



California Coastal Commission  
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Date Received: 3-12-83  
Item Number: 11c.  
Hearing Date: 4/15/83  
Analyst: EJL-C



NOTED - CLIFTON

CONSISTENCY CERTIFICATION AND STAFF RECOMMENDATION

Consistency Certification No. CC-3-83

3 and 6 Month Periods End: 4-12-83/7-12/83

APPLICANT FOR FEDERAL PERMITS:

Arco Oil and Gas Company

FEDERAL PERMIT FOR WHICH COMMISSION CONCURRENCE WITH APPLICANT'S CONSISTENCY CERTIFICATION IS REQUIRED:

Minerals Management Service Exploratory Well Drilling Permit; OCS Exploration Plan

ACTIVITY LOCATION:

On the Outer Continental Shelf on OCS Parcel 0444, approximately 3 miles west of Point Arguello, in the Santa Maria Basin.

ACTIVITY DESCRIPTION:

Drilling up to 6 wells to explore for oil and gas from the Diamond M General, a floating semisubmersible drilling vessel. (Exhibits 1 and 2)

PUBLIC HEARING AND VOTE:

Public hearing and possible action at the Commission's April 13-15, 1983 meeting in San Francisco.

STAFF NOTE: CONSISTENCY

Under regulations which implement the Federal Coastal Zone Management Act, the Minerals Management Service cannot grant a permit for any activity described in an Outer Continental Shelf (OCS) Plan of Exploration until the Coastal Commission concurs with a certification by the oil company applicant that the activity is consistent with the California Coastal Management Program (CCMP) or determines that the activity has no effect on the coastal zone.

Applicant's Consistency Certification and Findings. The applicant has submitted a consistency certification for up to six wells on OCS P-0444, stating that the proposed activities described in detail in the Plan of Exploration will be conducted in a manner consistent with California's Coastal Management Program.

Vessel Traffic Safety. At the meeting on March 25, 1983, the Commission raised the issue of vessel traffic lanes through the Santa Maria Basin. Questions were asked regarding the number of vessels transiting the area and the history behind establishing the lanes. These issues will be addressed at the time of the hearing.

April 1, 1983

I. Concurrence

The Commission hereby concurs with the consistency certification made by Union for OCS P-0444 as consistent with the policies and objectives of the California Coastal Act, as codified in the California Coastal Management Program.

II. Findings and Declarations

The Commission finds and declares as follows:

A. Project Description. Arco Oil and Gas Company proposes to drill up to six wells on OCS P-0444 in the Santa Maria Basin, about 3 miles west of Point Arguello (Exhibit 1 and 2). The Environmental Report submitted with the OCS plan states that onshore support, including boat and helicopter transportation of crew and supplies, would be based at Port Hueneme, Ellwood Pier, and Santa Maria or Goleta airports. The wells would be drilled in water depths of 205 to 269 feet deep to well depths of 9,500 to 13,000 feet. Total drilling time at each drill site is estimated from 85 to 113 days depending on the depth of the wells.

B. Protection of Marine Resources. Section 30230 of the Coastal Act requires protection of the marine environment:

Marine resources shall be maintained, enhanced, and, where feasible, restored. Special protection shall be given to areas and species of special biological or economic significance. Use of the marine environment shall be carried out in a manner that will sustain the biological productivity of coastal waters and that will maintain healthy populations of all species of marine organisms adequate for long term commercial, recreational, scientific and educational purposes.

Arco's leases P-0444, are located within the Santa Maria Basin in the vicinity of Point Arguello, a haul-out and breeding area for California sea lions and harbor seals. Also, several species of seabirds feed and rest in this area and the rocky intertidal areas close to shore. Point Conception, 15 miles to the southeast, is a rich intertidal area with extensive kelp beds. The Department of Fish and Game (DFG) Sea Otter Game Refuge, located in the northern part of the Santa Maria Basin, is 33 miles from the tract 0444, although sightings of sea otters have been made as far south as Purisima Point and even Point Arguello. However, the range and main habitat of the sea otter is still mainly on the northern portion of the Basin. Because the drill sites are a considerable distance from these habitat areas and the proposal is a temporary use, drilling of these wells will pose no significant impact on these animal species.

Sediments within the lease area are reported as being sandy silt and clay. While these types of substrates often do not support the diversity or numbers of organisms as rocky substrates, these soft bottom areas are still important biologically. Mud or sandy substrates can be important spawning or feeding areas for harvestable fish and invertebrates.

The Commission has received comments about the effects of blasting the well heads during well abandonment on the immediate and surrounding environment. The public has charged that this activity kills marine animals who are near the blasting site. To more fully assess this issue, the applicant will allow observers from DFG and the Commission on the drilling vessel during blasting of the well heads.



The entire length of the California coast is a part of the migratory route of the California gray whale and other species of whales and dolphins. Therefore some of these animals pass in the general vicinity of the lease. In the event of an oil spill, there could be an impact on the endangered whales. Under normal operating procedures, however, exploratory drilling probably causes the whales to detour around the drill rigs during the migration months (November through May). The DFG has commented that the existing number of drill rigs probably do not pose a significant hazard or impact to the animals as they are able to detect and avoid the anchor chains and rigs. Although this information is the best available, it is based on limited observations, and additional information and data may change this opinion. In the event of an oil spill, however, there could be an adverse impact on the marine mammals.

In summary, based on the limited information available, exploratory drilling on OCS P-0444 may cause some short-term disturbance to marine resources. In addition, because even the best available spill containment and cleanup equipment does not offer adequate protection to these animals if an oil spill occurs, (See Section C) the Commission cannot find that the proposal is consistent with with Section 30230. But analysis in Section I does find the project consistent with Section 30260.

C. Protection Against the Spillage of Crude Oil. Regardless of the precautions taken against well blowouts and resulting spills of crude oil in the open ocean, there is always a risk of this occurring at a drill site. Such a spill may reach the coast of California and damage marine life, scenic areas, and recreational areas. Because of this risk, the proposed drilling operations must be consistent with Section 30232 of the Coastal Act, incorporated in Chapter 3 of the Coastal Management Program, which states:

Protection against the spillage of crude oil, gas petroleum products, or hazardous substances shall be provided in relation to any development or transportation of such materials. Effective containment and cleanup facilities and procedures shall be provided for accidental spills that do occur.

Arco has provided onsite equipment and personnel training, and works with oil spill cooperatives, which have dedicated oil spill response vessels (See Appendix A). The Minerals Management Service (MMS) and the applicant have made the following agreement for inspections of the equipment:

The State Agency Coordinator for Oil Spill Contingency Planning (DFG) or the designated representative may accompany MMS on unscheduled inspection or deployment exercises of the oil spill containment and recovery equipment. All unscheduled inspections or deployments will be arranged by representatives of the MMS in cooperation with the State of California in conjunction with the Service's inspection program. The purpose of the inspection or deployment will be to verify the existence of the oil spill equipment and to ensure that the equipment can be deployed in an organized and timely manner. Each company applicant has agreed to allow stated personnel on board the drilling vessel to observe the inspection or deployment exercises. The Minerals Management Service has agreed to call these inspections or drills on a surprise basis.



Protection of Coastal Wetlands and Streams. The County of Santa Barbara has expressed specific concerns about the protection of the Santa Maria and Santa Ynez Rivers and the San Antonio and Jalama Creeks if an oil spill threatens these areas. This concern is based on the limited amount of time that oil spill containment and cleanup equipment will function in the waters north of Point Conception, increasing the possibility of these streams becoming contaminated. The County has recommended that Clean Seas be required to locate oil spill booms at the mouths of these waterways to improve the response time to them.

The Commission agrees that provisions must be available for the protection of these streams if they are threatened. However, a high percentage of the time these rivers and creeks may not be open to the ocean. Much of the time they are open the water is flowing toward the ocean, reducing the likelihood of oil contamination. Under conditions when they are threatened, Clean Seas can have equipment and personnel to the area within 3 to 4 hours. Clean Seas has two fast response units designed specifically for this purpose. They include:

- 1) a 15-foot trailer equipped with small containment boom, a skimmer, a storage bag, absorbents, rakes and shovels; and
- 2) a 2.5-ton truck equipped with a larger boom, skimmer, and associated tools.

Other strategies may be necessary to protect these waterways. In many cases the incoming current in the rivers or streams would exceed the capability of the oil containment booms to function. In these situations the stream mouth may have to be closed using heavy earthmoving equipment. This would eliminate additional contamination, and would provide a quiet water situation behind the closure to help recover any oil that has gotten into the stream.

To best determine the most effective means of protecting these streams, the Commission directs the staff to visit them during the rainy season when the streams open to the sea. The streams were visited in January 1983 by staff who found they were indeed open at high tide and determined that oil spill response drills should help test the response capability of Clean Seas' personnel and equipment. The applicant agrees in writing to such a drill arranged by the Commission. The Commission staff will contact Clean Seas directly to initiate the drill. The drill will require transport of the "fast response units" maintained by Clean Seas, and a bulldozer and personnel to operate the equipment. Industry workers and their contractors will deploy the oil spill containment booms and skimmers brought to the site. Bulldozers will be brought to the site, but will not be required to close the entrance of the streams to avoid unnecessary habitat damage. The objective will be to test the 3 to 4 hour response times quoted by the oil spill cooperative Clean Seas to determine if the equipment can be deployed properly.

After the drill, staff will recommend to the Commission whether additional equipment is required and if future drills should be called at the other wetland/mudflat and lagoon areas.

The Commission's standard of review is based on the maximum feasible capability to reduce the impacts of a spill, if one occurs. Section 30232 of the Coastal Act requires that effective oil spill containment and cleanup be provided for spills. The Commission cannot find that the Plan of Exploration consistent with this policy due to the limited capability of state-of-the-art oil spill equipment. However, Section 30260 of the Coastal Act provides that coastal-dependent industrial facilities can be sited if the adverse impacts are mitigated to the maximum extent feasible.

The Commission finds that the oil spill equipment response drills at the stream sites and the oil containment and cleanup equipment, and measures for response, as provided in the proposed Plan of Exploration and Consistency Certification made by Arco provide maximum feasible mitigation and are consistent with Section 30260 of the Coastal Act. Concurrence by the Commission is not an indication of satisfaction with the degree of protection afforded coastal resources by the oil spill containment and cleanup equipment provided. The Commission staff's forthcoming oil spill response capability study may indicate the need to update and increase standards for onsite and cooperative oil spill cleanup and containment capabilities. Such findings will be used in future consistency certifications and permit reviews.

D. Commercial Fishing. The Coastal Act requires maintenance of the productivity of the marine environment in Section 30230, quoted in Section B, and in Section 30231, below:

The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained, and where feasible, restored through, among other means, minimizing adverse effects of waste water discharges and entrainment . . .

The proposed wells are within the Department of Fish and Game designated Fish Blocks 644. The principal commercial fishery, within the depth of the proposed, wells, is California halibut, although some effort is expended for rockfish and other shallow-water flatfish species such as English sole, according to the Department. Block 644 accounted for 5-10% of the total trawl effort expended by trawlers from Morro Bay and Avila for rockfish and flatfish. To date, the Commission has not received comments from commercial fishermen or Arco indicating that the wells will interfere with commercial fishing operations. Therefore, absent any information on conflicts with commercial fishing operations, the Commission finds the proposed consistent with Sections 30230 and 30231 of the Coastal Act.

E. Geologic Hazards. Section 30253(1) of the Coastal Act states that new development shall minimize risks to life and property in areas of high geologic . . . hazard". The Environmental Report identifies geologic anomalies such as near-surface gasified sediments, faults and an apparent buried channel. Three of the six wells sites were selected so that the well bores would penetrate desired geological targets, and at the same time, not intersect any of the detected anomalies. The other three wells would be drilled in areas with recognized but manageable risks, according to the Report. The Division of Mines and Geology (DMG) routinely reviews OCS Plans of Exploration to determine whether the proposed drilling program can be safely conducted in view of the geologic conditions of the lease and well site. DMG finds the discussion of and recommendations for geologic and seismic hazards in the Environmental Report and Exploration Plan adequate for the proposed wells locations. Therefore, the Commission finds the project meets the requirements of Section 30253(1).

F. Air Quality. Section 30253(3) of the Coastal Act states that new development "shall be consistent with requirements imposed by an air pollution control district or the State Air Resources Control Board as to each particular development."

The Air Resources Board states that data on meteorology and pollutant transport in the Santa Maria Basin are not as complete as for the Santa Barbara Channel but that emissions from OCS drilling activities will have a significant adverse effect on onshore air quality. The ARB has recommended that the Commission require an oil company applicant to implement nitrogen oxides (NOx) control measures identified as

"interim" in the Air Quality Task Force, once implementation is approved by the American Bureau of Shipping (ABS); that the applicant install devices on the drilling vessel to gather data on fuel consumption, and hence NOx emissions, from drilling activities; and that, the applicant collect data on wind speed, direction and temperature.

The applicant has agreed to implement interim NOx control measures once ABS approval is obtained, to provide fuel consumption data to estimate NOx emissions and wind data if the drilling vessel is so equipped. This information will be used by ARB to ensure accuracy of the NOx emission data it is currently using.

The Commission finds that the proposal is consistent with Section 30253 (3) and the CCMP because the applicant has agreed to implement the interim NOx control measures as soon as ABS approval is obtained and to collect data necessary to improve NOx emission and pollutant transport information. The Commission, however, is concerned that investigations continue on pollutant reduction measures, and that long-term measures be developed that will reduce NOx and other pollutant emissions and cumulative impacts to a greater degree than interim measures.

G. Onshore Support Facilities/Cumulative Impacts. Section 30250 of the Coastal Act states that new industrial development "shall be located within, contiguous with, or in close proximity to, existing developed areas able to accommodate it or, where such areas are not able to accommodate it, in other areas with adequate public services and where it will not have significant adverse effects, either individually or cumulatively, on coastal resources."

Arco has stated in its Environmental Report that it is proposing to use Port Hueneme, Ellwood Pier, Port Hueneme and Santa Maria or Goleta airports for all its support activities--all crewboat, supply boat and helicopter trips to service the drillship crews will originate from and return to these areas. Although these drilling proposals will not affect onshore use in the Santa Maria Basin area, the increases in drilling in this basin may lead to the need for an additional service base to serve the Basin and the western Santa Barbara Channel. The staff is currently working with the counties of Santa Barbara and San Luis Obispo and the oil industry to study alternate sites for additional service and crew bases if needed.

The proposed exploratory activity would occur north of Point Conception, a region where OCS operations have increased steadily over the past one to two years. The Commission is extremely concerned about the overall cumulative effects on the environment and the coastal economy of California, particularly San Luis Obispo and Santa Barbara Counties, offshore of which most of the exploratory drilling is occurring. The Department of Fish and Game and Get Oil Out, Inc. have expressed similar concerns about increased industrial development on the OCS. Conflicts include commercial fishing operations, increases in vessel support traffic, air pollutant emissions, drill muds discharges, and risk of oil spills. The combination of those impacts could become unacceptable if the present level of drilling significantly increases. The exact number of drilling rigs that can operate in an area is a subject the Commission staff is now addressing. Until this number can be determined, the Commission finds that because the proposal would not increase the number of drill rigs currently offshore California, the project is consistent with Section 30250.



H. Vessel Traffic Safety. The principal Coastal Act policies applicable to vessel traffic safety are Sections 30260 and 30262, which apply specifically to coastal-dependent industrial development such as the proposed exploratory drilling project. Under 30260 and 30262 the project must first be tested under all applicable Chapter 3 policies. If the proposal does not meet these policies the project is analyzed under Section 30260, quoted and discussed below.

Because of the risks of ramming or collision and the consequent risk of oil spills and hazards to coastwise vessel traffic, the Commission finds the location of drilling vessels on the OCS affects the use of land and water in the coastal zone. Therefore, the Commission considers effects on navigation in each drilling proposal reviewed for consistency with the CCMP.

The proposed drilling is located in the Santa Maria Basin, north of the existing Vessel Traffic Separation Scheme in the Channel. Because no traffic lanes are designated in the Santa Maria Basin, substantial navigation does occur along the coast and weather is often foggy or stormy several months of the year, the presence of temporary structures could represent a hazard to navigation and risks of oil spills. The Commission finds therefore that the proposed activities do not meet the Chapter 3 policies of the Coastal Act and must be analyzed under Section 30260. The Commission notes that the drilling unit, the Diamond M General, is equipped with operating an automatic radar plotting aid which constitute mitigation of the hazards posed by the project, as discussed in Section I. If another drilling rig is used, the applicant agrees to install and operate such a device.

I. Industrial Development. Coastal-dependent industrial development such as offshore oil drilling must first be tested under all applicable policies in Chapter 3. If the proposal does not meet these policies, development is analyzed under the less stringent requirements of Section 30260. The proposed development does not meet Sections 30230 or 30232 of the Coastal Act. Therefore, the three tests of Section 30260 apply:

Coastal-dependent industrial facilities shall be encouraged to locate or expand within existing sites and shall be permitted reasonable long-term growth where consistent with this division. However, where new or expanded coastal-dependent industrial facilities cannot feasibly be accommodated consistent with other policies of this division, they may nonetheless be permitted in accordance with this section and Sections 30261 and 30262 if (1) alternative locations are infeasible or more environmentally damaging; (2) to do otherwise would adversely affect the public welfare; and (3) adverse environmental effects are mitigated to the maximum extent feasible.

The first requirement of Section 30260 is that the applicant must demonstrate that alternative locations for the project are either infeasible or more environmentally damaging. Arco could directionally drill from other points on these leases to reach the same targets. These other locations would be more environmentally damaging because of the extended time and risk that would be involved in directional drilling. The Commission finds, therefore, that the project meets the requirements of the first test.

The second requirement concerns the public welfare. It is in the interest of the public welfare to search for domestic sources of oil and gas and to encourage and protect public recreation, historic, cultural, aesthetic, and conservation values and food production. Objection to this project would prevent exploration and potential development of oil and gas resources on these lease tracts which could adversely affect

one aspect of the public welfare and national interest. However, the other aspect listed above would not be adversely affected by an objection to this proposal. The proposal therefore meets the second test.

Arco's agreement to use an automatic radar plotting aid, the best available oil spill control and containment equipment, and to participate in an onshore oil spill equipment deployment drill if one is found necessary by the Commission fulfills the requirement of the third test that adverse environmental effects be mitigated to the maximum extent feasible. It should be noted, however, that the Commission will continue to examine the issue of oil spill equipment and may require additional protection in the development stage. The Commission therefore finds that the proposed wells meet the three requirements of Section 30260 and are consistent with the CCMP.

NPDES. Up to five well locations will be drilled within 1000 meters of State waters (Exhibit 2), allowing the Commission to review the NPDES permit and the discharge of drilling fluids and cuttings. The proposed wells will be located approximately three miles from Point Arguello and the associated rocky intertidal areas. Based on existing biological information the wells will not be within 1000 meters of any environmentally sensitive habitat areas which could be harmed by disposal of the muds and cuttings. Further studies of potential impacts on the marine environment are being conducted in State waters.

The Regional Water Quality Control Board in the Central Region has issued waste discharge orders for the ocean disposal of water based muds and cuttings from three exploratory wells in State waters with the provision that the affected companies conduct detailed research level monitoring studies to determine specific effects, if any, of the muds and cuttings on different types of ocean substrates. Although the Board's decisions were appealed and a decision from the State Board is not expected until late spring, the studies are underway.

The NPDES permit issued for the subject wells requires less detailed monitoring data. Because a specific, detailed monitoring program would be quite expensive, \$250,000 to \$500,000 per well, and specific wells within a soft substrate have been selected by the Regional Board to be monitored, detailed monitoring of Arco's wells would result in a duplication of effort. The Commission finds that the NPDES permit for the wells within 1000 meters of the coastal zone is consistent with the Coastal Management Program because studies will be conducted to analyze the effects of drill muds on the marine environment, the required monitoring data from the subject wells can contribute to the data base of the detailed studies and the proposed wells should not be near sensitive habitat areas. The Commission further finds that the information on the effects of discharging drill fluids and cuttings is limited and that the studies being conducted by the Regional Water Quality Control Board and the Commission's own review of the effects of these discharges may result in future reviews of NPDES discharge permits.

APPENDIX A

Onsite Equipment (First Line of Defense). Oil spill containment and cleanup equipment stored on an exploratory drilling vessel or on a production platform is primarily designed to provide a first line of defense for a major spill or to contain and clean up small spills that may occur. This equipment must be able to surround the largest areas possible within an acceptable period of time. If the equipment is too large and difficult to handle, then its purpose is defeated. The following list includes the equipment which the Commission has established as minimum requirements for Plan of Exploration consistency certifications in the past. The applicant has committed in its plan to include this equipment onboard the drilling vessel:

- 1) 1,500 feet of open ocean oil spill containment boom;
- 2) one oil skimming device capable of open ocean use;
- 3) bales of oil sorbent material capable of containing 15 barrels of oil;
- 4) a boat capable of deploying the oil spill boom on the site at all times or within fifteen minutes of the drilling vessel; and
- 5) oil storage capacity of 29 barrels, minimum, for recovered oil.

Oil Spill Cooperatives (Major spills, second line of defense). Removal of spilled oil in coastal or marine waters is undertaken by the party responsible for the spill, under the supervision and, if necessary, the direction of the U.S. Coast Guard. Because of this requirement, oil production companies operating in the Outer Continental Shelf belong to oil spill cooperatives which have oil spill cleanup equipment designed for open ocean use. The oil spill cooperative used for the Santa Barbara Channel and the Santa Maria Basin in Clean Seas.

Dedicated Oil Spill Response Vessels. Clean Seas currently has a 136-foot oil spill response vessel stationed in Santa Barbara harbor. The vessel, Mr. Clean, is outfitted with equipment which is designed for response to oil spills in the open ocean. Clean Seas is continuing to investigate state-of-the-art equipment additions to the vessel, and the Commission staff is currently working on potential improvements through the Oil Spill Response Capability study. This vessel will provide the initial response from Clean Seas to oil spills in the Santa Barbara Channel from Point Conception to Point Dume, and beyond the Channel Islands.

Clean Seas has recently acquired a second oil spill response vessel which will be fully equipped with oil spill containment and recovery equipment. This vessel, Mr. Clean II, is located in Port San Luis to provide the initial response to oil spills north of Point Conception.

Personnel Training. An adequate oil spill response training program must recognize the different roles necessary to provide an acceptable response to an oil spill. In general, the program can be broken down to two categories: 1) training for supervisory personnel; and 2) training for workers charged with actually putting equipment into the water. This training can be done by an individual oil company, or through the local oil spill cooperative depending on the level of the training.




Supervisory Training. The Clean Seas oil spill cooperative conducted a two-day training program for supervisory or management personnel operating in the Santa Maria Basin. Arco sent their oil spill "Containment and Cleanup Coordinator, Offshore Containment and Cleanup Coordinator, Onshore Containment and Cleanup Coordinator, and other individuals with management or supervisory functions to the training session. The session focused on the supervisor's role in directing workers to use equipment properly, interface with the Clean Seas organization, and making the supervisors aware of proper coastal resource protection goals.

Equipment Use Training for Workers. Workers responsible for actual use of the oil spill equipment must receive "hands on" training to use the equipment properly. Arco has inhouse training procedures that include full deployment of all offshore oil spill containment and cleanup equipment. The Clean Seas oil spill cooperative puts on training sessions that cover use of specific types of equipment. Member oil companies are encouraged to send personnel to these sessions.

The environmental report for the proposed project states that ARCO plans to use the Diamond M General to drill the wells, or that another rig such as the Glomar Atlantic or the Glomar Java Sea may be used in lieu of or in addition to the Diamond M General. The Glomar Atlantic and Diamond M General are currently offshore California; the Glomar Java Sea is in the China Sea and will remain there for at least a year. The Commission and the trawlers are concerned with the impacts on commercial fishing of simultaneous drilling of two or more exploratory wells for a single POE.

The fishermen trawl for petrale sole mainly in the spring and summer, generally from May to September. According to representative trawlers the existence of one exploratory drill rig on the subject lease tracts during this time will not present a conflict with their operations, however, any additional rigs would interfere with their trawling activities. The fishermen add that the presence of up to two rigs on these tracts during the rest of the year, or during non-fishing season, should not pose a conflict. Locating more than two rigs in this area would present a problem since the area is still trawled in the fall and winter, but to a much lesser extent. Exploratory drilling operations interfere with commercial fishing by removing available space in which the fishermen can operate - a drill rig with its anchors takes up to a .5 mile radius area around the vessel, within which fishing is difficult and sometimes impossible. Also, the drilling activities themselves disrupt the fishing population and can result in temporary relocation of many fish species.

Arco agrees to limit the number of drill rigs to one from May 1st to September 30th, the fishing season for petrale sole, and to two rigs for the remainder of the year on the subject lease tracts. Because Arco agrees to limit the number of drill rigs and because the Commission has concluded that the discharge of drill muds and cuttings beyond 1,000 meters of State waters has no demonstrated effect on the Coastal Zone, the Commission finds that the proposed activities are consistent with Section 30231 of the Coastal Act. (See Section J)

EXHIBIT NO. 1  
 APPLICATION NO.  
 CC-3-83  
 ARCO Oil and Gas Co.  
 California Coastal Commission

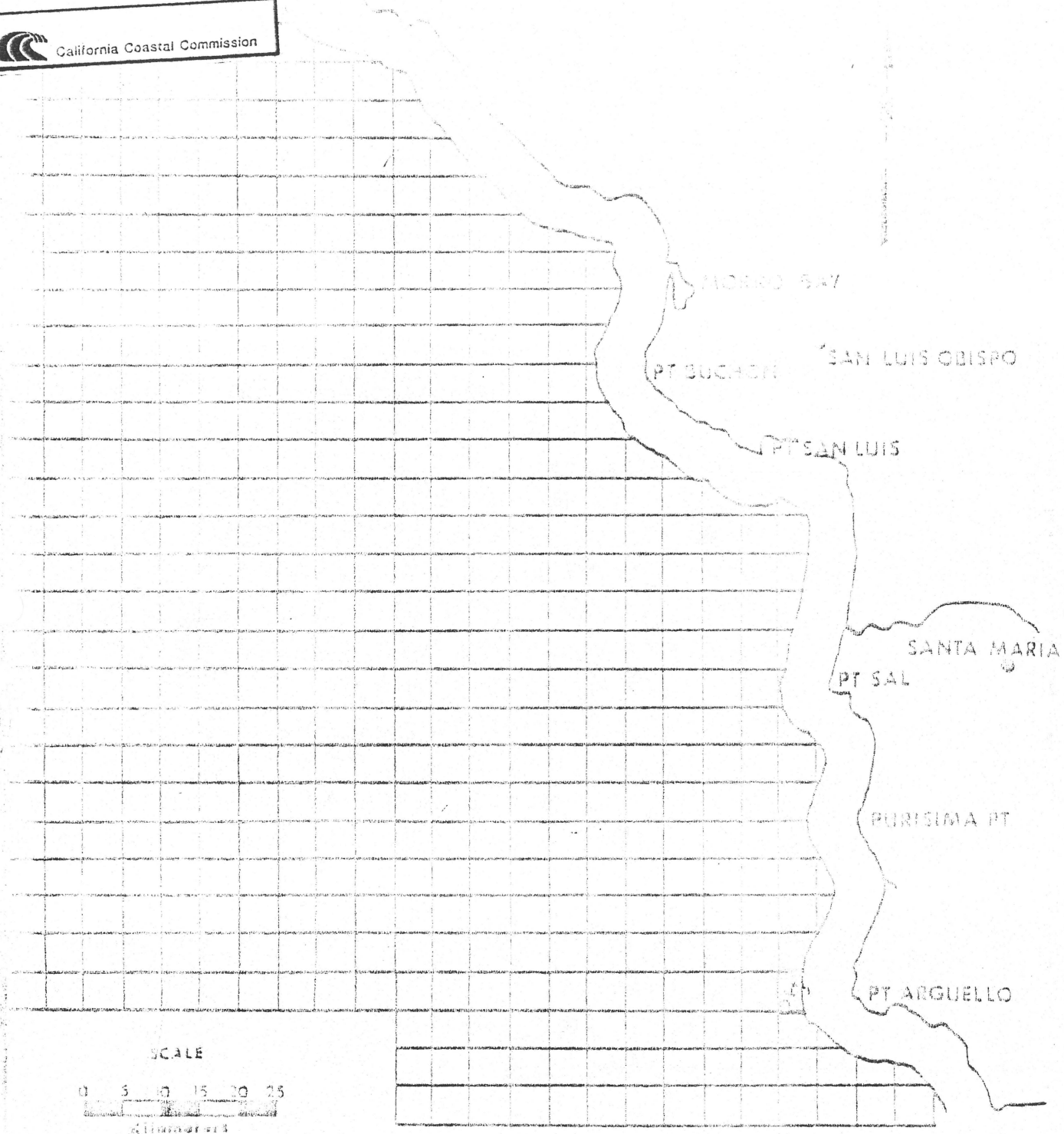

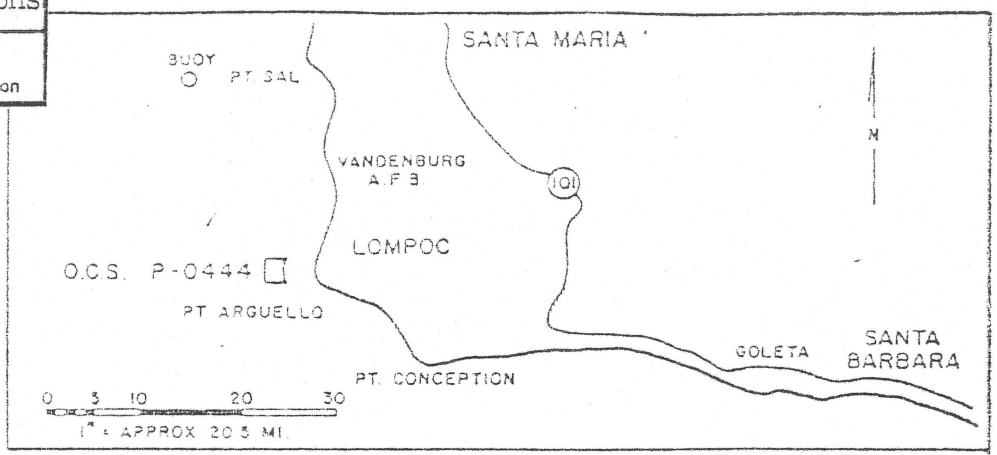


FIGURE 1 LOCATION OF LEASE OCS-P0444

HMA

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EXHIBIT NO. 2
APPLICATION NO. CC-3-83
Proposed well locations
 California Coastal Commission



PACIFIC OCEAN

