

From the desk of:

cc: CEH
RSL

Dick Cole

Raice -

Here is the abstract I submitted for the OTC paper. Hope it meets with your approval. The submission deadline is today, Sept 14. The conference is May 6-9, 1985.

~~Cancelled~~ Dick

PAPER TITLE INTERACTIVE COMPUTER GRAPHICS AND THE INTERPRETATION OF THREE-DIMENSIONAL SEISMIC SURVEYS

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(List names in order they should be printed in program. Provide addresses for all authors on separate sheet.)

Has presentation or publication of this material been made previously? YES NO

If yes, indicate place and date: SEG International Meeting, Atlanta, Dec. 1984

If member of a sponsoring society, please list Society of Exploration Geophysicist

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Subject Categories are listed on attached sheet. Please indicate number of subject

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DESCRIPTION: Rapid advancements in interactive computer graphics technology have made computer assisted interactive interpretation of seismic data a realizable and beneficial operation. Stand-alone microcomputer based workstations are now available at acceptable costs to afford dedicated usage by an explorationist without sacrifice of response time usually caused by competition with other processing tasks when sharing a larger host computer.

Capabilities of an interactive graphics system and procedures followed in the interactive interpretation of a portion of a 3-D seismic survey are discussed. Examples of softcopy displays are shown to illustrate the flexibility and efficiency of the system.

APPLICATION: Large volumes of geophysical data can be previewed and interpreted with increased efficiency, thoroughness and accuracy. Three-dimensional (3-D) seismic data volumes are particularly suitable for interactive interpretation although other tasks such as modeling are also facilitated. Rapid testing, data enhancement and analysis capabilities are additional benefits made possible by this technology. Combination operations provide powerful tools for assisting the explorationist in defining the geology related to the seismic data being analyzed.

RESULTS: Improvements are particularly evident in time management in that an interpreter with minimal system training working with softcopy (on the cathode ray tube screen rather than on paper) can create in a few hours maps that previously required at least a week to complete. This time improvement would be even greater except that interpreters tend to do more detailed evaluation on more data when using a quick response interactive system. Letting the computer manage and retrieve the data gives the interpreter more time to recognize geology and prepare results and presentation materials such as contour maps. This type of workstation facilitates random retrieval of sections at any orientation from the 3-D data volume, post-stack processing, horizon flattening, automatic picking of events, movable windows for correlation, scaling, zooming, isopach horizon computations, editing of color displays, generating hardcopy and many other data manipulations.

Instantaneous response facilitates continuity in interpretation thought processes. Animating or rapidly displaying parallel seismic lines permits the interpreter to recognize patterns that are not noticeable on individual sections and to see three-dimensional geologic relationships. Combining rapid response display with interactive color selection creates a powerful interpretation tool. The interpreter finds that previously unrecognized subtleties such as stratigraphic or thickness changes can be seen more readily.

SIGNIFICANCE OF SUBJECT MATTER:

With rapid color softcopy response, the final interpretation is reached more efficiently and with greater accuracy compared to using traditional interpretation methods. The final interpretation from an interactive system is a better prediction of the subsurface geology and extent of hydrocarbon reservoirs.

1985 OFFSHORE TECHNOLOGY CONFERENCE ABSTRACT SUBMISSION FORM



Deadline for Receipt — September 14, 1984

Note: All information requested on this abstract submission form must be included in order to be considered by the OTC Program Committee. Specific details regarding the nature of the work will be given priority consideration by the Program Committee.

GUIDELINES FOR AUTHORS

All Sponsoring Societies of the Offshore Technology Conference will participate in developing the technical program for the 1985 Conference. The Program Chairman for the 1985 Conference is Leroy M. Williams.

Individuals interested in submitting an abstract for consideration by the 1985 Conference Program Committee should review carefully the material included in this document. Specifically, potential authors should note that a manuscript will be required for inclusion in the Proceedings Volume for each paper accepted for the 1985 Conference Program.

The OTC Program Committee will evaluate papers solely on the basis of information supplied on this form. Authors must provide specific information on the paper proposal in each of the areas of the abstract section.

OTC provides complimentary registration **only** for presenting authors who register on special author registration cards. OTC assumes no obligation for any other expenses incurred by authors for travel, lodging, food, or other incidental expenses.

SUBMITTAL OF PAPERS

Solicitation of technical papers for the 1985 Conference will be made primarily with this Abstract Submission Form. The form contains space for the abstract that must be included for all proposed papers. This system permits the selection of papers for the program before manuscripts are written. Additional copies of this form will be supplied by the OTC Headquarters on request.

ABSTRACT: An abstract, containing 200-300 words, must be provided. Develop the abstract by addressing the major aspects of the paper as described below:

Description of the Paper: Summarize the scope and nature of the work upon which the paper will be based. Note the relative emphasis of components such as field data, laboratory data, design, analysis, field operations, research or system development. Note differences from other past or current related work being done in this area. If the paper is a review paper, carefully state the extent of the coverage.

Application: Describe the possible application of knowledge provided in this paper to a particular area of offshore resource development and recovery. If the paper is a review paper, carefully state the extent of the coverage.

Results, Observations, Conclusions: Describe results to be presented in the paper and state specific conclusions of work. Describe how these differ from results or conclusions of previous work in the same or similar subject. If the paper describes hardware, or operation of a system, or describes an event, state specific new information revealed. Also state whether or not results of field data, laboratory test data or calculated computer work will be included in the paper.

Significance of Subject Matter: Briefly state the most significant aspect of the subject matter.

Subject Categories are listed below. Please indicate by number the most appropriate Primary and Secondary Category designation on the abstract form where indicated.

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| 11. Structural Engineering, Design, and Analysis | 24. Power & Power Support Systems | 38. Safety & Fire Prevention |
| 12. Platform Construction & Installation | 25. Drilling, Production & Completion Technology | 39. Environmental Quality Considerations |
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Return Forms To: PROGRAM DEPT., OFFSHORE TECHNOLOGY CONFERENCE
P.O. Box 833868, Richardson, Texas 75083-3868 U.S.A.

EVALUATION OF ABSTRACTS BY THE 1985 PROGRAM COMMITTEE

The following criteria will be observed by the Offshore Technology Conference Program Committee in selecting papers for the 1985 Conference.

1. The paper must not have had prior extensive publication or circulation. Publication in trade periodicals or other professional and technical journals will be considered extensive publication.
2. The paper should contain new knowledge or experience in some field of offshore resource and environment.
3. The paper must be technically correct and should be of interest to a reasonable number of people working in the field of offshore resources and environment. It may be theoretical or may present the results of laboratory studies, and it may state or analyze a problem. The paper may also be a review-type paper, but must be of significant value to the technical field.
4. The paper may present information about equipment and tools to be used in offshore technology. Such papers must show the definite applications and limitations of such equipment and should avoid undue commercialism and the extensive use of trade names.
5. The abstract should have necessary clearance before submittal to OTC Headquarters. Prospective authors should provide information on any clearance problems when the abstract is submitted.

Although theoretical papers will be selected in various fields, application papers presenting solutions to problems are also desired. Program time is limited, so the Program Committee will emphasize the quality of the contribution and its value in the field of offshore technology.

A WORD ABOUT COMMERCIALISM . . .

The OTC Program Committee has a stated policy against use of commercial trade names or language that is **commercial** in tone in paper titles and text. Use of such terms will result in **careful scrutiny** by the Program Committee in evaluating abstracts, and the presence of **commercialism** in the text of papers submitted for the *Proceedings* Volume is cause for removal of the paper from the program.

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PREPARATION OF MANUSCRIPTS OF ACCEPTED PAPERS

Authors of papers selected for the 1985 OTC program will be notified by mail in late November 1984.

Authors offering papers for the program should fully understand that a manuscript will be required for each technical paper selected for the 1985 Conference. If selected, the manuscript will be printed in the *Proceedings* Volume to be sold at the Conference. The maximum desirable length for any paper is about 7,000 words.

Complete instructions on preparation of manuscripts and slides will be sent to authors of accepted papers. There are two options for preparing manuscripts:

- Option 1—**Deadline January 18, 1985.** Author provides complete manuscript and illustrations to OTC Headquarters, and the final typing and printing is done by the OTC Staff.
- Option 2—**Deadline February 15, 1985.** Author types final copy of his manuscript on special forms provided by the OTC Office, then sends typed forms and loose illustrations to OTC Headquarters. The OTC Staff completes the layout and printing of the paper.

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