

# THE MUNNS REPORT

Release Number 1F - Roger's Camera Path  
& Frame Count Information

Tracking Roger Patterson's path as he  
filmed, based on new image analysis,  
and Notes on the Issue of Frame Count.

This Report reflects an ongoing  
analysis by Bill Munns  
of the 1967  
Patterson-Gimlin Film.

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Report Release 1F - Roger's Path in the early filming, and issues of Frame Count.

August 15, 2009

This material is an analysis of Roger's path as he filmed the early to middle sequences of the PG Film, because moving ever forward, he actually filmed the paths he would subsequently take as he continued to follow the subject "Patty". This segment of the Report does rely on the prior segment, 1E, so familiarity with that material will make understanding this material easier.

I will be using a frame count system here for the frames I show, and they will have the prefix "VFCv1" before the number. This prefix stands for "Verified Frame Count, version 1". In the second section of this release material, this will be explained in more detail, both the why of it as well as the status and potential impact on the overall PG Film analysis by all researchers in the future. At this point in time, the impact is minimal, but it is an inevitable factual matter that must be rectified in the future, so I may as well start now.

## **The Path Analysis**

Various interviews in the past contain descriptions of Roger's actions when he was filming the PG Film, and other researchers in the past have tried to reconstruct Roger's path as he continually moved toward the film subject and adjusted his camera positions for clear filming. I was not terribly concerned about this issue in the past, because I did not expect anything in the film itself would actually reveal this. But the prior release material, unifying the early and middle sequences caused me to reconsider some issues of landscape objects. That reconsideration sort of crystallized in my mind after releasing the 1E segment a few days ago.

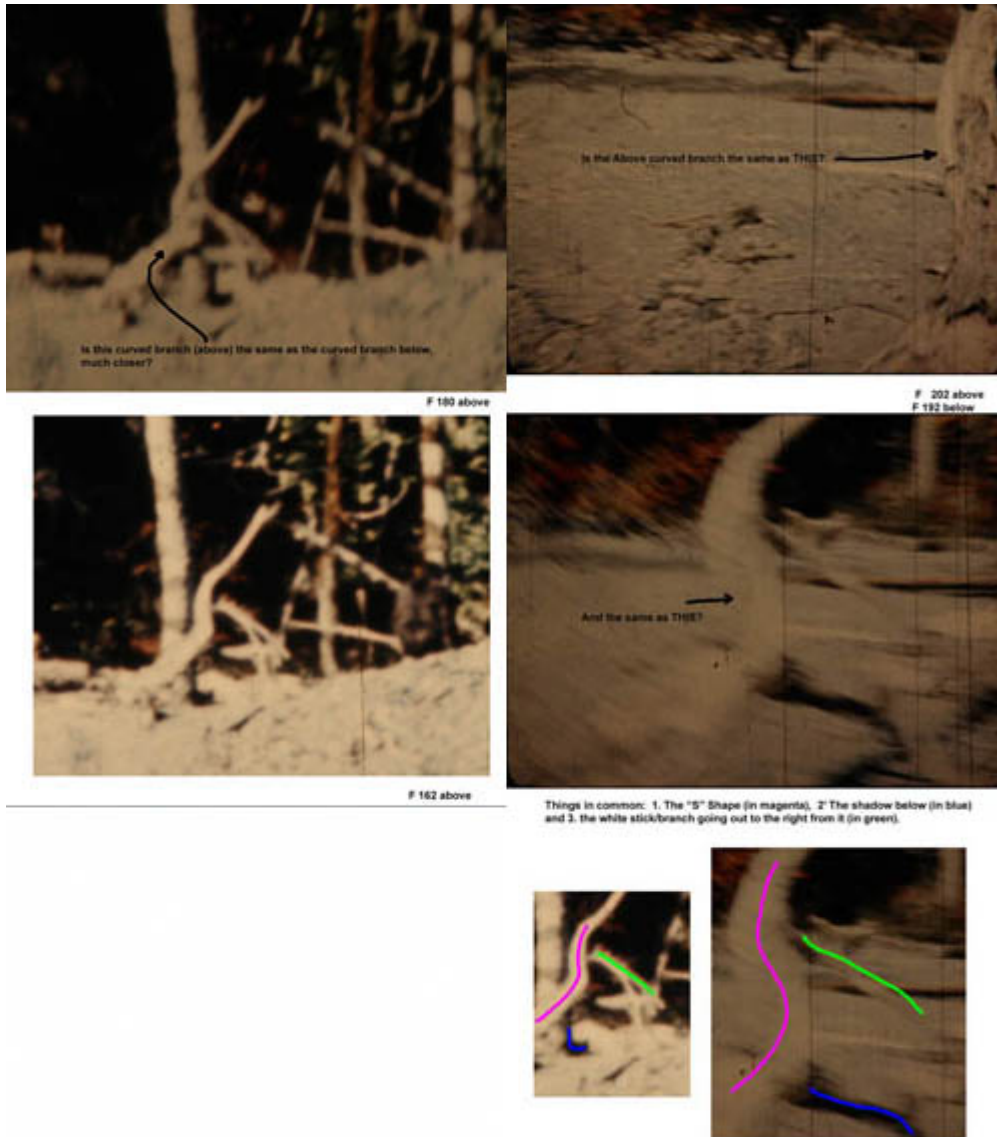
One of the keys to this new analysis is a curious object seen in some frames as Roger runs toward the subject, to film the famous Look Back sequence.

The genesis of this new analysis was a question I posed to the BFF Forum about a year ago, comparing a curious "S" shaped tree trunk or branch, with a curiously curved "S" shaped structure Roger clearly stands close to and films past as he goes into the main creek bed and starts filming the middle sequence.

I wondered if this "S" shaped branch-like structure could be the same in the two images. After some consideration, I could not make a strong enough connection to confirm it, so I set aside the idea, as unresolved.

Now I must conclude they are indeed the same structure, and the following material will illustrate why, as well as show the unique relevance to the analysis of Roger's filming path.

Starting with the original chart I posted to the forum about a year ago, it is shown below for reference.



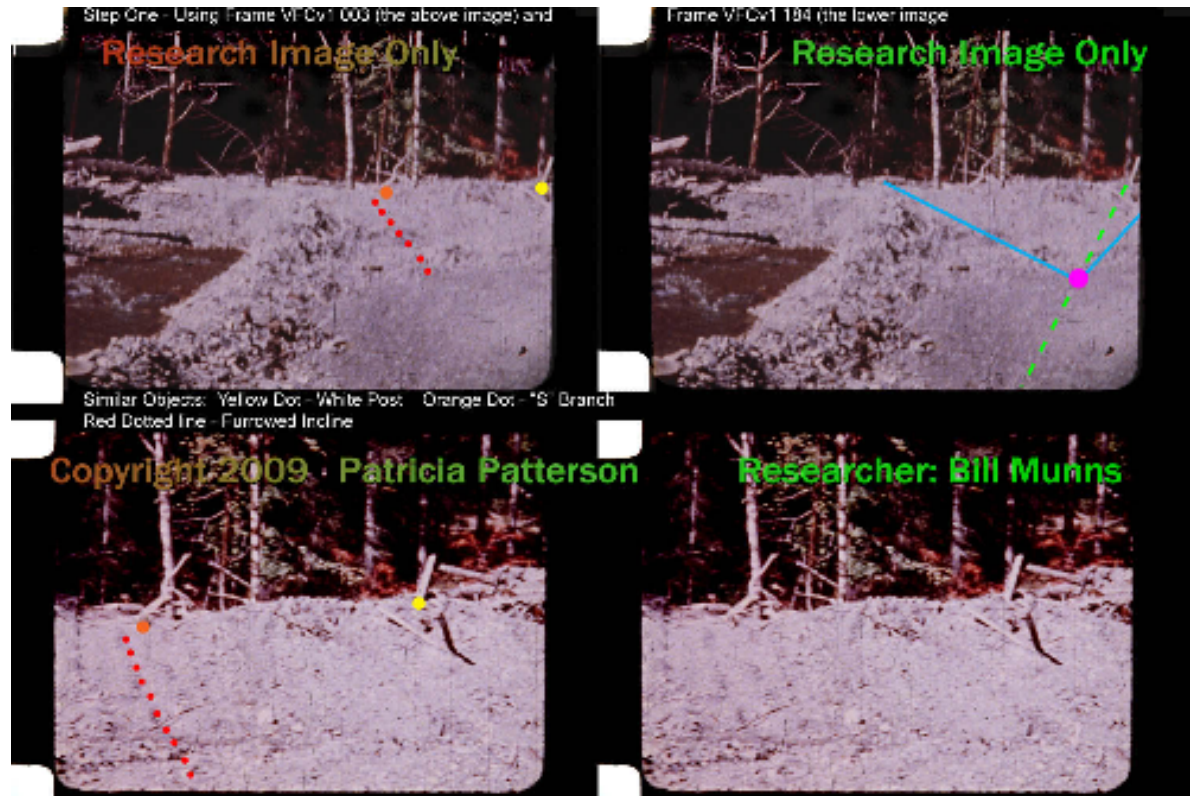
At the time I made this above chart, I had not unified the early and middle sequence landscapes as are now done in the prior report release, 1E.

With that piece of the jigsaw puzzle put in place (the report release 1E material), I could revisit the issue of this "S" shaped branch-like form, and verify that it is a significant part of analyzing Roger's path.

The analysis will be explained, step by step.

Step One - Roger's walk as he films the early segment.

The below diagram shows one of the very earliest frames (VFCv1 Frame 003) and one of the near last frames (VFCv1 Frame 184) of the early sequence. Roger is moving almost continuously while filming this segment, so it is the most shaky in content, with an occasional clear sharp frame, and a lot of blurry ones.



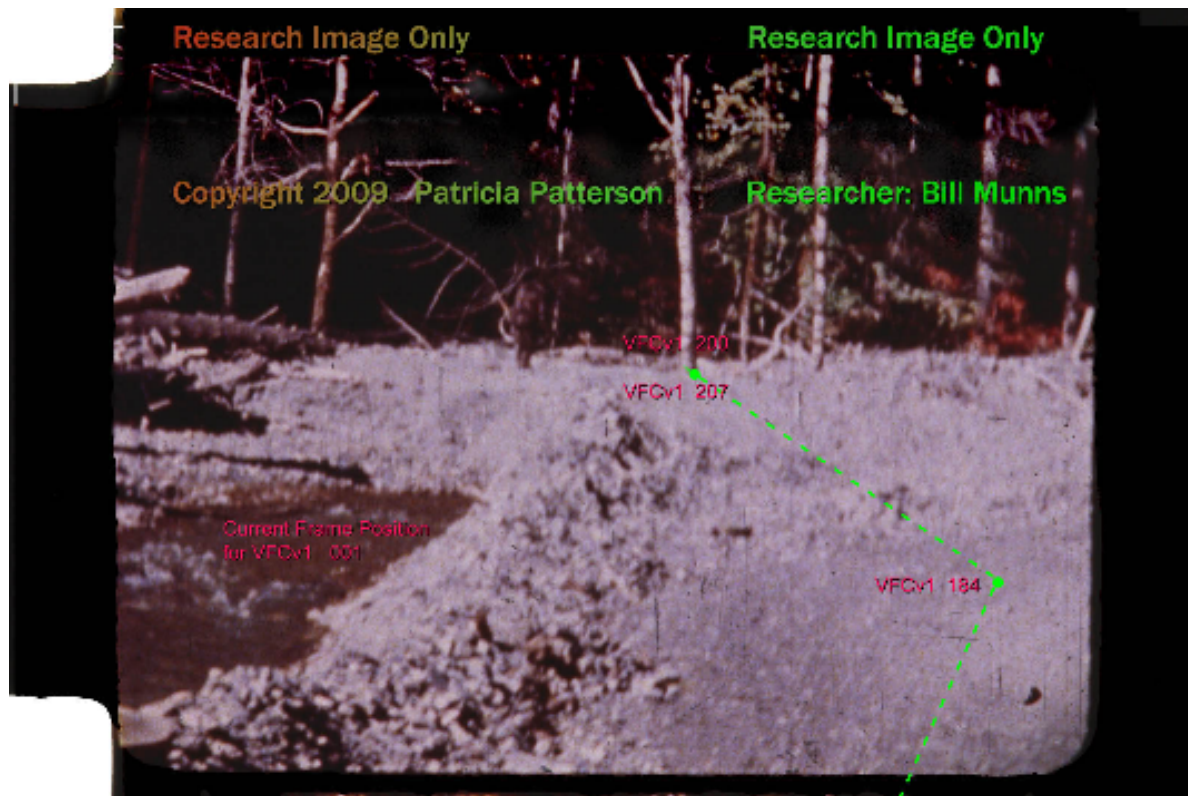
The White Post (a tree trunk, most likely) shown above with a Yellow Dot, has a tree almost directly behind it, but much further back. It is one of the trees identified in the 1E Report Release. But even though the White Post is far closer than the tree behind, they stay in very close alignment, so we can estimate that Roger was moving on a near straight line toward the White Post, because that's the only way a distant background object will stay in close proximity to the foreground one, in terms of line of sight. A green dotted line in the upper right image thus represents an approximate path Roger was moving in as he filmed the early sequence.

The common objects seen both in the early frame and the later frame are the White post (yellow dot), the "S" Shaped branch (Orange dot), and the furrowed incline (red dotted line) which may be an equipment graded incline, because of it's furrows, plus the fact the upper images show a water channel embankment which looks like it were formed with construction equipment.

On the upper left, the Magenta Dot is the estimation of Roger's standing position at VFCv1 Frame 184, and the two blue lines suggest his camera field of view from that position (the angle of view is illustrative, and estimated).

Step Two - Roger runs up the Furrowed Incline to film near the "S" shaped branch.

Below is the estimated path he took next (green dotted line):

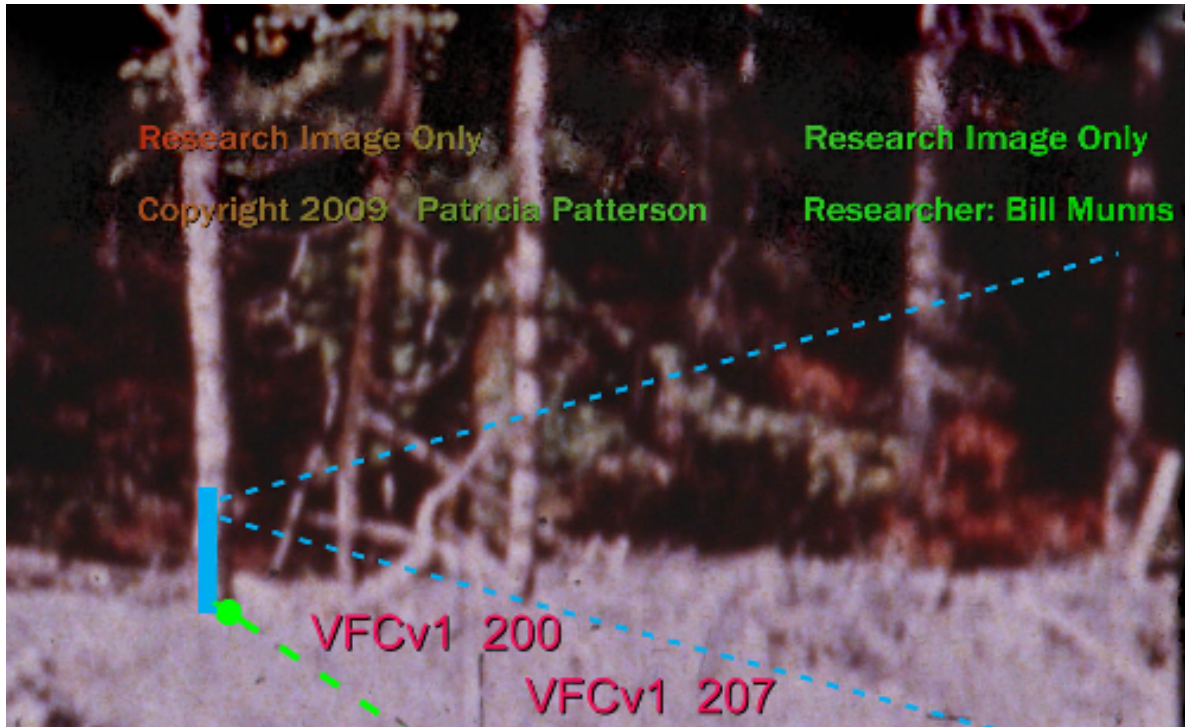


The second green dot in the sequence, near the center of the image, is where I estimate the start of the middle sequence was taken.

For each position marked with a Green Dot, I have noted the film frame being taken at that estimated position, so VFC v1 F184 was taken from a position proximate to the first (lower) green dot shown above, while VFC v1 F200 and VFC v1 F207 were filmed from a position proximate to the second (upper) green dot.

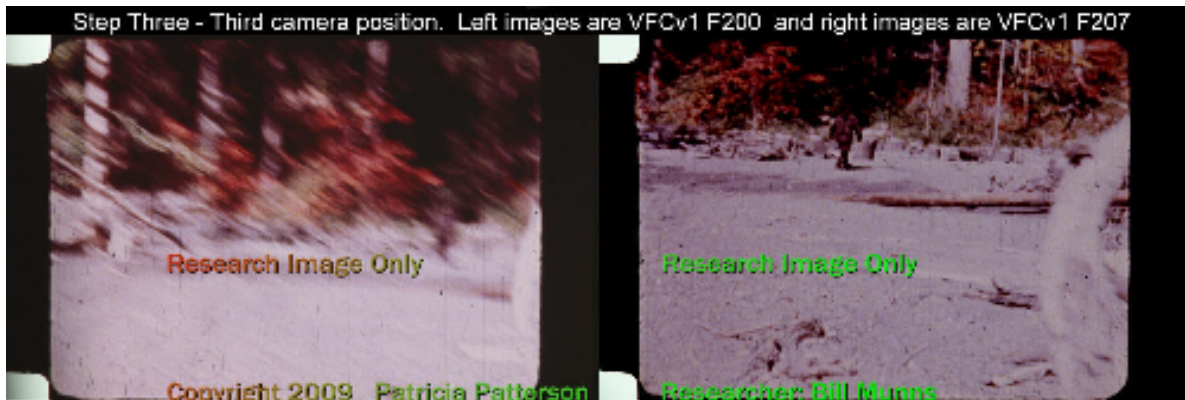
Next we consider the camera filming direction from that second position noted above.

The enlarged image below shows where Roger's estimated position was for filming the frames including VFCv1 Frame 200 and VFCv1 Frame 207, shown as examples herein.



The green dot is the estimated position, and the blue vertical line is Roger's estimated height (a little over 5' tall). His camera view is within the blue dotted lines, and in that direction. The estimation of Roger's height, and the height he is holding his camera at "eye level", is the "S" shaped branch object and the curvature of it seen in the camera frames.

In the two images below (showing the actual frames of VFCv1 F200 and VFCv1 F207) do have a slightly different position in terms of a lateral (side to side) position. Relative to the "S" shaped branch object, Roger does move somewhat left and right, so the distant landscape background changes in relation to the foreground "S" shaped object in frame.



Step Three - Comparing the camera frames taken at this third position with the side view which shows some of what we should expect to see in the frames. The frames taken at that viewpoint include the two below (on the left, VFCv1 F200, and on the right, VFCv1 F207):



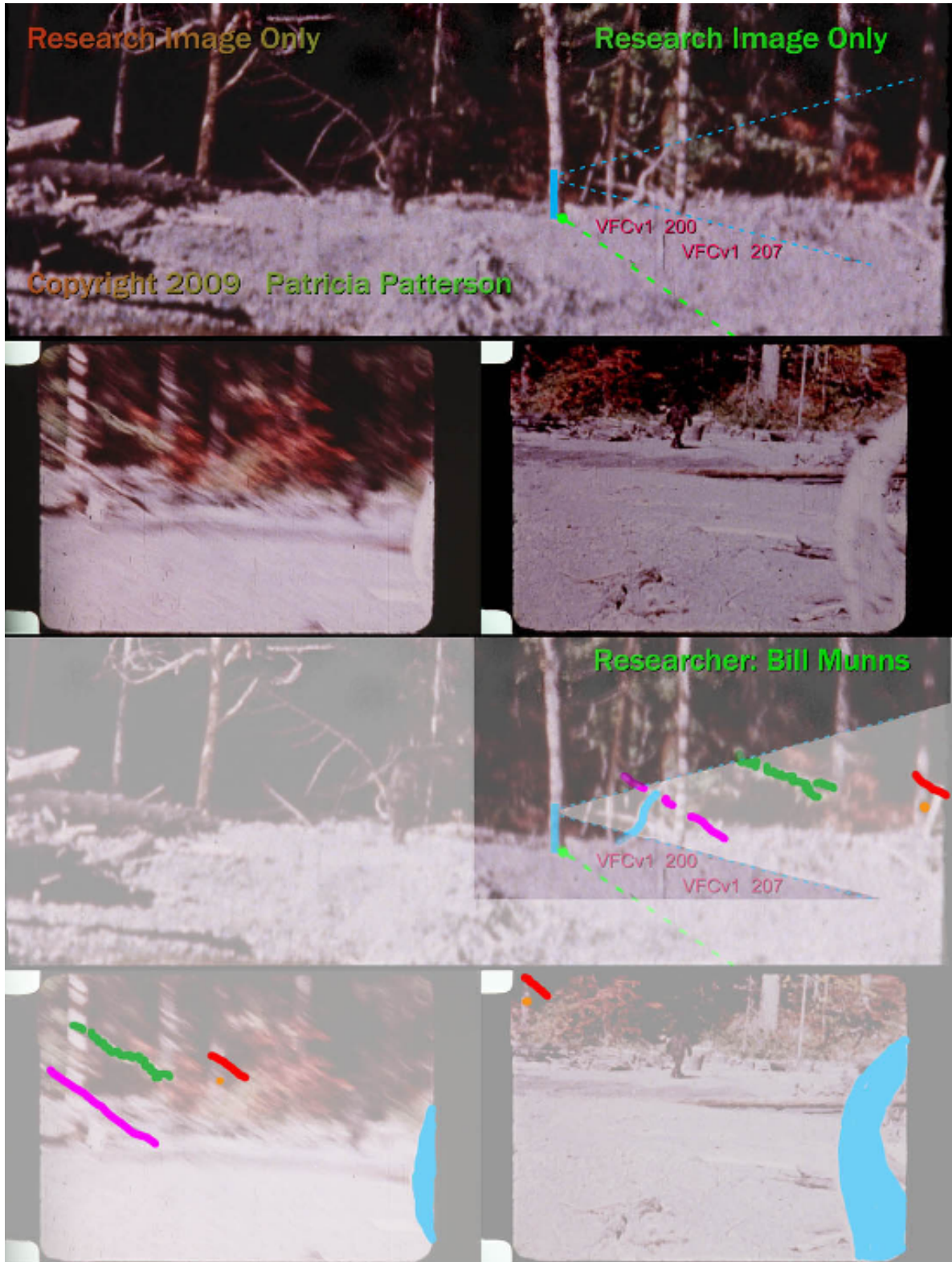
First thing here is to simply compare the two images for common content. The magenta dot is a piece of driftwood on the ground, making a shadow dark spot. The red dot is a curious white flat object, maybe a piece of wood. The yellow-orange dot is the curved part of the "S" shaped branch. The green dot is the end of the main log, as it gets buried by the creek-bed sand. The light blue dot is a tree, and the dark blue dot is a cluster of reddish leaves. Patty is seen in both, but of course blurred in the left images, which are taken 7 frames apart, or less than a half second apart.

Next we need to consider what landscape objects seen in these pictures are seen in the side view showing where we estimate Roger's position was filming these frames.

Step Four - The objects seen from the camera three position, with the "S" shaped branch in close foreground.

The next chart shows on top a cropped frame of VFCv1 F003, the wide view of this landscape when Roger began filming. The second row are two images, frames VFCv1 F200, and VFCv1 F207, taken from approximately the position marked with the blue vertical line, representing

Roger himself, as he filmed these frames. The third row is a repeat of row one, the landscape overview, but mostly whited out, and the landscape elements color coded which can be seen in the camera view. The fourth row is the camera views themselves, and the same objects color coded.





The object color code is as follows for this chart:

Blue is the "S" shaped branch itself.

Magenta is a diagonal log or branch, described in the Report release 1E and currently presumed to be correct.

Green is the diagonal cluster of leaves that still retain some greenish coloration.

Red is a diagonal slash of reddish leaves crossing a tree trunk.

Orange is the tree trunk itself, and a distinctive dark spot on the trunk, specifically.

We see all of these objects in the actual camera views, and as well in the side view of where the camera is filming from. The conclusion would be that this third camera position is thus reasonably well positioned in a preliminary analysis.

Fifth Step - Roger then advances again, to finally film the look back sequence itself. Comparing the size of the log as it gets bigger as Roger approaches it, and the size of the big tree in the background, which does get slightly bigger, an estimate is that Roger has advanced about 20-30 feet forward, and there, he filmed the Look Back sequence itself. The exact computation is still in progress.

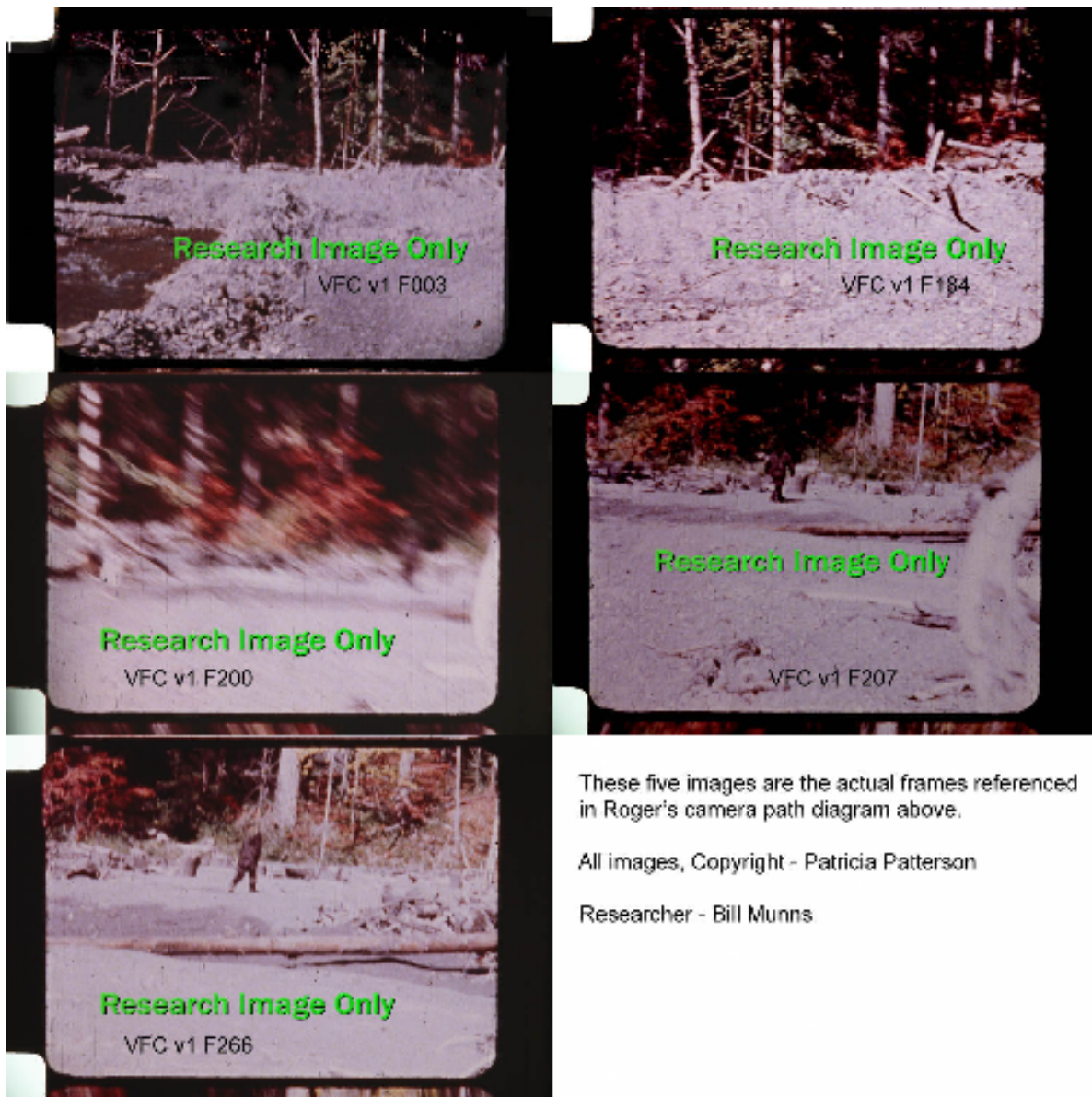
So this next chart illustrates his path as now estimated:



Now we have a reasonable estimation of Roger's actual path as he moved about while he filmed.

It should be noted that the fourth position for F266, is actually behind that whitish sand embankment seen, on the flatter creek bed area. The embankment blocks our view of that.

The frames referenced in the path diagram above are as follows:



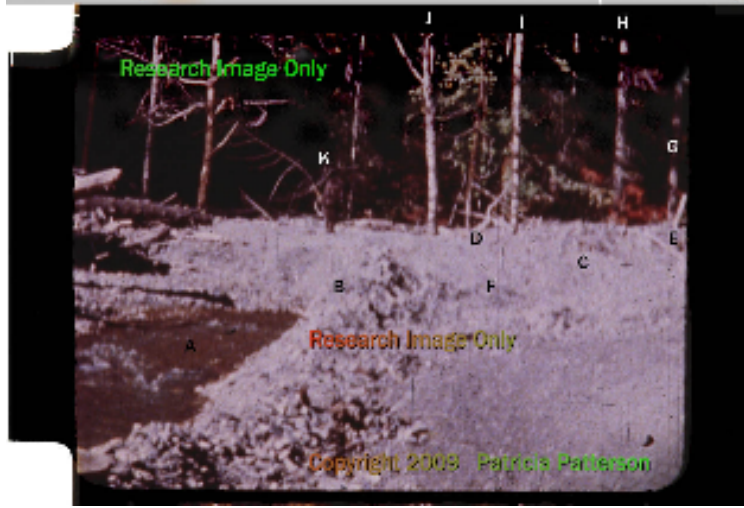
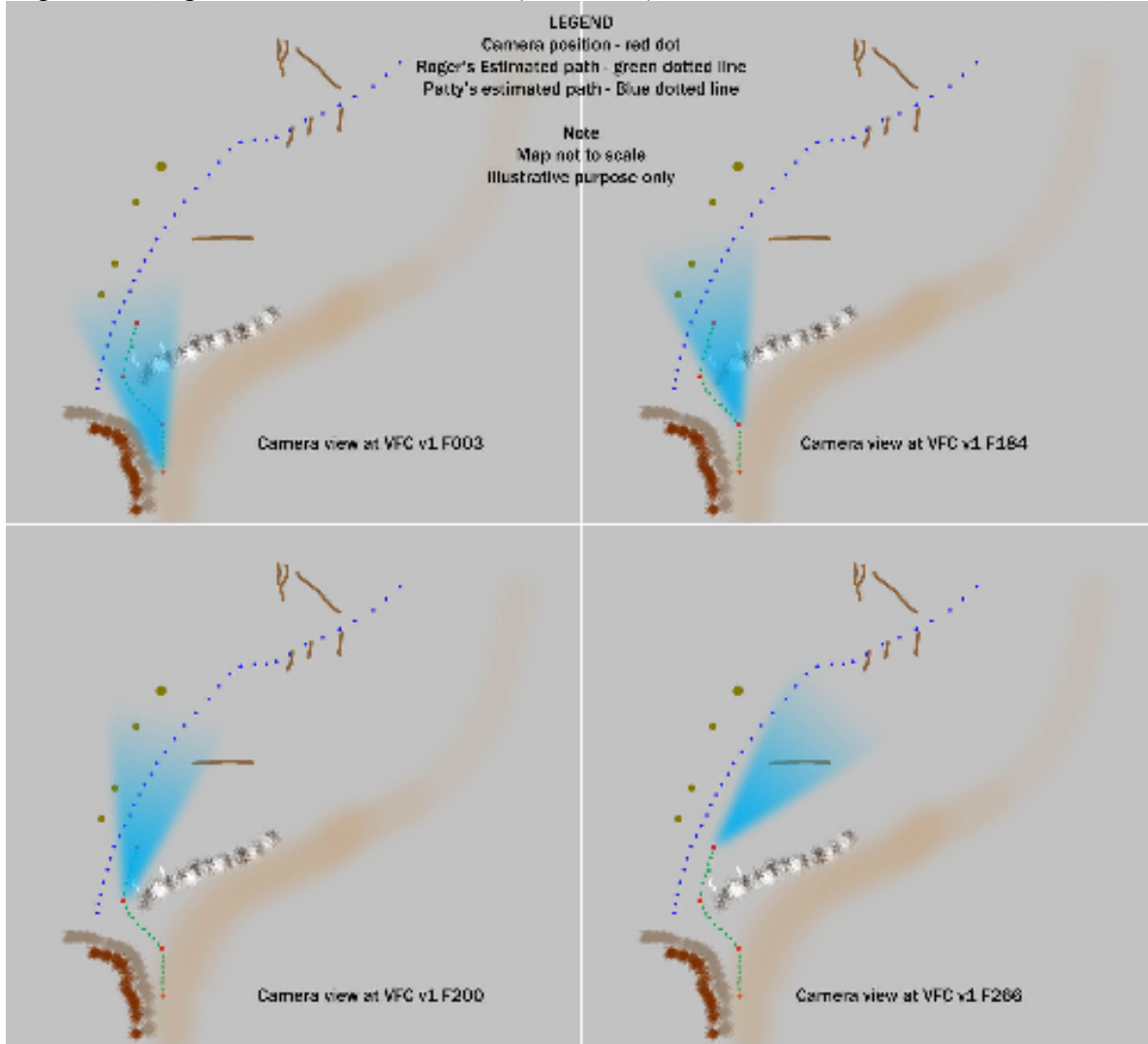
These five images are the actual frames referenced in Roger's camera path diagram above.

All images, Copyright - Patricia Patterson

Researcher - Bill Munns

The Value of This Analysis - Clearly, at this point, this analysis is a rough approximation of the path, simply based on similarities of various landscape objects. No measurement or Photogrammetry solution is implied by this current effort. But it does show us which landscape objects to give our attention to, as we progress. We now know what objects to look for in the clear frames, and specifically to look for multiple camera positions showing these identified objects. We now can look for ways to measure the changing scale or size of these objects in each frame, because the changing size will allow us to calculate a proportional change of distance, from one camera position to the next.

# Top View Diagram of Camera Positions (Estimated)



The Key to the above diagram is:

- A - The reddish muddy water in the channel
- B - The embankment of that channel
- C - The embankment further to the left
- D - The "S" shaped branch
- E - The White post (presumably a tree trunk)
- F - The incline on the embankment Roger likely ran up.
- G - The tree behind the White post (E)
- H - Another tree
- I - Another tree
- J - Another tree
- K - Patty

The red dots are estimated camera positions

The green dotted line is Roger's estimated path

The blue dotted line is Patty's estimated path

And so this also puts us one more step closer to a site photogrammetry solution, not only unifying the early and middle sequences of the film, but giving us additional camera positions for various landscape objects, which strengthens the potential for an excellent photogrammetry solution.

The main log and center cluster of trees are simply estimated in position for illustrative reference.

The first step to a final Photogrammetry Solution is identifying the objects and control points to be used in the analysis. This study allows us to identify those points and objects, in the early sequence as well as the bridge to the middle sequence, and thus takes us another step closer to a solution.

## Frame Count Revisions

In the course of gathering the material I have collected over the last 20 months, and having scanned two full versions of the film, and a partial scan of beginning, middle, and end segments of a third, I have assembled a frame inventory for future reference.

One of the things I found is that the traditional frame count, usually referenced to the Cibachrome images, is off by at least two frames. So the classic "Frame 352" is apparently frame 354 in the true sequence.

However, I don't regard this issue as settled yet, and I will continue to investigate it. What I do know is that for my own research, I needed one new standardized numbering system I personally can rely upon, a basic system that also references the image file numbers the scanning process generated each time a copy was scanned. The Green copy scans, the Gimlin copy scans, and the Patterson copy scans, all have different numbering sequences for the original RAW files as well as the JPEGs the scanning generates in the process, so I keep those numbers intact to insure going back to any source RAW files will be easy. The new numbering index references those other scan sequence numbers as well, in a cross referenced fashion.

I refer to this new numbering system as "VFCv1" which means "Verified Frame Count version 1". I am purposely allowing for the prospect that future research may reveal a different count (I've had enough surprises so far in researching this film, that I should realistically allow there may be more), and that would become version 2.

So at this point, I needed to have one reference system I could rely upon in my work, which indexes all the various scan images in a unified way, but still keep an open mind to the possibility that other frames may be existing and I haven't found them yet.

If such exist and were found, I'd need the option of revising the count with a new version, so the v2 designation is just keeping the option open. If something in the future requires me to modify the current reference system, I will call that revised system VFC v2.

How does this impact on the research of others? Truthfully, at present, it doesn't. I expect everyone else will continue to reference the traditional frame numbers, and that's fine, because those are the images most people have and use for their own analysis. I can easily translate them to my numbering, so there isn't any problem of confusion.

Does the new frame numbering impact on any real debates about whether the subject, "Patty" is real or hoaxed? No, not in the least. Further, for most of the material I expect to be working on in the immediate future, it won't be the usual frames everybody knows, so again, there isn't likely to be any confusion, but if I do reference a known frame with my numbering system, I will cross reference it to the traditional number as well, for clarity.

So my implementation of this new numbering system is simply a practical way for me to organize the material I currently work with, based on the actual verified frame count I have in my files of scanned images. As long as the current inventory remains unchanged, I'll keep using the "VFC v1" designation, and if I later find a need to revise the system, I'll switch over to "VFC v2".

For now, the easiest way to translate the verified numbering system to the traditional one is to simply add two (2) to your current frame numbers. So F352 traditional is F354 by the verified system.

I suppose the question may arise of how this error in numbering came about. I suspect I have found the cause, but it requires further research before I can document a true explanation. My continuing research into the film copy genealogy revealed this much, and may reveal more, as it continues, so I prefer to hold on my theory of the cause for the erroneous frame count, until I have further documentation.

Bill Munns

August 15, 2009