

# Foil Illuminates Sacred Manuscript by Kym Conis

*Photo by Terry Anderson Photography*

In 1998, Saint John's Abbey and University commissioned renowned calligrapher Donald Jackson of Monmouth, Wales to create a hand-written Bible. On March 8, 2000, the first words of *The Saint John's Bible* were transcribed. Jackson (together with a team of artists from Wales, the UK and the United States and scholars from central Minnesota) has utilized the ancient techniques of calligraphy and illumination to produce *The Saint John's Bible* – an awe-inspiring, hand-written and hand-illuminated epic work of art.

Uniting the ancient Benedictine tradition with the technology and vision of today, the final masterpiece (with a completion date set for May of 2011) will encompass seven volumes totaling some 1,150 pages and 160 illuminations (graphic images with gold or silver). Produced entirely on calfskin vellum utilizing quills hand-cut by the scribes, the Bible's pages are brought to life with lamp black ink from nineteenth-century Chinese ink sticks and vermillion and other cakes and powdered pigments, mixed with egg yolk and water, to create the stunning images. Gold leaf gilded with burnishing tools and brushes embellishes the final illuminations with exquisite light and movement. In the words of Donald Jackson, "The Bible is the calligraphic artist's supreme challenge, our Sistine Chapel, a daunting task."

Six years after work on *The Saint John's Bible* began, another project demanding the utmost attention to detail came to light, crossing the path of Minneapolis, MN-based McIntosh Embossing. The project, called the Heritage Edition, is a full-size, museum-quality reproduction of the original *Saint John's Bible*, produced in a limited edition series comprised of 360 sets of seven volumes. Slated for completion in 2012, the Heritage Edition is intended as a source of inspiration and faith for communities around the world for centuries to come.

For McIntosh Embossing, 'illuminating' the pages of the Heritage Edition has been a journey of momentous proportions. "There has been a path, an ongoing story in the process that has tied into the life and story of our actual lives," says McIntosh Embossing President/CEO Dave McIntosh. From a production standpoint, the project has tested the outer limits of foil textures – requiring unmatched quality and absolute repeatability – challenges that have elevated McIntosh Embossing and the art of foil stamping to new extremes.

## Capturing the Essence

When Donald Jackson, artistic director of the Heritage Edition, set out to produce the top quality reproduction, he first explored Europe for the right finishing techniques but came away dissatisfied with initial testing. Noted for its reputation of producing high-end, art-directed work, McIntosh Embossing was approached in 2006 by a representative from St. John's University in Collegeville, MN, to tackle the project. "I was shown samples of stamping done in Europe that Donald Jackson was not happy with," explains McIntosh. "The gold foil illuminations represent the presence of God on the page. The foil stamping had to reproduce the subtlety of detail, fineness of lines and varying textures of the original, hand-applied gold leaf."

In order to gain a better understanding of the illumination process, McIntosh flew to Wales and spent six days in Jackson's scriptorium, observing his work. "As I explored the original pages, the textures seemed accidental but they were definitely intentional. It was critical to Mr. Jackson that we preserve that aspect of the gold and platinum," recalls McIntosh. "I came to understand the process from his point of view: keeping the lines as clean as possible while still putting the right textures into the calligraphy through the use of the dies and foils."

Back in Minneapolis, the McIntosh Embossing team set to work, recreating the textures that would be paramount to the success of the reproduction. Working within the traditional parameters of diemaking produced textures that were too mechanical and uniform for the feel of the project. So McIntosh Embossing conducted its own R&D. Experimenting in-house, it began the arduous task of creating a set of custom textures utilizing magnesium dies (because of their softness) and a variety of etching tools, including steel wool, different grits of sandpaper, different burnishing tools and imported silk.

"We utilized different grades of English silk, ripping apart the silk and putting it over the dies. The silk texture actually impressed into the foil and broke up the light reflected by the gold," explains McIntosh. This was a key aspect in the recreation process as Jackson wanted to make sure that the foil stamping did not reflect the light uniformly, so that with each turn of the page, the foil would actually "twinkle" or "wink".

Ultimately, a manual of textures was created, which Jackson utilized to specify what textures would be utilized to recreate each illumination. Each texture specified had to be a perfect match to the one in the manual – created with the same heat, pressure and dwell.

One of the techniques developed for the Heritage project, called light pressure foil stamping, entails printing gold and then over stamping those areas with gold foil in such a way that the foil purposely does not cover all of the intended area. "To those of us in the industry, this looks like picking and substandard work. But all Jackson wanted was to enhance the ink in these areas... to make it sparkle," explains McIntosh. "The light pressure stamping has been one of the hardest techniques to reproduce."

Like the foil stamping process, the embossing process required its own set of specifications. McIntosh recalls, "It took us four months to understand that Jackson only wanted slight embossing depths of .002" to .005" from the dies provided by St. Cloud Engraving and Graven Images. The embossing only existed to make the foil twinkle more."

The foil also had to be tested prior to the initial run for light fastness, durability and compatibility with the stock and ink. In the end, three different metallic golds (bright, matte, and one with almost no reflection) and platinum-colored silver were utilized from Kurz Transfer Products. McIntosh explained that 500 years ago, silver leaf would have been used for the embellishments, but today, pollutants in the air would cause silver leaf to tarnish. Instead, platinum leaf is used because of its ability to maintain its integrity.

## Producing a Work of Art

The Heritage Edition's complete fidelity to the beauty of the original starts with the paper. Monadnock Paper Mills, Bennington, NH, a family-owned paper mill and the oldest

continuously operating paper mill in the U.S., supplied the paper for the Heritage Edition: custom-made, 100 percent cotton archival paper with no artificial whiteners, brighteners, coatings or fillers.

According to McIntosh, the size of the original Bible was constrained by the maximum size of calfskin available to Donald Jackson when he began the project. McIntosh recounts a story told by Jackson, "He toured facilities in Canada and Israel before finally finding a source in northern England (in his own backyard) that could provide 1,000 or so calfskin vellum sheets with consistency over the duration of the project. This was not an easy task given that calfskin is not widely used for writing any longer."

Working with 28x35" press sheets (with a finished single-page size of 16x25"), the sheets for the Heritage Edition were first printed at the John Roberts Company in Minnesota on a rare, high-speed Heidelberg XL-105 press. The inks used are fade-resistant and permanent, characteristics achieved,



*Photo by Terry Anderson Photography*

in part, through the specially-developed printing process using ultraviolet light. Each volume of the Heritage Edition undergoes a rigorous process of color correcting and press checks and Donald Jackson oversees production. Today, the imaging has moved in-house to the Hill Museum & Manuscript Library.

After the sheets are printed, they move to McIntosh Embossing for final embellishments. The arduous production of each volume requires an average of 110 to 144 foil stamping and/or embossing passes through the press. Produced on Imperia and Bobst 40" presses, each volume takes approximately six months to produce.

Jackson visits the U.S. to press-okay all the printing, a long and scrupulous task, and therefore does not have the additional time to do the same with the finishing processes. "We become his (Jackson's) eyes and the final arbiter of the foil stamping and embossing techniques," says McIntosh. "On the first volume or two, this was very difficult because we were working with a world-class artist and we were trying to recreate his art." McIntosh spent a lot of time on the phone in order to understand verbally what Jackson wanted and then over the next few months, tried to replicate those desires. But as McIntosh further points out, "We have always worked with hard-to-do, high-end work that is art-directed and usually involves lots of press-okays. That talent is probably what has made this project work as well as it has."

Following the intensive printing and finishing processes, the sheets are shipped to Roswell Bookbinding, Phoenix, AZ, where they are bound in rich, handcrafted red leather that is



Photo by Gerry Yumul

Each volume of the Heritage Edition undergoes 110 to 144 foil stamping and/or embossing passes.

embossed and embellished with gold foil in specified areas. The spines are imprinted with the volume title and number in gold foil and then finished with an ornamental silver clasp.

Now in production on the fifth volume out of seven, McIntosh Embossing and the rest of the production team, including the art director, the printer and the bindery, have developed distinct processes to keep track of all the specifications, textures and nuances that help to maintain the integrity of the Heritage Edition throughout each volume that is produced.

**A Masterpiece Unveiled**

The superbly executed reproduction of *The Saint John's Bible* has been met with overwhelming acclaims throughout the world. "Our devoted team of calligraphers, illuminators, craftspeople and illustrators has captured the spirit of *The Saint John's Bible* and put it into printed form," says Jackson. "But, there came a point when the reproduction stopped being an imitation of the original and became a work of art in its own right."

The first completed volume of the Heritage Edition, *The Wisdom Books*, was presented as a gift from St. John's Abbey and University to Pope Benedict XVI during the annual meeting of the Papal Foundation at the Vatican, April 4, 2008. As His Holiness turned the pages, he described it as "a work of art, a great work of art."

Through the Heritage Program, artistic, religious and cultural institutions around the world can experience and share in the wonder of the Heritage Edition, the only full size, limited edition, signed and numbered reproduction of *The Saint John's Bible*. On display at colleges and universities such as St. Catherine's University, St. Mary's College and Notre Dame and religious institutions such as St. Martin-in-the-Fields (London) and the Vatican Library (Rome), the Heritage Edition elicits a breath of inspiration and awe from all who survey its magnificence.

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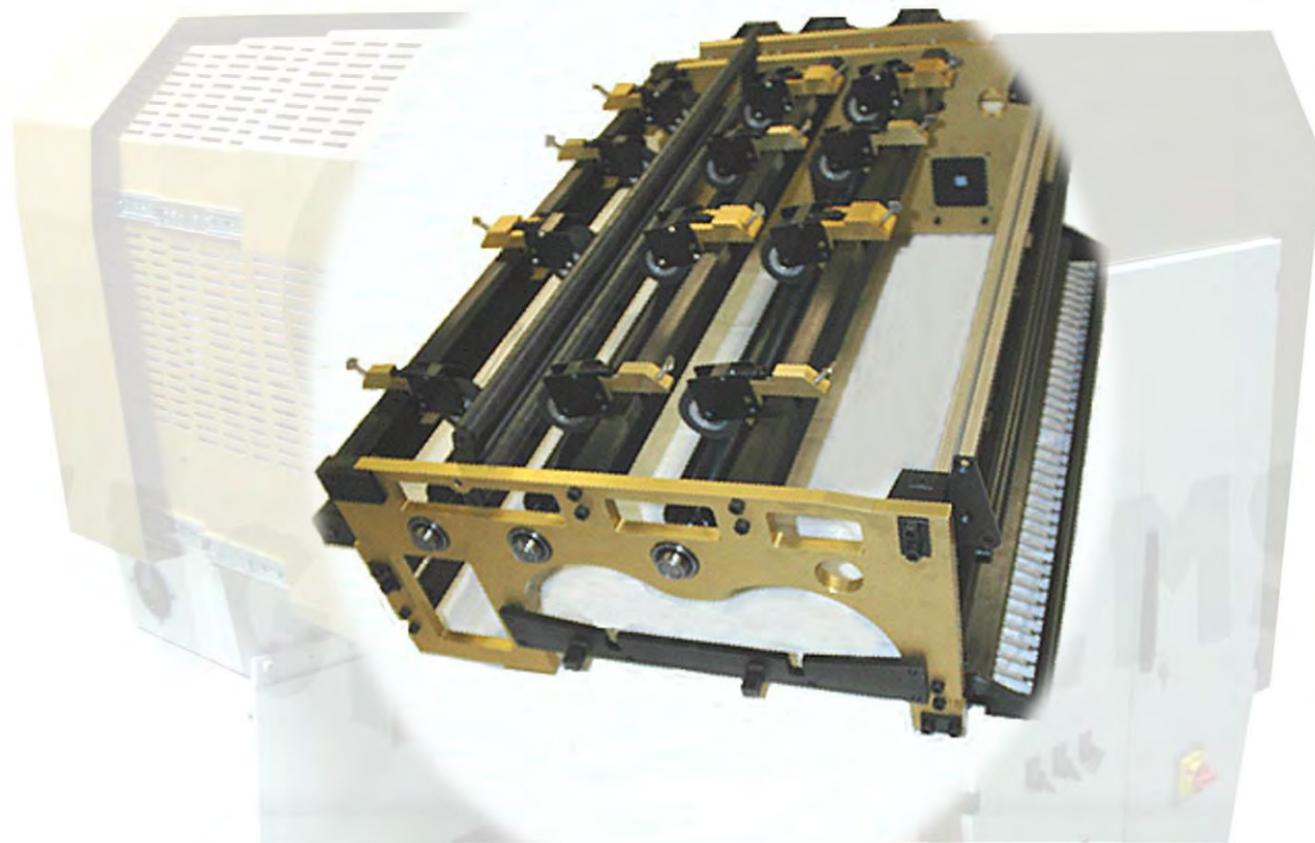


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*Detail from Creation, Donald Jackson with contribution by Chris Tomlin, Copyright 2003, Order of Saint Benedict, Collegeville, Minnesota, USA.*

The glory of the Heritage Edition continues to spread throughout the world, as the Mayo Clinic in Minnesota received one this past spring through the generosity of grateful patients. Each volume is to be displayed in a different location of the hospital, housed under a glass case. A Mayo Clinic employee will have the honor each day of the turning the page of each volume so that patients and visitors can enjoy the entire experience of the exquisite Bible.

Industry recognition also reigns as McIntosh Embossing received a gold award for Prophets Volume 5 of the Heritage Edition in the Foil & Specialty Effects Association's 2009 Gold Leaf Awards Competition – heralded as an extraordinary example of unique foil stamping textures and embossing.

McIntosh makes special note that the leadership of Donald Jackson

throughout the project has been instrumental to its phenomenal success. “We’ve had Donald in several times to speak to our production team; he’s been an amazing team builder,” says McIntosh. Even the president of St. John’s University, where the original, hand-written *Saint John’s Bible* will reside, has visited McIntosh Embossing to stress the magnitude of the project and the legacy it will leave behind – one that will live on for centuries to come. McIntosh concludes, “Producing something of such lasting value and appeal has instilled a sense of pride and inspiration throughout our entire organization. We feel we are creating something far beyond anything we have done in the past and most likely ever will again.” ■

*To learn more about The Saint John’s Bible and the Heritage Edition, visit the award-winning website at [www.saintjohnsbible.org](http://www.saintjohnsbible.org).*

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