

## **Petroleum Development Corporation**

### PEDCO-State No. 1

660' FNL & 1980' FWL of Section 16, T11S, R38E  
Lea County, New Mexico

### **Geological Discussion**

Abandoned fields throughout southeastern New Mexico undoubtedly hold millions of barrels of unrecovered reserves. In order to produce these reserves in an economic and prudent manner, it is necessary to drill additional infield wells at locations that are geologically correct without regard to the existing surface boundaries whenever possible. To do otherwise will result in very little bypassed oil being recovered because, in most cases, the optimum locations chosen due to surface lease constraints have already been drilled by wells that are now abandoned.

The East Echols Devonian Field produced more than 548,000 barrels of oil during its initial production lifetime. Detailed examination of the production from the field's wells indicates that there remains the potential to produce a large volume of unrecovered reserves from the abandoned field. Proper placement of new wells in the field should result in these reserves being produced. The PEDCO-State No. 1 bottom hole location was chosen in an effort to drill the well in the best geological position without regard for the existing surface quarter-section lines. An economic benefit can be realized by re-entering the existing well bore of the Cities Service Oil Co. State "BE" No. 1 and drilling directionally to this optimal location.

It is believed that the proposed bottom hole location of the PEDCO-State No. 1 is located at the highest structural location in the field. It is felt that the optimal location of the bottom hole should result in attaining a structural position that is at least 50' higher than at any of the other existing well locations. Therefore, since ultimate oil cumulative production is directly related to structural position, the bottom hole placement should result in the highest ultimate oil recovery for the well. This higher structural location should also result in less water production during the lifetime of the well. To drill the well in a "regular" location will not optimize the total oil reserves that the well otherwise would recover.