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GEOLOGICAL INFORMATION PERTAINING TO
THE PROPOSED ECHOLS STATE UNIT
OF YATES PETROLEUM CORPORATION

Yates Petroleum Corporation requests approval of the proposed Echols State Unit encompassing Sections 9 and 15 and SW 1/4 Section 10, T-11-S, R-38-E, or a total of 1440 acres, located in Lea County, New Mexico.

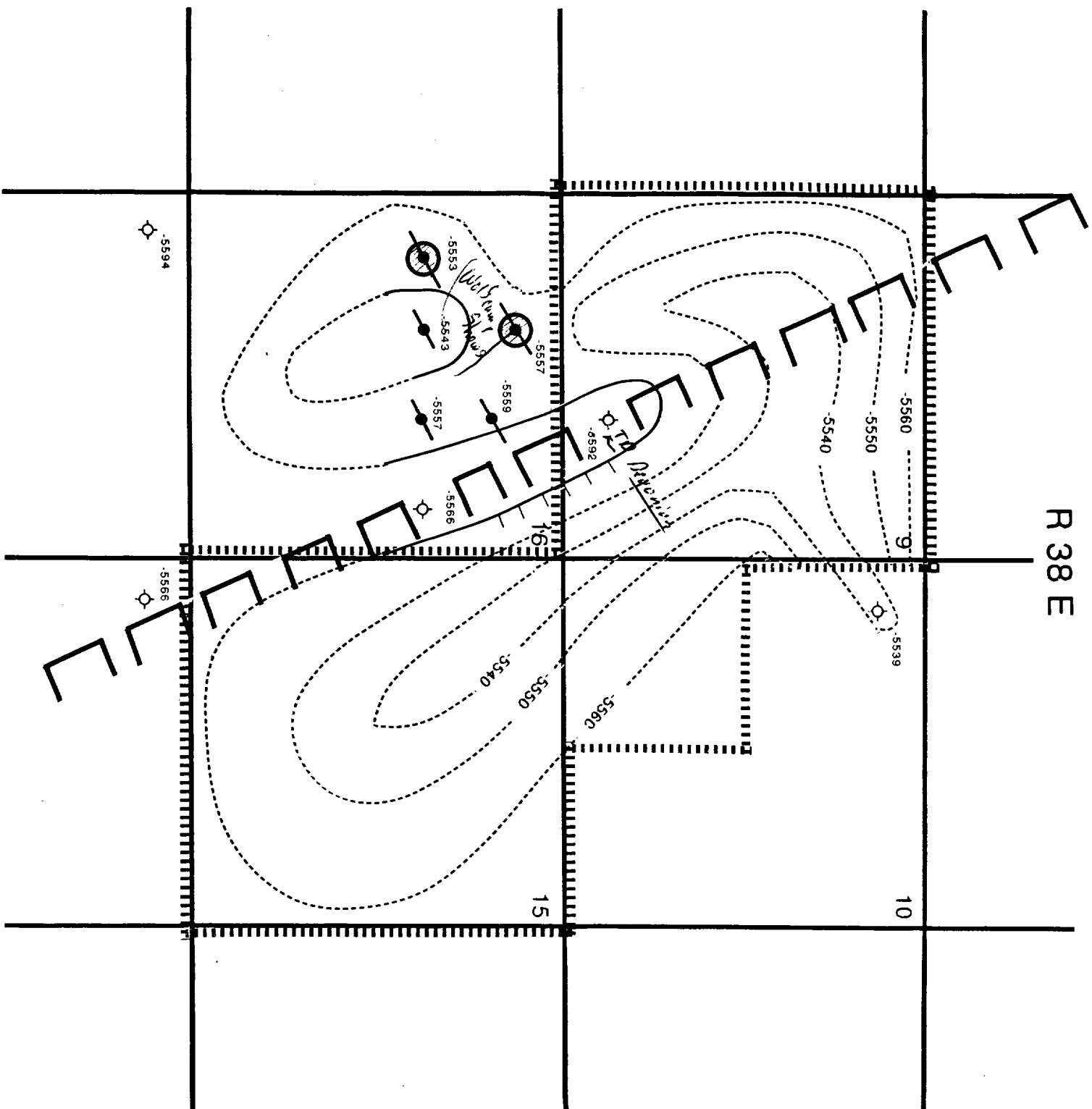
An initial test well to be drilled at 1980' FWL and 330' FSL, Section 9, T-11-S, R-38-E with a projected depth of 12,400' is designed to test the hydrocarbon potential of the Devonian and all intervening formations, especially the Wolfcamp.

The enclosed Devonian structure map indicates a northwesterly trending nose over the initial location. While the unit is justified in terms of its Wolfcamp potential, the initial drill site is a compromise location to take advantage of the Devonian potential as well. The nearest Devonian offset well to the south produced 117,554 BO cumulatively. Last full year's production was 5,753 BO plus 10,685 BW. This same well had free oil on a Wolfcamp DST with good pressure.

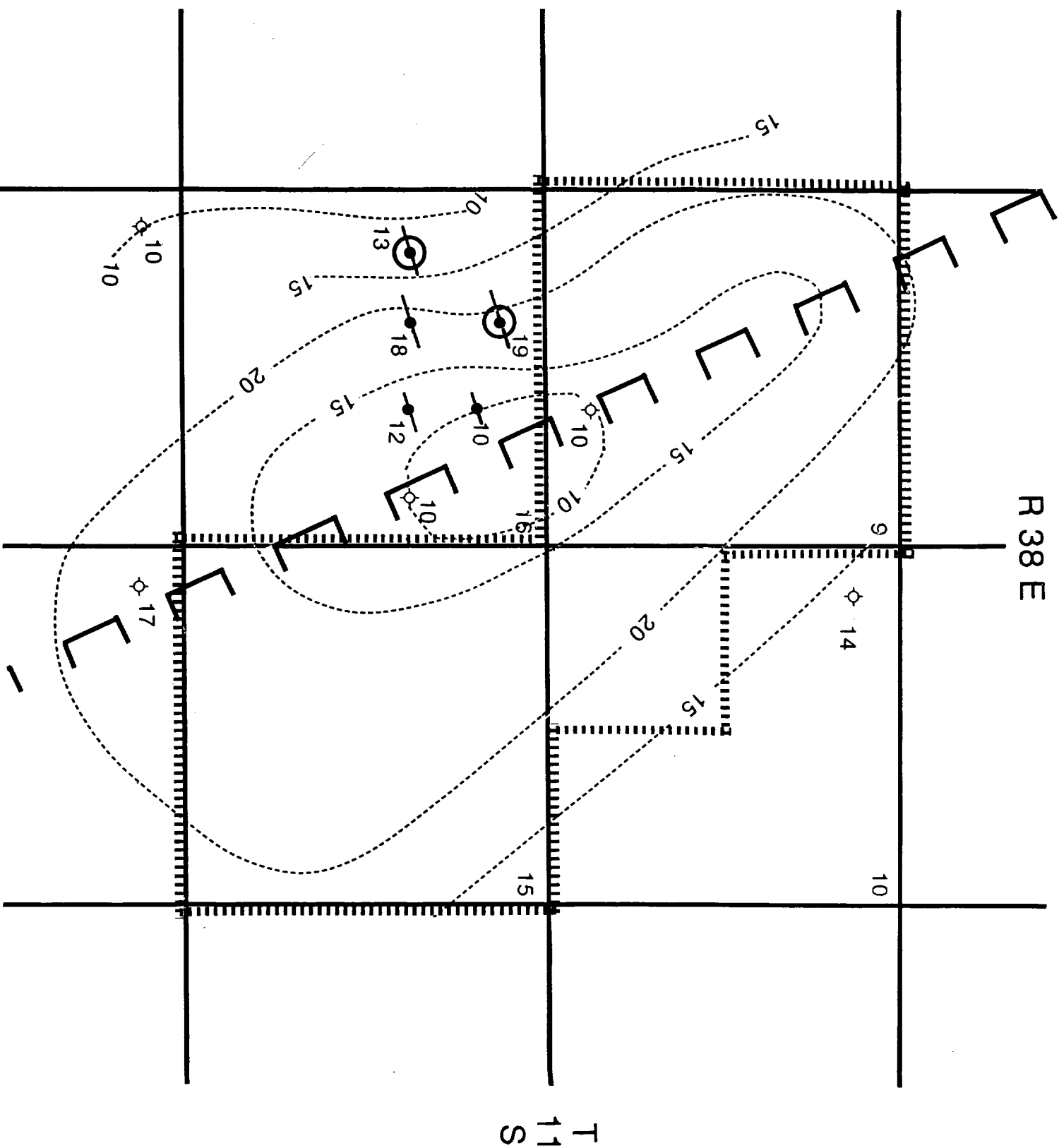
Structure and isopach maps on the Wolfcamp reservoir complement the subsurface picture. The best Wolfcamp potential is indicated to the east of the deep seated, almost vertical fault, cutting the Devonian but not the Wolfcamp. Later tilting to the ESE facilitated the buildup of the Wolfcamp reservoir, flanking and slightly offsetting the old Devonian high. The accompanying diagrammatic X-section highlights the basis for this interpretation.

In the opinion of Yates Petroleum Corporation, approval of the proposed Echols State Unit will result in the production of hydrocarbons that otherwise might be left in the ground, and will be in the best interest of conservation.

YATES PETROLEUM CORPORATION
Case No. 9301
2/3/88 Examiner Hearing
Exhibit No. 4



YATES PETROLEUM
ECHOLS STATE UNIT
LEA CO., NEW MEXICO
STRUCTURE MAP
BASE OF WOLECAMP PAY
UNIT OUTLINE
C.I. = 10'
SCALE: 1"=2000'



YATES PETROLEUM
ECHOLS STATE UNIT
 LEA CO., NEW MEXICO
 ISOPACH MAP
 WOLFCAMP PAY
 UNIT OUTLINE
 C.I. = 5'
 SCALE: 1"=2000'

R 38 E

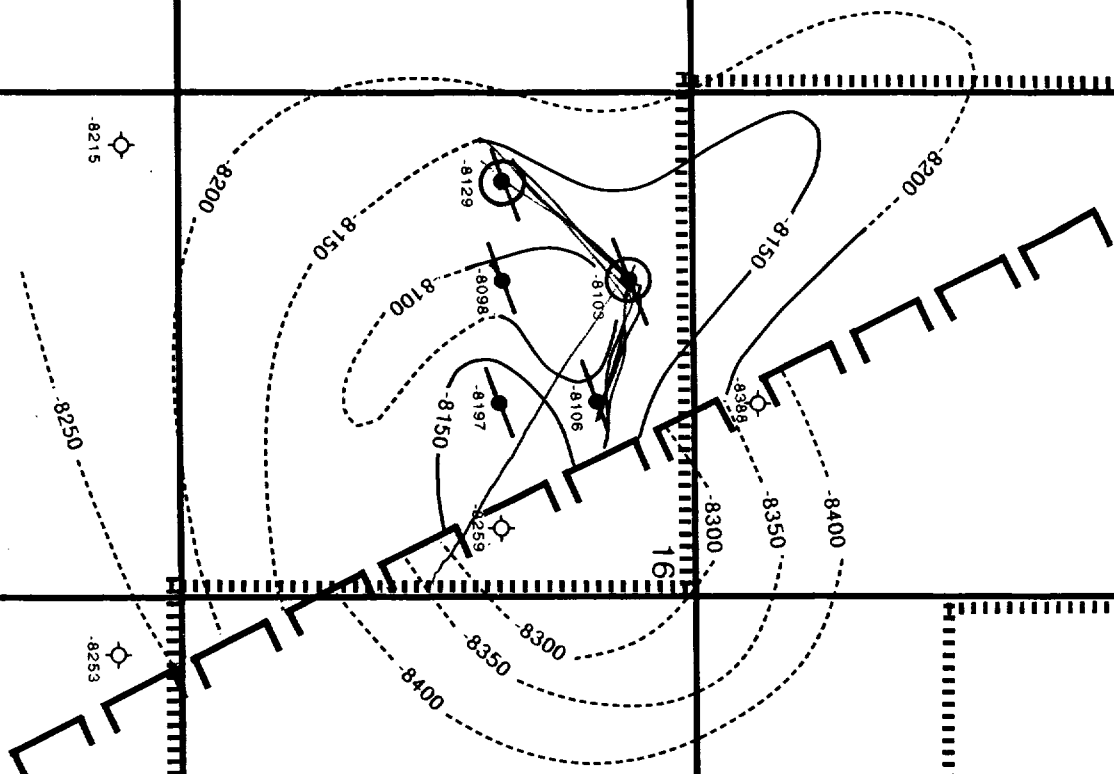
9

10

T
11
S

15

16



YATES PETROLEUM

ECHOLS STATE UNIT

LEA CO., NEW MEXICO

STRUCTURE MAP

TOP OF DEVONIAN

UNIT OUTLINE

C. I. = 50'

SCALE : 1" = 2000'

YATES PETROLEUM CORPORATION

Case No. 9301

2/3/88 Examiner Hearing

Exhibit No. 4 (c)

DIAGRAMMATIC E-W CROSS-SECTION THROUGH ECHOLS STATE UNIT

