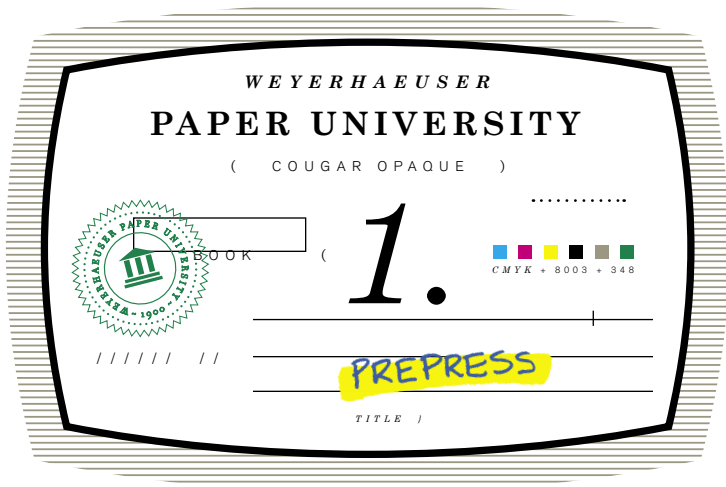




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INTRO { You're about to begin an incredible journey of discovery. Weyerhaeuser Paper University has compiled a world of knowledge — not only about **printing on uncoated paper**, but also about the history, processes, and technology behind the art of printing itself. In this series of manuals, our case study is Cougar® Opaque — North America's leading #1 premium uncoated paper. Book One explores **choosing the right imagery** for uncoated and preparing images for press. Book Two is a “back to basics” lesson on printing. And Book Three covers special techniques using Cougar Opaque. It may enlighten you to learn that you can achieve the same **outstanding results** on Cougar Opaque that you might expect from a coated sheet — or even a text and cover. The truth is that with Cougar Opaque **anything is possible** — provided you do your homework.



CMYK



(WELCOME)

FRESHMEN



The Five Ps
Pictures
Paper
Printer's Specs
Prepress
Proofing
6. PARTYING!



A PRIMER FOR PREPRESS

BOOK ONE: AN OVERVIEW { There are countless effects that can be achieved on uncoated paper, and unlimited variables that can affect the look and feel of a finished piece. So before your job prints, you need a plan. You need to think about what it is you're trying to accomplish, then weigh the options that will help you attain your goals. Some people start by comparing existing pieces. Others may defer to something familiar or "safe." But for those who wish to create something the world has never seen (and you know who you are), Weyerhaeuser Paper University requires that you study the following guidelines for printing on an uncoated sheet such as Cougar Opaque. Essentially, there are five things to consider that will help ensure success before you go to press: Pictures, Paper, Printer's Specs, Prepress, and Proofing. If you like, you can think of them as the "Five Ps." Either way, by mastering the skills and concepts defined herein, you'll be better equipped to work with uncoated paper — and better prepared to address printing situations like the ones we'll cover in Book Two.

1.

(CHAPTER)

GETTING STARTED: IMAGES ON PAPER

PICTURES, PAPER, AND YOUR PROJECT { Words and pictures on paper. In the business of communication, it doesn't get much simpler than that. But the relationship between message and medium should not be underestimated. For just as breathtaking images can incite an emotional response, the right paper can serve as the platform on which pictures can perform. So, which comes first, the picture or the paper? The answer is "both." And ultimately, it goes back to your main idea. What do you want to communicate? What image do you want to project? In this chapter, we'll demonstrate how an uncoated paper like Cougar Opaque can help you convey your ideas in ways that you might not have thought possible. Furthermore, you'll discover that Cougar Opaque performs as well as text & cover papers. You'll also learn how to choose the best available photography for uncoated. And for those of you who excel in chemistry (or who at least appreciate chemical references), you'll see how elements like paper color and surface texture combine to yield an impressive reaction.

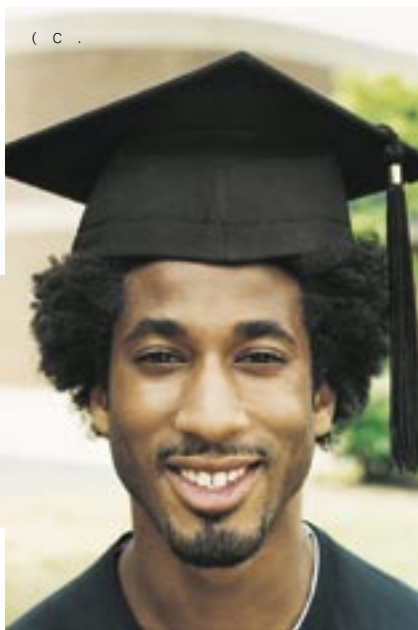
Photos
+ Paper

Reaction



[q :] *How will you start your project?*

(A . <input type="checkbox"/>)	(B . <input type="checkbox"/>)	(C . <input type="checkbox"/>)	(D . <input type="checkbox"/>)	-----
----------------------------------	----------------------------------	----------------------------------	----------------------------------	-------



[a :] What type of imagery do you want?

(A . (B . (C . (D .

[a:] What kinds of existing imagery will you be using?



- (PHOTO PRINTS)
- (TRANSPARENCIES)
- (NEGATIVES)
- (DIGITAL FILES)

MAKING THE MOST OF AVAILABLE IMAGES {

Occasionally, you will work with imagery that was not created specifically for your project. You may be provided, for example, with an overexposed snapshot of a CEO taken at a company picnic, then asked to enlarge that image 600% for the cover of a brochure. Needless to say, some of these pictures are beyond repair. But as long as the digital scans of such photos are of a high enough resolution for printing, there are a number of tools available for improving them. Surprisingly, however, one of the most significant factors that can affect your images is paper. Thanks to their surface qualities, uncoated papers can be very forgiving. What's more, by following a few easy steps prior to printing, you can edit less-than-perfect photos to reproduce exceptionally well on a quality uncoated stock. A few key techniques are outlined in Chapter 3. Of course, whenever possible it helps to start with good images. For the best results on uncoated, choose photography with clearly defined shadows and midtones. High-contrast photos or those with dark shadows may lose detail. Either way, once you've scanned your best available images, you can begin making adjustments to the digital files.

Paper helps images?

INTRO TO PAPER PSYCH: HOW CAN PAPER CHOICE CONVEY YOUR MOOD?



MODIFYING BEHAVIOR THROUGH TACTILE RESPONSE {

It is widely accepted that there is a positive correlation between uncoated paper and elevated mood. Weyerhaeuser Senior Research Scientist Alan Winslow has written extensively on this topic, and proposes that images printed on a well-formed, uncoated paper possess innate qualities capable of triggering deep emotional responses.¹ Upon further exploration, we find that reactions to these stimuli might reflect underlying issues of personality. For instance, people who exhibit romantic, nurturing traits may respond favorably to papers such as Cougar Natural Opaque vellum finish. Subjects who were shown Cougar Natural Opaque printed samples featuring skin tones, earthy textures and puppy dogs reported warm, childlike feelings. Conversely, those who have a tendency toward order and control might prefer Cougar Opaque smooth finish, a bright white sheet that performs consistently with regard to such tangible factors as color matching, dot gain, and ink holdout. Of course, within these boundaries, there is room for individual preference. However, it can be derived that when it comes to enhancing overall mood through printed imagery, choosing anything other than uncoated paper would be — clinically speaking — crazy.

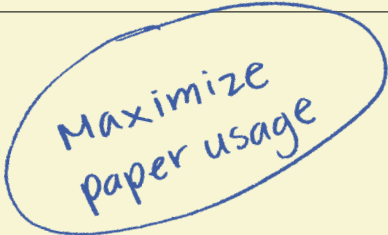
Smooth =
Control
vellum =
puppy dogs.

¹ "Printing on Weyerhaeuser Uncoated Paper: A Guide for Releasing the Potential of Fine Uncoated Papers to Produce Powerful Imagery with Charming Tactile Nuances." Weyerhaeuser Company, 2003.



[Q :] Which image "feels" best? Choose all that apply.

(A . (B . (C . (D . -----



Maximize
paper usage

(2. CHAPTER)

COMM 101: PRINTER'S SPECIFICATIONS

GETTING IT WRITE { On page 12, you'll see a typical printer's specification (or "spec") sheet. But this is more than a writing assignment. It's about **effective communication**. It's a direct link between what you see in your head and what you'll get at the press check. And when you're working on uncoated stock, it's more important than ever. Fortunately, when you choose a #1 premium uncoated paper like Cougar Opaque, the process is easier. Cougar Opaque offers a variety of **sheet sizes in a number of weights and finishes**, so your printer and paper rep can help you maximize paper usage. They can also help you optimize images for uncoated paper. And when you can design your piece with an understanding of ink coverage, holdout, and other factors that can affect **printability**, you're increasing the chances that you're going to love the results. Remember: this is your project, but everyone involved — from the client to the paper rep to the press operator — wants the same great finished piece. So you should not only choose your team wisely, but also use those people to your advantage. Get to know your printing supplier and their capabilities. Know the limits, and know when to push them. **Don't make assumptions**. Don't be afraid to ask questions. Do be specific — even if it seems obvious. And don't leave it open to interpretation.



SPECIFICATIONS CHECKLIST

DESCRIPTION:

EXPLAIN YOUR PIECE IN PRINTER-FRIENDLY TERMS (i.e., "24-PG. PERFECT BOUND BOOK, SELF COVER").

FLAT SIZE:

THIS MEASUREMENT DETERMINES WHAT SIZE SHEET YOU WILL REQUIRE, AND HOW MANY PAGES WILL FIT ONTO ONE SHEET AT ONCE. MAKE SURE YOU ACCOUNT FOR FOLD-OUTS, TABS, OR POCKETS.

FINISHED SIZE:

WHAT IS THE FINAL OVERALL SIZE ONCE THE PIECE GETS PRODUCED? THIS MAY BE IMPORTANT FOR MAILING PURPOSES.

PAGE COUNT:

THE TOTAL NUMBER OF PAGES A PIECE HAS, MULTIPLIED BY THE FLAT SIZE, WILL HELP A PRINTER TO DETERMINE HOW MANY PRESS FORMS WILL BE NEEDED, AS WELL AS HOW MUCH PAPER, PRESS CHECKS, ETC.

PAPER STOCK:

THE PAPER CAN MAKE OR BREAK YOUR PIECE. MANY FACTORS COME INTO PLAY WHEN SPECIFYING PAPER. YOUR PRINTER WILL NEED TO KNOW: PAPER COMPANY, SPECIFIC LINE OF PAPER, SUPPLIER, WEIGHT, FINISH, AND COLOR. DON'T FORGET TO MENTION YOUR SPEC. REPS!

INKS:

HOW MANY COLORS ARE YOU USING? ARE YOU PRINTING THE SAME INKS ON BOTH SIDES OF THE SHEET? USUALLY INKS ARE SPECIFIED FRONT TO BACK BY HOW MANY COLORS ON EACH SIDE (i.e., 4/4, 2/1, 6/6, etc.).

QUANTITY:

HOW MANY DO YOU NEED? IT'S USUALLY A GOOD IDEA TO FACTOR IN ANYWHERE BETWEEN 5-10% OVER THE NECESSARY QUANTITY FOR PORTFOLIO SAMPLES AND QUALITY CONTROL.

SUPPLIED ART:

IT'S ALWAYS A GOOD IDEA TO LET YOUR PRINTER KNOW HOW THE FINAL MECHANICAL FILES WILL BE COMING TO HIM OR HER (i.e., WHAT TYPE OF FILES ON DISK?).

PREPRESS/PROOFING:

SOMETIMES YOU WILL NEED DUPLICATE PROOFS FOR YOUR STUDIO AND CLIENT. AND DON'T FORGET: SPECIALTY PROOFS SUCH AS PRESS PROOFS OR INK DRAWDOWNS WILL BE ADDITIONAL COSTS.

BINDERY:

SPECIFY WHETHER YOU NEED SADDLE STITCHING OR PERFECT BINDING, OR ANY OTHER FINISHING TASKS SUCH AS TRIMMING, FOLDING AND DIE CUTTING.

SHIPPING:


SHRINK-WRAP PACKAGING CAN ADD COST AS OPPOSED TO BULK PACKAGING.

(3. CHAPTER)

SCIENCE & ART: IMAGE PREPARATION AND MANIPULATION

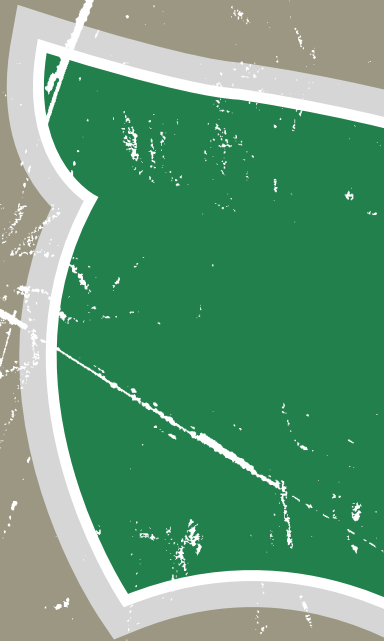
FOREWORD: TIPPING THE ODDS IN YOUR FAVOR

{ In order to get ahead, you must learn to work the system. And while Weyerhaeuser Paper University encourages working hard, we see no harm in working smart. This is especially true with regard to image preparation. The key issues when printing on uncoated paper are **controlling dot gain and ink density**. Halftone dots tend to spread (or “gain”) and even to connect as they are applied to the page. As a result, **images can lose detail** as the ink blurs subtleties between tones. To compensate for dot gain on uncoated paper, one can **easily manipulate dot size for better definition**. A good rule of thumb is to **reduce dot size in highlights by 5%, in midtones by 25%, and in shadows by 15%**. Experienced students know how to adjust profiles and curves within a digital image file to achieve these results. Similarly, you can “fudge” line screen and other variables to control the amount of ink applied to an uncoated sheet. Of course, Weyerhaeuser Paper University has been known to reward smart working students — especially when they work hard to enhance a finished product.



Dot gain bad.
Uncoated good.

Weyerh



COU

BLACK + 8000 + 348



advertiser



GAARS



CMYK

[16]

PAGE







CMYK





A LOOK AT YOUR PROFILES



YOUR IMAGE AT ITS BEST { In a visual culture, appearances are everything. So whether you want to make the best of what you've been given or to stand out from the crowd, it helps to have a good profile. "Profile" is the term used for color correction adjustments that can aid you in preparing digital images for printing. Established by the esteemed International Color Consortium® (ICC), each profile is a unique color balance formula that helps compensate for various on-press phenomena. Literally hundreds of SWOP® (Standards for Web and Offset Press) patterns have been developed to address the possible combinations of papers, inks, and printing methods. Many of the ICC's guidelines are featured within today's software packages. Still others, including the GRACoL® (General Requirements for Applications in Commercial Offset Lithography) standards, are being introduced in response to new printing challenges. These tools not only let you prepare imagery for press, but also allow you to "preview" the image in order to anticipate the final printed look. Using profiles is an excellent way to "touch up" your photos for a more flattering result.

Do curves
change profiles,
or do profiles
affect curves?





ICC rules!

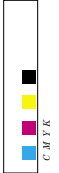
(A . Coated Paper Profile



(B . Offset Paper Profile



Stick with SWOP



(C . Uncoated Paper Profile



(D . No Profile



[a :] Which profile looks best on uncoated paper?

(A .) (B .) (C .) (D .)

HOW CURVES HELP YOUR IMAGES MAKE THE GRADE



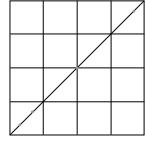
A LITTLE PREPARATION HELPS YOU GET AHEAD

{ More than any other exercise you can do to prepare photography for press, using curves to compensate for dot gain on an uncoated sheet will noticeably affect your performance. Think of it as extra credit for your images. The best part is that the math has already been done for you. Using photo manipulation software, you can adjust a digital image to “open up” shadows and midtones, brighten highlights, and improve your final project exponentially. Using curves can mean the difference between average results and an exceptional outcome. They can make a mediocre image passable, and a good one outstanding. So take the time to study up, then use the curve to your advantage.

SHADOWS
& MIDTONES



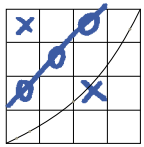
Curves for Coated Paper
[DON'T MISS THE MARK:]



- (SHADOWS TOO DARK
- (DULL HIGHLIGHTS
- (IMAGE LOOKS MUDDY



Adjustments for Uncoated
[IMAGES THAT SCORE:]



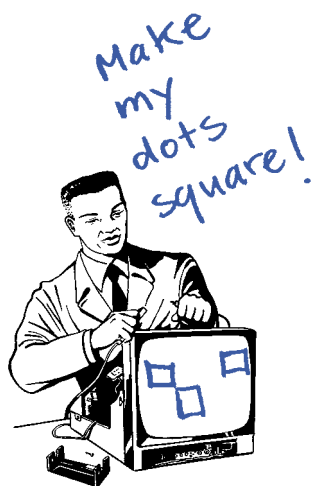
- (DETAIL IN SHADOWS
- (BRIGHT HIGHLIGHTS
- (IMAGE LOOKS CRISP






[Q:] Which image is adjusted for Cougar?

(A . (B .

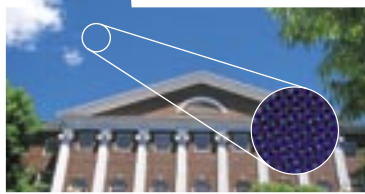
**THIS IS NOT A TEST –
PLEASE DO ADJUST
YOUR LINE SCREENS.**



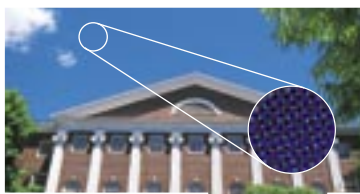
THE RIGHT DOTS MAKE A DIFFERENCE {

- To control dot gain on an uncoated sheet, choose a line screen that provides **good coverage without over saturating** the page (see illustration, right). Cougar Opaque, for example, can handle line screens from 133 to 400 or more. For even better performance, you can change the shapes of the dots themselves. **Square dots** (A) hold fine detail. **Elliptical dots** (B) produce better tonal gradations. And **round dots** (C) are good for web printing and conditions where dot gain is harder to manage.
- A . 
 - B . 
 - C . 

(Elliptical dots work well in large solid areas.)

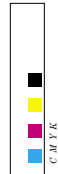


(Elliptical dots)



(Square dots)

(ELLIPTICAL DOTS SHOWN)



[Q :] Which line screen would you choose?

(A .) (B .) (C .)

WEYERHAEUSER



TM



WEYERHAEUSER | CUGAR OPAQUE





STOCHASTIC & TRADITIONAL PRINTING

A DOT-BY-DOT COMPARISON { Weyerhaeuser Paper

University encourages a spirit of friendly competition among printing technologies. And on the playing field of uncoated papers, a relative newcomer known as stochastic screening has proven to be a real contender. Rather than using halftone dots arranged in columns and rows, stochastic technology distributes dots in a random pattern that more closely resembles grains in a photograph. In contrast to traditional halftones, the dots are smaller but closer together, so it's important in stochastic printing to control dot gain without sacrificing ink density. Naturally, not all projects are in the same league, so it's best to let your printer or your paper rep coach you on whether stochastic would be the right call.



/// // // // //

TRADITIONAL PRINTING

/// // // // //

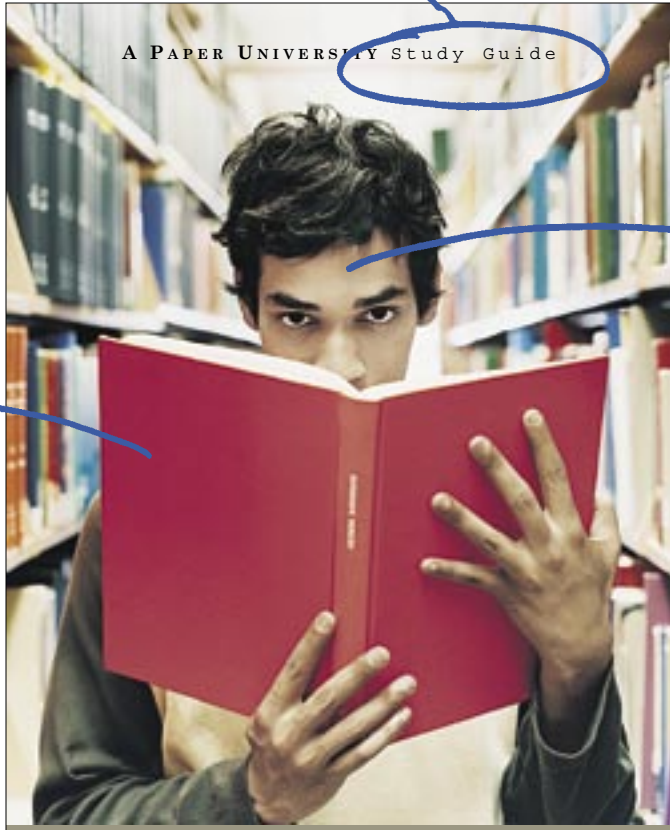
(4 . CHAPTER)

PROOFING

REVIEW FOR RESULTS { Let's review. You started with an idea — a hypothesis, if you will. Then you thought about the best way to **get that idea down on paper.** You've done your research, evaluated your data, and determined that Cougar Opaque has made the cut. Until now, you've mostly been "winging it" — adjusting images, manipulating line screens, and making educated guesses. **Now comes the real test:** ordering proofs that will simulate your final printed project. As with every stage of the process, there are options. We'll consider two broad categories: **on- and off-press proofing.** And while no proofing method will give you all the answers, there are a few tips you can use to get a good idea of **what you can expect going in.**

study group @ Flying Tomato ~~review~~ review

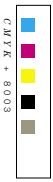
FONT DEFAULTED!



A PAPER UNIVERSITY Study Guide

+ yellow

cyan



LAERNING with WEYERHAEUSER

SP.

open picture box



(PROOF THIS EXAMPLE)



[Q:] *Proofs change as technology changes, but when a job is on the line, which one would you choose?*

- (DIGITAL PROOF)
- (PRESS PROOF)
- (INK DRAWDOWN)
- (ALL OF THE ABOVE)

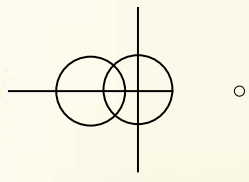


OFF-PRESS VS ON-PRESS { Just as pilots or astronauts in training use simulators, you can use proofs to evaluate your artwork before the job goes to press. This is especially important when you're printing on uncoated paper. For speed and economy, many choose **off-press proofs**. These work by simulating plating, ink, and even paper effects using a variety of output methods. They're **generally reliable**, and can even be made to approximate dot gain. Still, it's important to know your printer's capabilities before running the job. **On-press proofs**, which are usually reserved for high-quantity projects or pieces with detailed printing specs, closely replicate the conditions of an eventual press run. Most important, they are **made on the actual paper** specified for the job — so they can more accurately simulate dot gain and ink density. On-press proofs should always be checked wet and dry to compensate for dryback. Finally, for proofing solid colors, another ink-on-paper technique called a **"drawdown"** is used to check for color shifts, opacity, and holdout. Mastering the art of reviewing proofs takes time, but the experience pays off when ink finally meets paper on your project.

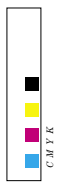


(DOES YOUR PAPER PASS)

THE TEST ?



EXAMINATION PAPERS



NAME: _____
LEVEL: _____
RE: _____
VER: _____

TEST: BOOK 1

[1 :] Which of the following is NOT one of the Five Ps for printing on uncoated?

- A. prepress
 B. pineapple
 C. paper
 D. printer's specs

[2 :] When selecting photography for printing on uncoated, look for clearly defined...

- A. cheekbones
 B. shadows and midtones
 C. dots
 D. moire patterns

[3 :] A noted Weyerhaeuser authority in the field of paper psychology is...

- A. Alan Winslow
 B. Dear Abby
 C. your Weyerhaeuser rep
 D. A and C

[4 :] People who use uncoated paper for lifelike skin tones and warm, rich images from nature are smarter and better looking than those who choose coated paper.

- A. true
 B. false

[5 :] Printer's specs are used to...

- A. determine what images will work best for uncoated paper
 B. convince the client that the project budget is too low
 C. clearly communicate your expectations to your printer
 D. carefully evaluate a press sheet for small imperfections

[6 :] [_____] are standardized color balance formulas used to correct digital image files for printing on uncoated paper.

- A. stochastic screens
 B. hickeys
 C. profiles
 D. CMYK

[7 :] Adjusting curves in a digital image file will help control...

- A. dot gain
 B. detail in shadows and midtones
 C. your demeanor at a press check
 D. all of the above

[8 :] A quality uncoated sheet such as Cougar Opaque can be printed using line screen values of...

- A. less than 133
 B. more than 175, square dots only
 C. uncoated paper is not printed using line screens
 D. from 133 to more than 400

[9 :] A key feature of stochastic screening is...

- A. random distribution of dots
 B. varied dot sizes
 C. superior ink density
 D. A and B

[10 :] [_____] proofs are the most accurate way to simulate the look of a final printed project.

- A. on-press
 B. stochastic
 C. off-press
 D. uncoated

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NOTES

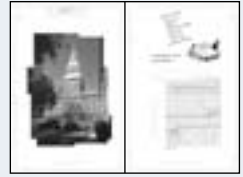


FRONT COVER:
100 lb. Cougar Cover, Smooth Finish.
Printed Double Bump Process Black.



INSIDE COVER & PAGE 1:
100 lb. Cougar Cover, Smooth Finish.
Printed Four-Color Process.
Illustration by Ernesto Pacheco.

100 lb. Cougar Opaque, Smooth Finish.
Printed Four-Color Process +
8003 Metallic + 348 Green.



PAGES 2 & 3:
100 lb. Cougar Opaque, Smooth Finish.
Printed Four-Color Process.
Photography by Neill Whitlock.



PAGES 4 & 5:
100 lb. Cougar Opaque, Smooth Finish.
Printed Four-Color Process.
Photography by Neill Whitlock.



PAGES 6 & 7:
100 lb. Cougar Opaque, Smooth Finish.
Printed Four-Color Process +
8003 Metallic + 348 Green.
Photography by Getty Images,
Veer and Photonica.



PAGES 8 & 9:
100 lb. Cougar Opaque, Smooth Finish.
Printed Four-Color Process.
Photography by Getty Images.



PAGES 10 & 11:
100 lb. Cougar Opaque, Smooth Finish.
Printed Four-Color Process + 614 Natural.
Photography by Neill Whitlock.



PAGES 12 & 13:
100 lb. Cougar Opaque, Smooth Finish.
Printed Four-Color Process.



PAGES 14 & 15:
100 lb. Cougar Opaque, Smooth Finish.
Printed Four-Color Process Black +
8003 Metallic + 348 Green.



PAGES 16, 17, 18 & 19:
100 lb. Cougar Opaque, Smooth Finish.
Printed Four-Color Process.
Photography by Neill Whitlock.



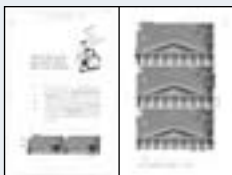
PAGES 20 & 21:
100 lb. Cougar Opaque, Smooth Finish.
Printed Four-Color Process.
Photography by Getty Images.



///// /



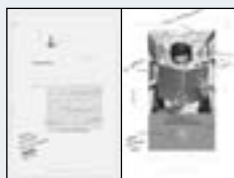
PAGES 22 & 23:
100 lb. Cougar Opaque, Smooth Finish.
Printed Four-Color Process.
Photography by Getty Images.



PAGES 24 & 25:
100 lb. Cougar Opaque, Smooth Finish.
Printed Four-Color Process.
Photography by Neill Whitlock.



PAGES 26 & 27:
100 lb. Cougar Opaque, Smooth Finish.
Printed Four-Color Process.
Illustration by Ernesto Pacheco.



PAGES 28 & 29:
100 lb. Cougar Opaque, Smooth Finish.
Printed Four-Color Process +
8003 Metallic + 614 Natural.
Photography by Digital Vision.



PAGES 30 & 31:
100 lb. Cougar Opaque, Smooth Finish.
Printed Four-Color Process.
Photography by Getty Images.



**PAGE 32
& INSIDE BACK COVER:**
100 lb. Cougar Opaque, Smooth Finish.
Printed Four-Color Process.
100 lb. Cougar Cover, Smooth Finish.
Printed Four-Color Process.
Illustration by Ernesto Pacheco.



BACK COVER:
100 lb. Cougar Cover, Smooth Finish.
Printed Four-Color Process + Double Bump
Process Black + 8003 Metallic + 348 Green.



LETTERHEAD:
80 lb. Cougar Natural Opaque, Smooth Finish.
Printed Four-Color Process + 348 Green.
Illustration by Ernesto Pacheco.



CONCEPT + DESIGN) Squires & Company

PHOTOGRAPHY) Neill Whitlock, Getty Images,
Veer, Digital Vision, Photonica

ILLUSTRATION) Ernesto Pacheco

COPYWRITING) Wayne Geyer

PRINTING) Williamson Printing Corporation

PRESS) 40" Heidelberg 8 color press using
conventional inks, overall dot for dot dull varnish

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The colors have not been checked by Pantone, Inc.
Refer to current **PANTONE®** Color Publication for the
color standard.

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The future is growing™

For over 100 years, Weyerhaeuser has been finding innovative ways to protect forest habitats while we utilize forest resources. We understand that we have a special responsibility to ensure that the forests we care for — as well as the fish and wildlife that make their homes there — will not only survive, but flourish. To learn more about the Weyerhaeuser family of fine papers, visit us at www.weyerhaeuser.com.

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