



UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

7760 Federal Building  
300 North Los Angeles Street  
Los Angeles, California 90012

June 2, 1977

~~Malte~~  
~~Werde~~  
~~Mansour~~  
~~Dunaway~~  
~~Woodruff~~  
File: Plat. "C"

NOTED - CYPHER



File: → NOTED ADAMS

MEMORANDUM

To: Oil and Gas Supervisor, Pacific Area  
From: District Geologist, Los Angeles  
Subject: Supplementary Plan of Development, Platform "C", Dos Cuadras Field, OCS P-0241

Union submitted with the plan the following data: Structure map on top CP, the proposed drilling schedule using two rigs, sand intervals that each well is to be completed in, average well spacing, and the proposed completion method of each well. In addition, in a meeting May 25<sup>th</sup> 1977 at Los Angeles, Union representatives gave an oral review of their proposed plan and submitted net vertical pay sand thickness maps of the proposed zones for our review.

The proposed plan calls for 26 wells to be drilled with restricted completion intervals which include fewer sands open than in previous wells drilled from platforms A and B. Only four wells of the 26 are schedule to cross major sand group boundry lines, ie. CP, DP, EP, FQ, etc. Of the four, three are to combine the CP group and DP group and one to combine the EP group and FP group. For these combined groups two wells are to be completed in the CP group only, one in the DP group only, four in the EP group only and four in the FP group only.

Some of the individual sands which contain hydrocarbons in the Union A and B platform areas are wet in the C platform area so that within a group of sands perhaps only the upper most one or two sands will be open in any given well, ie. FP, or FP, FIP. Exceptions to this are the CP and DP groups where all sands are oil saturated and GQ group where the GQ, GIQ and G2Q sands are saturated. In addition, no wells will be completed in both P and Q blocks.

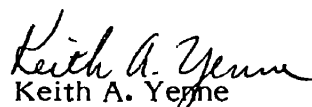
In reviewing the net vertical pay sand maps it appears that Union's plan optimizes the completions for maximum drainage of the total hydrocarbons present in the "C" platform area. More completions are scheduled for the thicker most areally extended zones. Exceptions to this are the uppermost zones where only the central part of the reservoir can be reached from the platform. These zones eventually may be drained by subsea completions. Completions are located at maximum structural positions which coincides in most

cases with maximum pay thickness. This should enhance the recovery which is attributed to water influx in many of the zones. Capability will exist to redrill the proposed wells or complete many in higher zones at a later date if they water out and it is economically feasible to do so.

Geological control in the "C" platform area includes core holes and the Union B-55 well (original and redrill). The core holes were drilled only a short distance into the Q block. From these wells evidence exists of a fault (C fault) between the "C" platform area and the "B" platform area in the P block and anomalous water contacts are present in the Q block. In the OCS P-0241 B-55 well (original hole), the FIP sand was tested west of the "C" fault and the FQ-FIQ interval and GQ, GIQ, G2Q interval were tested in the B-55 rd well just south and slightly east of the "C" platform location. Results of those tests taken in early 1974 indicated the following pressure gradients: FIP-.365<sub>+</sub>, FQ, FIQ-.385<sub>+</sub>, GQ, GIQ, G2Q-.338<sub>+</sub>. It appears evident that these zones have been subjected to pressure decline from the original reservoir pressure gradient of the field calculated by Union to be .445 PSI/ft.

Union's plans include extensive wireline testing in two of the first four wells which are scheduled to go through the HIQ sand interval. These are the C-15 and C-41 wells which should encounter most of the proposed completion intervals in both the P and Q blocks. This will enable us to determine if there are any zones in the "C" platform area which have not been subjected to pressure decline.

This plan of development appears to be one that adequately drains all reservoirs within the physical limits of the platform. No potential geologic hazards are evident from a review of the available data. It is realized, however, that new data gained from drilling from platform "C" may require alterations to the plan. From a geological viewpoint I recommend that this plan of development be approved.

  
Keith A. Yenne