The Champion Brick Case: A Study in the Proof of Value

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• In December 1959, the Maryland State Roads Commission acquired 55 acres owned by the Champion Brick Company to be used in connection with construction of an interchange on the Baltimore County Beltway and Northeastern Expressway. The value of this land and consequential damages to the brick company's nearby manufacturing plant were disputed, and led to a trial which, before it was completed, tested to the extreme the skill and ingenuity of counsel for both sides in the preparation and presentation of highly unusual and technical evidence. In many respects the Champion Brick case is a "once-in-a-lifetime" case, for rarely is there a combination of facts and issues that make such demands as did this one. In another sense, however, the experience of trying such a case as this is reassuring, for it demonstrates that the process of proof in condemnation cases is capable of reducing extremely lengthy and complex masses of facts to understandable proportions and presenting them to juries of laymen so that they can pass judgment in an intelligent matter.

ISSUES OF THE CASE

The brick company's land consisted of 172 acres, and was the site of subsurface clay deposits which were mined and used to make red face building bricks in the company's manufactory located 2½ miles away. The State's acquisition of 55 acres of this tract for right-of-way purposes (Fig. 1) was carried out under Maryland's quick-taking law and was accompanied by the deposit of $178,000 as the estimated just compensation for this land. The company rejected this offer and asked instead for $3,500,000 on the ground that the taking destroyed the utility of the entire brickmaking business. This claim was later reduced to $1,500,000 in the opening statements made at the trial.

The company contended that its compensation should include damages resulting from the reduced amount and availability of its clay supply. It estimated that the plant had a life expectancy of 23 years from the date of the taking (December 1959), whereas after the taking the plant could continue operations for only five years before the clay supply in its remaining property was depleted. After five years, the company contended, equipment and remaining land would have no market value as a brick manufactory, and would have to be valued as disorganized land and buildings.

The question of prime importance was, therefore, can a landowner be compensated for damages to a parcel of land as a result of a taking from another parcel owned by him, and which, although not contiguous, is connected inseparably in the use of the former parcel?

The trial court held that the question of consequential damages should go to the jury, relying in its holding on *Baetjer v. United States*, 243 F.2d 391 (1944), *cert. denied* 323 U.S. 772. In substance the court's ruling in the Baetjer case was that damages could be awarded where it was proved that integrated use of the land existed, that the parcels were inseparable and not susceptible of being replaced, and

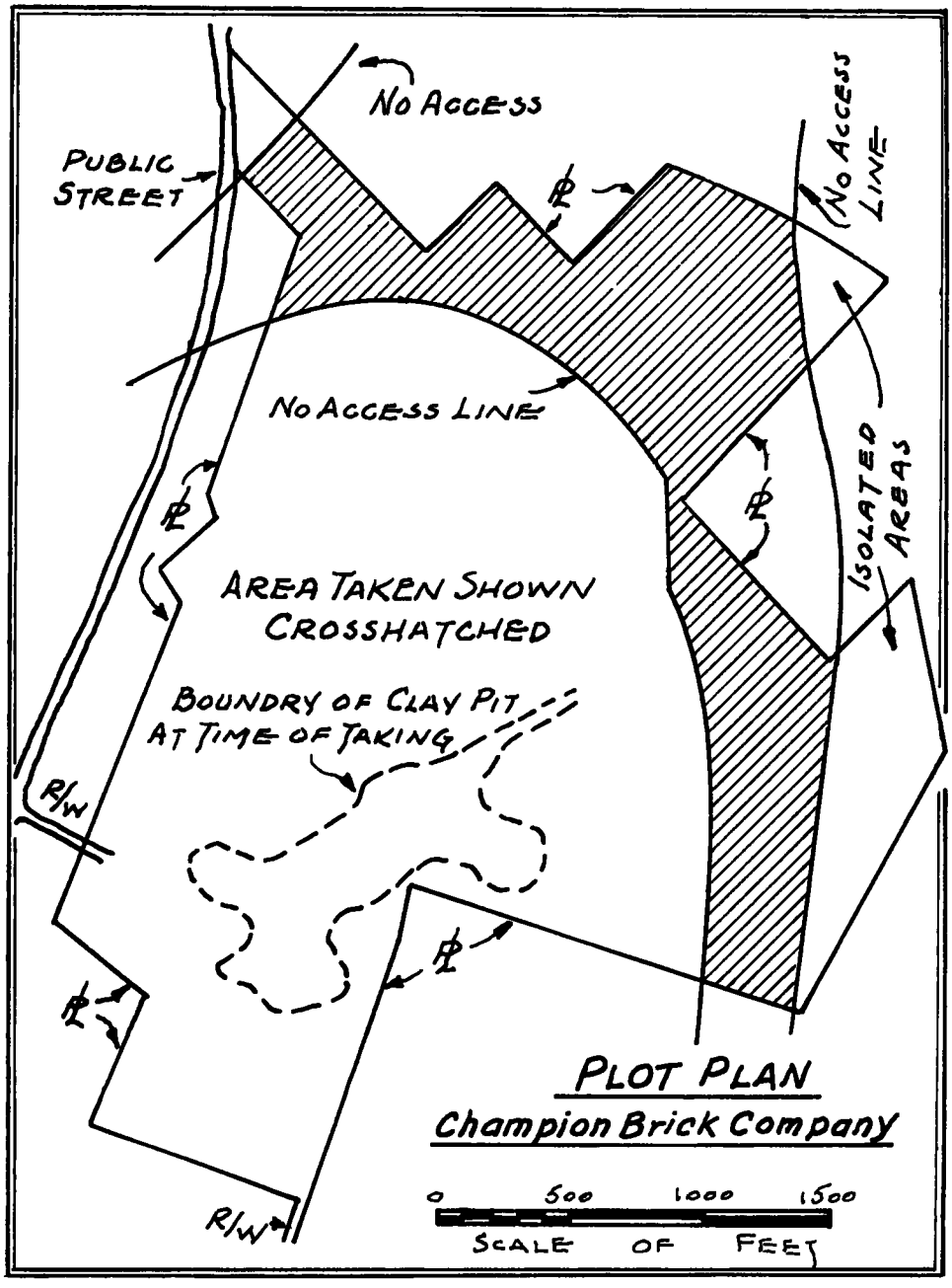

Figure 1.

that damage to one must necessarily damage the other. This involved proving unity of use, nonavailability of other suitable clay within an area capable of being used economically, and the diminution of the company's existing supply of clay below the 23-year period of the brick plant's life expectancy. This appears to be the first time in the history of Maryland's eminent domain law that the burden of proof of value has been placed on either party in a condemnation proceedings.

Proof of these elements of the case called for extremely comprehensive and technical testimony regarding the artistry and history of brickmaking, the technical aspects of the brickmaking process, the geology or the area and site, the techniques of subsurface exploration, and interpretation of subsurface data.

Clay Technology

As a basis for the jury's understanding of the technical testimony on brickmaking, some historical background testimony was considered desirable. Briefly the uses of clay and ceramic manufacturing processes were reviewed from the history of ancient Egypt, Europe, and Central America. The difference between "fat" (pure and highly plastic) clays and "lean" (less plastic due to mixture with sand, mica, and other non-plastic materials) clays was described, and its significance in terms of strength, shrinkage, and porosity was explained.

Testimony was also prepared to describe how modern clay technologists select particular types of clay for particular uses according to chemical composition and crystal structure of the minerals in the clay. Finally, counsel prepared to show how plasticity determines the extent to which clay may be molded into bricks which retain their shape and strength after being dried and fired. The contrast between the processes of drying and firing various types of clay according to their molecular structures was a foundation for testimony relating directly to the company's operations.

Geologic Factors

To show the effect of the taking on the company's business a lengthy chain of evidence was constructed. Testimony was prepared on the particular geologic factors involved in the property taken. The nature, origin, and distribution of the clay deposits on the company's land were set forth in considerable detail.

It was shown that the property in question was located on the coastal plain of Chesapeake Bay, a sedimentary formation (sand, gravel, clay, marl and diatomaceous earth) deposited on pre-existing strata of crystal-like rock. In this sedimentary layer of the coastal plain deposits of clay were exposed or near the surface in many places. Testimony from the Maryland Geological Survey and U. S. Geological Survey was prepared to show how the company's clay deposits were arranged in three distinct and continuous formations, created as a result of the cycles of deposition and uplift of the plain throughout its history. Thus the important fact was brought out that the clay deposits in question were of differing composition, color, and structure, and were neither uniformly accessible nor available for all types of ceramic use.

Expert testimony on the geology of the area and site was extremely important in the valuation of the property in question. Geologic survey data for this part of Maryland had been compiled for more than a century, and had constantly improved in its coverage and quality. Some difficulty was experienced in this case because of the initial employment of certain early geologic survey data which turned out to be misleading as to the amount of clay suitable for brickmaking that was left in the company's remaining land after taking.

Subsurface Exploration

The validity of much of the foregoing geological data depended on the methods used to acquire it. For example, samples of earth brought to the surface by borings made with an auger drill inevitably picked up loose soil from the walls of the test hole as they were pushed to the surface, and thus were to some degree contaminated before analysis. A more accurate method, the State found, was to use an open cylinder which, when driven into the earth and withdrawn, secured a sample of earth free from

any mixture with other soil. By sampling the property in question through a system of such test borings geologists employed by the condemnor were able accurately to determine the character and location of the usable clay deposits on the company's land.

Brickmaking Methods

In the valuation of alleged injury to the company's business, its manufacturing methods and plant had to be carefully analyzed. The Champion Brick Company's growth reflected the major advances made by the brick industry during the past half-century. In 1953 the company had commenced a program of replacing its old "skove" kilns with more efficient "tunnel" driers and kilns, and considerable testimony was prepared by the company to show how the plant and equipment had been selected to utilize the types of clay found on the property in question. This adaptation of plant to materials also included such matters as the types of mixers installed, the horsepower of electric motors, the number, and design and capacity of burners.

This testimony had a bearing on the transferability of the company's property and premises to other uses or to continued brickmaking with the available deposits of clay. When viewed in conjunction with the geologic data regarding clay reserves in the vicinity of the property, it provided an important part of the proof presented on the value assigned to the consequential injury claimed to have been suffered by the company.

Testing Standards and Procedures

As with the collection of geologic data, the validity of conclusions regarding the effects of various types of materials in the company's manufacturing process hinged on the accuracy of the methods used to test the differences in the types of clay. This analysis was carried on by processing a series of samples of clay from all parts of the company's property. Altogether 250 samples from forty-two borings were classified, compared, and correlated for all stages of the company's brickmaking process. In the exchange of information prior to the trial, the importance of agreement on a standard system of soil classification was revealed. After some argument, the geological experts agreed to use the AASHO classification, although the relatively narrow subclasses provided for in this system were found to be restrictive in certain cases. The danger of distortion of the test results from this cause turned out to be slight, however, since any error was on the conservative side by assuming that the material was of poorer quality than in fact it was.

The results of testing these samples formed an important part of the proof of the value of the clay reserves on the company's land, and this approach to the effect of the taking on the company's industrial operations was considered much more accurate than the usual method of relying solely on the subjective opinion of expert witnesses. Although practical considerations ruled out the possibility of testing these samples in full-size bricks, a body of objective evidence was assembled on the physical property of all types of clay on the company's property and available for future operations. With a minimum of speculation, the geologic witnesses were able to plot the location and gross volume of these usable materials for presentation to the jury.

The next step in quantity analysis required an estimate of what portion of the total amount of usable clay would be economically recoverable in the company's operations. For this analysis, the following premises were adopted: (a) grades affording gravity drainage would determine the lowest point of excavation of any individual clay deposit, and (b) the maximum economic limit of overburden removal would be at points where the thickness of unusable material exceeded two times the thickness of suitable material.

To apply these criteria extensive drainage studies were made and a series of drainage ditches were projected in locations that would afford maximum recovery of suitable clay. The engineer-geologist who made this projection and later testified at the trial consulted current technical and trade literature, and considered various economic factors such as the cost of excavation and hauling. Thus at the trial it was possible to estimate with reasonable accuracy both the volume of the reserve supply of clay suitable for brick manufacture, and the portion thereof that was economically recoverable by the company for its operations.

TRIAL TACTICS

The trial opened with a jury view of the company's tract, followed by the normal presentation of the condemnor's description of the portion taken and the valuation placed on the land by the State's appraisal witnesses. The condemnor's theory of value was that the highest, best, and most profitable use of the tract directly involved was for residential purposes, and two independent appraisals based on sales of comparable subdivision land were used by the State in its valuation. The condemnor then closed its principal case, giving notice, however, that in the event of a claim of consequential damages to the brick plant there would be rebuttal testimony on that point.

The company's first witness was its president and principal owner. He was a strong witness, having an intimate knowledge of all phases of the company's operations, having supervised the sampling and testing of the clay obtained in the pre-trial subsurface exploration, and having conceived the strategy of the claim of consequential damages. The president first described in detail the history of the plant since 1946, including unsuccessful attempts to locate other suitable clay deposits within the five-mile limit alleged to be the greatest distance that clay could be hauled for economical use of the company's plant. Condemnor filed a continuing objection to all testimony of this witness relating to the alleged unity of use of the plant and the property being condemned. The witness also described the properties of the clay on the land being taken which made it particularly suitable for the company's needs. Here again, however, objection was filed against testimony that there was a unity of use because of the "tailoring" of the manufacturing equipment and process to the specific clay found on the condemned parcel.

Regarding the after value of plant equipment, this witness testified that 300 kiln cars, valued at $150,000 prior to the taking, were reduced to junk by the taking. This was rebutted, however, on cross-examination by the condemnor's introduction of a chattel mortgage on the same kiln cars for $98,000 dated one year after the taking.

Turning to the matter of materials, the witness testified that as a result of the taking the best available deposits of clay would be denied to the company so that there would remain a "theoretical" five-year supply. The term "theoretical" was applied because it was alleged that the taking also interfered with access to the deposits on the company's remaining land. The company cited the difficulties of using a road that had newly been opened up for use instead of its previous access road (which remained undisturbed by the taking), but on cross-examination condemnor countered with engineering testimony that several other routes which were shorter and had lazier grades were available to the company's trucks.

The processes of obtaining and testing the samples of clay obtained from the geological survey of the property in question were carefully described to the jury by an engineer witness for the company. In this step, a peg model and a series of charts were used to supplement the oral testimony. This witness also tes-

tified on the extremely important matter of the rate of depletion of the available clay deposits on the company's land. Here selection of the proper use factor was vital to the testimony of both sides. The company's witnesses contended that 3 cu yd of clay was needed to make 1,000 bricks; the condemnor contended the correct factor was 2.1 cu yd. The issue was resolved by measuring a sample green brick introduced earlier in the trial and having the witness compute the use factor for the jury. This computation revealed a factor of 1.83 cu yd.

Cross-examination followed in an attempt to reconcile or explain this discrepancy relating to the use factor of the company's clay deposits, and the jury received extensive testimony regarding the density of samples caused by forcing the green clay into the brick molds, the shrinkage factor involved in drying and firing, and the rate of wastage in hauling and processing.

In cross-examination of the company's president aerial photographs correlated with topographic maps were used to verify the locations alleged to be available for future clay mining operations. With an aerial mosaic as a base map, transparent overlays were used to direct the attention of the witness and the jury to particular facets of earlier testimony such as the location of test borings.

The problem of cross-examining testimony that the company's manufacturing operations were tailored specifically to the type of clay on this site was also aided by a thorough search of technical writings on brick manufacture. The company's valuation testimony stressed the inseparable relationship of the plant and its supply, and was offered by two ceramic engineers engaged professionally in the design and construction of brick plants. This appraisal was based on replacement cost less depreciation as of the date of taking, using the premise that the plant was rendered useless for brickmaking by the taking. In cross-examination of this testimony condemnor's counsel relied chiefly on the apparently contradictory statements which one of these witnesses had made in articles appearing in ceramic trade journals. In his writings this witness had positively denied that the type of kilns being used by the company were "tailor-made" to process any specific type of clay.

Local real estate appraisers were called by the company to relate expert testimony on the value of the manufacturing plant to the value of the land itself. These witnesses adopted the unusual approach of filing a joint appraisal report instead of separate and independent appraisals. Therefore, the condemnor moved for, and was granted, a ruling to exclude one of these appraisers from the courtroom while the other was testifying. In the separate cross-examination of these witnesses counsel for the condemnor were able to disclose a $300,000 discrepancy between the two appraisers when each was questioned on the details of the appraisal.

This testimony concluded the company's case for consequential damages to its brick manufacturing process as a result of the taking. On its conclusion the court ruled that a prima facie case had been made, and that the jury should be permitted to view the plant and premises.

Following the jury view the condemnor offered rebuttal evidence. The theory of the rebuttal was that the company's plant had suffered no damage since the clay supplies still available would permit continued operations substantially as before. A ceramic expert who had exhaustively studied the geologic data and manufacturing processes involved was called to testify that operations could be carried by the company for a period ranging from approximately 20 to 80 years with the supplies available in the remaining land.

This testimony was reinforced by another engineer-geologist witness who testified specifically and in more

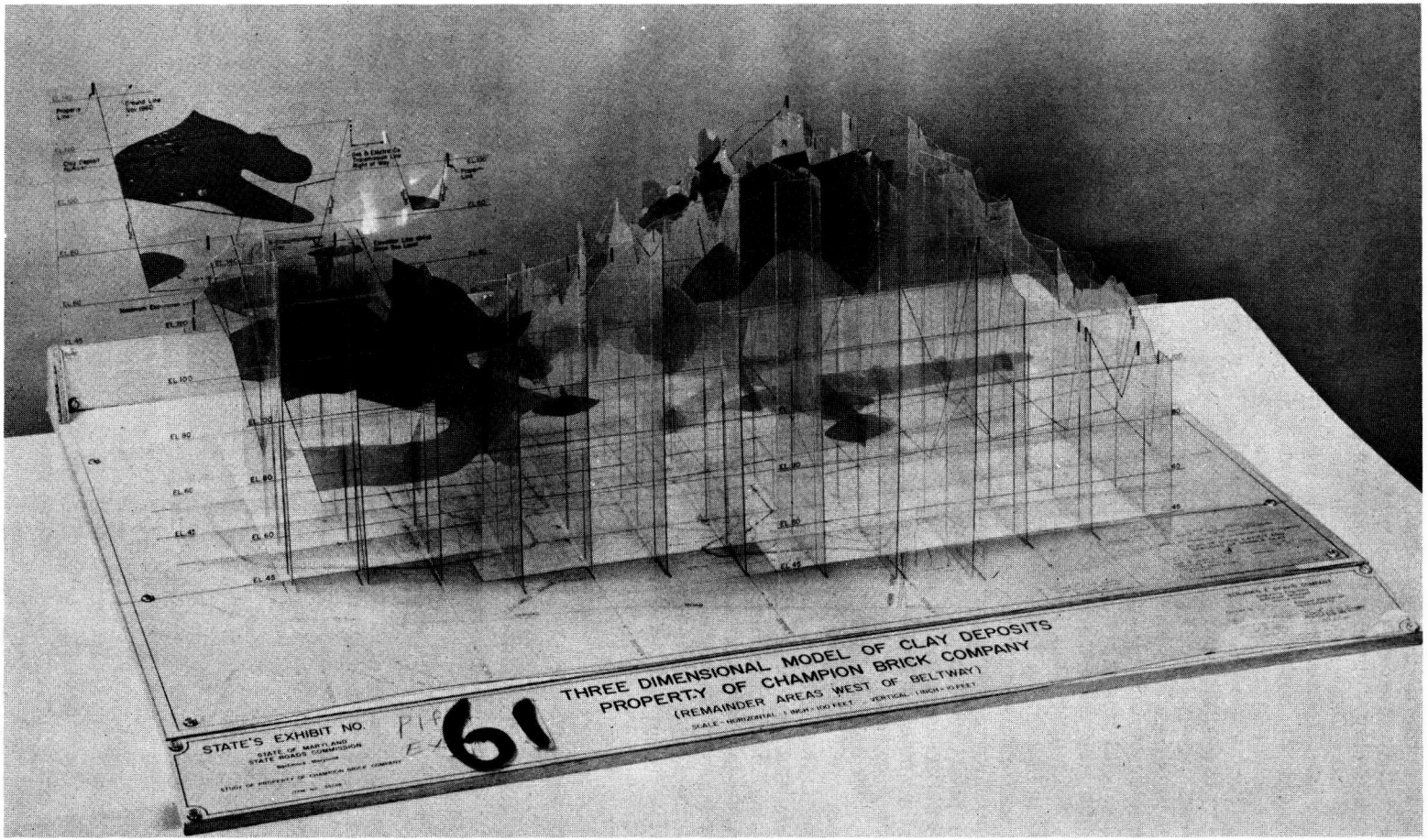

Figure 2. Three-dimensional model used as trial exhibit.

detail regarding the volume and recoverability of the clay deposits involved. To aid this testimony a three-dimensional cross-section of the site was constructed and displayed to the jury (Fig. 2). By use of clear plastic panels set on a base map of the site both the surface contours and subsurface deposits were made to appear in their proper sizes, shapes, and relationships. Color codes and symbols were used to show characteristics of the clay and special features.

From the standpoint of trial technique, comparisons between this model and the peg-board model used by the company's expert witness are of interest. The peg board purported to show the location and character of the subsurface clay deposits by an array of colored dowel sticks of differing lengths. Even when accompanied by the testimony and demonstration of an expert engineer witness this exhibit tended to be confusing to laymen on the jury. By contrast, the model constructed of plastic panels fitted together in egg-crate fashion, permitted the jury to follow the testimony regarding subsurface features with a three-dimensional view such as an X-ray of the land would have allowed.

CONCLUSION

The jury's award to the Champion Brick Case was $247,752. From the viewpoint of the condemnor, the effort spent in ten weeks of arduous trial and approximately two years of painstaking preparation of this case was well justified. If conclusions can be drawn from this case and applied generally to right-of-way condemnation work, the writer believes they may be the following. This case emphasizes the value of expertly prepared visual aids, particularly to present technical data which might otherwise be unintelligible to lay persons.

Further, the case illustrates that no condemnation situation is too complicated or technical to be entrusted to a jury, and that if a jury retires to deliberate confused by technical gobbledegook or overwhelmed by complicated scientific data, it is the fault of counsel. The presentation of the evidence is a responsibility that trial counsel alone must assume. Thus, adequate preparation with emphasis on an orderly presentation and lucid demonstration of the facts will always be the best insurance that counsel can have of a correct and fair verdict.