## Archives Preservation Update

## "A Mexican Governor's Legacy, A Conservator's Puzzle"

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The distinct group of documents which will be discussed in this article have an inherent value beyond the information they contain, often referred to as intrinsic value. Intrinsic value is an archival term applied to permanently valuable records having qualities and characteristics that make the records in their original physical form the only archivally acceptable form for preservation. This is an important concept because it often serves as the central issue in the ongoing dialogue between archivists and conservators.

According to National Archives Staff Information Paper 21, some of the specific qualities or characteristics of record materials having intrinsic value are as follows:

1. Physical form that may be the subject for study, or significant examples of the form.

2. Unique or curious physical features.

3. Age that provides a quality of uniqueness.

4. General and substantial public interest because of direct association with famous or historically significant people, places, things, issues, or events.

5. Value for use in exhibits.

By definition, intrinsic value takes into account a researcher's need to see documents in their original format as well as the needs of active exhibit programs in institutions such as the National Archives.

Because of their intrinsic value and with an eye toward exhibition, a group of nineteen handwritten pages were brought into the conservation laboratory. This group consists of three land grants signed by Pio Pico, the last Mexican governor of what was then called Alta California (Figure 1).

These documents were executed on transparentized, thin wove paper in a black writing ink characteristic of iron gall. The paper is machine made wove, manufactured from flax with the inclusion of shives. All but four of the pages have a distinct watermark.

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Fig. 1: Land Grant I, p. 2; Richard S. Den v Daniel A. Hill (1859); Miscellaneous Private Case Files, 1855 - 1908, Box 11B, Entry 1; Northern District of California, San Francisco, Special Circuit Court; Records of the District Courts of the United States, Record Group 21; National Archives - Pacific Sierra Region (San Bruno, California).

The watermark is characterized by a repeat scroll pattern which runs from the top edge of the sheet to the bottom (Figure 2). This watermark seems to be related to the type of watermark used for security papers in the manufacture of currency, stamps, and legal documents. It is, however, rare to find a reference in the literature to a transparentized paper bearing a watermark.

All the pages are in fair to poor condition. There are numerous edge tears; many areas along the edges are crumpled and folded back upon themselves. Horizontal folds indicate these papers were once trifolded. The documents were more than likely fastened together with ribbon through the hole punched near the top edge of each sheet, consistent with the way in which many nineteenth-century court records were stored. The folds and creases in the papers form a pattern of fine white lines, exposing paper fibers through the cracked coating layer.

The papers were transparentized by applying a coating to the verso. Because of the thinness of the paper and some bleed through of the coating, the method of application is hard to discern on casual examination, but the surface of the verso is smoother to the touch and tends to be shinier than the recto.

Small areas on two of the pages were left uncoated. As a result, one can speculate on what the condition of these papers might have been had they not been so treated. They would likely be less yellow and certainly less brittle. The pH of the uncoated areas is 5.3 to 5.5 and of the coated paper is 4.3 to 4.6. The two uncoated corners can withstand considerable flexing whereas the coated paper breaks very easily with any amount of movement. There has already been some loss of information, and more may be lost through fragmentation of the paper sheet.

In an attempt to find out more about the coating, small fragments of coated and uncoated paper were sent to the National Archives Research and Testing Laboratory in Washington, D.C. FTIR analysis was used to identify the coating. Spectra of both the coated and uncoated samples were run. In order to obtain a spectrum of the coating itself, the uncoated spectrum (the paper) was subtracted from the coated spectrum. The remaining spectrum is assumed to be that of the coating. Though some interference can occur in using the subtraction method, the resultant spectrum is considered valid for analytical purposes. Another factor to consider is that the spectra in the database used for comparison are of unaged artists' materials whereas the sample at hand is an aged one. Keeping these two factors in mind, it appears that the material in question is an aged coating the primary component of which is more than likely sandarac (Figure 3).

After extensive solubility testing, it was found that the coating was partially removed by acetone and fully removed by 1,1,1 trichloroethane. The media is stable to all solvents and solvent mixtures tested.

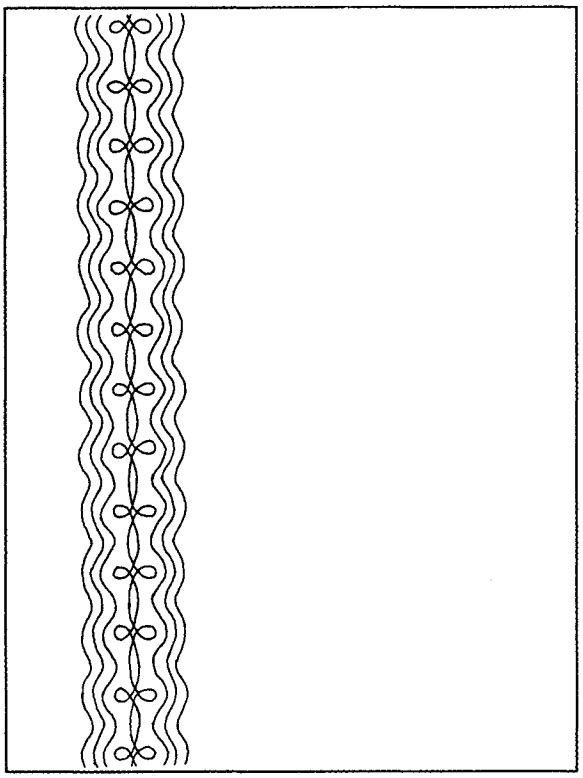

Figure 2. Repeat scroll pattern watermark.

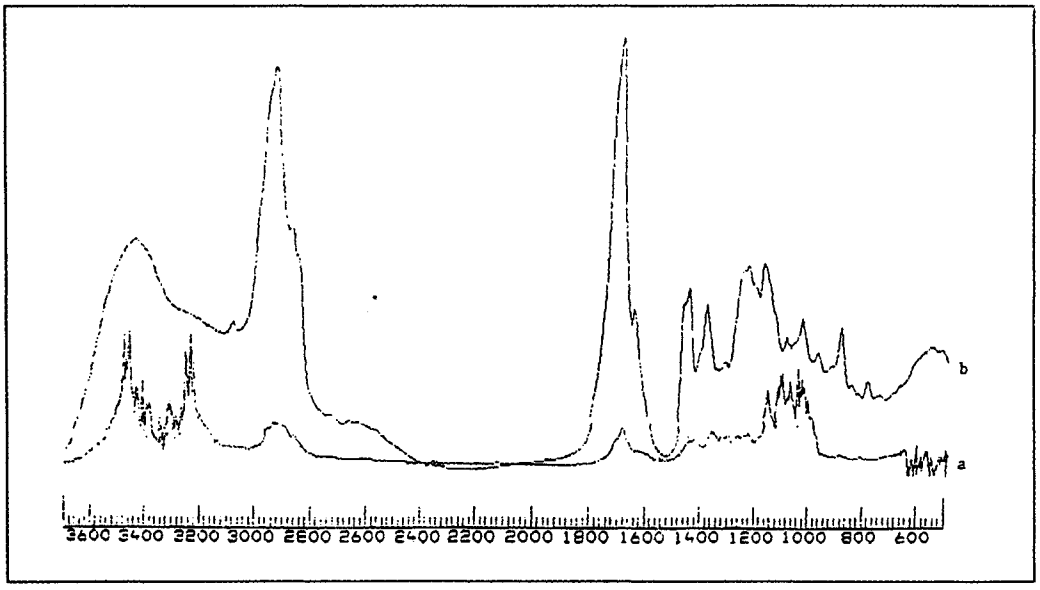


Figure 3. FTIR Spectra: a. unknown subtraction sample (coated sample - uncoated sample); b. sandarac.

During the initial discussion of treatment options the archivist in charge felt that the informational content of the documents was of the highest importance; that the flaking of the papers would result in a loss of information; and that these items have historic and legal value which must be preserved. There was concern that simply mending the tears and reattaching the fragments was risky. The coating could continue to age and further embrittle the paper. The implication was that the coating should be removed.

But in further discussion greater consideration was given to leaving the original format intact, because there is a technical value to these documents. Though the resin coating applied to the papers is one of the major contributors to the deterioration of the documents, there is little analysis that can be done to determine whether or not this deterioration has stabilized and will cause further damage. From a technical standpoint, however, the documents are not just unique to the holdings of the National Archives, but rare among transparentized papers. In other words, these documents have high intrinsic value precisely because of the technique used in their production and the fact that they bear a watermark.

The dialogue between conservator and archivist was critical. The high intrinsic value of the Pio Pico documents was not under dispute. Rather, the dialogue focused on the various qualities or characteristics of intrinsic value--whether one quality carried more weight than another; how they relate to each other;, and how they relate to choosing a course of conservation treatment.

In this case, the treatment of choice was to soften the coating on the crumpled and folded areas of the paper through the use of an acetone/toluene mixture in a local solvent chamber. This allows the paper to be safely relaxed in those areas in preparation for repair or reinforcement without incurring undue loss or breakage. Once the resin coating softens, the folds or crumples can be carefully laid flat and allowed to set under slight pressure.

The coating at the very edges of the tears and the loose pieces will be removed with 1,1,1 trichloroethane applied with a small brush and blotted dry. This will ensure good adhesion of those areas when mended with wheat starch paste and toned Japanese tissue. Once the treatment is complete, rigid housing will be constructed for each sheet to protect against undue flexing. The documents will then be stored in a customized archival box.

One of the most important aspects of this project has been the dialogue between conservator and archivist. It has broadened the conservation staff's understanding of how an archivist thinks, often judging a document by its informational content and examining its physical characteristics by the ability to

effectively bear that information. It is the interplay between information and physical support the archivist finds important.

The conservator tends to look first at the physical integrity of a record and at the techniques and methods used in its production, and only then at the image or text.

Viewing the dialogue from this perspective shows that the two approaches, of archivist and conservator, are really not far off from one another and that it is possible, indeed essential, to find a common vocabulary of concerns.