

Attachment

Cities Service Oil and Gas Corporation #2 Elkan A
2310'FNL & 990'FWL of Section 25-T13S-R34E
Lea County, New Mexico

Basis of Geologic Considerations

The Elkan A #2 is a development well in the Alston Ranch Upper Pennsylvanian Pool, being the first offset to the Elkan A #1, which was completed in the Bough Formation on 12-23-85. Additional pay was recently perforated and the well was repotentialled on 9-25-86.

Figure 1 shows the structure on the top of the Bough "C" porosity. The Alston Ranch Upper Pennsylvanian Pool is on a small anticlinal structure with about 30 feet of closure. The Union Oil of California's State 25 #1, located in the SW/4 NE/4 of Section 25, tested the Bough and recovered 1400' Gas, 760' SO&HGCM and 4100' salty sulfur water on a DST (figure 2). This water test, in conjunction with the productive test in the Cities Service Elkan A #1, supports an oil-water contact of about -6930. Subsurface mapping indicates that any standard location in the NW/4 of Section 25 will be outside the closing contour of the structure, near the oil-water contact, and will probably be wet. The requested unorthodox location is up-dip on the structure, within the last closing contour, and should encounter productive Bough reservoir.