

OTOWI 2 WELL PUMP DRIVE
LIFE CYCLE
ANALYSIS REPORT

FOR THE

LOS ALAMOS COUNTY UTILITIES
OTOWI 2 WELL

June 2020

FOR THE:
LOS ALAMOS
COUNTY UTILITIES
1000 CENTRAL AVE. SUITE 130
LOS ALAMOS, NM 87544

PREPARED BY:
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1000 CENTRAL AVE. SUITE 130
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I, Daniel Grijalva, certify that I am a licensed Professional Engineer (NMPE #12673), and that these documents, in part, were prepared by me or under my direction.

A handwritten signature in black ink, appearing to read 'D. Grijalva', is written over a horizontal line.

Daniel Grijalva, P.E., F.P.E., P.M.P.

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EXECUTIVE SUMMARY

This report is intended to compare the life cycle cost for three types of well pumping applications, natural gas engine driven, and electric motor driven well pump. This evaluation is to assist the end user, Los Alamos County Utilities (County), in the decision to select the drive that provides the best long term value for the new Otowi 2 Well which is currently under schematic design.

Three options are reviewed within the report:

Option A: Installation for natural gas engine only as prime mover.

Option B: Installation of electric motor only as prime mover.

Option C: Installation of “hybrid” electric motor prime mover with natural gas standby generator

After review of the three options, the installation of a “hybrid” installation of an electrical motor as a prime mover with a natural gas standby generator is recommended. This option provides the most flexibility in operational benefits along with the ability to take advantage of the most economical energy source based on changing market conditions. This option also provides added reliability for the 24/7/365 continuous operation of the facility.

BASIS OF SYSTEM CRITERIA COMPARISON

| | |
|---------|-------------------------------------|
| 50 | Year Life Expectancy |
| 1.5% | Yearly Inflation Rate* |
| 12 | Hours of facility operation per day |
| 365 | Days of facility operation per year |
| 4380 | Hours of operation a year |
| 219,000 | Total of Life Hours of Operation |

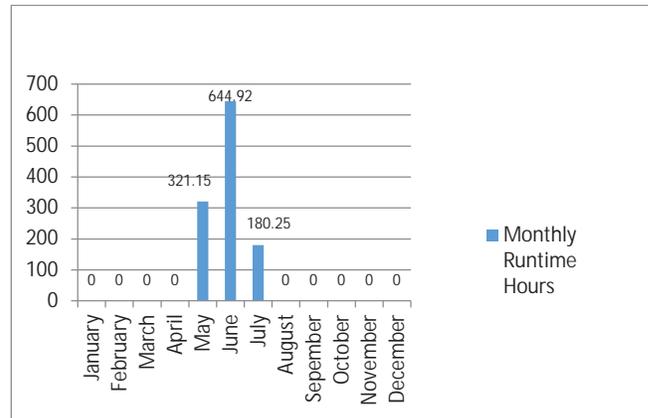
*yearly inflation rate is based on LAC DPU (Department of Public Utilities) recommendations. Reduced inflation rates are applied to partial electrical cost of power. Please refer to Option C for additional information.

NATURAL GAS ENGINE DRIVEN WELL PUMP (OPTION A)

Option A analysis is based on the operation of a Natural Gas Engine as the prime mover for the water pump rated equivalently to 800HP drive. This option would operate at the referenced operating conditions.

Pajarito 4 Well Runtime Historical Data

Using 2018 as a typical operating season (based on data provided by the County, Appendix F), it appears Pajarito 4 Well typically operates during the months of May-July. During 2018, Pajarito 4 Well operated 1146.25 hours for the entire year. These hours of operation are in contrast to the 4380 hours anticipated for Otowi 2 Well site. Due to this, the historic energy cost provided by the County for Pajarito 4 Well cannot be used. Please see chart for graph of usage for a typical year (2018).



**2018 Pajarito 4 Well Runtime Hours
Graph A.1**

The existing engine size at Pajarito 4 Well has been identified as a Caterpillar G3508J. After some research with the local Caterpillar manufacture representative (James Cumiford Jr.), the recommended engine size so support a 800 HP rated pump would corresponding to a Caterpillar G3512J engine. This engine is larger than the G3508J engine and therefore would not be comparable for fuel consumption comparison. The G3512J engine is rated at 515bkW (690 bhp) at 1400 rpm (Refer to Appendix B for equipment data sheet).

County Natural Gas Historical Cost

Finally, the cost of Natural Gas is needed for the cost analysis. In recent years the cost for natural gas has reduced compared the past years. It is unknown if this trend in will continue throughout the 50 year life cycle of Otowi 2 Well. For the purposes of this analysis, the yearly cost of natural gas was determined for the historical cost the County has paid for the years 2013-2019. This average cost is \$ 0.002848 per cu-ft. In comparison, the current market value (04/02/20) for natural gas (w/ County Transportation cost of \$0.241 per cu-ft) was approximately \$0.001794 per cu-ft. This value is lower than the average the County has paid for natural gas but due to the uncertainty of the market is would be prudent to use this average vs the current market value.

| Year | Natural Gas Price | |
|----------------|--------------------|-------------------|
| | Per Thousand Cu/ft | Per Cu-ft |
| 2013 | \$3.65 | \$0.003651 |
| 2014 | \$4.40 | \$0.004397 |
| 2015 | \$2.55 | \$0.002549 |
| 2016 | \$2.27 | \$0.002272 |
| 2017 | \$2.70 | \$0.002701 |
| 2018 | \$2.28 | \$0.002276 |
| 2019 | \$2.09 | \$0.002089 |
| Average | | \$0.002848 |

**Historical \$/cuft of Natural Gas
for the County from 2013-2019
Table A.1**

For reference, the graph below provides a market history of the price of natural gas for the last 5 years.



Data as of April 02, 2020

Natural Gas NMX

Source: www.Nasdaq.com/market-activity/commodities/ng%3anmx

Graph A.2

Otowi 2 Well Natural Gas Engine Cost Analysis

In coordination with Mr. Cumiford of Wagner Equipment, a life cycle cost analysis was prepared for Option A. This analysis is based on the use of a Caterpillar engine G3512J operating 4380 hours per year. Below are the assumptions and clarifications for the referenced analysis.

Items Included in Cost Analysis:

- 25 year cost analysis (due to software modeling constraints)
- Initial installation cost
- Cost associated with recommended maintenance
- Fuel cost based on yearly operating hours of 4380
- Interest rate of 1.5% inflation rate
- The cost of natural gas is estimated at \$0.002848 cubic foot per hour. This is based on the average rate of cost the County has paid during the years 2013-2019 (please refer to Table A.1)

Items not included in Cost Analysis:

- Facility construction cost nor facility maintenance
- Well or gear drive installation and maintenance
- Utility service connection and maintenance

- Instrumentation or Controls or piping installation and maintenance (assumed similar for all Options)

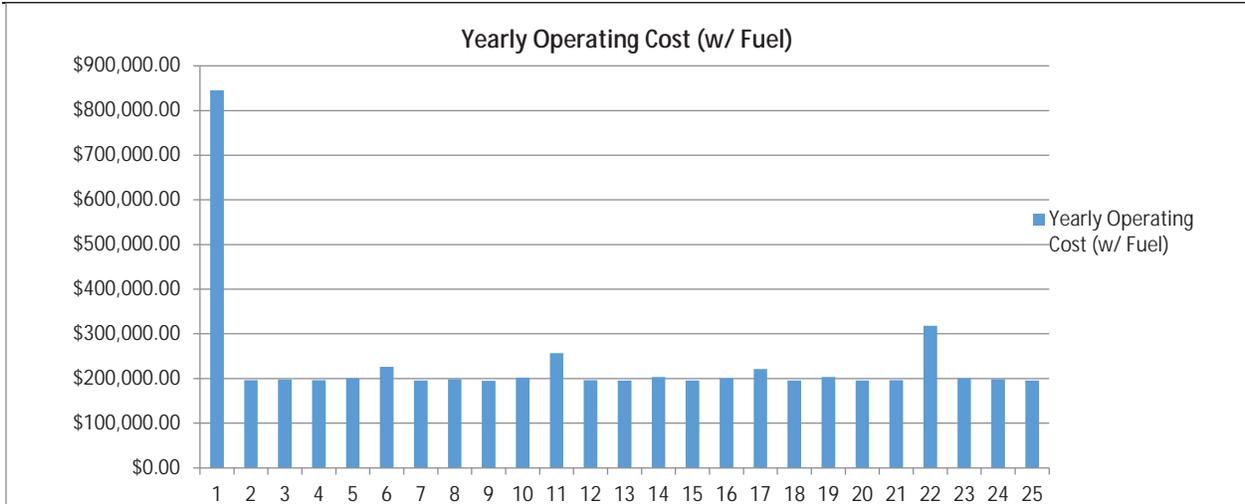
Cost Analysis Clarifications:

- At the end of 25 years the manufacture recommends a complete replacement of the engine.
- Due to manufacture software constraints, the Caterpillar engine G3512H was used as a basis of the cost analysis. The manufacture has confirmed the G3512H and the referenced G3512J are identical for the purposes of cost analysis.

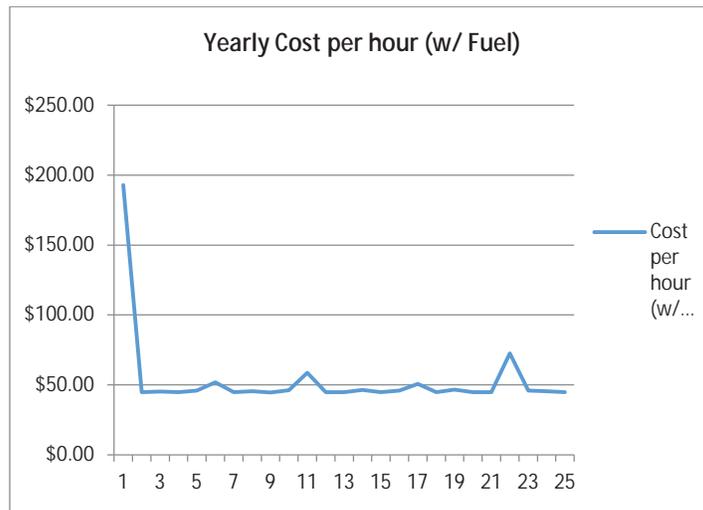
Table A.2 references the summary of the 25 year Cost Life Cycle for the Caterpillar G3512J. As mentioned in the clarification portions of this section, the Caterpillar software is limited to a maximum life expectancy of the engine to 25 years. At the end of this life expectancy, the manufacturer recommends a complete replacement of the equipment for the remaining 25 years. Table A.2 provides a summary of the software for the 25 year life expectancy. Please refer to Appendix C for the complete report:

| Year | Operating Cost (w/ Fuel) | Cost per hour (w/ Fuel) | Cost per HP Hour (w/ Fuel) | Cost Per eKw Hour (w/ Fuel) |
|--------------|--------------------------|-------------------------|----------------------------|-----------------------------|
| 1 | \$ 844,978.59 | \$ 192.92 | \$ 0.0966 | \$ 0.1295 |
| 2 | \$ 196,342.75 | \$ 44.83 | \$ 0.0224 | \$ 0.0301 |
| 3 | \$ 197,897.86 | \$ 45.18 | \$ 0.0226 | \$ 0.0303 |
| 4 | \$ 196,342.75 | \$ 44.83 | \$ 0.0224 | \$ 0.0301 |
| 5 | \$ 200,543.19 | \$ 45.79 | \$ 0.0229 | \$ 0.0307 |
| 6 | \$ 226,449.98 | \$ 51.70 | \$ 0.0259 | \$ 0.0347 |
| 7 | \$ 195,535.32 | \$ 44.64 | \$ 0.0224 | \$ 0.0300 |
| 8 | \$ 198,705.29 | \$ 45.37 | \$ 0.0227 | \$ 0.0304 |
| 9 | \$ 194,978.59 | \$ 44.52 | \$ 0.0223 | \$ 0.0299 |
| 10 | \$ 201,907.35 | \$ 46.10 | \$ 0.0231 | \$ 0.0309 |
| 11 | \$ 256,814.35 | \$ 58.63 | \$ 0.0294 | \$ 0.0394 |
| 12 | \$ 196,063.32 | \$ 44.76 | \$ 0.0224 | \$ 0.0300 |
| 13 | \$ 195,814.75 | \$ 44.71 | \$ 0.0224 | \$ 0.0300 |
| 14 | \$ 203,433.74 | \$ 46.45 | \$ 0.0233 | \$ 0.0312 |
| 15 | \$ 195,814.75 | \$ 44.71 | \$ 0.0224 | \$ 0.0300 |
| 16 | \$ 200,476.04 | \$ 45.77 | \$ 0.0229 | \$ 0.0307 |
| 17 | \$ 221,509.26 | \$ 50.57 | \$ 0.0253 | \$ 0.0339 |
| 18 | \$ 195,506.59 | \$ 44.64 | \$ 0.0223 | \$ 0.0300 |
| 19 | \$ 203,741.89 | \$ 46.52 | \$ 0.0233 | \$ 0.0312 |
| 20 | \$ 195,506.59 | \$ 44.64 | \$ 0.0223 | \$ 0.0300 |
| 21 | \$ 196,371.48 | \$ 44.83 | \$ 0.0224 | \$ 0.0301 |
| 22 | \$ 318,068.92 | \$ 72.62 | \$ 0.0364 | \$ 0.0487 |
| 23 | \$ 200,543.19 | \$ 45.79 | \$ 0.0229 | \$ 0.0307 |
| 24 | \$ 198,705.29 | \$ 45.37 | \$ 0.0227 | \$ 0.0304 |
| 25 | \$ 195,506.59 | \$ 44.64 | \$ 0.0223 | \$ 0.0300 |
| Total | \$ 5,827,558.42 | \$ 53.22 | \$ 0.0266 | \$ 0.0357 |

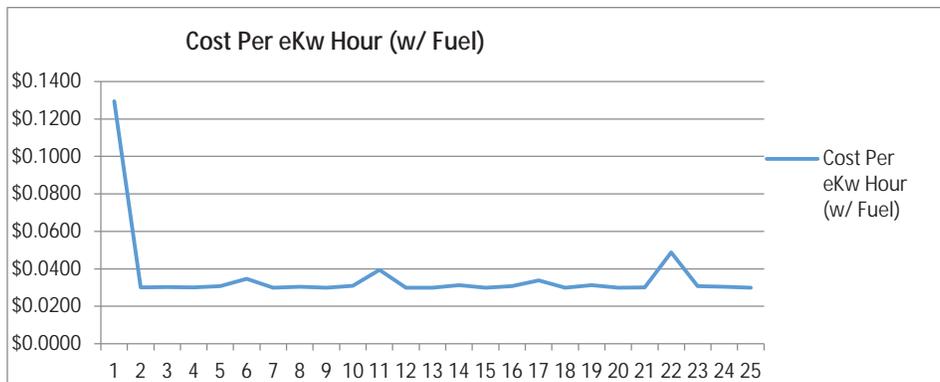
Option A-25 year Life Cycle Analysis for Caterpillar G3512J Engine @ 4380 Hours per year
Table A.2



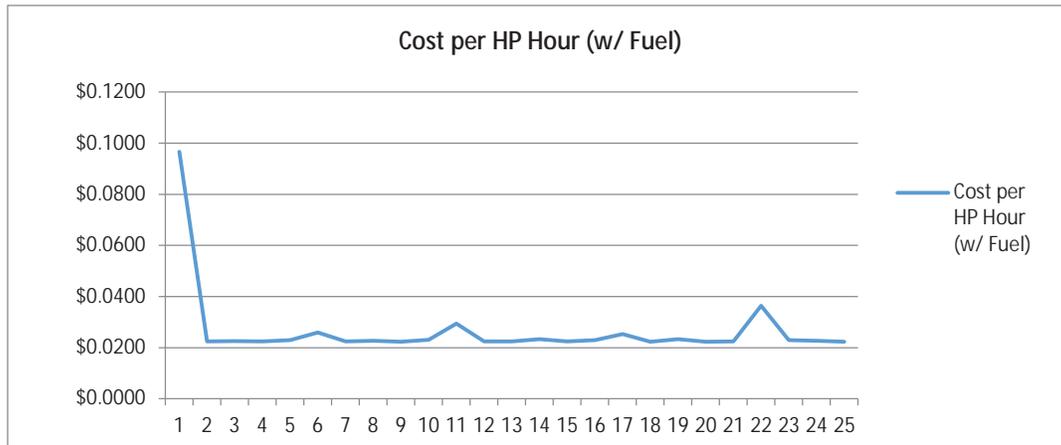
**Option A-Yearly Operating Cost (w/ Fuel)-years 1-25 @ 4380 Hours per year
Graph A.3**



**Option A-Yearly Cost per hour (w/ Fuel)-years 1-25 @ 4380 Hours per year
Graph A.4**



**Option A-Cost per eKw Hour (w/ Fuel)-years 1-25 @ 4380 Hours per year
Graph A.5**



Option A-Cost per HP Hour (w/ Fuel)-years 1-25 @ 4380 Hours per year
Graph A.6

As discussed earlier, the Caterpillar software allows for a maximum of 25 years life expectancy. Extrapolating the cost for year 25-50 is calculated using the following future value calculation based on the following formula:

$$FV = PV \times (1 + i)^N$$

PV = Present value (amount of money today)
FV = Future Value
i = Interest paid by the investment
N = Number of periods the investment will be held

Where :

PV= \$ 5,827,558.42

i= 1.5 %

N= 25

$$\text{Future Value of Money (years 26-50)} = \$ 5,827,558.42 \times (1 + .015)^{(25)}$$

$$= \$ 8,455,468.82$$

$$\text{Total Life Cycle Cost (Option A)} = \text{Future Money (years 1-25)} + \text{Future Money (years 26-50)}$$

$$= \$ 5,827,558.42 + \$ 8,455,468.82$$

$$= \mathbf{\$ 14,283,027.24}$$

Noteworthy items from analysis:

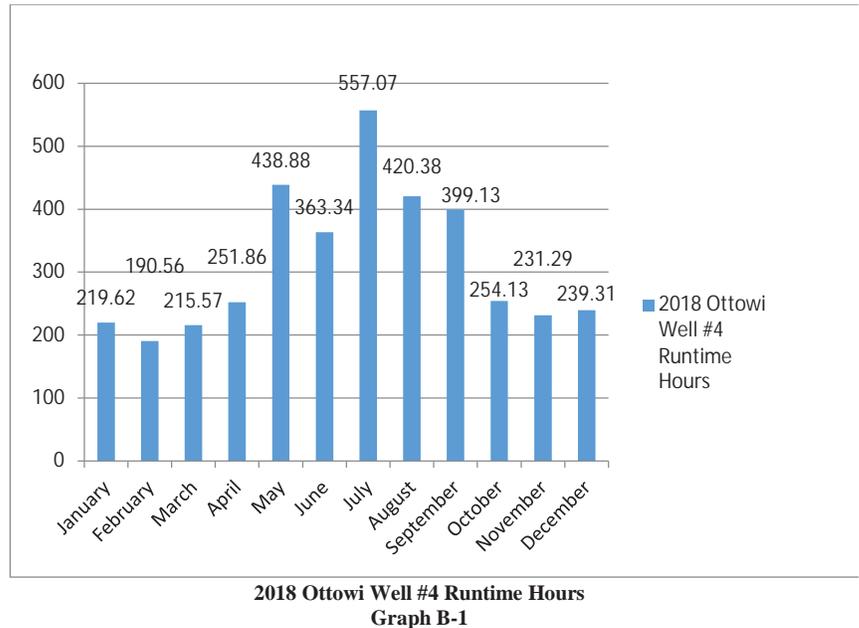
- Engine downtime for maintenance is required as referenced in manufacture operational report (Appendix C). This might affect operational availability of the well.
- Engine failure is also a concern with how it will affect operational availability of the well.

ELECTRICAL MOTOR DRIVEN WELL PUMP (OPTION B)

Option B analysis is based on the operation of a electrical motor as the prime mover for the water pump rated at 800HP. This option would operate at the referenced operating conditions.

Otowi 4 Well Runtime Historical Data

Using 2018 as a typical operating season (based on data provided by the County, Appendix G), it appears Otowi 4 Well typically operates during the months of January - December. During 2018, Otowi 4 Well operated 3781 hours for the entire year. In comparison to the anticipated hours of operation for Otowi 2 Well (4380 hours), Otowi 4 Well would run 599 fewer hours. Due to this, the historic energy cost provided by the County for Otowi 4 Well cannot be used. Please see chart for graph of usage for a typical year (2018).



The existing motor size at Otowi 4 Well is a U.S. Motor TEFC 750HP, 4160V, 3-phase rated. The motor sized used as part of this analysis is a TECO-Westinghouse 800HP, 480V, 3-phase rated Hollow Shaft Vertical Motor. The equipment specification sheet for this motor is provided in Appendix B.

County Electrical Kwhr Cost

Finally, the Electrical cost is needed for the cost analysis. Unlike Natural Gas, the cost of Electric Kwhr has increased in recent years. It is unknown if this trend in will continue throughout the 50 year life cycle of Otowi 2 Well. No historical electrical Kwhr cost was provided by the County. For the purposes of this analysis, the cost of Kwhr will be **\$0.03213 per KWhr** with a demand rate of **\$10.93 per KW**. This value was referenced in the County’s energy memo provided (Appendix H). Based on this same memo, the calculation for monthly electrical cost is calculated as follows:

Monthly Cost (\$) = Demand Charge + Energy Cost + Distribution Adder + Customer Service Charge

| | | |
|---------------------------------|---------------------------|-------------------------|
| Demand Charge (\$)= | Demand Rate (\$ / KW) x | KW Peak Used that month |
| Energy Cost (\$)= | Electric Rate (\$/KWhr) x | KWhr Used that month |
| Distribution Adder (\$)*= | \$0.01600 x | KWhr total for month |
| Customer Service Charge (\$)**= | \$215.75 | |

*demand rate of \$0.016 is set by the Board of Public Utilities

** Customer Service Charge is a flat monthly fee

Otowi 2 Well Electric Motor Cost Analysis

Please refer to Appendix D for the 0-49 year Life Cost Analysis data.

Below are the assumptions and clarifications for the referenced analysis.

Items Included in Cost Analysis:

- Initial installation cost of motor, electrical equipment
- Maintenance and operating yearly cost of \$5000.00 per year (Present Value)
- Electrical cost based on yearly operating hours of 4380
- Yearly Interest rate for inflation is calculated as:
 - Demand Charge = 0.5%
 - Energy Cost = 1.5%
 - Distribution Adder = 0.5%
 - Customer Service Charge = 0.5%
- The cost of electricity (as referenced above).

Items not included in Cost Analysis:

- Facility construction cost nor facility maintenance
- Well and maintenance
- Utility service connection and maintenance
- Instrumentation or Controls or piping installation and maintenance (assumed similar for all Options)
- VFD installation (motor is expected to be operated at full capacity, similar to the Natural Gas Engine operating scenario in Option A)
- Standby Generator

Cost Analysis Clarifications:

- At the end of 25 years it is recommending motor and electrical equipment be replaced.

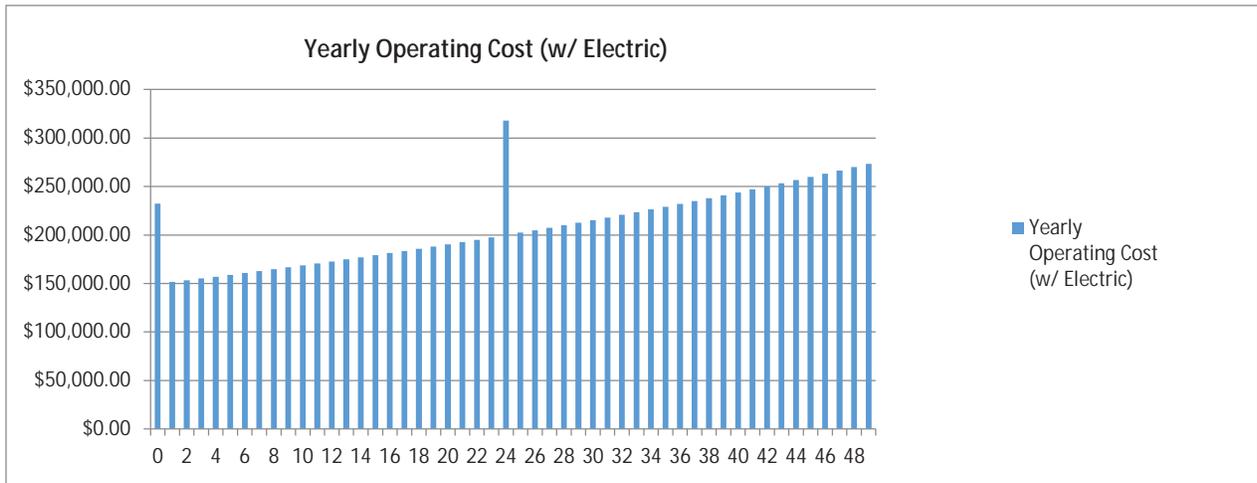
Table B-2 references the cost per year including future value cost at the specified year using the following formula:

$$FV = PV \times (1 + i)^N$$

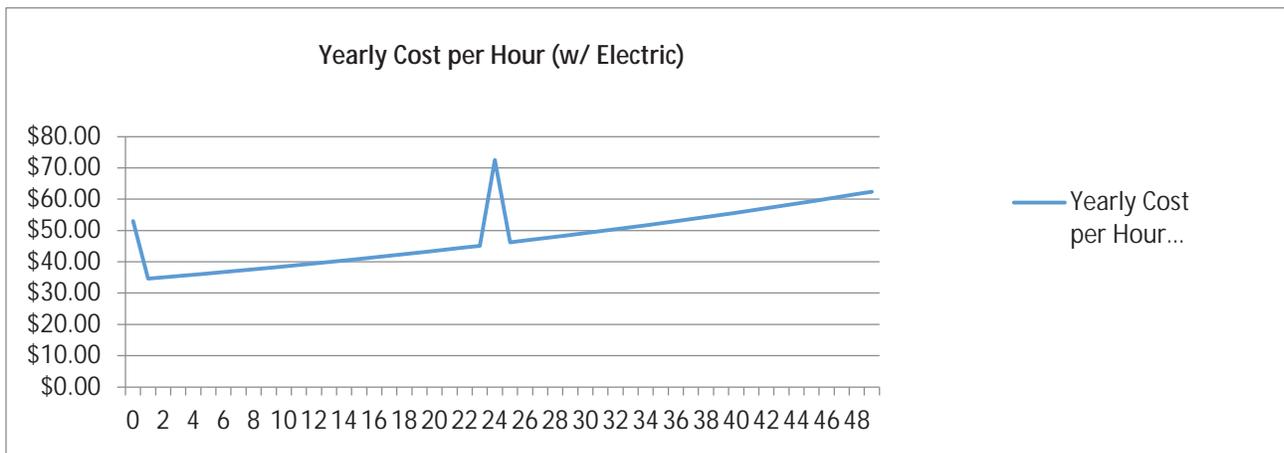
PV = Present value (amount of money today)
FV = Future Value
i = Interest paid by the investment
N = Number of periods the investment will be held

| Year (N) | Future Value | Cost Per Hour | Cost Per HP Hour | Cost Per eKW Hour |
|--------------|--------------------------|----------------|------------------|-------------------|
| | $FV = PV \times (1+i)^N$ | | | |
| | 1.50% | 4380 | 800 | 663.11 |
| 0 | \$ 232,253.36 | \$ 53.03 | \$ 0.0663 | \$ 0.0800 |
| 1 | \$ 151,532.80 | \$ 34.60 | \$ 0.0432 | \$ 0.0522 |
| 2 | \$ 153,336.59 | \$ 35.01 | \$ 0.0438 | \$ 0.0528 |
| 3 | \$ 155,165.10 | \$ 35.43 | \$ 0.0443 | \$ 0.0534 |
| 4 | \$ 157,018.67 | \$ 35.85 | \$ 0.0448 | \$ 0.0541 |
| 5 | \$ 158,897.68 | \$ 36.28 | \$ 0.0453 | \$ 0.0547 |
| 6 | \$ 160,802.49 | \$ 36.71 | \$ 0.0459 | \$ 0.0554 |
| 7 | \$ 162,733.48 | \$ 37.15 | \$ 0.0464 | \$ 0.0560 |
| 8 | \$ 164,691.03 | \$ 37.60 | \$ 0.0470 | \$ 0.0567 |
| 9 | \$ 166,675.52 | \$ 38.05 | \$ 0.0476 | \$ 0.0574 |
| 10 | \$ 168,687.36 | \$ 38.51 | \$ 0.0481 | \$ 0.0581 |
| 11 | \$ 170,726.93 | \$ 38.98 | \$ 0.0487 | \$ 0.0588 |
| 12 | \$ 172,794.64 | \$ 39.45 | \$ 0.0493 | \$ 0.0595 |
| 13 | \$ 174,890.90 | \$ 39.93 | \$ 0.0499 | \$ 0.0602 |
| 14 | \$ 177,016.12 | \$ 40.41 | \$ 0.0505 | \$ 0.0609 |
| 15 | \$ 179,170.73 | \$ 40.91 | \$ 0.0511 | \$ 0.0617 |
| 16 | \$ 181,355.16 | \$ 41.41 | \$ 0.0518 | \$ 0.0624 |
| 17 | \$ 183,569.84 | \$ 41.91 | \$ 0.0524 | \$ 0.0632 |
| 18 | \$ 185,815.21 | \$ 42.42 | \$ 0.0530 | \$ 0.0640 |
| 19 | \$ 188,091.72 | \$ 42.94 | \$ 0.0537 | \$ 0.0648 |
| 20 | \$ 190,399.83 | \$ 43.47 | \$ 0.0543 | \$ 0.0656 |
| 21 | \$ 192,739.99 | \$ 44.00 | \$ 0.0550 | \$ 0.0664 |
| 22 | \$ 195,112.67 | \$ 44.55 | \$ 0.0557 | \$ 0.0672 |
| 23 | \$ 197,518.35 | \$ 45.10 | \$ 0.0564 | \$ 0.0680 |
| 24 | \$ 317,891.50 | \$ 72.58 | \$ 0.0907 | \$ 0.1095 |
| 25 | \$ 202,430.65 | \$ 46.22 | \$ 0.0578 | \$ 0.0697 |
| 26 | \$ 204,938.24 | \$ 46.79 | \$ 0.0585 | \$ 0.0706 |
| 27 | \$ 207,480.81 | \$ 47.37 | \$ 0.0592 | \$ 0.0714 |
| 28 | \$ 210,058.86 | \$ 47.96 | \$ 0.0599 | \$ 0.0723 |
| 29 | \$ 212,672.91 | \$ 48.56 | \$ 0.0607 | \$ 0.0732 |
| 30 | \$ 215,323.48 | \$ 49.16 | \$ 0.0615 | \$ 0.0741 |
| 31 | \$ 218,011.12 | \$ 49.77 | \$ 0.0622 | \$ 0.0751 |
| 32 | \$ 220,736.36 | \$ 50.40 | \$ 0.0630 | \$ 0.0760 |
| 33 | \$ 223,499.75 | \$ 51.03 | \$ 0.0638 | \$ 0.0770 |
| 34 | \$ 226,301.85 | \$ 51.67 | \$ 0.0646 | \$ 0.0779 |
| 35 | \$ 229,143.24 | \$ 52.32 | \$ 0.0654 | \$ 0.0789 |
| 36 | \$ 232,024.48 | \$ 52.97 | \$ 0.0662 | \$ 0.0799 |
| 37 | \$ 234,946.16 | \$ 53.64 | \$ 0.0671 | \$ 0.0809 |
| 38 | \$ 237,908.87 | \$ 54.32 | \$ 0.0679 | \$ 0.0819 |
| 39 | \$ 240,913.21 | \$ 55.00 | \$ 0.0688 | \$ 0.0829 |
| 40 | \$ 243,959.80 | \$ 55.70 | \$ 0.0696 | \$ 0.0840 |
| 41 | \$ 247,049.25 | \$ 56.40 | \$ 0.0705 | \$ 0.0851 |
| 42 | \$ 250,182.19 | \$ 57.12 | \$ 0.0714 | \$ 0.0861 |
| 43 | \$ 253,359.27 | \$ 57.84 | \$ 0.0723 | \$ 0.0872 |
| 44 | \$ 256,581.12 | \$ 58.58 | \$ 0.0732 | \$ 0.0883 |
| 45 | \$ 259,848.40 | \$ 59.33 | \$ 0.0742 | \$ 0.0895 |
| 46 | \$ 263,161.79 | \$ 60.08 | \$ 0.0751 | \$ 0.0906 |
| 47 | \$ 266,521.96 | \$ 60.85 | \$ 0.0761 | \$ 0.0918 |
| 48 | \$ 269,929.59 | \$ 61.63 | \$ 0.0770 | \$ 0.0929 |
| 49 | \$ 273,385.39 | \$ 62.42 | \$ 0.0780 | \$ 0.0941 |
| Total | \$ 10,439,256.39 | \$47.67 | \$ 0.0596 | \$ 0.0719 |

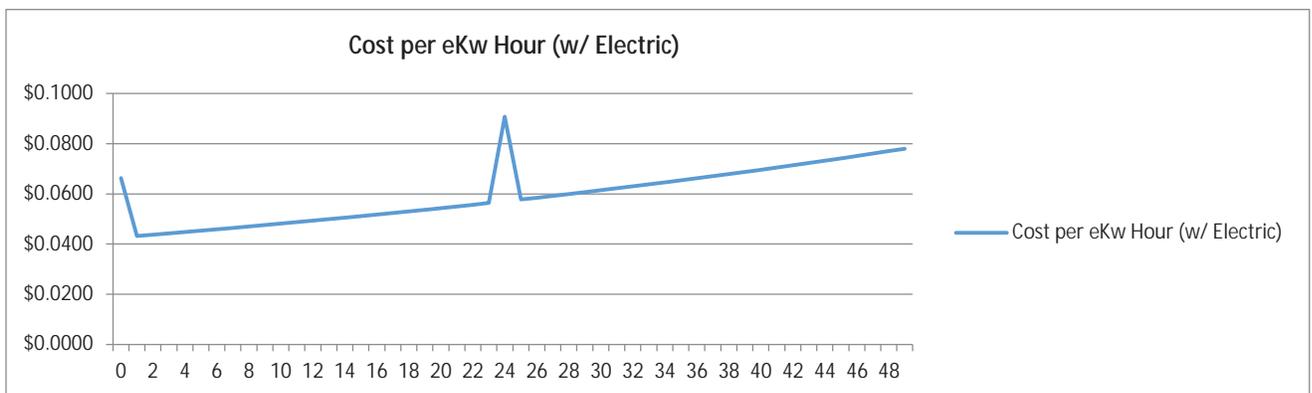
Option B-50 year Life Cycle Analysis for Electric Motor @ 4380 Hours per year
Table B.2



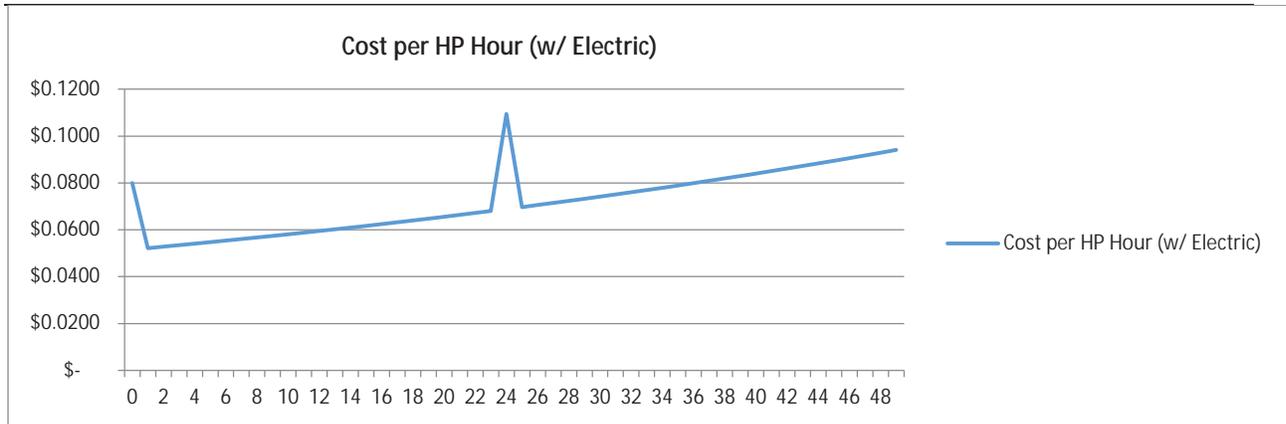
**Option B-Yearly Operating Cost (w/ Electric)-years 0-49 @ 4380 Hours per year
Graph B.3**



**Option B-Yearly Cost per hour (w/ Electric)-years 0-49 @ 4380 Hours per year
Graph B.4**



**Option B-Cost per eKw Hour (w/ Electric)-years 0-49 @ 4380 Hours per year
Graph B.5**



Option B-Cost per HP Hour (w/ Electric)-years 0-49 @ 4380 Hours per year
Graph B.6

Total Life Cycle Cost (Option B) = \$ 10,439,256.39

Noteworthy items from analysis:

- Motor downtime is expected only at ½ life for the motor and electrical equipment. With proper maintenance, this could be extended.
- Motor failure is also a concern with how it will affect operational availability of the well.

ELECTRICAL MOTOR DRIVEN WELL PUMP W/ STANDBY NATURAL GAS GENERATOR (OPTION C)

Option C analysis is based on the operation of an electrical motor as the prime mover for the water pump rated at 800HP. In addition, a properly sized natural gas standby generator will be installed as a secondary source of electrical power to the motor. The primary source of power will be the electrical utility similar to Option B. The addition of the standby generator will serve multiple purposes:

- Based on the energy market cost at any given time, DPU could “choose” the most economical utility source. During high summer demand DPU could utilize the natural gas standby generator to provide the needed power for the electrical motor and avoid peak electric demand charges. This would take advantage of lower natural gas market pricing. During the winter months, the opposite would apply. The electrical motor would derive its power source from the electrical utility during off peak demand operations. The transfer of electrical sources would be at the sole discretion of DPU. A manual electrical transfer switch would be installed within the electrical system to provide this capability. This ability would afford DPU to operate the well pump at the most economical level possible.
- Due to the installation of two separate sources from two separate utilities, the well would by default be capable of providing full “backup” source of power for the motor itself. If the motor were operating under the electrical utility source, and if that source were to have an outage, the standby generator would be capable of continued operation of the motor. The transfer of sources would be through the manual transfer switch. This would again involve the conscious decision of DPU to switch power source. The opposite scenario would be applied if the motor was under normal operation of the natural gas standby generator and there was a natural gas outage. The manual transfer switch would be consciously transferred to the electrical utility source and the motor would continue normal operation. This redundancy would provide DPU customers a 24/7/365 operational facility.
- Since the prime mover would be an electric motor, it would be capable of being controlled by a Variable Frequency Drive (highly recommended but not something originally considered) which would better benefit the operational capability of the entire water system hydraulically. Either source of power (Electrical Utility or the Natural Gas Standby Generator) would interface seamlessly to the VFD for continued operation of the well. As a safe guard to the possible outage of the VFD, a bypass to the VFD would be installed to allow operation of the motor (without speed control). The installation of a bypass in the VFD would also allow for routine maintenance of the VFD itself without jeopardizing the operation of the motor. All equipment would be properly size to achieve this operation.

For the purposes of this report, it is assumed the motor will operate half of the year through the electrical utility and the other half of the year through the natural gas standby generator. The hours of operation would therefore be evaluated at 2180 of operation per year for either source. While this assumption may

not be exactly the scenario DPU may operate the motor, it will suffice for purposes of comparison between all three options.

Electrical Motor use through the Natural Gas Standby Generator Cost Analysis

In coordination with Mr. Cumingford of Wagner Equipment, a life cycle cost analysis was prepared for Option C standby generator. This analysis is based on the use of the Caterpillar Standby Generator G3512 operating at 2180 hours (half of the year) per year. Below are the assumptions and clarifications for the referenced analysis:

Items Included in Cost Analysis:

- 25 year cost analysis (due to software modeling constraints)
- Initial installation cost
- Cost associated with recommended maintenance
- Fuel cost based on yearly operating hours of 2180
- Interest rate of 1.5% inflation rate
- The cost of natural gas is estimated at \$0.002848 cubic foot per hour. This is based on the average rate of cost the County has paid during the years 2013-2019 (please refer to Table A.1)

Items not included in Cost Analysis:

- Facility construction cost nor facility maintenance
- Well or gear drive installation and maintenance
- Utility service connection and maintenance
- Instrumentation or Controls or piping installation and maintenance (assumed similar for all Options)

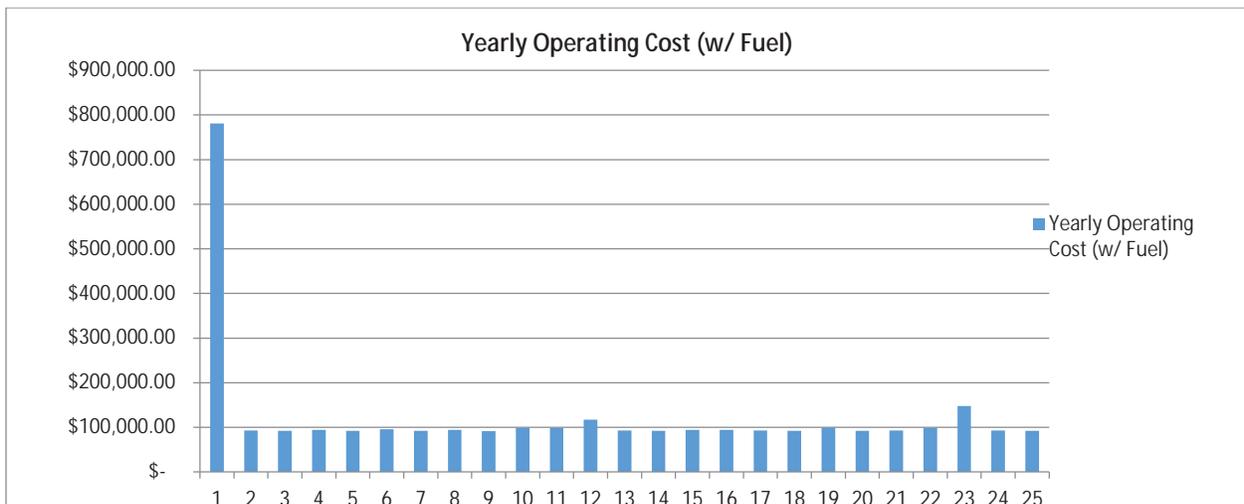
Cost Analysis Clarifications:

- At the end of 25 years the manufacture recommends a complete replacement of the engine.

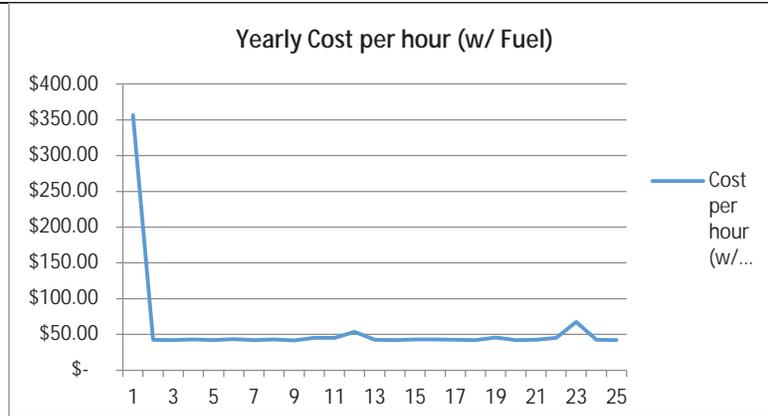
Table C.2 references the summary of the 25 year Cost Life Cycle for the Caterpillar Standby Generator G3512. As mentioned in the clarification portions of this section, the Caterpillar software is limited to a maximum life expectancy of the engine to 25 years. At the end of this life expectancy, the manufacturer recommends a complete replacement of the equipment for the remaining 25 years. Table C.1 provides a summary of the software for the 25 year life expectancy. Please refer to Appendix E for the complete report:

| Year | Operating Cost (w/ Fuel) | Cost per hour (w/ Fuel) | Cost per HP Hour (w/ Fuel) | Cost Per eKw Hour (w/ Fuel) |
|--------------|--------------------------|-------------------------|----------------------------|-----------------------------|
| 1 | \$ 780,621.94 | \$ 356.45 | \$ 0.1785 | \$ 0.2392 |
| 2 | \$ 93,216.94 | \$ 42.56 | \$ 0.0213 | \$ 0.0286 |
| 3 | \$ 91,995.94 | \$ 42.01 | \$ 0.0210 | \$ 0.0282 |
| 4 | \$ 94,053.10 | \$ 42.95 | \$ 0.0215 | \$ 0.0288 |
| 5 | \$ 92,024.67 | \$ 42.02 | \$ 0.0210 | \$ 0.0282 |
| 6 | \$ 95,579.49 | \$ 43.64 | \$ 0.0219 | \$ 0.0293 |
| 7 | \$ 91,995.94 | \$ 42.01 | \$ 0.0210 | \$ 0.0282 |
| 8 | \$ 94,053.10 | \$ 42.95 | \$ 0.0215 | \$ 0.0288 |
| 9 | \$ 91,467.94 | \$ 41.77 | \$ 0.0209 | \$ 0.0280 |
| 10 | \$ 98,781.55 | \$ 45.11 | \$ 0.0226 | \$ 0.0303 |
| 11 | \$ 98,680.31 | \$ 45.06 | \$ 0.0226 | \$ 0.0302 |
| 12 | \$ 117,475.96 | \$ 53.64 | \$ 0.0269 | \$ 0.0360 |
| 13 | \$ 92,688.94 | \$ 42.32 | \$ 0.0212 | \$ 0.0284 |
| 14 | \$ 92,552.67 | \$ 42.26 | \$ 0.0212 | \$ 0.0284 |
| 15 | \$ 94,053.10 | \$ 42.95 | \$ 0.0215 | \$ 0.0288 |
| 16 | \$ 94,358.49 | \$ 43.09 | \$ 0.0216 | \$ 0.0289 |
| 17 | \$ 92,688.94 | \$ 42.32 | \$ 0.0212 | \$ 0.0284 |
| 18 | \$ 91,995.94 | \$ 42.01 | \$ 0.0210 | \$ 0.0282 |
| 19 | \$ 99,617.70 | \$ 45.49 | \$ 0.0228 | \$ 0.0305 |
| 20 | \$ 91,995.94 | \$ 42.01 | \$ 0.0210 | \$ 0.0282 |
| 21 | \$ 92,688.94 | \$ 42.32 | \$ 0.0212 | \$ 0.0284 |
| 22 | \$ 98,680.31 | \$ 45.06 | \$ 0.0226 | \$ 0.0302 |
| 23 | \$ 147,704.06 | \$ 67.44 | \$ 0.0338 | \$ 0.0453 |
| 24 | \$ 93,216.94 | \$ 42.56 | \$ 0.0213 | \$ 0.0286 |
| 25 | \$ 91,995.94 | \$ 42.01 | \$ 0.0210 | \$ 0.0282 |
| Total | \$ 3,114,184.82 | \$ 56.88 | \$ 0.0285 | \$ 0.0382 |

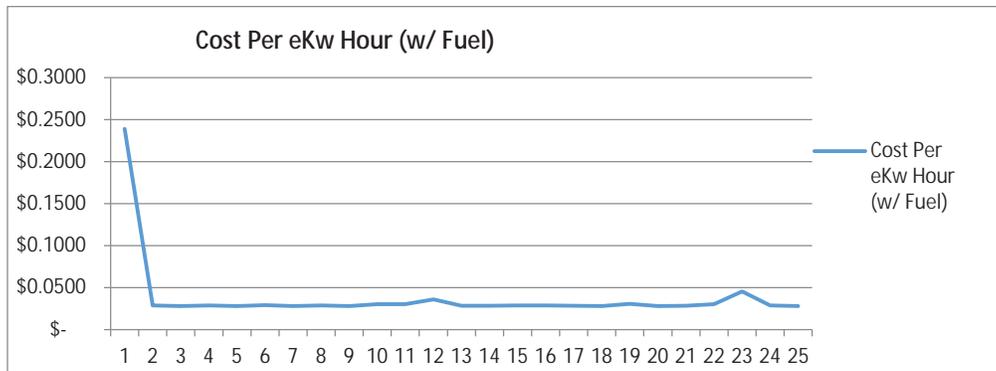
Option C-25 year Life Cycle Analysis for Caterpillar Standby Generator G3512 @ 2180 Hours per year
Table C.1



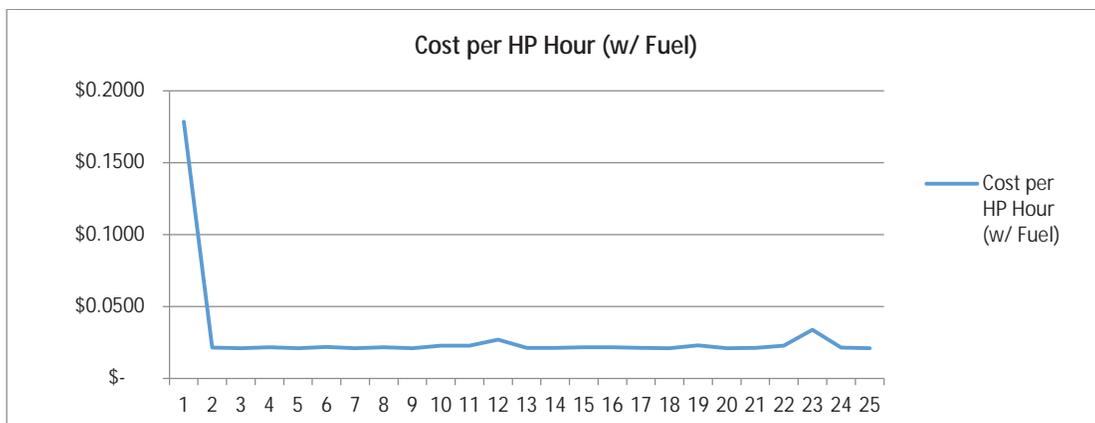
Option C-Yearly Operating Cost (w/ Fuel)-years 1-25 @ 2180 Hours per year
Graph C.1



**Option C-Yearly Cost per hour (w/ Fuel)-years 1-25 @ 2180 Hours per year
Graph C.2**



**Option C-Cost per eKw Hour (w/ Fuel)-years 1-25 @ 2180 Hours per year
Graph C.3**



**Option C-Cost per HP Hour (w/ Fuel)-years 1-25 @ 2180 Hours per year
Graph C.4**

As discussed earlier, the Caterpillar software allows for a maximum of 25 years life expectancy. Extrapolating the cost for year 25-50 is calculated using the following future value calculation based on the following formula:

$$FV = PV \times (1 + i)^N$$

PV = Present value (amount of money today)
FV = Future Value
i = Interest paid by the investment
N = Number of periods the investment will be held

Where :

$$PV = \$ 3,114,184.82$$

$$i = 1.5 \%$$

$$N = 25$$

$$\begin{aligned} \text{Future Value of Money (years 26-50)} &= \$ 3,114,184.82 \times (1 + .015)^{25} \\ &= \$ 4,518,512.00 \end{aligned}$$

$$\begin{aligned} \text{Life Cycle Cost of Natural Gas Engine Portion Only (Option C)} &= \text{Future Money (years 1-25)} + \text{Future Money (years 26-50)} \\ &= \$ 3,114,184.82 + \$ 4,518,512.00 \\ &= \$ 7,632,696.82 \end{aligned}$$

Electrical Motor use through the Electrical Utility Cost Analysis

Please refer to Appendix E for the 0-49 year Life Cost Analysis data.

Below are the assumptions and clarifications for the referenced analysis.

Items Included in Cost Analysis:

- Initial installation cost of motor, electrical equipment
- Maintenance and operating yearly cost of \$5000.00 per year (Present Value)
- Electrical cost based on yearly operating hours of 2180
- Yearly Interest rate for inflation is calculated as:
 - Demand Charge = 0.5%
 - Energy Cost = 1.5%
 - Distribution Adder = 0.5%
 - Customer Service Charge = 0.5%
- The cost of electricity (as referenced above).

Items not included in Cost Analysis:

- Facility construction cost nor facility maintenance
- Well and maintenance
- Utility service connection and maintenance
- Instrumentation or Controls or piping installation and maintenance (assumed similar for all Options)
- VFD installation (motor is expected to be operated at full capacity, similar to the Natural Gas Engine operating scenario in Option A)

Cost Analysis Clarifications:

- Due to the reduced hours of operation (2180 per year) the replacement of the motor is not included in the life cycle cost based on operational hours, continued maintenance and historical DPU replacement of other electrical motors in service currently.

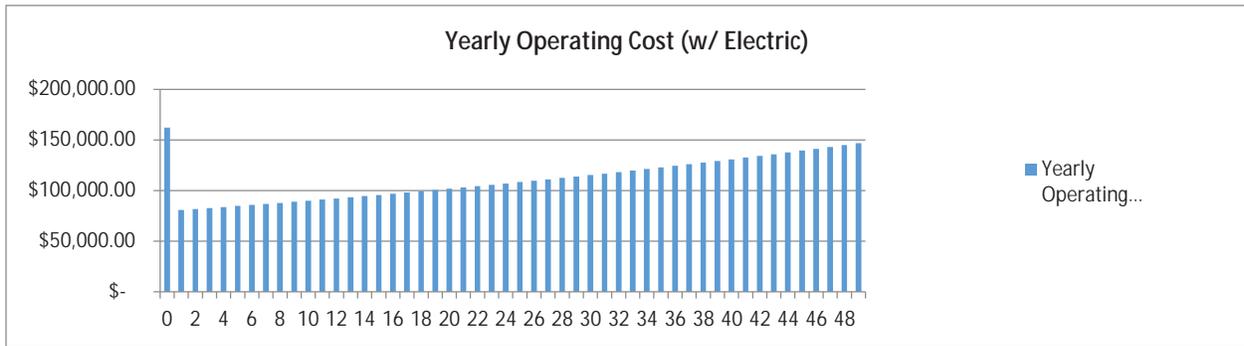
Table C-2 references the cost per year including future value cost at the specified year using the following formula:

$$FV = PV \times (1 + i)^N$$

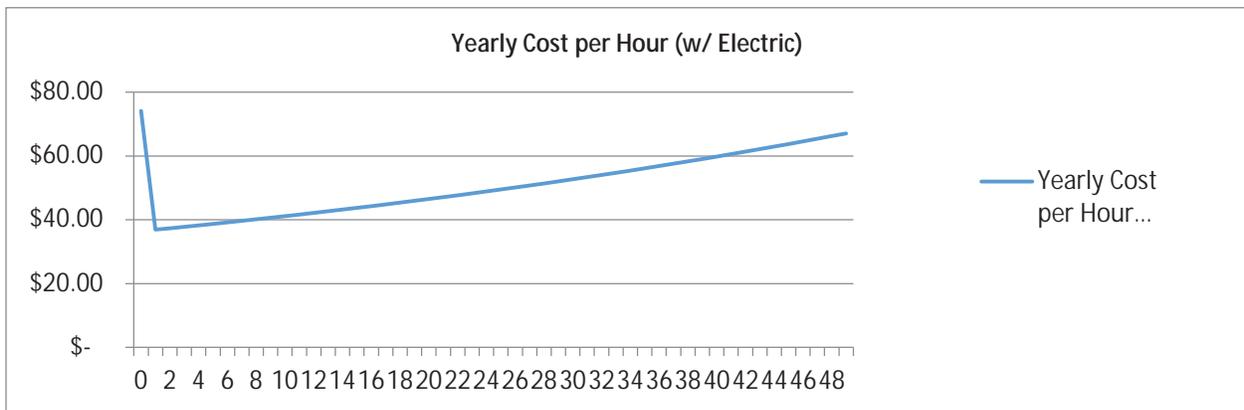
PV = Present value (amount of money today)
FV = Future Value
i = Interest paid by the investment
N = Number of periods the investment will be held

| Year (N) | Future Value | Cost Per Hour | Cost Per HP Hour | Cost Per eKW Hour |
|--------------|------------------------|-----------------|------------------|-------------------|
| | FV= PV x (1 +i)^N | | | |
| | 1.50% | | | |
| 0 | \$ 162,358.45 | \$ 74.14 | \$ 0.0927 | \$ 0.1118 |
| 1 | \$ 80,821.82 | \$ 36.90 | \$ 0.0461 | \$ 0.0557 |
| 2 | \$ 81,798.46 | \$ 37.35 | \$ 0.0467 | \$ 0.0563 |
| 3 | \$ 82,788.58 | \$ 37.80 | \$ 0.0473 | \$ 0.0570 |
| 4 | \$ 83,792.36 | \$ 38.26 | \$ 0.0478 | \$ 0.0577 |
| 5 | \$ 84,810.01 | \$ 38.73 | \$ 0.0484 | \$ 0.0584 |
| 6 | \$ 85,841.72 | \$ 39.20 | \$ 0.0490 | \$ 0.0591 |
| 7 | \$ 86,887.72 | \$ 39.67 | \$ 0.0496 | \$ 0.0598 |
| 8 | \$ 87,948.19 | \$ 40.16 | \$ 0.0502 | \$ 0.0606 |
| 9 | \$ 89,023.35 | \$ 40.65 | \$ 0.0508 | \$ 0.0613 |
| 10 | \$ 90,113.43 | \$ 41.15 | \$ 0.0514 | \$ 0.0621 |
| 11 | \$ 91,218.62 | \$ 41.65 | \$ 0.0521 | \$ 0.0628 |
| 12 | \$ 92,339.17 | \$ 42.16 | \$ 0.0527 | \$ 0.0636 |
| 13 | \$ 93,475.28 | \$ 42.68 | \$ 0.0534 | \$ 0.0644 |
| 14 | \$ 94,627.19 | \$ 43.21 | \$ 0.0540 | \$ 0.0652 |
| 15 | \$ 95,795.12 | \$ 43.74 | \$ 0.0547 | \$ 0.0660 |
| 16 | \$ 96,979.32 | \$ 44.28 | \$ 0.0554 | \$ 0.0668 |
| 17 | \$ 98,180.02 | \$ 44.83 | \$ 0.0560 | \$ 0.0676 |
| 18 | \$ 99,397.46 | \$ 45.39 | \$ 0.0567 | \$ 0.0684 |
| 19 | \$ 100,631.88 | \$ 45.95 | \$ 0.0574 | \$ 0.0693 |
| 20 | \$ 101,883.54 | \$ 46.52 | \$ 0.0582 | \$ 0.0702 |
| 21 | \$ 103,152.68 | \$ 47.10 | \$ 0.0589 | \$ 0.0710 |
| 22 | \$ 104,439.56 | \$ 47.69 | \$ 0.0596 | \$ 0.0719 |
| 23 | \$ 105,744.45 | \$ 48.29 | \$ 0.0604 | \$ 0.0728 |
| 24 | \$ 107,067.60 | \$ 48.89 | \$ 0.0611 | \$ 0.0737 |
| 25 | \$ 108,409.28 | \$ 49.50 | \$ 0.0619 | \$ 0.0747 |
| 26 | \$ 109,769.77 | \$ 50.12 | \$ 0.0627 | \$ 0.0756 |
| 27 | \$ 111,149.33 | \$ 50.75 | \$ 0.0634 | \$ 0.0765 |
| 28 | \$ 112,548.26 | \$ 51.39 | \$ 0.0642 | \$ 0.0775 |
| 29 | \$ 113,966.82 | \$ 52.04 | \$ 0.0650 | \$ 0.0785 |
| 30 | \$ 115,405.32 | \$ 52.70 | \$ 0.0659 | \$ 0.0795 |
| 31 | \$ 116,864.04 | \$ 53.36 | \$ 0.0667 | \$ 0.0805 |
| 32 | \$ 118,343.27 | \$ 54.04 | \$ 0.0675 | \$ 0.0815 |
| 33 | \$ 119,843.33 | \$ 54.72 | \$ 0.0684 | \$ 0.0825 |
| 34 | \$ 121,364.51 | \$ 55.42 | \$ 0.0693 | \$ 0.0836 |
| 35 | \$ 122,907.13 | \$ 56.12 | \$ 0.0702 | \$ 0.0846 |
| 36 | \$ 124,471.50 | \$ 56.84 | \$ 0.0710 | \$ 0.0857 |
| 37 | \$ 126,057.94 | \$ 57.56 | \$ 0.0720 | \$ 0.0868 |
| 38 | \$ 127,666.77 | \$ 58.30 | \$ 0.0729 | \$ 0.0879 |
| 39 | \$ 129,298.32 | \$ 59.04 | \$ 0.0738 | \$ 0.0890 |
| 40 | \$ 130,952.93 | \$ 59.80 | \$ 0.0747 | \$ 0.0902 |
| 41 | \$ 132,630.93 | \$ 60.56 | \$ 0.0757 | \$ 0.0913 |
| 42 | \$ 134,332.68 | \$ 61.34 | \$ 0.0767 | \$ 0.0925 |
| 43 | \$ 136,058.51 | \$ 62.13 | \$ 0.0777 | \$ 0.0937 |
| 44 | \$ 137,808.78 | \$ 62.93 | \$ 0.0787 | \$ 0.0949 |
| 45 | \$ 139,583.85 | \$ 63.74 | \$ 0.0797 | \$ 0.0961 |
| 46 | \$ 141,384.09 | \$ 64.56 | \$ 0.0807 | \$ 0.0974 |
| 47 | \$ 143,209.86 | \$ 65.39 | \$ 0.0817 | \$ 0.0986 |
| 48 | \$ 145,061.55 | \$ 66.24 | \$ 0.0828 | \$ 0.0999 |
| 49 | \$ 146,939.53 | \$ 67.10 | \$ 0.0839 | \$ 0.1012 |
| Total | \$ 5,567,144.25 | \$ 50.84 | \$ 0.0636 | \$ 0.0767 |

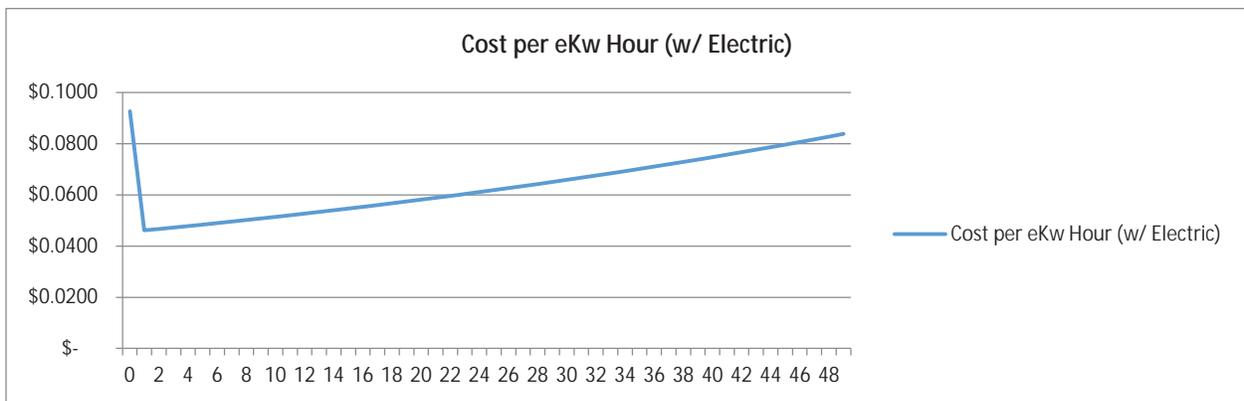
Option C-50 year Life Cycle Analysis for Electric Motor @ 2180 Hours per year
Table C.2



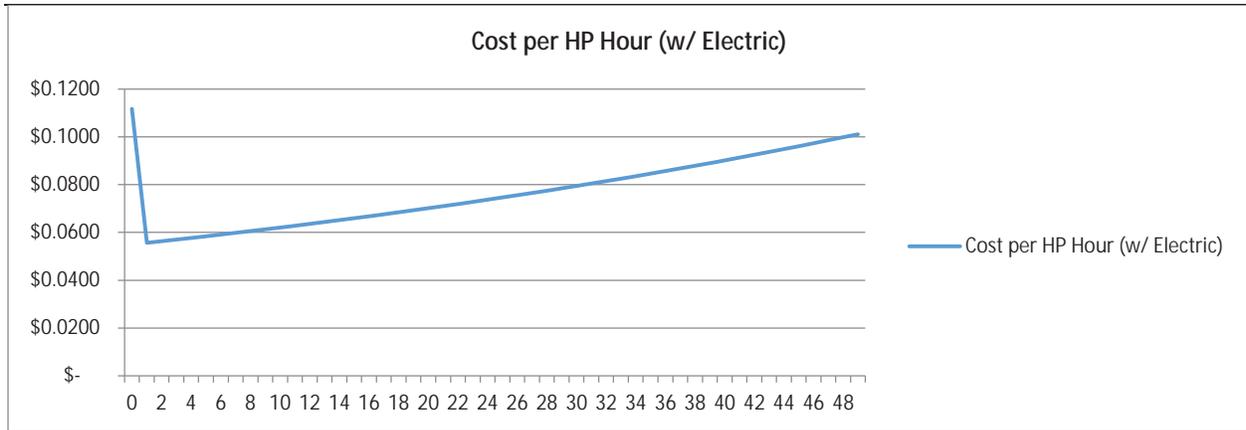
**Option C-Yearly Operating Cost (w/ Electric)-years 0-49 @ 2180 Hours per year
Graph C.5**



**Option C-Yearly Cost per hour (w/ Electric)-years 0-49 @ 2180 Hours per year
Graph C.6**



**Option C-Cost per eKw Hour (w/ Electric)-years 0-49 @ 2180 Hours per year
Graph C.7**



Option C-Cost per HP Hour (w/ Electric)-years 0-49 @ 2180 Hours per year
Graph C.8

Life Cycle Cost of Electrical Utility Portion Only (Option C) = \$ 5,567,144.25

Total 50 year Life Cycle Cost (Option C)

| | |
|---|---------------------------|
| Life Cycle Cost of Natural Gas Engine Portion Only (Option C) | = \$ 7,632,696.82 |
| Life Cycle Cost of Electrical Utility Portion Only (Option C) | = \$ 5,567,144.25 |
| Total | = \$ 13,199,841.07 |

Noteworthy items from analysis:

- Engine downtime for maintenance is required as referenced in manufacture operational report (Appendix E).
- Motor failure is also a concern with how it will affect operational availability of the well.
- Savings are realized based on seasonal use of either utility source. Based on market conditions, this may vary in favor of one utility to the other. DPU should closely monitor market conditions and modify the utility source accordingly. This may result in additional savings.

RECOMMENDATION

The original intention of this analysis was to determine which of two types of prime movers would be used for the new Otowi 2 Well design. Summary of the 50 year life cycle cost are:

| | |
|---|--------------------------|
| Natural Gas Engine as prime mover (Option A) | =\$ 14,283,027.24 |
| Electric Motor as prime Mover (Option B) | =\$ 10,439,256.39 |
| Hybrid Electric Motor w/ Standby Generator (Option C) | =\$ 13,199,841.07 |

While the current market conditions do favor the use of natural gas as the preferred energy source based on cubic-foot cost, the complete engine replacement at 25 years does effect this option. The use of electric , while based on the overall cost being the lowest of the options, does have limitations and could be impacted by raising electric rates. Interestingly, Option C, while lower in cost than Option A but higher in cost than Option B does provide the maximum flexibility for future changes in market conditions. It is important that all assumptions in all options are clearly understood and weighed proportionally.

The direct operational use of the future Otowi 2 Well will account for the majority of the real cost of the facility. Based on daily demand from the hydraulic system, the cost presented in this report can only be used as a general guide of anticipated costs based on the criteria referenced within this report.

Finally, it is my recommendation that the final design for Otowi 2 Well is not solely natural gas or electric but rather a combination as presented in the Option C. This would provide the County maximum flexibility to operate Otowi 2 Well and take maximum advantage of changing market costs for energy. This option also provides the redundancy for the continued operation of the well and higher reliability of the DPU water system to their customers.

LOS ALAMOS COUNTY
OTOWI 2 WELL PUMP DRIVE
LIFE CYCLE ANALYSIS

APPENDIX A

CATERPILLAR G3512J
DATA SHEET

WILSON
& COMPANY

discipline | intensity | collaboration | shared ownership | solutions

GAS COMPRESSION APPLICATION

| | | | |
|------------------------------------|----------------|--|-----------------------------|
| ENGINE SPEED (rpm): | 1400 | RATING STRATEGY: | STANDARD |
| COMPRESSION RATIO: | 8 | FUEL SYSTEM: | CAT WIDE RANGE |
| AFTERCOOLER TYPE: | SCAC | SITE CONDITIONS: | WITH AIR FUEL RATIO CONTROL |
| AFTERCOOLER - STAGE 2 INLET (°F): | 130 | FUEL: | Nat Gas |
| AFTERCOOLER - STAGE 1 INLET (°F): | 201 | FUEL PRESSURE RANGE (psig): (See note 1) | 7.0-40.0 |
| JACKET WATER OUTLET (°F): | 203 | FUEL METHANE NUMBER: | 84.7 |
| ASPIRATION: | TA | FUEL LHV (Btu/scf): | 905 |
| COOLING SYSTEM: | JW+OC+1AC, 2AC | ALTITUDE(ft): | 7200 |
| CONTROL SYSTEM: | ADEM3 | INLET AIR TEMPERATURE(°F): | 86 |
| EXHAUST MANIFOLD: | DRY | STANDARD RATED POWER: | 1035 bhp@1400rpm |
| COMBUSTION: | LOW EMISSION | | |
| NOx EMISSION LEVEL (g/bhp-hr NOx): | 0.5 | | |
| SET POINT TIMING: | 30 | | |

| RATING | NOTES | LOAD | SITE RATING AT MAXIMUM INLET AIR TEMPERATURE | | | |
|----------------------------|-------|------|--|------------|-----|-----|
| | | | 100% | 100% | 75% | 50% |
| ENGINE POWER (WITHOUT FAN) | (2) | bhp | 1035 | 950 | 712 | 518 |
| INLET AIR TEMPERATURE | | °F | 55 | 86 | 86 | 86 |

| ENGINE DATA | | | | | | | |
|---|-------|--------|------------|-------|------|------|------|
| FUEL CONSUMPTION (LHV) | | (3) | Btu/bhp-hr | 7378 | 7495 | 7904 | 8424 |
| FUEL CONSUMPTION (HHV) | | (3) | Btu/bhp-hr | 8184 | 8314 | 8768 | 9344 |
| AIR FLOW (@inlet air temp, 14.7 psia) | (WET) | (4)(5) | ft3/min | 2215 | 2173 | 1683 | 1269 |
| AIR FLOW | (WET) | (4)(5) | lb/hr | 10240 | 9477 | 7340 | 5534 |
| FUEL FLOW (60°F, 14.7 psia) | | | scfm | 141 | 131 | 104 | 80 |
| INLET MANIFOLD PRESSURE | | (6) | in Hg(abs) | 87.4 | 82.7 | 67.9 | 51.8 |
| EXHAUST TEMPERATURE - ENGINE OUTLET | | (7) | °F | 818 | 818 | 834 | 887 |
| EXHAUST GAS FLOW (@engine outlet temp, 14.5 psia) | (WET) | (8)(5) | ft3/min | 5937 | 5495 | 4316 | 3393 |
| EXHAUST GAS MASS FLOW | (WET) | (8)(5) | lb/hr | 10624 | 9835 | 7623 | 5754 |

| EMISSIONS DATA - ENGINE OUT | | | | | | | |
|-----------------------------------|--|-------------|----------|------|------|------|------|
| NOx (as NO2) | | (9)(10) | g/bhp-hr | 0.50 | 0.50 | 0.50 | 0.50 |
| CO | | (9)(10) | g/bhp-hr | 1.91 | 1.91 | 1.92 | 1.90 |
| THC (mol. wt. of 15.84) | | (9)(10) | g/bhp-hr | 4.36 | 4.39 | 4.46 | 4.48 |
| NMHC (mol. wt. of 15.84) | | (9)(10) | g/bhp-hr | 0.65 | 0.66 | 0.67 | 0.67 |
| NMNEHC (VOCs) (mol. wt. of 15.84) | | (9)(10)(11) | g/bhp-hr | 0.44 | 0.44 | 0.45 | 0.45 |
| HCHO (Formaldehyde) | | (9)(10) | g/bhp-hr | 0.51 | 0.52 | 0.55 | 0.61 |
| CO2 | | (9)(10) | g/bhp-hr | 463 | 471 | 500 | 537 |
| EXHAUST OXYGEN | | (9)(12) | % DRY | 8.9 | 8.8 | 8.5 | 8.1 |

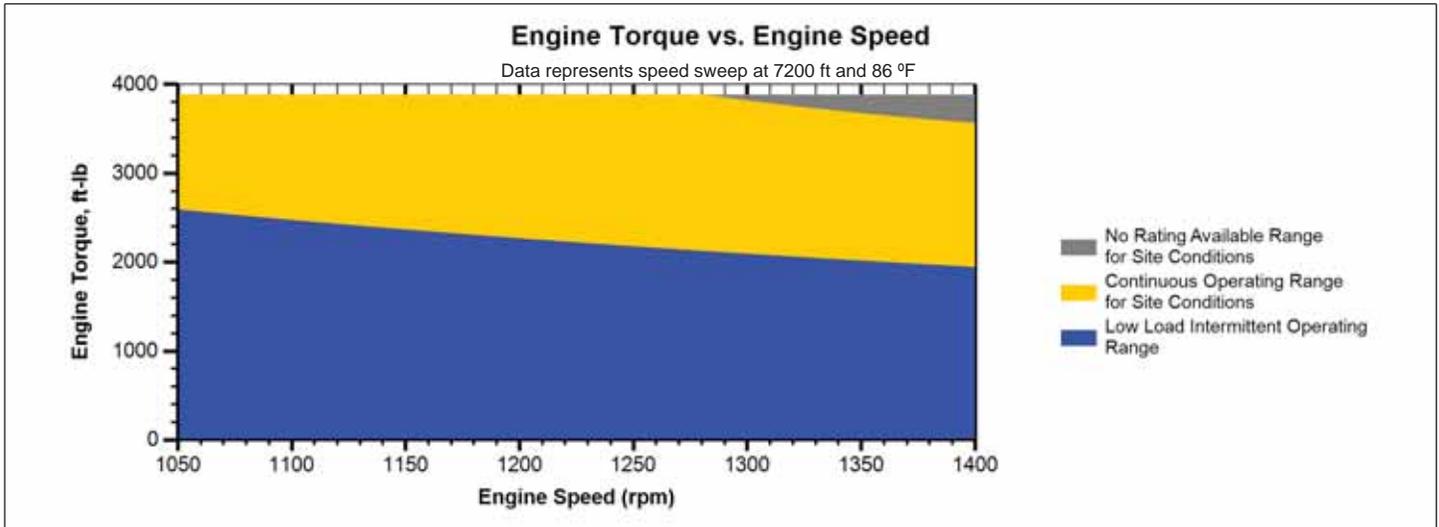
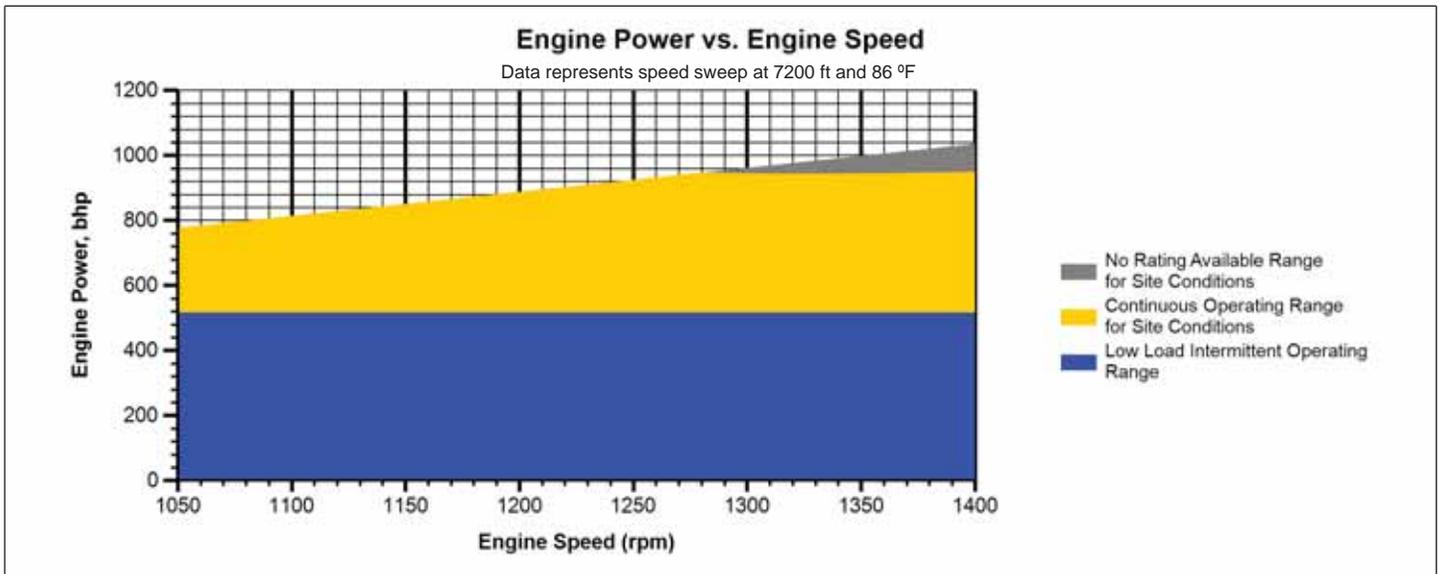
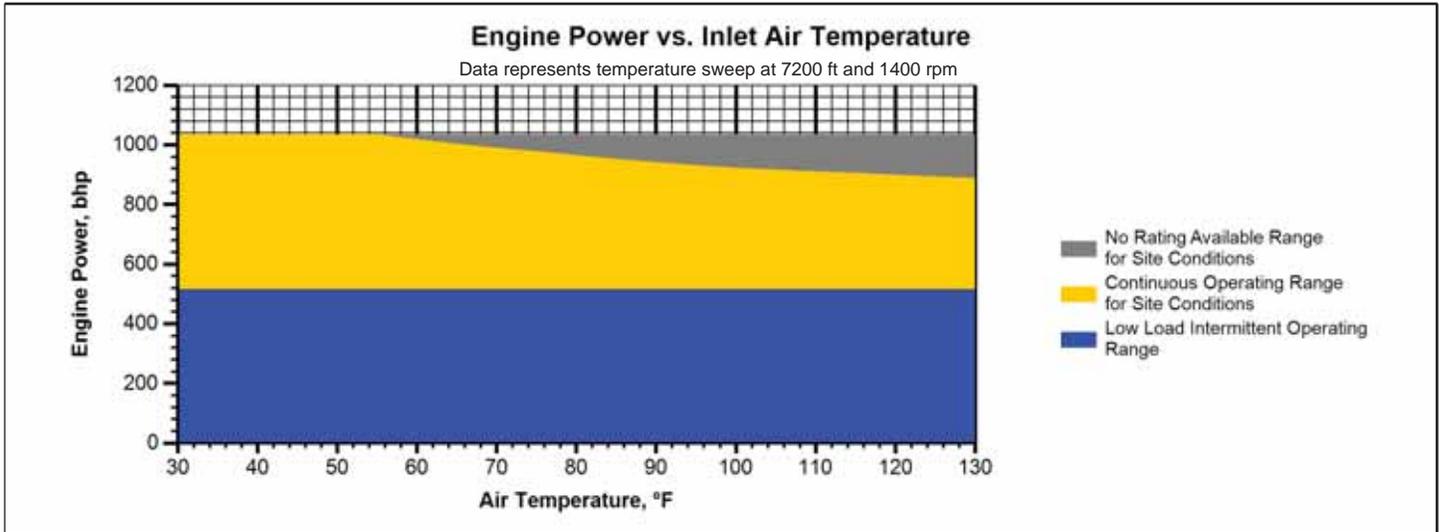
| HEAT REJECTION | | | | | | | |
|----------------------------------|--|----------|---------|-------|-------|-------|-------|
| HEAT REJ. TO JACKET WATER (JW) | | (13) | Btu/min | 27104 | 25898 | 22261 | 18491 |
| HEAT REJ. TO ATMOSPHERE | | (13) | Btu/min | 4668 | 4726 | 4053 | 3145 |
| HEAT REJ. TO LUBE OIL (OC) | | (13) | Btu/min | 3963 | 3848 | 3490 | 3135 |
| HEAT REJ. TO A/C - STAGE 1 (1AC) | | (13)(14) | Btu/min | 8347 | 8347 | 4671 | 2152 |
| HEAT REJ. TO A/C - STAGE 2 (2AC) | | (13)(14) | Btu/min | 4516 | 4516 | 2955 | 2017 |

| COOLING SYSTEM SIZING CRITERIA | | | |
|--|----------|---------|-------|
| TOTAL JACKET WATER CIRCUIT (JW+OC+1AC) | (14)(15) | Btu/min | 43334 |
| TOTAL AFTERCOOLER CIRCUIT (2AC) | (14)(15) | Btu/min | 4742 |

A cooling system safety factor of 0% has been added to the cooling system sizing criteria.

CONDITIONS AND DEFINITIONS
 Engine rating obtained and presented in accordance with ISO 3046/1, adjusted for fuel, site altitude and site inlet air temperature. 100% rating at maximum inlet air temperature is the maximum engine capability for the specified fuel at site altitude and maximum site inlet air temperature. Maximum rating is the maximum capability at the specified aftercooler inlet temperature for the specified fuel at site altitude and reduced inlet air temperature. Lowest load point is the lowest continuous duty operating load allowed. No overload permitted at rating shown.

For notes information consult page three.



Note:
At site conditions of 7200 ft and 86°F inlet air temp., constant torque can be maintained down to 1050 rpm. The minimum speed for loading at these conditions is 1050 rpm.

NOTES:

1. Fuel pressure range specified is to the engine fuel pressure regulator. Additional fuel train components should be considered in pressure and flow calculations.
2. Engine rating is with two engine driven water pumps. Tolerance is $\pm 3\%$ of full load.
3. Engine rating obtained and presented in accordance with ISO 3046/1, adjusted for fuel, site altitude and site ambient temperature.
4. Air flow value is on a 'wet' basis. Flow is a nominal value with a tolerance of $\pm 5\%$.
5. Inlet and Exhaust Restrictions must not exceed A&I limits based on full load flow rates from the standard technical data sheet.
6. Inlet manifold pressure is a nominal value with a tolerance of $\pm 5\%$.
7. Exhaust temperature is a nominal value with a tolerance of (+)63°F, (-)54°F.
8. Exhaust flow value is on a "wet" basis. Flow is a nominal value with a tolerance of $\pm 6\%$.
9. Emissions data is at engine exhaust flange prior to any after treatment.
10. Values listed are higher than nominal levels to allow for instrumentation, measurement, and engine-to-engine variations. They indicate the maximum values expected under steady state conditions. Fuel methane number cannot vary more than ± 3 . THC, NMHC, and NMNEHC do not include aldehydes. An oxidation catalyst may be required to meet Federal, State or local CO or HC requirements.
11. VOCs - Volatile organic compounds as defined in US EPA 40 CFR 60, subpart JJJJ
12. Exhaust Oxygen level is the result of adjusting the engine to operate at the specified NOx level. Tolerance is ± 0.5 .
13. Heat rejection values are nominal. Tolerances, based on treated water, are $\pm 10\%$ for jacket water circuit, $\pm 50\%$ for radiation, $\pm 20\%$ for lube oil circuit, and $\pm 5\%$ for aftercooler circuit.
14. Aftercooler heat rejection includes an aftercooler heat rejection factor for the site elevation and inlet air temperature specified. Aftercooler heat rejection values at part load are for reference only. Do not use part load data for heat exchanger sizing.
15. Cooling system sizing criteria are maximum circuit heat rejection for the site, with applied tolerances.

GAS COMPRESSION APPLICATION

| Constituent | Abbrev | Mole % | Norm |
|------------------|-----------|----------|----------|
| Water Vapor | H2O | 0.0000 | 0.0000 |
| Methane | CH4 | 92.2700 | 92.2700 |
| Ethane | C2H6 | 2.5000 | 2.5000 |
| Propane | C3H8 | 0.5000 | 0.5000 |
| Isobutane | iso-C4H10 | 0.0000 | 0.0000 |
| Norbutane | nor-C4H10 | 0.2000 | 0.2000 |
| Isopentane | iso-C5H12 | 0.0000 | 0.0000 |
| Noropentane | nor-C5H12 | 0.1000 | 0.1000 |
| Hexane | C6H14 | 0.0500 | 0.0500 |
| Heptane | C7H16 | 0.0000 | 0.0000 |
| Nitrogen | N2 | 3.4800 | 3.4800 |
| Carbon Dioxide | CO2 | 0.9000 | 0.9000 |
| Hydrogen Sulfide | H2S | 0.0000 | 0.0000 |
| Carbon Monoxide | CO | 0.0000 | 0.0000 |
| Hydrogen | H2 | 0.0000 | 0.0000 |
| Oxygen | O2 | 0.0000 | 0.0000 |
| Helium | HE | 0.0000 | 0.0000 |
| Neopentane | neo-C5H12 | 0.0000 | 0.0000 |
| Octane | C8H18 | 0.0000 | 0.0000 |
| Nonane | C9H20 | 0.0000 | 0.0000 |
| Ethylene | C2H4 | 0.0000 | 0.0000 |
| Propylene | C3H6 | 0.0000 | 0.0000 |
| TOTAL (Volume %) | | 100.0000 | 100.0000 |

Fuel Makeup:
Unit of Measure:

Nat Gas
English

Calculated Fuel Properties

| | |
|-------------------------------------|-------|
| Caterpillar Methane Number: | 84.7 |
| Lower Heating Value (Btu/scf): | 905 |
| Higher Heating Value (Btu/scf): | 1004 |
| WOBBE Index (Btu/scf): | 1168 |
| THC: Free Inert Ratio: | 21.83 |
| Total % Inerts (% N2, CO2, He): | 4.38% |
| RPC (%) (To 905 Btu/scf Fuel): | 100% |
| Compressibility Factor: | 0.998 |
| Stoich A/F Ratio (Vol/Vol): | 9.45 |
| Stoich A/F Ratio (Mass/Mass): | 15.75 |
| Specific Gravity (Relative to Air): | 0.600 |
| Fuel Specific Heat Ratio (K): | 1.313 |

CONDITIONS AND DEFINITIONS

Caterpillar Methane Number represents the knock resistance of a gaseous fuel. It should be used with the Caterpillar Fuel Usage Guide for the engine and rating to determine the rating for the fuel specified. A Fuel Usage Guide for each rating is included on page 2 of its standard technical data sheet.

RPC always applies to naturally aspirated (NA) engines, and turbocharged (TA or LE) engines only when they are derated for altitude and ambient site conditions.

Project specific technical data sheets generated by the Caterpillar Gas Engine Rating Pro program take the Caterpillar Methane Number and RPC into account when generating a site rating.

Fuel properties for Btu/scf calculations are at 60F and 14.696 psia.

Caterpillar shall have no liability in law or equity, for damages, consequently or otherwise, arising from use of program and related material or any part thereof.

FUEL LIQUIDS

Field gases, well head gases, and associated gases typically contain liquid water and heavy hydrocarbons entrained in the gas. To prevent detonation and severe damage to the engine, hydrocarbon liquids must not be allowed to enter the engine fuel system. To remove liquids, a liquid separator and coalescing filter are recommended, with an automatic drain and collection tank to prevent contamination of the ground in accordance with local codes and standards.

To avoid water condensation in the engine or fuel lines, limit the relative humidity of water in the fuel to 80% at the minimum fuel operating temperature.

LOS ALAMOS COUNTY
OTOWI 2 WELL PUMP DRIVE
LIFE CYCLE ANALYSIS

APPENDIX B

800 HP MOTOR
DATA SHEET

**WILSON
& COMPANY**

discipline | intensity | collaboration | shared ownership | solutions

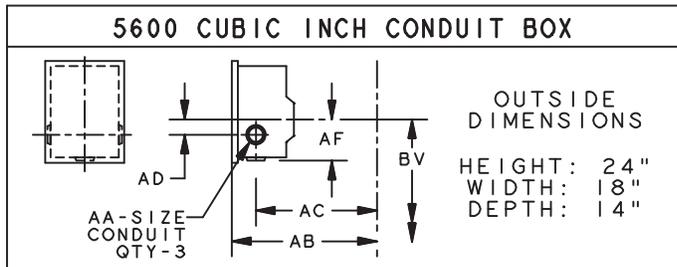
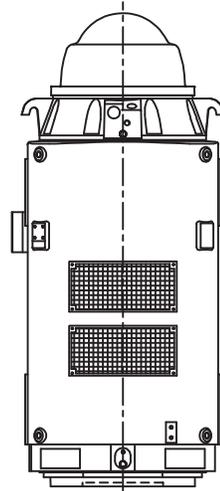
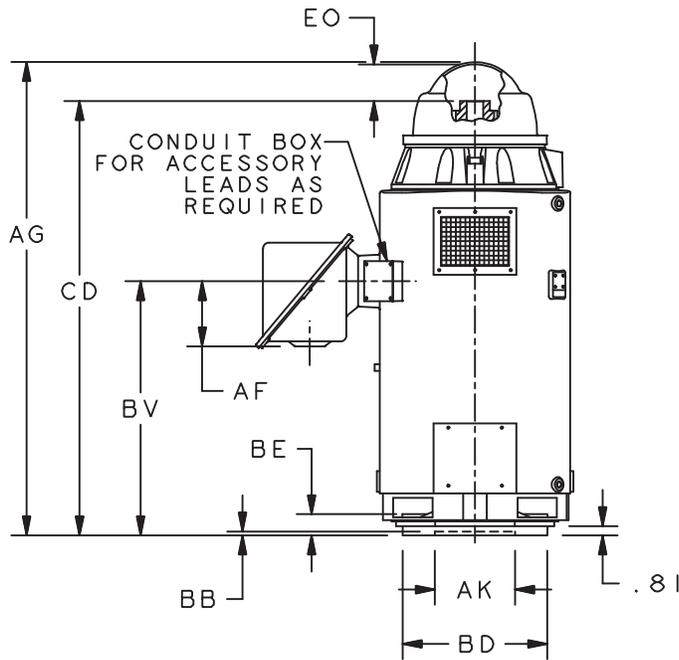
VERTICAL MOTORS

WEATHER PROTECTED TYPE I
 FRAME: 5000PH, P, PA
 TYPE: RU

09-2657

EFFECTIVE: 03-JUL-06
 SUPERSEDES: NEW

SHEET 1 OF 1

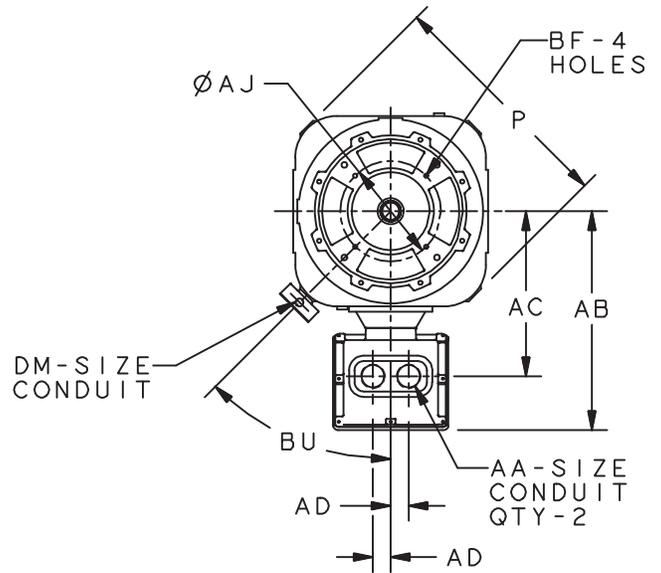


| TOLERANCES | |
|---|-------------|
| FACE RUNOUT | .007 F.I.R. |
| PERMISSIBLE ECCENTRICITY OF MOUNTING RABBET | .007 F.I.R. |
| MAXIMUM SHAFT END PLAY | .010 |

| FRAME | P | AG | BV | CD | EO |
|-------|-------|-------|-------|-------|------|
| 5008 | 40.00 | 63.88 | 27.00 | 57.06 | 6.42 |
| 5012 | | 78.88 | 42.00 | 72.30 | |

| FRAME | AJ | AK +.005 | BB MIN | BD MAX | BE | BF |
|--------------------|--------|-------------|-----------|-----------|------|-----|
| 5000PH | 14.750 | 13.500 | .25 | 20.00 | 2.19 | .69 |
| 5000P ³ | 14.750 | 13.500 | | 24.50 | | .69 |
| | 22.000 | | | 30.50 | | .94 |
| 5000PA | 26.000 | 22.000 | | | | .81 |

| VOLTS | C/BOX VOLUME (CU. IN.) | AB | AC | AD | AF | BU |
|-----------|------------------------|-------|-------|------|-------|-----|
| 0-4800 | 3400 | 36.50 | 27.88 | 3.00 | 10.94 | 45° |
| 4801-6900 | 5600 | 36.13 | 30.13 | 4.00 | 10.81 | |



| AA | DM |
|-----------|-----------|
| 2 NPT | 1/2 NPT |
| 2-1/2 NPT | 3/4 NPT |
| 3 NPT | 1 NPT |
| 3-1/2 NPT | 1-1/4 NPT |
| 4 NPT | 1-1/2 NPT |

- DIMENSIONS MAY VARY .25" DUE TO CASTING AND/OR FABRICATION VARIATIONS.
- DIMENSIONS AND TOLERANCES ARE SHOWN IN INCHES.
- 5000P HAS TWO BOLT CIRCLES.



LOS ALAMOS COUNTY
OTOWI 2 WELL PUMP DRIVE
LIFE CYCLE ANALYSIS

APPENDIX C

25 YEAR CATERPILLAR G3512J
COST DATA (OPTION A)

**WILSON
& COMPANY**

discipline | intensity | collaboration | shared ownership | solutions



Executive Summary

For the project LAC Ottowi #2 Well Pump Station, under normal operating conditions using the assumption set forth below, we would expect the 25 year total lifecycle cost for this project to be \$5,827,558.42 with fuel and \$1,710,076.28 without fuel. This lifecycle cost assumes a fuel cost initially of \$0.002848 per cubic foot.

The following key assumptions were also utilized in generating this total lifecycle cost:

G3512INPL engine at a rating of 1035BHP 1400 RPM

Engine is operating with an Average Load of 80% each year

General inflation rate: 1.5% per year

Prepared By:

James Cumiford at Wagner Power Systems

Email: cumiford_james@wagnerequipment.com

Phone: 505-343-2774

Mobile Phone: 505-401-1560

Address: 4000 Osuna Road NE Albuquerque New Mexico 87109

Country: United States

Prepared On Behalf Of:

James Alarid at Los Alamos County

Email: james.alarid@lacnm.us

Phone: (505) 663-3420

Address: 1000 Central Ave Ste 300 Los Alamos, NM

Country: United States



Input Parameters

General

Market: Municipal Water

Fuel Type: Gas

Model: G3512INPL

Performance No.: 1035 BHP 1400 rpm

Rating:

Engine Price: \$500,000.00

Fuel Parameters

Fuel Cost: \$0.002848/ft3

Lower Heat Value: 956.542 Btu/ft3

BSFC: 7903.9995 Btu/bhp-hr

Fuel Flow Rate: 13203.1519 ft3/hr

Fluid Parameters

Oil Cost: \$20.00/gal

BSOC: 0.00028 lbs/bhp-hr

Sump Size: 76.874 gal

Oil Consumption Rate: 0.075 gal/hr

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Annual Cost without Fuel, Engine Cost, or Additional Purchase Items



* Ancillary Costs were not included in this estimate.

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Owning and Operating Summary By Year

| Availability | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|--|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Calendar Hours in Interval | 8760 | 8760 | 8760 | 8760 | 8760 | 8760 | 8760 |
| Maintenance Hours | 79 | 86 | 83 | 86 | 98 | 165 | 79 |
| Available Time Based On Calendar Hours | 8681 | 8674 | 8677 | 8674 | 8662 | 8595 | 8681 |
| Requested Operating Hours | 4380 | 4380 | 4380 | 4380 | 4380 | 4380 | 4380 |
| Actual Operating Hours | 4380 | 4380 | 4380 | 4380 | 4380 | 4380 | 4380 |
| Un-Utilized Time | 4301 | 4294 | 4297 | 4294 | 4282 | 4215 | 4301 |
| Calendar Availability / Utilization | 99.10 % | 99.02 % | 99.05 % | 99.02 % | 98.88 % | 98.12 % | 99.10 % |
| Operational Availability | 100.00 % | 100.00 % | 100.00 % | 100.00 % | 100.00 % | 100.00 % | 100.00 % |
| Operational Utilization | 50.46 % | 50.50 % | 50.48 % | 50.50 % | 50.57 % | 50.96 % | 50.46 % |
| Ownership | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Engine Price | \$500,000.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| Additional Purchase Item | \$150,000.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| Maintenance | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Overhauls | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$25,480.01 | \$0.00 |
| PM | \$12,212.39 | \$12,888.89 | \$13,016.62 | \$12,888.89 | \$12,769.12 | \$13,649.09 | \$12,769.12 |
| Major Components | \$8,460.17 | \$9,147.82 | \$10,575.21 | \$9,147.82 | \$13,468.04 | \$11,477.36 | \$8,460.17 |
| Fluids | \$9,606.75 | \$9,606.75 | \$9,606.75 | \$9,606.75 | \$9,606.75 | \$11,144.23 | \$9,606.75 |
| Fuel | \$164,699.29 | \$164,699.29 | \$164,699.29 | \$164,699.29 | \$164,699.29 | \$164,699.29 | \$164,699.29 |
| Ancillary Cost | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| Summary (without Fuel) | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Operating Costs | \$680,279.31 | \$31,643.46 | \$33,198.58 | \$31,643.46 | \$35,843.91 | \$61,750.69 | \$30,836.04 |
| Cost Per Hour | \$155.31 | \$7.22 | \$7.58 | \$7.22 | \$8.18 | \$14.10 | \$7.04 |
| Cost Per Hp Hour | \$0.0778 | \$0.0036 | \$0.0038 | \$0.0036 | \$0.0041 | \$0.0071 | \$0.0035 |
| Cost Per eKw Hour | \$0.1042 | \$0.0048 | \$0.0051 | \$0.0048 | \$0.0055 | \$0.0095 | \$0.0047 |
| Summary (with Fuel) | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Operating Costs (w/Fuel) | \$844,978.59 | \$196,342.75 | \$197,897.86 | \$196,342.75 | \$200,543.19 | \$226,449.98 | \$195,535.32 |
| Cost Per Hour (w/Fuel) | \$192.92 | \$44.83 | \$45.18 | \$44.83 | \$45.79 | \$51.70 | \$44.64 |
| Cost Per Hp Hour (w/Fuel) | \$0.0966 | \$0.0224 | \$0.0226 | \$0.0224 | \$0.0229 | \$0.0259 | \$0.0224 |
| Cost Per eKw Hour (w/Fuel) | \$0.1295 | \$0.0301 | \$0.0303 | \$0.0301 | \$0.0307 | \$0.0347 | \$0.0300 |

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Owning and Operating Summary By Year

| Availability | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
|--|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Calendar Hours in Interval | 8760 | 8760 | 8760 | 8760 | 8760 | 8760 | 8760 |
| Maintenance Hours | 90 | 79 | 105 | 199 | 82 | 83 | 105 |
| Available Time Based On Calendar Hours | 8670 | 8681 | 8655 | 8561 | 8678 | 8677 | 8655 |
| Requested Operating Hours | 4380 | 4380 | 4380 | 4380 | 4380 | 4380 | 4380 |
| Actual Operating Hours | 4380 | 4380 | 4380 | 4380 | 4380 | 4380 | 4380 |
| Un-Utilized Time | 4290 | 4301 | 4275 | 4181 | 4298 | 4297 | 4275 |
| Calendar Availability / Utilization | 98.97 % | 99.10 % | 98.80 % | 97.73 % | 99.06 % | 99.05 % | 98.80 % |
| Operational Availability | 100.00 % | 100.00 % | 100.00 % | 100.00 % | 100.00 % | 100.00 % | 100.00 % |
| Operational Utilization | 50.52 % | 50.46 % | 50.61 % | 51.16 % | 50.47 % | 50.48 % | 50.61 % |
| Ownership | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| Engine Price | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| Additional Purchase Item | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| Maintenance | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| Overhauls | \$0.00 | \$0.00 | \$0.00 | \$55,151.38 | \$0.00 | \$0.00 | \$0.00 |
| PM | \$13,136.39 | \$12,212.39 | \$13,445.62 | \$14,342.09 | \$13,297.12 | \$12,360.89 | \$13,544.62 |
| Major Components | \$11,262.86 | \$8,460.17 | \$14,155.70 | \$11,477.36 | \$8,460.17 | \$9,147.82 | \$15,583.08 |
| Fluids | \$9,606.75 | \$9,606.75 | \$9,606.75 | \$11,144.23 | \$9,606.75 | \$9,606.75 | \$9,606.75 |
| Fuel | \$164,699.29 | \$164,699.29 | \$164,699.29 | \$164,699.29 | \$164,699.29 | \$164,699.29 | \$164,699.29 |
| Ancillary Cost | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| Summary (without Fuel) | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| Operating Costs | \$34,006.00 | \$30,279.31 | \$37,208.06 | \$92,115.06 | \$31,364.04 | \$31,115.46 | \$38,734.45 |
| Cost Per Hp Hour | \$7.76 | \$6.91 | \$8.49 | \$21.03 | \$7.16 | \$7.10 | \$8.84 |
| Cost Per Hp Hour | \$0.0039 | \$0.0035 | \$0.0043 | \$0.0105 | \$0.0036 | \$0.0036 | \$0.0044 |
| Cost Per eKw Hour | \$0.0052 | \$0.0046 | \$0.0057 | \$0.0141 | \$0.0048 | \$0.0048 | \$0.0059 |
| Summary (with Fuel) | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| Operating Costs (w/Fuel) | \$198,705.29 | \$194,978.59 | \$201,907.35 | \$256,814.35 | \$196,063.32 | \$195,814.75 | \$203,433.74 |
| Cost Per Hour (w/Fuel) | \$45.37 | \$44.52 | \$46.10 | \$58.63 | \$44.76 | \$44.71 | \$46.45 |
| Cost Per Hp Hour (w/Fuel) | \$0.0227 | \$0.0223 | \$0.0231 | \$0.0294 | \$0.0224 | \$0.0224 | \$0.0233 |
| Cost Per eKw Hour (w/Fuel) | \$0.0304 | \$0.0299 | \$0.0309 | \$0.0394 | \$0.0300 | \$0.0300 | \$0.0312 |

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Owning and Operating Summary By Year

| Availability | 15 | 16 | 17 | 18 | 19 | 20 | 21 |
|--|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Calendar Hours in Interval | 8760 | 8760 | 8760 | 8760 | 8760 | 8760 | 8760 |
| Maintenance Hours | 83 | 88 | 156 | 82 | 106 | 82 | 83 |
| Available Time Based On Calendar Hours | 8677 | 8672 | 8604 | 8678 | 8654 | 8678 | 8677 |
| Requested Operating Hours | 4380 | 4380 | 4380 | 4380 | 4380 | 4380 | 4380 |
| Actual Operating Hours | 4380 | 4380 | 4380 | 4380 | 4380 | 4380 | 4380 |
| Un-Utilized Time | 4297 | 4292 | 4224 | 4298 | 4274 | 4298 | 4297 |
| Calendar Availability / Utilization | 99.05 % | 99.00 % | 98.22 % | 99.06 % | 98.79 % | 99.06 % | 99.05 % |
| Operational Availability | 100.00 % | 100.00 % | 100.00 % | 100.00 % | 100.00 % | 100.00 % | 100.00 % |
| Operational Utilization | 50.48 % | 50.51 % | 50.91 % | 50.47 % | 50.61 % | 50.47 % | 50.48 % |
| Ownership | 15 | 16 | 17 | 18 | 19 | 20 | 21 |
| Engine Price | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| Additional Purchase Item | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| Maintenance | 15 | 16 | 17 | 18 | 19 | 20 | 21 |
| Overhauls | \$0.00 | \$0.00 | \$25,480.01 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| PM | \$12,360.89 | \$14,057.32 | \$12,360.89 | \$12,740.39 | \$13,165.12 | \$12,740.39 | \$12,917.62 |
| Major Components | \$9,147.82 | \$10,575.21 | \$9,362.32 | \$8,460.17 | \$16,270.74 | \$8,460.17 | \$9,147.82 |
| Fluids | \$9,606.75 | \$11,144.23 | \$9,606.75 | \$9,606.75 | \$9,606.75 | \$9,606.75 | \$9,606.75 |
| Fuel | \$164,699.29 | \$164,699.29 | \$164,699.29 | \$164,699.29 | \$164,699.29 | \$164,699.29 | \$164,699.29 |
| Ancillary Cost | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| Summary (without Fuel) | 15 | 16 | 17 | 18 | 19 | 20 | 21 |
| Operating Costs | \$31,115.46 | \$35,776.75 | \$56,809.97 | \$30,807.31 | \$39,042.61 | \$30,807.31 | \$31,672.19 |
| Cost Per Hour | \$7.10 | \$8.17 | \$12.97 | \$7.03 | \$8.91 | \$7.03 | \$7.23 |
| Cost Per Hp Hour | \$0.0036 | \$0.0041 | \$0.0065 | \$0.0035 | \$0.0045 | \$0.0035 | \$0.0036 |
| Cost Per eKw Hour | \$0.0048 | \$0.0055 | \$0.0087 | \$0.0047 | \$0.0060 | \$0.0047 | \$0.0049 |
| Summary (with Fuel) | 15 | 16 | 17 | 18 | 19 | 20 | 21 |
| Operating Costs (w/Fuel) | \$195,814.75 | \$200,476.04 | \$221,509.26 | \$195,506.59 | \$203,741.89 | \$195,506.59 | \$196,371.48 |
| Cost Per Hour (w/Fuel) | \$44.71 | \$45.77 | \$50.57 | \$44.64 | \$46.52 | \$44.64 | \$44.83 |
| Cost Per Hp Hour (w/Fuel) | \$0.0224 | \$0.0229 | \$0.0253 | \$0.0223 | \$0.0233 | \$0.0223 | \$0.0224 |
| Cost Per eKw Hour (w/Fuel) | \$0.0300 | \$0.0307 | \$0.0339 | \$0.0300 | \$0.0312 | \$0.0300 | \$0.0301 |

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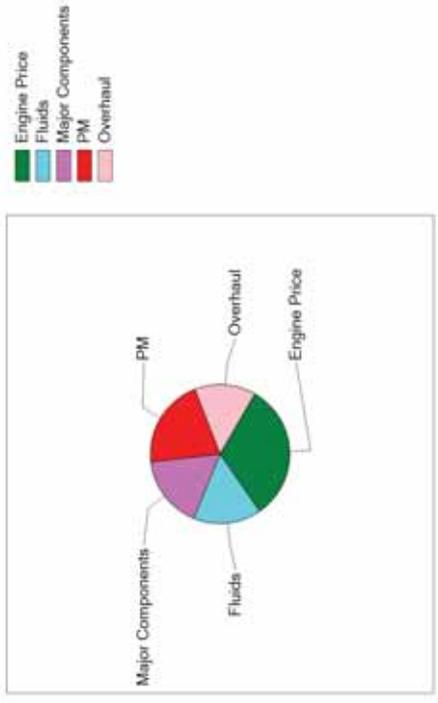
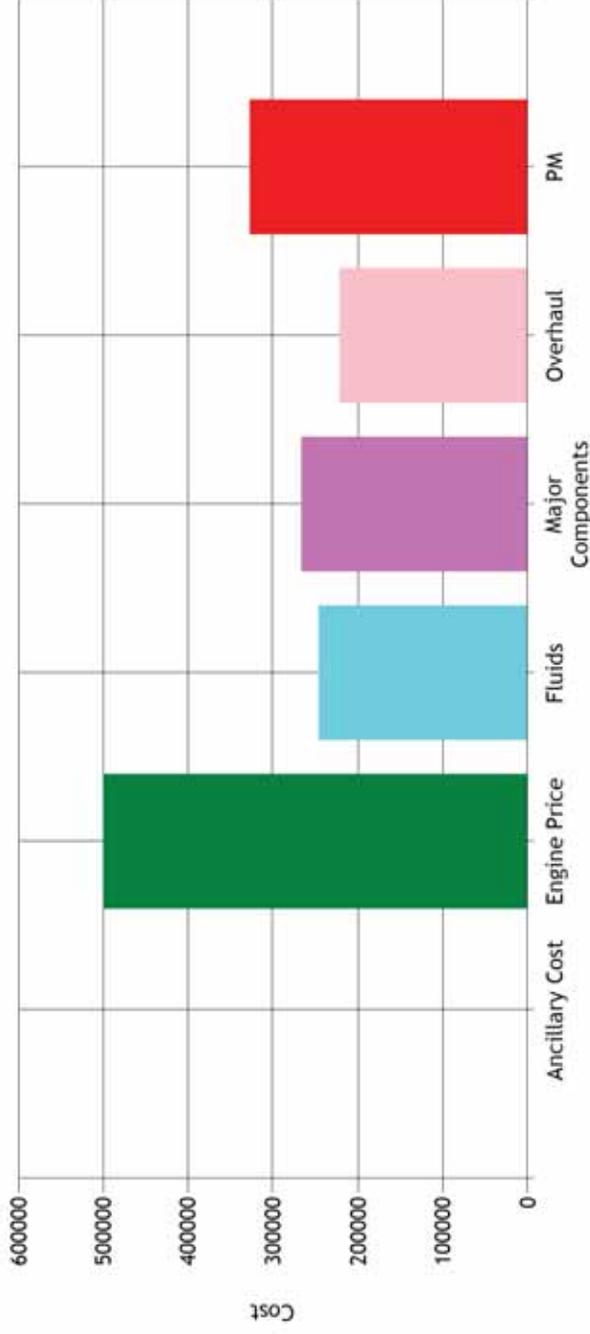
Owning and Operating Summary By Year

| Availability | 22 | 23 | 24 | 25 | Total |
|--|--------------|--------------|--------------|--------------|----------------|
| Calendar Hours in Interval | 8760 | 8760 | 8760 | 8760 | 219000 |
| Maintenance Hours | 271 | 98 | 90 | 82 | 2640 |
| Available Time Based On Calendar Hours | 8489 | 8662 | 8670 | 8678 | 216360 |
| Requested Operating Hours | 4380 | 4380 | 4380 | 4380 | 109500 |
| Actual Operating Hours | 4380 | 4380 | 4380 | 4380 | 109500 |
| Un-Utilized Time | 4109 | 4282 | 4290 | 4298 | 106860 |
| Calendar Availability / Utilization | 96.91 % | 98.88 % | 98.97 % | 99.06 % | 98.79 % |
| Operational Availability | 100.00 % | 100.00 % | 100.00 % | 100.00 % | 100.00 % |
| Operational Utilization | 51.60 % | 50.57 % | 50.52 % | 50.47 % | 50.61 % |
| Ownership | 22 | 23 | 24 | 25 | Total |
| Engine Price | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$500,000.00 |
| Additional Purchase Item | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$150,000.00 |
| Maintenance | 22 | 23 | 24 | 25 | Total |
| Overhauls | \$115,877.96 | \$0.00 | \$0.00 | \$0.00 | \$221,989.37 |
| PM | \$14,870.09 | \$12,769.12 | \$13,136.39 | \$12,740.39 | \$326,391.85 |
| Major Components | \$11,477.36 | \$13,468.04 | \$11,262.86 | \$8,460.17 | \$265,376.45 |
| Fluids | \$11,144.23 | \$9,606.75 | \$9,606.75 | \$9,606.75 | \$246,318.61 |
| Fuel | \$164,699.29 | \$164,699.29 | \$164,699.29 | \$164,699.29 | \$4,117,482.14 |
| Ancillary Cost | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| Summary (without Fuel) | 22 | 23 | 24 | 25 | Total |
| Operating Costs | \$153,369.63 | \$35,843.91 | \$34,006.00 | \$30,807.31 | \$1,710,076.28 |
| Cost Per Hour | \$35.02 | \$8.18 | \$7.76 | \$7.03 | \$15.62 |
| Cost Per Hp Hour | \$0.0175 | \$0.0041 | \$0.0039 | \$0.0035 | \$0.0078 |
| Cost Per eKw Hour | \$0.0235 | \$0.0055 | \$0.0052 | \$0.0047 | \$0.0105 |
| Summary (with Fuel) | 22 | 23 | 24 | 25 | Total |
| Operating Costs (w/Fuel) | \$318,068.92 | \$200,543.19 | \$198,705.29 | \$195,506.59 | \$5,827,558.42 |
| Cost Per Hour (w/Fuel) | \$72.62 | \$45.79 | \$45.37 | \$44.64 | \$53.22 |
| Cost Per Hp Hour (w/Fuel) | \$0.0364 | \$0.0229 | \$0.0227 | \$0.0223 | \$0.0266 |
| Cost Per eKw Hour (w/Fuel) | \$0.0487 | \$0.0307 | \$0.0304 | \$0.0300 | \$0.0357 |

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Lifecycle Overview without Fuel

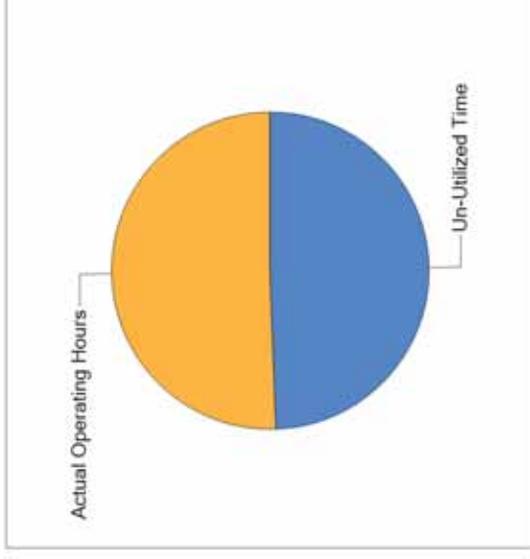


| Cost | Without Fuel | % Without Fuel |
|-------------------------------------|-----------------------|----------------|
| Ownership Costs | | |
| Engine Price | \$500,000.00 | 29.24 % |
| Ancillary/Additional Purchase Items | \$150,000.00 | 8.77 % |
| Operating Costs | | |
| Fluids | \$246,318.61 | 14.40 % |
| PM | \$326,391.85 | 19.09 % |
| Components | \$265,376.45 | 15.52 % |
| Overhauls | \$221,989.37 | 12.98 % |
| Total | \$1,710,076.28 | |

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Product Utilization



Un-Utilized Time
 Actual Operating Hours

Availability Summary

| | |
|--|------------|
| Calendar Hours in Interval | 219,000.00 |
| Maintenance Hours | 2,640.00 |
| Available Time Based On Calendar Hours | 216,360.00 |
| Requested Operating Hours | 109,500.00 |
| Actual Operating Hours | 109,500.00 |
| Un-Utilized Time | 106,860.00 |
| Calendar Availability / Utilization | 98.79 % |
| Operational Availability | 100.00 % |
| Operational Utilization | 50.61 % |

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LOS ALAMOS COUNTY
OTOWI 2 WELL PUMP DRIVE
LIFE CYCLE ANALYSIS

APPENDIX D

ELECTRICAL 50 YEAR
COST DATA (OPTION B)

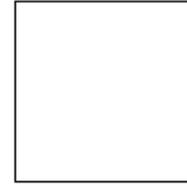
**WILSON
& COMPANY**

discipline | intensity | collaboration | shared ownership | solutions

MOTION INDUSTRIES

3321 MATTHEW AVE NE
ALBUQUERQUE, NM 87107-1924
PHONE : 5058842606
FAX : 5058830846

Date: 03/31/20



Note: Due to recent volatility of raw materials, price and delivery are subject to change based on availability at time of order.

To: MASTERCARD/VISA
3321 MATTHEW AVE NE
ALBUQUERQUE, NM 87107
PO: WILSON & COMPANY

QUOTE NUMBER: NM18 - 219045
CUSTOMER RFQ: WILSON & COMPANY
FOB: FOB ORG,FRT PP&ADD
QUOTE SENT BY: NEVIN
PAYMENT TERMS: . CRDTC D
DELIVERY: STOCK UNLESS NOTED
SHIPPING: OUR TRUCK

| Description | Manufacturer | Quantity | Unit | Unit Price | Amount |
|-------------|--------------|----------|------|------------|--------|
|-------------|--------------|----------|------|------------|--------|

PLUS FREIGHT IN STOCK FROM TX

LINE ITEM: 001
DELIVERY DATE: 03/31/20
 800HP 1800RPM 480V HOLLOW SHAFT 1 EA \$47,315.058 \$47,315.06
 VERTICLE MNT VFD RATED
ITEM NO: 99999999 TECO-WEST.HOUSE

Subtotal: \$47,315.05
SALES TAX: \$3,726.06
Total: \$51,041.11

All Prices in USD

LOS ALAMOS COUNTY
OTOWI 2 WELL PUMP DRIVE
LIFE CYCLE ANALYSIS

APPENDIX E

HYBRID 50 YEAR
COST DATA (OPTION C)
(G3512 NPL Genset & Electric Utility)

**WILSON
& COMPANY**

discipline | intensity | collaboration | shared ownership | solutions



Executive Summary

For the project LAC Ottowi #2 Gas Genset, under normal operating conditions using the assumption set forth below, we would expect the 25 year total lifecycle cost for this project to be \$3,114,184.82 with fuel and \$1,184,115.07 without fuel. This lifecycle cost assumes a fuel cost initially of \$0.002848 per cubic foot.

The following key assumptions were also utilized in generating this total lifecycle cost:

G3512 NPL_GSE engine at a rating of 1000 eKw, 1800 rpm

Engine is operating with an Average Load of 75% each year

Prepared By:

James Cumiford at Wagner Power Systems

Email: cumiford_james@wagnerequipment.com

Phone: 505-343-2774

Mobile Phone: 505-401-1560

Address: 4000 Osuna Road NE Albuquerque New Mexico 87109

Country: United States



Input Parameters

General

Market: Electric Power

Fuel Type: Gas

Model: G3512 NPL_GSE

Performance No.: 1000 eKw, 1800 rpm

Rating:

Engine Price: \$509,187.00

Fuel Parameters

Fuel Cost: \$0.002848/ft3

Lower Heat Value: 956.542 Btu/ft3

BSFC: 7903.9995 Btu/bhp-hr

Fuel Flow Rate: 12377.9549 ft3/hr

Fluid Parameters

Oil Cost: \$20.00/gal

BSOC: 0.00028 lbs/bhp-hr

Sump Size: 76.874 gal

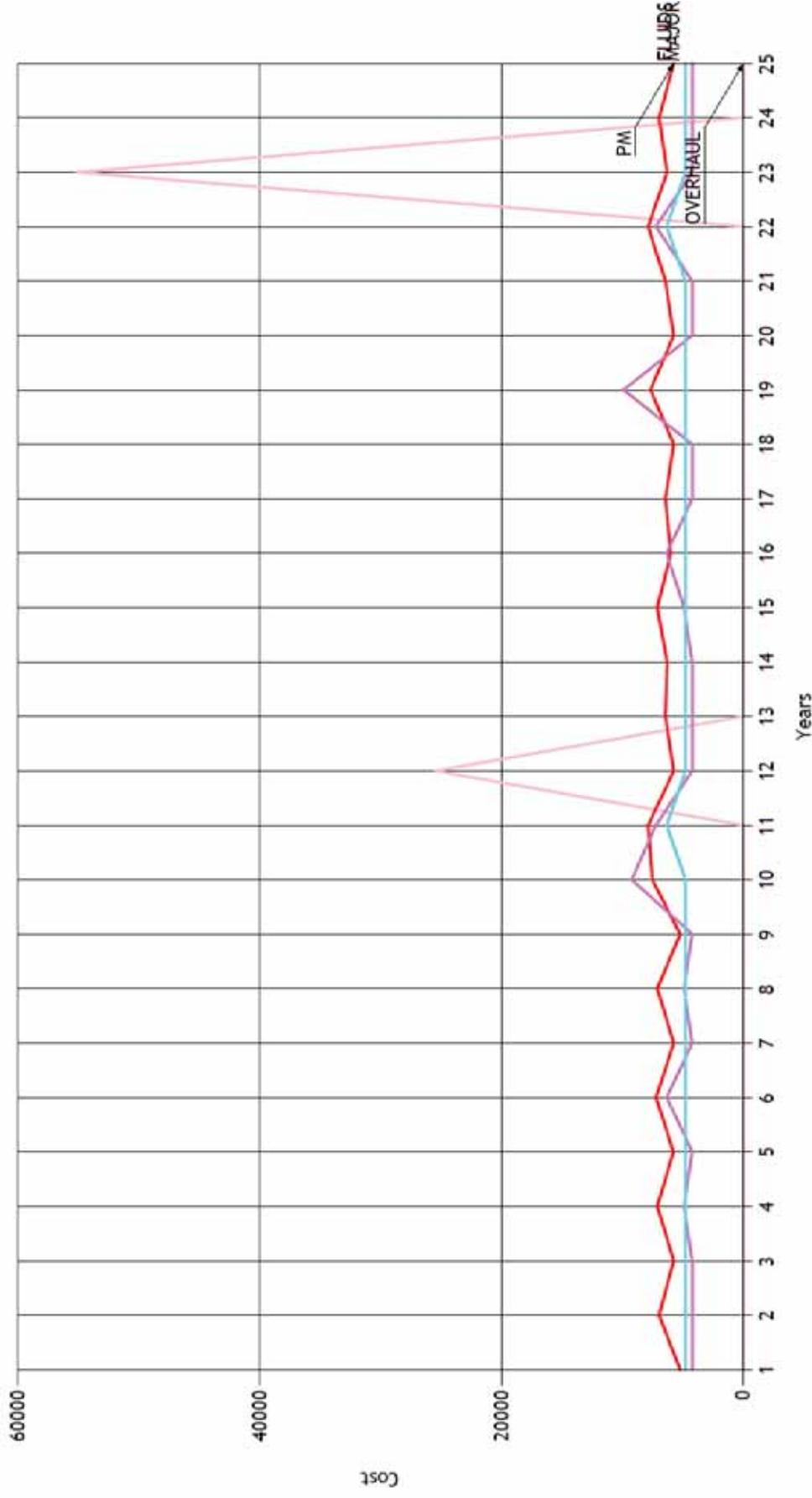
Oil Consumption Rate: 0.075 gal/hr

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Prices are adjusted for 1.5% general annual inflation



Annual Cost without Fuel, Engine Cost, or Additional Purchase Items



* Ancillary Costs were not included in this estimate.



Owning and Operating Summary By Year

| Availability | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|--|--------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Calendar Hours in Interval | 8760 | 8760 | 8760 | 8760 | 8760 | 8760 | 8760 |
| Maintenance Hours | 34 | 45 | 37 | 49 | 34 | 49 | 37 |
| Available Time Based On Calendar Hours | 8726 | 8715 | 8723 | 8711 | 8726 | 8711 | 8723 |
| Requested Operating Hours | 2190 | 2190 | 2190 | 2190 | 2190 | 2190 | 2190 |
| Actual Operating Hours | 2190 | 2190 | 2190 | 2190 | 2190 | 2190 | 2190 |
| Un-Utilized Time | 6536 | 6525 | 6533 | 6521 | 6536 | 6521 | 6533 |
| Calendar Availability / Utilization | 99.61 % | 99.49 % | 99.58 % | 99.44 % | 99.61 % | 99.44 % | 99.58 % |
| Operational Availability | 100.00 % | 100.00 % | 100.00 % | 100.00 % | 100.00 % | 100.00 % | 100.00 % |
| Operational Utilization | 25.10 % | 25.13 % | 25.11 % | 25.14 % | 25.10 % | 25.14 % | 25.11 % |
| Ownership | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Engine Price | \$509,187.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| Additional Purchase Item | \$179,967.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| Maintenance | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Overhauls | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| PM | \$5,231.70 | \$6,980.70 | \$5,759.70 | \$7,129.20 | \$5,788.43 | \$7,228.20 | \$5,759.70 |
| Major Components | \$4,230.08 | \$4,230.08 | \$4,230.08 | \$4,917.74 | \$4,230.08 | \$6,345.13 | \$4,230.08 |
| Fluids | \$4,803.37 | \$4,803.37 | \$4,803.37 | \$4,803.37 | \$4,803.37 | \$4,803.37 | \$4,803.37 |
| Fuel | \$77,202.79 | \$77,202.79 | \$77,202.79 | \$77,202.79 | \$77,202.79 | \$77,202.79 | \$77,202.79 |
| Ancillary Cost | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| Summary (without Fuel) | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Operating Costs | \$703,419.15 | \$16,014.15 | \$14,793.15 | \$16,850.31 | \$14,821.88 | \$18,376.70 | \$14,793.15 |
| Cost Per Hour | \$321.20 | \$7.31 | \$6.75 | \$7.69 | \$6.77 | \$8.39 | \$6.75 |
| Cost Per Hp Hour | \$0.1608 | \$0.0037 | \$0.0034 | \$0.0039 | \$0.0034 | \$0.0042 | \$0.0034 |
| Cost Per eKw Hour | \$0.2156 | \$0.0049 | \$0.0045 | \$0.0052 | \$0.0045 | \$0.0056 | \$0.0045 |
| Summary (with Fuel) | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Operating Costs (w/Fuel) | \$780,621.94 | \$93,216.94 | \$91,995.94 | \$94,053.10 | \$92,024.67 | \$95,579.49 | \$91,995.94 |
| Cost Per Hour (w/Fuel) | \$356.45 | \$42.56 | \$42.01 | \$42.95 | \$42.02 | \$43.64 | \$42.01 |
| Cost Per Hp Hour (w/Fuel) | \$0.1785 | \$0.0213 | \$0.0210 | \$0.0215 | \$0.0210 | \$0.0219 | \$0.0210 |
| Cost Per eKw Hour (w/Fuel) | \$0.2392 | \$0.0286 | \$0.0282 | \$0.0288 | \$0.0282 | \$0.0293 | \$0.0282 |

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Prices are adjusted for 1.5% general annual inflation



Owning and Operating Summary By Year

| Availability | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
|--|-------------|-------------|-------------|-------------|--------------|-------------|-------------|
| Calendar Hours in Interval | 8760 | 8760 | 8760 | 8760 | 8760 | 8760 | 8760 |
| Maintenance Hours | 49 | 34 | 64 | 56 | 109 | 42 | 37 |
| Available Time Based On Calendar Hours | 8711 | 8726 | 8696 | 8704 | 8651 | 8718 | 8723 |
| Requested Operating Hours | 2190 | 2190 | 2190 | 2190 | 2190 | 2190 | 2190 |
| Actual Operating Hours | 2190 | 2190 | 2190 | 2190 | 2190 | 2190 | 2190 |
| Un-Utilized Time | 6521 | 6536 | 6506 | 6514 | 6461 | 6528 | 6533 |
| Calendar Availability / Utilization | 99.44 % | 99.61 % | 99.27 % | 99.36 % | 98.76 % | 99.52 % | 99.58 % |
| Operational Availability | 100.00 % | 100.00 % | 100.00 % | 100.00 % | 100.00 % | 100.00 % | 100.00 % |
| Operational Utilization | 25.14 % | 25.10 % | 25.18 % | 25.16 % | 25.31 % | 25.12 % | 25.11 % |
| Ownership | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| Engine Price | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| Additional Purchase Item | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| Maintenance | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| Overhauls | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$25,480.01 | \$0.00 | \$0.00 |
| PM | \$7,129.20 | \$5,231.70 | \$7,537.43 | \$7,889.39 | \$5,759.70 | \$6,452.70 | \$6,316.43 |
| Major Components | \$4,917.74 | \$4,230.08 | \$9,237.96 | \$7,247.28 | \$4,230.08 | \$4,230.08 | \$4,230.08 |
| Fluids | \$4,803.37 | \$4,803.37 | \$4,803.37 | \$6,340.85 | \$4,803.37 | \$4,803.37 | \$4,803.37 |
| Fuel | \$77,202.79 | \$77,202.79 | \$77,202.79 | \$77,202.79 | \$77,202.79 | \$77,202.79 | \$77,202.79 |
| Ancillary Cost | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| Summary (without Fuel) | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| Operating Costs | \$16,850.31 | \$14,265.15 | \$21,578.76 | \$21,477.52 | \$40,273.17 | \$15,486.15 | \$15,349.88 |
| Cost Per Hp Hour | \$7.69 | \$6.51 | \$9.85 | \$9.81 | \$18.39 | \$7.07 | \$7.01 |
| Cost Per eKw Hour | \$0.0039 | \$0.0033 | \$0.0049 | \$0.0049 | \$0.0092 | \$0.0035 | \$0.0035 |
| Cost Per eKw Hour | \$0.0052 | \$0.0044 | \$0.0066 | \$0.0066 | \$0.0123 | \$0.0047 | \$0.0047 |
| Summary (with Fuel) | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| Operating Costs (w/Fuel) | \$94,053.10 | \$91,467.94 | \$98,781.55 | \$98,680.31 | \$117,475.96 | \$92,688.94 | \$92,552.67 |
| Cost Per Hour (w/Fuel) | \$42.95 | \$41.77 | \$45.11 | \$45.06 | \$53.64 | \$42.32 | \$42.26 |
| Cost Per Hp Hour (w/Fuel) | \$0.0215 | \$0.0209 | \$0.0226 | \$0.0226 | \$0.0269 | \$0.0212 | \$0.0212 |
| Cost Per eKw Hour (w/Fuel) | \$0.0288 | \$0.0280 | \$0.0303 | \$0.0302 | \$0.0360 | \$0.0284 | \$0.0284 |

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Prices are adjusted for 1.5% general annual inflation



Owning and Operating Summary By Year

| Availability | 15 | 16 | 17 | 18 | 19 | 20 | 21 |
|--|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Calendar Hours in Interval | 8760 | 8760 | 8760 | 8760 | 8760 | 8760 | 8760 |
| Maintenance Hours | 49 | 41 | 42 | 37 | 68 | 37 | 42 |
| Available Time Based On Calendar Hours | 8711 | 8719 | 8718 | 8723 | 8692 | 8723 | 8718 |
| Requested Operating Hours | 2190 | 2190 | 2190 | 2190 | 2190 | 2190 | 2190 |
| Actual Operating Hours | 2190 | 2190 | 2190 | 2190 | 2190 | 2190 | 2190 |
| Un-Utilized Time | 6521 | 6529 | 6528 | 6533 | 6502 | 6533 | 6528 |
| Calendar Availability / Utilization | 99.44 % | 99.53 % | 99.52 % | 99.58 % | 99.22 % | 99.58 % | 99.52 % |
| Operational Availability | 100.00 % | 100.00 % | 100.00 % | 100.00 % | 100.00 % | 100.00 % | 100.00 % |
| Operational Utilization | 25.14 % | 25.12 % | 25.12 % | 25.11 % | 25.20 % | 25.11 % | 25.12 % |
| Ownership | 15 | 16 | 17 | 18 | 19 | 20 | 21 |
| Engine Price | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| Additional Purchase Item | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| Maintenance | 15 | 16 | 17 | 18 | 19 | 20 | 21 |
| Overhauls | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| PM | \$7,129.20 | \$6,007.20 | \$6,452.70 | \$5,759.70 | \$7,685.93 | \$5,759.70 | \$6,452.70 |
| Major Components | \$4,917.74 | \$6,345.13 | \$4,230.08 | \$4,230.08 | \$9,925.61 | \$4,230.08 | \$4,230.08 |
| Fluids | \$4,803.37 | \$4,803.37 | \$4,803.37 | \$4,803.37 | \$4,803.37 | \$4,803.37 | \$4,803.37 |
| Fuel | \$77,202.79 | \$77,202.79 | \$77,202.79 | \$77,202.79 | \$77,202.79 | \$77,202.79 | \$77,202.79 |
| Ancillary Cost | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| Summary (without Fuel) | 15 | 16 | 17 | 18 | 19 | 20 | 21 |
| Operating Costs | \$16,850.31 | \$17,155.70 | \$15,486.15 | \$14,793.15 | \$22,414.91 | \$14,793.15 | \$15,486.15 |
| Cost Per Hour | \$7.69 | \$7.83 | \$7.07 | \$6.75 | \$10.24 | \$6.75 | \$7.07 |
| Cost Per Hp Hour | \$0.0039 | \$0.0039 | \$0.0035 | \$0.0034 | \$0.0051 | \$0.0034 | \$0.0035 |
| Cost Per eKw Hour | \$0.0052 | \$0.0053 | \$0.0047 | \$0.0045 | \$0.0069 | \$0.0045 | \$0.0047 |
| Summary (with Fuel) | 15 | 16 | 17 | 18 | 19 | 20 | 21 |
| Operating Costs (w/Fuel) | \$94,053.10 | \$94,358.49 | \$92,688.94 | \$91,995.94 | \$99,617.70 | \$91,995.94 | \$92,688.94 |
| Cost Per Hour (w/Fuel) | \$42.95 | \$43.09 | \$42.32 | \$42.01 | \$45.49 | \$42.01 | \$42.32 |
| Cost Per Hp Hour (w/Fuel) | \$0.0215 | \$0.0216 | \$0.0212 | \$0.0210 | \$0.0228 | \$0.0210 | \$0.0212 |
| Cost Per eKw Hour (w/Fuel) | \$0.0288 | \$0.0289 | \$0.0284 | \$0.0282 | \$0.0305 | \$0.0282 | \$0.0284 |

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Prices are adjusted for 1.5% general annual inflation



Owning and Operating Summary By Year

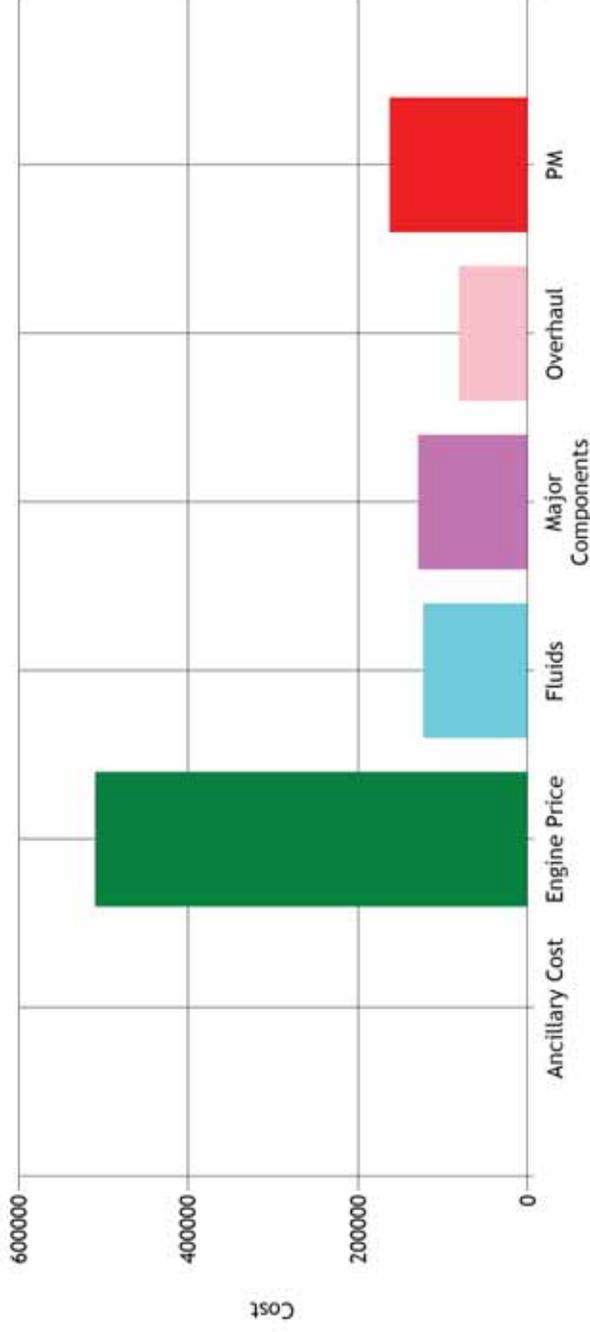
| Availability | 22 | 23 | 24 | 25 | Total |
|--|-------------|--------------|-------------|-------------|----------------|
| Calendar Hours in Interval | 8760 | 8760 | 8760 | 8760 | 219000 |
| Maintenance Hours | 56 | 138 | 45 | 37 | 1268 |
| Available Time Based On Calendar Hours | 8704 | 8622 | 8715 | 8723 | 217732 |
| Requested Operating Hours | 2190 | 2190 | 2190 | 2190 | 54750 |
| Actual Operating Hours | 2190 | 2190 | 2190 | 2190 | 54750 |
| Un-Utilized Time | 6514 | 6432 | 6525 | 6533 | 162982 |
| Calendar Availability / Utilization | 99.36 % | 98.42 % | 99.49 % | 99.58 % | 99.42 % |
| Operational Availability | 100.00 % | 100.00 % | 100.00 % | 100.00 % | 100.00 % |
| Operational Utilization | 25.16 % | 25.40 % | 25.13 % | 25.11 % | 25.15 % |
| Ownership | 22 | 23 | 24 | 25 | Total |
| Engine Price | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$509,187.00 |
| Additional Purchase Item | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$179,967.00 |
| Maintenance | 22 | 23 | 24 | 25 | Total |
| Overhauls | \$0.00 | \$55,151.38 | \$0.00 | \$0.00 | \$80,631.40 |
| PM | \$7,889.39 | \$6,316.43 | \$6,980.70 | \$5,759.70 | \$162,387.43 |
| Major Components | \$7,247.28 | \$4,230.08 | \$4,230.08 | \$4,230.08 | \$128,782.94 |
| Fluids | \$6,340.85 | \$4,803.37 | \$4,803.37 | \$4,803.37 | \$123,159.30 |
| Fuel | \$77,202.79 | \$77,202.79 | \$77,202.79 | \$77,202.79 | \$1,930,069.75 |
| Ancillary Cost | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| Summary (without Fuel) | 22 | 23 | 24 | 25 | Total |
| Operating Costs | \$21,477.52 | \$70,501.27 | \$16,014.15 | \$14,793.15 | \$1,184,115.07 |
| Cost Per Hour | \$9.81 | \$32.19 | \$7.31 | \$6.75 | \$21.63 |
| Cost Per Hp Hour | \$0.0049 | \$0.0161 | \$0.0037 | \$0.0034 | \$0.0108 |
| Cost Per eKw Hour | \$0.0066 | \$0.0216 | \$0.0049 | \$0.0045 | \$0.0145 |
| Summary (with Fuel) | 22 | 23 | 24 | 25 | Total |
| Operating Costs (w/Fuel) | \$98,680.31 | \$147,704.06 | \$93,216.94 | \$91,995.94 | \$3,114,184.82 |
| Cost Per Hour (w/Fuel) | \$45.06 | \$67.44 | \$42.56 | \$42.01 | \$56.88 |
| Cost Per Hp Hour (w/Fuel) | \$0.0226 | \$0.0338 | \$0.0213 | \$0.0210 | \$0.0285 |
| Cost Per eKw Hour (w/Fuel) | \$0.0302 | \$0.0453 | \$0.0286 | \$0.0282 | \$0.0382 |

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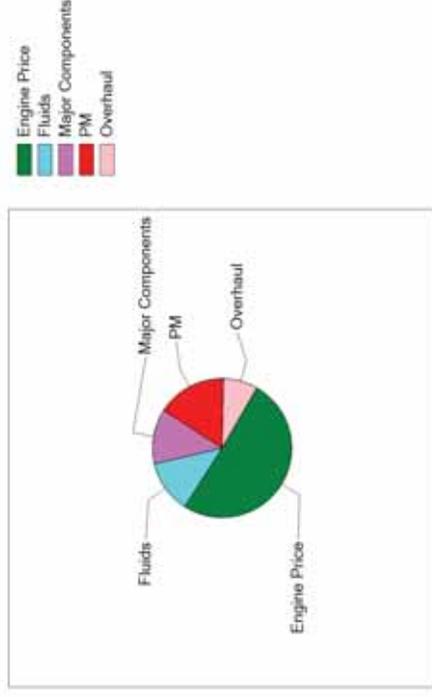
Prices are adjusted for 1.5% general annual inflation



Lifecycle Overview without Fuel



| Cost | Without Fuel | % Without Fuel |
|-------------------------------------|-----------------------|----------------|
| Ownership Costs | | |
| Engine Price | \$509,187.00 | 43.00 % |
| Ancillary/Additional Purchase Items | \$179,967.00 | 15.20 % |
| Operating Costs | | |
| Fluids | \$123,159.30 | 10.40 % |
| PM | \$162,387.43 | 13.71 % |
| Components | \$128,782.94 | 10.88 % |
| Overhauls | \$80,631.40 | 6.81 % |
| Total | \$1,184,115.07 | |

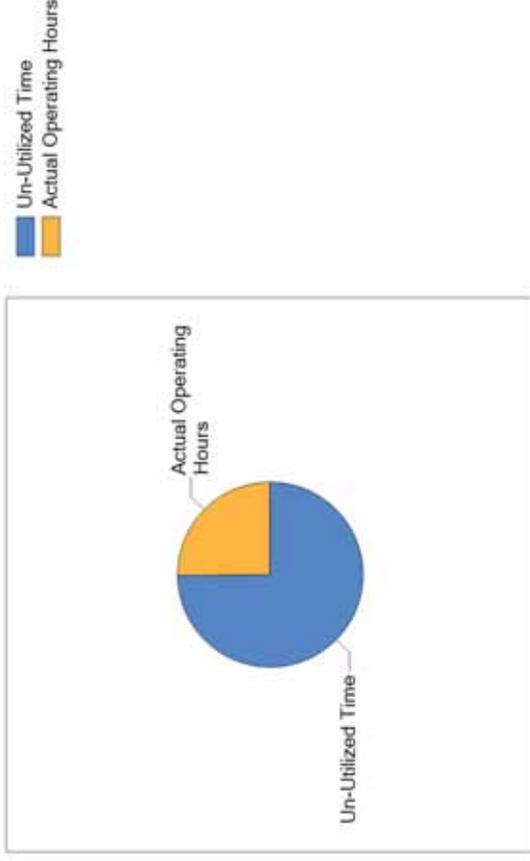


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Prices are adjusted for 1.5% general annual inflation



Product Utilization



Availability Summary

| | |
|--|------------|
| Calendar Hours in Interval | 219,000.00 |
| Maintenance Hours | 1,268.00 |
| Available Time Based On Calendar Hours | 217,732.00 |
| Requested Operating Hours | 54,750.00 |
| Actual Operating Hours | 54,750.00 |
| Un-Utilized Time | 162,982.00 |
| Calendar Availability / Utilization | 99.42 % |
| Operational Availability | 100.00 % |
| Operational Utilization | 25.15 % |

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Prices are adjusted for 1.5% general annual inflation

LOS ALAMOS COUNTY TOWNSHIP 2 WELLS PUMP DRIVE LIFE CYCLE ANALYSIS
 APPENDIX C
 HYBRID 50 YEAR ELECTRICAL COST DATA (OPTION C)

| Year (0) | Young Installation Cost | | Young Maintenance & Operation Cost | | Young Demand Charge-Demand kW * Demand Charge | | Young Energy Cost-Kwhr per year * Kraft Rate | | Young Distribution Action-Kwhr per year * Distribution Rate | | Young Customer Service Charge- \$/kV * % | | Future Value Total |
|----------|-------------------------|----------------------|------------------------------------|--|---|---|--|----------------|---|----------------------------|--|---------------------|--------------------|
| | Motor | Electrical Equipment | Present Total Initial Cost | Future Value FV=PV*(1+r)^N 1.50% | Demand kW | Present Demand Charge per kW \$10.93 | Future Value FV=PV*(1+r)^N 1.50% | Hours per year | Operations Kwhr per year | Present Value Kwhr/BkWh | Future Value FV=PV*(1+r)^N 0.90% | Present Value Total | |
| 0 | \$ 65,000.00 | \$ 20,000.00 | \$ 85,000.00 | \$ 85,000.00 | 663.11 | \$ 7,247.79 | \$ 7,247.79 | 663.11 | 2,190 | \$ 2,190 | \$ 2,190 | \$ 162,358.45 | |
| 1 | \$ - | \$ - | \$ - | \$ 2,337.50 | 663.11 | \$ 7,247.79 | \$ 7,365.51 | 663.11 | 2,190 | \$ 2,190 | \$ 2,215.37 | \$ 164,286.46 | |
| 2 | \$ - | \$ - | \$ - | \$ 4,675.00 | 663.11 | \$ 7,247.79 | \$ 7,534.52 | 663.11 | 2,190 | \$ 2,190 | \$ 2,241.15 | \$ 166,267.92 | |
| 3 | \$ - | \$ - | \$ - | \$ 7,012.50 | 663.11 | \$ 7,247.79 | \$ 7,703.53 | 663.11 | 2,190 | \$ 2,190 | \$ 2,267.13 | \$ 168,298.46 | |
| 4 | \$ - | \$ - | \$ - | \$ 9,350.00 | 663.11 | \$ 7,247.79 | \$ 7,873.54 | 663.11 | 2,190 | \$ 2,190 | \$ 2,293.31 | \$ 170,359.46 | |
| 5 | \$ - | \$ - | \$ - | \$ 11,687.50 | 663.11 | \$ 7,247.79 | \$ 8,044.55 | 663.11 | 2,190 | \$ 2,190 | \$ 2,319.69 | \$ 172,459.46 | |
| 6 | \$ - | \$ - | \$ - | \$ 14,025.00 | 663.11 | \$ 7,247.79 | \$ 8,216.56 | 663.11 | 2,190 | \$ 2,190 | \$ 2,346.27 | \$ 174,598.46 | |
| 7 | \$ - | \$ - | \$ - | \$ 16,362.50 | 663.11 | \$ 7,247.79 | \$ 8,389.57 | 663.11 | 2,190 | \$ 2,190 | \$ 2,372.95 | \$ 176,775.46 | |
| 8 | \$ - | \$ - | \$ - | \$ 18,700.00 | 663.11 | \$ 7,247.79 | \$ 8,563.58 | 663.11 | 2,190 | \$ 2,190 | \$ 2,399.83 | \$ 178,988.46 | |
| 9 | \$ - | \$ - | \$ - | \$ 21,037.50 | 663.11 | \$ 7,247.79 | \$ 8,738.59 | 663.11 | 2,190 | \$ 2,190 | \$ 2,426.91 | \$ 181,236.46 | |
| 10 | \$ - | \$ - | \$ - | \$ 23,375.00 | 663.11 | \$ 7,247.79 | \$ 8,914.60 | 663.11 | 2,190 | \$ 2,190 | \$ 2,454.19 | \$ 183,518.46 | |
| 11 | \$ - | \$ - | \$ - | \$ 25,712.50 | 663.11 | \$ 7,247.79 | \$ 9,091.61 | 663.11 | 2,190 | \$ 2,190 | \$ 2,481.67 | \$ 185,834.46 | |
| 12 | \$ - | \$ - | \$ - | \$ 28,050.00 | 663.11 | \$ 7,247.79 | \$ 9,269.62 | 663.11 | 2,190 | \$ 2,190 | \$ 2,509.35 | \$ 188,184.46 | |
| 13 | \$ - | \$ - | \$ - | \$ 30,387.50 | 663.11 | \$ 7,247.79 | \$ 9,448.63 | 663.11 | 2,190 | \$ 2,190 | \$ 2,537.23 | \$ 190,567.46 | |
| 14 | \$ - | \$ - | \$ - | \$ 32,725.00 | 663.11 | \$ 7,247.79 | \$ 9,628.64 | 663.11 | 2,190 | \$ 2,190 | \$ 2,565.31 | \$ 192,983.46 | |
| 15 | \$ - | \$ - | \$ - | \$ 35,062.50 | 663.11 | \$ 7,247.79 | \$ 9,809.65 | 663.11 | 2,190 | \$ 2,190 | \$ 2,593.59 | \$ 195,432.46 | |
| 16 | \$ - | \$ - | \$ - | \$ 37,400.00 | 663.11 | \$ 7,247.79 | \$ 9,991.66 | 663.11 | 2,190 | \$ 2,190 | \$ 2,622.07 | \$ 197,914.46 | |
| 17 | \$ - | \$ - | \$ - | \$ 39,737.50 | 663.11 | \$ 7,247.79 | \$ 10,174.67 | 663.11 | 2,190 | \$ 2,190 | \$ 2,650.75 | \$ 200,428.46 | |
| 18 | \$ - | \$ - | \$ - | \$ 42,075.00 | 663.11 | \$ 7,247.79 | \$ 10,358.68 | 663.11 | 2,190 | \$ 2,190 | \$ 2,679.73 | \$ 202,974.46 | |
| 19 | \$ - | \$ - | \$ - | \$ 44,412.50 | 663.11 | \$ 7,247.79 | \$ 10,543.69 | 663.11 | 2,190 | \$ 2,190 | \$ 2,708.91 | \$ 205,552.46 | |
| 20 | \$ - | \$ - | \$ - | \$ 46,750.00 | 663.11 | \$ 7,247.79 | \$ 10,729.70 | 663.11 | 2,190 | \$ 2,190 | \$ 2,738.29 | \$ 208,162.46 | |
| 21 | \$ - | \$ - | \$ - | \$ 49,087.50 | 663.11 | \$ 7,247.79 | \$ 10,916.71 | 663.11 | 2,190 | \$ 2,190 | \$ 2,767.87 | \$ 210,803.46 | |
| 22 | \$ - | \$ - | \$ - | \$ 51,425.00 | 663.11 | \$ 7,247.79 | \$ 11,104.72 | 663.11 | 2,190 | \$ 2,190 | \$ 2,797.65 | \$ 213,474.46 | |
| 23 | \$ - | \$ - | \$ - | \$ 53,762.50 | 663.11 | \$ 7,247.79 | \$ 11,293.73 | 663.11 | 2,190 | \$ 2,190 | \$ 2,827.63 | \$ 216,175.46 | |
| 24 | \$ - | \$ - | \$ - | \$ 56,100.00 | 663.11 | \$ 7,247.79 | \$ 11,483.74 | 663.11 | 2,190 | \$ 2,190 | \$ 2,857.81 | \$ 218,906.46 | |
| 25 | \$ - | \$ - | \$ - | \$ 58,437.50 | 663.11 | \$ 7,247.79 | \$ 11,674.75 | 663.11 | 2,190 | \$ 2,190 | \$ 2,888.19 | \$ 221,667.46 | |
| 26 | \$ - | \$ - | \$ - | \$ 60,775.00 | 663.11 | \$ 7,247.79 | \$ 11,866.76 | 663.11 | 2,190 | \$ 2,190 | \$ 2,918.77 | \$ 224,458.46 | |
| 27 | \$ - | \$ - | \$ - | \$ 63,112.50 | 663.11 | \$ 7,247.79 | \$ 12,059.77 | 663.11 | 2,190 | \$ 2,190 | \$ 2,949.55 | \$ 227,279.46 | |
| 28 | \$ - | \$ - | \$ - | \$ 65,450.00 | 663.11 | \$ 7,247.79 | \$ 12,253.78 | 663.11 | 2,190 | \$ 2,190 | \$ 2,980.53 | \$ 230,120.46 | |
| 29 | \$ - | \$ - | \$ - | \$ 67,787.50 | 663.11 | \$ 7,247.79 | \$ 12,448.79 | 663.11 | 2,190 | \$ 2,190 | \$ 3,011.71 | \$ 232,991.46 | |
| 30 | \$ - | \$ - | \$ - | \$ 70,125.00 | 663.11 | \$ 7,247.79 | \$ 12,644.80 | 663.11 | 2,190 | \$ 2,190 | \$ 3,043.09 | \$ 235,892.46 | |
| 31 | \$ - | \$ - | \$ - | \$ 72,462.50 | 663.11 | \$ 7,247.79 | \$ 12,841.81 | 663.11 | 2,190 | \$ 2,190 | \$ 3,074.67 | \$ 238,823.46 | |
| 32 | \$ - | \$ - | \$ - | \$ 74,800.00 | 663.11 | \$ 7,247.79 | \$ 13,039.82 | 663.11 | 2,190 | \$ 2,190 | \$ 3,106.45 | \$ 241,794.46 | |
| 33 | \$ - | \$ - | \$ - | \$ 77,137.50 | 663.11 | \$ 7,247.79 | \$ 13,238.83 | 663.11 | 2,190 | \$ 2,190 | \$ 3,138.43 | \$ 244,795.46 | |
| 34 | \$ - | \$ - | \$ - | \$ 79,475.00 | 663.11 | \$ 7,247.79 | \$ 13,438.84 | 663.11 | 2,190 | \$ 2,190 | \$ 3,170.61 | \$ 247,826.46 | |
| 35 | \$ - | \$ - | \$ - | \$ 81,812.50 | 663.11 | \$ 7,247.79 | \$ 13,639.85 | 663.11 | 2,190 | \$ 2,190 | \$ 3,203.09 | \$ 250,887.46 | |
| 36 | \$ - | \$ - | \$ - | \$ 84,150.00 | 663.11 | \$ 7,247.79 | \$ 13,841.86 | 663.11 | 2,190 | \$ 2,190 | \$ 3,235.87 | \$ 253,978.46 | |
| 37 | \$ - | \$ - | \$ - | \$ 86,487.50 | 663.11 | \$ 7,247.79 | \$ 14,044.87 | 663.11 | 2,190 | \$ 2,190 | \$ 3,268.95 | \$ 257,099.46 | |
| 38 | \$ - | \$ - | \$ - | \$ 88,825.00 | 663.11 | \$ 7,247.79 | \$ 14,248.88 | 663.11 | 2,190 | \$ 2,190 | \$ 3,302.33 | \$ 260,250.46 | |
| 39 | \$ - | \$ - | \$ - | \$ 91,162.50 | 663.11 | \$ 7,247.79 | \$ 14,453.89 | 663.11 | 2,190 | \$ 2,190 | \$ 3,335.91 | \$ 263,431.46 | |
| 40 | \$ - | \$ - | \$ - | \$ 93,500.00 | 663.11 | \$ 7,247.79 | \$ 14,659.90 | 663.11 | 2,190 | \$ 2,190 | \$ 3,369.79 | \$ 266,642.46 | |
| 41 | \$ - | \$ - | \$ - | \$ 95,837.50 | 663.11 | \$ 7,247.79 | \$ 14,866.91 | 663.11 | 2,190 | \$ 2,190 | \$ 3,403.97 | \$ 269,883.46 | |
| 42 | \$ - | \$ - | \$ - | \$ 98,175.00 | 663.11 | \$ 7,247.79 | \$ 15,074.92 | 663.11 | 2,190 | \$ 2,190 | \$ 3,438.45 | \$ 273,154.46 | |
| 43 | \$ - | \$ - | \$ - | \$ 100,512.50 | 663.11 | \$ 7,247.79 | \$ 15,283.93 | 663.11 | 2,190 | \$ 2,190 | \$ 3,473.23 | \$ 276,455.46 | |
| 44 | \$ - | \$ - | \$ - | \$ 102,850.00 | 663.11 | \$ 7,247.79 | \$ 15,493.94 | 663.11 | 2,190 | \$ 2,190 | \$ 3,508.31 | \$ 279,786.46 | |
| 45 | \$ - | \$ - | \$ - | \$ 105,187.50 | 663.11 | \$ 7,247.79 | \$ 15,704.95 | 663.11 | 2,190 | \$ 2,190 | \$ 3,543.69 | \$ 283,147.46 | |
| 46 | \$ - | \$ - | \$ - | \$ 107,525.00 | 663.11 | \$ 7,247.79 | \$ 15,916.96 | 663.11 | 2,190 | \$ 2,190 | \$ 3,579.37 | \$ 286,538.46 | |
| 47 | \$ - | \$ - | \$ - | \$ 109,862.50 | 663.11 | \$ 7,247.79 | \$ 16,129.97 | 663.11 | 2,190 | \$ 2,190 | \$ 3,615.35 | \$ 289,959.46 | |
| 48 | \$ - | \$ - | \$ - | \$ 112,200.00 | 663.11 | \$ 7,247.79 | \$ 16,343.98 | 663.11 | 2,190 | \$ 2,190 | \$ 3,651.63 | \$ 293,400.46 | |
| 49 | \$ - | \$ - | \$ - | \$ 114,537.50 | 663.11 | \$ 7,247.79 | \$ 16,558.99 | 663.11 | 2,190 | \$ 2,190 | \$ 3,688.21 | \$ 296,871.46 | |
| 50 | \$ - | \$ - | \$ - | \$ 116,875.00 | 663.11 | \$ 7,247.79 | \$ 16,774.99 | 663.11 | 2,190 | \$ 2,190 | \$ 3,725.19 | \$ 300,372.46 | |

\$ 85,000.00 **\$ 181,707.07** **\$ 534,037.83** **\$ 3,438,006.58** **\$ 1,316,171.57** **\$ 12,221.19** **\$ 5,567,144.25**

LOS ALAMOS COUNTY
OTOWI 2 WELL PUMP DRIVE
LIFE CYCLE ANALYSIS

APPENDIX F

PARAJITO 4 WELL
RUNTIME DATA

**WILSON
& COMPANY**

discipline | intensity | collaboration | shared ownership | solutions

| LALVS2\$ ANT pW4-RUN-TIME | | | totalization | program | | | |
|---------------------------|--------------|----------------|--------------|-----------|-----------|---------|-------|
| ANT | - | analog | | | 20-Feb-15 | 0:00:00 | 0 |
| ANT | 1 points | found | | | 21-Feb-15 | 0:00:00 | 0 |
| Acronym : | | | | | 22-Feb-15 | 0:00:00 | 0 |
| Reporting | on | | 1 points | | 23-Feb-15 | 0:00:00 | 0 |
| Enter Start | Date | [30-JAN-2020]: | 1-Jan-15 | | 24-Feb-15 | 0:00:00 | 0 |
| Enter Start | Time | [| 0:00:00] | : | 25-Feb-15 | 0:00:00 | 0 |
| Enter Stop | Date | [| 1-JAN-2015]: | 31-Dec-19 | 26-Feb-15 | 0:00:00 | 0 |
| Enter Stop | Time | [23:59:59] | : | | 27-Feb-15 | 0:00:00 | 0 |
| Report increment | (xx[M/H/D]): | 1d | | | 28-Feb-15 | 0:00:00 | 0 |
| Searching history | files | | | | 1-Mar-15 | 0:00:00 | 0 |
| | | | | | 2-Mar-15 | 0:00:00 | 0 |
| | | | | | 3-Mar-15 | 0:00:00 | 0 |
| | | | | | 4-Mar-15 | 0:00:00 | 0 |
| | | | | | 5-Mar-15 | 0:00:00 | 0 |
| | | | | | 6-Mar-15 | 0:00:00 | 0 |
| | | | | | 7-Mar-15 | 0:00:00 | 0 |
| | | | | | 8-Mar-15 | 0:00:00 | 0 |
| | | | | | 9-Mar-15 | 0:00:00 | 0 |
| | | | | | 10-Mar-15 | 0:00:00 | 0 |
| | | | | | 11-Mar-15 | 0:00:00 | 0 |
| | | | | | 12-Mar-15 | 0:00:00 | 0 |
| | | | | | 13-Mar-15 | 0:00:00 | 0 |
| | | | | | 14-Mar-15 | 0:00:00 | 0 |
| | | | | | 15-Mar-15 | 0:00:00 | 0 |
| | | | | | 16-Mar-15 | 0:00:00 | 0 |
| | | | | | 17-Mar-15 | 0:00:00 | 0 |
| | | | | | 18-Mar-15 | 0:00:00 | 0 |
| | | | | | 19-Mar-15 | 0:00:00 | 0 |
| | | | | | 20-Mar-15 | 0:00:00 | 0 |
| | | | | | 21-Mar-15 | 0:00:00 | 0 |
| | | | | | 22-Mar-15 | 0:00:00 | 0 |
| | | | | | 23-Mar-15 | 0:00:00 | 0 |
| | | | | | 24-Mar-15 | 0:00:00 | 0 |
| | | | | | 25-Mar-15 | 0:00:00 | 0 |
| | | | | | 26-Mar-15 | 0:00:00 | 0 |
| | | | | | 27-Mar-15 | 0:00:00 | 0 |
| | | | | | 28-Mar-15 | 0:00:00 | 0 |
| | | | | | 29-Mar-15 | 0:00:00 | 0 |
| | | | | | 30-Mar-15 | 0:00:00 | 0 |
| | | | | | 31-Mar-15 | 0:00:00 | 0 |
| | | | | | 1-Apr-15 | 0:00:00 | 0 |
| | | | | | 2-Apr-15 | 0:00:00 | 0 |
| | | | | | 3-Apr-15 | 0:00:00 | 0 |
| | | | | | 4-Apr-15 | 0:00:00 | 0 |
| | | | | | 5-Apr-15 | 0:00:00 | 0 |
| | | | | | 6-Apr-15 | 0:00:00 | 0 |
| | | | | | 7-Apr-15 | 0:00:00 | 0 |
| | | | | | 8-Apr-15 | 0:00:00 | 0 |
| | | | | | 9-Apr-15 | 0:00:00 | 0 |
| | | | | | 10-Apr-15 | 0:00:00 | 0 |
| | | | | | 11-Apr-15 | 0:00:00 | 0 |
| | | | | | 12-Apr-15 | 0:00:00 | 0 |
| | | | | | 13-Apr-15 | 0:00:00 | 0 |
| | | | | | 14-Apr-15 | 0:00:00 | 0 |
| | | | | | 15-Apr-15 | 0:00:00 | 0 |
| | | | | | 16-Apr-15 | 0:00:00 | 0 |
| | | | | | 17-Apr-15 | 0:00:00 | 0.75 |
| | | | | | 18-Apr-15 | 0:00:00 | 1.42 |
| | | | | | 19-Apr-15 | 0:00:00 | 0 |
| | | | | | 20-Apr-15 | 0:00:00 | 0 |
| | | | | | 21-Apr-15 | 0:00:00 | 0 |
| | | | | | 22-Apr-15 | 0:00:00 | 14.45 |
| | | | | | 23-Apr-15 | 0:00:00 | 23.98 |
| | | | | | 24-Apr-15 | 0:00:00 | 23.98 |
| | | | | | 25-Apr-15 | 0:00:00 | 23.98 |
| | | | | | 26-Apr-15 | 0:00:00 | 23.98 |
| | | | | | 27-Apr-15 | 0:00:00 | 23.98 |
| | | | | | 28-Apr-15 | 0:00:00 | 23.98 |

| | | | | | |
|-----------|---------|-------|-----------|---------|-------|
| 29-Apr-15 | 0:00:00 | 23.98 | 6-Jul-15 | 0:00:00 | 23.98 |
| 30-Apr-15 | 0:00:00 | 23.98 | 7-Jul-15 | 0:00:00 | 23.98 |
| 1-May-15 | 0:00:00 | 23.98 | 8-Jul-15 | 0:00:00 | 23.98 |
| 2-May-15 | 0:00:00 | 23.98 | 9-Jul-15 | 0:00:00 | 23.98 |
| 3-May-15 | 0:00:00 | 23.98 | 10-Jul-15 | 0:00:00 | 23.98 |
| 4-May-15 | 0:00:00 | 23.98 | 11-Jul-15 | 0:00:00 | 12.36 |
| 5-May-15 | 0:00:00 | 0 | 12-Jul-15 | 0:00:00 | 23.98 |
| 6-May-15 | 0:00:00 | 23.98 | 13-Jul-15 | 0:00:00 | 23.98 |
| 7-May-15 | 0:00:00 | 23.98 | 14-Jul-15 | 0:00:00 | 21.06 |
| 8-May-15 | 0:00:00 | 23.98 | 15-Jul-15 | 0:00:00 | 23.98 |
| 9-May-15 | 0:00:00 | 23.98 | 16-Jul-15 | 0:00:00 | 23.98 |
| 10-May-15 | 0:00:00 | 23.98 | 17-Jul-15 | 0:00:00 | 23.98 |
| 11-May-15 | 0:00:00 | 23.98 | 18-Jul-15 | 0:00:00 | 23.98 |
| 12-May-15 | 0:00:00 | 22.83 | 19-Jul-15 | 0:00:00 | 23.98 |
| 13-May-15 | 0:00:00 | 23.98 | 20-Jul-15 | 0:00:00 | 23.98 |
| 14-May-15 | 0:00:00 | 23.98 | 21-Jul-15 | 0:00:00 | 23.98 |
| 15-May-15 | 0:00:00 | 23.98 | 22-Jul-15 | 0:00:00 | 23.98 |
| 16-May-15 | 0:00:00 | 23.98 | 23-Jul-15 | 0:00:00 | 23.98 |
| 17-May-15 | 0:00:00 | 23.98 | 24-Jul-15 | 0:00:00 | 23.98 |
| 18-May-15 | 0:00:00 | 23.98 | 25-Jul-15 | 0:00:00 | 23.98 |
| 19-May-15 | 0:00:00 | 23.98 | 26-Jul-15 | 0:00:00 | 23.98 |
| 20-May-15 | 0:00:00 | 23.98 | 27-Jul-15 | 0:00:00 | 12.36 |
| 21-May-15 | 0:00:00 | 23.98 | 28-Jul-15 | 0:00:00 | 23.98 |
| 22-May-15 | 0:00:00 | 23.98 | 29-Jul-15 | 0:00:00 | 23.98 |
| 23-May-15 | 0:00:00 | 23.98 | 30-Jul-15 | 0:00:00 | 23.98 |
| 24-May-15 | 0:00:00 | 23.98 | 31-Jul-15 | 0:00:00 | 23.98 |
| 25-May-15 | 0:00:00 | 23.98 | 1-Aug-15 | 0:00:00 | 23.98 |
| 26-May-15 | 0:00:00 | 23.98 | 2-Aug-15 | 0:00:00 | 23.98 |
| 27-May-15 | 0:00:00 | 23.98 | 3-Aug-15 | 0:00:00 | 23.98 |
| 28-May-15 | 0:00:00 | 23.98 | 4-Aug-15 | 0:00:00 | 23.98 |
| 29-May-15 | 0:00:00 | 23.98 | 5-Aug-15 | 0:00:00 | 23.98 |
| 30-May-15 | 0:00:00 | 23.98 | 6-Aug-15 | 0:00:00 | 23.98 |
| 31-May-15 | 0:00:00 | 23.98 | 7-Aug-15 | 0:00:00 | 23.98 |
| 1-Jun-15 | 0:00:00 | 23.98 | 8-Aug-15 | 0:00:00 | 23.98 |
| 2-Jun-15 | 0:00:00 | 20.66 | 9-Aug-15 | 0:00:00 | 23.98 |
| 3-Jun-15 | 0:00:00 | 23.98 | 10-Aug-15 | 0:00:00 | 23.98 |
| 4-Jun-15 | 0:00:00 | 23.98 | 11-Aug-15 | 0:00:00 | 8.45 |
| 5-Jun-15 | 0:00:00 | 23.98 | 12-Aug-15 | 0:00:00 | 0 |
| 6-Jun-15 | 0:00:00 | 23.98 | 13-Aug-15 | 0:00:00 | 0.06 |
| 7-Jun-15 | 0:00:00 | 23.98 | 14-Aug-15 | 0:00:00 | 0 |
| 8-Jun-15 | 0:00:00 | 23.98 | 15-Aug-15 | 0:00:00 | 0 |
| 9-Jun-15 | 0:00:00 | 23.98 | 16-Aug-15 | 0:00:00 | 0 |
| 10-Jun-15 | 0:00:00 | 23.98 | 17-Aug-15 | 0:00:00 | 0 |
| 11-Jun-15 | 0:00:00 | 23.98 | 18-Aug-15 | 0:00:00 | 0 |
| 12-Jun-15 | 0:00:00 | 23.98 | 19-Aug-15 | 0:00:00 | 0 |
| 13-Jun-15 | 0:00:00 | 0 | 20-Aug-15 | 0:00:00 | 0 |
| 14-Jun-15 | 0:00:00 | 23.98 | 21-Aug-15 | 0:00:00 | 10.39 |
| 15-Jun-15 | 0:00:00 | 23.98 | 22-Aug-15 | 0:00:00 | 23.98 |
| 16-Jun-15 | 0:00:00 | 9.77 | 23-Aug-15 | 0:00:00 | 23.98 |
| 17-Jun-15 | 0:00:00 | 14.92 | 24-Aug-15 | 0:00:00 | 23.98 |
| 18-Jun-15 | 0:00:00 | 23.97 | 25-Aug-15 | 0:00:00 | 23.98 |
| 19-Jun-15 | 0:00:00 | 23.78 | 26-Aug-15 | 0:00:00 | 23.98 |
| 20-Jun-15 | 0:00:00 | 23.83 | 27-Aug-15 | 0:00:00 | 23.98 |
| 21-Jun-15 | 0:00:00 | 23.98 | 28-Aug-15 | 0:00:00 | 23.98 |
| 22-Jun-15 | 0:00:00 | 23.98 | 29-Aug-15 | 0:00:00 | 23.98 |
| 23-Jun-15 | 0:00:00 | 23.98 | 30-Aug-15 | 0:00:00 | 23.98 |
| 24-Jun-15 | 0:00:00 | 23.98 | 31-Aug-15 | 0:00:00 | 23.98 |
| 25-Jun-15 | 0:00:00 | 23.98 | 1-Sep-15 | 0:00:00 | 23.98 |
| 26-Jun-15 | 0:00:00 | 23.98 | 2-Sep-15 | 0:00:00 | 23.98 |
| 27-Jun-15 | 0:00:00 | 23.98 | 3-Sep-15 | 0:00:00 | 23.98 |
| 28-Jun-15 | 0:00:00 | 23.98 | 4-Sep-15 | 0:00:00 | 23.98 |
| 29-Jun-15 | 0:00:00 | 23.98 | 5-Sep-15 | 0:00:00 | 23.98 |
| 30-Jun-15 | 0:00:00 | 23.98 | 6-Sep-15 | 0:00:00 | 23.98 |
| 1-Jul-15 | 0:00:00 | 23.98 | 7-Sep-15 | 0:00:00 | 23.98 |
| 2-Jul-15 | 0:00:00 | 23.98 | 8-Sep-15 | 0:00:00 | 23.98 |
| 3-Jul-15 | 0:00:00 | 23.98 | 9-Sep-15 | 0:00:00 | 23.98 |
| 4-Jul-15 | 0:00:00 | 23.98 | 10-Sep-15 | 0:00:00 | 23.98 |
| 5-Jul-15 | 0:00:00 | 23.98 | 11-Sep-15 | 0:00:00 | 23.98 |

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|-----------|---------|-------|-----------|---------|---|
| 12-Sep-15 | 0:00:00 | 23.98 | 19-Nov-15 | 0:00:00 | 0 |
| 13-Sep-15 | 0:00:00 | 23.98 | 20-Nov-15 | 0:00:00 | 0 |
| 14-Sep-15 | 0:00:00 | 23.98 | 21-Nov-15 | 0:00:00 | 0 |
| 15-Sep-15 | 0:00:00 | 23.98 | 22-Nov-15 | 0:00:00 | 0 |
| 16-Sep-15 | 0:00:00 | 23.98 | 23-Nov-15 | 0:00:00 | 0 |
| 17-Sep-15 | 0:00:00 | 23.98 | 24-Nov-15 | 0:00:00 | 0 |
| 18-Sep-15 | 0:00:00 | 23.98 | 25-Nov-15 | 0:00:00 | 0 |
| 19-Sep-15 | 0:00:00 | 23.98 | 26-Nov-15 | 0:00:00 | 0 |
| 20-Sep-15 | 0:00:00 | 23.98 | 27-Nov-15 | 0:00:00 | 0 |
| 21-Sep-15 | 0:00:00 | 0 | 28-Nov-15 | 0:00:00 | 0 |
| 22-Sep-15 | 0:00:00 | 23.98 | 29-Nov-15 | 0:00:00 | 0 |
| 23-Sep-15 | 0:00:00 | 23.98 | 30-Nov-15 | 0:00:00 | 0 |
| 24-Sep-15 | 0:00:00 | 23.98 | 1-Dec-15 | 0:00:00 | 0 |
| 25-Sep-15 | 0:00:00 | 0 | 2-Dec-15 | 0:00:00 | 0 |
| 26-Sep-15 | 0:00:00 | 23.98 | 3-Dec-15 | 0:00:00 | 0 |
| 27-Sep-15 | 0:00:00 | 23.98 | 4-Dec-15 | 0:00:00 | 0 |
| 28-Sep-15 | 0:00:00 | 23.98 | 5-Dec-15 | 0:00:00 | 0 |
| 29-Sep-15 | 0:00:00 | 23.98 | 6-Dec-15 | 0:00:00 | 0 |
| 30-Sep-15 | 0:00:00 | 22.05 | 7-Dec-15 | 0:00:00 | 0 |
| 1-Oct-15 | 0:00:00 | 23.98 | 8-Dec-15 | 0:00:00 | 0 |
| 2-Oct-15 | 0:00:00 | 23.98 | 9-Dec-15 | 0:00:00 | 0 |
| 3-Oct-15 | 0:00:00 | 23.19 | 10-Dec-15 | 0:00:00 | 0 |
| 4-Oct-15 | 0:00:00 | 23.98 | 11-Dec-15 | 0:00:00 | 0 |
| 5-Oct-15 | 0:00:00 | 23.98 | 12-Dec-15 | 0:00:00 | 0 |
| 6-Oct-15 | 0:00:00 | 23.98 | 13-Dec-15 | 0:00:00 | 0 |
| 7-Oct-15 | 0:00:00 | 23.98 | 14-Dec-15 | 0:00:00 | 0 |
| 8-Oct-15 | 0:00:00 | 23.98 | 15-Dec-15 | 0:00:00 | 0 |
| 9-Oct-15 | 0:00:00 | 23.98 | 16-Dec-15 | 0:00:00 | 0 |
| 10-Oct-15 | 0:00:00 | 13.3 | 17-Dec-15 | 0:00:00 | 0 |
| 11-Oct-15 | 0:00:00 | 0 | 18-Dec-15 | 0:00:00 | 0 |
| 12-Oct-15 | 0:00:00 | 0 | 19-Dec-15 | 0:00:00 | 0 |
| 13-Oct-15 | 0:00:00 | 0 | 20-Dec-15 | 0:00:00 | 0 |
| 14-Oct-15 | 0:00:00 | 0 | 21-Dec-15 | 0:00:00 | 0 |
| 15-Oct-15 | 0:00:00 | 0 | 22-Dec-15 | 0:00:00 | 0 |
| 16-Oct-15 | 0:00:00 | 0 | 23-Dec-15 | 0:00:00 | 0 |
| 17-Oct-15 | 0:00:00 | 0 | 24-Dec-15 | 0:00:00 | 0 |
| 18-Oct-15 | 0:00:00 | 0 | 25-Dec-15 | 0:00:00 | 0 |
| 19-Oct-15 | 0:00:00 | 0 | 26-Dec-15 | 0:00:00 | 0 |
| 20-Oct-15 | 0:00:00 | 0 | 27-Dec-15 | 0:00:00 | 0 |
| 21-Oct-15 | 0:00:00 | 0 | 28-Dec-15 | 0:00:00 | 0 |
| 22-Oct-15 | 0:00:00 | 0 | 29-Dec-15 | 0:00:00 | 0 |
| 23-Oct-15 | 0:00:00 | 0 | 30-Dec-15 | 0:00:00 | 0 |
| 24-Oct-15 | 0:00:00 | 0 | 31-Dec-15 | 0:00:00 | 0 |
| 25-Oct-15 | 0:00:00 | 0 | 1-Jan-16 | 0:00:00 | 0 |
| 26-Oct-15 | 0:00:00 | 0 | 2-Jan-16 | 0:00:00 | 0 |
| 27-Oct-15 | 0:00:00 | 0 | 3-Jan-16 | 0:00:00 | 0 |
| 28-Oct-15 | 0:00:00 | 0 | 4-Jan-16 | 0:00:00 | 0 |
| 29-Oct-15 | 0:00:00 | 0 | 5-Jan-16 | 0:00:00 | 0 |
| 30-Oct-15 | 0:00:00 | 0 | 6-Jan-16 | 0:00:00 | 0 |
| 31-Oct-15 | 0:00:00 | 0 | 7-Jan-16 | 0:00:00 | 0 |
| 1-Nov-15 | 0:00:00 | 0 | 8-Jan-16 | 0:00:00 | 0 |
| 2-Nov-15 | 0:00:00 | 0 | 9-Jan-16 | 0:00:00 | 0 |
| 3-Nov-15 | 0:00:00 | 0 | 10-Jan-16 | 0:00:00 | 0 |
| 4-Nov-15 | 0:00:00 | 0 | 11-Jan-16 | 0:00:00 | 0 |
| 5-Nov-15 | 0:00:00 | 0 | 12-Jan-16 | 0:00:00 | 0 |
| 6-Nov-15 | 0:00:00 | 0 | 13-Jan-16 | 0:00:00 | 0 |
| 7-Nov-15 | 0:00:00 | 0 | 14-Jan-16 | 0:00:00 | 0 |
| 8-Nov-15 | 0:00:00 | 0 | 15-Jan-16 | 0:00:00 | 0 |
| 9-Nov-15 | 0:00:00 | 0 | 16-Jan-16 | 0:00:00 | 0 |
| 10-Nov-15 | 0:00:00 | 0 | 17-Jan-16 | 0:00:00 | 0 |
| 11-Nov-15 | 0:00:00 | 0 | 18-Jan-16 | 0:00:00 | 0 |
| 12-Nov-15 | 0:00:00 | 0 | 19-Jan-16 | 0:00:00 | 0 |
| 13-Nov-15 | 0:00:00 | 0 | 20-Jan-16 | 0:00:00 | 0 |
| 14-Nov-15 | 0:00:00 | 0 | 21-Jan-16 | 0:00:00 | 0 |
| 15-Nov-15 | 0:00:00 | 0 | 22-Jan-16 | 0:00:00 | 0 |
| 16-Nov-15 | 0:00:00 | 0 | 23-Jan-16 | 0:00:00 | 0 |
| 17-Nov-15 | 0:00:00 | 0 | 24-Jan-16 | 0:00:00 | 0 |
| 18-Nov-15 | 0:00:00 | 0 | 25-Jan-16 | 0:00:00 | 0 |

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|-----------|---------|---|-----------|---------|-------|
| 26-Jan-16 | 0:00:00 | 0 | 3-Apr-16 | 0:00:00 | 0 |
| 27-Jan-16 | 0:00:00 | 0 | 4-Apr-16 | 0:00:00 | 0 |
| 28-Jan-16 | 0:00:00 | 0 | 5-Apr-16 | 0:00:00 | 0 |
| 29-Jan-16 | 0:00:00 | 0 | 6-Apr-16 | 0:00:00 | 0 |
| 30-Jan-16 | 0:00:00 | 0 | 7-Apr-16 | 0:00:00 | 0 |
| 31-Jan-16 | 0:00:00 | 0 | 8-Apr-16 | 0:00:00 | 0 |
| 1-Feb-16 | 0:00:00 | 0 | 9-Apr-16 | 0:00:00 | 0 |
| 2-Feb-16 | 0:00:00 | 0 | 10-Apr-16 | 0:00:00 | 0 |
| 3-Feb-16 | 0:00:00 | 0 | 11-Apr-16 | 0:00:00 | 0 |
| 4-Feb-16 | 0:00:00 | 0 | 12-Apr-16 | 0:00:00 | 0 |
| 5-Feb-16 | 0:00:00 | 0 | 13-Apr-16 | 0:00:00 | 0 |
| 6-Feb-16 | 0:00:00 | 0 | 14-Apr-16 | 0:00:00 | 0 |
| 7-Feb-16 | 0:00:00 | 0 | 15-Apr-16 | 0:00:00 | 0 |
| 8-Feb-16 | 0:00:00 | 0 | 16-Apr-16 | 0:00:00 | 0 |
| 9-Feb-16 | 0:00:00 | 0 | 17-Apr-16 | 0:00:00 | 0 |
| 10-Feb-16 | 0:00:00 | 0 | 18-Apr-16 | 0:00:00 | 0 |
| 11-Feb-16 | 0:00:00 | 0 | 19-Apr-16 | 0:00:00 | 0 |
| 12-Feb-16 | 0:00:00 | 0 | 20-Apr-16 | 0:00:00 | 0 |
| 13-Feb-16 | 0:00:00 | 0 | 21-Apr-16 | 0:00:00 | 0 |
| 14-Feb-16 | 0:00:00 | 0 | 22-Apr-16 | 0:00:00 | 0 |
| 15-Feb-16 | 0:00:00 | 0 | 23-Apr-16 | 0:00:00 | 0 |
| 16-Feb-16 | 0:00:00 | 0 | 24-Apr-16 | 0:00:00 | 0 |
| 17-Feb-16 | 0:00:00 | 0 | 25-Apr-16 | 0:00:00 | 0 |
| 18-Feb-16 | 0:00:00 | 0 | 26-Apr-16 | 0:00:00 | 0 |
| 19-Feb-16 | 0:00:00 | 0 | 27-Apr-16 | 0:00:00 | 0 |
| 20-Feb-16 | 0:00:00 | 0 | 28-Apr-16 | 0:00:00 | 0 |
| 21-Feb-16 | 0:00:00 | 0 | 29-Apr-16 | 0:00:00 | 0 |
| 22-Feb-16 | 0:00:00 | 0 | 30-Apr-16 | 0:00:00 | 0 |
| 23-Feb-16 | 0:00:00 | 0 | 1-May-16 | 0:00:00 | 0 |
| 24-Feb-16 | 0:00:00 | 0 | 2-May-16 | 0:00:00 | 0 |
| 25-Feb-16 | 0:00:00 | 0 | 3-May-16 | 0:00:00 | 0 |
| 26-Feb-16 | 0:00:00 | 0 | 4-May-16 | 0:00:00 | 0 |
| 27-Feb-16 | 0:00:00 | 0 | 5-May-16 | 0:00:00 | 0 |
| 28-Feb-16 | 0:00:00 | 0 | 6-May-16 | 0:00:00 | 0 |
| 29-Feb-16 | 0:00:00 | 0 | 7-May-16 | 0:00:00 | 0 |
| 1-Mar-16 | 0:00:00 | 0 | 8-May-16 | 0:00:00 | 0 |
| 2-Mar-16 | 0:00:00 | 0 | 9-May-16 | 0:00:00 | 0 |
| 3-Mar-16 | 0:00:00 | 0 | 10-May-16 | 0:00:00 | 0 |
| 4-Mar-16 | 0:00:00 | 0 | 11-May-16 | 0:00:00 | 0 |
| 5-Mar-16 | 0:00:00 | 0 | 12-May-16 | 0:00:00 | 0 |
| 6-Mar-16 | 0:00:00 | 0 | 13-May-16 | 0:00:00 | 0 |
| 7-Mar-16 | 0:00:00 | 0 | 14-May-16 | 0:00:00 | 0 |
| 8-Mar-16 | 0:00:00 | 0 | 15-May-16 | 0:00:00 | 0 |
| 9-Mar-16 | 0:00:00 | 0 | 16-May-16 | 0:00:00 | 0 |
| 10-Mar-16 | 0:00:00 | 0 | 17-May-16 | 0:00:00 | 14.22 |
| 11-Mar-16 | 0:00:00 | 0 | 18-May-16 | 0:00:00 | 23.98 |
| 12-Mar-16 | 0:00:00 | 0 | 19-May-16 | 0:00:00 | 23.98 |
| 13-Mar-16 | 0:00:00 | 0 | 20-May-16 | 0:00:00 | 23.98 |
| 14-Mar-16 | 0:00:00 | 0 | 21-May-16 | 0:00:00 | 23.98 |
| 15-Mar-16 | 0:00:00 | 0 | 22-May-16 | 0:00:00 | 23.98 |
| 16-Mar-16 | 0:00:00 | 0 | 23-May-16 | 0:00:00 | 23.98 |
| 17-Mar-16 | 0:00:00 | 0 | 24-May-16 | 0:00:00 | 23.98 |
| 18-Mar-16 | 0:00:00 | 0 | 25-May-16 | 0:00:00 | 23.98 |
| 19-Mar-16 | 0:00:00 | 0 | 26-May-16 | 0:00:00 | 23.98 |
| 20-Mar-16 | 0:00:00 | 0 | 27-May-16 | 0:00:00 | 23.98 |
| 21-Mar-16 | 0:00:00 | 0 | 28-May-16 | 0:00:00 | 23.98 |
| 22-Mar-16 | 0:00:00 | 0 | 29-May-16 | 0:00:00 | 23.98 |
| 23-Mar-16 | 0:00:00 | 0 | 30-May-16 | 0:00:00 | 23.98 |
| 24-Mar-16 | 0:00:00 | 0 | 31-May-16 | 0:00:00 | 23.98 |
| 25-Mar-16 | 0:00:00 | 0 | 1-Jun-16 | 0:00:00 | 0 |
| 26-Mar-16 | 0:00:00 | 0 | 2-Jun-16 | 0:00:00 | 23.98 |
| 27-Mar-16 | 0:00:00 | 0 | 3-Jun-16 | 0:00:00 | 23.98 |
| 28-Mar-16 | 0:00:00 | 0 | 4-Jun-16 | 0:00:00 | 23.98 |
| 29-Mar-16 | 0:00:00 | 0 | 5-Jun-16 | 0:00:00 | 23.98 |
| 30-Mar-16 | 0:00:00 | 0 | 6-Jun-16 | 0:00:00 | 23.98 |
| 31-Mar-16 | 0:00:00 | 0 | 7-Jun-16 | 0:00:00 | 23.98 |
| 1-Apr-16 | 0:00:00 | 0 | 8-Jun-16 | 0:00:00 | 23.98 |
| 2-Apr-16 | 0:00:00 | 0 | 9-Jun-16 | 0:00:00 | 23.98 |

| | | | | | |
|-----------|---------|-------|-----------|---------|---|
| 10-Jun-16 | 0:00:00 | 23.98 | 17-Aug-16 | 0:00:00 | 0 |
| 11-Jun-16 | 0:00:00 | 23.98 | 18-Aug-16 | 0:00:00 | 0 |
| 12-Jun-16 | 0:00:00 | 23.98 | 19-Aug-16 | 0:00:00 | 0 |
| 13-Jun-16 | 0:00:00 | 23.98 | 20-Aug-16 | 0:00:00 | 0 |
| 14-Jun-16 | 0:00:00 | 23.98 | 21-Aug-16 | 0:00:00 | 0 |
| 15-Jun-16 | 0:00:00 | 0 | 22-Aug-16 | 0:00:00 | 0 |
| 16-Jun-16 | 0:00:00 | 21.14 | 23-Aug-16 | 0:00:00 | 0 |
| 17-Jun-16 | 0:00:00 | 23.98 | 24-Aug-16 | 0:00:00 | 0 |
| 18-Jun-16 | 0:00:00 | 23.98 | 25-Aug-16 | 0:00:00 | 0 |
| 19-Jun-16 | 0:00:00 | 23.98 | 26-Aug-16 | 0:00:00 | 0 |
| 20-Jun-16 | 0:00:00 | 23.98 | 27-Aug-16 | 0:00:00 | 0 |
| 21-Jun-16 | 0:00:00 | 23.98 | 28-Aug-16 | 0:00:00 | 0 |
| 22-Jun-16 | 0:00:00 | 21.39 | 29-Aug-16 | 0:00:00 | 0 |
| 23-Jun-16 | 0:00:00 | 14.34 | 30-Aug-16 | 0:00:00 | 0 |
| 24-Jun-16 | 0:00:00 | 23.98 | 31-Aug-16 | 0:00:00 | 0 |
| 25-Jun-16 | 0:00:00 | 21.39 | 1-Sep-16 | 0:00:00 | 0 |
| 26-Jun-16 | 0:00:00 | 21.39 | 2-Sep-16 | 0:00:00 | 0 |
| 27-Jun-16 | 0:00:00 | 21.39 | 3-Sep-16 | 0:00:00 | 0 |
| 28-Jun-16 | 0:00:00 | 23.98 | 4-Sep-16 | 0:00:00 | 0 |
| 29-Jun-16 | 0:00:00 | 23.98 | 5-Sep-16 | 0:00:00 | 0 |
| 30-Jun-16 | 0:00:00 | 23.98 | 6-Sep-16 | 0:00:00 | 0 |
| 1-Jul-16 | 0:00:00 | 21.39 | 7-Sep-16 | 0:00:00 | 0 |
| 2-Jul-16 | 0:00:00 | 23.98 | 8-Sep-16 | 0:00:00 | 0 |
| 3-Jul-16 | 0:00:00 | 23.98 | 9-Sep-16 | 0:00:00 | 0 |
| 4-Jul-16 | 0:00:00 | 23.98 | 10-Sep-16 | 0:00:00 | 0 |
| 5-Jul-16 | 0:00:00 | 23.98 | 11-Sep-16 | 0:00:00 | 0 |
| 6-Jul-16 | 0:00:00 | 23.98 | 12-Sep-16 | 0:00:00 | 0 |
| 7-Jul-16 | 0:00:00 | 23.98 | 13-Sep-16 | 0:00:00 | 0 |
| 8-Jul-16 | 0:00:00 | 21.39 | 14-Sep-16 | 0:00:00 | 0 |
| 9-Jul-16 | 0:00:00 | 23.98 | 15-Sep-16 | 0:00:00 | 0 |
| 10-Jul-16 | 0:00:00 | 21.39 | 16-Sep-16 | 0:00:00 | 0 |
| 11-Jul-16 | 0:00:00 | 23.98 | 17-Sep-16 | 0:00:00 | 0 |
| 12-Jul-16 | 0:00:00 | 14.69 | 18-Sep-16 | 0:00:00 | 0 |
| 13-Jul-16 | 0:00:00 | 4.59 | 19-Sep-16 | 0:00:00 | 0 |
| 14-Jul-16 | 0:00:00 | 0 | 20-Sep-16 | 0:00:00 | 0 |
| 15-Jul-16 | 0:00:00 | 0 | 21-Sep-16 | 0:00:00 | 0 |
| 16-Jul-16 | 0:00:00 | 0 | 22-Sep-16 | 0:00:00 | 0 |
| 17-Jul-16 | 0:00:00 | 0 | 23-Sep-16 | 0:00:00 | 0 |
| 18-Jul-16 | 0:00:00 | 0 | 24-Sep-16 | 0:00:00 | 0 |
| 19-Jul-16 | 0:00:00 | 0 | 25-Sep-16 | 0:00:00 | 0 |
| 20-Jul-16 | 0:00:00 | 0 | 26-Sep-16 | 0:00:00 | 0 |
| 21-Jul-16 | 0:00:00 | 0 | 27-Sep-16 | 0:00:00 | 0 |
| 22-Jul-16 | 0:00:00 | 0 | 28-Sep-16 | 0:00:00 | 0 |
| 23-Jul-16 | 0:00:00 | 0 | 29-Sep-16 | 0:00:00 | 0 |
| 24-Jul-16 | 0:00:00 | 0 | 30-Sep-16 | 0:00:00 | 0 |
| 25-Jul-16 | 0:00:00 | 0 | 1-Oct-16 | 0:00:00 | 0 |
| 26-Jul-16 | 0:00:00 | 0 | 2-Oct-16 | 0:00:00 | 0 |
| 27-Jul-16 | 0:00:00 | 0 | 3-Oct-16 | 0:00:00 | 0 |
| 28-Jul-16 | 0:00:00 | 0 | 4-Oct-16 | 0:00:00 | 0 |
| 29-Jul-16 | 0:00:00 | 0 | 5-Oct-16 | 0:00:00 | 0 |
| 30-Jul-16 | 0:00:00 | 0 | 6-Oct-16 | 0:00:00 | 0 |
| 31-Jul-16 | 0:00:00 | 0 | 7-Oct-16 | 0:00:00 | 0 |
| 1-Aug-16 | 0:00:00 | 0 | 8-Oct-16 | 0:00:00 | 0 |
| 2-Aug-16 | 0:00:00 | 0 | 9-Oct-16 | 0:00:00 | 0 |
| 3-Aug-16 | 0:00:00 | 0 | 10-Oct-16 | 0:00:00 | 0 |
| 4-Aug-16 | 0:00:00 | 0 | 11-Oct-16 | 0:00:00 | 0 |
| 5-Aug-16 | 0:00:00 | 0 | 12-Oct-16 | 0:00:00 | 0 |
| 6-Aug-16 | 0:00:00 | 0 | 13-Oct-16 | 0:00:00 | 0 |
| 7-Aug-16 | 0:00:00 | 0 | 14-Oct-16 | 0:00:00 | 0 |
| 8-Aug-16 | 0:00:00 | 0 | 15-Oct-16 | 0:00:00 | 0 |
| 9-Aug-16 | 0:00:00 | 0 | 16-Oct-16 | 0:00:00 | 0 |
| 10-Aug-16 | 0:00:00 | 0 | 17-Oct-16 | 0:00:00 | 0 |
| 11-Aug-16 | 0:00:00 | 0 | 18-Oct-16 | 0:00:00 | 0 |
| 12-Aug-16 | 0:00:00 | 0 | 19-Oct-16 | 0:00:00 | 0 |
| 13-Aug-16 | 0:00:00 | 0 | 20-Oct-16 | 0:00:00 | 0 |
| 14-Aug-16 | 0:00:00 | 0 | 21-Oct-16 | 0:00:00 | 0 |
| 15-Aug-16 | 0:00:00 | 0 | 22-Oct-16 | 0:00:00 | 0 |
| 16-Aug-16 | 0:00:00 | 0 | 23-Oct-16 | 0:00:00 | 0 |

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|-----------|---------|---|-----------|---------|---|
| 24-Oct-16 | 0:00:00 | 0 | 31-Dec-16 | 0:00:00 | 0 |
| 25-Oct-16 | 0:00:00 | 0 | 1-Jan-17 | 0:00:00 | 0 |
| 26-Oct-16 | 0:00:00 | 0 | 2-Jan-17 | 0:00:00 | 0 |
| 27-Oct-16 | 0:00:00 | 0 | 3-Jan-17 | 0:00:00 | 0 |
| 28-Oct-16 | 0:00:00 | 0 | 4-Jan-17 | 0:00:00 | 0 |
| 29-Oct-16 | 0:00:00 | 0 | 5-Jan-17 | 0:00:00 | 0 |
| 30-Oct-16 | 0:00:00 | 0 | 6-Jan-17 | 0:00:00 | 0 |
| 31-Oct-16 | 0:00:00 | 0 | 7-Jan-17 | 0:00:00 | 0 |
| 1-Nov-16 | 0:00:00 | 0 | 8-Jan-17 | 0:00:00 | 0 |
| 2-Nov-16 | 0:00:00 | 0 | 9-Jan-17 | 0:00:00 | 0 |
| 3-Nov-16 | 0:00:00 | 0 | 10-Jan-17 | 0:00:00 | 0 |
| 4-Nov-16 | 0:00:00 | 0 | 11-Jan-17 | 0:00:00 | 0 |
| 5-Nov-16 | 0:00:00 | 0 | 12-Jan-17 | 0:00:00 | 0 |
| 6-Nov-16 | 0:00:00 | 0 | 13-Jan-17 | 0:00:00 | 0 |
| 7-Nov-16 | 0:00:00 | 0 | 14-Jan-17 | 0:00:00 | 0 |
| 8-Nov-16 | 0:00:00 | 0 | 15-Jan-17 | 0:00:00 | 0 |
| 9-Nov-16 | 0:00:00 | 0 | 16-Jan-17 | 0:00:00 | 0 |
| 10-Nov-16 | 0:00:00 | 0 | 17-Jan-17 | 0:00:00 | 0 |
| 11-Nov-16 | 0:00:00 | 0 | 18-Jan-17 | 0:00:00 | 0 |
| 12-Nov-16 | 0:00:00 | 0 | 19-Jan-17 | 0:00:00 | 0 |
| 13-Nov-16 | 0:00:00 | 0 | 20-Jan-17 | 0:00:00 | 0 |
| 14-Nov-16 | 0:00:00 | 0 | 21-Jan-17 | 0:00:00 | 0 |
| 15-Nov-16 | 0:00:00 | 0 | 22-Jan-17 | 0:00:00 | 0 |
| 16-Nov-16 | 0:00:00 | 0 | 23-Jan-17 | 0:00:00 | 0 |
| 17-Nov-16 | 0:00:00 | 0 | 24-Jan-17 | 0:00:00 | 0 |
| 18-Nov-16 | 0:00:00 | 0 | 25-Jan-17 | 0:00:00 | 0 |
| 19-Nov-16 | 0:00:00 | 0 | 26-Jan-17 | 0:00:00 | 0 |
| 20-Nov-16 | 0:00:00 | 0 | 27-Jan-17 | 0:00:00 | 0 |
| 21-Nov-16 | 0:00:00 | 0 | 28-Jan-17 | 0:00:00 | 0 |
| 22-Nov-16 | 0:00:00 | 0 | 29-Jan-17 | 0:00:00 | 0 |
| 23-Nov-16 | 0:00:00 | 0 | 30-Jan-17 | 0:00:00 | 0 |
| 24-Nov-16 | 0:00:00 | 0 | 31-Jan-17 | 0:00:00 | 0 |
| 25-Nov-16 | 0:00:00 | 0 | 1-Feb-17 | 0:00:00 | 0 |
| 26-Nov-16 | 0:00:00 | 0 | 2-Feb-17 | 0:00:00 | 0 |
| 27-Nov-16 | 0:00:00 | 0 | 3-Feb-17 | 0:00:00 | 0 |
| 28-Nov-16 | 0:00:00 | 0 | 4-Feb-17 | 0:00:00 | 0 |
| 29-Nov-16 | 0:00:00 | 0 | 5-Feb-17 | 0:00:00 | 0 |
| 30-Nov-16 | 0:00:00 | 0 | 6-Feb-17 | 0:00:00 | 0 |
| 1-Dec-16 | 0:00:00 | 0 | 7-Feb-17 | 0:00:00 | 0 |
| 2-Dec-16 | 0:00:00 | 0 | 8-Feb-17 | 0:00:00 | 0 |
| 3-Dec-16 | 0:00:00 | 0 | 9-Feb-17 | 0:00:00 | 0 |
| 4-Dec-16 | 0:00:00 | 0 | 10-Feb-17 | 0:00:00 | 0 |
| 5-Dec-16 | 0:00:00 | 0 | 11-Feb-17 | 0:00:00 | 0 |
| 6-Dec-16 | 0:00:00 | 0 | 12-Feb-17 | 0:00:00 | 0 |
| 7-Dec-16 | 0:00:00 | 0 | 13-Feb-17 | 0:00:00 | 0 |
| 8-Dec-16 | 0:00:00 | 0 | 14-Feb-17 | 0:00:00 | 0 |
| 9-Dec-16 | 0:00:00 | 0 | 15-Feb-17 | 0:00:00 | 0 |
| 10-Dec-16 | 0:00:00 | 0 | 16-Feb-17 | 0:00:00 | 0 |
| 11-Dec-16 | 0:00:00 | 0 | 17-Feb-17 | 0:00:00 | 0 |
| 12-Dec-16 | 0:00:00 | 0 | 18-Feb-17 | 0:00:00 | 0 |
| 13-Dec-16 | 0:00:00 | 0 | 19-Feb-17 | 0:00:00 | 0 |
| 14-Dec-16 | 0:00:00 | 0 | 20-Feb-17 | 0:00:00 | 0 |
| 15-Dec-16 | 0:00:00 | 0 | 21-Feb-17 | 0:00:00 | 0 |
| 16-Dec-16 | 0:00:00 | 0 | 22-Feb-17 | 0:00:00 | 0 |
| 17-Dec-16 | 0:00:00 | 0 | 23-Feb-17 | 0:00:00 | 0 |
| 18-Dec-16 | 0:00:00 | 0 | 24-Feb-17 | 0:00:00 | 0 |
| 19-Dec-16 | 0:00:00 | 0 | 25-Feb-17 | 0:00:00 | 0 |
| 20-Dec-16 | 0:00:00 | 0 | 26-Feb-17 | 0:00:00 | 0 |
| 21-Dec-16 | 0:00:00 | 0 | 27-Feb-17 | 0:00:00 | 0 |
| 22-Dec-16 | 0:00:00 | 0 | 28-Feb-17 | 0:00:00 | 0 |
| 23-Dec-16 | 0:00:00 | 0 | 1-Mar-17 | 0:00:00 | 0 |
| 24-Dec-16 | 0:00:00 | 0 | 2-Mar-17 | 0:00:00 | 0 |
| 25-Dec-16 | 0:00:00 | 0 | 3-Mar-17 | 0:00:00 | 0 |
| 26-Dec-16 | 0:00:00 | 0 | 4-Mar-17 | 0:00:00 | 0 |
| 27-Dec-16 | 0:00:00 | 0 | 5-Mar-17 | 0:00:00 | 0 |
| 28-Dec-16 | 0:00:00 | 0 | 6-Mar-17 | 0:00:00 | 0 |
| 29-Dec-16 | 0:00:00 | 0 | 7-Mar-17 | 0:00:00 | 0 |
| 30-Dec-16 | 0:00:00 | 0 | 8-Mar-17 | 0:00:00 | 0 |

| | | | | | |
|-----------|---------|---|-----------|---------|---|
| 9-Mar-17 | 0:00:00 | 0 | 16-May-17 | 0:00:00 | 0 |
| 10-Mar-17 | 0:00:00 | 0 | 17-May-17 | 0:00:00 | 0 |
| 11-Mar-17 | 0:00:00 | 0 | 18-May-17 | 0:00:00 | 0 |
| 12-Mar-17 | 0:00:00 | 0 | 19-May-17 | 0:00:00 | 0 |
| 13-Mar-17 | 0:00:00 | 0 | 20-May-17 | 0:00:00 | 0 |
| 14-Mar-17 | 0:00:00 | 0 | 21-May-17 | 0:00:00 | 0 |
| 15-Mar-17 | 0:00:00 | 0 | 22-May-17 | 0:00:00 | 0 |
| 16-Mar-17 | 0:00:00 | 0 | 23-May-17 | 0:00:00 | 0 |
| 17-Mar-17 | 0:00:00 | 0 | 24-May-17 | 0:00:00 | 0 |
| 18-Mar-17 | 0:00:00 | 0 | 25-May-17 | 0:00:00 | 0 |
| 19-Mar-17 | 0:00:00 | 0 | 26-May-17 | 0:00:00 | 0 |
| 20-Mar-17 | 0:00:00 | 0 | 27-May-17 | 0:00:00 | 0 |
| 21-Mar-17 | 0:00:00 | 0 | 28-May-17 | 0:00:00 | 0 |
| 22-Mar-17 | 0:00:00 | 0 | 29-May-17 | 0:00:00 | 0 |
| 23-Mar-17 | 0:00:00 | 0 | 30-May-17 | 0:00:00 | 0 |
| 24-Mar-17 | 0:00:00 | 0 | 31-May-17 | 0:00:00 | 0 |
| 25-Mar-17 | 0:00:00 | 0 | 1-Jun-17 | 0:00:00 | 0 |
| 26-Mar-17 | 0:00:00 | 0 | 2-Jun-17 | 0:00:00 | 0 |
| 27-Mar-17 | 0:00:00 | 0 | 3-Jun-17 | 0:00:00 | 0 |
| 28-Mar-17 | 0:00:00 | 0 | 4-Jun-17 | 0:00:00 | 0 |
| 29-Mar-17 | 0:00:00 | 0 | 5-Jun-17 | 0:00:00 | 0 |
| 30-Mar-17 | 0:00:00 | 0 | 6-Jun-17 | 0:00:00 | 0 |
| 31-Mar-17 | 0:00:00 | 0 | 7-Jun-17 | 0:00:00 | 0 |
| 1-Apr-17 | 0:00:00 | 0 | 8-Jun-17 | 0:00:00 | 0 |
| 2-Apr-17 | 0:00:00 | 0 | 9-Jun-17 | 0:00:00 | 0 |
| 3-Apr-17 | 0:00:00 | 0 | 10-Jun-17 | 0:00:00 | 0 |
| 4-Apr-17 | 0:00:00 | 0 | 11-Jun-17 | 0:00:00 | 0 |
| 5-Apr-17 | 0:00:00 | 0 | 12-Jun-17 | 0:00:00 | 0 |
| 6-Apr-17 | 0:00:00 | 0 | 13-Jun-17 | 0:00:00 | 0 |
| 7-Apr-17 | 0:00:00 | 0 | 14-Jun-17 | 0:00:00 | 0 |
| 8-Apr-17 | 0:00:00 | 0 | 15-Jun-17 | 0:00:00 | 0 |
| 9-Apr-17 | 0:00:00 | 0 | 16-Jun-17 | 0:00:00 | 0 |
| 10-Apr-17 | 0:00:00 | 0 | 17-Jun-17 | 0:00:00 | 0 |
| 11-Apr-17 | 0:00:00 | 0 | 18-Jun-17 | 0:00:00 | 0 |
| 12-Apr-17 | 0:00:00 | 0 | 19-Jun-17 | 0:00:00 | 0 |
| 13-Apr-17 | 0:00:00 | 0 | 20-Jun-17 | 0:00:00 | 0 |
| 14-Apr-17 | 0:00:00 | 0 | 21-Jun-17 | 0:00:00 | 0 |
| 15-Apr-17 | 0:00:00 | 0 | 22-Jun-17 | 0:00:00 | 0 |
| 16-Apr-17 | 0:00:00 | 0 | 23-Jun-17 | 0:00:00 | 0 |
| 17-Apr-17 | 0:00:00 | 0 | 24-Jun-17 | 0:00:00 | 0 |
| 18-Apr-17 | 0:00:00 | 0 | 25-Jun-17 | 0:00:00 | 0 |
| 19-Apr-17 | 0:00:00 | 0 | 26-Jun-17 | 0:00:00 | 0 |
| 20-Apr-17 | 0:00:00 | 0 | 27-Jun-17 | 0:00:00 | 0 |
| 21-Apr-17 | 0:00:00 | 0 | 28-Jun-17 | 0:00:00 | 0 |
| 22-Apr-17 | 0:00:00 | 0 | 29-Jun-17 | 0:00:00 | 0 |
| 23-Apr-17 | 0:00:00 | 0 | 30-Jun-17 | 0:00:00 | 0 |
| 24-Apr-17 | 0:00:00 | 0 | 1-Jul-17 | 0:00:00 | 0 |
| 25-Apr-17 | 0:00:00 | 0 | 2-Jul-17 | 0:00:00 | 0 |
| 26-Apr-17 | 0:00:00 | 0 | 3-Jul-17 | 0:00:00 | 0 |
| 27-Apr-17 | 0:00:00 | 0 | 4-Jul-17 | 0:00:00 | 0 |
| 28-Apr-17 | 0:00:00 | 0 | 5-Jul-17 | 0:00:00 | 0 |
| 29-Apr-17 | 0:00:00 | 0 | 6-Jul-17 | 0:00:00 | 0 |
| 30-Apr-17 | 0:00:00 | 0 | 7-Jul-17 | 0:00:00 | 0 |
| 1-May-17 | 0:00:00 | 0 | 8-Jul-17 | 0:00:00 | 0 |
| 2-May-17 | 0:00:00 | 0 | 9-Jul-17 | 0:00:00 | 0 |
| 3-May-17 | 0:00:00 | 0 | 10-Jul-17 | 0:00:00 | 0 |
| 4-May-17 | 0:00:00 | 0 | 11-Jul-17 | 0:00:00 | 0 |
| 5-May-17 | 0:00:00 | 0 | 12-Jul-17 | 0:00:00 | 0 |
| 6-May-17 | 0:00:00 | 0 | 13-Jul-17 | 0:00:00 | 0 |
| 7-May-17 | 0:00:00 | 0 | 14-Jul-17 | 0:00:00 | 0 |
| 8-May-17 | 0:00:00 | 0 | 15-Jul-17 | 0:00:00 | 0 |
| 9-May-17 | 0:00:00 | 0 | 16-Jul-17 | 0:00:00 | 0 |
| 10-May-17 | 0:00:00 | 0 | 17-Jul-17 | 0:00:00 | 0 |
| 11-May-17 | 0:00:00 | 0 | 18-Jul-17 | 0:00:00 | 0 |
| 12-May-17 | 0:00:00 | 0 | 19-Jul-17 | 0:00:00 | 0 |
| 13-May-17 | 0:00:00 | 0 | 20-Jul-17 | 0:00:00 | 0 |
| 14-May-17 | 0:00:00 | 0 | 21-Jul-17 | 0:00:00 | 0 |
| 15-May-17 | 0:00:00 | 0 | 22-Jul-17 | 0:00:00 | 0 |

| | | | | | |
|-----------|---------|-------|-----------|---------|-------|
| 23-Jul-17 | 0:00:00 | 0 | 29-Sep-17 | 0:00:00 | 23.98 |
| 24-Jul-17 | 0:00:00 | 0 | 30-Sep-17 | 0:00:00 | 23.98 |
| 25-Jul-17 | 0:00:00 | 0 | 1-Oct-17 | 0:00:00 | 0 |
| 26-Jul-17 | 0:00:00 | 0 | 2-Oct-17 | 0:00:00 | 23.98 |
| 27-Jul-17 | 0:00:00 | 0 | 3-Oct-17 | 0:00:00 | 23.98 |
| 28-Jul-17 | 0:00:00 | 0 | 4-Oct-17 | 0:00:00 | 23.98 |
| 29-Jul-17 | 0:00:00 | 0 | 5-Oct-17 | 0:00:00 | 23.98 |
| 30-Jul-17 | 0:00:00 | 0 | 6-Oct-17 | 0:00:00 | 23.98 |
| 31-Jul-17 | 0:00:00 | 0 | 7-Oct-17 | 0:00:00 | 23.98 |
| 1-Aug-17 | 0:00:00 | 0 | 8-Oct-17 | 0:00:00 | 23.98 |
| 2-Aug-17 | 0:00:00 | 0 | 9-Oct-17 | 0:00:00 | 0 |
| 3-Aug-17 | 0:00:00 | 0 | 10-Oct-17 | 0:00:00 | 23.98 |
| 4-Aug-17 | 0:00:00 | 0 | 11-Oct-17 | 0:00:00 | 23.98 |
| 5-Aug-17 | 0:00:00 | 0 | 12-Oct-17 | 0:00:00 | 23.98 |
| 6-Aug-17 | 0:00:00 | 0 | 13-Oct-17 | 0:00:00 | 20.52 |
| 7-Aug-17 | 0:00:00 | 0 | 14-Oct-17 | 0:00:00 | 23.98 |
| 8-Aug-17 | 0:00:00 | 0 | 15-Oct-17 | 0:00:00 | 23.98 |
| 9-Aug-17 | 0:00:00 | 0 | 16-Oct-17 | 0:00:00 | 23.98 |
| 10-Aug-17 | 0:00:00 | 2.19 | 17-Oct-17 | 0:00:00 | 23.98 |
| 11-Aug-17 | 0:00:00 | 5.92 | 18-Oct-17 | 0:00:00 | 23.98 |
| 12-Aug-17 | 0:00:00 | 0 | 19-Oct-17 | 0:00:00 | 23.98 |
| 13-Aug-17 | 0:00:00 | 0 | 20-Oct-17 | 0:00:00 | 23.98 |
| 14-Aug-17 | 0:00:00 | 0 | 21-Oct-17 | 0:00:00 | 23.98 |
| 15-Aug-17 | 0:00:00 | 0 | 22-Oct-17 | 0:00:00 | 23.98 |
| 16-Aug-17 | 0:00:00 | 4.83 | 23-Oct-17 | 0:00:00 | 0 |
| 17-Aug-17 | 0:00:00 | 0 | 24-Oct-17 | 0:00:00 | 14.44 |
| 18-Aug-17 | 0:00:00 | 14.25 | 25-Oct-17 | 0:00:00 | 0 |
| 19-Aug-17 | 0:00:00 | 0 | 26-Oct-17 | 0:00:00 | 0 |
| 20-Aug-17 | 0:00:00 | 23.98 | 27-Oct-17 | 0:00:00 | 0 |
| 21-Aug-17 | 0:00:00 | 23.98 | 28-Oct-17 | 0:00:00 | 0 |
| 22-Aug-17 | 0:00:00 | 23.98 | 29-Oct-17 | 0:00:00 | 0 |
| 23-Aug-17 | 0:00:00 | 0 | 30-Oct-17 | 0:00:00 | 0 |
| 24-Aug-17 | 0:00:00 | 23.98 | 31-Oct-17 | 0:00:00 | 0 |
| 25-Aug-17 | 0:00:00 | 23.98 | 1-Nov-17 | 0:00:00 | 0 |
| 26-Aug-17 | 0:00:00 | 23.98 | 2-Nov-17 | 0:00:00 | 0 |
| 27-Aug-17 | 0:00:00 | 23.98 | 3-Nov-17 | 0:00:00 | 0 |
| 28-Aug-17 | 0:00:00 | 23.98 | 4-Nov-17 | 0:00:00 | 0 |
| 29-Aug-17 | 0:00:00 | 23.98 | 5-Nov-17 | 0:00:00 | 0 |
| 30-Aug-17 | 0:00:00 | 23.98 | 6-Nov-17 | 0:00:00 | 0 |
| 31-Aug-17 | 0:00:00 | 23.98 | 7-Nov-17 | 0:00:00 | 0 |
| 1-Sep-17 | 0:00:00 | 21.45 | 8-Nov-17 | 0:00:00 | 0 |
| 2-Sep-17 | 0:00:00 | 23.98 | 9-Nov-17 | 0:00:00 | 0 |
| 3-Sep-17 | 0:00:00 | 23.98 | 10-Nov-17 | 0:00:00 | 0 |
| 4-Sep-17 | 0:00:00 | 23.98 | 11-Nov-17 | 0:00:00 | 0 |
| 5-Sep-17 | 0:00:00 | 23.98 | 12-Nov-17 | 0:00:00 | 0 |
| 6-Sep-17 | 0:00:00 | 23.98 | 13-Nov-17 | 0:00:00 | 0 |
| 7-Sep-17 | 0:00:00 | 23.98 | 14-Nov-17 | 0:00:00 | 0 |
| 8-Sep-17 | 0:00:00 | 23.98 | 15-Nov-17 | 0:00:00 | 0 |
| 9-Sep-17 | 0:00:00 | 23.98 | 16-Nov-17 | 0:00:00 | 0 |
| 10-Sep-17 | 0:00:00 | 23.98 | 17-Nov-17 | 0:00:00 | 0 |
| 11-Sep-17 | 0:00:00 | 23.98 | 18-Nov-17 | 0:00:00 | 0 |
| 12-Sep-17 | 0:00:00 | 23.98 | 19-Nov-17 | 0:00:00 | 0 |
| 13-Sep-17 | 0:00:00 | 23.98 | 20-Nov-17 | 0:00:00 | 0 |
| 14-Sep-17 | 0:00:00 | 23.98 | 21-Nov-17 | 0:00:00 | 0 |
| 15-Sep-17 | 0:00:00 | 23.98 | 22-Nov-17 | 0:00:00 | 0 |
| 16-Sep-17 | 0:00:00 | 23.98 | 23-Nov-17 | 0:00:00 | 0 |
| 17-Sep-17 | 0:00:00 | 12.52 | 24-Nov-17 | 0:00:00 | 0 |
| 18-Sep-17 | 0:00:00 | 0 | 25-Nov-17 | 0:00:00 | 0 |
| 19-Sep-17 | 0:00:00 | 10.67 | 26-Nov-17 | 0:00:00 | 0 |
| 20-Sep-17 | 0:00:00 | 23.98 | 27-Nov-17 | 0:00:00 | 0 |
| 21-Sep-17 | 0:00:00 | 23.98 | 28-Nov-17 | 0:00:00 | 0 |
| 22-Sep-17 | 0:00:00 | 23.98 | 29-Nov-17 | 0:00:00 | 0 |
| 23-Sep-17 | 0:00:00 | 23.98 | 30-Nov-17 | 0:00:00 | 0 |
| 24-Sep-17 | 0:00:00 | 23.98 | 1-Dec-17 | 0:00:00 | 0 |
| 25-Sep-17 | 0:00:00 | 23.98 | 2-Dec-17 | 0:00:00 | 0 |
| 26-Sep-17 | 0:00:00 | 23.98 | 3-Dec-17 | 0:00:00 | 0 |
| 27-Sep-17 | 0:00:00 | 23.98 | 4-Dec-17 | 0:00:00 | 0 |
| 28-Sep-17 | 0:00:00 | 23.98 | 5-Dec-17 | 0:00:00 | 0 |

| | | | | | |
|-----------|---------|---|-----------|---------|---|
| 6-Dec-17 | 0:00:00 | 0 | 12-Feb-18 | 0:00:00 | 0 |
| 7-Dec-17 | 0:00:00 | 0 | 13-Feb-18 | 0:00:00 | 0 |
| 8-Dec-17 | 0:00:00 | 0 | 14-Feb-18 | 0:00:00 | 0 |
| 9-Dec-17 | 0:00:00 | 0 | 15-Feb-18 | 0:00:00 | 0 |
| 10-Dec-17 | 0:00:00 | 0 | 16-Feb-18 | 0:00:00 | 0 |
| 11-Dec-17 | 0:00:00 | 0 | 17-Feb-18 | 0:00:00 | 0 |
| 12-Dec-17 | 0:00:00 | 0 | 18-Feb-18 | 0:00:00 | 0 |
| 13-Dec-17 | 0:00:00 | 0 | 19-Feb-18 | 0:00:00 | 0 |
| 14-Dec-17 | 0:00:00 | 0 | 20-Feb-18 | 0:00:00 | 0 |
| 15-Dec-17 | 0:00:00 | 0 | 21-Feb-18 | 0:00:00 | 0 |
| 16-Dec-17 | 0:00:00 | 0 | 22-Feb-18 | 0:00:00 | 0 |
| 17-Dec-17 | 0:00:00 | 0 | 23-Feb-18 | 0:00:00 | 0 |
| 18-Dec-17 | 0:00:00 | 0 | 24-Feb-18 | 0:00:00 | 0 |
| 19-Dec-17 | 0:00:00 | 0 | 25-Feb-18 | 0:00:00 | 0 |
| 20-Dec-17 | 0:00:00 | 0 | 26-Feb-18 | 0:00:00 | 0 |
| 21-Dec-17 | 0:00:00 | 0 | 27-Feb-18 | 0:00:00 | 0 |
| 22-Dec-17 | 0:00:00 | 0 | 28-Feb-18 | 0:00:00 | 0 |
| 23-Dec-17 | 0:00:00 | 0 | 1-Mar-18 | 0:00:00 | 0 |
| 24-Dec-17 | 0:00:00 | 0 | 2-Mar-18 | 0:00:00 | 0 |
| 25-Dec-17 | 0:00:00 | 0 | 3-Mar-18 | 0:00:00 | 0 |
| 26-Dec-17 | 0:00:00 | 0 | 4-Mar-18 | 0:00:00 | 0 |
| 27-Dec-17 | 0:00:00 | 0 | 5-Mar-18 | 0:00:00 | 0 |
| 28-Dec-17 | 0:00:00 | 0 | 6-Mar-18 | 0:00:00 | 0 |
| 29-Dec-17 | 0:00:00 | 0 | 7-Mar-18 | 0:00:00 | 0 |
| 30-Dec-17 | 0:00:00 | 0 | 8-Mar-18 | 0:00:00 | 0 |
| 31-Dec-17 | 0:00:00 | 0 | 9-Mar-18 | 0:00:00 | 0 |
| 1-Jan-18 | 0:00:00 | 0 | 10-Mar-18 | 0:00:00 | 0 |
| 2-Jan-18 | 0:00:00 | 0 | 11-Mar-18 | 0:00:00 | 0 |
| 3-Jan-18 | 0:00:00 | 0 | 12-Mar-18 | 0:00:00 | 0 |
| 4-Jan-18 | 0:00:00 | 0 | 13-Mar-18 | 0:00:00 | 0 |
| 5-Jan-18 | 0:00:00 | 0 | 14-Mar-18 | 0:00:00 | 0 |
| 6-Jan-18 | 0:00:00 | 0 | 15-Mar-18 | 0:00:00 | 0 |
| 7-Jan-18 | 0:00:00 | 0 | 16-Mar-18 | 0:00:00 | 0 |
| 8-Jan-18 | 0:00:00 | 0 | 17-Mar-18 | 0:00:00 | 0 |
| 9-Jan-18 | 0:00:00 | 0 | 18-Mar-18 | 0:00:00 | 0 |
| 10-Jan-18 | 0:00:00 | 0 | 19-Mar-18 | 0:00:00 | 0 |
| 11-Jan-18 | 0:00:00 | 0 | 20-Mar-18 | 0:00:00 | 0 |
| 12-Jan-18 | 0:00:00 | 0 | 21-Mar-18 | 0:00:00 | 0 |
| 13-Jan-18 | 0:00:00 | 0 | 22-Mar-18 | 0:00:00 | 0 |
| 14-Jan-18 | 0:00:00 | 0 | 23-Mar-18 | 0:00:00 | 0 |
| 15-Jan-18 | 0:00:00 | 0 | 24-Mar-18 | 0:00:00 | 0 |
| 16-Jan-18 | 0:00:00 | 0 | 25-Mar-18 | 0:00:00 | 0 |
| 17-Jan-18 | 0:00:00 | 0 | 26-Mar-18 | 0:00:00 | 0 |
| 18-Jan-18 | 0:00:00 | 0 | 27-Mar-18 | 0:00:00 | 0 |
| 19-Jan-18 | 0:00:00 | 0 | 28-Mar-18 | 0:00:00 | 0 |
| 20-Jan-18 | 0:00:00 | 0 | 29-Mar-18 | 0:00:00 | 0 |
| 21-Jan-18 | 0:00:00 | 0 | 30-Mar-18 | 0:00:00 | 0 |
| 22-Jan-18 | 0:00:00 | 0 | 31-Mar-18 | 0:00:00 | 0 |
| 23-Jan-18 | 0:00:00 | 0 | 1-Apr-18 | 0:00:00 | 0 |
| 24-Jan-18 | 0:00:00 | 0 | 2-Apr-18 | 0:00:00 | 0 |
| 25-Jan-18 | 0:00:00 | 0 | 3-Apr-18 | 0:00:00 | 0 |
| 26-Jan-18 | 0:00:00 | 0 | 4-Apr-18 | 0:00:00 | 0 |
| 27-Jan-18 | 0:00:00 | 0 | 5-Apr-18 | 0:00:00 | 0 |
| 28-Jan-18 | 0:00:00 | 0 | 6-Apr-18 | 0:00:00 | 0 |
| 29-Jan-18 | 0:00:00 | 0 | 7-Apr-18 | 0:00:00 | 0 |
| 30-Jan-18 | 0:00:00 | 0 | 8-Apr-18 | 0:00:00 | 0 |
| 31-Jan-18 | 0:00:00 | 0 | 9-Apr-18 | 0:00:00 | 0 |
| 1-Feb-18 | 0:00:00 | 0 | 10-Apr-18 | 0:00:00 | 0 |
| 2-Feb-18 | 0:00:00 | 0 | 11-Apr-18 | 0:00:00 | 0 |
| 3-Feb-18 | 0:00:00 | 0 | 12-Apr-18 | 0:00:00 | 0 |
| 4-Feb-18 | 0:00:00 | 0 | 13-Apr-18 | 0:00:00 | 0 |
| 5-Feb-18 | 0:00:00 | 0 | 14-Apr-18 | 0:00:00 | 0 |
| 6-Feb-18 | 0:00:00 | 0 | 15-Apr-18 | 0:00:00 | 0 |
| 7-Feb-18 | 0:00:00 | 0 | 16-Apr-18 | 0:00:00 | 0 |
| 8-Feb-18 | 0:00:00 | 0 | 17-Apr-18 | 0:00:00 | 0 |
| 9-Feb-18 | 0:00:00 | 0 | 18-Apr-18 | 0:00:00 | 0 |
| 10-Feb-18 | 0:00:00 | 0 | 19-Apr-18 | 0:00:00 | 0 |
| 11-Feb-18 | 0:00:00 | 0 | 20-Apr-18 | 0:00:00 | 0 |

| | | |
|-----------|---------|-------|
| 21-Apr-18 | 0:00:00 | 0 |
| 22-Apr-18 | 0:00:00 | 0 |
| 23-Apr-18 | 0:00:00 | 0 |
| 24-Apr-18 | 0:00:00 | 0 |
| 25-Apr-18 | 0:00:00 | 0 |
| 26-Apr-18 | 0:00:00 | 0 |
| 27-Apr-18 | 0:00:00 | 0 |
| 28-Apr-18 | 0:00:00 | 0 |
| 29-Apr-18 | 0:00:00 | 0 |
| 30-Apr-18 | 0:00:00 | 0 |
| 1-May-18 | 0:00:00 | 0 |
| 2-May-18 | 0:00:00 | 0 |
| 3-May-18 | 0:00:00 | 0 |
| 4-May-18 | 0:00:00 | 0 |
| 5-May-18 | 0:00:00 | 0 |
| 6-May-18 | 0:00:00 | 0 |
| 7-May-18 | 0:00:00 | 0 |
| 8-May-18 | 0:00:00 | 0 |
| 9-May-18 | 0:00:00 | 0 |
| 10-May-18 | 0:00:00 | 0 |
| 11-May-18 | 0:00:00 | 0 |
| 12-May-18 | 0:00:00 | 0 |
| 13-May-18 | 0:00:00 | 0 |
| 14-May-18 | 0:00:00 | 0 |
| 15-May-18 | 0:00:00 | 9.41 |
| 16-May-18 | 0:00:00 | 23.98 |
| 17-May-18 | 0:00:00 | 23.98 |
| 18-May-18 | 0:00:00 | 23.98 |
| 19-May-18 | 0:00:00 | 23.98 |
| 20-May-18 | 0:00:00 | 23.98 |
| 21-May-18 | 0:00:00 | 23.98 |
| 22-May-18 | 0:00:00 | 0 |
| 23-May-18 | 0:00:00 | 0 |
| 24-May-18 | 0:00:00 | 23.98 |
| 25-May-18 | 0:00:00 | 23.98 |
| 26-May-18 | 0:00:00 | 23.98 |
| 27-May-18 | 0:00:00 | 23.98 |
| 28-May-18 | 0:00:00 | 23.98 |
| 29-May-18 | 0:00:00 | 0 |
| 30-May-18 | 0:00:00 | 23.98 |
| 31-May-18 | 0:00:00 | 23.98 |
| 1-Jun-18 | 0:00:00 | 0 |
| 2-Jun-18 | 0:00:00 | 23.98 |
| 3-Jun-18 | 0:00:00 | 23.98 |
| 4-Jun-18 | 0:00:00 | 23.98 |
| 5-Jun-18 | 0:00:00 | 23.98 |
| 6-Jun-18 | 0:00:00 | 23.98 |
| 7-Jun-18 | 0:00:00 | 23.98 |
| 8-Jun-18 | 0:00:00 | 23.98 |
| 9-Jun-18 | 0:00:00 | 23.98 |
| 10-Jun-18 | 0:00:00 | 23.98 |
| 11-Jun-18 | 0:00:00 | 23.98 |
| 12-Jun-18 | 0:00:00 | 23.98 |
| 13-Jun-18 | 0:00:00 | 23.98 |
| 14-Jun-18 | 0:00:00 | 0 |
| 15-Jun-18 | 0:00:00 | 23.98 |
| 16-Jun-18 | 0:00:00 | 23.98 |
| 17-Jun-18 | 0:00:00 | 23.98 |
| 18-Jun-18 | 0:00:00 | 23.98 |
| 19-Jun-18 | 0:00:00 | 23.98 |
| 20-Jun-18 | 0:00:00 | 21.44 |
| 21-Jun-18 | 0:00:00 | 23.98 |
| 22-Jun-18 | 0:00:00 | 23.98 |
| 23-Jun-18 | 0:00:00 | 23.98 |
| 24-Jun-18 | 0:00:00 | 23.98 |
| 25-Jun-18 | 0:00:00 | 23.98 |
| 26-Jun-18 | 0:00:00 | 23.98 |
| 27-Jun-18 | 0:00:00 | 23.98 |

| | | |
|-----------|---------|-------|
| 28-Jun-18 | 0:00:00 | 23.98 |
| 29-Jun-18 | 0:00:00 | 23.98 |
| 30-Jun-18 | 0:00:00 | 0 |
| 1-Jul-18 | 0:00:00 | 23.98 |
| 2-Jul-18 | 0:00:00 | 23.98 |
| 3-Jul-18 | 0:00:00 | 23.98 |
| 4-Jul-18 | 0:00:00 | 23.98 |
| 5-Jul-18 | 0:00:00 | 23.98 |
| 6-Jul-18 | 0:00:00 | 23.98 |
| 7-Jul-18 | 0:00:00 | 23.98 |
| 8-Jul-18 | 0:00:00 | 11.95 |
| 9-Jul-18 | 0:00:00 | 0 |
| 10-Jul-18 | 0:00:00 | 0.39 |
| 11-Jul-18 | 0:00:00 | 0 |
| 12-Jul-18 | 0:00:00 | 0 |
| 13-Jul-18 | 0:00:00 | 0 |
| 14-Jul-18 | 0:00:00 | 0 |
| 15-Jul-18 | 0:00:00 | 0 |
| 16-Jul-18 | 0:00:00 | 0 |
| 17-Jul-18 | 0:00:00 | 0 |
| 18-Jul-18 | 0:00:00 | 0.05 |
| 19-Jul-18 | 0:00:00 | 0 |
| 20-Jul-18 | 0:00:00 | 0 |
| 21-Jul-18 | 0:00:00 | 0 |
| 22-Jul-18 | 0:00:00 | 0 |
| 23-Jul-18 | 0:00:00 | 0 |
| 24-Jul-18 | 0:00:00 | 0 |
| 25-Jul-18 | 0:00:00 | 0 |
| 26-Jul-18 | 0:00:00 | 0 |
| 27-Jul-18 | 0:00:00 | 0 |
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| 1-Aug-18 | 0:00:00 | 0 |
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| 3-Aug-18 | 0:00:00 | 0 |
| 4-Aug-18 | 0:00:00 | 0 |
| 5-Aug-18 | 0:00:00 | 0 |
| 6-Aug-18 | 0:00:00 | 0 |
| 7-Aug-18 | 0:00:00 | 0 |
| 8-Aug-18 | 0:00:00 | 0 |
| 9-Aug-18 | 0:00:00 | 0 |
| 10-Aug-18 | 0:00:00 | 0 |
| 11-Aug-18 | 0:00:00 | 0 |
| 12-Aug-18 | 0:00:00 | 0 |
| 13-Aug-18 | 0:00:00 | 0 |
| 14-Aug-18 | 0:00:00 | 0 |
| 15-Aug-18 | 0:00:00 | 0 |
| 16-Aug-18 | 0:00:00 | 0 |
| 17-Aug-18 | 0:00:00 | 0 |
| 18-Aug-18 | 0:00:00 | 0 |
| 19-Aug-18 | 0:00:00 | 0 |
| 20-Aug-18 | 0:00:00 | 0 |
| 21-Aug-18 | 0:00:00 | 0 |
| 22-Aug-18 | 0:00:00 | 0 |
| 23-Aug-18 | 0:00:00 | 0 |
| 24-Aug-18 | 0:00:00 | 0 |
| 25-Aug-18 | 0:00:00 | 0 |
| 26-Aug-18 | 0:00:00 | 0 |
| 27-Aug-18 | 0:00:00 | 0 |
| 28-Aug-18 | 0:00:00 | 0 |
| 29-Aug-18 | 0:00:00 | 0 |
| 30-Aug-18 | 0:00:00 | 0 |
| 31-Aug-18 | 0:00:00 | 0 |
| 1-Sep-18 | 0:00:00 | 0 |
| 2-Sep-18 | 0:00:00 | 0 |
| 3-Sep-18 | 0:00:00 | 0 |

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|-----------|---------|---|
| 4-Sep-18 | 0:00:00 | 0 |
| 5-Sep-18 | 0:00:00 | 0 |
| 6-Sep-18 | 0:00:00 | 0 |
| 7-Sep-18 | 0:00:00 | 0 |
| 8-Sep-18 | 0:00:00 | 0 |
| 9-Sep-18 | 0:00:00 | 0 |
| 10-Sep-18 | 0:00:00 | 0 |
| 11-Sep-18 | 0:00:00 | 0 |
| 12-Sep-18 | 0:00:00 | 0 |
| 13-Sep-18 | 0:00:00 | 0 |
| 14-Sep-18 | 0:00:00 | 0 |
| 15-Sep-18 | 0:00:00 | 0 |
| 16-Sep-18 | 0:00:00 | 0 |
| 17-Sep-18 | 0:00:00 | 0 |
| 18-Sep-18 | 0:00:00 | 0 |
| 19-Sep-18 | 0:00:00 | 0 |
| 20-Sep-18 | 0:00:00 | 0 |
| 21-Sep-18 | 0:00:00 | 0 |
| 22-Sep-18 | 0:00:00 | 0 |
| 23-Sep-18 | 0:00:00 | 0 |
| 24-Sep-18 | 0:00:00 | 0 |
| 25-Sep-18 | 0:00:00 | 0 |
| 26-Sep-18 | 0:00:00 | 0 |
| 27-Sep-18 | 0:00:00 | 0 |
| 28-Sep-18 | 0:00:00 | 0 |
| 29-Sep-18 | 0:00:00 | 0 |
| 30-Sep-18 | 0:00:00 | 0 |
| 1-Oct-18 | 0:00:00 | 0 |
| 2-Oct-18 | 0:00:00 | 0 |
| 3-Oct-18 | 0:00:00 | 0 |
| 4-Oct-18 | 0:00:00 | 0 |
| 5-Oct-18 | 0:00:00 | 0 |
| 6-Oct-18 | 0:00:00 | 0 |
| 7-Oct-18 | 0:00:00 | 0 |
| 8-Oct-18 | 0:00:00 | 0 |
| 9-Oct-18 | 0:00:00 | 0 |
| 10-Oct-18 | 0:00:00 | 0 |
| 11-Oct-18 | 0:00:00 | 0 |
| 12-Oct-18 | 0:00:00 | 0 |
| 13-Oct-18 | 0:00:00 | 0 |
| 14-Oct-18 | 0:00:00 | 0 |
| 15-Oct-18 | 0:00:00 | 0 |
| 16-Oct-18 | 0:00:00 | 0 |
| 17-Oct-18 | 0:00:00 | 0 |
| 18-Oct-18 | 0:00:00 | 0 |
| 19-Oct-18 | 0:00:00 | 0 |
| 20-Oct-18 | 0:00:00 | 0 |
| 21-Oct-18 | 0:00:00 | 0 |
| 22-Oct-18 | 0:00:00 | 0 |
| 23-Oct-18 | 0:00:00 | 0 |
| 24-Oct-18 | 0:00:00 | 0 |
| 25-Oct-18 | 0:00:00 | 0 |
| 26-Oct-18 | 0:00:00 | 0 |
| 27-Oct-18 | 0:00:00 | 0 |
| 28-Oct-18 | 0:00:00 | 0 |
| 29-Oct-18 | 0:00:00 | 0 |
| 30-Oct-18 | 0:00:00 | 0 |
| 31-Oct-18 | 0:00:00 | 0 |
| 1-Nov-18 | 0:00:00 | 0 |
| 2-Nov-18 | 0:00:00 | 0 |
| 3-Nov-18 | 0:00:00 | 0 |
| 4-Nov-18 | 0:00:00 | 0 |
| 5-Nov-18 | 0:00:00 | 0 |
| 6-Nov-18 | 0:00:00 | 0 |
| 7-Nov-18 | 0:00:00 | 0 |
| 8-Nov-18 | 0:00:00 | 0 |
| 9-Nov-18 | 0:00:00 | 0 |
| 10-Nov-18 | 0:00:00 | 0 |

| | | |
|-----------|---------|---|
| 11-Nov-18 | 0:00:00 | 0 |
| 12-Nov-18 | 0:00:00 | 0 |
| 13-Nov-18 | 0:00:00 | 0 |
| 14-Nov-18 | 0:00:00 | 0 |
| 15-Nov-18 | 0:00:00 | 0 |
| 16-Nov-18 | 0:00:00 | 0 |
| 17-Nov-18 | 0:00:00 | 0 |
| 18-Nov-18 | 0:00:00 | 0 |
| 19-Nov-18 | 0:00:00 | 0 |
| 20-Nov-18 | 0:00:00 | 0 |
| 21-Nov-18 | 0:00:00 | 0 |
| 22-Nov-18 | 0:00:00 | 0 |
| 23-Nov-18 | 0:00:00 | 0 |
| 24-Nov-18 | 0:00:00 | 0 |
| 25-Nov-18 | 0:00:00 | 0 |
| 19-Oct-18 | 0:00:00 | 0 |
| 20-Oct-18 | 0:00:00 | 0 |
| 21-Oct-18 | 0:00:00 | 0 |
| 22-Oct-18 | 0:00:00 | 0 |
| 23-Oct-18 | 0:00:00 | 0 |
| 24-Oct-18 | 0:00:00 | 0 |
| 25-Oct-18 | 0:00:00 | 0 |
| 26-Oct-18 | 0:00:00 | 0 |
| 27-Oct-18 | 0:00:00 | 0 |
| 28-Oct-18 | 0:00:00 | 0 |
| 29-Oct-18 | 0:00:00 | 0 |
| 30-Oct-18 | 0:00:00 | 0 |
| 31-Oct-18 | 0:00:00 | 0 |
| 1-Nov-18 | 0:00:00 | 0 |
| 2-Nov-18 | 0:00:00 | 0 |
| 3-Nov-18 | 0:00:00 | 0 |
| 4-Nov-18 | 0:00:00 | 0 |
| 5-Nov-18 | 0:00:00 | 0 |
| 6-Nov-18 | 0:00:00 | 0 |
| 7-Nov-18 | 0:00:00 | 0 |
| 8-Nov-18 | 0:00:00 | 0 |
| 9-Nov-18 | 0:00:00 | 0 |
| 10-Nov-18 | 0:00:00 | 0 |
| 11-Nov-18 | 0:00:00 | 0 |
| 12-Nov-18 | 0:00:00 | 0 |
| 13-Nov-18 | 0:00:00 | 0 |
| 14-Nov-18 | 0:00:00 | 0 |
| 15-Nov-18 | 0:00:00 | 0 |
| 16-Nov-18 | 0:00:00 | 0 |
| 17-Nov-18 | 0:00:00 | 0 |
| 18-Nov-18 | 0:00:00 | 0 |
| 19-Nov-18 | 0:00:00 | 0 |
| 20-Nov-18 | 0:00:00 | 0 |
| 21-Nov-18 | 0:00:00 | 0 |
| 22-Nov-18 | 0:00:00 | 0 |
| 23-Nov-18 | 0:00:00 | 0 |
| 24-Nov-18 | 0:00:00 | 0 |
| 25-Nov-18 | 0:00:00 | 0 |
| 26-Nov-18 | 0:00:00 | 0 |
| 27-Nov-18 | 0:00:00 | 0 |
| 28-Nov-18 | 0:00:00 | 0 |
| 29-Nov-18 | 0:00:00 | 0 |
| 30-Nov-18 | 0:00:00 | 0 |
| 1-Dec-18 | 0:00:00 | 0 |
| 2-Dec-18 | 0:00:00 | 0 |
| 3-Dec-18 | 0:00:00 | 0 |
| 4-Dec-18 | 0:00:00 | 0 |
| 5-Dec-18 | 0:00:00 | 0 |
| 6-Dec-18 | 0:00:00 | 0 |
| 7-Dec-18 | 0:00:00 | 0 |
| 8-Dec-18 | 0:00:00 | 0 |
| 9-Dec-18 | 0:00:00 | 0 |
| 10-Dec-18 | 0:00:00 | 0 |

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|-----------|---------|---|-----------|---------|---|
| 11-Dec-18 | 0:00:00 | 0 | 17-Feb-19 | 0:00:00 | 0 |
| 12-Dec-18 | 0:00:00 | 0 | 18-Feb-19 | 0:00:00 | 0 |
| 13-Dec-18 | 0:00:00 | 0 | 19-Feb-19 | 0:00:00 | 0 |
| 14-Dec-18 | 0:00:00 | 0 | 20-Feb-19 | 0:00:00 | 0 |
| 15-Dec-18 | 0:00:00 | 0 | 21-Feb-19 | 0:00:00 | 0 |
| 16-Dec-18 | 0:00:00 | 0 | 22-Feb-19 | 0:00:00 | 0 |
| 17-Dec-18 | 0:00:00 | 0 | 23-Feb-19 | 0:00:00 | 0 |
| 18-Dec-18 | 0:00:00 | 0 | 24-Feb-19 | 0:00:00 | 0 |
| 19-Dec-18 | 0:00:00 | 0 | 25-Feb-19 | 0:00:00 | 0 |
| 20-Dec-18 | 0:00:00 | 0 | 26-Feb-19 | 0:00:00 | 0 |
| 21-Dec-18 | 0:00:00 | 0 | 27-Feb-19 | 0:00:00 | 0 |
| 22-Dec-18 | 0:00:00 | 0 | 28-Feb-19 | 0:00:00 | 0 |
| 23-Dec-18 | 0:00:00 | 0 | 1-Mar-19 | 0:00:00 | 0 |
| 24-Dec-18 | 0:00:00 | 0 | 2-Mar-19 | 0:00:00 | 0 |
| 25-Dec-18 | 0:00:00 | 0 | 3-Mar-19 | 0:00:00 | 0 |
| 26-Dec-18 | 0:00:00 | 0 | 4-Mar-19 | 0:00:00 | 0 |
| 27-Dec-18 | 0:00:00 | 0 | 5-Mar-19 | 0:00:00 | 0 |
| 28-Dec-18 | 0:00:00 | 0 | 6-Mar-19 | 0:00:00 | 0 |
| 29-Dec-18 | 0:00:00 | 0 | 7-Mar-19 | 0:00:00 | 0 |
| 30-Dec-18 | 0:00:00 | 0 | 8-Mar-19 | 0:00:00 | 0 |
| 31-Dec-18 | 0:00:00 | 0 | 9-Mar-19 | 0:00:00 | 0 |
| 1-Jan-19 | 0:00:00 | 0 | 10-Mar-19 | 0:00:00 | 0 |
| 2-Jan-19 | 0:00:00 | 0 | 11-Mar-19 | 0:00:00 | 0 |
| 3-Jan-19 | 0:00:00 | 0 | 12-Mar-19 | 0:00:00 | 0 |
| 4-Jan-19 | 0:00:00 | 0 | 13-Mar-19 | 0:00:00 | 0 |
| 5-Jan-19 | 0:00:00 | 0 | 14-Mar-19 | 0:00:00 | 0 |
| 6-Jan-19 | 0:00:00 | 0 | 15-Mar-19 | 0:00:00 | 0 |
| 7-Jan-19 | 0:00:00 | 0 | 16-Mar-19 | 0:00:00 | 0 |
| 8-Jan-19 | 0:00:00 | 0 | 17-Mar-19 | 0:00:00 | 0 |
| 9-Jan-19 | 0:00:00 | 0 | 18-Mar-19 | 0:00:00 | 0 |
| 10-Jan-19 | 0:00:00 | 0 | 19-Mar-19 | 0:00:00 | 0 |
| 11-Jan-19 | 0:00:00 | 0 | 20-Mar-19 | 0:00:00 | 0 |
| 12-Jan-19 | 0:00:00 | 0 | 21-Mar-19 | 0:00:00 | 0 |
| 13-Jan-19 | 0:00:00 | 0 | 22-Mar-19 | 0:00:00 | 0 |
| 14-Jan-19 | 0:00:00 | 0 | 23-Mar-19 | 0:00:00 | 0 |
| 15-Jan-19 | 0:00:00 | 0 | 24-Mar-19 | 0:00:00 | 0 |
| 16-Jan-19 | 0:00:00 | 0 | 25-Mar-19 | 0:00:00 | 0 |
| 17-Jan-19 | 0:00:00 | 0 | 26-Mar-19 | 0:00:00 | 0 |
| 18-Jan-19 | 0:00:00 | 0 | 27-Mar-19 | 0:00:00 | 0 |
| 19-Jan-19 | 0:00:00 | 0 | 28-Mar-19 | 0:00:00 | 0 |
| 20-Jan-19 | 0:00:00 | 0 | 29-Mar-19 | 0:00:00 | 0 |
| 21-Jan-19 | 0:00:00 | 0 | 30-Mar-19 | 0:00:00 | 0 |
| 22-Jan-19 | 0:00:00 | 0 | 31-Mar-19 | 0:00:00 | 0 |
| 23-Jan-19 | 0:00:00 | 0 | 1-Apr-19 | 0:00:00 | 0 |
| 24-Jan-19 | 0:00:00 | 0 | 2-Apr-19 | 0:00:00 | 0 |
| 25-Jan-19 | 0:00:00 | 0 | 3-Apr-19 | 0:00:00 | 0 |
| 26-Jan-19 | 0:00:00 | 0 | 4-Apr-19 | 0:00:00 | 0 |
| 27-Jan-19 | 0:00:00 | 0 | 5-Apr-19 | 0:00:00 | 0 |
| 28-Jan-19 | 0:00:00 | 0 | 6-Apr-19 | 0:00:00 | 0 |
| 29-Jan-19 | 0:00:00 | 0 | 7-Apr-19 | 0:00:00 | 0 |
| 30-Jan-19 | 0:00:00 | 0 | 8-Apr-19 | 0:00:00 | 0 |
| 31-Jan-19 | 0:00:00 | 0 | 9-Apr-19 | 0:00:00 | 0 |
| 1-Feb-19 | 0:00:00 | 0 | 10-Apr-19 | 0:00:00 | 0 |
| 2-Feb-19 | 0:00:00 | 0 | 11-Apr-19 | 0:00:00 | 0 |
| 3-Feb-19 | 0:00:00 | 0 | 12-Apr-19 | 0:00:00 | 0 |
| 4-Feb-19 | 0:00:00 | 0 | 13-Apr-19 | 0:00:00 | 0 |
| 5-Feb-19 | 0:00:00 | 0 | 14-Apr-19 | 0:00:00 | 0 |
| 6-Feb-19 | 0:00:00 | 0 | 15-Apr-19 | 0:00:00 | 0 |
| 7-Feb-19 | 0:00:00 | 0 | 16-Apr-19 | 0:00:00 | 0 |
| 8-Feb-19 | 0:00:00 | 0 | 17-Apr-19 | 0:00:00 | 0 |
| 9-Feb-19 | 0:00:00 | 0 | 18-Apr-19 | 0:00:00 | 0 |
| 10-Feb-19 | 0:00:00 | 0 | 19-Apr-19 | 0:00:00 | 0 |
| 11-Feb-19 | 0:00:00 | 0 | 20-Apr-19 | 0:00:00 | 0 |
| 12-Feb-19 | 0:00:00 | 0 | 21-Apr-19 | 0:00:00 | 0 |
| 13-Feb-19 | 0:00:00 | 0 | 22-Apr-19 | 0:00:00 | 0 |
| 14-Feb-19 | 0:00:00 | 0 | 23-Apr-19 | 0:00:00 | 0 |
| 15-Feb-19 | 0:00:00 | 0 | 24-Apr-19 | 0:00:00 | 0 |
| 16-Feb-19 | 0:00:00 | 0 | 25-Apr-19 | 0:00:00 | 0 |

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|-----------|---------|---|-----------|---------|---|
| 26-Apr-19 | 0:00:00 | 0 | 3-Jul-19 | 0:00:00 | 0 |
| 27-Apr-19 | 0:00:00 | 0 | 4-Jul-19 | 0:00:00 | 0 |
| 28-Apr-19 | 0:00:00 | 0 | 5-Jul-19 | 0:00:00 | 0 |
| 29-Apr-19 | 0:00:00 | 0 | 6-Jul-19 | 0:00:00 | 0 |
| 30-Apr-19 | 0:00:00 | 0 | 7-Jul-19 | 0:00:00 | 0 |
| 1-May-19 | 0:00:00 | 0 | 8-Jul-19 | 0:00:00 | 0 |
| 2-May-19 | 0:00:00 | 0 | 9-Jul-19 | 0:00:00 | 0 |
| 3-May-19 | 0:00:00 | 0 | 10-Jul-19 | 0:00:00 | 0 |
| 4-May-19 | 0:00:00 | 0 | 11-Jul-19 | 0:00:00 | 0 |
| 5-May-19 | 0:00:00 | 0 | 12-Jul-19 | 0:00:00 | 0 |
| 6-May-19 | 0:00:00 | 0 | 13-Jul-19 | 0:00:00 | 0 |
| 7-May-19 | 0:00:00 | 0 | 14-Jul-19 | 0:00:00 | 0 |
| 8-May-19 | 0:00:00 | 0 | 15-Jul-19 | 0:00:00 | 0 |
| 9-May-19 | 0:00:00 | 0 | 16-Jul-19 | 0:00:00 | 0 |
| 10-May-19 | 0:00:00 | 0 | 17-Jul-19 | 0:00:00 | 0 |
| 11-May-19 | 0:00:00 | 0 | 18-Jul-19 | 0:00:00 | 0 |
| 12-May-19 | 0:00:00 | 0 | 19-Jul-19 | 0:00:00 | 0 |
| 13-May-19 | 0:00:00 | 0 | 20-Jul-19 | 0:00:00 | 0 |
| 14-May-19 | 0:00:00 | 0 | 21-Jul-19 | 0:00:00 | 0 |
| 15-May-19 | 0:00:00 | 0 | 22-Jul-19 | 0:00:00 | 0 |
| 16-May-19 | 0:00:00 | 0 | 23-Jul-19 | 0:00:00 | 0 |
| 17-May-19 | 0:00:00 | 0 | 24-Jul-19 | 0:00:00 | 0 |
| 18-May-19 | 0:00:00 | 0 | 25-Jul-19 | 0:00:00 | 0 |
| 19-May-19 | 0:00:00 | 0 | 26-Jul-19 | 0:00:00 | 0 |
| 20-May-19 | 0:00:00 | 0 | 27-Jul-19 | 0:00:00 | 0 |
| 21-May-19 | 0:00:00 | 0 | 28-Jul-19 | 0:00:00 | 0 |
| 22-May-19 | 0:00:00 | 0 | 29-Jul-19 | 0:00:00 | 0 |
| 23-May-19 | 0:00:00 | 0 | 30-Jul-19 | 0:00:00 | 0 |
| 24-May-19 | 0:00:00 | 0 | 31-Jul-19 | 0:00:00 | 0 |
| 25-May-19 | 0:00:00 | 0 | 1-Aug-19 | 0:00:00 | 0 |
| 26-May-19 | 0:00:00 | 0 | 2-Aug-19 | 0:00:00 | 0 |
| 27-May-19 | 0:00:00 | 0 | 3-Aug-19 | 0:00:00 | 0 |
| 28-May-19 | 0:00:00 | 0 | 4-Aug-19 | 0:00:00 | 0 |
| 29-May-19 | 0:00:00 | 0 | 5-Aug-19 | 0:00:00 | 0 |
| 30-May-19 | 0:00:00 | 0 | 6-Aug-19 | 0:00:00 | 0 |
| 31-May-19 | 0:00:00 | 0 | 7-Aug-19 | 0:00:00 | 0 |
| 1-Jun-19 | 0:00:00 | 0 | 8-Aug-19 | 0:00:00 | 0 |
| 2-Jun-19 | 0:00:00 | 0 | 9-Aug-19 | 0:00:00 | 0 |
| 3-Jun-19 | 0:00:00 | 0 | 10-Aug-19 | 0:00:00 | 0 |
| 4-Jun-19 | 0:00:00 | 0 | 11-Aug-19 | 0:00:00 | 0 |
| 5-Jun-19 | 0:00:00 | 0 | 12-Aug-19 | 0:00:00 | 0 |
| 6-Jun-19 | 0:00:00 | 0 | 13-Aug-19 | 0:00:00 | 0 |
| 7-Jun-19 | 0:00:00 | 0 | 14-Aug-19 | 0:00:00 | 0 |
| 8-Jun-19 | 0:00:00 | 0 | 15-Aug-19 | 0:00:00 | 0 |
| 9-Jun-19 | 0:00:00 | 0 | 16-Aug-19 | 0:00:00 | 0 |
| 10-Jun-19 | 0:00:00 | 0 | 17-Aug-19 | 0:00:00 | 0 |
| 11-Jun-19 | 0:00:00 | 0 | 18-Aug-19 | 0:00:00 | 0 |
| 12-Jun-19 | 0:00:00 | 0 | 19-Aug-19 | 0:00:00 | 0 |
| 13-Jun-19 | 0:00:00 | 0 | 20-Aug-19 | 0:00:00 | 0 |
| 14-Jun-19 | 0:00:00 | 0 | 21-Aug-19 | 0:00:00 | 0 |
| 15-Jun-19 | 0:00:00 | 0 | 22-Aug-19 | 0:00:00 | 0 |
| 16-Jun-19 | 0:00:00 | 0 | 23-Aug-19 | 0:00:00 | 0 |
| 17-Jun-19 | 0:00:00 | 0 | 24-Aug-19 | 0:00:00 | 0 |
| 18-Jun-19 | 0:00:00 | 0 | 25-Aug-19 | 0:00:00 | 0 |
| 19-Jun-19 | 0:00:00 | 0 | 26-Aug-19 | 0:00:00 | 0 |
| 20-Jun-19 | 0:00:00 | 0 | 27-Aug-19 | 0:00:00 | 0 |
| 21-Jun-19 | 0:00:00 | 0 | 28-Aug-19 | 0:00:00 | 0 |
| 22-Jun-19 | 0:00:00 | 0 | 29-Aug-19 | 0:00:00 | 0 |
| 23-Jun-19 | 0:00:00 | 0 | 30-Aug-19 | 0:00:00 | 0 |
| 24-Jun-19 | 0:00:00 | 0 | 31-Aug-19 | 0:00:00 | 0 |
| 25-Jun-19 | 0:00:00 | 0 | 1-Sep-19 | 0:00:00 | 0 |
| 26-Jun-19 | 0:00:00 | 0 | 2-Sep-19 | 0:00:00 | 0 |
| 27-Jun-19 | 0:00:00 | 0 | 3-Sep-19 | 0:00:00 | 0 |
| 28-Jun-19 | 0:00:00 | 0 | 4-Sep-19 | 0:00:00 | 0 |
| 29-Jun-19 | 0:00:00 | 0 | 5-Sep-19 | 0:00:00 | 0 |
| 30-Jun-19 | 0:00:00 | 0 | 6-Sep-19 | 0:00:00 | 0 |
| 1-Jul-19 | 0:00:00 | 0 | 7-Sep-19 | 0:00:00 | 0 |
| 2-Jul-19 | 0:00:00 | 0 | 8-Sep-19 | 0:00:00 | 0 |

| | | | | | |
|-----------|---------|---|-----------|---------|---|
| 9-Sep-19 | 0:00:00 | 0 | 16-Nov-19 | 0:00:00 | 0 |
| 10-Sep-19 | 0:00:00 | 0 | 17-Nov-19 | 0:00:00 | 0 |
| 11-Sep-19 | 0:00:00 | 0 | 18-Nov-19 | 0:00:00 | 0 |
| 12-Sep-19 | 0:00:00 | 0 | 19-Nov-19 | 0:00:00 | 0 |
| 13-Sep-19 | 0:00:00 | 0 | 20-Nov-19 | 0:00:00 | 0 |
| 14-Sep-19 | 0:00:00 | 0 | 21-Nov-19 | 0:00:00 | 0 |
| 15-Sep-19 | 0:00:00 | 0 | 22-Nov-19 | 0:00:00 | 0 |
| 16-Sep-19 | 0:00:00 | 0 | 23-Nov-19 | 0:00:00 | 0 |
| 17-Sep-19 | 0:00:00 | 0 | 24-Nov-19 | 0:00:00 | 0 |
| 18-Sep-19 | 0:00:00 | 0 | 25-Nov-19 | 0:00:00 | 0 |
| 19-Sep-19 | 0:00:00 | 0 | 26-Nov-19 | 0:00:00 | 0 |
| 20-Sep-19 | 0:00:00 | 0 | 27-Nov-19 | 0:00:00 | 0 |
| 21-Sep-19 | 0:00:00 | 0 | 28-Nov-19 | 0:00:00 | 0 |
| 22-Sep-19 | 0:00:00 | 0 | 29-Nov-19 | 0:00:00 | 0 |
| 23-Sep-19 | 0:00:00 | 0 | 30-Nov-19 | 0:00:00 | 0 |
| 24-Sep-19 | 0:00:00 | 0 | 1-Dec-19 | 0:00:00 | 0 |
| 25-Sep-19 | 0:00:00 | 0 | 2-Dec-19 | 0:00:00 | 0 |
| 26-Sep-19 | 0:00:00 | 0 | 3-Dec-19 | 0:00:00 | 0 |
| 27-Sep-19 | 0:00:00 | 0 | 4-Dec-19 | 0:00:00 | 0 |
| 28-Sep-19 | 0:00:00 | 0 | 5-Dec-19 | 0:00:00 | 0 |
| 29-Sep-19 | 0:00:00 | 0 | 6-Dec-19 | 0:00:00 | 0 |
| 30-Sep-19 | 0:00:00 | 0 | 7-Dec-19 | 0:00:00 | 0 |
| 1-Oct-19 | 0:00:00 | 0 | 8-Dec-19 | 0:00:00 | 0 |
| 2-Oct-19 | 0:00:00 | 0 | 9-Dec-19 | 0:00:00 | 0 |
| 3-Oct-19 | 0:00:00 | 0 | 10-Dec-19 | 0:00:00 | 0 |
| 4-Oct-19 | 0:00:00 | 0 | 11-Dec-19 | 0:00:00 | 0 |
| 5-Oct-19 | 0:00:00 | 0 | 12-Dec-19 | 0:00:00 | 0 |
| 6-Oct-19 | 0:00:00 | 0 | 13-Dec-19 | 0:00:00 | 0 |
| 7-Oct-19 | 0:00:00 | 0 | 14-Dec-19 | 0:00:00 | 0 |
| 8-Oct-19 | 0:00:00 | 0 | 15-Dec-19 | 0:00:00 | 0 |
| 9-Oct-19 | 0:00:00 | 0 | 16-Dec-19 | 0:00:00 | 0 |
| 10-Oct-19 | 0:00:00 | 0 | 17-Dec-19 | 0:00:00 | 0 |
| 11-Oct-19 | 0:00:00 | 0 | 18-Dec-19 | 0:00:00 | 0 |
| 12-Oct-19 | 0:00:00 | 0 | 19-Dec-19 | 0:00:00 | 0 |
| 13-Oct-19 | 0:00:00 | 0 | 20-Dec-19 | 0:00:00 | 0 |
| 14-Oct-19 | 0:00:00 | 0 | 21-Dec-19 | 0:00:00 | 0 |
| 15-Oct-19 | 0:00:00 | 0 | 22-Dec-19 | 0:00:00 | 0 |
| 16-Oct-19 | 0:00:00 | 0 | 23-Dec-19 | 0:00:00 | 0 |
| 17-Oct-19 | 0:00:00 | 0 | 24-Dec-19 | 0:00:00 | 0 |
| 18-Oct-19 | 0:00:00 | 0 | 25-Dec-19 | 0:00:00 | 0 |
| 19-Oct-19 | 0:00:00 | 0 | 26-Dec-19 | 0:00:00 | 0 |
| 20-Oct-19 | 0:00:00 | 0 | 27-Dec-19 | 0:00:00 | 0 |
| 21-Oct-19 | 0:00:00 | 0 | 28-Dec-19 | 0:00:00 | 0 |
| 22-Oct-19 | 0:00:00 | 0 | 29-Dec-19 | 0:00:00 | 0 |
| 23-Oct-19 | 0:00:00 | 0 | 30-Dec-19 | 0:00:00 | 0 |
| 24-Oct-19 | 0:00:00 | 0 | 31-Dec-19 | 0:00:00 | 0 |
| 25-Oct-19 | 0:00:00 | 0 | | | |
| 26-Oct-19 | 0:00:00 | 0 | | | |
| 27-Oct-19 | 0:00:00 | 0 | | | |
| 28-Oct-19 | 0:00:00 | 0 | | | |
| 29-Oct-19 | 0:00:00 | 0 | | | |
| 30-Oct-19 | 0:00:00 | 0 | | | |
| 31-Oct-19 | 0:00:00 | 0 | | | |
| 1-Nov-19 | 0:00:00 | 0 | | | |
| 2-Nov-19 | 0:00:00 | 0 | | | |
| 3-Nov-19 | 0:00:00 | 0 | | | |
| 4-Nov-19 | 0:00:00 | 0 | | | |
| 5-Nov-19 | 0:00:00 | 0 | | | |
| 6-Nov-19 | 0:00:00 | 0 | | | |
| 7-Nov-19 | 0:00:00 | 0 | | | |
| 8-Nov-19 | 0:00:00 | 0 | | | |
| 9-Nov-19 | 0:00:00 | 0 | | | |
| 10-Nov-19 | 0:00:00 | 0 | | | |
| 11-Nov-19 | 0:00:00 | 0 | | | |
| 12-Nov-19 | 0:00:00 | 0 | | | |
| 13-Nov-19 | 0:00:00 | 0 | | | |
| 14-Nov-19 | 0:00:00 | 0 | | | |
| 15-Nov-19 | 0:00:00 | 0 | | | |

LOS ALAMOS COUNTY
OTOWI 2 WELL PUMP DRIVE
LIFE CYCLE ANALYSIS

APPENDIX G

OTTOWI 4 WELL
RUNTIME DATA

**WILSON
& COMPANY**

discipline | intensity | collaboration | shared ownership | solutions

| Interval | start | Total | Peak | Date | time |
|-----------|---------|-------|------|--------|----------|
| 1-Jan-18 | 0:00:00 | 7.62 | 7.92 | 1-Jan | 23:59:59 |
| 2-Jan-18 | 0:00:00 | 7.92 | 7.92 | 2-Jan | 0:00:00 |
| 3-Jan-18 | 0:00:00 | 7.25 | 7.25 | 3-Jan | 0:00:00 |
| 4-Jan-18 | 0:00:00 | 6.44 | 6.7 | 4-Jan | 23:59:59 |
| 5-Jan-18 | 0:00:00 | 6.7 | 6.7 | 5-Jan | 0:00:00 |
| 6-Jan-18 | 0:00:00 | 6.61 | 7.77 | 6-Jan | 23:59:59 |
| 7-Jan-18 | 0:00:00 | 7.75 | 7.92 | 7-Jan | 23:59:59 |
| 8-Jan-18 | 0:00:00 | 7.91 | 7.91 | 8-Jan | 0:00:00 |
| 9-Jan-18 | 0:00:00 | 7.28 | 7.28 | 9-Jan | 0:00:00 |
| 10-Jan-18 | 0:00:00 | 6.67 | 6.67 | 10-Jan | 0:00:00 |
| 11-Jan-18 | 0:00:00 | 6.42 | 6.52 | 11-Jan | 23:59:59 |
| 12-Jan-18 | 0:00:00 | 6.52 | 6.92 | 12-Jan | 23:59:59 |
| 13-Jan-18 | 0:00:00 | 6.91 | 7.95 | 13-Jan | 23:59:59 |
| 14-Jan-18 | 0:00:00 | 7.94 | 7.94 | 14-Jan | 0:00:00 |
| 15-Jan-18 | 0:00:00 | 7.41 | 7.83 | 15-Jan | 23:59:59 |
| 16-Jan-18 | 0:00:00 | 7.83 | 7.83 | 16-Jan | 0:00:00 |
| 17-Jan-18 | 0:00:00 | 6.02 | 6.41 | 17-Jan | 23:59:59 |
| 18-Jan-18 | 0:00:00 | 6.39 | 6.67 | 18-Jan | 23:59:59 |
| 19-Jan-18 | 0:00:00 | 6.66 | 6.77 | 19-Jan | 23:59:59 |
| 20-Jan-18 | 0:00:00 | 6.75 | 7.67 | 20-Jan | 23:59:59 |
| 21-Jan-18 | 0:00:00 | 7.66 | 7.69 | 21-Jan | 23:59:59 |
| 22-Jan-18 | 0:00:00 | 7.67 | 7.8 | 22-Jan | 23:59:59 |
| 23-Jan-18 | 0:00:00 | 7.78 | 7.78 | 23-Jan | 0:00:00 |
| 24-Jan-18 | 0:00:00 | 7.09 | 7.09 | 24-Jan | 0:00:00 |
| 25-Jan-18 | 0:00:00 | 6.58 | 6.73 | 25-Jan | 23:59:59 |
| 26-Jan-18 | 0:00:00 | 6.73 | 6.8 | 26-Jan | 23:59:59 |
| 27-Jan-18 | 0:00:00 | 6.78 | 7.73 | 27-Jan | 23:59:59 |
| 28-Jan-18 | 0:00:00 | 7.72 | 7.72 | 28-Jan | 0:00:00 |
| 29-Jan-18 | 0:00:00 | 7.47 | 7.47 | 29-Jan | 0:00:00 |
| 30-Jan-18 | 0:00:00 | 6.53 | 6.61 | 30-Jan | 23:59:59 |
| 31-Jan-18 | 0:00:00 | 6.61 | 6.83 | 31-Jan | 23:59:59 |
| 1-Feb-18 | 0:00:00 | 6.81 | 7.03 | 1-Feb | 23:59:59 |
| 2-Feb-18 | 0:00:00 | 7.02 | 7.02 | 2-Feb | 0:00:00 |
| 3-Feb-18 | 0:00:00 | 6.41 | 7.98 | 3-Feb | 23:59:59 |
| 4-Feb-18 | 0:00:00 | 6.61 | 7.78 | 4-Feb | 23:59:59 |
| 5-Feb-18 | 0:00:00 | 7.77 | 7.77 | 5-Feb | 0:00:00 |
| 6-Feb-18 | 0:00:00 | 7.16 | 7.16 | 6-Feb | 0:00:00 |
| 7-Feb-18 | 0:00:00 | 4.83 | 4.83 | 7-Feb | 0:00:00 |
| 8-Feb-18 | 0:00:00 | 3.52 | 7.44 | 8-Feb | 23:59:59 |
| 9-Feb-18 | 0:00:00 | 7.42 | 7.42 | 9-Feb | 0:00:00 |
| 10-Feb-18 | 0:00:00 | 6.48 | 8.02 | 10-Feb | 23:59:59 |
| 11-Feb-18 | 0:00:00 | 8 | 8 | 11-Feb | 0:00:00 |
| 12-Feb-18 | 0:00:00 | 6.39 | 6.83 | 12-Feb | 23:59:59 |
| 13-Feb-18 | 0:00:00 | 6.83 | 6.83 | 13-Feb | 0:00:00 |
| 14-Feb-18 | 0:00:00 | 6.61 | 6.75 | 14-Feb | 23:59:59 |
| 15-Feb-18 | 0:00:00 | 6.73 | 6.83 | 15-Feb | 23:59:59 |
| 16-Feb-18 | 0:00:00 | 6.81 | 6.84 | 16-Feb | 23:59:59 |
| 17-Feb-18 | 0:00:00 | 6.83 | 7.69 | 17-Feb | 23:59:59 |
| 18-Feb-18 | 0:00:00 | 7.67 | 7.67 | 18-Feb | 0:00:00 |
| 19-Feb-18 | 0:00:00 | 7.66 | 7.83 | 19-Feb | 23:59:59 |
| 20-Feb-18 | 0:00:00 | 7.81 | 7.81 | 20-Feb | 0:00:00 |
| 21-Feb-18 | 0:00:00 | 6.69 | 6.69 | 21-Feb | 0:00:00 |
| 22-Feb-18 | 0:00:00 | 5.73 | 6.56 | 22-Feb | 23:59:59 |
| 23-Feb-18 | 0:00:00 | 6.56 | 7.03 | 23-Feb | 23:59:59 |
| 24-Feb-18 | 0:00:00 | 7.02 | 7.95 | 24-Feb | 23:59:59 |
| 25-Feb-18 | 0:00:00 | 7.94 | 7.94 | 25-Feb | 0:00:00 |
| 26-Feb-18 | 0:00:00 | 7.28 | 7.36 | 26-Feb | 23:59:59 |
| 27-Feb-18 | 0:00:00 | 7.36 | 7.36 | 27-Feb | 0:00:00 |
| 28-Feb-18 | 0:00:00 | 6.61 | 6.61 | 28-Feb | 0:00:00 |
| 1-Mar-18 | 0:00:00 | 6.48 | 6.59 | 1-Mar | 23:59:59 |
| 2-Mar-18 | 0:00:00 | 6.59 | 7.06 | 2-Mar | 23:59:59 |
| 3-Mar-18 | 0:00:00 | 7.05 | 7.78 | 3-Mar | 23:59:59 |
| 4-Mar-18 | 0:00:00 | 7.77 | 7.77 | 4-Mar | 0:00:00 |
| 5-Mar-18 | 0:00:00 | 7.72 | 7.72 | 5-Mar | 0:00:00 |
| 6-Mar-18 | 0:00:00 | 6.52 | 6.52 | 6-Mar | 0:00:00 |
| 7-Mar-18 | 0:00:00 | 6.47 | 6.47 | 7-Mar | 0:00:00 |
| 8-Mar-18 | 0:00:00 | 6.47 | 6.47 | 8-Mar | 0:00:00 |
| 9-Mar-18 | 0:00:00 | 3.91 | 7.31 | 9-Mar | 23:59:59 |
| 10-Mar-18 | 0:00:00 | 7.3 | 8.05 | 10-Mar | 23:59:59 |
| 11-Mar-18 | 0:00:00 | 8.03 | 8.03 | 11-Mar | 0:00:00 |
| 12-Mar-18 | 0:00:00 | 7.69 | 7.69 | 12-Mar | 0:00:00 |
| 13-Mar-18 | 0:00:00 | 6.59 | 6.59 | 13-Mar | 0:00:00 |
| 14-Mar-18 | 0:00:00 | 6.53 | 6.53 | 14-Mar | 0:00:00 |
| 15-Mar-18 | 0:00:00 | 6.33 | 6.59 | 15-Mar | 23:59:59 |
| 16-Mar-18 | 0:00:00 | 6.59 | 6.78 | 16-Mar | 23:59:59 |
| 17-Mar-18 | 0:00:00 | 6.77 | 8.2 | 17-Mar | 23:59:59 |
| 18-Mar-18 | 0:00:00 | 8.19 | 8.19 | 18-Mar | 0:00:00 |
| 19-Mar-18 | 0:00:00 | 7.78 | 7.78 | 19-Mar | 0:00:00 |
| 20-Mar-18 | 0:00:00 | 7.78 | 7.78 | 20-Mar | 0:00:00 |
| 21-Mar-18 | 0:00:00 | 7.3 | 7.3 | 21-Mar | 0:00:00 |
| 22-Mar-18 | 0:00:00 | 6.5 | 6.55 | 22-Mar | 23:59:59 |
| 23-Mar-18 | 0:00:00 | 6.55 | 6.97 | 23-Mar | 23:59:59 |
| 24-Mar-18 | 0:00:00 | 6.95 | 8.12 | 24-Mar | 23:59:59 |
| 25-Mar-18 | 0:00:00 | 8.11 | 8.11 | 25-Mar | 0:00:00 |
| 26-Mar-18 | 0:00:00 | 7.77 | 7.77 | 26-Mar | 0:00:00 |
| 27-Mar-18 | 0:00:00 | 6.72 | 7 | 27-Mar | 23:59:59 |
| 28-Mar-18 | 0:00:00 | 7 | 7 | 28-Mar | 0:00:00 |
| 29-Mar-18 | 0:00:00 | 6.61 | 6.61 | 29-Mar | 0:00:00 |

Reporting on 1 points
Enter Start Date [28-JAN-2020]: 1-jan-2018
Enter Start Time [0:00:00] :
Enter Stop Date [1-JAN-2018]: 1-jan-2020
Enter Stop Time [23:59:59] :
Report increment (xx[M/H/D]): 1d
Searching history files

| Month | |
|-----------|---------|
| January | 219.62 |
| February | 190.56 |
| March | 215.57 |
| April | 251.86 |
| May | 438.88 |
| June | 363.34 |
| July | 557.07 |
| August | 420.38 |
| September | 399.13 |
| October | 254.13 |
| November | 231.29 |
| December | 239.31 |
| Totals | 3781.14 |

219.62 Jan-18

190.56 Feb-18

| Interval | start | Total | Peak | Date | time |
|-----------|---------|-------|-------|--------|----------|
| 30-Mar-18 | 0:00:00 | 6.45 | 7.06 | 30-Mar | 23:59:59 |
| 31-Mar-18 | 0:00:00 | 7.05 | 8.22 | 31-Mar | 23:59:59 |
| 1-Apr-18 | 0:00:00 | 8.2 | 8.2 | 1-Apr | 0:00:00 |
| 2-Apr-18 | 0:00:00 | 7.81 | 7.81 | 2-Apr | 0:00:00 |
| 3-Apr-18 | 0:00:00 | 6.5 | 6.5 | 3-Apr | 0:00:00 |
| 4-Apr-18 | 0:00:00 | 6.33 | 6.33 | 4-Apr | 0:00:00 |
| 5-Apr-18 | 0:00:00 | 6.3 | 6.52 | 5-Apr | 23:59:59 |
| 6-Apr-18 | 0:00:00 | 6.52 | 6.52 | 6-Apr | 0:00:00 |
| 7-Apr-18 | 0:00:00 | 6.5 | 8.08 | 7-Apr | 23:59:59 |
| 8-Apr-18 | 0:00:00 | 8.06 | 8.06 | 8-Apr | 0:00:00 |
| 9-Apr-18 | 0:00:00 | 7.78 | 7.78 | 9-Apr | 0:00:00 |
| 10-Apr-18 | 0:00:00 | 7.28 | 7.28 | 10-Apr | 0:00:00 |
| 11-Apr-18 | 0:00:00 | 6.7 | 6.7 | 11-Apr | 0:00:00 |
| 12-Apr-18 | 0:00:00 | 7.78 | 7.78 | 12-Apr | 0:00:00 |
| 13-Apr-18 | 0:00:00 | 6.59 | 16.02 | 13-Apr | 23:59:59 |
| 14-Apr-18 | 0:00:00 | 16 | 16 | 14-Apr | 0:00:00 |
| 15-Apr-18 | 0:00:00 | 8.06 | 8.06 | 15-Apr | 0:00:00 |
| 16-Apr-18 | 0:00:00 | 7.66 | 7.66 | 16-Apr | 0:00:00 |
| 17-Apr-18 | 0:00:00 | 6.94 | 6.94 | 17-Apr | 0:00:00 |
| 18-Apr-18 | 0:00:00 | 6.75 | 6.8 | 18-Apr | 23:59:59 |
| 19-Apr-18 | 0:00:00 | 6.78 | 6.8 | 19-Apr | 23:59:59 |
| 20-Apr-18 | 0:00:00 | 6.78 | 16.34 | 20-Apr | 23:59:59 |
| 21-Apr-18 | 0:00:00 | 16.33 | 16.33 | 21-Apr | 0:00:00 |
| 22-Apr-18 | 0:00:00 | 8.36 | 8.36 | 22-Apr | 0:00:00 |
| 23-Apr-18 | 0:00:00 | 7.8 | 7.8 | 23-Apr | 0:00:00 |
| 24-Apr-18 | 0:00:00 | 6.64 | 6.83 | 24-Apr | 23:59:59 |
| 25-Apr-18 | 0:00:00 | 6.81 | 6.81 | 25-Apr | 0:00:00 |
| 26-Apr-18 | 0:00:00 | 6.77 | 7.36 | 26-Apr | 23:59:59 |
| 27-Apr-18 | 0:00:00 | 7.34 | 24 | 27-Apr | 23:59:59 |
| 28-Apr-18 | 0:00:00 | 23.98 | 23.98 | 28-Apr | 0:00:00 |
| 29-Apr-18 | 0:00:00 | 8.89 | 8.89 | 29-Apr | 0:00:00 |
| 30-Apr-18 | 0:00:00 | 7.62 | 7.62 | 30-Apr | 0:00:00 |
| 1-May-18 | 0:00:00 | 6.72 | 6.75 | 1-May | 23:59:59 |
| 2-May-18 | 0:00:00 | 6.73 | 24 | 2-May | 23:59:59 |
| 3-May-18 | 0:00:00 | 23.98 | 24 | 3-May | 23:59:59 |
| 4-May-18 | 0:00:00 | 23.98 | 24 | 4-May | 23:59:59 |
| 5-May-18 | 0:00:00 | 6.64 | 7.94 | 5-May | 23:59:59 |
| 6-May-18 | 0:00:00 | 7.94 | 24 | 6-May | 23:59:59 |
| 7-May-18 | 0:00:00 | 23.98 | 23.98 | 7-May | 0:00:00 |
| 8-May-18 | 0:00:00 | 13.34 | 13.34 | 8-May | 0:00:00 |
| 9-May-18 | 0:00:00 | 13.31 | 14.89 | 9-May | 23:59:59 |
| 10-May-18 | 0:00:00 | 14.87 | 14.87 | 10-May | 0:00:00 |
| 11-May-18 | 0:00:00 | 11.67 | 19.91 | 11-May | 23:59:59 |
| 12-May-18 | 0:00:00 | 19.89 | 24 | 12-May | 23:59:59 |
| 13-May-18 | 0:00:00 | 7.94 | 12.8 | 13-May | 23:59:59 |
| 14-May-18 | 0:00:00 | 12.78 | 12.78 | 14-May | 0:00:00 |
| 15-May-18 | 0:00:00 | 12.59 | 12.59 | 15-May | 0:00:00 |
| 16-May-18 | 0:00:00 | 10.62 | 11.78 | 16-May | 23:59:59 |
| 17-May-18 | 0:00:00 | 11.77 | 12.28 | 17-May | 23:59:59 |
| 18-May-18 | 0:00:00 | 12.27 | 24 | 18-May | 23:59:59 |
| 19-May-18 | 0:00:00 | 23.98 | 24 | 19-May | 23:59:59 |
| 20-May-18 | 0:00:00 | 23.98 | 24 | 20-May | 23:59:59 |
| 21-May-18 | 0:00:00 | 23.98 | 23.98 | 21-May | 0:00:00 |
| 22-May-18 | 0:00:00 | 7.94 | 7.94 | 22-May | 0:00:00 |
| 23-May-18 | 0:00:00 | 7.94 | 12.11 | 23-May | 23:59:59 |
| 24-May-18 | 0:00:00 | 12.09 | 12.69 | 24-May | 23:59:59 |
| 25-May-18 | 0:00:00 | 12.67 | 12.67 | 25-May | 0:00:00 |
| 26-May-18 | 0:00:00 | 12.55 | 24 | 26-May | 23:59:59 |
| 27-May-18 | 0:00:00 | 23.98 | 23.98 | 27-May | 0:00:00 |
| 28-May-18 | 0:00:00 | 16.12 | 16.12 | 28-May | 0:00:00 |
| 29-May-18 | 0:00:00 | 7.94 | 12.05 | 29-May | 23:59:59 |
| 30-May-18 | 0:00:00 | 12.03 | 12.67 | 30-May | 23:59:59 |
| 31-May-18 | 0:00:00 | 12.66 | 12.66 | 31-May | 0:00:00 |
| 1-Jun-18 | 0:00:00 | 7.94 | 13.11 | 1-Jun | 23:59:59 |
| 2-Jun-18 | 0:00:00 | 13.09 | 24 | 2-Jun | 23:59:59 |
| 3-Jun-18 | 0:00:00 | 23.98 | 23.98 | 3-Jun | 0:00:00 |
| 4-Jun-18 | 0:00:00 | 8.44 | 8.44 | 4-Jun | 0:00:00 |
| 5-Jun-18 | 0:00:00 | 7.06 | 13.5 | 5-Jun | 23:59:59 |
| 6-Jun-18 | 0:00:00 | 13.48 | 13.48 | 6-Jun | 0:00:00 |
| 7-Jun-18 | 0:00:00 | 11.84 | 12.61 | 7-Jun | 23:59:59 |
| 8-Jun-18 | 0:00:00 | 12.59 | 13.84 | 8-Jun | 23:59:59 |
| 9-Jun-18 | 0:00:00 | 13.83 | 24 | 9-Jun | 23:59:59 |
| 10-Jun-18 | 0:00:00 | 23.98 | 23.98 | 10-Jun | 0:00:00 |
| 11-Jun-18 | 0:00:00 | 15.61 | 15.61 | 11-Jun | 0:00:00 |
| 12-Jun-18 | 0:00:00 | 9.97 | 12.69 | 12-Jun | 23:59:59 |
| 13-Jun-18 | 0:00:00 | 12.67 | 13.2 | 13-Jun | 23:59:59 |
| 14-Jun-18 | 0:00:00 | 8.44 | 14.87 | 14-Jun | 23:59:59 |
| 15-Jun-18 | 0:00:00 | 14.86 | 16.53 | 15-Jun | 23:59:59 |
| 16-Jun-18 | 0:00:00 | 16.52 | 16.52 | 16-Jun | 0:00:00 |
| 17-Jun-18 | 0:00:00 | 7.2 | 7.2 | 17-Jun | 0:00:00 |
| 18-Jun-18 | 0:00:00 | 6.95 | 6.95 | 18-Jun | 0:00:00 |
| 19-Jun-18 | 0:00:00 | 6.69 | 9.84 | 19-Jun | 23:59:59 |
| 20-Jun-18 | 0:00:00 | 9.83 | 10.12 | 20-Jun | 23:59:59 |
| 21-Jun-18 | 0:00:00 | 10.11 | 13.66 | 21-Jun | 23:59:59 |
| 22-Jun-18 | 0:00:00 | 13.64 | 14.2 | 22-Jun | 23:59:59 |
| 23-Jun-18 | 0:00:00 | 14.19 | 18.31 | 23-Jun | 23:59:59 |
| 24-Jun-18 | 0:00:00 | 18.3 | 18.3 | 24-Jun | 0:00:00 |
| 25-Jun-18 | 0:00:00 | 7.16 | 10.33 | 25-Jun | 23:59:59 |

215.57 Mar-18

251.86 Apr-18

438.88 May-18

| Interval | start | Total | Peak | Date | time |
|-----------|---------|-------|-------|--------|----------|
| 26-Jun-18 | 0:00:00 | 10.31 | 13.19 | 26-Jun | 23:59:59 |
| 27-Jun-18 | 0:00:00 | 13.17 | 13.17 | 27-Jun | 0:00:00 |
| 28-Jun-18 | 0:00:00 | 12.19 | 12.19 | 28-Jun | 0:00:00 |
| 29-Jun-18 | 0:00:00 | 12.14 | 24 | 29-Jun | 23:59:59 |
| 30-Jun-18 | 0:00:00 | 7.16 | 24 | 30-Jun | 23:59:59 |
| 1-Jul-18 | 0:00:00 | 23.98 | 23.98 | 1-Jul | 0:00:00 |
| 2-Jul-18 | 0:00:00 | 16.8 | 16.8 | 2-Jul | 0:00:00 |
| 3-Jul-18 | 0:00:00 | 11.53 | 11.83 | 3-Jul | 23:59:59 |
| 4-Jul-18 | 0:00:00 | 11.81 | 24 | 4-Jul | 23:59:59 |
| 5-Jul-18 | 0:00:00 | 23.98 | 24 | 5-Jul | 23:59:59 |
| 6-Jul-18 | 0:00:00 | 23.98 | 24 | 6-Jul | 23:59:59 |
| 7-Jul-18 | 0:00:00 | 23.98 | 24 | 7-Jul | 23:59:59 |
| 8-Jul-18 | 0:00:00 | 23.98 | 23.98 | 8-Jul | 0:00:00 |
| 9-Jul-18 | 0:00:00 | 12.87 | 12.87 | 9-Jul | 0:00:00 |
| 10-Jul-18 | 0:00:00 | 11.58 | 11.86 | 10-Jul | 23:59:59 |
| 11-Jul-18 | 0:00:00 | 11.84 | 12.8 | 11-Jul | 23:59:59 |
| 12-Jul-18 | 0:00:00 | 12.78 | 24 | 12-Jul | 23:59:59 |
| 13-Jul-18 | 0:00:00 | 23.98 | 24 | 13-Jul | 23:59:59 |
| 14-Jul-18 | 0:00:00 | 23.98 | 24 | 14-Jul | 23:59:59 |
| 15-Jul-18 | 0:00:00 | 23.98 | 24 | 15-Jul | 23:59:59 |
| 16-Jul-18 | 0:00:00 | 23.98 | 23.98 | 16-Jul | 0:00:00 |
| 17-Jul-18 | 0:00:00 | 13.47 | 14.86 | 17-Jul | 23:59:59 |
| 18-Jul-18 | 0:00:00 | 14.84 | 14.84 | 18-Jul | 0:00:00 |
| 19-Jul-18 | 0:00:00 | 12.39 | 14.25 | 19-Jul | 23:59:59 |
| 20-Jul-18 | 0:00:00 | 14.23 | 21.72 | 20-Jul | 23:59:59 |
| 21-Jul-18 | 0:00:00 | 21.7 | 24 | 21-Jul | 23:59:59 |
| 22-Jul-18 | 0:00:00 | 23.98 | 23.98 | 22-Jul | 0:00:00 |
| 23-Jul-18 | 0:00:00 | 16.44 | 16.44 | 23-Jul | 0:00:00 |
| 24-Jul-18 | 0:00:00 | 12.81 | 15.05 | 24-Jul | 23:59:59 |
| 25-Jul-18 | 0:00:00 | 15.03 | 15.03 | 25-Jul | 0:00:00 |
| 26-Jul-18 | 0:00:00 | 14.52 | 14.52 | 26-Jul | 0:00:00 |
| 27-Jul-18 | 0:00:00 | 11.47 | 24 | 27-Jul | 23:59:59 |
| 28-Jul-18 | 0:00:00 | 23.98 | 24 | 28-Jul | 23:59:59 |
| 29-Jul-18 | 0:00:00 | 23.98 | 23.98 | 29-Jul | 0:00:00 |
| 30-Jul-18 | 0:00:00 | 16.06 | 17.16 | 30-Jul | 23:59:59 |
| 31-Jul-18 | 0:00:00 | 17.14 | 17.14 | 31-Jul | 0:00:00 |
| 1-Aug-18 | 0:00:00 | 14.87 | 14.87 | 1-Aug | 0:00:00 |
| 2-Aug-18 | 0:00:00 | 11.78 | 12.53 | 2-Aug | 23:59:59 |
| 3-Aug-18 | 0:00:00 | 12.52 | 17.73 | 3-Aug | 23:59:59 |
| 4-Aug-18 | 0:00:00 | 17.72 | 17.72 | 4-Aug | 0:00:00 |
| 5-Aug-18 | 0:00:00 | 14.7 | 15.19 | 5-Aug | 23:59:59 |
| 6-Aug-18 | 0:00:00 | 15.17 | 15.17 | 6-Aug | 0:00:00 |
| 7-Aug-18 | 0:00:00 | 10.59 | 14.3 | 7-Aug | 23:59:59 |
| 8-Aug-18 | 0:00:00 | 14.28 | 14.28 | 8-Aug | 0:00:00 |
| 9-Aug-18 | 0:00:00 | 12.97 | 14.64 | 9-Aug | 23:59:59 |
| 10-Aug-18 | 0:00:00 | 14.62 | 15.23 | 10-Aug | 23:59:59 |
| 11-Aug-18 | 0:00:00 | 15.22 | 15.22 | 11-Aug | 0:00:00 |
| 12-Aug-18 | 0:00:00 | 10.62 | 15.64 | 12-Aug | 23:59:59 |
| 13-Aug-18 | 0:00:00 | 15.62 | 17.62 | 13-Aug | 23:59:59 |
| 14-Aug-18 | 0:00:00 | 7.16 | 14.19 | 14-Aug | 23:59:59 |
| 15-Aug-18 | 0:00:00 | 14.17 | 14.91 | 15-Aug | 23:59:59 |
| 16-Aug-18 | 0:00:00 | 14.89 | 14.91 | 16-Aug | 23:59:59 |
| 17-Aug-18 | 0:00:00 | 14.89 | 14.89 | 17-Aug | 0:00:00 |
| 18-Aug-18 | 0:00:00 | 13.09 | 13.39 | 18-Aug | 23:59:59 |
| 19-Aug-18 | 0:00:00 | 13.37 | 14.11 | 19-Aug | 23:59:59 |
| 20-Aug-18 | 0:00:00 | 14.09 | 14.27 | 20-Aug | 23:59:59 |
| 21-Aug-18 | 0:00:00 | 14.25 | 14.25 | 21-Aug | 0:00:00 |
| 22-Aug-18 | 0:00:00 | 12.02 | 12.02 | 22-Aug | 0:00:00 |
| 23-Aug-18 | 0:00:00 | 11.36 | 11.36 | 23-Aug | 0:00:00 |
| 24-Aug-18 | 0:00:00 | 11.27 | 15.31 | 24-Aug | 23:59:59 |
| 25-Aug-18 | 0:00:00 | 15.3 | 15.3 | 25-Aug | 0:00:00 |
| 26-Aug-18 | 0:00:00 | 13.42 | 13.87 | 26-Aug | 23:59:59 |
| 27-Aug-18 | 0:00:00 | 13.86 | 13.94 | 27-Aug | 23:59:59 |
| 28-Aug-18 | 0:00:00 | 13.92 | 13.92 | 28-Aug | 0:00:00 |
| 29-Aug-18 | 0:00:00 | 6.64 | 12.03 | 29-Aug | 23:59:59 |
| 30-Aug-18 | 0:00:00 | 12.02 | 24 | 30-Aug | 23:59:59 |
| 31-Aug-18 | 0:00:00 | 23.98 | 24 | 31-Aug | 23:59:59 |
| 1-Sep-18 | 0:00:00 | 23.98 | 23.98 | 1-Sep | 0:00:00 |
| 2-Sep-18 | 0:00:00 | 14 | 14 | 2-Sep | 0:00:00 |
| 3-Sep-18 | 0:00:00 | 13.31 | 13.7 | 3-Sep | 23:59:59 |
| 4-Sep-18 | 0:00:00 | 13.69 | 13.69 | 4-Sep | 0:00:00 |
| 5-Sep-18 | 0:00:00 | 8.45 | 9.45 | 5-Sep | 23:59:59 |
| 6-Sep-18 | 0:00:00 | 9.44 | 14.36 | 6-Sep | 23:59:59 |
| 7-Sep-18 | 0:00:00 | 10.5 | 11.97 | 7-Sep | 23:59:59 |
| 8-Sep-18 | 0:00:00 | 11.95 | 15.5 | 8-Sep | 23:59:59 |
| 9-Sep-18 | 0:00:00 | 10.5 | 10.5 | 9-Sep | 0:00:00 |
| 10-Sep-18 | 0:00:00 | 8.91 | 10.7 | 10-Sep | 23:59:59 |
| 11-Sep-18 | 0:00:00 | 10.69 | 10.81 | 11-Sep | 23:59:59 |
| 12-Sep-18 | 0:00:00 | 10.8 | 11.25 | 12-Sep | 23:59:59 |
| 13-Sep-18 | 0:00:00 | 11.23 | 11.23 | 13-Sep | 0:00:00 |
| 14-Sep-18 | 0:00:00 | 11.06 | 12.2 | 14-Sep | 23:59:59 |
| 15-Sep-18 | 0:00:00 | 12.19 | 15.22 | 15-Sep | 23:59:59 |
| 16-Sep-18 | 0:00:00 | 15.2 | 15.2 | 16-Sep | 0:00:00 |
| 17-Sep-18 | 0:00:00 | 14.56 | 14.56 | 17-Sep | 0:00:00 |
| 18-Sep-18 | 0:00:00 | 11.41 | 12.56 | 18-Sep | 23:59:59 |
| 19-Sep-18 | 0:00:00 | 12.55 | 12.55 | 19-Sep | 0:00:00 |
| 20-Sep-18 | 0:00:00 | 10.5 | 15.37 | 20-Sep | 23:59:59 |
| 21-Sep-18 | 0:00:00 | 15.36 | 24 | 21-Sep | 23:59:59 |

363.34 Jun-18

557.07 Jul-18

420.38 Aug-18

| Interval | start | Total | Peak | Date | time |
|-----------|---------|-------|-------|--------|----------|
| 22-Sep-18 | 0:00:00 | 23.98 | 23.98 | 22-Sep | 0:00:00 |
| 23-Sep-18 | 0:00:00 | 15.78 | 15.78 | 23-Sep | 0:00:00 |
| 24-Sep-18 | 0:00:00 | 14.14 | 14.14 | 24-Sep | 0:00:00 |
| 25-Sep-18 | 0:00:00 | 13.83 | 15.05 | 25-Sep | 23:59:59 |
| 26-Sep-18 | 0:00:00 | 15.03 | 15.03 | 26-Sep | 0:00:00 |
| 27-Sep-18 | 0:00:00 | 14.28 | 14.28 | 27-Sep | 0:00:00 |
| 28-Sep-18 | 0:00:00 | 11.09 | 14.94 | 28-Sep | 23:59:59 |
| 29-Sep-18 | 0:00:00 | 14.92 | 15.81 | 29-Sep | 23:59:59 |
| 30-Sep-18 | 0:00:00 | 15.8 | 15.8 | 30-Sep | 0:00:00 |
| 1-Oct-18 | 0:00:00 | 14.75 | 14.75 | 1-Oct | 0:00:00 |
| 2-Oct-18 | 0:00:00 | 14.62 | 14.62 | 2-Oct | 0:00:00 |
| 3-Oct-18 | 0:00:00 | 9.69 | 12.2 | 3-Oct | 23:59:59 |
| 4-Oct-18 | 0:00:00 | 12.19 | 12.19 | 4-Oct | 0:00:00 |
| 5-Oct-18 | 0:00:00 | 11.06 | 12.27 | 5-Oct | 23:59:59 |
| 6-Oct-18 | 0:00:00 | 12.25 | 14.83 | 6-Oct | 23:59:59 |
| 7-Oct-18 | 0:00:00 | 14.81 | 14.81 | 7-Oct | 0:00:00 |
| 8-Oct-18 | 0:00:00 | 7.83 | 7.83 | 8-Oct | 0:00:00 |
| 9-Oct-18 | 0:00:00 | 6.86 | 6.86 | 9-Oct | 0:00:00 |
| 10-Oct-18 | 0:00:00 | 6.78 | 6.78 | 10-Oct | 0:00:00 |
| 11-Oct-18 | 0:00:00 | 6.78 | 6.78 | 11-Oct | 0:00:00 |
| 12-Oct-18 | 0:00:00 | 6.78 | 8.36 | 12-Oct | 23:59:59 |
| 13-Oct-18 | 0:00:00 | 8.34 | 8.34 | 13-Oct | 0:00:00 |
| 14-Oct-18 | 0:00:00 | 7.89 | 7.89 | 14-Oct | 0:00:00 |
| 15-Oct-18 | 0:00:00 | 7.75 | 7.75 | 15-Oct | 0:00:00 |
| 16-Oct-18 | 0:00:00 | 6.8 | 6.8 | 16-Oct | 0:00:00 |
| 17-Oct-18 | 0:00:00 | 6.53 | 6.75 | 17-Oct | 23:59:59 |
| 18-Oct-18 | 0:00:00 | 6.73 | 8.08 | 18-Oct | 23:59:59 |
| 19-Oct-18 | 0:00:00 | 8.08 | 8.08 | 19-Oct | 0:00:00 |
| 20-Oct-18 | 0:00:00 | 6.66 | 8.42 | 20-Oct | 23:59:59 |
| 21-Oct-18 | 0:00:00 | 8.08 | 8.08 | 21-Oct | 0:00:00 |
| 22-Oct-18 | 0:00:00 | 8.08 | 8.08 | 22-Oct | 0:00:00 |
| 23-Oct-18 | 0:00:00 | 6.78 | 6.78 | 23-Oct | 0:00:00 |
| 24-Oct-18 | 0:00:00 | 6.62 | 6.78 | 24-Oct | 23:59:59 |
| 25-Oct-18 | 0:00:00 | 6.78 | 6.78 | 25-Oct | 0:00:00 |
| 26-Oct-18 | 0:00:00 | 6.78 | 16.23 | 26-Oct | 23:59:59 |
| 27-Oct-18 | 0:00:00 | 6.78 | 7.77 | 27-Oct | 23:59:59 |
| 28-Oct-18 | 0:00:00 | 7.77 | 7.77 | 28-Oct | 0:00:00 |
| 29-Oct-18 | 0:00:00 | 0 | 6.69 | 29-Oct | 23:59:59 |
| 30-Oct-18 | 0:00:00 | 6.69 | 6.69 | 30-Oct | 0:00:00 |
| 31-Oct-18 | 0:00:00 | 6.59 | 6.77 | 31-Oct | 23:59:59 |
| 1-Nov-18 | 0:00:00 | 6.75 | 7.11 | 1-Nov | 23:59:59 |
| 2-Nov-18 | 0:00:00 | 7.11 | 15.89 | 2-Nov | 23:59:59 |
| 3-Nov-18 | 0:00:00 | 15.87 | 15.87 | 3-Nov | 0:00:00 |
| 4-Nov-18 | 0:00:00 | 7.55 | 8.39 | 4-Nov | 23:59:59 |
| 5-Nov-18 | 0:00:00 | 8.37 | 8.37 | 5-Nov | 0:00:00 |
| 6-Nov-18 | 0:00:00 | 6.75 | 6.75 | 6-Nov | 0:00:00 |
| 7-Nov-18 | 0:00:00 | 6.42 | 6.59 | 7-Nov | 23:59:59 |
| 8-Nov-18 | 0:00:00 | 6.59 | 7.08 | 8-Nov | 23:59:59 |
| 9-Nov-18 | 0:00:00 | 7.08 | 15.05 | 9-Nov | 23:59:59 |
| 10-Nov-18 | 0:00:00 | 15.03 | 15.03 | 10-Nov | 0:00:00 |
| 11-Nov-18 | 0:00:00 | 7.97 | 7.97 | 11-Nov | 0:00:00 |
| 12-Nov-18 | 0:00:00 | 7.64 | 8.23 | 12-Nov | 23:59:59 |
| 13-Nov-18 | 0:00:00 | 8.23 | 8.23 | 13-Nov | 0:00:00 |
| 14-Nov-18 | 0:00:00 | 6.56 | 6.56 | 14-Nov | 0:00:00 |
| 15-Nov-18 | 0:00:00 | 6.52 | 6.59 | 15-Nov | 23:59:59 |
| 16-Nov-18 | 0:00:00 | 6.59 | 15.48 | 16-Nov | 23:59:59 |
| 17-Nov-18 | 0:00:00 | 6.59 | 7.56 | 17-Nov | 23:59:59 |
| 18-Nov-18 | 0:00:00 | 7.55 | 7.87 | 18-Nov | 23:59:59 |
| 19-Nov-18 | 0:00:00 | 7.86 | 7.86 | 19-Nov | 0:00:00 |
| 20-Nov-18 | 0:00:00 | 6.73 | 6.73 | 20-Nov | 0:00:00 |
| 21-Nov-18 | 0:00:00 | 6.52 | 6.78 | 21-Nov | 23:59:59 |
| 22-Nov-18 | 0:00:00 | 6.78 | 6.81 | 22-Nov | 23:59:59 |
| 23-Nov-18 | 0:00:00 | 6.81 | 8.3 | 23-Nov | 23:59:59 |
| 24-Nov-18 | 0:00:00 | 8.28 | 8.69 | 24-Nov | 23:59:59 |
| 25-Nov-18 | 0:00:00 | 8.67 | 8.67 | 25-Nov | 0:00:00 |
| 26-Nov-18 | 0:00:00 | 7.78 | 7.78 | 26-Nov | 0:00:00 |
| 27-Nov-18 | 0:00:00 | 6.69 | 6.69 | 27-Nov | 0:00:00 |
| 28-Nov-18 | 0:00:00 | 6.67 | 6.67 | 28-Nov | 0:00:00 |
| 29-Nov-18 | 0:00:00 | 6.64 | 6.69 | 29-Nov | 23:59:59 |
| 30-Nov-18 | 0:00:00 | 6.69 | 15.78 | 30-Nov | 23:59:59 |
| 1-Dec-18 | 0:00:00 | 15.77 | 15.77 | 1-Dec | 0:00:00 |
| 2-Dec-18 | 0:00:00 | 7.92 | 8.09 | 2-Dec | 23:59:59 |
| 3-Dec-18 | 0:00:00 | 8.08 | 8.08 | 3-Dec | 0:00:00 |
| 4-Dec-18 | 0:00:00 | 6.72 | 7.3 | 4-Dec | 23:59:59 |
| 5-Dec-18 | 0:00:00 | 7.3 | 7.3 | 5-Dec | 0:00:00 |
| 6-Dec-18 | 0:00:00 | 6.8 | 6.8 | 6-Dec | 0:00:00 |
| 7-Dec-18 | 0:00:00 | 6.77 | 16.53 | 7-Dec | 23:59:59 |
| 8-Dec-18 | 0:00:00 | 16.52 | 16.52 | 8-Dec | 0:00:00 |
| 9-Dec-18 | 0:00:00 | 7.84 | 7.84 | 9-Dec | 0:00:00 |
| 10-Dec-18 | 0:00:00 | 6.77 | 7.03 | 10-Dec | 23:59:59 |
| 11-Dec-18 | 0:00:00 | 7.03 | 7.03 | 11-Dec | 0:00:00 |
| 12-Dec-18 | 0:00:00 | 6.7 | 6.95 | 12-Dec | 23:59:59 |
| 13-Dec-18 | 0:00:00 | 6.94 | 7.97 | 13-Dec | 23:59:59 |
| 14-Dec-18 | 0:00:00 | 7.95 | 7.95 | 14-Dec | 0:00:00 |
| 15-Dec-18 | 0:00:00 | 7.72 | 8.19 | 15-Dec | 23:59:59 |
| 16-Dec-18 | 0:00:00 | 8.17 | 8.17 | 16-Dec | 0:00:00 |
| 17-Dec-18 | 0:00:00 | 7.36 | 7.36 | 17-Dec | 0:00:00 |
| 18-Dec-18 | 0:00:00 | 6.73 | 6.73 | 18-Dec | 0:00:00 |

399.13 Sep-18

254.13 Oct-18

231.29 Nov-18

| Interval | start | Total | Peak | Date | time |
|-----------|---------|-------|------|--------|----------|
| 19-Dec-18 | 0:00:00 | 6.61 | 6.61 | 19-Dec | 0:00:00 |
| 20-Dec-18 | 0:00:00 | 6.61 | 6.61 | 20-Dec | 0:00:00 |
| 21-Dec-18 | 0:00:00 | 6.53 | 7.03 | 21-Dec | 23:59:59 |
| 22-Dec-18 | 0:00:00 | 7.03 | 7.72 | 22-Dec | 23:59:59 |
| 23-Dec-18 | 0:00:00 | 7.7 | 7.7 | 23-Dec | 0:00:00 |
| 24-Dec-18 | 0:00:00 | 7.37 | 7.37 | 24-Dec | 0:00:00 |
| 25-Dec-18 | 0:00:00 | 6.77 | 7.62 | 25-Dec | 23:59:59 |
| 26-Dec-18 | 0:00:00 | 7.62 | 7.62 | 26-Dec | 0:00:00 |
| 27-Dec-18 | 0:00:00 | 6.67 | 6.67 | 27-Dec | 0:00:00 |
| 28-Dec-18 | 0:00:00 | 6.64 | 6.64 | 28-Dec | 0:00:00 |
| 29-Dec-18 | 0:00:00 | 6.36 | 7.75 | 29-Dec | 23:59:59 |
| 30-Dec-18 | 0:00:00 | 6.64 | 7.69 | 30-Dec | 23:59:59 |
| 31-Dec-18 | 0:00:00 | 7.67 | 7.91 | 31-Dec | 23:59:59 |
| 1-Jan-19 | 0:00:00 | 7.89 | 7.89 | 1-Jan | 0:00:00 |
| 2-Jan-19 | 0:00:00 | 7.36 | 7.36 | 2-Jan | 0:00:00 |
| 3-Jan-19 | 0:00:00 | 0 | 6.91 | 3-Jan | 23:59:59 |
| 4-Jan-19 | 0:00:00 | 6.91 | 7.53 | 4-Jan | 23:59:59 |
| 5-Jan-19 | 0:00:00 | 7.52 | 7.94 | 5-Jan | 23:59:59 |
| 6-Jan-19 | 0:00:00 | 7.92 | 7.92 | 6-Jan | 0:00:00 |
| 7-Jan-19 | 0:00:00 | 6.91 | 6.91 | 7-Jan | 0:00:00 |
| 8-Jan-19 | 0:00:00 | 6.7 | 6.77 | 8-Jan | 23:59:59 |
| 9-Jan-19 | 0:00:00 | 6.77 | 6.77 | 9-Jan | 0:00:00 |
| 10-Jan-19 | 0:00:00 | 6.59 | 6.67 | 10-Jan | 23:59:59 |
| 11-Jan-19 | 0:00:00 | 6.67 | 6.8 | 11-Jan | 23:59:59 |
| 12-Jan-19 | 0:00:00 | 6.78 | 7.83 | 12-Jan | 23:59:59 |
| 13-Jan-19 | 0:00:00 | 7.81 | 7.86 | 13-Jan | 23:59:59 |
| 14-Jan-19 | 0:00:00 | 7.84 | 7.84 | 14-Jan | 0:00:00 |
| 15-Jan-19 | 0:00:00 | 6.75 | 6.75 | 15-Jan | 0:00:00 |
| 16-Jan-19 | 0:00:00 | 6.48 | 6.7 | 16-Jan | 23:59:59 |
| 17-Jan-19 | 0:00:00 | 6.7 | 6.72 | 17-Jan | 23:59:59 |
| 18-Jan-19 | 0:00:00 | 6.72 | 7.39 | 18-Jan | 23:59:59 |
| 19-Jan-19 | 0:00:00 | 7.39 | 7.72 | 19-Jan | 23:59:59 |
| 20-Jan-19 | 0:00:00 | 7.72 | 7.91 | 20-Jan | 23:59:59 |
| 21-Jan-19 | 0:00:00 | 7.91 | 7.91 | 21-Jan | 0:00:00 |
| 22-Jan-19 | 0:00:00 | 7.75 | 7.75 | 22-Jan | 0:00:00 |
| 23-Jan-19 | 0:00:00 | 6.59 | 6.66 | 23-Jan | 23:59:59 |
| 24-Jan-19 | 0:00:00 | 6.66 | 6.66 | 24-Jan | 0:00:00 |
| 25-Jan-19 | 0:00:00 | 6.59 | 6.7 | 25-Jan | 23:59:59 |
| 26-Jan-19 | 0:00:00 | 6.7 | 7.81 | 26-Jan | 23:59:59 |
| 27-Jan-19 | 0:00:00 | 7.8 | 7.8 | 27-Jan | 0:00:00 |
| 28-Jan-19 | 0:00:00 | 7.41 | 7.41 | 28-Jan | 0:00:00 |
| 29-Jan-19 | 0:00:00 | 6.64 | 6.64 | 29-Jan | 0:00:00 |
| 30-Jan-19 | 0:00:00 | 6.61 | 6.7 | 30-Jan | 23:59:59 |
| 31-Jan-19 | 0:00:00 | 6.7 | 6.72 | 31-Jan | 23:59:59 |
| 1-Feb-19 | 0:00:00 | 6.72 | 6.94 | 1-Feb | 23:59:59 |
| 2-Feb-19 | 0:00:00 | 6.92 | 7.72 | 2-Feb | 23:59:59 |
| 3-Feb-19 | 0:00:00 | 7.7 | 8.03 | 3-Feb | 23:59:59 |
| 4-Feb-19 | 0:00:00 | 8.02 | 8.02 | 4-Feb | 0:00:00 |
| 5-Feb-19 | 0:00:00 | 7 | 7.58 | 5-Feb | 23:59:59 |
| 6-Feb-19 | 0:00:00 | 7.58 | 7.58 | 6-Feb | 0:00:00 |
| 7-Feb-19 | 0:00:00 | 7.19 | 7.19 | 7-Feb | 0:00:00 |
| 8-Feb-19 | 0:00:00 | 6.78 | 7.09 | 8-Feb | 23:59:59 |
| 9-Feb-19 | 0:00:00 | 6.78 | 8.34 | 9-Feb | 23:59:59 |
| 10-Feb-19 | 0:00:00 | 8.33 | 8.33 | 10-Feb | 0:00:00 |
| 11-Feb-19 | 0:00:00 | 7.52 | 7.52 | 11-Feb | 0:00:00 |
| 12-Feb-19 | 0:00:00 | 6.86 | 6.87 | 12-Feb | 23:59:59 |
| 13-Feb-19 | 0:00:00 | 6.86 | 6.86 | 13-Feb | 0:00:00 |
| 14-Feb-19 | 0:00:00 | 6.8 | 6.8 | 14-Feb | 0:00:00 |
| 15-Feb-19 | 0:00:00 | 6.55 | 7.14 | 15-Feb | 23:59:59 |
| 16-Feb-19 | 0:00:00 | 7.12 | 7.75 | 16-Feb | 23:59:59 |
| 17-Feb-19 | 0:00:00 | 6.55 | 7.45 | 17-Feb | 23:59:59 |
| 18-Feb-19 | 0:00:00 | 7.45 | 7.55 | 18-Feb | 23:59:59 |
| 19-Feb-19 | 0:00:00 | 7.53 | 7.53 | 19-Feb | 0:00:00 |
| 20-Feb-19 | 0:00:00 | 5.45 | 6.53 | 20-Feb | 23:59:59 |
| 21-Feb-19 | 0:00:00 | 6.53 | 6.56 | 21-Feb | 23:59:59 |
| 22-Feb-19 | 0:00:00 | 6.56 | 7.27 | 22-Feb | 23:59:59 |
| 23-Feb-19 | 0:00:00 | 7.25 | 7.72 | 23-Feb | 23:59:59 |
| 24-Feb-19 | 0:00:00 | 7.7 | 7.7 | 24-Feb | 0:00:00 |
| 25-Feb-19 | 0:00:00 | 7.62 | 7.62 | 25-Feb | 0:00:00 |
| 26-Feb-19 | 0:00:00 | 7.31 | 7.31 | 26-Feb | 0:00:00 |
| 27-Feb-19 | 0:00:00 | 6.72 | 6.86 | 27-Feb | 23:59:59 |
| 28-Feb-19 | 0:00:00 | 6.86 | 6.86 | 28-Feb | 0:00:00 |
| 1-Mar-19 | 0:00:00 | 6.83 | 6.98 | 1-Mar | 23:59:59 |
| 2-Mar-19 | 0:00:00 | 6.97 | 7.37 | 2-Mar | 23:59:59 |
| 3-Mar-19 | 0:00:00 | 7.37 | 7.61 | 3-Mar | 23:59:59 |
| 4-Mar-19 | 0:00:00 | 7.61 | 7.61 | 4-Mar | 0:00:00 |
| 5-Mar-19 | 0:00:00 | 7.14 | 7.14 | 5-Mar | 0:00:00 |
| 6-Mar-19 | 0:00:00 | 6.72 | 6.72 | 6-Mar | 0:00:00 |
| 7-Mar-19 | 0:00:00 | 6.67 | 6.7 | 7-Mar | 23:59:59 |
| 8-Mar-19 | 0:00:00 | 6.7 | 6.89 | 8-Mar | 23:59:59 |
| 9-Mar-19 | 0:00:00 | 6.87 | 7.69 | 9-Mar | 23:59:59 |
| 10-Mar-19 | 0:00:00 | 7.67 | 7.67 | 10-Mar | 0:00:00 |
| 11-Mar-19 | 0:00:00 | 7.31 | 7.31 | 11-Mar | 0:00:00 |
| 12-Mar-19 | 0:00:00 | 5.06 | 6.44 | 12-Mar | 23:59:59 |
| 13-Mar-19 | 0:00:00 | 6.44 | 6.44 | 13-Mar | 0:00:00 |
| 14-Mar-19 | 0:00:00 | 6.34 | 6.34 | 14-Mar | 0:00:00 |
| 15-Mar-19 | 0:00:00 | 0.14 | 7.12 | 15-Mar | 23:59:59 |
| 16-Mar-19 | 0:00:00 | 7.12 | 7.89 | 16-Mar | 23:59:59 |

239.31 Dec-18

| Interval | start | Total | Peak | Date | time | Interval | start | Total | Peak | Date | time |
|-----------|---------|-------|-------|--------|----------|-----------|---------|-------|-------|--------|----------|
| 17-Mar-19 | 0:00:00 | 7.87 | 7.87 | 17-Mar | 0:00:00 | 13-Jun-19 | 0:00:00 | 14.16 | 14.17 | 13-Jun | 23:59:59 |
| 18-Mar-19 | 0:00:00 | 7.3 | 7.33 | 18-Mar | 23:59:59 | 14-Jun-19 | 0:00:00 | 14.16 | 14.5 | 14-Jun | 23:59:59 |
| 19-Mar-19 | 0:00:00 | 7.33 | 7.33 | 19-Mar | 0:00:00 | 15-Jun-19 | 0:00:00 | 14.48 | 16.2 | 15-Jun | 23:59:59 |
| 20-Mar-19 | 0:00:00 | 6.91 | 6.91 | 20-Mar | 0:00:00 | 16-Jun-19 | 0:00:00 | 16.19 | 16.19 | 16-Jun | 0:00:00 |
| 21-Mar-19 | 0:00:00 | 6.75 | 6.75 | 21-Mar | 0:00:00 | 17-Jun-19 | 0:00:00 | 13.12 | 13.12 | 17-Jun | 0:00:00 |
| 22-Mar-19 | 0:00:00 | 6.72 | 6.72 | 22-Mar | 0:00:00 | 18-Jun-19 | 0:00:00 | 12.12 | 12.14 | 18-Jun | 23:59:59 |
| 23-Mar-19 | 0:00:00 | 6.19 | 7.84 | 23-Mar | 23:59:59 | 19-Jun-19 | 0:00:00 | 12.12 | 14.25 | 19-Jun | 23:59:59 |
| 24-Mar-19 | 0:00:00 | 7.83 | 7.83 | 24-Mar | 0:00:00 | 20-Jun-19 | 0:00:00 | 14.23 | 14.23 | 20-Jun | 0:00:00 |
| 25-Mar-19 | 0:00:00 | 7.52 | 7.52 | 25-Mar | 0:00:00 | 21-Jun-19 | 0:00:00 | 6.72 | 14.94 | 21-Jun | 23:59:59 |
| 26-Mar-19 | 0:00:00 | 6.77 | 6.8 | 26-Mar | 23:59:59 | 22-Jun-19 | 0:00:00 | 14.92 | 14.92 | 22-Jun | 0:00:00 |
| 27-Mar-19 | 0:00:00 | 6.8 | 6.8 | 27-Mar | 0:00:00 | 23-Jun-19 | 0:00:00 | 14.67 | 15.02 | 23-Jun | 23:59:59 |
| 28-Mar-19 | 0:00:00 | 6.72 | 6.83 | 28-Mar | 23:59:59 | 24-Jun-19 | 0:00:00 | 15 | 15 | 24-Jun | 0:00:00 |
| 29-Mar-19 | 0:00:00 | 6.81 | 6.86 | 29-Mar | 23:59:59 | 25-Jun-19 | 0:00:00 | 13.12 | 13.83 | 25-Jun | 23:59:59 |
| 30-Mar-19 | 0:00:00 | 6.86 | 6.86 | 30-Mar | 0:00:00 | 26-Jun-19 | 0:00:00 | 13.81 | 14.89 | 26-Jun | 23:59:59 |
| 31-Mar-19 | 0:00:00 | 0.75 | 7.39 | 31-Mar | 23:59:59 | 27-Jun-19 | 0:00:00 | 14.87 | 14.87 | 27-Jun | 0:00:00 |
| 1-Apr-19 | 0:00:00 | 6.86 | 6.87 | 1-Apr | 23:59:59 | 28-Jun-19 | 0:00:00 | 14.52 | 16.25 | 28-Jun | 23:59:59 |
| 2-Apr-19 | 0:00:00 | 6.87 | 7.42 | 2-Apr | 23:59:59 | 29-Jun-19 | 0:00:00 | 16.23 | 24 | 29-Jun | 23:59:59 |
| 3-Apr-19 | 0:00:00 | 7.42 | 7.42 | 3-Apr | 0:00:00 | 30-Jun-19 | 0:00:00 | 23.98 | 23.98 | 30-Jun | 0:00:00 |
| 4-Apr-19 | 0:00:00 | 6.8 | 6.8 | 4-Apr | 0:00:00 | 1-Jul-19 | 0:00:00 | 15.48 | 15.48 | 1-Jul | 0:00:00 |
| 5-Apr-19 | 0:00:00 | 6.77 | 7.05 | 5-Apr | 23:59:59 | 2-Jul-19 | 0:00:00 | 12.34 | 12.34 | 2-Jul | 0:00:00 |
| 6-Apr-19 | 0:00:00 | 6.77 | 7.89 | 6-Apr | 23:59:59 | 3-Jul-19 | 0:00:00 | 11.97 | 12.23 | 3-Jul | 23:59:59 |
| 7-Apr-19 | 0:00:00 | 7.87 | 7.87 | 7-Apr | 0:00:00 | 4-Jul-19 | 0:00:00 | 6.72 | 15.77 | 4-Jul | 23:59:59 |
| 8-Apr-19 | 0:00:00 | 7.77 | 7.77 | 8-Apr | 0:00:00 | 5-Jul-19 | 0:00:00 | 15.75 | 15.75 | 5-Jul | 0:00:00 |
| 9-Apr-19 | 0:00:00 | 6.78 | 6.83 | 9-Apr | 23:59:59 | 6-Jul-19 | 0:00:00 | 12.05 | 16.02 | 6-Jul | 23:59:59 |
| 10-Apr-19 | 0:00:00 | 6.83 | 6.83 | 10-Apr | 0:00:00 | 7-Jul-19 | 0:00:00 | 16 | 24 | 7-Jul | 23:59:59 |
| 11-Apr-19 | 0:00:00 | 6.77 | 6.77 | 11-Apr | 0:00:00 | 8-Jul-19 | 0:00:00 | 23.98 | 23.98 | 8-Jul | 0:00:00 |
| 12-Apr-19 | 0:00:00 | 0 | 0 | 12-Apr | 0:00:00 | 9-Jul-19 | 0:00:00 | 12.98 | 12.98 | 9-Jul | 0:00:00 |
| 13-Apr-19 | 0:00:00 | 0 | 0.33 | 13-Apr | 23:59:59 | 10-Jul-19 | 0:00:00 | 6.34 | 11.17 | 10-Jul | 23:59:59 |
| 14-Apr-19 | 0:00:00 | 0.31 | 7.56 | 14-Apr | 23:59:59 | 11-Jul-19 | 0:00:00 | 11.16 | 12.58 | 11-Jul | 23:59:59 |
| 15-Apr-19 | 0:00:00 | 7.55 | 7.55 | 15-Apr | 0:00:00 | 12-Jul-19 | 0:00:00 | 12.56 | 14.83 | 12-Jul | 23:59:59 |
| 16-Apr-19 | 0:00:00 | 6.78 | 6.78 | 16-Apr | 0:00:00 | 13-Jul-19 | 0:00:00 | 14.81 | 24 | 13-Jul | 23:59:59 |
| 17-Apr-19 | 0:00:00 | 6.72 | 6.94 | 17-Apr | 23:59:59 | 14-Jul-19 | 0:00:00 | 23.98 | 24 | 14-Jul | 23:59:59 |
| 18-Apr-19 | 0:00:00 | 6.92 | 6.92 | 18-Apr | 0:00:00 | 15-Jul-19 | 0:00:00 | 23.98 | 23.98 | 15-Jul | 0:00:00 |
| 19-Apr-19 | 0:00:00 | 6.91 | 7.12 | 19-Apr | 23:59:59 | 16-Jul-19 | 0:00:00 | 5.42 | 12.69 | 16-Jul | 23:59:59 |
| 20-Apr-19 | 0:00:00 | 7.11 | 7.7 | 20-Apr | 23:59:59 | 17-Jul-19 | 0:00:00 | 12.67 | 12.67 | 17-Jul | 0:00:00 |
| 21-Apr-19 | 0:00:00 | 7.69 | 7.69 | 21-Apr | 0:00:00 | 18-Jul-19 | 0:00:00 | 6.72 | 12.61 | 18-Jul | 23:59:59 |
| 22-Apr-19 | 0:00:00 | 7.58 | 7.58 | 22-Apr | 0:00:00 | 19-Jul-19 | 0:00:00 | 12.59 | 24 | 19-Jul | 23:59:59 |
| 23-Apr-19 | 0:00:00 | 6.67 | 6.67 | 23-Apr | 0:00:00 | 20-Jul-19 | 0:00:00 | 23.98 | 23.98 | 20-Jul | 0:00:00 |
| 24-Apr-19 | 0:00:00 | 6.66 | 6.78 | 24-Apr | 23:59:59 | 21-Jul-19 | 0:00:00 | 22.7 | 22.7 | 21-Jul | 0:00:00 |
| 25-Apr-19 | 0:00:00 | 6.78 | 7.66 | 25-Apr | 23:59:59 | 22-Jul-19 | 0:00:00 | 14.81 | 14.81 | 22-Jul | 0:00:00 |
| 26-Apr-19 | 0:00:00 | 7.66 | 7.66 | 26-Apr | 0:00:00 | 23-Jul-19 | 0:00:00 | 13.55 | 13.83 | 23-Jul | 23:59:59 |
| 27-Apr-19 | 0:00:00 | 7.66 | 7.91 | 27-Apr | 23:59:59 | 24-Jul-19 | 0:00:00 | 13.81 | 14.3 | 24-Jul | 23:59:59 |
| 28-Apr-19 | 0:00:00 | 7.89 | 7.89 | 28-Apr | 0:00:00 | 25-Jul-19 | 0:00:00 | 14.28 | 14.28 | 25-Jul | 0:00:00 |
| 29-Apr-19 | 0:00:00 | 7.66 | 7.66 | 29-Apr | 0:00:00 | 26-Jul-19 | 0:00:00 | 11.55 | 15.8 | 26-Jul | 23:59:59 |
| 30-Apr-19 | 0:00:00 | 6.86 | 6.94 | 30-Apr | 23:59:59 | 27-Jul-19 | 0:00:00 | 15.78 | 15.78 | 27-Jul | 0:00:00 |
| 1-May-19 | 0:00:00 | 6.94 | 6.94 | 1-May | 0:00:00 | 28-Jul-19 | 0:00:00 | 15.25 | 15.25 | 28-Jul | 0:00:00 |
| 2-May-19 | 0:00:00 | 6.58 | 6.8 | 2-May | 23:59:59 | 29-Jul-19 | 0:00:00 | 10.05 | 12.84 | 29-Jul | 23:59:59 |
| 3-May-19 | 0:00:00 | 6.8 | 7.47 | 3-May | 23:59:59 | 30-Jul-19 | 0:00:00 | 12.83 | 12.83 | 30-Jul | 0:00:00 |
| 4-May-19 | 0:00:00 | 7.45 | 8.34 | 4-May | 23:59:59 | 31-Jul-19 | 0:00:00 | 11.56 | 11.56 | 31-Jul | 0:00:00 |
| 5-May-19 | 0:00:00 | 8.33 | 8.33 | 5-May | 0:00:00 | 1-Aug-19 | 0:00:00 | 11.05 | 12.19 | 1-Aug | 23:59:59 |
| 6-May-19 | 0:00:00 | 8.22 | 8.22 | 6-May | 0:00:00 | 2-Aug-19 | 0:00:00 | 12.17 | 24 | 2-Aug | 23:59:59 |
| 7-May-19 | 0:00:00 | 7.42 | 7.42 | 7-May | 0:00:00 | 3-Aug-19 | 0:00:00 | 11.55 | 11.55 | 3-Aug | 0:00:00 |
| 8-May-19 | 0:00:00 | 6.87 | 6.87 | 8-May | 0:00:00 | 4-Aug-19 | 0:00:00 | 10.5 | 13.19 | 4-Aug | 23:59:59 |
| 9-May-19 | 0:00:00 | 6.8 | 6.8 | 9-May | 0:00:00 | 5-Aug-19 | 0:00:00 | 13.17 | 13.17 | 5-Aug | 0:00:00 |
| 10-May-19 | 0:00:00 | 6.75 | 7.08 | 10-May | 23:59:59 | 6-Aug-19 | 0:00:00 | 10 | 10 | 6-Aug | 0:00:00 |
| 11-May-19 | 0:00:00 | 7.06 | 7.78 | 11-May | 23:59:59 | 7-Aug-19 | 0:00:00 | 7.25 | 7.25 | 7-Aug | 0:00:00 |
| 12-May-19 | 0:00:00 | 7.77 | 12.86 | 12-May | 23:59:59 | 8-Aug-19 | 0:00:00 | 0 | 0 | 8-Aug | 0:00:00 |
| 13-May-19 | 0:00:00 | 12.84 | 12.84 | 13-May | 0:00:00 | 9-Aug-19 | 0:00:00 | 0 | 10.14 | 9-Aug | 23:59:59 |
| 14-May-19 | 0:00:00 | 11.83 | 12 | 14-May | 23:59:59 | 10-Aug-19 | 0:00:00 | 10.12 | 10.12 | 10-Aug | 0:00:00 |
| 15-May-19 | 0:00:00 | 11.98 | 11.98 | 15-May | 0:00:00 | 11-Aug-19 | 0:00:00 | 7.05 | 7.19 | 11-Aug | 23:59:59 |
| 16-May-19 | 0:00:00 | 7.44 | 9.64 | 16-May | 23:59:59 | 12-Aug-19 | 0:00:00 | 7.17 | 12.22 | 12-Aug | 23:59:59 |
| 17-May-19 | 0:00:00 | 6.8 | 11.03 | 17-May | 23:59:59 | 13-Aug-19 | 0:00:00 | 12.2 | 12.2 | 13-Aug | 0:00:00 |
| 18-May-19 | 0:00:00 | 11.02 | 15.73 | 18-May | 23:59:59 | 14-Aug-19 | 0:00:00 | 6.17 | 6.17 | 14-Aug | 0:00:00 |
| 19-May-19 | 0:00:00 | 15.72 | 15.72 | 19-May | 0:00:00 | 15-Aug-19 | 0:00:00 | 0.55 | 8 | 15-Aug | 23:59:59 |
| 20-May-19 | 0:00:00 | 12.73 | 12.73 | 20-May | 0:00:00 | 16-Aug-19 | 0:00:00 | 7.98 | 14.64 | 16-Aug | 23:59:59 |
| 21-May-19 | 0:00:00 | 6.72 | 6.72 | 21-May | 0:00:00 | 17-Aug-19 | 0:00:00 | 14.62 | 15.27 | 17-Aug | 23:59:59 |
| 22-May-19 | 0:00:00 | 3.11 | 10.3 | 22-May | 23:59:59 | 18-Aug-19 | 0:00:00 | 15.25 | 15.25 | 18-Aug | 0:00:00 |
| 23-May-19 | 0:00:00 | 6.72 | 10.47 | 23-May | 23:59:59 | 19-Aug-19 | 0:00:00 | 7.95 | 7.95 | 19-Aug | 0:00:00 |
| 24-May-19 | 0:00:00 | 10.45 | 12.44 | 24-May | 23:59:59 | 20-Aug-19 | 0:00:00 | 4.58 | 12.05 | 20-Aug | 23:59:59 |
| 25-May-19 | 0:00:00 | 12.42 | 15.36 | 25-May | 23:59:59 | 21-Aug-19 | 0:00:00 | 12.03 | 12.03 | 21-Aug | 0:00:00 |
| 26-May-19 | 0:00:00 | 15.34 | 15.34 | 26-May | 0:00:00 | 22-Aug-19 | 0:00:00 | 12 | 14.61 | 22-Aug | 23:59:59 |
| 27-May-19 | 0:00:00 | 6.72 | 13.16 | 27-May | 23:59:59 | 23-Aug-19 | 0:00:00 | 7.95 | 14.36 | 23-Aug | 23:59:59 |
| 28-May-19 | 0:00:00 | 6.72 | 10.12 | 28-May | 23:59:59 | 24-Aug-19 | 0:00:00 | 14.34 | 15.22 | 24-Aug | 23:59:59 |
| 29-May-19 | 0:00:00 | 10.11 | 11.83 | 29-May | 23:59:59 | 25-Aug-19 | 0:00:00 | 15.2 | 15.2 | 25-Aug | 0:00:00 |
| 30-May-19 | 0:00:00 | 11.81 | 12.12 | 30-May | 23:59:59 | 26-Aug-19 | 0:00:00 | 12.5 | 12.5 | 26-Aug | 0:00:00 |
| 31-May-19 | 0:00:00 | 12.11 | 12.37 | 31-May | 23:59:59 | 27-Aug-19 | 0:00:00 | 10.7 | 11.14 | 27-Aug | 23:59:59 |
| 1-Jun-19 | 0:00:00 | 12.36 | 12.36 | 1-Jun | 0:00:00 | 28-Aug-19 | 0:00:00 | 11.12 | 12.44 | 28-Aug | 23:59:59 |
| 2-Jun-19 | 0:00:00 | 11.03 | 13.03 | 2-Jun | 23:59:59 | 29-Aug-19 | 0:00:00 | 12.42 | 14.66 | 29-Aug | 23:59:59 |
| 3-Jun-19 | 0:00:00 | 13.02 | 13.02 | 3-Jun | 0:00:00 | 30-Aug-19 | 0:00:00 | 14.64 | 14.64 | 30-Aug | 0:00:00 |
| 4-Jun-19 | 0:00:00 | 6.72 | 10.75 | 4-Jun | 23:59:59 | 31-Aug-19 | 0:00:00 | 7.95 | 11.31 | 31-Aug | 23:59:59 |
| 5-Jun-19 | 0:00:00 | 10.73 | 10.73 | 5-Jun | 0:00:00 | 1-Sep-19 | 0:00:00 | 11.3 | 11.3 | 1-Sep | 0:00:00 |
| 6-Jun-19 | 0:00:00 | 10.33 | 12.75 | 6-Jun | 23:59:59 | 2-Sep-19 | 0:00:00 | 7.73 | 7.73 | 2-Sep | 0:00:00 |
| 7-Jun-19 | 0:00:00 | 12.73 | 12.73 | 7-Jun | 0:00:00 | 3-Sep-19 | 0:00:00 | 0 | 2.98 | 3-Sep | 23:59:59 |
| 8-Jun-19 | 0:00:00 | 11.89 | 15.8 | 8-Jun | 23:59:59 | 4-Sep-19 | 0:00:00 | 2.97 | 11.36 | 4-Sep | 23:59:59 |
| 9-Jun-19 | 0:00:00 | 15.78 | 15.78 | 9-Jun | 0:00:00 | 5-Sep-19 | 0:00:00 | 0 | 12.06 | 5-Sep | 23:59:59 |
| 10-Jun-19 | 0:00:00 | 10.55 | 12.45 | 10-Jun | 23:59:59 | 6-Sep-19 | 0:00:00 | 12.05 | 12.37 | 6-Sep | 23:59:59 |
| 11-Jun-19 | 0:00:00 | 12.44 | 12.44 | 11-Jun | 0:00:00 | 7-Sep-19 | 0:00:00 | 12.36 | 12.36 | 7-Sep | 0:00:00 |
| 12-Jun-19 | 0:00:00 | 6.72 | 14.17 | 12-Jun | 23:59:59 | 8-Sep-19 | 0:00:00 | 7.67 | 7.67 | 8-Sep | 0:00:00 |

| Interval | start | Total | Peak | Date | time | Interval | start | Total | Peak | Date | time |
|-----------|---------|-------|-------|--------|----------|-----------|---------|-------|-------|--------|----------|
| 9-Sep-19 | 0:00:00 | 0 | 5.61 | 9-Sep | 23:59:59 | 6-Dec-19 | 0:00:00 | 0.11 | 14.98 | 6-Dec | 23:59:59 |
| 10-Sep-19 | 0:00:00 | 5.59 | 12.06 | 10-Sep | 23:59:59 | 7-Dec-19 | 0:00:00 | 14.97 | 14.97 | 7-Dec | 0:00:00 |
| 11-Sep-19 | 0:00:00 | 12.05 | 12.05 | 11-Sep | 0:00:00 | 8-Dec-19 | 0:00:00 | 0 | 7.56 | 8-Dec | 23:59:59 |
| 12-Sep-19 | 0:00:00 | 6.42 | 6.42 | 12-Sep | 0:00:00 | 9-Dec-19 | 0:00:00 | 7.55 | 7.55 | 9-Dec | 0:00:00 |
| 13-Sep-19 | 0:00:00 | 3.72 | 8.25 | 13-Sep | 23:59:59 | 10-Dec-19 | 0:00:00 | 6.42 | 7.14 | 10-Dec | 23:59:59 |
| 14-Sep-19 | 0:00:00 | 8.25 | 8.25 | 14-Sep | 0:00:00 | 11-Dec-19 | 0:00:00 | 7.14 | 7.14 | 11-Dec | 0:00:00 |
| 15-Sep-19 | 0:00:00 | 0 | 2.22 | 15-Sep | 23:59:59 | 12-Dec-19 | 0:00:00 | 0 | 0.09 | 12-Dec | 23:59:59 |
| 16-Sep-19 | 0:00:00 | 0 | 9.47 | 16-Sep | 23:59:59 | 13-Dec-19 | 0:00:00 | 0.08 | 7.27 | 13-Dec | 23:59:59 |
| 17-Sep-19 | 0:00:00 | 9.45 | 11.48 | 17-Sep | 23:59:59 | 14-Dec-19 | 0:00:00 | 7.25 | 8.03 | 14-Dec | 23:59:59 |
| 18-Sep-19 | 0:00:00 | 11.47 | 11.47 | 18-Sep | 0:00:00 | 15-Dec-19 | 0:00:00 | 8.02 | 8.02 | 15-Dec | 0:00:00 |
| 19-Sep-19 | 0:00:00 | 8.48 | 8.48 | 19-Sep | 0:00:00 | 16-Dec-19 | 0:00:00 | 7.23 | 7.23 | 16-Dec | 0:00:00 |
| 20-Sep-19 | 0:00:00 | 6.58 | 8.28 | 20-Sep | 23:59:59 | 17-Dec-19 | 0:00:00 | 6.89 | 7.12 | 17-Dec | 23:59:59 |
| 21-Sep-19 | 0:00:00 | 8.27 | 10.84 | 21-Sep | 23:59:59 | 18-Dec-19 | 0:00:00 | 7.12 | 7.12 | 18-Dec | 0:00:00 |
| 22-Sep-19 | 0:00:00 | 10.83 | 10.83 | 22-Sep | 0:00:00 | 19-Dec-19 | 0:00:00 | 0.09 | 6.83 | 19-Dec | 23:59:59 |
| 23-Sep-19 | 0:00:00 | 7.92 | 7.92 | 23-Sep | 0:00:00 | 20-Dec-19 | 0:00:00 | 6.81 | 11.41 | 20-Dec | 23:59:59 |
| 24-Sep-19 | 0:00:00 | 7.5 | 12.16 | 24-Sep | 23:59:59 | 21-Dec-19 | 0:00:00 | 11.39 | 11.39 | 21-Dec | 0:00:00 |
| 25-Sep-19 | 0:00:00 | 12.14 | 12.14 | 25-Sep | 0:00:00 | 22-Dec-19 | 0:00:00 | 7.8 | 7.8 | 22-Dec | 0:00:00 |
| 26-Sep-19 | 0:00:00 | 10.67 | 11.16 | 26-Sep | 23:59:59 | 23-Dec-19 | 0:00:00 | 7.27 | 7.27 | 23-Dec | 0:00:00 |
| 27-Sep-19 | 0:00:00 | 11.14 | 11.14 | 27-Sep | 0:00:00 | 24-Dec-19 | 0:00:00 | 6.42 | 6.84 | 24-Dec | 23:59:59 |
| 28-Sep-19 | 0:00:00 | 8.45 | 11.91 | 28-Sep | 23:59:59 | 25-Dec-19 | 0:00:00 | 6.84 | 6.84 | 25-Dec | 0:00:00 |
| 29-Sep-19 | 0:00:00 | 7.92 | 13.84 | 29-Sep | 23:59:59 | 26-Dec-19 | 0:00:00 | 0 | 6.73 | 26-Dec | 23:59:59 |
| 30-Sep-19 | 0:00:00 | 13.83 | 13.83 | 30-Sep | 0:00:00 | 27-Dec-19 | 0:00:00 | 6.73 | 7.05 | 27-Dec | 23:59:59 |
| 1-Oct-19 | 0:00:00 | 6.53 | 6.53 | 1-Oct | 0:00:00 | 28-Dec-19 | 0:00:00 | 6.73 | 7.98 | 28-Dec | 23:59:59 |
| 2-Oct-19 | 0:00:00 | 4.81 | 11.25 | 2-Oct | 23:59:59 | 29-Dec-19 | 0:00:00 | 7.97 | 7.97 | 29-Dec | 0:00:00 |
| 3-Oct-19 | 0:00:00 | 11.23 | 12.27 | 3-Oct | 23:59:59 | 30-Dec-19 | 0:00:00 | 7.47 | 7.47 | 30-Dec | 0:00:00 |
| 4-Oct-19 | 0:00:00 | 12.25 | 13.44 | 4-Oct | 23:59:59 | 31-Dec-19 | 0:00:00 | 0.23 | 6.47 | 31-Dec | 23:59:59 |
| 5-Oct-19 | 0:00:00 | 13.42 | 14.14 | 5-Oct | 23:59:59 | | | | | | |
| 6-Oct-19 | 0:00:00 | 14.12 | 14.12 | 6-Oct | 0:00:00 | | | | | | |
| 7-Oct-19 | 0:00:00 | 7.11 | 7.11 | 7-Oct | 0:00:00 | | | | | | |
| 8-Oct-19 | 0:00:00 | 3.39 | 6.86 | 8-Oct | 23:59:59 | | | | | | |
| 9-Oct-19 | 0:00:00 | 6.84 | 6.84 | 9-Oct | 0:00:00 | | | | | | |
| 10-Oct-19 | 0:00:00 | 6.81 | 6.81 | 10-Oct | 0:00:00 | | | | | | |
| 11-Oct-19 | 0:00:00 | 6.78 | 15.36 | 11-Oct | 23:59:59 | | | | | | |
| 12-Oct-19 | 0:00:00 | 15.34 | 15.34 | 12-Oct | 0:00:00 | | | | | | |
| 13-Oct-19 | 0:00:00 | 6.78 | 7.67 | 13-Oct | 23:59:59 | | | | | | |
| 14-Oct-19 | 0:00:00 | 7.66 | 7.66 | 14-Oct | 0:00:00 | | | | | | |
| 15-Oct-19 | 0:00:00 | 7.14 | 7.14 | 15-Oct | 0:00:00 | | | | | | |
| 16-Oct-19 | 0:00:00 | 6.89 | 6.89 | 16-Oct | 0:00:00 | | | | | | |
| 17-Oct-19 | 0:00:00 | 6.8 | 6.86 | 17-Oct | 23:59:59 | | | | | | |
| 18-Oct-19 | 0:00:00 | 6.86 | 16.25 | 18-Oct | 23:59:59 | | | | | | |
| 19-Oct-19 | 0:00:00 | 16.23 | 16.23 | 19-Oct | 0:00:00 | | | | | | |
| 20-Oct-19 | 0:00:00 | 6.86 | 7.36 | 20-Oct | 23:59:59 | | | | | | |
| 21-Oct-19 | 0:00:00 | 7.36 | 7.36 | 21-Oct | 0:00:00 | | | | | | |
| 22-Oct-19 | 0:00:00 | 7.36 | 7.36 | 22-Oct | 0:00:00 | | | | | | |
| 23-Oct-19 | 0:00:00 | 7.02 | 7.02 | 23-Oct | 0:00:00 | | | | | | |
| 24-Oct-19 | 0:00:00 | 6.77 | 6.81 | 24-Oct | 23:59:59 | | | | | | |
| 25-Oct-19 | 0:00:00 | 6.81 | 7.98 | 25-Oct | 23:59:59 | | | | | | |
| 26-Oct-19 | 0:00:00 | 7.97 | 8.52 | 26-Oct | 23:59:59 | | | | | | |
| 27-Oct-19 | 0:00:00 | 8.5 | 8.5 | 27-Oct | 0:00:00 | | | | | | |
| 28-Oct-19 | 0:00:00 | 7.08 | 7.34 | 28-Oct | 23:59:59 | | | | | | |
| 29-Oct-19 | 0:00:00 | 7.34 | 7.34 | 29-Oct | 0:00:00 | | | | | | |
| 30-Oct-19 | 0:00:00 | 6.47 | 6.75 | 30-Oct | 23:59:59 | | | | | | |
| 31-Oct-19 | 0:00:00 | 6.73 | 6.86 | 31-Oct | 23:59:59 | | | | | | |
| 1-Nov-19 | 0:00:00 | 6.86 | 6.87 | 1-Nov | 23:59:59 | | | | | | |
| 2-Nov-19 | 0:00:00 | 6.86 | 6.86 | 2-Nov | 0:00:00 | | | | | | |
| 3-Nov-19 | 0:00:00 | 6.42 | 7.59 | 3-Nov | 23:59:59 | | | | | | |
| 4-Nov-19 | 0:00:00 | 7.59 | 7.59 | 4-Nov | 0:00:00 | | | | | | |
| 5-Nov-19 | 0:00:00 | 6.87 | 6.87 | 5-Nov | 0:00:00 | | | | | | |
| 6-Nov-19 | 0:00:00 | 6.61 | 6.61 | 6-Nov | 0:00:00 | | | | | | |
| 7-Nov-19 | 0:00:00 | 6.55 | 6.55 | 7-Nov | 0:00:00 | | | | | | |
| 8-Nov-19 | 0:00:00 | 6.5 | 6.94 | 8-Nov | 23:59:59 | | | | | | |
| 9-Nov-19 | 0:00:00 | 6.92 | 8.11 | 9-Nov | 23:59:59 | | | | | | |
| 10-Nov-19 | 0:00:00 | 8.09 | 8.09 | 10-Nov | 0:00:00 | | | | | | |
| 11-Nov-19 | 0:00:00 | 6.5 | 7.67 | 11-Nov | 23:59:59 | | | | | | |
| 12-Nov-19 | 0:00:00 | 7.66 | 7.66 | 12-Nov | 0:00:00 | | | | | | |
| 13-Nov-19 | 0:00:00 | 7.02 | 7.02 | 13-Nov | 0:00:00 | | | | | | |
| 14-Nov-19 | 0:00:00 | 0 | 7.11 | 14-Nov | 23:59:59 | | | | | | |
| 15-Nov-19 | 0:00:00 | 7.09 | 7.2 | 15-Nov | 23:59:59 | | | | | | |
| 16-Nov-19 | 0:00:00 | 0 | 7.84 | 16-Nov | 23:59:59 | | | | | | |
| 17-Nov-19 | 0:00:00 | 7.83 | 7.84 | 17-Nov | 23:59:59 | | | | | | |
| 18-Nov-19 | 0:00:00 | 7.84 | 7.84 | 18-Nov | 0:00:00 | | | | | | |
| 19-Nov-19 | 0:00:00 | 7.84 | 7.84 | 19-Nov | 0:00:00 | | | | | | |
| 20-Nov-19 | 0:00:00 | 6.8 | 6.8 | 20-Nov | 0:00:00 | | | | | | |
| 21-Nov-19 | 0:00:00 | 6.77 | 7.06 | 21-Nov | 23:59:59 | | | | | | |
| 22-Nov-19 | 0:00:00 | 7.05 | 7.08 | 22-Nov | 23:59:59 | | | | | | |
| 23-Nov-19 | 0:00:00 | 7.06 | 7.2 | 23-Nov | 23:59:59 | | | | | | |
| 24-Nov-19 | 0:00:00 | 7.2 | 7.2 | 24-Nov | 0:00:00 | | | | | | |
| 25-Nov-19 | 0:00:00 | 0 | 0.12 | 25-Nov | 23:59:59 | | | | | | |
| 26-Nov-19 | 0:00:00 | 0.11 | 6.8 | 26-Nov | 23:59:59 | | | | | | |
| 27-Nov-19 | 0:00:00 | 6.78 | 6.78 | 27-Nov | 0:00:00 | | | | | | |
| 28-Nov-19 | 0:00:00 | 6.7 | 7.55 | 28-Nov | 23:59:59 | | | | | | |
| 29-Nov-19 | 0:00:00 | 7.53 | 7.59 | 29-Nov | 23:59:59 | | | | | | |
| 30-Nov-19 | 0:00:00 | 7.59 | 7.59 | 30-Nov | 0:00:00 | | | | | | |
| 1-Dec-19 | 0:00:00 | 0.45 | 7.47 | 1-Dec | 23:59:59 | | | | | | |
| 2-Dec-19 | 0:00:00 | 7.59 | 7.59 | 2-Dec | 0:00:00 | | | | | | |
| 3-Dec-19 | 0:00:00 | 6.27 | 6.58 | 3-Dec | 23:59:59 | | | | | | |
| 4-Dec-19 | 0:00:00 | 6.58 | 6.58 | 4-Dec | 0:00:00 | | | | | | |
| 5-Dec-19 | 0:00:00 | 0 | 0.12 | 5-Dec | 23:59:59 | | | | | | |

LOS ALAMOS COUNTY
OTOWI 2 WELL PUMP DRIVE
LIFE CYCLE ANALYSIS

APPENDIX H

LOS ALAMOS COUNTY UTILITY
UTILITY RATE MEMO

**WILSON
& COMPANY**

discipline | intensity | collaboration | shared ownership | solutions

MEMORANDUM



Department of Public Utilities

Electric, Gas, Water, and Wastewater Services

Administrative Offices

1000 Central Avenue, Suite 130

Los Alamos, NM 87544

P 505.662.8333 F 505.662.8005

customercare@lacnm.us

ladpu.com/dpu

DATE: January 28, 2020

TO: James Alarid

FROM: Jordan Garcia

CC: Ernesto Gallegos

RE: **Water Production Pump and Booster Costing**

Electric Cost for Water Pumping

Electric Cost for water pumping is derived from 4 different components. The Demand Cost Component, Energy Cost component, Distribution Adder Cost component, and a Customer Service Charge. The two most complex components are the demand and energy. The Cost components work as follows:

1. The Demand Cost component changes every month. It is based on the demand cost of electricity divided by the monthly peak KW consumption. A good example, is December's 2019 Invoice. The Demand rate is \$10.93/KW (\$911,684.00 divided by 83,417KW). It is then multiplied by Water Production's Coincidental Peak. The Coincidental Peak is determined by Water Production's energy consumption at the hour of Energy Load Peak. In this case Water Production was consuming 662.58KW at the time of peak.
2. The Energy cost component is very similar to the Demand component. It changes every month and is based on the energy cost of electricity divided the monthly energy consumption. Using the same example from above December's rate is \$.03213 cents per KWh (\$1,562,845.00 divided by 48,648,530 KWhs). It is then multiplied by Water Production's total monthly energy. This particular month's energy consumption for Water Production is 484,053.73 KWh.
3. The Distribution Adder Cost component is one set by the Board of Public Utilities. It is .016 cents per KWh. Formula for December 2019 (.016*484,053.73 KWh)

4. The Customer Service Charge is also set by the Board of Public Utilities and is currently a flat \$215.75/month
 - a. The invoice looks like this:
 - i. Demand- ($\$10.93 \times 662.58 \text{KW} = \$7,241.51$)
 - ii. Energy- ($\$.03213 \times 484,053.73 \text{ KWh} = \$15,550.34$)
 - iii. Distribution Adder- ($.016 \times 484,053.73 \text{ KWh} = \$7,744.86$)
 - iv. Customer Service Charge- ($\$217.75$)
 - v. Total - ($\$7,241.51 + \$15,550.34 + \$7,744.86 + \$217.75 = \$30,754.46$)

In conclusion, Water Production is essentially a wholesale customer of the Electric Production (EP) group with a fixed cost for the distribution system. The invoicing for water production is highly dependent on what is transpiring in the EP department. Prior to 2016 EP demand costs were very high to debt service surrounding owned generating assets. 2016 and beyond the demand charges for EP have dropped due to the payoff and retirement of debt and assets.

Gas Cost for Water Pumping

Gas Billing for Water Pumping

Gas cost for water pumping is much simpler in terms of calculations however it still has a variable component. We gather metered data in terms of Million Cubic Feet (MCF) for usage. We then convert to MMBTU. All of the components I will list below are multiplied by the MMBTU. The Formula Works as follows:

1. Multiply Metered MCF by the Dry BTU provided by the Gas Company. For the month of December 2019 The MCF consumed is 38.8 then multiplied by 1.0535 (changes monthly) which gives us a value of 40.92 MMBTU
2. The Value of MMBTU is then multiplied by the cost of gas. Cost of gas is variable based on the index pricing of the San Juan Basin. It is supplied by both long term and short-term contracts. For December 2019 40.92 MMBTU is multiplied by \$2.313 ($40.92 \times \$2.313 = \94.64)
3. The value of MMBTU is multiplied by the transportation fee charge by New Mexico Gas Company. For December 2019 40.92 MMBTU is multiplied by .247 ($40.92 \times \$0.247 = \10.11)
4. Total for December Gas Usage by Water Production \$104.75 ($\$94.64 + \$10.11 = \104.75).

Water Production is essentially a wholesale customer of Gas Supply. The cost is based on futures of market gas with a slight discount for a long-term contract. It is also subject to transportation increases.

For any questions or concerns please don't hesitate to contact me.

LAC Historic Cost of Electric for Water Production

1/28/2020

LAC Recent Historic Cost of Electric for Water Production

| Year | Month | Demand- KW | Demand | | Energy-KW | Energy | | | Customer Service | |
|------|-----------|---------------|----------------|----------------------|--------------|-----------|--------------------|---------------|------------------|--------------|
| | | | Rate \$/KWH | Total Demand Cost | | Rate | Distribution adder | Energy Charge | Charge | Total Bill |
| 2019 | November | 513.00 | \$ 12.49 | \$ 6,408.45 | 474,570 | 0.02943 | 0.016 | \$ 21,557.40 | \$ 217.75 | \$ 28,183.61 |
| 2019 | October | 1,348.80 | \$ 15.67 | \$ 21,132.54 | 48,627 | 0.01882 | 0.016 | \$ 16,877.06 | \$ 217.75 | \$ 38,227.35 |
| 2019 | September | 38.15 | \$ 13.60 | \$ 518.82 | 716,625 | 0.0284442 | 0.016 | \$ 31,849.85 | \$ 217.75 | \$ 32,586.42 |
| 2019 | August | 256.62 | \$ 12.92 | \$ 3,315.31 | 777,737 | 0.0309848 | 0.016 | \$ 36,541.83 | \$ 217.75 | \$ 40,074.88 |
| 2019 | July | 24.77 | \$ 13.71 | \$ 339.47 | 756,087 | 0.0285262 | 0.016 | \$ 33,665.65 | \$ 217.75 | \$ 34,222.87 |
| 2019 | June | 20.13 | \$ 16.86 | \$ 339.47 | 802,411 | 0.0240527 | 0.016 | \$32,138.72 | \$ 217.75 | \$ 32,695.94 |
| 2019 | May | 406.02 | \$ 11.86 | \$ 4,815.60 | 601,185 | 0.0386281 | 0.016 | \$32,841.60 | \$ 217.75 | \$ 37,874.95 |
| 2019 | April | 38.47 | \$ 7.81 | \$ 300.57 | 468,971 | 0.0093391 | 0.016 | \$11,883.28 | \$ 217.75 | \$ 12,401.60 |
| 2019 | March | 529.25 | \$ 15.90 | \$ 8,413.84 | 459,310 | 0.0339041 | 0.016 | \$22,921.43 | \$ 217.75 | \$ 31,553.02 |
| 2019 | February | 2,059.82 | \$ 16.63 | \$ 34,256.11 | 457,149 | 0.0430629 | 0.016 | \$27,000.55 | \$ 217.75 | \$ 61,474.42 |
| 2019 | January | 135.14 | \$ 20.97 | \$ 2,833.88 | 495,401 | 0.0146268 | 0.016 | \$15,172.54 | \$ 217.75 | \$ 18,224.17 |
| 2018 | December | 115.72 | \$ 17.18 | \$ 1,988.34 | 507,745 | 0.0322192 | 0.016 | \$24,483.08 | \$ 217.75 | \$ 26,689.17 |
| 2018 | November | 86.58 | \$ 16.32 | \$ 1,412.85 | 537,107 | 0.0356734 | 0.016 | \$27,754.14 | \$ 217.75 | \$ 29,384.74 |
| 2018 | October | 70.37 | \$ 13.40 | \$ 943.23 | 665,214 | 0.0355096 | 0.016 | \$34,264.86 | \$ 217.75 | \$ 35,425.84 |
| 2018 | September | 19.92 | \$ 14.56 | \$ 290.01 | 915,759 | 0.0322148 | 0.016 | \$44,153.09 | \$ 217.75 | \$ 44,660.86 |
| 2018 | August | 30.07 | \$ 16.85 | \$ 506.63 | 764,954 | 0.0369855 | 0.016 | \$40,531.42 | \$ 217.75 | \$ 41,255.80 |
| 2018 | July | 70.18 | \$ 11.76 | \$ 825.25 | 1,096,955 | 0.0407854 | 0.016 | \$62,291.02 | \$ 217.75 | \$ 63,334.02 |
| 2018 | June | 307.18 | 12.48 | \$ 3,834.29 | 1,004,637.46 | 0.0246882 | 0.016 | \$40,876.84 | \$ 217.75 | \$ 44,928.88 |
| 2018 | May | 24.94 | 13.99 | \$ 348.91 | 1,071,066.76 | 0.02425 | 0.016 | \$43,110.47 | \$ 217.75 | \$ 43,677.14 |
| 2018 | April | 43.75 | 15.82 | \$ 692.25 | 722,957.36 | 0.0258296 | 0.016 | \$30,241.03 | \$ 217.75 | \$ 31,151.02 |
| 2018 | March | 172.00 | 13.40 | \$ 2,304.83 | 460,785.22 | 0.0307354 | 0.016 | \$21,535.00 | \$ 217.75 | \$ 24,057.59 |
| 2018 | February | 51.22 | 15.66 | \$ 802.30 | 556,941.44 | 0.0299957 | 0.016 | \$25,616.91 | \$ 217.75 | \$ 26,636.96 |
| 2018 | January | 97.38 | 15.05 | \$ 1,465.73 | 582,963.55 | 0.0280154 | 0.016 | \$25,659.36 | \$ 217.75 | \$ 27,342.84 |
| 2017 | December | 506.05 | 14.82 | \$ 7,498.80 | 631,600.80 | 0.0237216 | 0.016 | \$25,088.20 | \$ 217.75 | \$ 32,804.75 |
| 2017 | November | 478.10 | 15.40 | \$ 7,362.87 | 612,148.80 | 0.0194748 | 0.016 | \$21,715.86 | \$ 217.75 | \$ 29,296.48 |
| 2017 | October | 824.29 | 14.62 | \$ 12,047.77 | 632,589.47 | 0.0226253 | 0.016 | \$24,433.94 | \$ 217.75 | \$ 36,699.46 |
| 2017 | September | 34.28 | 14.05 | \$ 481.72 | 802,076.76 | 0.0229729 | 0.016 | \$31,259.23 | \$ 217.75 | \$ 31,958.70 |
| 2017 | August | 307.53 | 13.36 | \$ 4,108.18 | 907,456.57 | 0.0253909 | 0.016 | \$37,560.47 | \$ 217.75 | \$ 41,886.40 |
| 2017 | July | 35.28 | 13.33 | \$ 470.44 | 1,181,713.46 | 0.0247502 | 0.016 | \$48,155.08 | \$ 217.75 | \$ 48,843.26 |

LAC Historic Cost of Electric for Water Production

1/28/2020

LAC High Demand Historic Cost of Electric for Water Production

| Year | Month | Demand- KW | Demand | | Energy-KW | Energy Rate | Distribution adder | Energy Charge | Customer Service | |
|------|-----------|---------------|----------------|----------------------|--------------|----------------|--------------------|---------------|---------------------|--------------|
| | | | Rate \$/KWH | Total Demand Cost | | | | | Charge | Total Bill |
| 2015 | June | 33.80 | 15.79 | \$ 533.56 | 438,630.38 | 0.0400169 | 0.016 | \$24,570.71 | \$217.75 | \$ 25,322.02 |
| 2015 | May | 42.63 | 18.54 | \$ 790.48 | 960,075.50 | 0.0310144 | 0.016 | \$45,137.34 | \$217.75 | \$ 46,145.57 |
| 2015 | April | 171.70 | 17.86 | \$ 3,067.26 | 607,477.26 | 0.0365729 | 0.016 | \$31,936.84 | \$217.75 | \$ 35,221.84 |
| 2015 | March | 102.33 | 15.92 | \$ 1,629.03 | 619,628.84 | 0.039893 | 0.016 | \$34,632.92 | \$170.10 | \$ 36,432.05 |
| 2015 | February | 256.30 | 13.68 | \$ 3,505.35 | 617,752.43 | 0.0356943 | 0.016 | \$31,934.25 | \$170.10 | \$ 35,609.71 |
| 2015 | January | 102.94 | 15.68 | \$ 1,613.65 | 694,646.61 | 0.0343682 | 0.016 | \$34,988.11 | \$170.10 | \$ 36,771.86 |
| 2014 | December | 93.33 | 14.64 | \$ 1,366.45 | 723,366.95 | 0.0449402 | 0.016 | \$44,082.12 | \$170.10 | \$ 45,618.67 |
| 2014 | November | 476.40 | 15.14 | \$ 7,211.41 | 661,146.78 | 0.0472565 | 0.016 | \$41,821.85 | \$170.10 | \$ 49,203.36 |
| 2014 | October | 71.70 | 15.71 | \$ 1,126.39 | 473,351.74 | 0.0369195 | 0.016 | \$25,049.53 | \$170.10 | \$ 26,346.02 |
| 2014 | September | 171.27 | 15.11 | \$ 2,587.28 | 801,235.52 | 0.0355966 | 0.016 | \$41,341.02 | \$157.50 | \$ 44,085.80 |
| 2014 | August | 176.40 | 15.68 | \$ 2,766.06 | 764,939.25 | 0.0390425 | 0.016 | \$42,104.20 | \$157.50 | \$ 45,027.76 |
| 2014 | July | 168.01 | 14.14 | \$ 2,375.51 | 980,633.90 | 0.036252 | 0.016 | \$51,240.12 | \$157.50 | \$ 53,773.13 |
| 2014 | June | 83.88 | 22.50 | \$ 1,887.41 | 1,015,087.59 | 0.0390965 | 0.016 | \$55,927.76 | \$ 157.50 | \$ 57,972.67 |
| 2014 | May | 210.98 | 24.64 | \$ 5,198.68 | 1,179,201.90 | 0.0448859 | 0.016 | \$71,796.73 | \$ 157.50 | \$ 77,152.91 |
| 2014 | April | 200.03 | 25.78 | \$ 5,156.43 | 780,590.02 | 0.0431826 | 0.016 | \$46,197.37 | \$ 157.50 | \$ 51,511.30 |
| 2014 | March | 1,310.48 | 24.16 | \$ 31,659.65 | 605,925.52 | 0.0345666 | 0.016 | \$30,639.59 | \$ 157.50 | \$ 62,456.74 |
| 2014 | February | 246.66 | 21.39 | \$ 5,277.06 | 762,649.54 | 0.0296774 | 0.016 | \$34,835.82 | \$ 157.50 | \$ 40,270.38 |
| 2014 | January | 100.50 | 20.32 | \$ 2,041.76 | 741,093.30 | 0.0446571 | 0.016 | \$44,952.61 | \$ 157.50 | \$ 47,151.87 |
| 2013 | December | 233.67 | 19.67 | \$ 4,597.05 | 607,747.03 | 0.045959 | 0.016 | \$37,655.43 | \$ 157.50 | \$ 42,409.97 |
| 2013 | November | 194.91 | 20.83 | \$ 4,060.29 | 538,173.64 | 0.0393087 | 0.0158 | \$29,658.03 | \$ 157.50 | \$ 33,875.81 |
| 2013 | October | 20.73 | 20.88 | \$ 432.67 | 447,189.12 | 0.0380107 | 0.0158 | \$24,063.58 | \$ 157.50 | \$ 24,653.75 |
| 2013 | September | 157.80 | 21.42 | \$ 3,380.40 | 607,846.47 | 0.03221 | 0.0158 | \$29,182.72 | \$ 157.50 | \$ 32,720.62 |
| 2013 | August | 158.24 | 17.49 | \$ 2,768.03 | 679,195.84 | 0.0503344 | 0.0158 | \$44,918.23 | \$ 157.50 | \$ 47,843.77 |
| 2013 | July | 160.64 | 21.19 | \$ 3,404.76 | 825,024.66 | 0.038673 | 0.0158 | \$44,941.56 | \$ 157.50 | \$ 48,503.82 |

LAC Historic Cost of Gas for Water Production

1/28/2020

| | Total MCF | DRY BTU | Cost of Gas | Transportation Cost | Total Dollar Cost |
|--------|-----------|---------|-------------|---------------------|-------------------|
| Jul-19 | 1.56 | 1.057 | \$ 1.67 | \$ 0.247 | \$ 3.15 |
| Aug-19 | 1.56 | 1.065 | \$ 1.65 | \$ 0.247 | \$ 3.15 |
| Sep-19 | 1.64 | 1.069 | \$ 1.40 | \$ 0.247 | \$ 2.88 |
| Oct-19 | 1.95 | 1.056 | \$ 1.57 | \$ 0.247 | \$ 3.75 |
| Nov-19 | 17.86 | 1.062 | \$ 1.93 | \$ 0.247 | \$ 41.27 |
| Dec-19 | 38.84 | 1.054 | \$ 2.31 | \$ 0.247 | \$ 104.75 |
| Jul-18 | 1,771.87 | 1.078 | \$ 2.34 | \$ 0.241 | \$ 4,918.07 |
| Aug-18 | 1.88 | 1.065 | \$ 2.02 | \$ 0.241 | \$ 4.53 |
| Sep-18 | 3.03 | 1.057 | \$ 1.86 | \$ 0.241 | \$ 6.72 |
| Oct-18 | 0.78 | 1.059 | \$ 1.54 | \$ 0.241 | \$ 1.47 |
| Nov-18 | 46.96 | 1.048 | \$ 2.47 | \$ 0.241 | \$ 133.14 |
| Dec-18 | 91.34 | 1.047 | \$ 3.12 | \$ 0.241 | \$ 320.79 |
| Jan-19 | 76.36 | 1.050 | \$ 3.40 | \$ 0.241 | \$ 291.60 |
| Feb-19 | 70.51 | 1.048 | \$ 2.61 | \$ 0.241 | \$ 210.69 |
| Mar-19 | 59.05 | 1.050 | \$ 2.14 | \$ 0.241 | \$ 147.37 |
| Apr-19 | 28.08 | 1.052 | \$ 1.22 | \$ 0.241 | \$ 43.03 |
| May-19 | 7.88 | 1.055 | \$ 0.82 | \$ 0.241 | \$ 8.84 |
| Jun-19 | 2.73 | 1.063 | \$ 1.47 | \$ 0.241 | \$ 4.97 |
| Jul-17 | 2,389.73 | 1.020 | \$ 2.53 | \$ 0.241 | \$ 6,766.78 |
| Aug-17 | 1.64 | 1.020 | \$ 2.73 | \$ 0.241 | \$ 4.97 |
| Sep-17 | 2,549.95 | 1.036 | \$ 2.34 | \$ 0.241 | \$ 6,820.98 |
| Oct-17 | 2,528.52 | 1.031 | \$ 2.07 | \$ 0.241 | \$ 6,023.70 |
| Nov-17 | 642.79 | 1.643 | \$ 2.01 | \$ 0.241 | \$ 2,373.07 |
| Dec-17 | 47.89 | 1.052 | \$ 2.22 | \$ 0.241 | \$ 124.14 |
| Jan-18 | 53.51 | 1.049 | \$ 2.36 | \$ 0.241 | \$ 145.94 |
| Feb-18 | 54.68 | 1.051 | \$ 2.38 | \$ 0.241 | \$ 150.65 |
| Mar-18 | 53.20 | 1.055 | \$ 1.76 | \$ 0.241 | \$ 112.27 |
| Apr-18 | 33.34 | 1.063 | \$ 1.45 | \$ 0.241 | \$ 60.04 |
| May-18 | 82.46 | 1.077 | \$ 1.37 | \$ 0.241 | \$ 142.76 |
| Jun-18 | 2,670.19 | 1.081 | \$ 1.77 | \$ 0.241 | \$ 5,796.78 |
| Jul-16 | 2,389.73 | 1.045 | \$ 2.54 | \$ 0.241 | \$ 6,946.23 |
| Aug-16 | 1.64 | 1.045 | \$ 2.72 | \$ 0.241 | \$ 5.08 |
| Sep-16 | 1.25 | 1.035 | \$ 2.56 | \$ 0.241 | \$ 3.63 |
| Oct-16 | 1.25 | 1.026 | \$ 1.83 | \$ 0.241 | \$ 2.66 |
| Nov-16 | 1.09 | 1.029 | \$ 2.18 | \$ 0.241 | \$ 2.72 |
| Dec-16 | 29.95 | 1.019 | \$ 2.78 | \$ 0.241 | \$ 92.32 |
| Jan-17 | 61.46 | 1.019 | \$ 3.20 | \$ 0.241 | \$ 215.10 |
| Feb-17 | 46.96 | 1.027 | \$ 2.61 | \$ 0.241 | \$ 137.29 |
| Mar-17 | 43.60 | 1.025 | \$ 1.99 | \$ 0.241 | \$ 99.70 |
| Apr-17 | 19.82 | 1.033 | \$ 2.28 | \$ 0.241 | \$ 51.49 |
| May-17 | 4.84 | 1.152 | \$ 3.44 | \$ 0.241 | \$ 20.50 |
| Jun-17 | 1.88 | 1.033 | \$ 2.11 | \$ 0.241 | \$ 4.57 |
| Jul-15 | 3,168.64 | 1.013 | \$ 2.53 | \$ 0.241 | \$ 8,904.95 |
| Aug-15 | 2,674.64 | 1.021 | \$ 2.53 | \$ 0.241 | \$ 7,561.37 |
| Sep-15 | 2,520.33 | 1.019 | \$ 2.13 | \$ 0.241 | \$ 6,082.13 |
| Oct-15 | 2,339.86 | 1.031 | \$ 2.15 | \$ 0.241 | \$ 5,778.25 |
| Nov-15 | 12.80 | 1.018 | \$ 1.81 | \$ 0.241 | \$ 26.68 |
| Dec-15 | 93.29 | 1.016 | \$ 1.97 | \$ 0.241 | \$ 209.53 |
| Jan-16 | 88.61 | 1.034 | \$ 1.89 | \$ 0.241 | \$ 194.90 |
| Feb-16 | 61.70 | 1.023 | \$ 1.82 | \$ 0.241 | \$ 130.33 |
| Mar-16 | 40.67 | 1.037 | \$ 1.25 | \$ 0.241 | \$ 63.02 |
| Apr-16 | 42.43 | 1.020 | \$ 1.23 | \$ 0.241 | \$ 63.74 |
| May-16 | 24.65 | 1.042 | \$ 1.41 | \$ 0.241 | \$ 42.38 |
| Jun-16 | 2,850.34 | 1.041 | \$ 2.14 | \$ 0.241 | \$ 7,076.78 |
| Jul-14 | 651.48 | 1.025 | \$ 4.21 | \$ 0.241 | \$ 2,974.15 |
| Aug-14 | 1,250.56 | 1.028 | \$ 3.53 | \$ 0.241 | \$ 4,841.95 |
| Sep-14 | 2,639.79 | 1.030 | \$ 3.74 | \$ 0.241 | \$ 10,815.50 |
| Oct-14 | 2,758.95 | 1.039 | \$ 3.45 | \$ 0.241 | \$ 10,583.11 |
| Nov-14 | 2,032.37 | 1.018 | \$ 3.40 | \$ 0.241 | \$ 7,538.09 |
| Dec-14 | 54.06 | 1.016 | \$ 3.99 | \$ 0.241 | \$ 232.25 |
| Jan-15 | 75.20 | 1.024 | \$ 2.80 | \$ 0.241 | \$ 234.09 |
| Feb-15 | 40.24 | 1.017 | \$ 2.45 | \$ 0.241 | \$ 110.20 |
| Mar-15 | 49.92 | 1.017 | \$ 2.37 | \$ 0.241 | \$ 132.57 |

LAC Historic Cost of Gas for Water Production

1/28/2020

| | Total MCF | DRY BTU | Cost of Gas | Transportation Cost | Total Dollar Cost |
|--------|-----------|---------|-------------|---------------------|-------------------|
| Apr-15 | 12.17 | 1.016 | \$ 2.14 | \$ 0.241 | \$ 29.40 |
| May-15 | 2,627.37 | 1.017 | \$ 2.38 | \$ 0.241 | \$ 6,987.98 |
| Jun-15 | 3,343.11 | 1.027 | \$ 2.45 | \$ 0.241 | \$ 9,225.63 |
| Jul-13 | 1,847.56 | 1.030 | \$ 3.51 | \$ 0.241 | \$ 7,143.99 |
| Aug-13 | 3,013.35 | 1.028 | \$ 3.41 | \$ 0.241 | \$ 11,309.99 |
| Sep-13 | 3,060.02 | 1.029 | \$ 3.29 | \$ 0.241 | \$ 11,118.27 |
| Oct-13 | 2,837.84 | 1.041 | \$ 3.19 | \$ 0.241 | \$ 10,133.88 |
| Nov-13 | 3,154.51 | 1.007 | \$ 3.43 | \$ 0.241 | \$ 11,643.93 |
| Dec-13 | 69.54 | 1.007 | \$ 3.61 | \$ 0.241 | \$ 269.64 |
| Jan-14 | 76.28 | 1.007 | \$ 4.25 | \$ 0.241 | \$ 345.21 |
| Feb-14 | 63.96 | 1.009 | \$ 5.13 | \$ 0.241 | \$ 346.45 |
| Mar-14 | 28.15 | 1.009 | \$ 5.04 | \$ 0.241 | \$ 150.03 |
| Apr-14 | 875.77 | 1.013 | \$ 4.30 | \$ 0.241 | \$ 4,029.06 |
| May-14 | 6.16 | 1.026 | \$ 4.60 | \$ 0.241 | \$ 30.58 |
| Jun-14 | 1,650.11 | 1.027 | \$ 4.24 | \$ 0.241 | \$ 7,591.66 |
| Jul-12 | 1.55 | 1.021 | \$ 2.59 | \$ 0.241 | \$ 4.48 |
| Aug-12 | 2.27 | 1.017 | \$ 2.65 | \$ 0.241 | \$ 6.66 |
| Sep-12 | 1.71 | 1.013 | \$ 2.30 | \$ 0.241 | \$ 4.39 |
| Oct-12 | 2.81 | 1.020 | \$ 2.56 | \$ 0.241 | \$ 8.02 |
| Nov-12 | 10.29 | 1.011 | \$ 3.17 | \$ 0.241 | \$ 35.51 |
| Dec-12 | 19.03 | 1.009 | \$ 3.37 | \$ 0.241 | \$ 69.34 |
| Jan-13 | 74.18 | 1.024 | \$ 3.13 | \$ 0.241 | \$ 255.66 |
| Feb-13 | 53.35 | 1.016 | \$ 3.13 | \$ 0.241 | \$ 182.54 |
| Mar-13 | 65.52 | 1.012 | \$ 3.03 | \$ 0.241 | \$ 217.11 |
| Apr-13 | 24.33 | 1.015 | \$ 3.67 | \$ 0.241 | \$ 96.65 |
| May-13 | 23.47 | 1.028 | \$ 3.79 | \$ 0.241 | \$ 97.28 |
| Jun-13 | 21.86 | 1.029 | \$ 3.73 | \$ 0.241 | \$ 89.32 |
| Jul-11 | 3,228.88 | 1.031 | \$ 3.97 | \$ 0.186 | \$ 13,826.54 |
| Aug-11 | 502.99 | 1.032 | \$ 4.00 | \$ 0.186 | \$ 2,174.45 |
| Sep-11 | 1.60 | 1.025 | \$ 3.58 | \$ 0.186 | \$ 6.17 |
| Oct-11 | 1.76 | 1.031 | \$ 3.34 | \$ 0.186 | \$ 6.39 |
| Nov-11 | 38.61 | 1.017 | \$ 3.16 | \$ 0.186 | \$ 131.51 |
| Dec-11 | 66.61 | 1.024 | \$ 3.12 | \$ 0.186 | \$ 225.43 |
| Jan-12 | 55.30 | 1.032 | \$ 2.87 | \$ 0.186 | \$ 174.29 |
| Feb-12 | 65.68 | 1.038 | \$ 2.34 | \$ 0.186 | \$ 171.81 |
| Mar-12 | 60.23 | 1.309 | \$ 2.57 | \$ 0.186 | \$ 217.36 |
| Apr-12 | 31.51 | 1.024 | \$ 1.73 | \$ 0.186 | \$ 61.82 |
| May-12 | 3.90 | 1.014 | \$ 1.59 | \$ 0.186 | \$ 7.03 |
| Jun-12 | 1.55 | 1.021 | \$ 2.18 | \$ 0.186 | \$ 3.74 |
| Jul-10 | 2,921.34 | 1.025 | \$ 4.10 | \$ 0.186 | \$ 12,823.16 |
| Aug-10 | 2,483.10 | 1.042 | \$ 3.81 | \$ 0.186 | \$ 10,348.96 |
| Sep-10 | 2,038.10 | 1.036 | \$ 3.24 | \$ 0.186 | \$ 7,221.25 |
| Oct-10 | 2.96 | 1.029 | \$ 3.36 | \$ 0.186 | \$ 10.81 |
| Nov-10 | 33.62 | 1.028 | \$ 3.06 | \$ 0.186 | \$ 112.19 |
| Dec-10 | 68.70 | 1.023 | \$ 4.26 | \$ 0.186 | \$ 312.34 |
| Jan-11 | 115.30 | 1.024 | \$ 3.68 | \$ 0.186 | \$ 455.86 |
| Feb-11 | 65.09 | 1.014 | \$ 3.94 | \$ 0.186 | \$ 272.69 |
| Mar-11 | 65.09 | 1.022 | \$ 3.61 | \$ 0.186 | \$ 252.93 |
| Apr-11 | 69.29 | 1.029 | \$ 3.79 | \$ 0.186 | \$ 283.02 |
| May-11 | 2,702.14 | 1.022 | \$ 3.87 | \$ 0.186 | \$ 11,212.97 |
| Jun-11 | 2,965.40 | 1.027 | \$ 3.93 | \$ 0.186 | \$ 12,517.87 |
| Jul-09 | 1,777.20 | 1.045 | \$ 4.10 | \$ 0.285 | \$ 8,136.56 |
| Aug-09 | 1,644.50 | 1.044 | \$ 4.59 | \$ 0.285 | \$ 8,368.65 |
| Sep-09 | 2,299.94 | 1.039 | \$ 3.74 | \$ 0.285 | \$ 9,613.02 |
| Oct-09 | 2,180.70 | 1.045 | \$ 4.60 | \$ 0.285 | \$ 11,125.26 |
| Nov-09 | 30.90 | 1.036 | \$ 4.08 | \$ 0.285 | \$ 139.57 |
| Dec-09 | 77.30 | 1.029 | \$ 4.43 | \$ 0.285 | \$ 374.95 |
| Jan-10 | 74.65 | 1.016 | \$ 5.59 | \$ 0.285 | \$ 445.74 |
| Feb-10 | 82.00 | 1.011 | \$ 4.81 | \$ 0.285 | \$ 422.55 |
| Mar-10 | 2,203.50 | 1.021 | \$ 4.32 | \$ 0.285 | \$ 10,357.16 |
| Apr-10 | 3,174.90 | 1.022 | \$ 3.66 | \$ 0.285 | \$ 12,782.55 |
| May-10 | 2,895.70 | 1.026 | \$ 3.68 | \$ 0.285 | \$ 11,789.36 |
| Jun-10 | 3,098.10 | 1.031 | \$ 3.54 | \$ 0.019 | \$ 11,377.47 |