

LAB Overlay Technique

This tutorial introduces a new technique for color and contrast enhancement that has many advantages over conventional approaches. The technique takes advantage of the natural separation of color and luminance inherent in the LAB color mode and provides a way to enhance the image by re-calculating pixel values at every point in the image rather than pushing levels apart with a curves adjustment. You can download the Jpeg used in this tutorial here:

http://www.varis.com/StepByStep/LAB_Overlay/Varis-090308_6488_RGB.jpg

I encourage you to experiment with your own images to see how this approach might have value in other contexts.

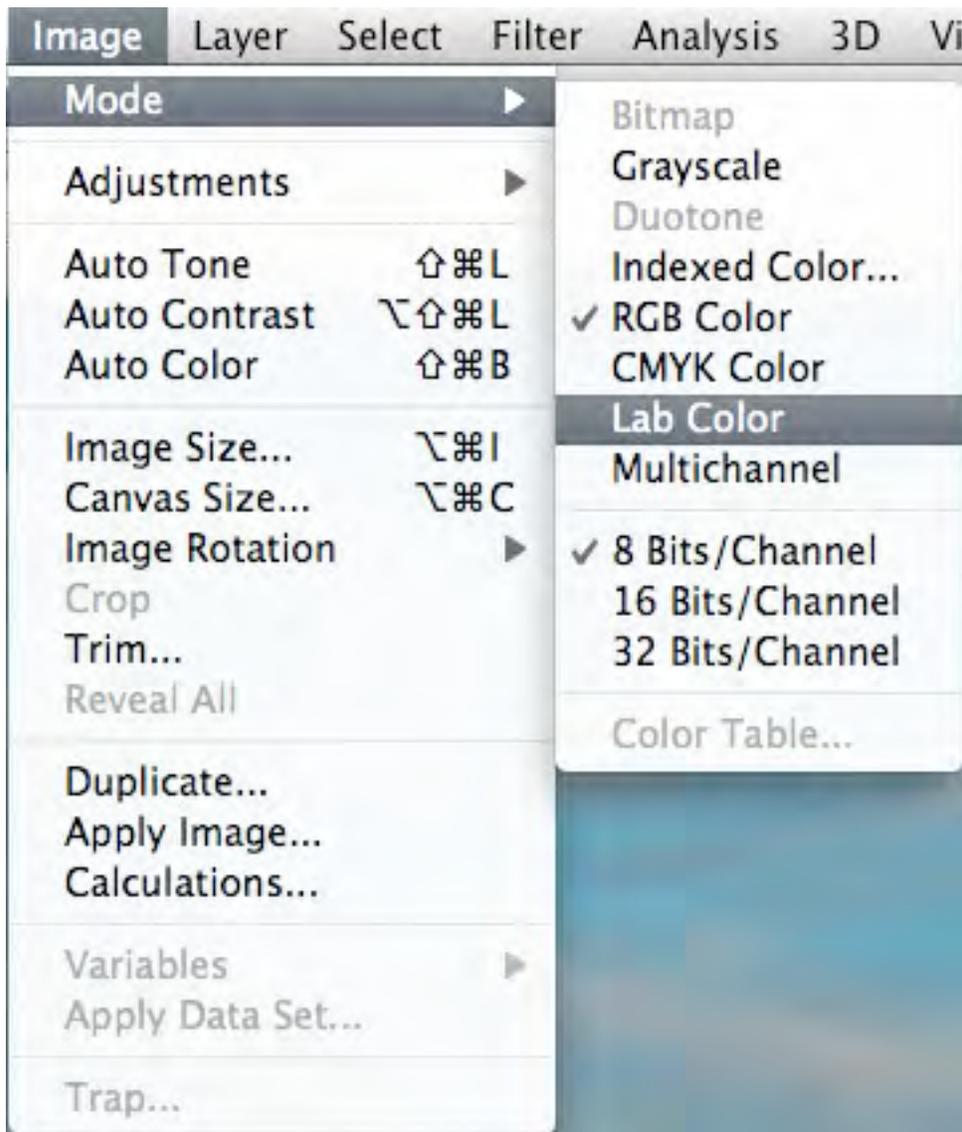
Here is the basic technique:

1. Open Image



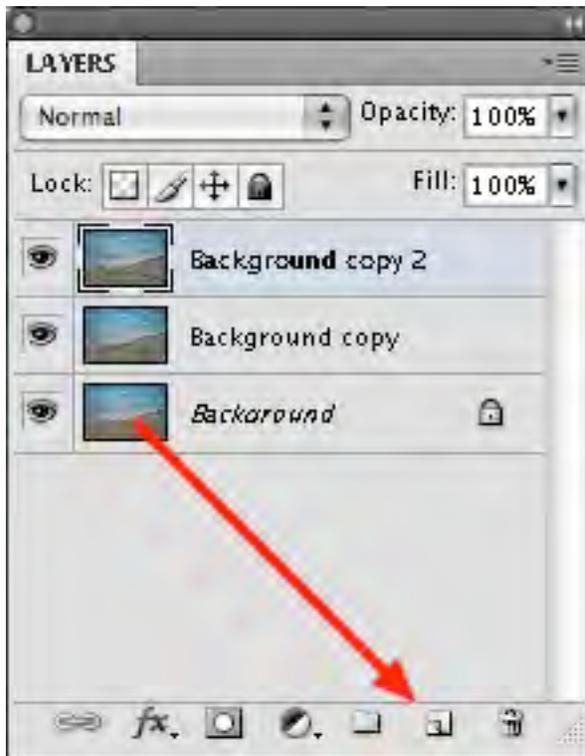
Open your image. Ideally we want to start with something that has reasonable color but is relatively flat - nothing too dark or too light, just dull with a lot of room to "grow" into highlights and shadows. This particular image was processed out of Lightroom with all sliders set to zero and represents an unaltered RAW capture. You might experiment with actually reducing the contrast by using "Fill Light" to artificially lighten shadows a little bit and make sure you set the "Black" slider to "zero"

2. Convert to LAB



Convert to LAB by selecting from the Image menu: Image->Mode->Lab Color

3. Duplicate the Background into two Layers



Drag the thumbnail of the "Background" in the Layers panel to the new layer icon two times - you will end up with two copies above the original background.

4. Name layers and turn off top layer



Name the top layer contrast and the next layer saturation, then turn off the visibility of the top layer by un-checking the eye icon next to the thumbnail. Finish by selecting the "saturation" layer. *Note: you can change the layer name by double clicking the existing name next to the thumbnail*

5. Change the Layer Apply Mode to "Overlay"



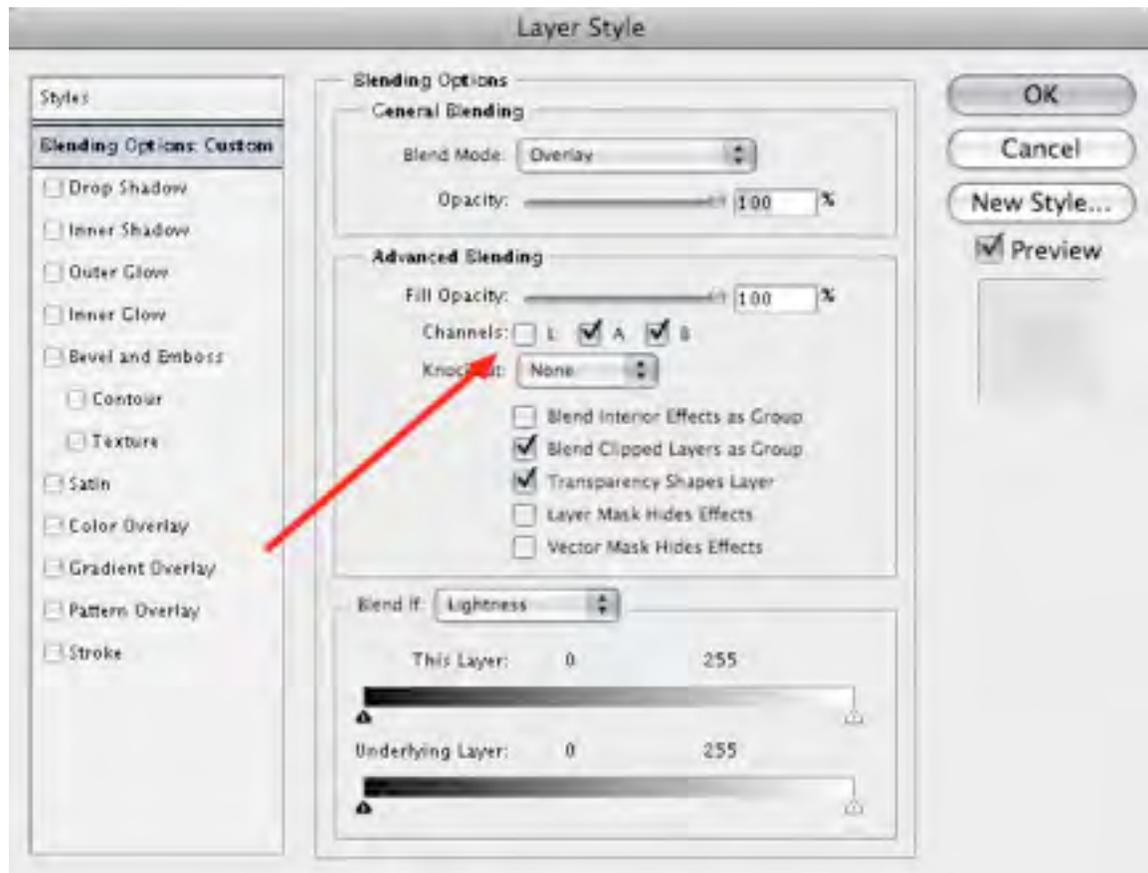
While you have the "saturation" layer highlighted, select "Overlay" from the drop down menu under the "LAYERS" tab.

The image will now gain a lot of saturation and contrast



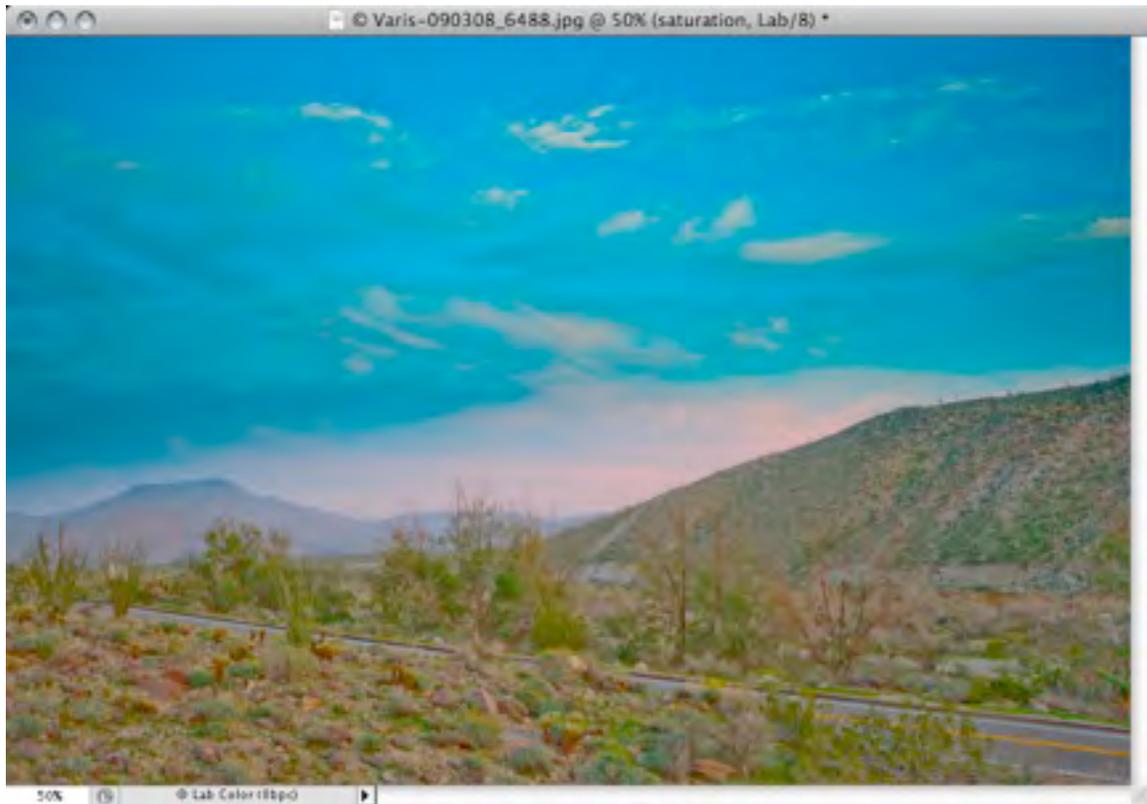
At this point you may like the result or you can do something simple like back off on the opacity slider. In our example the extra contrast has made the image too dark but the extra saturation may be desirable. We have a lot more options to explore...

6. Bring up the Layer Style Dialog and Uncheck the "L" Channel



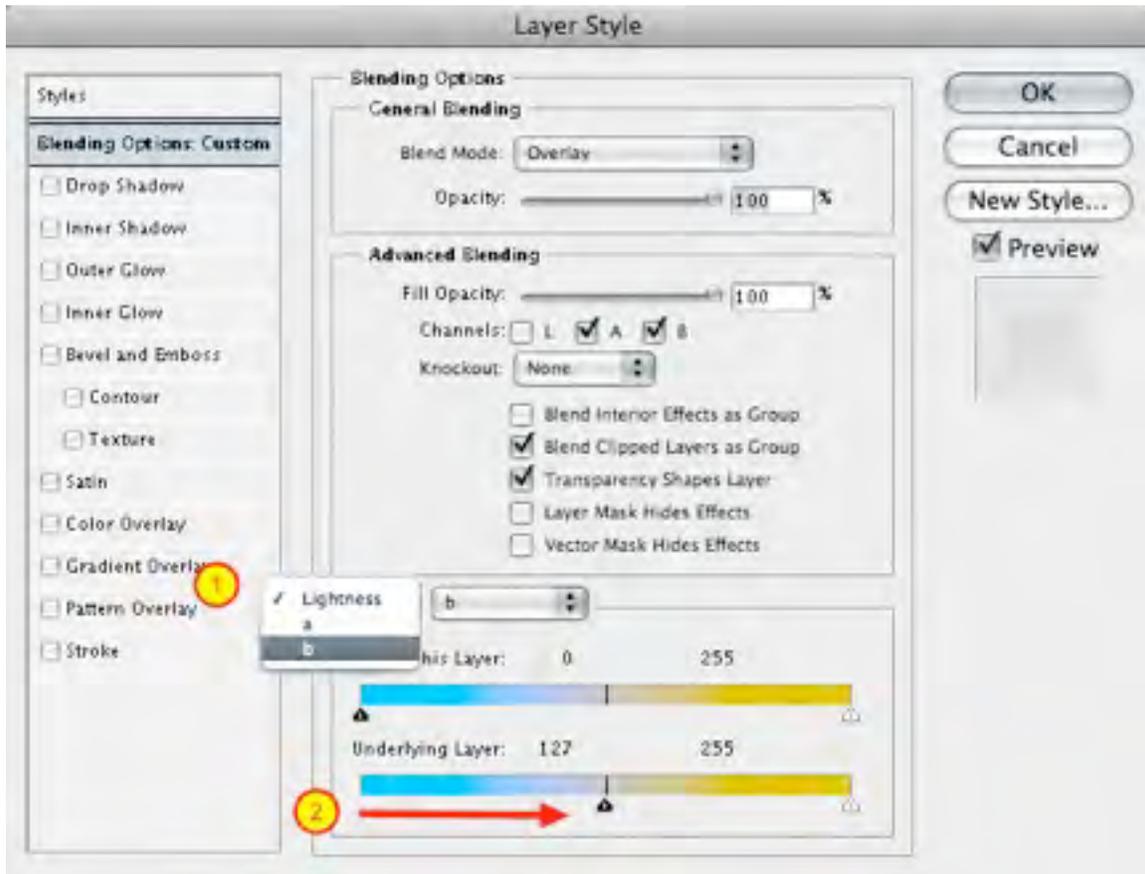
We are concerned here with the "Blending Options" section of the dialog › uncheck the "L" checkbox in the "Advanced Blending" area.

The image now maintains the added saturation without the added contrast



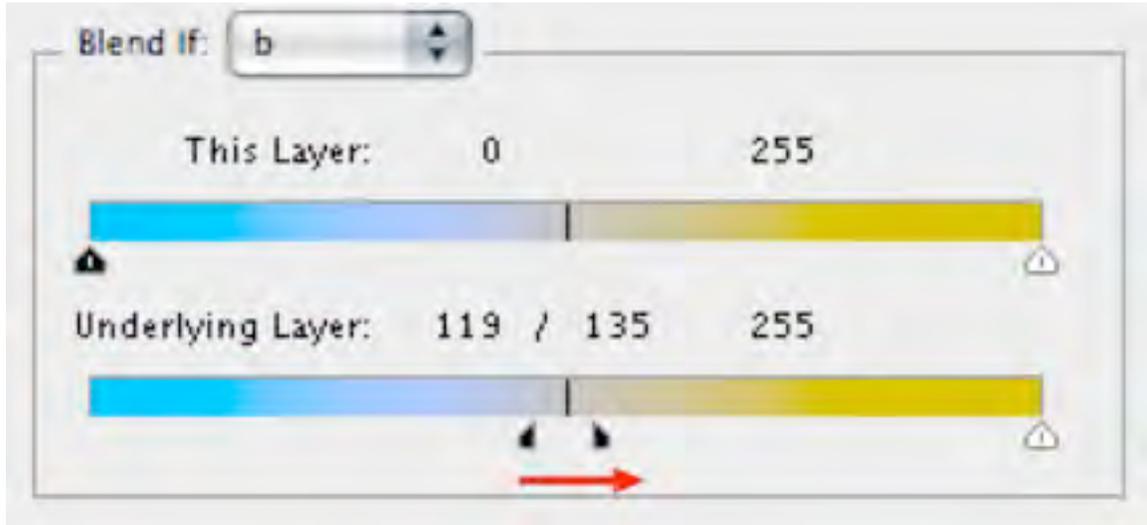
At this point, extra saturation is applied everywhere in the image. If you are lucky, it may be just right. However, most images will require some extra refinement. In our case, with this particular image, it seems that the blue sky is a bit over saturated and some areas around the clouds have gone into a cyan/green range. We'll remedy this in the next step...

7. Return to Blending Options & Adjust to blend through "b" channel



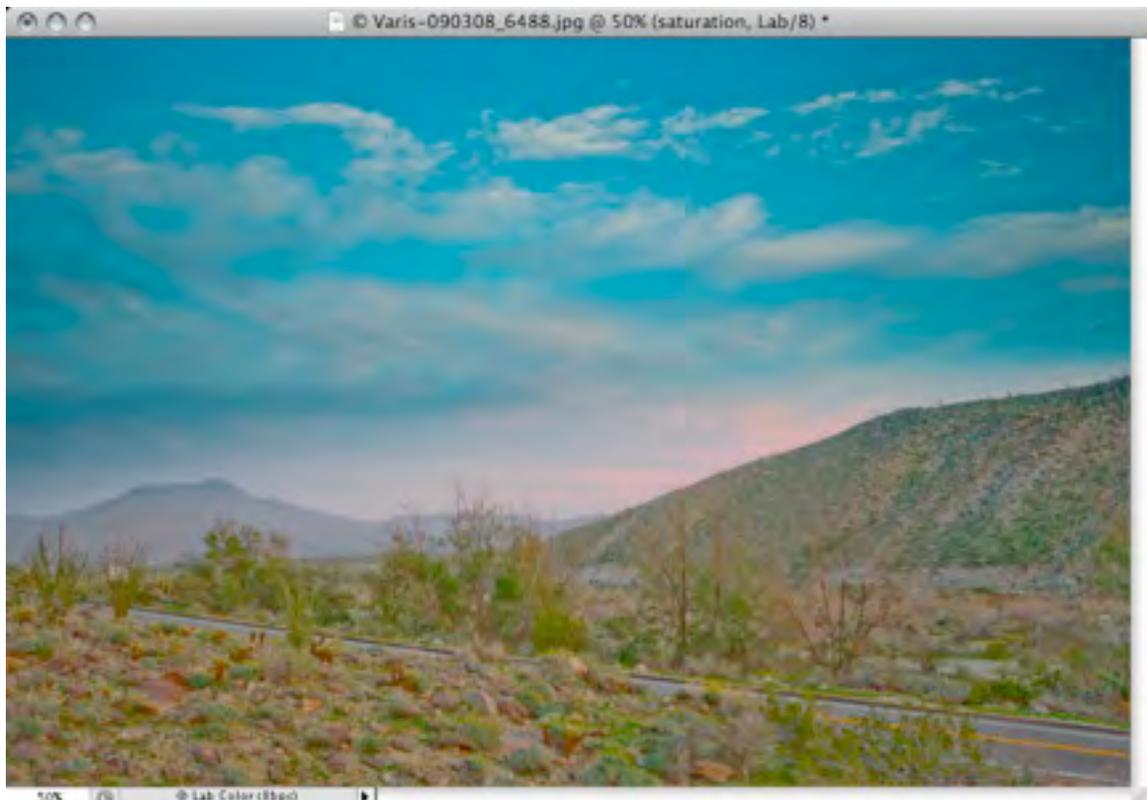
(1.) Select the "b" channel in the drop down menu In the "Blend If" section of the dialog. (2.) Drag the black triangle slider to the right in the Underlying Layer gradient. This will cause the Overlay to "blend through" anywhere the image is more blue than yellow – the saturation enhancing effect will not be applied to the sky...

Note: Split the Triangle slider to soften transitions



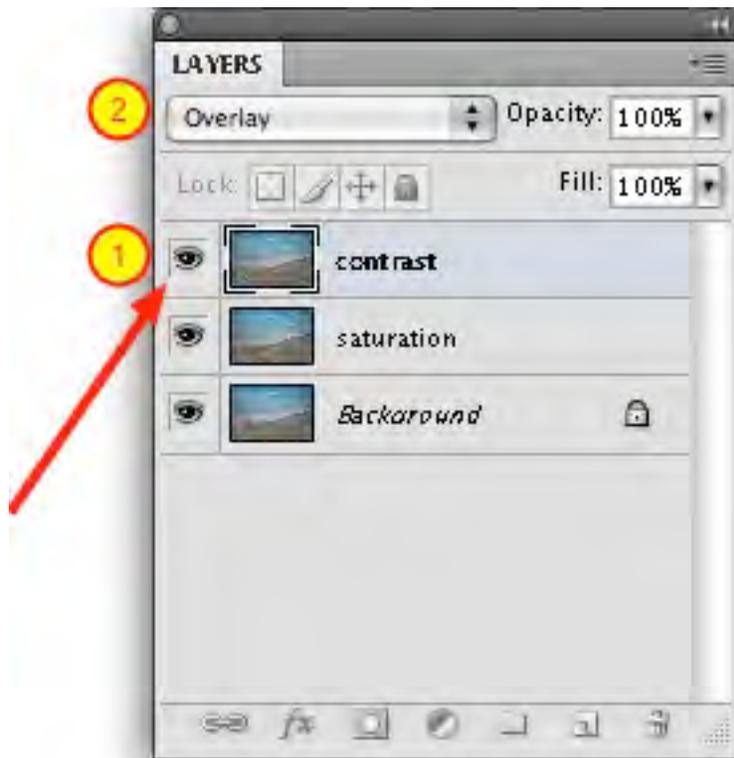
Hold down the "Option" or "Alt" key and drag the two halves of the black triangle apart – this will soften any hard tonal transitions that might appear in the image...

The Saturation Effect is Removed from the Sky Area



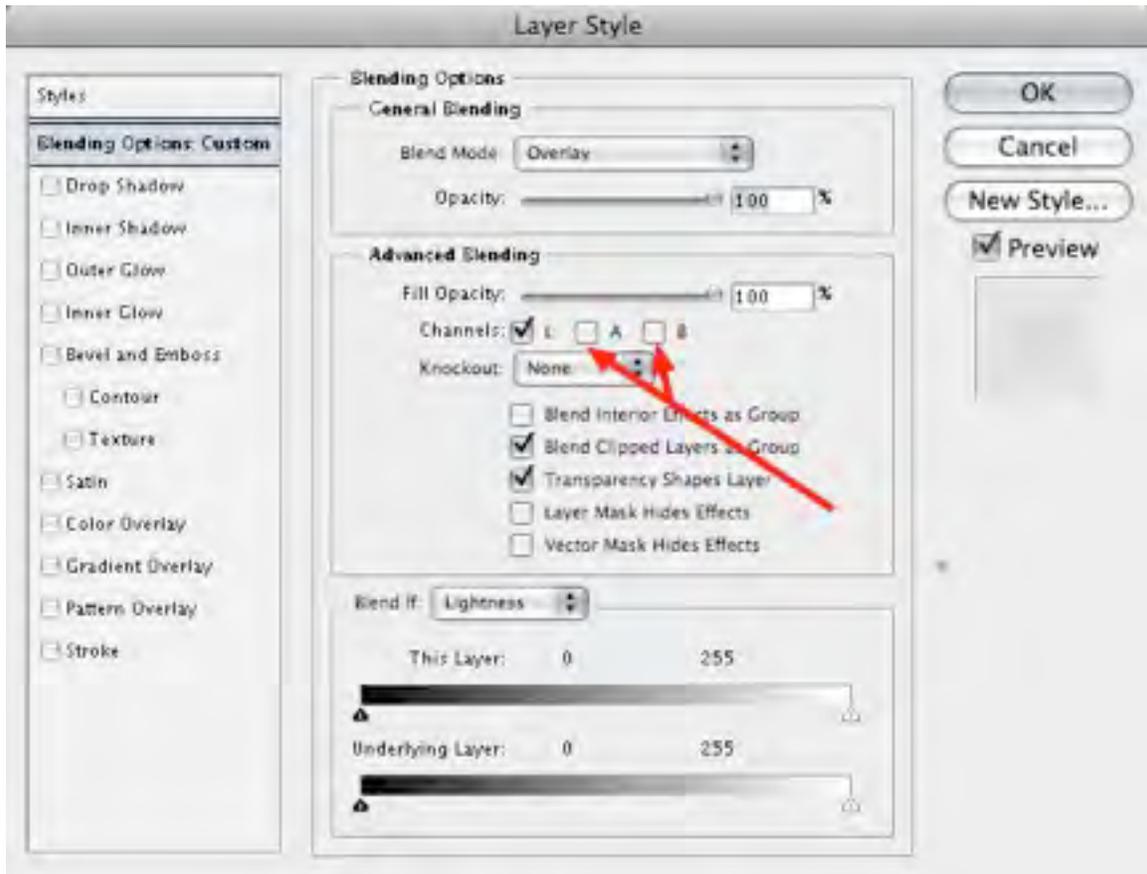
The Overlay saturation effect is removed everywhere the image is mostly blue. This puts the sky back into a more normal range but leaves the extra saturation where we want it – in the green plants and red rocks, as well as, the magenta horizon glow.

8. Turn on the Top Layer and Change the Apply Mode



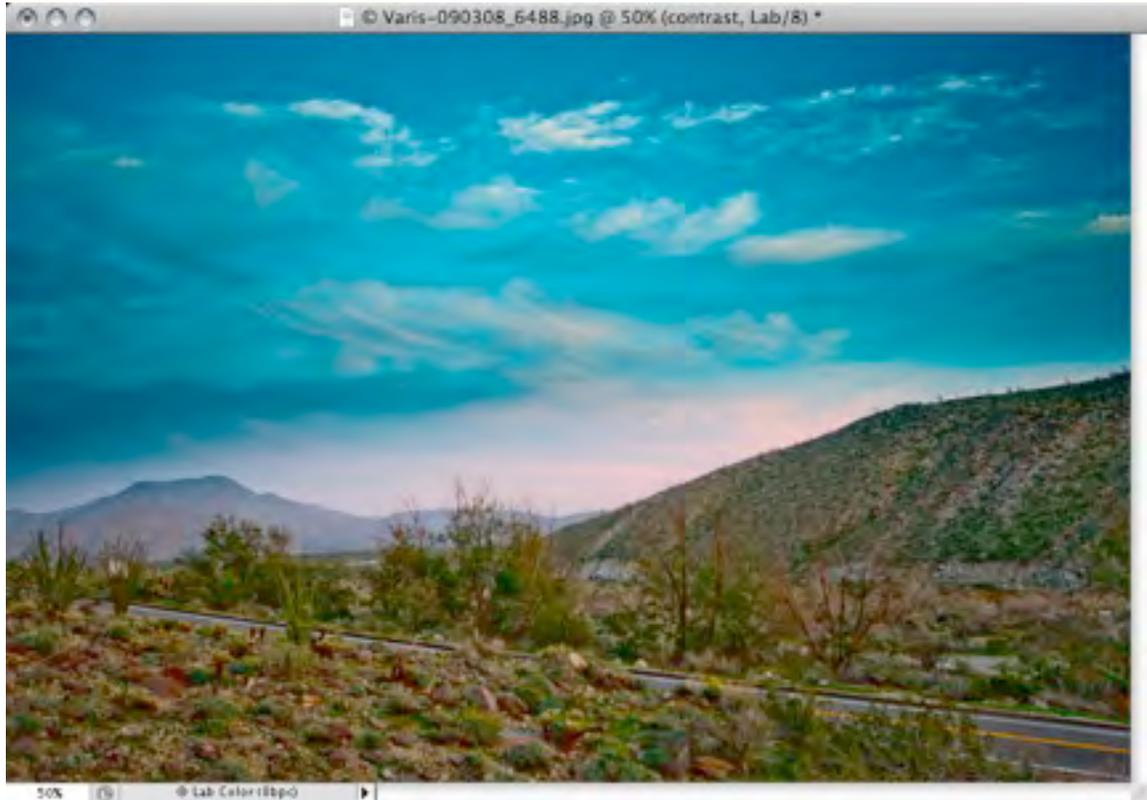
(1.) Turn on the top "contrast" layer by checking the empty icon well – the "eye" icon will appear and the top layer will become visible – click on the layer thumbnail to highlight the layer. (2.) Select "Overlay" from the drop down menu under the Layers tab – this will again apply an enhanced saturation and contrast effect to the image...

9. Uncheck the "A" & "B" Channels in the Advanced Blending options



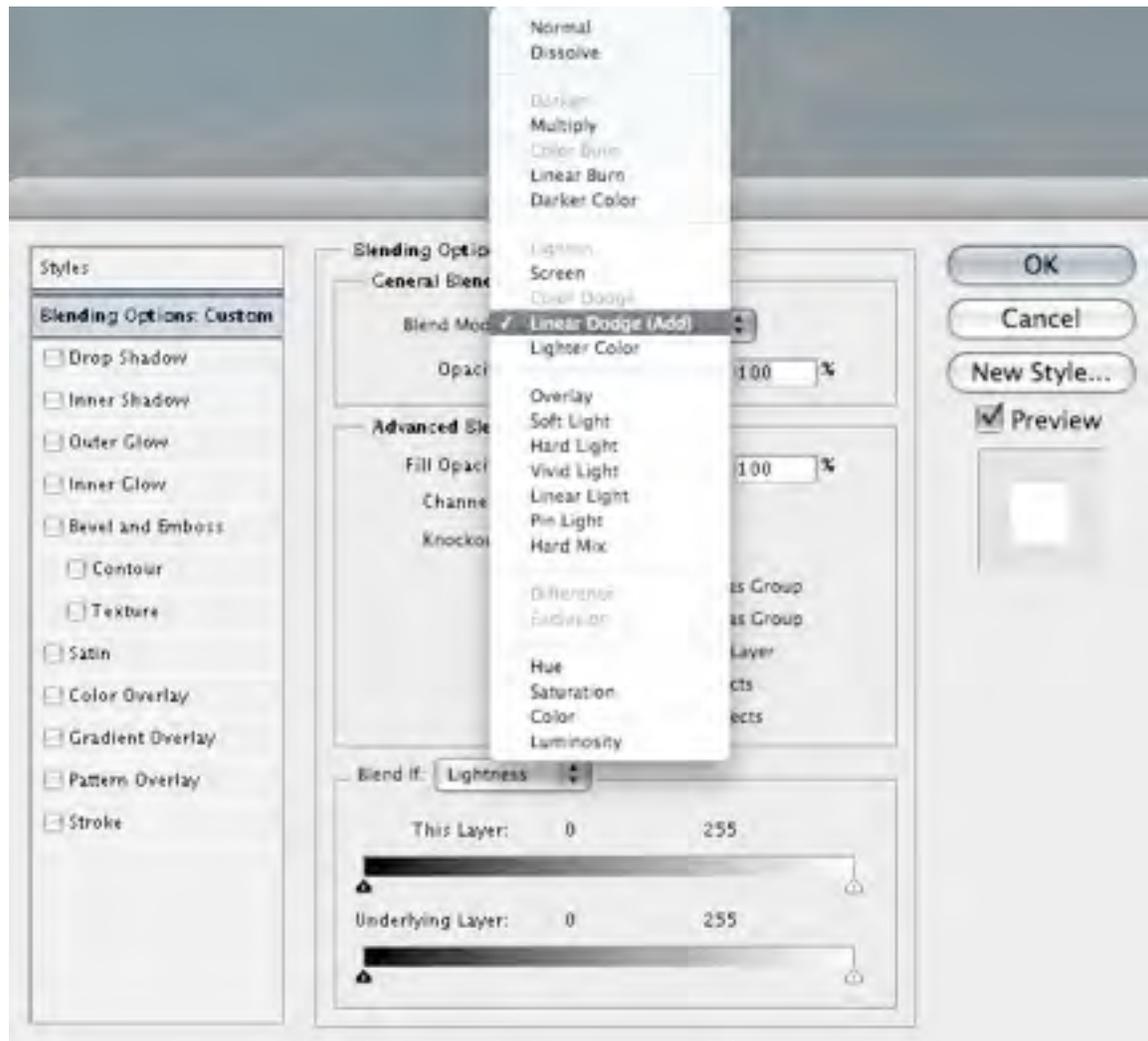
Bring up the Layer Style dialog by double clicking in the Layer. Uncheck the "A" and "B" checkboxes in the Advanced Blending section of the dialog – this will remove the saturation effect from the Overlay Blend Mode...

The Image has Increased Contrast



At this point, extra contrast is applied – things that were darker than medium gray are darker still and things that were lighter are even lighter. For many images, you might simply have to adjust the opacity to taste. In our example, since most of the image was darker than medium gray, the contrast enhancement has made the image too dark overall. The strategy has to change somewhat. Now we need to find a way to make the image lighter as well as enhance the contrast...

10. Change the Blend Mode to Find the Desired Effect



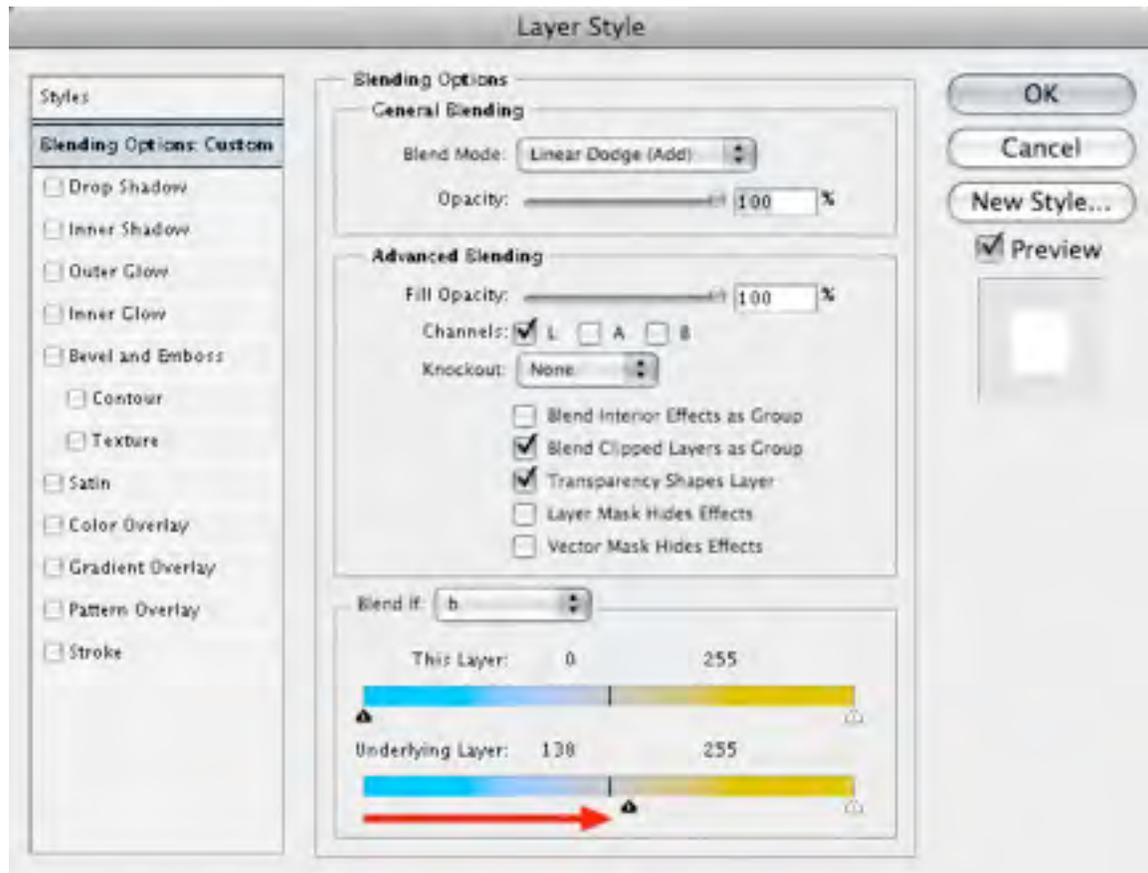
Select different Blend Modes from the drop down menu in the "General Blending" section. In our particular example the "Linear Dodge" mode offers the best compromise effect...

The Image is too Light but the Foreground is Better



We already know that we can treat the sky separately to remove the lightening effect and we can control other aspects of the blend as well...

11. Blend Through Blue in the "b" Channel



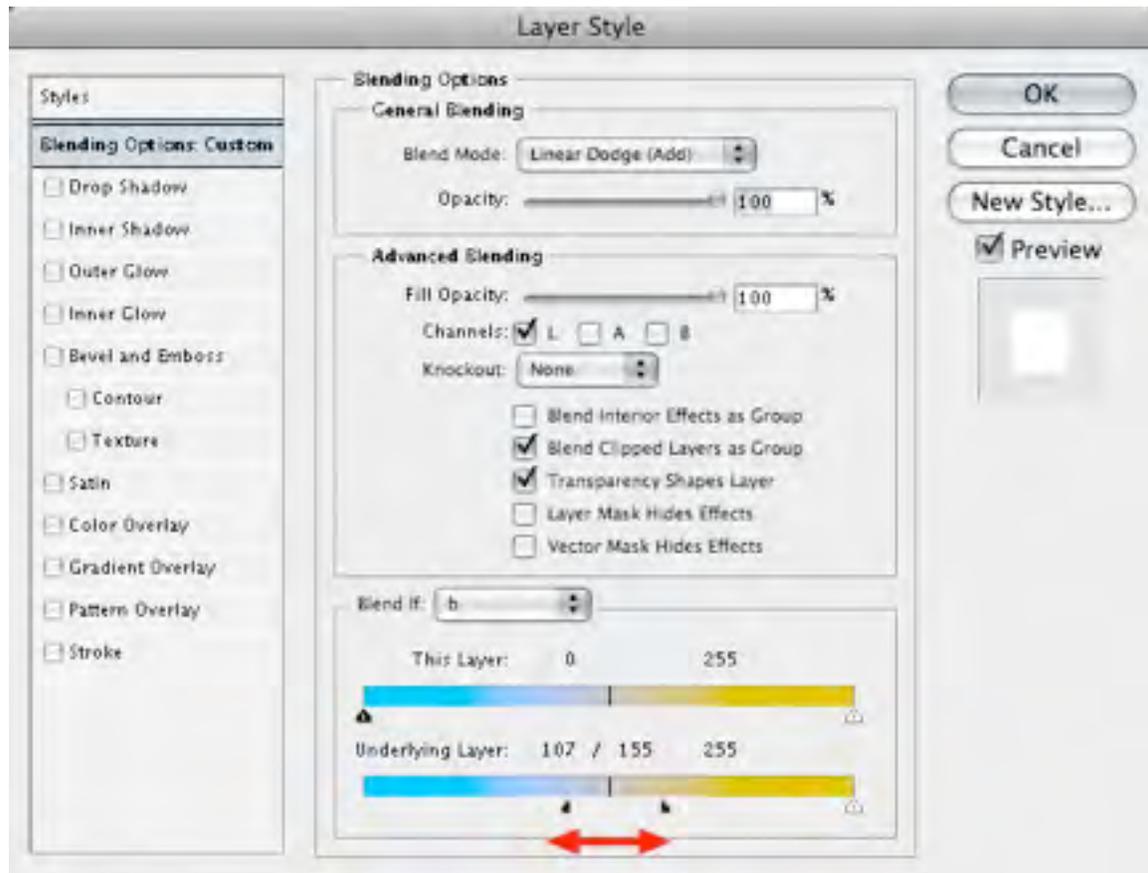
Bring up the Layer Style dialog and drag the black triangle slider to the right like we did before... drag far enough that you remove all of the lightening from the sky...

The Lightning Effect is Removed from the Sky



At this point, in our example image, you can see abrupt "breaks" in the transition between affected and non-affected areas – now we have to "split" the triangle slider...

12. Split the Blend If Slider



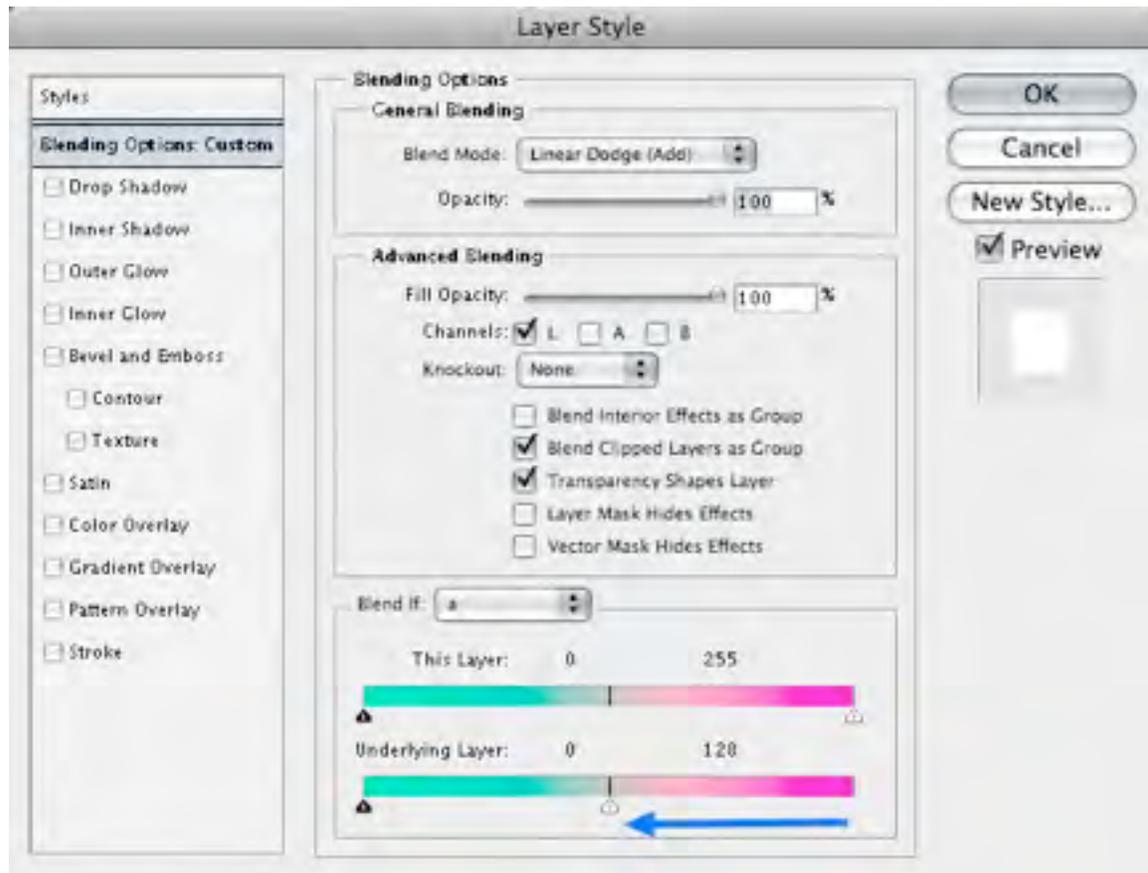
Hold down the "Option" or "Alt" key and drag apart the black triangle slider. This will smooth the transitions so they won't look unnatural...

Transitions are Smoothed



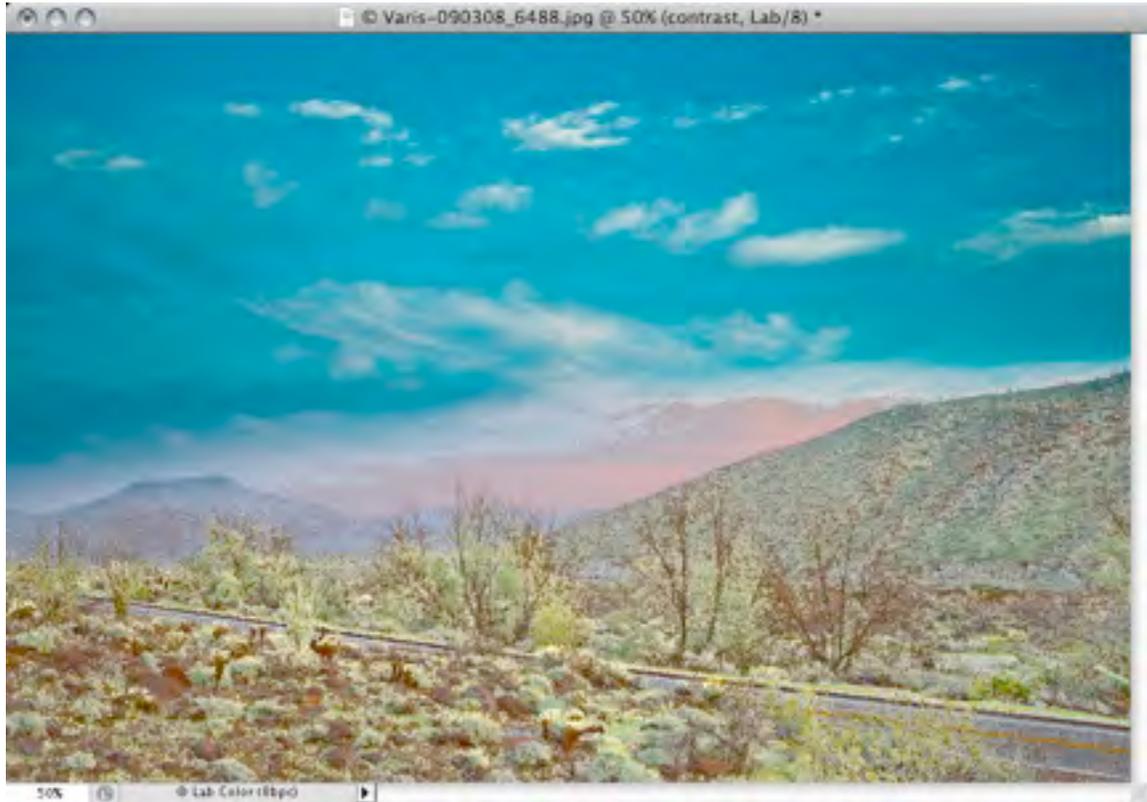
Now the transitions look better and we've managed to get just a hint of lightening into the clouds for additional contrast in the sky. Now we will work on the foreground areas to darken the more magenta elements including the horizon glow.

13. Switch to "a" Channel and Blend out Magenta



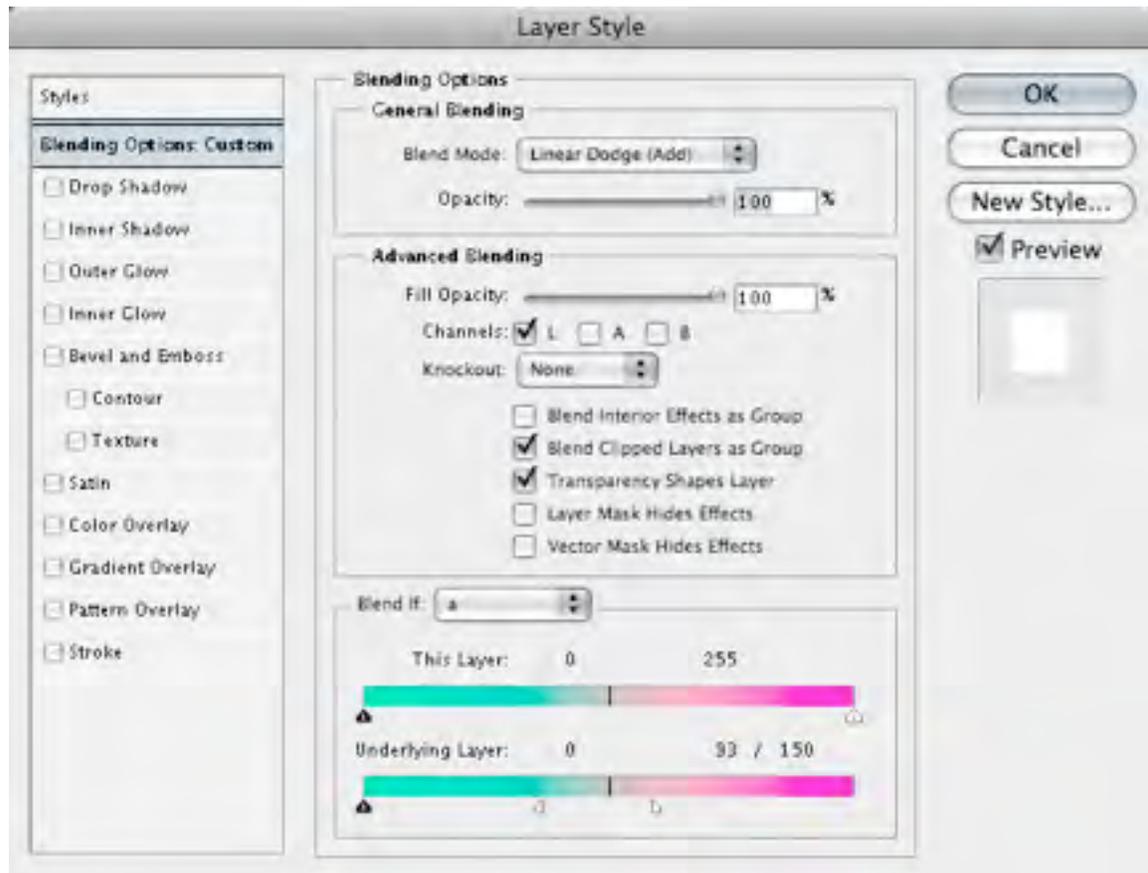
Select the "a" channel from the Blend If drop down and drag the white triangle slider to the left...

The Transitions Need Blending



We've darkened the magenta horizon and added back depth to the tree branches and rocks but now we need to split the slider to smooth out the transitions...

14. Split the Slider



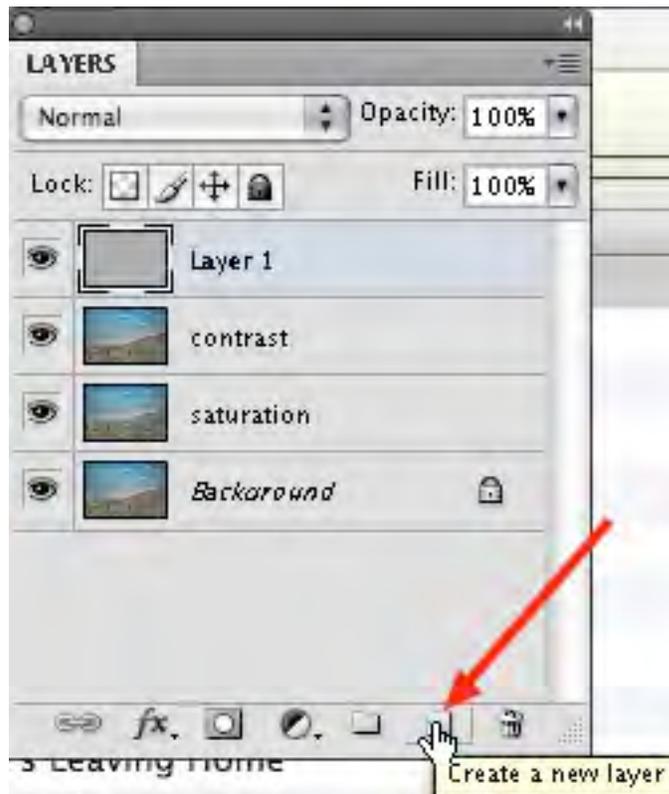
Hold down the "Option" or "Alt" key and drag apart the white triangle slider. The transitions will be smoothed out - experiment with how far you drag until you get the effect you're looking for...

The Image has the Right Brightness and Color



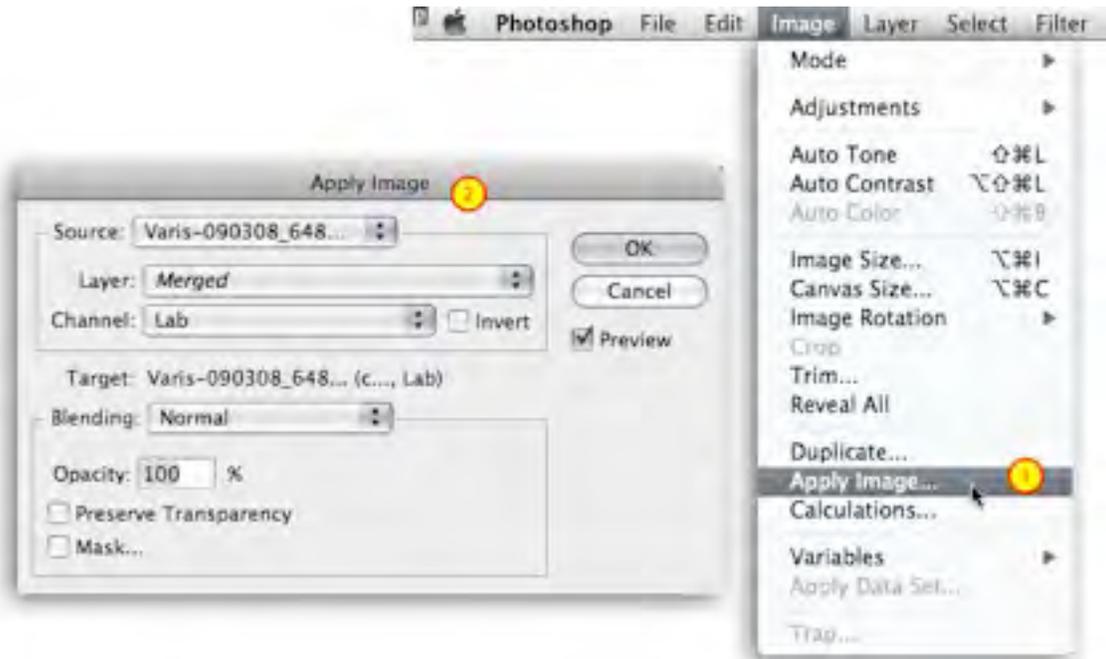
At this point our example image is about right for color and brightness but we could still use a little more contrast...

15. Create New Empty Layer



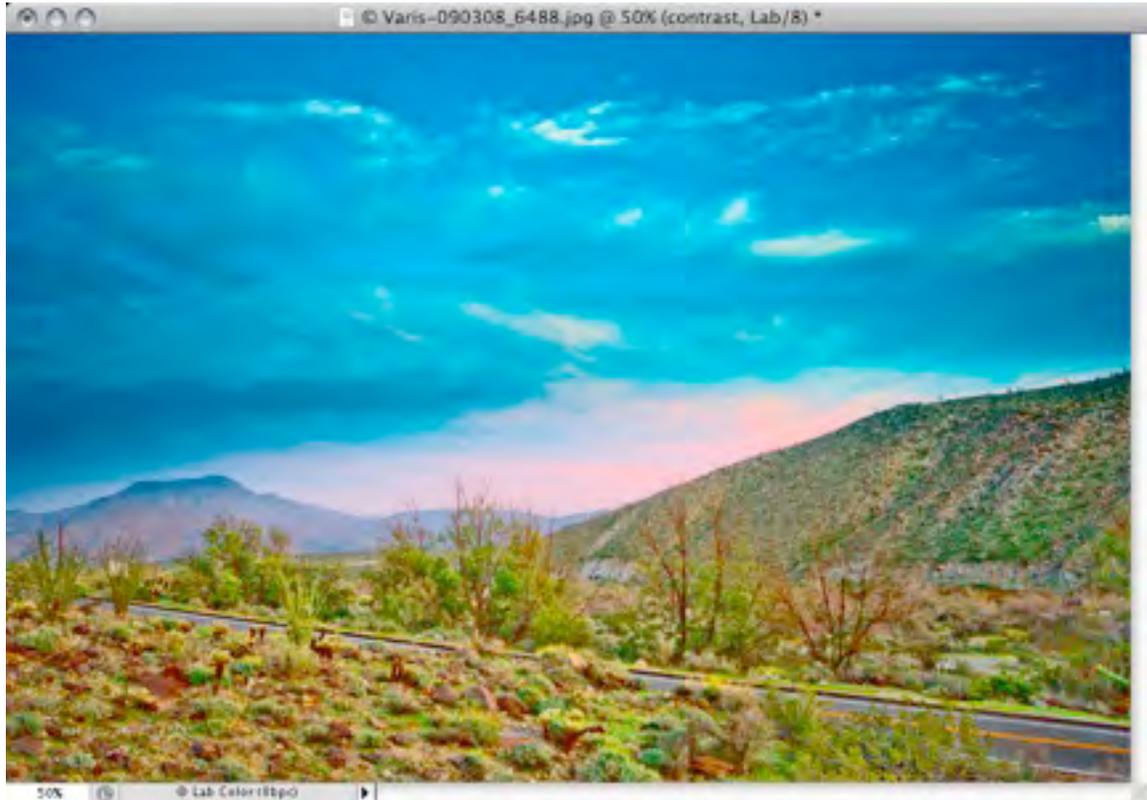
Click on the new layer icon at the bottom of the Layers panel...

16. Apply Image to Empty Layer



(1.) Select "Apply Image" from the Image Menu: Image-> Apply Image. (2.) Set up the resulting dialog to place the "Merged" version of the image in Normal mode into the empty layer...

The Image has Dramatic Contrast and Saturation



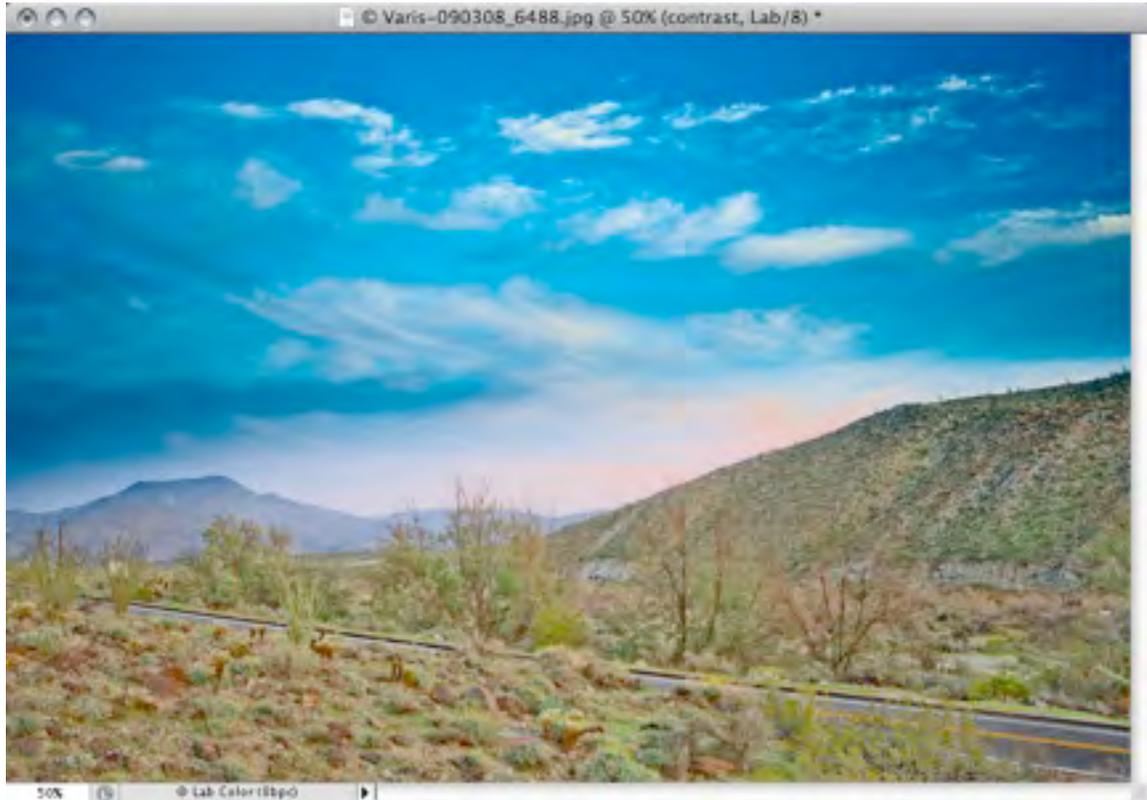
At this point, our example image is perhaps a little too psychedelic. Again we can exercise blending controls to mitigate the effect...

17. Turn off the "A" Channel and Blend out Yellows



Remove the saturation and contrast from the foreground by (1.) unchecking the "A" checkbox and (2.) dragging the white slider in the "b" channel to the left. Split the slider to smooth out transitions...

Contrast and Blue Saturation Applied to Sky Only



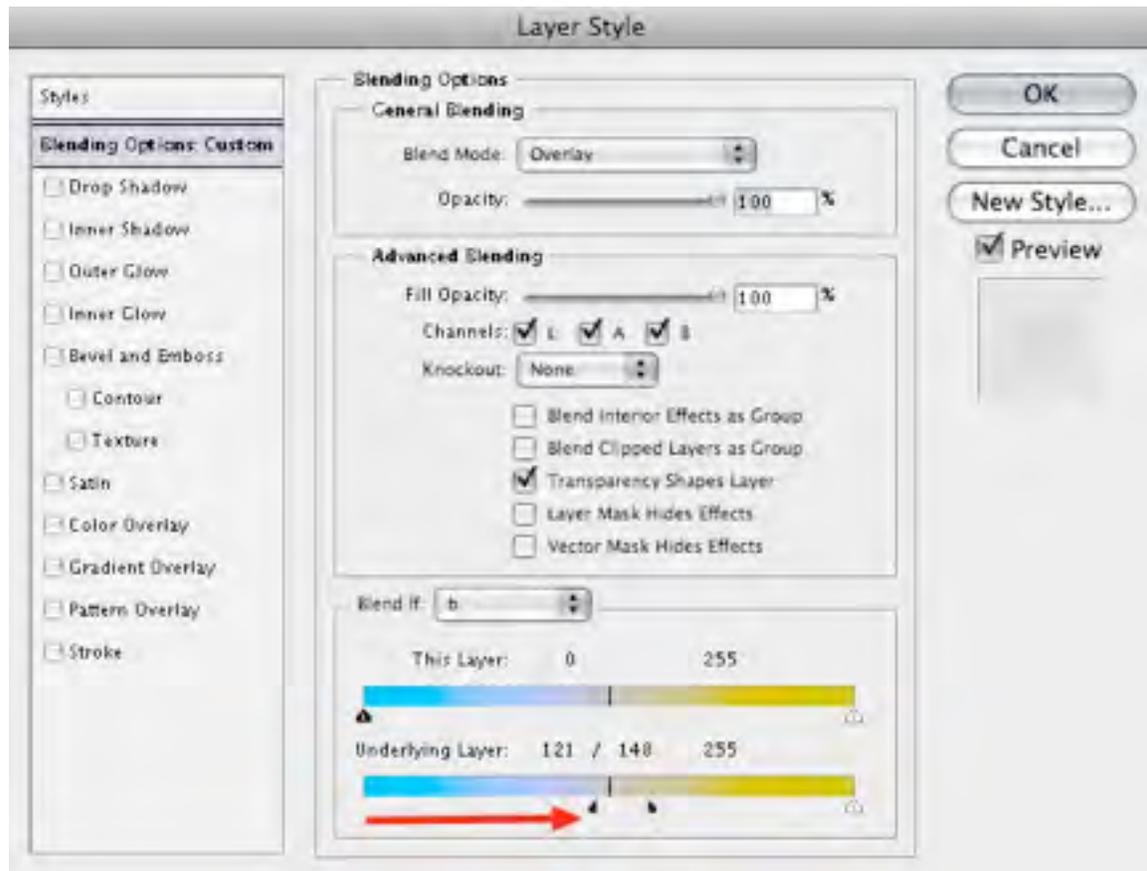
Here the result of the Overlay is only affecting the contrast of the sky and saturation in the "b" part of the B channel - this leaves the foreground mostly unaffected.

18. Duplicate the Top Contrast Layer



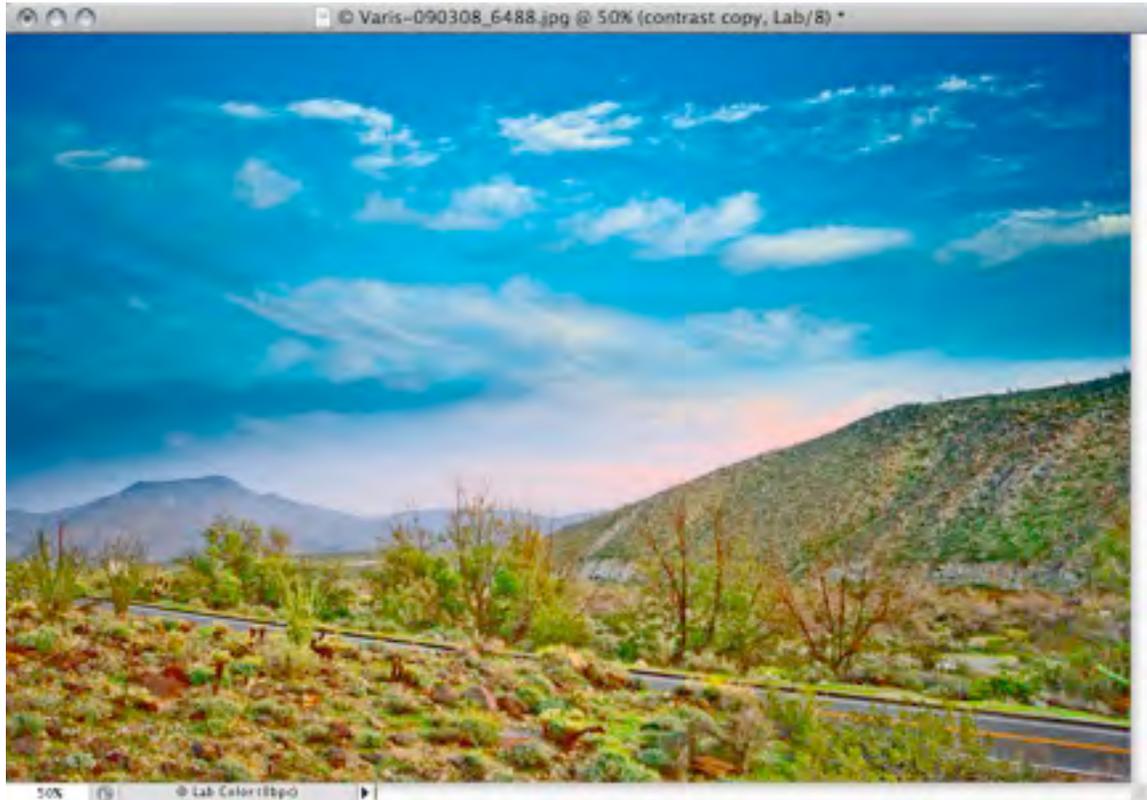
Drag the top "contrast" layer onto the new layer icon at the bottom of the Layers panel to make a "contrast" copy layer at the top...

19. Blend Out the Sky from the Overlay Effect



Drag the black triangle slider in the "b" Blend If section to the right and split the slider to smooth transitions.

Final Image



Once you have the desired color and contrast, flatten the image, sharpen the "L" channel and convert to the desired RGB workspace. Then you can fine tune things with traditional tools like Curves and if you feel that the color has gotten a little too garish you can blend back some of the original color using a copy of the original document in a "color" apply layer at reduced opacity...

Alternative Version



This basic technique has many applications and variations worth exploring. Applying the channel structures of the image against itself can create very intense transformations in color and contrast that are difficult to duplicate using other methods. I often find this approach can avoid introducing posterization or other artifacts while affecting extreme contrast and color enhancements. While this technique may not be applicable to every image, it can teach you a lot about the nature of LAB channels structure that can be valuable in other contexts.