

# GEOLOGIC MAP OF THE LANE QUADRANGLE, KOOTENAI COUNTY, IDAHO

James L. Browne  
2006

This Technical Report is a reproduction of independent mapping by James L. Browne of Coeur d'Alene, Idaho. Its content and format may not conform to agency standards.



- Description of Map Units**
- Quaternary**
    - Qal** Alluvium -- Recently deposited clay, silt, sand, and gravel in valley floor. Includes mine tailings along Coeur d'Alene River valley.
  - Tertiary**
    - Tcg** Old Gravel -- Tan to orange clay, silt, sand, pebbles, and cobbles filling Tertiary stream valleys; composed of materials derived from surrounding Belt metasediments.
    - Tcr** Columbia River basalt -- Tholeiitic basalt flow or flows of probable Grande Ronde age.
  - Cretaceous or Tertiary**
    - TKd** Dacite porphyry dikes -- 10 to 60 feet thick, containing 30% to 60% feldspar, quartz and biotite phenocrysts in an aphanitic matrix.
    - TKr** Rhyolite porphyry dike -- 20 to 30 feet thick, containing less than 5% 1 to 2mm quartz and feldspar phenocrysts in a light gray to white aphanitic matrix.
    - TKi** Diorite dikes -- 5 to 15 feet thick, most too narrow or of uncertain attitude to be shown on map. Medium to dark green, fine- to medium-grained, fresh to highly altered, mainly composed of feldspar and amphibole and/or pyroxene.
  - Precambrian Belt Supergroup**
    - Prichard Formation**
      - pCpa** Member H -- Gray siltite and silty argillite interlaminated and very thinly interbedded with dark gray and in places nearly black siltite and silty argillite. Few thin black argillite laminae. Planar bedded, micro-credited in places. Pyrite present in much of unit as specks, clots, and as fracture fillings. Weathers to plates and slabs, typically one eighth inch to one inch in thickness. Almost fissile in some places. Overall appearance is light in color.
      - pCpg pCpe** Member G -- Gray to dark gray and olive gray siltite and silty argillite interlaminated and very thinly interbedded with dark gray to black silty argillite, siltite and gray to dark gray fine- to very fine-grained quartzite. Numerous intervals of thin- to medium-bedded light to dark gray, tan and olive gray, fine- to medium- and little coarse-grained quartzite. Color of dark gray and very dark gray quartzites appears to be due to metamorphic biotite. Planar to irregular bedding. Blocky to platy weathering. Overall appearance is dark in color in most areas. pCpg is area of mainly fine- and very fine- to medium- and little coarse-grained gray quartzite and gray siltite with few occurrences of dark gray to black argillite and silty argillite, as above.
      - pCpf** Member F -- Light gray to gray siltite thinly to thickly interlaminated and very thinly interbedded with dark gray and olive gray siltite and silty argillite. Minor very fine-grained quartzite. Minor dark gray to black argillite as very thin laminae. Planar to little irregular bedding. Weathers to plates and slabs, typically one eighth inch to two inches in thickness. Pyrite present in much of unit as specks, clots and fracture fillings. Overall appearance is light in color.
      - pCpe** Member E -- Dark gray to black argillite and silty argillite very thinly to thickly interlaminated with gray to dark gray siltite and minor very fine-grained quartzite. Planar to irregular bedding. Few aggregations of medium to thick-bedded, tan to gray and white, fine- to coarse-grained quartzite (up to 80 feet thick) with minor thinly inter-layered argillite and/or siltite. The siltites and argillites in this member display abundant irregular bedding features (pinch and swell, lenticular bedding, wavy bedding, and slump folds) in some areas, much more than in any other Prichard member. The quartzites are prominently cross-bedded in some exposures and appear to be limited laterally, pinching out along strike. Platy to blocky weathering. Overall appearance is dark in color with the light colored quartzite aggregations in marked contrast.
      - pCi** Mafic intrusions -- Dark green, medium- to very coarse-grained quartz diorite. Predominantly hornblende in most exposures, with lesser to minor feldspar and quartz. Occurs as sill-like to slightly crosscutting bodies into Prichard Formation. Most exposures consist of dark red brown granular soil which contains rounded cobbles and boulders of unweathered diorite. Ragged cobbles of white quartz associated with diorite soil in many places, but not observed in fresh outcrop.

- Symbols**
- Contact, approximately located
  - - - Fault, approximately located
  - - - Fault, concealed
  - Strike and dip of beds  
57° inclined ⊕ horizontal
  - Axis of minor fold, showing inclination
  - Axis of anticline
  - Axis of syncline
  - x Individual outcrop, roadcut exposure or diagnostic rubble
  - Dikes**
    - Rhyolite porphyry
    - Dacite porphyry
    - △-△-△-△ Diorite

Base map scanned from USGS digital raster graphic, 1981.  
Topography by photogrammetric methods from aerial photographs taken 1975. Field checked 196. Map edited 1981.  
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.

Field work conducted 2004.  
Digital cartography by Jane S. Freed at the Idaho Geological Survey's Digital Mapping Lab.  
Map version 9-13-2006.  
Note on printing: The map is reproduced at a high resolution of 600 dots per inch. The inks are resistant to run and fading but will deteriorate with long-term exposure to light.  
PDF map (Acrobat Reader) may be viewed at [www.idahogeology.org](http://www.idahogeology.org).

