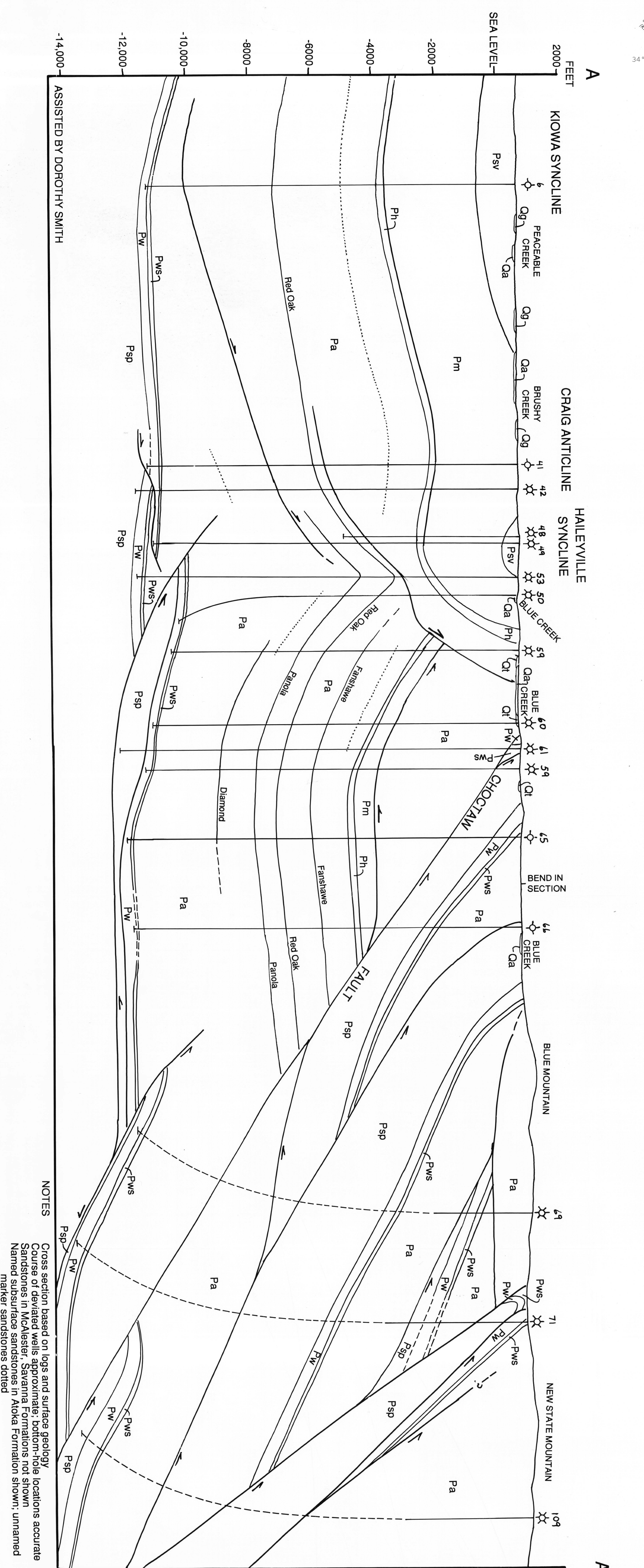


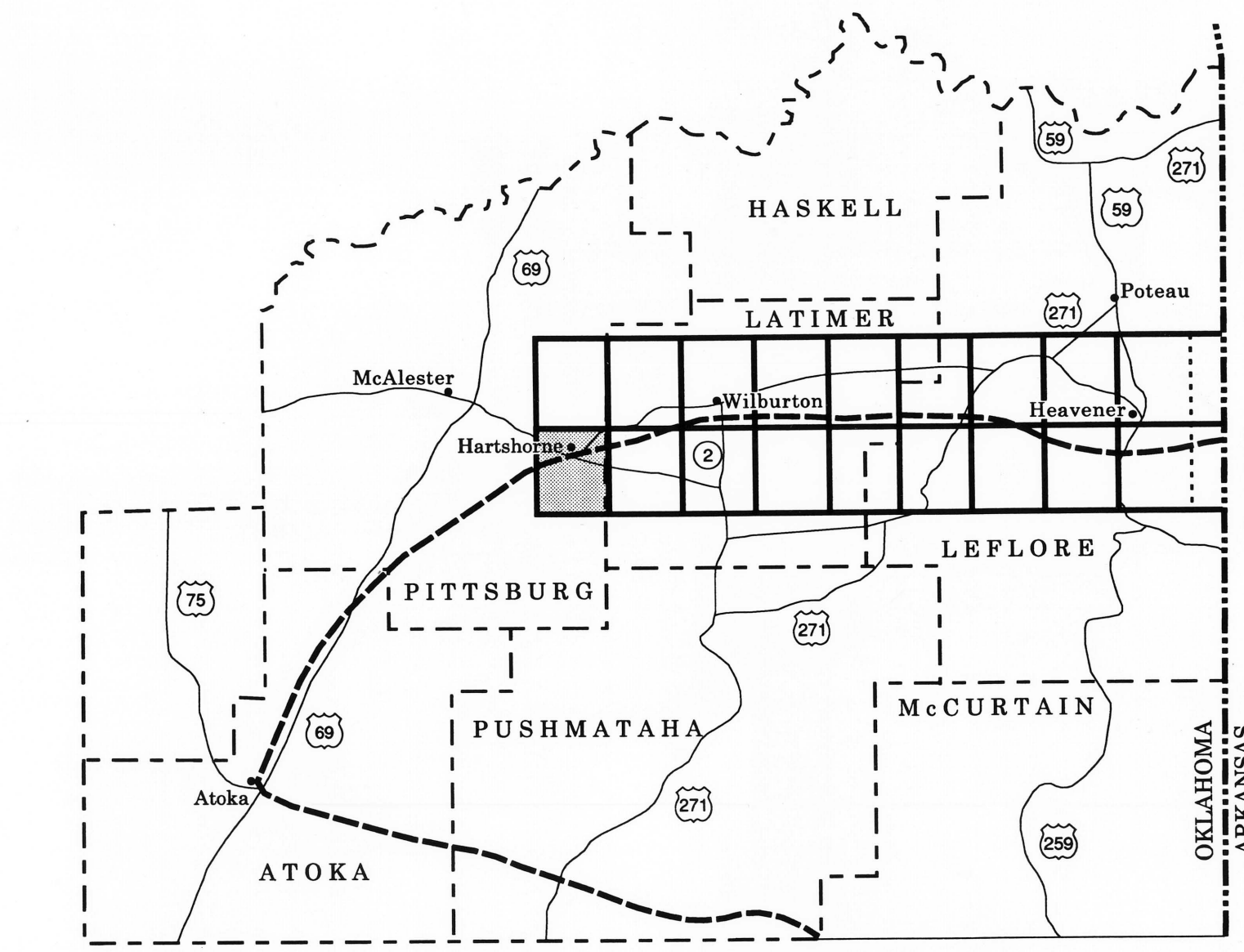


MAPS PUBLISHED AS PART OF
COGEOMAP & STATEMAP PROJECTS

ADAMSON	GOWEN	WILBURTON	PANOLA	RED OAK	LEFLORE	SUMMERFIELD	WISTER	HEAVENER	SATSBY
HARTSHORNE	HIGGINS	DIMON	BAKER MOUNTAIN	TALIHMA	BLACKACK RIDGE	LEFLORE SE	HODGEN	HONTUBER	SHULTON

GEOLOGIC MAP OF THE HARTSHORNE 7.5' QUADRANGLE, LATIMER AND PITTSBURG COUNTIES, OKLAHOMA

By
Neil H. Suneson
1995



LOCATION OF QUADRANGLE

CORRELATION OF MAP UNITS

af	} HOLOCENE	} QUATERNARY
Qa		
Qt		
Qg	} PLEISTOCENE	}

Units North of Choctaw Fault

IPsvs	IPsv	} DESMOINESIAN	} PENNSYLVANIAN
IPsvs	IPsv7, IPsv, IPsv5,6		
IPsvs	IPsv		
IPsvs	IPsv2,3,4	} ATOKAN	}
IPsv	IPm		
IPsv1	IPm		
IPmc	McAlester coal	} ATOKAN	}
IPm	unnamed coal		
IPm	unnamed coal		
IPml	IPmw(U), IPm, IPmw(I)	} ATOKAN	}
IPmm	IPmm		
IPmms	IPmms		
IPh	Upper Hartshorne coal	} ATOKAN	}
IPass	Lower Hartshorne coal		
IPass	IPa		

Units South of Choctaw Fault

IPa	} ATOKAN	} PENNSYLVANIAN
IPws		
IPw		
IPsp	} MORROWAN	}

SYMBOLS

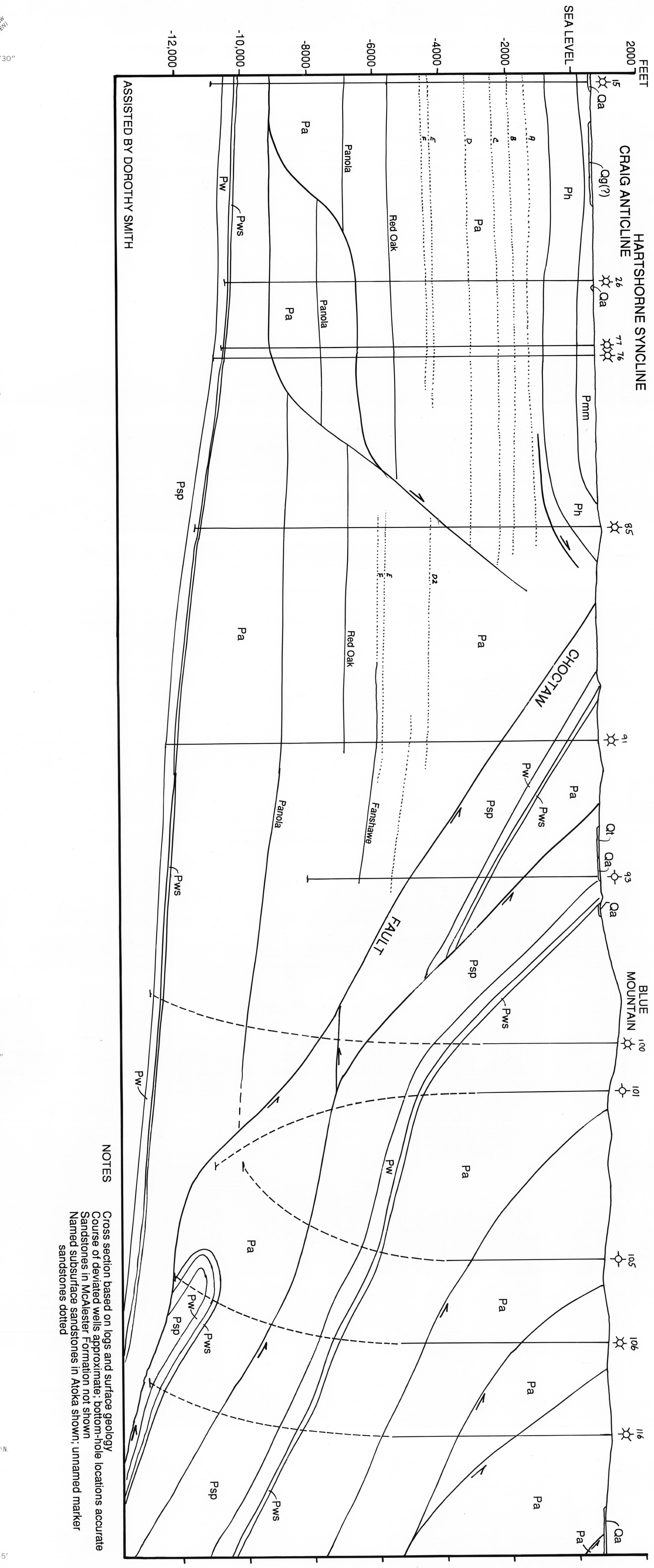
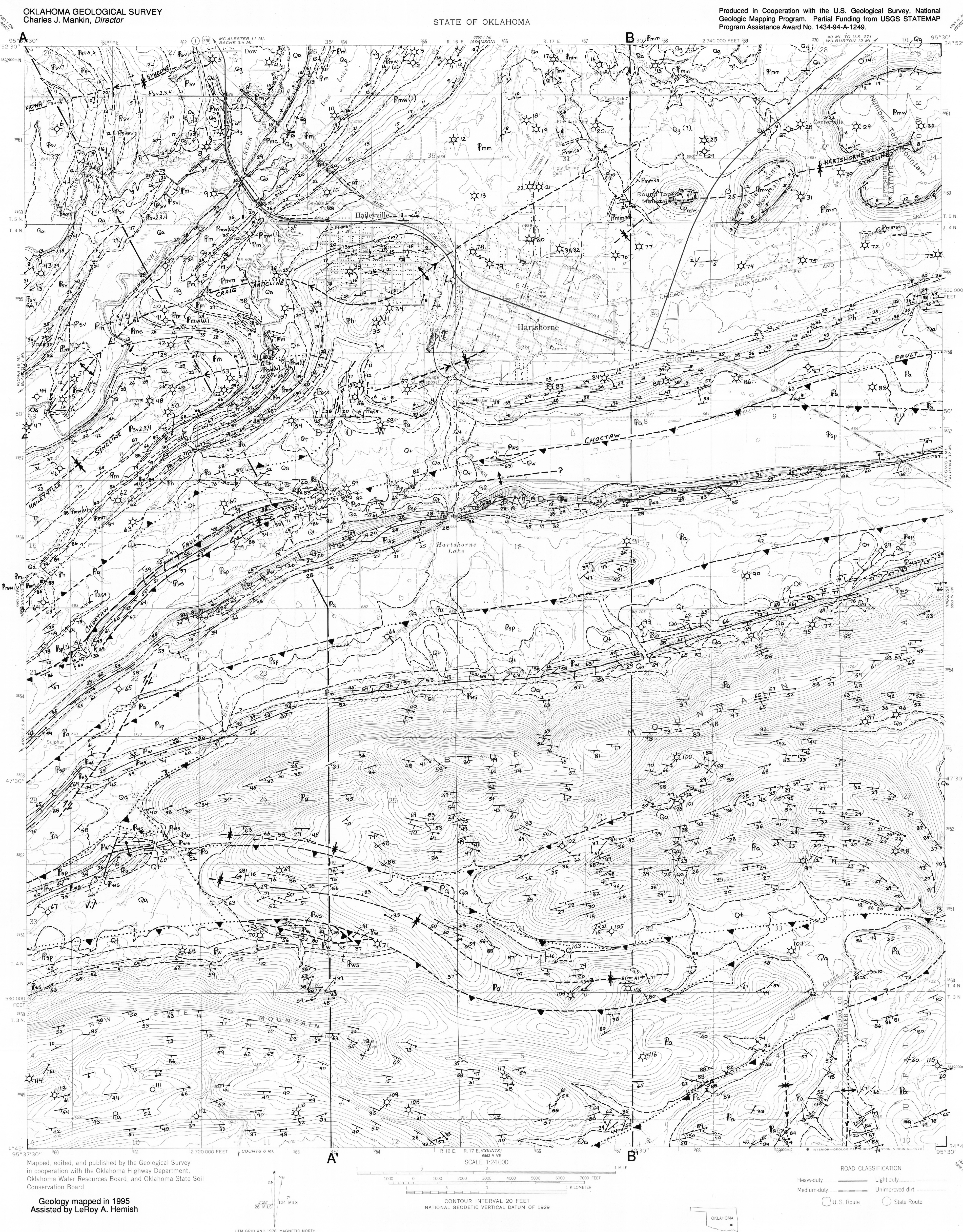
- CONTACT - Dashed where approximately located; queried where uncertain
- THRUST FAULT - Sawtooth on upper plate; dashed where approximately located; dotted where concealed; queried where uncertain
- FAULT - Arrows show relative horizontal movement; dashed where approximately located; dotted where concealed
- ANTICLINE - Showing crestline; arrow shows direction of plunge; dashed where approximately located; dotted where concealed; queried where uncertain
- SYNCLINE - Showing troughline; arrow shows direction of plunge; dashed where approximately located; dotted where concealed
- MINOR ANTICLINE - Showing plunge
- MINOR SYNCLINE - Showing plunge
- MINOR ANTICLINE - SYNCLINE PAIR - Showing plunge
- COAL EXPOSURE
- TRENCH
- ABANDONED SHAFT OR DOG HOLE
- SPOIL PILES FROM ABANDONED COAL MINE
- SURFACE QUARRY - Active or abandoned (a)

STRIKE AND DIP OF BEDS

- Leader to location of measurement
- Strike and dip of beds, upright
- Strike and dip of beds, overturned
- Strike and dip of beds, facing direction unknown
- Strike and dip of beds, approximate
- Vertical beds, ball indicates top of beds
- Vertical beds, facing direction unknown

OIL AND GAS WELLS

- Leader to location of measurement
- Drilling on December 1, 1995
- Dry hole, abandoned
- Gas well
- Number on map corresponds to list of wells



NOTES
Cross section based on logs and surface geology.
Sandstones in McAlester, Savanna Formations not shown.
Named subsurface sandstones in Atoka shown; unnamed marker sandstones omitted.

Geology mapped in 1995
Assisted by LeRoy A. Hemish

Maped, edited, and published by the Geological Survey
in cooperation with the Oklahoma Highway Department,
Oklahoma Water Resources Board, and Oklahoma State Soil
Conservation Board

UTM GRID AND 1978 MAGNETIC NORTH
(DECLINATION AT CENTER OF SHEET)

QUADRANGLE LOCATION

ROAD CLASSIFICATION

Heavy-duty	Light-duty
Medium-duty	Unimproved dirt
U.S. Route	State Route

CONTOUR INTERVAL, 20 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929