## 5.4 Weather Depiction Chart

The Weather Depiction Chart (Figure 5-39) contains a plot of weather conditions at selected METAR stations and an analysis of weather flying category. It is designed primarily as a briefing tool to alert aviation interests to the location of critical or near-critical operational minimums at terminals in the conterminous US and surrounding land areas. The chart can be found at: http://weather.noaa.gov/pub/fax/QGUA00.TIF

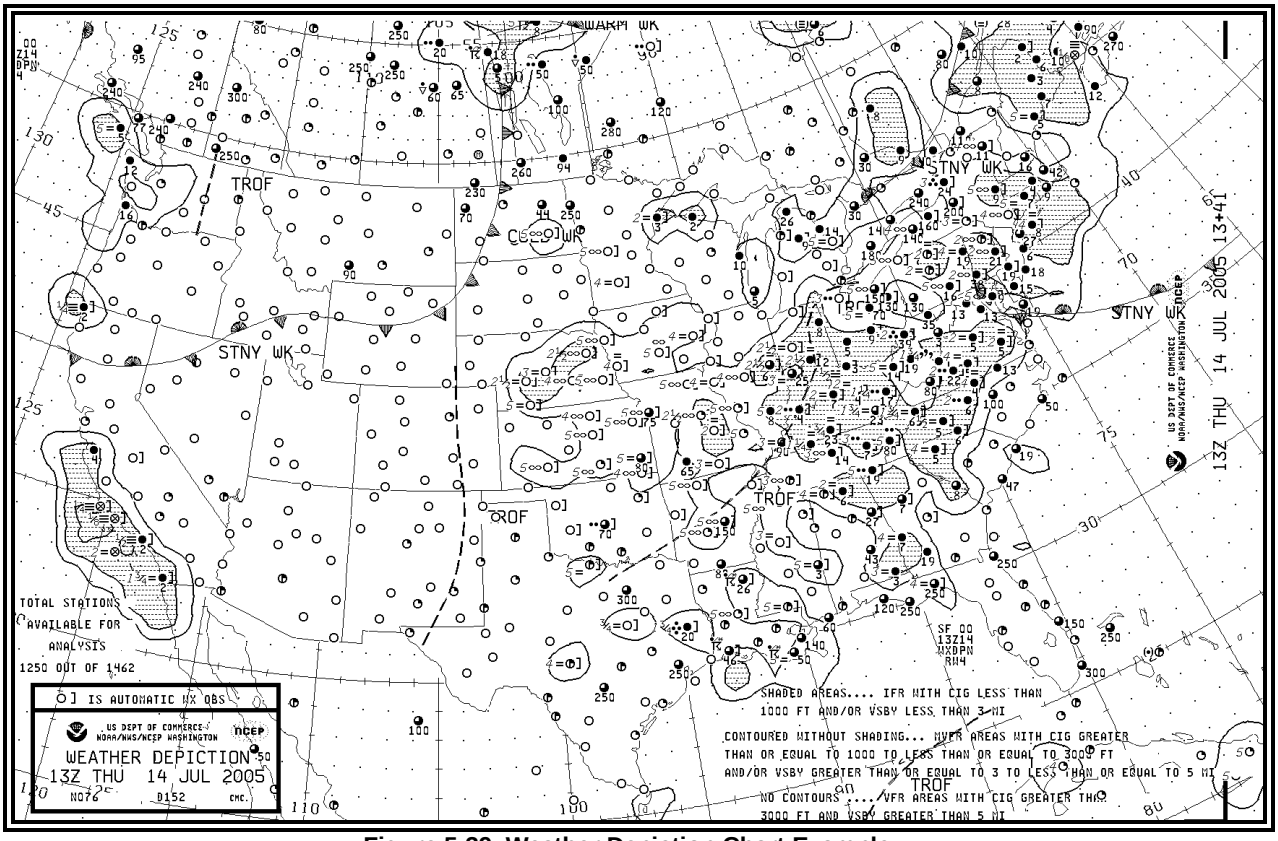


**Figure 5-39. Weather Depiction Chart Example**

### 5.4.1 Issuance

The Weather Depiction chart is issued eight times daily at the following times:

**Table 5-13. Weather Depiction Charts Issuance Schedule**

| Valid Time (UTC) | 01 | 04 | 07 | 10 | 13 | 16 | 19 | 22 |
|---|---|---|---|---|---|---|---|---|

### 5.4.2 Station Plot Model

METAR elements (Section 2.1) associated with weather flying category (visibility, present weather, sky cover, and ceiling) are plotted for each station on the chart (Figure 5-41). The station is located at the center of the sky cover symbol. Most stations are not plotted due to space limitations. However, all reporting stations are used in the weather flying category analysis.

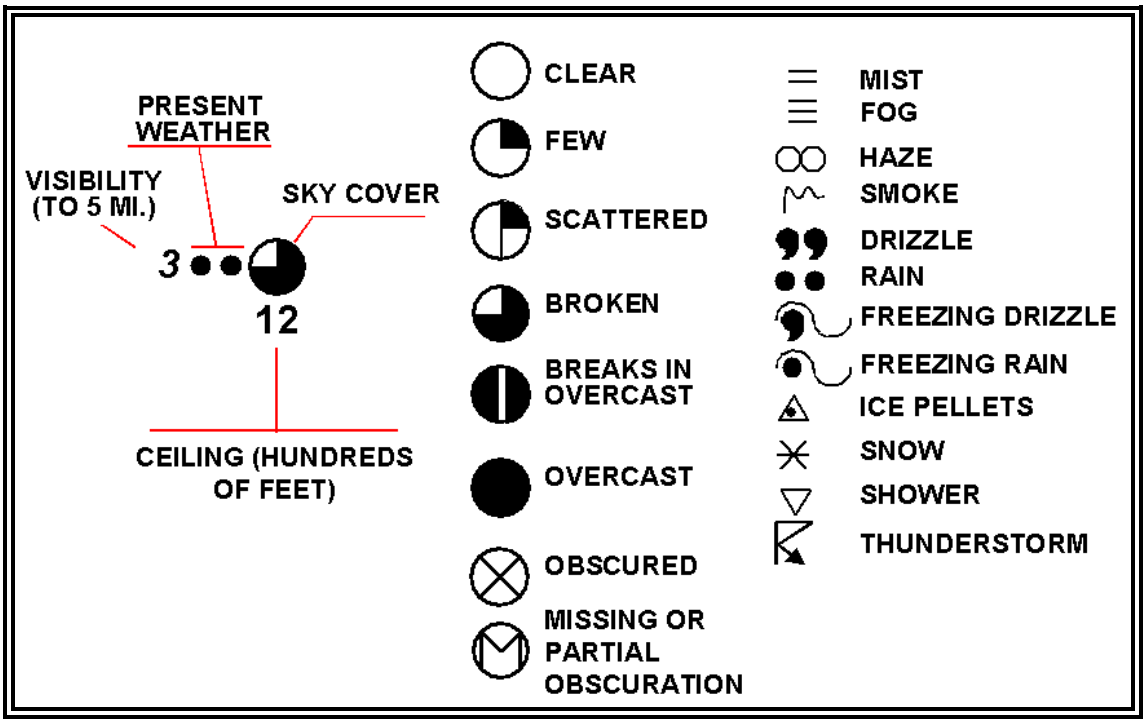


**Figure 5-40. Weather Depiction Chart Station Plot Model**

#### 5.4.2.1 Visibility

When visibility is 5 miles or less, it is entered to the left of the station. Visibility is entered in statute miles and fractions of a mile.

#### 5.4.2.2 Present Weather

Present weather symbols are entered to the left of the station. If the present weather information is obtained by an automated system, the right bracket symbol ( **]** ) is plotted to the right of the station.

When several types of weather and/or obstructions to visibility are reported, the most significant weather element is plotted. This is the first weather element coded in the METAR report (Section 2.1) and is usually the highest coded number in the Present Weather Symbols guide (Appendix I).

#### 5.4.2.3 Sky Cover

Sky cover represents the summation total of the sky condition element from the METAR report. For example, if the METAR sky condition element was **SCT030 BKN060 OVC090**, the sky cover would be overcast. Sky cover symbols are listed in Figure 5-41.

#### 5.4.2.4 Ceiling

Ceiling is the height from the base of the lowest layer aloft covering more than one-half the sky to the ground. Additionally, vertical visibility into a total surface-based obscuration is defined as a ceiling. For a METAR report, the first broken (BKN) or overcast (OVC) layer is the ceiling. For example, if the METAR sky condition element is **SCT030 BKN060 OVC090**, the ceiling is 6,000 feet.

For stations with broken to overcast layers, the ceiling height is plotted below the station. Ceilings are reported as hundreds of feet above ground level (AGL).

For a total surface-based obscuration, no ceiling is plotted and the METAR must be consulted.

Partial obscurations are not identified.

- For a partial obscuration with no layer above, the sky cover symbol will be plotted as missing (Figure 5-41).
- For a partial obscuration with a layer above, the sky cover and ceiling height will be plotted for the cloud layer only.

The METAR report should be consulted to identify the partial obscuration.

If the sky cover is clear, few, or scattered, no ceiling is plotted.

### 5.4.3 Weather Flying Category Analysis

Instrument Flight Rules (IFR) indicated on the Weather Depiction Chart represents ceilings less than 1,000 feet and/or visibility less than 3 statute miles and IFR operations must be in place. IFR areas are outlined on the chart with a solid line and are shaded. IFR areas are typically shaded red in colorized versions of the chart.

Marginal Visual Flight Rules (MVFR) indicated on the Weather Depiction Chart represents ceiling 1,000 to 3,000 feet and/or visibility 3 to 5 statute miles and VFR operations can take place. MVFR areas are outlined with a solid line, but the area is not shaded. MVFR areas are typically shaded blue in colorized versions of the chart.

Visual Flight Rules (VFR) indicated on the Weather Depiction Chart represents a ceiling greater than 3,000 feet or clear skies and visibility greater than 5 statute miles and VFR operations can take place. VFR conditions are not analyzed. This does not necessarily imply that the sky is clear.

### 5.4.4 Use

The Weather Depiction Chart is an ideal place to begin flight planning or to prepare for a weather briefing. This chart provides an overview of weather flying categories and other adverse weather conditions for the chart valid time. The chart, though, may not completely represent the en route conditions because of terrain variations and the possibility of weather occurring between reporting stations. This chart should be used in addition to the current METAR reports, pilot weather reports, and radar and satellite imagery for a complete look at the latest flying conditions.

## 5.5 Alaska Weather Depiction Charts

The Alaska Weather Depiction Charts (Figure 5-43) display color coded station plots which show: temperature, dew point, ceiling, visibility and wind direction/speed. A key to the station plots is found on each map.

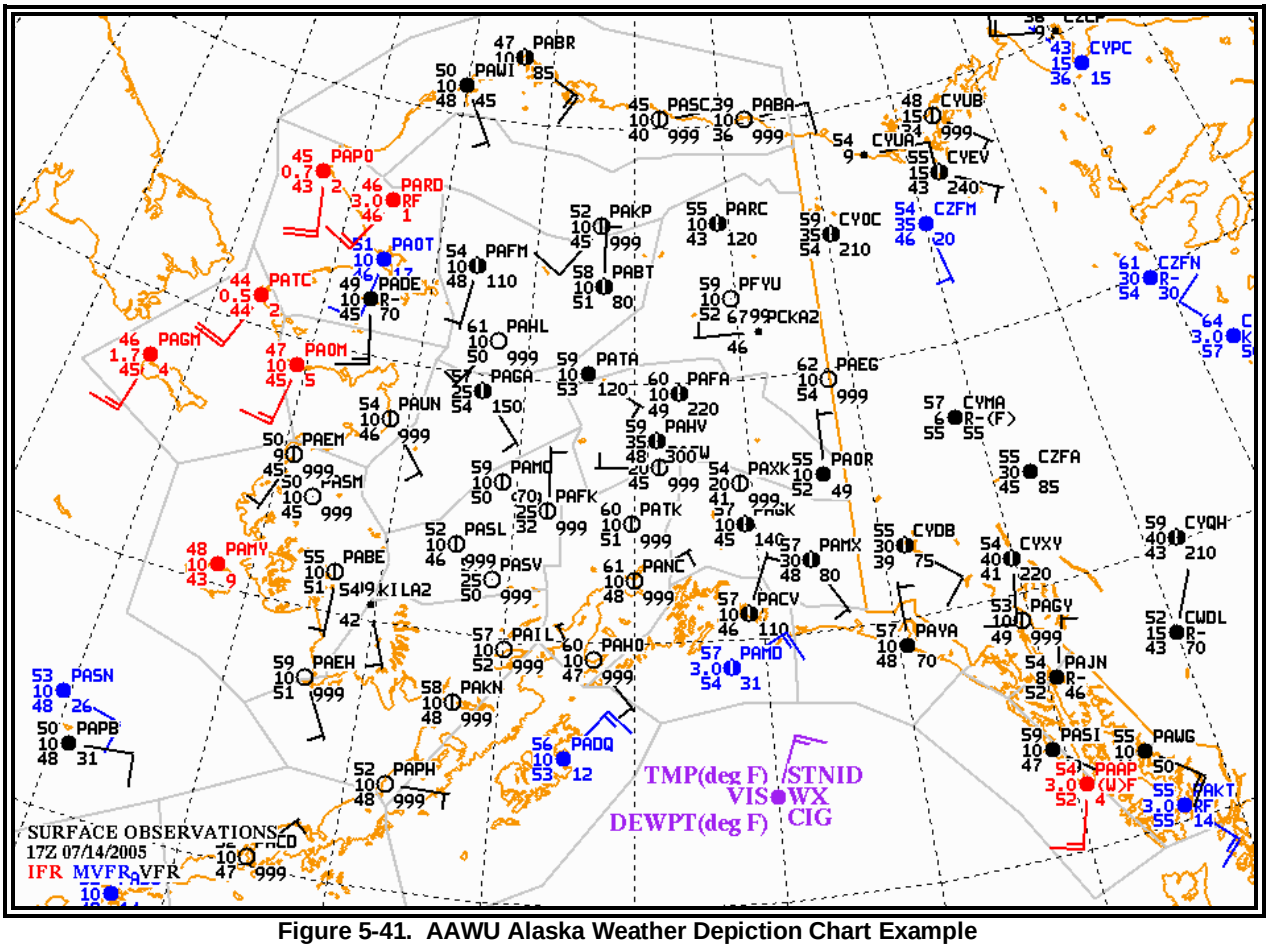


**Figure 5-41. AAWU Alaska Weather Depiction Chart Example**

Thirteen charts cover Alaska (except for the Aleutians) and adjacent areas of Canada.

**Table 5-14. AAWU Alaska Weather Depiction Charts Coverage**

| Chart Coverage | Scale |
|---|---|
| Entire State of Alaska | (1:12 million) |
| All of Southeast Alaska | (1:5 million) |
| Southern Southeast Alaska | (1:3 million) |
| Northern Southeast Alaska | (1:3 million) |
| North Gulf Coast | (1:5 million) |
| South Central Alaska | (1:5 million) |
| Cook Inlet/Susitna Valley | (1:2 million) |
| Southwest Alaska | (1:6 million) |
| Western Interior | (1:5 million) |
| Central Interior | (1:5 million) |
| Northern Alaska | (1:6 million) |
| Southwest British Columbia | (1:7 million) |
| Yukon Territory/Northern British Columbia | (1:8 million) |

### 5.5.1 Issuance

The charts are issued hourly and can be found on the Alaska Aviation Weather Unit (AAWU) web site at: http://aawu.arh.noaa.gov/Sigwx.php. The charts will first appear at about 10 minutes past the hour, with a second update at about 25 minutes past the hour.

### 5.5.2 Legends

The Alaska Weather Depiction Charts depict numerous parameters including the flying category, sky cover and wind.

#### 5.5.2.1 Flying Category

Each station plot is color-coded according to the weather flying category reported (Table 5-16). Red indicates instrument flight rules (IFR), blue indicates marginal visual flight rules (MVFR), and black is plotted for stations reporting visual flight rules (VFR).

**Table 5-15 AAWU Alaska Weather Flying Categories and Criteria**

| FLYING CATEGORY | CEILING (feet) | VISIBILITY (miles) |
|---|---|---|
| **VFR (black)** | Greater than 3,000 feet | Greater than 5 miles |
| **MVFR (blue)** | 1,000 to 3,000 feet | 3 to 5 miles |
| **IFR (red)** | Less than 1,000 feet | Less than 3 miles |

#### 5.5.2.2 Station Plot

METAR elements are plotted for each station on the chart (Figure 5-45). Some stations are not plotted due to space limitations, notably on the chart which covers the entire state of Alaska.


**Figure 5-42. AAWU Alaska Weather Depiction Chart Station Plot Legend**

#### 5.5.2.3 Sky Cover

The sky cover symbol is plotted at the station location and is filled according to the summation total of the sky condition element from the METAR report. For example, if the METAR sky condition element was **SCT030 BKN060 OVC090**, the sky cover would be overcast. Sky cover symbols are listed in Figure 5-41.

#### 5.5.2.4 Station Identifier (STNID)

The four-letter ICAO station identifier is entered to the upper right of the station.

#### 5.5.2.5 Wind

Wind is plotted in increments of 5 knots (kts). The wind direction is referenced to "true" north and is depicted by a stem (line) pointed in the direction from which the wind is blowing. Wind speed is determined by adding the values of the flags (50 kts), barbs (10kts), and half barbs (5 kts) found on the stem.

A single circle over the station with no wind symbol indicates a calm wind.

Some sample wind symbols are shown on Figure 5-46.

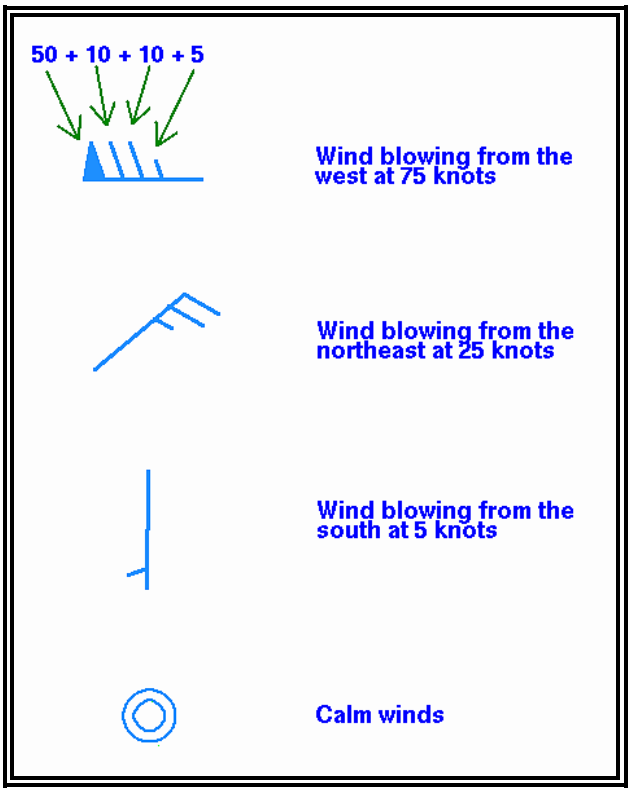


**Figure 5-43. AAWU Alaska Weather Depiction Chart Wind Symbols**

#### 5.5.2.6 Temperature (TMP deg F)

Temperature in degrees Fahrenheit is plotted to the upper left of the sky cover symbol.

#### 5.5.2.7 Visibility (VIS)

Visibility in statute miles is plotted to the left of the sky cover symbol. Decimals are used to represent tenths of miles when necessary.

#### 5.5.2.8 Dew Point Temperature (DEWPT deg F)

Dew point temperature in degrees Fahrenheit is plotted to the lower left of the sky cover symbol.

#### 5.5.2.9 Ceiling (CIG)

Ceiling is the height from the base of the lowest layer aloft covering more than one-half the sky. Additionally, vertical visibility into a total surface-based obscuration is defined as a ceiling. For a METAR report, the first broken (BKN) or overcast (OVC) layer is the ceiling. For example, if the METAR sky condition element is **SCT030 BKN060 OVC090**, the ceiling is 6,000 feet.

For a total surface-based obscuration, no ceiling is plotted and the METAR must be consulted.

If the sky cover is clear, few, or scattered, no ceiling is plotted.

The ceiling is plotted to the lower right of the station circle. Ceilings are reported as hundreds of feet above ground level (AGL). If no ceiling is present, the code **999** will be plotted.

#### 5.5.2.10 Present Weather (WX)

Present weather symbols are entered to the left of the station. Note that the older Surface Aviation Observation (SAO) code is used instead Surface Analysis Chart symbols or the modern METAR code.

**Table 5-16 Alaska Weather Depiction Charts Precipitation Symbols**

| Symbol | Meaning |
|---|---|
| T | Thunderstorm |
| R | Rain |
| RW | Rain Shower |
| L | Drizzle |
| ZR | Freezing Rain |
| ZL | Freezing Drizzle |
| A | Hail |
| IP | Ice Pellets |
| IPW | Ice Pellet Showers |
| S | Snow |
| SW | Snow Showers |
| SP | Snow Pellets |
| SG | Snow Grains |
| IC | Ice Crystals |

**Table 5-17 Alaska Weather Depiction Charts Obstruction to Visibility Symbols**

| Symbol | Meaning |
|---|---|
| BD | Blowing Dust |
| BN | Blowing Sand |
| BS | Blowing Snow |
| BY | Blowing Spray |
| D | Dust |
| F | Fog |
| GF | Ground Fog |
| H | Haze |
| IF | Ice Fog |
| K | Smoke |

**Table 5-18 Alaska Weather Depiction Charts Precipitation Intensity Symbols**

| Symbol | Meaning |
|---|---|
| - | Light |
| (No symbol) | Moderate |
| + | Heavy |

### 5.5.3 Use

The Alaska Weather Depiction Charts provide an overview of weather flying categories and other adverse weather conditions for the chart valid time. The chart often does not completely represent the en route conditions because of terrain variations and the possibility of weather occurring between reporting stations. These charts should be used in addition to the latest METAR/SPECIs, pilot weather reports, and radar and satellite imagery for a complete look at the latest flying conditions.

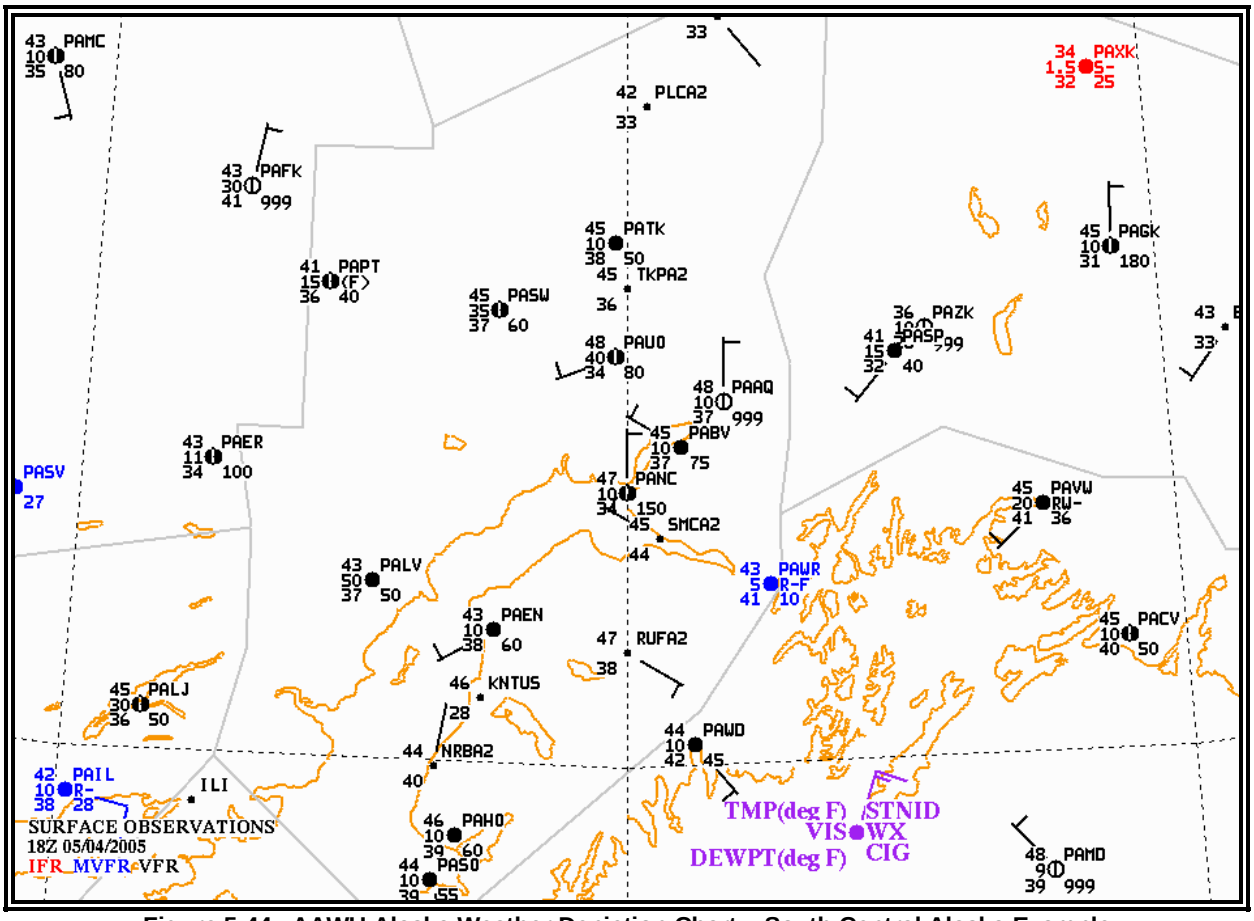


**Figure 5-44. AAWU Alaska Weather Depiction Chart – South Central Alaska Example**