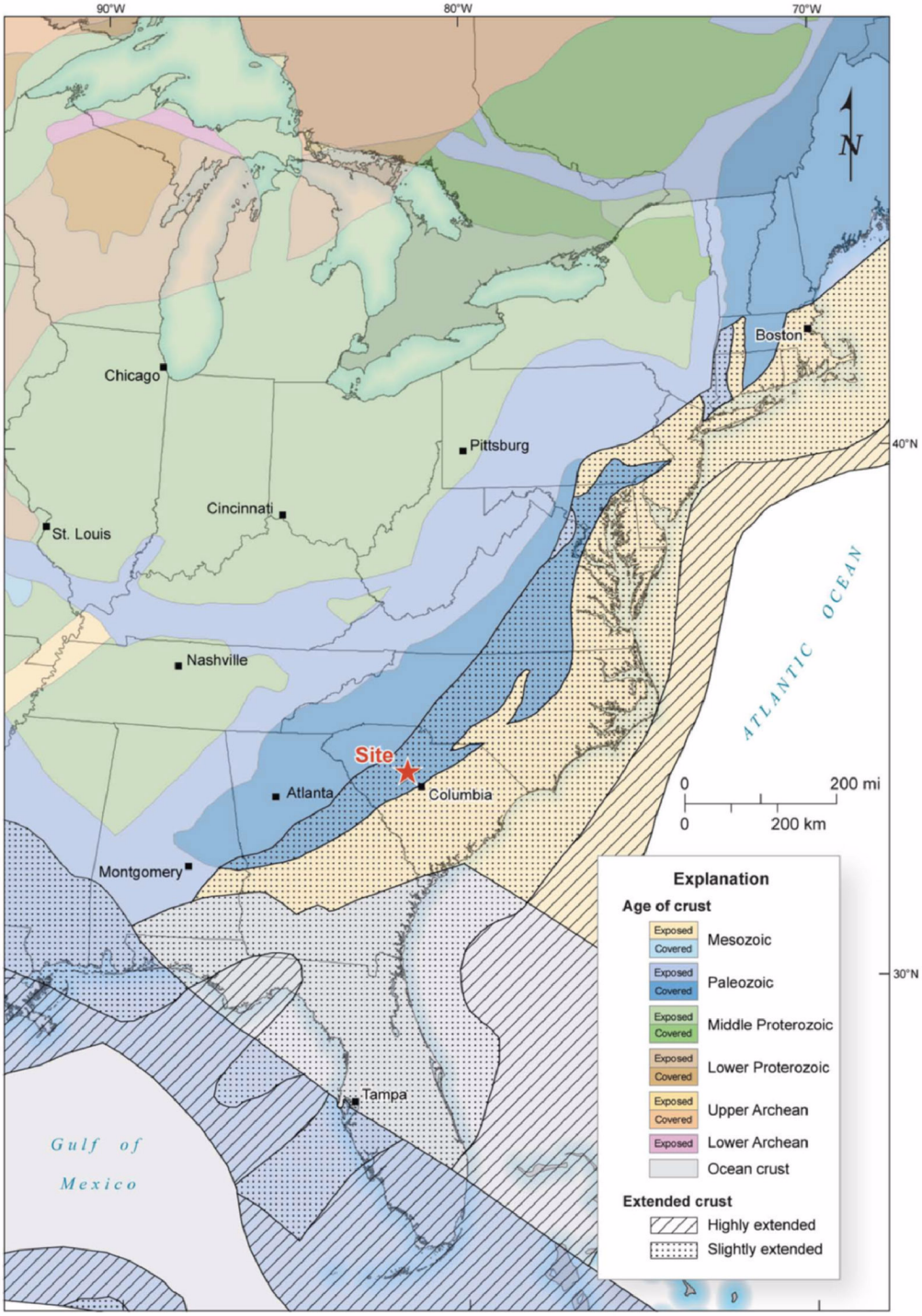

Figure 2.5.1-214. Crustal Ages from Johnston et al. (1994)

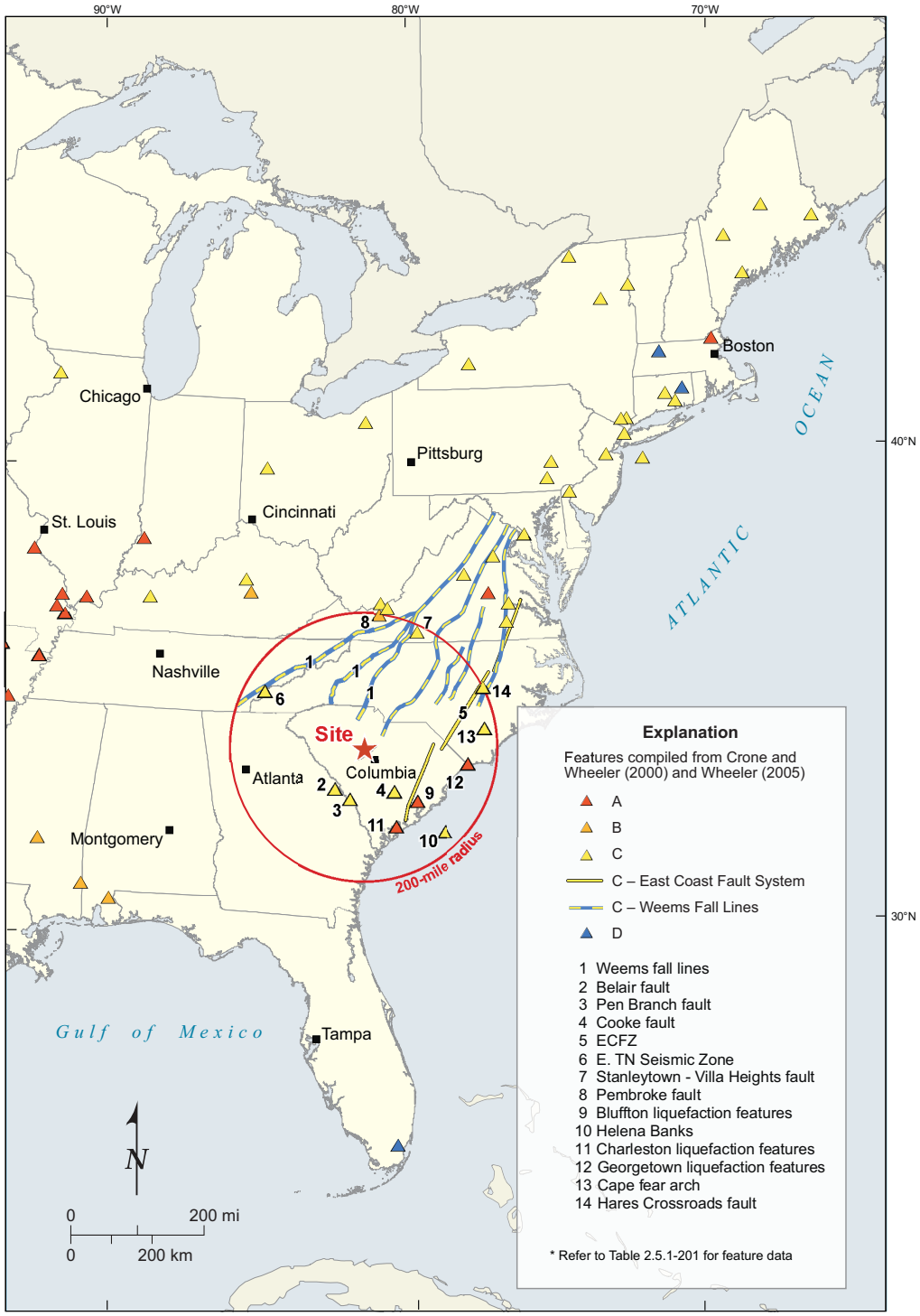

Figure 2.5.1-215. Potential Quaternary Features in the Site Region

Figure 2.5.1-216. Seismic Zones and Seismicity in CEUS

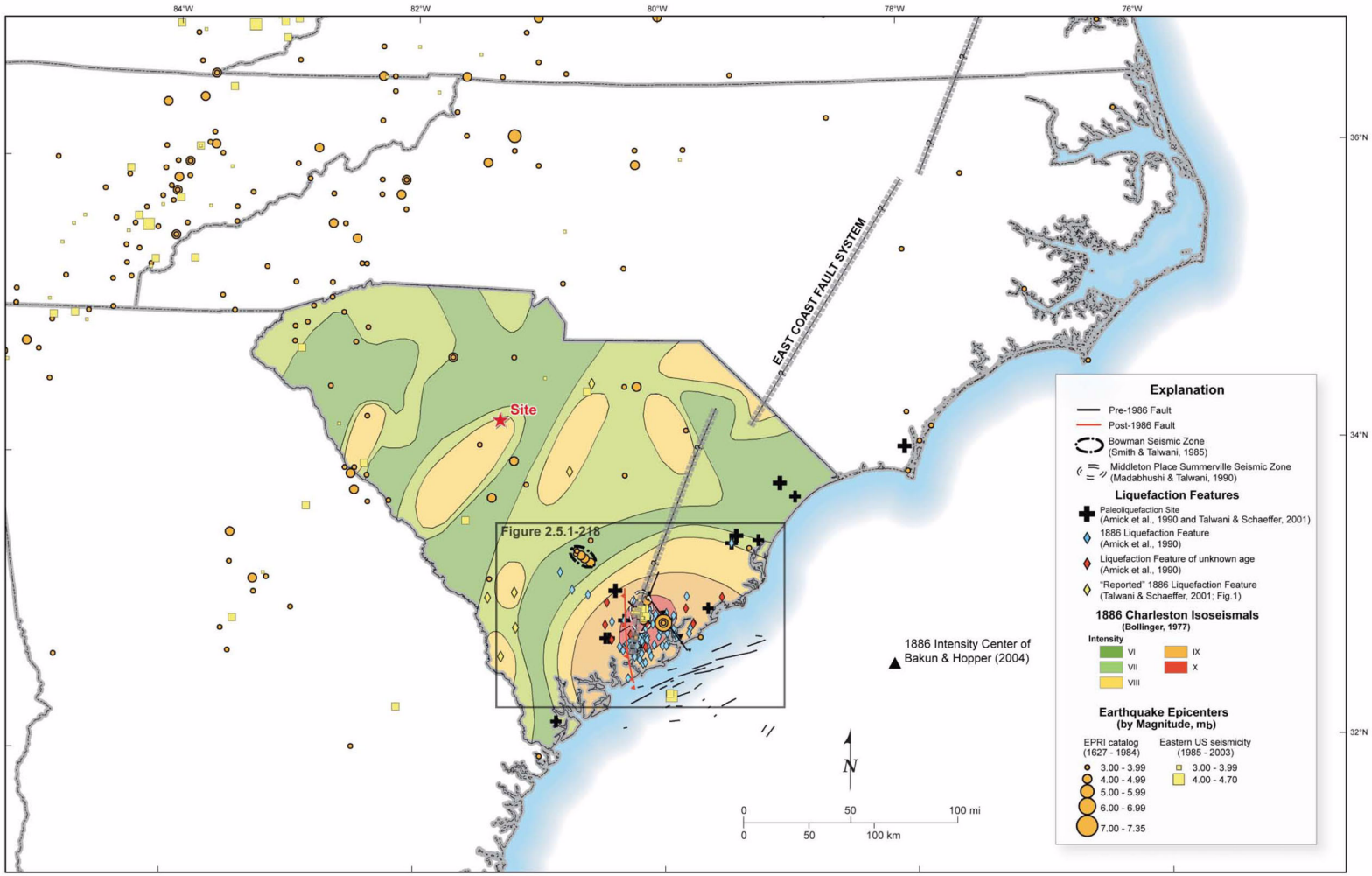

Figure 2.5.1-217. Regional Charleston Tectonic Features

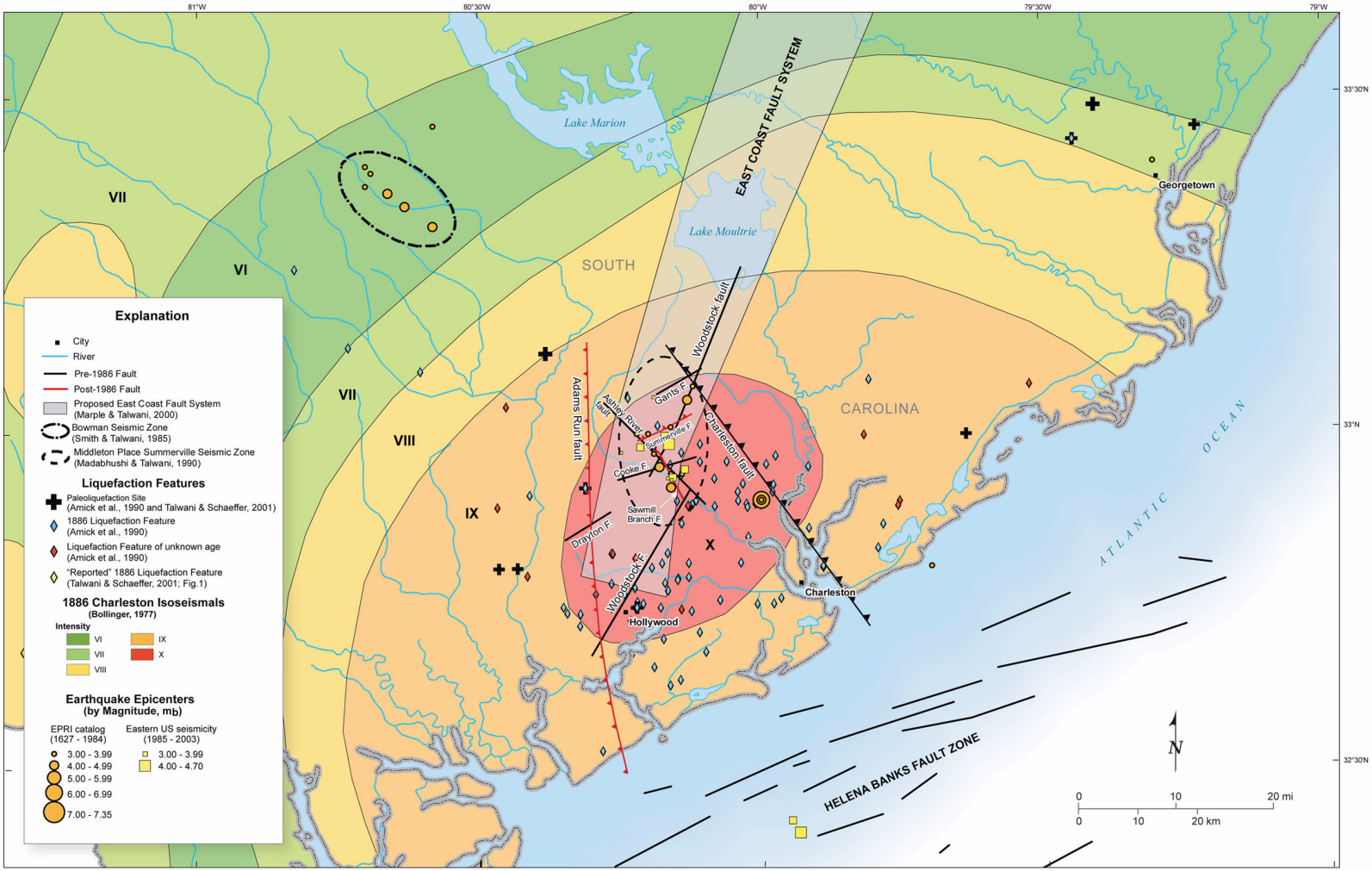

Figure 2.5.1-218. Local Charleston Tectonic Features

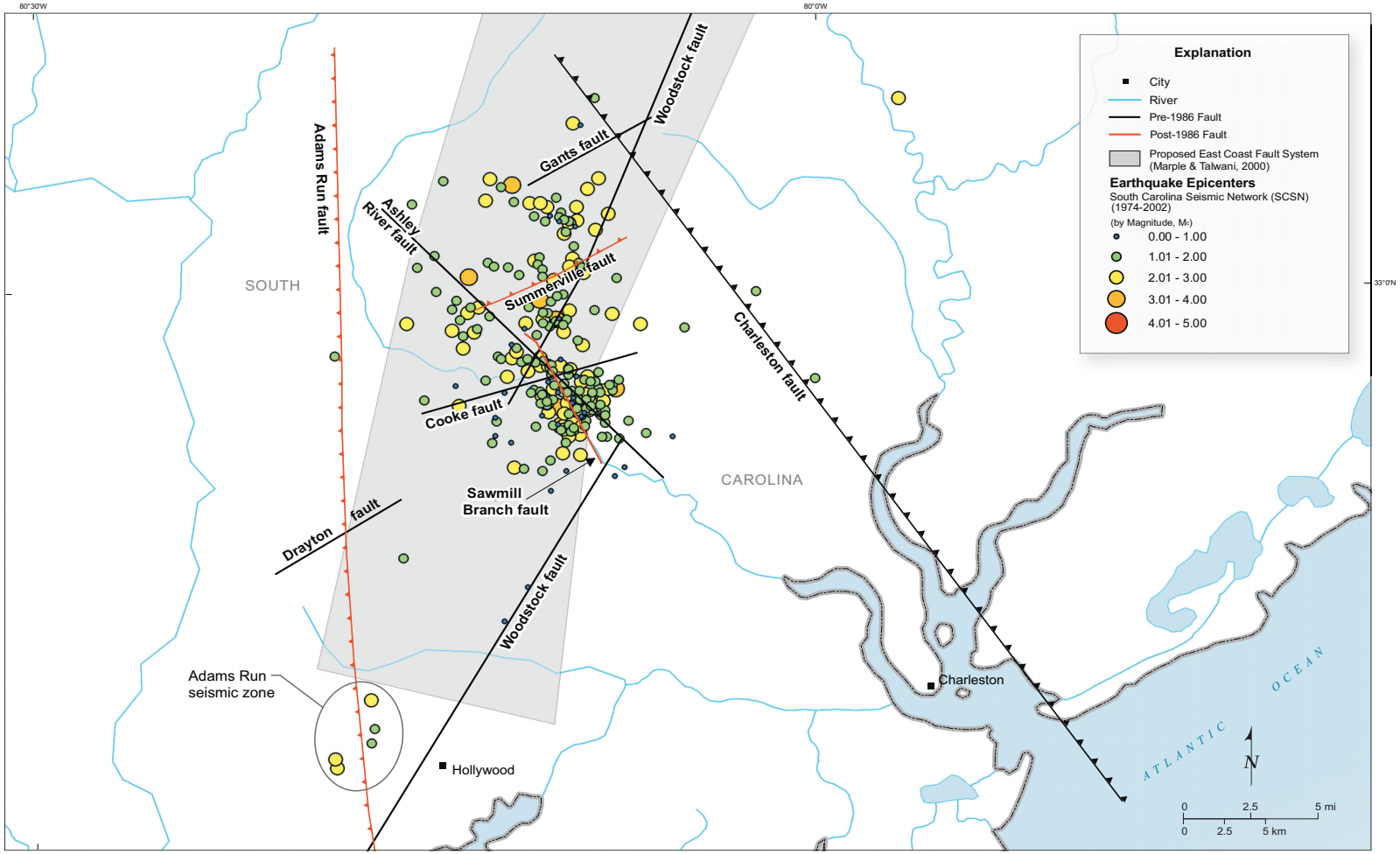

Figure 2.5.1-219. Charleston Area Seismicity

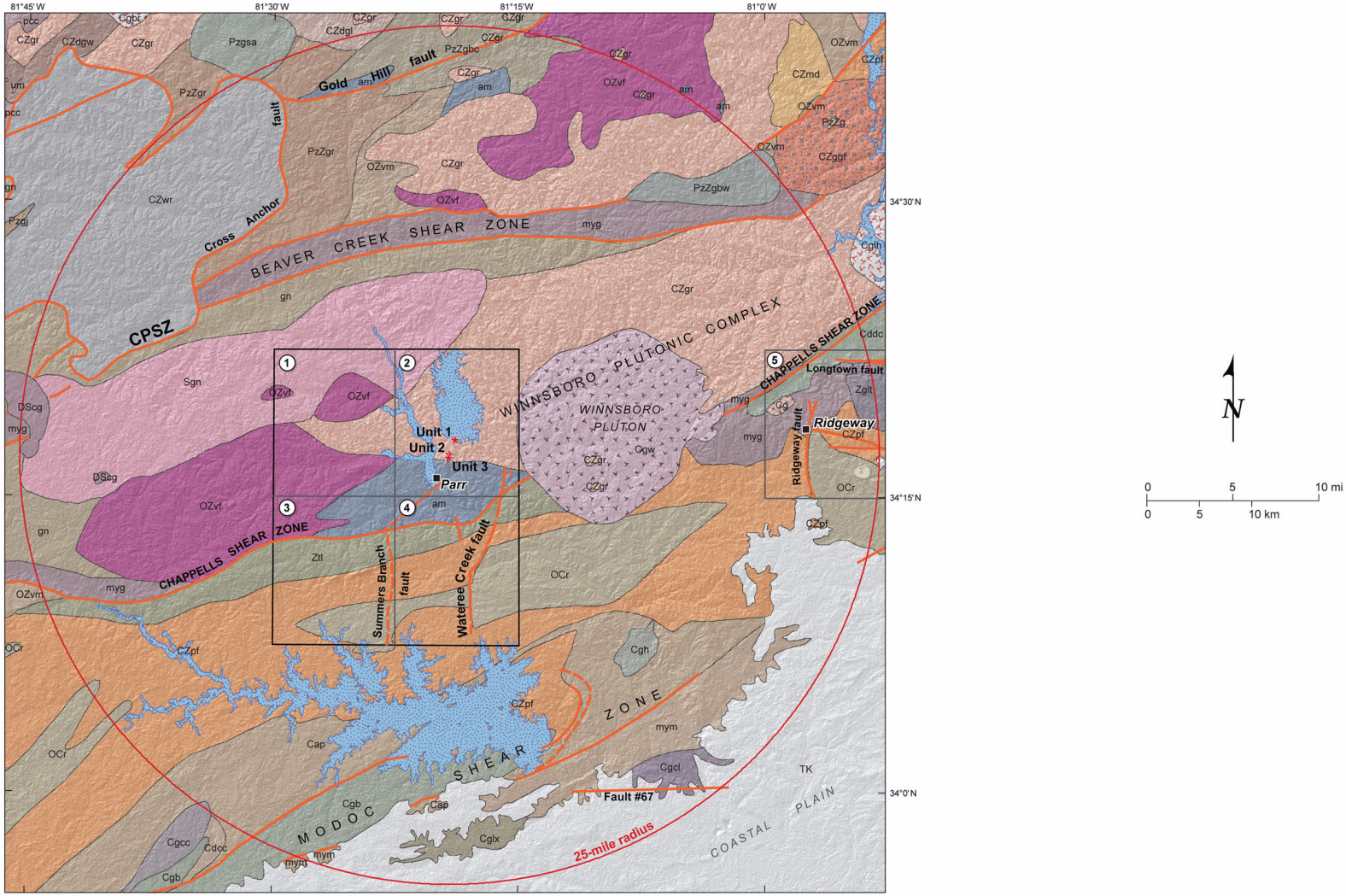

Figure 2.5.1-220. Site Vicinity Geologic Map (Sheet 1 of 2)

Explanation

Horton and Dicken (2001)

LATE PALEOZOIC
- myg — Mylonitic gneiss
- mym — Mylonitic rocks of Modoc fault zone

CARBONIFEROUS TO PERMAIN
- Cgb — Granite, Batesman pluton
- Cgbr — Granite, Bald Rock pluton
- Cgcc — Granite, Clouds Creek pluton
- Cgcl — Granite, Columbia pluton
- Cgh — Granite, Harbison pluton
- Cglh — Granite, Liberty Hill pluton
- Cgwb — Granite, Winnsboro pluton
- Cglx — Granite, Lexington pluton

CARBONI-FEROUS
- Cdcc — Gabbro and diorite, Clouds Creek pluton
- Cddc — Gabbro and diorite, Dutchmans Creek pluton

DEVONIAN TO SILURIAN
- DScg — Gabbro

SILURIAN
- Sgn — Newberry granite and similar, possilby related granites

ORDOVICIAN TO MIDDLE CAMBRIAN
- OCr — Richtex Formation - metamudstone

MIDDLE CAMBRIAN
- Cap — Asbill Pond Formation - metamorphosed siltstone and sandstone with interbedded metavolcanic rocks

PALEOZOIC
- Pzgj — Granite sheets near Joanna
- Pzgsa — Santuck granite

MIDDLE PALEOZOIC TO NEOPROTEROZOIC
- PzZg — Metagabbro and minor metadiorite
- PzZgbc — Metagabbro and minor metadiorite - Chester
- PzZgbw — Metagabbro and minor metadiorite - Big Wateree Creek

ORDOVICIAN TO NEOPROTEROZOIC
- OZvf — Felsic metavolcanic rocks and layered felsic gneiss
- OZvm — Mafic to intermediate metavolcanic rocks including hornblende gneiss and amphibolite

PALEOZOIC TO NEOPROTEROZOIC
- PzZgr — Metamorphosed granitoids
- am — Amphibolite and amphibole gneiss
- gn — Biotite-quartz-plagioclase gneiss
- um — Ultramafic rock - metamorphosed

EARLY PALEOZOIC-NEOPROTERO-ZOIC
- CZdgl — Metadiorite and minor metagabbro - Lockhart metadiorite
- CZdgw — Metadiorite and minor metagabbro - Wildcat Branch complex

CAMBRIAN OR NEOPROTEROZOIC
- CZggf — Great Falls metagranite - metamorphosed muscovite-biotite granite
- CZgr — Metamorphosed granite to granodiorite
- CZmd — Metadiorite
- CZpf — Persimmon Fork Formation - mainly metatuff
- CZwr — Biotite-quartz-feldspar gneiss of Whitmire reentrant

NEO-PROTEROZOIC
- Ztl — Metatolanlite

UNDETERMINED
- pcc — Philson Crossroads complex - biotite-quartz-fledspar gneiss having layers of amphibolite and metagranite

Other Mapped Quandrangles, not shown

1. Pomaria 7.5-minute quandrangle, Secor (2007); See Figure 2.5.1-225
2. Jenkinsville 7.5-minute quandrangle, Secor (2007); See Figure 2.5.1-225
3. Little Mountain 7.5-minute quandrangle, Secor (2007); See Figure 2.5.1-225
4. Chapin 7.5-minute quandrangle, Secor (2007); See Figure 2.5.1-225
5. Ridgeway 7.5-minute quandrangle, Secor et al. (1998); See Figure 2.5.1-213

Faults modified from Hibbard et al. (2006) and Secor (2007); dashed where postulated and likely non-existent

Figure 2.5.1-220. Explanation of Site Vicinity Geologic Map (Sheet 2 of 2)

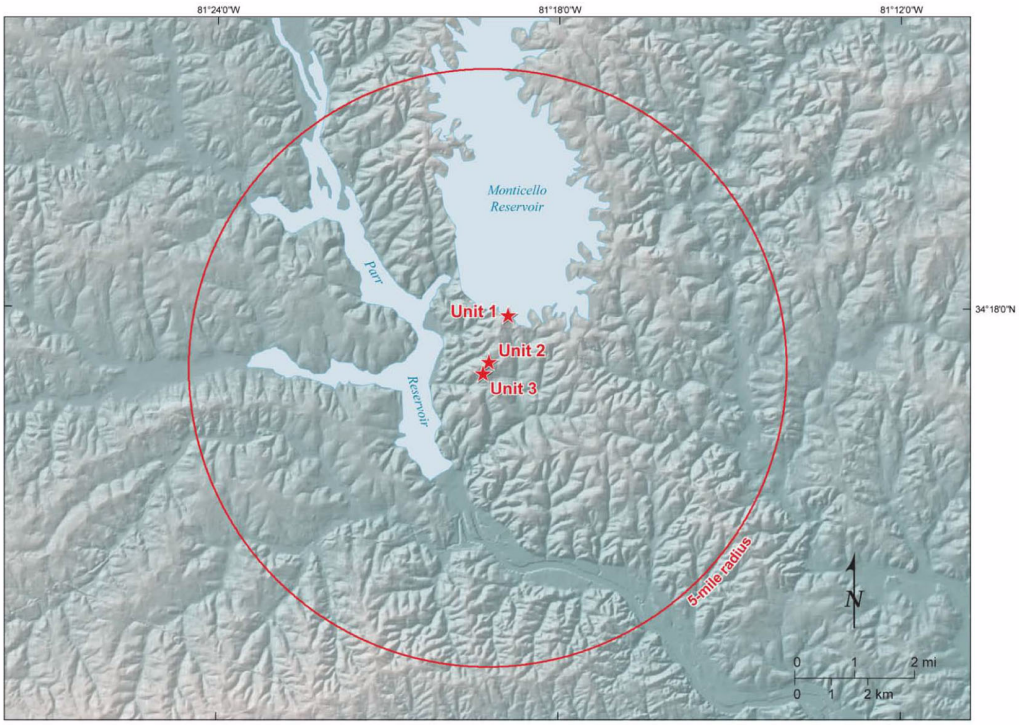

Figure 2.5.1-221. Site Area Relief Map

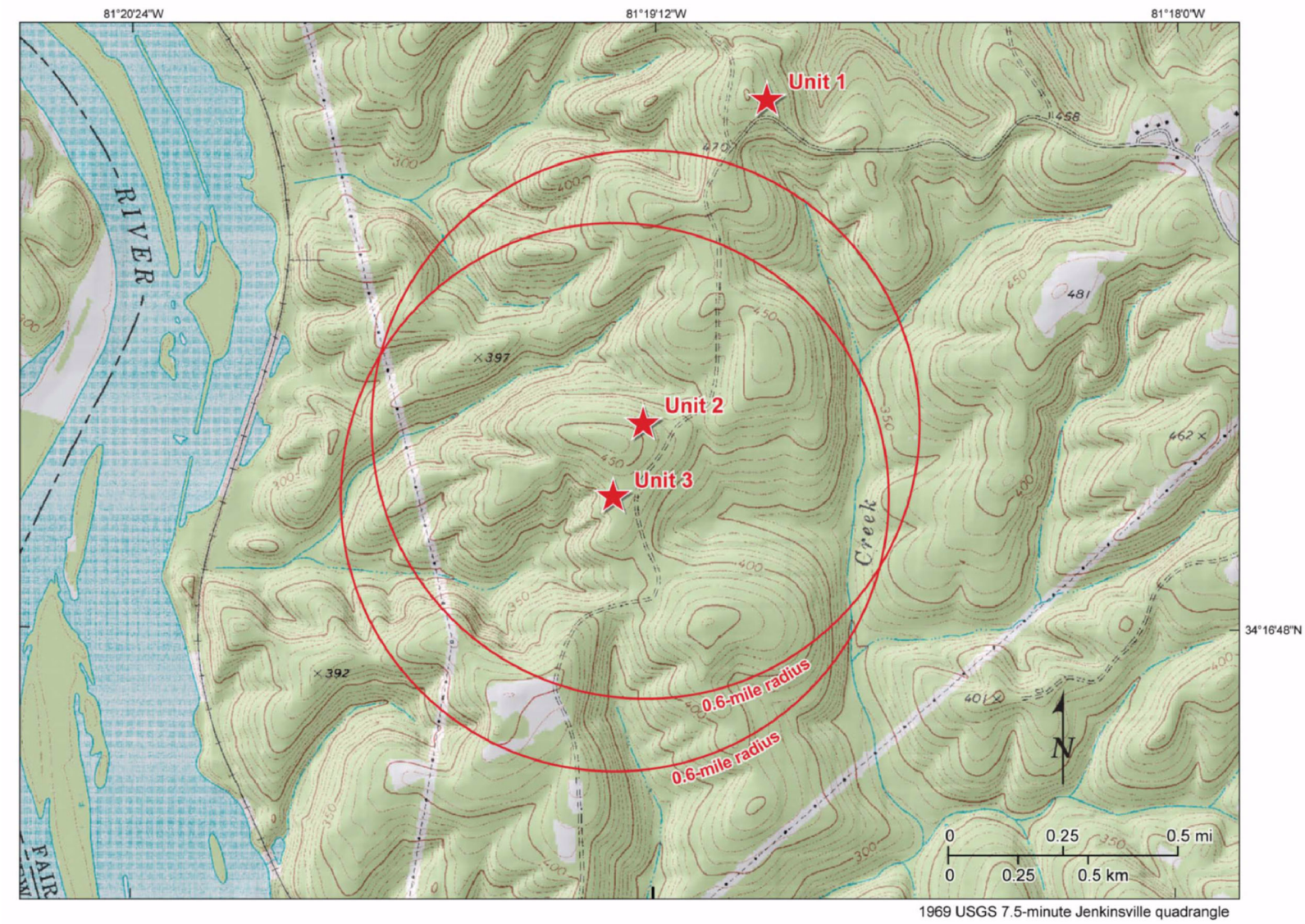

Figure 2.5.1-222. Site Topographic Map