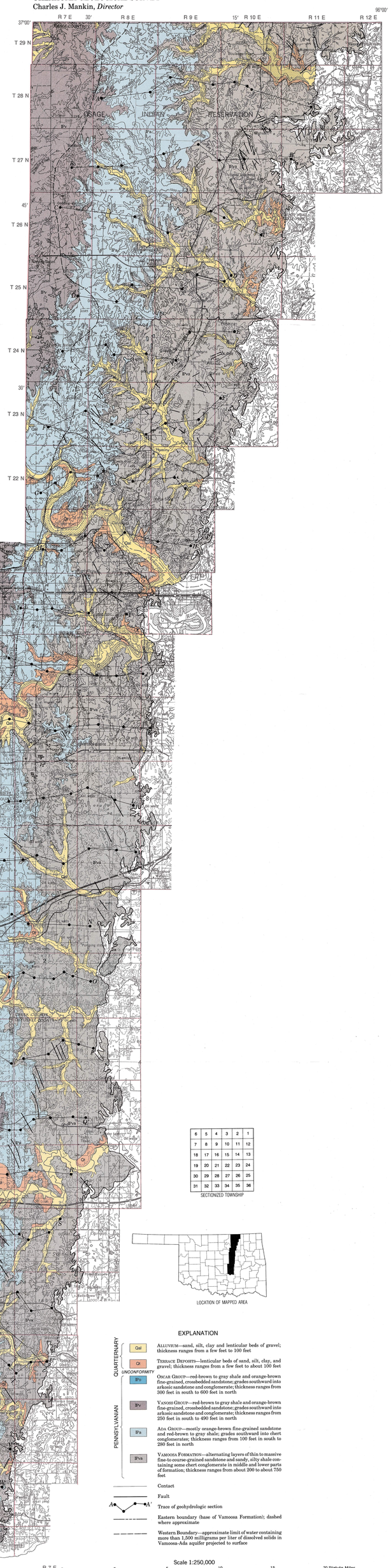
OKLAHOMA GEOLOGICAL SURVEY
Charles J. Mankin, *Director*

Prepared in cooperation with the UNITED STATES GEOLOGICAL SURVEY

CIRCULAR 87 PLATE 1
Geologic Map and Sections



6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

SECTIONIZED TOWNSHIP

LOCATION OF MAPPED AREA

EXPLANATION

QUARTERNARY

Qal — ALLUVIUM—sand, silt, clay and lenticular beds of gravel; thickness ranges from a few feet to 100 feet

Qt — TERRACE DEPOSITS—lenticular beds of sand, silt, clay, and gravel; thickness ranges from a few feet to about 100 feet

UNCONFORMITY

PENNSYLVANIAN

IPo — OSCAR GROUP—red-brown to gray shale and orange-brown fine-grained, crossbedded sandstone; grades southward into arkosic sandstone and conglomerate; thickness ranges from 300 feet in south to 600 feet in north

IPv — VAMOOSA GROUP—red-brown to gray shale and orange-brown fine-grained, crossbedded sandstone; grades southward into arkosic sandstone and conglomerate; thickness ranges from 250 feet in south to 490 feet in north

IPa — ADA GROUP—mostly orange-brown fine-grained sandstone and red-brown to gray shale; grades southward into chert conglomerates; thickness ranges from 100 feet in south to 280 feet in north

IPva — VAMOOSA FORMATION—alternating layers of thin to massive fine-to course-grained sandstone and sandy, silty shale containing some chert conglomerate in middle and lower parts of formation; thickness ranges from about 200 to about 750 feet

Contact

Fault

A—A' Trace of geohydrologic section

Eastern boundary (base of Vamoosa Formation); dashed where approximate

Western Boundary—approximate limit of water containing more than 1,500 milligrams per liter of dissolved solids in Vamoosa-Ada aquifer projected to surface

Scale 1:250,000

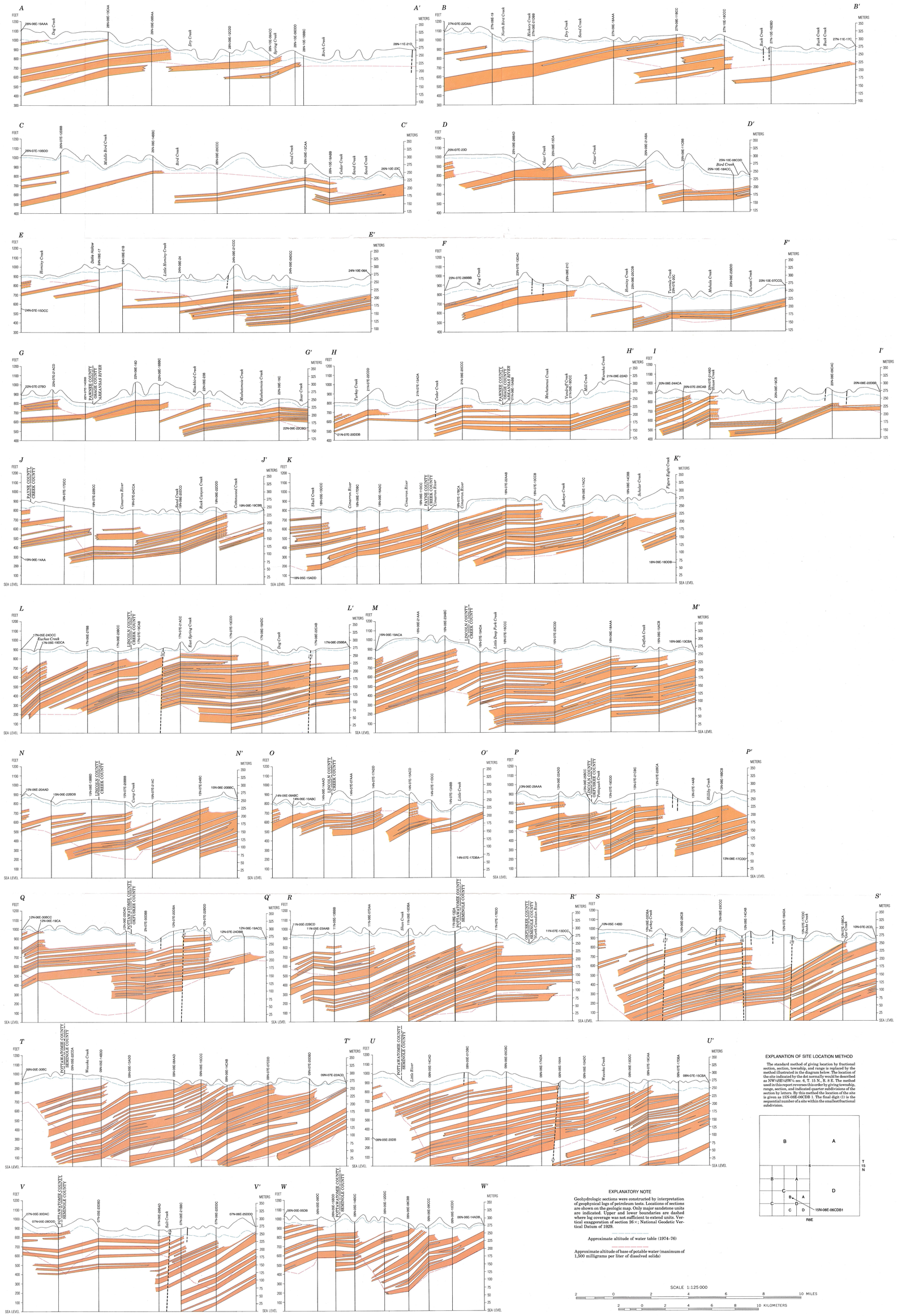
5 0 5 10 15 20 Statute Miles

5 0 5 10 15 20 Kilometers

CONTOUR INTERVAL 100 FEET
WITH SUPPLEMENTARY CONTOURS AT 50 FOOT INTERVAL
NATIONAL GEODETIC VERTICAL DATUM OF 1929

Base from U.S. Geological Survey 1:250,000-scale series: Ardmore, 1967, Enid, 1965, and Oklahoma City, 1968

Geology modified from R. D. Fay in Hart (1974), Bingham and Moore (1975), and Bingham and Bergman (1980)



EXPLANATION OF SITE LOCATION METHOD

The standard method of giving location by fractional section, section, township, and range is replaced by the method illustrated in the diagram below. The location of the site indicated by the dot normally would be described as NW¼SE¼SW¼ sec. 6, T. 15 N., R. 8 E. The method used in this report reverses this order by giving township, range, section, and indicated quarter subdivisions of the section by letters. By this method the location of the site is given as 15N-08E-06CDB 1. The final digit (1) is the sequential number of a site within the smallest fractional subdivision.

EXPLANATORY NOTE

Geohydrologic sections were constructed by interpretation of geophysical logs of petroleum tests. Locations of sections are shown on the geologic map. Only major sandstone units are indicated. Upper and lower boundaries are dashed where log coverage was not sufficient to extend units. Vertical exaggeration of section 26×; National Geodetic Vertical Datum of 1929.

Approximate altitude of water table (1974–76)

Approximate altitude of base of potable water (maximum of 1,500 milligrams per liter of dissolved solids)

SCALE 1:125 000

2 0 2 4 6 8 10 MILES

2 0 2 4 6 8 10 KILOMETERS

GEOLOGIC MAP OF VAMOOSA FORMATION AND YOUNGER UNITS, AND GEOHYDROLOGIC SECTIONS SHOWING MAJOR SANDSTONE UNITS IN VAMOOSA–ADA AQUIFER, EAST-CENTRAL OKLAHOMA

By
Joseph J. D'Lugosz and Roger G. McClaflin

1986