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A CASE STUDY OF ADVECTION FOG
May 22 - 25, 1984

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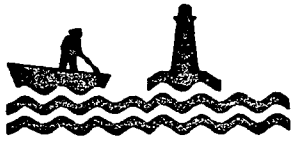

I INTRODUCTION

Everyone knows the economic cost of fog. Forecasting of fog arrival or lifting has an economic impact, especially in transportation activity.

An understanding of the mechanism involved in the formation/dissipation of sea fog and the resulting effect at coastal locations is the first step if someone wants to forecast sea fog at particular locations.

A brief review of the physical mechanisms involved in sea fog formation/dissipation will be presented. Surface analysis, satellite imagery and hourly reports will then be used to illustrate the formation, spread and dissipation/advection of sea fog and the resulting effects at coastal terminals.

II PHYSICS OF ADVECTION FOG

Advection fog is produced when a warm and moist air mass comes over a relatively cold surface. The process is basically a vertical mixing of moist air parcels of different temperature. When moist and warm air interact with the colder surface, the air cools. This cooling is spread by turbulence with neighbouring layers producing the condensation of the water vapour. For condensation to occur, we also need condensation nuclei of which there is an abundance over the sea surface.

It is generally assumed that with warm, moist air flowing over cold water, advection fog will form. Osborne[1] explains why it is not always the case:

> "In reality, an air mass whose dewpoint is higher than the water temperature loses water vapour as well as heat to the surface. Hence, the cold water surface exerts a drying effect as well as a cooling. As these two exchange mechanisms are more or less of equal efficiency, both temperature and dewpoint will decrease and the saturation point will not be reached unless turbulent mixing and/or radiative cooling is present".

Juisto[2] agrees with the assumption of Osborne on the role of radiative cooling:

> "As Rodhe[3] and others[4] have shown, mixing alone generally is not sufficient to account for the liquid water content observed in these fogs. Radiational cooling near the fog top plays a significant complementary role".

Keeping all these refinements in mind, one can look very simply to the formation mechanism on a Clausius-Clapeyron diagram where vapour pressure is a function of temperature (Fig. 1[1,5]). If only turbulent mixing is considered, the process is represented by the straight line CD. However, by allowing for radiational cooling of the fog, the qualitative effect is for line CD to bulge upward and produce higher fog liquid water content[2].

Advection fog occurs much more readily over the sea than over continents and, when it originates over the sea, is called sea fog. The horizontal extent of this fog may be a thousand square kilometers or more and covers at least all the water surface with temperature less than the air dew point temperature. The mean thickness could be more than 300 meters. This fog may form in all seasons but is statistically more likely to occur in early summer when warm and moist air masses spread northward more frequently.

As there is almost no diurnal variation of sea surface temperature, fog dissipation by diurnal warming will generally not happen over the sea and, consequently, diurnal variation is less likely to occur. On the other hand, over land, diurnal warming may dissipate or at least may make the fog thinner (or raise ceilings)[a] while nocturnal land cooling will intensify the fog.

The same reasoning explains why advection fog (or sea fog) penetrates inland at night, then seems to withdraw toward the ocean during the day.

To get rid of this fog, wind direction will have to change. The change in wind can advect away the fog or bring in cooler and drier air; the fog will then dissipate through mixing processes.

a. Lifting of the fog into a stratus layer.

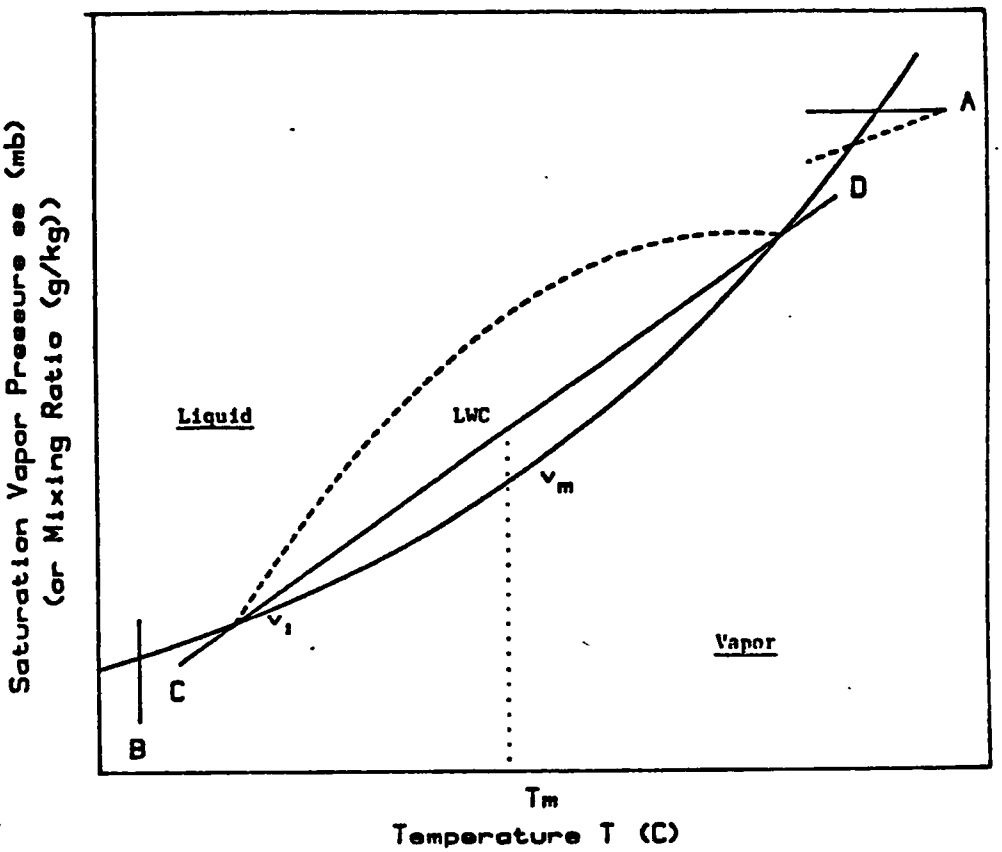

FIGURE I. Phase diagram and fog formation processes. (from Jiusto)[2]

III FORECAST OF ADVECTION FOG (SEA FOG)

Actually, as far as the Maritimes Weather Centre is concerned, there is no objective method to forecast time of occurrence of sea fog at coastal locations. Some attempts are being made in the United States using deterministic numerical schemes or using statistical techniques (like MOS or perfect prog techniques). There is also some attempt to use special infra red and visible enhancements on satellite imagery for short term forecasting of sea fog.

In the Maritimes, one can use the "pattern recognition technique". Osborne[2] made a study of sea fog occurrence versus synoptic pattern and based on that study, developed graphs which, if he has time to use them, can help the forecaster.

Another technique that one can use is the extrapolation of the "dew point front". Basically the idea is to look westward for dew point 3 or 4 degrees higher than the mean sea surface temperature. By taking the historical speed of that "dew point front", you can extrapolate its position at a time t + t. Applying this technique to the case of May 22nd, 1984 (Fig. 3, Table 1-2), this method gives at least an idea when the fog will come in at coastal stations. The problems with this technique are that (1) the position of the "dew point front" is somewhat subjective and can lead to important errors in timing, and (2) the short term extrapolation of the dew point front over the ocean is not straightforward. Finally, sometimes radiation fog will form before the arrival of the sea fog so that the two effects are present.

Advection fog forecasting at coastal terminals is largely a matter of experience. This case is presented to give the new forecaster an idea of the formation and the spread of sea fog using surface analyses, satellite pictures (visible), and hourly reports for selected terminals. Hourly reports have been included to give an idea of the ceilings, and their diurnal variation, associated with advection fog/stratus.

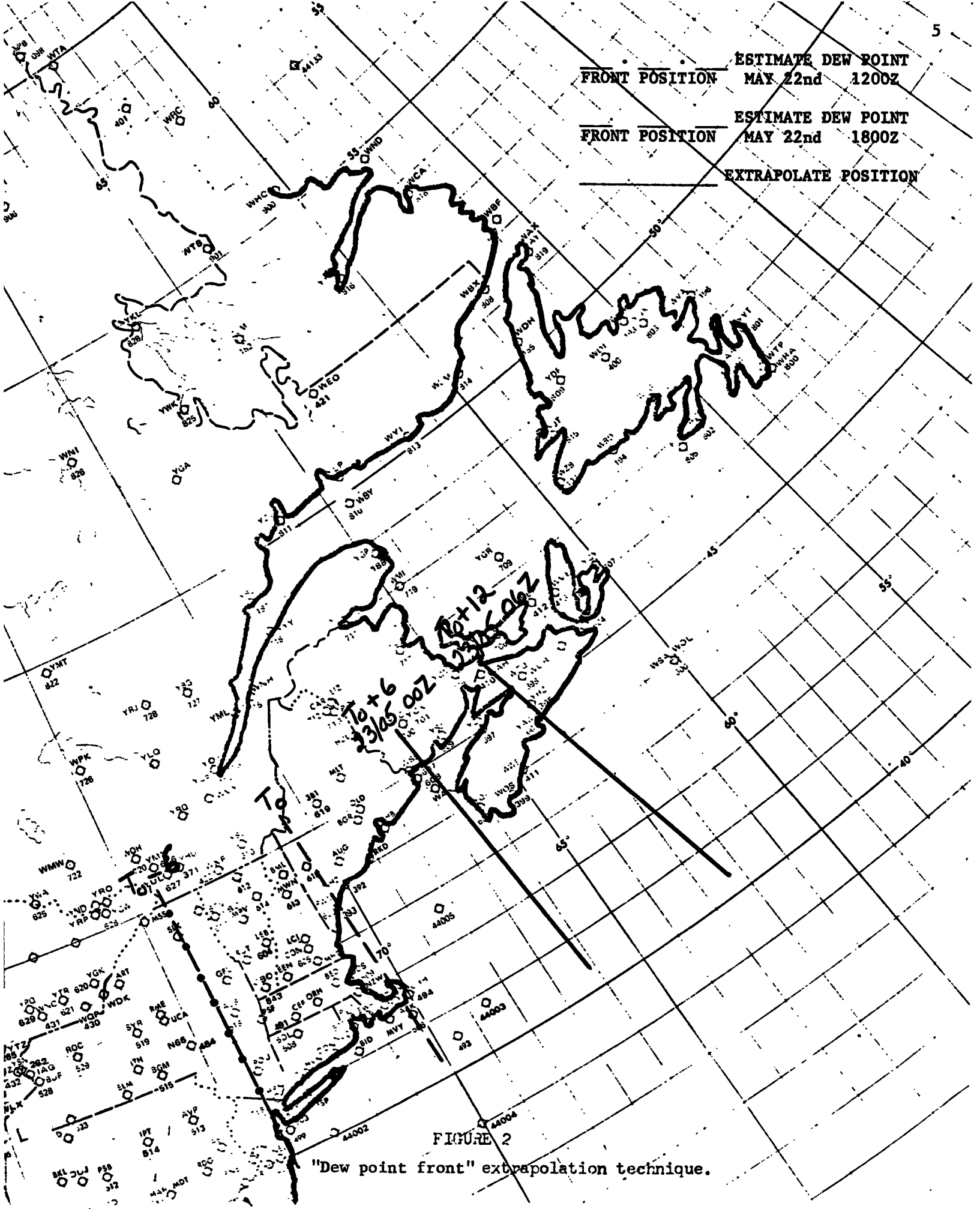

FIGURE 2

"Dew point front" extrapolation technique.

Hourly reports corresponding to the
extrapolated times on figure 2

TABLE I.

MAY 2504002 10 2405002 1964

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2304 YSJ SA 0400 M3 BKN 300 OVC 4F 203/4/6/1965/012/SF4C11 =
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7014 =
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2308 YSJ SA 0800 M7 BKN 40 OVC 10 185/10/6/1808/00//SF/3C3 =
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7010 =
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1812/005/SC7AC1C11 UA/UV YSJ 0950 FLURN /TP AC64 /SK BKN
022 =
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2311 YSJ SP 1142 -X M2 OVC 3/8F 1914 F/S13=
2311 YSJ SP 1152 M1 X 1/4L--F 1913 F10=
2312 YSJ SA 1200 M 1 X 1/4F 1/1/11/10/1913621/003/F10 0012 =
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2312 YSJ SP 1220 M1 X 1/8L-F 1910622 F10=
2312 COR YSJ SA 1200 M1 X 1/4F 1/1/11/10/1913621/003/F10 0012 =
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2316 YSJ SA 1600 M2 X 1/2F 152/12/11/2010623/99//F10 =
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1658 FLURN /TP DC9 /SK OVC 020 /RV 050 220/40 =
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2319 YSJ SA 1900 -X M2 OVC 1F 127/12/11/2119623/990/F5S13 =
2319 YSJ SP 1908 M2 X 1/2F 2110 F10=
2320 YSJ SA 2000 M2 X 1/2F 115/12/11/2022/900/F10 =
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HOURLY REPORTS (Continued)

TABLE 2.

MARITIMES SA RECORD

```
2304 YQI SA 0400 CLR 15 219/10/8/2112/017/ =
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2313 YQI RS 1300 M1 X 3/8F 184/12/11/1813/007/F10 =
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     VSBL 7013 =
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     DMLY VSBL =
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2318 YQI RS 1800 -X B2 OVC 2F 154/15/14/2018G32/998/F3SF7 SUN
     DMLY VSBL 7022 =
2319 YQI RS 1900 B3 BKN 3F 147/17/14/1916G27/996/SF9 =
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2322 YQI RS 2200 E3 BKN 6F 121/14/13/2018G30/988/SF8 CIG RGD
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2403 YQI SA 0300 M0 X 1/8L-F 110/12/11/1918/985/F10 8010 =
```

IV CASE STUDY.

In the period from May 22nd, 1984, 1200Z to May 25th, 1984, 0000Z, a southerly flow of warm and moist air developed over the Atlantic, south of Nova Scotia. Sea fog consequently formed and advected over coastal locations. Usually, when these conditions occur, mid and high level clouds are present so that the use of satellite pictures to locate and follow the sea fog is futile. One has to rely only on surface analysis. This case shows the formation, spread and dissipation/advection of sea fog with very little cloud above.

1. May 22nd, 1984 (See Appendix 1)

A. Surface Analysis.

A ridge of high pressure through the Maritimes is moving slowly eastward and a low pressure system over Hudson Bay is moving northeastward. Light variable winds are observed at most stations, gradually being replaced by light southerly winds as the ridge moves to the east. Fog forms over water as the air mass within the ridge becomes saturated in the low levels. The fog eventually dissipates over land, but remains over the Gulf of St. Lawrence.

B. Satellite Picture.

There are two significant features throughout the day. The first one is the stratus and fog over the Gulf of St. Lawrence. The second feature is the fog and stratus over the Atlantic south of Nova Scotia. The fog area shrank a bit during the day, except for a band along longitudes 60°W to 63°W.

C. Hourly Reports.

All the features mentioned above can be found in the hourly reports. Fog and stratus over the Gulf of St. Lawrence are associated with low visibilities at East Point (WEP). Note the sea fog over the Atlantic south of Nova Scotia, as reported by the rigs BOW, BOX, BOR, GOR. When the southerly flow started, it advected sea fog at Eddy Point (WOQ) between 02Z and 03Z (remember the fog band along 62-63 degrees west?).

2. May 23rd, 1984 (See Appendix 2)

A. Surface Analysis

A moderate to strong southerly flow is fully developed over the Maritimes. The temperature and dew point at New England locations indicate a flow of warm and moist air.

Some particular features on the 0600Z analysis:

(a) Ships VSBC, YSA (Sable Island), ships at 60°W - 45°N and WOQ (Eddy Point). They all report visibility reduced by fog. The cause is the extensive area of fog that lingered along 62-63 degrees west. This area, with a southerly flow, started to drift northward.

(b) YCL (Charlo), with a moderate easterly wind, reports visibility reduced by fog due to the advection of fog banks and/or stratus over the Gulf of St. Lawrence/Bay of Chaleur.

(c) Ships CGBL, CGDW and YQI (Yarmouth) and WOQ (Shelburne). Ships report fog banks with zero visibility and Yarmouth and Shelburne start to report reduced visibility in fog.

Note the New England coastal stations.

By 1200Z, the fog covered an extensive area over water and over coastal locations.

B. Satellite Picture.

The pictures show extensive fog cover over the Gulf of Maine, the Bay of Fundy, the Atlantic south of Nova Scotia, and adjacent coastal locations (fog and/or stratus). The movement of the warm front can be followed by localizing the "bumpy" clouds over Nova Scotia.

C. Hourly Reports.

Hourly reports indicate an improvement in ceilings and visibility during the day due to daytime heating.

3. May 24th, 1984 (Appendix 3)

A. Surface Analysis.

The following maps illustrate how fog/stratus caused by a southerly flow of warm and moist air dissipates and/or advects away. A cold frontal passage bringing drier air and/or a shift in the wind direction will usually dissipate and/or advect the fog/stratus away.

B. Satellite Picture.

In conjunction with the surface analysis, the passage of the cold front across Nova Scotia can be followed together with the subsequent "wash out" of the fog/stratus. It is especially apparent over the ocean. (Note the sharp edge of the fog/stratus a little bit behind the cold front.

C. Hourly Reports.

Hourly reports at YFC (10Z-12Z), YSJ (12Z-15Z) and YQI (13Z-14Z) show how quickly conditions improve with the approach of the cold front.

V CONCLUSION

It is hoped that this case study will aid the new forecaster in recognizing the synoptic patterns favourable to the formation of sea fog,the subsequent advection to coastal locations, and help him/her to write useful forecasts when such a situation occurs. It is hoped that the new forecaster will make the links between all the mechanisms involved (diurnal heating, turbulent mixing over land, overlapping effect of radiation and advection fog, etc..).

Finally, this case study covers only a fraction of synoptic situations that will cause fog to form. Osborne[1] identified seven categories of synoptic situations from which fog will occur. Other case studies will be necessary to cover all these situations.

BIBLIOGRAPHY

1. Osborne, A.H., "Technique for the Prediction of Sea Fog over the Scotian Shelf", Tec 825, 18 pp, p. 12 ff.

2. Juisto, J.E., "Fog Structure", in "Clouds: Their Formation, Optical Properties and Effects", Academic Press, 1981, PP. 187-239, P. 190-191.

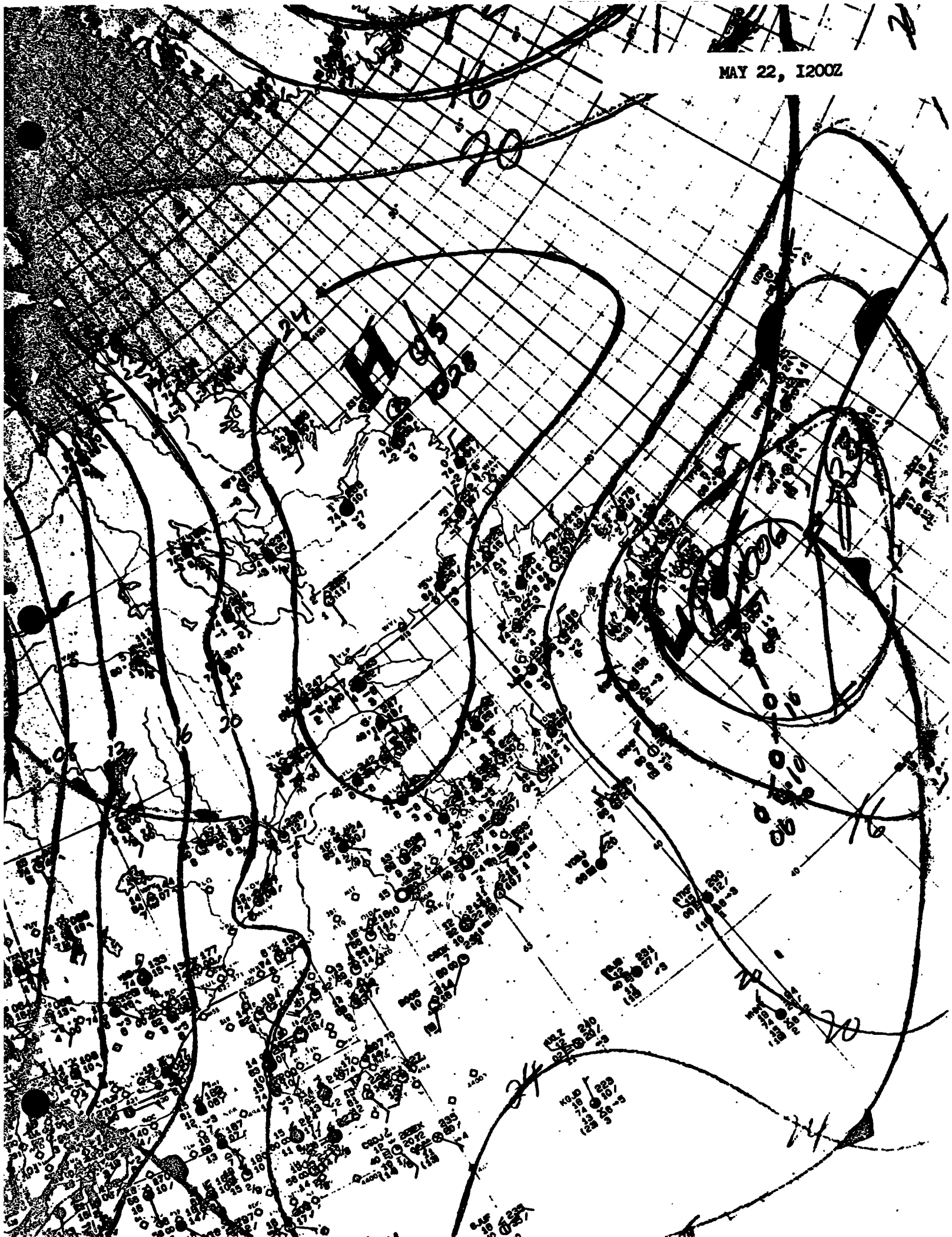
3. Rodhe, B., "The Effect of Turbulence on Fog Formation", Tellus, 14, p. 49-86 (1962).

4. Oliver, A.D., Lewellen, W.S., Williamson, G.G., "The Interaction Between Turbulent and Radiative Transport in the Development of Fog and Low Level Stratus", J. Atmos. Sci., #35, 1978, pp. 301-316.

5. Iribarne, J.V., Godson, W.L., "Atmospheric Thermodynamic", D. Reidel Publishing, 1981, 222 p., pp. 97-131 (first edition).

APPENDIX I

Data for 22/05/84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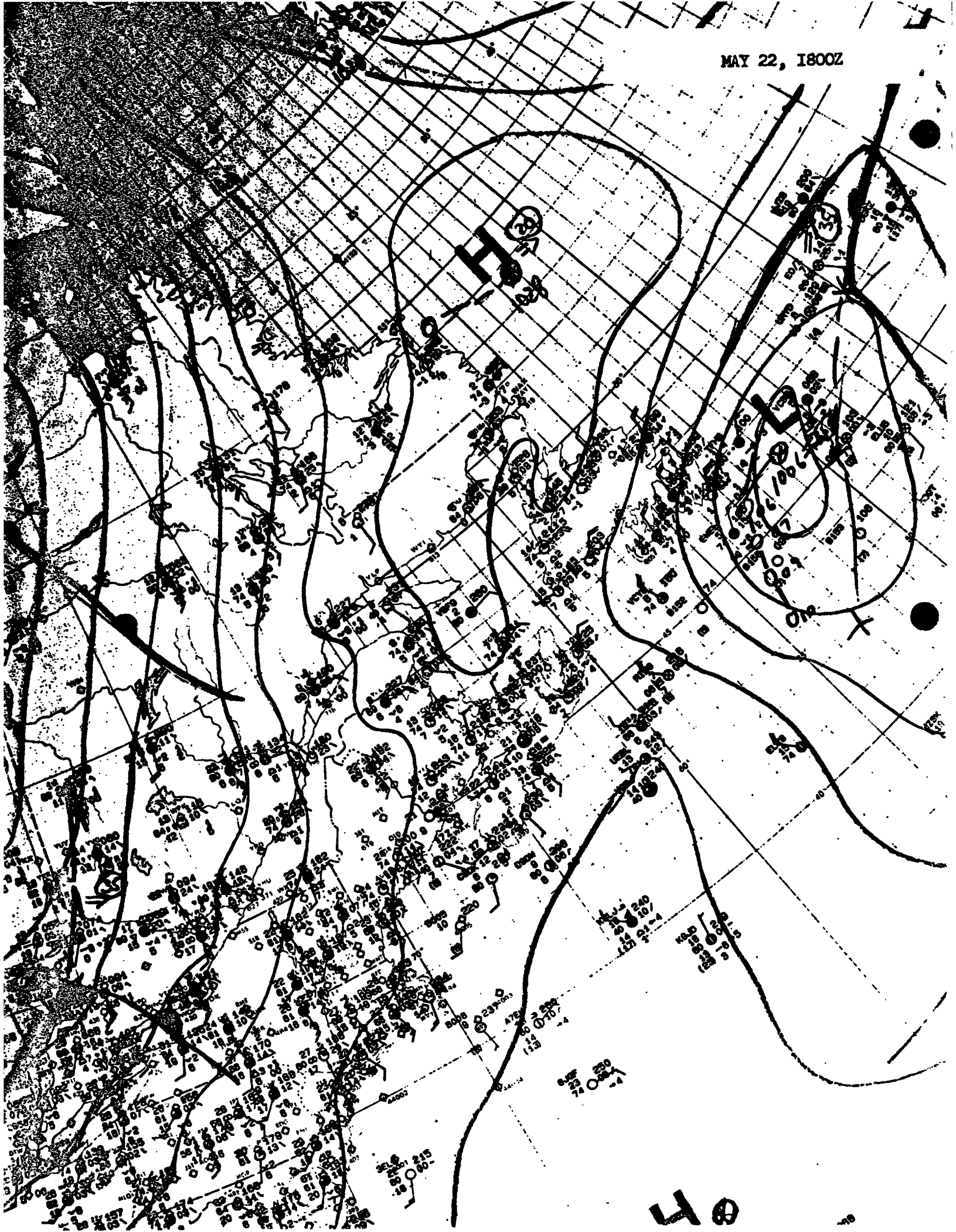

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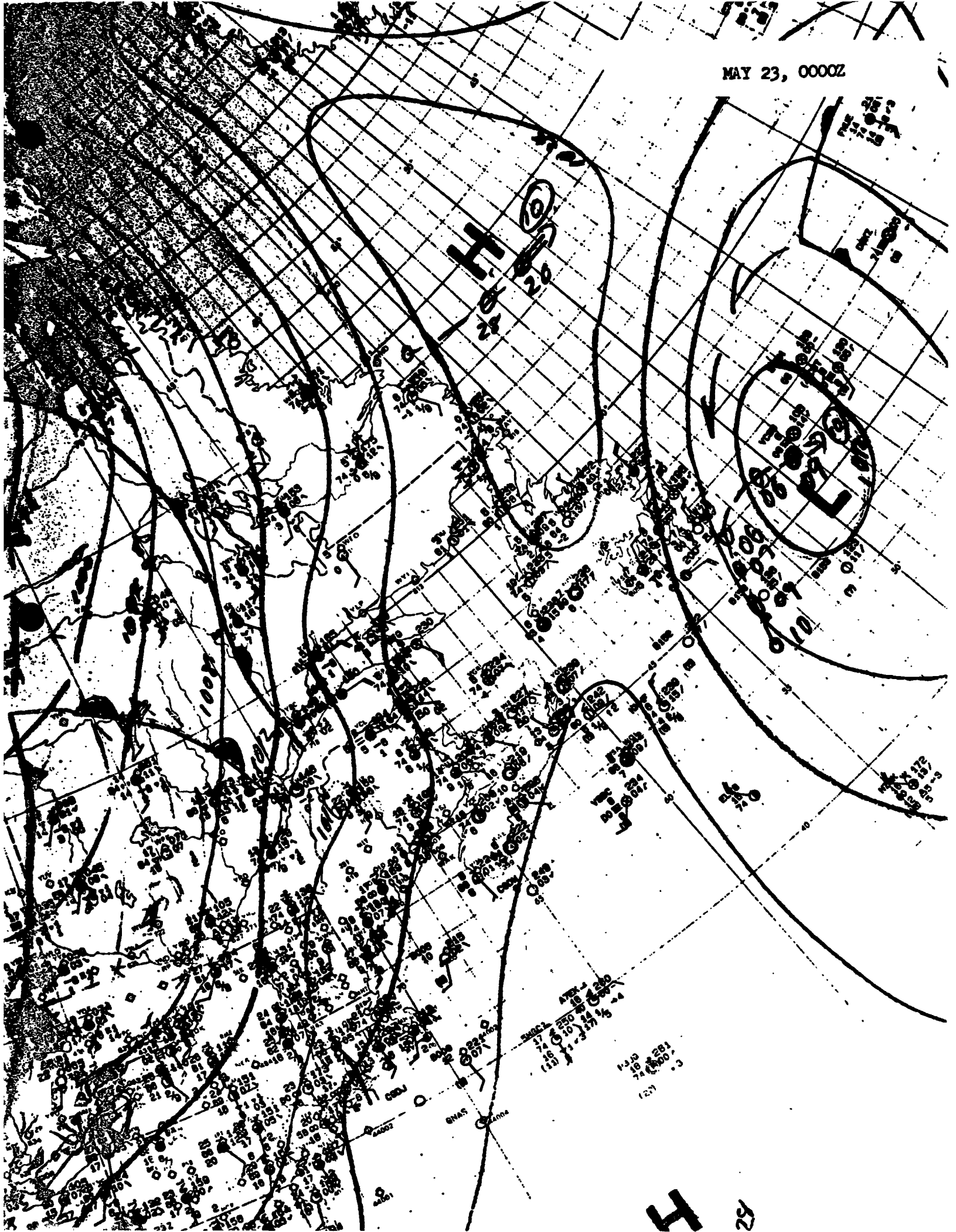
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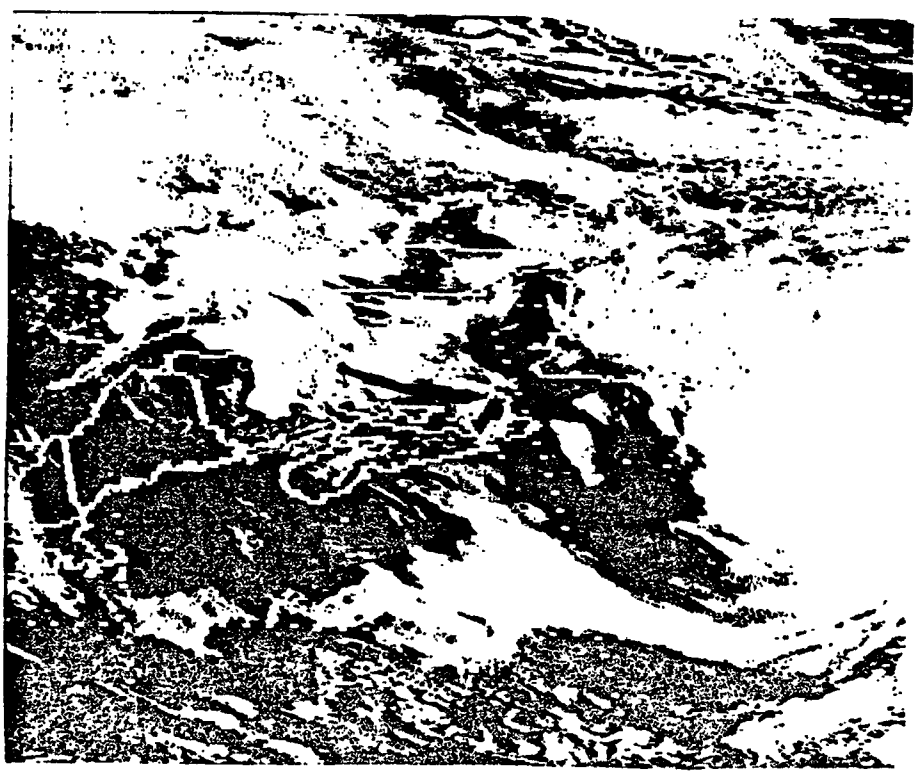
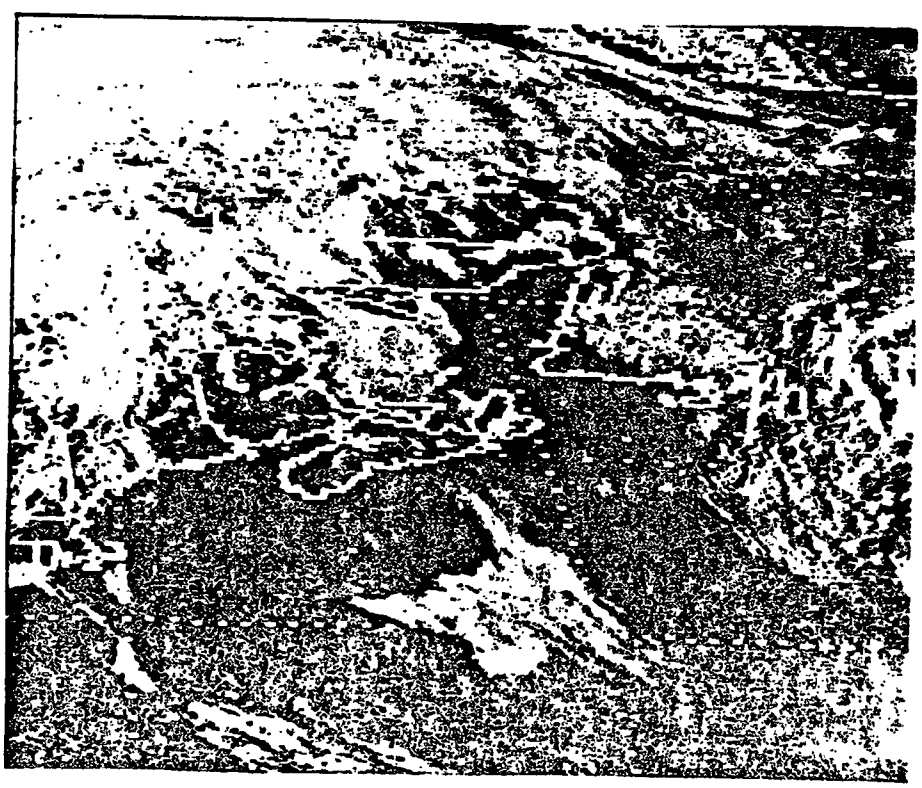
22 1200Z



22 1500Z

22 1800Z



22 2200Z

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2209 YFC SA 0900 M13 BKN 12 205/10/9/0000/013/SF8 3025 =
2209 YFC SP 0945 15 SCT 10 0000 SF3=
2210 YFC RS 1000 8 SCT 15 SCT 10 212/10/9/3403/015/SF1SC2 =
2211 YFC SA 1100 10 SCT 10 219/11/8/0606/017/SF4 =
2212 YFC SA 1200 12 SCT 12 228/13/9/0706/020/SC4 3023 =
2213 YFC SA 1300 15 SCT 250 -SCT 12 229/12/10/1110/020/CU3CI =
2214 YFC SA 1400 15 SCT 250 -SCT 12 230/12/10/1110/020/CU3CI =
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1002 =
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8017 =
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013/CU2CI =
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009/AC1CI1 =
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2205 YwI RS 0500 -X 1/EF 182/5/4/2406/007/F8 =
2205 YwI SF 0517 -X 1/2F 2104 Fo=
2206 YwI RS 0600 -X 1/4F 183/4/5/1506/007/F8 1009?=
2207 YwI SA 0700 -X 1/6F 183/4/4/1707/007/F9 =
2208 YwI RS 0800 -X 2F 188/5/4/1707/008/F1 =
2209 YwI SF 0842 -X b12 KKN 11/2F 1607 F1SC5=
2209 YwI RS 0900 -X 12 -bKN 11/2F 195/6/5/1407/010/F2SF1 3012 =
2209 YwI SF 0914 nO X UF 1707 F10=
2209 YwI SF 0947 -X E12 UVC 1/4F 1706 F5SF2=
2210 YwI SA 1000 -X E12 UVC 1/4F 204/7/6/2406/013/F5SC2 =
2210 YwI SF 1022 -X 12 SCT 1VF 1505 F3SC1 VSb 1/2-11/2=
2211 YwI RS 1100 -X 12 SCT 2F 212/9/9/0000/015/F2SC1 =
2212 YwI SA 1200 -X 12 SCI 2F 217/1C/10/0000/017/F2SC1 2022 =
2213 YwI SA 1300 120 -SCI 10 219/15/11/1202/017/4C1 =
2214 YwI SA 1400 250 -SCI 10 221/16/13/0000/018/C1 =
2215 YwI SA 1500 20 SCI 250 -SCI 12 221/16/13/2607/018/CU1C1
     1004 =
2216 YwI SA 1600 20 SCI 250 -SCI 12 222/16/13/2607/016/CU1C12 =
2217 YwI SA 1700 20 SCI 250 -bKN 12 224/15/11/2606/019/CU1C11 =
2218 YwI SA 1800 20 SCI 250 -SCI 12 223/17/12/2606/016/CU1C11
     1002 =
2219 YwI SA 1900 20 SCI 250 -SCI 12 222/16/12/2610/016/CU1C11 =
2220 YwI SA 2000 250 -bKN 12 226/16/11/2516/020/C12 =
2221 YwI SA 2100 250 -SCI 12 225/14/11/2307/019/C11 0002 =
2222 YwI SA 2200 250 SCI 10 224/12/9/2407/019/C11 =
2223 YwI SA 2300 250 -SCI 10 226/11/9/2105/020/C1 =
2300 YwI SA 0000 250 -SCI 10 224/9/6/1705/019/C1 2001 =
2301 YwI SA 0100 250 -SCI 10 224/9/7/1705/019/C1 =
2302 YwI SA 0200 250 -SCI 10 223/11/8/1907/016/C1 =
2303 YwI SA 0300 LLK 12 217/11/8/2012/017/ 0007 =
```

MAY 220400Z TO 230300Z 1984

```
2204 KOS SA 0400 M1 X 1/2F 173/10/10/3008/004/F10 =
2205 KOS SA 0500 W0 X 0F 176/10/10/2906/004/F10 =
2206 KOS SA 0600 W0 X 0F 181/9/9/0000/006/F10 3008 =
2207 KOS SA 0700 -X 1/4F 183/8/8/0000/007/F8 =
2208 KOS SA 0800 -X 220 -SCT 1F 187/7/7/2905/008/F1CI1 =
2209 KOS SA 0900 -X 100 SCT 220 -SCT 1/8F 198/6/6/2703/
     011/F2AC1CI1 3017 =
2210 KOS SA 1000 E80 BKN 250 BKN 4F 209/8/8/0000/014/AC6CI1 =
2211 KOS SA 1100 12 SCT E80 BKN 6F 214/9/9/0000/016/SC1AC8 =
2212 KOS SA 1200 80 -BKN 8 219/11/10/0000/017/AC5 2021 =
2213 KOS SA 1300 250 -SCT 8 221/15/10/0903/018/CI =
2214 KOS SA 1400 250 -SCT 10 224/15/10/1205/019/CI =
2215 KOS SA 1500 25 SCT 250 -SCT 10 225/16/10/1406/019/CU1CI
     1006 =
2216 KOS SA 1600 25 SCT 250 -SCT 10 225/15/9/1611/019/CU2CI =
2217 KOS SA 1700 25 -SCT 250 -SCT 8 225/15/10/1512/019/SC2CI
     HAZY =
2218 KOS SA 1800 25 SCT 250 -SCT 8 223/12/8/1311/019/SC4CI HAZY
     8002 =
2219 KOS SA 1900 30 SCT 250 -SCT 10 222/14/9/0905/018/SC2CI =
2220 KOS SA 2000 250 -SCT 12 219/24/6/2410G19/017/CI1 =
2221 KOS SA 2100 250 -SCT 15 220/22/10/2411G18/017/CI 5003 =
2222 KOS SA 2200 250 SCT 15 220/20/10/2310/017/CI1 =
2223 KOS SA 2300 250 SCT 12 222/16/10/2412G18/018/CI1 =
2300 KOS SA 0000 250 SCT 12 222/15/10/2410/018/CI1 1002 =
2301 KOS SA 0100 250 SCT 12 226/13/9/2409/019/CI1 =
2302 KOS SA 0200 250 SCT 12 228/10/9/2002/020/CI1 =
2303 KOS SA 0300 250 SCT 12 227/8/7/2303/020/CI1 0005 =
```

MAY 220400Z TO 230300Z 1984

2204 YHZ SA 0400 80 SCT 250 -BKN 8 163/12/8/3403/001/AC1CI1 =
2205 YHZ SA 0500 80 SCT E250 BKN 8 170/11/8/3306/003/AC2CI4 =
2206 YHZ SA 0600 80 SCT E250 BKN 8 176/11/9/0000/004/AC2CI4
3016 =
2207 YHZ SA 0700 80 -SCT 250 -BKN 8 176/11/9/0000/004/AC1CI2 =
2208 YHZ SA 0800 60 SCT 250 -BKN 6F 187/10/9/2903/008/AC2CI1 =
2208 YHZ SP 0835 60 SCT 250 -BKN 2F 0000 AC2CI1=
2209 YHZ SP 0850 2 SCT E60 BKN 11/2F 0000 SF4AC2=
2209 YHZ RS 0900 M3 BKN 11/2F 197/9/9/2103/011/SF7 =
2209 COR YHZ RS 0900 M3 BKN 11/2F 197/9/9/2103/011/SF7 3021 =
2210 YHZ SA 1000 M5 OVC 21/2F 207/10/9/0000/014/SF9 VSBY SW 5
2210 YHZ SP 1020 M4 OVC 3F 0000 SF9=
2211 YHZ SA 1100 M4 BKN 4F 213/10/9/0000/016/SF7 =
2211 YHZ SP 1120 4 -BKN 4F 0000 SF5=
2211 YHZ SP 1140 M5 BKN 3F 0000 SF6=
2212 YHZ SA 1200 M7 BKN 5F 221/11/10/0000/018/SF6 3022 =
2212 YHZ SP 1215 6 -SCT 8 0000 SF4=
2213 YHZ SA 1300 250 -SCT 8 223/15/11/0000/018/CI1 =
2214 YHZ SA 1400 20 SCT 10 224/17/11/0000/018/CF1 =
2215 YHZ SA 1500 30 SCT 15 222/19/11/0000/018/CU1 3003 =
2216 YHZ SA 1600 35 SCT 15 222/20/10/3305/018/CU2 =
2217 YHZ SA 1700 35 SCT 15 220/20/10/0907/018/CU3 =
2218 YHZ SA 1800 30 SCT 15 219/19/11/1605/018/CU4 6003 =
2219 YHZ SA 1900 30 SCT 15 219/19/11/1610/018/CU4 =
2220 YHZ SA 2000 35 SCT 15 220/19/11/1810/018/CU3 =
2221 YHZ SA 2100 40 SCT 270 -SCT 15 219/19/11/2110/018/CU1CI2
0000 =
2222 YHZ SA 2200 40 SCT 270 -BKN 15 221/18/10/1910/018/CU1CI2
2223 YHZ SA 2300 270 -SCT 15 221/15/9/1606/018/CI2 =
2300 YHZ SA 0000 100 SCT 270 -BKN 15 225/12/8/1508/019/AC1CI2
2004 =
2301 YHZ SA 0100 100 SCT 270 -BKN 15 226/9/7/1509/019/AC1CI1 =
2302 YHZ SP 0204 3 -BKN 8 1611 SF3=
2302 YHZ SP 0217 M2 BKN 2F 1612 SF7 CIG RGD=
2302 YHZ SP 0240 M2 X 1/2F 1612 F10=
2303 YHZ SA 0300 M2 X 1/2F 222/7/7/1610/018/F10 8003 =
2303 YHZ SP 0321 -XM2 OVC 3/4F 1508 F6SF4 CIG RGD=

MAY 2204002 TO 2303002 1984

2204 WOU SA 0400 25 SCT 15 157/7/5/3204/999/SC5 ?0755?=
2205 WOU SA 0500 30 SCT 15 166/8/5/3303/001/SC4 ?5744?=
2206 WOU SA 0600 30 SCT 15 171/7/5/3303/003/SC5 3011 ?9755?=
2207 WOU SA 0700 30 SCT 15 174/8/5/3203/004/SC5 ?1455?=
2208 WOU SA 0800 E30 BKN 15 179/8/6/0000/005/SC7 ?2677?=
06050805?
2209 WOU SA 0900 E35 BKN 15 191/8/5/2805/009/SC7 2020 ?0477?=
2210 WOU SA 1000 40 SCT 15 196/9/6/3106/010/SC1 ?3111?=
2211 WOU SA 1100 CLR 15 205/11/6/3205/013/ ?7300?= 110811087
2212 WOU SA 1200 CLR 15 212/12/7/3305/015/ ?2500?=
2212 COR WOU SA 1200 CLR 15 212/12/7/3305/015/ 2021 ?2500?=
2212 COR WOU SA 1200 CLR 15 212/12/7/3305/015/ 2021 =
2213 WOU SA 1300 CLR 15 217/14/7/3208/017/ ?1600?= 125613037
2214 WOU SA 1400 CLR 15 219/15/7/3209/017/ ?8600?=
2215 WOU SA 1500 200 SCT 15 218/15/7/3308/017/CS1 006 ?1511?=
2215 COR WOU SA 1500 200 SCT 15 218/15/7/3308/017/CS1 0006
?1511?=
2215 COR WOU SA 1500 200 SCT 15 218/15/7/3308/017/CS1 0006 =
2216 WOU SA 1600 200 -SCT 15 219/16/16/3208/017/C11 ?5413?=
2217 WOU SA 1700 200 -SCT 15 217/15/7/3008/017/C11 ?2812?=
2218 WOU SA 1800 200 -SCT 15 220/16/7/3112/017/CS1 COTRA 2002
?8012?=
2219 WOU SA 1900 20 -SCT 200 -BKN 15 219/15/6/3213/017/CUCI2
?9027?=
2220 WOU SA 2000 20 -SCT 200 -BKN 15 220/14/6/3013/017/CUCI2
?2527?=
2221 WOU SA 2100 200 -BKN 15 221/14/5/3107/018/C11 0001 ?0216?=
2222 WOU SA 2200 200 -BKN 15 224/14/5/3207/018/C11 ?5017?=
2223 WOU SA 2300 200 -BKN 15 226/14/5/2704/019/C11 ?8216?=
2300 WOU SA 2300 200 -SCT 15 228/13/5/3404/020/CI 3007 ?9901?=
2300 COR WOU SA 0000 200 -SCT 15 228/13/5/3404/020/CI 3007
?9901?= 001600167
2300 COR WOU SA 0000 200 -SCT 15 228/13/5/3404/020/CI 3007 =
2300 COR WOU SA 0000 200 -SCT 15 228/13/5/3404/020/CI 3007
302/10=
2301 WOU SA 0100 CLR 15 234/8/4/0302/021/ ?62XX?=
2302 WOU SA 0200 CLR 15 235/7/5/0403/022/ ?1500?=
2303 WOU SA 0300 WO X OF 234/6/4/0503/021/F10 0006 ?30XX?=

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2204 YGY SA 0400 M25 OVC 15 159/7/5/3604/000/SC10 =
2205 YGY RS 0500 4 SCT 25 SCT 15 162/7/5/3409/000/SF2SC3 =
2206 YGY SA 0600 25 SCT 15 166/7/5/3306/002/SC3 2009 =
2207 YGY SA 0700 CLR 15 172/7/5/3411/003/ =
2208 YGY SA 0800 CLR 15 173/7/6/3309/004/ =
2209 YGY SA 0900 CLR 15 163/7/6/3411/007/ 2017 =
2210 YGY RS 1000 5 SCT 15 193/7/6/3515/010/SF4 =
2211 YGY SA 1100 6 -BKN 15 202/5/6/3513/012/SF4 =
2211 YGY SP 1115 M0 BKN 12 3414 SF6 VSBY 0F TO NE=
2211 YGY SP 1141 M3 BKN 10 3615 SF6 VSBY 5F TO NE=
2211 YGY SP 1155 -X M3 BKN 6 3513 F2SF6 VSBY 1F EAST QUAD=
2212 YGY RS 1200 -X M2 BKN 6 210/6/4/3510/015/F2SF6 VSBY 1 1/2F
     EAST QUAD 2027 =
2212 YGY SP 1230 -X M1 OVC 3/4F 3613 F4SF4=
2213 YGY RS 1300 -X M2 OVC 1F 214/6/4/3613/016/F4SF4 =
2213 YGY SP 1325 M3 BKN 6 3617 SF7 VSBY 2F TO NE=
2213 YGY SP 1340 4 -SCT 15 3515 SF2=
2214 YGY SA 1400 5 SCT 15 220/5/5/3511/016/CF2 =
2215 YGY SA 1500 10 SCT 15 220/10/6/3514/016/SC1 1010 =
2216 YGY SA 1600 10 SCT 250 -SCT 15 223/9/5/3611/019/SC1C11 =
2217 YGY SA 1700 10 SCT 250 -SCT 15 227/10/6/3610/020/SC1C11 =
2218 YGY SA 1800 15 SCT 250 -SCT 15 225/10/5/0411/019/SC1C1
     0005 =
2219 YGY SA 1900 250 -SCT 15 226/11/5/0506/019/C11 =
2220 YGY SA 2000 30 SCT 250 -SCT 15 227/9/5/0107/020/CU1C11 =
2221 YGY SA 2100 30 SCT 250 -SCT 15 232/9/4/0205/021/CU1C11
     2007 =
2222 YGY SA 2200 250 -SCT 15 235/7/3/0106/022/C11 =
2223 YGY SA 2300 250 -SCT 15 235/6/3/0206/022/C11 =
2300 YGY SA 0000 250 SCT 15 239/5/3/0000/024/C11 2007 =
2301 YGY SA 0100 250 SCT 15 241/5/3/0204/024/C11 =
2302 YGY SA 0200 CLR 15 243/4/2/3405/025/ =
2303 YGY SA 0300 CLR 15 239/4/2/2703/024/ 0006 =
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MAY 220400Z TO 230300Z 1984

2204 WEP SA 0400 AUTO2 2.5 160/ 09/ 07/2111/-/ 2010 =
2205 WEP SA 0500 AUTO2 2.5 173/ 06/ 05/0609/-/ 2019 =
2206 WEP SA 0600 AUTO2 2.5 178/ 06/ 05/0408/-/ 2024 =
2207 WEP SA 0700 AUTO2 2.0 183/ 06/ 05/0105/-/ 2023 =
2208 WEP SA 0800 AUTO2 2.5 189/ 05/ 04/3305/-/ 2016 =
2209 WEP SA 0900 AUTO2 2.0 195/ 05/ 04/0211/-/ 2017 =
2210 WEP SA 1000 AUTO2 3.5 206/ 05/ 04/0213/-/ 2023 =
2211 WEP SA 1100 AUTO2 4.0 217/ 05/ 04/0312/-/ 2028 =
2212 WEP SA 1200 AUTO2 4.0 225/ 05/ 04/0110/-/ 2030 =
2213 WEP SA 1300 AUTO2 0.3 233/ 04/ 03/0107/-/ 2027 =
2214 WEP SA 1400 AUTO2 0.3 237/ 04/ 03/3608/-/ 2020 =
2215 WEP SA 1500 AUTO2 2.5 238/ 04/ 03/3607/-/ 2013 =
2216 WEP SA 1600 AUTO2 3.5 238/ 05/ 04/3609/-/ 1005 =
2217 WEP SA 1700 AUTO2 3.5 238/ 06/ 04/3508/-/ 1001 =
2218 WEP SA 1800 AUTO2 9.+ 237/ 04/ 04/0106/-/ 8001 =
2219 WEP SA 1900 AUTO2 0.1 237/ 04/ 03/0208/-/ 6001 =
2219 WEP SA 1900 AUTO2 0.1 237/ 04/ 03/0208/-/ 6001 =
2220 WEP SA 2000 AUTO2 0.1 237/ 04/ 03/3609/-/ 6001 =
2221 WEP SA 2100 AUTO2 0.1 236/ 04/ 03/0105/-/ 8001 =
2222 WEP SA 2200 AUTO2 0.1 233/ 03/ 02/0609/-/ 7004 =
2223 WEP SA 2300 AUTO2 0.1 233/ 03/ 02/0609/-/ 6004 =
2300 WEP SA 0000 AUTO2 0.1 227/ 03/ 02/0810/-/ 7009 =
2301 WEP SA 0100 AUTO2 0.2 228/ 03/ 02/1106/-/ 5005 =
2302 WEP SA 0200 AUTO2 0.1 227/ 03/ 02/1306/-/ 7006 =
2303 WEP SA 0300 AUTO2 0.1 224/ 03/ 03/1406/-/ 8003 =

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2209 BUR SA 0900 10 SCT 154 180/6/5/0121/0006/M M=
2210 BUR SA 1000 20 SCT 250 SCT 15 187/7/5/0121/ 008/M=
2211 BUR SA 1100 250 SCT 15 195/7/5/0120/011/M=
2213 BUR SA 1300 CLR 15 209/7/5/3620/015/=
2214 BUR SA 1400 CLR 15 216/7/5/3619/017/=
2215 BUR SA 1500 CLR 15 219/7/6/3617/018/M M=
2216 BUR SA 1600 10 SCT 200 -SCT 15 219/7/5/3614/016/M=
2217 BUR SA 1700 10 SCT 200 -BKN 15 224/8/6/0112/019/M=
2218 BUR SA 1800 10 SCT 200 -OVC 15 223/8/6/3610/019/M M= ?
2219 BUR SA 1900 200 -OVC 15 226/8/6/0110/020/M=
2220 BUR SA 2000 200 -OVC 15 229/8/6/0309/021/M=
2221 BUR SA 2100 200 -BKN 15 226/12/6/0409/020/M M= ?
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2208 BUR SA 0800 MO X UL--F 075/7/7/0610/975/F10=
2209 BUR HS 0900 HS X UF 181/8/8/0107/977/F10 M=
2210 BUR SA 1000 HS X UF 194/7/7/0205/010/F10= ?
2211 BUR SA 1101 HS X UF 204/7/7/0305/013/F5=
2213 BUR SA 1301 M4 X 1/8F 213/9/8/3508/016/F10 SUN DMLY VSB=
2214 BUR SA 1400 M4 X 1/8F 22C/8/8/3510/019/F10=
2215 BUR SA 1500 M4 X 1/8F 224/9/8/3409/01/F10 SUN DMLY VSBL SV
     VSBLTY 1000 FT M=
2216 BUR HS 1600 -X UF 226/8/8/3407/020/F9 SV VSBY 400 FT=
2217 BUR SA 1700 -X UF 226/9/8/3507/020/F5 SUPPLY VSL VSB 600
     FT=
2218 BUR HS 1800 -X E250 BKN 5/8F 227/11/9/1003/320/F5C11 SV
     VSBY 4/16 MILE M=
2219 BUR SA 1900 -X 3/4F 230/11/9/2905/021/F8 VSB 5-SE 1/4MI
     FOG=
2220 BUR HS 2000 -X 1/8F 230/8/8/2806/021/F9 SUN DMLY VSBL= ?
2221 BUR SA 2100 M4 X UF 230/8/8/2705/021/F10 SUN DMLY VSBL M=
```

MAY 220400Z TO 230300Z 1984

2206 BOX SA 0800 E10 BKN 7 179/8/7/3520/006/CU3SC4=
2209 BOX SA 0900 B9 BKN 12 185/8/7/3617/008/CU6SC1 M=
2210 BOX SA 1000 10 SCT 12 194/8/7/3619/ 010/CU4=
2211 BOX SA 1100 CLR 12 202/8/7/3618/013/=
2213 BOX SA 1300 CLR 12 215/9/7/3516/016/=
2214 BOX SA 1400 12 224/9/7/3416/019/=
2215 BOX SA 1500 250 SCT 12 226/9/8/3617/020/CI1 M=
2216 BOX SA 1600 8 SCT 250 -SC1 12 229/9/7/3515/021/SF1CI1=
2217 BOX SA 1700 150 SCT 250 -SCT 12 229/10/6/3411/021/AC1CI2=
2218 BOX SA 1800 250 -BKN 12 230/9/7/3315/021/CI7 M=
2216 BOX SP 1847 -X 1/2F 268 3618 032 F6= ?
2219 BOX SA 1900 150 SC1 E250 BKN 12 234/10/7/3413/022/AS2CI4=
2220 BOX SA 2000 E20 BKN 12 234/10/7/3411/022/CI7=
2221 BOX SA 2100 150 SCT E200 BKN 10 239/10/8/3307/024/ AS2CI4
M=

2206 GOK SA 0800 6 SCT E20 OVC 15 151/6/5/0126/996/SF1SC8 F
VCNTY=
2209 GOK SA 0900 7 SCT E20 BKN 15 161/6/5/3626/001/ SF1SC6 FOG
VCNTY M=
2210 GOK BS 1000 E20 BKN 15 169/7/6/0125/003/SC7 FOG VCNTY=
2213 GOK SA 1300 M4 X 1/8F 213/9/8/3306/016/F10 SUN DMLY VSB=
2214 GOK SA 1400 20 -SCT 14 200/8/6/3622/012/SC1=
2215 GOK SA 1500 20 -SCT 14 204/8/6/3622/013/SC1 M=
2216 GOK SA 1600 20 -SCT 10 217/7/5/3522/017/SC1=
2217 GOK SA 1700 20 -SCT 8 206/7/5/3522/014/SC1 FOG PTCHS
VSCTY=
2218 GOK SA 1800 20 SCT 65 -SC1 8 211/7/5/3622/015/SC1AS2 FOG
VSCTY M=
2216 COK GOK SP 1847 -X 1/2F 208 3618 014 F6=
2219 GOK SA 1900 -X 1/2F 217/5/5/3617/017/F6=
2221 GOK SA 2100 -X 200 -SCT 6F 224/6/5/3622/019/F2CI2 M=

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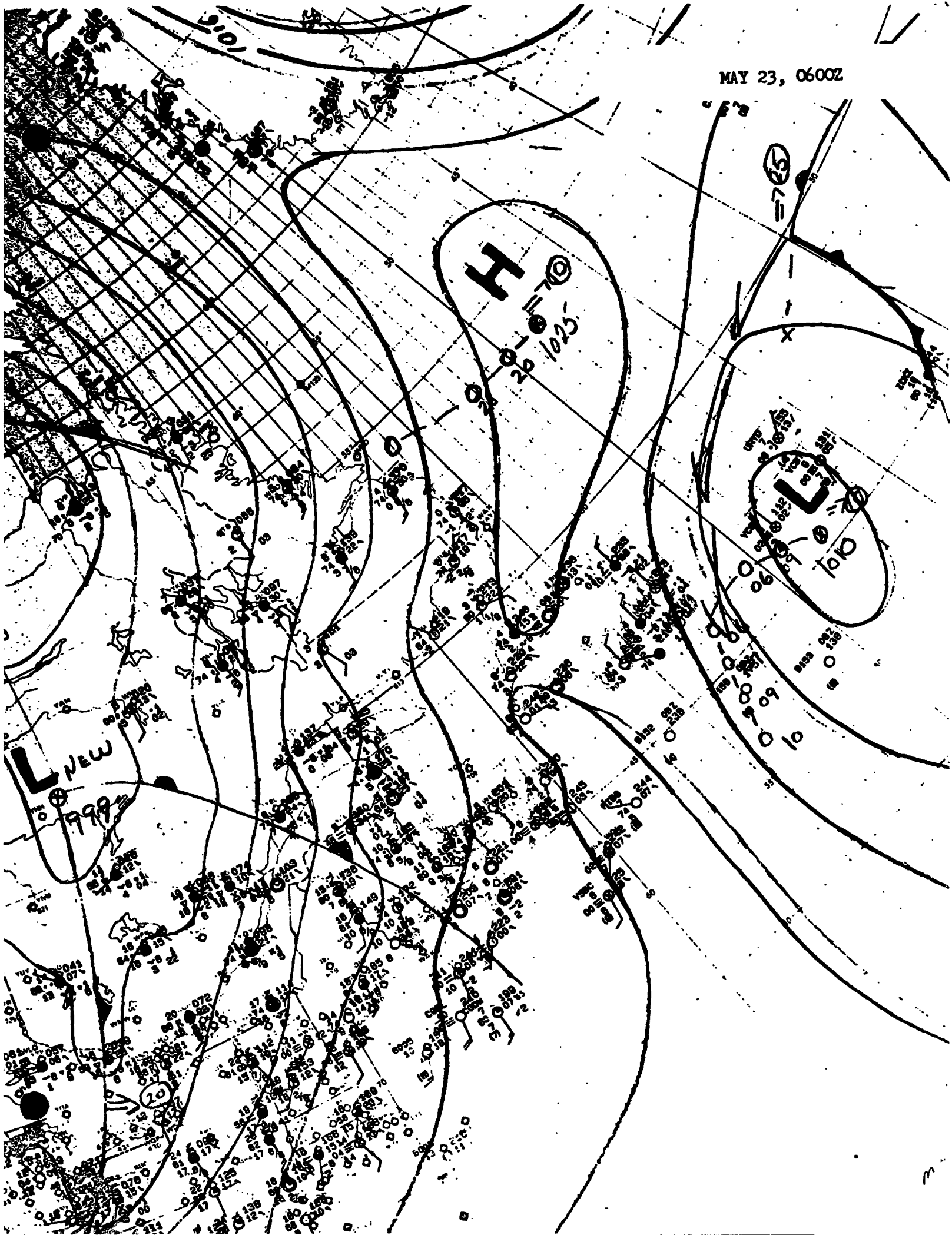
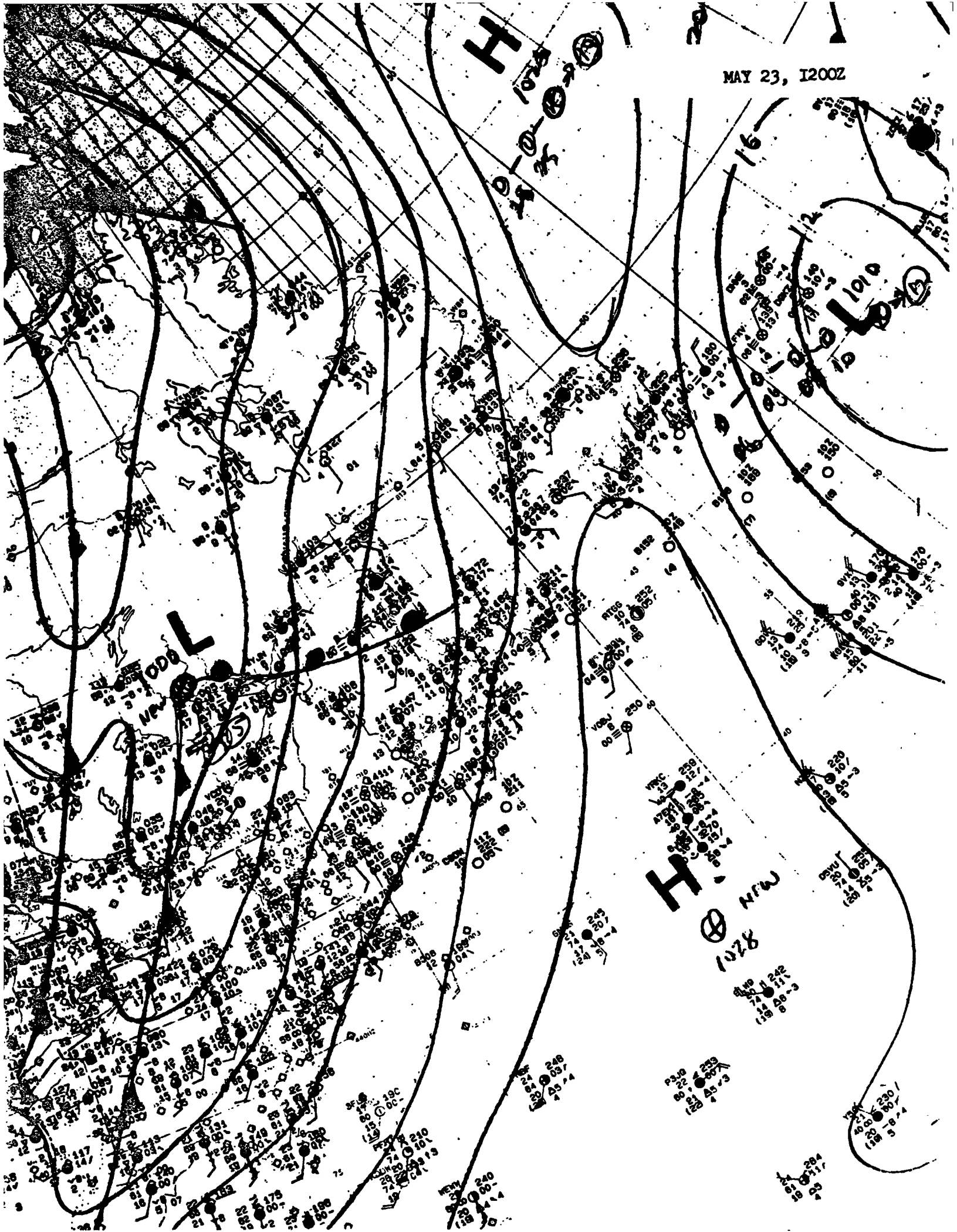
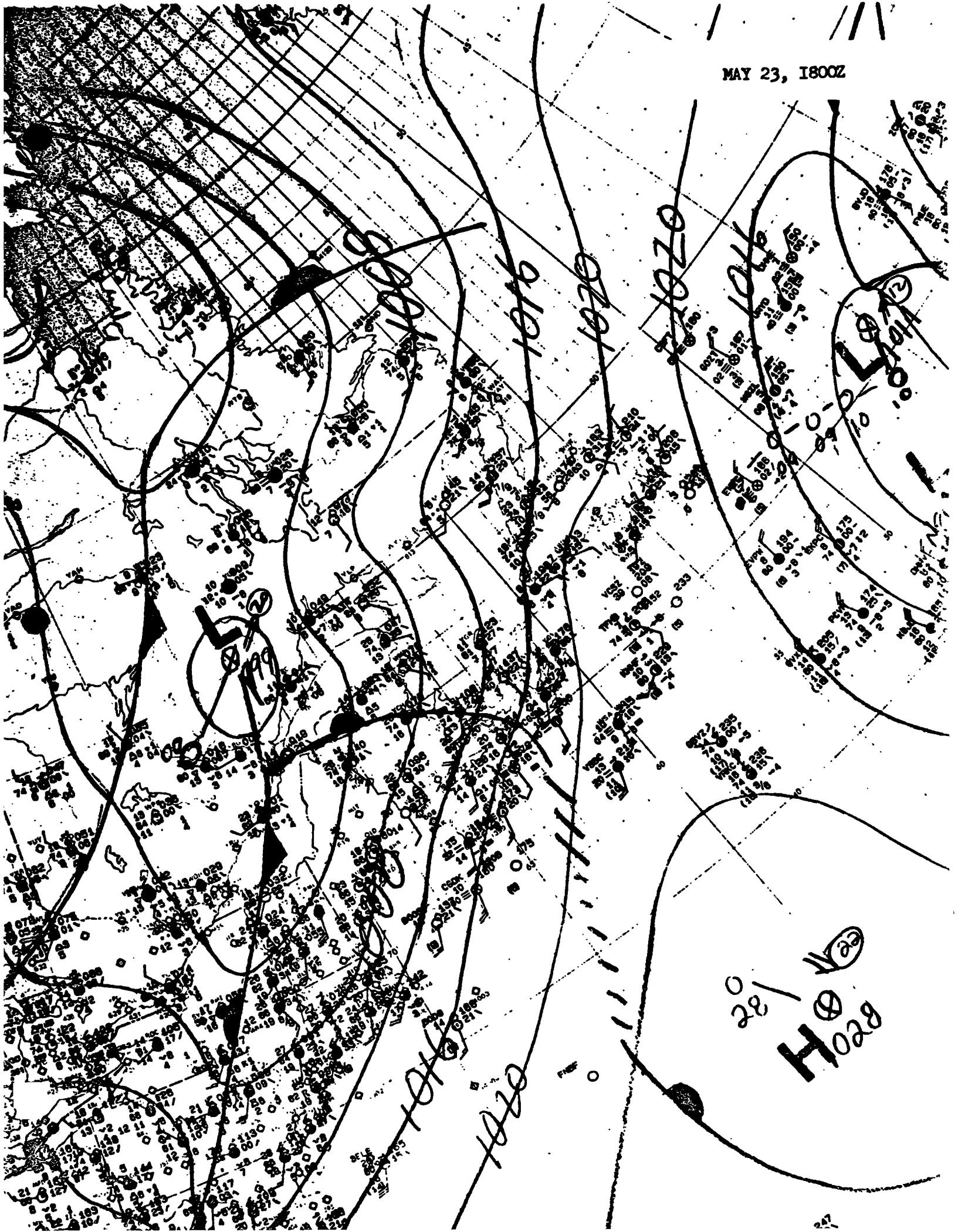
2204 KSA RS 0400 5 SCT M13 OVC 3F 146/7/6/3513/996/SF5SF5
      ?61XX?=
2205 KSA SA 0500 5 SCT M13 OVC 4F 151/7/6/3613/998/SF5SC5
      ?92XX?=
2206 KSA SA 0600 4 SCT M14 OVC 6F 159/7/6/3508/000/SF4SC6 3012
      ?22XX?=
2207 KSA RS 0700 M23 OVC 6F 166/7/7/3511/002/SC10 ?37XX?=
2208 KSA SA 0800 E23 BKN 8 173/8/6/3408/004/SC9 ?6399?=
2209 KSA SA 0900 E25 BKN 10 180/8/6/3509/006/SC8 2021 ?0088?=
2210 KSA SA 1000 25 SCT 260 SCT 10 189/8/6/3408/009/SC1C11 CI
      TR ?0011?=
2211 KSA SA 1100 260 -SCT 10 197/9/7/35093KCI ?6601?=
2211 COR KSA SA 1100 260 -SCT 10 19/9/7/3509/011/CI ?6601?=
2211 COR KSA SA 1100 260 -SCT 10 19/9/7/3509/011/CI =
2211 COR KSA SA 1100 260 -SCT 10 197/9/7/3509/011/CI ?6601?=
2211 COR KSA SA 1100 260 -SCT 10 197/9/7/3509/011/C1 =
2212 KSA SA 1200 260 -SCT 10 206/9/7/3407/013/C1 2026 ?8701?=
2213 KSA SA 1300 260 - SCT 10 214/10/7/3310/016/CI ?7801?=
2213 COR KSA SA 1300 260 - SCT 10 214/10/7/3310/016/CI ?7801?=
2213 COR KSA SA 1300 260 - SCT 10 214/10/7/3310/016/CI =
2213 COR KSA SA 1300 260 -SCT 10 214/10/7/3310/016/CI ?7801?=
2213 COR KSA SA 1300 260 -SCT 10 214/10/7/3310/016/CI =
2214 KSA SA 1400 260 -SCT 10 220/9/7/3307/018/C1 ?3201?=
2215 KSA SA 1500 20 -SCT 260 -SCT 10 223/10/7/3510/019/ST1CI
      1017 ?7812?=
2216 KSA SA 1600 260 -SCT 10 226/10/7/3407/019/CP?0401?=
2216 COR KSA SA 1600 260 -SCT 10 226/10/7/3407/019/C1 ?0401?=
2216 COR KSA SA 1600 260 -SCT 10 226/10/7/3407/019/CI =
2218 KSA SA 1800 220 -SCT 260 -BKN 10 226/10/8/3108/CI1CI 0003
      ?4519?=
2218 COR KSA SA 1800 220 -SCT 260 -BKN 10 226/10/8/3108/
      019/C11CI 0003 ?4519?=
2218 COR KSA SA 1800 220 -SCT 260 -BKN 10 226/10/8/3108/
      019/C11CI 0003 =
2219 KSA SA 1900 260 -BKN 10 230/10/8/3108/021/C11 ?0719?=
2220 KSA SA 2000 270 -OVC 10 231/10/8/3107/021/C12 ?662X?=
2221 KSA SA 2100 14 -SCT 270 -OVC 10 233/9/8/3605/022/ST1C11
      1007 ?642X?=
2222 KSA SA 2200 270 -OVC 10 236/9/7/0304/022/C12 ?462X?=
2223 KSA SA 2300 270 -BKN 10 240/9/7/0102/024/C12 ?9729?=
2300 KSA SA 0000 260 -BKN 10 242/6/7/3502/024/C12 2009 ?0627?=
2301 KSA SA 0100 260 -SCT 6F 245/7/7/0000/025/CI1 ?3715?=
2302 KSA SA 0200 260 -SCT 6F 248/M/M/2003MKCI1 ?MM15?=
2302 COR KSA SA 0200 260 -SCT 6F 248/M/M/2003/M/CI1 ?MM15?=
```

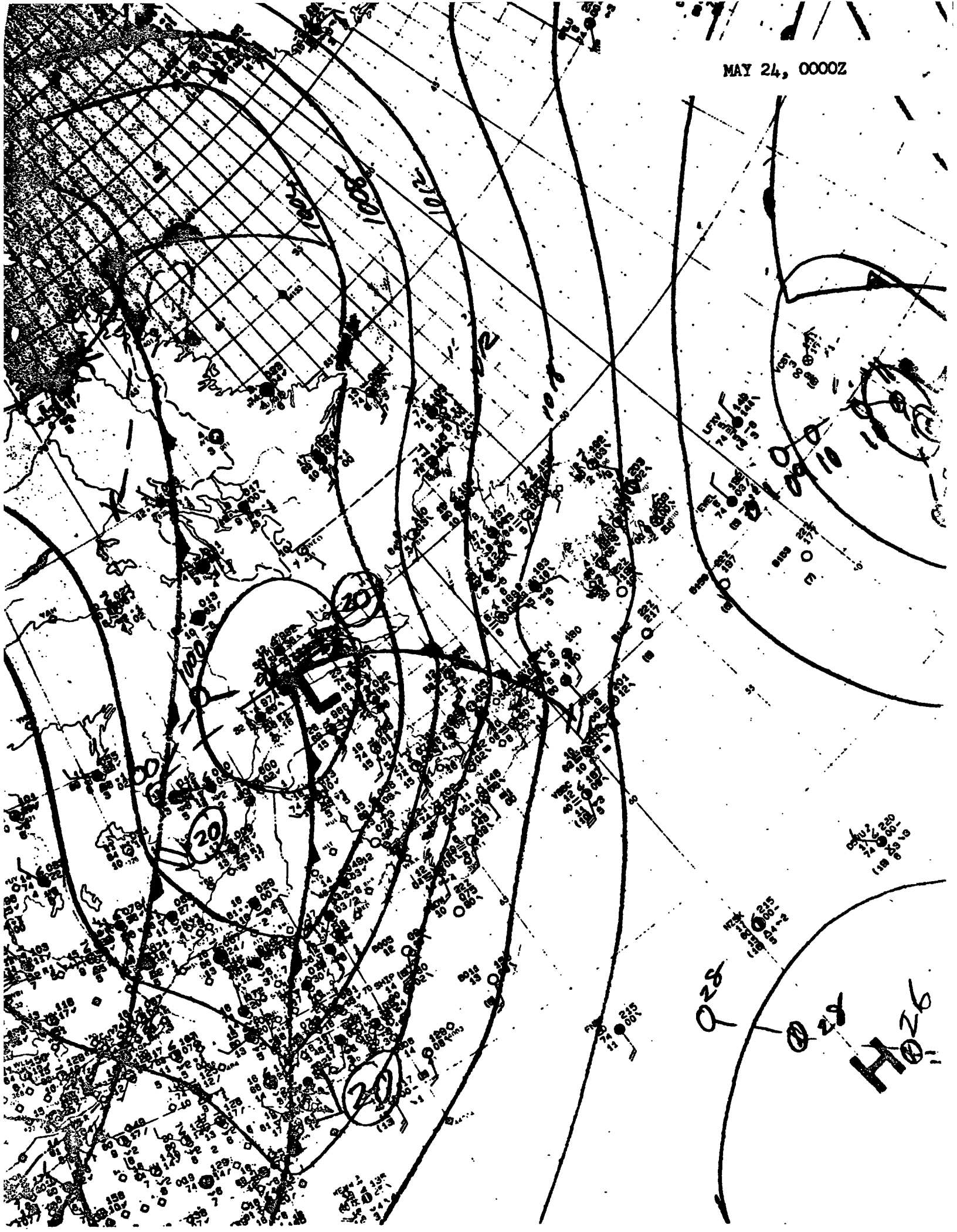
APPENDIX 2

Data for 23/0[illegible]/84

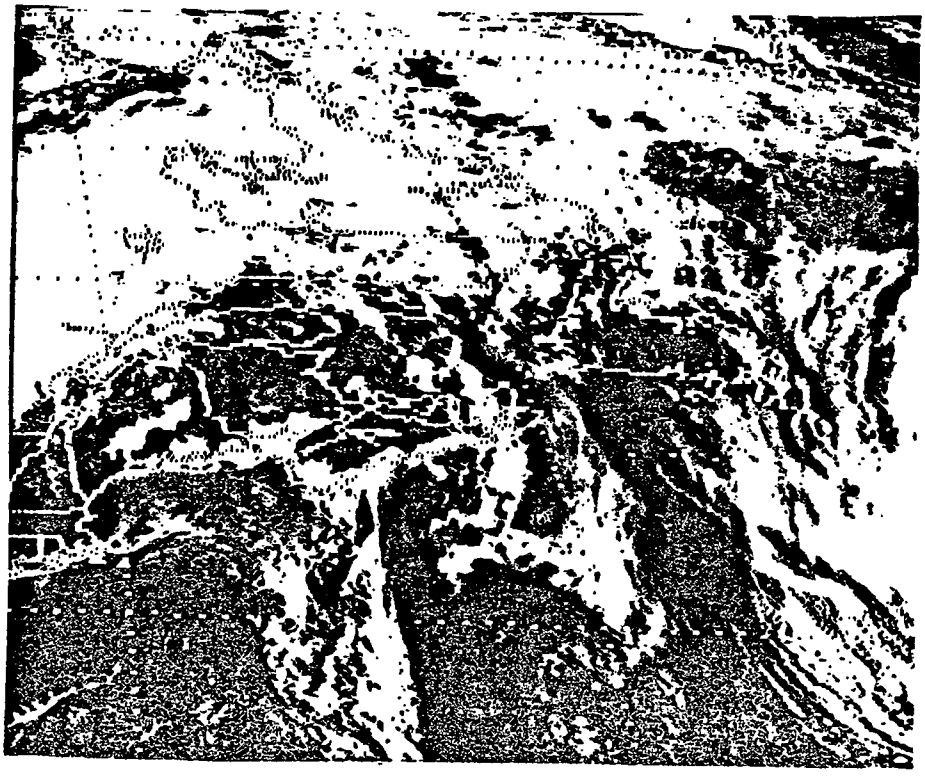

MAY 23, 0600Z
H
1025
L
NEW
998
L
1010


MAY 23, 1200Z
1028
1010
1004

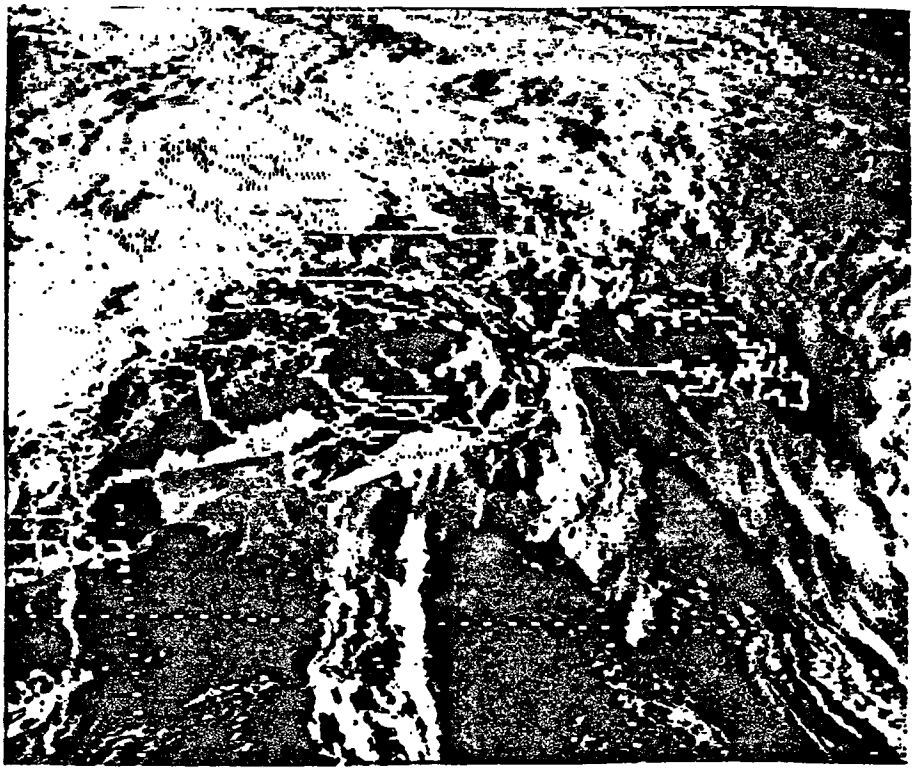

MAY 23, 1800Z


MAY 24, 0000Z

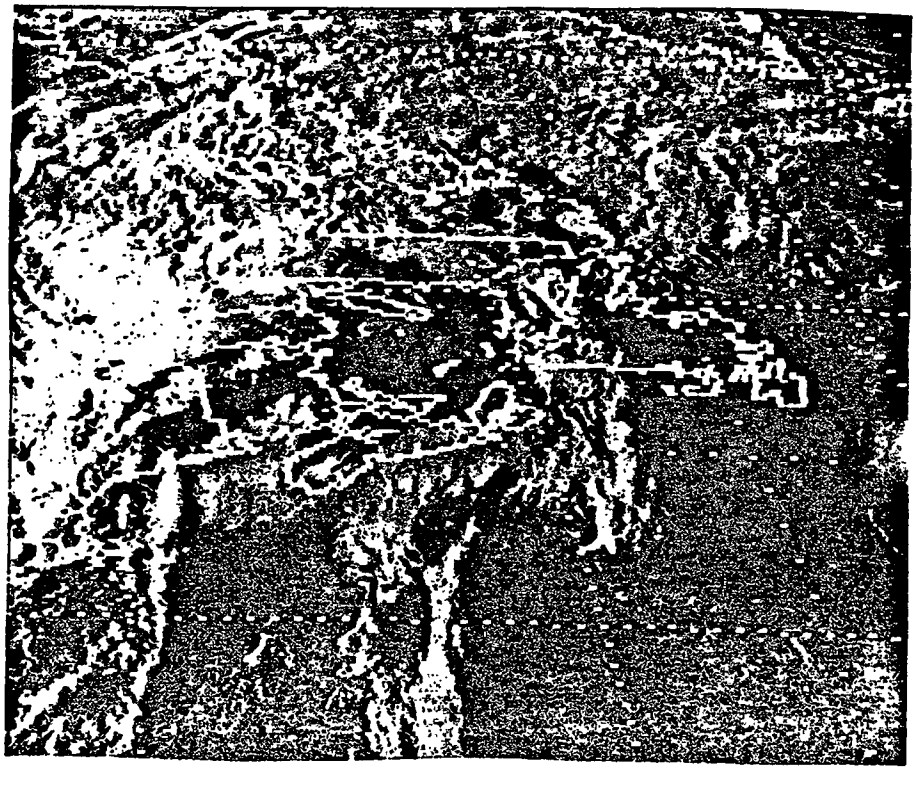
23 1200Z



23 1500Z



23 1800Z



23 2200Z

MAY 2304002 TO 2403002 1964

2304 YFC SA 0400 M90 OVC 15 184/14/11/1608/007/AC10 =
2305 YFC SA 0500 M120 BKN 15 174/13/10/1706/004/AC6 =
2306 YFC SA 0600 120 SCT 15 172/13/10/1906/003/AC4 6013 =
2307 YFC SA 0700 90 SCT 15 167/13/9/1704/002/AC5 =
2308 YFC SA 0800 90 SCT 15 162/13/9/1603/000/AC5 =
2309 YFC SA 0900 M90 BKN 15 154/13/9/1604/996/AC6 6018 =
2310 YFC SA 2300 15 SCT 40 SCT E90 OVC 15 150/14/10/1607/
997/SF2SC2AC5 =
2311 YFC SA 1100 15 SCT E60 BKN 10 147/14/11/1612/996/SF4AC5 =
2311 YFC SP 1112 M14 BKN 90 BKN 7 1610 SF7AC2=
2312 YFC SA 1200 7 SCT M14 BKN 90 BKN 7 147/14/12/1610/
996/SF2SC5AC2 6007 =
2313 YFC SA 1300 7 SCT M16 BKN 90 BKN 8 139/15/12/1612/
994/SF1SC5AC2 =
2314 YFC SA 1400 16 SCT E90 BKN 10 132/11/15/1610/991/SC4AC3 =
2315 YFC SA 1500 15 SCT E90 BKN 10 127/19/14/1713/990/SC4AC4
6020 =
2316 YFC SA 1600 20 SCT E90 BKN 12 115/21/14/1615G21/987/SC3AC3
=
2317 YFC SA 1700 20 SCT E90 BKN 12 106/21/15/1714G25/984/SC2AC4
=
2318 YFC SA 1800 20 SCT 90 SCT 250 -BKN 12 096/22/15/
1717G27/981/ CU1AC3C1 3030 =
2319 YFC SA 1900 20 SCT 90 SCT 250 -BKN 12 086/21/15/
1820G28/978/ CU1AC1C12 =
2320 YFC SA 2000 90 SCT 250 -SCT 12 073/20/14/1815G23/
974/AC1C11 =
2321 YFC SA 2100 70 SCT 250 -SCT 15 063/20/14/1818G26/
971/AC1C12 7033 =
2322 YFC SA 2200 20 SCT 250 -SCT 15 063/18/14/1818/971/CU3C1 =
2323 YFC SA 2300 M10 BKN 15 057/17/14/1817/970/SC6 =
2400 YFC SA 0000 13 SCT 120 SCT 12 056/15/13/1815/969/SF4AC1
8008 =
2401 YFC RS 0100 M10 BKN 15 056/15/13/1914/970/SF7 =
2402 YFC RS 0200 M7 OVC 15 062/15/13/2014/971/SF10 =
2403 YFC SA 0300 A7 OVC 15 046/14/13/1912/967/SF10 8009 =

MAY 2304002 TO 2403002 1984

2303 YSJ SA 0300 M3 BKN 300 OVC 4F
2304 YSJ SA 0400 M3 BKN 300 OVC 4F 203/9/6/1905/012/SF9C11 =
2305 YSJ SA 0500 M3 BKN 300 OVC 4F 191/9/6/1808/010/SF6CS4 =
2305 YSJ SP 0540 M6 BKN 300 OVC 6 1808 SF6CS4=
2306 YSJ SA 0600 M6 BKN 300 OVC 10 193/10/6/1906/009/SF/CS3
7014 =
2307 YSJ SA 0700 M7 BKN 300 OVC 10 191/10/6/1810/009/SF7CS3 =
2308 YSJ SA 0800 M7 BKN 40 OVC 10 185/10/6/1806/00//SF7SC3 =
2309 YSJ SA 0900 M7 BKN 100 BKN 10 181/10/6/1810/006/SF6AC3
7010 =
2309 YSJ SP 0935 8 SCT E100 BKN 300 BKN 10 1811 SF4AC4C11=
2310 YSJ RS 1000 M14 BKN 100 BKN 300 BKN 10 176/11/9/
1812/005/SC7AC1CI1 UA/OV YSJ 0950 FLUKN /TP AC69 /SK BKN
022 =
2310 YSJ SP 1040 M7 BKN 100 OVC 6 1813622 SF9AC1=
2311 YSJ SA 1100 M5 BKN 9 OVC 5F 172/12/10/1815622/003/SF9SF1 =
2311 YSJ SP 1111 2 SCT M4 OVC 2F 1912621 SF2SF6=
2311 YSJ SP 1130 -X M2 OVC 1/2F 1913622 F4S16=
2311 YSJ SP 1142 -X M2 OVC 3/8F 1914 F/S13=
2311 YSJ SP 1152 M1 X 1/4L--F 1915 F10=
2312 YSJ SA 1200 M 1 X 1/4F 171/11/10/1915621/003/F10 6012 =
2312 COR YSJ SA 1200 M1 X 1/4F 171/11/10/1915621/003/F10 6012 =
2312 YSJ SP 1220 M1 X 1/8L-F 1916622 F10=
2312 COR YSJ SA 1200 M1 X 1/4F 171/11/10/1915621/003/F10 6012 =
2313 YSJ SA 1300 M1 X 1/8F 167/11/10/2016621/001/F10 =
2313 YSJ SP 1335 M1 X 1/4L--F 2116625 F10=
2314 YSJ SA 1400 M1 X 1/4F 159/12/11/2115623/999/F10 =
2314 YSJ SP 1440 M2 X 1/2F 2116624 F10=
2315 YSJ SA 1500 M2 X 1/2F 156/13/12/2115623/998/F10 6015 =
2316 YSJ SA 1600 M2 X 1/2F 152/12/11/2016625/991/F10 =
2317 YSJ SA 1700 M2 X 1/2F 141/12/11/2017/994/F10 UA/OV YSJ
1658 FLUKN /TP DC9 /SK OVC 060 /WV 050 220/40 =
2318 YSJ RS 1600 M2 X 3/4F 135/12/12/2016/992/F10 6021 =
2318 YSJ SP 1819 -X M2 OVC 1F 2020 F5S15=
2319 YSJ SA 1900 -X M2 OVC 1F 127/12/11/2116/990/F5S15 =
2319 YSJ SP 1908 M2 X 1/2F 2116 F10=
2320 YSJ SA 2000 M2 X 1/2F 115/12/11/2022/988/F10 =
2320 YSJ SP 2040 M1 X 1/4F 1191G22 F10=
2321 YSJ SA 2100 M1 X 1/4F 100/11/11/2018/982/F10 6032 =
2321 YSJ SP 2137 M1 X 1/8F 1915 F10=
2322 YSJ SA 2200 M1 X 1/8F 096/11/10/2015/981/F10 =
2323 YSJ SA 2300 M1 X 1/8F 098/11/10/1915/982/F10 =
2400 YSJ SA 0000 M1 X 1/8F 091/11/10/1914/979/F10 6009 =
2400 YSJ SP 0047 M1 X 1/8L-F 1915 F10=
2401 YSJ SA 0100 M1 X 1/8L-F 084/11/11/1915/979/F10 =
2402 YSJ SA 0200 M1 X 1/8L-F 088/12/11/1914G22/979/F10 =
2403 YSJ RS 0300 M1 X 1/4L-F 084/12/11/2016/980/F10 /007 =

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2304 YQI SA 0400 CLR 15 219/10/8/2112/017/ =
2305 YQI SA 0500 CLR 15 213/11/9/2012/015/ =
2306 YQI RS 0600 4 -SCT 6F 211/11/10/1912/015/SF2 8006 =
2306 YQI SP 0612 -X 2F 1811 F7=
2307 YQI RS 0700 M2 X 1F 209/11/10/1812/014/F10 =
2308 YQI RS 0800 M1 X 1/2F 206/10/9/1711/014/F10 =
2309 YQI SA 0900 M1 X 1/2F 203/11/10/1812G23/013/F10 7008 =
2309 YQI SP 0945 -X B2 BKN 80 OVC 1F 1714 F6SF3AC1=
2310 YQI SA 1000 -X B2 OVC 1F 200/11/10/1713G20/012/F6SF4 =
2310 YQI SP 1032 M1 X 1/4VF 1812G22 F10 VSBY 1/8-1/2=
2311 YQI SA 1100 M1 X 1/4F 195/11/10/1812G19/010/F10 =
2312 YQI RS 1200 M0 X 0F 189/11/10/1815/008/F10 8014 =
2312 YQI SP 1222 M1 X 1/4F 1812G18 F10=
2313 YQI RS 1300 M1 X 3/8F 184/12/11/1813/007/F10 =
2313 YQI SP 1325 M2 X 1/2F 1812G17 F10=
2314 YQI SA 1400 M2 X 1/2F 180/12/12/1813G21/006/F10 =
2315 YQI SA 1500 M2 X 1/2F 176/14/12/1915G21/005/F10 SUN DMLY
     VSBL 7013 =
2315 YQI SP 1520 M3 X 1F 2015G22 F10 SUN DMLY VSBL=
2316 YQI RS 1600 -X B3 OVC 2F 169/15/13/1914G20/002/F3SF7 SUN
     DMLY VSBL =
2317 YQI RS 1700 B3 BKN 3F 162/16/14/2017G31/001/SF8 =
2318 YQI RS 1800 -X B2 OVC 2F 154/15/14/2018G32/996/F3SF7 SUN
     DMLY VSBL 7022 =
2319 YQI RS 1900 B3 BKN 3F 147/17/14/1916G27/996/SF9 =
2320 YQI SA 2000 E3 BKN 3F 139/17/14/1916G26/994/SF8 CIG RGD =
2320 YQI SP 2045 M2 X 1F 1916G28 F10=
2321 YQI SA 2100 M2 X 1/2F 126/13/12/1915G27/991/F10 7026 =
2321 YQI SP 2125 E2 BKN 8 2018G30 SF8 VSBY E-S 3=
2322 YQI RS 2200 E3 BKN 6F 121/14/13/2018G30/988/SF8 CIG RGD
     VSBY S3 =
2323 YQI RS 2300 M0 X 1/4F 122/12/11/1915G25/989/F10 =
2400 YQI SA 0000 M0 X 1/4F 120/12/11/1916G27/988/F10 8008 =
2402 YQI SA 0200 M0 X 1/8L-F 111/12/12/1815G25/985/F10 =
2403 YQI SA 0300 M0 X 1/8L-F 110/12/11/1918/985/F10 6010 =
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MAY 2304002 TO 2403002 1964

2304 NOS SA 0400 CLR 12 225/E/7/0000/0197 =
2305 NOS SA 0500 CLR 5F 224/7/E/1502/0197 =
2306 NOS SA 0600 M4 UVC 5F 220/7/7/1502/017/5110 E007 =
2307 NOS SA 0700 M4 UVC 5F 219/E/E/0000/017/5110 =
2308 NOS SA 0800 A1 X 1/4F 217/E/0/1404/017/F10 =
2309 NOS SA 0900 A1 X 1F 213/E/E/0000/016/F10 7007 =
2310 NOS SA 1000 A1 X 1F 216/E/E/0000/016/F10 =
2311 NOS SA 1100 A2 X 1F 212/10/9/2106/015/F10 =
2312 NOS SA 1200 B4 UVC 11/2F 206/12/11/2009/013/5F7 E007 =
2313 NOS SA 1300 A1 X 1/2F 201/11/11/2010/01C/F10 =
2314 NOS SA 1400 A1 X 1/2F 194/12/11/2012/010/F10 =
2315 NOS SA 1500 A1 X 1/2F 190/13/12/1910/0009/F10 7010 =
2316 NOS SA 1600 A2 X 1/2F 185/13/12/1907/0007/F10 =
2317 NOS SA 1700 E4 UVC 1F 176/14/13/1911/0004/5F10 =
2318 NOS SA 1600 -X B2 UVC 1F 170/14/13/1910/0003/F65F4 7020 =
2319 NOS SA 1900 -X E2 UVC 1F 165/15/14/1909/0001/F5515 =
2320 NOS SA 2000 -X E2 UVC 1F 157/15/14/2013/9997/F5515 =
2321 NOS SA 2100 -X E3 UVC 1F 150/15/13/1909/9997/F4516 7020 =
2322 NOS SA 2200 -X E3 UVC 3/4F 139/13/12/1906/9994/F5515 =
2303 NOS SA 2300 A1 X 1/4F 136/12/12/1910/9993/F10 =
2400 NOS SA 0000 A1 X 1/4F 136/12/12/2012/9993/F10 E012 =
2401 NOS SA 0100 A1 X 1/2F 136/12/12/2113/9993/F10 =
2402 NOS SA 0200 A1 X 1/4F 137/11/11/2010/9993/F10 =
2403 NOS SA 0300 A1 X 1/4F 127/11/11/2012/9990/F10 E011 =

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2304 YHZ SP 0420 M2 A 1/2VF 1607 F4 VSBY 3/8-5/8=
2305 YHZ SA 0500 M2 A 1/2VF 220/7/7/1704/017/F10 VSBY 3/8-5/8 =
2306 YHZ MS 0600 -X 3/4VF 217/7/7/1604/017/F8 VSBY 1/2-1 6003 =
2307 YHZ MS 0700 -X 1/2VF 213/6/6/1604/016/F6 VSBY 3/8-5/8 =
2307 YHZ SP 0740 -X 3/4VF 1607 F4 VSBY 1/2-1=
2308 YHZ SA 0800 -X E90 BKN 3/4VF 213/6/6/1707/016/F4AC3 VSBY
     1/2-1  =
2309 YHZ SA 0900 -X E90 BKN 3/4VF 214/7/7/1506/016/F4AC4 VSBY
     1/2-1. 5003  =
2309 YHZ SP 0940 2 SCT E90 OVC 11/2F 1508 SF2AC7 VSBY 5-SE 5/8=
2310 YHZ SA 1000 2 SCT E90 OC 2F 211/8/8/150//015/SF1AC9 =
2310 COR YHZ SA 1000 2 SCT E90 OVC 2F 211/8/8/1507/015/SF1AC9 =
2310 YHZ SP 1030 3 SCT E90 OVC 3F 1708 SF1AC9=
2311 YHZ SA 1100 6 SCT E90 OVC 5F 209/10/10/1708/015/SF1AC9 =
2312 YHZ SA 1200 6 SCT E90 OVC 6F 208/11/11/1710/013/SF4AC6
     8006 =
2312 YHZ SP 1238 E6 BKN 90 OVC 4F 1913 SF2AC4=
2313 YHZ SA 1300 M6 BKN 90 OVC 5F 201/13/12/1914/012/SF6AC2 =
2314 YHZ SA 1400 M8 OVC 6F 195/14/13/2016624/010/SF9 =
2314 YHZ SP 1433 10 SCT E90 BKN 10 2016 CF2AC4=
2315 YHZ SA 1500 10 SCT 120 SCT 15 186/16/13/1916626/006/CF2AC2
     7020  =
2315 YHZ SP 1535 M10 BKN 10 2016 SC6 C16 RGD=
2316 YHZ MS 1600 M9 OVC 6F 185/15/13/2015624/007/S19 =
2316 YHZ SP 1640 M5 OVC 11/2F 1914622 S110=
2317 YHZ MS 1700 M4 OVC 11/2F 1//14/13/1913622/004/S110 C16
     RGD =
2317 YHZ SP 1720 M4 OVC 1F 1813622 S110 C16 RGD=
2318 YHZ MS 1800 M4 OVC 11/2F 1//14/13/1713620/003/S110 C16
     RGD SUN OCNL VSB 7017 =
2318 YHZ SP 1852 M5 OVC 3F 1913 S19=
2319 YHZ SA 1900 M5 OVC 4F 182/15/14/1913624/000/S19 VSBY MA 10
     =
2319 YHZ SP 1940 M4 OVC 21/2F 1814622 S110=
2320 YHZ SA 2000 M4 OVC 11/2F 154/14/14/1914624/997/S110 VSBY
     SM 3/4  =
2320 YHZ SP 2020 -X M3 OVC 3/4F 1910622 F3517 VSBY E 6040 1=
2321 YHZ SA 2100 -X M3 OVC 3/4F 145/14/14/1910622/995/F3517
     7026 =
2321 YHZ SP 2120 -X M3 OVC 1/2F 2010622 F0514=
2322 YHZ MS 2200 -X M2 OVC 3/8L--F 139/14/14/1910625/993/F0512
     =
2322 YHZ SP 2235 M2 A 1/4L--F 1910624 F10=
2322 YHZ SP 2245 M1 A 1/8L--F 1910624 F10=
2323 YHZ SA 2300 M1 A 1/8L--F 13//14/14/2010623/992/F10 =
2400 YHZ MS 0000 M2 A 3/8L--F 141/13/13/191//994/F10 5004 =
2401 YHZ SA 0100 M2 A 3/8L--F 139/13/13/1913/993/F10 =
2401 YHZ SP 0145 M1 A 1/4L--F 2013620 F10=
2402 YHZ SA 0200 M1 A 1/4L-F 136/13/13/2010/99C/F10 =
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2304 NOW SA 0400 N0 X 0F 234/6/4/0603/0C1/F10 ?11XX?=
2305 NOW SA 0500 N0 X 0F 233/6/4/0705/021/F10 ?96XX?=
2306 NOW SA 0600 N0 X 0F 226/6/4/1203/019/F10 0006 ?09XX?=
2307 NOW SA 0700 N0 X 0F 221/5/3/1404/016/F10 ?43XX?=
2307 COR NOW SA 0700 N0 X 0F 221/5/3/1404/016/F10 ?43XX?=
2307 COR NOW SA 0700 N0 X 0F 221/5/3/1404/016/F10 =
2308 NOW SA 0800 N0 X 0F 221/5/3/1904/016/F10 ?11XX?=
2309 NOW SA 0900 N0 X 0F 224/6/4/1605/016/F10 5002 ?16XX?=
2310 NOW SA 1000 N0 X 0F 221/6/4/1406/016/F10 ?15XX?=
2311 NOW SA 1100 N0 X 1/4F 220/6/4/1504/011/F10 ?42XX?=
2312 NOW SA 1200 N0 X 1F 219/7/5/1905/017/F10 0005 ?12XX?=
2313 NOW SA 1300 E7 UVC 2F 214/6/6/1907/016/S110 ?16XX?=
2314 NOW SA 1400 -X E80 BKN 2F 206/6/5/1506/014/F2AC? ?5349?=
     133614107
2315 NOW SA 1500 E80 UVC 10 202/10/6/1405/012/AL/ 7017 ?51XX?=
2316 NOW SA 1600 E80 UVC 15 193/14/9/1707/010/AC10 ?92XX?=
2317 NOW SA 1700 E80 UVC 10 182/15/10/1915619/0006/AL10 ?03XX?=
2318 NOW SA 1800 20 SCT E80 BKN 15 17C/17/11/2110650/0053/
     SC5AC2 6030  ?0677?= 1604180047
2319 NOW SA 1900 20 SCT E220 -BKN 12 165/17/11/19216207007/
     SC1CS4 ?25597?=
2320 NOW SA 2000 E10 BKN 220 BKN 1C 160/17/11/1915/999/SL0C11
     ?5379?=
2321 NOW SA 2100 E10 UVC 5F 159/12/9/1911/999/SC10 6013 ?90XX?=
2322 NOW SA 2200 E8 UVC 3F 151/10/8/1809/997/S110 ?36XX?=
2323 NOW SA 2300 M1 X 1/2L-F 149/10/8/1908/996/F10 ?81XX?=
2400 NOW SA 0000 M1 X 1/2F 149/10/8/1905/996/F10 6010 ?09XX?=
2401 NOW SA 0100 M1 X 1/2L--F 149/11/9/1905/996/F10 ?90XX?=
     005201057
2402 NOW SA 0200 N0 X 1/2F 149/12/10/1606/996/F10 ?06XX?=
2403 NOW SA 0300 M7 UVC 1F 149/11/10/2010/996/S110 4000 ?45XX?=
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2304 YQY SA 0400 CLR 15 239/3/2/0000/024/ =
2305 YQY SA 0500 CLR 15 235/3/2/1802/022/ =
2306 YQY SA 0600 CLR 15 230/3/2/2104/021/ 8009 =
2307 YQY SA 0700 CLR 15 226/3/2/1904/019/ =
2308 YQY RS 0800 M1 X 1/2F 221/4/3/1906/018/F10 =
2308 YQY SP 0846 M0 X 1/8F 2003 F10=
2309 YQY SA 0900 M0 X 1/8F 222/5/3/1806/018/F10 6008 =
2310 YQY RS 1000 M1 X 1/2F 226/6/4/2005/019/F10 =
2311 YQY RS 1100 M3 X 3/4F 220/6/5/2007/018/F10 SUN DMLY VSBL =
2311 YQY SP 1111 -X M2 OVC 1F 1907 F4SF5=
2311 YQY SP 1145 M4 OVC 6F 1912 SF7=
2311 YQY SP 1155 5 -BKN E250 BKN 10 2010 SF3C13=
2312 YQY SA 1200 5 -BKN E250 BKN 10 211/9/8/2010/015/SF3C13
      8011 =
2313 YQY SA 1300 5 SCT 250 -BKN 15 206/13/9/2013/013/SF1C13 SF
      CEILG NW =
2314 YQY SA 1400 120 SCT 250 -BKN 15 201/15/10/2012/012/AC2C12
      =
2315 YQY SA 1500 250 -BKN 12 196/16/9/1916/010/C13 7015 =
2316 YQY SA 1600 250 -BKN 12 190/16/10/1810/009/C12 CUTRA =
2317 YQY SA 1700 120 SCT E250 OVC 12 179/17/10/2012/006/AC3C17
      =
2318 YQY SA 1800 M90 OVC 12 176/17/9/2014/005/AC10 6020 =
2320 YQY SA 2000 M16 BKN 10 164/17/11/2118G26/001/SC7 =
2321 YQY SA 2100 16 SCT E250 BKN 15 154/15/11/1817/998/SC4C13
      7022 =
2322 YQY SA 2200 E15 BKN 15 149/13/10/1812/997/SC6 =
2322 YQY SP 2335 M5 OVC 6F 1915 SF10=
2323 YQY RS 2300 M3 OVC 4F 146/11/9/1912/996/SF10 =
2400 YQY SA 0000 M3 OVC 4F 145/11/9/2315G23/996/SF10 7009 =
2401 YQY RS 0100 M1 OVC 1F 146/10/9/2315/996/SF10 =
2402 YQY RS 0200 M3 OVC 4F 146/11/10/2312/996/SF10 =
2403 YQY RS 0300 M0 X 3/4F 146/11/10/2012/996/F10 1001 =
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2306 BOX SA 0600 W0 X 0F 245/9/9/2205/025/F10 FG 0415 MUDMLY.
     VSBL=
2309 BOX SA 0900 W1 X 0F 253/7/7/2106/028/F10 M=
2310 BOX SA 1000 SAWR W1 X 0F 255/7/7/2312/026/F10=
2311 BOX SA 1100 W1 X 1/8F 255/8/8/2312/026/F10 VSB BY SV=
2312 BOX SA 1200 W1 X 1/8F 255/8/8/2311/026/F10 VSY BY SV 400
     FEET M=
2313 BOX SA 1300 W1 X 1/8F 245/8/8/2112/025/F10 SV VSB 400
     FEET=
2314 BOX SA 1400 W1 X 1/8F 244/8/8/2114/025/F10 SV VSB NO LMG
     SUN DMLY VSBL=
2315 BOX RS 1500 W1 X 1/4F 235/9/9/2214/022/F10 SUN DMLY VSBL
     M=
2316 BOX RS 1600 W1 X 0F 235/9/9/2113/022/F10 BALLOON
     DISAPPEARED AT 115 FEET VSBY W-NE 1/8 ML/SV HAS 300 FEET
     VSB=
2317 BOX SA 1700 W1 X 1/8F 226/10/10/2115/020/F10 FOG BANK
     DPSTD 76 FT VSBLY NNE 1/4W1=
2318 BOX SA 1800 W1 X 1/8F 223/10/9/2111/019/ F10 B DSPD 115 F
     VSBVY NNE  1/8M1=
2319 BOX RS 1900 W0 X 0F 222/9/9/2217/019/F10=
2320 BOX SA 2000 W0 X 0F 216/9/9/2211/011/F10=
2321 BOX SA 2100 W0 X 0F 213/9/9/2119/016/F10 M=
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```
2308 GOR SA 0500 05 -SCT 15 2447/5/5/0109/025/ALC=
2309 GOR SA 0900 05 SCT 200 -SCT 15T 244/8/8/04006/ 025/ACCLI1
     M=
2310 GOR SA 1000 SAWR 65 SCT 200 SCT 15 246/9/5/0005/
     026/AC1CI2=
2311 GOR SA 1100 200 -BKN 15 249/10//0000/027/CL14=
2312 GOR SA 1200 200 SCT 15 249/9/5/0000/027/CL14 M=
2313 GOR SA 1300 200 SCT 15 249/8/8/0000/02//CL4=
2314 GOR SA 1400 200 SCT 15 246/7/5/2305/026/CL4= ?
2315 GOR SA 1500 90 SCT 200 SCT 15 242/7/5/2105/024/AL1CI5 M= ?
2316 GOR SA 1600 90 SCT 200 SCT 15 237/8/8/2106/025/AL1CI2=
2317 GOR SA 1700 90 SCT 200 SCT 15 233/8/8/2413/022/ ACCLI2= ?
2318 GOR SA 1800 10 SCT 90 SCT 200 -BKN 10 2247/ 10/8/
     2413/021/SF1ACCLI1  FOG BNK 5 MILES NW M=
2319 GOR SA 1900 W2 X 3F 223/9/8/2313/019/F10=
2319 GOR SP 1940 W2 X 1F 2315 F10=
2320 GOR SA 2000 W2 X 1F 219/10/8/2415/016/F10=
2321 GOR RS 2100 W1 X 1/2F 216/9/9/2415/011/F10 M=
```

```
2304 WSA SA 0400 CLK 6F 245/7/6/1904/0251 ?C200?=
2305 WSA SA 0500 CLK 5F 241/7/6/1704/0241 ?6100?=
2306 WSA RS 0600 W1 X 1/6F 242/7/7/2206/0241/F10 5007 ?08XX?=
2307 WSA SA 0700 W1 X 1/6F 241/6/6/1906/0241/F10 MOON DMLY VSB
     ?22XX?=
2308 WSA SA 0800 W1 X 1/6F 240/6/6/2106/0241/F10 ?44XX?=
2309 WSA SA 0900 W1 X 1/6F 241/7/7/2010024/F10 5001 ?00X0?=
2309 COR WSA SA 0900 W1 X 1/6F 241/7/7/2010/0241/F10 5001
     ?00XX?=
2309 COR WSA SA 0900 W1 X 1/6F 241/7/7/2010/0241/F10 5001 =
2310 WSA SA 1000 W1 X 1/6F 244/6/6/2209/0251/F10 ?99XX?=
2311 WSA SA 1100 W1 X 1/6F 245/6/6/2211/0251/F10 ?22XX?=
2312 WSA RS 1200 -X 1/4F 241/9/9/2109/0241/F9 SUN DMLY VSB 0000
     ?9999?=
2312 WSA SP 1247 W1 X 1/6F 2010 F10 SUN DMLY VSB= 122412517
2313 WSA SA 1300 W1 X 1/6F 239/10/10/2010/0241/F10 SUN DMLY VSB
     ?88XX?=
2314 WSA SA 1400 W1 X 1/4F 236/10/9/2111/0221/F10 SUN DMLY VSB
     ?09XX?=
2315 WSA SA 1500 W1 X 1/6F 231/11/9/2111/0211/F1PSUN DMLY VSB
     7010 ?50XX?=
2315 COR WSA SA 1500 W1 X 1/6F 231/11/9/2111/0211/F10 SUN DMLY
     VSB 7010 ?50XX?=
2315 COR WSA SA 1500 W1 X 1/6F 231/11/9/2111/0211/F10 SUN DMLY
     VSB 7010 =
2316 WSA SA 1600 -X B2 DVC 1/4F 229/11/9/211C/0119/F7SF2 SUN
     DMLY VSB ?579X?=
2317 WSA SA 1700 -X B2 DVC 1/4F 218/1C/10/2009/0111/F5SF4 SUN
     DMLY VSB ?859X?=
2318 WSA SA 1800 -X B2 DVC 1/4F 215/10/9/190C/0101/F7SF5 SUN
     ?40XX?=
2318 WSA SP 1821 -X B5 DVC 1/2F 1908 F4SF6=
2319 WSA RS 1900 -X B2 DVC 3/4F 211/10/9/180B/0151/F2SF8 ?29XX?=
2320 WSA RS 2000 B2 DVC 11/2F 200/10/9/2009/0131/SF10 DLN VSSL
     TG 3 MND 09XX?=
2320 WSA SP 2047 2 SLT B120 BAL 290 DVC 2F 1810 SPACSL11=
2321 WSA SA 2100 2 SLT B120 BAL 290 DVC 2F 199/11/10/
     1810/012/SF4ACSL11  7010 ?000X?=
2321 WSA SP 2122 W2 X 1/4F 1911 F10=
2322 WSA SA 2200 W1 X 1/6F 190/10/9/1911/0111/F10 ?01XX?=
2323 WSA SA 2300 W1 X 1/6F 192/10/10/1812/0004/F10 ?55XX?=
2400 WSA SA 0000 W1 X 1/6F 188/10/10/1912/0006/F10 7011 ?77XX?=
2401 WSA SA 0100 W1 X 1/6F 187/10/10/1912/0006/F10 ?85X?=
2402 WSA SA 0200 W1 X 1/6F 185/10/10/1911/0006/F10 ?88XX?=
2402 WSA SP 0246 M11 DVC 21/2L--F 1911 SF10=
2403 WSA SA 0300 M11 DVC 21/2L--F 184/10/10/1911/0007/SF10 7004
     ?06XX?=
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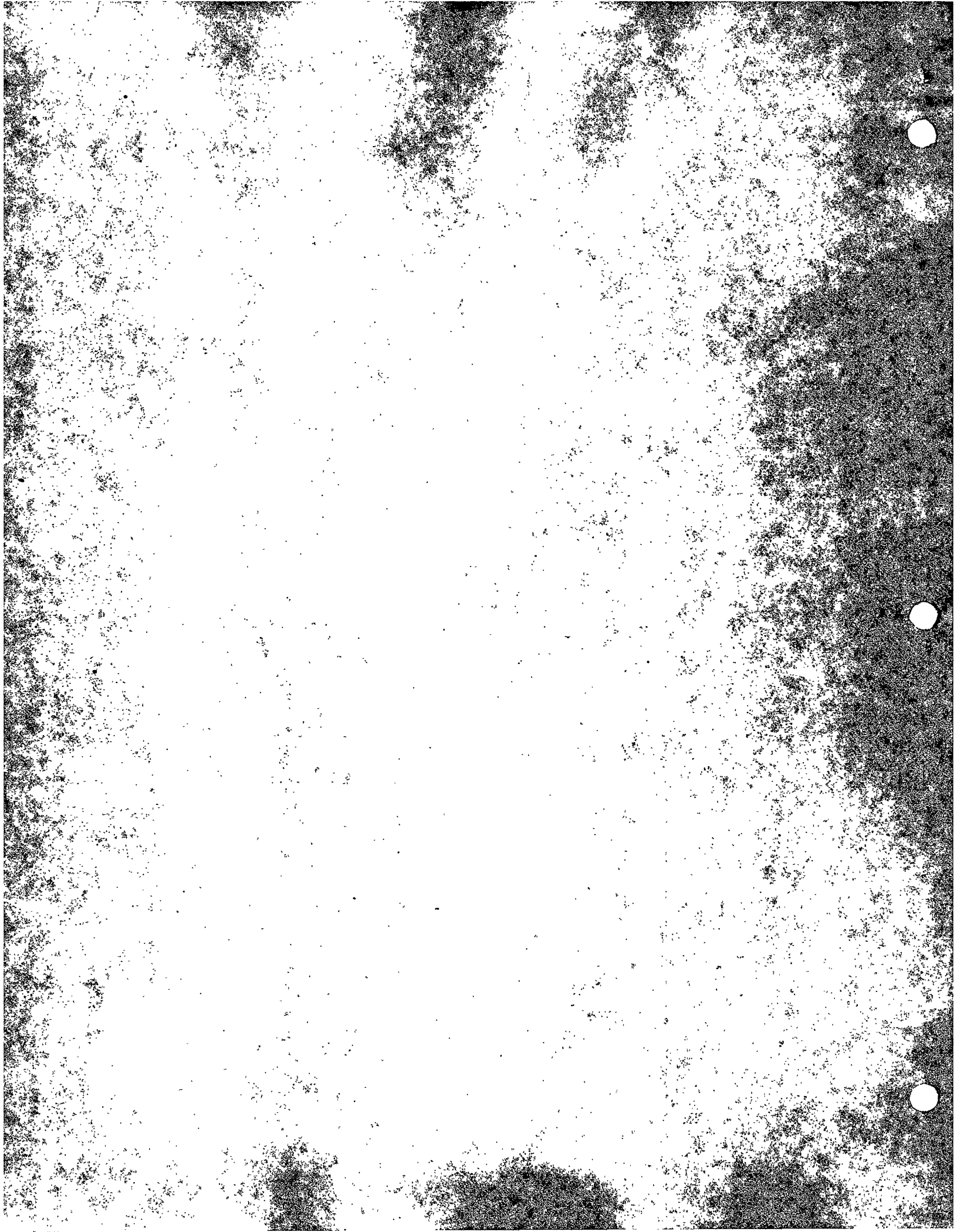
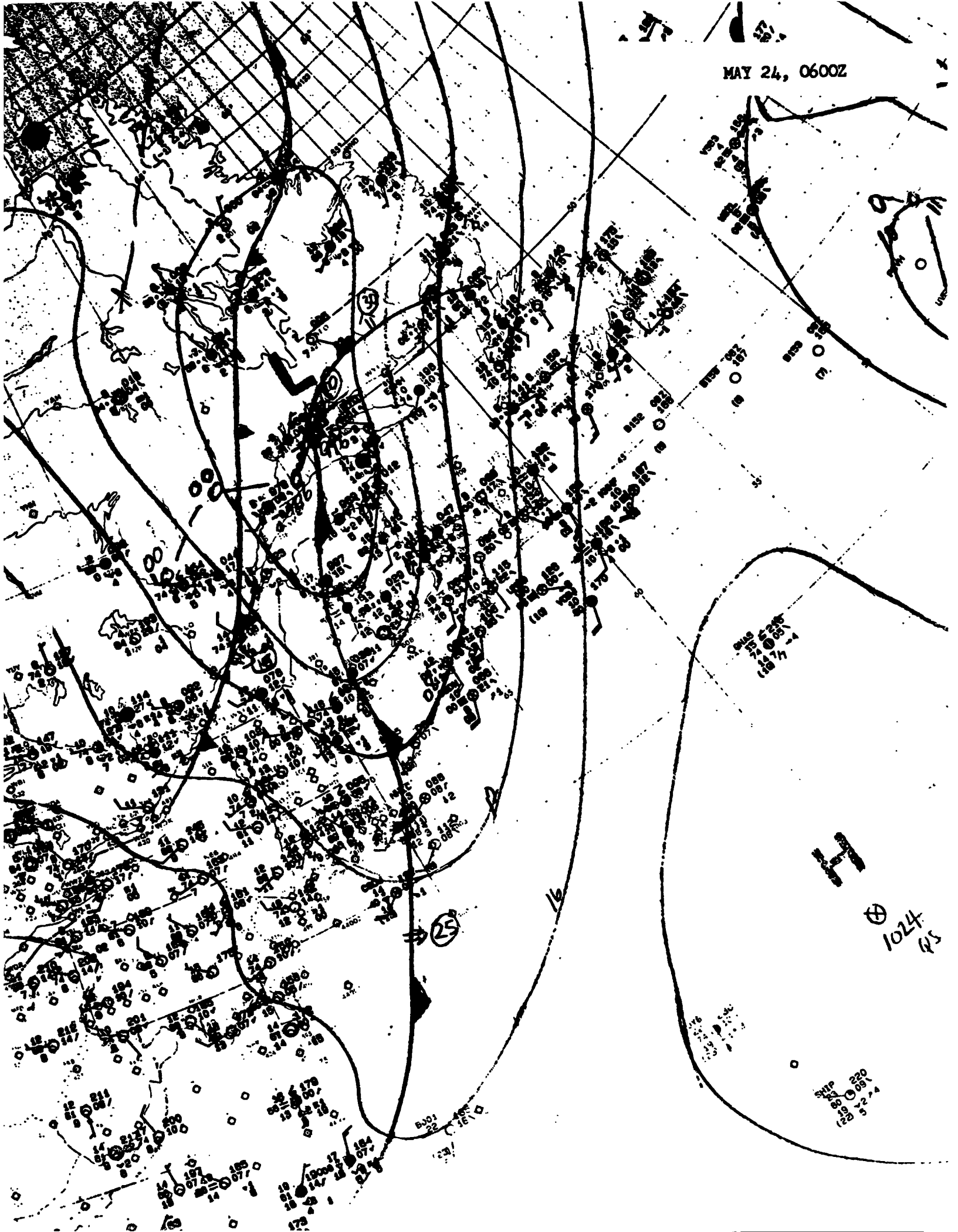
2309 BOW SA 0900 W1 X OF 234/6/6/2111/022/M M=
2310 BOW SA 1000 SAWR W1 X OF 236/6/6/2112/023/M=
2311 BOW SA 1100 W1 X OF 234/7/7/2111/022/M=
2312 BOW SA 1200 W1 X OF 230/7/7/2010/021/M M=
2313 BOW SA 1300 W1 X OF 232/7/7/2011/022/M=
2314 BOW SA 1400 W1 X OF 227/7/7/1912/020/M=
2315 BOW SA 1500 21 X OF 222/8/8/2013/019/M M=
2316 BOW SA 1600 W2 X 1/8F 216/8/8/2115/017/M=
2316 BOW SP 1633 SAWR -X E160 OVC 1/4F 2217 016 F3CC7=
2317 BOW RS 1700 -X E130 OVC 1/2F 208/8/7/2116/014/F2ACB= ?
2317 BOW SP 1725 SAWR E130 OVC 2F 2119 013= ?
2318 BOW SA 1800 E130 OC 21/2F 205/8/8/2116/014/M M=
2319 BOW RS 1900 E100 OVC 4F 199/9/8/2117/012/M=
2320 BOW SA 2000 E90 OVC 21/2F 194/9/8/2016/010/M=
2321 BOW SA 2100 E90 OVC 21/2F 187/9/8/2018/008/M M=

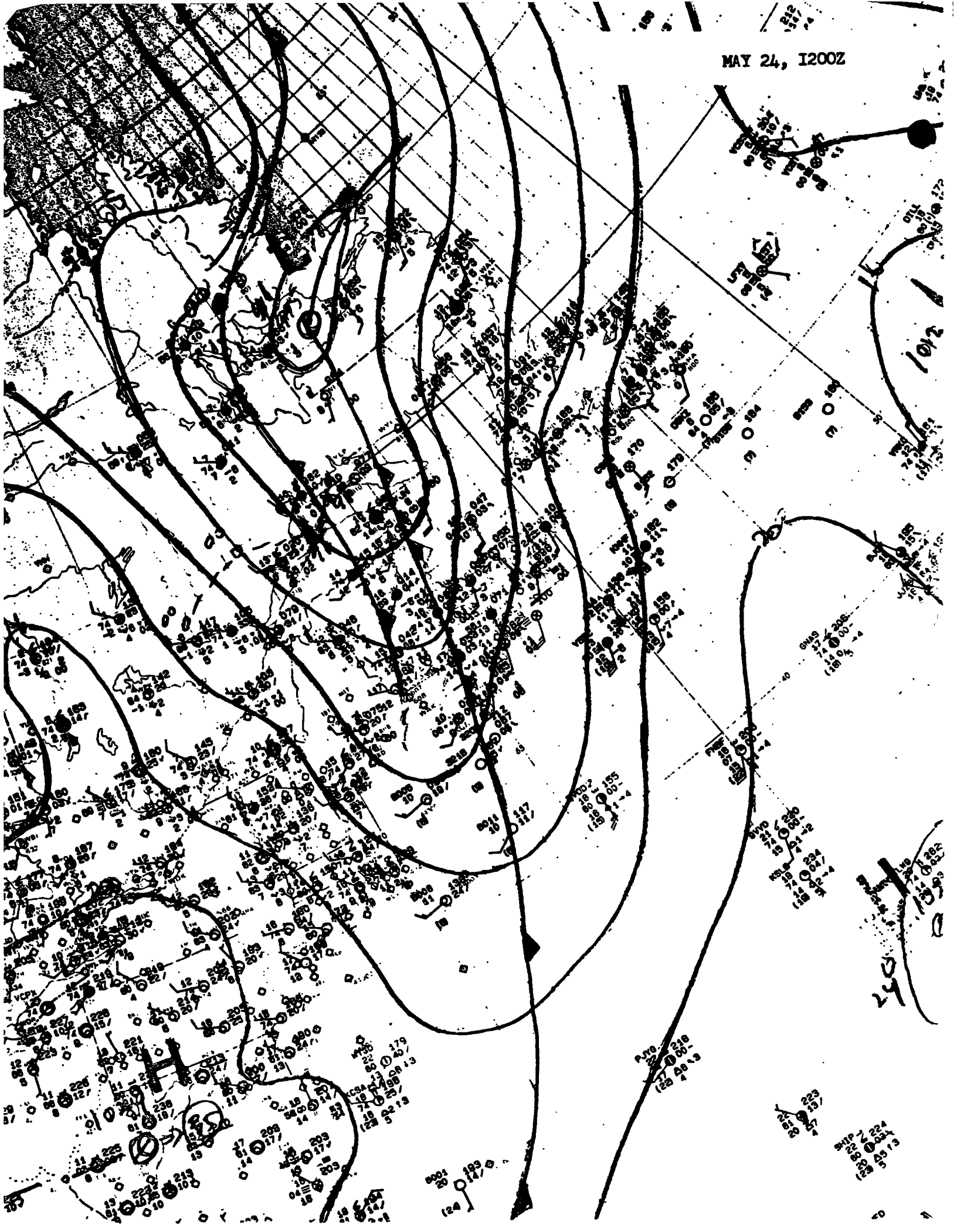
2308 BOR SA 0800 P4 X OLF 236/8/8/2012/023/F10=
2309 BOR SA 0900 P4 X OLF 236/9/9/2114/023/F10 M=
2310 BOR SA 1000 SAWR W3 X OF 236/9/9/2112/026/F10=
2311 BOR SA 1100 W3 X OF 238/9/9/2112/023/F10 SUN DMLY VSB SV
VSB = 1/2 CABLE= ?
2312 BOR SA 1200 -X E100 SCT OF 238/10/10/2110/013/F6C12 SV VSB
300 FEET M=
2313 BOR RS 1300 W3 X OF 237/9/9/2112/023/F10 SUN DMLY VSBL=
2314 BOR SA 1400 W3 X OF 236/9/8/2013/023/F10 SUN DMLY VSB SV
1/2 CBL=
2315 BOR SA 1500 W3 X OF 229/10/9/2016/021/F10 SUN DMLY VSBL M=
2316 BOR SA 1600 W3 X OF 226/12/10/2019/020/F10 SUN DMLY VSB SV
VSB 1 CBL=
2316 BOR SP 1625 SAWR -X E200 OVC 1/4F 223/13/11/2013/019/
F9SC1 SV VSBL 3-1/2 CABLE=
2317 BOR RS 1700 -X E20 OVC 11/4F 221/13/11/2020/018/ F9SC1 SV
VSB 1.2 MILES=
2318 BOR RS 1800 -X E250 BKN 1/2F 213/13/11/2023/ 016/F6C12 SV
VSB .5 MILES=
2319 BOR RS 1900 W5 X 1/8F 209/11/11/2123/015/ F10 SUN DMLY
VSBL SV VSB .2 MM= ?

APPENDIX 3

Date Sub 30/05/84




MAY 24, 0600Z
1024
25
16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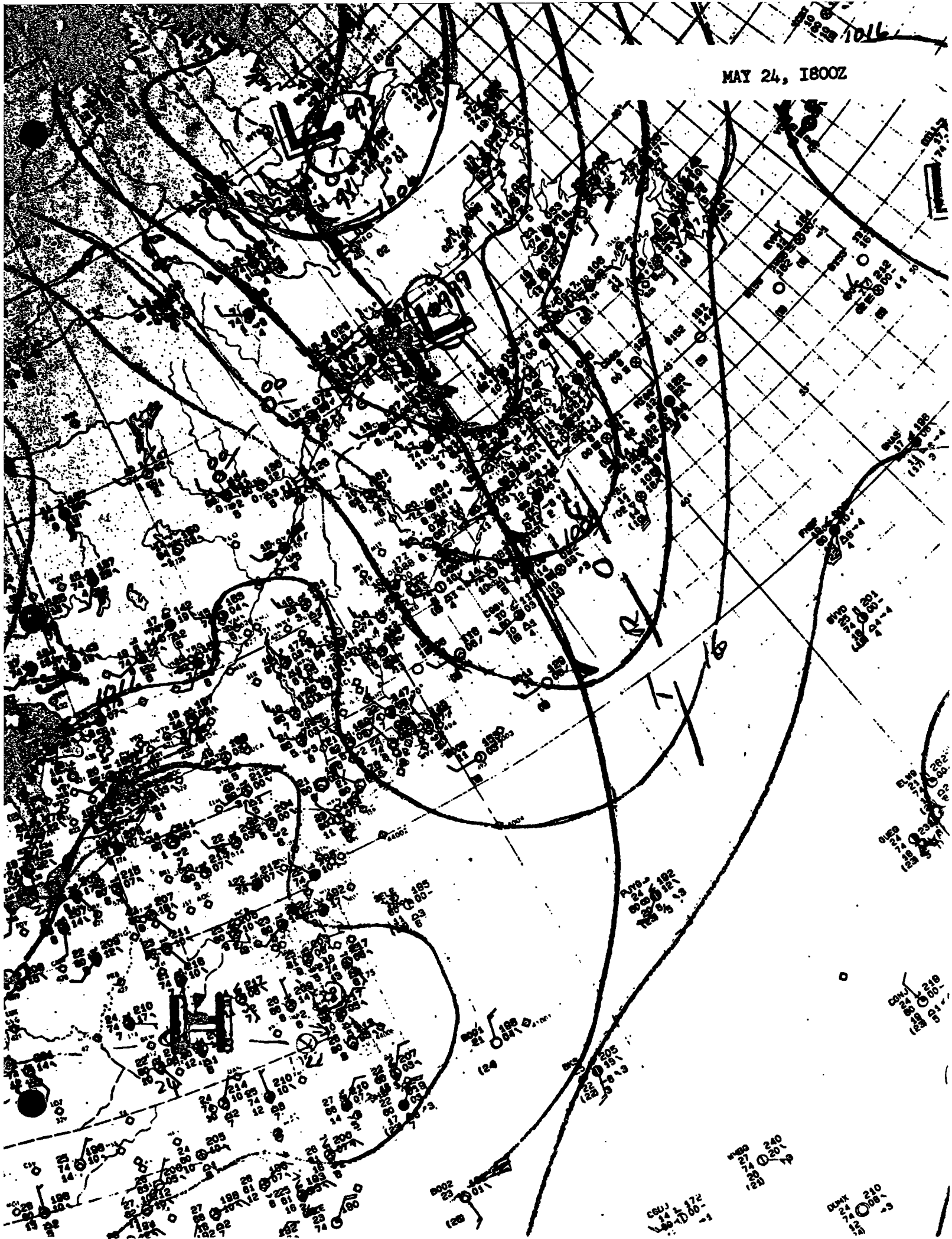
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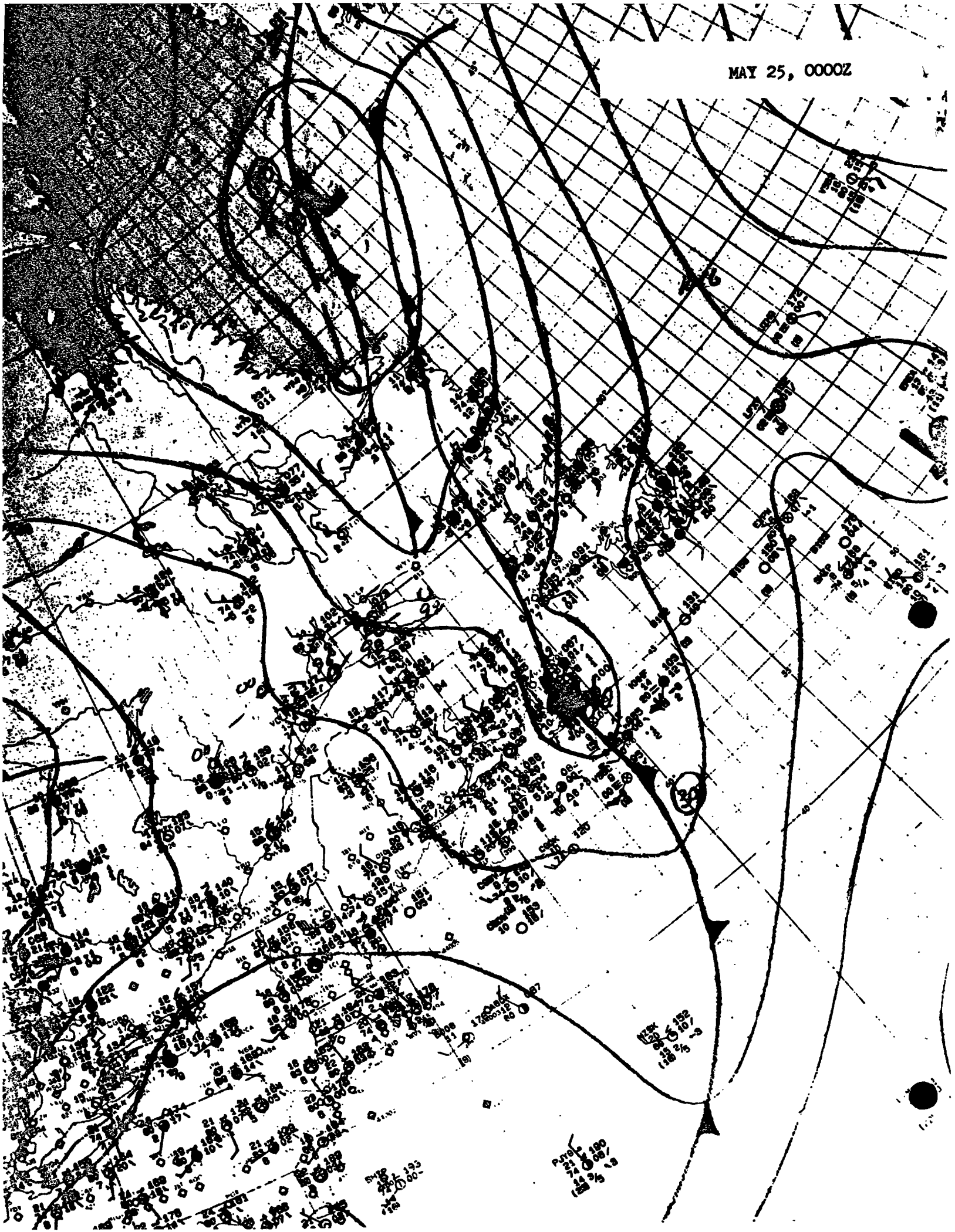
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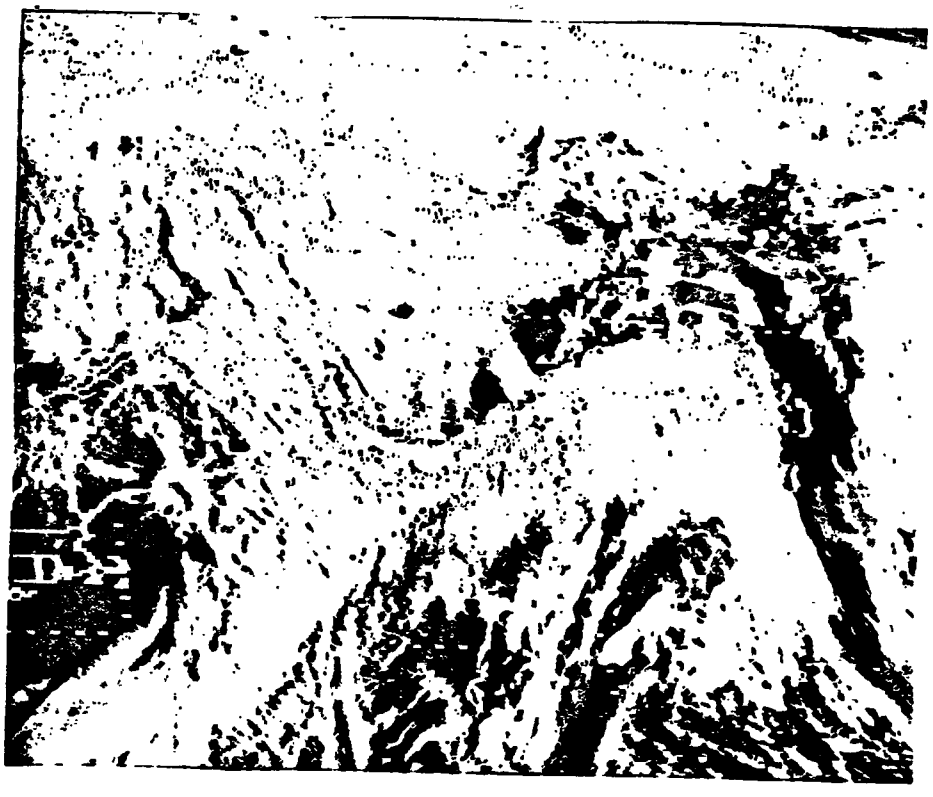
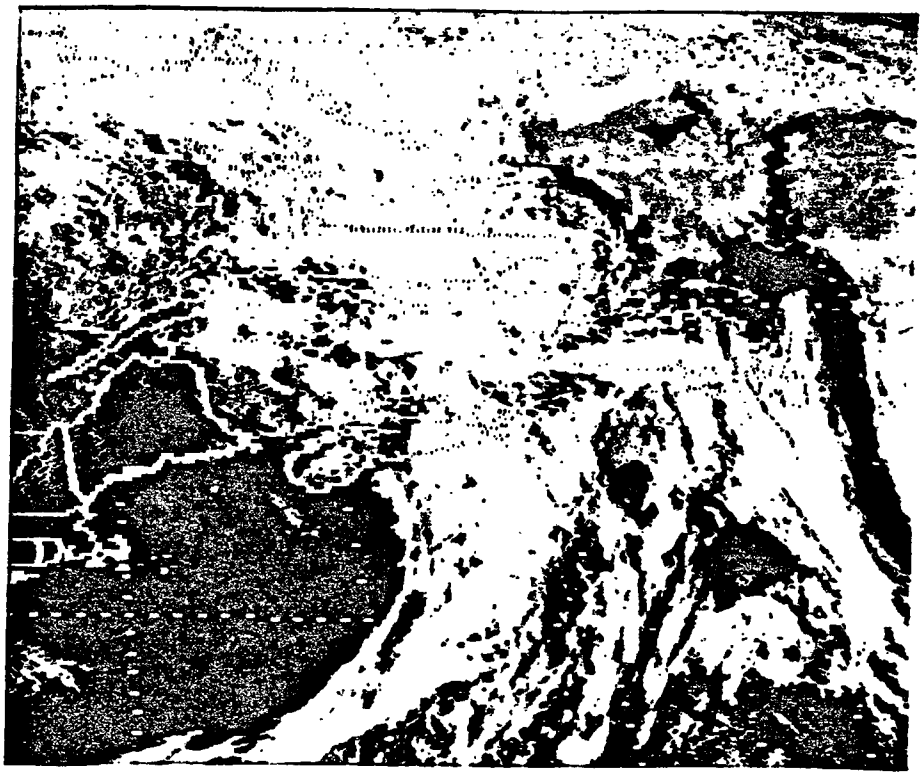


24 1200Z

24 1500Z



24 1800Z

24 2200Z

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2404 YFC RS 0400 M3 OVC 5R-F 033/13/12/1815/962/SF10 =
2405 YFC SA 0500 M3 OVC 4L--F 032/13/12/2112/962/SF10 =
2406 YFC SA 0600 M3 OVC 4L--F 029/13/12/1810/961/SF10 6017 =
2407 YFC SA 0700 M5 OVC 10 029/13/12/1910/961/SF10 =
2408 YFC SA 0800 M4 OVC 10 029/13/12/1910/961/SF10 =
2409 YFC SA 0900 M4 OVC 8 034/13/12/1910/963/SF10 3005 =
2410 YFC RS 1000 M5 OVC 10 035/13/12/2107/963/SF10 =
2411 YFC SA 1100 M6 BKN 16 OVC 10 036/14/12/2207/964/SF6SC4 =
2412 YFC RS 1200 10 SCT M16 BKN 15RM-- 042/15/12/2810/
      965/SF4SC5 3008 =
2413 YFC SA 1300 E20 BKN 250 BKN 15 049/17/12/2812/967/SC7CI =
2414 YFC SA 1400 M26 BKN 15 055/18/12/2912G20/969/SC8 =
2415 YFC SA 1500 M30 BKN 15 060/18/11/2812G21/971/SC8 1018 =
2416 YFC SA 1600 M34 BKN 15 061/18/10/3012G22/971/SC9 =
2417 YFC SA 1700 M34 BKN 15 062/20/10/3112G2?/971/SC8 =
2418 YFC SA 1800 E35 BKN 15 064/20/8/2910G23/972/CU8 3004 =
2419 YFC SA 1900 M55 BKN 15 065/22/8/2914G19/972/CU6 =
2420 YFC SA 2000 M55 BKN 15 073/21/6/3116G22/974/CU6 =
2421 YFC SA 2100 60 SCT 15 080/21/5/3016G26/977/SC2 3016 =
2422 YFC SA 2200 60 SCT 15 093/20/5/3214/980/SC1 =
2423 YFC SA 2300 60 SCT 300 -SCT 15 104/19/2/3209/984/SC1CI =
2500 YFC SA 0000 300 -SCT 15 116/16/2/3210/987/CI1 2036 =
2501 YFC SA 0100 300 SCT 15 129/14/2/3407/991/C11 =
2502 YFC SA 0200 CLR 15 139/12/2/3406/994/ =
2503 YFC SA 0300 CLR 15 137/10/2/3205/993/ 0020 =
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2404 YSJ SA 0400 M1 X 1/4L-F 066/11/10/2016/972/F10 =
2405 YSJ SA 0500 M1 X 1/4L-F 058/11/10/2014G24/970/F10 =
2406 YSJ SA 0600 M1 X 1/4L-F 056/11/11/2112G22/969/F10 6028 =
2407 YSJ SA 0700 M1 X 1/4L-F 052/11/10/2116G26/968/F10 =
2408 YSJ SA 0800 M1 X 1/4L-F 048/10/10/2018/967/F10 =
2409 YSJ SA 0900 M1 X 1/4L-R--F 052/9/9/2015/968/F10 5004 =
2409 YSJ SP 0915 M1 X 1/4R-L-F 2115 F10=
2410 YSJ SA 1000 M1 X 1/4R-L-F 054/9/9/2208/969/F10 =
2410 YSJ SP 1015 M1 X 1/8L-F 1706 F10=
2411 YSJ SA 1100 M1 X 1/8L-F 053/9/8/2209/968/F10 =
2411 YSJ SP 1130 M1 X 1/4RM-L-F 2208 F10=
2411 YSJ SP 1148 M2 X 1/2RM-F 2207 F10=
2412 YSJ SA 1200 M2 X 1/2RM-F 052/9/8/2207/968/F10 0000 =
2412 YSJ SP 1205 -X M2 OVC 1RM-F 2107 F4SF6=
2413 YSJ RS 1300 M2 OVC 11/2F 057/10/10/2106/969/SF10 SUN DIMLY
      VSB =
2413 YSJ SP 1323 M4 BKN 15 OVC 21/2F 2606 SF8SC2=
2413 YSJ SP 1337 4 SCT M18 BKN 3F 2505 3F4SC5=
2414 YSJ SA 1400 4 SCT M18 BKN 6F 062/12/11/2605/971/SF3SC6 =
2415 YSJ SA 1500 12 SCT E20 BKN 300 BKN 15 060/16/13/
      2709/970/CU4SC2C11  0008 =
2416 YSJ SA 1600 25 SCT 250 -BKN 15 054/18/13/2309/969/CU3CS2 =
2417 YSJ SA 1700 40 SCT 50 SCT 250 -BKN 15 055/19/12/
      2407/969/CU3SC1CS1 =
2418 YSJ SA 1800 E40 BKN 70 BKN 15 059/18/12/2108/970/CU7AC2
      SHWRS E 5001 =
2419 YSJ SA 1900 E40 BKN 15 060/20/8/3314/970/CU7 =
2420 YSJ SA 2000 E40 BKN 15 063/21/7/3216/971/CU6 =
2421 YSJ SA 2100 E50 BKN 15 072/20/7/3215/974/CU7 3013 =
2422 YSJ SA 2200 60 SCT 15 081/21/5/3216/976/CU4 =
2423 YSJ SA 2300 60 SCT 15 094/19/3/3415/981/CU2 =
2500 YSJ SA 0000 60 SCT 15 104/18/4/3414/984/SC1 2032 =
2501 YSJ SA 0100 300 SCT 15 114/16/4/3511/987/CI1 =
2502 YSJ SA 0200 300 SCT 15 129/15/4/3513/991/CI1 =
2503 YSJ SA 0300 CLR 15 133/13/2/3512/991/ 1026 =
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MARITIMES SA RECORD

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2404 YQI SA 0400 M0 X 1/8L-F 098/12/11/1817G26/982/F10 =
2405 YQI RS 0500 M0 X 1/8L--F 090/11/10/2018/979/F10 =
2406 YQI SA 0600 M0 X 1/8L--F 080/12/11/1818G27/976/F10 7029 =
2407 YQI SA 0700 M0 X 1/8L--F 076/12/11/1917F26/975/F10 =
2408 YQI SA 0800 M0 X 1/8L--F 077/11/10/2015/976/F10 =
2409 YQI RS 0900 M1 X 3/4F 074/10/9/2012/975/F10 6006 =
2409 YQI SP 0916 M1 X 1R-L-F 2009 F10=
2410 YQI RS 1000 M2 X 1R-L-F 073/10/9/2008/975/F10 VSBY W 1/2 =
2411 YQI RS 1100 -X B2 OVC 11/2R-F 076/11/10/2010/975/F4SF6 =
2411 YQI SP 1120 M2 X 1/2R-F 2112G19 F10=
2412 YQI SA 1200 M2 X 1/2R-F 073/10/9/2312G18/975/F10 8001 =
2412 YQI SP 1214 M1 X 1/4R--F 2413G20 F10=
2413 YQI RS 1300 M2 X 1/2F 078/9/8/2610/976/F10 =
2413 YQI SP 1312 -X B2 OVC 1RM-F 2607 F4SF6=
2413 YQI SP 1337 B2 OVC 3F 2611 SF10 SUN DMLY VSBL=
2414 YQI RS 1400 B3 OVC 4F 081/11/10/2611/977/SF10 SUN DMLY
      VSBL =
2414 YQI SP 1436 4SCT E250 BKN 8 2009 3F4CI3=
2415 YQI SA 1500 5 SCT 140 SCT 250 -BKN 12 083/12/12/
      2810/978/SF2AC2CI1  1010 =
2416 YQI SA 1600 14 SCT 140 SCT E240 BKN 15 082/13/11/
      2811/977/CU1AC2CI3 =
2417 YQI SA 1700 20 SCT 240 SCT 15 081/13/10/2812G18/977/CU1CI2
      =
2418 YQI SA 1800 20 SCT 240 SCT 15 083/14/10/2812G20/978/CU1CI1
      5000  =
2419 YQI SA 1900 20 SCT E50 BKN 15 089/13/9/2912G17/979/CU1SC7
      =
2420 YQI SA 2000 20 SCT 80 SCT 15 091/14/9/2812G18/980/CU1AC1 =
2421 YQI SA 2100 20 SCT 80 SCT 15 094/13/8/2912G17/980/CU1AC1
      1011  =
2422 YQI SA 2200 CLR 15 099/12/7/2814G20/982/ =
2423 YQI SA 2300 CLR 15 106/11/7/2914G20/984/ =
2500 YQI SA 0000 250 -SCT 15 115/10/5/3012G16/986/CI1 2020 =
2501 YQI SA 0100 CLR 15 127/10/4/3210/990/ =
2502 YQI SA 0200 CLR 15 134/10/3/3210/992/ =
2503 YQI SA 0300 CLR 15 143/10/3/3210/995/ 2028 =
```

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2405 WOS SA 0500 W1 X 1/4F 106/11/11/2109/904/F10 =
2406 WCS SA 0600 W1 X 1/4F 101/11/11/1910/98C/F10 0026 =
2407 WOS SA 0700 W1 X 1/4L-F 095/10/10/2013/900/F10 =
2408 WCS SA 0800 W1 X 1/2L-F 0E9/12/12/2115622/974/F10 =
2409 WOS SA 0900 W1 X 1/4L-F 0E5/1C/12/2214620/970/F10 0010 =
2410 WCS SA 1000 W1 X 1/4L-F 0E5/11/11/2209/970/F10 =
2411 WOS SA 1100 W1 X 1/4FP-F 0BC/12/1C/2308/977/F10 =
2412 WOS SA 1200 -X E3 OVC 1L-F 0B1/11/11/2205/977/F35F7 0004 =
2413 WCS SA 1300 W1 X 1/4L-F 0E3/1C/12/2207/977/F10 =
2414 WOS SA 1400 E2 OVC 1FP-F 0B2/11/11/2209/977/SF10 =
2415 WOS SA 1500 E2 OVC 1L-F 0B2/12/1C/2411/977/SF10 0001 =
2416 WCS SA 1600 B5 BKN 250 FEW E 060/14/13/2310/977/SF0C11 =
2417 WOS SA 1700 10 SCT E250 BKN 10 079/10/13/2310/970/C05C12 =
2418 WCS SA 1800 20 SCT E250 BKN 10 074/20/12/2010/975/C05C12
     8008 =
2419 WCS SA 1900 25 SCT 250 SCT 12 075/20/11/2710620/975/C04C11
     =
2420 WOS SA 2000 30 SCT 250 SCT 12 082/20/0/2/16623/977/C04C11
     =
2421 WOS SA 2100 30 SCT 12 088/20/9/2/15621/979/TC01 3014 =
2422 WCS SA 2200 30 SCT 15 094/19///2710625/981/TC01 =
2423 WOS SA 2300 30 SCT 15 101/18///2710/982/TC01 =
2500 WOS SA 0000 30 SCT 250 SCT 15 106/15/8/2710/984/SC1C11
     1018 =
2501 WOS SA 0100 250 SCT 15 116/13//2710/987/C11 =
2502 WOS SA 0200 CLR 15 124/12/8/2710/990/ =
2503 WOS SA 0300 CLR 15 132/12/4/2709/992/ 6800?=
```

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2405 YHZ SA 0500 M1 X 1/6L-F 115/1C/1C/1910/906/F10 =
2406 YHZ SA 0600 M1 X 1/6L-F 110/12/12/1914620/964/F10 7025 =
2407 YHZ SA 0700 M1 X 1/6L-F 102/1C/12/1914/962/F10 =
2408 YHZ KS 0800 M1 X 1/6L-F 095/13/13/2015621/979/F10 =
2408 YHZ SP 0825 M1 X 1/4L-F 1910625 F10=
2408 YHZ SP 0845 M2 X 1/2L-F 1815622 F10=
2409 YHZ KS 0900 M2 X 3/6L-F 085/13/13/2010625/976/F10 6020 =
2409 YHZ SP 0925 M2 X 1/2L-F 2201562C F10=
2410 YHZ SA 1000 M2 X 1/2L-F 0C2/13/12/2120/977/F10 =
2410 YHZ SP 1032 M2 X 5/8F 2017 F10=
2411 YHZ KS 1100 M2 X 3/8F 081/12/12/2014/977/F10 =
2412 YHZ SA 1200 M2 X 1/4F 0C2/1C/11/1912/977/F10 5003 =
2412 YHZ SP 1210 M2 X 1/2F 1914 F10=
2412 YHZ SP 1217 M2 X 1/4F 2015 F10=
2412 YHZ SP 1242 M2 X 3/8F 201C F10=
2413 YHZ KS 1300 M2 X 1/2F 076/1C/11/1811/976/F10 =
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2413 YHZ SP 1320 M3 OVC 3/4MR-F 1913 SF10=
2413 YHZ SP 1335 M2 OVC 3/4MR-F 2015 SF10=
2414 YHZ KS 1400 M3 BKN 20 OVC 3MR-F 080/12/11/1810/976/SF05C2
     =
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2415 YHZ SA 1500 M4 BKN 30 OVC 6F 071/14/13/C11C/915/SF75C3
     6005 =
2416 YHZ KS 1600 M5 OVC 4MR-F 073/13/12/1812/914/SF10 =
2416 YHZ SP 1640 M5 BKN 30 OVC 8 2012 SF45C1=
2417 YHZ SA 1700 4 SCT M5 OVC 8 070/14/13/2013/973/SF45F0 =
2418 YHZ SA 1800 M5 OVC 4F 060/14/1C/2212/973/SF10 7009 =
2418 YHZ SP 1850 6 SCT E30 BKN 1C 2207 SF45C5=
2419 YHZ SA 1900 7 SCT 30 SCT E250 BKN 15 064/15/13/2000/
     971/SF2SC2C14 =
2420 YHZ SA 2000 25 SCT E120 BKN 250 BKN 15 064/10/13/
     2406/971/SC4AC2C13 =
2421 YHZ SA 2100 25 SCT E120 BKN 250 BKN 15 060/10/12/
     3111/973/SC4AC2C11 3002 =
2422 YHZ SA 2200 20 SCT E50 BKN 120 BKN 250 BKN 15 073/
     18/12/2911/974/ CF2TCU4AC1C11 =
2422 YHZ SP 2215 20 SCT E50 BKN 120 BKN 250 BKN 15KM- 2912
     CF2TCU54C1C11 LTGCCG SE CB DSNC=
2422 YHZ SP 2240 20 SCT E50 BKN 120 BKN 250 BKN 15 3013
     CF2TCU44C1C1 RVY PCPN SE CB DSNC=
2423 YHZ SA 2300 20 SCT E50 BKN 120 BKN 250 BKN 15 064/
     18/11/3210/976/ CF1TCU5AC1C1 CB TR SE =
2500 YHZ SA 0000 20 SCT 50 SCT 80 SCT 100 SCT 15 100/15/
     12/3506/962/ CF1TCU2SC1AC1 3024 =
2501 YHZ SA 0100 30 SCT 80 SCT 15 110/13/12/3501/965/CU1SC2 =
2502 YHZ SA 0200 30 SCT 80 SCT 15 110/12/11/3407/966/CU1SC1 =
2503 YHZ SA 0300 40 SCT 15 1C7/1C/1C/3504/964/SC3 2025 =
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2404 WOO SA 0400 M1 X 1/4F 142/11/9/1605/994/F10 ?56XX?=
2405 WOO SA 0500 M0 X 1/8F 136/9/7/1506/992/F10 ?21XX?=
2406 WOO SA 0600 M0 X 1/8F 132/9/7/1506/991/F10 8017 ?44XX?=
2407 WOO SA 0700 M0 X 0F 123/9/7/1706/989/F10 ?32XX?= 070507057
2408 WOO SA 0800 M0 X 0F 118/10/8/1709/987/F10 ?33XX?=
2409 WOO SA 0900 M0 X 1/4F 112/9/7/1708/986/F10 7018 ?99XX?=
2410 WOO SA 1000 M1 X 3/8F 105/10/7/1808/984/F10 ?88XX?=
2411 WOO SA 1100 M0 X 1/4L--F 102/10/8/1807/983//F10 ?34XX?=
2411 COR WOO SA 1100 M0 X 1/4L--F 102/10/8/1807/983/F10 ?34XX?=
2411 COR WOO SA 1100 M0 X 1/4L--F 102/10/8/1807/983/F10 =
2411 COR WOO SA 1100 M0 X 1/4L--F 102/10/8/1807/983/F10 LHW
     158/07= ?
2412 WOO SA 1200 M0 X 1/4L--F 096/11/9/2109/981/F10 8016
     ?00XX?=
2413 WOO SA 1300 M1 X 1/2L-F 088/12/10/1913G17/979/F10 ?68XX?=
2414 WOO SA 1400 B1 OVC 3/4L-F 086/12/10/1917G25/978/ST10
     ?91XX?=
2415 WOO SA 1500 B2 OVC 2L--F 082/12/10/1913/977/ST10 8014
     ?42XX?= 150515057
2416 WOO SA 1600 E5 OVC 3F 077/13/11/2111/976/SF10 ?45XX?=
2417 WOO SA 1700 B4 OVC 5RW--F 072/12/9/2112G20/974/SC10
     ?91XX?=
2418 WOO SA 1800 15 SCT E80 BKN 220 BKN 15 064/13/10/2214/972/
     SC5AC3CC1 5018 ?45XX?=
2419 WOO SA 1900 E15 BKN 80 OVC 10RW- 064/13/10/2208/972/SC6AC4
     ?13XX?=
2420 WOO SA 2000 8 SCT E15 BKN 80 OVC 8L- 063/13/10/2009/972/
     SF2SC6AC2  ?83XX?=
2421 WOO SA 2100 E15 BKN 80 OVC 12 062/13/10/2112/971/SC7AC3
     8002 ?02XX?=
2422 WOO SA 2200 E15 BKN 80 OVC 12 066/13/10/1805/972/SC8AC2
     ?89XX?= 220322037
2423 WOO SA 2300 E30 OVC 10 068/13/10/2406/973/SC10 ?68XX?=
2500 WOO SA 0000 E50 BKN 120 OVC 10 068/12/10/0000/973/ SC9AS1
     1006  ?48XX?=
2501 WOO SA 0100 M30 OVC 15RW+ 081/11/9/3008G17/977/SC10
     ?21XX?=
2502 WOO SA 0200 E50 OVC 15 087/9/7/3007G20/979/SC10 ?49XX?=
2503 WOO SA 0300 M35 OVC 10RW- 093/9/7/3106G16/980/ SC10 2025
     ?18XX?=
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2404 YGY RS 0400 A0 A 1/2F 141/11/10/2114/964/F10 =
2405 YGY RS 0500 A1 UVC 3F 135/11/11/1909/962/3F10 =
2406 YGY RS 0600 A0 A 1F 132/10/10/2010/941/F10 7014 =
2407 YGY RS 0700 A0 A 1/2F 126/10/10/1911/960/F10 =
2408 YGY SA 0800 A0 A 1/2F 112/10/10/2011/965/F10 =
2409 YGY RS 0900 A1 A 1F 110/11/10/2115/965/F10 6021 =
2410 YGY SA 1000 A1 A 1F 106/12/11/2010/965/F10 =
2411 YGY RS 1100 -A 3F 102/12/11/191C/963/F9 VSDY S 1 =
2411 YGY SP 1129 A3 A 2F 1913 F10 VSDY?S 1=
2412 YGY RS 1200 A3 A 11/2F 101/13/11/1913/963/F10 6009 =
2413 YGY SA 1300 -A A3 CVC 2F 097/14/12/1910/961/F7SF3 =
2413 YGY SP 1336 -A A4 BRN 10 CVC 3F 2014 F25F5SC3=
2414 YGY SA 1400 -A A4 BRN 10 CVC 3F 0C9/14/1C/2017625/
     979/F25F5SC3 =
2414 YGY SP 1440 A6 BRN 12 UVC 2F 1915 3F/5C3=
2415 YGY SA 1500 A6 BRN 8 0C5/1C/13/2016625/97C/3F9 6101 =
2415 COR YGY SA 1500 A6 BRN 8 0C4/1C/13/2016625/97C/3F9 6017 =
2416 YGY SA 1600 A8 BRN 12 0C0/17/14/1910621/977/3F7 =
2417 YGY SA 1700 A8 BRN 12 076/1C/13/2115620/975/3F8 =
2418 YGY RS 1800 A1C BRN 24 BRN 1C 0C5/17/13/1914620/91C/3F05C2
     8019 =
2419 YGY RS 1900 A6 BRN 30 BRN 15 1C5/14/1C/2117/972/3F05C1 =
2420 YGY SP 2005 A7 BRN 60 BRN 15 2C15 3F05C3=
2421 YGY RS 2100 7 SC1 A60 BRN 15 0CC/13/11/1904/972/3F24L/
     5001 =
2421 YGY SP 2125 8 SC1 A60 BRN 12M-= 2104 3F1AL6=
2422 YGY RS 2200 A5 BRN B0 CVC 12M-= 0C0/1C/11/2004/91C/3F05C2
     =
2422 YGY SP 2226 A6 BRN 30 UVC 11/2M-F 2104 3F05C4=
2422 YGY SP 2250 8 SC1 A30 CVC 5M-F 2004 3F35C1=
2423 YGY RS 2300 7 SC1 A30 UVC 12M-= 0C4/1C/11/190/973/3F25C0
     =
2500 YGY SA 0000 30 SC1 A50 UVC 10 0C/11/10/2C05/972/5C45L0
     0001 =
2500 YGY SP 0036 A2 BRN 30 UVC 10 2304 3F05L2=
2501 YGY SA 0100 A2 BRN 20 UVC 10 0/1/11/11/2/05/974/3F75C3 =
2501 YGY SP 0135 2 SC1 A50 CVC 10 3104 3F35C7=
2502 YGY RS 0200 A5 BRN 20 CVC 3M-F 079/1C/11/3409/97C/3F/5C3
     =
2502 YGY SP 0215 A2 UVC 5M-F 3C14 3F10=
2502 YGY SP 0240 3 SC1 A15 CVC 5M-F 3C14 3F35C1=
2503 YGY SA 0300 4 SC1 A13 BRN 100 UVC 5MM-F 0C2/9/4/
     0104/977/3F25C4AC4  1015 =
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2408 GOR SA 0800 -X E10 OVC 11/2F 176/11/11/2322/006/ F5SF5= ?
2409 GOR RS 0900 W4 X 1/2F 173/11/11/2326/004/F10 M=
2410 GOR RS 1000 -X 3/4F 167/11/1/2326/002/F9=
2410 GOR SP 1030 -X B4 OVC 1/2F 2326/F6SF4= ?
2411 GOR SA 1100 -X B4 OVC 1/2F 164/11/11/2326/001/F6SF4=
2412 GOR RS 1200 -X B5 OVC 3/4F 162/11/11/2430/001/F5SF5 M=
2412 GOR SP 1239 SAWR -X 5 -BKN 1F 2430 F5SF= ?
2413 GOR RS 1300 -X B5 BKN 2F 158/12/11/2430/000/F5SF2=
2414 GOR SA 1400 -X B3 OVC 11/2F 156/12/11/2428/999/F5SF5 CLG
      RAGGD=
2415 GOR RS 1500 -X 3 SCT E65 BKN 2F 154/12/11/2633/998/
      F1SF4AC2 M=
2416 GOR RS 1600 -X A3 BKN 65 OVC 2F 150/12/11/2330/997/
      F1SF6AC3=
2417 GOR SA 1700 -X B3 BKN 65 OVC 2F 140/12/11/2230/994/
      F2SF6AC2=
2418 GOR RS 1800 -X 3 SCT E65 OVC 2F 134/12/11/2330/993/
      F1SF4ASS SUN  DMLY VSBL M=
2419 GOR SA 1900 -X 3 SCT 2F 126/12/11/2230/990/F3SF2=
2420 GOR SA 2000 -X 2F 122/13/12/2233/989/F4=
2421 GOR SA 2100 -X E5 OVC 1F 115/12/12/2234/987/F6ST4 M=

2408 BOX SA 0800 -X E8 BKN 2F 169/11/10/2229/003/ F3CU2SC3=
2408 BOX SP 0830 -X 10 SCT 21/2F 164 2131 001 F2SC1=
2409 BOX RS 0900 -X 10 SCT 2F 162/11/11/2130/001/ F2SC2 M=
2410 BOX RS 1000 -X E10 BKN 21/2F 164/11/11/2130/001/ F2SF3SC2=
2411 BOX SA 1100 -X B3 BKN 10 OVC 21/2F 159/11/10/2131/
      000/F2ST6SC2=
2412 BOX RS 1200 -X B2 OVC 11/2F 153/11/11/2130/998/F4ST6 8
      DSPD 235 FT M=
2413 BOX RS 1300 -X B5 OVC 11/2F 145/11/11/2133/996/F3ST7 SUN
      DMLY VSBL=
2414 BOX SA 1400 -X E5 BKN 80 OVC 11/2F 144/12/11/2134/996/
      F3ST4CU3 SUN DMLY VSB=
2414 BOX SP 1430 -X 3/4F 142 2136 995 F8 SV 3/4 ML= ?
2415 BOX RS 1500 W1 X 1/8F 139/12/11/2135/994/F10 SUN DMLY VSBL
      8 DSPD 140 FT VSB NNE 1/4 MILE M=
2416 BOX RS 1600 W2 X 3/4F 141/11/10/213/995/F10 SUN DMLY VSBLE
      SV VSB 8 CABLES=
2417 BOX SA 1700 W2 X 1/2F 126/11/11/2035/990/F10 SUN DMLY
      VSBL=
2418 BOX RS 1800 -X E10 BKN 3/4F 123/11/11/2035/989/ F7SC2 M=
2418 BOX SP 1835 W2 X 1/2F 113/11/10/2037/986/F10 SUN DMLY
      VSBL= ?
2419 BOX SA 1900 W2 X 1/2F 110/12/11/2039/985/F10 SUN DMLY
      VSBL=
2420 BOX RS 2000 W0 X 0R--F 106/11/11/2037/984/F10=
2421 BOX SA 2100 W0 X 0F 104/11/11/2033/984/F10 M=
```

2409 BOW SA 0900 A1 A OF 137/10/10/2025/994/M M=
2410 BOW SA 1000 A2 A 1/4VF 135/10/10/2026/993/ VSBY 0-1/2=
2411 BOW SA 1100 A2 X 1/8F 130/10/10/2025/991/M=
2412 BOW SA 1200 A2 X 1/8F 126/10/10/2027/990/M M=
2413 BOW SA 1300 A2 A 1/8L-F 123/10/10/2026/989/M=
2414 BOW SA 1400 A2 A 1/8L-F 118/11/11/2026/988/M=
2415 BOW SA 1500 A2 X 1/8L-F 114/11/11/2026/98//M M=
2416 BOW SA 1600 A2 A 1/8L-F 109/11/11/2027/984/M=
2417 BOW RS 1700 A2 A 1/8F 09//11/11/2026/982/M=
2418 BOW SA 1800 A2 A 1/8F 09C/11/11/2027/980/M M=
2419 BOW SP 1825 A2 X 1/8F 21C5 M/M OVCL M M+= ?
2420 BOW RS 1900 A2 A 1/8F 087/11/11/2025/979/M=
2421 BOW SA 2000 A2 A 1/8F 084/10/10/2021/978/M=
2422 BOW SA 2100 A2 A 1/8F 084/10/10/2120/978/M M=

2408 BOR SA 0800 -X E10 OVC 5F 15//15/12/2022/999/ FEST/=
2409 BOR RS 0900 A3 X OF 154/13/13/2032/990/F10 M=
2410 BOR SA 1000 A3 X OF 153/13/13/1953/990/F10= ?
2410 BOR SP 1044 -A E15 BKN 1F 145/13/13/1953/990/COMP4TCU
PRSNT=
2411 BOR SA 1100 -X E8 BKN 10 BKN 1VF 140/13/13/1953/994/
FEST2TCU1 SV 1-13/4 MI VSB RUG=
2412 BOR SA 1200 -X 94 OVC 11/2F 130/13/13/2035/994/F4SFB M=
2413 BOR SA 1300 -X E8 BKN 13/4F 125/13/12/1950/990/F4STS SV
13/4 MLS VSB=
2414 BOR SA 1400 A2 X OF 131/13/13/1959/99C/F10 SUN DELY VSB=
2415 BOR RS 1500 A2 A 1/8F 124/14/14/1941/990/F10 SUN DELY VSBL
SV VSB 11/2 CABLES M=
2416 BOR SA 1600 A4 A 1/8F 115/15/15/1941/98//F10 SUN DELY
VSBLE SV VSB 2.5 CABLES=
2417 BOR SA 1700 A3 X 1/8F 10//15/14/1941/985/F10= ?
2418 BOR RS 1800 A3 A OL-F 106/14/14/2035/984/F10 M= ?
2419 BOR RS 1900 A4 X 1/8R-F 101/12/12/2130/983/F10 R= IMIM=
2420 BOR RS 2000 A4 X 3/8RF 100/11/11/2224/983/F10=
2421 BOR RS 2100 -X E10 BKN 25 OVC 4R-F 090/11/11/2521/
980/F1STRMS1 M=

A case study of advection fog

JEAN, M.


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                                                    1/2011/002/SC0 7018
                                                    1/10/2011/002/SC10 7018
      ?61XX?=
2406 COR WSA SA 0600 M10 OVC 21/2F 106/11/10/2011/002/SC10 7018
      =
2407 WSA WS 0700 4 -BKN M10 OVC 2F 102/11/00/2011=L/SF4SC6
      ?61XX?=
2407 COR WSA WS 0700 4 -BKN M10 OVC 2F 102/11/10/2012/
      000/SF4SC6 ?61XX?=
2407 COR WSA WS 0700 4 -BKN M10 OVC 2F 102/11/10/2012/
      000/SF4SC6 =
2408 WSA SA 0800 4 -SCT E10 BKN 2F 157/11/10/2011/999/SF3SC3
      ?5189?=
2409 WSA SA 0900 5 -BKN E10 OVC 2F 149/11/10/1913/999//SF3SC3
      8017 ?618X?=
2410 COR WSA SA 1000 5 -SCT E10 OVC 2F 149/11/10/1912/999//
      SF2SC6 SUN  DMLY VSB ?95BX?=
2410 COR WSA SA 1000 5 -SCT E10 OVC 2F 149/11/10/1912/999//
      SF2SC6 SUN  DMLY VSB =
2411 WSA WS 1100 W2 X 1/4KM-F 145/11/11/1912/990/F10 ?05XX?=
2412 WSA WS 1200 W2 X 1/2F 130/11/11/1914/993/F10 SUN DMLY VSB
      8011  ?33XX?=
2412 WSA SP 1246 -X E1 OVC 3/4F 2013 F25F6=
2413 WSA WS 1300 -X B4 OVC 1F 135/13/12/2014/993/F15F9 SUN DMLY
      VSB  ?55XX?=
2414 WSA WS 1400 W1 X 1/4F 132/13/12/1914/992/F10 ?90XX?=
2415 WSA SP 1524 W1 X 1/4F 1814 F10 SUN DMLY VSB=
2415 COR WSA WS 1500 -X E2 OVC 1/2F 125/14/12/1914/990/F/3F3
      SUN DMLY VSB  8013 ?05XX?=
2415 COR WSA WS 1500 -X E2 OVC 1/2F 125/14/12/1914/990/F/3F3
      SUN DMLY VSB  8013 =
2416 WSA SA 1600 W1 X 1/4F 110/13/12/1913/987/F10 SUN DMLY VSB
      ?36XX?=
2417 WSA SA 1700 -X E2 OVC 1/4F 110/14/12/1910/985/F8SF2 SUN
      DMLY VSB  ?80AX?=
2417 WSA SP 1719 -X E2 OVC 1/2F 1813 F05F4 SUN DMLY VSB=
2418 WSA SA 1800 -X B1 OVC 1/2F 102/14/12/1817/983/F05F4 SUN
      DMLY VSB  8073 00XX?=
2418 WSA SP 123 W1 X 1/4F 1818 F10=
2419 WSA SA 1900 W1 X 1/4F 099/13/12/1915/982/F10 ?88X?=
2419 WSA SP 1906 W1 X 1/2K-F 1918 F10=
2419 WSA SP 1940 W2 X 3/8F 1813 F10=
2420 WSA SA 2000 W2 X 3/8F 094/12/11/1914/980/F10 ?02XX?=
2421 WSA WS 2100 W1 X 1/4K-F 093/12/12/2114/980/F10 8009
      ?66XX?=
2421 WSA SP 2143 W1 X 1/2K-F 2109 F10=
2422 WSA SA 2200 W1 X 1/2K-F 083/11/11/2107/977/F10 ?11XX?=
2423 WSA SA 2300 W2 X 1/2K-F 089/10/10/2109/979/F10 ?44XX?=
2423 WSA SP 2305 W1 X 1/4F 2209 F10=
2500 WSA SA 0000 W1 X 1/4F 085/10/10/2409/976/F10 8006 ?00XX?=
2501 WSA SA 0100 W1 X 1/8F 092/9/9/2410/980/F10 ?44XX?=
2501 COR WSA SA 0100 W1 X 1/8F 092/9/9/2410/980/F10 ?44XX?=
2501 COR WSA SA 0100 W1 X 1/8F 092/9/9/2410/980/F10 =
2502 WSA SA 0200 W1 X 1/4F 090/9/9/2511/979/F10 ?22XX?=
2502 WSA SP 0212 -X E150 OVC 11/2F 2510 F4AC6=
2502 WSA SP 0237 -X M8 BKN 150 OVC 2F 2511 F4SF4AC2=
2503 WSA SA 0300 -X M6 OVC 11/2F 084/9/9/2509/979/F3SF3 8004
      ?06X?=
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