LOCATION and INTRODUCTION

The South Bosque field is located approximately 8 miles southwest of the city of Waco, McLennan County, Texas, and covers an area approximately 1/2 mile wide and 3 miles long, extending from the vicinity of the town of South Bosque to Hog Creek. At least 123 oil wells have been completed in the field since its discovery. Much of the information relative to this field is conflicting and unreliable. There are very few good records of the wells available at this time.

METHODS OF EXPLORATION LEADING TO DISCOVERY

Shows of oil had been encountered in water wells in the area for a number of years before the discovery well was drilled. According to reliable information, a few barrels of oil were bailed from a water well dug in this vicinity in 1890 on the farm of Colonel William L. Prather. Mr. E. S. Cluck, who drilled many of the producing wells in the field, reports that one deep water well had been drilled to the Basal Trinity sands prior to discovery of the field. This well had shows of oil at a depth of approximately 470 feet.

DISCOVERY

Lower Walnut sand and Field: Approximately 1902; probably Goldstein - Migel #1 Grim.

ELEVATION OF SURFACE

At well locations: Highest, 551 ft.; lowest, 425 feet.

SURFACE FORMATIONS

Del Rio shale and Georgetown limestone of the Washita group outcrop within the limits of the field.

OLDEST STRATIGRAPHIC HORIZON PENETRATED

The oldest horizon penetrated within the actual limits of the field is a few feet below the top of the Glen Rose limestone. However, the Bellrose Deep Test, just southeast of the field, was drilled into the Basal Trinity sands.

STRATIGRAPHIC SECTION

The accompanying TYPE SECTION OF ROCKS PENETRATED is based on the log of a water well which is located 5 miles east of, and considerably downdip from, the South Bosque field. This is the nearest well affording electric log control. The section encountered in it is considered as typical of rocks penetrated in the vicinity. In general, the stratigraphic units are thicker in this well than in the field. The section includes sediments above those penetrated within the area of the field.

In designing the accompanying TYPE SECTION, the surface elevation was arbitrarily indicated as 1,051 feet in order to indicate approximately the correct elevations of the stratigraphic units within the area of the field. This results in indicating depths about 500 feet greater than actual depths.

Although the reservoir rock is not productive at the location of this well, its stratigraphic position is indicated on the accompanying TYPE SECTION and at the approximate correct elevation of 65 feet above sea level.

NATURE OF TRAP and STRUCTURE

The producing sand is thin and erratic throughout the field. In some wells scattered throughout the field, the porosity pinches out completely. It is possible that a pinchout of porosity and permeability is influential in controlling the accumulation.

From available sub-surface data, the author is not able to definitely determine the structure. Surface reversal is present on Hog Creek near the north edge of the field, suggesting the existence of anticlinal closure. A field map by W. S. Adkins showing such closure was published in 1923.

PRODUCTIVE AREA

Lower Walnut sand and Field: The accompanying map is based on one with well locations which was drawn in 1926 by Frank Bryan, now Consulting Geologist in Groesbeck, Texas. This map indicates a productive area of approximately 1,600 acres. Other reliable sources** report the productive area as high as 2,500 acres.