



**Australian Government**  
**Bureau of Meteorology**

**Tropical Cyclone *Frederic***  
28 January – 1 February 1988

Perth Tropical Cyclone Warning Centre  
Bureau of Meteorology

**A. Summary**

Tropical cyclone *Frederic* was the first cyclone to form in the Western Australian region in the 1987-88 season.

The initial tropical low was first discernable at 0000 UTC 28 January near 6.9°S, 99.5°E. It moved slowly west at first before settling onto a south southwestward course which it maintained from 0000 UTC 29 January until its decaying stages. The low attained tropical cyclone intensity at about 0001 UTC, 30 January near 10°S, 97.7°E, some 240 km north-northeast of Cocos Island.

The centre of the cyclone passed very close to the Cocos group at about 1500 UTC 30 January. The meteorological office on the Island reported a lowest pressure reading of 993 hPa and a maximum wind gust of 113 km/h. The community experienced gale force winds for a period of about eight hours but sustained little damage.

After leaving Cocos, *Frederic* continued to intensify and Japanese Geostationary Meteorological Satellite (GMS) imagery indicated a small, intense system had developed by 31 January with tightly banded features. An eye became visible for a brief period about 2100 UTC 31 January when *Frederic* was at its most intense. Dvorak intensity analyses suggested a central pressure near 950 hPa with maximum wind gusts of 205 km/h.

After 0000 UTC 1 February the tropical cyclone came under the influence of increasing vertical wind shear which rapidly weakened the system. By 1800 UTC 1 February the low-level centre was clearly divorced from the middle-level canopy. The low-level centre then drifted west-northwest before filling completely during 2 February.

There was no known impact associated with TC *Frederic*.

Table 1. Best track summary for Tropical Cyclone Frederic, 28 January – 1 February 1988. Note: Add 8 hours to convert to WST. Refer to best track database for complete track details.

| Year | Month | Day | Hour (UTC) | Position Latitude S | Position Longitude E | Max wind knots | Central Pressure hPa | Rad. of Gales nm |
|------|-------|-----|------------|---------------------|----------------------|----------------|----------------------|------------------|
| 1988 | 1     | 28  | 0000       | 6.9                 | 99.5                 |                | 1003                 |                  |
| 1988 | 1     | 28  | 0600       | 6.8                 | 98.8                 |                | 1003                 |                  |
| 1988 | 1     | 28  | 1200       | 6.9                 | 98.3                 |                | 1002                 |                  |
| 1988 | 1     | 28  | 1800       | 7.2                 | 98.6                 |                | 1001                 |                  |
| 1988 | 1     | 29  | 0000       | 7.6                 | 99.0                 |                | 1001                 |                  |
| 1988 | 1     | 29  | 0600       | 8.2                 | 98.6                 |                | 1000                 |                  |
| 1988 | 1     | 29  | 1200       | 8.8                 | 98.4                 |                | 999                  |                  |
| 1988 | 1     | 29  | 1800       | 9.3                 | 98.1                 |                | 998                  |                  |
| 1988 | 1     | 30  | 0000       | 10.0                | 97.7                 |                | 996                  |                  |
| 1988 | 1     | 30  | 0600       | 10.6                | 97.2                 |                | 994                  |                  |
| 1988 | 1     | 30  | 0900       | 11.1                | 97.1                 |                | 993                  |                  |
| 1988 | 1     | 30  | 1200       | 11.6                | 97.1                 |                | 992                  |                  |
| 1988 | 1     | 30  | 1500       | 12.1                | 97.1                 |                | 990                  |                  |
| 1988 | 1     | 30  | 1800       | 12.6                | 96.8                 |                | 988                  |                  |
| 1988 | 1     | 30  | 2100       | 13.2                | 96.7                 |                | 985                  |                  |
| 1988 | 1     | 31  | 0000       | 13.7                | 96.5                 |                | 981                  |                  |
| 1988 | 1     | 31  | 0600       | 15.1                | 96.2                 |                | 973                  |                  |
| 1988 | 1     | 31  | 1200       | 16.2                | 96.0                 |                | 961                  |                  |
| 1988 | 1     | 31  | 1800       | 17.4                | 95.6                 |                | 955                  |                  |
| 1988 | 2     | 1   | 0000       | 18.2                | 95.5                 |                | 966                  |                  |
| 1988 | 2     | 1   | 0600       | 18.8                | 95.4                 |                | 978                  |                  |
| 1988 | 2     | 1   | 1200       | 18.8                | 95.2                 |                | 986                  |                  |
| 1988 | 2     | 1   | 1800       | 18.7                | 95.1                 |                | 992                  |                  |
| 1988 | 2     | 2   | 0000       | 18.6                | 95.0                 |                | 1000                 |                  |

Figure 1. Best Track for Tropical Cyclone *Frederic*, 28 January – 1 February 1988 All times in WST.

