You will find more information on the reproduction technologies illustrated here in the galleries on this site. For extensive descriptions, essays and comprehensive references, the reader is invited to consult the latest edition of Luis Nadeau’s *The Encyclopedia of Printing, Photographic and Photomechanical Processes*. For the identification of processes the reader should consult the author’s upcoming *Guide to the Identification of Prints, Photographs, and Documents. Featuring a Comprehensive Chronology of Reproduction Technologies*.

**The Research Library**

The Nadeau collection includes a library of approximately 5,000 volumes, mostly in English, French and German, related to the history and conservation of printing and photographic materials. Among the most interesting items, is a comprehensive set of the *Penrose Annual. A Review of the Graphic Arts* (1895-1982). As of this writing, this is the only complete collection of the *Penrose* in Canada and one of two in North America. All 74 volumes (27,000 pp.) have been abstracted and indexed and will be the subject of an upcoming book in the near future: *A Review of the Penrose Annual (A Review of the Graphic Arts)*.

**Photographically Illustrated Books**
Photographically Illustrated Books include a copy of John Borthwick's *Montreal, its history, to which is added biographical sketches, with photographs, of many of its principal citizens*. This large quarto volume (29.5 x 24 cm) was published by Drysdale and Co., in 1875. The availability and suitability of photomechanical processes of the day left publishers with few options when it came to their use of illustrations for their *éditions de luxe*. The lithographic frontispiece of Sir George E. Cartier is followed by 188 albumen photographs (some are copies of earlier prints), mounted recto and verso of 52 leaves, from the Montreal studio of James Inglis. In 1875 Inglis had the second largest studio in Montreal, second only to William Notman.

19th Century France benefited from many of the most successful inventors and innovators in the fields of printing, photography and photomechanical printing. By 1881 the time was ripe for the Cercle de la librairie (a Paris Society of booksellers, printers and publishers) to commission the most impressive exhibition catalog of engravings ever published: *Catalogue de l'exposition de gravures anciennes et modernes. 4 juillet 1881*. All the known methods of printing and illustration techniques were utilized to produce 100 copies adorned by Lemercier and Goupil woodburytypes, photogravures by Baldus and Dujardin, chromolithographs by Dambourgez, similigravures by Petit and many collotypes, etchings, steel engravings, etc. by the finest artists of the day.
The Nadeau library has a copy of the most important 19th century book with original specimens of early photographic technologies. Ten “specimen heliograms” were used to illustrate printing processes in Ernst Lietze's *Modern Heliographic Processes: Manual of Instruction. The Art of Reproducing Drawings, Engravings, Manuscripts, etc.* New York, D. Van Nostrand, 1888. The processes include silver prints on citro-chloride of silver paper (Neg. & Pos.), ordinary blueprints (Neg. & Pos.), a red prussiate of potash print, a direct cyanotype (Pizzighellitype), an ink picture, a carbon print, a uranium print developed with nitrate of silver and a uranium print developed with red prussiate of potash.

The Collection

The collection of photographs was begun in the 1970s and was gradually expanded to include all forms of reproduction technologies, from ancient engraving methods to modern photomechanical processes. There are thousands of illustrations made by approximately 400 “different” printing, photographic and photomechanical technologies although, admittedly, many of them differ only in name. The emphasis has been on collecting items whose production methods are clearly identified.

The oldest item in the collection, a Sumarian cylinder seal, goes back approximately 4,000 years. As with the other artifacts on these pages, more information can be found in the online Museum galleries and in Luis Nadeau's Encyclopedia.
For centuries prior to the invention of printing with movable type (ca. 1450), books had to be copied by hand. The following manuscript, on thin vellum, is from a Friar's Bible, from the 13th Century.

The *incunabula* collection includes a fine typographical example (1477), a leaf-book that includes a leaf from the *Hortus Sanitatis* (1499) and this interesting item from the *Nuremberg Chronicle*, 1493.

The *physionotrace* was the first mechanical system invented to produce multiple copies of a portrait, in 1786.
Photo Conservation - Collection Highlights

The photography collection includes specimens of early color processes such as the Uvachrome, a dye-mordanting process that relied on copper compounds as mordants for transparency dyes. The Nadeau collection is rich in items that were originally supplied by manufacturers as specimens of their products. This greatly simplifies the identification process.

The three-color carbro process was preferred by high-end color studios during the period 1920-1955. The process, being very difficult and expensive, was almost exclusively used for illustrations that were color-separated for photoengraving in popular magazines and catalogs. These photographs, such as this portrait of Italian actress Gina Lollobrigida, are partly for the fact that they were usually unique and made with permanent color pigments that will last for centuries.

The collection also has samples of Vivex prints from the Art Deco era and Nadeau's own permanent three-color carbon prints, reputed by many to be among the most beautiful color prints ever made, on account of the unique, thick relief... at the University of Arizona in Tucson, U.S.A. Nadeau detailed the techniques used to make these prints in his books "History and Practice of Carbon Processes" (1982) and "Modern Carbon Printing" (1986).

Other photographic pigment processes represented in the collection include gum prints, bromoils, and Fressons such as this beautiful print by José Ortiz Echagüe. Ortiz Echagüe's Fresson coating equipment and formulas are now (2010) owned by Luis Nadeau. This process will be looking for a new home in the upcoming years.
Photomechanical technologies are well represented in the Nadeau collection. These include early albertypes. An albertype (collotype family) showing the interior of Albert's Munich printing establishment in 1870. This original albertype was inserted in the June 24, 1870 issue of *Photographic News*. Under magnification this print has no visible sign of reticulation, unlike later collotypes.

The first practical half-tone process in the world was invented and commercialized in Canada by the Leggo brothers.