MS-7B

Rearranged and reproduced from the U.S. Geological Survey full-color edition of 1955 by the Geological Survey of Wyoming, 1980.

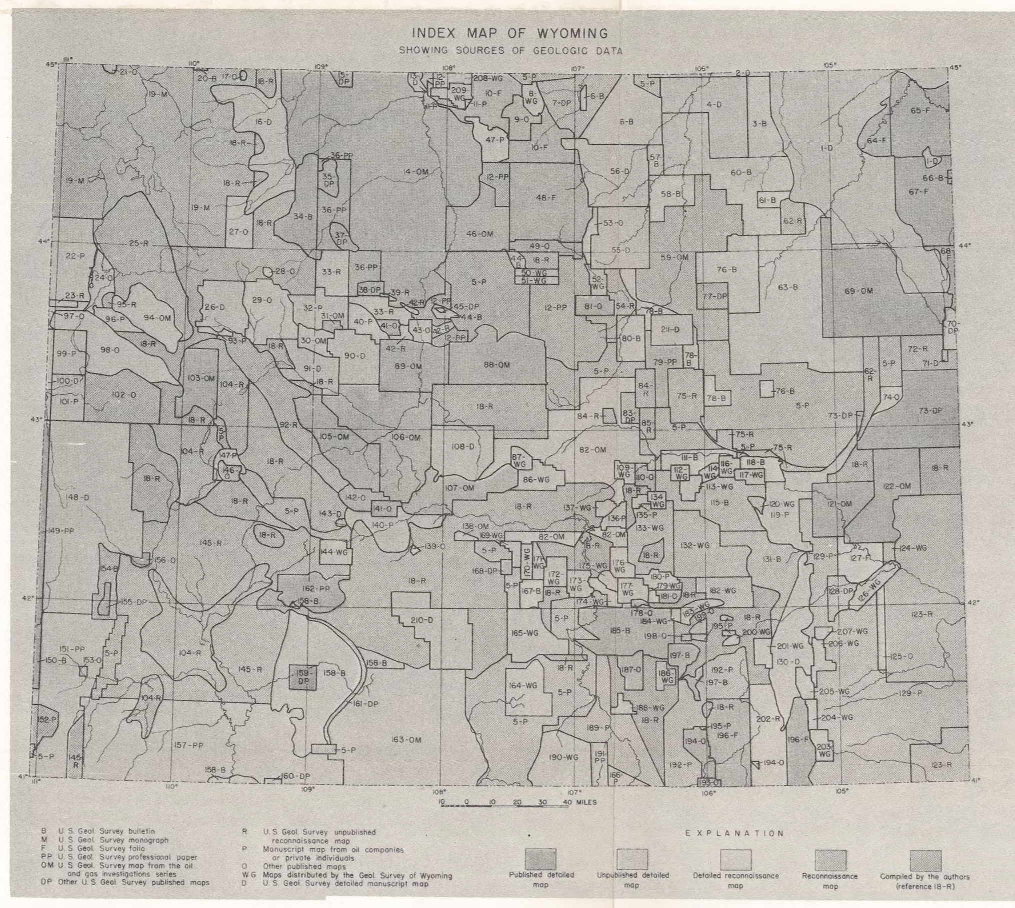
DEPARTMENT OF THE INTERIOR
UNITED STATES GEOLOGICAL SURVEY

Map Series 7B

GEOLOGIC MAP OF WYOMING

Compiled by J. D. Love, J. L. Weitz, and R. K. Hose

1955



SOURCES OF DATA USED IN COMPILING GEOLOGIC MAP OF WYOMING

(Numbers and letters correspond to those shown on index map; (u) indicates unpublished data)

EXPLANATION

SEDIMENTARY ROCKS

QUATERNARY (Pleistocene and Recent)

Southwest

- Qal — Alluvial deposits. *Unconsolidated and poorly consolidated clay, silt, sand, and gravel, mainly in floodplains, fans, and terraces*
- Ql — Late lake sediments. *Chiefly clay, silt, and sand*
- Qls — Landslide deposits. *Unsized and unsorted rock debris*
- Qs — Wind-blown sand. *Includes active and dormant sand dunes*
- Qg — Glacial deposits. *Sand, gravel, and boulders*

Northwest

- Qal — Alluvial deposits. *Unconsolidated and poorly consolidated clay, silt, sand, and gravel, mainly in floodplains, fans, and terraces*
- Ql — Late lake sediments. *Chiefly clay, silt, and sand*
- Qls — Landslide deposits. *Unsized and unsorted rock debris*
- Qs — Wind-blown sand. *Includes active and dormant sand dunes*
- Qg — Glacial deposits. *Sand, gravel, and boulders*

Northeast

- Qal — Alluvial deposits. *Unconsolidated and poorly consolidated clay, silt, sand, and gravel, mainly in floodplains, fans, and terraces*
- Qs — Wind-blown sand. *Includes active and dormant sand dunes*
- Qg — Glacial deposits. *Sand, gravel, and boulders*

Southeast

- Qal — Alluvial deposits. *Unconsolidated and poorly consolidated clay, silt, sand, and gravel, mainly in floodplains, fans, and terraces*
- Qls — Landslide deposits. *Unsized and unsorted rock debris*
- Qs — Wind-blown sand. *Includes active and dormant sand dunes*
- Qg — Glacial deposits. *Sand, gravel, and boulders*

TERTIARY (Pliocene, Miocene, Oligocene, Eocene, Paleocene)

Southwest

- Tpm — Pliocene and Miocene rocks. *Light-colored claystone, sandstone, and conglomerate; poorly consolidated, tuffaceous*
- Tbp — Browns Park formation. *White massive soft tuffaceous sandstone and white marl; lower part conglomeratic*
- Tbi — Bishop conglomerate. *Roundstones of red quartzite, gray chert, and limestone in a gray to white tuffaceous sandstone matrix*
- Tm — Miocene rocks. *White massive soft tuffaceous sandstone and white marl*
- Tmo — Miocene and Oligocene rocks. *Miocene rocks chiefly light-gray soft sandstone; Oligocene rocks chiefly white tuffaceous claystone and siltstone*
- Twr — White River formation. *White to pale-pink blocky tuffaceous claystone and lenticular arkosic conglomerate*
- Toe — Oligocene and upper and middle Eocene rocks undivided. *Light greenish-gray tuffaceous claystone, white sandstone, and volcanic pebble conglomerate*
- Tu — Tertiary rocks undivided. *Conglomerate, sandstone, shale, and tuff*
- Teum — Upper and middle Eocene rocks undivided. *Green and gray tuffaceous claystone, sandstone, and conglomerate*
- Tb — Bridger formation. *Greenish-gray, olive-drab, and white tuffaceous sandstone and shale; lenticular marlstones and conglomerates*
- Tml — Morrow Creek and Laney members of Green River formation
- Tgr — Green River formation. *Oil shale, light-colored marlstone, and sandstone*
- Tmt — Morrow Creek member of Green River formation, Cathedral Bluffs tongue of Wasatch formation, and Tipton shale member of Green River formation
- Tct — Cathedral Bluffs tongue of Wasatch formation and Tipton shale member of Green River formation
- Twdr — Wind River formation. *Variegated claystone, shale, sandstone, and lenticular conglomerate*
- Tgm, Tw, Tgl, Twc, Tgt — Green River and Wasatch formations. *Wasatch formation interfingers basinward into Green River; consists of Morrow Creek member, Tgm, of marlstone, shale, and algal limestone, Laney shale member, Tgl, and Tipton shale member, Tgt, both of oil shale and marlstone. Wasatch, Tw, consists of variegated claystone and shale, carbonaceous shale and coal, drab sandstone and conglomerate. Cathedral Bluffs tongue, Twc, is variegated claystone*
- Tcg — Conglomerate beds. *Thick beds of giant boulders separated by soft sandstone and some red shale*
- Tep — Lower Eocene and Paleocene rocks, undivided. *Dully variegated claystone, shale, and sandstone interbedded with conglomerate of highly rounded quartzite fragments; includes Pass Peak formation of Eardley*
- Tf — Fort Union formation. *Brown to gray sandstone, gray to black shale, carbonaceous shale, and thin coal beds*
- Tp — Paleocene rocks, undivided. *Rhyolitic tuff beds and freshwater limestones of Fowkes formation; underlain by quartzite pebble conglomerate, brown sandstone, and red claystone of Almy formation; underlain by dark-gray carbonaceous shale, thin coal beds, and lenticular sandstones of Evanston formation*

Northwest

- Tpm — Pliocene and Miocene rocks. *Includes Tower Creek conglomerate in Yellowstone National Park, Camp Davis formation of Eardley in the Hoback area, and white tuff and tuffaceous marl in Jackson Hole*
- Twi — Wiggins formation. *Gray to brown coarsely bedded volcanic conglomerate interbedded with white blocky tuffaceous claystone*
- Twr — White River formation. *White to pale-pink blocky tuffaceous claystone and lenticular arkosic conglomerate*
- Tt — Tepee Trail formation. *Green and olive-drab andesitic conglomerate, sandstone, and claystone*
- Ta — Aycross formation. *Brightly variegated tuffaceous claystone and sandstone grading laterally into greenish-gray sandstone and shale*
- Toe — Oligocene and upper and middle Eocene rocks undivided. *Light greenish-gray tuffaceous claystone, white sandstone, and volcanic pebble conglomerate*
- Teum — Upper and middle Eocene rocks undivided. *Green and gray tuffaceous claystone, sandstone, and conglomerate; underlain by tuffaceous variegated claystone and sandstone*
- Tu — Tertiary rocks undivided. *Conglomerate, sandstone, shale, and tuff*
- Teml — Middle and lower Eocene rocks, undivided. *Brightly variegated to drab sandstone and claystone*
- Tta — Tatman formation. *Drab claystone, oil shale, lignitic beds, and sandstone*
- Tim — Indian Meadows formation. *Red to variegated claystone, shale, sandstone, and beds of large boulders. Some algal ball limestone*
- Twdr — Wind River formation. *Variegated claystone, shale, sandstone, and lenticular conglomerate*
- Tcg — Conglomerate beds. *Thick beds of giant boulders separated by soft sandstone and some red shale*
- Twl — Willwood formation. *Variegated claystone, shale, and sandstone; some lenticular conglomerates*
- Tw — Wasatch formation. *Drab-colored sandstone, drab-colored to variegated claystone and shale*
- Twim — Wind River and Indian Meadows formations. *Variegated claystone, shale, and sandstone; some lenticular conglomerates*
- Tep — Lower Eocene and Paleocene rocks, undivided. *Dully variegated claystone, shale, and sandstone interbedded with conglomerate of highly rounded quartzite fragments; includes Pass Peak formation of Eardley*
- Tp — Paleocene rocks, undivided. *Includes green and gray sandstone, shale, and coal sequence, underlain by Pinyon formation, which is quartzite pebble conglomerate and sandstone with coal and shale at base, in Jackson Hole area. Includes Hoback formation of Eardley in Hoback area*
- Tf — Fort Union formation. *Gray soft shale with brown chert pebble conglomerate and sandstone in lower part*

Northeast

- Tmo — Miocene and Oligocene rocks. *Miocene rocks chiefly light-gray soft sandstone; Oligocene rocks chiefly white tuffaceous claystone and siltstone*
- Twr — White River formation. *White to pale-pink blocky tuffaceous claystone and lenticular arkosic conglomerate*
- Toe — Oligocene and upper and middle Eocene rocks undivided. *Light greenish-gray tuffaceous claystone, white sandstone, and volcanic pebble conglomerate*
- Twm, Tw, Twk — Wasatch formation. *Drab-colored to variegated claystone and shale, drab-colored sandstone, and numerous coal beds; Moncrief member, Twm, consists of conglomerate of pre-Cambrian rock fragments, sandstone, and drab shale; Kingsbury member, Twk, consists of conglomerate of Paleozoic rock fragments, sandstone, and variegated claystone*
- Twdr — Wind River formation. *Variegated claystone, shale, sandstone, and lenticular conglomerate*
- Tftr, Tfl, Tft, Tf — Fort Union formation. *Light-colored massive sandstone, drab-colored shale, and coal; Tongue River member, Tftr, Lebo member, Tfl, Tullock member, Tft*

Southeast

- To — Ogallala formation. *Light-colored limy tuffaceous conglomerate, sandstone, and claystone*
- Tn — North Park formation. *White to buff tuff, sandstone, and bentonitic claystone*
- Tpm — Pliocene and Miocene rocks. *Light-colored claystone, sandstone, and conglomerate; poorly consolidated, tuffaceous*
- Tbp — Browns Park formation. *White massive soft tuffaceous sandstone and white marl; lower part conglomeratic*
- Tm — Miocene rocks. *White massive soft tuffaceous sandstone and white marl; coarse-grained arkosic sandstone and conglomerate in lower part*
- Tmo — Miocene and Oligocene rocks. *Miocene rocks chiefly light-gray soft sandstone; Oligocene rocks chiefly white tuffaceous claystone and siltstone*
- Tbr — Brule formation. *Pale pink to white blocky claystone*
- Tc — Chadron formation. *Light-gray to dark-red claystone, sandstone, and lenticular conglomerate*
- Twr — White River formation. *White to pale-pink blocky tuffaceous claystone and lenticular arkosic conglomerate*
- Tu — Tertiary rocks undivided. *Conglomerate, sandstone, shale, and tuff*
- Teum — Upper and middle Eocene rocks undivided. *Green and gray tuffaceous claystone, sandstone, and conglomerate*
- Teml — Middle and lower Eocene rocks, undivided. *Brightly variegated to drab sandstone and claystone*
- Th — Hanna formation. *Brown and gray sandstone, shale, conglomerate, and coal; beds of giant boulders near Medicine Bow Mountains*
- Tw — Wasatch formation. *Drab-colored sandstone, drab-colored to variegated claystone and shale*
- Twdr — Wind River formation. *Variegated claystone, shale, sandstone, and lenticular conglomerate*
- Tf — Fort Union formation. *Brown to gray sandstone, gray to black shale, carbonaceous shale, and thin coal beds*
- TKf — Ferris formation. *Brown and gray sandstone and shale; sparse carbonaceous shale and coal beds; thin lenticular pebble conglomerates*

CRETACEOUS

Southwest — Upper Cretaceous

- Kl — Lance formation. *Gray and brown sandstone, gray shale, thin coal beds; massive cliff-forming white to yellow sandstone at base*
- Klle — Lance formation and Lewis shale
- Kle — Lewis shale. *Gray soft marine shale, with many gray and brown lenticular sandstone beds; many concretions*
- Kal — Almond formation. *White and brown soft sandstone, gray sandy shale, coal and carbonaceous shale*
- Kmv — Mesaverde formation. *Gray to tan sandstone and sandy shale; some coal beds*
- Kav — Adaville formation. *Yellow, gray, and black shale, brown and yellow sandstone, coal; Lazeart sandstone member at base*
- Ke — Ericson sandstone. *White massive sandstone; lenticular conglomerate beds in upper part*
- Kah — Adaville formation and Hilliard shale
- Kr — Rock Springs formation. *White to brown sandstone, shale, and claystone; numerous coal beds*
- Kc — Cody shale. *Gray soft marine shale with many lenticular sandstone beds and some bentonite beds*
- Kh — Hilliard shale. *Gray to black soft sandy shale and shaly sandstone*
- Kbl — Blair formation. *Drab-yellow and brown sandstone and sandy shale*
- Khf — Hilliard shale and Frontier formation
- Kba — Baxter shale. *Gray to black soft sandy shale and shaly sandstone*
- Kf — Frontier formation. *Gray to tan sandstone interbedded with yellow to dark-gray marine shale; carbonaceous shale and coal; some white tuff and bentonite zones; Oyster ridge sandstone member in upper part*

Southwest — Lower Cretaceous

- Kab — Aspen shale and Bear River formation
- Kmt — Mowry and Thermopolis shales. *Mowry shale is black and gray, weathers silvery gray, hard, contains thin bentonite beds and abundant fish scales; underlain by black soft Thermopolis shale with Muddy sandstone member 0 to 200 feet above base*
- Ka — Aspen shale. *Black and gray shale, weathers silvery gray; thin bentonite beds*
- Kbr — Bear River formation. *Dark-gray to black shale, impure limestone, and dark-gray and brown quartzitic sandstone*

Northwest — Upper Cretaceous

- Klm — Lance and Meeteetse formations. *Lance formation is gray and brown sandstone, gray shale, thin coal beds; white to yellow massive sandstone at base; underlain by Meeteetse formation, which consists of light-gray tuffaceous sandstone, yellow bentonite, and thin coal and black to gray shale beds*
- Kl — Lance formation. *Gray and brown sandstone, gray shale, thin coal beds; massive cliff-forming white to yellow sandstone at base in Teton County contains quartzite pebble conglomerate and tuff beds*
- Kmo — Montana group undivided. *Includes Telegraph Creek and Eagle sandstones, Claggett shale, and Judith River formation along north margin of Yellowstone National Park*
- Kmv — Mesaverde formation. *Gray to tan sandstone and sandy shale; some coal beds*
- Ku — Cretaceous rocks undivided
- Kss — Lenticular sandstone and shale sequence. *Gray lenticular sandstone and gray to brown shale; coal near base*
- Ksb — Lenticular sandstone and shale sequence and Bacon Ridge sandstone
- Kah — Adaville formation and Hilliard shale
- Kb — Bacon Ridge sandstone. *Light-gray massive marine sandstone, gray shale, and coal*
- Kc — Cody shale. *Gray soft marine shale with many lenticular sandstone beds and some bentonite beds*
- Kf — Frontier formation. *Gray to black marine shale and many lenticular sandstones; thin bentonite and tuff beds*

Northwest — Lower Cretaceous

- Kft — Frontier formation, Mowry and Thermopolis shales
- Ka — Aspen shale. *Black and gray shale, weathers silvery gray; thin bentonite beds*
- Kmt — Mowry and Thermopolis shales. *Mowry shale is black and gray, weathers silvery gray, hard, contains thin bentonite beds and abundant fish scales; underlain by black soft Thermopolis shale with Muddy sandstone member 150 to 250 feet above base*
- Kbr — Bear River formation. *Dark-gray to black shale, impure limestone, and dark-gray and brown quartzitic sandstone*

Northeast

- Kl — Lance formation. *Brown and gray sandstone and shale; thin coal and carbonaceous shale beds*
- Khc — Hell Creek formation. *Brown and gray sandstone and shale; thin coal and carbonaceous shale beds*
- Klle — Lance formation and Lewis shale
- Klf — Lance formation and Fox Hills sandstone. *Includes Bearpaw shale in northwest part of quadrant*
- Kfh — Fox Hills sandstone. *Light-colored sandstone and gray sandy shale containing marine fossils*
- Kmv — Mesaverde formation. *Light-colored massive to thin-bedded sandstone, gray sandy shale, and coal; Parkman sandstone member at base; Teapot sandstone member near top*
- Kp — Pierre shale. *Dark-gray concretionary marine shale; in Black Hills area Monument Hill bentonite member in upper part, Groat sandstone member in lower middle, and Pedro bentonite bed at base*
- Kc — Cody shale. *Dark-gray marine shale with numerous bentonite beds; Shannon sandstone member 2000 feet above base and Sussex sandstone member 2500 feet above base*
- Kn — Niobrara formation. *Light-colored limestone and gray to yellow, speckled limy shale*
- Kncl — Niobrara formation and Carlile shale
- Kcl — Carlile shale. *Dark-gray sandy shale; Sage Breaks member at top; Turner sandy member in middle*
- Kf — Frontier formation. *Gray shale and sandstone; Wall Creek sandstone member at top*
- Kg — Greenhorn limestone. *Light-colored marl, limestone, and limy sandstone interbedded with gray concretionary shale*
- Kft — Frontier formation, Mowry and Thermopolis shales
- Kbm — Belle Fourche and Mowry shales. *Belle Fourche shale is black, soft, bentonitic, concretionary; Mowry shale is black, hard, siliceous, and weathers silvery gray*
- Kmt — Mowry and Thermopolis shales. *Mowry shale is black and gray, weathers silvery gray, hard, contains thin bentonite beds and abundant fish scales; underlain by black soft Thermopolis shale with Muddy sandstone member 150 to 250 feet above base*
- Knc — Newcastle sandstone. *Gray sandstone and sandy shale with some bentonite and coal*
- Kbs — Belle Fourche and Mowry shales Newcastle sandstone, and Skull Creek shale
- Ksc — Skull Creek shale. *Black soft fissile shale*

Southeast

- Kmb — Medicine Bow formation. *Brown and gray sandstone and shale; thin carbonaceous shale and coal beds*
- Kl — Lance formation. *Brown and gray sandstone and shale; thin coal and carbonaceous shale beds*
- Klle — Lance formation and Lewis shale
- Kle — Lewis shale. *Gray soft marine shale, with many gray and brown lenticular sandstone beds; many concretions*
- Kfh — Fox Hills sandstone. *Light-colored sandstone and gray sandy shale containing marine fossils*
- Kmv — Mesaverde formation. *Gray to tan sandstone and sandy shale; some coal beds; Pine Ridge sandstone member at top*
- Ks — Steele shale. *Gray soft marine shale with numerous bentonite beds and thin lenticular sandstones*
- Kc — Cody shale. *Gray soft marine shale with many lenticular sandstone beds and some bentonite beds*
- Kn — Niobrara formation. *Light-colored limestone and gray to yellow, speckled limy shale*
- Kf — Frontier formation. *Gray shale and sandstone; Wall Creek sandstone member at top*
- Kft — Frontier formation Mowry and Thermopolis shales
- Kmt — Mowry and Thermopolis shales. *Mowry shale is black and gray, weathers silvery gray, hard, contains thin bentonite beds and abundant fish scales; underlain by black soft Thermopolis shale with Muddy sandstone member 50 to 200 feet above base*
- Kcv — Cloverly formation. *Light-gray to brown sandstone with black shale partings; chert pebble conglomerate in lower part*

CRETACEOUS AND JURASSIC

Southwest

- KJm — Cloverly and Morrison formations. *Cloverly formation is light-gray sandstone and lenticular chert pebble conglomerate interbedded with variegated bentonitic claystone; the underlying Morrison formation consists of dully variegated siliceous claystone with nodular limestone and gray silty sandstone lenses*
- KJms — Cloverly Morrison and Sundance formations
- KJg — Gannett group. *Draney and Peterson limestones separated by variegated claystone in upper part of group. Lenticular sandstone and conglomerate of Ephraim conglomerate interbedded with variegated claystone in lower part*
- KJb — Beckwith formation. *Includes most of Gannett group and the upper part of the underlying marine Jurassic sequence*

Northwest

- KJm — Cloverly and Morrison formations. *Cloverly formation is light-gray sandstone and lenticular chert pebble conglomerate interbedded with variegated bentonitic claystone; the underlying Morrison formation consists of dully variegated siliceous claystone with nodular limestone and gray silty sandstone lenses*
- KJg — Gannett group. *Draney and Peterson limestones separated by variegated claystone in upper part of group. Lenticular sandstone and conglomerate of Ephraim conglomerate interbedded with variegated claystone in lower part*

Northeast

- KJim — Inyan Kara group and Morrison formation
- KJm — Cloverly and Morrison formations. *Cloverly formation is light-gray sandstone and lenticular chert pebble conglomerate interbedded with variegated bentonitic claystone; the underlying Morrison formation consists of dully variegated siliceous claystone with nodular limestone and gray silty sandstone lenses*

Southeast

- KJm — Cloverly and Morrison formations. *Cloverly formation is light-gray sandstone and lenticular chert pebble conglomerate interbedded with variegated bentonitic claystone; the underlying Morrison formation consists of dully variegated siliceous claystone with nodular limestone and gray silty sandstone lenses*
- KJms — Cloverly Morrison and Sundance formations
- Jm — Morrison formation. *Green siliceous claystone with limestone nodules and silty gray sandstone lenses*

JURASSIC

Southwest

- Jst — Stump and Preuss sandstones and Twin Creek limestone
- Jsp — Stump and Preuss sandstones. *Stump sandstone is greenish-gray, glauconitic, limy, with green shale partings; underlying Preuss sandstone is deep red to gray, very fine grained, silty, and shaly*
- Jt — Twin Creek limestone. *Black and gray limestone and limy shale; lower 100 feet is red shale and siltstone, limestone breccia, anhydrite, and gray limestone*
- Ju — Jurassic rocks, undivided. *Includes Sundance and Gypsum Spring formations and Nugget sandstone*
- Jn — Nugget sandstone. *Gray to dull-red massive and coarsely bedded sandstone*
- JTRna — Nugget sandstone and Ankareh shale as used by Schultz. *Red and gray sandstone and quartzite of Nugget underlain by red shale, red siltstone, and fine-grained sandstone of Ankareh*

Northwest

- Jst — Stump and Preuss sandstones and Twin Creek limestone
- Jsp — Stump and Preuss sandstones. *Stump sandstone is greenish-gray, glauconitic, limy, with green shale partings; underlying Preuss sandstone is deep red to gray, very fine grained, silty, and shaly*
- Jt — Twin Creek limestone. *Black and gray limestone and limy shale; lower 100 feet is red shale and siltstone, limestone breccia, anhydrite, and gray limestone*
- Ju — Jurassic rocks, undivided. *Includes Sundance and Gypsum Spring formations and Nugget sandstone*
- Jn — Nugget sandstone. *Gray to dull-red massive and coarsely bedded sandstone*

Northeast

- Js — Sundance formation. *Greenish-gray glauconitic sandstone and shale underlain by red and gray nonglauconitic sandstone and shale*
- Ju — Jurassic rocks, undivided. *Includes Sundance and Gypsum Spring formations*

Southeast

- Js — Sundance formation. *Greenish-gray glauconitic sandstone and shale underlain by red and gray nonglauconitic sandstone and shale*
- Ju — Jurassic rocks undivided. *Includes Sundance formation and Nugget sandstone*

TRIASSIC

Southwest

- TRa — Ankareh shale. *Red shale, red siltstone, and fine-grained red sandstone*
- TRu — Triassic rocks, undivided. *Includes Ankareh shale, Thaynes limestone, Woodside shale, and Dinwoody formation*
- TRtw — Thaynes limestone and Woodside shale. *Thaynes limestone is dark gray, hard, thin-bedded; Woodside shale is red, soft, silty, with dolomitic siltstone equivalent of Dinwoody formation at base*

Northwest

- TRu — Triassic rocks, undivided. *In southwest corner of quadrant includes Ankareh shale, Thaynes limestone, and Woodside shale; elsewhere includes Chugwater and Dinwoody formations*

Northeast

- TRs — Spearfish formation. *Red shale, red siltstone, and white gypsum beds*
- TRu — Triassic rocks undivided. *Includes Chugwater and Dinwoody formations*

Southeast

- TRc — Chugwater formation. *Red shale and red siltstone with thin gypsum partings near base*
- TRu — Triassic rocks, undivided. *Includes Jelm and Chugwater formations*

TRIASSIC AND PERMIAN; PERMIAN

Southwest

- TRPu — Triassic and Permian rocks undivided. *Includes Chugwater, Dinwoody, and Phosphoria formations*
- Pp — Phosphoria formation. *Cherty dolomite underlain by black and gray shale, siltstone, thin limestone and phosphate beds*

Northwest

- TRPu — Triassic and Permian rocks undivided. *Includes Chugwater, Dinwoody, and Phosphoria formations*
- Pp — Phosphoria formation. *Cherty dolomite underlain by black and gray shale, siltstone, thin limestone and phosphate beds*
- PCu — Phosphoria formation Tensleep sandstone, and Amsden formation

Northeast

- TRPu — Triassic and Permian rocks, undivided. *Includes Chugwater formation and red siltstones and gypsum beds equivalent to the Dinwoody and Phosphoria formations of areas to the west*
- Pmo — Minnekahta limestone and Opeche shale. *Minnekahta limestone is gray, slabby, hard; Opeche shale is red, sandy, soft*
- Pp — Phosphoria formation. *Cherty gray and lavender dolomite interbedded with red shale and gypsum*

Southeast

- TRPc — Triassic and post-Forelle Permian rocks. *Includes Chugwater formation and gypsum, red shale, and dolomite beds equivalent to the Phosphoria formation of areas to the northwest*
- TRPu — Triassic and Permian rocks, undivided. *Includes Chugwater formation and red siltstones and gypsum beds equivalent to the Dinwoody and Phosphoria formations of areas to the west*
- Pfs — Forelle limestone and Satanka shale. *Forelle limestone is gray, slabby, hard, crinkled; Satanka shale is red, soft, sandy*
- Pp — Phosphoria formation. *Cherty gray and lavender dolomite interbedded with red shale and gypsum*
- Pu — Permian rocks undivided

CARBONIFEROUS SYSTEMS (Pennsylvanian, Mississippian)

Southwest

- Cta — Tensleep sandstone and Amsden formation. *Gray sandstone and thin limestone and dolomite beds; basal part contains red and green shale; Darwin sandstone member at base*
- Cw — Wells formation. *Gray quartzite and sandstone, with thin beds of gray limestone; basal part is red shale, pink limestone, and red sandstone*
- Cbm — Brazer and Madison limestones. *Brazer limestone is gray, massive to slabby; Madison limestone is massive, cherty, dolomitic*
- Cm — Madison limestone. *Blue-gray massive cherty limestone; some arkosic beds in basal part*
- CDmd — Madison limestone and Darby formation

Northwest

- Cta — Tensleep sandstone and Amsden formation. *Gray sandstone and thin limestone and dolomite beds; basal part contains red and green shale; Darwin sandstone member at base*
- Cm — Madison limestone. *Blue-gray massive cavernous limestone. Near top are thin-bedded pink limestone, red shale, and gypsum that may be equivalent to part of the Brazer limestone*
- CDmd — Madison limestone and Darby formation. *Includes Bighorn dolomite in parts of Cody and Clark Fork areas*

Northeast

- Cml — Minnelusa formation. *Buff and red limy sandstone; some thin limestone beds, breccia beds, and gypsum*
- Cta — Tensleep sandstone and Amsden formation. *Gray sandstone and thin limestone and dolomite beds; basal part contains red and green shale; Darwin sandstone member at base*
- Cpe — Pahasapa and Englewood limestones. *Pahasapa limestone is gray, massive, dolomitic; Englewood limestone is pink, slabby, and dolomitic*
- Cm — Madison limestone. *Blue-gray massive cavernous cherty limestone and dolomite*

Southeast

- Cc — Casper formation. *Gray and tan thick-bedded sandstone, underlain by interbedded sandstone and pink and gray limestone*
- Cta — Tensleep sandstone and Amsden formation. *Gray sandstone and thin limestone and dolomite beds; basal part contains red and green shale; Darwin sandstone member at base*
- PCh — Hartville formation. *In descending order: red and white sandstone, gray dolomite and limestone, red shale, and red and gray sandstone*
- Cu — Carboniferous rocks, undivided. *Includes Tensleep sandstone, Amsden formation, and Madison limestone*
- Cm — Madison limestone. *Blue-gray massive cavernous cherty limestone and dolomite; arkosic sandstone present in places at base may be of Cambrian age*
- Cg — Guernsey limestone. *Blue-gray massive cherty limestone and dolomite. Locally includes dolomite and sandstone of Devonian age*

DEVONIAN, SILURIAN, ORDOVICIAN, CAMBRIAN

Southwest

- Du — Devonian rocks, undivided. *Includes Jefferson limestone and Three Forks shale along western margin of quadrant and Darby formation in northern part*
- Sl — Laketown dolomite. *Light-gray massive hard dolomite, exposed in one outcrop along western margin of quadrant*
- DOCu — Devonian, Ordovician and Cambrian rocks undivided
- Ob — Bighorn dolomite. *Gray massive siliceous dolomite with Leigh dolomite member at top and Lander sandstone member at base*
- OCu — Ordovician and Cambrian rocks, undivided
- Cambrian rocks, undivided. *In descending order: Gallatin limestone, Gros Ventre shale, and Flathead sandstone*

Northwest

- Du — Devonian rocks, undivided. *Includes Jefferson limestone and Three Forks shale in northern part of quadrant and Darby formation in southern part. Chiefly fetid brown dolomite, dark shale, and thin sandstones*
- CCu — Carboniferous to Cambrian rocks, undivided. *Tensleep sandstone, Amsden formation, Madison limestone, Darby formation, Bighorn dolomite, and Cambrian rocks*
- Ob — Bighorn dolomite. *Gray massive siliceous dolomite with Leigh dolomite member at top and Lander sandstone member at base*
- OCu — Ordovician and Cambrian rocks, undivided
- Cambrian rocks, undivided. *In descending order: Gallatin limestone, Gros Ventre shale, and Flathead sandstone*

Northeast

- OCu — Ordovician and Cambrian rocks, undivided
- Cambrian rocks, undivided. *In northeast part of quadrant, rocks are sandstones and shales; in southern part, quartzites; in Bighorn Mountains, limestone near the top, shales in middle, and Flathead sandstone at base*

Southeast

- CCmu — Madison limestone and Cambrian rocks, undivided
- Cambrian rocks, undivided. *Chiefly thin-bedded glauconitic sandstone and quartzite*

IGNEOUS AND METAMORPHIC ROCKS

TERTIARY

Southwest

- Tai — Alkalic intrusive and extrusive rocks. *Limited to Leucite Hills area*

Northwest

- Tbf — Basalt flows. *Includes some dikes and intrusive masses*
- Tadd — Andesite, diorite, and dacite intrusive and extrusive rocks
- Trf — Rhyolite flows. *Includes some dikes and intrusive masses*
- Tie — Intrusive and extrusive rocks
- Tlbb, Tlab — Late breccias of Hague. *Basic breccia, Tlbb, acid breccia, Tlab*
- Ttr — Trachytic rhyolite
- Top — Upper Eocene, Oligocene, and younger pyroclastic rocks. *Includes minor areas of intrusive and extrusive rocks; also some volcanic conglomerate and tuffaceous claystone*
- Tebf, Tebb, Teab — Early flows and breccias of Hague. *Basalt flows, Tebf; basic breccia, Tebb; acid breccia, Teab*

Northeast

- Ti — Monzonite and syenite porphyry, phonolite, bostonite, nepheline syenite, and pseudoleucite porphyry

Southeast

- Tib — Basalt flows and intrusive masses
- Tid — Dacitic intrusive and extrusive rocks
- Tai — Alkalic intrusive and extrusive rocks

PRE-CAMBRIAN

- pCu (Southwest) — Pre-Cambrian rocks, undivided. *Chiefly granite. An area of metasedimentary rocks extends east from the south end of the Wind River Mountains into the Granite Mountains*
- pCu (Northwest) — Pre-Cambrian rocks, undivided. *Chiefly granite, with lesser amounts of metasedimentary rocks and other rock types. Some areas of metasedimentary rocks in the Owl Creek Mountains*
- pCu (Northeast) — Pre-Cambrian rocks, undivided. *Chiefly granite, with lesser amounts of metasedimentary rocks and other rock types in the Bighorn Mountains*
- pCu (Southeast) — Pre-Cambrian rocks, undivided. *Chiefly granite and metasedimentary rocks in the Hartville area; granite, metasedimentary rocks, and anorthosite in the Laramie Mountains; and granite and metasedimentary rocks in the Medicine Bow Mountains*

The Geological Survey of Wyoming