# Meridian Idaho East FamilySearch Center
# Inservice Discussion

## Photo and Slide Scanning Issues

June 13, 2024 Updated

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The next 4 slides include scans of 3 slides. The first two slides are portrait orientation and two different scans displayed side by side. The last two slides are landscape orientation and are separate scans of the same picture.

The two paired images were scanned with different scanning parameters. The in-service participants were asked to vote on which one they thought was the better quality image.

Check the scans yourself! Can you see a difference? The participants were in favor of the right-side scan for the portrait photos and the second scan for the landscape photos.

Details are provided in the following slides and the description of the scans follow on slides 14-17.


PIONEER MORMON
CEMETERY
IN LOVING
MEMORY OF THE
SIX THOUSAND
DEVOTED
PIONEERS
WHO DIED
ON THE
PLAINS
BETWEEN
1846-1869
BLADE


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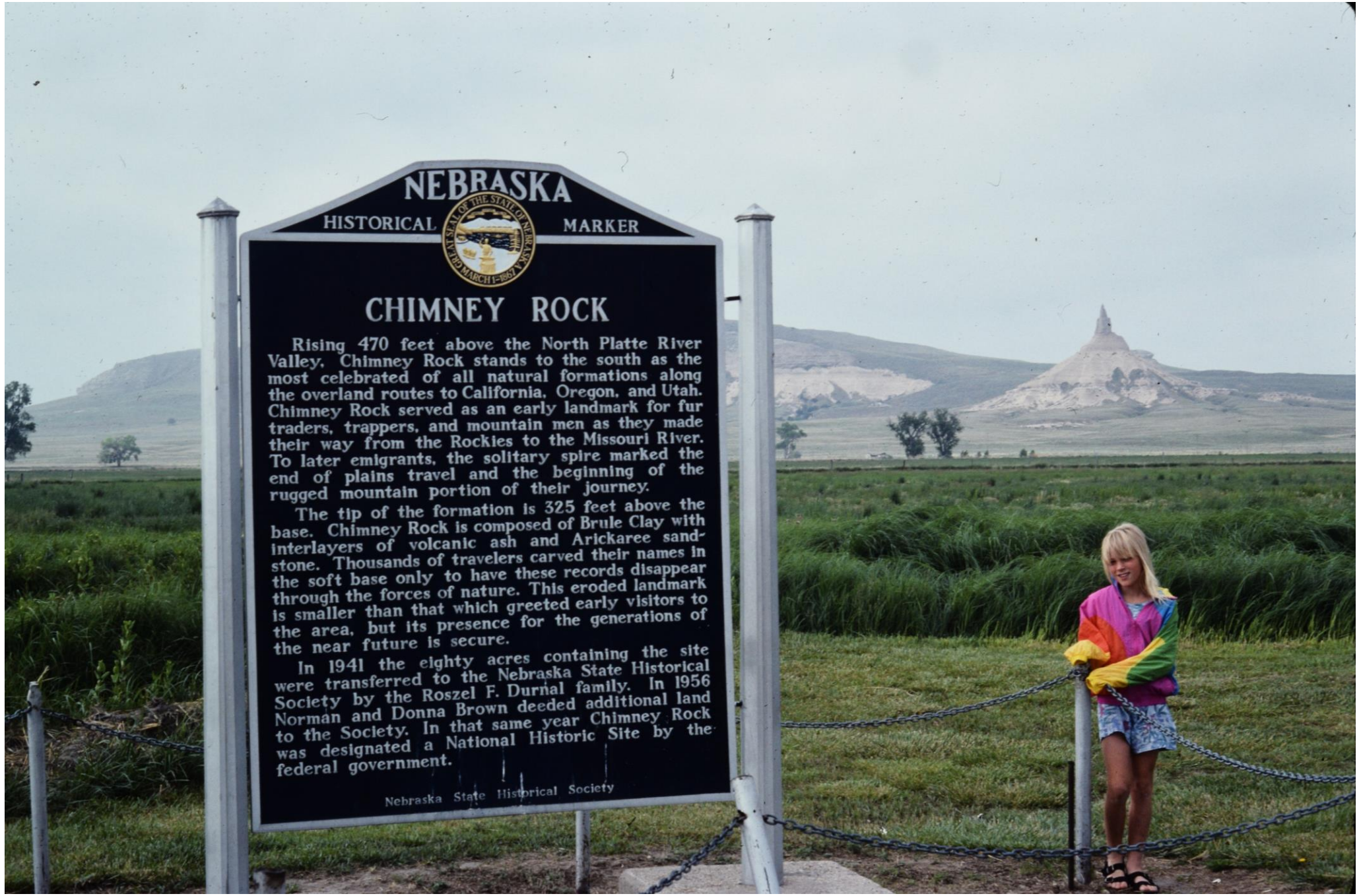
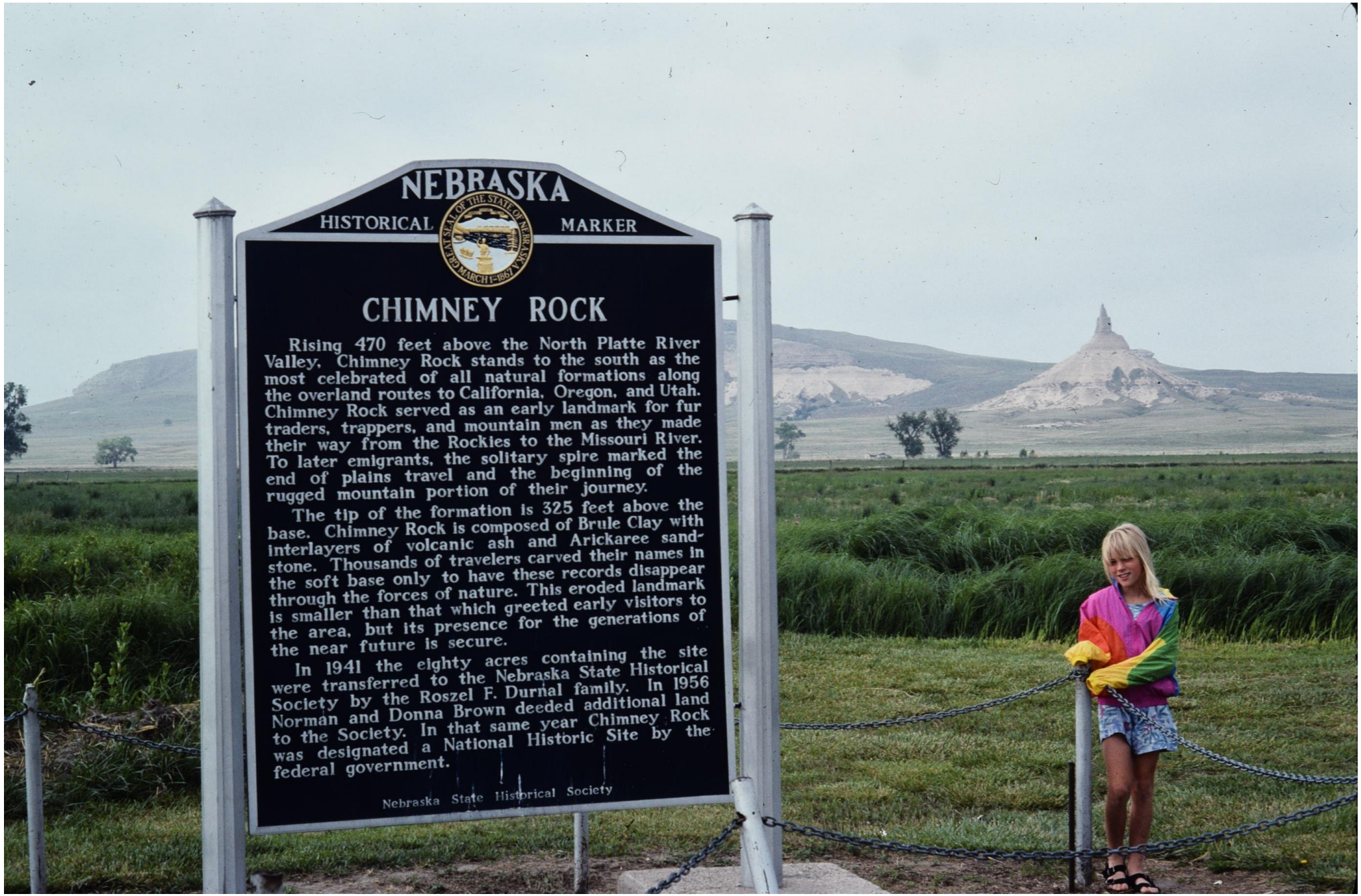

NEBRASKA
HISTORICAL MARKER
GREAT SEAL OF THE STATE OF NEBRASKA
MARCH 1 1867
CHIMNEY ROCK
Rising 470 feet above the North Platte River Valley, Chimney Rock stands to the south as the most celebrated of all natural formations along the overland routes to California, Oregon, and Utah. Chimney Rock served as an early landmark for fur traders, trappers, and mountain men as they made their way from the Rockies to the Missouri River. To later emigrants, the solitary spire marked the end of plains travel and the beginning of the rugged mountain portion of their journey.
The tip of the formation is 325 feet above the base. Chimney Rock is composed of Brule Clay with interlayers of volcanic ash and Arickaree sandstone. Thousands of travelers carved their names in the soft base only to have these records disappear through the forces of nature. This eroded landmark is smaller than that which greeted early visitors to the area, but its presence for the generations of the near future is secure.
In 1941 the eighty acres containing the site were transferred to the Nebraska State Historical Society by the Roszel F. Durnal family. In 1956 Norman and Donna Brown deeded additional land to the Society. In that same year Chimney Rock was designated a National Historic Site by the federal government.
Nebraska State Historical Society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# Quick Review: Photograph Scanning Quality

Pixels is an abbreviation Picture Element
Pixels typically describe color using 8 bits or 1 byte for each color of Red, Green, and Blue
256 values/color results in 16.8 million color combinations

Scanning Photographs  DPI (Dots per Inch) or PPI (Pixels per Inch)

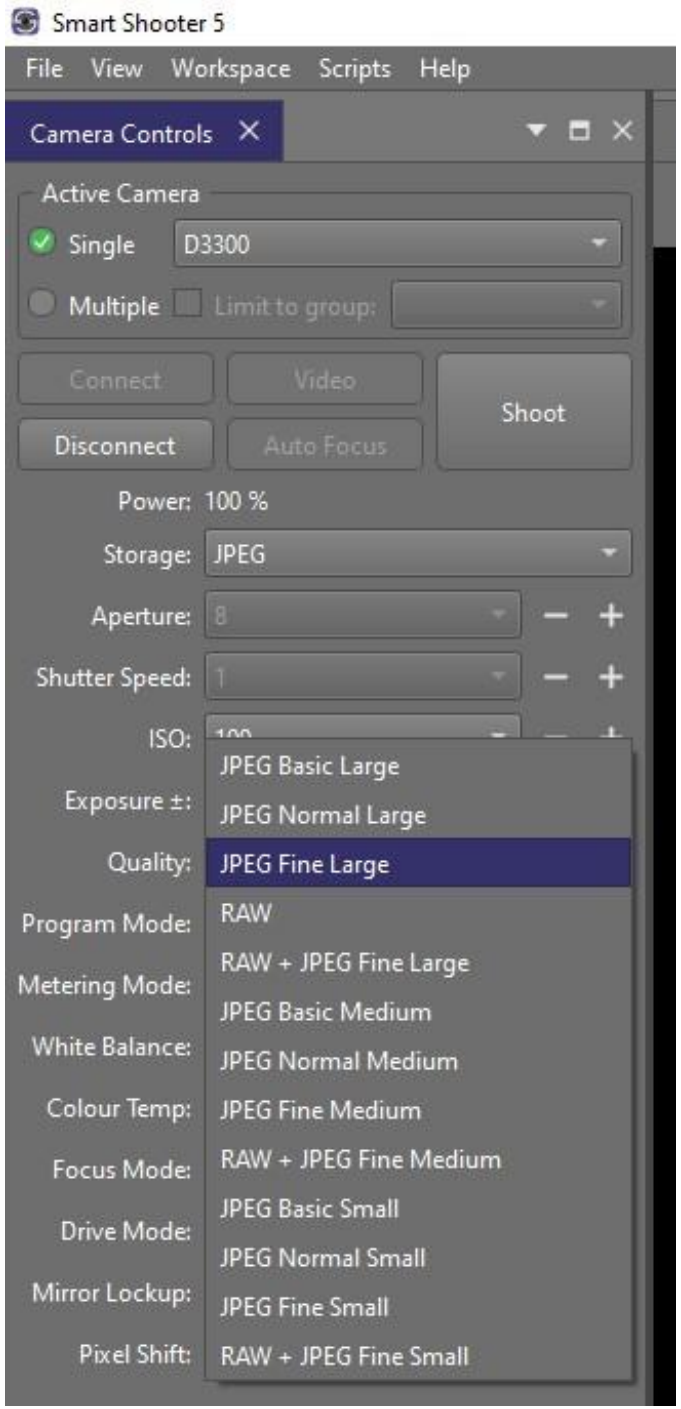
Epson FastFoto Scanner Options: 300, 600 or 1200 DPI
HP G3110 Flat Bed Scanner Options: 150, 200, 300, 600 and 1200.

Recommendation is 600 DPI


Slide Scanning Quality on the Slide Snap Pro Slide Scanning System

On the Left is the Camera Controls Menu

On the right are the available quality settings



The Smart Shooter 5 Software on the Slide Snap Pro Rapid Slide Scanning System supports 13 different options in 2 formats, of which 9 are viable for patrons.

1. RAW files contain uncompressed and unprocessed image data, allowing photographers to capture practically every detail they see in their viewfinder. Note that RAW files require specialized software to view or edit and are not practical for scanning family history photos. Ignore the RAW options on the quality menu.

2. JPEG (Joint Photographic Experts Group) is a commonly used method of lossy compression for digital images, particularly for those images produced by digital photography. The degree of compression can be adjusted, allowing a selectable tradeoff between storage size and image quality. This standard was created in 1992 and is the most common standard for digital cameras and internet image sharing.

The Nikon D3300 Camera in the Slide Snap Pro scanning system supports three compression ratios and 3 file sizes for 9 combinations for JPEG scans.

| | | |
|---|---|---|
| Compression: | Fine | 1:4 ratio |
| | Normal | 1:8 ratio |
| | Basic | 1:16 ratio |
| | | |
| Size: | Large | 6000 x 4000 pixels |
| | Medium | 4496 x 3000 pixels |
| | Small | 2992 x 2000 pixels |

Translating the 600 DPI print guideline to slides suggests a size of 3,600 x 2,400 pixels

# Comparing Slide Snap Pro Slide to Epson FastFoto Photo Scanning
## 35 mm film

| Slide Snap Scanning Slide scans | | Fast Foto Scanning 6x4 Photo scans | |
|---|---|---|---|
| Large: | 6,000 x 4,000 pixels | 1200 DPI: | 7,200 x 4,800 pixels |
| Medium: | 4,496 x 3,000 pixels | 600 DPI: | 3,600 x 2,400 pixels |
| Small: | 2,992 x 2,000 pixels | 300 DPI: | 1,800 x 1,200 pixels |

# Experiment time!

I selected 24 slides from a 1992 church history trip. I scanned the set 9 times, once with each quality setting. The results are reported in an appendix to the Slide Snap Pro users guide. Here is a summary:

| | Large Size 6000 x 4000 | Medium Size 4496 x 3000 | Small Size 2296 x 2000 |
|---|---|---|---|
| Fine Compression 1:4 ratio | 10.76 MB | 6.53 MB | 3.96 MB |
| Normal Compression 1:8 ratio | 6.57 MB | 3.99 MB | 1.97 MB |
| Basic Compression 1:16 ratio | 2.35 MB | 1.62 MB | 0.97 MB |

Average size of the 24 test scanned images. FamilySearch maximum file size for upload is 15 MB so any scan option works fine.

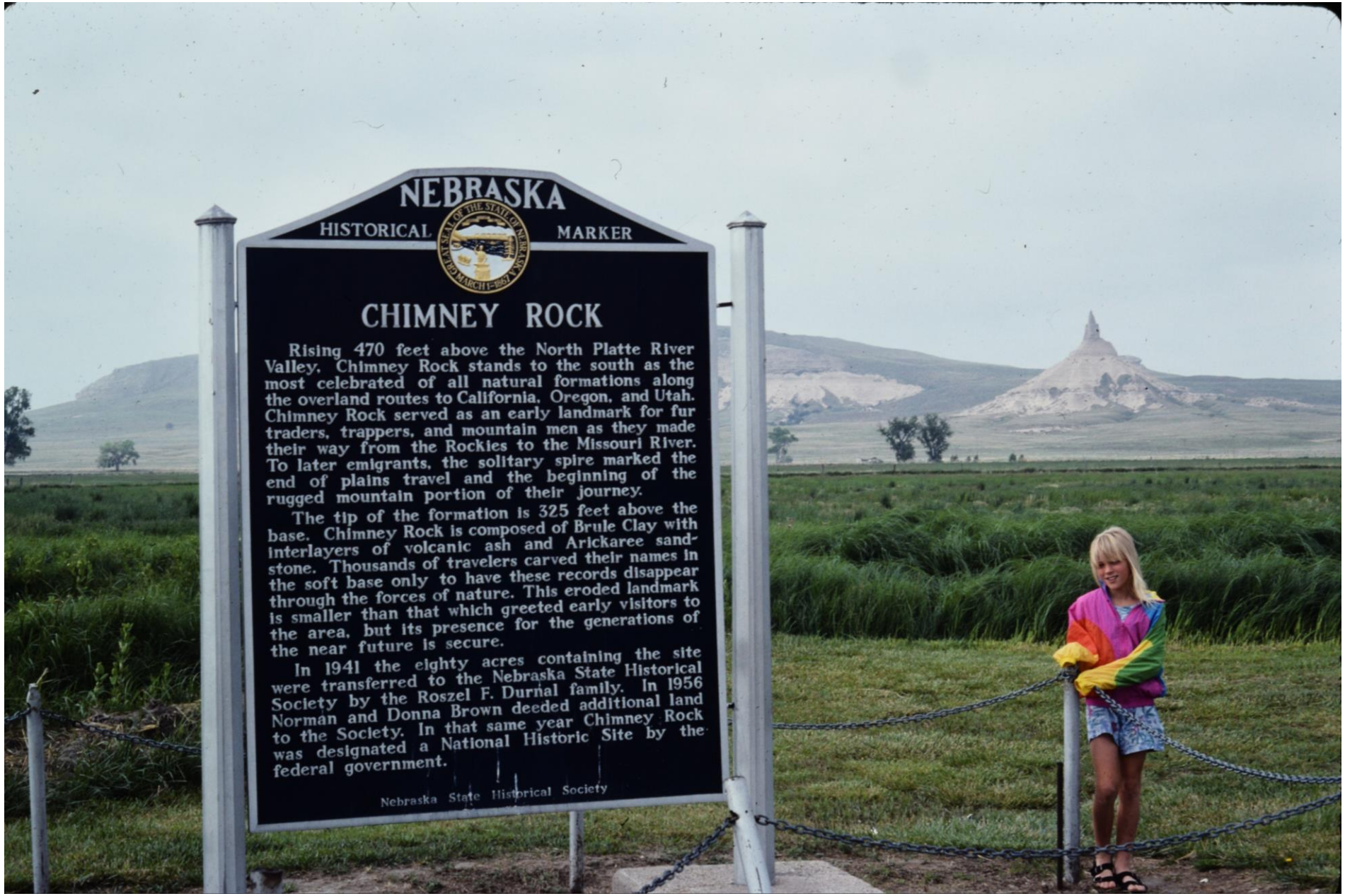
JPEG Fine Large 10.8 Megabytes

JPEG Basic Small 872 Kilobytes

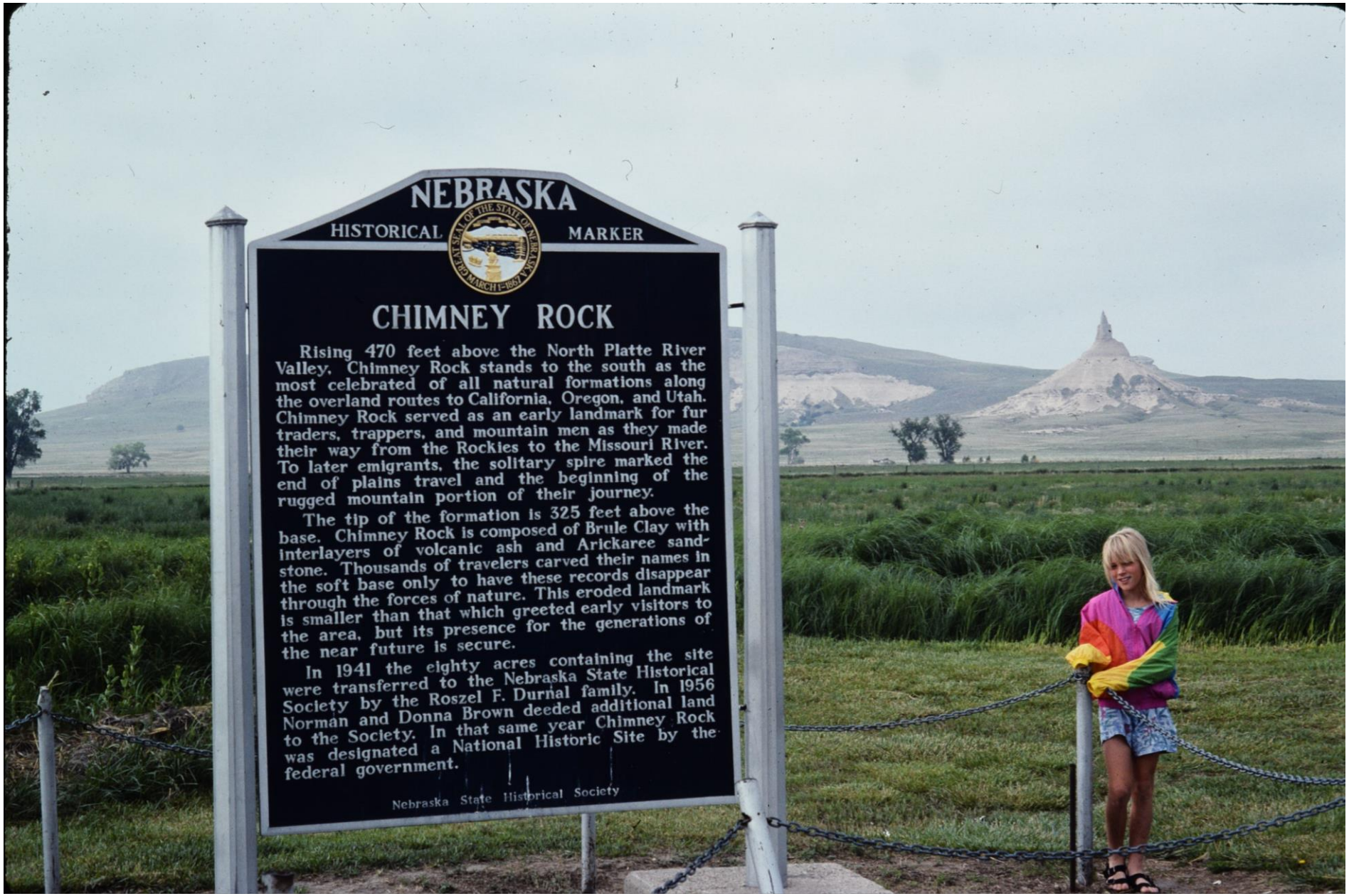

JPEG Fine Large 11.1 Megabytes


JPEG BASIC Small 840 Kilobytes

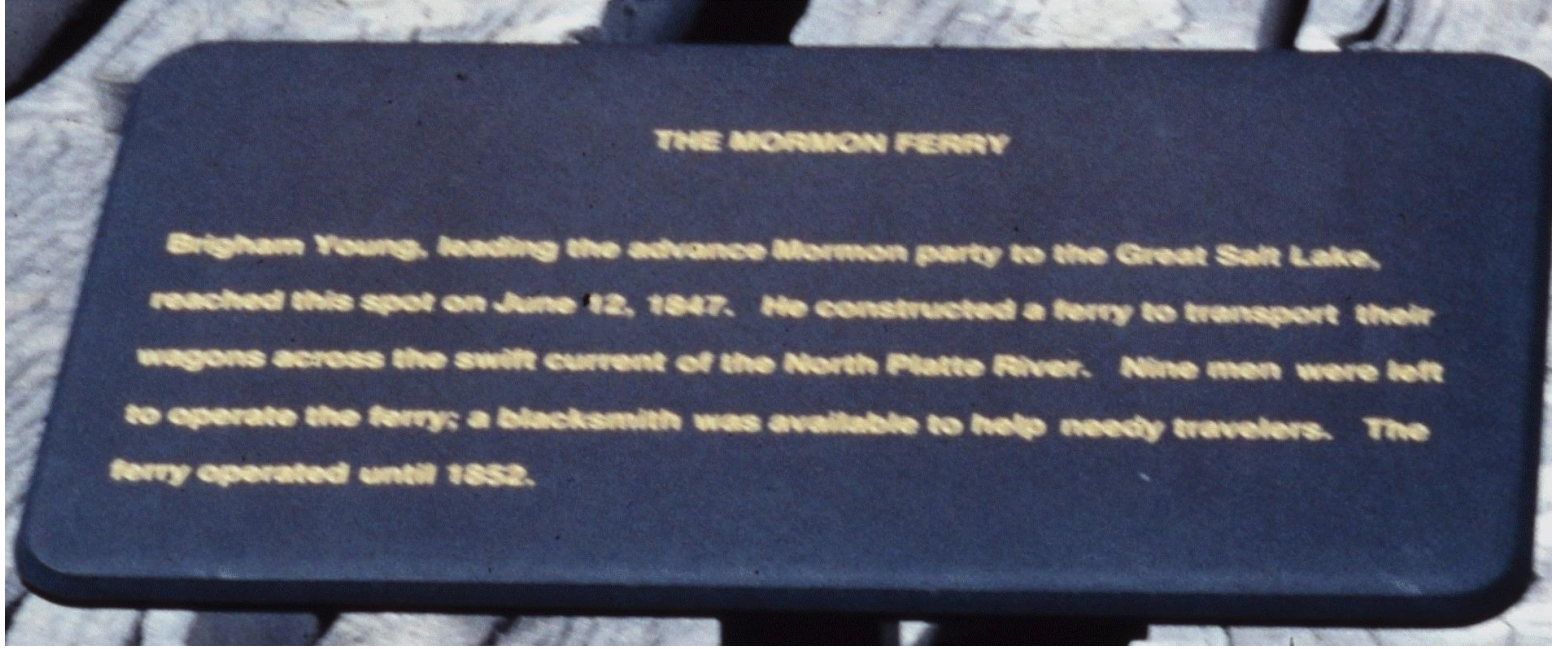
JPEG Fine Large 10.2 Megabytes

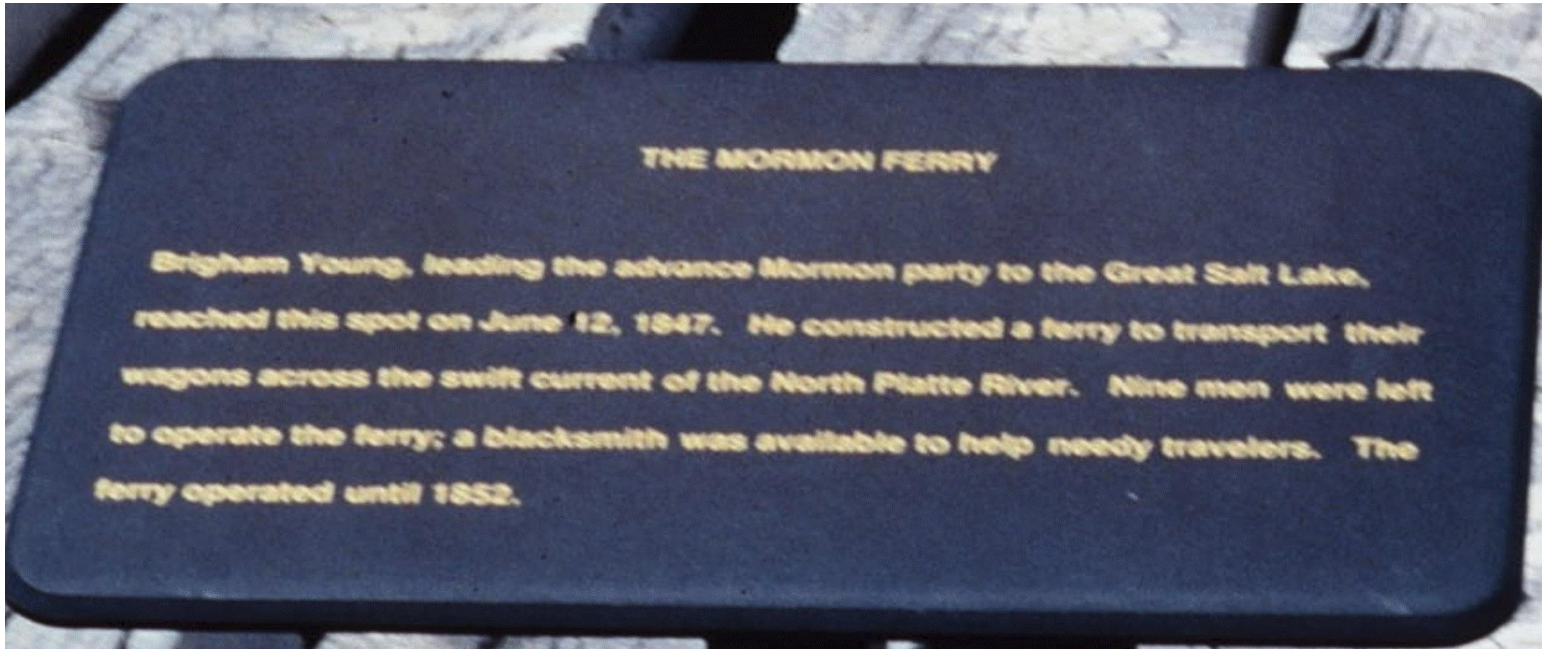


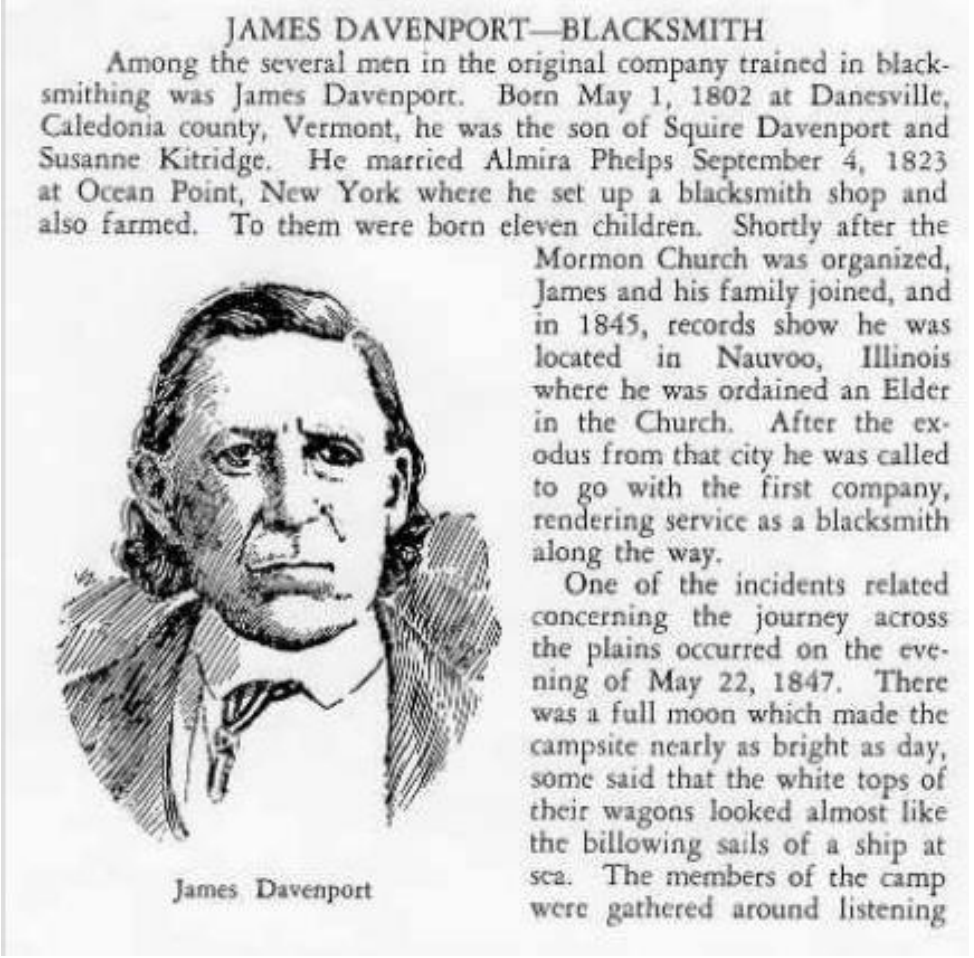
JPEG BASIC Small 980 Kilobytes



The Mormon Ferry replica on the North Fork Platte river at Casper Wyoming



JAMES DAVENPORT—BLACKSMITH

Among the several men in the original company trained in blacksmithing was James Davenport. Born May 1, 1802 at Danesville, Caledonia county, Vermont, he was the son of Squire Davenport and Susanne Kitridge. He married Almira Phelps September 4, 1823 at Ocean Point, New York where he set up a blacksmith shop and also farmed. To them were born eleven children. Shortly after the Mormon Church was organized, James and his family joined, and in 1845, records show he was located in Nauvoo, Illinois where he was ordained an Elder in the Church. After the exodus from that city he was called to go with the first company, rendering service as a blacksmith along the way.

James Davenport

One of the incidents related concerning the journey across the plains occurred on the evening of May 22, 1847. There was a full moon which made the campsite nearly as bright as day, some said that the white tops of their wagons looked almost like the billowing sails of a ship at sea. The members of the camp were gathered around listening

Top: JPEG Fine Large
Expanded 110 %

Bottom: JPEG Basic Small
Expanded 214%

Summary:  Scanning at a higher resolution than the original image supports creates a larger file that provides no additional value over a smaller file.

High resolution 35 mm slides are created with:

- Camera with high quality (expensive) lens
- Mounted on a tripod
- Perfect lighting and exposure
- Specialized film developing
- “Slow” film

High quality scans of high resolution photographs can be used for printing posters but will make no difference in typical viewing environments.

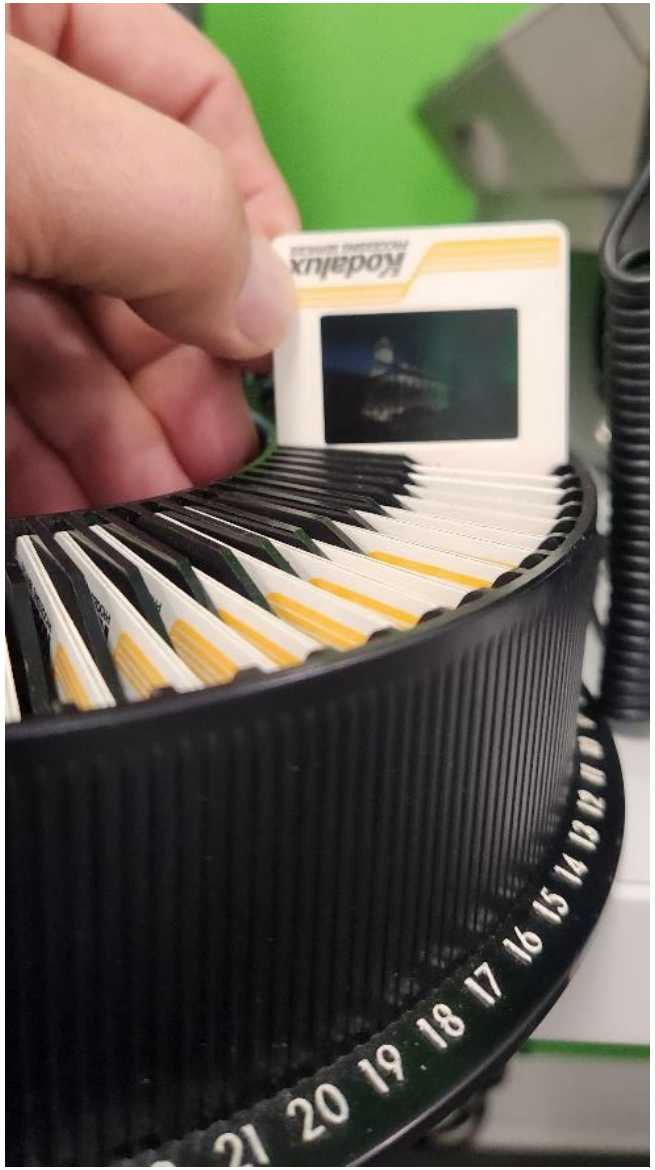
High quality scans viewed on a computer monitor cannot appear better than the monitor quality. My laptop monitor is 1920 x 1080 pixels. The small size is 2992 x 2000. An 8K monitor (7680 x 4320 pixels) costs over $4000 but would display the large size 6000 x 4000.

# Important Notes with the SlideSnap PRO Fast 35mm Slide Scanner

On the left is a landscape oriented slide displayed in landscape mode. On the right is a portrait oriented slide displayed  in landscape mode. It appears to be laying on its side. Unlike other scanners, The SlideSnap PRO is inflexible in its scanning. It will always scan as though the slide is in landscape mode. Consequently portrait oriented slides must be loaded on their side to scan correctly.

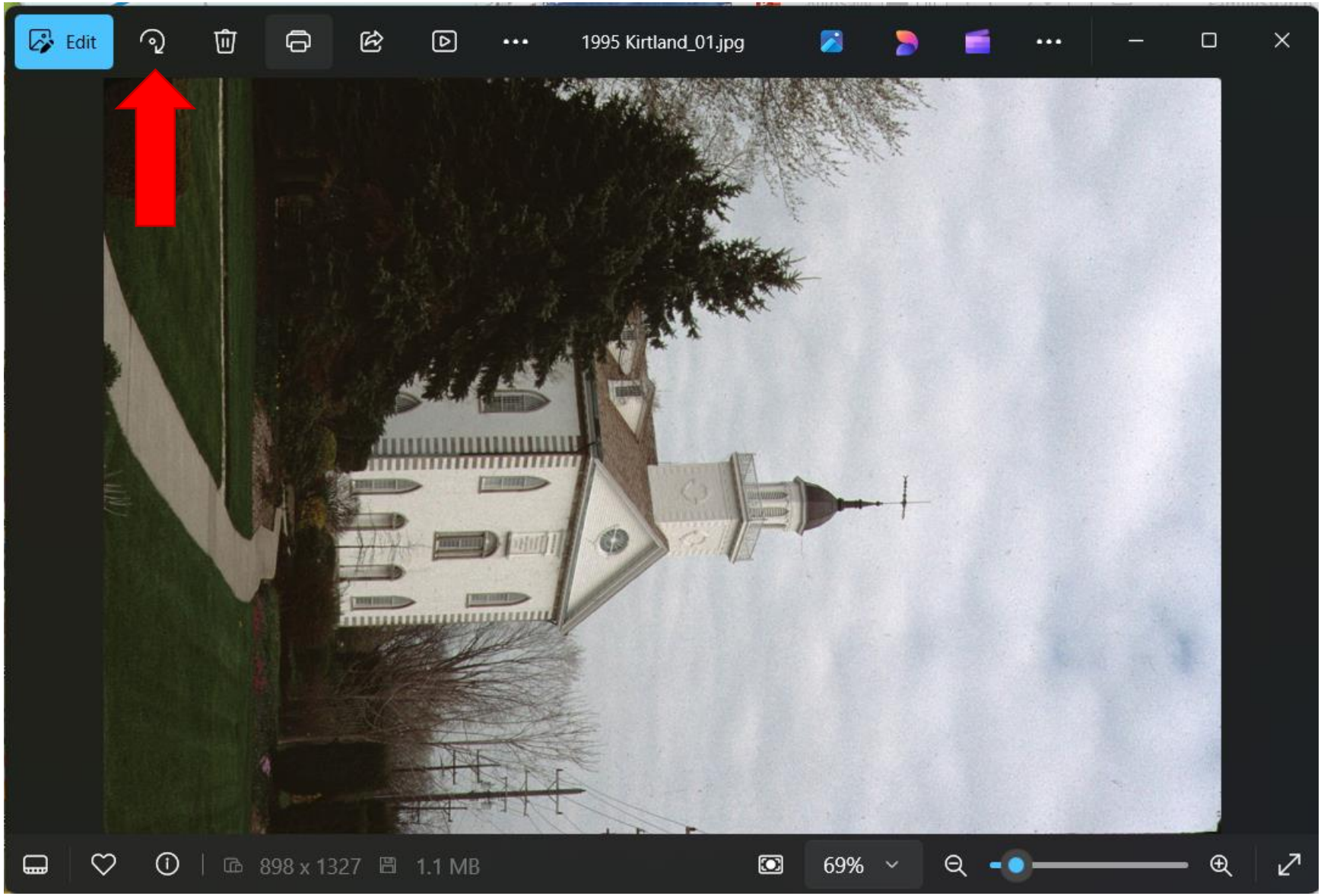
The scan on the left accurately represents the slide. It was scanned in landscape orientation and rotated upright afterwards. The scan on the right is the same slide incorrectly scanned in a portrait orientation. The scanned image is damaged. You can see that the top and bottom of the picture is missing. The dark area on the sides of the scan are the scanner’s attempt to scan the cardboard slide mount.

Scanning with the slide loaded in the wrong orientation will result in an incomplete scan image.



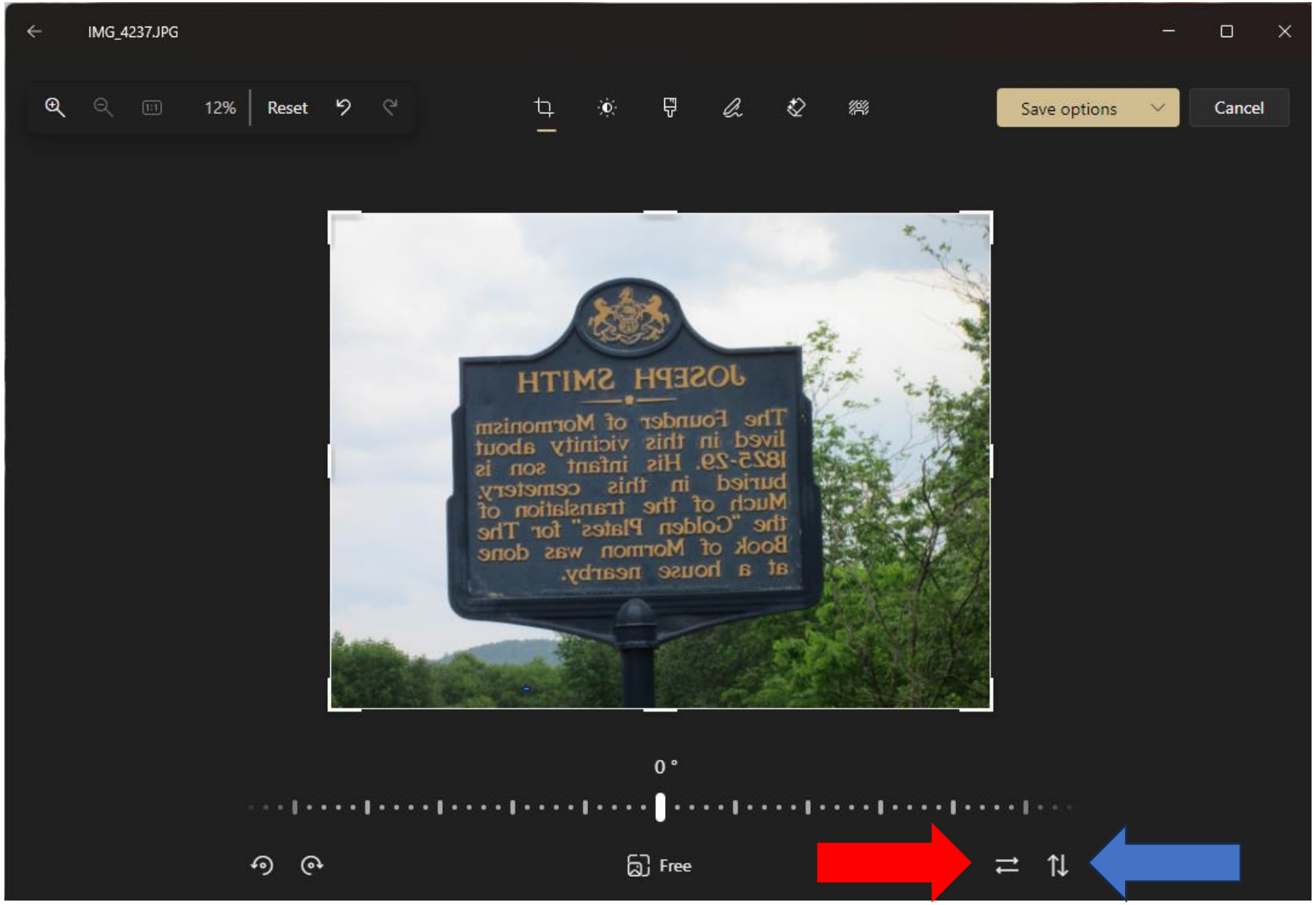

This picture demonstrates loading a slide in the SlideSnap PRO carousel for scanning. Note that the slide is being loaded in the landscape orientation. If the slide itself is landscape oriented, load it upright. If it is in portrait mode it will have to be scanned on its side and rotated in the software afterwards.

Note that the slide text is facing in the direction of increasing carousel count. If the slide is loaded backwards, the scan will be a mirror image of the original. This can be fixed as is described in later.

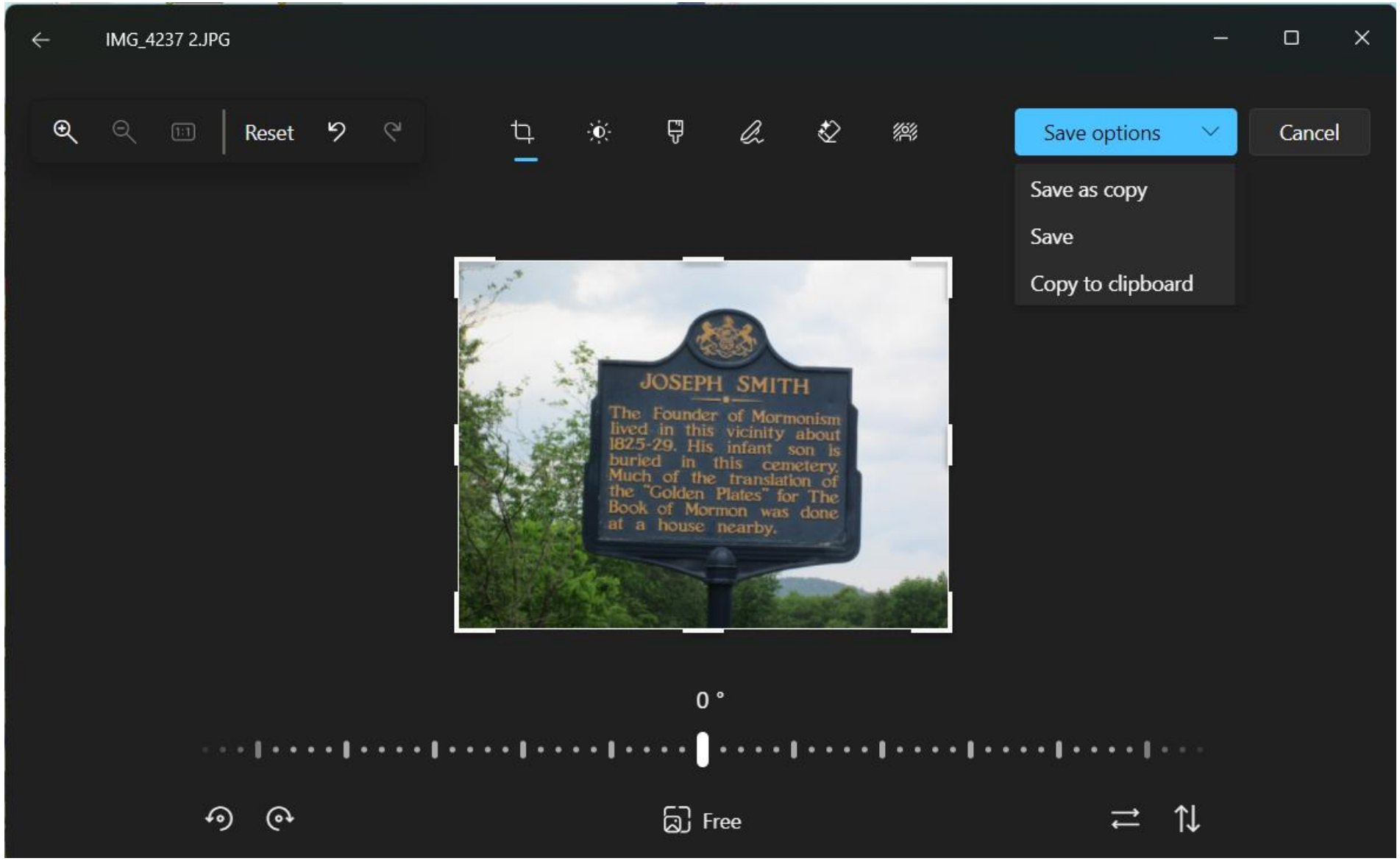



To correct a portrait slide scanned in landscape mode. Open the scan by clicking on image file. It opens in Windows Photos. Click the half circle icon marked by the red arrow. This will rotate the photo 90°. Keep clicking until the image is upright,


To fix a slide scanned backwards resulting in a mirror image. Open the scan in Window Photos. Click the blue Edit box marked by the red arrow. The editor opens as shown on the next slide.




Note the two horizontal arrows at the bottom right marked by the large red arrow. Selecting this icon will mirror image the scan. (The two vertical arrows marked by the large blue arrow will rotate the image 180°.) After using either of these controls the image has to be saved to keep the edits. Click on the tan “Save Options” drop down menu in the top right.




Here is the corrected scan. The “Save Options” drop down menu is open. Select “Save” to save the file.