Geologic Map of the Kellogg East and Southern Grizzly Mountain Quadrangles, Shoshone County, Idaho

James L. Browne

2017

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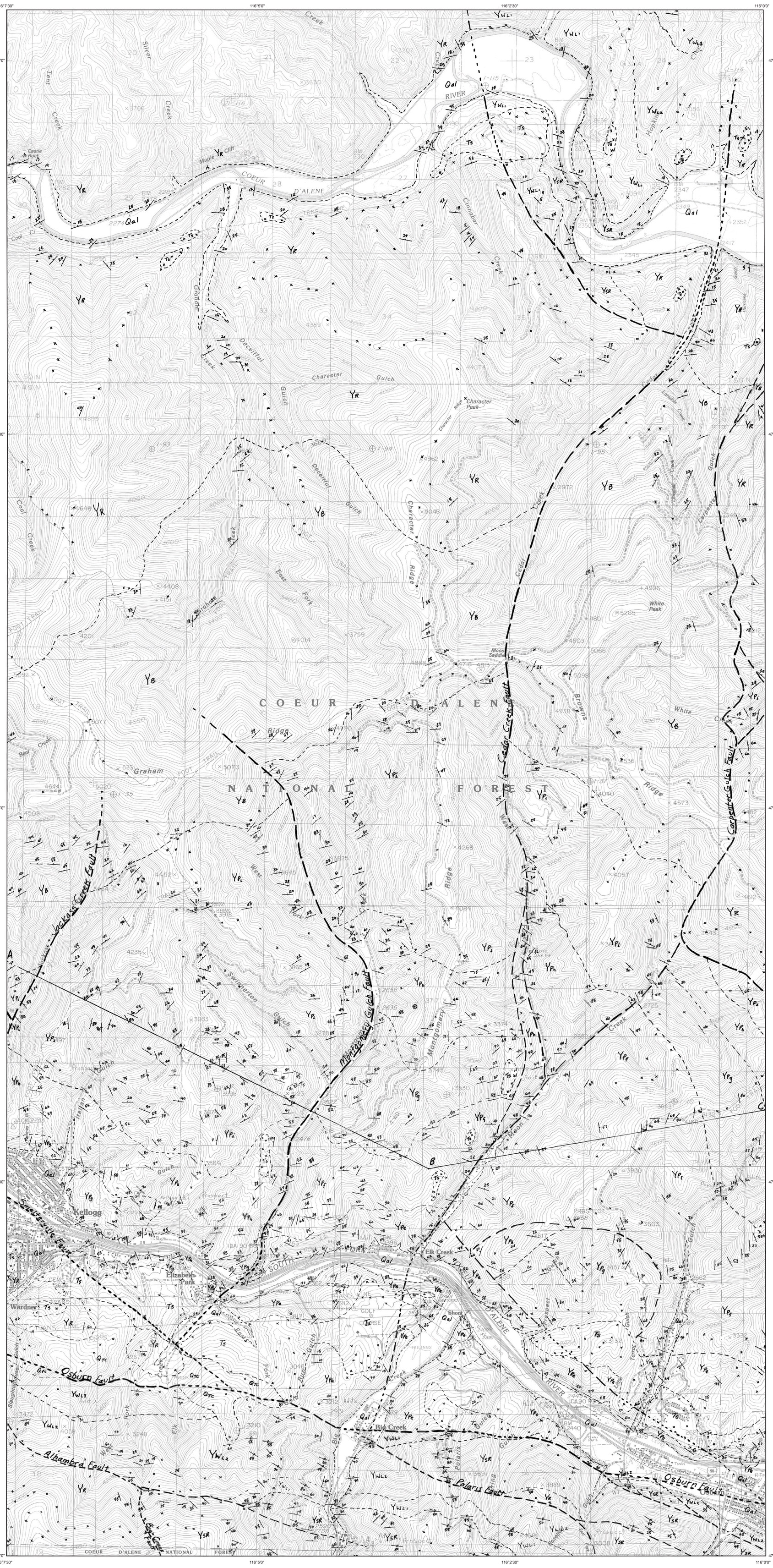


Description of Map Units

Quaternary

- **Qal** — Alluvium — Recently deposited silt, sand, cobbles, and boulders in stream and river valleys.
- **Qtc** — Talus and colluvium — Composed of angular to sub-rounded cobbles and finer debris from weathering and downhill transport of Revett and St. Regis strata from south of the Osburn fault. Minor included Wallace Formation debris.

Tertiary

- **Ts** — Tertiary sediments — Tan to red and orange silt, sand, cobbles and boulders filling Tertiary stream and river valleys. Composed of material derived from weathering of surrounding Belt metasediments. Cemented by iron oxides in a few places.

Middle Proterozoic Belt Supergroup

Wallace Formation

- **Ywl_3** — Lower Wallace unit 3 — Thin- to medium-bedded, light gray to gray quartzite, dolomitic quartzite grading to quartzitic dolomite, and abundant green argillite. Few thin black argillite caps. Dolomitic quartzite and quartzitic dolomite are dominant constituents.
- **Ywl_2** — Lower Wallace unit 2 — Thin- to medium-bedded, light gray to gray quartzite and ocherous-weathering dolomitic quartzite, grading to ocherous-weathering quartzitic dolomite. Abundant and prominent black argillite caps. Minor green argillite.
- **Ywl_1** — Lower Wallace unit 1 — Green argillite and carbonate-bearing argillite with thin- to medium-bedded, light gray to gray quartzite, and ocherous-weathering dolomitic quartzite grading to ocherous-weathering quartzitic dolomite. Green argillite is more abundant in lower one-third of unit, where it is thinly interlayered with ocherous-weathering dolomitic argillite and dolomite. Rare thin, black argillite caps.
- **Ysr** — St. Regis Formation — Thin- to very thin-bedded green and purple argillite with gray to green siltite and gray to gray-green impure quartzite. Ocherous-weathering dolomitic argillite in upper one-quarter of formation with very thin beds of ocherous-weathering dolomite that becomes progressively more prominent toward the top of the formation. Upper contact placed at thin bed of distinctive waxy green argillite, peculiar to this interval, above which no purple argillite occurs.
- **Yr** — Revett Formation — Thin- to thick-bedded, gray to white and in some places gray-green vitreous to sub-vitreous quartzite with thin- to medium-bedded siltite and very thin to thin-bedded gray-green argillite in places. Quartzite is generally more vitreous and blocky and more resistant to weathering than quartzites of the underlying Burke Formation.
- **Yb** — Burke Formation — Thin- to thick-bedded, gray and dark gray to pale green siltite and sub vitreous fine- to medium-grained quartzite commonly with interlayered gray-green argillite and argillitic siltite, especially in the lower one-third of the formation. A few beds in upper one-third to one-half of the formation may be vitreous and resemble Revett quartzites. Fine- to very fine disseminated to thin attenuated streaks of magnetite generally found throughout the formation, especially in the argillitic and silty strata.

Prichard Formation

- **Ypi** — Member I — Thin- to thick-bedded, fine- to medium-grained, white to tan and dark gray quartzite, gray to dark gray siltite, and laminated to very thin bedded light and dark gray siltite couplets, graded in places, together with siltite-black argillite couplets. Percentages of the different components of this member may vary considerably from one area to the next.
- **Yph** — Member H — Platy- to shaley-weathering, laminated to very thin bedded, light and dark gray siltite couplets, graded in places, and siltite-black argillite couplets. Mainly planar bedded.
- **Ypg** — Member G — Light to dark gray siltite couplets, graded in places, and siltite-black argillite couplets, laminated to very thin bedded, with lesser quantities of thin- to thick-bedded, gray to white siltite and quartzite. As in member I, quantities of the different components may vary widely from one area to the next. Minor irregular bedding.
- **Ypf** — Member F — Platy-weathering, laminated to very thin and thin-bedded siltite-siltite couplets, graded in places. Black argillite laminae are rare. Gray to light gray, thin-bedded siltite prominent in some sections of the formation member. That, the presence of irregular bedding in places, the lack of shaley weathering, and the rarity of black argillite provides the minor differences between members F and H. Mainly planar bedded.
- **Ype** — Member E — Much like member G with siltite laminae of various alternating shades of gray to very dark gray, siltite-black argillite couplets, and variable amounts of gray to white, thin- to thick-bedded siltite and quartzite. Considerable dark gray massive siltite in the uppermost part of the member. Characteristically, much of the finer grained strata show irregular rather than planar bedding features, such as cutoffs, abrupt thinning and thickening, and crumpling of strata.

Symbols

- Contact, approximately located
- Contact, concealed
- Fault, approximately located
- Fault, concealed

Strike and dip of beds

- 40 — Inclined
- 90 — Vertical
- Horizontal
- 75 — Overturned
- 30 FA — Direction and plunge of minor fold
- × — Individual outcrop, road cut exposure, or diagnostic rubble

Cross-section Symbols

- Reactivated thrust fault with larger component of late normal fault displacement
- Reactivated thrust fault with proportionately equal amounts of early reverse and late normal fault displacement

Base Map Credit

Base from scanned 1:24,000-scale USGS paper quadrangles, 1985.

Topography by photogrammetric methods from aerial photographs taken 1977. Field checked 1980.

Map edited 1985.

Projection: Idaho coordinate system, west zone (Transverse Mercator). 1927 North American Datum.

10,000-foot grid ticks based on Idaho coordinate system, west zone.

1000-meter Universal Transverse Mercator grid ticks, zone 11.

Declination from NOAA National Geophysical Data Center.

UTM Grid and 2017Magnetic North Declination at Center of Map (1° 44′ 14.12″)

SCALE 1:24,000

1 0.5 0 1 MILE

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

1 0.5 0 1 KILOMETER

Contour interval 40 feet

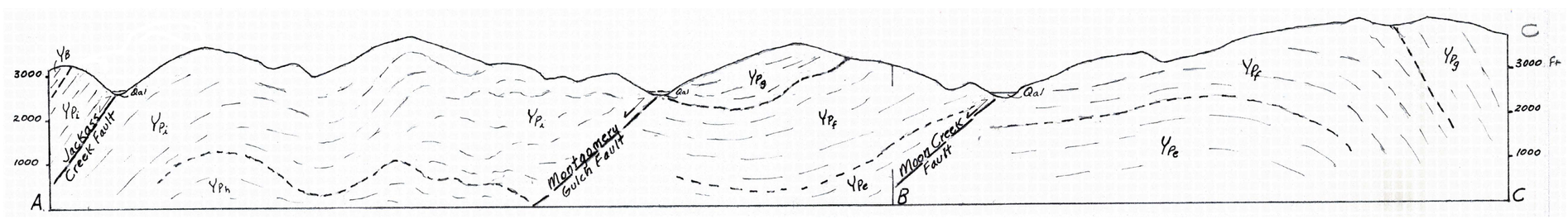
IDAHO

Qudrangle Location

Digital cartography by Jonathan E. Sandquist at the Idaho Geological Survey's Digital Mapping Lab.

Map version 3-14-2018.

PDF (Acrobat Reader) map may be viewed online at www.idahogeology.org.



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