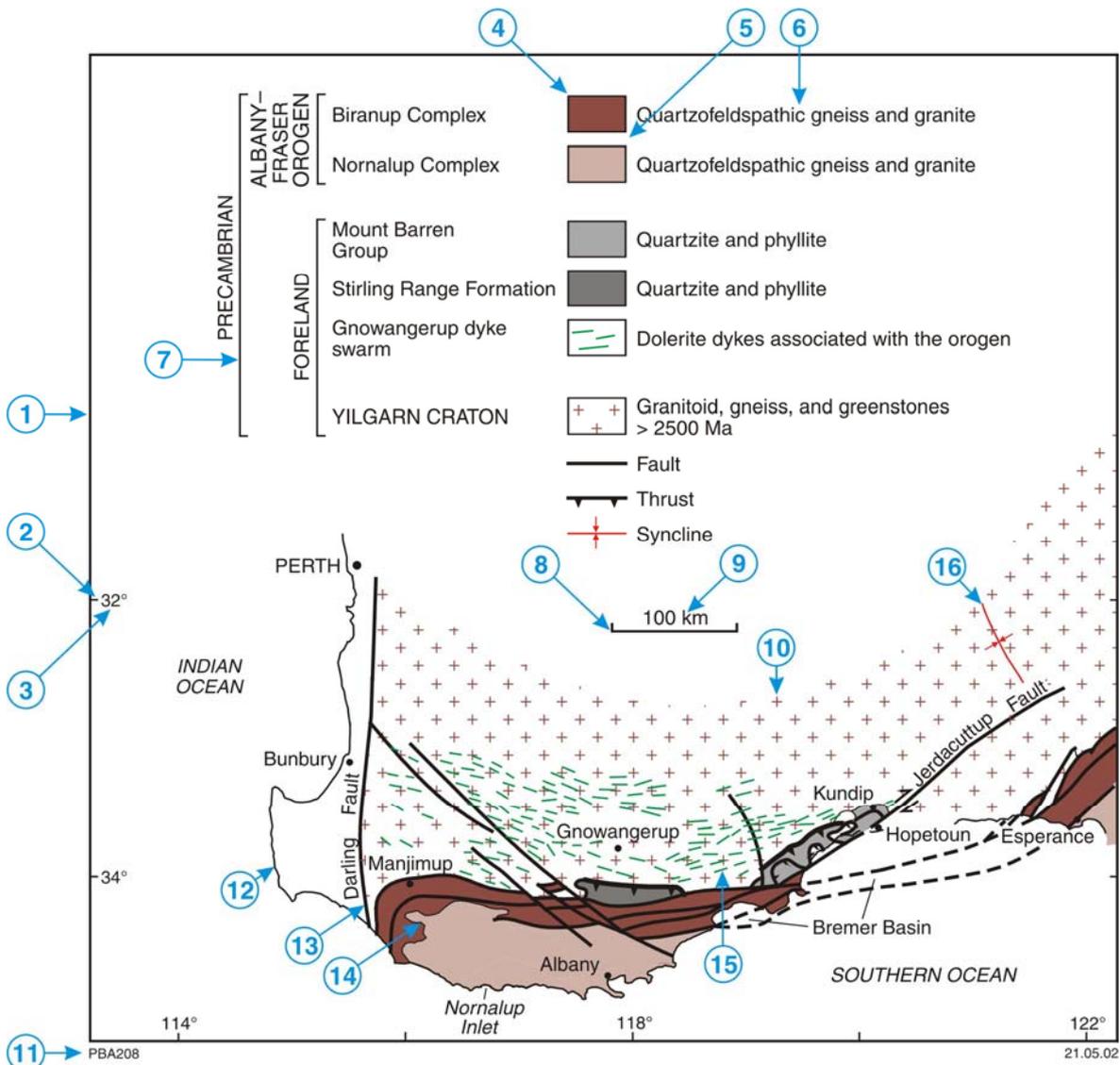


PRODUCTION MANUAL

DIAGRAMS

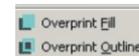


	Feature	Line weight (mm)	Line size (mm)	Text size (pt)
1	Neatline	0.35	-	-
2	Graticule tick	0.25	1	-
3	Graticule value	-	-	7
4	Boxes	0.25	8 x 5	-
5	Box spacing	-	2	-
6	Legend text	-	-	8
7	Brackets	0.25	1	8
8	Scale bar	0.35	1	-
9	Scale value	-	-	8
10	Patterns	-	-	-
11	Client ID / Date	-	-	5.5
12	Coastline	0.25	-	-
13	Fault	0.50	-	-
14	Geological bdy	0.18	-	-
15	Dykes	0.25	-	-
16	Fold axis	0.25	-	-

For all text use the **Helvetica** font.

For all black text and line work, set the fill/outline status to **'overprint'**.

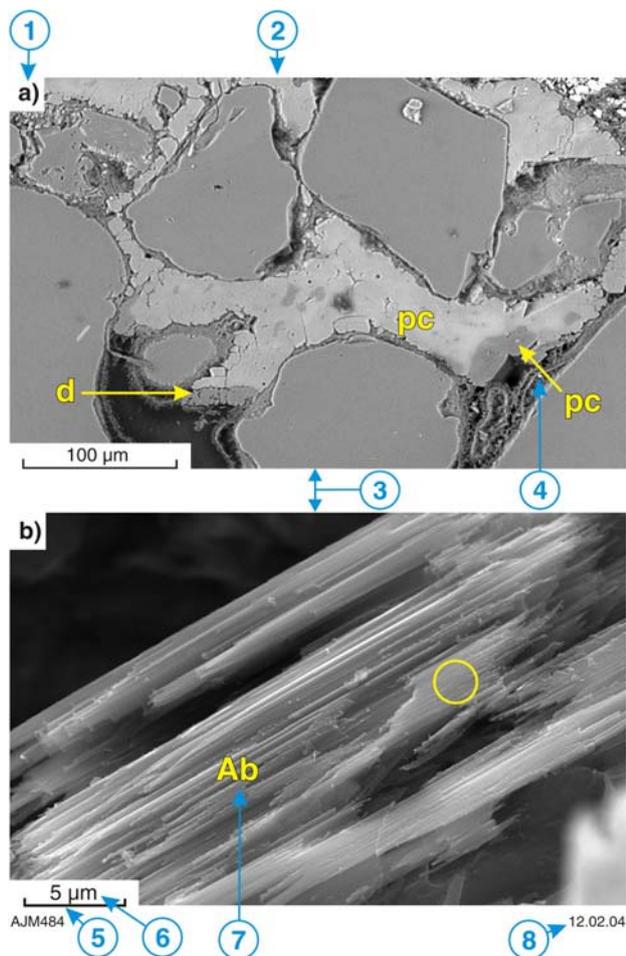
In Corel Draw this is done by right clicking on the required element(s), and selecting the overprint setting:



For Microtation this is done via the Cadscript colour table. Setting the overprint status for specific colours. Note by default Cadscript assigns black as an overprint colour:



IMAGES



	Feature	Line weight (mm)	Line size (mm)	Text size (pt)
1	Figure part	-	-	9 Bold
1	White box	0.35	4 x 4	-
2	Photo	-	81	-
	Resolution:	300 pi		
	Image mode:	CMYK/Grayscale for press RGB/Grayscale for PDFs		
3	Photo spacing	-	4	-
4	Arrows	0.35	-	-
5	Scale bar	0.35	1	-
6	Scale value	-	-	8
	<i>placed 1.0 mm above centre of scale bar</i>			
7	Text	-	-	10/12 Bold
	<i>line weight – 0.18 mm behind fill, only if required to add contrast for readability</i>			
	<i>colour – preferably black, or white. This will depend upon the background image</i>			
8	Client ID / Date	-	-	5.5
	<i>spaced 1.0 mm from photo</i>			

For all text use the **Helvetica** font.

FIGURE SIZES

Publication	Portrait (mm)	Landscape (mm)
Annual review		
1 column	52 x 237	
2 columns	110 x 237	
Full page	168 x 237	247 x 158
Report, Record, or 100K Explanatory Notes		
1 column	81 x 237	
Full page	168 x 237	247 x 158
250K Explanatory Notes		
Full page	128 x 199	209 x 118
Slide (Powerpoint)	-	180 x 240
Image widths	81	
	130	
	150	
	168	

PREPARING PHOTOS

Ideally, when preparing photos for a publication, we want images to be clean, crisp, and a uniform size. The preferred size is: 81 x 60 mm, however to fit 8 landscape images to a page (2 columns) the height may be reduced 56 mm, to allow for a 4 mm vertical gap between images.

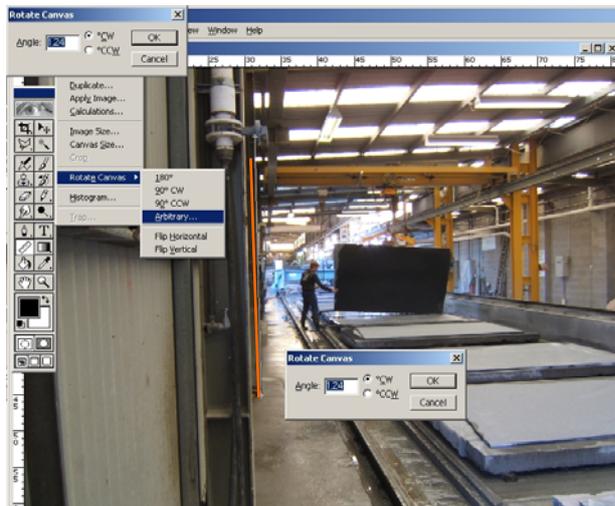
To prepare photos for publication, the following steps (here in Adobe Photoshop 5) are taken:

1. Rotate

Open original image in Photoshop, and check horizontal and vertical lines to determine if any rotation is required to straighten the image. If so, draw a line on the image with the measure tool to indicate a vertical or horizontal line and select the command **Image/Rotate Canvas/Arbitrary**



Then click **OK** on the Rotate Canvas dialog box.

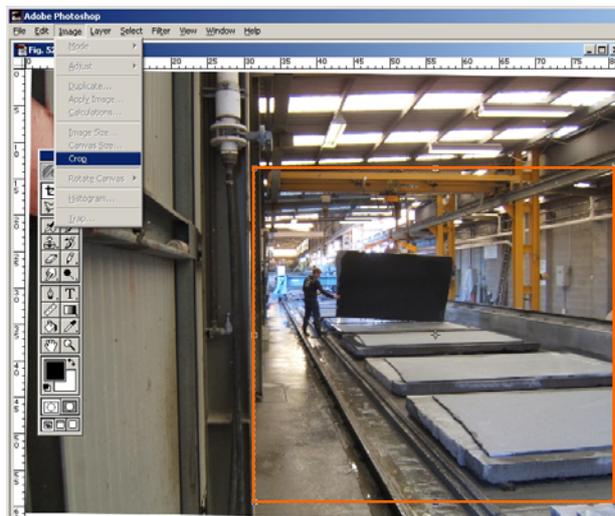


2. Crop

Select the cropping tool from the tool palette, and marquee the main image area of the photograph, and click the menu command: **Image/Crop** (or double click on the image)



Note: when defining the crop area, only concern yourself with crop extent on three sides of the photo, the fourth side will be cropped later when the canvas size is set.



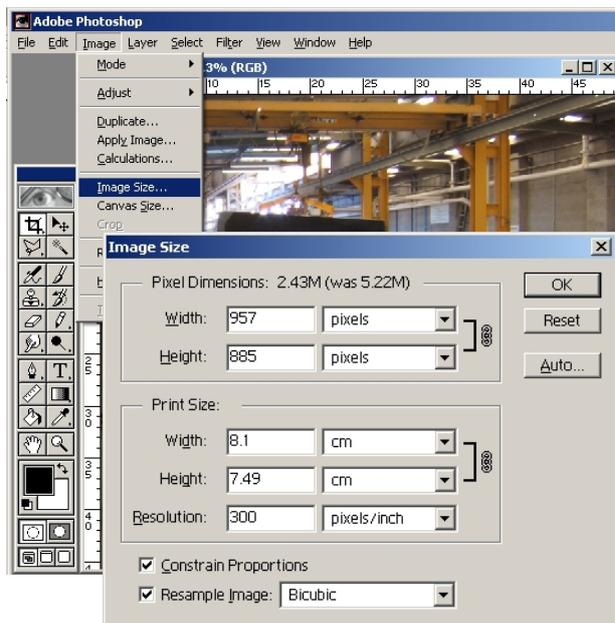
3. Image size

To redefine a photograph's size, select the menu command **Image/Image Size**, then type in the dimensions required in either the width or height field.

In our sample photo the width was cropped correctly, so now a width of 8.1 cm is set to match the column width for a GSWA Record.

Also the Resolution is set to 300 pixels/inch, the standard setting for publishing.

Note the Pixel Dimensions at the top of the dialogue box. If the (was) figure is the larger value, the image is being downsized for the publication, this is good. However if it is the smaller value, the result will add pixels to the image which may not be desirable. Either: a) go back to the author for a higher resolution photo; or b) be careful when sharpening image as pixilation may occur.



4. Canvas size

With the dimensions of the photo correct in one direction (the width in the sample image), the next step is to trim the excess image in the height.

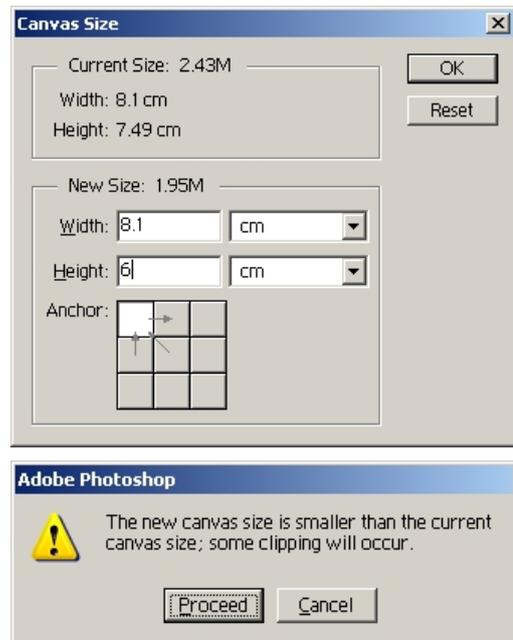
Do this by calling up the Canvas Size dialogue box, with the menu command **Image/Canvas Size**.

Now type the dimension for the height (6 cm for our sample), and define the anchor point from which the new canvas size will be measured from.

Note the arrows pointing in, or out, of the anchor box indicate where the image is going to be cropped, or extended.

If cropping is going to occur, a warning box appears prompting the user to proceed. Do so to finalise the crop and get to the final image size.

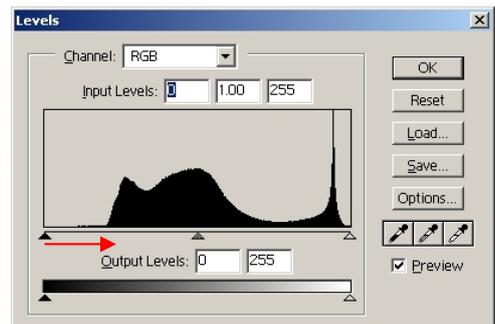
The end result is a clear image where extraneous and distracting data has been minimised, and hopefully the main subject matter enhanced.



5. Adjust Levels

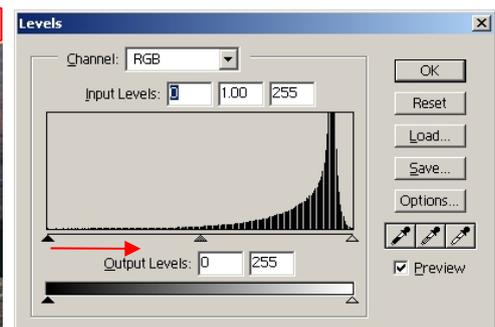
When a photo is over or under exposed, image levels need to be adjusted. Select the **Image/Adjust/Levels** command to view the Levels dialogue box.

Slide the triangle (▲) until it sits at the start point of the histogram. Then toggle the preview (👁) to view changes, and click **OK** when the best result is found.



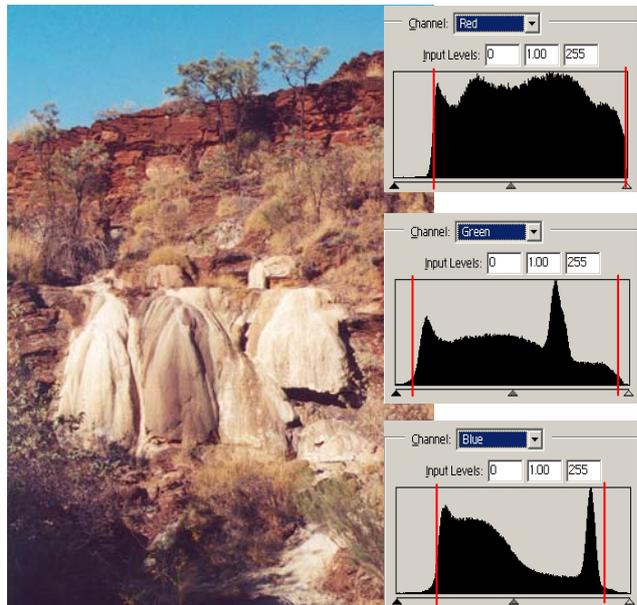
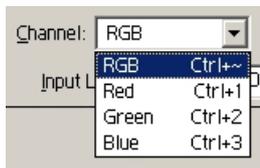
In images with deep shadow, and bright sunlight, use the selection tool to marquee the bright or dark area, and again open the Levels dialogue box. Note how the histogram only displays for the selected area.

Again slide the triangle until it sits at the start point of the histogram, and review the result. Thus the bright area can be adjust separately from the shadows.



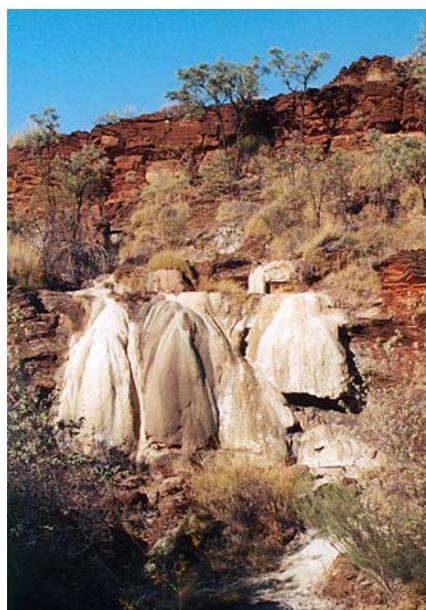
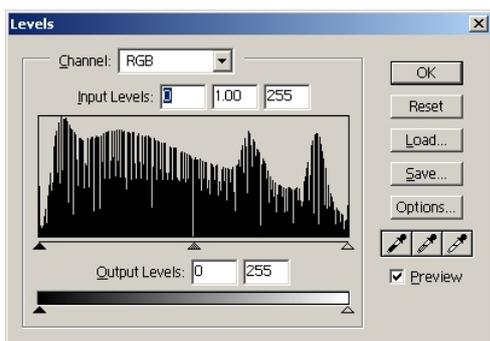
Sometimes a photo may have a red (/blue/green) cast. This can be corrected with the Levels dialogue box. So open the dialogue box with the command **Image/Adjust/Levels** (CTRL+L).

Next toggle the Channel on the dialogue box from RGB to each of the colour bands, and check the histogram.



In the example displayed, the Red and Blue bands show histograms that stop short of the left triangle. By sliding the triangles to meet the start and end points of the histograms, for each band, the excess red and blue is adjusted, and the vegetation gets greener and looks more natural.

While sliding the triangles turn the preview on and off to review the photo before committing a change. Note how the RGB histogram reflects the changes to the three individual bands.



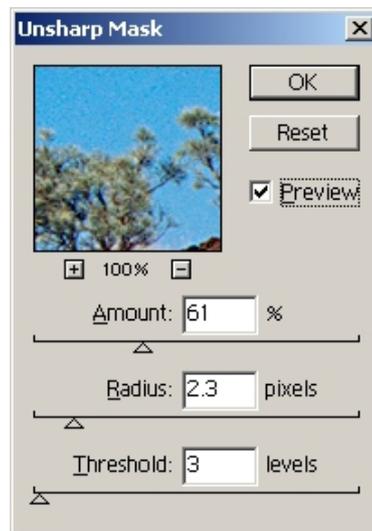
Another way of adjusting the channels is to use the three eyedroppers to select points on the photo that are: black, grey, and white.

6. Sharpen

To sharpen an image, open the Unsharp Mask dialogue box with the following command **Filter/Sharpen/Unsharp Mask**.

Then adjust the three slide bars, and toggling the preview on and off to see the effect they are having in sharpening the photo.

Be careful not to over sharpen a photo, as it will brighten it and make it look fake.



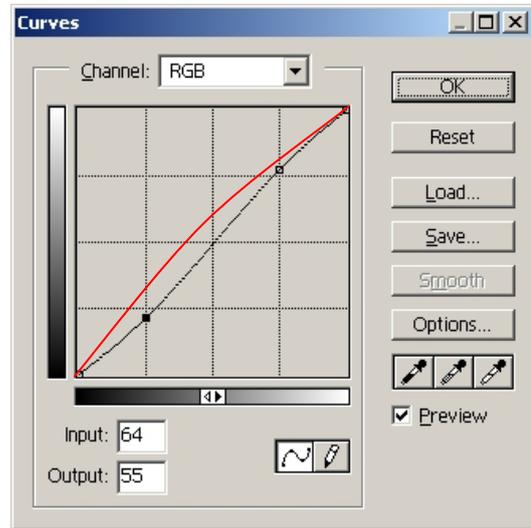
7. Curves

To make a photo crisper, open the Curves dialogue box with **Image/Adjust/Curves** (CTRL+M).

Click on the graph line to add data points and modifying the curve. Create an:

- “**Bow**” curve to lighten or darken the photo.
- “**S**” curve to adjust the contrast of the photo.

While modifying the curve, toggle the preview on and off to review changes before committing them by clicking the **OK** button.



8. History

At any stage while editing a photo, an action can be undone by pressing (CTRL+Z).

If you want to go back a number of steps to review the changes made to a photo, you can navigate through these actions in the History window.

If this window is not currently displayed, select **Window/Show History** from the command menu. Now by clicking the relevant line in the history, the photo will revert to its' status at that point.



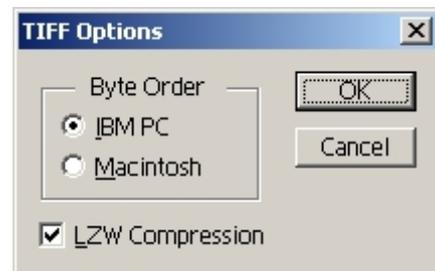
9. Mode

If a photo being prepared will end up in a printed publication. Convert the photo to CMYK by selecting **Image/Mode/CMYK**. If the photo will end up in a PDF document, leave the photo as RGB.

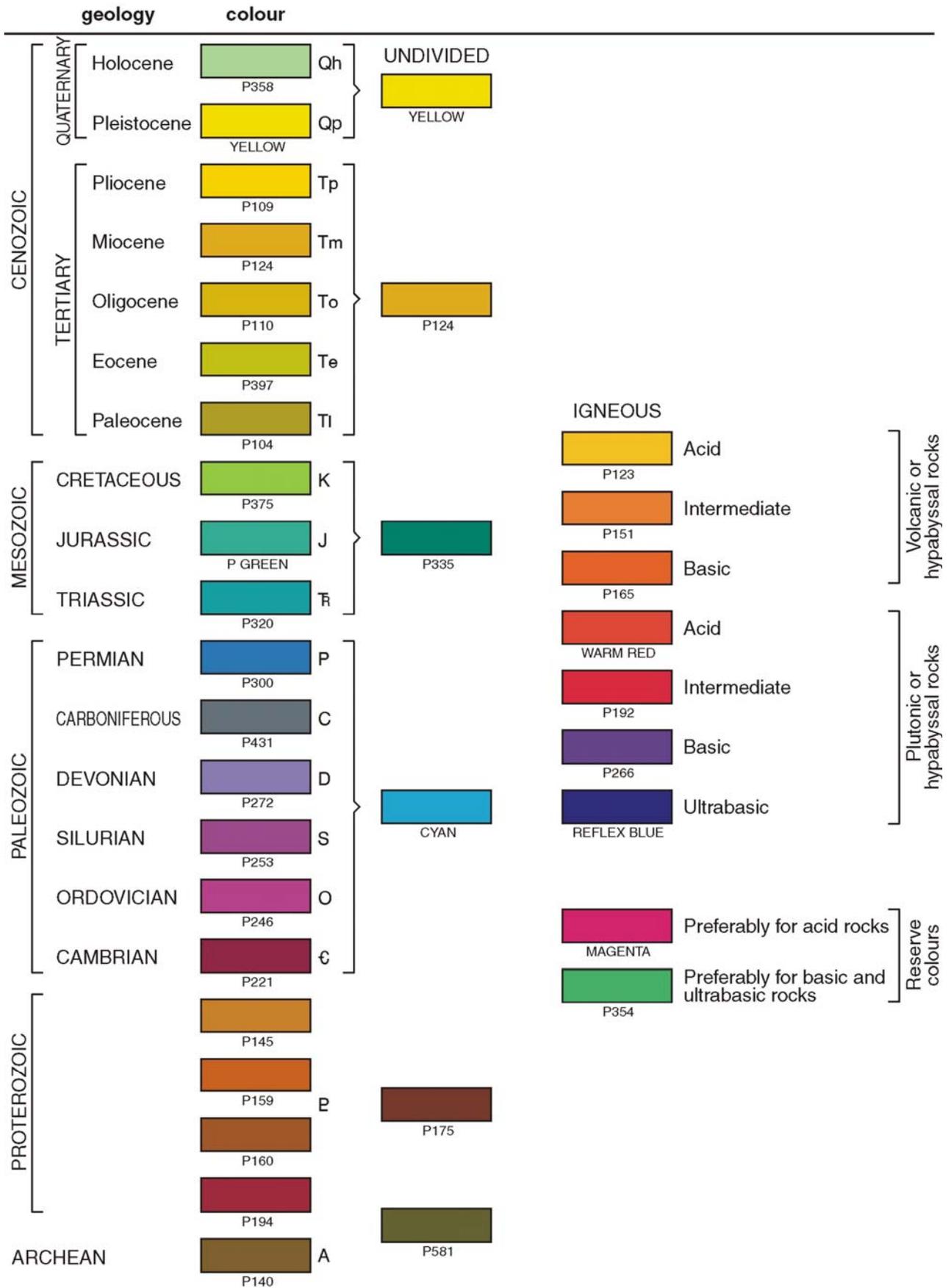
10. Save

Finally save the edited photo in TIF format, with LZW compression.

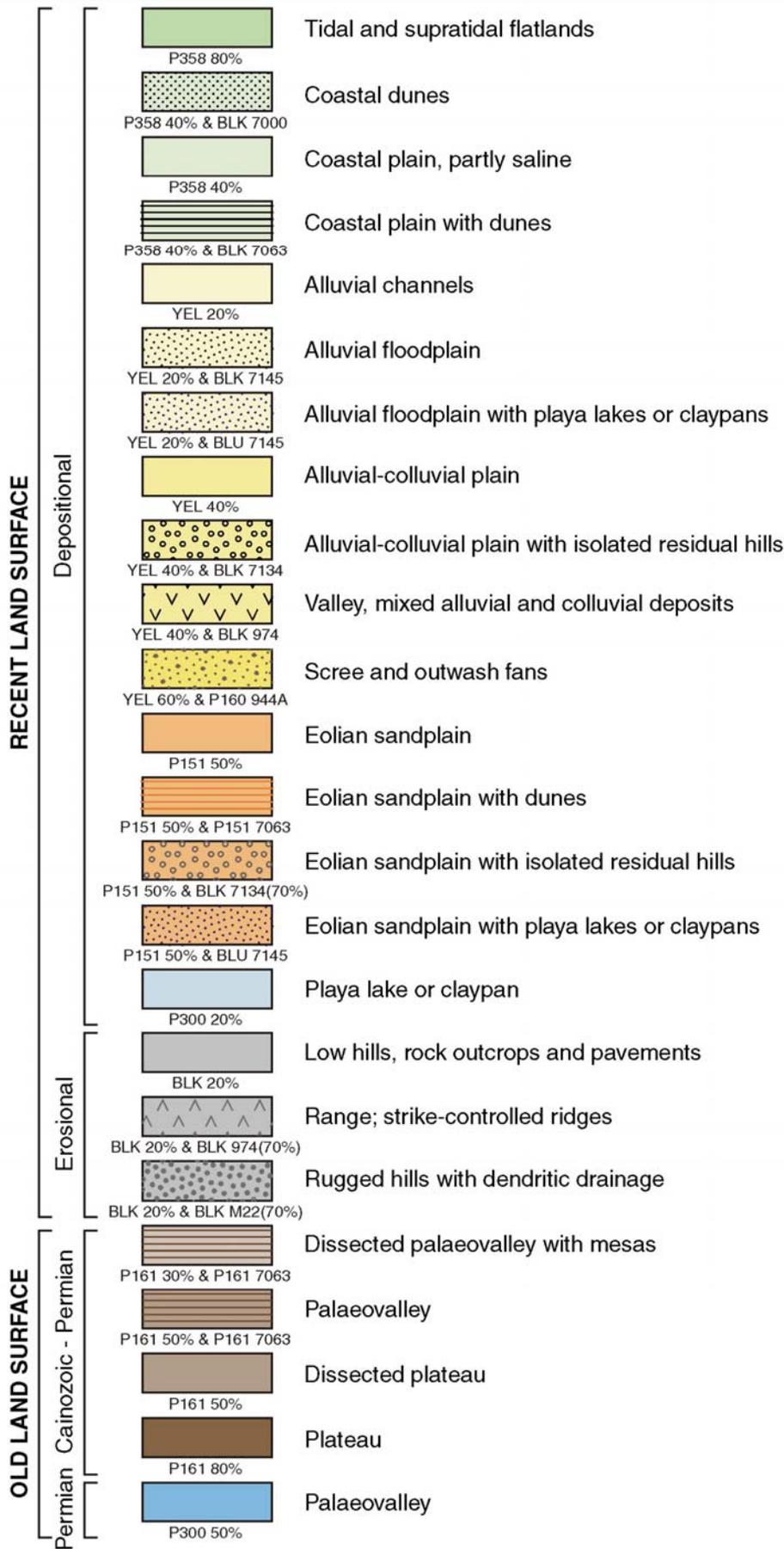
The image is now ready to be imported into Corel, where any annotations can be added, along with the file identification tag, and date stamp.



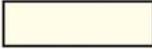
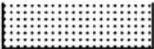
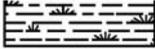
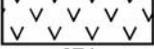
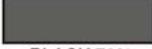
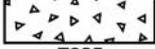
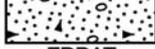
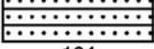
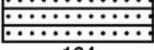
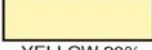
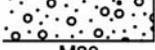
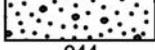
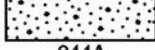
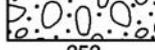
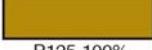
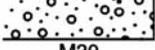
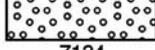
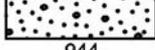
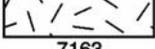
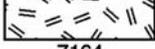
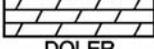
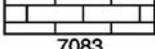
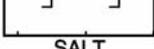
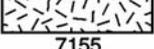
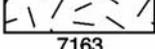
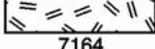
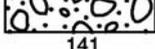
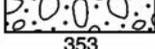
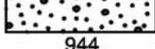
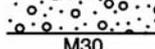
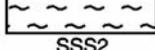
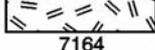
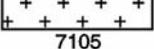
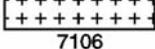
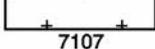
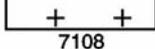
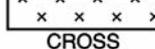
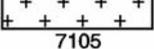
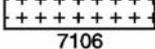
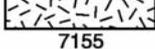
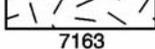
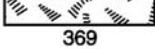
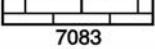
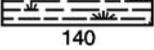
GEOLOGICAL TIME SCALE

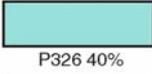
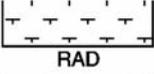
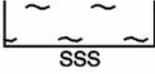
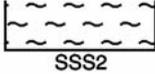
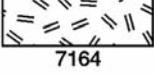
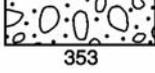
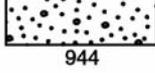
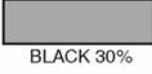
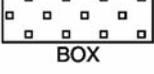
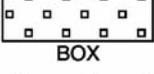
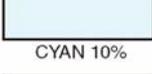
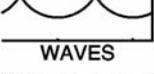
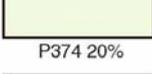
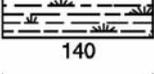
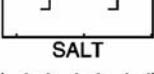
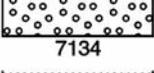
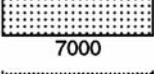
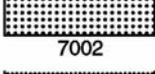
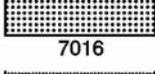
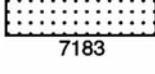
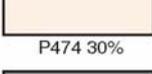
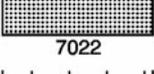
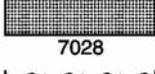
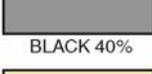
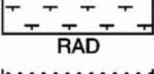
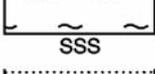
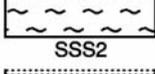
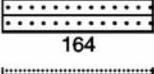
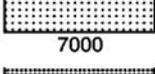
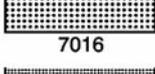
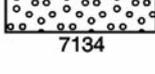
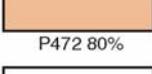
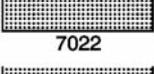
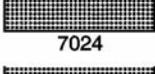
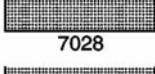
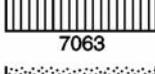
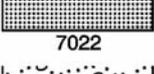
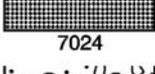
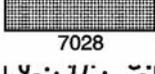
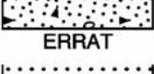
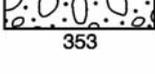
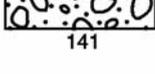
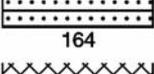
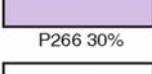
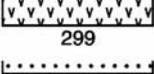
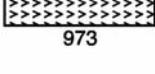
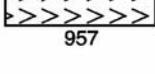
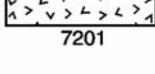
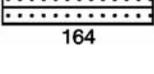


PILBARA PHYSIOGRAPHY LEGEND

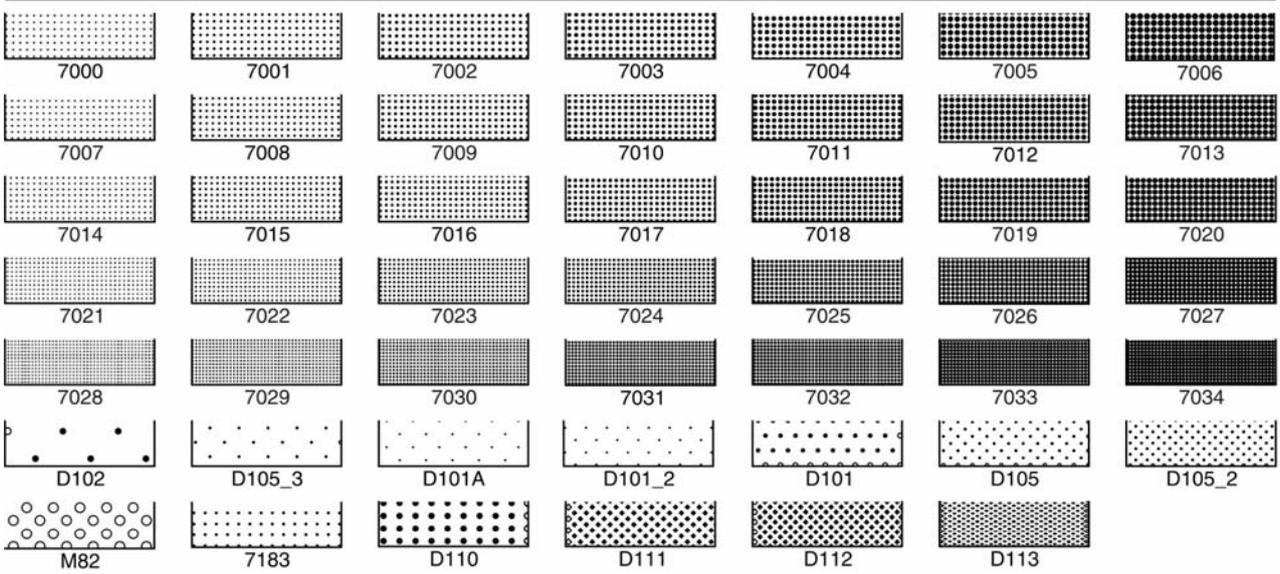


GEOLOGICAL PATTERNS

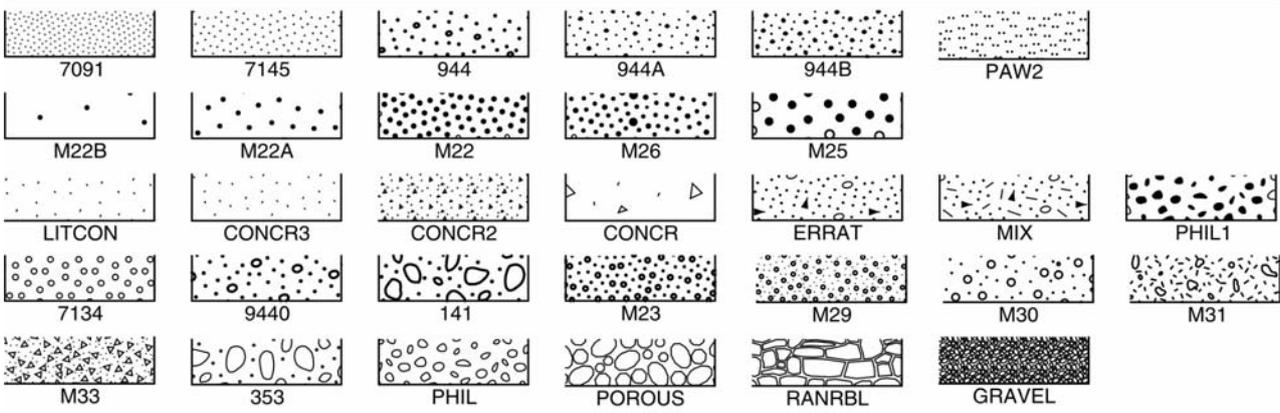
geology	colour	pattern				
alluvium	 YELLOW 10%	 7000	 140			
banded iron formation	 P300 100%	 BLACK 100% 7063				
basalt	 P451 70%	 974	 299			
breccia	 BLACK 70%	 M20	 7235	 M33	 ERRAT	 944A
calc-silicates	 —	 164				
chert	 P300 100%	 164	 7063			
colluvium	 YELLOW 30%	 M29	 M30	 944	 944A	 353
conglomerate	 P125 100%	 M29	 M30	 7134	 944	 944A
crystalline rock	 —	 7155	 7163	 928		
dolerite	 P335 100%	 BLACK 70% 7155	 7163	 7164	 M15	
dolomite	 —	 DOLER	 7083			
evaporite	 —	 SALT				
gabbro	 P354 30%	 7155	 7163	 7164	 928	
glacial rock	 —	 ERRAT	 141	 353	 944	 M30
gneiss	 RHODAMINE 40%	 RAD	 SSS	 SSS2	 7164	
gossan	 BLACK 70%	 7221				
granite	 RED 30%	 7105	 7106	 7107	 7108	 CROSS
igneous rock	 RED 30%	 7105	 7106	 7155	 7163	 928
komatiite	 —	 369				
laterite	 P158 50%	 SALT	 369			
limestone	 —	 DOLER	 7083			
marble	 —	 DOLER				
marsh	 —	 140				

geology	colour	pattern				
metamorphic rock	 P326 40%	 RAD	 SSS	 SSS2		
migmatiite	 —	 7164				
molasse	 —	 ERRAT	 MIX	 353	 944	
mudstone	 BLACK 30%	 7022	 7024	 7063	 7091	
orebody	 BLACK 50%	 7221				
porphyritic granite	 —	 BOX				
porphyry	 —	 BOX				
recent marine/ coastal	 CYAN 10%	 WAVES				
recent rock	 P374 20%	 140				
salt	 —	 SALT				
sandstone coarse	 P474 100%	 7134				
sandstone	 P474 60%	 7000	 7002	 7016	 7183	
sandstone fine	 P474 30%	 7022	 7024	 7028		
schist	 BLACK 40%	 RAD	 SSS	 SSS2		
sedimentary rock	 YELLOW 30%	 164	 7000	 7016	 7091	 7134
shale	 P472 80%	 7022	 7024	 7028	 7063	
siltstone	 —	 7022	 7024	 7028	 7091	
tillite	 —	 ERRAT	 353	 141		
turbidites	 —	 164				
ultramafic rock	 P266 30%	 928	 7221			
volcanic rock	 —	 299	 973	 957	 7201	
volcanic tuff	 —	 164				

regular



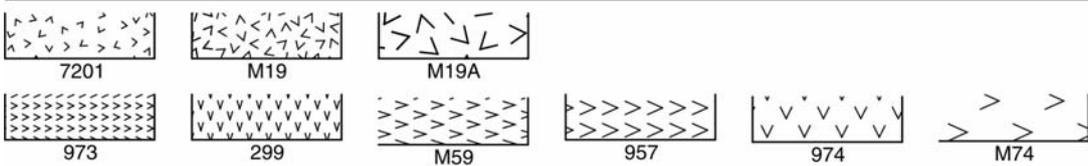
irregular



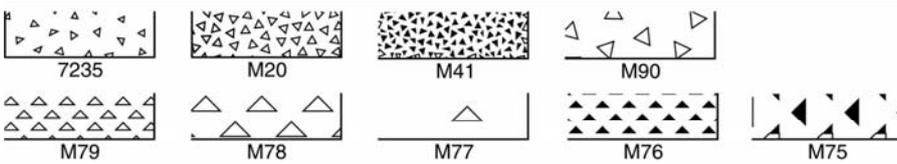
fleck



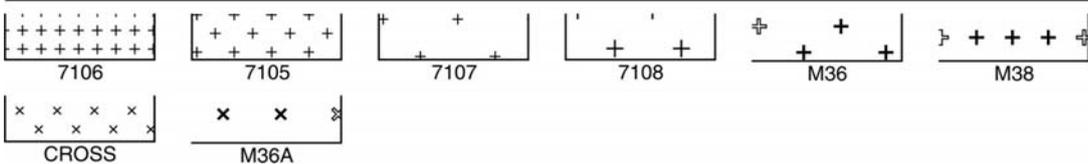
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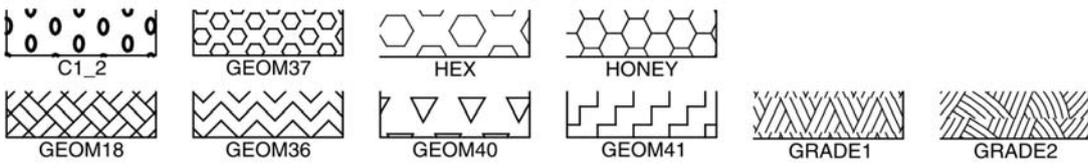
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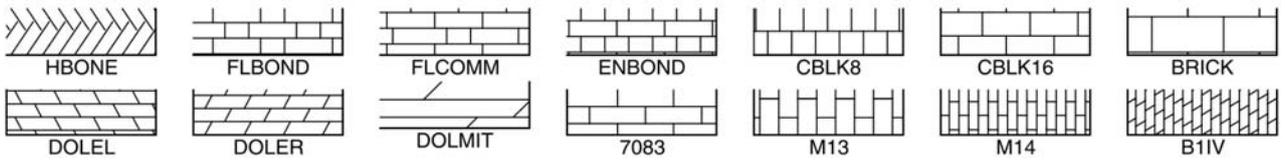
cross



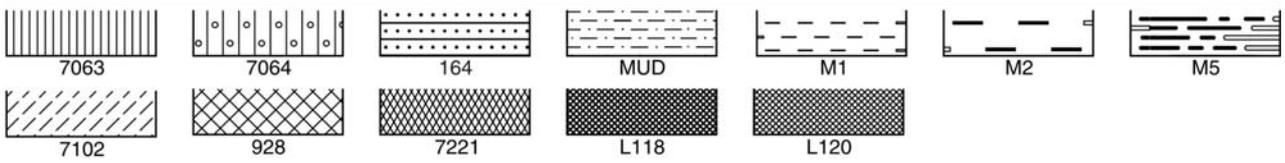
geometric



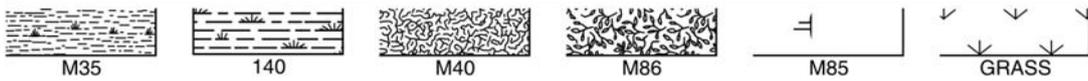
brick



line



swamp



other

