



PACIFIC REGION TECHNICAL NOTES

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SATELLITE OBSERVATION OF
KAT FOREST FIRE.

John Spagnol, Meteorologist, Pacific Weather Center.

SUBJECT

The first major fire of the forest fire season was the so called "KAT" fire.

LOCATION

The fire was located near Chist creek which is located between Kitamat and Terrace.

CAUSE AND DURATION

The fire was started by unknown means. However, forestry officials did not consider a lightning strike as a probable cause. It began on or near June 29 and was still smouldering at the time this note was written.

SATELLITE OBSERVATION

The smoke plume from the fire was readily observed on the visual satellite pictures received at the Pacific Weather Center. The appropriate portion of one such picture is shown in figure 1.

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Figure 1. KAT forest fire (point A). The picture is valid at 0115Z, July 5, 1978. The smoke plume is advected downstream (eastward) to point B and perhaps as far as point C.

ADDITIONAL REMARKS

1. The large smoke plume was actually a composition of smoke from various smaller fires that raged in the central interior at the same time. Probable sites are indicated by points D. The KAT fire was the largest and located further upstream.

2. The direction of the plume is consistent with air parcel trajectories at levels 12-20 thousand feet.

3. Nearest temperature soundings valid the afternoon of June 4th demonstrated that the airmass was quite unstable. This was caused mostly by surface heating that affected the first 12 thousand foot layer. The unstable air probably caused the fires to flare up and produce an increased amount of smoke. The fact that the smoke seems to be streaking over the Rocky mountains after it is caught in the wind flow would indicate the smoke was carried to great heights. This is also attributed to the unstable airmass.