

A DEPTH-DURATION-FREQUENCY DIAGRAM FOR  
POINT RAINFALL IN SOUTHERN AFRICA

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INTRODUCTION

An essential prerequisite to the solution of many engineering problems is a knowledge of the rates of precipitation corresponding to a range of durations and return periods. In Southern Africa, however, as in many other regions, the sample observations from which extrapolations have to be made are sparse and few of the autographic stations in operation have long records.

In 1974 the Weather Bureau published the results of extreme value analyses of rainfall intensity records longer than ten years up to 1972 at 77 stations in Southern Africa. This publication (WB36)<sup>1</sup> contains maximum 15-, 30-, 45-, 60-minute and 24-hour falls experienced, and expected falls for these durations, for 25-, 50- and 100-year return periods in each month of the year. (The Weather Bureau has since produced an addendum to WB36 containing extreme rainfalls analysed on an annual basis). No attempt was made, however, to formulate a basis for extrapolation of the results beyond the localities of the observation stations.

More up-to-date than WB36 is Department of Water Affairs Technical Note<sup>2</sup>, prepared by P. Adamson. This publication, however, still lacks a basis for extrapolation beyond the immediate locations of the autographic gauges.

A recent paper by Van Heerden<sup>3</sup> contains an analysis of the results presented in the addendum to WB36 (i.e. annual extremes). Van Heerden has grouped the stations under a number of sets and produced intensity-duration-frequency curves for each set. The main drawback to this approach is that it is left to the experience of the user

to select the set of curves relevant to his problem point.

Figure C2 in Hydrological Research Unit Report 1/72<sup>4</sup> therefore remained the sole non-subjective basis for estimating, for a given return period, the maximum depth of precipitation likely to accumulate over a given period (duration) anywhere in South Africa. Figure C2 of 1/72, based on analyses at the mere handful of gauges suitable for analyses at the time of study, has some shortcomings and it has long been felt within the Hydrological Research Unit that this co-axial diagram should be revised - especially now that many more records are available. This has now been accomplished and the results are summarized in the co-axial diagram Figure 4.

It will be noted that Figure 4 differs somewhat from Figure C2 of 1/72. Although, as before, the intensities of given duration and return period were strongly correlated with local mean annual precipitation (MAP), the previously encountered differences from summer to winter to year-round rainfall regions did not show up in the re-analysis; instead, there appeared to be a clear distinction between coastal and inland regions. The parameters that provide the basis for extrapolation are therefore MAP and locality (coastal or inland).

#### SEMI-PROCESSED DATA

The Weather Bureau provided data from the autographic rainfall stations listed in Table 1. These are located as shown on Figure 1. The data take the form of maxima for durations of 15-, 30-, 45-, 60- and 1440-minutes in each month of each year of record. Annual maxima were abstracted for each year and these data are listed in the Appendix.

In processing the autographic charts the analysts at the Weather Bureau divided the time scale according to clock quarter-hours. It follows that the abstracted maxima listed in Appendix 1 are not necessarily 15-, 45-, 60- and 1440-minute maxima because the clock quarter-hours intersect the charted precipitation randomly and thus inevitably result in underestimates of the maximum intensities.

It is possible, however, to make a blanket adjustment to overcome this difficulty, as suggested by Herschfield<sup>5</sup>.

It is important to recognise, too, that for a given month or year a short-duration maximum (say the 15-minute maximum) will not necessarily occur within the same storm event as that which displays a longer duration maximum (say the 60-minute maximum).

Furthermore, in abstracting the values for analysis, there are two principal approaches: (a) recognition of all independent values above a given threshold regardless of how many such values occur in a single year (partial duration series) and (b) recognition of only one maximum for each year of record (annual series). For the current study the latter basis has been accepted.

#### ANALYTICAL PROCEDURES

The probability density function (p.d.f.) of the Gumbel distribution is given by:

$$p(x) = \frac{1}{c} \cdot e^{-(a+x)/c} \cdot e^{-(a+x)/c} \dots\dots\dots (1)$$

② This p.d.f. has been found to be eminently suitable for extreme value analysis and was therefore adopted for this study.

Data from all stations with relatively long records ( $\pm 40$  years) were selected in order to test the suitability of the Gumbel distribution. The following eight stations met the requirements:

|         |              |
|---------|--------------|
| 21/178  | D.F. Malan   |
| 59/572  | East London  |
| 241/50  | Louis Botha  |
| 261/516 | Bloemfontein |
| 290/68  | Kimberley    |
| 476/398 | Jan Smuts    |
| 513/405 | Pretoria     |
| 677/802 | Pietersburg  |

② There are various ways of fitting a distribution to a set of data. In this study the method of moments was employed since it is easy to apply and does not rely on the somewhat arbitrary selection of a plotting position formula.

The method-of-moments estimators for  $a$  and  $c$  in equation 1 are

$\gamma_c - \mu$  and  $\frac{\sqrt{6}}{\pi} \cdot \sigma$  respectively, where  $\gamma = 0,57721....$  (i.e. Euler's constant),  $\mu$  is the mean and  $\sigma$  the standard deviation.

The results of this analysis for all the selected storm durations are presented as Table 2. Included in this table are the results of the chi-square goodness-of-fit tests. According to the chi-square test, the hypothesis that the data set follows the postulated distribution should be rejected not more than 5% of the time. However, inspection of Table 2 reveals that the hypothesis was rejected nine times out of forty, i.e. 22½% of the time.

Many probability functions can be transformed by replacing the variate with its logarithmic value. In the case of the Gumbel distribution logarithmic transformation converts the distribution from what is known as a Type I extremal distribution to a Type II.

Table 3 displays the results of a chi-square test, after fitting the Gumbel distribution to logarithmically transformed data. It is to be noted that the "Log-Gumbel" distribution was rejected only once out of forty tests - well below the acceptable limit of five percent. Accordingly the Log-Gumbel distribution was adopted.

Table 4 contains a summary of the results achieved by fitting the Log-Gumbel distribution to the data in Appendix 1. Of the complete set of results listed in Table 4 only the 15-, 60- and 1440-minute precipitations were selected for analysis since it was felt that interpolation between 15 and 60 minutes could be readily accomplished.

In order to ascertain the influence of mean annual precipitation (MAP) on extreme rainfall events, first the Log-Gumbel means appropriate to each duration were plotted against MAP as shown in Figure 2. This diagram illustrates clearly the rise in mean with increase in MAP - an expected result. What is even more interesting perhaps is the clear distinction between coastal and inland stations for short duration events (15- and 60-minute). However, this distinction is not discernible in the case of 1440-minute (24-hour) events.

The main reason for this behaviour is the high incidence of thunderstorm activity in the interior, giving rise to high intensities for short durations. For durations of the order of one day, however, the frontal rains associated with coastal regions can match the production from prolonged thunderstorm activity.

Curves fitted by least squares regression yielded the following equations in which  $x$  is the MAP and  $y$  the Log-Gumbel mean:-

15-minute duration : coastal region :  $y=0,0742x^{1/2}+0,4902$  ..... (2)

inland region :  $y=0,0570x^{1/2}+1,3995$  ..... (3)

60-minute duration : coastal region :  $y=0,0786x^{1/2}+1,0647$  ..... (4)

inland region :  $y=0,0598x^{1/2}+1,9020$  ..... (5)

1440-minute duration : both regions :  $y=0,0640x^{1/2}+2,3559$  ..... (6)

In seeking relationships for standard deviation the picture was complicated by the marked influence of sampling error. While records of the order of 10 years are just about adequate for the purpose of estimating the mean, considerably longer records are required to establish standard deviation with any degree of confidence.

In order to determine the influence (if any) on standard deviation of storm duration the results of the Log-Gumbel fit to the eight long records employed for the chi-square test were analysed as shown in Table 5.

As can be seen from Table 5, no clear relationship exists between standard deviation and duration. A plot of standard deviation (average for the three durations) against MAP appeared to indicate a trend of increasing standard deviation with decreasing MAP (see Figure 3). A curve-fit to these data by Newton-Raphson method yielded the following equation, in which  $x$  is the MAP and  $y$  is the standard deviation:

$$y=e^{(-0,00778x - 0,425)} + 0,359 \quad \text{..... (7)}$$

However, application of this equation (in combination with the

adopted equations for the mean) would generate unrealistically high storm rainfalls at high return periods for places with low MAP. This, plus the fact that there exists no long record for a station with MAP < 400 mm, prompted the adoption of a blanket value of standard deviation equal to 0,359, viz. the asymptote of equation 7. While this choice of non-varying standard deviation might lead to underestimation in very dry areas, at high return periods it does at least ensure that unrealistically high rainfalls will not be generated.

Once the MAP of a place and its location (viz. whether inland or coastal) are known, equations 1 to 6 can be employed to generate extreme rainfalls of any probability or return period for durations of 15-, 60- and 1440-minutes. The next logical step is to provide a graphical means of facilitating interpolation between and extrapolation beyond the 15- to 1440-minute range of durations. A graphical representation of all the relationships in the form of a co-axial diagram, at the same time, obviates the need for tedious calculations.

#### CONSTRUCTION OF CO-AXIAL DIAGRAM

Owing to the wide range of storm durations, return periods and climatological features of regions to be covered by the diagram, giving rise in turn to a wide range of rainfall depths, the co-axial diagram is plotted on logarithmic paper. By choosing 3-cycle paper a thousandfold range of duration and storm depth can be handled, viz. 0,1 to 100 hours duration and 1 to 1000 mm precipitation depth respectively.

#### Quadrant A : interpolation and extrapolation of duration

In the design of drainage from comparatively small areas, such as roofs, motorways, parking lots etc. there is a need to estimate rainfall intensities for durations of less than 15 minutes. For these short durations, and to facilitate interpolation among all durations shorter than one day, the following equation was adopted.

$$I = I_0 / (1 + B.D)^n \quad \dots\dots\dots (8)$$

where I is the intensity (mm/h) associated with a duration of D(h)



$I_o, B \& n$  are parameters associated with the given region,  
 MAP and return period  
 also  $I_o$  is the intensity associated with an event of zero  
 duration.

For a return period of 20 years and MAP of 500 mm the values of  
 the parameters in equation 8, satisfying equations 1 to 6 with  
 standard deviation fixed at 0,359, were computed to be as follows:

|                 | $I_o$ (mm/h) | B     | n      |
|-----------------|--------------|-------|--------|
| coastal region: | 122,8        | 4,779 | 0,7372 |
| inland region : | 217,8        | 4,164 | 0,8832 |

These parameters were employed in equation 8 to construct the two  
 curves in quadrant A of the co-axial diagram, Figure 4.

#### Quadrant B : return-period scale

Adoption of a fixed value for standard deviation results in a  
 constant ratio between rainfall depths for any pair of return periods.  
 By choosing the 20-year return period as a reference, according to  
 quadrant A, the following ratios for a selected range of return  
 periods were generated by equation 1 with standard deviation equal  
 to 0,359.

| return period (T)<br>years | ratio: $\frac{T\text{-year}}{20\text{-year}}$ |
|----------------------------|-----------------------------------------------|
| 2                          | 0,47                                          |
| 5                          | 0,64                                          |
| 10                         | 0,81                                          |
| 20                         | 1,00                                          |
| 50                         | 1,30                                          |
| 100                        | 1,60                                          |

These ratios are represented by the set of parallel lines in quadrant  
 B.

#### Quadrant C : influence of MAP

A range of MAP's between the limits 50 mm and 1000 mm (i.e. the  
 range of the observation stations) was selected for analysis.  
 Point rainfalls for return periods of 2-, 5-, 10-, 20-, 50- and  
 100-years and duration of 15-, 60- and 1440-minutes were then

generated by means of equations 1 to 6 with standard deviation of 0,359.

The generated rainfalls were plotted in quadrant C against the expected rainfalls (according to quadrant A and B) as shown in Figure 5. The line fitted to the set of points will then in turn generate the required value ( $\pm$  fitting error) on the vertical axis of quadrant C.

For situations in areas experiencing more than 1000 mm MAP the increase in extreme rainfall was assumed to be proportional to MAP. In this way the lines representing MAP's of up to 2000 mm were drawn in quadrant C.

#### SUMMARY AND CONCLUSIONS

Table 4 lists the results of a frequency analysis of extreme point rainfalls of short duration at 58 stations distributed in Southern Africa as shown on Figure 1. The co-axial diagram, Figure 4, was constructed for purposes of extrapolation to ungauged points.

It should be appreciated by the user of the co-axial diagram that due to sampling errors the scatters are appreciable and therefore attempts to read the diagram with a high degree of precision are likely to be unrewarding.

Care should be exercised, too, when comparing the results of frequency analyses of records at specific stations with those given by the diagram - particularly if the record is short. It must be appreciated that a single recording rain gauge provides a relatively poor sample of occurrences in the general vicinity of the gauging site. Only when the results of analyses of a multiplicity of records are viewed simultaneously and in juxtaposition are the effects of sampling error revealed. It is therefore unfruitful to compare values derived from Figure 4 with corresponding values based on frequency analyses of intensity records at a nearby station and expect necessarily close agreement, especially where the records are short.

## ACKNOWLEDGEMENTS

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## FIGURES



Fig.1 LOCATION OF AUTOGRAPHIC RAIN GAUGES

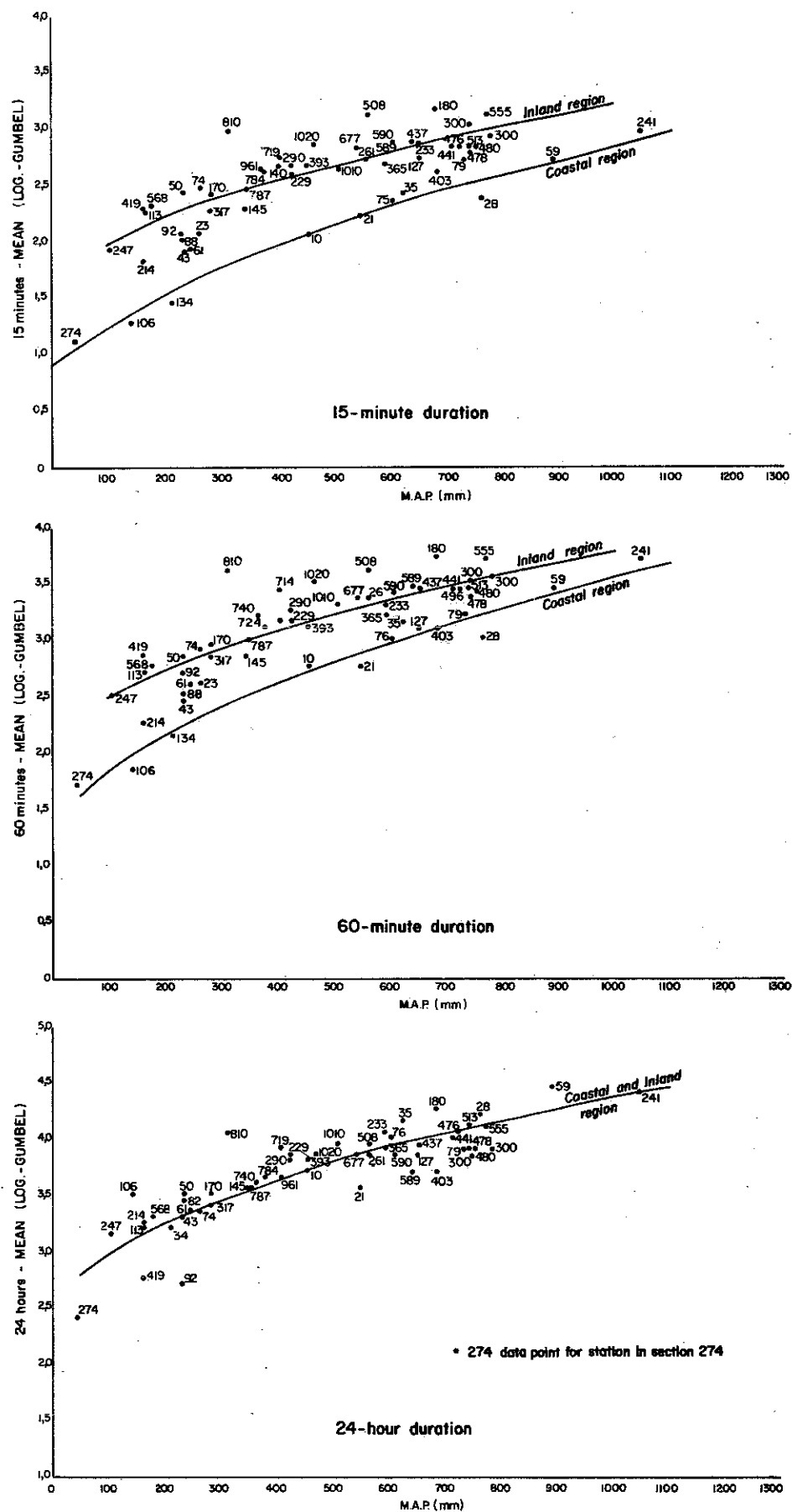
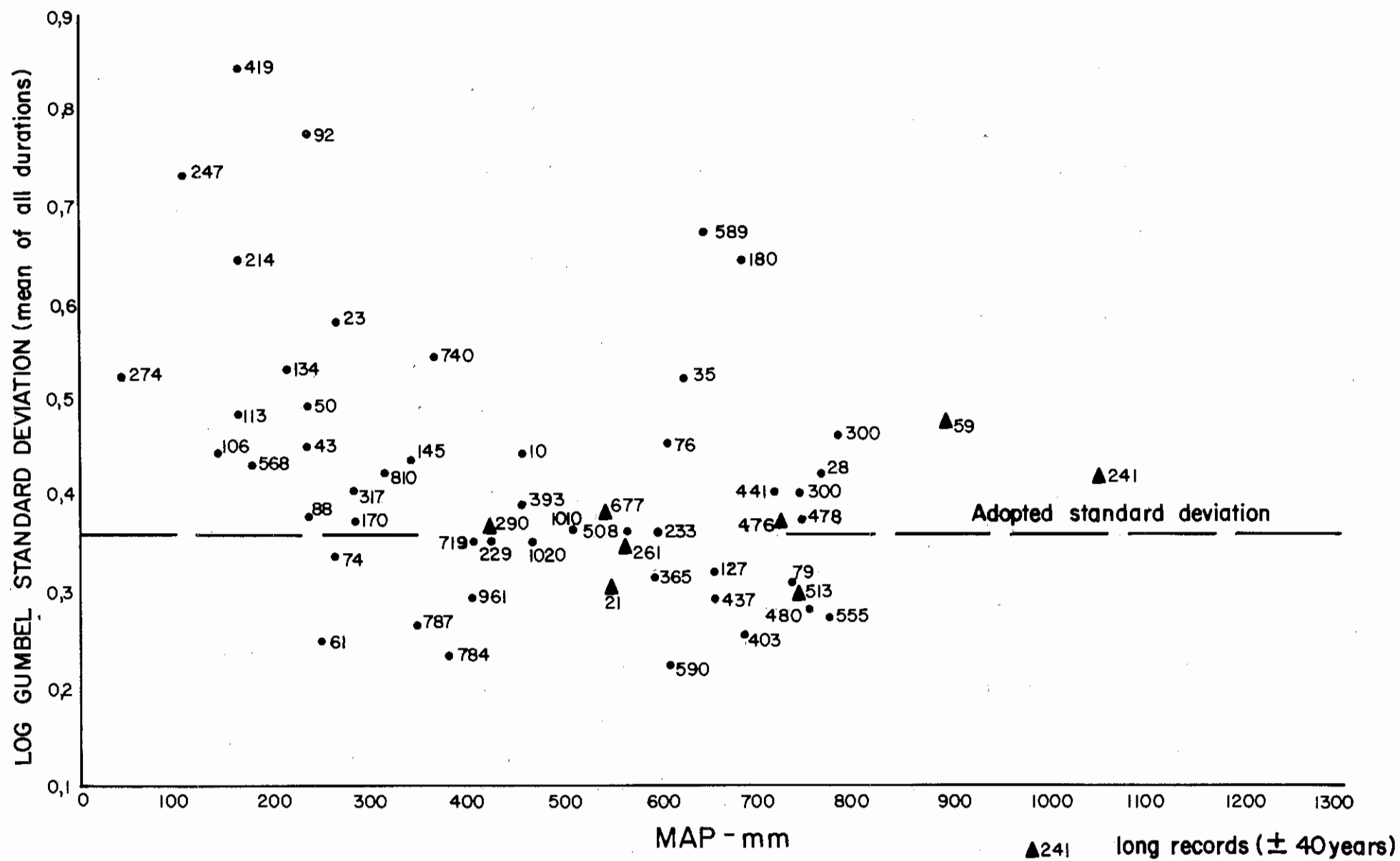


Fig.2 Relationship between MAP and mean of log-Gumbel distribution



**Fig. 3 Relationship between standard deviation and MAP**

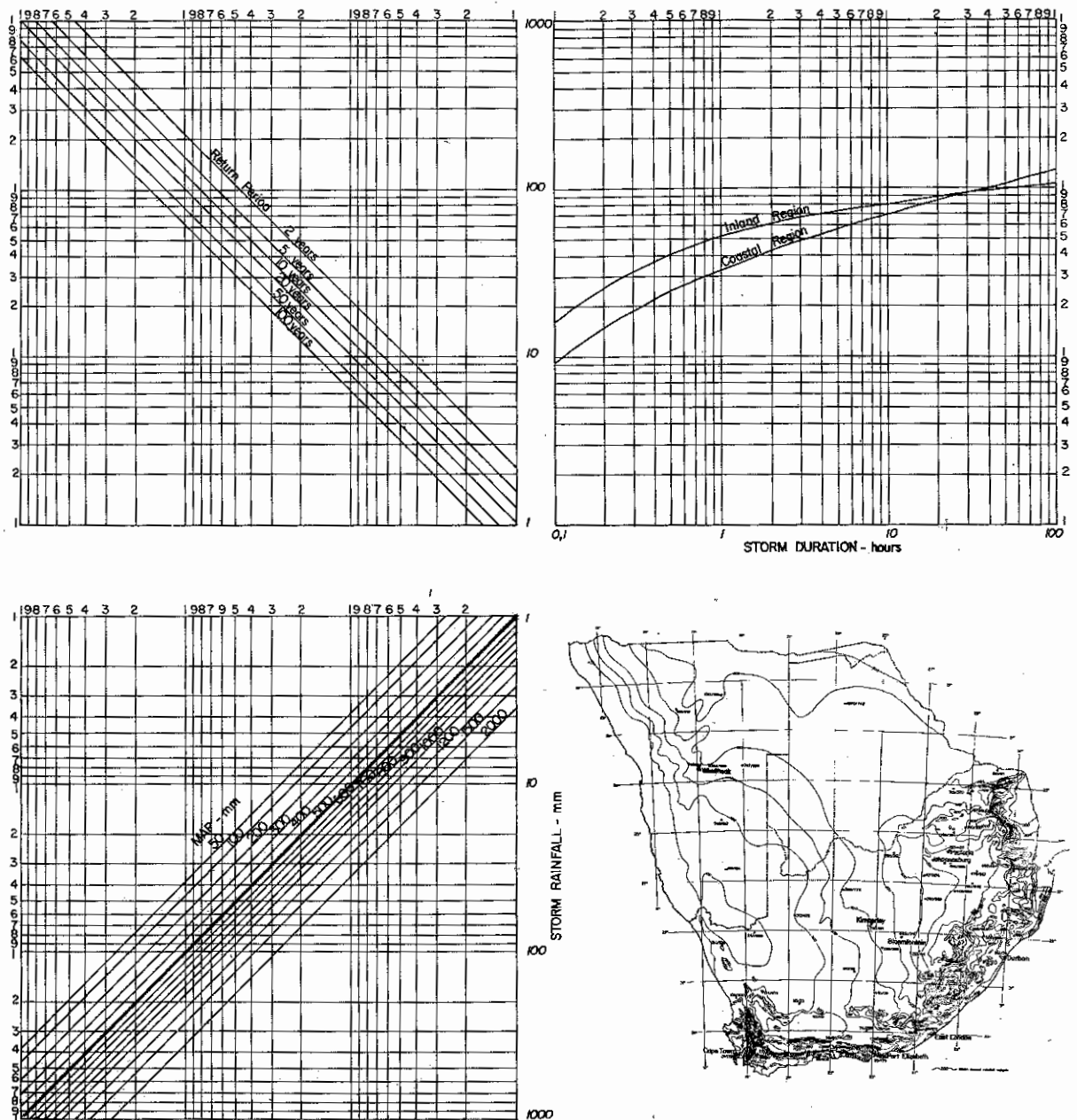


Fig. 4 Depth-Duration-Frequency diagram for point rainfall

|                |      |      |      |      |      |      |
|----------------|------|------|------|------|------|------|
| T              | 2    | 5    | 10   | 20   | 50   | 100  |
| F <sub>T</sub> | 0,47 | 0,64 | 0,81 | 1,00 | 1,30 | 1,80 |

$$\text{Kusstreek } P = [D * 122,8 / (1,0 + 4,770 * D)^{0,7372}]$$

$$\text{Binnelands } P = [D * 217,8 / (1,0 + 4,164 * D)^{0,8832}]$$

$$P_T = P * F_T * (18,79 + 0,17 * GJA) / 100$$



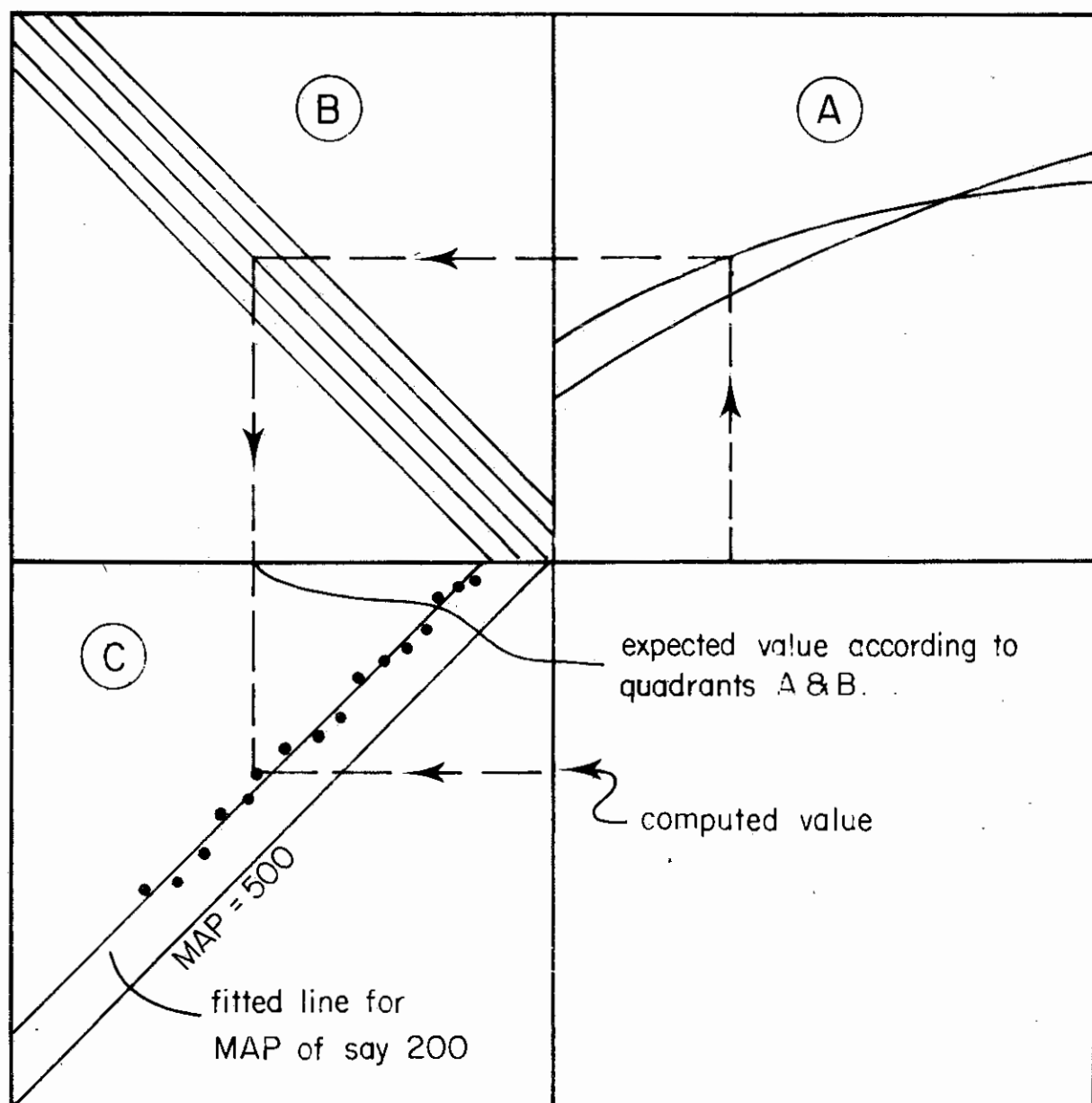


Fig. 5 Construction of Coaxial Diagram

## TABLES

Table 1 : Details of autographic rainfall stations

| Station no. | Station name   | Lat. S<br>deg. min | Long. E<br>deg. min | MAP<br>mm | Period of<br>record    |
|-------------|----------------|--------------------|---------------------|-----------|------------------------|
|             | Marion Island  |                    |                     | -         | 1951-1975              |
| 0/709       | Gough Island   |                    |                     | -         | 1956-1975              |
| 10/456      | Riversdale     | 34 06              | 21 16               | 457,4     | 1960-1971              |
| 21/178      | D.F. Malan     | 33 58              | 18 36               | 550,0     | 1938-1976              |
| 23/710      | Robertson      | 33 50              | 19 54               | 266,2     | 1958-1970              |
| 28/838      | George         | 33 58              | 22 28               | 766,5     | 1949-1963              |
| 35/179      | Port Elizabeth | 33 59              | 25 36               | 625,9     | 1947-1976              |
| 43/566      | Matroosberg    | 33 26              | 19 49               | 237,8     | 1938-1953<br>1958-1970 |
| 50/887      | Willowmore     | 33 17              | 23 30               | 236,8     | 1961-1968              |
| 59/572      | East London    | 33 02              | 27 50               | 896,1     | 1940-1976              |
| 61/298      | Langebaanweg   | 32 58              | 18 10               | 250,0     | 1973-1976              |
| 74/298      | Jansenville    | 32 58              | 24 40               | 267,3     | 1956-1970              |
| 76/134      | Somerset East  | 32 44              | 25 35               | 606,4     | 1961-1970              |
| 79/81       | Dohne          | 32 51              | 27 03               | 736,7     | 1965-1971              |
| 88/293      | Sutherland     | 32 23              | 20 40               | 238,1     | 1960-1970              |
| 92/141      | Beaufort West  | 32 21              | 22 35               | 230,3     | 1940-1970              |
| 106/850     | Vredendal      | 31 40              | 18 29               | 140,1     | 1958-1970              |
| 113/25      | Fraserburg     | 31 55              | 21 31               | 168,7     | 1958-1970              |
| 127/485     | Umtata         | 31 35              | 28 47               | 652,6     | 1957-1969              |
| 134/478     | Calvinia       | 31 28              | 19 46               | 213,8     | 1957-1970              |
| 145/59      | Grootfontein   | 31 29              | 25 02               | 349,9     | 1961-1976              |
| 170/98      | De Aar         | 30 38              | 24 04               | 287,4     | 1958-1970              |
| 180/722     | Kokstad        | 30 32              | 29 25               | 680,7     | 1959-1970              |
| 214/636     | O Kiep         | 29 36              | 17 52               | 161,0     | 1956-1970              |
| 229/556     | Fouresmith     | 29 46              | 25 19               | 429,2     | 1957-1970              |
| 233/44      | Wepener        | 29 44              | 27 02               | 599,7     | 1956-1969              |
| 241/50      | Louis Botha    | 29 50              | 31 02               | 1050,0    | 1938-1976              |
| 247/668     | Pofadder       | 29 08              | 19 23               | 104,6     | 1956-1970              |
| 261/516     | Bloemfontein   | 29 06              | 26 18               | 560,9     | 1938-1976              |
| 274/34      | Alexander Bay  | 28 34              | 16 32               | 44,2      | 1952-1976              |
| 290/68      | Kimberley      | 28 47              | 24 45               | 426,3     | 1938-1976              |
| 300/483     | Ladysmith      | 28 33              | 29 47               | 780,4     | 1949-1954              |
| 300/690     | Estcourt       | 29 00              | 29 53               | 749,3     | 1959-1966              |
| 317/476     | Upington       | 28 26              | 21 16               | 286,9     | 1951-1976              |

/Continued.....

Table 1 (contd)

| Station no. | Station name  | Lat. S<br>deg. min | Long. E<br>deg. min | MAP<br>mm | Period of<br>record |
|-------------|---------------|--------------------|---------------------|-----------|---------------------|
| 365/398     | Kroonstad     | 27 38              | 27 14               | 594,3     | 1961-1970           |
| 393/778     | Kuruman       | 27 28              | 23 26               | 456,0     | 1957-1970           |
| 403/866     | Frankfort     | 27 16              | 28 30               | 688,7     | 1961-1970           |
| 419/184     | Keetmanshoop  | 26 34              | 18 07               | 163,0     | 1956-1976           |
| 437/134     | Potchefstroom | 26 44              | 27 05               | 652,4     | 1951-1971           |
| 441/446     | Standerton    | 26 56              | 29 15               | 718,3     | 1960-1970           |
| 476/398     | Jan Smuts     | 26 08              | 28 14               | 722,9     | 1938-1976           |
| 478/867     | Bethal        | 26 27              | 29 29               | 747,6     | 1963-1971           |
| 480/184     | Carolina      | 26 04              | 30 07               | 757,7     | 1961-1971           |
| 508/261     | Mafeking      | 25 51              | 25 39               | 561,2     | 1958-1965           |
| 513/405     | Pretoria      | 25 45              | 28 14               | 742,1     | 1938-1976           |
| 555/837     | Nelspruit     | 25 27              | 30 58               | 776,7     | 1961-1971           |
| 568/817     | Mariental     | 24 37              | 17 57               | 180,0     | 1960-1971           |
| 589/594     | Towoomba      | 24 54              | 28 20               | 641,2     | 1947-1972           |
| 590/550     | Crecy         | 24 40              | 28 49               | 610,0     | 1956-1965           |
| 677/802     | Pietersberg   | 23 52              | 29 27               | 545,0     | 1938-1976           |
| 719/370     | Marnitz       | 23 10              | 28 13               | 408,1     | 1958-1972           |
| 740/154     | Windhoek      | 22 34              | 17 06               | 367,3     | 1956-1976           |
| 784/839     | J.G. Strydom  | 22 29              | 17 28               | 380,0     | 1967-1976           |
| 787/838     | Gobabis       | 22 28              | 18 58               | 350,0     | 1960-1971           |
| 810/80      | Messina       | 22 20              | 30 03               | 312,2     | 1956-1965           |
| 961/247     | Outjo         | 20 07              | 16 09               | 409,4     | 1960-1969           |
| 1010/186    | Grootfontein  | 19 36              | 18 07               | 510,0     | 1969-1976           |
| 1020/749    | Maun          | 19 59              | 23 25               | 468,6     | 1952-1963           |

TABLE 2 CHI-SQUARE TEST ON GUMBEL DISTRIBUTION

| SECTION NO.    | POSITION NO. | FIRST YEAR. | LAST YEAR. | MAP.   | NAME.        |
|----------------|--------------|-------------|------------|--------|--------------|
| 21             | 178          | 1938        | 1976       | 550.0  | D F MALAN    |
| 15 MINUTES .   | PGT = 0.615  | ACCEPT      |            |        |              |
| 30 MINUTES .   | PGT = 0.048  | REJECT      |            |        |              |
| 45 MINUTES .   | PGT = 0.009  | REJECT      |            |        |              |
| 60 MINUTES .   | PGT = 0.890  | ACCEPT      |            |        |              |
| 1440 MINUTES . | PGT = 0.528  | ACCEPT      |            |        |              |
| SECTION NO.    | POSITION NO. | FIRST YEAR. | LAST YEAR. | MAP.   | NAME.        |
| 59             | 572          | 1940        | 1976       | 896.1  | EAST LONDON  |
| 15 MINUTES .   | PGT = 0.017  | REJECT      |            |        |              |
| 30 MINUTES .   | PGT = 0.824  | ACCEPT      |            |        |              |
| 45 MINUTES .   | PGT = 0.726  | ACCEPT      |            |        |              |
| 60 MINUTES .   | PGT = 0.980  | ACCEPT      |            |        |              |
| 1440 MINUTES . | PGT = 0.021  | REJECT      |            |        |              |
| SECTION NO.    | POSITION NO. | FIRST YEAR. | LAST YEAR. | MAP.   | NAME.        |
| 241            | 50           | 1938        | 1976       | 1050.0 | LOUIS BOTHA  |
| 15 MINUTES .   | PGT = 0.488  | ACCEPT      |            |        |              |
| 30 MINUTES .   | PGT = 0.801  | ACCEPT      |            |        |              |
| 45 MINUTES .   | PGT = 0.571  | ACCEPT      |            |        |              |
| 60 MINUTES .   | PGT = 0.615  | ACCEPT      |            |        |              |
| 1440 MINUTES . | PGT = 0.488  | ACCEPT      |            |        |              |
| SECTION NO.    | POSITION NO. | FIRST YEAR. | LAST YEAR. | MAP.   | NAME.        |
| 261            | 516          | 1938        | 1976       | 560.9  | BLOEMFONTEIN |
| 15 MINUTES .   | PGT = 0.000  | REJECT      |            |        |              |
| 30 MINUTES .   | PGT = 0.090  | ACCEPT      |            |        |              |
| 45 MINUTES .   | PGT = 0.135  | ACCEPT      |            |        |              |
| 60 MINUTES .   | PGT = 0.488  | ACCEPT      |            |        |              |
| 1440 MINUTES . | PGT = 0.661  | ACCEPT      |            |        |              |
| SECTION NO.    | POSITION NO. | FIRST YEAR. | LAST YEAR. | MAP.   | NAME.        |
| 290            | 68           | 1938        | 1976       | 426.3  | KIMBERLEY    |
| 15 MINUTES .   | PGT = 0.488  | ACCEPT      |            |        |              |
| 30 MINUTES .   | PGT = 0.890  | ACCEPT      |            |        |              |
| 45 MINUTES .   | PGT = 0.449  | ACCEPT      |            |        |              |
| 60 MINUTES .   | PGT = 0.413  | ACCEPT      |            |        |              |
| 1440 MINUTES . | PGT = 0.707  | ACCEPT      |            |        |              |
| SECTION NO.    | POSITION NO. | FIRST YEAR. | LAST YEAR. | MAP.   | NAME.        |
| 476            | 398          | 1938        | 1976       | 722.9  | JAN SMUTS    |
| 15 MINUTES .   | PGT = 0.488  | ACCEPT      |            |        |              |
| 30 MINUTES .   | PGT = 0.000  | REJECT      |            |        |              |
| 45 MINUTES .   | PGT = 0.000  | REJECT      |            |        |              |
| 60 MINUTES .   | PGT = 0.002  | REJECT      |            |        |              |
| 1440 MINUTES . | PGT = 0.317  | ACCEPT      |            |        |              |
| SECTION NO.    | POSITION NO. | FIRST YEAR. | LAST YEAR. | MAP.   | NAME.        |
| 513            | 405          | 1938        | 1976       | 742.1  | PRETORIA     |
| 15 MINUTES .   | PGT = 0.986  | ACCEPT      |            |        |              |
| 30 MINUTES .   | PGT = 0.929  | ACCEPT      |            |        |              |
| 45 MINUTES .   | PGT = 0.413  | ACCEPT      |            |        |              |
| 60 MINUTES .   | PGT = 0.929  | ACCEPT      |            |        |              |
| 1440 MINUTES . | PGT = 0.413  | ACCEPT      |            |        |              |
| SECTION NO.    | POSITION NO. | FIRST YEAR. | LAST YEAR. | MAP.   | NAME.        |
| 677            | 802          | 1938        | 1976       | 545.0  | PIETERSBERG  |
| 15 MINUTES .   | PGT = 0.929  | ACCEPT      |            |        |              |
| 30 MINUTES .   | PGT = 0.379  | ACCEPT      |            |        |              |
| 45 MINUTES .   | PGT = 0.031  | REJECT      |            |        |              |
| 60 MINUTES .   | PGT = 0.488  | ACCEPT      |            |        |              |
| 1440 MINUTES . | PGT = 0.110  | ACCEPT      |            |        |              |

TABLE 3 CHI-SQUARE TEST ON LOG-GUMBEL DISTRIBUTION

| SECTION NO.    | POSITION NO. | FIRST YEAR. | LAST YEAR. | MAP.   | NAME.        |
|----------------|--------------|-------------|------------|--------|--------------|
| 21             | 178          | 1938        | 1976       | 550.0  | D F MALAN    |
| 15 MINUTES .   | PGT = 0.264  | ACCEPT      |            |        |              |
| 30 MINUTES .   | PGT = 0.135  | ACCEPT      |            |        |              |
| 45 MINUTES .   | PGT = 0.755  | ACCEPT      |            |        |              |
| 60 MINUTES .   | PGT = 0.755  | ACCEPT      |            |        |              |
| 1440 MINUTES . | PGT = 0.135  | ACCEPT      |            |        |              |
| SECTION NO.    | POSITION NO. | FIRST YEAR. | LAST YEAR. | MAP.   | NAME.        |
| 59             | 572          | 1940        | 1976       | 896.1  | EAST LONDON  |
| 15 MINUTES .   | PGT = 0.492  | ACCEPT      |            |        |              |
| 30 MINUTES .   | PGT = 0.997  | ACCEPT      |            |        |              |
| 45 MINUTES .   | PGT = 0.726  | ACCEPT      |            |        |              |
| 60 MINUTES .   | PGT = 0.726  | ACCEPT      |            |        |              |
| 1440 MINUTES . | PGT = 0.378  | ACCEPT      |            |        |              |
| SECTION NO.    | POSITION NO. | FIRST YEAR. | LAST YEAR. | MAP.   | NAME.        |
| 241            | 50           | 1938        | 1976       | 1050.0 | LOUIS BUTHA  |
| 15 MINUTES .   | PGT = 0.990  | ACCEPT      |            |        |              |
| 30 MINUTES .   | PGT = 0.986  | ACCEPT      |            |        |              |
| 45 MINUTES .   | PGT = 0.929  | ACCEPT      |            |        |              |
| 60 MINUTES .   | PGT = 0.929  | ACCEPT      |            |        |              |
| 1440 MINUTES . | PGT = 0.661  | ACCEPT      |            |        |              |
| SECTION NO.    | POSITION NO. | FIRST YEAR. | LAST YEAR. | MAP.   | NAME.        |
| 261            | 516          | 1938        | 1976       | 560.9  | BLCEMFORTEIN |
| 15 MINUTES .   | PGT = 0.755  | ACCEPT      |            |        |              |
| 30 MINUTES .   | PGT = 0.488  | ACCEPT      |            |        |              |
| 45 MINUTES .   | PGT = 0.847  | ACCEPT      |            |        |              |
| 60 MINUTES .   | PGT = 0.929  | ACCEPT      |            |        |              |
| 1440 MINUTES . | PGT = 0.755  | ACCEPT      |            |        |              |
| SECTION NO.    | POSITION NO. | FIRST YEAR. | LAST YEAR. | MAP.   | NAME.        |
| 290            | 68           | 1938        | 1976       | 426.3  | KIMBERLEY    |
| 15 MINUTES .   | PGT = 0.488  | ACCEPT      |            |        |              |
| 30 MINUTES .   | PGT = 0.890  | ACCEPT      |            |        |              |
| 45 MINUTES .   | PGT = 0.661  | ACCEPT      |            |        |              |
| 60 MINUTES .   | PGT = 0.755  | ACCEPT      |            |        |              |
| 1440 MINUTES . | PGT = 0.755  | ACCEPT      |            |        |              |
| SECTION NO.    | POSITION NO. | FIRST YEAR. | LAST YEAR. | MAP.   | NAME.        |
| 476            | 398          | 1938        | 1976       | 722.9  | JAN SMUTS    |
| 15 MINUTES .   | PGT = 0.661  | ACCEPT      |            |        |              |
| 30 MINUTES .   | PGT = 0.290  | ACCEPT      |            |        |              |
| 45 MINUTES .   | PGT = 0.707  | ACCEPT      |            |        |              |
| 60 MINUTES .   | PGT = 0.528  | ACCEPT      |            |        |              |
| 1440 MINUTES . | PGT = 0.661  | ACCEPT      |            |        |              |
| SECTION NO.    | POSITION NO. | FIRST YEAR. | LAST YEAR. | MAP.   | NAME.        |
| 513            | 405          | 1938        | 1976       | 742.1  | PRETORIA     |
| 15 MINUTES .   | PGT = 0.488  | ACCEPT      |            |        |              |
| 30 MINUTES .   | PGT = 0.707  | ACCEPT      |            |        |              |
| 45 MINUTES .   | PGT = 0.081  | ACCEPT      |            |        |              |
| 60 MINUTES .   | PGT = 0.615  | ACCEPT      |            |        |              |
| 1440 MINUTES . | PGT = 0.755  | ACCEPT      |            |        |              |
| SECTION NO.    | POSITION NO. | FIRST YEAR. | LAST YEAR. | MAP.   | NAME.        |
| 677            | 802          | 1938        | 1976       | 545.0  | PIETERSBERG  |
| 15 MINUTES .   | PGT = 0.066  | ACCEPT      |            |        |              |
| 30 MINUTES .   | PGT = 0.264  | ACCEPT      |            |        |              |
| 45 MINUTES .   | PGT = 0.031  | REJECT      |            |        |              |
| 60 MINUTES .   | PGT = 0.149  | ACCEPT      |            |        |              |
| 1440 MINUTES . | PGT = 0.290  | ACCEPT      |            |        |              |

TABLE 4 RESULTS OF DEPTH-DURATION-FREQUENCY ANALYSIS

| SECTION NO.          | POSITION NO.                       | FIRST YEAR. | LAST YEAR. | MAP.      | NAME.         |                            |
|----------------------|------------------------------------|-------------|------------|-----------|---------------|----------------------------|
| 0                    | C                                  | 1951        | 1975       | C.7       | MARION ISLAND |                            |
| DURATION IN MINUTES. | TOTALS FOR RETURN PERIOD IN MM/HR. |             |            |           |               |                            |
|                      | 2 YEARS.                           | 5 YEARS.    | 10 YEARS.  | 20 YEARS. | 50 YEARS.     | 100 YEARS.                 |
| 15                   | 6.5                                | 8.9         | 11.1       | 13.6      | 17.7          | 21.5                       |
|                      |                                    |             |            |           |               | A = -1.703 C = 0.285       |
|                      |                                    |             |            |           |               | MEANXL = 1.927 SXL = 0.365 |
|                      |                                    |             |            |           |               | MEANX = 6.868 SX = 1.441   |
| 30                   | 9.8                                | 13.2        | 16.1       | 19.4      | 24.7          | 29.6                       |
|                      |                                    |             |            |           |               | A = -2.191 C = 0.260       |
|                      |                                    |             |            |           |               | MEANXL = 2.342 SXL = 0.333 |
|                      |                                    |             |            |           |               | MEANX = 10.397 SX = 1.396  |
| 45                   | 13.0                               | 16.8        | 19.9       | 23.3      | 26.3          | 33.7                       |
|                      |                                    |             |            |           |               | A = -2.083 C = 0.225       |
|                      |                                    |             |            |           |               | MEANXL = 3.613 SXL = 0.288 |
|                      |                                    |             |            |           |               | MEANX = 13.635 SX = 1.33A  |
| 60                   | 15.6                               | 19.8        | 23.2       | 27.0      | 32.9          | 38.0                       |
|                      |                                    |             |            |           |               | A = -2.070 C = 0.210       |
|                      |                                    |             |            |           |               | MEANXL = 2.791 SXL = 0.270 |
|                      |                                    |             |            |           |               | MEANX = 16.301 SX = 1.309  |
| 1440                 | 64.8                               | 78.2        | 88.5       | 99.7      | 116.2         | 130.4                      |
|                      |                                    |             |            |           |               | A = -4.112 C = 0.165       |
|                      |                                    |             |            |           |               | MEANXL = 4.207 SXL = 0.212 |
|                      |                                    |             |            |           |               | MEANX = 67.144 SX = 1.236  |

| SECTION NO.          | POSITION NO. | FIRST YEAR.                        | LAST YEAR. | MAP.      | NAME.        |           |            |          |         |             |
|----------------------|--------------|------------------------------------|------------|-----------|--------------|-----------|------------|----------|---------|-------------|
| 0                    | 709          | 1956                               | 1975       | 9.0       | GOUGH ISLAND |           |            |          |         |             |
| DURATION IN MINUTES. |              | TOTALS FOR RETURN PERIOD IN MM/HR. |            |           |              |           |            |          |         |             |
|                      |              | 2 YEARS.                           | 5 YEARS.   | 10 YEARS. | 20 YEARS.    | 50 YEARS. | 100 YEARS. |          |         |             |
| 15                   |              | 9.6                                | 12.2       | 14.3      | 16.6         | 20.3      | 23.5       | A =      | -2.179  | C = 0.213   |
|                      |              |                                    |            |           |              |           |            | MEANXL = | 2.302   | SXL = 0.273 |
|                      |              |                                    |            |           |              |           |            | MEANX =  | 9.997   | SX = 1.314  |
| 30                   |              | 15.4                               | 19.6       | 22.9      | 26.6         | 32.4      | 37.5       | A =      | -2.059  | C = 0.210   |
|                      |              |                                    |            |           |              |           |            | MEANXL = | 2.780   | SXL = 0.269 |
|                      |              |                                    |            |           |              |           |            | MEANX =  | 16.122  | SX = 1.309  |
| 45                   |              | 19.7                               | 24.5       | 28.3      | 32.5         | 38.9      | 44.5       | A =      | -2.913  | C = 0.192   |
|                      |              |                                    |            |           |              |           |            | MEANXL = | 3.023   | SXL = 0.246 |
|                      |              |                                    |            |           |              |           |            | MEANX =  | 20.561  | SX = 1.279  |
| 60                   |              | 23.8                               | 29.8       | 34.5      | 39.7         | 47.7      | 54.8       | A =      | -3.098  | C = 0.157   |
|                      |              |                                    |            |           |              |           |            | MEANXL = | 3.211   | SXL = 0.252 |
|                      |              |                                    |            |           |              |           |            | MEANX =  | 24.813  | SX = 1.287  |
| 1440                 |              | 104.0                              | 141.0      | 172.5     | 209.4        | 268.9     | 324.4      | A =      | -4.546  | C = 0.269   |
|                      |              |                                    |            |           |              |           |            | MEANXL = | 4.701   | SXL = 0.345 |
|                      |              |                                    |            |           |              |           |            | MEANX =  | 110.055 | SX = 1.411  |

| SECTION NO.          | POSITION NO.                       | FIRST YEAR. | LAST YEAR. | MAP.      | NAME.      |                            |
|----------------------|------------------------------------|-------------|------------|-----------|------------|----------------------------|
| 10                   | 456                                | 1960        | 1971       | 457.4     | RIVERSDALE |                            |
| DURATION IN MINUTES. | TOTALS FOR RETURN PERIOD IN MM/HR. |             |            |           |            |                            |
|                      | 2 YEARS.                           | 5 YEARS.    | 10 YEARS.  | 20 YEARS. | 50 YEARS.  | 100 YEARS.                 |
| 15                   | 7.4                                | 10.4        | 13.0       | 16.2      | 21.4       | 26.3                       |
|                      |                                    |             |            |           |            | A = -1.895 C = 0.299       |
|                      |                                    |             |            |           |            | MEANXL = 2.068 SXL = 0.383 |
|                      |                                    |             |            |           |            | MEANX = 7.909 SX = 1.467   |
| 30                   | 11.3                               | 16.7        | 21.5       | 27.4      | 37.6       | 47.5                       |
|                      |                                    |             |            |           |            | A = -2.304 C = 0.339       |
|                      |                                    |             |            |           |            | MEANXL = 2.500 SXL = 0.435 |
|                      |                                    |             |            |           |            | MEANX = 12.182 SX = 1.544  |
| 45                   | 13.4                               | 20.3        | 26.8       | 34.9      | 49.2       | 63.6                       |
|                      |                                    |             |            |           |            | A = -2.459 C = 0.368       |
|                      |                                    |             |            |           |            | MEANXL = 2.672 SXL = 0.472 |
|                      |                                    |             |            |           |            | MEANX = 14.463 SX = 1.603  |
| 60                   | 14.5                               | 22.7        | 30.5       | 40.5      | 58.4       | 76.9                       |
|                      |                                    |             |            |           |            | A = -2.532 C = 0.394       |
|                      |                                    |             |            |           |            | MEANXL = 2.759 SXL = 0.505 |
|                      |                                    |             |            |           |            | MEANX = 15.788 SX = 1.657  |
| 1440                 | 39.3                               | 58.8        | 76.8       | 99.2      | 138.2      | 177.2                      |
|                      |                                    |             |            |           |            | A = -3.540 C = 0.356       |
|                      |                                    |             |            |           |            | MEANXL = 3.745 SXL = 0.457 |
|                      |                                    |             |            |           |            | MEANX = 42.310 SX = 1.579  |



| SECTION NO.          | POSITION NO. | FIRST YEAR.                        | LAST YEAR. | MAP.      | NAME.     |           |            |          |        |             |
|----------------------|--------------|------------------------------------|------------|-----------|-----------|-----------|------------|----------|--------|-------------|
| 21                   | 178          | 1938                               | 1970       | 550.3     | D F MALAN |           |            |          |        |             |
| DURATION IN MINUTES. |              | TOTALS FOR RETURN PERIOD IN MM/HR. |            |           |           |           |            |          |        |             |
|                      |              | 2 YEARS.                           | 5 YEARS.   | 10 YEARS. | 20 YEARS. | 50 YEARS. | 100 YEARS. |          |        |             |
| 15                   |              | 8.8                                | 11.5       | 13.7      | 16.2      | 20.1      | 23.7       | A =      | -2.094 | C = 0.232   |
|                      |              |                                    |            |           |           |           |            | MEANXL = | 2.228  | SXL = 0.258 |
|                      |              |                                    |            |           |           |           |            | MEANX =  | 9.285  | SX = 1.347  |
| 30                   |              | 12.2                               | 16.3       | 19.8      | 23.8      | 30.3      | 36.2       | A =      | -2.406 | C = 0.257   |
|                      |              |                                    |            |           |           |           |            | MEANXL = | 2.554  | SXL = 0.330 |
|                      |              |                                    |            |           |           |           |            | MEANX =  | 12.864 | SX = 1.391  |
| 45                   |              | 14.1                               | 19.2       | 23.0      | 28.7      | 37.1      | 45.0       | A =      | -2.543 | C = 0.275   |
|                      |              |                                    |            |           |           |           |            | MEANXL = | 2.731  | SXL = 0.352 |
|                      |              |                                    |            |           |           |           |            | MEANX =  | 14.696 | SX = 1.422  |
| 60                   |              | 15.5                               | 20.9       | 25.6      | 31.0      | 39.7      | 47.8       | A =      | -2.642 | C = 0.267   |
|                      |              |                                    |            |           |           |           |            | MEANXL = | 2.796  | SXL = 0.342 |
|                      |              |                                    |            |           |           |           |            | MEANX =  | 16.373 | SX = 1.408  |
| 1440                 |              | 34.3                               | 43.6       | 51.1      | 59.6      | 72.5      | 84.1       | A =      | -3.459 | C = 0.211   |
|                      |              |                                    |            |           |           |           |            | MEANXL = | 3.581  | SXL = 0.271 |
|                      |              |                                    |            |           |           |           |            | MEANX =  | 35.909 | SX = 1.311  |

| SECTION NO.          | POSITION NO.                       | FIRST YEAR. | LAST YEAR. | MAP.      | NAME.     |            |                |             |
|----------------------|------------------------------------|-------------|------------|-----------|-----------|------------|----------------|-------------|
| 23                   | 710                                | 1958        | 1970       | 256.2     | ROBERTSON |            |                |             |
| DURATION IN MINUTES. | TOTALS FOR RETURN PERIOD IN MM/HR. |             |            |           |           |            |                |             |
|                      | 2 YEARS.                           | 5 YEARS.    | 10 YEARS.  | 20 YEARS. | 50 YEARS. | 100 YEARS. |                |             |
| 15                   | 7.3                                | 12.6        | 18.1       | 25.6      | 40.2      | 55.3       | A = -1.809     | C = 0.483   |
|                      |                                    |             |            |           |           |            | MEANXL = 2.088 | SXL = 0.620 |
|                      |                                    |             |            |           |           |            | MEANX = 8.066  | SX = 1.858  |
| 30                   | 9.7                                | 17.1        | 24.8       | 35.5      | 56.3      | 79.7       | A = -2.093     | C = 0.497   |
|                      |                                    |             |            |           |           |            | MEANXL = 2.380 | SXL = 0.637 |
|                      |                                    |             |            |           |           |            | MEANX = 10.800 | SX = 1.891  |
| 45                   | 11.3                               | 18.8        | 26.3       | 36.3      | 55.1      | 75.4       | A = -2.264     | C = 0.447   |
|                      |                                    |             |            |           |           |            | MEANXL = 2.522 | SXL = 0.574 |
|                      |                                    |             |            |           |           |            | MEANX = 12.455 | SX = 1.775  |
| 60                   | 12.5                               | 20.2        | 27.6       | 37.4      | 55.4      | 74.3       | A = -2.372     | C = 0.421   |
|                      |                                    |             |            |           |           |            | MEANXL = 2.615 | SXL = 0.540 |
|                      |                                    |             |            |           |           |            | MEANX = 13.670 | SX = 1.716  |

| SECTION NO.          | POSITION NO.                       | FIRST YEAR. | LAST YEAR. | MAP.      | NAME.     |            |                |             |
|----------------------|------------------------------------|-------------|------------|-----------|-----------|------------|----------------|-------------|
| 28                   | 838                                | 1949        | 1963       | 766.5     | GEORGE    |            |                |             |
| DURATION IN MINUTES. | TOTALS FOR RETURN PERIOD IN MM/HR. |             |            |           |           |            |                |             |
|                      | 2 YEARS.                           | 5 YEARS.    | 10 YEARS.  | 20 YEARS. | 50 YEARS. | 100 YEARS. |                |             |
| 15                   | 10.0                               | 15.4        | 20.6       | 27.2      | 39.0      | 51.1       | A = -2.158     | C = 0.386   |
|                      |                                    |             |            |           |           |            | MEANXL = 2.381 | SXL = 0.495 |
|                      |                                    |             |            |           |           |            | MEANX = 10.818 | SX = 1.641  |
| 30                   | 13.6                               | 20.0        | 25.8       | 33.0      | 45.4      | 57.7       | A = -2.482     | C = 0.342   |
|                      |                                    |             |            |           |           |            | MEANXL = 2.680 | SXL = 0.439 |
|                      |                                    |             |            |           |           |            | MEANX = 14.578 | SX = 1.551  |
| 45                   | 16.7                               | 24.9        | 32.6       | 42.0      | 58.5      | 74.9       | A = -2.685     | C = 0.355   |
|                      |                                    |             |            |           |           |            | MEANXL = 2.889 | SXL = 0.455 |
|                      |                                    |             |            |           |           |            | MEANX = 17.981 | SX = 1.576  |
| 60                   | 19.4                               | 28.5        | 36.7       | 46.7      | 63.9      | 80.9       | A = -2.844     | C = 0.337   |
|                      |                                    |             |            |           |           |            | MEANXL = 3.038 | SXL = 0.432 |
|                      |                                    |             |            |           |           |            | MEANX = 20.869 | SX = 1.540  |
| 1440                 | 65.5                               | 88.4        | 107.9      | 130.5     | 167.1     | 201.1      | A = -4.085     | C = 0.265   |
|                      |                                    |             |            |           |           |            | MEANXL = 4.237 | SXL = 0.340 |
|                      |                                    |             |            |           |           |            | MEANX = 69.234 | SX = 1.405  |

| SECTION NO.          | POSITION NO.                       | FIRST YEAR. | LAST YEAR. | MAP.      | NAME.          |                            |
|----------------------|------------------------------------|-------------|------------|-----------|----------------|----------------------------|
| 35                   | 179                                | 1947        | 1970       | 625.9     | PORT ELIZABETH |                            |
| DURATION IN MINUTES. | TOTALS FOR RETURN PERIOD IN MM/HR. |             |            |           |                |                            |
|                      | 2 YEARS.                           | 5 YEARS.    | 10 YEARS.  | 20 YEARS. | 50 YEARS.      | 100 YEARS.                 |
| 15                   | 10.4                               | 10.2        | 21.7       | 28.8      | 41.5           | 54.6                       |
|                      |                                    |             |            |           |                | A = -2.198 C = 0.392       |
|                      |                                    |             |            |           |                | MEANXL = 2.424 SXL = 0.502 |
|                      |                                    |             |            |           |                | MEANX = 11.287 SX = 1.653  |
| 30                   | 16.0                               | 24.7        | 33.0       | 43.5      | 62.2           | 81.4                       |
|                      |                                    |             |            |           |                | A = -2.632 C = 0.384       |
|                      |                                    |             |            |           |                | MEANXL = 2.654 SXL = 0.493 |
|                      |                                    |             |            |           |                | MEANX = 17.259 SX = 1.637  |
| 45                   | 19.4                               | 30.5        | 41.1       | 54.9      | 79.6           | 105.3                      |
|                      |                                    |             |            |           |                | A = -2.817 C = 0.400       |
|                      |                                    |             |            |           |                | MEANXL = 3.048 SXL = 0.513 |
|                      |                                    |             |            |           |                | MEANX = 21.072 SX = 1.670  |
| 60                   | 21.8                               | 34.7        | 47.2       | 63.4      | 92.8           | 123.5                      |
|                      |                                    |             |            |           |                | A = -2.932 C = 0.410       |
|                      |                                    |             |            |           |                | MEANXL = 3.169 SXL = 0.525 |
|                      |                                    |             |            |           |                | MEANX = 23.776 SX = 1.691  |
| 1440                 | 59.4                               | 95.5        | 130.7      | 176.7     | 200.9          | 349.5                      |
|                      |                                    |             |            |           |                | A = -3.932 C = 0.418       |
|                      |                                    |             |            |           |                | MEANXL = 4.173 SXL = 0.537 |
|                      |                                    |             |            |           |                | MEANX = 64.917 SX = 1.710  |

| SECTION NO.          | POSITION NO. | FIRST YEAR.                        | LAST YEAR. | MAP.      | NAME.       |           |            |          |        |             |
|----------------------|--------------|------------------------------------|------------|-----------|-------------|-----------|------------|----------|--------|-------------|
| 43                   | 566          | 1938                               | 1953       | 237.8     | MATROOSBERG |           |            |          |        |             |
| DURATION IN MINUTES. |              | TOTALS FOR RETURN PERIOD IN MM/HR. |            |           |             |           |            |          |        |             |
|                      |              | 2 YEARS.                           | 5 YEARS.   | 10 YEARS. | 20 YEARS.   | 50 YEARS. | 100 YEARS. |          |        |             |
| 15                   |              | 7.9                                | 11.9       | 13.7      | 20.5        | 28.9      | 37.3       | A =      | -1.929 | C = 0.368   |
|                      |              |                                    |            |           |             |           |            | MEANXL = | 2.141  | SXL = 0.472 |
|                      |              |                                    |            |           |             |           |            | MEANX =  | 8.508  | SX = 1.603  |
| 30                   |              | 10.7                               | 17.4       | 23.9      | 32.5        | 48.4      | 65.2       | A =      | -2.213 | C = 0.427   |
|                      |              |                                    |            |           |             |           |            | MEANXL = | 2.460  | SXL = 0.548 |
|                      |              |                                    |            |           |             |           |            | MEANX =  | 11.703 | SX = 1.729  |
| 45                   |              | 12.2                               | 19.8       | 27.4      | 37.4        | 55.9      | 75.6       | A =      | -2.339 | C = 0.432   |
|                      |              |                                    |            |           |             |           |            | MEANXL = | 2.588  | SXL = 0.554 |
|                      |              |                                    |            |           |             |           |            | MEANX =  | 13.308 | SX = 1.740  |
| 60                   |              | 13.1                               | 21.7       | 30.3      | 41.8        | 63.3      | 86.4       | A =      | -2.409 | C = 0.446   |
|                      |              |                                    |            |           |             |           |            | MEANXL = | 2.666  | SXL = 0.572 |
|                      |              |                                    |            |           |             |           |            | MEANX =  | 14.385 | SX = 1.771  |
| 1440                 |              | 26.7                               | 35.9       | 43.7      | 52.8        | 67.4      | 80.8       | A =      | -3.184 | C = 0.262   |
|                      |              |                                    |            |           |             |           |            | MEANXL = | 3.340  | SXL = 0.336 |
|                      |              |                                    |            |           |             |           |            | MEANX =  | 28.223 | SX = 1.399  |

| SECTION NO.          | POSITION NO.                       | FIRST YEAR. | LAST YEAR. | MAP.      | NAME.       |            |          |        |             |
|----------------------|------------------------------------|-------------|------------|-----------|-------------|------------|----------|--------|-------------|
| 43                   | 566                                | 1958        | 1970       | 237.8     | MATROOSBERG |            |          |        |             |
| DURATION IN MINUTES. | TOTALS FOR RETURN PERIOD IN MM/HR. |             |            |           |             |            |          |        |             |
|                      | 2 YEARS.                           | 5 YEARS.    | 10 YEARS.  | 20 YEARS. | 50 YEARS.   | 100 YEARS. |          |        |             |
| 15                   | 4.5                                | 7.9         | 11.5       | 16.4      | 26.1        | 36.9       | A =      | -1.325 | C = 0.496   |
|                      |                                    |             |            |           |             |            | MEANXL = | 1.611  | SXL = 0.636 |
|                      |                                    |             |            |           |             |            | MEANX =  | 5.008  | SX = 1.889  |
| 30                   | 6.2                                | 9.6         | 12.9       | 17.1      | 24.6        | 32.3       | A =      | -1.677 | C = 0.391   |
|                      |                                    |             |            |           |             |            | MEANXL = | 1.903  | SXL = 0.501 |
|                      |                                    |             |            |           |             |            | MEANX =  | 6.703  | SX = 1.651  |
| 45                   | 7.5                                | 10.5        | 13.2       | 16.4      | 21.7        | 26.8       | A =      | -1.901 | C = 0.301   |
|                      |                                    |             |            |           |             |            | MEANXL = | 2.075  | SXL = 0.386 |
|                      |                                    |             |            |           |             |            | MEANX =  | 7.964  | SX = 1.472  |
| 60                   | 8.8                                | 11.9        | 14.6       | 17.8      | 22.9        | 27.6       | A =      | -2.070 | C = 0.272   |
|                      |                                    |             |            |           |             |            | MEANXL = | 2.227  | SXL = 0.349 |
|                      |                                    |             |            |           |             |            | MEANX =  | 9.268  | SX = 1.417  |

| SECTION NO.          | POSITION NO.                       | FIRST YEAR. | LAST YEAR. | MAP.      | NAME.       |            |          |        |       |       |  |
|----------------------|------------------------------------|-------------|------------|-----------|-------------|------------|----------|--------|-------|-------|--|
| 50                   | 387                                | 1961        | 1968       | 236.8     | WILLOWMOORE |            |          |        |       |       |  |
| DURATION IN MINUTES. | TOTALS FOR RETURN PERIOD IN MM/HR. |             |            |           |             |            |          |        |       |       |  |
|                      | 2 YEARS.                           | 5 YEARS.    | 10 YEARS.  | 20 YEARS. | 50 YEARS.   | 100 YEARS. |          |        |       |       |  |
| 15                   | 10.4                               | 16.7        | 22.8       | 32.8      | 45.3        | 60.5       | A =      | -2.124 | C =   | 0.415 |  |
|                      |                                    |             |            |           |             |            | MEANXL = | 2.434  | SXL = | 0.532 |  |
|                      |                                    |             |            |           |             |            | MEANX =  | 11.399 | SX =  | 1.702 |  |
| 30                   | 14.4                               | 21.8        | 28.0       | 37.2      | 52.2        | 67.4       | A =      | -2.533 | C =   | 0.365 |  |
|                      |                                    |             |            |           |             |            | MEANXL = | 2.744  | SXL = | 0.468 |  |
|                      |                                    |             |            |           |             |            | MEANX =  | 15.547 | SX =  | 1.596 |  |
| 45                   | 15.3                               | 24.2        | 32.8       | 44.0      | 64.1        | 85.0       | A =      | -2.541 | C =   | 0.405 |  |
|                      |                                    |             |            |           |             |            | MEANXL = | 2.814  | SXL = | 0.519 |  |
|                      |                                    |             |            |           |             |            | MEANX =  | 16.683 | SX =  | 1.691 |  |
| 60                   | 16.0                               | 25.2        | 33.9       | 45.2      | 65.5        | 86.6       | A =      | -2.628 | C =   | 0.399 |  |
|                      |                                    |             |            |           |             |            | MEANXL = | 2.858  | SXL = | 0.511 |  |
|                      |                                    |             |            |           |             |            | MEANX =  | 17.420 | SX =  | 1.667 |  |
| 1440                 | 32.0                               | 47.1        | 63.8       | 77.7      | 106.7       | 135.4      | A =      | -3.341 | C =   | 0.341 |  |
|                      |                                    |             |            |           |             |            | MEANXL = | 3.537  | SXL = | 0.437 |  |
|                      |                                    |             |            |           |             |            | MEANX =  | 34.372 | SX =  | 1.548 |  |

| SECTION NO.          | POSITION NO.                       | FIRST YEAR. | LAST YEAR. | MAP.      | NAME.       |            |          |        |       |       |  |
|----------------------|------------------------------------|-------------|------------|-----------|-------------|------------|----------|--------|-------|-------|--|
| 55                   | 572                                | 1940        | 1976       | 896.1     | EAST LONDON |            |          |        |       |       |  |
| DURATION IN MINUTES. | TOTALS FOR RETURN PERIOD IN MM/HR. |             |            |           |             |            |          |        |       |       |  |
|                      | 2 YEARS.                           | 5 YEARS.    | 10 YEARS.  | 20 YEARS. | 50 YEARS.   | 100 YEARS. |          |        |       |       |  |
| 15                   | 14.4                               | 22.1        | 29.3       | 38.5      | 54.7        | 71.2       | A =      | -2.529 | C =   | 0.378 |  |
|                      |                                    |             |            |           |             |            | MEANXL = | 2.747  | SXL = | 0.484 |  |
|                      |                                    |             |            |           |             |            | MEANX =  | 15.600 | SX =  | 1.623 |  |
| 30                   | 21.5                               | 33.2        | 44.2       | 59.3      | 83.2        | 109.7      | A =      | -2.928 | C =   | 0.383 |  |
|                      |                                    |             |            |           |             |            | MEANXL = | 3.149  | SXL = | 0.491 |  |
|                      |                                    |             |            |           |             |            | MEANX =  | 23.311 | SX =  | 1.634 |  |
| 45                   | 25.8                               | 39.7        | 52.7       | 69.2      | 98.5        | 128.3      | A =      | -3.113 | C =   | 0.379 |  |
|                      |                                    |             |            |           |             |            | MEANXL = | 3.331  | SXL = | 0.486 |  |
|                      |                                    |             |            |           |             |            | MEANX =  | 27.975 | SX =  | 1.625 |  |
| 60                   | 29.9                               | 45.8        | 60.7       | 79.6      | 113.0       | 147.0      | A =      | -3.260 | C =   | 0.376 |  |
|                      |                                    |             |            |           |             |            | MEANXL = | 3.477  | SXL = | 0.482 |  |
|                      |                                    |             |            |           |             |            | MEANX =  | 32.367 | SX =  | 1.620 |  |
| 1440                 | 82.8                               | 124.6       | 163.3      | 211.7     | 296.3       | 381.2      | A =      | -4.284 | C =   | 0.361 |  |
|                      |                                    |             |            |           |             |            | MEANXL = | 4.492  | SXL = | 0.463 |  |
|                      |                                    |             |            |           |             |            | MEANX =  | 89.304 | SX =  | 1.588 |  |

| SECTION NO.          | POSITION NO.                       | FIRST YEAR. | LAST YEAR. | MAP.      | NAME.         |            |          |        |       |       |  |
|----------------------|------------------------------------|-------------|------------|-----------|---------------|------------|----------|--------|-------|-------|--|
| 61                   | 298                                | 1973        | 1976       | 250.0     | LANCEEBAANWEG |            |          |        |       |       |  |
| DURATION IN MINUTES. | TOTALS FOR RETURN PERIOD IN MM/HR. |             |            |           |               |            |          |        |       |       |  |
|                      | 2 YEARS.                           | 5 YEARS.    | 10 YEARS.  | 20 YEARS. | 50 YEARS.     | 100 YEARS. |          |        |       |       |  |
| 15                   | 6.7                                | 8.1         | 9.2        | 10.4      | 12.2          | 13.7       | A =      | -1.838 | C =   | 0.169 |  |
|                      |                                    |             |            |           |               |            | MEANXL = | 1.936  | SXL = | 0.217 |  |
|                      |                                    |             |            |           |               |            | MEANX =  | 6.929  | SX =  | 1.243 |  |
| 30                   | 9.4                                | 11.2        | 12.6       | 14.1      | 16.4          | 18.3       | A =      | -2.180 | C =   | 0.158 |  |
|                      |                                    |             |            |           |               |            | MEANXL = | 2.271  | SXL = | 0.203 |  |
|                      |                                    |             |            |           |               |            | MEANX =  | 9.687  | SX =  | 1.225 |  |
| 45                   | 11.5                               | 12.7        | 13.6       | 14.5      | 15.8          | 16.9       | A =      | -2.406 | C =   | 0.091 |  |
|                      |                                    |             |            |           |               |            | MEANXL = | 2.459  | SXL = | 0.117 |  |
|                      |                                    |             |            |           |               |            | MEANX =  | 11.692 | SX =  | 1.124 |  |
| 60                   | 13.4                               | 14.8        | 15.7       | 16.7      | 18.1          | 19.2       | A =      | -2.564 | C =   | 0.085 |  |
|                      |                                    |             |            |           |               |            | MEANXL = | 2.613  | SXL = | 0.109 |  |
|                      |                                    |             |            |           |               |            | MEANX =  | 13.643 | SX =  | 1.116 |  |
| 1440                 | 27.2                               | 39.6        | 50.7       | 64.3      | 87.5          | 110.2      | A =      | -3.182 | C =   | 0.330 |  |
|                      |                                    |             |            |           |               |            | MEANXL = | 3.373  | SXL = | 0.424 |  |
|                      |                                    |             |            |           |               |            | MEANX =  | 29.167 | SX =  | 1.528 |  |

| SECTION NO.          | POSITION NO.                       | FIRST YEAR. | LAST YEAR. | MAP.      | NAME.       |                            |
|----------------------|------------------------------------|-------------|------------|-----------|-------------|----------------------------|
| 74                   | 298                                | 1956        | 1970       | 267.3     | JANSENVILLE |                            |
| DURATION IN MINUTES. | TOTALS FOR RETURN PERIOD IN MM/HR. |             |            |           |             |                            |
|                      | 2 YEARS.                           | 5 YEARS.    | 10 YEARS.  | 20 YEARS. | 50 YEARS.   | 100 YEARS.                 |
| 15                   | 11.3                               | 15.3        | 17.8       | 20.5      | 32.4        | 39.8                       |
|                      |                                    |             |            |           |             | A = -2.316 C = 0.297       |
|                      |                                    |             |            |           |             | MEANXL = 2.488 SXL = 0.382 |
|                      |                                    |             |            |           |             | MEANX = 12.036 SX = 1.465  |
| 30                   | 15.0                               | 20.3        | 24.9       | 30.2      | 38.8        | 46.8                       |
|                      |                                    |             |            |           |             | A = -2.609 C = 0.269       |
|                      |                                    |             |            |           |             | MEANXL = 2.764 SXL = 0.345 |
|                      |                                    |             |            |           |             | MEANX = 15.870 SX = 1.412  |
| 45                   | 16.8                               | 23.0        | 28.2       | 34.3      | 44.2        | 53.5                       |
|                      |                                    |             |            |           |             | A = -2.724 C = 0.273       |
|                      |                                    |             |            |           |             | MEANXL = 2.982 SXL = 0.350 |
|                      |                                    |             |            |           |             | MEANX = 17.844 SX = 1.419  |
| 60                   | 17.4                               | 23.8        | 29.2       | 35.6      | 46.0        | 55.8                       |
|                      |                                    |             |            |           |             | A = -2.757 C = 0.275       |
|                      |                                    |             |            |           |             | MEANXL = 2.915 SXL = 0.353 |
|                      |                                    |             |            |           |             | MEANX = 18.455 SX = 1.423  |
| 1440                 | 27.5                               | 35.1        | 41.2       | 49.0      | 58.6        | 68.0                       |
|                      |                                    |             |            |           |             | A = -3.236 C = 0.214       |
|                      |                                    |             |            |           |             | MEANXL = 3.360 SXL = 0.274 |
|                      |                                    |             |            |           |             | MEANX = 28.777 SX = 1.316  |

| SECTION NO.          | POSITION NO.                       | FIRST YEAR. | LAST YEAR. | MAP.      | NAME.         |                            |
|----------------------|------------------------------------|-------------|------------|-----------|---------------|----------------------------|
| 76                   | 134                                | 1961        | 1970       | 606.4     | SCMERSET EAST |                            |
| DURATION IN MINUTES. | TOTALS FOR RETURN PERIOD IN MM/HR. |             |            |           |               |                            |
|                      | 2 YEARS.                           | 5 YEARS.    | 10 YEARS.  | 20 YEARS. | 50 YEARS.     | 100 YEARS.                 |
| 15                   | 9.7                                | 14.8        | 19.5       | 25.5      | 36.0          | 46.6                       |
|                      |                                    |             |            |           |               | A = -2.141 C = 0.369       |
|                      |                                    |             |            |           |               | MEANXL = 2.354 SXL = 0.474 |
|                      |                                    |             |            |           |               | MEANX = 10.531 SX = 1.606  |
| 30                   | 14.7                               | 22.7        | 30.3       | 40.0      | 57.3          | 75.0                       |
|                      |                                    |             |            |           |               | A = -2.547 C = 0.385       |
|                      |                                    |             |            |           |               | MEANXL = 2.769 SXL = 0.494 |
|                      |                                    |             |            |           |               | MEANX = 15.939 SX = 1.638  |
| 45                   | 17.4                               | 27.0        | 36.1       | 47.7      | 68.4          | 89.7                       |
|                      |                                    |             |            |           |               | A = -2.717 C = 0.387       |
|                      |                                    |             |            |           |               | MEANXL = 2.940 SXL = 0.496 |
|                      |                                    |             |            |           |               | MEANX = 18.917 SX = 1.642  |
| 60                   | 19.0                               | 29.2        | 38.8       | 50.9      | 72.5          | 94.4                       |
|                      |                                    |             |            |           |               | A = -2.806 C = 0.379       |
|                      |                                    |             |            |           |               | MEANXL = 3.025 SXL = 0.486 |
|                      |                                    |             |            |           |               | MEANX = 20.591 SX = 1.625  |
| 1440                 | 52.0                               | 75.0        | 95.5       | 120.4     | 162.6         | 203.7                      |
|                      |                                    |             |            |           |               | A = -3.834 C = 0.322       |
|                      |                                    |             |            |           |               | MEANXL = 4.020 SXL = 0.413 |
|                      |                                    |             |            |           |               | MEANX = 55.682 SX = 1.512  |

| SECTION NO.          | POSITION NO.                       | FIRST YEAR. | LAST YEAR. | MAP.      | NAME.     |                            |
|----------------------|------------------------------------|-------------|------------|-----------|-----------|----------------------------|
| 79                   | 81                                 | 1965        | 1971       | 736.7     | DCHNE     |                            |
| DURATION IN MINUTES. | TOTALS FOR RETURN PERIOD IN MM/HR. |             |            |           |           |                            |
|                      | 2 YEARS.                           | 5 YEARS.    | 10 YEARS.  | 20 YEARS. | 50 YEARS. | 100 YEARS.                 |
| 15                   | 14.2                               | 20.9        | 26.9       | 34.4      | 47.2      | 59.9                       |
|                      |                                    |             |            |           |           | A = -2.328 C = 0.340       |
|                      |                                    |             |            |           |           | MEANXL = 2.724 SXL = 0.436 |
|                      |                                    |             |            |           |           | MEANX = 15.246 SX = 1.547  |
| 30                   | 20.1                               | 26.7        | 32.3       | 38.8      | 49.1      | 58.6                       |
|                      |                                    |             |            |           |           | A = -2.905 C = 0.253       |
|                      |                                    |             |            |           |           | MEANXL = 3.052 SXL = 0.325 |
|                      |                                    |             |            |           |           | MEANX = 21.153 SX = 1.384  |
| 45                   | 23.3                               | 30.5        | 36.4       | 43.2      | 53.9      | 63.6                       |
|                      |                                    |             |            |           |           | A = -3.000 C = 0.238       |
|                      |                                    |             |            |           |           | MEANXL = 3.197 SXL = 0.305 |
|                      |                                    |             |            |           |           | MEANX = 24.453 SX = 1.356  |
| 60                   | 24.5                               | 31.4        | 37.0       | 43.4      | 53.2      | 62.0                       |
|                      |                                    |             |            |           |           | A = -3.117 C = 0.220       |
|                      |                                    |             |            |           |           | MEANXL = 3.244 SXL = 0.282 |
|                      |                                    |             |            |           |           | MEANX = 25.637 SX = 1.325  |
| 1440                 | 48.1                               | 58.5        | 65.7       | 75.5      | 88.8      | 100.2                      |
|                      |                                    |             |            |           |           | A = -3.809 C = 0.173       |
|                      |                                    |             |            |           |           | MEANXL = 3.909 SXL = 0.222 |
|                      |                                    |             |            |           |           | MEANX = 49.862 SX = 1.249  |

| SECTION NO.          | POSITION NO. | FIRST YEAR.                        | LAST YEAR. | MAP.      | NAME.      |           |            |          |        |             |
|----------------------|--------------|------------------------------------|------------|-----------|------------|-----------|------------|----------|--------|-------------|
| 88                   | 293          | 1960                               | 1970       | 239.1     | SUTHERLAND |           |            |          |        |             |
| DURATION IN MINUTES. |              | TOTALS FOR RETURN PERIOD IN MM/HF. |            |           |            |           |            |          |        |             |
|                      |              | 2 YEARS.                           | 5 YEARS.   | 10 YEARS. | 20 YEARS.  | 50 YEARS. | 100 YEARS. |          |        |             |
| 15                   |              | 7.0                                | 10.7       | 14.3      | 18.7       | 26.6      | 34.6       | A =      | -1.309 | C = 0.377   |
|                      |              |                                    |            |           |            |           |            | MEANXL = | 2.027  | SXL = 0.464 |
|                      |              |                                    |            |           |            |           |            | MEANX =  | 7.588  | SX = 1.622  |
| 30                   |              | 10.0                               | 14.6       | 18.7      | 23.7       | 32.3      | 40.8       | A =      | -2.180 | C = 0.332   |
|                      |              |                                    |            |           |            |           |            | MEANXL = | 2.372  | SXL = 0.426 |
|                      |              |                                    |            |           |            |           |            | MEANX =  | 10.715 | SX = 1.531  |
| 45                   |              | 11.1                               | 16.0       | 20.3      | 25.6       | 34.6      | 43.3       | A =      | -2.288 | C = 0.322   |
|                      |              |                                    |            |           |            |           |            | MEANXL = | 2.474  | SXL = 0.412 |
|                      |              |                                    |            |           |            |           |            | MEANX =  | 11.870 | SX = 1.510  |
| 60                   |              | 12.0                               | 16.8       | 21.0      | 26.0       | 34.4      | 42.3       | A =      | -2.374 | C = 0.298   |
|                      |              |                                    |            |           |            |           |            | MEANXL = | 2.546  | SXL = 0.382 |
|                      |              |                                    |            |           |            |           |            | MEANX =  | 12.754 | SX = 1.466  |
| 1440                 |              | 31.0                               | 39.5       | 40.4      | 54.1       | 66.1      | 76.7       | A =      | -3.355 | C = 0.214   |
|                      |              |                                    |            |           |            |           |            | MEANXL = | 3.478  | SXL = 0.275 |
|                      |              |                                    |            |           |            |           |            | MEANX =  | 32.404 | SX = 1.316  |

| SECTION NO.          | POSITION NO.                       | FIRST YEAR. | LAST YEAR. | MAP.      | NAME.         |                            |
|----------------------|------------------------------------|-------------|------------|-----------|---------------|----------------------------|
| 92                   | 141                                | 1940        | 1970       | 230.3     | BEAUFORT WEST |                            |
| DURATION IN MINUTES. | TOTALS FOR RETURN PERIOD IN MM/HF. |             |            |           |               |                            |
|                      | 2 YEARS.                           | 5 YEARS.    | 10 YEARS.  | 20 YEARS. | 50 YEARS.     | 100 YEARS.                 |
| 15                   | 7.3                                | 11.3        | 15.0       | 19.9      | 28.4          | 37.2                       |
|                      |                                    |             |            |           |               | A = -1.845 C = 0.385       |
|                      |                                    |             |            |           |               | MEANXL = 2.007 SXL = 0.494 |
|                      |                                    |             |            |           |               | MEANX = 7.902 SX = 1.639   |
| 30                   | 11.0                               | 17.1        | 23.1       | 30.7      | 44.3          | 58.4                       |
|                      |                                    |             |            |           |               | A = -2.249 C = 0.395       |
|                      |                                    |             |            |           |               | MEANXL = 2.477 SXL = 0.507 |
|                      |                                    |             |            |           |               | MEANX = 11.907 SX = 1.660  |
| 45                   | 12.8                               | 19.2        | 25.2       | 32.7      | 45.8          | 58.9                       |
|                      |                                    |             |            |           |               | A = -2.414 C = 0.361       |
|                      |                                    |             |            |           |               | MEANXL = 2.623 SXL = 0.463 |
|                      |                                    |             |            |           |               | MEANX = 13.777 SX = 1.589  |
| 60                   | 13.9                               | 20.5        | 26.6       | 34.1      | 46.7          | 59.7                       |
|                      |                                    |             |            |           |               | A = -2.506 C = 0.344       |
|                      |                                    |             |            |           |               | MEANXL = 2.705 SXL = 0.441 |
|                      |                                    |             |            |           |               | MEANX = 14.954 SX = 1.554  |
| 1440                 | 12.3                               | 42.7        | 47.3       | 214.3     | 595.4         | 1280.5                     |
|                      |                                    |             |            |           |               | A = -2.110 C = 1.097       |
|                      |                                    |             |            |           |               | MEANXL = 2.743 SXL = 1.406 |
|                      |                                    |             |            |           |               | MEANX = 15.540 SX = 4.081  |

| SECTION NO.          | POSITION NO.                       | FIRST YEAR. | LAST YEAR. | MAP.      | NAME.      |                            |
|----------------------|------------------------------------|-------------|------------|-----------|------------|----------------------------|
| 106                  | 850                                | 1958        | 1970       | 140.1     | VRECCENDAL |                            |
| DURATION IN MINUTES. | TOTALS FOR RETURN PERIOD IN MM/HF. |             |            |           |            |                            |
|                      | 2 YEARS.                           | 5 YEARS.    | 10 YEARS.  | 20 YEARS. | 50 YEARS.  | 100 YEARS.                 |
| 15                   | 3.4                                | 4.8         | 5.9        | 7.3       | 9.6        | 11.7                       |
|                      |                                    |             |            |           |            | A = -1.124 C = 0.291       |
|                      |                                    |             |            |           |            | MEANXL = 1.292 SXL = 0.373 |
|                      |                                    |             |            |           |            | MEANX = 3.641 SX = 1.453   |
| 30                   | 4.6                                | 6.7         | 8.7        | 11.0      | 15.0       | 19.0                       |
|                      |                                    |             |            |           |            | A = -1.408 C = 0.334       |
|                      |                                    |             |            |           |            | MEANXL = 1.601 SXL = 0.428 |
|                      |                                    |             |            |           |            | MEANX = 4.958 SX = 1.535   |
| 45                   | 5.5                                | 8.0         | 10.1       | 12.8      | 17.3       | 21.6                       |
|                      |                                    |             |            |           |            | A = -1.592 C = 0.322       |
|                      |                                    |             |            |           |            | MEANXL = 1.777 SXL = 0.413 |
|                      |                                    |             |            |           |            | MEANX = 5.915 SX = 1.511   |
| 60                   | 6.1                                | 8.6         | 10.9       | 13.7      | 19.3       | 22.8                       |
|                      |                                    |             |            |           |            | A = -1.657 C = 0.313       |
|                      |                                    |             |            |           |            | MEANXL = 1.867 SXL = 0.401 |
|                      |                                    |             |            |           |            | MEANX = 6.472 SX = 1.494   |
| 1440                 | 18.6                               | 30.8        | 43.1       | 59.4      | 90.1       | 123.1                      |
|                      |                                    |             |            |           |            | A = -2.757 C = 0.447       |
|                      |                                    |             |            |           |            | MEANXL = 3.015 SXL = 0.573 |
|                      |                                    |             |            |           |            | MEANX = 20.397 SX = 1.774  |

| SECTION NO.          | POSITION NO.                       | FIRST YEAR. | LAST YEAR. | MAP.      | NAME.      |            |                |             |
|----------------------|------------------------------------|-------------|------------|-----------|------------|------------|----------------|-------------|
| 113                  | 25                                 | 1958        | 1970       | 169.7     | FRASERBURG |            |                |             |
| DURATION IN MINUTES. | TOTALS FOR RETURN PERIOD IN MM/HR. |             |            |           |            |            |                |             |
|                      | 2 YEARS.                           | 5 YEARS.    | 10 YEARS.  | 20 YEARS. | 50 YEARS.  | 100 YEARS. |                |             |
| 15                   | 9.0                                | 13.0        | 15.6       | 21.1      | 28.6       | 36.0       | A = -2.072     | C = 0.328   |
|                      |                                    |             |            |           |            |            | MEANXL = 2.261 | SXL = 0.421 |
|                      |                                    |             |            |           |            |            | MEANX = 9.597  | SX = 1.524  |
| 30                   | 12.0                               | 17.0        | 21.5       | 26.8      | 35.8       | 44.4       | A = -2.371     | C = 0.309   |
|                      |                                    |             |            |           |            |            | MEANXL = 2.550 | SXL = 0.397 |
|                      |                                    |             |            |           |            |            | MEANX = 12.801 | SX = 1.487  |
| 45                   | 13.5                               | 19.9        | 25.7       | 32.9      | 45.4       | 57.6       | A = -2.475     | C = 0.343   |
|                      |                                    |             |            |           |            |            | MEANXL = 2.673 | SXL = 0.440 |
|                      |                                    |             |            |           |            |            | MEANX = 14.489 | SX = 1.553  |
| 60                   | 14.3                               | 21.8        | 28.7       | 37.5      | 52.9       | 68.4       | A = -2.526     | C = 0.370   |
|                      |                                    |             |            |           |            |            | MEANXL = 2.739 | SXL = 0.474 |
|                      |                                    |             |            |           |            |            | MEANX = 15.474 | SX = 1.606  |
| 1440                 | 22.9                               | 37.9        | 52.9       | 72.9      | 110.3      | 150.5      | A = -2.967     | C = 0.445   |
|                      |                                    |             |            |           |            |            | MEANXL = 3.224 | SXL = 0.571 |
|                      |                                    |             |            |           |            |            | MEANX = 25.126 | SX = 1.770  |

| SECTION NO.          | POSITION NO.                       | FIRST YEAR. | LAST YEAR. | MAP.      | NAME.     |            |          |        |       |       |
|----------------------|------------------------------------|-------------|------------|-----------|-----------|------------|----------|--------|-------|-------|
| 127                  | 485                                | 1957        | 1969       | 652.6     | UMTATA    |            |          |        |       |       |
| DURATION IN MINUTES. | TOTALS FOR RETURN PERIOD IN MM/HR. |             |            |           |           |            |          |        |       |       |
|                      | 2 YEARS.                           | 5 YEARS.    | 10 YEARS.  | 20 YEARS. | 50 YEARS. | 100 YEARS. |          |        |       |       |
| 15                   | 14.4                               | 20.3        | 25.6       | 31.9      | 42.4      | 52.4       | A =      | -2.553 | C =   | 0.306 |
|                      |                                    |             |            |           |           |            | MEANXL = | 2.729  | SXL = | 0.392 |
|                      |                                    |             |            |           |           |            | MEANX =  | 15.323 | SX =  | 1.480 |
| 30                   | 16.7                               | 24.8        | 29.9       | 35.8      | 45.2      | 53.8       | A =      | -2.635 | C =   | 0.250 |
|                      |                                    |             |            |           |           |            | MEANXL = | 2.979  | SXL = | 0.321 |
|                      |                                    |             |            |           |           |            | MEANX =  | 19.675 | SX =  | 1.378 |
| 45                   | 20.3                               | 26.6        | 31.8       | 37.7      | 47.1      | 55.5       | A =      | -2.925 | C =   | 0.237 |
|                      |                                    |             |            |           |           |            | MEANXL = | 3.062  | SXL = | 0.304 |
|                      |                                    |             |            |           |           |            | MEANX =  | 21.374 | SX =  | 1.356 |
| 60                   | 21.3                               | 28.1        | 33.7       | 40.2      | 50.4      | 59.7       | A =      | -2.971 | C =   | 0.243 |
|                      |                                    |             |            |           |           |            | MEANXL = | 3.111  | SXL = | 0.312 |
|                      |                                    |             |            |           |           |            | MEANX =  | 22.448 | SX =  | 1.366 |
| 1440                 | 46.3                               | 58.2        | 67.7       | 78.4      | 94.6      | 109.0      | A =      | -3.760 | C =   | 0.203 |
|                      |                                    |             |            |           |           |            | MEANXL = | 3.877  | SXL = | 0.260 |
|                      |                                    |             |            |           |           |            | MEANX =  | 48.268 | SX =  | 1.257 |

| SECTION NO.          | POSITION NO.                       | FIRST YEAR. | LAST YEAR. | MAP.      | NAME.     |            |          |        |       |       |
|----------------------|------------------------------------|-------------|------------|-----------|-----------|------------|----------|--------|-------|-------|
| 134                  | 478                                | 1957        | 1970       | 213.9     | CALVINIA  |            |          |        |       |       |
| DURATION IN MINUTES. | TOTALS FOR RETURN PERIOD IN MM/HR. |             |            |           |           |            |          |        |       |       |
|                      | 2 YEARS.                           | 5 YEARS.    | 10 YEARS.  | 20 YEARS. | 50 YEARS. | 100 YEARS. |          |        |       |       |
| 15                   | 3.9                                | 6.6         | 9.2        | 12.8      | 19.5      | 25.8       | A =      | -1.206 | C =   | 0.452 |
|                      |                                    |             |            |           |           |            | MEANXL = | 1.468  | SXL = | 0.580 |
|                      |                                    |             |            |           |           |            | MEANX =  | 4.339  | SX =  | 1.786 |
| 30                   | 5.8                                | 9.4         | 12.9       | 17.5      | 26.0      | 34.9       | A =      | -1.604 | C =   | 0.422 |
|                      |                                    |             |            |           |           |            | MEANXL = | 1.853  | SXL = | 0.541 |
|                      |                                    |             |            |           |           |            | MEANX =  | 6.379  | SX =  | 1.719 |
| 45                   | 7.3                                | 11.6        | 15.7       | 21.1      | 30.7      | 40.7       | A =      | -1.845 | C =   | 0.405 |
|                      |                                    |             |            |           |           |            | MEANXL = | 2.079  | SXL = | 0.519 |
|                      |                                    |             |            |           |           |            | MEANX =  | 7.993  | SX =  | 1.680 |
| 60                   | 8.0                                | 12.6        | 16.9       | 22.5      | 32.5      | 42.9       | A =      | -1.936 | C =   | 0.396 |
|                      |                                    |             |            |           |           |            | MEANXL = | 2.165  | SXL = | 0.508 |
|                      |                                    |             |            |           |           |            | MEANX =  | 8.713  | SX =  | 1.662 |
| 1440                 | 23.1                               | 36.3        | 49.3       | 65.3      | 94.8      | 125.3      | A =      | -2.993 | C =   | 0.400 |
|                      |                                    |             |            |           |           |            | MEANXL = | 3.223  | SXL = | 0.512 |
|                      |                                    |             |            |           |           |            | MEANX =  | 25.113 | SX =  | 1.659 |

| SECTION NO.          | POSITION NO.                       | FIRST YEAR. | LAST YEAR. | MAP.      | NAME.        |            |
|----------------------|------------------------------------|-------------|------------|-----------|--------------|------------|
| 145                  | 59                                 | 1961        | 1976       | 349.9     | GRODTFONTEIN |            |
| DURATION IN MINUTES. | TOTALS FOR RETURN PERIOD IN MM/HR. |             |            |           |              |            |
|                      | 2 YEARS.                           | 5 YEARS.    | 10 YEARS.  | 20 YEARS. | 50 YEARS.    | 100 YEARS. |
| 15                   | 9.2                                | 13.9        | 18.2       | 23.6      | 33.0         | 42.4       |
|                      |                                    |             |            |           | A =          | -2.392     |
|                      |                                    |             |            |           | C =          | 0.360      |
|                      |                                    |             |            |           | MEANXL =     | 2.300      |
|                      |                                    |             |            |           | SXL =        | 0.462      |
|                      |                                    |             |            |           | MEANX =      | 9.375      |
|                      |                                    |             |            |           | SX =         | 1.587      |
| 30                   | 13.7                               | 20.4        | 26.5       | 34.0      | 47.1         | 50.0       |
|                      |                                    |             |            |           | A =          | -2.493     |
|                      |                                    |             |            |           | C =          | 0.348      |
|                      |                                    |             |            |           | MEANXL =     | 2.694      |
|                      |                                    |             |            |           | SXL =        | 0.447      |
|                      |                                    |             |            |           | MEANX =      | 14.784     |
|                      |                                    |             |            |           | SX =         | 1.563      |
| 45                   | 15.4                               | 22.7        | 29.3       | 37.4      | 51.5         | 65.4       |
|                      |                                    |             |            |           | A =          | -2.609     |
|                      |                                    |             |            |           | C =          | 0.341      |
|                      |                                    |             |            |           | MEANXL =     | 2.806      |
|                      |                                    |             |            |           | SXL =        | 0.438      |
|                      |                                    |             |            |           | MEANX =      | 16.549     |
|                      |                                    |             |            |           | SX =         | 1.549      |
| 60                   | 16.2                               | 23.8        | 30.6       | 39.0      | 53.4         | 67.5       |
|                      |                                    |             |            |           | A =          | -2.693     |
|                      |                                    |             |            |           | C =          | 0.337      |
|                      |                                    |             |            |           | MEANXL =     | 2.857      |
|                      |                                    |             |            |           | SXL =        | 0.432      |
|                      |                                    |             |            |           | MEANX =      | 17.415     |
|                      |                                    |             |            |           | SX =         | 1.541      |
| 1440                 | 33.3                               | 48.3        | 61.8       | 78.7      | 106.4        | 133.3      |
|                      |                                    |             |            |           | A =          | -3.384     |
|                      |                                    |             |            |           | C =          | 0.329      |
|                      |                                    |             |            |           | MEANXL =     | 3.574      |
|                      |                                    |             |            |           | SXL =        | 0.422      |
|                      |                                    |             |            |           | MEANX =      | 35.651     |
|                      |                                    |             |            |           | SX =         | 1.522      |

| SECTION NO.          | POSITION NO.                       | FIRST YEAR. | LAST YEAR. | MAP.      | NAME.     |            |
|----------------------|------------------------------------|-------------|------------|-----------|-----------|------------|
| 170                  | 98                                 | 1959        | 1970       | 287.4     | DE AAR    |            |
| DURATION IN MINUTES. | TOTALS FOR RETURN PERIOD IN MM/HR. |             |            |           |           |            |
|                      | 2 YEARS.                           | 5 YEARS.    | 10 YEARS.  | 20 YEARS. | 50 YEARS. | 100 YEARS. |
| 15                   | 10.4                               | 14.9        | 19.8       | 23.6      | 31.6      | 39.3       |
|                      |                                    |             |            |           | A =       | -2.231     |
|                      |                                    |             |            |           | C =       | 0.313      |
|                      |                                    |             |            |           | MEANXL =  | 2.412      |
|                      |                                    |             |            |           | SXL =     | 0.402      |
|                      |                                    |             |            |           | MEANX =   | 11.155     |
|                      |                                    |             |            |           | SX =      | 1.494      |
| 30                   | 14.6                               | 20.5        | 25.7       | 31.9      | 42.2      | 52.1       |
|                      |                                    |             |            |           | A =       | -2.567     |
|                      |                                    |             |            |           | C =       | 0.301      |
|                      |                                    |             |            |           | MEANXL =  | 2.741      |
|                      |                                    |             |            |           | SXL =     | 0.387      |
|                      |                                    |             |            |           | MEANX =   | 15.509     |
|                      |                                    |             |            |           | SX =      | 1.472      |
| 45                   | 17.1                               | 23.8        | 29.6       | 36.5      | 47.8      | 58.5       |
|                      |                                    |             |            |           | A =       | -2.734     |
|                      |                                    |             |            |           | C =       | 0.290      |
|                      |                                    |             |            |           | MEANXL =  | 2.902      |
|                      |                                    |             |            |           | SXL =     | 0.372      |
|                      |                                    |             |            |           | MEANX =   | 18.208     |
|                      |                                    |             |            |           | SX =      | 1.451      |
| 60                   | 18.6                               | 25.9        | 32.2       | 39.8      | 52.3      | 64.2       |
|                      |                                    |             |            |           | A =       | -2.813     |
|                      |                                    |             |            |           | C =       | 0.293      |
|                      |                                    |             |            |           | MEANXL =  | 2.982      |
|                      |                                    |             |            |           | SXL =     | 0.376      |
|                      |                                    |             |            |           | MEANX =   | 19.733     |
|                      |                                    |             |            |           | SX =      | 1.456      |
| 1440                 | 32.4                               | 43.8        | 53.4       | 64.6      | 82.7      | 99.4       |
|                      |                                    |             |            |           | A =       | -3.382     |
|                      |                                    |             |            |           | C =       | 0.265      |
|                      |                                    |             |            |           | MEANXL =  | 3.534      |
|                      |                                    |             |            |           | SXL =     | 0.340      |
|                      |                                    |             |            |           | MEANX =   | 34.276     |
|                      |                                    |             |            |           | SX =      | 1.404      |

| SECTION NO.          | POSITION NO.                       | FIRST YEAR. | LAST YEAR. | MAP.      | NAME.          |             |
|----------------------|------------------------------------|-------------|------------|-----------|----------------|-------------|
| 190                  | 722                                | 1959        | 1970       | 680.7     | KCKSTAD        |             |
| DURATION IN MINUTES. | TOTALS FOR RETURN PERIOD IN MM/HR. |             |            |           |                |             |
|                      | 2 YEARS.                           | 5 YEARS.    | 10 YEARS.  | 20 YEARS. | 50 YEARS.      | 100 YEARS.  |
| 15                   | 21.6                               | 37.5        | 53.9       | 76.4      | 120.1          | 168.5       |
|                      |                                    |             |            |           | A = -2.896     | C = 0.485   |
|                      |                                    |             |            |           | MEANXL = 3.176 | SXL = 0.622 |
|                      |                                    |             |            |           | MEANX = 23.948 | SX = 1.863  |
| 30                   | 33.0                               | 54.6        | 76.2       | 105.0     | 158.9          | 216.7       |
|                      |                                    |             |            |           | A = -3.333     | C = 0.445   |
|                      |                                    |             |            |           | MEANXL = 3.590 | SXL = 0.570 |
|                      |                                    |             |            |           | MEANX = 36.233 | SX = 1.769  |
| 45                   | 37.1                               | 61.1        | 83.1       | 116.8     | 176.2          | 239.7       |
|                      |                                    |             |            |           | A = -3.451     | C = 0.441   |
|                      |                                    |             |            |           | MEANXL = 3.706 | SXL = 0.565 |
|                      |                                    |             |            |           | MEANX = 40.681 | SX = 1.760  |
| 60                   | 38.8                               | 63.5        | 88.1       | 120.6     | 180.9          | 245.2       |
|                      |                                    |             |            |           | A = -3.499     | C = 0.436   |
|                      |                                    |             |            |           | MEANXL = 3.750 | SXL = 0.559 |
|                      |                                    |             |            |           | MEANX = 42.518 | SX = 1.748  |
| 1440                 | 63.3                               | 123.4       | 193.1      | 295.8     | 513.7          | 776.8       |
|                      |                                    |             |            |           | A = -3.930     | C = 0.592   |
|                      |                                    |             |            |           | MEANXL = 4.272 | SXL = 0.760 |
|                      |                                    |             |            |           | MEANX = 71.690 | SX = 2.136  |

| SECTION NO.                        | POSITION NO. | FIRST YEAR. | LAST YEAR. | MAP.      | NAME.      |       |                |             |
|------------------------------------|--------------|-------------|------------|-----------|------------|-------|----------------|-------------|
| 214                                | 636          | 1956        | 1970       | 161.0     | J KIEP     |       |                |             |
| DURATION IN MINUTES.               |              |             |            |           |            |       |                |             |
| TOTALS FOR RETURN PERIOD IN MM/HR. |              |             |            |           |            |       |                |             |
| 2 YEARS.                           | 5 YEARS.     | 10 YEARS.   | 20 YEARS.  | 50 YEARS. | 100 YEARS. |       |                |             |
| 15                                 | 5.6          | 10.2        | 15.0       | 21.9      | 35.7       | 51.4  | A = -1.535     | C = 0.523   |
|                                    |              |             |            |           |            |       | MEANXL = 1.837 | SXL = 0.670 |
|                                    |              |             |            |           |            |       | MEANX = 6.275  | SX = 1.955  |
| 30                                 | 7.3          | 13.0        | 19.0       | 27.3      | 43.6       | 60.1  | A = -1.807     | C = 0.504   |
|                                    |              |             |            |           |            |       | MEANXL = 2.099 | SXL = 0.647 |
|                                    |              |             |            |           |            |       | MEANX = 8.155  | SX = 1.910  |
| 45                                 | 8.2          | 14.4        | 20.9       | 29.8      | 47.2       | 66.7  | A = -1.926     | C = 0.494   |
|                                    |              |             |            |           |            |       | MEANXL = 2.211 | SXL = 0.634 |
|                                    |              |             |            |           |            |       | MEANX = 9.125  | SX = 1.885  |
| 60                                 | 8.9          | 15.6        | 22.5       | 32.1      | 50.8       | 71.0  | A = -2.009     | C = 0.492   |
|                                    |              |             |            |           |            |       | MEANXL = 2.292 | SXL = 0.631 |
|                                    |              |             |            |           |            |       | MEANX = 9.899  | SX = 1.979  |
| 1440                               | 23.5         | 41.2        | 59.9       | 85.8      | 136.4      | 193.1 | A = -2.973     | C = 0.498   |
|                                    |              |             |            |           |            |       | MEANXL = 3.260 | SXL = 0.639 |
|                                    |              |             |            |           |            |       | MEANX = 26.054 | SX = 1.994  |

| SECTION NO.                        | POSITION NO. | FIRST YEAR. | LAST YEAR. | MAP.      | NAME.      |       |                |             |
|------------------------------------|--------------|-------------|------------|-----------|------------|-------|----------------|-------------|
| 229                                | 556          | 1957        | 1970       | 429.2     | FOURESMTIH |       |                |             |
| DURATION IN MINUTES.               |              |             |            |           |            |       |                |             |
| TOTALS FOR RETURN PERIOD IN MM/HR. |              |             |            |           |            |       |                |             |
| 2 YEARS.                           | 5 YEARS.     | 10 YEARS.   | 20 YEARS.  | 50 YEARS. | 100 YEARS. |       |                |             |
| 15                                 | 12.6         | 17.8        | 22.3       | 27.7      | 36.8       | 45.4  | A = -2.426     | C = 0.302   |
|                                    |              |             |            |           |            |       | MEANXL = 2.600 | SXL = 0.387 |
|                                    |              |             |            |           |            |       | MEANX = 13.467 | SX = 1.473  |
| 30                                 | 18.9         | 25.4        | 30.9       | 37.3      | 47.5       | 57.0  | A = -2.844     | C = 0.261   |
|                                    |              |             |            |           |            |       | MEANXL = 2.994 | SXL = 0.334 |
|                                    |              |             |            |           |            |       | MEANX = 19.974 | SX = 1.397  |
| 45                                 | 21.6         | 28.6        | 34.5       | 41.3      | 52.1       | 62.0  | A = -2.979     | C = 0.249   |
|                                    |              |             |            |           |            |       | MEANXL = 3.123 | SXL = 0.320 |
|                                    |              |             |            |           |            |       | MEANX = 22.724 | SX = 1.377  |
| 60                                 | 22.6         | 30.2        | 36.5       | 43.9      | 55.7       | 66.5  | A = -3.024     | C = 0.256   |
|                                    |              |             |            |           |            |       | MEANXL = 3.171 | SXL = 0.328 |
|                                    |              |             |            |           |            |       | MEANX = 23.833 | SX = 1.388  |
| 1440                               | 45.3         | 62.2        | 76.9       | 94.1      | 122.3      | 148.8 | A = -3.709     | C = 0.281   |
|                                    |              |             |            |           |            |       | MEANXL = 3.872 | SXL = 0.360 |
|                                    |              |             |            |           |            |       | MEANX = 48.024 | SX = 1.434  |

| SECTION NO.                        | POSITION NO. | FIRST YEAR. | LAST YEAR. | MAP.      | NAME.      |       |                |             |
|------------------------------------|--------------|-------------|------------|-----------|------------|-------|----------------|-------------|
| 233                                | 44           | 1956        | 1969       | 599.7     | WEFENER    |       |                |             |
| DURATION IN MINUTES.               |              |             |            |           |            |       |                |             |
| TOTALS FOR RETURN PERIOD IN MM/HR. |              |             |            |           |            |       |                |             |
| 2 YEARS.                           | 5 YEARS.     | 10 YEARS.   | 20 YEARS.  | 50 YEARS. | 100 YEARS. |       |                |             |
| 15                                 | 15.6         | 20.3        | 24.1       | 28.4      | 35.1       | 41.2  | A = -2.665     | C = 0.229   |
|                                    |              |             |            |           |            |       | MEANXL = 2.797 | SXL = 0.294 |
|                                    |              |             |            |           |            |       | MEANX = 16.402 | SX = 1.341  |
| 30                                 | 21.9         | 28.9        | 34.8       | 41.5      | 52.1       | 61.9  | A = -2.998     | C = 0.245   |
|                                    |              |             |            |           |            |       | MEANXL = 3.139 | SXL = 0.314 |
|                                    |              |             |            |           |            |       | MEANX = 23.086 | SX = 1.369  |
| 45                                 | 24.3         | 33.2        | 40.8       | 49.7      | 64.2       | 77.9  | A = -3.088     | C = 0.275   |
|                                    |              |             |            |           |            |       | MEANXL = 3.247 | SXL = 0.353 |
|                                    |              |             |            |           |            |       | MEANX = 25.710 | SX = 1.424  |
| 60                                 | 25.6         | 35.7        | 44.5       | 54.9      | 72.2       | 88.7  | A = -3.133     | C = 0.294   |
|                                    |              |             |            |           |            |       | MEANXL = 3.303 | SXL = 0.377 |
|                                    |              |             |            |           |            |       | MEANX = 27.195 | SX = 1.458  |
| 1440                               | 54.3         | 78.9        | 101.0      | 128.1     | 174.2      | 219.4 | A = -3.873     | C = 0.330   |
|                                    |              |             |            |           |            |       | MEANXL = 4.064 | SXL = 0.423 |
|                                    |              |             |            |           |            |       | MEANX = 58.185 | SX = 1.527  |



| SECTION NO.          | POSITION NO.                       | FIRST YEAR. | LAST YEAR. | MAP.      | NAME.       |                            |
|----------------------|------------------------------------|-------------|------------|-----------|-------------|----------------------------|
| 241                  | 50                                 | 1938        | 1970       | 1059.3    | LCUIS BOUTH |                            |
| DURATION IN MINUTES. | TOTALS FOR RETURN PERIOD IN MM/HR. |             |            |           |             |                            |
|                      | 2 YEARS.                           | 5 YEARS.    | 10 YEARS.  | 20 YEARS. | 50 YEARS.   | 100 YEARS.                 |
| 15                   | 18.2                               | 20.1        | 33.2       | 41.8      | 56.4        | 70.5                       |
|                      |                                    |             |            |           |             | A = -2.782 C = 0.320       |
|                      |                                    |             |            |           |             | MEANXL = 2.967 SXL = 0.411 |
|                      |                                    |             |            |           |             | MEANX = 19.436 SX = 1.508  |
| 30                   | 27.7                               | 40.6        | 52.3       | 66.8      | 91.4        | 115.8                      |
|                      |                                    |             |            |           |             | A = -3.198 C = 0.338       |
|                      |                                    |             |            |           |             | MEANXL = 3.393 SXL = 0.433 |
|                      |                                    |             |            |           |             | MEANX = 29.744 SX = 1.542  |
| 45                   | 33.9                               | 49.6        | 63.9       | 81.5      | 111.5       | 141.0                      |
|                      |                                    |             |            |           |             | A = -3.400 C = 0.337       |
|                      |                                    |             |            |           |             | MEANXL = 3.594 SXL = 0.432 |
|                      |                                    |             |            |           |             | MEANX = 36.378 SX = 1.540  |
| 60                   | 38.4                               | 50.5        | 73.0       | 93.4      | 128.3       | 162.9                      |
|                      |                                    |             |            |           |             | A = -3.522 C = 0.342       |
|                      |                                    |             |            |           |             | MEANXL = 3.719 SXL = 0.438 |
|                      |                                    |             |            |           |             | MEANX = 41.229 SX = 1.550  |
| 1440                 | 79.4                               | 114.1       | 145.1      | 182.7     | 246.3       | 306.0                      |
|                      |                                    |             |            |           |             | A = -4.257 C = 0.320       |
|                      |                                    |             |            |           |             | MEANXL = 4.442 SXL = 0.411 |
|                      |                                    |             |            |           |             | MEANX = 84.906 SX = 1.508  |

| SECTION NO.          | POSITION NO.                       | FIRST YEAR. | LAST YEAR. | MAP.      | NAME.     |                            |
|----------------------|------------------------------------|-------------|------------|-----------|-----------|----------------------------|
| 247                  | 608                                | 1956        | 1970       | 104.6     | PCFADDER  |                            |
| DURATION IN MINUTES. | TOTALS FOR RETURN PERIOD IN MM/HR. |             |            |           |           |                            |
|                      | 2 YEARS.                           | 5 YEARS.    | 10 YEARS.  | 20 YEARS. | 50 YEARS. | 100 YEARS.                 |
| 15                   | 6.1                                | 12.7        | 20.0       | 32.7      | 59.5      | .93.2                      |
|                      |                                    |             |            |           |           | A = -1.576 C = 0.643       |
|                      |                                    |             |            |           |           | MEANXL = 1.947 SXL = 0.825 |
|                      |                                    |             |            |           |           | MEANX = 7.011 SX = 2.282   |
| 30                   | 8.9                                | 19.6        | 33.0       | 54.3      | 103.7     | 158.3                      |
|                      |                                    |             |            |           |           | A = -1.936 C = 0.693       |
|                      |                                    |             |            |           |           | MEANXL = 2.336 SXL = 0.889 |
|                      |                                    |             |            |           |           | MEANX = 10.338 SX = 2.434  |
| 45                   | 10.0                               | 21.7        | 36.1       | 58.9      | 111.1     | 178.6                      |
|                      |                                    |             |            |           |           | A = -2.056 C = 0.680       |
|                      |                                    |             |            |           |           | MEANXL = 2.448 SXL = 0.872 |
|                      |                                    |             |            |           |           | MEANX = 11.569 SX = 2.393  |
| 60                   | 10.8                               | 22.7        | 37.2       | 59.7      | 110.0     | 174.0                      |
|                      |                                    |             |            |           |           | A = -2.139 C = 0.657       |
|                      |                                    |             |            |           |           | MEANXL = 2.518 SXL = 0.842 |
|                      |                                    |             |            |           |           | MEANX = 12.400 SX = 2.321  |
| 1440                 | 21.8                               | 35.2        | 48.4       | 65.7      | 97.6      | 131.3                      |
|                      |                                    |             |            |           |           | A = -2.925 C = 0.425       |
|                      |                                    |             |            |           |           | MEANXL = 3.170 SXL = 0.544 |
|                      |                                    |             |            |           |           | MEANX = 23.807 SX = 1.724  |

| SECTION NO.          | POSITION NO.                       | FIRST YEAR. | LAST YEAR. | MAP.      | NAME.          |                            |
|----------------------|------------------------------------|-------------|------------|-----------|----------------|----------------------------|
| 261                  | 516                                | 1938        | 1970       | 560.9     | BLECEMFOINTEIN |                            |
| DURATION IN MINUTES. | TOTALS FOR RETURN PERIOD IN MM/HR. |             |            |           |                |                            |
|                      | 2 YEARS.                           | 5 YEARS.    | 10 YEARS.  | 20 YEARS. | 50 YEARS.      | 100 YEARS.                 |
| 15                   | 14.6                               | 20.3        | 25.2       | 31.0      | 40.5           | 49.6                       |
|                      |                                    |             |            |           |                | A = -2.578 C = 0.288       |
|                      |                                    |             |            |           |                | MEANXL = 2.745 SXL = 0.369 |
|                      |                                    |             |            |           |                | MEANX = 15.557 SX = 1.447  |
| 30                   | 21.7                               | 29.8        | 36.8       | 45.0      | 58.5           | 71.1                       |
|                      |                                    |             |            |           |                | A = -2.976 C = 0.280       |
|                      |                                    |             |            |           |                | MEANXL = 3.137 SXL = 0.359 |
|                      |                                    |             |            |           |                | MEANX = 23.042 SX = 1.432  |
| 45                   | 25.8                               | 35.3        | 43.3       | 52.8      | 68.1           | 82.5                       |
|                      |                                    |             |            |           |                | A = -3.151 C = 0.274       |
|                      |                                    |             |            |           |                | MEANXL = 3.310 SXL = 0.352 |
|                      |                                    |             |            |           |                | MEANX = 27.376 SX = 1.422  |
| 60                   | 27.8                               | 38.1        | 47.0       | 57.4      | 74.3           | 90.2                       |
|                      |                                    |             |            |           |                | A = -3.224 C = 0.278       |
|                      |                                    |             |            |           |                | MEANXL = 3.384 SXL = 0.357 |
|                      |                                    |             |            |           |                | MEANX = 29.492 SX = 1.428  |
| 1440                 | 45.1                               | 59.9        | 72.3       | 86.6      | 109.4          | 130.4                      |
|                      |                                    |             |            |           |                | A = -3.717 C = 0.251       |
|                      |                                    |             |            |           |                | MEANXL = 3.861 SXL = 0.322 |
|                      |                                    |             |            |           |                | MEANX = 47.535 SX = 1.379  |

| SECTION NO.                        | POSITION NO. | FIRST YEAR. | LAST YEAR. | MAP.      | NAME.         |            |                            |
|------------------------------------|--------------|-------------|------------|-----------|---------------|------------|----------------------------|
| 274                                | 34           | 1952        | 1976       | 44.2      | ALEXANDER DAY |            |                            |
| TOTALS FOR RETURN PERIOD IN MM/HR. |              |             |            |           |               |            |                            |
| DURATION IN MINUTES.               | 2 YEARS.     | 5 YEARS.    | 10 YEARS.  | 20 YEARS. | 50 YEARS.     | 100 YEARS. |                            |
| 15                                 | 2.8          | 4.4         | 5.9        | 7.8       | 11.2          | 14.3       | A = -0.889 C = 0.352       |
|                                    |              |             |            |           |               |            | MEANXL = 1.115 SXL = 0.503 |
|                                    |              |             |            |           |               |            | MEANX = 3.051 SX = 1.654   |
| 30                                 | 4.1          | 6.3         | 8.3        | 10.8      | 15.3          | 19.8       | A = -1.278 C = 0.371       |
|                                    |              |             |            |           |               |            | MEANXL = 1.492 SXL = 0.476 |
|                                    |              |             |            |           |               |            | MEANX = 4.446 SX = 1.610   |
| 45                                 | 4.8          | 7.4         | 9.8        | 12.9      | 18.4          | 23.9       | A = -1.432 C = 0.379       |
|                                    |              |             |            |           |               |            | MEANXL = 1.650 SXL = 0.486 |
|                                    |              |             |            |           |               |            | MEANX = 5.209 SX = 1.625   |
| 60                                 | 5.3          | 8.2         | 11.0       | 14.6      | 21.0          | 27.0       | A = -1.817 C = 0.391       |
|                                    |              |             |            |           |               |            | MEANXL = 1.743 SXL = 0.502 |
|                                    |              |             |            |           |               |            | MEANX = 5.715 SX = 1.652   |
| 1440                               | 10.1         | 16.9        | 23.8       | 33.0      | 50.3          | 69.1       | A = -2.149 C = 0.453       |
|                                    |              |             |            |           |               |            | MEANXL = 2.411 SXL = 0.582 |
|                                    |              |             |            |           |               |            | MEANX = 11.144 SX = 1.789  |

| SECTION NO.                        | POSITION NO. | FIRST YEAR. | LAST YEAR. | MAP.      | NAME.     |            |                            |
|------------------------------------|--------------|-------------|------------|-----------|-----------|------------|----------------------------|
| 290                                | 68           | 1938        | 1976       | 426.3     | KIMBERLEY |            |                            |
| TOTALS FOR RETURN PERIOD IN MM/HR. |              |             |            |           |           |            |                            |
| DURATION IN MINUTES.               | 2 YEARS.     | 5 YEARS.    | 10 YEARS.  | 20 YEARS. | 50 YEARS. | 100 YEARS. |                            |
| 15                                 | 13.9         | 19.2        | 23.8       | 29.2      | 38.1      | 46.5       | A = -2.527 C = 0.285       |
|                                    |              |             |            |           |           |            | MEANXL = 2.691 SXL = 0.366 |
|                                    |              |             |            |           |           |            | MEANX = 14.751 SX = 1.442  |
| 30                                 | 20.0         | 28.8        | 36.6       | 46.1      | 62.2      | 77.8       | A = -2.880 C = 0.320       |
|                                    |              |             |            |           |           |            | MEANXL = 3.065 SXL = 0.411 |
|                                    |              |             |            |           |           |            | MEANX = 21.430 SX = 1.508  |
| 45                                 | 22.9         | 33.4        | 42.8       | 54.3      | 73.9      | 93.1       | A = -3.012 C = 0.331       |
|                                    |              |             |            |           |           |            | MEANXL = 3.203 SXL = 0.424 |
|                                    |              |             |            |           |           |            | MEANX = 24.599 SX = 1.529  |
| 60                                 | 24.5         | 36.2        | 47.0       | 60.4      | 83.4      | 106.3      | A = -3.070 C = 0.347       |
|                                    |              |             |            |           |           |            | MEANXL = 3.270 SXL = 0.445 |
|                                    |              |             |            |           |           |            | MEANX = 26.316 SX = 1.561  |
| 1440                               | 44.5         | 57.0        | 67.1       | 78.6      | 96.3      | 112.1      | A = -3.716 C = 0.218       |
|                                    |              |             |            |           |           |            | MEANXL = 3.842 SXL = 0.280 |
|                                    |              |             |            |           |           |            | MEANX = 46.614 SX = 1.323  |

| SECTION NO.                        | POSITION NO. | FIRST YEAR. | LAST YEAR. | MAP.      | NAME.     |            |                            |
|------------------------------------|--------------|-------------|------------|-----------|-----------|------------|----------------------------|
| 300                                | 483          | 1949        | 1954       | 780.4     | LADYSMITH |            |                            |
| TOTALS FOR RETURN PERIOD IN MM/HR. |              |             |            |           |           |            |                            |
| DURATION IN MINUTES.               | 2 YEARS.     | 5 YEARS.    | 10 YEARS.  | 20 YEARS. | 50 YEARS. | 100 YEARS. |                            |
| 15                                 | 17.2         | 24.7        | 31.3       | 39.3      | 52.8      | 65.9       | A = -2.731 C = 0.317       |
|                                    |              |             |            |           |           |            | MEANXL = 2.914 SXL = 0.406 |
|                                    |              |             |            |           |           |            | MEANX = 18.424 SX = 1.501  |
| 30                                 | 26.0         | 37.9        | 48.7       | 61.9      | 84.5      | 106.7      | A = -3.134 C = 0.334       |
|                                    |              |             |            |           |           |            | MEANXL = 3.327 SXL = 0.428 |
|                                    |              |             |            |           |           |            | MEANX = 27.849 SX = 1.534  |
| 45                                 | 30.0         | 46.1        | 61.2       | 80.4      | 114.5     | 149.1      | A = -3.263 C = 0.379       |
|                                    |              |             |            |           |           |            | MEANXL = 3.481 SXL = 0.486 |
|                                    |              |             |            |           |           |            | MEANX = 32.507 SX = 1.625  |
| 60                                 | 32.5         | 50.7        | 68.1       | 90.4      | 130.5     | 171.7      | A = -3.336 C = 0.393       |
|                                    |              |             |            |           |           |            | MEANXL = 3.564 SXL = 0.504 |
|                                    |              |             |            |           |           |            | MEANX = 35.288 SX = 1.656  |
| 1440                               | 46.2         | 70.3        | 92.8       | 121.1     | 171.0     | 221.4      | A = -3.697 C = 0.370       |
|                                    |              |             |            |           |           |            | MEANXL = 3.911 SXL = 0.475 |
|                                    |              |             |            |           |           |            | MEANX = 49.953 SX = 1.608  |

| SECTION NO.          | POSITION NO.                       | FIRST YEAR. | LAST YEAR. | MAP.      | NAME.     |            |          |        |             |
|----------------------|------------------------------------|-------------|------------|-----------|-----------|------------|----------|--------|-------------|
| 300                  | 090                                | 1959        | 1960       | 749.3     | ESTCOURT. |            |          |        |             |
| DURATION IN MINUTES. | TOTALS FOR RETURN PERIOD IN MM/HR. |             |            |           |           |            |          |        |             |
|                      | 2 YEARS.                           | 5 YEARS.    | 10 YEARS.  | 20 YEARS. | 50 YEARS. | 100 YEARS. |          |        |             |
| 15                   | 18.9                               | 26.9        | 34.1       | 42.7      | 57.1      | 71.1       | A =      | -2.624 | C = 0.313   |
|                      |                                    |             |            |           |           |            | MEANXL = | 3.005  | SXL = 0.491 |
|                      |                                    |             |            |           |           |            | MEANX =  | 20.176 | SX = 1.494  |
| 30                   | 27.1                               | 39.6        | 50.9       | 64.8      | 88.6      | 112.0      | A =      | -3.176 | C = 0.335   |
|                      |                                    |             |            |           |           |            | MEANXL = | 3.369  | SXL = 0.430 |
|                      |                                    |             |            |           |           |            | MEANX =  | 29.054 | SX = 1.537  |
| 45                   | 29.7                               | 44.5        | 58.3       | 75.4      | 105.2     | 135.1      | A =      | -3.259 | C = 0.358   |
|                      |                                    |             |            |           |           |            | MEANXL = | 3.466  | SXL = 0.459 |
|                      |                                    |             |            |           |           |            | MEANX =  | 32.007 | SX = 1.582  |
| 60                   | 31.3                               | 47.0        | 61.6       | 79.9      | 111.5     | 143.4      | A =      | -3.312 | C = 0.359   |
|                      |                                    |             |            |           |           |            | MEANXL = | 3.520  | SXL = 0.461 |
|                      |                                    |             |            |           |           |            | MEANX =  | 33.770 | SX = 1.585  |
| 1440                 | 44.5                               | 60.8        | 74.9       | 91.3      | 118.2     | 143.3      | A =      | -3.694 | C = 0.276   |
|                      |                                    |             |            |           |           |            | MEANXL = | 3.953  | SXL = 0.354 |
|                      |                                    |             |            |           |           |            | MEANX =  | 47.146 | SX = 1.425  |

| SECTION NO.          | POSITION NO.                       | FIRST YEAR. | LAST YEAR. | MAP.      | NAME.     |            |          |        |             |
|----------------------|------------------------------------|-------------|------------|-----------|-----------|------------|----------|--------|-------------|
| 317                  | 476                                | 1951        | 1970       | 286.9     | UFINGTON  |            |          |        |             |
| DURATION IN MINUTES. | TOTALS FOR RETURN PERIOD IN MM/HR. |             |            |           |           |            |          |        |             |
|                      | 2 YEARS.                           | 5 YEARS.    | 10 YEARS.  | 20 YEARS. | 50 YEARS. | 100 YEARS. |          |        |             |
| 15                   | 9.2                                | 13.3        | 17.1       | 21.8      | 29.6      | 37.4       | A =      | -2.093 | C = 0.332   |
|                      |                                    |             |            |           |           |            | MEANXL = | 2.285  | SXL = 0.426 |
|                      |                                    |             |            |           |           |            | MEANX =  | 9.824  | SX = 1.531  |
| 30                   | 13.0                               | 19.2        | 22.7       | 28.1      | 36.9      | 45.4       | A =      | -2.460 | C = 0.295   |
|                      |                                    |             |            |           |           |            | MEANXL = | 2.630  | SXL = 0.378 |
|                      |                                    |             |            |           |           |            | MEANX =  | 13.870 | SX = 1.459  |
| 45                   | 15.5                               | 21.2        | 26.1       | 31.9      | 41.3      | 50.2       | A =      | -2.636 | C = 0.278   |
|                      |                                    |             |            |           |           |            | MEANXL = | 2.797  | SXL = 0.357 |
|                      |                                    |             |            |           |           |            | MEANX =  | 16.396 | SX = 1.429  |
| 60                   | 16.7                               | 22.8        | 28.0       | 34.2      | 44.1      | 53.4       | A =      | -2.715 | C = 0.275   |
|                      |                                    |             |            |           |           |            | MEANXL = | 2.874  | SXL = 0.352 |
|                      |                                    |             |            |           |           |            | MEANX =  | 17.703 | SX = 1.422  |
| 1440                 | 28.0                               | 41.2        | 53.3       | 69.2      | 93.9      | 119.3      | A =      | -3.205 | C = 0.343   |
|                      |                                    |             |            |           |           |            | MEANXL = | 3.403  | SXL = 0.440 |
|                      |                                    |             |            |           |           |            | MEANX =  | 30.054 | SX = 1.552  |

| SECTION NO.          | POSITION NO.                       | FIRST YEAR. | LAST YEAR. | MAP.      | NAME.     |            |          |        |             |
|----------------------|------------------------------------|-------------|------------|-----------|-----------|------------|----------|--------|-------------|
| 365                  | 398                                | 1961        | 1970       | 594.3     | KROENSTAD |            |          |        |             |
| DURATION IN MINUTES. | TOTALS FOR RETURN PERIOD IN MM/HR. |             |            |           |           |            |          |        |             |
|                      | 2 YEARS.                           | 5 YEARS.    | 10 YEARS.  | 20 YEARS. | 50 YEARS. | 100 YEARS. |          |        |             |
| 15                   | 13.9                               | 18.1        | 21.6       | 25.5      | 31.6      | 37.1       | A =      | -2.551 | C = 0.231   |
|                      |                                    |             |            |           |           |            | MEANXL = | 2.684  | SXL = 0.296 |
|                      |                                    |             |            |           |           |            | MEANX =  | 14.642 | SX = 1.345  |
| 30                   | 18.6                               | 24.3        | 29.0       | 34.4      | 42.8      | 50.5       | A =      | -2.838 | C = 0.236   |
|                      |                                    |             |            |           |           |            | MEANXL = | 2.974  | SXL = 0.302 |
|                      |                                    |             |            |           |           |            | MEANX =  | 19.561 | SX = 1.353  |
| 45                   | 22.0                               | 29.2        | 35.3       | 42.2      | 53.3      | 63.5       | A =      | -3.000 | C = 0.250   |
|                      |                                    |             |            |           |           |            | MEANXL = | 3.145  | SXL = 0.321 |
|                      |                                    |             |            |           |           |            | MEANX =  | 23.208 | SX = 1.379  |
| 60                   | 23.8                               | 30.5        | 36.0       | 42.3      | 52.0      | 60.6       | A =      | -3.087 | C = 0.221   |
|                      |                                    |             |            |           |           |            | MEANXL = | 3.214  | SXL = 0.284 |
|                      |                                    |             |            |           |           |            | MEANX =  | 24.888 | SX = 1.328  |
| 1440                 | 47.2                               | 65.6        | 81.7       | 100.8     | 132.2     | 162.1      | A =      | -3.747 | C = 0.292   |
|                      |                                    |             |            |           |           |            | MEANXL = | 3.915  | SXL = 0.374 |
|                      |                                    |             |            |           |           |            | MEANX =  | 50.148 | SX = 1.454  |

| SECTION NO.          | POSITION NO.                       | FIRST YEAR. | LAST YEAR. | MAP.      | NAME.     |                            |
|----------------------|------------------------------------|-------------|------------|-----------|-----------|----------------------------|
| 393                  | 778                                | 1957        | 1970       | 456.0     | KURUMAN   |                            |
| DURATION IN MINUTES. | TOTALS FOR RETURN PERIOD IN MM/HR. |             |            |           |           |                            |
|                      | 2 YEARS.                           | 5 YEARS.    | 10 YEARS.  | 20 YEARS. | 50 YEARS. | 100 YEARS.                 |
| 15                   | 13.7                               | 18.3        | 22.2       | 26.8      | 34.0      | 40.7                       |
|                      |                                    |             |            |           |           | A = -2.524 C = 0.257       |
|                      |                                    |             |            |           |           | MEANXL = 2.672 SXL = 0.329 |
|                      |                                    |             |            |           |           | MEANX = 14.468 SX = 1.390  |
| 30                   | 17.7                               | 23.8        | 24.9       | 35.0      | 44.7      | 53.0                       |
|                      |                                    |             |            |           |           | A = -2.775 C = 0.263       |
|                      |                                    |             |            |           |           | MEANXL = 2.426 SXL = 0.337 |
|                      |                                    |             |            |           |           | MEANX = 18.056 SX = 1.400  |
| 45                   | 19.8                               | 26.8        | 32.8       | 39.7      | 51.0      | 61.5                       |
|                      |                                    |             |            |           |           | A = -2.887 C = 0.268       |
|                      |                                    |             |            |           |           | MEANXL = 3.041 SXL = 0.343 |
|                      |                                    |             |            |           |           | MEANX = 20.936 SX = 1.410  |
| 60                   | 21.7                               | 29.9        | 37.0       | 45.3      | 58.9      | 71.8                       |
|                      |                                    |             |            |           |           | A = -2.976 C = 0.282       |
|                      |                                    |             |            |           |           | MEANXL = 3.139 SXL = 0.362 |
|                      |                                    |             |            |           |           | MEANX = 23.070 SX = 1.436  |
| 1440                 | 41.9                               | 64.6        | 80.0       | 113.3     | 161.8     | 211.3                      |
|                      |                                    |             |            |           |           | A = -3.594 C = 0.382       |
|                      |                                    |             |            |           |           | MEANXL = 3.815 SXL = 0.490 |
|                      |                                    |             |            |           |           | MEANX = 45.273 SX = 1.633  |

| SECTION NO.          | POSITION NO.                       | FIRST YEAR. | LAST YEAR. | MAP.      | NAME.     |                            |
|----------------------|------------------------------------|-------------|------------|-----------|-----------|----------------------------|
| 403                  | 866                                | 1961        | 1970       | 688.7     | FRANKFORT |                            |
| DURATION IN MINUTES. | TOTALS FOR RETURN PERIOD IN MM/HR. |             |            |           |           |                            |
|                      | 2 YEARS.                           | 5 YEARS.    | 10 YEARS.  | 20 YEARS. | 50 YEARS. | 100 YEARS.                 |
| 15                   | 13.1                               | 16.5        | 19.2       | 22.2      | 26.8      | 30.9                       |
|                      |                                    |             |            |           |           | A = -2.500 C = 0.202       |
|                      |                                    |             |            |           |           | MEANXL = 2.616 SXL = 0.259 |
|                      |                                    |             |            |           |           | MEANX = 13.685 SX = 1.296  |
| 30                   | 17.5                               | 22.2        | 23.9       | 30.1      | 36.5      | 42.2                       |
|                      |                                    |             |            |           |           | A = -2.788 C = 0.208       |
|                      |                                    |             |            |           |           | MEANXL = 2.908 SXL = 0.266 |
|                      |                                    |             |            |           |           | MEANX = 18.314 SX = 1.395  |
| 45                   | 20.3                               | 25.9        | 30.4       | 35.4      | 43.3      | 50.2                       |
|                      |                                    |             |            |           |           | A = -2.931 C = 0.214       |
|                      |                                    |             |            |           |           | MEANXL = 3.055 SXL = 0.275 |
|                      |                                    |             |            |           |           | MEANX = 21.220 SX = 1.316  |
| 60                   | 21.5                               | 27.7        | 32.7       | 38.4      | 47.2      | 55.2                       |
|                      |                                    |             |            |           |           | A = -2.986 C = 0.223       |
|                      |                                    |             |            |           |           | MEANXL = 3.115 SXL = 0.286 |
|                      |                                    |             |            |           |           | MEANX = 22.529 SX = 1.331  |
| 1440                 | 40.4                               | 49.3        | 56.2       | 63.7      | 74.9      | 84.7                       |
|                      |                                    |             |            |           |           | A = -3.635 C = 0.175       |
|                      |                                    |             |            |           |           | MEANXL = 3.736 SXL = 0.224 |
|                      |                                    |             |            |           |           | MEANX = 41.920 SX = 1.251  |

| SECTION NO.          | POSITION NO.                       | FIRST YEAR. | LAST YEAR. | MAP.      | NAME.        |                            |
|----------------------|------------------------------------|-------------|------------|-----------|--------------|----------------------------|
| 419                  | 184                                | 1956        | 1970       | 163.0     | KEETMANSHOOP |                            |
| DURATION IN MINUTES. | TOTALS FOR RETURN PERIOD IN MM/HR. |             |            |           |              |                            |
|                      | 2 YEARS.                           | 5 YEARS.    | 10 YEARS.  | 20 YEARS. | 50 YEARS.    | 100 YEARS.                 |
| 15                   | 8.9                                | 15.1        | 21.5       | 30.2      | 46.7         | 64.8                       |
|                      |                                    |             |            |           |              | A = -2.011 C = 0.470       |
|                      |                                    |             |            |           |              | MEANXL = 2.282 SXL = 0.602 |
|                      |                                    |             |            |           |              | MEANX = 9.798 SX = 1.827   |
| 30                   | 12.6                               | 22.1        | 32.1       | 45.9      | 72.6         | 102.4                      |
|                      |                                    |             |            |           |              | A = -2.356 C = 0.494       |
|                      |                                    |             |            |           |              | MEANXL = 2.642 SXL = 0.634 |
|                      |                                    |             |            |           |              | MEANX = 14.036 SX = 1.885  |
| 45                   | 14.6                               | 26.0        | 37.9       | 54.5      | 87.3         | 124.2                      |
|                      |                                    |             |            |           |              | A = -2.499 C = 0.505       |
|                      |                                    |             |            |           |              | MEANXL = 2.790 SXL = 0.648 |
|                      |                                    |             |            |           |              | MEANX = 16.285 SX = 1.911  |
| 60                   | 15.8                               | 28.4        | 41.8       | 60.7      | 98.2         | 140.9                      |
|                      |                                    |             |            |           |              | A = -2.570 C = 0.517       |
|                      |                                    |             |            |           |              | MEANXL = 2.808 SXL = 0.663 |
|                      |                                    |             |            |           |              | MEANX = 17.610 SX = 1.940  |
| 1440                 | 13.0                               | 40.0        | 84.4       | 172.7     | 436.2        | 873.5                      |
|                      |                                    |             |            |           |              | A = -2.198 C = 0.555       |
|                      |                                    |             |            |           |              | MEANXL = 2.772 SXL = 1.275 |
|                      |                                    |             |            |           |              | MEANX = 15.985 SX = 3.580  |

| SECTION NO.          | POSITION NO.                       | FIRST YEAR. | LAST YEAR. | MAP.      | NAME.                            |
|----------------------|------------------------------------|-------------|------------|-----------|----------------------------------|
| 437                  | 134                                | 1951        | 1971       | 659.4     | POTCHFEESTRUM                    |
| DURATION IN MINUTES. | TOTALS FOR RETURN PERIOD IN MM/HR. |             |            |           |                                  |
|                      | 2 YEARS.                           | 5 YEARS.    | 10 YEARS.  | 20 YEARS. | 50 YEARS. 100 YEARS.             |
| 15                   | 16.7                               | 21.2        | 24.9       | 28.9      | 35.1 40.7 A = -2.740 C = 0.210   |
|                      |                                    |             |            |           | MEANXL = 2.861 SXL = 0.269       |
|                      |                                    |             |            |           | MEANX = 17.482 SX = 1.309        |
| 30                   | 23.9                               | 31.7        | 38.2       | 45.8      | 57.7 68.7 A = -3.083 C = 0.249   |
|                      |                                    |             |            |           | MEANXL = 3.227 SXL = 0.320       |
|                      |                                    |             |            |           | MEANX = 25.201 SX = 1.377        |
| 45                   | 28.0                               | 37.7        | 45.9       | 55.5      | 70.9 85.1 A = -3.236 C = 0.263   |
|                      |                                    |             |            |           | MEANXL = 3.388 SXL = 0.337       |
|                      |                                    |             |            |           | MEANX = 29.604 SX = 1.400        |
| 60                   | 29.9                               | 40.2        | 48.9       | 59.9      | 75.1 90.1 A = -3.303 C = 0.260   |
|                      |                                    |             |            |           | MEANXL = 3.453 SXL = 0.334       |
|                      |                                    |             |            |           | MEANX = 31.603 SX = 1.397        |
| 1440                 | 49.7                               | 63.7        | 75.1       | 88.0      | 107.9 125.7 A = -3.826 C = 0.219 |
|                      |                                    |             |            |           | MEANXL = 3.953 SXL = 0.281       |
|                      |                                    |             |            |           | MEANX = 52.079 SX = 1.324        |

| SECTION NO.          | POSITION NO.                       | FIRST YEAR. | LAST YEAR. | MAP.      | NAME.                            |
|----------------------|------------------------------------|-------------|------------|-----------|----------------------------------|
| 441                  | 446                                | 1960        | 1970       | 718.3     | STANDERTUN                       |
| DURATION IN MINUTES. | TOTALS FOR RETURN PERIOD IN MM/HR. |             |            |           |                                  |
|                      | 2 YEARS.                           | 5 YEARS.    | 10 YEARS.  | 20 YEARS. | 50 YEARS. 100 YEARS.             |
| 15                   | 16.3                               | 22.2        | 27.2       | 32.1      | 42.7 51.7 A = -2.588 C = 0.273   |
|                      |                                    |             |            |           | MEANXL = 2.846 SXL = 0.351       |
|                      |                                    |             |            |           | MEANX = 17.221 SX = 1.420        |
| 30                   | 23.4                               | 31.9        | 39.3       | 48.0      | 62.1 75.3 A = -3.049 C = 0.276   |
|                      |                                    |             |            |           | MEANXL = 3.209 SXL = 0.355       |
|                      |                                    |             |            |           | MEANX = 24.753 SX = 1.426        |
| 45                   | 27.0                               | 38.6        | 49.0       | 61.6      | 82.9 103.4 A = -3.178 C = 0.318  |
|                      |                                    |             |            |           | MEANXL = 3.362 SXL = 0.407       |
|                      |                                    |             |            |           | MEANX = 28.833 SX = 1.503        |
| 60                   | 29.7                               | 43.7        | 50.5       | 72.2      | 99.2 125.4 A = -3.267 C = 0.341  |
|                      |                                    |             |            |           | MEANXL = 3.464 SXL = 0.437       |
|                      |                                    |             |            |           | MEANX = 31.945 SX = 1.548        |
| 1440                 | 51.1                               | 75.2        | 97.1       | 124.1     | 170.5 216.2 A = -3.809 C = 0.341 |
|                      |                                    |             |            |           | MEANXL = 4.006 SXL = 0.437       |
|                      |                                    |             |            |           | MEANX = 54.928 SX = 1.548        |

| SECTION NO.          | POSITION NO.                       | FIRST YEAR. | LAST YEAR. | MAP.      | NAME.                            |
|----------------------|------------------------------------|-------------|------------|-----------|----------------------------------|
| 476                  | 398                                | 1938        | 1976       | 722.9     | JAN SMUTS                        |
| DURATION IN MINUTES. | TOTALS FOR RETURN PERIOD IN MM/HR. |             |            |           |                                  |
|                      | 2 YEARS.                           | 5 YEARS.    | 10 YEARS.  | 20 YEARS. | 50 YEARS. 100 YEARS.             |
| 15                   | 16.3                               | 22.9        | 26.8       | 32.4      | 41.4 49.7 A = -2.697 C = 0.263   |
|                      |                                    |             |            |           | MEANXL = 2.849 SXL = 0.337       |
|                      |                                    |             |            |           | MEANX = 17.271 SX = 1.401        |
| 30                   | 23.8                               | 33.3        | 41.6       | 51.6      | 68.0 83.8 A = -3.059 C = 0.298   |
|                      |                                    |             |            |           | MEANXL = 3.230 SXL = 0.382       |
|                      |                                    |             |            |           | MEANX = 25.291 SX = 1.465        |
| 45                   | 27.7                               | 39.9        | 50.7       | 63.9      | 86.1 107.8 A = -3.204 C = 0.321  |
|                      |                                    |             |            |           | MEANXL = 3.389 SXL = 0.411       |
|                      |                                    |             |            |           | MEANX = 29.647 SX = 1.509        |
| 60                   | 29.6                               | 42.6        | 54.1       | 68.1      | 91.7 114.0 A = -3.272 C = 0.319  |
|                      |                                    |             |            |           | MEANXL = 3.456 SXL = 0.410       |
|                      |                                    |             |            |           | MEANX = 31.705 SX = 1.506        |
| 1440                 | 54.4                               | 75.3        | 93.3       | 114.6     | 149.6 182.0 A = -3.892 C = 0.296 |
|                      |                                    |             |            |           | MEANXL = 4.057 SXL = 0.367       |
|                      |                                    |             |            |           | MEANX = 57.817 SX = 1.443        |

| SECTION NO.          | POSITION NO.                       | FIRST YEAR. | LAST YEAR. | MAP.      | NAME.     |            |
|----------------------|------------------------------------|-------------|------------|-----------|-----------|------------|
| 478                  | 807                                | 1963        | 1971       | 707.6     | JETHAL    |            |
| DURATION IN MINUTES. | TOTALS FOR RETURN PERIOD IN MM/HF. |             |            |           |           |            |
|                      | 2 YEARS.                           | 5 YEARS.    | 10 YEARS.  | 20 YEARS. | 50 YEARS. | 100 YEARS. |
| 15                   | 15.4                               | 21.8        | 27.5       | 34.7      | 45.7      | 56.6       |
|                      |                                    |             |            |           | A =       | -2.520     |
|                      |                                    |             |            |           | C =       | 0.308      |
|                      |                                    |             |            |           | MEANXL =  | 2.797      |
|                      |                                    |             |            |           | SXL =     | 0.395      |
|                      |                                    |             |            |           | MEANX =   | 16.402     |
|                      |                                    |             |            |           | SX =      | 1.484      |
| 30                   | 22.4                               | 31.2        | 38.8       | 47.8      | 62.7      | 76.8       |
|                      |                                    |             |            |           | A =       | -3.003     |
|                      |                                    |             |            |           | C =       | 0.291      |
|                      |                                    |             |            |           | MEANXL =  | 3.171      |
|                      |                                    |             |            |           | SXL =     | 0.373      |
|                      |                                    |             |            |           | MEANX =   | 23.839     |
|                      |                                    |             |            |           | SX =      | 1.452      |
| 45                   | 26.6                               | 37.1        | 46.2       | 57.1      | 75.1      | 92.2       |
|                      |                                    |             |            |           | A =       | -3.173     |
|                      |                                    |             |            |           | C =       | 0.294      |
|                      |                                    |             |            |           | MEANXL =  | 3.343      |
|                      |                                    |             |            |           | SXL =     | 0.377      |
|                      |                                    |             |            |           | MEANX =   | 28.293     |
|                      |                                    |             |            |           | SX =      | 1.457      |
| 60                   | 28.2                               | 38.8        | 47.9       | 59.6      | 76.2      | 92.7       |
|                      |                                    |             |            |           | A =       | -3.236     |
|                      |                                    |             |            |           | C =       | 0.281      |
|                      |                                    |             |            |           | MEANXL =  | 3.338      |
|                      |                                    |             |            |           | SXL =     | 0.361      |
|                      |                                    |             |            |           | MEANX =   | 29.914     |
|                      |                                    |             |            |           | SX =      | 1.434      |
| 1440                 | 47.3                               | 65.3        | 80.8       | 99.1      | 129.1     | 157.4      |
|                      |                                    |             |            |           | A =       | -3.753     |
|                      |                                    |             |            |           | C =       | 0.284      |
|                      |                                    |             |            |           | MEANXL =  | 3.917      |
|                      |                                    |             |            |           | SXL =     | 0.364      |
|                      |                                    |             |            |           | MEANX =   | 50.229     |
|                      |                                    |             |            |           | SX =      | 1.439      |

| SECTION NO.          | POSITION NO.                       | FIRST YEAR. | LAST YEAR. | MAP.      | NAME.          |             |
|----------------------|------------------------------------|-------------|------------|-----------|----------------|-------------|
| 480                  | 184                                | 1961        | 1971       | 757.7     | CARCLINA       |             |
| DURATION IN MINUTES. | TOTALS FOR RETURN PERIOD IN MM/HF. |             |            |           |                |             |
|                      | 2 YEARS.                           | 5 YEARS.    | 10 YEARS.  | 20 YEARS. | 50 YEARS.      | 100 YEARS.  |
| 15                   | 16.4                               | 20.1        | 23.0       | 26.1      | 30.9           | 35.0        |
|                      |                                    |             |            |           | A = -2.730     | C = 0.179   |
|                      |                                    |             |            |           | MEANXL = 2.834 | SXL = 0.230 |
|                      |                                    |             |            |           | MEANX = 17.009 | SX = 1.259  |
| 30                   | 22.9                               | 30.8        | 37.5       | 45.3      | 57.8           | 69.4        |
|                      |                                    |             |            |           | A = -3.035     | C = 0.262   |
|                      |                                    |             |            |           | MEANXL = 3.186 | SXL = 0.336 |
|                      |                                    |             |            |           | MEANX = 24.198 | SX = 1.399  |
| 45                   | 26.7                               | 38.2        | 49.5       | 60.8      | 81.7           | 101.8       |
|                      |                                    |             |            |           | A = -3.170     | C = 0.316   |
|                      |                                    |             |            |           | MEANXL = 3.352 | SXL = 0.405 |
|                      |                                    |             |            |           | MEANX = 26.504 | SX = 1.500  |
| 60                   | 29.5                               | 41.8        | 52.7       | 65.8      | 87.7           | 108.7       |
|                      |                                    |             |            |           | A = -3.272     | C = 0.308   |
|                      |                                    |             |            |           | MEANXL = 3.450 | SXL = 0.395 |
|                      |                                    |             |            |           | MEANX = 31.494 | SX = 1.484  |
| 1440                 | 48.5                               | 59.0        | 67.2       | 76.1      | 89.4           | 103.9       |
|                      |                                    |             |            |           | A = -3.818     | C = 0.173   |
|                      |                                    |             |            |           | MEANXL = 3.918 | SXL = 0.222 |
|                      |                                    |             |            |           | MEANX = 50.285 | SX = 1.249  |

| SECTION NO.          | POSITION NO.                       | FIRST YEAR. | LAST YEAR. | MAP.      | NAME.     |            |          |        |       |       |  |
|----------------------|------------------------------------|-------------|------------|-----------|-----------|------------|----------|--------|-------|-------|--|
| 538                  | 261                                | 1958        | 1965       | 561.2     | MAFEKING  |            |          |        |       |       |  |
| DURATION IN MINUTES. | TOTALS FOR RETURN PERIOD IN MM/HF. |             |            |           |           |            |          |        |       |       |  |
|                      | 2 YEARS.                           | 5 YEARS.    | 10 YEARS.  | 20 YEARS. | 50 YEARS. | 100 YEARS. |          |        |       |       |  |
| 15                   | 21.5                               | 30.0        | 37.4       | 46.2      | 60.7      | 74.5       | A =      | -2.902 | C =   | 0.293 |  |
|                      |                                    |             |            |           |           |            | MEANXL = | 3.131  | SXL = | 0.376 |  |
|                      |                                    |             |            |           |           |            | MEANX =  | 22.907 | SX =  | 1.456 |  |
| 30                   | 29.5                               | 38.5        | 45.8       | 54.2      | 67.3      | 79.2       | A =      | -3.300 | C =   | 0.233 |  |
|                      |                                    |             |            |           |           |            | MEANXL = | 3.434  | SXL = | 0.299 |  |
|                      |                                    |             |            |           |           |            | MEANX =  | 31.015 | SX =  | 1.348 |  |
| 45                   | 33.3                               | 44.4        | 53.6       | 64.3      | 81.3      | 97.0       | A =      | -3.413 | C =   | 0.252 |  |
|                      |                                    |             |            |           |           |            | MEANXL = | 3.559  | SXL = | 0.324 |  |
|                      |                                    |             |            |           |           |            | MEANX =  | 35.134 | SX =  | 1.382 |  |
| 60                   | 36.0                               | 48.2        | 58.4       | 70.3      | 89.3      | 106.9      | A =      | -3.490 | C =   | 0.257 |  |
|                      |                                    |             |            |           |           |            | MEANXL = | 3.638  | SXL = | 0.330 |  |
|                      |                                    |             |            |           |           |            | MEANX =  | 36.023 | SX =  | 1.390 |  |
| 1440                 | 50.1                               | 70.5        | 88.4       | 109.9     | 145.7     | 179.9      | A =      | -3.803 | C =   | 0.302 |  |
|                      |                                    |             |            |           |           |            | MEANXL = | 3.977  | SXL = | 0.387 |  |
|                      |                                    |             |            |           |           |            | MEANX =  | 53.353 | SX =  | 1.473 |  |

| SECTION NO.          | POSITION NO.                       | FIRST YEAR. | LAST YEAR. | MAP.      | NAME.     |                            |
|----------------------|------------------------------------|-------------|------------|-----------|-----------|----------------------------|
| 513                  | 405                                | 1938        | 1976       | 742.1     | PRETORIA  |                            |
| DURATION IN MINUTES. | TOTALS FOR RETURN PERIOD IN MM/HR. |             |            |           |           |                            |
|                      | 2 YEARS.                           | 5 YEARS.    | 10 YEARS.  | 20 YEARS. | 50 YEARS. | 100 YEARS.                 |
| 15                   | 16.6                               | 21.3        | 25.1       | 29.4      | 36.2      | 42.2                       |
|                      |                                    |             |            |           |           | A = -2.727 C = 0.221       |
|                      |                                    |             |            |           |           | MEANXL = 2.855 SXL = 0.283 |
|                      |                                    |             |            |           |           | MEANX = 17.368 SX = 1.327  |
| 30                   | 24.1                               | 31.1        | 36.8       | 43.2      | 53.3      | 62.3                       |
|                      |                                    |             |            |           |           | A = -3.101 C = 0.224       |
|                      |                                    |             |            |           |           | MEANXL = 3.230 SXL = 0.298 |
|                      |                                    |             |            |           |           | MEANX = 25.279 SX = 1.333  |
| 45                   | 27.9                               | 36.4        | 43.5       | 51.6      | 64.4      | 75.9                       |
|                      |                                    |             |            |           |           | A = -3.241 C = 0.237       |
|                      |                                    |             |            |           |           | MEANXL = 3.377 SXL = 0.304 |
|                      |                                    |             |            |           |           | MEANX = 29.293 SX = 1.355  |
| 60                   | 31.0                               | 41.0        | 49.4       | 59.0      | 74.3      | 88.3                       |
|                      |                                    |             |            |           |           | A = -3.343 C = 0.247       |
|                      |                                    |             |            |           |           | MEANXL = 3.486 SXL = 0.317 |
|                      |                                    |             |            |           |           | MEANX = 32.646 SX = 1.373  |
| 1440                 | 58.9                               | 70.5        | 91.0       | 107.5     | 133.3     | 159.7                      |
|                      |                                    |             |            |           |           | A = -3.991 C = 0.231       |
|                      |                                    |             |            |           |           | MEANXL = 4.124 SXL = 0.297 |
|                      |                                    |             |            |           |           | MEANX = 61.806 SX = 1.345  |

| SECTION NO.          | POSITION NO.                       | FIRST YEAR. | LAST YEAR. | MAP.      | NAME.     |                            |
|----------------------|------------------------------------|-------------|------------|-----------|-----------|----------------------------|
| 555                  | 837                                | 1961        | 1971       | 776.7     | NELSPRUIT |                            |
| DURATION IN MINUTES. | TOTALS FOR RETURN PERIOD IN MM/HR. |             |            |           |           |                            |
|                      | 2 YEARS.                           | 5 YEARS.    | 10 YEARS.  | 20 YEARS. | 50 YEARS. | 100 YEARS.                 |
| 15                   | 21.6                               | 28.1        | 33.4       | 39.5      | 49.0      | 57.5                       |
|                      |                                    |             |            |           |           | A = -2.990 C = 0.231       |
|                      |                                    |             |            |           |           | MEANXL = 3.123 SXL = 0.296 |
|                      |                                    |             |            |           |           | MEANX = 22.724 SX = 1.345  |
| 30                   | 32.4                               | 44.1        | 54.0       | 65.7      | 84.6      | 102.3                      |
|                      |                                    |             |            |           |           | A = -3.379 C = 0.271       |
|                      |                                    |             |            |           |           | MEANXL = 3.536 SXL = 0.348 |
|                      |                                    |             |            |           |           | MEANX = 34.314 SX = 1.417  |
| 45                   | 35.8                               | 48.5        | 59.2       | 71.7      | 92.0      | 110.8                      |
|                      |                                    |             |            |           |           | A = -3.481 C = 0.267       |
|                      |                                    |             |            |           |           | MEANXL = 3.635 SXL = 0.342 |
|                      |                                    |             |            |           |           | MEANX = 37.893 SX = 1.408  |
| 60                   | 38.7                               | 51.8        | 62.7       | 75.4      | 95.7      | 114.4                      |
|                      |                                    |             |            |           |           | A = -3.563 C = 0.256       |
|                      |                                    |             |            |           |           | MEANXL = 3.711 SXL = 0.328 |
|                      |                                    |             |            |           |           | MEANX = 40.876 SX = 1.398  |
| 1440                 | 59.3                               | 70.8        | 79.6       | 89.0      | 102.9     | 114.8                      |
|                      |                                    |             |            |           |           | A = -4.026 C = 0.156       |
|                      |                                    |             |            |           |           | MEANXL = 4.116 SXL = 0.200 |
|                      |                                    |             |            |           |           | MEANX = 61.317 SX = 1.221  |

| SECTION NO.          | POSITION NO. | FIRST YEAR.                        | LAST YEAR. | MAP.      | NAME.     |           |            |          |        |       |       |
|----------------------|--------------|------------------------------------|------------|-----------|-----------|-----------|------------|----------|--------|-------|-------|
| 566                  | 817          | 1960                               | 1971       | 180.0     | MARIENTAL |           |            |          |        |       |       |
| DURATION IN MINUTES. |              | TOTALS FOR RETURN PERIOD IN MM/HR. |            |           |           |           |            |          |        |       |       |
|                      |              | 2 YEARS.                           | 5 YEARS.   | 10 YEARS. | 20 YEARS. | 50 YEARS. | 100 YEARS. |          |        |       |       |
| 15                   |              | 9.5                                | 12.7       | 15.5      | 18.7      | 23.8      | 28.6       | A =      | -2.150 | C =   | 0.261 |
|                      |              |                                    |            |           |           |           |            | MEANXL = | 2.301  | SXL = | 0.335 |
|                      |              |                                    |            |           |           |           |            | MEANX =  | 9.986  | SX =  | 1.398 |
| 30                   |              | 11.6                               | 16.6       | 21.0      | 26.4      | 35.3      | 44.0       | A =      | -2.340 | C =   | 0.314 |
|                      |              |                                    |            |           |           |           |            | MEANXL = | 2.521  | SXL = | 0.403 |
|                      |              |                                    |            |           |           |           |            | MEANX =  | 12.442 | SX =  | 1.496 |
| 45                   |              | 13.5                               | 20.3       | 26.5      | 34.3      | 47.9      | 61.5       | A =      | -2.472 | C =   | 0.358 |
|                      |              |                                    |            |           |           |           |            | MEANXL = | 2.679  | SXL = | 0.459 |
|                      |              |                                    |            |           |           |           |            | MEANX =  | 14.568 | SX =  | 1.582 |
| 60                   |              | 14.9                               | 22.6       | 29.9      | 39.1      | 55.2      | 71.6       | A =      | -2.562 | C =   | 0.371 |
|                      |              |                                    |            |           |           |           |            | MEANXL = | 2.777  | SXL = | 0.476 |
|                      |              |                                    |            |           |           |           |            | MEANX =  | 10.063 | SX =  | 1.610 |
| 1440                 |              | 25.3                               | 38.9       | 51.8      | 68.1      | 97.1      | 126.7      | A =      | -3.089 | C =   | 0.381 |
|                      |              |                                    |            |           |           |           |            | MEANXL = | 3.309  | SXL = | 0.489 |
|                      |              |                                    |            |           |           |           |            | MEANX =  | 27.367 | SX =  | 1.630 |

| SECTION NO.          | POSITION NO.                       | FIRST YEAR. | LAST YEAR. | MAP.      | NAME.     |                            |
|----------------------|------------------------------------|-------------|------------|-----------|-----------|----------------------------|
| 549                  | 544                                | 1947        | 1972       | 641.2     | TOWCOMUA  |                            |
| DURATION IN MINUTES. | TOTALS FOR RETURN PERIOD IN MM/HR. |             |            |           |           |                            |
|                      | 2 YEARS.                           | 5 YEARS.    | 10 YEARS.  | 20 YEARS. | 50 YEARS. | 100 YEARS.                 |
| 15                   | 16.4                               | 24.2        | 31.3       | 40.0      | 54.9      | 69.7                       |
|                      |                                    |             |            |           |           | A = -2.675 C = 0.341       |
|                      |                                    |             |            |           |           | MEANXL = 2.872 SXL = 0.438 |
|                      |                                    |             |            |           |           | MEANX = 17.605 SX = 1.549  |
| 30                   | 23.9                               | 35.2        | 45.1       | 57.4      | 73.4      | 93.2                       |
|                      |                                    |             |            |           |           | A = -3.053 C = 0.336       |
|                      |                                    |             |            |           |           | MEANXL = 3.244 SXL = 0.430 |
|                      |                                    |             |            |           |           | MEANX = 25.695 SX = 1.538  |
| 45                   | 27.3                               | 40.3        | 53.4       | 69.3      | 76.1      | 123.3                      |
|                      |                                    |             |            |           |           | A = -3.175 C = 0.356       |
|                      |                                    |             |            |           |           | MEANXL = 3.341 SXL = 0.457 |
|                      |                                    |             |            |           |           | MEANX = 29.392 SX = 1.579  |
| 60                   | 29.3                               | 44.6        | 58.5       | 76.1      | 107.2     | 138.5                      |
|                      |                                    |             |            |           |           | A = -3.243 C = 0.367       |
|                      |                                    |             |            |           |           | MEANXL = 3.455 SXL = 0.471 |
|                      |                                    |             |            |           |           | MEANX = 31.650 SX = 1.501  |
| 1440                 | 34.0                               | 93.9        | 174.2      | 325.2     | 729.5     | 1336.5                     |
|                      |                                    |             |            |           |           | A = -3.239 C = 0.667       |
|                      |                                    |             |            |           |           | MEANXL = 3.739 SXL = 1.112 |
|                      |                                    |             |            |           |           | MEANX = 40.832 SX = 3.041  |

| SECTION NO.          | POSITION NO. | FIRST YEAR.                        | LAST YEAR. | MAP.      | NAME.     |           |            |          |        |             |
|----------------------|--------------|------------------------------------|------------|-----------|-----------|-----------|------------|----------|--------|-------------|
| 590                  | 550          | 1950                               | 1963       | 617.0     | CRECY     |           |            |          |        |             |
| DURATION IN MINUTES. |              | TOTALS FOR RETURN PERIOD IN MM/HR. |            |           |           |           |            |          |        |             |
|                      |              | 2 YEARS.                           | 5 YEARS.   | 10 YEARS. | 20 YEARS. | 50 YEARS. | 100 YEARS. |          |        |             |
| 15                   |              | 17.0                               | 21.8       | 25.7      | 30.2      | 37.1      | 43.2       | A =      | -2.752 | C = 0.220   |
|                      |              |                                    |            |           |           |           |            | MEANXL = | 2.879  | SXL = 0.283 |
|                      |              |                                    |            |           |           |           |            | MEANX =  | 17.802 | SX = 1.327  |
| 30                   |              | 24.1                               | 27.8       | 34.2      | 39.2      | 46.6      | 53.1       | A =      | -3.113 | C = 0.187   |
|                      |              |                                    |            |           |           |           |            | MEANXL = | 3.221  | SXL = 0.240 |
|                      |              |                                    |            |           |           |           |            | MEANX =  | 25.052 | SX = 1.271  |
| 45                   |              | 27.9                               | 33.2       | 37.2      | 41.6      | 48.0      | 53.4       | A =      | -3.272 | C = 0.153   |
|                      |              |                                    |            |           |           |           |            | MEANXL = | 3.361  | SXL = 0.197 |
|                      |              |                                    |            |           |           |           |            | MEANX =  | 29.813 | SX = 1.217  |
| 60                   |              | 30.0                               | 35.1       | 39.0      | 43.2      | 49.2      | 54.3       | A =      | -3.348 | C = 0.140   |
|                      |              |                                    |            |           |           |           |            | MEANXL = | 3.429  | SXL = 0.180 |
|                      |              |                                    |            |           |           |           |            | MEANX =  | 30.960 | SX = 1.197  |
| 1440                 |              | 46.3                               | 55.0       | 62.3      | 72.0      | 82.1      | 92.0       | A =      | -3.775 | C = 0.162   |
|                      |              |                                    |            |           |           |           |            | MEANXL = | 3.869  | SXL = 0.208 |
|                      |              |                                    |            |           |           |           |            | MEANX =  | 47.830 | SX = 1.231  |

| SECTION NO.          | POSITION NO.                       | FIRST YEAR. | LAST YEAR. | MAP.      | NAME.       |                            |
|----------------------|------------------------------------|-------------|------------|-----------|-------------|----------------------------|
| 677                  | 802                                | 1939        | 1970       | 545.0     | PIETERSBERG |                            |
| DURATION IN MINUTES. | TOTALS FOR RETURN PERIOD IN MM/HR. |             |            |           |             |                            |
|                      | 2 YEARS.                           | 5 YEARS.    | 10 YEARS.  | 20 YEARS. | 50 YEARS.   | 100 YEARS.                 |
| 15                   | 16.1                               | 22.5        | 28.2       | 35.0      | 46.2        | 57.0                       |
|                      |                                    |             |            |           |             | A = -2.667 C = 0.299       |
|                      |                                    |             |            |           |             | MEANXL = 2.839 SXL = 0.384 |
|                      |                                    |             |            |           |             | MEANX = 17.105 SX = 1.468  |
| 30                   | 23.8                               | 33.1        | 41.1       | 50.5      | 60.1        | 80.9                       |
|                      |                                    |             |            |           |             | A = -3.066 C = 0.289       |
|                      |                                    |             |            |           |             | MEANXL = 3.233 SXL = 0.370 |
|                      |                                    |             |            |           |             | MEANX = 25.344 SX = 1.448  |
| 45                   | 26.5                               | 36.4        | 45.0       | 55.1      | 71.6        | 87.2                       |
|                      |                                    |             |            |           |             | A = -3.173 C = 0.282       |
|                      |                                    |             |            |           |             | MEANXL = 3.336 SXL = 0.361 |
|                      |                                    |             |            |           |             | MEANX = 28.096 SX = 1.435  |
| 60                   | 27.9                               | 39.1        | 48.8       | 60.4      | 73.5        | 97.3                       |
|                      |                                    |             |            |           |             | A = -3.221 C = 0.296       |
|                      |                                    |             |            |           |             | MEANXL = 3.392 SXL = 0.390 |
|                      |                                    |             |            |           |             | MEANX = 29.727 SX = 1.462  |
| 1440                 | 45.1                               | 63.2        | 79.3       | 98.0      | 129.3       | 159.3                      |
|                      |                                    |             |            |           |             | A = -3.699 C = 0.248       |
|                      |                                    |             |            |           |             | MEANXL = 3.871 SXL = 0.392 |
|                      |                                    |             |            |           |             | MEANX = 47.996 SX = 1.466  |



| SECTION NO.                        | POSITION NO. | FIRST YEAR. | LAST YEAR. | MAP.      | NAME.     |           |            |                |             |
|------------------------------------|--------------|-------------|------------|-----------|-----------|-----------|------------|----------------|-------------|
| 719                                | 370          | 1959        | 1972       | 409.1     | MARNITZ   |           |            |                |             |
| DURATION IN MINUTES.               |              |             |            |           |           |           |            |                |             |
| TOTALS FOR RETURN PERIOD IN MM/HR. |              |             |            |           |           |           |            |                |             |
|                                    |              | 2 YEARS.    | 5 YEARS.   | 10 YEARS. | 20 YEARS. | 50 YEARS. | 100 YEARS. |                |             |
| 15                                 |              | 14.8        | 19.2       | 22.8      | 26.9      | 33.4      | 39.2       | A = -2.607     | C = 0.231   |
|                                    |              |             |            |           |           |           |            | MEANXL = 2.740 | SXL = 0.296 |
|                                    |              |             |            |           |           |           |            | MEANX = 15.492 | SX = 1.244  |
| 30                                 |              | 21.4        | 29.0       | 35.5      | 43.1      | 55.4      | 66.7       | A = -2.964     | C = 0.269   |
|                                    |              |             |            |           |           |           |            | MEANXL = 3.119 | SXL = 0.345 |
|                                    |              |             |            |           |           |           |            | MEANX = 22.033 | SX = 1.412  |
| 45                                 |              | 26.0        | 35.5       | 43.7      | 53.3      | 69.8      | 83.4       | A = -3.158     | C = 0.275   |
|                                    |              |             |            |           |           |           |            | MEANXL = 3.317 | SXL = 0.353 |
|                                    |              |             |            |           |           |           |            | MEANX = 27.571 | SX = 1.423  |
| 60                                 |              | 29.6        | 42.2       | 53.4      | 66.8      | 89.4      | 111.3      | A = -3.273     | C = 0.313   |
|                                    |              |             |            |           |           |           |            | MEANXL = 3.434 | SXL = 0.401 |
|                                    |              |             |            |           |           |           |            | MEANX = 31.614 | SX = 1.494  |
| 1440                               |              | 48.6        | 67.1       | 93.1      | 122.0     | 133.0     | 162.3      | A = -3.779     | C = 0.285   |
|                                    |              |             |            |           |           |           |            | MEANXL = 3.943 | SXL = 0.365 |
|                                    |              |             |            |           |           |           |            | MEANX = 51.531 | SX = 1.441  |

| SECTION NO.                        | POSITION NO. | FIRST YEAR. | LAST YEAR. | MAP.      | NAME.     |           |            |                |             |
|------------------------------------|--------------|-------------|------------|-----------|-----------|-----------|------------|----------------|-------------|
| 740                                | 154          | 1956        | 1970       | 367.3     | WINDHOEK  |           |            |                |             |
| DURATION IN MINUTES.               |              |             |            |           |           |           |            |                |             |
| TOTALS FOR RETURN PERIOD IN MM/HR. |              |             |            |           |           |           |            |                |             |
|                                    |              | 2 YEARS.    | 5 YEARS.   | 10 YEARS. | 20 YEARS. | 50 YEARS. | 100 YEARS. |                |             |
| 15                                 |              | 13.3        | 20.4       | 27.1      | 35.5      | 50.5      | 65.8       | A = -2.448     | C = 0.278   |
|                                    |              |             |            |           |           |           |            | MEANXL = 2.066 | SXL = 0.485 |
|                                    |              |             |            |           |           |           |            | MEANX = 14.380 | SX = 1.624  |
| 30                                 |              | 19.0        | 30.2       | 41.1      | 55.3      | 81.0      | 107.8      | A = -2.795     | C = 0.410   |
|                                    |              |             |            |           |           |           |            | MEANXL = 3.031 | SXL = 0.526 |
|                                    |              |             |            |           |           |           |            | MEANX = 20.724 | SX = 1.692  |
| 45                                 |              | 21.5        | 35.4       | 49.2      | 67.5      | 101.8     | 138.4      | A = -2.905     | C = 0.440   |
|                                    |              |             |            |           |           |           |            | MEANXL = 3.160 | SXL = 0.564 |
|                                    |              |             |            |           |           |           |            | MEANX = 23.559 | SX = 1.758  |
| 60                                 |              | 22.6        | 37.0       | 52.7      | 72.7      | 110.4     | 151.0      | A = -2.956     | C = 0.448   |
|                                    |              |             |            |           |           |           |            | MEANXL = 3.214 | SXL = 0.575 |
|                                    |              |             |            |           |           |           |            | MEANX = 24.888 | SX = 1.777  |
| 1440                               |              | 34.5        | 57.4       | 80.5      | 111.4     | 169.6     | 232.3      | A = -3.375     | C = 0.451   |
|                                    |              |             |            |           |           |           |            | MEANXL = 3.635 | SXL = 0.578 |
|                                    |              |             |            |           |           |           |            | MEANX = 37.891 | SX = 1.783  |

| SECTION NO.                        | POSITION NO. | FIRST YEAR. | LAST YEAR. | MAP.      | NAME.       |           |            |                |             |
|------------------------------------|--------------|-------------|------------|-----------|-------------|-----------|------------|----------------|-------------|
| 784                                | 839          | 1967        | 1970       | 380.0     | J E STRYDOM |           |            |                |             |
| DURATION IN MINUTES.               |              |             |            |           |             |           |            |                |             |
| TOTALS FOR RETURN PERIOD IN MM/HR. |              |             |            |           |             |           |            |                |             |
|                                    |              | 2 YEARS.    | 5 YEARS.   | 10 YEARS. | 20 YEARS.   | 50 YEARS. | 100 YEARS. |                |             |
| 15                                 |              | 13.2        | 15.5       | 17.2      | 19.0        | 21.6      | 23.3       | A = -2.532     | C = 0.139   |
|                                    |              |             |            |           |             |           |            | MEANXL = 2.612 | SXL = 0.178 |
|                                    |              |             |            |           |             |           |            | MEANX = 13.629 | SX = 1.195  |
| 30                                 |              | 20.0        | 23.5       | 26.2      | 29.0        | 33.1      | 36.5       | A = -2.946     | C = 0.142   |
|                                    |              |             |            |           |             |           |            | MEANXL = 3.028 | SXL = 0.182 |
|                                    |              |             |            |           |             |           |            | MEANX = 20.650 | SX = 1.199  |
| 45                                 |              | 21.5        | 25.7       | 28.8      | 32.2        | 37.2      | 41.4       | A = -3.014     | C = 0.154   |
|                                    |              |             |            |           |             |           |            | MEANXL = 3.103 | SXL = 0.198 |
|                                    |              |             |            |           |             |           |            | MEANX = 22.255 | SX = 1.219  |
| 60                                 |              | 22.5        | 26.6       | 29.7      | 33.1        | 38.0      | 42.2       | A = -3.057     | C = 0.149   |
|                                    |              |             |            |           |             |           |            | MEANXL = 3.143 | SXL = 0.151 |
|                                    |              |             |            |           |             |           |            | MEANX = 23.167 | SX = 1.210  |
| 1440                               |              | 37.6        | 50.5       | 61.3      | 73.9        | 94.2      | 112.9      | A = -3.531     | C = 0.260   |
|                                    |              |             |            |           |             |           |            | MEANXL = 3.681 | SXL = 0.333 |
|                                    |              |             |            |           |             |           |            | MEANX = 39.697 | SX = 1.396  |

| SECTION NO.          | POSITION NO.                       | FIRST YEAR. | LAST YEAR. | MAP.      | NAME.     |            |          |        |             |
|----------------------|------------------------------------|-------------|------------|-----------|-----------|------------|----------|--------|-------------|
| 787                  | 838                                | 1960        | 1971       | 350.0     | GCEAEIS   |            |          |        |             |
| DURATION IN MINUTES. | TOTALS FOR RETURN PERIOD IN MM/HR. |             |            |           |           |            |          |        |             |
|                      | 2 YEARS.                           | 5 YEARS.    | 10 YEARS.  | 20 YEARS. | 50 YEARS. | 100 YEARS. |          |        |             |
| 15                   | 11.5                               | 14.4        | 16.7       | 19.2      | 23.1      | 29.0       | A =      | -2.369 | C = 0.198   |
|                      |                                    |             |            |           |           |            | MEANXL = | 2.483  | SXL = 0.254 |
|                      |                                    |             |            |           |           |            | MEANX =  | 11.982 | SX = 1.289  |
| 30                   | 15.6                               | 19.8        | 23.2       | 27.0      | 32.9      | 38.2       | A =      | -2.667 | C = 0.212   |
|                      |                                    |             |            |           |           |            | MEANXL = | 2.789  | SXL = 0.272 |
|                      |                                    |             |            |           |           |            | MEANX =  | 16.264 | SX = 1.312  |
| 45                   | 18.1                               | 23.2        | 27.4       | 32.0      | 39.3      | 45.8       | A =      | -2.816 | C = 0.219   |
|                      |                                    |             |            |           |           |            | MEANXL = | 2.942  | SXL = 0.281 |
|                      |                                    |             |            |           |           |            | MEANX =  | 18.960 | SX = 1.324  |
| 60                   | 19.4                               | 25.1        | 29.8       | 35.1      | 43.4      | 50.9       | A =      | -2.882 | C = 0.228   |
|                      |                                    |             |            |           |           |            | MEANXL = | 3.013  | SXL = 0.292 |
|                      |                                    |             |            |           |           |            | MEANX =  | 20.354 | SX = 1.340  |
| 1440                 | 35.0                               | 43.7        | 50.7       | 58.4      | 70.2      | 80.5       | A =      | -3.483 | C = 0.197   |
|                      |                                    |             |            |           |           |            | MEANXL = | 3.596  | SXL = 0.253 |
|                      |                                    |             |            |           |           |            | MEANX =  | 36.463 | SX = 1.287  |

| SECTION NO.          | POSITION NO.                       | FIRST YEAR. | LAST YEAR. | MAP.      | NAME.     |            |          |        |             |
|----------------------|------------------------------------|-------------|------------|-----------|-----------|------------|----------|--------|-------------|
| 810                  | 80                                 | 1956        | 1965       | 312.2     | MESSINA   |            |          |        |             |
| DURATION IN MINUTES. | TOTALS FOR RETURN PERIOD IN MM/HR. |             |            |           |           |            |          |        |             |
|                      | 2 YEARS.                           | 5 YEARS.    | 10 YEARS.  | 20 YEARS. | 50 YEARS. | 100 YEARS. |          |        |             |
| 15                   | 18.9                               | 25.6        | 31.4       | 38.1      | 49.0      | 59.2       | A =      | -2.838 | C = 0.270   |
|                      |                                    |             |            |           |           |            | MEANXL = | 2.994  | SXL = 0.347 |
|                      |                                    |             |            |           |           |            | MEANX =  | 19.958 | SX = 1.414  |
| 30                   | 26.6                               | 37.6        | 47.2       | 58.8      | 78.1      | 96.0       | A =      | -3.169 | C = 0.305   |
|                      |                                    |             |            |           |           |            | MEANXL = | 3.345  | SXL = 0.391 |
|                      |                                    |             |            |           |           |            | MEANX =  | 28.353 | SX = 1.478  |
| 45                   | 31.5                               | 46.0        | 59.1       | 75.2      | 102.6     | 129.0      | A =      | -3.328 | C = 0.334   |
|                      |                                    |             |            |           |           |            | MEANXL = | 3.521  | SXL = 0.428 |
|                      |                                    |             |            |           |           |            | MEANX =  | 33.809 | SX = 1.535  |
| 60                   | 34.9                               | 52.0        | 67.7       | 87.1      | 120.8     | 154.4      | A =      | -3.424 | C = 0.351   |
|                      |                                    |             |            |           |           |            | MEANXL = | 3.627  | SXL = 0.450 |
|                      |                                    |             |            |           |           |            | MEANX =  | 37.605 | SX = 1.569  |
| 1440                 | 54.6                               | 83.6        | 110.9      | 145.3     | 206.3     | 268.2      | A =      | -3.862 | C = 0.376   |
|                      |                                    |             |            |           |           |            | MEANXL = | 4.079  | SXL = 0.482 |
|                      |                                    |             |            |           |           |            | MEANX =  | 59.087 | SX = 1.620  |

| SECTION NO.          | POSITION NO.                       | FIRST YEAR. | LAST YEAR. | MAP.      | NAME.     |            |          |        |             |
|----------------------|------------------------------------|-------------|------------|-----------|-----------|------------|----------|--------|-------------|
| 561                  | 247                                | 1960        | 1969       | 409.4     | OUTJO     |            |          |        |             |
| DURATION IN MINUTES. | TOTALS FOR RETURN PERIOD IN MM/HR. |             |            |           |           |            |          |        |             |
|                      | 2 YEARS.                           | 5 YEARS.    | 10 YEARS.  | 20 YEARS. | 50 YEARS. | 100 YEARS. |          |        |             |
| 15                   | 13.8                               | 17.0        | 19.5       | 22.3      | 26.6      | 30.3       | A =      | -2.554 | C = 0.186   |
|                      |                                    |             |            |           |           |            | MEANXL = | 2.661  | SXL = 0.239 |
|                      |                                    |             |            |           |           |            | MEANX =  | 14.313 | SX = 1.270  |
| 30                   | 18.6                               | 23.9        | 28.1       | 32.9      | 40.4      | 47.0       | A =      | -2.844 | C = 0.219   |
|                      |                                    |             |            |           |           |            | MEANXL = | 2.970  | SXL = 0.281 |
|                      |                                    |             |            |           |           |            | MEANX =  | 19.501 | SX = 1.324  |
| 45                   | 22.1                               | 28.5        | 33.7       | 39.6      | 48.8      | 57.0       | A =      | -3.013 | C = 0.224   |
|                      |                                    |             |            |           |           |            | MEANXL = | 3.142  | SXL = 0.287 |
|                      |                                    |             |            |           |           |            | MEANX =  | 23.153 | SX = 1.333  |
| 60                   | 23.2                               | 30.7        | 36.9       | 44.0      | 55.3      | 65.6       | A =      | -3.056 | C = 0.245   |
|                      |                                    |             |            |           |           |            | MEANXL = | 3.197  | SXL = 0.315 |
|                      |                                    |             |            |           |           |            | MEANX =  | 24.469 | SX = 1.370  |
| 1440                 | 37.4                               | 50.1        | 60.9       | 73.3      | 93.3      | 111.7      | A =      | -3.527 | C = 0.258   |
|                      |                                    |             |            |           |           |            | MEANXL = | 3.676  | SXL = 0.331 |
|                      |                                    |             |            |           |           |            | MEANX =  | 39.500 | SX = 1.393  |

| SECTION NO.          | POSITION NO.                       | FIRST YEAR. | LAST YEAR. | MAP.      | NAME.            |                            |
|----------------------|------------------------------------|-------------|------------|-----------|------------------|----------------------------|
| 1010                 | 186                                | 1969        | 1970       | 510.0     | GROOTFONTEIN SWA |                            |
| DURATION IN MINUTES. | TOTALS FOR RETURN PERIOD IN MM/HR. |             |            |           |                  |                            |
|                      | 2 YEARS.                           | 5 YEARS.    | 10 YEARS.  | 20 YEARS. | 50 YEARS.        | 100 YEARS.                 |
| 15                   | 13.3                               | 16.6        | 23.2       | 28.7      | 37.9             | 45.0                       |
|                      |                                    |             |            |           |                  | A = -2.475 C = 0.257       |
|                      |                                    |             |            |           |                  | MEANXL = 2.047 SXL = 0.381 |
|                      |                                    |             |            |           |                  | MEANX = 14.108 SX = 1.464  |
| 30                   | 20.8                               | 29.5        | 37.1       | 46.3      | 61.6             | 70.3                       |
|                      |                                    |             |            |           |                  | A = -2.923 C = 0.307       |
|                      |                                    |             |            |           |                  | MEANXL = 3.100 SXL = 0.394 |
|                      |                                    |             |            |           |                  | MEANX = 22.201 SX = 1.482  |
| 45                   | 24.1                               | 34.2        | 43.0       | 53.6      | 71.3             | 88.3                       |
|                      |                                    |             |            |           |                  | A = -3.072 C = 0.306       |
|                      |                                    |             |            |           |                  | MEANXL = 3.248 SXL = 0.393 |
|                      |                                    |             |            |           |                  | MEANX = 25.748 SX = 1.481  |
| 60                   | 25.9                               | 37.9        | 48.8       | 62.1      | 84.9             | 107.3                      |
|                      |                                    |             |            |           |                  | A = -3.132 C = 0.336       |
|                      |                                    |             |            |           |                  | MEANXL = 3.325 SXL = 0.431 |
|                      |                                    |             |            |           |                  | MEANX = 27.811 SX = 1.538  |
| 1440                 | 50.9                               | 65.7        | 77.9       | 91.7      | 113.3            | 132.7                      |
|                      |                                    |             |            |           |                  | A = -3.846 C = 0.227       |
|                      |                                    |             |            |           |                  | MEANXL = 3.577 SXL = 0.291 |
|                      |                                    |             |            |           |                  | MEANX = 53.347 SX = 1.337  |

| SECTION NO.          | POSITION NO.                       | FIRST YEAR. | LAST YEAR. | MAP.      | NAME.     |                            |
|----------------------|------------------------------------|-------------|------------|-----------|-----------|----------------------------|
| 1020                 | 749                                | 1952        | 1963       | 468.6     | MAUN      |                            |
| DURATION IN MINUTES. | TOTALS FOR RETURN PERIOD IN MM/HR. |             |            |           |           |                            |
|                      | 2 YEARS.                           | 5 YEARS.    | 10 YEARS.  | 20 YEARS. | 50 YEARS. | 100 YEARS.                 |
| 15                   | 16.5                               | 22.1        | 26.7       | 32.1      | 40.7      | 48.7                       |
|                      |                                    |             |            |           |           | A = -2.712 C = 0.255       |
|                      |                                    |             |            |           |           | MEANXL = 2.859 SXL = 0.127 |
|                      |                                    |             |            |           |           | MEANX = 17.446 SX = 1.387  |
| 30                   | 24.3                               | 32.3        | 39.0       | 46.8      | 59.2      | 70.7                       |
|                      |                                    |             |            |           |           | A = -3.096 C = 0.252       |
|                      |                                    |             |            |           |           | MEANXL = 3.242 SXL = 0.324 |
|                      |                                    |             |            |           |           | MEANX = 25.590 SX = 1.382  |
| 45                   | 29.3                               | 39.5        | 48.2       | 58.3      | 74.6      | 89.7                       |
|                      |                                    |             |            |           |           | A = -3.280 C = 0.265       |
|                      |                                    |             |            |           |           | MEANXL = 3.432 SXL = 0.339 |
|                      |                                    |             |            |           |           | MEANX = 30.952 SX = 1.404  |
| 60                   | 32.5                               | 44.7        | 55.1       | 67.4      | 87.5      | 106.4                      |
|                      |                                    |             |            |           |           | A = -3.379 C = 0.280       |
|                      |                                    |             |            |           |           | MEANXL = 3.541 SXL = 0.359 |
|                      |                                    |             |            |           |           | MEANX = 34.503 SX = 1.432  |
| 1440                 | 44.7                               | 62.1        | 77.2       | 95.1      | 124.7     | 152.7                      |
|                      |                                    |             |            |           |           | A = -3.693 C = 0.290       |
|                      |                                    |             |            |           |           | MEANXL = 3.861 SXL = 0.372 |
|                      |                                    |             |            |           |           | MEANX = 47.506 SX = 1.451  |

Table 5 : Variation of standard deviation with duration

| Station no. | Standard deviation (log. units) |           |             |         |
|-------------|---------------------------------|-----------|-------------|---------|
|             | 15-minute                       | 60-minute | 1440-minute | average |
| 21/178      | 0,294                           | 0,345     | 0,270       | 0,303   |
| 59/572      | 0,486                           | 0,485     | 0,468       | 0,479   |
| 241/50      | 0,413                           | 0,436     | 0,410       | 0,420   |
| 261/516     | 0,366                           | 0,358     | 0,328       | 0,351   |
| 290/68      | 0,365                           | 0,445     | 0,280       | 0,363   |
| 476/398     | 0,338                           | 0,410     | 0,370       | 0,372   |
| 513/405     | 0,286                           | 0,325     | 0,292       | 0,301   |
| 677/802     | 0,385                           | 0,380     | 0,385       | 0,383   |
| Average     | 0,366                           | 0,394     | 0,350       | 0,371   |

## APPENDIX A LIST OF POINT RAINFALL DATA

| SECTION NO. | POSITION NO. |         |         |         | FIRST YEAR. | LAST YEAR. | MAP. | NAME.         |
|-------------|--------------|---------|---------|---------|-------------|------------|------|---------------|
| C           | C            |         |         |         | 1951        | 1975       | C.C  | MARION ISLAND |
| YEAR.       | 15 MIN.      | 30 MIN. | 45 MIN. | 60 MIN. | 1440 MIN.   |            |      |               |
| 1951        | 3.8          | 5.8     | 3.7     | 9.7     | 47.5        |            |      |               |
| 1952        | 8.1          | 12.7    | 16.7    | 19.5    | 59.1        |            |      |               |
| 1953        | 16.2         | 18.8    | 20.3    | 22.1    | 55.6        |            |      |               |
| 1954        | 5.0          | 6.8     | 8.6     | 10.4    | 30.3        |            |      |               |
| 1955        | 8.0          | 11.1    | 15.6    | 18.8    | 32.2        |            |      |               |
| 1956        | 5.4          | 8.5     | 11.8    | 14.0    | 47.8        |            |      |               |
| 1957        | 7.4          | 12.0    | 15.1    | 17.8    | 73.9        |            |      |               |
| 1958        | 4.1          | 7.0     | 8.1     | 10.9    | 102.8       |            |      |               |
| 1959        | 13.9         | 23.2    | 25.2    | 26.7    | 66.6        |            |      |               |
| 1960        | 4.7          | 8.2     | 12.4    | 14.7    | 90.5        |            |      |               |
| 1961        | 7.1          | 11.6    | 16.3    | 20.4    | 79.4        |            |      |               |
| 1962        | 4.8          | 6.8     | 10.0    | 12.1    | 52.4        |            |      |               |
| 1963        | 5.0          | 8.7     | 11.7    | 14.5    | 85.5        |            |      |               |
| 1964        | 8.0          | 10.1    | 13.9    | 17.3    | 65.6        |            |      |               |
| 1965        | 10.0         | 12.8    | 14.5    | 16.2    | 95.5        |            |      |               |
| 1966        | 4.5          | 7.1     | 10.0    | 11.5    | 56.0        |            |      |               |
| 1967        | 11.0         | 11.5    | 17.5    | 20.8    | 37.2        |            |      |               |
| 1968        | 8.0          | 13.0    | 16.0    | 18.5    | 49.3        |            |      |               |
| 1969        | 6.8          | 9.9     | 13.4    | 16.7    | 71.4        |            |      |               |
| 1970        | 5.7          | 8.0     | 11.8    | 15.1    | 65.0        |            |      |               |
| 1971        | 6.0          | 12.7    | 14.3    | 15.4    | 70.5        |            |      |               |
| 1972        | 10.1         | 15.2    | 19.2    | 20.3    | 62.5        |            |      |               |
| 1973        | 8.6          | 15.4    | 21.0    | 28.9    | 59.9        |            |      |               |
| 1974        | 4.8          | 8.8     | 12.0    | 15.7    | 66.6        |            |      |               |
| 1975        | 5.4          | 9.1     | 11.6    | 14.4    | 63.0        |            |      |               |

| SECTION NO. | POSITION NO. |         |         |         | FIRST YEAR. | LAST YEAR. | MAP. | NAME.        |
|-------------|--------------|---------|---------|---------|-------------|------------|------|--------------|
| 0           | 709          |         |         |         | 1956        | 1975       | C.C  | GELGH ISLAND |
| YEAR.       | 15 MIN.      | 30 MIN. | 45 MIN. | 60 MIN. | 1440 MIN.   |            |      |              |
| 1956        | 11.7         | 17.7    | 18.9    | 19.8    | 90.7        |            |      |              |
| 1957        | 6.2          | 11.5    | 13.7    | 16.7    | 118.5       |            |      |              |
| 1958        | 11.4         | 19.6    | 22.4    | 27.8    | 126.7       |            |      |              |
| 1959        | 9.3          | 13.8    | 18.4    | 22.2    | 97.7        |            |      |              |
| 1960        | 7.1          | 13.7    | 16.6    | 19.0    | 69.3        |            |      |              |
| 1961        | 8.6          | 12.3    | 17.1    | 22.6    | 100.5       |            |      |              |
| 1962        | 8.0          | 13.0    | 19.4    | 24.7    | 63.3        |            |      |              |
| 1963        | 15.8         | 28.1    | 30.7    | 33.3    | 93.0        |            |      |              |
| 1964        | 9.4          | 14.6    | 20.1    | 26.1    | 93.3        |            |      |              |
| 1965        | 13.3         | 23.6    | 32.8    | 42.0    | 147.5       |            |      |              |
| 1966        | 12.5         | 23.3    | 31.7    | 37.9    | 151.4       |            |      |              |
| 1967        | 9.0          | 13.8    | 19.9    | 23.1    | 107.3       |            |      |              |
| 1968        | 9.5          | 17.2    | 24.0    | 28.5    | 140.7       |            |      |              |
| 1969        | 7.3          | 12.4    | 16.4    | 21.4    | 102.5       |            |      |              |
| 1970        | 11.6         | 20.0    | 25.0    | 33.4    | 301.2       |            |      |              |
| 1971        | 15.0         | 21.5    | 25.0    | 27.0    | 88.4        |            |      |              |
| 1972        | 15.0         | 19.7    | 23.6    | 29.8    | 108.4       |            |      |              |
| 1973        | 7.2          | 12.5    | 15.5    | 19.5    | 189.3       |            |      |              |
| 1974        | 11.8         | 15.8    | 18.0    | 21.2    | 80.6        |            |      |              |
| 1975        | 7.2          | 10.5    | 15.0    | 16.7    | 91.0        |            |      |              |

| SECTION NO. | POSITION NO. |         |         |         | FIRST YEAR. | LAST YEAR. | MAP.  | NAME.      |
|-------------|--------------|---------|---------|---------|-------------|------------|-------|------------|
| 1C          | 456          |         |         |         | 1960        | 1971       | 457.4 | RIVERSDALE |
| YEAR.       | 15 MIN.      | 30 MIN. | 45 MIN. | 60 MIN. | 1440 MIN.   |            |       |            |
| 1960        | 6.5          | 8.5     | 11.5    | 13.0    | 26.5        |            |       |            |
| 1961        | 6.0          | 8.0     | 9.5     | 10.5    | 32.0        |            |       |            |
| 1962        | 11.0         | 24.5    | 32.0    | 41.5    | 110.5       |            |       |            |
| 1963        | 11.0         | 21.0    | 31.0    | 33.5    | 62.5        |            |       |            |
| 1964        | 6.0          | 8.2     | 9.2     | 9.4     | 25.2        |            |       |            |
| 1965        | 16.5         | 24.8    | 26.5    | 27.0    | 30.5        |            |       |            |
| 1966        | 9.5          | 14.0    | 17.5    | 19.5    | 53.5        |            |       |            |
| 1967        | 5.5          | 9.0     | 11.5    | 14.0    | 78.0        |            |       |            |
| 1968        | 9.0          | 11.2    | 11.6    | 11.8    | 29.7        |            |       |            |
| 1969        | 6.2          | 10.0    | 10.5    | 10.5    | 32.5        |            |       |            |
| 1970        | 4.0          | 7.0     | 7.7     | 8.0     | 33.0        |            |       |            |
| 1971        | 11.0         | 15.2    | 16.8    | 18.4    | 55.0        |            |       |            |

| SECTION NO. | POSITION NO. |         |         |         | FIRST YEAR. | LAST YEAR. | MAP.  | NAME.     |
|-------------|--------------|---------|---------|---------|-------------|------------|-------|-----------|
| 21          | 178          |         |         |         | 1938        | 1976       | 550.0 | D F MALAN |
| YEAR.       | 15 MIN.      | 30 MIN. | 45 MIN. | 60 MIN. | 1440 MIN.   |            |       |           |
| 1938        | 19.3         | 27.4    | 30.5    | 32.2    | 48.4        |            |       |           |
| 1939        | 8.1          | 9.6     | 9.6     | 11.2    | 34.0        |            |       |           |
| 1940        | 11.2         | 15.7    | 17.5    | 19.0    | 41.6        |            |       |           |
| 1941        | 16.0         | 23.8    | 23.6    | 25.6    | 48.3        |            |       |           |
| 1942        | 7.6          | 10.2    | 10.7    | 11.2    | 39.9        |            |       |           |
| 1943        | 7.9          | 11.2    | 12.4    | 14.5    | 28.7        |            |       |           |
| 1944        | 7.6          | 10.2    | 10.7    | 10.9    | 29.0        |            |       |           |
| 1945        | 10.9         | 15.7    | 19.3    | 20.3    | 39.1        |            |       |           |
| 1946        | 9.7          | 13.6    | 15.3    | 17.4    | 37.2        |            |       |           |
| 1947        | 11.2         | 16.0    | 17.8    | 18.8    | 28.4        |            |       |           |
| 1948        | 7.4          | 10.4    | 11.7    | 12.2    | 20.0        |            |       |           |
| 1949        | 6.4          | 9.1     | 11.9    | 14.5    | 26.9        |            |       |           |
| 1950        | 13.0         | 17.8    | 21.6    | 22.1    | 47.8        |            |       |           |
| 1951        | 7.6          | 8.1     | 11.2    | 13.7    | 43.7        |            |       |           |
| 1952        | 13.0         | 20.2    | 26.9    | 28.8    | 47.4        |            |       |           |
| 1953        | 6.7          | 8.0     | 10.5    | 15.3    | 27.4        |            |       |           |
| 1954        | 8.8          | 14.1    | 15.2    | 16.7    | 40.0        |            |       |           |
| 1955        | 9.3          | 11.1    | 12.1    | 13.5    | 35.7        |            |       |           |
| 1956        | 8.1          | 10.2    | 11.0    | 12.4    | 44.5        |            |       |           |
| 1957        | 8.8          | 10.6    | 11.1    | 12.1    | 31.8        |            |       |           |
| 1958        | 10.5         | 12.8    | 17.5    | 18.1    | 32.8        |            |       |           |
| 1959        | 16.0         | 28.8    | 36.3    | 39.1    | 44.5        |            |       |           |
| 1960        | 10.3         | 15.8    | 18.5    | 19.9    | 38.6        |            |       |           |
| 1961        | 8.5          | 10.5    | 12.0    | 13.3    | 35.7        |            |       |           |
| 1962        | 9.9          | 12.2    | 13.8    | 15.5    | 48.3        |            |       |           |
| 1963        | 7.6          | 10.8    | 11.1    | 11.4    | 35.4        |            |       |           |
| 1964        | 7.8          | 10.5    | 10.5    | 10.5    | 25.5        |            |       |           |
| 1965        | 11.0         | 13.5    | 15.6    | 17.0    | 26.5        |            |       |           |
| 1966        | 6.0          | 10.9    | 13.9    | 15.7    | 34.9        |            |       |           |
| 1967        | 7.5          | 10.1    | 10.7    | 11.0    | 38.0        |            |       |           |
| 1968        | 8.0          | 12.0    | 14.8    | 15.8    | 58.1        |            |       |           |
| 1969        | 6.0          | 9.3     | 12.0    | 13.2    | 22.6        |            |       |           |
| 1970        | 14.7         | 20.2    | 22.9    | 23.9    | 36.4        |            |       |           |
| 1971        | 9.5          | 13.5    | 16.3    | 17.3    | 25.5        |            |       |           |
| 1972        | 6.4          | 7.1     | 7.9     | 9.3     | 23.1        |            |       |           |
| 1973        | 6.0          | 10.5    | 11.2    | 11.8    | 26.6        |            |       |           |
| 1974        | 7.9          | 11.4    | 15.0    | 17.5    | 65.0        |            |       |           |
| 1975        | 10.5         | 18.0    | 23.6    | 26.1    | 50.6        |            |       |           |
| 1976        | 16.9         | 22.9    | 26.7    | 30.9    | 43.5        |            |       |           |

| SECTION NO. | POSITION NO. |         |         |         | FIRST YEAR. | LAST YEAR. | MAP.  | NAME.     |
|-------------|--------------|---------|---------|---------|-------------|------------|-------|-----------|
| 23          | 710          |         |         |         | 1958        | 1970       | 266.2 | ROBERTSON |
| YEAR.       | 15 MIN.      | 30 MIN. | 45 MIN. | 60 MIN. | 1440 MIN.   |            |       |           |
| 1958        | 18.7         | 27.7    | 28.0    | 28.1    |             |            |       |           |
| 1959        | 4.2          | 5.9     | 7.4     | 8.7     |             |            |       |           |
| 1960        | 5.0          | 6.2     | 7.8     | 8.2     |             |            |       |           |
| 1961        | 5.0          | 6.5     | 8.0     | 9.7     |             |            |       |           |
| 1962        | 17.0         | 27.0    | 27.5    | 28.0    |             |            |       |           |
| 1963        | 13.0         | 18.3    | 19.6    | 19.6    |             |            |       |           |
| 1964        | 24.1         | 32.1    | 36.9    | 41.4    |             |            |       |           |
| 1965        | 6.3          | 9.0     | 10.8    | 11.3    |             |            |       |           |
| 1966        | 3.2          | 5.0     | 6.2     | 7.2     |             |            |       |           |
| 1967        | 5.0          | 6.0     | 6.9     | 7.7     |             |            |       |           |
| 1968        | 5.5          | 7.2     | 9.9     | 12.7    |             |            |       |           |
| 1969        | 5.6          | 10.8    | 11.1    | 11.5    |             |            |       |           |
| 1970        | 11.0         | 12.4    | 13.3    | 14.4    |             |            |       |           |

| SECTION NO. | POSITION NO. |         | FIRST YEAR. |         | LAST YEAR. | MAP.  | NAME.  |
|-------------|--------------|---------|-------------|---------|------------|-------|--------|
| 28          | 838          |         | 1949        |         | 1963       | 766.5 | GEORGE |
| YEAR.       | 15 MIN.      | 30 MIN. | 45 MIN.     | 60 MIN. | 1440 MIN.  |       |        |
| 1949        | 9.1          | 9.4     | 12.2        | 16.2    | 72.0       |       |        |
| 1950        | 5.8          | 9.2     | 12.2        | 15.5    | 70.8       |       |        |
| 1951        | 42.4         | 46.7    | 57.5        | 63.2    | 131.0      |       |        |
| 1952        | 15.9         | 17.4    | 21.4        | 23.8    | 49.3       |       |        |
| 1953        | 19.2         | 20.9    | 26.0        | 28.6    | 39.2       |       |        |
| 1954        | 9.1          | 10.0    | 13.5        | 17.0    | 110.0      |       |        |
| 1955        | 10.7         | 11.8    | 18.3        | 18.8    | 31.3       |       |        |
| 1956        | 5.0          | 9.7     | 12.2        | 13.9    | 48.6       |       |        |
| 1957        | 8.6          | 12.1    | 13.8        | 14.5    | 95.4       |       |        |
| 1958        | 10.6         | 10.7    | 10.8        | 12.3    | 47.6       |       |        |
| 1959        | 8.2          | 15.6    | 16.6        | 17.5    | 52.3       |       |        |
| 1960        | 15.0         | 29.0    | 41.0        | 46.2    | 55.6       |       |        |
| 1961        | 9.6          | 13.7    | 15.2        | 19.4    | 55.0       |       |        |
| 1962        | 10.1         | 14.6    | 16.4        | 20.9    | 116.0      |       |        |
| 1963        | 9.0          | 14.5    | 18.3        | 22.1    | 89.4       |       |        |

| SECTION NO. | POSITION NO. |         | FIRST YEAR. |         | LAST YEAR. | MAP.  | NAME.          |
|-------------|--------------|---------|-------------|---------|------------|-------|----------------|
| 35          | 179          |         | 1947        |         | 1976       | 625.9 | PORT ELIZABETH |
| YEAR.       | 15 MIN.      | 30 MIN. | 45 MIN.     | 60 MIN. | 1440 MIN.  |       |                |
| 1947        | 10.2         | 11.2    | 13.2        | 15.8    | 47.2       |       |                |
| 1948        | 7.4          | 9.6     | 11.2        | 11.9    | 43.1       |       |                |
| 1949        | 13.0         | 24.9    | 35.0        | 38.1    | 91.8       |       |                |
| 1950        | 9.6          | 16.0    | 16.0        | 19.0    | 41.1       |       |                |
| 1951        | 26.6         | 30.5    | 33.2        | 34.8    | 88.2       |       |                |
| 1952        | 7.4          | 12.6    | 16.3        | 20.0    | 135.4      |       |                |
| 1953        | 6.4          | 10.6    | 15.8        | 20.0    | 63.9       |       |                |
| 1954        | 25.1         | 42.6    | 56.0        | 78.4    | 132.5      |       |                |
| 1955        | 10.8         | 15.9    | 18.2        | 19.6    | 53.3       |       |                |
| 1956        | 18.5         | 20.5    | 21.1        | 21.2    | 37.8       |       |                |
| 1957        | 13.2         | 19.4    | 23.5        | 25.0    | 91.0       |       |                |
| 1958        | 10.2         | 20.4    | 29.3        | 31.4    | 46.3       |       |                |
| 1959        | 23.5         | 25.9    | 31.8        | 35.1    | 55.0       |       |                |
| 1960        | 7.2          | 13.3    | 16.6        | 17.0    | 56.8       |       |                |
| 1961        | 13.9         | 24.1    | 30.1        | 35.1    | 120.6      |       |                |
| 1962        | 13.4         | 17.4    | 21.4        | 22.8    | 105.4      |       |                |
| 1963        | 16.0         | 26.7    | 30.7        | 31.7    | 52.5       |       |                |
| 1964        | 13.0         | 17.0    | 19.2        | 21.0    | 72.4       |       |                |
| 1965        | 6.5          | 10.0    | 16.0        | 19.5    | 46.3       |       |                |
| 1966        | 6.5          | 12.2    | 15.2        | 15.3    | 52.0       |       |                |
| 1967        | 8.0          | 12.3    | 15.5        | 19.9    | 88.0       |       |                |
| 1968        | 34.7         | 61.4    | 85.4        | 112.1   | 428.8      |       |                |
| 1969        | 4.5          | 7.3     | 7.8         | 10.5    | 30.8       |       |                |
| 1970        | 13.6         | 23.6    | 28.6        | 31.9    | 94.6       |       |                |
| 1971        | 10.7         | 18.6    | 21.2        | 23.7    | 51.2       |       |                |
| 1972        | 7.1          | 11.0    | 13.0        | 13.4    | 55.4       |       |                |
| 1973        | 7.9          | 9.5     | 10.4        | 11.3    | 34.0       |       |                |
| 1974        | 20.2         | 33.6    | 40.2        | 43.7    | 64.3       |       |                |
| 1975        | 5.3          | 9.3     | 10.8        | 12.8    | 42.2       |       |                |
| 1976        | 15.6         | 25.3    | 27.4        | 27.9    | 34.1       |       |                |

| SECTION NO. | POSITION NO. |         | FIRST YEAR. |         | LAST YEAR. | MAP.  | NAME.       |
|-------------|--------------|---------|-------------|---------|------------|-------|-------------|
| 43          | 566          |         | 1938        |         | 1953       | 237.8 | MATROOSBERG |
| YEAR.       | 15 MIN.      | 30 MIN. | 45 MIN.     | 60 MIN. | 1440 MIN.  |       |             |
| 1938        | 7.6          | 10.9    | 12.2        | 12.7    | 19.3       |       |             |
| 1939        | 3.6          | 4.3     | 5.1         | 5.6     | 32.5       |       |             |
| 1940        | 13.5         | 19.3    | 21.3        | 22.6    | 34.0       |       |             |
| 1941        | 11.2         | 16.0    | 17.8        | 18.8    | 28.4       |       |             |
| 1942        | 10.1         | 12.7    | 14.5        | 15.8    | 28.2       |       |             |
| 1943        | 7.6          | 11.2    | 12.2        | 12.9    | 20.3       |       |             |
| 1944        | 3.8          | 5.6     | 7.4         | 7.6     | 17.8       |       |             |
| 1945        | 4.8          | 6.4     | 7.4         | 7.4     | 23.1       |       |             |
| 1946        | 10.2         | 14.7    | 16.2        | 17.3    | 25.9       |       |             |
| 1947        | 7.4          | 8.1     | 8.4         | 8.4     | 26.4       |       |             |
| 1948        | 15.0         | 23.6    | 29.0        | 37.6    | 63.2       |       |             |
| 1949        | 9.4          | 12.2    | 14.2        | 17.3    | 47.0       |       |             |
| 1950        | 5.3          | 5.3     | 5.3         | 6.1     | 17.8       |       |             |
| 1951        | 11.9         | 17.0    | 18.8        | 20.1    | 30.2       |       |             |
| 1952        | 9.5          | 18.1    | 22.5        | 24.0    | 26.9       |       |             |
| 1953        | 20.4         | 30.0    | 33.7        | 34.0    | 38.7       |       |             |



| SECTION NO. | POSITION NO. |         | FIRST YEAR. |         | LAST YEAR. | MAP.  | NAME.       |
|-------------|--------------|---------|-------------|---------|------------|-------|-------------|
| 42          | 366          |         | 1958        |         | 1970       | 237.8 | MATROSHBERG |
| YEAR.       | 15 MIN.      | 30 MIN. | 45 MIN.     | 60 MIN. | 1440 MIN.  |       |             |
| 1958        | 7.5          | 10.0    | 11.8        | 12.3    |            |       |             |
| 1959        | 2.5          | 3.9     | 5.9         | 7.6     |            |       |             |
| 1960        | 3.5          | 5.0     | 5.6         | 5.7     |            |       |             |
| 1961        | 7.5          | 8.3     | 8.3         | 8.7     |            |       |             |
| 1962        | 7.0          | 7.1     | 7.2         | 11.5    |            |       |             |
| 1963        | 3.5          | 6.0     | 8.5         | 10.0    |            |       |             |
| 1964        | 12.2         | 13.2    | 14.2        | 14.2    |            |       |             |
| 1965        | 2.0          | 4.0     | 5.5         | 7.0     |            |       |             |
| 1966        | 9.0          | 9.1     | 9.2         | 9.3     |            |       |             |
| 1967        | 1.5          | 3.0     | 4.5         | 5.7     |            |       |             |
| 1968        | 3.0          | 3.5     | 4.8         | 5.9     |            |       |             |
| 1969        | 7.3          | 11.5    | 12.5        | 15.5    |            |       |             |
| 1970        | 11.5         | 13.0    | 13.5        | 14.5    |            |       |             |

| SECTION NO. | POSITION NO. |         | FIRST YEAR. |         | LAST YEAR. | MAP.  | NAME.      |
|-------------|--------------|---------|-------------|---------|------------|-------|------------|
| 50          | 887          |         | 1961        |         | 1968       | 236.6 | WILLOWMORE |
| YEAR.       | 15 MIN.      | 30 MIN. | 45 MIN.     | 60 MIN. | 1440 MIN.  |       |            |
| 1961        | 13.8         | 14.5    | 14.8        | 17.0    | 45.5       |       |            |
| 1962        | 8.5          | 14.0    | 15.5        | 16.0    | 25.0       |       |            |
| 1963        | 20.0         | 27.0    | 27.7        | 29.7    | 35.5       |       |            |
| 1964        | 15.0         | 19.0    | 20.5        | 21.5    | 38.6       |       |            |
| 1965        | 8.7          | 11.5    | 11.7        | 12.6    | 37.1       |       |            |
| 1966        | 24.0         | 32.0    | 40.0        | 41.0    | 61.7       |       |            |
| 1967        | 9.7          | 13.7    | 13.7        | 13.7    | 42.0       |       |            |
| 1968        | 4.0          | 6.5     | 6.7         | 6.7     | 13.0       |       |            |

| SECTION NO. | POSITION NO. |         | FIRST YEAR. |         | LAST YEAR. | MAP.  | NAME.       |
|-------------|--------------|---------|-------------|---------|------------|-------|-------------|
| 59          | 572          |         | 1940        |         | 1976       | 896.1 | EAST LONDON |
| YEAR.       | 15 MIN.      | 30 MIN. | 45 MIN.     | 60 MIN. | 1440 MIN.  |       |             |
| 1940        | 31.7         | 40.3    | 42.1        | 42.7    | 49.0       |       |             |
| 1941        | 22.8         | 37.1    | 42.1        | 55.9    | 119.4      |       |             |
| 1942        | 17.0         | 27.4    | 36.6        | 44.6    | 78.0       |       |             |
| 1943        | 14.7         | 18.3    | 18.8        | 19.3    | 109.2      |       |             |
| 1944        | 6.1          | 10.7    | 13.5        | 16.3    | 106.1      |       |             |
| 1945        | 11.2         | 12.4    | 13.2        | 13.2    | 48.8       |       |             |
| 1946        | 10.4         | 19.0    | 27.2        | 33.7    | 95.6       |       |             |
| 1947        | 10.7         | 18.3    | 21.4        | 23.1    | 91.6       |       |             |
| 1948        | 39.4         | 57.1    | 66.9        | 77.5    | 109.1      |       |             |
| 1949        | 29.4         | 39.4    | 46.0        | 55.4    | 75.1       |       |             |
| 1950        | 10.7         | 12.7    | 15.7        | 20.0    | 68.4       |       |             |
| 1951        | 20.3         | 30.5    | 40.6        | 49.4    | 113.0      |       |             |
| 1952        | 24.2         | 30.4    | 35.6        | 43.3    | 71.0       |       |             |
| 1953        | 11.0         | 21.0    | 24.0        | 28.0    | 100.4      |       |             |
| 1954        | 10.0         | 13.5    | 14.7        | 16.7    | 49.0       |       |             |
| 1955        | 15.5         | 22.5    | 26.3        | 30.5    | 43.3       |       |             |
| 1956        | 39.0         | 74.5    | 80.3        | 89.6    | 122.3      |       |             |
| 1957        | 12.3         | 22.5    | 26.6        | 27.3    | 59.8       |       |             |
| 1958        | 33.3         | 55.5    | 69.1        | 70.2    | 127.5      |       |             |
| 1959        | 12.3         | 17.5    | 23.0        | 30.0    | 165.4      |       |             |
| 1960        | 17.3         | 24.1    | 25.7        | 26.6    | 94.5       |       |             |
| 1961        | 14.3         | 22.0    | 26.5        | 27.2    | 112.1      |       |             |
| 1962        | 10.3         | 17.8    | 20.0        | 22.1    | 105.6      |       |             |
| 1963        | 14.0         | 27.0    | 40.0        | 45.0    | 217.2      |       |             |
| 1964        | 24.1         | 31.4    | 31.6        | 31.6    | 103.0      |       |             |
| 1965        | 13.6         | 22.1    | 31.6        | 37.6    | 96.0       |       |             |
| 1966        | 10.6         | 19.6    | 28.9        | 37.7    | 130.6      |       |             |
| 1967        | 28.4         | 56.4    | 59.4        | 59.4    | 130.6      |       |             |
| 1968        | 17.3         | 25.3    | 30.8        | 36.3    | 66.5       |       |             |
| 1969        | 10.4         | 15.4    | 22.5        | 30.0    | 40.0       |       |             |
| 1970        | 24.9         | 36.1    | 52.5        | 70.0    | 447.0      |       |             |
| 1971        | 14.0         | 17.3    | 17.8        | 28.5    | 97.7       |       |             |
| 1972        | 6.0          | 10.8    | 12.6        | 18.3    | 85.1       |       |             |
| 1973        | 27.4         | 29.9    | 30.6        | 30.9    | 57.5       |       |             |
| 1974        | 12.7         | 15.5    | 18.7        | 19.8    | 59.0       |       |             |
| 1975        | 5.5          | 9.6     | 11.9        | 13.1    | 61.0       |       |             |
| 1976        | 14.5         | 16.3    | 23.9        | 26.4    | 67.9       |       |             |

| SECTION NO. | POSITION NO. |         | FIRST YEAR. |         | LAST YEAR. | MAP.  | NAME.       |
|-------------|--------------|---------|-------------|---------|------------|-------|-------------|
| 61          | 298          |         | 1973        |         | 1976       | 250.0 | LANCEEANWEG |
| YEAR.       | 15 MIN.      | 30 MIN. | 45 MIN.     | 60 MIN. | 1440 MIN.  |       |             |
| 1973        | 7.2          | 9.4     | 11.4        | 13.2    | 18.4       |       |             |
| 1974        | 6.0          | 8.4     | 11.1        | 13.9    | 57.0       |       |             |
| 1975        | 9.7          | 13.6    | 14.2        | 16.0    | 30.0       |       |             |
| 1976        | 5.5          | 8.2     | 10.4        | 11.8    | 23.0       |       |             |

| SECTION NO. | POSITION NO. |         | FIRST YEAR. |         | LAST YEAR. | MAP.  | NAME.       |
|-------------|--------------|---------|-------------|---------|------------|-------|-------------|
| 74          | 298          |         | 1956        |         | 1970       | 267.3 | JANSENVILLE |
| YEAR.       | 15 MIN.      | 30 MIN. | 45 MIN.     | 60 MIN. | 1440 MIN.  |       |             |
| 1956        | 21.8         | 23.0    | 23.4        | 23.5    | 25.6       |       |             |
| 1957        | 10.9         | 10.9    | 10.9        | 10.9    | 22.5       |       |             |
| 1958        | 6.0          | 10.5    | 12.5        | 14.0    | 16.5       |       |             |
| 1959        | 8.5          | 11.5    | 11.5        | 11.9    | 20.0       |       |             |
| 1960        | 20.0         | 26.0    | 29.0        | 30.0    | 33.0       |       |             |
| 1961        | 17.0         | 21.2    | 22.8        | 23.5    | 29.5       |       |             |
| 1962        | 10.5         | 14.0    | 16.0        | 16.5    | 34.0       |       |             |
| 1963        | 17.5         | 18.4    | 22.0        | 23.5    | 37.0       |       |             |
| 1964        | 9.1          | 16.0    | 17.0        | 17.0    | 23.0       |       |             |
| 1965        | 7.2          | 7.7     | 9.5         | 10.0    | 31.5       |       |             |
| 1966        | 11.0         | 17.0    | 20.3        | 20.8    | 26.5       |       |             |
| 1967        | 11.0         | 14.5    | 17.5        | 17.5    | 43.5       |       |             |
| 1968        | 16.4         | 18.7    | 25.4        | 26.9    | 44.2       |       |             |
| 1969        | 17.8         | 27.5    | 30.6        | 32.6    | 33.5       |       |             |
| 1970        | 9.2          | 15.2    | 15.5        | 15.5    | 24.5       |       |             |

| SECTION NO. | POSITION NO. |         | FIRST YEAR. |         | LAST YEAR. | MAP.  | NAME.         |
|-------------|--------------|---------|-------------|---------|------------|-------|---------------|
| 76          | 134          |         | 1961        |         | 1970       | 606.4 | SOMERSET EAST |
| YEAR.       | 15 MIN.      | 30 MIN. | 45 MIN.     | 60 MIN. | 1440 MIN.  |       |               |
| 1961        | 7.8          | 15.3    | 18.3        | 18.8    | 33.5       |       |               |
| 1962        | 12.0         | 19.5    | 21.5        | 24.0    | 54.0       |       |               |
| 1963        | 13.0         | 24.0    | 34.0        | 42.0    | 101.7      |       |               |
| 1964        | 5.3          | 7.2     | 9.6         | 11.0    | 73.5       |       |               |
| 1965        | 15.2         | 16.2    | 16.9        | 17.4    | 49.5       |       |               |
| 1966        | 6.0          | 8.0     | 9.5         | 10.5    | 26.9       |       |               |
| 1967        | 16.0         | 22.0    | 26.0        | 27.0    | 70.0       |       |               |
| 1968        | 18.0         | 25.0    | 30.0        | 30.5    | 33.0       |       |               |
| 1969        | 18.0         | 32.0    | 36.5        | 38.0    | 66.6       |       |               |
| 1970        | 5.5          | 9.0     | 10.0        | 11.5    | 90.0       |       |               |

| SECTION NO. | POSITION NO. |         | FIRST YEAR. |         | LAST YEAR. | MAP.  | NAME. |
|-------------|--------------|---------|-------------|---------|------------|-------|-------|
| 79          | 81           |         | 1965        |         | 1971       | 736.7 | DCHNE |
| YEAR.       | 15 MIN.      | 30 MIN. | 45 MIN.     | 60 MIN. | 1440 MIN.  |       |       |
| 1965        | 26.5         | 30.5    | 32.6        | 34.6    | 40.8       |       |       |
| 1966        | 20.0         | 26.0    | 27.5        | 27.5    | 52.0       |       |       |
| 1967        | 9.0          | 17.0    | 22.5        | 23.0    | 42.0       |       |       |
| 1968        | 22.3         | 22.3    | 22.4        | 22.4    | 68.0       |       |       |
| 1969        | 9.0          | 12.0    | 14.5        | 16.0    | 36.5       |       |       |
| 1970        | 20.0         | 30.9    | 39.5        | 40.0    | 52.5       |       |       |
| 1971        | 10.0         | 17.0    | 20.2        | 23.2    | 66.0       |       |       |

| SECTION NO. | POSITION NO. |         | FIRST YEAR. |         | LAST YEAR. | MAP.  | NAME.      |
|-------------|--------------|---------|-------------|---------|------------|-------|------------|
| 88          | 293          |         | 1960        |         | 1973       | 238.1 | SUTHERLAND |
| YEAR.       | 15 MIN.      | 30 MIN. | 45 MIN.     | 60 MIN. | 1440 MIN.  |       |            |
| 1960        | 15.5         | 18.9    | 21.9        | 23.4    | 27.5       |       |            |
| 1961        | 7.0          | 10.0    | 11.5        | 12.5    | 37.6       |       |            |
| 1962        | 7.5          | 12.5    | 12.5        | 12.5    | 42.0       |       |            |
| 1963        | 7.0          | 10.0    | 12.5        | 12.6    | 24.0       |       |            |
| 1964        | 4.0          | 7.0     | 9.0         | 10.2    | 29.0       |       |            |
| 1965        | 4.0          | 5.3     | 5.8         | 6.8     | 30.5       |       |            |
| 1966        | 14.4         | 15.5    | 16.8        | 19.6    | 52.5       |       |            |
| 1967        | 12.0         | 22.0    | 22.0        | 22.0    | 49.0       |       |            |
| 1968        | 3.7          | 6.5     | 7.0         | 8.5     | 29.5       |       |            |
| 1969        | 10.3         | 12.5    | 14.1        | 14.1    | 27.5       |       |            |
| 1970        | 8.0          | 8.8     | 9.8         | 8.9     | 21.5       |       |            |

| SECTION NO. | POSITION NO. |         | FIRST YEAR. |         | LAST YEAR. | MAP.  | NAME.         |
|-------------|--------------|---------|-------------|---------|------------|-------|---------------|
| 92          | 141          |         | 1949        |         | 1970       | 230.3 | BEAUFORT WEST |
| YEAR.       | 15 MIN.      | 30 MIN. | 45 MIN.     | 60 MIN. | 1440 MIN.  |       |               |
| 1940        | 21.9         | 30.0    | 30.5        | 34.5    | 37.5       |       |               |
| 1941        | 15.8         | 27.9    | 30.5        | 33.1    | 45.0       |       |               |
| 1942        | 5.1          | 8.1     | 8.4         | 9.2     | 13.2       |       |               |
| 1943        | 4.1          | 5.6     | 7.3         | 8.9     | 14.0       |       |               |
| 1944        | 5.0          | 8.8     | 7.6         | 7.9     | 11.0       |       |               |
| 1945        | 7.8          | 15.2    | 15.5        | 15.5    | 17.3       |       |               |
| 1946        | 9.8          | 16.0    | 18.3        | 19.3    | 31.0       |       |               |
| 1947        | 7.7          | 12.5    | 14.7        | 15.3    | 24.5       |       |               |
| 1948        | 10.1         | 15.0    | 17.4        | 17.6    | 24.5       |       |               |
| 1949        | 9.6          | 11.7    | 13.8        | 15.7    | 32.9       |       |               |
| 1950        | 13.5         | 23.2    | 23.4        | 23.7    | 49.2       |       |               |
| 1951        | 4.1          | 7.4     | 9.8         | 11.3    | 25.0       |       |               |
| 1952        | 11.0         | 15.1    | 15.3        | 15.3    | 34.3       |       |               |
| 1953        | 9.3          | 14.8    | 17.7        | 19.6    | 50.0       |       |               |
| 1954        | 9.6          | 11.8    | 12.7        | 16.1    | 39.2       |       |               |
| 1955        | 12.2         | 23.5    | 25.9        | 26.3    | 31.1       |       |               |
| 1956        | 10.6         | 13.4    | 15.2        | 15.2    | 28.3       |       |               |
| 1957        | 8.4          | 14.8    | 14.8        | 14.8    | 41.8       |       |               |
| 1958        | 3.2          | 5.2     | 9.2         | 11.7    | 44.3       |       |               |
| 1959        | 5.4          | 7.2     | 7.9         | 9.5     | 19.5       |       |               |
| 1960        | 12.6         | 14.6    | 16.2        | 16.7    | 23.2       |       |               |
| 1961        | 20.1         | 37.6    | 45.3        | 49.0    | 58.1       |       |               |
| 1962        | 6.8          | 11.9    | 13.8        | 15.1    | 21.4       |       |               |
| 1963        | 11.5         | 12.7    | 16.0        | 16.3    | 31.2       |       |               |
| 1964        | 8.3          | 11.1    | 11.8        | 12.9    | 38.2       |       |               |
| 1965        | 6.0          | 8.0     | 11.2        | 11.8    |            |       |               |
| 1966        | 4.5          | 7.1     | 9.1         | 10.6    |            |       |               |
| 1967        | 8.0          | 10.0    | 11.5        | 12.0    |            |       |               |
| 1968        | 3.0          | 5.0     | 6.5         | 8.0     |            |       |               |
| 1969        | 7.5          | 12.0    | 15.0        | 16.0    |            |       |               |
| 1970        | 4.0          | 5.5     | 6.5         | 6.6     |            |       |               |

| SECTION NO. | POSITION NO. |         | FIRST YEAR. |         | LAST YEAR. | MAP.  | NAME.     |
|-------------|--------------|---------|-------------|---------|------------|-------|-----------|
| 106         | 850          |         | 1958        |         | 1970       | 140.1 | VREDENDAL |
| YEAR.       | 15 MIN.      | 30 MIN. | 45 MIN.     | 60 MIN. | 1440 MIN.  |       |           |
| 1958        | 4.5          | 5.3     | 5.8         | 6.0     | 19.6       |       |           |
| 1959        | 2.5          | 3.0     | 3.5         | 4.0     | 12.2       |       |           |
| 1960        | 5.0          | 9.0     | 11.5        | 12.0    | 40.5       |       |           |
| 1961        | 9.0          | 11.5    | 12.5        | 13.0    | 43.4       |       |           |
| 1962        | 3.0          | 5.0     | 6.0         | 7.0     | 22.0       |       |           |
| 1963        | 3.5          | 4.5     | 6.0         | 7.0     | 20.0       |       |           |
| 1964        | 3.0          | 5.5     | 6.5         | 7.0     | 37.3       |       |           |
| 1965        | 4.5          | 7.0     | 7.0         | 7.5     | 32.3       |       |           |
| 1966        | 3.0          | 3.0     | 3.5         | 4.0     | 6.7        |       |           |
| 1967        | 5.1          | 6.5     | 8.0         | 9.0     | 29.0       |       |           |
| 1968        | 3.0          | 3.5     | 4.5         | 5.0     | 19.5       |       |           |
| 1969        | 2.0          | 2.5     | 3.0         | 3.1     | 7.5        |       |           |
| 1970        | 3.0          | 4.5     | 6.0         | 6.5     | 17.0       |       |           |

| SECTION NO. | POSITION NO. |         | FIRST YEAR. |         | LAST YEAR. | MAP.  | NAME.      |
|-------------|--------------|---------|-------------|---------|------------|-------|------------|
| 113         | 25           |         | 1958        |         | 1970       | 168.7 | FRASERBURG |
| YEAR.       | 15 MIN.      | 30 MIN. | 45 MIN.     | 60 MIN. | 1440 MIN.  |       |            |
| 1958        | 10.8         | 13.4    | 14.0        | 14.6    | 23.3       |       |            |
| 1959        | 20.0         | 25.5    | 30.0        | 31.1    | 49.0       |       |            |
| 1960        | 5.8          | 9.5     | 12.3        | 14.6    | 20.1       |       |            |
| 1961        | 12.8         | 20.0    | 24.3        | 29.5    | 61.8       |       |            |
| 1962        | 3.5          | 6.0     | 6.0         | 6.0     | 8.8        |       |            |
| 1963        | 15.0         | 17.8    | 24.8        | 29.6    | 44.5       |       |            |
| 1964        | 11.0         | 11.5    | 12.1        | 12.1    | 14.5       |       |            |
| 1965        | 12.0         | 16.0    | 18.0        | 19.5    | 31.0       |       |            |
| 1966        | 8.5          | 8.6     | 8.7         | 8.8     | 9.0        |       |            |
| 1967        | 9.7          | 12.3    | 12.7        | 12.7    | 29.0       |       |            |
| 1968        | 6.7          | 10.2    | 12.0        | 13.0    | 28.0       |       |            |
| 1969        | 10.5         | 20.0    | 21.3        | 21.3    | 31.0       |       |            |
| 1970        | 7.0          | 9.0     | 10.8        | 11.5    | 29.5       |       |            |

| SECTION NO. | POSITION NO. |         | FIRST YEAR. |         | LAST YEAR. | MAP.  | NAME.  |
|-------------|--------------|---------|-------------|---------|------------|-------|--------|
| 127         | 485          |         | 1957        |         | 1969       | 652.6 | UNTATA |
| YEAR.       | 15 MIN.      | 30 MIN. | 45 MIN.     | 60 MIN. | 1440 MIN.  |       |        |
| 1957        | 8.9          | 14.5    | 19.2        | 23.0    | 54.5       |       |        |
| 1958        | 7.5          | 11.2    | 14.4        | 15.0    | 51.0       |       |        |
| 1959        | 21.5         | 22.5    | 25.0        | 27.0    | 47.2       |       |        |
| 1960        | 12.0         | 19.0    | 21.0        | 24.0    | 38.7       |       |        |
| 1961        | 22.0         | 27.0    | 30.0        | 32.5    | 57.5       |       |        |
| 1962        | 18.0         | 20.8    | 21.0        | 21.2    | 35.4       |       |        |
| 1963        | 19.0         | 28.0    | 30.0        | 32.0    | 57.0       |       |        |
| 1964        | 22.0         | 22.5    | 23.0        | 23.1    | 68.2       |       |        |
| 1965        | 13.8         | 17.1    | 17.9        | 18.1    | 52.8       |       |        |
| 1966        | 12.6         | 14.3    | 14.5        | 15.0    | 64.5       |       |        |
| 1967        | 32.4         | 39.4    | 42.4        | 42.5    | 46.0       |       |        |
| 1968        | 13.0         | 17.0    | 17.6        | 17.6    | 27.5       |       |        |
| 1969        | 12.3         | 15.9    | 15.9        | 15.9    | 37.5       |       |        |

| SECTION NO. | POSITION NO. |         | FIRST YEAR. |         | LAST YEAR. | MAP.  | NAME.    |
|-------------|--------------|---------|-------------|---------|------------|-------|----------|
| 134         | 478          |         | 1957        |         | 1970       | 213.2 | CALVINIA |
| YEAR.       | 15 MIN.      | 30 MIN. | 45 MIN.     | 60 MIN. | 1440 MIN.  |       |          |
| 1957        | 2.0          | 4.0     | 5.0         | 5.3     | 23.8       |       |          |
| 1958        | 4.5          | 6.3     | 7.1         | 7.3     | 24.0       |       |          |
| 1959        | 3.0          | 5.0     | 7.0         | 8.5     | 35.0       |       |          |
| 1960        | 7.5          | 10.5    | 11.0        | 11.0    | 13.0       |       |          |
| 1961        | 10.5         | 20.5    | 24.5        | 27.2    | 79.5       |       |          |
| 1962        | 2.9          | 3.4     | 4.7         | 5.4     | 30.0       |       |          |
| 1963        | 9.5          | 10.4    | 14.6        | 14.8    | 21.8       |       |          |
| 1964        | 5.0          | 6.0     | 6.5         | 7.8     | 22.8       |       |          |
| 1965        | 2.0          | 3.5     | 5.0         | 5.1     | 24.5       |       |          |
| 1966        | 2.0          | 2.5     | 3.0         | 3.5     | 10.5       |       |          |
| 1967        | 7.0          | 8.5     | 11.0        | 12.5    | 44.5       |       |          |
| 1968        | 4.0          | 8.0     | 10.5        | 12.0    | 37.5       |       |          |
| 1969        | 8.8          | 9.8     | 11.2        | 11.8    | 24.0       |       |          |
| 1970        | 2.9          | 5.5     | 7.5         | 7.5     | 12.5       |       |          |

| SECTION NO. | POSITION NO. |         | FIRST YEAR. |         | LAST YEAR. | MAP.  | NAME.        |
|-------------|--------------|---------|-------------|---------|------------|-------|--------------|
| 145         | 59           |         | 1961        |         | 1976       | 349.9 | GRECIFONTEIN |
| YEAR.       | 15 MIN.      | 30 MIN. | 45 MIN.     | 60 MIN. | 1440 MIN.  |       |              |
| 1961        | 3.3          | 5.7     | 6.4         | 6.9     | 31.0       |       |              |
| 1962        | 5.7          | 6.5     | 7.2         | 7.4     | 17.3       |       |              |
| 1963        | 13.6         | 17.1    | 19.9        | 23.1    | 50.8       |       |              |
| 1964        | 9.3          | 15.6    | 20.5        | 22.7    | 47.5       |       |              |
| 1965        | 15.6         | 18.0    | 22.1        | 22.6    | 34.4       |       |              |
| 1966        | 10.6         | 16.6    | 19.5        | 20.2    | 20.5       |       |              |
| 1967        | 18.1         | 19.2    | 19.4        | 19.5    | 43.6       |       |              |
| 1968        | 6.8          | 11.3    | 14.5        | 17.4    | 23.2       |       |              |
| 1969        | 9.6          | 15.5    | 15.8        | 16.1    | 25.9       |       |              |
| 1970        | 5.5          | 8.5     | 8.8         | 8.9     | 69.1       |       |              |
| 1971        | 14.0         | 27.5    | 29.8        | 30.2    | 30.2       |       |              |
| 1972        | 7.1          | 10.7    | 12.6        | 13.9    | 31.4       |       |              |
| 1973        | 12.9         | 19.1    | 21.2        | 21.2    | 30.3       |       |              |
| 1974        | 16.2         | 19.4    | 21.7        | 23.3    | 93.4       |       |              |
| 1975        | 13.2         | 23.2    | 23.7        | 23.8    | 41.4       |       |              |
| 1976        | 13.7         | 24.4    | 24.4        | 24.4    | 37.1       |       |              |

| SECTION NO. | POSITION NO. |         | FIRST YEAR. |         | LAST YEAR. | MAP.  | NAME.  |
|-------------|--------------|---------|-------------|---------|------------|-------|--------|
| 170         | 98           |         | 1958        |         | 1970       | 287.4 | DE AAR |
| YEAR.       | 15 MIN.      | 30 MIN. | 45 MIN.     | 60 MIN. | 1440 MIN.  |       |        |
| 1958        | 12.0         | 15.0    | 22.0        | 25.0    | 28.2       |       |        |
| 1959        | 14.0         | 18.0    | 21.0        | 24.0    | 41.5       |       |        |
| 1960        | 12.0         | 14.0    | 15.0        | 15.5    | 26.5       |       |        |
| 1961        | 7.0          | 12.0    | 18.0        | 23.0    | 31.5       |       |        |
| 1962        | 7.5          | 8.5     | 9.0         | 9.0     | 27.5       |       |        |
| 1963        | 7.5          | 12.5    | 14.0        | 17.0    | 79.5       |       |        |
| 1964        | 7.0          | 9.5     | 12.0        | 13.0    | 17.5       |       |        |
| 1965        | 7.5          | 10.5    | 11.5        | 11.6    | 38.0       |       |        |
| 1966        | 15.0         | 23.0    | 28.0        | 28.0    | 31.0       |       |        |
| 1967        | 23.0         | 31.5    | 33.5        | 33.5    | 34.4       |       |        |
| 1968        | 20.0         | 25.0    | 26.5        | 27.5    | 32.0       |       |        |
| 1969        | 16.0         | 23.0    | 23.0        | 23.0    | 40.0       |       |        |
| 1970        | 9.0          | 15.0    | 19.5        | 23.5    | 46.5       |       |        |

| SECTION NO. | POSITION NO. |         | FIRST YEAR. |         | LAST YEAR. | MAP.  | NAME.   |
|-------------|--------------|---------|-------------|---------|------------|-------|---------|
| 180         | 722          |         | 1959        |         | 1970       | 680.7 | KOKSTAD |
| YEAR.       | 15 MIN.      | 30 MIN. | 45 MIN.     | 60 MIN. | 1440 MIN.  |       |         |
| 1959        | 12.5         | 20.0    | 22.5        | 25.0    | 197.5      |       |         |
| 1960        | 20.0         | 30.0    | 30.0        | 30.0    | 34.5       |       |         |
| 1961        | 38.0         | 47.5    | 49.5        | 49.6    | 51.0       |       |         |
| 1962        | 20.0         | 32.5    | 42.0        | 42.5    | 50.0       |       |         |
| 1963        | 29.0         | 39.0    | 45.9        | 46.3    | 68.0       |       |         |
| 1964        | 12.5         | 23.0    | 30.5        | 36.5    | 114.0      |       |         |
| 1965        | 27.8         | 41.2    | 46.0        | 49.8    | 55.0       |       |         |
| 1966        | 175.0        | 180.0   | 210.0       | 220.0   | 575.0      |       |         |
| 1967        | 18.5         | 30.0    | 35.0        | 36.0    | 67.5       |       |         |
| 1968        | 16.0         | 22.0    | 25.0        | 26.5    | 32.2       |       |         |
| 1969        | 15.5         | 24.5    | 24.9        | 25.0    | 39.8       |       |         |
| 1970        | 30.0         | 50.0    | 50.0        | 50.0    | 50.2       |       |         |

| SECTION NO. | POSITION NO. |         | FIRST YEAR. |         | LAST YEAR. | MAP.  | NAME.  |
|-------------|--------------|---------|-------------|---------|------------|-------|--------|
| 214         | 636          |         | 1956        |         | 1970       | 161.0 | Q KIEP |
| YEAR.       | 15 MIN.      | 30 MIN. | 45 MIN.     | 60 MIN. | 1440 MIN.  |       |        |
| 1956        | 3.0          | 4.0     | 5.0         | 6.0     | 17.3       |       |        |
| 1957        | 11.5         | 13.0    | 13.0        | 13.0    | 38.3       |       |        |
| 1958        | 4.5          | 6.0     | 6.6         | 8.0     | 33.0       |       |        |
| 1959        | 3.0          | 6.0     | 7.2         | 8.2     | 28.3       |       |        |
| 1960        | 13.5         | 19.0    | 22.0        | 23.5    | 42.0       |       |        |
| 1961        | 17.0         | 18.0    | 18.2        | 18.4    | 53.2       |       |        |
| 1962        | 2.4          | 3.9     | 4.5         | 4.7     | 24.2       |       |        |
| 1963        | 6.0          | 7.7     | 9.5         | 10.5    | 34.6       |       |        |
| 1964        | 13.5         | 15.5    | 15.7        | 15.9    | 23.1       |       |        |
| 1965        | 3.5          | 4.5     | 6.0         | 7.5     | 13.3       |       |        |
| 1966        | 4.5          | 5.0     | 5.0         | 5.0     | 12.7       |       |        |
| 1967        | 9.3          | 11.1    | 12.4        | 14.2    | 74.7       |       |        |
| 1968        | 18.0         | 30.0    | 35.5        | 39.5    | 43.0       |       |        |
| 1969        | 4.2          | 4.2     | 4.2         | 4.2     | 5.3        |       |        |
| 1970        | 4.0          | 5.0     | 5.5         | 5.6     | 22.1       |       |        |

| SECTION NO. | POSITION NO. |         | FIRST YEAR. |         | LAST YEAR. | MAP.  | NAME.     |
|-------------|--------------|---------|-------------|---------|------------|-------|-----------|
| 229         | 556          |         | 1957        |         | 1970       | 429.2 | ECURSMITH |
| YEAR.       | 15 MIN.      | 30 MIN. | 45 MIN.     | 60 MIN. | 1440 MIN.  |       |           |
| 1957        | 39.4         | 52.3    | 52.6        | 52.8    | 56.0       |       |           |
| 1958        | 10.0         | 17.0    | 20.0        | 21.0    | 40.8       |       |           |
| 1959        | 7.0          | 13.0    | 13.0        | 13.0    | 47.0       |       |           |
| 1960        | 15.5         | 22.0    | 24.0        | 24.0    | 29.0       |       |           |
| 1961        | 18.4         | 27.0    | 34.6        | 37.4    | 78.2       |       |           |
| 1962        | 12.0         | 18.9    | 24.7        | 31.2    | 49.0       |       |           |
| 1963        | 15.0         | 20.0    | 29.0        | 29.5    | 56.5       |       |           |
| 1964        | 13.0         | 18.0    | 22.0        | 23.5    | 37.5       |       |           |
| 1965        | 11.0         | 19.8    | 20.0        | 20.2    | 38.0       |       |           |
| 1966        | 14.0         | 20.5    | 20.5        | 20.5    | 52.0       |       |           |
| 1967        | 12.0         | 16.5    | 19.5        | 21.0    | 38.0       |       |           |
| 1968        | 13.5         | 18.7    | 19.9        | 20.3    | 67.0       |       |           |
| 1969        | 10.0         | 15.0    | 18.0        | 19.5    | 90.3       |       |           |
| 1970        | 11.1         | 14.1    | 19.1        | 19.8    | 27.0       |       |           |

| SECTION NO. | POSITION NO. |         | FIRST YEAR. |         | LAST YEAR. | MAP.  | NAME.   |
|-------------|--------------|---------|-------------|---------|------------|-------|---------|
| 233         | 44           |         | 1956        |         | 1969       | 599.7 | WEFENER |
| YEAR.       | 15 MIN.      | 30 MIN. | 45 MIN.     | 60 MIN. | 1440 MIN.  |       |         |
| 1956        | 16.0         | 26.0    | 27.3        | 27.7    | 121.0      |       |         |
| 1957        | 14.2         | 15.0    | 15.1        | 15.3    | 95.0       |       |         |
| 1958        | 14.4         | 24.8    | 24.8        | 24.8    | 43.0       |       |         |
| 1959        | 27.0         | 44.6    | 52.7        | 59.2    | 90.0       |       |         |
| 1960        | 24.9         | 27.5    | 28.5        | 32.5    | 57.0       |       |         |
| 1961        | 25.0         | 35.0    | 39.6        | 43.7    | 62.0       |       |         |
| 1962        | 13.4         | 16.0    | 16.1        | 16.3    | 32.0       |       |         |
| 1963        | 15.4         | 29.1    | 41.1        | 44.6    | 47.8       |       |         |
| 1964        | 20.0         | 23.5    | 26.5        | 27.7    | 46.0       |       |         |
| 1965        | 11.8         | 17.3    | 19.6        | 22.0    | 29.0       |       |         |
| 1966        | 14.5         | 16.3    | 19.1        | 21.1    | 106.4      |       |         |
| 1967        | 9.2          | 17.7    | 22.7        | 23.7    | 56.6       |       |         |
| 1968        | 15.1         | 28.2    | 31.7        | 32.2    | 65.0       |       |         |
| 1969        | 18.9         | 19.1    | 19.2        | 19.2    | 43.6       |       |         |

| SECTION NO. |         | POSITION NO. |         |         | FIRST YEAR. | LAST YEAR. | MAP.   | NAME.       |
|-------------|---------|--------------|---------|---------|-------------|------------|--------|-------------|
| 241         |         | 50           |         |         | 1938        | 1976       | 1050.0 | LOUIS BOTHA |
| YEAR.       | 15 MIN. | 30 MIN.      | 45 MIN. | 60 MIN. | 1440 MIN.   |            |        |             |
| 1938        | 22.6    | 33.2         | 35.3    | 36.6    | 62.2        |            |        |             |
| 1939        | 44.2    | 60.0         | 61.2    | 62.2    | 69.0        |            |        |             |
| 1940        | 18.8    | 21.1         | 27.4    | 35.8    | 142.1       |            |        |             |
| 1941        | 24.9    | 29.2         | 30.8    | 31.3    | 54.9        |            |        |             |
| 1942        | 21.8    | 29.2         | 34.6    | 39.1    | 65.8        |            |        |             |
| 1943        | 47.5    | 68.9         | 80.5    | 93.6    | 145.0       |            |        |             |
| 1944        | 15.7    | 23.1         | 29.0    | 30.7    | 46.7        |            |        |             |
| 1945        | 16.8    | 29.0         | 39.8    | 52.8    | 71.1        |            |        |             |
| 1946        | 11.7    | 21.1         | 23.4    | 23.6    | 43.1        |            |        |             |
| 1947        | 28.4    | 46.7         | 64.5    | 79.5    | 128.9       |            |        |             |
| 1948        | 23.4    | 37.1         | 48.5    | 53.9    | 72.4        |            |        |             |
| 1949        | 28.2    | 41.9         | 53.6    | 63.0    | 86.9        |            |        |             |
| 1950        | 16.2    | 23.6         | 26.6    | 31.2    | 72.0        |            |        |             |
| 1951        | 15.7    | 31.0         | 32.5    | 33.0    | 48.0        |            |        |             |
| 1952        | 33.8    | 65.0         | 83.2    | 94.2    | 111.7       |            |        |             |
| 1953        | 38.0    | 65.0         | 74.7    | 79.2    | 300.6       |            |        |             |
| 1954        | 11.4    | 13.8         | 17.3    | 20.6    | 82.0        |            |        |             |
| 1955        | 22.0    | 35.5         | 43.0    | 44.3    | 97.1        |            |        |             |
| 1956        | 34.0    | 40.0         | 44.0    | 47.0    | 70.5        |            |        |             |
| 1957        | 29.0    | 49.5         | 62.5    | 66.0    | 91.6        |            |        |             |
| 1958        | 14.5    | 29.0         | 36.0    | 42.0    | 142.5       |            |        |             |
| 1959        | 13.5    | 20.8         | 33.0    | 43.3    | 100.3       |            |        |             |
| 1960        | 9.2     | 16.8         | 17.5    | 17.5    | 67.5        |            |        |             |
| 1961        | 21.5    | 32.0         | 40.5    | 48.5    | 108.7       |            |        |             |
| 1962        | 11.0    | 14.6         | 17.9    | 17.9    | 53.0        |            |        |             |
| 1963        | 14.7    | 22.7         | 27.7    | 32.2    | 162.5       |            |        |             |
| 1964        | 19.7    | 29.2         | 34.7    | 45.0    | 80.7        |            |        |             |
| 1965        | 17.0    | 25.7         | 32.2    | 34.3    | 79.0        |            |        |             |
| 1966        | 9.0     | 14.8         | 19.2    | 25.0    | 57.5        |            |        |             |
| 1967        | 23.2    | 33.9         | 43.8    | 45.9    | 64.9        |            |        |             |
| 1968        | 22.0    | 58.5         | 71.6    | 79.9    | 106.1       |            |        |             |
| 1969        | 16.2    | 23.7         | 29.6    | 36.1    | 100.9       |            |        |             |
| 1970        | 28.4    | 48.8         | 59.2    | 66.7    | 69.5        |            |        |             |
| 1971        | 13.0    | 14.8         | 16.0    | 20.0    | 110.6       |            |        |             |
| 1972        | 18.0    | 34.0         | 36.0    | 36.7    | 44.3        |            |        |             |
| 1973        | 15.0    | 21.7         | 25.8    | 27.2    | 47.8        |            |        |             |
| 1974        | 18.0    | 30.0         | 44.0    | 59.0    | 100.1       |            |        |             |
| 1975        | 12.0    | 19.8         | 29.6    | 31.6    | 91.2        |            |        |             |
| 1976        | 16.3    | 21.5         | 31.0    | 42.0    | 160.3       |            |        |             |

| SECTION NO. |         | POSITION NO. |         |         | FIRST YEAR. | LAST YEAR. | MAP.  | NAME.    |
|-------------|---------|--------------|---------|---------|-------------|------------|-------|----------|
| 247         |         | 668          |         |         | 1956        | 1970       | 104.6 | POFADDER |
| YEAR.       | 15 MIN. | 30 MIN.      | 45 MIN. | 60 MIN. | 1440 MIN.   |            |       |          |
| 1956        | 9.3     | 25.0         | 28.3    | 28.8    | 35.0        |            |       |          |
| 1957        | 2.8     | 4.3          | 4.5     | 4.6     | 15.0        |            |       |          |
| 1958        | 2.5     | 3.0          | 3.5     | 4.0     | 12.1        |            |       |          |
| 1959        | 3.0     | 4.0          | 4.8     | 5.2     | 8.0         |            |       |          |
| 1960        | 20.0    | 25.0         | 25.0    | 25.0    | 32.0        |            |       |          |
| 1961        | 12.0    | 16.0         | 19.0    | 19.5    | 40.0        |            |       |          |
| 1962        | 20.0    | 29.5         | 32.5    | 32.5    | 33.0        |            |       |          |
| 1963        | 13.5    | 19.5         | 20.0    | 21.5    | 46.0        |            |       |          |
| 1964        | 10.0    | 13.7         | 17.2    | 20.7    | 25.0        |            |       |          |
| 1965        | 12.0    | 17.7         | 17.7    | 17.7    | 41.0        |            |       |          |
| 1966        | 1.0     | 1.3          | 1.5     | 1.7     | 8.7         |            |       |          |
| 1967        | 8.8     | 16.8         | 16.8    | 16.8    | 22.3        |            |       |          |
| 1968        | 9.5     | 11.0         | 11.4    | 14.5    | 37.8        |            |       |          |
| 1969        | 8.5     | 15.5         | 22.0    | 22.0    | 23.0        |            |       |          |
| 1970        | 4.5     | 6.0          | 7.0     | 8.0     | 26.2        |            |       |          |

| SECTION NO. | POSITION NO. |         | FIRST YEAR. |         | LAST YEAR. | MAP.  | NAME.       |
|-------------|--------------|---------|-------------|---------|------------|-------|-------------|
| 261         | 316          |         | 1938        |         | 1976       | 560.9 | ELEMFONTEIN |
| YEAR.       | 15 MIN.      | 30 MIN. | 45 MIN.     | 60 MIN. | 1440 MIN.  |       |             |
| 1938        | 10.7         | 13.5    | 16.3        | 16.5    | 31.8       |       |             |
| 1939        | 15.8         | 17.0    | 18.7        | 20.1    | 32.3       |       |             |
| 1940        | 17.5         | 20.2    | 41.1        | 46.5    | 59.7       |       |             |
| 1941        | 10.4         | 19.0    | 21.6        | 22.3    | 43.2       |       |             |
| 1942        | 14.7         | 20.3    | 27.7        | 29.7    | 34.5       |       |             |
| 1943        | 22.9         | 31.8    | 40.6        | 43.1    | 53.8       |       |             |
| 1944        | 15.3         | 29.4    | 38.0        | 39.8    | 109.5      |       |             |
| 1945        | 23.4         | 25.9    | 26.7        | 27.2    | 37.1       |       |             |
| 1946        | 28.7         | 47.0    | 54.9        | 59.2    | 75.5       |       |             |
| 1947        | 15.8         | 23.4    | 30.2        | 31.2    | 43.1       |       |             |
| 1948        | 23.4         | 37.3    | 44.4        | 46.0    | 63.5       |       |             |
| 1949        | 26.9         | 32.5    | 33.8        | 34.0    | 39.4       |       |             |
| 1950        | 13.2         | 16.3    | 19.3        | 19.8    | 46.2       |       |             |
| 1951        | 17.0         | 27.4    | 32.5        | 33.5    | 40.5       |       |             |
| 1952        | 11.5         | 20.0    | 26.3        | 26.3    | 53.9       |       |             |
| 1953        | 10.0         | 14.4    | 17.4        | 18.7    | 32.6       |       |             |
| 1954        | 17.5         | 27.5    | 29.5        | 29.3    | 34.0       |       |             |
| 1955        | 14.8         | 17.8    | 19.9        | 21.9    | 56.9       |       |             |
| 1956        | 15.7         | 19.3    | 20.8        | 22.2    | 49.0       |       |             |
| 1957        | 12.7         | 21.5    | 23.5        | 28.5    | 48.3       |       |             |
| 1958        | 16.0         | 24.1    | 30.3        | 34.3    | 44.6       |       |             |
| 1959        | 64.4         | 85.4    | 85.4        | 85.4    | 74.0       |       |             |
| 1960        | 9.5          | 15.0    | 21.1        | 23.8    | 56.0       |       |             |
| 1961        | 7.5          | 13.9    | 14.2        | 15.0    | 23.8       |       |             |
| 1962        | 10.4         | 17.8    | 22.0        | 29.5    | 45.4       |       |             |
| 1963        | 11.0         | 19.6    | 20.4        | 20.4    | 33.7       |       |             |
| 1964        | 16.0         | 23.9    | 29.5        | 32.1    | 37.2       |       |             |
| 1965        | 14.0         | 19.7    | 24.9        | 26.7    | 33.5       |       |             |
| 1966        | 11.1         | 19.2    | 23.8        | 23.3    | 60.5       |       |             |
| 1967        | 11.9         | 20.9    | 23.9        | 24.4    | 44.5       |       |             |
| 1968        | 15.9         | 24.4    | 28.4        | 30.0    | 36.2       |       |             |
| 1969        | 20.9         | 27.7    | 32.5        | 40.2    | 51.3       |       |             |
| 1970        | 13.2         | 19.8    | 22.9        | 24.8    | 48.0       |       |             |
| 1971        | 16.2         | 20.7    | 21.9        | 23.3    | 25.6       |       |             |
| 1972        | 13.3         | 21.1    | 23.6        | 25.6    | 55.0       |       |             |
| 1973        | 16.3         | 17.2    | 20.0        | 24.0    | 45.3       |       |             |
| 1974        | 16.5         | 25.2    | 37.0        | 49.6    | 76.0       |       |             |
| 1975        | 15.8         | 30.6    | 36.2        | 37.5    | 40.0       |       |             |
| 1976        | 20.6         | 33.4    | 42.0        | 46.4    | 80.3       |       |             |

| SECTION NO. | POSITION NO. |         | FIRST YEAR. |         | LAST YEAR. | MAP. | NAME.         |
|-------------|--------------|---------|-------------|---------|------------|------|---------------|
| 274         | 34           |         | 1952        |         | 1976       | 44.2 | ALEXANDER BAY |
| YEAR.       | 15 MIN.      | 30 MIN. | 45 MIN.     | 60 MIN. | 1440 MIN.  |      |               |
| 1952        | 2.8          | 4.1     | 5.1         | 5.5     | 13.2       |      |               |
| 1953        | 3.5          | 6.5     | 8.4         | 9.5     | 17.1       |      |               |
| 1954        | 7.3          | 10.0    | 12.0        | 15.5    | 39.0       |      |               |
| 1955        | 1.9          | 3.3     | 4.6         | 6.0     | 19.3       |      |               |
| 1956        | 5.8          | 10.6    | 11.2        | 11.5    | 16.3       |      |               |
| 1957        | 6.3          | 7.8     | 8.1         | 8.3     | 9.2        |      |               |
| 1958        | 3.4          | 6.5     | 7.6         | 8.1     | 12.5       |      |               |
| 1959        | 3.6          | 4.8     | 5.3         | 5.5     | 12.9       |      |               |
| 1960        | 3.4          | 3.4     | 3.4         | 3.4     | 4.0        |      |               |
| 1961        | 2.6          | 4.0     | 4.1         | 4.1     | 7.9        |      |               |
| 1962        | 2.6          | 3.6     | 3.8         | 4.5     | 15.5       |      |               |
| 1963        | 2.5          | 3.5     | 5.2         | 5.6     | 21.3       |      |               |
| 1964        | 5.6          | 6.8     | 7.4         | 7.9     | 19.5       |      |               |
| 1965        | 2.1          | 2.6     | 2.7         | 2.8     | 7.4        |      |               |
| 1966        | 1.6          | 2.3     | 2.7         | 3.0     | 5.1        |      |               |
| 1967        | 3.0          | 5.0     | 5.7         | 6.3     | 11.4       |      |               |
| 1968        | 1.1          | 2.0     | 2.7         | 3.3     | 4.8        |      |               |
| 1969        | 7.0          | 10.4    | 16.3        | 19.8    | 28.0       |      |               |
| 1970        | 1.5          | 3.0     | 4.2         | 4.8     | 9.2        |      |               |
| 1971        | 2.3          | 3.5     | 3.8         | 4.2     | 5.7        |      |               |
| 1972        | 2.3          | 3.9     | 3.9         | 4.2     | 4.3        |      |               |
| 1973        | 1.5          | 2.0     | 2.5         | 2.6     | 9.0        |      |               |
| 1974        | 3.2          | 3.9     | 4.0         | 4.5     | 7.5        |      |               |
| 1975        | 5.3          | 7.0     | 7.4         | 7.4     | 17.5       |      |               |
| 1976        | 4.2          | 4.3     | 5.6         | 5.8     | 11.5       |      |               |

| SECTION NO. | POSITION NO. |         | FIRST YEAR. |         | LAST YEAR. | MAP.  | NAME.     |
|-------------|--------------|---------|-------------|---------|------------|-------|-----------|
| 290         | 68           |         | 1938        |         | 1976       | 426.3 | KINEERLEY |
| YEAR.       | 15 MIN.      | 30 MIN. | 45 MIN.     | 60 MIN. | 1440 MIN.  |       |           |
| 1938        | 7.9          | 9.1     | 10.2        | 11.9    | 45.2       |       |           |
| 1939        | 26.9         | 52.1    | 61.5        | 63.7    | 67.9       |       |           |
| 1940        | 19.3         | 33.2    | 35.6        | 40.4    | 55.6       |       |           |
| 1941        | 22.8         | 41.6    | 57.4        | 70.1    | 80.2       |       |           |
| 1942        | 16.3         | 23.1    | 24.4        | 25.9    | 59.2       |       |           |
| 1943        | 23.6         | 37.4    | 45.0        | 46.5    | 64.5       |       |           |
| 1944        | 6.1          | 8.1     | 9.4         | 9.5     | 19.8       |       |           |
| 1945        | 13.7         | 23.6    | 27.7        | 28.7    | 30.0       |       |           |
| 1946        | 18.3         | 34.6    | 35.0        | 37.6    | 38.1       |       |           |
| 1947        | 14.7         | 19.5    | 21.9        | 23.1    | 50.8       |       |           |
| 1948        | 23.6         | 38.1    | 45.2        | 46.7    | 64.8       |       |           |
| 1949        | 8.6          | 12.7    | 14.7        | 16.3    | 59.1       |       |           |
| 1950        | 20.8         | 31.0    | 43.7        | 60.0    | 63.0       |       |           |
| 1951        | 13.2         | 17.5    | 18.5        | 19.3    | 29.8       |       |           |
| 1952        | 13.5         | 26.0    | 30.7        | 34.8    | 37.6       |       |           |
| 1953        | 13.8         | 15.8    | 17.3        | 17.4    | 44.0       |       |           |
| 1954        | 16.2         | 24.2    | 27.5        | 33.9    | 46.9       |       |           |
| 1955        | 8.7          | 13.3    | 17.8        | 20.5    | 43.0       |       |           |
| 1956        | 11.6         | 16.0    | 17.3        | 17.3    | 43.5       |       |           |
| 1957        | 14.1         | 17.3    | 21.0        | 21.4    | 67.5       |       |           |
| 1958        | 15.7         | 21.6    | 25.7        | 26.6    | 39.0       |       |           |
| 1959        | 13.6         | 14.2    | 14.3        | 14.9    | 37.3       |       |           |
| 1960        | 22.4         | 32.8    | 34.9        | 35.8    | 45.0       |       |           |
| 1961        | 8.9          | 15.3    | 18.5        | 25.0    | 60.1       |       |           |
| 1962        | 15.7         | 22.0    | 23.4        | 24.3    | 38.9       |       |           |
| 1963        | 12.1         | 17.3    | 17.3        | 17.3    | 44.6       |       |           |
| 1964        | 8.0          | 10.5    | 14.7        | 14.8    | 58.0       |       |           |
| 1965        | 12.0         | 18.7    | 18.7        | 18.7    | 33.4       |       |           |
| 1966        | 12.9         | 19.8    | 20.0        | 20.1    | 42.0       |       |           |
| 1967        | 19.8         | 23.9    | 25.6        | 25.7    | 54.6       |       |           |
| 1968        | 8.3          | 14.9    | 22.7        | 25.3    | 37.5       |       |           |
| 1969        | 12.5         | 18.5    | 21.2        | 21.7    | 51.1       |       |           |
| 1970        | 21.0         | 21.5    | 21.5        | 21.7    | 40.9       |       |           |
| 1971        | 17.9         | 21.8    | 24.3        | 25.0    | 35.6       |       |           |
| 1972        | 24.7         | 34.7    | 40.7        | 43.0    | 47.7       |       |           |
| 1973        | 20.2         | 30.6    | 34.7        | 35.1    | 48.4       |       |           |
| 1974        | 13.4         | 23.4    | 26.1        | 26.2    | 54.2       |       |           |
| 1975        | 16.0         | 25.1    | 26.0        | 27.2    | 56.8       |       |           |
| 1976        | 24.0         | 26.9    | 38.1        | 42.2    | 59.6       |       |           |

| SECTION NO. | POSITION NO. |         | FIRST YEAR. |         | LAST YEAR. | MAP.  | NAME.     |
|-------------|--------------|---------|-------------|---------|------------|-------|-----------|
| 300         | 483          |         | 1949        |         | 1954       | 780.4 | LADYSMITH |
| YEAR.       | 15 MIN.      | 30 MIN. | 45 MIN.     | 60 MIN. | 1440 MIN.  |       |           |
| 1949        | 17.0         | 30.7    | 36.3        | 39.4    | 58.4       |       |           |
| 1950        | 11.8         | 14.9    | 16.8        | 19.0    | 36.1       |       |           |
| 1951        | 11.0         | 16.8    | 16.8        | 16.8    | 22.7       |       |           |
| 1952        | 36.0         | 50.0    | 50.0        | 55.2    | 92.0       |       |           |
| 1953        | 21.5         | 35.5    | 41.5        | 44.5    | 44.5       |       |           |
| 1954        | 22.9         | 34.2    | 55.5        | 62.5    | 79.3       |       |           |

| SECTION NO. | POSITION NO. |         | FIRST YEAR. |         | LAST YEAR. | MAP.  | NAME.    |
|-------------|--------------|---------|-------------|---------|------------|-------|----------|
| 300         | 690          |         | 1959        |         | 1966       | 749.3 | ESTCOURT |
| YEAR.       | 15 MIN.      | 30 MIN. | 45 MIN.     | 60 MIN. | 1440 MIN.  |       |          |
| 1959        | 25.0         | 35.0    | 37.0        | 40.3    | 50.5       |       |          |
| 1960        | 17.0         | 21.0    | 24.5        | 24.7    | 29.9       |       |          |
| 1961        | 29.0         | 38.1    | 46.0        | 47.0    | 60.0       |       |          |
| 1962        | 12.5         | 17.0    | 17.6        | 19.5    | 37.4       |       |          |
| 1963        | 22.0         | 25.0    | 30.0        | 35.0    | 45.0       |       |          |
| 1964        | 14.7         | 28.0    | 28.0        | 28.0    | 37.4       |       |          |
| 1965        | 13.0         | 20.9    | 21.4        | 21.5    | 41.6       |       |          |
| 1966        | 42.4         | 72.9    | 83.5        | 88.0    | 102.9      |       |          |



| SECTION NO. | POSITION NO. |         |         |         | FIRST YEAR. | LAST YEAR. | MAP.  | NAME.    |
|-------------|--------------|---------|---------|---------|-------------|------------|-------|----------|
| 317         | 476          |         |         |         | 1951        | 1976       | 286.9 | UPINGTON |
| YEAR.       | 15 MIN.      | 30 MIN. | 45 MIN. | 60 MIN. | 1440 MIN.   |            |       |          |
| 1951        | 5.2          | 10.3    | 11.1    | 11.5    | 16.2        |            |       |          |
| 1952        | 11.3         | 16.3    | 19.1    | 23.7    | 45.7        |            |       |          |
| 1953        | 6.7          | 10.1    | 12.1    | 13.1    | 31.7        |            |       |          |
| 1954        | 6.9          | 7.4     | 12.1    | 13.9    | 33.1        |            |       |          |
| 1955        | 15.2         | 19.7    | 20.4    | 21.8    | 67.8        |            |       |          |
| 1956        | 6.2          | 8.2     | 10.4    | 11.3    | 29.9        |            |       |          |
| 1957        | 6.2          | 10.2    | 16.2    | 18.2    | 28.7        |            |       |          |
| 1958        | 8.0          | 10.3    | 11.4    | 12.9    | 21.4        |            |       |          |
| 1959        | 7.5          | 13.6    | 14.0    | 14.0    | 14.5        |            |       |          |
| 1960        | 6.6          | 10.1    | 12.3    | 16.2    | 16.5        |            |       |          |
| 1961        | 9.1          | 13.5    | 14.5    | 15.5    | 30.5        |            |       |          |
| 1962        | 11.0         | 14.0    | 16.0    | 17.8    | 19.0        |            |       |          |
| 1963        | 6.4          | 12.5    | 18.3    | 20.8    | 33.7        |            |       |          |
| 1964        | 20.0         | 21.7    | 22.3    | 22.3    | 36.4        |            |       |          |
| 1965        | 8.1          | 11.8    | 15.3    | 15.6    | 33.1        |            |       |          |
| 1966        | 7.3          | 7.3     | 7.3     | 7.3     | 9.5         |            |       |          |
| 1967        | 14.5         | 21.5    | 26.1    | 27.1    | 43.8        |            |       |          |
| 1968        | 9.7          | 12.6    | 15.6    | 17.6    | 45.3        |            |       |          |
| 1969        | 9.3          | 16.1    | 20.9    | 22.4    | 45.5        |            |       |          |
| 1970        | 6.6          | 10.8    | 11.2    | 11.5    | 27.3        |            |       |          |
| 1971        | 20.0         | 20.0    | 22.1    | 22.1    | 29.3        |            |       |          |
| 1972        | 13.7         | 21.2    | 22.3    | 23.7    | 28.0        |            |       |          |
| 1973        | 13.2         | 18.7    | 27.3    | 28.8    | 59.0        |            |       |          |
| 1974        | 10.5         | 14.7    | 18.3    | 20.8    | 33.0        |            |       |          |
| 1975        | 14.0         | 18.6    | 18.6    | 18.8    | 27.3        |            |       |          |
| 1976        | 28.8         | 37.5    | 39.6    | 40.0    | 47.9        |            |       |          |

| SECTION NO. | POSITION NO. |         |         |         | FIRST YEAR. | LAST YEAR. | MAP.  | NAME.     |
|-------------|--------------|---------|---------|---------|-------------|------------|-------|-----------|
| 365         | 398          |         |         |         | 1961        | 1970       | 594.3 | KRECNSTAD |
| YEAR.       | 15 MIN.      | 30 MIN. | 45 MIN. | 60 MIN. | 1440 MIN.   |            |       |           |
| 1961        | 8.5          | 12.0    | 17.5    | 20.0    | 53.5        |            |       |           |
| 1962        | 12.5         | 17.0    | 18.0    | 18.1    | 68.0        |            |       |           |
| 1963        | 23.0         | 28.5    | 29.0    | 29.0    | 36.2        |            |       |           |
| 1964        | 20.1         | 29.5    | 37.5    | 43.5    | 123.5       |            |       |           |
| 1965        | 12.0         | 23.5    | 36.5    | 33.5    | 36.5        |            |       |           |
| 1966        | 14.0         | 23.8    | 28.3    | 28.8    | 62.0        |            |       |           |
| 1967        | 12.0         | 21.0    | 22.0    | 23.0    | 48.5        |            |       |           |
| 1968        | 12.5         | 13.0    | 13.0    | 16.0    | 36.0        |            |       |           |
| 1969        | 18.3         | 14.5    | 20.0    | 25.0    | 36.4        |            |       |           |
| 1970        | 20.0         | 21.6    | 22.4    | 22.5    | 43.0        |            |       |           |

| SECTION NO. | POSITION NO. |         |         |         | FIRST YEAR. | LAST YEAR. | MAP.  | NAME.   |
|-------------|--------------|---------|---------|---------|-------------|------------|-------|---------|
| 393         | 778          |         |         |         | 1957        | 1970       | 456.0 | KURUMAN |
| YEAR.       | 15 MIN.      | 30 MIN. | 45 MIN. | 60 MIN. | 1440 MIN.   |            |       |         |
| 1957        | 12.5         | 16.0    | 22.8    | 26.3    | 75.0        |            |       |         |
| 1958        | 9.8          | 10.3    | 10.5    | 10.7    | 22.0        |            |       |         |
| 1959        | 16.1         | 20.0    | 20.0    | 21.2    | 30.0        |            |       |         |
| 1960        | 21.3         | 25.6    | 26.1    | 32.4    | 36.0        |            |       |         |
| 1961        | 18.6         | 29.1    | 32.4    | 33.1    | 68.0        |            |       |         |
| 1962        | 12.8         | 17.8    | 20.1    | 26.2    | 39.0        |            |       |         |
| 1963        | 22.5         | 25.3    | 29.0    | 32.7    | 64.5        |            |       |         |
| 1964        | 9.3          | 11.8    | 13.3    | 14.8    | 31.0        |            |       |         |
| 1965        | 10.8         | 11.1    | 11.5    | 12.4    | 15.0        |            |       |         |
| 1966        | 12.7         | 21.5    | 24.3    | 26.7    | 44.0        |            |       |         |
| 1967        | 15.6         | 17.2    | 19.0    | 20.0    | 60.0        |            |       |         |
| 1968        | 10.0         | 17.0    | 23.0    | 24.5    | 39.5        |            |       |         |
| 1969        | 13.7         | 21.5    | 25.5    | 25.9    | 63.0        |            |       |         |
| 1970        | 28.7         | 31.6    | 31.8    | 35.9    | 101.0       |            |       |         |

| SECTION NO. | POSITION NO. |         | FIRST YEAR. |         | LAST YEAR. | MAP.  | NAME.     |
|-------------|--------------|---------|-------------|---------|------------|-------|-----------|
| 403         | 866          |         | 1961        |         | 1970       | 688.7 | FRANKFORT |
| YEAR.       | 15 MIN.      | 30 MIN. | 45 MIN.     | 60 MIN. | 1440 MIN.  |       |           |
| 1961        | 18.0         | 23.3    | 28.3        | 28.5    | 45.7       |       |           |
| 1962        | 20.0         | 26.0    | 26.5        | 26.5    | 39.4       |       |           |
| 1963        | 11.0         | 13.5    | 15.1        | 15.2    | 39.5       |       |           |
| 1964        | 20.0         | 25.0    | 29.0        | 32.0    | 65.5       |       |           |
| 1965        | 10.0         | 15.0    | 19.0        | 19.5    | 45.0       |       |           |
| 1966        | 10.0         | 15.0    | 18.2        | 19.0    | 37.5       |       |           |
| 1967        | 14.8         | 20.0    | 22.0        | 22.9    | 54.4       |       |           |
| 1968        | 10.8         | 11.8    | 13.0        | 14.5    | 29.7       |       |           |
| 1969        | 13.0         | 23.0    | 30.0        | 35.5    | 41.5       |       |           |
| 1970        | 14.0         | 17.0    | 19.0        | 21.0    | 32.9       |       |           |

| SECTION NO. | POSITION NO. |         | FIRST YEAR. |         | LAST YEAR. | MAP.  | NAME.        |
|-------------|--------------|---------|-------------|---------|------------|-------|--------------|
| 415         | 184          |         | 1956        |         | 1976       | 163.0 | KEETMANSHOOP |
| YEAR.       | 15 MIN.      | 30 MIN. | 45 MIN.     | 60 MIN. | 1440 MIN.  |       |              |
| 1956        | 17.4         | 21.9    | 24.6        | 25.6    |            |       |              |
| 1957        | 30.0         | 56.2    | 68.2        | 70.6    |            |       |              |
| 1958        | 7.6          | 9.1     | 9.2         | 9.4     |            |       |              |
| 1959        | 5.0          | 7.0     | 7.6         | 7.6     | 9.5        |       |              |
| 1960        | 11.0         | 15.0    | 15.6        | 15.6    | 15.5       |       |              |
| 1961        | 10.6         | 10.9    | 11.0        | 11.0    | 26.9       |       |              |
| 1962        | 12.5         | 21.0    | 27.8        | 32.0    | 62.0       |       |              |
| 1963        | 17.7         | 19.5    | 19.5        | 19.5    | 20.0       |       |              |
| 1964        | 2.5          | 3.8     | 4.3         | 4.4     | 5.8        |       |              |
| 1965        | 7.6          | 13.6    | 20.3        | 25.3    | 27.5       |       |              |
| 1966        | 5.0          | 8.0     | 10.2        | 12.1    | 12.1       |       |              |
| 1967        | 14.2         | 20.2    | 22.4        | 23.0    | 39.8       |       |              |
| 1968        | 9.5          | 11.2    | 11.5        | 11.7    | 24.2       |       |              |
| 1969        | 5.6          | 9.4     | 14.5        | 16.4    | 31.0       |       |              |
| 1970        | 4.3          | 7.0     | 8.2         | 9.2     | 28.2       |       |              |
| 1971        | 6.1          | 7.2     | 8.9         | 9.8     | 17.1       |       |              |
| 1972        | 11.9         | 12.4    | 15.7        | 16.8    | 21.7       |       |              |
| 1973        | 13.5         | 18.3    | 19.0        | 22.0    | 45.8       |       |              |
| 1974        | 26.9         | 46.3    | 60.4        | 66.1    | 71.6       |       |              |
| 1975        | 10.3         | 19.3    | 21.2        | 27.7    | 44.0       |       |              |
| 1976        | 15.2         | 26.2    | 27.7        | 28.9    | 44.4       |       |              |

| SECTION NO. | POSITION NO. |         | FIRST YEAR. |         | LAST YEAR. | MAP.  | NAME.         |
|-------------|--------------|---------|-------------|---------|------------|-------|---------------|
| 437         | 134          |         | 1951        |         | 1971       | 652.4 | POTCHEFSTROOM |
| YEAR.       | 15 MIN.      | 30 MIN. | 45 MIN.     | 60 MIN. | 1440 MIN.  |       |               |
| 1951        | 19.1         | 37.8    | 48.5        | 48.5    | 71.9       |       |               |
| 1952        | 14.2         | 18.7    | 19.3        | 19.3    | 39.4       |       |               |
| 1953        | 17.4         | 33.0    | 37.5        | 39.5    | 42.5       |       |               |
| 1954        | 20.4         | 34.9    | 42.7        | 51.3    | 76.0       |       |               |
| 1955        | 18.0         | 25.3    | 29.0        | 33.4    | 79.0       |       |               |
| 1956        | 18.3         | 20.7    | 22.5        | 24.6    | 48.5       |       |               |
| 1957        | 24.0         | 25.7    | 25.7        | 25.9    | 53.5       |       |               |
| 1958        | 14.0         | 19.4    | 21.4        | 23.4    | 34.5       |       |               |
| 1959        | 20.0         | 21.1    | 25.2        | 28.9    | 44.0       |       |               |
| 1960        | 16.5         | 29.0    | 36.0        | 37.5    | 68.0       |       |               |
| 1961        | 12.0         | 23.0    | 30.1        | 30.1    | 77.5       |       |               |
| 1962        | 10.5         | 13.7    | 14.8        | 16.9    | 40.3       |       |               |
| 1963        | 13.3         | 20.9    | 27.4        | 29.1    | 34.3       |       |               |
| 1964        | 20.0         | 21.1    | 41.5        | 46.1    | 54.0       |       |               |
| 1965        | 30.0         | 56.7    | 65.6        | 66.2    | 82.5       |       |               |
| 1966        | 13.0         | 20.2    | 26.0        | 27.8    | 46.5       |       |               |
| 1967        | 20.0         | 21.3    | 21.3        | 21.3    | 41.7       |       |               |
| 1968        | 13.0         | 17.3    | 23.4        | 24.5    | 38.3       |       |               |
| 1969        | 17.0         | 21.0    | 30.0        | 34.5    | 65.5       |       |               |
| 1970        | 29.0         | 37.0    | 39.0        | 40.5    | 45.4       |       |               |
| 1971        | 21.1         | 30.8    | 32.2        | 33.3    | 53.0       |       |               |

| SECTION NO. | POSITION NO. |         |         |         |           | FIRST YEAR. | LAST YEAR. | MAP.  | NAME.      |
|-------------|--------------|---------|---------|---------|-----------|-------------|------------|-------|------------|
| 441         | 446          |         |         |         |           | 1960        | 1970       | 71E.3 | STANDERTON |
| YEAR.       | 15 MIN.      | 30 MIN. | 45 MIN. | 60 MIN. | 1440 MIN. |             |            |       |            |
| 1960        | 14.5         | 27.5    | 26.5    | 34.0    | 64.5      |             |            |       |            |
| 1961        | 15.0         | 26.5    | 38.5    | 45.5    | 86.3      |             |            |       |            |
| 1962        | 11.0         | 14.0    | 14.1    | 14.1    | 32.5      |             |            |       |            |
| 1963        | 35.0         | 39.0    | 44.0    | 51.0    | 103.3     |             |            |       |            |
| 1964        | 30.0         | 47.0    | 55.0    | 58.0    | 80.5      |             |            |       |            |
| 1965        | 14.0         | 21.0    | 24.0    | 30.5    | 42.5      |             |            |       |            |
| 1966        | 14.0         | 21.0    | 23.5    | 27.5    | 38.8      |             |            |       |            |
| 1967        | 19.0         | 27.0    | 34.5    | 37.0    | 55.7      |             |            |       |            |
| 1968        | 12.0         | 15.0    | 17.0    | 17.0    | 31.7      |             |            |       |            |
| 1969        | 16.0         | 20.0    | 21.5    | 22.1    | 33.0      |             |            |       |            |
| 1970        | 22.0         | 32.0    | 43.0    | 47.0    | 95.0      |             |            |       |            |

| SECTION NO. | POSITION NO. |         |         |         |           | FIRST YEAR. | LAST YEAR. | MAP.  | NAME.     |
|-------------|--------------|---------|---------|---------|-----------|-------------|------------|-------|-----------|
| 476         | 396          |         |         |         |           | 1938        | 1976       | 722.9 | JAN SMUTS |
| YEAR.       | 15 MIN.      | 30 MIN. | 45 MIN. | 60 MIN. | 1440 MIN. |             |            |       |           |
| 1938        | 31.8         | 60.0    | 76.0    | 79.9    | 88.0      |             |            |       |           |
| 1939        | 12.5         | 21.2    | 24.3    | 25.9    | 67.2      |             |            |       |           |
| 1940        | 15.6         | 22.5    | 32.3    | 33.0    | 47.5      |             |            |       |           |
| 1941        | 14.6         | 22.0    | 25.5    | 28.3    | 63.9      |             |            |       |           |
| 1942        | 13.7         | 20.3    | 23.1    | 26.7    | 75.5      |             |            |       |           |
| 1943        | 27.2         | 38.4    | 42.3    | 43.5    | 58.3      |             |            |       |           |
| 1944        | 40.0         | 70.0    | 88.0    | 89.1    | 100.5     |             |            |       |           |
| 1945        | 11.9         | 16.8    | 21.8    | 25.0    | 76.2      |             |            |       |           |
| 1946        | 23.3         | 26.9    | 27.9    | 29.0    | 49.5      |             |            |       |           |
| 1947        | 21.8         | 32.0    | 32.2    | 32.2    | 43.6      |             |            |       |           |
| 1948        | 14.5         | 19.5    | 20.8    | 22.9    | 48.0      |             |            |       |           |
| 1949        | 21.9         | 29.6    | 33.0    | 34.3    | 35.8      |             |            |       |           |
| 1950        | 39.4         | 60.8    | 62.3    | 63.4    | 83.0      |             |            |       |           |
| 1951        | 13.2         | 18.3    | 20.3    | 22.4    | 88.0      |             |            |       |           |
| 1952        | 20.5         | 31.1    | 45.6    | 53.2    | 58.6      |             |            |       |           |
| 1953        | 15.6         | 22.5    | 32.3    | 33.0    | 47.5      |             |            |       |           |
| 1954        | 15.4         | 20.4    | 24.8    | 24.8    | 43.6      |             |            |       |           |
| 1955        | 14.6         | 22.0    | 25.5    | 28.3    | 63.9      |             |            |       |           |
| 1956        | 14.0         | 19.0    | 21.5    | 25.0    | 41.1      |             |            |       |           |
| 1957        | 30.1         | 60.1    | 73.6    | 75.6    | 88.7      |             |            |       |           |
| 1958        | 18.0         | 22.0    | 24.3    | 25.8    | 68.0      |             |            |       |           |
| 1959        | 14.2         | 20.5    | 26.5    | 27.0    | 36.4      |             |            |       |           |
| 1960        | 15.7         | 19.4    | 21.8    | 22.3    | 33.9      |             |            |       |           |
| 1961        | 10.3         | 19.6    | 19.6    | 19.6    | 37.3      |             |            |       |           |
| 1962        | 20.4         | 28.6    | 29.5    | 29.8    | 65.0      |             |            |       |           |
| 1963        | 21.2         | 25.3    | 27.1    | 27.5    | 57.4      |             |            |       |           |
| 1964        | 18.5         | 25.5    | 32.0    | 38.0    | 71.2      |             |            |       |           |
| 1965        | 14.5         | 19.5    | 24.0    | 25.9    | 49.8      |             |            |       |           |
| 1966        | 19.6         | 21.6    | 23.6    | 25.5    | 36.5      |             |            |       |           |
| 1967        | 10.0         | 18.3    | 19.4    | 20.9    | 92.0      |             |            |       |           |
| 1968        | 19.8         | 23.1    | 23.6    | 25.2    | 54.8      |             |            |       |           |
| 1969        | 17.0         | 27.5    | 32.9    | 32.9    | 15.5      |             |            |       |           |
| 1970        | 11.3         | 15.4    | 17.2    | 17.7    | 43.4      |             |            |       |           |
| 1971        | 10.4         | 14.3    | 15.6    | 17.0    | 41.6      |             |            |       |           |
| 1972        | 20.0         | 40.0    | 59.6    | 76.0    | 187.8     |             |            |       |           |
| 1973        | 13.3         | 20.3    | 21.6    | 25.5    | 49.1      |             |            |       |           |
| 1974        | 13.0         | 20.9    | 27.7    | 28.4    | 19.7      |             |            |       |           |
| 1975        | 20.0         | 37.0    | 45.7    | 47.5    | 71.5      |             |            |       |           |
| 1976        | 17.4         | 21.2    | 29.7    | 33.0    | 88.7      |             |            |       |           |

| SECTION NO. | POSITION NO. |         |         |         |           | FIRST YEAR. | LAST YEAR. | MAP.  | NAME.  |
|-------------|--------------|---------|---------|---------|-----------|-------------|------------|-------|--------|
| 478         | 867          |         |         |         |           | 1963        | 1971       | 747.6 | BETHAL |
| YEAR.       | 15 MIN.      | 30 MIN. | 45 MIN. | 60 MIN. | 1440 MIN. |             |            |       |        |
| 1963        | 7.9          | 11.3    | 13.8    | 16.8    | 63.2      |             |            |       |        |
| 1964        | 18.5         | 30.5    | 33.4    | 33.9    | 86.7      |             |            |       |        |
| 1965        | 20.3         | 27.8    | 34.4    | 34.4    | 35.3      |             |            |       |        |
| 1966        | 21.1         | 30.5    | 35.7    | 36.1    | 63.6      |             |            |       |        |
| 1967        | 18.0         | 25.7    | 34.1    | 36.7    | 50.5      |             |            |       |        |
| 1968        | 12.3         | 17.3    | 18.0    | 18.0    | 25.2      |             |            |       |        |
| 1969        | 30.0         | 40.0    | 44.0    | 44.5    | 61.3      |             |            |       |        |
| 1970        | 10.0         | 16.5    | 20.0    | 20.5    | 35.1      |             |            |       |        |
| 1971        | 20.0         | 29.0    | 38.0    | 45.0    | 34.0      |             |            |       |        |

| SECTION NO. | POSITION NO. |         | FIRST YEAR. |         | LAST YEAR. | MAP.  | NAME.    |
|-------------|--------------|---------|-------------|---------|------------|-------|----------|
| 48C         | 184          |         | 1961        |         | 1971       | 757.7 | CAROLINA |
| YEAR.       | 15 MIN.      | 30 MIN. | 45 MIN.     | 60 MIN. | 1440 MIN.  |       |          |
| 1961        | 18.5         | 25.0    | 27.5        | 29.5    | 42.0       |       |          |
| 1962        | 15.3         | 18.7    | 18.7        | 23.0    | 51.5       |       |          |
| 1963        | 11.7         | 15.5    | 18.6        | 23.1    | 49.5       |       |          |
| 1964        | 21.1         | 30.6    | 40.5        | 44.0    | 48.0       |       |          |
| 1965        | 25.0         | 45.8    | 49.0        | 50.1    | 53.0       |       |          |
| 1966        | 17.0         | 19.1    | 20.1        | 20.2    | 44.2       |       |          |
| 1967        | 15.2         | 17.3    | 19.1        | 20.6    | 37.9       |       |          |
| 1968        | 16.8         | 19.0    | 21.8        | 22.9    | 44.0       |       |          |
| 1969        | 16.4         | 31.4    | 41.8        | 49.8    | 80.0       |       |          |
| 1970        | 23.1         | 38.4    | 59.7        | 63.6    | 74.4       |       |          |
| 1971        | 12.0         | 21.0    | 26.5        | 29.0    | 43.5       |       |          |

| SECTION NO. | POSITION NO. |         | FIRST YEAR. |         | LAST YEAR. | MAP.  | NAME.    |
|-------------|--------------|---------|-------------|---------|------------|-------|----------|
| 50E         | 261          |         | 1958        |         | 1965       | 561.2 | MAPEKING |
| YEAR.       | 15 MIN.      | 30 MIN. | 45 MIN.     | 60 MIN. | 1440 MIN.  |       |          |
| 1958        | 17.0         | 19.3    | 19.4        | 19.4    | 35.0       |       |          |
| 1959        | 18.4         | 27.0    | 35.5        | 40.5    | 51.2       |       |          |
| 1960        | 51.3         | 57.5    | 60.4        | 64.2    | 84.4       |       |          |
| 1961        | 19.4         | 31.3    | 39.6        | 43.3    | 89.5       |       |          |
| 1962        | 34.7         | 37.2    | 46.3        | 46.3    | 51.2       |       |          |
| 1963        | 17.2         | 24.5    | 25.9        | 31.2    | 36.0       |       |          |
| 1964        | 17.9         | 31.6    | 36.5        | 43.0    | 79.5       |       |          |
| 1965        | 22.8         | 31.7    | 32.2        | 32.2    | 33.1       |       |          |

| SECTION NO. | POSITION NO. |         | FIRST YEAR. |         | LAST YEAR. | MAP.  | NAME.    |
|-------------|--------------|---------|-------------|---------|------------|-------|----------|
| 51E         | 405          |         | 1938        |         | 1976       | 742.1 | PRETORIA |
| YEAR.       | 15 MIN.      | 30 MIN. | 45 MIN.     | 60 MIN. | 1440 MIN.  |       |          |
| 1938        | 22.5         | 32.6    | 36.2        | 37.9    | 51.8       |       |          |
| 1939        | 23.4         | 34.0    | 44.2        | 46.7    | 99.0       |       |          |
| 1940        | 15.2         | 17.0    | 19.3        | 21.8    | 48.0       |       |          |
| 1941        | 12.7         | 21.3    | 25.1        | 26.7    | 49.0       |       |          |
| 1942        | 15.7         | 24.1    | 31.8        | 37.3    | 44.4       |       |          |
| 1943        | 13.2         | 18.8    | 20.8        | 22.6    | 50.5       |       |          |
| 1944        | 17.5         | 30.7    | 32.6        | 32.8    | 71.4       |       |          |
| 1945        | 14.0         | 25.4    | 31.2        | 34.3    | 71.1       |       |          |
| 1946        | 20.3         | 28.4    | 32.8        | 33.8    | 64.8       |       |          |
| 1947        | 24.9         | 30.5    | 34.5        | 36.1    | 62.0       |       |          |
| 1948        | 21.6         | 31.8    | 38.9        | 60.4    | 91.7       |       |          |
| 1949        | 21.4         | 31.5    | 34.8        | 36.8    | 49.9       |       |          |
| 1950        | 13.5         | 21.1    | 24.6        | 29.2    | 94.0       |       |          |
| 1951        | 18.3         | 19.6    | 22.4        | 29.2    | 53.1       |       |          |
| 1952        | 21.9         | 36.8    | 43.5        | 48.0    | 64.5       |       |          |
| 1953        | 15.5         | 20.2    | 28.4        | 30.9    | 50.9       |       |          |
| 1954        | 28.7         | 40.0    | 43.5        | 44.2    | 48.5       |       |          |
| 1955        | 33.5         | 48.0    | 61.0        | 75.1    | 135.0      |       |          |
| 1956        | 14.5         | 19.4    | 21.9        | 27.0    | 40.7       |       |          |
| 1957        | 14.9         | 22.8    | 24.5        | 27.4    | 54.5       |       |          |
| 1958        | 12.5         | 15.0    | 17.7        | 20.5    | 34.9       |       |          |
| 1959        | 16.2         | 26.5    | 36.8        | 38.4    | 86.7       |       |          |
| 1960        | 15.4         | 19.7    | 21.9        | 25.9    | 42.2       |       |          |
| 1961        | 15.2         | 24.0    | 24.2        | 30.6    | 69.4       |       |          |
| 1962        | 12.7         | 20.5    | 26.0        | 32.0    | 85.2       |       |          |
| 1963        | 18.0         | 23.2    | 29.6        | 33.1    | 59.2       |       |          |
| 1964        | 18.5         | 26.5    | 30.5        | 31.2    | 71.0       |       |          |
| 1965        | 11.4         | 20.9    | 21.7        | 22.0    | 77.7       |       |          |
| 1966        | 12.2         | 19.2    | 19.7        | 20.8    | 48.2       |       |          |
| 1967        | 12.0         | 17.5    | 19.3        | 20.8    | 81.3       |       |          |
| 1968        | 20.2         | 30.4    | 31.6        | 31.9    | 55.6       |       |          |
| 1969        | 18.0         | 30.5    | 32.7        | 42.6    | 93.5       |       |          |
| 1970        | 17.0         | 18.2    | 20.0        | 20.5    | 40.5       |       |          |
| 1971        | 13.0         | 18.2    | 22.0        | 24.3    | 46.9       |       |          |
| 1972        | 21.4         | 33.0    | 36.1        | 38.4    | 60.8       |       |          |
| 1973        | 27.6         | 45.4    | 52.9        | 58.8    | 61.0       |       |          |
| 1974        | 32.9         | 40.8    | 49.3        | 55.7    | 65.3       |       |          |
| 1975        | 12.0         | 21.0    | 23.5        | 24.3    | 53.3       |       |          |
| 1976        | 17.0         | 23.8    | 30.7        | 32.8    | 95.2       |       |          |

| SECTION NO. | POSITION NO. |         |         | FIRST YEAR. | LAST YEAR. | MAP.  | NAME.     |
|-------------|--------------|---------|---------|-------------|------------|-------|-----------|
| 555         | 837          |         |         | 1961        | 1971       | 776.7 | NELSPRUIT |
| YEAR.       | 15 MIN.      | 30 MIN. | 45 MIN. | 60 MIN.     | 1440 MIN.  |       |           |
| 1961        | 21.5         | 33.5    | 40.5    | 43.5        | 88.4       |       |           |
| 1962        | 22.2         | 28.5    | 29.5    | 43.0        | 65.0       |       |           |
| 1963        | 33.0         | 52.0    | 57.3    | 57.3        | 64.0       |       |           |
| 1964        | 24.0         | 41.0    | 42.2    | 42.4        | 56.5       |       |           |
| 1965        | 21.9         | 28.4    | 28.7    | 28.7        | 56.2       |       |           |
| 1966        | 37.0         | 53.0    | 55.0    | 59.0        | 65.1       |       |           |
| 1967        | 30.0         | 54.0    | 61.0    | 65.1        | 72.2       |       |           |
| 1968        | 22.0         | 40.0    | 48.0    | 52.0        | 57.6       |       |           |
| 1969        | 17.2         | 25.1    | 28.4    | 28.6        | 57.0       |       |           |
| 1970        | 12.0         | 17.0    | 20.0    | 23.2        | 37.7       |       |           |
| 1971        | 20.0         | 27.5    | 30.5    | 30.8        | 67.2       |       |           |

| SECTION NO. | POSITION NO. |         |         | FIRST YEAR. | LAST YEAR. | MAP.  | NAME.     |
|-------------|--------------|---------|---------|-------------|------------|-------|-----------|
| 556         | 817          |         |         | 1960        | 1971       | 180.0 | MARIENTAL |
| YEAR.       | 15 MIN.      | 30 MIN. | 45 MIN. | 60 MIN.     | 1440 MIN.  |       |           |
| 1960        | 7.7          | 15.0    | 17.4    | 19.4        | 36.0       |       |           |
| 1961        | 14.8         | 26.1    | 35.3    | 35.5        | 35.5       |       |           |
| 1962        | 10.0         | 10.0    | 10.0    | 10.3        | 22.6       |       |           |
| 1963        | 21.0         | 22.1    | 22.5    | 22.5        | 26.4       |       |           |
| 1964        | 5.8          | 6.3     | 6.4     | 6.8         | 7.7        |       |           |
| 1965        | 8.5          | 8.5     | 8.5     | 8.5         | 28.0       |       |           |
| 1966        | 8.0          | 10.8    | 12.3    | 13.3        | 22.0       |       |           |
| 1967        | 10.5         | 10.6    | 15.2    | 19.7        | 24.5       |       |           |
| 1968        | 8.0          | 11.5    | 16.5    | 20.5        | 33.0       |       |           |
| 1969        | 14.5         | 20.7    | 24.2    | 27.2        | 55.5       |       |           |
| 1970        | 9.5          | 10.0    | 10.5    | 11.0        | 21.5       |       |           |
| 1971        | 9.0          | 10.9    | 15.5    | 19.9        | 31.5       |       |           |

| SECTION NO. | POSITION NO. |         |         | FIRST YEAR. | LAST YEAR. | MAP.  | NAME.    |
|-------------|--------------|---------|---------|-------------|------------|-------|----------|
| 559         | 594          |         |         | 1947        | 1972       | 641.2 | TOWCEMBA |
| YEAR.       | 15 MIN.      | 30 MIN. | 45 MIN. | 60 MIN.     | 1440 MIN.  |       |          |
| 1947        | 11.4         | 19.0    | 19.0    | 20.2        | 66.8       |       |          |
| 1948        | 17.0         | 23.2    | 32.0    | 40.7        | 37.1       |       |          |
| 1949        | 12.7         | 18.9    | 20.4    | 21.8        | 42.4       |       |          |
| 1950        | 19.5         | 30.5    | 35.0    | 38.7        | 54.4       |       |          |
| 1951        | 18.9         | 35.5    | 42.2    | 46.8        | 48.3       |       |          |
| 1952        | 20.7         | 28.4    | 36.0    | 36.3        | 50.0       |       |          |
| 1953        | 15.3         | 23.9    | 28.7    | 30.6        | 55.0       |       |          |
| 1954        | 20.4         | 21.8    | 22.6    | 24.3        | 46.0       |       |          |
| 1955        | 23.3         | 32.3    | 37.8    | 42.8        | 116.5      |       |          |
| 1956        | 29.3         | 56.7    | 71.9    | 81.1        | 97.6       |       |          |
| 1957        | 19.6         | 24.2    | 25.4    | 27.0        | 49.5       |       |          |
| 1958        | 21.2         | 31.8    | 40.7    | 48.7        | 52.5       |       |          |
| 1959        | 10.0         | 16.8    | 21.4    | 27.6        | 59.6       |       |          |
| 1960        | 15.2         | 20.6    | 22.1    | 22.2        | 58.5       |       |          |
| 1961        | 9.7          | 15.3    | 17.4    | 18.5        | 42.5       |       |          |
| 1962        | 8.6          | 13.4    | 14.7    | 14.7        | 45.3       |       |          |
| 1963        | 9.7          | 13.0    | 13.9    | 14.6        | 47.5       |       |          |
| 1964        | 45.0         | 56.1    | 63.0    | 65.5        | 84.0       |       |          |
| 1965        | 18.0         | 28.0    | 35.0    | 39.0        | 51.0       |       |          |
| 1966        | 56.0         | 65.5    | 68.0    | 68.5        | 88.0       |       |          |
| 1967        | 18.0         | 23.5    | 27.0    | 27.0        | 85.5       |       |          |
| 1968        | 15.0         | 23.5    | 28.5    | 31.5        | 36.0       |       |          |
| 1969        | 20.0         | 28.0    | 30.0    | 32.5        | 38.5       |       |          |
| 1970        | 10.5         | 12.2    | 12.5    | 12.5        | 34.0       |       |          |
| 1971        | 23.0         | 34.5    | 35.2    | 35.5        |            |       |          |
| 1972        | 22.0         | 39.0    | 48.5    | 49.0        |            |       |          |

| SECTION NO. | POSITION NO. |         |         |         | FIRST YEAR. | LAST YEAR. | MAP.  | NAME. |
|-------------|--------------|---------|---------|---------|-------------|------------|-------|-------|
| 590         | 550          |         |         |         | 1950        | 1965       | 610.0 | CRECY |
| YEAR.       | 15 MIN.      | 30 MIN. | 45 MIN. | 60 MIN. | 1440 MIN.   |            |       |       |
| 1956        | 18.5         | 24.2    | 24.2    | 24.2    | 39.9        |            |       |       |
| 1957        | 20.5         | 23.0    | 29.0    | 33.0    | 49.0        |            |       |       |
| 1958        | 10.0         | 15.0    | 20.0    | 25.0    | 49.2        |            |       |       |
| 1959        | 19.0         | 25.0    | 27.0    | 28.0    | 59.8        |            |       |       |
| 1960        | 21.0         | 31.5    | 31.5    | 31.5    | 44.4        |            |       |       |
| 1961        | 29.5         | 39.5    | 44.5    | 46.5    | 53.2        |            |       |       |
| 1962        | 13.0         | 23.0    | 32.2    | 36.7    | 70.0        |            |       |       |
| 1963        | 19.0         | 28.5    | 29.0    | 29.0    | 32.0        |            |       |       |
| 1964        | 20.0         | 26.0    | 30.0    | 31.0    | 50.5        |            |       |       |
| 1965        | 14.5         | 22.0    | 26.5    | 29.0    | 41.2        |            |       |       |

| SECTION NO. | POSITION NO. |         |         |         | FIRST YEAR. | LAST YEAR. | MAP.  | NAME.       |
|-------------|--------------|---------|---------|---------|-------------|------------|-------|-------------|
| 677         | 802          |         |         |         | 1938        | 1976       | 545.0 | PIETERSBERG |
| YEAR.       | 15 MIN.      | 30 MIN. | 45 MIN. | 60 MIN. | 1440 MIN.   |            |       |             |
| 1938        | 8.5          | 11.4    | 13.0    | 15.3    | 44.1        |            |       |             |
| 1939        | 34.8         | 49.6    | 51.1    | 54.4    | 59.4        |            |       |             |
| 1940        | 12.9         | 22.5    | 26.3    | 26.5    | 75.0        |            |       |             |
| 1941        | 26.5         | 35.0    | 37.1    | 38.7    | 121.9       |            |       |             |
| 1942        | 22.4         | 33.5    | 34.8    | 37.1    | 76.0        |            |       |             |
| 1943        | 20.2         | 30.7    | 33.9    | 36.2    | 48.6        |            |       |             |
| 1944        | 11.3         | 19.1    | 22.7    | 24.1    | 43.5        |            |       |             |
| 1945        | 7.3          | 12.7    | 13.8    | 14.0    | 25.7        |            |       |             |
| 1946        | 19.1         | 27.7    | 30.7    | 32.3    | 44.1        |            |       |             |
| 1947        | 18.4         | 27.5    | 32.6    | 36.7    | 45.8        |            |       |             |
| 1948        | 24.6         | 36.2    | 39.9    | 41.8    | 57.0        |            |       |             |
| 1949        | 20.8         | 29.1    | 30.4    | 30.4    | 70.0        |            |       |             |
| 1950        | 12.5         | 23.8    | 30.4    | 34.6    | 51.5        |            |       |             |
| 1951        | 27.9         | 37.8    | 38.7    | 38.7    | 38.9        |            |       |             |
| 1952        | 24.3         | 28.8    | 29.9    | 30.6    | 33.9        |            |       |             |
| 1953        | 12.3         | 15.5    | 17.2    | 18.0    | 31.6        |            |       |             |
| 1954        | 19.3         | 24.6    | 27.2    | 28.9    | 29.7        |            |       |             |
| 1955        | 18.4         | 34.7    | 40.1    | 42.1    | 108.6       |            |       |             |
| 1956        | 9.3          | 11.7    | 12.5    | 12.7    | 27.4        |            |       |             |
| 1957        | 8.5          | 13.2    | 16.9    | 17.4    | 31.2        |            |       |             |
| 1958        | 18.5         | 28.0    | 33.1    | 38.1    | 65.6        |            |       |             |
| 1959        | 12.8         | 23.2    | 26.4    | 27.7    | 37.8        |            |       |             |
| 1960        | 15.4         | 18.4    | 19.0    | 19.3    | 43.4        |            |       |             |
| 1961        | 23.0         | 31.5    | 36.0    | 36.5    | 37.4        |            |       |             |
| 1962        | 16.2         | 29.2    | 30.2    | 30.2    | 45.0        |            |       |             |
| 1963        | 20.0         | 35.1    | 42.1    | 55.1    | 70.3        |            |       |             |
| 1964        | 33.0         | 37.7    | 39.9    | 43.1    | 67.5        |            |       |             |
| 1965        | 17.8         | 27.8    | 27.8    | 27.8    | 27.8        |            |       |             |
| 1966        | 27.0         | 53.3    | 56.6    | 63.4    | 78.6        |            |       |             |
| 1967        | 13.4         | 20.2    | 20.2    | 20.4    | 34.4        |            |       |             |
| 1968        | 18.3         | 23.8    | 25.8    | 26.7    | 31.2        |            |       |             |
| 1969        | 13.1         | 19.6    | 21.2    | 23.2    | 53.0        |            |       |             |
| 1970        | 17.8         | 18.8    | 19.5    | 19.7    | 38.0        |            |       |             |
| 1971        | 28.8         | 36.7    | 36.7    | 36.7    | 45.6        |            |       |             |
| 1972        | 8.2          | 14.2    | 16.3    | 16.3    | 43.1        |            |       |             |
| 1973        | 20.0         | 31.5    | 35.2    | 40.0    | 74.0        |            |       |             |
| 1974        | 18.5         | 25.7    | 30.2    | 31.7    | 34.7        |            |       |             |
| 1975        | 17.5         | 26.5    | 35.5    | 40.5    | 68.5        |            |       |             |
| 1976        | 16.5         | 28.0    | 33.4    | 34.2    | 40.2        |            |       |             |

| SECTION NO. | POSITION NO. |         | FIRST YEAR. |         | LAST YEAR. | MAP.  | NAME.   |
|-------------|--------------|---------|-------------|---------|------------|-------|---------|
| 715         | 370          |         | 1958        |         | 1972       | 408.1 | WERNITZ |
| YEAR.       | 15 MIN.      | 30 MIN. | 45 MIN.     | 60 MIN. | 1440 MIN.  |       |         |
| 1958        | 13.0         | 24.0    | 34.0        | 37.5    | 57.0       |       |         |
| 1959        | 24.0         | 31.0    | 45.0        | 46.0    | 66.0       |       |         |
| 1960        | 15.0         | 23.0    | 25.5        | 26.3    | 60.5       |       |         |
| 1961        | 22.5         | 25.0    | 29.5        | 31.0    | 50.0       |       |         |
| 1962        | 13.0         | 14.8    | 17.0        | 18.1    | 34.0       |       |         |
| 1963        | 15.0         | 27.5    | 34.0        | 40.0    | 59.0       |       |         |
| 1964        | 9.5          | 14.5    | 19.5        | 21.5    | 33.0       |       |         |
| 1965        | 14.5         | 20.0    | 20.5        | 23.5    | 28.0       |       |         |
| 1966        | 17.3         | 29.0    | 35.5        | 49.2    | 71.0       |       |         |
| 1967        | 17.2         | 27.5    | 39.8        | 54.5    | 35.0       |       |         |
| 1968        | 9.0          | 11.0    | 15.0        | 18.0    | 59.5       |       |         |
| 1969        | 16.0         | 22.5    | 25.0        | 25.5    | 48.4       |       |         |
| 1970        | 27.9         | 49.3    | 53.8        | 72.2    | 82.5       |       |         |
| 1971        | 14.5         | 20.2    | 23.2        | 26.5    | 53.5       |       |         |
| 1972        | 14.5         | 21.1    | 23.0        | 26.0    | 27.0       |       |         |

| SECTION NO. | POSITION NO. |         | FIRST YEAR. |         | LAST YEAR. | MAP.  | NAME.    |
|-------------|--------------|---------|-------------|---------|------------|-------|----------|
| 740         | 154          |         | 1956        |         | 1976       | 367.3 | WINDPOEK |
| YEAR.       | 15 MIN.      | 30 MIN. | 45 MIN.     | 60 MIN. | 1440 MIN.  |       |          |
| 1956        | 17.4         | 21.9    | 24.6        | 25.6    | 55.6       |       |          |
| 1957        | 30.0         | 52.2    | 68.2        | 70.6    | 99.5       |       |          |
| 1958        | 7.6          | 9.1     | 9.2         | 9.4     | 21.0       |       |          |
| 1959        | 5.0          | 7.0     | 7.6         | 7.6     | 9.5        |       |          |
| 1960        | 11.0         | 15.0    | 15.6        | 15.6    | 15.6       |       |          |
| 1961        | 10.6         | 10.9    | 11.0        | 11.0    | 26.9       |       |          |
| 1962        | 12.5         | 21.0    | 27.8        | 32.0    | 62.0       |       |          |
| 1963        | 17.7         | 19.5    | 19.5        | 19.5    | 20.0       |       |          |
| 1964        | 9.5          | 14.2    | 16.8        | 18.4    | 20.4       |       |          |
| 1965        | 10.0         | 19.5    | 19.9        | 20.2    | 34.8       |       |          |
| 1966        | 23.1         | 32.1    | 36.1        | 36.7    | 42.7       |       |          |
| 1967        | 11.6         | 16.5    | 19.0        | 20.6    | 40.0       |       |          |
| 1968        | 17.7         | 28.1    | 31.0        | 32.5    | 34.3       |       |          |
| 1969        | 14.6         | 29.0    | 36.4        | 37.1    | 38.5       |       |          |
| 1970        | 20.0         | 30.0    | 33.7        | 40.0    | 75.7       |       |          |
| 1971        | 9.5          | 13.0    | 16.7        | 17.2    | 28.5       |       |          |
| 1972        | 19.5         | 22.3    | 22.6        | 22.6    | 46.0       |       |          |
| 1973        | 19.9         | 31.0    | 36.8        | 40.1    | 38.0       |       |          |
| 1974        | 41.4         | 53.4    | 59.4        | 61.8    | 64.5       |       |          |
| 1975        | 22.0         | 38.5    | 49.0        | 50.5    | 56.5       |       |          |
| 1976        | 9.1          | 13.7    | 17.0        | 22.7    | 45.4       |       |          |

| SECTION NO. | POSITION NO. |         | FIRST YEAR. |         | LAST YEAR. | MAP.  | NAME.       |
|-------------|--------------|---------|-------------|---------|------------|-------|-------------|
| 784         | 839          |         | 1967        |         | 1976       | 380.0 | J G STRYDOM |
| YEAR.       | 15 MIN.      | 30 MIN. | 45 MIN.     | 60 MIN. | 1440 MIN.  |       |             |
| 1967        | 17.5         | 20.5    | 21.0        | 21.4    | 28.7       |       |             |
| 1968        | 13.7         | 16.8    | 17.2        | 18.7    | 32.4       |       |             |
| 1969        | 13.5         | 23.5    | 24.0        | 24.0    | 29.8       |       |             |
| 1970        | 9.5          | 15.2    | 15.7        | 16.2    | 25.0       |       |             |
| 1971        | 15.8         | 20.0    | 22.7        | 22.7    | 44.0       |       |             |
| 1972        | 14.5         | 22.5    | 28.0        | 30.4    | 70.5       |       |             |
| 1973        | 16.7         | 30.2    | 31.2        | 31.5    | 34.2       |       |             |
| 1974        | 14.0         | 23.0    | 24.6        | 25.3    | 65.5       |       |             |
| 1975        | 12.1         | 19.5    | 22.9        | 24.1    | 40.3       |       |             |
| 1976        | 11.1         | 18.8    | 19.6        | 21.6    | 50.1       |       |             |

| SECTION NO. | POSITION NO. |         |         |         |           | FIRST YEAR. | LAST YEAR. | MAP.  | NAME.    |
|-------------|--------------|---------|---------|---------|-----------|-------------|------------|-------|----------|
| 787         | 838          |         |         |         |           | 1960        | 1971       | 350.0 | GOREADIS |
| YEAR.       | 15 MIN.      | 30 MIN. | 45 MIN. | 60 MIN. | 1440 MIN. |             |            |       |          |
| 1960        | 13.3         | 16.8    | 17.5    | 19.5    | 56.8      |             |            |       |          |
| 1961        | 14.7         | 18.6    | 21.1    | 22.3    | 32.5      |             |            |       |          |
| 1962        | 6.5          | 9.5     | 12.2    | 12.8    | 34.7      |             |            |       |          |
| 1963        | 18.8         | 28.3    | 32.7    | 34.4    | 45.8      |             |            |       |          |
| 1964        | 13.1         | 15.2    | 17.2    | 18.4    | 27.5      |             |            |       |          |
| 1965        | 13.0         | 20.4    | 22.8    | 26.8    | 31.0      |             |            |       |          |
| 1966        | 9.0          | 12.1    | 13.9    | 14.1    | 39.5      |             |            |       |          |
| 1967        | 10.8         | 13.8    | 15.8    | 18.5    | 53.0      |             |            |       |          |
| 1968        | 11.0         | 17.0    | 21.7    | 22.6    | 26.0      |             |            |       |          |
| 1969        | 12.5         | 18.0    | 20.0    | 22.0    | 43.5      |             |            |       |          |
| 1970        | 11.5         | 13.0    | 14.0    | 14.0    | 26.5      |             |            |       |          |
| 1971        | 14.0         | 19.8    | 28.0    | 29.5    | 35.2      |             |            |       |          |

| SECTION NO. | POSITION NO. |         |         |         |           | FIRST YEAR. | LAST YEAR. | MAP.  | NAME.   |
|-------------|--------------|---------|---------|---------|-----------|-------------|------------|-------|---------|
| 810         | 80           |         |         |         |           | 1956        | 1965       | 312.2 | MESSINA |
| YEAR.       | 15 MIN.      | 30 MIN. | 45 MIN. | 60 MIN. | 1440 MIN. |             |            |       |         |
| 1956        | 12.6         | 13.1    | 14.2    | 14.5    | 35.5      |             |            |       |         |
| 1957        | 13.2         | 22.9    | 30.8    | 34.0    | 46.5      |             |            |       |         |
| 1958        | 17.8         | 27.5    | 35.3    | 41.3    | 167.0     |             |            |       |         |
| 1959        | 28.7         | 34.8    | 37.4    | 39.8    | 47.5      |             |            |       |         |
| 1960        | 25.6         | 33.0    | 47.8    | 54.3    | 107.5     |             |            |       |         |
| 1961        | 16.0         | 25.2    | 27.2    | 28.0    | 34.5      |             |            |       |         |
| 1962        | 40.0         | 60.5    | 66.6    | 68.2    | 73.5      |             |            |       |         |
| 1963        | 24.0         | 37.6    | 48.3    | 62.8    | 67.5      |             |            |       |         |
| 1964        | 16.4         | 31.7    | 40.4    | 45.6    | 54.5      |             |            |       |         |
| 1965        | 18.3         | 19.5    | 20.0    | 23.5    | 39.5      |             |            |       |         |

| SECTION NO. | POSITION NO. |         |         |         |           | FIRST YEAR. | LAST YEAR. | MAP.  | NAME. |
|-------------|--------------|---------|---------|---------|-----------|-------------|------------|-------|-------|
| 961         | 247          |         |         |         |           | 1960        | 1969       | 409.4 | CUTJC |
| YEAR.       | 15 MIN.      | 30 MIN. | 45 MIN. | 60 MIN. | 1440 MIN. |             |            |       |       |
| 1960        | 9.1          | 10.9    | 16.2    | 16.6    | 32.2      |             |            |       |       |
| 1961        | 16.0         | 17.9    | 22.9    | 26.2    | 42.7      |             |            |       |       |
| 1962        | 18.0         | 30.0    | 34.5    | 34.9    | 37.5      |             |            |       |       |
| 1963        | 18.4         | 28.8    | 40.6    | 47.4    | 51.5      |             |            |       |       |
| 1964        | 12.5         | 15.7    | 17.2    | 17.5    | 23.5      |             |            |       |       |
| 1965        | 12.5         | 20.5    | 25.5    | 26.0    | 34.0      |             |            |       |       |
| 1966        | 18.6         | 21.8    | 23.0    | 24.0    | 25.5      |             |            |       |       |
| 1967        | 18.0         | 22.1    | 25.5    | 27.5    | 71.0      |             |            |       |       |
| 1968        | 13.0         | 17.0    | 18.5    | 19.9    | 41.5      |             |            |       |       |
| 1969        | 11.0         | 17.9    | 17.9    | 17.9    | 58.0      |             |            |       |       |

| SECTION NO. | POSITION NO. |         |         |         |           | FIRST YEAR. | LAST YEAR. | MAP.  | NAME.            |
|-------------|--------------|---------|---------|---------|-----------|-------------|------------|-------|------------------|
| 1010        | 186          |         |         |         |           | 1969        | 1976       | 510.0 | GRCCIFONTEIN SWA |
| YEAR.       | 15 MIN.      | 30 MIN. | 45 MIN. | 60 MIN. | 1440 MIN. |             |            |       |                  |
| 1969        | 15.2         | 19.5    | 24.6    | 28.6    | 45.4      |             |            |       |                  |
| 1970        | 16.2         | 22.0    | 25.1    | 26.6    | 36.3      |             |            |       |                  |
| 1971        | 12.0         | 20.3    | 21.5    | 22.3    | 41.5      |             |            |       |                  |
| 1972        | 9.7          | 10.0    | 19.6    | 19.6    | 72.5      |             |            |       |                  |
| 1973        | 20.5         | 35.5    | 39.3    | 42.2    | 45.4      |             |            |       |                  |
| 1974        | 29.1         | 48.7    | 58.3    | 68.7    | 93.3      |             |            |       |                  |
| 1975        | 5.0          | 14.0    | 16.2    | 16.5    | 54.7      |             |            |       |                  |
| 1976        | 10.2         | 17.5    | 20.0    | 22.5    | 57.1      |             |            |       |                  |

| SECTION NO. | POSITION NO. |         |         |         |           | FIRST YEAR. | LAST YEAR. | MAP.  | NAME. |
|-------------|--------------|---------|---------|---------|-----------|-------------|------------|-------|-------|
| 102C        | 749          |         |         |         |           | 1952        | 1963       | 466.6 | MAUN  |
| YEAR.       | 15 MIN.      | 30 MIN. | 45 MIN. | 60 MIN. | 1440 MIN. |             |            |       |       |
| 1952        | 8.8          | 15.5    | 20.9    | 21.8    | 23.6      |             |            |       |       |
| 1953        | 29.8         | 34.3    | 37.4    | 38.3    | 56.1      |             |            |       |       |
| 1954        | 18.0         | 21.6    | 26.9    | 31.9    | 64.4      |             |            |       |       |
| 1955        | 20.2         | 35.5    | 39.6    | 41.4    | 56.8      |             |            |       |       |
| 1956        | 15.0         | 23.2    | 34.4    | 40.3    | 45.6      |             |            |       |       |
| 1957        | 15.0         | 19.2    | 20.7    | 27.8    | 41.2      |             |            |       |       |
| 1958        | 15.8         | 18.1    | 21.7    | 22.4    | 32.0      |             |            |       |       |
| 1959        | 21.4         | 31.0    | 35.3    | 36.6    | 46.5      |             |            |       |       |
| 1960        | 11.4         | 18.4    | 18.8    | 18.9    | 27.9      |             |            |       |       |
| 1961        | 17.2         | 26.0    | 34.0    | 40.6    | 55.0      |             |            |       |       |
| 1962        | 20.4         | 36.6    | 47.3    | 57.5    | 80.0      |             |            |       |       |
| 1963        | 27.4         | 44.2    | 56.3    | 63.7    | 79.5      |             |            |       |       |