Preliminary Precambrian basement map of Wyoming showing geologic-geophysical domains

INDEX MAP (Modified from Reed, 1993)
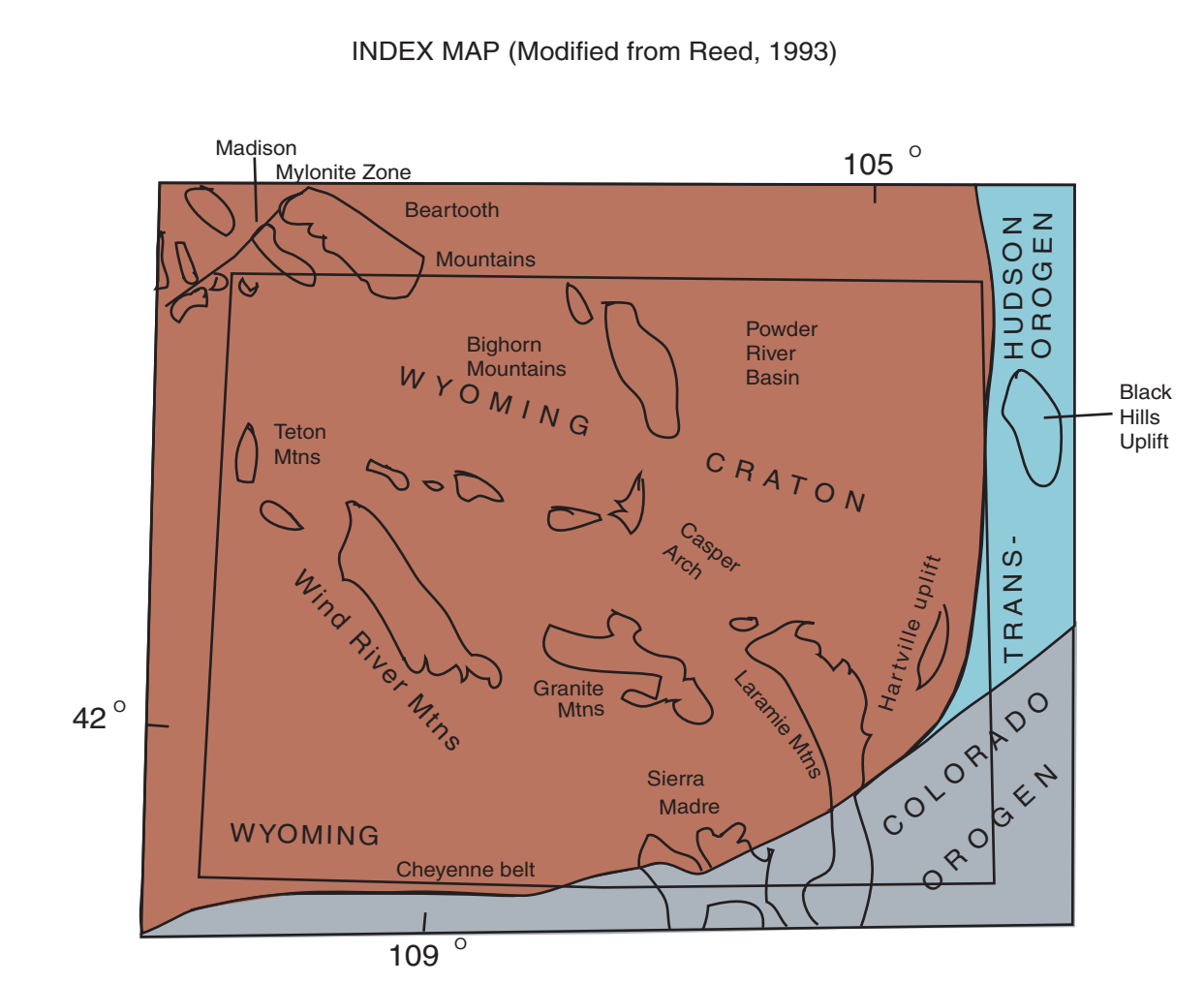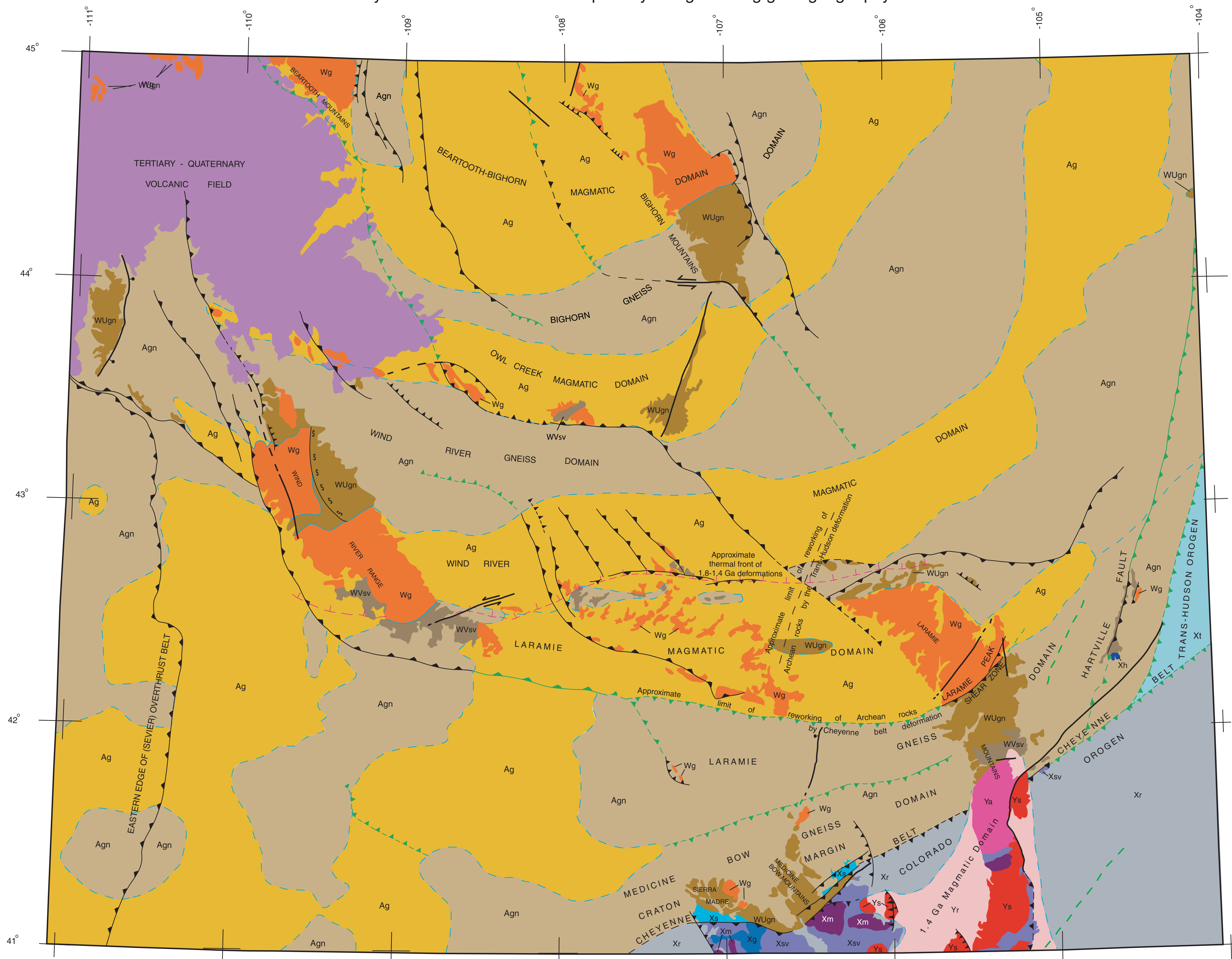
EXPLANATION
Correlation of Map Units

	Outcrop Areas	Covered Areas

Wyoming Archean Craton

Meso-Proterozoic	Ys / Ya	Yr
Paleo-Proterozoic	Xh / Xs	
Late Archean	Wg / WVsv / WUgn	Ag / Agn

Trans-Hudson Orogen

Paleo-Proterozoic		Xt

Colorado Orogen

Meso-Proterozoic	Ys / Ya	Yr
Paleo-Proterozoic	Xg / Xm / Xsv	Xr

Contact, dashed where approximately located

High-angle fault - Bar and ball on down-thrown side

Thrust fault - Sawteeth on upper plate; dashed where inferred

High-angle fault - Relative movement not known

Approximate thermal front (1.8-1.4 Ga)

Ductile shear zone

All faults: black, where previously known, green, determined by this study.

Strike-slip fault

Principal sources of data: Blackstone, 1989 (Precambrian basement map of Wyoming); Kucks and Hill, 2000 (Aeromagnetic map of Wyoming); Love and Christiansen, 1985 (Geologic map of Wyoming)

ARCHEAN CRATON (WYOMING PROVINCE)

MESOPROTEROZOIC

Ys - Sherman Granite (age 1,415 - 1,435 Ma) -- In Laramie and Medicine Bow Mountains

Ya - Laramie Anorthosite Complex (Age 1,435 Ma) -- Includes anorthosite and pyroxene and hornblende syenite. In Laramie Mountains

Yr - Unidentified rocks of units Ys and Ya -- Mapped from aeromagnetic map of Wyoming

PALEOPROTEROZOIC

Xh - Haystack Range Granite (Age 1,720 Ma) -- In Hartville uplift

Xs - Metasedimentary rocks on craton margin -- In Medicine Bow and Sierra Madre Mountains; in covered areas, included in unit Agn

LATE ARCHEAN

Wg - Intrusive igneous rocks, mainly granite-granodiorite (range in age from 2,900 to 2,550 Ma)

WVsv - Metasedimentary and metavolcanic rocks -- Amphibolite, hornblende gneiss, biotite gneiss, quartzite, iron-formation, metaconglomerate, pelite schist, and marble; older than 2,875 Ma in Teton Range; older than 3,200 Ma in Granite Mountains; older than 2,600 Ma in Medicine Bow and Sierra Madre Mountains.

WUgn - Gneiss and migmatite (Age 3,100 to 2,600 Ma)

Ag - Unidentified granitic rocks mapped from aeromagnetic data

Agn - Unidentified gneiss mapped from aeromagnetic data; includes subordinate rocks of unit WVsv

TRANS-HUDSON OROGEN

Xt-Unidentified rocks

COLORADO OROGEN (COLORADO PROVINCE)

MESOPROTEROZOIC (1,600-900 Ma)

Ys - Sherman Granite -- In Laramie and Medicine Bow Mountains

Ya - Laramie Anorthosite Complex -- In Laramie Mountains

Yr - Unidentified rocks of units Ys and Ya mapped from aeromagnetic data

PALEOPROTEROZOIC (2,500-1,600 Ma)

Xg - Granitic rocks of 1,700 Ma age group -- In Medicine Bow Mountains and Sierra Madre

Xm - Mafic intrusive rocks (Age ~1,760 Ma) -- In Medicine Bow Mountains, Laramie Mountains and Sierra Madre

Xsv - Metasedimentary and metavolcanic rocks -- Formed in a volcanic arc environment (Age 1,800-1,700 Ma)

Xr - Unidentified rocks of units Xg, Xm, and Xsv mapped from aeromagnetic data