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**CASE PREPARATION: THE
EXPERT WITNESS' ROLE**

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**Uncovering the Hidden Resource: Ground-Water Law,
Hydrology, and Policy in the 1990s**

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CASE PREPARATION: THE EXPERT WITNESS' ROLE

I. INTRODUCTION

The presentation of complex technical evidence in a court proceeding or administrative hearing may be one of the greatest challenges faced during the careers of many ground-water professionals. The expert witness' objective is to present the technical evidence in an understandable manner with confidence and credibility. Careful preparation and coordination with the attorney before the trial or hearing is absolutely critical if this objective is to be achieved.

Most of the fundamental processes involved in case preparation are very similar to the processes employed by technical professionals involved in other, non-litigation related projects. However, the results of the technical professional's work, as well as how and why those results were obtained, will almost always be subject to greater scrutiny and challenge on projects where litigation is involved. The expert witness must be prepared for this challenge. This outline will discuss some of the factors which should receive consideration by the technical professional during case preparation.

II. THE CASE PREPARATION PROCESS

The case preparation process can be broken down into several distinct tasks. The amount of effort spent on each task will vary depending upon the complexity and magnitude of the case, but the steps should generally proceed in the following order.

A. Identify the Issues

Expert witness work is usually initiated through contact with an attorney or client needing technical assistance and support during litigation. The first thing technical professionals must do is to collect basic information about the case. Such information should include:

- (1) The type of proceeding involved. Is it a water rights adjudication or transfer, a ground-water contamination problem, a civil action regarding drainage problems, etc.?

- (2) The general technical issues in dispute.
- (3) The specific areas in which technical expertise is needed.
- (4) The parties involved in the dispute.

The potential witness should carefully consider whether he or she is qualified by education, training, and experience to testify as an expert in the technical areas identified. Keep in mind that it will ultimately be necessary to demonstrate these qualifications to a judge or hearing officer. Also consider whether any of the other parties involved in the dispute present a conflict of interest. Any potential problems should be disclosed to the attorney.

If the technical professional and attorney agree that it is appropriate to proceed, the expert should next obtain and review any additional technical information which is available and pertinent to the case. This information should be used as an aid for better understanding the issues involved, and to develop preliminary ideas about the studies which may need to be conducted in order to address these issues.

B. Develop a Strategy

The next step should be a joint effort with the attorney, expert and client all contributing to the development of a trial strategy. The expert and attorney will have to communicate as a team in the court room, and it is important to establish effective communication early in the case preparation process.

The expert should present initial opinions about the technical issues which have been identified. The attorney should provide the expert with a sufficient understanding of the legal issues involved in the case. The client should provide guidance in identifying and prioritizing the important issues. The entire group should then formulate a strategy that makes sense for the particular case, taking into consideration the legal issues and facts involved, the importance of the outcome to the client's interests, the costs of trial preparation, and the time available.

A strategic decision may be made to collect data and conduct independent technical studies to support the case which will be presented to the court. Alternatively, it may be decided to

dispute the evidence and testimony presented by the other side, or to do both. In any event, the expert should be provided with a clear understanding of the selected strategy and the objectives of the technical studies which will be conducted.

The expert should be cognizant of the fact that some of the information provided by the client and attorney as part of litigation preparation will be strictly confidential. Proper care should be taken, especially when a number of staff members will be assisting the expert in his studies, to prevent disclosure of confidential information.

C. Select a Study Methodology

It is now time for the expert to develop a specific work plan to carry out the agreed upon strategy. The importance of this step in the case preparation process should not be underestimated. In most instances, experts testifying for the other side will endeavor to find fundamental flaws in whatever methodology is chosen. The expert should give due consideration to the following factors:

- (1) What specific studies need to be conducted in order to follow through with the selected strategy?
- (2) Can the studies be accomplished through interpretation and analysis of existing or readily obtainable data? If so, would this be an appropriate study approach?
- (3) Can the studies be accomplished through application of relatively simple and well documented analytical techniques? What data are required for applying these techniques? Can the required data be obtained; or, will it have to be estimated? Would this be an appropriate study approach?
- (4) Do the studies justify the application of more complex computer modeling techniques? If so, what model will be used? What input data are required? To what extent will input data need to be estimated or assumed?

Cases involving ground-water issues are increasingly becoming a "battle of models". In many instances this may be unavoidable because the cause and effect interrelationships being examined are too complex to analyze in any other manner. However, the expert should apply sound judgment when choosing the approach to take. Basic data interpretation and/or application of straight-forward analytical techniques can be much easier to explain and defend than a complex model in a court room setting.

The expert should also try to understand the other side's perspective. Based upon this perspective, the expert should try to anticipate the criticisms which may be expected from the other side, and to formulate responses to the criticism. If appropriate responses are difficult to identify for a specific study approach, it may be an indication that an alternative approach should be selected.

The expert should involve the attorney as part of this decision making process. He should explain the advantages and disadvantages of the alternative methodologies, identify the assumptions and degrees of uncertainty involved in each alternative, and provide a basis for the recommended approach. Mutual agreement should be reached before proceeding with the studies.

D. Perform and Document the Technical Studies

When performing a technical study for the purpose of litigation support, it is necessary to carefully document each step in the study process. It will probably be necessary to completely explain and defend the procedures used in each step of the study, the sources and reliability of data relied upon, and all assumptions which are made. Each of these items should be thoroughly documented as the study proceeds. It may also be necessary to provide the other parties in the case with virtually everything in the project files (including computer files) as part of the discovery process. Many technical professionals have a habit of filing every scrap of paper in the project files, including, for example, incomplete and/or confusing handwritten notes which they may have scribbled to themselves at some time during the study. While one certainly should maintain documentation of everything which is pertinent and important to the study, care should be exercised with other information which do not meet these criteria.

It is important to keep the attorney informed about the progress of the studies and about initial results and conclusions as they are obtained. Any necessary changes in the trial strategy or study approach should be identified and agreed upon.

E. Prepare Testimony and Trial Exhibits

Upon completing the technical studies, the expert should present the study results to the attorney, and each should consider how the results fit into the overall case strategy. A trial plan should be developed which identifies the topics to be covered during the expert's testimony and the types of exhibits which will be necessary to support this testimony. Depending upon personal preference, either the attorney or the expert should develop an outline for the anticipated testimony.

Trial exhibits should be prepared for the purpose of assisting the expert to clearly present the results of the technical studies which have been performed. The expert should remember who the court room audience will be. After working on a case for many weeks or months, it is sometimes easy to forget that the judge, hearing officer, or trial jury does not have the same period of exposure to the case. The preparation of effective exhibits can be very challenging, especially when the expert must present the results of complex modeling activities. Several general concepts should be kept in mind during the preparation of technical exhibits:

- (1) Create exhibit material that is understandable to non-technical people. Avoid the use of technical jargon. If such jargon is absolutely necessary, clearly define the technical terms being used.
- (2) Try not to show too much on one exhibit. Graphs that are too busy or tables that present too much information are hard for the expert to explain and hard for the audience to follow.

- (3) Try to present concepts and results, rather than numbers. Although it is often necessary to support conclusions and opinions with appropriate numbers, the judge, hearing officer, or jury must ultimately understand the end results and conclusions.

In addition to summarizing the results of technical studies, trial exhibits can also be prepared for the purpose of assisting the expert witness in answering questions which relate to the basic details of the expert's studies. This type of exhibit may be especially useful when complex, detailed studies have been performed. An exhibit can be prepared to summarize the types and sources of basic data which have been relied upon, for example. The availability of such exhibits can make the expert's job on the witness stand much easier, since fewer details need to be committed to memory.

All exhibits should be meticulously reviewed in order to find and eliminate any careless mistakes. Special effort should also be devoted to ensure that titles, headings, and footnotes are accurate and clear. Copies of all exhibits should be submitted to the attorney for review and comment. The expert should then work closely with the attorney to combine the oral testimony and the use of exhibits into an effective presentation.

BIOGRAPHICAL SKETCH

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Bruce E. Kroeker is president of Ted Zorich & Associates, Inc., a water resources engineering firm in Lakewood, Colorado. He specializes in the development, management, and protection of water resources. He has assisted clients with projects involving the development of ground water supplies, assessment and cleanup of ground water contamination incidents, and interrelationships between ground water and surface water, including numerous projects associated with litigation and regulatory enforcement orders. His experience includes the presentation of testimony in Colorado Water Court, and in administrative hearings in Kansas and Nebraska.

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