

MINUTE ITEM

This Calendar Item No. 10
was approved as Minute Item
10 by the State Lands
Commission by a vote of 3
0 at its 5/24/84
meeting.

MINUTE ITEM

10.

GEOPHYSICAL SURVEY PERMIT
STUDY PROGRAM

5/24/84
W 6005
Faber

During consideration of Calendar Item 10, attached, the following people appeared and presented testimony relative to the staff recommendations on this item:

Susan LeFever, Greenpeace
Eric Hanscom, Whale Center
Greg Kirkpatrick, Fishers Protection
Institute and the Environment & Defense
Center

The following people appeared and testified in support of the staff recommendations on this item:

B. J. Kirwan, Western Oil and Gas Association
Craig Fusaro, Liaison Office, Santa Barbara
Larry Bowles, Geophysical Service, Inc.
David Bennyhoff, Arco Exploration
Carroll Hoyt, Nekton
Dr. Dilworth Chamberlain, Western Oil and
Gas Association
Doug Barman, Texaco
Mark Savit, Western Geophysical

The following people appeared but did not speak:

Leslie Bratos, Western Geophysical Co.
of America
William F. Gusey, Shell Oil Company
Harold M. Meadow, McClelland Engineers, Inc.
Donald J. Patterson, Western Oil and Gas
Association
John A. Zar, General Fishermen's Serv., Inc.
Robert Isenhower, Digicon Geophysical Corp.
Charles F. Darden, American Association of
Geophysical Contractors
Randy Ashley, Pelagos Corporation
Frank Kingery, WESTEC Services, Inc.
D. W. Richardson, Mobil Oil Corp.
Richard Purtell, ARCO Exploration Company
Carroll Hill, Richill Marine

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Bob Faber, Assistant to the Executive Officer for Energy and Mineral Resources, from the staff of the State Lands Commission, offered an additional recommendation as Resolution No. 5 of Calendar Item 10.

Upon conclusion of testimony, a motion was made by Commission-Alternate Nancy Ordway and seconded by John Jervis, to approve Calendar Item 10, amended as follows, and approved by a vote of 3-0:

THE COMMISSION:

1. ENDORSED CONTINUING BASIC SCIENTIFIC AND TECHNICAL EVALUATIONS IN THE FIELDS OF GEOPHYSICAL RESEARCH AND MARINE BIOLOGY; AND
2. AUTHORIZED STAFF TO SEEK FUNDING FROM THE APPROPRIATE SOURCES FOR THE STUDIES DESCRIBED HEREIN; AND
3. DIRECTED STAFF TO PROCEED WITH THESE PROJECTS WHEN FUNDING IS ESTABLISHED, AND
4. AUTHORIZED STAFF TO ENTER INTO A MEMORANDUM OF UNDERSTANDING WITH THE DEPARTMENT OF FISH AND GAME FOR THE PURPOSES DESCRIBED HEREIN; AND
5. DIRECTED STAFF TO REPORT BACK TO THE COMMISSION WITHIN SIX MONTHS TO GIVE A STATUS REPORT ON THE FUNDING AND DESIGN OF THE STUDIES.

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CALENDAR ITEM

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05/24/84
W 6005
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PRC 6002

GEOPHYSICAL SURVEY PERMIT STUDY PROGRAM

APPLICANT

State Lands Commission

INTRODUCTION

The gathering of geophysical information has become more efficient, technically advanced, and relatively more benign in its effects to the marine environment since its initial use offshore California in the 1940's. While the depth and clarity of geologic data that can now be gathered is greater the impacts resulting from the energy sources have substantially reduced. There can be little doubt that the use of explosives in the early 1960's was clearly detrimental to marine life in contrast with the acoustic pulse generators used today. As improvements to the geophysical technology have advanced in sophistication, so too has the scientific knowledge of effects on the marine environment. These advancements have occurred over 40 years with the bulk of scientific investigations during the last 10 years.

Geophysical research provides data necessary to locate deposits of oil and gas as well as underground hazards that must be avoided. The results of this research are used to provide greater safety to personnel and reduce adverse environmental impacts associated with offshore oil developments. However, new questions have been raised about whether or not there are short or long term effects from geophysical research itself. Currently, additional information is requested by various groups on the possible effects of acoustic pulse energy on fish and sea mammals.

Added 5/18/84

Technical Revision 8/2/84

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Primary research into the effects of geophysical exploration during the 1940's to mid-1950's focused on the effects of dynamite and underwater explosions on marine life. For example, the California Department of Fish and Game published a report in 1948 entitled, "Use and Effect of Explosives in California Coastal Waters". Beginning in the early 1970's and continuing to the present, scientific research has evaluated the effects of the new geophysical technology (compressed air) on fish and their eggs, crustaceans, and marine mammals. The Commission was instrumental in the decision of the Minerals Management Service (MMS) to include geophysical operations in the 1983 Bolt, et al. Study of the California Grey Whale and Sea Otter.

STUDIES

After meetings with the Department of Fish and Game, the fishing industry and various public groups the staff of the Commission believes that additional areas of basic research could be pursued to complement existing knowledge. Such efforts will assist in the ongoing evaluation and evolution of the Geophysical Survey Permit Program. Staff's discussions with representatives of commercial fishermen and the Department of Fish and Game have provided three specific areas for research with the next 1-2 years: (1) fish dispersal; (2) effects on juvenile forms; and (3) the update and organization of fish catch data collected by Fish and Game. A summary of each effort follows.

(1) Fish dispersal - A Fish Dispersal Steering Committee (geophysical operators, fishermen, MMS, Fish and Game, SLC, and NMFS) has been formed and suggests an initial field study to verify the reports of fish dispersal and determine the feasibility of further scientific study. The field study would involve use of a geophysical boat and its equipment as well as several commercial fishing boats.

Continued active participation in the Steering Committee and additional technical support by staff should facilitate this effort.

(2) Effects on juvenile fish - The fishing industry has requested the Commission seek funding from the Legislature to conduct additional studies on the effect of geophysical operations on the larval stages of fish. Based on a continuing literature search (see major sources listed in Appendix 6 of the Commission's Initial Study for the Geophysical Survey Permit Program), a study plan should be developed in close

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cooperation with the Department of Fish and Game and the academic community. Then it can be submitted to the Legislature for program approval and funding from appropriate sources. Staff has already received commitments of support and assistance from environmental groups, fishermen and Fish and Game in seeking this funding.

(3) Update and organization of Fish and Game catch data - The Department of Fish and Game maintains fish catch records. This data could be used to determine peak fishing areas and seasons. That information would also be useful in allowing geophysical operators to plan future surveys. In addition correlations might be made between fish harvesting and geophysical research. Staff could develop a memorandum of understanding between the Commission and Fish and Game to outline each agency's role in the above effort. It should consider interagency staff support or assignments, additional budget revisions for legislative consideration, or other appropriate means.

Staff also believes additional discussions should occur with the MMS to determine the feasibility of followup studies to the Bolt, et al. Study on Grey Whales and the Southern Sea Otter. Such efforts should involve public interest groups which could provide valuable input in the design and evaluation of studies. These groups have committed to support and assist the Commission in obtaining appropriate funding for these projects.

IT IS RECOMMENDED THAT THE COMMISSION:

1. ENDORSE CONTINUING BASIC SCIENTIFIC AND TECHNICAL EVALUATIONS IN THE FIELDS OF GEOPHYSICAL RESEARCH AND MARINE BIOLOGY;
2. AUTHORIZE STAFF TO SEEK FUNDING FROM THE APPROPRIATE SOURCES FOR THE STUDIES DESCRIBED HEREIN;
3. DIRECT STAFF TO PROCEED WITH THESE PROJECTS WHEN FUNDING IS ESTABLISHED; AND
4. AUTHORIZE STAFF TO ENTER INTO A MEMORANDUM OF UNDERSTANDING WITH THE DEPARTMENT OF FISH AND GAME FOR THE PURPOSES DESCRIBED HEREIN;

Added 5/18/84
Revised 5/24/84