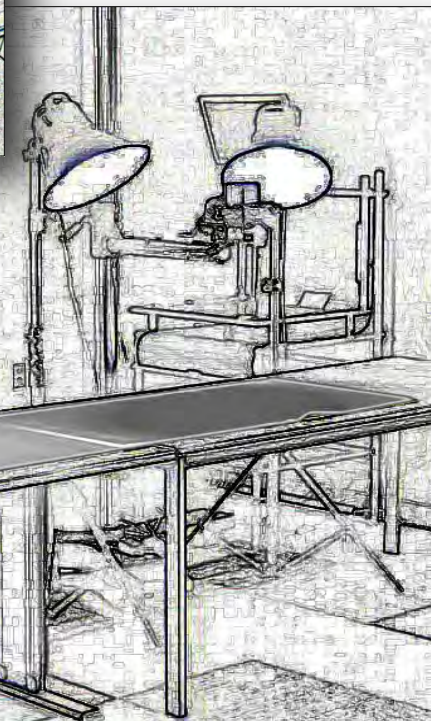


Digitizing Oversized Documents Operational Guide



**Step-by-step procedural guide for
digitizing oversized documents and maps**

- Methods
- Equipment
- Procedures
- Post Processing
- Stitching
- File Configurations



(Considerations)

Size

Length + Width

Condition

Flat, Curled, Fragile, etc.

Digitizing method

Scanner vs. Camera

Post Processing

Enhancement and Stitching

File size/format

Size vs. Resolution

Methods Overview

Scanners

Documents up to (11" x 17") can be scanned completely on the Epson GT20000. Documents 11" x any length can be scanned in overlapping sections. The HP large format scanner in St. Louis can scan 48" wide x any length documents.



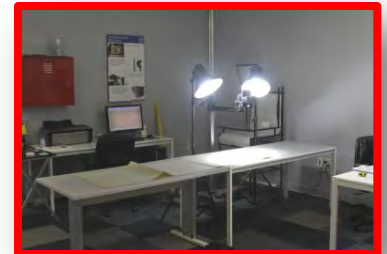
Copy Stand Method

Documents larger than 11" x 17" but not larger than the copy table surface can be photographed using the digital camera setup.



Table Top Method

Maps, documents, and other materials larger than the copy stand surface can be laid out on top of several table tops and must be shot with the digital camera positioned above it. Long documents must be shot in overlapping sections to be digitally stitched later.

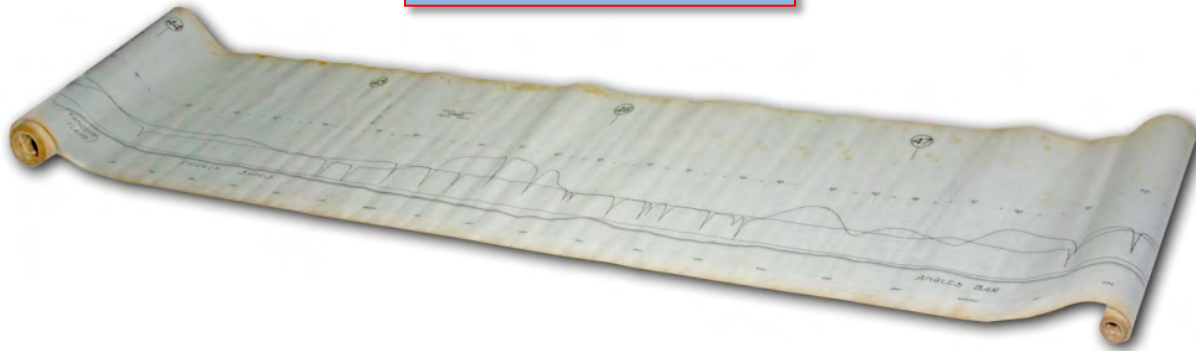


Floor Method

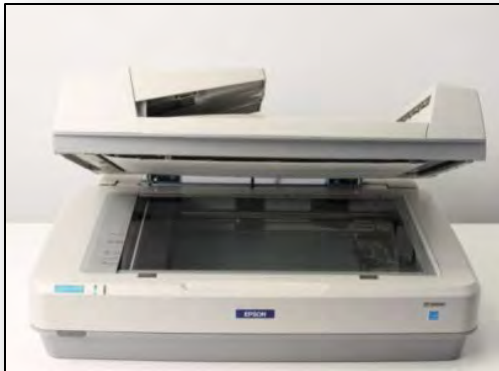
Maps, documents, and other materials larger than the copy stand surface can be laid on the floor with the digital camera positioned above it. Long documents must be shot in overlapping sections to be digitally stitched later.



Scanning Method



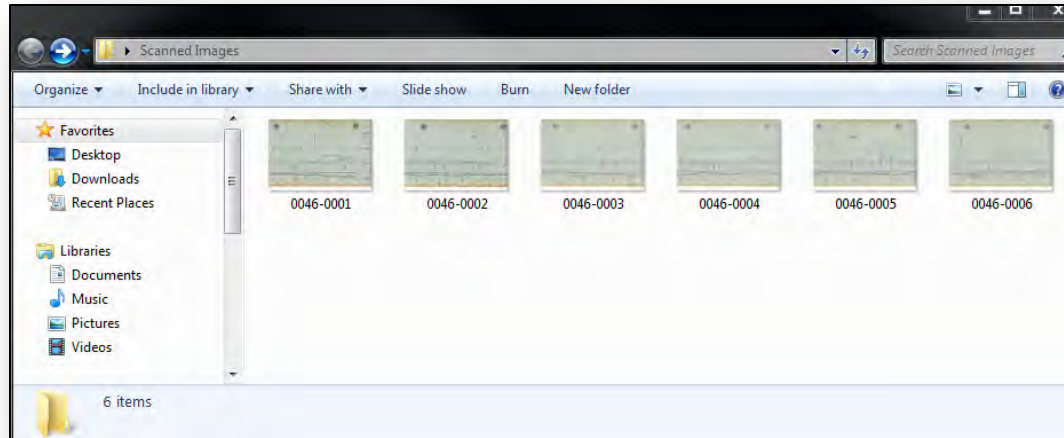
Large documents measuring 11 inches in width by any length can be scanned using the GT20000 scanner. Refer to Scanning Operational Guide for more scanning instructions.



Scan individual overlapping images moving the document the entire length.

NOTE: This method may require several lab technicians working together to align and move the document for accurate overlapping scans.

Scanning Method

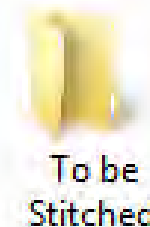


Images are saved in the **(Scanned Images)** folder.



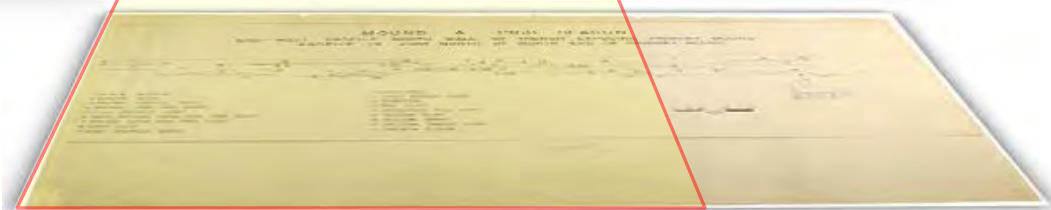
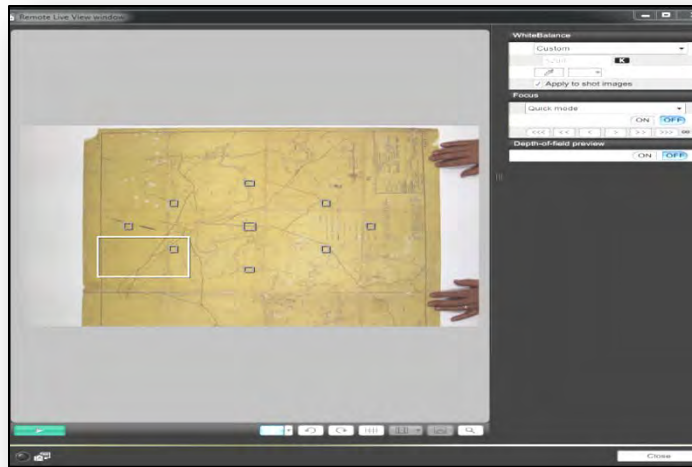
Image file names are preset by the lab technician using the scanner software's naming configuration.

Move the scanned images into a designated **(To be stitched)** folder.



Camera Methods

All of the camera methods in this guide involve the use of the Canon 50D digital camera mounted on the camera stand and controlled by a computer with the dedicated EOS software program in each VCP lab.

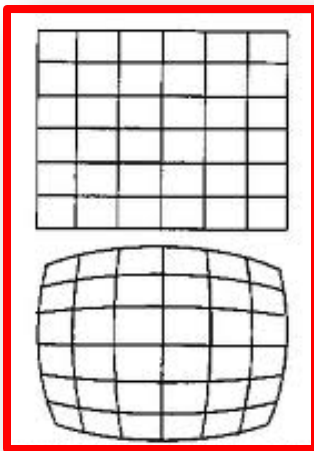


Camera Methods

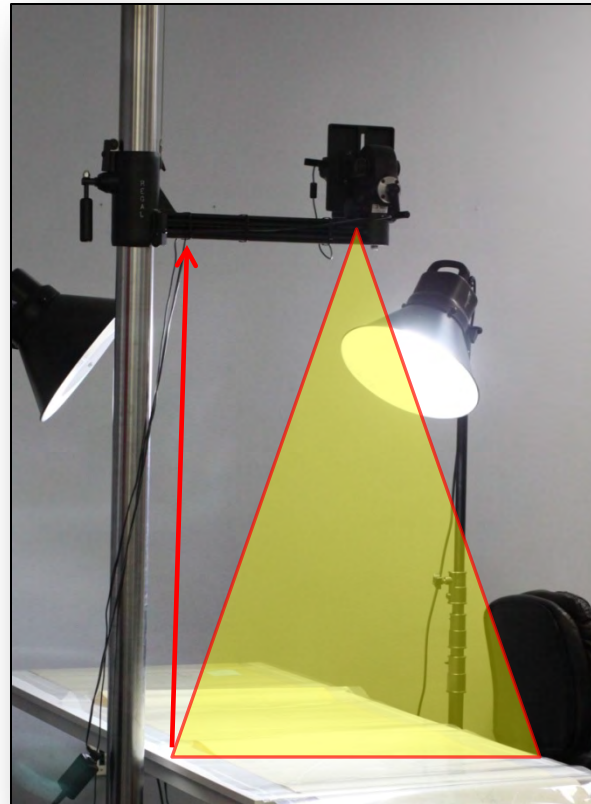


When using the zoom lens adjust the focal length setting between **(35mm and 50mm)** to prevent “barrel distortion”.

It may be necessary to elevate the camera higher on the camera stand to ensure that the document is positioned accurately within the frame.



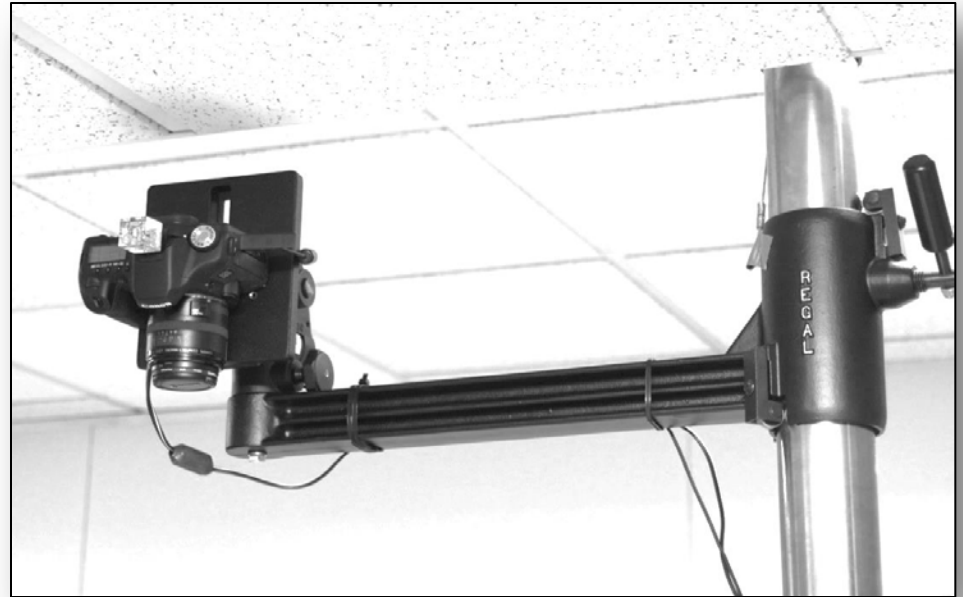
Barrel Distortion



Camera Methods



Camera must be **level**



Document **surface** must be **level**



Copy Stand Method

Equipment Needed:

- Digital camera mounted on the camera stand.
- 28mm to 105mm zoom lens.
- Two lights on light stands.
- 36" x 24" white foam core board.

Procedure: (36" x 24" or smaller)

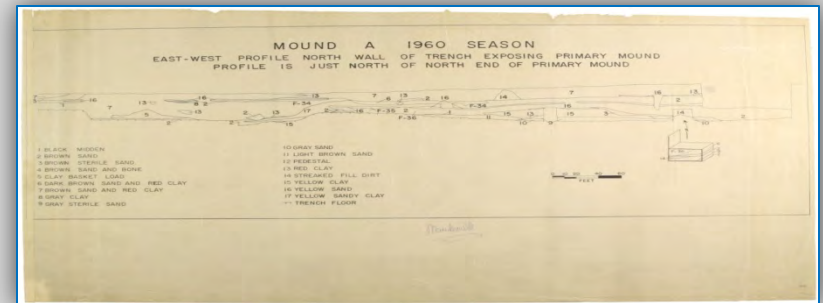
1. Take a reference photograph of the entire document.
2. Position the camera stand closer to the front of the copy stand.
3. Position two lights on light stands on both sides of the copy stand at equal distances and heights.
4. Place a 36" x 24" white foam core board on top of the plexiglas copy stand surface.
5. Position an oversized document on top of the foam core board.
6. Utilizing the EOS utility software's "Live View" function, compose the image so that the document fills the frame.
7. Capture the image.
8. Move the image into the Oversized Documents folder.
9. Re-name the captured image with the asset number.
10. Move the re-named image into the project folder.



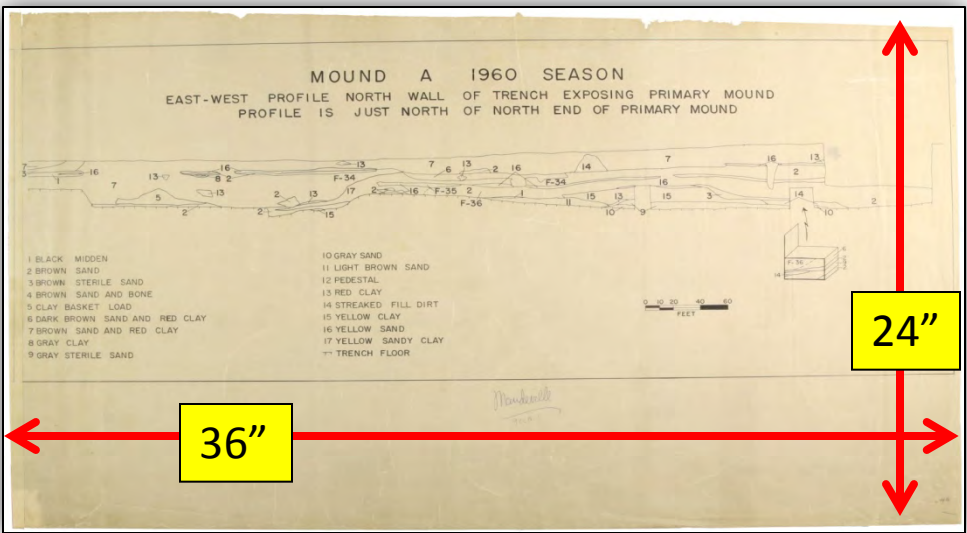
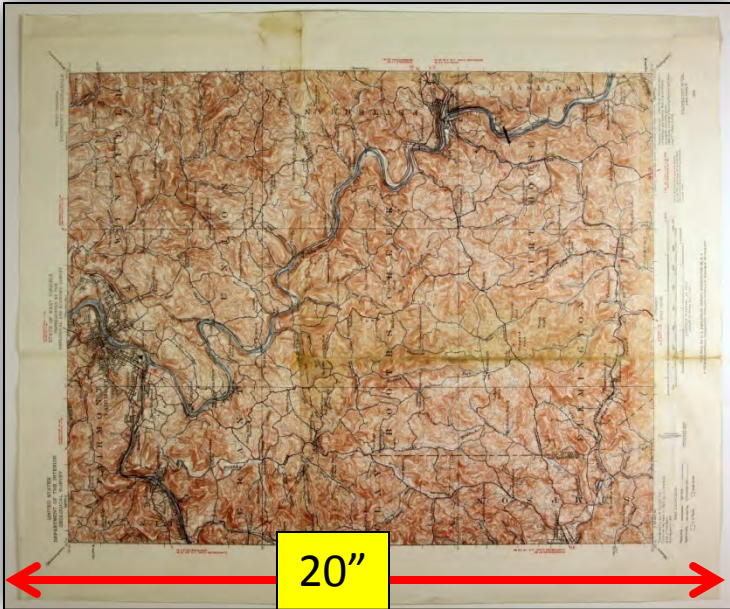
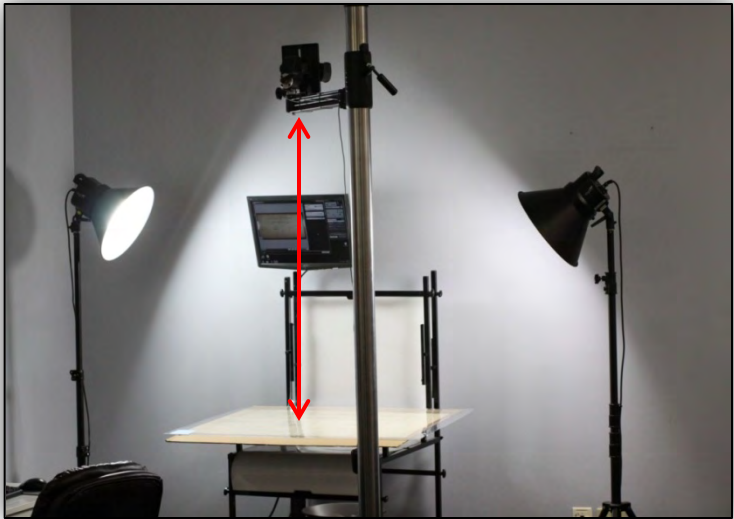
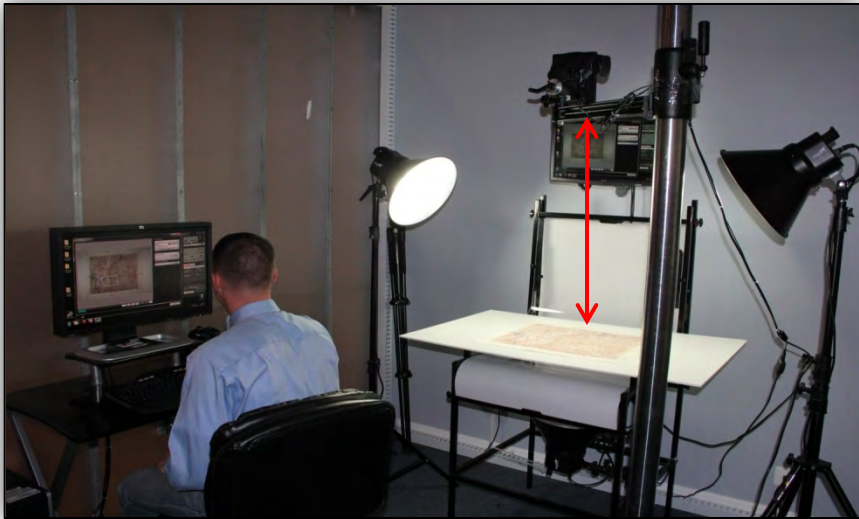
Procedure: (24" x any length)

Follow steps 1 – 6 as above.

7. Capture overlapping images as needed of entire document.
8. Move the images into the Oversized Documents folder.
9. Re-name the files with the asset number (plus a file extension of .1, .2, .3, etc.) for each sequential overlapping image.
10. Move all images into a "To be stitched" folder within the project name folder.

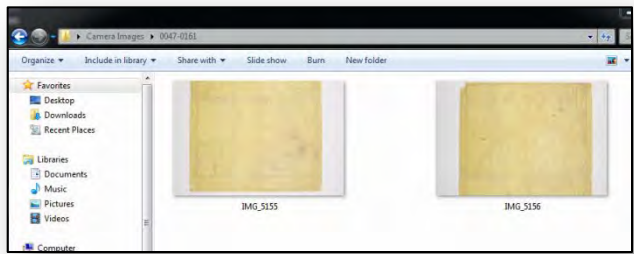


Copy Stand Method



File Naming Configuration

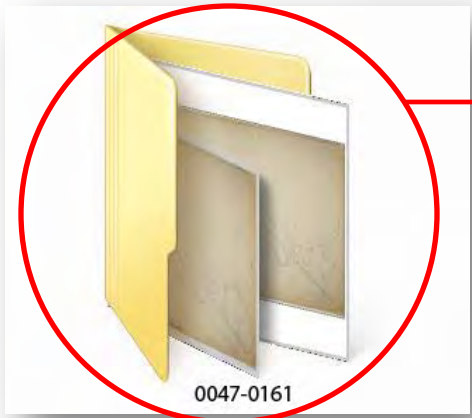
1 Captured images are saved in the (**Camera Images**) folder by default.



2 **Rename** image files with the asset number. For multiple images that need to be stitched, add the (**view extension**) to the asset number.



3 **Move** the renamed images into a folder named with the asset number.



4 **Move** the renamed folder into a (**to be stitched**) folder.

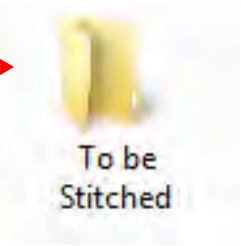


Table Method

Equipment Needed:

- Digital camera mounted on the camera stand.
- 28mm to 105mm zoom lens.
- Two lights on light stands.
- (1 or 2) 6' white tables.

Procedure: (Large documents over 36" in length)

1. Position the camera stand so that the swing arm (camera mount) is positioned over the document.
2. Position two lights on light stands on both sides of the camera stand at equal distances and heights.
3. Utilizing the EOS utility software's "Live View" function, compose the image so that the document fills the frame.
4. Capture overlapping images as needed of entire document.
5. Move the images into the Oversized Documents folder.
6. Re-name the files with the asset number (plus a file extension of .1a, .1b, .1c, etc.) for each sequential overlapping image.
7. Move all images into a "To be stitched" folder within the project name folder.

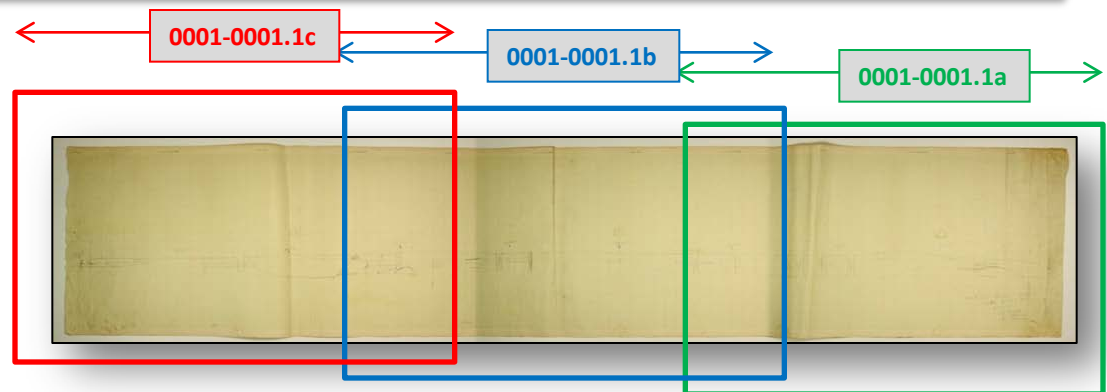


Table Method

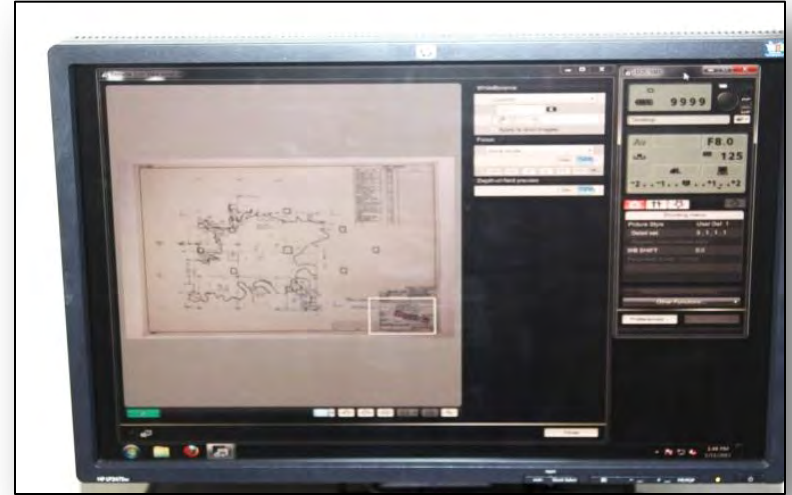
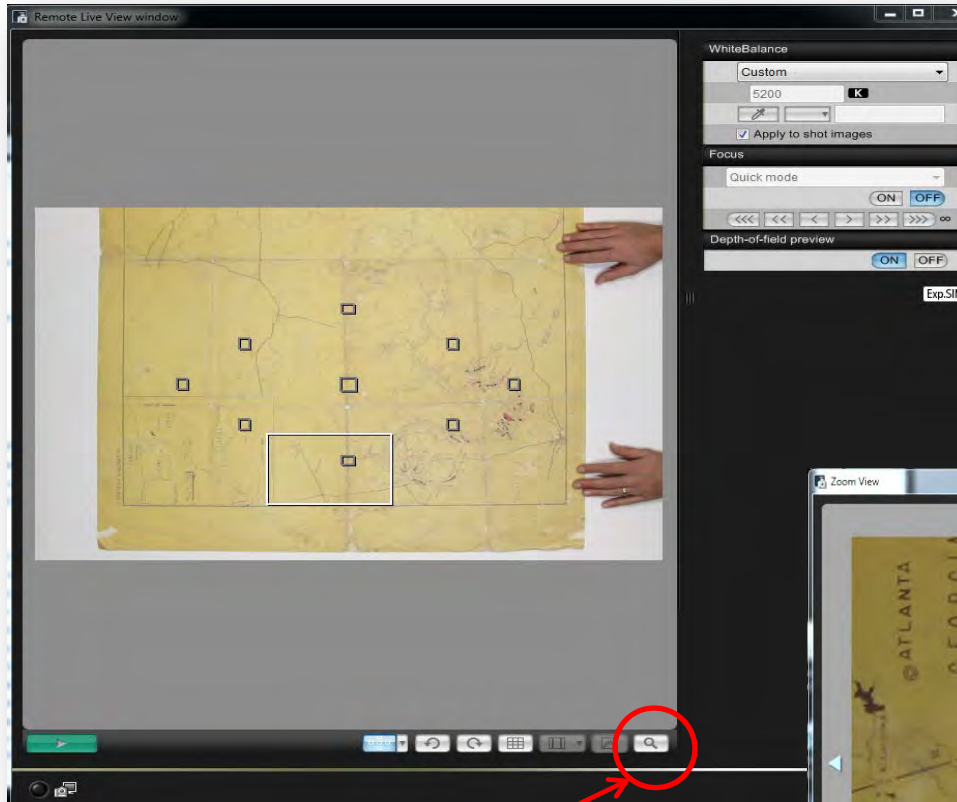


Table Method



1

Align first section of the document utilizing the LiveView function within the EOS utility software.

2

Ensure that the edge of the document is visible.

3

Capture the image.

Use the (Zoom View) function to adjust focus.

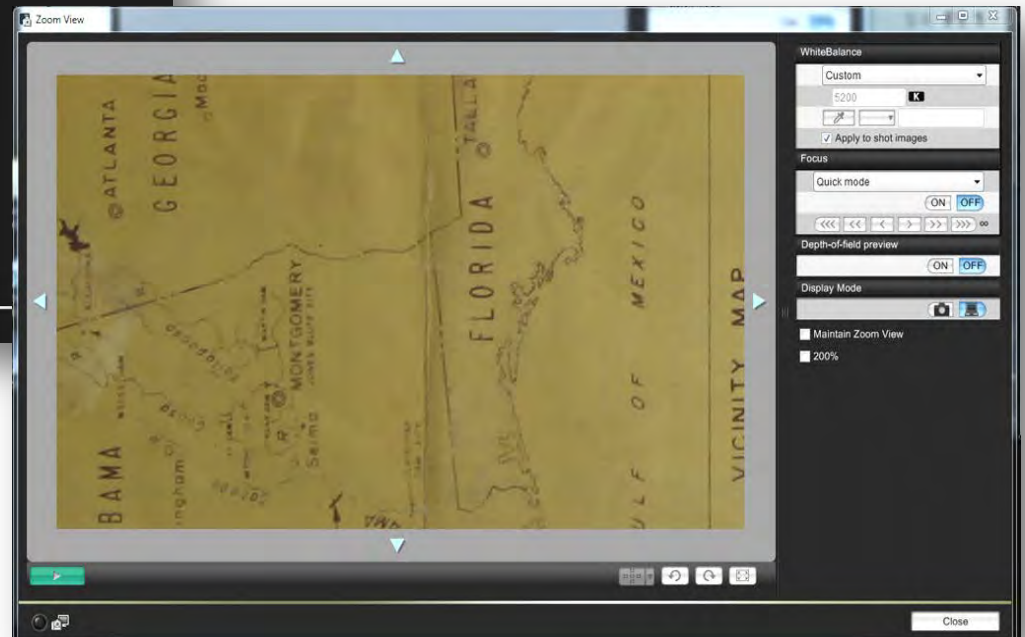
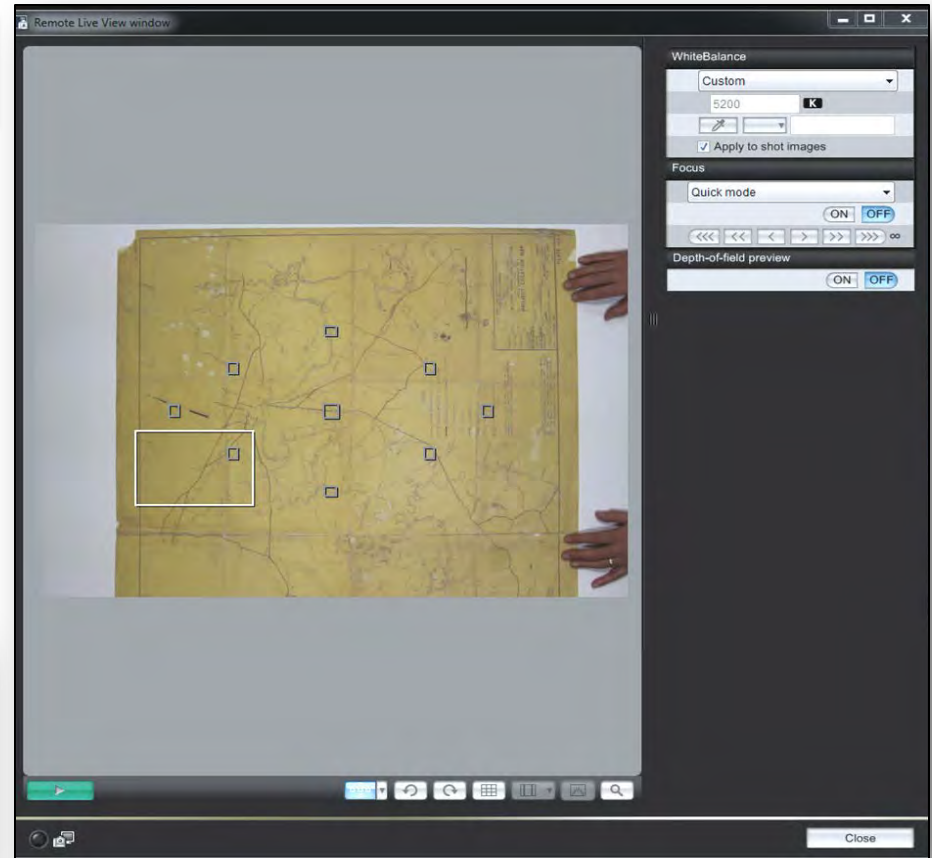


Table Method

- 1 **Align** the second section of the document using the Live View function within the EOS utility software.
- 2 **Make** sure there are overlapping reference points visible in both images.
- 3 **Ensure** that the edge of the document is visible.
- 4 **Capture** the image.



File Naming Configuration

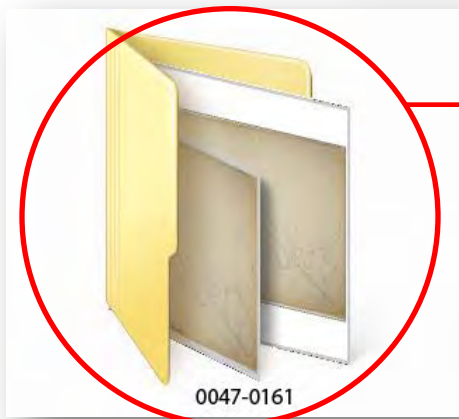
1 Captured images are saved in the (**Camera Images**) folder by default.



2 **Rename** image files with the asset number. For multiple images that need to be stitched, add the (**view extension**) to the asset number.



3 **Move** the renamed images into a folder named with the asset number.



4 **Move** the renamed folder into a (**to be stitched**) folder.



Floor Method



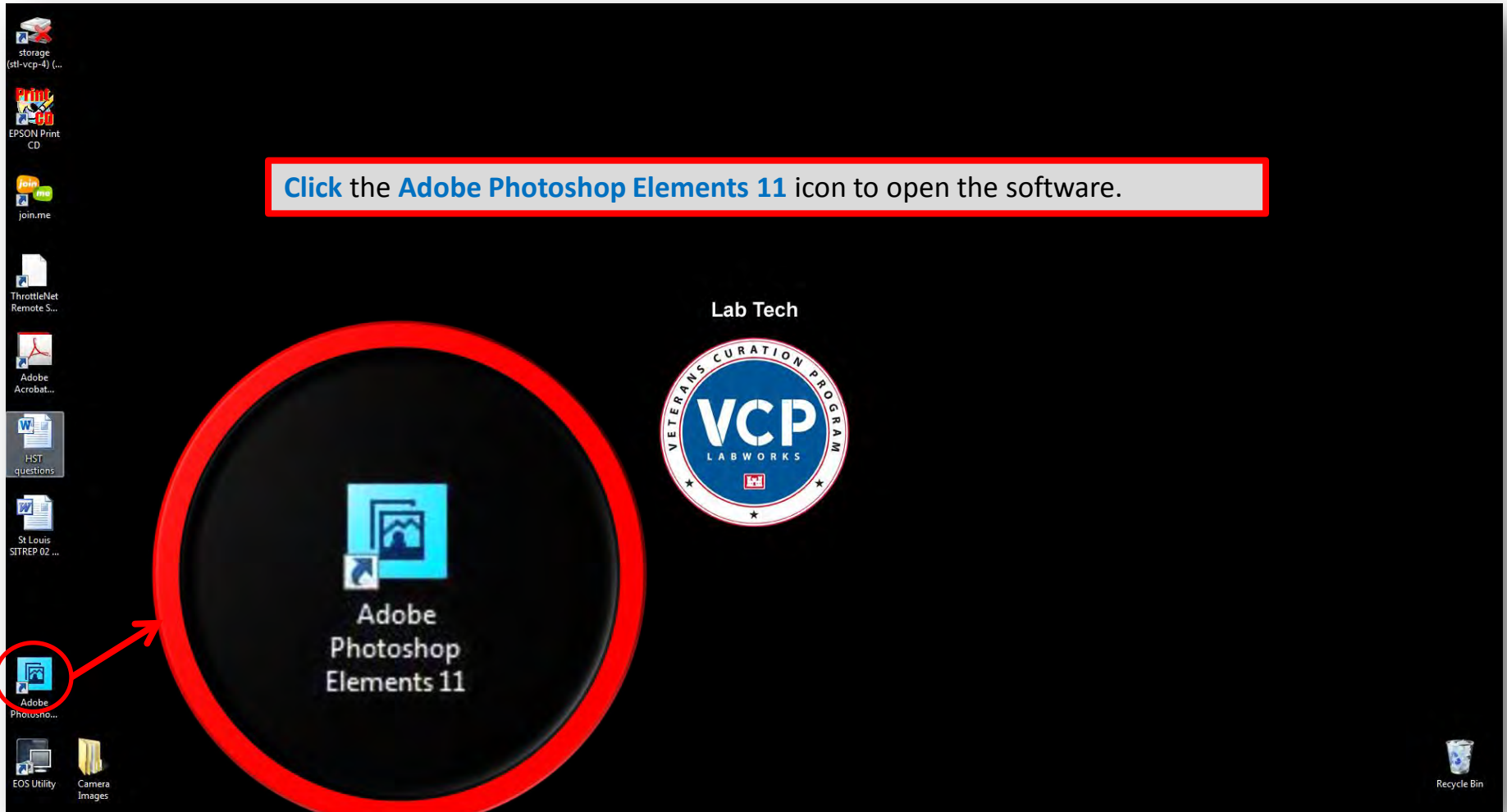
- Documents larger than 42 inches will require a two person approach.
- One person is responsible for aligning the document and positioning the camera, while the other operates the camera remotely from the main computer.
- It's important check the focus on every shot.



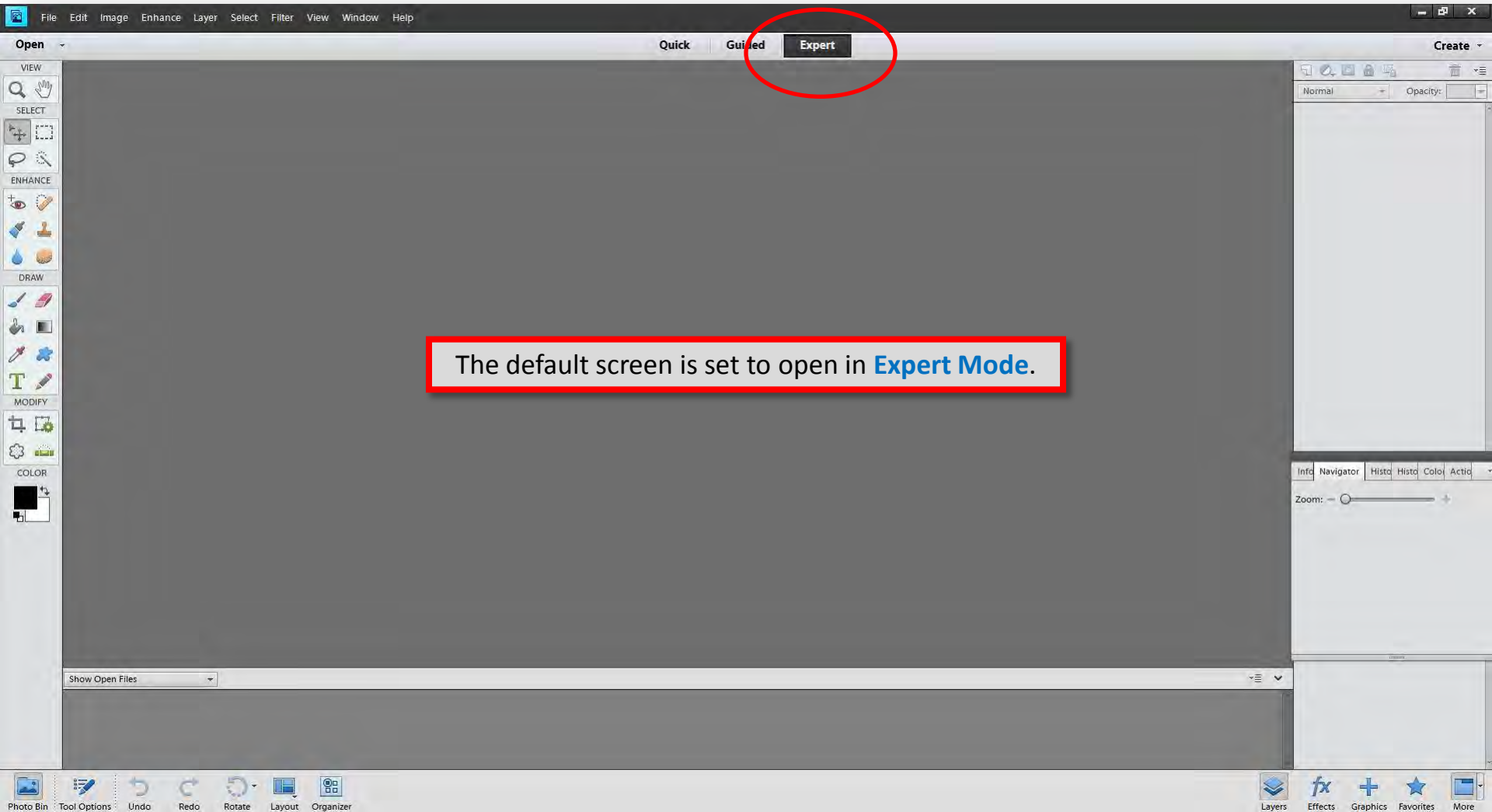
The floor method should be used when shooting very large documents.

Digital Stitching using Adobe Photoshop Elements (Photomerge Method)

Click the **Adobe Photoshop Elements 11** icon to open the software.

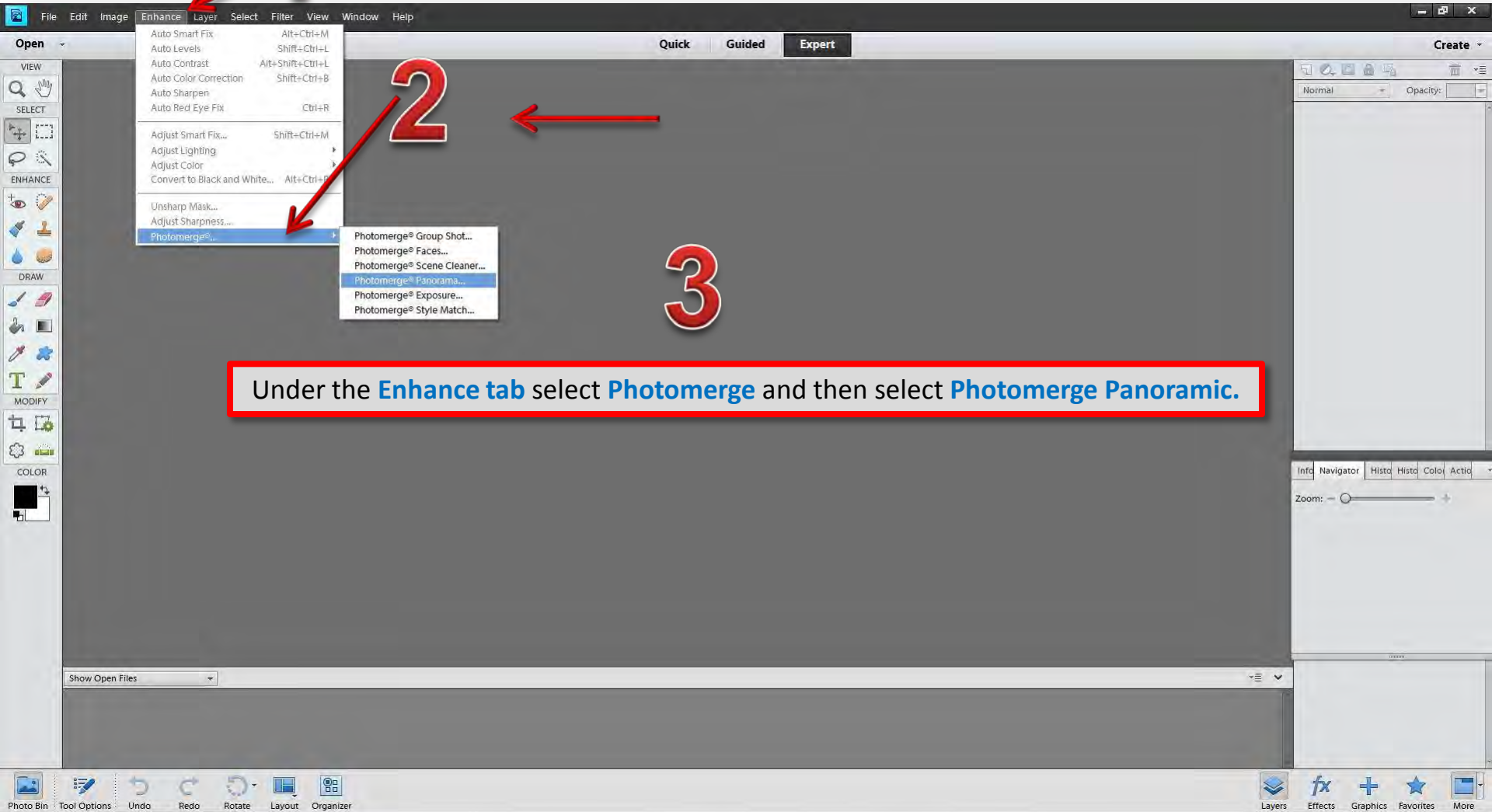


Photomerge Method



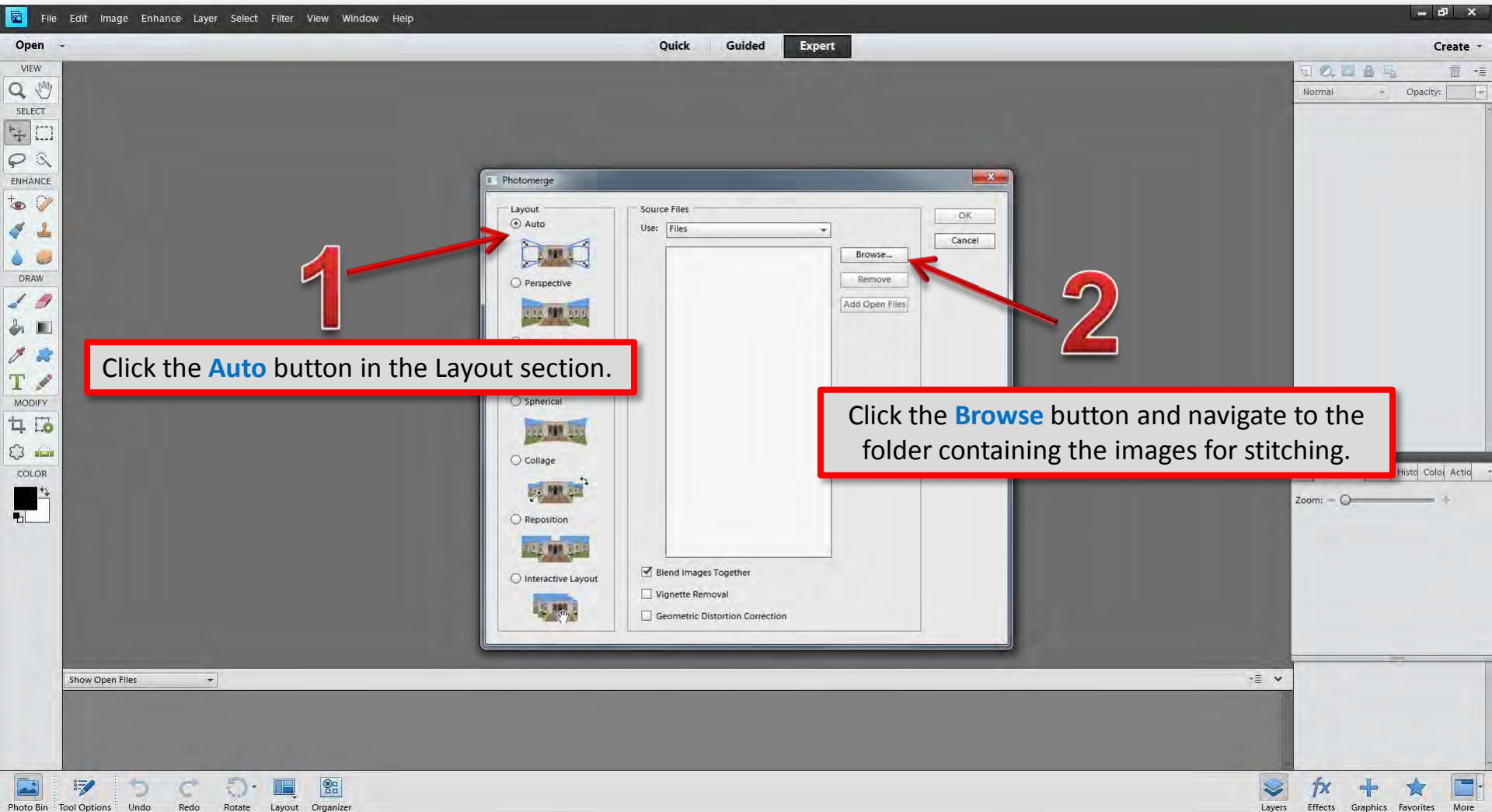
The default screen is set to open in **Expert Mode**.

Photomerge Method

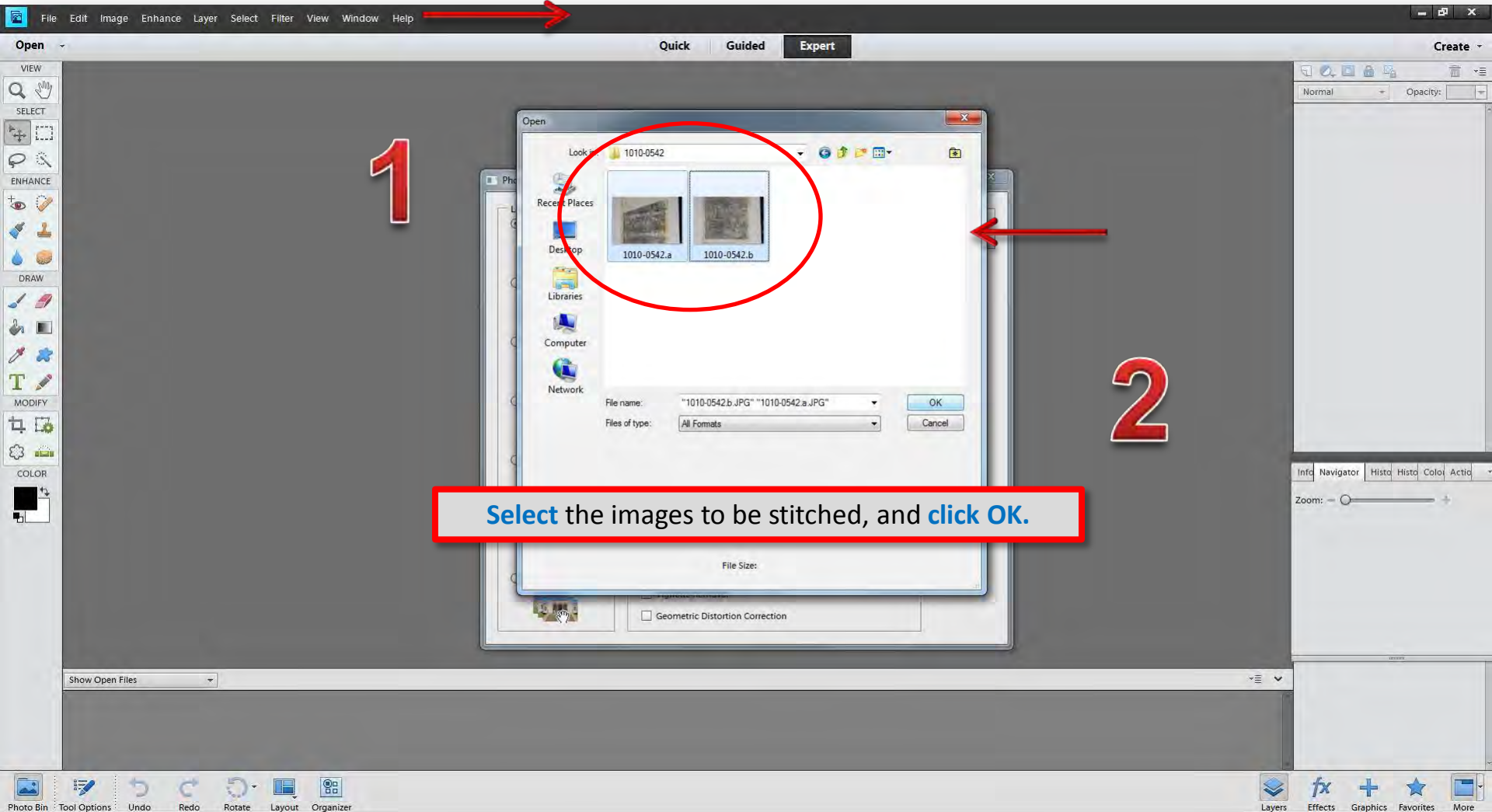


Under the **Enhance** tab select **Photomerge** and then select **Photomerge Panoramic**.

Photomerge Method

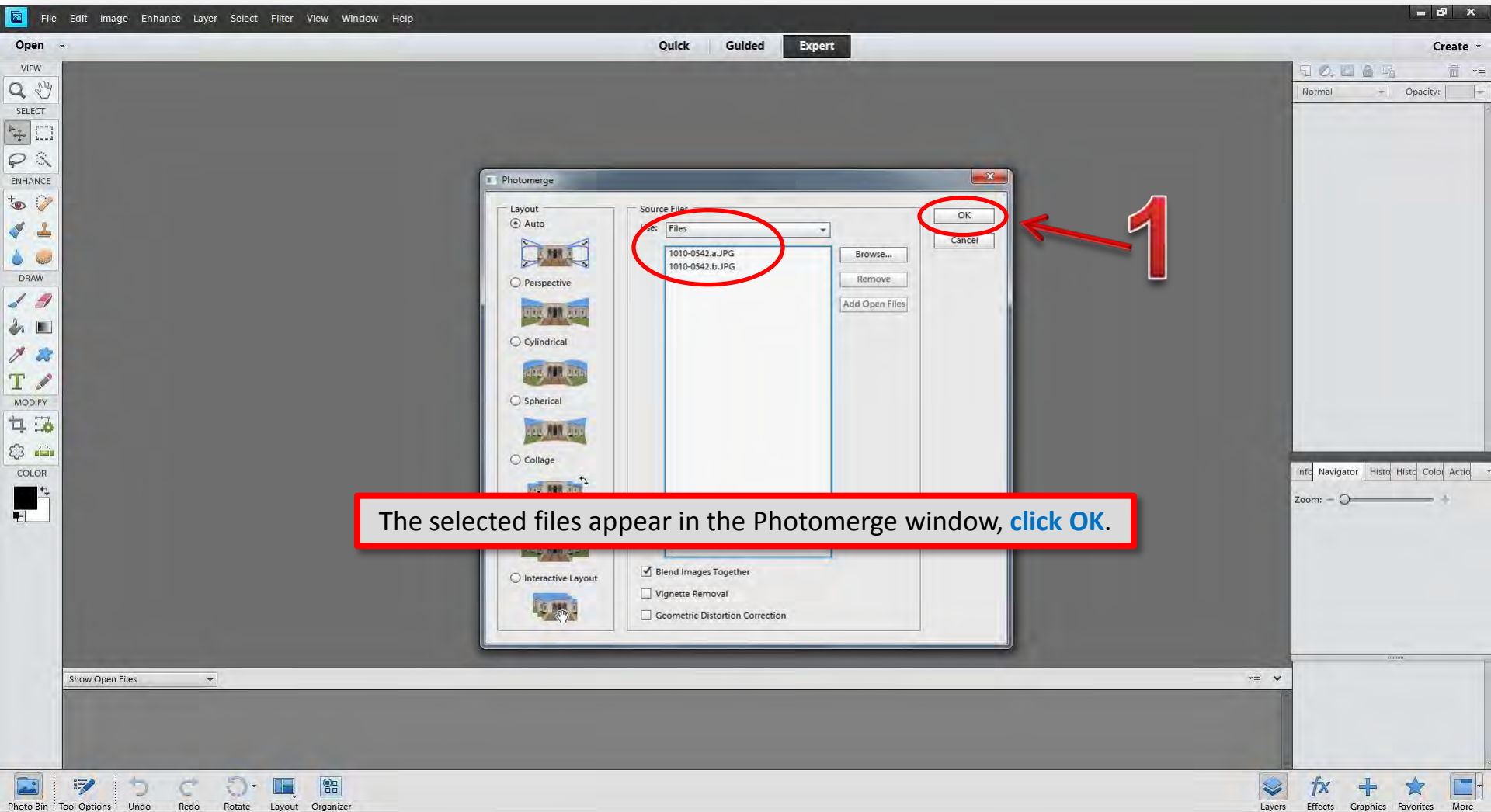


Photomerge Method



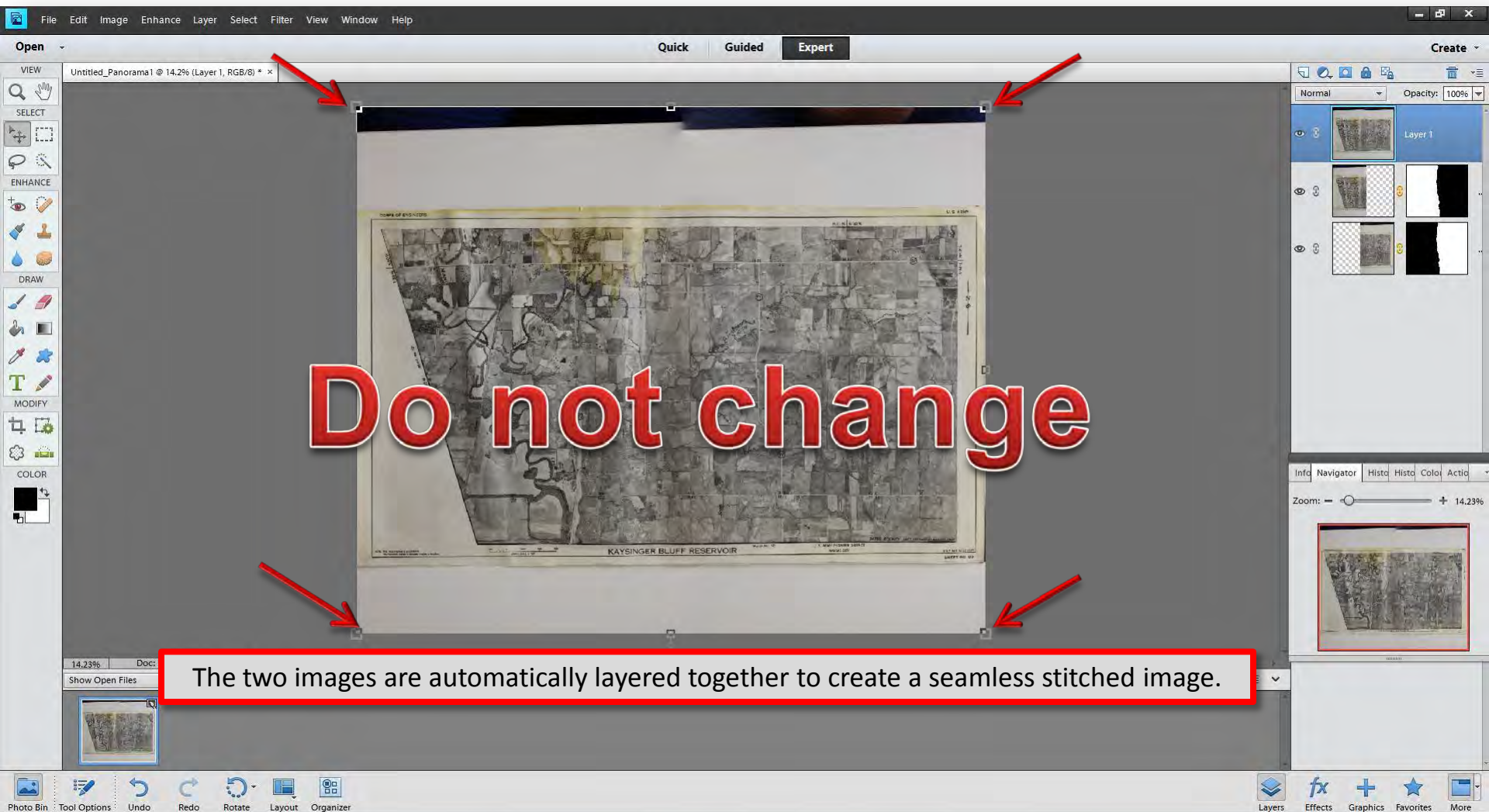
Select the images to be stitched, and click OK.

Photomerge Method



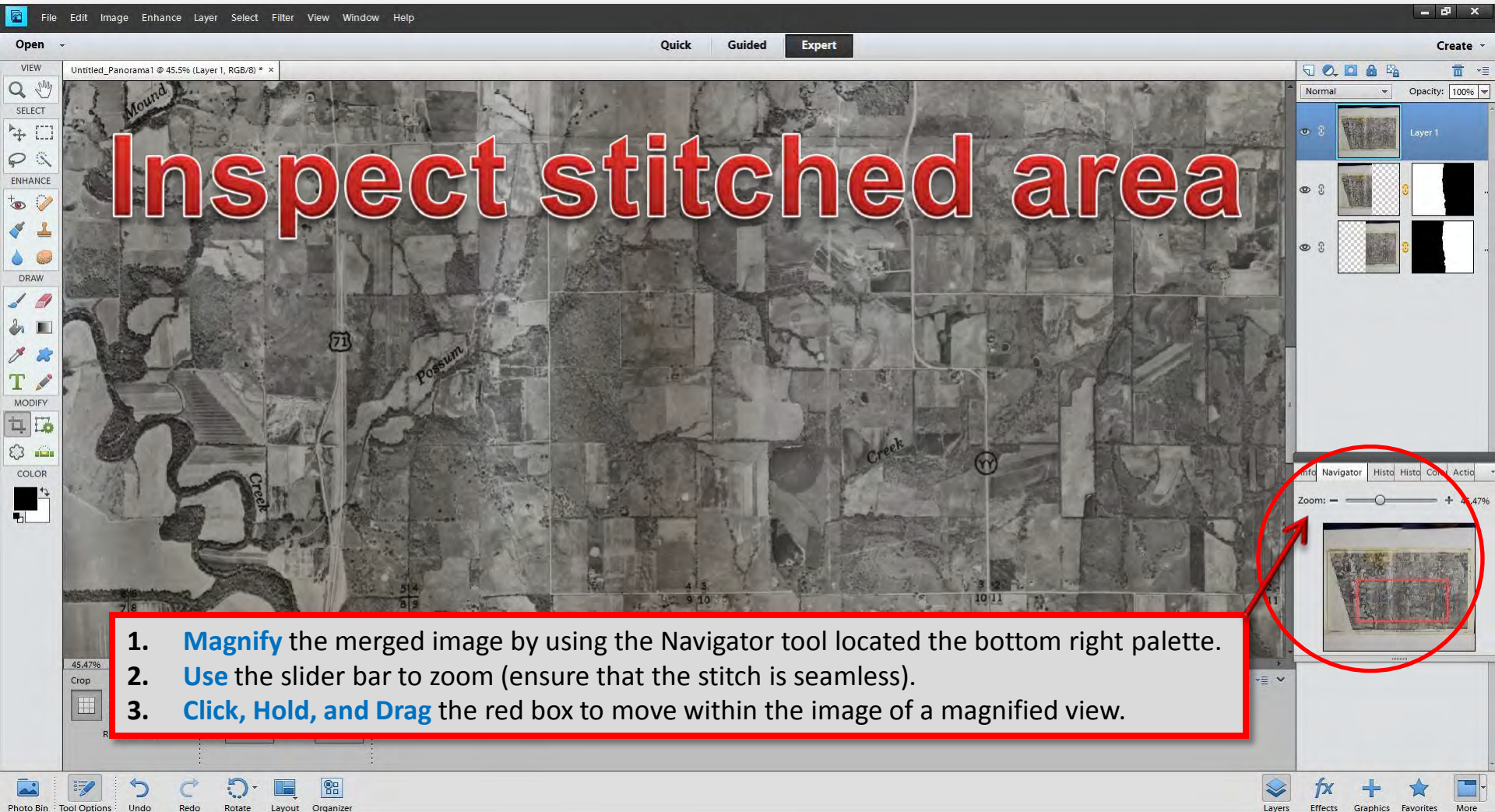
The selected files appear in the Photomerge window, [click OK](#).

Photomerge Method

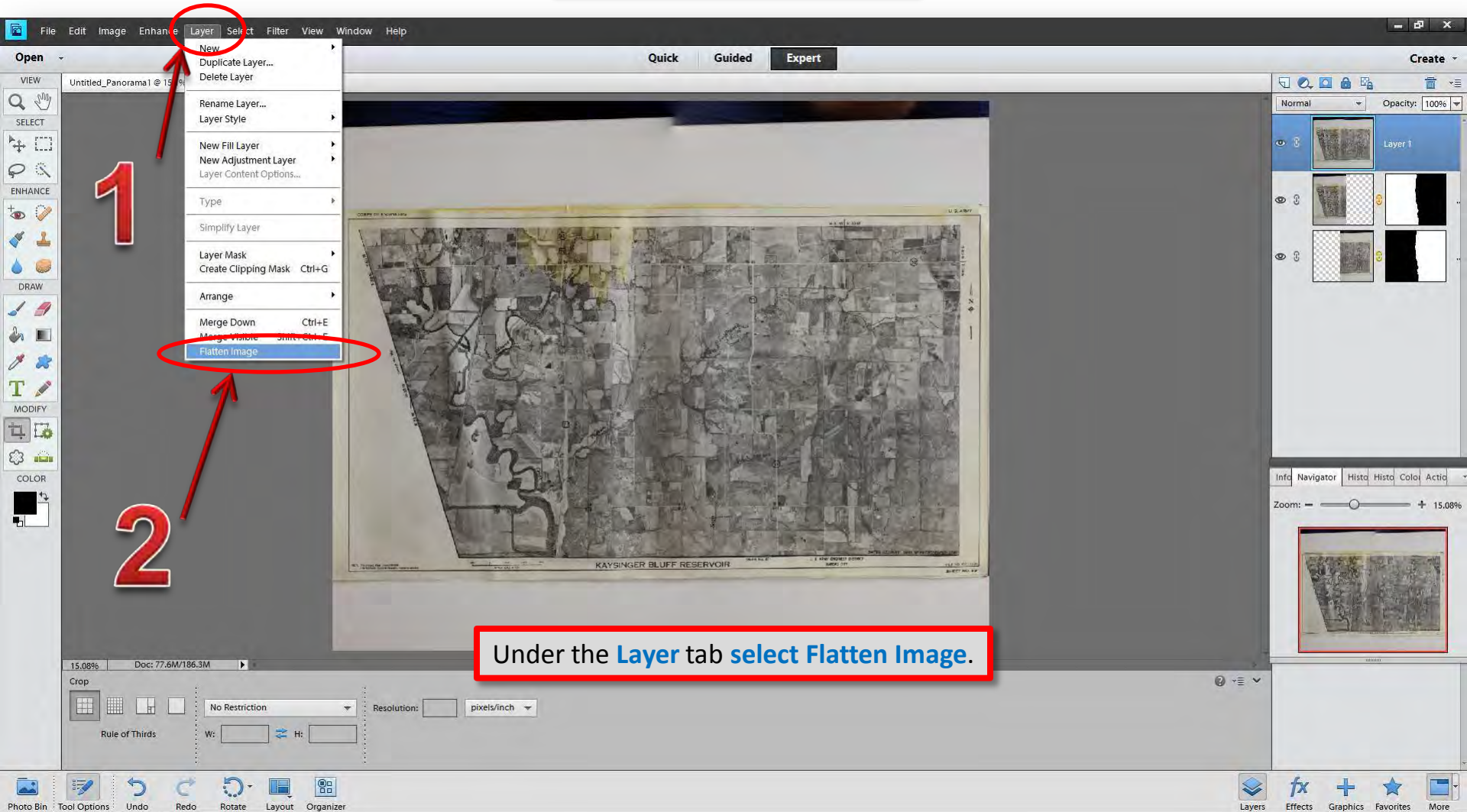


NOTE: Do not move the adjustment control boxes located on the corners, **top**, **bottom**, and **sides** of the image.

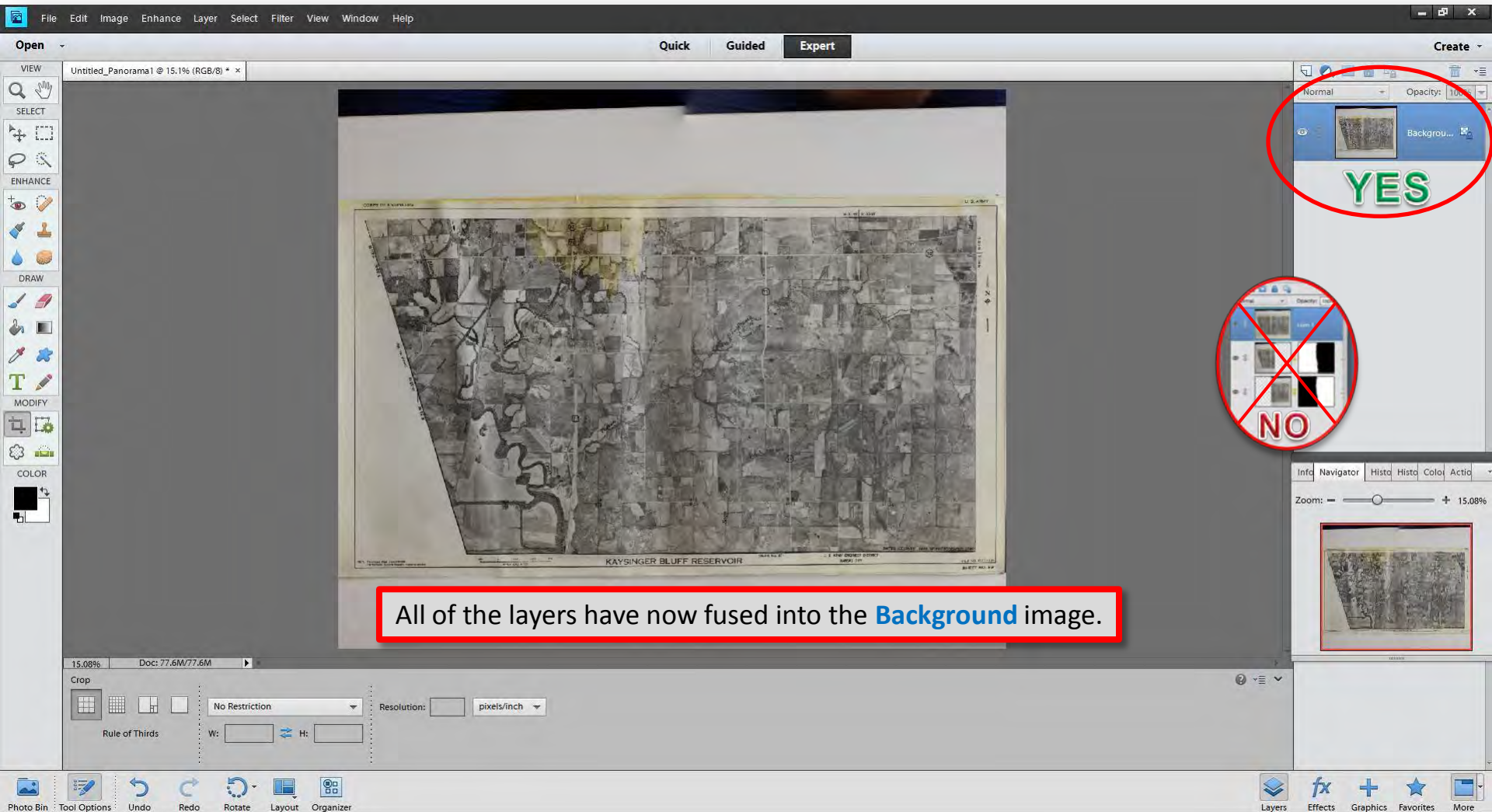
Photomerge Method



Photomerge Method



Photomerge Method



All of the layers have now fused into the **Background** image.

NOTE: All of the layers in the upper right palette are replaced with a single layer called (**Background**).

Photomerge Method

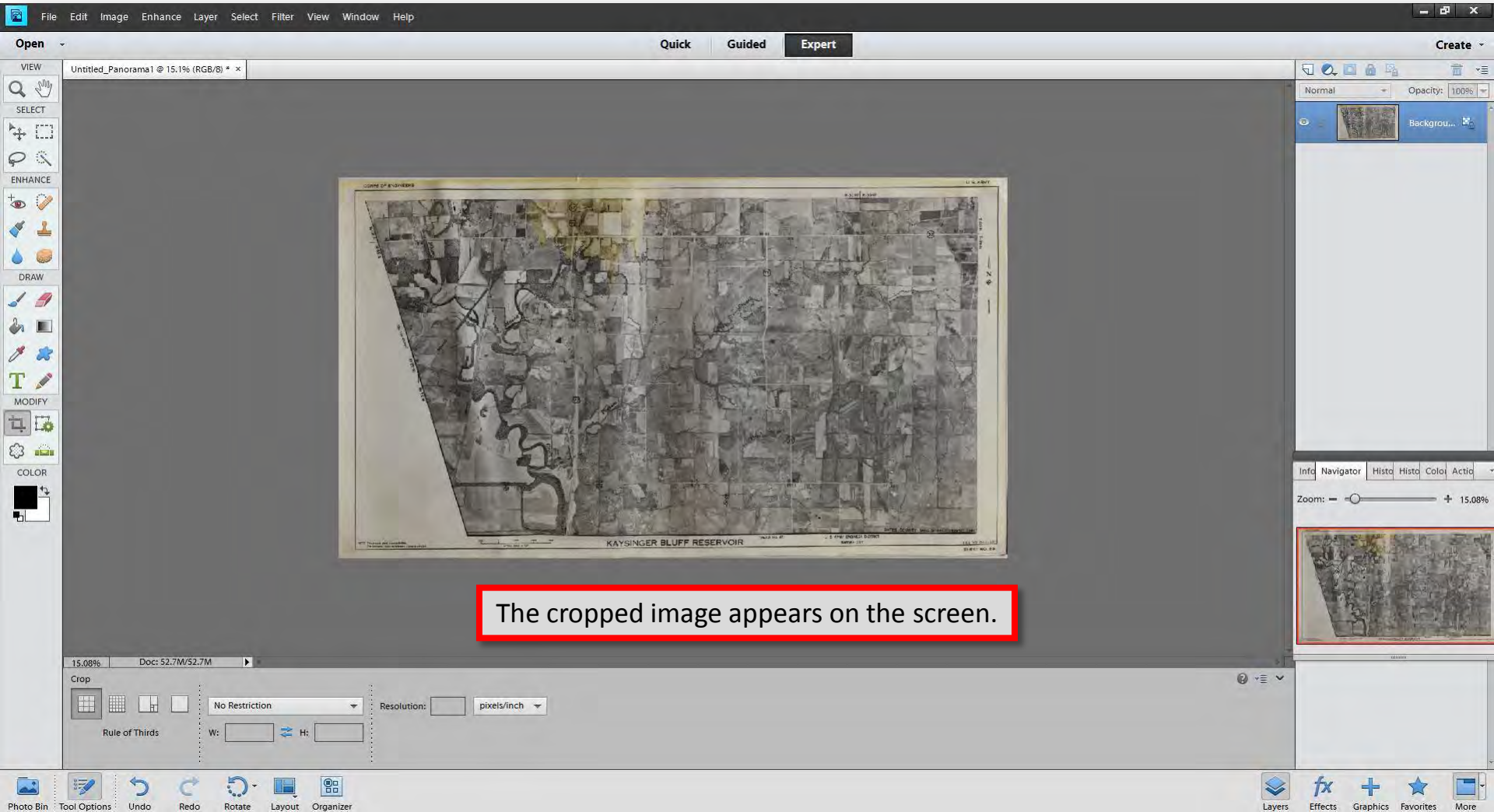
1 Select the **Crop** tool.

2 Click the top left corner of the image and **drag** the cursor (**across and down**) to form a crop area. **Slide** the control boxes surrounding the image to crop out unwanted area.

3 Click the **green check box** to accept crop.

The screenshot shows the Photoshop interface with the 'Expert' workspace. The main canvas displays a photomerge of a landscape with a grid overlay. The 'Crop' tool is selected in the toolbar on the left. A red circle highlights the crop tool icon. Green arrows point to the corners of the crop area. A red circle highlights the green checkmark button in the bottom right corner of the crop area. The 'Crop' panel at the bottom left shows 'No Restriction' and 'Resolution: pixels/inch'. The status bar at the bottom indicates 'Doc: 77.6M/77.6M'.

Photomerge Method



Photomerge Method

Examine the seam area for proper alignment.

STOP

QUALITY CONTROL must be performed by **LAB MANAGER** before continuing

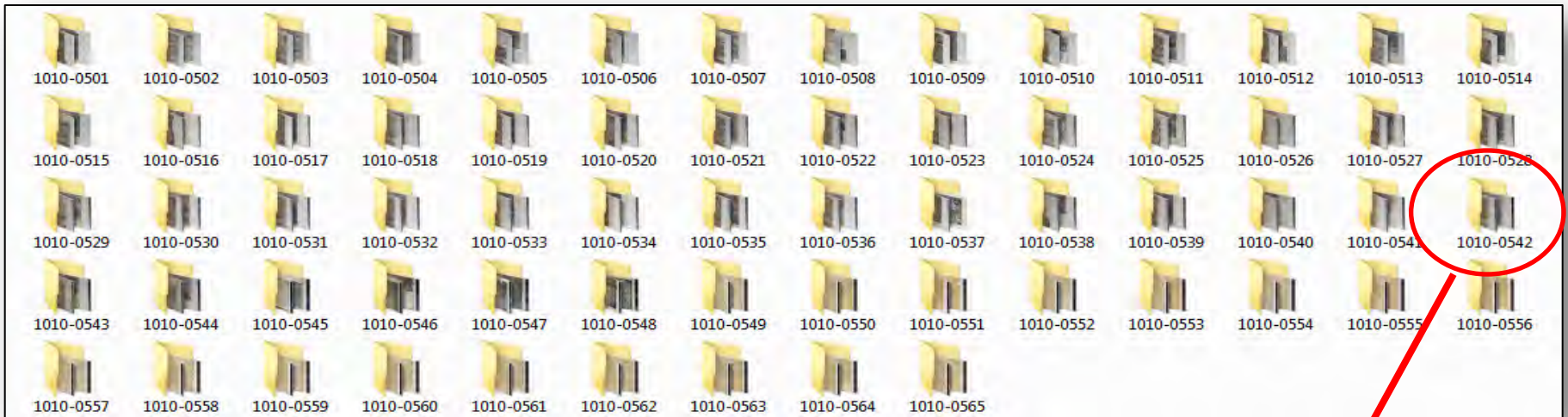
Photomerge Method

The screenshot shows the Photoshop interface with several key elements highlighted by red boxes and arrows:

- File Menu:** The 'File' menu is open, and 'Save As...' is highlighted. A red box and arrow point to this option with the text: "Under the File tab select Save As..."
- Save As Dialog:** The 'Save As' dialog box is open. The 'File name' field contains '1010-0542' and the 'Format' dropdown is set to 'JPEG (*.JPG;*.JPEG;*.JPE)'. A red box and arrow point to the 'Save' button with the text: "Name the file with Asset Number. Select the desired file format and click Save and OK."
- JPEG Options Dialog:** The 'JPEG Options' dialog box is open. The 'Quality' is set to 'Maximum' and 'Preview' is checked. A red box and arrow point to the 'OK' button.

Other visible interface elements include the top menu bar (File, Edit, Image, Enhance, Layer, Select, Filter, View, Window, Help), the 'Quick', 'Guided', and 'Expert' tabs, the 'Create' button, the 'Layers' panel, and the 'Info' panel.

Photomerge Method



Original images



1010-0542.a



1010-0542.b



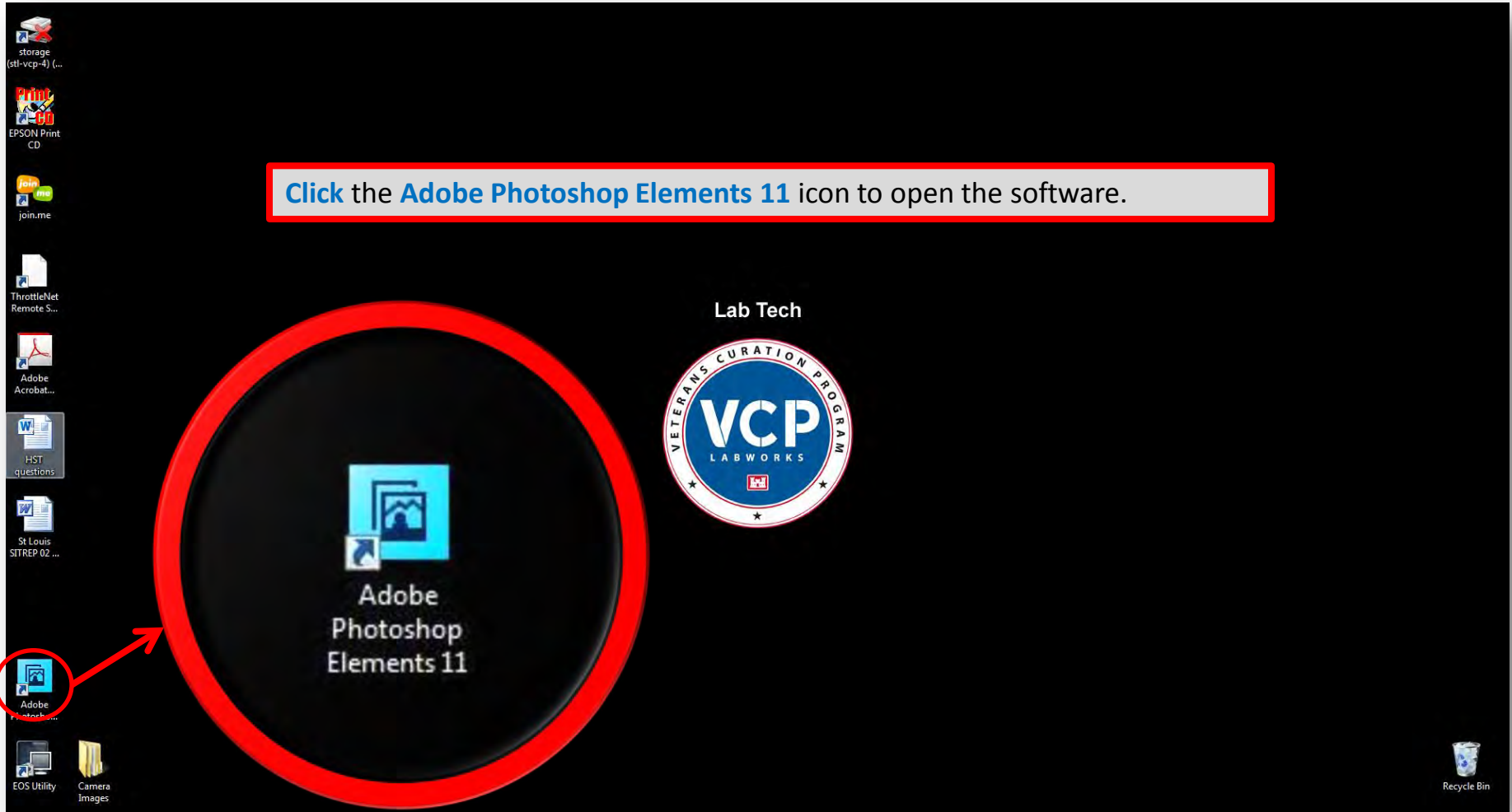
1010-0542

Completed stitched image

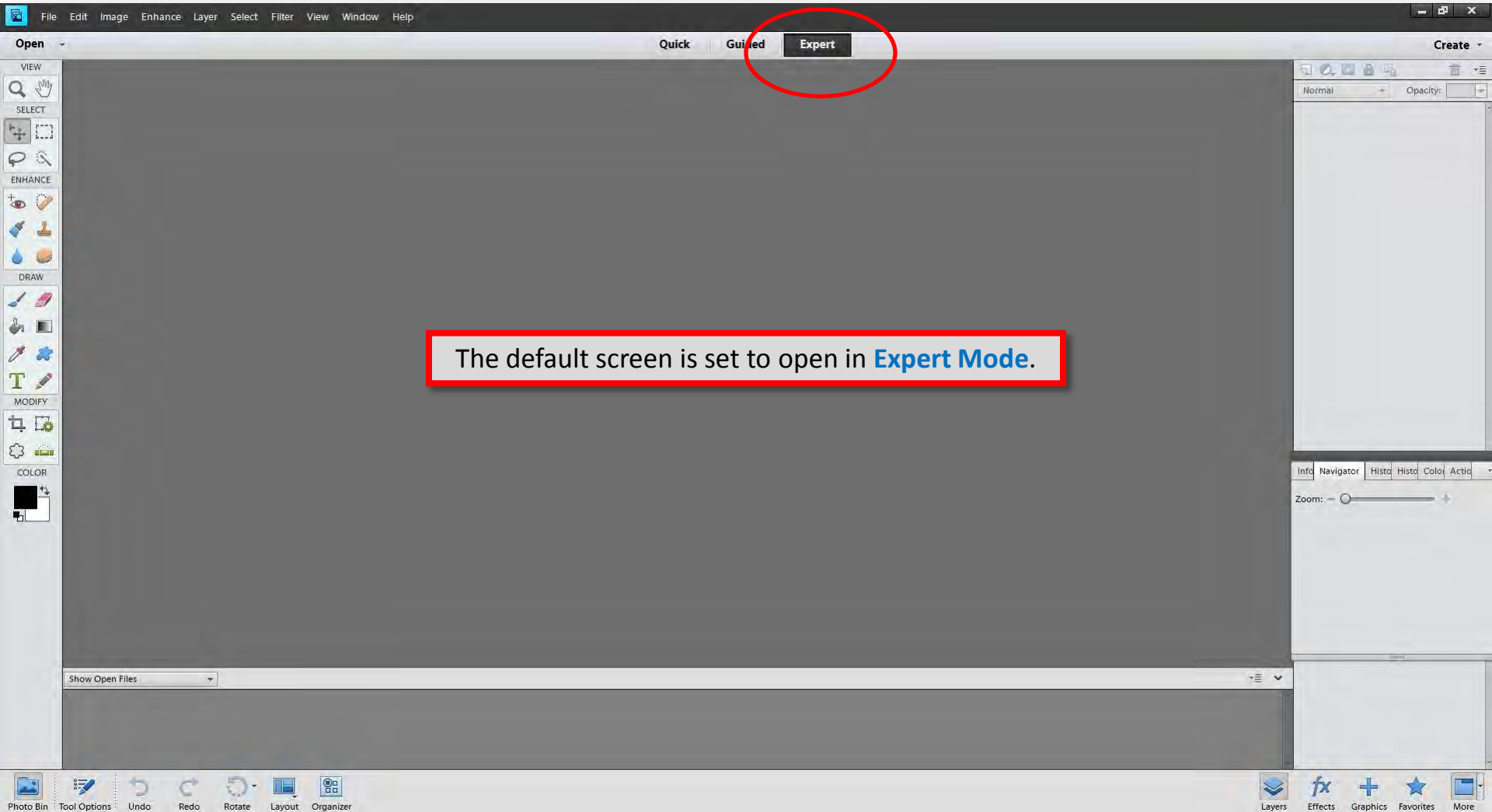
The folder should contain the image files used for the stitch, as well as the final stitched image.

Digital Stitching using Adobe Photoshop Elements (Manual Method)

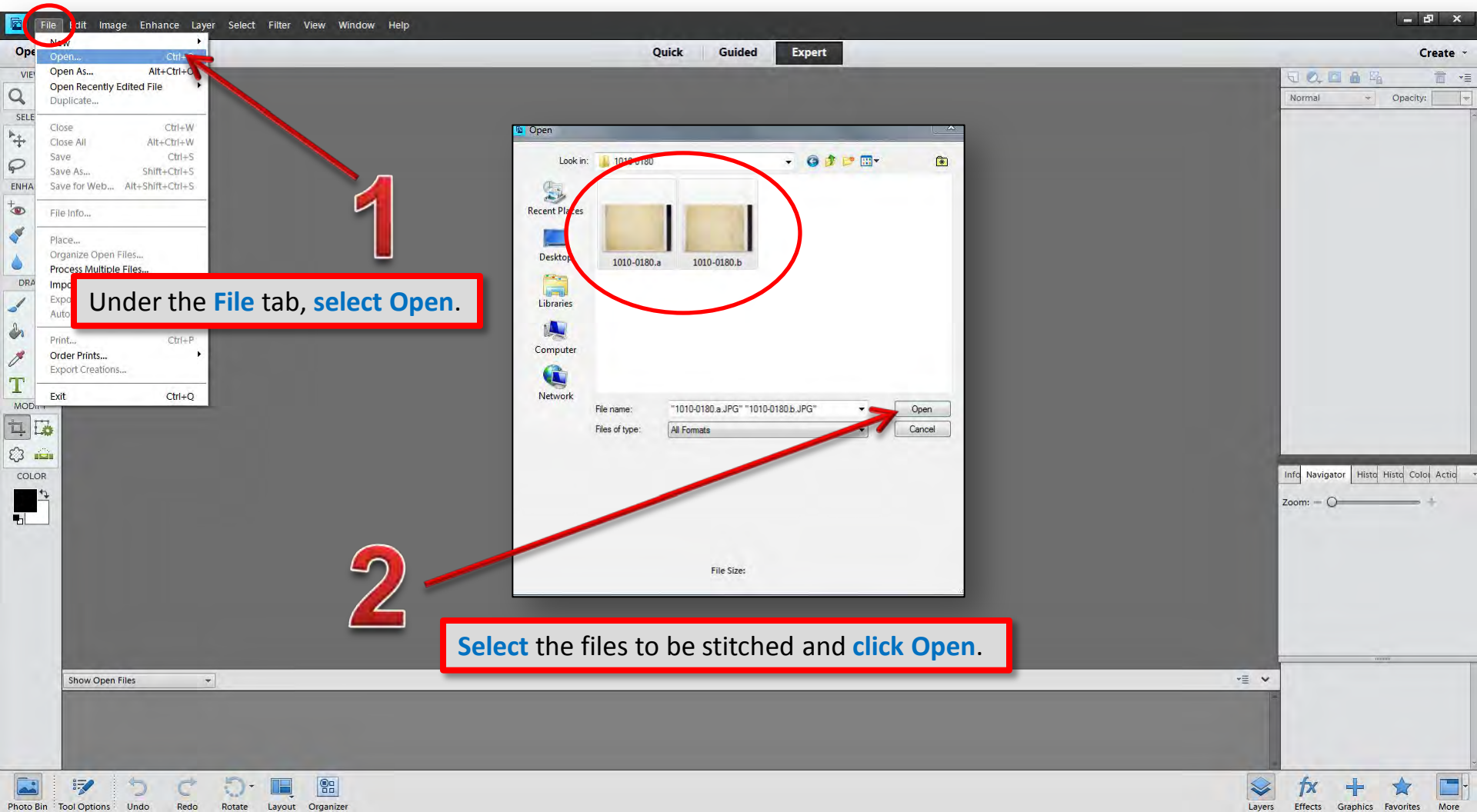
Click the **Adobe Photoshop Elements 11** icon to open the software.



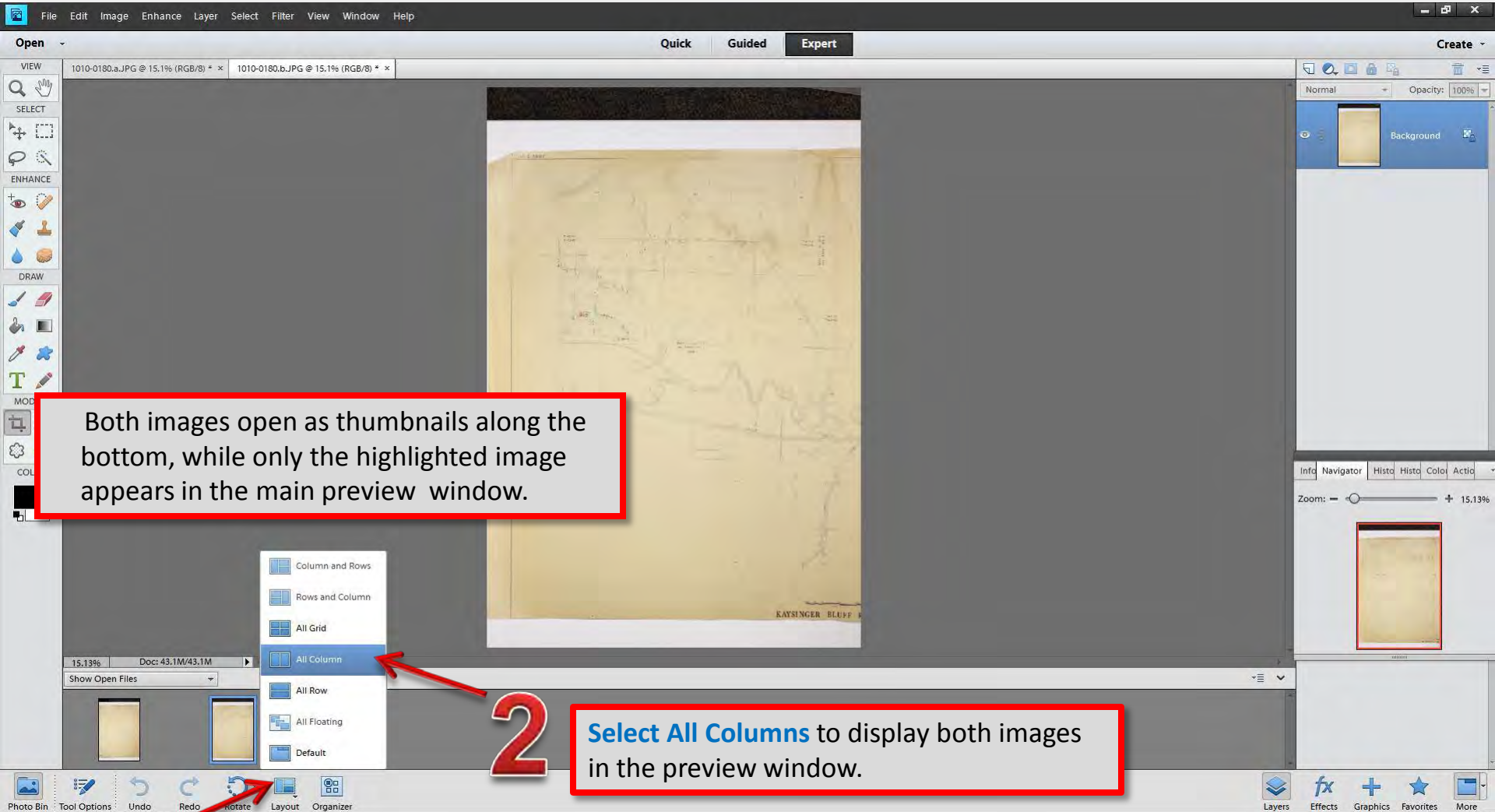
Manual Method



Manual Method



Manual Method

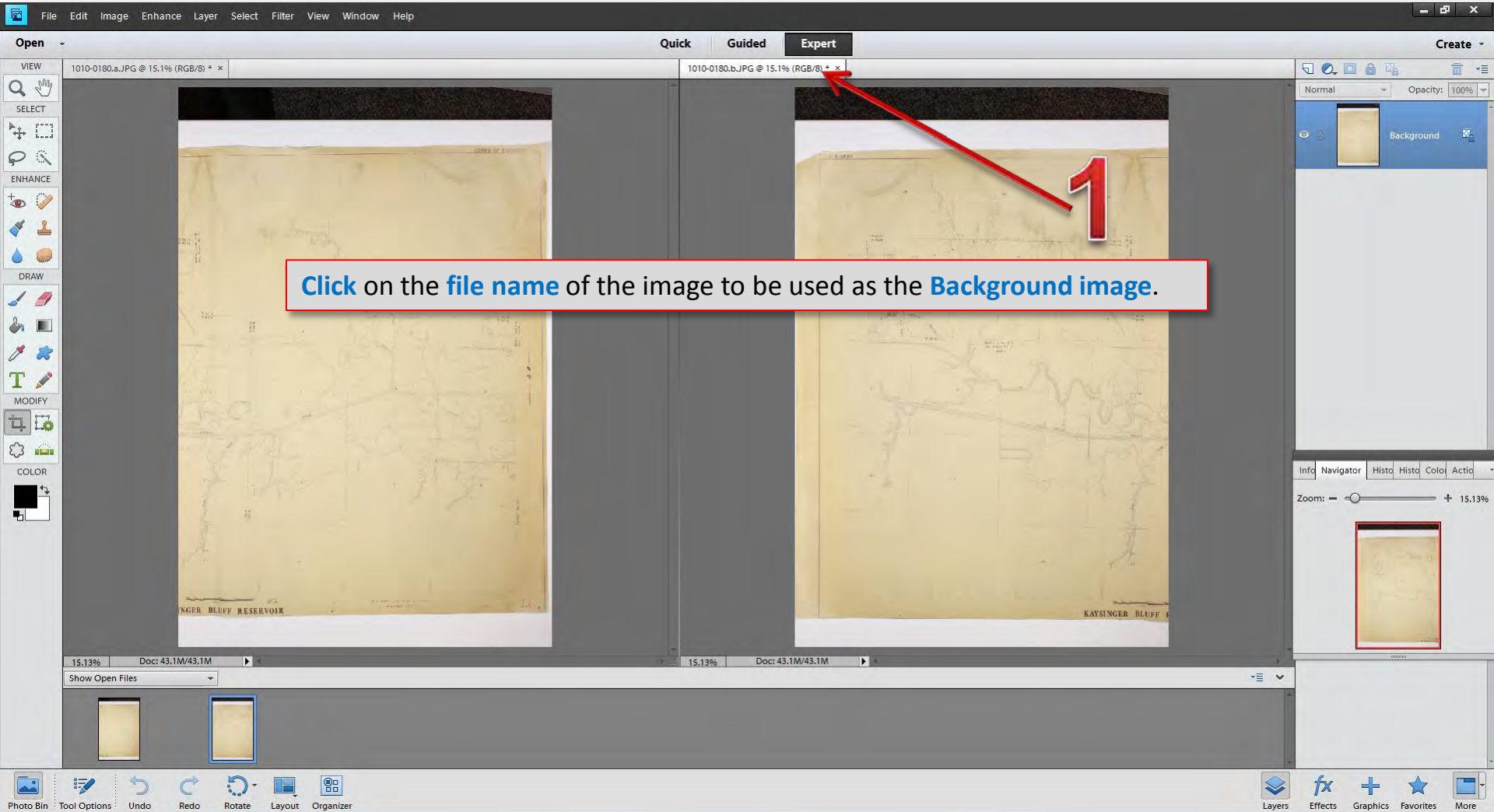


Both images open as thumbnails along the bottom, while only the highlighted image appears in the main preview window.

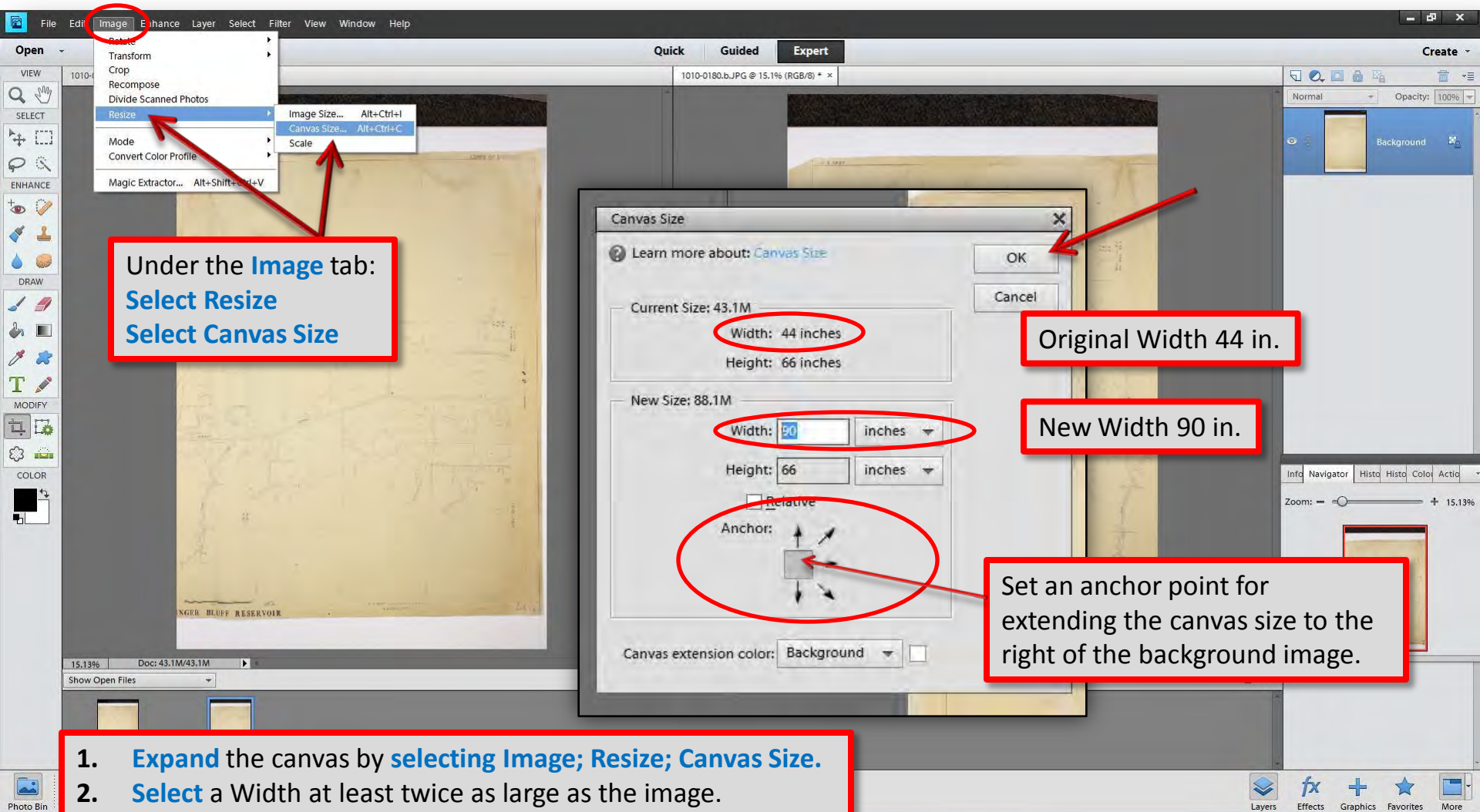
2 Select All Columns to display both images in the preview window.

1 Select Layout.

Manual Method



Manual Method



Under the **Image** tab:
Select Resize
Select Canvas Size

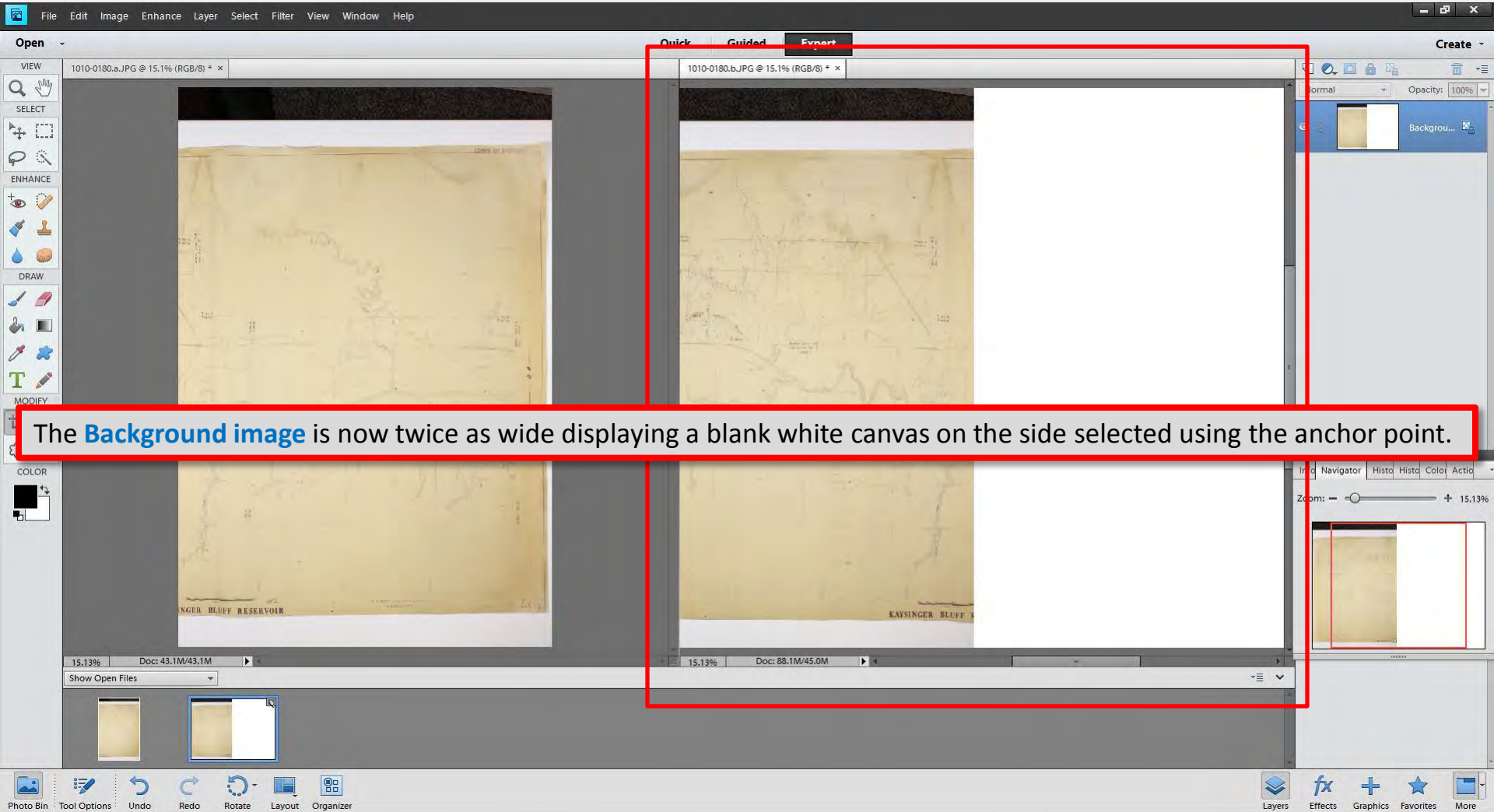
Original Width 44 in.

New Width 90 in.

Set an anchor point for extending the canvas size to the right of the background image.

1. **Expand** the canvas by **selecting Image; Resize; Canvas Size.**
2. **Select** a Width at least twice as large as the image.
3. **Select** the side to Anchor with the appropriate arrow.
4. **Click OK.**

Manual Method



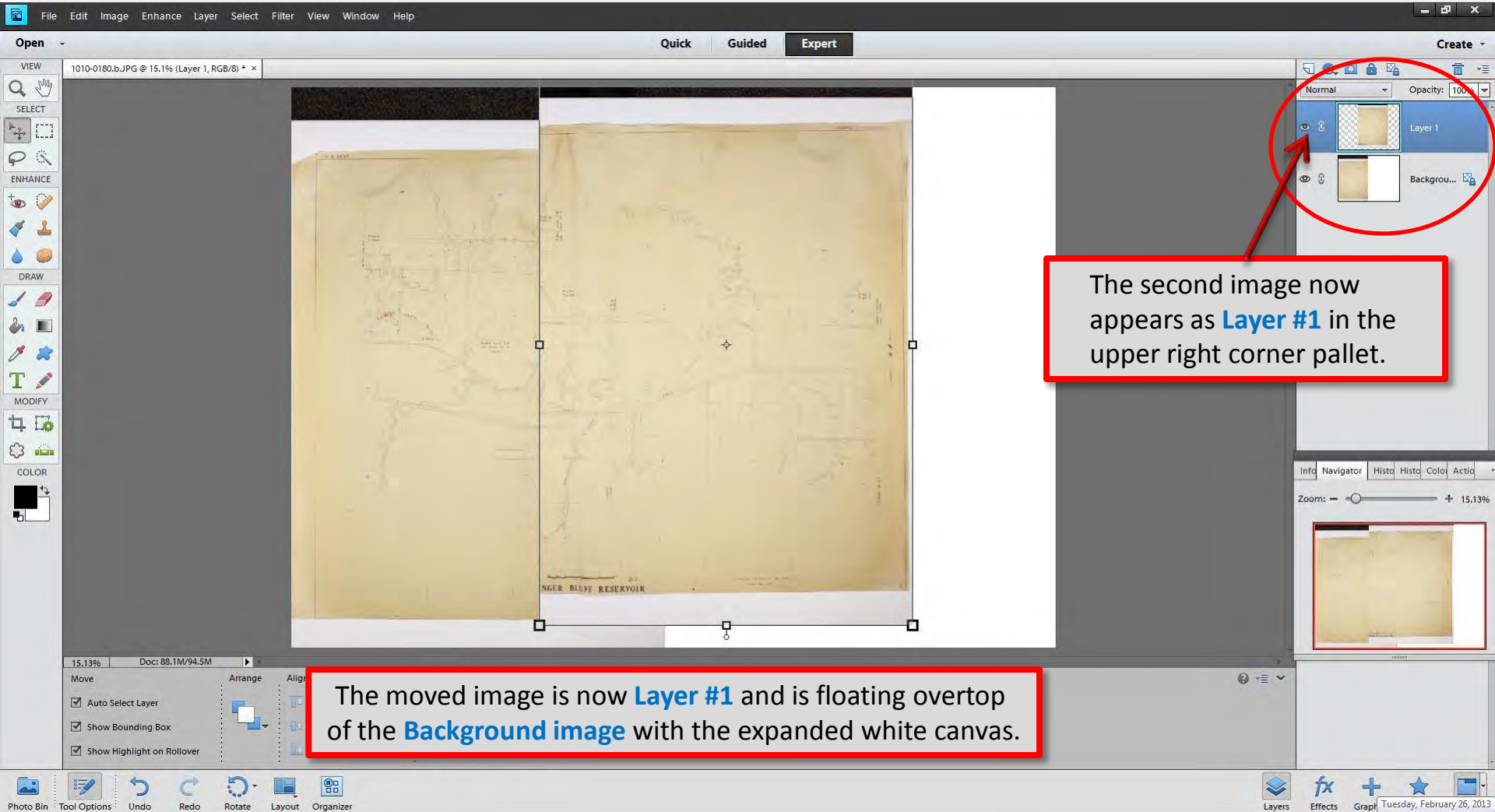
Manual Method

1. Select the **Move Tool**.

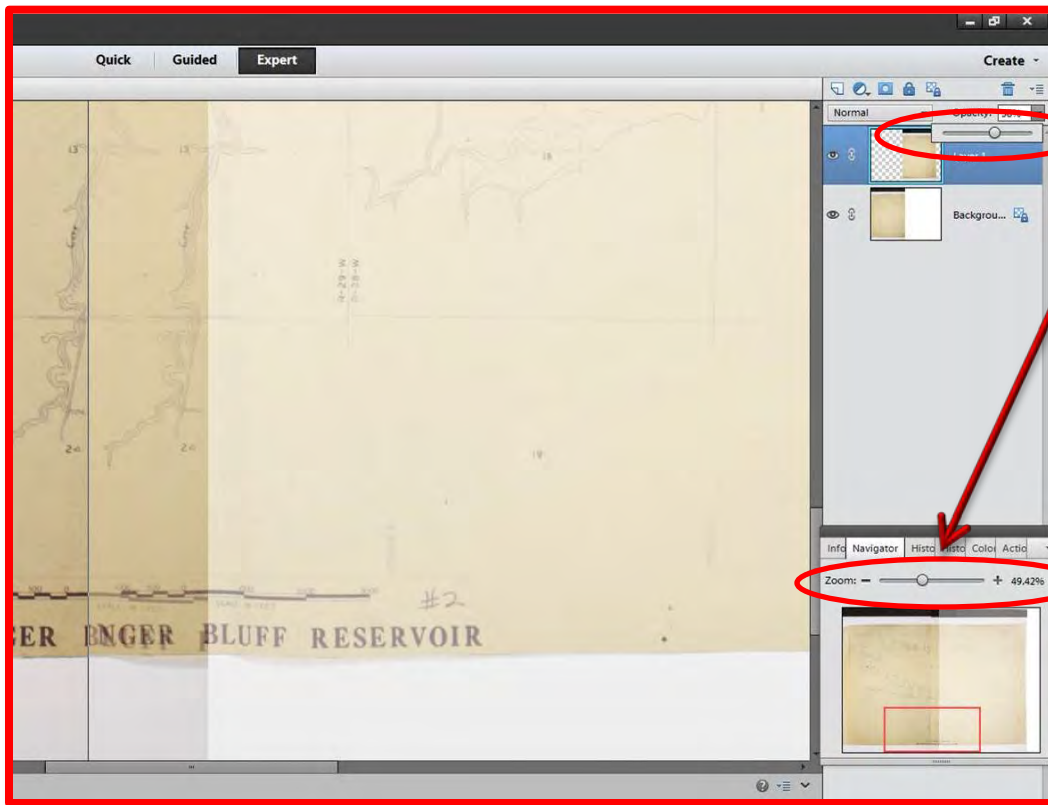
2. **Drag and Drop** the second image over top of the **background image** with the expanded canvas.

3. **Close** the original second image.

Manual Method

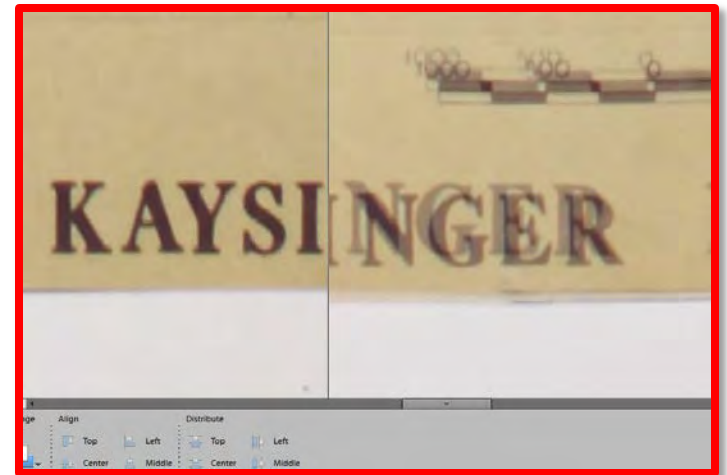


Manual Method



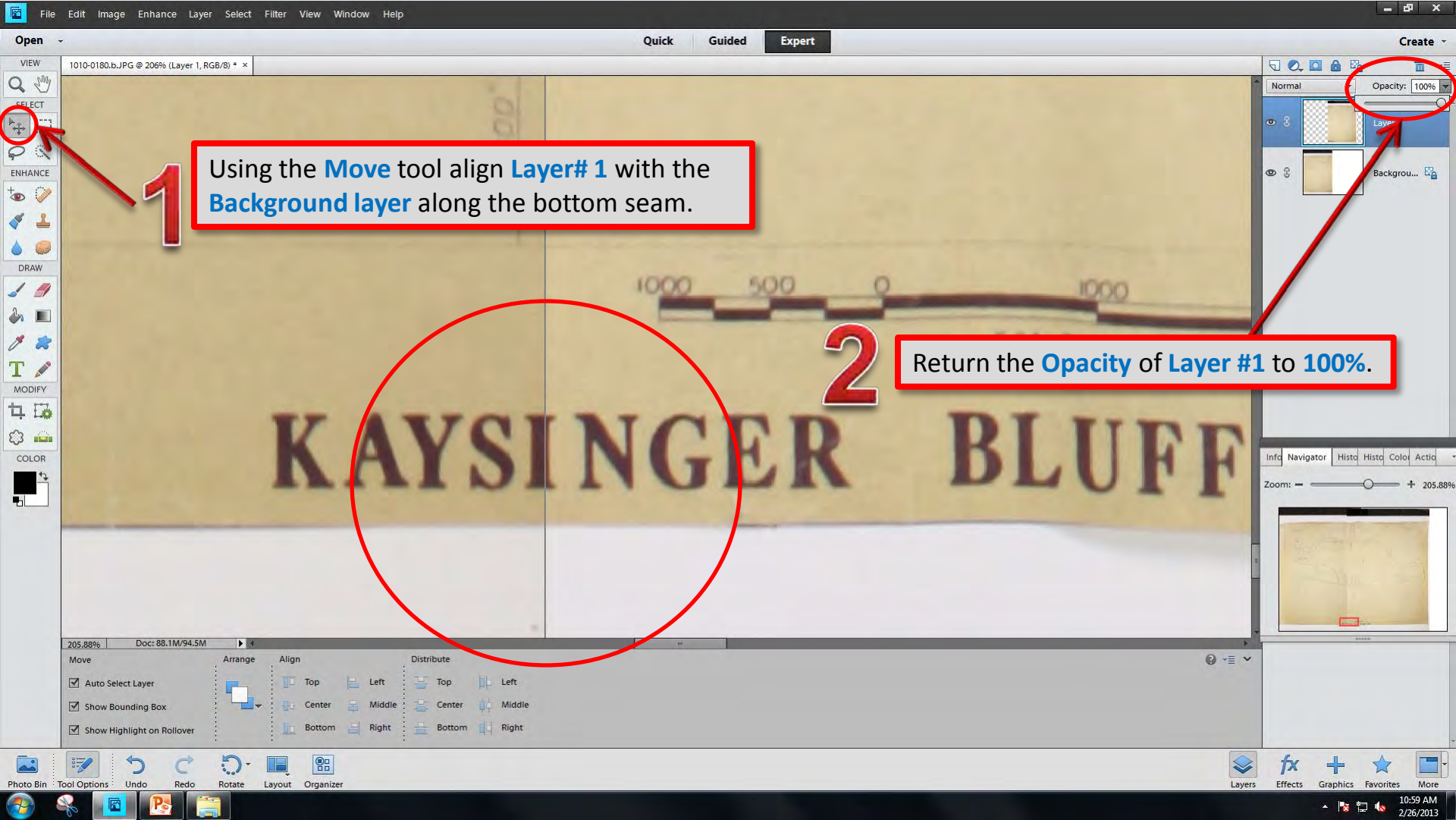
Slide the **Opacity** bar to make **layer #1** transparent.

Slide the **Zoom** bar to enlarge a section of the seam.

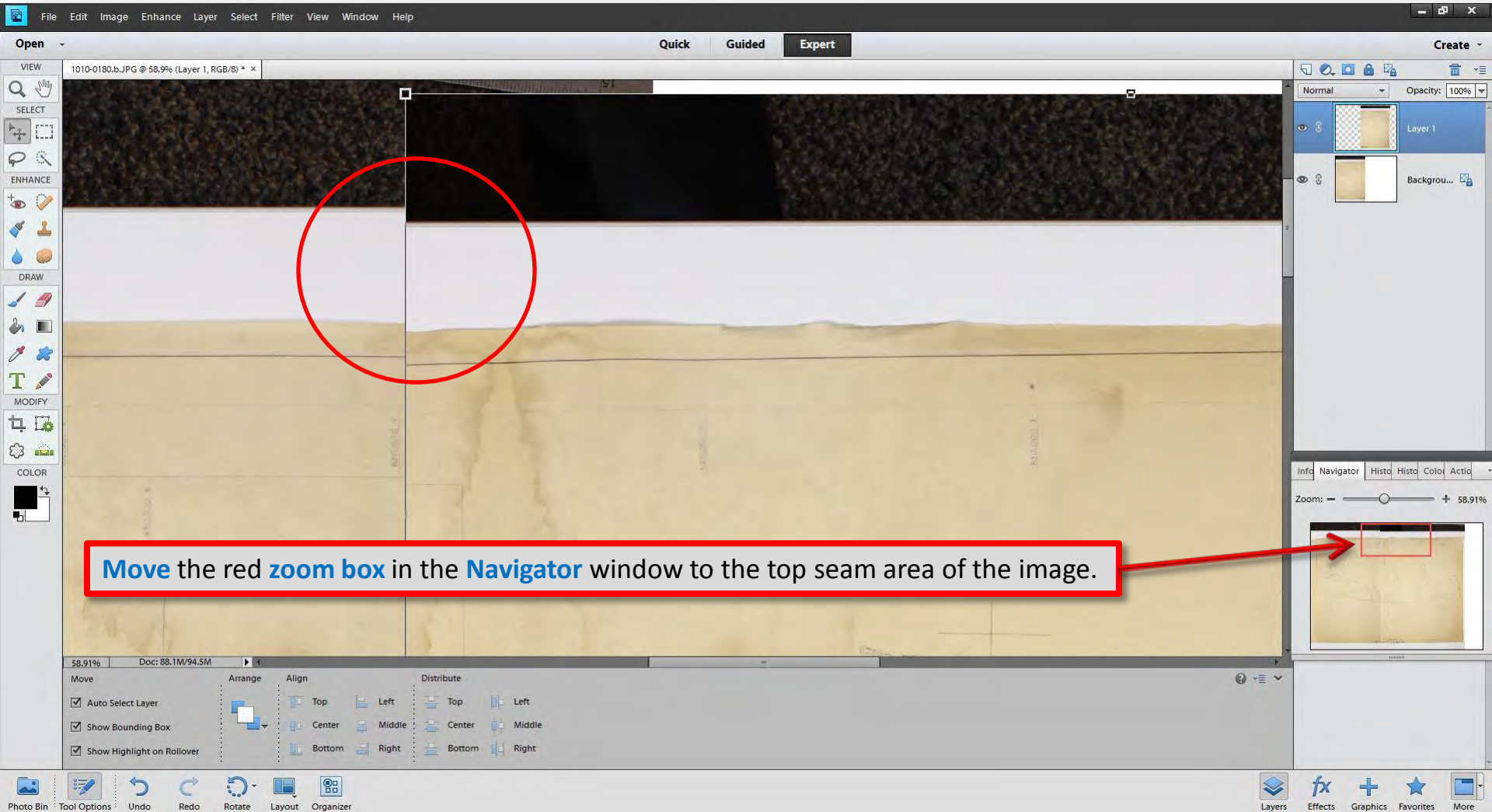


1. With **Layer #1** highlighted **adjust the opacity** to make that layer transparent.
2. Use the **navigator zoom bar** to enlarge the overlapping images at the seam area along the bottom.

Manual Method



Manual Method



Move the red zoom box in the Navigator window to the top seam area of the image.

Manual Method

1010-0180.b.JPG @ 42.5% (Layer 1, RGB/8) * x

Quick Guided Expert

VIEW

SELECT

ENHANCE

DRAW

MODIFY

COLOR

42.51% Doc: 88.1M/91.9M

Transform

Rotate Scale Skew

W: 100.00% H: 100.45%

Constrain Proportions

Angle

0.00 Degrees

Normal Opacity: 100%

Layer 1

Backgrou...

Info Navigator Histo Histo Colo Actio

Zoom: 42.51%

Layers Effects Graphics Favorites More

NO

YES

2 Use the center adjustment square on **Layer# 1** to align the top of the seam.

1 Reposition the red **zoom box** in the **Navigator** window to the top of the seam.

Manual Method

Select the Eraser tool.

Eraser Tool Settings:
Type = Brush
Brush = Soft Edges
Size = 250 pixels
Opacity = 100%

Layer # 1 highlighted in blue.

1010-0180.b.JPG @ 14.8% (Layer 1, RGB/8) * x

Quick Guided Expert

VIEW 1010-0180.b.JPG @ 14.8% (Layer 1, RGB/8) * x

SELECT

ENHANCE

DRAW

MODIFY

COLOR

14.84% Doc: 88.1M/91.9M

Eraser

Brush: [Soft Edge Brush] Type: Pencil Brush Block

Size: 250 px

Opacity: 100%

Normal Opacity: 100%

Layer 1

Backgrou...

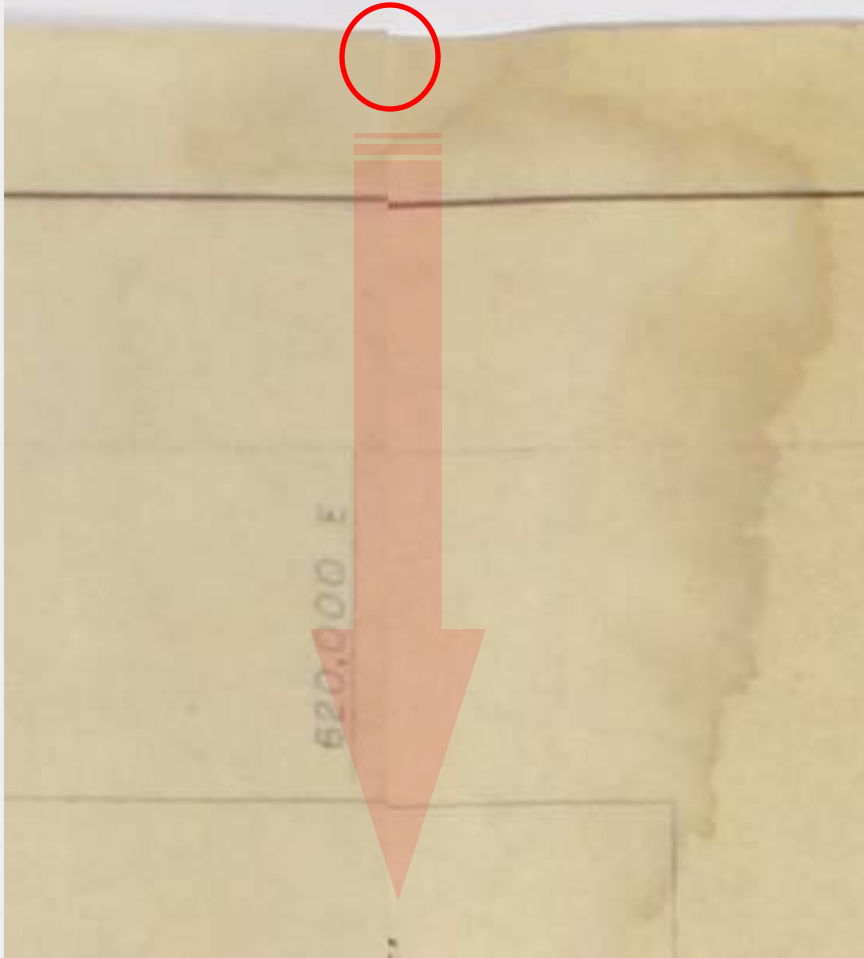
Info Navigator Hist Hist Color Actio

Zoom: 14.84%

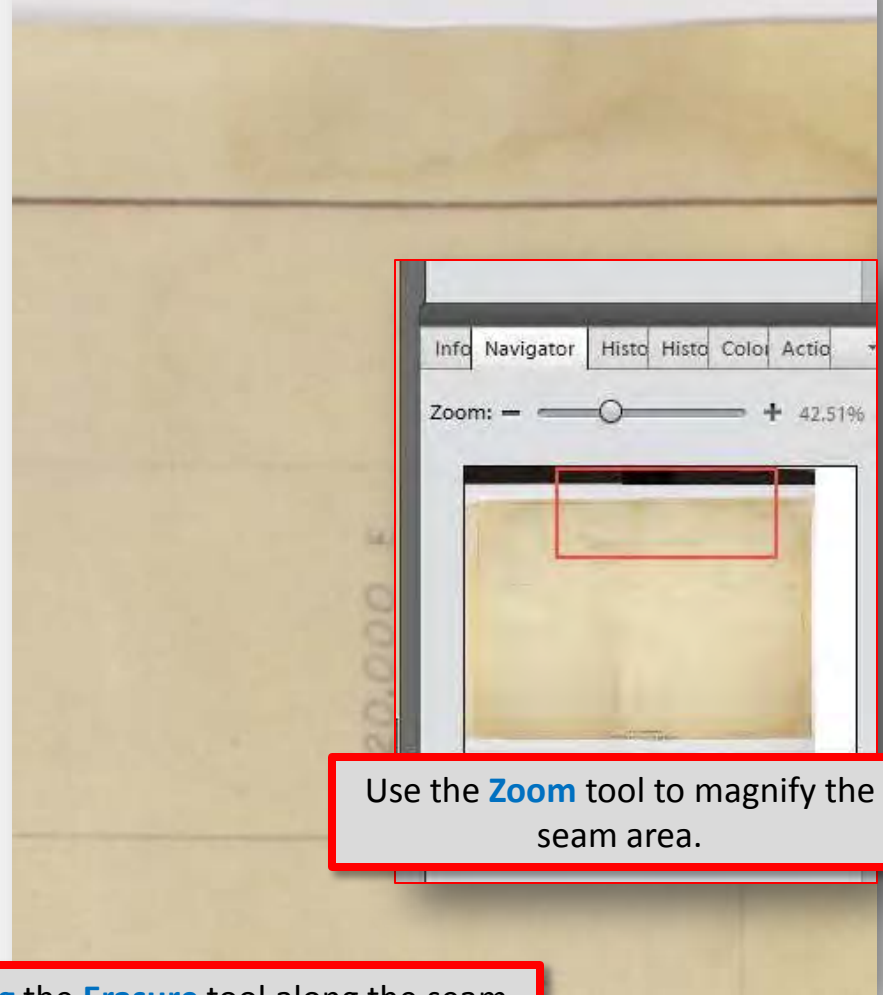
Layers Effects Graphics Favorites More

Manual Method

Before



After



Use the **Zoom** tool to magnify the seam area.

Magnify the image with the **Navigator** tool and slowly **drag** the **Erasure** tool along the seam.

NOTE: Only erase from Layer 1, and stay on the seam area.

Manual Method

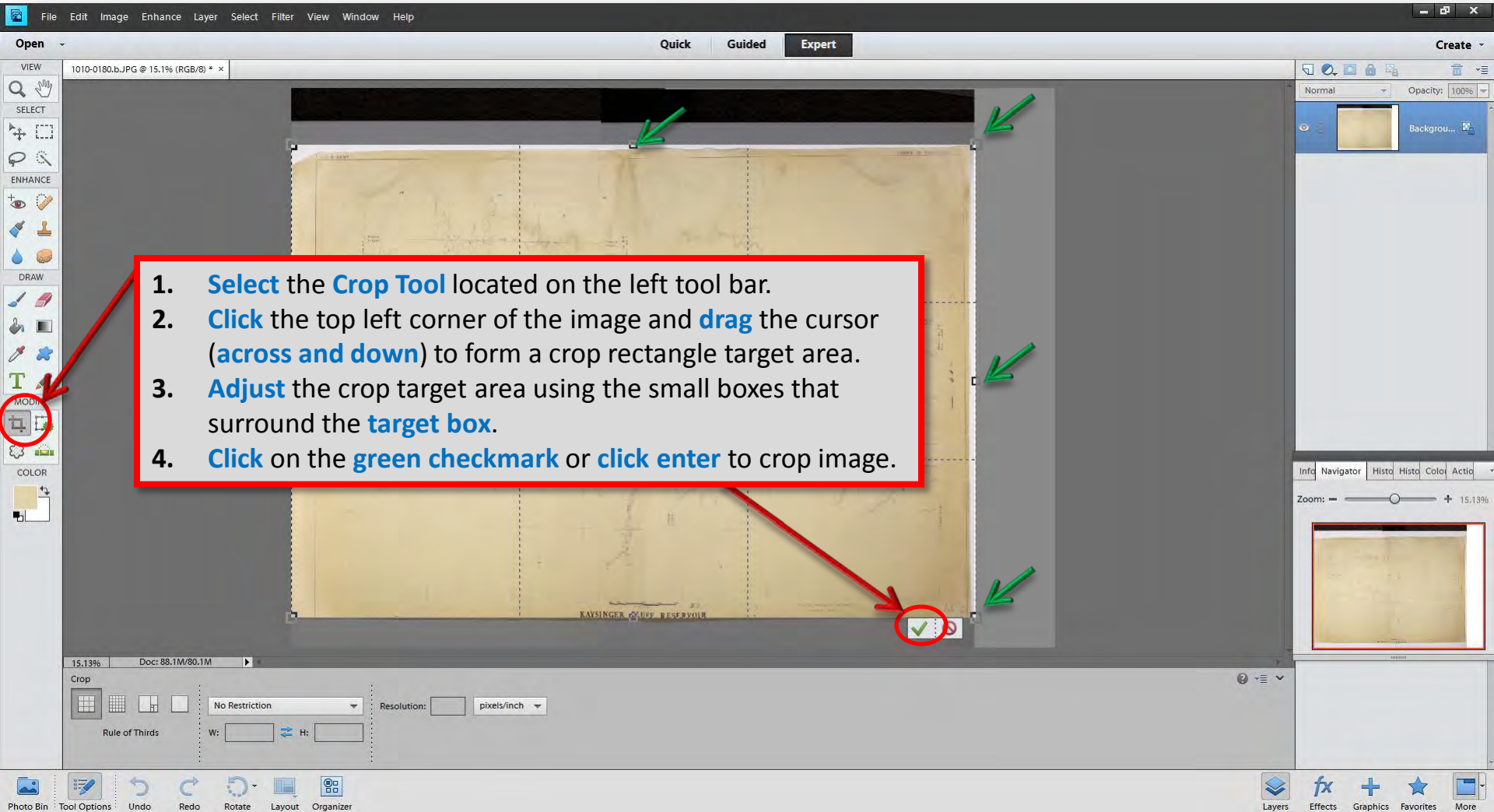
1 Under the **Layer** tab select **Flatten Image**. This will combine all layers into one.

Layer 1
Background...

Layer 1 is now fused with the **Background** image.

The screenshot shows the Photoshop interface with the 'Layer' menu open. The 'Flatten Image' option is highlighted. A callout box with a red border and a large number '1' points to the 'Flatten Image' option. Another callout box with a red border points to the 'Background' layer in the Layers panel, indicating that it is now fused with 'Layer 1'. The background image is a map of Kaysinger Bluff Reservoir.

Manual Method

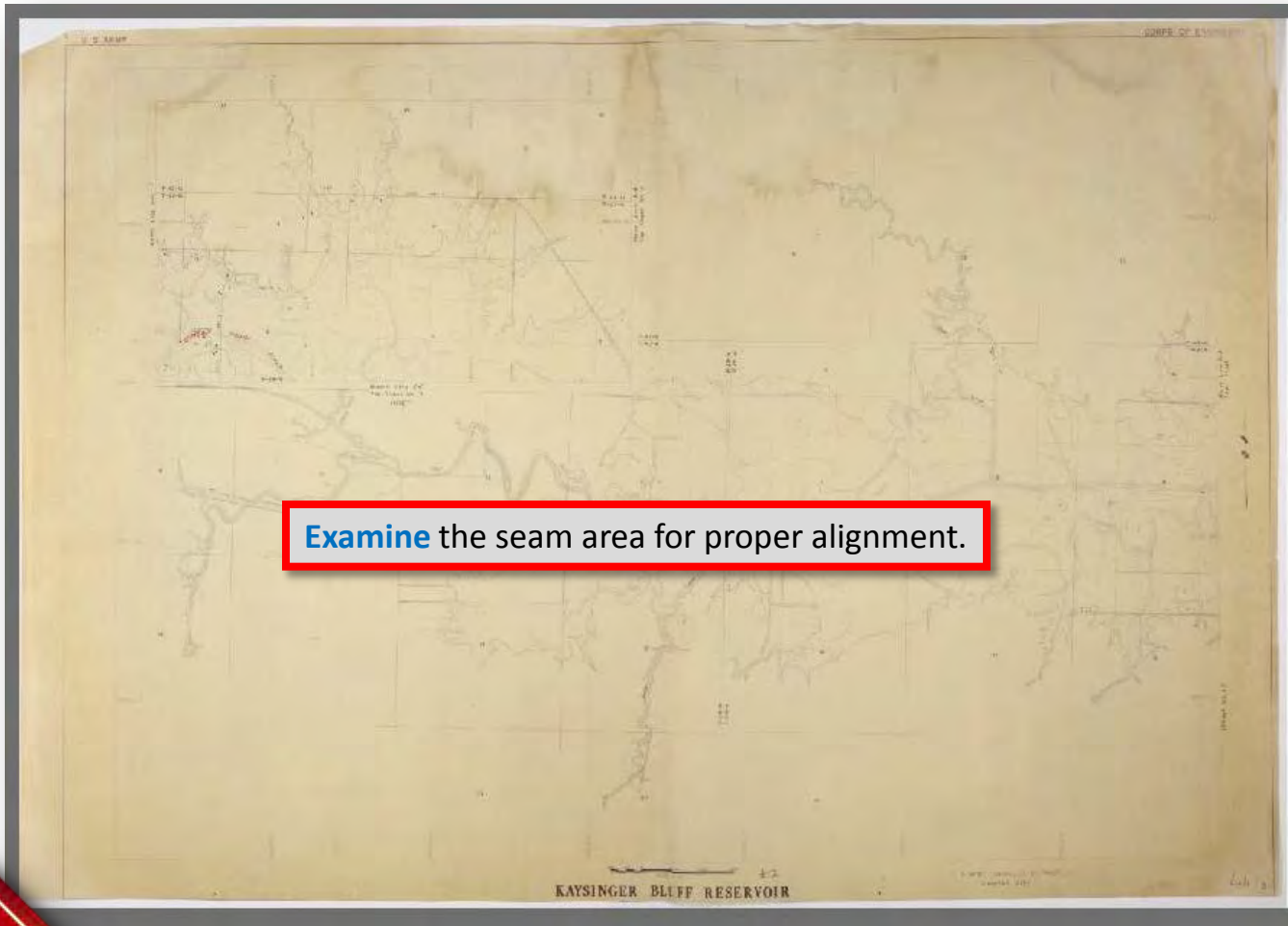


Manual Method

Under the **File** tab select **Save As...**

1. Name the file with **Asset Number**
2. Select the desired file **format**
3. Click **Save**
4. Click **OK**

Manual Method

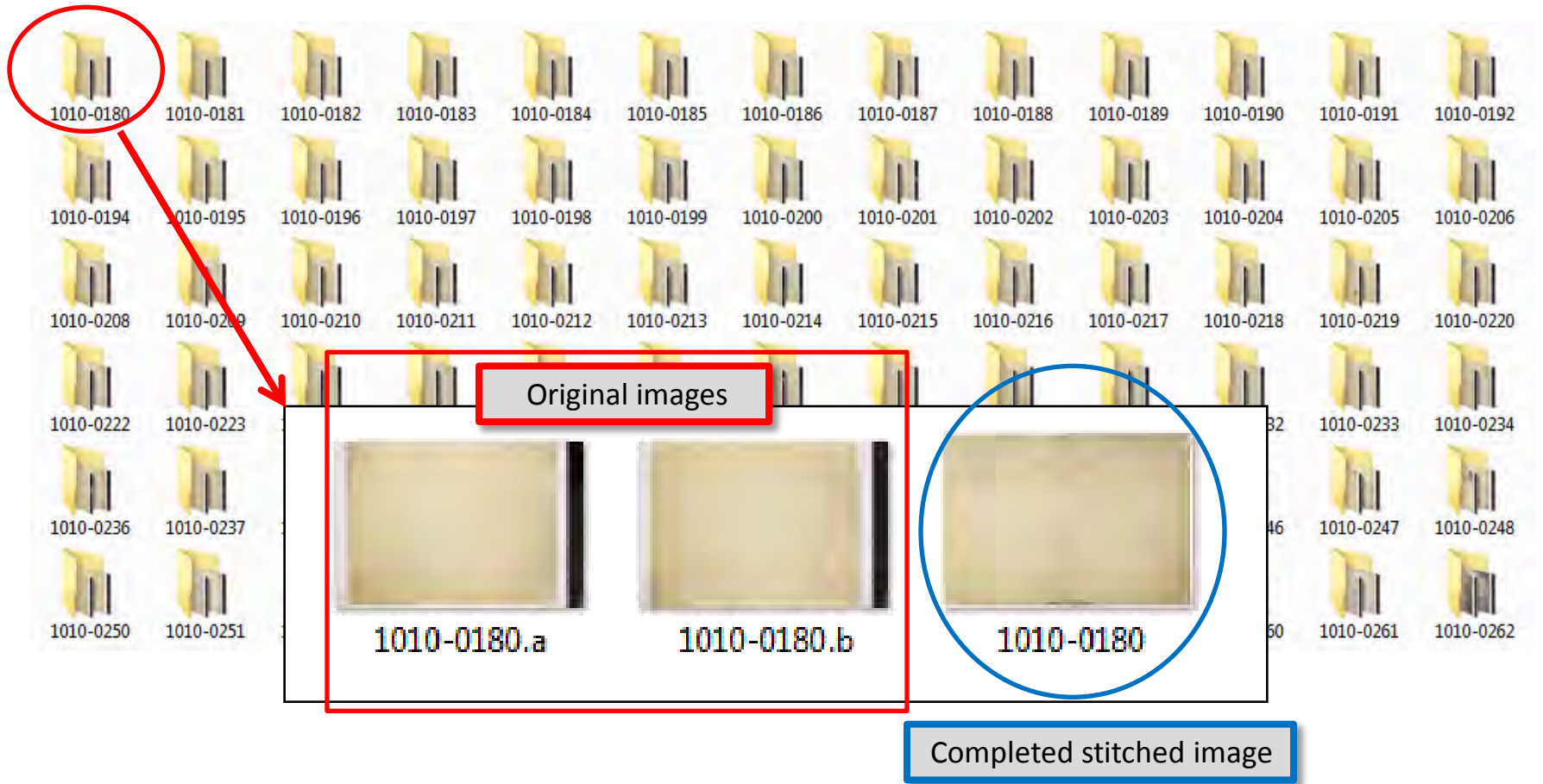


Examine the seam area for proper alignment.



QUALITY CONTROL must be performed by **LAB MANAGER** before continuing

Manual Method



The folder should contain the image files used for the stitch, as well as the final stitched image.