

MINUTE ITEM

This Calendar Item No. 18
is approved as Minute Item
No. 18 by the State Lands
Commission by a vote of 2
to 0 at its 2/23/84
meeting.

CALENDAR ITEM

18 4

2/23/84
W 7403.3
W 6005
Livenick
PRC 6559

PROPOSED SOIL BORING PROGRAM ON STATE TIDE
AND SUBMERGED LANDS WEST OF POINT CONCEPTION,
SANTA BARBARA COUNTY

PERMITTEE: Chevron USA, Inc.
P.O. Box 8000
Concord, California 94524
Attn: Richard J. Harris

AREA, TYPE LANDS AND LOCATION:
Tide and submerged lands lying west of
Point Conception, Santa Barbara County.

PROPOSED PROJECT:
Chevron proposes to take shallow samples
of the sea floor with a rotary drill rig
from a floating vessel. The purpose of
the program is to collect geotechnical
information to aid in the design of the
pipeline system for development of the
federal Point Arguello field.

Chevron has proposed four borings to a
maximum depth of 50 feet, 1,000 to 5,000 feet
offshore in water depths of 50 to 100 feet.

Because of the shallow depth (50 feet)
and small diameter (six-inch) of the holes
which will be drilled, the volume of cuttings
will be very small, less than four cubic
feet. The composition of the cuttings is
expected to be the same as that of the
strata exposed on the ocean floor at or
near the drill site. This extremely small

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volume of locally derived sediment is not expected to have a significant impact on the environment. Although there is not a riser to recover drill cuttings, because of the shallow depth and small six-inch hole size, the volume of cuttings dispersed on the seafloor will be very small.

The drilling fluid will consist principally of seawater with small amounts of clay and barite. Laboratory tests have demonstrated these materials to be non-toxic to humans and to marine life.

Gas hazards are not expected within the range of the soil borings. The consolidated formations that the holes penetrate have been drilled through by numerous core holes in the immediate area, and gas pressures in the bottom unconsolidated sediments are not great enough to be a problem. A shallow hazard survey of the area has been conducted, and data from this survey will be used to ensure that shallow pressurized gas zones are not entered. Additionally, a contingency plan has been prepared to handle any unexpected gas entry.

Proposed operations will be conducted to avoid operations at times when the ozone levels may exceed the State one-hour standard.

The vessel used to drill the core holes is self contained and will require no support boat. The vessel used will be no larger (50 meters length, 2 meter draft) than fishing boats normally used in the Santa Barbara Channel. This vessel should not require any trips to a harbor during the project duration. Chevron will notify local fishing organizations of the time and location of the proposed activities.

Chevron has conducted a geohazard survey of the project area which has been used to identify potential cultural resources in the area.

The shallow hazard and cultural resources survey have been submitted to State Lands Commission staff for review. There are no areas which show potential cultural resources in the vicinity of the proposed pipeline and soil boring corridor.

Pursuant to the Commission delegation of authority and the State CEQA guidelines (14 Cal. Admin. Code 15025) the staff has prepared and circulated for public review a proposed negative declaration identified as EIR ND 355, State Clearinghouse No. 8122116. Based upon the Initial Study, the proposed Negative Declaration, and the comments received thereto, there is no substantial evidence the project will have a significant effect on the environment (14 Cal. Admin. Code 15074(b)).

This project is situated on State land identified as possessing significant environmental values pursuant to P.R.C. 6370, et seq. Based upon the staff's consultation with the persons nominations, this site and through the CEQA review process, it is staff's opinion that the project, as proposed, is consistent with its use classification.

AB 884: N/A.

EXHIBITS: A. Site Map.
B. Land Description.
C. Negative Declaration.

IT IS RECOMMENDED THAT THE COMMISSION:

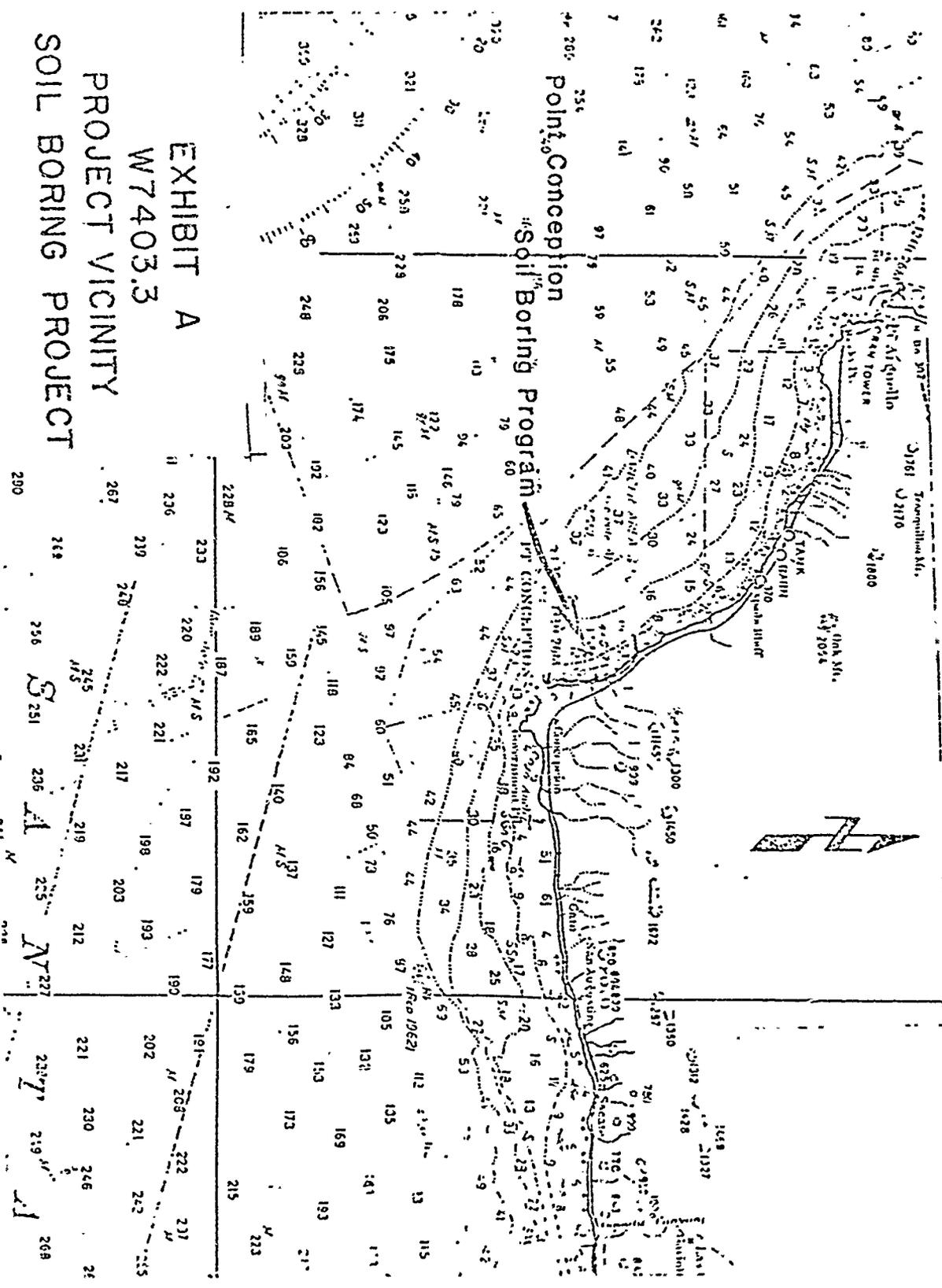
1. CERTIFY THAT NEGATIVE DECLARATION ND 355, STATE CLEARINGHOUSE NO. 8122116 HAS BEEN PREPARED FOR THE PROJECT PURSUANT TO THE PROVISIONS OF THE CEQA AND THAT THE COMMISSION HAS REVIEWED AND CONSIDERED THE INFORMATION CONTAINED THEREIN.
2. DETERMINE THAT THE PROJECT, AS PROPOSED, WILL NOT HAVE A SIGNIFICANT EFFECT ON THE ENVIRONMENT.

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3. FIND THAT THIS PROJECT, AS PROPOSED, IS CONSISTENT WITH THE USE CLASSIFICATIONS DESIGNATED FOR THE LAND PURSUANT TO P.R.C. 6370, ET SEQ.
4. AUTHORIZE THE ISSUANCE OF A GEOLOGICAL EXPLORATION PERMIT IN ACCORDANCE WITH THE SOIL BORING PROGRAM AS PROPOSED BY CHEVRON USA, INC. ON STATE-OWNED TIDE AND SUBMERGED LANDS LYING WEST OF POINT CONCEPTION.

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EXHIBIT A
 W7403.3
 PROJECT VICINITY
 SOIL BORING PROJECT



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EXHIBIT "B"

The soil boring locations will be in the tidelands north of Point Conception within a corridor the center line being 863000 (north) and between the end points of 722500 (west) and 725900 (east) - Lambert Zone 6.

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EXHIBIT "C"

EXECUTIVE OFFICE
1807 - 13th Street
Sacramento, California 95814

PROPOSED NEGATIVE DECLARATION

EIR ND 355

File Ref.: W 7403.3

SCH#: 83122116

Project Title: Soil Boring Program - Point Conception Area

Project Proponent: Chevron U.S.A.

Project Location: 2,000 to 5,000 feet offshore, west of Point Conception, Santa Barbara County

Project Description: To take four core holes by a rotary drill to a sampling depth of 50 feet; core holes will be 6 inches in diameter with a 2½ inch diameter core sample being taken; the work will be conducted by a qualified area contractor using a Marine vessel equipped with a Falling 1500 or 2000 type drill rig

Contact Person: Ted T. Fukushima

Telephone: (916)322-7813

This document is prepared pursuant to the requirements of the California Environmental Quality Act (Section 21000 et seq., Public Resources Code), the State CEQA Guidelines (Section 15000 et seq., Title 14, California Administrative Code), and the State Lands Commission regulations (Section 2901 et seq., Title 2, California Administrative Code).

Based upon the attached Initial Study, it has been found that:

the project will not have a significant effect on the environment.

mitigation measures included in the project will avoid potentially significant effects.

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INITIAL STUDY COMMENTS AND RESPONSES

1. Santa Barbara County Air Pollution Control District

COMMENT:

The District recommends that the project be given an N. D. conditioned on Chevron's notifying the APCD of starting and ending date along with emissions for the project. In addition, the APCD requests that Chevron give the APCD one week notice before operations start in order to assist the District in coordinating tidelands projects in the western channel.

RESPONSE:

Chevron has been notified of the Santa Barbara County APCD requirement for notification one week in advance of the project date and of the District requirement for project emissions.

2. California Coastal Commission

COMMENT:

The Coastal Commission staff has stated that sufficient notice must be given to fishermen and mariners and has requested that Chevron be requested to cooperate with the U. C. Extension in Santa Barbara in facilitating this notification.

RESPONSE:

The State Lands Commission requires that Chevron give Notice to Mariners through a series of procedures coordinated by Commission staff and the Liason office in Santa Barbara. Additionally, State Lands Commission staff has requested that Chevron cooperate with the Extension in order to assure that this activity is consistent with the Consistency Determination approved by California Coastal Commission for the development of the Arguello field.

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INITIAL STUDY CHECKLIST

Form 13 20 (7/80)

W 7 103.3
6005

File Ref.: SCH-83122116

I. BACKGROUND INFORMATION

A. Applicant: Chevron USA

P. O. Box 9000

Concord, CA

B. Checklist Date: 12 / 12 / 83

C. Contact Person: S. R. Livenick

Telephone: (213) 590-5215

D. Purpose: Permit to Investigate soil properties

E. Location: State-owned tide and submerged lands lying west of Pt. Conception

F. Description: Applicant intends to gather information on soil substrate by taking four 50 foot soil borings, using rotary drilling techniques.

G. Persons Contacted: Jerry Wilson
James & Moore

Pat Hughes

Chevron USA

Bob Erickson

Chevron USA

II. ENVIRONMENTAL IMPACTS. (Explain all "yes" and "maybe" answers)

A. Earth. Will the proposal result in:

- | | Yes | Maybe | No |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|--------------------------|--------------------------|
| 1. Unstable earth conditions, or changes in geologic substructures? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. Disruptions, displacements, compaction, or overcovering of the soil? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. Change in topography or ground surface relief features? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4. The destruction, covering, or modification of any unique geologic or physical features? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 5. Any increase in wind or water erosion of soils, either on or off the site? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 6. Changes in deposition or erosion of beach sands, or changes in siltation, deposition or erosion which modify the channel of a river or stream or the bed of the ocean or any bay, inlet, or estuary? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 7. Exposure of all people to property to geologic hazards such as earthquakes, landslides, ground failure, or similar hazards? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

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B. Air. Will the proposal result in:

Yes Maybe No

- 1. Substantial air emissions or deterioration of ambient air quality?
- 2. The creation of objectionable odors?
- 3. Alteration of air movement, moisture or temperature, or any change in climate, either locally or regionally?

C. Water. Will the proposal result in:

- 1. Changes in the currents, or the course or direction of water movements, in either marine or fresh waters?
- 2. Changes in absorption rates, drainage patterns, or the rate and amount of surface water runoff?
- 3. Alterations to the course or flow of flood waters?
- 4. Change in the amount of surface water in any water body?
- 5. Discharge into surface waters, or in any alteration of surface water quality, including but not limited to temperature, dissolved oxygen or turbidity?
- 6. Alteration of the direct on or rate of flow of ground waters?
- 7. Change in the quantity of ground waters, either through direct additions or withdrawals, or through interception of an aquifer by cuts or excavations?
- 8. Substantial reduction in the amount of water otherwise available for public water supplies?
- 9. Exposure of people or property to water-related hazards such as flooding or tidal waves?
- 10. Significant changes in the temperature, flow or chemical content of surface thermal springs?

D. Plant Life. Will the proposal result in:

- 1. Change in the diversity of species, or number of any species of plants (including trees, shrubs, grass, crops, and aquatic plants)?
- 2. Reduction of the numbers of any unique, rare or endangered species of plants?
- 3. Introduction of new species of plants into an area, or in a barrier to the normal replenishment of existing species?
- 4. Reduction in acreage of any agricultural crop?

E. Animal Life. Will the proposal result in:

- 1. Change in the diversity of species, or numbers of any species of animals (birds, land animals including reptiles, fish and shellfish, benthic organisms, or insects)?
- 2. Reduction of the numbers of any unique, rare or endangered species of animals?
- 3. Introduction of new species of animals into an area, or result in a barrier to the migration or movement of animals?
- 4. Deterioration to existing fish or wildlife habitat?

F. Noise. Will the proposal result in:

- 1. Increase in existing noise levels?
- 2. Exposure of people to severe noise levels?

G. Light and Glare. Will the proposal result in:

- 1. The production of new light or glare?

H. Land Use. Will the proposal result in:

- 1. A substantial alteration of the present or planned land use of an area?

I. Natural Resources. Will the proposal result in:

- 1. Increase in the rate of use of any natural resources?
- 2. Substantial depletion of any nonrenewable resources?

J. Risk of Upset. Does the proposal result in:

- 1. A risk of an explosion or the release of hazardous substances (including, but not limited to, oil, pesticides, chemicals, or radiation) in the event of an accident or upset conditions? Yes Maybe No
- 2. Possible interference with emergency response plan or an emergency evacuation plan? Yes Maybe No

K. Population. Will the proposal result in:

- 1. The alteration, distribution, density, or growth rate of the human population of the area? Yes Maybe No

L. Housing. Will the proposal result in:

- 1. Affecting existing housing, or create a demand for additional housing? Yes Maybe No

M. Transportation/Circulation. Will the proposal result in:

- 1. Generation of substantial additional vehicular movement? Yes Maybe No
- 2. Affecting existing parking facilities, or create a demand for new parking? Yes Maybe No
- 3. Substantial impact upon existing transportation systems? Yes Maybe No
- 4. Alterations to present patterns of circulation or movement of people and/or goods? Yes Maybe No
- 5. Alterations to waterborne, rail, or air traffic? Yes Maybe No
- 6. Increase in traffic hazards to motor vehicles, bicyclists, or pedestrians? Yes Maybe No

N. Public Services. Will the proposal have an effect upon, or result in a need for new or altered governmental services in any of the following areas:

- 1. Fire protection? Yes Maybe No
- 2. Police protection? Yes Maybe No
- 3. Schools? Yes Maybe No
- 4. Parks and other recreational facilities? Yes Maybe No
- 5. Maintenance of public facilities, including roads? Yes Maybe No
- 6. Other governmental services? Yes Maybe No

O. Energy. Will the proposal result in:

- 1. Use of substantial amounts of fuel or energy? Yes Maybe No
- 2. Substantial increase in demand upon existing sources of energy, or require the development of new sources? Yes Maybe No

P. Utilities. Will the proposal result in a need for new systems, or substantial alterations to the following utilities:

- 1. Power or natural gas? Yes Maybe No
- 2. Communication systems? Yes Maybe No
- 3. Water? Yes Maybe No
- 4. Sewer or septic tanks? Yes Maybe No
- 5. Storm water drainage? Yes Maybe No
- 6. Solid waste and disposal? Yes Maybe No

Q. Human Health. Will the proposal result in:

- 1. Creation of any health hazard or potential health hazard (excluding mental health)? Yes Maybe No
- 2. Exposure of people to potential health hazards? Yes Maybe No

R. Aesthetics. Will the proposal result in:

- 1. The destruction of any scenic vista or view open to the public, or will the proposal result in the creation of an aesthetically offensive site open to public view? Yes Maybe No

S. Recreation. Will the proposal result in:

- 1. An impact upon the quality or quantity of existing recreational opportunities? Yes Maybe No

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Yes Maybe No

T. Cultural Resources.

- 1. Will the proposal result in the alteration of or the destruction of a prehistoric or historic archeological site?
- 2. Will the proposal result in adverse physical or aesthetic effects to a prehistoric or historic building, structure, or object?
- 3. Does the proposal have the potential to cause a physical change which would affect unique ethnic cultural values?
- 4. Will the proposal restrict existing religious or sacred uses within the Special Impact Area?

U. Mandatory Findings of Significance.

- 1. Does the project have the potential to degrade the quality of the environment, reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?
- 2. Does the project have the potential to achieve short-term, to the disadvantage of long term, environmental goals?
- 3. Does the project have impacts which are individually limited, but cumulatively considerable?
- 4. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

III. DISCUSSION OF ENVIRONMENTAL EVALUATION (See Comments Attached)

II. A. 2. Displacement of earth: Four soil samples will be taken, displacing approximately one cubic yard at each site. Approximately 0.5 cubic yards of cuttings will be dumped at each site.

II. R. 1. A 165' long vessel will be conducting operations for approximately five days in a remote location (in waters off Point Conception). A small number of individuals can see the project area. Some may find the presence of the vessel aesthetically offensive.

IV. DETERMINATION

On the basis of this initial evaluation

- I find the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because the mitigation measures described on an attached sheet have been added to the project. A NEGATIVE DECLARATION will be prepared.
- I find the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

Date: 11/30/81

Linda Mc... For the State Lands Commission
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Form J.S. 17/11/81

File Ref.: W 7403.3
SCH# 83122116

January 9, 1984

INITIAL STUDY
PERMIT TO CONDUCT SOIL BORING PROGRAM
PT. CONCEPTION AREA

I. INTRODUCTION

Chevron USA, Inc. (Chevron) proposes to conduct a soil boring program on State-owned tide and submerged lands lying west of Point Conception in Santa Barbara County (see Exhibit A).

The purpose of the program is to collect geotechnical information in order to design a pipeline for the development of the Arguello Offshore Field, located on and adjacent to Federal leases P 0315, P 0316, and P 0450.

II. SOIL BORING PLAN

In order to properly design the pipeline required for the development of the Arguello Offshore Field, geotechnical analysis of the sea floor must be conducted. This analysis is particularly important in the shallow water depths where the pipeline will approach the shore. For the pipeline design phase, engineers must assess the continuity and integrity of the strata where a trench will be cut to protect the pipeline from nearshore wave action. The geotechnical and shallow stratigraphic information will be used to

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the required design parameters for the pipeline and trench.

Soil borings will be taken in water depths of 50 to 100 feet, 2000 to 5000 feet offshore. The borings will be 60 feet in depth, just deep enough to penetrate into the upper layers of the Sisquoc shale which, in the project area, is the uppermost resistant layer of the ocean floor.

The work will be conducted by a qualified area contractor using a Marine vessel equipped with a Failing 1500 or 2000 type drill rig. Core holes will be 6 inches in diameter with a 2 1/2 inch diameter core sample being taken. The core holes will be rotary drilled to sampling depths (50 feet BOF). Soil samples will be taken with a push-type sampler. This wireline sampler consists of several spring loaded digging claws and a shelby tube to contain the soil samples. The digging claws are activated by lowering the drill string and applying weight. The tool and soil samples are then retrieved by wireline.

Soil samples will be examined and visually classified by the onboard geologic engineer, and subsequently examined in an engineering laboratory.

For such shallow soil boring projects, no riser is used to recover drill cuttings and fluids. Each bore hole, which will be six (6) inches in diameter and 50 feet deep, will be

in approximately 0.3 cubic yards of cuttings dispersed on the sea floor. The drill fluid will consist of seawater mixed with small amounts of attapulgite clay and barite, added as conditions warrant (see Attachment B and C). Upon retrieval of the core, each bore hole will be plugged with cement.

Chevron will furnish State Lands Commission with a copy of the soil stability report when it becomes available. The location of the soil borings program is as follows:

Along a corridor, 26300 north, centerline;
722500 (west) and 725900 (east , end points;
Lambert Zone 6. A maximum total of four
cores are projected from the above
corridors.

State Lands Commission's geologic and engineering staff has examined the extensive shallow geohazard data available in the project area and has concluded that the soil boring program is proposed for an area without identifiable geologic hazard, shallow gas hazard, or cultural resource.

The program is expected to take no more than five days.

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III. ENVIRONMENTAL SETTING

The proposed project area, immediately west of Point Conception, is at the western end of the Transverse Range physiographic province. The province is characterized by east-west trending sedimentary and volcanic rocks of Jurassic to Pliocene age which were folded and faulted by regional north-south compression principally during Plio-Pleistocene time. The Coast Range province lies north of the project area. The Western Transverse Range province is defined by the east-west striking Santa Ynez Mountains. Toward the western end of the province, however, geologic structures assume more northwesterly orientations and appear to trend toward the northwest-southwest oriented structure of the Coast Range province. The western end of the Transverse Range province is therefore transitional between the typical east-west features of the Transverse Range province and the northwest-southeast trend of the Coast Range province. Exactly how these two provinces fit together geologically and what mechanisms are responsible for their formation are poorly understood at this time.

Onshore stratigraphy between Point Conception and Point Arguello is complicated. Cretaceous to Holocene age rocks are represented between Point Conception and Point Arguello; however, they are not everywhere found in a

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continuous sequence. Unconformities separate strata of widely different ages and represent missing time in the geologic record. Rocks of early Eocene, late Eocene, early Miocene and middle Miocene age unconformably overlie Cretaceous age rocks, all within several miles of each other. In addition, a large accumulation of Miocene volcanic rocks interrupts the sedimentary succession. The many unconformities in the Point Conception-Point Arguello area suggest that this region has been subjected to several cycles of uplift, deposition, and erosion while areas farther east received more or less continuous deposition from the Cretaceous to the Recent. Surficial sediments vary in thickness from less than a few feet to nearly fifty feet.

The ocean floor slopes to the southwest at less than two percent (2%) in the immediate vicinity of the proposed project. Surface and nearshore bottom water temperatures in the area between Point Arguello and Point Conception are generally lower than water temperatures off Southern California. A recent report in the area (State Lands Commission 1932) stated that the 13-year mean temperature at 10-m (33-ft) depth between the years 1950 and 1962 was between 13°C and 14°C (55.4°F and 57.2°F) for the waters between Point Arguello and Point Conception as compared to a 13-year mean 10-m (33-ft) water temperature of between 14°C and 15°C (57.2°F and 59°F) for the

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the Santa Barbara Channel,

Studies of seawater salinity reported 13-year mean salinities at 10 meter depth in the Point Conception area to be about 33.4^o/oo in January and about 33.6^o/oo in June when seawater salinities in southern California range between 33.5^o/oo and 34.5^o/oo (State Lands Commission 1982).

Nearshore waters in the Point Arguello-Point Conception region are often turbid due to the stirring up of the bottom sediments by the frequently strong wave action and due to the runoff from the many rivers and streams. Nearshore, off the open coast, waters are generally saturated with oxygen.

Recently, University of Southern California mapped nutrient concentrations in the waters between Point Arguello and Point Conception. These data are not yet available, but the area richest in nutrients is believed north of the proposed project area.

Hydrocarbon levels of the seawater in the area appear to be high; however, oil in this area is believed the result of natural oil seepage. There are seven (7) seep areas near Point Conception which are estimated to contain some 277 seeps (LBI, 1979), none in the immediate project vicinity.

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The project area is located at the northernmost boundary of the Southern California Bight, and resident biota are represented by both northern and southern species. Soft bottom substrates (cobble or rock outcrops) are found in the project vicinity but the soil boring program will not take place at or interfere with any rocky outcrop. Invertebrate, planktonic, fish and mammalian species commonly associated with these habitats are found within the project area.

Detailed shallow geohazard and cultural resource surveys of the immediate project vicinity demonstrate that no cultural resources or hazards are located there.

Vessel activity in the Point Conception area includes commercial shipping, crew and supply boats for offshore petroleum development, commercial and sport fishing, and recreational power and sail boats. Of these groups, only the fishing and recreational boats come as close to shore as the proposed projects.

IV ENVIRONMENTAL IMPACT

Environmental impacts from the soil boring program as a result of coring, discharging core hole sediments, noise and air contaminants, and general offshore marine vessel

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activity are expected to be very small and of short duration.

Approximately four (4) cubic feet of sediment and un-consolidated material may be excavated with each core hole. Depending upon ocean currents, the deposition of excavated material will be greatest within a few feet of the core hole. Slight mounds of material (less than one (1) foot high) may be temporarily built up, slightly altering seafloor topography and overcovering sediments until currents redistribute them.

Turbidity levels in the immediate area of excavation and discharge may increase slightly. Coarser grain material will settle out within a relatively short distance of excavation and discharge; finer grain materials may be suspended for somewhat greater distances. Increases above background levels of hydrocarbon and other elements may also occur depending upon the sediment composition. However, all impacts to water quality are expected to be local and of short duration.

Impacts to existing biota are expected to be very small. The habitats to be impacted will be those few substrates immediately surrounding core holes. In these areas invertebrate and planktonic communities will be affected but the overall effect upon area

ecology will be

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negligible.

Ambient noise levels in close proximity to the vessel will increase as a result of drilling. However, since drilling will occur several miles from onshore receptors, onshore receptors will not be impacted to any noticeable extent.

The drilling vessel will release small amounts of air pollutants into the atmosphere, primarily oxides of nitrogen and some reactive hydrocarbons. Impacts to the area's overall air quality is expected to be negligible. The project does not require a permit from the Santa Barbara County Air Pollution Control District.

Impacts to navigation and traffic in the Point Conception Area are expected to be negligible. Adequate safeguards currently exist to notify marine traffic in the area of drilling activity.

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ATTACHMENT "A"

CONTINGENCY PLAN FOR SHALLOW GAS

In order to be thoroughly prepared to handle potential problems associated with shallow gas, outline below is a contingency plan that will be incorporated into the

offshore coring program.

1. Drilling fluid will consist of a weighted mud system of a non-toxic nature (see Attachment #B). Additionally, 80 pcf mud will be readily available in sufficient storage tanks onsite.
2. Cement, with all necessary associated equipment for mixing and pumping, will be on hand and will be utilized if deemed necessary.

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3. Experienced drilling personnel will be on board the coring vessel at all times. Their responsibilities will include direct supervision and enforcement of sound drilling practices.

4. A pre-spud meeting will be held prior to coring. The purpose of the meeting will be to inform all coring personnel of the potential gas problem and prepare them for possible contingencies. Information will include preventive measures that will be incorporated into the coring program, as well as insuring that every individual understands his specific

duties and stations in an emergency.

By adhering to this contingency plan, the potential of shallow gas should pose no threat to the soil coring project.

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SAFETY AND ENVIRONMENTAL TECHNICAL BULLETIN

Date Issued 9/17/75

Attachment 1

ISSUED BY THE SAFETY AND ENVIRONMENTAL CONTROL DEPARTMENT

TOXICITY DATA

A BIOASSAY - MAGCOGEL A DRILLING FLUID ADDITIVE

INTRODUCTION

Magcogel is a naturally occurring ore consisting of a sodium montmorillonite, colloidal clay commonly known as bentonite. It is water insoluble, however, it is a hydrophilic clay. It is used as an additive to develop controlled viscosity, gel strengths, and filtration rates of water base drilling fluids. It may be dehydrated in freshwater for use as a viscosifying and fluid loss control agent in certain brine systems.

- It is considered to be non-toxic to man as it can be used as a bulk laxative and a base for preparations which may be used on the skin. The toxic effects of bentonite on aquatic life (both marine and freshwater species) are of great importance and the following tests were conducted to determine the acute fish toxicity of Magcogel.

PROCEDURE

- Fish kill studies applying the Acute Fish Toxicity Test of the American Public Health Association were conducted by an independent testing laboratory.

TEST RESULTS AND CONCLUSIONS

Test results are listed as TLM (Median Tolerance Limit) which represents the concentrations of the material tested that causes fatalities in 50% of the test organisms (*Mollisnias latipinna*-Saltfin Molly) for a specified period of time.

Magcogel is normally used in concentrations of 5 - 35 pounds/barrel which corresponds approximately to 570 - 40,000 ppm. This product is a fine particle-sized, high yield clay that wets fairly readily and disperses well in a seawater media. It forms an extremely viscous gel at high concentrations which increases with time in a freshwater media, and it virtually restricts any mobility of the test organisms.

FRESHWATER

24 - 96 hour TLM = 14,500 ppm

SEAWATER

24 - 96 hour TLM = > 100,000 ppm

Any higher concentrations would exceed the practical limits of the test method.

- Due to the formation of an extremely viscous gel in freshwater, a loss of viability in the test organisms occurred, and thus exceeded the standard to mechanical blockage of gill function.

ATTACHMENT B

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SAFETY AND ENVIRONMENTAL TECHNICAL BULLETIN

NO. 10 — 1
Date Issued 9/17/76

ISSUED BY THE SAFETY AND ENVIRONMENTAL CONTROL DEPARTMENT

TOXICITY DATA

A BIOASSAY — MAGCOBAR A DRILLING FLUID ADDITIVE

INTRODUCTION

Magobar is a water insoluble, naturally occurring ore consisting of barium sulfate and commonly known as barite. It is chemically non-abrasive weighting material that will not react with the various other mud additive contaminants encountered in a drilling fluid. It is a drilling fluid weighting material used to increase the density of oil drilling fluids up to 22 lbs/gal.

It is considered non-toxic to man as it is used as a contrast medium in roentgenography of the upper and lower digestive tract. The toxic effects of barite on aquatic life (both marine and freshwater) are of great importance, and the following tests were conducted to determine the acute fish toxicity of Magobar.

PROCEDURE

Fish kill studies using the Acute Fish Toxicity Test of the American Public Health Association were conducted using a current production sample of Magobar. All tests were conducted by an independent testing laboratory.

TEST RESULTS AND CONCLUSIONS

Test results are listed as TLM (Median Tolerance Limit) which represents the concentration of the material tested that causes fatalities in 50% of the test organisms (*Mollisnisis latipinna*-Saltin Molly) for a specified period of time.

Magobar is normally used in concentrations of 0 — 700 pounds/barrel which corresponds to approximately 0 — 49,000 ppm.

This product is a very fine particle-size mineral powder that wets readily and disperses easily. However, due to its high bulk density, Magobar will not remain dispersed at the extremely high concentrations tested. Being water insoluble and chemically inert, contact with aquatic life would have no detrimental effects.

FRESHWATER

SEAWATER

• 24 — 96 hour TLM = > 100,000 ppm • 24 — 96 hour TLM = > 100,000 ppm

• No fatalities occurred at 100,000 ppm. This concentration was considered to exceed the practical limits of the test.

ATTACHMENT C

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ATTACHMENT "D"

1. State Lands Commission Draft Programmatic EIR Leasing, Exploration and Development of Oil and Gas Resources on State Tide and Submerged Lands-Point Concepcion to Point Arguello, Santa Barbara County, California, April, 1982.
2. Chevron U.S.A., Inc. Point Arguello Field Environmental Report, December, 1982.
3. State Lands Commission, Draft EIR-Resumption of Exploratory Operations by Union Oil Company of California, Lease PRC 2879.1, Point Concepcion November, 1979.
4. Dames and Moore, Geohazard and Cultural Resource Investigation, Marine Pipeline Route, Platform

Herrera Site to Government Point Area, Offshore
Santa Barbara County, California. December, 1982.

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