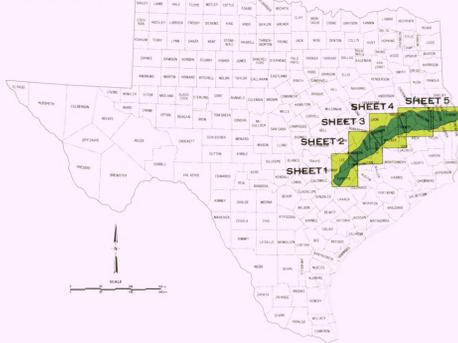


INDEX MAP



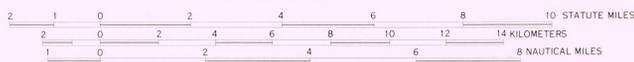
Base adapted from USGS 7 1/2" and 15" quadrangles, 10,000-meter Universal Transverse Mercator grid, zones 14 and 15, shown in blue.

References: Arbingast and others (1976), Barnes (1967, 1968), Dumble (1918), Dolezel (1980), Fisher (1965), Guyton (1970), Henry and Basciano (1979), Kaiser and others (1980), Sellards and others (1932), and Tarver (1968).

Mapped by Mary L. W. Jackson and L. E. Garner, assisted by Guy G. Cleveland and Robert A. Rountree. Scribing and cartography by Barbara Hartmann, Dan F. Scranton, Chief Cartographer.

**SOUTHEAST TEXAS LIGNITE BELT
ENVIRONMENTAL GEOLOGY
YEGUA-JACKSON TREND
SHEET 4**

SCALE 1:125,000



1980 MAGNETIC DECLINATION FOR THE CENTER OF THIS SHEET IS APPROXIMATELY 6°56' EASTERLY
CONTOUR INTERVAL — 20 FEET (6.1 METERS)

1982

MAPPING SUPPORTED BY A GRANT FROM THE ENERGY LANDS PROGRAM, U.S. GEOLOGICAL SURVEY

EXPLANATION

- Areas of measured lignite resources.
- Areas of indicated lignite resources.
- Areas of inferred lignite resources.

Order of characteristics for each unit below follows that given in table 1.

GEOMORPHIC UNITS

BOTTOMLAND UNITS

- FLOODPLAIN.** Alluvium; clay mud and sand with minor gravel, commonly fines upward; clay and clay loam soils; slopes less than 2 percent; includes terraces less than 10 ft above floodplain elevation; high- to moderate-frequency flooding, recharge, ponding; pine and water-tolerant hardwood forest; aquifer, commercial timberland, pastureland.
- UNDIFFERENTIATED ALLUVIUM AND COLLUVIUM.** Fluvial and slope deposits; clay mud and sand with minor gravel along low-order tributaries; fine sandy loam and clay loam soils; slopes less than 5 percent; low- to high-frequency flooding; pine forest; commercial timberland, pastureland.
- RIVER TERRACE UNITS**
- SAND TERRACE.** Alluvium; sand with minor clay and gravel, commonly fines upward; fine sandy loam soils; slopes less than 2 percent; rare flooding, recharge; pine forest; commercial timberland, minor aquifer, pastureland.

- SANDY MUD TERRACE.** Alluvium; clay mud and sand with minor gravel, commonly fines upward; fine sandy loam and loamy fine sand soils; slopes less than 2 percent; rare flooding, recharge; pine forest; commercial timberland, minor aquifer, pastureland. Contiguous terraces of different ages separated by solid line.
- TERRACE MARGIN.** Alluvium; clay mud and sand with minor gravel, dominant material same as that of adjoining terrace; slopes 3 to 10 percent, forms the lower sloping and locally gullied boundary of a terrace; gullying, low-frequency flooding, recharge; pine forest; commercial timberland, pastureland.
- LOW TERRACE OVERLAY.** Terraces 10 ft above floodplain elevation; inundated during low-frequency high-magnitude floods, modifies river terrace units only.
- MISCELLANEOUS GEOMORPHIC UNITS**
- DISSECTED SAND AND MUD.** Interbedded sand, mud, and sandy mud; fine sandy loam and clay loam soils; slopes 10 to 25 percent; recharge, erosion, gullying; pine forest; commercial timberland, pastureland.
- ALLUVIAL FAN.** Sand and clay mud with minor gravel; fine sandy loam and clay loam soils; slopes less than 2 percent, fan shaped in plan view; low- to moderate-frequency flooding, recharge; pine forest; aquifer, commercial timberland, pastureland.
- MODERATE-RELIEF SAND AND MUD—PINE FOREST.** Interbedded sand, mud, and sandy mud, locally iron-stained; fine sandy loam and loamy fine sand soils; slopes 3 to 10 percent; recharge, pine forest; commercial timberland, minor aquifer, pastureland, recreation.
- SAND UNITS**
- SAND HILLS.** Hard to loose sand and silty sand, locally conglomeratic; fine sandy loam soils; slopes 3 to 10 percent; recharge, gullying; pine forest; aquifer, commercial timberland, pastureland.
- LOW ROLLING SANDS.** Hard to loose sand and silty sand; fine sandy loam soils; slopes less than 3 percent; recharge, gullying; pine forest; aquifer, commercial timberland, pastureland.
- FINE SAND.** Friable to loose fine sand and silty sand, locally indurated; fine sandy loam soils; slopes less than 10 percent; recharge, gullying; pine forest; aquifer, commercial timberland, pastureland.
- INDURATED SANDSTONE.** Silica-cemented sandstone; fine sandy loam soils; slopes less than 3 percent; sheetwash; pine forest; commercial timberland, pastureland.
- MISCELLANEOUS SUBSTRATE UNIT**
- ASH.** Consolidated, vitric ash; fine sandy loam soils; slopes less than 5 percent; sheetwash; pine forest; commercial timberland.
- MAN-MADE UNITS**
- SURFACE-MINED LAND.** Land disturbed by mining for clay, sand, gravel, or ironstone; soils absent; slopes variable; erosion, vegetation sparse; land use minimal if not currently mined.
- CONTROLLED INUNDATION.** Land upstream from reservoirs below elevation of spillway but not regularly inundated; soils, processes, vegetation, and land use variable; slopes less than 3 percent.