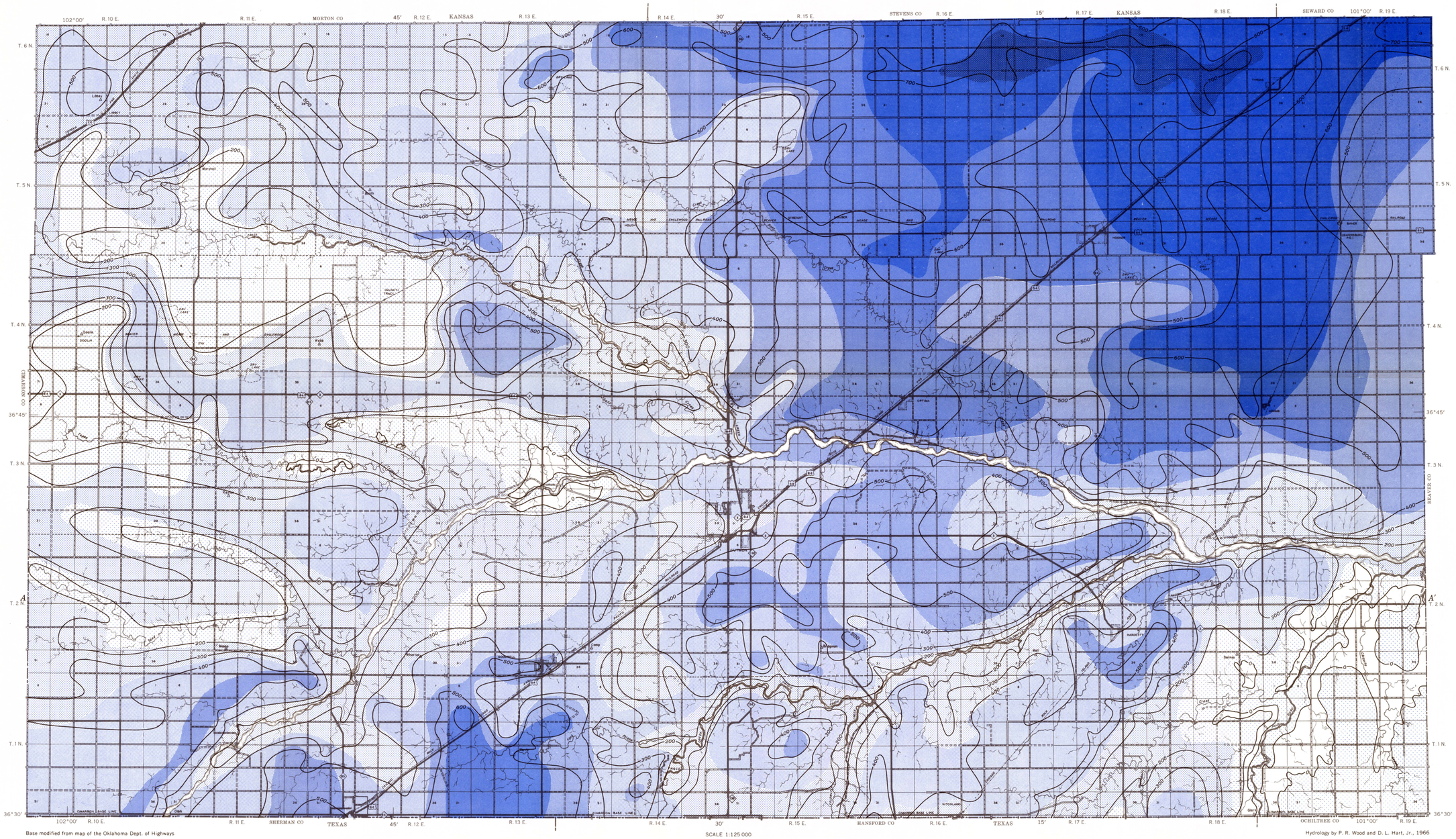
PREPARED IN COOPERATION WITH THE
OKLAHOMA WATER RESOURCES BOARD



Base modified from map of the Oklahoma Dept. of Highways

Hydrology by P. R. Wood and D. L. Hart, Jr., 1966

This map shows the thickness of unconsolidated deposits and the thickness of saturated material in March, 1966. The principal ground-water reservoir consists of dune sand and alluvium of Recent age and undifferentiated deposits of Pleistocene and Pliocene age. These unconsolidated deposits overlie the eroded bedrock surface formed on rocks of Mesozoic and Permian age. The bedrock surface had moderate topographic relief and an integrated drainage system. However, numerous local depressions were formed by the collapse of gypsum and salt solution cavities beneath the surface.

The thickness of saturated material in the unconsolidated deposits indicates the magnitude of the potential yield of ground water to wells. In general, yield increases with the thickness of saturation. Yields may change in short distances owing to differences in permeability of the water-bearing deposits.

A generalized section, drawn along a line through the middle of Township 2 North, shows the relation between the total thickness and the thickness of saturated material in the unconsolidated deposits and the probable configuration of the bedrock surface. This section shows how erosional features of the present land surface and irregularities on the bedrock surface influence the thickness of deposits, the depth to water, and the thickness of saturated material tapped by individual wells.

EXPLANATION

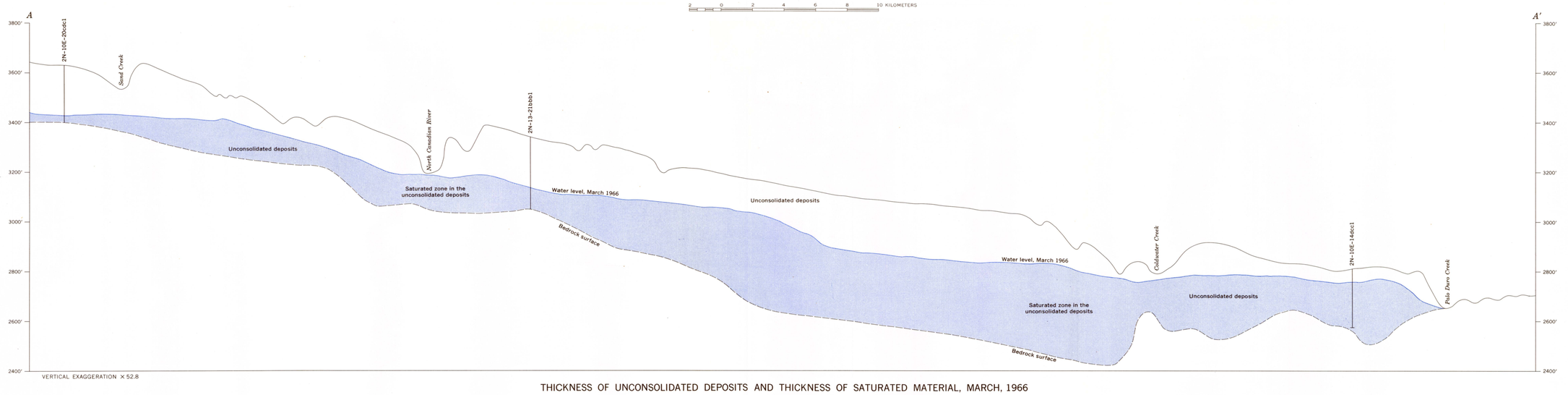
200

Lines of equal thickness of unconsolidated deposits
Interval 100 and 200 feet

Bedrock exposed at land surface

Approximate saturated thickness, in feet

- 0–100
- 100–200
- 200–300
- 300–400
- 400–500
- 500–600
- More than 600



THICKNESS OF UNCONSOLIDATED DEPOSITS AND THICKNESS OF SATURATED MATERIAL, MARCH, 1966

INTERIOR—GEOLOGICAL SURVEY, WASHINGTON, D. C.—1967—W67072

AVAILABILITY OF GROUND WATER IN TEXAS COUNTY, OKLAHOMA

By
P. R. Wood and D. L. Hart, Jr.

1967