



ARCO Permian
600 N Marienfeld
Midland TX 79701
Post Office Box 1610
Midland TX 79702
Telephone 915 688 5200

REC'D
A-10-1

November 29, 1995

Mr. Michael Stogner
New Mexico Oil Conservation Division
2040 South Pacheco
Santa Fe, NM 87505

**Re: Application for Unorthodox Location
DOROTHY 36 STATE COM #1
Empire (Morrow) Gas Pool
West half Sec. 36, T 17 SR 28 E, Eddy County, NM**

Dear Mr. Stogner:

ARCO Permian respectfully requests approval for an unorthodox Morrow gas well, the ARCO Dorothy 36 State Com #1. This well is staked 1163 FSL, 1647 FWL of Sec 36, T17S R28E, for geological reasons. Any standard location in the west-half 320-acre proration unit would likely result in economic waste and minimal potential of finding the most productive Morrow sands. The east half of the section is already dedicated to another non-standard Morrow producer in Amoco's Empire South Deep Unit, which produced from another sand body in the same stratigraphic interval.

Notification to all offset operators has been made by certified mail under the provisions of Rule 104 (F) IV. We request that this unorthodox location be administratively approved if no objections are received within the cited 20 days, or earlier if waivers are received.

Enclosed are Form C-102, a land plat showing all offset operators, a list of these operators, Morrow Cross-section A-A', and a Net Pay map for the Lower Morrow "C" Sand (showing all wells over 9000').

The Integrated Net Pay Map of the Lower Morrow "C" sand shows that NW-to-SE trends for productive "C" sands in this area are well-established. The two producers in Section 25 along with Well #23470 in Section 36 have together produced nearly 35 BCF with 300 MBC from the Lower Morrow "BV Channel" reservoir, which is within our "C" sand interval. To the west, wells #24059 in Section 35 and #24665 in Section 2 have produced 2.5 and 5.4 BCF respectively from a thinner "C" sand distributary channel. Cross-section A-A' through #24059 in Sec 35 and #23470 in Sec 36 demonstrates these correlations. All three "BV Channel" wells and Sec 35 are nearly depleted, but #24665 in Sec 2 produced 9687 MCF in March, 1995.

Our proprietary 3D survey indicates that a new "C" sand "thick" is best developed at our unorthodox location. Orthodox locations such as 2310 FSL and 660 FWL were carefully considered, but our 3D indicates that sand quality or porosity deteriorates in the northern two-thirds of the proration unit. ARCO believes that the orthodox location **alone** offers acceptable risk, and that any other wellsite in the proration unit would present untenable risk. As an example, note how only 1600' between wells #22543 and #23470 in Sec 36 accounts for geologic failure in one well, compared to 50 ft of excellent pay with nearly 8 BCF in the other. Even at the optimum location, ARCO and partners are taking substantial risk of missing all Morrow pay sands and obtaining a dry hole.

RECEIVED

DEC 01 1995

OIL CON. DIV.
DIST. 2