

SEDIMENTOLOGY AND STRATIGRAPHY

Lab 14

Oil and Gas Exploration Project

Readings: Attached

(Modified from Exercises in Sedimentology, by G.M. Friedman and K.G. Johnson, 1982, John Wiley, 208 p.)

This lab simulates the geologic and economic conditions usually encountered in oil exploration. Oil and gas fields in this quadrangle are mainly structurally controlled but not all structural highs are productive. One of the principal goals is to drill productive wells and make a profit, but make some effort to explore and exploit more than one structure, to gain geologic perspective. Contouring structural data is vital and controlled imagination is frequently rewarded. First bids and seismic line data requests will be accepted promptly at 3:30. Additional bids, requests for seismic line data and plans to drill wells will be received at announced intervals. The exercise concludes at 5:15.

Procedure

Every section in this quadrangle has been drilled by oil companies in the past. Everyone agrees there must be oil and/or gas here, but no one has been successful in bringing in a producing well. Apparently none of the companies bothered to hire a geologist to analyze the data (weird!). They have gone bankrupt and the leases are all available for sale. Suddenly several companies with geologists (your groups) appear on the scene, but with limited capital. They all expect the maximum bang for the bucks available.

Your team (choose your own name) must find the most oil and or/gas possible in a limited amount of time. Operators must treat geological information and structural interpretation as strictly confidential. Your instructor will serve as the source of all geological data and will supply oil and gas production information. Each operator must keep complete and separate records of financial information (all bid purchases, income, sales, costs) and plot and interpret data on the base map.

1. All the data points on the **structural datum horizon** are supplied free (they were given to the local geological survey after the other companies went under. **Contour** the information.
2. You begin with \$3 million and stay in the exercise until you go bankrupt. Part of your holdings may be auctioned off to continue in the exercise. All deals, including the sale of information, must be authorized by the instructor and all operators must learn of the deal and be able to bid on the holdings or information.