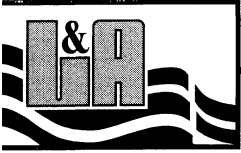


APPENDIX 14.6

PRELIMINARY GEOTECHNICAL EVALUATION



LEIGHTON AND ASSOCIATES, INC.

Geotechnical and Environmental Engineering Consultants

**COMPILATION OF EXISTING
GEOTECHNICAL DATA,
REMAINING CITY OF FULLERTON
PORTION OF THE WEST COYOTE HILLS,
CALIFORNIA**

July 27, 1998

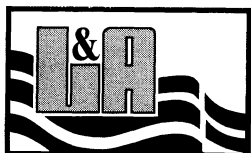
Project No. 2980111-001

Prepared for:

CHEVRON LAND AND DEVELOPMENT COMPANY

3100 S. Harbor Boulevard, Suite 340

Santa Ana, California 92704



LEIGHTON AND ASSOCIATES, INC.

Geotechnical and Environmental Engineering Consultants

July 27, 1998

Project No. 2980111-001

To: Chevron Land and Development Company
3100 S. Harbor Boulevard, Suite 340
Santa Ana, California 92704

Attention: Mr. Don Means

Subject: Compilation of Existing Geotechnical Data, Remaining City of Fullerton Portion
of the West Coyote Hills, California

In response to your request, Leighton and Associates, Inc. (Leighton) has prepared this report compiling the existing geotechnical data for the remaining City of Fullerton portion of the West Coyote Hills oil field. The geotechnical data presented herein has been compiled from previous work performed by Leighton on, and adjacent to, the site, as well as published and unpublished reports prepared by others (Appendix A). The 100-scale topographic map, prepared in 1990, was used as a base for the enclosed Preliminary Geotechnical Map (Plates 1 through 4), that illustrates the locations of previous borings excavated onsite and the geotechnical conditions at the site based on the current data. Additional geotechnical investigations will be required based on future tentative map and/or grading plans.

The most significant geotechnical issues at the site are those associated with slope stability, compressible soils and effects of seismic ground shaking.

Two prehistoric landslides or suspected landslides have been mapped within, or adjacent to, the site. The largest landslide, located in the northwest corner of the site, has been preliminarily investigated by subsurface exploration. This slide is approximately 90 feet deep. This slide has been partially graded during offsite grading to the north. Both slides will have to be investigated based on current development plans. We anticipate that significant remedial grading will be required to stabilize the larger landslide or development setbacks established. Smaller slides are generally removed if they occur within the development.

We anticipate that the future development will include numerous cut, fill and natural slopes. Due to the general south to southwest dipping bedrock bedding, we expect that cut and natural slopes facing these directions will have the greatest potential for failure, especially where clay seams are present within the bedding. Slope stability is discussed in Sections 2.5 and 3.5.

Large amounts of compressible soils are present on site including topsoil, alluvium, colluvium, uncontrolled fill and landslide debris. Removal of these materials will be required where settlement is a concern. In some areas, it may be feasible to leave some compressible soils in

place and conduct a settlement monitoring program. Also, where significant depths of fill are placed (typically 60 feet or greater), settlement monitoring will be required prior to construction. The monitoring periods will vary depending on depth of fill and/or compressible material left in place and level of compaction used for fill. Typically, settlement monitoring periods range from 3 to 12 months. Compressible soils are discussed further in Sections 2.10 and 3.6.

As with most sites in Southern California, there is a high probability that this site will be subject to strong seismic shaking from a moderate to large earthquake on a major active fault in the region. There is no realistic way in which the hazard of seismic shaking can be completely avoided. However, the effects of seismic shaking on structures can be reduced through conformance with recommendations of the geotechnical engineer and geologist for the project and the Structural Engineers Association of Southern California, and the requirements of the Uniform Building Code or local agency codes. Seismic hazards are discussed in Sections 2.4, 3.2, and 3.3.

We appreciate the opportunity to be of continued service to Chevron Land and Development Company. If you have any questions regarding this compilation of geotechnical data associated with your West Coyote Hills property, please call us at your convenience.

Respectfully submitted,

LEIGHTON AND ASSOCIATES, INC.



Kay St. Peters, CEG 1477
Project Geologist

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KS/DCS/sbe

Distribution: (4) Addressee

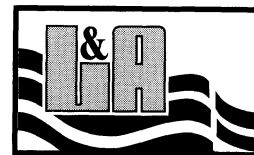


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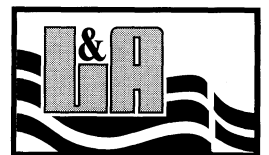


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Plates

Plates 1 through 4 - Preliminary Geologic Maps (100-scale) - In Pocket

