

Indian Gulch Ablaze



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Flow Visualization, Clouds II

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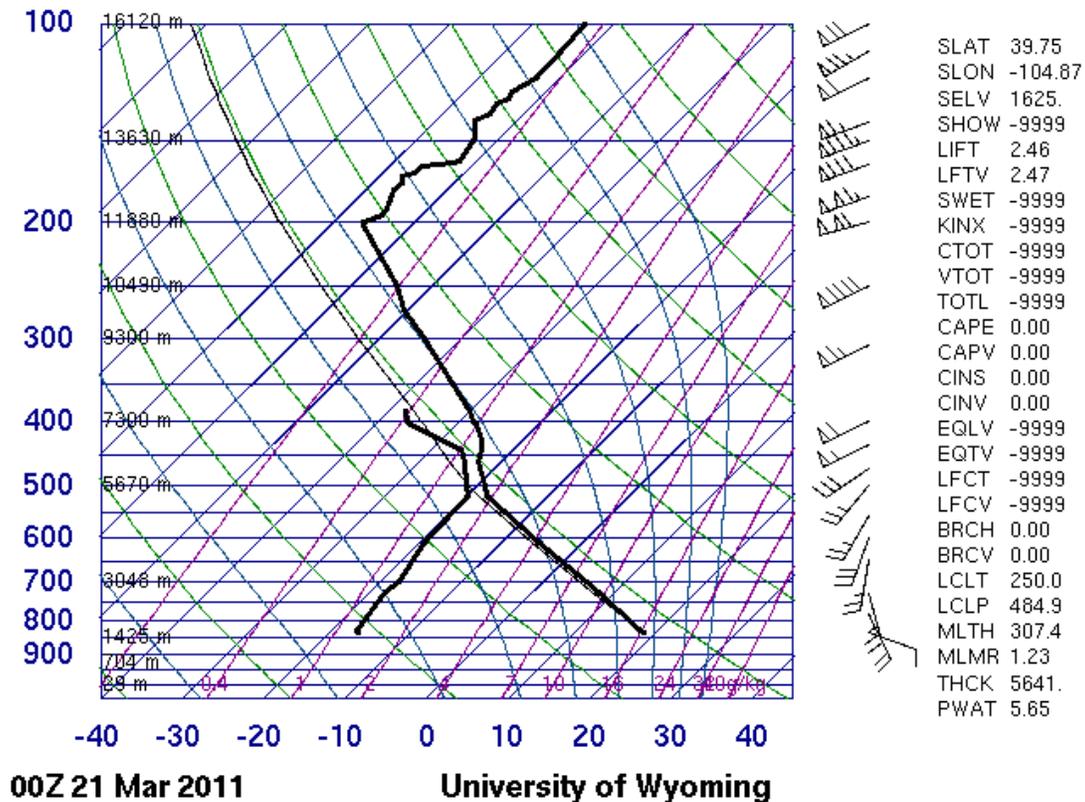
March, 2011

The goal of this image was to capture a scene of the Indian Gulch Fire which started on March 20, 2011 in Golden, CO around 10:15 AM. The fire burned approximately 1,570 acres before being contained on Friday, March 25th. This image was submitted as part of a fluid visualization course at the University of Colorado at Boulder.

This photograph was taken just off of Rt. 6 in Golden at 5:00 PM on March 20th, 2011. I was facing west and my camera was tilted up at an angle between 5 and 15 degrees above the horizontal. The elevation at this point is roughly 5,600 ft.

The clouds shown in the image are most likely Altocumulus-Undulates clouds. They are orographic which means that they are caused by air that is forced upwards over the mountains. The following skew-t plots show the atmospheric sounding data for the Denver, CO area at 6:00 PM on 3/20/2011.

72469 DNR Denver



The atmosphere is stable as you can see in the skew-T plot; the CAPE is 0. I estimate that the clouds I saw were at an altitude of 3 – 3.5 mi. This puts the clouds in the lower half of the Troposphere. The smoke seen in this picture is rising over a mountain that is roughly 6700 feet at its peak. I was not able to identify this particular mountain but my elevation estimate is based on the elevation of Golden (5600 ft.). I assumed this peak to be 1100 ft. above Golden.

The rest of sky had similar Altocumulus clouds to the East and West. These clouds were massed together and covered the entire sky. Winds were light between 5 – 10 mph. The temperature in Golden at this time was about 64 degree Fahrenheit, which was similar to the days before and after Sunday the 20th. This suggests there was no front moving through at the time of the image.

This photo was taken in sunlight from an overcast sky. The following photographic settings were used on a Canon EOS Digital Rebel XS (Lens EF-S 18-55 mm 1:3.5-5.6 IS):

- No flash
- Landscape Mode
- Distance from lens to object: 1 – 3 mi.
- Focal length: 35 mm
- Original image dimensions: 3888 X 2592 pixels
- Exposure: 1/60 sec.
- F-stop: f/7.1
- ISO: 100
- White balance: Auto

This image was edited in Photoshop and the Red was enhanced but no other alterations were made. The original image is shown below.



I do not feel that this image is very aesthetically appealing but I felt compelled to submit this picture because it captures a natural disaster in Colorado. I feel that everyone should see this sort of image especially if the event happened nearby. I had a great picture of the Left hand Canyon fire taken from Louisville, overlooking Boulder. Unfortunately I accidentally erased this image the day I captured the Indian Gulch Fire. In the end I feel lucky that I had a chance to see both incidents and share an image of at least one of them.

References

WeatherSpark.com, info for Boulder, CO 6:00 PM on March 20th, 2011

<http://weatherspark.com/#!graphs;a=USA/CO/Boulder>

University of Wyoming, Department of Atmospheric Science: Atmospheric Soundings Weather

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

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<http://www.kdvr.com/news/kdvr-golden-fire-text,0,1837279.story>