SARATOGA BUILDING P. O. BOX 60035, NEW ORLEANS, LOUISIANA 70160

July 3, 1968

Phillips Petroleum Company
1306 Santa Barbara Street
Santa Barbara, California 93104

Attention: Mr. F. R. Davis

Re: Drilling & Production Platform
"Houchin"
Santa Barbara Channel, California
Project No. 3756

Gentlemen:

At the request of your Mr. R. E. Hogan, we are pleased to submit the following description of the subject platform along with a brief outline of the design for this platform.

We have attached three (3) copies of our elevation drawings and equipment layout drawings as requested. These drawings give a general description of the equipment layout for your drilling and production operation, along with a general view of the entire structure which is being designed for you by J. Ray McDermott & Co., Inc. Our delay in submitting this to you was due to the elevation drawings which are not normally completed until near the end of the engineering phase of the project.

The structure shown on the attached drawings in a conventional template-type offshore platform. This type structure has been installed along the West Coast previously. It is not a new concept or an experimental model, but an up-to-date structure based on the latest techniques of offshore design and construction practice.

The structure consists primarily of two (2) large decks; a drilling deck to serve the actual drilling operation and a production deck to handle the produced fluids before pumping them to shore through a subsea pipeline. Both the drilling and production decks are equipped with curbs and gutters to carry any deck spillage into a sump tank so there will be no direct run-off into the ocean. Sanitary facilities for the drilling and production crew are provided. These facilities are fed through a sewage treatment plant on the platform which will produce a fluid effluent to be discharged approximately 140' below MLLW.

The subject platform has been designed specifically for the conditions at the site such as wind, wave, current, and earthquake forces based on information furnished by consultants who are experts in their field. The foundation investigation and recommendations were made by a local consultant, Dames and Moore, who is well known on the West Coast.

The wind loading used for the design of this platform was a 80 mph wind applied to all exposed surfaces of the superstructure including drill pipe standing in the derrick.

The seismic forces used in the design of this structure were based on a minimum seismic factor on 0.15 in accordance with the latest edition of the "Uniform Building Code" for Zone 3.

The platform was designed to resist the wave forces from a maximum 100-year storm based on information furnished by A. H Glenn and Associates.

The platform will have a cathodic protection system to enable the structure to resist corrosion based on a design by the HARCO Company providing 10 milliampheres current psf of exposed metal above the mud line, and 1 milliamperes psf below the mud line. The main structural members in the splash zone will be protected with an additional 1/2" metal thickness wrapped around these members.

This structure will incorporate the latest safety features and aids to navigation such as guard rails, stairways, emergency life rafts, first aid equipment, and navigational aids to meet or exceed applicable U.S. Coast Guard in state of California regulations.

The engineering staffs of Phillips Petroleum Company and J. Ray McDermott & Co., Inc. have done a considerable amount of planning to eliminate sources of water pollution during the drilling and production operations on this platform.

We would be pleased to supply any additional information concerning J. Ray McDermott or the proposed platform that might be of further assistance. In our opinion, the proposed platform will be a sound and stable structure, entirely adequate to fullfill its intended purpose. It will be the kind of platform that we are proud to say was built by McDermott.

Yours very truly,

J. RAY McDERMOTT & CO., INC.
Engineering Department

Griff C. Lee
Chief Engineer

GCL:bdj