

First Exposure II

Scott Adams



Kodak T-Max T400 CN

When I first started in photography, the beginning photo classes I attended always had lectures on films and their different applications. In the years to follow, I sat in on many sessions and found them all to be very much the same, except that the film names would change. The instructor would explain that as the film ISO speed (ASA in my day) is reduced, the grain becomes finer. Then, as if we might not figure it out on our own, they explained that as the film speed increased, grain would become larger. In the final analysis, the best compromise on film speed and fine grain usually centered around an ISO 100 film. In subsequent years, I tended to refrain from using high speed films on professional assignments, especially with black-and-white film. In the back of my mind I

always wished that some day there would be a high speed black-and-white film that would have the fine-grain qualities of the slower ISO films. I wanted the best of both worlds, but it seemed that the laws of physics always seemed to keep me from getting my way.

Recently, a new type of hybrid film, Kodak T-Max T400 CN, came on the scene and it seems to have solved this problem. This film is referred to as chromogenic film, which is basically a black-and-white film that is processed in color chemistry. The roots of this film date back to the mid '60s when a company called EG&G created a black-and-white film that was processed in C-22 color negative chemistry. Over the years a few film companies have tried a variety of chromogenic emulsions, but at present

only Kodak's T400 CN and Ilford's XP-2 remain.

When I got my first ten rolls of T-Max T400 CN, I grabbed a camera and when shooting. I never read any of the technical information about the film, so when I processed the film, I expected to see what I had seen on ISO 400 black-and-white films from the past—moderate grain and acceptable sharpness. When I looked at the results of my first print, I closed my fist, held it high in the air, and yelled, "YES!" This film was *very* different. Finally, I could have my film speed and fine grain too!

After finally sitting down and reading the film's information, I found that it offered a whole new approach to black-and-white photography. Looking at the structure of T400 CN, I found that Kodak used multiple layers of varying speed, each containing color-coupler chemistry to create a film with a wide exposure range. The technology used to create these layers was taken from Kodak's best color negative films, and the famous T-grain technology first used in Kodak T-Max films. The film can be processed in standard C-41 chemistry right along with all other C-41 color negative films. Most amazing is that the film can be exposed from ISO 25–1600 without any change in processing. You can also push it to ISO 3200 with an additional minute in the developer. This film's exposure latitude makes most any type of black-and-white photography easy.



ISO 100, normal processing



ISO 400, normal processing



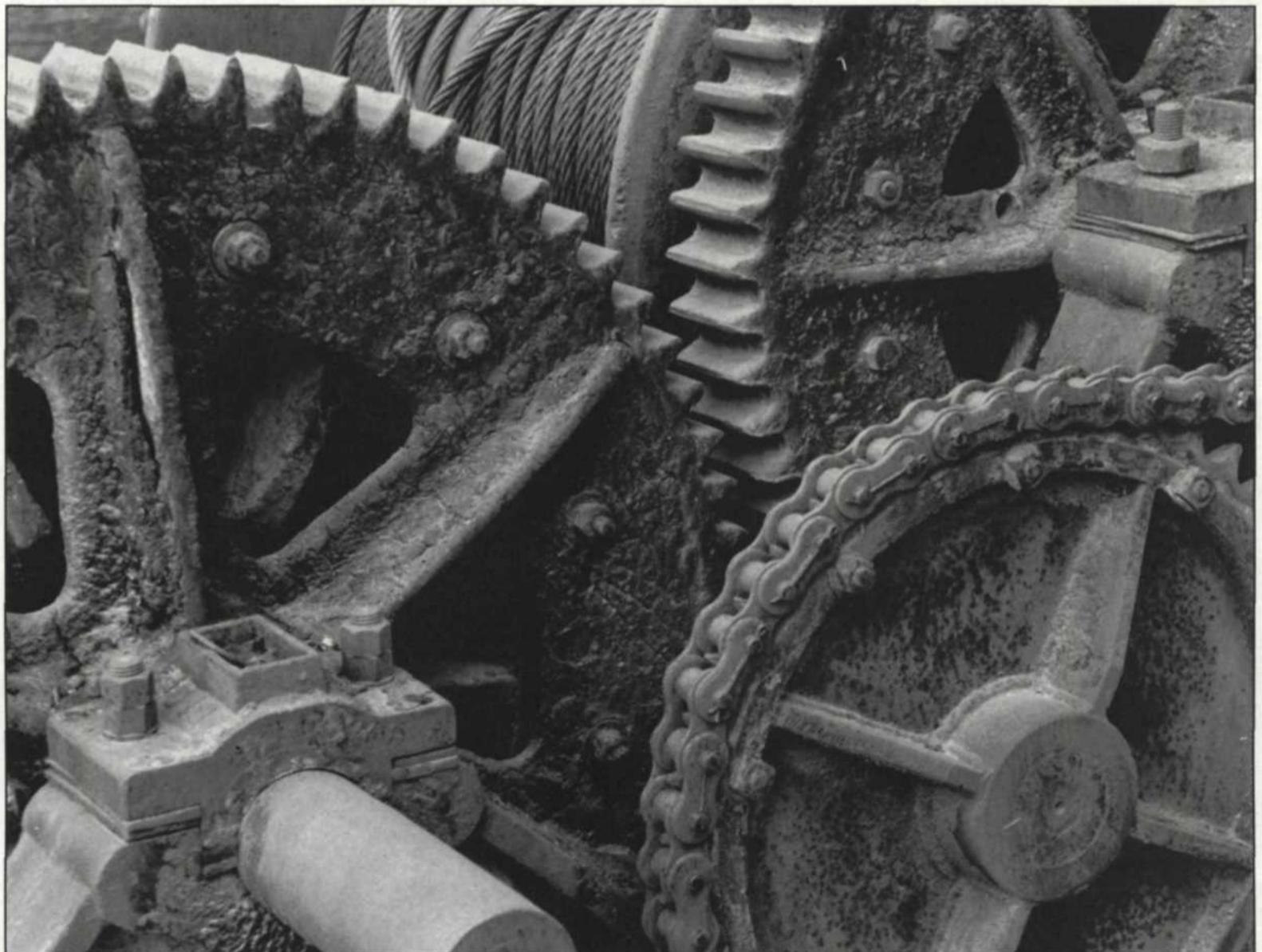
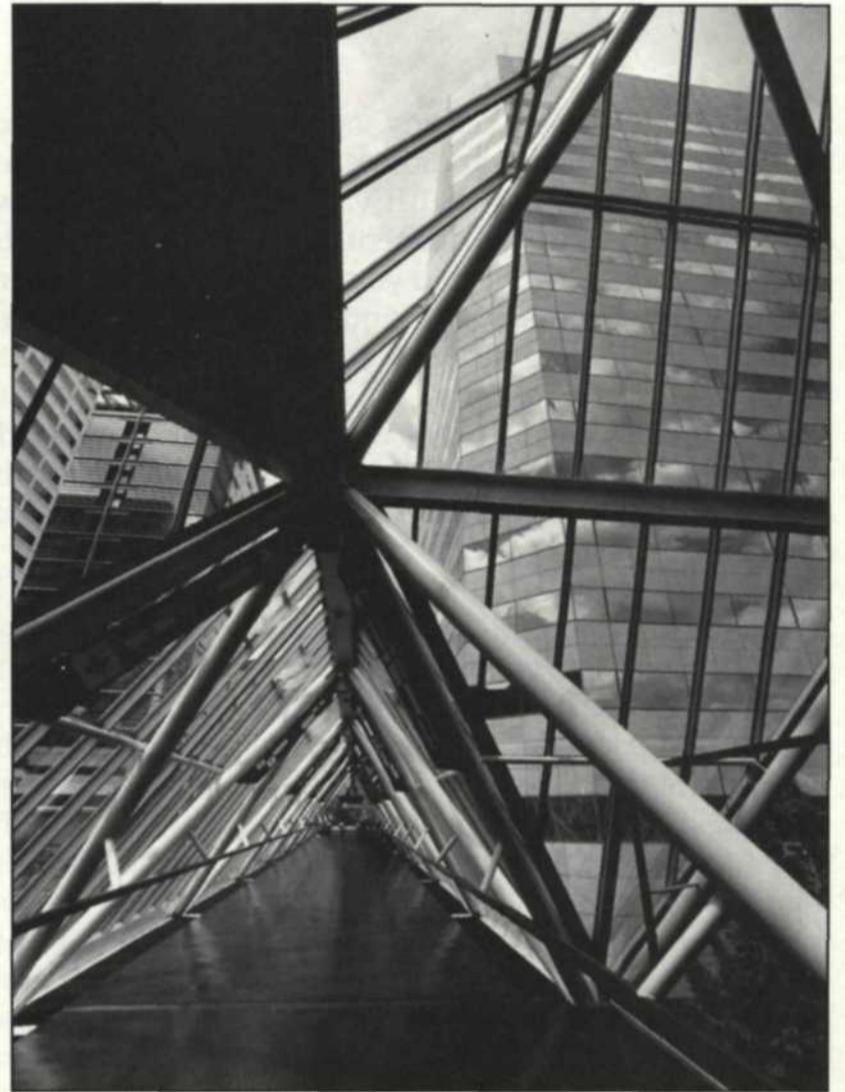
ISO 1600, normal processing



ISO 3200 +1 minute in the C-41 developer



T400 CN is capable of handling a wide array of subject matter and subject brightnesses equally well. Sharpness is outstanding, grain is extremely fine and the tonal range is hard to believe.



Kodak T400 CN acts like any standard black-and-white film. You can use black-and-white filters, print with variable contrast filters, rate it at different ISO's, push it and even scan it into your computer just like any other black-and-white negative. The processed negative is light brown to orange in color. This color mask is incorporated so that mini labs can print these negatives on color paper and achieve black-and-white prints without a drastic change in the filter pack. The negatives can easily be printed on any standard black-and-white paper; a grade #3 paper is a good starting point. This film can also be printed on the new Ektamax RA paper and processed in RA-4 color print chemistry.

Believe it or not, this film keeps getting better and better. The grain pattern of the T400 CN gets smaller as you reduce the ISO rating. Because of the multi ISO layer, the contrast level at the different ISOs remains pretty much the same. The biggest difference in the darkroom is the printing times. As the ISO rating drops, the density increases, requiring more exposure time. That's fine with me, if I can get an even tighter grain pattern.

Black-and-white films of my school days were often used because they had archival quality. Since T400 CN is a C-41 process, it will have at least the lasting ability of some of the newer C-41 emulsions. Add to that fact that T400 CN is a

chromogenic film, you can add additional years to its life because there is no worry of crossover of colors between layers. Thanks to technological advances, you can even archive the negative on Photo CD, so the images can be scanned and preserved forever. Once it is captured to the digital environment, it can also be copied over and over with no loss of image quality.

I decided to really see what this film could do, so I scheduled a trip to Bonneville Dam Power Station, where they have a very large room with all kinds of mixed lighting as well as daylight coming through windows. I shot two full rolls using a bracket function in order to accurately determine the ideal film speed and to identify the true exposure latitude of this film. One roll I processed normally and the other I gave an additional minute in the developer. I then printed the center image on each roll working my way up and down the steps until I got unacceptable prints. With the normal processing I found great images from ISO 25 to 1600. I found that the ideal ISO was 400. The grain was fine and the negative was a normal density, so printing times were quick. The prints at ISO 25 and 50 had even less grain, but took longer to print, due to negative density. I found that on the pushed roll, the image rated at 1600 had better shadow detail than that of the normally pro-

cessed film at 1600. So, I would recommend that you use this film at ISO 400 for most images, but if you really need the added film speed of 1600, then process the film the added minute.

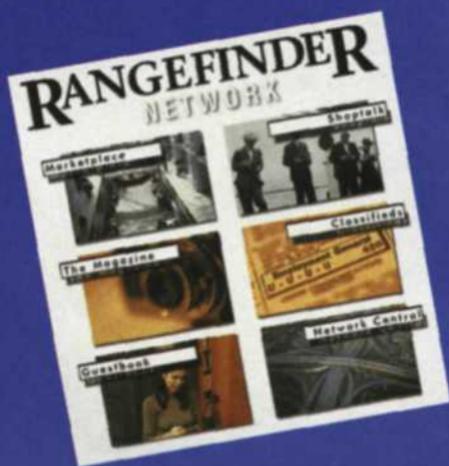
After shooting a half dozen more rolls of T400 CN, I locked myself in the darkroom and went to work printing one image after the next. Normally, *Rangefinder* only needs a half dozen 5x7 prints to accompany the articles, but I found myself printing several dozen 8x10s before I was sure what I was seeing was real. Sharpness is outstanding, grain is extremely fine, and the tonal range is hard to believe. I also found that if I had exposed a whole roll at ISO 400, almost all the images printed at the same print time. The pushed film printed a bit differently, but the results were still outstanding!

I know I have not talked about the special applications of this fine film, but there really is no need. If you need to shoot a black-and-white negative on assignment, this film will do the job. There is no question about its superb image quality. The extra film speed potential is just another added bonus. Grab a roll of Kodak's T400 CN, give it a try, and see just how this film has given physics a new twist!



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