Gas Planet Tutorial : by Burntstrobe, Nomada_Firefox and Mike Culver.

The pictures were taken with MSPaint. Actual work looks better ingame than shown through MSPaint, and more realistic when video gamma controls are adjusted to decrease brightness. This of course depends on what type of graphics card your computer has, and for the purpose of this tutorial, I have chosen a computer with a 1280x1024 resolution setting and an ATI X1600 graphics card, game graphics set to highest level.

NEEDED: Photoshop CS3, Nvidea Photoshop Pluggin, Original EAW W_planets_gas.dds file.

The first part from this tutorial was taken from here and it was made by Mike Culver.
http://www.solarvoyager.com/images/tutorials/gasgiant.jpg
But we will not use all this tutorial because we will need only it.

Cooking with gas!

Gas Giants in Photoshop

Forward

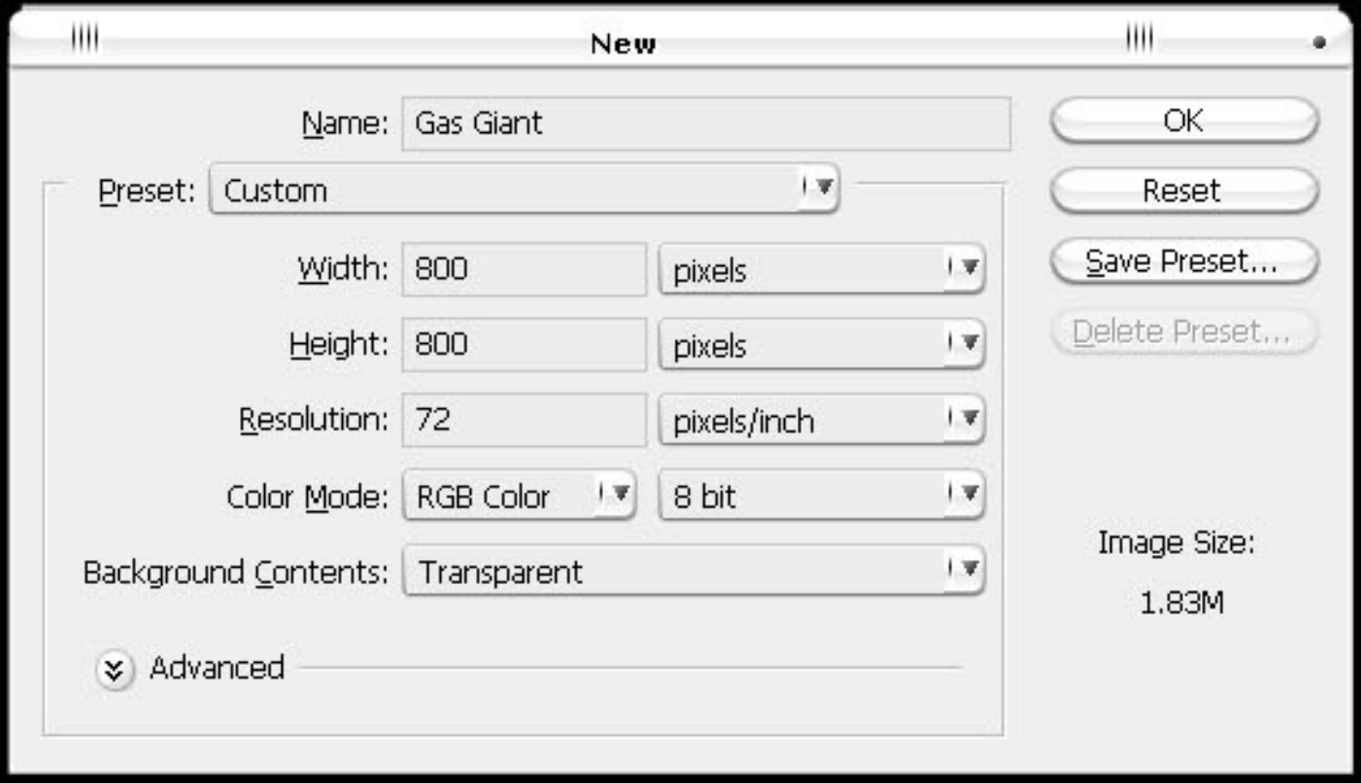
In this tutorial I will try to explain the gas giant techniques I have been experimenting with. This is by no means the only way to create a gas giant type planet and could likely be improved upon. This is meant to be a starting point for achieving the type of effect you are looking for.

Oh yeah... and this is my first tutorial ever so bare with me.

-Mike

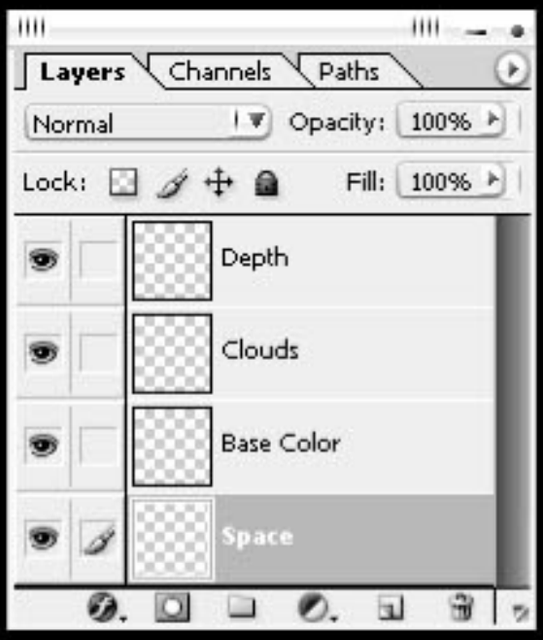
Getting Started

Open Photoshop and create a new document. Set the size to 800x800 pixels.



Create 4 new layers.

Name the 1st one Space
Name the 2nd one Base Color
Name the 3rd one Clouds
Name the 4th one Depth

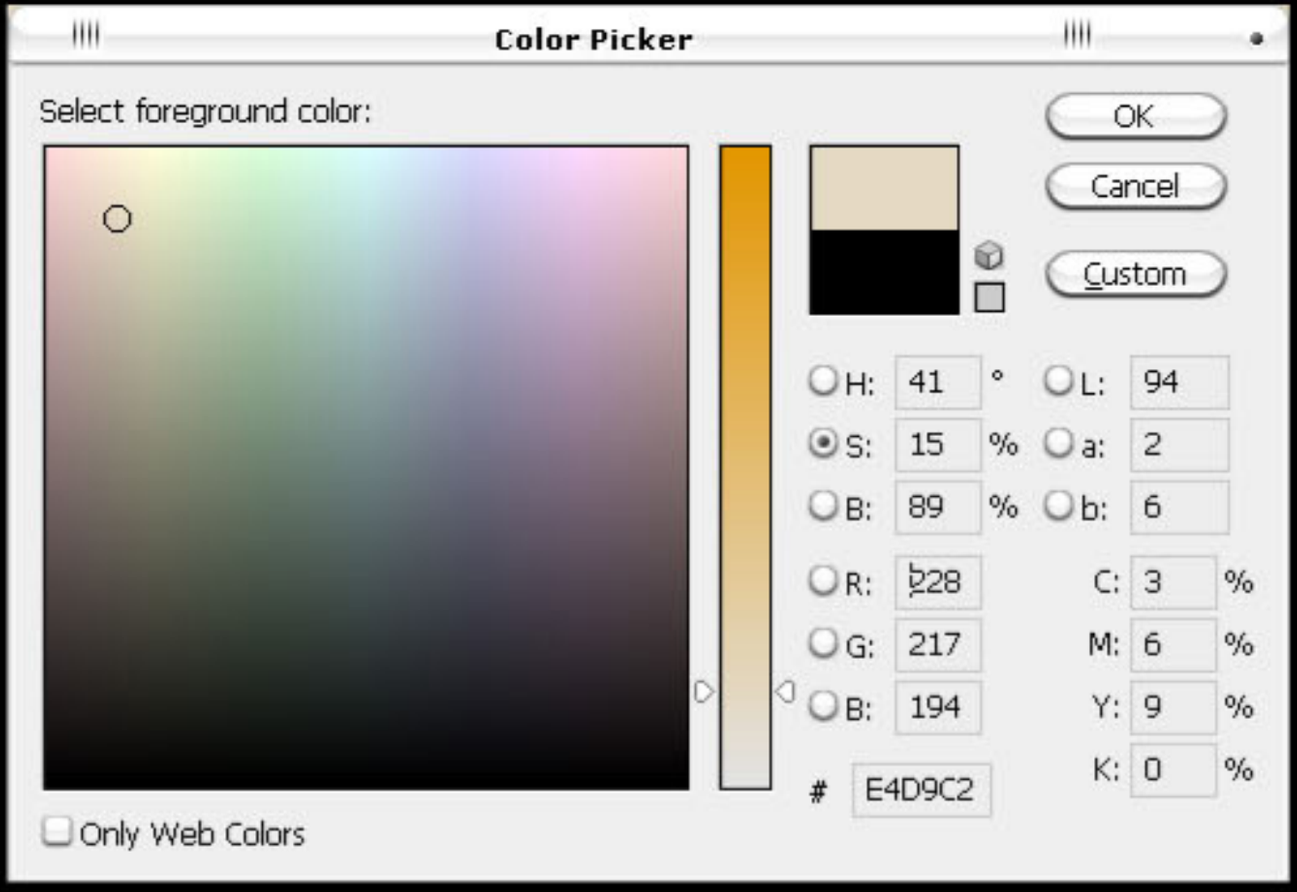


Space

Fill the space layer with black... Thank you captain obvious.

Base Color

Now you need to pick a base color for your cloud world. I'm going for that pale tan Jupiter style so I am going to pick a washed out tan (E4D9C2) like so.

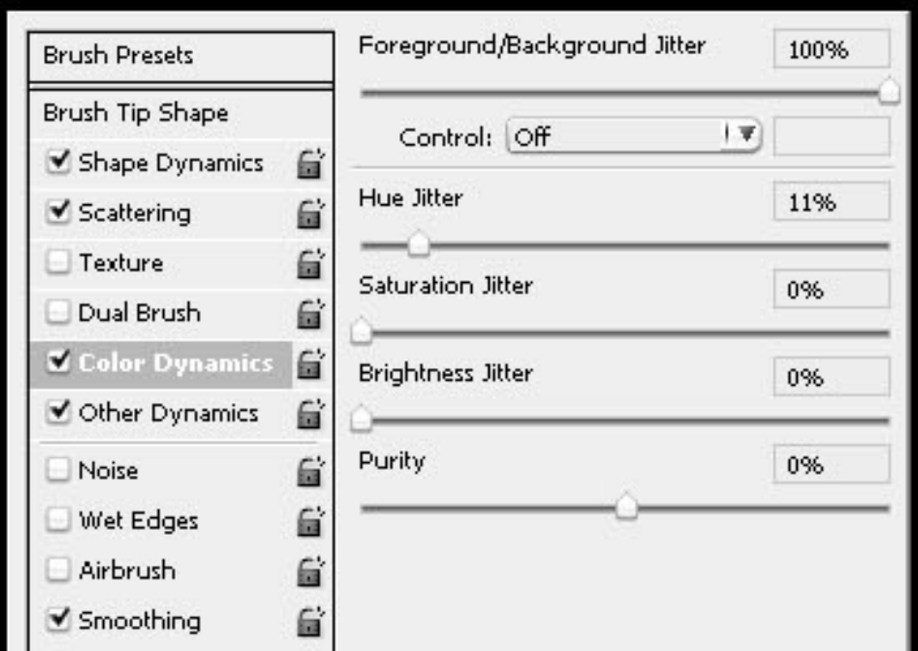


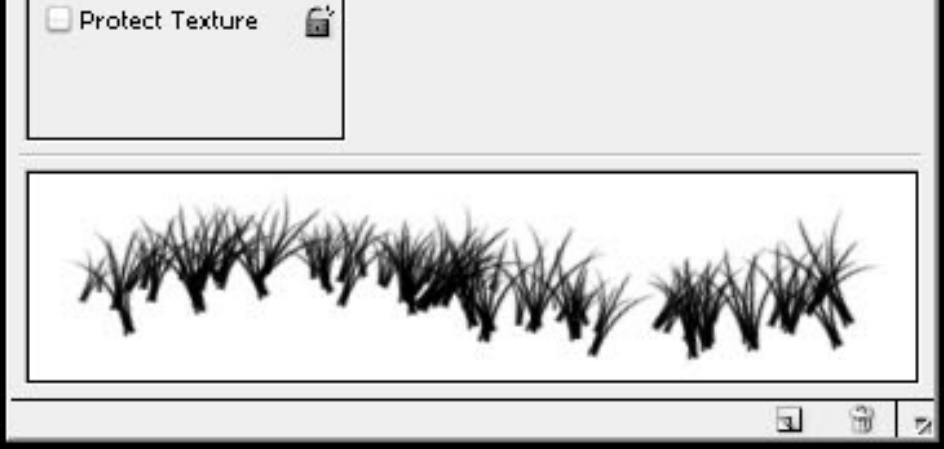
Clouds

First thing we need to do is pick a good brush. For this planet I am going to pick the grass brush. Yep I said the grass brush. What we really need here is something that will give us a good variety of color the actual shape really isn't important right now.

Select the grass brush like so

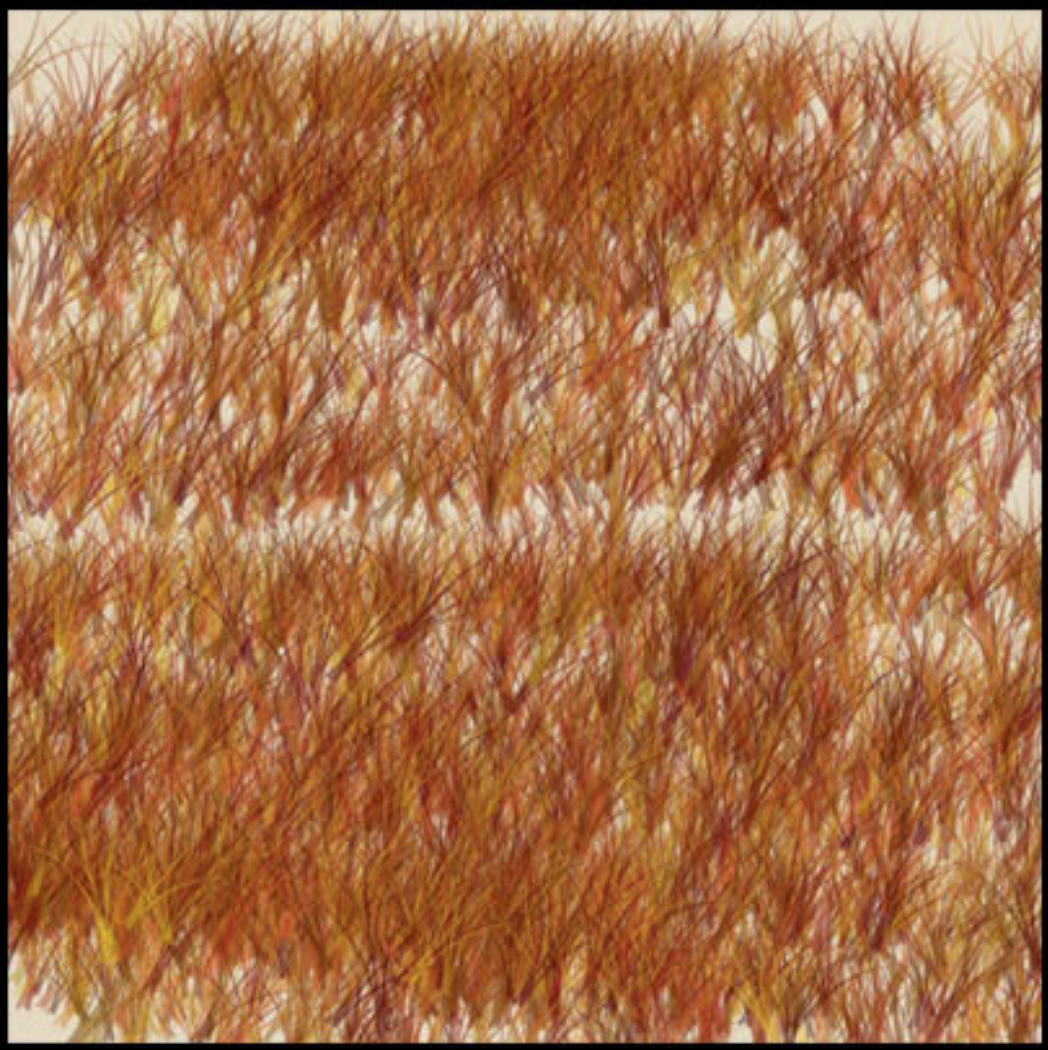
Next open your brushes window, go to color dynamics and set the hue jitter to 11%





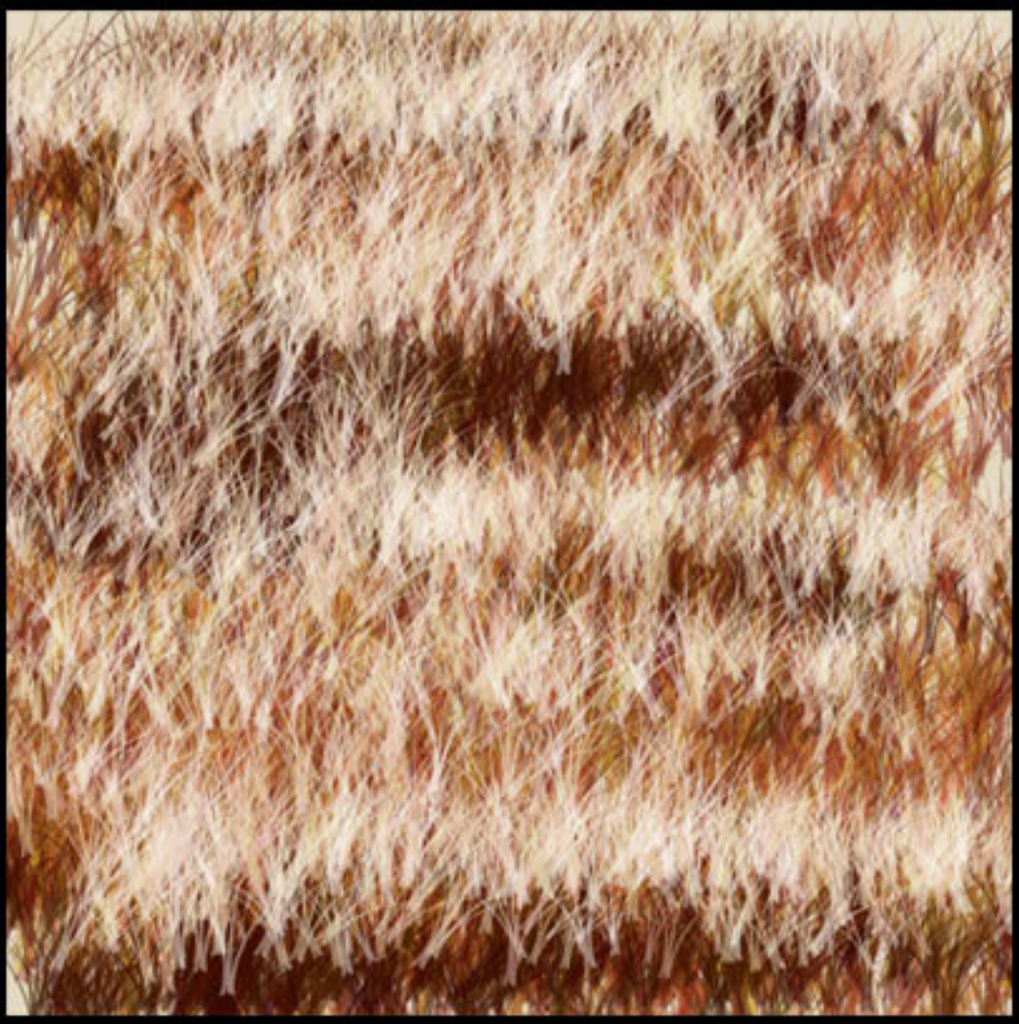
Now with your base color visible select the **cloulds layer** and then select two colors for your brush. Press X alternate between colors. For my planet I am going to use dark red (4B0000) and orange (E49736)

Now start painting horizontally across your picture. Really get some good coverage with this brush.



Next I usually pick two darker colors (2B0000, 532000) and go over the area again, this time highlighting areas that I would like to be darker on the final image.

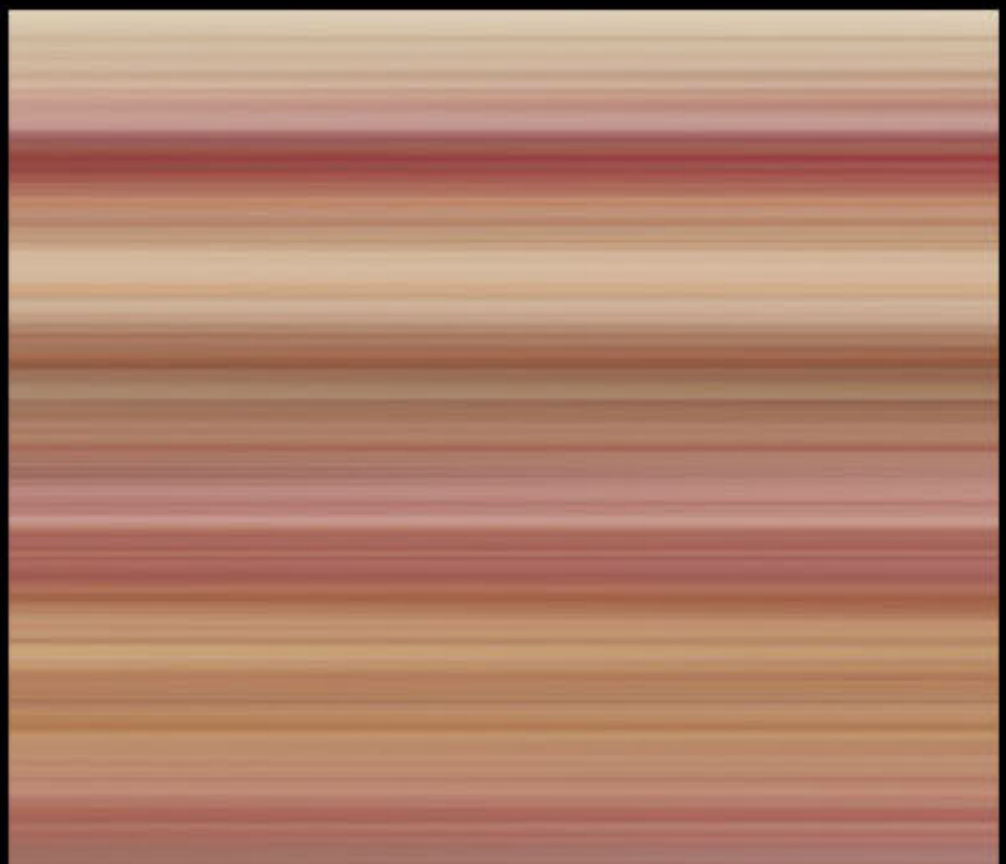
Next I add my some lighter colors (FFFFFF, E4C39A) and brush those on. Remember that because we are using a brush with color jitter we are going to get varied hues of color.



Next I will add some more purple and red highlights (46004D, BB0001), This is just personal preference.

Looks like a real mess doesn't it? So lets fix it. Next we will transform our mess into a more constructive color patern. With your clouds layer still selected go up to filters and select blur then motion blur. Make sure you settings are as follows. Angle 0 and Distance 999. Hit ok and run this motion blur about 5 more times.

You should up end up with something similar to what I have below.

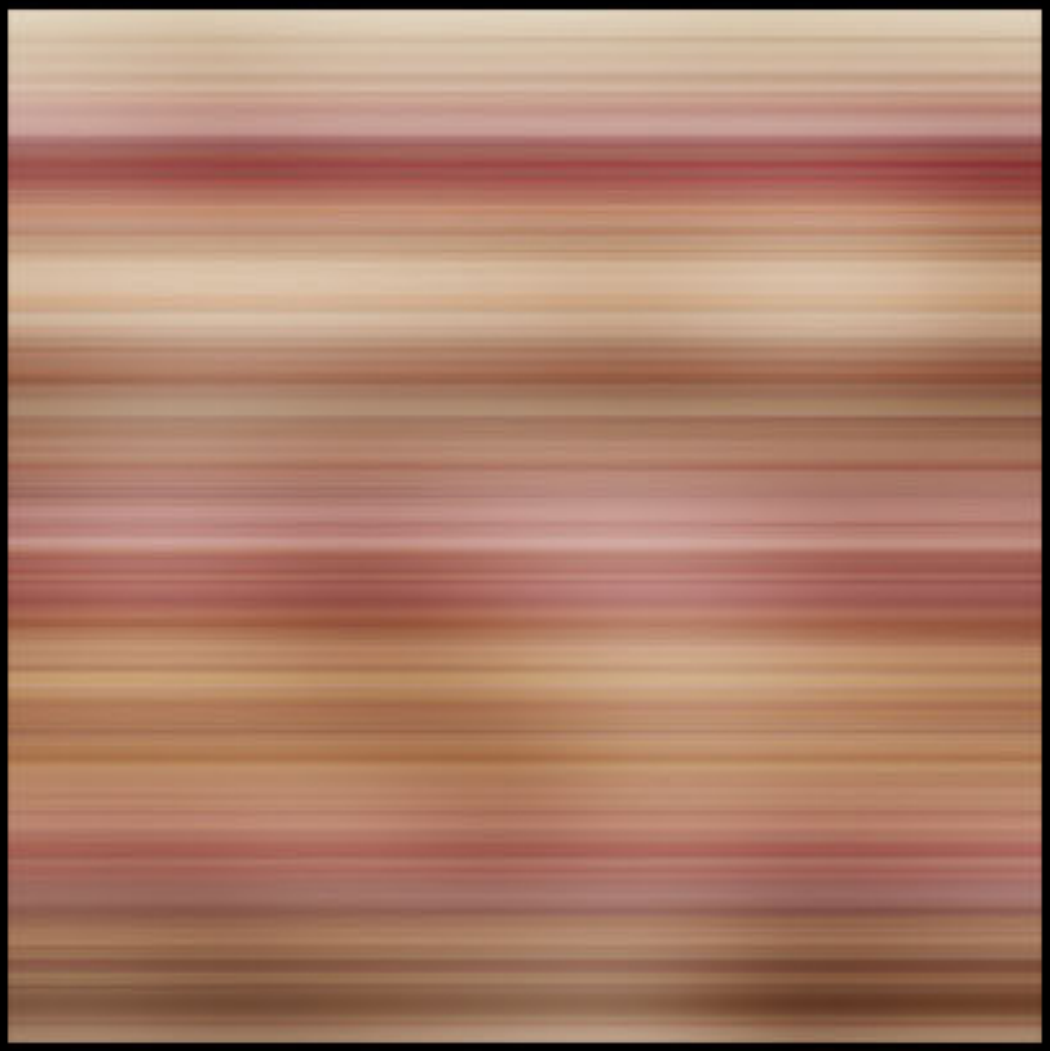


Well it looks closer to our gas giant but its still not quite there.

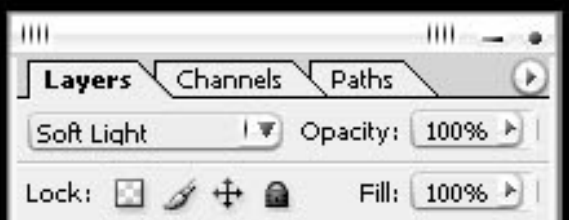
Depth

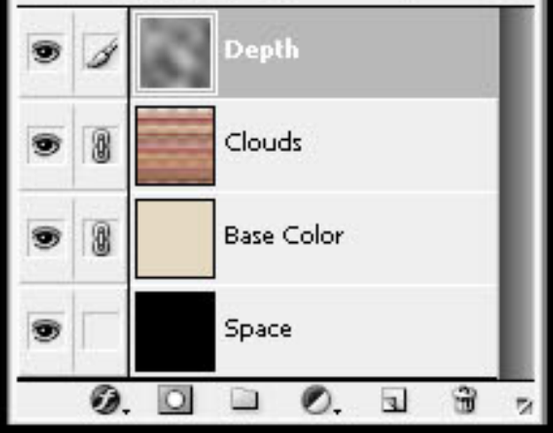
Select your depth layer and reset your colors to Black and White (Press D). Now go to filter and then render and then render clouds

Go back to filter and select blur then gaussian blur and set it to 50. Now set the clouds layer to soft light. This adds a little bit of variance to the color tones of your clouds.



Next link your Base Color, Clouds, and Depth layer together.



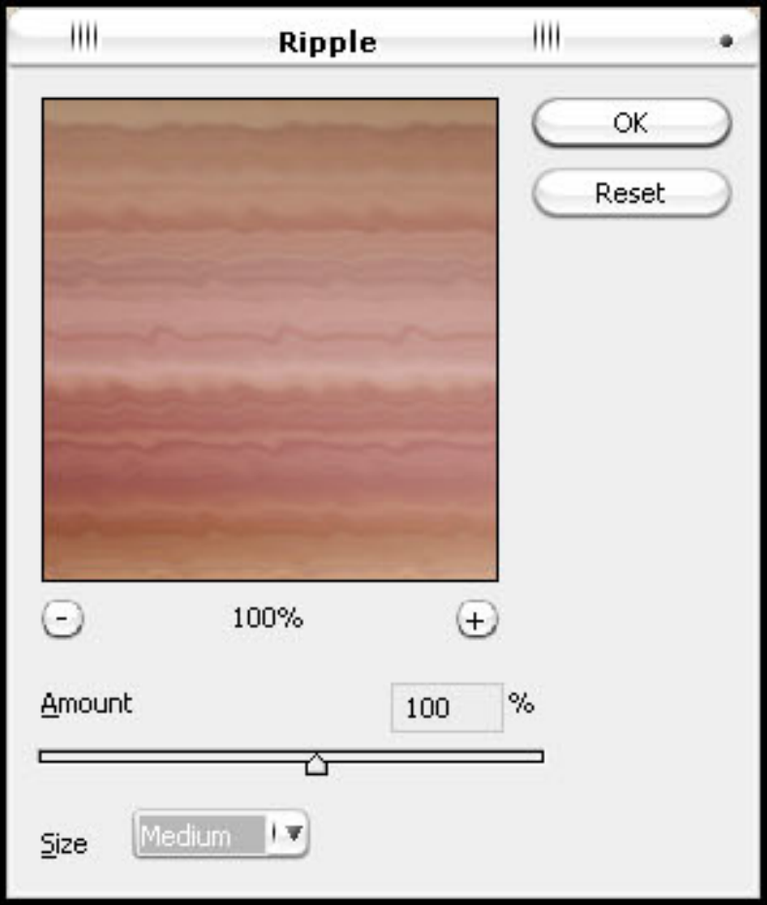


Then merge them. (Control-E) and rename the layer back to Clouds.

Clouds

Well so far its not to bad. But the clouds are way to straight. Lets give them some turbulence.

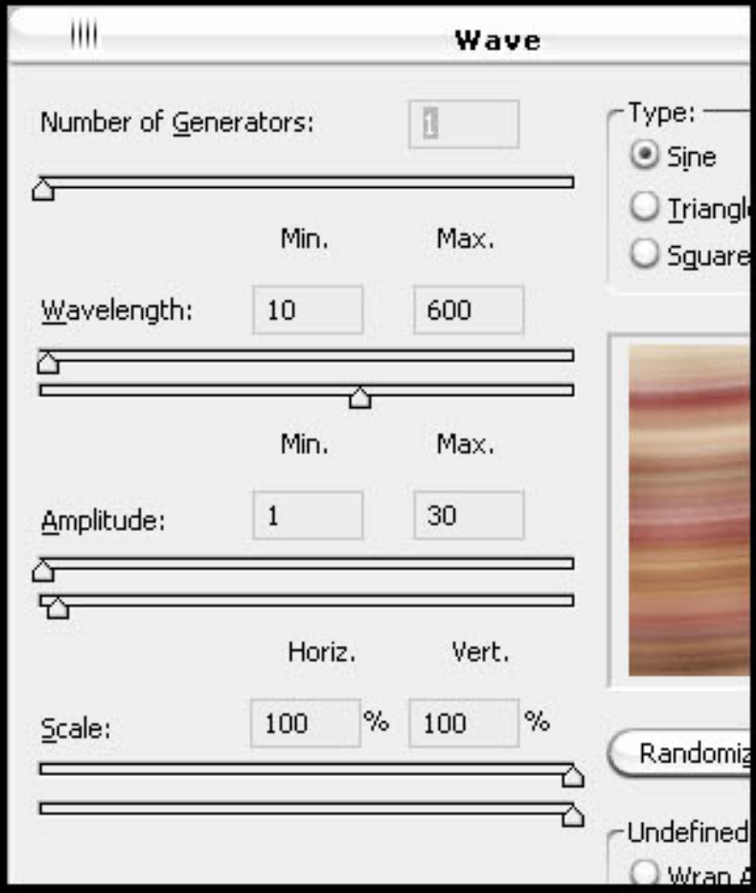
Go to filter then distort and finally ripple. Set your ripple to 100 and size to medium.



Next lets give the cloud bands a bit of a wave.

Go to filter then distort and wave this time. This is mostly personal preference. I like to give the clouds a bit of a wave so I go with:

Generators 1
Wavelength Min 10
Wavelength Max 600
Amplitude Min 1
Amplitude Max 30
Scale Horiz 100%
Scale Vert 100%

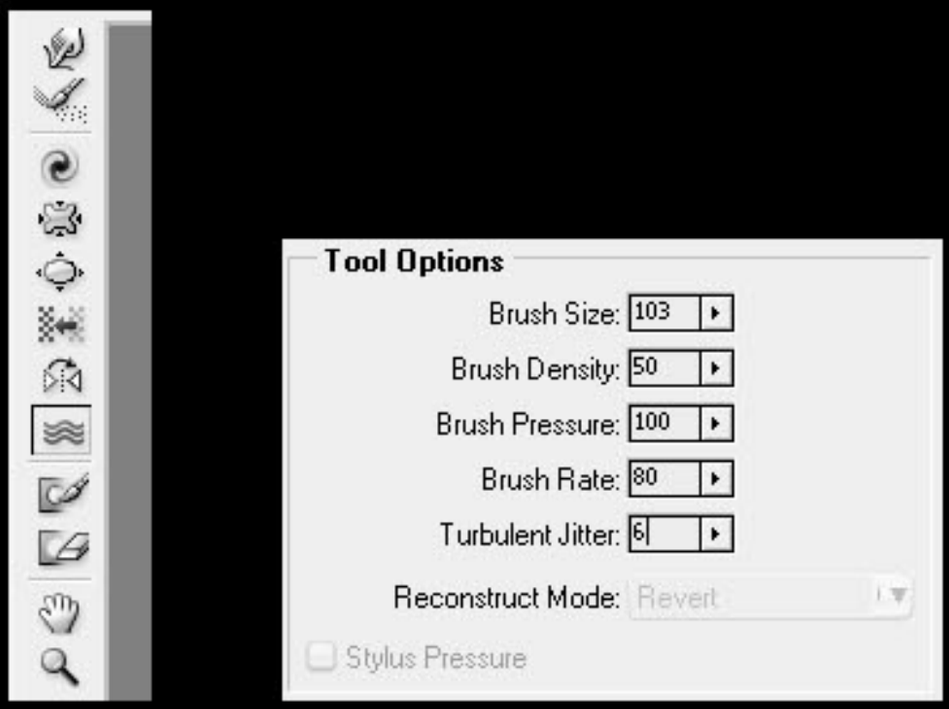


And here is the result.

Ok so we have some cloud layers but it still looks way to computerize. In this next step we are going to really brush things out. This is where the magic happens.

With your clouds layer selected go to filters and select liquify.

Now on the liquify screen select the turbulence tool. Make sure the brush is set to about 100 and the turbulence to around 6.



Now with this brush begin to brush out the colored bands in your clouds. Like so.

Continue brushing out the cloud layers. Take the time to play around and really brush out the clouds into whatever you desire.

Now you can quit here if you want or you can continue and try some other things.

If you want a little of your turbulence back that you brushed out click once on the Reconstruct button under reconstruct options on the right menu.

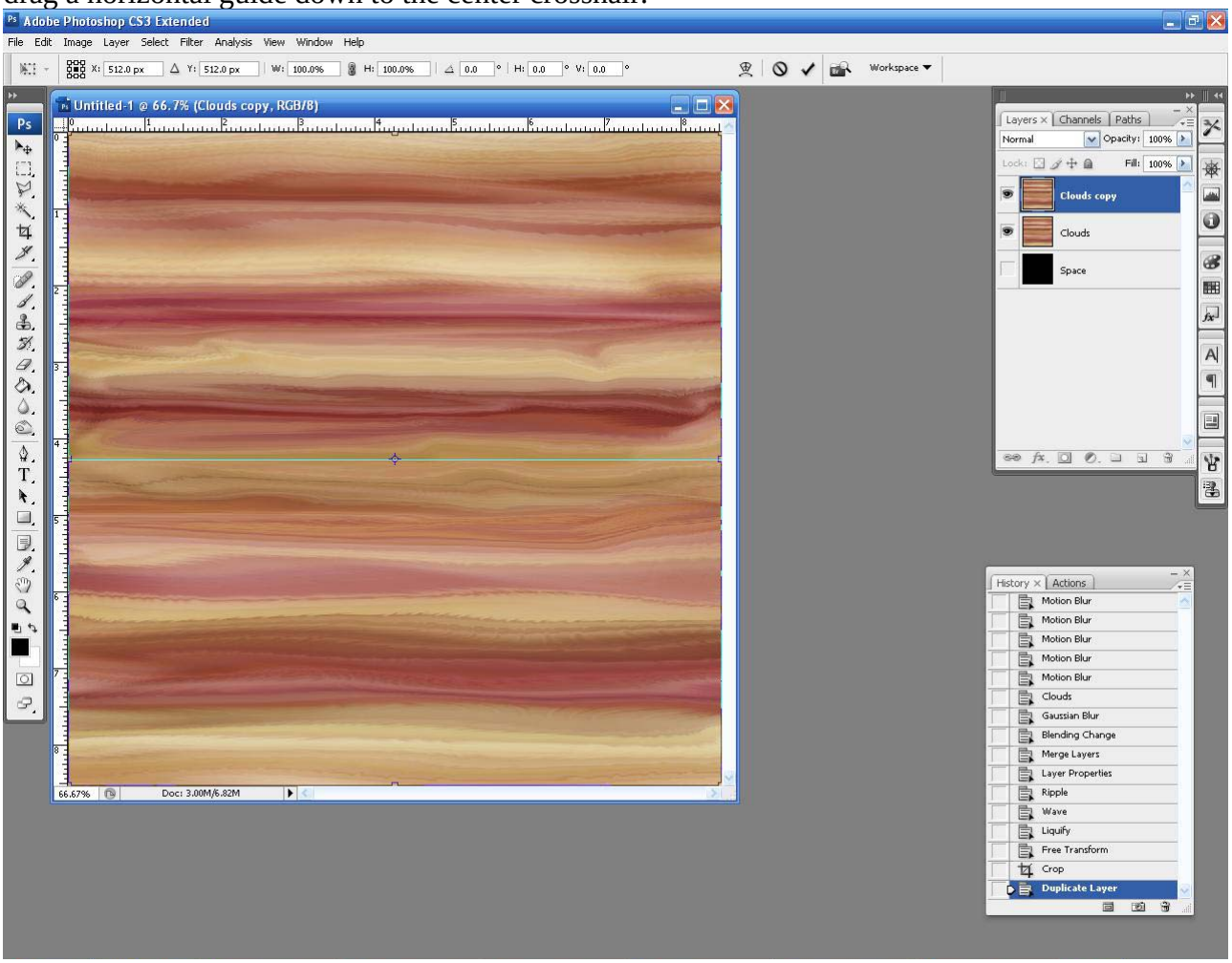
Or you can size your brush down and brush out even more detail in your clouds. It's really up to you to decide how much detail you want to put in.

Red Spots

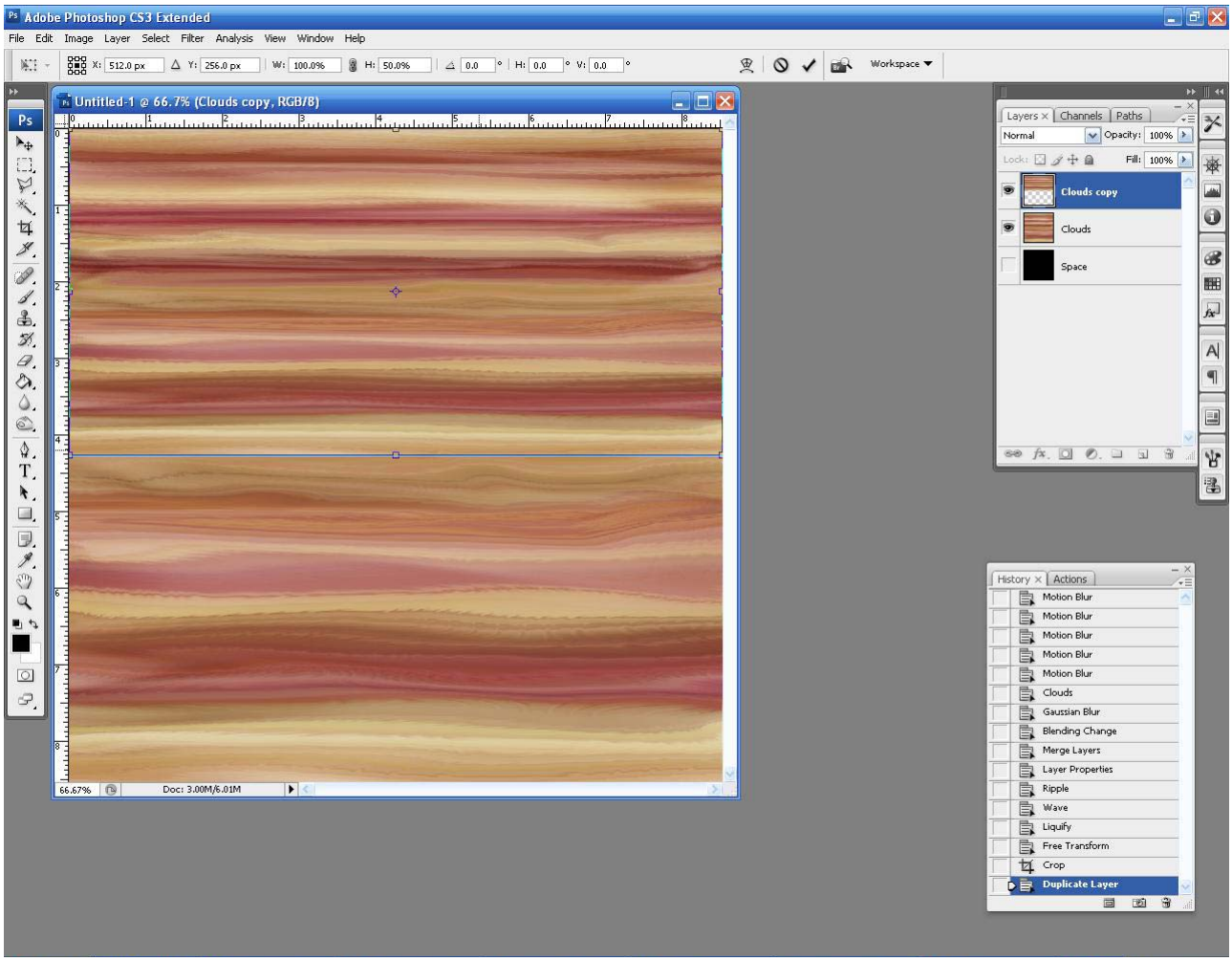
A good trick for making red spots while in the liquify tool is to select the Twirl tool and start to carve out a region with circular motions that you want a spot to form in.

Once you have a good spot going use the bloat tool to expand it and drag your colors out. Make sure you smooth the surrounding clouds out around the spot with the turbulence tool

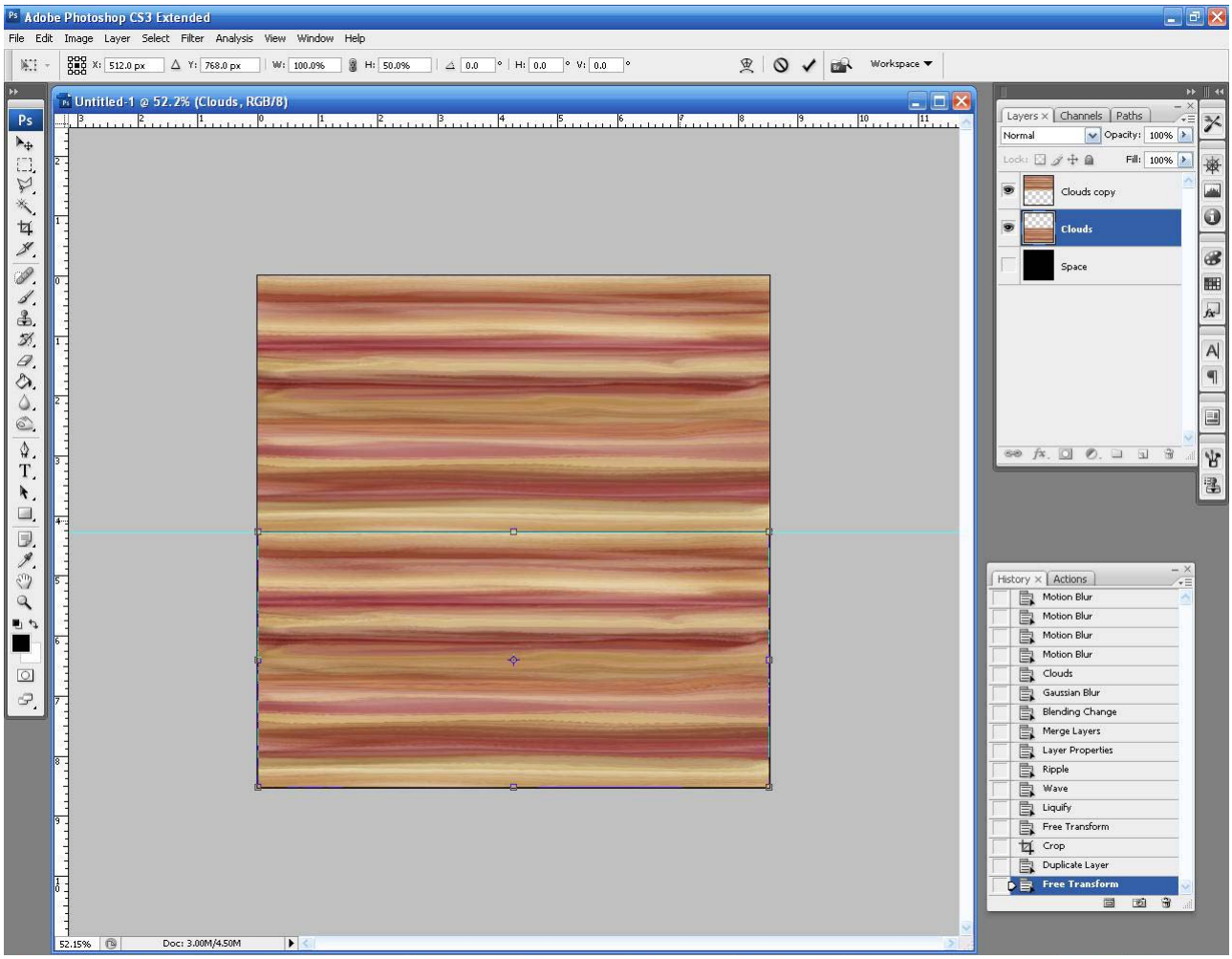
Duplicate the Cloud Layer, and press "Ctrl+Alt+T" to transform the size of the image. Before doing anything, make sure you have your rulers tuned on (View>Rulers) and drag a horizontal guide down to the center crosshair.



Next, drag the bottom edge of the layer up to the guide so that the layer has now just been condensed to the top half of the page.

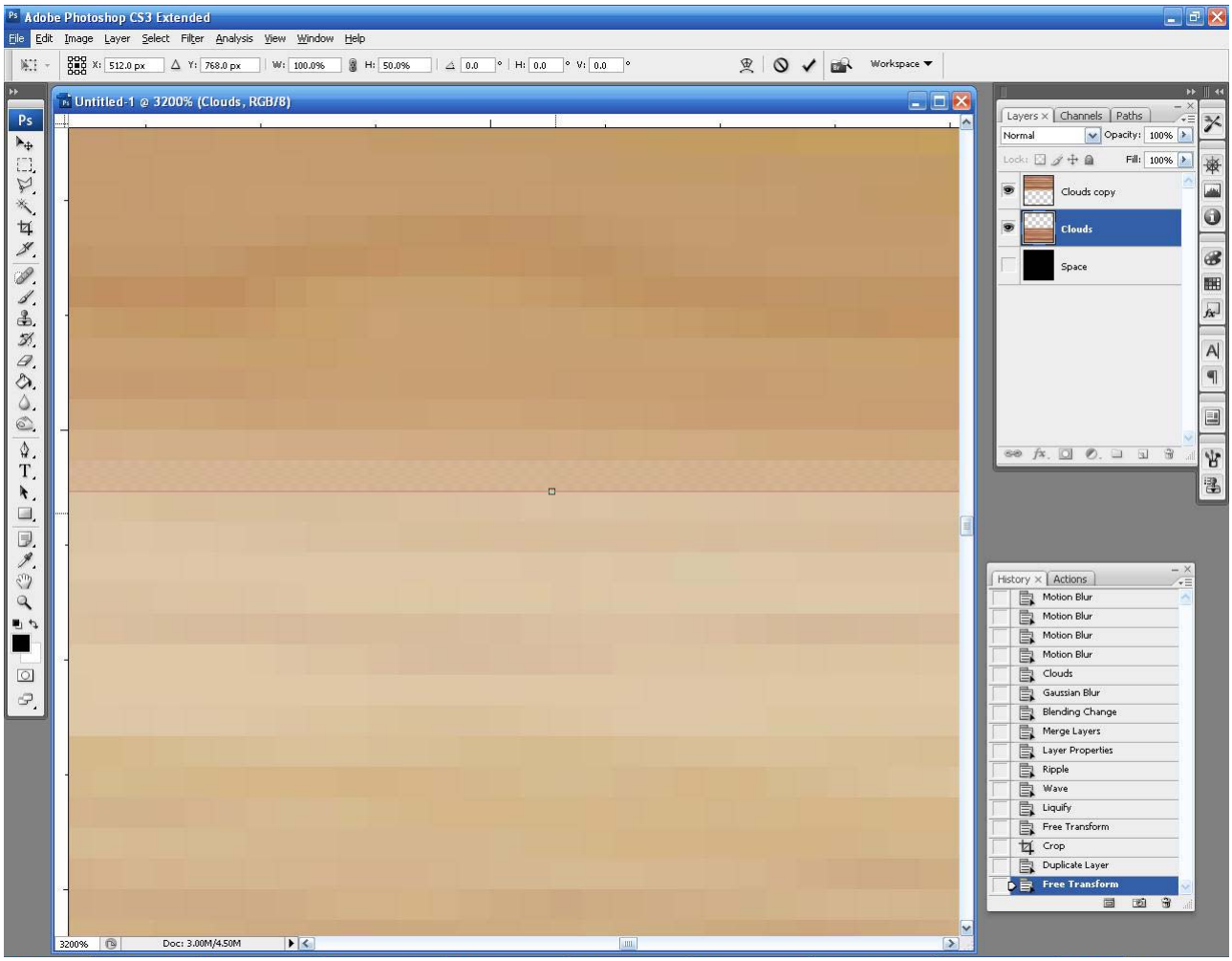


Repeat for the other Cloud Layer, but dragging the bottom half of the page

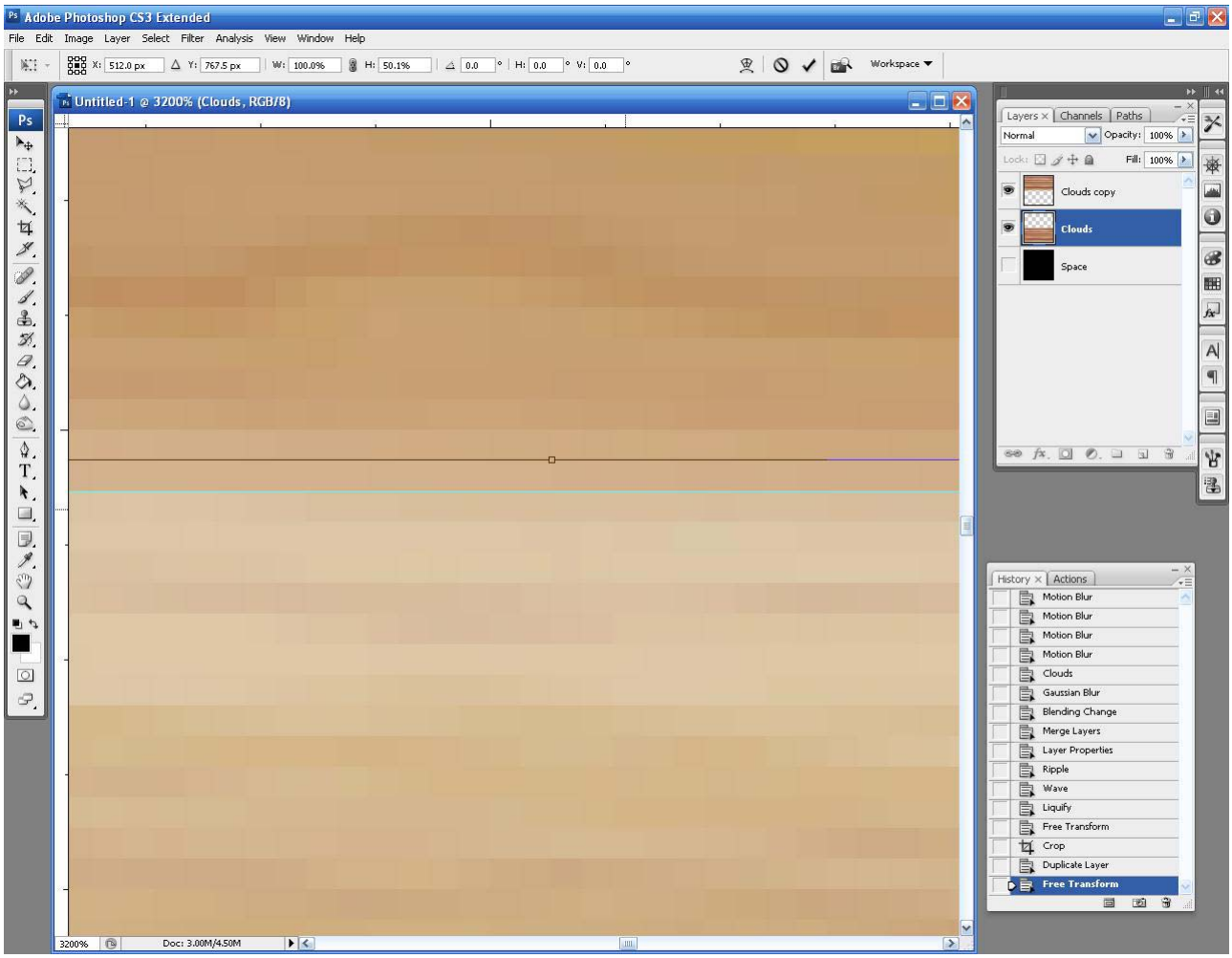


but do not press Enter and turn off transform yet.

With transform still activated and the bottom Cloud Layer selected, zoom into the middle of the page "Ctrl +", you will notice that there is a slight area of no texture here.

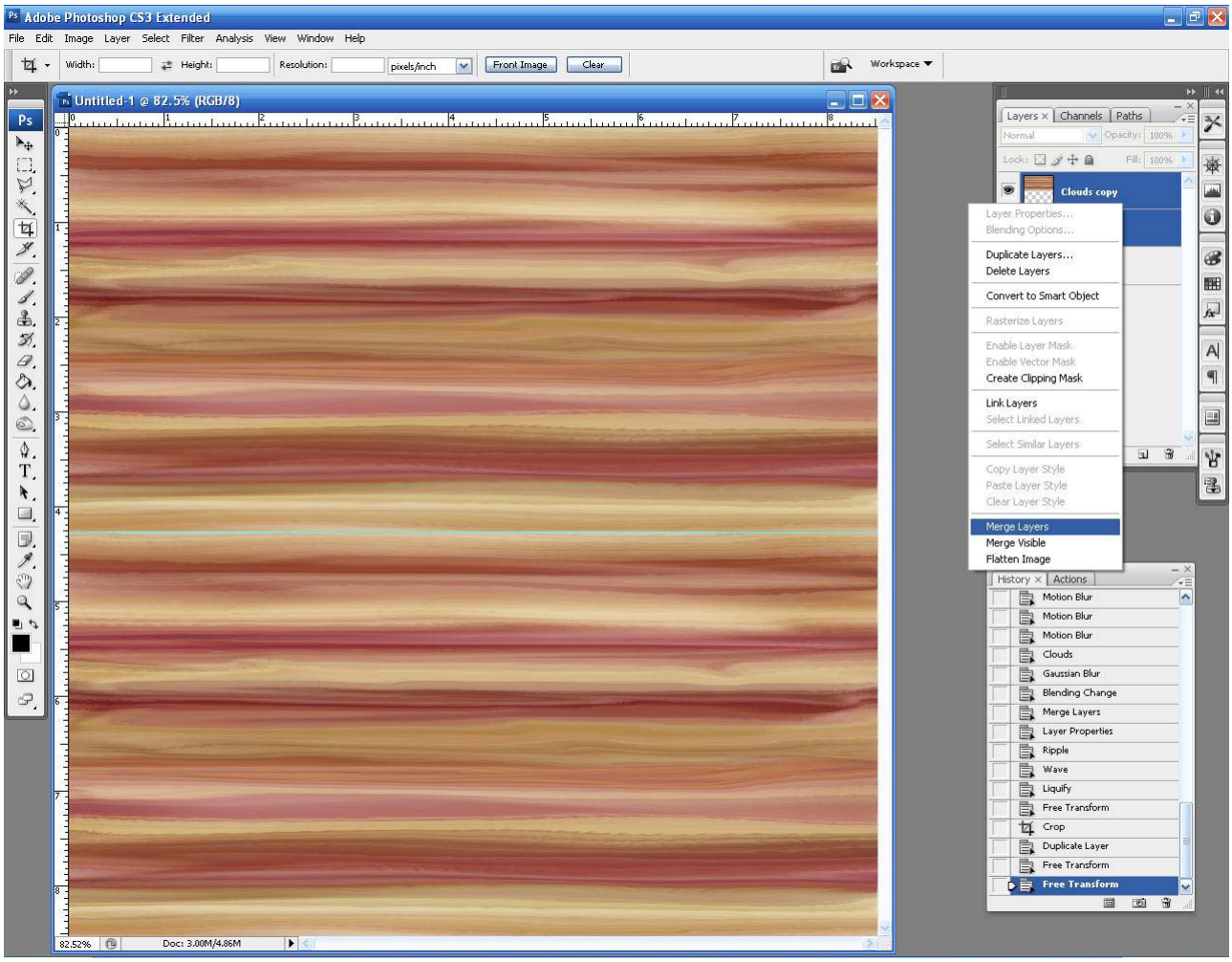


To fix this, simply drag the still selected cloud layer up over the top layer until the colors are seemless with no separation .

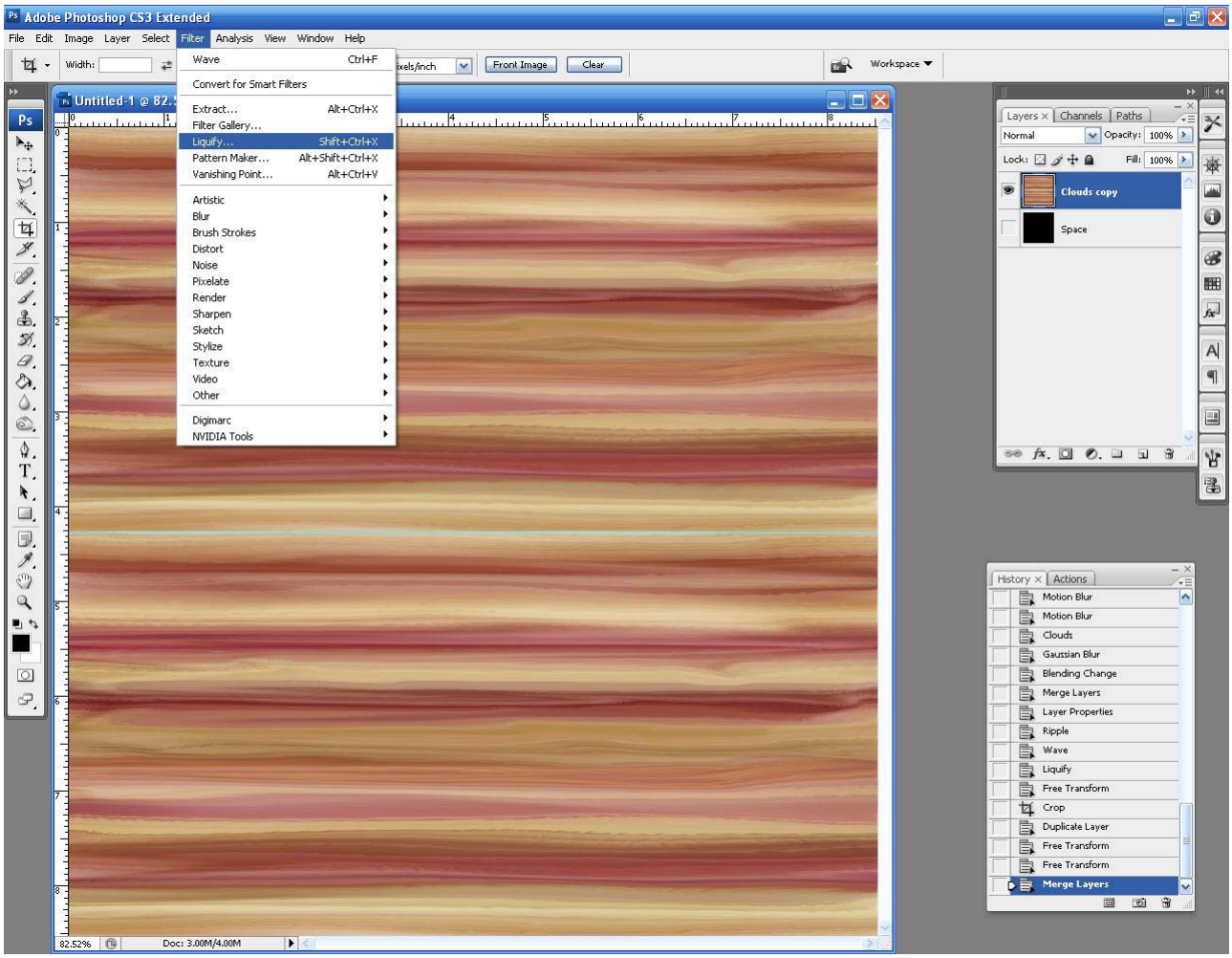


When finished press Enter to turn off Transform.

Zoom back out "Ctrl+0" and select both Cloud Layers and Merge Layers .



Next go to Filter>Liquify .

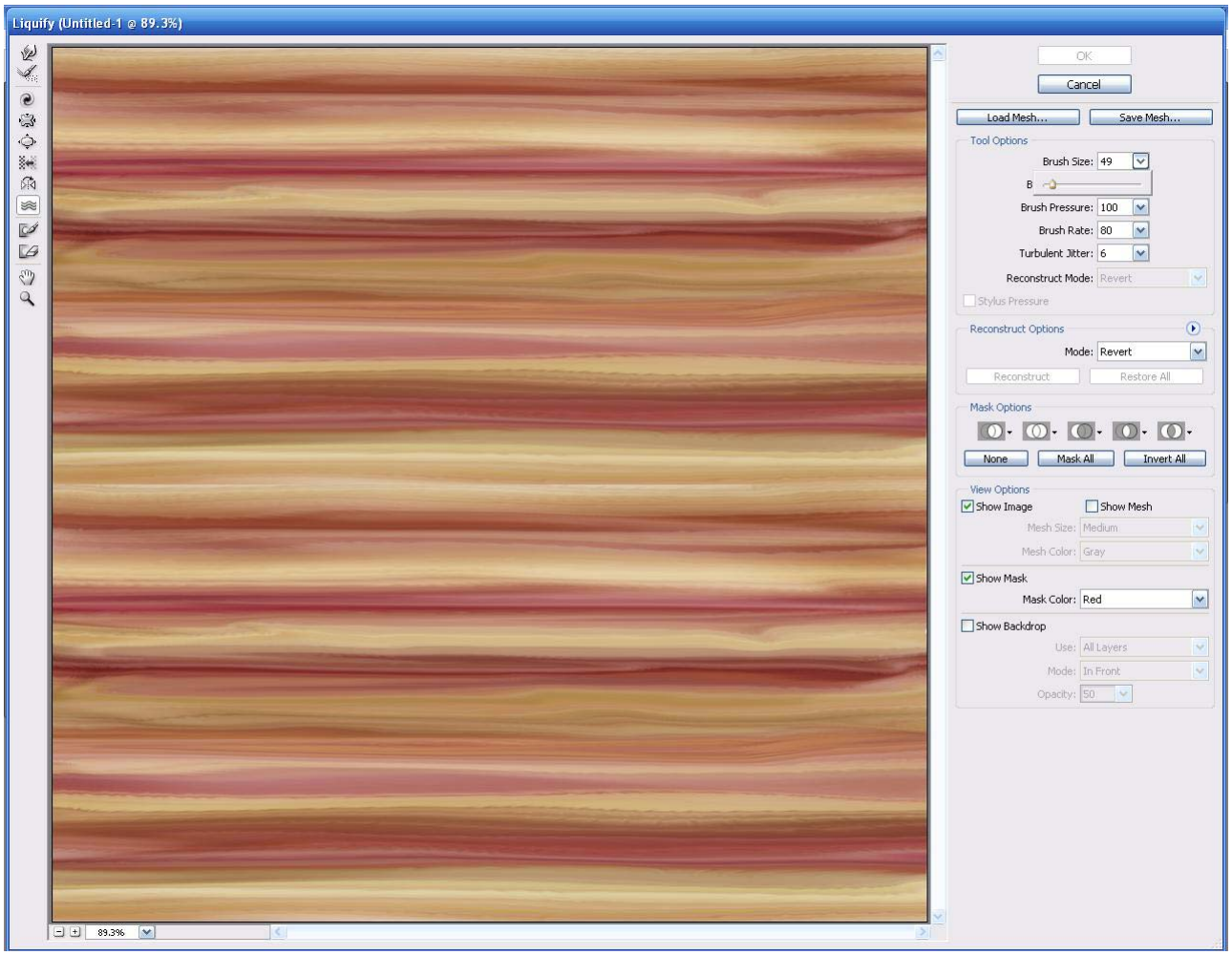


Select the Turbulence Tool and a small brush size.

From this point on, what you do to the texture is really up to your own imagination.

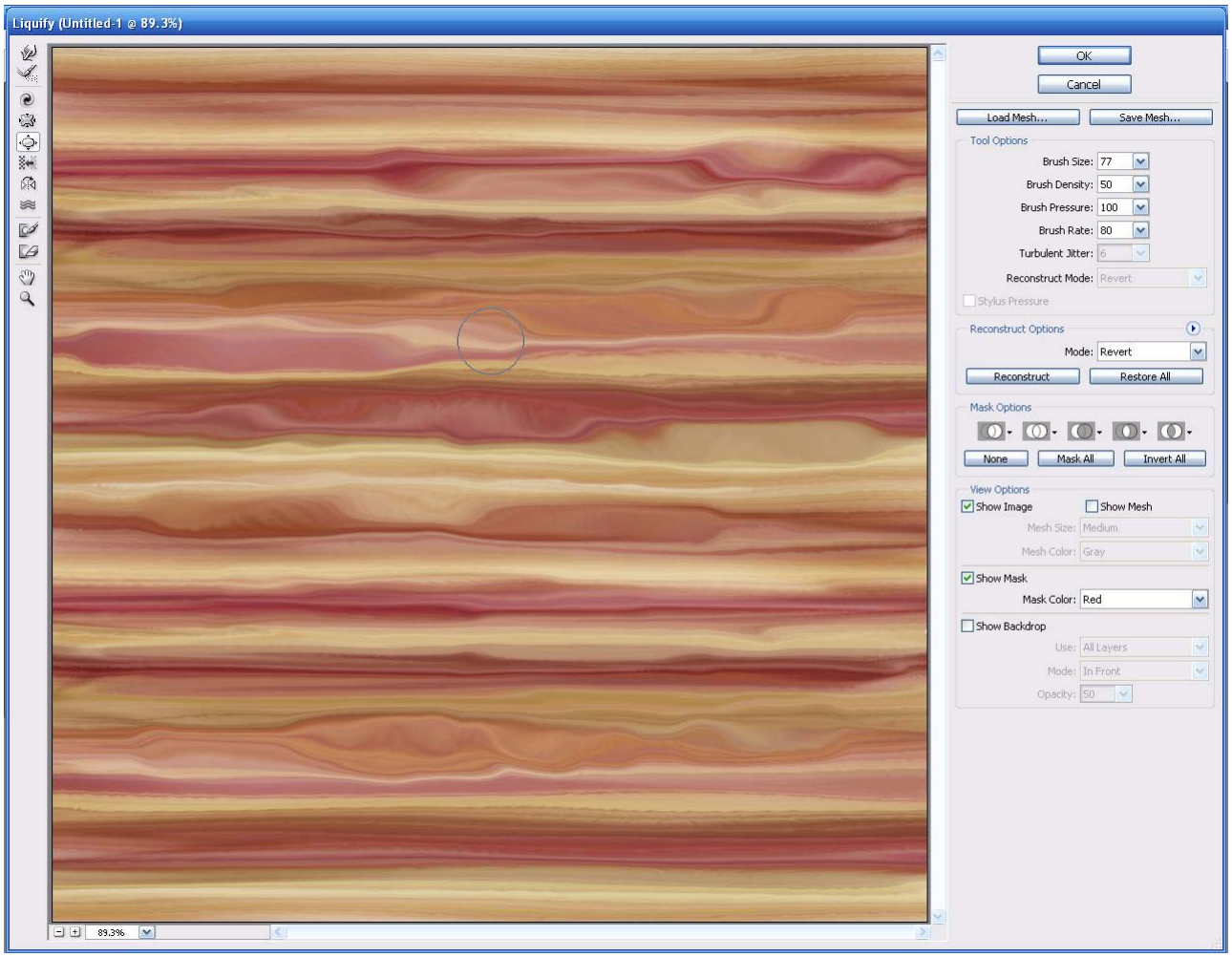
The following steps will serve as a guideline, and for the purpose of this tutorial I have taken screenshots of the minimalist amount of detail added to the texture.

For my other gas planets, I spent a good deal of time playing with varying brush sized and really worked a lot of detail into the texture .



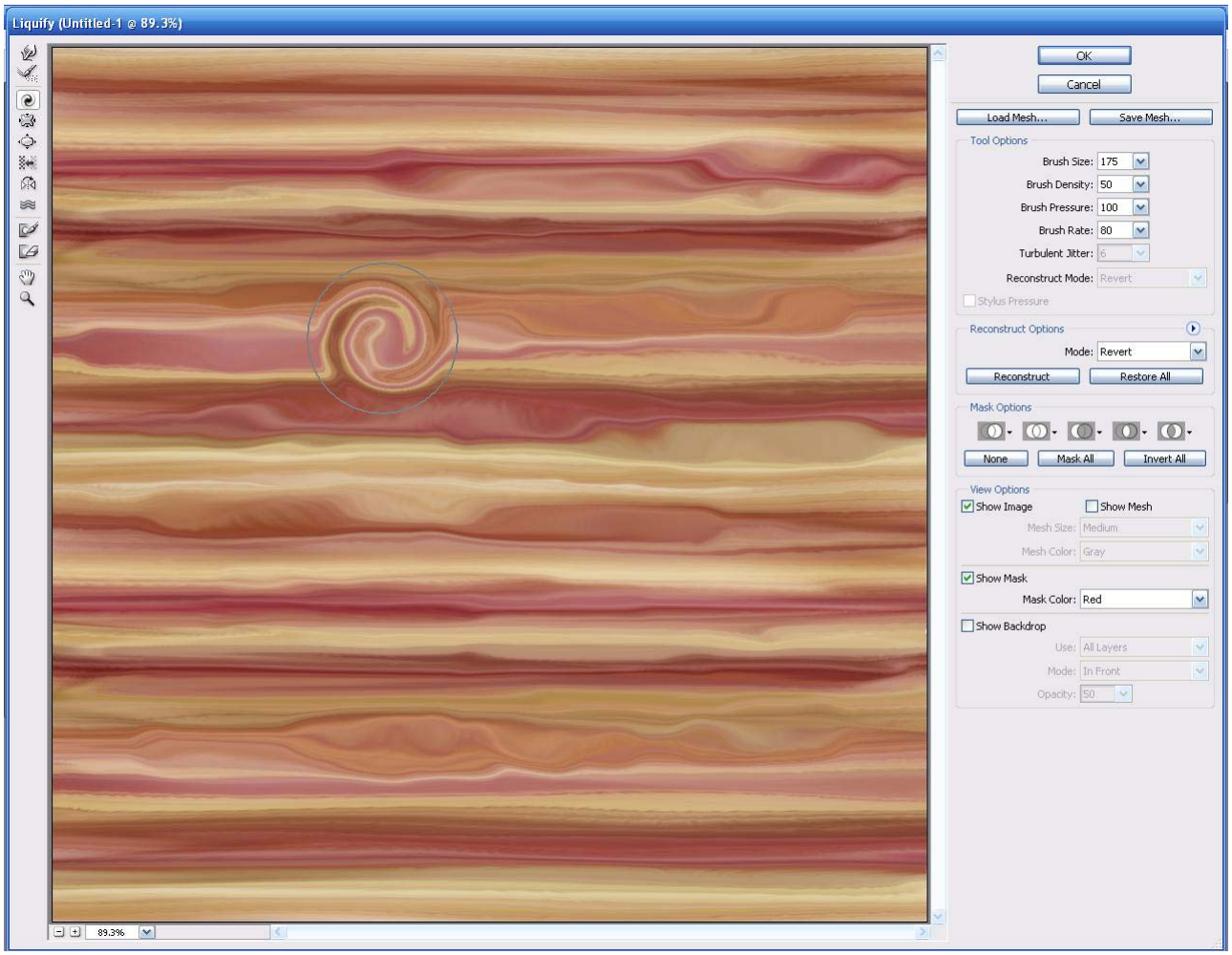
Using a combination of the Turbulence Tool and the Bloat Tool, start transforming the streaks of color as you wish.

Keep in mind some planets like Neptune and Saturn don't much variation at all, while others such as Jupiter are full of swirls .

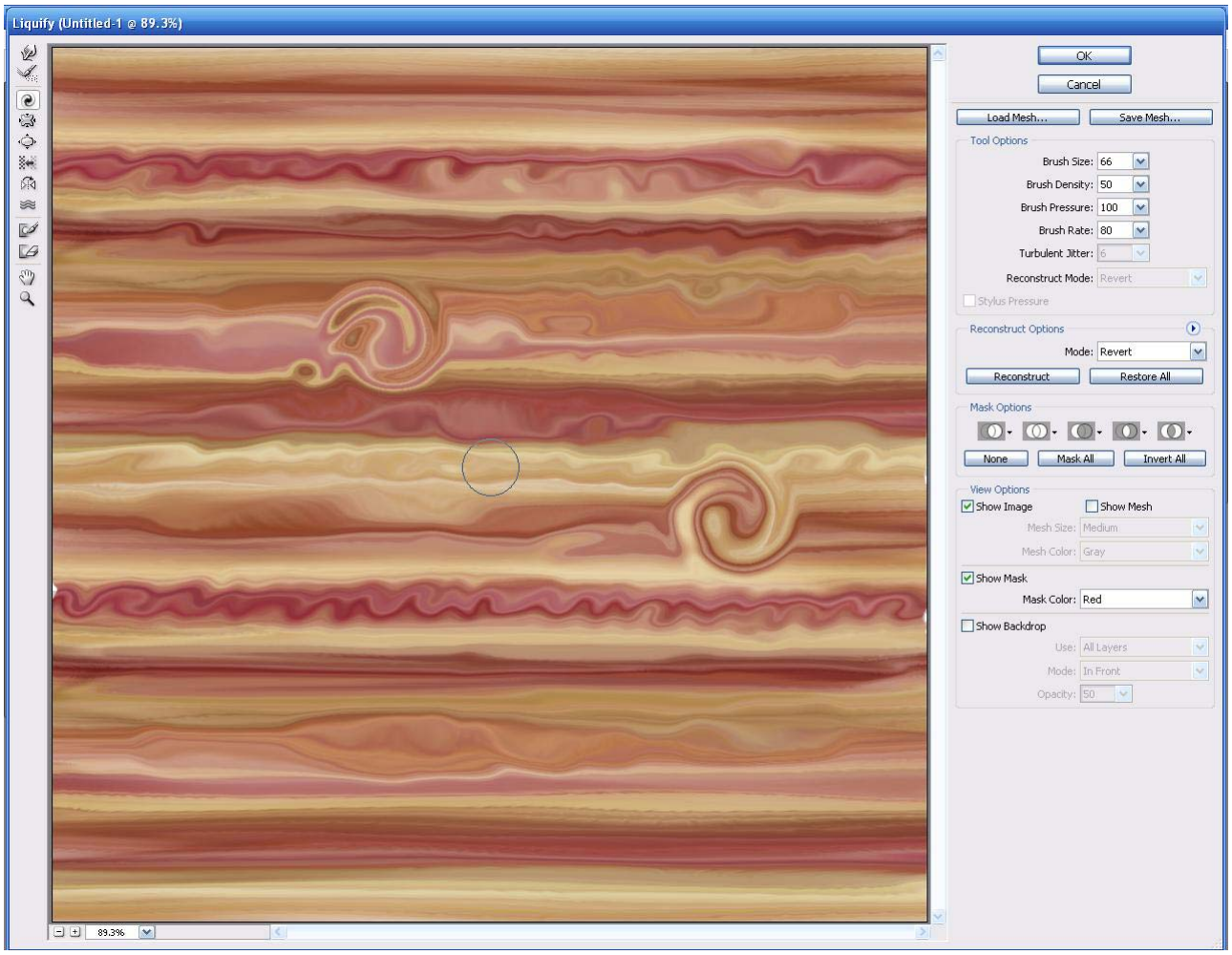


Another interesting trick is to use the Swirl Tool. This can be used to create Giant Storm Spots (keep in mind that when the texture is applied, the top half of the planet is most visible, and the texture is stretched horizontally), and to cause variation amongst the streaks of color.

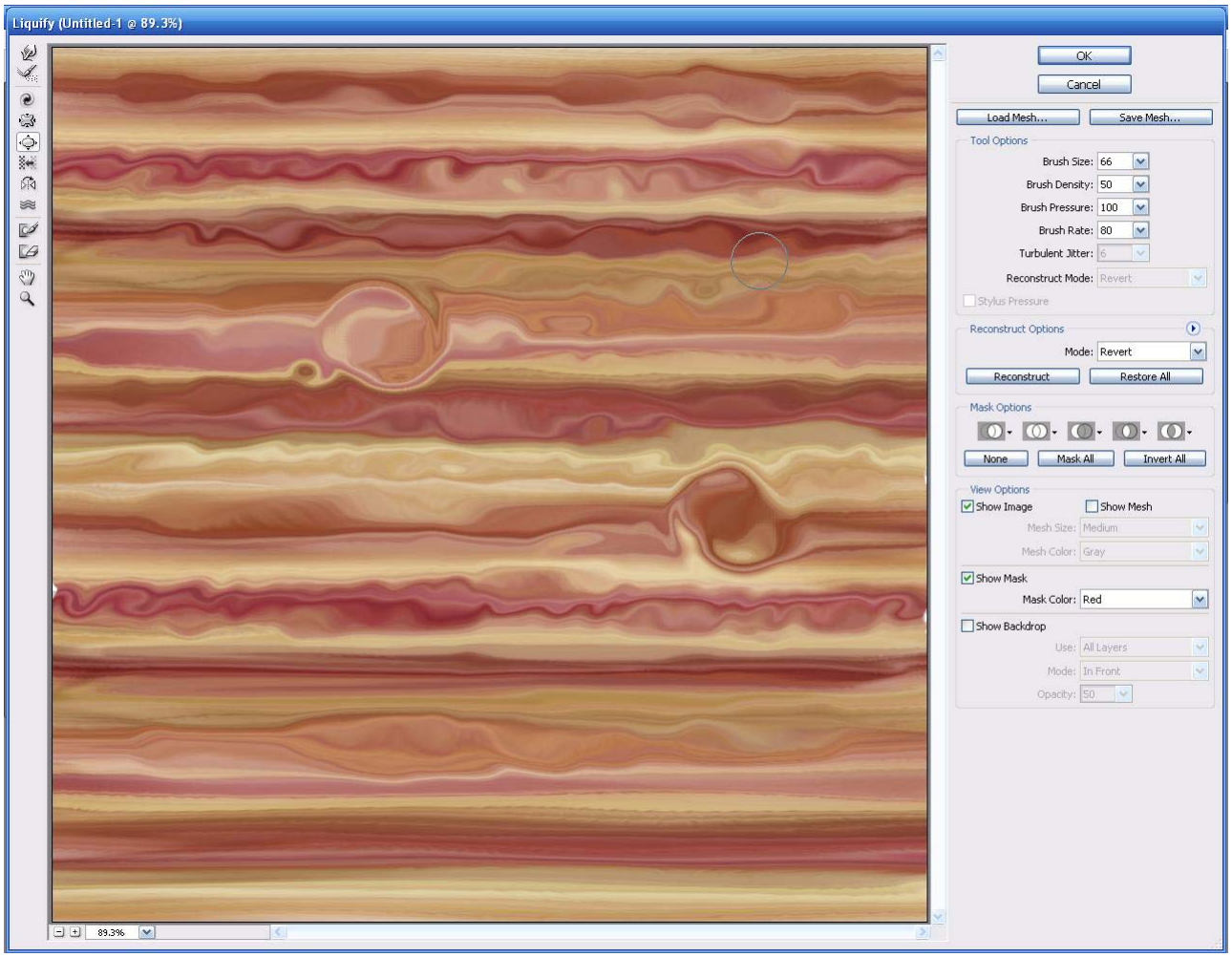
Using a larger sized brush and holding down the Swirl Tool

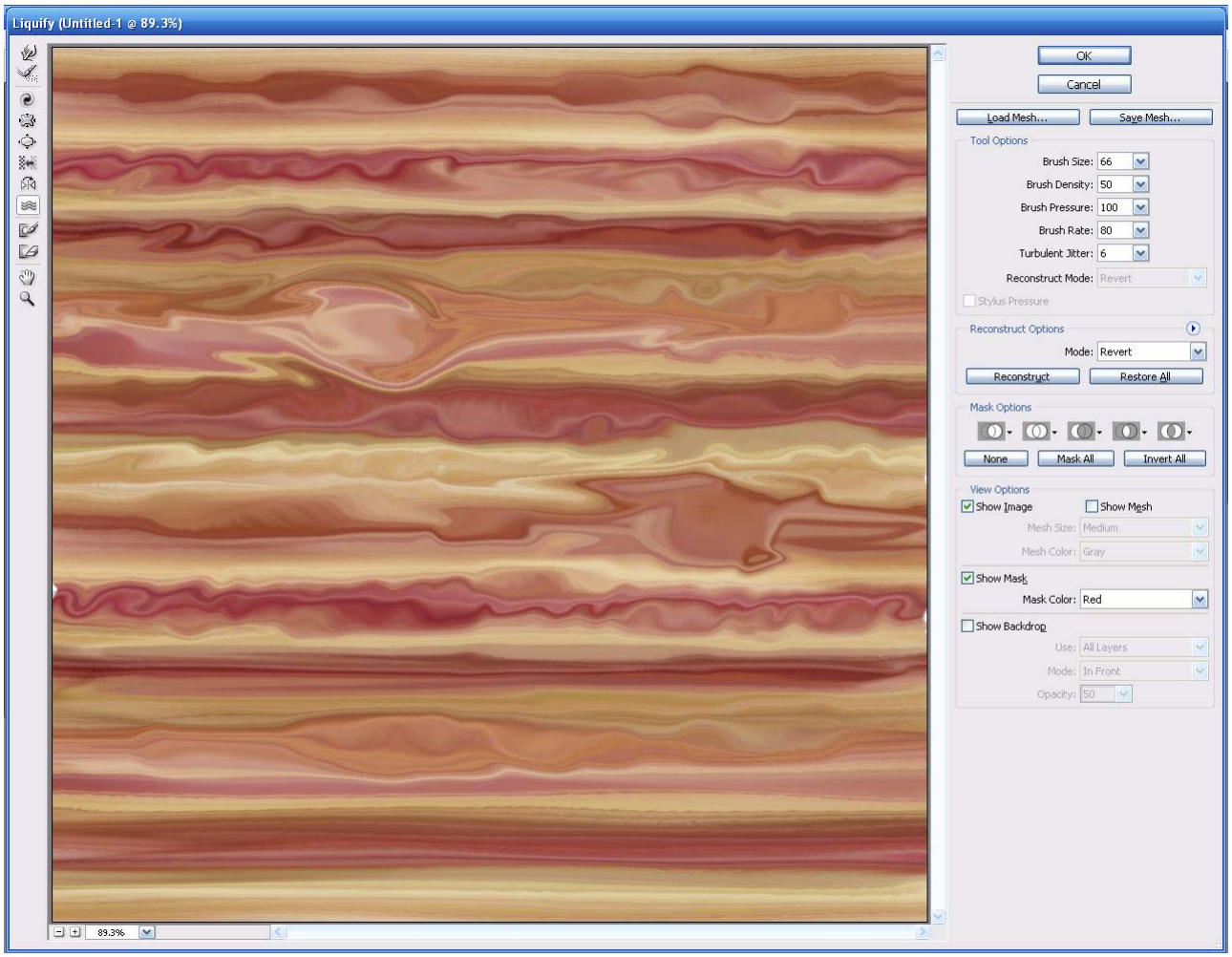


I have created two large spots, and using a smaller brush and holding down the Swirl Tool while moving the mouse in a horizontal zig-zag motion have caused large ripples in some of the streaks of color .



I then proceeded back over some areas using the Bloat Tool to expand color areas and the Turbulence Tool to drag some wisps of color here and there. These steps require much experimentation and remember "Ctrl+Alt+Z" allows multiple "undos" .


Liquify (Untitled-1 @ 89.3%)
OK
Cancel
Load Mesh...
Save Mesh...
Tool Options
Brush Size: 66
Brush Density: 50
Brush Pressure: 100
Brush Rate: 80
Turbulent Jitter: 6
Reconstruct Mode: Revert
Stylus Pressure
Reconstruct Options
Mode: Revert
Reconstruct
Restore All
Mask Options
None
Mask All
Invert All
View Options
Show Image
Show Mesh
Mesh Size: Medium
Mesh Color: Gray
Show Mask
Mask Color: Red
Show Backdrop
Use: All Layers
Mode: In Front
Opacity: 50
89.3%



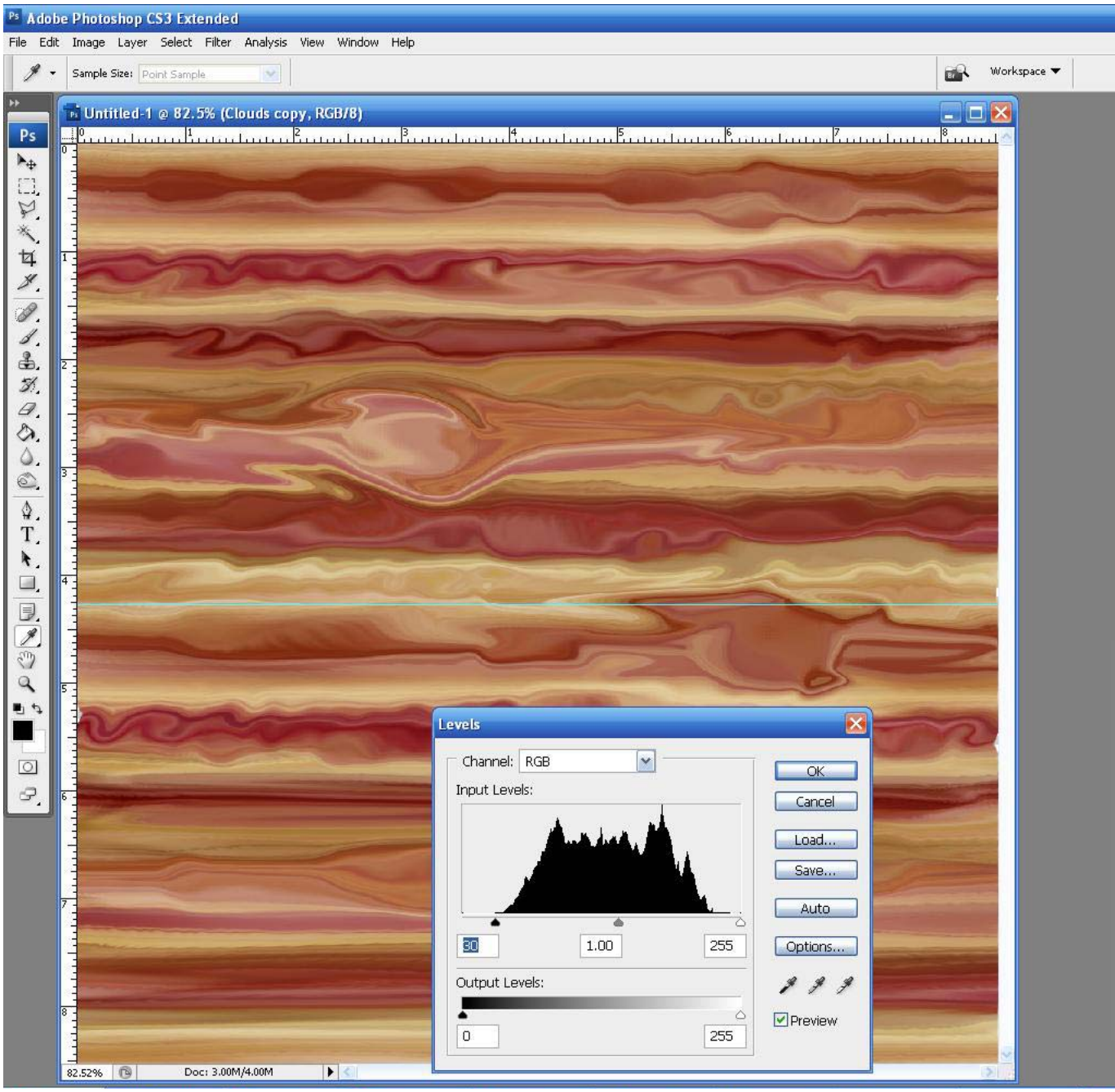
When a desired effect reached, hit OK and go back to main photoshop interface.

You can begin experimenting at this point with different effects. To test your designs, Rename the current default gas texture W_planet_gas (you must find this using the EAW extractor) to W_planet_gasx. Then save your new texture from photoshop as W_planet_gas.

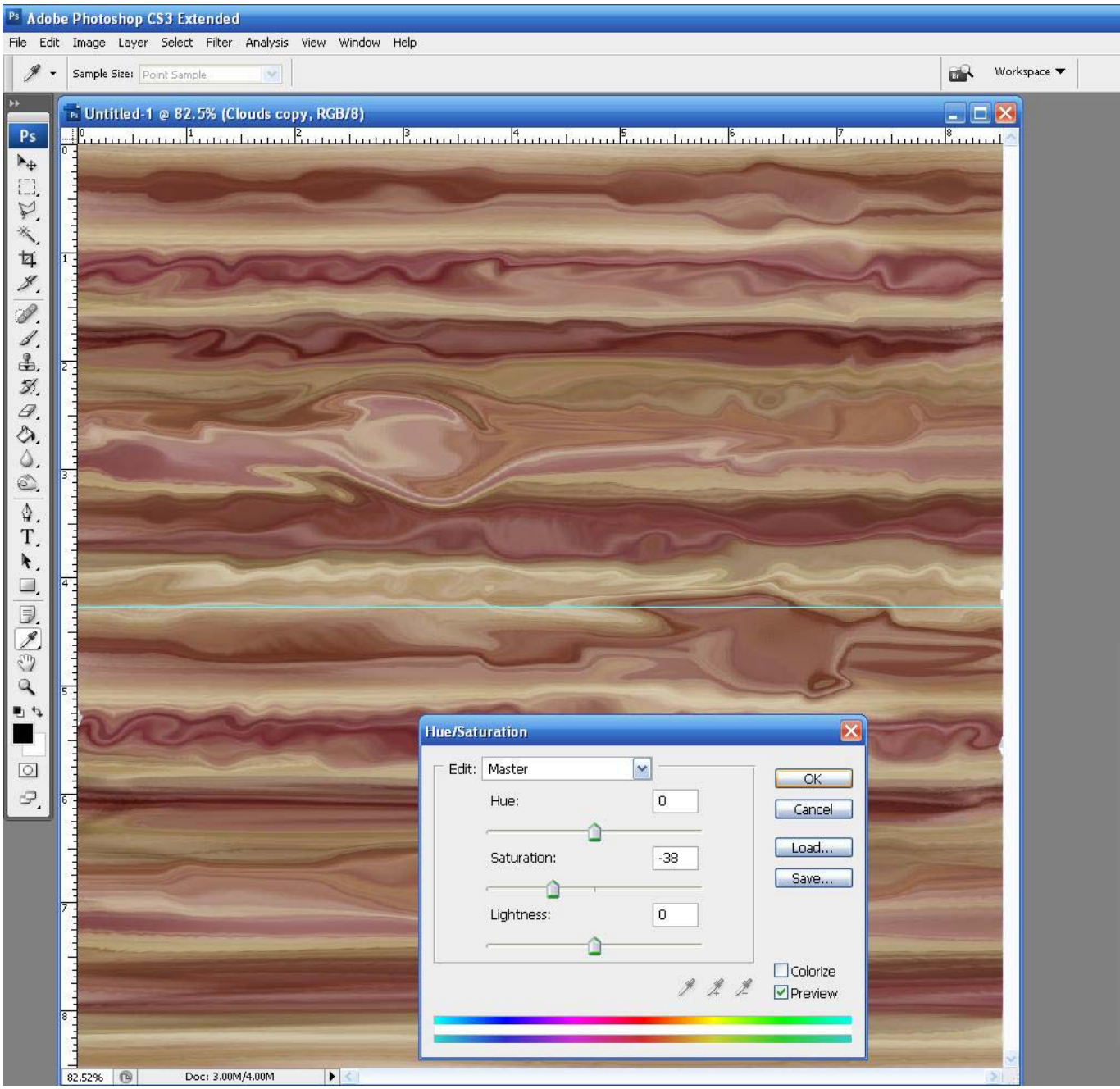
When you play the game, you will notice that the planet Bespin now has your new texture applied to it.

Go there, start a space battle and take screenshots of the planet to see how your texture looks. I believe the rebels always start in control of Bespin, so you will want to be the Empire.

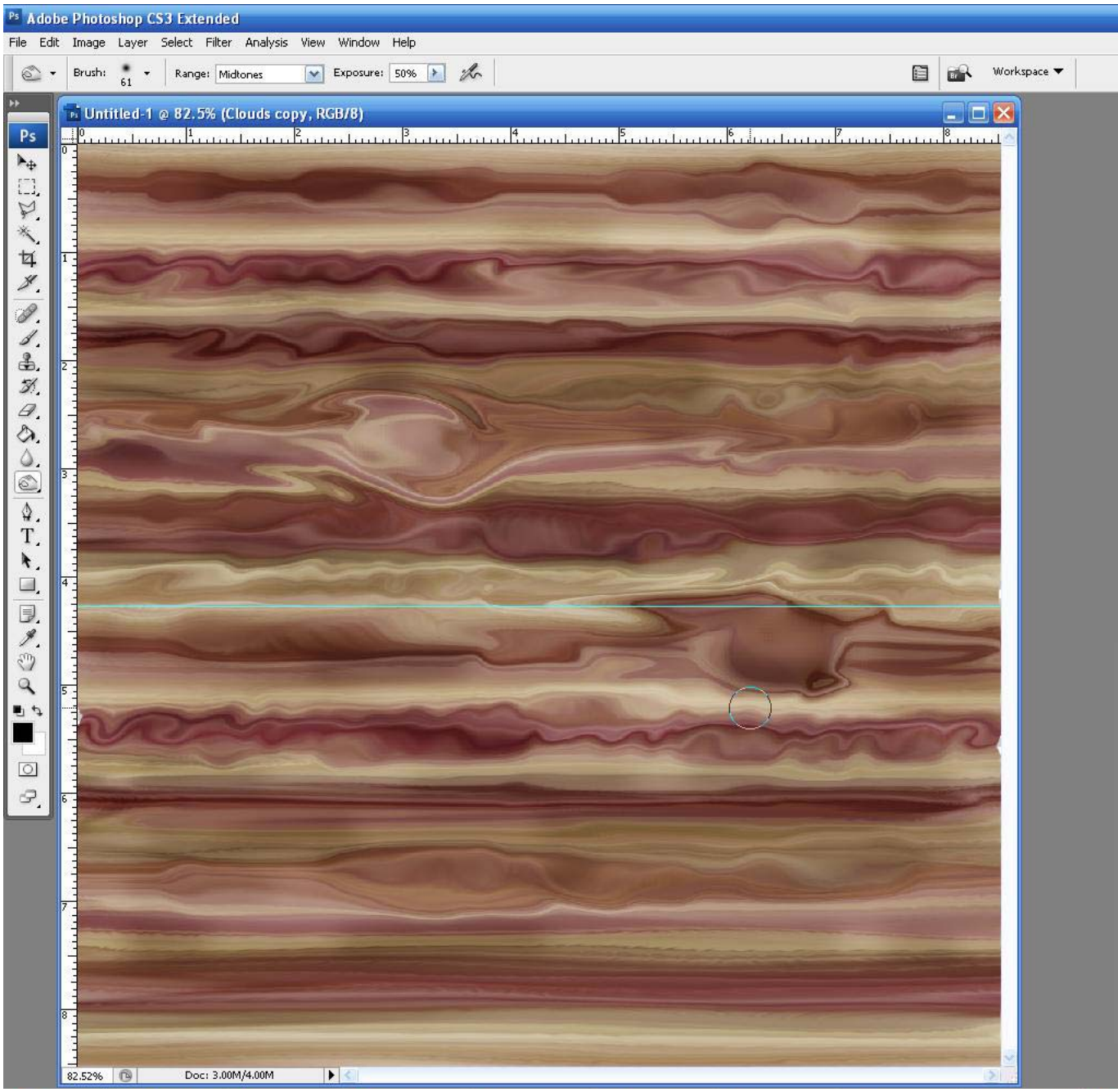
Once back in photoshop, you can proceed with experimentation at this point. Try adjusting the levels,

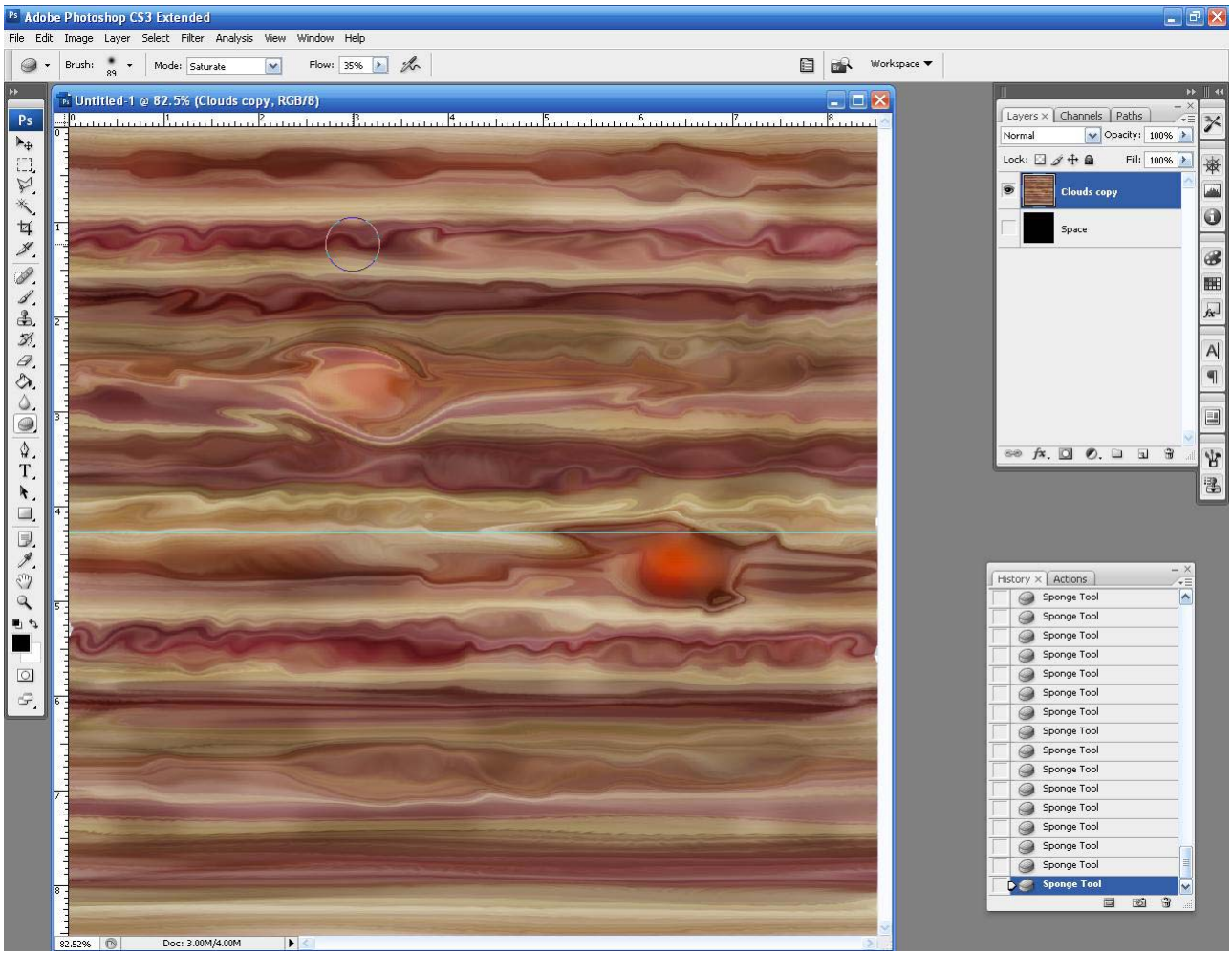


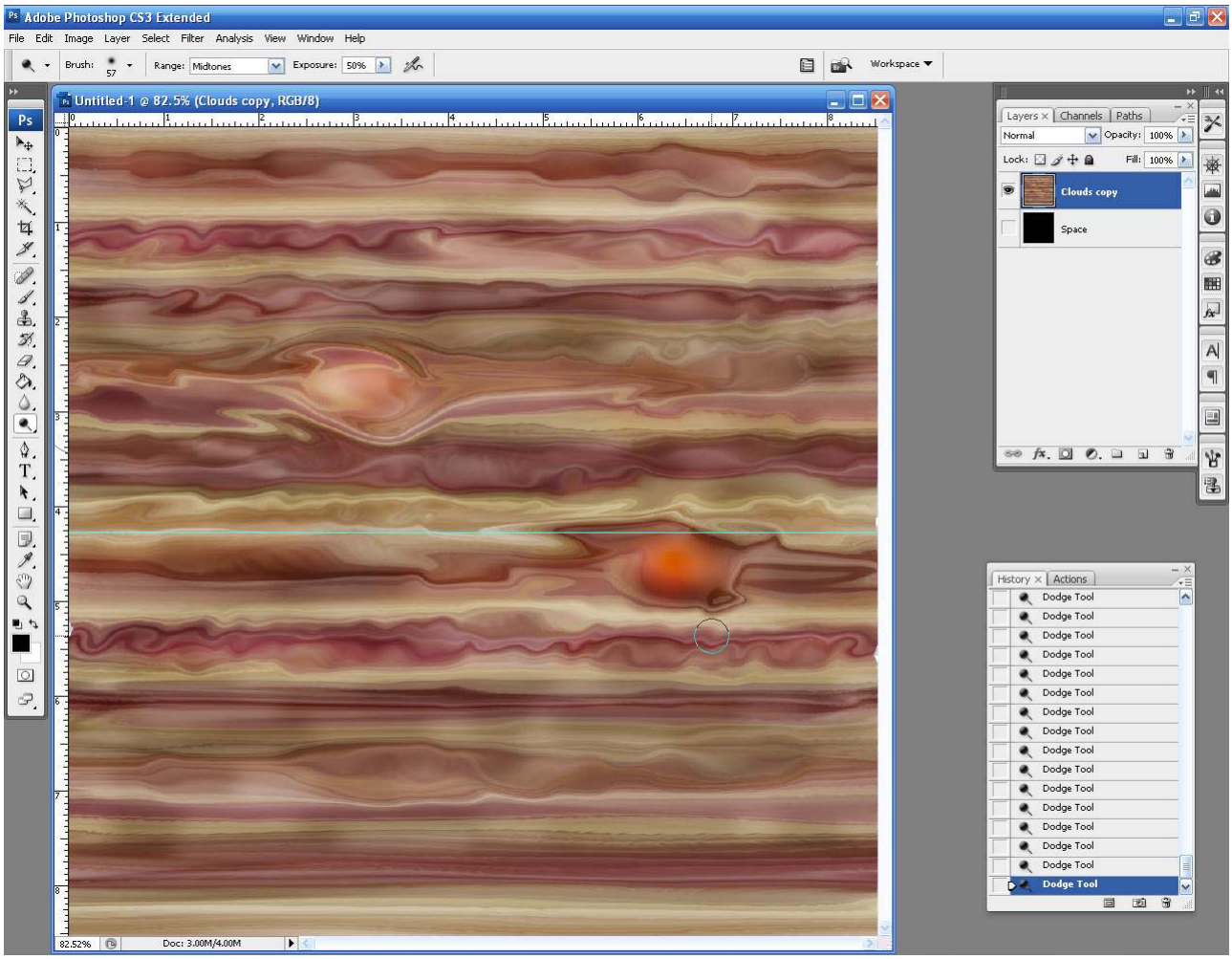
changing the Saturation,



using the Burn Tool, using the Sponge Tool set to "saturate" at 35% and the Dodge Tool to bring back some white highlights.

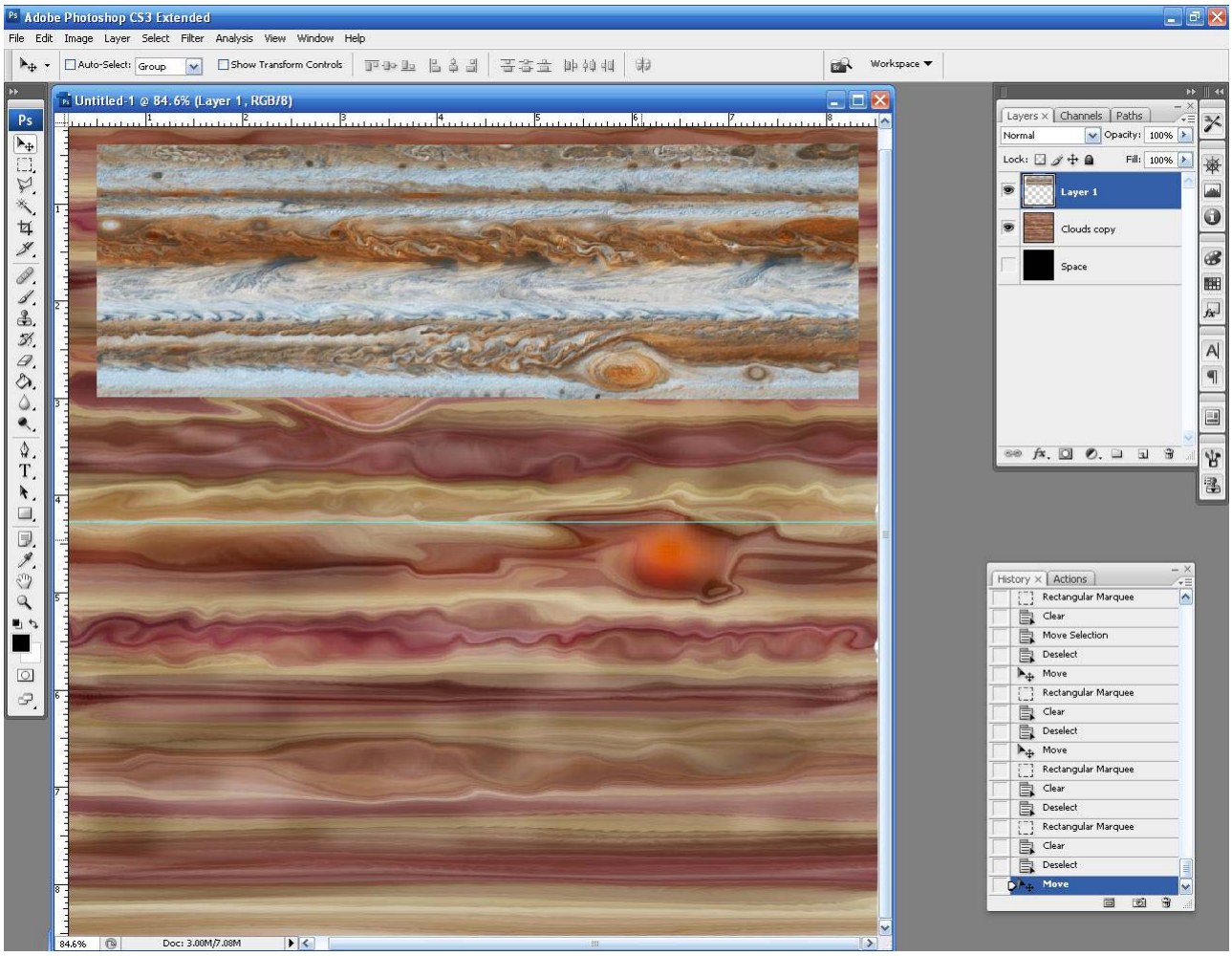

Adobe Photoshop CS3 Extended
File Edit Image Layer Select Filter Analysis View Window Help
Brush: 61
Range: Midtones
Exposure: 50%
Workspace
Untitled-1 @ 82.5% (Clouds copy, RGB/8)
82.52%
Doc: 3.00M/4.00M


Adobe Photoshop CS3 Extended
File Edit Image Layer Select Filter Analysis View Window Help
Brush: Mode: Saturate Flow: 35% Workspace
Untitled-1 @ 82.5% (Clouds copy, RGB/8)
82.52% Doc: 3.00M/4.00M
Layers Channels Paths
Normal Opacity: 100%
Lock: Fill: 100%
Clouds copy
Space
History Actions
Sponge Tool

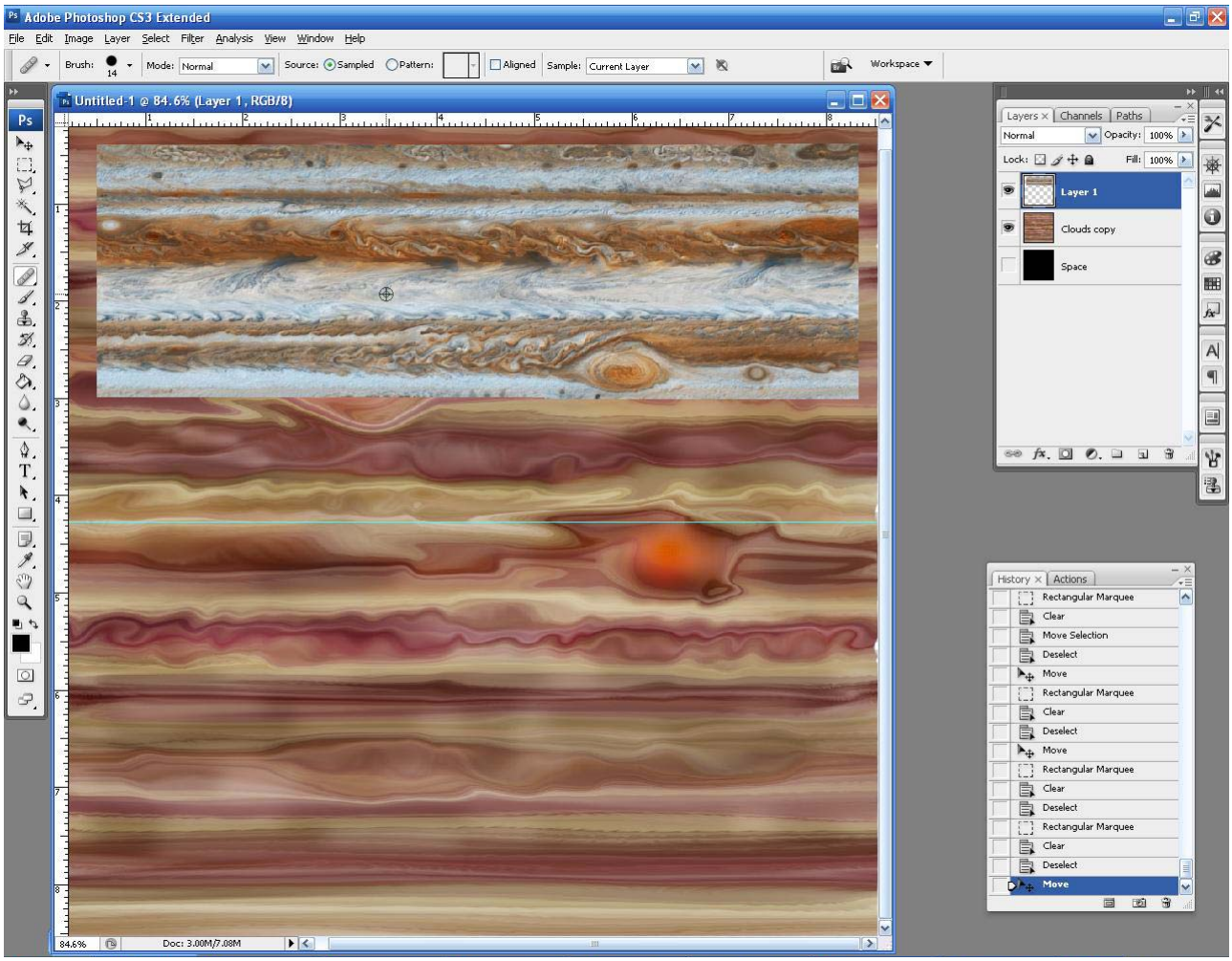


Now once you have something interesting, here is an optional step that takes a good bit of time. Find a good high quality picture of Jupiter, specifically the gas clouds.

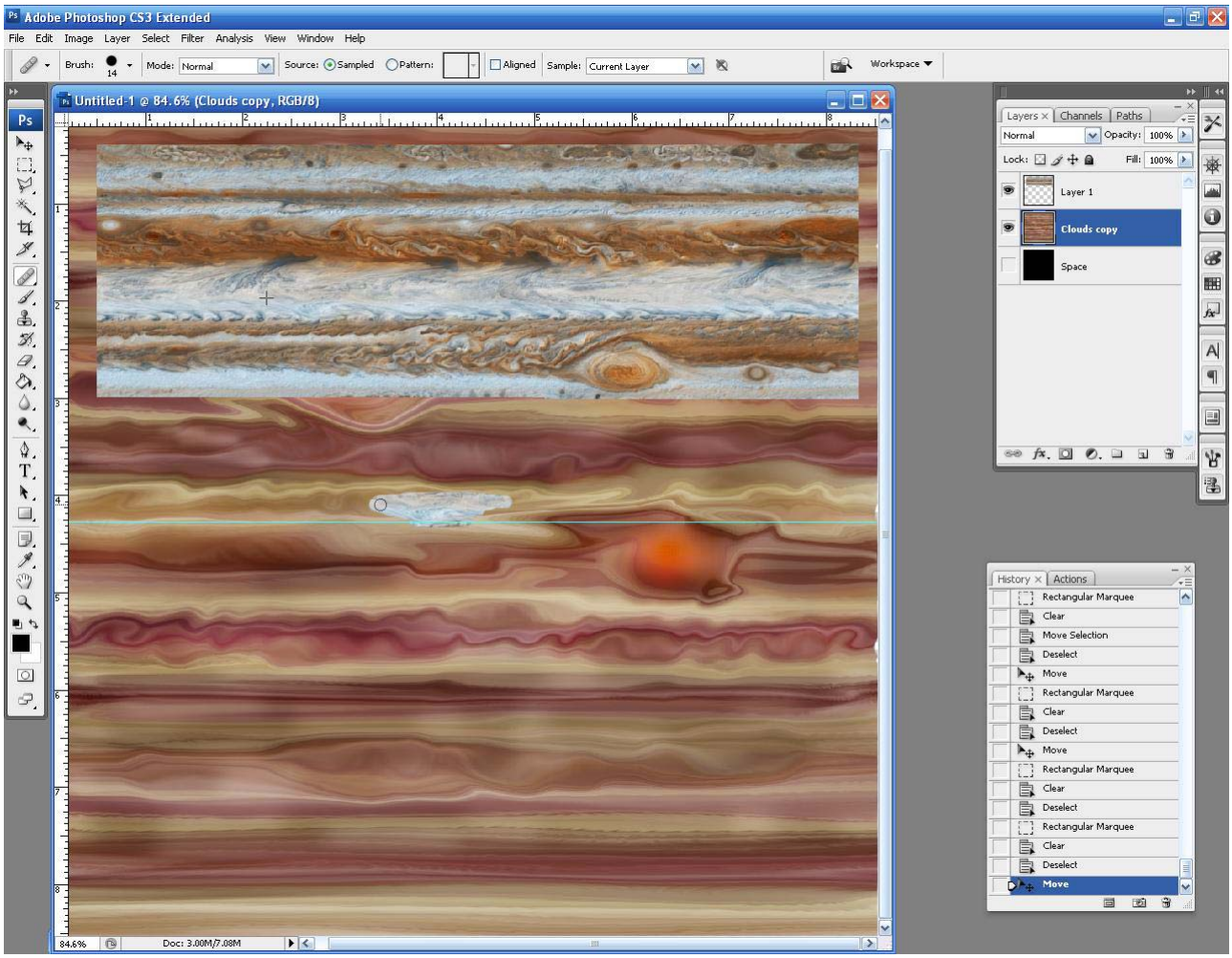
Paste the photo into the same texture file you are working on as a new layer .

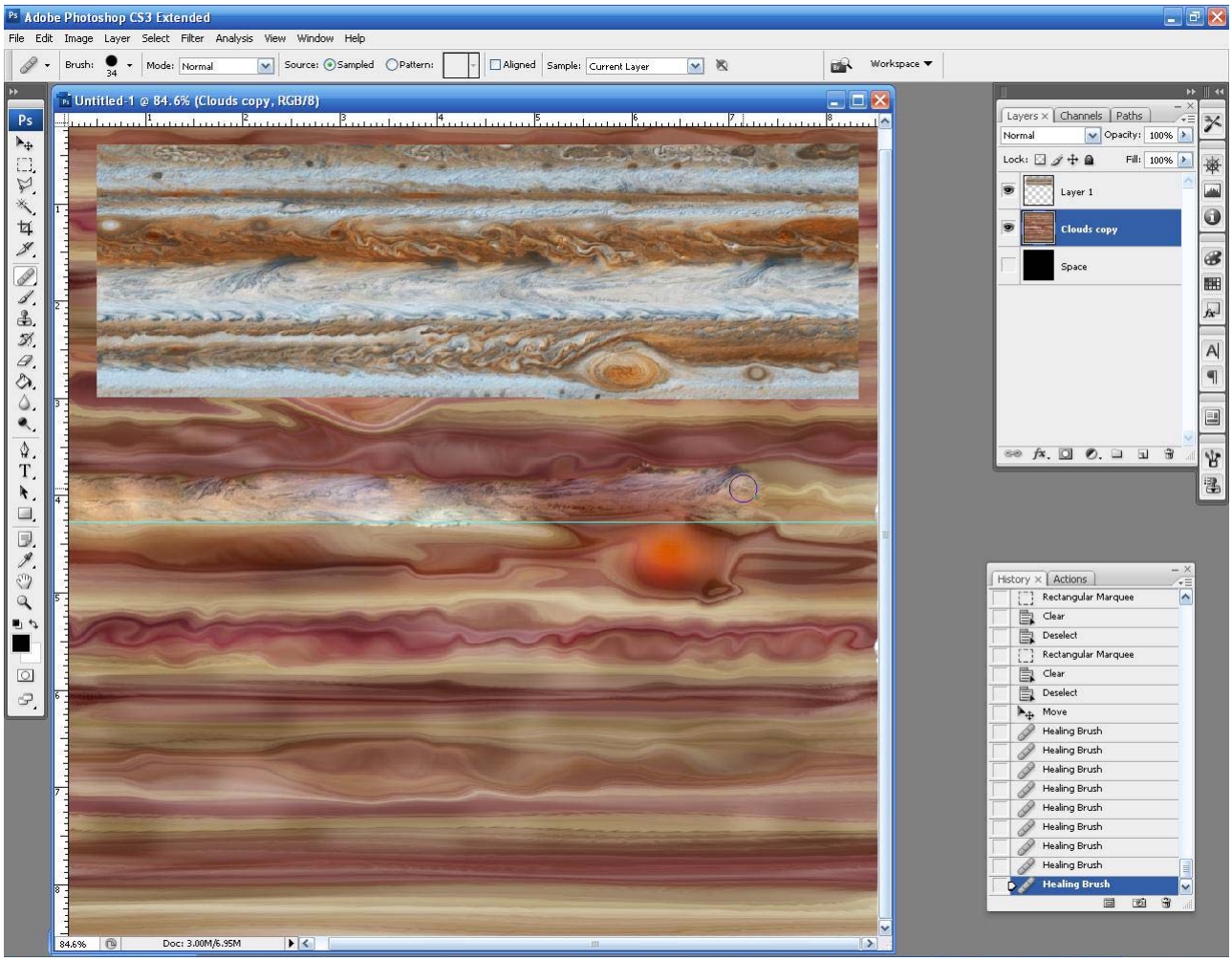


Choose the Healing Tool, and select the Jupiter photo layer.
Sample an area of clouds by holding down "Alt" and clicking on the photo.



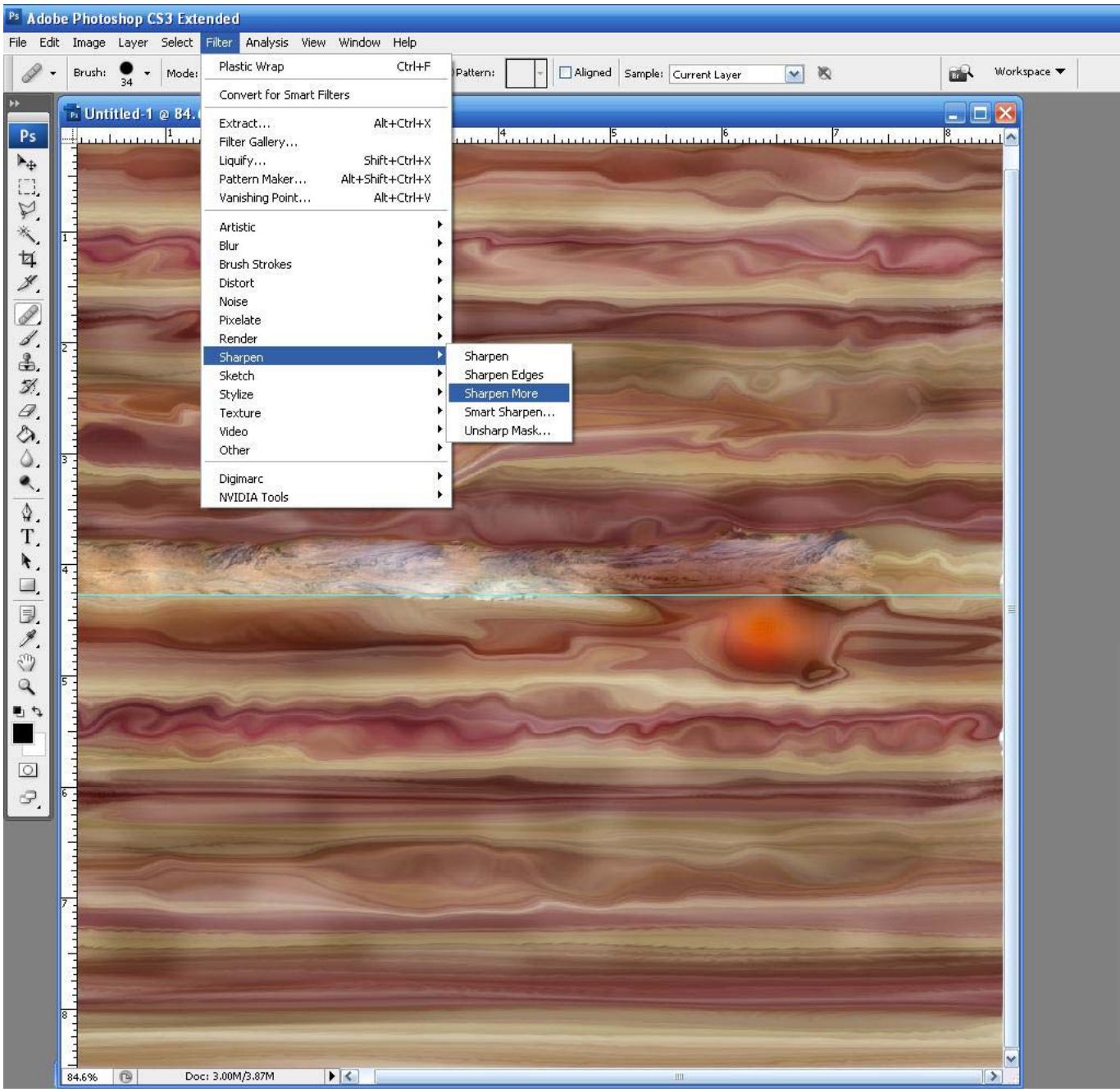
Select the Cloud Layer and start painting with the Healing Tool over an area you wish to graphically enhance. This step is very time consuming, but provides stunning results.


Adobe Photoshop CS3 Extended
File Edit Image Layer Select Filter Analysis View Window Help
Brush: Mode: Normal Source: Sampled Pattern: Aligned Sample: Current Layer
Workspace
Untitled-1 @ 84.6% (Clouds copy, RGB/8)
84.6% Doc: 3.00M/7.08M
Layers Channels Paths
Normal Opacity: 100%
Lock: Fill: 100%
Layer 1
Clouds copy
Space
History Actions
Rectangular Marquee
Clear
Move Selection
Deselect
Move
Rectangular Marquee
Clear
Deselect
Move
Rectangular Marquee
Clear
Deselect
Rectangular Marquee
Clear
Deselect
Move



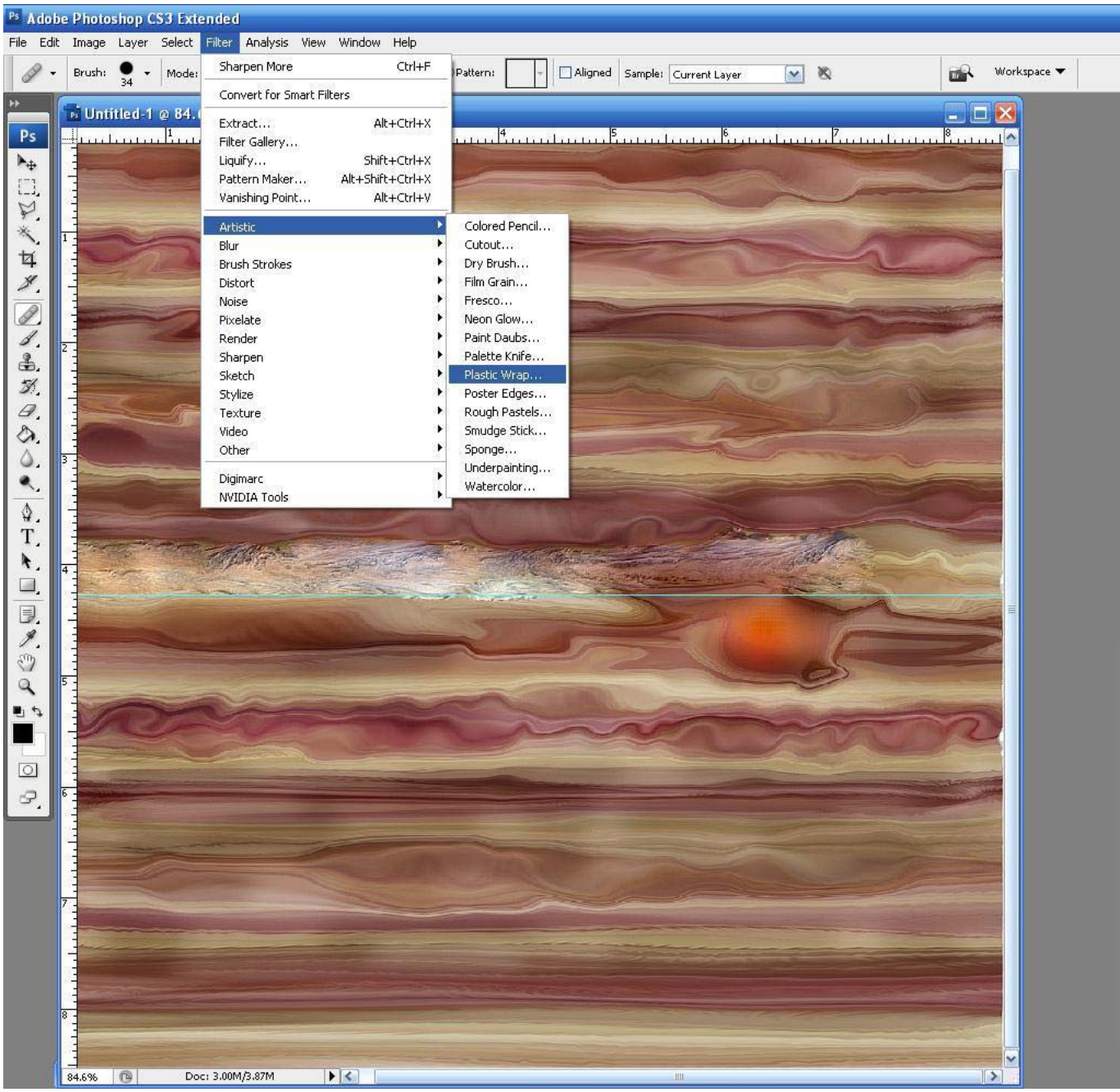
Due to lack of time, I am unable to complete this tutorial with screenshots showing how this effect can transform the image, so you will have to experiment and use your imagination to visualize what an end result will look like.

The last steps I will quickly go over while using the texture as it currently is. Once you have finished with the Healing Tool, delete your photo layer of Jupiter. Click Filter>Sharpen>Sharpen More .



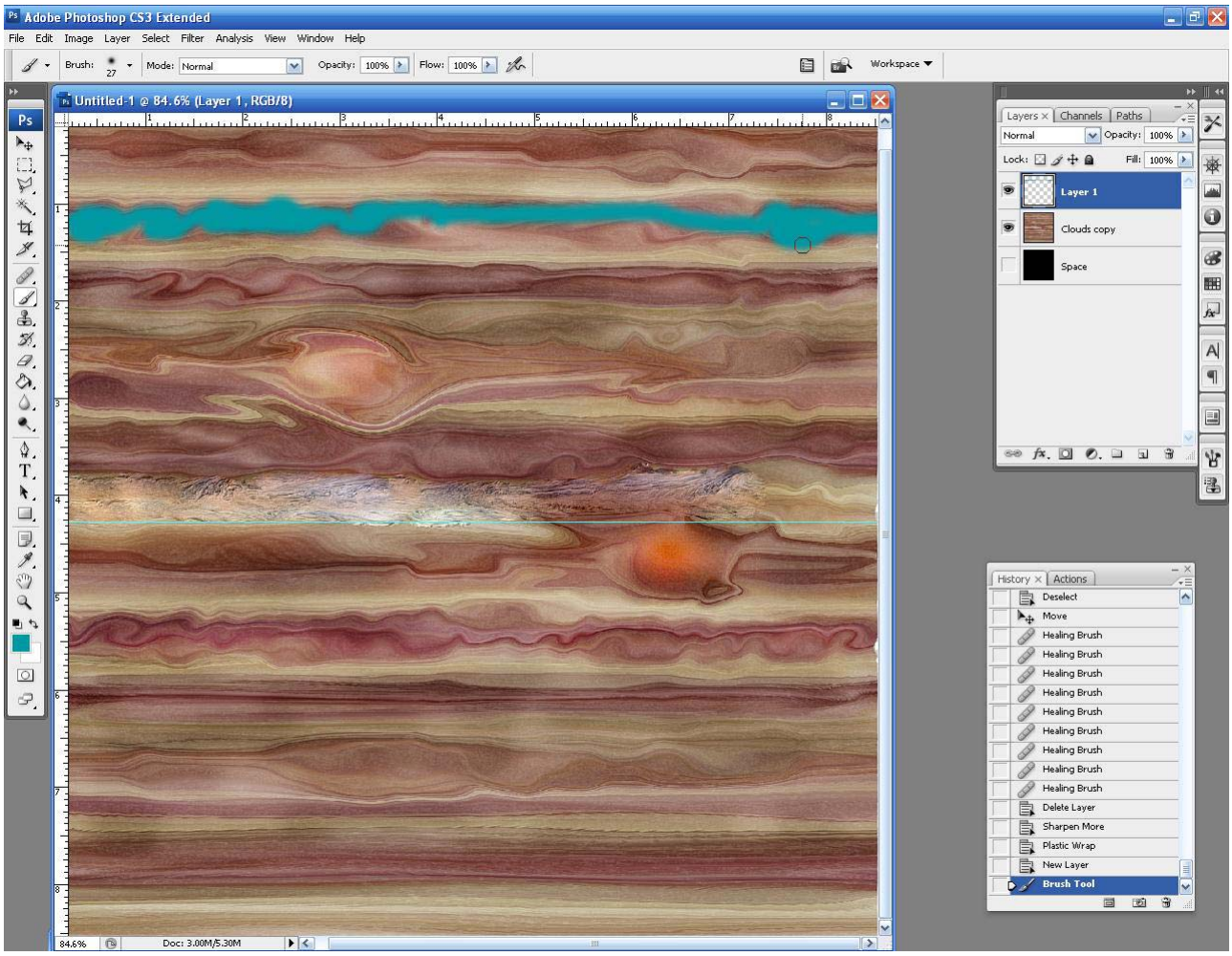
This will vividly enhance your texture.

Another optional idea is use Filter>Artistic>Plastic Wrap .

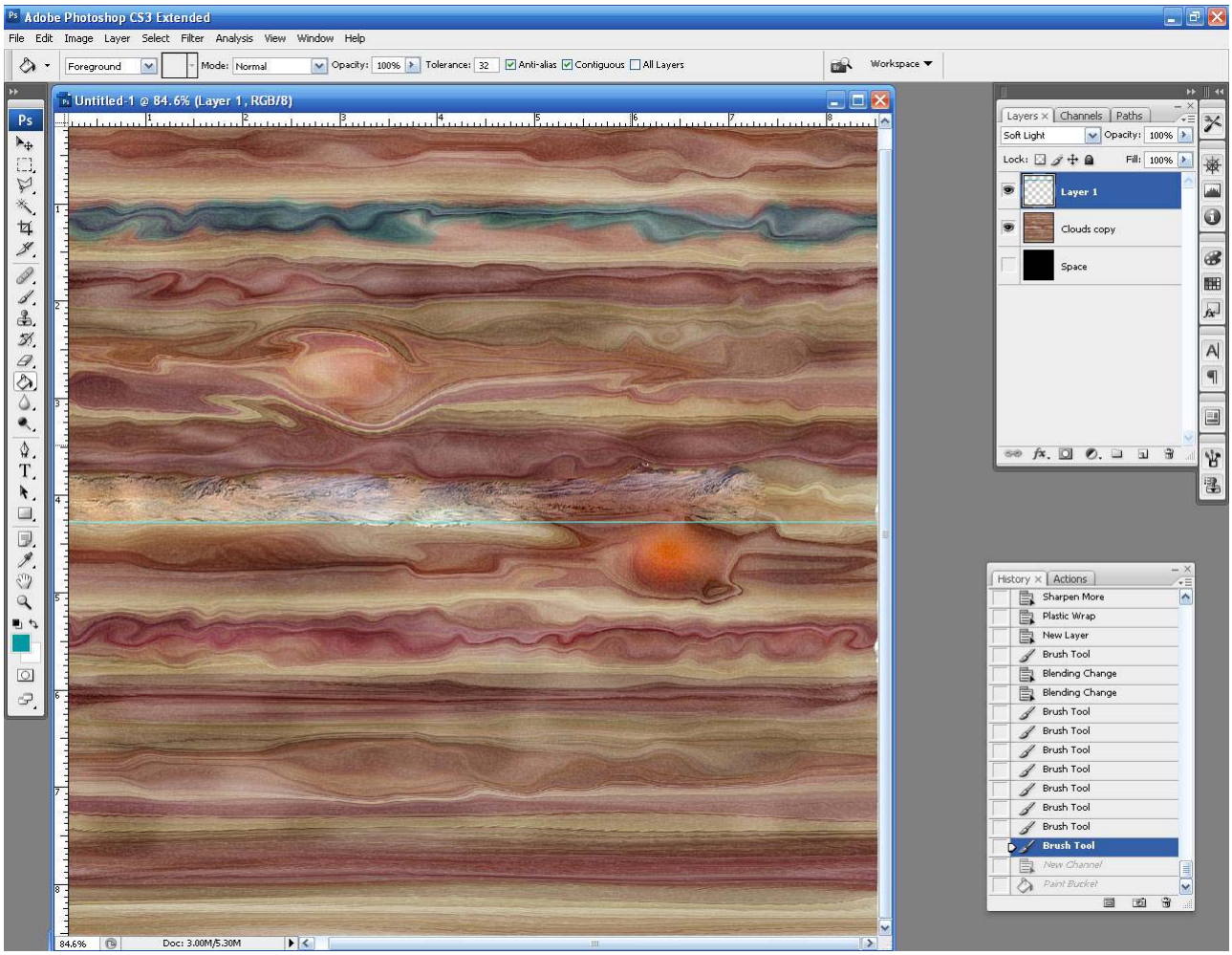


After all of these steps, one can always go back an use Filter>Liquify and use the Bloat and Turbulence Tool to modify the image more.

If you would like to add extra colors to the work at this point, select a new layer, choose a small-med brush like size 27 for example and choose a color. Paint over a desired area.

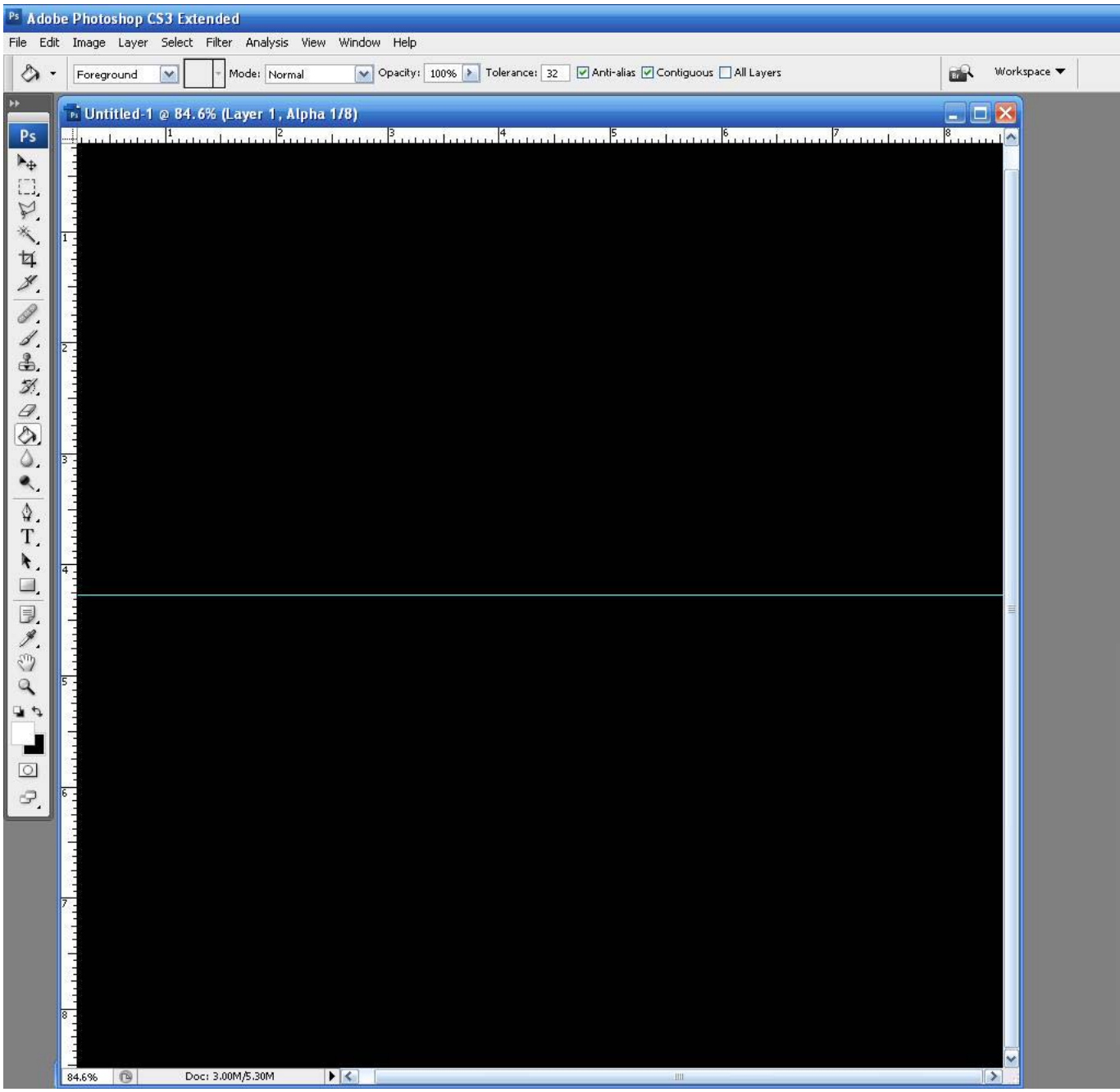


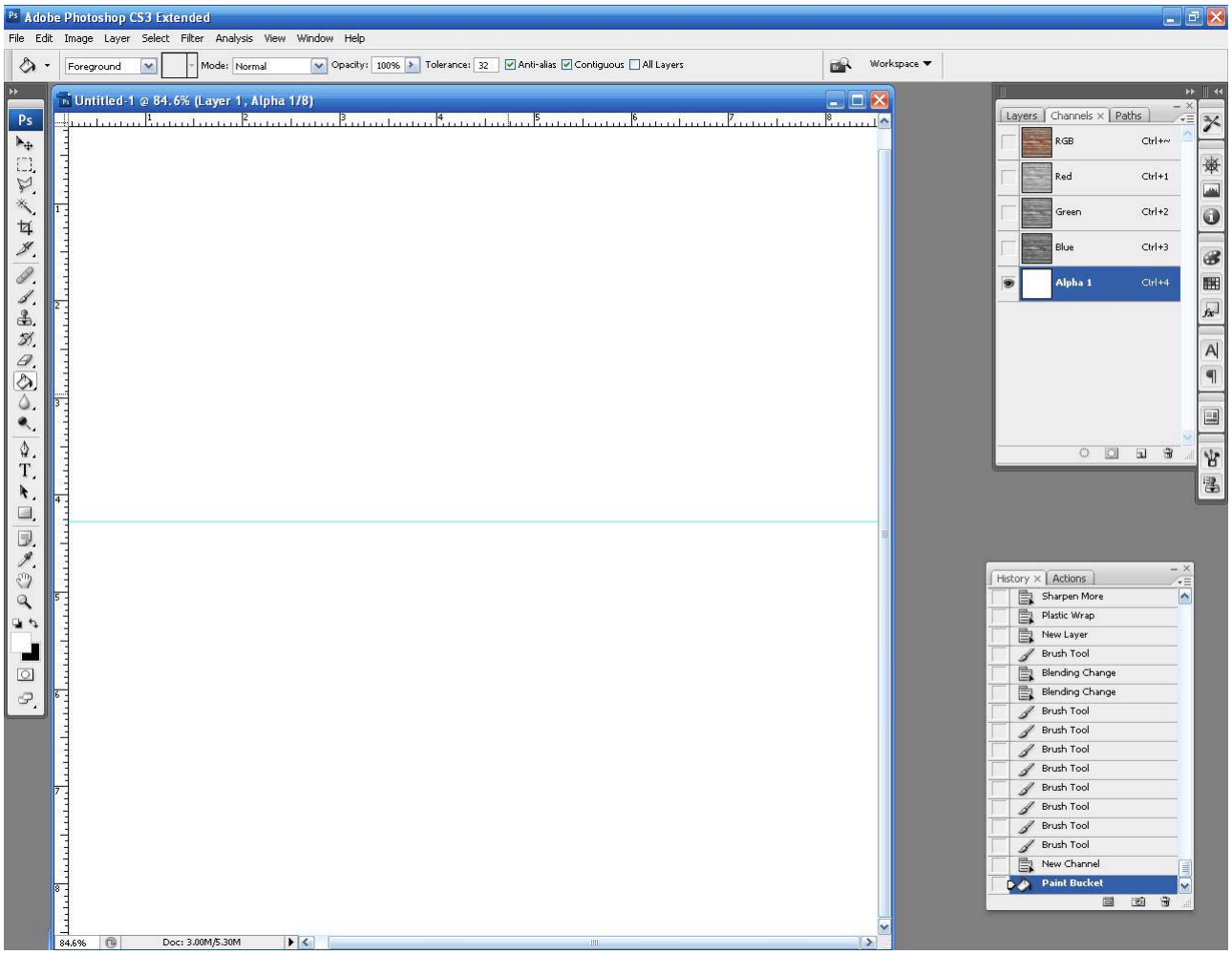
Then set layer options to Soft Light, or Overlay .

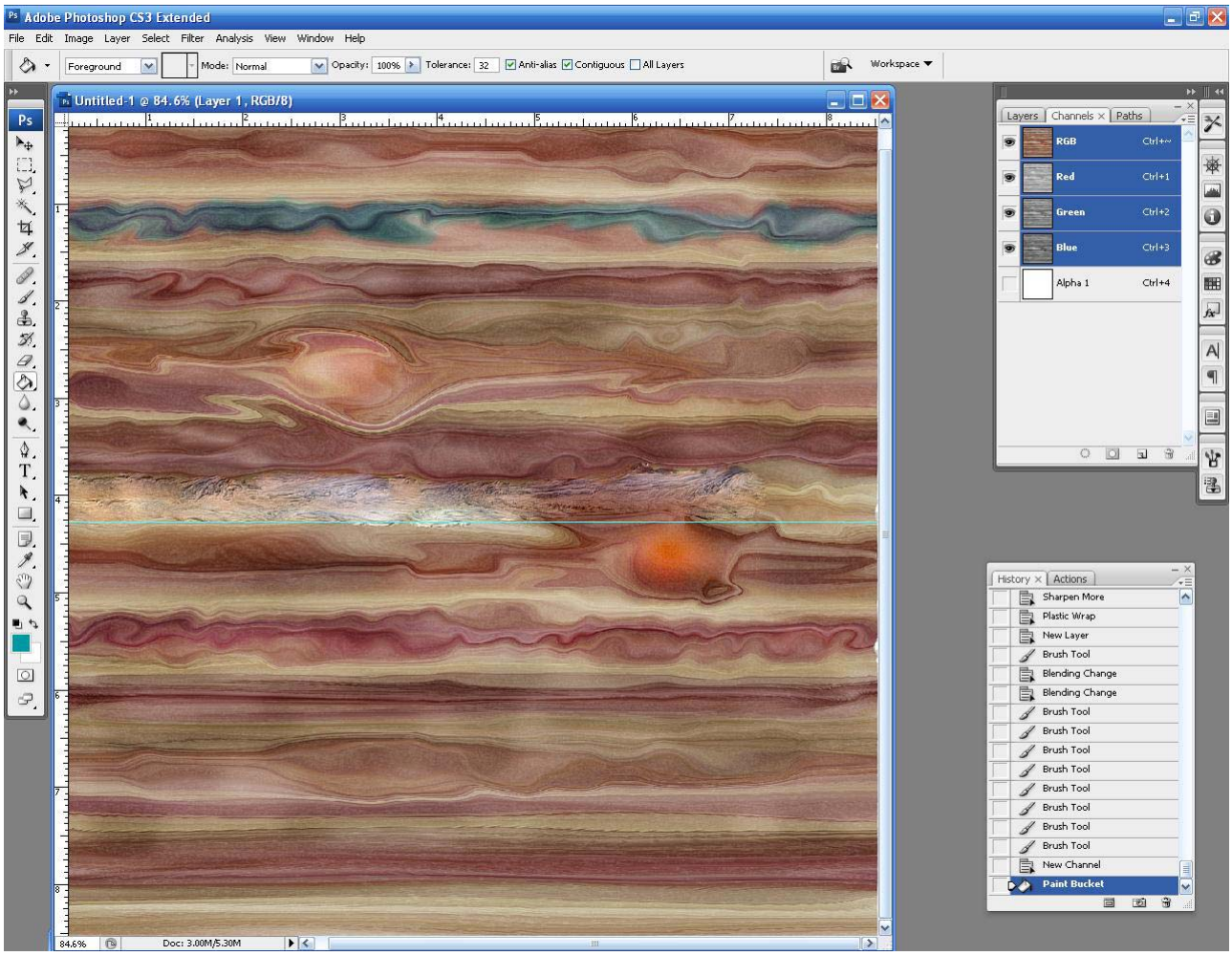


You will have to experiment to see what works best. For each new color, create a new layer and repeat.

When finished, flatten image, and click on the Channels Tab. Create a new alpha channel and fill it with white. Click back on RGB channel at top of Channels Tab, and return to Layers Tab.


Adobe Photoshop CS3 Extended
File Edit Image Layer Select Filter Analysis View Window Help
Foreground
Mode: Normal
Opacity: 100%
Tolerance: 32
Anti-alias
Contiguous
All Layers
Workspace
Untitled-1 @ 84.6% (Layer 1, Alpha 1/8)
84.6%
Doc: 3.00M/5.30M


Adobe Photoshop CS3 Extended
File Edit Image Layer Select Filter Analysis View Window Help
Foreground Mode: Normal Opacity: 100% Tolerance: 32 Anti-alias Contiguous All Layers
Workspace
Untitled-1 @ 84.6% (Layer 1, Alpha 1/8)
84.6% Doc: 3.00M/5.30M
Layers Channels Paths
RGB Ctrl+~
Red Ctrl+1
Green Ctrl+2
Blue Ctrl+3
Alpha 1 Ctrl+4
History Actions
Sharpen More
Plastic Wrap
New Layer
Brush Tool
Blending Change
Blending Change
Brush Tool
Brush Tool
Brush Tool
Brush Tool
Brush Tool
Brush Tool
Brush Tool
Brush Tool
New Channel
Paint Bucket


Adobe Photoshop CS3 Extended
File Edit Image Layer Select Filter Analysis View Window Help
Foreground Mode: Normal Opacity: 100% Tolerance: 32 Anti-alias Contiguous All Layers
Workspace
Untitled-1 @ 84.6% (Layer 1, RGB/8)
84.6% Doc: 3.00M/5.30M
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Blending Change
Blending Change
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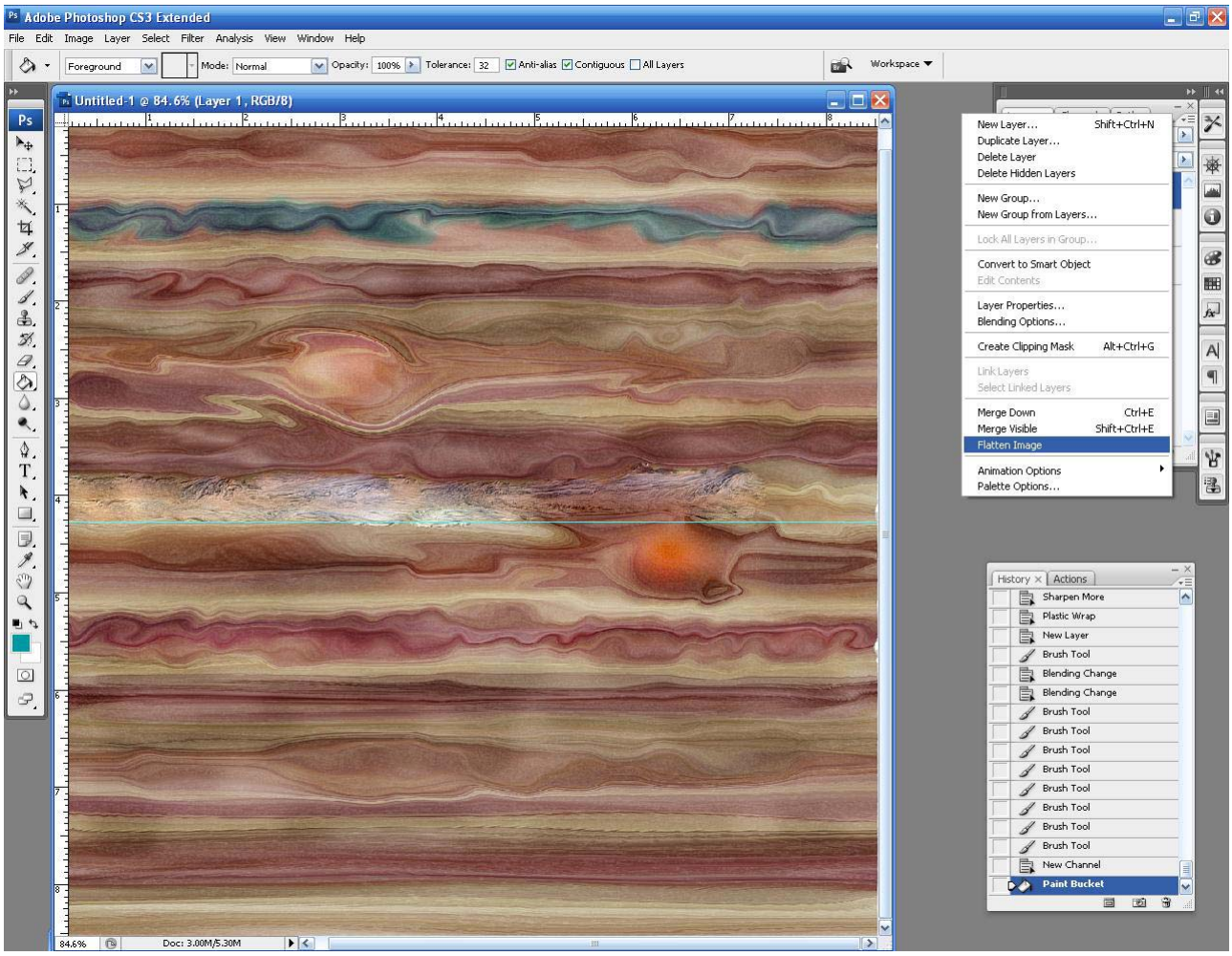
Brush Tool
Brush Tool
Brush Tool
Brush Tool
New Channel
Paint Bucket



When finished with the design, there is one last step before saving the file. You need to correct the texture so that when it wraps around the planet, both sides connect seemlessly.

To accomplish this, take the Square Marquee Tool, and select on the left hand side of the texture the entire side from top to bottom and about 1/8 of an inch (roughly) in towards the center, so that you have a long vertical column selected along the entire left hand side.

Copy and paste this selection so that it becomes a new layer (Ctrl+C, and Ctrl+V).

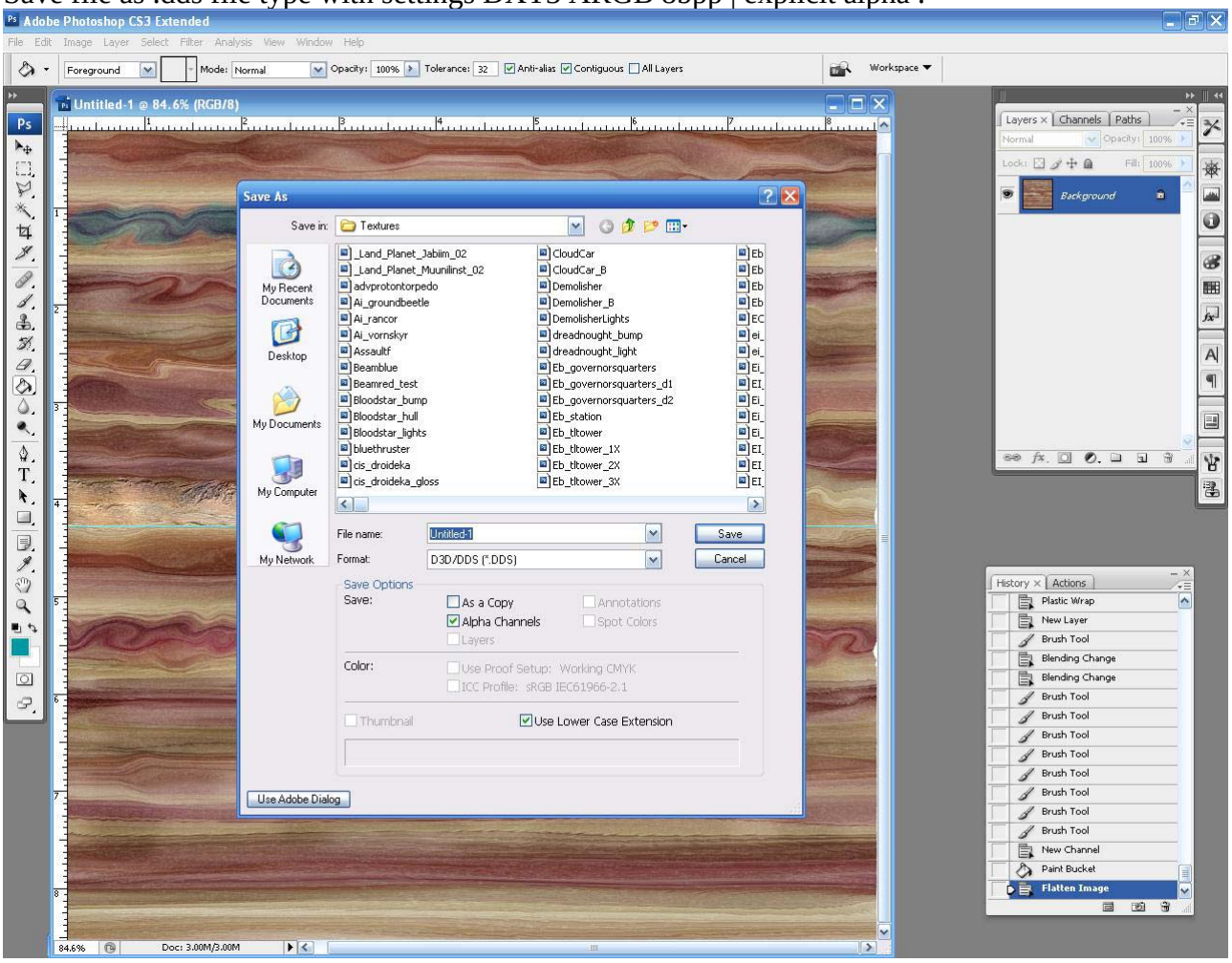
Now with this new layer selected go to Edit>Transform>Flip Horizontal and move this vertical column all the way so that it is against the right side side of the document.

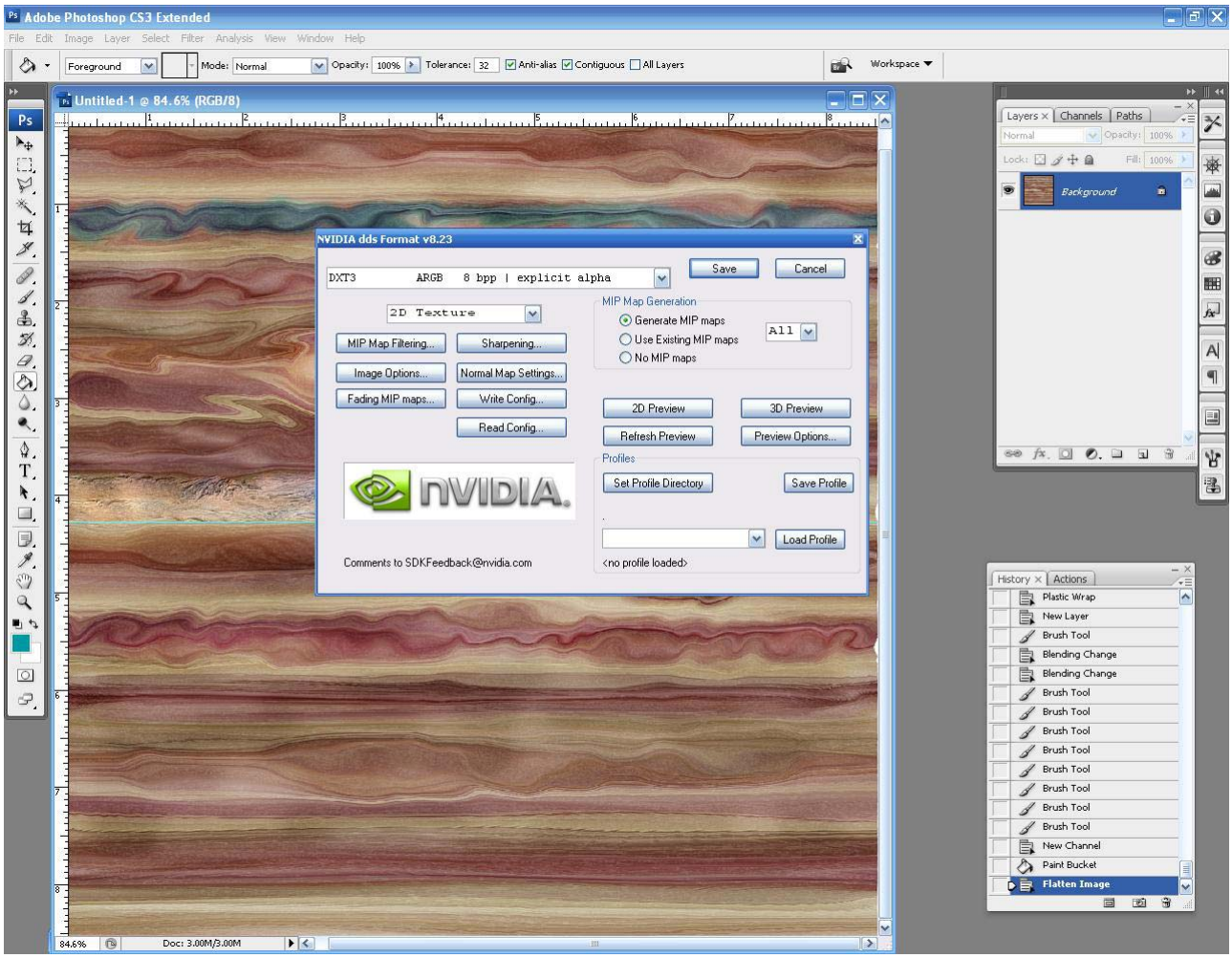
Now select the main texture (should be background) and press "Ctrl+Alt+T" and grab the right side and move it leftwards, squeezing the main texture a bit, until it becomes even with the column of the other layer you just positioned before.

Zoom in and double check to make sure that there is no space between the two layers, and then merge/flatten the two layers together.

Then use the Spot Healing Tool to blend out any areas that don't seem to match up perfectly. By doing this step, when the game loads the planet texture, there will be no "seam" visible on the planet. (sorry, no screenshots to illustrate this step, I almost forgot to add it in)

Save file as .dds file type with settings DXT3 ARGB 8bpp | explicit alpha .




Adobe Photoshop CS3 Extended
File Edit Image Layer Select Filter Analysis View Window Help
Foreground Mode: Normal Opacity: 100% Tolerance: 32 Anti-alias Contiguous All Layers
Workspace
Untitled-1 @ 84.6% (RGB/8)
NVIDIA dds Format v8.23
DXT3 ARGB 8 bpp | explicit alpha
Save
Cancel
2D Texture
MIP Map Generation
Generate MIP maps
Use Existing MIP maps
No MIP maps
All
MIP Map Filtering...
Sharpening...
Image Options...
Normal Map Settings...
Fading MIP maps...
Write Config...
Read Config...
2D Preview
3D Preview
Refresh Preview
Preview Options...
Profiles
Set Profile Directory
Save Profile
Load Profile
<no profile loaded>
Comments to SDKFeedback@nvidia.com
nVIDIA
Layers Channels Paths
Background
History Actions
Plastic Wrap
New Layer
Brush Tool
Blending Change
Blending Change
Brush Tool
Brush Tool
Brush Tool
Brush Tool
Brush Tool
Brush Tool
Brush Tool
Brush Tool
Brush Tool
New Channel
Paint Bucket
Flatten Image
84.6% Doc: 3.00M/3.00M

As I had mentioned the ending portion of this tutorial is not 100% complete, for I am still learning and experimenting myself. The provided information should at least get you started on your way, and through trial and error, you should be able to arrive at some of the end results that I came to.

I hope that you have found this helpful, for this is about the extent of the knowledge that I currently have on this process, and wanted to share it to spark interest and other results from other designers.

I look forward to seeing your work on internet, happy modding,

Burntstrobe.

If you need contact with the maker of the tutorial, I recomend you go to www.FirefoxCCMods.com