

RECEIVED  
DIVISION OF  
PUBLIC UTILITIES

FEB 27 10 55 AM '95

October 17, 1994

Darrell S. Hanson  
Utah Division of Public Utilities  
Heber M. Wells Building  
160 East 300 South  
P. O. Box 45802  
Salt Lake City, UT 84145

RE: Guideline Letter Relating to 3-D Seismic Projects

Dear Mr. Hanson:

Wexpro has received proposals from working interest owners to participate in 3-D seismic surveys in two separate areas. Because use of seismic by Wexpro has never before been addressed and because in these instances we feel that there are field development benefits, we are seeking guidelines relating to recovery of these expenses before we actually participate.

#### Introduction

In the past several years there have been major advances in seismic technology and computer capability which created a unique synergy and enabled the new tool of 3-D seismic to become a reality. Normal (or what has now become know as 2-D seismic) seismic techniques produce one or more lines of seismic data which are somewhat similar to a slice through a section of the earth and are used to reveal the structural position of the layers of rock as well as some stratigraphic information related to where there are changes in rock characteristics along this slice of the earth. Frequently there are several of these 2-D seismic lines used together and they have often been one of the major components of petroleum exploration. In 3-D seismic a grid of data is gathered and processed together to form a cube or 3-D block of data. This cube of data then is processed to produce horizontal slices as well as vertical slices that reveal the innermost details of both the structure and stratigraphy of this cube of data. 3-D seismic was initially developed as another tool for exploration geology; however, as its use progressed it became apparent that the tremendous details revealed by 3-D seismic could be of great benefit to development geology as well. Often oil and gas fields that were considered fully developed were found to have much more potential than previously thought. 3-D seismic showed more structural detail and previously un-mapped faults as well as the details of inhomogeneities in the reservoir rocks. Additional development wells have been located resulting in new reserves that would never have been found through traditional methods.

Use of 3-D technology has been developing for several years now and has been successfully used in a variety of geologic settings. In areas familiar to us 3-D seismic has been successfully used as a development tool by UPRC on the Moxa Arch and by Enron in the Big Piney/Labarge area. They are continuing to use 3-D seismic in their development programs at what appears to be an accelerating rate.

### How 3-D Seismic Enhances Development Programs

3-D seismic has the potential of enhancing and assisting in field development, even in somewhat mature fields, by helping to find new reserves, by improving deliverability and lowering finding cost. 3-D seismic assists in finding new reserves by helping to locate reserves isolated by compartments not recognized on log data and conventional geologic interpretation. Compartments can be formed by local vertical faults, by normal faults, by small thrust faults or by local changes in reservoir character. Whatever the method of their creation, reservoir compartments mean less efficient reservoir development by traditional drilling methods and often this results in reserves which are left unrecovered or which can be found only by over development using traditional methods. 3-D seismic can aid field development by helping to select better quality reservoir drill sites or in the case of multiple reservoirs where the best combination of reservoirs occur, thus improving the deliverability and lowering finding cost.

In addition to the above benefits 3-D seismic may provide data which will allow better placement of field edge wells to protect against drainage from nearby non-unit wells and to defend against unwarranted Federal drainage demands.

### Caveats

3-D seismic has limitations and obviously will not locate isolated compartments if none exist. Although many fields previously thought to be fully developed homogenous reservoirs have been found through 3-D seismic to still have development potential, there will be some fields which, even after the application of 3-D seismic technology, will be found to still be fully developed homogenous reservoirs. There are limits to the technology and different methods of gathering the data depending on the local geology and terrain, so that under adverse conditions the 3-D seismic data could be gathered and be of poor quality and of limited usefulness. These conditions need to be considered in any 3-D seismic program.

### Current Proposals

Wexpro currently has two proposals from partners to participate in 3-D seismic programs for the purpose of enhanced field development: one in the south end of Church Buttes Field and one in Birch Creek Field. It is expected that we will see more proposals in the future. Because seismic data has traditionally been viewed as primarily an exploration tool, Wexpro has not used this tool previously although it is now widely recognized as a field development tool. Because of this Wexpro is seeking a guideline that will enable it to participate equally with its partners in these programs. If we did not participate in these programs we could find ourselves in the difficult position of having to elect to participate in a proposed well for which we would have no basis of evaluating its merits. If we turned down such a well proposal we would be potentially losing reserves and if we participated, we would be doing so blindly without knowing the true merits of the proposal. Wexpro believes it is imprudent to be in either of these positions.

### Proposed Guideline

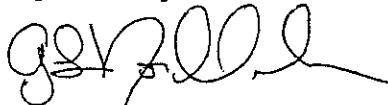
Due to industry recognition of 3-D seismic as a field development tool which has the potential of adding new reserves, improving deliverability and lowering finding costs, and due to the fact that its partners have proposed 3-D seismic programs as a development tool in existing fields, Wexpro wants to

participate in these 3-D seismic programs in order to gain the same benefits for Mountain Fuel Supply as the partners will gain from these programs. The 3-D seismic programs presently proposed are limited to the south end of Church Buttes Field and to the Birch Creek Field for a combined net cost of approximately \$1.1 million. We have reviewed the proposed methods of gathering the 3-D seismic data as well as the potential benefits to Wexpro and Mountain Fuel Supply and find that there is reasonable probability that useable and beneficial data will be gathered. Accordingly, by this letter agreement Wexpro requests approval to participate in these programs with full recovery of expenses incurred. Wexpro's participation in future 3-D seismic programs will be predicated upon pre-participation review and approval by the hydrocarbon monitor.

The current body of accounting literature treats all seismic expenditures as exploratory in nature. Under successful efforts accounting exploration expenses are expensed rather than capitalized; even though 3-D seismic has now become a recognized development tool. To date, there have been no new accounting pronouncements issued which recognizes its developmental character. Although, the current practice for many companies is to capitalize developmental seismic, Wexpro will expense rather than capitalize these costs and receive cost recovery as an operating expense under the provisions of the Wexpro agreement. Should there be more definitive accounting guidelines issued in the future then any subsequent seismic programs will be governed by the accounting pronouncements in place at that time.

Please indicate your approval of the proposed guideline in the signature boxes below. Of course, should you wish to discuss this, please let me know.

Respectfully Yours,



Gary L. Nordloh  
President and CEO, Wexpro Company

Approved:

Utah Division of Public Utilities

By: 

Date: 3-3-95

Approved:

Robert L. Magnie and Associates, Inc.

By: 

Date: 1-27-95

JRL:sjb