

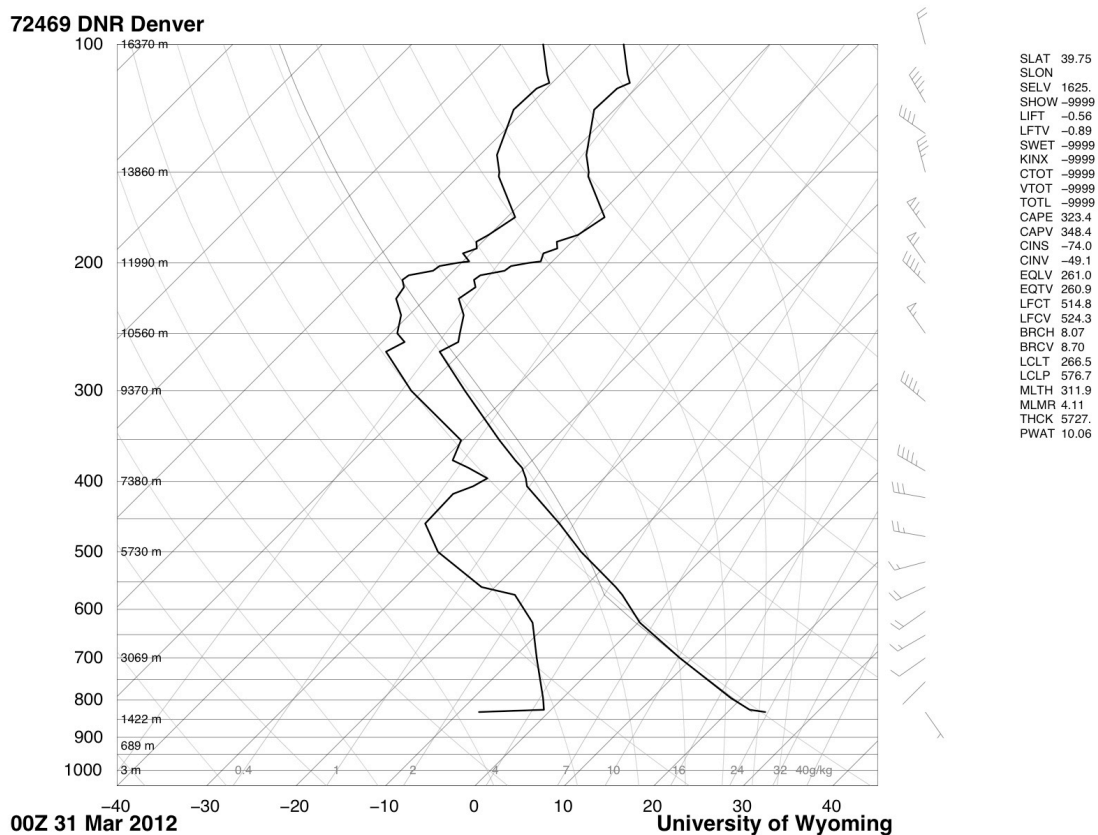


**Journey Ends: 4608 x 1992 pixels, 1/400 s, f4.9, ISO 400**

Photographed outside of Steamboat Springs Colorado on a trip back from Jackson Hole Wyoming, this image signifies an end to many things. The end of a day, a road trip, my final spring break, as well as the end of a special era in my life. I had taken so many different cloud images for this assignment, obtaining a dozen really nice photos for myself in the process. This image in particular captured me for its underlying personal meaning. It's just another sunset for most people, there will be many more just like it, but it was special for me. Journey Ends was chosen as the title in order to help portray the message I was trying to deliver in the image.

I shot this image using my point and shoot camera, a Casio EX-H30. Small enhancements of the original image, seen at the end of this report, were done with Adobe Photoshop CS5. When observing a sunset like this the dull grey sky is never the focus. It was cropped out of the original image to draw attention to the sunset, like it would be viewed naturally (or at least how we want to remember them). Overall the color of the clouds was not how I wanted to picture them either. Using the curves feature in Photoshop, I was able to increase the brightness of the sunset without disturbing the darkness of the mountains and clouds. This also created more contrast in the image, increasing the overall image quality while getting it as close to I remember seeing it.

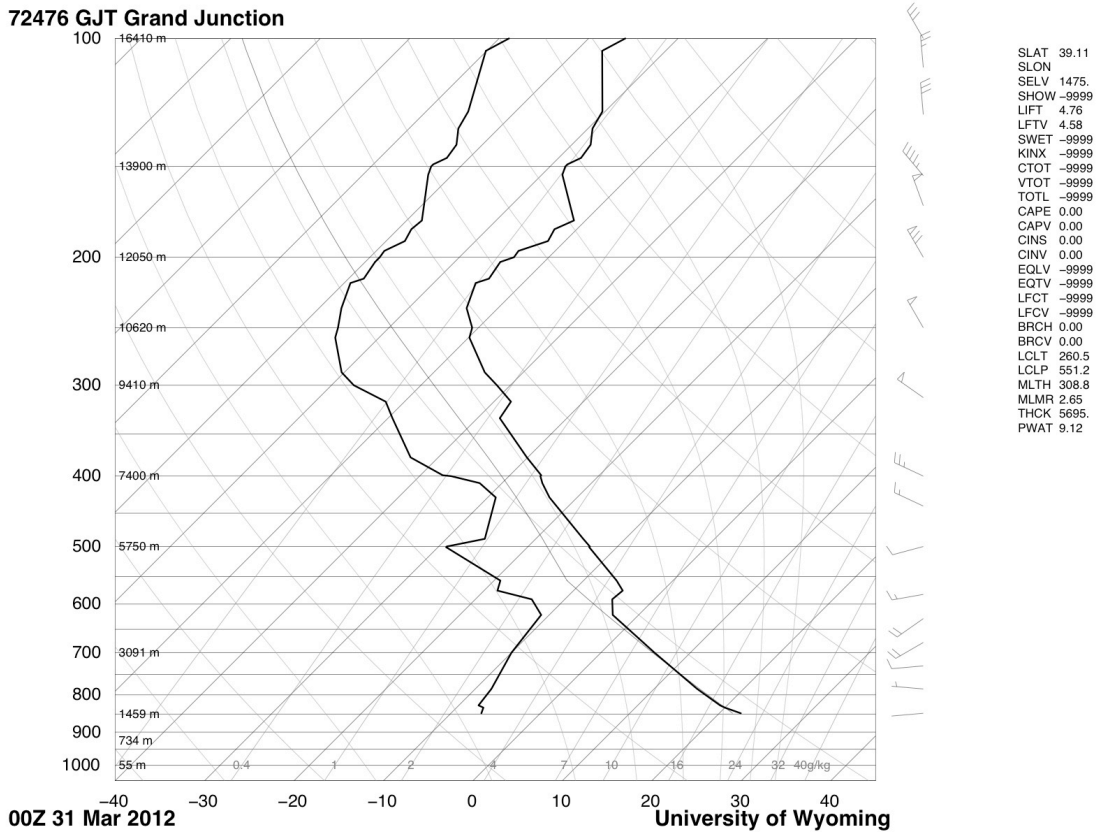
The types of clouds that can be seen in this image are most likely stratocumulus and altostratus<sup>1</sup>. Skew-T plots can provide data on whether or not the atmosphere on any particular day is stable or unstable, helping in determining cloud types. Data for these plots are gathered twice a day from airports and archives are available online. This image was shot at 7:00 pm on Friday March the 30<sup>th</sup>, or 00Z on March 31<sup>st</sup>, just south of Steamboat Springs Colorado and is closest to Denver in terms of sources for sounding data. This will give us a rough idea of how high the clouds in this image may be.



**Denver, CO Skew-T plot for March 31st at 00Z**

From this information<sup>2</sup>, and the numbers on the right, we can determine the height of clouds in Denver and the atmospheric conditions. The cape, signifying the stability of the atmosphere, is not zero. A non zero cape value signifies an unstable atmosphere on that day. The clouds I observed were from a stable atmosphere and the Denver information may not be applicable here. The next

nearest available sounding data is from Grand Junction Colorado, and is actually in the direction I was facing when I took this picture.



**Grand Junction, CO Skew-T plot for March 31st at 00Z**

The data from Grand Junction has a cape value of zero on the night I took my picture. This is what I was expecting to see based on the way that the clouds look. Heights of the clouds above sea level are given on the left side of this plot, and when the two lines come close together it signifies that clouds could form at that height. At about 4000 m and 7000 m above sea level the two lines both come together, it is at these heights the clouds in the image would be at. At roughly 7000 feet above sea level, these clouds would be approximately 6000 and 16000 feet above the ground level.

Sunsets with red and orange colors, like the ones seen in my image, are a result of certain wavelengths of the sun's light being scattered by the atmosphere. Shorter wavelengths have a better chance of interacting with different particulate matter in the atmosphere giving them a better chance of being scattered<sup>3</sup>. The

red light of the sun is not scattered in my image, resulting in the beautiful colors. It is possible to get multiple different colors, but it depends on the material that is in the atmosphere. Smoggy cities, such as Los Angeles, frequently have many brilliant sunsets. This is due to the light interaction with the particulate matter in the smog.

Overall I was very happy with this image. It has a lot of meaning to me, and I hope that meaning can be visualized to some extent. The different colors were breathtaking that night and they are captured in this image. Deer littered the roads after this image was taken and if the most unfortunate had happened, it would have been a fantastic sunset to go out on. It was very fun learning more about the different cloud types in the two different images we had to select this semester. Being able to understand, even a small amount, of the information a skew-t plot can provide is really beneficial.

#### Reference:

[1] "The Cloud Collector's Reference." *The Cloud Appreciation Society*. Web. 20 Apr. 2012. <<http://cloudappreciationsociety.org/collecting/>>.

[2] "Atmospheric Soundings." *Wyoming Weather Web*. Web. 22 Apr. 2012. <<http://weather.uwyo.edu/upperair/sounding.html>>.

[3] "Red Sunset." *HyperPhysics*. Georgia State University. Web. 22 Apr. 2012. <<http://hyperphysics.phy-astr.gsu.edu/hbase/atmos/redsun.html>>.

