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Refer To: ADESH-16-034
LAUR: 16-21912
Locates Action No.: n/a

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Subject: Submittal of the Completion Report for Regional Aquifer Well R-58

Dear Mr. Kieling:

Enclosed please find two hard copies with electronic files of the Completion Report for Regional Aquifer Well R-58.

If you have any questions, please contact Steve Paris at (505) 606-0915 (smparis@lanl.gov) or Hai Shen at (505) 665-5046 (hai.shen.@em.doe.gov).

Sincerely,

Bruce Robinson, Program Director
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Sincerely,

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BR/DR/SP:sm

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LA-UR-16-21912
April 2016
EP2016-0032

Completion Report for Regional Aquifer Well R-58

Los Alamos
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Prepared by the Associate Directorate for Environmental Management

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EP2016-0032

Completion Report for Regional Aquifer Well R-58

April 2016

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EXECUTIVE SUMMARY

This well completion report describes the drilling, well construction, development, aquifer testing, and dedicated sampling system installation for regional aquifer monitoring well R-58, located within Technical Area 16 (TA-16) at Los Alamos National Laboratory (LANL or the Laboratory), Los Alamos, New Mexico. The R-58 monitoring well is being installed to augment the existing network to better define RDX (hexahydro-1,3,5-trinitro-1,3,5-triazine) contamination flow paths downgradient of potential contaminant breakthrough locations for S-Site and Fishladder Canyons. The primary purpose of well R-58 is to increase the overall detection efficiency of the TA-16 monitoring network for the high- and medium-priority sources at TA-16, as required by the New Mexico Environment Department's (NMED's) approval with modifications for the regional aquifer well R-58 drilling work plan.

The R-58 monitoring well borehole was drilled using dual-rotary air-drilling methods. Fluid additives used included potable water and foam. Foam-assisted drilling was used only to a depth of 1178 ft below ground surface (bgs). R-58 was drilled to a total depth of 1378.4 ft bgs.

The following geologic formations were encountered at R-58: Tshirege Member of the Bandelier Tuff, Cerro Toledo interval, Otowi Member of the Bandelier Tuff, Guaje Pumice Bed of the Otowi Member, the Puye Formation, and the Tschicoma Formation younger dacite breccia.

Well R-58 was completed as a single-screen well, allowing evaluation of water quality and water levels within the regional aquifer. The screened interval is set between 1257 ft and 1277.3 ft bgs within dacite breccia. The static depth to water after well installation was measured at 1238.3 ft bgs.

The well was completed in accordance with an NMED-approved well design. The well was developed and the regional aquifer groundwater met target water-quality parameters. Aquifer testing indicates that regional aquifer monitoring well R-58 will perform effectively in meeting the planned objectives. A sampling system and transducer were placed above the screened interval, and groundwater sampling at R-58 will be performed as part of the annual Interim Facility-Wide Groundwater Monitoring Plan.

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Acronyms and Abbreviations

ADEM	Associate Directorate for Environmental Management
amsl	above mean sea level
ASTM	American Society for Testing and Materials
bgs	below ground surface
Consent Order	Compliance Order on Consent
DO	dissolved oxygen
DTW	depth to water
EES	Earth and Environmental Sciences (Laboratory group)
Eh	oxidation-reduction potential
EPA	Environmental Protection Agency (U.S.)
EPC-CP	Environmental Protection and Compliance Division–Environmental Compliance Programs
ESH	Environment, Safety, and Health (Laboratory directorate)
F	filtered
FD	field duplicate
FTP	field trip blank
gpd	gallons per day

gpm	gallons per minute
hp	horsepower
I.D.	inside diameter
LANL	Los Alamos National Laboratory
NAD	North American Datum
NMED	New Mexico Environment Department
NTU	nephelometric turbidity unit
O.D.	outside diameter
ORP	oxidation-reduction potential
PVC	polyvinyl chloride
RDX	hexahydro-1,3,5-trinitro-1,3,5-triazine
SOP	standard operating procedure
SVOC	semivolatile organic compound
TA	technical area
TD	total depth
TOC	total organic carbon
UF	unfiltered
VOC	volatile organic compound
WCSF	waste characterization strategy form

1.0 INTRODUCTION

This completion report summarizes borehole drilling, well construction, well development, aquifer testing, and dedicated sampling system installation for regional aquifer monitoring well R-58. The report is written in accordance with the requirements in Section IV.A.3.e.iv of the March 1, 2005 (revised 2012), Compliance Order on Consent (the Consent Order). The R-58 monitoring well borehole was drilled in accordance with the New Mexico Environment Department– (NMED-) approved drilling work plan (LANL 2012, 212117; NMED 2012, 521741) between September 2 and 17, 2015, and completed between September 28 and November 5, 2015, at Los Alamos National Laboratory (LANL or the Laboratory) for the Associate Directorate for Environmental Management (ADEM).

Well R-58 is located within the Laboratory's Technical Area 16 (TA-16) in Los Alamos County, New Mexico (Figure 1.0-1). Well R-58 was installed to augment the existing network to better define RDX (hexahydro-1,3,5-trinitro-1,3,5-triazine) contamination flow paths downgradient of potential contaminant breakthrough locations for S-Site and Fishladder Canyons. Secondary objectives were to identify and establish water levels in perched-intermediate aquifers, if present, and to collect samples of drill cuttings for lithologic description.

The R-58 borehole was drilled to a total depth (TD) of 1378.4 ft below ground surface (bgs). During drilling, cuttings samples were collected at 5-ft intervals from ground surface to TD. A monitoring well was installed with a screened interval between 1257 and 1277.3 ft bgs within dacite breccia. The depth to water (DTW) of 1238.3 ft bgs was recorded on November 6, 2015, after well installation.

Post-installation activities included well development, aquifer testing, surface completion, conducting a geodetic survey, and sampling system installation. Future activities will include site restoration and waste management.

The information presented in this report was compiled from field reports and daily activity summaries. Records, including field reports, field logs, and survey information, are on file at the ADEM Records Processing Facility. This report contains brief descriptions of activities and supporting figures, tables, and appendixes associated with the R-58 project.

2.0 ADMINISTRATIVE PLANNING

The following documents were prepared to guide activities associated with the drilling, installation, and development of regional aquifer well R-58:

- "Drilling Work Plan for Regional Aquifer Well R-58" (LANL 2012, 212117);
- "Field Implementation Plan for Regional Aquifer Well R-58" (TerranearPMC 2015, 601274);
- "IWD [Integrated Work Document] for Drilling and Installation of LANL Well R-58" (TerranearPMC 2015, 601273);
- "Storm Water Pollution Prevention Plan, Regional Wells (R-Wells) Drilling, Los Alamos National Laboratory, Revision 1" (LANL 2014, 601293); and
- "Waste Characterization Strategy Form for R-47, R-58, R-63i, CdV-9-1i," (LANL 2013, 244887).

3.0 DRILLING ACTIVITIES

This section describes the drilling approach and provides a chronological summary of field activities conducted at monitoring well R-58.

3.1 Drilling Approach

The drilling method, equipment and drill-casing sizes for the R-58 monitoring well were selected to retain the ability to investigate and case/seal off any perched groundwater encountered above the regional aquifer. Further, the drilling approach ensured that a sufficiently sized drill casing was used to meet the required 2-in.-minimum annular thickness of the filter pack around a 5.88-in.–outside diameter (O.D.) well screen.

Dual-rotary drilling methods using a Foremost DR-24HD drill rig were employed to drill the R-58 borehole. The drill rig was equipped with conventional drilling rods, tricone bits, downhole hammer bits, deck-mounted air compressor, and general drilling equipment. Auxiliary equipment included two Ingersoll Rand skid-mounted air compressors. Three sizes of A53 grade B flush-welded mild carbon-steel casing (16-in.-O.D., and 12-in.-and 10-in.–inside diameter [I.D.]) were used for the R-58 project.

The dual-rotary drilling technique at R-58 used filtered compressed air and fluid-assisted air to evacuate cuttings from the borehole during drilling. Drilling fluids, other than air, used in the borehole (all within the vadose zone) included potable water and a mixture of potable water with Baroid Quik Foam foaming agent. The fluids were used to cool the bit and help lift cuttings from the borehole. Use of the foaming agent was terminated at 1178 ft bgs, roughly 100 ft above the expected top of the regional aquifer. No additives, other than potable water, were used for drilling below 1178 ft bgs. The actual depth to water, however, was determined to be 1238 ft bgs. Total amounts of drilling fluids introduced into the borehole are presented in Table 3.1-1.

3.2 Chronological Drilling Activities for the R-58 Well

The DR-24HD drill rig, drilling equipment, and supplies were mobilized to the R-58 drill site from August 28 to September 1, 2015. The equipment and tooling were decontaminated before mobilization to the site. On September 2, following on-site equipment inspections, drilling of the monitoring well borehole began at 0235 h using dual-rotary methods with a 15-in. tricone bit and 16-in. drill casing.

The 16-in. surface casing was advanced to 96.2 ft bgs in Unit 4 of the Tshirege Member of the Bandelier Tuff on September 2. Open-hole drilling commenced the same day using a 15-in. tricone bit. Drilling proceeded through the Tshirege Member of the Bandelier Tuff, Cerro Toledo interval, and the Otowi Member of the Bandelier Tuff to 676 ft bgs. The 16-in. casing shoe was cut on September 4 at 91.2 ft bgs.

Between September 4 and September 6, a 12-in. casing string was installed in the open borehole to a depth of 610 ft bgs (66 ft of slough was encountered in the borehole). Beginning on September 6, a 12-in. underreaming hammer bit was used to advance the 12-in. casing through the Otowi Member of the Bandelier Tuff, the Guaje Pumice Bed of the Otowi Member, and the Puye Formation to 1027.4 ft bgs. The 12-in. casing shoe was successfully cut on September 8 at 1022.4 ft bgs.

Between September 12 and September 14, a 10-in. casing string was installed to a depth of 1027.4 ft bgs. The 10-in. casing string and an underreaming hammer bit were advanced through the Puye Formation and the dacite breccia to a TD of 1378.4 ft bgs on September 17 at 1814 h. After reaching TD, the 10-in. casing was pulled back 2 ft, water levels were recorded in the borehole, and the

10-in. casing was pushed back to 1378 ft bgs. On September 18, a Laboratory natural gamma log was recorded. The casing shoe was cut on September 19 at 1371.9 ft bgs.

During drilling from September 2 to 8 and September 12 to 17, field crews worked 24-h shifts, 7 d/wk. All associated activities proceeded normally without incident or delay.

4.0 SAMPLING ACTIVITIES

This section describes the cuttings and groundwater sampling activities for monitoring well R-58. All sampling activities were conducted in accordance with applicable quality procedures.

4.1 Cuttings Sampling

Cuttings samples were collected from the R-58 monitoring well borehole at 5-ft intervals from ground surface to the TD of 1378.4 ft bgs. At each interval, approximately 500 mL of bulk cuttings were collected by the site geologist from the drilling discharge cyclone, placed in resealable plastic bags, labeled, and archived in core boxes. Whole rock, +35, and +10 sieve-size fractions were also processed, placed in chip trays, and archived for each 5-ft interval. Radiological control technicians screened the cuttings before they were removed from the site. All screening measurements were within the range of background values. The cuttings samples were delivered to the Laboratory's archive at the conclusion of drilling activities.

The stratigraphy at well R-58 is summarized in section 5.1, and a detailed lithologic log is presented in Appendix A.

4.2 Water Sampling

Four groundwater-screening samples were collected during development from the pump's discharge line for total organic carbon (TOC) analysis. Two samples were collected during aquifer testing and analyzed for TOC, alkalinity, anions, and metals.

Table 4.2-1 presents a summary of screening samples collected during the R-58 monitoring well installation. The TOC results and field water-quality parameters are presented in Appendix B.

Groundwater characterization samples will be collected from the completed well in accordance with the Consent Order. For the first year, the samples will be analyzed for a full suite of constituents in accordance with the requirements of the Interim Facility-Wide Groundwater Monitoring Plan. The analytical results will be included in the appropriate periodic monitoring report issued by the Laboratory. After the first year, the analytical suite and sample frequency at R-58 will be evaluated and presented in the annual Interim Facility-Wide Groundwater Monitoring Plan.

5.0 GEOLOGY AND HYDROGEOLOGY

The geologic and hydrogeologic features encountered at R-58 are summarized below. The Laboratory's geology task leader and project site geologist examined cuttings and the natural gamma log to determine geologic contacts and hydrogeologic conditions. Drilling observations and water-level measurements were used to identify groundwater encountered at R-58.

5.1 Stratigraphy

Rock units for the R-58 borehole are presented below in order of youngest to oldest in stratigraphic occurrence. Lithologic descriptions are based on binocular microscope analysis of drill cuttings collected from the discharge hose. Figure 5.1-1 illustrates the stratigraphy at R-58. A detailed lithologic log for R-58 is presented in Appendix A.

Unit 4, Tshirege Member of the Bandelier Tuff, Qbt 4 (0–110 ft bgs)

Unit 4 of the Tshirege Member of the Bandelier Tuff was encountered from 0 to 110 ft bgs. Unit 4 contains large glassy pumice fragments in outcrop that decrease with depth and become devitrified.

Unit 3t, Tshirege Member of the Bandelier Tuff, Qbt 3t (110–130 ft bgs)

The upper part of Unit 3 is further subdivided into Unit 3t (transition) in the western part of the Laboratory. Unit 3t of the Tshirege Member of the Bandelier Tuff was encountered from 110 ft to 130 ft bgs. Unit 3t is moderately to strongly welded crystal-rich tuff.

Unit 3, Tshirege Member of the Bandelier Tuff, Qbt 3 (130–260 ft bgs)

Unit 3 of the Tshirege Member of the Bandelier Tuff was encountered from 130 ft to 260 ft bgs. Unit 3 is a poorly to moderately welded devitrified ash-flow tuff (i.e., ignimbrite) that is crystal-rich, slightly pumiceous and lithic-poor and exhibits a matrix of fine ash.

Unit 2, Tshirege Member of the Bandelier Tuff, Qbt 2 (260–355 ft bgs)

Unit 2 of the Tshirege Member of the Bandelier Tuff was encountered from 260 ft to 355 ft bgs. Unit 2 represents a moderately to strongly welded devitrified rhyolitic ash-flow tuff (i.e., ignimbrite) that is composed of abundant quartz and sanidine crystals. Cuttings typically contain abundant fragments of indurated tuff and numerous free quartz and sanidine crystals.

Unit 1v, Tshirege Member of the Bandelier Tuff, Qbt 1v (355–400 ft bgs)

Unit 1v of the Tshirege Member of the Bandelier Tuff was encountered from 355 ft to 400 ft bgs. Unit 1v is a poorly to moderately welded, devitrified rhyolitic ash-flow tuff that is pumiceous, generally lithic-poor and crystal-bearing to locally crystal-rich. Abundant ash matrix is rarely preserved in cuttings. Cuttings commonly contain numerous fragments of indurated crystal-rich tuff with devitrified pumice. Abundant free quartz and sanidine crystals dominate cuttings in many intervals and minor small (generally less than 10 mm in diameter) volcanic lithic inclusions also occur in cuttings.

Unit 1g, Tshirege Member of the Bandelier Tuff, Qbt 1g (400–480 ft bgs)

Unit 1g of the Tshirege Member of the Bandelier Tuff was encountered from 400 ft to 480 ft bgs. Unit 1g is a poorly welded vitric rhyolitic ash-flow tuff that is poorly to moderately indurated, strongly pumiceous, and crystal-bearing. White to pale orange, lustrous, glassy pumice lapilli are characteristic of Unit 1g. Cuttings contain abundant free quartz and sanidine crystals and glassy pumices.

Cerro Toledo Interval, Qct (480–615 ft bgs)

The Cerro Toledo interval was encountered from 480 ft to 615 ft bgs. The Cerro Toledo interval is a sequence of poorly consolidated tuffaceous and volcaniclastic sediments that occurs intermediately between the Tshirege and Otowi Members of the Bandelier Tuff. Sediments are largely stained with orange oxidation on grain surfaces.

Otowi Member of the Bandelier Tuff, Qbo (615–866 ft bgs)

The Otowi Member of the Bandelier Tuff was encountered from 615 ft to 866 ft bgs. The Otowi Member is composed of poorly welded vitric rhyolitic ash-flow tuffs that are pumiceous and crystal- and lithic-bearing. Drill cuttings contain pale orange to white pumices, volcanic lithic clasts, and quartz and sanidine crystals. Lithic fragments are commonly subangular to subrounded and generally of intermediate volcanic composition, including porphyritic dacites.

Guaje Pumice Bed of the Otowi Member of the Bandelier Tuff, Qbog (866–889 ft bgs)

The Guaje Pumice Bed represents an air-fall tephra deposit of rhyolitic pumice that forms the base of the Otowi Member. The Guaje deposit was encountered from 866 ft to 889 ft bgs. Drill cuttings in this interval contain abundant lustrous vitric pumice lapilli (up to 15 mm in diameter) with trace occurrences of small volcanic lithic fragments. The deposit is poorly consolidated.

Puye Formation, Tpf (889–1187 ft bgs)

Puye Formation volcaniclastic sediments were encountered from 889 ft to 1187 ft bgs. The Puye Formation consists of alluvial fan deposits eroded from volcanic rocks in the nearby Jemez Mountains. Cuttings from this interval consist of grey, red, and purple dacitic and rhyolitic gravels, volcaniclastic sands, and minor devitrified pumice clasts. Cuttings are generally angular to subangular.

Tschicoma Formation Younger Dacite Flow Breccia, Tvt 2 (1187–1378.4 ft bgs)

The interval from 1187 ft to TD at 1378.4 ft bgs contains abundant reddish-brown oxidized/altered dacite that contains quartz and hornblende crystals. The size, angularity, and oxidation of cuttings suggest a flow breccia. Angular grey dacite clasts are mostly massive with minor vesicular clasts.

5.2 Groundwater

Drilling at R-58 proceeded without any indications of groundwater until 1240 ft bgs as noted by the drilling crew. The borehole was then advanced to the TD of 1378.4 ft bgs. The water level was 1240.2 ft bgs on September 18, 2015, before well installation. The DTW in the completed well was 1238.3 ft bgs on November 6.

During development, the average pumping rate was approximately 18 gallons per minute (gpm) with varying pump placement throughout the screened interval.

6.0 BOREHOLE LOGGING

A natural gamma ray log was recorded on September 18, 2015, inside the 10-in. casing from surface to 1378.4 ft bgs after the borehole was advanced to TD. Logging was conducted with Laboratory logging equipment and staff (Appendix C). A summary of the geophysical logging run is presented in Table 6.0-1.

7.0 WELL INSTALLATION R-58 MONITORING WELL

The R-58 well was installed between September 28 and November 5, 2015.

7.1 Well Design

The R-58 well was designed in accordance with requirements in the Consent Order, and NMED approved the final well design before the well was installed (Appendix D). The well was designed with a screened interval between 1257 ft and 1277 ft bgs to monitor the groundwater quality near the top of the regional aquifer within the dacite breccia.

7.2 Well Construction

From September 24 to October 2, 2015, the stainless-steel well casing, screens, and tremie pipe were decontaminated, and the workover rig and initial well construction materials were mobilized to the site.

The R-58 monitoring well was constructed of 5.0-in.-I.D./5.56-in.-O.D. type A304 passivated stainless-steel beveled casing fabricated to American Society for Testing and Materials (ASTM) A312 standards. The screened section utilized two 10-ft lengths of 5.0-in.-I.D. rod-based 0.040-in. slot wire-wrapped screens to make up the 20-ft-long screen interval. All individual casing and screen sections were welded together using compatible stainless-steel welding rods. A 2-in. steel tremie pipe was used to deliver backfill and annular fill materials downhole during well construction. A short length of 16-in. (5.0-ft casing and shoe, from 91.2 ft to 96.2 ft bgs), 12-in. (5.0-ft casing and shoe, from 1022.4 ft to 1027.4 ft bgs), and 10-in. drill casing (6.1-ft casing and shoe, from 1371.9 ft to 1378.0 ft bgs) remain in the borehole. The 16-in. and 12-in. casing stubs were entombed in the upper bentonite seal, and the 10-in. casing stub was encased in slough and bentonite backfill at the bottom of the borehole.

A 10.4-ft-long stainless-steel sump was placed below the bottom of the well screen. The well casing was started into the borehole on September 28 at 0930 h. The well casing was hung by wireline with the bottom at 1287.7 ft bgs. Stainless-steel centralizers (two sets of four) were welded to the well casing approximately 2.0 ft above and below the screened interval. Figure 7.2-1 presents an as-built schematic showing construction details for the completed well.

The installation of annular materials began on October 9 after the bottom of the borehole was measured at 1374.1 ft bgs (approximately 4.3 ft of slough had accumulated in the borehole). The bentonite backfill was installed between October 9 and 11 from 1282.5 ft to 1374.1 ft bgs using 70.0 ft^3 of 3/8-in. bentonite chips and coated pellets. A summary of calculated volumes and annular materials used is presented in Table 7.2-1.

The filter pack was installed between October 11 and 16 from 1252.4 ft to 1282.5 ft bgs using 38.0 ft^3 of 10/20 silica sand. The actual volume of filter pack sand was 168% greater than the calculated volume and is likely the result of an oversized borehole caused by sloughing in the unconsolidated dacite breccia. The filter pack was surged to promote compaction. The fine sand collar was installed above the filter pack from 1250.3 ft to 1252.4 ft bgs using 2.5 ft^3 of 20/40 silica sand.

From October 17 to November 4, the bentonite seal was installed from 60.2 ft to 1250.3 ft bgs using 1152.9 ft^3 of 3/8-in. bentonite chips. On November 4, a cement seal was installed from 3.0 ft to 60.2 ft bgs. The top of the cement seal was verified on November 5 at 1000 h. The cement seal used 109.6 ft^3 of Portland Type I/II/V cement. This volume exceeded the calculated volume of 70.9 ft^3 by 55% and is likely the result of cement loss to the near-surface formations.

Operationally, well construction proceeded smoothly 12h/d, 7d/wk from September 28 to October 26 and 24 h/d, 7 d/wk from October 27 to November 4.

8.0 POST-INSTALLATION ACTIVITIES

Following well installation at R-58, the well was developed and aquifer pumping tests were conducted. The wellhead and surface pad were constructed, a geodetic survey was performed, and a dedicated sampling system was installed. Site restoration activities will be completed following the final disposition of contained drill cuttings and groundwater, per the NMED-approved waste-disposal decision trees for land application of drill cuttings and groundwater.

8.1 Well Development

The well was developed between November 6 and 13, 2015. Initially, the screened interval was swabbed and bailed to remove formation fines in the filter pack and well sump. Bailing continued until water clarity visibly improved. Final development was then performed with a submersible pump.

The swabbing tool employed was a 4.5-in.-O.D., 1-in.-thick nylon disc attached to a weighted steel rod. The wireline-conveyed tool was drawn repeatedly across the screened interval, causing a surging action across the screen and filter pack. The bailing tool was a 4.0-in.-O.D. by 21.0-ft-long carbon-steel bailer with a total capacity of 12 gal. The tool was repeatedly lowered by wireline, filled, withdrawn from the well, and emptied into the cuttings pit. Approximately 550 gal. of groundwater was removed during bailing activities.

After bailing, a 10-horsepower (hp), 4-in. Berkeley submersible pump was installed in the well for the final stage of well development. The screened interval was pumped from top to bottom and from bottom to top in 2-ft increments between November 9 and 11. Purging continued from November 11 to 13 with the pump intake set below the bottom of the well screen. Approximately 39,090 gal. of groundwater was purged with the submersible pump during well development.

Total Volumes of Introduced and Purged Water

During drilling, approximately 3645 gal. of potable water was added below the top of the regional aquifer at approximately 1240 ft bgs. Approximately 16,135 gal. was added during installation of the annular seals. In total, approximately 19,780 gal. of potable water was introduced to the borehole below 1240 ft bgs during project activities.

Approximately 39,640 gal. of groundwater was purged at R-58 during well development activities. Another 25,626 gal. was purged during aquifer testing. The total amount of groundwater purged during post-installation activities was 65,266 gal.

8.1.1 Well Development Field Parameters

During the pumping stage of well development, turbidity, temperature, pH, dissolved oxygen (DO), oxidation-reduction potential (ORP), and specific conductance in microSiemens per centimeter were measured. The required TOC and turbidity values for adequate well development are less than 2.0 ppm and less than 5 nephelometric turbidity units (NTU), respectively.

Field parameters were measured by collecting aliquots of groundwater from the discharge pipe with the use of a flow-through cell. The final parameters at the end of well development were pH of 8.04, temperature of 19.52ºC, specific conductance of 107 µS/cm, and turbidity of 5.0 NTU. Table B-2.2-1 in Appendix B shows field parameters and purge volumes measured during well development.

During 21-h aquifer test, the turbidity values ranged from 4 to 17.6 NTU, with the final recorded value of 5.8 NTU.

8.2 Aquifer Testing

Aquifer pumping tests were conducted at R-58 between November 14 and 19, 2015. On November 14, the aquifer test pump assembly was installed and the well was pumped to fill the drop pipe for subsequent testing. Two short-duration tests with short-duration recovery periods were performed on November 16. A 21-h pump test with the pump intake at 1267.2 ft bgs, followed by a 24-h recovery period completed the testing of the screened interval. The test was scheduled for 24 h but was started late because of inclement weather and a Laboratory delayed start. The average pumping rate for the 21-h test was approximately 18.8 gpm.

A 10-hp pump was used for the aquifer tests. A total of approximately 25,626 gal. of groundwater was purged during aquifer testing. Turbidity, temperature, pH, DO, ORP, and specific conductance were measured during the aquifer test. Measured parameters are presented in Appendix B. The R-58 aquifer test results and analysis are presented in Appendix E.

8.3 Dedicated Sampling System Installation

The dedicated sampling system for R-58 was installed between January 9 and 15, 2016. The pumping system utilizes an environmentally retrofitted 4-in. 5-hp Grundfos submersible pump set in a shroud near the top of the screened interval. The pump column is constructed of 1-in. threaded/coupled passivated stainless-steel pipe. One 1-in. stainless-steel check valve was installed at the top of the lowermost pipe joint above the pump shroud to provide redundancy to the built-in check valve in the top of the pump body. A weep valve was installed at the bottom of the uppermost pipe joint to protect the pump column from freezing. To measure water levels in the well, two 1-in.-I.D. schedule 80 polyvinyl chloride (PVC) pipes were installed to sufficient depth to set a dedicated transducer and to provide access for manual water-level measurements. The PVC transducer tubes are equipped with 9-in. sections of 0.010-in. slot screen with a threaded end cap on the bottom of each tube. An In-Situ Level Troll 500 30-psig transducer was installed in one of the PVC tubes to monitor the water level in the well's screened interval.

Sampling system details for R-58 are presented in Figure 8.3-1a. Figure 8.3-1b presents technical notes for the well. Figure 8.3-1c presents a performance curve for the submersible pump installed.

8.4 Wellhead Completion

A reinforced concrete surface pad, 10 ft × 10 ft × 10 in. thick, was installed at the R-58 wellhead. The concrete pad was slightly elevated above the ground surface and crowned to promote runoff. The pad will

provide long-term structural integrity for the well. A brass survey pin was embedded in the northwest corner of the pad. A 16-in.-O.D. steel protective casing with a locking lid was installed around the stainless-steel well riser. A total of four removable bollards, painted yellow for visibility, were set at the outside edges of the pad to protect the well from traffic. Details of the wellhead completion are presented in Figure 8.3-1a.

8.5 Geodetic Survey

A New Mexico licensed professional land surveyor conducted a geodetic survey on January 5, 2016 (Table 8.5-1). The survey data conform to Laboratory Information Architecture project standards IA-CB02, “GIS Horizontal Spatial Reference System,” and IA-D802, “Geospatial Positioning Accuracy Standard for A/E/C and Facility Management.” All coordinates are expressed relative to the New Mexico State Plane Coordinate System Central Zone (North American Datum [NAD] 83); elevation is expressed in feet above mean sea level (amsl) using the National Geodetic Vertical Datum of 1929. Survey points include ground surface elevation near the concrete pad, the top of the brass pin in the concrete pad, the top of the well casing, and the top of the protective casing for the R-58 monitoring well.

8.6 Waste Management and Site Restoration

Waste generated from the R-58 project included drilling fluids, purged groundwater, drill cuttings, decontamination water, and contact waste. A summary of the waste characterization samples collected during drilling, construction, and development of the R-58 well is presented in Table 8.6-1.

All waste streams produced during drilling and development activities were sampled in accordance with “Waste Characterization Strategy Form for R-47, R-58, R-63i, CdV-9-1i” (LANL 2013, 244887).

Fluids produced during drilling, well development, and aquifer testing are expected to be land-applied after a review of associated analytical results per the waste characterization strategy form (WCSF) and the ENV-RCRA-QP-010.2, Land Application of Groundwater. If it is determined the drilling fluids are nonhazardous but cannot meet the criteria for land application, they will be evaluated for treatment and disposal at one of the Laboratory’s wastewater treatment facilities. If analytical data indicate the drilling fluids are hazardous/nonradioactive or mixed low-level waste, the drilling fluids will be disposed of at an authorized facility.

Cuttings produced during drilling are anticipated to be land-applied after a review of associated analytical results per the WCSF and ENV-RCRA-QP-011.2, Land Application of Drill Cuttings. If the drill cuttings do not meet the criteria for land application, they will be disposed of at an authorized facility.

Decontamination fluid used for cleaning equipment is containerized. The fluid waste was sampled and will be disposed of at an authorized facility. Characterization of contact waste will be based upon acceptable knowledge, pending analyses of the waste samples collected from the drill cuttings, purge water, and decontamination fluid.

Site restoration activities will include removing drilling fluids and cuttings from the pit and managing the fluids and cuttings as described above, removing the polyethylene liner, removing the containment area berms, and backfilling and regrading the containment area, as appropriate.

9.0 DEVIATIONS FROM PLANNED ACTIVITIES

Drilling, sampling, and well construction at R-58 were performed as specified in "Drilling Work Plan for Regional Aquifer Well R-58" (LANL 2013, 239226).

10.0 ACKNOWLEDGMENTS

Boart Longyear drilled and installed the R-58 monitoring well.

David C. Schafer designed, implemented, and analyzed the aquifer tests.

TerranearPMC provided oversight on all preparatory and field-related activities.

11.0 REFERENCES AND MAP DATA SOURCES

11.1 References

The following list includes all documents cited in this report. Parenthetical information following each reference provides the author(s), publication date, and ER ID or ESH ID. This information is also included in text citations. ER IDs were assigned by the Environmental Programs Directorate's Records Processing Facility (IDs through 599999), and ESH IDs are assigned by the Environment, Safety, and Health (ESH) Directorate (IDs 600000 and above). IDs are used to locate documents in the Laboratory's Electronic Document Management System and, where applicable, in the master reference set.

Copies of the master reference set are maintained at the NMED Hazardous Waste Bureau and the ESH Directorate. The set was developed to ensure that the administrative authority has all material needed to review this document, and it is updated with every document submitted to the administrative authority. Documents previously submitted to the administrative authority are not included.

LANL (Los Alamos National Laboratory), December 2012. "Drilling Work Plan for Regional Aquifer Well R-58," Los Alamos National Laboratory document LA-UR-12-26784, Los Alamos, New Mexico. (LANL 2012, 212117)

LANL (Los Alamos National Laboratory), April 2013. "Drilling Work Plan for Well CdV-9-1(i)," Los Alamos National Laboratory document LA-UR-13-20779, Los Alamos, New Mexico. (LANL 2013, 239226)

LANL (Los Alamos National Laboratory), July 10, 2013. "Waste Characterization Strategy Form for R-47, R-58, R-63i, CdV-9-1i," Los Alamos National Laboratory, Los Alamos, New Mexico. (LANL 2013, 244887)

LANL (Los Alamos National Laboratory), June 26, 2014. "Storm Water Pollution Prevention Plan, Regional Wells (R-Wells) Drilling, Los Alamos National Laboratory, Revision 1," Los Alamos National Laboratory, Los Alamos, New Mexico. (LANL 2014, 601293)

NMED (New Mexico Environment Department), December 31, 2012. "Approval with Modifications, Drilling Work Plan for Regional Aquifer Well R-58," New Mexico Environment Department letter to P. Maggiore (DOE-LASO) and J.D. Mousseau (LANL) from J.E. Kieling (NMED-HWB), Santa Fe, New Mexico. (NMED 2012, 521741)

TerranearPMC, August 2015. “Field Implementation Plan for Regional Aquifer Well R-58,” plan prepared for Los Alamos National Laboratory, Los Alamos, New Mexico. (TerranearPMC 2015, 601274)

TerranearPMC, August 25, 2015. “IWD [Integrated Work Document] for Drilling and Installation of LANL Well R-58,” Los Alamos, New Mexico. (TerranearPMC 2015, 601273)

11.2 Map Data Sources

Point Feature Locations of the Environmental Restoration Project Database; Los Alamos National Laboratory, Waste and Environmental Services Division, EP2008-0109; 12 April 2010.

Hypsography, 100 and 20 Foot Contour Interval; Los Alamos National Laboratory, ENV Environmental Remediation and Surveillance Program; 1991.

Surface Drainages, 1991; Los Alamos National Laboratory, ENV Environmental Remediation and Surveillance Program, ER2002-0591; 1:24,000 Scale Data; Unknown publication date.

Paved Road Arcs; Los Alamos National Laboratory, KSL Site Support Services, Planning, Locating and Mapping Section; 06 January 2004; as published 28 May 2009.

Dirt Road Arcs; Los Alamos National Laboratory, KSL Site Support Services, Planning, Locating and Mapping Section; 06 January 2004; as published 28 May 2009.

Structures; Los Alamos National Laboratory, KSL Site Support Services, Planning, Locating and Mapping Section; 06 January 2004; as published 28 May 2009.

Technical Area Boundaries; Los Alamos National Laboratory, Site Planning & Project Initiation Group, Infrastructure Planning Division; 4 December 2009.

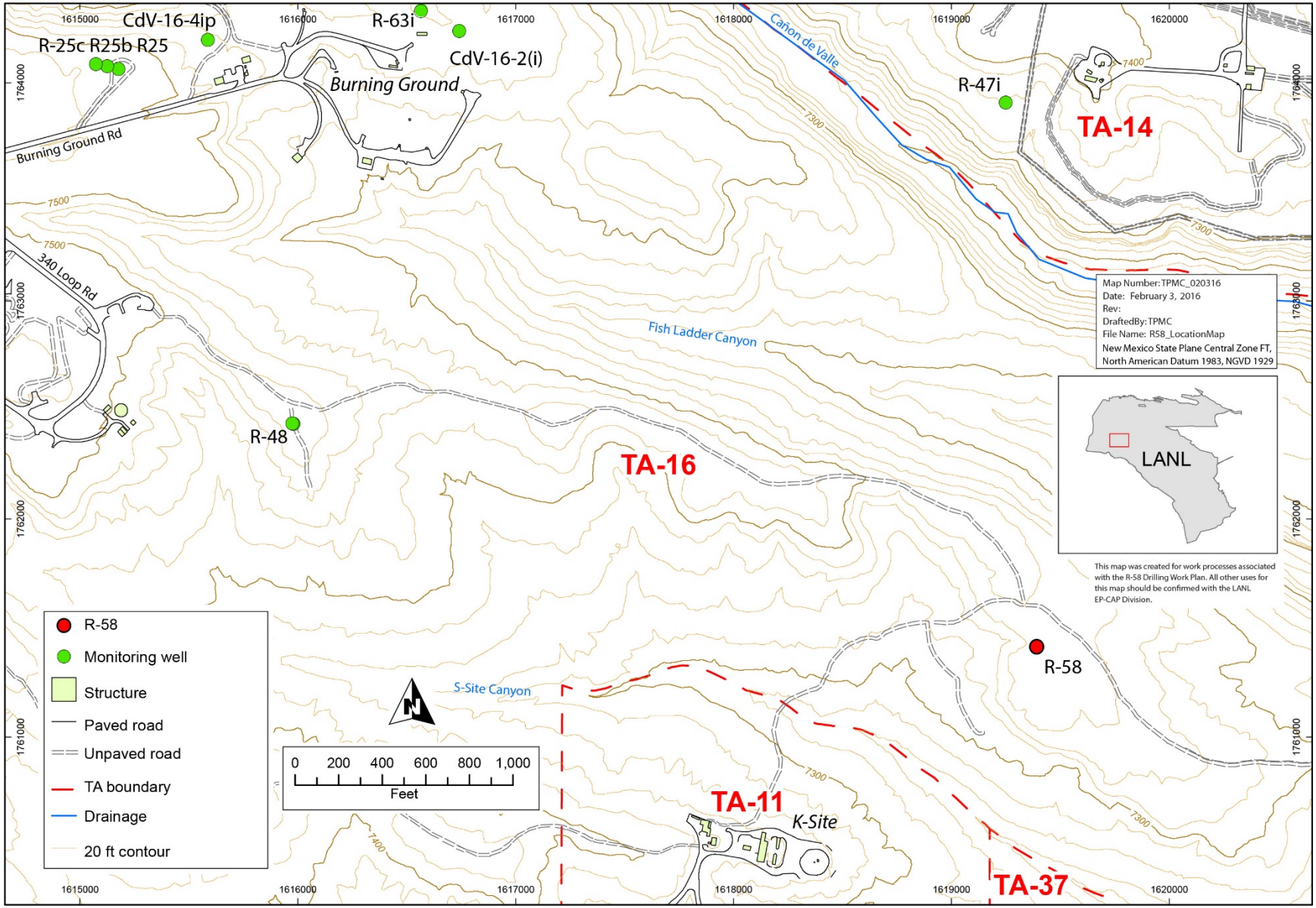

Figure 1.0-1 Location of monitoring well R-58

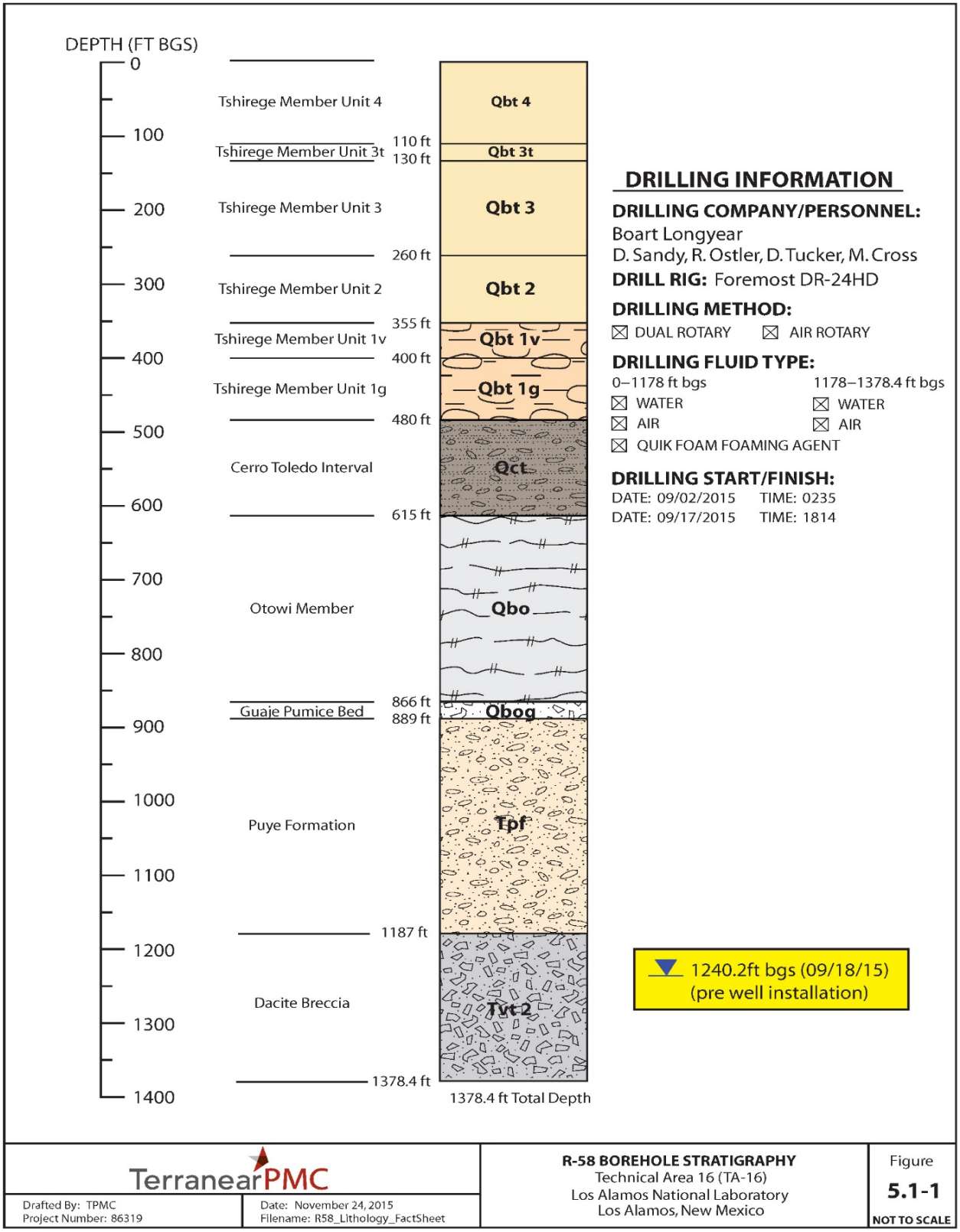

Figure 5.1-1 Monitoring well R-58 borehole stratigraphy

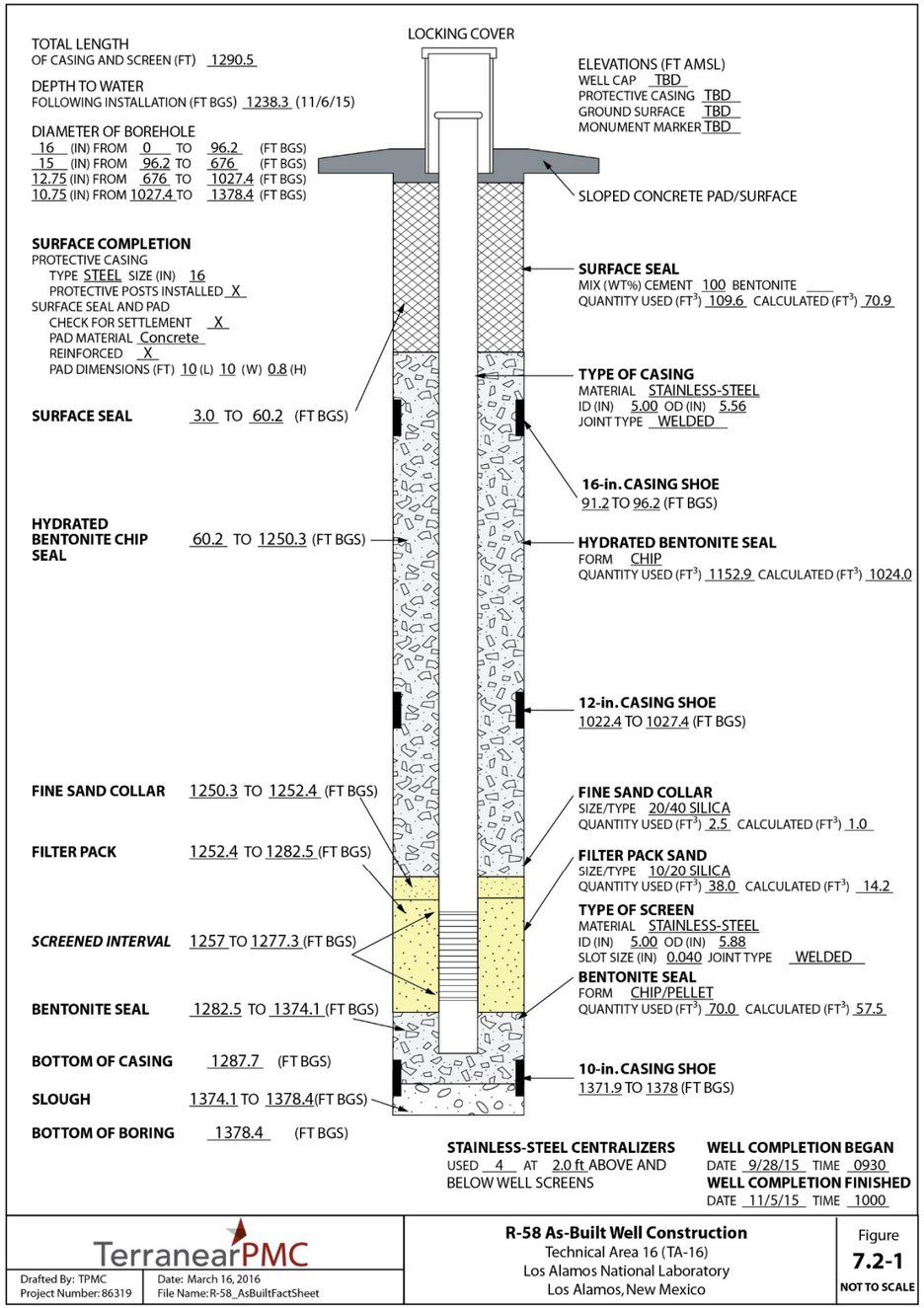

Figure 7.2-1 Monitoring well R-58 as-built well construction diagram

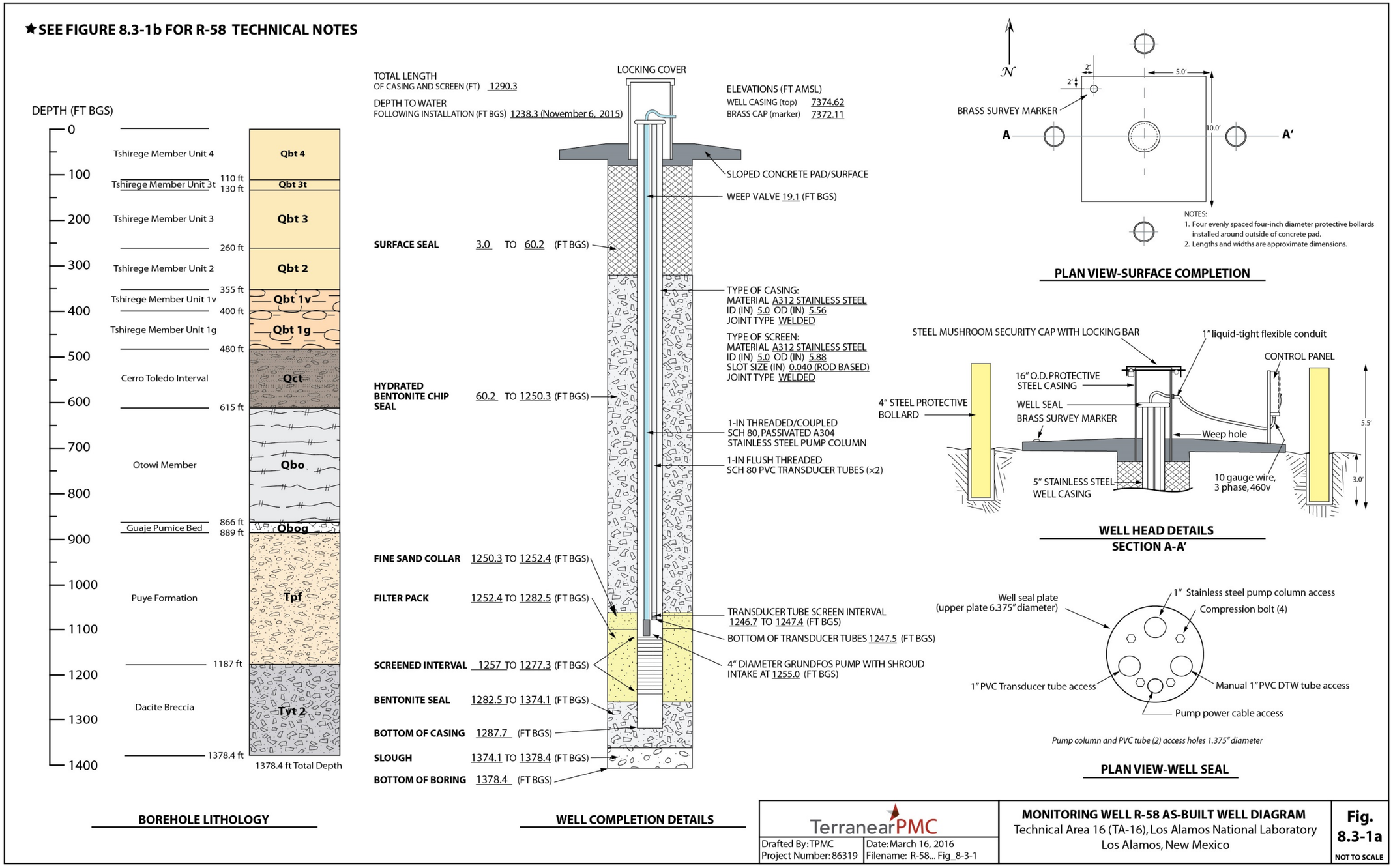

Figure 8.3-1a Monitoring well R-58 as-built diagram with borehole lithology and technical well completion details

R-58 TECHNICAL NOTES:

SURVEY INFORMATION*

Brass Marker

Northing:	1761298.75 ft
Easting:	1619435.65 ft
Elevation:	7372.11 ft AMSL

Well Casing (top of stainless steel)

Northing:	1761295.35 ft
Easting:	1619437.86 ft
Elevation:	7374.62 ft AMSL

BOREHOLE GEOPHYSICAL LOGS

LANL natural gamma log

DRILLING INFORMATION

Drilling Company
Boart Longyear

Drill Rig
Foremost DR-24HD

Drilling Methods
Dual Rotary
Fluid-assisted air rotary, Foam-assisted air rotary

Drilling Fluids
Air, potable water, AQF-2 Foam (to 1178 ft bgs)

MILESTONE DATES

Drilling

Start:	09/02/2015
Finished:	09/17/2015

Well Completion

Start:	09/28/2015
Finished:	11/05/2015

Well Development

Start:	11/06/2015
Finished:	11/13/2015

WELL DEVELOPMENT

Development Methods
Performed swabbing, bailing, and pumping
Total Volume Purged: 39,640 gal.

Parameter Measurements (Final)

pH:	8.04
Temperature:	19.52˚C
Specific Conductance:	107 µS/cm
Turbidity:	5.0 NTU

AQUIFER TESTING

Constant Rate Pumping Test

Water Produced:	25,626 gal.
Average Flow Rate:	18.8 gpm
Performed on:	11/14–19/2015

DEDICATED SAMPLING SYSTEM

Pump (Shrouded)
Make: Grundfos
Model: 10S50-930CBM
S/N: P115450003
Environmental retrofit
Top of pump intake 1252.6 ft bgs
Base of shroud 1255.0 ft bgs

Motor
Make: Franklin Electric
Model: 2343278602
5 hp, 3-phase, 460V

Pump Shroud
Pumps of Oklahoma custom 4.6-in. O.D. schd. 5
A304 stainless steel with schd. 40 pipe connections

Pump Column
1-in. threaded/coupled schd. 80, pickled and passivated A304 stainless steel tubing
Weep valve installed at 19.1 ft bgs
Check valve installed at 1222.5 ft bgs

Transducer Tubes
2 × 1-in. flush threaded schd. 80 PVC tubing, 0.010-in. slot screens at 1246.7-1247.4 ft bgs

Transducer
Make: In-Situ, Inc.
Model: Level TROLL 500
30 psig range (vented)
S/N: 431623

NOTES:
* Coordinates based on New Mexico State Plane Grid Coordinates, Central Zone (NAD83); Elevation expressed in feet amsl using the National Geodetic Vertical Datum of 1929.

TerranearPMC	R-58 TECHNICAL NOTES	Fig. 8.3-1b
Drafted By: TPMC Project Number: 86319	Date: February 3, 2016 Filename: R-58_TechnicalNotes_Fig8.3-1b	Technical Area 16 (TA-16) Los Alamos National Laboratory Los Alamos, New Mexico	NOT TO SCALE

Figure 8.3-1b As-built technical notes for monitoring well R-58

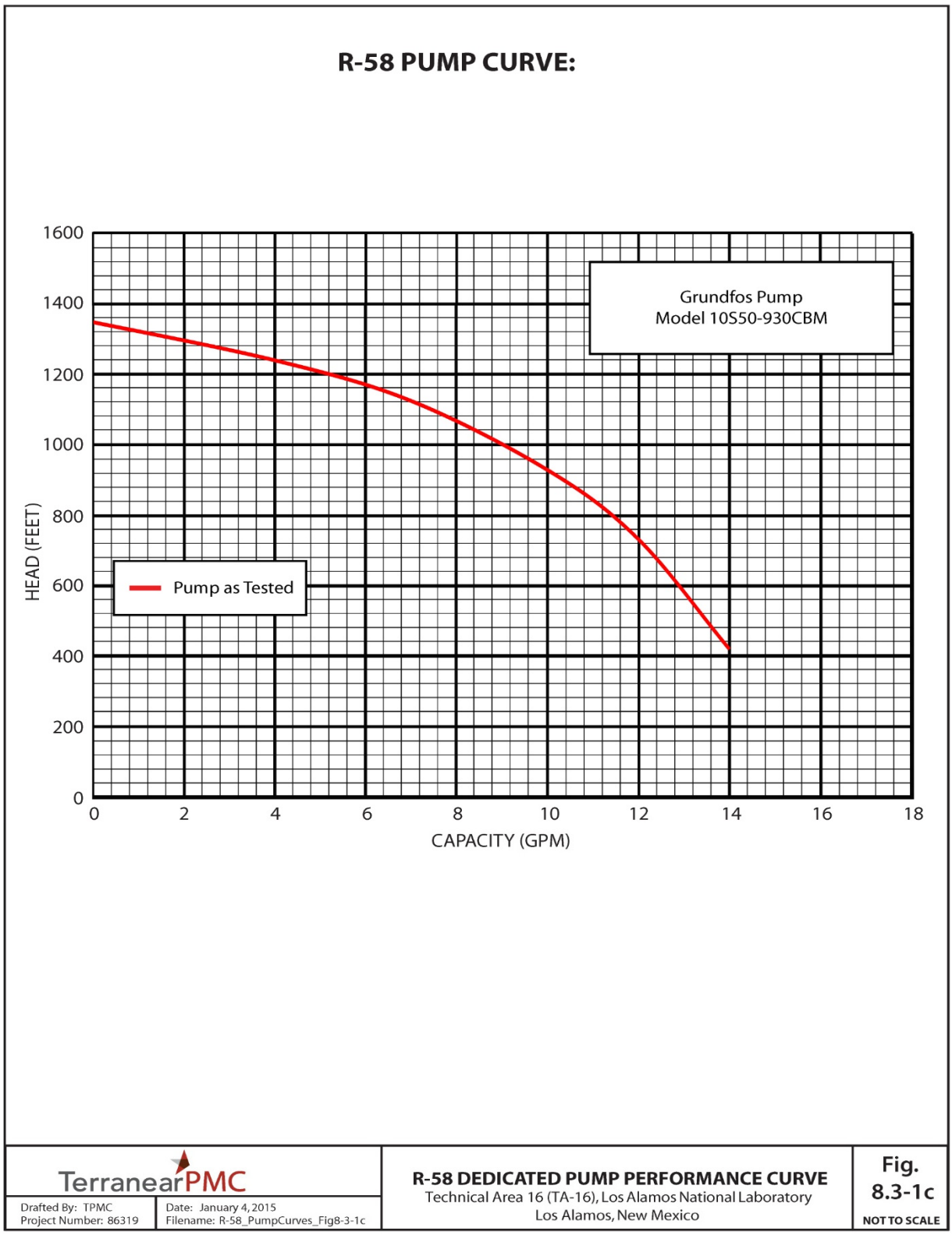

Figure 8.3-1c Pump curve for monitoring well R-58

Table 3.1-1
Fluid Quantities Used during R-58 Drilling and Well Construction

Date	Depth Interval (ft bgs)	Water (gal.)	Cumulative Water (gal.)	Quick Foam (gal.)	Cumulative Quick Foam (gal.)
Drilling					
9/1/15	0–36	555	555	0	0
9/2/15	36–296	2546	3101	15.75	15.75
9/3/15	296–676	3881	6982	40	55.75
9/6/15	600a–851	3350	10,332	16	71.75
9/7/15	851–1027	3860	14,192	25	96.75
9/14/15	1022[a]–1121	2385	16,577	12.75	109.5
9/15/15	1121–1178	1350	17,927	6	115.5
9/16/15	1178–1278	1985	19,912	n/a[b]	n/a
9/17/15	1278–1378.4	2800	22,712	n/a	n/a
Well Construction					
10/9/15	1374.1–1355	1488	1488	n/a	n/a
10/10/15	1355–1321	2265	3753	n/a	n/a
10/11/15	1321–1283	2888	6641	n/a	n/a
10/12/15	1283–1270	1381	8022	n/a	n/a
10/13/15	1270–1261	1079	9101	n/a	n/a
10/14/15	1261–1257	589	9690	n/a	n/a
10/15/15	1257–1255	1265	10,955	n/a	n/a
10/16/15	1255–1252	319	11,274	n/a	n/a
10/17/15	1252–1241	2034	13,308	n/a	n/a
10/18/15	1241–1220	2827	16,135	n/a	n/a
10/19/15	1220–1188	3600	19,735	n/a	n/a
10/21/15	1188–1165	1514	21,249	n/a	n/a
10/22/15	1165–1101	2978	24,227	n/a	n/a
10/23/15	1101–1032	3324	27,551	n/a	n/a
10/24/15	1032–1028	384	27,935	n/a	n/a
10/28/15	1028–1007	79	28,014	n/a	n/a
10/29/15	1007–936	541	28,555	n/a	n/a
10/30/15	936–859	337	28,892	n/a	n/a
10/31/15	859-651	679	29,571	n/a	n/a
11/1/15	651–472	665	30,236	n/a	n/a
11/2/15	472–223	900	31,136	n/a	n/a
11/3/15	223–60	459	31,595	n/a	n/a
11/4/15	60–3	550	32,145	n/a	n/a
Total Water Volume (gal.)					
R-58	54,857				

[a] Drilled out slough.

[b] n/a = Not applicable.

Table 4.2-1
Summary of Groundwater Screening Samples Collected during Well Development and Aquifer Testing at Well R-58

Location ID	Sample ID	Date Collected	Collection Depth (ft bgs)	Sample Type	Analysis
Well Development					
R-58	CACV-15-104376	11/10/15	1277.3	Groundwater, Pumped	TOC
R-58	CACV-15-104377	11/11/15	1277.3	Groundwater, Pumped	TOC
R-58	CACV-15-104378	11/12/15	1277.3	Groundwater, Pumped	TOC
R-58	CACV-15-104379	11/13/15	1277.3	Groundwater, Pumped	TOC
Aquifer Testing					
R-58	CACV-15-104381	11/18/15	1254.0	Groundwater, Pumped	TOC, Alkalinity
R-58	CACV-15-104382	11/18/15	1254.0	Groundwater, Pumped	Anions, Metals

Table 6.0-1
R-58 Geophysical Logging Run

Date	Logging Interval	Description
9/18/15	0–1378.4 ft bgs	Laboratory natural gamma ray log run through 10-in. casing to TD at 1378.4 ft bgs

Table 7.2-1
R-58 Monitoring Well Annular Fill Materials

Material	Calculated Volume	Actual Volume
Upper surface seal: cement slurry	70.6 ft^3	109.6 ft^3
Upper bentonite seal: bentonite chips	1024.0 ft^3	1152.9 ft^3
Fine sand collar: 20/40 silica sand	1.0 ft^3	2.5 ft^3
Filter pack: 10/20 silica sand	14.2 ft^3	38.0 ft^3
Backfill: bentonite pellets/chips	57.5 ft^3	70.0 ft^3

Table 8.5-1
R-58 Survey Coordinates

Identification	Northing	Easting	Elevation
R-58 brass pin embedded in pad	1761298.75	1619435.65	7372.11
R-58 ground surface near pad	1761300.82	1619432.36	7372.02
R-58 top of stainless-steel well casing	1761295.36	1619437.86	7374.62
R-58 top of 16-in. protective casing	1761294.89	1619437.96	7375.61

Note: All coordinates are expressed as New Mexico State Plane Coordinate System Central Zone (NAD 83); elevation is expressed in ft amsl using the National Geodetic Vertical Datum of 1929.

Table 8.6-1
Summary of Waste Samples Collected during
Drilling, Development and Sample System Installation at R-58

Location ID	Sample ID	Date Collected	Description	Sample Type
R-58	WST16-15-104049	9/2/15	Drill fluids VOC[a]/SVOC[b] initial sample–UF[c]	Liquid
R-58	WST16-15-104052	9/2/15	Drill fluids VOC/SVOC initial sample–UF FD[d]	Liquid
R-58	WST16-15-104055	9/2/15	Drill fluids VOC/SVOC initial sample–UF FTB[e]	Liquid
R-58	WST16-15-104050	9/6/15	Drill fluids VOC/SVOC midpoint sample–UF	Liquid
R-58	WST16-15-104053	9/6/15	Drill fluids VOC/SVOC midpoint sample–UF FD	Liquid
R-58	WST16-15-104056	9/6/15	Drill fluids VOC/SVOC midpoint sample–UF FTB	Liquid
R-58	WST16-15-104051	9/17/15	Drill fluids VOC/SVOC final sample–UF	Liquid
R-58	WST16-15-104054	9/17/15	Drill fluids VOC/SVOC final sample–UF FD	Liquid
R-58	WST16-15-104057	9/17/15	Drill fluids VOC/SVOC final sample–UF FTB	Liquid
R-58	WST16-16-105652	10/15/15	Drill fluids non-VOC sample–UF	Liquid
R-58	WST16-16-105651	10/15/15	Drill fluids non-VOC sample–F[f]	Liquid
R-58	WST16-15-104058	9/2/15	Drill cuttings VOC initial sample	Solid
R-58	WST16-15-104061	9/2/15	Drill cuttings VOC initial sample–FTB	Solid
R-58	WST16-15-104059	9/6/15	Drill cuttings VOC midpoint sample	Solid
R-58	WST16-15-104062	9/6/15	Drill cuttings VOC midpoint sample–FTB	Solid
R-58	WST16-15-104060	9/17/15	Drill cuttings VOC final sample	Solid
R-58	WST16-15-104063	9/17/15	Drill cuttings VOC final sample–FTB	Solid
R-58	WST16-16-105650	10/15/15	Drill cuttings non-VOC sample	Solid
R-58	WST16-16-110082	1/26/16	New Mexico Special Waste sample	Solid
R-58	WST16-16-110083	1/26/16	New Mexico Special Waste sample–FTB	Solid
R-58	WST16-16-109653	12/16/15	Decontamination fluids sample–F	Liquid
R-58	WST16-16-109654	12/16/15	Decontamination fluids sample–UF	Liquid
R-58	WST16-16-109655	12/16/15	Decontamination fluids sample–FD	Liquid
R-58	WST16-16-109656	12/16/15	Decontamination fluids sample–FTB	Liquid
R-58	WST16-16-109657	12/16/15	Development fluids sample–F	Liquid
R-58	WST16-16-109658	12/16/15	Development fluids sample–UF	Liquid
R-58	WST16-16-109659	12/16/15	Development fluids sample–FD	Liquid
R-58	WST16-16-109660	12/16/15	Development fluids sample–FTB	Liquid

[a] VOC = Volatile organic compound.

[b] SVOC = Semivolatile organic compound.

[c] UF = Unfiltered sample.

[d] FD = Field duplicate.

[e] FTB = Field trip blank.

[f] F = Filtered sample.

Appendix A

Borehole R-58 Lithologic Log

BOREHOLE IDENTIFICATION (ID): R-58	**TECHNICAL AREA (TA):** 16	
DRILLING COMPANY: Boart Longyear Company	**START DATE/TIME:** 9/02/15; 0235	**END DATE/TIME:** 9/17/15; 1814
DRILLING METHOD: Rotary and Dual Rotary	**MACHINE**: Foremost DR24 HD	**SAMPLING METHOD:** Grab
GROUND ELEVATION: 7372.02 ft amsl		**TOTAL DEPTH:** 1378.4 ft
DRILLERS: M. Cross, R. Ostler, D. Sandy, D. Tucker	**SITE GEOLOGISTS:** T. Sower, J. Jordan, E. Tow, L. Anderson	

DEPTH (ft bgs)	LITHOLOGY	LITHOLOGIC SYMBOL	NOTES
0–15	**UNIT 4 OF THE TSHIREGE MEMBER OF THE BANDELIER TUFF:** Rhyolitic Tuff—very pale orange (10YR 8/2) to orange-brown (10YR 7/4) poorly welded, crystal- and lithic-rich tuff. 0–15 ft WR/+10F/+35F: 55–65% quartz and sanidine crystals; 30%–40% powdered ash-flow tuff and welded tuff fragments; 5% rhyolitic and dacitic lithic clasts.	Qbt 4	Note: Drill cuttings for descriptive analysis were collected at 5-ft intervals from ground surface to borehole total depth (TD) at 1378.4 ft bgs. Unit 4 of the Tshirege Member of the Bandelier Tuff (Qbt 4), encountered from 0 to 110 ft below ground surface (bgs), is 110 ft thick.
15–25	Rhyolitic Tuff—very pale orange (10YR 8/2) to orange-brown (10YR 7/4) poorly welded, crystal- and lithic-rich tuff. 15–25 ft WR: 85% powdered ash flow tuff and welded tuff fragments; 10% rhyolitic and dacitic lithic clasts; 5% quartz and sanidine crystals. +10F: 70%–95% crystal-bearing ash-flow tuff fragments; 5%–30% dacitic and rhyolitic lithic clasts. +35F: 70%–75% quartz and sanidine crystals; 20%–25% tuff fragments; 5% dacitic lithic clasts.	Qbt 4	
25–95	Rhyolitic Tuff— Light gray (N7) to dark gray (N3) poorly welded, crystal- and lithic-rich tuff. 25%–95 ft WR: 60% powdered ash-flow tuff and welded tuff fragments; 30% rhyolitic and dacitic lithic clasts; 10% quartz and sanidine crystals. +10F: 60%–70% dacitic and rhyolitic lithic clasts; 30%–40% crystal-bearing ash-flow tuff fragments. +35F: 85%–90% quartz and sanidine crystals; 5%–10% tuff fragments; 5%–10% dacitic lithic clasts.	Qbt 4	
95–105	Rhyolitic Tuff— Light gray (N7) to dark gray (N3) poorly welded, crystal- and lithic-rich tuff. 95%–105 ft WR: 85% powdered ash flow tuff and welded tuff fragments; 10% rhyolitic and dacitic lithic clasts; 5% quartz and sanidine crystals. +10F: 50%–60% crystal-bearing ash-flow tuff fragments; 40%–50% dacitic and rhyolitic lithic clasts. +35F: 60%–70% quartz and sanidine crystals; 25%–35% tuff fragments; 5% dacitic lithic clasts.		

DEPTH (ft bgs)	LITHOLOGY	LITHOLOGIC SYMBOL	NOTES
105–110	Rhyolitic Tuff— Light gray (N7) to dark gray (N3) poorly welded, crystal- and lithic-rich tuff. 25–95 ft WR: 60% powdered ash flow tuff and welded tuff fragments; 30% rhyolitic and dacitic lithic clasts; 10% quartz and sanidine crystals. +10F: 60%–70% dacitic and rhyolitic lithic clasts; 30%–40% crystal-bearing ash flow tuff fragments. +35F: 85%–90% quartz and sanidine crystals; 5%–10% tuff fragments; 5%–10% dacitic lithic clasts.	Qbt 4	The Qbt 4/Qbt 3t contact, estimated at 110 ft bgs, is based on natural gamma logging and drilling noted in harder rock.
110–130	**UNIT 3t OF THE TSHIREGE MEMBER OF THE BANDELIER TUFF:** Rhyolitic Tuff— Light gray (N7) to medium light gray (N6) poorly welded, crystal- and lithic-rich tuff. 25–95 ft WR: 60% powdered ash flow tuff and welded tuff fragments; 30% rhyolitic and dacitic lithic clasts; 10% quartz and sanidine crystals. +10F: 60%–70% dacitic and rhyolitic lithic clasts; 30%–40% crystal-bearing ash-flow tuff fragments. +35F: 85–90% quartz and sanidine crystals; 5%–10% tuff fragments; 5%–10% dacitic lithic clasts.	Qbt 3t	Unit 3t of the Tshirege Member of the Bandelier Tuff (Qbt 3t), encountered from 110 to 130 ft bgs, is approximately 20 ft thick. The Qbt 3t/Qbt 3 contact, estimated at 130 ft bgs, is based on increase in crystals in cuttings.
130–155	**UNIT 3 OF THE TSHIREGE MEMBER OF THE BANDELIER TUFF:** Rhyolitic Tuff—light gray (N7) to medium dark gray (N4) poorly welded, crystal- and lithic-rich tuff. 130–155 ft WR/+10F/+35: 40%–70% tuff fragments; 30%–60% quartz and sanidine crystals; <10% gray rhyolitic and dacitic lithic clasts.	Qbt 3	Unit 3 of the Tshirege Member of the Bandelier Tuff (Qbt 3), encountered from 130 to 260 ft bgs, is approximately 130 ft thick.
155–200	Rhyolitic Tuff—light gray (N7) to medium dark gray (N4) poorly welded, crystal- and lithic-rich tuff. 155–200 ft WR/+10F: 60–80% tuff fragments; 20%–40% quartz and sanidine crystals; <10% gray rhyolitic and dacitic lithic clasts. +35F: 80%–95% quartz and sanidine crystals; 5%–20% tuff fragments; <5% dacitic lithic clasts.	Qbt 3	
200–215	Rhyolitic Tuff—light gray (N7) to pale yellowish brown (10TR 6/2) poorly welded, crystal-rich tuff. 200–215 ft WR: 60%–80% quartz and sanidine crystals; 20–40% tuff fragments; <5% gray rhyolitic and dacitic lithic clasts. +10F: 50%–60% quartz and sanidine crystals; 40%–50% tuff fragments; <5% gray rhyolitic and dacitic lithic clasts. +35F: 95%–100% quartz and sanidine crystals; <5% tuff fragments; <5% dacitic lithic clasts.	Qbt 3	

DEPTH (ft bgs)	LITHOLOGY	LITHOLOGIC SYMBOL	NOTES
215–230	Rhyolitic Tuff—light gray (N7 to pale yellowish brown (10TR 6/2) poorly welded, crystal- and lithic-rich tuff. 155–200 ft WR/+10F: 60%–80% tuff fragments; 20%–40% quartz and sanidine crystals; <10% gray rhyolitic and dacitic lithic clasts. +35F: 80%–95% quartz and sanidine crystals; 5%–20% tuff fragments; <5% dacitic lithic clasts.	Qbt 3	
230–260	Rhyolitic Tuff—light gray (N7) to pale yellowish brown (10TR 6/2) very poorly welded, crystal-rich tuff. 230–260 ft WR/+10: 70%–80% tuff fragments; 20%–30% quartz and sanidine crystals. +35F: 60%–70% tuff fragments; 30%–40% quartz and sanidine crystals	Qbt 3	The Qbt 3/Qbt 2 contact, estimated at 260 ft bgs, is based on decrease in crystals in cuttings.
260–300	**UNIT 2 OF THE TSHIREGE MEMBER OF THE BANDELIER TUFF** Rhyolitic Tuff—gray (N6) to light brown (5YR 5/6), strongly welded, crystal-bearing tuff. 260–300 ft WR/+10/+35: 60%–70% welded tuff fragments; 30%–40% quartz and sanidine crystals.	Qbt 2	Unit 2 of the Tshirege Member of the Bandelier Tuff (Qbt 2), encountered from 260 to 355 ft bgs, is approximately 95 ft thick.
300–310	Rhyolitic Tuff—gray (N6) to pale yellowish brown (10YR 6/2), strongly welded, crystal-bearing tuff. 300–310 ft WR/+35: 50%–60% quartz and sanidine crystals; 40%–50% tuff fragments. +10F: Insufficient returns to sieve.	Qbt 2	Note: Poor recovery in +10
310–315	Rhyolitic Tuff—gray (N6) to light brown (5YR 5/6), strongly welded, crystal-bearing tuff. 260–300 ft WR/+10/+35: 60%–70% welded tuff fragments; 30%–40% quartz and sanidine crystals.	Qbt 2	
315–355	Rhyolitic Tuff—gray (N6) to pale reddish brown (10R 7/2), moderately welded, crystal-rich tuff 315–355 ft WR: 70%–80% tuff fragments; 20%–30% quartz and sanidine crystals. +10F: 70%–80% crystal-bearing tuff fragments; 20%–30% quartz and sanidine crystals. +35F: 70%–90% quartz and sanidine crystals; 5%–30% welded tuff fragments; <5% white to orange devitrified pumice clasts.	Qbt 2	The Qbt 2/Qbt 1v contact, estimated at 355 ft bgs, is based on increase in crystals in cuttings.

DEPTH (ft bgs)	LITHOLOGY	LITHOLOGIC SYMBOL	NOTES
355–400	**UNIT 1v OF THE TSHIREGE MEMBER OF THE BANDELIER TUFF** Rhyolitic Tuff—light gray (N7) to pale brown (5YR 5/2), poorly welded, crystal-rich tuff, with abundant light gray (N7) dacitic lithics. 355–400 ft WR/+10: 50%–60% light gray lithic fragments; 30%–40% crystal-rich tuff fragments; 10% quartz and sanidine crystals. +35F: 85%–95% quartz and sanidine crystals; 5%–10% lithics; <5% tuff fragments.	Qbt 1v	Unit 1v of the Tshirege Member of the Bandelier Tuff (Qbt 1v), encountered from 355 to 400 ft bgs, is approximately 45 ft thick. The Qbt 1v/Qbt 1g contact, estimated at 400 ft bgs, is based on natural gamma logging and the presence of glassy pumice fragments.
400–405	**UNIT 1g OF THE TSHIREGE MEMBER OF THE BANDELIER TUFF** Rhyolitic Tuff—light gray (N7), poorly welded, crystal-rich tuff, with abundant light gray (N7) rhyolitic and dacitic lithics. 400–405 ft WR: 50%–60% quartz and sanidine crystals; 20%–30%.light gray lithic fragments; 20%–30% pumice and tuff fragments. +10F: 80%–90% light gray dacite lithic fragments; <10% pumice and tuff fragments; <10% euhedral quartz and sanidine crystals. +35F: 85%–95% quartz and sanidine crystals; 5%–10% dacite lithics; <5% tuff fragments and pumice.	Qbt 1g	Unit 1g of the Tshirege Member of the Bandelier Tuff (Qbt 1g), encountered from 400 to 480 ft bgs, is approximately 80 ft thick.
405–465	Rhyolitic Tuff—light gray (N7), poorly welded, crystal-rich tuff, with abundant light gray (N7) rhyolitic and dacitic lithics. 405–465 ft WR/+10F: 80%–90% light gray dacite lithic fragments; <10% pumice and tuff fragments; <10% euhedral quartz and sanidine crystals. +35F: 75%–85% quartz and sanidine crystals; 15%–20% dacite lithics; <5% tuff fragments and pumice.	Qbt 1g	
465–480	Rhyolitic Tuff—light gray (N7), poorly welded, crystal-rich tuff, with abundant light gray (N7) rhyolitic and dacitic lithics. 465–480 ft WR/+10F: 90% light gray dacite lithic fragments; 5% pumice and tuff fragments; <5% euhedral quartz and sanidine crystals. +35F: 75%–85% quartz and sanidine crystals; 15%–20% dacite lithics; <5% tuff fragments and pumice.	Qbt 1g	The Qbt 1g/Qct contact, estimated at 480 ft bgs, is based on color change and increase abundance of pumice in cuttings.

DEPTH (ft bgs)	LITHOLOGY	LITHOLOGIC SYMBOL	NOTES
480–500	**CERRO TOLEDO INTERVAL** Pumiceous Sediments—sand to gravel size angular to subangular white pumice clasts with minor quartz, obsidian, and volcaniclastic sediments. 480–500 ft WR/+10F: 60%–80% pumice clasts with orange surface alteration up to 15 mm; 20%–40% gray dacite and varicolored rhyolite clasts up to 15 mm; trace quartz grains. +35F: 50%–70% quartz and sanidine grains; 20%–30% pumice clasts; 10%–20% dacite and rhyolite grains; trace obsidian fragments.	Qct	The Cerro Toledo interval (Qct), encountered from 480 to 615 ft bgs, is approximately 135 ft thick.
500–510	Pumiceous Sediments—sand to gravel size angular to subangular white pumice clasts with minor quartz, obsidian, and volcaniclastic sediments. 500–510 ft WR/+10F: 50%–60% pumice clasts with orange surface alteration up to 15 mm; 40%–50% gray dacite and varicolored rhyolite clasts up to 15 mm; trace quartz grains. +35F: 20%–40% pumice clasts; 20%–40% dacite and rhyolite grains; 20%–40% quartz and sanidine grains; trace obsidian fragments.	Qct	
510–520	Pumiceous Sediments—sand to gravel size angular to subangular white pumice clasts with minor quartz, obsidian, and volcaniclastic sediments. 510–520 ft WR/+10F: 50%–60% pumice clasts with orange surface alteration up to 15 mm; 40%–50% gray dacite and varicolored rhyolite clasts up to 15 mm; trace quartz grains. +35F: 50%–70% quartz and sanidine grains; 20%–30% pumice clasts; 10%–20% dacite and rhyolite grains; trace obsidian fragments.	Qct	
520–555	Pumiceous Sediments—sand to gravel size angular to subangular white pumice clasts with minor quartz, obsidian, and volcaniclastic sediments. 520–555 ft WR/+10F: 50%–60% pumice clasts with orange surface alteration up to 15 mm; 40%–50% gray dacite and varicolored rhyolite clasts up to 15 mm; trace quartz grains. +35F: 20%–40% pumice clasts; 20%–40% dacite and rhyolite grains; 20%–40% quartz and sanidine grains; trace obsidian fragments.	Qct	

DEPTH (ft bgs)	LITHOLOGY	LITHOLOGIC SYMBOL	NOTES
555–615	Pumiceous Sediments—sand to gravel size angular to subangular white pumice clasts with minor quartz, obsidian, and volcaniclastic sediments. 555–645 ft WR/+10F: 50%–70% gray dacite and varicolored rhyolite clasts up to 15 mm; 30%–50% pumice clasts with orange surface alteration up to 15 mm; trace quartz grains. +35F: 20–40% pumice clasts; 20%–40% dacite and rhyolite grains; 20%–40% quartz and sanidine grains; trace obsidian fragments.	Qct	The Qct/Qbo contact, estimated at 615 ft bgs, is based on color change and decreased abundance of pumice in cuttings and presence of varied volcanoclastic grains in cuttings.
615–635	**OTOWI MEMBER OF THE BANDELIER TUFF** Rhyolitic Tuff—white (N9), poorly welded, pumice- and lithic-rich tuff. 615–635 ft WR/+10F: 98%–99% rhyolite and dacite lithic fragments; <2% quartz grains; trace white pumice. +35F: 60%–90% lithic fragments; 10%–40% quartz grains; trace pumice.	Qbo	The Otowi Member of the Bandelier Tuff (Qbo), encountered from 615 to 866 ft bgs, is approximately 251 ft thick.
635–680	Rhyolitic Tuff—white (N9), poorly welded, pumice- and lithic-rich tuff. 635–680 ft WR/+10F: 80%–95% rhyolite and dacite lithic fragments; 5–20% orange or white pumice; trace quartz grains. +35F: 70%–90% lithic fragments; 5%–25% quartz grains; 5%–10% pumice.	Qbo	Note: 650–655 ft poor recovery in +35F
680–690	Rhyolitic Tuff—white (N9), poorly welded, pumice- and lithic-rich tuff. 680–690 ft WR/+10F: 60%–80% rhyolite and dacite lithic fragments; 20%–40% orange or white pumice; trace quartz grains. +35F: 50%–80% lithic fragments; 20%–30% quartz grains; 10%–20% pumice.	Qbo	
690–700	Rhyolitic Tuff—white (N9), poorly welded, pumice- and lithic-rich tuff. 690–700 ft WR/+10F: 40%–60% rhyolite and dacite lithic fragments; 40%–60% orange or white pumice; trace quartz grains. +35F: 40%–60% lithic fragments; 30%–50% pumice; 10%–20% quartz grains.	Qbo	
700–730	Rhyolitic Tuff—white (N9), poorly welded, pumice- and lithic-rich tuff. 700–730 ft WR/+10F: 60%–80% rhyolite and dacite lithic fragments; 20%–40% orange or white pumice; trace quartz grains. +35F: 50%–80% lithic fragments; 20%–30% quartz grains; 10%–20% pumice.	Qbo	

DEPTH (ft bgs)	LITHOLOGY	LITHOLOGIC SYMBOL	NOTES
730–800	Rhyolitic Tuff—white (N9), poorly welded, pumice- and lithic-rich tuff. 730–800 ft WR/+10F: 50%–70% rhyolite and dacite lithic fragments; 30%–50% white pumice; trace quartz grains. +35F: 50%–70% lithic fragments; 20%–40% pumice; 20%–30% quartz grains.	Qbo	
800–815	Rhyolitic Tuff—white (N9), poorly welded, pumice- and lithic-rich tuff. 800–815 ft WR/+10F: 60%–80% rhyolite and dacite lithic fragments; 20%–40% white pumice; trace quartz grains. +35F: 50%–70% lithic fragments; 20%–40% pumice; 10%–20% quartz grains.	Qbo	
815–866	Rhyolitic Tuff—white (N9), poorly welded, pumice- and lithic-rich tuff. 815–866 ft WR/+10F: 50%–70% rhyolite and dacite lithic fragments; 30%–50% white pumice; trace quartz grains. +35F: 50%–70% lithic fragments; 20%–40% pumice; 20%–30% quartz grains.	Qbo	The Qbo/Qbog contact, estimated at 866 ft bgs, is based on increased abundance of pumice in cuttings, and natural gamma logging.
866–889	**GUAJE PUMICE BED OF THE OTOWI MEMBER OF THE BANDELIER TUFF** Rhyolitic Tuff—white (N9), poorly welded, pumice- and lithic-rich tuff. 866–889 ft WR/+10F: 30%–70% rhyolite and dacite lithic fragments; 30%–70% white pumice; trace quartz grains. +35F: 30%–70% lithic fragments; 20%–50% pumice; 10%–30% quartz grains.	Qbog	The Guaje Pumice Bed of the Otowi Member of the Bandelier Tuff (Qbog), encountered from 866 to 889 ft bgs, is approximately 23 ft thick. The Qbog/Tpf contact, estimated at 889 ft bgs, is based on natural gamma logging and decreased abundance of pumice in cuttings.
889–975	**PUYE FORMATION** Volcaniclastic Sediments—sand to gravel size dacitic and rhyolitic sediments. 889–975 ft WR/ +10F: 100% subangular grains of dacite and rhyolite up to 20 mm. +35F: 98%–100% dacite and rhyolite grains; <2% quartz and sanidine grains.	Tpf	The Puye Formation (Tpf), encountered from 889 to 1187 ft bgs, is at least 298 ft thick.
975–1030	Volcaniclastic Sediments—clay to gravel size dacitic and rhyolitic sediments. 975–1030 ft WR/ +10F: 100% subangular grains of dacite and rhyolite up to 20 mm with silt and clay coating. +35F: 98%–100% dacite and rhyolite grains; <2% quartz and sanidine grains.	Tpf	
1030–1080	Volcaniclastic Sediments—sand to gravel size dacitic and rhyolitic sediments. 1030–1080 ft WR/ +10F: 100% subangular grains of dacite and rhyolite up to 20 mm. +35F: 98%–100% dacite and rhyolite grains; <2% quartz and sanidine grains.	Tpf	

DEPTH (ft bgs)	LITHOLOGY	LITHOLOGIC SYMBOL	NOTES
1080–1095	Volcaniclastic Sediments—clay to gravel size dacitic and rhyolitic sediments. 1080–1095 ft WR/ +10F: 100% subangular grains of dacite and rhyolite up to 20 mm with clay coating. +35F: 98%–100% dacite and rhyolite grains; <2% quartz and sanidine grains.	Tpf	
1095–1135	Volcaniclastic Sediments—sand to gravel size dacitic and rhyolitic sediments. 1095–1135 ft WR/ +10F: 100% subangular grains of dacite and rhyolite up to 20 mm. +35F: 98%–100% dacite and rhyolite grains; <2% quartz and sanidine grains	Tpf	
1135–1187	Volcaniclastic Sediments—clay to gravel size dacitic and rhyolitic sediments. 1080–1095 ft WR/ +10F: 98%–100% subangular grains of dacite and rhyolite up to 20 mm with clay coating; <2% pumice clasts. +35F: 98%–100% dacite and rhyolite grains; <2% quartz and sanidine grains.	Tpf	Note: 1175 to 1185 ft bgs is finer grained than above. The Tpf/Tvt 2 contact, estimated at 1187 ft bgs, is based on color change of fragments and abrupt slowing of penetration rate during drilling.
1187–1205	**TSCHICOMA FORMATION, younger dacite flow breccia** Dacite breccia—Grey (N4 to N6) to maroon (5R 4/2) quartz and hornblende-bearing volcanic deposits 1187–1205 ft WR/+10F: 100% angular fragments of dacite with minor oxidation and variable alteration. +35F: 99%–100% angular fragments of dacite with minor oxidation and variable alteration; trace quartz, plagioclase, and hornblende crystals.	Tvt 2	The dacite breccia (Tvt 2), encountered from 1187 to 1378.4 ft bgs, is at least 191.4 ft thick.
1205–1230	Dacite breccia—Grey (N4 to N6) to maroon (5R 4/2) quartz and hornblende-bearing volcanic deposits 1205–1230 ft WR/+10F: 100% angular fragments of dacite with very minor oxidation and variable alteration. +35F: 99%–100% angular fragments of dacite with minor oxidation and variable alteration; trace quartz, plagioclase, and hornblende crystals.	Tvt 2	Note: Less oxidized than above
1230–1295	Dacite breccia—Grey (N4 to N6) to maroon (5R 4/2) quartz and hornblende-bearing volcanic deposits 1230–1295 ft WR/+10F: 100% angular fragments of dacite with moderate oxidation and variable alteration. +35F: 99%–100% angular fragments of dacite with minor oxidation and variable alteration; trace quartz, plagioclase, and hornblende crystals.	Tvt 2	Note: More oxidized than above

DEPTH (ft bgs)	LITHOLOGY	LITHOLOGIC SYMBOL	NOTES
1295–1340	Dacite Breccia—Grey (N4 to N6) to maroon (5R 4/2) quartz and hornblende-bearing volcanic deposits 1295–1340 ft WR/+10F: 100% angular fragments of dacite with major oxidation and variable alteration. +35F: 99%–100% angular fragments of dacite with minor oxidation and variable alteration; trace quartz, plagioclase, and hornblende crystals.	Tvt 2	Note: Strongly oxidized in this interval.
1340–1378.4	Dacite Breccia—Grey (N4 to N6) to maroon (5R 4/2) quartz and hornblende-bearing volcanic deposits 1340–1378 ft WR/+10F: 100% angular fragments of dacite with moderate oxidation and variable alteration. +35F: 99%–100% angular fragments of dacite with minor oxidation and variable alteration; trace	Tvt 2	

Borehole Lithologic Log (continued)

ABBREVIATIONS

5YR 8/4 = Munsell rock color notation where hue (e.g., 5YR), value (e.g., 8), and chroma (e.g., 4) are expressed. Hue indicates soil color's relation to red, yellow, green, blue, and purple. Value indicates soil color's lightness. Chroma indicates soil color's strength.

% = estimated percent by volume of a given sample constituent

amsl = above mean sea level

bgs = below ground surface

Qbt 4 = Unit 4 of the Tshirege Member of the Bandelier Tuff

Qbt 3t = Unit 3t (transition) of the Tshirege Member of the Bandelier Tuff

Qbt 3 = Unit 3 of the Tshirege Member of the Bandelier Tuff

Qbt 2 = Unit 2 of the Tshirege Member of the Bandelier Tuff

Qbt 1v = Unit 1v (vapor phase) of the Tshirege Member of the Bandelier Tuff

Qbt 1g = Unit 1g (glassy) of the Tshirege Member of the Bandelier Tuff

Qct = Cerro Toledo interval

Qbo = Otowi Member of Bandelier Tuff

Qbog = Guaje Pumice Bed

Tpf = Puye Formation

Tvt 2 = Dacite breccia

+10F = plus No. 10 sieve sample fraction

+35F = plus No. 35 sieve sample fraction

WR = whole rock (unsieved sample)

1 mm = 0.039 in

1 in = 25.4 mm

Appendix B

Screening Groundwater Analytical Results for Well R-58

B-1.0 SCREENING GROUNDWATER ANALYSES AT R-58

R-58 is a regional aquifer monitoring well with one well screen drilled from 1257 ft to 1277.3 ft below ground surface (bgs) in dacite breccia. This appendix presents screening analytical results for samples collected during well development and aquifer testing at R-58.

Laboratory Analyses

Four groundwater samples were collected during development and two groundwater samples were collected during aquifer testing. Los Alamos National Laboratory's (LANL's or the Laboratory's) Earth and Environmental Sciences Group 14 (EES-14) analyzed the development samples for total organic carbon (TOC) and the aquifer test samples for TOC, alkalinity, anions, and metals. Table B-1.0-1 lists the samples submitted for TOC analyses from R-58.

Field Analyses

Additionally, groundwater samples were collected from a flow-through cell at regular intervals during well development and aquifer testing and measured for pH, conductivity, temperature, dissolved oxygen (DO), oxidation-reduction potential (ORP), and turbidity.

B-2.0 SCREENING ANALYTICAL RESULTS

This section presents the TOC concentrations and field parameters measured during well development and aquifer testing.

B-2.1 Total Organic Carbon

TOC concentrations were at the target concentration of 2.0 mgC/L in four groundwater samples collected during well development at well R-58 (Table B-2.1-1). Table B-2.1-1 also presents the U.S. Environmental Protection Agency (EPA) method by which the samples were analyzed.

B-2.2 Field Parameters

Field parameters measured during well development and aquifer testing are summarized in Table B-2.2-1. Well development was initially conducted for 8 d. Aquifer testing was then conducted for 6 d. These activities were conducted consecutively and the field parameters are summarized below.

During well development and aquifer testing, pH varied from 7.98 to 8.66 and temperature ranged from 14.32°C to 19.72°C. DO concentrations varied from −9.83 to 9.79 mg/L. Specific conductance ranged from 94 µS/cm to 119 µS/cm, and turbidity values varied from 0 to 117 nephelometric turbidity units (NTU). Corrected oxidation-reduction potential (Eh) values, determined from field ORP measurements, varied from 257.8 mV to 594.2 mV. One temperature-dependent correction factor was used to calculate Eh values from field ORP measurements: 208.9 mV at 15°C. Figure B-2.2-1 shows the field parameters measured over the course of well development and aquifer testing.

The final parameters measured at the end of the aquifer testing period were pH of 8.19, temperature of 16.93°C, DO of 8.53 mg/L, specific conductance of 97 µS/cm, and turbidity of 5.8 NTU.

B-3.0 SUMMARY OF SCREENING ANALYTICAL RESULTS

TOC concentration was below the target level of 2.0 mgC/L and turbidity was 5.8 NTU at the end of aquifer testing. R-58 will be sampled quarterly for 1 yr, and the data collected will be assessed and incorporated into the Interim Facility-Wide Groundwater Monitoring Plan. Data from ongoing sampling at R-58 will be analyzed and presented in the appropriate Laboratory periodic monitoring report.

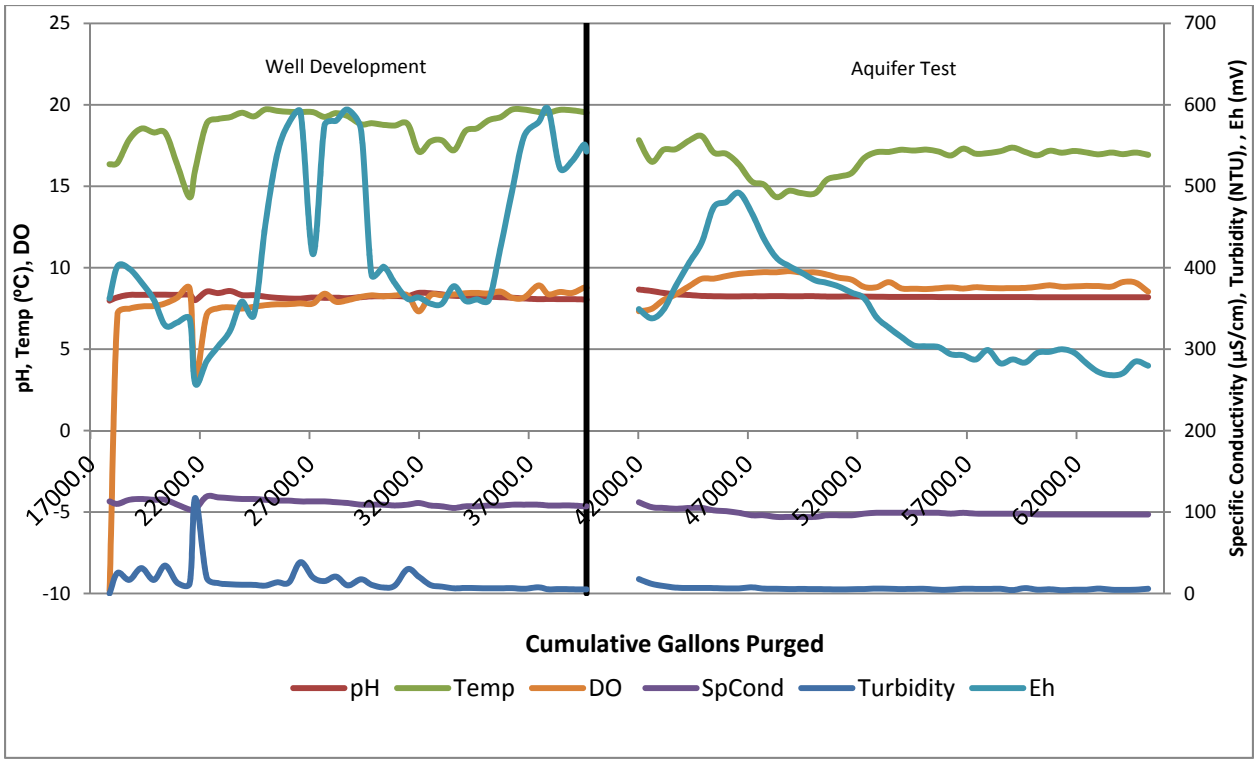

Figure B-2.2-1 Field parameters versus volume purged during R-58 well development and aquifer testing

Table B-1.0-1
Summary of Groundwater Screening Samples Collected during Well Development and Aquifer Testing at Well R-58

Location ID	Sample ID	Date Collected	Collection Depth (ft bgs)	Sample Type	Analysis
Well Development					
R-58	CACV-15-104376	11/10/15	1277.3	Groundwater, Pumped	TOC
R-58	CACV-15-104377	11/11/15	1277.3	Groundwater, Pumped	TOC
R-58	CACV-15-104378	11/12/15	1277.3	Groundwater, Pumped	TOC
R-58	CACV-15-104379	11/13/15	1277.3	Groundwater, Pumped	TOC
Aquifer Testing					
R-58	CACV-15-104381	11/18/15	1254.0	Groundwater, Pumped	TOC, Alkalinity
R-58	CACV-15-104382	11/18/15	1254.0	Groundwater, Pumped	Anions, Metals

Table B-2.1-1
TOC Results

Sample ID	EPA Method	TOC Concentration (mgC/L)
CACV-15-104376	SW-846:9060	2.0
CACV-15-104377	SW-846:9060	2.0
CACV-15-104378	SW-846:9060	2.0
CACV-15-104379	SW-846:9060	2.0
CACV-15-104381	SW-846:9060	1.0

Table B-2.2-1
Purge Volumes and Field Parameters during Well Development and Aquifer Testing at R-58

Date	pH	Temp (°C)	DO (mg/L)	ORP (mV)	Eh (mV)	Specific Conductivity (µS/cm)	Turbidity (NTU)	Purge Volume between Samples (gal.)	Cumulative Purge Volume (gal.)
Well Development									
11/6/15	n/r*; bailing							50	50.0
11/7/15	n/r; bailing							325	375.0
11/8/15	n/r; bailing							175	550.0
11/9/15	n/r; pumping through screen							81.8	631.8
11/10/15	n/r; pumping through screen							10757.5	11389.3
11/11/15	7.98	16.35	-9.83	153.4	362.3	113	0.0	6485.6	17874.9
	8.18	16.44	7.15	192.7	401.6	110	25.2	362.0	18236.9
	8.33	17.87	7.48	189.8	398.7	115	16.7	540.0	18776.9
	8.33	18.54	7.62	173.1	382.0	116	31.1	550.0	19326.9
	8.34	18.30	7.65	151.8	360.7	115	16.6	566.0	19892.9
	8.34	18.28	7.81	120.1	329.0	115	34.2	523.0	20415.9
	8.33	16.31	8.16	123.8	332.7	109	13.0	551.0	20966.9
	8.33	14.32	8.71	128	336.9	103	12.4	565.3	21532.2
11/12/15	8.01	16.01	3.17	48.9	257.8	103	117.2	251.6	21783.8
	8.53	18.84	7.09	76.1	285.0	119	19.8	520.0	22303.8
	8.44	19.13	7.51	94.6	303.5	118	12.7	530.0	22833.8
	8.57	19.24	7.57	113.6	322.5	117	11.3	540.0	23373.8
	8.32	19.51	7.49	149.5	358.4	116	10.7	540.0	23913.8
	8.31	19.29	7.60	132.9	341.8	116	10.5	550.0	24463.8
	8.22	19.72	7.70	243.7	452.6	115	9.6	520.0	24983.8
	8.15	19.63	7.75	330.7	539.6	114	13.7	541	25524.8
	8.11	19.57	7.76	368.7	577.6	114	13.4	532	26056.8
	8.10	19.56	7.81	382.0	590.9	113	38.4	532	26588.8
	8.17	19.55	7.80	207.7	416.6	113	19.7	569	27157.8
	8.15	19.26	8.40	366.0	574.9	113	15.2	527	27684.8
	8.16	19.49	7.91	371.4	580.3	112	20.7	521	28205.8
	8.13	19.30	8.01	385.2	594.1	111	9.9	543	28748.8
	8.19	18.81	8.21	360.1	569.0	109	17.4	601	29349.8
	8.24	18.87	8.30	182.2	391.1	109	10.6	482	29831.8
	8.25	18.77	8.25	192.3	401.2	109	7.3	542	30373.8
	8.26	18.73	8.29	172.1	381.0	108	9.7	520	30893.8
	8.25	18.83	8.30	152.9	361.8	109	29.9	581.4	31475.2

Table B-2.2-1 (continued)

Date	pH	Temp (°C)	DO (mg/L)	ORP (mV)	Eh (mV)	Specific Conductivity (µS/cm)	Turbidity (NTU)	Purge Volume between Samples (gal.)	Cumulative Purge Volume (gal.)
11/13/15	8.45	17.13	7.32	154.5	363.4	111	20.6	509.6	31984.8
	8.43	17.75	8.31	147.0	355.9	108	10.3	537	32521.8
	8.36	17.82	8.31	146.8	355.7	107	8.4	517	33038.8
	8.27	17.21	8.36	168.4	377.3	105	6.3	553	33591.8
	8.27	18.39	8.43	150.4	359.3	107	6.8	522	34113.8
	8.25	18.56	8.45	152.2	361.1	107	6.6	527	34640.8
	8.22	19.06	8.41	151.5	360.4	108	6.3	544	35184.8
	8.19	19.25	8.53	217.6	426.5	108	6.4	544	35728.8
	8.16	19.71	8.15	285.2	494.1	109	6.5	515	36243.8
	8.11	19.71	8.17	352.5	561.4	109	5.7	551	36794.8
	8.07	19.56	8.91	369.8	578.7	109	7.5	657	37451.8
	8.08	19.51	8.37	385.3	594.2	108	5.1	442	37893.8
	8.07	19.69	8.51	313.3	522.2	108	5.4	533	38426.8
	8.07	19.66	8.45	322.1	531.0	108	5.1	556	38982.8
	8.05	19.56	8.77	342.1	551.0	107	5.0	532	39514.8
	8.04	19.52	8.77	333.7	542.6	107	5.0	125.1	39639.9
Aquifer Pump Test									
11/14/15	n/r, pumping, fill discharge lines							178.8	39818.7
11/16/15	n/r, pumping, mini-tests							1671.7	41490.4
11/17/15 to 11/18/15	8.66	17.83	7.33	140.3	349.2	112	17.6	539.7	42030.1
	8.57	16.51	7.47	128.9	337.8	106	11.8	575	42605.1
	8.45	17.24	8.01	139.3	348.2	105	9.2	542	43147.1
	8.37	17.28	8.36	168.3	377.2	104	7.2	560	43707.1
	8.32	17.82	8.88	197.8	406.7	105	6.7	633	44340.1
	8.27	18.08	9.32	222.4	431.3	105	6.7	559	44899.1
	8.25	17.07	9.33	265.5	474.4	102	6.6	548	45447.1
	8.24	16.99	9.49	271.8	480.7	101	6.2	575	46022.1
	8.24	16.33	9.62	283.0	491.9	99	6.2	575	46597.1
	8.25	15.29	9.68	258.1	467.0	96	7.5	587	47184.1
	8.25	15.10	9.73	226.5	435.4	96	5.9	553	47737.1
	8.26	14.33	9.72	203.2	412.1	94	5.7	571	48308.1
	8.25	14.72	9.79	193.2	402.1	94	5.4	570	48878.1
	8.25	14.58	9.71	185.2	394.1	94	5.5	562	49440.1
	8.25	14.57	9.71	175.6	384.5	94	5.4	635	50075.1
	8.23	15.40	9.58	172.5	381.4	96	5.2	531	50606.1

Table B-2.2-1 (continued)

Date	pH	Temp (°C)	DO (mg/L)	ORP (mV)	Eh (mV)	Specific Conductivity (µS/cm)	Turbidity (NTU)	Purge Volume between Samples (gal.)	Cumulative Purge Volume (gal.)
	8.23	15.60	9.38	167.7	376.6	96	4.9	569	51175.1
	8.24	15.82	9.26	160.4	369.3	96	5.2	567	51742.1
	8.23	16.73	8.82	153.6	362.5	98	5.4	566	52308.1
	8.22	17.09	8.80	130.2	339.1	99	6.0	565	52873.1
	8.21	17.11	9.11	117.4	326.3	99	5.8	567	53440.1
	8.21	17.24	8.73	106.0	314.9	99	5.4	568	54008.1
	8.21	17.19	8.71	95.7	304.6	99	5.6	566	54574.1
	8.21	17.25	8.69	94.6	303.5	99	5.6	565	55139.1
	8.20	17.13	8.74	93.6	302.5	99	4.5	565	55704.1
	8.20	16.89	8.79	84.8	293.7	98	4.7	562	56266.1
	8.20	17.31	8.72	83.6	292.5	99	5.8	563	56829.1
	8.20	17.00	8.80	78.3	287.2	98	5.6	563	57392.1
	8.20	17.04	8.76	90.0	298.9	98	5.5	564	57956.1
	8.20	17.15	8.74	73.7	282.6	98	5.7	566	58522.1
	8.20	17.37	8.75	78.5	287.4	98	4.1	565	59087.1
	8.20	17.11	8.76	74.6	283.5	98	6.6	565	59652.1
	8.19	16.90	8.83	86.6	295.5	97	4.6	562	60214.1
	8.19	17.18	8.92	87.8	296.7	97	5.1	560	60774.1
	8.19	17.06	8.83	90.9	299.8	97	4.0	561	61335.1
	8.19	17.17	8.85	86.7	295.6	97	4.6	561	61896.1
	8.19	17.07	8.88	73.6	282.5	97	4.6	560	62456.1
	8.19	16.96	8.87	62.8	271.7	97	6.0	560	63016.1
	8.19	17.07	8.84	59.1	268.0	97	4.6	578	63594.1
	8.19	16.97	9.12	61.7	270.6	97	4.3	534	64128.1
	8.19	17.07	9.08	75.9	284.8	97	4.6	563	64691.1
	8.19	16.93	8.53	70.8	279.7	97	5.8	574.3	65265.4

Note: One temperature-dependent correction factor was used to calculate Eh values from field ORP measurements: 208.9 mV at 15°C.

*n/r = Not recorded.

Appendix C

Geophysical Logs
(on CD included with this document)

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#------------------------------------------------------------
~VERSION INFORMATION
VERS.            2.0  :CWLS LOG ASCII STANDARD - VERSION 2.0
WRAP.             NO  :ONE LINE PER DEPTH STEP
#------------------------------------------------------------
~WELL INFORMATION
STRT.M       -0.614800  :FIRST INDEX VALUE
STOP.M         420.435  :LAST INDEX VALUE
STEP.M        0.000000  :STEP
NULL.         -999.25  :NULL VALUE
COMP.                  :COMPANY
WELL.                  :WELL
FLD.                   :FIELD
LOC.                   :LOCATION
LATI.                  :LATITUDE
LONG.                  :LONGITUDE
GDAT.                  :GEODETIC DATUM
SRVC.                  :SERVICE COMPANY
CTRY.                  :COUNTRY
PROV.                  :PROVINCE
STAT.                  :STATE
CNTY.                  :COUNTY
DATE.                  :LOG DATE
UWI.                   :UNIQUE WELL ID
API.                   :API NUMBER
LIC.                   :LICENSE NUMBER
#------------------------------------------------------------
~CURVE INFORMATION
DEPT.M                 :DEPTH
TIME.SEC               :Time
TCPU.'C                :TCPU
EHT.VOLTS              :EHT
COUNT.                 :COUNT
GR.CPS                 :GR
#------------------------------------------------------------
~OTHER
#------------------------------------------------------------
```

Depth	Time	TCPU	EHT	COUNT	GR
ft	sec	'C	Volts		CPS
-2.02	-999	19.2636	-999	-999	-999
-1.85	0.631	19.2636	-923.914	4	6.33914
-1.69	0.635	19.6981	-919.999	6	9.44882
-1.53	0.637	19.2636	-927.829	2	3.13972
-1.36	0.635	19.2636	-919.999	4	6.29921
-1.2	0.633	19.2636	-927.829	5	7.89889
-1.03	0.633	19.4808	-923.914	3	4.73934

-0.87	0.634	19.2636	-923.914	4	6.30915
-0.71	0.637	19.4808	-923.914	2	3.13972
-0.54	0.634	19.2636	-919.999	4	6.30915
-0.38	0.634	19.2636	-927.829	5	7.88644
-0.21	0.631	19.2636	-919.999	12	19.0174
-0.05	0.627	19.2636	-919.999	8	12.7592
0.11	0.628	19.2636	-919.999	11	17.5159
0.28	0.626	19.4808	-919.999	9	14.377
0.44	0.627	19.2636	-919.999	6	9.56938
0.61	0.623	19.2636	-919.999	6	9.63082
0.77	0.624	19.4808	-919.999	9	14.4231
0.93	0.626	19.2636	-916.084	5	7.98722
1.1	0.626	19.2636	-916.084	7	11.1821
1.26	0.623	19.4808	-919.999	5	8.02568
1.43	0.619	19.2636	-919.999	4	6.46204
1.59	0.618	19.2636	-919.999	2	3.23625
1.75	0.62	19.2636	-923.914	8	12.9032
1.92	0.632	19.2636	-923.914	1	1.58228
2.08	0.633	19.2636	-923.914	1	1.57978
2.25	0.633	19.2636	-923.914	4	6.31912
2.41	0.631	19.2636	-919.999	9	14.2631
2.57	0.628	19.2636	-919.999	4	6.36943
2.74	0.63	19.2636	-923.914	14	22.2222
2.9	0.633	19.2636	-927.829	7	11.0585
3.07	0.632	19.4808	-923.914	10	15.8228
3.23	0.629	19.2636	-927.829	11	17.4881
3.39	0.633	19.2636	-919.999	15	23.6967
3.56	0.631	19.0464	-923.914	18	28.5261
3.72	0.632	19.2636	-923.914	20	31.6456
3.89	0.634	19.2636	-927.829	23	36.2776
4.05	0.636	19.2636	-923.914	19	29.8742
4.21	0.635	19.2636	-919.999	16	25.1968
4.38	0.635	19.2636	-927.829	24	37.7953
4.54	0.631	19.2636	-923.914	18	28.5261
4.71	0.63	19.0464	-919.999	19	30.1587
4.87	0.629	19.2636	-927.829	28	44.5151
5.03	0.623	19.2636	-919.999	34	54.5746
5.2	0.623	19.0464	-923.914	22	35.313
5.36	0.621	19.2636	-923.914	27	43.4783
5.53	0.623	19.2636	-923.914	25	40.1284
5.69	0.628	19.2636	-923.914	38	60.5096
5.85	0.627	19.4808	-923.914	22	35.0877
6.02	0.625	19.2636	-923.914	25	40
6.18	0.621	19.2636	-919.999	22	35.4267
6.35	0.621	19.2636	-923.914	21	33.8164
6.51	0.625	19.2636	-919.999	22	35.2
6.67	0.631	19.2636	-923.914	26	41.2044

6.84	0.632	19.0464	-923.914	22	34.8101
7	0.634	19.2636	-923.914	20	31.5457
7.17	0.632	19.2636	-919.999	23	36.3924
7.33	0.629	19.2636	-923.914	28	44.5151
7.49	0.631	19.2636	-923.914	22	34.8653
7.66	0.633	19.2636	-919.999	22	34.7551
7.82	0.634	19.2636	-923.914	30	47.3186
7.99	0.63	19.2636	-916.084	32	50.7937
8.15	0.628	19.2636	-919.999	28	44.586
8.31	0.632	19.2636	-919.999	31	49.0506
8.48	0.636	19.4808	-923.914	26	40.8805
8.64	0.638	19.2636	-923.914	25	39.185
8.81	0.636	19.2636	-923.914	29	45.5975
8.97	0.625	19.0464	-923.914	19	30.4
9.13	0.631	19.4808	-923.914	18	28.5261
9.3	0.633	19.2636	-923.914	25	39.4945
9.46	0.634	19.2636	-923.914	22	34.7003
9.63	0.628	19.0464	-923.914	25	39.8089
9.79	0.626	19.0464	-923.914	29	46.3259
9.95	0.621	19.2636	-919.999	31	49.9195
10.12	0.627	19.2636	-919.999	31	49.4418
10.28	0.626	19.2636	-919.999	23	36.7412
10.45	0.626	19.2636	-916.084	26	41.5335
10.61	0.625	19.2636	-919.999	28	44.8
10.77	0.621	19.2636	-919.999	26	41.868
10.94	0.619	19.0464	-927.829	25	40.3877
11.1	0.62	19.2636	-927.829	27	43.5484
11.27	0.623	19.2636	-919.999	31	49.7592
11.43	0.627	19.2636	-923.914	27	43.0622
11.59	0.63	19.2636	-923.914	30	47.619
11.76	0.629	19.2636	-919.999	32	50.8744
11.92	0.631	19.2636	-919.999	20	31.6957
12.09	0.635	19.0464	-919.999	18	28.3465
12.25	0.637	19.0464	-923.914	23	36.1068
12.41	0.632	19.2636	-927.829	19	30.0633
12.58	0.635	19.2636	-919.999	29	45.6693
12.74	0.631	19.0464	-923.914	30	47.5436
12.91	0.63	19.2636	-916.084	22	34.9206
13.07	0.633	19.2636	-923.914	25	39.4945
13.23	0.633	19.0464	-927.829	19	30.0158
13.4	0.631	19.2636	-919.999	22	34.8653
13.56	0.631	19.0464	-919.999	23	36.4501
13.73	0.63	19.2636	-919.999	25	39.6825
13.89	0.634	19.4808	-927.829	29	45.7413
14.05	0.636	19.2636	-923.914	20	31.4465
14.22	0.635	19.0464	-923.914	23	36.2205
14.38	0.629	19.2636	-919.999	30	47.6948

14.55	0.624	19.2636	-923.914	30	48.0769
14.71	0.619	19.0464	-923.914	25	40.3877
14.87	0.618	19.2636	-916.084	28	45.3074
15.04	0.628	19.0464	-919.999	21	33.4395
15.2	0.627	19.2636	-919.999	20	31.8979
15.37	0.624	19.4808	-923.914	22	35.2564
15.53	0.62	19.2636	-923.914	28	45.1613
15.69	0.621	19.2636	-919.999	19	30.5958
15.86	0.624	19.2636	-919.999	29	46.4744
16.02	0.627	19.2636	-923.914	25	39.8724
16.19	0.628	19.2636	-919.999	22	35.0318
16.35	0.626	19.2636	-919.999	30	47.9233
16.51	0.629	19.2636	-919.999	18	28.6169
16.68	0.631	19.2636	-923.914	29	45.9588
16.84	0.632	19.2636	-916.084	23	36.3924
17.01	0.631	19.0464	-919.999	18	28.5261
17.17	0.63	19.0464	-923.914	23	36.5079
17.33	0.633	19.2636	-919.999	21	33.1754
17.5	0.633	19.2636	-923.914	15	23.6967
17.66	0.637	19.2636	-923.914	26	40.8163
17.83	0.636	19.2636	-923.914	20	31.4465
17.99	0.636	19.2636	-923.914	22	34.5912
18.15	0.633	19.2636	-923.914	19	30.0158
18.32	0.634	19.0464	-919.999	30	47.3186
18.48	0.633	19.0464	-923.914	18	28.436
18.65	0.636	19.0464	-923.914	27	42.4528
18.81	0.638	19.0464	-919.999	21	32.9154
18.97	0.633	19.2636	-916.084	22	34.7551
19.14	0.628	19.2636	-919.999	26	41.4013
19.3	0.623	19.2636	-923.914	23	36.9181
19.47	0.625	19.0464	-919.999	24	38.4
19.63	0.624	19.2636	-919.999	21	33.6538
19.79	0.626	19.0464	-919.999	19	30.3514
19.96	0.623	19.0464	-919.999	26	41.7335
20.12	0.62	19.0464	-919.999	21	33.871
20.29	0.621	19.0464	-923.914	23	37.037
20.45	0.623	19.0464	-916.084	21	33.7079
20.61	0.62	19.2636	-919.999	10	16.129
20.78	0.622	19.0464	-919.999	21	33.7621
20.94	0.623	19.2636	-919.999	15	24.077
21.11	0.622	19.0464	-919.999	29	46.6238
21.27	0.623	19.2636	-919.999	21	33.7079
21.43	0.632	19.2636	-923.914	22	34.8101
21.6	0.637	19.2636	-919.999	22	34.5369
21.76	0.638	19.2636	-923.914	27	42.3197
21.93	0.633	19.0464	-923.914	18	28.436
22.09	0.629	19.0464	-923.914	23	36.566

22.25	0.631	19.0464	-919.999	24	38.0349
22.42	0.633	19.0464	-923.914	27	42.654
22.58	0.634	19.0464	-919.999	24	37.8549
22.75	0.633	19.2636	-919.999	24	37.9147
22.91	0.628	19.0464	-919.999	29	46.1783
23.07	0.633	19.2636	-923.914	20	31.5956
23.24	0.639	19.2636	-919.999	25	39.1236
23.4	0.638	19.2636	-919.999	19	29.7806
23.57	0.636	19.2636	-919.999	22	34.5912
23.73	0.635	19.2636	-923.914	28	44.0945
23.89	0.632	19.0464	-919.999	31	49.0506
24.06	0.633	19.0464	-919.999	19	30.0158
24.22	0.633	19.0464	-923.914	24	37.9147
24.39	0.628	19.0464	-919.999	33	52.5478
24.55	0.621	18.8292	-919.999	19	30.5958
24.71	0.621	19.0464	-912.169	16	25.7649
24.88	0.62	19.0464	-919.999	26	41.9355
25.04	0.62	19.2636	-923.914	27	43.5484
25.21	0.626	19.2636	-919.999	34	54.3131
25.37	0.623	19.0464	-927.829	17	27.2873
25.53	0.62	19.0464	-919.999	20	32.2581
25.7	0.618	19.2636	-923.914	21	33.9806
25.86	0.62	19.2636	-927.829	19	30.6452
26.03	0.628	19.0464	-923.914	26	41.4013
26.19	0.632	19.0464	-919.999	23	36.3924
26.35	0.632	19.0464	-919.999	23	36.3924
26.52	0.625	19.0464	-923.914	34	54.4
26.68	0.63	19.0464	-919.999	24	38.0952
26.85	0.631	19.2636	-919.999	25	39.6197
27.01	0.635	19.0464	-919.999	22	34.6457
27.17	0.632	19.2636	-923.914	28	44.3038
27.34	0.634	19.0464	-912.169	29	45.7413
27.5	0.63	19.2636	-919.999	28	44.4444
27.67	0.632	19.0464	-923.914	25	39.557
27.83	0.636	19.0464	-927.829	21	33.0189
27.99	0.636	19.0464	-927.829	27	42.4528
28.16	0.636	19.0464	-927.829	20	31.4465
28.32	0.632	19.2636	-923.914	18	28.481
28.49	0.633	19.0464	-919.999	23	36.3349
28.65	0.633	19.2636	-919.999	21	33.1754
28.81	0.635	19.2636	-927.829	22	34.6457
28.98	0.63	19.0464	-923.914	24	38.0952
29.14	0.629	19.0464	-923.914	21	33.3863
29.31	0.624	19.0464	-923.914	18	28.8462
29.47	0.621	19.0464	-923.914	34	54.7504
29.63	0.627	19.0464	-923.914	24	38.2775
29.8	0.632	19.2636	-919.999	15	23.7342

29.96	0.625	19.2636	-923.914	22	35.2
30.13	0.623	19.0464	-919.999	22	35.313
30.29	0.619	19.2636	-919.999	22	35.5412
30.45	0.619	19.2636	-919.999	22	35.5412
30.62	0.621	19.0464	-923.914	26	41.868
30.78	0.626	19.0464	-923.914	19	30.3514
30.95	0.625	19.0464	-923.914	24	38.4
31.11	0.628	19.2636	-923.914	24	38.2166
31.27	0.627	19.0464	-919.999	22	35.0877
31.44	0.633	19.0464	-919.999	23	36.3349
31.6	0.633	19.0464	-923.914	32	50.5529
31.77	0.637	19.0464	-916.084	20	31.3972
31.93	0.632	19.0464	-923.914	18	28.481
32.09	0.629	19.2636	-919.999	20	31.7965
32.26	0.626	19.0464	-919.999	33	52.7157
32.42	0.625	19.0464	-919.999	15	24
32.59	0.636	19.0464	-923.914	11	17.2956
32.75	0.636	19.2636	-923.914	30	47.1698
32.91	0.633	19.2636	-919.999	29	45.8136
33.08	0.63	19.0464	-927.829	25	39.6825
33.24	0.629	19.0464	-923.914	14	22.2576
33.41	0.635	19.0464	-923.914	28	44.0945
33.57	0.639	19.0464	-919.999	29	45.3834
33.73	0.635	19.0464	-923.914	19	29.9213
33.9	0.627	19.0464	-919.999	26	41.4673
34.06	0.621	19.0464	-919.999	22	35.4267
34.23	0.62	19.2636	-919.999	27	43.5484
34.39	0.626	19.0464	-919.999	19	30.3514
34.55	0.624	19.0464	-919.999	26	41.6667
34.72	0.624	19.0464	-919.999	25	40.0641
34.88	0.623	19.0464	-923.914	23	36.9181
35.05	0.622	19.0464	-919.999	23	36.9775
35.21	0.623	19.0464	-919.999	22	35.313
35.37	0.622	19.0464	-919.999	19	30.5466
35.54	0.625	19.0464	-919.999	20	32
35.7	0.624	19.0464	-923.914	18	28.8462
35.87	0.628	19.0464	-919.999	26	41.4013
36.03	0.63	19.0464	-923.914	28	44.4444
36.19	0.634	19.2636	-919.999	24	37.8549
36.36	0.635	19.2636	-923.914	22	34.6457
36.52	0.631	19.2636	-919.999	25	39.6197
36.69	0.628	19.0464	-927.829	29	46.1783
36.85	0.627	19.0464	-919.999	19	30.303
37.01	0.63	19.0464	-923.914	25	39.6825
37.18	0.634	19.0464	-916.084	15	23.6593
37.34	0.636	19.0464	-919.999	31	48.7421
37.51	0.636	19.2636	-919.999	25	39.3082

37.67	0.631	19.0464	-919.999	28	44.374
37.83	0.629	19.2636	-919.999	13	20.6677
38	0.632	19.0464	-923.914	16	25.3165
38.16	0.628	19.0464	-923.914	26	41.4013
38.33	0.635	19.0464	-919.999	23	36.2205
38.49	0.635	19.0464	-923.914	30	47.2441
38.65	0.629	19.0464	-923.914	20	31.7965
38.82	0.622	19.0464	-923.914	29	46.6238
38.98	0.625	19.2636	-919.999	27	43.2
39.15	0.626	19.0464	-923.914	32	51.1182
39.31	0.629	19.0464	-927.829	25	39.7456
39.47	0.626	19.0464	-923.914	23	36.7412
39.64	0.622	19.0464	-919.999	22	35.3698
39.8	0.622	19.0464	-919.999	21	33.7621
39.97	0.624	19.0464	-916.084	23	36.859
40.13	0.623	19.0464	-923.914	18	28.8925
40.29	0.622	19.2636	-923.914	18	28.9389
40.46	0.62	19.0464	-923.914	21	33.871
40.62	0.624	19.2636	-919.999	21	33.6538
40.79	0.629	19.2636	-923.914	27	42.9253
40.95	0.635	19.0464	-927.829	21	33.0709
41.11	0.634	19.0464	-919.999	22	34.7003
41.28	0.635	19.0464	-919.999	18	28.3465
41.44	0.633	19.2636	-923.914	30	47.3934
41.61	0.633	19.0464	-919.999	16	25.2765
41.77	0.638	19.0464	-919.999	23	36.0502
41.93	0.635	19.0464	-923.914	17	26.7717
42.1	0.631	19.0464	-923.914	18	28.5261
42.26	0.632	19.2636	-923.914	24	37.9747
42.43	0.629	19.0464	-923.914	19	30.2067
42.59	0.632	19.0464	-923.914	22	34.8101
42.75	0.636	19.0464	-919.999	20	31.4465
42.92	0.635	19.0464	-923.914	34	53.5433
43.08	0.631	19.0464	-923.914	26	41.2044
43.25	0.628	19.0464	-923.914	27	42.9936
43.41	0.633	19.0464	-923.914	30	47.3934
43.57	0.629	19.0464	-923.914	20	31.7965
43.74	0.632	18.8292	-923.914	29	45.8861
43.9	0.624	19.0464	-919.999	21	33.6538
44.07	0.614	19.2636	-923.914	24	39.0879
44.23	0.623	19.0464	-923.914	21	33.7079
44.39	0.624	19.2636	-919.999	24	38.4615
44.56	0.626	19.2636	-927.829	15	23.9617
44.72	0.627	19.2636	-919.999	20	31.8979
44.89	0.624	19.0464	-919.999	20	32.0513
45.05	0.619	19.2636	-919.999	18	29.0792
45.21	0.624	19.2636	-919.999	30	48.0769

45.38	0.626	19.0464	-923.914	28	44.7284
45.54	0.63	19.0464	-923.914	29	46.0317
45.71	0.629	19.0464	-919.999	26	41.3355
45.87	0.631	19.0464	-923.914	30	47.5436
46.03	0.632	19.0464	-927.829	19	30.0633
46.2	0.63	19.0464	-923.914	26	41.2698
46.36	0.632	19.0464	-923.914	20	31.6456
46.53	0.637	19.0464	-919.999	18	28.2575
46.69	0.638	19.0464	-923.914	23	36.0502
46.85	0.636	19.0464	-919.999	13	20.4403
47.02	0.632	19.0464	-919.999	23	36.3924
47.18	0.635	19.0464	-919.999	26	40.9449
47.35	0.636	19.0464	-919.999	24	37.7358
47.51	0.64	19.0464	-923.914	31	48.4375
47.67	0.636	19.0464	-923.914	28	44.0252
47.84	0.634	19.0464	-919.999	21	33.123
48	0.632	19.0464	-927.829	24	37.9747
48.17	0.634	19.0464	-919.999	26	41.0095
48.33	0.634	18.8292	-923.914	23	36.2776
48.49	0.626	19.0464	-919.999	17	27.1565
48.66	0.624	19.0464	-916.084	22	35.2564
48.82	0.62	19.0464	-923.914	18	29.0323
48.99	0.624	19.0464	-923.914	22	35.2564
49.15	0.626	19.0464	-923.914	26	41.5335
49.31	0.63	19.0464	-919.999	25	39.6825
49.48	0.626	19.0464	-923.914	27	43.131
49.64	0.623	19.0464	-919.999	23	36.9181
49.81	0.614	19.0464	-923.914	24	39.0879
49.97	0.619	18.8292	-923.914	30	48.4653
50.13	0.626	19.0464	-919.999	27	43.131
50.3	0.632	19.0464	-919.999	22	34.8101
50.46	0.629	19.0464	-919.999	29	46.1049
50.63	0.627	19.0464	-927.829	26	41.4673
50.79	0.629	18.8292	-916.084	15	23.8474
50.95	0.633	19.0464	-923.914	19	30.0158
51.12	0.637	19.0464	-923.914	26	40.8163
51.28	0.635	19.0464	-919.999	17	26.7717
51.45	0.634	18.8292	-919.999	22	34.7003
51.61	0.631	19.0464	-923.914	28	44.374
51.77	0.632	19.2636	-919.999	15	23.7342
51.94	0.633	19.0464	-923.914	30	47.3934
52.1	0.634	18.8292	-919.999	26	41.0095
52.27	0.635	18.8292	-923.914	22	34.6457
52.43	0.633	19.0464	-919.999	30	47.3934
52.59	0.636	19.0464	-923.914	20	31.4465
52.76	0.636	19.0464	-923.914	27	42.4528
52.92	0.64	19.0464	-923.914	22	34.375

53.09	0.636	18.8292	-919.999	18	28.3019
53.25	0.633	19.0464	-923.914	24	37.9147
53.41	0.627	18.8292	-923.914	18	28.7081
53.58	0.623	19.0464	-919.999	27	43.3387
53.74	0.624	18.8292	-919.999	29	46.4744
53.91	0.629	19.0464	-927.829	20	31.7965
54.07	0.623	18.8292	-919.999	24	38.5233
54.23	0.621	19.0464	-919.999	23	37.037
54.4	0.621	19.0464	-919.999	23	37.037
54.56	0.621	19.0464	-919.999	33	53.1401
54.73	0.625	19.0464	-916.084	29	46.4
54.89	0.625	19.0464	-919.999	22	35.2
55.05	0.626	19.0464	-919.999	21	33.5463
55.22	0.626	19.0464	-923.914	27	43.131
55.38	0.628	19.0464	-919.999	31	49.3631
55.55	0.633	19.0464	-919.999	26	41.0742
55.71	0.629	19.0464	-923.914	22	34.9762
55.87	0.636	19.0464	-923.914	28	44.0252
56.04	0.633	19.0464	-923.914	33	52.1327
56.2	0.628	19.0464	-923.914	21	33.4395
56.37	0.628	18.8292	-923.914	26	41.4013
56.53	0.632	19.2636	-919.999	29	45.8861
56.69	0.637	19.0464	-919.999	22	34.5369
56.86	0.64	19.0464	-927.829	29	45.3125
57.02	0.635	19.0464	-919.999	21	33.0709
57.19	0.634	18.8292	-923.914	26	41.0095
57.35	0.632	19.2636	-923.914	26	41.1392
57.51	0.637	19.0464	-919.999	20	31.3972
57.68	0.636	19.0464	-923.914	24	37.7358
57.84	0.635	19.0464	-927.829	27	42.5197
58.01	0.632	19.0464	-927.829	19	30.0633
58.17	0.627	19.0464	-919.999	29	46.252
58.33	0.627	19.0464	-923.914	30	47.8469
58.5	0.63	19.0464	-919.999	30	47.619
58.66	0.63	19.0464	-919.999	17	26.9841
58.83	0.627	19.0464	-919.999	19	30.303
58.99	0.623	19.0464	-923.914	20	32.1027
59.15	0.624	19.0464	-923.914	15	24.0385
59.32	0.624	19.0464	-919.999	30	48.0769
59.48	0.625	18.8292	-927.829	30	48
59.65	0.621	19.0464	-923.914	23	37.037
59.81	0.622	18.8292	-923.914	23	36.9775
59.97	0.623	18.8292	-923.914	18	28.8925
60.14	0.625	18.8292	-923.914	23	36.8
60.3	0.632	19.0464	-919.999	16	25.3165
60.47	0.634	19.0464	-919.999	31	48.8959
60.63	0.633	18.8292	-923.914	25	39.4945

60.79	0.629	18.8292	-923.914	25	39.7456
60.96	0.632	18.8292	-923.914	24	37.9747
61.12	0.631	18.8292	-919.999	32	50.7132
61.29	0.638	19.0464	-919.999	23	36.0502
61.45	0.634	18.8292	-923.914	32	50.4732
61.61	0.627	19.0464	-923.914	20	31.8979
61.78	0.631	19.0464	-923.914	26	41.2044
61.94	0.633	19.0464	-923.914	19	30.0158
62.11	0.635	19.0464	-923.914	22	34.6457
62.27	0.636	19.0464	-923.914	24	37.7358
62.43	0.636	19.0464	-923.914	28	44.0252
62.6	0.635	19.2636	-923.914	30	47.2441
62.76	0.636	18.8292	-927.829	32	50.3145
62.93	0.632	19.0464	-919.999	28	44.3038
63.09	0.633	19.0464	-923.914	26	41.0742
63.25	0.632	19.0464	-923.914	20	31.6456
63.42	0.628	18.8292	-923.914	20	31.8471
63.58	0.625	19.0464	-923.914	17	27.2
63.75	0.623	19.0464	-923.914	21	33.7079
63.91	0.625	19.0464	-919.999	16	25.6
64.07	0.628	19.0464	-923.914	28	44.586
64.24	0.625	19.0464	-923.914	23	36.8
64.4	0.623	19.0464	-919.999	28	44.9438
64.57	0.621	19.0464	-927.829	23	37.037
64.73	0.626	19.0464	-919.999	26	41.5335
64.89	0.631	19.0464	-923.914	12	19.0174
65.06	0.634	19.0464	-923.914	23	36.2776
65.22	0.635	19.0464	-919.999	30	47.2441
65.39	0.635	19.0464	-923.914	19	29.9213
65.55	0.633	19.0464	-919.999	21	33.1754
65.71	0.633	19.0464	-919.999	28	44.2338
65.88	0.633	19.0464	-919.999	31	48.9731
66.04	0.634	19.0464	-916.084	23	36.2776
66.21	0.633	19.0464	-927.829	18	28.436
66.37	0.629	18.8292	-923.914	37	58.8235
66.53	0.634	18.8292	-923.914	18	28.3912
66.7	0.635	18.8292	-919.999	30	47.2441
66.86	0.639	19.0464	-923.914	32	50.0782
67.03	0.634	18.8292	-923.914	31	48.8959
67.19	0.633	19.2636	-923.914	18	28.436
67.35	0.625	18.8292	-923.914	22	35.2
67.52	0.634	19.0464	-923.914	20	31.5457
67.68	0.641	19.0464	-919.999	30	46.8019
67.85	0.641	18.8292	-923.914	34	53.0421
68.01	0.644	19.0464	-923.914	20	31.0559
68.17	0.638	19.0464	-919.999	25	39.185
68.34	0.639	18.8292	-919.999	21	32.8638

68.5	0.648	19.0464	-923.914	25	38.5802
68.67	0.645	19.0464	-916.084	12	18.6047
68.83	0.641	18.8292	-923.914	25	39.0016
68.99	0.639	19.0464	-919.999	24	37.5587
69.16	0.634	18.8292	-919.999	21	33.123
69.32	0.634	19.0464	-923.914	24	37.8549
69.49	0.636	19.0464	-923.914	27	42.4528
69.65	0.641	18.8292	-919.999	30	46.8019
69.81	0.646	18.8292	-923.914	22	34.0557
69.98	0.649	18.8292	-927.829	23	35.4391
70.14	0.649	18.8292	-923.914	23	35.4391
70.31	0.649	19.0464	-919.999	27	41.6025
70.47	0.653	19.0464	-923.914	20	30.6279
70.63	0.65	19.0464	-927.829	15	23.0769
70.8	0.65	19.0464	-923.914	22	33.8462
70.96	0.647	19.0464	-916.084	24	37.0943
71.13	0.648	19.0464	-923.914	19	29.321
71.29	0.65	19.0464	-919.999	23	35.3846
71.45	0.652	18.8292	-912.169	15	23.0061
71.62	0.646	18.8292	-923.914	30	46.4396
71.78	0.644	18.8292	-923.914	16	24.8447
71.95	0.647	19.0464	-923.914	17	26.2751
72.11	0.649	19.0464	-919.999	24	36.98
72.27	0.652	19.0464	-919.999	18	27.6074
72.44	0.652	18.8292	-923.914	24	36.8098
72.6	0.645	19.2636	-923.914	21	32.5581
72.77	0.639	18.8292	-923.914	21	32.8638
72.93	0.638	19.0464	-923.914	17	26.6458
73.09	0.634	19.2636	-923.914	25	39.4322
73.26	0.646	18.8292	-919.999	19	29.4118
73.42	0.642	19.0464	-923.914	23	35.8255
73.59	0.636	18.8292	-916.084	20	31.4465
73.75	0.634	19.0464	-923.914	22	34.7003
73.91	0.636	19.2636	-923.914	19	29.8742
74.08	0.642	19.0464	-919.999	22	34.2679
74.24	0.644	18.8292	-923.914	17	26.3975
74.41	0.641	19.0464	-919.999	23	35.8814
74.57	0.642	19.0464	-923.914	24	37.3832
74.73	0.644	18.8292	-927.829	22	34.1615
74.9	0.648	19.0464	-923.914	20	30.8642
75.06	0.649	18.8292	-923.914	22	33.8983
75.23	0.647	19.0464	-919.999	21	32.4575
75.39	0.648	19.0464	-927.829	19	29.321
75.55	0.648	19.0464	-923.914	20	30.8642
75.72	0.65	19.0464	-927.829	30	46.1538
75.88	0.651	19.0464	-919.999	21	32.2581
76.05	0.653	18.8292	-927.829	26	39.8162

76.21	0.65	19.0464	-923.914	26	40
76.37	0.648	19.0464	-923.914	15	23.1481
76.54	0.651	19.0464	-919.999	30	46.083
76.7	0.654	19.0464	-923.914	21	32.1101
76.87	0.65	18.8292	-919.999	31	47.6923
77.03	0.649	19.0464	-919.999	30	46.225
77.19	0.643	19.0464	-923.914	17	26.4386
77.36	0.64	18.8292	-919.999	20	31.25
77.52	0.643	19.0464	-923.914	19	29.549
77.69	0.643	18.8292	-919.999	24	37.325
77.85	0.639	18.8292	-919.999	30	46.9484
78.01	0.638	19.0464	-923.914	18	28.2132
78.18	0.638	18.8292	-919.999	16	25.0784
78.34	0.64	18.8292	-919.999	19	29.6875
78.51	0.642	18.8292	-923.914	31	48.2866
78.67	0.637	19.0464	-919.999	22	34.5369
78.83	0.632	18.8292	-919.999	28	44.3038
79	0.637	19.0464	-919.999	21	32.967
79.16	0.639	18.8292	-923.914	31	48.5133
79.33	0.643	18.8292	-923.914	18	27.9938
79.49	0.648	18.8292	-923.914	27	41.6667
79.65	0.648	18.8292	-923.914	22	33.9506
79.82	0.65	19.0464	-923.914	27	41.5385
79.98	0.649	19.0464	-923.914	26	40.0616
80.15	0.646	19.0464	-923.914	20	30.9598
80.31	0.651	19.0464	-923.914	23	35.3303
80.47	0.65	18.8292	-919.999	20	30.7692
80.64	0.647	19.0464	-927.829	18	27.8207
80.8	0.649	19.0464	-919.999	25	38.5208
80.97	0.645	18.8292	-919.999	19	29.4574
81.13	0.65	18.8292	-923.914	24	36.9231
81.29	0.652	18.8292	-923.914	21	32.2086
81.46	0.653	19.0464	-923.914	24	36.7534
81.62	0.648	19.0464	-919.999	26	40.1235
81.79	0.647	18.8292	-923.914	19	29.3663
81.95	0.649	18.8292	-923.914	19	29.2758
82.11	0.649	19.0464	-919.999	23	35.4391
82.28	0.647	18.8292	-927.829	29	44.8223
82.44	0.643	18.8292	-923.914	20	31.1042
82.61	0.636	19.0464	-919.999	11	17.2956
82.77	0.634	18.8292	-931.744	24	37.8549
82.93	0.637	18.8292	-919.999	24	37.6766
83.1	0.639	19.0464	-923.914	30	46.9484
83.26	0.64	19.0464	-923.914	18	28.125
83.43	0.636	19.0464	-923.914	20	31.4465
83.59	0.633	18.8292	-919.999	26	41.0742
83.75	0.635	18.8292	-919.999	27	42.5197

83.92	0.644	19.0464	-919.999	20	31.0559
84.08	0.648	18.8292	-919.999	29	44.7531
84.25	0.65	19.0464	-927.829	28	43.0769
84.41	0.644	19.0464	-916.084	30	46.5839
84.57	0.64	19.0464	-927.829	25	39.0625
84.74	0.648	18.8292	-919.999	24	37.037
84.9	0.652	19.0464	-919.999	25	38.3436
85.07	0.648	18.8292	-919.999	28	43.2099
85.23	0.649	18.8292	-923.914	22	33.8983
85.39	0.647	19.0464	-923.914	18	27.8207
85.56	0.648	18.8292	-923.914	28	43.2099
85.72	0.652	18.8292	-923.914	21	32.2086
85.89	0.655	18.8292	-923.914	17	25.9542
86.05	0.652	18.8292	-923.914	25	38.3436
86.21	0.649	18.8292	-919.999	30	46.225
86.38	0.647	19.0464	-919.999	33	51.0046
86.54	0.65	19.0464	-923.914	31	47.6923
86.71	0.648	18.8292	-919.999	18	27.7778
86.87	0.646	18.8292	-923.914	26	40.2477
87.03	0.643	18.8292	-927.829	20	31.1042
87.2	0.636	18.8292	-923.914	18	28.3019
87.36	0.639	18.8292	-927.829	26	40.6886
87.53	0.643	18.8292	-919.999	21	32.6594
87.69	0.642	18.8292	-919.999	24	37.3832
87.85	0.638	19.0464	-923.914	31	48.5893
88.02	0.635	19.0464	-916.084	24	37.7953
88.18	0.634	18.8292	-923.914	22	34.7003
88.35	0.636	18.8292	-923.914	26	40.8805
88.51	0.642	18.8292	-919.999	27	42.0561
88.67	0.641	18.8292	-923.914	28	43.6817
88.84	0.643	18.8292	-923.914	33	51.3219
89	0.644	19.0464	-923.914	33	51.2422
89.17	0.645	18.8292	-919.999	28	43.4109
89.33	0.648	19.0464	-923.914	27	41.6667
89.49	0.649	18.8292	-923.914	28	43.1433
89.66	0.651	18.8292	-923.914	27	41.4747
89.82	0.647	19.0464	-923.914	21	32.4575
89.99	0.644	19.0464	-919.999	25	38.8199
90.15	0.639	19.0464	-923.914	23	35.9937
90.31	0.648	19.0464	-919.999	25	38.5802
90.48	0.652	18.8292	-927.829	29	44.4785
90.64	0.651	19.0464	-927.829	31	47.619
90.81	0.645	18.8292	-923.914	39	60.4651
90.97	0.648	18.8292	-923.914	25	38.5802
91.13	0.651	18.6119	-923.914	27	41.4747
91.3	0.655	18.8292	-919.999	28	42.7481
91.46	0.649	18.8292	-919.999	26	40.0616

91.63	0.641	19.0464	-923.914	29	45.2418
91.79	0.639	19.0464	-919.999	20	31.2989
91.95	0.64	19.0464	-919.999	25	39.0625
92.12	0.643	19.2636	-923.914	16	24.8834
92.28	0.638	19.0464	-923.914	23	36.0502
92.45	0.637	18.8292	-916.084	25	39.2465
92.61	0.634	19.0464	-919.999	27	42.5868
92.77	0.637	18.8292	-919.999	23	36.1068
92.94	0.639	18.8292	-919.999	28	43.8185
93.1	0.64	19.0464	-923.914	32	50
93.27	0.642	18.8292	-923.914	24	37.3832
93.43	0.64	19.0464	-923.914	26	40.625
93.59	0.644	18.8292	-919.999	29	45.0311
93.76	0.649	19.0464	-923.914	30	46.225
93.92	0.651	19.0464	-919.999	24	36.8664
94.09	0.65	18.8292	-923.914	25	38.4615
94.25	0.647	19.2636	-912.169	27	41.7311
94.41	0.642	18.8292	-919.999	32	49.8442
94.58	0.642	19.0464	-923.914	27	42.0561
94.74	0.648	18.8292	-923.914	20	30.8642
94.91	0.65	18.8292	-923.914	26	40
95.07	0.648	18.8292	-923.914	37	57.0988
95.23	0.646	19.0464	-923.914	20	30.9598
95.4	0.645	18.8292	-923.914	25	38.7597
95.56	0.647	18.8292	-912.169	23	35.5487
95.73	0.65	18.8292	-931.744	24	36.9231
95.89	0.644	19.0464	-927.829	28	43.4783
96.05	0.647	19.0464	-923.914	28	43.2767
96.22	0.646	19.0464	-923.914	25	38.6997
96.38	0.643	19.0464	-919.999	24	37.325
96.55	0.642	18.8292	-919.999	25	38.9408
96.71	0.64	18.8292	-919.999	24	37.5
96.87	0.64	18.8292	-919.999	42	65.625
97.04	0.641	19.0464	-919.999	32	49.922
97.2	0.636	19.0464	-919.999	31	48.7421
97.37	0.641	18.8292	-923.914	26	40.5616
97.53	0.64	18.8292	-919.999	31	48.4375
97.69	0.634	19.0464	-927.829	22	34.7003
97.86	0.634	19.0464	-923.914	18	28.3912
98.02	0.634	19.0464	-919.999	33	52.0505
98.19	0.639	18.8292	-919.999	20	31.2989
98.35	0.648	18.8292	-923.914	26	40.1235
98.51	0.651	19.0464	-923.914	24	36.8664
98.68	0.649	18.8292	-923.914	26	40.0616
98.84	0.649	19.0464	-919.999	18	27.735
99.01	0.647	18.8292	-923.914	23	35.5487
99.17	0.649	19.0464	-919.999	29	44.6841

99.33	0.653	19.0464	-923.914	31	47.4732
99.5	0.651	18.8292	-923.914	33	50.6912
99.66	0.648	19.0464	-923.914	39	60.1852
99.83	0.647	19.0464	-923.914	26	40.1855
99.99	0.645	18.8292	-927.829	38	58.9147
100.15	0.646	19.0464	-919.999	48	74.3034
100.32	0.652	19.0464	-923.914	29	44.4785
100.48	0.651	19.0464	-919.999	23	35.3303
100.65	0.647	19.0464	-927.829	40	61.8238
100.81	0.645	19.0464	-923.914	28	43.4109
100.97	0.649	19.0464	-923.914	40	61.6333
101.14	0.646	19.0464	-923.914	31	47.9876
101.3	0.643	18.8292	-923.914	41	63.7636
101.47	0.64	19.0464	-919.999	21	32.8125
101.63	0.632	18.8292	-919.999	29	45.8861
101.79	0.638	19.0464	-923.914	39	61.1285
101.96	0.64	19.0464	-919.999	34	53.125
102.12	0.64	19.0464	-923.914	38	59.375
102.29	0.639	18.8292	-923.914	31	48.5133
102.45	0.637	19.0464	-919.999	36	56.5149
102.61	0.635	19.0464	-919.999	46	72.4409
102.78	0.64	19.0464	-919.999	25	39.0625
102.94	0.646	19.0464	-923.914	43	66.5635
103.11	0.643	19.0464	-927.829	43	66.874
103.27	0.646	19.0464	-923.914	42	65.0155
103.43	0.646	18.8292	-927.829	35	54.1796
103.6	0.646	18.8292	-919.999	45	69.6594
103.76	0.644	19.0464	-919.999	40	62.1118
103.93	0.649	19.0464	-919.999	35	53.9291
104.09	0.651	19.0464	-919.999	38	58.3717
104.25	0.647	19.0464	-919.999	35	54.0958
104.42	0.647	19.0464	-919.999	34	52.5502
104.58	0.649	18.8292	-923.914	46	70.8783
104.75	0.652	19.0464	-923.914	32	49.0798
104.91	0.655	19.0464	-923.914	34	51.9084
105.07	0.651	19.0464	-923.914	43	66.0522
105.24	0.649	19.0464	-923.914	36	55.47
105.4	0.647	19.0464	-923.914	37	57.187
105.57	0.648	19.0464	-919.999	43	66.358
105.73	0.649	19.0464	-919.999	36	55.47
105.89	0.642	19.0464	-919.999	24	37.3832
106.06	0.639	18.8292	-919.999	34	53.2081
106.22	0.635	19.0464	-923.914	54	85.0394
106.39	0.638	18.8292	-919.999	44	68.9655
106.55	0.639	19.0464	-923.914	33	51.6432
106.71	0.642	19.0464	-919.999	25	38.9408
106.88	0.64	19.2636	-923.914	33	51.5625

107.04	0.636	18.8292	-923.914	43	67.6101
107.21	0.635	19.0464	-927.829	24	37.7953
107.37	0.634	19.0464	-923.914	28	44.164
107.53	0.642	19.0464	-927.829	37	57.6324
107.7	0.646	18.8292	-919.999	33	51.0836
107.86	0.645	19.0464	-923.914	38	58.9147
108.03	0.644	18.8292	-923.914	37	57.4534
108.19	0.647	18.8292	-923.914	34	52.5502
108.35	0.653	19.0464	-923.914	44	67.3813
108.52	0.651	18.8292	-919.999	43	66.0522
108.68	0.647	19.0464	-919.999	26	40.1855
108.85	0.645	19.2636	-919.999	25	38.7597
109.01	0.646	19.0464	-923.914	41	63.4675
109.17	0.648	19.0464	-923.914	37	57.0988
109.34	0.652	18.8292	-923.914	41	62.8834
109.5	0.65	19.0464	-923.914	34	52.3077
109.67	0.648	19.0464	-919.999	34	52.4691
109.83	0.648	18.8292	-919.999	36	55.5556
109.99	0.651	18.8292	-923.914	35	53.7634
110.16	0.653	18.8292	-923.914	36	55.1302
110.32	0.654	19.2636	-923.914	34	51.9878
110.49	0.648	18.8292	-923.914	33	50.9259
110.65	0.641	19.0464	-923.914	35	54.6022
110.81	0.64	18.8292	-919.999	31	48.4375
110.98	0.639	18.8292	-923.914	39	61.0329
111.14	0.642	19.0464	-923.914	37	57.6324
111.31	0.64	19.0464	-919.999	32	50
111.47	0.636	18.8292	-919.999	38	59.7484
111.63	0.634	19.0464	-927.829	50	78.8644
111.8	0.637	19.0464	-919.999	28	43.956
111.96	0.637	18.8292	-923.914	27	42.3862
112.13	0.641	19.0464	-923.914	40	62.4025
112.29	0.64	18.8292	-919.999	33	51.5625
112.45	0.641	19.0464	-923.914	36	56.1622
112.62	0.645	18.8292	-923.914	39	60.4651
112.78	0.651	19.0464	-923.914	34	52.2273
112.95	0.647	19.0464	-919.999	43	66.4606
113.11	0.646	18.8292	-923.914	31	47.9876
113.27	0.647	18.8292	-923.914	28	43.2767
113.44	0.645	19.0464	-923.914	39	60.4651
113.6	0.643	18.8292	-919.999	44	68.4292
113.77	0.649	19.0464	-927.829	33	50.8475
113.93	0.65	18.8292	-916.084	32	49.2308
114.09	0.649	18.8292	-923.914	46	70.8783
114.26	0.649	19.0464	-923.914	40	61.6333
114.42	0.647	18.8292	-923.914	36	55.6414
114.59	0.651	18.8292	-923.914	44	67.5883

114.75	0.651	18.8292	-923.914	36	55.2995
114.91	0.655	19.0464	-919.999	48	73.2824
115.08	0.647	19.0464	-923.914	29	44.8223
115.24	0.641	19.0464	-923.914	35	54.6022
115.41	0.642	19.0464	-919.999	45	70.0935
115.57	0.646	19.0464	-919.999	40	61.9195
115.73	0.643	19.0464	-923.914	41	63.7636
115.9	0.644	19.0464	-927.829	34	52.795
116.06	0.638	18.8292	-916.084	41	64.2633
116.23	0.635	19.0464	-923.914	29	45.6693
116.39	0.638	19.0464	-923.914	36	56.4263
116.55	0.64	19.0464	-923.914	38	59.375
116.72	0.638	18.8292	-923.914	38	59.5611
116.88	0.636	19.0464	-919.999	31	48.7421
117.05	0.638	18.8292	-923.914	32	50.1567
117.21	0.641	18.8292	-919.999	42	65.5226
117.37	0.645	18.8292	-923.914	30	46.5116
117.54	0.65	19.0464	-919.999	42	64.6154
117.7	0.649	18.8292	-919.999	43	66.2558
117.87	0.647	18.8292	-927.829	51	78.8253
118.03	0.644	18.8292	-923.914	36	55.9006
118.19	0.65	19.0464	-923.914	41	63.0769
118.36	0.653	19.0464	-923.914	49	75.0383
118.52	0.649	19.0464	-919.999	38	58.5516
118.69	0.64	18.8292	-923.914	40	62.5
118.85	0.646	18.8292	-919.999	50	77.3994
119.01	0.647	19.0464	-923.914	32	49.459
119.18	0.652	19.2636	-923.914	48	73.6196
119.34	0.652	18.8292	-923.914	44	67.4847
119.51	0.649	19.0464	-923.914	28	43.1433
119.67	0.646	18.8292	-923.914	43	66.5635
119.83	0.652	18.8292	-923.914	54	82.8221
120	0.65	18.8292	-919.999	34	52.3077
120.16	0.647	18.8292	-923.914	38	58.7326
120.33	0.645	18.8292	-919.999	31	48.062
120.49	0.636	18.8292	-919.999	28	44.0252
120.65	0.638	18.8292	-923.914	41	64.2633
120.82	0.634	19.0464	-919.999	34	53.6278
120.98	0.641	18.8292	-927.829	27	42.1217
121.15	0.641	18.8292	-916.084	42	65.5226
121.31	0.64	19.0464	-919.999	39	60.9375
121.47	0.638	19.0464	-923.914	37	57.9937
121.64	0.635	18.8292	-923.914	44	69.2913
121.8	0.64	18.8292	-923.914	34	53.125
121.97	0.645	18.8292	-923.914	41	63.5659
122.13	0.649	18.8292	-923.914	42	64.7149
122.29	0.651	18.8292	-923.914	39	59.9078

122.46	0.646	19.0464	-923.914	40	61.9195
122.62	0.648	19.0464	-919.999	33	50.9259
122.79	0.651	19.0464	-923.914	26	39.9386
122.95	0.646	18.8292	-923.914	36	55.7276
123.11	0.646	19.0464	-927.829	40	61.9195
123.28	0.646	19.0464	-919.999	44	68.1115
123.44	0.644	19.0464	-919.999	46	71.4286
123.61	0.648	19.0464	-919.999	38	58.642
123.77	0.655	18.8292	-919.999	41	62.5954
123.93	0.652	18.8292	-923.914	49	75.1534
124.1	0.648	19.0464	-919.999	35	54.0123
124.26	0.647	19.0464	-923.914	38	58.7326
124.43	0.641	18.8292	-923.914	40	62.4025
124.59	0.651	19.0464	-927.829	43	66.0522
124.75	0.651	18.8292	-923.914	36	55.2995
124.92	0.644	18.8292	-919.999	39	60.559
125.08	0.638	19.0464	-923.914	35	54.8589
125.25	0.636	19.0464	-919.999	45	70.7547
125.41	0.643	18.8292	-919.999	44	68.4292
125.57	0.645	18.8292	-923.914	43	66.6667
125.74	0.641	18.8292	-923.914	47	73.3229
125.9	0.64	18.8292	-919.999	31	48.4375
126.07	0.635	18.8292	-923.914	40	62.9921
126.23	0.634	18.8292	-919.999	36	56.7823
126.39	0.638	18.8292	-923.914	34	53.2915
126.56	0.641	19.0464	-923.914	35	54.6022
126.72	0.645	19.0464	-923.914	35	54.2636
126.89	0.647	18.8292	-919.999	39	60.2782
127.05	0.647	18.8292	-923.914	42	64.915
127.21	0.65	18.8292	-919.999	38	58.4615
127.38	0.65	19.0464	-919.999	43	66.1538
127.54	0.649	19.0464	-923.914	42	64.7149
127.71	0.65	18.8292	-919.999	35	53.8462
127.87	0.647	18.8292	-916.084	42	64.915
128.03	0.651	19.0464	-923.914	32	49.1551
128.2	0.652	19.0464	-923.914	32	49.0798
128.36	0.653	19.0464	-923.914	36	55.1302
128.53	0.648	19.0464	-923.914	35	54.0123
128.69	0.644	18.8292	-923.914	35	54.3478
128.85	0.646	19.0464	-919.999	31	47.9876
129.02	0.647	19.0464	-927.829	38	58.7326
129.18	0.653	18.8292	-919.999	30	45.9418
129.35	0.649	19.2636	-923.914	51	78.5824
129.51	0.64	18.8292	-916.084	32	50
129.67	0.639	18.8292	-923.914	25	39.1236
129.84	0.639	19.0464	-923.914	31	48.5133
130	0.64	18.8292	-919.999	39	60.9375

130.17	0.637	19.0464	-927.829	48	75.3532
130.33	0.639	19.0464	-916.084	39	61.0329
130.49	0.639	19.0464	-923.914	34	53.2081
130.66	0.633	19.0464	-923.914	38	60.0316
130.82	0.636	19.0464	-923.914	46	72.327
130.99	0.638	18.8292	-919.999	36	56.4263
131.15	0.643	19.0464	-927.829	39	60.6532
131.31	0.646	19.0464	-923.914	26	40.2477
131.48	0.644	19.0464	-923.914	46	71.4286
131.64	0.646	19.0464	-923.914	41	63.4675
131.81	0.65	19.0464	-923.914	44	67.6923
131.97	0.65	19.0464	-923.914	42	64.6154
132.13	0.65	19.0464	-923.914	35	53.8462
132.3	0.646	18.8292	-919.999	33	51.0836
132.46	0.648	18.8292	-923.914	37	57.0988
132.63	0.649	18.8292	-919.999	34	52.3883
132.79	0.652	19.0464	-923.914	29	44.4785
132.95	0.652	19.0464	-923.914	35	53.681
133.12	0.65	18.8292	-923.914	47	72.3077
133.28	0.649	18.8292	-919.999	42	64.7149
133.45	0.652	19.0464	-923.914	38	58.2822
133.61	0.654	19.0464	-919.999	38	58.104
133.77	0.653	18.8292	-923.914	41	62.7871
133.94	0.651	18.8292	-923.914	23	35.3303
134.1	0.646	19.0464	-919.999	40	61.9195
134.27	0.64	19.0464	-923.914	41	64.0625
134.43	0.642	18.6119	-919.999	39	60.7477
134.59	0.645	19.0464	-923.914	34	52.7132
134.76	0.64	19.0464	-927.829	42	65.625
134.92	0.639	19.0464	-919.999	35	54.7731
135.09	0.635	19.0464	-919.999	40	62.9921
135.25	0.636	18.8292	-923.914	25	39.3082
135.41	0.644	19.0464	-919.999	32	49.6894
135.58	0.642	18.8292	-923.914	36	56.0748
135.74	0.634	19.0464	-919.999	41	64.6688
135.91	0.632	19.0464	-923.914	40	63.2911
136.07	0.638	19.0464	-923.914	36	56.4263
136.23	0.648	19.0464	-919.999	37	57.0988
136.4	0.651	19.0464	-923.914	29	44.5469
136.56	0.649	19.2636	-923.914	44	67.7966
136.73	0.65	18.8292	-923.914	32	49.2308
136.89	0.649	18.8292	-919.999	26	40.0616
137.05	0.649	19.0464	-923.914	46	70.8783
137.22	0.651	19.0464	-923.914	39	59.9078
137.38	0.651	18.8292	-923.914	38	58.3717
137.55	0.648	19.0464	-919.999	42	64.8148
137.71	0.648	19.2636	-919.999	29	44.7531

137.87	0.647	19.0464	-923.914	35	54.0958
138.04	0.648	19.0464	-923.914	29	44.7531
138.2	0.653	19.0464	-923.914	41	62.7871
138.37	0.656	19.0464	-923.914	28	42.6829
138.53	0.651	19.0464	-919.999	35	53.7634
138.69	0.651	19.0464	-919.999	53	81.4132
138.86	0.653	19.0464	-919.999	33	50.536
139.02	0.648	19.0464	-919.999	27	41.6667
139.19	0.648	19.0464	-919.999	37	57.0988
139.35	0.641	18.8292	-919.999	30	46.8019
139.51	0.64	18.8292	-919.999	35	54.6875
139.68	0.639	19.0464	-919.999	32	50.0782
139.84	0.639	18.8292	-923.914	35	54.7731
140.01	0.64	19.0464	-923.914	47	73.4375
140.17	0.638	18.8292	-923.914	36	56.4263
140.33	0.636	18.8292	-923.914	36	56.6038
140.5	0.633	19.0464	-919.999	43	67.9305
140.66	0.638	19.0464	-923.914	34	53.2915
140.83	0.644	18.8292	-919.999	28	43.4783
140.99	0.65	19.0464	-919.999	40	61.5385
141.15	0.651	19.0464	-923.914	36	55.2995
141.32	0.645	18.8292	-923.914	40	62.0155
141.48	0.64	19.0464	-927.829	22	34.375
141.65	0.65	18.8292	-923.914	34	52.3077
141.81	0.653	18.8292	-919.999	33	50.536
141.97	0.651	19.0464	-927.829	26	39.9386
142.14	0.649	19.0464	-923.914	34	52.3883
142.3	0.647	18.8292	-916.084	46	71.0974
142.47	0.65	18.8292	-919.999	43	66.1538
142.63	0.656	19.0464	-919.999	48	73.1707
142.79	0.654	19.2636	-919.999	33	50.4587
142.96	0.654	19.0464	-919.999	37	56.5749
143.12	0.651	18.8292	-919.999	31	47.619
143.29	0.649	19.0464	-923.914	26	40.0616
143.45	0.652	18.8292	-923.914	38	58.2822
143.61	0.654	19.0464	-923.914	33	50.4587
143.78	0.645	19.0464	-923.914	31	48.062
143.94	0.642	18.8292	-919.999	27	42.0561
144.11	0.64	18.8292	-923.914	40	62.5
144.27	0.645	19.0464	-923.914	41	63.5659
144.43	0.647	19.0464	-927.829	38	58.7326
144.6	0.644	19.0464	-919.999	38	59.0062
144.76	0.641	18.8292	-923.914	26	40.5616
144.93	0.64	19.0464	-919.999	34	53.125
145.09	0.637	19.0464	-919.999	44	69.0738
145.25	0.638	19.0464	-923.914	31	48.5893
145.42	0.642	19.0464	-923.914	32	49.8442

145.58	0.644	19.0464	-919.999	26	40.3727
145.75	0.643	19.0464	-927.829	26	40.4355
145.91	0.642	19.0464	-923.914	34	52.9595
146.07	0.646	19.0464	-919.999	34	52.6316
146.24	0.649	19.2636	-919.999	37	57.0108
146.4	0.652	18.8292	-923.914	36	55.2147
146.57	0.65	19.0464	-927.829	32	49.2308
146.73	0.648	18.8292	-923.914	34	52.4691
146.89	0.648	19.0464	-916.084	42	64.8148
147.06	0.647	19.0464	-923.914	35	54.0958
147.22	0.645	19.2636	-923.914	43	66.6667
147.39	0.653	18.8292	-923.914	40	61.2557
147.55	0.651	19.0464	-919.999	47	72.1966
147.71	0.649	19.0464	-919.999	33	50.8475
147.88	0.652	19.0464	-919.999	39	59.816
148.04	0.65	19.0464	-927.829	31	47.6923
148.21	0.655	19.0464	-919.999	34	51.9084
148.37	0.652	19.0464	-923.914	48	73.6196
148.53	0.643	19.0464	-923.914	38	59.098
148.7	0.642	19.0464	-923.914	47	73.2087
148.86	0.643	19.0464	-923.914	38	59.098
149.03	0.645	19.0464	-923.914	37	57.3643
149.19	0.641	19.0464	-919.999	32	49.922
149.35	0.636	19.0464	-923.914	34	53.4591
149.52	0.636	19.0464	-923.914	33	51.8868
149.68	0.639	19.0464	-919.999	33	51.6432
149.85	0.643	19.0464	-919.999	32	49.7667
150.01	0.642	19.0464	-923.914	42	65.4206
150.17	0.641	19.0464	-919.999	39	60.8424
150.34	0.644	19.0464	-923.914	32	49.6894
150.5	0.645	19.0464	-923.914	38	58.9147
150.67	0.651	19.0464	-923.914	37	56.8356
150.83	0.655	19.0464	-919.999	34	51.9084
150.99	0.648	19.0464	-923.914	29	44.7531
151.16	0.647	18.8292	-923.914	33	51.0046
151.32	0.642	19.0464	-927.829	33	51.4019
151.49	0.644	19.0464	-923.914	34	52.795
151.65	0.652	19.0464	-919.999	29	44.4785
151.81	0.649	19.0464	-919.999	45	69.3374
151.98	0.648	19.0464	-923.914	26	40.1235
152.14	0.649	19.2636	-923.914	30	46.225
152.31	0.646	19.0464	-923.914	39	60.3715
152.47	0.649	19.0464	-927.829	39	60.0924
152.63	0.657	19.0464	-919.999	31	47.1842
152.8	0.646	19.0464	-923.914	38	58.8235
152.96	0.645	18.8292	-923.914	34	52.7132
153.13	0.647	19.2636	-923.914	23	35.5487

153.29	0.644	19.0464	-923.914	48	74.5342
153.45	0.64	18.8292	-919.999	35	54.6875
153.62	0.64	19.0464	-919.999	27	42.1875
153.78	0.643	19.2636	-919.999	34	52.8771
153.95	0.64	19.0464	-923.914	36	56.25
154.11	0.639	19.0464	-919.999	32	50.0782
154.27	0.64	19.0464	-927.829	24	37.5
154.44	0.64	19.0464	-919.999	32	50
154.6	0.637	19.0464	-923.914	42	65.9341
154.77	0.637	19.0464	-916.084	42	65.9341
154.93	0.639	19.0464	-923.914	36	56.338
155.09	0.64	19.0464	-923.914	38	59.375
155.26	0.649	19.0464	-919.999	39	60.0924
155.42	0.652	19.0464	-923.914	31	47.546
155.59	0.65	18.8292	-916.084	31	47.6923
155.75	0.648	19.0464	-919.999	25	38.5802
155.91	0.648	19.2636	-919.999	38	58.642
156.08	0.651	19.0464	-923.914	37	56.8356
156.24	0.651	19.0464	-923.914	51	78.341
156.41	0.652	19.2636	-919.999	37	56.7485
156.57	0.649	19.0464	-923.914	28	43.1433
156.73	0.646	19.0464	-923.914	32	49.5356
156.9	0.649	19.0464	-923.914	33	50.8475
157.06	0.65	19.2636	-923.914	32	49.2308
157.23	0.652	19.0464	-923.914	41	62.8834
157.39	0.652	19.0464	-923.914	39	59.816
157.55	0.648	19.0464	-919.999	21	32.4074
157.72	0.65	19.0464	-923.914	32	49.2308
157.88	0.649	19.0464	-923.914	36	55.47
158.05	0.648	18.8292	-923.914	39	60.1852
158.21	0.644	19.0464	-923.914	26	40.3727
158.37	0.642	19.0464	-923.914	33	51.4019
158.54	0.635	19.0464	-923.914	35	55.1181
158.7	0.638	19.2636	-923.914	36	56.4263
158.87	0.64	19.0464	-919.999	34	53.125
159.03	0.643	19.0464	-919.999	38	59.098
159.19	0.64	19.2636	-923.914	28	43.75
159.36	0.636	19.0464	-919.999	26	40.8805
159.52	0.638	19.0464	-923.914	29	45.4545
159.69	0.645	19.0464	-919.999	35	54.2636
159.85	0.649	19.2636	-923.914	32	49.3066
160.01	0.649	19.0464	-923.914	22	33.8983
160.18	0.649	19.0464	-919.999	46	70.8783
160.34	0.647	19.0464	-919.999	33	51.0046
160.51	0.649	19.0464	-916.084	40	61.6333
160.67	0.652	18.8292	-923.914	37	56.7485
160.83	0.651	19.0464	-919.999	40	61.4439

161	0.65	19.0464	-923.914	44	67.6923
161.16	0.648	19.0464	-919.999	42	64.8148
161.33	0.648	19.0464	-923.914	41	63.2716
161.49	0.652	19.0464	-919.999	38	58.2822
161.65	0.655	19.0464	-919.999	30	45.8015
161.82	0.652	18.8292	-919.999	46	70.5521
161.98	0.655	19.0464	-919.999	37	56.4885
162.15	0.65	19.0464	-923.914	39	60
162.31	0.649	19.2636	-923.914	35	53.9291
162.47	0.654	19.0464	-919.999	39	59.633
162.64	0.647	19.0464	-919.999	44	68.0062
162.8	0.643	19.0464	-919.999	33	51.3219
162.97	0.639	19.0464	-923.914	33	51.6432
163.13	0.638	19.0464	-927.829	25	39.185
163.29	0.644	19.2636	-916.084	37	57.4534
163.46	0.641	19.0464	-923.914	39	60.8424
163.62	0.64	19.0464	-923.914	32	50
163.79	0.638	19.0464	-919.999	38	59.5611
163.95	0.637	19.0464	-923.914	34	53.3752
164.11	0.639	19.0464	-923.914	25	39.1236
164.28	0.635	19.2636	-923.914	37	58.2677
164.44	0.642	19.0464	-919.999	40	62.3053
164.61	0.646	19.0464	-923.914	34	52.6316
164.77	0.646	19.0464	-923.914	44	68.1115
164.93	0.647	19.0464	-923.914	38	58.7326
165.1	0.65	19.0464	-919.999	33	50.7692
165.26	0.656	19.0464	-923.914	34	51.8293
165.43	0.652	19.0464	-919.999	28	42.9448
165.59	0.649	19.2636	-927.829	27	41.6025
165.75	0.647	19.0464	-923.914	38	58.7326
165.92	0.65	19.0464	-919.999	29	44.6154
166.08	0.651	19.2636	-919.999	39	59.9078
166.25	0.652	19.0464	-923.914	31	47.546
166.41	0.648	19.0464	-923.914	40	61.7284
166.57	0.646	19.0464	-919.999	29	44.8916
166.74	0.65	19.0464	-923.914	34	52.3077
166.9	0.657	18.8292	-919.999	29	44.14
167.07	0.656	19.2636	-923.914	39	59.4512
167.23	0.656	19.0464	-919.999	31	47.2561
167.39	0.648	19.0464	-919.999	33	50.9259
167.56	0.644	19.0464	-923.914	30	46.5839
167.72	0.642	19.0464	-923.914	38	59.19
167.89	0.645	19.0464	-923.914	29	44.9612
168.05	0.646	19.0464	-923.914	59	91.3313
168.21	0.642	19.0464	-919.999	44	68.5358
168.38	0.637	19.0464	-919.999	26	40.8163
168.54	0.636	19.0464	-923.914	44	69.1824

168.71	0.638	19.2636	-927.829	38	59.5611
168.87	0.64	19.0464	-923.914	39	60.9375
169.03	0.64	19.0464	-919.999	29	45.3125
169.2	0.642	19.0464	-923.914	36	56.0748
169.36	0.643	19.0464	-923.914	42	65.3188
169.53	0.649	19.2636	-919.999	26	40.0616
169.69	0.653	19.2636	-919.999	24	36.7534
169.85	0.651	19.0464	-912.169	43	66.0522
170.02	0.645	19.2636	-927.829	26	40.3101
170.18	0.644	18.8292	-923.914	32	49.6894
170.35	0.648	18.8292	-919.999	30	46.2963
170.51	0.651	19.2636	-923.914	40	61.4439
170.67	0.652	19.0464	-923.914	44	67.4847
170.84	0.651	18.8292	-923.914	33	50.6912
171	0.65	19.0464	-919.999	32	49.2308
171.17	0.648	19.0464	-923.914	33	50.9259
171.33	0.651	19.0464	-916.084	42	64.5161
171.49	0.657	19.0464	-923.914	42	63.9269
171.66	0.655	19.0464	-923.914	42	64.1221
171.82	0.653	19.0464	-923.914	30	45.9418
171.99	0.646	19.0464	-923.914	30	46.4396
172.15	0.64	19.0464	-923.914	36	56.25
172.31	0.645	19.0464	-919.999	26	40.3101
172.48	0.648	19.0464	-923.914	44	67.9012
172.64	0.645	19.2636	-923.914	38	58.9147
172.81	0.644	19.0464	-919.999	34	52.795
172.97	0.637	19.0464	-923.914	33	51.8053
173.13	0.638	19.0464	-923.914	40	62.6959
173.3	0.644	19.0464	-923.914	42	65.2174
173.46	0.641	19.0464	-923.914	35	54.6022
173.63	0.644	19.0464	-919.999	39	60.559
173.79	0.638	19.2636	-923.914	34	53.2915
173.95	0.64	19.0464	-927.829	35	54.6875
174.12	0.644	19.0464	-919.999	48	74.5342
174.28	0.646	19.0464	-927.829	32	49.5356
174.45	0.649	19.2636	-923.914	31	47.7658
174.61	0.644	19.0464	-923.914	34	52.795
174.77	0.648	19.0464	-923.914	42	64.8148
174.94	0.647	19.0464	-927.829	31	47.9134
175.1	0.649	19.0464	-919.999	39	60.0924
175.27	0.651	19.2636	-919.999	48	73.7327
175.43	0.65	19.0464	-927.829	33	50.7692
175.59	0.643	19.0464	-919.999	31	48.2115
175.76	0.645	19.0464	-919.999	43	66.6667
175.92	0.651	19.2636	-919.999	35	53.7634
176.09	0.658	19.0464	-919.999	33	50.152
176.25	0.654	19.0464	-919.999	30	45.8716

176.41	0.648	19.0464	-916.084	34	52.4691
176.58	0.649	19.0464	-919.999	41	63.1741
176.74	0.651	19.2636	-923.914	27	41.4747
176.91	0.648	19.0464	-923.914	38	58.642
177.07	0.647	19.0464	-919.999	32	49.459
177.23	0.642	19.0464	-919.999	38	59.19
177.4	0.638	19.0464	-919.999	36	56.4263
177.56	0.639	19.2636	-919.999	37	57.903
177.73	0.64	19.2636	-923.914	36	56.25
177.89	0.643	19.0464	-923.914	32	49.7667
178.05	0.641	19.0464	-923.914	35	54.6022
178.22	0.641	18.8292	-919.999	29	45.2418
178.38	0.639	19.0464	-923.914	41	64.1628
178.55	0.64	19.0464	-919.999	38	59.375
178.71	0.648	19.0464	-919.999	40	61.7284
178.87	0.65	19.0464	-923.914	44	67.6923
179.04	0.651	19.0464	-923.914	39	59.9078
179.2	0.649	19.0464	-919.999	33	50.8475
179.37	0.649	19.2636	-919.999	36	55.47
179.53	0.651	19.0464	-923.914	28	43.0108
179.69	0.649	19.2636	-923.914	31	47.7658
179.86	0.646	19.0464	-927.829	40	61.9195
180.02	0.646	19.0464	-919.999	23	35.6037
180.19	0.645	19.0464	-919.999	43	66.6667
180.35	0.648	19.0464	-919.999	23	35.4938
180.51	0.652	18.8292	-923.914	40	61.3497
180.68	0.652	19.0464	-919.999	38	58.2822
180.84	0.653	19.0464	-916.084	31	47.4732
181.01	0.65	19.0464	-923.914	35	53.8462
181.17	0.65	19.2636	-919.999	47	72.3077
181.33	0.648	19.2636	-919.999	33	50.9259
181.5	0.653	19.0464	-923.914	32	49.0046
181.66	0.646	19.0464	-923.914	40	61.9195
181.83	0.641	19.0464	-919.999	47	73.3229
181.99	0.636	19.0464	-923.914	24	37.7358
182.15	0.641	19.2636	-923.914	26	40.5616
182.32	0.647	19.0464	-923.914	25	38.6399
182.48	0.646	19.0464	-923.914	40	61.9195
182.65	0.641	19.2636	-919.999	34	53.0421
182.81	0.638	19.0464	-916.084	24	37.6176
182.97	0.636	19.0464	-919.999	31	48.7421
183.14	0.639	19.2636	-919.999	39	61.0329
183.3	0.644	19.0464	-919.999	44	68.323
183.47	0.645	19.0464	-919.999	36	55.814
183.63	0.646	19.0464	-919.999	23	35.6037
183.79	0.649	19.0464	-919.999	27	41.6025
183.96	0.651	19.0464	-919.999	22	33.7942

184.12	0.653	19.2636	-923.914	30	45.9418
184.29	0.652	19.0464	-923.914	43	65.9509
184.45	0.652	19.2636	-923.914	37	56.7485
184.61	0.649	19.0464	-923.914	30	46.225
184.78	0.65	19.2636	-923.914	44	67.6923
184.94	0.651	19.0464	-919.999	36	55.2995
185.11	0.652	19.0464	-923.914	35	53.681
185.27	0.651	19.0464	-931.744	39	59.9078
185.43	0.648	19.2636	-919.999	36	55.5556
185.6	0.648	19.0464	-919.999	30	46.2963
185.76	0.651	19.2636	-923.914	37	56.8356
185.93	0.655	19.0464	-919.999	41	62.5954
186.09	0.654	19.0464	-919.999	38	58.104
186.25	0.645	19.2636	-923.914	38	58.9147
186.42	0.642	19.0464	-919.999	39	60.7477
186.58	0.641	19.0464	-923.914	29	45.2418
186.75	0.644	19.0464	-923.914	30	46.5839
186.91	0.643	19.0464	-923.914	41	63.7636
187.07	0.639	19.2636	-919.999	36	56.338
187.24	0.639	19.0464	-923.914	29	45.3834
187.4	0.638	19.2636	-919.999	31	48.5893
187.57	0.639	19.0464	-916.084	39	61.0329
187.73	0.639	19.0464	-923.914	33	51.6432
187.89	0.641	19.0464	-916.084	38	59.2824
188.06	0.644	19.2636	-919.999	39	60.559
188.22	0.646	19.0464	-923.914	30	46.4396
188.39	0.648	19.0464	-923.914	38	58.642
188.55	0.651	19.2636	-923.914	35	53.7634
188.71	0.653	19.0464	-919.999	31	47.4732
188.88	0.649	19.0464	-923.914	42	64.7149
189.04	0.647	19.2636	-923.914	29	44.8223
189.21	0.646	19.0464	-923.914	25	38.6997
189.37	0.649	19.0464	-919.999	43	66.2558
189.53	0.653	19.0464	-916.084	34	52.0674
189.7	0.652	19.2636	-919.999	40	61.3497
189.86	0.651	19.0464	-923.914	33	50.6912
190.03	0.647	19.2636	-919.999	37	57.187
190.19	0.652	19.2636	-927.829	32	49.0798
190.35	0.655	19.0464	-919.999	31	47.3282
190.52	0.655	19.0464	-916.084	34	51.9084
190.68	0.658	19.2636	-923.914	38	57.7508
190.85	0.647	19.0464	-923.914	35	54.0958
191.01	0.643	19.0464	-919.999	37	57.5428
191.17	0.644	19.0464	-919.999	37	57.4534
191.34	0.643	19.0464	-927.829	37	57.5428
191.5	0.642	19.2636	-923.914	37	57.6324
191.67	0.641	19.2636	-919.999	23	35.8814

191.83	0.638	19.0464	-919.999	39	61.1285
191.99	0.638	19.0464	-919.999	31	48.5893
192.16	0.642	19.2636	-919.999	25	38.9408
192.32	0.645	19.2636	-923.914	53	82.1705
192.49	0.643	19.0464	-927.829	43	66.874
192.65	0.634	19.2636	-923.914	26	41.0095
192.81	0.637	19.0464	-919.999	35	54.9451
192.98	0.644	19.0464	-912.169	36	55.9006
193.14	0.65	19.2636	-919.999	32	49.2308
193.31	0.652	19.0464	-923.914	31	47.546
193.47	0.651	19.0464	-923.914	30	46.083
193.63	0.647	19.0464	-923.914	36	55.6414
193.8	0.648	19.0464	-919.999	33	50.9259
193.96	0.653	19.0464	-923.914	40	61.2557
194.13	0.651	19.0464	-923.914	38	58.3717
194.29	0.651	19.2636	-923.914	43	66.0522
194.45	0.651	19.0464	-923.914	31	47.619
194.62	0.647	19.0464	-923.914	34	52.5502
194.78	0.649	19.0464	-923.914	46	70.8783
194.95	0.655	19.0464	-919.999	27	41.2214
195.11	0.654	19.2636	-919.999	31	47.4006
195.27	0.653	19.0464	-919.999	45	68.9127
195.44	0.653	19.2636	-919.999	30	45.9418
195.6	0.649	19.2636	-919.999	32	49.3066
195.77	0.651	19.0464	-923.914	29	44.5469
195.93	0.651	19.2636	-919.999	28	43.0108
196.09	0.644	19.0464	-919.999	34	52.795
196.26	0.641	19.2636	-923.914	37	57.7223
196.42	0.642	19.0464	-923.914	43	66.9782
196.59	0.642	19.2636	-919.999	38	59.19
196.75	0.643	19.0464	-927.829	36	55.9876
196.91	0.639	19.0464	-923.914	31	48.5133
197.08	0.639	19.0464	-919.999	33	51.6432
197.24	0.636	19.0464	-919.999	30	47.1698
197.41	0.638	19.0464	-923.914	40	62.6959
197.57	0.645	19.0464	-923.914	26	40.3101
197.73	0.65	19.0464	-919.999	38	58.4615
197.9	0.65	19.2636	-923.914	41	63.0769
198.06	0.646	19.0464	-919.999	30	46.4396
198.23	0.646	19.0464	-923.914	36	55.7276
198.39	0.639	19.2636	-919.999	38	59.4679
198.55	0.65	19.0464	-919.999	44	67.6923
198.72	0.652	19.2636	-923.914	36	55.2147
198.88	0.65	19.2636	-923.914	30	46.1538
199.05	0.644	19.2636	-923.914	31	48.1366
199.21	0.646	19.0464	-919.999	34	52.6316
199.37	0.651	19.0464	-919.999	42	64.5161

199.54	0.658	19.0464	-923.914	48	72.9483
199.7	0.651	19.2636	-923.914	42	64.5161
199.87	0.651	19.0464	-923.914	36	55.2995
200.03	0.65	19.2636	-919.999	30	46.1538
200.19	0.653	19.0464	-919.999	36	55.1302
200.36	0.651	19.2636	-923.914	44	67.5883
200.52	0.645	19.0464	-927.829	40	62.0155
200.69	0.643	19.0464	-927.829	41	63.7636
200.85	0.638	19.0464	-923.914	33	51.7241
201.01	0.642	19.2636	-919.999	36	56.0748
201.18	0.647	19.0464	-923.914	37	57.187
201.34	0.645	19.0464	-916.084	52	80.6202
201.51	0.642	19.2636	-923.914	38	59.19
201.67	0.64	19.0464	-919.999	46	71.875
201.83	0.639	19.0464	-923.914	43	67.2926
202	0.642	19.2636	-923.914	30	46.729
202.16	0.646	19.2636	-919.999	37	57.2755
202.33	0.647	19.0464	-923.914	44	68.0062
202.49	0.646	19.2636	-919.999	45	69.6594
202.65	0.644	19.0464	-923.914	41	63.6646
202.82	0.648	19.0464	-919.999	46	70.9877
202.98	0.65	19.2636	-919.999	34	52.3077
203.15	0.653	19.0464	-923.914	40	61.2557
203.31	0.649	19.2636	-923.914	32	49.3066
203.47	0.646	19.2636	-919.999	34	52.6316
203.64	0.644	19.0464	-923.914	39	60.559
203.8	0.649	19.2636	-919.999	31	47.7658
203.97	0.65	19.2636	-923.914	40	61.5385
204.13	0.646	19.0464	-919.999	34	52.6316
204.29	0.652	19.2636	-923.914	37	56.7485
204.46	0.649	19.2636	-923.914	38	58.5516
204.62	0.652	19.2636	-927.829	34	52.1472
204.79	0.655	19.2636	-923.914	29	44.2748
204.95	0.652	19.2636	-919.999	38	58.2822
205.11	0.653	19.2636	-919.999	30	45.9418
205.28	0.648	19.2636	-919.999	40	61.7284
205.44	0.64	19.2636	-919.999	36	56.25
205.61	0.643	19.2636	-923.914	34	52.8771
205.77	0.647	19.4808	-919.999	36	55.6414
205.93	0.643	19.0464	-923.914	38	59.098
206.1	0.638	19.0464	-919.999	39	61.1285
206.26	0.633	19.0464	-923.914	31	48.9731
206.43	0.64	19.0464	-919.999	38	59.375
206.59	0.645	19.2636	-923.914	38	58.9147
206.75	0.644	19.0464	-919.999	39	60.559
206.92	0.643	19.0464	-919.999	39	60.6532
207.08	0.643	19.2636	-927.829	51	79.3157

207.25	0.648	19.0464	-923.914	39	60.1852
207.41	0.652	19.2636	-919.999	42	64.4172
207.57	0.655	19.0464	-923.914	45	68.7023
207.74	0.653	19.0464	-923.914	39	59.7243
207.9	0.649	19.2636	-923.914	38	58.5516
208.07	0.647	19.0464	-919.999	40	61.8238
208.23	0.646	19.0464	-923.914	31	47.9876
208.39	0.648	19.2636	-919.999	41	63.2716
208.56	0.651	19.0464	-927.829	40	61.4439
208.72	0.65	19.0464	-919.999	42	64.6154
208.89	0.647	19.2636	-919.999	35	54.0958
209.05	0.646	19.2636	-919.999	41	63.4675
209.21	0.651	19.4808	-923.914	33	50.6912
209.38	0.657	19.0464	-923.914	32	48.7062
209.54	0.655	19.0464	-923.914	40	61.0687
209.71	0.646	19.2636	-923.914	31	47.9876
209.87	0.645	19.2636	-923.914	33	51.1628
210.03	0.645	19.2636	-919.999	29	44.9612
210.2	0.647	19.2636	-923.914	36	55.6414
210.36	0.644	19.2636	-919.999	37	57.4534
210.53	0.64	19.2636	-919.999	37	57.8125
210.69	0.641	19.0464	-919.999	41	63.9626
210.85	0.642	19.2636	-923.914	43	66.9782
211.02	0.644	19.4808	-923.914	45	69.8758
211.18	0.645	19.2636	-919.999	44	68.2171
211.35	0.644	19.2636	-919.999	26	40.3727
211.51	0.64	19.2636	-923.914	36	56.25
211.67	0.639	19.0464	-923.914	36	56.338
211.84	0.643	19.2636	-919.999	32	49.7667
212	0.649	19.2636	-919.999	52	80.1233
212.17	0.654	19.0464	-923.914	45	68.8073
212.33	0.655	19.2636	-919.999	45	68.7023
212.49	0.649	19.2636	-916.084	53	81.6641
212.66	0.646	19.2636	-923.914	52	80.4954
212.82	0.652	19.2636	-919.999	42	64.4172
212.99	0.654	19.2636	-923.914	44	67.2783
213.15	0.653	19.0464	-919.999	45	68.9127
213.31	0.652	19.2636	-919.999	38	58.2822
213.48	0.648	19.2636	-919.999	36	55.5556
213.64	0.647	19.2636	-927.829	38	58.7326
213.81	0.653	19.2636	-919.999	42	64.3185
213.97	0.653	19.0464	-923.914	26	39.8162
214.13	0.649	19.0464	-919.999	32	49.3066
214.3	0.652	19.0464	-927.829	59	90.4908
214.46	0.648	19.2636	-919.999	44	67.9012
214.63	0.646	19.0464	-919.999	38	58.8235
214.79	0.648	19.4808	-916.084	45	69.4444

214.95	0.645	19.4808	-927.829	34	52.7132
215.12	0.642	19.0464	-919.999	33	51.4019
215.28	0.638	19.2636	-923.914	36	56.4263
215.45	0.635	19.2636	-923.914	44	69.2913
215.61	0.644	19.0464	-923.914	36	55.9006
215.77	0.644	19.0464	-919.999	27	41.9255
215.94	0.64	19.2636	-919.999	46	71.875
216.1	0.637	19.0464	-923.914	44	69.0738
216.27	0.64	19.2636	-919.999	51	79.6875
216.43	0.647	19.2636	-923.914	39	60.2782
216.59	0.653	19.2636	-923.914	33	50.536
216.76	0.651	19.2636	-919.999	50	76.8049
216.92	0.65	19.2636	-923.914	33	50.7692
217.09	0.647	19.2636	-927.829	35	54.0958
217.25	0.648	19.2636	-919.999	31	47.8395
217.41	0.651	19.2636	-919.999	26	39.9386
217.58	0.651	19.2636	-919.999	48	73.7327
217.74	0.648	19.2636	-923.914	52	80.2469
217.91	0.648	19.2636	-916.084	35	54.0123
218.07	0.65	19.0464	-923.914	47	72.3077
218.23	0.651	19.2636	-916.084	37	56.8356
218.4	0.657	19.0464	-927.829	34	51.7504
218.56	0.656	19.2636	-923.914	35	53.3537
218.73	0.653	19.2636	-923.914	46	70.4441
218.89	0.654	19.2636	-923.914	37	56.5749
219.05	0.652	19.4808	-923.914	39	59.816
219.22	0.652	19.2636	-927.829	43	65.9509
219.38	0.652	19.2636	-919.999	38	58.2822
219.55	0.643	19.2636	-923.914	34	52.8771
219.71	0.635	19.0464	-919.999	44	69.2913
219.87	0.638	19.0464	-923.914	36	56.4263
220.04	0.643	19.4808	-919.999	35	54.4324
220.2	0.644	19.2636	-923.914	47	72.9814
220.37	0.64	19.2636	-919.999	45	70.3125
220.53	0.638	19.0464	-923.914	32	50.1567
220.69	0.639	19.2636	-919.999	33	51.6432
220.86	0.643	19.0464	-919.999	42	65.3188
221.02	0.644	19.0464	-919.999	40	62.1118
221.19	0.641	19.2636	-923.914	45	70.2028
221.35	0.647	19.2636	-923.914	38	58.7326
221.51	0.649	19.2636	-923.914	46	70.8783
221.68	0.647	19.2636	-916.084	48	74.1886
221.84	0.649	19.0464	-919.999	46	70.8783
222.01	0.652	19.2636	-923.914	41	62.8834
222.17	0.651	19.2636	-927.829	42	64.5161
222.33	0.646	19.2636	-919.999	40	61.9195
222.5	0.645	19.0464	-927.829	51	79.0698

222.66	0.648	19.0464	-919.999	36	55.5556
222.83	0.65	19.0464	-919.999	45	69.2308
222.99	0.651	19.2636	-923.914	44	67.5883
223.15	0.651	19.0464	-927.829	48	73.7327
223.32	0.647	19.2636	-919.999	49	75.7342
223.48	0.651	19.2636	-919.999	37	56.8356
223.65	0.655	19.2636	-916.084	46	70.229
223.81	0.655	19.2636	-923.914	49	74.8092
223.97	0.654	19.0464	-923.914	42	64.2202
224.14	0.647	19.2636	-927.829	45	69.5518
224.3	0.642	19.2636	-927.829	40	62.3053
224.47	0.642	19.2636	-927.829	39	60.7477
224.63	0.646	19.2636	-923.914	44	68.1115
224.79	0.644	19.2636	-919.999	38	59.0062
224.96	0.639	19.2636	-923.914	29	45.3834
225.12	0.637	19.4808	-923.914	50	78.4929
225.29	0.636	19.2636	-919.999	38	59.7484
225.45	0.641	19.2636	-919.999	46	71.7629
225.61	0.643	19.2636	-919.999	43	66.874
225.78	0.642	19.2636	-923.914	55	85.6698
225.94	0.645	19.2636	-919.999	49	75.969
226.11	0.645	19.2636	-919.999	44	68.2171
226.27	0.651	19.2636	-923.914	44	67.5883
226.43	0.655	19.2636	-923.914	44	67.1756
226.6	0.653	19.2636	-923.914	34	52.0674
226.76	0.643	19.2636	-923.914	51	79.3157
226.93	0.644	19.2636	-923.914	54	83.8509
227.09	0.649	19.2636	-919.999	36	55.47
227.25	0.651	19.2636	-919.999	44	67.5883
227.42	0.649	19.2636	-923.914	31	47.7658
227.58	0.651	19.2636	-923.914	53	81.4132
227.75	0.648	19.2636	-919.999	32	49.3827
227.91	0.647	19.2636	-919.999	35	54.0958
228.07	0.653	19.2636	-923.914	47	71.9755
228.24	0.655	19.2636	-919.999	40	61.0687
228.4	0.655	19.2636	-919.999	39	59.542
228.57	0.654	19.2636	-923.914	39	59.633
228.73	0.646	19.2636	-923.914	56	86.6873
228.89	0.641	19.4808	-923.914	37	57.7223
229.06	0.646	19.2636	-923.914	42	65.0155
229.22	0.646	19.4808	-923.914	46	71.2074
229.39	0.646	19.2636	-923.914	51	78.9474
229.55	0.643	19.2636	-919.999	47	73.0949
229.71	0.64	19.2636	-919.999	41	64.0625
229.88	0.643	19.2636	-919.999	58	90.2022
230.04	0.644	19.2636	-923.914	45	69.8758
230.21	0.643	19.2636	-919.999	36	55.9876

230.37	0.643	19.4808	-919.999	37	57.5428
230.53	0.64	19.2636	-919.999	41	64.0625
230.7	0.646	19.2636	-916.084	48	74.3034
230.86	0.649	19.2636	-919.999	37	57.0108
231.03	0.652	19.4808	-919.999	47	72.0859
231.19	0.652	19.4808	-919.999	42	64.4172
231.35	0.646	19.2636	-919.999	54	83.5913
231.52	0.646	19.2636	-919.999	50	77.3994
231.68	0.647	19.2636	-919.999	55	85.0077
231.85	0.652	19.4808	-919.999	43	65.9509
232.01	0.654	19.4808	-923.914	41	62.6911
232.17	0.65	19.2636	-923.914	50	76.9231
232.34	0.646	19.4808	-919.999	32	49.5356
232.5	0.64	19.2636	-927.829	40	62.5
232.67	0.653	19.2636	-923.914	41	62.7871
232.83	0.656	19.0464	-919.999	40	60.9756
232.99	0.653	19.2636	-919.999	47	71.9755
233.16	0.652	19.0464	-916.084	42	64.4172
233.32	0.65	19.2636	-923.914	39	60
233.49	0.65	19.2636	-919.999	35	53.8462
233.65	0.654	19.2636	-919.999	38	58.104
233.81	0.647	19.2636	-919.999	35	54.0958
233.98	0.643	19.2636	-919.999	45	69.9845
234.14	0.642	19.2636	-919.999	36	56.0748
234.31	0.639	19.2636	-919.999	38	59.4679
234.47	0.643	19.2636	-919.999	39	60.6532
234.63	0.643	19.2636	-923.914	31	48.2115
234.8	0.643	19.2636	-927.829	42	65.3188
234.96	0.641	19.2636	-919.999	40	62.4025
235.13	0.643	19.2636	-919.999	40	62.2084
235.29	0.646	19.4808	-927.829	35	54.1796
235.45	0.649	19.2636	-919.999	37	57.0108
235.62	0.652	19.2636	-923.914	35	53.681
235.78	0.651	19.2636	-919.999	39	59.9078
235.95	0.652	19.2636	-927.829	41	62.8834
236.11	0.652	19.2636	-919.999	40	61.3497
236.27	0.652	19.2636	-916.084	40	61.3497
236.44	0.65	19.2636	-919.999	40	61.5385
236.6	0.647	19.2636	-919.999	46	71.0974
236.77	0.645	19.2636	-923.914	44	68.2171
236.93	0.645	19.2636	-923.914	37	57.3643
237.09	0.649	19.2636	-923.914	37	57.0108
237.26	0.655	19.2636	-923.914	51	77.8626
237.42	0.646	19.2636	-919.999	42	65.0155
237.59	0.643	19.2636	-912.169	41	63.7636
237.75	0.639	19.4808	-923.914	34	53.2081
237.91	0.64	19.2636	-927.829	46	71.875

238.08	0.639	19.2636	-923.914	55	86.072
238.24	0.636	19.2636	-927.829	27	42.4528
238.41	0.634	19.4808	-923.914	34	53.6278
238.57	0.63	19.2636	-916.084	32	50.7937
238.73	0.616	19.2636	-923.914	43	69.8052
238.9	0.616	19.0464	-923.914	34	55.1948
239.06	0.62	19.2636	-919.999	50	80.6452
239.23	0.62	19.2636	-923.914	27	43.5484
239.39	0.619	19.2636	-923.914	39	63.0048
239.55	0.613	19.2636	-923.914	45	73.4095
239.72	0.614	19.2636	-923.914	39	63.5179
239.88	0.618	19.2636	-923.914	40	64.7249
240.05	0.619	19.2636	-923.914	42	67.8514
240.21	0.621	19.4808	-923.914	39	62.8019
240.37	0.622	19.4808	-923.914	36	57.8778
240.54	0.623	19.2636	-923.914	43	69.0209
240.7	0.63	19.2636	-923.914	42	66.6667
240.87	0.626	19.2636	-919.999	49	78.2748
241.03	0.626	19.2636	-923.914	49	78.2748
241.19	0.624	19.4808	-923.914	38	60.8974
241.36	0.62	19.4808	-919.999	55	88.7097
241.52	0.622	19.4808	-919.999	40	64.3087
241.69	0.628	19.2636	-923.914	42	66.879
241.85	0.626	19.2636	-923.914	44	70.2875
242.01	0.626	19.2636	-919.999	36	57.508
242.18	0.622	19.4808	-923.914	54	86.8167
242.34	0.62	19.0464	-923.914	32	51.6129
242.51	0.624	19.2636	-919.999	54	86.5385
242.67	0.631	19.4808	-919.999	49	77.6545
242.83	0.625	19.2636	-923.914	47	75.2
243	0.623	19.2636	-923.914	46	73.8363
243.16	0.618	19.2636	-923.914	31	50.1618
243.33	0.616	19.2636	-919.999	44	71.4286
243.49	0.618	19.4808	-919.999	40	64.7249
243.65	0.62	19.2636	-919.999	36	58.0645
243.82	0.614	19.4808	-919.999	27	43.9739
243.98	0.614	19.2636	-919.999	36	58.6319
244.15	0.608	19.2636	-919.999	40	65.7895
244.31	0.613	19.4808	-919.999	32	52.2023
244.47	0.617	19.2636	-919.999	39	63.2091
244.64	0.62	19.2636	-919.999	47	75.8064
244.8	0.617	19.2636	-923.914	29	47.0016
244.97	0.621	19.4808	-923.914	53	85.3462
245.13	0.626	19.2636	-923.914	46	73.4824
245.29	0.627	19.4808	-919.999	33	52.6316
245.46	0.624	19.2636	-923.914	36	57.6923
245.62	0.622	19.2636	-923.914	39	62.701

245.79	0.621	19.4808	-916.084	48	77.2947
245.95	0.619	19.2636	-927.829	39	63.0048
246.11	0.623	19.2636	-919.999	49	78.6517
246.28	0.628	19.4808	-923.914	43	68.4713
246.44	0.624	19.4808	-919.999	41	65.7051
246.61	0.624	19.4808	-923.914	31	49.6795
246.77	0.623	19.4808	-919.999	46	73.8363
246.93	0.623	19.2636	-923.914	45	72.2311
247.1	0.631	19.2636	-927.829	51	80.8241
247.26	0.632	19.2636	-919.999	38	60.1266
247.43	0.628	19.4808	-919.999	32	50.9554
247.59	0.624	19.4808	-919.999	34	54.4872
247.75	0.62	19.2636	-923.914	57	91.9355
247.92	0.614	19.4808	-919.999	41	66.7752
248.08	0.619	19.2636	-916.084	36	58.1583
248.25	0.623	19.2636	-935.659	38	60.9952
248.41	0.617	19.2636	-919.999	32	51.8639
248.57	0.613	19.4808	-919.999	40	65.2529
248.74	0.613	19.2636	-923.914	42	68.5155
248.9	0.619	19.2636	-923.914	41	66.2359
249.07	0.619	19.2636	-923.914	33	53.3118
249.23	0.619	19.4808	-923.914	43	69.4669
249.39	0.616	19.2636	-919.999	36	58.4416
249.56	0.61	19.2636	-919.999	46	75.4098
249.72	0.622	19.4808	-919.999	49	78.7781
249.89	0.628	19.2636	-923.914	28	44.586
250.05	0.627	19.2636	-919.999	42	66.9856
250.21	0.625	19.4808	-919.999	49	78.4
250.38	0.622	19.2636	-923.914	26	41.8006
250.54	0.624	19.2636	-919.999	34	54.4872
250.71	0.629	19.4808	-923.914	45	71.5421
250.87	0.626	19.4808	-923.914	50	79.8722
251.03	0.624	19.2636	-919.999	55	88.141
251.2	0.624	19.4808	-919.999	46	73.7179
251.36	0.623	19.2636	-923.914	39	62.6003
251.53	0.625	19.2636	-919.999	36	57.6
251.69	0.628	19.2636	-919.999	41	65.2866
251.85	0.628	19.2636	-919.999	37	58.9172
252.02	0.626	19.2636	-923.914	36	57.508
252.18	0.628	19.2636	-919.999	31	49.3631
252.35	0.625	19.4808	-919.999	40	64
252.51	0.625	19.4808	-919.999	40	64
252.67	0.63	19.4808	-923.914	36	57.1429
252.84	0.623	19.2636	-919.999	41	65.8106
253	0.617	19.2636	-923.914	40	64.8298
253.17	0.619	19.2636	-923.914	42	67.8514
253.33	0.617	19.2636	-923.914	33	53.4846

253.49	0.619	19.2636	-919.999	31	50.0808
253.66	0.616	19.4808	-923.914	37	60.0649
253.82	0.614	19.2636	-927.829	47	76.5472
253.99	0.614	19.4808	-919.999	35	57.0033
254.15	0.617	19.4808	-923.914	42	68.0713
254.31	0.623	19.4808	-923.914	35	56.1798
254.48	0.625	19.4808	-919.999	41	65.6
254.64	0.629	19.4808	-923.914	47	74.7218
254.81	0.624	19.2636	-923.914	47	75.3205
254.97	0.624	19.2636	-919.999	36	57.6923
255.13	0.622	19.4808	-919.999	60	96.463
255.3	0.621	19.4808	-919.999	40	64.4122
255.46	0.623	19.2636	-927.829	43	69.0209
255.63	0.625	19.2636	-923.914	39	62.4
255.79	0.619	19.2636	-923.914	30	48.4653
255.95	0.62	19.4808	-919.999	46	74.1936
256.12	0.628	19.4808	-919.999	35	55.7325
256.28	0.63	19.4808	-919.999	32	50.7937
256.45	0.628	19.4808	-919.999	39	62.1019
256.61	0.626	19.2636	-919.999	49	78.2748
256.77	0.627	19.4808	-919.999	43	68.5805
256.94	0.628	19.4808	-919.999	33	52.5478
257.1	0.635	19.2636	-919.999	38	59.8425
257.27	0.638	19.4808	-919.999	38	59.5611
257.43	0.636	19.4808	-919.999	52	81.761
257.59	0.634	19.4808	-923.914	32	50.4732
257.76	0.638	19.4808	-923.914	49	76.8025
257.92	0.639	19.4808	-923.914	35	54.7731
258.09	0.636	19.2636	-919.999	39	61.3208
258.25	0.633	19.2636	-919.999	40	63.1912
258.41	0.628	19.4808	-919.999	44	70.0637
258.58	0.633	19.4808	-923.914	46	72.6698
258.74	0.637	19.6981	-923.914	39	61.2245
258.91	0.638	19.2636	-919.999	47	73.6677
259.07	0.639	19.6981	-923.914	38	59.4679
259.23	0.639	19.2636	-919.999	40	62.5978
259.4	0.638	19.2636	-923.914	42	65.8307
259.56	0.641	19.4808	-923.914	41	63.9626
259.73	0.643	19.4808	-923.914	43	66.874
259.89	0.64	19.4808	-919.999	52	81.25
260.05	0.639	19.2636	-919.999	50	78.2473
260.22	0.637	19.4808	-919.999	36	56.5149
260.38	0.641	19.2636	-919.999	45	70.2028
260.55	0.642	19.4808	-919.999	46	71.6511
260.71	0.638	19.2636	-919.999	39	61.1285
260.87	0.637	19.4808	-923.914	42	65.9341
261.04	0.64	19.2636	-923.914	45	70.3125

261.2	0.643	19.4808	-923.914	44	68.4292
261.37	0.645	19.4808	-923.914	36	55.814
261.53	0.647	19.4808	-919.999	42	64.915
261.69	0.641	19.6981	-923.914	46	71.7629
261.86	0.641	19.4808	-919.999	52	81.1232
262.02	0.636	19.4808	-919.999	42	66.0377
262.19	0.636	19.6981	-919.999	48	75.4717
262.35	0.639	19.2636	-923.914	42	65.7277
262.51	0.635	19.4808	-919.999	61	96.063
262.68	0.632	19.4808	-919.999	37	58.5443
262.84	0.627	19.2636	-919.999	37	59.0112
263.01	0.629	19.4808	-923.914	44	69.9523
263.17	0.638	19.2636	-927.829	44	68.9655
263.33	0.636	19.4808	-923.914	40	62.8931
263.5	0.639	19.4808	-919.999	46	71.9875
263.66	0.638	19.2636	-923.914	51	79.9373
263.83	0.641	19.4808	-919.999	47	73.3229
263.99	0.646	19.4808	-919.999	43	66.5635
264.15	0.647	19.4808	-919.999	44	68.0062
264.32	0.644	19.4808	-919.999	51	79.1925
264.48	0.639	19.2636	-919.999	32	50.0782
264.65	0.637	19.4808	-919.999	40	62.7943
264.81	0.644	19.4808	-919.999	48	74.5342
264.97	0.639	19.2636	-919.999	54	84.507
265.14	0.643	19.4808	-919.999	40	62.2084
265.3	0.638	19.4808	-919.999	48	75.2351
265.47	0.643	19.4808	-923.914	47	73.0949
265.63	0.64	19.4808	-923.914	50	78.125
265.79	0.651	19.4808	-923.914	44	67.5883
265.96	0.646	19.2636	-919.999	42	65.0155
266.12	0.645	19.4808	-927.829	44	68.2171
266.29	0.632	19.4808	-923.914	33	52.2152
266.45	0.638	19.4808	-916.084	40	62.6959
266.61	0.64	19.4808	-923.914	47	73.4375
266.78	0.64	19.4808	-923.914	50	78.125
266.94	0.634	19.2636	-923.914	52	82.0189
267.11	0.635	19.6981	-923.914	33	51.9685
267.27	0.632	19.2636	-919.999	43	68.038
267.43	0.635	19.4808	-923.914	41	64.5669
267.6	0.637	19.2636	-919.999	39	61.2245
267.76	0.635	19.2636	-919.999	57	89.7638
267.93	0.635	19.4808	-923.914	50	78.7402
268.09	0.635	19.4808	-919.999	55	86.6142
268.25	0.636	19.6981	-927.829	43	67.6101
268.42	0.641	19.4808	-919.999	44	68.6427
268.58	0.643	19.4808	-919.999	49	76.2053
268.75	0.643	19.2636	-923.914	27	41.9907

268.91	0.638	19.2636	-923.914	39	61.1285
269.07	0.64	19.4808	-923.914	41	64.0625
269.24	0.642	19.4808	-919.999	34	52.9595
269.4	0.642	19.4808	-923.914	41	63.8629
269.57	0.642	19.2636	-923.914	38	59.19
269.73	0.642	19.4808	-923.914	49	76.324
269.89	0.643	19.4808	-919.999	47	73.0949
270.06	0.64	19.4808	-919.999	36	56.25
270.22	0.647	19.2636	-923.914	32	49.459
270.39	0.642	19.4808	-923.914	39	60.7477
270.55	0.642	19.2636	-919.999	48	74.7664
270.71	0.64	19.4808	-923.914	44	68.75
270.88	0.642	19.4808	-927.829	48	74.7664
271.04	0.642	19.4808	-919.999	51	79.4393
271.21	0.64	19.6981	-919.999	44	68.75
271.37	0.634	19.4808	-919.999	42	66.2461
271.53	0.632	19.4808	-923.914	46	72.7848
271.7	0.633	19.4808	-919.999	36	56.872
271.86	0.626	19.4808	-923.914	47	75.0799
272.03	0.637	19.4808	-923.914	56	87.9121
272.19	0.634	19.2636	-919.999	40	63.0915
272.35	0.634	19.2636	-919.999	45	70.9779
272.52	0.631	19.6981	-919.999	45	71.3154
272.68	0.635	19.4808	-923.914	29	45.6693
272.85	0.645	19.4808	-923.914	43	66.6667
273.01	0.645	19.4808	-923.914	47	72.8682
273.17	0.644	19.2636	-923.914	39	60.559
273.34	0.642	19.4808	-919.999	26	40.4984
273.5	0.643	19.4808	-919.999	43	66.874
273.67	0.642	19.4808	-923.914	60	93.4579
273.83	0.642	19.4808	-923.914	39	60.7477
273.99	0.637	19.4808	-919.999	41	64.3642
274.16	0.639	19.4808	-923.914	43	67.2926
274.32	0.641	19.4808	-919.999	43	67.0827
274.49	0.646	19.4808	-919.999	40	61.9195
274.65	0.646	19.4808	-923.914	40	61.9195
274.81	0.646	19.4808	-919.999	48	74.3034
274.98	0.643	19.2636	-919.999	39	60.6532
275.14	0.644	19.4808	-916.084	39	60.559
275.31	0.648	19.4808	-923.914	41	63.2716
275.47	0.647	19.4808	-923.914	47	72.643
275.63	0.644	19.4808	-919.999	40	62.1118
275.8	0.635	19.4808	-923.914	39	61.4173
275.96	0.629	19.6981	-919.999	41	65.1828
276.13	0.633	19.6981	-923.914	42	66.3507
276.29	0.634	19.4808	-919.999	38	59.9369
276.45	0.636	19.6981	-923.914	32	50.3145

276.62	0.633	19.4808	-927.829	41	64.7709
276.78	0.633	19.4808	-923.914	42	66.3507
276.95	0.631	19.6981	-923.914	55	87.1632
277.11	0.633	19.2636	-923.914	38	60.0316
277.27	0.637	19.4808	-919.999	32	50.2355
277.44	0.634	19.4808	-919.999	46	72.5552
277.6	0.64	19.6981	-919.999	31	48.4375
277.77	0.643	19.4808	-923.914	39	60.6532
277.93	0.643	19.6981	-923.914	51	79.3157
278.09	0.643	19.4808	-919.999	42	65.3188
278.26	0.644	19.4808	-923.914	40	62.1118
278.42	0.642	19.6981	-919.999	38	59.19
278.59	0.641	19.4808	-923.914	52	81.1232
278.75	0.641	19.6981	-919.999	28	43.6817
278.91	0.645	19.4808	-923.914	40	62.0155
279.08	0.644	19.6981	-916.084	25	38.8199
279.24	0.644	19.4808	-923.914	45	69.8758
279.41	0.64	19.6981	-923.914	50	78.125
279.57	0.641	19.6981	-923.914	37	57.7223
279.73	0.642	19.6981	-923.914	40	62.3053
279.9	0.652	19.6981	-919.999	42	64.4172
280.06	0.648	19.4808	-919.999	40	61.7284
280.23	0.643	19.2636	-923.914	37	57.5428
280.39	0.635	19.4808	-923.914	29	45.6693
280.55	0.636	19.4808	-919.999	44	69.1824
280.72	0.638	19.4808	-919.999	33	51.7241
280.88	0.64	19.4808	-919.999	43	67.1875
281.05	0.634	19.6981	-923.914	42	66.2461
281.21	0.629	19.4808	-923.914	36	57.2337
281.37	0.63	19.6981	-927.829	35	55.5556
281.54	0.63	19.6981	-923.914	45	71.4286
281.7	0.639	19.6981	-919.999	45	70.4225
281.87	0.636	19.6981	-923.914	29	45.5975
282.03	0.636	19.6981	-923.914	58	91.195
282.19	0.64	19.4808	-919.999	38	59.375
282.36	0.642	19.4808	-923.914	37	57.6324
282.52	0.646	19.4808	-919.999	36	55.7276
282.69	0.642	19.4808	-923.914	31	48.2866
282.85	0.638	19.6981	-919.999	42	65.8307
283.01	0.632	19.4808	-923.914	35	55.3797
283.18	0.641	19.9153	-912.169	36	56.1622
283.34	0.646	19.4808	-923.914	45	69.6594
283.51	0.643	19.6981	-923.914	44	68.4292
283.67	0.64	19.6981	-919.999	44	68.75
283.83	0.641	19.4808	-923.914	32	49.922
284	0.643	19.4808	-919.999	38	59.098
284.16	0.649	19.4808	-916.084	51	78.5824

284.33	0.65	19.6981	-923.914	43	66.1538
284.49	0.647	19.4808	-927.829	33	51.0046
284.65	0.643	19.4808	-919.999	34	52.8771
284.82	0.637	19.6981	-923.914	46	72.2135
284.98	0.636	19.4808	-923.914	46	72.327
285.15	0.639	19.4808	-923.914	48	75.1174
285.31	0.638	19.4808	-923.914	42	65.8307
285.47	0.635	19.2636	-919.999	42	66.1417
285.64	0.63	19.6981	-923.914	42	66.6667
285.8	0.633	19.4808	-923.914	36	56.872
285.97	0.636	19.4808	-919.999	39	61.3208
286.13	0.635	19.6981	-923.914	38	59.8425
286.29	0.637	19.4808	-927.829	48	75.3532
286.46	0.635	19.6981	-919.999	36	56.6929
286.62	0.639	19.4808	-919.999	42	65.7277
286.79	0.641	19.6981	-919.999	50	78.0031
286.95	0.643	19.4808	-919.999	39	60.6532
287.11	0.64	19.6981	-919.999	49	76.5625
287.28	0.64	19.2636	-927.829	42	65.625
287.44	0.638	19.4808	-919.999	32	50.1567
287.61	0.642	19.4808	-919.999	38	59.19
287.77	0.643	19.4808	-919.999	48	74.6501
287.93	0.643	19.4808	-919.999	47	73.0949
288.1	0.638	19.4808	-923.914	41	64.2633
288.26	0.638	19.4808	-919.999	53	83.0721
288.43	0.634	19.6981	-923.914	37	58.3596
288.59	0.643	19.6981	-923.914	37	57.5428
288.75	0.647	19.4808	-923.914	34	52.5502
288.92	0.648	19.4808	-919.999	44	67.9012
289.08	0.639	19.4808	-923.914	39	61.0329
289.25	0.641	19.6981	-919.999	45	70.2028
289.41	0.643	19.6981	-919.999	35	54.4324
289.57	0.647	19.4808	-919.999	42	64.915
289.74	0.637	19.6981	-923.914	52	81.6327
289.9	0.636	19.6981	-919.999	35	55.0314
290.07	0.63	19.4808	-923.914	29	46.0317
290.23	0.631	19.6981	-923.914	47	74.4849
290.39	0.635	19.6981	-923.914	41	64.5669
290.56	0.631	19.4808	-919.999	38	60.2219
290.72	0.633	19.4808	-916.084	50	78.9889
290.89	0.634	19.6981	-919.999	40	63.0915
291.05	0.633	19.6981	-923.914	44	69.5103
291.21	0.64	19.6981	-923.914	52	81.25
291.38	0.643	19.4808	-916.084	43	66.874
291.54	0.645	19.4808	-923.914	44	68.2171
291.71	0.641	19.4808	-923.914	43	67.0827
291.87	0.642	19.6981	-923.914	35	54.5171

292.03	0.643	19.4808	-923.914	32	49.7667
292.2	0.645	19.6981	-919.999	49	75.969
292.36	0.642	19.4808	-919.999	36	56.0748
292.53	0.638	19.6981	-919.999	32	50.1567
292.69	0.633	19.4808	-923.914	43	67.9305
292.85	0.643	19.6981	-919.999	31	48.2115
293.02	0.644	19.6981	-923.914	38	59.0062
293.18	0.647	19.6981	-919.999	34	52.5502
293.35	0.641	19.6981	-919.999	49	76.4431
293.51	0.643	19.6981	-919.999	45	69.9845
293.67	0.642	19.6981	-923.914	44	68.5358
293.84	0.647	19.4808	-919.999	39	60.2782
294	0.636	19.6981	-923.914	46	72.327
294.17	0.64	19.6981	-919.999	38	59.375
294.33	0.632	19.4808	-919.999	32	50.6329
294.49	0.63	19.6981	-919.999	40	63.4921
294.66	0.631	19.4808	-923.914	46	72.9002
294.82	0.635	19.4808	-923.914	41	64.5669
294.99	0.636	19.4808	-919.999	45	70.7547
295.15	0.636	19.4808	-923.914	41	64.4654
295.31	0.63	19.6981	-919.999	28	44.4444
295.48	0.631	19.6981	-923.914	35	55.4675
295.64	0.636	19.6981	-919.999	36	56.6038
295.81	0.638	19.4808	-923.914	44	68.9655
295.97	0.639	19.6981	-916.084	40	62.5978
296.13	0.638	19.6981	-919.999	36	56.4263
296.3	0.64	19.4808	-919.999	35	54.6875
296.46	0.644	19.6981	-923.914	40	62.1118
296.63	0.644	19.6981	-927.829	40	62.1118
296.79	0.642	19.6981	-916.084	29	45.1713
296.95	0.64	19.6981	-923.914	37	57.8125
297.12	0.64	19.6981	-923.914	31	48.4375
297.28	0.642	19.6981	-923.914	41	63.8629
297.45	0.648	19.6981	-919.999	36	55.5556
297.61	0.645	19.4808	-923.914	42	65.1163
297.77	0.641	19.6981	-923.914	55	85.8034
297.94	0.64	19.6981	-919.999	42	65.625
298.1	0.642	19.4808	-923.914	52	80.9969
298.27	0.645	19.4808	-923.914	36	55.814
298.43	0.646	19.6981	-927.829	45	69.6594
298.59	0.644	19.9153	-923.914	44	68.323
298.76	0.635	19.6981	-919.999	64	100.787
298.92	0.631	19.4808	-919.999	44	69.7306
299.09	0.635	19.6981	-923.914	54	85.0394
299.25	0.636	19.6981	-919.999	43	67.6101
299.41	0.636	19.9153	-923.914	47	73.8994
299.58	0.624	19.4808	-919.999	38	60.8974

299.74	0.628	19.6981	-923.914	37	58.9172
299.91	0.634	19.6981	-923.914	31	48.8959
300.07	0.635	19.6981	-919.999	44	69.2913
300.23	0.634	19.4808	-927.829	43	67.8233
300.4	0.636	19.6981	-923.914	41	64.4654
300.56	0.638	19.6981	-916.084	39	61.1285
300.73	0.644	19.4808	-923.914	39	60.559
300.89	0.644	19.6981	-923.914	39	60.559
301.05	0.645	19.6981	-919.999	46	71.3178
301.22	0.641	19.4808	-919.999	42	65.5226
301.38	0.639	19.6981	-919.999	32	50.0782
301.55	0.638	19.6981	-919.999	48	75.2351
301.71	0.642	19.6981	-919.999	31	48.2866
301.87	0.645	19.6981	-916.084	48	74.4186
302.04	0.644	19.4808	-919.999	47	72.9814
302.2	0.64	19.6981	-919.999	29	45.3125
302.37	0.641	19.9153	-923.914	48	74.883
302.53	0.646	19.6981	-923.914	39	60.3715
302.69	0.648	19.4808	-923.914	48	74.0741
302.86	0.65	19.4808	-923.914	50	76.9231
303.02	0.644	19.4808	-919.999	40	62.1118
303.19	0.642	19.4808	-923.914	41	63.8629
303.35	0.636	19.6981	-919.999	36	56.6038
303.51	0.637	19.6981	-919.999	43	67.5039
303.68	0.634	19.6981	-919.999	36	56.7823
303.84	0.631	19.4808	-923.914	39	61.8067
304.01	0.632	19.6981	-916.084	43	68.038
304.17	0.63	19.9153	-919.999	36	57.1429
304.33	0.631	19.4808	-923.914	37	58.6371
304.5	0.635	19.4808	-923.914	37	58.2677
304.66	0.633	19.6981	-919.999	41	64.7709
304.83	0.635	19.4808	-919.999	49	77.1654
304.99	0.631	19.9153	-923.914	39	61.8067
305.15	0.63	19.6981	-923.914	36	57.1429
305.32	0.642	19.4808	-927.829	42	65.4206
305.48	0.646	19.4808	-923.914	52	80.4954
305.65	0.642	19.4808	-919.999	46	71.6511
305.81	0.636	19.4808	-923.914	33	51.8868
305.97	0.639	19.6981	-919.999	45	70.4225
306.14	0.644	19.4808	-919.999	42	65.2174
306.3	0.646	19.6981	-919.999	45	69.6594
306.47	0.645	19.4808	-923.914	52	80.6202
306.63	0.641	19.4808	-923.914	44	68.6427
306.79	0.639	19.6981	-919.999	39	61.0329
306.96	0.643	19.6981	-919.999	54	83.9813
307.12	0.646	19.6981	-923.914	43	66.5635
307.29	0.645	19.6981	-923.914	37	57.3643

307.45	0.643	19.6981	-919.999	36	55.9876
307.61	0.643	19.6981	-923.914	46	71.5397
307.78	0.644	19.6981	-919.999	37	57.4534
307.94	0.642	19.6981	-923.914	46	71.6511
308.11	0.643	19.6981	-919.999	50	77.7605
308.27	0.634	19.6981	-919.999	32	50.4732
308.43	0.635	19.6981	-916.084	45	70.8661
308.6	0.633	19.6981	-919.999	52	82.1485
308.76	0.633	19.6981	-927.829	44	69.5103
308.93	0.635	19.4808	-919.999	39	61.4173
309.09	0.632	19.6981	-923.914	42	66.4557
309.25	0.628	19.6981	-919.999	51	81.2102
309.42	0.63	19.6981	-927.829	35	55.5556
309.58	0.633	19.6981	-919.999	39	61.6114
309.75	0.639	19.6981	-919.999	50	78.2473
309.91	0.641	19.6981	-923.914	50	78.0031
310.07	0.64	19.6981	-919.999	41	64.0625
310.24	0.639	19.6981	-923.914	41	64.1628
310.4	0.64	19.4808	-923.914	35	54.6875
310.57	0.641	19.6981	-919.999	43	67.0827
310.73	0.638	19.6981	-919.999	46	72.1003
310.89	0.64	19.6981	-919.999	34	53.125
311.06	0.639	19.6981	-919.999	51	79.8122
311.22	0.638	19.4808	-923.914	42	65.8307
311.39	0.641	19.4808	-923.914	34	53.0421
311.55	0.649	19.6981	-923.914	38	58.5516
311.71	0.647	19.9153	-919.999	40	61.8238
311.88	0.645	19.6981	-919.999	50	77.5194
312.04	0.642	19.9153	-919.999	47	73.2087
312.21	0.644	19.6981	-923.914	36	55.9006
312.37	0.648	19.4808	-923.914	31	47.8395
312.53	0.64	19.4808	-919.999	34	53.125
312.7	0.636	19.6981	-919.999	36	56.6038
312.86	0.63	19.6981	-919.999	44	69.8413
313.03	0.631	19.6981	-923.914	41	64.9762
313.19	0.637	19.9153	-919.999	37	58.0848
313.35	0.635	19.6981	-927.829	46	72.4409
313.52	0.633	19.6981	-919.999	47	74.2496
313.68	0.632	19.6981	-919.999	45	71.2025
313.85	0.631	19.6981	-923.914	44	69.7306
314.01	0.636	19.6981	-919.999	35	55.0314
314.17	0.636	19.6981	-919.999	45	70.7547
314.34	0.637	19.6981	-923.914	40	62.7943
314.5	0.637	19.6981	-919.999	42	65.9341
314.67	0.639	19.6981	-923.914	39	61.0329
314.83	0.64	19.6981	-923.914	48	75
314.99	0.643	19.6981	-919.999	51	79.3157

315.16	0.642	19.6981	-919.999	50	77.8816
315.32	0.639	19.6981	-923.914	43	67.2926
315.49	0.635	19.6981	-919.999	38	59.8425
315.65	0.639	19.9153	-919.999	31	48.5133
315.81	0.644	19.6981	-919.999	49	76.087
315.98	0.646	19.4808	-923.914	47	72.7554
316.14	0.639	19.6981	-916.084	42	65.7277
316.31	0.636	19.4808	-919.999	46	72.327
316.47	0.642	19.6981	-923.914	29	45.1713
316.63	0.646	19.6981	-923.914	36	55.7276
316.8	0.647	19.6981	-923.914	40	61.8238
316.96	0.645	19.6981	-923.914	38	58.9147
317.13	0.639	19.6981	-923.914	48	75.1174
317.29	0.639	19.6981	-919.999	38	59.4679
317.45	0.635	19.9153	-919.999	56	88.189
317.62	0.635	19.6981	-923.914	48	75.5906
317.78	0.637	19.4808	-927.829	48	75.3532
317.95	0.632	19.4808	-923.914	42	66.4557
318.11	0.628	19.6981	-919.999	39	62.1019
318.27	0.629	19.6981	-923.914	38	60.4134
318.44	0.63	19.9153	-919.999	37	58.7302
318.6	0.636	19.6981	-919.999	43	67.6101
318.77	0.633	19.6981	-923.914	48	75.8294
318.93	0.636	19.6981	-923.914	34	53.4591
319.09	0.637	19.6981	-916.084	44	69.0738
319.26	0.644	19.6981	-919.999	45	69.8758
319.42	0.646	19.6981	-919.999	59	91.3313
319.59	0.643	19.6981	-927.829	42	65.3188
319.75	0.641	19.6981	-923.914	49	76.4431
319.91	0.636	19.4808	-923.914	36	56.6038
320.08	0.639	19.9153	-923.914	39	61.0329
320.24	0.642	19.6981	-923.914	47	73.2087
320.41	0.642	19.6981	-923.914	39	60.7477
320.57	0.641	19.6981	-919.999	47	73.3229
320.73	0.638	19.6981	-923.914	46	72.1003
320.9	0.641	19.9153	-919.999	53	82.6833
321.06	0.645	19.6981	-919.999	46	71.3178
321.23	0.647	19.6981	-923.914	49	75.7342
321.39	0.645	19.6981	-923.914	49	75.969
321.55	0.644	19.4808	-919.999	34	52.795
321.72	0.632	19.6981	-923.914	54	85.443
321.88	0.635	19.9153	-923.914	39	61.4173
322.05	0.639	19.9153	-923.914	39	61.0329
322.21	0.636	19.6981	-919.999	44	69.1824
322.37	0.633	19.6981	-927.829	39	61.6114
322.54	0.629	19.9153	-919.999	39	62.0032
322.7	0.633	19.6981	-919.999	48	75.8294

322.87	0.637	19.6981	-923.914	51	80.0628
323.03	0.634	19.6981	-919.999	46	72.5552
323.19	0.632	19.6981	-919.999	41	64.8734
323.36	0.631	19.9153	-923.914	44	69.7306
323.52	0.635	19.6981	-923.914	34	53.5433
323.69	0.64	19.6981	-923.914	56	87.5
323.85	0.641	19.6981	-919.999	48	74.883
324.01	0.641	19.9153	-923.914	49	76.4431
324.18	0.641	19.9153	-919.999	45	70.2028
324.34	0.64	19.6981	-923.914	61	95.3125
324.51	0.643	19.6981	-919.999	49	76.2053
324.67	0.646	19.6981	-919.999	44	68.1115
324.83	0.646	19.6981	-919.999	57	88.2353
325	0.642	19.9153	-919.999	57	88.785
325.16	0.642	19.6981	-916.084	40	62.3053
325.33	0.642	19.6981	-919.999	60	93.4579
325.49	0.646	19.6981	-923.914	32	49.5356
325.65	0.645	19.6981	-923.914	48	74.4186
325.82	0.645	19.6981	-923.914	32	49.6124
325.98	0.64	19.9153	-919.999	50	78.125
326.15	0.643	19.6981	-923.914	62	96.423
326.31	0.64	19.6981	-916.084	56	87.5
326.47	0.643	19.6981	-927.829	43	66.874
326.64	0.635	19.6981	-923.914	41	64.5669
326.8	0.633	19.6981	-919.999	43	67.9305
326.97	0.633	19.9153	-923.914	44	69.5103
327.13	0.633	19.9153	-919.999	39	61.6114
327.29	0.629	19.9153	-919.999	47	74.7218
327.46	0.633	19.9153	-919.999	34	53.7125
327.62	0.631	19.9153	-919.999	44	69.7306
327.79	0.629	19.6981	-919.999	58	92.2099
327.95	0.63	19.6981	-919.999	38	60.3175
328.11	0.638	19.6981	-919.999	47	73.6677
328.28	0.642	19.6981	-919.999	47	73.2087
328.44	0.644	19.6981	-919.999	48	74.5342
328.61	0.64	19.6981	-923.914	49	76.5625
328.77	0.64	19.6981	-919.999	47	73.4375
328.93	0.644	19.6981	-919.999	63	97.8261
329.1	0.642	19.6981	-919.999	37	57.6324
329.26	0.642	19.6981	-923.914	58	90.3427
329.43	0.636	19.6981	-923.914	45	70.7547
329.59	0.638	19.6981	-919.999	55	86.2069
329.75	0.641	19.6981	-916.084	38	59.2824
329.92	0.646	19.6981	-923.914	52	80.4954
330.08	0.647	19.6981	-919.999	66	102.009
330.25	0.647	19.9153	-927.829	47	72.643
330.41	0.645	19.9153	-919.999	45	69.7674

330.57	0.643	19.6981	-919.999	41	63.7636
330.74	0.647	19.6981	-923.914	75	115.92
330.9	0.648	19.6981	-923.914	45	69.4444
331.07	0.638	19.6981	-919.999	55	86.2069
331.23	0.633	19.9153	-919.999	44	69.5103
331.39	0.63	19.6981	-923.914	54	85.7143
331.56	0.632	19.9153	-923.914	55	87.0253
331.72	0.635	19.6981	-919.999	44	69.2913
331.89	0.631	19.6981	-923.914	51	80.8241
332.05	0.628	19.9153	-919.999	49	78.0255
332.21	0.627	19.6981	-931.744	35	55.8214
332.38	0.631	19.9153	-923.914	39	61.8067
332.54	0.636	19.9153	-923.914	40	62.8931
332.71	0.637	19.6981	-919.999	54	84.7724
332.87	0.63	19.6981	-923.914	59	93.6508
333.03	0.637	19.6981	-919.999	45	70.6436
333.2	0.641	19.6981	-923.914	58	90.4836
333.36	0.644	19.9153	-923.914	56	86.9565
333.53	0.645	19.6981	-923.914	57	88.3721
333.69	0.642	19.9153	-923.914	46	71.6511
333.85	0.639	19.6981	-919.999	55	86.072
334.02	0.641	19.6981	-919.999	49	76.4431
334.18	0.642	19.9153	-923.914	51	79.4393
334.35	0.647	19.6981	-923.914	42	64.915
334.51	0.645	19.6981	-919.999	43	66.6667
334.67	0.641	19.6981	-923.914	59	92.0437
334.84	0.641	19.6981	-923.914	48	74.883
335	0.641	19.9153	-919.999	65	101.404
335.17	0.648	19.9153	-923.914	42	64.8148
335.33	0.649	19.6981	-927.829	45	69.3374
335.49	0.645	19.6981	-919.999	57	88.3721
335.66	0.638	19.6981	-919.999	49	76.8025
335.82	0.636	19.9153	-919.999	52	81.761
335.99	0.636	19.6981	-923.914	48	75.4717
336.15	0.638	19.6981	-919.999	49	76.8025
336.31	0.638	19.6981	-919.999	39	61.1285
336.48	0.632	19.6981	-923.914	58	91.7721
336.64	0.628	19.6981	-919.999	36	57.3248
336.81	0.63	19.9153	-923.914	36	57.1429
336.97	0.631	19.9153	-919.999	60	95.0872
337.13	0.632	19.6981	-923.914	40	63.2911
337.3	0.634	19.6981	-916.084	47	74.1325
337.46	0.632	19.6981	-919.999	57	90.1899
337.63	0.637	19.6981	-923.914	65	102.041
337.79	0.645	19.6981	-919.999	61	94.5736
337.95	0.646	19.6981	-923.914	47	72.7554
338.12	0.643	19.6981	-919.999	41	63.7636

338.28	0.637	19.9153	-919.999	41	64.3642
338.45	0.631	19.6981	-919.999	55	87.1632
338.61	0.642	19.6981	-919.999	30	46.729
338.77	0.646	19.6981	-919.999	43	66.5635
338.94	0.643	19.6981	-923.914	49	76.2053
339.1	0.641	19.6981	-923.914	52	81.1232
339.27	0.64	19.6981	-927.829	50	78.125
339.43	0.644	19.6981	-916.084	53	82.2981
339.59	0.65	19.6981	-923.914	54	83.0769
339.76	0.649	19.6981	-923.914	42	64.7149
339.92	0.644	19.9153	-919.999	50	77.6398
340.09	0.641	19.6981	-923.914	52	81.1232
340.25	0.638	19.6981	-919.999	48	75.2351
340.41	0.636	19.9153	-919.999	53	83.3333
340.58	0.636	19.6981	-919.999	57	89.6226
340.74	0.635	19.6981	-923.914	60	94.4882
340.91	0.636	19.6981	-919.999	42	66.0377
341.07	0.632	19.6981	-919.999	45	71.2025
341.23	0.634	19.6981	-923.914	47	74.1325
341.4	0.637	19.6981	-919.999	55	86.3422
341.56	0.632	19.6981	-916.084	50	79.1139
341.73	0.633	19.6981	-919.999	52	82.1485
341.89	0.634	19.9153	-923.914	45	70.9779
342.05	0.636	19.6981	-919.999	46	72.327
342.22	0.644	19.6981	-919.999	66	102.484
342.38	0.642	19.9153	-919.999	50	77.8816
342.55	0.641	19.6981	-923.914	59	92.0437
342.71	0.637	19.6981	-923.914	40	62.7943
342.87	0.638	19.9153	-923.914	55	86.2069
343.04	0.641	19.6981	-919.999	46	71.7629
343.2	0.644	19.9153	-927.829	61	94.7205
343.37	0.643	19.6981	-923.914	62	96.423
343.53	1.282	19.9153	-919.999	89	69.4228
343.69	-999	-999	-999	-999	-999
343.86	0.641	19.9153	-919.999	53	82.6833
344.02	0.642	19.6981	-923.914	42	65.4206
344.19	0.649	19.9153	-919.999	56	86.2866
344.35	0.647	19.6981	-919.999	51	78.8253
344.51	0.643	19.6981	-919.999	62	96.423
344.68	0.642	19.6981	-919.999	58	90.3427
344.84	0.642	19.9153	-919.999	44	68.5358
345.01	0.643	19.6981	-919.999	47	73.0949
345.17	0.64	19.6981	-916.084	48	75
345.33	0.631	19.6981	-919.999	55	87.1632
345.5	0.634	19.6981	-919.999	56	88.3281
345.66	0.633	19.6981	-916.084	52	82.1485
345.83	0.632	19.9153	-919.999	65	102.848

345.99	0.63	19.9153	-919.999	63	100
346.15	0.629	19.6981	-923.914	58	92.2099
346.32	0.631	19.6981	-923.914	55	87.1632
346.48	0.636	19.6981	-919.999	55	86.478
346.65	0.64	19.9153	-919.999	36	56.25
346.81	0.643	19.6981	-923.914	65	101.089
346.97	0.643	19.6981	-919.999	52	80.8709
347.14	0.643	19.9153	-923.914	54	83.9813
347.3	0.643	19.6981	-923.914	58	90.2022
347.47	0.648	19.6981	-919.999	45	69.4444
347.63	0.644	19.6981	-923.914	59	91.6149
347.79	0.644	19.9153	-919.999	58	90.0621
347.96	0.637	19.6981	-927.829	40	62.7943
348.12	0.636	19.9153	-923.914	58	91.195
348.29	0.642	19.9153	-919.999	62	96.5732
348.45	0.646	19.6981	-919.999	64	99.0712
348.61	0.643	19.6981	-923.914	51	79.3157
348.78	0.643	19.6981	-923.914	44	68.4292
348.94	0.643	19.6981	-923.914	57	88.647
349.11	0.645	19.9153	-919.999	62	96.124
349.27	0.647	19.6981	-919.999	49	75.7342
349.43	0.635	19.9153	-923.914	73	114.961
349.6	0.638	19.6981	-919.999	53	83.0721
349.76	0.633	19.6981	-919.999	62	97.9463
349.93	0.632	19.6981	-923.914	47	74.3671
350.09	0.637	19.6981	-923.914	58	91.0518
350.25	0.634	19.9153	-919.999	53	83.5962
350.42	0.632	19.6981	-919.999	56	88.6076
350.58	0.632	19.9153	-923.914	51	80.6962
350.75	0.63	19.9153	-919.999	43	68.254
350.91	0.632	19.6981	-919.999	51	80.6962
351.07	0.638	19.6981	-919.999	60	94.0439
351.24	0.636	19.6981	-923.914	38	59.7484
351.4	0.637	19.9153	-919.999	44	69.0738
351.57	0.638	19.6981	-927.829	48	75.2351
351.73	0.642	19.6981	-923.914	45	70.0935
351.89	0.646	19.6981	-919.999	52	80.4954
352.06	0.645	19.6981	-919.999	53	82.1705
352.22	0.644	20.1325	-919.999	37	57.4534
352.39	0.639	19.6981	-919.999	52	81.3772
352.55	0.641	19.6981	-919.999	60	93.6037
352.71	0.647	19.6981	-923.914	50	77.2798
352.88	0.648	19.6981	-919.999	56	86.4198
353.04	0.647	19.6981	-923.914	49	75.7342
353.21	0.642	19.6981	-923.914	51	79.4393
353.37	0.641	19.6981	-919.999	46	71.7629
353.53	0.645	19.6981	-923.914	57	88.3721

353.7	0.643	19.6981	-919.999	47	73.0949
353.86	0.644	19.9153	-923.914	51	79.1925
354.03	0.639	19.6981	-923.914	43	67.2926
354.19	0.635	19.6981	-919.999	43	67.7165
354.35	0.635	19.6981	-927.829	46	72.4409
354.52	0.638	19.6981	-927.829	48	75.2351
354.68	0.637	19.6981	-919.999	45	70.6436
354.85	0.632	19.6981	-923.914	63	99.6835
355.01	0.622	19.6981	-923.914	66	106.109
355.17	0.63	19.9153	-919.999	47	74.6032
355.34	0.633	19.9153	-923.914	65	102.686
355.5	0.635	19.6981	-923.914	58	91.3386
355.67	0.633	19.6981	-923.914	59	93.2069
355.83	0.633	19.6981	-919.999	48	75.8294
355.99	0.637	19.9153	-919.999	45	70.6436
356.16	0.646	19.6981	-923.914	48	74.3034
356.32	0.646	19.9153	-919.999	45	69.6594
356.49	0.642	19.9153	-919.999	67	104.361
356.65	0.641	19.9153	-923.914	48	74.883
356.81	0.638	19.6981	-923.914	56	87.7743
356.98	0.64	19.6981	-923.914	47	73.4375
357.14	0.641	19.9153	-923.914	47	73.3229
357.31	0.645	19.9153	-919.999	52	80.6202
357.47	0.645	19.9153	-919.999	38	58.9147
357.63	0.643	19.9153	-923.914	38	59.098
357.8	0.644	19.9153	-919.999	57	88.5093
357.96	0.645	19.6981	-923.914	55	85.2713
358.13	0.648	19.9153	-919.999	53	81.7901
358.29	0.647	19.6981	-923.914	43	66.4606
358.45	0.645	19.9153	-923.914	43	66.6667
358.62	0.64	19.6981	-923.914	61	95.3125
358.78	0.638	19.9153	-919.999	46	72.1003
358.95	0.635	19.9153	-923.914	41	64.5669
359.11	0.631	19.9153	-919.999	43	68.1458
359.27	0.63	19.6981	-919.999	55	87.3016
359.44	0.63	19.6981	-919.999	46	73.0159
359.6	0.631	19.9153	-923.914	47	74.4849
359.77	0.634	19.6981	-919.999	45	70.9779
359.93	0.633	19.6981	-919.999	49	77.4092
360.09	0.632	19.9153	-927.829	45	71.2025
360.26	0.629	19.6981	-923.914	53	84.2607
360.42	0.635	19.6981	-919.999	43	67.7165
360.59	0.632	19.9153	-923.914	52	82.2785
360.75	0.645	19.9153	-923.914	55	85.2713
360.91	0.645	19.6981	-919.999	47	72.8682
361.08	0.64	19.6981	-923.914	59	92.1875
361.24	0.638	19.6981	-912.169	36	56.4263

361.41	0.641	19.9153	-923.914	52	81.1232
361.57	0.645	19.6981	-923.914	46	71.3178
361.73	0.646	19.9153	-919.999	44	68.1115
361.9	0.643	19.9153	-919.999	65	101.089
362.06	0.64	19.9153	-923.914	52	81.25
362.23	0.642	19.6981	-919.999	62	96.5732
362.39	0.646	19.6981	-923.914	62	95.9752
362.55	0.646	19.6981	-923.914	45	69.6594
362.72	0.644	19.9153	-923.914	48	74.5342
362.88	0.643	19.6981	-923.914	42	65.3188
363.05	0.645	19.6981	-923.914	49	75.969
363.21	0.645	19.9153	-923.914	52	80.6202
363.37	0.642	19.9153	-923.914	63	98.1308
363.54	0.638	19.9153	-919.999	42	65.8307
363.7	0.634	19.6981	-923.914	31	48.8959
363.87	0.633	19.9153	-919.999	43	67.9305
364.03	0.634	19.9153	-919.999	50	78.8644
364.19	0.636	19.6981	-919.999	46	72.327
364.36	0.632	19.9153	-923.914	49	77.5316
364.52	0.628	19.6981	-923.914	55	87.5796
364.69	0.624	19.9153	-919.999	46	73.7179
364.85	0.629	19.9153	-919.999	64	101.749
365.01	0.637	19.9153	-923.914	54	84.7724
365.18	0.64	19.9153	-923.914	66	103.125
365.34	0.642	19.6981	-916.084	45	70.0935
365.51	0.639	19.9153	-923.914	47	73.5524
365.67	0.64	19.9153	-919.999	43	67.1875
365.83	0.642	19.9153	-919.999	51	79.4393
366	0.644	19.9153	-923.914	55	85.4037
366.16	0.635	19.6981	-919.999	35	55.1181
366.33	0.642	19.6981	-919.999	36	56.0748
366.49	0.643	19.9153	-916.084	53	82.4261
366.65	0.641	19.9153	-919.999	42	65.5226
366.82	0.644	19.6981	-919.999	50	77.6398
366.98	0.644	19.9153	-923.914	43	66.7702
367.15	0.644	19.6981	-923.914	45	69.8758
367.31	0.645	19.9153	-923.914	59	91.4729
367.47	0.644	19.9153	-919.999	41	63.6646
367.64	0.646	19.9153	-927.829	47	72.7554
367.8	0.645	19.9153	-923.914	43	66.6667
367.97	0.638	19.9153	-919.999	58	90.9091
368.13	0.633	19.9153	-923.914	45	71.09
368.29	0.631	19.9153	-919.999	43	68.1458
368.46	0.635	19.9153	-919.999	48	75.5906
368.62	0.639	19.9153	-919.999	58	90.7668
368.79	0.635	19.6981	-919.999	56	88.189
368.95	0.631	19.6981	-923.914	44	69.7306

369.11	0.63	19.9153	-923.914	52	82.5397
369.28	0.63	19.9153	-923.914	40	63.4921
369.44	0.635	19.6981	-923.914	43	67.7165
369.61	0.637	19.9153	-923.914	45	70.6436
369.77	0.637	19.9153	-923.914	44	69.0738
369.93	0.637	19.6981	-919.999	48	75.3532
370.1	0.638	19.9153	-923.914	31	48.5893
370.26	0.64	19.6981	-923.914	64	100
370.43	0.643	19.9153	-923.914	45	69.9845
370.59	0.644	19.9153	-919.999	52	80.7453
370.75	0.64	19.9153	-919.999	45	70.3125
370.92	0.639	19.6981	-927.829	63	98.5916
371.08	0.642	19.9153	-923.914	53	82.5545
371.25	0.647	19.9153	-919.999	40	61.8238
371.41	0.646	19.9153	-919.999	50	77.3994
371.57	0.642	19.6981	-919.999	54	84.1122
371.74	0.636	19.9153	-919.999	33	51.8868
371.9	0.645	19.9153	-919.999	37	57.3643
372.07	0.648	19.9153	-923.914	36	55.5556
372.23	0.645	19.9153	-923.914	49	75.969
372.39	0.643	19.6981	-923.914	34	52.8771
372.56	0.635	19.9153	-923.914	57	89.7638
372.72	0.637	19.9153	-923.914	45	70.6436
372.89	0.637	19.6981	-919.999	50	78.4929
373.05	0.636	19.9153	-919.999	41	64.4654
373.21	0.635	19.6981	-919.999	38	59.8425
373.38	0.63	19.9153	-919.999	51	80.9524
373.54	0.628	19.9153	-919.999	59	93.949
373.71	0.628	19.9153	-923.914	45	71.6561
373.87	0.632	19.6981	-919.999	33	52.2152
374.03	0.634	19.9153	-919.999	46	72.5552
374.2	0.636	19.9153	-923.914	54	84.9057
374.36	0.634	19.9153	-919.999	47	74.1325
374.53	0.64	19.6981	-919.999	49	76.5625
374.69	0.646	19.9153	-923.914	60	92.8793
374.85	0.646	19.6981	-923.914	59	91.3313
375.02	0.645	19.9153	-923.914	43	66.6667
375.18	0.641	19.6981	-923.914	48	74.883
375.35	0.639	19.6981	-923.914	52	81.3772
375.51	0.642	19.6981	-919.999	57	88.785
375.67	0.643	19.9153	-919.999	57	88.647
375.84	0.642	19.9153	-919.999	40	62.3053
376	0.642	19.9153	-919.999	49	76.324
376.17	0.64	19.9153	-923.914	51	79.6875
376.33	0.644	19.9153	-923.914	38	59.0062
376.49	0.647	19.9153	-919.999	40	61.8238
376.66	0.646	19.9153	-916.084	46	71.2074

376.82	0.644	19.9153	-923.914	34	52.795
376.99	0.641	19.9153	-919.999	48	74.883
377.15	0.634	19.9153	-923.914	44	69.4006
377.31	0.637	19.9153	-919.999	44	69.0738
377.48	0.64	19.9153	-923.914	56	87.5
377.64	0.633	20.1325	-923.914	39	61.6114
377.81	0.627	19.6981	-923.914	29	46.252
377.97	0.628	19.9153	-919.999	41	65.2866
378.13	0.632	20.1325	-923.914	59	93.3544
378.3	0.637	19.6981	-923.914	57	89.4819
378.46	0.634	19.9153	-923.914	49	77.2871
378.63	0.63	19.9153	-919.999	37	58.7302
378.79	0.631	19.9153	-919.999	45	71.3154
378.95	0.634	19.9153	-923.914	37	58.3596
379.12	0.643	19.6981	-923.914	47	73.0949
379.28	0.643	19.6981	-919.999	48	74.6501
379.45	0.643	19.9153	-919.999	40	62.2084
379.61	0.642	19.9153	-919.999	51	79.4393
379.77	0.64	19.9153	-919.999	61	95.3125
379.94	0.644	19.9153	-923.914	55	85.4037
380.1	0.646	19.9153	-919.999	48	74.3034
380.27	0.645	19.9153	-919.999	49	75.969
380.43	0.642	19.9153	-923.914	57	88.785
380.59	0.642	19.9153	-919.999	50	77.8816
380.76	0.644	19.6981	-919.999	53	82.2981
380.92	0.643	19.6981	-919.999	56	87.0918
381.09	0.644	19.9153	-923.914	40	62.1118
381.25	0.641	19.6981	-923.914	52	81.1232
381.41	0.638	19.9153	-923.914	47	73.6677
381.58	0.643	19.9153	-919.999	51	79.3157
381.74	0.641	19.9153	-935.659	36	56.1622
381.91	0.637	19.6981	-919.999	48	75.3532
382.07	0.633	19.9153	-919.999	48	75.8294
382.23	0.631	19.9153	-923.914	61	96.672
382.4	0.634	19.9153	-923.914	47	74.1325
382.56	0.634	19.9153	-923.914	41	64.6688
382.73	0.628	19.6981	-927.829	51	81.2102
382.89	0.632	19.9153	-923.914	45	71.2025
383.05	0.627	19.9153	-919.999	37	59.0112
383.22	0.628	19.9153	-923.914	47	74.8408
383.38	0.632	19.9153	-923.914	52	82.2785
383.55	0.638	19.9153	-923.914	57	89.3417
383.71	0.642	19.9153	-923.914	47	73.2087
383.87	0.643	19.6981	-923.914	53	82.4261
384.04	0.641	19.6981	-923.914	50	78.0031
384.2	0.64	19.9153	-919.999	52	81.25
384.37	0.645	19.9153	-919.999	39	60.4651

384.53	0.642	19.9153	-923.914	45	70.0935
384.69	0.641	19.9153	-919.999	49	76.4431
384.86	0.638	19.6981	-923.914	52	81.5047
385.02	0.641	19.9153	-923.914	40	62.4025
385.19	0.644	19.6981	-919.999	41	63.6646
385.35	0.648	19.9153	-923.914	43	66.358
385.51	0.646	19.9153	-923.914	50	77.3994
385.68	0.642	19.6981	-919.999	39	60.7477
385.84	0.641	19.9153	-919.999	57	88.9236
386.01	0.645	19.9153	-923.914	59	91.4729
386.17	0.648	19.9153	-919.999	43	66.358
386.33	0.643	19.9153	-919.999	50	77.7605
386.5	0.635	19.6981	-923.914	52	81.8898
386.66	0.632	19.9153	-923.914	40	63.2911
386.83	0.628	19.6981	-919.999	37	58.9172
386.99	0.634	19.9153	-919.999	33	52.0505
387.15	0.636	19.6981	-923.914	51	80.1887
387.32	0.63	20.1325	-927.829	49	77.7778
387.48	0.628	19.9153	-919.999	39	62.1019
387.65	0.626	19.9153	-923.914	36	57.508
387.81	0.632	19.9153	-919.999	44	69.6203
387.97	0.637	19.6981	-923.914	45	70.6436
388.14	0.637	19.9153	-919.999	40	62.7943
388.3	0.631	19.9153	-919.999	55	87.1632
388.47	0.637	20.1325	-919.999	50	78.4929
388.63	0.641	19.9153	-923.914	50	78.0031
388.79	0.642	19.9153	-923.914	51	79.4393
388.96	0.642	19.9153	-919.999	59	91.9003
389.12	0.641	19.6981	-919.999	27	42.1217
389.29	0.64	19.9153	-923.914	56	87.5
389.45	0.642	19.9153	-919.999	52	80.9969
389.61	0.644	19.9153	-919.999	52	80.7453
389.78	0.647	19.9153	-919.999	44	68.0062
389.94	0.644	19.9153	-923.914	35	54.3478
390.11	0.639	19.9153	-935.659	45	70.4225
390.27	0.641	19.9153	-923.914	31	48.3619
390.43	0.643	19.9153	-919.999	45	69.9845
390.6	0.647	19.9153	-919.999	36	55.6414
390.76	0.645	19.9153	-923.914	49	75.969
390.93	0.642	19.9153	-919.999	41	63.8629
391.09	0.635	19.9153	-923.914	49	77.1654
391.25	0.635	19.9153	-919.999	45	70.8661
391.42	0.637	19.6981	-919.999	41	64.3642
391.58	0.637	20.1325	-923.914	53	83.2025
391.75	0.632	20.1325	-919.999	46	72.7848
391.91	0.629	19.9153	-923.914	42	66.7727
392.07	0.628	19.9153	-919.999	49	78.0255

392.24	0.631	19.9153	-927.829	45	71.3154
392.4	0.632	19.9153	-923.914	47	74.3671
392.57	0.63	19.9153	-919.999	41	65.0794
392.73	0.632	19.6981	-923.914	42	66.4557
392.89	0.637	19.6981	-919.999	49	76.9231
393.06	0.641	19.6981	-927.829	34	53.0421
393.22	0.644	20.1325	-923.914	49	76.087
393.39	0.643	19.9153	-919.999	49	76.2053
393.55	0.642	19.9153	-923.914	49	76.324
393.71	0.638	19.6981	-919.999	39	61.1285
393.88	0.631	19.9153	-919.999	50	79.2393
394.04	0.641	19.9153	-923.914	47	73.3229
394.21	0.644	19.6981	-919.999	58	90.0621
394.37	0.641	19.9153	-919.999	49	76.4431
394.53	0.64	19.9153	-916.084	38	59.375
394.7	0.64	19.9153	-919.999	50	78.125
394.86	0.646	19.9153	-919.999	55	85.1393
395.03	0.647	19.9153	-919.999	46	71.0974
395.19	0.646	19.9153	-923.914	42	65.0155
395.35	0.641	19.9153	-919.999	45	70.2028
395.52	0.64	19.9153	-919.999	48	75
395.68	0.635	19.6981	-923.914	57	89.7638
395.85	0.638	20.1325	-919.999	42	65.8307
396.01	0.632	19.9153	-919.999	58	91.7721
396.17	0.633	19.9153	-919.999	44	69.5103
396.34	0.63	19.9153	-919.999	51	80.9524
396.5	0.631	19.9153	-919.999	53	83.9937
396.67	0.633	19.9153	-919.999	66	104.265
396.83	0.633	19.9153	-923.914	48	75.8294
396.99	0.633	20.1325	-927.829	56	88.4676
397.16	0.631	19.9153	-919.999	55	87.1632
397.32	0.632	19.9153	-923.914	36	56.962
397.49	0.64	19.9153	-923.914	50	78.125
397.65	0.642	19.6981	-923.914	48	74.7664
397.81	0.643	19.9153	-919.999	38	59.098
397.98	0.639	19.9153	-919.999	51	79.8122
398.14	0.636	19.6981	-923.914	47	73.8994
398.31	0.639	19.6981	-916.084	45	70.4225
398.47	0.642	19.9153	-923.914	53	82.5545
398.63	0.641	19.9153	-919.999	65	101.404
398.8	0.641	19.9153	-919.999	64	99.844
398.96	0.64	19.6981	-923.914	56	87.5
399.13	0.642	19.9153	-919.999	60	93.4579
399.29	0.642	19.9153	-919.999	56	87.2274
399.45	0.637	19.9153	-923.914	52	81.6327
399.62	0.642	19.9153	-923.914	52	80.9969
399.78	0.642	19.9153	-923.914	76	118.38

399.95	0.64	19.9153	-919.999	49	76.5625
400.11	0.642	19.9153	-923.914	60	93.4579
400.27	0.641	19.6981	-923.914	67	104.524
400.44	0.638	19.9153	-919.999	56	87.7743
400.6	0.633	19.9153	-916.084	59	93.2069
400.77	0.63	19.9153	-923.914	46	73.0159
400.93	0.632	19.9153	-919.999	50	79.1139
401.09	0.635	19.9153	-919.999	56	88.189
401.26	0.632	19.9153	-919.999	58	91.7721
401.42	0.63	20.3498	-919.999	58	92.0635
401.59	0.625	19.9153	-919.999	58	92.8
401.75	0.629	19.6981	-919.999	55	87.4404
401.91	0.637	19.9153	-919.999	54	84.7724
402.08	0.64	19.9153	-923.914	44	68.75
402.24	0.643	19.9153	-923.914	58	90.2022
402.41	0.642	19.9153	-919.999	50	77.8816
402.57	0.638	19.9153	-923.914	64	100.313
402.73	0.642	19.9153	-919.999	62	96.5732
402.9	0.644	19.9153	-927.829	55	85.4037
403.06	0.643	20.1325	-919.999	58	90.2022
403.23	0.641	19.9153	-923.914	63	98.2839
403.39	0.637	19.9153	-919.999	51	80.0628
403.55	0.639	19.9153	-923.914	51	79.8122
403.72	0.641	19.9153	-919.999	56	87.3635
403.88	0.643	19.9153	-919.999	71	110.42
404.05	0.642	20.1325	-919.999	60	93.4579
404.21	0.64	19.6981	-923.914	65	101.563
404.37	0.64	19.9153	-919.999	61	95.3125
404.54	0.644	20.1325	-923.914	67	104.037
404.7	0.645	19.6981	-919.999	63	97.6744
404.87	0.636	19.9153	-919.999	64	100.629
405.03	0.628	19.9153	-923.914	57	90.7643
405.19	0.629	19.9153	-919.999	53	84.2607
405.36	0.635	19.9153	-927.829	52	81.8898
405.52	0.634	20.1325	-923.914	62	97.7918
405.69	0.635	19.9153	-923.914	67	105.512
405.85	0.631	19.9153	-919.999	48	76.0697
406.01	0.628	19.9153	-919.999	60	95.5414
406.18	0.63	19.9153	-919.999	54	85.7143
406.34	0.633	19.9153	-923.914	54	85.3081
406.51	0.636	19.6981	-919.999	69	108.491
406.67	0.637	19.9153	-919.999	50	78.4929
406.83	0.638	19.9153	-919.999	65	101.881
407	0.638	19.9153	-919.999	48	75.2351
407.16	0.639	19.9153	-919.999	61	95.4617
407.33	0.642	19.9153	-916.084	64	99.6885
407.49	0.642	19.9153	-923.914	48	74.7664

407.65	0.64	19.9153	-923.914	53	82.8125
407.82	0.64	19.9153	-919.999	55	85.9375
407.98	0.642	19.9153	-923.914	54	84.1122
408.15	0.646	19.9153	-923.914	62	95.9752
408.31	0.645	19.9153	-919.999	55	85.2713
408.47	0.643	19.6981	-919.999	53	82.4261
408.64	0.639	19.9153	-919.999	55	86.072
408.8	0.642	19.9153	-923.914	52	80.9969
408.97	0.643	19.9153	-923.914	63	97.9782
409.13	0.642	19.9153	-919.999	45	70.0935
409.29	0.64	19.9153	-919.999	59	92.1875
409.46	0.635	20.1325	-919.999	49	77.1654
409.62	0.632	19.9153	-927.829	48	75.9494
409.79	0.634	19.9153	-919.999	45	70.9779
409.95	0.635	19.9153	-919.999	49	77.1654
410.11	0.634	19.9153	-919.999	59	93.0599
410.28	0.629	19.9153	-927.829	60	95.3895
410.44	0.623	19.9153	-919.999	56	89.8876
410.61	0.623	19.9153	-923.914	52	83.4671
410.77	0.634	19.9153	-923.914	56	88.3281
410.93	0.635	19.9153	-923.914	54	85.0394
411.1	0.632	19.9153	-919.999	73	115.506
411.26	0.634	19.9153	-923.914	48	75.7098
411.43	0.637	19.9153	-919.999	54	84.7724
411.59	0.644	19.9153	-919.999	60	93.1677
411.75	0.645	19.9153	-919.999	51	79.0698
411.92	0.642	20.1325	-923.914	65	101.246
412.08	0.64	20.1325	-919.999	55	85.9375
412.25	0.638	20.1325	-923.914	44	68.9655
412.41	0.639	19.9153	-919.999	67	104.851
412.57	0.642	19.6981	-919.999	73	113.707
412.74	0.64	19.9153	-919.999	58	90.625
412.9	0.641	19.9153	-923.914	62	96.7239
413.07	0.639	19.9153	-919.999	61	95.4617
413.23	0.643	19.9153	-919.999	49	76.2053
413.39	0.647	19.9153	-923.914	63	97.3725
413.56	0.645	19.9153	-919.999	50	77.5194
413.72	0.642	19.9153	-919.999	53	82.5545
413.89	0.64	19.9153	-919.999	77	120.313
414.05	0.639	19.9153	-923.914	48	75.1174
414.21	0.638	19.9153	-919.999	58	90.9091
414.38	0.635	19.9153	-919.999	47	74.0157
414.54	0.632	20.1325	-919.999	66	104.43
414.71	0.627	19.9153	-923.914	71	113.238
414.87	0.627	19.9153	-923.914	62	98.8836
415.03	0.629	19.9153	-919.999	64	101.749
415.2	0.631	19.9153	-923.914	50	79.2393

415.36	0.63	19.9153	-923.914	54	85.7143
415.53	0.629	19.9153	-919.999	70	111.288
415.69	0.63	19.9153	-923.914	51	80.9524
415.85	0.634	19.9153	-923.914	59	93.0599
416.02	0.635	19.9153	-923.914	59	92.9134
416.18	0.641	19.9153	-919.999	48	74.883
416.35	0.645	19.9153	-919.999	57	88.3721
416.51	0.64	19.9153	-923.914	53	82.8125
416.67	0.637	19.9153	-919.999	59	92.6217
416.84	0.641	19.9153	-916.084	69	107.644
417	0.643	20.1325	-919.999	59	91.7574
417.17	0.644	19.9153	-923.914	52	80.7453
417.33	0.64	20.1325	-919.999	72	112.5
417.49	0.642	19.9153	-923.914	68	105.919
417.66	0.643	19.9153	-919.999	58	90.2022
417.82	0.645	19.9153	-919.999	68	105.426
417.99	0.641	19.9153	-923.914	57	88.9236
418.15	0.639	20.1325	-919.999	57	89.2019
418.31	0.637	19.9153	-923.914	60	94.1915
418.48	0.642	19.9153	-923.914	59	91.9003
418.64	0.644	19.9153	-919.999	65	100.932
418.81	0.641	19.9153	-923.914	53	82.6833
418.97	0.635	19.9153	-919.999	66	103.937
419.13	0.63	19.6981	-919.999	63	100
419.3	0.63	19.9153	-919.999	53	84.127
419.46	0.634	19.9153	-923.914	57	89.9054
419.63	0.635	19.9153	-919.999	70	110.236
419.79	0.63	19.9153	-923.914	57	90.4762
419.95	0.628	19.9153	-919.999	65	103.503
420.12	0.625	19.9153	-919.999	69	110.4
420.28	0.628	19.9153	-919.999	80	127.389
420.45	0.637	19.9153	-923.914	63	98.9011
420.61	0.638	19.9153	-923.914	68	106.583
420.77	0.64	20.1325	-923.914	70	109.375
420.94	0.637	19.9153	-923.914	55	86.3422
421.1	0.64	19.9153	-919.999	60	93.75
421.27	0.641	19.9153	-923.914	51	79.5632
421.43	0.642	20.1325	-919.999	59	91.9003
421.59	0.633	19.9153	-923.914	65	102.686
421.76	0.637	19.9153	-919.999	48	75.3532
421.92	0.639	19.9153	-923.914	58	90.7668
422.09	0.645	20.1325	-923.914	58	89.9225
422.25	0.642	19.6981	-923.914	63	98.1308
422.41	0.644	19.9153	-919.999	52	80.7453
422.58	0.641	19.9153	-919.999	71	110.764
422.74	0.642	20.1325	-919.999	59	91.9003
422.91	0.641	20.1325	-919.999	63	98.2839

423.07	0.647	19.9153	-919.999	65	100.464
423.23	0.644	19.9153	-919.999	60	93.1677
423.4	0.635	19.9153	-919.999	61	96.063
423.56	0.629	19.9153	-919.999	54	85.8506
423.73	0.628	19.9153	-923.914	55	87.5796
423.89	0.636	19.9153	-927.829	65	102.201
424.05	0.636	19.9153	-919.999	69	108.491
424.22	0.634	19.9153	-923.914	61	96.2145
424.38	0.628	20.1325	-919.999	72	114.65
424.55	0.629	19.6981	-923.914	53	84.2607
424.71	0.631	19.9153	-923.914	69	109.35
424.87	0.636	19.9153	-923.914	59	92.7673
425.04	0.638	19.9153	-919.999	72	112.853
425.2	0.64	19.6981	-919.999	53	82.8125
425.37	0.637	19.9153	-923.914	58	91.0518
425.53	0.639	19.9153	-923.914	73	114.241
425.69	0.64	19.9153	-919.999	70	109.375
425.86	0.638	19.9153	-919.999	50	78.3699
426.02	0.64	20.1325	-923.914	48	75
426.19	0.636	20.1325	-923.914	63	99.0566
426.35	0.64	19.9153	-923.914	55	85.9375
426.51	0.642	19.9153	-923.914	52	80.9969
426.68	0.645	19.9153	-923.914	53	82.1705
426.84	0.643	19.9153	-923.914	63	97.9782
427.01	0.641	19.9153	-923.914	55	85.8034
427.17	0.632	19.9153	-919.999	58	91.7721
427.33	0.644	19.9153	-923.914	68	105.59
427.5	0.645	19.9153	-923.914	75	116.279
427.66	0.645	19.9153	-919.999	62	96.124
427.83	0.639	19.9153	-923.914	59	92.3318
427.99	0.634	19.9153	-919.999	51	80.4416
428.15	0.634	20.1325	-919.999	68	107.256
428.32	0.637	19.9153	-923.914	46	72.2135
428.48	0.636	19.9153	-923.914	52	81.761
428.65	0.634	19.9153	-919.999	60	94.6372
428.81	0.628	20.3498	-923.914	65	103.503
428.97	0.625	19.9153	-923.914	57	91.2
429.14	0.629	19.9153	-919.999	70	111.288
429.3	0.629	19.9153	-919.999	65	103.339
429.47	0.633	20.1325	-923.914	66	104.265
429.63	0.634	20.1325	-919.999	62	97.7918
429.79	0.637	19.9153	-923.914	53	83.2025
429.96	0.639	19.9153	-919.999	53	82.9421
430.12	0.644	19.9153	-923.914	59	91.6149
430.29	0.644	19.9153	-919.999	65	100.932
430.45	0.641	19.9153	-919.999	49	76.4431
430.61	0.64	19.9153	-919.999	66	103.125

430.78	0.64	19.9153	-923.914	68	106.25
430.94	0.643	20.1325	-923.914	64	99.5334
431.11	0.641	19.9153	-919.999	75	117.005
431.27	0.638	19.9153	-919.999	78	122.257
431.43	0.635	19.9153	-919.999	53	83.4646
431.6	0.638	20.1325	-919.999	77	120.69
431.76	0.64	20.1325	-919.999	53	82.8125
431.93	0.646	20.1325	-923.914	61	94.4272
432.09	0.643	20.1325	-912.169	50	77.7605
432.25	0.64	20.1325	-927.829	73	114.063
432.42	0.638	19.6981	-923.914	54	84.6395
432.58	0.637	19.9153	-923.914	58	91.0518
432.75	0.631	19.9153	-919.999	74	117.274
432.91	0.633	19.9153	-923.914	50	78.9889
433.07	0.635	19.9153	-923.914	57	89.7638
433.24	0.628	19.6981	-923.914	60	95.5414
433.4	0.627	19.9153	-923.914	65	103.668
433.57	0.631	20.1325	-919.999	59	93.5024
433.73	0.634	19.9153	-919.999	68	107.256
433.89	0.632	19.9153	-912.169	73	115.506
434.06	0.629	19.9153	-919.999	56	89.0302
434.22	0.632	19.9153	-923.914	73	115.506
434.39	0.634	20.1325	-919.999	55	86.7508
434.55	0.64	19.9153	-923.914	74	115.625
434.71	0.639	19.9153	-919.999	60	93.8967
434.88	0.639	19.9153	-923.914	66	103.286
435.04	0.64	20.1325	-919.999	55	85.9375
435.21	0.643	19.9153	-923.914	67	104.199
435.37	0.641	19.9153	-919.999	62	96.7239
435.53	0.643	20.1325	-923.914	68	105.754
435.7	0.643	19.9153	-927.829	66	102.644
435.86	0.641	19.9153	-919.999	55	85.8034
436.03	0.641	20.1325	-919.999	36	56.1622
436.19	0.646	20.1325	-919.999	72	111.455
436.35	0.645	19.6981	-916.084	71	110.078
436.52	0.643	19.9153	-919.999	73	113.53
436.68	0.637	20.1325	-923.914	60	94.1915
436.85	0.636	19.9153	-923.914	59	92.7673
437.01	0.639	19.9153	-919.999	67	104.851
437.17	0.641	19.9153	-919.999	54	84.2434
437.34	0.636	20.1325	-923.914	57	89.6226
437.5	0.636	20.1325	-919.999	53	83.3333
437.67	0.631	19.9153	-919.999	66	104.596
437.83	0.631	19.9153	-923.914	77	122.029
437.99	0.634	19.9153	-919.999	54	85.1735
438.16	0.632	19.9153	-919.999	66	104.43
438.32	0.624	19.9153	-919.999	55	88.141

438.49	0.628	19.9153	-919.999	67	106.688
438.65	0.63	19.9153	-919.999	61	96.8254
438.81	0.634	20.1325	-919.999	51	80.4416
438.98	0.638	20.1325	-923.914	63	98.7461
439.14	0.641	19.9153	-916.084	62	96.7239
439.31	0.641	19.9153	-919.999	52	81.1232
439.47	0.641	19.9153	-927.829	58	90.4836
439.63	0.64	19.9153	-923.914	69	107.813
439.8	0.643	19.9153	-919.999	63	97.9782
439.96	0.641	19.9153	-916.084	57	88.9236
440.13	0.639	19.9153	-923.914	69	107.981
440.29	0.636	19.9153	-919.999	57	89.6226
440.45	0.64	19.9153	-923.914	68	106.25
440.62	0.646	20.1325	-919.999	60	92.8793
440.78	0.647	19.9153	-923.914	63	97.3725
440.95	0.644	19.9153	-919.999	73	113.354
441.11	0.64	19.9153	-919.999	74	115.625
441.27	0.641	20.1325	-919.999	69	107.644
441.44	0.647	20.1325	-923.914	70	108.192
441.6	0.647	20.1325	-923.914	61	94.2813
441.77	0.646	19.9153	-919.999	72	111.455
441.93	0.645	19.9153	-923.914	56	86.8217
442.09	0.65	19.6981	-919.999	69	106.154
442.26	0.649	19.9153	-923.914	75	115.562
442.42	0.648	19.9153	-923.914	57	87.963
442.59	0.648	19.9153	-923.914	72	111.111
442.75	0.644	20.1325	-919.999	60	93.1677
442.91	0.643	20.1325	-923.914	53	82.4261
443.08	0.643	19.9153	-919.999	60	93.3126
443.24	0.648	20.1325	-919.999	77	118.827
443.41	0.653	19.9153	-923.914	68	104.135
443.57	0.655	19.9153	-916.084	55	83.9695
443.73	0.647	19.9153	-927.829	69	106.646
443.9	0.655	20.1325	-919.999	64	97.7099
444.06	0.659	20.1325	-919.999	65	98.6343
444.23	0.66	19.9153	-923.914	55	83.3333
444.39	0.654	19.9153	-923.914	67	102.446
444.55	0.653	20.1325	-923.914	77	117.917
444.72	0.653	19.9153	-923.914	57	87.2894
444.88	0.66	19.9153	-923.914	72	109.091
445.05	0.663	19.9153	-923.914	63	95.0226
445.21	0.66	20.1325	-923.914	64	96.9697
445.37	0.655	19.9153	-919.999	64	97.7099
445.54	0.655	20.1325	-919.999	67	102.29
445.7	0.658	20.1325	-919.999	66	100.304
445.87	0.659	19.9153	-916.084	64	97.1168
446.03	0.662	19.9153	-919.999	73	110.272

446.19	0.658	19.9153	-923.914	67	101.824
446.36	0.652	19.9153	-923.914	67	102.761
446.52	0.652	20.1325	-923.914	70	107.362
446.69	0.651	20.1325	-923.914	74	113.671
446.85	0.652	20.1325	-919.999	61	93.5583
447.01	0.65	19.9153	-919.999	79	121.538
447.18	0.644	20.1325	-919.999	57	88.5093
447.34	0.643	20.1325	-923.914	61	94.8678
447.51	0.645	20.1325	-916.084	55	85.2713
447.67	0.643	19.9153	-919.999	73	113.53
447.83	0.646	20.1325	-923.914	62	95.9752
448	0.651	19.9153	-919.999	71	109.063
448.16	0.652	19.9153	-916.084	63	96.6258
448.33	0.657	20.1325	-919.999	71	108.067
448.49	0.658	20.1325	-919.999	61	92.7052
448.65	0.657	19.9153	-923.914	46	70.0152
448.82	0.654	20.1325	-923.914	71	108.563
448.98	0.654	20.1325	-919.999	71	108.563
449.15	0.65	20.1325	-923.914	74	113.846
449.31	0.66	19.9153	-923.914	68	103.03
449.47	0.661	20.1325	-923.914	64	96.823
449.64	0.656	20.1325	-919.999	67	102.134
449.8	0.654	19.9153	-919.999	62	94.8012
449.97	0.657	19.9153	-919.999	68	103.501
450.13	0.66	19.9153	-923.914	64	96.9697
450.29	0.662	20.1325	-919.999	63	95.1662
450.46	0.66	19.9153	-919.999	71	107.576
450.62	0.656	19.9153	-919.999	59	89.939
450.79	0.655	19.9153	-923.914	74	112.977
450.95	0.653	20.1325	-919.999	67	102.603
451.11	0.651	19.9153	-919.999	63	96.7742
451.28	0.647	19.9153	-919.999	58	89.6445
451.44	0.644	20.1325	-923.914	65	100.932
451.61	0.647	19.9153	-919.999	82	126.739
451.77	0.65	20.1325	-923.914	66	101.538
451.93	0.648	19.9153	-919.999	67	103.395
452.1	0.646	19.9153	-927.829	71	109.907
452.26	0.646	20.1325	-923.914	66	102.167
452.43	0.65	19.9153	-919.999	54	83.0769
452.59	0.656	19.9153	-923.914	67	102.134
452.75	0.658	19.9153	-923.914	62	94.2249
452.92	0.657	19.9153	-923.914	57	86.758
453.08	0.652	20.1325	-919.999	61	93.5583
453.25	0.648	19.9153	-919.999	56	86.4198
453.41	0.656	20.3498	-919.999	59	89.939
453.57	0.658	19.9153	-923.914	52	79.0274
453.74	0.658	19.9153	-923.914	62	94.2249

453.9	0.655	19.9153	-919.999	76	116.031
454.07	0.655	20.1325	-923.914	60	91.6031
454.23	0.657	20.1325	-919.999	73	111.111
454.39	0.661	19.9153	-923.914	61	92.2844
454.56	0.654	20.1325	-923.914	60	91.7431
454.72	0.658	19.9153	-923.914	63	95.7447
454.89	0.657	20.1325	-919.999	64	97.4125
455.05	0.655	19.9153	-919.999	56	85.4962
455.21	0.655	20.1325	-923.914	65	99.2366
455.38	0.654	20.1325	-923.914	66	100.917
455.54	0.652	19.9153	-923.914	69	105.828
455.71	0.647	19.9153	-919.999	58	89.6445
455.87	0.649	19.9153	-919.999	55	84.7458
456.03	0.649	19.9153	-919.999	63	97.0724
456.2	0.649	19.9153	-923.914	45	69.3374
456.36	0.644	19.9153	-923.914	69	107.143
456.53	0.64	20.1325	-919.999	61	95.3125
456.69	0.642	20.1325	-923.914	72	112.15
456.85	0.649	20.1325	-919.999	77	118.644
457.02	0.658	20.1325	-919.999	54	82.0669
457.18	0.658	19.9153	-923.914	65	98.7842
457.35	0.657	20.1325	-919.999	60	91.3242
457.51	0.654	20.1325	-919.999	64	97.8593
457.67	0.655	20.1325	-923.914	62	94.6565
457.84	0.661	20.1325	-923.914	55	83.2073
458	0.659	20.1325	-923.914	79	119.879
458.17	0.656	20.1325	-919.999	69	105.183
458.33	0.655	20.1325	-919.999	66	100.763
458.49	0.651	19.9153	-923.914	70	107.527
458.66	0.655	19.9153	-919.999	66	100.763
458.82	0.66	20.1325	-923.914	53	80.303
458.99	0.657	19.9153	-923.914	52	79.1476
459.15	0.655	19.9153	-919.999	56	85.4962
459.31	0.656	20.1325	-919.999	57	86.8902
459.48	0.661	19.9153	-919.999	61	92.2844
459.64	0.659	19.9153	-923.914	73	110.774
459.81	0.655	20.1325	-923.914	70	106.87
459.97	0.641	19.9153	-919.999	67	104.524
460.13	0.644	20.1325	-919.999	66	102.484
460.3	0.65	20.1325	-919.999	68	104.615
460.46	0.649	20.3498	-923.914	46	70.8783
460.63	0.646	20.1325	-923.914	70	108.359
460.79	0.642	20.1325	-919.999	57	88.785
460.95	0.644	19.9153	-923.914	55	85.4037
461.12	0.649	20.1325	-919.999	70	107.858
461.28	0.652	19.9153	-916.084	59	90.4908
461.45	0.652	20.1325	-923.914	66	101.227

461.61	0.654	20.1325	-919.999	61	93.2722
461.77	0.653	20.1325	-919.999	61	93.415
461.94	0.656	19.9153	-923.914	60	91.4634
462.1	0.656	20.1325	-919.999	76	115.854
462.27	0.658	19.9153	-931.744	70	106.383
462.43	0.658	19.9153	-923.914	54	82.0669
462.59	0.656	20.1325	-923.914	46	70.1219
462.76	0.656	19.9153	-927.829	64	97.561
462.92	0.658	19.9153	-919.999	64	97.2644
463.09	0.661	19.9153	-923.914	60	90.7716
463.25	0.661	20.1325	-919.999	69	104.387
463.41	0.656	19.9153	-919.999	62	94.5122
463.58	0.656	20.1325	-919.999	58	88.4146
463.74	0.66	19.9153	-919.999	65	98.4848
463.91	0.658	20.1325	-916.084	62	94.2249
464.07	0.654	20.1325	-927.829	70	107.034
464.23	0.654	20.1325	-919.999	62	94.8012
464.4	0.648	19.9153	-923.914	59	91.0494
464.56	0.652	20.1325	-919.999	72	110.429
464.73	0.651	19.9153	-919.999	62	95.2381
464.89	0.65	19.9153	-919.999	69	106.154
465.05	0.644	20.1325	-923.914	77	119.565
465.22	0.641	20.1325	-927.829	55	85.8034
465.38	0.636	20.1325	-927.829	62	97.4843
465.55	0.646	20.1325	-919.999	63	97.5232
465.71	0.65	19.9153	-919.999	59	90.7692
465.87	0.649	20.1325	-912.169	48	73.9599
466.04	0.647	19.9153	-919.999	65	100.464
466.2	0.653	20.1325	-919.999	49	75.0383
466.37	0.66	20.1325	-919.999	60	90.9091
466.53	0.661	20.1325	-923.914	72	108.926
466.69	0.658	20.1325	-923.914	54	82.0669
466.86	0.655	20.1325	-923.914	52	79.3893
467.02	0.653	19.9153	-923.914	75	114.855
467.19	0.656	20.1325	-919.999	59	89.939
467.35	0.658	19.9153	-923.914	65	98.7842
467.51	0.655	20.1325	-916.084	70	106.87
467.68	0.656	19.9153	-923.914	65	99.0854
467.84	0.657	20.1325	-923.914	64	97.4125
468.01	0.66	20.1325	-919.999	56	84.8485
468.17	0.661	19.9153	-923.914	59	89.2587
468.33	0.659	19.9153	-923.914	51	77.39
468.5	0.657	19.9153	-916.084	73	111.111
468.66	0.654	20.1325	-923.914	57	87.156
468.83	0.655	19.9153	-919.999	59	90.0763
468.99	0.652	20.1325	-923.914	49	75.1534
469.15	0.65	20.1325	-923.914	63	96.9231

469.32	0.646	20.3498	-923.914	72	111.455
469.48	0.639	19.9153	-923.914	83	129.89
469.65	0.643	19.9153	-919.999	64	99.5334
469.81	0.647	20.1325	-916.084	84	129.83
469.97	0.647	20.1325	-919.999	60	92.7357
470.14	0.644	19.9153	-923.914	43	66.7702
470.3	0.645	20.1325	-919.999	68	105.426
470.47	0.647	20.1325	-923.914	48	74.1886
470.63	0.655	20.1325	-919.999	49	74.8092
470.79	0.65	20.1325	-919.999	73	112.308
470.96	0.657	20.1325	-923.914	58	88.2801
471.12	0.654	19.9153	-923.914	55	84.0979
471.29	0.654	20.1325	-923.914	64	97.8593
471.45	0.655	20.1325	-919.999	76	116.031
471.61	0.657	20.1325	-919.999	61	92.8463
471.78	0.657	20.1325	-919.999	72	109.589
471.94	0.659	19.9153	-919.999	70	106.222
472.11	0.656	19.9153	-919.999	52	79.2683
472.27	0.658	20.1325	-919.999	67	101.824
472.43	0.662	20.1325	-927.829	58	87.6133
472.6	0.658	20.1325	-923.914	72	109.422
472.76	0.654	20.1325	-916.084	62	94.8012
472.93	0.651	19.9153	-919.999	58	89.0937
473.09	0.656	20.1325	-923.914	77	117.378
473.25	0.659	20.1325	-923.914	53	80.4249
473.42	0.656	20.1325	-923.914	59	89.939
473.58	0.651	20.1325	-923.914	64	98.3103
473.75	0.644	19.9153	-916.084	65	100.932
473.91	0.647	20.1325	-919.999	79	122.102
474.07	0.649	20.1325	-923.914	58	89.3683
474.24	0.648	20.1325	-919.999	52	80.2469
474.4	0.644	19.9153	-919.999	53	82.2981
474.57	0.642	20.1325	-916.084	71	110.592
474.73	0.642	19.9153	-919.999	57	88.785
474.89	0.645	19.9153	-916.084	75	116.279
475.06	0.653	19.9153	-923.914	71	108.729
475.22	0.655	20.1325	-919.999	57	87.0229
475.39	0.652	19.9153	-923.914	76	116.564
475.55	0.653	20.1325	-919.999	59	90.3522
475.71	0.656	19.9153	-923.914	72	109.756
475.88	0.657	20.1325	-919.999	45	68.4931
476.04	0.656	19.9153	-919.999	65	99.0854
476.21	0.648	20.1325	-919.999	69	106.481
476.37	0.652	20.1325	-919.999	58	88.9571
476.53	0.656	20.1325	-923.914	45	68.5976
476.7	0.661	19.9153	-923.914	58	87.7458
476.86	0.656	20.1325	-919.999	51	77.7439

477.03	0.655	20.1325	-919.999	68	103.817
477.19	0.656	20.1325	-923.914	63	96.0366
477.35	0.658	20.1325	-919.999	47	71.4286
477.52	0.66	19.9153	-919.999	58	87.8788
477.68	0.66	20.3498	-919.999	43	65.1515
477.85	0.653	19.9153	-923.914	59	90.3522
478.01	0.644	20.1325	-923.914	69	107.143
478.17	0.643	20.1325	-919.999	57	88.647
478.34	0.647	20.1325	-923.914	72	111.283
478.5	0.649	20.1325	-923.914	60	92.4499
478.67	0.648	20.3498	-923.914	62	95.679
478.83	0.643	19.9153	-919.999	53	82.4261
478.99	0.643	19.9153	-923.914	49	76.2053
479.16	0.646	20.1325	-919.999	63	97.5232
479.32	0.651	20.1325	-912.169	65	99.8464
479.49	0.653	20.1325	-923.914	65	99.5406
479.65	0.655	20.1325	-919.999	62	94.6565
479.81	0.654	20.1325	-916.084	55	84.0979
479.98	0.656	20.1325	-923.914	59	89.939
480.14	0.656	20.1325	-923.914	58	88.4146
480.31	0.652	20.1325	-923.914	60	92.0245
480.47	0.653	20.1325	-923.914	55	84.2266
480.63	0.649	20.1325	-919.999	70	107.858
480.8	0.654	20.1325	-919.999	50	76.4526
480.96	0.658	20.1325	-919.999	76	115.502
481.13	0.66	20.3498	-919.999	49	74.2424
481.29	0.658	20.1325	-919.999	71	107.903
481.45	0.654	20.1325	-919.999	63	96.3303
481.62	0.649	20.1325	-923.914	59	90.9091
481.78	0.659	20.1325	-923.914	74	112.291
481.95	0.661	19.9153	-923.914	76	114.977
482.11	0.657	20.1325	-923.914	70	106.545
482.27	0.652	20.1325	-919.999	62	95.092
482.44	0.649	19.9153	-916.084	72	110.94
482.6	0.65	20.1325	-923.914	69	106.154
482.77	0.652	20.1325	-919.999	71	108.896
482.93	0.651	20.1325	-919.999	59	90.6298
483.09	0.644	19.9153	-919.999	52	80.7453
483.26	0.644	19.9153	-923.914	55	85.4037
483.42	0.644	19.9153	-919.999	49	76.087
483.59	0.645	20.1325	-919.999	47	72.8682
483.75	0.644	20.1325	-919.999	57	88.5093
483.91	0.648	19.9153	-923.914	74	114.198
484.08	0.654	20.1325	-919.999	60	91.7431
484.24	0.656	20.1325	-923.914	60	91.4634
484.41	0.66	20.1325	-919.999	63	95.4545
484.57	0.66	20.1325	-919.999	66	100

484.73	0.655	19.9153	-923.914	58	88.5496
484.9	0.655	20.1325	-923.914	62	94.6565
485.06	0.656	20.1325	-923.914	59	89.939
485.23	0.659	20.1325	-927.829	44	66.7678
485.39	0.658	20.1325	-919.999	53	80.5471
485.55	0.655	20.1325	-919.999	54	82.4427
485.72	0.65	20.1325	-923.914	54	83.0769
485.88	0.653	20.1325	-919.999	72	110.26
486.05	0.656	19.9153	-923.914	48	73.1707
486.21	0.66	20.1325	-919.999	63	95.4545
486.37	0.657	20.1325	-919.999	63	95.8904
486.54	0.656	20.1325	-919.999	56	85.3659
486.7	0.654	20.1325	-916.084	56	85.6269
486.87	0.652	20.3498	-919.999	65	99.6933
487.03	0.646	20.1325	-923.914	57	88.2353
487.19	0.648	20.1325	-923.914	64	98.7654
487.36	0.647	20.1325	-923.914	68	105.1
487.52	0.644	20.1325	-919.999	47	72.9814
487.69	0.646	20.3498	-927.829	59	91.3313
487.85	0.645	20.3498	-919.999	39	60.4651
488.01	0.649	20.1325	-919.999	67	103.236
488.18	0.645	20.1325	-923.914	62	96.124
488.34	0.644	20.1325	-923.914	60	93.1677
488.51	0.648	19.9153	-919.999	59	91.0494
488.67	0.655	20.1325	-919.999	72	109.924
488.83	0.657	20.3498	-919.999	59	89.8021
489	0.655	20.1325	-923.914	57	87.0229
489.16	0.651	20.1325	-923.914	62	95.2381
489.33	0.655	20.1325	-919.999	59	90.0763
489.49	0.66	20.1325	-919.999	61	92.4242
489.65	0.659	20.3498	-919.999	56	84.9772
489.82	0.658	20.1325	-923.914	76	115.502
489.98	0.658	20.3498	-927.829	60	91.1854
490.15	0.655	20.1325	-923.914	65	99.2366
490.31	0.662	20.1325	-919.999	70	105.74
490.47	0.662	20.1325	-923.914	61	92.145
490.64	0.659	20.3498	-923.914	51	77.39
490.8	0.655	20.1325	-919.999	60	91.6031
490.97	0.653	20.1325	-919.999	51	78.1011
491.13	0.654	20.1325	-923.914	67	102.446
491.29	0.656	20.1325	-923.914	61	92.9878
491.46	0.649	20.1325	-923.914	56	86.2866
491.62	0.647	20.1325	-923.914	63	97.3725
491.79	0.644	20.1325	-919.999	70	108.696
491.95	0.648	20.1325	-923.914	61	94.1358
492.11	0.649	20.3498	-927.829	70	107.858
492.28	0.647	20.1325	-923.914	62	95.8269

492.44	0.637	20.1325	-916.084	52	81.6327
492.61	0.64	20.1325	-923.914	59	92.1875
492.77	0.646	20.1325	-923.914	48	74.3034
492.93	0.651	20.1325	-919.999	55	84.4854
493.1	0.655	20.1325	-923.914	63	96.1832
493.26	0.656	20.1325	-923.914	63	96.0366
493.43	0.655	20.1325	-919.999	48	73.2824
493.59	0.655	20.1325	-919.999	73	111.45
493.75	0.654	20.1325	-923.914	54	82.5688
493.92	0.657	20.3498	-923.914	73	111.111
494.08	0.656	20.3498	-923.914	52	79.2683
494.25	0.655	20.1325	-923.914	67	102.29
494.41	0.652	20.1325	-923.914	61	93.5583
494.57	0.655	20.1325	-923.914	60	91.6031
494.74	0.66	20.3498	-919.999	50	75.7576
494.9	0.66	20.1325	-923.914	61	92.4242
495.07	0.658	20.1325	-923.914	63	95.7447
495.23	0.657	20.1325	-923.914	54	82.1918
495.39	0.66	20.1325	-923.914	57	86.3636
495.56	0.66	20.1325	-923.914	53	80.303
495.72	0.659	20.1325	-923.914	48	72.8376
495.89	0.654	20.3498	-927.829	62	94.8012
496.05	0.646	20.1325	-919.999	51	78.9474
496.21	0.643	20.3498	-919.999	46	71.5397
496.38	0.649	20.1325	-923.914	62	95.5316
496.54	0.645	20.1325	-923.914	60	93.0233
496.71	0.644	20.1325	-923.914	36	55.9006
496.87	0.639	19.9153	-919.999	62	97.0266
497.03	0.641	20.1325	-923.914	72	112.324
497.2	0.645	20.1325	-919.999	41	63.5659
497.36	0.653	20.3498	-919.999	51	78.1011
497.53	0.655	20.1325	-919.999	51	77.8626
497.69	0.653	20.1325	-919.999	45	68.9127
497.85	0.647	20.1325	-919.999	62	95.8269
498.02	0.656	20.1325	-923.914	51	77.7439
498.18	0.658	20.1325	-919.999	55	83.5866
498.35	0.657	20.1325	-923.914	66	100.457
498.51	0.653	20.1325	-919.999	51	78.1011
498.67	0.653	20.1325	-919.999	52	79.6325
498.84	0.656	20.1325	-919.999	54	82.3171
499	0.66	20.1325	-919.999	60	90.9091
499.17	0.659	20.1325	-919.999	67	101.669
499.33	0.66	20.1325	-923.914	63	95.4545
499.49	0.657	20.1325	-919.999	64	97.4125
499.66	0.656	20.1325	-919.999	57	86.8902
499.82	0.66	20.3498	-919.999	49	74.2424
499.99	0.658	20.1325	-919.999	66	100.304

500.15	0.656	20.1325	-923.914	66	100.61
500.31	0.652	20.3498	-923.914	61	93.5583
500.48	0.651	20.1325	-923.914	59	90.6298
500.64	0.653	20.1325	-927.829	46	70.4441
500.81	0.65	20.1325	-923.914	68	104.615
500.97	0.651	20.1325	-919.999	65	99.8464
501.13	0.645	20.3498	-919.999	50	77.5194
501.3	0.642	20.1325	-919.999	48	74.7664
501.46	0.644	20.1325	-919.999	69	107.143
501.63	0.645	20.1325	-927.829	64	99.2248
501.79	0.647	20.3498	-919.999	64	98.9181
501.95	0.644	20.1325	-923.914	64	99.3789
502.12	0.651	20.3498	-923.914	58	89.0937
502.28	0.656	20.3498	-919.999	52	79.2683
502.45	0.658	20.1325	-923.914	59	89.6657
502.61	0.657	20.1325	-923.914	60	91.3242
502.77	0.656	20.1325	-923.914	59	89.939
502.94	0.653	20.3498	-923.914	59	90.3522
503.1	0.655	20.1325	-919.999	62	94.6565
503.27	0.655	20.1325	-923.914	49	74.8092
503.43	0.658	20.1325	-919.999	55	83.5866
503.59	0.656	20.3498	-919.999	56	85.3659
503.76	0.657	19.9153	-923.914	51	77.6256
503.92	0.657	20.1325	-919.999	58	88.2801
504.09	0.66	20.1325	-919.999	61	92.4242
504.25	0.661	20.3498	-923.914	37	55.9758
504.41	0.661	20.1325	-916.084	50	75.643
504.58	0.655	20.1325	-923.914	56	85.4962
504.74	0.653	20.1325	-923.914	68	104.135
504.91	0.652	20.1325	-923.914	63	96.6258
505.07	0.651	20.3498	-923.914	59	90.6298
505.23	0.647	20.1325	-919.999	65	100.464
505.4	0.645	20.1325	-919.999	53	82.1705
505.56	0.643	20.1325	-923.914	68	105.754
505.73	0.646	20.1325	-923.914	59	91.3313
505.89	0.647	20.1325	-919.999	52	80.3709
506.05	0.645	20.1325	-923.914	60	93.0233
506.22	0.647	20.1325	-919.999	64	98.9181
506.38	0.646	20.3498	-919.999	42	65.0155
506.55	0.654	20.1325	-919.999	57	87.156
506.71	0.657	20.3498	-919.999	58	88.2801
506.87	0.656	20.1325	-923.914	52	79.2683
507.04	0.654	20.1325	-923.914	66	100.917
507.2	0.653	20.1325	-919.999	64	98.0092
507.37	0.65	20.1325	-916.084	44	67.6923
507.53	0.657	20.1325	-919.999	55	83.7139
507.69	0.655	20.1325	-923.914	65	99.2366

507.86	0.655	20.3498	-923.914	72	109.924
508.02	0.653	20.3498	-919.999	55	84.2266
508.19	0.656	20.1325	-923.914	53	80.7927
508.35	0.66	20.1325	-919.999	60	90.9091
508.51	0.66	20.1325	-919.999	70	106.061
508.68	0.652	20.1325	-927.829	55	84.3558
508.84	0.653	20.3498	-927.829	64	98.0092
509.01	0.656	20.1325	-919.999	55	83.8415
509.17	0.661	20.1325	-919.999	59	89.2587
509.33	0.654	20.1325	-919.999	58	88.685
509.5	0.653	20.1325	-919.999	60	91.8836
509.66	0.646	20.1325	-923.914	60	92.8793
509.83	0.648	20.3498	-919.999	56	86.4198
509.99	0.647	20.1325	-919.999	47	72.643
510.15	0.648	20.3498	-923.914	61	94.1358
510.32	0.645	20.1325	-923.914	53	82.1705
510.48	0.641	20.1325	-923.914	67	104.524
510.65	0.641	20.1325	-919.999	59	92.0437
510.81	0.646	20.3498	-923.914	62	95.9752
510.97	0.653	20.1325	-919.999	68	104.135
511.14	0.655	20.3498	-923.914	69	105.344
511.3	0.656	20.3498	-919.999	69	105.183
511.47	0.655	20.1325	-927.829	67	102.29
511.63	0.658	20.1325	-916.084	49	74.4681
511.79	0.658	20.3498	-919.999	51	77.5076
511.96	0.659	20.3498	-923.914	52	78.9074
512.12	0.656	20.3498	-923.914	55	83.8415
512.29	0.651	20.1325	-919.999	59	90.6298
512.45	0.654	20.3498	-923.914	54	82.5688
512.61	0.657	20.1325	-923.914	51	77.6256
512.78	0.657	20.1325	-923.914	66	100.457
512.94	0.66	20.1325	-919.999	63	95.4545
513.11	0.654	20.3498	-919.999	71	108.563
513.27	0.655	20.3498	-919.999	55	83.9695
513.43	0.658	20.3498	-919.999	58	88.1459
513.6	0.661	20.1325	-923.914	57	86.233
513.76	0.657	20.1325	-923.914	52	79.1476
513.93	0.648	20.1325	-923.914	56	86.4198
514.09	0.64	20.1325	-919.999	55	85.9375
514.25	0.645	20.1325	-919.999	66	102.326
514.42	0.653	20.3498	-916.084	70	107.198
514.58	0.647	20.1325	-919.999	62	95.8269
514.75	0.641	20.1325	-919.999	60	93.6037
514.91	0.64	20.1325	-919.999	51	79.6875
515.07	0.645	20.3498	-919.999	57	88.3721
515.24	0.651	20.3498	-919.999	62	95.2381
515.4	0.652	20.1325	-923.914	48	73.6196

515.57	0.65	20.3498	-919.999	65	100
515.73	0.652	20.3498	-923.914	60	92.0245
515.89	0.646	20.1325	-919.999	48	74.3034
516.06	0.644	20.1325	-923.914	50	77.6398
516.22	0.644	20.3498	-916.084	54	83.8509
516.39	0.644	20.1325	-919.999	75	116.46
516.55	0.641	20.1325	-923.914	56	87.3635
516.71	0.643	20.1325	-919.999	58	90.2022
516.88	0.645	20.3498	-923.914	62	96.124
517.04	0.648	20.1325	-919.999	58	89.5062
517.21	0.647	20.3498	-923.914	59	91.1901
517.37	0.644	20.3498	-923.914	55	85.4037
517.53	0.644	20.3498	-919.999	57	88.5093
517.7	0.644	20.1325	-919.999	57	88.5093
517.86	0.647	20.1325	-923.914	44	68.0062
518.03	0.645	20.1325	-919.999	57	88.3721
518.19	0.638	20.3498	-923.914	44	68.9655
518.35	0.628	20.3498	-923.914	48	76.4331
518.52	0.626	20.1325	-923.914	61	97.4441
518.68	0.623	20.1325	-919.999	63	101.124
518.85	0.622	20.1325	-923.914	61	98.0707
519.01	0.619	20.1325	-923.914	59	95.315
519.17	0.617	20.3498	-916.084	65	105.348
519.34	0.616	20.3498	-923.914	59	95.7792
519.5	0.612	20.1325	-923.914	51	83.3333
519.67	0.622	20.3498	-919.999	55	88.4244
519.83	0.622	20.1325	-923.914	63	101.286
519.99	0.621	20.3498	-923.914	52	83.7359
520.16	0.624	20.3498	-919.999	56	89.7436
520.32	0.629	20.3498	-923.914	43	68.3625
520.49	0.634	20.1325	-919.999	68	107.256
520.65	0.63	20.1325	-923.914	58	92.0635
520.81	0.627	20.3498	-919.999	67	106.858
520.98	0.625	20.1325	-919.999	52	83.2
521.14	0.629	20.1325	-923.914	63	100.159
521.31	0.63	20.1325	-923.914	47	74.6032
521.47	0.629	20.3498	-919.999	55	87.4404
521.63	0.628	20.3498	-919.999	60	95.5414
521.8	0.628	20.3498	-919.999	61	97.1338
521.96	0.631	20.3498	-923.914	55	87.1632
522.13	0.634	20.3498	-923.914	63	99.3691
522.29	0.634	20.1325	-927.829	58	91.4827
522.45	0.632	20.3498	-923.914	57	90.1899
522.62	0.628	20.1325	-923.914	62	98.7261
522.78	0.628	20.1325	-923.914	51	81.2102
522.95	0.627	20.3498	-916.084	51	81.3397
523.11	0.619	20.1325	-923.914	62	100.162

523.27	0.617	20.3498	-916.084	54	87.5203
523.44	0.616	20.1325	-919.999	51	82.7922
523.6	0.614	20.3498	-927.829	54	87.9479
523.77	0.618	20.1325	-919.999	56	90.6149
523.93	0.617	20.3498	-919.999	62	100.486
524.09	0.617	20.1325	-923.914	55	89.141
524.26	0.618	20.3498	-923.914	54	87.3786
524.42	0.622	20.3498	-919.999	60	96.463
524.59	0.627	20.3498	-919.999	60	95.6938
524.75	0.629	20.3498	-927.829	71	112.878
524.91	0.623	20.3498	-923.914	56	89.8876
525.08	0.626	20.1325	-919.999	57	91.0543
525.24	0.626	20.3498	-923.914	58	92.6518
525.41	0.626	20.3498	-919.999	40	63.8978
525.57	0.629	20.1325	-919.999	53	84.2607
525.73	0.628	20.3498	-919.999	50	79.6178
525.9	0.628	20.3498	-923.914	61	97.1338
526.06	0.628	20.3498	-923.914	62	98.7261
526.23	0.63	20.1325	-919.999	65	103.175
526.39	0.633	20.1325	-923.914	54	85.3081
526.55	0.631	20.1325	-919.999	45	71.3154
526.72	0.629	20.1325	-919.999	61	96.9793
526.88	0.625	20.1325	-923.914	53	84.8
527.05	0.627	20.3498	-919.999	57	90.9091
527.21	0.634	20.1325	-919.999	42	66.2461
527.37	0.627	20.1325	-919.999	58	92.504
527.54	0.624	20.3498	-923.914	63	100.962
527.7	0.618	20.3498	-923.914	45	72.8155
527.87	0.62	20.3498	-923.914	51	82.2581
528.03	0.624	20.1325	-923.914	59	94.5513
528.19	0.623	20.1325	-919.999	52	83.4671
528.36	0.618	20.3498	-923.914	57	92.233
528.52	0.613	20.1325	-923.914	58	94.6166
528.69	0.614	20.3498	-923.914	67	109.121
528.85	0.621	20.1325	-923.914	60	96.6184
529.01	0.624	20.1325	-919.999	49	78.5256
529.18	0.628	20.1325	-916.084	55	87.5796
529.34	0.626	20.1325	-919.999	57	91.0543
529.51	0.625	20.1325	-923.914	43	68.8
529.67	0.627	20.1325	-919.999	66	105.263
529.83	0.63	20.3498	-923.914	37	58.7302
530	0.631	20.1325	-919.999	68	107.765
530.16	0.625	20.3498	-923.914	50	80
530.33	0.62	20.3498	-927.829	47	75.8064
530.49	0.626	20.3498	-919.999	53	84.6645
530.65	0.633	20.1325	-919.999	57	90.0474
530.82	0.631	20.3498	-919.999	50	79.2393

530.98	0.63	20.1325	-919.999	54	85.7143
531.15	0.627	20.3498	-923.914	59	94.0989
531.31	0.63	20.3498	-919.999	41	65.0794
531.47	0.635	20.3498	-919.999	40	62.9921
531.64	0.631	20.567	-927.829	52	82.4089
531.8	0.624	20.3498	-919.999	47	75.3205
531.97	0.62	20.1325	-919.999	56	90.3226
532.13	0.618	20.1325	-919.999	71	114.887
532.29	0.624	20.1325	-923.914	57	91.3462
532.46	0.623	20.567	-923.914	44	70.626
532.62	0.62	20.3498	-919.999	55	88.7097
532.79	0.615	20.3498	-916.084	60	97.561
532.95	0.615	20.3498	-923.914	48	78.0488
533.11	0.618	20.3498	-923.914	49	79.288
533.28	0.626	20.3498	-919.999	80	127.796
533.44	0.624	20.3498	-923.914	57	91.3462
533.61	0.627	20.3498	-919.999	59	94.0989
533.77	0.627	20.3498	-919.999	54	86.1244
533.93	0.626	20.1325	-923.914	47	75.0799
534.1	0.629	20.3498	-923.914	56	89.0302
534.26	0.628	20.3498	-919.999	70	111.465
534.43	0.624	20.3498	-923.914	52	83.3333
534.59	0.624	20.3498	-923.914	59	94.5513
534.75	0.625	20.3498	-923.914	50	80
534.92	0.631	20.1325	-916.084	63	99.8415
535.08	0.631	20.567	-923.914	56	88.748
535.25	0.629	20.3498	-919.999	60	95.3895
535.41	0.628	20.3498	-923.914	52	82.8026
535.57	0.629	20.1325	-923.914	58	92.2099
535.74	0.628	20.567	-919.999	66	105.096
535.9	0.634	20.567	-923.914	57	89.9054
536.07	0.631	20.3498	-923.914	42	66.561
536.23	0.622	20.1325	-919.999	58	93.2476
536.39	0.621	20.3498	-923.914	43	69.2432
536.56	0.622	20.3498	-919.999	48	77.1704
536.72	0.625	20.3498	-923.914	61	97.6
536.89	0.624	20.3498	-923.914	68	108.974
537.05	0.617	20.1325	-923.914	54	87.5203
537.21	0.615	20.1325	-923.914	56	91.0569
537.38	0.617	20.3498	-927.829	58	94.0032
537.54	0.621	20.3498	-927.829	65	104.67
537.71	0.619	20.3498	-919.999	61	98.546
537.87	0.621	20.3498	-919.999	56	90.1771
538.03	0.625	20.3498	-919.999	59	94.4
538.2	0.628	20.3498	-923.914	61	97.1338
538.36	0.631	20.3498	-923.914	67	106.181
538.53	0.631	20.3498	-919.999	58	91.9176

538.69	0.63	20.1325	-919.999	59	93.6508
538.85	0.627	20.3498	-923.914	46	73.3652
539.02	0.63	20.567	-923.914	51	80.9524
539.18	0.63	20.1325	-923.914	57	90.4762
539.35	0.627	20.1325	-923.914	56	89.3142
539.51	0.628	20.3498	-919.999	59	93.949
539.67	0.625	20.3498	-919.999	62	99.2
539.84	0.625	20.3498	-923.914	49	78.4
540	0.634	20.3498	-923.914	61	96.2145
540.17	0.634	20.567	-919.999	65	102.524
540.33	0.632	20.3498	-919.999	63	99.6835
540.49	0.628	20.3498	-919.999	48	76.4331
540.66	0.626	20.3498	-923.914	58	92.6518
540.82	0.626	20.3498	-919.999	35	55.9105
540.99	0.624	20.3498	-919.999	60	96.1538
541.15	0.617	20.3498	-923.914	50	81.0373
541.31	0.619	20.3498	-919.999	59	95.315
541.48	0.618	20.3498	-916.084	72	116.505
541.64	0.616	20.3498	-919.999	50	81.1688
541.81	0.619	20.3498	-919.999	44	71.0824
541.97	0.619	20.3498	-912.169	65	105.008
542.13	0.619	20.3498	-919.999	48	77.5444
542.3	0.619	20.3498	-923.914	53	85.622
542.46	0.625	20.3498	-919.999	55	88
542.63	0.628	20.3498	-927.829	60	95.5414
542.79	0.629	20.1325	-923.914	49	77.9014
542.95	0.627	20.3498	-919.999	50	79.7448
543.12	0.625	20.3498	-919.999	49	78.4
543.28	0.626	20.3498	-923.914	64	102.236
543.45	0.631	20.3498	-916.084	48	76.0697
543.61	0.63	20.567	-919.999	51	80.9524
543.77	0.627	20.3498	-923.914	49	78.1499
543.94	0.626	20.3498	-919.999	58	92.6518
544.1	0.629	20.1325	-919.999	58	92.2099
544.27	0.632	20.1325	-923.914	49	77.5316
544.43	0.636	20.3498	-923.914	66	103.774
544.59	0.633	20.3498	-919.999	65	102.686
544.76	0.626	20.3498	-919.999	49	78.2748
544.92	0.625	20.3498	-923.914	57	91.2
545.09	0.628	20.3498	-916.084	58	92.3567
545.25	0.626	20.3498	-919.999	63	100.639
545.41	0.624	20.3498	-919.999	48	76.9231
545.58	0.619	20.3498	-923.914	49	79.1599
545.74	0.617	20.3498	-919.999	57	92.3825
545.91	0.619	20.3498	-916.084	48	77.5444
546.07	0.62	20.3498	-919.999	53	85.4839
546.23	0.618	20.3498	-919.999	54	87.3786

546.4	0.616	20.3498	-919.999	58	94.1558
546.56	0.61	20.3498	-923.914	55	90.1639
546.73	0.619	20.3498	-923.914	53	85.622
546.89	0.625	20.3498	-919.999	39	62.4
547.05	0.626	20.567	-919.999	55	87.8594
547.22	0.628	20.3498	-919.999	52	82.8026
547.38	0.625	20.3498	-919.999	61	97.6
547.55	0.627	20.3498	-923.914	53	84.5295
547.71	0.632	20.1325	-923.914	61	96.519
547.87	0.63	20.3498	-923.914	58	92.0635
548.04	0.628	20.3498	-923.914	55	87.5796
548.2	0.624	20.3498	-923.914	61	97.7564
548.37	0.624	20.3498	-919.999	72	115.385
548.53	0.628	20.567	-923.914	47	74.8408
548.69	0.632	20.3498	-919.999	70	110.759
548.86	0.634	20.3498	-919.999	52	82.0189
549.02	0.631	20.3498	-927.829	46	72.9002
549.19	0.628	20.567	-923.914	33	52.5478
549.35	0.631	20.3498	-919.999	60	95.0872
549.51	0.635	20.3498	-923.914	41	64.5669
549.68	0.632	20.3498	-923.914	62	98.1013
549.84	0.624	20.3498	-919.999	60	96.1538
550.01	0.621	20.567	-919.999	55	88.5668
550.17	0.617	20.3498	-919.999	43	69.6921
550.33	0.621	20.3498	-919.999	41	66.0225
550.5	0.618	20.3498	-919.999	47	76.0518
550.66	0.614	20.1325	-923.914	34	55.3746
550.83	0.614	20.3498	-927.829	44	71.6612
550.99	0.613	20.3498	-916.084	45	73.4095
551.15	0.622	20.3498	-919.999	48	77.1704
551.32	0.623	20.3498	-923.914	40	64.2055
551.48	0.623	20.3498	-919.999	49	78.6517
551.65	0.625	20.567	-923.914	35	56
551.81	0.623	20.3498	-919.999	41	65.8106
551.97	0.624	20.3498	-927.829	37	59.2949
552.14	0.63	20.567	-919.999	36	57.1429
552.3	0.629	20.3498	-923.914	30	47.6948
552.47	0.624	20.3498	-919.999	39	62.5
552.63	0.623	20.3498	-919.999	39	62.6003
552.79	0.625	20.3498	-919.999	43	68.8
552.96	0.633	20.3498	-919.999	52	82.1485
553.12	0.631	20.3498	-923.914	40	63.3914
553.29	0.63	20.3498	-919.999	36	57.1429
553.45	0.628	20.3498	-923.914	37	58.9172
553.61	0.63	20.3498	-919.999	34	53.9683
553.78	0.633	20.3498	-919.999	42	66.3507
553.94	0.63	20.3498	-923.914	40	63.4921

554.11	0.628	20.3498	-916.084	29	46.1783
554.27	0.624	20.3498	-919.999	42	67.3077
554.43	0.624	20.3498	-927.829	40	64.1026
554.6	0.623	20.3498	-919.999	31	49.7592
554.76	0.621	20.3498	-923.914	39	62.8019
554.93	0.622	20.3498	-927.829	33	53.0547
555.09	0.618	20.3498	-923.914	34	55.0162
555.25	0.617	20.3498	-919.999	43	69.6921
555.42	0.62	20.3498	-919.999	36	58.0645
555.58	0.619	20.567	-919.999	40	64.6204
555.75	0.618	20.567	-919.999	36	58.2524
555.91	0.619	20.3498	-919.999	39	63.0048
556.07	0.621	20.567	-919.999	32	51.5298
556.24	0.626	20.3498	-927.829	35	55.9105
556.4	0.631	20.567	-923.914	35	55.4675
556.57	0.629	20.3498	-919.999	37	58.8235
556.73	0.625	20.567	-923.914	41	65.6
556.89	0.623	20.3498	-919.999	34	54.5746
557.06	0.627	20.3498	-919.999	35	55.8214
557.22	0.628	20.3498	-919.999	38	60.5096
557.39	0.625	20.567	-919.999	35	56
557.55	0.628	20.3498	-919.999	41	65.2866
557.71	0.628	20.3498	-923.914	37	58.9172
557.88	0.628	20.3498	-923.914	42	66.879
558.04	0.633	20.3498	-919.999	44	69.5103
558.21	0.634	20.3498	-919.999	35	55.205
558.37	0.633	20.567	-923.914	42	66.3507
558.53	0.627	20.3498	-919.999	32	51.0367
558.7	0.626	20.3498	-923.914	47	75.0799
558.86	0.626	20.1325	-923.914	57	91.0543
559.03	0.622	20.3498	-923.914	41	65.9164
559.19	0.62	20.567	-919.999	38	61.2903
559.35	0.616	20.3498	-923.914	30	48.7013
559.52	0.617	20.3498	-919.999	43	69.6921
559.68	0.62	20.3498	-923.914	40	64.5161
559.85	0.623	20.567	-919.999	33	52.9695
560.01	0.618	20.3498	-919.999	39	63.1068
560.17	0.618	20.3498	-923.914	42	67.9612
560.34	0.621	20.3498	-923.914	29	46.6989
560.5	0.627	20.3498	-923.914	43	68.5805
560.67	0.632	20.3498	-919.999	41	64.8734
560.83	0.632	20.567	-927.829	38	60.1266
560.99	0.627	20.567	-923.914	44	70.1754
561.16	0.624	20.3498	-923.914	46	73.7179
561.32	0.623	20.3498	-919.999	53	85.0722
561.49	0.626	20.567	-923.914	50	79.8722
561.65	0.627	20.3498	-923.914	48	76.555

561.81	0.626	20.3498	-919.999	34	54.3131
561.98	0.625	20.3498	-923.914	41	65.6
562.14	0.627	20.3498	-923.914	38	60.6061
562.31	0.632	20.3498	-916.084	31	49.0506
562.47	0.633	20.567	-923.914	50	78.9889
562.63	0.627	20.567	-919.999	48	76.555
562.8	0.624	20.3498	-923.914	32	51.2821
562.96	0.631	20.567	-919.999	46	72.9002
563.13	0.635	20.3498	-919.999	43	67.7165
563.29	0.625	20.3498	-923.914	33	52.8
563.45	0.623	20.567	-927.829	32	51.3644
563.62	0.617	20.567	-923.914	47	76.175
563.78	0.619	20.567	-923.914	31	50.0808
563.95	0.621	20.3498	-923.914	43	69.2432
564.11	0.622	20.567	-919.999	41	65.9164
564.27	0.619	20.3498	-923.914	38	61.3893
564.44	0.614	20.567	-923.914	47	76.5472
564.6	0.618	20.3498	-927.829	32	51.7799
564.77	0.618	20.567	-923.914	44	71.1974
564.93	0.625	20.3498	-919.999	36	57.6
565.09	0.63	20.567	-919.999	35	55.5556
565.26	0.63	20.567	-919.999	32	50.7937
565.42	0.626	20.567	-916.084	35	55.9105
565.59	0.628	20.567	-919.999	52	82.8026
565.75	0.632	20.3498	-919.999	42	66.4557
565.91	0.63	20.3498	-919.999	23	36.5079
566.08	0.627	20.3498	-923.914	36	57.4163
566.24	0.626	20.3498	-919.999	44	70.2875
566.41	0.626	20.3498	-923.914	44	70.2875
566.57	0.628	20.3498	-923.914	33	52.5478
566.73	0.627	20.3498	-923.914	42	66.9856
566.9	0.625	20.3498	-919.999	40	64
567.06	0.626	20.3498	-919.999	35	55.9105
567.23	0.628	20.3498	-916.084	38	60.5096
567.39	0.633	20.3498	-919.999	45	71.09
567.55	0.634	20.3498	-916.084	30	47.3186
567.72	0.627	20.3498	-919.999	33	52.6316
567.88	0.623	20.567	-923.914	29	46.549
568.05	0.613	20.3498	-919.999	30	48.9396
568.21	0.616	20.3498	-923.914	40	64.9351
568.37	0.625	20.7842	-919.999	44	70.4
568.54	0.621	20.567	-923.914	32	51.5298
568.7	0.617	20.3498	-919.999	35	56.7261
568.87	0.614	20.567	-919.999	41	66.7752
569.03	0.618	20.3498	-923.914	27	43.6893
569.19	0.624	20.3498	-919.999	34	54.4872
569.36	0.625	20.3498	-923.914	44	70.4

569.52	0.625	20.567	-919.999	48	76.8
569.69	0.627	20.3498	-919.999	46	73.3652
569.85	0.626	20.3498	-919.999	19	30.3514
570.01	0.629	20.567	-919.999	44	69.9523
570.18	0.626	20.3498	-919.999	42	67.0927
570.34	0.625	20.567	-919.999	36	57.6
570.51	0.625	20.3498	-931.744	38	60.8
570.67	0.629	20.567	-919.999	45	71.5421
570.83	0.631	20.3498	-919.999	39	61.8067
571	0.632	20.3498	-919.999	41	64.8734
571.16	0.631	20.3498	-923.914	38	60.2219
571.33	0.63	20.567	-923.914	39	61.9048
571.49	0.63	20.3498	-923.914	34	53.9683
571.65	0.631	20.567	-923.914	61	96.672
571.82	0.633	20.3498	-919.999	45	71.09
571.98	0.629	20.3498	-919.999	42	66.7727
572.15	0.621	20.567	-919.999	43	69.2432
572.31	0.62	20.1325	-923.914	44	70.9677
572.47	0.619	20.567	-919.999	44	71.0824
572.64	0.623	20.3498	-923.914	33	52.9695
572.8	0.62	20.3498	-919.999	29	46.7742
572.97	0.62	20.567	-919.999	42	67.7419
573.13	0.617	20.3498	-919.999	25	40.5186
573.29	0.618	20.3498	-919.999	34	55.0162
573.46	0.618	20.3498	-919.999	51	82.5243
573.62	0.616	20.3498	-923.914	37	60.0649
573.79	0.623	20.567	-923.914	36	57.7849
573.95	0.625	20.3498	-919.999	33	52.8
574.11	0.624	20.3498	-923.914	47	75.3205
574.28	0.63	20.3498	-923.914	36	57.1429
574.44	0.628	20.567	-927.829	36	47.7707
574.61	0.629	20.3498	-916.084	30	57.2337
574.77	0.625	20.3498	-923.914	36	80
574.93	0.626	20.7842	-919.999	50	67.0927
575.1	0.627	20.3498	-919.999	42	49.4418
575.26	0.629	20.3498	-927.829	31	68.3625
575.43	0.628	20.567	-919.999	43	65.2866
575.59	0.624	20.567	-912.169	41	64.1026
575.75	0.627	20.3498	-923.914	40	73.3652
575.92	0.633	20.7842	-919.999	46	41.0742
576.08	0.636	20.567	-919.999	26	69.1824
576.25	0.633	20.3498	-919.999	44	61.6114
576.41	0.63	20.567	-923.914	39	65.0794
576.57	0.627	20.567	-919.999	41	65.3907
576.74	0.627	20.567	-923.914	41	79.7448
576.9	0.626	20.567	-927.829	50	52.7157
577.07	0.623	20.3498	-916.084	33	49.7592

577.23	0.619	20.3498	-919.999	31	66.2359
577.39	0.616	20.3498	-919.999	41	68.1818
577.56	0.614	20.567	-916.084	42	68.4039
577.72	0.618	20.3498	-919.999	42	64.7249
577.89	0.619	20.3498	-919.999	40	63.0048
578.05	0.619	20.567	-919.999	39	58.1583
578.21	0.618	20.567	-923.914	36	53.3981
578.38	0.623	20.3498	-923.914	33	65.8106
578.54	0.63	20.3498	-919.999	41	76.1905
578.71	0.632	20.567	-923.914	48	71.2025
578.87	0.625	20.3498	-923.914	45	65.6
579.03	0.62	20.3498	-919.999	41	56.4516
579.2	0.627	20.7842	-923.914	35	59.0112
579.36	0.628	20.3498	-919.999	37	73.2484
579.53	0.63	20.567	-923.914	46	58.7302
579.69	0.628	20.3498	-923.914	37	76.4331
579.85	0.625	20.3498	-919.999	48	76.8
580.02	0.626	20.567	-923.914	48	46.3259
580.18	0.63	20.567	-923.914	29	61.9048
580.35	0.635	20.3498	-923.914	39	51.9685
580.51	0.632	20.3498	-927.829	33	77.5316
580.67	0.63	20.3498	-919.999	49	71.4286
580.84	0.628	20.567	-919.999	45	74.8408
581	0.627	20.567	-923.914	47	82.9346
581.17	0.629	20.3498	-919.999	52	54.0541
581.33	0.628	20.567	-923.914	34	70.0637
581.49	0.623	20.3498	-923.914	44	62.6003
581.66	0.618	20.567	-923.914	39	50.1618
581.82	0.62	20.3498	-919.999	31	69.3548
581.99	0.622	20.567	-919.999	43	62.701
582.15	0.623	20.567	-919.999	39	75.4414
582.31	0.621	20.3498	-919.999	47	66.0225
582.48	0.617	20.3498	-923.914	41	68.0713
582.64	0.62	20.567	-919.999	42	82.2581
582.81	0.622	20.567	-919.999	51	59.4855
582.97	0.626	20.567	-916.084	37	52.7157
583.13	0.626	20.3498	-919.999	33	81.4697
583.3	0.625	20.567	-919.999	51	41.6
583.46	0.625	20.567	-919.999	26	51.2
583.63	0.629	20.3498	-919.999	32	69.9523
583.79	0.631	20.3498	-923.914	44	60.2219
583.95	0.627	20.567	-919.999	38	51.0367
584.12	0.625	20.567	-927.829	32	65.6
584.28	0.619	20.567	-916.084	41	71.0824
584.45	0.625	20.567	-919.999	44	51.2
584.61	0.633	20.7842	-919.999	32	64.7709
584.77	0.633	20.567	-919.999	41	74.2496

584.94	0.63	20.567	-919.999	47	57.1429
585.1	0.628	20.3498	-919.999	36	74.8408
585.27	0.63	20.3498	-923.914	47	76.1905
585.43	0.636	20.3498	-919.999	48	77.044
585.59	0.63	20.567	-923.914	49	57.1429
585.76	0.626	20.3498	-923.914	36	60.7029
585.92	0.62	20.567	-919.999	38	61.2903
586.09	0.619	20.3498	-927.829	38	61.3893
586.25	0.621	20.567	-919.999	38	67.6329
586.41	0.62	20.3498	-919.999	42	59.6774
586.58	0.618	20.567	-919.999	37	69.5793
586.74	0.619	20.3498	-919.999	43	66.2359
586.91	0.62	20.3498	-923.914	41	50
587.07	0.624	20.3498	-923.914	31	52.8846
587.23	0.628	20.3498	-916.084	33	89.172
587.4	0.627	20.3498	-919.999	56	74.9601
587.56	0.628	20.567	-919.999	47	60.5096
587.73	0.629	20.567	-923.914	38	62.0032
587.89	0.629	20.567	-923.914	39	74.7218
588.05	0.631	20.3498	-923.914	47	85.5784
588.22	0.628	20.567	-919.999	54	60.5096
588.38	0.622	20.3498	-919.999	38	78.7781
588.55	0.622	20.3498	-919.999	49	91.6399
588.71	0.625	20.567	-923.914	57	76.8
588.87	0.63	20.3498	-919.999	48	55.5556
589.04	0.63	20.3498	-919.999	35	76.1905
589.2	0.63	20.567	-919.999	48	73.0159
589.37	0.629	20.3498	-916.084	46	62.0032
589.53	0.631	20.3498	-919.999	39	87.1632
589.69	0.628	20.567	-919.999	55	66.879
589.86	0.631	20.567	-919.999	42	71.3154
590.02	0.631	20.3498	-923.914	45	71.3154
590.19	0.625	20.567	-923.914	45	78.4
590.35	0.622	20.3498	-919.999	49	70.7395
590.51	0.623	20.3498	-923.914	44	85.0722
590.68	0.623	20.567	-923.914	53	75.4414
590.84	0.623	20.3498	-919.999	47	70.626
591.01	0.618	20.3498	-923.914	44	66.343
591.17	0.618	20.567	-916.084	41	80.9062
591.33	0.622	20.3498	-923.914	50	69.1318
591.5	0.623	20.7842	-923.914	43	75.4414
591.66	0.623	20.567	-919.999	47	91.4928
591.83	0.62	20.567	-923.914	57	72.5806
591.99	0.626	20.3498	-927.829	45	55.9105
592.15	0.632	20.567	-919.999	35	53.7975
592.32	0.636	20.567	-919.999	34	59.7484
592.48	0.632	20.3498	-927.829	38	93.3544

592.65	0.631	20.567	-919.999	59	71.3154
592.81	0.626	20.567	-919.999	45	100.639
592.97	0.629	20.567	-919.999	63	100.159
593.14	0.632	20.3498	-919.999	63	82.2785
593.3	0.63	20.567	-923.914	52	74.6032
593.47	0.628	20.567	-919.999	47	76.4331
593.63	0.626	20.567	-923.914	48	86.262
593.79	0.624	20.3498	-919.999	54	65.7051
593.96	0.632	20.3498	-923.914	41	99.6835
594.12	0.633	20.3498	-919.999	63	91.6272
594.29	0.631	20.7842	-923.914	58	123.613
594.45	0.628	20.567	-919.999	78	79.6178
594.61	0.627	20.567	-919.999	50	86.1244
594.78	0.63	20.567	-916.084	54	77.7778
594.94	0.626	20.567	-923.914	49	46.3259
595.11	0.616	20.567	-919.999	29	82.7922
595.27	0.616	20.7842	-919.999	51	76.2987
595.43	0.62	20.567	-919.999	47	87.0968
595.6	0.621	20.3498	-919.999	54	99.839
595.76	0.622	20.567	-923.914	62	77.1704
595.93	0.623	20.567	-919.999	48	80.2568
596.09	0.622	20.3498	-919.999	50	94.8553
596.25	0.625	20.567	-919.999	59	60.8
596.42	0.627	20.3498	-923.914	38	114.833
596.58	0.632	20.567	-919.999	72	88.6076
596.75	0.632	20.7842	-919.999	56	85.443
596.91	0.628	20.567	-919.999	54	93.949
597.07	0.626	20.3498	-919.999	59	79.8722
597.24	0.625	20.7842	-919.999	50	102.4
597.4	0.63	20.567	-919.999	64	88.8889
597.57	0.631	20.567	-919.999	56	88.748
597.73	0.628	20.567	-919.999	56	71.6561
597.89	0.628	20.567	-919.999	45	90.7643
598.06	0.63	20.3498	-919.999	57	90.4762
598.22	0.635	20.567	-919.999	57	97.6378
598.39	0.635	20.567	-919.999	62	85.0394
598.55	0.634	20.567	-923.914	54	74.1325
598.71	0.629	20.567	-923.914	47	93.7997
598.88	0.629	20.567	-923.914	59	76.3116
599.04	0.631	20.567	-919.999	48	106.181
599.21	0.626	20.567	-923.914	67	99.0415
599.37	0.625	20.567	-919.999	62	75.2
599.53	0.618	20.567	-923.914	47	82.5243
599.7	0.617	20.3498	-919.999	51	82.658
599.86	0.619	20.3498	-919.999	51	75.9289
600.03	0.624	20.7842	-923.914	47	75.3205
600.19	0.624	20.567	-919.999	47	57.6923

600.35	0.622	20.3498	-919.999	36	102.894
600.52	0.612	20.3498	-923.914	64	80.0654
600.68	0.62	20.567	-919.999	49	74.1936
600.85	0.629	20.3498	-919.999	46	85.8506
601.01	0.631	20.567	-919.999	54	93.5024
601.17	0.63	20.567	-919.999	59	82.5397
601.34	0.629	20.567	-923.914	52	87.4404
601.5	0.628	20.7842	-919.999	55	109.873
601.67	0.633	20.567	-923.914	69	82.1485
601.83	0.632	20.567	-919.999	52	87.0253
601.99	0.627	20.7842	-923.914	55	92.504
602.16	0.625	20.567	-916.084	58	91.2
602.32	0.625	20.567	-919.999	57	84.8
602.49	0.631	20.567	-923.914	53	104.596
602.65	0.631	20.567	-919.999	66	99.8415
602.81	0.632	20.3498	-919.999	63	90.1899
602.98	0.631	20.567	-927.829	57	93.5024
603.14	0.631	20.3498	-923.914	59	106.181
603.31	0.635	20.3498	-923.914	67	75.5906
603.47	0.637	20.567	-923.914	48	89.4819
603.63	0.633	20.567	-919.999	57	104.265
603.8	0.626	20.567	-919.999	66	76.6773
603.96	0.62	20.567	-919.999	48	101.613
604.13	0.621	20.567	-919.999	63	85.3462
604.29	0.622	20.567	-923.914	53	75.5627
604.45	0.622	20.3498	-919.999	47	106.109
604.62	0.617	20.7842	-923.914	66	77.7958
604.78	0.617	20.567	-923.914	48	94.0032
604.95	0.618	20.567	-923.914	58	80.9062
605.11	0.623	20.567	-919.999	50	77.0465
605.27	0.624	20.567	-923.914	48	81.7308
605.44	0.629	20.567	-919.999	51	90.62
605.6	0.627	20.3498	-919.999	57	84.5295
605.77	0.63	20.567	-923.914	53	92.0635
605.93	0.626	20.567	-923.914	58	83.0671
606.09	0.631	20.567	-923.914	52	58.6371
606.26	0.627	20.567	-919.999	37	84.5295
606.42	0.626	20.567	-923.914	53	95.8466
606.59	0.624	20.3498	-919.999	60	97.7564
606.75	0.63	20.3498	-916.084	61	85.7143
606.91	0.636	20.3498	-919.999	54	91.195
607.08	0.633	20.7842	-923.914	58	83.7283
607.24	0.63	20.567	-919.999	53	85.7143
607.41	0.63	20.567	-923.914	54	74.6032
607.57	0.631	20.3498	-927.829	47	96.672
607.73	0.634	20.567	-919.999	61	94.6372
607.9	0.633	20.7842	-919.999	60	80.5687

608.06	0.629	20.567	-927.829	51	93.7997
608.23	0.624	20.567	-923.914	59	105.769
608.39	0.624	20.567	-931.744	66	92.9487
608.55	0.626	20.567	-919.999	58	87.8594
608.72	0.624	20.567	-919.999	55	99.359
608.88	0.623	20.567	-919.999	62	115.57
609.05	0.621	20.3498	-919.999	72	88.5668
609.21	0.621	20.3498	-923.914	55	56.3607
609.37	0.625	20.567	-919.999	35	105.6
609.54	0.623	20.567	-923.914	66	89.8876
609.7	0.625	20.3498	-923.914	56	88
609.87	0.625	20.567	-923.914	55	84.8
610.03	0.625	20.567	-927.829	53	91.2
610.19	0.633	20.7842	-927.829	57	94.7867
610.36	0.633	20.3498	-919.999	60	85.3081
610.52	0.63	20.3498	-919.999	54	93.6508
610.69	0.626	20.567	-919.999	59	86.262
610.85	0.628	20.567	-927.829	54	100.318
611.01	0.629	20.7842	-919.999	63	101.749
611.18	0.632	20.567	-919.999	64	75.9494
611.34	0.623	20.567	-923.914	48	88.2825
611.51	0.626	20.7842	-923.914	55	97.4441
611.67	0.628	20.567	-919.999	61	97.1338
611.83	0.632	20.567	-919.999	61	85.443
612	0.634	20.7842	-919.999	54	93.0599
612.16	0.635	20.3498	-923.914	59	72.4409
612.33	0.634	20.567	-919.999	46	116.719
612.49	0.631	20.7842	-919.999	74	99.8415
612.65	0.628	20.567	-923.914	63	82.8026
612.82	0.627	20.7842	-919.999	52	82.9346
612.98	0.625	20.7842	-919.999	52	75.2
613.15	0.621	20.567	-919.999	47	96.6184
613.31	0.616	20.567	-919.999	60	100.649
613.47	0.619	20.3498	-923.914	62	92.084
613.64	0.623	20.567	-919.999	57	115.57
613.8	0.623	20.3498	-923.914	72	81.862
613.97	0.623	20.567	-927.829	51	91.4928
614.13	0.623	20.567	-919.999	57	89.8876
614.29	0.627	20.567	-919.999	56	84.5295
614.46	0.631	20.567	-919.999	53	85.5784
614.62	0.634	20.567	-919.999	54	91.4827
614.79	0.633	20.3498	-923.914	58	91.6272
614.95	0.629	20.567	-919.999	58	68.3625
615.11	0.625	20.3498	-916.084	43	108.8
615.28	0.627	20.567	-923.914	68	114.833
615.44	0.628	20.567	-923.914	72	93.949
615.61	0.63	20.567	-919.999	59	103.175

615.77	0.625	20.567	-923.914	65	84.8
615.93	0.626	20.567	-923.914	53	83.0671
616.1	0.628	20.567	-919.999	52	89.172
616.26	0.636	20.567	-919.999	56	95.9119
616.43	0.633	20.567	-923.914	61	78.9889
616.59	0.632	20.3498	-923.914	50	106.013
616.75	0.623	20.567	-923.914	67	102.729
616.92	0.631	20.7842	-923.914	64	99.8415
617.08	0.635	20.567	-919.999	63	81.8898
617.25	0.629	20.3498	-923.914	52	84.2607
617.41	0.625	20.567	-923.914	53	78.4
617.57	0.621	20.3498	-916.084	49	103.06
617.74	0.624	20.567	-919.999	64	99.359
617.9	0.627	20.567	-919.999	62	76.555
618.07	0.625	20.567	-919.999	48	76.8
618.23	0.619	20.3498	-927.829	48	69.4669
618.39	0.619	20.567	-923.914	43	108.239
618.56	0.619	20.567	-923.914	67	90.4685
618.72	0.624	20.567	-919.999	56	107.372
618.89	0.63	20.567	-923.914	67	106.349
619.05	0.633	20.567	-923.914	67	90.0474
619.21	0.63	20.7842	-927.829	57	98.4127
619.38	0.63	20.567	-919.999	62	95.2381
619.54	0.631	20.3498	-923.914	60	88.748
619.71	0.634	20.567	-927.829	56	96.2145
619.87	0.632	20.3498	-919.999	61	107.595
620.03	0.63	20.567	-923.914	68	98.4127
620.2	0.628	20.3498	-919.999	62	89.172
620.36	0.627	20.567	-923.914	56	98.8836
620.53	0.632	20.7842	-919.999	62	77.5316
620.69	0.632	20.567	-919.999	49	88.6076
620.85	0.629	20.567	-919.999	56	117.647
621.02	0.63	20.567	-923.914	74	77.7778
621.18	0.63	20.3498	-919.999	49	98.4127
621.35	0.632	20.567	-919.999	62	98.1013
621.51	0.635	20.7842	-919.999	62	81.8898
621.67	0.638	20.567	-923.914	52	105.016
621.84	0.644	20.7842	-919.999	67	80.7453
622	0.638	20.7842	-919.999	52	105.016
622.17	0.635	20.7842	-923.914	67	99.2126
622.33	0.642	20.567	-919.999	63	87.2274
622.49	0.637	20.567	-919.999	56	83.2025
622.66	0.632	20.567	-923.914	53	112.342
622.82	0.634	20.3498	-919.999	71	74.1325
622.99	0.641	20.567	-916.084	47	93.6037
623.15	0.648	20.3498	-919.999	60	80.2469
623.31	0.647	20.567	-919.999	52	86.5533

623.48	0.646	20.567	-923.914	56	74.3034
623.64	0.646	20.567	-923.914	48	97.5232
623.81	0.646	20.567	-919.999	63	86.6873
623.97	0.647	20.567	-923.914	56	55.6414
624.13	0.643	20.3498	-916.084	36	83.9813
624.3	0.645	20.567	-923.914	54	89.9225
624.46	0.646	20.567	-919.999	58	102.167
624.63	0.646	20.567	-923.914	66	77.3994
624.79	0.65	20.567	-916.084	50	101.538
624.95	0.649	20.567	-923.914	66	80.1233
625.12	0.648	20.567	-919.999	52	63.2716
625.28	0.649	20.567	-919.999	41	100.154
625.45	0.653	20.567	-919.999	65	82.6953
625.61	0.652	20.7842	-916.084	54	76.6871
625.77	0.648	20.567	-919.999	50	89.5062
625.94	0.645	20.567	-919.999	58	77.5194
626.1	0.639	20.567	-923.914	50	98.5916
626.27	0.642	20.7842	-919.999	63	95.0156
626.43	0.64	20.7842	-919.999	61	81.25
626.59	0.64	20.567	-916.084	52	107.813
626.76	0.635	20.567	-919.999	69	69.2913
626.92	0.632	20.567	-919.999	44	104.43
627.09	0.638	20.567	-919.999	66	100.313
627.25	0.64	20.7842	-919.999	64	114.063
627.41	0.636	20.3498	-923.914	73	80.1887
627.58	0.642	20.7842	-923.914	51	90.3427
627.74	0.645	20.567	-916.084	58	83.7209
627.91	0.646	20.567	-923.914	54	88.2353
628.07	0.648	20.7842	-919.999	57	95.679
628.23	0.649	20.3498	-919.999	62	106.317
628.4	0.647	20.567	-923.914	69	75.7342
628.56	0.643	20.7842	-919.999	49	99.5334
628.73	0.646	20.567	-919.999	64	88.2353
628.89	0.649	20.7842	-923.914	57	84.7458
629.05	0.645	20.7842	-919.999	55	94.5736
629.22	0.645	20.7842	-919.999	61	79.0698
629.38	0.642	20.567	-923.914	51	85.6698
629.55	0.649	20.7842	-919.999	55	73.9599
629.71	0.652	20.567	-916.084	48	95.092
629.87	0.652	20.567	-923.914	62	84.3558
630.04	0.649	20.567	-923.914	55	81.6641
630.2	0.648	20.3498	-919.999	53	94.1358
630.37	0.648	20.567	-919.999	61	100.309
630.53	0.649	20.7842	-919.999	65	63.1741
630.69	0.642	20.7842	-923.914	41	88.785
630.86	0.638	20.567	-919.999	57	106.583
631.02	0.633	20.7842	-919.999	68	97.9463

631.19	0.635	20.567	-923.914	62	86.6142
631.35	0.636	20.567	-923.914	55	73.8994
631.51	0.639	20.567	-919.999	47	86.072
631.68	0.637	20.567	-919.999	55	84.7724
631.84	0.64	20.567	-916.084	54	84.375
632.01	0.643	20.567	-923.914	54	115.086
632.17	0.65	20.567	-916.084	74	84.6154
632.33	0.648	20.567	-919.999	55	89.5062
632.5	0.644	20.567	-923.914	58	90.0621
632.66	0.636	20.567	-923.914	58	84.9057
632.83	0.644	20.567	-919.999	54	72.9814
632.99	0.649	20.567	-923.914	47	80.1233
633.15	0.646	20.567	-923.914	52	85.1393
633.32	0.645	20.7842	-919.999	55	85.2713
633.48	0.643	20.567	-919.999	55	110.42
633.65	0.648	20.7842	-923.914	71	84.8765
633.81	0.651	20.7842	-919.999	55	105.991
633.97	0.653	20.567	-923.914	69	88.8208
634.14	0.651	20.567	-919.999	58	96.7742
634.3	0.646	20.567	-923.914	63	74.3034
634.47	0.647	20.7842	-923.914	48	92.7357
634.63	0.649	20.567	-927.829	60	109.399
634.79	0.649	20.7842	-919.999	71	98.6133
634.96	0.644	20.567	-923.914	64	74.5342
635.12	0.637	20.7842	-919.999	48	89.4819
635.29	0.636	20.7842	-919.999	57	89.6226
635.45	0.64	20.567	-923.914	57	90.625
635.61	0.641	20.567	-923.914	58	96.7239
635.78	0.639	20.567	-919.999	62	75.1174
635.94	0.638	20.7842	-927.829	48	83.0721
636.11	0.638	20.567	-923.914	53	84.6395
636.27	0.643	20.7842	-919.999	54	97.9782
636.43	0.646	20.567	-927.829	63	83.5913
636.6	0.644	20.567	-919.999	54	124.224
636.76	0.645	20.567	-919.999	80	108.527
636.93	0.643	20.7842	-923.914	70	105.754
637.09	0.647	20.567	-919.999	68	71.0974
637.25	0.648	20.567	-919.999	46	83.3333
637.42	0.647	20.567	-923.914	54	81.9165
637.58	0.645	20.7842	-919.999	53	102.326
637.75	0.641	20.7842	-923.914	66	90.4836
637.91	0.639	20.567	-923.914	58	73.5524
638.07	0.649	20.7842	-919.999	47	89.3683
638.24	0.653	20.567	-923.914	58	105.666
638.4	0.653	20.7842	-923.914	69	105.666
638.57	0.647	20.567	-919.999	56	86.5533
638.73	0.647	20.567	-923.914	58	89.6445

638.89	0.65	20.567	-919.999	64	98.4615
639.06	0.657	20.7842	-923.914	55	83.7139
639.22	0.653	20.7842	-919.999	69	105.666
639.39	0.643	20.7842	-919.999	59	91.7574
639.55	0.638	20.3498	-923.914	50	78.3699
639.71	0.638	20.567	-919.999	51	79.9373
639.88	0.64	20.567	-923.914	64	100
640.04	0.637	20.7842	-919.999	60	94.1915
640.21	0.635	20.567	-923.914	51	80.315
640.37	0.635	20.567	-919.999	55	86.6142
640.53	0.639	20.567	-923.914	58	90.7668
640.7	0.642	20.3498	-923.914	57	88.785
640.86	0.646	20.567	-919.999	56	86.6873
641.03	0.646	20.567	-923.914	67	103.715
641.19	0.644	20.7842	-916.084	65	100.932
641.35	0.647	20.567	-919.999	55	85.0077
641.52	0.648	20.7842	-919.999	63	97.2222
641.68	0.646	20.7842	-919.999	55	85.1393
641.85	0.645	20.567	-919.999	64	99.2248
642.01	0.639	20.567	-919.999	49	76.6823
642.17	0.643	20.567	-919.999	64	99.5334
642.34	0.645	20.7842	-919.999	65	100.775
642.5	0.649	20.7842	-919.999	67	103.236
642.67	0.645	20.567	-919.999	48	74.4186
642.83	0.648	20.567	-919.999	56	86.4198
642.99	0.649	20.567	-919.999	68	104.777
643.16	0.651	20.567	-916.084	60	92.1659
643.32	0.642	20.567	-923.914	56	87.2274
643.49	0.648	20.567	-923.914	54	83.3333
643.65	0.644	20.567	-919.999	57	88.5093
643.81	0.644	20.567	-923.914	49	76.087
643.98	0.64	20.567	-919.999	56	87.5
644.14	0.64	20.7842	-919.999	48	75
644.31	0.642	20.567	-923.914	68	105.919
644.47	0.635	20.567	-919.999	50	78.7402
644.63	0.635	20.567	-919.999	46	72.4409
644.8	0.638	20.7842	-919.999	70	109.718
644.96	0.642	20.567	-923.914	64	99.6885
645.13	0.641	20.567	-923.914	72	112.324
645.29	0.641	20.7842	-923.914	52	81.1232
645.45	0.644	20.567	-923.914	47	72.9814
645.62	0.651	20.7842	-919.999	57	87.5576
645.78	0.651	20.567	-919.999	57	87.5576
645.95	0.647	20.7842	-923.914	69	106.646
646.11	0.644	20.567	-923.914	68	105.59
646.27	0.644	20.567	-919.999	63	97.8261
646.44	0.648	20.7842	-919.999	54	83.3333

646.6	0.649	20.567	-923.914	56	86.2866
646.77	0.649	20.567	-919.999	55	84.7458
646.93	0.645	20.567	-919.999	60	93.0233
647.09	0.645	20.567	-923.914	56	86.8217
647.26	0.646	20.7842	-919.999	49	75.8514
647.42	0.651	20.567	-919.999	67	102.919
647.59	0.649	20.567	-923.914	44	67.7966
647.75	0.647	20.7842	-919.999	71	109.737
647.91	0.646	20.7842	-923.914	52	80.4954
648.08	0.646	20.7842	-923.914	57	88.2353
648.24	0.647	20.567	-923.914	54	83.4621
648.41	0.64	20.567	-923.914	59	92.1875
648.57	0.628	20.567	-923.914	49	78.0255
648.73	0.634	20.567	-919.999	58	91.4827
648.9	0.638	20.7842	-919.999	44	68.9655
649.06	0.64	20.7842	-916.084	52	81.25
649.23	0.637	20.7842	-919.999	65	102.041
649.39	0.638	20.7842	-919.999	55	86.2069
649.55	0.641	20.567	-919.999	66	102.964
649.72	0.647	20.7842	-916.084	49	75.7342
649.88	0.648	20.7842	-923.914	55	84.8765
650.05	0.649	20.567	-923.914	50	77.0416
650.21	0.645	20.7842	-923.914	48	74.4186
650.37	0.644	20.567	-919.999	56	86.9565
650.54	0.644	20.7842	-923.914	41	63.6646
650.7	0.648	20.7842	-923.914	77	118.827
650.87	0.648	20.3498	-923.914	53	81.7901
651.03	0.646	20.7842	-919.999	50	77.3994
651.19	0.645	20.567	-919.999	63	97.6744
651.36	0.649	20.567	-923.914	60	92.4499
651.52	0.652	20.567	-919.999	69	105.828
651.69	0.652	20.567	-919.999	65	99.6933
651.85	0.648	20.7842	-919.999	59	91.0494
652.01	0.645	20.7842	-919.999	53	82.1705
652.18	0.648	20.7842	-927.829	49	75.6173
652.34	0.647	20.567	-919.999	48	74.1886
652.51	0.643	20.567	-923.914	59	91.7574
652.67	0.64	20.7842	-919.999	57	89.0625
652.83	0.634	20.567	-919.999	53	83.5962
653	0.634	20.567	-923.914	62	97.7918
653.16	0.639	20.567	-919.999	58	90.7668
653.33	0.639	20.567	-919.999	53	82.9421
653.49	0.637	20.7842	-919.999	57	89.4819
653.65	0.636	20.567	-923.914	55	86.478
653.82	0.632	20.7842	-919.999	52	82.2785
653.98	0.644	20.7842	-919.999	49	76.087
654.15	0.649	20.7842	-919.999	65	100.154

654.31	0.648	20.7842	-923.914	64	98.7654
654.47	0.642	20.7842	-923.914	51	79.4393
654.64	0.643	20.7842	-923.914	67	104.199
654.8	0.65	20.7842	-923.914	70	107.692
654.97	0.651	20.7842	-919.999	60	92.1659
655.13	0.646	20.7842	-919.999	65	100.619
655.29	0.643	20.7842	-919.999	63	97.9782
655.46	0.643	20.7842	-923.914	56	87.0918
655.62	0.648	20.567	-923.914	67	103.395
655.79	0.65	20.7842	-916.084	54	83.0769
655.95	0.648	20.567	-923.914	53	81.7901
656.11	0.649	20.7842	-919.999	66	101.695
656.28	0.649	20.567	-923.914	65	100.154
656.44	0.652	20.7842	-923.914	73	111.963
656.61	0.654	20.567	-919.999	62	94.8012
656.77	0.647	20.567	-919.999	52	80.3709
656.93	0.643	20.567	-919.999	74	115.086
657.1	0.638	20.567	-923.914	63	98.7461
657.26	0.639	20.567	-919.999	57	89.2019
657.43	0.638	20.7842	-919.999	62	97.1787
657.59	0.636	20.7842	-919.999	56	88.0503
657.75	0.63	20.567	-923.914	51	80.9524
657.92	0.633	20.7842	-923.914	59	93.2069
658.08	0.637	20.7842	-919.999	56	87.9121
658.25	0.643	20.567	-919.999	61	94.8678
658.41	0.644	20.7842	-919.999	61	94.7205
658.57	0.646	20.567	-919.999	51	78.9474
658.74	0.644	20.7842	-923.914	51	79.1925
658.9	0.645	20.7842	-923.914	47	72.8682
659.07	0.643	20.567	-919.999	63	97.9782
659.23	0.647	20.567	-923.914	63	97.3725
659.39	0.645	20.7842	-916.084	55	85.2713
659.56	0.642	20.567	-923.914	63	98.1308
659.72	0.642	20.567	-923.914	49	76.324
659.89	0.647	20.7842	-923.914	53	81.9165
660.05	0.649	20.7842	-923.914	60	92.4499
660.21	0.649	20.7842	-923.914	59	90.9091
660.38	0.646	20.7842	-919.999	83	128.483
660.54	0.65	20.7842	-923.914	52	80
660.71	0.651	20.567	-919.999	65	99.8464
660.87	0.65	20.567	-919.999	64	98.4615
661.03	0.646	20.7842	-919.999	55	85.1393
661.2	0.641	20.7842	-919.999	61	95.1638
661.36	0.643	20.7842	-923.914	59	91.7574
661.53	0.643	20.7842	-919.999	74	115.086
661.69	0.64	20.7842	-923.914	61	95.3125
661.85	0.638	20.7842	-923.914	63	98.7461

662.02	0.633	20.567	-916.084	60	94.7867
662.18	0.636	20.7842	-919.999	65	102.201
662.35	0.64	20.7842	-916.084	52	81.25
662.51	0.638	20.7842	-923.914	70	109.718
662.67	0.64	20.567	-919.999	59	92.1875
662.84	0.639	20.567	-923.914	50	78.2473
663	0.642	20.567	-923.914	54	84.1122
663.17	0.647	20.7842	-923.914	45	69.5518
663.33	0.646	20.567	-919.999	64	99.0712
663.49	0.644	20.7842	-923.914	55	85.4037
663.66	0.644	20.567	-919.999	51	79.1925
663.82	0.647	20.567	-931.744	46	71.0974
663.99	0.647	20.7842	-919.999	67	103.555
664.15	0.648	20.567	-919.999	67	103.395
664.31	0.639	20.7842	-916.084	56	87.6369
664.48	0.642	20.567	-916.084	48	74.7664
664.64	0.647	20.567	-923.914	45	69.5518
664.81	0.651	20.7842	-919.999	57	87.5576
664.97	0.648	20.7842	-923.914	63	97.2222
665.13	0.649	20.7842	-919.999	52	80.1233
665.3	0.644	21.0014	-923.914	62	96.2733
665.46	0.648	20.7842	-923.914	54	83.3333
665.63	0.647	20.7842	-919.999	63	97.3725
665.79	0.644	20.7842	-923.914	63	97.8261
665.95	0.639	20.567	-919.999	63	98.5916
666.12	0.635	20.7842	-916.084	56	88.189
666.28	0.633	20.7842	-923.914	61	96.3665
666.45	0.635	20.567	-923.914	59	92.9134
666.61	0.636	20.7842	-919.999	53	83.3333
666.77	0.627	20.7842	-919.999	52	82.9346
666.94	0.626	20.7842	-923.914	62	99.0415
667.1	0.628	20.7842	-919.999	63	100.318
667.27	0.632	20.567	-923.914	53	83.8608
667.43	0.637	20.7842	-923.914	51	80.0628
667.59	0.632	20.7842	-923.914	50	79.1139
667.76	0.629	20.7842	-923.914	55	87.4404
667.92	0.627	20.567	-919.999	52	82.9346
668.09	0.631	20.567	-923.914	59	93.5024
668.25	0.629	20.7842	-923.914	52	82.6709
668.41	0.62	20.567	-919.999	52	83.871
668.58	0.616	20.567	-923.914	63	102.273
668.74	0.618	20.7842	-923.914	65	105.178
668.91	0.623	20.567	-919.999	58	93.0979
669.07	0.628	20.7842	-923.914	43	68.4713
669.23	0.625	20.7842	-919.999	59	94.4
669.4	0.623	20.567	-923.914	61	97.9133
669.56	0.614	20.7842	-923.914	51	83.0619

669.73	0.622	20.7842	-916.084	54	86.8167
669.89	0.625	20.567	-919.999	49	78.4
670.05	0.62	20.7842	-919.999	56	90.3226
670.22	0.612	20.567	-923.914	65	106.209
670.38	0.609	20.7842	-916.084	49	80.4598
670.55	0.613	20.567	-927.829	61	99.5106
670.71	0.616	20.567	-923.914	70	113.636
670.87	0.613	21.0014	-923.914	63	102.773
671.04	0.611	20.567	-919.999	51	83.4697
671.2	0.609	20.567	-923.914	46	75.5337
671.37	0.613	20.7842	-923.914	52	84.8287
671.53	0.619	20.7842	-919.999	59	95.315
671.69	0.619	20.7842	-919.999	56	90.4685
671.86	0.621	20.7842	-923.914	49	78.905
672.02	0.621	20.7842	-919.999	43	69.2432
672.19	0.623	20.7842	-919.999	61	97.9133
672.35	0.624	20.7842	-919.999	57	91.3462
672.51	0.624	20.7842	-923.914	48	76.9231
672.68	0.621	20.7842	-923.914	49	78.905
672.84	0.621	20.7842	-923.914	64	103.06
673.01	0.62	20.7842	-919.999	47	75.8064
673.17	0.622	20.567	-923.914	63	101.286
673.33	0.624	20.7842	-919.999	52	83.3333
673.5	0.621	20.7842	-923.914	75	120.773
673.66	0.621	20.7842	-919.999	55	88.5668
673.83	0.622	20.7842	-919.999	59	94.8553
673.99	0.626	20.567	-919.999	53	84.6645
674.15	0.625	20.7842	-923.914	61	97.6
674.32	0.622	20.7842	-923.914	54	86.8167
674.48	0.616	20.7842	-923.914	54	87.6623
674.65	0.612	20.7842	-923.914	54	88.2353
674.81	0.609	20.7842	-919.999	57	93.5961
674.97	0.612	20.567	-916.084	67	109.477
675.14	0.612	20.7842	-923.914	54	88.2353
675.3	0.609	20.7842	-919.999	56	91.954
675.47	0.608	20.7842	-927.829	63	103.618
675.63	0.615	20.7842	-919.999	52	84.5528
675.79	0.617	20.7842	-923.914	44	71.3128
675.96	0.621	20.7842	-916.084	53	85.3462
676.12	0.619	20.7842	-927.829	70	113.086
676.29	0.62	20.567	-927.829	40	64.5161
676.45	0.621	20.7842	-919.999	61	98.2287
676.61	0.622	20.567	-923.914	48	77.1704
676.78	0.619	21.0014	-919.999	45	72.6979
676.94	0.618	20.7842	-919.999	60	97.0874
677.11	0.619	20.7842	-919.999	65	105.008
677.27	0.623	20.7842	-919.999	49	78.6517

677.43	0.626	20.567	-919.999	56	89.4569
677.6	0.624	20.7842	-919.999	61	97.7564
677.76	0.623	20.567	-919.999	37	59.39
677.93	0.624	20.7842	-916.084	67	107.372
678.09	0.628	20.7842	-919.999	46	73.2484
678.25	0.628	20.7842	-919.999	49	78.0255
678.42	0.623	20.7842	-923.914	54	86.6774
678.58	0.619	20.7842	-923.914	60	96.9305
678.75	0.614	20.7842	-919.999	48	78.1759
678.91	0.616	20.7842	-923.914	46	74.6753
679.07	0.616	20.567	-923.914	50	81.1688
679.24	0.613	20.567	-923.914	51	83.1974
679.4	0.61	20.7842	-923.914	45	73.7705
679.57	0.608	20.7842	-923.914	54	88.8158
679.73	0.612	20.567	-923.914	48	78.4314
679.89	0.616	20.7842	-919.999	52	84.4156
680.06	0.613	20.567	-923.914	42	68.5155
680.22	0.611	20.7842	-919.999	75	122.75
680.39	0.617	20.7842	-923.914	45	72.9335
680.55	0.623	20.7842	-919.999	51	81.862
680.71	0.622	20.567	-919.999	43	69.1318
680.88	0.621	20.7842	-923.914	48	77.2947
681.04	0.622	20.7842	-919.999	54	86.8167
681.21	0.62	20.7842	-919.999	57	91.9355
681.37	0.622	20.7842	-923.914	54	86.8167
681.53	0.625	20.7842	-919.999	49	78.4
681.7	0.623	20.567	-919.999	48	77.0465
681.86	0.62	20.567	-919.999	56	90.3226
682.03	0.617	20.7842	-923.914	49	79.4165
682.19	0.621	20.7842	-919.999	69	111.111
682.35	0.629	20.7842	-919.999	65	103.339
682.52	0.632	20.7842	-923.914	57	90.1899
682.68	0.625	20.7842	-919.999	59	94.4
682.85	0.624	20.567	-916.084	56	89.7436
683.01	0.621	20.7842	-923.914	43	69.2432
683.17	0.624	20.567	-923.914	55	88.141
683.34	0.619	20.567	-919.999	52	84.0065
683.5	0.614	20.7842	-912.169	54	87.9479
683.67	0.61	20.7842	-919.999	52	85.2459
683.83	0.609	20.7842	-923.914	59	96.8801
683.99	0.614	20.567	-919.999	56	91.2052
684.16	0.61	20.7842	-927.829	49	80.3279
684.32	0.611	20.7842	-923.914	53	86.743
684.49	0.611	20.7842	-919.999	45	73.6498
684.65	0.614	20.7842	-919.999	54	87.9479
684.81	0.622	20.7842	-927.829	58	93.2476
684.98	0.623	20.7842	-919.999	49	78.6517

685.14	0.621	20.7842	-919.999	65	104.67
685.31	0.615	21.0014	-923.914	55	89.4309
685.47	0.614	20.7842	-923.914	60	97.7199
685.63	0.622	20.7842	-919.999	59	94.8553
685.8	0.625	20.567	-923.914	45	72
685.96	0.621	20.7842	-923.914	51	82.1256
686.13	0.619	20.7842	-923.914	54	87.2375
686.29	0.62	20.7842	-923.914	53	85.4839
686.45	0.628	20.7842	-919.999	55	87.5796
686.62	0.628	21.0014	-923.914	66	105.096
686.78	0.626	20.567	-919.999	56	89.4569
686.95	0.622	21.0014	-919.999	54	86.8167
687.11	0.619	20.7842	-923.914	60	96.9305
687.27	0.624	20.7842	-919.999	54	86.5385
687.44	0.62	20.7842	-919.999	50	80.6452
687.6	0.619	20.7842	-919.999	67	108.239
687.77	0.615	20.7842	-919.999	47	76.4228
687.93	0.613	20.7842	-916.084	56	91.354
688.09	0.616	21.0014	-919.999	64	103.896
688.26	0.614	21.0014	-919.999	61	99.3485
688.42	0.612	20.7842	-923.914	58	94.7712
688.59	0.61	20.7842	-927.829	52	85.2459
688.75	0.612	20.7842	-919.999	45	73.5294
688.91	0.615	20.7842	-919.999	64	104.065
689.08	0.619	20.7842	-919.999	53	85.622
689.24	0.62	20.7842	-919.999	51	82.2581
689.41	0.617	20.7842	-923.914	55	89.141
689.57	0.616	20.7842	-919.999	48	77.9221
689.73	0.619	20.7842	-923.914	46	74.3134
689.9	0.623	20.567	-919.999	55	88.2825
690.06	0.622	20.7842	-919.999	61	98.0707
690.23	0.621	20.7842	-923.914	51	82.1256
690.39	0.617	20.7842	-919.999	67	108.59
690.55	0.618	20.7842	-931.744	46	74.4337
690.72	0.62	20.7842	-923.914	48	77.4194
690.88	0.625	20.7842	-919.999	56	89.6
691.05	0.627	20.7842	-919.999	62	98.8836
691.21	0.623	20.7842	-919.999	46	73.8363
691.37	0.624	20.7842	-919.999	67	107.372
691.54	0.626	20.7842	-919.999	62	99.0415
691.7	0.628	20.7842	-916.084	58	92.3567
691.87	0.621	21.0014	-919.999	43	69.2432
692.03	0.616	20.7842	-923.914	61	99.026
692.19	0.613	20.7842	-919.999	65	106.036
692.36	0.614	20.7842	-919.999	53	86.3192
692.52	0.612	20.7842	-923.914	64	104.575
692.69	0.607	20.7842	-919.999	47	77.43

692.85	0.607	20.7842	-923.914	54	88.9621
693.01	0.612	20.7842	-923.914	59	96.4052
693.18	0.615	20.7842	-923.914	62	100.813
693.34	0.621	20.7842	-923.914	55	88.5668
693.51	0.621	20.7842	-919.999	62	99.839
693.67	0.62	20.7842	-923.914	42	67.7419
693.83	0.622	20.7842	-919.999	50	80.3858
694	0.624	20.7842	-919.999	59	94.5513
694.16	0.621	21.0014	-919.999	64	103.06
694.33	0.621	20.567	-919.999	55	88.5668
694.49	0.617	20.7842	-916.084	58	94.0032
694.65	0.617	21.0014	-919.999	45	72.9335
694.82	0.622	21.0014	-923.914	52	83.6013
694.98	0.623	21.0014	-919.999	45	72.2311
695.15	0.622	20.567	-919.999	41	65.9164
695.31	0.62	20.7842	-919.999	54	87.0968
695.47	0.623	20.7842	-919.999	63	101.124
695.64	0.628	20.7842	-923.914	58	92.3567
695.8	0.624	20.7842	-919.999	65	104.167
695.97	0.619	20.7842	-919.999	54	87.2375
696.13	0.619	21.0014	-919.999	59	95.315
696.29	0.619	20.7842	-919.999	54	87.2375
696.46	0.617	20.7842	-919.999	70	113.452
696.62	0.616	20.7842	-919.999	48	77.9221
696.79	0.614	20.7842	-916.084	67	109.121
696.95	0.611	20.7842	-923.914	43	70.3764
697.11	0.61	20.7842	-923.914	50	81.9672
697.28	0.611	20.7842	-923.914	59	96.563
697.44	0.615	20.7842	-919.999	56	91.0569
697.61	0.612	20.7842	-919.999	46	75.1634
697.77	0.614	20.567	-919.999	56	91.2052
697.93	0.613	20.7842	-916.084	50	81.5661
698.1	0.622	20.7842	-923.914	65	104.502
698.26	0.624	20.7842	-923.914	60	96.1538
698.43	0.623	20.7842	-919.999	53	85.0722
698.59	0.622	21.0014	-923.914	53	85.209
698.75	0.62	20.7842	-927.829	43	69.3548
698.92	0.623	21.0014	-923.914	63	101.124
699.08	0.627	21.0014	-923.914	71	113.238
699.25	0.625	20.7842	-916.084	67	107.2
699.41	0.621	20.7842	-923.914	48	77.2947
699.57	0.62	20.7842	-919.999	54	87.0968
699.74	0.621	20.7842	-919.999	65	104.67
699.9	0.625	20.7842	-919.999	66	105.6
700.07	0.626	20.7842	-919.999	63	100.639
700.23	0.62	20.7842	-919.999	65	104.839
700.39	0.619	20.7842	-919.999	54	87.2375

700.56	0.62	20.7842	-923.914	62	100
700.72	0.621	20.7842	-927.829	62	99.839
700.89	0.617	20.7842	-923.914	72	116.694
701.05	0.61	21.0014	-919.999	50	81.9672
701.21	0.604	20.7842	-923.914	57	94.3709
701.38	0.61	20.7842	-923.914	57	93.4426
701.54	0.614	20.7842	-919.999	68	110.749
701.71	0.61	20.7842	-923.914	63	103.279
701.87	0.609	20.567	-923.914	60	98.5222
702.03	0.611	20.7842	-919.999	68	111.293
702.2	0.619	20.7842	-919.999	57	92.084
702.36	0.624	20.7842	-919.999	76	121.795
702.53	0.622	20.7842	-923.914	66	106.109
702.69	0.621	20.7842	-927.829	56	90.1771
702.85	0.619	20.7842	-916.084	50	80.7754
703.02	0.619	20.7842	-923.914	49	79.1599
703.18	0.622	20.7842	-923.914	56	90.0322
703.35	0.624	20.7842	-916.084	59	94.5513
703.51	0.622	20.7842	-919.999	62	99.6785
703.67	0.62	21.0014	-923.914	57	91.9355
703.84	0.62	20.7842	-923.914	67	108.065
704	0.627	20.7842	-919.999	67	106.858
704.17	0.628	21.0014	-919.999	56	89.172
704.33	0.628	20.7842	-919.999	57	90.7643
704.49	0.623	20.7842	-923.914	50	80.2568
704.66	0.621	21.0014	-919.999	57	91.7874
704.82	0.625	20.7842	-919.999	67	107.2
704.99	0.619	20.7842	-919.999	61	98.546
705.15	0.615	21.0014	-923.914	62	100.813
705.31	0.612	21.0014	-919.999	61	99.6732
705.48	0.609	20.7842	-923.914	56	91.954
705.64	0.614	20.7842	-916.084	52	84.6906
705.81	0.611	20.7842	-916.084	68	111.293
705.97	0.611	20.7842	-923.914	70	114.566
706.13	0.609	20.7842	-919.999	63	103.448
706.3	0.609	21.0014	-919.999	69	113.3
706.46	0.608	20.7842	-916.084	59	97.0395
706.63	0.62	20.7842	-919.999	56	90.3226
706.79	0.621	20.7842	-919.999	46	74.0741
706.95	0.619	20.7842	-919.999	57	92.084
707.12	0.617	20.7842	-923.914	54	87.5203
707.28	0.622	20.7842	-919.999	52	83.6013
707.45	0.626	21.0014	-919.999	57	91.0543
707.61	0.624	20.7842	-923.914	61	97.7564
707.77	0.618	20.7842	-916.084	63	101.942
707.94	0.619	20.7842	-927.829	57	92.084
708.1	0.621	20.7842	-919.999	59	95.008

708.27	0.625	20.7842	-923.914	52	83.2
708.43	0.623	20.7842	-923.914	73	117.175
708.59	0.623	20.7842	-923.914	69	110.754
708.76	0.623	20.7842	-923.914	63	101.124
708.92	0.625	20.7842	-916.084	60	96
709.09	0.626	20.7842	-923.914	64	102.236
709.25	0.625	20.7842	-923.914	62	99.2
709.41	0.617	20.7842	-919.999	60	97.2447
709.58	0.615	20.7842	-923.914	74	120.325
709.74	0.614	20.7842	-923.914	65	105.863
709.91	0.617	20.7842	-923.914	64	103.728
710.07	0.611	20.7842	-923.914	59	96.563
710.23	0.607	20.7842	-923.914	59	97.1993
710.4	0.603	20.7842	-923.914	65	107.794
710.56	0.61	21.0014	-919.999	65	106.557
710.73	0.615	20.7842	-919.999	64	104.065
710.89	0.616	21.0014	-919.999	62	100.649
711.05	0.616	20.7842	-923.914	68	110.39
711.22	0.617	20.7842	-923.914	66	106.969
711.38	0.621	20.7842	-923.914	52	83.7359
711.55	0.625	20.7842	-919.999	65	104
711.71	0.616	20.7842	-923.914	66	107.143
711.87	0.621	20.7842	-919.999	62	99.839
712.04	0.618	20.7842	-919.999	57	92.233
712.2	0.619	21.0014	-923.914	50	80.7754
712.37	0.622	20.7842	-919.999	48	77.1704
712.53	0.624	20.7842	-923.914	56	89.7436
712.69	0.623	20.567	-923.914	51	81.862
712.86	0.623	20.7842	-919.999	56	89.8876
713.02	0.626	21.0014	-923.914	64	102.236
713.19	0.629	20.7842	-923.914	56	89.0302
713.35	0.624	21.0014	-916.084	60	96.1538
713.51	0.622	21.0014	-919.999	53	85.209
713.68	0.616	21.0014	-923.914	59	95.7792
713.84	0.617	20.7842	-923.914	70	113.452
714.01	0.618	20.7842	-919.999	61	98.7055
714.17	0.617	21.0014	-923.914	66	106.969
714.33	0.614	20.7842	-919.999	59	96.0912
714.5	0.609	20.7842	-923.914	50	82.1018
714.66	0.609	20.7842	-919.999	71	116.585
714.83	0.612	20.7842	-919.999	52	84.9673
714.99	0.613	20.7842	-923.914	54	88.0914
715.15	0.614	20.7842	-923.914	67	109.121
715.32	0.614	21.0014	-919.999	56	91.2052
715.48	0.617	20.7842	-919.999	72	116.694
715.65	0.618	20.7842	-919.999	45	72.8155
715.81	0.623	20.7842	-919.999	65	104.334

715.97	0.621	21.0014	-919.999	58	93.3977
716.14	0.619	21.0014	-916.084	68	109.855
716.3	0.619	20.7842	-923.914	54	87.2375
716.47	0.622	21.0014	-919.999	63	101.286
716.63	0.624	20.7842	-927.829	70	112.179
716.79	0.623	20.7842	-919.999	65	104.334
716.96	0.614	21.0014	-919.999	52	84.6906
717.12	0.62	21.0014	-912.169	52	83.871
717.29	0.625	20.7842	-919.999	79	126.4
717.45	0.628	20.7842	-916.084	66	105.096
717.61	0.623	20.7842	-919.999	70	112.36
717.78	0.619	21.0014	-923.914	61	98.546
717.94	0.622	21.0014	-919.999	67	107.717
718.11	0.623	20.7842	-919.999	55	88.2825
718.27	0.62	20.7842	-919.999	41	66.129
718.43	0.615	20.7842	-931.744	39	63.4146
718.6	0.611	20.7842	-919.999	64	104.746
718.76	0.61	20.7842	-923.914	64	104.918
718.93	0.608	20.7842	-919.999	63	103.618
719.09	0.613	20.7842	-919.999	62	101.142
719.25	0.614	20.7842	-919.999	68	110.749
719.42	0.611	21.0014	-923.914	54	88.3797
719.58	0.614	21.0014	-919.999	73	118.893
719.75	0.617	20.7842	-923.914	59	95.624
719.91	0.624	20.7842	-919.999	61	97.7564
720.07	0.624	20.7842	-919.999	67	107.372
720.24	0.622	20.7842	-919.999	71	114.148
720.4	0.619	20.7842	-919.999	68	109.855
720.57	0.619	20.7842	-919.999	71	114.701
720.73	0.622	20.7842	-919.999	61	98.0707
720.89	0.619	20.7842	-919.999	84	135.703
721.06	0.618	21.0014	-919.999	61	98.7055
721.22	0.616	20.7842	-923.914	59	95.7792
721.39	0.622	20.7842	-923.914	73	117.363
721.55	0.625	20.7842	-923.914	71	113.6
721.71	0.627	20.7842	-919.999	53	84.5295
721.88	0.624	20.7842	-919.999	81	129.808
722.04	0.621	20.7842	-923.914	54	86.9565
722.21	0.616	21.2187	-923.914	58	94.1558
722.37	0.622	20.7842	-923.914	49	78.7781
722.53	0.623	21.0014	-919.999	56	89.8876
722.7	0.618	21.0014	-923.914	65	105.178
722.86	0.611	21.0014	-919.999	78	127.66
723.03	0.611	20.7842	-919.999	53	86.743
723.19	0.614	20.7842	-923.914	68	110.749
723.35	0.615	21.0014	-923.914	52	84.5528
723.52	0.609	21.0014	-919.999	67	110.016

723.68	0.607	21.0014	-923.914	57	93.9044
723.85	0.611	21.0014	-919.999	78	127.66
724.01	0.616	20.7842	-919.999	52	84.4156
724.17	0.619	20.7842	-919.999	57	92.084
724.34	0.618	20.7842	-919.999	68	110.032
724.5	0.621	20.7842	-923.914	75	120.773
724.67	0.621	21.0014	-919.999	71	114.332
724.83	0.625	20.7842	-919.999	66	105.6
724.99	0.624	20.7842	-923.914	61	97.7564
725.16	0.624	21.0014	-919.999	65	104.167
725.32	0.62	21.0014	-919.999	61	98.3871
725.49	0.622	20.7842	-919.999	57	91.6399
725.65	0.623	21.0014	-923.914	50	80.2568
725.81	0.623	21.0014	-923.914	52	83.4671
725.98	0.624	20.7842	-923.914	63	100.962
726.14	0.619	20.7842	-919.999	69	111.47
726.31	0.618	21.0014	-923.914	64	103.56
726.47	0.623	21.0014	-919.999	75	120.385
726.63	0.625	20.7842	-919.999	52	83.2
726.8	0.621	21.0014	-919.999	66	106.28
726.96	0.617	20.7842	-919.999	68	110.211
727.13	0.615	20.7842	-919.999	63	102.439
727.29	0.614	21.0014	-923.914	58	94.4625
727.45	0.61	20.7842	-923.914	71	116.393
727.62	0.608	20.7842	-916.084	66	108.553
727.78	0.608	20.7842	-919.999	63	103.618
727.95	0.608	21.0014	-919.999	60	98.6842
728.11	0.61	21.0014	-923.914	80	131.148
728.27	0.615	20.7842	-919.999	58	94.3089
728.44	0.619	21.0014	-919.999	63	101.777
728.6	0.621	20.7842	-923.914	63	101.449
728.77	0.619	20.7842	-916.084	62	100.162
728.93	0.62	20.7842	-919.999	69	111.29
729.09	0.622	21.0014	-919.999	66	106.109
729.26	0.621	21.0014	-919.999	73	117.552
729.42	0.621	20.7842	-919.999	77	123.994
729.59	0.618	21.0014	-923.914	53	85.7605
729.75	0.622	20.567	-919.999	59	94.8553
729.91	0.625	21.0014	-919.999	76	121.6
730.08	0.626	21.0014	-919.999	48	76.6773
730.24	0.622	21.0014	-919.999	68	109.325
730.41	0.624	20.7842	-923.914	63	100.962
730.57	0.626	21.0014	-923.914	68	108.626
730.73	0.628	21.0014	-923.914	44	70.0637
730.9	0.626	21.0014	-919.999	67	107.029
731.06	0.62	20.7842	-923.914	77	124.194
731.23	0.616	20.7842	-923.914	59	95.7792

731.39	0.616	20.7842	-919.999	70	113.636
731.55	0.615	21.0014	-919.999	54	87.8049
731.72	0.614	20.7842	-919.999	62	100.977
731.88	0.611	20.7842	-919.999	73	119.476
732.05	0.605	20.7842	-919.999	69	114.05
732.21	0.608	20.7842	-923.914	56	92.1053
732.37	0.612	20.7842	-923.914	58	94.7712
732.54	0.615	21.0014	-919.999	72	117.073
732.7	0.613	20.7842	-919.999	68	110.93
732.87	0.611	21.0014	-919.999	54	88.3797
733.03	0.619	21.0014	-919.999	68	109.855
733.19	0.625	21.0014	-919.999	72	115.2
733.36	0.623	20.7842	-919.999	62	99.5185
733.52	0.62	20.7842	-919.999	64	103.226
733.69	0.619	20.7842	-923.914	61	98.546
733.85	0.622	21.0014	-923.914	75	120.579
734.01	0.625	20.7842	-923.914	63	100.8
734.18	0.626	20.7842	-916.084	60	95.8466
734.34	0.62	20.7842	-923.914	62	100
734.51	0.62	21.0014	-919.999	66	106.452
734.67	0.621	21.0014	-919.999	57	91.7874
734.83	0.623	21.0014	-916.084	48	77.0465
735	0.626	21.0014	-923.914	67	107.029
735.16	0.625	20.7842	-916.084	53	84.8
735.33	0.621	21.0014	-919.999	59	95.008
735.49	0.621	20.7842	-919.999	60	96.6184
735.65	0.622	20.7842	-919.999	56	90.0322
735.82	0.622	20.7842	-923.914	83	133.441
735.98	0.617	21.0014	-919.999	60	97.2447
736.15	0.613	21.0014	-919.999	79	128.874
736.31	0.608	20.7842	-923.914	76	125
736.47	0.609	20.7842	-916.084	56	91.954
736.64	0.611	21.0014	-923.914	67	109.656
736.8	0.606	20.7842	-923.914	67	110.561
736.97	0.609	20.7842	-919.999	77	126.437
737.13	0.611	21.0014	-923.914	50	81.8331
737.29	0.616	20.7842	-919.999	40	64.9351
737.46	0.622	20.7842	-923.914	63	101.286
737.62	0.624	20.7842	-919.999	61	97.7564
737.79	0.621	20.7842	-923.914	61	98.2287
737.95	0.616	21.0014	-919.999	79	128.247
738.11	0.616	20.7842	-919.999	66	107.143
738.28	0.624	21.0014	-916.084	64	102.564
738.44	0.625	21.0014	-916.084	55	88
738.61	0.619	21.0014	-923.914	63	101.777
738.77	0.619	21.0014	-916.084	81	130.856
738.93	0.622	21.0014	-919.999	65	104.502

739.1	0.628	20.7842	-919.999	55	87.5796
739.26	0.628	20.7842	-923.914	62	98.7261
739.43	0.624	20.7842	-923.914	77	123.397
739.59	0.62	20.7842	-919.999	59	95.1613
739.75	0.621	20.7842	-923.914	55	88.5668
739.92	0.624	20.7842	-923.914	64	102.564
740.08	0.617	21.0014	-923.914	47	76.175
740.25	0.615	20.7842	-923.914	66	107.317
740.41	0.611	21.0014	-923.914	52	85.1064
740.57	0.613	21.0014	-923.914	62	101.142
740.74	0.614	20.7842	-919.999	75	122.15
740.9	0.613	20.7842	-923.914	66	107.667
741.07	0.609	21.0014	-916.084	59	96.8801
741.23	0.609	21.0014	-919.999	56	91.954
741.39	0.612	21.0014	-919.999	65	106.209
741.56	0.619	21.0014	-923.914	61	98.546
741.72	0.618	21.0014	-923.914	69	111.65
741.89	0.621	20.7842	-919.999	63	101.449
742.05	0.614	20.7842	-919.999	68	110.749
742.21	0.62	21.0014	-923.914	66	106.452
742.38	0.621	21.0014	-919.999	77	123.994
742.54	0.622	20.7842	-923.914	54	86.8167
742.71	0.62	20.7842	-923.914	53	85.4839
742.87	0.617	21.0014	-923.914	55	89.141
743.03	0.619	20.7842	-919.999	61	98.546
743.2	0.623	21.0014	-919.999	68	109.149
743.36	0.619	21.0014	-927.829	74	119.548
743.53	0.622	20.7842	-919.999	70	112.54
743.69	0.622	21.0014	-923.914	62	99.6785
743.85	0.62	20.7842	-919.999	67	108.065
744.02	0.625	21.0014	-923.914	86	137.6
744.18	0.625	21.0014	-923.914	66	105.6
744.35	0.624	21.0014	-923.914	61	97.7564
744.51	0.617	21.0014	-919.999	65	105.348
744.67	0.613	21.0014	-919.999	68	110.93
744.84	0.615	20.7842	-923.914	73	118.699
745	0.614	20.7842	-919.999	61	99.3485
745.17	0.61	21.0014	-919.999	58	95.082
745.33	0.606	21.2187	-923.914	62	102.31
745.49	0.606	20.7842	-919.999	66	108.911
745.66	0.611	20.7842	-923.914	69	112.93
745.82	0.616	21.0014	-923.914	72	116.883
745.99	0.616	21.0014	-919.999	69	112.013
746.15	0.619	21.0014	-919.999	72	116.317
746.31	0.619	21.0014	-919.999	70	113.086
746.48	0.624	21.0014	-919.999	59	94.5513
746.64	0.625	21.0014	-923.914	53	84.8

746.81	0.623	20.7842	-923.914	70	112.36
746.97	0.619	21.0014	-923.914	75	121.163
747.13	0.618	21.0014	-919.999	61	98.7055
747.3	0.617	21.0014	-919.999	75	121.556
747.46	0.623	21.0014	-923.914	66	105.939
747.63	0.621	20.7842	-923.914	62	99.839
747.79	0.626	21.0014	-919.999	76	121.406
747.95	0.619	21.0014	-916.084	58	93.6995
748.12	0.623	21.0014	-923.914	65	104.334
748.28	0.625	21.0014	-923.914	67	107.2
748.45	0.621	20.7842	-916.084	54	86.9565
748.61	0.614	20.7842	-919.999	59	96.0912
748.77	0.618	21.0014	-923.914	69	111.65
748.94	0.619	20.7842	-919.999	63	101.777
749.1	0.616	21.0014	-923.914	64	103.896
749.27	0.614	21.0014	-923.914	70	114.007
749.43	0.61	21.0014	-919.999	71	116.393
749.59	0.608	20.7842	-919.999	61	100.329
749.76	0.612	21.0014	-919.999	62	101.307
749.92	0.612	21.0014	-919.999	64	104.575
750.09	0.612	21.0014	-919.999	68	111.111
750.25	0.613	20.7842	-923.914	64	104.405
750.41	0.616	20.7842	-912.169	61	99.026
750.58	0.617	20.7842	-923.914	77	124.797
750.74	0.622	20.7842	-927.829	54	86.8167
750.91	0.623	20.7842	-923.914	69	110.754
751.07	0.62	20.7842	-923.914	65	104.839
751.23	0.62	21.0014	-923.914	70	112.903
751.4	0.622	21.0014	-923.914	73	117.363
751.56	0.624	21.0014	-919.999	43	68.9103
751.73	0.625	20.7842	-919.999	63	100.8
751.89	0.624	21.0014	-919.999	51	81.7308
752.05	0.621	20.7842	-916.084	67	107.891
752.22	0.622	21.0014	-923.914	78	125.402
752.38	0.625	21.0014	-919.999	69	110.4
752.55	0.623	20.567	-923.914	67	107.544
752.71	0.622	20.7842	-923.914	67	107.717
752.87	0.618	21.0014	-919.999	65	105.178
753.04	0.62	21.0014	-919.999	75	120.968
753.2	0.622	20.7842	-919.999	65	104.502
753.37	0.62	21.0014	-919.999	62	100
753.53	0.615	20.7842	-923.914	80	130.081
753.69	0.609	21.0014	-919.999	60	98.5222
753.86	0.602	20.7842	-923.914	68	112.957
754.02	0.611	21.0014	-935.659	80	130.933
754.19	0.614	20.7842	-916.084	69	112.378
754.35	0.611	21.0014	-919.999	71	116.203

754.51	0.609	20.7842	-927.829	67	110.016
754.68	0.613	21.0014	-919.999	63	102.773
754.84	0.622	21.0014	-923.914	66	106.109
755.01	0.625	21.0014	-919.999	59	94.4
755.17	0.623	20.7842	-923.914	63	101.124
755.33	0.62	21.0014	-916.084	58	93.5484
755.5	0.619	21.0014	-923.914	47	75.9289
755.66	0.62	20.7842	-923.914	80	129.032
755.83	0.622	20.7842	-919.999	67	107.717
755.99	0.621	20.7842	-916.084	47	75.6844
756.15	0.623	20.7842	-923.914	68	109.149
756.32	0.619	21.0014	-919.999	65	105.008
756.48	0.622	21.0014	-919.999	65	104.502
756.65	0.627	21.0014	-919.999	63	100.478
756.81	0.628	20.7842	-919.999	71	113.057
756.97	0.623	20.7842	-923.914	66	105.939
757.14	0.618	21.0014	-919.999	69	111.65
757.3	0.622	20.7842	-919.999	71	114.148
757.47	0.625	21.2187	-923.914	68	108.8
757.63	0.618	20.7842	-916.084	67	108.414
757.79	0.613	20.7842	-919.999	70	114.192
757.96	0.609	21.0014	-919.999	69	113.3
758.12	0.611	21.0014	-919.999	63	103.11
758.29	0.613	21.0014	-919.999	65	106.036
758.45	0.61	21.0014	-919.999	64	104.918
758.61	0.611	21.0014	-923.914	62	101.473
758.78	0.608	20.7842	-919.999	50	82.2368
758.94	0.61	21.2187	-923.914	55	90.1639
759.11	0.613	21.0014	-923.914	77	125.612
759.27	0.618	21.0014	-923.914	54	87.3786
759.43	0.62	20.7842	-923.914	59	95.1613
759.6	0.62	21.0014	-919.999	73	117.742
759.76	0.617	20.7842	-923.914	74	119.935
759.93	0.622	20.7842	-923.914	75	120.579
760.09	0.624	21.0014	-923.914	77	123.397
760.25	0.623	20.7842	-919.999	69	110.754
760.42	0.62	20.7842	-923.914	64	103.226
760.58	0.62	20.7842	-919.999	55	88.7097
760.75	0.623	20.7842	-916.084	80	128.411
760.91	0.623	20.7842	-919.999	59	94.703
761.07	0.623	21.0014	-919.999	62	99.5185
761.24	0.618	20.7842	-919.999	71	114.887
761.4	0.622	21.0014	-919.999	64	102.894
761.57	0.624	20.7842	-923.914	62	99.359
761.73	0.625	21.0014	-919.999	62	99.2
761.89	0.621	21.2187	-919.999	75	120.773
762.06	0.614	21.0014	-919.999	60	97.7199

762.22	0.615	21.0014	-919.999	66	107.317
762.39	0.615	21.0014	-923.914	53	86.1789
762.55	0.615	21.0014	-923.914	61	99.187
762.71	0.611	20.7842	-919.999	68	111.293
762.88	0.608	20.7842	-923.914	64	105.263
763.04	0.604	21.0014	-919.999	64	105.96
763.21	0.61	21.0014	-916.084	47	77.0492
763.37	0.615	20.7842	-919.999	57	92.6829
763.53	0.619	21.0014	-919.999	68	109.855
763.7	0.618	21.0014	-919.999	76	122.977
763.86	0.619	20.7842	-919.999	58	93.6995
764.03	0.621	20.7842	-919.999	62	99.839
764.19	0.624	21.0014	-923.914	59	94.5513
764.35	0.619	21.0014	-916.084	71	114.701
764.52	0.617	21.0014	-923.914	59	95.624
764.68	0.617	21.0014	-923.914	51	82.658
764.85	0.622	20.7842	-919.999	70	112.54
765.01	0.621	21.0014	-923.914	66	106.28
765.17	0.623	21.0014	-923.914	64	102.729
765.34	0.621	21.0014	-919.999	63	101.449
765.5	0.623	20.7842	-919.999	66	105.939
765.67	0.625	21.0014	-919.999	64	102.4
765.83	0.625	21.0014	-919.999	52	83.2
765.99	0.623	20.7842	-919.999	72	115.57
766.16	0.62	21.2187	-923.914	59	95.1613
766.32	0.617	21.0014	-919.999	60	97.2447
766.49	0.617	21.0014	-919.999	56	90.7617
766.65	0.618	21.2187	-916.084	60	97.0874
766.81	0.616	20.7842	-919.999	70	113.636
766.98	0.61	21.2187	-919.999	62	101.639
767.14	0.607	20.7842	-923.914	68	112.026
767.31	0.61	20.7842	-923.914	54	88.5246
767.47	0.612	21.0014	-923.914	58	94.7712
767.63	0.615	21.0014	-923.914	57	92.6829
767.8	0.616	21.0014	-923.914	53	86.039
767.96	0.615	21.0014	-916.084	58	94.3089
768.13	0.617	21.0014	-923.914	66	106.969
768.29	0.62	21.0014	-919.999	78	125.806
768.45	0.621	21.0014	-916.084	56	90.1771
768.62	0.622	21.0014	-923.914	73	117.363
768.78	0.618	21.0014	-927.829	72	116.505
768.95	0.619	20.7842	-919.999	66	106.624
769.11	0.622	21.0014	-923.914	58	93.2476
769.27	0.624	21.0014	-919.999	74	118.59
769.44	0.622	21.0014	-923.914	65	104.502
769.6	0.617	21.0014	-919.999	53	85.8995
769.77	0.616	21.0014	-919.999	69	112.013

769.93	0.624	20.7842	-919.999	59	94.5513
770.09	0.627	20.7842	-919.999	66	105.263
770.26	0.62	20.7842	-919.999	61	98.3871
770.42	0.617	21.0014	-923.914	65	105.348
770.59	0.62	21.0014	-923.914	55	88.7097
770.75	0.624	20.7842	-919.999	77	123.397
770.91	0.621	20.7842	-927.829	62	99.839
771.08	0.616	20.7842	-923.914	72	116.883
771.24	0.612	21.0014	-923.914	74	120.915
771.41	0.607	20.7842	-919.999	66	108.731
771.57	0.61	20.7842	-923.914	71	116.393
771.73	0.61	21.0014	-919.999	87	142.623
771.9	0.612	21.0014	-919.999	63	102.941
772.06	0.613	21.0014	-923.914	73	119.086
772.23	0.614	20.7842	-919.999	69	112.378
772.39	0.62	21.0014	-919.999	65	104.839
772.55	0.625	21.0014	-919.999	73	116.8
772.72	0.622	21.0014	-923.914	60	96.463
772.88	0.62	21.0014	-923.914	58	93.5484
773.05	0.62	21.0014	-923.914	44	70.9677
773.21	0.621	21.0014	-919.999	68	109.501
773.37	0.624	21.0014	-923.914	74	118.59
773.54	0.62	21.0014	-919.999	69	111.29
773.7	0.617	20.7842	-919.999	85	137.763
773.87	0.618	21.0014	-919.999	79	127.832
774.03	0.62	21.0014	-919.999	79	127.419
774.19	0.626	21.0014	-919.999	75	119.808
774.36	0.624	21.0014	-919.999	73	116.987
774.52	0.62	21.0014	-919.999	56	90.3226
774.69	0.621	21.0014	-919.999	77	123.994
774.85	0.621	20.7842	-919.999	65	104.67
775.01	0.619	21.0014	-919.999	68	109.855
775.18	0.621	21.0014	-923.914	82	132.045
775.34	0.616	20.7842	-919.999	60	97.4026
775.51	0.608	20.7842	-916.084	79	129.934
775.67	0.611	21.2187	-919.999	53	86.743
775.83	0.614	21.0014	-916.084	62	100.977
776	0.615	21.0014	-923.914	84	136.585
776.16	0.608	21.0014	-923.914	68	111.842
776.33	0.61	20.7842	-923.914	68	111.475
776.49	0.611	20.7842	-919.999	66	108.02
776.65	0.616	21.0014	-923.914	69	112.013
776.82	0.62	21.0014	-916.084	69	111.29
776.98	0.619	20.7842	-927.829	73	117.932
777.15	0.621	21.0014	-923.914	69	111.111
777.31	0.621	20.7842	-923.914	75	120.773
777.47	0.625	21.0014	-923.914	65	104

777.64	0.622	21.0014	-923.914	90	144.695
777.8	0.623	21.0014	-923.914	57	91.4928
777.97	0.621	21.0014	-919.999	82	132.045
778.13	0.62	21.0014	-919.999	69	111.29
778.29	0.623	21.0014	-923.914	66	105.939
778.46	0.625	21.0014	-919.999	73	116.8
778.62	0.622	21.0014	-919.999	75	120.579
778.79	0.619	21.0014	-919.999	65	105.008
778.95	0.616	21.0014	-919.999	73	118.506
779.11	0.622	21.0014	-919.999	58	93.2476
779.28	0.623	21.0014	-923.914	77	123.596
779.44	0.624	21.2187	-923.914	74	118.59
779.61	0.615	21.0014	-919.999	63	102.439
779.77	0.614	21.0014	-919.999	68	110.749
779.93	0.614	20.7842	-916.084	62	100.977
780.1	0.614	21.2187	-919.999	79	128.664
780.26	0.605	21.0014	-919.999	80	132.231
780.43	0.608	21.0014	-923.914	71	116.776
780.59	0.608	21.0014	-919.999	61	100.329
780.75	0.612	21.0014	-923.914	71	116.013
780.92	0.616	21.0014	-919.999	67	108.766
781.08	0.618	20.7842	-919.999	82	132.686
781.25	0.618	21.0014	-923.914	79	127.832
781.41	0.618	21.0014	-919.999	58	93.8511
781.57	0.623	21.0014	-923.914	66	105.939
781.74	0.623	21.0014	-919.999	77	123.596
781.9	0.622	21.0014	-919.999	68	109.325
782.07	0.621	21.0014	-923.914	59	95.008
782.23	0.617	20.7842	-923.914	74	119.935
782.39	0.619	21.0014	-923.914	64	103.393
782.56	0.627	21.0014	-919.999	85	135.566
782.72	0.625	20.7842	-916.084	52	83.2
782.89	0.623	21.0014	-923.914	80	128.411
783.05	0.623	21.0014	-923.914	67	107.544
783.21	0.625	21.0014	-919.999	61	97.6
783.38	0.627	20.7842	-919.999	63	100.478
783.54	0.624	21.0014	-923.914	65	104.167
783.71	0.62	21.0014	-919.999	68	109.677
783.87	0.62	21.0014	-923.914	62	100
784.03	0.616	21.0014	-919.999	65	105.519
784.2	0.614	21.0014	-919.999	73	118.893
784.36	0.612	21.0014	-923.914	74	120.915
784.53	0.609	21.0014	-919.999	66	108.374
784.69	0.607	21.0014	-919.999	73	120.264
784.85	0.606	21.0014	-919.999	74	122.112
785.02	0.612	21.0014	-919.999	64	104.575
785.18	0.614	21.0014	-919.999	73	118.893

785.35	0.616	21.0014	-919.999	76	123.377
785.51	0.608	21.0014	-916.084	75	123.355
785.67	0.617	21.2187	-923.914	59	95.624
785.84	0.625	21.0014	-923.914	64	102.4
786	0.624	21.0014	-923.914	61	97.7564
786.17	0.62	21.0014	-916.084	61	98.3871
786.33	0.619	21.0014	-919.999	71	114.701
786.49	0.62	21.0014	-923.914	61	98.3871
786.66	0.624	21.0014	-919.999	69	110.577
786.82	0.625	21.0014	-923.914	65	104
786.99	0.621	21.2187	-919.999	66	106.28
787.15	0.621	21.0014	-927.829	72	115.942
787.31	0.621	21.0014	-919.999	64	103.06
787.48	0.623	21.0014	-919.999	69	110.754
787.64	0.626	21.0014	-919.999	66	105.431
787.81	0.624	20.7842	-923.914	82	131.41
787.97	0.62	21.0014	-923.914	60	96.7742
788.13	0.621	20.7842	-919.999	63	101.449
788.3	0.624	21.0014	-927.829	65	104.167
788.46	0.622	21.0014	-923.914	69	110.932
788.63	0.617	21.0014	-923.914	69	111.831
788.79	0.612	21.2187	-923.914	59	96.4052
788.95	0.609	21.0014	-919.999	54	88.67
789.12	0.611	21.0014	-919.999	58	94.9264
789.28	0.611	21.0014	-923.914	65	106.383
789.45	0.607	21.2187	-919.999	69	113.674
789.61	0.61	21.0014	-919.999	70	114.754
789.77	0.61	21.0014	-919.999	73	119.672
789.94	0.617	21.0014	-916.084	64	103.728
790.1	0.622	21.0014	-919.999	59	94.8553
790.27	0.623	21.0014	-923.914	57	91.4928
790.43	0.621	20.7842	-919.999	90	144.928
790.59	0.619	21.0014	-919.999	66	106.624
790.76	0.617	21.0014	-919.999	73	118.314
790.92	0.622	21.0014	-923.914	70	112.54
791.09	0.623	21.0014	-919.999	51	81.862
791.25	0.622	21.0014	-919.999	74	118.971
791.41	0.617	20.7842	-923.914	60	97.2447
791.58	0.622	21.0014	-919.999	55	88.4244
791.74	0.628	21.0014	-923.914	78	124.204
791.91	0.628	20.7842	-919.999	78	124.204
792.07	0.623	21.0014	-919.999	78	125.201
792.23	0.62	21.0014	-923.914	74	119.355
792.4	0.622	20.7842	-919.999	91	146.302
792.56	0.623	21.0014	-919.999	59	94.703
792.73	0.62	21.0014	-919.999	74	119.355
792.89	0.617	21.0014	-919.999	96	155.592

793.05	0.615	21.0014	-919.999	67	108.943
793.22	0.615	21.0014	-919.999	65	105.691
793.38	0.615	21.0014	-916.084	61	99.187
793.55	0.613	21.2187	-916.084	77	125.612
793.71	0.611	21.0014	-923.914	79	129.296
793.87	0.609	21.0014	-919.999	71	116.585
794.04	0.613	21.0014	-919.999	66	107.667
794.2	0.618	21.0014	-919.999	60	97.0874
794.37	0.619	21.0014	-923.914	65	105.008
794.53	0.622	21.2187	-916.084	65	104.502
794.69	0.618	20.7842	-919.999	68	110.032
794.86	0.618	21.0014	-916.084	81	131.068
795.02	0.623	21.0014	-923.914	58	93.0979
795.19	0.623	20.7842	-919.999	52	83.4671
795.35	0.62	21.0014	-919.999	71	114.516
795.51	0.619	21.0014	-919.999	59	95.315
795.68	0.619	21.0014	-927.829	73	117.932
795.84	0.624	20.7842	-919.999	63	100.962
796.01	0.622	21.0014	-919.999	69	110.932
796.17	0.62	21.0014	-919.999	59	95.1613
796.33	0.622	20.7842	-919.999	86	138.264
796.5	0.622	21.0014	-916.084	54	86.8167
796.66	0.623	21.0014	-916.084	46	73.8363
796.83	0.625	21.0014	-919.999	70	112
796.99	0.624	21.0014	-923.914	71	113.782
797.15	0.626	21.0014	-916.084	67	107.029
797.32	0.631	21.0014	-919.999	75	118.859
797.48	0.635	21.0014	-919.999	76	119.685
797.65	0.632	21.0014	-923.914	57	90.1899
797.81	0.626	21.0014	-919.999	73	116.613
797.97	0.622	21.2187	-919.999	64	102.894
798.14	0.622	21.0014	-919.999	64	102.894
798.3	0.628	21.0014	-919.999	74	117.834
798.47	0.633	20.7842	-923.914	81	127.962
798.63	0.635	21.0014	-931.744	60	94.4882
798.79	0.636	21.0014	-923.914	60	94.3396
798.96	0.637	20.7842	-919.999	63	98.9011
799.12	0.639	21.0014	-923.914	58	90.7668
799.29	0.643	21.0014	-919.999	67	104.199
799.45	0.639	21.0014	-919.999	64	100.156
799.61	0.638	21.0014	-919.999	73	114.42
799.78	0.634	21.0014	-923.914	71	111.987
799.94	0.637	21.0014	-916.084	69	108.32
800.11	0.642	21.0014	-919.999	71	110.592
800.27	0.639	21.2187	-923.914	64	100.156
800.43	0.637	21.0014	-923.914	56	87.9121
800.6	0.638	21.0014	-919.999	77	120.69

800.76	0.642	21.0014	-919.999	81	126.168
800.93	0.642	21.0014	-923.914	84	130.841
801.09	0.637	21.2187	-927.829	66	103.611
801.25	0.629	21.0014	-919.999	56	89.0302
801.42	0.634	20.7842	-919.999	55	86.7508
801.58	0.637	21.0014	-923.914	69	108.32
801.75	0.632	21.0014	-919.999	56	88.6076
801.91	0.628	21.0014	-923.914	69	109.873
802.07	0.625	21.0014	-919.999	76	121.6
802.24	0.627	21.0014	-919.999	69	110.048
802.4	0.629	20.7842	-919.999	51	81.0811
802.57	0.631	21.0014	-919.999	56	88.748
802.73	0.633	21.0014	-923.914	73	115.324
802.89	0.634	21.0014	-919.999	84	132.492
803.06	0.635	21.0014	-923.914	72	113.386
803.22	0.637	21.0014	-916.084	90	141.287
803.39	0.641	20.7842	-916.084	72	112.324
803.55	0.64	21.0014	-923.914	85	132.813
803.71	0.638	21.0014	-923.914	71	111.285
803.88	0.638	21.0014	-919.999	63	98.7461
804.04	0.641	21.0014	-919.999	69	107.644
804.21	0.64	20.7842	-919.999	70	109.375
804.37	0.64	21.0014	-923.914	68	106.25
804.53	0.639	21.0014	-919.999	75	117.371
804.7	0.637	21.0014	-923.914	70	109.89
804.86	0.643	21.0014	-916.084	78	121.306
805.03	0.64	21.0014	-919.999	72	112.5
805.19	0.637	20.7842	-919.999	75	117.739
805.35	0.634	21.0014	-919.999	83	130.915
805.52	0.637	21.0014	-919.999	61	95.7614
805.68	0.64	21.0014	-919.999	76	118.75
805.85	0.636	21.0014	-919.999	73	114.78
806.01	0.631	21.0014	-923.914	59	93.5024
806.17	0.626	21.0014	-919.999	77	123.003
806.34	0.619	21.0014	-923.914	73	117.932
806.5	0.625	21.0014	-919.999	63	100.8
806.67	0.629	21.0014	-919.999	71	112.878
806.83	0.628	21.0014	-923.914	60	95.5414
806.99	0.626	21.0014	-923.914	75	119.808
807.16	0.633	21.0014	-916.084	70	110.585
807.32	0.642	21.0014	-919.999	71	110.592
807.49	0.642	21.0014	-923.914	65	101.246
807.65	0.639	21.0014	-923.914	68	106.416
807.81	0.635	21.0014	-919.999	82	129.134
807.98	0.636	20.7842	-919.999	62	97.4843
808.14	0.642	21.0014	-919.999	78	121.495
808.31	0.638	21.2187	-923.914	67	105.016

808.47	0.637	21.0014	-916.084	74	116.17
808.63	0.637	21.0014	-919.999	69	108.32
808.8	0.641	21.0014	-919.999	67	104.524
808.96	0.643	21.0014	-919.999	63	97.9782
809.13	0.642	21.0014	-919.999	85	132.399
809.29	0.642	21.0014	-923.914	69	107.477
809.45	0.641	20.7842	-923.914	79	123.245
809.62	0.64	20.7842	-919.999	81	126.563
809.78	0.641	21.0014	-923.914	61	95.1638
809.95	0.637	21.0014	-923.914	70	109.89
810.11	0.633	21.0014	-919.999	61	96.3665
810.27	0.625	21.0014	-919.999	65	104
810.44	0.63	21.0014	-919.999	56	88.8889
810.6	0.631	21.0014	-923.914	74	117.274
810.77	0.627	21.0014	-923.914	77	122.807
810.93	0.624	21.0014	-919.999	53	84.9359
811.09	0.626	21.0014	-916.084	76	121.406
811.26	0.633	21.0014	-923.914	87	137.441
811.42	0.636	21.0014	-919.999	84	132.075
811.59	0.635	21.0014	-923.914	81	127.559
811.75	0.637	21.2187	-923.914	72	113.03
811.91	0.636	21.0014	-919.999	95	149.371
812.08	0.635	21.0014	-916.084	89	140.157
812.24	0.642	21.0014	-923.914	84	130.841
812.41	0.642	20.7842	-923.914	63	98.1308
812.57	0.642	21.0014	-919.999	61	95.0156
812.73	0.637	21.0014	-923.914	69	108.32
812.9	0.639	21.2187	-919.999	84	131.455
813.06	0.645	21.0014	-919.999	64	99.2248
813.23	0.641	21.0014	-916.084	90	140.406
813.39	0.637	21.0014	-923.914	82	128.728
813.55	0.637	21.0014	-919.999	72	113.03
813.72	0.643	21.0014	-923.914	91	141.524
813.88	0.646	21.0014	-923.914	64	99.0712
814.05	0.641	21.0014	-919.999	83	129.485
814.21	0.637	21.0014	-919.999	57	89.4819
814.37	0.631	21.0014	-919.999	82	129.952
814.54	0.634	21.0014	-923.914	74	116.719
814.7	0.634	21.0014	-923.914	81	127.76
814.87	0.628	21.0014	-923.914	61	97.1338
815.03	0.625	21.0014	-919.999	55	88
815.19	0.62	21.0014	-923.914	66	106.452
815.36	0.626	20.7842	-923.914	64	102.236
815.52	0.632	21.0014	-923.914	64	101.266
815.69	0.634	21.0014	-919.999	89	140.379
815.85	0.637	20.7842	-923.914	78	122.449
816.01	0.634	21.0014	-919.999	85	134.069

816.18	0.639	21.0014	-919.999	68	106.416
816.34	0.641	20.7842	-919.999	70	109.204
816.51	0.638	20.7842	-919.999	93	145.768
816.67	0.63	21.0014	-919.999	61	96.8254
816.83	0.634	21.0014	-919.999	70	110.41
817	0.642	21.0014	-923.914	74	115.265
817.16	0.64	21.0014	-923.914	62	96.875
817.33	0.638	21.0014	-919.999	63	98.7461
817.49	0.638	21.0014	-919.999	70	109.718
817.65	0.641	21.0014	-919.999	67	104.524
817.82	0.642	21.0014	-919.999	74	115.265
817.98	0.645	20.7842	-927.829	68	105.426
818.15	0.641	21.0014	-923.914	86	134.165
818.31	0.635	21.0014	-923.914	71	111.811
818.47	0.634	21.2187	-923.914	70	110.41
818.64	0.634	21.0014	-923.914	66	104.101
818.8	0.636	21.0014	-923.914	84	132.075
818.97	0.633	21.2187	-923.914	77	121.643
819.13	0.628	21.0014	-919.999	75	119.427
819.29	0.626	20.7842	-927.829	72	115.016
819.46	0.627	21.0014	-919.999	70	111.643
819.62	0.631	21.0014	-923.914	74	117.274
819.79	0.632	21.0014	-919.999	63	99.6835
819.95	0.634	21.0014	-919.999	72	113.565
820.11	0.634	21.0014	-919.999	61	96.2145
820.28	0.64	21.0014	-919.999	85	132.813
820.44	0.638	21.0014	-919.999	72	112.853
820.61	0.637	21.0014	-919.999	69	108.32
820.77	0.634	21.0014	-919.999	65	102.524
820.93	0.634	20.7842	-919.999	61	96.2145
821.1	0.639	21.0014	-923.914	84	131.455
821.26	0.643	21.0014	-927.829	69	107.309
821.43	0.64	21.0014	-923.914	65	101.563
821.59	0.637	21.0014	-923.914	66	103.611
821.75	0.631	21.0014	-923.914	60	95.0872
821.92	0.64	21.0014	-923.914	67	104.688
822.08	0.644	21.0014	-919.999	70	108.696
822.25	0.64	20.7842	-916.084	70	109.375
822.41	0.635	21.0014	-919.999	71	111.811
822.57	0.637	21.0014	-919.999	69	108.32
822.74	0.641	21.0014	-923.914	79	123.245
822.9	0.637	21.0014	-923.914	65	102.041
823.07	0.634	21.0014	-916.084	72	113.565
823.23	0.629	21.0014	-923.914	64	101.749
823.39	0.627	21.0014	-923.914	96	153.11
823.56	0.628	21.0014	-923.914	80	127.389
823.72	0.627	21.0014	-923.914	69	110.048

823.89	0.627	21.0014	-919.999	78	124.402
824.05	0.628	21.0014	-919.999	58	92.3567
824.21	0.637	21.0014	-919.999	80	125.589
824.38	0.641	21.2187	-919.999	75	117.005
824.54	0.643	21.0014	-919.999	67	104.199
824.71	0.641	21.0014	-919.999	72	112.324
824.87	0.638	21.0014	-923.914	69	108.15
825.03	0.637	21.0014	-923.914	61	95.7614
825.2	0.641	21.0014	-919.999	72	112.324
825.36	0.64	21.0014	-927.829	77	120.313
825.53	0.638	21.0014	-919.999	61	95.6113
825.69	0.634	21.0014	-919.999	75	118.297
825.85	0.637	21.0014	-927.829	60	94.1915
826.02	0.641	21.0014	-923.914	77	120.125
826.18	0.641	21.0014	-916.084	76	118.565
826.35	0.64	21.0014	-919.999	78	121.875
826.51	0.638	20.7842	-919.999	64	100.313
826.67	0.64	21.0014	-919.999	70	109.375
826.84	0.639	21.0014	-919.999	65	101.721
827	0.637	21.0014	-919.999	70	109.89
827.17	0.635	21.0014	-923.914	57	89.7638
827.33	0.631	21.2187	-919.999	59	93.5024
827.49	0.627	21.2187	-919.999	63	100.478
827.66	0.63	21.0014	-919.999	56	88.8889
827.82	0.632	21.0014	-927.829	80	126.582
827.99	0.628	20.7842	-923.914	66	105.096
828.15	0.624	21.0014	-923.914	63	100.962
828.31	0.629	20.7842	-919.999	68	108.108
828.48	0.636	21.0014	-923.914	64	100.629
828.64	0.637	21.0014	-919.999	63	98.9011
828.81	0.639	20.7842	-919.999	67	104.851
828.97	0.636	21.0014	-919.999	73	114.78
829.13	0.638	21.0014	-919.999	75	117.555
829.3	0.641	21.0014	-919.999	64	99.844
829.46	0.641	21.0014	-923.914	58	90.4836
829.63	0.639	21.0014	-923.914	65	101.721
829.79	0.638	21.0014	-923.914	77	120.69
829.95	0.643	21.0014	-919.999	72	111.975
830.12	0.645	21.0014	-919.999	70	108.527
830.28	0.642	21.0014	-916.084	64	99.6885
830.45	0.638	21.2187	-927.829	71	111.285
830.61	0.636	21.0014	-923.914	51	80.1887
830.77	0.636	21.0014	-919.999	68	106.918
830.94	0.641	21.2187	-919.999	71	110.764
831.1	0.64	21.0014	-923.914	73	114.063
831.27	0.639	21.0014	-919.999	72	112.676
831.43	0.629	21.2187	-919.999	56	89.0302

831.59	0.632	21.0014	-927.829	75	118.671
831.76	0.635	21.0014	-923.914	51	80.315
831.92	0.629	21.0014	-919.999	57	90.62
832.09	0.622	21.0014	-923.914	76	122.186
832.25	0.625	21.2187	-923.914	67	107.2
832.41	0.629	21.0014	-919.999	52	82.6709
832.58	0.631	21.0014	-923.914	62	98.2567
832.74	0.635	20.7842	-919.999	59	92.9134
832.91	0.636	21.0014	-923.914	73	114.78
833.07	0.641	21.2187	-923.914	66	102.964
833.23	0.64	21.0014	-916.084	64	100
833.4	0.643	21.0014	-919.999	85	132.193
833.56	0.639	21.0014	-919.999	63	98.5916
833.73	0.636	21.2187	-923.914	76	119.497
833.89	0.635	21.0014	-919.999	67	105.512
834.05	0.638	21.2187	-923.914	60	94.0439
834.22	0.642	21.0014	-923.914	82	127.726
834.38	0.645	21.0014	-923.914	52	80.6202
834.55	0.641	21.0014	-919.999	67	104.524
834.71	0.638	21.0014	-923.914	71	111.285
834.87	0.641	21.0014	-923.914	65	101.404
835.04	0.646	21.0014	-923.914	67	103.715
835.2	0.644	21.0014	-923.914	62	96.2733
835.37	0.64	21.2187	-919.999	77	120.313
835.53	0.636	21.0014	-927.829	61	95.9119
835.69	0.635	21.0014	-916.084	62	97.6378
835.86	0.633	20.7842	-919.999	65	102.686
836.02	0.629	21.0014	-919.999	71	112.878
836.19	0.626	21.0014	-923.914	66	105.431
836.35	0.625	21.2187	-923.914	68	108.8
836.51	0.627	21.2187	-919.999	43	68.5805
836.68	0.632	21.0014	-923.914	60	94.9367
836.84	0.631	21.0014	-919.999	64	101.426
837.01	0.633	21.0014	-919.999	52	82.1485
837.17	0.629	20.7842	-919.999	47	74.7218
837.33	0.641	21.0014	-923.914	68	106.084
837.5	0.646	21.0014	-919.999	56	86.6873
837.66	0.64	20.7842	-919.999	66	103.125
837.83	0.636	20.7842	-919.999	66	103.774
837.99	0.636	21.0014	-923.914	60	94.3396
838.15	0.642	21.0014	-923.914	71	110.592
838.32	0.645	21.0014	-919.999	50	77.5194
838.48	0.643	21.2187	-919.999	62	96.423
838.65	0.64	21.0014	-919.999	82	128.125
838.81	0.639	21.0014	-927.829	58	90.7668
838.97	0.64	21.0014	-923.914	60	93.75
839.14	0.64	21.0014	-919.999	72	112.5

839.3	0.641	21.0014	-919.999	61	95.1638
839.47	0.639	21.0014	-919.999	75	117.371
839.63	0.64	21.0014	-919.999	66	103.125
839.79	0.642	21.0014	-923.914	68	105.919
839.96	0.64	21.0014	-919.999	76	118.75
840.12	0.636	21.0014	-923.914	76	119.497
840.29	0.631	21.0014	-919.999	62	98.2567
840.45	0.627	21.0014	-919.999	63	100.478
840.61	0.628	21.0014	-916.084	69	109.873
840.78	0.629	21.0014	-919.999	62	98.5692
840.94	0.628	21.0014	-919.999	73	116.242
841.11	0.625	21.0014	-923.914	77	123.2
841.27	0.631	21.2187	-923.914	70	110.935
841.43	0.636	21.0014	-919.999	59	92.7673
841.6	0.641	20.7842	-923.914	52	81.1232
841.76	0.641	21.0014	-919.999	60	93.6037
841.93	0.638	21.0014	-919.999	46	72.1003
842.09	0.639	21.0014	-919.999	53	82.9421
842.25	0.637	21.0014	-919.999	74	116.17
842.42	0.637	20.7842	-919.999	63	98.9011
842.58	0.64	21.0014	-919.999	64	100
842.75	0.639	21.0014	-919.999	70	109.546
842.91	0.638	21.2187	-919.999	67	105.016
843.07	0.643	21.0014	-919.999	69	107.309
843.24	0.646	21.0014	-923.914	64	99.0712
843.4	0.646	21.0014	-923.914	59	91.3313
843.57	0.64	21.2187	-923.914	61	95.3125
843.73	0.64	21.0014	-919.999	69	107.813
843.89	0.644	21.0014	-919.999	69	107.143
844.06	0.641	21.2187	-912.169	61	95.1638
844.22	0.636	21.0014	-919.999	66	103.774
844.39	0.631	21.2187	-919.999	57	90.3328
844.55	0.631	21.0014	-919.999	79	125.198
844.71	0.633	21.0014	-919.999	80	126.382
844.88	0.632	21.0014	-919.999	63	99.6835
845.04	0.629	21.0014	-919.999	43	68.3625
845.21	0.627	21.0014	-919.999	68	108.453
845.37	0.631	20.7842	-923.914	73	115.689
845.53	0.638	21.0014	-923.914	59	92.4765
845.7	0.64	21.0014	-919.999	59	92.1875
845.86	0.64	20.7842	-919.999	70	109.375
846.03	0.638	20.7842	-919.999	83	130.094
846.19	0.637	21.2187	-923.914	79	124.019
846.35	0.641	21.0014	-923.914	65	101.404
846.52	0.641	21.2187	-923.914	66	102.964
846.68	0.641	21.0014	-919.999	74	115.445
846.85	0.636	21.0014	-916.084	64	100.629

847.01	0.638	21.0014	-919.999	60	94.0439
847.17	0.645	21.2187	-919.999	64	99.2248
847.34	0.646	21.0014	-923.914	59	91.3313
847.5	0.636	21.0014	-923.914	73	114.78
847.67	0.64	21.0014	-919.999	58	90.625
847.83	0.646	21.0014	-919.999	77	119.195
847.99	0.643	21.0014	-919.999	62	96.423
848.16	0.643	21.0014	-927.829	59	91.7574
848.32	0.641	21.0014	-923.914	72	112.324
848.49	0.639	21.0014	-923.914	63	98.5916
848.65	0.638	21.2187	-923.914	65	101.881
848.81	0.636	21.0014	-919.999	59	92.7673
848.98	0.631	21.0014	-919.999	65	103.011
849.14	0.628	21.0014	-919.999	65	103.503
849.31	0.624	21.2187	-923.914	59	94.5513
849.47	0.626	21.0014	-919.999	63	100.639
849.63	0.634	21.0014	-919.999	72	113.565
849.8	0.637	21.0014	-919.999	71	111.46
849.96	0.639	21.0014	-916.084	71	111.111
850.13	0.638	21.0014	-919.999	65	101.881
850.29	0.642	21.0014	-919.999	70	109.034
850.45	0.643	21.0014	-919.999	81	125.972
850.62	0.643	21.2187	-923.914	74	115.086
850.78	0.643	21.0014	-919.999	70	108.865
850.95	0.64	21.2187	-916.084	63	98.4375
851.11	0.64	21.0014	-923.914	59	92.1875
851.27	0.64	21.0014	-916.084	71	110.938
851.44	0.64	21.2187	-923.914	65	101.563
851.6	0.64	21.0014	-919.999	59	92.1875
851.77	0.64	21.0014	-919.999	69	107.813
851.93	0.642	21.0014	-923.914	88	137.072
852.09	0.646	21.0014	-919.999	66	102.167
852.26	0.645	21.0014	-923.914	80	124.031
852.42	0.64	21.0014	-923.914	57	89.0625
852.59	0.63	21.0014	-923.914	50	79.3651
852.75	0.637	21.0014	-919.999	76	119.309
852.91	0.638	21.0014	-919.999	66	103.448
853.08	0.633	21.0014	-919.999	77	121.643
853.24	0.627	21.0014	-919.999	57	90.9091
853.41	0.625	21.0014	-919.999	61	97.6
853.57	0.632	21.0014	-919.999	78	123.418
853.73	0.634	21.0014	-923.914	68	107.256
853.9	0.633	20.7842	-923.914	69	109.005
854.06	0.634	21.2187	-919.999	68	107.256
854.23	0.636	21.0014	-919.999	49	77.044
854.39	0.641	21.0014	-923.914	58	90.4836
854.55	0.641	21.0014	-919.999	73	113.885

854.72	0.643	21.0014	-919.999	70	108.865
854.88	0.643	21.0014	-923.914	65	101.089
855.05	0.64	21.0014	-923.914	72	112.5
855.21	0.642	21.0014	-919.999	67	104.361
855.37	0.645	21.0014	-919.999	67	103.876
855.54	0.641	21.0014	-919.999	65	101.404
855.7	0.642	20.7842	-923.914	63	98.1308
855.87	0.642	21.0014	-923.914	60	93.4579
856.03	0.645	21.0014	-923.914	66	102.326
856.19	0.645	21.0014	-923.914	59	91.4729
856.36	0.641	21.2187	-919.999	70	109.204
856.52	0.639	21.0014	-919.999	68	106.416
856.69	0.639	20.7842	-923.914	57	89.2019
856.85	0.639	21.0014	-923.914	76	118.936
857.01	0.639	20.7842	-923.914	71	111.111
857.18	0.636	21.2187	-923.914	75	117.925
857.34	0.632	21.0014	-923.914	65	102.848
857.51	0.63	21.2187	-923.914	69	109.524
857.67	0.626	21.2187	-919.999	76	121.406
857.83	0.629	21.0014	-919.999	62	98.5692
858	0.629	21.2187	-919.999	67	106.518
858.16	0.63	21.0014	-919.999	73	115.873
858.33	0.632	21.0014	-919.999	55	87.0253
858.49	0.64	21.0014	-919.999	66	103.125
858.65	0.645	21.0014	-919.999	62	96.124
858.82	0.642	21.0014	-919.999	60	93.4579
858.98	0.64	21.0014	-919.999	76	118.75
859.15	0.64	21.0014	-919.999	68	106.25
859.31	0.643	21.0014	-923.914	84	130.638
859.47	0.643	21.0014	-919.999	61	94.8678
859.64	0.641	21.0014	-923.914	60	93.6037
859.8	0.64	21.0014	-919.999	63	98.4375
859.97	0.641	21.0014	-916.084	56	87.3635
860.13	0.646	21.0014	-923.914	61	94.4272
860.29	0.648	21.0014	-919.999	73	112.654
860.46	0.645	21.0014	-919.999	55	85.2713
860.62	0.64	21.0014	-923.914	55	85.9375
860.79	0.643	21.0014	-919.999	55	85.5365
860.95	0.644	21.2187	-919.999	65	100.932
861.11	0.642	21.0014	-916.084	53	82.5545
861.28	0.636	21.0014	-919.999	62	97.4843
861.44	0.633	21.2187	-919.999	60	94.7867
861.61	0.627	20.7842	-923.914	79	125.997
861.77	0.634	21.0014	-923.914	63	99.3691
861.93	0.63	21.0014	-923.914	72	114.286
862.1	0.628	21.0014	-923.914	65	103.503
862.26	0.627	21.0014	-919.999	61	97.2887

862.43	0.631	21.2187	-923.914	71	112.52
862.59	0.637	21.0014	-919.999	64	100.471
862.75	0.64	21.0014	-923.914	54	84.375
862.92	0.636	21.0014	-923.914	76	119.497
863.08	0.639	21.0014	-923.914	74	115.806
863.25	0.64	21.0014	-912.169	59	92.1875
863.41	0.64	20.7842	-919.999	67	104.688
863.57	0.642	21.0014	-919.999	69	107.477
863.74	0.64	21.2187	-919.999	66	103.125
863.9	0.643	21.0014	-923.914	66	102.644
864.07	0.642	21.2187	-923.914	68	105.919
864.23	0.645	21.0014	-923.914	70	108.527
864.39	0.646	21.0014	-923.914	58	89.7833
864.56	0.643	21.0014	-919.999	68	105.754
864.72	0.639	21.2187	-919.999	70	109.546
864.89	0.641	21.0014	-923.914	80	124.805
865.05	0.648	21.0014	-919.999	74	114.198
865.21	0.645	21.0014	-916.084	68	105.426
865.38	0.642	21.0014	-927.829	72	112.15
865.54	0.636	21.0014	-919.999	66	103.774
865.71	0.636	21.0014	-923.914	77	121.069
865.87	0.636	21.0014	-919.999	78	122.642
866.03	0.635	21.2187	-923.914	78	122.835
866.2	0.629	21.2187	-923.914	84	133.545
866.36	0.624	21.0014	-923.914	79	126.603
866.53	0.627	21.2187	-919.999	58	92.504
866.69	0.63	21.0014	-919.999	73	115.873
866.85	0.636	21.0014	-923.914	58	91.195
867.02	0.636	20.7842	-916.084	62	97.4843
867.18	0.639	21.2187	-919.999	66	103.286
867.35	0.643	21.0014	-923.914	63	97.9782
867.51	0.645	20.7842	-916.084	64	99.2248
867.67	0.641	21.0014	-923.914	68	106.084
867.84	0.639	21.0014	-919.999	63	98.5916
868	0.632	21.0014	-919.999	76	120.253
868.17	0.642	21.0014	-923.914	80	124.611
868.33	0.648	21.0014	-919.999	68	104.938
868.49	0.642	21.0014	-923.914	64	99.6885
868.66	0.641	21.0014	-919.999	68	106.084
868.82	0.64	21.0014	-923.914	78	121.875
868.99	0.646	21.0014	-923.914	77	119.195
869.15	0.648	21.2187	-923.914	70	108.025
869.31	0.645	21.0014	-923.914	81	125.581
869.48	0.643	21.2187	-919.999	71	110.42
869.64	0.638	21.0014	-923.914	66	103.448
869.81	0.636	21.0014	-916.084	64	100.629
869.97	0.638	21.0014	-919.999	69	108.15

870.13	0.634	21.0014	-919.999	66	104.101
870.3	0.632	21.0014	-919.999	85	134.494
870.46	0.631	21.0014	-916.084	82	129.952
870.63	0.631	21.0014	-919.999	84	133.122
870.79	0.635	21.0014	-919.999	49	77.1654
870.95	0.634	21.0014	-919.999	65	102.524
871.12	0.636	21.0014	-919.999	69	108.491
871.28	0.638	20.7842	-923.914	92	144.201
871.45	0.642	21.0014	-923.914	66	102.804
871.61	0.645	21.0014	-923.914	66	102.326
871.77	0.64	21.0014	-919.999	60	93.75
871.94	0.638	21.0014	-919.999	68	106.583
872.1	0.636	21.0014	-923.914	77	121.069
872.27	0.642	21.0014	-919.999	75	116.822
872.43	0.645	21.0014	-923.914	79	122.481
872.59	0.645	21.0014	-916.084	67	103.876
872.76	0.644	21.0014	-923.914	82	127.329
872.92	0.642	21.0014	-919.999	71	110.592
873.09	0.636	21.0014	-919.999	74	116.352
873.25	0.648	21.0014	-919.999	69	106.481
873.41	0.646	21.0014	-927.829	76	117.647
873.58	0.644	21.0014	-923.914	70	108.696
873.74	0.64	21.0014	-923.914	70	109.375
873.91	0.642	21.0014	-919.999	69	107.477
874.07	0.64	21.0014	-919.999	91	142.188
874.23	0.637	21.0014	-919.999	72	113.03
874.4	0.63	21.0014	-919.999	57	90.4762
874.56	0.631	21.0014	-923.914	68	107.765
874.73	0.633	21.0014	-919.999	70	110.585
874.89	0.632	21.0014	-923.914	78	123.418
875.05	0.627	21.0014	-923.914	68	108.453
875.22	0.629	21.0014	-919.999	75	119.237
875.38	0.635	21.0014	-919.999	70	110.236
875.55	0.641	21.0014	-919.999	82	127.925
875.71	0.647	21.0014	-923.914	73	112.828
875.87	0.646	21.0014	-923.914	79	122.291
876.04	0.641	21.0014	-923.914	66	102.964
876.2	0.641	21.0014	-923.914	60	93.6037
876.37	0.643	21.0014	-923.914	64	99.5334
876.53	0.643	21.0014	-919.999	64	99.5334
876.69	0.642	21.0014	-923.914	67	104.361
876.86	0.637	21.2187	-919.999	66	103.611
877.02	0.639	21.2187	-919.999	62	97.0266
877.19	0.645	21.0014	-923.914	72	111.628
877.35	0.645	21.0014	-916.084	66	102.326
877.51	0.644	21.2187	-923.914	63	97.8261
877.68	0.642	21.0014	-919.999	63	98.1308

877.84	0.644	21.0014	-923.914	60	93.1677
878.01	0.646	21.0014	-919.999	64	99.0712
878.17	0.639	21.0014	-923.914	75	117.371
878.33	0.636	21.0014	-919.999	69	108.491
878.5	0.632	21.0014	-919.999	91	143.987
878.66	0.631	21.2187	-923.914	74	117.274
878.83	0.632	21.0014	-919.999	71	112.342
878.99	0.633	21.0014	-919.999	84	132.701
879.15	0.632	21.0014	-919.999	63	99.6835
879.32	0.631	21.0014	-919.999	74	117.274
879.48	0.631	21.0014	-923.914	53	83.9937
879.65	0.636	21.0014	-919.999	72	113.208
879.81	0.64	21.0014	-919.999	62	96.875
879.97	0.641	21.0014	-923.914	82	127.925
880.14	0.638	21.0014	-919.999	60	94.0439
880.3	0.641	21.0014	-919.999	55	85.8034
880.47	0.646	21.0014	-919.999	73	113.003
880.63	0.644	21.0014	-919.999	58	90.0621
880.79	0.643	21.0014	-919.999	75	116.641
880.96	0.642	21.0014	-919.999	66	102.804
881.12	0.642	20.7842	-919.999	74	115.265
881.29	0.651	21.2187	-923.914	59	90.6298
881.45	0.65	21.0014	-919.999	74	113.846
881.61	0.644	21.0014	-919.999	62	96.2733
881.78	0.639	21.0014	-923.914	64	100.156
881.94	0.644	21.2187	-919.999	70	108.696
882.11	0.645	21.0014	-919.999	62	96.124
882.27	0.645	21.0014	-919.999	51	79.0698
882.43	0.64	21.0014	-919.999	70	109.375
882.6	0.636	21.0014	-919.999	69	108.491
882.76	0.635	21.2187	-919.999	79	124.409
882.93	0.634	21.0014	-916.084	70	110.41
883.09	0.634	21.0014	-919.999	70	110.41
883.25	0.627	21.0014	-919.999	67	106.858
883.42	0.624	21.2187	-919.999	65	104.167
883.58	0.632	21.0014	-919.999	60	94.9367
883.75	0.637	21.0014	-919.999	67	105.181
883.91	0.635	21.0014	-919.999	64	100.787
884.07	0.637	21.0014	-919.999	48	75.3532
884.24	0.641	21.0014	-923.914	61	95.1638
884.4	0.643	21.0014	-919.999	43	66.874
884.57	0.645	20.7842	-923.914	49	75.969
884.73	0.643	21.0014	-919.999	63	97.9782
884.89	0.641	21.0014	-919.999	60	93.6037
885.06	0.638	21.0014	-919.999	65	101.881
885.22	0.639	21.0014	-919.999	57	89.2019
885.39	0.644	20.7842	-916.084	63	97.8261

885.55	0.646	21.0014	-916.084	61	94.4272
885.71	0.645	21.0014	-923.914	60	93.0233
885.88	0.643	20.7842	-923.914	74	115.086
886.04	0.646	21.0014	-919.999	59	91.3313
886.21	0.648	21.0014	-919.999	69	106.481
886.37	0.649	21.0014	-919.999	55	84.7458
886.53	0.643	21.0014	-923.914	53	82.4261
886.7	0.639	21.2187	-919.999	72	112.676
886.86	0.639	21.0014	-916.084	62	97.0266
887.03	0.636	21.0014	-923.914	43	67.6101
887.19	0.626	21.0014	-916.084	61	97.4441
887.35	0.628	21.0014	-923.914	56	89.172
887.52	0.626	21.0014	-923.914	66	105.431
887.68	0.631	21.0014	-923.914	58	91.9176
887.85	0.633	21.0014	-919.999	62	97.9463
888.01	0.636	21.0014	-923.914	52	81.761
888.17	0.636	20.7842	-916.084	59	92.7673
888.34	0.638	21.0014	-923.914	64	100.313
888.5	0.636	21.0014	-923.914	45	70.7547
888.67	0.644	21.0014	-923.914	69	107.143
888.83	0.643	21.0014	-923.914	54	83.9813
888.99	0.639	21.0014	-919.999	53	82.9421
889.16	0.639	21.0014	-923.914	43	67.2926
889.32	0.642	21.2187	-919.999	38	59.19
889.49	0.647	21.2187	-919.999	45	69.5518
889.65	0.643	21.0014	-923.914	30	46.6563
889.81	0.641	21.0014	-919.999	32	49.922
889.98	0.642	21.0014	-923.914	34	52.9595
890.14	0.646	21.0014	-927.829	31	47.9876
890.31	0.648	21.0014	-923.914	24	37.037
890.47	0.643	21.0014	-919.999	36	55.9876
890.63	0.644	21.0014	-919.999	24	37.2671
890.8	0.643	21.2187	-919.999	26	40.4355
890.96	0.646	21.0014	-923.914	24	37.1517
891.13	0.643	21.2187	-923.914	30	46.6563
891.29	0.636	20.7842	-923.914	19	29.8742
891.45	0.63	21.0014	-923.914	21	33.3333
891.62	0.632	21.2187	-919.999	16	25.3165
891.78	0.635	21.0014	-923.914	16	25.1968
891.95	0.633	21.0014	-919.999	23	36.3349
892.11	0.629	21.0014	-923.914	28	44.5151
892.27	0.627	20.7842	-916.084	19	30.303
892.44	0.634	20.7842	-923.914	31	48.8959
892.6	0.64	21.0014	-919.999	19	29.6875
892.77	0.642	21.0014	-923.914	24	37.3832
892.93	0.642	21.0014	-919.999	29	45.1713
893.09	0.639	21.0014	-919.999	28	43.8185

893.26	0.643	21.2187	-919.999	20	31.1042
893.42	0.644	21.0014	-923.914	19	29.5031
893.59	0.636	21.0014	-923.914	27	42.4528
893.75	0.64	21.0014	-919.999	21	32.8125
893.91	0.64	20.7842	-919.999	21	32.8125
894.08	0.642	21.0014	-919.999	25	38.9408
894.24	0.645	21.0014	-923.914	23	35.6589
894.41	0.647	21.0014	-923.914	26	40.1855
894.57	0.65	21.0014	-923.914	21	32.3077
894.73	0.643	21.0014	-919.999	21	32.6594
894.9	0.642	21.2187	-919.999	27	42.0561
895.06	0.645	21.0014	-919.999	18	27.907
895.23	0.642	21.0014	-923.914	19	29.595
895.39	0.637	21.0014	-916.084	23	36.1068
895.55	0.631	21.0014	-916.084	20	31.6957
895.72	0.63	21.0014	-919.999	34	53.9683
895.88	0.637	21.0014	-919.999	27	42.3862
896.05	0.634	20.7842	-919.999	27	42.5868
896.21	0.631	21.0014	-919.999	26	41.2044
896.37	0.632	21.0014	-923.914	31	49.0506
896.54	0.633	21.2187	-919.999	35	55.2923
896.7	0.641	21.0014	-919.999	30	46.8019
896.87	0.644	21.0014	-919.999	20	31.0559
897.03	0.641	21.2187	-923.914	27	42.1217
897.19	0.638	21.0014	-919.999	19	29.7806
897.36	0.636	21.0014	-919.999	27	42.4528
897.52	0.641	21.0014	-919.999	38	59.2824
897.69	0.641	21.0014	-919.999	19	29.6412
897.85	0.64	21.0014	-919.999	31	48.4375
898.01	0.638	21.0014	-923.914	24	37.6176
898.18	0.643	21.0014	-919.999	26	40.4355
898.34	0.646	21.0014	-919.999	23	35.6037
898.51	0.645	20.7842	-919.999	28	43.4109
898.67	0.638	21.0014	-916.084	23	36.0502
898.83	0.642	21.0014	-923.914	22	34.2679
899	0.646	21.0014	-923.914	21	32.5077
899.16	0.648	21.0014	-919.999	20	30.8642
899.33	0.643	21.0014	-923.914	21	32.6594
899.49	0.639	21.0014	-919.999	24	37.5587
899.65	0.638	21.0014	-919.999	16	25.0784
899.82	0.636	21.0014	-912.169	23	36.1635
899.98	0.637	21.0014	-919.999	19	29.8273
900.15	0.635	21.0014	-923.914	11	17.3228
900.31	0.627	21.2187	-923.914	17	27.1132
900.47	0.625	21.0014	-919.999	16	25.6
900.64	0.628	20.7842	-923.914	29	46.1783
900.8	0.636	21.0014	-919.999	20	31.4465

900.97	0.639	21.0014	-923.914	21	32.8638
901.13	0.642	21.0014	-919.999	25	38.9408
901.29	0.64	21.0014	-923.914	26	40.625
901.46	0.643	20.7842	-919.999	23	35.7698
901.62	0.646	21.0014	-916.084	25	38.6997
901.79	0.645	21.0014	-919.999	26	40.3101
901.95	0.643	21.0014	-919.999	26	40.4355
902.11	0.639	21.0014	-919.999	17	26.6041
902.28	0.641	20.7842	-923.914	24	37.4415
902.44	0.643	21.2187	-923.914	18	27.9938
902.61	0.64	21.0014	-919.999	19	29.6875
902.77	0.64	21.0014	-919.999	26	40.625
902.93	0.64	21.0014	-919.999	23	35.9375
903.1	0.644	21.0014	-919.999	23	35.7143
903.26	0.648	21.0014	-919.999	27	41.6667
903.43	0.647	21.0014	-919.999	28	43.2767
903.59	0.643	20.7842	-923.914	28	43.5459
903.75	0.633	21.0014	-919.999	25	39.4945
903.92	0.635	21.0014	-923.914	23	36.2205
904.08	0.638	21.2187	-923.914	22	34.4828
904.25	0.634	21.0014	-919.999	22	34.7003
904.41	0.629	21.0014	-923.914	30	47.6948
904.57	0.628	21.0014	-919.999	23	36.6242
904.74	0.634	21.0014	-923.914	22	34.7003
904.9	0.637	21.0014	-923.914	28	43.956
905.07	0.635	21.0014	-923.914	16	25.1968
905.23	0.636	21.0014	-919.999	29	45.5975
905.39	0.639	21.0014	-923.914	21	32.8638
905.56	0.641	21.0014	-919.999	14	21.8409
905.72	0.642	21.0014	-927.829	20	31.1526
905.89	0.638	21.0014	-919.999	22	34.4828
906.05	0.64	21.0014	-919.999	30	46.875
906.21	0.64	21.2187	-923.914	23	35.9375
906.38	0.644	21.0014	-919.999	19	29.5031
906.54	0.647	21.0014	-923.914	20	30.9119
906.71	0.644	21.0014	-923.914	20	31.0559
906.87	0.641	21.0014	-927.829	24	37.4415
907.03	0.642	21.0014	-919.999	30	46.729
907.2	0.647	21.0014	-919.999	21	32.4575
907.36	0.648	21.2187	-919.999	21	32.4074
907.53	0.643	21.0014	-923.914	20	31.1042
907.69	0.639	21.0014	-923.914	23	35.9937
907.85	0.642	21.0014	-919.999	24	37.3832
908.02	0.64	21.0014	-916.084	13	20.3125
908.18	0.638	21.0014	-923.914	22	34.4828
908.35	0.63	21.0014	-919.999	20	31.746
908.51	0.628	21.0014	-919.999	20	31.8471

908.67	0.633	21.0014	-919.999	27	42.654
908.84	0.632	21.0014	-919.999	29	45.8861
909	0.627	21.0014	-923.914	24	38.2775
909.17	0.63	21.0014	-927.829	19	30.1587
909.33	0.632	21.0014	-923.914	21	33.2278
909.49	0.634	21.0014	-912.169	16	25.2366
909.66	0.642	21.0014	-919.999	24	37.3832
909.82	0.645	21.2187	-919.999	24	37.2093
909.99	0.645	21.0014	-919.999	26	40.3101
910.15	0.639	21.0014	-923.914	29	45.3834
910.31	0.641	21.0014	-923.914	23	35.8814
910.48	0.642	21.0014	-919.999	25	38.9408
910.64	0.641	21.0014	-912.169	29	45.2418
910.81	0.638	21.2187	-923.914	16	25.0784
910.97	0.639	21.0014	-919.999	23	35.9937
911.13	0.641	20.7842	-919.999	30	46.8019
911.3	0.649	21.0014	-923.914	24	36.98
911.46	0.65	21.0014	-919.999	20	30.7692
911.63	0.645	21.0014	-919.999	16	24.8062
911.79	0.642	21.0014	-919.999	25	38.9408
911.95	0.648	21.0014	-927.829	33	50.9259
912.12	0.65	21.0014	-919.999	26	40
912.28	0.64	21.0014	-919.999	21	32.8125
912.45	0.635	21.0014	-919.999	32	50.3937
912.61	0.629	21.0014	-923.914	25	39.7456
912.77	0.629	21.0014	-916.084	22	34.9762
912.94	0.634	21.0014	-916.084	20	31.5457
913.1	0.633	21.0014	-919.999	24	37.9147
913.27	0.629	21.0014	-916.084	20	31.7965
913.43	0.627	21.0014	-919.999	22	35.0877
913.59	0.632	21.2187	-923.914	26	41.1392
913.76	0.64	21.0014	-923.914	20	31.25
913.92	0.641	21.0014	-919.999	25	39.0016
914.09	0.635	21.0014	-923.914	34	53.5433
914.25	0.64	21.0014	-919.999	25	39.0625
914.41	0.641	21.2187	-923.914	18	28.0811
914.58	0.64	21.0014	-919.999	29	45.3125
914.74	0.639	21.0014	-919.999	26	40.6886
914.91	0.64	21.0014	-923.914	26	40.625
915.07	0.642	21.0014	-919.999	26	40.4984
915.23	0.643	21.0014	-923.914	19	29.549
915.4	0.647	20.7842	-919.999	29	44.8223
915.56	0.645	21.0014	-923.914	23	35.6589
915.73	0.643	20.7842	-923.914	23	35.7698
915.89	0.641	21.2187	-923.914	23	35.8814
916.05	0.641	21.0014	-927.829	30	46.8019
916.22	0.648	21.0014	-923.914	23	35.4938

916.38	0.645	21.0014	-919.999	30	46.5116
916.55	0.64	21.2187	-923.914	25	39.0625
916.71	0.632	21.0014	-919.999	23	36.3924
916.87	0.638	20.7842	-919.999	27	42.3197
917.04	0.635	21.0014	-923.914	20	31.4961
917.2	0.635	21.0014	-916.084	39	61.4173
917.37	0.631	21.2187	-923.914	32	50.7132
917.53	0.626	21.0014	-923.914	14	22.3642
917.69	0.632	21.0014	-919.999	27	42.7215
917.86	0.635	21.0014	-923.914	21	33.0709
918.02	0.636	20.7842	-923.914	22	34.5912
918.19	0.636	21.0014	-916.084	16	25.1572
918.35	0.639	21.0014	-919.999	26	40.6886
918.51	0.644	21.0014	-919.999	26	40.3727
918.68	0.644	21.0014	-919.999	21	32.6087
918.84	0.641	21.0014	-916.084	21	32.7613
919.01	0.636	21.0014	-923.914	22	34.5912
919.17	0.628	21.0014	-919.999	25	39.8089
919.33	0.64	21.0014	-923.914	21	32.8125
919.5	0.645	21.0014	-912.169	21	32.5581
919.66	0.642	21.0014	-916.084	20	31.1526
919.83	0.64	21.0014	-919.999	23	35.9375
919.99	0.641	21.0014	-919.999	24	37.4415
920.15	0.649	21.2187	-919.999	29	44.6841
920.32	0.647	21.0014	-919.999	25	38.6399
920.48	0.646	21.0014	-923.914	30	46.4396
920.65	0.641	21.2187	-919.999	27	42.1217
920.81	0.637	20.7842	-923.914	14	21.978
920.97	0.639	21.0014	-923.914	18	28.169
921.14	0.633	21.0014	-923.914	30	47.3934
921.3	0.632	21.2187	-919.999	32	50.6329
921.47	0.63	21.0014	-919.999	15	23.8095
921.63	0.63	21.0014	-923.914	21	33.3333
921.79	0.633	21.0014	-923.914	23	36.3349
921.96	0.635	21.2187	-919.999	26	40.9449
922.12	0.635	21.0014	-923.914	24	37.7953
922.29	0.636	21.0014	-923.914	16	25.1572
922.45	0.64	21.2187	-923.914	16	25
922.61	0.643	21.0014	-919.999	20	31.1042
922.78	0.642	21.0014	-923.914	30	46.729
922.94	0.641	21.0014	-923.914	25	39.0016
923.11	0.636	21.0014	-923.914	19	29.8742
923.27	0.638	21.0014	-919.999	18	28.2132
923.43	0.639	21.0014	-919.999	23	35.9937
923.6	0.644	21.0014	-919.999	20	31.0559
923.76	0.641	21.0014	-923.914	27	42.1217
923.93	0.641	21.0014	-919.999	24	37.4415

924.09	0.644	21.0014	-919.999	19	29.5031
924.25	0.64	21.0014	-919.999	20	31.25
924.42	0.643	21.2187	-923.914	20	31.1042
924.58	0.646	21.0014	-919.999	16	24.7678
924.75	0.642	21.0014	-923.914	26	40.4984
924.91	0.64	21.0014	-923.914	28	43.75
925.07	0.642	21.0014	-923.914	14	21.8069
925.24	0.641	21.0014	-923.914	23	35.8814
925.4	0.634	21.0014	-923.914	23	36.2776
925.57	0.628	20.7842	-919.999	17	27.0701
925.73	0.633	21.0014	-923.914	29	45.8136
925.89	0.633	21.2187	-919.999	15	23.6967
926.06	0.631	21.0014	-919.999	28	44.374
926.22	0.634	21.2187	-916.084	24	37.8549
926.39	0.632	21.0014	-919.999	27	42.7215
926.55	0.637	21.0014	-923.914	30	47.0958
926.71	0.644	21.0014	-919.999	16	24.8447
926.88	0.644	21.0014	-919.999	16	24.8447
927.04	0.642	20.7842	-919.999	19	29.595
927.21	0.639	21.0014	-916.084	17	26.6041
927.37	0.642	21.2187	-919.999	17	26.4798
927.53	0.644	21.0014	-919.999	22	34.1615
927.7	0.64	21.0014	-923.914	26	40.625
927.86	0.64	20.7842	-923.914	28	43.75
928.03	0.636	21.0014	-923.914	29	45.5975
928.19	0.638	20.7842	-916.084	22	34.4828
928.35	0.646	21.0014	-919.999	26	40.2477
928.52	0.645	21.0014	-923.914	26	40.3101
928.68	0.643	21.0014	-919.999	26	40.4355
928.85	0.64	21.0014	-919.999	16	25
929.01	0.645	21.0014	-927.829	25	38.7597
929.17	0.647	21.0014	-923.914	20	30.9119
929.34	0.637	21.2187	-923.914	19	29.8273
929.5	0.631	21.0014	-923.914	18	28.5261
929.67	0.628	21.0014	-923.914	26	41.4013
929.83	0.631	21.0014	-923.914	27	42.7892
929.99	0.634	21.0014	-919.999	16	25.2366
930.16	0.632	21.0014	-923.914	10	15.8228
930.32	0.631	21.0014	-919.999	22	34.8653
930.49	0.634	21.2187	-923.914	18	28.3912
930.65	0.637	21.0014	-927.829	22	34.5369
930.81	0.643	21.0014	-919.999	27	41.9907
930.98	0.641	20.7842	-919.999	25	39.0016
931.14	0.641	21.0014	-923.914	23	35.8814
931.31	0.638	21.0014	-919.999	32	50.1567
931.47	0.641	20.7842	-919.999	24	37.4415
931.63	0.647	21.0014	-923.914	19	29.3663

931.8	0.644	21.0014	-923.914	25	38.8199
931.96	0.639	21.0014	-919.999	26	40.6886
932.13	0.638	21.2187	-919.999	25	39.185
932.29	0.644	21.0014	-919.999	21	32.6087
932.45	0.649	21.0014	-919.999	22	33.8983
932.62	0.645	20.7842	-923.914	15	23.2558
932.78	0.642	21.0014	-923.914	31	48.2866
932.95	0.643	21.0014	-919.999	39	60.6532
933.11	0.644	21.0014	-919.999	19	29.5031
933.27	0.644	21.2187	-916.084	23	35.7143
933.44	0.644	21.0014	-923.914	18	27.9503
933.6	0.637	20.7842	-919.999	25	39.2465
933.77	0.634	21.0014	-919.999	12	18.9274
933.93	0.633	21.0014	-919.999	19	30.0158
934.09	0.634	21.0014	-919.999	23	36.2776
934.26	0.635	21.0014	-923.914	21	33.0709
934.42	0.629	21.2187	-923.914	34	54.0541
934.59	0.625	21.0014	-919.999	25	40
934.75	0.634	20.7842	-919.999	26	41.0095
934.91	0.641	21.0014	-927.829	19	29.6412
935.08	0.638	21.0014	-923.914	36	56.4263
935.24	0.64	21.0014	-919.999	21	32.8125
935.41	0.64	21.0014	-919.999	30	46.875
935.57	0.645	21.0014	-919.999	19	29.4574
935.73	0.643	21.0014	-923.914	22	34.2146
935.9	0.641	21.0014	-923.914	29	45.2418
936.06	0.641	21.0014	-923.914	20	31.2012
936.23	0.637	21.0014	-919.999	21	32.967
936.39	0.64	21.0014	-919.999	28	43.75
936.55	0.643	21.0014	-919.999	25	38.8802
936.72	0.643	21.0014	-923.914	27	41.9907
936.88	0.643	21.0014	-916.084	22	34.2146
937.05	0.643	21.0014	-923.914	28	43.5459
937.21	0.648	20.7842	-923.914	23	35.4938
937.37	0.648	20.7842	-923.914	27	41.6667
937.54	0.645	21.2187	-919.999	21	32.5581
937.7	0.641	21.0014	-923.914	19	29.6412
937.87	0.637	21.0014	-919.999	27	42.3862
938.03	0.638	21.2187	-923.914	17	26.6458
938.19	0.632	21.0014	-919.999	18	28.481
938.36	0.631	21.0014	-919.999	19	30.1109
938.52	0.629	21.0014	-923.914	17	27.027
938.69	0.628	21.0014	-923.914	31	49.3631
938.85	0.633	21.0014	-919.999	21	33.1754
939.01	0.636	21.2187	-923.914	19	29.8742
939.18	0.638	21.0014	-923.914	18	28.2132
939.34	0.639	21.0014	-919.999	29	45.3834

939.51	0.641	21.2187	-919.999	12	18.7207
939.67	0.638	21.0014	-923.914	23	36.0502
939.83	0.642	21.0014	-919.999	24	37.3832
940	0.64	21.0014	-919.999	21	32.8125
940.16	0.636	21.0014	-923.914	23	36.1635
940.33	0.637	21.0014	-919.999	29	45.5259
940.49	0.646	21.0014	-923.914	20	30.9598
940.65	0.645	21.0014	-916.084	20	31.0078
940.82	0.642	20.7842	-923.914	19	29.595
940.98	0.641	21.0014	-919.999	18	28.0811
941.15	0.645	21.0014	-923.914	22	34.1085
941.31	0.65	20.7842	-919.999	26	40
941.47	0.645	21.0014	-919.999	26	40.3101
941.64	0.641	21.0014	-919.999	26	40.5616
941.8	0.642	21.0014	-916.084	20	31.1526
941.97	0.645	21.0014	-919.999	14	21.7054
942.13	0.643	20.7842	-919.999	20	31.1042
942.29	0.638	20.7842	-919.999	25	39.185
942.46	0.634	21.2187	-919.999	22	34.7003
942.62	0.629	21.0014	-923.914	27	42.9253
942.79	0.636	20.7842	-923.914	33	51.8868
942.95	0.634	21.0014	-923.914	16	25.2366
943.11	0.632	21.0014	-923.914	23	36.3924
943.28	0.631	21.0014	-923.914	15	23.7718
943.44	0.632	21.0014	-923.914	35	55.3797
943.61	0.643	21.0014	-919.999	33	51.3219
943.77	0.645	21.0014	-916.084	25	38.7597
943.93	0.646	21.0014	-923.914	25	38.6997
944.1	0.639	21.0014	-919.999	22	34.4288
944.26	0.638	21.0014	-919.999	31	48.5893
944.43	0.64	21.0014	-919.999	25	39.0625
944.59	0.643	21.0014	-923.914	28	43.5459
944.75	0.635	21.0014	-923.914	24	37.7953
944.92	0.641	21.0014	-923.914	19	29.6412
945.08	0.64	20.7842	-919.999	31	48.4375
945.25	0.642	21.2187	-919.999	29	45.1713
945.41	0.646	21.2187	-919.999	20	30.9598
945.57	0.645	21.0014	-923.914	21	32.5581
945.74	0.644	21.0014	-916.084	26	40.3727
945.9	0.642	21.0014	-919.999	20	31.1526
946.07	0.644	20.7842	-923.914	23	35.7143
946.23	0.644	21.0014	-919.999	27	41.9255
946.39	0.639	21.0014	-923.914	23	35.9937
946.56	0.634	21.0014	-923.914	23	36.2776
946.72	0.628	21.0014	-919.999	27	42.9936
946.89	0.635	21.0014	-919.999	21	33.0709
947.05	0.639	21.0014	-923.914	30	46.9484

947.21	0.632	20.7842	-923.914	19	30.0633
947.38	0.632	21.0014	-919.999	25	39.557
947.54	0.633	20.7842	-919.999	25	39.4945
947.71	0.64	21.0014	-919.999	21	32.8125
947.87	0.644	21.0014	-919.999	19	29.5031
948.03	0.645	21.0014	-919.999	21	32.5581
948.2	0.64	21.0014	-919.999	24	37.5
948.36	0.638	21.0014	-919.999	18	28.2132
948.53	0.639	21.2187	-919.999	23	35.9937
948.69	0.642	21.0014	-923.914	27	42.0561
948.85	0.64	21.0014	-919.999	30	46.875
949.02	0.636	21.0014	-923.914	17	26.7296
949.18	0.638	21.0014	-927.829	29	45.4545
949.35	0.645	21.0014	-919.999	26	40.3101
949.51	0.646	21.0014	-923.914	30	46.4396
949.67	0.643	21.0014	-919.999	29	45.1011
949.84	0.635	21.0014	-919.999	26	40.9449
950	0.642	21.0014	-923.914	21	32.7103
950.17	0.65	21.0014	-923.914	32	49.2308
950.33	0.65	21.0014	-919.999	26	40
950.49	0.642	21.0014	-919.999	23	35.8255
950.66	0.635	21.0014	-923.914	21	33.0709
950.82	0.634	21.0014	-923.914	24	37.8549
950.99	0.636	21.0014	-916.084	25	39.3082
951.15	0.635	21.0014	-923.914	22	34.6457
951.31	0.634	21.0014	-927.829	16	25.2366
951.48	0.63	21.0014	-919.999	14	22.2222
951.64	0.629	21.0014	-923.914	24	38.1558
951.81	0.635	21.0014	-923.914	26	40.9449
951.97	0.639	21.0014	-919.999	20	31.2989
952.13	0.642	21.0014	-919.999	27	42.0561
952.3	0.645	21.0014	-919.999	24	37.2093
952.46	0.642	21.0014	-923.914	22	34.2679
952.63	0.646	21.2187	-916.084	20	30.9598
952.79	0.644	21.0014	-923.914	23	35.7143
952.95	0.642	21.0014	-923.914	26	40.4984
953.12	0.639	21.0014	-919.999	17	26.6041
953.28	0.64	21.2187	-923.914	29	45.3125
953.45	0.644	21.0014	-919.999	25	38.8199
953.61	0.643	21.0014	-923.914	29	45.1011
953.77	0.64	21.0014	-919.999	16	25
953.94	0.638	21.0014	-919.999	17	26.6458
954.1	0.642	21.0014	-919.999	13	20.2492
954.27	0.648	21.0014	-919.999	25	38.5802
954.43	0.646	21.0014	-919.999	18	27.8638
954.59	0.645	21.2187	-916.084	23	35.6589
954.76	0.643	21.0014	-923.914	21	32.6594

954.92	0.633	20.7842	-923.914	19	30.0158
955.09	0.632	20.7842	-923.914	16	25.3165
955.25	0.634	21.0014	-923.914	29	45.7413
955.41	0.632	21.2187	-919.999	25	39.557
955.58	0.63	20.7842	-923.914	19	30.1587
955.74	0.633	21.0014	-923.914	24	37.9147
955.91	0.637	21.0014	-919.999	27	42.3862
956.07	0.639	21.0014	-919.999	24	37.5587
956.23	0.638	20.7842	-919.999	21	32.9154
956.4	0.638	21.0014	-919.999	19	29.7806
956.56	0.643	20.7842	-916.084	33	51.3219
956.73	0.643	21.2187	-923.914	22	34.2146
956.89	0.64	21.2187	-919.999	25	39.0625
957.05	0.639	21.0014	-919.999	29	45.3834
957.22	0.638	21.0014	-919.999	23	36.0502
957.38	0.642	21.2187	-919.999	28	43.6137
957.55	0.644	20.7842	-923.914	16	24.8447
957.71	0.646	21.0014	-919.999	35	54.1796
957.87	0.643	21.0014	-916.084	24	37.325
958.04	0.642	20.7842	-919.999	25	38.9408
958.2	0.643	21.0014	-919.999	23	35.7698
958.37	0.648	21.0014	-923.914	24	37.037
958.53	0.644	21.0014	-919.999	24	37.2671
958.69	0.642	21.0014	-919.999	24	37.3832
958.86	0.641	21.0014	-912.169	30	46.8019
959.02	0.644	21.0014	-919.999	29	45.0311
959.19	0.639	21.0014	-916.084	17	26.6041
959.35	0.634	21.0014	-919.999	23	36.2776
959.51	0.63	21.0014	-919.999	20	31.746
959.68	0.632	21.0014	-923.914	29	45.8861
959.84	0.635	21.0014	-919.999	32	50.3937
960.01	0.633	21.0014	-923.914	23	36.3349
960.17	0.63	21.0014	-919.999	28	44.4444
960.33	0.633	20.7842	-919.999	21	33.1754
960.5	0.637	21.0014	-919.999	26	40.8163
960.66	0.642	21.0014	-919.999	27	42.0561
960.83	0.646	21.0014	-916.084	25	38.6997
960.99	0.644	20.7842	-927.829	30	46.5839
961.15	0.642	20.7842	-923.914	21	32.7103
961.32	0.643	21.0014	-919.999	29	45.1011
961.48	0.642	21.0014	-919.999	16	24.9221
961.65	0.644	20.7842	-919.999	16	24.8447
961.81	0.64	21.0014	-923.914	22	34.375
961.97	0.638	21.0014	-923.914	27	42.3197
962.14	0.639	20.7842	-923.914	25	39.1236
962.3	0.646	21.0014	-919.999	34	52.6316
962.47	0.649	21.0014	-919.999	34	52.3883

962.63	0.645	21.0014	-919.999	37	57.3643
962.79	0.643	21.0014	-919.999	35	54.4324
962.96	0.647	21.0014	-923.914	43	66.4606
963.12	0.65	21.0014	-923.914	39	60
963.29	0.646	21.0014	-919.999	42	65.0155
963.45	0.638	21.0014	-919.999	34	53.2915
963.61	0.635	21.0014	-919.999	26	40.9449
963.78	0.63	20.7842	-923.914	42	66.6667
963.94	0.632	21.0014	-919.999	35	55.3797
964.11	0.634	20.7842	-927.829	50	78.8644
964.27	0.631	21.0014	-919.999	36	57.0523
964.43	0.633	21.0014	-919.999	43	67.9305
964.6	0.633	20.7842	-923.914	40	63.1912
964.76	0.64	21.0014	-927.829	33	51.5625
964.93	0.645	21.0014	-927.829	47	72.8682
965.09	0.642	20.7842	-919.999	54	84.1122
965.25	0.635	21.2187	-923.914	43	67.7165
965.42	0.64	21.0014	-919.999	43	67.1875
965.58	0.646	21.0014	-919.999	27	41.7957
965.75	0.641	21.0014	-923.914	26	40.5616
965.91	0.64	20.7842	-923.914	24	37.5
966.07	0.637	21.0014	-919.999	23	36.1068
966.24	0.644	20.7842	-923.914	20	31.0559
966.4	0.648	21.0014	-923.914	26	40.1235
966.57	0.647	21.0014	-927.829	21	32.4575
966.73	0.645	21.0014	-919.999	24	37.2093
966.89	0.641	21.0014	-916.084	23	35.8814
967.06	0.643	21.0014	-923.914	17	26.4386
967.22	0.646	21.0014	-919.999	29	44.8916
967.39	0.647	21.2187	-919.999	26	40.1855
967.55	0.646	21.0014	-923.914	21	32.5077
967.71	0.655	21.2187	-919.999	25	38.1679
967.88	0.658	21.0014	-919.999	26	39.5137
968.04	0.655	21.0014	-923.914	28	42.7481
968.21	0.655	21.0014	-919.999	18	27.4809
968.37	0.648	21.0014	-919.999	27	41.6667
968.53	0.649	21.0014	-919.999	28	43.1433
968.7	0.655	20.7842	-919.999	25	38.1679
968.86	0.657	21.0014	-923.914	31	47.1842
969.03	0.654	21.0014	-919.999	23	35.1682
969.19	0.659	21.0014	-923.914	28	42.4886
969.35	0.658	21.0014	-919.999	27	41.0334
969.52	0.66	21.2187	-919.999	27	40.9091
969.68	0.662	20.7842	-919.999	24	36.2538
969.85	0.661	21.0014	-927.829	19	28.7443
970.01	0.657	21.0014	-919.999	23	35.0076
970.17	0.655	21.0014	-923.914	15	22.9008

970.34	0.656	21.0014	-923.914	20	30.4878
970.5	0.662	21.0014	-916.084	30	45.3172
970.67	0.663	20.7842	-919.999	18	27.1493
970.83	0.658	21.0014	-919.999	17	25.8359
970.99	0.661	21.0014	-916.084	18	27.2315
971.16	0.668	20.7842	-916.084	20	29.9401
971.32	0.666	21.0014	-923.914	26	39.039
971.49	0.663	21.0014	-923.914	17	25.641
971.65	0.66	21.0014	-927.829	23	34.8485
971.81	0.658	21.0014	-919.999	34	51.6717
971.98	0.657	20.7842	-923.914	22	33.4855
972.14	0.649	21.0014	-927.829	21	32.3575
972.31	0.649	20.7842	-919.999	16	24.6533
972.47	0.648	20.7842	-919.999	22	33.9506
972.63	0.651	21.0014	-923.914	17	26.1137
972.8	0.654	21.0014	-923.914	26	39.7554
972.96	0.654	21.0014	-923.914	14	21.4067
973.13	0.658	21.0014	-919.999	27	41.0334
973.29	0.661	21.0014	-927.829	22	33.2829
973.45	0.665	21.0014	-923.914	25	37.594
973.62	0.661	21.0014	-923.914	26	39.3343
973.78	0.658	21.2187	-919.999	22	33.4347
973.95	0.653	21.0014	-919.999	21	32.1593
974.11	0.656	21.0014	-923.914	24	36.5854
974.27	0.661	21.0014	-923.914	14	21.18
974.44	0.661	20.7842	-919.999	22	33.2829
974.6	0.66	21.0014	-919.999	24	36.3636
974.77	0.657	20.7842	-923.914	23	35.0076
974.93	0.66	21.0014	-919.999	23	34.8485
975.09	0.664	21.0014	-919.999	17	25.6024
975.26	0.662	21.0014	-927.829	16	24.1692
975.42	0.662	21.0014	-923.914	26	39.2749
975.59	0.662	21.0014	-919.999	25	37.7644
975.75	0.659	21.0014	-919.999	22	33.3839
975.91	0.66	21.0014	-919.999	20	30.303
976.08	0.658	21.0014	-923.914	19	28.8754
976.24	0.652	21.0014	-923.914	23	35.2761
976.41	0.648	21.0014	-916.084	21	32.4074
976.57	0.653	21.0014	-919.999	27	41.3476
976.73	0.652	21.0014	-919.999	28	42.9448
976.9	0.65	21.0014	-919.999	27	41.5385
977.06	0.649	20.7842	-919.999	22	33.8983
977.23	0.653	21.0014	-923.914	17	26.0337
977.39	0.663	21.0014	-923.914	29	43.7406
977.55	0.667	21.0014	-923.914	22	32.9835
977.72	0.662	21.0014	-919.999	30	45.3172
977.88	0.658	20.7842	-923.914	19	28.8754

978.05	0.656	20.7842	-919.999	17	25.9146
978.21	0.662	21.0014	-923.914	17	25.6798
978.37	0.661	21.0014	-919.999	27	40.8472
978.54	0.659	21.2187	-923.914	19	28.8316
978.7	0.657	21.0014	-919.999	28	42.618
978.87	0.658	21.0014	-916.084	19	28.8754
979.03	0.662	21.0014	-919.999	23	34.7432
979.19	0.662	20.7842	-923.914	34	51.3595
979.36	0.661	20.7842	-919.999	19	28.7443
979.52	0.66	21.0014	-923.914	18	27.2727
979.69	0.663	21.0014	-923.914	27	40.724
979.85	0.669	21.0014	-923.914	20	29.8954
980.01	0.662	21.0014	-919.999	17	25.6798
980.18	0.648	21.0014	-919.999	25	38.5802
980.34	0.647	21.0014	-923.914	19	29.3663
980.51	0.649	21.0014	-919.999	29	44.6841
980.67	0.653	21.0014	-919.999	21	32.1593
980.83	0.648	21.0014	-923.914	21	32.4074
981	0.65	20.7842	-919.999	22	33.8462
981.16	0.652	21.0014	-916.084	27	41.411
981.33	0.658	21.0014	-919.999	17	25.8359
981.49	0.663	21.0014	-919.999	27	40.724
981.65	0.662	21.0014	-919.999	19	28.7009
981.82	0.66	21.0014	-919.999	20	30.303
981.98	0.657	21.2187	-919.999	19	28.9193
982.15	0.66	21.0014	-923.914	22	33.3333
982.31	0.661	21.0014	-919.999	31	46.8986
982.47	0.658	21.0014	-919.999	33	50.152
982.64	0.659	20.7842	-919.999	30	45.5235
982.8	0.659	21.0014	-919.999	23	34.9014
982.97	0.665	21.0014	-919.999	20	30.0752
983.13	0.666	20.7842	-923.914	28	42.042
983.29	0.662	21.0014	-919.999	25	37.7644
983.46	0.659	21.0014	-923.914	22	33.3839
983.62	0.661	21.0014	-923.914	14	21.18
983.79	0.665	21.0014	-919.999	27	40.6015
983.95	0.661	20.7842	-919.999	24	36.3086
984.11	0.659	21.0014	-923.914	23	34.9014
984.28	0.654	21.0014	-923.914	23	35.1682
984.44	0.653	21.0014	-923.914	14	21.4395
984.61	0.652	21.0014	-923.914	24	36.8098
984.77	0.651	21.0014	-923.914	28	43.0108
984.93	0.651	21.0014	-923.914	14	21.5054
985.1	0.646	20.7842	-927.829	19	29.4118
985.26	0.651	20.7842	-923.914	13	19.9693
985.43	0.659	20.7842	-923.914	29	44.0061
985.59	0.661	21.0014	-923.914	28	42.3601

985.75	0.657	21.0014	-919.999	23	35.0076
985.92	0.658	21.0014	-923.914	20	30.3951
986.08	0.663	21.0014	-927.829	31	46.7572
986.25	0.663	21.0014	-919.999	24	36.1991
986.41	0.66	21.0014	-919.999	27	40.9091
986.57	0.657	21.0014	-923.914	27	41.0959
986.74	0.656	21.0014	-923.914	19	28.9634
986.9	0.661	20.7842	-923.914	25	37.8215
987.07	0.662	21.0014	-923.914	20	30.2115
987.23	0.661	20.7842	-923.914	29	43.8729
987.39	0.661	20.7842	-919.999	24	36.3086
987.56	0.665	21.0014	-919.999	11	16.5414
987.72	0.667	21.0014	-919.999	21	31.4843
987.89	0.665	21.2187	-919.999	27	40.6015
988.05	0.662	21.0014	-923.914	21	31.7221
988.21	0.661	21.2187	-916.084	29	43.8729
988.38	0.659	21.0014	-919.999	22	33.3839
988.54	0.657	20.7842	-919.999	27	41.0959
988.71	0.648	21.0014	-916.084	23	35.4938
988.87	0.645	21.0014	-919.999	16	24.8062
989.03	0.644	21.2187	-923.914	22	34.1615
989.2	0.65	20.7842	-923.914	17	26.1538
989.36	0.653	21.0014	-919.999	24	36.7534
989.53	0.656	20.7842	-923.914	26	39.6341
989.69	0.658	21.0014	-919.999	20	30.3951
989.85	0.659	21.0014	-919.999	19	28.8316
990.02	0.663	20.7842	-923.914	14	21.1161
990.18	0.654	21.0014	-919.999	16	24.4648
990.35	0.658	21.0014	-919.999	23	34.9544
990.51	0.658	21.0014	-923.914	28	42.5532
990.67	0.658	21.0014	-919.999	26	39.5137
990.84	0.661	20.7842	-923.914	16	24.2057
991	0.661	21.0014	-919.999	18	27.2315
991.17	0.661	21.0014	-919.999	18	27.2315
991.33	0.658	21.0014	-923.914	20	30.3951
991.49	0.662	21.0014	-923.914	22	33.2326
991.66	0.665	21.0014	-912.169	25	37.594
991.82	0.664	20.7842	-919.999	18	27.1084
991.99	0.66	21.0014	-923.914	22	33.3333
992.15	0.658	20.7842	-919.999	18	27.3556
992.31	0.662	21.0014	-919.999	20	30.2115
992.48	0.663	21.0014	-919.999	16	24.1327
992.64	0.659	21.0014	-919.999	21	31.8665
992.81	0.649	20.7842	-912.169	16	24.6533
992.97	0.652	21.0014	-919.999	18	27.6074
993.13	0.652	21.0014	-916.084	21	32.2086
993.3	0.652	21.0014	-919.999	20	30.6748

993.46	0.65	21.0014	-923.914	26	40
993.63	0.65	21.0014	-923.914	15	23.0769
993.79	0.654	21.0014	-927.829	20	30.581
993.95	0.659	21.0014	-919.999	18	27.3141
994.12	0.662	21.0014	-923.914	22	33.2326
994.28	0.657	21.0014	-923.914	18	27.3973
994.45	0.655	20.7842	-919.999	22	33.5878
994.61	0.656	20.7842	-923.914	22	33.5366
994.77	0.661	21.0014	-923.914	22	33.2829
994.94	0.66	21.0014	-923.914	19	28.7879
995.1	0.655	21.0014	-919.999	26	39.6947
995.27	0.657	20.7842	-919.999	18	27.3973
995.43	0.66	21.2187	-923.914	20	30.303
995.59	0.663	21.0014	-919.999	18	27.1493
995.76	0.664	20.7842	-923.914	14	21.0843
995.92	0.661	21.0014	-919.999	19	28.7443
996.09	0.665	21.0014	-923.914	28	42.1053
996.25	0.665	21.0014	-923.914	16	24.0602
996.41	0.668	20.7842	-923.914	20	29.9401
996.58	0.658	20.7842	-919.999	23	34.9544
996.74	0.651	20.7842	-919.999	11	16.8971
996.91	0.647	21.0014	-919.999	18	27.8207
997.07	0.652	21.0014	-923.914	25	38.3436
997.23	0.655	21.0014	-919.999	22	33.5878
997.4	0.651	21.0014	-923.914	26	39.9386
997.56	0.65	20.7842	-919.999	24	36.9231
997.73	0.65	21.0014	-923.914	20	30.7692
997.89	0.658	21.0014	-919.999	12	18.2371
998.05	0.662	20.7842	-919.999	20	30.2115
998.22	0.662	21.0014	-919.999	16	24.1692
998.38	0.659	21.0014	-923.914	22	33.3839
998.55	0.659	21.0014	-923.914	23	34.9014
998.71	0.659	21.0014	-923.914	21	31.8665
998.87	0.657	21.0014	-927.829	12	18.2648
999.04	0.657	21.0014	-923.914	33	50.2283
999.2	0.654	21.0014	-919.999	15	22.9358
999.37	0.657	21.0014	-923.914	24	36.5297
999.53	0.664	21.0014	-923.914	25	37.6506
999.69	0.663	21.0014	-916.084	29	43.7406
999.86	0.662	21.0014	-916.084	26	39.2749
1000.02	0.655	21.0014	-919.999	23	35.1145
1000.19	0.659	21.0014	-919.999	17	25.7967
1000.35	0.667	21.0014	-919.999	17	25.4873
1000.51	0.665	21.0014	-919.999	14	21.0526
1000.68	0.658	21.0014	-919.999	22	33.4347
1000.84	0.654	21.0014	-923.914	18	27.5229
1001.01	0.657	21.0014	-916.084	24	36.5297

1001.17	0.653	21.0014	-923.914	25	38.2848
1001.33	0.651	20.7842	-923.914	25	38.4025
1001.5	0.649	21.0014	-919.999	21	32.3575
1001.66	0.647	21.0014	-919.999	16	24.7295
1001.83	0.652	21.0014	-919.999	22	33.7423
1001.99	0.652	21.0014	-919.999	32	49.0798
1002.15	0.656	21.0014	-923.914	22	33.5366
1002.32	0.659	21.0014	-923.914	25	37.9363
1002.48	0.66	20.7842	-923.914	22	33.3333
1002.65	0.661	21.0014	-919.999	25	37.8215
1002.81	0.663	21.0014	-919.999	23	34.6908
1002.97	0.66	21.0014	-923.914	26	39.3939
1003.14	0.658	20.7842	-919.999	28	42.5532
1003.3	0.658	20.7842	-919.999	27	41.0334
1003.47	0.662	20.7842	-919.999	18	27.1903
1003.63	0.66	20.7842	-927.829	22	33.3333
1003.79	0.658	21.0014	-923.914	23	34.9544
1003.96	0.658	21.0014	-923.914	16	24.3161
1004.12	0.66	21.0014	-919.999	27	40.9091
1004.29	0.666	21.2187	-919.999	12	18.018
1004.45	0.663	21.0014	-919.999	18	27.1493
1004.61	0.663	21.0014	-919.999	16	24.1327
1004.78	0.659	21.0014	-923.914	21	31.8665
1004.94	0.657	21.0014	-919.999	29	44.14
1005.11	0.648	20.7842	-919.999	29	44.7531
1005.27	0.647	20.7842	-923.914	16	24.7295
1005.43	0.65	21.0014	-919.999	19	29.2308
1005.6	0.646	20.7842	-923.914	20	30.9598
1005.76	0.65	21.0014	-916.084	23	35.3846
1005.93	0.655	21.2187	-923.914	30	45.8015
1006.09	0.657	21.0014	-919.999	16	24.3531
1006.25	0.654	21.0014	-923.914	26	39.7554
1006.42	0.658	21.0014	-923.914	16	24.3161
1006.58	0.662	21.0014	-923.914	21	31.7221
1006.75	0.658	21.0014	-923.914	29	44.0729
1006.91	0.658	20.7842	-923.914	28	42.5532
1007.07	0.658	20.7842	-919.999	18	27.3556
1007.24	0.657	21.0014	-919.999	21	31.9635
1007.4	0.663	20.7842	-923.914	22	33.1825
1007.57	0.66	20.7842	-923.914	28	42.4242
1007.73	0.66	21.0014	-927.829	20	30.303
1007.89	0.66	21.0014	-919.999	25	37.8788
1008.06	0.664	20.7842	-923.914	23	34.6386
1008.22	0.667	21.0014	-923.914	23	34.4828
1008.39	0.665	21.0014	-919.999	27	40.6015
1008.55	0.658	21.0014	-919.999	21	31.9149
1008.71	0.657	21.2187	-923.914	18	27.3973

1008.88	0.66	20.7842	-923.914	26	39.3939
1009.04	0.66	21.0014	-923.914	18	27.2727
1009.21	0.657	20.7842	-919.999	25	38.0518
1009.37	0.648	20.7842	-919.999	27	41.6667
1009.53	0.647	20.7842	-923.914	13	20.0927
1009.7	0.65	20.7842	-923.914	15	23.0769
1009.86	0.652	21.0014	-919.999	21	32.2086
1010.03	0.645	21.0014	-919.999	16	24.8062
1010.19	0.648	20.7842	-919.999	21	32.4074
1010.35	0.655	20.7842	-919.999	27	41.2214
1010.52	0.66	20.7842	-919.999	20	30.303
1010.68	0.661	20.7842	-919.999	24	36.3086
1010.85	0.66	20.7842	-919.999	23	34.8485
1011.01	0.657	20.7842	-923.914	17	25.8752
1011.17	0.658	21.0014	-923.914	25	37.9939
1011.34	0.663	21.0014	-923.914	14	21.1161
1011.5	0.662	20.7842	-923.914	21	31.7221
1011.67	0.659	21.0014	-916.084	28	42.4886
1011.83	0.655	21.0014	-927.829	20	30.5344
1011.99	0.658	21.0014	-919.999	23	34.9544
1012.16	0.665	21.0014	-927.829	24	36.0902
1012.32	0.667	21.0014	-923.914	29	43.4783
1012.49	0.665	20.7842	-916.084	13	19.5489
1012.65	0.662	20.7842	-927.829	13	19.6375
1012.81	0.663	20.7842	-919.999	22	33.1825
1012.98	0.668	21.0014	-919.999	18	26.9461
1013.14	0.66	21.0014	-919.999	21	31.8182
1013.31	0.654	21.0014	-919.999	24	36.6972
1013.47	0.648	20.7842	-923.914	20	30.8642
1013.63	0.647	20.7842	-916.084	23	35.5487
1013.8	0.65	21.0014	-919.999	25	38.4615
1013.96	0.647	20.7842	-923.914	22	34.0031
1014.13	0.646	21.0014	-923.914	23	35.6037
1014.29	0.651	21.0014	-923.914	18	27.6498
1014.45	0.656	20.7842	-923.914	18	27.439
1014.62	0.661	20.7842	-919.999	27	40.8472
1014.78	0.662	21.0014	-923.914	25	37.7644
1014.95	0.654	21.0014	-923.914	20	30.581
1015.11	0.654	21.0014	-923.914	32	48.9297
1015.27	0.662	21.0014	-923.914	26	39.2749
1015.44	0.659	21.0014	-919.999	19	28.8316
1015.6	0.656	20.7842	-923.914	25	38.1098
1015.77	0.655	21.0014	-919.999	18	27.4809
1015.93	0.659	21.0014	-919.999	23	34.9014
1016.09	0.667	20.7842	-923.914	19	28.4858
1016.26	0.664	21.0014	-923.914	23	34.6386
1016.42	0.663	21.0014	-923.914	22	33.1825

1016.59	0.662	21.0014	-919.999	17	25.6798
1016.75	0.663	20.7842	-919.999	19	28.6576
1016.91	0.665	21.0014	-923.914	24	36.0902
1017.08	0.666	21.0014	-919.999	18	27.027
1017.24	0.661	21.0014	-927.829	15	22.6929
1017.41	0.655	20.7842	-923.914	27	41.2214
1017.57	0.657	21.0014	-923.914	24	36.5297
1017.73	0.652	21.2187	-923.914	16	24.5399
1017.9	0.653	21.0014	-923.914	23	35.2221
1018.06	0.648	21.0014	-923.914	22	33.9506
1018.23	0.648	21.0014	-923.914	16	24.6914
1018.39	0.652	20.7842	-923.914	23	35.2761
1018.55	0.654	20.7842	-919.999	28	42.8135
1018.72	0.654	20.7842	-923.914	24	36.6972
1018.88	0.657	21.0014	-923.914	19	28.9193
1019.05	0.658	21.2187	-923.914	20	30.3951
1019.21	0.662	20.7842	-919.999	17	25.6798
1019.37	0.66	21.0014	-919.999	21	31.8182
1019.54	0.66	21.0014	-919.999	15	22.7273
1019.7	0.656	20.7842	-919.999	20	30.4878
1019.87	0.659	20.7842	-923.914	19	28.8316
1020.03	0.657	20.7842	-923.914	15	22.8311
1020.19	0.664	20.7842	-916.084	21	31.6265
1020.36	0.664	21.0014	-919.999	23	34.6386
1020.52	0.659	20.7842	-919.999	20	30.349
1020.69	0.663	20.7842	-919.999	37	55.8069
1020.85	0.666	20.7842	-923.914	27	40.5405
1021.01	0.667	21.0014	-919.999	14	20.9895
1021.18	0.663	21.0014	-919.999	16	24.1327
1021.34	0.66	20.7842	-923.914	16	24.2424
1021.51	0.658	21.0014	-923.914	25	37.9939
1021.67	0.655	20.7842	-919.999	19	29.0076
1021.83	0.647	21.0014	-919.999	20	30.9119
1022	0.647	21.0014	-923.914	15	23.1839
1022.16	0.648	21.0014	-919.999	22	33.9506
1022.33	0.652	20.7842	-923.914	22	33.7423
1022.49	0.653	21.0014	-923.914	14	21.4395
1022.65	0.656	21.0014	-919.999	20	30.4878
1022.82	0.655	21.0014	-919.999	17	25.9542
1022.98	0.658	21.0014	-919.999	31	47.1125
1023.15	0.663	21.0014	-919.999	26	39.2157
1023.31	0.661	20.7842	-919.999	20	30.2572
1023.47	0.659	20.7842	-919.999	24	36.4188
1023.64	0.654	21.0014	-923.914	16	24.4648
1023.8	0.653	20.7842	-919.999	28	42.879
1023.97	0.66	21.0014	-923.914	14	21.2121
1024.13	0.66	21.0014	-919.999	15	22.7273

1024.29	0.659	21.0014	-923.914	28	42.4886
1024.46	0.659	21.0014	-919.999	26	39.4537
1024.62	0.665	20.7842	-919.999	19	28.5714
1024.79	0.668	20.7842	-923.914	26	38.9222
1024.95	0.658	21.0014	-923.914	27	41.0334
1025.11	0.659	20.7842	-919.999	19	28.8316
1025.28	0.661	21.0014	-919.999	33	49.9244
1025.44	0.663	21.0014	-923.914	17	25.641
1025.61	0.661	20.7842	-923.914	18	27.2315
1025.77	0.657	20.7842	-919.999	22	33.4855
1025.93	0.653	20.7842	-923.914	21	32.1593
1026.1	0.648	21.0014	-923.914	19	29.321
1026.26	0.649	21.0014	-923.914	26	40.0616
1026.43	0.651	20.7842	-919.999	24	36.8664
1026.59	0.651	21.0014	-927.829	21	32.2581
1026.75	0.649	21.0014	-923.914	24	36.98
1026.92	0.652	21.0014	-923.914	25	38.3436
1027.08	0.66	20.7842	-919.999	23	34.8485
1027.25	0.664	21.0014	-923.914	17	25.6024
1027.41	0.662	20.7842	-919.999	20	30.2115
1027.57	0.659	21.0014	-919.999	26	39.4537
1027.74	0.662	21.0014	-919.999	18	27.1903
1027.9	0.662	20.7842	-919.999	22	33.2326
1028.07	0.663	20.7842	-927.829	24	36.1991
1028.23	0.661	20.7842	-923.914	30	45.3858
1028.39	0.656	20.7842	-919.999	16	24.3902
1028.56	0.661	21.0014	-919.999	26	39.3343
1028.72	0.663	20.7842	-919.999	24	36.1991
1028.89	0.665	20.7842	-919.999	22	33.0827
1029.05	0.663	21.0014	-923.914	18	27.1493
1029.21	0.658	20.7842	-919.999	24	36.4742
1029.38	0.66	21.0014	-919.999	28	42.4242
1029.54	0.666	20.7842	-919.999	21	31.5315
1029.71	0.66	20.7842	-919.999	15	22.7273
1029.87	0.652	20.7842	-919.999	28	42.9448
1030.03	0.647	20.7842	-923.914	23	35.5487
1030.2	0.653	20.7842	-919.999	26	39.8162
1030.36	0.651	21.0014	-923.914	26	39.9386
1030.53	0.648	20.7842	-919.999	19	29.321
1030.69	0.646	20.7842	-923.914	19	29.4118
1030.85	0.649	21.0014	-919.999	26	40.0616
1031.02	0.658	21.0014	-919.999	17	25.8359
1031.18	0.662	20.7842	-919.999	21	31.7221
1031.35	0.661	20.7842	-923.914	22	33.2829
1031.51	0.656	20.7842	-919.999	20	30.4878
1031.67	0.655	21.0014	-927.829	33	50.3817
1031.84	0.658	21.0014	-919.999	31	47.1125

1032	0.66	20.7842	-919.999	37	56.0606
1032.17	0.662	20.7842	-919.999	34	51.3595
1032.33	0.659	21.0014	-923.914	33	50.0759
1032.49	0.66	21.0014	-919.999	30	45.4545
1032.66	0.666	20.7842	-919.999	24	36.036
1032.82	0.666	20.7842	-919.999	28	42.042
1032.99	0.664	20.7842	-919.999	41	61.747
1033.15	0.663	20.7842	-927.829	38	57.3152
1033.31	0.662	20.7842	-923.914	32	48.3384
1033.48	0.667	20.7842	-923.914	38	56.9715
1033.64	0.661	20.7842	-916.084	29	43.8729
1033.81	0.658	20.7842	-923.914	24	36.4742
1033.97	0.654	20.7842	-923.914	33	50.4587
1034.13	0.654	20.7842	-919.999	31	47.4006
1034.3	0.651	21.0014	-919.999	35	53.7634
1034.46	0.653	21.0014	-927.829	28	42.879
1034.63	0.646	20.7842	-923.914	29	44.8916
1034.79	0.646	21.0014	-923.914	35	54.1796
1034.95	0.644	20.7842	-919.999	33	51.2422
1035.12	0.655	20.7842	-919.999	40	61.0687
1035.28	0.659	20.7842	-919.999	26	39.4537
1035.45	0.658	21.0014	-919.999	25	37.9939
1035.61	0.66	21.0014	-919.999	36	54.5455
1035.77	0.662	20.7842	-919.999	39	58.9124
1035.94	0.662	20.7842	-923.914	29	43.8066
1036.1	0.662	20.7842	-923.914	25	37.7644
1036.27	0.659	21.0014	-927.829	27	40.9712
1036.43	0.659	20.7842	-927.829	36	54.6282
1036.59	0.664	21.0014	-919.999	39	58.7349
1036.76	0.662	21.0014	-919.999	21	31.7221
1036.92	0.659	21.0014	-923.914	31	47.041
1037.09	0.661	20.7842	-916.084	40	60.5144
1037.25	0.665	21.0014	-923.914	22	33.0827
1037.41	0.667	20.7842	-923.914	19	28.4858
1037.58	0.667	20.7842	-916.084	32	47.976
1037.74	0.663	20.7842	-919.999	24	36.1991
1037.91	0.662	21.0014	-923.914	36	54.3807
1038.07	0.661	21.0014	-923.914	28	42.3601
1038.23	0.657	21.0014	-919.999	24	36.5297
1038.4	0.65	20.7842	-923.914	28	43.0769
1038.56	0.647	20.7842	-919.999	26	40.1855
1038.73	0.643	20.7842	-919.999	31	48.2115
1038.89	0.65	21.0014	-919.999	34	52.3077
1039.05	0.651	21.0014	-919.999	36	55.2995
1039.22	0.652	21.0014	-919.999	26	39.8773
1039.38	0.652	21.0014	-923.914	32	49.0798
1039.55	0.658	20.7842	-919.999	37	56.231

1039.71	0.663	20.7842	-923.914	31	46.7572
1039.87	0.658	20.7842	-916.084	19	28.8754
1040.04	0.657	21.0014	-923.914	32	48.7062
1040.2	0.658	20.7842	-919.999	31	47.1125
1040.37	0.658	21.0014	-927.829	34	51.6717
1040.53	0.661	20.7842	-923.914	22	33.2829
1040.69	0.663	20.7842	-927.829	28	42.2323
1040.86	0.663	20.7842	-923.914	20	30.1659
1041.02	0.663	20.7842	-919.999	32	48.2655
1041.19	0.665	21.0014	-923.914	33	49.6241
1041.35	0.667	21.0014	-923.914	29	43.4783
1041.51	0.664	20.7842	-923.914	31	46.6867
1041.68	0.66	20.7842	-919.999	37	56.0606
1041.84	0.658	20.7842	-919.999	36	54.7112
1042.01	0.665	20.7842	-923.914	35	52.6316
1042.17	0.663	20.7842	-923.914	27	40.724
1042.33	0.658	20.7842	-919.999	22	33.4347
1042.5	0.65	20.7842	-923.914	27	41.5385
1042.66	0.648	20.7842	-919.999	28	43.2099
1042.83	0.651	20.7842	-927.829	29	44.5469
1042.99	0.651	21.0014	-919.999	25	38.4025
1043.15	0.652	21.0014	-919.999	31	47.546
1043.32	0.649	20.7842	-919.999	32	49.3066
1043.48	0.653	21.0014	-919.999	30	45.9418
1043.65	0.656	20.7842	-916.084	28	42.6829
1043.81	0.661	20.7842	-923.914	28	42.3601
1043.97	0.659	20.7842	-923.914	33	50.0759
1044.14	0.66	21.0014	-919.999	31	46.9697
1044.3	0.659	21.0014	-919.999	38	57.6631
1044.47	0.663	20.7842	-919.999	22	33.1825
1044.63	0.663	20.7842	-919.999	31	46.7572
1044.79	0.658	20.7842	-923.914	36	54.7112
1044.96	0.651	20.7842	-919.999	37	56.8356
1045.12	0.662	21.0014	-919.999	31	46.8278
1045.29	0.669	20.7842	-919.999	30	44.843
1045.45	0.665	21.0014	-916.084	29	43.609
1045.61	0.661	21.0014	-919.999	34	51.4372
1045.78	0.662	20.7842	-919.999	26	39.2749
1045.94	0.666	21.0014	-923.914	25	37.5375
1046.11	0.668	20.7842	-919.999	37	55.3892
1046.27	0.662	21.0014	-923.914	24	36.2538
1046.43	0.655	21.0014	-923.914	26	39.6947
1046.6	0.651	20.7842	-923.914	33	50.6912
1046.76	0.649	20.7842	-919.999	30	46.225
1046.93	0.65	21.0014	-916.084	30	46.1538
1047.09	0.65	21.0014	-919.999	30	46.1538
1047.25	0.649	20.7842	-919.999	24	36.98

1047.42	0.649	20.7842	-923.914	39	60.0924
1047.58	0.658	20.7842	-919.999	35	53.1915
1047.75	0.659	20.7842	-919.999	35	53.1108
1047.91	0.661	20.7842	-919.999	35	52.9501
1048.07	0.659	20.7842	-923.914	32	48.5584
1048.24	0.658	20.7842	-923.914	31	47.1125
1048.4	0.662	20.7842	-919.999	38	57.4018
1048.57	0.66	20.7842	-919.999	28	42.4242
1048.73	0.659	21.0014	-923.914	31	47.041
1048.89	0.644	20.7842	-919.999	33	51.2422
1049.06	0.64	21.0014	-919.999	26	40.625
1049.22	0.646	21.0014	-919.999	41	63.4675
1049.39	0.646	20.7842	-927.829	29	44.8916
1049.55	0.646	20.7842	-923.914	30	46.4396
1049.71	0.643	21.0014	-923.914	31	48.2115
1049.88	0.638	20.7842	-919.999	37	57.9937
1050.04	0.647	20.7842	-923.914	28	43.2767
1050.21	0.641	21.0014	-919.999	29	45.2418
1050.37	0.625	21.0014	-923.914	38	60.8
1050.53	0.623	20.7842	-919.999	29	46.549
1050.7	0.625	20.7842	-923.914	38	60.8
1050.86	0.611	20.7842	-916.084	27	44.1899
1051.03	0.599	20.7842	-919.999	33	55.0918
1051.19	0.594	20.7842	-919.999	29	48.8215
1051.35	0.595	20.7842	-923.914	33	55.4622
1051.52	0.6	20.7842	-923.914	32	53.3333
1051.68	0.603	20.7842	-927.829	38	63.0182
1051.85	0.605	21.0014	-919.999	37	61.157
1052.01	0.608	21.0014	-919.999	28	46.0526
1052.17	0.609	21.0014	-919.999	23	37.7668
1052.34	0.609	21.0014	-919.999	26	42.6929
1052.5	0.609	20.7842	-916.084	29	47.619
1052.67	0.611	20.7842	-923.914	27	44.1899
1052.83	0.61	21.0014	-923.914	32	52.459
1052.99	0.609	20.7842	-919.999	31	50.9031
1053.16	0.611	20.7842	-923.914	29	47.4632
1053.32	0.609	20.7842	-919.999	29	47.619
1053.49	0.607	20.7842	-923.914	31	51.0708
1053.65	0.606	21.0014	-919.999	27	44.5545
1053.81	0.612	20.7842	-923.914	23	37.5817
1053.98	0.616	20.7842	-927.829	38	61.6883
1054.14	0.614	20.7842	-923.914	30	48.8599
1054.31	0.609	20.7842	-919.999	36	59.1133
1054.47	0.608	21.0014	-919.999	20	32.8947
1054.63	0.608	20.7842	-923.914	31	50.9868
1054.8	0.602	20.7842	-919.999	36	59.8007
1054.96	0.599	21.0014	-927.829	30	50.0835

1055.13	0.598	20.7842	-923.914	23	38.4615
1055.29	0.597	20.7842	-919.999	25	41.876
1055.45	0.597	21.0014	-919.999	28	46.9012
1055.62	0.6	20.7842	-923.914	26	43.3333
1055.78	0.604	20.7842	-919.999	24	39.7351
1055.95	0.605	20.7842	-919.999	25	41.3223
1056.11	0.606	21.0014	-923.914	28	46.2046
1056.27	0.611	20.7842	-923.914	32	52.3732
1056.44	0.609	20.7842	-919.999	31	50.9031
1056.6	0.607	21.0014	-927.829	23	37.8913
1056.77	0.604	20.7842	-919.999	38	62.9139
1056.93	0.607	20.7842	-923.914	23	37.8913
1057.09	0.613	20.7842	-923.914	41	66.8842
1057.26	0.613	20.7842	-923.914	18	29.3638
1057.42	0.61	21.0014	-923.914	27	44.2623
1057.59	0.61	20.7842	-923.914	33	54.0984
1057.75	0.612	20.7842	-916.084	37	60.4575
1057.91	0.615	20.7842	-919.999	31	50.4065
1058.08	0.613	20.7842	-923.914	34	55.4649
1058.24	0.608	21.0014	-919.999	31	50.9868
1058.41	0.608	21.0014	-919.999	23	37.8289
1058.57	0.607	21.0014	-923.914	33	54.3657
1058.73	0.608	20.7842	-919.999	41	67.4342
1058.9	0.603	20.7842	-923.914	23	38.1426
1059.06	0.597	20.7842	-923.914	26	43.5511
1059.23	0.595	20.7842	-919.999	28	47.0588
1059.39	0.599	20.7842	-923.914	26	43.4057
1059.55	0.6	21.0014	-912.169	23	38.3333
1059.72	0.596	20.7842	-923.914	29	48.6577
1059.88	0.592	20.7842	-923.914	31	52.3649
1060.05	0.601	20.7842	-919.999	24	39.9334
1060.21	0.61	21.0014	-919.999	26	42.623
1060.37	0.608	20.7842	-923.914	33	54.2763
1060.54	0.608	21.0014	-919.999	29	47.6974
1060.7	0.607	21.0014	-927.829	25	41.1862
1060.87	0.61	20.7842	-919.999	36	59.0164
1061.03	0.61	21.0014	-919.999	24	39.3443
1061.19	0.61	21.0014	-923.914	31	50.8197
1061.36	0.609	20.7842	-919.999	34	55.8292
1061.52	0.605	20.7842	-919.999	31	51.2397
1061.69	0.609	20.7842	-919.999	21	34.4828
1061.85	0.612	20.7842	-923.914	30	49.0196
1062.01	0.613	20.7842	-923.914	38	61.9902
1062.18	0.612	20.7842	-923.914	30	49.0196
1062.34	0.608	21.0014	-919.999	30	49.3421
1062.51	0.612	20.7842	-923.914	29	47.3856
1062.67	0.614	20.7842	-919.999	35	57.0033

1062.83	0.611	20.7842	-923.914	36	58.9198
1063	0.605	20.7842	-919.999	27	44.6281
1063.16	0.599	20.7842	-919.999	27	45.0751
1063.33	0.598	21.0014	-919.999	28	46.8227
1063.49	0.598	21.0014	-919.999	28	46.8227
1063.65	0.594	21.0014	-919.999	26	43.771
1063.82	0.594	20.7842	-927.829	30	50.5051
1063.98	0.597	20.7842	-923.914	27	45.2261
1064.15	0.604	20.7842	-927.829	33	54.6358
1064.31	0.608	21.0014	-923.914	32	52.6316
1064.47	0.609	20.7842	-919.999	25	41.0509
1064.64	0.606	20.7842	-919.999	23	37.9538
1064.8	0.599	20.7842	-916.084	27	45.0751
1064.97	0.61	21.0014	-916.084	31	50.8197
1065.13	0.611	20.7842	-923.914	25	40.9165
1065.29	0.607	21.0014	-919.999	24	39.5387
1065.46	0.605	21.0014	-927.829	45	74.3802
1065.62	0.606	21.0014	-919.999	39	64.3564
1065.79	0.616	20.7842	-919.999	23	37.3377
1065.95	0.613	20.7842	-923.914	35	57.0962
1066.11	0.611	21.0014	-923.914	27	44.1899
1066.28	0.609	20.7842	-923.914	33	54.1872
1066.44	0.609	21.0014	-919.999	26	42.6929
1066.61	0.61	20.7842	-919.999	25	40.9836
1066.77	0.61	20.7842	-923.914	29	47.541
1066.93	0.608	20.7842	-919.999	39	64.1447
1067.1	0.605	20.7842	-923.914	23	38.0165
1067.26	0.606	21.0014	-919.999	34	56.1056
1067.43	0.602	20.7842	-923.914	23	38.206
1067.59	0.597	21.0014	-919.999	28	46.9012
1067.75	0.597	20.7842	-919.999	35	58.6265
1067.92	0.594	21.0014	-923.914	30	50.5051
1068.08	0.598	20.7842	-919.999	35	58.5284
1068.25	0.603	20.567	-927.829	32	53.068
1068.41	0.604	21.0014	-923.914	30	49.6689
1068.57	0.603	20.567	-919.999	27	44.7761
1068.74	0.606	20.7842	-923.914	25	41.2541
1068.9	0.608	20.7842	-927.829	22	36.1842
1069.07	0.609	20.7842	-923.914	34	55.8292
1069.23	0.608	20.7842	-923.914	30	49.3421
1069.39	0.607	20.7842	-919.999	26	42.8336
1069.56	0.608	20.7842	-919.999	25	41.1184
1069.72	0.609	20.7842	-919.999	35	57.4713
1069.89	0.607	20.7842	-919.999	28	46.1285
1070.05	0.61	20.7842	-919.999	27	44.2623
1070.21	0.608	21.0014	-919.999	31	50.9868
1070.38	0.607	20.7842	-919.999	27	44.4811

1070.54	0.612	21.0014	-919.999	34	55.5556
1070.71	0.613	21.0014	-916.084	26	42.4144
1070.87	0.61	20.7842	-919.999	12	19.6721
1071.03	0.605	20.7842	-923.914	22	36.3636
1071.2	0.607	20.7842	-919.999	31	51.0708
1071.36	0.606	20.7842	-923.914	42	69.3069
1071.53	0.599	20.7842	-919.999	23	38.3973
1071.69	0.596	20.7842	-923.914	30	50.3356
1071.85	0.594	20.7842	-919.999	29	48.8215
1072.02	0.597	20.7842	-916.084	23	38.526
1072.18	0.6	20.7842	-916.084	28	46.6667
1072.35	0.602	20.7842	-923.914	27	44.8505
1072.51	0.604	20.7842	-919.999	37	61.2583
1072.67	0.606	20.7842	-919.999	32	52.8053
1072.84	0.613	20.7842	-923.914	26	42.4144
1073	0.611	21.0014	-923.914	28	45.8265
1073.17	0.606	21.0014	-923.914	24	39.604
1073.33	0.606	20.7842	-923.914	28	46.2046
1073.49	0.605	20.7842	-923.914	35	57.8512
1073.66	0.608	20.7842	-923.914	41	67.4342
1073.82	0.611	20.7842	-919.999	46	75.2864
1073.99	0.608	21.0014	-923.914	30	49.3421
1074.15	0.606	20.7842	-919.999	44	72.6073
1074.31	0.608	20.7842	-919.999	35	57.5658
1074.48	0.614	20.7842	-923.914	36	58.6319
1074.64	0.61	20.567	-919.999	35	57.377
1074.81	0.604	20.7842	-919.999	32	52.9801
1074.97	0.608	20.7842	-927.829	35	57.5658
1075.13	0.61	21.0014	-927.829	46	75.4098
1075.3	0.61	21.0014	-919.999	34	55.7377
1075.46	0.603	20.7842	-923.914	36	59.7015
1075.63	0.598	20.7842	-919.999	27	45.1505
1075.79	0.599	20.7842	-919.999	35	58.4307
1075.95	0.599	20.7842	-923.914	32	53.4224
1076.12	0.598	20.7842	-923.914	40	66.8896
1076.28	0.595	20.7842	-919.999	36	60.5042
1076.45	0.594	21.0014	-923.914	30	50.5051
1076.61	0.599	20.7842	-923.914	30	50.0835
1076.77	0.606	21.0014	-923.914	25	41.2541
1076.94	0.612	20.7842	-923.914	32	52.2876
1077.1	0.61	21.0014	-916.084	39	63.9344
1077.27	0.607	20.7842	-923.914	29	47.7759
1077.43	0.607	21.0014	-919.999	31	51.0708
1077.59	0.61	20.7842	-916.084	28	45.9016
1077.76	0.611	20.7842	-919.999	29	47.4632
1077.92	0.61	21.0014	-923.914	32	52.459
1078.09	0.607	20.7842	-923.914	28	46.1285

1078.25	0.607	20.7842	-923.914	32	52.7183
1078.41	0.611	20.7842	-919.999	22	36.0065
1078.58	0.608	20.7842	-923.914	36	59.2105
1078.74	0.608	20.7842	-912.169	25	41.1184
1078.91	0.606	20.7842	-919.999	31	51.1551
1079.07	0.61	20.7842	-923.914	25	40.9836
1079.23	0.611	20.7842	-919.999	30	49.0998
1079.4	0.609	21.0014	-919.999	34	55.8292
1079.56	0.603	20.7842	-919.999	30	49.7512
1079.73	0.593	20.7842	-919.999	32	53.9629
1079.89	0.599	20.7842	-923.914	32	53.4224
1080.05	0.602	20.567	-919.999	29	48.1728
1080.22	0.6	20.7842	-923.914	35	58.3333
1080.38	0.594	20.7842	-919.999	30	50.5051
1080.55	0.597	20.7842	-919.999	28	46.9012
1080.71	0.604	20.7842	-919.999	25	41.3907
1080.87	0.61	20.567	-923.914	27	44.2623
1081.04	0.612	20.7842	-919.999	30	49.0196
1081.2	0.607	20.7842	-923.914	31	51.0708
1081.37	0.604	20.7842	-919.999	29	48.0132
1081.53	0.609	20.7842	-919.999	35	57.4713
1081.69	0.605	20.7842	-916.084	41	67.7686
1081.86	0.607	21.0014	-923.914	31	51.0708
1082.02	0.609	21.0014	-919.999	33	54.1872
1082.19	0.609	20.7842	-923.914	31	50.9031
1082.35	0.613	21.0014	-919.999	47	76.6721
1082.51	0.614	21.0014	-923.914	40	65.1466
1082.68	0.611	20.7842	-919.999	34	55.6465
1082.84	0.61	20.7842	-923.914	31	50.8197
1083.01	0.609	20.7842	-923.914	18	29.5567
1083.17	0.611	20.7842	-923.914	32	52.3732
1083.33	0.608	20.7842	-919.999	26	42.7632
1083.5	0.605	20.7842	-923.914	28	46.281
1083.66	0.603	20.7842	-919.999	33	54.7264
1083.83	0.602	20.7842	-919.999	33	54.8173
1083.99	0.603	20.7842	-919.999	26	43.1177
1084.15	0.597	20.7842	-919.999	18	30.1508
1084.32	0.593	21.0014	-919.999	29	48.9039
1084.48	0.593	20.7842	-923.914	26	43.8449
1084.65	0.596	20.7842	-919.999	24	40.2685
1084.81	0.598	20.7842	-923.914	22	36.7893
1084.97	0.604	20.7842	-919.999	27	44.702
1085.14	0.606	20.7842	-923.914	24	39.604
1085.3	0.604	20.7842	-923.914	24	39.7351
1085.47	0.607	20.7842	-919.999	32	52.7183
1085.63	0.612	20.7842	-923.914	24	39.2157
1085.79	0.61	20.7842	-919.999	33	54.0984

1085.96	0.607	21.0014	-923.914	32	52.7183
1086.12	0.607	20.7842	-923.914	39	64.2504
1086.29	0.61	20.7842	-923.914	34	55.7377
1086.45	0.61	20.7842	-919.999	42	68.8525
1086.61	0.607	20.7842	-923.914	41	67.5453
1086.78	0.606	20.7842	-923.914	50	82.5082
1086.94	0.611	20.7842	-923.914	50	81.8331
1087.11	0.613	20.7842	-923.914	31	50.571
1087.27	0.611	20.7842	-919.999	45	73.6498
1087.43	0.607	20.7842	-919.999	37	60.9555
1087.6	0.605	20.7842	-923.914	39	64.4628
1087.76	0.608	20.7842	-919.999	43	70.7237
1087.93	0.608	20.7842	-923.914	44	72.3684
1088.09	0.602	20.7842	-923.914	33	54.8173
1088.25	0.594	20.7842	-919.999	44	74.0741
1088.42	0.592	21.0014	-923.914	42	70.9459
1088.58	0.593	20.7842	-923.914	43	72.5126
1088.75	0.598	20.7842	-919.999	29	48.495
1088.91	0.599	20.7842	-923.914	40	66.778
1089.07	0.602	21.0014	-923.914	37	61.4618
1089.24	0.605	20.567	-919.999	50	82.6446
1089.4	0.609	20.7842	-919.999	28	45.977
1089.57	0.61	20.7842	-919.999	45	73.7705
1089.73	0.601	20.7842	-919.999	43	71.5474
1089.89	0.603	20.7842	-919.999	44	72.9685
1090.06	0.605	21.0014	-919.999	39	64.4628
1090.22	0.61	21.0014	-923.914	38	62.2951
1090.39	0.609	20.7842	-919.999	34	55.8292
1090.55	0.608	20.7842	-919.999	41	67.4342
1090.71	0.608	20.7842	-919.999	41	67.4342
1090.88	0.609	20.7842	-916.084	32	52.5452
1091.04	0.612	21.0014	-923.914	42	68.6274
1091.21	0.61	20.7842	-919.999	31	50.8197
1091.37	0.608	20.7842	-919.999	25	41.1184
1091.53	0.605	20.7842	-923.914	33	54.5455
1091.7	0.606	20.7842	-923.914	40	66.0066
1091.86	0.612	20.7842	-919.999	35	57.1895
1092.03	0.607	20.7842	-919.999	32	52.7183
1092.19	0.601	20.7842	-919.999	38	63.228
1092.35	0.596	20.7842	-923.914	26	43.6242
1092.52	0.599	20.7842	-916.084	34	56.7613
1092.68	0.6	20.7842	-919.999	38	63.3333
1092.85	0.596	20.7842	-923.914	38	63.7584
1093.01	0.595	20.7842	-916.084	41	68.9076
1093.17	0.598	20.7842	-919.999	30	50.1672
1093.34	0.604	20.7842	-919.999	24	39.7351
1093.5	0.607	20.7842	-923.914	34	56.0132

1093.67	0.606	20.7842	-919.999	36	59.4059
1093.83	0.602	20.7842	-919.999	36	59.8007
1093.99	0.603	20.7842	-923.914	38	63.0182
1094.16	0.609	21.0014	-919.999	39	64.0394
1094.32	0.612	21.0014	-919.999	27	44.1176
1094.49	0.61	20.567	-923.914	32	52.459
1094.65	0.601	20.7842	-919.999	33	54.9085
1094.81	0.602	20.7842	-923.914	32	53.1561
1094.98	0.611	20.7842	-923.914	41	67.1031
1095.14	0.613	20.7842	-923.914	43	70.1468
1095.31	0.609	20.7842	-919.999	30	49.2611
1095.47	0.606	20.7842	-919.999	36	59.4059
1095.63	0.609	20.7842	-923.914	26	42.6929
1095.8	0.613	20.7842	-919.999	16	26.1011
1095.96	0.608	20.7842	-923.914	41	67.4342
1096.13	0.601	20.7842	-923.914	23	38.2696
1096.29	0.598	20.567	-923.914	32	53.5117
1096.45	0.598	20.7842	-923.914	30	50.1672
1096.62	0.598	20.7842	-923.914	26	43.4783
1096.78	0.599	20.567	-919.999	29	48.414
1096.95	0.596	20.7842	-919.999	26	43.6242
1097.11	0.594	20.567	-919.999	35	58.9226
1097.27	0.601	20.7842	-923.914	40	66.5557
1097.44	0.609	20.7842	-935.659	33	54.1872
1097.6	0.608	20.7842	-927.829	26	42.7632
1097.77	0.608	20.7842	-923.914	23	37.8289
1097.93	0.608	20.7842	-923.914	21	34.5395
1098.09	0.606	20.7842	-923.914	25	41.2541
1098.26	0.609	20.7842	-923.914	29	47.619
1098.42	0.602	20.7842	-923.914	26	43.1894
1098.59	0.603	21.0014	-919.999	23	38.1426
1098.75	0.602	20.7842	-919.999	24	39.8671
1098.91	0.61	21.0014	-923.914	27	44.2623
1099.08	0.61	20.7842	-919.999	39	63.9344
1099.24	0.607	20.7842	-923.914	35	57.6606
1099.41	0.607	20.7842	-919.999	27	44.4811
1099.57	0.607	20.7842	-919.999	30	49.4234
1099.73	0.605	20.7842	-919.999	23	38.0165
1099.9	0.61	20.7842	-919.999	26	42.623
1100.06	0.609	20.7842	-923.914	37	60.7553
1100.23	0.602	20.567	-923.914	28	46.5116
1100.39	0.602	21.0014	-919.999	34	56.4784
1100.55	0.603	20.7842	-923.914	28	46.4345
1100.72	0.601	20.7842	-927.829	37	61.5641
1100.88	0.597	20.567	-919.999	19	31.8258
1101.05	0.595	20.7842	-923.914	28	47.0588
1101.21	0.596	20.7842	-923.914	37	62.0805

1101.37	0.6	20.7842	-919.999	27	45
1101.54	0.6	20.7842	-919.999	20	33.3333
1101.7	0.602	20.567	-923.914	21	34.8837
1101.87	0.607	20.7842	-923.914	20	32.9489
1102.03	0.61	20.7842	-919.999	32	52.459
1102.19	0.61	21.0014	-923.914	24	39.3443
1102.36	0.608	20.7842	-919.999	32	52.6316
1102.52	0.607	20.7842	-916.084	30	49.4234
1102.69	0.606	21.0014	-923.914	31	51.1551
1102.85	0.609	21.0014	-919.999	47	77.1757
1103.01	0.61	20.567	-919.999	32	52.459
1103.18	0.609	20.7842	-923.914	26	42.6929
1103.34	0.605	20.7842	-919.999	35	57.8512
1103.51	0.604	20.567	-919.999	30	49.6689
1103.67	0.61	20.7842	-923.914	29	47.541
1103.83	0.608	21.0014	-919.999	30	49.3421
1104	0.607	21.0014	-923.914	26	42.8336
1104.16	0.605	20.7842	-916.084	14	23.1405
1104.33	0.606	20.7842	-919.999	34	56.1056
1104.49	0.608	21.0014	-919.999	34	55.9211
1104.65	0.596	20.7842	-919.999	29	48.6577
1104.82	0.595	20.7842	-919.999	27	45.3782
1104.98	0.594	20.567	-923.914	26	43.771
1105.15	0.596	20.7842	-919.999	39	65.4362
1105.31	0.597	20.7842	-919.999	35	58.6265
1105.47	0.6	20.7842	-923.914	31	51.6667
1105.64	0.604	20.567	-923.914	31	51.3245
1105.8	0.604	20.7842	-923.914	36	59.6026
1105.97	0.607	20.7842	-923.914	25	41.1862
1106.13	0.61	20.7842	-919.999	28	45.9016
1106.29	0.607	20.7842	-923.914	38	62.603
1106.46	0.606	20.567	-923.914	22	36.3036
1106.62	0.605	20.7842	-923.914	26	42.9752
1106.79	0.609	20.7842	-923.914	19	31.1987
1106.95	0.612	20.7842	-919.999	27	44.1176
1107.11	0.609	20.7842	-923.914	29	47.619
1107.28	0.606	20.7842	-919.999	31	51.1551
1107.44	0.606	20.567	-923.914	24	39.604
1107.61	0.611	20.7842	-919.999	25	40.9165
1107.77	0.612	20.7842	-919.999	29	47.3856
1107.93	0.61	21.0014	-923.914	31	50.8197
1108.1	0.606	20.567	-919.999	25	41.2541
1108.26	0.604	20.567	-923.914	42	69.5364
1108.43	0.606	20.567	-923.914	27	44.5545
1108.59	0.607	20.567	-923.914	27	44.4811
1108.75	0.601	20.567	-919.999	19	31.614
1108.92	0.595	20.7842	-916.084	20	33.6134

1109.08	0.595	20.7842	-919.999	32	53.7815
1109.25	0.597	20.567	-919.999	31	51.9263
1109.41	0.598	20.7842	-919.999	37	61.8729
1109.57	0.596	20.7842	-923.914	26	43.6242
1109.74	0.593	20.7842	-923.914	35	59.0219
1109.9	0.604	20.567	-919.999	30	49.6689
1110.07	0.612	20.567	-919.999	28	45.7516
1110.23	0.607	20.7842	-923.914	33	54.3657
1110.39	0.604	20.567	-919.999	25	41.3907
1110.56	0.603	20.7842	-923.914	32	53.068
1110.72	0.61	20.567	-919.999	29	47.541
1110.89	0.612	20.567	-923.914	27	44.1176
1111.05	0.609	21.0014	-923.914	29	47.619
1111.21	0.606	20.7842	-927.829	37	61.0561
1111.38	0.605	20.7842	-923.914	23	38.0165
1111.54	0.609	20.7842	-923.914	36	59.1133
1111.71	0.611	20.7842	-919.999	29	47.4632
1111.87	0.61	20.7842	-927.829	39	63.9344
1112.03	0.609	20.7842	-919.999	21	34.4828
1112.2	0.609	20.7842	-923.914	29	47.619
1112.36	0.61	20.7842	-923.914	32	52.459
1112.53	0.61	20.7842	-919.999	29	47.541
1112.69	0.608	20.7842	-919.999	31	50.9868
1112.85	0.601	20.7842	-923.914	27	44.9251
1113.02	0.598	20.7842	-923.914	31	51.8395
1113.18	0.6	20.7842	-919.999	28	46.6667
1113.35	0.594	20.7842	-923.914	31	52.1886
1113.51	0.591	20.7842	-923.914	21	35.533
1113.67	0.591	20.7842	-919.999	25	42.3012
1113.84	0.598	20.567	-919.999	26	43.4783
1114	0.607	20.7842	-923.914	36	59.3081
1114.17	0.608	20.7842	-916.084	26	42.7632
1114.33	0.608	20.7842	-923.914	22	36.1842
1114.49	0.606	20.7842	-919.999	25	41.2541
1114.66	0.601	20.7842	-923.914	23	38.2696
1114.82	0.608	20.7842	-919.999	28	46.0526
1114.99	0.61	20.7842	-923.914	23	37.7049
1115.15	0.604	20.7842	-919.999	26	43.0464
1115.31	0.604	20.7842	-919.999	30	49.6689
1115.48	0.609	20.7842	-919.999	25	41.0509
1115.64	0.613	20.7842	-923.914	27	44.0457
1115.81	0.609	20.567	-919.999	30	49.2611
1115.97	0.608	20.7842	-919.999	21	34.5395
1116.13	0.606	20.7842	-923.914	29	47.8548
1116.3	0.609	20.567	-919.999	30	49.2611
1116.46	0.61	20.7842	-919.999	24	39.3443
1116.63	0.605	20.7842	-919.999	24	39.6694

1116.79	0.605	20.567	-923.914	25	41.3223
1116.95	0.604	20.567	-927.829	29	48.0132
1117.12	0.604	20.7842	-919.999	33	54.6358
1117.28	0.601	20.7842	-919.999	25	41.5973
1117.45	0.598	20.7842	-919.999	28	46.8227
1117.61	0.595	20.567	-919.999	28	47.0588
1117.77	0.596	20.7842	-919.999	23	38.5906
1117.94	0.601	20.567	-927.829	35	58.2363
1118.1	0.603	20.7842	-923.914	35	58.0431
1118.27	0.604	20.7842	-923.914	26	43.0464
1118.43	0.603	20.7842	-919.999	32	53.068
1118.59	0.607	20.7842	-923.914	33	54.3657
1118.76	0.608	20.7842	-919.999	31	50.9868
1118.92	0.606	21.0014	-923.914	26	42.9043
1119.09	0.604	20.567	-927.829	17	28.1457
1119.25	0.604	20.7842	-923.914	30	49.6689
1119.41	0.609	20.7842	-923.914	30	49.2611
1119.58	0.61	20.567	-919.999	28	45.9016
1119.74	0.603	20.7842	-919.999	30	49.7512
1119.91	0.607	20.567	-923.914	26	42.8336
1120.07	0.608	20.567	-919.999	40	65.7895
1120.23	0.609	20.7842	-923.914	29	47.619
1120.4	0.611	20.7842	-919.999	36	58.9198
1120.56	0.61	20.567	-919.999	31	50.8197
1120.73	0.609	20.567	-916.084	37	60.7553
1120.89	0.606	20.7842	-923.914	42	69.3069
1121.05	0.606	20.567	-923.914	30	49.505
1121.22	0.601	21.0014	-919.999	39	64.8918
1121.38	0.597	20.7842	-923.914	30	50.2513
1121.55	0.594	20.7842	-923.914	28	47.138
1121.71	0.595	20.567	-927.829	32	53.7815
1121.87	0.598	20.7842	-923.914	26	43.4783
1122.04	0.599	20.7842	-927.829	25	41.7362
1122.2	0.6	20.567	-923.914	26	43.3333
1122.37	0.603	20.567	-919.999	30	49.7512
1122.53	0.607	20.567	-919.999	28	46.1285
1122.69	0.612	20.567	-919.999	32	52.2876
1122.86	0.609	20.7842	-923.914	32	52.5452
1123.02	0.606	21.0014	-923.914	30	49.505
1123.19	0.604	20.567	-919.999	32	52.9801
1123.35	0.605	20.7842	-923.914	26	42.9752
1123.51	0.606	20.7842	-919.999	32	52.8053
1123.68	0.608	20.7842	-919.999	31	50.9868
1123.84	0.606	20.7842	-927.829	33	54.4554
1124.01	0.605	20.7842	-919.999	26	42.9752
1124.17	0.612	20.567	-923.914	33	53.9216
1124.33	0.612	20.7842	-919.999	32	52.2876

1124.5	0.609	20.567	-919.999	29	47.619
1124.66	0.6	20.7842	-919.999	20	33.3333
1124.83	0.605	20.7842	-919.999	29	47.9339
1124.99	0.609	20.567	-923.914	35	57.4713
1125.15	0.61	20.7842	-923.914	29	47.541
1125.32	0.602	20.567	-923.914	35	58.1395
1125.48	0.597	20.7842	-923.914	31	51.9263
1125.65	0.598	20.7842	-923.914	30	50.1672
1125.81	0.598	20.7842	-923.914	29	48.495
1125.97	0.598	20.7842	-923.914	21	35.1171
1126.14	0.598	20.7842	-919.999	32	53.5117
1126.3	0.598	20.7842	-919.999	43	71.9064
1126.47	0.602	20.567	-923.914	29	48.1728
1126.63	0.606	20.567	-923.914	30	49.505
1126.79	0.61	20.7842	-919.999	27	44.2623
1126.96	0.609	20.567	-923.914	27	44.335
1127.12	0.605	20.7842	-923.914	24	39.6694
1127.29	0.607	20.7842	-919.999	25	41.1862
1127.45	0.612	20.7842	-927.829	28	45.7516
1127.61	0.61	20.7842	-919.999	18	29.5082
1127.78	0.61	20.7842	-919.999	33	54.0984
1127.94	0.606	20.567	-919.999	32	52.8053
1128.11	0.608	20.7842	-923.914	22	36.1842
1128.27	0.61	20.7842	-923.914	29	47.541
1128.43	0.608	20.7842	-919.999	28	46.0526
1128.6	0.608	20.7842	-923.914	32	52.6316
1128.76	0.606	20.7842	-927.829	36	59.4059
1128.93	0.609	20.7842	-919.999	22	36.1248
1129.09	0.609	20.7842	-923.914	26	42.6929
1129.25	0.608	20.7842	-923.914	23	37.8289
1129.42	0.602	20.7842	-927.829	28	46.5116
1129.58	0.6	20.7842	-919.999	31	51.6667
1129.75	0.597	20.7842	-927.829	29	48.5762
1129.91	0.599	20.7842	-919.999	27	45.0751
1130.07	0.596	20.567	-916.084	28	46.9799
1130.24	0.593	20.567	-919.999	24	40.4722
1130.4	0.597	20.567	-919.999	26	43.5511
1130.57	0.604	20.7842	-923.914	28	46.3576
1130.73	0.609	20.7842	-923.914	31	50.9031
1130.89	0.609	20.567	-919.999	32	52.5452
1131.06	0.605	20.567	-919.999	29	47.9339
1131.22	0.603	20.7842	-923.914	28	46.4345
1131.39	0.609	20.567	-919.999	39	64.0394
1131.55	0.606	20.567	-919.999	39	64.3564
1131.71	0.608	20.7842	-923.914	31	50.9868
1131.88	0.609	20.7842	-919.999	25	41.0509
1132.04	0.609	20.567	-916.084	31	50.9031

1132.21	0.611	20.7842	-919.999	31	50.7365
1132.37	0.612	20.7842	-919.999	40	65.3595
1132.53	0.611	20.567	-923.914	24	39.2799
1132.7	0.609	20.567	-923.914	28	45.977
1132.86	0.612	20.567	-919.999	34	55.5556
1133.03	0.611	20.7842	-923.914	21	34.3699
1133.19	0.606	20.567	-919.999	33	54.4554
1133.35	0.602	20.567	-919.999	36	59.8007
1133.52	0.607	20.567	-927.829	37	60.9555
1133.68	0.619	20.7842	-919.999	32	51.6963
1133.85	0.62	20.7842	-923.914	28	45.1613
1134.01	0.614	20.7842	-919.999	32	52.1173
1134.17	0.61	20.7842	-919.999	26	42.623
1134.34	0.611	20.7842	-919.999	31	50.7365
1134.5	0.617	20.567	-923.914	26	42.1394
1134.67	0.616	20.567	-923.914	32	51.9481
1134.83	0.622	20.567	-919.999	36	57.8778
1134.99	0.625	20.7842	-919.999	21	33.6
1135.16	0.623	20.7842	-923.914	32	51.3644
1135.32	0.627	20.567	-927.829	28	44.6571
1135.49	0.626	20.7842	-923.914	29	46.3259
1135.65	0.624	20.567	-919.999	30	48.0769
1135.81	0.625	20.567	-919.999	26	41.6
1135.98	0.625	20.7842	-919.999	29	46.4
1136.14	0.629	20.567	-912.169	31	49.2846
1136.31	0.624	20.7842	-919.999	26	41.6667
1136.47	0.621	20.7842	-923.914	31	49.9195
1136.63	0.625	20.7842	-919.999	40	64
1136.8	0.63	20.567	-919.999	31	49.2063
1136.96	0.63	20.567	-919.999	38	60.3175
1137.13	0.625	20.7842	-923.914	33	52.8
1137.29	0.625	20.7842	-919.999	38	60.8
1137.45	0.626	20.7842	-919.999	47	75.0799
1137.62	0.624	20.7842	-923.914	40	64.1026
1137.78	0.622	20.7842	-923.914	42	67.5241
1137.95	0.611	20.567	-923.914	46	75.2864
1138.11	0.61	20.567	-919.999	34	55.7377
1138.27	0.612	20.567	-919.999	48	78.4314
1138.44	0.614	20.7842	-923.914	36	58.6319
1138.6	0.617	20.7842	-923.914	45	72.9335
1138.77	0.618	20.7842	-923.914	35	56.6343
1138.93	0.621	20.7842	-919.999	39	62.8019
1139.09	0.627	20.567	-919.999	32	51.0367
1139.26	0.627	20.567	-919.999	33	52.6316
1139.42	0.62	20.7842	-919.999	41	66.129
1139.59	0.619	20.7842	-923.914	48	77.5444
1139.75	0.623	20.567	-923.914	40	64.2055

1139.91	0.628	20.7842	-923.914	43	68.4713
1140.08	0.624	20.567	-919.999	41	65.7051
1140.24	0.626	20.567	-919.999	50	79.8722
1140.41	0.626	20.567	-927.829	26	41.5335
1140.57	0.63	20.7842	-927.829	40	63.4921
1140.73	0.629	20.7842	-916.084	27	42.9253
1140.9	0.627	20.7842	-923.914	46	73.3652
1141.06	0.623	20.567	-919.999	31	49.7592
1141.23	0.622	20.567	-919.999	33	53.0547
1141.39	0.627	20.7842	-923.914	39	62.201
1141.55	0.628	20.567	-923.914	37	58.9172
1141.72	0.62	20.7842	-923.914	41	66.129
1141.88	0.614	20.567	-919.999	32	52.1173
1142.05	0.612	20.567	-919.999	43	70.2614
1142.21	0.616	20.7842	-923.914	33	53.5714
1142.37	0.616	20.7842	-919.999	28	45.4545
1142.54	0.614	20.7842	-919.999	42	68.4039
1142.7	0.618	20.567	-923.914	38	61.4887
1142.87	0.622	20.7842	-927.829	41	65.9164
1143.03	0.627	20.567	-923.914	37	59.0112
1143.19	0.623	20.7842	-923.914	36	57.7849
1143.36	0.622	20.567	-919.999	36	57.8778
1143.52	0.621	20.567	-923.914	52	83.7359
1143.69	0.625	20.567	-916.084	42	67.2
1143.85	0.629	20.7842	-923.914	53	84.2607
1144.01	0.626	20.7842	-919.999	46	73.4824
1144.18	0.624	20.567	-919.999	38	60.8974
1144.34	0.616	20.567	-927.829	32	51.9481
1144.51	0.629	20.7842	-919.999	31	49.2846
1144.67	0.63	21.0014	-923.914	33	52.381
1144.83	0.625	20.7842	-916.084	36	57.6
1145	0.624	20.7842	-919.999	23	36.859
1145.16	0.625	20.7842	-923.914	37	59.2
1145.33	0.631	20.567	-923.914	28	44.374
1145.49	0.627	20.7842	-919.999	36	57.4163
1145.65	0.622	20.7842	-923.914	31	49.8392
1145.82	0.617	20.567	-923.914	39	63.2091
1145.98	0.616	20.7842	-923.914	40	64.9351
1146.15	0.615	20.7842	-923.914	38	61.7886
1146.31	0.612	20.567	-923.914	43	70.2614
1146.47	0.611	20.567	-923.914	25	40.9165
1146.64	0.618	20.7842	-927.829	40	64.7249
1146.8	0.622	20.7842	-923.914	36	57.8778
1146.97	0.627	20.567	-923.914	28	44.6571
1147.13	0.626	20.7842	-919.999	36	57.508
1147.29	0.625	20.7842	-923.914	35	56
1147.46	0.628	20.567	-912.169	36	57.3248

1147.62	0.626	20.567	-919.999	29	46.3259
1147.79	0.624	20.7842	-919.999	40	64.1026
1147.95	0.62	20.7842	-919.999	29	46.7742
1148.11	0.623	20.567	-923.914	30	48.1541
1148.28	0.626	20.567	-916.084	28	44.7284
1148.44	0.63	20.7842	-923.914	29	46.0317
1148.61	0.626	20.7842	-923.914	18	28.754
1148.77	0.625	20.567	-919.999	24	38.4
1148.93	0.627	20.7842	-923.914	30	47.8469
1149.1	0.626	20.7842	-919.999	33	52.7157
1149.26	0.625	20.3498	-919.999	29	46.4
1149.43	0.626	20.567	-919.999	24	38.3387
1149.59	0.622	20.7842	-919.999	24	38.5852
1149.75	0.618	21.0014	-919.999	35	56.6343
1149.92	0.621	20.567	-919.999	35	56.3607
1150.08	0.617	20.7842	-919.999	38	61.5883
1150.25	0.614	20.567	-919.999	24	39.0879
1150.41	0.611	20.567	-927.829	34	55.6465
1150.57	0.614	20.7842	-919.999	22	35.8306
1150.74	0.618	21.0014	-923.914	33	53.3981
1150.9	0.621	20.567	-923.914	26	41.868
1151.07	0.62	20.7842	-919.999	35	56.4516
1151.23	0.624	20.567	-919.999	27	43.2692
1151.39	0.63	20.567	-923.914	23	36.5079
1151.56	0.626	20.7842	-923.914	35	55.9105
1151.72	0.626	20.567	-919.999	34	54.3131
1151.89	0.623	20.567	-927.829	33	52.9695
1152.05	0.625	20.7842	-919.999	26	41.6
1152.21	0.629	20.567	-919.999	25	39.7456
1152.38	0.628	20.7842	-919.999	28	44.586
1152.54	0.625	20.567	-923.914	26	41.6
1152.71	0.623	20.7842	-923.914	20	32.1027
1152.87	0.623	20.567	-923.914	23	36.9181
1153.03	0.628	20.567	-919.999	24	38.2166
1153.2	0.627	20.7842	-923.914	29	46.252
1153.36	0.623	20.7842	-923.914	20	32.1027
1153.53	0.624	20.567	-919.999	25	40.0641
1153.69	0.627	20.7842	-927.829	22	35.0877
1153.85	0.621	20.567	-919.999	39	62.8019
1154.02	0.608	20.567	-923.914	24	39.4737
1154.18	0.61	20.567	-923.914	19	31.1475
1154.35	0.613	20.567	-923.914	32	52.2023
1154.51	0.616	20.7842	-923.914	34	55.1948
1154.67	0.617	20.567	-923.914	33	53.4846
1154.84	0.619	20.567	-923.914	32	51.6963
1155	0.623	21.0014	-923.914	29	46.549
1155.17	0.625	20.7842	-919.999	30	48

1155.33	0.628	20.567	-923.914	23	36.6242
1155.49	0.625	20.7842	-923.914	32	51.2
1155.66	0.622	20.567	-923.914	32	51.4469
1155.82	0.622	20.567	-919.999	36	57.8778
1155.99	0.625	20.7842	-923.914	31	49.6
1156.15	0.628	20.567	-923.914	32	50.9554
1156.31	0.626	20.567	-923.914	21	33.5463
1156.48	0.624	20.567	-923.914	35	56.0897
1156.64	0.626	20.7842	-927.829	27	43.131
1156.81	0.631	20.7842	-923.914	31	49.1284
1156.97	0.631	20.567	-912.169	26	41.2044
1157.13	0.627	20.567	-927.829	26	41.4673
1157.3	0.621	20.567	-908.254	38	61.1916
1157.46	0.624	20.7842	-919.999	21	33.6538
1157.63	0.626	20.7842	-923.914	22	35.1438
1157.79	0.621	20.7842	-923.914	29	46.6989
1157.95	0.617	20.567	-919.999	23	37.2771
1158.12	0.613	20.567	-919.999	27	44.0457
1158.28	0.612	20.7842	-919.999	19	31.0458
1158.45	0.614	20.567	-919.999	33	53.7459
1158.61	0.613	20.7842	-923.914	31	50.571
1158.77	0.615	20.567	-923.914	27	43.9024
1158.94	0.615	20.7842	-919.999	30	48.7805
1159.1	0.626	20.7842	-923.914	37	59.1054
1159.27	0.63	20.7842	-923.914	33	52.381
1159.43	0.621	20.567	-923.914	36	57.971
1159.59	0.622	20.7842	-923.914	27	43.4084
1159.76	0.624	20.567	-927.829	24	38.4615
1159.92	0.63	20.7842	-923.914	33	52.381
1160.09	0.628	20.567	-923.914	33	52.5478
1160.25	0.627	20.7842	-923.914	38	60.6061
1160.41	0.624	20.567	-923.914	35	56.0897
1160.58	0.626	20.567	-919.999	43	68.6901
1160.74	0.626	20.7842	-923.914	35	55.9105
1160.91	0.627	20.7842	-919.999	34	54.2265
1161.07	0.626	20.567	-919.999	37	59.1054
1161.23	0.627	20.567	-927.829	41	65.3907
1161.4	0.629	20.7842	-923.914	36	57.2337
1161.56	0.63	20.567	-923.914	31	49.2063
1161.73	0.623	20.7842	-923.914	37	59.39
1161.89	0.619	20.567	-919.999	29	46.8498
1162.05	0.619	20.567	-919.999	31	50.0808
1162.22	0.617	20.567	-923.914	39	63.2091
1162.38	0.614	20.7842	-923.914	24	39.0879
1162.55	0.607	20.567	-923.914	37	60.9555
1162.71	0.611	20.567	-923.914	38	62.1931
1162.87	0.618	20.567	-916.084	26	42.0712

1163.04	0.625	20.7842	-923.914	33	52.8
1163.2	0.627	20.7842	-919.999	32	51.0367
1163.37	0.624	20.7842	-923.914	45	72.1154
1163.53	0.625	20.7842	-919.999	44	70.4
1163.69	0.621	20.567	-923.914	36	57.971
1163.86	0.622	20.7842	-923.914	35	56.2701
1164.02	0.625	20.567	-923.914	33	52.8
1164.19	0.623	20.7842	-919.999	29	46.549
1164.35	0.624	20.567	-919.999	43	68.9103
1164.51	0.628	20.567	-919.999	49	78.0255
1164.68	0.631	20.7842	-919.999	29	45.9588
1164.84	0.627	20.7842	-919.999	33	52.6316
1165.01	0.625	20.7842	-919.999	41	65.6
1165.17	0.628	20.567	-923.914	31	49.3631
1165.33	0.629	20.7842	-923.914	32	50.8744
1165.5	0.629	20.7842	-919.999	30	47.6948
1165.66	0.623	20.567	-919.999	45	72.2311
1165.83	0.622	20.567	-919.999	37	59.4855
1165.99	0.623	20.567	-919.999	40	64.2055
1166.15	0.618	20.7842	-919.999	26	42.0712
1166.32	0.615	20.7842	-919.999	29	47.1545
1166.48	0.611	20.7842	-919.999	38	62.1931
1166.65	0.614	20.7842	-931.744	25	40.7166
1166.81	0.621	20.7842	-923.914	30	48.3092
1166.97	0.621	20.567	-923.914	30	48.3092
1167.14	0.622	20.7842	-923.914	34	54.6624
1167.3	0.622	20.567	-923.914	27	43.4084
1167.47	0.624	20.567	-919.999	37	59.2949
1167.63	0.628	20.567	-923.914	29	46.1783
1167.79	0.626	20.7842	-919.999	44	70.2875
1167.96	0.623	20.7842	-923.914	34	54.5746
1168.12	0.622	20.7842	-923.914	27	43.4084
1168.29	0.628	20.7842	-916.084	34	54.1401
1168.45	0.628	20.567	-923.914	31	49.3631
1168.61	0.623	20.7842	-919.999	31	49.7592
1168.78	0.626	20.567	-919.999	27	43.131
1168.94	0.63	20.7842	-919.999	32	50.7937
1169.11	0.628	20.567	-923.914	26	41.4013
1169.27	0.626	20.7842	-923.914	25	39.9361
1169.43	0.624	20.567	-923.914	36	57.6923
1169.6	0.624	20.7842	-923.914	29	46.4744
1169.76	0.628	20.7842	-923.914	37	58.9172
1169.93	0.625	20.7842	-919.999	29	46.4
1170.09	0.619	20.567	-923.914	34	54.9273
1170.25	0.614	20.7842	-923.914	30	48.8599
1170.42	0.608	20.7842	-916.084	30	49.3421
1170.58	0.613	20.7842	-919.999	33	53.8336

1170.75	0.616	20.7842	-919.999	24	38.961
1170.91	0.62	20.567	-919.999	34	54.8387
1171.07	0.622	20.567	-923.914	36	57.8778
1171.24	0.629	20.7842	-927.829	22	34.9762
1171.4	0.629	20.7842	-919.999	22	34.9762
1171.57	0.628	20.7842	-923.914	37	58.9172
1171.73	0.625	20.7842	-923.914	38	60.8
1171.89	0.621	20.7842	-919.999	21	33.8164
1172.06	0.624	20.567	-916.084	32	51.2821
1172.22	0.624	20.7842	-919.999	27	43.2692
1172.39	0.624	20.7842	-923.914	26	41.6667
1172.55	0.622	20.7842	-919.999	34	54.6624
1172.71	0.624	20.567	-919.999	25	40.0641
1172.88	0.629	20.567	-923.914	31	49.2846
1173.04	0.63	20.7842	-923.914	40	63.4921
1173.21	0.629	20.7842	-923.914	29	46.1049
1173.37	0.621	20.7842	-919.999	26	41.868
1173.53	0.622	20.567	-923.914	25	40.1929
1173.7	0.628	20.7842	-919.999	33	52.5478
1173.86	0.627	20.567	-927.829	25	39.8724
1174.03	0.618	20.567	-923.914	27	43.6893
1174.19	0.615	20.567	-919.999	33	53.6585
1174.35	0.617	20.7842	-923.914	32	51.8639
1174.52	0.617	20.7842	-919.999	25	40.5186
1174.68	0.614	20.7842	-923.914	22	35.8306
1174.85	0.613	20.7842	-923.914	28	45.677
1175.01	0.616	20.567	-919.999	29	47.0779
1175.17	0.623	21.0014	-923.914	25	40.1284
1175.34	0.624	20.567	-919.999	33	52.8846
1175.5	0.628	20.3498	-919.999	28	44.586
1175.67	0.627	20.567	-927.829	22	35.0877
1175.83	0.626	20.567	-923.914	33	52.7157
1175.99	0.627	20.567	-923.914	27	43.0622
1176.16	0.628	20.567	-919.999	23	36.6242
1176.32	0.628	20.567	-923.914	27	42.9936
1176.49	0.625	20.567	-919.999	38	60.8
1176.65	0.627	20.567	-923.914	21	33.4928
1176.81	0.63	20.567	-919.999	25	39.6825
1176.98	0.627	20.567	-923.914	22	35.0877
1177.14	0.622	20.567	-923.914	15	24.1158
1177.31	0.623	20.567	-923.914	31	49.7592
1177.47	0.626	20.567	-919.999	21	33.5463
1177.63	0.628	20.7842	-923.914	27	42.9936
1177.8	0.627	20.567	-927.829	38	60.6061
1177.96	0.62	20.567	-923.914	28	45.1613
1178.13	0.616	20.7842	-923.914	23	37.3377
1178.29	0.611	20.7842	-923.914	21	34.3699

1178.45	0.615	20.567	-923.914	28	45.5285
1178.62	0.614	20.567	-919.999	27	43.9739
1178.78	0.612	20.567	-923.914	40	65.3595
1178.95	0.614	20.567	-923.914	16	26.0586
1179.11	0.625	20.7842	-919.999	16	25.6
1179.27	0.629	20.567	-919.999	25	39.7456
1179.44	0.628	20.567	-923.914	37	58.9172
1179.6	0.627	20.7842	-916.084	32	51.0367
1179.77	0.627	20.567	-923.914	23	36.6826
1179.93	0.627	20.7842	-919.999	22	35.0877
1180.09	0.623	20.7842	-919.999	22	35.313
1180.26	0.623	20.7842	-919.999	33	52.9695
1180.42	0.625	20.7842	-923.914	31	49.6
1180.59	0.632	20.7842	-919.999	26	41.1392
1180.75	0.631	20.567	-923.914	33	52.2979
1180.91	0.631	20.7842	-923.914	23	36.4501
1181.08	0.627	20.7842	-923.914	28	44.6571
1181.24	0.628	20.7842	-923.914	34	54.1401
1181.41	0.631	20.567	-923.914	24	38.0349
1181.57	0.628	20.567	-919.999	19	30.2548
1181.73	0.626	20.7842	-923.914	28	44.7284
1181.9	0.621	20.567	-927.829	22	35.4267
1182.06	0.622	20.567	-927.829	15	24.1158
1182.23	0.62	20.7842	-923.914	31	50
1182.39	0.614	20.7842	-919.999	33	53.7459
1182.55	0.611	20.7842	-919.999	32	52.3732
1182.72	0.61	20.7842	-923.914	32	52.459
1182.88	0.619	20.7842	-919.999	25	40.3877
1183.05	0.62	20.567	-923.914	35	56.4516
1183.21	0.619	20.7842	-923.914	26	42.0032
1183.37	0.625	20.7842	-923.914	24	38.4
1183.54	0.625	20.567	-923.914	30	48
1183.7	0.627	20.567	-923.914	23	36.6826
1183.87	0.627	20.567	-923.914	29	46.252
1184.03	0.628	20.7842	-923.914	28	44.586
1184.19	0.627	20.567	-923.914	33	52.6316
1184.36	0.629	20.567	-919.999	29	46.1049
1184.52	0.632	20.567	-919.999	28	44.3038
1184.69	0.627	20.7842	-923.914	27	43.0622
1184.85	0.625	20.7842	-919.999	25	40
1185.01	0.624	20.7842	-923.914	30	48.0769
1185.18	0.631	20.7842	-919.999	25	39.6197
1185.34	0.633	20.7842	-923.914	29	45.8136
1185.51	0.631	20.7842	-923.914	28	44.374
1185.67	0.625	20.7842	-923.914	23	36.8
1185.83	0.627	20.7842	-916.084	25	39.8724
1186	0.628	20.567	-923.914	21	33.4395

1186.16	0.624	20.7842	-923.914	27	43.2692
1186.33	0.616	21.0014	-923.914	26	42.2078
1186.49	0.613	20.567	-916.084	24	39.1517
1186.65	0.612	20.7842	-919.999	21	34.3137
1186.82	0.613	20.7842	-923.914	28	45.677
1186.98	0.618	20.7842	-919.999	22	35.5987
1187.15	0.617	20.567	-919.999	29	47.0016
1187.31	0.623	20.7842	-923.914	33	52.9695
1187.47	0.628	20.567	-923.914	25	39.8089
1187.64	0.631	20.567	-919.999	30	47.5436
1187.8	0.627	20.567	-927.829	22	35.0877
1187.97	0.617	20.567	-919.999	30	48.6224
1188.13	0.622	20.7842	-919.999	18	28.9389
1188.29	0.629	20.7842	-927.829	32	50.8744
1188.46	0.63	20.7842	-923.914	25	39.6825
1188.62	0.627	20.567	-923.914	35	55.8214
1188.79	0.627	20.7842	-923.914	24	38.2775
1188.95	0.629	20.567	-923.914	28	44.5151
1189.11	0.632	20.7842	-916.084	26	41.1392
1189.28	0.63	20.7842	-923.914	33	52.381
1189.44	0.629	20.567	-927.829	24	38.1558
1189.61	0.626	20.7842	-923.914	28	44.7284
1189.77	0.628	20.7842	-923.914	27	42.9936
1189.93	0.629	20.7842	-919.999	20	31.7965
1190.1	0.623	20.567	-919.999	21	33.7079
1190.26	0.615	20.7842	-919.999	25	40.6504
1190.43	0.615	20.7842	-923.914	22	35.7724
1190.59	0.617	20.7842	-919.999	28	45.3809
1190.75	0.617	20.7842	-919.999	27	43.7601
1190.92	0.616	20.567	-923.914	28	45.4545
1191.08	0.617	20.7842	-923.914	26	42.1394
1191.25	0.621	20.7842	-919.999	27	43.4783
1191.41	0.627	20.7842	-923.914	36	57.4163
1191.57	0.626	20.567	-923.914	25	39.9361
1191.74	0.626	20.7842	-923.914	18	28.754
1191.9	0.624	20.7842	-927.829	26	41.6667
1192.07	0.627	20.7842	-919.999	27	43.0622
1192.23	0.628	20.7842	-923.914	35	55.7325
1192.39	0.626	20.7842	-923.914	34	54.3131
1192.56	0.627	20.7842	-919.999	29	46.252
1192.72	0.626	20.7842	-927.829	22	35.1438
1192.89	0.627	20.7842	-923.914	20	31.8979
1193.05	0.633	20.567	-923.914	28	44.2338
1193.21	0.629	20.7842	-923.914	27	42.9253
1193.38	0.623	20.7842	-923.914	19	30.4976
1193.54	0.627	20.7842	-927.829	35	55.8214
1193.71	0.632	20.7842	-923.914	24	37.9747

1193.87	0.631	20.7842	-927.829	26	41.2044
1194.03	0.623	20.7842	-923.914	32	51.3644
1194.2	0.62	20.7842	-919.999	32	51.6129
1194.36	0.617	20.7842	-919.999	22	35.6564
1194.53	0.616	20.567	-919.999	21	34.0909
1194.69	0.613	20.7842	-927.829	17	27.7325
1194.85	0.613	20.7842	-927.829	23	37.5204
1195.02	0.618	20.7842	-919.999	29	46.9256
1195.18	0.625	20.7842	-927.829	20	32
1195.35	0.626	20.7842	-919.999	36	57.508
1195.51	0.627	20.7842	-923.914	27	43.0622
1195.67	0.626	20.567	-919.999	13	20.7668
1195.84	0.627	20.7842	-923.914	24	38.2775
1196	0.63	20.7842	-923.914	24	38.0952
1196.17	0.628	20.7842	-923.914	32	50.9554
1196.33	0.624	20.567	-923.914	27	43.2692
1196.49	0.62	20.7842	-919.999	27	43.5484
1196.66	0.628	20.7842	-919.999	32	50.9554
1196.82	0.628	20.7842	-923.914	22	35.0318
1196.99	0.628	20.7842	-923.914	21	33.4395
1197.15	0.627	20.7842	-919.999	29	46.252
1197.31	0.629	20.7842	-919.999	23	36.566
1197.48	0.631	20.7842	-923.914	22	34.8653
1197.64	0.624	20.7842	-923.914	20	32.0513
1197.81	0.626	20.7842	-923.914	22	35.1438
1197.97	0.624	20.7842	-919.999	22	35.2564
1198.13	0.623	20.567	-919.999	28	44.9438
1198.3	0.62	20.7842	-923.914	21	33.871
1198.46	0.619	20.567	-923.914	22	35.5412
1198.63	0.616	20.7842	-923.914	24	38.961
1198.79	0.611	20.7842	-919.999	29	47.4632
1198.95	0.615	20.7842	-916.084	27	43.9024
1199.12	0.62	20.567	-927.829	19	30.6452
1199.28	0.621	20.7842	-927.829	29	46.6989
1199.45	0.624	20.7842	-923.914	19	30.4487
1199.61	0.625	20.7842	-923.914	24	38.4
1199.77	0.629	21.0014	-919.999	28	44.5151
1199.94	0.629	20.7842	-927.829	24	38.1558
1200.1	0.628	20.7842	-923.914	24	38.2166
1200.27	0.626	20.7842	-923.914	24	38.3387
1200.43	0.628	20.567	-919.999	37	58.9172
1200.59	0.635	20.7842	-923.914	22	34.6457
1200.76	0.63	21.0014	-919.999	21	33.3333
1200.92	0.628	20.7842	-919.999	23	36.6242
1201.09	0.625	21.0014	-919.999	22	35.2
1201.25	0.628	20.7842	-919.999	22	35.0318
1201.41	0.629	20.7842	-919.999	28	44.5151

1201.58	0.629	20.7842	-919.999	24	38.1558
1201.74	0.627	20.7842	-923.914	20	31.8979
1201.91	0.625	20.7842	-923.914	23	36.8
1202.07	0.627	20.7842	-923.914	24	38.2775
1202.23	0.625	20.7842	-919.999	28	44.8
1202.4	0.616	20.7842	-916.084	20	32.4675
1202.56	0.608	20.7842	-923.914	34	55.9211
1202.73	0.613	20.7842	-923.914	23	37.5204
1202.89	0.621	20.7842	-919.999	26	41.868
1203.05	0.617	20.567	-923.914	15	24.3112
1203.22	0.618	20.567	-916.084	29	46.9256
1203.38	0.623	20.567	-919.999	30	48.1541
1203.55	0.629	20.7842	-927.829	25	39.7456
1203.71	0.633	20.567	-923.914	22	34.7551
1203.87	0.627	20.7842	-923.914	40	63.7959
1204.04	0.626	21.0014	-923.914	34	54.3131
1204.2	0.624	20.7842	-923.914	25	40.0641
1204.37	0.626	20.7842	-931.744	27	43.131
1204.53	0.628	20.7842	-923.914	30	47.7707
1204.69	0.628	21.0014	-923.914	29	46.1783
1204.86	0.628	20.7842	-923.914	35	55.7325
1205.02	0.631	20.7842	-919.999	23	36.4501
1205.19	0.634	20.7842	-919.999	23	36.2776
1205.35	0.633	20.7842	-923.914	34	53.7125
1205.51	0.629	20.7842	-923.914	33	52.4642
1205.68	0.627	20.7842	-919.999	20	31.8979
1205.84	0.629	20.7842	-919.999	34	54.0541
1206.01	0.629	20.7842	-923.914	26	41.3355
1206.17	0.621	20.7842	-923.914	32	51.5298
1206.33	0.618	21.0014	-919.999	23	37.2168
1206.5	0.613	20.7842	-919.999	26	42.4144
1206.66	0.615	20.7842	-923.914	23	37.3984
1206.83	0.615	20.567	-919.999	29	47.1545
1206.99	0.615	21.0014	-919.999	24	39.0244
1207.15	0.616	20.567	-919.999	30	48.7013
1207.32	0.618	20.567	-919.999	28	45.3074
1207.48	0.624	20.7842	-923.914	24	38.4615
1207.65	0.631	20.7842	-919.999	32	50.7132
1207.81	0.625	20.7842	-923.914	24	38.4
1207.97	0.623	21.0014	-927.829	26	41.7335
1208.14	0.625	20.7842	-919.999	20	32
1208.3	0.634	20.7842	-919.999	24	37.8549
1208.47	0.63	20.567	-923.914	19	30.1587
1208.63	0.626	20.7842	-927.829	19	30.3514
1208.79	0.627	20.7842	-923.914	19	30.303
1208.96	0.629	20.7842	-923.914	33	52.4642
1209.12	0.633	20.7842	-923.914	24	37.9147

1209.29	0.63	20.7842	-923.914	32	50.7937
1209.45	0.628	20.7842	-923.914	28	44.586
1209.61	0.628	20.567	-923.914	30	47.7707
1209.78	0.632	20.7842	-919.999	28	44.3038
1209.94	0.63	20.7842	-919.999	27	42.8571
1210.11	0.625	21.0014	-919.999	27	43.2
1210.27	0.623	20.7842	-923.914	24	38.5233
1210.43	0.619	20.7842	-919.999	24	38.7722
1210.6	0.621	21.0014	-919.999	27	43.4783
1210.76	0.614	20.7842	-923.914	26	42.3453
1210.93	0.61	20.7842	-923.914	33	54.0984
1211.09	0.612	21.0014	-919.999	30	49.0196
1211.25	0.62	20.7842	-927.829	29	46.7742
1211.42	0.628	20.7842	-919.999	15	23.8854
1211.58	0.629	20.7842	-923.914	24	38.1558
1211.75	0.625	20.7842	-919.999	30	48
1211.91	0.626	21.0014	-919.999	25	39.9361
1212.07	0.628	20.7842	-923.914	33	52.5478
1212.24	0.622	20.7842	-923.914	20	32.1543
1212.4	0.626	20.7842	-923.914	31	49.5208
1212.57	0.627	20.567	-919.999	26	41.4673
1212.73	0.626	20.7842	-919.999	20	31.9489
1212.89	0.63	20.7842	-923.914	28	44.4444
1213.06	0.631	20.7842	-919.999	30	47.5436
1213.22	0.63	20.7842	-919.999	28	44.4444
1213.39	0.629	20.7842	-923.914	25	39.7456
1213.55	0.633	20.7842	-916.084	23	36.3349
1213.71	0.631	20.7842	-919.999	29	45.9588
1213.88	0.629	20.7842	-919.999	23	36.566
1214.04	0.623	20.7842	-919.999	28	44.9438
1214.21	0.621	20.7842	-923.914	25	40.2576
1214.37	0.623	20.7842	-919.999	34	54.5746
1214.53	0.621	20.7842	-919.999	29	46.6989
1214.7	0.616	20.7842	-923.914	29	47.0779
1214.86	0.615	20.7842	-919.999	32	52.0325
1215.03	0.618	20.7842	-919.999	32	43.6893
1215.19	0.622	20.7842	-919.999	27	36.9775
1215.35	0.623	20.7842	-919.999	23	33.7079
1215.52	0.623	20.7842	-919.999	21	51.3644
1215.68	0.623	20.7842	-919.999	32	36.9181
1215.85	0.624	20.7842	-919.999	23	52.8846
1216.01	0.628	20.7842	-923.914	33	41.4013
1216.17	0.625	20.7842	-919.999	26	46.4
1216.34	0.623	21.0014	-919.999	29	46.549
1216.5	0.625	20.7842	-923.914	29	43.2
1216.67	0.631	20.7842	-923.914	27	55.4675
1216.83	0.631	20.7842	-919.999	35	45.9588

1216.99	0.627	20.7842	-919.999	29	27.1132
1217.16	0.624	20.7842	-923.914	17	54.4872
1217.32	0.63	20.7842	-923.914	34	22.2222
1217.49	0.632	20.7842	-919.999	14	53.7975
1217.65	0.629	20.7842	-923.914	34	30.2067
1217.81	0.628	20.7842	-923.914	19	33.4395
1217.98	0.63	21.0014	-923.914	21	34.9206
1218.14	0.627	20.7842	-923.914	22	44.6571
1218.31	0.625	20.7842	-923.914	28	48
1218.47	0.618	20.7842	-927.829	30	30.7443
1218.63	0.612	20.7842	-919.999	19	39.2157
1218.8	0.613	20.7842	-919.999	24	50.571
1218.96	0.617	20.7842	-919.999	31	43.7601
1219.13	0.618	20.7842	-919.999	27	51.7799
1219.29	0.622	20.7842	-923.914	32	46.6238
1219.45	0.623	20.7842	-919.999	29	32.1027
1219.62	0.628	20.7842	-923.914	20	46.1783
1219.78	0.631	20.7842	-919.999	29	36.4501
1219.95	0.628	20.7842	-923.914	23	42.9936
1220.11	0.627	21.0014	-923.914	27	60.6061
1220.27	0.626	20.567	-916.084	38	49.5208
1220.44	0.626	20.7842	-923.914	31	43.131
1220.6	0.626	20.7842	-919.999	27	46.3259
1220.77	0.623	20.7842	-916.084	29	48.1541
1220.93	0.624	20.7842	-919.999	30	56.0897
1221.09	0.627	21.0014	-916.084	35	28.7081
1221.26	0.633	21.0014	-923.914	18	48.9731
1221.42	0.632	20.7842	-919.999	31	45.8861
1221.59	0.632	20.7842	-919.999	29	41.1392
1221.75	0.626	20.7842	-919.999	26	35.1438
1221.91	0.623	20.7842	-923.914	22	52.9695
1222.08	0.63	20.7842	-919.999	33	46.0317
1222.24	0.628	20.7842	-923.914	29	52.5478
1222.41	0.619	20.7842	-919.999	33	33.9257
1222.57	0.615	20.7842	-919.999	21	65.0406
1222.73	0.617	20.7842	-923.914	40	34.0357
1222.9	0.62	20.7842	-923.914	21	50
1223.06	0.617	20.7842	-923.914	31	37.2771
1223.23	0.619	20.7842	-923.914	23	42.0032
1223.39	0.62	21.0014	-923.914	26	40.3226
1223.55	0.626	20.7842	-923.914	25	51.1182
1223.72	0.627	21.0014	-923.914	32	41.4673
1223.88	0.624	21.0014	-916.084	26	46.4744
1224.05	0.625	20.7842	-919.999	29	24
1224.21	0.625	20.7842	-923.914	15	49.6
1224.37	0.629	20.7842	-916.084	31	34.9762
1224.54	0.629	21.0014	-919.999	22	36.566

1224.7	0.629	20.7842	-919.999	23	38.1558
1224.87	0.627	20.7842	-923.914	24	46.252
1225.03	0.628	20.7842	-923.914	29	39.8089
1225.19	0.632	20.7842	-923.914	25	44.3038
1225.36	0.63	20.7842	-919.999	28	49.2063
1225.52	0.626	21.0014	-919.999	31	43.131
1225.69	0.628	21.0014	-923.914	27	28.6624
1225.85	0.63	21.0014	-923.914	18	61.9048
1226.01	0.631	20.7842	-919.999	39	52.2979
1226.18	0.624	20.7842	-923.914	33	38.4615
1226.34	0.62	21.0014	-919.999	24	67.7419
1226.51	0.615	21.0014	-923.914	42	39.0244
1226.67	0.616	20.7842	-919.999	24	50.3247
1226.83	0.616	20.7842	-916.084	31	37.3377
1227	0.615	20.7842	-927.829	23	52.0325
1227.16	0.614	20.7842	-923.914	32	30.9446
1227.33	0.617	21.0014	-923.914	19	61.5883
1227.49	0.627	20.7842	-923.914	38	31.8979
1227.65	0.63	20.7842	-919.999	20	47.619
1227.82	0.628	20.7842	-919.999	30	41.4013
1227.98	0.627	21.0014	-919.999	26	54.2265
1228.15	0.628	20.7842	-923.914	34	38.2166
1228.31	0.626	20.7842	-919.999	24	46.3259
1228.47	0.626	21.0014	-923.914	29	43.131
1228.64	0.622	20.7842	-919.999	27	41.8006
1228.8	0.627	20.7842	-927.829	26	31.8979
1228.97	0.632	21.0014	-923.914	20	52.2152
1229.13	0.634	20.7842	-923.914	33	50.4732
1229.29	0.63	20.7842	-923.914	32	39.6825
1229.46	0.628	21.0014	-923.914	25	42.9936
1229.62	0.631	20.7842	-923.914	27	28.5261
1229.79	0.633	21.0014	-919.999	18	37.9147
1229.95	0.63	21.0014	-923.914	24	42.8571
1230.11	0.627	20.7842	-919.999	27	65.3907
1230.28	0.622	20.7842	-919.999	41	48.2315
1230.44	0.619	20.7842	-919.999	30	37.1567
1230.61	0.617	20.7842	-923.914	23	40.5186
1230.77	0.616	20.7842	-919.999	25	45.4545
1230.93	0.612	21.0014	-919.999	28	45.7516
1231.1	0.617	20.7842	-919.999	28	35.6564
1231.26	0.621	21.0014	-923.914	22	48.3092
1231.43	0.623	20.7842	-919.999	30	52.9695
1231.59	0.617	20.7842	-923.914	33	43.7601
1231.75	0.623	21.0014	-923.914	27	43.3387
1231.92	0.628	20.7842	-916.084	27	35.0318
1232.08	0.628	20.7842	-919.999	22	52.5478
1232.25	0.627	21.0014	-927.829	33	35.0877

1232.41	0.625	20.7842	-919.999	22	41.6
1232.57	0.626	20.7842	-927.829	26	44.7284
1232.74	0.627	21.0014	-923.914	28	35.0877
1232.9	0.629	20.7842	-919.999	22	38.1558
1233.07	0.628	20.7842	-927.829	24	33.4395
1233.23	0.627	20.7842	-919.999	21	47.8469
1233.39	0.628	21.0014	-919.999	30	35.0318
1233.56	0.633	20.7842	-923.914	22	39.4945
1233.72	0.635	20.7842	-919.999	25	47.2441
1233.89	0.63	20.7842	-923.914	30	25.3968
1234.05	0.628	20.7842	-923.914	16	36.6242
1234.21	0.626	21.0014	-919.999	23	44.7284
1234.38	0.626	20.7842	-919.999	28	25.5591
1234.54	0.622	20.7842	-919.999	16	49.8392
1234.71	0.615	21.2187	-923.914	31	42.2764
1234.87	0.611	21.0014	-919.999	26	40.9165
1235.03	0.615	21.0014	-923.914	25	40.6504
1235.2	0.615	21.0014	-919.999	25	37.3984
1235.36	0.619	20.7842	-919.999	23	35.5412
1235.53	0.621	21.0014	-923.914	22	41.868
1235.69	0.627	21.0014	-916.084	26	47.8469
1235.85	0.629	21.0014	-919.999	30	36.566
1236.02	0.628	20.7842	-919.999	23	42.9936
1236.18	0.627	21.0014	-923.914	27	35.0877
1236.35	0.621	20.7842	-923.914	22	41.868
1236.51	0.622	20.7842	-923.914	26	43.4084
1236.67	0.629	20.7842	-927.829	27	41.3355
1236.84	0.629	21.0014	-923.914	26	36.566
1237	0.624	20.7842	-919.999	23	44.8718
1237.17	0.625	21.0014	-919.999	28	41.6
1237.33	0.632	21.0014	-923.914	26	30.0633
1237.49	0.635	21.0014	-919.999	19	42.5197
1237.66	0.633	21.0014	-923.914	27	39.4945
1237.82	0.628	21.0014	-923.914	25	30.2548
1237.99	0.628	21.0014	-919.999	19	39.8089
1238.15	0.629	21.0014	-923.914	25	44.5151
1238.31	0.624	21.0014	-927.829	28	46.4744
1238.48	0.622	21.0014	-923.914	29	25.7235
1238.64	0.615	20.7842	-919.999	16	39.0244
1238.81	0.619	20.7842	-923.914	24	40.3877
1238.97	0.62	21.0014	-923.914	25	35.4839
1239.13	0.618	21.0014	-919.999	22	45.3074
1239.3	0.619	20.7842	-923.914	28	53.3118
1239.46	0.618	21.0014	-919.999	33	56.6343
1239.63	0.626	21.0014	-923.914	35	35.1438
1239.79	0.63	20.7842	-919.999	22	44.4444
1239.95	0.627	20.7842	-923.914	28	41.4673

1240.12	0.621	21.0014	-923.914	26	33.8164
1240.28	0.622	21.0014	-919.999	21	36.9775
1240.45	0.626	21.0014	-923.914	23	43.131
1240.61	0.627	20.7842	-923.914	27	33.4928
1240.77	0.627	21.0014	-919.999	21	31.8979
1240.94	0.626	21.0014	-919.999	20	46.3259
1241.1	0.627	20.7842	-923.914	29	31.8979
1241.27	0.625	21.0014	-919.999	20	36.8
1241.43	0.629	21.0014	-923.914	23	36.566
1241.59	0.63	21.0014	-927.829	23	36.5079
1241.76	0.625	20.7842	-923.914	23	38.4
1241.92	0.631	21.0014	-919.999	24	61.8067
1242.09	0.633	20.7842	-923.914	39	31.5956
1242.25	0.631	21.0014	-923.914	20	30.1109
1242.41	0.627	20.7842	-923.914	19	33.4928
1242.58	0.617	21.0014	-919.999	21	37.2771
1242.74	0.617	20.7842	-923.914	23	43.7601
1242.91	0.618	20.7842	-919.999	27	43.6893
1243.07	0.614	21.0014	-923.914	27	26.0586
1243.23	0.615	21.0014	-919.999	16	47.1545
1243.4	0.618	21.0014	-923.914	29	29.1262
1243.56	0.625	20.7842	-923.914	18	33.6
1243.73	0.626	21.0014	-919.999	21	31.9489
1243.89	0.629	21.0014	-919.999	20	23.8474
1244.05	0.626	21.0014	-923.914	15	33.5463
1244.22	0.629	21.0014	-919.999	21	27.027
1244.38	0.63	21.0014	-923.914	17	20.6349
1244.55	0.625	20.7842	-923.914	13	32
1244.71	0.624	20.7842	-927.829	20	30.4487
1244.87	0.623	21.0014	-923.914	19	30.4976
1245.04	0.626	21.0014	-919.999	19	33.5463
1245.2	0.632	21.0014	-923.914	21	41.1392
1245.37	0.63	21.0014	-923.914	26	34.9206
1245.53	0.626	21.0014	-923.914	22	30.3514
1245.69	0.628	21.0014	-919.999	19	28.6624
1245.86	0.633	21.0014	-919.999	18	26.8562
1246.02	0.63	21.0014	-923.914	17	22.2222
1246.19	0.623	20.7842	-923.914	14	30.4976
1246.35	0.623	21.0014	-923.914	19	28.8925
1246.51	0.623	21.0014	-919.999	18	24.077
1246.68	0.62	21.0014	-923.914	15	30.6452
1246.84	0.617	21.2187	-919.999	19	29.1734
1247.01	0.615	21.0014	-919.999	18	26.0163
1247.17	0.616	21.0014	-919.999	16	25.974
1247.33	0.62	20.7842	-923.914	16	27.4194
1247.5	0.624	21.0014	-919.999	17	30.4487
1247.66	0.627	21.0014	-919.999	19	17.5439

1247.83	0.625	21.0014	-919.999	11	33.6
1247.99	0.623	21.0014	-919.999	21	43.3387
1248.15	0.629	21.0014	-919.999	27	31.7965
1248.32	0.629	21.0014	-923.914	20	33.3863
1248.48	0.627	21.2187	-919.999	21	30.303
1248.65	0.624	21.0014	-919.999	19	49.6795
1248.81	0.627	21.0014	-919.999	31	20.7337
1248.97	0.631	21.2187	-919.999	13	36.4501
1249.14	0.628	21.0014	-919.999	23	22.293
1249.3	0.627	21.2187	-923.914	14	19.1388
1249.47	0.626	21.0014	-919.999	12	33.5463
1249.63	0.63	21.2187	-923.914	21	22.2222
1249.79	0.63	21.0014	-919.999	14	12.6984
1249.96	0.629	21.2187	-919.999	8	20.6677
1250.12	0.625	21.0014	-919.999	13	38.4
1250.29	0.627	21.0014	-923.914	24	35.0877
1250.45	0.625	21.0014	-923.914	22	32
1250.61	0.624	21.0014	-919.999	20	25.641
1250.78	0.615	21.2187	-919.999	16	21.1382
1250.94	0.611	21.0014	-927.829	13	42.5532
1251.11	0.615	21.0014	-919.999	26	30.8943
1251.27	0.619	21.0014	-916.084	19	32.3102
1251.43	0.618	21.0014	-919.999	20	19.4175
1251.6	0.618	21.0014	-916.084	12	37.2168
1251.76	0.623	21.0014	-923.914	23	20.8668
1251.93	0.631	21.0014	-923.914	13	33.2805
1252.09	0.633	21.0014	-919.999	21	41.0742
1252.25	0.627	21.2187	-923.914	26	25.5183
1252.42	0.624	21.0014	-919.999	16	22.4359
1252.58	0.621	21.2187	-923.914	14	27.3752
1252.75	0.628	21.0014	-919.999	17	27.0701
1252.91	0.628	21.0014	-923.914	17	36.6242
1253.07	0.629	21.2187	-919.999	23	22.2576
1253.24	0.628	21.0014	-923.914	14	47.7707
1253.4	0.63	21.0014	-923.914	30	26.9841
1253.57	0.633	21.0014	-923.914	17	33.1754
1253.73	0.632	21.0014	-923.914	21	41.1392
1253.89	0.63	21.0014	-923.914	26	26.9841
1254.06	0.628	21.2187	-919.999	17	30.2548
1254.22	0.633	21.0014	-919.999	19	36.3349
1254.39	0.627	21.2187	-919.999	23	39.8724
1254.55	0.62	21.0014	-919.999	25	27.4194
1254.71	0.613	21.0014	-927.829	17	22.8385
1254.88	0.614	21.2187	-919.999	14	29.316
1255.04	0.619	21.0014	-919.999	18	25.8481
1255.21	0.618	21.0014	-919.999	16	37.2168
1255.37	0.62	21.0014	-919.999	23	29.0323

1255.53	0.618	21.0014	-927.829	18	38.835
1255.7	0.621	21.0014	-923.914	24	20.934
1255.86	0.624	21.2187	-919.999	13	22.4359
1256.03	0.629	21.2187	-919.999	14	15.8983
1256.19	0.628	21.0014	-923.914	10	36.6242
1256.35	0.623	21.0014	-919.999	23	32.1027
1256.52	0.625	21.0014	-927.829	20	28.8
1256.68	0.629	21.0014	-919.999	18	34.9762
1256.85	0.628	21.0014	-923.914	22	33.4395
1257.01	0.625	21.0014	-923.914	21	22.4
1257.17	0.624	21.2187	-919.999	14	33.6538
1257.34	0.631	21.2187	-919.999	21	23.7718
1257.5	0.631	21.2187	-923.914	15	25.3566
1257.67	0.628	21.0014	-919.999	16	17.5159
1257.83	0.626	21.0014	-923.914	11	19.1693
1257.99	0.629	21.0014	-919.999	12	23.8474
1258.16	0.633	21.2187	-923.914	15	34.7551
1258.32	0.632	21.2187	-923.914	22	34.8101
1258.49	0.626	21.0014	-923.914	22	31.9489
1258.65	0.618	21.0014	-923.914	20	24.2718
1258.81	0.618	21.0014	-923.914	15	29.1262
1258.98	0.623	21.0014	-923.914	18	33.7079
1259.14	0.616	21.0014	-919.999	21	19.4805
1259.31	0.616	21.0014	-923.914	12	22.7273
1259.47	0.615	21.2187	-919.999	14	21.1382
1259.63	0.621	21.0014	-919.999	13	25.7649
1259.8	0.626	21.2187	-923.914	16	33.5463
1259.96	0.625	21.0014	-927.829	21	32
1260.13	0.624	21.0014	-923.914	20	33.6538
1260.29	0.624	21.0014	-923.914	21	35.2564
1260.45	0.628	21.2187	-919.999	22	27.0701
1260.62	0.624	21.0014	-923.914	17	35.2564
1260.78	0.623	21.0014	-916.084	22	28.8925
1260.95	0.625	21.2187	-927.829	18	30.4
1261.11	0.627	21.0014	-923.914	19	27.1132
1261.27	0.63	21.0014	-919.999	17	42.8571
1261.44	0.63	21.2187	-919.999	27	20.6349
1261.6	0.63	21.2187	-923.914	13	20.6349
1261.77	0.629	21.2187	-927.829	13	14.3084
1261.93	0.632	21.2187	-919.999	9	22.1519
1262.09	0.632	21.0014	-923.914	14	33.2278
1262.26	0.629	21.2187	-916.084	21	15.8983
1262.42	0.624	21.2187	-923.914	10	14.4231
1262.59	0.62	21.2187	-919.999	9	20.9677
1262.75	0.623	21.4359	-923.914	13	28.8925
1262.91	0.621	21.2187	-919.999	18	19.3237
1263.08	0.618	21.0014	-919.999	12	17.7994

1263.24	0.615	21.0014	-927.829	11	24.3902
1263.41	0.62	21.2187	-919.999	15	19.3548
1263.57	0.624	21.0014	-919.999	12	20.8333
1263.73	0.627	21.0014	-916.084	13	19.1388
1263.9	0.625	21.2187	-919.999	12	20.8
1264.06	0.626	21.2187	-923.914	13	14.377
1264.23	0.626	21.4359	-919.999	9	17.5719
1264.39	0.628	21.2187	-916.084	11	25.4777
1264.55	0.625	21.2187	-919.999	16	9.6
1264.72	0.623	21.0014	-927.829	6	20.8668
1264.88	0.623	21.2187	-919.999	13	14.4462
1265.05	0.629	21.2187	-919.999	9	20.6677
1265.21	0.631	21.4359	-919.999	13	33.2805
1265.37	0.629	21.2187	-923.914	21	20.6677
1265.54	0.618	21.2187	-919.999	13	16.1812
1265.7	0.629	21.2187	-923.914	10	27.027
1265.87	0.635	21.2187	-919.999	17	23.622
1266.03	0.63	21.2187	-919.999	15	26.9841
1266.19	0.629	21.2187	-923.914	17	14.3084
1266.36	0.629	21.2187	-919.999	9	28.6169
1266.52	0.631	21.2187	-919.999	18	22.187
1266.69	0.625	21.2187	-919.999	14	20.8
1266.85	0.619	21.2187	-927.829	13	19.3861
1267.01	0.615	21.2187	-919.999	12	17.8862
1267.18	0.616	21.0014	-919.999	11	29.2208
1267.34	0.618	21.2187	-919.999	18	19.4175
1267.51	0.621	21.2187	-923.914	12	17.7134
1267.67	0.623	21.2187	-923.914	11	32.1027
1267.83	0.625	21.2187	-919.999	20	19.2
1268	0.629	21.2187	-919.999	12	23.8474
1268.16	0.631	21.2187	-923.914	15	22.187
1268.33	0.631	21.0014	-919.999	14	30.1109
1268.49	0.627	21.0014	-923.914	19	25.5183
1268.65	0.623	21.2187	-919.999	16	28.8925
1268.82	0.625	21.2187	-919.999	18	32
1268.98	0.628	21.2187	-923.914	20	19.1083
1269.15	0.626	21.2187	-927.829	12	25.5591
1269.31	0.625	21.0014	-919.999	16	27.2
1269.47	0.627	21.2187	-919.999	17	31.8979
1269.64	0.632	21.2187	-919.999	20	30.0633
1269.8	0.63	21.2187	-923.914	19	39.6825
1269.97	0.63	21.0014	-919.999	25	26.9841
1270.13	0.628	21.0014	-923.914	17	33.4395
1270.29	0.625	21.2187	-919.999	21	33.6
1270.46	0.628	21.2187	-919.999	21	28.6624
1270.62	0.628	21.2187	-919.999	18	31.8471
1270.79	0.62	21.2187	-923.914	20	14.5161

1270.95	0.612	21.2187	-919.999	9	37.5817
1271.11	0.619	21.2187	-919.999	23	17.7706
1271.28	0.621	21.2187	-923.914	11	35.4267
1271.44	0.623	21.2187	-919.999	22	19.2616
1271.61	0.622	21.0014	-923.914	12	40.1929
1271.77	0.625	21.2187	-919.999	25	30.4
1271.93	0.629	21.2187	-923.914	19	30.2067
1272.1	0.629	21.2187	-919.999	19	33.3863
1272.26	0.625	21.2187	-923.914	21	32
1272.43	0.626	21.2187	-923.914	20	30.3514
1272.59	0.627	21.4359	-919.999	19	39.8724
1272.75	0.632	21.2187	-919.999	25	44.3038
1272.92	0.628	21.2187	-923.914	28	38.2166
1273.08	0.627	21.2187	-927.829	24	25.5183
1273.25	0.628	21.2187	-923.914	16	39.8089
1273.41	0.63	21.2187	-923.914	25	42.8571
1273.57	0.634	21.0014	-923.914	27	22.082
1273.74	0.63	21.2187	-927.829	14	36.5079
1273.9	0.629	21.2187	-923.914	23	30.2067
1274.07	0.627	21.0014	-923.914	19	36.6826
1274.23	0.631	21.4359	-916.084	23	36.4501
1274.39	0.632	21.2187	-919.999	23	26.8987
1274.56	0.628	21.2187	-923.914	17	22.293
1274.72	0.62	21.2187	-927.829	14	54.8387
1274.89	0.619	21.2187	-919.999	34	22.6171
1275.05	0.622	21.2187	-923.914	14	22.508
1275.21	0.613	21.2187	-916.084	14	21.2072
1275.38	0.616	21.4359	-923.914	13	29.2208
1275.54	0.62	21.2187	-923.914	18	30.6452
1275.71	0.623	21.4359	-923.914	19	35.313
1275.87	0.63	21.2187	-923.914	22	25.3968
1276.03	0.631	21.2187	-923.914	16	23.7718
1276.2	0.63	21.4359	-919.999	15	31.746
1276.36	0.626	21.2187	-923.914	20	27.1565
1276.53	0.625	21.2187	-919.999	17	19.2
1276.69	0.631	21.4359	-916.084	12	36.4501
1276.85	0.626	21.4359	-923.914	23	27.1565
1277.02	0.625	21.2187	-923.914	17	27.2
1277.18	0.627	21.2187	-923.914	17	27.1132
1277.35	0.634	21.0014	-916.084	17	42.5868
1277.51	0.631	21.2187	-919.999	27	31.6957
1277.67	0.629	21.2187	-919.999	20	36.566
1277.84	0.629	21.2187	-923.914	23	27.027
1278	0.632	21.2187	-923.914	17	28.481
1278.17	0.638	21.2187	-927.829	18	37.6176
1278.33	0.632	21.2187	-919.999	24	31.6456
1278.49	0.627	21.4359	-919.999	20	22.3285

1278.66	0.62	21.2187	-923.914	14	37.0968
1278.82	0.618	21.2187	-919.999	23	30.7443
1278.99	0.618	21.2187	-919.999	19	30.7443
1279.15	0.619	21.4359	-923.914	24	38.7722
1279.31	0.617	21.2187	-923.914	22	35.6564
1279.48	0.616	21.2187	-919.999	19	30.8442
1279.64	0.616	21.2187	-919.999	25	40.5844
1279.81	0.626	21.2187	-923.914	20	31.9489
1279.97	0.63	21.2187	-923.914	19	30.1587
1280.13	0.624	21.2187	-919.999	15	24.0385
1280.3	0.622	21.2187	-919.999	9	14.4695
1280.46	0.628	21.4359	-916.084	22	35.0318
1280.63	0.632	21.2187	-923.914	12	18.9873
1280.79	0.627	21.4359	-923.914	18	28.7081
1280.95	0.623	21.4359	-916.084	16	25.6822
1281.12	0.626	21.2187	-923.914	18	28.754
1281.28	0.63	21.2187	-923.914	22	34.9206
1281.45	0.633	21.4359	-919.999	24	37.9147
1281.61	0.631	21.2187	-923.914	13	20.6022
1281.77	0.628	21.2187	-923.914	24	38.2166
1281.94	0.628	21.2187	-919.999	11	17.5159
1282.1	0.63	21.2187	-919.999	17	26.9841
1282.27	0.634	21.4359	-919.999	23	36.2776
1282.43	0.632	21.2187	-923.914	28	44.3038
1282.59	0.631	21.2187	-923.914	17	26.9414
1282.76	0.631	21.2187	-919.999	21	33.2805
1282.92	0.628	21.2187	-923.914	22	35.0318
1283.09	0.621	21.2187	-927.829	13	20.934
1283.25	0.617	21.4359	-923.914	20	32.4149
1283.41	0.618	21.4359	-919.999	26	42.0712
1283.58	0.62	21.4359	-919.999	27	43.5484
1283.74	0.622	21.2187	-923.914	20	32.1543
1283.91	0.621	21.2187	-923.914	18	28.9855
1284.07	0.623	21.4359	-919.999	23	36.9181
1284.23	0.627	21.2187	-923.914	21	33.4928
1284.4	0.63	21.2187	-923.914	15	23.8095
1284.56	0.631	21.2187	-923.914	24	38.0349
1284.73	0.627	21.4359	-919.999	24	38.2775
1284.89	0.624	21.2187	-919.999	18	28.8462
1285.05	0.62	21.4359	-923.914	13	20.9677
1285.22	0.629	21.2187	-919.999	25	39.7456
1285.38	0.63	21.4359	-923.914	26	41.2698
1285.55	0.626	21.4359	-919.999	15	23.9617
1285.71	0.628	21.2187	-923.914	16	25.4777
1285.87	0.631	21.2187	-923.914	13	20.6022
1286.04	0.638	21.2187	-923.914	15	23.511
1286.2	0.633	21.2187	-923.914	26	41.0742

1286.37	0.629	21.4359	-923.914	24	38.1558
1286.53	0.63	21.2187	-919.999	15	23.8095
1286.69	0.631	21.4359	-919.999	28	44.374
1286.86	0.626	21.4359	-923.914	14	22.3642
1287.02	0.619	21.2187	-916.084	20	32.3102
1287.19	0.617	21.6531	-919.999	26	42.1394
1287.35	0.62	21.4359	-927.829	21	33.871
1287.51	0.622	21.2187	-923.914	15	24.1158
1287.68	0.622	21.2187	-919.999	23	36.9775
1287.84	0.621	21.2187	-923.914	23	37.037
1288.01	0.625	21.2187	-919.999	17	27.2
1288.17	0.631	21.2187	-919.999	19	30.1109
1288.33	0.632	21.2187	-919.999	20	31.6456
1288.5	0.63	21.2187	-916.084	29	46.0317
1288.66	0.624	21.4359	-919.999	15	24.0385
1288.83	0.625	21.2187	-923.914	28	44.8
1288.99	0.628	21.2187	-919.999	19	30.2548
1289.15	0.629	21.4359	-919.999	25	39.7456
1289.32	0.627	21.2187	-923.914	22	35.0877
1289.48	0.625	21.4359	-923.914	23	36.8
1289.65	0.631	21.2187	-923.914	21	33.2805
1289.81	0.63	21.4359	-919.999	24	38.0952
1289.97	0.627	21.4359	-919.999	17	27.1132
1290.14	0.631	21.2187	-919.999	15	23.7718
1290.3	0.631	21.0014	-923.914	19	30.1109
1290.47	0.632	21.2187	-923.914	24	37.9747
1290.63	0.636	21.4359	-923.914	18	28.3019
1290.79	0.632	21.4359	-923.914	34	53.7975
1290.96	0.622	21.4359	-919.999	22	35.3698
1291.12	0.62	21.4359	-919.999	22	35.4839
1291.29	0.622	21.4359	-919.999	16	25.7235
1291.45	0.623	21.4359	-919.999	21	33.7079
1291.61	0.62	21.4359	-923.914	9	14.5161
1291.78	0.616	21.4359	-923.914	22	35.7143
1291.94	0.624	21.2187	-923.914	11	17.6282
1292.11	0.628	21.4359	-919.999	15	23.8854
1292.27	0.631	21.2187	-919.999	16	25.3566
1292.43	0.629	21.4359	-919.999	20	31.7965
1292.6	0.628	21.2187	-923.914	28	44.586
1292.76	0.631	21.2187	-919.999	20	31.6957
1292.93	0.631	21.4359	-923.914	24	38.0349
1293.09	0.628	21.4359	-923.914	21	33.4395
1293.25	0.624	21.4359	-919.999	19	30.4487
1293.42	0.625	21.4359	-923.914	19	30.4
1293.58	0.629	21.4359	-916.084	21	33.3863
1293.75	0.633	21.4359	-919.999	21	33.1754
1293.91	0.631	21.4359	-923.914	23	36.4501

1294.07	0.627	21.4359	-923.914	25	39.8724
1294.24	0.631	21.4359	-923.914	14	22.187
1294.4	0.636	21.4359	-923.914	17	26.7296
1294.57	0.635	21.4359	-919.999	17	26.7717
1294.73	0.626	21.4359	-923.914	13	20.7668
1294.89	0.634	21.2187	-927.829	21	33.123
1295.06	0.645	21.4359	-923.914	10	15.5039
1295.22	0.639	21.2187	-919.999	12	18.7793
1295.39	0.636	21.4359	-919.999	18	28.3019
1295.55	0.636	21.2187	-923.914	20	31.4465
1295.71	0.64	21.4359	-923.914	18	28.125
1295.88	0.646	21.4359	-923.914	19	29.4118
1296.04	0.645	21.2187	-916.084	21	32.5581
1296.21	0.645	21.6531	-919.999	15	23.2558
1296.37	0.646	21.4359	-923.914	20	30.9598
1296.53	0.647	21.2187	-919.999	22	34.0031
1296.7	0.65	21.2187	-919.999	18	27.6923
1296.86	0.649	21.4359	-923.914	30	46.225
1297.03	0.646	21.2187	-923.914	22	34.0557
1297.19	0.646	21.4359	-923.914	15	23.2198
1297.35	0.649	21.4359	-923.914	23	35.4391
1297.52	0.651	21.4359	-919.999	19	29.1859
1297.68	0.647	21.2187	-919.999	22	34.0031
1297.85	0.648	21.4359	-919.999	24	37.037
1298.01	0.651	21.4359	-919.999	19	29.1859
1298.17	0.651	21.2187	-919.999	21	32.2581
1298.34	0.649	21.4359	-919.999	21	32.3575
1298.5	0.646	21.6531	-923.914	19	29.4118
1298.67	0.648	21.4359	-919.999	15	23.1481
1298.83	0.649	21.4359	-923.914	24	36.98
1298.99	0.644	21.6531	-919.999	20	31.0559
1299.16	0.637	21.4359	-923.914	20	31.3972
1299.32	0.635	21.6531	-919.999	15	23.622
1299.49	0.629	21.4359	-923.914	17	27.027
1299.65	0.641	21.6531	-919.999	23	35.8814
1299.81	0.644	21.2187	-919.999	15	23.2919
1299.98	0.642	21.4359	-927.829	27	42.0561
1300.14	0.646	21.4359	-919.999	17	26.3158
1300.31	0.653	21.4359	-923.914	26	39.8162
1300.47	0.652	21.4359	-919.999	22	33.7423
1300.63	0.647	21.4359	-923.914	19	29.3663
1300.8	0.642	21.4359	-923.914	16	24.9221
1300.96	0.645	21.6531	-927.829	15	23.2558
1301.13	0.648	21.4359	-923.914	18	27.7778
1301.29	0.649	21.4359	-923.914	18	27.735
1301.45	0.649	21.4359	-919.999	17	26.1941
1301.62	0.649	21.4359	-923.914	15	23.1125

1301.78	0.653	21.6531	-919.999	23	35.2221
1301.95	0.654	21.4359	-923.914	29	44.3425
1302.11	0.652	21.4359	-923.914	20	30.6748
1302.27	0.651	21.4359	-919.999	17	26.1137
1302.44	0.653	21.2187	-923.914	17	26.0337
1302.6	0.653	21.4359	-919.999	20	30.6279
1302.77	0.645	21.2187	-923.914	16	24.8062
1302.93	0.634	21.4359	-919.999	20	31.5457
1303.09	0.631	21.2187	-923.914	19	30.1109
1303.26	0.637	21.6531	-923.914	16	25.1177
1303.42	0.64	21.6531	-919.999	20	31.25
1303.59	0.639	21.4359	-923.914	13	20.3443
1303.75	0.641	21.4359	-923.914	19	29.6412
1303.91	0.645	21.6531	-923.914	21	32.5581
1304.08	0.649	21.4359	-923.914	18	27.735
1304.24	0.649	21.4359	-919.999	32	49.3066
1304.41	0.648	21.4359	-923.914	12	18.5185
1304.57	0.644	21.4359	-919.999	25	38.8199
1304.73	0.648	21.4359	-919.999	17	26.2346
1304.9	0.648	21.4359	-919.999	16	24.6914
1305.06	0.65	21.6531	-919.999	21	32.3077
1305.23	0.646	21.6531	-919.999	21	32.5077
1305.39	0.647	21.4359	-923.914	22	34.0031
1305.55	0.653	21.6531	-923.914	24	36.7534
1305.72	0.65	21.6531	-923.914	21	32.3077
1305.88	0.649	21.2187	-919.999	24	36.98
1306.05	0.647	21.4359	-923.914	16	24.7295
1306.21	0.654	21.2187	-919.999	16	24.4648
1306.37	0.655	21.4359	-919.999	23	35.1145
1306.54	0.653	21.6531	-923.914	16	24.5023
1306.7	0.644	21.4359	-923.914	22	34.1615
1306.87	0.641	21.4359	-919.999	15	23.4009
1307.03	0.64	21.4359	-923.914	21	32.8125
1307.19	0.639	21.4359	-923.914	13	20.3443
1307.36	0.637	21.4359	-923.914	16	25.1177
1307.52	0.637	21.6531	-919.999	18	28.2575
1307.69	0.64	21.2187	-923.914	20	31.25
1307.85	0.65	21.2187	-919.999	22	33.8462
1308.01	0.649	21.4359	-923.914	27	41.6025
1308.18	0.646	21.4359	-923.914	16	24.7678
1308.34	0.645	21.4359	-923.914	24	37.2093
1308.51	0.649	21.6531	-919.999	22	33.8983
1308.67	0.648	21.4359	-919.999	17	26.2346
1308.83	0.641	21.4359	-923.914	28	43.6817
1309	0.645	21.6531	-919.999	19	29.4574
1309.16	0.65	21.4359	-923.914	15	23.0769
1309.33	0.651	21.4359	-923.914	13	19.9693

1309.49	0.651	21.6531	-916.084	18	27.6498
1309.65	0.649	21.4359	-923.914	15	23.1125
1309.82	0.65	21.4359	-923.914	21	32.3077
1309.98	0.656	21.4359	-923.914	13	19.8171
1310.15	0.657	21.4359	-919.999	20	30.4414
1310.31	0.652	21.4359	-916.084	17	26.0736
1310.47	0.645	21.4359	-919.999	21	32.5581
1310.64	0.64	21.6531	-916.084	12	18.75
1310.8	0.641	21.2187	-919.999	9	14.0406
1310.97	0.64	21.4359	-919.999	26	40.625
1311.13	0.637	21.2187	-923.914	15	23.5479
1311.29	0.638	21.4359	-919.999	18	28.2132
1311.46	0.643	21.6531	-923.914	16	24.8834
1311.62	0.647	21.4359	-923.914	20	30.9119
1311.79	0.649	21.6531	-923.914	25	38.5208
1311.95	0.648	21.4359	-919.999	18	27.7778
1312.11	0.648	21.4359	-919.999	19	29.321
1312.28	0.649	21.4359	-923.914	18	27.735
1312.44	0.646	21.6531	-919.999	20	30.9598
1312.61	0.645	21.2187	-923.914	26	40.3101
1312.77	0.644	21.4359	-923.914	15	23.2919
1312.93	0.646	21.2187	-923.914	16	24.7678
1313.1	0.653	21.4359	-919.999	22	33.6907
1313.26	0.65	21.4359	-919.999	20	30.7692
1313.43	0.648	21.4359	-923.914	17	26.2346
1313.59	0.644	21.4359	-916.084	17	26.3975
1313.75	0.654	21.4359	-919.999	21	32.1101
1313.92	0.653	21.6531	-919.999	19	29.0965
1314.08	0.648	21.4359	-923.914	16	24.6914
1314.25	0.649	21.6531	-923.914	27	41.6025
1314.41	0.654	21.4359	-927.829	16	24.4648
1314.57	0.649	21.4359	-923.914	17	26.1941
1314.74	0.64	21.4359	-919.999	22	34.375
1314.9	0.635	21.2187	-919.999	25	39.3701
1315.07	0.637	21.6531	-923.914	16	25.1177
1315.23	0.641	21.6531	-923.914	13	20.2808
1315.39	0.642	21.4359	-931.744	14	21.8069
1315.56	0.645	21.6531	-923.914	19	29.4574
1315.72	0.648	21.4359	-919.999	17	26.2346
1315.89	0.65	21.4359	-919.999	22	33.8462
1316.05	0.651	21.4359	-916.084	23	35.3303
1316.21	0.648	21.4359	-923.914	29	44.7531
1316.38	0.647	21.4359	-919.999	18	27.8207
1316.54	0.648	21.4359	-919.999	18	27.7778
1316.71	0.648	21.4359	-919.999	18	27.7778
1316.87	0.651	21.4359	-927.829	19	29.1859
1317.03	0.645	21.6531	-919.999	22	34.1085

1317.2	0.647	21.4359	-923.914	15	23.1839
1317.36	0.649	21.2187	-923.914	17	26.1941
1317.53	0.654	21.4359	-919.999	12	18.3486
1317.69	0.652	21.6531	-927.829	17	26.0736
1317.85	0.649	21.4359	-916.084	26	40.0616
1318.02	0.649	21.4359	-927.829	15	23.1125
1318.18	0.646	21.4359	-919.999	20	30.9598
1318.35	0.647	21.4359	-919.999	12	18.5471
1318.51	0.643	21.4359	-923.914	20	31.1042
1318.67	0.635	21.6531	-923.914	15	23.622
1318.84	0.636	21.4359	-923.914	13	20.4403
1319	0.641	21.4359	-923.914	22	34.3214
1319.17	0.64	21.6531	-923.914	20	31.25
1319.33	0.641	21.6531	-919.999	18	28.0811
1319.49	0.643	21.6531	-923.914	20	31.1042
1319.66	0.65	21.4359	-919.999	25	38.4615
1319.82	0.651	21.4359	-916.084	26	39.9386
1319.99	0.65	21.4359	-927.829	19	29.2308
1320.15	0.645	21.4359	-919.999	13	20.155
1320.31	0.648	21.4359	-919.999	16	24.6914
1320.48	0.651	21.6531	-919.999	30	46.083
1320.64	0.651	21.4359	-919.999	12	18.4332
1320.81	0.65	21.6531	-923.914	18	27.6923
1320.97	0.65	21.4359	-919.999	27	41.5385
1321.13	0.654	21.4359	-916.084	15	22.9358
1321.3	0.655	21.2187	-919.999	18	27.4809
1321.46	0.65	21.4359	-923.914	19	29.2308
1321.63	0.648	21.6531	-923.914	16	24.6914
1321.79	0.649	21.4359	-923.914	15	23.1125
1321.95	0.655	21.4359	-919.999	27	41.2214
1322.12	0.653	21.6531	-919.999	22	33.6907
1322.28	0.643	21.6531	-923.914	17	26.4386
1322.45	0.639	21.6531	-923.914	19	29.734
1322.61	0.638	21.4359	-923.914	18	28.2132
1322.77	0.643	21.4359	-916.084	16	24.8834
1322.94	0.63	21.4359	-919.999	15	23.8095
1323.1	0.637	21.6531	-919.999	12	18.8383
1323.27	0.642	21.2187	-923.914	18	28.0374
1323.43	0.647	21.6531	-919.999	20	30.9119
1323.59	0.648	21.6531	-919.999	13	20.0617
1323.76	0.649	21.4359	-923.914	10	15.4083
1323.92	0.648	21.4359	-923.914	11	16.9753
1324.09	0.65	21.4359	-916.084	8	12.3077
1324.25	0.649	21.4359	-919.999	12	18.49
1324.41	0.646	21.4359	-916.084	11	17.0279
1324.58	0.646	21.4359	-919.999	15	23.2198
1324.74	0.645	21.4359	-919.999	13	20.155

1324.91	0.652	21.6531	-923.914	16	24.5399
1325.07	0.655	21.4359	-919.999	15	22.9008
1325.23	0.651	21.4359	-923.914	10	15.361
1325.4	0.651	21.6531	-919.999	16	24.5776
1325.56	0.655	21.6531	-923.914	16	24.4275
1325.73	0.656	21.6531	-919.999	19	28.9634
1325.89	0.652	21.6531	-923.914	16	24.5399
1326.05	0.647	21.4359	-923.914	11	17.0015
1326.22	0.642	21.6531	-919.999	15	23.3645
1326.38	0.642	21.4359	-923.914	13	20.2492
1326.55	0.637	21.4359	-919.999	12	18.8383
1326.71	0.636	21.6531	-923.914	12	18.8679
1326.87	0.634	21.4359	-923.914	14	22.082
1327.04	0.637	21.4359	-923.914	16	25.1177
1327.2	0.646	21.6531	-923.914	14	21.6718
1327.37	0.647	21.6531	-919.999	20	30.9119
1327.53	0.646	21.6531	-919.999	11	17.0279
1327.69	0.642	21.4359	-923.914	23	35.8255
1327.86	0.651	21.6531	-923.914	12	18.4332
1328.02	0.649	21.4359	-923.914	15	23.1125
1328.19	0.646	21.4359	-923.914	23	35.6037
1328.35	0.644	21.4359	-923.914	11	17.0807
1328.51	0.648	21.6531	-927.829	20	30.8642
1328.68	0.654	21.6531	-923.914	16	24.4648
1328.84	0.651	21.4359	-919.999	13	19.9693
1329.01	0.648	21.4359	-919.999	16	24.6914
1329.17	0.648	21.6531	-923.914	11	16.9753
1329.33	0.651	21.6531	-923.914	11	16.8971
1329.5	0.65	21.4359	-923.914	17	26.1538
1329.66	0.655	21.4359	-919.999	24	36.6412
1329.83	0.652	21.4359	-919.999	15	23.0061
1329.99	0.651	21.4359	-919.999	19	29.1859
1330.15	0.648	21.4359	-916.084	19	29.321
1330.32	0.642	21.4359	-919.999	14	21.8069
1330.48	0.638	21.2187	-919.999	11	17.2414
1330.65	0.637	21.6531	-923.914	9	14.1287
1330.81	0.64	21.4359	-923.914	23	35.9375
1330.97	0.642	21.4359	-919.999	13	20.2492
1331.14	0.638	21.6531	-919.999	14	21.9436
1331.3	0.642	21.4359	-919.999	30	46.729
1331.47	0.645	21.4359	-919.999	14	21.7054
1331.63	0.653	21.6531	-923.914	17	26.0337
1331.79	0.649	21.6531	-919.999	19	29.2758
1331.96	0.648	21.4359	-919.999	24	37.037
1332.12	0.644	21.4359	-919.999	24	37.2671
1332.29	0.642	21.6531	-923.914	21	32.7103
1332.45	0.648	21.4359	-923.914	19	29.321

1332.61	0.651	21.4359	-923.914	16	24.5776
1332.78	0.648	21.4359	-923.914	19	29.321
1332.94	0.649	21.6531	-919.999	20	30.8166
1333.11	0.656	21.4359	-923.914	20	30.4878
1333.27	0.656	21.4359	-923.914	18	27.439
1333.43	0.652	21.6531	-919.999	16	24.5399
1333.6	0.648	21.4359	-927.829	18	27.7778
1333.76	0.653	21.6531	-923.914	19	29.0965
1333.93	0.65	21.4359	-923.914	19	29.2308
1334.09	0.643	21.4359	-923.914	16	24.8834
1334.25	0.637	21.4359	-923.914	16	25.1177
1334.42	0.638	21.4359	-923.914	12	18.8088
1334.58	0.639	21.4359	-919.999	22	34.4288
1334.75	0.641	21.4359	-923.914	14	21.8409
1334.91	0.641	21.4359	-923.914	16	24.961
1335.07	0.642	21.4359	-919.999	16	24.9221
1335.24	0.65	21.2187	-919.999	20	30.7692
1335.4	0.652	21.4359	-919.999	18	27.6074
1335.57	0.649	21.6531	-923.914	21	32.3575
1335.73	0.644	21.4359	-923.914	14	21.7391
1335.89	0.642	21.4359	-919.999	17	26.4798
1336.06	0.65	21.4359	-923.914	19	29.2308
1336.22	0.651	21.6531	-923.914	20	30.722
1336.39	0.648	21.4359	-919.999	13	20.0617
1336.55	0.647	21.4359	-919.999	17	26.2751
1336.71	0.648	21.4359	-919.999	19	29.321
1336.88	0.655	21.4359	-923.914	9	13.7405
1337.04	0.645	21.4359	-927.829	19	29.4574
1337.21	0.65	21.6531	-923.914	11	16.9231
1337.37	0.652	21.2187	-923.914	17	26.0736
1337.53	0.653	21.4359	-919.999	13	19.9081
1337.7	0.653	21.4359	-919.999	22	33.6907
1337.86	0.649	21.4359	-923.914	18	27.735
1338.03	0.643	21.2187	-919.999	20	31.1042
1338.19	0.64	21.4359	-923.914	19	29.6875
1338.35	0.643	21.4359	-927.829	21	32.6594
1338.52	0.638	21.4359	-919.999	25	39.185
1338.68	0.635	21.6531	-923.914	14	22.0472
1338.85	0.635	21.4359	-923.914	19	29.9213
1339.01	0.645	21.6531	-923.914	23	35.6589
1339.17	0.649	21.4359	-923.914	20	30.8166
1339.34	0.65	21.6531	-919.999	22	33.8462
1339.5	0.647	21.4359	-923.914	18	27.8207
1339.67	0.65	21.4359	-923.914	17	26.1538
1339.83	0.652	21.6531	-919.999	17	26.0736
1339.99	0.647	21.4359	-919.999	24	37.0943
1340.16	0.646	21.4359	-923.914	13	20.1238

1340.32	0.646	21.4359	-923.914	17	26.3158
1340.49	0.651	21.4359	-919.999	24	36.8664
1340.65	0.653	21.2187	-916.084	21	32.1593
1340.81	0.651	21.4359	-919.999	17	26.1137
1340.98	0.649	21.4359	-919.999	23	35.4391
1341.14	0.65	21.2187	-923.914	17	26.1538
1341.31	0.656	21.4359	-919.999	20	30.4878
1341.47	0.656	21.4359	-919.999	24	36.5854
1341.63	0.649	21.4359	-927.829	24	36.98
1341.8	0.642	21.4359	-923.914	16	24.9221
1341.96	0.646	21.4359	-923.914	15	23.2198
1342.13	0.641	21.4359	-919.999	19	29.6412
1342.29	0.636	21.4359	-923.914	19	29.8742
1342.45	0.634	21.6531	-923.914	21	33.123
1342.62	0.639	21.4359	-923.914	19	29.734
1342.78	0.646	21.4359	-919.999	23	35.6037
1342.95	0.646	21.6531	-923.914	16	24.7678
1343.11	0.647	21.6531	-919.999	26	40.1855
1343.27	0.646	21.4359	-923.914	12	18.5759
1343.44	0.65	21.6531	-919.999	20	30.7692
1343.6	0.649	21.6531	-923.914	25	38.5208
1343.77	0.65	21.4359	-919.999	17	26.1538
1343.93	0.648	21.4359	-919.999	22	33.9506
1344.09	0.647	21.6531	-923.914	23	35.5487
1344.26	0.653	21.4359	-923.914	27	41.3476
1344.42	0.653	21.4359	-923.914	19	29.0965
1344.59	0.653	21.4359	-923.914	28	42.879
1344.75	0.648	21.4359	-919.999	17	26.2346
1344.91	0.653	21.6531	-923.914	18	27.5651
1345.08	0.653	21.4359	-919.999	23	35.2221
1345.24	0.65	21.4359	-916.084	28	43.0769
1345.41	0.649	21.2187	-923.914	26	40.0616
1345.57	0.649	21.4359	-919.999	21	32.3575
1345.73	0.649	21.4359	-919.999	23	35.4391
1345.9	0.647	21.2187	-923.914	18	27.8207
1346.06	0.638	21.4359	-919.999	19	29.7806
1346.23	0.637	21.4359	-923.914	16	25.1177
1346.39	0.633	21.2187	-919.999	22	34.7551
1346.55	0.639	21.4359	-919.999	27	42.2535
1346.72	0.643	21.6531	-923.914	17	26.4386
1346.88	0.643	21.6531	-916.084	21	32.6594
1347.05	0.645	21.4359	-927.829	22	34.1085
1347.21	0.652	21.4359	-923.914	30	46.0123
1347.37	0.652	21.4359	-923.914	23	35.2761
1347.54	0.648	21.4359	-919.999	25	38.5802
1347.7	0.645	21.4359	-919.999	21	32.5581
1347.87	0.648	21.4359	-923.914	32	49.3827

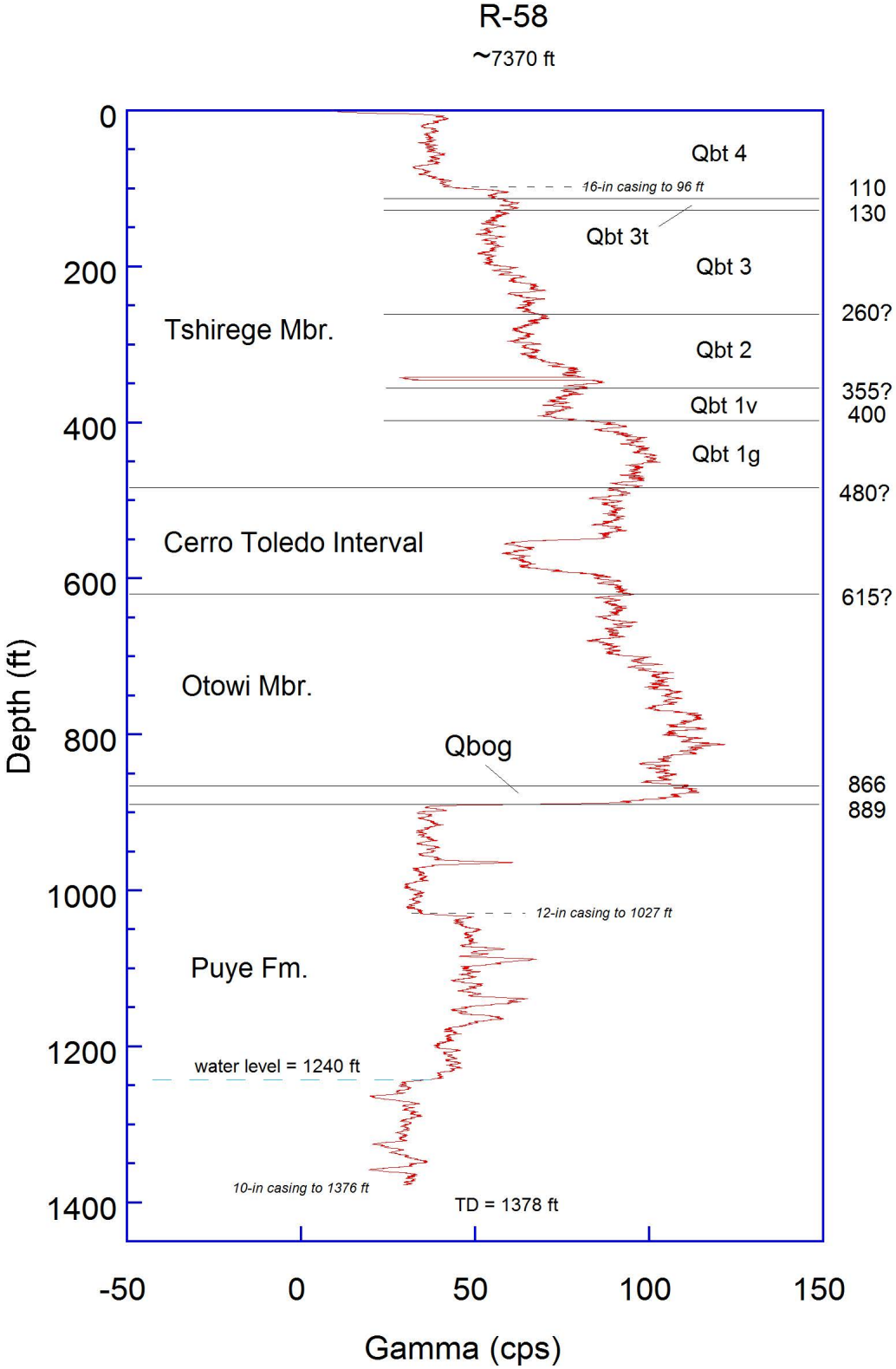
1348.03	0.651	21.4359	-923.914	28	43.0108
1348.19	0.65	21.4359	-919.999	26	40
1348.36	0.649	21.2187	-919.999	23	35.4391
1348.52	0.65	21.4359	-919.999	23	35.3846
1348.69	0.655	21.4359	-919.999	18	27.4809
1348.85	0.656	21.4359	-919.999	20	30.4878
1349.01	0.655	21.2187	-923.914	30	45.8015
1349.18	0.651	21.4359	-923.914	24	36.8664
1349.34	0.654	21.4359	-923.914	19	29.052
1349.51	0.655	21.4359	-923.914	23	35.1145
1349.67	0.648	21.4359	-923.914	13	20.0617
1349.83	0.639	21.4359	-927.829	19	29.734
1350	0.634	21.2187	-919.999	23	36.2776
1350.16	0.637	21.4359	-919.999	26	40.8163
1350.33	0.639	21.2187	-923.914	26	40.6886
1350.49	0.637	21.2187	-919.999	13	20.4082
1350.65	0.64	21.4359	-919.999	16	25
1350.82	0.645	21.4359	-916.084	13	20.155
1350.98	0.652	21.2187	-919.999	21	32.2086
1351.15	0.643	21.6531	-919.999	21	32.6594
1351.31	0.648	21.2187	-923.914	20	30.8642
1351.47	0.649	21.4359	-919.999	19	29.2758
1351.64	0.65	21.4359	-923.914	18	27.6923
1351.8	0.651	21.4359	-919.999	18	27.6498
1351.97	0.65	21.2187	-919.999	33	50.7692
1352.13	0.65	21.6531	-919.999	25	38.4615
1352.29	0.65	21.2187	-927.829	30	46.1538
1352.46	0.657	21.2187	-923.914	24	36.5297
1352.62	0.654	21.2187	-927.829	19	29.052
1352.79	0.652	21.4359	-923.914	18	27.6074
1352.95	0.646	21.2187	-923.914	9	13.9319
1353.11	0.653	21.6531	-923.914	16	24.5023
1353.28	0.656	21.2187	-923.914	21	32.0122
1353.44	0.652	21.4359	-919.999	25	38.3436
1353.61	0.645	21.4359	-919.999	23	35.6589
1353.77	0.643	21.2187	-927.829	23	35.7698
1353.93	0.642	21.2187	-919.999	12	18.6916
1354.1	0.639	21.2187	-919.999	20	31.2989
1354.26	0.636	21.2187	-919.999	16	25.1572
1354.43	0.635	21.4359	-919.999	13	20.4724
1354.59	0.641	21.4359	-923.914	20	31.2012
1354.75	0.647	21.4359	-923.914	22	34.0031
1354.92	0.65	21.2187	-923.914	28	43.0769
1355.08	0.649	21.4359	-927.829	17	26.1941
1355.25	0.645	21.2187	-919.999	20	31.0078
1355.41	0.649	21.4359	-919.999	20	30.8166
1355.57	0.651	21.2187	-919.999	13	19.9693

1355.74	0.647	21.4359	-919.999	16	24.7295
1355.9	0.641	21.4359	-919.999	15	23.4009
1356.07	0.651	21.4359	-923.914	14	21.5054
1356.23	0.655	21.0014	-923.914	18	27.4809
1356.39	0.651	21.2187	-919.999	12	18.4332
1356.56	0.65	21.4359	-919.999	7	10.7692
1356.72	0.654	21.2187	-919.999	16	24.4648
1356.89	0.658	21.4359	-919.999	9	13.6778
1357.05	0.656	21.2187	-919.999	14	21.3415
1357.21	0.653	21.6531	-919.999	15	22.9709
1357.38	0.649	21.4359	-923.914	12	18.49
1357.54	0.643	21.4359	-923.914	7	10.8865
1357.71	0.645	21.4359	-916.084	11	17.0543
1357.87	0.642	21.2187	-923.914	17	26.4798
1358.03	0.638	21.2187	-916.084	12	18.8088
1358.2	0.638	21.2187	-927.829	15	23.511
1358.36	0.643	21.4359	-923.914	17	26.4386
1358.53	0.647	21.2187	-927.829	17	26.2751
1358.69	0.647	21.4359	-919.999	16	24.7295
1358.85	0.648	21.2187	-923.914	7	10.8025
1359.02	0.649	21.4359	-919.999	13	20.0308
1359.18	0.652	21.4359	-919.999	10	15.3374
1359.35	0.648	21.2187	-923.914	10	15.4321
1359.51	0.645	21.2187	-919.999	15	23.2558
1359.67	0.645	21.2187	-916.084	15	23.2558
1359.84	0.651	21.4359	-923.914	10	15.361
1360	0.654	21.2187	-923.914	13	19.8777
1360.17	0.653	21.2187	-919.999	24	36.7534
1360.33	0.65	21.4359	-919.999	17	26.1538
1360.49	0.648	21.2187	-923.914	17	26.2346
1360.66	0.655	21.2187	-923.914	12	18.3206
1360.82	0.655	21.4359	-923.914	22	33.5878
1360.99	0.651	21.4359	-923.914	14	21.5054
1361.15	0.65	21.2187	-916.084	19	29.2308
1361.31	0.653	21.2187	-919.999	17	26.0337
1361.48	0.652	21.2187	-919.999	15	23.0061
1361.64	0.642	21.4359	-927.829	23	35.8255
1361.81	0.637	21.4359	-923.914	19	29.8273
1361.97	0.634	21.4359	-923.914	15	23.6593
1362.13	0.639	21.4359	-919.999	18	28.169
1362.3	0.64	21.2187	-916.084	18	28.125
1362.46	0.644	21.2187	-919.999	22	34.1615
1362.63	0.648	21.2187	-923.914	33	50.9259
1362.79	0.653	21.4359	-923.914	18	27.5651
1362.95	0.653	21.4359	-919.999	16	24.5023
1363.12	0.652	21.4359	-919.999	24	36.8098
1363.28	0.648	21.4359	-919.999	30	46.2963

1363.45	0.651	21.2187	-923.914	21	32.2581
1363.61	0.652	21.2187	-919.999	18	27.6074
1363.77	0.651	21.2187	-923.914	16	24.5776
1363.94	0.649	21.4359	-919.999	17	26.1941
1364.1	0.646	21.2187	-923.914	19	29.4118
1364.27	0.652	21.4359	-919.999	28	42.9448
1364.43	0.656	21.2187	-927.829	20	30.4878
1364.59	0.652	21.4359	-919.999	21	32.2086
1364.76	0.652	21.2187	-919.999	29	44.4785
1364.92	0.653	21.4359	-923.914	20	30.6279
1365.09	0.655	21.4359	-916.084	14	21.374
1365.25	0.647	21.2187	-919.999	17	26.2751
1365.41	0.646	21.4359	-923.914	21	32.5077
1365.58	0.641	21.2187	-923.914	25	39.0016
1365.74	0.639	21.2187	-919.999	21	32.8638
1365.91	0.64	21.2187	-923.914	25	39.0625
1366.07	0.641	21.2187	-919.999	14	21.8409
1366.23	0.642	21.6531	-923.914	22	34.2679
1366.4	0.645	21.2187	-923.914	23	35.6589
1366.56	0.651	21.4359	-927.829	15	23.0415
1366.73	0.651	21.2187	-923.914	24	36.8664
1366.89	0.649	21.2187	-919.999	23	35.4391
1367.05	0.644	21.2187	-923.914	17	26.3975
1367.22	0.649	21.4359	-923.914	30	46.225
1367.38	0.653	21.4359	-919.999	23	35.2221
1367.55	0.653	21.2187	-919.999	6	9.18836
1367.71	0.65	21.2187	-919.999	18	27.6923
1367.87	0.651	21.4359	-923.914	18	27.6498
1368.04	0.657	21.2187	-919.999	17	25.8752
1368.2	0.658	21.0014	-923.914	23	34.9544
1368.37	0.654	21.2187	-923.914	21	32.1101
1368.53	0.651	21.2187	-923.914	30	46.083
1368.69	0.651	21.2187	-919.999	22	33.7942
1368.86	0.653	21.2187	-919.999	26	39.8162
1369.02	0.654	21.2187	-919.999	16	24.4648
1369.19	0.65	21.2187	-923.914	23	35.3846
1369.35	0.643	21.2187	-919.999	14	21.7729
1369.51	0.641	21.4359	-919.999	17	26.5211
1369.68	0.643	21.2187	-919.999	14	21.7729
1369.84	0.635	21.2187	-919.999	26	40.9449
1370.01	0.631	21.2187	-923.914	17	26.9414
1370.17	0.64	21.2187	-923.914	19	29.6875
1370.33	0.65	21.4359	-923.914	15	23.0769
1370.5	0.65	21.4359	-919.999	26	40
1370.66	0.652	21.2187	-919.999	20	30.6748
1370.83	0.65	21.2187	-919.999	22	33.8462
1370.99	0.652	21.2187	-923.914	23	35.2761

1371.15	0.653	21.2187	-919.999	24	36.7534
1371.32	0.651	21.2187	-919.999	24	36.8664
1371.48	0.649	21.2187	-923.914	26	40.0616
1371.65	0.648	21.2187	-927.829	21	32.4074
1371.81	0.652	21.2187	-923.914	22	33.7423
1371.97	0.653	21.4359	-919.999	22	33.6907
1372.14	0.654	21.4359	-919.999	22	33.6391
1372.3	0.651	21.2187	-923.914	23	35.3303
1372.47	0.66	21.4359	-919.999	21	31.8182
1372.63	0.662	21.2187	-919.999	19	28.7009
1372.79	0.659	21.2187	-923.914	14	21.2443
1372.96	0.654	21.2187	-923.914	22	33.6391
1373.12	0.649	21.2187	-919.999	14	21.5716
1373.29	0.647	21.2187	-919.999	17	26.2751
1373.45	0.64	21.2187	-919.999	17	26.5625
1373.61	0.632	21.2187	-923.914	18	28.481
1373.78	0.626	21.2187	-923.914	27	43.131
1373.94	0.628	21.4359	-919.999	23	36.6242
1374.11	0.633	21.4359	-923.914	23	36.3349
1374.27	0.639	21.2187	-923.914	8	12.5196
1374.43	0.64	21.2187	-919.999	14	21.875
1374.6	0.633	21.0014	-919.999	17	26.8562
1374.76	0.63	21.2187	-923.914	22	34.9206
1374.93	0.629	21.2187	-919.999	15	23.8474
1375.09	0.626	21.2187	-927.829	27	43.131
1375.25	0.629	21.2187	-923.914	28	44.5151
1375.42	0.644	21.2187	-919.999	19	29.5031
1375.58	0.661	21.2187	-919.999	10	15.1286
1375.75	0.661	21.2187	-927.829	22	33.2829
1375.91	0.664	21.2187	-916.084	26	39.1566
1376.07	0.664	21.2187	-919.999	29	43.6747
1376.24	0.67	21.2187	-923.914	15	22.3881
1376.4	0.669	21.2187	-923.914	26	38.864
1376.57	0.669	21.2187	-919.999	22	32.8849
1376.73	0.672	21.2187	-923.914	19	28.2738
1376.89	0.69	21.2187	-919.999	23	33.3333
1377.06	0.693	21.0014	-919.999	20	28.86
1377.22	0.711	21.2187	-923.914	22	30.9423
1377.39	0.726	21.2187	-919.999	11	15.1515
1377.55	0.737	21.2187	-919.999	27	36.635
1377.71	0.765	21.2187	-923.914	17	22.2222
1377.88	0.79	21.2187	-923.914	22	27.8481
1378.04	0.809	21.2187	-923.914	26	32.1384
1378.21	0.865	21.0014	-923.914	26	30.0578
1378.37	0.929	21.2187	-919.999	34	36.5985
1378.53	0.974	21.4359	-923.914	28	28.7474
1378.7	1.048	21.2187	-919.999	24	22.9008

1378.86	1.086	21.2187	-923.914	21	19.337
1379.03	1.173	21.2187	-919.999	46	39.2157
1379.19	1.335	21.0014	-916.084	29	21.7228
1379.35	1.459	21.2187	-919.999	35	23.989


R-58
~7370 ft
Qbt 4
16-in casing to 96 ft
110
130
Qbt 3t
Qbt 3
260?
Tshirege Mbr.
Qbt 2
355?
Qbt 1v
400
Qbt 1g
480?
Cerro Toledo Interval
615?
Otowi Mbr.
Qbog
866
889
12-in casing to 1027 ft
Puye Fm.
water level = 1240 ft
10-in casing to 1376 ft
TD = 1378 ft
Depth (ft)
0
200
400
600
800
1000
1200
1400
-50
0
50
100
150
Gamma (cps)

Appendix D

Final Well Design and
New Mexico Environment Department Approval

From: Everett, Mark Capen
Sent: Monday, September 21, 2015 2:17 PM
To: Michael Dale (Michael.Dale@state.nm.us); Wear, Benjamin, NMENV; Jerzy Kulis (jerzy.kulis@state.nm.us)
Cc: Rodriguez, Cheryl L; Shen, Hai; Paris, Steven M; Swickley, Stephani Fuller
Subject: R-58 proposed well design
Attachments: R-58 Well Design Justification_final.doc

Michael,

Attached, please find our proposed design for well R-58. Let me know if you have questions, otherwise please respond to this e-mail with your concurrence.

Thanks,

Mark Everett, PG
ER-ES LANL
(505) 667-5931 (o)
(505) 231-6002 (c)

Proposed Well Design for Regional Aquifer Well R-58

R-58 Well Objectives

Regional aquifer well R-58 is being installed to satisfy a recommendation made in the Technical Area 16 Well Network Evaluation and Recommendations and approved with modifications by the New Mexico Environment Department (NMED) Hazardous Waste Bureau. This assessment recommended installing one new regional groundwater monitoring well downgradient of potential contaminant breakthrough locations for S-Site Canyon and Fishladder Canyon. In consultation with NMED, the final location was moved east of the originally proposed location to the location shown on Figure 1 (Figure 1). The primary purpose of R-58 is to increase the overall detection efficiency of the TA-16 monitoring network for the high- and medium- priority sources at TA-16. Water-level data from this location will also constrain the shape of the regional water table and groundwater flow directions in this area.

R-58 Recommended Well Design

It is recommended that R-58 be installed as a single-screen well with a 20-ft stainless steel, 40-slot, wire-wrapped well screen. The top of the well screen would be set 17 ft below the regional water table. The primary filter pack will consist of 10/20 sand extending 5 ft above and 5 ft below the screen openings. A 2-ft secondary filter pack (transition sand) consisting of 20/40 sand will be placed above the primary filter pack. The 17 ft of submergence to the top of the well screen allows for a 5-ft filter pack and 2-ft transition sand resulting in 10 ft of additional submergence beneath the water table allowing for potential drawdown during development. The proposed well design is shown in Figure 2. This well design is based on the objectives stated above and on the information summarized below.

R-58 Well Design Considerations

At a total depth (TD) of 1378 ft, the R-58 borehole contained 16-in drill casing from 0 to 95 ft, 12-in drill casing from 0–1027 ft, and 10-in drill casing from 0-1378 ft. Preliminary lithological logs indicate that the geologic contacts are, in descending stratigraphic order: Qbt 4 (0-110 ft), Qbt 3t (110-130 ft), Qbt 3 (130-260? ft), Qbt 2 (260?-355? ft), Qbt 1v (355?-400 ft), Qbt 1g (400-480? ft), Qct (480?-615? ft), Qbof (615? ft- 866 ft), Qbog (866-889 ft), and Tpf (889-1378 ft). The proposed well screen will be in the Puye Formation. Well cuttings indicate that the Puye Formation at R-58 consists of poorly sorted and subangular to subrounded dacitic sands and gravels.

Characterization within the regional aquifer included the collection of cuttings at 5-ft intervals. In addition, a cased-hole gamma log was collected on 09/18/15 from 0-1378 ft. Based on drillers' observations of water production and multiple water-level measurements, the regional water-table surface occurs at a depth of approximately 1240 ft.

The proposed well screen targets the 1257 to 1277 ft interval with the goal of monitoring near the water table for potential contaminant travel pathways. Sediments making up the Puye Formation in this interval are primarily sands and gravels. The grain-size distribution appears to have good porosity and permeability characteristics. A 10-ft well screen was evaluated as a means to monitor a more discrete zone of groundwater near the top of the regional aquifer. However, the longer 20-ft screen was chosen because the longer screen provides greater assurance that preferential pathways in the stratigraphically complex aquifer will be adequately captured by water entering the well screen.

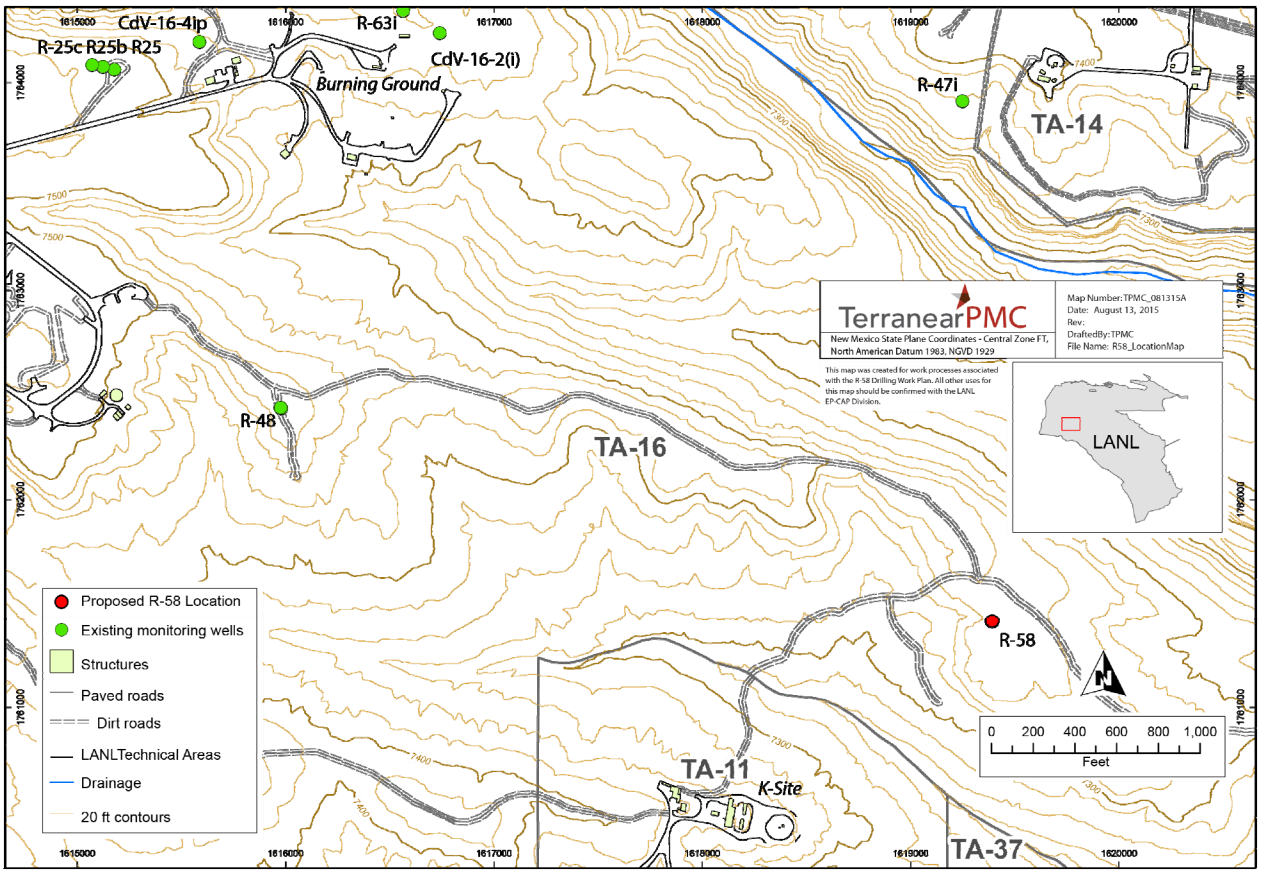


Figure 1. Map of well R-58 location

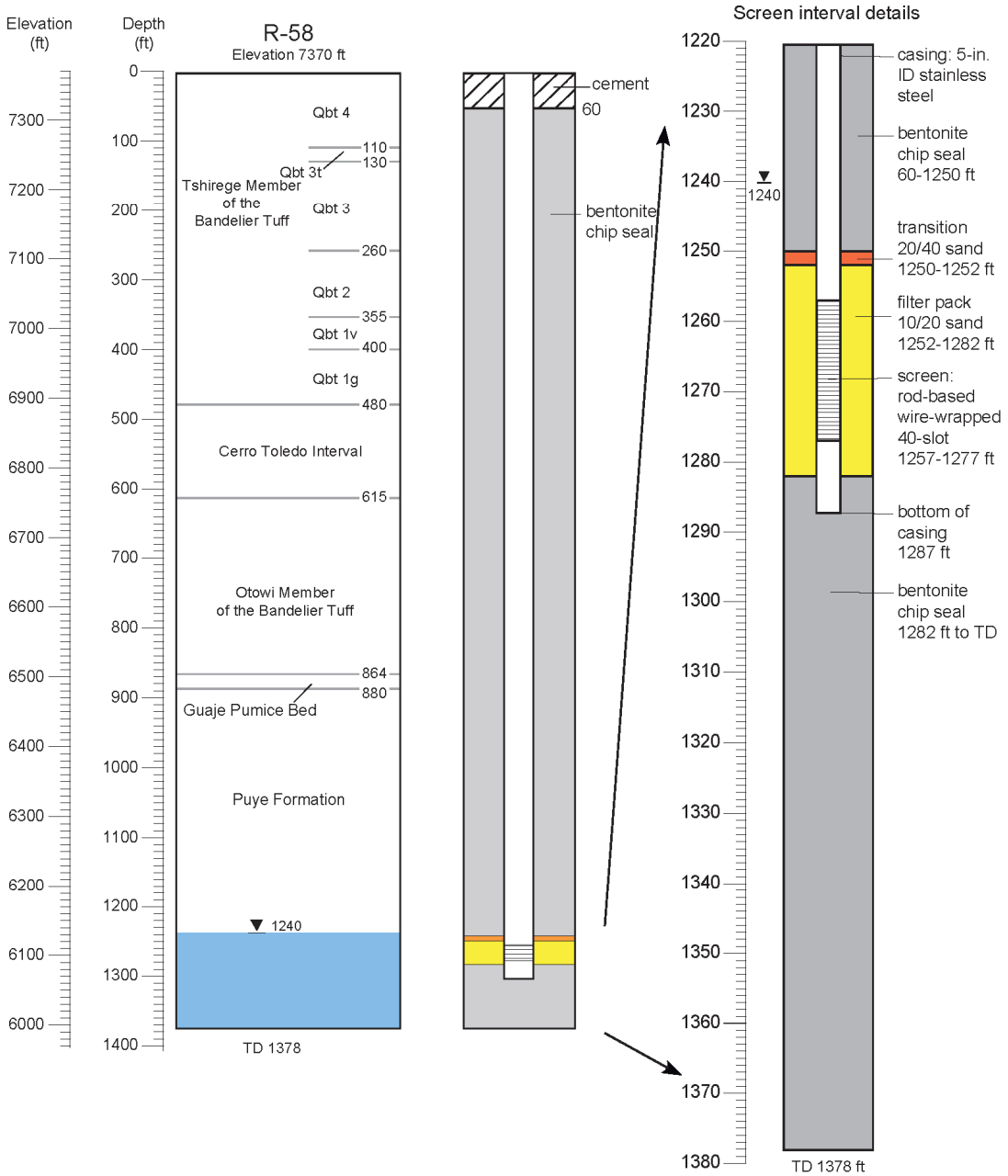


Figure 2. Proposed well design for R-58

From: Dale, Michael, NMENV <Michael.Dale@state.nm.us>
Sent: Monday, September 21, 2015 2:48 PM
To: Everett, Mark Capen
Cc: Rodriguez, Cheryl L; Shen, Hai; Paris, Steven M; Swickley, Stephani Fuller; Wear, Benjamin, NMENV; Kulis, Jerzy, NMENV; Cobrain, Dave, NMENV; Fellenz, David, NMENV; Yanicak, Stephen M; Green, Megan, NMENV; Granzow, Kim P
Subject: RE: R-58 proposed well design

Mark,

New Mexico Environment Department (NMED) hereby approves the installation of the regional-aquifer well R-58 as proposed in your e-mail, with attachments, that was received today, September 21, 2015 at 2:16 PM. This approval is based on information available to NMED at the time of the approval. LANL must provide the results of groundwater sampling, any modifications to the well design as proposed in the above-mentioned e-mail, and any additional information relevant to the installation of the well as soon as such data or information become available. Please call if you have any questions concerning this approval.

Thank you,

Michael R. Dale
New Mexico Environment Department
1183 Diamond Drive, Suite B
Los Alamos, NM 87544
LANL MS M894
Cell Phone: (505) 231-5423
Office Phone (505) 476-3078

From: Everett, Mark Capen [meverett@lanl.gov]
Sent: Monday, September 21, 2015 2:16 PM
To: Dale, Michael, NMENV; Wear, Benjamin, NMENV; Kulis, Jerzy, NMENV
Cc: Rodriguez, Cheryl L; Shen, Hai; Paris, Steven M; Swickley, Stephani Fuller
Subject: R-58 proposed well design

Michael,

Attached, please find our proposed design for well R-58. Let me know if you have questions, otherwise please respond to this e-mail with your concurrence.

Thanks,

Mark Everett, PG
ER-ES LANL
(505) 667-5931 (o)
(505) 231-6002 (c)

Appendix E

Aquifer Testing Report

E-1.0 INTRODUCTION

This appendix describes the hydraulic analysis of pumping tests conducted during November 2015 at well R-58, a regional aquifer well located at Technical Area 16 (TA-16) at Los Alamos National Laboratory (LANL or the Laboratory) in Los Alamos, New Mexico. The tests at R-58 were conducted to characterize the saturated materials and to quantify the hydraulic properties of the screened interval. Testing consisted of brief trial pumping, background water-level data collection, and a 21-h constant-rate pumping test. (The planned 24-h pumping test was truncated to 21-h because a snowstorm overnight limited site accessibility for several hours, delaying the scheduled start.)

As in most of the R-well pumping tests conducted on the Pajarito Plateau, an inflatable packer system was installed in R-58 to try to eliminate casing storage effects on the test data. This setup was largely effective at eliminating storage effects and allowing the capture of some usable early data. However, there was evidence that minor air/gas buildup may have occurred beneath the inflatable packer or within the filter pack beneath the bentonite seal. The water pumped from R-58 during testing was slightly aerated, suggesting the presence of air/gas in the formation water. It appeared that some of the earliest data (1 to 2 s) may have reflected storage effects.

In addition, leaky (worn) coupling joints in the drop pipe string allowed water to flow from the drop pipe into the annular space between the well casing and drop pipe, above the inflatable packer, throughout the testing. During nonpumping periods, this allowed drainage of portions of the drop pipe leaving voids (vacuum) beneath a few of the check valves. For example, when the pump was removed from the well following testing, drop pipe voids approximately 6 ft in length were observed at two separate locations in the drop pipe string and a third area showing approximately 35 ft of empty drop pipe was noted. Because of these voids, whenever the pump was started, the pumping head was artificially low, essentially equal to the distance between the pumping water level and the lowest remaining void in the drop pipe, plus friction loss. This reduced head resulted in a brief transient period of increased discharge rate until the void was filled. This phenomenon had the effect of corrupting most of the early drawdown data collected while the voids were being refilled immediately following pump startup.

Conceptual Hydrogeology

R-58 is completed within highly permeable dacite breccia. The well screen is 20.3 ft long, extending from 1257.0 to 1277.3 ft below ground surface (bgs). The static water level measured on November 14, 2015, before testing, was 1241.04 ft below the top of the 5-in. stainless-steel casing (1238.44 ft bgs). The casing elevation was 7374.62 ft above mean sea level (amsl), making the groundwater elevation 6133.58 ft amsl. The brass cap elevation at the well was surveyed at 7372.11 ft amsl, placing the water level 1238.53 ft below the brass cap.

Dacite breccia extended from above the static water level to a depth of at least 1378.4 ft bgs where the pilot hole was terminated during drilling. The presence of the water table within the permeable formation implied locally unconfined conditions. The depth of the pilot hole implied a minimum aquifer thickness of 140 ft at this location. Testing showed the formation to be highly permeable both in the screened interval and beyond it (above and/or below). Also, during the drilling of the pilot hole, it was possible to air lift water steadily from a depth of 1378 ft suggesting great permeability at the bottom of the drilled zone.

R-58 Testing

R-58 was tested from November 14 to 19, 2015. On November 14, the pump was installed and operated long enough to fill the drop pipe to prepare for subsequent testing.

After background data had been collected for a couple of days, trial testing of R-58 (trial 1) began at 8:00 a.m. on November 16 at a discharge rate of 18.6 gallons per minute (gpm) and continued for 30 min. Following 30 min of recovery, a second trial test (trial 2) was performed at 9:00 a.m. for 60 min at a discharge rate of 18.6 gpm. Following shutdown, recovery/background data were recorded for 1500 min until the start of the 21-h pumping test at 11:00 a.m. on November 17.

Originally, the pumping test was scheduled for 24 h, beginning at 8:00 a.m. on November 17. However, a snowfall overnight triggered a Laboratory late start and it was not possible to mobilize to the site until just before 11:00 a.m. Once the crew was on site, the pumping test began at 11:00 a.m. at a rate of 18.8 gpm and continued until 8:00 a.m. on November 18. Then recovery data were recorded for 1440 min until 8:00 a.m. on November 19 when the pump was pulled from the well.

E-2.0 BACKGROUND DATA

The background water-level data collected in conjunction with running the pumping tests allow the analyst to see what water-level fluctuations occur naturally in the aquifer and help distinguish between water-level changes caused by conducting the pumping test and changes associated with other causes.

Background water-level fluctuations have several causes, among them barometric pressure changes, operation of other wells in the aquifer, Earth tides, and long-term trends related to weather patterns. The background data hydrographs from the monitored wells were compared with barometric pressure data from the area to determine if a correlation existed.

Previous pumping tests on the Plateau have demonstrated a barometric efficiency for most wells of between 90% and 100%. Barometric efficiency is defined as the ratio of water-level change divided by barometric pressure change, expressed as a percentage. In the initial pumping tests conducted on the early R-wells, downhole pressure was monitored using a vented pressure transducer. This equipment measures the difference between the total pressure applied to the transducer and the barometric pressure, this difference being the true height of water above the transducer.

Subsequent pumping tests, including R-58, have utilized nonvented transducers. These devices simply record the total pressure on the transducer, that is, the sum of the water height plus the barometric pressure. This results in an attenuated “apparent” hydrograph in a barometrically efficient well. Take as an example a 90% barometrically efficient well. When monitored using a vented transducer, an increase in barometric pressure of 1 unit causes a decrease in recorded downhole pressure of 0.9 unit because the water level is forced downward 0.9 unit by the barometric pressure change. However, using a nonvented transducer, the total measured pressure increases by 0.1 unit (the combination of the barometric pressure increase and the water-level decrease). Thus, the resulting apparent hydrograph changes by a factor of 100 minus the barometric efficiency, and in the same direction as the barometric pressure change, rather than in the opposite direction.

Barometric pressure data were obtained from TA-54 tower site from the Waste and Environmental Protection and Compliance Division–Environmental Compliance Programs (EPC-CP). The TA-54 measurement location is at an elevation of 6548 ft amsl, whereas the wellhead brass cap elevation is at 7372.11 ft amsl. The static water level in R-58 was 1238.53 ft below the brass cap, making the water-

table elevation 6133.58 ft amsl. Therefore, the measured barometric pressure data from TA-54 had to be adjusted to reflect the pressure at the elevation of the water table within R-58.

The following formula was used to adjust the measured barometric pressure data:

$$P_{WT} = P_{TA54} \exp\left[-\frac{g}{3.281R} \left(\frac{E_{R-58} - E_{TA54}}{T_{TA54}} + \frac{E_{WT} - E_{R-58}}{T_{WELL}} \right) \right] \qquad \textbf{Equation E-1}$$

Where, P_{WT} = barometric pressure at the water table inside R-58

P_{TA54} = barometric pressure measured at TA-54

g = acceleration of gravity, in m/sec^2 (9.80665 m/sec^2)

R = gas constant, in J/Kg/degree Kelvin (287.04 J/Kg/degree Kelvin)

E_{R-58} = brass cap elevation at R-58 site, in feet (7372.11 ft)

E_{TA54} = elevation of barometric pressure measuring point at TA-54, in feet (6548 ft)

E_{WT} = elevation of the water level in R-58, in feet (6133.58 ft)

T_{TA54} = air temperature near TA-54, in degrees Kelvin (assigned a value of 35.0 degrees Fahrenheit, or 274.8 degrees Kelvin)

T_{WELL} = air column temperature inside R-58, in degrees Kelvin (assigned a value of 62.5 degrees Fahrenheit, or 290.1 degrees Kelvin)

This formula is an adaptation of an equation EPC-CP provided. It can be derived from the ideal gas law and standard physics principles. An inherent assumption in the derivation of the equation is that the air temperature between TA-54 and the well is temporally and spatially constant and that the temperature of the air column in the well is similarly constant.

The corrected barometric pressure data reflecting pressure conditions at the water table were compared with the water-level hydrograph to discern the correlation between the two and determine whether water-level corrections would be needed before data analysis.

E-3.0 IMPORTANCE OF EARLY DATA

When pumping or recovery first begins, the vertical extent of the cone of depression is limited to approximately the well screen length, the filter pack length, or the aquifer thickness in relatively thin permeable strata. For many pumping tests on the Plateau, the early pumping period is the only time the effective height of the cone of depression is known with certainty because soon after startup the cone of depression expands vertically through permeable materials above and/or below the screened interval. Thus, the early data often offer the best opportunity to obtain hydraulic conductivity information because conductivity would equal the earliest-time transmissivity divided by the well screen length.

Unfortunately, in many pumping tests, casing-storage effects dominate the early-time data, potentially hindering the effort to determine the transmissivity of the screened interval. The duration of casing-storage effects can be estimated using the following equation (Schafer 1978, 098240).

$$t_c = \frac{0.6\left(D^2 - d^2\right)}{\frac{Q}{s}}$$

Equation E-2

Where, t_c = duration of casing storage effect, in minutes

D = inside diameter of well casing, in inches

d = outside diameter of drop pipe, in inches

Q = discharge rate, in gallons per minute

s = drawdown observed in pumped well at time t_c, in feet

The calculated casing storage time is quite conservative. Often, the data show that significant effects of casing storage have dissipated after about half the computed time.

For wells screened across the water table or wells in which the filter pack can drain during pumping, there can be an additional storage contribution from the filter pack. The following equation provides an estimate of the storage duration accounting for both casing and filter pack storage.

$$t_c = \frac{0.6\left[\left(D^2 - d^2\right) + S_y\left(D_B^2 - D_C^2\right)\right]}{\frac{Q}{s}}$$

Equation E-3

Where, S_y = short term specific yield of filter media (typically 0.2)

D_B = diameter of borehole, in inches

D_C = outside diameter of well casing, in inches

This equation was derived from Equation E-2 on a proportional basis by increasing the computed time in direct proportion to the additional volume of water expected to drain from the filter pack. (To prove this, note that the left-hand term within the brackets is directly proportional to the annular area [and volume] between the casing and drop pipe, while the right-hand term is proportional to the area [and volume] between the borehole and the casing, corrected for the drainable porosity of the filter pack. Thus, the summed term within the brackets accounts for all of the volume [casing water and drained filter pack water] appropriately.)

In some instances, it is possible to eliminate casing storage effects by setting an inflatable packer above the tested screen interval before conducting the test. As discussed in Section E-1.0 this effort was largely successful in the testing performed on R-58. However, effervescence in the formation water appeared to cause some air buildup within the well imparting a very brief storage effect to some of the test data.

E-4.0 TIME-DRAWDOWN METHODS

Time-drawdown data can be analyzed using a variety of methods. Among them is the Theis method (1934-1935, 098241). The Theis equation describes drawdown around a well as follows:

$$s = \frac{114.6Q}{T} W(u)$$

Equation E-4

where,

$$W(u) = \int_u^\infty \frac{e^{-x}}{x} dx$$

Equation E-5

and

$$u = \frac{1.87r^2 S}{Tt}$$

Equation E-6

and where, s = drawdown, in feet

Q = discharge rate, in gallons per minute

T = transmissivity, in gallons per day per foot

S = storage coefficient (dimensionless)

t = pumping time, in days

r = distance from center of pumpage, in feet

To use the Theis method of analysis, the time-drawdown data are plotted on log-log graph paper. Then, Theis curve matching is performed using the Theis type curve—a plot of the Theis well function $W(u)$ versus $1/u$. Curve matching is accomplished by overlaying the type curve on the data plot and, while keeping the coordinate axes of the two plots parallel, shifting the data plot to align with the type curve, effecting a match position. An arbitrary point, referred to as the match point, is selected from the overlapping parts of the plots. Match-point coordinates are recorded from the two graphs, yielding four values: $W(u)$: $1/u$, s, and t. Using these match-point values, transmissivity and storage coefficient are computed as follows:

$$T = \frac{114.6Q}{s} W(u)$$

Equation E-7

$$S = \frac{Tut}{2693r^2}$$

Equation E-8

where, T = transmissivity, in gallons per day per foot

S = storage coefficient

Q = discharge rate, in gallons per minute

$W(u)$ = match-point value

s = match-point value, in feet

u = match-point value

t = match-point value, in minutes

An alternative solution method applicable to time-drawdown data is the Cooper-Jacob method (1946, 098236), a simplification of the Theis equation that is mathematically equivalent to the Theis equation for most pumped well data. The Cooper-Jacob equation describes drawdown around a pumping well as follows:

$$s = \frac{264Q}{T} \log \frac{0.3Tt}{r^2 S}$$

Equation E-9

The Cooper-Jacob equation is a simplified approximation of the Theis equation and is valid whenever the u value is less than about 0.05. For small radius values (e.g., corresponding to borehole radii), u is less than 0.05 at very early pumping times and therefore is less than 0.05 for most or all measured drawdown values. Thus, for the pumped well, the Cooper-Jacob equation usually can be considered a valid approximation of the Theis equation. An exception occurs when the transmissivity of the aquifer is very low. In that case, some of the early pumped well drawdown data may not be well approximated by the Cooper-Jacob equation.

According to the Cooper-Jacob method, the time-drawdown data are plotted on a semilog graph, with time plotted on the logarithmic scale. Then a straight line of best fit is constructed through the data points and transmissivity is calculated using:

$$T = \frac{264Q}{\Delta s}$$

Equation E-10

Where, T = transmissivity, in gallons per day per foot

Q = discharge rate, in gallons per minute

Δs = change in head over one log cycle of the graph, in feet

Because many of the test wells completed on the Plateau are severely partially penetrating, an alternate solution considered for assessing aquifer conditions is the Hantush equation for partially penetrating wells (Hantush 1961, 098237; Hantush 1961, 106003). The Hantush equation is as follows:

Equation E-11

$$s = \frac{Q}{4\pi T}\left[W(u) + \frac{2b^2}{\pi^2 (l-d)(l'-d')} \sum_{n=1}^{\infty} \frac{1}{n^2}\left(\sin\frac{n\pi l}{b} - \sin\frac{n\pi d}{b}\right)\left(\sin\frac{n\pi l'}{b} - \sin\frac{n\pi d'}{b}\right) W\left(u, \sqrt{\frac{K_z}{K_r}}\frac{n\pi r}{b}\right)\right]$$

Where, in consistent units, s, Q, T, t, r, S, and u are as previously defined and

b = aquifer thickness

d = distance from top of aquifer to top of well screen in pumped well

l = distance from top of aquifer to bottom of well screen in pumped well

d' = distance from top of aquifer to top of well screen in observation well

l' = distance from top of aquifer to bottom of well screen in observation well

K_z = vertical hydraulic conductivity

K_r = horizontal hydraulic conductivity

In this equation, $W(u)$ is the Theis well function and $W(u,\beta)$ is the Hantush well function for leaky aquifers where:

$$\beta = \sqrt{\frac{K_z}{K_r}}\frac{n\pi r}{b}$$ **Equation E-12**

Note that for single-well tests, $d = d'$ and $l = l'$.

E-5.0 RECOVERY METHODS

Recovery data were analyzed using the Theis recovery method. This is a semilog analysis method similar to the Cooper-Jacob procedure.

In this method, residual drawdown is plotted on a semilog graph versus the ratio t/t', where t is the time since pumping began and t' is the time since pumping stopped. A straight line of best fit is constructed through the data points and T is calculated from the slope of the line as follows:

$$T = \frac{264Q}{\Delta s}$$ **Equation E-13**

The recovery data are particularly useful compared with time-drawdown data. Because the pump is not running, spurious data responses associated with dynamic discharge rate fluctuations are eliminated. The result is that the data set is generally “smoother” and easier to analyze.

Recovery data also can be analyzed using the Hantush equation for partial penetration. This approach is generally applied to the early data in a plot of recovery versus recovery time.

E-6.0 SPECIFIC CAPACITY METHOD

The specific capacity of the pumped well can be used to obtain a lower-bound value of hydraulic conductivity. The hydraulic conductivity is computed using formulas that are based on the assumption that the pumped well is 100% efficient. The resulting hydraulic conductivity is the value required to sustain the observed specific capacity. If the actual well is less than 100% efficient, it follows that the actual hydraulic conductivity would have to be greater than calculated to compensate for well inefficiency. Thus, because the efficiency is not known, the computed hydraulic conductivity value represents a lower bound. The actual conductivity is known to be greater than or equal to the computed value.

For fully penetrating wells, the Cooper-Jacob equation can be iterated to solve for the lower-bound hydraulic conductivity. However, the Cooper-Jacob equation (assuming full penetration) ignores the contribution to well yield from permeable sediments above and below the screened interval. To account for this contribution, it is necessary to use a computation algorithm that includes the effects of partial penetration. One such approach was introduced by Brons and Marting (1961, 098235) and augmented by Bradbury and Rothchild (1985, 098234).

Brons and Marting introduced a dimensionless drawdown correction factor, s_P, approximated by Bradbury and Rothschild as follows:

$$s_P = \frac{1-\frac{L}{b}}{\frac{L}{b}}\left[\ln\frac{b}{r_w} - 2.948 + 7.363\frac{L}{b} - 11.447\left(\frac{L}{b}\right)^2 + 4.675\left(\frac{L}{b}\right)^3\right] \qquad \textbf{Equation E-14}$$

In this equation, L is the well screen length, in ft. Incorporating the dimensionless drawdown parameter, the conductivity is obtained by iterating the following formula:

$$K = \frac{264Q}{sb}\left(\log\frac{0.3Tt}{r_w^2 S} + \frac{2s_P}{\ln 10}\right) \qquad \textbf{Equation E-15}$$

The Brons and Marting procedure can be applied to both partially penetrating and fully penetrating wells.

To apply this procedure, a storage coefficient value must be assigned. Storage coefficient values generally range from 10^{-5} to 10^{-3} for confined aquifers and 0.01 to 0.25 for unconfined aquifers (Driscoll 1986, 104226). Semiconfined conditions generally are associated with intermediate storage coefficient values between these ranges. For R-58, the test data and well log suggested unconfined conditions as well as highly permeable and coarse-grained formation material that would be associated with storage coefficient values at the upper end of the normal range. Therefore, calculations were performed for an assigned storage coefficient range of 0.10 to 0.25. The lower-bound transmissivity calculation result is not particularly sensitive to the choice of storage coefficient value, so a rough estimate is generally adequate to support the calculations.

The analysis also requires assigning a value for the saturated aquifer thickness, b. For R-58, b was assigned a value of 140 ft, the approximate thickness of saturated formation penetrated by the borehole before backfilling and well completion. The calculation is not particularly sensitive to the assigned value of saturated thickness. It is only necessary to use a value well in excess of the screen length. Ignoring deeper sediments has little effect on the calculation results because sediments far from the screened interval have minimal effect on yield.

E-7.0 BACKGROUND DATA ANALYSIS

Background aquifer pressure data collected during the R-58 tests were plotted along with barometric pressure to determine the barometric effect on water levels.

Figure E-7.0-1 shows aquifer pressure data from R-58 during the test period along with barometric pressure data from TA-54 that have been corrected to equivalent barometric pressure in feet of water at the water table. The R-58 data are referred to in the figure as the “apparent hydrograph” because the measurements reflect the sum of water pressure and barometric pressure, having been recorded using a nonvented pressure transducer. The times of the pumping periods for the R-58 pumping tests are included on the figure for reference.

A comparison of the apparent hydrograph and barometric pressure curve showed little correlation between the two, suggesting a high barometric efficiency, likely close to 100%. Large changes in barometric pressure caused negligible change in the apparent hydrograph, meaning that the changes in water level were equal and opposite to changes in barometric pressure.

Note that following both the trial testing and the 21-h test, water levels recovered temporarily above the initial static water level by up to a few hundredths of a foot. This so-called “super recovery” is not well understood. It has been observed in other R-well pumping tests at the Laboratory reaching magnitudes of many feet at those locations. One possible explanation is that the depressurization of aquifer water caused by the pumping test allowed dissolved gas to come out of solution. Assuming this process could continue for a time following pump shutoff, the volume of gas created would have the same effect as injecting an equivalent volume of water, thus raising water levels temporarily. The occurrence of this phenomenon obscured the natural hydraulic response during recovery, rendering the middle and late recovery data unanalyzable.

E-8.0 WELL R-58 DATA ANALYSIS

This section presents the data obtained from the R-58 pumping tests and the results of the analytical interpretations. Data are presented for trial 1, trial 2, and the 21-h constant-rate test.

E-8.1 Well R-58 Trial 1

Figure E-8.1-1 shows a semilog plot of the drawdown data collected from trial 1 on R-58 at a discharge rate of 18.6 gpm. It appeared that a portion of the drop pipe had drained overnight and that initial operation of the pump was against substantially reduced head. This resulted in a greater pumping rate initially while the gap in the drop pipe was refilled.

Based on the estimated elevation of the void in the drop pipe, from observations made days later when the pump was pulled from the well, and the resulting pumping head, the hydraulic characteristics of the pump bowls implied an estimated initial discharge rate of approximately 29 gpm. This discharge rate persisted for approximately 0.2 min corresponding to a void volume of about 6 gal.—roughly the volume of 35 ft of 2-in. drop pipe. This agreed with the observation of an approximately 35-ft empty interval of drop pipe observed when the pump was pulled from the well following the test effort.

Once the void had been filled, the discharge rate declined to 18.6 gpm, resulting in the rise in water level observed after 0.2 min.

The early data revealed a calculated transmissivity of 10,500 gallons per day (gpd)/ft. Dividing this value by the screen length of 20.3 ft yielded an estimated hydraulic conductivity of 517 gpd/ft^2, or 69 ft/d. This value may be considered an estimate of the properties of the screened interval.

The late data from trial 1 were plotted on the expanded scale shown in Figure E-8.1-2. The transmissivity computed from the plot was 70,100 gpd/ft. As discussed below, this appeared to be an overestimate of transmissivity and suggested that the curve was artificially flattened because of delayed yield.

Figure E-8.1-3 shows recovery data recorded for 30 min following cessation of trial 1 pumping. The initial slope was steep, gradually flattening over time because of partial penetration effects (vertical growth of the cone of impression) and delayed yield. The early data were insufficient to support a transmissivity computation. The late data showed that water levels recovered above the static water level (“super” recovery) and were not analyzable.

E-8.2 Well R-58 Trial 2

Figure E-8.2-1 shows a semilog plot of the drawdown data collected from trial 2 at a discharge rate of 18.6 gpm. The early data showed exaggerated drawdown, likely a response to a brief period (just a few

seconds) of elevated discharge rate resulting from a small void in the drop pipe caused by leakage of water through a coupling joint during the 30-min recovery period between trials 1 and 2.

The subsequent data were plotted on the expanded scale shown in Figure E-8.2-2. The transmissivity value calculated from the analysis was 15,900 gpd/ft. This value was substantially greater than that obtained from trial 1 and was not considered reliable. The transition from the greater antecedent discharge rate (before the data shown on the line of fit on the graph) to the lower rate caused the data trace to be artificially flat for a period of time. Before the sought slope could be restored, the effects of delayed yield and vertical growth of the cone of depression caused continued flattening of the curve. Thus, no portion of the curve could be relied on to provide a valid estimate of the transmissivity.

Late drawdown data from trial 2 were plotted on the graph in Figure E-8.2-3. The transmissivity determined from the line of fit on the graph was 87,000 gpd/ft. As described later, similar to the late-time transmissivity value obtained from trial 1, this appeared to be an overestimate of transmissivity and suggested that the curve was artificially flattened because of delayed yield.

Figure E-8.2-4 shows the recovery data collected following trial 2. The transmissivity computed from the early data was 10,700 gpd/ft corresponding to a screen interval hydraulic conductivity of 527 gpd/ft^2, or 70 ft/d.

Late data showed the expected flattening effect associated with delayed yield and vertical growth of the cone of impression. These data also showed “super” recovery and were not analyzable.

E-8.3 Well R-58 21-h Test

Figure E-8.3-1 shows a semilog plot of the drawdown data collected during the 21-h pumping test at a discharge rate of 18.8 gpm. Because of the Laboratory delayed start the morning of the test and the 11:00 a.m. starting time, the pumping event missed the dense data collection programmed in the transducer for 8:00 a.m. Thus, only 1-min data were available for analysis. As shown on the plot, the first recorded data point showed exaggerated drawdown caused by antecedent drainage of a portion of the drop pipe during the 2-d background monitoring period. Subsequent data showed a flat slope resulting from delayed yield and vertical growth of the cone of depression.

It appeared that delayed yield had subsided midway through the pumping period. The transmissivity value determined from the stabilized late-time slope was 43,400 gpd/ft. It was assumed that this represented the transmissivity of the hydraulically contiguous formation responding to pumping, although it was not possible to know what the corresponding aquifer thickness was.

After approximately 1100 min of pumping, the water level rose several hundredths of a foot as indicated on the plot. There was no corresponding change in discharge rate to explain this response. It was possible that a small, gradual lessening of the gas content in the formation near the well resulted in a permeability increase there. Of note was the fact that less gas was observed in the pumped water at the end of the pumping test compared to earlier on.

Figure E-8.3-2 shows recovery data recorded following cessation of pumping. Interpreting this plot was challenging. The transmissivity determined from the earliest slope (not shown) was less than that determined from the above analyses, suggesting the early slope was artificially steep. It was possible a tiny buildup of air/gas in the casing beneath the inflatable packer or within the filter pack behind the blank casing above the well screen may have occurred, resulting in a brief storage-like effect associated with compression of the gas as water levels recovered initially.

Because of this possibility, the line of fit was chosen to deliberately omit the first few data points. At the same time, the line of fit was constructed to utilize data corresponding to at least 0.1 to 0.2 min of recovery—a duration expected to be minimally affected by partial penetration and delayed yield effects, based on previous analyses. Selecting the line of fit was tricky because the data plot showed a continuous change in slope over time, with no distinct straight line segment.

The transmissivity value obtained from the line of fit shown in Figure E-8.3-2 was 10,600 gpd/ft corresponding to a screen interval hydraulic conductivity value of 522 gpd/ft^2, or 70 ft/d. There was some uncertainty in this value because of the early storage effect and the lack of a consistent straight line portion of the curve.

Late recovery data showed the expected flattening effect associated with delayed yield and vertical growth of the cone of impression as well as the “super” recovery observed previously and were not analyzable.

E-8.4 Combined Results

Table E-8.4-1 summarizes the results of the early-data analyses determining the hydraulic properties of the screened zone in R-58. The transmissivity values ranged from 10.500 to 10,700 gpd/ft, averaging 10,600 gpd/ft. The resulting screen interval hydraulic conductivity values averaged 522 gpd/ft^2, or 70 ft/d.

Early-time data from trial 1 drawdown, trial 2 drawdown and recovery, and the 21-h test recovery were plotted on the same graph for comparison purposes in Figure E-8.4-1. The displacement data were normalized by dividing the displacement by the corresponding discharge rate for each test and, thus, the vertical scale on the plot is s/Q, the ratio of drawdown to pumping rate. The trial 1 drawdown data were normalized using the initial rate of 29 gpm, which accounts for the deviation of the later data on that particular plot from the others.

The significant observation from Figure E-8.4-1 was the distinctly steeper slope at very early time from the 21-h test recovery data compared with the slope of the trial 2 recovery data. This seemed to reinforce the idea of a small amount of gas buildup in the well or filter pack during the 21-h test, causing a minor storage-like effect.

E-8.5 Well R-58 Specific Capacity Data

Specific capacity data were used along with well geometry to estimate a lower-bound hydraulic conductivity value for the permeable zone penetrated by R-58. This was done to provide a frame of reference for evaluating the above analyses.

The total saturated thickness of dacite breccia was not known. In applying partial penetration analysis, however, it is only necessary to assign an aquifer thickness substantially greater than the well screen length because sediments far from the screened interval have negligible effect on yield. The aquifer thickness was arbitrarily assigned a value of 140 ft—the approximate thickness of saturated sediments penetrated during drilling of the borehole. The well screen length of 20.3 ft was used in the partial penetration calculations.

R-58 produced 18.8 gpm with 1.37 ft of drawdown for a specific capacity of 13.7 gpm/ft after 1440 min of pumping. In addition to specific capacity and pumping time, other input values used in the calculations included assigned storage coefficient values ranging from 0.10 to 0.25 and a borehole radius of 0.67 ft (inferred from the volume of filter pack required to backfill the screen zone).

Applying the Brons and Marting method to these inputs yielded the lower-bound hydraulic conductivity estimates shown in Figure E-8.5-1: approximately 76 ft/d. This was slightly contradictory to the pumping test hydraulic conductivity estimate of 70 ft/d. However, the discrepancy was less than 10%, within typical accuracy expectations of many pumping test analyses.

In some instances in fractured rock, the specific capacity of the well will be greater than that estimated using porous media theory. Because when the well bore intersects fractures, it responds hydraulically with an effective radius greater than the actual, leading to an elevated specific capacity and an overestimate of the lower-bound hydraulic conductivity. It was not known if this was a contributing factor to the result presented here, that is, it was not known whether the dacite breccia was consolidated or unconsolidated. The screen interval drilled rapidly, suggesting unconsolidated conditions, so this explanation may not apply to R-58. Nevertheless, the hydraulic conductivity values from the pumping test and specific capacity agreed reasonably well and, further, suggested an efficient well.

E-8.6 Packer Deflation

Water leaking through the drop pipe coupling joints flowed into the annular space between the drop pipe and well casing above the inflatable packer and remained there until the packer was deflated at the end of the 24-h recovery period. This can be seen in the head buildup that occurred when the packer was deflated.

Figure E-8.6-1 shows the head buildup above the static water level during the first 15 min following packer deflation. As shown on the graph, the greatest head measured was 34 ft above the static level. The actual maximum height of water buildup in the annulus was not known because the head data were measured at 1-min intervals—not sufficient frequency to capture the maximum head position. It was certain, however, that the initial head following packer deflation would have been greater than the first measurement shown on the graph.

It was not possible to extrapolate what the maximum head buildup might have been because the exact time of packer deflation was not known. When the packer was bled, the pressurized nitrogen gas escaped slowly so there was no way to know at what point the pressure had been reduced sufficiently to allow movement of trapped water downward past the packer. The only certainty was that the packer deflated between 0 and 1 min on the graph in Figure E-8.6-1. Note that the buildup level declined 90% from minute 1 to minute 2—rapid response because of the great aquifer permeability. This means that it is probable that the initial head might have been far greater than the 34-ft level shown on the graph.

E-9.0 SUMMARY

Pumping tests were conducted on R-58 to gain an understanding of the hydraulic characteristics of the aquifer and screen interval. Testing consisted of two brief trial tests and a 21-h test.

Several important observations and conclusions from the test pumping include the following.

1. A comparison of barometric pressure and R-58 water-level data showed a highly barometrically efficient screen zone. Large changes in barometric pressure caused almost no change in the apparent hydrograph obtained from the well using a non-vented pressure transducer.

2. Following each pumping event, R-58 showed “super recovery” in which water levels rose above the original static level temporarily by up to a few hundredths of a foot. The cause of this phenomenon is not understood but may be related to the release of dissolved gas from the

formation water in response to pumping. Similar responses have been observed in other R-well pumping tests, but with magnitudes of several feet or tens of feet.

3. Water produced from R-58 showed effervescence during most of the pumping period but cleared toward the end of the test. Possibly related, the drawdown declined by approximately 5% over the last few hours of pumping during the 21-h test, consistent with a permeability increase near the well, perhaps associated with gradual decline of gas content in the formation pores there.

4. There was some evidence of minor gas buildup, either within the well casing beneath the inflatable packer or within the filter pack beneath the bentonite seal, causing a brief storage-like effect on the earliest recovery data from the 21-h pumping test.

5. Leaky (worn) threaded joints in the drop pipe allowed drainage of water from the pipe during nonpumping periods. This resulted in elevated discharge rates briefly on startup rendering most of the early-time pumping data unanalyzable.

6. The estimated transmissivity of the screened interval was 10,600 gpd/ft, making the hydraulic conductivity of the screen interval 522 gpd/ft^2, or 70 ft/d.

7. The overall transmissivity of the hydraulically contiguous sediments responding to pumping was 43,400 gpd/ft. The corresponding thickness of sediments was not known.

8. The specific capacity of R-58 implied a lower-bound hydraulic conductivity of approximately 76 ft/d—slightly greater than, but in reasonable agreement with, the pumping test result. This could be either from a fracture flow component, if the formation is consolidated, or from the inherent accuracy limitations of the typical pumping test analysis methods. Drilling performance through the screen interval suggested the likelihood of unconsolidated formation conditions.

E-10.0 REFERENCES

The following list includes all documents cited in this appendix. Parenthetical information following each reference provides the author(s), publication date, and ER ID or ESH ID. This information is also included in text citations. ER IDs were assigned by the Environmental Programs Directorate's Records Processing Facility (IDs through 599999), and ESH IDs are assigned by the Environment, Safety, and Health (ESH) Directorate (IDs 600000 and above). IDs are used to locate documents in the Laboratory's Electronic Document Management System and, where applicable, in the master reference set.

Copies of the master reference set are maintained at the New Mexico Environment Department Hazardous Waste Bureau and the ESH Directorate. The set was developed to ensure that the administrative authority has all material needed to review this document, and it is updated with every document submitted to the administrative authority. Documents previously submitted to the administrative authority are not included.

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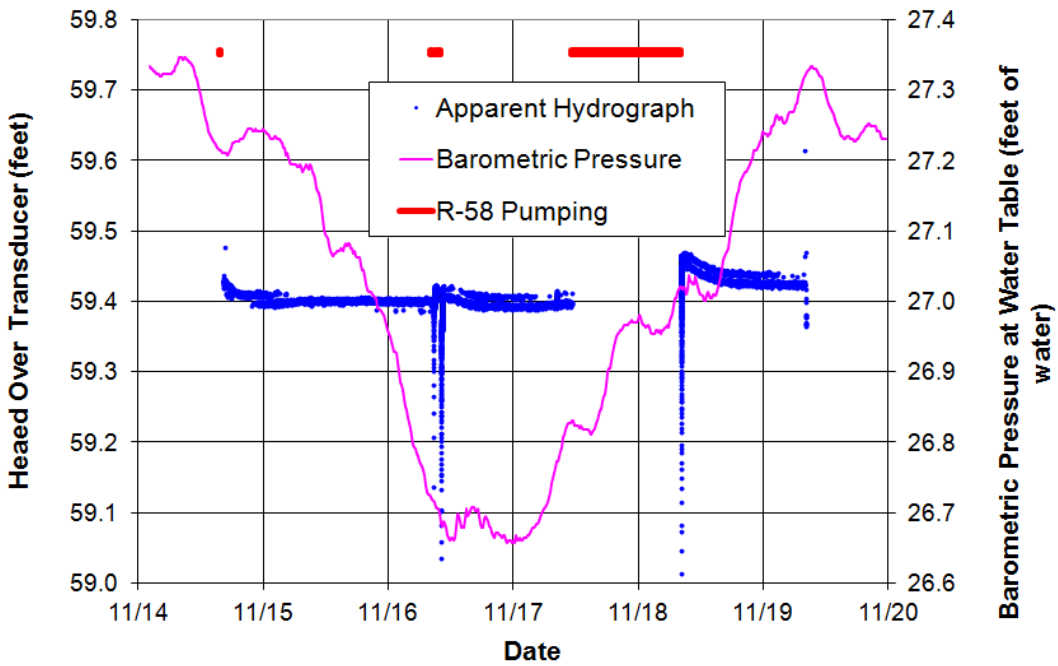

Figure E-7.0-1 Well R-58 apparent hydrograph

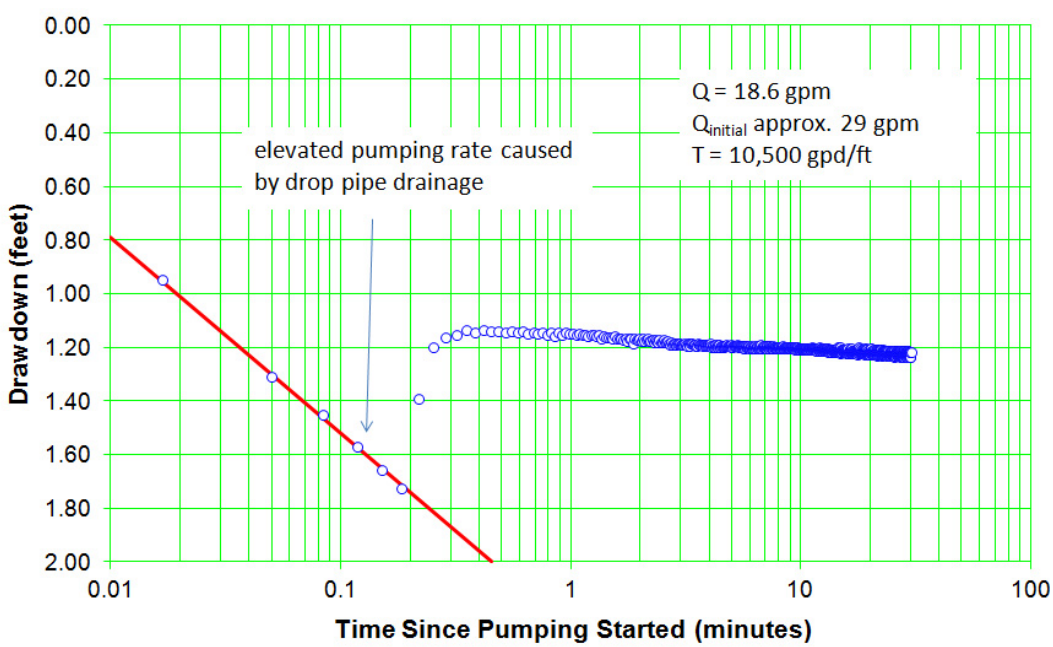

Figure E-8.1-1 Well R-58 trial 1 drawdown

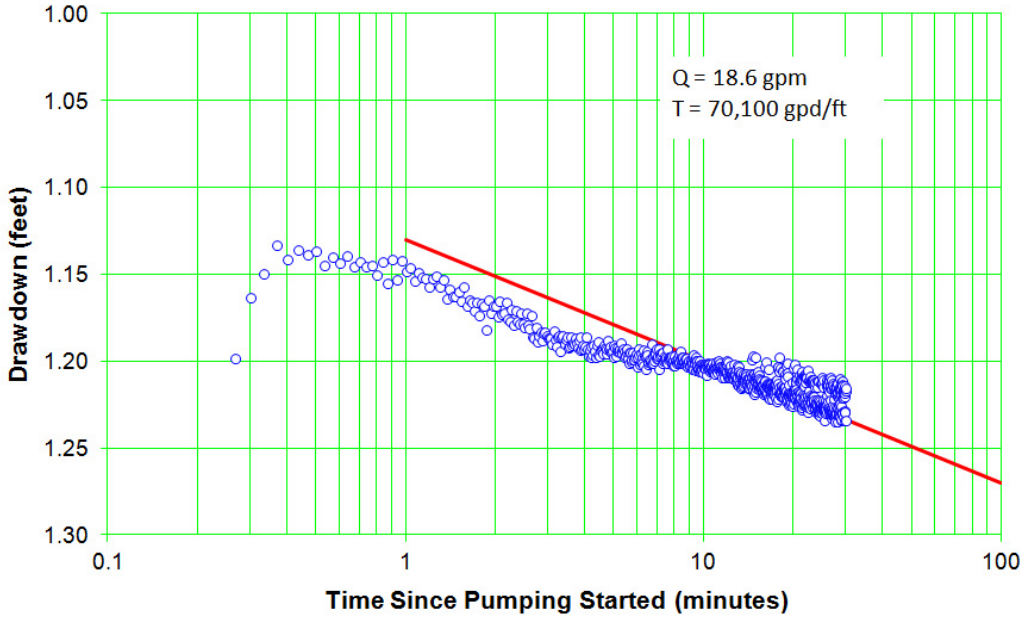

Figure E-8.1-2 Well R-58 trial 1 drawdown—expanded scale

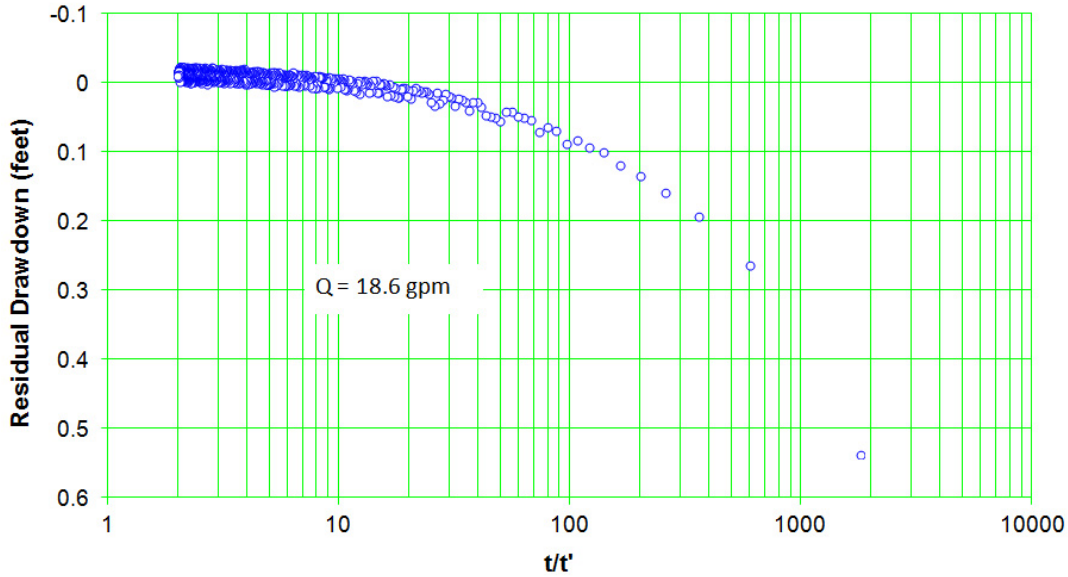

Figure E-8.1-3 Well R-58 trial 1 recovery

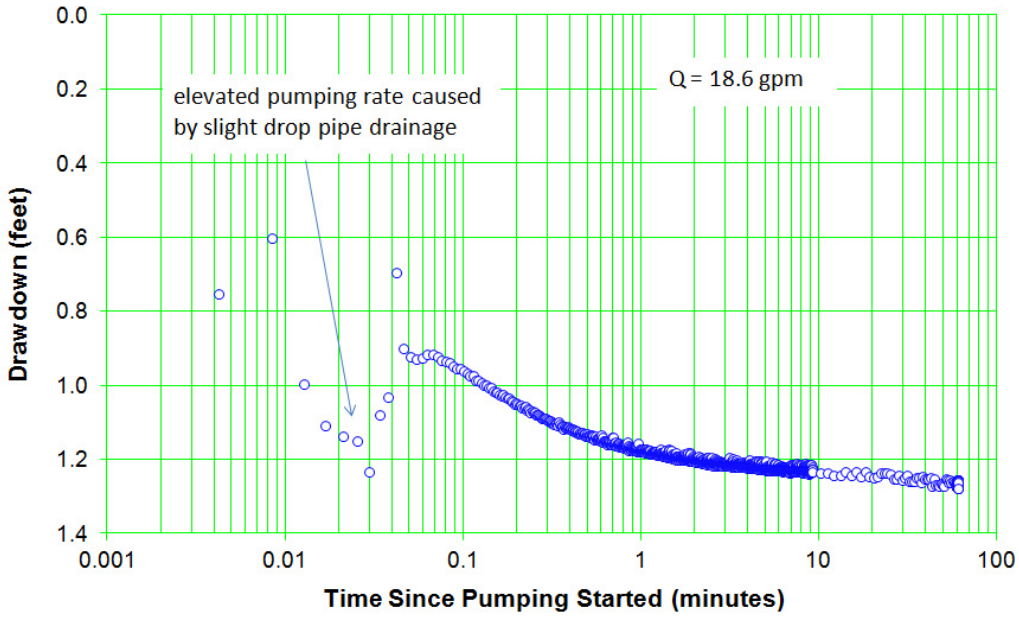

Figure E-8.2-1 Well R-58 trial 2 drawdown

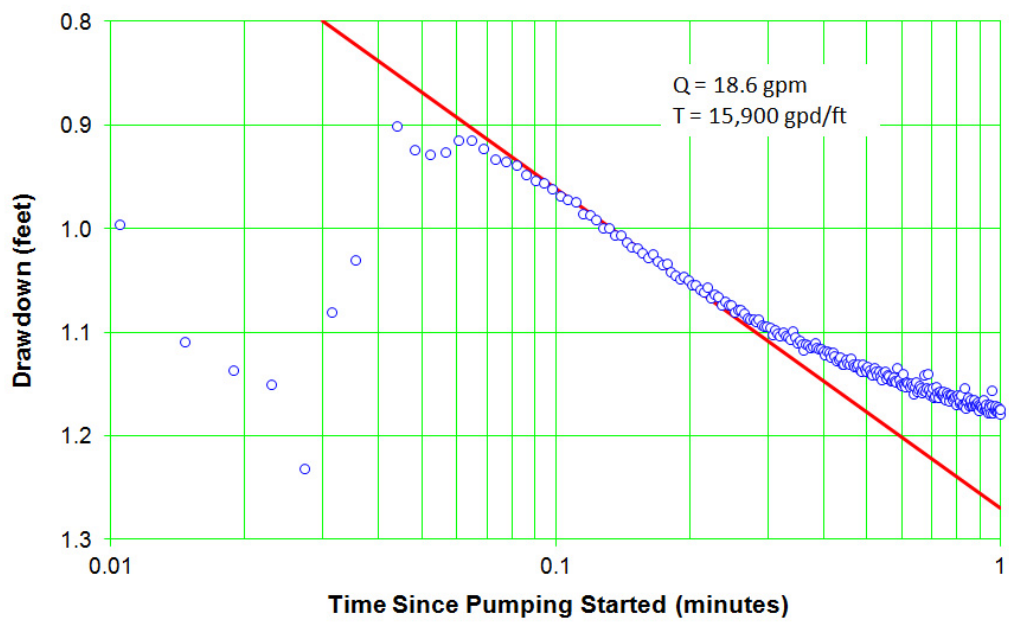

Figure E-8.2-2 Well R-58 trial 2 drawdown—expanded scale

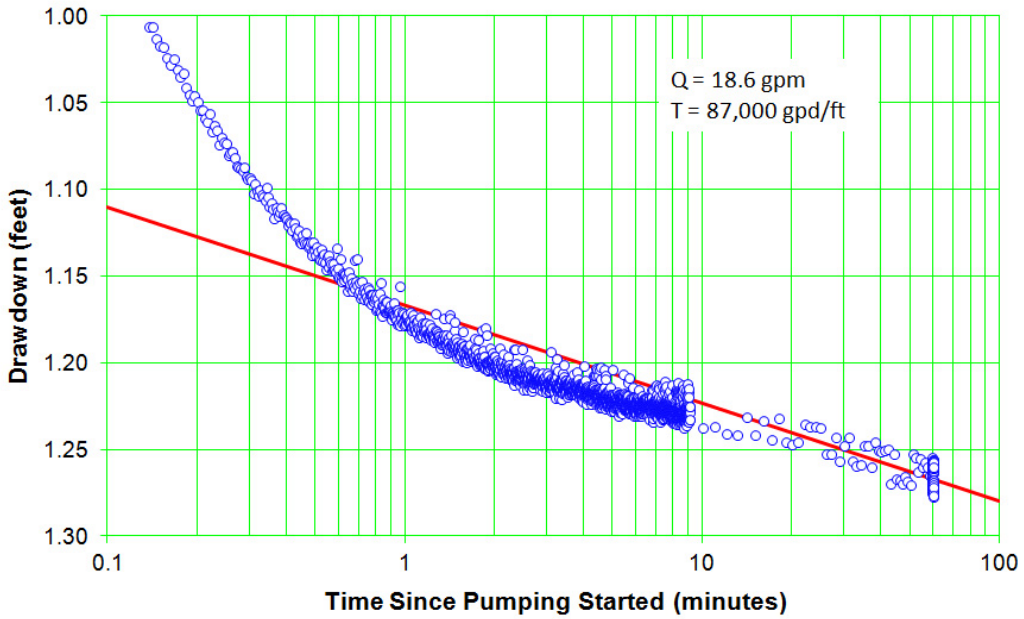

Figure E-8.2-3 Well R-58 trial 2 drawdown—late data

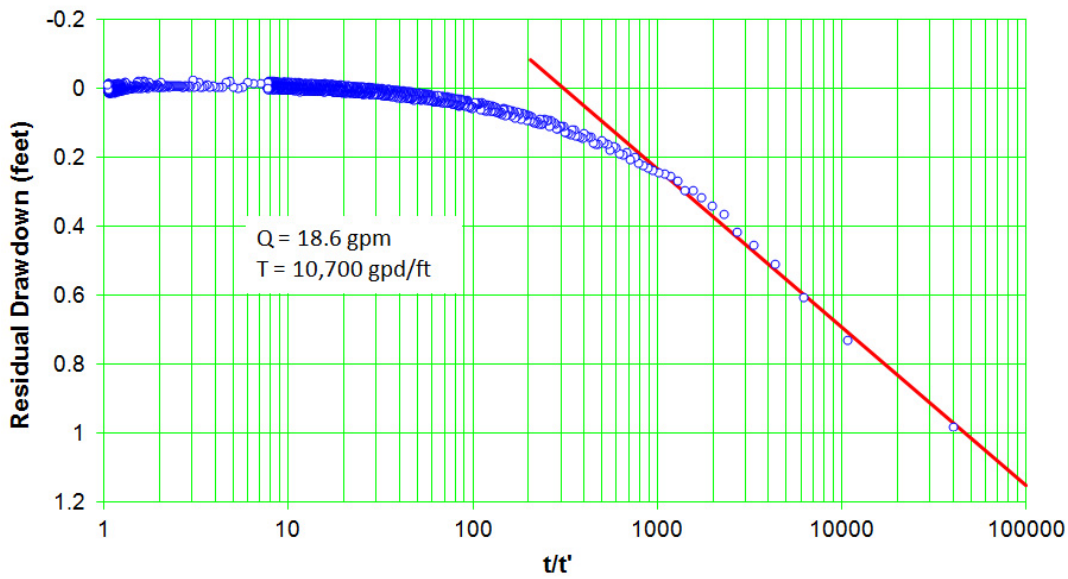

Figure E-8.2-4 Well R-58 trial 2 recovery

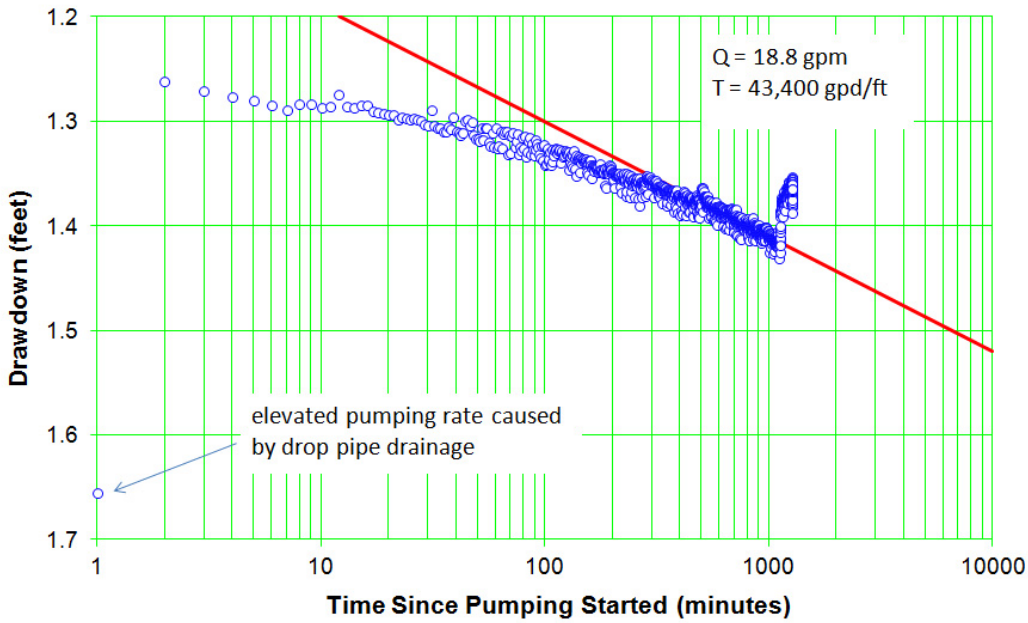

Figure E-8.3-1 Well R-58 drawdown

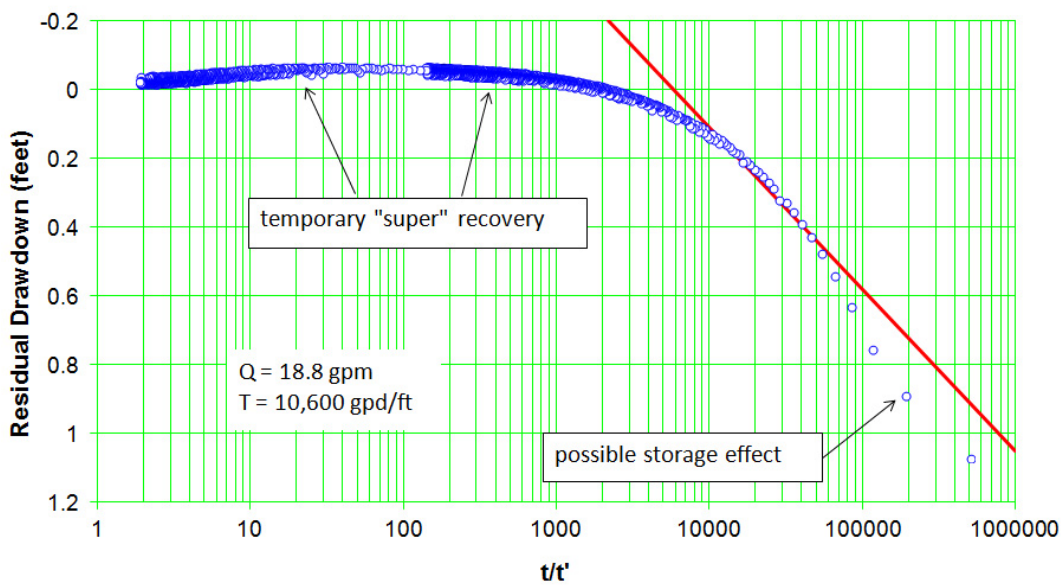

Figure E-8.3-2 Well R-58 recovery

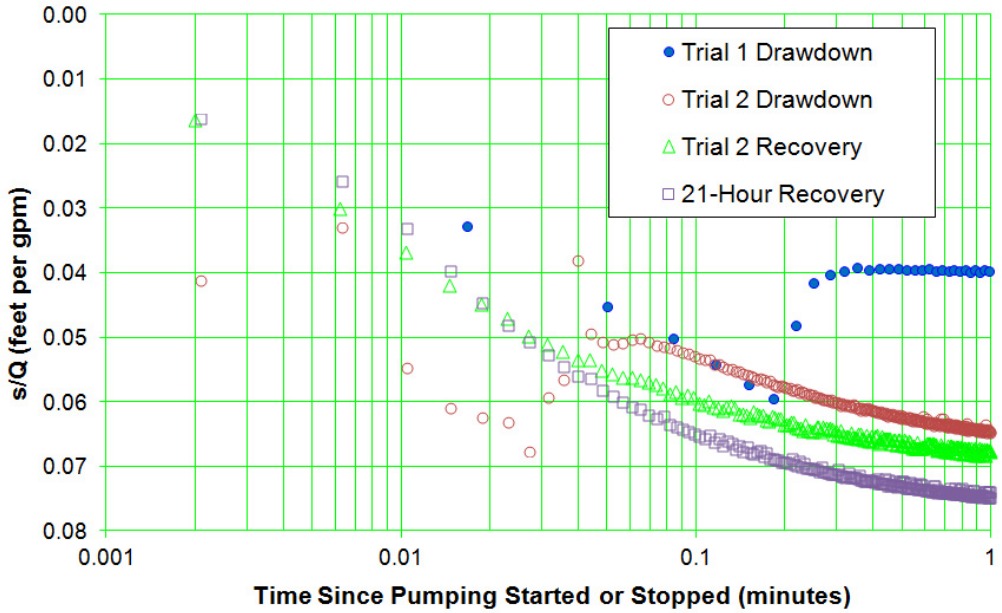

Figure E-8.4-1 Well R-58 combined early data

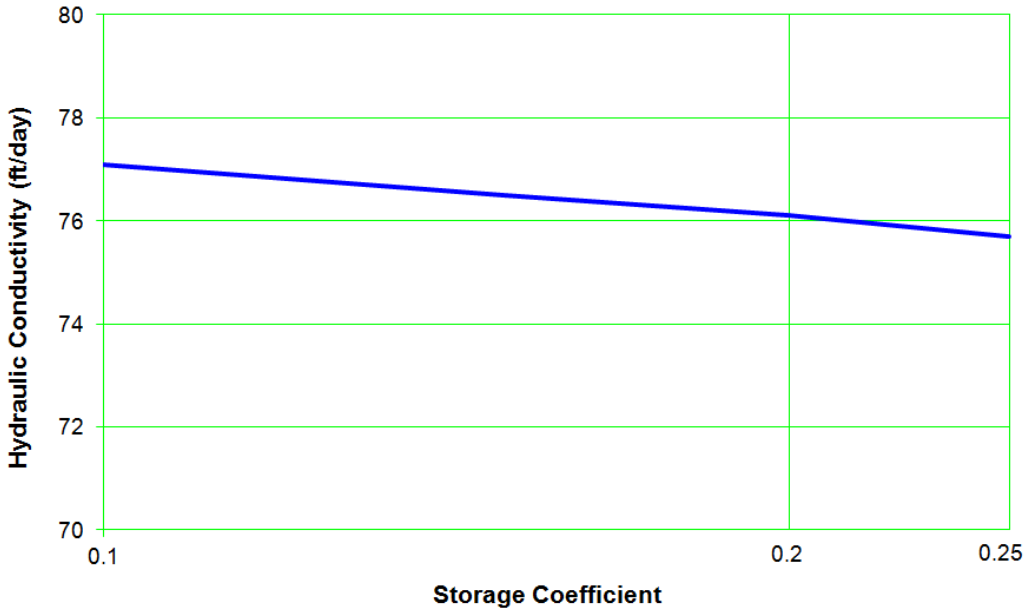

Figure E-8.5-1 Well R-58 lower bound-hydraulic conductivity

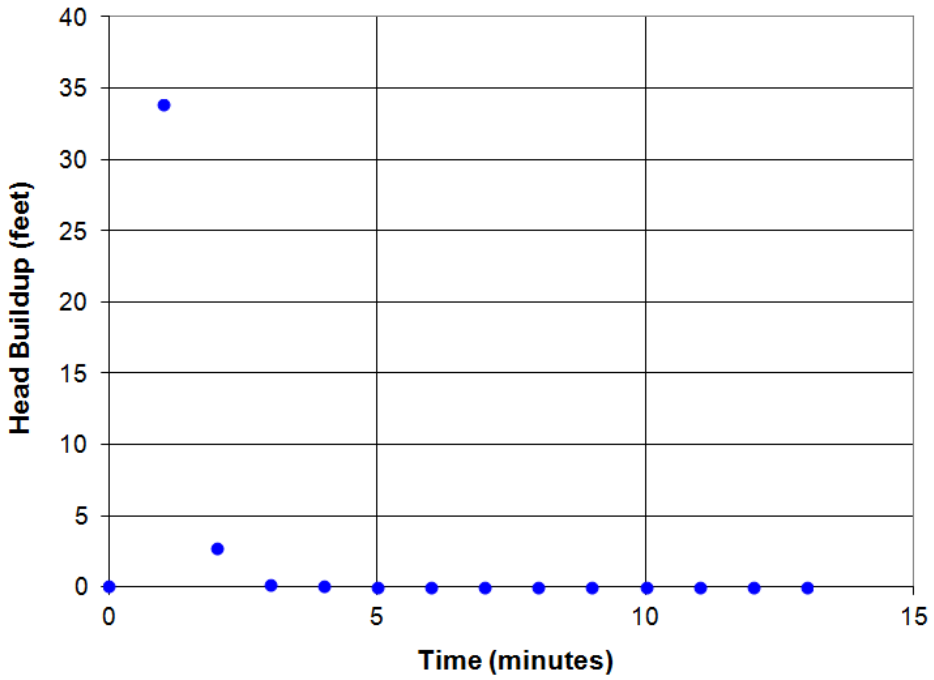

Figure E-8.6-1 Well R-58 packer deflation

Table E-8.5-1
Transmissivity and Hydraulic Conductivity Summary

Test	Method	T (gpd/ft)	K (gpd/ft^2)	K (ft/day)
Trial 1	Drawdown	10,500	517	69
Trial 2	Residual Drawdown	10,700	527	70
21-h Test	Residual Drawdown	10,600	522	70
Average	As Above	10,600	522	70