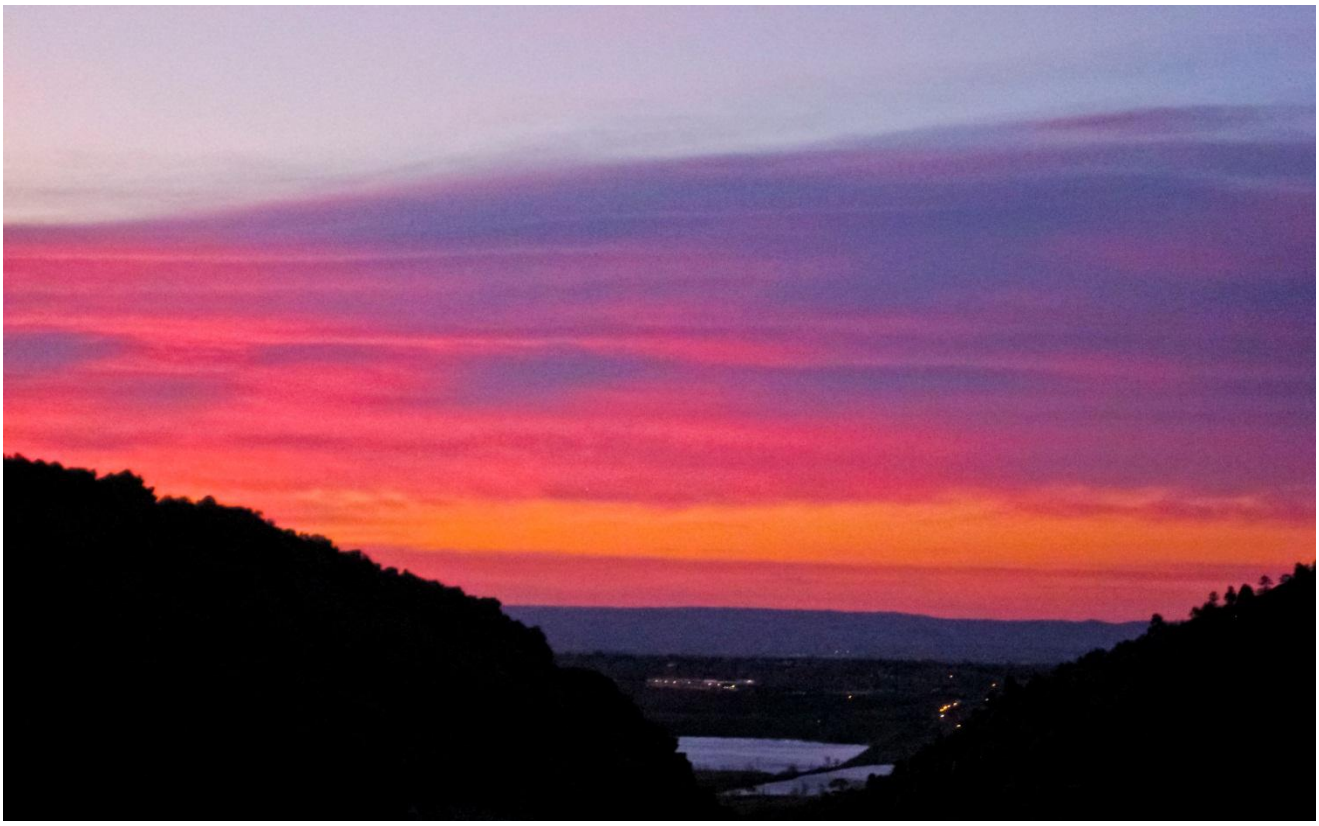
Clouds #2



Alyssa Berg

Flow Visualization

4/22/12

This picture was taken with the intent to really show the different colors of the sunrise and how beautiful the clouds can look early in the morning. I took several pictures over the course of a month, but I didn't really like any of them. I also took several other pictures that morning, but this one had the best focus and colors.

This picture was taken in Morrison, Colorado at Red Rocks Amphitheatre, where the elevation is approximately 6,200 feet above sea level. It was taken at approximately 6:30 in the morning on Easter, April 8, 2012. The camera was facing east and the angle on the horizon was about 5 degrees.

The clouds that appear in the image are stratus clouds. During that day, and the day before the weather was very calm and the high for both days were in the 70s. There was very little wind the day before or the day the picture was taken. Figure 1 is the skew – T plot for that time and day[1]. The CAPE is 0 and this implies that the atmosphere is stable.

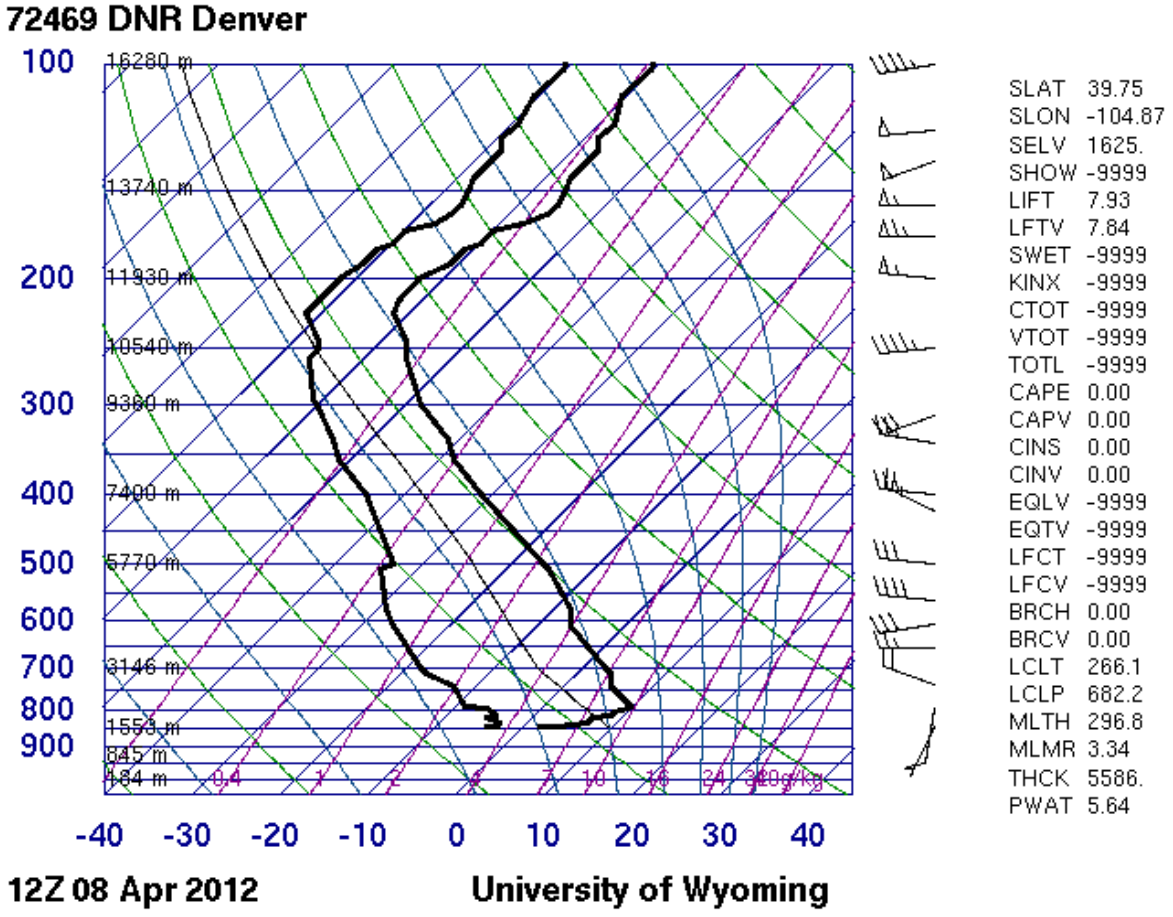


Figure 1: Skew - T Plot

Stratus clouds are generally hazy, featureless clouds of low altitude that can vary in color. They are also sometimes seen as above ground fog [2]. They also have an elevation that is below 6,000ft [2], which

makes sense in this picture at the given altitude. I would estimate these clouds at that same level due to the angle the picture was taken at. Stratus cloud elements form where the air is rising while the blue sky in between the cloud elements indicates sinking air [3]. Also small amounts of precipitation maybe associated with these clouds, and they may often accompany small amount of drizzle [2].

In this picture I really wanted to show the different colors in the sky and show the contrast it had with the mountains that early in the morning. The camera I used was a friend's Cannon Power Shot. The shutter speed was set to 1/60 seconds and the f-stop was f/4.9, the ISO was 250, and the focal length was 17.4 mm. The final pixel dimensions are 3,072 by 1,908. I did edit the final picture from the original picture produced by the camera. I ended up increasing the contrast and the saturation, to make the mountains appear blacker. I also messed with the color tints in the picture by slightly increasing the red. I have included the before and after pictures and can be seen in Figures 2 and 3.

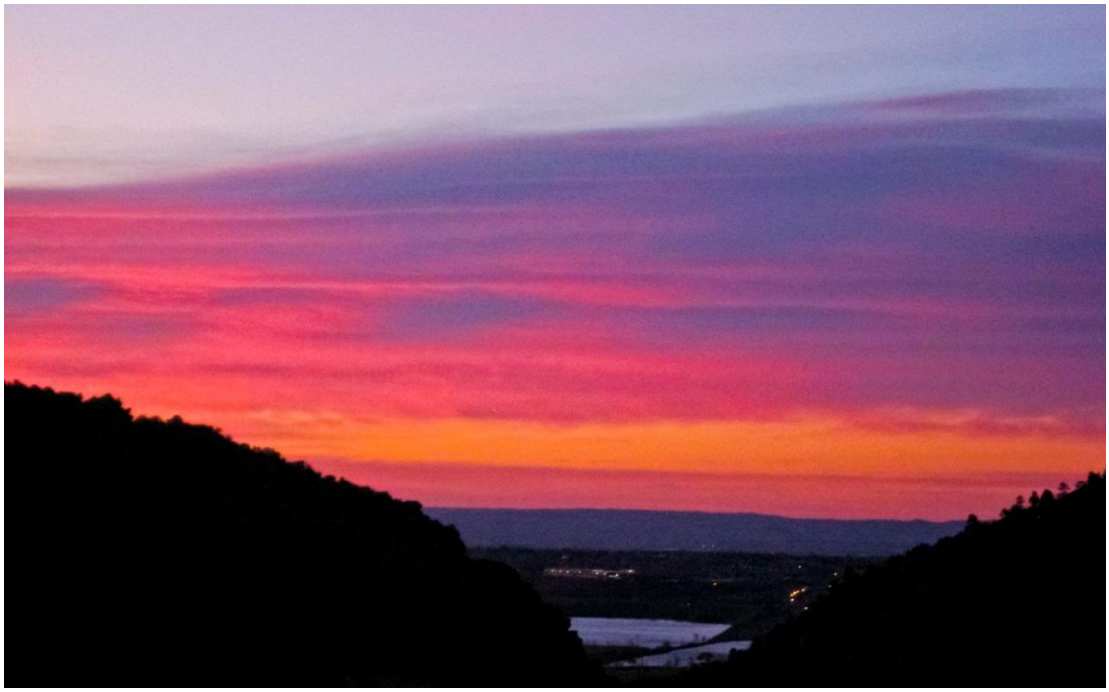


Figure 2: Final Picture

Figure 3: Original Picture

The image reveals a nice contrast between the mountains and the different colors of the clouds in the sunset. Something that I dislike in the picture is that it looks slightly pixelated and a little blurry. I think this is because of the type of camera I was using and if I had my camera it would have turned out a little better. The physics are shown well, but they might have been shown a little better if I didn't mess with the colors as much. Overall, I like the picture, but in the future I would want to take more pictures with a better quality camera and not edit the colors quite as much as I did this time.

References

[1] "Atmospheric Soundings." *Wyoming Weather Web*. Web. 01 Mar. 2012.

http://weather.uwyo.edu/upperair/sounding.html.

[2] "Stratus Cloud." *Wikipedia*. Wikimedia Foundation, 24 Apr. 2012. Web. 24 Apr. 2012. <http://en.wikipedia.org/wiki/Stratus_cloud>.

[3] *USA Today*. Gannett. Web. 24 Apr. 2012. <http://www.usatoday.com/weather/wstratus.htm>.