PLATE I

GEOLOGIC MAP
OF
THE GRAY HORSE AREA
OSAGE COUNTY, OKLAHOMA

DAVID G. BRYANT M.S. 1956

SCALE IN MILES

EXPLANATION

PENNSYLVANIAN SYSTEM

VIRGILIAN SERIES

WABAUNSEE GROUP

- EMPORIA LIMESTONE
- ELMONT LIMESTONE — Pwel
- HARVEYVILLE SHALE
- READING LIMESTONE — Pwr
- AUBURN SHALE — Pwa
- BERN LIMESTONE
- WAKARUSA LIMESTONE — Pw

SHAWNEE GROUP

- WOOD SIDING FORMATION
- BROWNVILLE LIMESTONE — Pwv
- PONY CREEK SHALE
- UNNAMED LIMESTONE — Pwl
- GRAYHORSE LIMESTONE — Pwh
- PLUMB SHALE
- NEBRASKA CITY LIMESTONE
- ROOT SHALE
- FRENCH CREEK SHALE
- JIM CREEK LIMESTONE — Pwc
- FRIEDRICH SHALE
- STOTLER LIMESTONE
- GRANDHAVEN LIMESTONE
- WILLARD–STOTLER (DRY) SHALE

PERMIAN SYSTEM

WOLFCAMPIAN SERIES

COUNCIL GROVE GROUP

- GRENOLA FORMATION
- BURR LIMESTONE — Pgb
- LOWER GRENOLA UNIT — Pg b-l
- ROCA SHALE
- RED EAGLE LIMESTONE — Pre
- JOHNSON SHALE — Pj
- FORAKER FORMATION
- LONG CREEK LIMESTONE — Pfle
- HUGHES CREEK LIMESTONE — Pfhc
- AMERICUS LIMESTONE — Pfa

ADMIRE GROUP

- ADMIRE SHALE — Pa

- QUATERNARY ALLUVIUM — Qal
- QUATERNARY TERRACE & EOLIAN — Qt

- U.S. HIGHWAY
- STATE HIGHWAY
- PAVED ROAD
- IMPROVED ROAD
- RAILROAD
- ABANDONED RAILROAD GRADE
- STOCK POND
- INTERMITTENT STREAM
- COUNTY LINE
- CITY LIMITS
- SCHOOL
- CHURCH
- FAULT
- LINEAR

R7E

T 27 N

T 26 N

T 25 N

R6E

T 24 N

T 23 N

T 22 N

GRAY HORSE

NAVAL RESERVE VILLAGE

ARKANSAS RIVER

OSAGE RD

PAWNEE RD

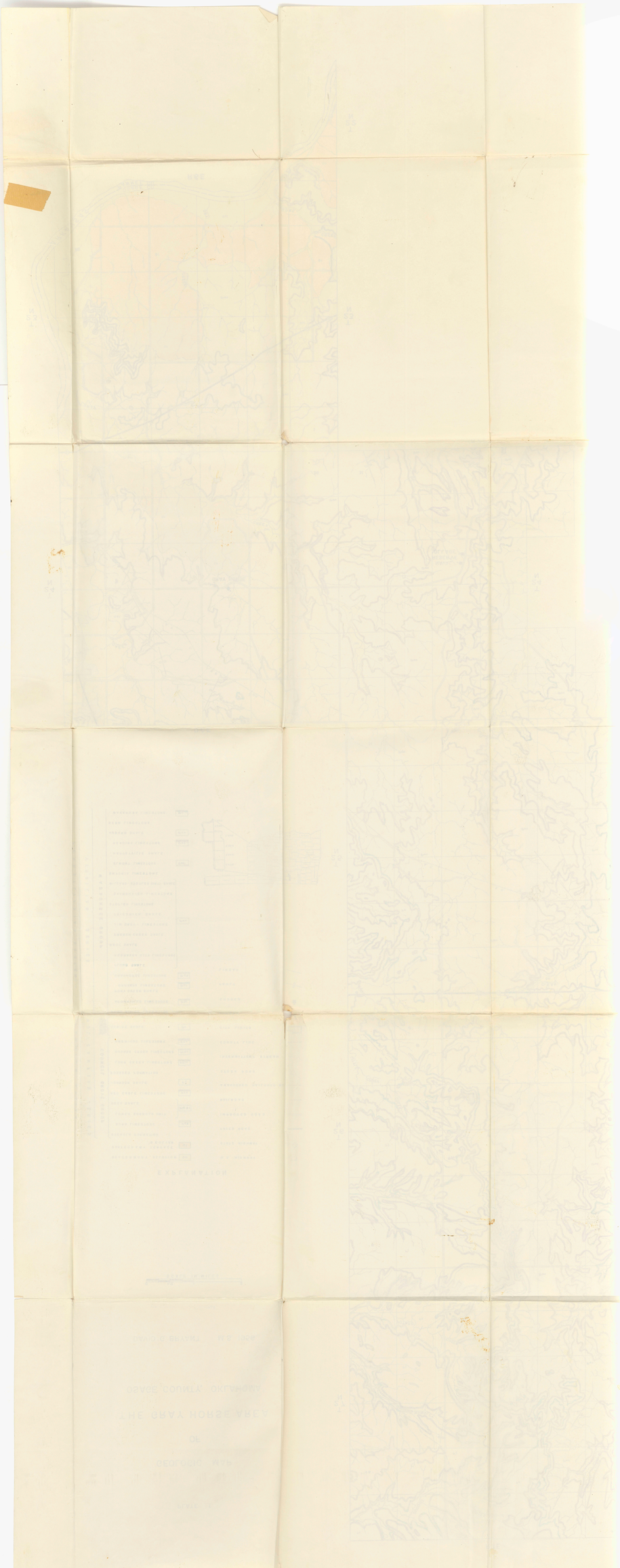
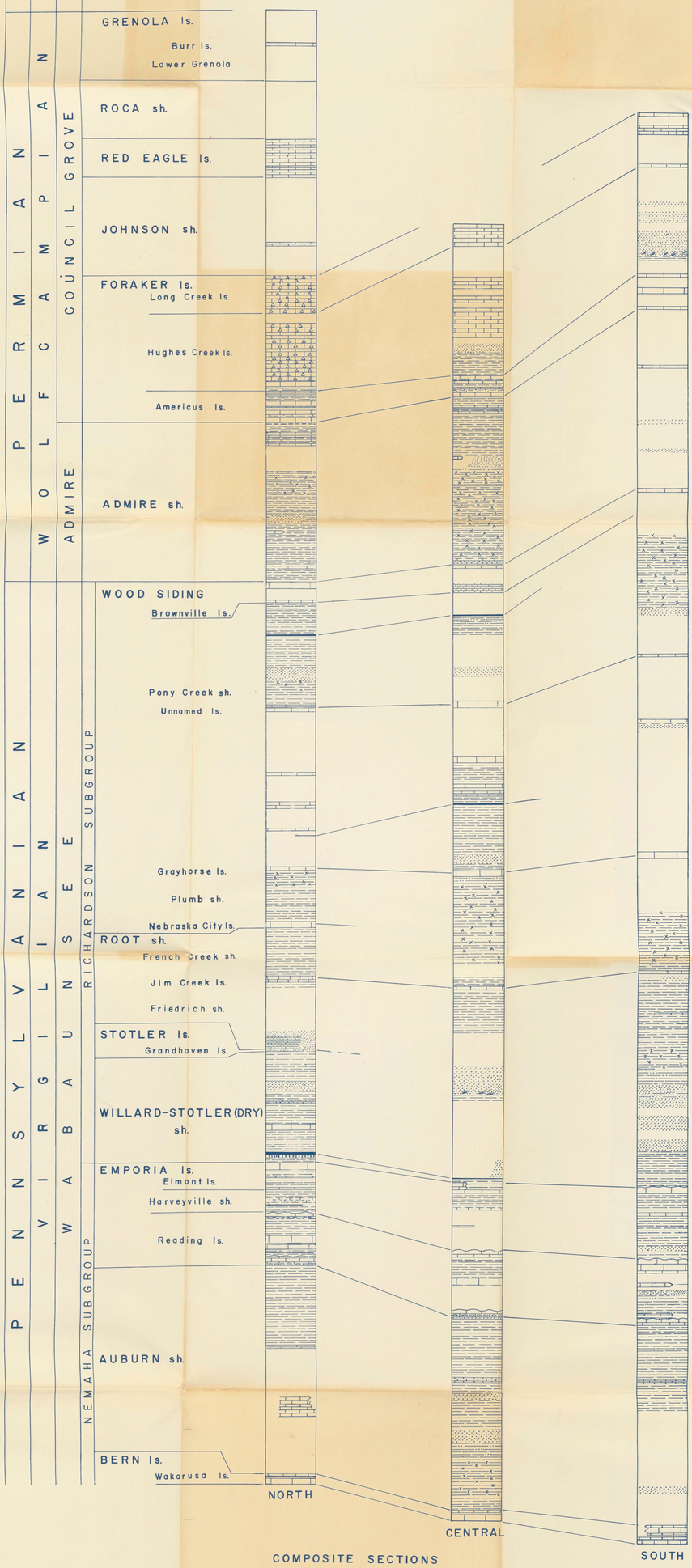


PLATE II



COMPOSITE SECTIONS OF THE UPPER PENNSYLVANIAN AND LOWER PERMIAN SYSTEMS IN THE GRAY HORSE AREA OSAGE COUNTY, OKLAHOMA

DAVID G. BRYANT M.S., 1956

LEGEND

limestone
cherty limestone
covered
shaley limestone
sandy limestone
shale
coal
underclay
siltstone
maroon shale
sandy shale
shaley sandstone
sandstone
cross-bedding

SCALE

0 feet

25