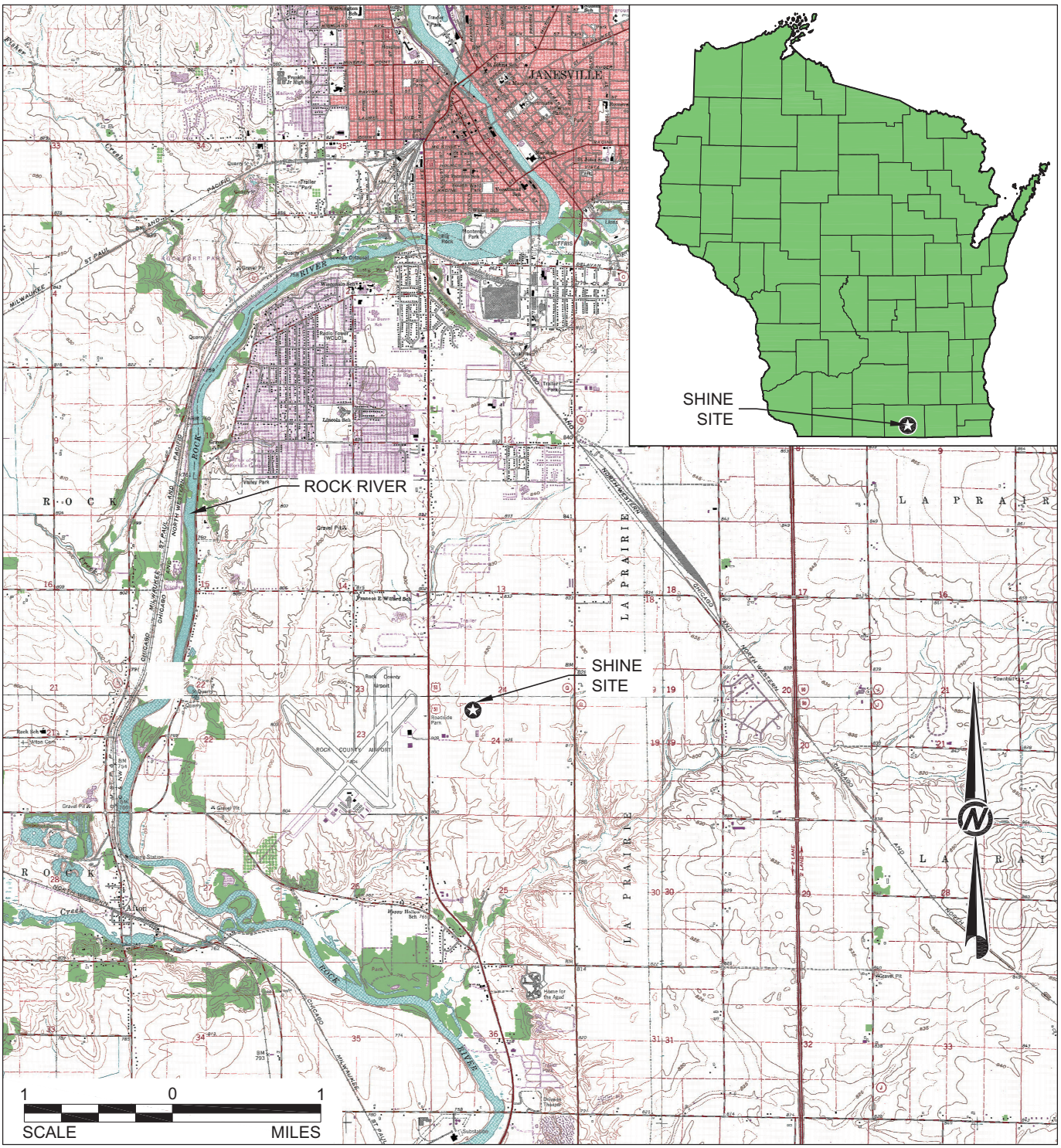
Figure 2.5-1 – Site Vicinity Map



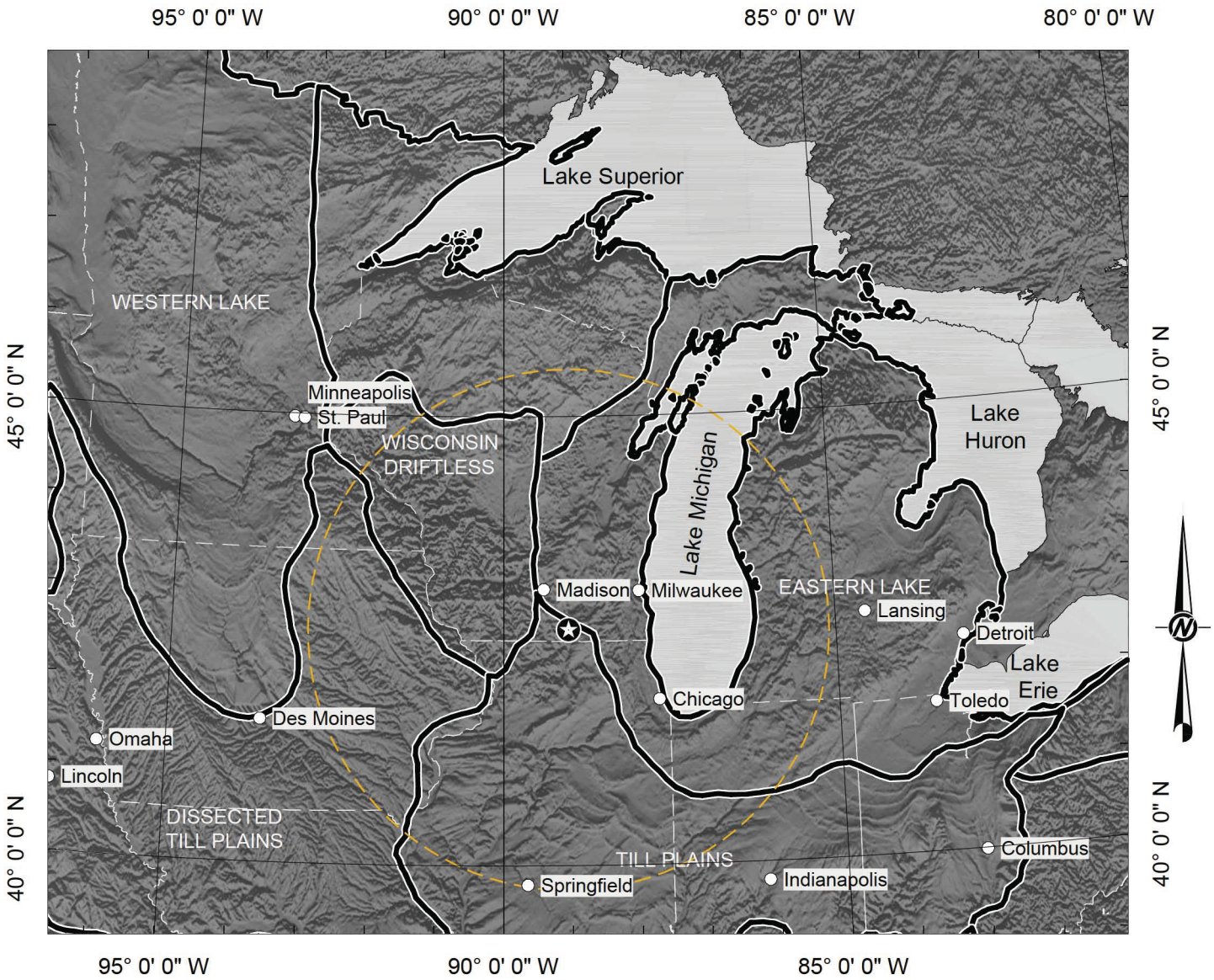
LEGEND

✪ SHINE SITE

REFERENCES

WDNR, 1997a; WDNR, 1997b; WDNR, 1997c; WDNR, 1997d

Figure 2.5-2 – Map of Physiographic Sections



LEGEND

- SHINE SITE
- 200 MILE (322 KM) RADIUS
- BOUNDARY OF PHYSIOGRAPHIC SECTION
- STATE BOUNDARY

124 0 124
SCALE MILES

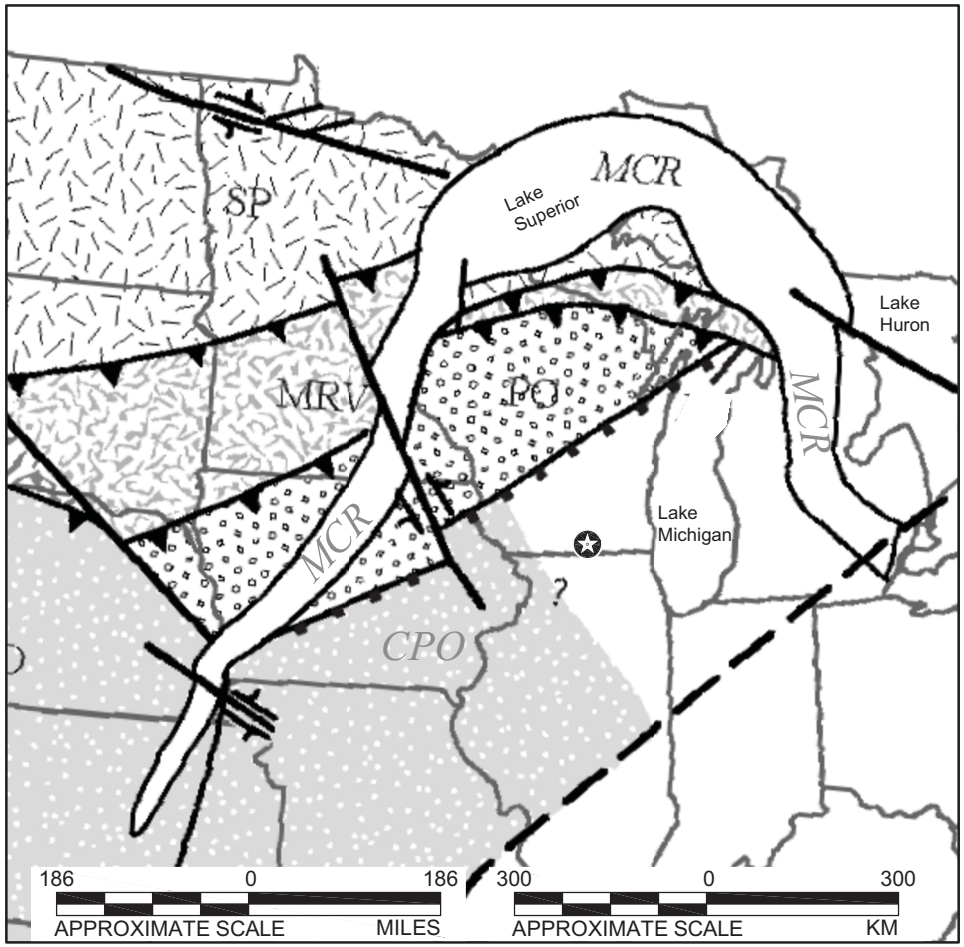
200 0 200
SCALE KM

REFERENCE

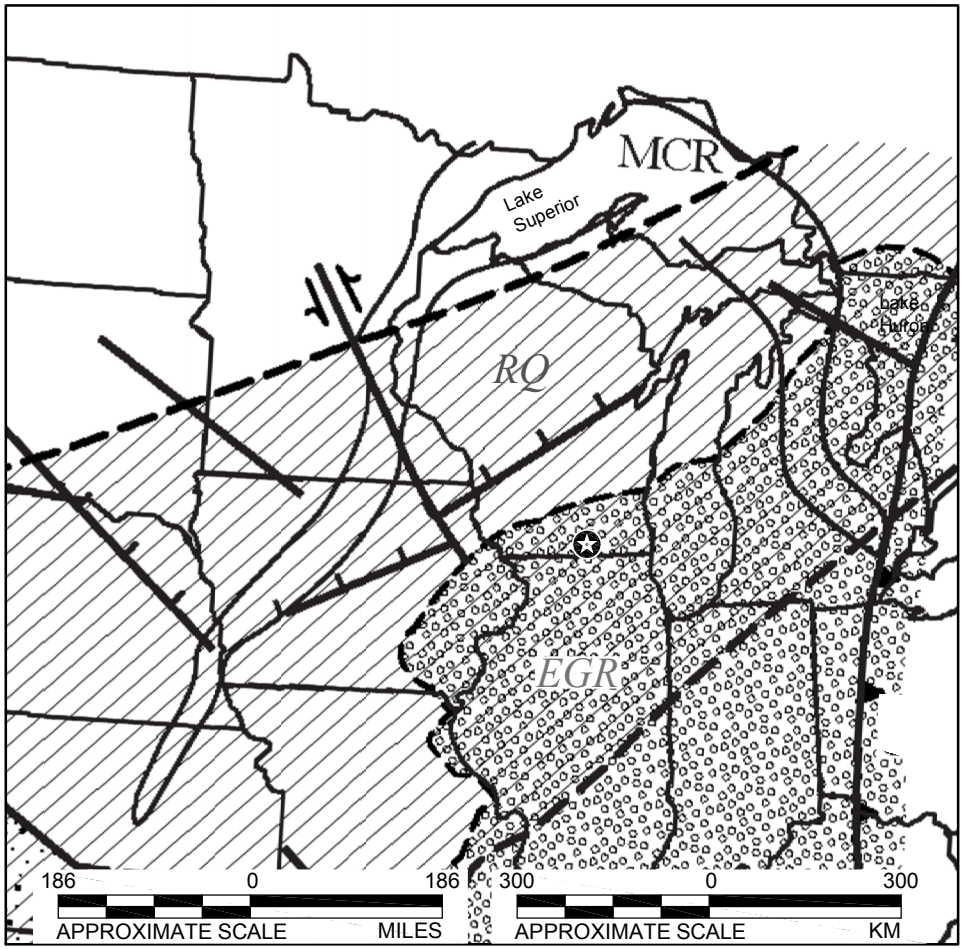
1.) USGS, 2010.
2.) CGIAR-CSI, 2012.

Figure 2.5-3 – Tectonic Provinces Map

ARCHEAN AND PALEOPROTEROZOIC GEOLOGIC PROVINCES



LATE PROTEROZOIC AND MESOPROTEROZOIC GEOLOGIC PROVINCES



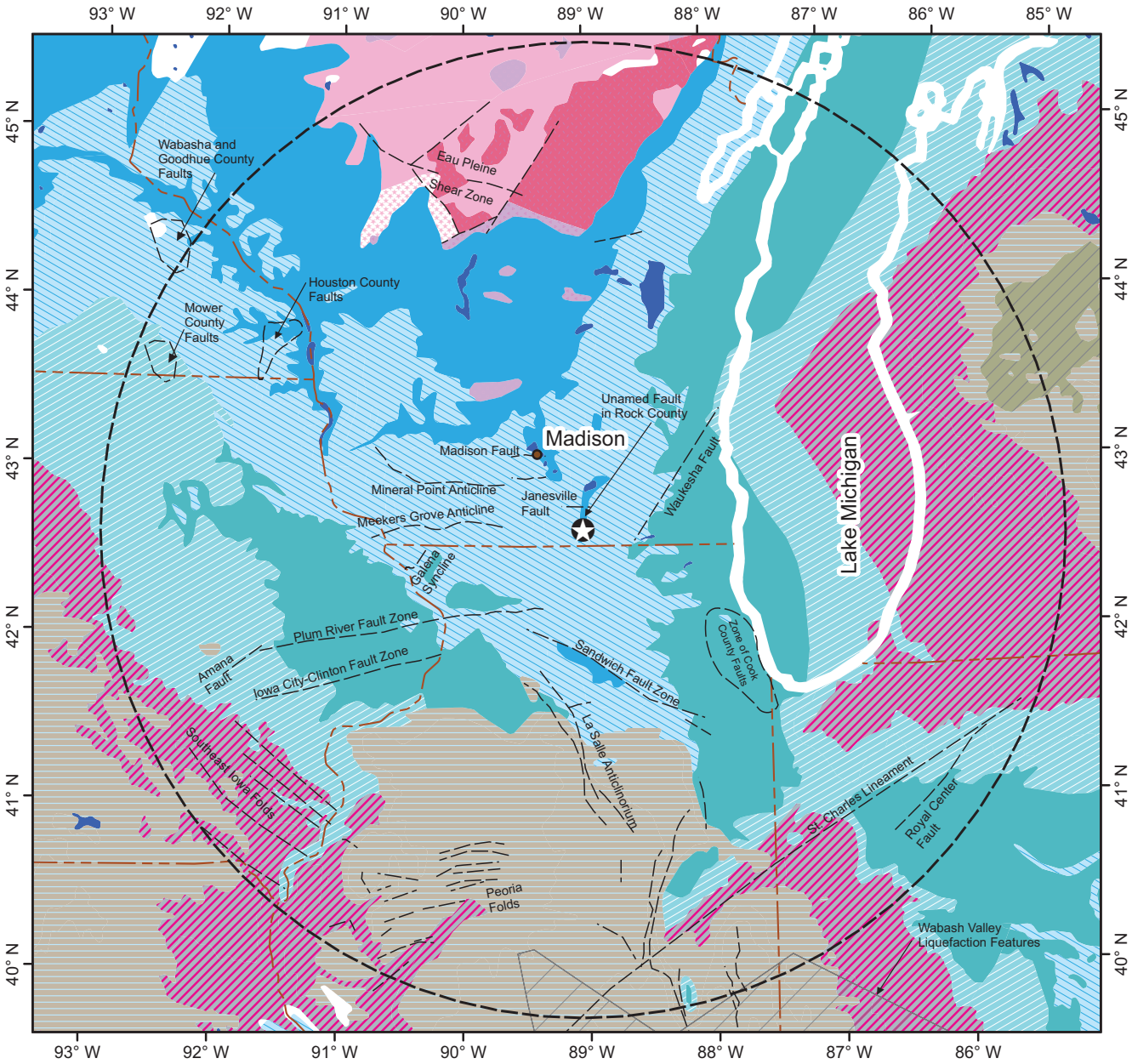
LEGEND

- CPO — CENTRAL PLAINS OROGEN (INCLUDES YAVAPAI AND MAZATZAL PROVINCES)
- SP — SUPERIOR PROVINCE
- MRV — MINNESOTA RIVER PROVINCE
- PO — PENOKEAN OROGEN (INCLUDES PEMBRINE-WAUSAU AND MARSHFIELD TERRANES)
- MCR — MIDCONTINENT RIFT
- SGR — SOUTHERN GRANITE RHYOLITE PROVINCE
- EGR — EASTERN GRANITE RHYOLITE PROVINCE
- RQ — RHYOLITE-QUARTZ ARENITE BELT
- STRATIGRAPHIC CONTACT (DASHED WHERE APPROXIMATED)
- HIGH-ANGLE FAULT
- STRIKE-SLIP FAULT PREDOMINANT RELATIVE DISPLACEMENT
- THRUST FAULT
- SHINE SITE

REFERENCE

1.) SIMS ET AL., 2005.

Figure 2.5-4 – Generalized Regional Geologic Map



LEGEND

- SHINE SITE
- 200 Mile (322 KM) Radius
- State Boundary
- Fault and Fold Trend
- Open Water

Geologic Time	Generalized Geologic Units
Jurassic	Mudstone, shale
Pennsylvanian	Coal, limestone, sandstone, shale or clay shale
Mississippian	Limestone, shale or clay shale
Devonian	Carbonate, sandstone
Silurian	Dolomite, silty limestone
Ordovician	Conglomerate, dolomite, limestone, sandstone, shale
Cambrian	Dolomite, sandstone, shale
Early Proterozoic	Quartzite (Wolf River Batholith)
Early Proterozoic	Felsic Rocks (Wolf River Batholith)
Early Proterozoic	Volcanic Rocks (Wolf River Batholith)
Early and Middle Proterozoic	Granitic Rocks (Wolf River Batholith)
Late Archean	Orthogneiss

N

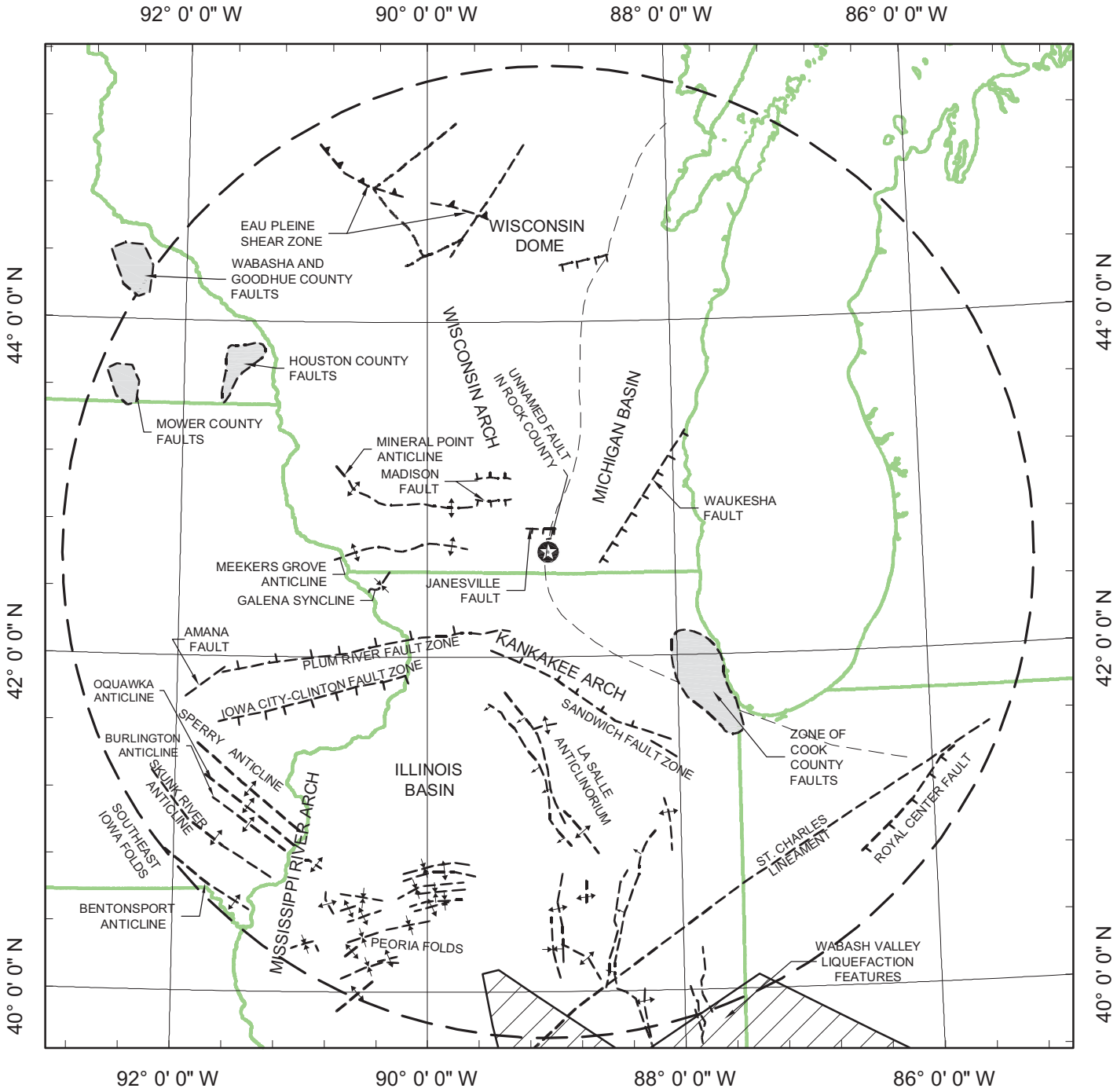
60 30 0 60 MILES
SCALE

100 50 0 100 KM
SCALE

REFERENCE

GARRITY, C.P., AND SOLLER, D.R., 2009.

Figure 2.5-5 – Generalized Regional Structural Geologic Map



LEGEND

- SHINE SITE
- 200 MILE (322 KM) RADIUS
- REVERSE FAULT (SAWTEETH ON HANGING WALL)
- ANTICLINE
- GENERALIZED DOME AND BASIN
- SYNCLINE
- FAULT (HATCHURES ON DOWNTHROW SIDE)

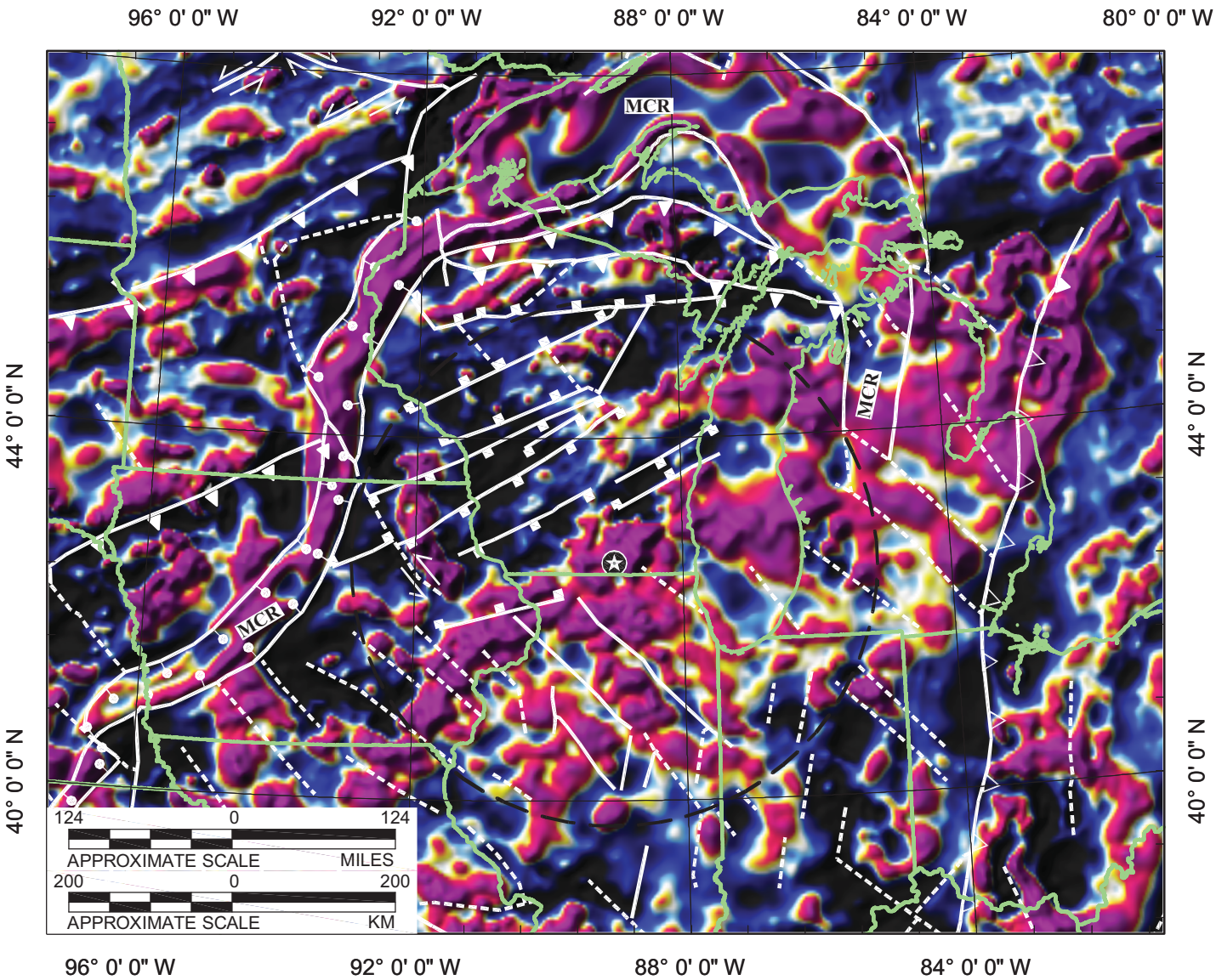
REFERENCES

HEYL ET AL., 1978; NELSON, W.J., 1995; HARRISON, R.W., AND SCHULTZ, A., 2002; BRASCHAYKO, S.M., 2005; EXELON, 2006a; EXELON, 2006b; JIRSA ET AL., 2011; AND USGS, 2012c.

62 0 62
SCALE MILES

100 0 100
SCALE KM

Figure 2.5-6 – Regional Magnetic Anomaly Map and Structural Interpretation



LEGEND

SHINE SITE

MCR MIDCONTINENT RIFT

200 MILE (322 KM) RADIUS

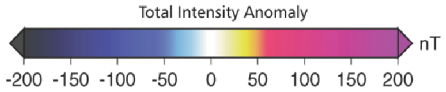
HIGH-ANGLE FAULT - CHIEFLY TRANSCURRENT SHEARS AND FAULTS OF LATE PALEOPROTEROZOIC - MESOPROTERZOIC AGE, BUT INCLUDES FAULTS OF LATE ARCHEAN AGE IN NORTHERN MIDCONTINENT. ARROWS INDICATE RELATIVE DISPLACEMENT WHERE KNOWN. SOLID LINE, BASED CHIEFLY ON GEOLOGIC DATA; DASHED LINE, BASED CHIEFLY ON MAGNETIC DATA. NOTE: SAME DISTINCTION APPLIES TO STRUCTURES FOLLOWING:

DUCTILE SHEAR ZONE; MAINLY OF LATE PALEOPROTEROZOIC AGE

BOUNDARY OF MAJOR RIFT ZONE OF LATE MESOPROTEROZOIC (MIDCONTINENT RIFT) AND CAMBRIAN (REELFOOT RIFT) AGE

THRUST FAULT OF MESOPROTEROZOIC (~1.1 Ga) AGE

THRUST FAULT OF PALEOPROTEROZOIC AGE ASSOCIATED WITH SUTURE ZONES. SOLID LINE, BASED CHIEFLY ON GEOLOGIC DATA; DASHED LINE BASED CHIEFLY ON MAGNETIC DATA.



REFERENCE

1.) MAUS ET AL., 2009.
2.) SIMS ET AL., 2005.