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### Cloud Image Report

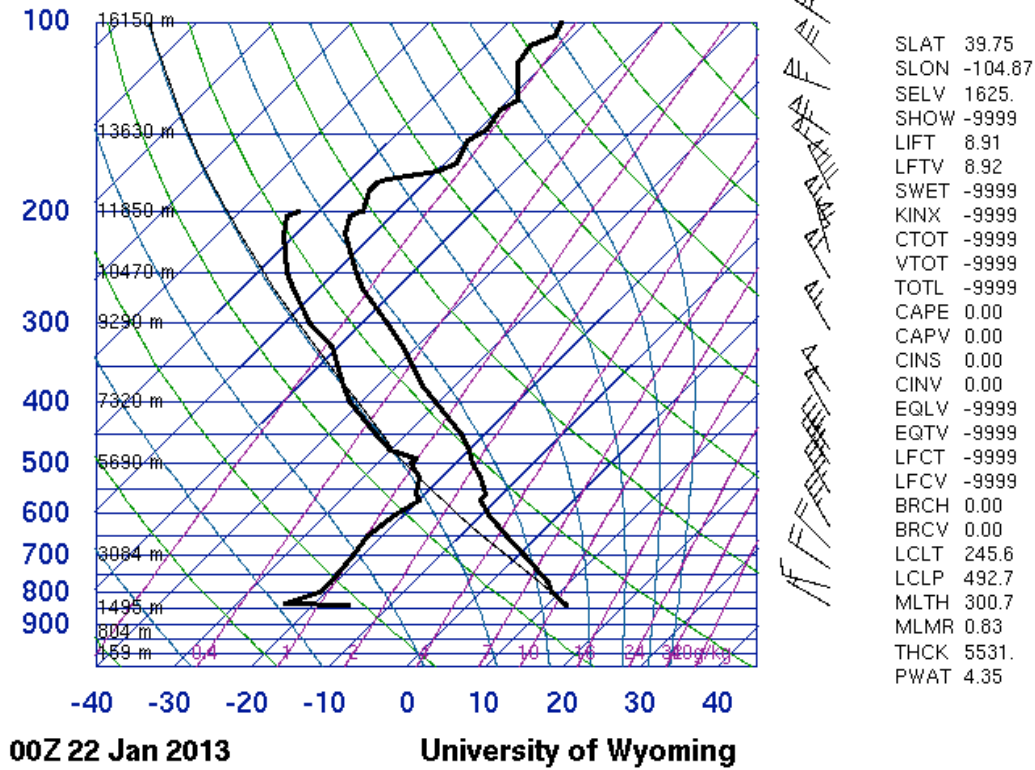
This image was created to fulfill the first cloud imaging assignment. The intent of the image and assignment was to visualize clouds and identify and interpret their structure. As a completely coincidental image, this was taken as a test image for my camera to calibrate my lenses that happened to turn out to be a neat image. In addition to this, the image that I constructed was just a throwaway image that I had on my camera, and after the various failed attempts, or at least attempts that I felt were artistically disgusting, I stumbled across this one.

This image was taken on January 21, 2013 at 5:27 post meridian. The image was taken facing northwest in Broomfield, Colorado. After re-measuring the same camera setup, the camera was measured at approximately 45 degrees above the horizon. This photograph was taken from the third floor of an apartment complex, approximately fifty feet above the ground. It should also be noted that this image was taken approximately 3 miles from the rocky mountain airport, so planes often disturb the airspace that these clouds reside in.

There are two clouds presented in the image and the first is the lower cloud, a stratocumulus cloud. The second, residing above that cloud is an altostratus cloud. The rest of the sky was fairly clear, with only a few sparse clouds situated way east, or directly behind the camera setup. The observed weather cast for January 21, 2013, showed a clear night, no precipitation on either the day before or after, with

an average temperature of 42 degrees Fahrenheit. The atmosphere was stable, as reflected in the SKEW-T report below.

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The dew point of the day was 26.7 degrees Fahrenheit, and with this information the height of the clouds can be calculated.

$$52 - 26.7 / 4.4 \times 1000 = 5750 \text{ft.}$$

The above calculation indicates the base height of the clouds, 5750 feet. The long drawn out nature of these clouds could be indicated by the disrupted airspace by the airplanes flying both above and beneath them. In addition to this, the choppy nature of the above cloud is formed by the winds rolling off of the foothills.

The photographic choices, although the product of the image was somewhat accidental, were carefully planned in order to properly calibrate the lenses and to properly check the image quality of the camera itself. The subject was

approximately 5,900 feet from the lens, an 18-55mm focal length zoom lens at full extension. . A Canon EOS Rebel T3 digital camera was used. The original image measured  $4272 \times 2848$  in pixels, while the edited image, slightly cropped to attract more attention to the clouds themselves rather than the immediate surroundings, measured  $4272 \times 2315$  pixels. Below on the left is the image, not manipulated or distorted in any way.



This image was shot at a focal length of 55mm, an f5.6 with an exposure time of 1/100 of a second. The image came out slightly less bold than I had hoped, and the uncontrollable issue of framing drew attention away from the subject and to the surrounding structure. The edited image, on the left, was only manipulated for brightness and color contrast, both of which were heightened 2x.

The image, artistically speaking is very appealing to me. I like how the final product shows the clouds, but with the framing and cropping done in post, the colors depict a high contrast to the silhouetted houses. The goal of the image was to depict clouds, and for my personal gain, improve the quality of the image through post-production editing. I feel I succeeded on these fronts, and hope to, in the future cloud projects, to make a more conscious effort to focus on the science of the image rather than the art of it.