Cloud First Report

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The image used for this report was taken off highway 36. I chose to use this photo because of the contrast that it created because of the nice weather of the day. This was taken on March 5th at 2:55 pm. I found this photo to be a great example for this assignment of capturing a cloud, identifying it, and discussing the stability of the atmosphere that created this cloud formation. To capture this, I used my iPhone 7 and edited it with fotor. I used a black and white theme because I felt that it gave the clouds a strong contrast which made them easily identifiable. The black and white also helps to keep the clouds as the center of attention rather than the ground. Because I was using an iPhone, I had to take numerous pictures before one had decent enough quality. The autofocus feature on iPhones can make it difficult to capture subjects such as clouds.

These are likely to be stratocumulus clouds since how low they are relative to the ground as well as their flat bottoms and fluffy tops. The mountains seen in the background of the picture are much farther than they appear and likely have no effect on the clouds or the atmosphere around. Consulting a Skew-T diagram, the atmosphere is confirmed to be stable. Assuming the average length of the clouds in the picture are about 100 m , the density 1 Kg/m^3, the wind an average velocity of 4 m/s and the viscosity to be 1.7 * 10^-5 Ns/m^2, the Reynolds number of cloud is approximated to be Re=2.35 * 10^7 resulting in turbulent flow.

To edit the photo, I used fotor. I knew immediately that I wanted a black and white photo when I saw the picture and the software allowed me to do it easily and quickly. The black and white helped keep the clouds as the main focus of the picture since the ground was dark enough to hide any prominent features. This created a sharp contrast in which I enjoy. Overall I like this picture a lot because the black and white also hides the fact the weather was beautiful out which is just a fun effect of editing.

Figure 1: unedited photo

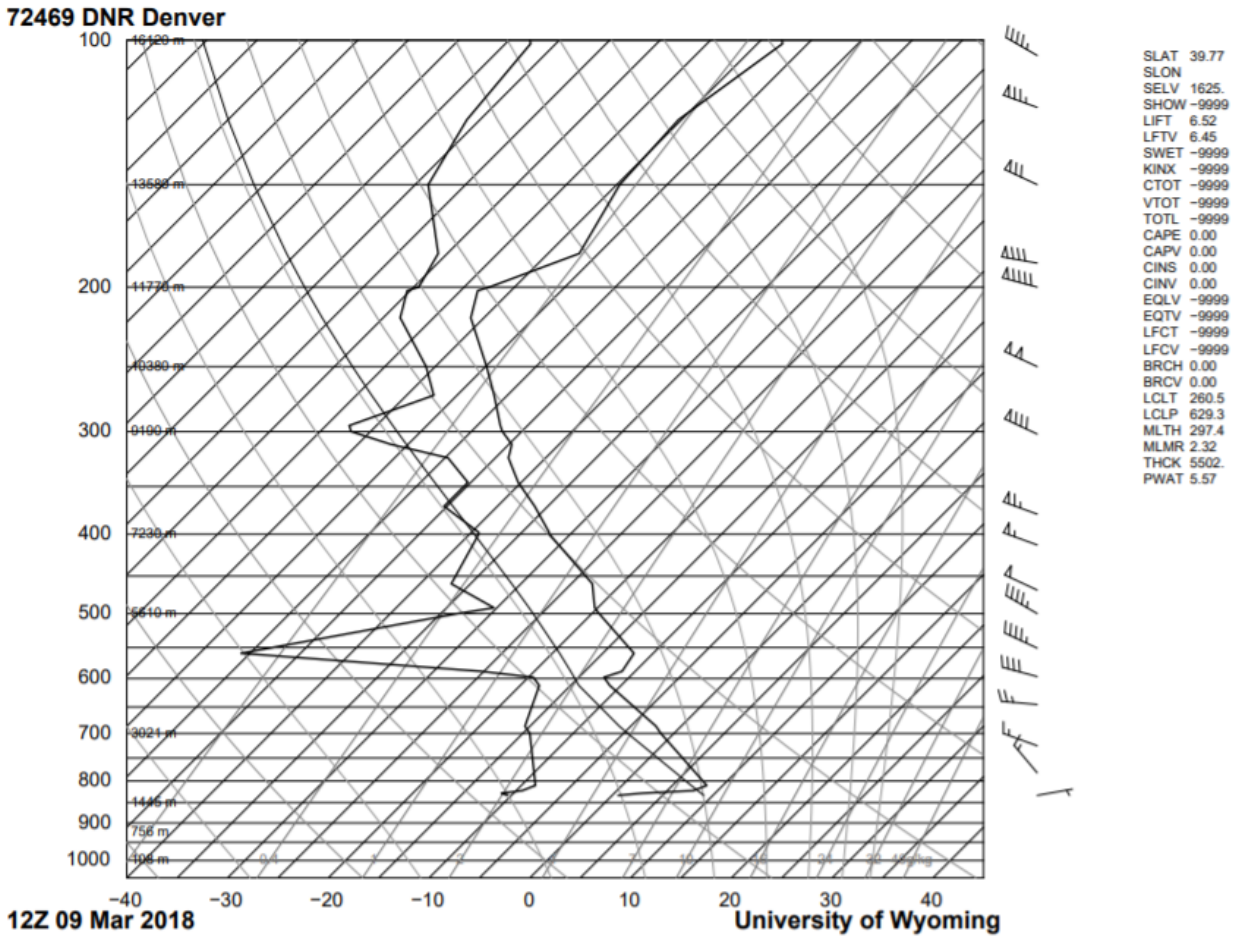

Figure 2: Skew T

References:

https://www.thoughtco.com/types-of-clouds-recognize-in-the-sky-4025569

http://www.uwyo.edu/