Macintosh enthusiasts might know the name Bill Atkinson from his 12-year reign at Apple Computer beginning in 1979 when Steve Jobs lured him out of a PhD program at the University of Washington. Atkinson was the one who devised a good portion of the original Macintosh user interface. He designed the pull-down menu. He wrote the original QuickDraw, MacPaint, and HyperCard programs. Some folks even go as far to say that he’s one of the godfathers of the entire graphics software industry.

Nowadays Atkinson is more intent on redefining digital photography and printmaking. And exactly what is he taking pictures of? Rocks. A nature photographer since the age of 13, he now uses $30,000 worth of equipment to take highly magnified photos of natural rock surfaces, adds a few small tweaks in Adobe Photoshop, and then makes large matted fine-art prints for galleries and collectors. As a result, the images look like abstract art and you would never know they were photos of rock surfaces. He recently published a book of his rock photos, titled, *Within the Stone* (Browntrout Publications, $39.99, 180 pp.).

“They look like paintings,” Atkinson said. “That’s what I love about them. They’re very evocative, very mysterious, and very emotional. They’re almost like colored Rorschach tests. Everybody sees something a little different in them. Nobody sees them as flat polished rocks.”

**Opal, morrisonite, and pietersite**

Magnified nine times, the cover image is the surface of a black opal from the Mulga Field, Lightning Ridge, Walgett Shire in New South Wales, Australia. The last section of *Within the Stone* features descriptions of the rocks at this site from Robert Hutchinson and Si and Ann Frazier, all of whom are experts in mineralogy. They say that “black opal is the most brilliantly colorful and most valuable opal variety in the world, typically commanding hundreds of dollars per carat.”

Figure 1 is *Matrix Opal*, a stone that also hails from Australia and is magnified seven times in the image. When Atkinson says the images are like colored Rorschach tests, he’s absolutely right. Everyone will see something different in these images. *Matrix Opal* looks like a funhouse, an opium den, and a paint store explosion all rolled into one. Hutchinson and the Fraziers explain that “The ‘matrix opal’ in a given boulder might be ‘precious’ (showing ‘play of color’) or ‘common’ (lacking ‘play of color’)—or both (in which case the common opal is called *potch*). In the specimen in the photograph, the blue sparkly material is precious opal, the creamy orange material is potch, and the black matrix is ironstone.” Atkinson says the *Matrix Opal* image is often seen as something from the dark side.

*Morrisonite* (see Figure 2) looks like a bloody, surreal nightmare or some sort of Lovecraftian psychohell, but it’s just a rock from Morrison Ranch, Owyhee River Canyon in Malheur County, Oregon, magnified two and a half times. For *Within the Stone*, 10 famous authors contributed texts to accompany 70 of the images. For *Morrisonite*, science writer and philosopher John Horgan, author of *Rational Mysticism*, contributed a poem titled *Erotica Geologica*.
Figure 3, Pietersite from Namibia, looks exactly like an abstract painting. You can even see what looks like brush strokes and deliberate compositional techniques. This image is not included in *Within the Stone*, but several similar ones are.

**Technique**

Instead of a typical digital camera, Atkinson uses a high-resolution, large-format scanning camera—the kind used to make digital reproductions of fine-art paintings. “If you just put the rock on a flatbed scanner, you get horrible results because of the flat frontal lighting,” he explained. “But with the large-format scanning camera, I was able to get high enough resolution for 4-by-6-foot prints that are tack sharp, and I was able to get much more accurate color than was possible with film.”

The rocks photographed were all between 1 and 10 inches wide. Atkinson photographed them with reflected light and used cross-polarized lighting to reduce glare, to enable seeing deeper into the rocks, and to fully bring out the rocks’ colors and textures. “Each capture, each original scan, is 275 Mbytes of uninterpolated data. So that’s what preserves all the detail when you [make the large print]. We’re talking 6,000 by 8,000 pixels at 16 bits deep. And full color for each pixel.” Atkinson cleaned up the scanned transparencies and direct digital captures in Photoshop and made large-scale fine art prints on an Epson Stylus Pro 9600 pigment printer.

*Within the Stone* proved to be even more challenging, as replicating the intense color of the large prints with a four-color offset press proved nearly impossible. “I’ve been spoiled with these printers that can print a very wide range of color,” he mused. “The normal four-color printing process is like playing with an eight-color Crayola set.”

So Atkinson worked with Vanfu Inc. of Japan to improve the entire printing process by using highly concentrated inks and more accurate color management. “Without this technology less than half of my images would print acceptably,” he said. “With it, all of them printed acceptably.” As a result, *Within the Stone* received a Gold Ink Award for excellence and innovation in printing. Atkinson explains the process in more detail on the last page of the book and he has no qualms about giving away the secret.

**Past, present, and future**

When asked if he misses the software industry, Atkinson says no. “When I was at Apple for 12 years—from when there were 30 people to when there were 15,000 people—I made tools to empower creative people. That’s what I did there. And now it’s the perfect payback because I’m being empowered in my own creative endeavors. I’m making beautiful fine-art prints that sell at many galleries, using Photoshop. And I didn’t have to write Photoshop. I’m making beautiful books using InDesign, and I didn’t have to write InDesign.”

Atkinson says his next project will be a full-blown high-definition DVD set featuring images from his 40 years of nature photography. Since high-definition televisions aren’t omnipresent yet, Atkinson says standard TV versions of the DVD will be available as well.

Readers may contact Gary Singh at gsingh@metronews.com.