APPENDIX J

RECCO FORM, CODE TABLES AND REGULATIONS

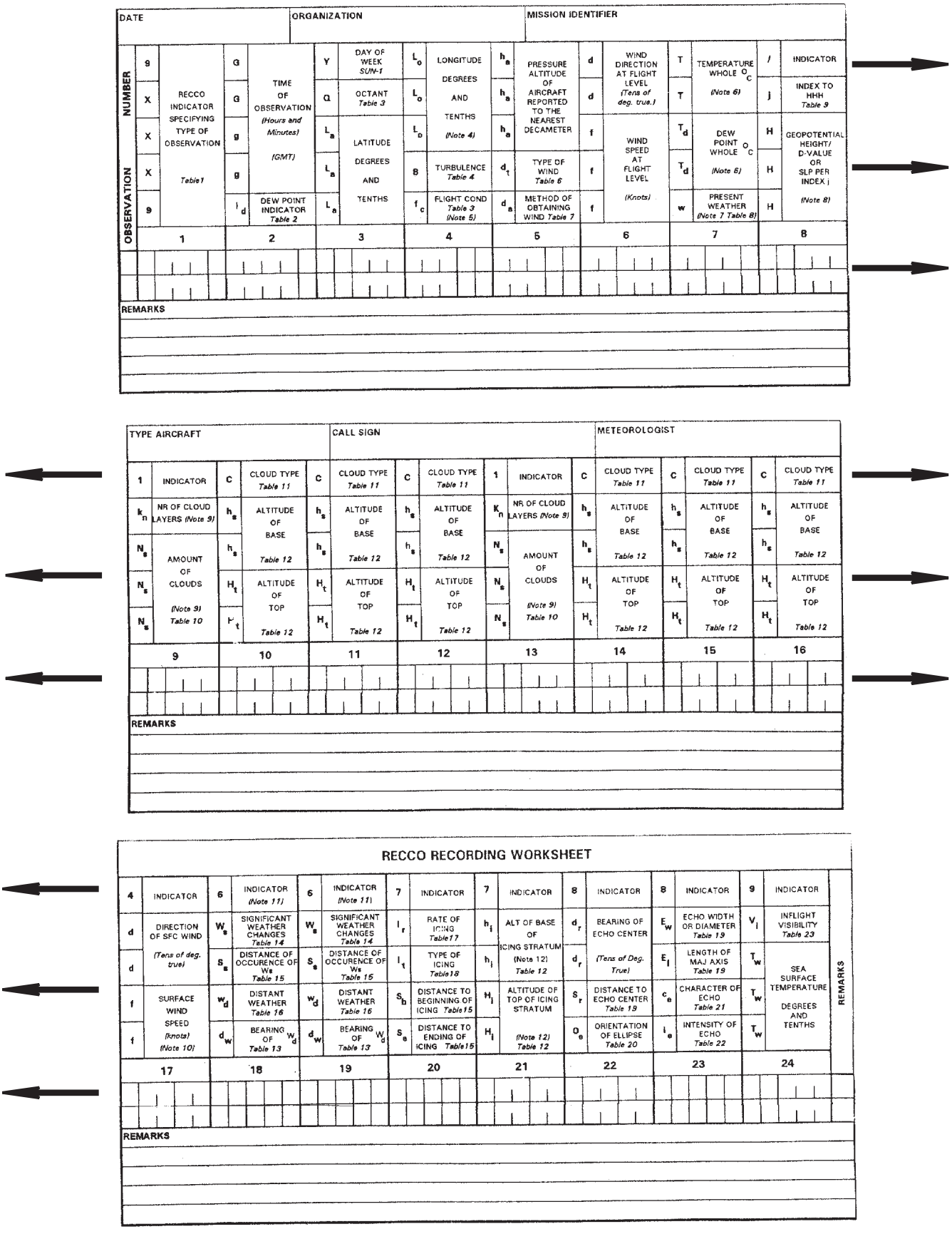

Figure J-1. Reconnaissance code recording form.

Table J-1. Reconnaissance code tables.

TABLE 1 XXX

222	Sec One Observation without radar capability
555	Sec Three (intermediate) observation with or without radar capability
777	Sec One Observation with radar capability

TABLE 2 i_d

0	No dew point capability/acft below 10,000 meters
1	No dew point capability/acft at or above 10,000 meters
2	No dew point capability/acft below 10,000 meters and flight lvl tem -50EC or colder
3	No dew point capability/acft at or above 10,000 meters and flight lvl temp -50EC or colder
4	Dew point capability/acft below 10,000 meters
5	Dew point capability/acft at or above 10,000 meters
6	Dew point capability/acft below 10,000 meters and flight lvl temp -50EC or colder
7	Dew point capability/acft at or above 10,000 meters and flight lvl temp -50EC or colder

TABLE 3 Q

0	0E -90E W	Northern
1	90E W - 180E	Northern
2	180E - 90E E	Northern
3	90E - 0E E	Northern
4	Not Used	
5	0E - 90E W	Southern
6	90E W - 180E	Southern
7	180E - 90E E	Southern
8	90E - 0E E	Southern

TABLE 4 B

0	None
1	Light turbulence
2	Moderate turbulence in clear air, infrequent
3	Moderate turbulence in clear air, frequent
4	Moderate turbulence in cloud, infrequent
5	Moderate turbulence in cloud, frequent
6	Severe Turbulence in clear air, infrequent
7	Severe Turbulence in clear air, frequent
8	Severe Turbulence in cloud, infrequent
9	Severe Turbulence in cloud, frequent

TABLE 5 f_c

0	In the clear
8	In and out of clouds
9	In clouds all the time (continuous IMC)
/	Impossible to determine due to darkness or other cause

TABLE 6 d_t

0	Spot of Wind
1	Average wind
/	No wind reported

TABLE 7 d_a

0	Winds obtained using doppler radar or inertial systems
1	Winds obtained using other navigation equipment and/or techniques
/	Navigator unable to determine or wind not compatible

TABLE 8 w

0	Clear
1	Scattered (trace to 4/8 cloud coverage)
2	Broken (5/8 to 7/8 cloud coverage)
3	Overcast/undercast
4	Fog, thick dust or haze
5	Drizzle
6	Rain (continuous or intermittent precip - from stratiform clouds)
7	Snow or rain and snow mixed
8	Shower(s) (continuous or intermittent precip - from cumuliform clouds)
9	Thunderstorm(s)
/	Unknown for any cause, including darkness

TABLE 9 j

0	Sea level pressure in whole millibars (thousands fig if any omitted)
1	Altitude 200 mb surface in geopotential decameters (thousands fig if any omitted)
2	Altitude 850 mb surface in geopotential meters (thousands fig omitted)
3	Altitude 700 mb surface in geopotential meters (thousands fig omitted)
4	Altitude 500 mb surface in geopotential decameters
5	Altitude 400 mb surface in geopotential decameters
6	Altitude 300 mb surface in geopotential decameters
7	Altitude 250 mb surface in geopotential decameters (thousands fig if any omitted)
8	D - Value in geopotential decameters; if negative 500 is added to HHH
9	Altitude 925 mb surface in geopotential meters
/	No absolute altitude available or geopotential data not within ± 30 meters/4 mb accuracy requirements

TABLE 10 N_s

0	No additional cloud layers (place holder)
1	1 okta or less, but not zero (1/8 or less sky covered)
2	2 oktas (or 2/8 of sky covered)
3	3 oktas (or 3/8 of sky covered)
4	4 oktas (or 4/8 of sky covered)
5	5 oktas (or 5/8 of sky covered)
6	6 oktas (or 6/8 of sky covered)
7	7 oktas or more but not 8 oktas
8	8 oktas or sky completely covered
9	Sky obscured (place holder)

TABLE 11 C

0	Cirrus (Ci)
1	Cirrocumulus (Cc)
2	Cirrostratus (Cs)
3	Altocumulus (Ac)
4	Altostratus (As)
5	Nimbostratus (Ns)
6	Stratocumulus (Sc)
7	Stratus (St)
8	Cumulus (Cu)
9	Cumulonimbus (Cb)
/	Cloud type unknown due to darkness or other analogous phenomena

TABLE 12 $h_sh_sH_tH_th_ih_iH_iH_i$

00	Less than 100
01	100 ft
02	200 ft
03	300 ft
etc, etc	
49	4,900 ft
50	5,000 ft
51-55	Not used
56	6,000 ft
57	7,000 ft
etc, etc	
79	29,000 ft
80	30,000 ft
81	35,000 ft
82	40,000 ft
etc, etc	
89	Greater than 70,000 ft
//	Unknown

TABLE 13 d_w

0	No report	5	SW
1	NE	6	W
2	E	7	NW
3	SE	8	N
4	S	9	all directions

TABLE 14 W_s

0	No change
1	Marked wind shift
2	Beginning or ending or marked turbulence
3	Marked temperature change (not with altitude)
4	Precipitation begins or ends
5	Change in cloud forms
6	Fog or ice fog bank begins or ends
7	Warm front
8	Cold Front
9	Front, type not specified

TABLE 15 $S_bS_eS_s$

0	No report
1	Previous position
2	Present position
3	30 nautical miles
4	60 nautical miles
5	90 nautical miles
6	120 nautical miles
7	150 nautical miles
8	180 nautical miles
9	More than 180 nautical miles
/	Unknown (not used for S_s)

Table J-1. Reconnaissance code tables (continued)

TABLE 16 w_d

0 No report
1 Signs of a tropical cyclone
2 Ugly threatening sky
3 Duststorm or sandstorm
4 Fog or ice fog
5 Waterspout
6 Cirrostratus shield or bank
7 Altostratus or altocumulus shield or bank
8 Line of heavy cumulus
9 Cumulonimbus heads or thunderstorms

TABLE 17 I_r

7 Light
8 Moderate
9 Severe
/ Unknown or contrails

TABLE 18 I_t

0 None
1 Rime ice in clouds
2 Clear ice in clouds
3 Combination rime and clear ice in clouds
4 Rime ice in precipitation
5 Clear ice in precipitation
6 Combination rime and clear ice in precip
7 Frost (icing in clear air)
8 Nonpersistent contrails (less than 1/4 nautical miles long)
9 Persistent contrails

TABLE 19 S_r, E_w, E_l

0 0NM
1 10NM
2 20NM
3 30NM
4 40NM
5 50NM
6 60-80NM
7 80-100NM
8 100-150NM
9 Greater than 150NM
/ Unknown

TABLE 20 O_e

0 Circular
1 NNE - SSW
2 NE - SW
3 ENE - WSW
4 E - W
5 ESE - WNW
6 SE - NW
7 SSE - NNW
8 S - N
/ Unknown

TABLE 21 c_e

1 Scattered Area
2 Solid Area
3 Scattered Line
4 Solid Line
5 Scattered, all quadrants
6 Solid, all quadrants
/ Unknown

TABLE 22 i_e

2 Weak
5 Moderate
8 Strong
/ Unknown

TABLE 23 V_i

1 Inflight visibility 0 to and including 1 nautical mile
2 Inflight visibility greater than 1 and not exceeding 3 nautical miles
3 Inflight visibility greater than 3 nautical miles

RECCO SYMBOLIC FORM

SECTION ONE (MANDATORY)

9XXX9 GGggi$_d$ YQL$_a$L$_a$L$_a$ L$_o$L$_o$L$_o$Bf$_c$ h$_a$h$_a$h$_a$d$_t$d$_a$

ddfff TTT$_d$T$_d$w /jHHH

SECTION TWO (ADDITIONAL)

1k$_n$N$_s$N$_s$N$_s$ Ch$_s$h$_s$H$_t$H$_t$ 4ddff

6W$_s$S$_s$W$_d$d$_w$ 7I$_r$I$_t$S$_b$S$_e$ 7h$_i$h$_i$H$_i$H$_i$ 8d$_r$d$_r$S$_r$O$_e$

8E$_w$E$_l$c$_e$i$_e$ 9V$_i$T$_w$T$_w$T$_w$

SECTION THREE (INTERMEDIATE)

9XXX9 GGggi$_d$ YQL$_a$L$_a$L$_a$ L$_o$L$_o$L$_o$Bf$_c$ h$_a$h$_a$h$_a$d$_t$d$_a$

ddfff TTT$_d$T$_d$w /jHHH

Table J-2. Reconnaissance code regulations.

1. At the time of the observation the aircraft observing platform is considered to be located on the axis of a right vertical cylinder with a radius of 30 nautical miles bounded by the earth's surface and the top atmosphere. Present weather, cloud amount and type, turbulence, and other subjective elements are reported as occurring within the cylinder. Flight level winds, temperature, dew point, and geopotential values are sensed or computed and reported as occurring at the center of the observation circle. Radar echoes, significant weather changes, distant weather, and icing are phenomena that may also be observed/reported. Code groups identifying these phenomena may be reported as necessary to adequately describe met conditions observed.

2. The intermediate observation (Section Three) is reported following Section One (or Section Two if appended to Section One) in the order that it was taken.

3. Plain language remarks may be added as appropriate. These remarks follow the last encoded portion of the horizontal or vertical observation and will clearly convey the intended message. Vertical observations will not include meteorological remarks. These remarks must begin with a letter or word-e.g. "FL TEMP" vice "700 MB FL TEMP." The last report plain language remarks are mandatory, i.e., "LAST REPORT. OBS 01 thru 08 to KNHC, OBS 09 and 10 to KBIX."

4. The hundreds digit of longitude is omitted for longitudes from 100E to 180E.

5. Describe conditions along the route of flight actually experienced at flight level by aircraft.

6. TT, T_dT_d. When encoding negative temperatures, 50 is added to the absolute value of the temperature with the hundreds figure, if any, being omitted. A temperature of -52EC is encoded as 02, the distinction between -52EC and 2EC being made from i_d. Missing or unknown temperatures are reported as //. When the dew point is colder than -49.4EC, Code T_dT_d as // and report the actual value as a plain language remark - e.g. "DEW POINT NEG 52EC".

7. When two or more types of w co-exist, the type with the higher code figure will be reported. Code Figure 1, 2 and 3 are reported based on the total cloud amount through a given altitude, above or below the aircraft, and when other figures are inappropriate. The summation principle applies only when two or more cloud types share a given altitude.

8. When j is reported as a /, HHH is encoded as ///.

9. If the number of cloud layers reported exceeds 3, k_n in the first 1-group reports the total number of cloud layers. The second 1-group reports the additional number of layers being reported exclusive of those previously reported. In those cases where a cloud layer(s) is discernible, but a descriptive cloud picture of the observation circle is not possible, use appropriate remarks such as "Clouds Blo" or "As Blo" to indicate the presence of clouds. In such cases, coded entries are not made for group 9. The sequence in which cloud amounts are encoded depends upon type of cloud, cloud base, and vertical extent of the cloud. The cloud with the largest numerical value of cloud type code (C) is reported first, regardless of coverage, base, or vertical extent. Among clouds of the same cloud type code, sharing a common base, the cloud of greatest vertical extent is reported first. The summation principle is not used; each layer is treated as though no other clouds were present. The total amount of clouds through one altitude shared by several clouds will not exceed 8 oktas. Only use code figure 0 as a place holder when you can determine that no additional cloud layers exist. In case of undercast, overcast, etc., use code figure 9 as a placeholder.

10. Due to limitations in the ability to distinguish sea state features representative of wind speeds above 130 knots, surface wind speeds in excess of 130 knots will not be encoded. Wind speeds of 100 to 130 knots inclusive will be encoded by deleting the hundreds figure and adding 50 to dd. For wind speeds above 130 knots, dd is reported without adding 50 and ff is encoded as // with a plain language remark added, i.e., "SFC WIND ABOVE 130 KNOTS."

11. Significant weather changes which have occurred since the last observation along the track are reported for W_s.

12. When aircraft encounters icing in level flight, the height at which the icing occurred will be reported for h_ih_i. The H_iH_i will be reported as //.