ADDENDUM:

PROPERTY DESCRIPTION AND FACT-FINDING REPORT FOR NAVAL PETROLEUM RESERVE NO. 2(NPR-2) KERN COUNTY, CALIFORNIA

for the

U.S. DEPARTMENT OF ENERGY
Contract No. DE-AC01-96FE64202

Respectfully submitted on
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John B. Gustavson, President
Certified Minerals Appraiser

GUSTAVSON ASSOCIATES
5757 CENTRAL AVE. SUITE D BOULDER, COLORADO 80301 USA

The center of the field area is approximately four miles northeast of the city of Taft, Kern County. The field is approximately 11 by 4 miles in area and is orientated in a northwest-southeast direction. The field includes all or part of the following four townships: T31-32S, R23-24E. Originally considered part of the larger Midway-Sunset field to the southwest, Buena Vista Hills oil field was officially recognized as a separate accumulation by the State of California in January, 1958.

The San Joaquin Basin has been a major producer of hydrocarbons since the late 1800s. The Midway-Sunset Field lies to the southwest of the Buena Vista Hills Field, and Elk Hills Field (Naval Petroleum Reserve No. 1) is located to the northeast (Figure 1.3). Midway-Sunset is the second largest producing oil field in California, with cumulative production of 2 billion barrels and estimated remaining recoverable reserves of 59 million barrels. The Elk Hills Field has produced 1 billion barrels, and has estimated remaining reserves of 23 million barrels.

The first well in Buena Vista Hills was drilled 1909. As of 1994, cumulative production from Buena Vista Hills was 656 million barrels, with estimated remaining recoverable reserves of 1.2 million barrels. The historical production makes Buena Vista Hills the tenth largest producing field in the State of California.

1.4.2 Regional Geology

The San Joaquin Valley Basin developed in the Cretaceous and mid-Tertiary as a forearc basin in response to the collision of the North American and Pacific plates. The east flank of this asymmetric basin consists of a broad and gently dipping homocline which is relatively undeformed. The west flank is narrower and consists of a tightly folded, complexly-faulted anticlinorium which parallels the San Andreas Fault. Right lateral strike-slip movement along the San Andreas Fault has been occurring since the Early Miocene. Deformation and uplift in the Coast Range as well as the formation of anticlines in the southern part of the valley has accompanied movement along the fault.

4. SURFACE AND WATER RIGHTS

4.1 INTRODUCTION

The surface and water resources at NPR-2 are managed by the DOE out of their Tupman office. Surface management currently includes overseeing an agricultural lease with the City of Taft and maintaining the surface on the drill sites located within Ford City. A summary of appropriate facts is included in this section.

4.2 SURFACE

The land use pattern across Kern County is influenced by the variety of flat, hilly, and mountainous terrain and by proximity and access to water. About 90 percent of Kern County's total land area is devoted to agriculture, including sheep and cattle grazing and crop production. The region has most of the characteristics of a semi-arid subtropical climate, including mild, moist winters and hot, dry summers.

Much of the area surrounding NPR-2 consists of agricultural land and open space. Agricultural activities located east of NPR-2 consist of irrigated crops in the Buena Vista Lake Bed areas to area of interspersed crop production and livestock grazing immediately adjacent to the site. Alfalfa production is a current agricultural use on 167 acres of land leased by the City of Taft on NPR-2. However, due to the hilly topography throughout the majority of NPR-2, combined with the need for irrigation and the fact that the surface acreage is encumbered with oil production facilities, widespread commercial use for growing crops is not feasible (Figure 4.1).

Although grazing is not a current surface use within NPR-2, sheep and cattle are grazed on open space to the north, west, and south of the site on BLM-managed land in the winter months. Cattle grazing and mineral production are not compatible because cattle require extensive fencing and cross-fencing. Cattle ranching also requires extensive water development. The land could, however, be used for sheep grazing because extensive fencing is not required, and water