+4	2.382	2.447E+4	0.467
1.097E+4	2.382	2.447E+4	0.46

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
1.098E+4	2.37	2.448E+4	0.46
1.098E+4	2.366	2.448E+4	0.458
1.099E+4	2.364	2.449E+4	0.447
1.099E+4	2.368	2.449E+4	0.449
1.1E+4	2.363	2.45E+4	0.45
1.1E+4	2.358	2.45E+4	0.444
1.101E+4	2.36	2.451E+4	0.442
1.101E+4	2.351	2.451E+4	0.442
1.102E+4	2.351	2.452E+4	0.428
1.102E+4	2.349	2.452E+4	0.42
1.103E+4	2.346	2.453E+4	0.424
1.103E+4	2.337	2.453E+4	0.424
1.104E+4	2.337	2.454E+4	0.422
1.104E+4	2.335	2.454E+4	0.418
1.105E+4	2.337	2.455E+4	0.422
1.105E+4	2.333	2.455E+4	0.416
1.106E+4	2.331	2.456E+4	0.415
1.106E+4	2.328	2.456E+4	0.409
1.107E+4	2.317	2.457E+4	0.413
1.107E+4	2.317	2.457E+4	0.414
1.108E+4	2.324	2.458E+4	0.411
1.108E+4	2.311	2.458E+4	0.403
1.109E+4	2.317	2.459E+4	0.401
1.109E+4	2.313	2.459E+4	0.395
1.11E+4	2.317	2.46E+4	0.397
1.11E+4	2.309	2.46E+4	0.39
1.111E+4	2.311	2.461E+4	0.389
1.111E+4	2.312	2.461E+4	0.385
1.112E+4	2.31	2.462E+4	0.385
1.112E+4	2.307	2.462E+4	0.383
1.113E+4	2.306	2.463E+4	0.383
1.113E+4	2.304	2.463E+4	0.393
1.114E+4	2.301	2.464E+4	0.39
1.114E+4	2.299	2.464E+4	0.384
1.115E+4	2.296	2.465E+4	0.377
1.115E+4	2.297	2.465E+4	0.378
1.116E+4	2.293	2.466E+4	0.371
1.116E+4	2.3	2.466E+4	0.371
1.117E+4	2.295	2.467E+4	0.368
1.117E+4	2.303	2.467E+4	0.374
1.118E+4	2.304	2.468E+4	0.363
1.118E+4	2.308	2.468E+4	0.364
1.119E+4	2.302	2.469E+4	0.358
1.119E+4	2.315	2.469E+4	0.353
1.12E+4	2.308	2.47E+4	0.355
1.12E+4	2.33	2.47E+4	0.359
1.121E+4	2.324	2.471E+4	0.363
1.121E+4	2.33	2.471E+4	0.359
1.122E+4	2.328	2.472E+4	0.354
1.122E+4	2.336	2.472E+4	0.354
1.123E+4	2.334	2.473E+4	0.354
1.123E+4	2.334	2.473E+4	0.351
1.124E+4	2.342	2.474E+4	0.352

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
1.124E+4	2.342	2.474E+4	0.345
1.125E+4	2.346	2.475E+4	0.351
1.125E+4	2.349	2.475E+4	0.358
1.126E+4	2.35	2.476E+4	0.357
1.126E+4	2.356	2.476E+4	0.351
1.127E+4	2.363	2.477E+4	0.354
1.127E+4	2.357	2.477E+4	0.35
1.128E+4	2.368	2.478E+4	0.344
1.128E+4	2.374	2.478E+4	0.355
1.129E+4	2.376	2.479E+4	0.342
1.129E+4	2.374	2.479E+4	0.347
1.13E+4	2.377	2.48E+4	0.343
1.13E+4	2.381	2.48E+4	0.341
1.131E+4	2.383	2.481E+4	0.336
1.131E+4	2.381	2.481E+4	0.337
1.132E+4	2.385	2.482E+4	0.347
1.132E+4	2.384	2.482E+4	0.338
1.133E+4	2.391	2.483E+4	0.336
1.133E+4	2.399	2.483E+4	0.337
1.134E+4	2.399	2.484E+4	0.334
1.134E+4	2.397	2.484E+4	0.335
1.135E+4	2.395	2.485E+4	0.329
1.135E+4	2.4	2.485E+4	0.332
1.136E+4	2.416	2.486E+4	0.33
1.136E+4	2.42	2.486E+4	0.329
1.137E+4	2.412	2.487E+4	0.327
1.137E+4	2.403	2.487E+4	0.332
1.138E+4	2.415	2.488E+4	0.323
1.138E+4	2.408	2.488E+4	0.326
1.139E+4	2.406	2.489E+4	0.324
1.139E+4	2.406	2.489E+4	0.323
1.14E+4	2.404	2.49E+4	0.324
1.14E+4	2.409	2.49E+4	0.326
1.141E+4	2.405	2.491E+4	0.324
1.141E+4	2.404	2.491E+4	0.324
1.142E+4	2.407	2.492E+4	0.324
1.142E+4	2.405	2.492E+4	0.322
1.143E+4	2.416	2.493E+4	0.311
1.143E+4	2.411	2.493E+4	0.311
1.144E+4	2.407	2.494E+4	0.316
1.144E+4	2.42	2.494E+4	0.311
1.145E+4	2.421	2.495E+4	0.318
1.145E+4	2.448	2.495E+4	0.31
1.146E+4	2.443	2.496E+4	0.31
1.146E+4	2.431	2.496E+4	0.306
1.147E+4	2.438	2.497E+4	0.308
1.147E+4	2.447	2.497E+4	0.306
1.148E+4	2.426	2.498E+4	0.309
1.148E+4	2.419	2.498E+4	0.302
1.149E+4	2.413	2.499E+4	0.301
1.149E+4	2.408	2.499E+4	0.304
1.15E+4	2.401	2.5E+4	0.298
1.15E+4	2.411	2.5E+4	0.297

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
1.151E+4	2.401	2.501E+4	0.297
1.151E+4	2.401	2.501E+4	0.295
1.152E+4	2.394	2.502E+4	0.291
1.152E+4	2.396	2.502E+4	0.289
1.153E+4	2.396	2.503E+4	0.29
1.153E+4	2.388	2.503E+4	0.289
1.154E+4	2.391	2.504E+4	0.283
1.154E+4	2.392	2.504E+4	0.287
1.155E+4	2.394	2.505E+4	0.279
1.155E+4	2.384	2.505E+4	0.276
1.156E+4	2.39	2.506E+4	0.279
1.156E+4	2.396	2.506E+4	0.271
1.157E+4	2.392	2.507E+4	0.275
1.157E+4	2.392	2.507E+4	0.27
1.158E+4	2.406	2.508E+4	0.273
1.158E+4	2.399	2.508E+4	0.268
1.159E+4	2.401	2.509E+4	0.264
1.159E+4	2.395	2.509E+4	0.26
1.16E+4	2.392	2.51E+4	0.27
1.16E+4	2.399	2.51E+4	0.261
1.161E+4	2.401	2.511E+4	0.258
1.161E+4	2.4	2.511E+4	0.254
1.162E+4	2.393	2.512E+4	0.25
1.162E+4	2.394	2.512E+4	0.258
1.163E+4	2.392	2.513E+4	0.252
1.163E+4	2.392	2.513E+4	0.246
1.164E+4	2.385	2.514E+4	0.248
1.164E+4	2.391	2.514E+4	0.242
1.165E+4	2.388	2.515E+4	0.246
1.165E+4	2.383	2.515E+4	0.238
1.166E+4	2.388	2.516E+4	0.235
1.166E+4	2.378	2.516E+4	0.229
1.167E+4	2.382	2.517E+4	0.23
1.167E+4	2.384	2.517E+4	0.224
1.168E+4	2.382	2.518E+4	0.226
1.168E+4	2.384	2.518E+4	0.224
1.169E+4	2.383	2.519E+4	0.22
1.169E+4	2.379	2.519E+4	0.217
1.17E+4	2.382	2.52E+4	0.219
1.17E+4	2.375	2.52E+4	0.219
1.171E+4	2.378	2.521E+4	0.212
1.171E+4	2.369	2.521E+4	0.213
1.172E+4	2.37	2.522E+4	0.206
1.172E+4	2.367	2.522E+4	0.207
1.173E+4	2.365	2.523E+4	0.208
1.173E+4	2.365	2.523E+4	0.205
1.174E+4	2.371	2.524E+4	0.201
1.174E+4	2.367	2.524E+4	0.195
1.175E+4	2.368	2.525E+4	0.197
1.175E+4	2.365	2.525E+4	0.194
1.176E+4	2.364	2.526E+4	0.196
1.176E+4	2.365	2.526E+4	0.194
1.177E+4	2.36	2.527E+4	0.187

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
1.177E+4	2.363	2.527E+4	0.192
1.178E+4	2.363	2.528E+4	0.19
1.178E+4	2.365	2.528E+4	0.193
1.179E+4	2.361	2.529E+4	0.182
1.179E+4	2.359	2.529E+4	0.18
1.18E+4	2.356	2.53E+4	0.186
1.18E+4	2.357	2.53E+4	0.179
1.181E+4	2.356	2.531E+4	0.179
1.181E+4	2.363	2.531E+4	0.182
1.182E+4	2.364	2.532E+4	0.174
1.182E+4	2.358	2.532E+4	0.175
1.183E+4	2.362	2.533E+4	0.173
1.183E+4	2.351	2.533E+4	0.172
1.184E+4	2.352	2.534E+4	0.168
1.184E+4	2.354	2.534E+4	0.171
1.185E+4	2.346	2.535E+4	0.164
1.185E+4	2.349	2.535E+4	0.169
1.186E+4	2.343	2.536E+4	0.166
1.186E+4	2.34	2.536E+4	0.172
1.187E+4	2.342	2.537E+4	0.164
1.187E+4	2.34	2.537E+4	0.158
1.188E+4	2.337	2.538E+4	0.159
1.188E+4	2.334	2.538E+4	0.159
1.189E+4	2.336	2.539E+4	0.165
1.189E+4	2.329	2.539E+4	0.161
1.19E+4	2.33	2.54E+4	0.163
1.19E+4	2.333	2.54E+4	0.162
1.191E+4	2.328	2.541E+4	0.154
1.191E+4	2.327	2.541E+4	0.158
1.192E+4	2.33	2.542E+4	0.153
1.192E+4	2.33	2.542E+4	0.16
1.193E+4	2.321	2.543E+4	0.159
1.193E+4	2.323	2.543E+4	0.162
1.194E+4	2.317	2.544E+4	0.163
1.194E+4	2.317	2.544E+4	0.157
1.195E+4	2.312	2.545E+4	0.158
1.195E+4	2.323	2.545E+4	0.161
1.196E+4	2.325	2.546E+4	0.159
1.196E+4	2.315	2.546E+4	0.163
1.197E+4	2.306	2.547E+4	0.166
1.197E+4	2.308	2.547E+4	0.163
1.198E+4	2.306	2.548E+4	0.162
1.198E+4	2.306	2.548E+4	0.16
1.199E+4	2.303	2.549E+4	0.166
1.199E+4	2.301	2.549E+4	0.168
1.2E+4	2.292	2.55E+4	0.167
1.2E+4	2.286	2.55E+4	0.166
1.201E+4	2.289	2.551E+4	0.171
1.201E+4	2.292	2.551E+4	0.166
1.202E+4	2.289	2.552E+4	0.165
1.202E+4	2.286	2.552E+4	0.169
1.203E+4	2.289	2.553E+4	0.171
1.203E+4	2.279	2.553E+4	0.172

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
1.204E+4	2.276	2.554E+4	0.167
1.204E+4	2.272	2.554E+4	0.17
1.205E+4	2.274	2.555E+4	0.174
1.205E+4	2.268	2.555E+4	0.166
1.206E+4	2.268	2.556E+4	0.174
1.206E+4	2.27	2.556E+4	0.167
1.207E+4	2.271	2.557E+4	0.176
1.207E+4	2.264	2.557E+4	0.177
1.208E+4	2.259	2.558E+4	0.175
1.208E+4	2.258	2.558E+4	0.178
1.209E+4	2.259	2.559E+4	0.178
1.209E+4	2.252	2.559E+4	0.18
1.21E+4	2.252	2.56E+4	0.184
1.21E+4	2.255	2.56E+4	0.185
1.211E+4	2.245	2.561E+4	0.187
1.211E+4	2.243	2.561E+4	0.191
1.212E+4	2.245	2.562E+4	0.213
1.212E+4	2.244	2.562E+4	0.209
1.213E+4	2.239	2.563E+4	0.21
1.213E+4	2.239	2.563E+4	0.216
1.214E+4	2.231	2.564E+4	0.222
1.214E+4	2.227	2.564E+4	0.216
1.215E+4	2.231	2.565E+4	0.226
1.215E+4	2.228	2.565E+4	0.232
1.216E+4	2.223	2.566E+4	0.228
1.216E+4	2.236	2.566E+4	0.235
1.217E+4	2.232	2.567E+4	0.242
1.217E+4	2.23	2.567E+4	0.245
1.218E+4	2.219	2.568E+4	0.249
1.218E+4	2.217	2.568E+4	0.254
1.219E+4	2.211	2.569E+4	0.253
1.219E+4	2.207	2.569E+4	0.261
1.22E+4	2.209	2.57E+4	0.261
1.22E+4	2.205	2.57E+4	0.264
1.221E+4	2.205	2.571E+4	0.266
1.221E+4	2.198	2.571E+4	0.273
1.222E+4	2.192	2.572E+4	0.28
1.222E+4	2.186	2.572E+4	0.271
1.223E+4	2.189	2.573E+4	0.278
1.223E+4	2.185	2.573E+4	0.279
1.224E+4	2.179	2.574E+4	0.284
1.224E+4	2.175	2.574E+4	0.303
1.225E+4	2.179	2.575E+4	0.297
1.225E+4	2.17	2.575E+4	0.301
1.226E+4	2.169	2.576E+4	0.296
1.226E+4	2.169	2.576E+4	0.3
1.227E+4	2.164	2.577E+4	0.298
1.227E+4	2.163	2.577E+4	0.299
1.228E+4	2.155	2.578E+4	0.301
1.228E+4	2.151	2.578E+4	0.298
1.229E+4	2.153	2.579E+4	0.297
1.229E+4	2.147	2.579E+4	0.3
1.23E+4	2.145	2.58E+4	0.299

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
1.23E+4	2.143	2.58E+4	0.307
1.231E+4	2.139	2.581E+4	0.307
1.231E+4	2.141	2.581E+4	0.305
1.232E+4	2.127	2.582E+4	0.302
1.232E+4	2.124	2.582E+4	0.308
1.233E+4	2.129	2.583E+4	0.303
1.233E+4	2.131	2.583E+4	0.297
1.234E+4	2.126	2.584E+4	0.299
1.234E+4	2.122	2.584E+4	0.302
1.235E+4	2.119	2.585E+4	0.291
1.235E+4	2.114	2.585E+4	0.299
1.236E+4	2.112	2.586E+4	0.295
1.236E+4	2.109	2.586E+4	0.295
1.237E+4	2.108	2.587E+4	0.293
1.237E+4	2.101	2.587E+4	0.297
1.238E+4	2.095	2.588E+4	0.297
1.238E+4	2.089	2.588E+4	0.294
1.239E+4	2.088	2.589E+4	0.291
1.239E+4	2.084	2.589E+4	0.296
1.24E+4	2.079	2.59E+4	0.31
1.24E+4	2.08	2.59E+4	0.305
1.241E+4	2.074	2.591E+4	0.301
1.241E+4	2.075	2.591E+4	0.289
1.242E+4	2.074	2.592E+4	0.293
1.242E+4	2.067	2.592E+4	0.287
1.243E+4	2.062	2.593E+4	0.287
1.243E+4	2.072	2.593E+4	0.289
1.244E+4	2.06	2.594E+4	0.295
1.244E+4	2.058	2.594E+4	0.288
1.245E+4	2.061	2.595E+4	0.288
1.245E+4	2.055	2.595E+4	0.287
1.246E+4	2.053	2.596E+4	0.287
1.246E+4	2.054	2.596E+4	0.286
1.247E+4	2.051	2.597E+4	0.282
1.247E+4	2.049	2.597E+4	0.283
1.248E+4	2.045	2.598E+4	0.281
1.248E+4	2.049	2.598E+4	0.304
1.249E+4	2.041	2.599E+4	0.322
1.249E+4	2.037	2.599E+4	0.307
1.25E+4	2.04	2.6E+4	0.299
1.25E+4	2.038	2.6E+4	0.296
1.251E+4	2.037	2.601E+4	0.29
1.251E+4	2.03	2.601E+4	0.285
1.252E+4	2.035	2.602E+4	0.283
1.252E+4	2.03	2.602E+4	0.282
1.253E+4	2.031	2.603E+4	0.282
1.253E+4	2.03	2.603E+4	0.277
1.254E+4	2.028	2.604E+4	0.276
1.254E+4	2.027	2.604E+4	0.272
1.255E+4	2.028	2.605E+4	0.274
1.255E+4	2.026	2.605E+4	0.268
1.256E+4	2.036	2.606E+4	0.271
1.256E+4	2.037	2.606E+4	0.267

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
1.257E+4	2.039	2.607E+4	0.263
1.257E+4	2.035	2.607E+4	0.263
1.258E+4	2.041	2.608E+4	0.259
1.258E+4	2.051	2.608E+4	0.265
1.259E+4	2.055	2.609E+4	0.263
1.259E+4	2.065	2.609E+4	0.255
1.26E+4	2.079	2.61E+4	0.256
1.26E+4	2.09	2.61E+4	0.251
1.261E+4	2.1	2.611E+4	0.256
1.261E+4	2.111	2.611E+4	0.254
1.262E+4	2.123	2.612E+4	0.254
1.262E+4	2.136	2.612E+4	0.254
1.263E+4	2.148	2.613E+4	0.257
1.263E+4	2.157	2.613E+4	0.253
1.264E+4	2.174	2.614E+4	0.25
1.264E+4	2.179	2.614E+4	0.245
1.265E+4	2.189	2.615E+4	0.251
1.265E+4	2.206	2.615E+4	0.249
1.266E+4	2.212	2.616E+4	0.252
1.266E+4	2.223	2.616E+4	0.241
1.267E+4	2.227	2.617E+4	0.26
1.267E+4	2.236	2.617E+4	0.26
1.268E+4	2.242	2.618E+4	0.258
1.268E+4	2.251	2.618E+4	0.251
1.269E+4	2.263	2.619E+4	0.249
1.269E+4	2.267	2.619E+4	0.254
1.27E+4	2.292	2.62E+4	0.249
1.27E+4	2.287	2.62E+4	0.244
1.271E+4	2.292	2.621E+4	0.249
1.271E+4	2.291	2.621E+4	0.242
1.272E+4	2.293	2.622E+4	0.257
1.272E+4	2.295	2.622E+4	0.252
1.273E+4	2.3	2.623E+4	0.258
1.273E+4	2.301	2.623E+4	0.248
1.274E+4	2.305	2.624E+4	0.247
1.274E+4	2.312	2.624E+4	0.248
1.275E+4	2.311	2.625E+4	0.242
1.275E+4	2.305	2.625E+4	0.242
1.276E+4	2.313	2.626E+4	0.244
1.276E+4	2.31	2.626E+4	0.25
1.277E+4	2.32	2.627E+4	0.246
1.277E+4	2.319	2.627E+4	0.244
1.278E+4	2.321	2.628E+4	0.242
1.278E+4	2.324	2.628E+4	0.241
1.279E+4	2.329	2.629E+4	0.236
1.279E+4	2.316	2.629E+4	0.234
1.28E+4	2.318	2.63E+4	0.239
1.28E+4	2.339	2.63E+4	0.238
1.281E+4	2.33	2.631E+4	0.239
1.281E+4	2.334	2.631E+4	0.235
1.282E+4	2.331	2.632E+4	0.234
1.282E+4	2.322	2.632E+4	0.233
1.283E+4	2.322	2.633E+4	0.233

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
1.283E+4	2.322	2.633E+4	0.234
1.284E+4	2.323	2.634E+4	0.229
1.284E+4	2.318	2.634E+4	0.236
1.285E+4	2.344	2.635E+4	0.229
1.285E+4	2.354	2.635E+4	0.233
1.286E+4	2.339	2.636E+4	0.233
1.286E+4	2.355	2.636E+4	0.225
1.287E+4	2.341	2.637E+4	0.224
1.287E+4	2.333	2.637E+4	0.228
1.288E+4	2.329	2.638E+4	0.219
1.288E+4	2.324	2.638E+4	0.226
1.289E+4	2.318	2.639E+4	0.227
1.289E+4	2.314	2.639E+4	0.222
1.29E+4	2.308	2.64E+4	0.227
1.29E+4	2.303	2.64E+4	0.225
1.291E+4	2.296	2.641E+4	0.217
1.291E+4	2.298	2.641E+4	0.219
1.292E+4	2.29	2.642E+4	0.215
1.292E+4	2.292	2.642E+4	0.216
1.293E+4	2.29	2.643E+4	0.214
1.293E+4	2.286	2.643E+4	0.213
1.294E+4	2.279	2.644E+4	0.214
1.294E+4	2.28	2.644E+4	0.206
1.295E+4	2.269	2.645E+4	0.222
1.295E+4	2.273	2.645E+4	0.218
1.296E+4	2.269	2.646E+4	0.212
1.296E+4	2.266	2.646E+4	0.208
1.297E+4	2.261	2.647E+4	0.207
1.297E+4	2.26	2.647E+4	0.206
1.298E+4	2.254	2.648E+4	0.201
1.298E+4	2.262	2.648E+4	0.201
1.299E+4	2.251	2.649E+4	0.2
1.299E+4	2.25	2.649E+4	0.2
1.3E+4	2.237	2.65E+4	0.193
1.3E+4	2.239	2.65E+4	0.189
1.301E+4	2.233	2.651E+4	0.192
1.301E+4	2.233	2.651E+4	0.189
1.302E+4	2.228	2.652E+4	0.185
1.302E+4	2.228	2.652E+4	0.184
1.303E+4	2.221	2.653E+4	0.179
1.303E+4	2.225	2.653E+4	0.179
1.304E+4	2.229	2.654E+4	0.175
1.304E+4	2.215	2.654E+4	0.178
1.305E+4	2.214	2.655E+4	0.174
1.305E+4	2.212	2.655E+4	0.171
1.306E+4	2.207	2.656E+4	0.166
1.306E+4	2.202	2.656E+4	0.169
1.307E+4	2.198	2.657E+4	0.166
1.307E+4	2.193	2.657E+4	0.164
1.308E+4	2.183	2.658E+4	0.167
1.308E+4	2.182	2.658E+4	0.159
1.309E+4	2.178	2.659E+4	0.163
1.309E+4	2.176	2.659E+4	0.158

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
1.31E+4	2.168	2.66E+4	0.154
1.31E+4	2.165	2.66E+4	0.15
1.311E+4	2.159	2.661E+4	0.141
1.311E+4	2.153	2.661E+4	0.146
1.312E+4	2.155	2.662E+4	0.139
1.312E+4	2.143	2.662E+4	0.143
1.313E+4	2.146	2.663E+4	0.14
1.313E+4	2.136	2.663E+4	0.14
1.314E+4	2.132	2.664E+4	0.129
1.314E+4	2.129	2.664E+4	0.13
1.315E+4	2.133	2.665E+4	0.125
1.315E+4	2.117	2.665E+4	0.119
1.316E+4	2.108	2.666E+4	0.121
1.316E+4	2.111	2.666E+4	0.12
1.317E+4	2.103	2.667E+4	0.114
1.317E+4	2.098	2.667E+4	0.11
1.318E+4	2.097	2.668E+4	0.107
1.318E+4	2.098	2.668E+4	0.106
1.319E+4	2.095	2.669E+4	0.101
1.319E+4	2.094	2.669E+4	0.106
1.32E+4	2.086	2.67E+4	0.099
1.32E+4	2.079	2.67E+4	0.101
1.321E+4	2.084	2.671E+4	0.097
1.321E+4	2.071	2.671E+4	0.088
1.322E+4	2.073	2.672E+4	0.093
1.322E+4	2.067	2.672E+4	0.093
1.323E+4	2.066	2.673E+4	0.091
1.323E+4	2.062	2.673E+4	0.085
1.324E+4	2.054	2.674E+4	0.088
1.324E+4	2.054	2.674E+4	0.084
1.325E+4	2.051	2.675E+4	0.089
1.325E+4	2.049	2.675E+4	0.085
1.326E+4	2.04	2.676E+4	0.088
1.326E+4	2.04	2.676E+4	0.085
1.327E+4	2.04	2.677E+4	0.082
1.327E+4	2.038	2.677E+4	0.087
1.328E+4	2.026	2.678E+4	0.085
1.328E+4	2.025	2.678E+4	0.08
1.329E+4	2.024	2.679E+4	0.08
1.329E+4	2.044	2.679E+4	0.079
1.33E+4	2.048	2.68E+4	0.077
1.33E+4	2.036	2.68E+4	0.079
1.331E+4	2.031	2.681E+4	0.076
1.331E+4	2.021	2.681E+4	0.069
1.332E+4	2.015	2.682E+4	0.078
1.332E+4	2.008	2.682E+4	0.074
1.333E+4	2.007	2.683E+4	0.073
1.333E+4	2.006	2.683E+4	0.065
1.334E+4	1.998	2.684E+4	0.065
1.334E+4	1.998	2.684E+4	0.07
1.335E+4	1.996	2.685E+4	0.063
1.335E+4	1.993	2.685E+4	0.064
1.336E+4	1.976	2.686E+4	0.058

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
1.336E+4	1.98	2.686E+4	0.063
1.337E+4	1.979	2.687E+4	0.069
1.337E+4	1.973	2.687E+4	0.059
1.338E+4	1.981	2.688E+4	0.068
1.338E+4	1.975	2.688E+4	0.063
1.339E+4	1.962	2.689E+4	0.067
1.339E+4	1.965	2.689E+4	0.057
1.34E+4	1.964	2.69E+4	0.067
1.34E+4	1.961	2.69E+4	0.06
1.341E+4	1.954	2.691E+4	0.063
1.341E+4	1.953	2.691E+4	0.064
1.342E+4	1.944	2.692E+4	0.071
1.342E+4	1.954	2.692E+4	0.066
1.343E+4	1.949	2.693E+4	0.069
1.343E+4	1.945	2.693E+4	0.077
1.344E+4	1.959	2.694E+4	0.071
1.344E+4	1.945	2.694E+4	0.071
1.345E+4	1.945	2.695E+4	0.074
1.345E+4	1.944	2.695E+4	0.067
1.346E+4	1.934	2.696E+4	0.075
1.346E+4	1.938	2.696E+4	0.071
1.347E+4	1.935	2.697E+4	0.072
1.347E+4	1.933	2.697E+4	0.076
1.348E+4	1.932	2.698E+4	0.078
1.348E+4	1.926	2.698E+4	0.079
1.349E+4	1.924	2.699E+4	0.075
1.349E+4	1.925	2.699E+4	0.072
1.35E+4	1.916	2.7E+4	0.078
1.35E+4	1.918	2.7E+4	0.078

Observation Well No. 4: TH24-1

X Location: 0. ft
Y Location: 2414. ft

Radial distance from east pump well: 2414. ft

Fully Penetrating Well

No. of Observations: 5643

Observation Data

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
5.	0.006	1.412E+4	2.38
10.	0.005	1.412E+4	2.385
15.	0.01	1.413E+4	2.389
20.	0.014	1.413E+4	2.396
25.	0.026	1.414E+4	2.399
30.	0.046	1.414E+4	2.404
35.	0.089	1.415E+4	2.406
40.	0.122	1.415E+4	2.41
45.	0.164	1.416E+4	2.414
50.	0.218	1.416E+4	2.412

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
55.	0.282	1.417E+4	2.415
60.	0.349	1.417E+4	2.417
65.	0.424	1.418E+4	2.419
70.	0.499	1.418E+4	2.423
75.	0.598	1.419E+4	2.419
80.	0.666	1.419E+4	2.423
85.	0.764	1.42E+4	2.423
90.	0.845	1.42E+4	2.422
95.	0.937	1.421E+4	2.42
100.	1.038	1.421E+4	2.419
105.	1.124	1.422E+4	2.42
110.	1.235	1.422E+4	2.42
115.	1.333	1.423E+4	2.421
120.	1.427	1.423E+4	2.419
125.	1.524	1.424E+4	2.412
130.	1.624	1.424E+4	2.413
135.	1.722	1.425E+4	2.413
140.	1.82	1.425E+4	2.408
145.	1.917	1.426E+4	2.407
150.	2.016	1.426E+4	2.403
155.	2.113	1.427E+4	2.405
160.	2.209	1.427E+4	2.402
165.	2.305	1.428E+4	2.4
170.	2.397	1.428E+4	2.396
175.	2.497	1.429E+4	2.392
180.	2.586	1.429E+4	2.39
185.	2.681	1.43E+4	2.384
190.	2.777	1.43E+4	2.384
195.	2.867	1.431E+4	2.382
200.	2.961	1.431E+4	2.375
205.	3.049	1.432E+4	2.375
210.	3.14	1.432E+4	2.373
215.	3.231	1.433E+4	2.37
220.	3.322	1.433E+4	2.366
225.	3.409	1.434E+4	2.365
230.	3.499	1.434E+4	2.362
235.	3.582	1.435E+4	2.357
240.	3.666	1.435E+4	2.352
245.	3.754	1.436E+4	2.35
250.	3.834	1.436E+4	2.343
255.	3.921	1.437E+4	2.344
260.	4.006	1.437E+4	2.34
265.	4.09	1.438E+4	2.338
270.	4.17	1.438E+4	2.321
275.	4.25	1.439E+4	2.326
280.	4.332	1.439E+4	2.327
285.	4.416	1.44E+4	2.322
290.	4.491	1.44E+4	2.319
295.	4.573	1.441E+4	2.313
300.	4.649	1.441E+4	2.311
305.	4.726	1.442E+4	2.309
310.	4.801	1.442E+4	2.303
315.	4.879	1.443E+4	2.297

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
320.	4.955	1.443E+4	2.295
325.	5.028	1.444E+4	2.29
330.	5.103	1.444E+4	2.288
335.	5.175	1.445E+4	2.283
340.	5.247	1.445E+4	2.278
345.	5.32	1.446E+4	2.276
350.	5.387	1.446E+4	2.273
355.	5.462	1.447E+4	2.268
360.	5.53	1.447E+4	2.264
365.	5.596	1.448E+4	2.259
370.	5.669	1.448E+4	2.26
375.	5.736	1.449E+4	2.253
380.	5.803	1.449E+4	2.25
385.	5.869	1.45E+4	2.245
390.	5.935	1.45E+4	2.244
395.	6.004	1.451E+4	2.238
400.	6.068	1.451E+4	2.231
405.	6.13	1.452E+4	2.23
410.	6.193	1.452E+4	2.225
415.	6.258	1.453E+4	2.217
420.	6.323	1.453E+4	2.212
425.	6.383	1.454E+4	2.21
430.	6.446	1.454E+4	2.203
435.	6.508	1.455E+4	2.198
440.	6.565	1.455E+4	2.195
445.	6.626	1.456E+4	2.188
450.	6.686	1.456E+4	2.185
455.	6.744	1.457E+4	2.18
460.	6.801	1.457E+4	2.174
465.	6.86	1.458E+4	2.169
470.	6.917	1.458E+4	2.164
475.	6.974	1.459E+4	2.159
480.	7.03	1.459E+4	2.154
485.	7.086	1.46E+4	2.152
490.	7.142	1.46E+4	2.148
495.	7.197	1.461E+4	2.145
500.	7.255	1.461E+4	2.141
505.	7.31	1.462E+4	2.137
510.	7.363	1.462E+4	2.133
515.	7.419	1.463E+4	2.127
520.	7.468	1.463E+4	2.124
525.	7.525	1.464E+4	2.122
530.	7.579	1.464E+4	2.116
535.	7.629	1.465E+4	2.112
540.	7.683	1.465E+4	2.109
545.	7.733	1.466E+4	2.102
550.	7.783	1.466E+4	2.099
555.	7.836	1.467E+4	2.098
560.	7.888	1.467E+4	2.096
565.	7.938	1.468E+4	2.09
570.	7.988	1.468E+4	2.085
575.	8.039	1.469E+4	2.079
580.	8.089	1.469E+4	2.075

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
585.	8.136	1.47E+4	2.072
590.	8.185	1.47E+4	2.069
595.	8.235	1.471E+4	2.064
600.	8.283	1.471E+4	2.059
605.	8.329	1.472E+4	2.058
610.	8.378	1.472E+4	2.052
615.	8.427	1.473E+4	2.048
620.	8.472	1.473E+4	2.046
625.	8.519	1.474E+4	2.043
630.	8.565	1.474E+4	2.038
635.	8.611	1.475E+4	2.035
640.	8.656	1.475E+4	2.032
645.	8.699	1.476E+4	2.026
650.	8.748	1.476E+4	2.022
655.	8.793	1.477E+4	2.019
660.	8.834	1.477E+4	2.016
665.	8.879	1.478E+4	2.014
670.	8.926	1.478E+4	2.009
675.	8.967	1.479E+4	2.006
680.	9.012	1.479E+4	2.001
685.	9.053	1.48E+4	1.999
690.	9.099	1.48E+4	1.995
695.	9.14	1.481E+4	1.99
700.	9.183	1.481E+4	1.986
705.	9.224	1.482E+4	1.983
710.	9.266	1.482E+4	1.982
715.	9.307	1.483E+4	1.977
720.	9.35	1.483E+4	1.971
725.	9.392	1.484E+4	1.968
730.	9.429	1.484E+4	1.965
735.	9.471	1.485E+4	1.962
740.	9.512	1.485E+4	1.959
745.	9.551	1.486E+4	1.954
750.	9.595	1.486E+4	1.95
755.	9.637	1.487E+4	1.945
760.	9.675	1.487E+4	1.944
765.	9.716	1.488E+4	1.94
770.	9.752	1.488E+4	1.936
775.	9.791	1.489E+4	1.932
780.	9.831	1.489E+4	1.931
785.	9.872	1.49E+4	1.927
790.	9.911	1.49E+4	1.924
795.	9.948	1.491E+4	1.92
800.	9.985	1.491E+4	1.918
805.	10.02	1.492E+4	1.911
810.	10.06	1.492E+4	1.909
815.	10.1	1.493E+4	1.893
820.	10.14	1.493E+4	1.901
825.	10.18	1.494E+4	1.896
830.	10.21	1.494E+4	1.89
835.	10.25	1.495E+4	1.885
840.	10.29	1.495E+4	1.88
845.	10.32	1.496E+4	1.88

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
850.	10.36	1.496E+4	1.876
855.	10.39	1.497E+4	1.872
860.	10.43	1.497E+4	1.872
865.	10.47	1.498E+4	1.867
870.	10.5	1.498E+4	1.865
875.	10.54	1.499E+4	1.861
880.	10.57	1.499E+4	1.859
885.	10.61	1.5E+4	1.856
890.	10.64	1.5E+4	1.854
895.	10.68	1.501E+4	1.852
900.	10.71	1.501E+4	1.849
905.	10.75	1.502E+4	1.848
910.	10.78	1.502E+4	1.843
915.	10.82	1.503E+4	1.839
920.	10.85	1.503E+4	1.838
925.	10.89	1.504E+4	1.833
930.	10.93	1.504E+4	1.83
935.	10.96	1.505E+4	1.814
940.	10.99	1.505E+4	1.824
945.	11.03	1.506E+4	1.82
950.	11.06	1.506E+4	1.817
955.	11.09	1.507E+4	1.811
960.	11.12	1.507E+4	1.804
965.	11.16	1.508E+4	1.803
970.	11.19	1.508E+4	1.802
975.	11.22	1.509E+4	1.792
980.	11.25	1.509E+4	1.793
985.	11.29	1.51E+4	1.788
990.	11.32	1.51E+4	1.786
995.	11.35	1.511E+4	1.77
1000.	11.38	1.511E+4	1.78
1005.	11.41	1.512E+4	1.773
1010.	11.45	1.512E+4	1.773
1015.	11.48	1.513E+4	1.768
1020.	11.51	1.513E+4	1.76
1025.	11.54	1.514E+4	1.759
1030.	11.57	1.514E+4	1.741
1035.	11.6	1.515E+4	1.749
1040.	11.64	1.515E+4	1.744
1045.	11.66	1.516E+4	1.74
1050.	11.7	1.516E+4	1.737
1055.	11.73	1.517E+4	1.73
1060.	11.76	1.517E+4	1.725
1065.	11.79	1.518E+4	1.721
1070.	11.82	1.518E+4	1.718
1075.	11.85	1.519E+4	1.718
1080.	11.89	1.519E+4	1.71
1085.	11.92	1.52E+4	1.706
1090.	11.95	1.52E+4	1.706
1095.	11.99	1.521E+4	1.697
1100.	12.03	1.521E+4	1.695
1105.	12.06	1.522E+4	1.69
1110.	12.1	1.522E+4	1.686

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
1115.	12.14	1.523E+4	1.684
1120.	12.18	1.523E+4	1.68
1125.	12.22	1.524E+4	1.676
1130.	12.26	1.524E+4	1.674
1135.	12.29	1.525E+4	1.665
1140.	12.33	1.525E+4	1.664
1145.	12.37	1.526E+4	1.66
1150.	12.41	1.526E+4	1.653
1155.	12.45	1.527E+4	1.648
1160.	12.49	1.527E+4	1.64
1165.	12.53	1.528E+4	1.637
1170.	12.57	1.528E+4	1.634
1175.	12.61	1.529E+4	1.633
1180.	12.65	1.529E+4	1.625
1185.	12.69	1.53E+4	1.621
1190.	12.73	1.53E+4	1.623
1195.	12.77	1.531E+4	1.618
1200.	12.81	1.531E+4	1.616
1205.	12.85	1.532E+4	1.615
1210.	12.89	1.532E+4	1.613
1215.	12.93	1.533E+4	1.602
1220.	12.97	1.533E+4	1.593
1225.	13.	1.534E+4	1.59
1230.	13.04	1.534E+4	1.588
1235.	13.08	1.535E+4	1.588
1240.	13.11	1.535E+4	1.586
1245.	13.15	1.536E+4	1.579
1250.	13.19	1.536E+4	1.574
1255.	13.22	1.537E+4	1.568
1260.	13.26	1.537E+4	1.565
1265.	13.29	1.538E+4	1.559
1270.	13.33	1.538E+4	1.555
1275.	13.37	1.539E+4	1.56
1280.	13.4	1.539E+4	1.555
1285.	13.44	1.54E+4	1.558
1290.	13.47	1.54E+4	1.546
1295.	13.5	1.541E+4	1.565
1300.	13.54	1.541E+4	1.568
1305.	13.57	1.542E+4	1.567
1310.	13.61	1.542E+4	1.566
1315.	13.64	1.543E+4	1.588
1320.	13.68	1.543E+4	1.584
1325.	13.71	1.544E+4	1.591
1330.	13.74	1.544E+4	1.595
1335.	13.78	1.545E+4	1.593
1340.	13.81	1.545E+4	1.599
1345.	13.85	1.546E+4	1.621
1350.	13.88	1.546E+4	1.616
1355.	13.91	1.547E+4	1.633
1360.	13.94	1.547E+4	1.632
1365.	13.98	1.548E+4	1.639
1370.	14.01	1.548E+4	1.64
1375.	14.04	1.549E+4	1.656

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
1380.	14.08	1.549E+4	1.656
1385.	14.11	1.55E+4	1.659
1390.	14.14	1.55E+4	1.662
1395.	14.18	1.551E+4	1.677
1400.	14.21	1.551E+4	1.671
1405.	14.24	1.552E+4	1.673
1410.	14.28	1.552E+4	1.659
1415.	14.31	1.553E+4	1.66
1420.	14.34	1.553E+4	1.678
1425.	14.37	1.554E+4	1.695
1430.	14.4	1.554E+4	1.694
1435.	14.44	1.555E+4	1.694
1440.	14.47	1.555E+4	1.694
1445.	14.49	1.556E+4	1.697
1450.	14.53	1.556E+4	1.687
1455.	14.56	1.557E+4	1.711
1460.	14.59	1.557E+4	1.697
1465.	14.62	1.558E+4	1.703
1470.	14.65	1.558E+4	1.7
1475.	14.68	1.559E+4	1.694
1480.	14.71	1.559E+4	1.695
1485.	14.74	1.56E+4	1.697
1490.	14.77	1.56E+4	1.692
1495.	14.8	1.561E+4	1.703
1500.	14.83	1.561E+4	1.692
1505.	14.87	1.562E+4	1.694
1510.	14.89	1.562E+4	1.703
1515.	14.92	1.563E+4	1.692
1520.	14.95	1.563E+4	1.693
1525.	14.98	1.564E+4	1.684
1530.	15.01	1.564E+4	1.681
1535.	15.04	1.565E+4	1.69
1540.	15.07	1.565E+4	1.671
1545.	15.1	1.566E+4	1.674
1550.	15.13	1.566E+4	1.685
1555.	15.16	1.567E+4	1.671
1560.	15.19	1.567E+4	1.667
1565.	15.22	1.568E+4	1.659
1570.	15.24	1.568E+4	1.645
1575.	15.28	1.569E+4	1.65
1580.	15.31	1.569E+4	1.659
1585.	15.34	1.57E+4	1.651
1590.	15.36	1.57E+4	1.655
1595.	15.39	1.571E+4	1.653
1600.	15.42	1.571E+4	1.649
1605.	15.45	1.572E+4	1.625
1610.	15.48	1.572E+4	1.642
1615.	15.5	1.573E+4	1.625
1620.	15.53	1.573E+4	1.623
1625.	15.56	1.574E+4	1.626
1630.	15.59	1.574E+4	1.628
1635.	15.62	1.575E+4	1.623
1640.	15.64	1.575E+4	1.618

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
1645.	15.67	1.576E+4	1.617
1650.	15.7	1.576E+4	1.606
1655.	15.73	1.577E+4	1.614
1660.	15.75	1.577E+4	1.588
1665.	15.78	1.578E+4	1.603
1670.	15.81	1.578E+4	1.585
1675.	15.83	1.579E+4	1.584
1680.	15.86	1.579E+4	1.584
1685.	15.89	1.58E+4	1.58
1690.	15.91	1.58E+4	1.572
1695.	15.94	1.581E+4	1.569
1700.	15.97	1.581E+4	1.563
1705.	15.99	1.582E+4	1.566
1710.	16.02	1.582E+4	1.565
1715.	16.04	1.583E+4	1.558
1720.	16.07	1.583E+4	1.558
1725.	16.1	1.584E+4	1.553
1730.	16.12	1.584E+4	1.551
1735.	16.15	1.585E+4	1.549
1740.	16.18	1.585E+4	1.543
1745.	16.2	1.586E+4	1.542
1750.	16.23	1.586E+4	1.54
1755.	16.25	1.587E+4	1.536
1760.	16.28	1.587E+4	1.535
1765.	16.31	1.588E+4	1.528
1770.	16.33	1.588E+4	1.525
1775.	16.36	1.589E+4	1.52
1780.	16.39	1.589E+4	1.516
1785.	16.41	1.59E+4	1.509
1790.	16.44	1.59E+4	1.506
1795.	16.46	1.591E+4	1.502
1800.	16.49	1.591E+4	1.5
1805.	16.51	1.592E+4	1.499
1810.	16.54	1.592E+4	1.494
1815.	16.56	1.593E+4	1.491
1820.	16.59	1.593E+4	1.488
1825.	16.61	1.594E+4	1.483
1830.	16.64	1.594E+4	1.482
1835.	16.66	1.595E+4	1.479
1840.	16.69	1.595E+4	1.478
1845.	16.71	1.596E+4	1.474
1850.	16.74	1.596E+4	1.472
1855.	16.76	1.597E+4	1.47
1860.	16.79	1.597E+4	1.467
1865.	16.81	1.598E+4	1.468
1870.	16.83	1.598E+4	1.465
1875.	16.86	1.599E+4	1.46
1880.	16.89	1.599E+4	1.456
1885.	16.91	1.6E+4	1.453
1890.	16.93	1.6E+4	1.451
1895.	16.96	1.601E+4	1.445
1900.	16.98	1.601E+4	1.444
1905.	17.01	1.602E+4	1.439

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
1910.	17.03	1.602E+4	1.432
1915.	17.05	1.603E+4	1.43
1920.	17.07	1.603E+4	1.426
1925.	17.1	1.604E+4	1.423
1930.	17.12	1.604E+4	1.421
1935.	17.14	1.605E+4	1.415
1940.	17.16	1.605E+4	1.41
1945.	17.18	1.606E+4	1.406
1950.	17.21	1.606E+4	1.405
1955.	17.23	1.607E+4	1.402
1960.	17.25	1.607E+4	1.401
1965.	17.27	1.608E+4	1.392
1970.	17.29	1.608E+4	1.397
1975.	17.32	1.609E+4	1.388
1980.	17.34	1.609E+4	1.392
1985.	17.36	1.61E+4	1.384
1990.	17.38	1.61E+4	1.387
1995.	17.4	1.611E+4	1.383
2000.	17.42	1.611E+4	1.383
2005.	17.45	1.612E+4	1.379
2010.	17.47	1.612E+4	1.377
2015.	17.49	1.613E+4	1.371
2020.	17.51	1.613E+4	1.371
2025.	17.53	1.614E+4	1.368
2030.	17.55	1.614E+4	1.363
2035.	17.57	1.615E+4	1.365
2040.	17.59	1.615E+4	1.36
2045.	17.61	1.616E+4	1.358
2050.	17.63	1.616E+4	1.353
2055.	17.65	1.617E+4	1.351
2060.	17.67	1.617E+4	1.338
2065.	17.69	1.618E+4	1.347
2070.	17.71	1.618E+4	1.345
2075.	17.73	1.619E+4	1.347
2080.	17.75	1.619E+4	1.339
2085.	17.77	1.62E+4	1.327
2090.	17.79	1.62E+4	1.335
2095.	17.81	1.621E+4	1.335
2100.	17.83	1.621E+4	1.331
2105.	17.85	1.622E+4	1.33
2110.	17.87	1.622E+4	1.328
2115.	17.89	1.623E+4	1.324
2120.	17.91	1.623E+4	1.323
2125.	17.92	1.624E+4	1.31
2130.	17.94	1.624E+4	1.319
2135.	17.96	1.625E+4	1.318
2140.	17.98	1.625E+4	1.313
2145.	18.	1.626E+4	1.317
2150.	18.01	1.626E+4	1.313
2155.	18.03	1.627E+4	1.311
2160.	18.05	1.627E+4	1.303
2165.	18.07	1.628E+4	1.314
2170.	18.08	1.628E+4	1.302

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
2175.	18.11	1.629E+4	1.318
2180.	18.13	1.629E+4	1.307
2185.	18.14	1.63E+4	1.303
2190.	18.16	1.63E+4	1.304
2195.	18.18	1.631E+4	1.303
2200.	18.2	1.631E+4	1.297
2205.	18.22	1.632E+4	1.298
2210.	18.24	1.632E+4	1.301
2215.	18.26	1.633E+4	1.297
2220.	18.27	1.633E+4	1.295
2225.	18.29	1.634E+4	1.292
2230.	18.32	1.634E+4	1.291
2235.	18.34	1.635E+4	1.292
2240.	18.35	1.635E+4	1.29
2245.	18.37	1.636E+4	1.287
2250.	18.39	1.636E+4	1.286
2255.	18.41	1.637E+4	1.284
2260.	18.42	1.637E+4	1.282
2265.	18.45	1.638E+4	1.283
2270.	18.47	1.638E+4	1.276
2275.	18.49	1.639E+4	1.281
2280.	18.51	1.639E+4	1.275
2285.	18.52	1.64E+4	1.275
2290.	18.54	1.64E+4	1.272
2295.	18.56	1.641E+4	1.271
2300.	18.58	1.641E+4	1.272
2305.	18.6	1.642E+4	1.267
2310.	18.61	1.642E+4	1.257
2315.	18.63	1.643E+4	1.259
2320.	18.65	1.643E+4	1.261
2325.	18.67	1.644E+4	1.261
2330.	18.68	1.644E+4	1.273
2335.	18.7	1.645E+4	1.243
2340.	18.72	1.645E+4	1.26
2345.	18.73	1.646E+4	1.254
2350.	18.75	1.646E+4	1.249
2355.	18.77	1.647E+4	1.254
2360.	18.79	1.647E+4	1.246
2365.	18.81	1.648E+4	1.245
2370.	18.83	1.648E+4	1.252
2375.	18.84	1.649E+4	1.246
2380.	18.86	1.649E+4	1.25
2385.	18.88	1.65E+4	1.252
2390.	18.9	1.65E+4	1.24
2395.	18.92	1.651E+4	1.233
2400.	18.94	1.651E+4	1.234
2405.	18.95	1.652E+4	1.239
2410.	18.97	1.652E+4	1.23
2415.	18.98	1.653E+4	1.231
2420.	19.	1.653E+4	1.229
2425.	19.02	1.654E+4	1.23
2430.	19.03	1.654E+4	1.217
2435.	19.06	1.655E+4	1.223

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
2440.	19.07	1.655E+4	1.227
2445.	19.09	1.656E+4	1.227
2450.	19.08	1.656E+4	1.227
2455.	19.1	1.657E+4	1.22
2460.	19.12	1.657E+4	1.214
2465.	19.13	1.658E+4	1.215
2470.	19.15	1.658E+4	1.213
2475.	19.16	1.659E+4	1.21
2480.	19.18	1.659E+4	1.209
2485.	19.2	1.66E+4	1.204
2490.	19.21	1.66E+4	1.209
2495.	19.23	1.661E+4	1.203
2500.	19.25	1.661E+4	1.206
2505.	19.27	1.662E+4	1.198
2510.	19.29	1.662E+4	1.2
2515.	19.3	1.663E+4	1.195
2520.	19.31	1.663E+4	1.196
2525.	19.33	1.664E+4	1.198
2530.	19.35	1.664E+4	1.196
2535.	19.36	1.665E+4	1.186
2540.	19.38	1.665E+4	1.188
2545.	19.39	1.666E+4	1.19
2550.	19.41	1.666E+4	1.185
2555.	19.43	1.667E+4	1.188
2560.	19.44	1.667E+4	1.184
2565.	19.46	1.668E+4	1.185
2570.	19.48	1.668E+4	1.175
2575.	19.5	1.669E+4	1.178
2580.	19.52	1.669E+4	1.162
2585.	19.54	1.67E+4	1.179
2590.	19.56	1.67E+4	1.171
2595.	19.58	1.671E+4	1.178
2600.	19.6	1.671E+4	1.164
2605.	19.63	1.672E+4	1.173
2610.	19.66	1.672E+4	1.167
2615.	19.68	1.673E+4	1.157
2620.	19.71	1.673E+4	1.162
2625.	19.74	1.674E+4	1.161
2630.	19.78	1.674E+4	1.14
2635.	19.81	1.675E+4	1.147
2640.	19.84	1.675E+4	1.164
2645.	19.88	1.676E+4	1.169
2650.	19.91	1.676E+4	1.149
2655.	19.95	1.677E+4	1.153
2660.	19.99	1.677E+4	1.152
2665.	20.02	1.678E+4	1.148
2670.	20.06	1.678E+4	1.15
2675.	20.1	1.679E+4	1.148
2680.	20.14	1.679E+4	1.145
2685.	20.17	1.68E+4	1.136
2690.	20.22	1.68E+4	1.142
2695.	20.25	1.681E+4	1.147
2700.	20.28	1.681E+4	1.144

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
2705.	20.32	1.682E+4	1.149
2710.	20.36	1.682E+4	1.145
2715.	20.38	1.683E+4	1.141
2720.	20.42	1.683E+4	1.137
2725.	20.45	1.684E+4	1.147
2730.	20.49	1.684E+4	1.146
2735.	20.51	1.685E+4	1.151
2740.	20.55	1.685E+4	1.141
2745.	20.58	1.686E+4	1.142
2750.	20.61	1.686E+4	1.146
2755.	20.63	1.687E+4	1.14
2760.	20.66	1.687E+4	1.133
2765.	20.68	1.688E+4	1.145
2770.	20.7	1.688E+4	1.151
2775.	20.73	1.689E+4	1.149
2780.	20.75	1.689E+4	1.156
2785.	20.77	1.69E+4	1.148
2790.	20.79	1.69E+4	1.161
2795.	20.82	1.691E+4	1.183
2800.	20.84	1.691E+4	1.179
2805.	20.86	1.692E+4	1.201
2810.	20.88	1.692E+4	1.215
2815.	20.9	1.693E+4	1.22
2820.	20.92	1.693E+4	1.244
2825.	20.93	1.694E+4	1.255
2830.	20.96	1.694E+4	1.255
2835.	20.98	1.695E+4	1.279
2840.	20.99	1.695E+4	1.291
2845.	21.01	1.696E+4	1.304
2850.	21.03	1.696E+4	1.317
2855.	21.04	1.697E+4	1.329
2860.	21.06	1.697E+4	1.342
2865.	21.07	1.698E+4	1.355
2870.	21.09	1.698E+4	1.377
2875.	21.1	1.699E+4	1.367
2880.	21.11	1.699E+4	1.384
2885.	21.13	1.7E+4	1.391
2890.	21.14	1.7E+4	1.412
2895.	21.15	1.701E+4	1.407
2900.	21.17	1.701E+4	1.407
2905.	21.18	1.702E+4	1.425
2910.	21.2	1.702E+4	1.434
2915.	21.21	1.703E+4	1.441
2920.	21.23	1.703E+4	1.446
2925.	21.24	1.704E+4	1.454
2930.	21.25	1.704E+4	1.457
2935.	21.26	1.705E+4	1.459
2940.	21.28	1.705E+4	1.471
2945.	21.29	1.706E+4	1.473
2950.	21.3	1.706E+4	1.459
2955.	21.32	1.707E+4	1.479
2960.	21.32	1.707E+4	1.491
2965.	21.34	1.708E+4	1.51

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
2970.	21.35	1.708E+4	1.487
2975.	21.36	1.709E+4	1.496
2980.	21.38	1.709E+4	1.494
2985.	21.38	1.71E+4	1.489
2990.	21.39	1.71E+4	1.49
2995.	21.4	1.711E+4	1.495
3000.	21.42	1.711E+4	1.497
3005.	21.42	1.712E+4	1.496
3010.	21.44	1.712E+4	1.49
3015.	21.45	1.713E+4	1.496
3020.	21.45	1.713E+4	1.503
3025.	21.47	1.714E+4	1.504
3030.	21.47	1.714E+4	1.505
3035.	21.49	1.715E+4	1.5
3040.	21.5	1.715E+4	1.505
3045.	21.51	1.716E+4	1.498
3050.	21.54	1.716E+4	1.501
3055.	21.53	1.717E+4	1.498
3060.	21.54	1.717E+4	1.503
3065.	21.56	1.718E+4	1.498
3070.	21.57	1.718E+4	1.492
3075.	21.58	1.719E+4	1.499
3080.	21.58	1.719E+4	1.495
3085.	21.59	1.72E+4	1.492
3090.	21.61	1.72E+4	1.484
3095.	21.62	1.721E+4	1.489
3100.	21.63	1.721E+4	1.493
3105.	21.64	1.722E+4	1.493
3110.	21.64	1.722E+4	1.491
3115.	21.66	1.723E+4	1.489
3120.	21.67	1.723E+4	1.49
3125.	21.68	1.724E+4	1.486
3130.	21.69	1.724E+4	1.475
3135.	21.7	1.725E+4	1.497
3140.	21.71	1.725E+4	1.484
3145.	21.73	1.726E+4	1.485
3150.	21.74	1.726E+4	1.484
3155.	21.75	1.727E+4	1.484
3160.	21.76	1.727E+4	1.481
3165.	21.77	1.728E+4	1.463
3170.	21.78	1.728E+4	1.485
3175.	21.8	1.729E+4	1.477
3180.	21.82	1.729E+4	1.474
3185.	21.82	1.73E+4	1.471
3190.	21.83	1.73E+4	1.468
3195.	21.85	1.731E+4	1.467
3200.	21.86	1.731E+4	1.455
3205.	21.87	1.732E+4	1.469
3210.	21.89	1.732E+4	1.463
3215.	21.9	1.733E+4	1.465
3220.	21.91	1.733E+4	1.457
3225.	21.92	1.734E+4	1.459
3230.	21.92	1.734E+4	1.44

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
3235.	21.93	1.735E+4	1.448
3240.	21.95	1.735E+4	1.448
3245.	21.96	1.736E+4	1.444
3250.	21.97	1.736E+4	1.439
3255.	21.98	1.737E+4	1.441
3260.	21.99	1.737E+4	1.443
3265.	22.01	1.738E+4	1.44
3270.	22.02	1.738E+4	1.434
3275.	22.04	1.739E+4	1.425
3280.	22.04	1.739E+4	1.433
3285.	22.05	1.74E+4	1.421
3290.	22.07	1.74E+4	1.426
3295.	22.08	1.741E+4	1.424
3300.	22.09	1.741E+4	1.42
3305.	22.1	1.742E+4	1.407
3310.	22.1	1.742E+4	1.421
3315.	22.12	1.743E+4	1.396
3320.	22.14	1.743E+4	1.41
3325.	22.15	1.744E+4	1.41
3330.	22.15	1.744E+4	1.407
3335.	22.16	1.745E+4	1.409
3340.	22.18	1.745E+4	1.404
3345.	22.18	1.746E+4	1.411
3350.	22.19	1.746E+4	1.403
3355.	22.2	1.747E+4	1.406
3360.	22.22	1.747E+4	1.401
3365.	22.22	1.748E+4	1.396
3370.	22.23	1.748E+4	1.397
3375.	22.25	1.749E+4	1.386
3380.	22.25	1.749E+4	1.392
3385.	22.26	1.75E+4	1.388
3390.	22.27	1.75E+4	1.389
3395.	22.28	1.751E+4	1.375
3400.	22.3	1.751E+4	1.387
3405.	22.31	1.752E+4	1.372
3410.	22.31	1.752E+4	1.405
3415.	22.32	1.753E+4	1.396
3420.	22.33	1.753E+4	1.375
3425.	22.34	1.754E+4	1.376
3430.	22.36	1.754E+4	1.375
3435.	22.37	1.755E+4	1.372
3440.	22.38	1.755E+4	1.371
3445.	22.39	1.756E+4	1.353
3450.	22.4	1.756E+4	1.369
3455.	22.42	1.757E+4	1.358
3460.	22.43	1.757E+4	1.345
3465.	22.43	1.758E+4	1.343
3470.	22.44	1.758E+4	1.352
3475.	22.44	1.759E+4	1.338
3480.	22.47	1.759E+4	1.335
3485.	22.47	1.76E+4	1.332
3490.	22.48	1.76E+4	1.328
3495.	22.49	1.761E+4	1.344

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
3500.	22.51	1.761E+4	1.328
3505.	22.51	1.762E+4	1.333
3510.	22.52	1.762E+4	1.334
3515.	22.53	1.763E+4	1.331
3520.	22.54	1.763E+4	1.315
3525.	22.55	1.764E+4	1.325
3530.	22.56	1.764E+4	1.314
3535.	22.57	1.765E+4	1.326
3540.	22.58	1.765E+4	1.303
3545.	22.6	1.766E+4	1.307
3550.	22.6	1.766E+4	1.299
3555.	22.62	1.767E+4	1.311
3560.	22.63	1.767E+4	1.308
3565.	22.64	1.768E+4	1.302
3570.	22.65	1.768E+4	1.307
3575.	22.66	1.769E+4	1.293
3580.	22.67	1.769E+4	1.286
3585.	22.68	1.77E+4	1.296
3590.	22.68	1.77E+4	1.286
3595.	22.71	1.771E+4	1.284
3600.	22.71	1.771E+4	1.269
3605.	22.72	1.772E+4	1.285
3610.	22.73	1.772E+4	1.267
3615.	22.75	1.773E+4	1.277
3620.	22.75	1.773E+4	1.263
3625.	22.77	1.774E+4	1.255
3630.	22.78	1.774E+4	1.258
3635.	22.79	1.775E+4	1.255
3640.	22.8	1.775E+4	1.268
3645.	22.81	1.776E+4	1.258
3650.	22.83	1.776E+4	1.241
3655.	22.83	1.777E+4	1.246
3660.	22.85	1.777E+4	1.258
3665.	22.86	1.778E+4	1.247
3670.	22.87	1.778E+4	1.242
3675.	22.88	1.779E+4	1.254
3680.	22.89	1.779E+4	1.24
3685.	22.9	1.78E+4	1.232
3690.	22.91	1.78E+4	1.245
3695.	22.92	1.781E+4	1.22
3700.	22.93	1.781E+4	1.227
3705.	22.94	1.782E+4	1.241
3710.	22.95	1.782E+4	1.222
3715.	22.96	1.783E+4	1.215
3720.	22.99	1.783E+4	1.209
3725.	22.98	1.784E+4	1.222
3730.	23.	1.784E+4	1.221
3735.	23.01	1.785E+4	1.222
3740.	23.02	1.785E+4	1.214
3745.	23.03	1.786E+4	1.199
3750.	23.04	1.786E+4	1.191
3755.	23.05	1.787E+4	1.202
3760.	23.07	1.787E+4	1.201

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
3765.	23.07	1.788E+4	1.203
3770.	23.09	1.788E+4	1.188
3775.	23.1	1.789E+4	1.204
3780.	23.11	1.789E+4	1.198
3785.	23.12	1.79E+4	1.191
3790.	23.13	1.79E+4	1.191
3795.	23.14	1.791E+4	1.195
3800.	23.16	1.791E+4	1.197
3805.	23.17	1.792E+4	1.19
3810.	23.18	1.792E+4	1.18
3815.	23.19	1.793E+4	1.191
3820.	23.2	1.793E+4	1.176
3825.	23.21	1.794E+4	1.185
3830.	23.22	1.794E+4	1.18
3835.	23.23	1.795E+4	1.187
3840.	23.23	1.795E+4	1.172
3845.	23.25	1.796E+4	1.164
3850.	23.26	1.796E+4	1.175
3855.	23.27	1.797E+4	1.171
3860.	23.28	1.797E+4	1.177
3865.	23.29	1.798E+4	1.159
3870.	23.31	1.798E+4	1.157
3875.	23.32	1.799E+4	1.169
3880.	23.33	1.799E+4	1.167
3885.	23.34	1.8E+4	1.167
3890.	23.36	1.8E+4	1.165
3895.	23.36	1.801E+4	1.166
3900.	23.38	1.801E+4	1.162
3905.	23.39	1.802E+4	1.163
3910.	23.4	1.802E+4	1.158
3915.	23.41	1.803E+4	1.156
3920.	23.42	1.803E+4	1.156
3925.	23.43	1.804E+4	1.156
3930.	23.44	1.804E+4	1.147
3935.	23.45	1.805E+4	1.15
3940.	23.47	1.805E+4	1.148
3945.	23.48	1.806E+4	1.15
3950.	23.5	1.806E+4	1.149
3955.	23.52	1.807E+4	1.145
3960.	23.53	1.807E+4	1.129
3965.	23.55	1.808E+4	1.14
3970.	23.57	1.808E+4	1.139
3975.	23.58	1.809E+4	1.126
3980.	23.6	1.809E+4	1.122
3985.	23.63	1.81E+4	1.12
3990.	23.64	1.81E+4	1.13
3995.	23.67	1.811E+4	1.118
4000.	23.68	1.811E+4	1.129
4005.	23.7	1.812E+4	1.111
4010.	23.72	1.812E+4	1.119
4015.	23.74	1.813E+4	1.115
4020.	23.76	1.813E+4	1.119
4025.	23.78	1.814E+4	1.118

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
4030.	23.8	1.814E+4	1.118
4035.	23.81	1.815E+4	1.099
4040.	23.83	1.815E+4	1.106
4045.	23.85	1.816E+4	1.113
4050.	23.87	1.816E+4	1.124
4055.	23.88	1.817E+4	1.102
4060.	23.9	1.817E+4	1.096
4065.	23.92	1.818E+4	1.106
4070.	23.94	1.818E+4	1.106
4075.	23.95	1.819E+4	1.104
4080.	23.97	1.819E+4	1.097
4085.	23.98	1.82E+4	1.108
4090.	24.	1.82E+4	1.087
4095.	24.01	1.821E+4	1.093
4100.	24.02	1.821E+4	1.092
4105.	24.04	1.822E+4	1.091
4110.	24.06	1.822E+4	1.087
4115.	24.07	1.823E+4	1.097
4120.	24.08	1.823E+4	1.095
4125.	24.09	1.824E+4	1.084
4130.	24.1	1.824E+4	1.079
4135.	24.11	1.825E+4	1.078
4140.	24.13	1.825E+4	1.08
4145.	24.14	1.826E+4	1.079
4150.	24.14	1.826E+4	1.077
4155.	24.16	1.827E+4	1.079
4160.	24.17	1.827E+4	1.085
4165.	24.18	1.828E+4	1.074
4170.	24.18	1.828E+4	1.073
4175.	24.19	1.829E+4	1.067
4180.	24.2	1.829E+4	1.064
4185.	24.21	1.83E+4	1.068
4190.	24.22	1.83E+4	1.061
4195.	24.23	1.831E+4	1.068
4200.	24.24	1.831E+4	1.066
4205.	24.25	1.832E+4	1.062
4210.	24.25	1.832E+4	1.053
4215.	24.26	1.833E+4	1.055
4220.	24.27	1.833E+4	1.059
4225.	24.28	1.834E+4	1.067
4230.	24.29	1.834E+4	1.057
4235.	24.3	1.835E+4	1.05
4240.	24.3	1.835E+4	1.052
4245.	24.31	1.836E+4	1.066
4250.	24.32	1.836E+4	1.068
4255.	24.32	1.837E+4	1.056
4260.	24.33	1.837E+4	1.064
4265.	24.34	1.838E+4	1.065
4270.	24.35	1.838E+4	1.085
4275.	24.35	1.839E+4	1.09
4280.	24.36	1.839E+4	1.081
4285.	24.37	1.84E+4	1.093
4290.	24.38	1.84E+4	1.101

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
4295.	24.39	1.841E+4	1.111
4300.	24.39	1.841E+4	1.12
4305.	24.4	1.842E+4	1.132
4310.	24.41	1.842E+4	1.143
4315.	24.41	1.843E+4	1.153
4320.	24.42	1.843E+4	1.169
4325.	24.43	1.844E+4	1.186
4330.	24.44	1.844E+4	1.196
4335.	24.45	1.845E+4	1.207
4340.	24.45	1.845E+4	1.204
4345.	24.46	1.846E+4	1.212
4350.	24.46	1.846E+4	1.23
4355.	24.47	1.847E+4	1.227
4360.	24.47	1.847E+4	1.24
4365.	24.46	1.848E+4	1.26
4370.	24.45	1.848E+4	1.257
4375.	24.43	1.849E+4	1.26
4380.	24.4	1.849E+4	1.276
4385.	24.37	1.85E+4	1.287
4390.	24.32	1.85E+4	1.291
4395.	24.27	1.851E+4	1.289
4400.	24.21	1.851E+4	1.296
4405.	24.15	1.852E+4	1.302
4410.	24.08	1.852E+4	1.298
4415.	24.	1.853E+4	1.318
4420.	23.93	1.853E+4	1.321
4425.	23.84	1.854E+4	1.322
4430.	23.76	1.854E+4	1.339
4435.	23.68	1.855E+4	1.335
4440.	23.59	1.855E+4	1.327
4445.	23.5	1.856E+4	1.33
4450.	23.41	1.856E+4	1.357
4455.	23.32	1.857E+4	1.346
4460.	23.22	1.857E+4	1.343
4465.	23.13	1.858E+4	1.349
4470.	23.04	1.858E+4	1.363
4475.	22.94	1.859E+4	1.348
4480.	22.85	1.859E+4	1.351
4485.	22.75	1.86E+4	1.362
4490.	22.66	1.86E+4	1.357
4495.	22.57	1.861E+4	1.367
4500.	22.47	1.861E+4	1.358
4505.	22.38	1.862E+4	1.36
4510.	22.28	1.862E+4	1.365
4515.	22.19	1.863E+4	1.349
4520.	22.09	1.863E+4	1.368
4525.	22.01	1.864E+4	1.364
4530.	21.91	1.864E+4	1.353
4535.	21.82	1.865E+4	1.372
4540.	21.73	1.865E+4	1.369
4545.	21.64	1.866E+4	1.366
4550.	21.55	1.866E+4	1.366
4555.	21.46	1.867E+4	1.354

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
4560.	21.37	1.867E+4	1.363
4565.	21.28	1.868E+4	1.355
4570.	21.2	1.868E+4	1.355
4575.	21.11	1.869E+4	1.358
4580.	21.03	1.869E+4	1.348
4585.	20.94	1.87E+4	1.359
4590.	20.86	1.87E+4	1.362
4595.	20.77	1.871E+4	1.35
4600.	20.69	1.871E+4	1.352
4605.	20.61	1.872E+4	1.359
4610.	20.53	1.872E+4	1.36
4615.	20.45	1.873E+4	1.359
4620.	20.37	1.873E+4	1.35
4625.	20.29	1.874E+4	1.356
4630.	20.21	1.874E+4	1.337
4635.	20.13	1.875E+4	1.342
4640.	20.05	1.875E+4	1.354
4645.	19.98	1.876E+4	1.346
4650.	19.9	1.876E+4	1.345
4655.	19.82	1.877E+4	1.338
4660.	19.75	1.877E+4	1.337
4665.	19.68	1.878E+4	1.326
4670.	19.6	1.878E+4	1.327
4675.	19.53	1.879E+4	1.323
4680.	19.45	1.879E+4	1.327
4685.	19.38	1.88E+4	1.332
4690.	19.31	1.88E+4	1.319
4695.	19.24	1.881E+4	1.336
4700.	19.17	1.881E+4	1.32
4705.	19.1	1.882E+4	1.32
4710.	19.03	1.882E+4	1.315
4715.	18.96	1.883E+4	1.31
4720.	18.9	1.883E+4	1.326
4725.	18.83	1.884E+4	1.314
4730.	18.76	1.884E+4	1.315
4735.	18.69	1.885E+4	1.32
4740.	18.63	1.885E+4	1.308
4745.	18.56	1.886E+4	1.313
4750.	18.49	1.886E+4	1.31
4755.	18.43	1.887E+4	1.311
4760.	18.36	1.887E+4	1.284
4765.	18.3	1.888E+4	1.287
4770.	18.24	1.888E+4	1.305
4775.	18.18	1.889E+4	1.3
4780.	18.11	1.889E+4	1.282
4785.	18.05	1.89E+4	1.293
4790.	17.99	1.89E+4	1.277
4795.	17.93	1.891E+4	1.275
4800.	17.87	1.891E+4	1.276
4805.	17.81	1.892E+4	1.268
4810.	17.75	1.892E+4	1.281
4815.	17.69	1.893E+4	1.267
4820.	17.63	1.893E+4	1.266

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
4825.	17.57	1.894E+4	1.27
4830.	17.51	1.894E+4	1.257
4835.	17.45	1.895E+4	1.265
4840.	17.39	1.895E+4	1.252
4845.	17.34	1.896E+4	1.256
4850.	17.28	1.896E+4	1.262
4855.	17.22	1.897E+4	1.247
4860.	17.17	1.897E+4	1.241
4865.	17.11	1.898E+4	1.242
4870.	17.06	1.898E+4	1.246
4875.	17.	1.899E+4	1.245
4880.	16.94	1.899E+4	1.242
4885.	16.89	1.9E+4	1.233
4890.	16.84	1.9E+4	1.226
4895.	16.78	1.901E+4	1.226
4900.	16.73	1.901E+4	1.229
4905.	16.68	1.902E+4	1.217
4910.	16.63	1.902E+4	1.215
4915.	16.57	1.903E+4	1.214
4920.	16.52	1.903E+4	1.221
4925.	16.47	1.904E+4	1.208
4930.	16.42	1.904E+4	1.209
4935.	16.37	1.905E+4	1.212
4940.	16.32	1.905E+4	1.198
4945.	16.27	1.906E+4	1.195
4950.	16.22	1.906E+4	1.196
4955.	16.17	1.907E+4	1.201
4960.	16.12	1.907E+4	1.186
4965.	16.07	1.908E+4	1.195
4970.	16.02	1.908E+4	1.19
4975.	15.98	1.909E+4	1.185
4980.	15.93	1.909E+4	1.183
4985.	15.88	1.91E+4	1.17
4990.	15.84	1.91E+4	1.168
4995.	15.79	1.911E+4	1.174
5000.	15.74	1.911E+4	1.17
5005.	15.69	1.912E+4	1.159
5010.	15.65	1.912E+4	1.165
5015.	15.6	1.913E+4	1.165
5020.	15.56	1.913E+4	1.161
5025.	15.51	1.914E+4	1.157
5030.	15.46	1.914E+4	1.154
5035.	15.42	1.915E+4	1.152
5040.	15.38	1.915E+4	1.138
5045.	15.34	1.916E+4	1.132
5050.	15.29	1.916E+4	1.13
5055.	15.25	1.917E+4	1.128
5060.	15.21	1.917E+4	1.123
5065.	15.16	1.918E+4	1.121
5070.	15.12	1.918E+4	1.116
5075.	15.08	1.919E+4	1.116
5080.	15.03	1.919E+4	1.12
5085.	14.99	1.92E+4	1.106

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
5090.	14.95	1.92E+4	1.101
5095.	14.91	1.921E+4	1.099
5100.	14.87	1.921E+4	1.105
5105.	14.82	1.922E+4	1.093
5110.	14.78	1.922E+4	1.101
5115.	14.74	1.923E+4	1.085
5120.	14.7	1.923E+4	1.082
5125.	14.66	1.924E+4	1.08
5130.	14.62	1.924E+4	1.078
5135.	14.59	1.925E+4	1.074
5140.	14.54	1.925E+4	1.07
5145.	14.5	1.926E+4	1.076
5150.	14.47	1.926E+4	1.062
5155.	14.43	1.927E+4	1.069
5160.	14.39	1.927E+4	1.058
5165.	14.35	1.928E+4	1.053
5170.	14.31	1.928E+4	1.058
5175.	14.27	1.929E+4	1.059
5180.	14.24	1.929E+4	1.048
5185.	14.2	1.93E+4	1.053
5190.	14.17	1.93E+4	1.041
5195.	14.13	1.931E+4	1.036
5200.	14.1	1.931E+4	1.032
5205.	14.06	1.932E+4	1.029
5210.	14.02	1.932E+4	1.038
5215.	13.99	1.933E+4	1.022
5220.	13.95	1.933E+4	1.03
5225.	13.92	1.934E+4	1.015
5230.	13.88	1.934E+4	1.025
5235.	13.85	1.935E+4	1.011
5240.	13.81	1.935E+4	1.008
5245.	13.78	1.936E+4	1.004
5250.	13.74	1.936E+4	0.998
5255.	13.71	1.937E+4	1.009
5260.	13.68	1.937E+4	1.004
5265.	13.64	1.938E+4	0.99
5270.	13.61	1.938E+4	0.988
5275.	13.57	1.939E+4	0.984
5280.	13.54	1.939E+4	0.979
5285.	13.51	1.94E+4	0.975
5290.	13.47	1.94E+4	0.984
5295.	13.44	1.941E+4	0.982
5300.	13.41	1.941E+4	0.965
5305.	13.37	1.942E+4	0.962
5310.	13.34	1.942E+4	0.958
5315.	13.31	1.943E+4	0.955
5320.	13.28	1.943E+4	0.953
5325.	13.25	1.944E+4	0.948
5330.	13.22	1.944E+4	0.944
5335.	13.19	1.945E+4	0.94
5340.	13.16	1.945E+4	0.937
5345.	13.13	1.946E+4	0.948
5350.	13.1	1.946E+4	0.932

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
5355.	13.07	1.947E+4	0.929
5360.	13.04	1.947E+4	0.925
5365.	13.01	1.948E+4	0.924
5370.	12.99	1.948E+4	0.934
5375.	12.96	1.949E+4	0.921
5380.	12.93	1.949E+4	0.916
5385.	12.9	1.95E+4	0.915
5390.	12.87	1.95E+4	0.909
5395.	12.84	1.951E+4	0.904
5400.	12.82	1.951E+4	0.912
5405.	12.79	1.952E+4	0.909
5410.	12.77	1.952E+4	0.894
5415.	12.74	1.953E+4	0.902
5420.	12.72	1.953E+4	0.9
5425.	12.7	1.954E+4	0.885
5430.	12.68	1.954E+4	0.883
5435.	12.66	1.955E+4	0.879
5440.	12.64	1.955E+4	0.876
5445.	12.62	1.956E+4	0.889
5450.	12.61	1.956E+4	0.874
5455.	12.59	1.957E+4	0.873
5460.	12.58	1.957E+4	0.869
5465.	12.57	1.958E+4	0.865
5470.	12.55	1.958E+4	0.864
5475.	12.54	1.959E+4	0.859
5480.	12.52	1.959E+4	0.859
5485.	12.51	1.96E+4	0.861
5490.	12.5	1.96E+4	0.866
5495.	12.48	1.961E+4	0.852
5500.	12.47	1.961E+4	0.848
5505.	12.45	1.962E+4	0.854
5510.	12.44	1.962E+4	0.84
5515.	12.43	1.963E+4	0.838
5520.	12.41	1.963E+4	0.834
5525.	12.39	1.964E+4	0.829
5530.	12.38	1.964E+4	0.828
5535.	12.36	1.965E+4	0.825
5540.	12.34	1.965E+4	0.83
5545.	12.32	1.966E+4	0.823
5550.	12.31	1.966E+4	0.817
5555.	12.28	1.967E+4	0.814
5560.	12.26	1.967E+4	0.814
5565.	12.24	1.968E+4	0.826
5570.	12.23	1.968E+4	0.808
5575.	12.2	1.969E+4	0.808
5580.	12.18	1.969E+4	0.803
5585.	12.16	1.97E+4	0.806
5590.	12.14	1.97E+4	0.813
5595.	12.12	1.971E+4	0.811
5600.	12.1	1.971E+4	0.804
5605.	12.07	1.972E+4	0.808
5610.	12.05	1.972E+4	0.802
5615.	12.03	1.973E+4	0.808

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
5620.	12.	1.973E+4	0.808
5625.	11.98	1.974E+4	0.802
5630.	11.96	1.974E+4	0.793
5635.	11.94	1.975E+4	0.799
5640.	11.91	1.975E+4	0.8
5645.	11.89	1.976E+4	0.809
5650.	11.86	1.976E+4	0.807
5655.	11.84	1.977E+4	0.821
5660.	11.82	1.977E+4	0.833
5665.	11.79	1.978E+4	0.837
5670.	11.77	1.978E+4	0.838
5675.	11.75	1.979E+4	0.861
5680.	11.72	1.979E+4	0.858
5685.	11.7	1.98E+4	0.873
5690.	11.68	1.98E+4	0.874
5695.	11.65	1.981E+4	0.892
5700.	11.63	1.981E+4	0.881
5705.	11.61	1.982E+4	0.91
5710.	11.58	1.982E+4	0.916
5715.	11.56	1.983E+4	0.951
5720.	11.53	1.983E+4	0.937
5725.	11.51	1.984E+4	0.939
5730.	11.49	1.984E+4	0.937
5735.	11.47	1.985E+4	0.936
5740.	11.45	1.985E+4	0.959
5745.	11.42	1.986E+4	0.976
5750.	11.4	1.986E+4	0.979
5755.	11.37	1.987E+4	0.987
5760.	11.35	1.987E+4	0.973
5765.	11.32	1.988E+4	0.991
5770.	11.3	1.988E+4	0.993
5775.	11.28	1.989E+4	0.967
5780.	11.26	1.989E+4	1.003
5785.	11.23	1.99E+4	0.99
5790.	11.21	1.99E+4	1.01
5795.	11.19	1.991E+4	1.005
5800.	11.16	1.991E+4	0.988
5805.	11.14	1.992E+4	1.008
5810.	11.12	1.992E+4	1.01
5815.	11.1	1.993E+4	1.012
5820.	11.07	1.993E+4	1.017
5825.	11.06	1.994E+4	1.01
5830.	11.03	1.994E+4	1.017
5835.	11.01	1.995E+4	1.011
5840.	10.99	1.995E+4	1.
5845.	10.97	1.996E+4	0.989
5850.	10.94	1.996E+4	0.974
5855.	10.92	1.997E+4	1.001
5860.	10.9	1.997E+4	1.028
5865.	10.88	1.998E+4	1.009
5870.	10.85	1.998E+4	0.99
5875.	10.83	1.999E+4	1.03
5880.	10.81	1.999E+4	0.98

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
5885.	10.79	2.0E+4	0.977
5890.	10.77	2.0E+4	0.997
5895.	10.75	2.001E+4	0.985
5900.	10.72	2.001E+4	0.99
5905.	10.7	2.002E+4	0.964
5910.	10.68	2.002E+4	0.958
5915.	10.66	2.003E+4	0.962
5920.	10.64	2.003E+4	0.967
5925.	10.62	2.004E+4	0.953
5930.	10.6	2.004E+4	0.951
5935.	10.57	2.005E+4	0.982
5940.	10.56	2.005E+4	0.937
5945.	10.54	2.006E+4	0.945
5950.	10.52	2.006E+4	0.944
5955.	10.5	2.007E+4	0.94
5960.	10.48	2.007E+4	0.914
5965.	10.46	2.008E+4	0.921
5970.	10.44	2.008E+4	0.919
5975.	10.42	2.009E+4	0.896
5980.	10.4	2.009E+4	0.908
5985.	10.38	2.01E+4	0.903
5990.	10.37	2.01E+4	0.884
5995.	10.35	2.011E+4	0.916
6000.	10.33	2.011E+4	0.867
6005.	10.31	2.012E+4	0.883
6010.	10.29	2.012E+4	0.894
6015.	10.27	2.013E+4	0.88
6020.	10.25	2.013E+4	0.88
6025.	10.23	2.014E+4	0.863
6030.	10.21	2.014E+4	0.878
6035.	10.19	2.015E+4	0.854
6040.	10.18	2.015E+4	0.851
6045.	10.16	2.016E+4	0.867
6050.	10.14	2.016E+4	0.848
6055.	10.12	2.017E+4	0.874
6060.	10.1	2.017E+4	0.863
6065.	10.09	2.018E+4	0.861
6070.	10.07	2.018E+4	0.834
6075.	10.05	2.019E+4	0.846
6080.	10.03	2.019E+4	0.828
6085.	10.02	2.02E+4	0.834
6090.	10.	2.02E+4	0.82
6095.	9.981	2.021E+4	0.824
6100.	9.961	2.021E+4	0.826
6105.	9.944	2.022E+4	0.822
6110.	9.924	2.022E+4	0.811
6115.	9.91	2.023E+4	0.812
6120.	9.893	2.023E+4	0.809
6125.	9.876	2.024E+4	0.797
6130.	9.857	2.024E+4	0.791
6135.	9.839	2.025E+4	0.779
6140.	9.821	2.025E+4	0.785
6145.	9.801	2.026E+4	0.785

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
6150.	9.784	2.026E+4	0.783
6155.	9.767	2.027E+4	0.781
6160.	9.747	2.027E+4	0.776
6165.	9.733	2.028E+4	0.762
6170.	9.713	2.028E+4	0.768
6175.	9.698	2.029E+4	0.767
6180.	9.678	2.029E+4	0.751
6185.	9.661	2.03E+4	0.763
6190.	9.642	2.03E+4	0.756
6195.	9.623	2.031E+4	0.757
6200.	9.608	2.031E+4	0.754
6205.	9.589	2.032E+4	0.753
6210.	9.572	2.032E+4	0.751
6215.	9.555	2.033E+4	0.746
6220.	9.537	2.033E+4	0.746
6225.	9.522	2.034E+4	0.741
6230.	9.503	2.034E+4	0.729
6235.	9.483	2.035E+4	0.732
6240.	9.466	2.035E+4	0.72
6245.	9.451	2.036E+4	0.726
6250.	9.436	2.036E+4	0.712
6255.	9.416	2.037E+4	0.717
6260.	9.397	2.037E+4	0.718
6265.	9.381	2.038E+4	0.713
6270.	9.365	2.038E+4	0.711
6275.	9.348	2.039E+4	0.708
6280.	9.331	2.039E+4	0.704
6285.	9.314	2.04E+4	0.703
6290.	9.297	2.04E+4	0.703
6295.	9.282	2.041E+4	0.701
6300.	9.263	2.041E+4	0.698
6305.	9.247	2.042E+4	0.684
6310.	9.233	2.042E+4	0.678
6315.	9.214	2.043E+4	0.689
6320.	9.199	2.043E+4	0.688
6325.	9.179	2.044E+4	0.681
6330.	9.162	2.044E+4	0.673
6335.	9.146	2.045E+4	0.682
6340.	9.129	2.045E+4	0.672
6345.	9.112	2.046E+4	0.668
6350.	9.096	2.046E+4	0.666
6355.	9.076	2.047E+4	0.675
6360.	9.06	2.047E+4	0.673
6365.	9.046	2.048E+4	0.66
6370.	9.027	2.048E+4	0.672
6375.	9.012	2.049E+4	0.668
6380.	8.996	2.049E+4	0.664
6385.	8.98	2.05E+4	0.653
6390.	8.961	2.05E+4	0.653
6395.	8.946	2.051E+4	0.661
6400.	8.929	2.051E+4	0.659
6405.	8.91	2.052E+4	0.648
6410.	8.895	2.052E+4	0.642

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
6415.	8.88	2.053E+4	0.657
6420.	8.862	2.053E+4	0.651
6425.	8.846	2.054E+4	0.644
6430.	8.828	2.054E+4	0.641
6435.	8.812	2.055E+4	0.64
6440.	8.797	2.055E+4	0.65
6445.	8.782	2.056E+4	0.637
6450.	8.766	2.056E+4	0.646
6455.	8.749	2.057E+4	0.643
6460.	8.731	2.057E+4	0.644
6465.	8.718	2.058E+4	0.628
6470.	8.704	2.058E+4	0.641
6475.	8.686	2.059E+4	0.638
6480.	8.671	2.059E+4	0.632
6485.	8.655	2.06E+4	0.621
6490.	8.642	2.06E+4	0.627
6495.	8.625	2.061E+4	0.624
6500.	8.611	2.061E+4	0.613
6505.	8.593	2.062E+4	0.622
6510.	8.578	2.062E+4	0.611
6515.	8.562	2.063E+4	0.606
6520.	8.547	2.063E+4	0.613
6525.	8.533	2.064E+4	0.598
6530.	8.519	2.064E+4	0.609
6535.	8.504	2.065E+4	0.606
6540.	8.488	2.065E+4	0.602
6545.	8.472	2.066E+4	0.602
6550.	8.458	2.066E+4	0.6
6555.	8.442	2.067E+4	0.585
6560.	8.427	2.067E+4	0.594
6565.	8.413	2.068E+4	0.584
6570.	8.397	2.068E+4	0.592
6575.	8.384	2.069E+4	0.577
6580.	8.367	2.069E+4	0.585
6585.	8.355	2.07E+4	0.573
6590.	8.338	2.07E+4	0.567
6595.	8.325	2.071E+4	0.579
6600.	8.312	2.071E+4	0.566
6605.	8.297	2.072E+4	0.574
6610.	8.281	2.072E+4	0.561
6615.	8.268	2.073E+4	0.572
6620.	8.253	2.073E+4	0.569
6625.	8.24	2.074E+4	0.571
6630.	8.231	2.074E+4	0.564
6635.	8.219	2.075E+4	0.553
6640.	8.205	2.075E+4	0.562
6645.	8.192	2.076E+4	0.549
6650.	8.182	2.076E+4	0.547
6655.	8.167	2.077E+4	0.549
6660.	8.153	2.077E+4	0.552
6665.	8.143	2.078E+4	0.542
6670.	8.127	2.078E+4	0.551
6675.	8.115	2.079E+4	0.536

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
6680.	8.103	2.079E+4	0.532
6685.	8.089	2.08E+4	0.533
6690.	8.079	2.08E+4	0.54
6695.	8.07	2.081E+4	0.532
6700.	8.054	2.081E+4	0.528
6705.	8.044	2.082E+4	0.537
6710.	8.029	2.082E+4	0.533
6715.	8.017	2.083E+4	0.521
6720.	8.006	2.083E+4	0.533
6725.	7.99	2.084E+4	0.532
6730.	7.979	2.084E+4	0.518
6735.	7.967	2.085E+4	0.514
6740.	7.955	2.085E+4	0.529
6745.	7.941	2.086E+4	0.526
6750.	7.929	2.086E+4	0.52
6755.	7.92	2.087E+4	0.512
6760.	7.91	2.087E+4	0.521
6765.	7.899	2.088E+4	0.506
6770.	7.888	2.088E+4	0.511
6775.	7.878	2.089E+4	0.503
6780.	7.866	2.089E+4	0.504
6785.	7.854	2.09E+4	0.5
6790.	7.842	2.09E+4	0.506
6795.	7.832	2.091E+4	0.508
6800.	7.822	2.091E+4	0.501
6805.	7.809	2.092E+4	0.496
6810.	7.799	2.092E+4	0.505
6815.	7.79	2.093E+4	0.504
6820.	7.781	2.093E+4	0.504
6825.	7.769	2.094E+4	0.487
6830.	7.758	2.094E+4	0.5
6835.	7.75	2.095E+4	0.487
6840.	7.741	2.095E+4	0.49
6845.	7.729	2.096E+4	0.499
6850.	7.716	2.096E+4	0.488
6855.	7.707	2.097E+4	0.49
6860.	7.697	2.097E+4	0.49
6865.	7.686	2.098E+4	0.486
6870.	7.677	2.098E+4	0.486
6875.	7.665	2.099E+4	0.493
6880.	7.656	2.099E+4	0.478
6885.	7.647	2.1E+4	0.483
6890.	7.636	2.1E+4	0.492
6895.	7.625	2.101E+4	0.497
6900.	7.614	2.101E+4	0.499
6905.	7.606	2.102E+4	0.479
6910.	7.596	2.102E+4	0.477
6915.	7.583	2.103E+4	0.475
6920.	7.574	2.103E+4	0.475
6925.	7.561	2.104E+4	0.489
6930.	7.552	2.104E+4	0.48
6935.	7.538	2.105E+4	0.465
6940.	7.528	2.105E+4	0.482

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
6945.	7.516	2.106E+4	0.473
6950.	7.507	2.106E+4	0.467
6955.	7.496	2.107E+4	0.467
6960.	7.486	2.107E+4	0.476
6965.	7.474	2.108E+4	0.474
6970.	7.466	2.108E+4	0.477
6975.	7.452	2.109E+4	0.472
6980.	7.442	2.109E+4	0.473
6985.	7.433	2.11E+4	0.482
6990.	7.423	2.11E+4	0.483
6995.	7.408	2.111E+4	0.479
7000.	7.398	2.111E+4	0.471
7005.	7.385	2.112E+4	0.476
7010.	7.371	2.112E+4	0.471
7015.	7.362	2.113E+4	0.483
7020.	7.347	2.113E+4	0.477
7025.	7.336	2.114E+4	0.471
7030.	7.326	2.114E+4	0.47
7035.	7.314	2.115E+4	0.482
7040.	7.302	2.115E+4	0.476
7045.	7.292	2.116E+4	0.468
7050.	7.277	2.116E+4	0.467
7055.	7.266	2.117E+4	0.472
7060.	7.255	2.117E+4	0.469
7065.	7.243	2.118E+4	0.481
7070.	7.232	2.118E+4	0.489
7075.	7.218	2.119E+4	0.479
7080.	7.207	2.119E+4	0.487
7085.	7.194	2.12E+4	0.501
7090.	7.182	2.12E+4	0.501
7095.	7.169	2.121E+4	0.513
7100.	7.159	2.121E+4	0.522
7105.	7.144	2.122E+4	0.524
7110.	7.131	2.122E+4	0.531
7115.	7.122	2.123E+4	0.543
7120.	7.108	2.123E+4	0.573
7125.	7.1	2.124E+4	0.567
7130.	7.084	2.124E+4	0.589
7135.	7.072	2.125E+4	0.598
7140.	7.062	2.125E+4	0.613
7145.	7.049	2.126E+4	0.611
7150.	7.037	2.126E+4	0.62
7155.	7.026	2.127E+4	0.631
7160.	7.014	2.127E+4	0.642
7165.	7.004	2.128E+4	0.646
7170.	6.992	2.128E+4	0.672
7175.	6.979	2.129E+4	0.686
7180.	6.965	2.129E+4	0.694
7185.	6.955	2.13E+4	0.691
7190.	6.946	2.13E+4	0.712
7195.	6.93	2.131E+4	0.71
7200.	6.922	2.131E+4	0.715
7205.	6.912	2.132E+4	0.717

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
7210.	6.899	2.132E+4	0.743
7215.	6.89	2.133E+4	0.732
7220.	6.877	2.133E+4	0.74
7225.	6.87	2.134E+4	0.754
7230.	6.859	2.134E+4	0.754
7235.	6.852	2.135E+4	0.753
7240.	6.844	2.135E+4	0.751
7245.	6.835	2.136E+4	0.777
7250.	6.829	2.136E+4	0.766
7255.	6.824	2.137E+4	0.771
7260.	6.819	2.137E+4	0.765
7265.	6.816	2.138E+4	0.797
7270.	6.813	2.138E+4	0.79
7275.	6.812	2.139E+4	0.781
7280.	6.816	2.139E+4	0.785
7285.	6.816	2.14E+4	0.798
7290.	6.818	2.14E+4	0.797
7295.	6.818	2.141E+4	0.791
7300.	6.823	2.141E+4	0.804
7305.	6.825	2.142E+4	0.817
7310.	6.829	2.142E+4	0.794
7315.	6.833	2.143E+4	0.807
7320.	6.838	2.143E+4	0.823
7325.	6.843	2.144E+4	0.819
7330.	6.845	2.144E+4	0.822
7335.	6.85	2.145E+4	0.828
7340.	6.855	2.145E+4	0.812
7345.	6.858	2.146E+4	0.819
7350.	6.86	2.146E+4	0.828
7355.	6.866	2.147E+4	0.808
7360.	6.864	2.147E+4	0.811
7365.	6.868	2.148E+4	0.789
7370.	6.869	2.148E+4	0.818
7375.	6.868	2.149E+4	0.815
7380.	6.869	2.149E+4	0.807
7385.	6.868	2.15E+4	0.814
7390.	6.868	2.15E+4	0.818
7395.	6.867	2.151E+4	0.821
7400.	6.866	2.151E+4	0.803
7405.	6.867	2.152E+4	0.802
7410.	6.866	2.152E+4	0.799
7415.	6.865	2.153E+4	0.807
7420.	6.861	2.153E+4	0.817
7425.	6.861	2.154E+4	0.806
7430.	6.856	2.154E+4	0.801
7435.	6.855	2.155E+4	0.8
7440.	6.851	2.155E+4	0.802
7445.	6.849	2.156E+4	0.802
7450.	6.841	2.156E+4	0.796
7455.	6.838	2.157E+4	0.796
7460.	6.835	2.157E+4	0.798
7465.	6.831	2.158E+4	0.806
7470.	6.825	2.158E+4	0.794

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
7475.	6.82	2.159E+4	0.796
7480.	6.816	2.159E+4	0.81
7485.	6.811	2.16E+4	0.805
7490.	6.804	2.16E+4	0.791
7495.	6.8	2.161E+4	0.801
7500.	6.797	2.161E+4	0.792
7505.	6.79	2.162E+4	0.802
7510.	6.785	2.162E+4	0.793
7515.	6.779	2.163E+4	0.8
7520.	6.773	2.163E+4	0.809
7525.	6.765	2.164E+4	0.804
7530.	6.756	2.164E+4	0.789
7535.	6.751	2.165E+4	0.787
7540.	6.74	2.165E+4	0.781
7545.	6.733	2.166E+4	0.798
7550.	6.729	2.166E+4	0.796
7555.	6.721	2.167E+4	0.782
7560.	6.715	2.167E+4	0.784
7565.	6.708	2.168E+4	0.792
7570.	6.702	2.168E+4	0.779
7575.	6.693	2.169E+4	0.778
7580.	6.684	2.169E+4	0.779
7585.	6.679	2.17E+4	0.78
7590.	6.67	2.17E+4	0.786
7595.	6.661	2.171E+4	0.794
7600.	6.654	2.171E+4	0.771
7605.	6.646	2.172E+4	0.78
7610.	6.639	2.172E+4	0.769
7615.	6.633	2.173E+4	0.766
7620.	6.625	2.173E+4	0.765
7625.	6.619	2.174E+4	0.77
7630.	6.608	2.174E+4	0.764
7635.	6.602	2.175E+4	0.77
7640.	6.592	2.175E+4	0.759
7645.	6.587	2.176E+4	0.763
7650.	6.58	2.176E+4	0.76
7655.	6.569	2.177E+4	0.762
7660.	6.563	2.177E+4	0.749
7665.	6.555	2.178E+4	0.748
7670.	6.547	2.178E+4	0.762
7675.	6.536	2.179E+4	0.765
7680.	6.527	2.179E+4	0.753
7685.	6.518	2.18E+4	0.748
7690.	6.509	2.18E+4	0.743
7695.	6.501	2.181E+4	0.748
7700.	6.49	2.181E+4	0.731
7705.	6.483	2.182E+4	0.744
7710.	6.473	2.182E+4	0.745
7715.	6.461	2.183E+4	0.742
7720.	6.455	2.183E+4	0.745
7725.	6.445	2.184E+4	0.745
7730.	6.435	2.184E+4	0.754
7735.	6.424	2.185E+4	0.755

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
7740.	6.415	2.185E+4	0.742
7745.	6.407	2.186E+4	0.746
7750.	6.395	2.186E+4	0.736
7755.	6.384	2.187E+4	0.74
7760.	6.373	2.187E+4	0.734
7765.	6.366	2.188E+4	0.737
7770.	6.358	2.188E+4	0.738
7775.	6.348	2.189E+4	0.734
7780.	6.336	2.189E+4	0.718
7785.	6.328	2.19E+4	0.733
7790.	6.318	2.19E+4	0.729
7795.	6.311	2.191E+4	0.73
7800.	6.302	2.191E+4	0.733
7805.	6.294	2.192E+4	0.734
7810.	6.287	2.192E+4	0.74
7815.	6.275	2.193E+4	0.735
7820.	6.266	2.193E+4	0.733
7825.	6.255	2.194E+4	0.729
7830.	6.245	2.194E+4	0.724
7835.	6.234	2.195E+4	0.706
7840.	6.224	2.195E+4	0.718
7845.	6.213	2.196E+4	0.723
7850.	6.205	2.196E+4	0.719
7855.	6.191	2.197E+4	0.713
7860.	6.183	2.197E+4	0.72
7865.	6.175	2.198E+4	0.709
7870.	6.165	2.198E+4	0.693
7875.	6.153	2.199E+4	0.717
7880.	6.143	2.199E+4	0.705
7885.	6.133	2.2E+4	0.71
7890.	6.122	2.2E+4	0.715
7895.	6.113	2.201E+4	0.701
7900.	6.1	2.201E+4	0.694
7905.	6.091	2.202E+4	0.702
7910.	6.079	2.202E+4	0.701
7915.	6.069	2.203E+4	0.714
7920.	6.059	2.203E+4	0.693
7925.	6.05	2.204E+4	0.701
7930.	6.039	2.204E+4	0.698
7935.	6.03	2.205E+4	0.683
7940.	6.018	2.205E+4	0.687
7945.	6.007	2.206E+4	0.69
7950.	5.999	2.206E+4	0.691
7955.	5.986	2.207E+4	0.691
7960.	5.976	2.207E+4	0.683
7965.	5.969	2.208E+4	0.683
7970.	5.956	2.208E+4	0.682
7975.	5.946	2.209E+4	0.682
7980.	5.938	2.209E+4	0.682
7985.	5.927	2.21E+4	0.68
7990.	5.917	2.21E+4	0.671
7995.	5.908	2.211E+4	0.672
8000.	5.896	2.211E+4	0.669

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
8005.	5.888	2.212E+4	0.667
8010.	5.877	2.212E+4	0.665
8015.	5.868	2.213E+4	0.666
8020.	5.861	2.213E+4	0.66
8025.	5.852	2.214E+4	0.663
8030.	5.842	2.214E+4	0.662
8035.	5.832	2.215E+4	0.653
8040.	5.821	2.215E+4	0.652
8045.	5.811	2.216E+4	0.647
8050.	5.804	2.216E+4	0.658
8055.	5.796	2.217E+4	0.647
8060.	5.787	2.217E+4	0.65
8065.	5.777	2.218E+4	0.649
8070.	5.77	2.218E+4	0.637
8075.	5.761	2.219E+4	0.637
8080.	5.753	2.219E+4	0.632
8085.	5.741	2.22E+4	0.634
8090.	5.735	2.22E+4	0.63
8095.	5.724	2.221E+4	0.625
8100.	5.717	2.221E+4	0.627
8105.	5.707	2.222E+4	0.627
8110.	5.695	2.222E+4	0.623
8115.	5.689	2.223E+4	0.621
8120.	5.678	2.223E+4	0.617
8125.	5.672	2.224E+4	0.612
8130.	5.665	2.224E+4	0.613
8135.	5.657	2.225E+4	0.61
8140.	5.646	2.225E+4	0.611
8145.	5.636	2.226E+4	0.608
8150.	5.633	2.226E+4	0.606
8155.	5.621	2.227E+4	0.603
8160.	5.613	2.227E+4	0.596
8165.	5.605	2.228E+4	0.595
8170.	5.6	2.228E+4	0.595
8175.	5.589	2.229E+4	0.604
8180.	5.581	2.229E+4	0.59
8185.	5.573	2.23E+4	0.601
8190.	5.567	2.23E+4	0.599
8195.	5.559	2.231E+4	0.585
8200.	5.551	2.231E+4	0.588
8205.	5.548	2.232E+4	0.584
8210.	5.538	2.232E+4	0.577
8215.	5.529	2.233E+4	0.59
8220.	5.521	2.233E+4	0.576
8225.	5.513	2.234E+4	0.575
8230.	5.505	2.234E+4	0.575
8235.	5.496	2.235E+4	0.573
8240.	5.49	2.235E+4	0.571
8245.	5.482	2.236E+4	0.568
8250.	5.475	2.236E+4	0.573
8255.	5.466	2.237E+4	0.569
8260.	5.463	2.237E+4	0.57
8265.	5.456	2.238E+4	0.565

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
8270.	5.448	2.238E+4	0.568
8275.	5.439	2.239E+4	0.565
8280.	5.433	2.239E+4	0.565
8285.	5.427	2.24E+4	0.564
8290.	5.422	2.24E+4	0.562
8295.	5.411	2.241E+4	0.561
8300.	5.403	2.241E+4	0.562
8305.	5.397	2.242E+4	0.561
8310.	5.39	2.242E+4	0.556
8315.	5.386	2.243E+4	0.555
8320.	5.373	2.243E+4	0.556
8325.	5.368	2.244E+4	0.552
8330.	5.36	2.244E+4	0.55
8335.	5.357	2.245E+4	0.549
8340.	5.348	2.245E+4	0.559
8345.	5.339	2.246E+4	0.544
8350.	5.327	2.246E+4	0.547
8355.	5.325	2.247E+4	0.546
8360.	5.316	2.247E+4	0.542
8365.	5.302	2.248E+4	0.54
8370.	5.302	2.248E+4	0.539
8375.	5.287	2.249E+4	0.539
8380.	5.288	2.249E+4	0.54
8385.	5.27	2.25E+4	0.542
8390.	5.268	2.25E+4	0.539
8395.	5.253	2.251E+4	0.539
8400.	5.259	2.251E+4	0.538
8405.	5.241	2.252E+4	0.533
8410.	5.242	2.252E+4	0.546
8415.	5.231	2.253E+4	0.534
8420.	5.225	2.253E+4	0.534
8425.	5.215	2.254E+4	0.531
8430.	5.21	2.254E+4	0.53
8435.	5.201	2.255E+4	0.531
8440.	5.194	2.255E+4	0.533
8445.	5.185	2.256E+4	0.53
8450.	5.175	2.256E+4	0.532
8455.	5.173	2.257E+4	0.531
8460.	5.16	2.257E+4	0.53
8465.	5.157	2.258E+4	0.529
8470.	5.145	2.258E+4	0.529
8475.	5.136	2.259E+4	0.533
8480.	5.124	2.259E+4	0.532
8485.	5.118	2.26E+4	0.529
8490.	5.109	2.26E+4	0.532
8495.	5.1	2.261E+4	0.544
8500.	5.1	2.261E+4	0.535
8505.	5.088	2.262E+4	0.536
8510.	5.086	2.262E+4	0.55
8515.	5.072	2.263E+4	0.535
8520.	5.067	2.263E+4	0.543
8525.	5.062	2.264E+4	0.546
8530.	5.049	2.264E+4	0.549

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
8535.	5.039	2.265E+4	0.558
8540.	5.03	2.265E+4	0.563
8545.	5.03	2.266E+4	0.57
8550.	5.018	2.266E+4	0.58
8555.	5.011	2.267E+4	0.589
8560.	5.002	2.267E+4	0.603
8565.	4.996	2.268E+4	0.61
8570.	4.984	2.268E+4	0.623
8575.	4.98	2.269E+4	0.64
8580.	4.97	2.269E+4	0.653
8585.	4.971	2.27E+4	0.668
8590.	4.961	2.27E+4	0.682
8595.	4.954	2.271E+4	0.696
8600.	4.951	2.271E+4	0.707
8605.	4.948	2.272E+4	0.72
8610.	4.943	2.272E+4	0.729
8615.	4.94	2.273E+4	0.743
8620.	4.939	2.273E+4	0.755
8625.	4.94	2.274E+4	0.777
8630.	4.944	2.274E+4	0.774
8635.	4.947	2.275E+4	0.785
8640.	4.944	2.275E+4	0.793
8645.	4.945	2.276E+4	0.809
8650.	4.946	2.276E+4	0.807
8655.	4.948	2.277E+4	0.812
8660.	4.954	2.277E+4	0.821
8665.	4.959	2.278E+4	0.826
8670.	4.965	2.278E+4	0.833
8675.	4.964	2.279E+4	0.839
8680.	4.974	2.279E+4	0.844
8685.	4.973	2.28E+4	0.845
8690.	4.983	2.28E+4	0.849
8695.	4.984	2.281E+4	0.852
8700.	4.986	2.281E+4	0.868
8705.	4.999	2.282E+4	0.858
8710.	4.999	2.282E+4	0.861
8715.	4.994	2.283E+4	0.861
8720.	5.001	2.283E+4	0.867
8725.	4.998	2.284E+4	0.865
8730.	5.	2.284E+4	0.865
8735.	5.002	2.285E+4	0.866
8740.	5.003	2.285E+4	0.876
8745.	5.	2.286E+4	0.87
8750.	4.996	2.286E+4	0.867
8755.	4.995	2.287E+4	0.865
8760.	4.998	2.287E+4	0.867
8765.	4.991	2.288E+4	0.864
8770.	4.995	2.288E+4	0.866
8775.	4.995	2.289E+4	0.866
8780.	4.988	2.289E+4	0.862
8785.	4.989	2.29E+4	0.859
8790.	4.989	2.29E+4	0.861
8795.	4.989	2.291E+4	0.857

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
8800.	4.979	2.291E+4	0.866
8805.	4.978	2.292E+4	0.852
8810.	4.976	2.292E+4	0.857
8815.	4.979	2.293E+4	0.851
8820.	4.977	2.293E+4	0.852
8825.	4.972	2.294E+4	0.851
8830.	4.971	2.294E+4	0.849
8835.	4.965	2.295E+4	0.849
8840.	4.961	2.295E+4	0.848
8845.	4.956	2.296E+4	0.843
8850.	4.95	2.296E+4	0.843
8855.	4.945	2.297E+4	0.84
8860.	4.938	2.297E+4	0.837
8865.	4.932	2.298E+4	0.836
8870.	4.927	2.298E+4	0.846
8875.	4.924	2.299E+4	0.832
8880.	4.921	2.299E+4	0.83
8885.	4.913	2.3E+4	0.827
8890.	4.903	2.3E+4	0.822
8895.	4.903	2.301E+4	0.82
8900.	4.896	2.301E+4	0.815
8905.	4.891	2.302E+4	0.811
8910.	4.89	2.302E+4	0.811
8915.	4.882	2.303E+4	0.81
8920.	4.878	2.303E+4	0.806
8925.	4.87	2.304E+4	0.803
8930.	4.863	2.304E+4	0.8
8935.	4.859	2.305E+4	0.797
8940.	4.853	2.305E+4	0.794
8945.	4.845	2.306E+4	0.804
8950.	4.837	2.306E+4	0.79
8955.	4.833	2.307E+4	0.785
8960.	4.827	2.307E+4	0.784
8965.	4.825	2.308E+4	0.779
8970.	4.819	2.308E+4	0.78
8975.	4.813	2.309E+4	0.776
8980.	4.807	2.309E+4	0.771
8985.	4.803	2.31E+4	0.778
8990.	4.797	2.31E+4	0.764
8995.	4.791	2.311E+4	0.764
9000.	4.784	2.311E+4	0.761
9005.	4.776	2.312E+4	0.77
9010.	4.771	2.312E+4	0.754
9015.	4.763	2.313E+4	0.75
9020.	4.759	2.313E+4	0.746
9025.	4.752	2.314E+4	0.746
9030.	4.745	2.314E+4	0.743
9035.	4.745	2.315E+4	0.738
9040.	4.739	2.315E+4	0.745
9045.	4.732	2.316E+4	0.733
9050.	4.725	2.316E+4	0.731
9055.	4.723	2.317E+4	0.728
9060.	4.72	2.317E+4	0.726

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
9065.	4.714	2.318E+4	0.723
9070.	4.711	2.318E+4	0.732
9075.	4.702	2.319E+4	0.717
9080.	4.696	2.319E+4	0.715
9085.	4.691	2.32E+4	0.712
9090.	4.684	2.32E+4	0.712
9095.	4.676	2.321E+4	0.708
9100.	4.669	2.321E+4	0.706
9105.	4.662	2.322E+4	0.705
9110.	4.654	2.322E+4	0.702
9115.	4.645	2.323E+4	0.698
9120.	4.641	2.323E+4	0.698
9125.	4.632	2.324E+4	0.697
9130.	4.629	2.324E+4	0.695
9135.	4.623	2.325E+4	0.706
9140.	4.617	2.325E+4	0.691
9145.	4.61	2.326E+4	0.69
9150.	4.604	2.326E+4	0.685
9155.	4.598	2.327E+4	0.697
9160.	4.593	2.327E+4	0.684
9165.	4.582	2.328E+4	0.684
9170.	4.581	2.328E+4	0.678
9175.	4.575	2.329E+4	0.68
9180.	4.568	2.329E+4	0.677
9185.	4.562	2.33E+4	0.674
9190.	4.553	2.33E+4	0.672
9195.	4.55	2.331E+4	0.684
9200.	4.542	2.331E+4	0.67
9205.	4.534	2.332E+4	0.667
9210.	4.531	2.332E+4	0.666
9215.	4.521	2.333E+4	0.666
9220.	4.517	2.333E+4	0.663
9225.	4.513	2.334E+4	0.66
9230.	4.503	2.334E+4	0.66
9235.	4.497	2.335E+4	0.657
9240.	4.49	2.335E+4	0.655
9245.	4.482	2.336E+4	0.652
9250.	4.474	2.336E+4	0.652
9255.	4.468	2.337E+4	0.649
9260.	4.46	2.337E+4	0.645
9265.	4.455	2.338E+4	0.644
9270.	4.445	2.338E+4	0.645
9275.	4.439	2.339E+4	0.641
9280.	4.432	2.339E+4	0.649
9285.	4.428	2.34E+4	0.638
9290.	4.419	2.34E+4	0.639
9295.	4.413	2.341E+4	0.636
9300.	4.405	2.341E+4	0.634
9305.	4.397	2.342E+4	0.633
9310.	4.39	2.342E+4	0.632
9315.	4.384	2.343E+4	0.642
9320.	4.377	2.343E+4	0.627
9325.	4.369	2.344E+4	0.628

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
9330.	4.364	2.344E+4	0.623
9335.	4.357	2.345E+4	0.623
9340.	4.349	2.345E+4	0.632
9345.	4.343	2.346E+4	0.621
9350.	4.338	2.346E+4	0.615
9355.	4.328	2.347E+4	0.616
9360.	4.323	2.347E+4	0.624
9365.	4.314	2.348E+4	0.61
9370.	4.308	2.348E+4	0.609
9375.	4.301	2.349E+4	0.608
9380.	4.293	2.349E+4	0.607
9385.	4.289	2.35E+4	0.604
9390.	4.282	2.35E+4	0.602
9395.	4.277	2.351E+4	0.599
9400.	4.269	2.351E+4	0.61
9405.	4.263	2.352E+4	0.594
9410.	4.257	2.352E+4	0.591
9415.	4.251	2.353E+4	0.589
9420.	4.241	2.353E+4	0.586
9425.	4.234	2.354E+4	0.584
9430.	4.228	2.354E+4	0.58
9435.	4.22	2.355E+4	0.581
9440.	4.217	2.355E+4	0.574
9445.	4.209	2.356E+4	0.573
9450.	4.2	2.356E+4	0.572
9455.	4.194	2.357E+4	0.567
9460.	4.188	2.357E+4	0.563
9465.	4.183	2.358E+4	0.565
9470.	4.178	2.358E+4	0.558
9475.	4.174	2.359E+4	0.556
9480.	4.166	2.359E+4	0.554
9485.	4.161	2.36E+4	0.56
9490.	4.153	2.36E+4	0.548
9495.	4.146	2.361E+4	0.544
9500.	4.14	2.361E+4	0.543
9505.	4.136	2.362E+4	0.539
9510.	4.13	2.362E+4	0.536
9515.	4.122	2.363E+4	0.533
9520.	4.114	2.363E+4	0.531
9525.	4.109	2.364E+4	0.528
9530.	4.103	2.364E+4	0.525
9535.	4.099	2.365E+4	0.522
9540.	4.091	2.365E+4	0.519
9545.	4.084	2.366E+4	0.514
9550.	4.078	2.366E+4	0.513
9555.	4.07	2.367E+4	0.513
9560.	4.068	2.367E+4	0.511
9565.	4.061	2.368E+4	0.507
9570.	4.059	2.368E+4	0.507
9575.	4.055	2.369E+4	0.504
9580.	4.05	2.369E+4	0.499
9585.	4.044	2.37E+4	0.509
9590.	4.04	2.37E+4	0.495

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
9595.	4.032	2.371E+4	0.49
9600.	4.028	2.371E+4	0.491
9605.	4.025	2.372E+4	0.485
9610.	4.019	2.372E+4	0.484
9615.	4.016	2.373E+4	0.48
9620.	4.013	2.373E+4	0.478
9625.	4.011	2.374E+4	0.475
9630.	4.007	2.374E+4	0.472
9635.	4.004	2.375E+4	0.47
9640.	4.002	2.375E+4	0.466
9645.	3.998	2.376E+4	0.463
9650.	3.999	2.376E+4	0.459
9655.	3.998	2.377E+4	0.456
9660.	3.996	2.377E+4	0.455
9665.	3.997	2.378E+4	0.45
9670.	3.994	2.378E+4	0.451
9675.	3.998	2.379E+4	0.449
9680.	3.995	2.379E+4	0.457
9685.	3.994	2.38E+4	0.443
9690.	4.001	2.38E+4	0.441
9695.	4.004	2.381E+4	0.442
9700.	4.007	2.381E+4	0.44
9705.	4.013	2.382E+4	0.439
9710.	4.015	2.382E+4	0.436
9715.	4.013	2.383E+4	0.433
9720.	4.017	2.383E+4	0.433
9725.	4.017	2.384E+4	0.429
9730.	4.026	2.384E+4	0.441
9735.	4.027	2.385E+4	0.429
9740.	4.032	2.385E+4	0.427
9745.	4.03	2.386E+4	0.425
9750.	4.032	2.386E+4	0.421
9755.	4.034	2.387E+4	0.421
9760.	4.035	2.387E+4	0.432
9765.	4.037	2.388E+4	0.416
9770.	4.041	2.388E+4	0.416
9775.	4.04	2.389E+4	0.416
9780.	4.04	2.389E+4	0.411
9785.	4.042	2.39E+4	0.411
9790.	4.043	2.39E+4	0.409
9795.	4.044	2.391E+4	0.407
9800.	4.043	2.391E+4	0.407
9805.	4.045	2.392E+4	0.402
9810.	4.044	2.392E+4	0.402
9815.	4.043	2.393E+4	0.403
9820.	4.041	2.393E+4	0.395
9825.	4.04	2.394E+4	0.398
9830.	4.034	2.394E+4	0.397
9835.	4.032	2.395E+4	0.396
9840.	4.031	2.395E+4	0.394
9845.	4.031	2.396E+4	0.394
9850.	4.03	2.396E+4	0.394
9855.	4.026	2.397E+4	0.392

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
9860.	4.025	2.397E+4	0.394
9865.	4.027	2.398E+4	0.392
9870.	4.032	2.398E+4	0.405
9875.	4.024	2.399E+4	0.396
9880.	4.023	2.399E+4	0.396
9885.	4.019	2.4E+4	0.395
9890.	4.016	2.4E+4	0.394
9895.	4.011	2.401E+4	0.397
9900.	4.008	2.401E+4	0.396
9905.	4.004	2.402E+4	0.396
9910.	4.001	2.402E+4	0.397
9915.	3.997	2.403E+4	0.398
9920.	3.994	2.403E+4	0.412
9925.	3.99	2.404E+4	0.403
9930.	3.985	2.404E+4	0.407
9935.	3.978	2.405E+4	0.41
9940.	3.969	2.405E+4	0.414
9945.	3.966	2.406E+4	0.422
9950.	3.963	2.406E+4	0.426
9955.	3.956	2.407E+4	0.434
9960.	3.952	2.407E+4	0.443
9965.	3.945	2.408E+4	0.452
9970.	3.94	2.408E+4	0.461
9975.	3.935	2.409E+4	0.47
9980.	3.928	2.409E+4	0.48
9985.	3.923	2.41E+4	0.491
9990.	3.915	2.41E+4	0.499
9995.	3.908	2.411E+4	0.507
10000.	3.902	2.411E+4	0.518
1.001E+4	3.896	2.412E+4	0.528
1.001E+4	3.889	2.412E+4	0.537
1.002E+4	3.88	2.413E+4	0.545
1.002E+4	3.874	2.413E+4	0.555
1.003E+4	3.867	2.414E+4	0.575
1.003E+4	3.864	2.414E+4	0.57
1.004E+4	3.856	2.415E+4	0.58
1.004E+4	3.846	2.415E+4	0.584
1.005E+4	3.838	2.416E+4	0.591
1.005E+4	3.832	2.416E+4	0.596
1.006E+4	3.824	2.417E+4	0.602
1.006E+4	3.816	2.417E+4	0.606
1.007E+4	3.809	2.418E+4	0.613
1.007E+4	3.8	2.418E+4	0.618
1.008E+4	3.798	2.419E+4	0.622
1.008E+4	3.791	2.419E+4	0.627
1.009E+4	3.786	2.42E+4	0.63
1.009E+4	3.78	2.42E+4	0.633
1.01E+4	3.773	2.421E+4	0.637
1.01E+4	3.767	2.421E+4	0.641
1.011E+4	3.763	2.422E+4	0.642
1.011E+4	3.756	2.422E+4	0.646
1.012E+4	3.75	2.423E+4	0.647
1.012E+4	3.745	2.423E+4	0.651

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
1.013E+4	3.739	2.424E+4	0.655
1.013E+4	3.728	2.424E+4	0.654
1.014E+4	3.722	2.425E+4	0.669
1.014E+4	3.719	2.425E+4	0.66
1.015E+4	3.71	2.426E+4	0.67
1.015E+4	3.702	2.426E+4	0.671
1.016E+4	3.698	2.427E+4	0.672
1.016E+4	3.692	2.427E+4	0.662
1.017E+4	3.683	2.428E+4	0.667
1.017E+4	3.674	2.428E+4	0.669
1.018E+4	3.67	2.429E+4	0.659
1.018E+4	3.661	2.429E+4	0.657
1.019E+4	3.655	2.43E+4	0.654
1.019E+4	3.65	2.43E+4	0.656
1.02E+4	3.642	2.431E+4	0.652
1.02E+4	3.636	2.431E+4	0.65
1.021E+4	3.632	2.432E+4	0.649
1.021E+4	3.626	2.432E+4	0.646
1.022E+4	3.62	2.433E+4	0.648
1.022E+4	3.614	2.433E+4	0.643
1.023E+4	3.608	2.434E+4	0.642
1.023E+4	3.603	2.434E+4	0.647
1.024E+4	3.594	2.435E+4	0.636
1.024E+4	3.59	2.435E+4	0.643
1.025E+4	3.586	2.436E+4	0.629
1.025E+4	3.581	2.436E+4	0.629
1.026E+4	3.576	2.437E+4	0.624
1.026E+4	3.569	2.437E+4	0.622
1.027E+4	3.565	2.438E+4	0.617
1.027E+4	3.561	2.438E+4	0.614
1.028E+4	3.555	2.439E+4	0.61
1.028E+4	3.548	2.439E+4	0.606
1.029E+4	3.542	2.44E+4	0.606
1.029E+4	3.538	2.44E+4	0.603
1.03E+4	3.531	2.441E+4	0.6
1.03E+4	3.529	2.441E+4	0.601
1.031E+4	3.524	2.442E+4	0.596
1.031E+4	3.52	2.442E+4	0.592
1.032E+4	3.515	2.443E+4	0.591
1.032E+4	3.507	2.443E+4	0.588
1.033E+4	3.503	2.444E+4	0.585
1.033E+4	3.498	2.444E+4	0.584
1.034E+4	3.495	2.445E+4	0.579
1.034E+4	3.49	2.445E+4	0.578
1.035E+4	3.488	2.446E+4	0.575
1.035E+4	3.481	2.446E+4	0.575
1.036E+4	3.476	2.447E+4	0.571
1.036E+4	3.474	2.447E+4	0.567
1.037E+4	3.467	2.448E+4	0.563
1.037E+4	3.46	2.448E+4	0.562
1.038E+4	3.459	2.449E+4	0.557
1.038E+4	3.452	2.449E+4	0.556
1.039E+4	3.449	2.45E+4	0.553

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
1.039E+4	3.445	2.45E+4	0.55
1.04E+4	3.442	2.451E+4	0.544
1.04E+4	3.436	2.451E+4	0.541
1.041E+4	3.434	2.452E+4	0.54
1.041E+4	3.427	2.452E+4	0.536
1.042E+4	3.424	2.453E+4	0.537
1.042E+4	3.419	2.453E+4	0.532
1.043E+4	3.417	2.454E+4	0.534
1.043E+4	3.412	2.454E+4	0.542
1.044E+4	3.407	2.455E+4	0.529
1.044E+4	3.403	2.455E+4	0.527
1.045E+4	3.403	2.456E+4	0.525
1.045E+4	3.396	2.456E+4	0.523
1.046E+4	3.392	2.457E+4	0.522
1.046E+4	3.389	2.457E+4	0.521
1.047E+4	3.383	2.458E+4	0.515
1.047E+4	3.381	2.458E+4	0.514
1.048E+4	3.377	2.459E+4	0.511
1.048E+4	3.371	2.459E+4	0.507
1.049E+4	3.368	2.46E+4	0.506
1.049E+4	3.366	2.46E+4	0.506
1.05E+4	3.362	2.461E+4	0.5
1.05E+4	3.357	2.461E+4	0.502
1.051E+4	3.354	2.462E+4	0.498
1.051E+4	3.352	2.462E+4	0.496
1.052E+4	3.349	2.463E+4	0.493
1.052E+4	3.343	2.463E+4	0.493
1.053E+4	3.34	2.464E+4	0.488
1.053E+4	3.339	2.464E+4	0.486
1.054E+4	3.333	2.465E+4	0.485
1.054E+4	3.332	2.465E+4	0.486
1.055E+4	3.327	2.466E+4	0.483
1.055E+4	3.323	2.466E+4	0.493
1.056E+4	3.318	2.467E+4	0.481
1.056E+4	3.315	2.467E+4	0.478
1.057E+4	3.311	2.468E+4	0.489
1.057E+4	3.305	2.468E+4	0.474
1.058E+4	3.304	2.469E+4	0.472
1.058E+4	3.301	2.469E+4	0.471
1.059E+4	3.297	2.47E+4	0.473
1.059E+4	3.293	2.47E+4	0.47
1.06E+4	3.291	2.471E+4	0.468
1.06E+4	3.288	2.471E+4	0.469
1.061E+4	3.283	2.472E+4	0.468
1.061E+4	3.282	2.472E+4	0.465
1.062E+4	3.279	2.473E+4	0.463
1.062E+4	3.272	2.473E+4	0.463
1.063E+4	3.268	2.474E+4	0.472
1.063E+4	3.264	2.474E+4	0.459
1.064E+4	3.261	2.475E+4	0.459
1.064E+4	3.257	2.475E+4	0.461
1.065E+4	3.25	2.476E+4	0.459
1.065E+4	3.25	2.476E+4	0.456

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
1.066E+4	3.246	2.477E+4	0.469
1.066E+4	3.241	2.477E+4	0.457
1.067E+4	3.238	2.478E+4	0.459
1.067E+4	3.236	2.478E+4	0.457
1.068E+4	3.229	2.479E+4	0.455
1.068E+4	3.229	2.479E+4	0.453
1.069E+4	3.222	2.48E+4	0.455
1.069E+4	3.217	2.48E+4	0.452
1.07E+4	3.212	2.481E+4	0.453
1.07E+4	3.208	2.481E+4	0.463
1.071E+4	3.202	2.482E+4	0.449
1.071E+4	3.199	2.482E+4	0.45
1.072E+4	3.197	2.483E+4	0.446
1.072E+4	3.191	2.483E+4	0.446
1.073E+4	3.187	2.484E+4	0.446
1.073E+4	3.185	2.484E+4	0.442
1.074E+4	3.178	2.485E+4	0.444
1.074E+4	3.173	2.485E+4	0.445
1.075E+4	3.167	2.486E+4	0.44
1.075E+4	3.162	2.486E+4	0.44
1.076E+4	3.157	2.487E+4	0.44
1.076E+4	3.151	2.487E+4	0.44
1.077E+4	3.146	2.488E+4	0.44
1.077E+4	3.141	2.488E+4	0.438
1.078E+4	3.137	2.489E+4	0.436
1.078E+4	3.132	2.489E+4	0.436
1.079E+4	3.127	2.49E+4	0.437
1.079E+4	3.124	2.49E+4	0.435
1.08E+4	3.121	2.491E+4	0.435
1.08E+4	3.115	2.491E+4	0.432
1.081E+4	3.11	2.492E+4	0.43
1.081E+4	3.107	2.492E+4	0.431
1.082E+4	3.103	2.493E+4	0.429
1.082E+4	3.096	2.493E+4	0.428
1.083E+4	3.094	2.494E+4	0.423
1.083E+4	3.091	2.494E+4	0.424
1.084E+4	3.085	2.495E+4	0.421
1.084E+4	3.084	2.495E+4	0.421
1.085E+4	3.077	2.496E+4	0.42
1.085E+4	3.073	2.496E+4	0.419
1.086E+4	3.069	2.497E+4	0.418
1.086E+4	3.064	2.497E+4	0.417
1.087E+4	3.058	2.498E+4	0.419
1.087E+4	3.056	2.498E+4	0.424
1.088E+4	3.051	2.499E+4	0.412
1.088E+4	3.046	2.499E+4	0.408
1.089E+4	3.044	2.5E+4	0.408
1.089E+4	3.041	2.5E+4	0.405
1.09E+4	3.037	2.501E+4	0.404
1.09E+4	3.032	2.501E+4	0.403
1.091E+4	3.03	2.502E+4	0.401
1.091E+4	3.024	2.502E+4	0.4
1.092E+4	3.021	2.503E+4	0.399

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
1.092E+4	3.016	2.503E+4	0.396
1.093E+4	3.016	2.504E+4	0.393
1.093E+4	3.013	2.504E+4	0.389
1.094E+4	3.008	2.505E+4	0.391
1.094E+4	3.004	2.505E+4	0.386
1.095E+4	3.001	2.506E+4	0.386
1.095E+4	2.997	2.506E+4	0.383
1.096E+4	2.992	2.507E+4	0.382
1.096E+4	2.99	2.507E+4	0.38
1.097E+4	2.987	2.508E+4	0.379
1.097E+4	2.982	2.508E+4	0.374
1.098E+4	2.979	2.509E+4	0.373
1.098E+4	2.976	2.509E+4	0.371
1.099E+4	2.971	2.51E+4	0.368
1.099E+4	2.967	2.51E+4	0.365
1.1E+4	2.966	2.511E+4	0.375
1.1E+4	2.962	2.511E+4	0.363
1.101E+4	2.957	2.512E+4	0.359
1.101E+4	2.953	2.512E+4	0.355
1.102E+4	2.951	2.513E+4	0.355
1.102E+4	2.946	2.513E+4	0.351
1.103E+4	2.944	2.514E+4	0.347
1.103E+4	2.939	2.514E+4	0.347
1.104E+4	2.937	2.515E+4	0.343
1.104E+4	2.935	2.515E+4	0.339
1.105E+4	2.932	2.516E+4	0.34
1.105E+4	2.927	2.516E+4	0.334
1.106E+4	2.924	2.517E+4	0.333
1.106E+4	2.922	2.517E+4	0.331
1.107E+4	2.92	2.518E+4	0.329
1.107E+4	2.918	2.518E+4	0.326
1.108E+4	2.914	2.519E+4	0.326
1.108E+4	2.912	2.519E+4	0.322
1.109E+4	2.912	2.52E+4	0.319
1.109E+4	2.91	2.52E+4	0.317
1.11E+4	2.907	2.521E+4	0.316
1.11E+4	2.909	2.521E+4	0.312
1.111E+4	2.908	2.522E+4	0.311
1.111E+4	2.909	2.522E+4	0.309
1.112E+4	2.912	2.523E+4	0.307
1.112E+4	2.912	2.523E+4	0.305
1.113E+4	2.917	2.524E+4	0.305
1.113E+4	2.922	2.524E+4	0.301
1.114E+4	2.929	2.525E+4	0.299
1.114E+4	2.934	2.525E+4	0.298
1.115E+4	2.945	2.526E+4	0.296
1.115E+4	2.954	2.526E+4	0.294
1.116E+4	2.965	2.527E+4	0.292
1.116E+4	2.979	2.527E+4	0.291
1.117E+4	2.992	2.528E+4	0.291
1.117E+4	3.003	2.528E+4	0.287
1.118E+4	3.015	2.529E+4	0.29
1.118E+4	3.03	2.529E+4	0.285

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
1.119E+4	3.042	2.53E+4	0.285
1.119E+4	3.054	2.53E+4	0.281
1.12E+4	3.065	2.531E+4	0.281
1.12E+4	3.075	2.531E+4	0.279
1.121E+4	3.085	2.532E+4	0.278
1.121E+4	3.097	2.532E+4	0.276
1.122E+4	3.105	2.533E+4	0.276
1.122E+4	3.112	2.533E+4	0.274
1.123E+4	3.124	2.534E+4	0.274
1.123E+4	3.131	2.534E+4	0.273
1.124E+4	3.139	2.535E+4	0.272
1.124E+4	3.148	2.535E+4	0.269
1.125E+4	3.154	2.536E+4	0.269
1.125E+4	3.159	2.536E+4	0.268
1.126E+4	3.165	2.537E+4	0.266
1.126E+4	3.169	2.537E+4	0.265
1.127E+4	3.176	2.538E+4	0.264
1.127E+4	3.18	2.538E+4	0.266
1.128E+4	3.184	2.539E+4	0.262
1.128E+4	3.188	2.539E+4	0.262
1.129E+4	3.193	2.54E+4	0.263
1.129E+4	3.193	2.54E+4	0.262
1.13E+4	3.197	2.541E+4	0.265
1.13E+4	3.197	2.541E+4	0.264
1.131E+4	3.198	2.542E+4	0.263
1.131E+4	3.203	2.542E+4	0.261
1.132E+4	3.204	2.543E+4	0.262
1.132E+4	3.204	2.543E+4	0.262
1.133E+4	3.206	2.544E+4	0.263
1.133E+4	3.204	2.544E+4	0.262
1.134E+4	3.203	2.545E+4	0.262
1.134E+4	3.207	2.545E+4	0.264
1.135E+4	3.204	2.546E+4	0.263
1.135E+4	3.206	2.546E+4	0.263
1.136E+4	3.206	2.547E+4	0.266
1.136E+4	3.203	2.547E+4	0.276
1.137E+4	3.203	2.548E+4	0.268
1.137E+4	3.199	2.548E+4	0.269
1.138E+4	3.198	2.549E+4	0.269
1.138E+4	3.195	2.549E+4	0.27
1.139E+4	3.197	2.55E+4	0.269
1.139E+4	3.195	2.55E+4	0.273
1.14E+4	3.191	2.551E+4	0.271
1.14E+4	3.192	2.551E+4	0.275
1.141E+4	3.196	2.552E+4	0.279
1.141E+4	3.198	2.552E+4	0.283
1.142E+4	3.204	2.553E+4	0.285
1.142E+4	3.21	2.553E+4	0.29
1.143E+4	3.222	2.554E+4	0.298
1.143E+4	3.236	2.554E+4	0.305
1.144E+4	3.254	2.555E+4	0.314
1.144E+4	3.275	2.555E+4	0.326
1.145E+4	3.304	2.556E+4	0.336

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
1.145E+4	3.333	2.556E+4	0.347
1.146E+4	3.366	2.557E+4	0.361
1.146E+4	3.406	2.557E+4	0.372
1.147E+4	3.445	2.558E+4	0.387
1.147E+4	3.488	2.558E+4	0.398
1.148E+4	3.531	2.559E+4	0.413
1.148E+4	3.575	2.559E+4	0.426
1.149E+4	3.616	2.56E+4	0.441
1.149E+4	3.653	2.56E+4	0.455
1.15E+4	3.69	2.561E+4	0.469
1.15E+4	3.721	2.561E+4	0.477
1.151E+4	3.746	2.562E+4	0.491
1.151E+4	3.764	2.562E+4	0.501
1.152E+4	3.785	2.563E+4	0.514
1.152E+4	3.799	2.563E+4	0.524
1.153E+4	3.81	2.564E+4	0.532
1.153E+4	3.821	2.564E+4	0.544
1.154E+4	3.829	2.565E+4	0.552
1.154E+4	3.834	2.565E+4	0.557
1.155E+4	3.837	2.566E+4	0.569
1.155E+4	3.839	2.566E+4	0.574
1.156E+4	3.841	2.567E+4	0.582
1.156E+4	3.836	2.567E+4	0.587
1.157E+4	3.834	2.568E+4	0.593
1.157E+4	3.831	2.568E+4	0.597
1.158E+4	3.828	2.569E+4	0.602
1.158E+4	3.824	2.569E+4	0.603
1.159E+4	3.818	2.57E+4	0.606
1.159E+4	3.812	2.57E+4	0.615
1.16E+4	3.807	2.571E+4	0.616
1.16E+4	3.799	2.571E+4	0.621
1.161E+4	3.79	2.572E+4	0.622
1.161E+4	3.782	2.572E+4	0.622
1.162E+4	3.773	2.573E+4	0.626
1.162E+4	3.764	2.573E+4	0.628
1.163E+4	3.748	2.574E+4	0.63
1.163E+4	3.739	2.574E+4	0.631
1.164E+4	3.728	2.575E+4	0.632
1.164E+4	3.716	2.575E+4	0.628
1.165E+4	3.706	2.576E+4	0.633
1.165E+4	3.695	2.576E+4	0.633
1.166E+4	3.686	2.577E+4	0.635
1.166E+4	3.674	2.577E+4	0.63
1.167E+4	3.664	2.578E+4	0.63
1.167E+4	3.655	2.578E+4	0.63
1.168E+4	3.643	2.579E+4	0.628
1.168E+4	3.636	2.579E+4	0.625
1.169E+4	3.624	2.58E+4	0.624
1.169E+4	3.613	2.58E+4	0.625
1.17E+4	3.601	2.581E+4	0.622
1.17E+4	3.592	2.581E+4	0.62
1.171E+4	3.582	2.582E+4	0.618
1.171E+4	3.572	2.582E+4	0.615

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
1.172E+4	3.562	2.583E+4	0.611
1.172E+4	3.552	2.583E+4	0.611
1.173E+4	3.544	2.584E+4	0.608
1.173E+4	3.534	2.584E+4	0.606
1.174E+4	3.526	2.585E+4	0.601
1.174E+4	3.519	2.585E+4	0.602
1.175E+4	3.509	2.586E+4	0.601
1.175E+4	3.498	2.586E+4	0.598
1.176E+4	3.489	2.587E+4	0.593
1.176E+4	3.482	2.587E+4	0.593
1.177E+4	3.473	2.588E+4	0.586
1.177E+4	3.464	2.588E+4	0.586
1.178E+4	3.454	2.589E+4	0.585
1.178E+4	3.445	2.589E+4	0.583
1.179E+4	3.435	2.59E+4	0.576
1.179E+4	3.428	2.59E+4	0.575
1.18E+4	3.419	2.591E+4	0.573
1.18E+4	3.412	2.591E+4	0.567
1.181E+4	3.404	2.592E+4	0.578
1.181E+4	3.395	2.592E+4	0.566
1.182E+4	3.392	2.593E+4	0.565
1.182E+4	3.38	2.593E+4	0.56
1.183E+4	3.372	2.594E+4	0.558
1.183E+4	3.364	2.594E+4	0.554
1.184E+4	3.355	2.595E+4	0.557
1.184E+4	3.349	2.595E+4	0.551
1.185E+4	3.341	2.596E+4	0.547
1.185E+4	3.332	2.596E+4	0.546
1.186E+4	3.324	2.597E+4	0.539
1.186E+4	3.317	2.597E+4	0.539
1.187E+4	3.31	2.598E+4	0.537
1.187E+4	3.303	2.598E+4	0.533
1.188E+4	3.296	2.599E+4	0.528
1.188E+4	3.288	2.599E+4	0.53
1.189E+4	3.281	2.6E+4	0.525
1.189E+4	3.278	2.6E+4	0.522
1.19E+4	3.273	2.601E+4	0.519
1.19E+4	3.266	2.601E+4	0.519
1.191E+4	3.26	2.602E+4	0.518
1.191E+4	3.256	2.602E+4	0.515
1.192E+4	3.244	2.603E+4	0.51
1.192E+4	3.239	2.603E+4	0.509
1.193E+4	3.232	2.604E+4	0.504
1.193E+4	3.226	2.604E+4	0.504
1.194E+4	3.22	2.605E+4	0.503
1.194E+4	3.211	2.605E+4	0.5
1.195E+4	3.204	2.606E+4	0.495
1.195E+4	3.198	2.606E+4	0.492
1.196E+4	3.189	2.607E+4	0.491
1.196E+4	3.185	2.607E+4	0.487
1.197E+4	3.177	2.608E+4	0.485
1.197E+4	3.176	2.608E+4	0.482
1.198E+4	3.167	2.609E+4	0.481

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
1.198E+4	3.161	2.609E+4	0.48
1.199E+4	3.152	2.61E+4	0.476
1.199E+4	3.147	2.61E+4	0.475
1.2E+4	3.143	2.611E+4	0.474
1.2E+4	3.137	2.611E+4	0.468
1.201E+4	3.132	2.612E+4	0.471
1.201E+4	3.126	2.612E+4	0.465
1.202E+4	3.121	2.613E+4	0.463
1.202E+4	3.111	2.613E+4	0.463
1.203E+4	3.106	2.614E+4	0.463
1.203E+4	3.101	2.614E+4	0.472
1.204E+4	3.096	2.615E+4	0.467
1.204E+4	3.091	2.615E+4	0.466
1.205E+4	3.084	2.616E+4	0.457
1.205E+4	3.08	2.616E+4	0.453
1.206E+4	3.074	2.617E+4	0.45
1.206E+4	3.068	2.617E+4	0.451
1.207E+4	3.064	2.618E+4	0.461
1.207E+4	3.057	2.618E+4	0.448
1.208E+4	3.05	2.619E+4	0.447
1.208E+4	3.047	2.619E+4	0.444
1.209E+4	3.041	2.62E+4	0.446
1.209E+4	3.035	2.62E+4	0.444
1.21E+4	3.03	2.621E+4	0.442
1.21E+4	3.025	2.621E+4	0.441
1.211E+4	3.017	2.622E+4	0.441
1.211E+4	3.014	2.622E+4	0.439
1.212E+4	3.009	2.623E+4	0.437
1.212E+4	3.005	2.623E+4	0.437
1.213E+4	2.999	2.624E+4	0.434
1.213E+4	2.993	2.624E+4	0.435
1.214E+4	2.989	2.625E+4	0.434
1.214E+4	2.984	2.625E+4	0.433
1.215E+4	2.977	2.626E+4	0.443
1.215E+4	2.976	2.626E+4	0.428
1.216E+4	2.971	2.627E+4	0.428
1.216E+4	2.963	2.627E+4	0.425
1.217E+4	2.958	2.628E+4	0.424
1.217E+4	2.953	2.628E+4	0.425
1.218E+4	2.949	2.629E+4	0.423
1.218E+4	2.94	2.629E+4	0.42
1.219E+4	2.936	2.63E+4	0.422
1.219E+4	2.934	2.63E+4	0.416
1.22E+4	2.927	2.631E+4	0.417
1.22E+4	2.92	2.631E+4	0.414
1.221E+4	2.915	2.632E+4	0.413
1.221E+4	2.908	2.632E+4	0.411
1.222E+4	2.905	2.633E+4	0.41
1.222E+4	2.899	2.633E+4	0.41
1.223E+4	2.892	2.634E+4	0.409
1.223E+4	2.887	2.634E+4	0.408
1.224E+4	2.882	2.635E+4	0.406
1.224E+4	2.877	2.635E+4	0.405

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
1.225E+4	2.871	2.636E+4	0.405
1.225E+4	2.868	2.636E+4	0.401
1.226E+4	2.863	2.637E+4	0.399
1.226E+4	2.858	2.637E+4	0.394
1.227E+4	2.853	2.638E+4	0.395
1.227E+4	2.848	2.638E+4	0.39
1.228E+4	2.843	2.639E+4	0.392
1.228E+4	2.837	2.639E+4	0.389
1.229E+4	2.83	2.64E+4	0.385
1.229E+4	2.827	2.64E+4	0.385
1.23E+4	2.824	2.641E+4	0.385
1.23E+4	2.82	2.641E+4	0.382
1.231E+4	2.814	2.642E+4	0.379
1.231E+4	2.809	2.642E+4	0.379
1.232E+4	2.806	2.643E+4	0.377
1.232E+4	2.8	2.643E+4	0.377
1.233E+4	2.793	2.644E+4	0.373
1.233E+4	2.792	2.644E+4	0.371
1.234E+4	2.784	2.645E+4	0.369
1.234E+4	2.779	2.645E+4	0.365
1.235E+4	2.774	2.646E+4	0.363
1.235E+4	2.768	2.646E+4	0.361
1.236E+4	2.766	2.647E+4	0.358
1.236E+4	2.76	2.647E+4	0.355
1.237E+4	2.751	2.648E+4	0.355
1.237E+4	2.745	2.648E+4	0.353
1.238E+4	2.74	2.649E+4	0.35
1.238E+4	2.735	2.649E+4	0.348
1.239E+4	2.734	2.65E+4	0.347
1.239E+4	2.728	2.65E+4	0.343
1.24E+4	2.721	2.651E+4	0.341
1.24E+4	2.717	2.651E+4	0.339
1.241E+4	2.711	2.652E+4	0.335
1.241E+4	2.708	2.652E+4	0.33
1.242E+4	2.702	2.653E+4	0.329
1.242E+4	2.701	2.653E+4	0.326
1.243E+4	2.7	2.654E+4	0.323
1.243E+4	2.694	2.654E+4	0.323
1.244E+4	2.69	2.655E+4	0.321
1.244E+4	2.685	2.655E+4	0.318
1.245E+4	2.68	2.656E+4	0.313
1.245E+4	2.678	2.656E+4	0.311
1.246E+4	2.68	2.657E+4	0.31
1.246E+4	2.675	2.657E+4	0.305
1.247E+4	2.669	2.658E+4	0.304
1.247E+4	2.669	2.658E+4	0.303
1.248E+4	2.664	2.659E+4	0.298
1.248E+4	2.659	2.659E+4	0.293
1.249E+4	2.657	2.66E+4	0.29
1.249E+4	2.652	2.66E+4	0.288
1.25E+4	2.648	2.661E+4	0.287
1.25E+4	2.645	2.661E+4	0.282
1.251E+4	2.645	2.662E+4	0.279

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
1.251E+4	2.642	2.662E+4	0.276
1.252E+4	2.64	2.663E+4	0.274
1.252E+4	2.637	2.663E+4	0.271
1.253E+4	2.635	2.664E+4	0.268
1.253E+4	2.633	2.664E+4	0.263
1.254E+4	2.631	2.665E+4	0.262
1.254E+4	2.631	2.665E+4	0.256
1.255E+4	2.628	2.666E+4	0.254
1.255E+4	2.628	2.666E+4	0.252
1.256E+4	2.629	2.667E+4	0.249
1.256E+4	2.632	2.667E+4	0.246
1.257E+4	2.633	2.668E+4	0.245
1.257E+4	2.634	2.668E+4	0.243
1.258E+4	2.64	2.669E+4	0.241
1.258E+4	2.648	2.669E+4	0.251
1.259E+4	2.654	2.67E+4	0.233
1.259E+4	2.66	2.67E+4	0.23
1.26E+4	2.668	2.671E+4	0.231
1.26E+4	2.677	2.671E+4	0.229
1.261E+4	2.687	2.672E+4	0.228
1.261E+4	2.695	2.672E+4	0.227
1.262E+4	2.701	2.673E+4	0.223
1.262E+4	2.713	2.673E+4	0.222
1.263E+4	2.722	2.674E+4	0.219
1.263E+4	2.727	2.674E+4	0.219
1.264E+4	2.737	2.675E+4	0.218
1.264E+4	2.746	2.675E+4	0.217
1.265E+4	2.753	2.676E+4	0.215
1.265E+4	2.762	2.676E+4	0.214
1.266E+4	2.766	2.677E+4	0.212
1.266E+4	2.777	2.677E+4	0.213
1.267E+4	2.782	2.678E+4	0.211
1.267E+4	2.789	2.678E+4	0.209
1.268E+4	2.795	2.679E+4	0.21
1.268E+4	2.801	2.679E+4	0.207
1.269E+4	2.806	2.68E+4	0.206
1.269E+4	2.811	2.68E+4	0.204
1.27E+4	2.812	2.681E+4	0.202
1.27E+4	2.816	2.681E+4	0.202
1.271E+4	2.82	2.682E+4	0.198
1.271E+4	2.821	2.682E+4	0.197
1.272E+4	2.823	2.683E+4	0.196
1.272E+4	2.827	2.683E+4	0.194
1.273E+4	2.83	2.684E+4	0.193
1.273E+4	2.832	2.684E+4	0.193
1.274E+4	2.835	2.685E+4	0.189
1.274E+4	2.834	2.685E+4	0.19
1.275E+4	2.837	2.686E+4	0.191
1.275E+4	2.842	2.686E+4	0.191
1.276E+4	2.843	2.687E+4	0.192
1.276E+4	2.844	2.687E+4	0.192
1.277E+4	2.845	2.688E+4	0.191
1.277E+4	2.846	2.688E+4	0.19

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
1.278E+4	2.845	2.689E+4	0.189
1.278E+4	2.842	2.689E+4	0.189
1.279E+4	2.844	2.69E+4	0.189
1.279E+4	2.846	2.69E+4	0.189
1.28E+4	2.845	2.691E+4	0.191
1.28E+4	2.845	2.691E+4	0.192
1.281E+4	2.847	2.692E+4	0.19
1.281E+4	2.844	2.692E+4	0.194
1.282E+4	2.841	2.693E+4	0.193
1.282E+4	2.839	2.693E+4	0.193
1.283E+4	2.839	2.694E+4	0.192
1.283E+4	2.836	2.694E+4	0.193
1.284E+4	2.834	2.695E+4	0.204
1.284E+4	2.835	2.695E+4	0.192
1.285E+4	2.832	2.696E+4	0.193
1.285E+4	2.829	2.696E+4	0.193
1.286E+4	2.828	2.697E+4	0.193
1.286E+4	2.824	2.697E+4	0.195
1.287E+4	2.825	2.698E+4	0.192
1.287E+4	2.825	2.698E+4	0.193
1.288E+4	2.821	2.699E+4	0.194
1.288E+4	2.818	2.699E+4	0.196
1.289E+4	2.813	2.7E+4	0.195
1.289E+4	2.81	2.7E+4	0.195
1.29E+4	2.808	2.701E+4	0.195
1.29E+4	2.803	2.701E+4	0.197
1.291E+4	2.801	2.702E+4	0.2
1.291E+4	2.798	2.702E+4	0.205
1.292E+4	2.795	2.703E+4	0.206
1.292E+4	2.79	2.703E+4	0.208
1.293E+4	2.787	2.704E+4	0.215
1.293E+4	2.781	2.704E+4	0.222
1.294E+4	2.782	2.705E+4	0.23
1.294E+4	2.778	2.705E+4	0.237
1.295E+4	2.774	2.706E+4	0.246
1.295E+4	2.772	2.706E+4	0.251
1.296E+4	2.771	2.707E+4	0.259
1.296E+4	2.766	2.707E+4	0.271
1.297E+4	2.763	2.708E+4	0.279
1.297E+4	2.758	2.708E+4	0.291
1.298E+4	2.754	2.709E+4	0.298
1.298E+4	2.748	2.709E+4	0.306
1.299E+4	2.744	2.71E+4	0.315
1.299E+4	2.74	2.71E+4	0.324
1.3E+4	2.736	2.711E+4	0.335
1.3E+4	2.734	2.711E+4	0.339
1.301E+4	2.731	2.712E+4	0.35
1.301E+4	2.729	2.712E+4	0.358
1.302E+4	2.725	2.713E+4	0.365
1.302E+4	2.722	2.713E+4	0.372
1.303E+4	2.72	2.714E+4	0.376
1.303E+4	2.718	2.714E+4	0.384
1.304E+4	2.715	2.715E+4	0.39

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
1.304E+4	2.711	2.715E+4	0.4
1.305E+4	2.703	2.716E+4	0.398
1.305E+4	2.7	2.716E+4	0.404
1.306E+4	2.693	2.717E+4	0.408
1.306E+4	2.689	2.717E+4	0.412
1.307E+4	2.685	2.718E+4	0.417
1.307E+4	2.68	2.718E+4	0.421
1.308E+4	2.673	2.719E+4	0.425
1.308E+4	2.669	2.719E+4	0.431
1.309E+4	2.663	2.72E+4	0.43
1.309E+4	2.661	2.72E+4	0.431
1.31E+4	2.652	2.721E+4	0.434
1.31E+4	2.647	2.721E+4	0.436
1.311E+4	2.645	2.722E+4	0.438
1.311E+4	2.639	2.722E+4	0.439
1.312E+4	2.635	2.723E+4	0.437
1.312E+4	2.631	2.723E+4	0.439
1.313E+4	2.625	2.724E+4	0.442
1.313E+4	2.621	2.724E+4	0.44
1.314E+4	2.615	2.725E+4	0.437
1.314E+4	2.611	2.725E+4	0.435
1.315E+4	2.605	2.726E+4	0.433
1.315E+4	2.602	2.726E+4	0.433
1.316E+4	2.594	2.727E+4	0.432
1.316E+4	2.59	2.727E+4	0.432
1.317E+4	2.586	2.728E+4	0.429
1.317E+4	2.582	2.728E+4	0.427
1.318E+4	2.577	2.729E+4	0.43
1.318E+4	2.574	2.729E+4	0.436
1.319E+4	2.569	2.73E+4	0.435
1.319E+4	2.567	2.73E+4	0.425
1.32E+4	2.562	2.731E+4	0.422
1.32E+4	2.558	2.731E+4	0.419
1.321E+4	2.554	2.732E+4	0.418
1.321E+4	2.548	2.732E+4	0.412
1.322E+4	2.543	2.733E+4	0.411
1.322E+4	2.54	2.733E+4	0.409
1.323E+4	2.536	2.734E+4	0.403
1.323E+4	2.534	2.734E+4	0.403
1.324E+4	2.529	2.735E+4	0.398
1.324E+4	2.525	2.735E+4	0.398
1.325E+4	2.522	2.736E+4	0.406
1.325E+4	2.52	2.736E+4	0.393
1.326E+4	2.517	2.737E+4	0.39
1.326E+4	2.511	2.737E+4	0.386
1.327E+4	2.507	2.738E+4	0.381
1.327E+4	2.503	2.738E+4	0.377
1.328E+4	2.501	2.739E+4	0.375
1.328E+4	2.497	2.739E+4	0.37
1.329E+4	2.49	2.74E+4	0.373
1.329E+4	2.489	2.74E+4	0.367
1.33E+4	2.484	2.741E+4	0.362
1.33E+4	2.479	2.741E+4	0.359

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
1.331E+4	2.479	2.742E+4	0.357
1.331E+4	2.474	2.742E+4	0.354
1.332E+4	2.471	2.743E+4	0.349
1.332E+4	2.47	2.743E+4	0.349
1.333E+4	2.465	2.744E+4	0.347
1.333E+4	2.462	2.744E+4	0.345
1.334E+4	2.457	2.745E+4	0.345
1.334E+4	2.455	2.745E+4	0.341
1.335E+4	2.452	2.746E+4	0.337
1.335E+4	2.443	2.746E+4	0.334
1.336E+4	2.442	2.747E+4	0.331
1.336E+4	2.442	2.747E+4	0.327
1.337E+4	2.439	2.748E+4	0.322
1.337E+4	2.433	2.748E+4	0.319
1.338E+4	2.43	2.749E+4	0.318
1.338E+4	2.427	2.749E+4	0.315
1.339E+4	2.425	2.75E+4	0.313
1.339E+4	2.42	2.75E+4	0.31
1.34E+4	2.417	2.751E+4	0.308
1.34E+4	2.412	2.751E+4	0.305
1.341E+4	2.409	2.752E+4	0.301
1.341E+4	2.408	2.752E+4	0.296
1.342E+4	2.405	2.753E+4	0.296
1.342E+4	2.404	2.753E+4	0.292
1.343E+4	2.399	2.754E+4	0.29
1.343E+4	2.397	2.754E+4	0.287
1.344E+4	2.395	2.755E+4	0.283
1.344E+4	2.394	2.755E+4	0.28
1.345E+4	2.391	2.756E+4	0.276
1.345E+4	2.388	2.756E+4	0.273
1.346E+4	2.387	2.757E+4	0.274
1.346E+4	2.384	2.757E+4	0.273
1.347E+4	2.379	2.758E+4	0.274
1.347E+4	2.378	2.758E+4	0.269
1.348E+4	2.375	2.759E+4	0.267
1.348E+4	2.372	2.759E+4	0.263
1.349E+4	2.371	2.76E+4	0.263
1.349E+4	2.368	2.76E+4	0.261
1.35E+4	2.364	2.761E+4	0.262
1.35E+4	2.361	2.761E+4	0.261
1.351E+4	2.356	2.762E+4	0.259
1.351E+4	2.351	2.762E+4	0.256
1.352E+4	2.349	2.763E+4	0.255
1.352E+4	2.346	2.763E+4	0.255
1.353E+4	2.344	2.764E+4	0.252
1.353E+4	2.341	2.764E+4	0.249
1.354E+4	2.339	2.765E+4	0.249
1.354E+4	2.338	2.765E+4	0.246
1.355E+4	2.334	2.766E+4	0.258
1.355E+4	2.332	2.766E+4	0.245
1.356E+4	2.329	2.767E+4	0.243
1.356E+4	2.328	2.767E+4	0.242
1.357E+4	2.326	2.768E+4	0.244

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
1.357E+4	2.321	2.768E+4	0.239
1.358E+4	2.318	2.769E+4	0.239
1.358E+4	2.316	2.769E+4	0.236
1.359E+4	2.315	2.77E+4	0.235
1.359E+4	2.309	2.77E+4	0.232
1.36E+4	2.306	2.771E+4	0.232
1.36E+4	2.304	2.771E+4	0.228
1.361E+4	2.303	2.772E+4	0.228
1.361E+4	2.298	2.772E+4	0.227
1.362E+4	2.295	2.773E+4	0.226
1.362E+4	2.295	2.773E+4	0.226
1.363E+4	2.289	2.774E+4	0.223
1.363E+4	2.286	2.774E+4	0.223
1.364E+4	2.284	2.775E+4	0.221
1.364E+4	2.279	2.775E+4	0.219
1.365E+4	2.276	2.776E+4	0.218
1.365E+4	2.273	2.776E+4	0.212
1.366E+4	2.271	2.777E+4	0.213
1.366E+4	2.265	2.777E+4	0.211
1.367E+4	2.262	2.778E+4	0.213
1.367E+4	2.26	2.778E+4	0.209
1.368E+4	2.255	2.779E+4	0.207
1.368E+4	2.253	2.779E+4	0.203
1.369E+4	2.249	2.78E+4	0.212
1.369E+4	2.247	2.78E+4	0.202
1.37E+4	2.242	2.781E+4	0.199
1.37E+4	2.241	2.781E+4	0.198
1.371E+4	2.236	2.782E+4	0.196
1.371E+4	2.234	2.782E+4	0.194
1.372E+4	2.228	2.783E+4	0.193
1.372E+4	2.229	2.783E+4	0.195
1.373E+4	2.222	2.784E+4	0.191
1.373E+4	2.221	2.784E+4	0.189
1.374E+4	2.219	2.785E+4	0.188
1.374E+4	2.215	2.785E+4	0.184
1.375E+4	2.213	2.786E+4	0.18
1.375E+4	2.211	2.786E+4	0.179
1.376E+4	2.209	2.787E+4	0.177
1.376E+4	2.208	2.787E+4	0.172
1.377E+4	2.206	2.788E+4	0.171
1.377E+4	2.202	2.788E+4	0.169
1.378E+4	2.201	2.789E+4	0.166
1.378E+4	2.197	2.789E+4	0.16
1.379E+4	2.194	2.79E+4	0.16
1.379E+4	2.192	2.79E+4	0.159
1.38E+4	2.191	2.791E+4	0.156
1.38E+4	2.185	2.791E+4	0.155
1.381E+4	2.184	2.792E+4	0.149
1.381E+4	2.18	2.792E+4	0.15
1.382E+4	2.178	2.793E+4	0.145
1.382E+4	2.177	2.793E+4	0.143
1.383E+4	2.173	2.794E+4	0.141
1.383E+4	2.169	2.794E+4	0.138

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
1.384E+4	2.168	2.795E+4	0.135
1.384E+4	2.165	2.795E+4	0.141
1.385E+4	2.163	2.796E+4	0.13
1.385E+4	2.163	2.796E+4	0.125
1.386E+4	2.162	2.797E+4	0.121
1.386E+4	2.157	2.797E+4	0.118
1.387E+4	2.153	2.798E+4	0.115
1.387E+4	2.151	2.798E+4	0.114
1.388E+4	2.148	2.799E+4	0.11
1.388E+4	2.147	2.799E+4	0.104
1.389E+4	2.145	2.8E+4	0.104
1.389E+4	2.142	2.8E+4	0.102
1.39E+4	2.14	2.801E+4	0.102
1.39E+4	2.139	2.801E+4	0.1
1.391E+4	2.136	2.802E+4	0.097
1.391E+4	2.137	2.802E+4	0.095
1.392E+4	2.134	2.803E+4	0.091
1.392E+4	2.136	2.803E+4	0.089
1.393E+4	2.137	2.804E+4	0.086
1.393E+4	2.134	2.804E+4	0.085
1.394E+4	2.133	2.805E+4	0.081
1.394E+4	2.129	2.805E+4	0.077
1.395E+4	2.129	2.806E+4	0.076
1.395E+4	2.13	2.806E+4	0.07
1.396E+4	2.13	2.807E+4	0.069
1.396E+4	2.126	2.807E+4	0.077
1.397E+4	2.135	2.808E+4	0.064
1.397E+4	2.143	2.808E+4	0.058
1.398E+4	2.149	2.809E+4	0.057
1.398E+4	2.156	2.809E+4	0.053
1.399E+4	2.166	2.81E+4	0.053
1.399E+4	2.175	2.81E+4	0.049
1.4E+4	2.183	2.811E+4	0.047
1.4E+4	2.193	2.811E+4	0.045
1.401E+4	2.206	2.812E+4	0.042
1.401E+4	2.217	2.812E+4	0.037
1.402E+4	2.231	2.813E+4	0.036
1.402E+4	2.241	2.813E+4	0.035
1.403E+4	2.251	2.814E+4	0.033
1.403E+4	2.263	2.814E+4	0.032
1.404E+4	2.271	2.815E+4	0.03
1.404E+4	2.28	2.815E+4	0.028
1.405E+4	2.289	2.816E+4	0.028
1.405E+4	2.297	2.816E+4	0.022
1.406E+4	2.306	2.817E+4	0.02
1.406E+4	2.316	2.817E+4	0.018
1.407E+4	2.326	2.818E+4	0.018
1.407E+4	2.335	2.818E+4	0.016
1.408E+4	2.339	2.819E+4	0.015
1.408E+4	2.348	2.819E+4	0.012
1.409E+4	2.355	2.82E+4	0.01
1.409E+4	2.361	2.82E+4	0.009
1.41E+4	2.365	2.821E+4	0.008

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
1.41E+4	2.37	2.821E+4	0.006
1.411E+4	2.373	2.822E+4	0.002
1.411E+4	2.378		

Observation Well No. 5: West 24 12 inch

X Location: -1250. ft
Y Location: 0. ft

Radial distance from east pump well: 1250. ft

Fully Penetrating Well

No. of Observations: 1953

Observation Data

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
5.	0.067	4890.	18.34
10.	0.334	4895.	18.24
15.	0.735	4900.	18.18
20.	1.136	4905.	18.11
25.	1.604	4910.	18.04
30.	2.038	4915.	18.01
35.	2.472	4920.	17.91
40.	2.873	4925.	17.84
45.	3.308	4930.	17.77
50.	3.709	4935.	17.71
55.	4.076	4940.	17.64
60.	4.477	4945.	17.57
65.	4.811	4950.	17.54
70.	5.179	4955.	17.44
75.	5.513	4960.	17.41
80.	5.814	4965.	17.34
85.	6.148	4970.	17.27
90.	6.448	4975.	17.21
95.	6.749	4980.	17.14
100.	7.016	4985.	17.07
105.	7.284	4990.	17.04
110.	7.551	4995.	16.97
115.	7.818	5000.	16.91
120.	8.052	5005.	16.84
125.	8.286	5010.	16.77
130.	8.52	5015.	16.74
135.	8.754	5020.	16.67
140.	8.988	5025.	16.61
145.	9.188	5030.	16.54
150.	9.389	5035.	16.5
155.	9.623	5040.	16.44
160.	9.79	5045.	16.37
165.	9.99	5050.	16.34
170.	10.19	5055.	16.27
175.	10.36	5060.	16.24
180.	10.56	5065.	16.2

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
185.	10.73	5070.	16.1
190.	10.89	5075.	16.07
195.	11.03	5080.	16.
200.	11.23	5085.	15.97
205.	11.36	5090.	15.9
210.	11.53	5095.	15.84
215.	11.69	5100.	15.8
220.	11.83	5105.	15.74
225.	11.96	5110.	15.7
230.	12.13	5115.	15.67
235.	12.3	5120.	15.6
240.	12.43	5125.	15.54
245.	12.56	5130.	15.5
250.	12.7	5135.	15.47
255.	12.83	5140.	15.4
260.	12.96	5145.	15.37
265.	13.1	5150.	15.3
270.	13.23	5155.	15.27
275.	13.33	5160.	15.24
280.	13.47	5165.	15.17
285.	13.57	5170.	15.14
290.	13.7	5175.	15.07
295.	13.83	5180.	15.04
300.	13.93	5185.	15.
305.	14.03	5190.	14.94
310.	14.17	5195.	14.9
315.	14.27	5200.	14.84
320.	14.37	5205.	14.8
325.	14.47	5210.	14.77
330.	14.57	5215.	14.73
335.	14.7	5220.	14.67
340.	14.77	5225.	14.63
345.	14.9	5230.	14.6
350.	15.	5235.	14.57
355.	15.1	5240.	14.5
360.	15.17	5245.	14.47
365.	15.27	5250.	14.43
370.	15.37	5255.	14.37
375.	15.47	5260.	14.37
380.	15.54	5265.	14.3
385.	15.64	5270.	14.27
390.	15.74	5275.	14.23
395.	15.84	5280.	14.17
400.	15.9	5285.	14.17
405.	16.	5290.	14.1
410.	16.1	5295.	14.1
415.	16.17	5300.	14.03
420.	16.24	5305.	14.
425.	16.34	5310.	13.97
430.	16.44	5315.	13.9
435.	16.5	5320.	13.87
440.	16.57	5325.	13.83
445.	16.64	5330.	13.8

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
450.	16.74	5335.	13.77
455.	16.84	5340.	13.73
460.	16.91	5345.	13.7
465.	16.97	5350.	13.66
470.	17.04	5355.	13.6
475.	17.14	5360.	13.57
480.	17.17	5365.	13.53
485.	17.27	5370.	13.5
490.	17.34	5375.	13.47
495.	17.41	5380.	13.43
500.	17.51	5385.	13.4
505.	17.54	5390.	13.37
510.	17.61	5395.	13.33
515.	17.71	5400.	13.3
520.	17.77	5405.	13.26
525.	17.84	5410.	13.23
530.	17.91	5415.	13.2
535.	17.98	5420.	13.16
540.	18.04	5425.	13.13
545.	18.11	5430.	13.1
550.	18.18	5435.	13.06
555.	18.21	5440.	13.03
560.	18.28	5445.	13.
565.	18.34	5450.	12.96
570.	18.41	5455.	12.93
575.	18.48	5460.	12.9
580.	18.54	5465.	12.86
585.	18.58	5470.	12.83
590.	18.64	5475.	12.8
595.	18.71	5480.	12.76
600.	18.78	5485.	12.76
605.	18.81	5490.	12.73
610.	18.88	5495.	12.7
615.	18.95	5500.	12.66
620.	19.01	5505.	12.63
625.	19.05	5510.	12.6
630.	19.11	5515.	12.56
635.	19.18	5520.	12.56
640.	19.21	5525.	12.5
645.	19.28	5530.	12.5
650.	19.31	5535.	12.46
655.	19.38	5540.	12.43
660.	19.41	5545.	12.43
665.	19.48	5550.	12.4
670.	19.51	5555.	12.36
675.	19.58	5560.	12.33
680.	19.65	5565.	12.3
685.	19.71	5570.	12.3
690.	19.71	5575.	12.26
695.	19.78	5580.	12.23
700.	19.85	5585.	12.2
705.	19.88	5590.	12.2
710.	19.95	5595.	12.16

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
715.	19.98	5600.	12.13
720.	20.05	5605.	12.1
725.	20.08	5610.	12.1
730.	20.15	5615.	12.06
735.	20.18	5620.	12.03
740.	20.21	5625.	12.03
745.	20.25	5630.	11.99
750.	20.31	5635.	11.96
755.	20.38	5640.	11.96
760.	20.41	5645.	11.93
765.	20.45	5650.	11.9
770.	20.52	5655.	11.86
775.	20.55	5660.	11.86
780.	20.58	5665.	11.83
785.	20.65	5670.	11.79
790.	20.68	5675.	11.76
795.	20.72	5680.	11.76
800.	20.78	5685.	11.73
805.	20.78	5690.	11.69
810.	20.85	5695.	11.69
815.	20.88	5700.	11.66
820.	20.92	5705.	11.63
825.	20.98	5710.	11.63
830.	21.02	5715.	11.59
835.	21.05	5720.	11.56
840.	21.08	5725.	11.56
845.	21.12	5730.	11.53
850.	21.18	5735.	11.49
855.	21.22	5740.	11.49
860.	21.25	5745.	11.43
865.	21.28	5750.	11.43
870.	21.32	5755.	11.39
875.	21.38	5760.	11.39
880.	21.42	5765.	11.36
885.	21.45	5770.	11.33
890.	21.48	5775.	11.29
895.	21.52	5780.	11.29
900.	21.55	5785.	11.26
905.	21.58	5790.	11.26
910.	21.65	5795.	11.23
915.	21.68	5800.	11.19
920.	21.72	5805.	11.16
925.	21.75	5810.	11.16
930.	21.79	5815.	11.13
935.	21.82	5820.	11.09
940.	21.85	5825.	11.09
945.	21.89	5830.	11.06
950.	21.95	5835.	11.03
955.	21.95	5840.	11.03
960.	21.98	5845.	10.99
965.	22.02	5850.	10.96
970.	22.09	5855.	10.96
975.	22.12	5860.	10.96

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
980.	22.12	5865.	10.93
985.	22.18	5870.	10.89
990.	22.22	5875.	10.86
995.	22.25	5880.	10.86
1000.	22.25	5885.	10.82
1005.	22.32	5890.	10.82
1010.	22.35	5895.	10.79
1015.	22.39	5900.	10.76
1020.	22.42	5905.	10.76
1025.	22.45	5910.	10.73
1030.	22.49	5915.	10.73
1035.	22.52	5920.	10.69
1040.	22.55	5925.	10.66
1045.	22.59	5930.	10.66
1050.	22.65	5935.	10.63
1055.	22.69	5940.	10.63
1060.	22.75	5945.	10.59
1065.	22.82	5950.	10.59
1070.	22.92	5955.	10.56
1075.	22.99	5960.	10.53
1080.	23.09	5965.	10.53
1085.	23.15	5970.	10.49
1090.	23.25	5975.	10.49
1095.	23.32	5980.	10.46
1100.	23.42	5985.	10.42
1105.	23.49	5990.	10.42
1110.	23.56	5995.	10.39
1115.	23.66	6000.	10.36
1120.	23.72	6005.	10.36
1125.	23.79	6010.	10.32
1130.	23.86	6015.	10.32
1135.	23.92	6020.	10.29
1140.	23.99	6025.	10.29
1145.	24.06	6030.	10.26
1150.	24.12	6035.	10.26
1155.	24.19	6040.	10.22
1160.	24.26	6045.	10.22
1165.	24.29	6050.	10.19
1170.	24.36	6055.	10.19
1175.	24.42	6060.	10.16
1180.	24.46	6065.	10.16
1185.	24.52	6070.	10.12
1190.	24.59	6075.	10.09
1195.	24.66	6080.	10.09
1200.	24.69	6085.	10.06
1205.	24.76	6090.	10.06
1210.	24.79	6095.	10.02
1215.	24.86	6100.	10.02
1220.	24.93	6105.	9.99
1225.	24.96	6110.	9.99
1230.	25.03	6115.	9.957
1235.	25.06	6120.	9.957
1240.	25.13	6125.	9.923

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
1245.	25.16	6130.	9.89
1250.	25.23	6135.	9.89
1255.	25.26	6140.	9.856
1260.	25.33	6145.	9.856
1265.	25.36	6150.	9.823
1270.	25.39	6155.	9.823
1275.	25.46	6160.	9.79
1280.	25.49	6165.	9.79
1285.	25.56	6170.	9.756
1290.	25.59	6175.	9.756
1295.	25.66	6180.	9.723
1300.	25.69	6185.	9.723
1305.	25.73	6190.	9.689
1310.	25.79	6195.	9.689
1315.	25.83	6200.	9.656
1320.	25.86	6205.	9.656
1325.	25.93	6210.	9.623
1330.	25.96	6215.	9.623
1335.	25.99	6220.	9.589
1340.	26.06	6225.	9.589
1345.	26.09	6230.	9.556
1350.	26.13	6235.	9.522
1355.	26.2	6240.	9.522
1360.	26.23	6245.	9.522
1365.	26.26	6250.	9.489
1370.	26.33	6255.	9.489
1375.	26.36	6260.	9.455
1380.	26.4	6265.	9.455
1385.	26.43	6270.	9.422
1390.	26.46	6275.	9.422
1395.	26.53	6280.	9.389
1400.	26.56	6285.	9.389
1405.	26.6	6290.	9.355
1410.	26.66	6295.	9.355
1415.	26.66	6300.	9.322
1420.	26.73	6305.	9.288
1425.	26.76	6310.	9.288
1430.	26.8	6315.	9.255
1435.	26.83	6320.	9.255
1440.	26.86	6325.	9.222
1445.	26.9	6330.	9.222
1450.	26.93	6335.	9.222
1455.	27.	6340.	9.188
1460.	27.03	6345.	9.155
1465.	27.06	6350.	9.155
1470.	27.1	6355.	9.155
1475.	27.13	6360.	9.121
1480.	27.2	6365.	9.088
1485.	27.2	6370.	9.088
1490.	27.26	6375.	9.055
1495.	27.3	6380.	9.055
1500.	27.33	6385.	9.021
1505.	27.36	6390.	9.021

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
1510.	27.4	6395.	8.988
1515.	27.43	6400.	8.988
1520.	27.47	6405.	8.954
1525.	27.53	6410.	8.954
1530.	27.57	6415.	8.954
1535.	27.6	6420.	8.921
1540.	27.63	6425.	8.887
1545.	27.66	6430.	8.887
1550.	27.7	6435.	8.887
1555.	27.73	6440.	8.854
1560.	27.77	6445.	8.821
1565.	27.8	6450.	8.821
1570.	27.83	6455.	8.787
1575.	27.87	6460.	8.787
1580.	27.9	6465.	8.754
1585.	27.93	6470.	8.754
1590.	27.97	6475.	8.754
1595.	28.	6480.	8.72
1600.	28.	6485.	8.72
1605.	28.07	6490.	8.687
1610.	28.1	6495.	8.687
1615.	28.13	6500.	8.654
1620.	28.17	6505.	8.62
1625.	28.2	6510.	8.62
1630.	28.23	6515.	8.62
1635.	28.27	6520.	8.587
1640.	28.27	6525.	8.587
1645.	28.33	6530.	8.553
1650.	28.33	6535.	8.553
1655.	28.37	6540.	8.52
1660.	28.4	6545.	8.52
1665.	28.47	6550.	8.487
1670.	28.47	6555.	8.487
1675.	28.5	6560.	8.453
1680.	28.53	6565.	8.453
1685.	28.6	6570.	8.453
1690.	28.6	6575.	8.42
1695.	28.67	6580.	8.42
1700.	28.7	6585.	8.386
1705.	28.73	6590.	8.353
1710.	28.77	6595.	8.353
1715.	28.8	6600.	8.353
1720.	28.83	6605.	8.353
1725.	28.87	6610.	8.319
1730.	28.9	6615.	8.286
1735.	28.93	6620.	8.286
1740.	28.97	6625.	8.286
1745.	29.	6630.	8.253
1750.	29.04	6635.	8.219
1755.	29.07	6640.	8.219
1760.	29.1	6645.	8.219
1765.	29.14	6650.	8.219
1770.	29.17	6655.	8.186

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
1775.	29.2	6660.	8.152
1780.	29.23	6665.	8.152
1785.	29.27	6670.	8.152
1790.	29.3	6675.	8.119
1795.	29.34	6680.	8.119
1800.	29.34	6685.	8.086
1805.	29.37	6690.	8.086
1810.	29.4	6695.	8.086
1815.	29.44	6700.	8.052
1820.	29.47	6705.	8.052
1825.	29.5	6710.	8.052
1830.	29.54	6715.	8.019
1835.	29.54	6720.	8.019
1840.	29.6	6725.	8.019
1845.	29.6	6730.	7.985
1850.	29.64	6735.	7.952
1855.	29.67	6740.	7.952
1860.	29.7	6745.	7.952
1865.	29.74	6750.	7.952
1870.	29.74	6755.	7.919
1875.	29.77	6760.	7.919
1880.	29.8	6765.	7.885
1885.	29.84	6770.	7.885
1890.	29.87	6775.	7.885
1895.	29.87	6780.	7.852
1900.	29.9	6785.	7.852
1905.	29.94	6790.	7.818
1910.	29.94	6795.	7.818
1915.	29.97	6800.	7.818
1920.	30.	6805.	7.785
1925.	30.04	6810.	7.785
1930.	30.07	6815.	7.785
1935.	30.1	6820.	7.751
1940.	30.14	6825.	7.751
1945.	30.14	6830.	7.751
1950.	30.14	6835.	7.751
1955.	30.2	6840.	7.718
1960.	30.2	6845.	7.685
1965.	30.24	6850.	7.685
1970.	30.27	6855.	7.685
1975.	30.27	6860.	7.685
1980.	30.31	6865.	7.651
1985.	30.34	6870.	7.651
1990.	30.34	6875.	7.618
1995.	30.37	6880.	7.618
2000.	30.41	6885.	7.618
2005.	30.41	6890.	7.618
2010.	30.44	6895.	7.584
2015.	30.47	6900.	7.584
2020.	30.5	6905.	7.551
2025.	30.54	6910.	7.551
2030.	30.54	6915.	7.551
2035.	30.57	6920.	7.551

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
2040.	30.61	6925.	7.518
2045.	30.61	6930.	7.518
2050.	30.64	6935.	7.484
2055.	30.67	6940.	7.484
2060.	30.67	6945.	7.484
2065.	30.71	6950.	7.451
2070.	30.74	6955.	7.451
2075.	30.77	6960.	7.417
2080.	30.77	6965.	7.417
2085.	30.81	6970.	7.417
2090.	30.84	6975.	7.417
2095.	30.84	6980.	7.384
2100.	30.87	6985.	7.384
2105.	30.87	6990.	7.351
2110.	30.91	6995.	7.351
2115.	30.94	7000.	7.351
2120.	30.94	7005.	7.351
2125.	30.97	7010.	7.351
2130.	31.01	7015.	7.317
2135.	31.04	7020.	7.317
2140.	31.04	7025.	7.284
2145.	31.07	7030.	7.284
2150.	31.11	7035.	7.284
2155.	31.14	7040.	7.25
2160.	31.14	7045.	7.25
2165.	31.17	7050.	7.25
2170.	31.21	7055.	7.217
2175.	31.21	7060.	7.217
2180.	31.21	7065.	7.217
2185.	31.24	7070.	7.217
2190.	31.27	7075.	7.183
2195.	31.31	7080.	7.183
2200.	31.31	7085.	7.15
2205.	31.34	7090.	7.15
2210.	31.34	7095.	7.15
2215.	31.37	7100.	7.15
2220.	31.41	7105.	7.117
2225.	31.41	7110.	7.117
2230.	31.44	7115.	7.117
2235.	31.44	7120.	7.083
2240.	31.47	7125.	7.083
2245.	31.47	7130.	7.083
2250.	31.51	7135.	7.083
2255.	31.54	7140.	7.05
2260.	31.54	7145.	7.05
2265.	31.54	7150.	7.016
2270.	31.57	7155.	7.016
2275.	31.61	7160.	7.016
2280.	31.61	7165.	7.016
2285.	31.64	7170.	6.983
2290.	31.68	7175.	6.983
2295.	31.68	7180.	6.983
2300.	31.71	7185.	6.95

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
2305.	31.71	7190.	6.95
2310.	31.74	7195.	6.95
2315.	31.74	7200.	6.95
2320.	31.77	7205.	6.916
2325.	31.81	7210.	6.916
2330.	31.81	7215.	6.883
2335.	31.84	7220.	6.883
2340.	31.88	7225.	6.883
2345.	31.88	7230.	6.883
2350.	31.91	7235.	6.849
2355.	31.94	7240.	6.849
2360.	31.94	7245.	6.849
2365.	31.94	7250.	6.816
2370.	31.98	7255.	6.816
2375.	32.01	7260.	6.816
2380.	32.01	7265.	6.816
2385.	32.04	7270.	6.783
2390.	32.04	7275.	6.783
2395.	32.08	7280.	6.749
2400.	32.11	7285.	6.749
2405.	34.01	7290.	6.749
2410.	32.04	7295.	6.749
2415.	32.08	7300.	6.749
2420.	32.08	7305.	6.749
2425.	32.11	7310.	6.716
2430.	32.14	7315.	6.716
2435.	32.14	7320.	6.716
2440.	32.14	7325.	6.682
2445.	32.18	7330.	6.682
2450.	32.21	7335.	6.682
2455.	32.21	7340.	6.682
2460.	32.24	7345.	6.682
2465.	32.28	7350.	6.682
2470.	32.28	7355.	6.649
2475.	32.31	7360.	6.649
2480.	32.34	7365.	6.649
2485.	32.34	7370.	6.615
2490.	32.34	7375.	6.649
2495.	32.38	7380.	6.615
2500.	32.41	7385.	6.615
2505.	32.41	7390.	6.615
2510.	32.41	7395.	6.615
2515.	32.44	7400.	6.615
2520.	32.44	7405.	6.615
2525.	32.48	7410.	6.615
2530.	32.48	7415.	6.615
2535.	32.51	7420.	6.615
2540.	32.51	7425.	6.582
2545.	32.54	7430.	6.582
2550.	32.54	7435.	6.582
2555.	32.54	7440.	6.582
2560.	32.58	7445.	6.582
2565.	32.58	7450.	6.582

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
2570.	32.61	7455.	6.549
2575.	32.61	7460.	6.582
2580.	32.64	7465.	6.549
2585.	32.64	7470.	6.549
2590.	32.64	7475.	6.549
2595.	32.68	7480.	6.549
2600.	32.68	7485.	6.549
2605.	32.71	7490.	6.549
2610.	32.71	7495.	6.549
2615.	32.74	7500.	6.549
2620.	32.74	7505.	6.549
2625.	32.78	7510.	6.515
2630.	32.78	7515.	6.515
2635.	32.81	7520.	6.515
2640.	32.81	7525.	6.515
2645.	32.81	7530.	6.515
2650.	32.84	7535.	6.515
2655.	32.84	7540.	6.515
2660.	32.88	7545.	6.515
2665.	32.88	7550.	6.482
2670.	32.91	7555.	6.482
2675.	32.94	7560.	6.482
2680.	32.94	7565.	6.482
2685.	32.98	7570.	6.482
2690.	32.98	7575.	6.482
2695.	33.01	7580.	6.482
2700.	33.01	7585.	6.482
2705.	33.04	7590.	6.448
2710.	33.08	7595.	6.448
2715.	33.08	7600.	6.448
2720.	33.11	7605.	6.448
2725.	33.15	7610.	6.448
2730.	33.18	7615.	6.448
2735.	33.18	7620.	6.448
2740.	33.21	7625.	6.415
2745.	33.21	7630.	6.415
2750.	33.24	7635.	6.415
2755.	33.28	7640.	6.415
2760.	33.31	7645.	6.415
2765.	33.34	7650.	6.382
2770.	33.34	7655.	6.382
2775.	33.38	7660.	6.382
2780.	33.41	7665.	6.382
2785.	33.41	7670.	6.382
2790.	33.45	7675.	6.348
2795.	33.48	7680.	6.348
2800.	33.48	7685.	6.348
2805.	33.55	7690.	6.348
2810.	33.55	7695.	6.348
2815.	33.58	7700.	6.348
2820.	33.58	7705.	6.315
2825.	33.61	7710.	6.348
2830.	33.61	7715.	6.315

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
2835.	33.65	7720.	6.315
2840.	33.68	7725.	6.315
2845.	33.68	7730.	6.281
2850.	33.75	7735.	6.281
2855.	33.75	7740.	6.281
2860.	33.78	7745.	6.281
2865.	33.78	7750.	6.281
2870.	33.81	7755.	6.281
2875.	33.85	7760.	6.281
2880.	33.88	7765.	6.248
2885.	33.88	7770.	6.248
2890.	33.91	7775.	6.248
2895.	33.95	7780.	6.215
2900.	33.95	7785.	6.215
2905.	33.98	7790.	6.215
2910.	34.01	7795.	6.215
2915.	34.01	7800.	6.215
2920.	34.01	7805.	6.181
2925.	34.05	7810.	6.181
2930.	34.08	7815.	6.181
2935.	34.08	7820.	6.148
2940.	34.11	7825.	6.148
2945.	34.15	7830.	6.148
2950.	34.15	7835.	6.148
2955.	34.15	7840.	6.148
2960.	34.18	7845.	6.114
2965.	34.21	7850.	6.114
2970.	34.21	7855.	6.081
2975.	34.25	7860.	6.081
2980.	34.28	7865.	6.081
2985.	34.28	7870.	6.081
2990.	34.31	7875.	6.081
2995.	34.35	7880.	6.081
3000.	34.35	7885.	6.081
3005.	34.38	7890.	6.047
3010.	34.38	7895.	6.047
3015.	34.41	7900.	6.047
3020.	34.41	7905.	6.047
3025.	34.45	7910.	6.047
3030.	34.48	7915.	6.014
3035.	34.48	7920.	6.014
3040.	34.52	7925.	6.014
3045.	34.55	7930.	6.014
3050.	34.55	7935.	5.981
3055.	34.55	7940.	5.981
3060.	34.58	7945.	5.981
3065.	34.62	7950.	5.947
3070.	34.62	7955.	5.981
3075.	34.65	7960.	5.947
3080.	34.65	7965.	5.947
3085.	34.68	7970.	5.947
3090.	34.68	7975.	5.947
3095.	34.72	7980.	5.914

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
3100.	34.72	7985.	5.914
3105.	34.75	7990.	5.914
3110.	34.75	7995.	5.914
3115.	34.78	8000.	5.88
3120.	34.81	8005.	5.88
3125.	34.81	8010.	5.88
3130.	34.81	8015.	5.88
3135.	34.85	8020.	5.88
3140.	34.85	8025.	5.847
3145.	34.88	8030.	5.847
3150.	34.88	8035.	5.814
3155.	34.91	8040.	5.814
3160.	34.91	8045.	5.814
3165.	34.91	8050.	5.814
3170.	34.95	8055.	5.814
3175.	34.95	8060.	5.814
3180.	34.95	8065.	5.814
3185.	34.98	8070.	5.78
3190.	34.98	8075.	5.78
3195.	35.02	8080.	5.78
3200.	35.02	8085.	5.78
3205.	35.05	8090.	5.78
3210.	35.05	8095.	5.78
3215.	35.05	8100.	5.747
3220.	35.08	8105.	5.747
3225.	35.08	8110.	5.747
3230.	35.08	8115.	5.747
3235.	35.12	8120.	5.747
3240.	35.12	8125.	5.713
3245.	35.12	8130.	5.713
3250.	35.15	8135.	5.713
3255.	35.15	8140.	5.713
3260.	35.15	8145.	5.68
3265.	35.18	8150.	5.68
3270.	35.18	8155.	5.68
3275.	35.18	8160.	5.68
3280.	35.22	8165.	5.68
3285.	35.22	8170.	5.68
3290.	35.22	8175.	5.646
3295.	35.22	8180.	5.646
3300.	35.25	8185.	5.646
3305.	35.25	8190.	5.646
3310.	35.28	8195.	5.613
3315.	35.28	8200.	5.613
3320.	35.28	8205.	5.613
3325.	35.32	8210.	5.613
3330.	35.32	8215.	5.613
3335.	35.32	8220.	5.613
3340.	35.35	8225.	5.613
3345.	35.35	8230.	5.58
3350.	35.35	8235.	5.58
3355.	35.38	8240.	5.58
3360.	35.38	8245.	5.58

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
3365.	35.42	8250.	5.58
3370.	35.42	8255.	5.58
3375.	35.42	8260.	5.546
3380.	35.42	8265.	5.546
3385.	35.45	8270.	5.546
3390.	35.45	8275.	5.546
3395.	35.48	8280.	5.546
3400.	35.48	8285.	5.546
3405.	35.48	8290.	5.513
3410.	35.52	8295.	5.513
3415.	35.52	8300.	5.513
3420.	35.55	8305.	5.513
3425.	35.55	8310.	5.513
3430.	35.55	8315.	5.513
3435.	35.58	8320.	5.513
3440.	35.58	8325.	5.479
3445.	35.62	8330.	5.479
3450.	35.62	8335.	5.479
3455.	35.62	8340.	5.479
3460.	35.65	8345.	5.479
3465.	35.65	8350.	5.479
3470.	35.68	8355.	5.446
3475.	35.68	8360.	5.479
3480.	35.72	8365.	5.446
3485.	35.72	8370.	5.446
3490.	35.75	8375.	5.446
3495.	35.75	8380.	5.446
3500.	35.75	8385.	5.413
3505.	35.75	8390.	5.413
3510.	35.78	8395.	5.413
3515.	35.82	8400.	5.413
3520.	35.82	8405.	5.413
3525.	35.82	8410.	5.413
3530.	35.85	8415.	5.413
3535.	35.85	8420.	5.413
3540.	35.88	8425.	5.413
3545.	35.88	8430.	5.379
3550.	35.88	8435.	5.379
3555.	35.92	8440.	5.379
3560.	35.92	8445.	5.379
3565.	35.95	8450.	5.379
3570.	35.95	8455.	5.379
3575.	35.95	8460.	5.379
3580.	35.98	8465.	5.346
3585.	35.98	8470.	5.346
3590.	36.02	8475.	5.346
3595.	36.02	8480.	5.346
3600.	36.02	8485.	5.346
3605.	36.05	8490.	5.312
3610.	36.05	8495.	5.312
3615.	36.09	8500.	5.312
3620.	36.09	8505.	5.312
3625.	36.09	8510.	5.279

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
3630.	36.12	8515.	5.279
3635.	36.12	8520.	5.279
3640.	36.15	8525.	5.279
3645.	36.15	8530.	5.279
3650.	36.15	8535.	5.279
3655.	36.15	8540.	5.279
3660.	36.19	8545.	5.279
3665.	36.19	8550.	5.279
3670.	36.22	8555.	5.246
3675.	36.22	8560.	5.246
3680.	36.22	8565.	5.246
3685.	36.25	8570.	5.246
3690.	36.25	8575.	5.212
3695.	36.28	8580.	5.212
3700.	36.28	8585.	5.212
3705.	36.28	8590.	5.212
3710.	36.32	8595.	5.212
3715.	36.32	8600.	5.179
3720.	36.32	8605.	5.179
3725.	36.32	8610.	5.179
3730.	36.35	8615.	5.145
3735.	36.35	8620.	5.145
3740.	36.35	8625.	5.145
3745.	36.39	8630.	5.145
3750.	36.39	8635.	5.145
3755.	36.39	8640.	5.112
3760.	36.39	8645.	5.112
3765.	36.42	8650.	5.112
3770.	36.42	8655.	5.112
3775.	36.42	8660.	5.112
3780.	36.42	8665.	5.112
3785.	36.45	8670.	5.112
3790.	36.45	8675.	5.078
3795.	36.49	8680.	5.078
3800.	36.49	8685.	5.078
3805.	36.49	8690.	5.078
3810.	36.49	8695.	5.078
3815.	36.52	8700.	5.078
3820.	36.52	8705.	5.045
3825.	36.55	8710.	5.045
3830.	36.55	8715.	5.045
3835.	36.55	8720.	5.045
3840.	36.55	8725.	5.045
3845.	36.59	8730.	5.045
3850.	36.59	8735.	5.045
3855.	36.62	8740.	5.012
3860.	36.62	8745.	5.012
3865.	36.62	8750.	5.012
3870.	36.65	8755.	5.012
3875.	36.65	8760.	5.012
3880.	36.65	8765.	5.012
3885.	36.65	8770.	5.012
3890.	36.65	8775.	5.012

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
3895.	36.69	8780.	5.012
3900.	36.69	8785.	5.012
3905.	36.69	8790.	5.012
3910.	36.69	8795.	5.012
3915.	36.69	8800.	5.012
3920.	36.72	8805.	5.012
3925.	36.72	8810.	4.978
3930.	36.72	8815.	4.978
3935.	36.75	8820.	4.978
3940.	36.75	8825.	4.978
3945.	36.75	8830.	4.978
3950.	36.75	8835.	4.978
3955.	36.79	8840.	4.978
3960.	36.79	8845.	4.945
3965.	36.79	8850.	4.945
3970.	36.79	8855.	4.945
3975.	36.82	8860.	4.945
3980.	36.82	8865.	4.945
3985.	36.82	8870.	4.945
3990.	36.82	8875.	4.945
3995.	36.82	8880.	4.945
4000.	36.85	8885.	4.945
4005.	36.85	8890.	4.945
4010.	36.89	8895.	4.945
4015.	36.89	8900.	4.945
4020.	36.89	8905.	4.945
4025.	36.92	8910.	4.911
4030.	36.92	8915.	4.945
4035.	36.92	8920.	4.911
4040.	36.95	8925.	4.911
4045.	36.95	8930.	4.911
4050.	36.95	8935.	4.911
4055.	36.99	8940.	4.911
4060.	36.99	8945.	4.911
4065.	37.02	8950.	4.911
4070.	37.02	8955.	4.911
4075.	37.02	8960.	4.911
4080.	37.02	8965.	4.878
4085.	37.02	8970.	4.878
4090.	37.02	8975.	4.878
4095.	37.05	8980.	4.878
4100.	37.05	8985.	4.878
4105.	37.05	8990.	4.878
4110.	37.05	8995.	4.878
4115.	37.05	9000.	4.878
4120.	37.05	9005.	4.878
4125.	37.05	9010.	4.878
4130.	37.05	9015.	4.878
4135.	37.09	9020.	4.878
4140.	37.09	9025.	4.878
4145.	37.09	9030.	4.878
4150.	37.09	9035.	4.878
4155.	37.09	9040.	4.845

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
4160.	37.09	9045.	4.845
4165.	37.09	9050.	4.845
4170.	37.09	9055.	4.845
4175.	37.09	9060.	4.845
4180.	37.09	9065.	4.811
4185.	37.09	9070.	4.811
4190.	37.12	9075.	4.811
4195.	37.12	9080.	4.811
4200.	37.15	9085.	4.811
4205.	37.12	9090.	4.811
4210.	37.15	9095.	4.811
4215.	37.15	9100.	4.811
4220.	37.15	9105.	4.811
4225.	37.15	9110.	4.811
4230.	37.15	9115.	4.811
4235.	37.15	9120.	4.811
4240.	37.19	9125.	4.811
4245.	37.19	9130.	4.778
4250.	37.19	9135.	4.778
4255.	37.19	9140.	4.778
4260.	37.19	9145.	4.744
4265.	37.19	9150.	4.744
4270.	37.19	9155.	4.744
4275.	37.22	9160.	4.744
4280.	37.22	9165.	4.744
4285.	37.22	9170.	4.744
4290.	37.22	9175.	4.744
4295.	37.22	9180.	4.744
4300.	37.22	9185.	4.744
4305.	37.22	9190.	4.744
4310.	37.25	9195.	4.744
4315.	37.25	9200.	4.711
4320.	37.25	9205.	4.711
4325.	37.25	9210.	4.711
4330.	37.29	9215.	4.711
4335.	37.29	9220.	4.711
4340.	37.29	9225.	4.711
4345.	37.22	9230.	4.678
4350.	36.99	9235.	4.678
4355.	36.65	9240.	4.678
4360.	36.28	9245.	4.678
4365.	35.88	9250.	4.678
4370.	35.45	9255.	4.678
4375.	35.02	9260.	4.678
4380.	34.58	9265.	4.678
4385.	34.15	9270.	4.644
4390.	33.75	9275.	4.644
4395.	33.34	9280.	4.644
4400.	32.94	9285.	4.644
4405.	32.58	9290.	4.611
4410.	32.21	9295.	4.611
4415.	31.88	9300.	4.611
4420.	31.54	9305.	4.611

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
4425.	31.21	9310.	4.611
4430.	30.91	9315.	4.611
4435.	30.57	9320.	4.577
4440.	30.31	9325.	4.611
4445.	30.	9330.	4.577
4450.	29.74	9335.	4.577
4455.	29.47	9340.	4.577
4460.	29.2	9345.	4.577
4465.	28.93	9350.	4.577
4470.	28.7	9355.	4.544
4475.	28.47	9360.	4.544
4480.	28.23	9365.	4.544
4485.	28.	9370.	4.544
4490.	27.8	9375.	4.544
4495.	27.57	9380.	4.544
4500.	27.33	9385.	4.51
4505.	27.16	9390.	4.51
4510.	26.93	9395.	4.51
4515.	26.76	9400.	4.477
4520.	26.56	9405.	4.477
4525.	26.36	9410.	4.477
4530.	26.2	9415.	4.477
4535.	25.99	9420.	4.477
4540.	25.83	9425.	4.477
4545.	25.66	9430.	4.477
4550.	25.49	9435.	4.477
4555.	25.33	9440.	4.477
4560.	25.16	9445.	4.444
4565.	24.99	9450.	4.444
4570.	24.86	9455.	4.444
4575.	24.69	9460.	4.444
4580.	24.52	9465.	4.41
4585.	24.39	9470.	4.41
4590.	24.26	9475.	4.41
4595.	24.12	9480.	4.41
4600.	23.96	9485.	4.41
4605.	23.82	9490.	4.41
4610.	23.69	9495.	4.377
4615.	23.56	9500.	4.377
4620.	23.42	9505.	4.377
4625.	23.29	9510.	4.343
4630.	23.19	9515.	4.377
4635.	23.05	9520.	4.377
4640.	22.92	9525.	4.343
4645.	22.79	9530.	4.343
4650.	22.65	9535.	4.343
4655.	22.55	9540.	4.343
4660.	22.45	9545.	4.343
4665.	22.32	9550.	4.343
4670.	22.22	9555.	4.343
4675.	22.12	9560.	4.31
4680.	21.98	9565.	4.343
4685.	21.89	9570.	4.31

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
4690.	21.79	9575.	4.31
4695.	21.65	9580.	4.277
4700.	21.55	9585.	4.277
4705.	21.45	9590.	4.277
4710.	21.35	9595.	4.277
4715.	21.25	9600.	4.277
4720.	21.15	9605.	4.277
4725.	21.05	9610.	4.277
4730.	20.95	9615.	4.277
4735.	20.85	9620.	4.277
4740.	20.78	9625.	4.243
4745.	20.68	9630.	4.243
4750.	20.58	9635.	4.243
4755.	20.48	9640.	4.243
4760.	20.38	9645.	4.21
4765.	20.31	9650.	4.21
4770.	20.21	9655.	4.21
4775.	20.11	9660.	4.21
4780.	20.05	9665.	4.21
4785.	19.95	9670.	4.21
4790.	19.85	9675.	4.21
4795.	19.78	9680.	4.21
4800.	19.71	9685.	4.21
4805.	19.61	9690.	4.21
4810.	19.55	9695.	4.21
4815.	19.45	9700.	4.176
4820.	19.38	9705.	4.176
4825.	19.31	9710.	4.176
4830.	19.21	9715.	4.176
4835.	19.15	9720.	4.21
4840.	19.08	9725.	4.176
4845.	18.98	9730.	4.176
4850.	18.95	9735.	4.176
4855.	18.84	9740.	4.176
4860.	18.78	9745.	4.176
4865.	18.71	9750.	4.176
4870.	18.61	9755.	4.176
4875.	18.54	9760.	4.176
4880.	18.48	9765.	4.176
4885.	18.41		

Observation Well No. 6: TH6 SS

X Location: 0. ft
Y Location: -8485. ft

Radial distance from east pump well: 8485. ft

Fully Penetrating Well

No. of Observations: 6494

Observation Data

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
5.	-0.0099	1.624E+4	1.193
10.	-0.005	1.625E+4	1.187
15.	-0.003	1.625E+4	1.186
20.	-0.002	1.626E+4	1.187
25.	0.0023	1.626E+4	1.186
30.	0.0043	1.627E+4	1.189
35.	-0.0003	1.627E+4	1.189
40.	0.0122	1.628E+4	1.181
45.	0.0108	1.628E+4	1.182
50.	0.0166	1.629E+4	1.187
55.	0.0103	1.629E+4	1.182
60.	0.0105	1.63E+4	1.184
65.	0.0124	1.63E+4	1.189
70.	0.0116	1.631E+4	1.19
75.	0.0165	1.631E+4	1.194
80.	0.0178	1.632E+4	1.187
85.	0.0237	1.632E+4	1.186
90.	0.0208	1.633E+4	1.187
95.	0.0181	1.633E+4	1.19
100.	0.0239	1.634E+4	1.192
105.	0.0239	1.634E+4	1.19
110.	0.0223	1.635E+4	1.193
115.	0.026	1.635E+4	1.193
120.	0.0261	1.636E+4	1.19
125.	0.0274	1.636E+4	1.189
130.	0.0224	1.637E+4	1.189
135.	0.023	1.637E+4	1.184
140.	0.0276	1.638E+4	1.183
145.	0.0193	1.638E+4	1.18
150.	0.0196	1.639E+4	1.185
155.	0.0315	1.639E+4	1.185
160.	0.0243	1.64E+4	1.186
165.	0.0226	1.64E+4	1.183
170.	0.0325	1.641E+4	1.188
175.	0.0323	1.641E+4	1.189
180.	0.026	1.642E+4	1.187
185.	0.0254	1.642E+4	1.185
190.	0.0264	1.643E+4	1.186
195.	0.0251	1.643E+4	1.188
200.	0.0214	1.644E+4	1.187
205.	0.0216	1.644E+4	1.182
210.	0.0188	1.645E+4	1.188
215.	0.0258	1.645E+4	1.186
220.	0.021	1.646E+4	1.188
225.	0.0237	1.646E+4	1.187
230.	0.0284	1.647E+4	1.185
235.	0.0265	1.647E+4	1.19
240.	0.028	1.648E+4	1.189
245.	0.0278	1.648E+4	1.194
250.	0.026	1.649E+4	1.18
255.	0.0275	1.649E+4	1.187
260.	0.0259	1.65E+4	1.193
265.	0.0284	1.65E+4	1.196

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
270.	0.0307	1.651E+4	1.181
275.	0.0255	1.651E+4	1.192
280.	0.026	1.652E+4	1.192
285.	0.0302	1.652E+4	1.175
290.	0.0341	1.653E+4	1.183
295.	0.0329	1.653E+4	1.181
300.	0.0349	1.654E+4	1.187
305.	0.0248	1.654E+4	1.184
310.	0.0312	1.655E+4	1.179
315.	0.0352	1.655E+4	1.188
320.	0.0328	1.656E+4	1.183
325.	0.0367	1.656E+4	1.187
330.	0.0354	1.657E+4	1.188
335.	0.0365	1.657E+4	1.182
340.	0.0389	1.658E+4	1.177
345.	0.038	1.658E+4	1.18
350.	0.0436	1.659E+4	1.186
355.	0.0385	1.659E+4	1.178
360.	0.0383	1.66E+4	1.183
365.	0.0396	1.66E+4	1.176
370.	0.0375	1.661E+4	1.174
375.	0.0402	1.661E+4	1.175
380.	0.0423	1.662E+4	1.175
385.	0.0489	1.662E+4	1.178
390.	0.0454	1.663E+4	1.176
395.	0.0424	1.663E+4	1.186
400.	0.0505	1.664E+4	1.178
405.	0.0525	1.664E+4	1.179
410.	0.0472	1.665E+4	1.183
415.	0.0362	1.665E+4	1.181
420.	0.0404	1.666E+4	1.173
425.	0.0404	1.666E+4	1.179
430.	0.0501	1.667E+4	1.174
435.	0.0451	1.667E+4	1.182
440.	0.0481	1.668E+4	1.176
445.	0.0512	1.668E+4	1.174
450.	0.0493	1.669E+4	1.182
455.	0.047	1.669E+4	1.173
460.	0.0503	1.67E+4	1.177
465.	0.0542	1.67E+4	1.181
470.	0.0468	1.671E+4	1.176
475.	0.0529	1.671E+4	1.169
480.	0.0549	1.672E+4	1.176
485.	0.0507	1.672E+4	1.168
490.	0.0555	1.673E+4	1.172
495.	0.0502	1.673E+4	1.174
500.	0.0527	1.674E+4	1.17
505.	0.0489	1.674E+4	1.167
510.	0.0602	1.675E+4	1.176
515.	0.0596	1.675E+4	1.175
520.	0.0596	1.676E+4	1.172
525.	0.0582	1.676E+4	1.172
530.	0.0542	1.677E+4	1.18

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
535.	0.0583	1.677E+4	1.178
540.	0.0578	1.678E+4	1.175
545.	0.0546	1.678E+4	1.184
550.	0.0558	1.679E+4	1.176
555.	0.0603	1.679E+4	1.175
560.	0.0602	1.68E+4	1.174
565.	0.0553	1.68E+4	1.178
570.	0.0648	1.681E+4	1.163
575.	0.0647	1.681E+4	1.171
580.	0.0638	1.682E+4	1.178
585.	0.0642	1.682E+4	1.177
590.	0.0744	1.683E+4	1.178
595.	0.0751	1.683E+4	1.181
600.	0.0794	1.684E+4	1.18
605.	0.0809	1.684E+4	1.183
610.	0.0807	1.685E+4	1.167
615.	0.0834	1.685E+4	1.179
620.	0.0856	1.686E+4	1.178
625.	0.0942	1.686E+4	1.173
630.	0.0885	1.687E+4	1.184
635.	0.0961	1.687E+4	1.175
640.	0.0939	1.688E+4	1.181
645.	0.0957	1.688E+4	1.181
650.	0.1035	1.689E+4	1.181
655.	0.0987	1.689E+4	1.182
660.	0.1052	1.69E+4	1.178
665.	0.1021	1.69E+4	1.176
670.	0.1017	1.691E+4	1.172
675.	0.1051	1.691E+4	1.183
680.	0.1098	1.692E+4	1.182
685.	0.113	1.692E+4	1.168
690.	0.113	1.693E+4	1.172
695.	0.1168	1.693E+4	1.175
700.	0.1204	1.694E+4	1.169
705.	0.1259	1.694E+4	1.175
710.	0.1218	1.695E+4	1.176
715.	0.1346	1.695E+4	1.173
720.	0.1326	1.696E+4	1.176
725.	0.1373	1.696E+4	1.174
730.	0.1389	1.697E+4	1.186
735.	0.1435	1.697E+4	1.176
740.	0.1467	1.698E+4	1.178
745.	0.1442	1.698E+4	1.183
750.	0.1446	1.699E+4	1.17
755.	0.1481	1.699E+4	1.189
760.	0.1584	1.7E+4	1.187
765.	0.1638	1.7E+4	1.179
770.	0.1681	1.701E+4	1.178
775.	0.1652	1.701E+4	1.192
780.	0.1689	1.702E+4	1.185
785.	0.1768	1.702E+4	1.183
790.	0.1814	1.703E+4	1.18
795.	0.184	1.703E+4	1.181

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
800.	0.1903	1.704E+4	1.188
805.	0.1903	1.704E+4	1.191
810.	0.1978	1.705E+4	1.183
815.	0.1961	1.705E+4	1.188
820.	0.2051	1.706E+4	1.19
825.	0.2108	1.706E+4	1.19
830.	0.2114	1.707E+4	1.194
835.	0.2132	1.707E+4	1.203
840.	0.2196	1.708E+4	1.2
845.	0.2275	1.708E+4	1.206
850.	0.2324	1.709E+4	1.207
855.	0.2344	1.709E+4	1.207
860.	0.2362	1.71E+4	1.216
865.	0.2448	1.71E+4	1.217
870.	0.2453	1.711E+4	1.213
875.	0.2549	1.711E+4	1.21
880.	0.2535	1.712E+4	1.206
885.	0.2586	1.712E+4	1.204
890.	0.2658	1.713E+4	1.215
895.	0.2652	1.713E+4	1.202
900.	0.2752	1.714E+4	1.217
905.	0.2795	1.714E+4	1.214
910.	0.2841	1.715E+4	1.215
915.	0.2914	1.715E+4	1.222
920.	0.2947	1.716E+4	1.225
925.	0.3052	1.716E+4	1.216
930.	0.3137	1.717E+4	1.22
935.	0.321	1.717E+4	1.22
940.	0.329	1.718E+4	1.219
945.	0.3338	1.718E+4	1.224
950.	0.34	1.719E+4	1.221
955.	0.3466	1.719E+4	1.224
960.	0.3507	1.72E+4	1.226
965.	0.3508	1.72E+4	1.227
970.	0.3545	1.721E+4	1.221
975.	0.3633	1.721E+4	1.224
980.	0.3712	1.722E+4	1.232
985.	0.3763	1.722E+4	1.235
990.	0.3847	1.723E+4	1.232
995.	0.3924	1.723E+4	1.232
1000.	0.3929	1.724E+4	1.236
1005.	0.4	1.724E+4	1.242
1010.	0.4038	1.725E+4	1.251
1015.	0.4095	1.725E+4	1.244
1020.	0.4169	1.726E+4	1.245
1025.	0.4212	1.726E+4	1.245
1030.	0.4274	1.727E+4	1.247
1035.	0.4372	1.727E+4	1.26
1040.	0.4371	1.728E+4	1.25
1045.	0.447	1.728E+4	1.249
1050.	0.4543	1.729E+4	1.249
1055.	0.4605	1.729E+4	1.255
1060.	0.4648	1.73E+4	1.256

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
1065.	0.4764	1.73E+4	1.267
1070.	0.4802	1.731E+4	1.263
1075.	0.4912	1.731E+4	1.263
1080.	0.4943	1.732E+4	1.259
1085.	0.4967	1.732E+4	1.267
1090.	0.5065	1.733E+4	1.257
1095.	0.51	1.733E+4	1.259
1100.	0.5186	1.734E+4	1.256
1105.	0.5265	1.734E+4	1.269
1110.	0.5264	1.735E+4	1.264
1115.	0.5404	1.735E+4	1.271
1120.	0.5398	1.736E+4	1.262
1125.	0.5468	1.736E+4	1.265
1130.	0.5594	1.737E+4	1.266
1135.	0.5591	1.737E+4	1.267
1140.	0.5678	1.738E+4	1.266
1145.	0.5731	1.738E+4	1.284
1150.	0.5778	1.739E+4	1.273
1155.	0.5818	1.739E+4	1.274
1160.	0.5951	1.74E+4	1.269
1165.	0.5986	1.74E+4	1.273
1170.	0.6094	1.741E+4	1.281
1175.	0.6158	1.741E+4	1.266
1180.	0.6227	1.742E+4	1.273
1185.	0.6321	1.742E+4	1.273
1190.	0.6367	1.743E+4	1.275
1195.	0.6434	1.743E+4	1.27
1200.	0.6537	1.744E+4	1.278
1205.	0.6565	1.744E+4	1.273
1210.	0.6661	1.745E+4	1.277
1215.	0.6753	1.745E+4	1.274
1220.	0.6848	1.746E+4	1.285
1225.	0.6829	1.746E+4	1.287
1230.	0.6934	1.747E+4	1.289
1235.	0.6955	1.747E+4	1.29
1240.	0.7087	1.748E+4	1.284
1245.	0.7023	1.748E+4	1.291
1250.	0.7056	1.749E+4	1.29
1255.	0.7143	1.749E+4	1.297
1260.	0.7247	1.75E+4	1.29
1265.	0.7286	1.75E+4	1.292
1270.	0.7307	1.751E+4	1.29
1275.	0.742	1.751E+4	1.296
1280.	0.7454	1.752E+4	1.298
1285.	0.7481	1.752E+4	1.296
1290.	0.7578	1.753E+4	1.297
1295.	0.7624	1.753E+4	1.289
1300.	0.7672	1.754E+4	1.303
1305.	0.7664	1.754E+4	1.304
1310.	0.7715	1.755E+4	1.302
1315.	0.7828	1.755E+4	1.312
1320.	0.7806	1.756E+4	1.301
1325.	0.7869	1.756E+4	1.304

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
1330.	0.796	1.757E+4	1.299
1335.	0.7987	1.757E+4	1.305
1340.	0.8054	1.758E+4	1.301
1345.	0.8096	1.758E+4	1.299
1350.	0.8173	1.759E+4	1.292
1355.	0.8287	1.759E+4	1.3
1360.	0.834	1.76E+4	1.306
1365.	0.8369	1.76E+4	1.298
1370.	0.848	1.761E+4	1.295
1375.	0.8467	1.761E+4	1.29
1380.	0.858	1.762E+4	1.286
1385.	0.8594	1.762E+4	1.302
1390.	0.8645	1.763E+4	1.295
1395.	0.8777	1.763E+4	1.29
1400.	0.8846	1.764E+4	1.294
1405.	0.891	1.764E+4	1.288
1410.	0.8965	1.765E+4	1.297
1415.	0.9002	1.765E+4	1.29
1420.	0.9059	1.766E+4	1.29
1425.	0.9111	1.766E+4	1.286
1430.	0.9168	1.767E+4	1.286
1435.	0.9208	1.767E+4	1.285
1440.	0.9349	1.768E+4	1.293
1445.	0.9389	1.768E+4	1.282
1450.	0.9454	1.769E+4	1.277
1455.	0.9502	1.769E+4	1.289
1460.	0.9567	1.77E+4	1.284
1465.	0.9642	1.77E+4	1.29
1470.	0.9759	1.771E+4	1.283
1475.	0.971	1.771E+4	1.281
1480.	0.9753	1.772E+4	1.277
1485.	0.9855	1.772E+4	1.278
1490.	0.9947	1.773E+4	1.279
1495.	0.9933	1.773E+4	1.271
1500.	1.005	1.774E+4	1.276
1505.	1.013	1.774E+4	1.275
1510.	1.021	1.775E+4	1.275
1515.	1.029	1.775E+4	1.276
1520.	1.028	1.776E+4	1.273
1525.	1.039	1.776E+4	1.26
1530.	1.041	1.777E+4	1.268
1535.	1.049	1.777E+4	1.257
1540.	1.057	1.778E+4	1.261
1545.	1.064	1.778E+4	1.266
1550.	1.07	1.779E+4	1.258
1555.	1.081	1.779E+4	1.261
1560.	1.087	1.78E+4	1.262
1565.	1.092	1.78E+4	1.251
1570.	1.099	1.781E+4	1.257
1575.	1.106	1.781E+4	1.256
1580.	1.115	1.782E+4	1.249
1585.	1.119	1.782E+4	1.251
1590.	1.137	1.783E+4	1.256

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
1595.	1.133	1.783E+4	1.252
1600.	1.14	1.784E+4	1.255
1605.	1.144	1.784E+4	1.255
1610.	1.156	1.785E+4	1.251
1615.	1.162	1.785E+4	1.252
1620.	1.168	1.786E+4	1.252
1625.	1.175	1.786E+4	1.242
1630.	1.188	1.787E+4	1.246
1635.	1.188	1.787E+4	1.244
1640.	1.193	1.788E+4	1.251
1645.	1.203	1.788E+4	1.252
1650.	1.208	1.789E+4	1.251
1655.	1.22	1.789E+4	1.253
1660.	1.221	1.79E+4	1.247
1665.	1.234	1.79E+4	1.249
1670.	1.241	1.791E+4	1.25
1675.	1.245	1.791E+4	1.254
1680.	1.248	1.792E+4	1.251
1685.	1.261	1.792E+4	1.248
1690.	1.266	1.793E+4	1.247
1695.	1.273	1.793E+4	1.244
1700.	1.283	1.794E+4	1.248
1705.	1.282	1.794E+4	1.244
1710.	1.292	1.795E+4	1.25
1715.	1.3	1.795E+4	1.246
1720.	1.307	1.796E+4	1.255
1725.	1.312	1.796E+4	1.244
1730.	1.318	1.797E+4	1.248
1735.	1.325	1.797E+4	1.239
1740.	1.329	1.798E+4	1.253
1745.	1.336	1.798E+4	1.235
1750.	1.342	1.799E+4	1.237
1755.	1.346	1.799E+4	1.24
1760.	1.353	1.8E+4	1.23
1765.	1.363	1.8E+4	1.24
1770.	1.372	1.801E+4	1.234
1775.	1.375	1.801E+4	1.236
1780.	1.381	1.802E+4	1.236
1785.	1.388	1.802E+4	1.239
1790.	1.396	1.803E+4	1.244
1795.	1.401	1.803E+4	1.233
1800.	1.406	1.804E+4	1.24
1805.	1.415	1.804E+4	1.239
1810.	1.427	1.805E+4	1.24
1815.	1.436	1.805E+4	1.235
1820.	1.438	1.806E+4	1.24
1825.	1.443	1.806E+4	1.241
1830.	1.451	1.807E+4	1.232
1835.	1.454	1.807E+4	1.237
1840.	1.466	1.808E+4	1.231
1845.	1.474	1.808E+4	1.231
1850.	1.486	1.809E+4	1.239
1855.	1.489	1.809E+4	1.239

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
1860.	1.493	1.81E+4	1.229
1865.	1.504	1.81E+4	1.226
1870.	1.504	1.811E+4	1.23
1875.	1.513	1.811E+4	1.231
1880.	1.521	1.812E+4	1.229
1885.	1.527	1.812E+4	1.229
1890.	1.54	1.813E+4	1.228
1895.	1.54	1.813E+4	1.234
1900.	1.544	1.814E+4	1.232
1905.	1.556	1.814E+4	1.222
1910.	1.559	1.815E+4	1.226
1915.	1.568	1.815E+4	1.224
1920.	1.571	1.816E+4	1.224
1925.	1.58	1.816E+4	1.225
1930.	1.587	1.817E+4	1.226
1935.	1.595	1.817E+4	1.22
1940.	1.596	1.818E+4	1.218
1945.	1.605	1.818E+4	1.223
1950.	1.605	1.819E+4	1.222
1955.	1.611	1.819E+4	1.22
1960.	1.622	1.82E+4	1.226
1965.	1.627	1.82E+4	1.225
1970.	1.63	1.821E+4	1.22
1975.	1.638	1.821E+4	1.217
1980.	1.646	1.822E+4	1.222
1985.	1.65	1.822E+4	1.222
1990.	1.647	1.823E+4	1.223
1995.	1.659	1.823E+4	1.217
2000.	1.663	1.824E+4	1.223
2005.	1.675	1.824E+4	1.225
2010.	1.679	1.825E+4	1.218
2015.	1.684	1.825E+4	1.214
2020.	1.687	1.826E+4	1.218
2025.	1.697	1.826E+4	1.223
2030.	1.703	1.827E+4	1.218
2035.	1.703	1.827E+4	1.214
2040.	1.71	1.828E+4	1.214
2045.	1.719	1.828E+4	1.223
2050.	1.716	1.829E+4	1.218
2055.	1.725	1.829E+4	1.213
2060.	1.727	1.83E+4	1.216
2065.	1.738	1.83E+4	1.209
2070.	1.741	1.831E+4	1.207
2075.	1.747	1.831E+4	1.2
2080.	1.755	1.832E+4	1.214
2085.	1.762	1.832E+4	1.206
2090.	1.769	1.833E+4	1.208
2095.	1.772	1.833E+4	1.206
2100.	1.779	1.834E+4	1.204
2105.	1.779	1.834E+4	1.204
2110.	1.786	1.835E+4	1.207
2115.	1.788	1.835E+4	1.204
2120.	1.802	1.836E+4	1.202

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
2125.	1.808	1.836E+4	1.196
2130.	1.806	1.837E+4	1.201
2135.	1.817	1.837E+4	1.202
2140.	1.822	1.838E+4	1.201
2145.	1.829	1.838E+4	1.194
2150.	1.832	1.839E+4	1.196
2155.	1.841	1.839E+4	1.203
2160.	1.841	1.84E+4	1.2
2165.	1.848	1.84E+4	1.192
2170.	1.856	1.841E+4	1.192
2175.	1.855	1.841E+4	1.192
2180.	1.861	1.842E+4	1.192
2185.	1.871	1.842E+4	1.194
2190.	1.877	1.843E+4	1.194
2195.	1.881	1.843E+4	1.188
2200.	1.89	1.844E+4	1.192
2205.	1.894	1.844E+4	1.193
2210.	1.902	1.845E+4	1.188
2215.	1.91	1.845E+4	1.186
2220.	1.913	1.846E+4	1.194
2225.	1.924	1.846E+4	1.184
2230.	1.925	1.847E+4	1.182
2235.	1.931	1.847E+4	1.183
2240.	1.939	1.848E+4	1.187
2245.	1.948	1.848E+4	1.188
2250.	1.95	1.849E+4	1.184
2255.	1.955	1.849E+4	1.187
2260.	1.963	1.85E+4	1.189
2265.	1.967	1.85E+4	1.192
2270.	1.974	1.851E+4	1.184
2275.	1.988	1.851E+4	1.182
2280.	1.997	1.852E+4	1.187
2285.	2.001	1.852E+4	1.188
2290.	2.009	1.853E+4	1.192
2295.	2.013	1.853E+4	1.186
2300.	2.022	1.854E+4	1.192
2305.	2.03	1.854E+4	1.186
2310.	2.036	1.855E+4	1.187
2315.	2.047	1.855E+4	1.187
2320.	2.053	1.856E+4	1.193
2325.	2.058	1.856E+4	1.186
2330.	2.064	1.857E+4	1.186
2335.	2.071	1.857E+4	1.188
2340.	2.079	1.858E+4	1.187
2345.	2.084	1.858E+4	1.183
2350.	2.094	1.859E+4	1.18
2355.	2.096	1.859E+4	1.181
2360.	2.11	1.86E+4	1.18
2365.	2.115	1.86E+4	1.182
2370.	2.119	1.861E+4	1.186
2375.	2.126	1.861E+4	1.178
2380.	2.136	1.862E+4	1.179
2385.	2.147	1.862E+4	1.177

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
2390.	2.156	1.863E+4	1.173
2395.	2.152	1.863E+4	1.178
2400.	2.162	1.864E+4	1.173
2405.	2.174	1.864E+4	1.174
2410.	2.17	1.865E+4	1.176
2415.	2.179	1.865E+4	1.178
2420.	2.189	1.866E+4	1.182
2425.	2.199	1.866E+4	1.186
2430.	2.202	1.867E+4	1.183
2435.	2.212	1.867E+4	1.178
2440.	2.22	1.868E+4	1.179
2445.	2.226	1.868E+4	1.182
2450.	2.232	1.869E+4	1.18
2455.	2.242	1.869E+4	1.185
2460.	2.247	1.87E+4	1.178
2465.	2.243	1.87E+4	1.184
2470.	2.256	1.871E+4	1.185
2475.	2.259	1.871E+4	1.184
2480.	2.272	1.872E+4	1.183
2485.	2.275	1.872E+4	1.189
2490.	2.285	1.873E+4	1.19
2495.	2.287	1.873E+4	1.187
2500.	2.295	1.874E+4	1.186
2505.	2.3	1.874E+4	1.188
2510.	2.309	1.875E+4	1.189
2515.	2.319	1.875E+4	1.183
2520.	2.326	1.876E+4	1.188
2525.	2.329	1.876E+4	1.185
2530.	2.335	1.877E+4	1.19
2535.	2.346	1.877E+4	1.186
2540.	2.35	1.878E+4	1.188
2545.	2.357	1.878E+4	1.189
2550.	2.359	1.879E+4	1.189
2555.	2.372	1.879E+4	1.19
2560.	2.373	1.88E+4	1.192
2565.	2.387	1.88E+4	1.194
2570.	2.386	1.881E+4	1.197
2575.	2.401	1.881E+4	1.187
2580.	2.408	1.882E+4	1.2
2585.	2.411	1.882E+4	1.196
2590.	2.412	1.883E+4	1.19
2595.	2.419	1.883E+4	1.191
2600.	2.425	1.884E+4	1.2
2605.	2.432	1.884E+4	1.197
2610.	2.435	1.885E+4	1.2
2615.	2.435	1.885E+4	1.198
2620.	2.447	1.886E+4	1.196
2625.	2.457	1.886E+4	1.203
2630.	2.461	1.887E+4	1.204
2635.	2.465	1.887E+4	1.201
2640.	2.475	1.888E+4	1.2
2645.	2.482	1.888E+4	1.2
2650.	2.486	1.889E+4	1.202

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
2655.	2.493	1.889E+4	1.202
2660.	2.495	1.89E+4	1.201
2665.	2.502	1.89E+4	1.205
2670.	2.505	1.891E+4	1.205
2675.	2.5	1.891E+4	1.198
2680.	2.513	1.892E+4	1.192
2685.	2.528	1.892E+4	1.196
2690.	2.527	1.893E+4	1.197
2695.	2.534	1.893E+4	1.202
2700.	2.539	1.894E+4	1.198
2705.	2.541	1.894E+4	1.197
2710.	2.549	1.895E+4	1.2
2715.	2.556	1.895E+4	1.197
2720.	2.562	1.896E+4	1.192
2725.	2.561	1.896E+4	1.196
2730.	2.577	1.897E+4	1.195
2735.	2.572	1.897E+4	1.198
2740.	2.583	1.898E+4	1.194
2745.	2.586	1.898E+4	1.196
2750.	2.598	1.899E+4	1.199
2755.	2.607	1.899E+4	1.189
2760.	2.614	1.9E+4	1.193
2765.	2.622	1.9E+4	1.194
2770.	2.622	1.901E+4	1.196
2775.	2.625	1.901E+4	1.194
2780.	2.632	1.902E+4	1.198
2785.	2.647	1.902E+4	1.192
2790.	2.646	1.903E+4	1.194
2795.	2.659	1.903E+4	1.194
2800.	2.668	1.904E+4	1.186
2805.	2.678	1.904E+4	1.192
2810.	2.69	1.905E+4	1.192
2815.	2.692	1.905E+4	1.186
2820.	2.7	1.906E+4	1.187
2825.	2.703	1.906E+4	1.185
2830.	2.708	1.907E+4	1.187
2835.	2.721	1.907E+4	1.188
2840.	2.733	1.908E+4	1.185
2845.	2.742	1.908E+4	1.185
2850.	2.752	1.909E+4	1.182
2855.	2.758	1.909E+4	1.179
2860.	2.766	1.91E+4	1.175
2865.	2.77	1.91E+4	1.176
2870.	2.789	1.911E+4	1.174
2875.	2.788	1.911E+4	1.174
2880.	2.801	1.912E+4	1.175
2885.	2.806	1.912E+4	1.172
2890.	2.814	1.913E+4	1.169
2895.	2.818	1.913E+4	1.166
2900.	2.821	1.914E+4	1.168
2905.	2.841	1.914E+4	1.173
2910.	2.849	1.915E+4	1.167
2915.	2.864	1.915E+4	1.168

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
2920.	2.876	1.916E+4	1.17
2925.	2.873	1.916E+4	1.166
2930.	2.886	1.917E+4	1.159
2935.	2.898	1.917E+4	1.156
2940.	2.908	1.918E+4	1.156
2945.	2.912	1.918E+4	1.158
2950.	2.929	1.919E+4	1.156
2955.	2.934	1.919E+4	1.154
2960.	2.941	1.92E+4	1.154
2965.	2.951	1.92E+4	1.148
2970.	2.958	1.921E+4	1.147
2975.	2.966	1.921E+4	1.148
2980.	2.986	1.922E+4	1.147
2985.	2.986	1.922E+4	1.141
2990.	3.002	1.923E+4	1.145
2995.	3.006	1.923E+4	1.144
3000.	3.013	1.924E+4	1.136
3005.	3.023	1.924E+4	1.137
3010.	3.034	1.925E+4	1.135
3015.	3.046	1.925E+4	1.131
3020.	3.057	1.926E+4	1.134
3025.	3.067	1.926E+4	1.128
3030.	3.066	1.927E+4	1.131
3035.	3.073	1.927E+4	1.124
3040.	3.079	1.928E+4	1.126
3045.	3.09	1.928E+4	1.126
3050.	3.104	1.929E+4	1.124
3055.	3.116	1.929E+4	1.118
3060.	3.112	1.93E+4	1.114
3065.	3.129	1.93E+4	1.116
3070.	3.133	1.931E+4	1.116
3075.	3.147	1.931E+4	1.114
3080.	3.157	1.932E+4	1.116
3085.	3.165	1.932E+4	1.119
3090.	3.159	1.933E+4	1.114
3095.	3.173	1.933E+4	1.111
3100.	3.176	1.934E+4	1.107
3105.	3.192	1.934E+4	1.106
3110.	3.192	1.935E+4	1.108
3115.	3.204	1.935E+4	1.103
3120.	3.213	1.936E+4	1.103
3125.	3.219	1.936E+4	1.098
3130.	3.23	1.937E+4	1.093
3135.	3.23	1.937E+4	1.091
3140.	3.245	1.938E+4	1.091
3145.	3.251	1.938E+4	1.091
3150.	3.256	1.939E+4	1.093
3155.	3.27	1.939E+4	1.089
3160.	3.281	1.94E+4	1.084
3165.	3.294	1.94E+4	1.081
3170.	3.307	1.941E+4	1.083
3175.	3.312	1.941E+4	1.084
3180.	3.324	1.942E+4	1.082

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
3185.	3.332	1.942E+4	1.074
3190.	3.348	1.943E+4	1.072
3195.	3.358	1.943E+4	1.068
3200.	3.366	1.944E+4	1.07
3205.	3.377	1.944E+4	1.068
3210.	3.392	1.945E+4	1.063
3215.	3.395	1.945E+4	1.06
3220.	3.407	1.946E+4	1.06
3225.	3.417	1.946E+4	1.062
3230.	3.42	1.947E+4	1.057
3235.	3.42	1.947E+4	1.055
3240.	3.438	1.948E+4	1.059
3245.	3.452	1.948E+4	1.05
3250.	3.464	1.949E+4	1.053
3255.	3.475	1.949E+4	1.054
3260.	3.471	1.95E+4	1.053
3265.	3.497	1.95E+4	1.043
3270.	3.496	1.951E+4	1.053
3275.	3.501	1.951E+4	1.046
3280.	3.511	1.952E+4	1.041
3285.	3.523	1.952E+4	1.036
3290.	3.525	1.953E+4	1.038
3295.	3.535	1.953E+4	1.037
3300.	3.543	1.954E+4	1.033
3305.	3.549	1.954E+4	1.032
3310.	3.566	1.955E+4	1.034
3315.	3.568	1.955E+4	1.027
3320.	3.572	1.956E+4	1.024
3325.	3.575	1.956E+4	1.026
3330.	3.598	1.957E+4	1.025
3335.	3.609	1.957E+4	1.021
3340.	3.615	1.958E+4	1.017
3345.	3.618	1.958E+4	1.014
3350.	3.627	1.959E+4	1.022
3355.	3.63	1.959E+4	1.014
3360.	3.639	1.96E+4	1.014
3365.	3.648	1.96E+4	1.014
3370.	3.651	1.961E+4	1.016
3375.	3.66	1.961E+4	1.009
3380.	3.675	1.962E+4	1.012
3385.	3.679	1.962E+4	1.008
3390.	3.686	1.963E+4	1.008
3395.	3.685	1.963E+4	0.9959
3400.	3.697	1.964E+4	0.996
3405.	3.709	1.964E+4	0.9962
3410.	3.712	1.965E+4	0.9891
3415.	3.722	1.965E+4	0.9903
3420.	3.73	1.966E+4	0.9896
3425.	3.737	1.966E+4	0.9913
3430.	3.738	1.967E+4	0.9874
3435.	3.745	1.967E+4	0.9845
3440.	3.754	1.968E+4	0.9806
3445.	3.762	1.968E+4	0.9801

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
3450.	3.774	1.969E+4	0.9852
3455.	3.77	1.969E+4	0.9807
3460.	3.784	1.97E+4	0.9764
3465.	3.781	1.97E+4	0.9834
3470.	3.807	1.971E+4	0.9809
3475.	3.797	1.971E+4	0.9808
3480.	3.807	1.972E+4	0.9792
3485.	3.811	1.972E+4	0.9781
3490.	3.824	1.973E+4	0.9761
3495.	3.825	1.973E+4	0.9751
3500.	3.836	1.974E+4	0.9791
3505.	3.841	1.974E+4	0.974
3510.	3.845	1.975E+4	0.9655
3515.	3.853	1.975E+4	0.9592
3520.	3.86	1.976E+4	0.9603
3525.	3.862	1.976E+4	0.958
3530.	3.873	1.977E+4	0.952
3535.	3.886	1.977E+4	0.9585
3540.	3.885	1.978E+4	0.9563
3545.	3.886	1.978E+4	0.9586
3550.	3.897	1.979E+4	0.9451
3555.	3.906	1.979E+4	0.9458
3560.	3.912	1.98E+4	0.9412
3565.	3.914	1.98E+4	0.9413
3570.	3.914	1.981E+4	0.9287
3575.	3.924	1.981E+4	0.9278
3580.	3.937	1.982E+4	0.9261
3585.	3.937	1.982E+4	0.9151
3590.	3.943	1.983E+4	0.9218
3595.	3.952	1.983E+4	0.9136
3600.	3.958	1.984E+4	0.9138
3605.	3.967	1.984E+4	0.9104
3610.	3.971	1.985E+4	0.9098
3615.	3.981	1.985E+4	0.9086
3620.	3.985	1.986E+4	0.9042
3625.	3.992	1.986E+4	0.9038
3630.	3.995	1.987E+4	0.9097
3635.	4.002	1.987E+4	0.9032
3640.	4.008	1.988E+4	0.8991
3645.	4.013	1.988E+4	0.8914
3650.	4.03	1.989E+4	0.8923
3655.	4.021	1.989E+4	0.8829
3660.	4.045	1.99E+4	0.874
3665.	4.037	1.99E+4	0.8852
3670.	4.047	1.991E+4	0.8833
3675.	4.056	1.991E+4	0.8812
3680.	4.052	1.992E+4	0.8709
3685.	4.056	1.992E+4	0.87
3690.	4.072	1.993E+4	0.876
3695.	4.073	1.993E+4	0.87
3700.	4.083	1.994E+4	0.8651
3705.	4.088	1.994E+4	0.8652
3710.	4.092	1.995E+4	0.8624

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
3715.	4.107	1.995E+4	0.8556
3720.	4.114	1.996E+4	0.8641
3725.	4.121	1.996E+4	0.8532
3730.	4.12	1.997E+4	0.8525
3735.	4.127	1.997E+4	0.8734
3740.	4.135	1.998E+4	0.8589
3745.	4.149	1.998E+4	0.8525
3750.	4.153	1.999E+4	0.8481
3755.	4.157	1.999E+4	0.854
3760.	4.157	2.0E+4	0.8703
3765.	4.167	2.0E+4	0.8438
3770.	4.175	2.001E+4	0.8383
3775.	4.185	2.001E+4	0.8561
3780.	4.188	2.002E+4	0.8468
3785.	4.192	2.002E+4	0.8435
3790.	4.198	2.003E+4	0.8399
3795.	4.206	2.003E+4	0.8379
3800.	4.223	2.004E+4	0.8514
3805.	4.223	2.004E+4	0.8405
3810.	4.226	2.005E+4	0.8366
3815.	4.236	2.005E+4	0.8285
3820.	4.239	2.006E+4	0.8189
3825.	4.25	2.006E+4	0.8209
3830.	4.258	2.007E+4	0.8121
3835.	4.263	2.007E+4	0.817
3840.	4.265	2.008E+4	0.8107
3845.	4.276	2.008E+4	0.8121
3850.	4.278	2.009E+4	0.8081
3855.	4.286	2.009E+4	0.8046
3860.	4.301	2.01E+4	0.8091
3865.	4.308	2.01E+4	0.8087
3870.	4.317	2.011E+4	0.7979
3875.	4.313	2.011E+4	0.8027
3880.	4.324	2.012E+4	0.8026
3885.	4.332	2.012E+4	0.7895
3890.	4.342	2.013E+4	0.7996
3895.	4.352	2.013E+4	0.798
3900.	4.355	2.014E+4	0.8
3905.	4.362	2.014E+4	0.7853
3910.	4.367	2.015E+4	0.7873
3915.	4.374	2.015E+4	0.7936
3920.	4.383	2.016E+4	0.7885
3925.	4.394	2.016E+4	0.7819
3930.	4.399	2.017E+4	0.7832
3935.	4.409	2.017E+4	0.788
3940.	4.414	2.018E+4	0.7806
3945.	4.417	2.018E+4	0.7816
3950.	4.429	2.019E+4	0.7775
3955.	4.433	2.019E+4	0.7813
3960.	4.437	2.02E+4	0.7814
3965.	4.447	2.02E+4	0.7777
3970.	4.452	2.021E+4	0.775
3975.	4.466	2.021E+4	0.7756

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
3980.	4.468	2.022E+4	0.7641
3985.	4.475	2.022E+4	0.7699
3990.	4.487	2.023E+4	0.776
3995.	4.495	2.023E+4	0.7701
4000.	4.499	2.024E+4	0.7698
4005.	4.507	2.024E+4	0.7634
4010.	4.513	2.025E+4	0.7659
4015.	4.519	2.025E+4	0.762
4020.	4.522	2.026E+4	0.764
4025.	4.532	2.026E+4	0.7589
4030.	4.535	2.027E+4	0.7591
4035.	4.537	2.027E+4	0.7531
4040.	4.549	2.028E+4	0.7589
4045.	4.555	2.028E+4	0.7532
4050.	4.566	2.029E+4	0.7614
4055.	4.574	2.029E+4	0.7593
4060.	4.577	2.03E+4	0.7541
4065.	4.582	2.03E+4	0.7485
4070.	4.598	2.031E+4	0.7471
4075.	4.605	2.031E+4	0.7531
4080.	4.612	2.032E+4	0.7508
4085.	4.617	2.032E+4	0.7545
4090.	4.628	2.033E+4	0.7581
4095.	4.63	2.033E+4	0.7585
4100.	4.638	2.034E+4	0.7562
4105.	4.644	2.034E+4	0.7541
4110.	4.651	2.035E+4	0.7532
4115.	4.653	2.035E+4	0.7429
4120.	4.668	2.036E+4	0.7487
4125.	4.674	2.036E+4	0.7461
4130.	4.68	2.037E+4	0.7445
4135.	4.685	2.037E+4	0.7433
4140.	4.687	2.038E+4	0.7442
4145.	4.695	2.038E+4	0.7402
4150.	4.705	2.039E+4	0.738
4155.	4.708	2.039E+4	0.7398
4160.	4.714	2.04E+4	0.736
4165.	4.713	2.04E+4	0.7387
4170.	4.724	2.041E+4	0.7405
4175.	4.73	2.041E+4	0.7383
4180.	4.735	2.042E+4	0.7372
4185.	4.747	2.042E+4	0.7405
4190.	4.745	2.043E+4	0.7399
4195.	4.754	2.043E+4	0.7377
4200.	4.768	2.044E+4	0.7336
4205.	4.769	2.044E+4	0.739
4210.	4.774	2.045E+4	0.7341
4215.	4.786	2.045E+4	0.7364
4220.	4.79	2.046E+4	0.7401
4225.	4.802	2.046E+4	0.7395
4230.	4.804	2.047E+4	0.7418
4235.	4.807	2.047E+4	0.7375
4240.	4.819	2.048E+4	0.7394

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
4245.	4.823	2.048E+4	0.7404
4250.	4.825	2.049E+4	0.737
4255.	4.837	2.049E+4	0.7362
4260.	4.843	2.05E+4	0.7371
4265.	4.856	2.05E+4	0.7402
4270.	4.859	2.051E+4	0.7394
4275.	4.87	2.051E+4	0.7434
4280.	4.873	2.052E+4	0.7411
4285.	4.874	2.052E+4	0.7429
4290.	4.891	2.053E+4	0.7398
4295.	4.895	2.053E+4	0.738
4300.	4.903	2.054E+4	0.7394
4305.	4.907	2.054E+4	0.7408
4310.	4.914	2.055E+4	0.7426
4315.	4.923	2.055E+4	0.7408
4320.	4.926	2.056E+4	0.745
4325.	4.939	2.056E+4	0.7425
4330.	4.941	2.057E+4	0.7416
4335.	4.954	2.057E+4	0.7409
4340.	4.96	2.058E+4	0.7391
4345.	4.963	2.058E+4	0.7395
4350.	4.974	2.059E+4	0.7398
4355.	4.977	2.059E+4	0.7392
4360.	4.981	2.06E+4	0.742
4365.	4.99	2.06E+4	0.7374
4370.	4.995	2.061E+4	0.7413
4375.	5.003	2.061E+4	0.7367
4380.	5.01	2.062E+4	0.7401
4385.	5.02	2.062E+4	0.7408
4390.	5.021	2.063E+4	0.7295
4395.	5.034	2.063E+4	0.7315
4400.	5.035	2.064E+4	0.7289
4405.	5.043	2.064E+4	0.7237
4410.	5.052	2.065E+4	0.7292
4415.	5.056	2.065E+4	0.727
4420.	5.066	2.066E+4	0.7283
4425.	5.072	2.066E+4	0.7255
4430.	5.086	2.067E+4	0.7249
4435.	5.092	2.067E+4	0.7182
4440.	5.093	2.068E+4	0.7256
4445.	5.101	2.068E+4	0.7245
4450.	5.106	2.069E+4	0.726
4455.	5.116	2.069E+4	0.7227
4460.	5.122	2.07E+4	0.7207
4465.	5.126	2.07E+4	0.7221
4470.	5.137	2.071E+4	0.7218
4475.	5.143	2.071E+4	0.7131
4480.	5.155	2.072E+4	0.7162
4485.	5.159	2.072E+4	0.7135
4490.	5.167	2.073E+4	0.7144
4495.	5.175	2.073E+4	0.7115
4500.	5.18	2.074E+4	0.7102
4505.	5.192	2.074E+4	0.7116

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
4510.	5.195	2.075E+4	0.7153
4515.	5.206	2.075E+4	0.7085
4520.	5.211	2.076E+4	0.7066
4525.	5.216	2.076E+4	0.7061
4530.	5.222	2.077E+4	0.7097
4535.	5.237	2.077E+4	0.7014
4540.	5.238	2.078E+4	0.7134
4545.	5.248	2.078E+4	0.708
4550.	5.256	2.079E+4	0.7041
4555.	5.261	2.079E+4	0.7054
4560.	5.27	2.08E+4	0.7029
4565.	5.278	2.08E+4	0.7032
4570.	5.276	2.081E+4	0.7001
4575.	5.289	2.081E+4	0.6981
4580.	5.292	2.082E+4	0.7033
4585.	5.301	2.082E+4	0.7009
4590.	5.311	2.083E+4	0.7014
4595.	5.321	2.083E+4	0.6954
4600.	5.329	2.084E+4	0.6944
4605.	5.336	2.084E+4	0.6951
4610.	5.341	2.085E+4	0.6926
4615.	5.345	2.085E+4	0.691
4620.	5.362	2.086E+4	0.6886
4625.	5.369	2.086E+4	0.69
4630.	5.374	2.087E+4	0.6877
4635.	5.382	2.087E+4	0.686
4640.	5.385	2.088E+4	0.6893
4645.	5.395	2.088E+4	0.6929
4650.	5.398	2.089E+4	0.694
4655.	5.408	2.089E+4	0.6886
4660.	5.41	2.09E+4	0.6876
4665.	5.424	2.09E+4	0.6893
4670.	5.428	2.091E+4	0.6943
4675.	5.433	2.091E+4	0.6894
4680.	5.441	2.092E+4	0.6927
4685.	5.441	2.092E+4	0.6841
4690.	5.457	2.093E+4	0.6897
4695.	5.452	2.093E+4	0.6937
4700.	5.465	2.094E+4	0.6874
4705.	5.47	2.094E+4	0.6885
4710.	5.472	2.095E+4	0.6883
4715.	5.478	2.095E+4	0.6919
4720.	5.49	2.096E+4	0.6909
4725.	5.492	2.096E+4	0.6848
4730.	5.496	2.097E+4	0.6858
4735.	5.495	2.097E+4	0.6928
4740.	5.501	2.098E+4	0.6921
4745.	5.507	2.098E+4	0.6894
4750.	5.512	2.099E+4	0.6926
4755.	5.514	2.099E+4	0.6914
4760.	5.526	2.1E+4	0.6968
4765.	5.531	2.1E+4	0.6896
4770.	5.537	2.101E+4	0.6932

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
4775.	5.54	2.101E+4	0.6945
4780.	5.548	2.102E+4	0.6933
4785.	5.554	2.102E+4	0.6988
4790.	5.561	2.103E+4	0.6886
4795.	5.559	2.103E+4	0.6892
4800.	5.565	2.104E+4	0.6894
4805.	5.565	2.104E+4	0.6856
4810.	5.57	2.105E+4	0.6906
4815.	5.575	2.105E+4	0.696
4820.	5.577	2.106E+4	0.6833
4825.	5.578	2.106E+4	0.695
4830.	5.583	2.107E+4	0.6904
4835.	5.586	2.107E+4	0.6924
4840.	5.587	2.108E+4	0.6884
4845.	5.591	2.108E+4	0.6873
4850.	5.591	2.109E+4	0.7032
4855.	5.601	2.109E+4	0.6974
4860.	5.598	2.11E+4	0.6963
4865.	5.6	2.11E+4	0.6999
4870.	5.606	2.111E+4	0.6956
4875.	5.606	2.111E+4	0.7016
4880.	5.609	2.112E+4	0.6995
4885.	5.605	2.112E+4	0.7045
4890.	5.609	2.113E+4	0.7026
4895.	5.616	2.113E+4	0.6982
4900.	5.611	2.114E+4	0.6963
4905.	5.616	2.114E+4	0.7017
4910.	5.624	2.115E+4	0.709
4915.	5.63	2.115E+4	0.6991
4920.	5.63	2.116E+4	0.7014
4925.	5.632	2.116E+4	0.695
4930.	5.628	2.117E+4	0.6994
4935.	5.628	2.117E+4	0.6943
4940.	5.634	2.118E+4	0.702
4945.	5.634	2.118E+4	0.6961
4950.	5.637	2.119E+4	0.7023
4955.	5.636	2.119E+4	0.7081
4960.	5.644	2.12E+4	0.7074
4965.	5.646	2.12E+4	0.7048
4970.	5.646	2.121E+4	0.715
4975.	5.652	2.121E+4	0.7042
4980.	5.649	2.122E+4	0.7165
4985.	5.655	2.122E+4	0.7096
4990.	5.651	2.123E+4	0.7073
4995.	5.655	2.123E+4	0.71
5000.	5.655	2.124E+4	0.7117
5005.	5.657	2.124E+4	0.7076
5010.	5.652	2.125E+4	0.7204
5015.	5.653	2.125E+4	0.7142
5020.	5.66	2.126E+4	0.7133
5025.	5.662	2.126E+4	0.7164
5030.	5.658	2.127E+4	0.7199
5035.	5.655	2.127E+4	0.7154

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
5040.	5.657	2.128E+4	0.7139
5045.	5.662	2.128E+4	0.7254
5050.	5.659	2.129E+4	0.7095
5055.	5.667	2.129E+4	0.7175
5060.	5.667	2.13E+4	0.7149
5065.	5.668	2.13E+4	0.714
5070.	5.668	2.131E+4	0.7164
5075.	5.665	2.131E+4	0.7231
5080.	5.66	2.132E+4	0.7176
5085.	5.667	2.132E+4	0.7189
5090.	5.668	2.133E+4	0.7129
5095.	5.666	2.133E+4	0.7137
5100.	5.665	2.134E+4	0.7221
5105.	5.662	2.134E+4	0.7133
5110.	5.665	2.135E+4	0.7204
5115.	5.664	2.135E+4	0.7214
5120.	5.672	2.136E+4	0.716
5125.	5.665	2.136E+4	0.7044
5130.	5.67	2.137E+4	0.7127
5135.	5.669	2.137E+4	0.7133
5140.	5.668	2.138E+4	0.7103
5145.	5.666	2.138E+4	0.7111
5150.	5.663	2.139E+4	0.7123
5155.	5.668	2.139E+4	0.7159
5160.	5.667	2.14E+4	0.7084
5165.	5.673	2.14E+4	0.7116
5170.	5.671	2.141E+4	0.7064
5175.	5.663	2.141E+4	0.713
5180.	5.667	2.142E+4	0.7207
5185.	5.666	2.142E+4	0.7192
5190.	5.665	2.143E+4	0.7213
5195.	5.665	2.143E+4	0.7212
5200.	5.666	2.144E+4	0.7187
5205.	5.665	2.144E+4	0.7246
5210.	5.67	2.145E+4	0.7158
5215.	5.667	2.145E+4	0.7172
5220.	5.67	2.146E+4	0.7205
5225.	5.67	2.146E+4	0.7183
5230.	5.67	2.147E+4	0.7156
5235.	5.667	2.147E+4	0.7207
5240.	5.667	2.148E+4	0.7166
5245.	5.667	2.148E+4	0.7265
5250.	5.665	2.149E+4	0.721
5255.	5.665	2.149E+4	0.7259
5260.	5.667	2.15E+4	0.7222
5265.	5.664	2.15E+4	0.7213
5270.	5.665	2.151E+4	0.7255
5275.	5.664	2.151E+4	0.7262
5280.	5.664	2.152E+4	0.7224
5285.	5.664	2.152E+4	0.7275
5290.	5.657	2.153E+4	0.7187
5295.	5.658	2.153E+4	0.7284
5300.	5.655	2.154E+4	0.7258

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
5305.	5.658	2.154E+4	0.7236
5310.	5.656	2.155E+4	0.7244
5315.	5.65	2.155E+4	0.725
5320.	5.653	2.156E+4	0.7252
5325.	5.65	2.156E+4	0.7331
5330.	5.65	2.157E+4	0.7247
5335.	5.648	2.157E+4	0.7305
5340.	5.646	2.158E+4	0.7341
5345.	5.651	2.158E+4	0.7268
5350.	5.655	2.159E+4	0.7332
5355.	5.654	2.159E+4	0.7308
5360.	5.655	2.16E+4	0.7379
5365.	5.655	2.16E+4	0.7379
5370.	5.655	2.161E+4	0.7383
5375.	5.654	2.161E+4	0.7378
5380.	5.656	2.162E+4	0.7346
5385.	5.656	2.162E+4	0.754
5390.	5.654	2.163E+4	0.7383
5395.	5.653	2.163E+4	0.7362
5400.	5.655	2.164E+4	0.7343
5405.	5.652	2.164E+4	0.7412
5410.	5.657	2.165E+4	0.7476
5415.	5.653	2.165E+4	0.7436
5420.	5.66	2.166E+4	0.7511
5425.	5.654	2.166E+4	0.7455
5430.	5.66	2.167E+4	0.752
5435.	5.661	2.167E+4	0.7548
5440.	5.658	2.168E+4	0.7537
5445.	5.658	2.168E+4	0.7599
5450.	5.66	2.169E+4	0.7607
5455.	5.663	2.169E+4	0.7591
5460.	5.659	2.17E+4	0.7634
5465.	5.658	2.17E+4	0.7631
5470.	5.651	2.171E+4	0.7615
5475.	5.648	2.171E+4	0.7684
5480.	5.649	2.172E+4	0.7619
5485.	5.652	2.172E+4	0.7676
5490.	5.649	2.173E+4	0.763
5495.	5.648	2.173E+4	0.7739
5500.	5.647	2.174E+4	0.7715
5505.	5.646	2.174E+4	0.7683
5510.	5.645	2.175E+4	0.7731
5515.	5.641	2.175E+4	0.7724
5520.	5.643	2.176E+4	0.7751
5525.	5.642	2.176E+4	0.7757
5530.	5.636	2.177E+4	0.7761
5535.	5.636	2.177E+4	0.776
5540.	5.633	2.178E+4	0.7757
5545.	5.625	2.178E+4	0.7767
5550.	5.622	2.179E+4	0.7792
5555.	5.619	2.179E+4	0.785
5560.	5.62	2.18E+4	0.7736
5565.	5.618	2.18E+4	0.7857

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
5570.	5.611	2.181E+4	0.7859
5575.	5.61	2.181E+4	0.7785
5580.	5.613	2.182E+4	0.7839
5585.	5.607	2.182E+4	0.782
5590.	5.602	2.183E+4	0.7804
5595.	5.603	2.183E+4	0.7827
5600.	5.592	2.184E+4	0.782
5605.	5.597	2.184E+4	0.7818
5610.	5.595	2.185E+4	0.7823
5615.	5.587	2.185E+4	0.7808
5620.	5.591	2.186E+4	0.7834
5625.	5.586	2.186E+4	0.7926
5630.	5.577	2.187E+4	0.7883
5635.	5.579	2.187E+4	0.7869
5640.	5.578	2.188E+4	0.7805
5645.	5.567	2.188E+4	0.7931
5650.	5.57	2.189E+4	0.7942
5655.	5.562	2.189E+4	0.7897
5660.	5.562	2.19E+4	0.7992
5665.	5.561	2.19E+4	0.7998
5670.	5.561	2.191E+4	0.7986
5675.	5.559	2.191E+4	0.7925
5680.	5.551	2.192E+4	0.8002
5685.	5.553	2.192E+4	0.8042
5690.	5.549	2.193E+4	0.801
5695.	5.548	2.193E+4	0.8022
5700.	5.547	2.194E+4	0.7981
5705.	5.542	2.194E+4	0.7987
5710.	5.536	2.195E+4	0.7995
5715.	5.531	2.195E+4	0.8012
5720.	5.53	2.196E+4	0.7988
5725.	5.524	2.196E+4	0.8025
5730.	5.529	2.197E+4	0.8045
5735.	5.528	2.197E+4	0.8035
5740.	5.532	2.198E+4	0.8031
5745.	5.525	2.198E+4	0.8007
5750.	5.522	2.199E+4	0.8021
5755.	5.521	2.199E+4	0.7982
5760.	5.514	2.2E+4	0.8005
5765.	5.515	2.2E+4	0.8094
5770.	5.509	2.201E+4	0.8047
5775.	5.503	2.201E+4	0.8025
5780.	5.503	2.202E+4	0.8003
5785.	5.499	2.202E+4	0.8031
5790.	5.499	2.203E+4	0.8064
5795.	5.493	2.203E+4	0.8083
5800.	5.495	2.204E+4	0.805
5805.	5.494	2.204E+4	0.8079
5810.	5.488	2.205E+4	0.8105
5815.	5.488	2.205E+4	0.8054
5820.	5.484	2.206E+4	0.7993
5825.	5.48	2.206E+4	0.8007
5830.	5.483	2.207E+4	0.8069

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
5835.	5.481	2.207E+4	0.8091
5840.	5.47	2.208E+4	0.81
5845.	5.471	2.208E+4	0.8022
5850.	5.473	2.209E+4	0.8062
5855.	5.47	2.209E+4	0.806
5860.	5.467	2.21E+4	0.8092
5865.	5.461	2.21E+4	0.8035
5870.	5.45	2.211E+4	0.8066
5875.	5.458	2.211E+4	0.8101
5880.	5.452	2.212E+4	0.8017
5885.	5.448	2.212E+4	0.8117
5890.	5.448	2.213E+4	0.8036
5895.	5.447	2.213E+4	0.8
5900.	5.443	2.214E+4	0.8057
5905.	5.441	2.214E+4	0.7992
5910.	5.436	2.215E+4	0.7964
5915.	5.435	2.215E+4	0.7976
5920.	5.426	2.216E+4	0.7919
5925.	5.429	2.216E+4	0.7991
5930.	5.426	2.217E+4	0.7936
5935.	5.418	2.217E+4	0.7942
5940.	5.42	2.218E+4	0.7994
5945.	5.417	2.218E+4	0.7939
5950.	5.41	2.219E+4	0.7909
5955.	5.409	2.219E+4	0.7878
5960.	5.41	2.22E+4	0.7929
5965.	5.405	2.22E+4	0.791
5970.	5.407	2.221E+4	0.79
5975.	5.402	2.221E+4	0.7881
5980.	5.404	2.222E+4	0.7907
5985.	5.401	2.222E+4	0.7866
5990.	5.399	2.223E+4	0.7804
5995.	5.401	2.223E+4	0.7834
6000.	5.39	2.224E+4	0.7885
6005.	5.389	2.224E+4	0.783
6010.	5.385	2.225E+4	0.7797
6015.	5.382	2.225E+4	0.7888
6020.	5.382	2.226E+4	0.7867
6025.	5.378	2.226E+4	0.7842
6030.	5.379	2.227E+4	0.7814
6035.	5.377	2.227E+4	0.7821
6040.	5.378	2.228E+4	0.7757
6045.	5.368	2.228E+4	0.7736
6050.	5.37	2.229E+4	0.7704
6055.	5.366	2.229E+4	0.7721
6060.	5.361	2.23E+4	0.7733
6065.	5.359	2.23E+4	0.7688
6070.	5.36	2.231E+4	0.771
6075.	5.362	2.231E+4	0.7722
6080.	5.363	2.232E+4	0.7726
6085.	5.354	2.232E+4	0.7737
6090.	5.355	2.233E+4	0.7688
6095.	5.354	2.233E+4	0.7716

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
6100.	5.351	2.234E+4	0.7672
6105.	5.349	2.234E+4	0.7719
6110.	5.344	2.235E+4	0.7707
6115.	5.338	2.235E+4	0.7692
6120.	5.335	2.236E+4	0.7683
6125.	5.337	2.236E+4	0.7644
6130.	5.336	2.237E+4	0.7668
6135.	5.333	2.237E+4	0.7682
6140.	5.329	2.238E+4	0.7655
6145.	5.328	2.238E+4	0.771
6150.	5.325	2.239E+4	0.7618
6155.	5.32	2.239E+4	0.7659
6160.	5.313	2.24E+4	0.7707
6165.	5.313	2.24E+4	0.7728
6170.	5.307	2.241E+4	0.7718
6175.	5.312	2.241E+4	0.7691
6180.	5.303	2.242E+4	0.7669
6185.	5.299	2.242E+4	0.7705
6190.	5.299	2.243E+4	0.7653
6195.	5.296	2.243E+4	0.7672
6200.	5.287	2.244E+4	0.7687
6205.	5.283	2.244E+4	0.7712
6210.	5.283	2.245E+4	0.7694
6215.	5.274	2.245E+4	0.7629
6220.	5.265	2.246E+4	0.7648
6225.	5.267	2.246E+4	0.7684
6230.	5.261	2.247E+4	0.7631
6235.	5.262	2.247E+4	0.7592
6240.	5.258	2.248E+4	0.7611
6245.	5.252	2.248E+4	0.7618
6250.	5.255	2.249E+4	0.7628
6255.	5.247	2.249E+4	0.7635
6260.	5.247	2.25E+4	0.7592
6265.	5.241	2.25E+4	0.7617
6270.	5.235	2.251E+4	0.7648
6275.	5.228	2.251E+4	0.7646
6280.	5.223	2.252E+4	0.759
6285.	5.227	2.252E+4	0.7601
6290.	5.22	2.253E+4	0.7599
6295.	5.209	2.253E+4	0.7631
6300.	5.214	2.254E+4	0.7542
6305.	5.208	2.254E+4	0.7579
6310.	5.198	2.255E+4	0.7535
6315.	5.19	2.255E+4	0.7583
6320.	5.197	2.256E+4	0.7578
6325.	5.197	2.256E+4	0.7634
6330.	5.189	2.257E+4	0.7637
6335.	5.185	2.257E+4	0.7622
6340.	5.176	2.258E+4	0.7606
6345.	5.174	2.258E+4	0.7637
6350.	5.165	2.259E+4	0.7589
6355.	5.165	2.259E+4	0.7577
6360.	5.163	2.26E+4	0.7634

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
6365.	5.153	2.26E+4	0.7664
6370.	5.148	2.261E+4	0.7623
6375.	5.143	2.261E+4	0.7656
6380.	5.139	2.262E+4	0.7638
6385.	5.135	2.262E+4	0.7681
6390.	5.136	2.263E+4	0.7647
6395.	5.122	2.263E+4	0.7698
6400.	5.124	2.264E+4	0.7677
6405.	5.118	2.264E+4	0.7692
6410.	5.116	2.265E+4	0.771
6415.	5.109	2.265E+4	0.773
6420.	5.1	2.266E+4	0.7746
6425.	5.099	2.266E+4	0.7772
6430.	5.095	2.267E+4	0.7702
6435.	5.086	2.267E+4	0.7753
6440.	5.078	2.268E+4	0.7721
6445.	5.078	2.268E+4	0.7817
6450.	5.072	2.269E+4	0.7758
6455.	5.066	2.269E+4	0.7806
6460.	5.055	2.27E+4	0.7881
6465.	5.054	2.27E+4	0.7843
6470.	5.05	2.271E+4	0.7845
6475.	5.046	2.271E+4	0.7873
6480.	5.04	2.272E+4	0.7896
6485.	5.037	2.272E+4	0.784
6490.	5.034	2.273E+4	0.7878
6495.	5.027	2.273E+4	0.7833
6500.	5.024	2.274E+4	0.7877
6505.	5.02	2.274E+4	0.7886
6510.	5.017	2.275E+4	0.7897
6515.	5.005	2.275E+4	0.7904
6520.	5.003	2.276E+4	0.785
6525.	4.999	2.276E+4	0.7887
6530.	4.994	2.277E+4	0.7846
6535.	4.982	2.277E+4	0.7892
6540.	4.98	2.278E+4	0.7826
6545.	4.979	2.278E+4	0.7829
6550.	4.969	2.279E+4	0.7826
6555.	4.966	2.279E+4	0.7873
6560.	4.962	2.28E+4	0.7805
6565.	4.959	2.28E+4	0.7872
6570.	4.952	2.281E+4	0.7881
6575.	4.941	2.281E+4	0.7833
6580.	4.94	2.282E+4	0.7866
6585.	4.941	2.282E+4	0.7836
6590.	4.933	2.283E+4	0.7864
6595.	4.933	2.283E+4	0.7816
6600.	4.926	2.284E+4	0.7808
6605.	4.923	2.284E+4	0.782
6610.	4.915	2.285E+4	0.7749
6615.	4.911	2.285E+4	0.785
6620.	4.904	2.286E+4	0.7763
6625.	4.906	2.286E+4	0.7757

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
6630.	4.899	2.287E+4	0.7804
6635.	4.894	2.287E+4	0.7805
6640.	4.896	2.288E+4	0.7754
6645.	4.887	2.288E+4	0.7777
6650.	4.887	2.289E+4	0.774
6655.	4.88	2.289E+4	0.7817
6660.	4.882	2.29E+4	0.7796
6665.	4.878	2.29E+4	0.7738
6670.	4.872	2.291E+4	0.7694
6675.	4.867	2.291E+4	0.7779
6680.	4.869	2.292E+4	0.7787
6685.	4.859	2.292E+4	0.7737
6690.	4.86	2.293E+4	0.7645
6695.	4.855	2.293E+4	0.7718
6700.	4.849	2.294E+4	0.7707
6705.	4.855	2.294E+4	0.7751
6710.	4.841	2.295E+4	0.7732
6715.	4.839	2.295E+4	0.7763
6720.	4.843	2.296E+4	0.7733
6725.	4.84	2.296E+4	0.7745
6730.	4.837	2.297E+4	0.777
6735.	4.832	2.297E+4	0.78
6740.	4.822	2.298E+4	0.7744
6745.	4.827	2.298E+4	0.7719
6750.	4.814	2.299E+4	0.7797
6755.	4.812	2.299E+4	0.7791
6760.	4.81	2.3E+4	0.78
6765.	4.808	2.3E+4	0.7775
6770.	4.81	2.301E+4	0.7689
6775.	4.809	2.301E+4	0.7761
6780.	4.804	2.302E+4	0.7703
6785.	4.802	2.302E+4	0.778
6790.	4.803	2.303E+4	0.7739
6795.	4.795	2.303E+4	0.7731
6800.	4.79	2.304E+4	0.7796
6805.	4.79	2.304E+4	0.7796
6810.	4.786	2.305E+4	0.7806
6815.	4.783	2.305E+4	0.7792
6820.	4.782	2.306E+4	0.774
6825.	4.776	2.306E+4	0.7753
6830.	4.777	2.307E+4	0.7815
6835.	4.777	2.307E+4	0.777
6840.	4.779	2.308E+4	0.7768
6845.	4.773	2.308E+4	0.7765
6850.	4.773	2.309E+4	0.779
6855.	4.772	2.309E+4	0.779
6860.	4.765	2.31E+4	0.7703
6865.	4.763	2.31E+4	0.7724
6870.	4.76	2.311E+4	0.7815
6875.	4.766	2.311E+4	0.7717
6880.	4.762	2.312E+4	0.7706
6885.	4.765	2.312E+4	0.7717
6890.	4.752	2.313E+4	0.7811

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
6895.	4.751	2.313E+4	0.7679
6900.	4.752	2.314E+4	0.7717
6905.	4.749	2.314E+4	0.7756
6910.	4.743	2.315E+4	0.7665
6915.	4.743	2.315E+4	0.7719
6920.	4.741	2.316E+4	0.7688
6925.	4.731	2.316E+4	0.7698
6930.	4.735	2.317E+4	0.7723
6935.	4.733	2.317E+4	0.7732
6940.	4.729	2.318E+4	0.7727
6945.	4.727	2.318E+4	0.7773
6950.	4.717	2.319E+4	0.7718
6955.	4.714	2.319E+4	0.7709
6960.	4.711	2.32E+4	0.776
6965.	4.712	2.32E+4	0.7722
6970.	4.706	2.321E+4	0.776
6975.	4.701	2.321E+4	0.7661
6980.	4.697	2.322E+4	0.7707
6985.	4.69	2.322E+4	0.7711
6990.	4.694	2.323E+4	0.7705
6995.	4.689	2.323E+4	0.7698
7000.	4.691	2.324E+4	0.7695
7005.	4.676	2.324E+4	0.7704
7010.	4.678	2.325E+4	0.768
7015.	4.674	2.325E+4	0.7685
7020.	4.67	2.326E+4	0.7705
7025.	4.664	2.326E+4	0.7734
7030.	4.661	2.327E+4	0.7694
7035.	4.654	2.327E+4	0.7701
7040.	4.648	2.328E+4	0.7704
7045.	4.643	2.328E+4	0.7703
7050.	4.641	2.329E+4	0.7714
7055.	4.632	2.329E+4	0.775
7060.	4.628	2.33E+4	0.7748
7065.	4.627	2.33E+4	0.7741
7070.	4.62	2.331E+4	0.7695
7075.	4.616	2.331E+4	0.7737
7080.	4.607	2.332E+4	0.7744
7085.	4.603	2.332E+4	0.7722
7090.	4.599	2.333E+4	0.7686
7095.	4.588	2.333E+4	0.7761
7100.	4.585	2.334E+4	0.773
7105.	4.58	2.334E+4	0.7744
7110.	4.572	2.335E+4	0.7737
7115.	4.572	2.335E+4	0.7744
7120.	4.565	2.336E+4	0.7763
7125.	4.561	2.336E+4	0.7723
7130.	4.553	2.337E+4	0.7754
7135.	4.549	2.337E+4	0.7688
7140.	4.544	2.338E+4	0.7637
7145.	4.532	2.338E+4	0.7709
7150.	4.529	2.339E+4	0.7678
7155.	4.526	2.339E+4	0.7725

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
7160.	4.515	2.34E+4	0.7697
7165.	4.514	2.34E+4	0.7668
7170.	4.511	2.341E+4	0.7699
7175.	4.5	2.341E+4	0.7642
7180.	4.499	2.342E+4	0.7711
7185.	4.497	2.342E+4	0.7717
7190.	4.486	2.343E+4	0.7695
7195.	4.483	2.343E+4	0.7744
7200.	4.476	2.344E+4	0.7737
7205.	4.468	2.344E+4	0.7688
7210.	4.463	2.345E+4	0.7725
7215.	4.458	2.345E+4	0.7722
7220.	4.457	2.346E+4	0.77
7225.	4.451	2.346E+4	0.7746
7230.	4.446	2.347E+4	0.7739
7235.	4.438	2.347E+4	0.7676
7240.	4.437	2.348E+4	0.7733
7245.	4.425	2.348E+4	0.7669
7250.	4.428	2.349E+4	0.7694
7255.	4.423	2.349E+4	0.7714
7260.	4.423	2.35E+4	0.7735
7265.	4.415	2.35E+4	0.7634
7270.	4.419	2.351E+4	0.7722
7275.	4.405	2.351E+4	0.7652
7280.	4.402	2.352E+4	0.7651
7285.	4.397	2.352E+4	0.7677
7290.	4.393	2.353E+4	0.7656
7295.	4.39	2.353E+4	0.76
7300.	4.384	2.354E+4	0.7607
7305.	4.378	2.354E+4	0.7592
7310.	4.373	2.355E+4	0.7609
7315.	4.366	2.355E+4	0.7602
7320.	4.366	2.356E+4	0.7591
7325.	4.359	2.356E+4	0.753
7330.	4.35	2.357E+4	0.7513
7335.	4.347	2.357E+4	0.7497
7340.	4.344	2.358E+4	0.7523
7345.	4.33	2.358E+4	0.7485
7350.	4.336	2.359E+4	0.7441
7355.	4.333	2.359E+4	0.7422
7360.	4.327	2.36E+4	0.746
7365.	4.326	2.36E+4	0.7436
7370.	4.318	2.361E+4	0.7427
7375.	4.314	2.361E+4	0.7416
7380.	4.305	2.362E+4	0.7365
7385.	4.302	2.362E+4	0.7382
7390.	4.297	2.363E+4	0.7331
7395.	4.289	2.363E+4	0.7334
7400.	4.287	2.364E+4	0.7293
7405.	4.282	2.364E+4	0.7266
7410.	4.282	2.365E+4	0.7281
7415.	4.279	2.365E+4	0.7275
7420.	4.272	2.366E+4	0.7266

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
7425.	4.267	2.366E+4	0.7229
7430.	4.261	2.367E+4	0.7162
7435.	4.268	2.367E+4	0.7175
7440.	4.255	2.368E+4	0.7206
7445.	4.251	2.368E+4	0.7151
7450.	4.252	2.369E+4	0.7187
7455.	4.247	2.369E+4	0.7161
7460.	4.242	2.37E+4	0.7156
7465.	4.243	2.37E+4	0.7111
7470.	4.242	2.371E+4	0.7128
7475.	4.236	2.371E+4	0.7129
7480.	4.234	2.372E+4	0.7101
7485.	4.227	2.372E+4	0.7143
7490.	4.226	2.373E+4	0.7097
7495.	4.223	2.373E+4	0.7037
7500.	4.227	2.374E+4	0.7043
7505.	4.223	2.374E+4	0.7052
7510.	4.222	2.375E+4	0.7016
7515.	4.219	2.375E+4	0.7004
7520.	4.212	2.376E+4	0.6941
7525.	4.214	2.376E+4	0.6963
7530.	4.216	2.377E+4	0.6926
7535.	4.216	2.377E+4	0.6944
7540.	4.203	2.378E+4	0.6881
7545.	4.209	2.378E+4	0.6909
7550.	4.205	2.379E+4	0.6857
7555.	4.196	2.379E+4	0.6841
7560.	4.193	2.38E+4	0.6856
7565.	4.194	2.38E+4	0.6881
7570.	4.192	2.381E+4	0.6792
7575.	4.188	2.381E+4	0.6811
7580.	4.189	2.382E+4	0.6803
7585.	4.189	2.382E+4	0.6821
7590.	4.189	2.383E+4	0.6777
7595.	4.181	2.383E+4	0.6833
7600.	4.184	2.384E+4	0.6761
7605.	4.176	2.384E+4	0.6771
7610.	4.176	2.385E+4	0.6744
7615.	4.173	2.385E+4	0.6733
7620.	4.175	2.386E+4	0.6775
7625.	4.176	2.386E+4	0.6781
7630.	4.168	2.387E+4	0.6731
7635.	4.165	2.387E+4	0.6706
7640.	4.166	2.388E+4	0.6658
7645.	4.162	2.388E+4	0.668
7650.	4.158	2.389E+4	0.672
7655.	4.156	2.389E+4	0.6641
7660.	4.161	2.39E+4	0.665
7665.	4.157	2.39E+4	0.6581
7670.	4.163	2.391E+4	0.667
7675.	4.16	2.391E+4	0.6645
7680.	4.154	2.392E+4	0.6626
7685.	4.157	2.392E+4	0.665

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
7690.	4.148	2.393E+4	0.6649
7695.	4.153	2.393E+4	0.6646
7700.	4.147	2.394E+4	0.6602
7705.	4.146	2.394E+4	0.665
7710.	4.136	2.395E+4	0.6652
7715.	4.136	2.395E+4	0.6603
7720.	4.133	2.396E+4	0.658
7725.	4.128	2.396E+4	0.6589
7730.	4.127	2.397E+4	0.664
7735.	4.121	2.397E+4	0.6553
7740.	4.122	2.398E+4	0.66
7745.	4.119	2.398E+4	0.6604
7750.	4.119	2.399E+4	0.6596
7755.	4.11	2.399E+4	0.658
7760.	4.111	2.4E+4	0.6657
7765.	4.106	2.4E+4	0.6635
7770.	4.103	2.401E+4	0.6668
7775.	4.102	2.401E+4	0.6667
7780.	4.099	2.402E+4	0.6674
7785.	4.097	2.402E+4	0.6709
7790.	4.089	2.403E+4	0.6719
7795.	4.095	2.403E+4	0.6724
7800.	4.083	2.404E+4	0.6697
7805.	4.089	2.404E+4	0.6734
7810.	4.083	2.405E+4	0.6749
7815.	4.084	2.405E+4	0.6727
7820.	4.079	2.406E+4	0.6748
7825.	4.079	2.406E+4	0.6741
7830.	4.072	2.407E+4	0.6729
7835.	4.071	2.407E+4	0.6743
7840.	4.073	2.408E+4	0.6743
7845.	4.064	2.408E+4	0.6717
7850.	4.061	2.409E+4	0.6731
7855.	4.055	2.409E+4	0.6745
7860.	4.062	2.41E+4	0.6736
7865.	4.056	2.41E+4	0.6759
7870.	4.042	2.411E+4	0.6733
7875.	4.04	2.411E+4	0.6741
7880.	4.043	2.412E+4	0.672
7885.	4.034	2.412E+4	0.6786
7890.	4.033	2.413E+4	0.6798
7895.	4.028	2.413E+4	0.6752
7900.	4.022	2.414E+4	0.675
7905.	4.022	2.414E+4	0.6779
7910.	4.018	2.415E+4	0.6765
7915.	4.013	2.415E+4	0.6771
7920.	4.005	2.416E+4	0.6773
7925.	4.	2.416E+4	0.6751
7930.	3.995	2.417E+4	0.6755
7935.	3.993	2.417E+4	0.6722
7940.	3.99	2.418E+4	0.6805
7945.	3.979	2.418E+4	0.6768
7950.	3.976	2.419E+4	0.6726

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
7955.	3.977	2.419E+4	0.6738
7960.	3.972	2.42E+4	0.6703
7965.	3.971	2.42E+4	0.6685
7970.	3.964	2.421E+4	0.6675
7975.	3.958	2.421E+4	0.6693
7980.	3.953	2.422E+4	0.6686
7985.	3.948	2.422E+4	0.6696
7990.	3.947	2.423E+4	0.6649
7995.	3.939	2.423E+4	0.6669
8000.	3.931	2.424E+4	0.6625
8005.	3.928	2.424E+4	0.6686
8010.	3.927	2.425E+4	0.6673
8015.	3.922	2.425E+4	0.6686
8020.	3.919	2.426E+4	0.6641
8025.	3.918	2.426E+4	0.6703
8030.	3.906	2.427E+4	0.6648
8035.	3.908	2.427E+4	0.6632
8040.	3.907	2.428E+4	0.6662
8045.	3.897	2.428E+4	0.6668
8050.	3.89	2.429E+4	0.6591
8055.	3.894	2.429E+4	0.6566
8060.	3.889	2.43E+4	0.6587
8065.	3.888	2.43E+4	0.6564
8070.	3.879	2.431E+4	0.6572
8075.	3.875	2.431E+4	0.6531
8080.	3.874	2.432E+4	0.6574
8085.	3.866	2.432E+4	0.652
8090.	3.867	2.433E+4	0.6535
8095.	3.86	2.433E+4	0.6522
8100.	3.857	2.434E+4	0.6489
8105.	3.861	2.434E+4	0.6445
8110.	3.85	2.435E+4	0.645
8115.	3.85	2.435E+4	0.6397
8120.	3.84	2.436E+4	0.6362
8125.	3.845	2.436E+4	0.6356
8130.	3.836	2.437E+4	0.6307
8135.	3.836	2.437E+4	0.6316
8140.	3.837	2.438E+4	0.6305
8145.	3.834	2.438E+4	0.6337
8150.	3.822	2.439E+4	0.6257
8155.	3.82	2.439E+4	0.621
8160.	3.82	2.44E+4	0.6223
8165.	3.816	2.44E+4	0.6219
8170.	3.813	2.441E+4	0.6247
8175.	3.813	2.441E+4	0.6181
8180.	3.814	2.442E+4	0.6172
8185.	3.809	2.442E+4	0.6193
8190.	3.801	2.443E+4	0.6146
8195.	3.799	2.443E+4	0.6111
8200.	3.799	2.444E+4	0.6136
8205.	3.797	2.444E+4	0.6147
8210.	3.79	2.445E+4	0.6132
8215.	3.789	2.445E+4	0.6124

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
8220.	3.792	2.446E+4	0.6083
8225.	3.789	2.446E+4	0.6098
8230.	3.786	2.447E+4	0.6066
8235.	3.774	2.447E+4	0.609
8240.	3.783	2.448E+4	0.6059
8245.	3.769	2.448E+4	0.6043
8250.	3.773	2.449E+4	0.6066
8255.	3.767	2.449E+4	0.6055
8260.	3.771	2.45E+4	0.5978
8265.	3.763	2.45E+4	0.5946
8270.	3.763	2.451E+4	0.5963
8275.	3.759	2.451E+4	0.5936
8280.	3.756	2.452E+4	0.5926
8285.	3.75	2.452E+4	0.5945
8290.	3.752	2.453E+4	0.5882
8295.	3.749	2.453E+4	0.5901
8300.	3.747	2.454E+4	0.588
8305.	3.745	2.454E+4	0.5907
8310.	3.738	2.455E+4	0.5936
8315.	3.74	2.455E+4	0.5967
8320.	3.733	2.456E+4	0.5908
8325.	3.733	2.456E+4	0.5921
8330.	3.727	2.457E+4	0.5916
8335.	3.732	2.457E+4	0.5917
8340.	3.727	2.458E+4	0.5911
8345.	3.722	2.458E+4	0.5888
8350.	3.717	2.459E+4	0.5881
8355.	3.707	2.459E+4	0.5852
8360.	3.708	2.46E+4	0.5897
8365.	3.705	2.46E+4	0.585
8370.	3.7	2.461E+4	0.5845
8375.	3.694	2.461E+4	0.5845
8380.	3.692	2.462E+4	0.5857
8385.	3.684	2.462E+4	0.5847
8390.	3.679	2.463E+4	0.5825
8395.	3.68	2.463E+4	0.5835
8400.	3.682	2.464E+4	0.581
8405.	3.678	2.464E+4	0.5831
8410.	3.674	2.465E+4	0.5837
8415.	3.677	2.465E+4	0.582
8420.	3.67	2.466E+4	0.5744
8425.	3.668	2.466E+4	0.5793
8430.	3.663	2.467E+4	0.581
8435.	3.658	2.467E+4	0.5794
8440.	3.66	2.468E+4	0.5813
8445.	3.659	2.468E+4	0.5804
8450.	3.647	2.469E+4	0.5765
8455.	3.647	2.469E+4	0.578
8460.	3.643	2.47E+4	0.5791
8465.	3.635	2.47E+4	0.5734
8470.	3.633	2.471E+4	0.5759
8475.	3.628	2.471E+4	0.5795
8480.	3.624	2.472E+4	0.5825

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
8485.	3.624	2.472E+4	0.584
8490.	3.614	2.473E+4	0.5815
8495.	3.617	2.473E+4	0.5791
8500.	3.613	2.474E+4	0.5811
8505.	3.61	2.474E+4	0.5828
8510.	3.601	2.475E+4	0.5876
8515.	3.598	2.475E+4	0.5831
8520.	3.599	2.476E+4	0.5808
8525.	3.597	2.476E+4	0.5876
8530.	3.59	2.477E+4	0.5867
8535.	3.584	2.477E+4	0.5845
8540.	3.584	2.478E+4	0.5917
8545.	3.578	2.478E+4	0.5884
8550.	3.569	2.479E+4	0.5952
8555.	3.569	2.479E+4	0.595
8560.	3.564	2.48E+4	0.5957
8565.	3.559	2.48E+4	0.5963
8570.	3.556	2.481E+4	0.5909
8575.	3.555	2.481E+4	0.5953
8580.	3.542	2.482E+4	0.5969
8585.	3.545	2.482E+4	0.5992
8590.	3.538	2.483E+4	0.5959
8595.	3.53	2.483E+4	0.5936
8600.	3.53	2.484E+4	0.6025
8605.	3.525	2.484E+4	0.5996
8610.	3.527	2.485E+4	0.5988
8615.	3.525	2.485E+4	0.5916
8620.	3.52	2.486E+4	0.591
8625.	3.522	2.486E+4	0.602
8630.	3.517	2.487E+4	0.5977
8635.	3.518	2.487E+4	0.6004
8640.	3.515	2.488E+4	0.601
8645.	3.517	2.488E+4	0.5982
8650.	3.509	2.489E+4	0.6053
8655.	3.504	2.489E+4	0.6005
8660.	3.5	2.49E+4	0.6028
8665.	3.493	2.49E+4	0.6065
8670.	3.489	2.491E+4	0.605
8675.	3.488	2.491E+4	0.6095
8680.	3.479	2.492E+4	0.6087
8685.	3.476	2.492E+4	0.6117
8690.	3.469	2.493E+4	0.6082
8695.	3.465	2.493E+4	0.6088
8700.	3.46	2.494E+4	0.6076
8705.	3.465	2.494E+4	0.6114
8710.	3.449	2.495E+4	0.6094
8715.	3.448	2.495E+4	0.6083
8720.	3.442	2.496E+4	0.6045
8725.	3.441	2.496E+4	0.6018
8730.	3.433	2.497E+4	0.6091
8735.	3.429	2.497E+4	0.6041
8740.	3.423	2.498E+4	0.6022
8745.	3.422	2.498E+4	0.6027

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
8750.	3.418	2.499E+4	0.6037
8755.	3.411	2.499E+4	0.6053
8760.	3.403	2.5E+4	0.6047
8765.	3.398	2.5E+4	0.6053
8770.	3.396	2.501E+4	0.6075
8775.	3.393	2.501E+4	0.6064
8780.	3.389	2.502E+4	0.5993
8785.	3.39	2.502E+4	0.6088
8790.	3.382	2.503E+4	0.6048
8795.	3.384	2.503E+4	0.6031
8800.	3.379	2.504E+4	0.5988
8805.	3.376	2.504E+4	0.6003
8810.	3.373	2.505E+4	0.5974
8815.	3.375	2.505E+4	0.593
8820.	3.372	2.506E+4	0.5937
8825.	3.376	2.506E+4	0.5894
8830.	3.383	2.507E+4	0.5992
8835.	3.373	2.507E+4	0.5943
8840.	3.373	2.508E+4	0.5962
8845.	3.376	2.508E+4	0.5933
8850.	3.366	2.509E+4	0.5936
8855.	3.369	2.509E+4	0.5929
8860.	3.363	2.51E+4	0.5934
8865.	3.359	2.51E+4	0.587
8870.	3.357	2.511E+4	0.5897
8875.	3.35	2.511E+4	0.5814
8880.	3.356	2.512E+4	0.5835
8885.	3.346	2.512E+4	0.5847
8890.	3.351	2.513E+4	0.5798
8895.	3.353	2.513E+4	0.5803
8900.	3.347	2.514E+4	0.5761
8905.	3.342	2.514E+4	0.5769
8910.	3.346	2.515E+4	0.5742
8915.	3.344	2.515E+4	0.5661
8920.	3.346	2.516E+4	0.5737
8925.	3.338	2.516E+4	0.5668
8930.	3.338	2.517E+4	0.5717
8935.	3.335	2.517E+4	0.5677
8940.	3.339	2.518E+4	0.5658
8945.	3.336	2.518E+4	0.5629
8950.	3.334	2.519E+4	0.5606
8955.	3.33	2.519E+4	0.5614
8960.	3.331	2.52E+4	0.5597
8965.	3.328	2.52E+4	0.5572
8970.	3.328	2.521E+4	0.5602
8975.	3.328	2.521E+4	0.5522
8980.	3.322	2.522E+4	0.5505
8985.	3.322	2.522E+4	0.5572
8990.	3.318	2.523E+4	0.5558
8995.	3.323	2.523E+4	0.5518
9000.	3.321	2.524E+4	0.5526
9005.	3.325	2.524E+4	0.557
9010.	3.317	2.525E+4	0.5447

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
9015.	3.314	2.525E+4	0.5502
9020.	3.319	2.526E+4	0.546
9025.	3.314	2.526E+4	0.5481
9030.	3.314	2.527E+4	0.5421
9035.	3.309	2.527E+4	0.5405
9040.	3.305	2.528E+4	0.5427
9045.	3.309	2.528E+4	0.543
9050.	3.311	2.529E+4	0.5444
9055.	3.308	2.529E+4	0.5382
9060.	3.306	2.53E+4	0.5433
9065.	3.311	2.53E+4	0.542
9070.	3.305	2.531E+4	0.5356
9075.	3.306	2.531E+4	0.5387
9080.	3.311	2.532E+4	0.5307
9085.	3.305	2.532E+4	0.537
9090.	3.297	2.533E+4	0.5362
9095.	3.307	2.533E+4	0.5326
9100.	3.3	2.534E+4	0.5363
9105.	3.297	2.534E+4	0.5342
9110.	3.296	2.535E+4	0.5303
9115.	3.289	2.535E+4	0.5351
9120.	3.288	2.536E+4	0.5368
9125.	3.285	2.536E+4	0.5329
9130.	3.286	2.537E+4	0.5369
9135.	3.291	2.537E+4	0.5283
9140.	3.281	2.538E+4	0.5381
9145.	3.284	2.538E+4	0.5364
9150.	3.28	2.539E+4	0.5352
9155.	3.275	2.539E+4	0.5402
9160.	3.281	2.54E+4	0.5362
9165.	3.272	2.54E+4	0.5363
9170.	3.27	2.541E+4	0.5382
9175.	3.271	2.541E+4	0.5398
9180.	3.266	2.542E+4	0.5403
9185.	3.267	2.542E+4	0.5397
9190.	3.267	2.543E+4	0.5425
9195.	3.263	2.543E+4	0.5362
9200.	3.258	2.544E+4	0.5428
9205.	3.254	2.544E+4	0.5415
9210.	3.254	2.545E+4	0.5436
9215.	3.256	2.545E+4	0.5387
9220.	3.253	2.546E+4	0.5443
9225.	3.252	2.546E+4	0.5426
9230.	3.243	2.547E+4	0.5437
9235.	3.246	2.547E+4	0.5395
9240.	3.244	2.548E+4	0.5453
9245.	3.24	2.548E+4	0.549
9250.	3.235	2.549E+4	0.5482
9255.	3.235	2.549E+4	0.5462
9260.	3.232	2.55E+4	0.5565
9265.	3.229	2.55E+4	0.5566
9270.	3.219	2.551E+4	0.5575
9275.	3.23	2.551E+4	0.5571

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
9280.	3.215	2.552E+4	0.5572
9285.	3.216	2.552E+4	0.5575
9290.	3.213	2.553E+4	0.5592
9295.	3.211	2.553E+4	0.5561
9300.	3.203	2.554E+4	0.5605
9305.	3.204	2.554E+4	0.5675
9310.	3.195	2.555E+4	0.5638
9315.	3.198	2.555E+4	0.5598
9320.	3.189	2.556E+4	0.559
9325.	3.186	2.556E+4	0.5619
9330.	3.189	2.557E+4	0.5606
9335.	3.182	2.557E+4	0.5621
9340.	3.175	2.558E+4	0.5567
9345.	3.171	2.558E+4	0.5551
9350.	3.17	2.559E+4	0.5641
9355.	3.178	2.559E+4	0.5616
9360.	3.161	2.56E+4	0.56
9365.	3.163	2.56E+4	0.5656
9370.	3.158	2.561E+4	0.5608
9375.	3.152	2.561E+4	0.564
9380.	3.151	2.562E+4	0.5643
9385.	3.148	2.562E+4	0.5638
9390.	3.15	2.563E+4	0.5585
9395.	3.149	2.563E+4	0.5669
9400.	3.138	2.564E+4	0.5635
9405.	3.138	2.564E+4	0.568
9410.	3.134	2.565E+4	0.5626
9415.	3.135	2.565E+4	0.5679
9420.	3.129	2.566E+4	0.5681
9425.	3.124	2.566E+4	0.5666
9430.	3.117	2.567E+4	0.5658
9435.	3.111	2.567E+4	0.5661
9440.	3.114	2.568E+4	0.5678
9445.	3.108	2.568E+4	0.5691
9450.	3.1	2.569E+4	0.5702
9455.	3.111	2.569E+4	0.5721
9460.	3.1	2.57E+4	0.5717
9465.	3.099	2.57E+4	0.5681
9470.	3.092	2.571E+4	0.5678
9475.	3.088	2.571E+4	0.5691
9480.	3.093	2.572E+4	0.5716
9485.	3.084	2.572E+4	0.5678
9490.	3.082	2.573E+4	0.5674
9495.	3.075	2.573E+4	0.5655
9500.	3.077	2.574E+4	0.5728
9505.	3.075	2.574E+4	0.5673
9510.	3.073	2.575E+4	0.5661
9515.	3.072	2.575E+4	0.5714
9520.	3.064	2.576E+4	0.5708
9525.	3.067	2.576E+4	0.5713
9530.	3.059	2.577E+4	0.5747
9535.	3.052	2.577E+4	0.5727
9540.	3.049	2.578E+4	0.5718

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
9545.	3.055	2.578E+4	0.5663
9550.	3.048	2.579E+4	0.5688
9555.	3.045	2.579E+4	0.5737
9560.	3.038	2.58E+4	0.5761
9565.	3.034	2.58E+4	0.5755
9570.	3.035	2.581E+4	0.5733
9575.	3.033	2.581E+4	0.5705
9580.	3.029	2.582E+4	0.5749
9585.	3.025	2.582E+4	0.5733
9590.	3.025	2.583E+4	0.5739
9595.	3.022	2.583E+4	0.5743
9600.	3.021	2.584E+4	0.5721
9605.	3.018	2.584E+4	0.5681
9610.	3.015	2.585E+4	0.5706
9615.	3.016	2.585E+4	0.5679
9620.	3.008	2.586E+4	0.5708
9625.	3.01	2.586E+4	0.5787
9630.	3.009	2.587E+4	0.5741
9635.	3.011	2.587E+4	0.5753
9640.	3.007	2.588E+4	0.5746
9645.	3.014	2.588E+4	0.5725
9650.	3.014	2.589E+4	0.5704
9655.	3.011	2.589E+4	0.5792
9660.	3.012	2.59E+4	0.5755
9665.	3.016	2.59E+4	0.5774
9670.	3.015	2.591E+4	0.5706
9675.	3.013	2.591E+4	0.5723
9680.	3.012	2.592E+4	0.5717
9685.	3.004	2.592E+4	0.5663
9690.	3.004	2.593E+4	0.5732
9695.	2.997	2.593E+4	0.5672
9700.	2.998	2.594E+4	0.5703
9705.	3.002	2.594E+4	0.5712
9710.	2.997	2.595E+4	0.574
9715.	2.996	2.595E+4	0.5705
9720.	2.996	2.596E+4	0.5684
9725.	2.993	2.596E+4	0.5685
9730.	2.984	2.597E+4	0.5702
9735.	2.981	2.597E+4	0.5735
9740.	2.985	2.598E+4	0.5692
9745.	2.986	2.598E+4	0.5733
9750.	2.978	2.599E+4	0.572
9755.	2.982	2.599E+4	0.5719
9760.	2.976	2.6E+4	0.5728
9765.	2.981	2.6E+4	0.5734
9770.	2.974	2.601E+4	0.5748
9775.	2.973	2.601E+4	0.5732
9780.	2.972	2.602E+4	0.5725
9785.	2.969	2.602E+4	0.575
9790.	2.968	2.603E+4	0.5733
9795.	2.966	2.603E+4	0.5725
9800.	2.968	2.604E+4	0.5728
9805.	2.963	2.604E+4	0.5722

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
9810.	2.967	2.605E+4	0.5738
9815.	2.961	2.605E+4	0.5713
9820.	2.958	2.606E+4	0.5793
9825.	2.959	2.606E+4	0.5784
9830.	2.957	2.607E+4	0.571
9835.	2.954	2.607E+4	0.5688
9840.	2.947	2.608E+4	0.5648
9845.	2.939	2.608E+4	0.5694
9850.	2.941	2.609E+4	0.5724
9855.	2.942	2.609E+4	0.5694
9860.	2.936	2.61E+4	0.5673
9865.	2.937	2.61E+4	0.5696
9870.	2.933	2.611E+4	0.5699
9875.	2.938	2.611E+4	0.5696
9880.	2.938	2.612E+4	0.5704
9885.	2.935	2.612E+4	0.5689
9890.	2.937	2.613E+4	0.5723
9895.	2.936	2.613E+4	0.5694
9900.	2.933	2.614E+4	0.5749
9905.	2.932	2.614E+4	0.5705
9910.	2.929	2.615E+4	0.5765
9915.	2.928	2.615E+4	0.574
9920.	2.928	2.616E+4	0.5784
9925.	2.926	2.616E+4	0.5728
9930.	2.924	2.617E+4	0.5805
9935.	2.917	2.617E+4	0.579
9940.	2.917	2.618E+4	0.5839
9945.	2.917	2.618E+4	0.5847
9950.	2.912	2.619E+4	0.5838
9955.	2.903	2.619E+4	0.5834
9960.	2.905	2.62E+4	0.5888
9965.	2.897	2.62E+4	0.59
9970.	2.898	2.621E+4	0.5866
9975.	2.892	2.621E+4	0.591
9980.	2.889	2.622E+4	0.5844
9985.	2.891	2.622E+4	0.5875
9990.	2.882	2.623E+4	0.5879
9995.	2.877	2.623E+4	0.5945
10000.	2.87	2.624E+4	0.5964
1.001E+4	2.875	2.624E+4	0.5932
1.001E+4	2.874	2.625E+4	0.5924
1.002E+4	2.868	2.625E+4	0.5971
1.002E+4	2.863	2.626E+4	0.5947
1.003E+4	2.854	2.626E+4	0.5984
1.003E+4	2.856	2.627E+4	0.597
1.004E+4	2.846	2.627E+4	0.5973
1.004E+4	2.844	2.628E+4	0.5977
1.005E+4	2.839	2.628E+4	0.5949
1.005E+4	2.831	2.629E+4	0.5932
1.006E+4	2.823	2.629E+4	0.596
1.006E+4	2.823	2.63E+4	0.6033
1.007E+4	2.816	2.63E+4	0.5939
1.007E+4	2.817	2.631E+4	0.5924

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
1.008E+4	2.806	2.631E+4	0.5994
1.008E+4	2.804	2.632E+4	0.6005
1.009E+4	2.798	2.632E+4	0.596
1.009E+4	2.796	2.633E+4	0.6022
1.01E+4	2.793	2.633E+4	0.6039
1.01E+4	2.793	2.634E+4	0.5967
1.011E+4	2.785	2.634E+4	0.6038
1.011E+4	2.789	2.635E+4	0.6
1.012E+4	2.783	2.635E+4	0.6065
1.012E+4	2.781	2.636E+4	0.6012
1.013E+4	2.776	2.636E+4	0.6044
1.013E+4	2.771	2.637E+4	0.6025
1.014E+4	2.769	2.637E+4	0.6081
1.014E+4	2.765	2.638E+4	0.6043
1.015E+4	2.762	2.638E+4	0.5995
1.015E+4	2.761	2.639E+4	0.6041
1.016E+4	2.758	2.639E+4	0.5965
1.016E+4	2.746	2.64E+4	0.5996
1.017E+4	2.754	2.64E+4	0.5976
1.017E+4	2.749	2.641E+4	0.5974
1.018E+4	2.737	2.641E+4	0.6039
1.018E+4	2.734	2.642E+4	0.6014
1.019E+4	2.728	2.642E+4	0.6008
1.019E+4	2.724	2.643E+4	0.5981
1.02E+4	2.726	2.643E+4	0.5998
1.02E+4	2.72	2.644E+4	0.5992
1.021E+4	2.717	2.644E+4	0.6026
1.021E+4	2.712	2.645E+4	0.6036
1.022E+4	2.709	2.645E+4	0.5992
1.022E+4	2.717	2.646E+4	0.5989
1.023E+4	2.705	2.646E+4	0.6012
1.023E+4	2.704	2.647E+4	0.5922
1.024E+4	2.702	2.647E+4	0.5938
1.024E+4	2.707	2.648E+4	0.5892
1.025E+4	2.697	2.648E+4	0.5938
1.025E+4	2.691	2.649E+4	0.5933
1.026E+4	2.692	2.649E+4	0.5908
1.026E+4	2.685	2.65E+4	0.5838
1.027E+4	2.686	2.65E+4	0.5946
1.027E+4	2.685	2.651E+4	0.5855
1.028E+4	2.67	2.651E+4	0.5872
1.028E+4	2.677	2.652E+4	0.5874
1.029E+4	2.676	2.652E+4	0.5847
1.029E+4	2.668	2.653E+4	0.5845
1.03E+4	2.67	2.653E+4	0.5822
1.03E+4	2.667	2.654E+4	0.5783
1.031E+4	2.657	2.654E+4	0.5729
1.031E+4	2.659	2.655E+4	0.5726
1.032E+4	2.654	2.655E+4	0.5725
1.032E+4	2.655	2.656E+4	0.5708
1.033E+4	2.663	2.656E+4	0.5714
1.033E+4	2.648	2.657E+4	0.5687
1.034E+4	2.65	2.657E+4	0.5644

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
1.034E+4	2.651	2.658E+4	0.5676
1.035E+4	2.643	2.658E+4	0.5644
1.035E+4	2.644	2.659E+4	0.5673
1.036E+4	2.647	2.659E+4	0.5619
1.036E+4	2.643	2.66E+4	0.5644
1.037E+4	2.64	2.66E+4	0.5592
1.037E+4	2.638	2.661E+4	0.5589
1.038E+4	2.635	2.661E+4	0.5564
1.038E+4	2.63	2.662E+4	0.5469
1.039E+4	2.634	2.662E+4	0.5473
1.039E+4	2.63	2.663E+4	0.5485
1.04E+4	2.628	2.663E+4	0.5433
1.04E+4	2.627	2.664E+4	0.5418
1.041E+4	2.629	2.664E+4	0.5377
1.041E+4	2.627	2.665E+4	0.5316
1.042E+4	2.623	2.665E+4	0.532
1.042E+4	2.614	2.666E+4	0.5319
1.043E+4	2.611	2.666E+4	0.5257
1.043E+4	2.614	2.667E+4	0.5271
1.044E+4	2.615	2.667E+4	0.5263
1.044E+4	2.608	2.668E+4	0.5227
1.045E+4	2.612	2.668E+4	0.5208
1.045E+4	2.613	2.669E+4	0.5178
1.046E+4	2.612	2.669E+4	0.5162
1.046E+4	2.606	2.67E+4	0.5122
1.047E+4	2.604	2.67E+4	0.5108
1.047E+4	2.606	2.671E+4	0.513
1.048E+4	2.602	2.671E+4	0.5096
1.048E+4	2.603	2.672E+4	0.5106
1.049E+4	2.603	2.672E+4	0.5097
1.049E+4	2.597	2.673E+4	0.5061
1.05E+4	2.595	2.673E+4	0.5029
1.05E+4	2.598	2.674E+4	0.5071
1.051E+4	2.597	2.674E+4	0.503
1.051E+4	2.591	2.675E+4	0.5046
1.052E+4	2.59	2.675E+4	0.5011
1.052E+4	2.594	2.676E+4	0.5011
1.053E+4	2.589	2.676E+4	0.5016
1.053E+4	2.588	2.677E+4	0.5017
1.054E+4	2.587	2.677E+4	0.5046
1.054E+4	2.594	2.678E+4	0.5052
1.055E+4	2.588	2.678E+4	0.5027
1.055E+4	2.589	2.679E+4	0.5029
1.056E+4	2.59	2.679E+4	0.5069
1.056E+4	2.587	2.68E+4	0.5017
1.057E+4	2.583	2.68E+4	0.5034
1.057E+4	2.578	2.681E+4	0.499
1.058E+4	2.579	2.681E+4	0.495
1.058E+4	2.568	2.682E+4	0.4988
1.059E+4	2.573	2.682E+4	0.4971
1.059E+4	2.57	2.683E+4	0.4997
1.06E+4	2.568	2.683E+4	0.4946
1.06E+4	2.57	2.684E+4	0.4976

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
1.061E+4	2.563	2.684E+4	0.4946
1.061E+4	2.566	2.685E+4	0.4978
1.062E+4	2.56	2.685E+4	0.4988
1.062E+4	2.567	2.686E+4	0.4909
1.063E+4	2.569	2.686E+4	0.4977
1.063E+4	2.565	2.687E+4	0.4992
1.064E+4	2.559	2.687E+4	0.499
1.064E+4	2.561	2.688E+4	0.4962
1.065E+4	2.559	2.688E+4	0.5033
1.065E+4	2.555	2.689E+4	0.5022
1.066E+4	2.555	2.689E+4	0.5019
1.066E+4	2.553	2.69E+4	0.5055
1.067E+4	2.551	2.69E+4	0.5028
1.067E+4	2.544	2.691E+4	0.5064
1.068E+4	2.554	2.691E+4	0.5062
1.068E+4	2.55	2.692E+4	0.5044
1.069E+4	2.545	2.692E+4	0.5046
1.069E+4	2.544	2.693E+4	0.5043
1.07E+4	2.536	2.693E+4	0.5083
1.07E+4	2.533	2.694E+4	0.5117
1.071E+4	2.531	2.694E+4	0.5085
1.071E+4	2.531	2.695E+4	0.5089
1.072E+4	2.531	2.695E+4	0.514
1.072E+4	2.526	2.696E+4	0.512
1.073E+4	2.528	2.696E+4	0.514
1.073E+4	2.526	2.697E+4	0.5187
1.074E+4	2.527	2.697E+4	0.5123
1.074E+4	2.523	2.698E+4	0.5187
1.075E+4	2.52	2.698E+4	0.5214
1.075E+4	2.523	2.699E+4	0.5153
1.076E+4	2.507	2.699E+4	0.5188
1.076E+4	2.505	2.7E+4	0.5172
1.077E+4	2.502	2.7E+4	0.5227
1.077E+4	2.501	2.701E+4	0.5232
1.078E+4	2.505	2.701E+4	0.5205
1.078E+4	2.502	2.702E+4	0.5194
1.079E+4	2.495	2.702E+4	0.5237
1.079E+4	2.49	2.703E+4	0.524
1.08E+4	2.493	2.703E+4	0.527
1.08E+4	2.486	2.704E+4	0.5228
1.081E+4	2.485	2.704E+4	0.531
1.081E+4	2.483	2.705E+4	0.5271
1.082E+4	2.477	2.705E+4	0.5205
1.082E+4	2.477	2.706E+4	0.5218
1.083E+4	2.471	2.706E+4	0.5256
1.083E+4	2.471	2.707E+4	0.5195
1.084E+4	2.472	2.707E+4	0.5198
1.084E+4	2.47	2.708E+4	0.5209
1.085E+4	2.467	2.708E+4	0.5198
1.085E+4	2.463	2.709E+4	0.5125
1.086E+4	2.463	2.709E+4	0.5102
1.086E+4	2.457	2.71E+4	0.5148
1.087E+4	2.46	2.71E+4	0.5172

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
1.087E+4	2.456	2.711E+4	0.519
1.088E+4	2.452	2.711E+4	0.5147
1.088E+4	2.447	2.712E+4	0.5083
1.089E+4	2.441	2.712E+4	0.5104
1.089E+4	2.438	2.713E+4	0.515
1.09E+4	2.442	2.713E+4	0.5104
1.09E+4	2.438	2.714E+4	0.5105
1.091E+4	2.434	2.714E+4	0.511
1.091E+4	2.434	2.715E+4	0.5052
1.092E+4	2.432	2.715E+4	0.5002
1.092E+4	2.432	2.716E+4	0.5055
1.093E+4	2.424	2.716E+4	0.5012
1.093E+4	2.425	2.717E+4	0.4962
1.094E+4	2.427	2.717E+4	0.4939
1.094E+4	2.423	2.718E+4	0.4898
1.095E+4	2.418	2.718E+4	0.4936
1.095E+4	2.419	2.719E+4	0.4926
1.096E+4	2.418	2.719E+4	0.4879
1.096E+4	2.41	2.72E+4	0.4884
1.097E+4	2.413	2.72E+4	0.4883
1.097E+4	2.414	2.721E+4	0.4771
1.098E+4	2.406	2.721E+4	0.4861
1.098E+4	2.405	2.722E+4	0.4872
1.099E+4	2.403	2.722E+4	0.4833
1.099E+4	2.405	2.723E+4	0.4786
1.1E+4	2.4	2.723E+4	0.4722
1.1E+4	2.394	2.724E+4	0.4799
1.101E+4	2.396	2.724E+4	0.4746
1.101E+4	2.392	2.725E+4	0.4771
1.102E+4	2.388	2.725E+4	0.4708
1.102E+4	2.387	2.726E+4	0.4686
1.103E+4	2.387	2.726E+4	0.4623
1.103E+4	2.381	2.727E+4	0.464
1.104E+4	2.385	2.727E+4	0.4557
1.104E+4	2.382	2.728E+4	0.4579
1.105E+4	2.377	2.728E+4	0.4565
1.105E+4	2.382	2.729E+4	0.4589
1.106E+4	2.378	2.729E+4	0.4508
1.106E+4	2.379	2.73E+4	0.4474
1.107E+4	2.375	2.73E+4	0.4499
1.107E+4	2.377	2.731E+4	0.4458
1.108E+4	2.373	2.731E+4	0.4526
1.108E+4	2.37	2.732E+4	0.4496
1.109E+4	2.369	2.732E+4	0.4442
1.109E+4	2.367	2.733E+4	0.4437
1.11E+4	2.371	2.733E+4	0.4391
1.11E+4	2.364	2.734E+4	0.439
1.111E+4	2.37	2.734E+4	0.4361
1.111E+4	2.364	2.735E+4	0.4365
1.112E+4	2.368	2.735E+4	0.4343
1.112E+4	2.369	2.736E+4	0.4301
1.113E+4	2.363	2.736E+4	0.4226
1.113E+4	2.364	2.737E+4	0.4283

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
1.114E+4	2.363	2.737E+4	0.4249
1.114E+4	2.363	2.738E+4	0.4223
1.115E+4	2.366	2.738E+4	0.4203
1.115E+4	2.364	2.739E+4	0.4171
1.116E+4	2.36	2.739E+4	0.4138
1.116E+4	2.361	2.74E+4	0.4111
1.117E+4	2.364	2.74E+4	0.4088
1.117E+4	2.363	2.741E+4	0.4079
1.118E+4	2.363	2.741E+4	0.4028
1.118E+4	2.364	2.742E+4	0.4008
1.119E+4	2.362	2.742E+4	0.407
1.119E+4	2.365	2.743E+4	0.4024
1.12E+4	2.366	2.743E+4	0.4007
1.12E+4	2.365	2.744E+4	0.3946
1.121E+4	2.369	2.744E+4	0.3986
1.121E+4	2.363	2.745E+4	0.4047
1.122E+4	2.365	2.745E+4	0.4026
1.122E+4	2.367	2.746E+4	0.4034
1.123E+4	2.364	2.746E+4	0.4
1.123E+4	2.367	2.747E+4	0.3969
1.124E+4	2.365	2.747E+4	0.404
1.124E+4	2.367	2.748E+4	0.3983
1.125E+4	2.368	2.748E+4	0.3943
1.125E+4	2.37	2.749E+4	0.3944
1.126E+4	2.366	2.749E+4	0.3928
1.126E+4	2.365	2.75E+4	0.3967
1.127E+4	2.37	2.75E+4	0.3958
1.127E+4	2.364	2.751E+4	0.392
1.128E+4	2.363	2.751E+4	0.3857
1.128E+4	2.373	2.752E+4	0.3899
1.129E+4	2.369	2.752E+4	0.3899
1.129E+4	2.371	2.753E+4	0.3855
1.13E+4	2.378	2.753E+4	0.3837
1.13E+4	2.378	2.754E+4	0.384
1.131E+4	2.377	2.754E+4	0.3817
1.131E+4	2.376	2.755E+4	0.3787
1.132E+4	2.374	2.755E+4	0.3777
1.132E+4	2.373	2.756E+4	0.3783
1.133E+4	2.375	2.756E+4	0.3814
1.133E+4	2.376	2.757E+4	0.3766
1.134E+4	2.382	2.757E+4	0.38
1.134E+4	2.373	2.758E+4	0.3784
1.135E+4	2.372	2.758E+4	0.3835
1.135E+4	2.378	2.759E+4	0.3833
1.136E+4	2.379	2.759E+4	0.3766
1.136E+4	2.379	2.76E+4	0.3803
1.137E+4	2.378	2.76E+4	0.3775
1.137E+4	2.381	2.761E+4	0.3812
1.138E+4	2.377	2.761E+4	0.3765
1.138E+4	2.38	2.762E+4	0.3876
1.139E+4	2.38	2.762E+4	0.384
1.139E+4	2.378	2.763E+4	0.3799
1.14E+4	2.386	2.763E+4	0.3818

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
1.14E+4	2.382	2.764E+4	0.3823
1.141E+4	2.382	2.764E+4	0.3848
1.141E+4	2.377	2.765E+4	0.3811
1.142E+4	2.38	2.765E+4	0.3807
1.142E+4	2.375	2.766E+4	0.3738
1.143E+4	2.376	2.766E+4	0.3822
1.143E+4	2.375	2.767E+4	0.3872
1.144E+4	2.376	2.767E+4	0.3871
1.144E+4	2.38	2.768E+4	0.385
1.145E+4	2.378	2.768E+4	0.3894
1.145E+4	2.376	2.769E+4	0.3903
1.146E+4	2.377	2.769E+4	0.3915
1.146E+4	2.371	2.77E+4	0.3881
1.147E+4	2.373	2.77E+4	0.3836
1.147E+4	2.373	2.771E+4	0.3886
1.148E+4	2.372	2.771E+4	0.3885
1.148E+4	2.371	2.772E+4	0.385
1.149E+4	2.362	2.772E+4	0.3856
1.149E+4	2.366	2.773E+4	0.388
1.15E+4	2.366	2.773E+4	0.387
1.15E+4	2.368	2.774E+4	0.3899
1.151E+4	2.37	2.774E+4	0.3909
1.151E+4	2.372	2.775E+4	0.3914
1.152E+4	2.367	2.775E+4	0.3877
1.152E+4	2.365	2.776E+4	0.3867
1.153E+4	2.359	2.776E+4	0.3847
1.153E+4	2.358	2.777E+4	0.3829
1.154E+4	2.361	2.777E+4	0.3812
1.154E+4	2.355	2.778E+4	0.3892
1.155E+4	2.359	2.778E+4	0.3849
1.155E+4	2.353	2.779E+4	0.3895
1.156E+4	2.358	2.779E+4	0.3878
1.156E+4	2.359	2.78E+4	0.384
1.157E+4	2.361	2.78E+4	0.3885
1.157E+4	2.355	2.781E+4	0.3824
1.158E+4	2.355	2.781E+4	0.3867
1.158E+4	2.354	2.782E+4	0.3849
1.159E+4	2.352	2.782E+4	0.3787
1.159E+4	2.353	2.783E+4	0.384
1.16E+4	2.351	2.783E+4	0.3845
1.16E+4	2.353	2.784E+4	0.3868
1.161E+4	2.348	2.784E+4	0.3855
1.161E+4	2.348	2.785E+4	0.3836
1.162E+4	2.346	2.785E+4	0.3831
1.162E+4	2.342	2.786E+4	0.382
1.163E+4	2.339	2.786E+4	0.3851
1.163E+4	2.337	2.787E+4	0.3848
1.164E+4	2.334	2.787E+4	0.3781
1.164E+4	2.325	2.788E+4	0.3765
1.165E+4	2.326	2.788E+4	0.3805
1.165E+4	2.323	2.789E+4	0.3854
1.166E+4	2.316	2.789E+4	0.3779
1.166E+4	2.318	2.79E+4	0.3781

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
1.167E+4	2.311	2.79E+4	0.3704
1.167E+4	2.316	2.791E+4	0.3707
1.168E+4	2.306	2.791E+4	0.3712
1.168E+4	2.308	2.792E+4	0.3703
1.169E+4	2.307	2.792E+4	0.3728
1.169E+4	2.304	2.793E+4	0.3691
1.17E+4	2.305	2.793E+4	0.375
1.17E+4	2.299	2.794E+4	0.3751
1.171E+4	2.297	2.794E+4	0.3602
1.171E+4	2.299	2.795E+4	0.3621
1.172E+4	2.297	2.795E+4	0.3605
1.172E+4	2.292	2.796E+4	0.3627
1.173E+4	2.291	2.796E+4	0.3583
1.173E+4	2.285	2.797E+4	0.3583
1.174E+4	2.287	2.797E+4	0.355
1.174E+4	2.286	2.798E+4	0.3547
1.175E+4	2.282	2.798E+4	0.3523
1.175E+4	2.282	2.799E+4	0.3466
1.176E+4	2.283	2.799E+4	0.3439
1.176E+4	2.273	2.8E+4	0.3407
1.177E+4	2.278	2.8E+4	0.3371
1.177E+4	2.277	2.801E+4	0.3401
1.178E+4	2.276	2.801E+4	0.34
1.178E+4	2.272	2.802E+4	0.3381
1.179E+4	2.272	2.802E+4	0.3429
1.179E+4	2.267	2.803E+4	0.3404
1.18E+4	2.271	2.803E+4	0.3355
1.18E+4	2.269	2.804E+4	0.3399
1.181E+4	2.263	2.804E+4	0.3325
1.181E+4	2.266	2.805E+4	0.3376
1.182E+4	2.271	2.805E+4	0.333
1.182E+4	2.265	2.806E+4	0.3333
1.183E+4	2.263	2.806E+4	0.3293
1.183E+4	2.264	2.807E+4	0.3256
1.184E+4	2.27	2.807E+4	0.325
1.184E+4	2.266	2.808E+4	0.3207
1.185E+4	2.26	2.808E+4	0.3175
1.185E+4	2.264	2.809E+4	0.3177
1.186E+4	2.256	2.809E+4	0.3149
1.186E+4	2.261	2.81E+4	0.3198
1.187E+4	2.256	2.81E+4	0.3158
1.187E+4	2.261	2.811E+4	0.3134
1.188E+4	2.261	2.811E+4	0.308
1.188E+4	2.251	2.812E+4	0.312
1.189E+4	2.256	2.812E+4	0.3059
1.189E+4	2.252	2.813E+4	0.3026
1.19E+4	2.248	2.813E+4	0.3036
1.19E+4	2.254	2.814E+4	0.2984
1.191E+4	2.253	2.814E+4	0.2995
1.191E+4	2.256	2.815E+4	0.3019
1.192E+4	2.25	2.815E+4	0.3025
1.192E+4	2.258	2.816E+4	0.3023
1.193E+4	2.254	2.816E+4	0.3025

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
1.193E+4	2.251	2.817E+4	0.2943
1.194E+4	2.253	2.817E+4	0.2939
1.194E+4	2.251	2.818E+4	0.2954
1.195E+4	2.251	2.818E+4	0.2942
1.195E+4	2.248	2.819E+4	0.2915
1.196E+4	2.242	2.819E+4	0.2924
1.196E+4	2.243	2.82E+4	0.2941
1.197E+4	2.237	2.82E+4	0.2929
1.197E+4	2.24	2.821E+4	0.2879
1.198E+4	2.242	2.821E+4	0.2967
1.198E+4	2.24	2.822E+4	0.2963
1.199E+4	2.238	2.822E+4	0.2943
1.199E+4	2.239	2.823E+4	0.2899
1.2E+4	2.238	2.823E+4	0.2961
1.2E+4	2.239	2.824E+4	0.2937
1.201E+4	2.234	2.824E+4	0.2919
1.201E+4	2.236	2.825E+4	0.2935
1.202E+4	2.233	2.825E+4	0.2918
1.202E+4	2.234	2.826E+4	0.2828
1.203E+4	2.235	2.826E+4	0.2849
1.203E+4	2.23	2.827E+4	0.2883
1.204E+4	2.226	2.827E+4	0.2885
1.204E+4	2.232	2.828E+4	0.2842
1.205E+4	2.225	2.828E+4	0.2859
1.205E+4	2.223	2.829E+4	0.2856
1.206E+4	2.226	2.829E+4	0.2816
1.206E+4	2.227	2.83E+4	0.2724
1.207E+4	2.226	2.83E+4	0.2885
1.207E+4	2.223	2.831E+4	0.2815
1.208E+4	2.228	2.831E+4	0.2849
1.208E+4	2.223	2.832E+4	0.2858
1.209E+4	2.225	2.832E+4	0.2819
1.209E+4	2.225	2.833E+4	0.287
1.21E+4	2.221	2.833E+4	0.2809
1.21E+4	2.223	2.834E+4	0.2909
1.211E+4	2.216	2.834E+4	0.2869
1.211E+4	2.216	2.835E+4	0.2798
1.212E+4	2.217	2.835E+4	0.2876
1.212E+4	2.221	2.836E+4	0.2899
1.213E+4	2.215	2.836E+4	0.2886
1.213E+4	2.213	2.837E+4	0.2903
1.214E+4	2.215	2.837E+4	0.2916
1.214E+4	2.211	2.838E+4	0.2895
1.215E+4	2.212	2.838E+4	0.2911
1.215E+4	2.213	2.839E+4	0.2957
1.216E+4	2.211	2.839E+4	0.2971
1.216E+4	2.216	2.84E+4	0.2999
1.217E+4	2.212	2.84E+4	0.2986
1.217E+4	2.211	2.841E+4	0.2942
1.218E+4	2.212	2.841E+4	0.2988
1.218E+4	2.205	2.842E+4	0.2965
1.219E+4	2.205	2.842E+4	0.2907
1.219E+4	2.199	2.843E+4	0.293

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
1.22E+4	2.199	2.843E+4	0.2925
1.22E+4	2.203	2.844E+4	0.2955
1.221E+4	2.2	2.844E+4	0.297
1.221E+4	2.199	2.845E+4	0.3007
1.222E+4	2.197	2.845E+4	0.2963
1.222E+4	2.196	2.846E+4	0.3005
1.223E+4	2.192	2.846E+4	0.3047
1.223E+4	2.193	2.847E+4	0.3045
1.224E+4	2.19	2.847E+4	0.3085
1.224E+4	2.189	2.848E+4	0.3101
1.225E+4	2.183	2.848E+4	0.3043
1.225E+4	2.183	2.849E+4	0.306
1.226E+4	2.183	2.849E+4	0.3046
1.226E+4	2.179	2.85E+4	0.3141
1.227E+4	2.185	2.85E+4	0.3102
1.227E+4	2.18	2.851E+4	0.3084
1.228E+4	2.176	2.851E+4	0.3106
1.228E+4	2.178	2.852E+4	0.3121
1.229E+4	2.176	2.852E+4	0.3121
1.229E+4	2.178	2.853E+4	0.3133
1.23E+4	2.176	2.853E+4	0.3115
1.23E+4	2.168	2.854E+4	0.3113
1.231E+4	2.169	2.854E+4	0.3125
1.231E+4	2.169	2.855E+4	0.314
1.232E+4	2.164	2.855E+4	0.3096
1.232E+4	2.163	2.856E+4	0.3182
1.233E+4	2.165	2.856E+4	0.3132
1.233E+4	2.163	2.857E+4	0.3038
1.234E+4	2.159	2.857E+4	0.314
1.234E+4	2.159	2.858E+4	0.3126
1.235E+4	2.157	2.858E+4	0.3103
1.235E+4	2.151	2.859E+4	0.3077
1.236E+4	2.152	2.859E+4	0.3115
1.236E+4	2.146	2.86E+4	0.3079
1.237E+4	2.151	2.86E+4	0.3118
1.237E+4	2.147	2.861E+4	0.3121
1.238E+4	2.147	2.861E+4	0.3095
1.238E+4	2.14	2.862E+4	0.3117
1.239E+4	2.137	2.862E+4	0.3164
1.239E+4	2.135	2.863E+4	0.3085
1.24E+4	2.136	2.863E+4	0.3099
1.24E+4	2.135	2.864E+4	0.3123
1.241E+4	2.13	2.864E+4	0.3101
1.241E+4	2.126	2.865E+4	0.3116
1.242E+4	2.125	2.865E+4	0.305
1.242E+4	2.124	2.866E+4	0.3082
1.243E+4	2.124	2.866E+4	0.3098
1.243E+4	2.124	2.867E+4	0.3051
1.244E+4	2.127	2.867E+4	0.3081
1.244E+4	2.128	2.868E+4	0.3085
1.245E+4	2.127	2.868E+4	0.3105
1.245E+4	2.12	2.869E+4	0.3043
1.246E+4	2.124	2.869E+4	0.3074

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
1.246E+4	2.12	2.87E+4	0.3077
1.247E+4	2.123	2.87E+4	0.3084
1.247E+4	2.119	2.871E+4	0.3117
1.248E+4	2.116	2.871E+4	0.3113
1.248E+4	2.113	2.872E+4	0.3102
1.249E+4	2.116	2.872E+4	0.3123
1.249E+4	2.114	2.873E+4	0.3138
1.25E+4	2.115	2.873E+4	0.314
1.25E+4	2.11	2.874E+4	0.3098
1.251E+4	2.108	2.874E+4	0.3054
1.251E+4	2.107	2.875E+4	0.3106
1.252E+4	2.113	2.875E+4	0.309
1.252E+4	2.113	2.876E+4	0.3061
1.253E+4	2.106	2.876E+4	0.3109
1.253E+4	2.111	2.877E+4	0.3088
1.254E+4	2.11	2.877E+4	0.3058
1.254E+4	2.107	2.878E+4	0.3098
1.255E+4	2.105	2.878E+4	0.3084
1.255E+4	2.107	2.879E+4	0.3005
1.256E+4	2.105	2.879E+4	0.2995
1.256E+4	2.103	2.88E+4	0.3071
1.257E+4	2.106	2.88E+4	0.301
1.257E+4	2.104	2.881E+4	0.3006
1.258E+4	2.108	2.881E+4	0.3001
1.258E+4	2.101	2.882E+4	0.3016
1.259E+4	2.1	2.882E+4	0.2964
1.259E+4	2.103	2.883E+4	0.3003
1.26E+4	2.104	2.883E+4	0.2995
1.26E+4	2.103	2.884E+4	0.3022
1.261E+4	2.1	2.884E+4	0.2946
1.261E+4	2.101	2.885E+4	0.2963
1.262E+4	2.103	2.885E+4	0.2988
1.262E+4	2.103	2.886E+4	0.2926
1.263E+4	2.105	2.886E+4	0.2964
1.263E+4	2.105	2.887E+4	0.292
1.264E+4	2.108	2.887E+4	0.2881
1.264E+4	2.106	2.888E+4	0.2919
1.265E+4	2.105	2.888E+4	0.2929
1.265E+4	2.108	2.889E+4	0.2932
1.266E+4	2.107	2.889E+4	0.282
1.266E+4	2.104	2.89E+4	0.2896
1.267E+4	2.107	2.89E+4	0.285
1.267E+4	2.106	2.891E+4	0.2922
1.268E+4	2.116	2.891E+4	0.2852
1.268E+4	2.108	2.892E+4	0.2873
1.269E+4	2.115	2.892E+4	0.2895
1.269E+4	2.111	2.893E+4	0.2863
1.27E+4	2.117	2.893E+4	0.2839
1.27E+4	2.111	2.894E+4	0.2885
1.271E+4	2.111	2.894E+4	0.2879
1.271E+4	2.106	2.895E+4	0.2895
1.272E+4	2.108	2.895E+4	0.28
1.272E+4	2.112	2.896E+4	0.2803

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
1.273E+4	2.109	2.896E+4	0.2808
1.273E+4	2.112	2.897E+4	0.2841
1.274E+4	2.107	2.897E+4	0.2873
1.274E+4	2.109	2.898E+4	0.28
1.275E+4	2.108	2.898E+4	0.2846
1.275E+4	2.105	2.899E+4	0.2868
1.276E+4	2.104	2.899E+4	0.2865
1.276E+4	2.103	2.9E+4	0.2861
1.277E+4	2.107	2.9E+4	0.2887
1.277E+4	2.109	2.901E+4	0.2931
1.278E+4	2.108	2.901E+4	0.2886
1.278E+4	2.111	2.902E+4	0.2905
1.279E+4	2.107	2.902E+4	0.2889
1.279E+4	2.108	2.903E+4	0.2875
1.28E+4	2.105	2.903E+4	0.2914
1.28E+4	2.108	2.904E+4	0.2912
1.281E+4	2.112	2.904E+4	0.2931
1.281E+4	2.111	2.905E+4	0.2956
1.282E+4	2.111	2.905E+4	0.3
1.282E+4	2.115	2.906E+4	0.3004
1.283E+4	2.108	2.906E+4	0.3001
1.283E+4	2.107	2.907E+4	0.303
1.284E+4	2.109	2.907E+4	0.3013
1.284E+4	2.105	2.908E+4	0.3011
1.285E+4	2.106	2.908E+4	0.3119
1.285E+4	2.113	2.909E+4	0.3036
1.286E+4	2.105	2.909E+4	0.3047
1.286E+4	2.112	2.91E+4	0.3059
1.287E+4	2.107	2.91E+4	0.3083
1.287E+4	2.107	2.911E+4	0.3048
1.288E+4	2.104	2.911E+4	0.3091
1.288E+4	2.108	2.912E+4	0.3085
1.289E+4	2.112	2.912E+4	0.314
1.289E+4	2.107	2.913E+4	0.3124
1.29E+4	2.11	2.913E+4	0.305
1.29E+4	2.102	2.914E+4	0.312
1.291E+4	2.103	2.914E+4	0.3124
1.291E+4	2.107	2.915E+4	0.3093
1.292E+4	2.105	2.915E+4	0.306
1.292E+4	2.103	2.916E+4	0.3118
1.293E+4	2.103	2.916E+4	0.3191
1.293E+4	2.104	2.917E+4	0.3147
1.294E+4	2.103	2.917E+4	0.3216
1.294E+4	2.109	2.918E+4	0.3179
1.295E+4	2.103	2.918E+4	0.3215
1.295E+4	2.105	2.919E+4	0.3239
1.296E+4	2.103	2.919E+4	0.3253
1.296E+4	2.103	2.92E+4	0.3311
1.297E+4	2.105	2.92E+4	0.3263
1.297E+4	2.099	2.921E+4	0.3273
1.298E+4	2.099	2.921E+4	0.3261
1.298E+4	2.097	2.922E+4	0.3318
1.299E+4	2.095	2.922E+4	0.3306

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
1.299E+4	2.095	2.923E+4	0.3322
1.3E+4	2.096	2.923E+4	0.3352
1.3E+4	2.099	2.924E+4	0.3291
1.301E+4	2.095	2.924E+4	0.3325
1.301E+4	2.095	2.925E+4	0.3347
1.302E+4	2.091	2.925E+4	0.3338
1.302E+4	2.091	2.926E+4	0.3341
1.303E+4	2.101	2.926E+4	0.3342
1.303E+4	2.096	2.927E+4	0.3373
1.304E+4	2.096	2.927E+4	0.331
1.304E+4	2.1	2.928E+4	0.3354
1.305E+4	2.097	2.928E+4	0.3339
1.305E+4	2.09	2.929E+4	0.3324
1.306E+4	2.092	2.929E+4	0.3385
1.306E+4	2.085	2.93E+4	0.3366
1.307E+4	2.086	2.93E+4	0.3328
1.307E+4	2.084	2.931E+4	0.3381
1.308E+4	2.083	2.931E+4	0.3399
1.308E+4	2.08	2.932E+4	0.3349
1.309E+4	2.072	2.932E+4	0.3279
1.309E+4	2.074	2.933E+4	0.3299
1.31E+4	2.071	2.933E+4	0.3314
1.31E+4	2.064	2.934E+4	0.3312
1.311E+4	2.066	2.934E+4	0.3305
1.311E+4	2.062	2.935E+4	0.3281
1.312E+4	2.062	2.935E+4	0.3219
1.312E+4	2.061	2.936E+4	0.3236
1.313E+4	2.058	2.936E+4	0.322
1.313E+4	2.052	2.937E+4	0.3253
1.314E+4	2.054	2.937E+4	0.324
1.314E+4	2.055	2.938E+4	0.3182
1.315E+4	2.052	2.938E+4	0.316
1.315E+4	2.048	2.939E+4	0.3156
1.316E+4	2.044	2.939E+4	0.3154
1.316E+4	2.044	2.94E+4	0.3134
1.317E+4	2.041	2.94E+4	0.313
1.317E+4	2.04	2.941E+4	0.3134
1.318E+4	2.032	2.941E+4	0.3071
1.318E+4	2.036	2.942E+4	0.2953
1.319E+4	2.037	2.942E+4	0.3005
1.319E+4	2.035	2.943E+4	0.296
1.32E+4	2.038	2.943E+4	0.3057
1.32E+4	2.031	2.944E+4	0.3031
1.321E+4	2.035	2.944E+4	0.2951
1.321E+4	2.029	2.945E+4	0.2997
1.322E+4	2.027	2.945E+4	0.2961
1.322E+4	2.024	2.946E+4	0.2988
1.323E+4	2.025	2.946E+4	0.292
1.323E+4	2.02	2.947E+4	0.2906
1.324E+4	2.019	2.947E+4	0.2872
1.324E+4	2.021	2.948E+4	0.2824
1.325E+4	2.018	2.948E+4	0.2853
1.325E+4	2.018	2.949E+4	0.2835

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
1.326E+4	2.014	2.949E+4	0.2842
1.326E+4	2.015	2.95E+4	0.2914
1.327E+4	2.01	2.95E+4	0.2833
1.327E+4	2.009	2.951E+4	0.2842
1.328E+4	2.011	2.951E+4	0.287
1.328E+4	2.006	2.952E+4	0.2855
1.329E+4	2.008	2.952E+4	0.2843
1.329E+4	2.014	2.953E+4	0.287
1.33E+4	2.01	2.953E+4	0.2829
1.33E+4	2.005	2.954E+4	0.2753
1.331E+4	2.004	2.954E+4	0.2786
1.331E+4	2.005	2.955E+4	0.2747
1.332E+4	2.004	2.955E+4	0.2753
1.332E+4	2.004	2.956E+4	0.2699
1.333E+4	2.001	2.956E+4	0.2728
1.333E+4	2.001	2.957E+4	0.2676
1.334E+4	2.	2.957E+4	0.2699
1.334E+4	1.998	2.958E+4	0.2694
1.335E+4	1.998	2.958E+4	0.2685
1.335E+4	2.001	2.959E+4	0.2673
1.336E+4	1.999	2.959E+4	0.2643
1.336E+4	1.99	2.96E+4	0.2634
1.337E+4	1.992	2.96E+4	0.2631
1.337E+4	1.991	2.961E+4	0.2697
1.338E+4	1.996	2.961E+4	0.2655
1.338E+4	1.996	2.962E+4	0.2579
1.339E+4	1.992	2.962E+4	0.2599
1.339E+4	1.99	2.963E+4	0.2593
1.34E+4	1.986	2.963E+4	0.2547
1.34E+4	1.989	2.964E+4	0.2581
1.341E+4	1.987	2.964E+4	0.2554
1.341E+4	1.984	2.965E+4	0.2579
1.342E+4	1.979	2.965E+4	0.2566
1.342E+4	1.984	2.966E+4	0.2531
1.343E+4	1.981	2.966E+4	0.2603
1.343E+4	1.985	2.967E+4	0.2481
1.344E+4	1.982	2.967E+4	0.2543
1.344E+4	1.975	2.968E+4	0.2542
1.345E+4	1.977	2.968E+4	0.2484
1.345E+4	1.981	2.969E+4	0.2535
1.346E+4	1.981	2.969E+4	0.2468
1.346E+4	1.98	2.97E+4	0.2512
1.347E+4	1.985	2.97E+4	0.2492
1.347E+4	1.982	2.971E+4	0.2513
1.348E+4	1.979	2.971E+4	0.2443
1.348E+4	1.98	2.972E+4	0.2502
1.349E+4	1.977	2.972E+4	0.2445
1.349E+4	1.972	2.973E+4	0.2491
1.35E+4	1.972	2.973E+4	0.2541
1.35E+4	1.971	2.974E+4	0.2462
1.351E+4	1.975	2.974E+4	0.25
1.351E+4	1.971	2.975E+4	0.246
1.352E+4	1.969	2.975E+4	0.2472

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
1.352E+4	1.971	2.976E+4	0.2463
1.353E+4	1.966	2.976E+4	0.2466
1.353E+4	1.965	2.977E+4	0.2489
1.354E+4	1.962	2.977E+4	0.245
1.354E+4	1.961	2.978E+4	0.2498
1.355E+4	1.969	2.978E+4	0.2445
1.355E+4	1.962	2.979E+4	0.2456
1.356E+4	1.968	2.979E+4	0.2474
1.356E+4	1.967	2.98E+4	0.2533
1.357E+4	1.963	2.98E+4	0.2487
1.357E+4	1.966	2.981E+4	0.2498
1.358E+4	1.964	2.981E+4	0.2543
1.358E+4	1.967	2.982E+4	0.2484
1.359E+4	1.963	2.982E+4	0.2537
1.359E+4	1.964	2.983E+4	0.2547
1.36E+4	1.962	2.983E+4	0.2518
1.36E+4	1.962	2.984E+4	0.2498
1.361E+4	1.961	2.984E+4	0.2565
1.361E+4	1.957	2.985E+4	0.2564
1.362E+4	1.961	2.985E+4	0.2541
1.362E+4	1.956	2.986E+4	0.2555
1.363E+4	1.957	2.986E+4	0.2571
1.363E+4	1.954	2.987E+4	0.2599
1.364E+4	1.948	2.987E+4	0.2614
1.364E+4	1.944	2.988E+4	0.2549
1.365E+4	1.942	2.988E+4	0.2601
1.365E+4	1.943	2.989E+4	0.26
1.366E+4	1.946	2.989E+4	0.2579
1.366E+4	1.947	2.99E+4	0.2595
1.367E+4	1.94	2.99E+4	0.2595
1.367E+4	1.943	2.991E+4	0.264
1.368E+4	1.937	2.991E+4	0.2641
1.368E+4	1.938	2.992E+4	0.2572
1.369E+4	1.935	2.992E+4	0.2607
1.369E+4	1.932	2.993E+4	0.259
1.37E+4	1.932	2.993E+4	0.2631
1.37E+4	1.935	2.994E+4	0.2623
1.371E+4	1.931	2.994E+4	0.2656
1.371E+4	1.922	2.995E+4	0.2674
1.372E+4	1.925	2.995E+4	0.2609
1.372E+4	1.925	2.996E+4	0.266
1.373E+4	1.922	2.996E+4	0.2677
1.373E+4	1.927	2.997E+4	0.2628
1.374E+4	1.916	2.997E+4	0.2606
1.374E+4	1.922	2.998E+4	0.2642
1.375E+4	1.915	2.998E+4	0.2616
1.375E+4	1.914	2.999E+4	0.2635
1.376E+4	1.917	2.999E+4	0.2625
1.376E+4	1.912	3.0E+4	0.2591
1.377E+4	1.91	3.0E+4	0.264
1.377E+4	1.913	3.001E+4	0.2656
1.378E+4	1.914	3.001E+4	0.2639
1.378E+4	1.914	3.002E+4	0.2617

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
1.379E+4	1.914	3.002E+4	0.2695
1.379E+4	1.913	3.003E+4	0.2617
1.38E+4	1.907	3.003E+4	0.2693
1.38E+4	1.909	3.004E+4	0.2666
1.381E+4	1.908	3.004E+4	0.2633
1.381E+4	1.906	3.005E+4	0.2584
1.382E+4	1.904	3.005E+4	0.2628
1.382E+4	1.906	3.006E+4	0.2701
1.383E+4	1.905	3.006E+4	0.2554
1.383E+4	1.902	3.007E+4	0.2614
1.384E+4	1.899	3.007E+4	0.2574
1.384E+4	1.899	3.008E+4	0.2613
1.385E+4	1.894	3.008E+4	0.2558
1.385E+4	1.894	3.009E+4	0.2603
1.386E+4	1.898	3.009E+4	0.2578
1.386E+4	1.895	3.01E+4	0.259
1.387E+4	1.898	3.01E+4	0.2606
1.387E+4	1.897	3.011E+4	0.2551
1.388E+4	1.896	3.011E+4	0.2559
1.388E+4	1.889	3.012E+4	0.2578
1.389E+4	1.889	3.012E+4	0.2568
1.389E+4	1.891	3.013E+4	0.2525
1.39E+4	1.891	3.013E+4	0.2538
1.39E+4	1.887	3.014E+4	0.2535
1.391E+4	1.886	3.014E+4	0.2533
1.391E+4	1.884	3.015E+4	0.2493
1.392E+4	1.888	3.015E+4	0.2523
1.392E+4	1.886	3.016E+4	0.2501
1.393E+4	1.886	3.016E+4	0.2436
1.393E+4	1.888	3.017E+4	0.2448
1.394E+4	1.893	3.017E+4	0.2372
1.394E+4	1.892	3.018E+4	0.2419
1.395E+4	1.891	3.018E+4	0.2372
1.395E+4	1.891	3.019E+4	0.2361
1.396E+4	1.886	3.019E+4	0.2346
1.396E+4	1.892	3.02E+4	0.2415
1.397E+4	1.888	3.02E+4	0.2335
1.397E+4	1.889	3.021E+4	0.2427
1.398E+4	1.886	3.021E+4	0.2338
1.398E+4	1.885	3.022E+4	0.2217
1.399E+4	1.892	3.022E+4	0.2306
1.399E+4	1.888	3.023E+4	0.219
1.4E+4	1.886	3.023E+4	0.2284
1.4E+4	1.886	3.024E+4	0.2275
1.401E+4	1.884	3.024E+4	0.2272
1.401E+4	1.881	3.025E+4	0.2294
1.402E+4	1.884	3.025E+4	0.2205
1.402E+4	1.878	3.026E+4	0.2221
1.403E+4	1.883	3.026E+4	0.2209
1.403E+4	1.888	3.027E+4	0.2184
1.404E+4	1.881	3.027E+4	0.2208
1.404E+4	1.885	3.028E+4	0.2214
1.405E+4	1.883	3.028E+4	0.2263

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
1.405E+4	1.884	3.029E+4	0.2315
1.406E+4	1.876	3.029E+4	0.225
1.406E+4	1.873	3.03E+4	0.2059
1.407E+4	1.874	3.03E+4	0.2096
1.407E+4	1.871	3.031E+4	0.2111
1.408E+4	1.878	3.031E+4	0.1995
1.408E+4	1.88	3.032E+4	0.2066
1.409E+4	1.876	3.032E+4	0.2059
1.409E+4	1.873	3.033E+4	0.206
1.41E+4	1.88	3.033E+4	0.2057
1.41E+4	1.877	3.034E+4	0.1958
1.411E+4	1.876	3.034E+4	0.2001
1.411E+4	1.874	3.035E+4	0.1923
1.412E+4	1.877	3.035E+4	0.193
1.412E+4	1.878	3.036E+4	0.1902
1.413E+4	1.878	3.036E+4	0.1943
1.413E+4	1.878	3.037E+4	0.1819
1.414E+4	1.871	3.037E+4	0.1853
1.414E+4	1.882	3.038E+4	0.1887
1.415E+4	1.884	3.038E+4	0.1872
1.415E+4	1.889	3.039E+4	0.1856
1.416E+4	1.89	3.039E+4	0.188
1.416E+4	1.892	3.04E+4	0.1832
1.417E+4	1.889	3.04E+4	0.1814
1.417E+4	1.89	3.041E+4	0.1859
1.418E+4	1.897	3.041E+4	0.1801
1.418E+4	1.897	3.042E+4	0.1783
1.419E+4	1.897	3.042E+4	0.1857
1.419E+4	1.903	3.043E+4	0.1751
1.42E+4	1.902	3.043E+4	0.1861
1.42E+4	1.902	3.044E+4	0.186
1.421E+4	1.904	3.044E+4	0.182
1.421E+4	1.901	3.045E+4	0.1798
1.422E+4	1.902	3.045E+4	0.187
1.422E+4	1.907	3.046E+4	0.1853
1.423E+4	1.905	3.046E+4	0.1896
1.423E+4	1.905	3.047E+4	0.1792
1.424E+4	1.912	3.047E+4	0.1789
1.424E+4	1.909	3.048E+4	0.1794
1.425E+4	1.904	3.048E+4	0.1694
1.425E+4	1.908	3.049E+4	0.1796
1.426E+4	1.908	3.049E+4	0.1769
1.426E+4	1.903	3.05E+4	0.1838
1.427E+4	1.907	3.05E+4	0.175
1.427E+4	1.91	3.051E+4	0.1828
1.428E+4	1.913	3.051E+4	0.1802
1.428E+4	1.911	3.052E+4	0.1764
1.429E+4	1.913	3.052E+4	0.1768
1.429E+4	1.912	3.053E+4	0.1835
1.43E+4	1.912	3.053E+4	0.1713
1.43E+4	1.916	3.054E+4	0.1757
1.431E+4	1.913	3.054E+4	0.1816
1.431E+4	1.915	3.055E+4	0.184

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
1.432E+4	1.914	3.055E+4	0.1762
1.432E+4	1.912	3.056E+4	0.1778
1.433E+4	1.913	3.056E+4	0.1837
1.433E+4	1.912	3.057E+4	0.192
1.434E+4	1.909	3.057E+4	0.184
1.434E+4	1.909	3.058E+4	0.1882
1.435E+4	1.916	3.058E+4	0.1936
1.435E+4	1.916	3.059E+4	0.1951
1.436E+4	1.908	3.059E+4	0.1897
1.436E+4	1.909	3.06E+4	0.1919
1.437E+4	1.909	3.06E+4	0.1916
1.437E+4	1.91	3.061E+4	0.1896
1.438E+4	1.913	3.061E+4	0.1884
1.438E+4	1.911	3.062E+4	0.1875
1.439E+4	1.91	3.062E+4	0.1922
1.439E+4	1.913	3.063E+4	0.1924
1.44E+4	1.915	3.063E+4	0.1869
1.44E+4	1.91	3.064E+4	0.1851
1.441E+4	1.907	3.064E+4	0.1805
1.441E+4	1.91	3.065E+4	0.1903
1.442E+4	1.905	3.065E+4	0.1867
1.442E+4	1.905	3.066E+4	0.1882
1.443E+4	1.908	3.066E+4	0.1838
1.443E+4	1.903	3.067E+4	0.1856
1.444E+4	1.895	3.067E+4	0.1905
1.444E+4	1.896	3.068E+4	0.1848
1.445E+4	1.897	3.068E+4	0.1883
1.445E+4	1.898	3.069E+4	0.1861
1.446E+4	1.901	3.069E+4	0.18
1.446E+4	1.901	3.07E+4	0.1787
1.447E+4	1.897	3.07E+4	0.1794
1.447E+4	1.898	3.071E+4	0.1767
1.448E+4	1.891	3.071E+4	0.1777
1.448E+4	1.893	3.072E+4	0.1781
1.449E+4	1.894	3.072E+4	0.1746
1.449E+4	1.895	3.073E+4	0.1695
1.45E+4	1.895	3.073E+4	0.1693
1.45E+4	1.893	3.074E+4	0.1695
1.451E+4	1.891	3.074E+4	0.1702
1.451E+4	1.891	3.075E+4	0.1646
1.452E+4	1.884	3.075E+4	0.1736
1.452E+4	1.885	3.076E+4	0.1659
1.453E+4	1.886	3.076E+4	0.1624
1.453E+4	1.88	3.077E+4	0.1655
1.454E+4	1.878	3.077E+4	0.1614
1.454E+4	1.879	3.078E+4	0.154
1.455E+4	1.877	3.078E+4	0.1586
1.455E+4	1.875	3.079E+4	0.1634
1.456E+4	1.869	3.079E+4	0.1629
1.456E+4	1.868	3.08E+4	0.1597
1.457E+4	1.867	3.08E+4	0.1609
1.457E+4	1.858	3.081E+4	0.1624
1.458E+4	1.861	3.081E+4	0.1574

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
1.458E+4	1.855	3.082E+4	0.1592
1.459E+4	1.856	3.082E+4	0.1566
1.459E+4	1.855	3.083E+4	0.1558
1.46E+4	1.851	3.083E+4	0.1524
1.46E+4	1.84	3.084E+4	0.1519
1.461E+4	1.846	3.084E+4	0.1456
1.461E+4	1.845	3.085E+4	0.1523
1.462E+4	1.84	3.085E+4	0.1491
1.462E+4	1.84	3.086E+4	0.1467
1.463E+4	1.839	3.086E+4	0.1463
1.463E+4	1.838	3.087E+4	0.1422
1.464E+4	1.835	3.087E+4	0.1384
1.464E+4	1.831	3.088E+4	0.1407
1.465E+4	1.83	3.088E+4	0.1367
1.465E+4	1.828	3.089E+4	0.1411
1.466E+4	1.826	3.089E+4	0.1324
1.466E+4	1.815	3.09E+4	0.1299
1.467E+4	1.821	3.09E+4	0.1259
1.467E+4	1.823	3.091E+4	0.1221
1.468E+4	1.825	3.091E+4	0.1228
1.468E+4	1.822	3.092E+4	0.1272
1.469E+4	1.817	3.092E+4	0.1128
1.469E+4	1.81	3.093E+4	0.1103
1.47E+4	1.815	3.093E+4	0.1108
1.47E+4	1.813	3.094E+4	0.1078
1.471E+4	1.811	3.094E+4	0.1063
1.471E+4	1.81	3.095E+4	0.1029
1.472E+4	1.803	3.095E+4	0.1073
1.472E+4	1.807	3.096E+4	0.108
1.473E+4	1.8	3.096E+4	0.1093
1.473E+4	1.796	3.097E+4	0.1078
1.474E+4	1.804	3.097E+4	0.0957
1.474E+4	1.795	3.098E+4	0.1006
1.475E+4	1.796	3.098E+4	0.1004
1.475E+4	1.794	3.099E+4	0.0975
1.476E+4	1.792	3.099E+4	0.0925
1.476E+4	1.785	3.1E+4	0.0959
1.477E+4	1.786	3.1E+4	0.0947
1.477E+4	1.779	3.101E+4	0.0921
1.478E+4	1.781	3.101E+4	0.0894
1.478E+4	1.781	3.102E+4	0.0832
1.479E+4	1.777	3.102E+4	0.0848
1.479E+4	1.773	3.103E+4	0.0814
1.48E+4	1.781	3.103E+4	0.0889
1.48E+4	1.772	3.104E+4	0.0791
1.481E+4	1.773	3.104E+4	0.078
1.481E+4	1.774	3.105E+4	0.07
1.482E+4	1.769	3.105E+4	0.0705
1.482E+4	1.767	3.106E+4	0.0698
1.483E+4	1.761	3.106E+4	0.0696
1.483E+4	1.768	3.107E+4	0.062
1.484E+4	1.766	3.107E+4	0.0634
1.484E+4	1.762	3.108E+4	0.0608

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
1.485E+4	1.758	3.108E+4	0.0589
1.485E+4	1.761	3.109E+4	0.0578
1.486E+4	1.755	3.109E+4	0.0508
1.486E+4	1.749	3.11E+4	0.0512
1.487E+4	1.749	3.11E+4	0.0473
1.487E+4	1.743	3.111E+4	0.0504
1.488E+4	1.745	3.111E+4	0.0507
1.488E+4	1.745	3.112E+4	0.053
1.489E+4	1.74	3.112E+4	0.0458
1.489E+4	1.741	3.113E+4	0.0466
1.49E+4	1.738	3.113E+4	0.0444
1.49E+4	1.74	3.114E+4	0.0454
1.491E+4	1.732	3.114E+4	0.0429
1.491E+4	1.732	3.115E+4	0.0405
1.492E+4	1.731	3.115E+4	0.0463
1.492E+4	1.727	3.116E+4	0.0387
1.493E+4	1.724	3.116E+4	0.0398
1.493E+4	1.725	3.117E+4	0.039
1.494E+4	1.723	3.117E+4	0.0395
1.494E+4	1.714	3.118E+4	0.0401
1.495E+4	1.716	3.118E+4	0.0298
1.495E+4	1.715	3.119E+4	0.0332
1.496E+4	1.712	3.119E+4	0.028
1.496E+4	1.709	3.12E+4	0.0244
1.497E+4	1.706	3.12E+4	0.0274
1.497E+4	1.7	3.121E+4	0.0248
1.498E+4	1.699	3.121E+4	0.024
1.498E+4	1.701	3.122E+4	0.0263
1.499E+4	1.696	3.122E+4	0.0205
1.499E+4	1.697	3.123E+4	0.0148
1.5E+4	1.698	3.123E+4	0.0262
1.5E+4	1.693	3.124E+4	0.0267
1.501E+4	1.69	3.124E+4	0.0284
1.501E+4	1.696	3.125E+4	0.0255
1.502E+4	1.694	3.125E+4	0.0278
1.502E+4	1.698	3.126E+4	0.0204
1.503E+4	1.688	3.126E+4	0.022
1.503E+4	1.69	3.127E+4	0.015
1.504E+4	1.683	3.127E+4	0.0215
1.504E+4	1.689	3.128E+4	0.0227
1.505E+4	1.683	3.128E+4	0.0206
1.505E+4	1.676	3.129E+4	0.022
1.506E+4	1.675	3.129E+4	0.021
1.506E+4	1.674	3.13E+4	0.0197
1.507E+4	1.673	3.13E+4	0.017
1.507E+4	1.668	3.131E+4	0.0173
1.508E+4	1.666	3.131E+4	0.0143
1.508E+4	1.666	3.132E+4	0.0148
1.509E+4	1.665	3.132E+4	0.014
1.509E+4	1.662	3.133E+4	0.0198
1.51E+4	1.652	3.133E+4	0.0197
1.51E+4	1.657	3.134E+4	0.017
1.511E+4	1.651	3.134E+4	0.009

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
1.511E+4	1.655	3.135E+4	0.0105
1.512E+4	1.648	3.135E+4	0.0138
1.512E+4	1.646	3.136E+4	0.0168
1.513E+4	1.646	3.136E+4	0.0161
1.513E+4	1.643	3.137E+4	0.0166
1.514E+4	1.647	3.137E+4	0.0186
1.514E+4	1.632	3.138E+4	0.0212
1.515E+4	1.634	3.138E+4	0.0247
1.515E+4	1.628	3.139E+4	0.024
1.516E+4	1.628	3.139E+4	0.0211
1.516E+4	1.626	3.14E+4	0.0214
1.517E+4	1.624	3.14E+4	0.0205
1.517E+4	1.621	3.141E+4	0.0314
1.518E+4	1.618	3.141E+4	0.0364
1.518E+4	1.611	3.142E+4	0.0287
1.519E+4	1.611	3.142E+4	0.0314
1.519E+4	1.61	3.143E+4	0.027
1.52E+4	1.612	3.143E+4	0.0296
1.52E+4	1.609	3.144E+4	0.0307
1.521E+4	1.6	3.144E+4	0.0359
1.521E+4	1.593	3.145E+4	0.0374
1.522E+4	1.595	3.145E+4	0.0371
1.522E+4	1.588	3.146E+4	0.0379
1.523E+4	1.591	3.146E+4	0.0327
1.523E+4	1.58	3.147E+4	0.0347
1.524E+4	1.588	3.147E+4	0.0474
1.524E+4	1.581	3.148E+4	0.0463
1.525E+4	1.58	3.148E+4	0.0405
1.525E+4	1.575	3.149E+4	0.0468
1.526E+4	1.572	3.149E+4	0.0433
1.526E+4	1.566	3.15E+4	0.0403
1.527E+4	1.568	3.15E+4	0.0407
1.527E+4	1.558	3.151E+4	0.045
1.528E+4	1.558	3.151E+4	0.0428
1.528E+4	1.557	3.152E+4	0.0468
1.529E+4	1.552	3.152E+4	0.0488
1.529E+4	1.551	3.153E+4	0.0478
1.53E+4	1.546	3.153E+4	0.0491
1.53E+4	1.539	3.154E+4	0.0516
1.531E+4	1.538	3.154E+4	0.0514
1.531E+4	1.537	3.155E+4	0.0556
1.532E+4	1.542	3.155E+4	0.0478
1.532E+4	1.535	3.156E+4	0.0536
1.533E+4	1.537	3.156E+4	0.0476
1.533E+4	1.53	3.157E+4	0.052
1.534E+4	1.527	3.157E+4	0.0523
1.534E+4	1.525	3.158E+4	0.0505
1.535E+4	1.517	3.158E+4	0.0547
1.535E+4	1.509	3.159E+4	0.0522
1.536E+4	1.507	3.159E+4	0.0537
1.536E+4	1.506	3.16E+4	0.0577
1.537E+4	1.503	3.16E+4	0.0541
1.537E+4	1.502	3.161E+4	0.0519

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
1.538E+4	1.496	3.161E+4	0.0538
1.538E+4	1.491	3.162E+4	0.0644
1.539E+4	1.485	3.162E+4	0.0539
1.539E+4	1.487	3.163E+4	0.0655
1.54E+4	1.488	3.163E+4	0.0579
1.54E+4	1.48	3.164E+4	0.0556
1.541E+4	1.477	3.164E+4	0.0588
1.541E+4	1.474	3.165E+4	0.0571
1.542E+4	1.476	3.165E+4	0.0505
1.542E+4	1.47	3.166E+4	0.0543
1.543E+4	1.47	3.166E+4	0.0611
1.543E+4	1.46	3.167E+4	0.0579
1.544E+4	1.454	3.167E+4	0.0594
1.544E+4	1.457	3.168E+4	0.0549
1.545E+4	1.454	3.168E+4	0.0549
1.545E+4	1.459	3.169E+4	0.0521
1.546E+4	1.446	3.169E+4	0.0539
1.546E+4	1.448	3.17E+4	0.0507
1.547E+4	1.45	3.17E+4	0.0518
1.547E+4	1.438	3.171E+4	0.0572
1.548E+4	1.438	3.171E+4	0.0536
1.548E+4	1.432	3.172E+4	0.052
1.549E+4	1.429	3.172E+4	0.0483
1.549E+4	1.427	3.173E+4	0.0582
1.55E+4	1.424	3.173E+4	0.0484
1.55E+4	1.417	3.174E+4	0.0477
1.551E+4	1.41	3.174E+4	0.0524
1.551E+4	1.401	3.175E+4	0.0555
1.552E+4	1.408	3.175E+4	0.0542
1.552E+4	1.405	3.176E+4	0.0536
1.553E+4	1.402	3.176E+4	0.0587
1.553E+4	1.395	3.177E+4	0.0485
1.554E+4	1.398	3.177E+4	0.0537
1.554E+4	1.39	3.178E+4	0.0444
1.555E+4	1.395	3.178E+4	0.0477
1.555E+4	1.388	3.179E+4	0.0548
1.556E+4	1.389	3.179E+4	0.0572
1.556E+4	1.387	3.18E+4	0.0448
1.557E+4	1.382	3.18E+4	0.0574
1.557E+4	1.381	3.181E+4	0.0485
1.558E+4	1.381	3.181E+4	0.0478
1.558E+4	1.373	3.182E+4	0.0496
1.559E+4	1.372	3.182E+4	0.0508
1.559E+4	1.365	3.183E+4	0.0521
1.56E+4	1.367	3.183E+4	0.0516
1.56E+4	1.361	3.184E+4	0.0548
1.561E+4	1.361	3.184E+4	0.048
1.561E+4	1.359	3.185E+4	0.0528
1.562E+4	1.365	3.185E+4	0.0531
1.562E+4	1.357	3.186E+4	0.0485
1.563E+4	1.352	3.186E+4	0.05
1.563E+4	1.358	3.187E+4	0.0484
1.564E+4	1.346	3.187E+4	0.0406

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
1.564E+4	1.341	3.188E+4	0.0382
1.565E+4	1.335	3.188E+4	0.0552
1.565E+4	1.34	3.189E+4	0.0471
1.566E+4	1.337	3.189E+4	0.0573
1.566E+4	1.326	3.19E+4	0.0337
1.567E+4	1.329	3.19E+4	0.0333
1.567E+4	1.335	3.191E+4	0.0436
1.568E+4	1.34	3.191E+4	0.0434
1.568E+4	1.322	3.192E+4	0.0384
1.569E+4	1.323	3.192E+4	0.0393
1.569E+4	1.318	3.193E+4	0.037
1.57E+4	1.311	3.193E+4	0.0439
1.57E+4	1.312	3.194E+4	0.0435
1.571E+4	1.313	3.194E+4	0.0463
1.571E+4	1.307	3.195E+4	0.0467
1.572E+4	1.31	3.195E+4	0.0434
1.572E+4	1.305	3.196E+4	0.0418
1.573E+4	1.308	3.196E+4	0.0468
1.573E+4	1.301	3.197E+4	0.0398
1.574E+4	1.301	3.197E+4	0.042
1.574E+4	1.304	3.198E+4	0.0434
1.575E+4	1.297	3.198E+4	0.0439
1.575E+4	1.292	3.199E+4	0.0411
1.576E+4	1.285	3.199E+4	0.0382
1.576E+4	1.281	3.2E+4	0.0409
1.577E+4	1.278	3.2E+4	0.0479
1.577E+4	1.289	3.201E+4	0.0415
1.578E+4	1.284	3.201E+4	0.0507
1.578E+4	1.277	3.202E+4	0.0458
1.579E+4	1.285	3.202E+4	0.0366
1.579E+4	1.276	3.203E+4	0.0483
1.58E+4	1.276	3.203E+4	0.044
1.58E+4	1.279	3.204E+4	0.0435
1.581E+4	1.275	3.204E+4	0.0455
1.581E+4	1.272	3.205E+4	0.051
1.582E+4	1.272	3.205E+4	0.0437
1.582E+4	1.266	3.206E+4	0.0465
1.583E+4	1.263	3.206E+4	0.049
1.583E+4	1.265	3.207E+4	0.0422
1.584E+4	1.259	3.207E+4	0.0435
1.584E+4	1.263	3.208E+4	0.0516
1.585E+4	1.254	3.208E+4	0.0456
1.585E+4	1.262	3.209E+4	0.0478
1.586E+4	1.264	3.209E+4	0.0472
1.586E+4	1.257	3.21E+4	0.0458
1.587E+4	1.253	3.21E+4	0.0511
1.587E+4	1.255	3.211E+4	0.0449
1.588E+4	1.254	3.211E+4	0.0527
1.588E+4	1.255	3.212E+4	0.0511
1.589E+4	1.252	3.212E+4	0.0467
1.589E+4	1.252	3.213E+4	0.0474
1.59E+4	1.251	3.213E+4	0.0518
1.59E+4	1.249	3.214E+4	0.0579

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
1.591E+4	1.24	3.214E+4	0.0561
1.591E+4	1.241	3.215E+4	0.0558
1.592E+4	1.242	3.215E+4	0.0478
1.592E+4	1.243	3.216E+4	0.0452
1.593E+4	1.246	3.216E+4	0.0442
1.593E+4	1.242	3.217E+4	0.0484
1.594E+4	1.236	3.217E+4	0.0404
1.594E+4	1.236	3.218E+4	0.0448
1.595E+4	1.227	3.218E+4	0.0391
1.595E+4	1.233	3.219E+4	0.0477
1.596E+4	1.235	3.219E+4	0.0485
1.596E+4	1.239	3.22E+4	0.0473
1.597E+4	1.237	3.22E+4	0.0466
1.597E+4	1.236	3.221E+4	0.0377
1.598E+4	1.236	3.221E+4	0.0433
1.598E+4	1.237	3.222E+4	0.0432
1.599E+4	1.238	3.222E+4	0.0285
1.599E+4	1.236	3.223E+4	0.0425
1.6E+4	1.234	3.223E+4	0.0406
1.6E+4	1.233	3.224E+4	0.0425
1.601E+4	1.231	3.224E+4	0.04
1.601E+4	1.228	3.225E+4	0.0427
1.602E+4	1.224	3.225E+4	0.0417
1.602E+4	1.228	3.226E+4	0.0412
1.603E+4	1.223	3.226E+4	0.0452
1.603E+4	1.22	3.227E+4	0.0402
1.604E+4	1.22	3.227E+4	0.0415
1.604E+4	1.217	3.228E+4	0.0424
1.605E+4	1.214	3.228E+4	0.0378
1.605E+4	1.212	3.229E+4	0.0321
1.606E+4	1.216	3.229E+4	0.0384
1.606E+4	1.21	3.23E+4	0.031
1.607E+4	1.206	3.23E+4	0.036
1.607E+4	1.206	3.231E+4	0.0377
1.608E+4	1.21	3.231E+4	0.0355
1.608E+4	1.213	3.232E+4	0.036
1.609E+4	1.203	3.232E+4	0.0351
1.609E+4	1.215	3.233E+4	0.0367
1.61E+4	1.2	3.233E+4	0.0275
1.61E+4	1.202	3.234E+4	0.0298
1.611E+4	1.206	3.234E+4	0.0327
1.611E+4	1.203	3.235E+4	0.0357
1.612E+4	1.203	3.235E+4	0.0274
1.612E+4	1.197	3.236E+4	0.031
1.613E+4	1.194	3.236E+4	0.0333
1.613E+4	1.198	3.237E+4	0.0248
1.614E+4	1.198	3.237E+4	0.0282
1.614E+4	1.198	3.238E+4	0.0288
1.615E+4	1.196	3.238E+4	0.0283
1.615E+4	1.193	3.239E+4	0.0238
1.616E+4	1.189	3.239E+4	0.0248
1.616E+4	1.192	3.24E+4	0.0135
1.617E+4	1.195	3.24E+4	0.021

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
1.617E+4	1.191	3.241E+4	0.0195
1.618E+4	1.194	3.241E+4	0.018
1.618E+4	1.201	3.242E+4	0.0141
1.619E+4	1.196	3.242E+4	0.0144
1.619E+4	1.197	3.243E+4	0.006
1.62E+4	1.192	3.243E+4	0.0156
1.62E+4	1.196	3.244E+4	0.0114
1.621E+4	1.188	3.244E+4	0.0073
1.621E+4	1.19	3.245E+4	0.0116
1.622E+4	1.192	3.245E+4	0.0026
1.622E+4	1.197	3.246E+4	0.0086
1.623E+4	1.194	3.246E+4	0.0046
1.623E+4	1.194	3.247E+4	0.0045
1.624E+4	1.193	3.247E+4	0.0044

Friesen DRILLERS

Appendix H

Analytical Laboratory Data
(WP2405686)

CERTIFICATE OF ANALYSIS

Work Order	: **WP2405686**	Page	: 1 of 6
Client	: **Friesen Drillers Ltd.**	Laboratory	: ALS Environmental - Winnipeg
Contact	: Justin Neufeld	Account Manager	: Victoria Nazarkiewicz
Address	: 307 PTH 12 N Steinbach MB Canada R5G 1T8	Address	: 1329 Niakwa Road East, Unit 12 Winnipeg MB Canada R2J 3T4
Telephone	: 204 329 2485	Telephone	: +1 204 255 9720
Project	: OAKBANK DUGALD	Date Samples Received	: 08-Mar-2024 15:15
PO	: ----	Date Analysis Commenced	: 08-Mar-2024
C-O-C number	: ----	Issue Date	: 22-Mar-2024 14:49
Sampler	: ----		
Site	: ----		
Quote number	: Standing Offer 2024- Analytical Services		
No. of samples received	: 5		
No. of samples analysed	: 5		

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QC Interpretive report to assist with Quality Review and Sample Receipt Notification (SRN).

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

Signatories	*Position*	*Laboratory Department*
Christopher Chow		Inorganics, Winnipeg, Manitoba
Janani Mudiyanselage		External Subcontracting, Waterloo, Ontario
Rhovee Guevarra		Inorganics, Winnipeg, Manitoba
Rhovee Guevarra		Metals, Winnipeg, Manitoba

General Comments

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Refer to the ALS Quality Control Interpretive report (QCI) for applicable references and methodology summaries. Reference methods may incorporate modifications to improve performance.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Please refer to Quality Control Interpretive report (QCI) for information regarding Holding Time compliance.

Key : CAS Number: Chemical Abstracts Services number is a unique identifier assigned to discrete substances

LOR: Limit of Reporting (detection limit).

Unit	*Description*
-	no units
%	percent
% T/cm	% transmittance per centimetre
µS/cm	microsiemens per centimetre
‰ VSMOW	parts per thousand Vienna Standard Mean Ocean Water
AU/cm	absorbance units per centimetre
CU	colour units (1 cu = 1 mg/l pt)
meq/L	milliequivalents per litre
mg/L	milligrams per litre
NTU	nephelometric turbidity units
pH units	pH units

<: less than.

>: greater than.

Surrogate: An analyte that is similar in behavior to target analyte(s), but that does not occur naturally in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery.

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED on SRN or QCI Report, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Qualifiers

Qualifier	*Description*
DLM	*Detection Limit Adjusted due to sample matrix effects (e.g. chemical interference, colour, turbidity).*

Analytical Results

Sub-Matrix: **Water**
(Matrix: **Water**)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	START	24 HOR	48 HOUR	72 HOUR	WEST PRODUCTION WELL
					Client sampling date / time	04-Mar-2024 16:00	05-Mar-2024 16:00	06-Mar-2024 16:00	07-Mar-2024 16:00	07-Mar-2024 13:00
						WP2405686-001	WP2405686-002	WP2405686-003	WP2405686-004	WP2405686-005
						Result	Result	Result	Result	Result
Physical Tests										
Absorbance, UV (@ 254nm)	----	E404/WP	0.0050	AU/cm		----	----	----	0.0330	0.0320
Alkalinity, bicarbonate (as CaCO3)	----	E290/WP	1.0	mg/L		281	283	283	----	----
Alkalinity, bicarbonate (as HCO3)	71-52-3	E290/WP	1.0	mg/L		----	----	----	345	345
Alkalinity, carbonate (as CaCO3)	----	E290/WP	1.0	mg/L		16.2	15.8	16.8	----	----
Alkalinity, carbonate (as CO3)	3812-32-6	E290/WP	1.0	mg/L		----	----	----	10.6	9.7
Alkalinity, hydroxide (as CaCO3)	----	E290/WP	1.0	mg/L		<1.0	<1.0	<1.0	----	----
Alkalinity, hydroxide (as OH)	14280-30-9	E290/WP	1.0	mg/L		----	----	----	<1.0	<1.0
Alkalinity, total (as CaCO3)	----	E290/WP	1.0	mg/L		297	299	300	300	299
Colour, true	----	E329/WP	5.0	CU		----	----	----	<5.0	<5.0
Conductivity	----	E100/WP	1.0	µS/cm		----	----	----	1100	1100
Conductivity	----	E100/WP	2.0	µS/cm		1110	1110	1100	----	----
Hardness (as CaCO3), from total Ca/Mg	----	EC100A/WP	0.50	mg/L		36.3	36.0	36.1	35.3	35.4
pH	----	E108/WP	0.10	pH units		8.45	8.45	8.45	8.50	8.45
Solids, total dissolved [TDS]	----	E162-L/WP	3.0	mg/L		----	----	----	634	626
Solids, total dissolved [TDS], calculated	----	EC103A/WP	1.0	mg/L		722	722	715	----	----
Transmittance, UV (@ 254nm)	----	E404/WP	1.0	% T/cm		----	----	----	92.7	92.9
Turbidity	----	E121/WP	0.10	NTU		2.08	0.21	0.14	0.15	0.18
Langelier index (@ 4°C)	----	EC105A/WP	0.010	-		----	----	----	0.123	0.066
Langelier index (@ 60°C)	----	EC105A/WP	0.010	-		----	----	----	0.864	0.809
Anions and Nutrients										
Chloride	16887-00-6	E235.Cl/WP	0.50	mg/L		123	123	124	----	----
Nitrite (as N)	14797-65-0	E235.NO2/WP	0.010	mg/L		<0.020 DLM	<0.020 DLM	<0.020 DLM	----	----
Nitrate (as N)	14797-55-8	E235.NO3/WP	0.020	mg/L		<0.040 DLM	<0.040 DLM	<0.040 DLM	----	----
Ammonia, total (as N)	7664-41-7	E298/WP	0.0050	mg/L		----	----	----	0.587	0.619
Bromide	24959-67-9	E235.Br-T/WP	0.010	mg/L		----	----	----	0.163	0.166
Chloride	16887-00-6	E235.Cl-L/WP	0.10	mg/L		----	----	----	123	124
Fluoride	16984-48-8	E235.F/WP	0.020	mg/L		1.59	1.58	1.59	1.57	1.57
Nitrate (as N)	14797-55-8	E235.NO3-L/WP	0.0050	mg/L		----	----	----	<0.0100 DLM	<0.0100 DLM

Analytical Results

Sub-Matrix: **Water**
(Matrix: **Water**)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	START	24 HOR	48 HOUR	72 HOUR	WEST PRODUCTION WELL
					Client sampling date / time	04-Mar-2024 16:00	05-Mar-2024 16:00	06-Mar-2024 16:00	07-Mar-2024 16:00	07-Mar-2024 13:00
						WP2405686-001	WP2405686-002	WP2405686-003	WP2405686-004	WP2405686-005
						Result	Result	Result	Result	Result
Anions and Nutrients										
Nitrate + Nitrite (as N)	----	EC235.N+N/WP	0.0200	mg/L		<0.0447	<0.0447	<0.0447	----	----
Nitrite (as N)	14797-65-0	E235.NO2-L/WP	0.0010	mg/L		----	----	----	<0.0020 DLM	<0.0020 DLM
Sulfate (as SO4)	14808-79-8	E235.SO4/WP	0.30	mg/L		80.9	79.4	79.2	79.3	79.1
Organic / Inorganic Carbon										
Carbon, dissolved organic [DOC]	----	E358-L/WP	0.50	mg/L		----	----	----	1.95	1.80
Carbon, total organic [TOC]	----	E355-L/WP	0.50	mg/L		----	----	----	1.60	1.38
Ion Balance										
Anion sum	----	EC101A/WP	0.10	meq/L		11.2	11.2	11.2	11.2	11.2
Cation sum (total)	----	EC101A/WP	0.10	meq/L		11.1	10.9	11.0	11.0	10.8
Ion balance (APHA)	----	EC101A/WP	0.010	%		-0.448	-1.36	-0.901	-0.901	-1.82
Ion balance (cations/anions)	----	EC101A/WP	0.01	%		----	----	----	98.2	96.4
Total Metals										
Chromium, total	7440-47-3	E420/WP	0.00050	mg/L		<0.00050	Not Detected	Not Detected	----	----
Phosphorus, total	7723-14-0	E420/WP	0.050	mg/L		<0.050	<0.050	<0.050	----	----
Sulfur, total	7704-34-9	E420/WP	0.50	mg/L		30.0	30.1	29.7	----	----
Aluminum, total	7429-90-5	E420/WP	0.0030	mg/L		0.0850	0.0056	0.0036	<0.0030	0.0033
Antimony, total	7440-36-0	E420/WP	0.00010	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Arsenic, total	7440-38-2	E420/WP	0.00010	mg/L		0.00060	0.00027	0.00021	0.00018	0.00020
Barium, total	7440-39-3	E420/WP	0.00010	mg/L		0.0182	0.0172	0.0175	0.0171	0.0172
Beryllium, total	7440-41-7	E420/WP	0.000020	mg/L		0.000053	0.000048	0.000048	0.000051	0.000052
Bismuth, total	7440-69-9	E420/WP	0.000050	mg/L		<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Boron, total	7440-42-8	E420/WP	0.010	mg/L		1.54	1.55	1.52	1.50	1.50
Cadmium, total	7440-43-9	E420/WP	0.0000050	mg/L		0.0000068	<0.0000050	<0.0000050	Not Detected	Not Detected
Calcium, total	7440-70-2	E420/WP	0.050	mg/L		8.32	8.24	8.14	7.93	7.78
Cesium, total	7440-46-2	E420/WP	0.000010	mg/L		0.000025	0.000016	0.000017	0.000017	0.000018
Chromium, total	7440-47-3	E420.Cr-L/WP	0.00010	mg/L		----	----	----	<0.00010	<0.00010
Cobalt, total	7440-48-4	E420/WP	0.00010	mg/L		0.00044	<0.00010	<0.00010	<0.00010	<0.00010
Copper, total	7440-50-8	E420/WP	0.00050	mg/L		0.00525	0.00397	0.00461	0.00196	0.00147

Analytical Results

Sub-Matrix: **Water**
(Matrix: **Water**)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	START	24 HOR	48 HOUR	72 HOUR	WEST PRODUCTION WELL
					Client sampling date / time	04-Mar-2024 16:00	05-Mar-2024 16:00	06-Mar-2024 16:00	07-Mar-2024 16:00	07-Mar-2024 13:00
						WP2405686-001	WP2405686-002	WP2405686-003	WP2405686-004	WP2405686-005
						Result	Result	Result	Result	Result
Total Metals										
Iron, total	7439-89-6	E420/WP	0.010	mg/L		0.085	0.074	0.076	0.081	0.076
Lead, total	7439-92-1	E420/WP	0.000050	mg/L		0.00187	0.000834	0.000666	0.000554	0.000295
Lithium, total	7439-93-2	E420/WP	0.0010	mg/L		0.0667	0.0666	0.0680	0.0668	0.0662
Magnesium, total	7439-95-4	E420/WP	0.0050	mg/L		3.78	3.75	3.84	3.77	3.87
Manganese, total	7439-96-5	E420/WP	0.00010	mg/L		0.00374	0.00229	0.00218	0.00216	0.00214
Molybdenum, total	7439-98-7	E420/WP	0.000050	mg/L		0.00440	0.00408	0.00407	0.00406	0.00410
Nickel, total	7440-02-0	E420/WP	0.00050	mg/L		0.00076	<0.00050	<0.00050	<0.00050	<0.00050
Phosphorus, total	7723-14-0	E420.P-L/WP	0.030	mg/L		----	----	----	0.032	0.032
Potassium, total	7440-09-7	E420/WP	0.050	mg/L		11.8	11.5	11.5	11.6	11.6
Rubidium, total	7440-17-7	E420/WP	0.00020	mg/L		0.00588	0.00601	0.00590	0.00569	0.00598
Selenium, total	7782-49-2	E420/WP	0.000050	mg/L		<0.000050	Not Detected	<0.000050	<0.000050	<0.000050
Silicon, total	7440-21-3	E420/WP	0.10	mg/L		3.04	2.84	2.88	2.84	2.85
Silver, total	7440-22-4	E420/WP	0.000010	mg/L		<0.000010	<0.000010	Not Detected	<0.000010	Not Detected
Sodium, total	7440-23-5	E420/WP	0.050	mg/L		231	228	230	228	225
Strontium, total	7440-24-6	E420/WP	0.00020	mg/L		0.0782	0.0768	0.0785	0.0768	0.0780
Tellurium, total	13494-80-9	E420/WP	0.00020	mg/L		Not Detected	Not Detected	Not Detected	<0.00020	<0.00020
Thallium, total	7440-28-0	E420/WP	0.000010	mg/L		<0.000010	Not Detected	Not Detected	Not Detected	Not Detected
Thorium, total	7440-29-1	E420/WP	0.00010	mg/L		0.00013	Not Detected	Not Detected	Not Detected	Not Detected
Tin, total	7440-31-5	E420/WP	0.00010	mg/L		0.00012	<0.00010	<0.00010	<0.00010	<0.00010
Titanium, total	7440-32-6	E420/WP	0.00030	mg/L		0.00194	<0.00030	<0.00030	<0.00030	<0.00030
Tungsten, total	7440-33-7	E420/WP	0.00010	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Uranium, total	7440-61-1	E420/WP	0.000010	mg/L		0.000062	0.000019	0.000017	0.000016	0.000018
Vanadium, total	7440-62-2	E420/WP	0.00050	mg/L		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Zinc, total	7440-66-6	E420/WP	0.0030	mg/L		0.0039	<0.0030	0.0041	<0.0030	<0.0030
Zirconium, total	7440-67-7	E420/WP	0.00020	mg/L		<0.00020	Not Detected	Not Detected	Not Detected	Not Detected
Stable Isotope										
delta-Hydrogen-2	n/a	H-2+O-18/3A	-	‰ VSMOW		See attached	See attached	See attached	See attached	See attached
delta-Oxygen-18	n/a	H-2+O-18/3A	-	‰ VSMOW		See attached	See attached	See attached	See attached	See attached

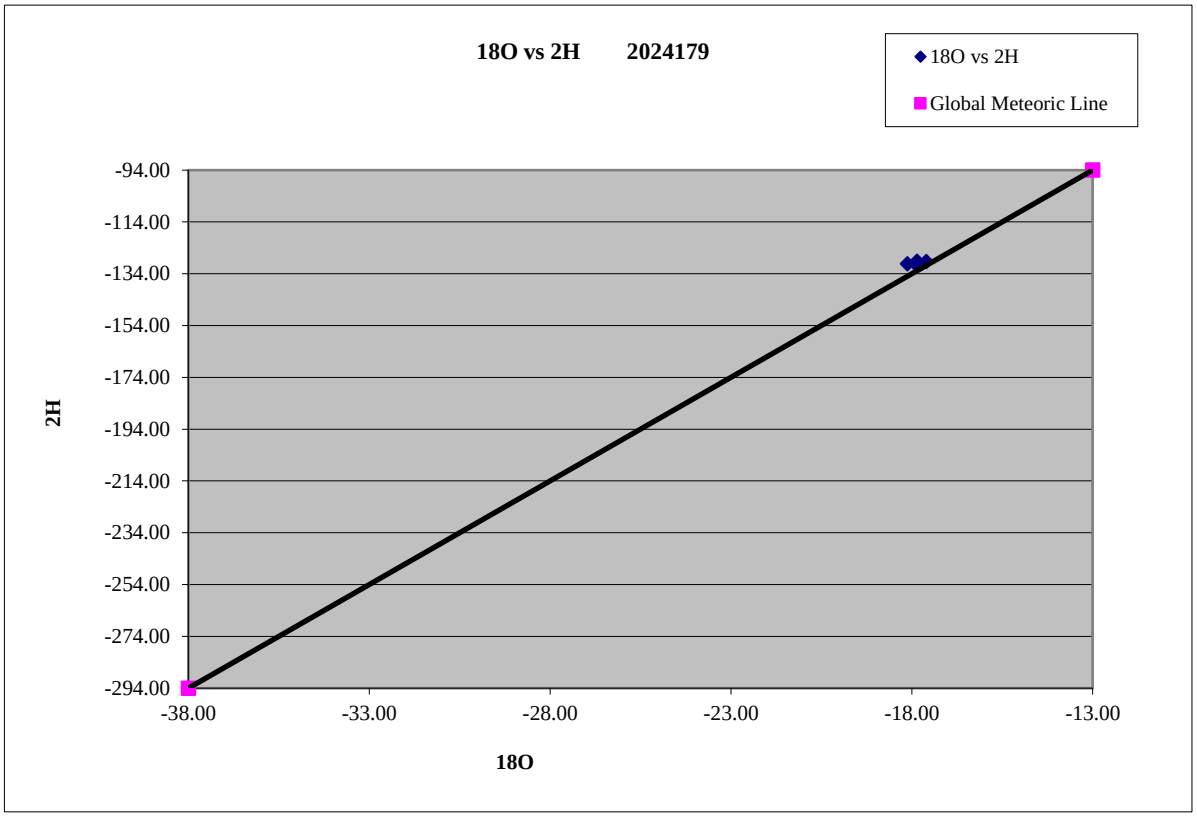
Please refer to the General Comments section for an explanation of any result qualifiers detected.

Please refer to the Accreditation section for an explanation of analyte accreditations.

Dalmaijer 2024179

-17.85	-17.99	-129.17	-129.09
-18.12		-130.11	
-17.90	-17.99	-130.18	-129.83
-17.59		-129.33	
-17.85	-17.69	-129.57	-129.98

-13.00	-94
-38.00	-294



Client:Dalmaijer/Riddell/ALS Environmental Labs ISO# 2024179 Environmental Isotope Lab
Location:A4 2024-03-22
PO#:WP2405686 5 for 18O, 2H

#	Sample	Lab#	$\delta^{18}O$	Result	Repeat	$\delta^{2}H$	Result	Repeat		pH	EC	AZD
			H_2O	VSMOW	± 0.2‰	H_2O	VSMOW	± 0.8‰			uS/cm	
1	WP2405686-001	527235	X	-17.85	-17.99	X	-129.17	-129.09	2X40ml	8.45	1,110	
2	WP2405686-002	527236	X	-18.12		X	-130.11		2X40ml	8.45	1,110	
3	WP2405686-003	527237	X	-17.90	-17.99	X	-130.18	-129.83	2X40ml	8.45	1,110	
4	WP2405686-004	527238	X	-17.59		X	-129.33		2X40ml	8.5	1,110	
5	WP2405686-005	527239	X	-17.85	-17.69	X	-129.57	-129.98	2X40ml	8.45	1,110	

BAL= Below Analytical Limit
NA= Not Attempted (concentrations too low)
NES= Not Enough Sample
ND= Non-detect

ENVIRONMENTAL ISOTOPE LABORATORY

Chain of Custody (COC) / Analytical Request Form

www.alsglobal.com

Canada Toll Free: 1 800 668 9878

Affix ALS barcode label here (lab use only)

COC Number: 14 -

Page 1 of 1

Report To		Report Format / Distribution	Select Service Level Below (Rush Turnaround Time (TAT) is not available for all tests)
Company:	Friesen Drillers Limited	Select Report Format: ☑ PDF ☐ EXCEL ☐ EDD (DIGITAL)	R ☑ Regular (Standard TAT if received by 3 pm - business days)
Contact:	Justin Neufeld, P.Geo.	Quality Control (QC) Report with Report: ☑ Yes ☐ No	P ☐ Priority (2-4 bus. days if received by 3pm) 50% surcharge - contact ALS to confirm TAT
Address:	307 PTH 12N Steinbach MB, R5G1T8	☐ Criteria on Report - provide details below if box checked Select Distribution: ☑ EMAIL ☐ MAI ☐ FAX	E ☐ Emergency (1-2 bus. days if received by 3pm) 100% surcharge - contact ALS to confirm TAT E2 ☐ Same day or weekend emergency - contact ALS to confirm TAT and surcharge
Phone:	204-329-2485	Email 1 or Fax [redacted]	Specify Date Required for E2,E or P:
		Email 2 [redacted]	

Invoice To		Invoice Distribution	Analysis Request
	Same as Report To ☑ Yes ☐ No	Select Invoice Distribution: ☑ EMAIL ☐ MAIL ☐ FAX	Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below
	Copy of Invoice with Report ☐ Yes ☑ No		
Company:		Email 1 or Fax accts@friesendrillers.com	
Contact:		Email 2	

Project Information		Oil and Gas Required Fields (client use)	
ALS Quote #:		Approver ID:	Cost Center:
Job #:	Oakbank Dugald	GL Account:	Routing Code:
PO / AFE:		Activity Code:	
LSD:		Location:	
ALS Lab Work Order # (lab use only)		**ALS Contact:** JUDY D.	**Sampler:** SF

ALS Sample # (lab use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	ROU4W-T-WP	MB-CH-PWS-WP	Oxygen-18/Deuterium										Number of Containers
	Start	4-Mar-23	16:00	Water	R		R										
	24 hour	5-Mar-23	16:00	Water	R		R										
	48 hour	6-Mar-23	16:00	Water	R		R										
	72 Hour	7-Mar-23	16:00	Water		R	R										
	West Production Well	7-Mar-23	13:00	Water		R	R										

Environmental Division Winnipeg
Work Order Reference
WP2405686
Telephone : +1 204 255 9720

Drinking Water (DW) Samples[1] (client use)	Special Instructions / Specify Criteria to add on report (client Use)
Are samples taken from a Regulated DW System? ☐ Yes ☑ No	
Are samples for human drinking water use? ☐ Yes ☐ No	

SAMPLE CONDITION AS RECEIVED (lab use only)

Frozen ☐ SIF Observations Yes ☐ No ☐
Ice packs Yes ☐ No ☐ Custody seal intact Yes ☐ No ☐
Cooling Initiated ☐

INITIAL COOLER TEMPERATURES °C			FINAL COOLER TEMPERATURES °C		
			8.9		

SHIPMENT RELEASE (client use)			INITIAL SHIPMENT RECEPTION (lab use only)			FINAL SHIPMENT RECEPTION (lab use only)		
Released by:	Date:	Time:	Received [redacted]	Date: MAR 08 2024	Time: [redacted]	Received by:	Date:	Time:

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

NA-FM-0326e v09 Front/04 January 2014

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY. By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the back page of the white - report copy.

Sample Intake						
Client:	Friesen Drillers					
Cheque Enclosed with CoC		Yes		No		
Priority/Emergency Required (circle one)		Yes		No		
Time Sensitive Hold Time (circle one)		Yes		No		
Matrix (circle one)		Water	Soil/solid	Air	Biota	Other
# of Bottles received:	24					
Green/White	5x500	Yellow/Black				
Purple/White	2x1W	Light blue/White				
Warm red/White	5x125	Orange/Black				
Dark Green/White		Dark Blue/White				
Grey/black	2x1W	Black/white				
Other:						
Additional Comments: 10 x 40ml Clear.						

Login Check	Check yes if you have verified the following:	
	Yes	N/A
Received date/time	✓	
Project/PO/LSD	✓	
Quote/Office match CoC	✓	
Sample IDs/Description	✓	
Sample Date/time	✓	
Sales Items as per CoC	✓	
Express Due Dates	✓	✓
Client due date matches ALS Due date	✓	
Client recipient emails	✓	
Guidelines/thresholds added		✓
Billing/payment recorded		✓
Field data entered		✓
Sub-contracting Forms Printed	✓	
SUBCO/Chromatograph added to client contacts for required analysis	✓	
Are sub-samples required?		✓
Has a SIF been submitted for this WO?		✓
Has the SIF been resolved?		✓