

CORRELATION OF MAP UNITS

Qa	Qs	} QUATERNARY
QTs	QTb	
Tsl	Tw	} QUATERNARY OR TERTIARY
Jt	Jl	} TERTIARY
Trt	Trd	} MIDDLE JURASSIC
Ppr	Ppm	} EOCENE
PPw	Mc	} PERMIAN
Mm		} PERMIAN AND PENNSYLVANIAN
		} MISSISSIPPIAN

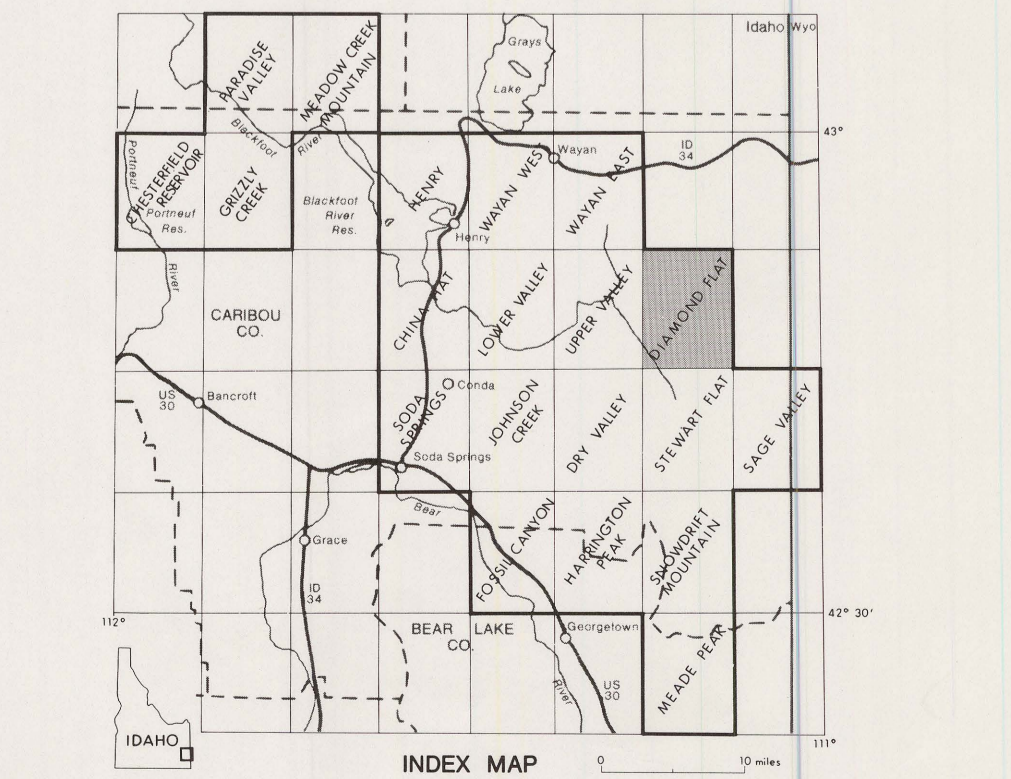
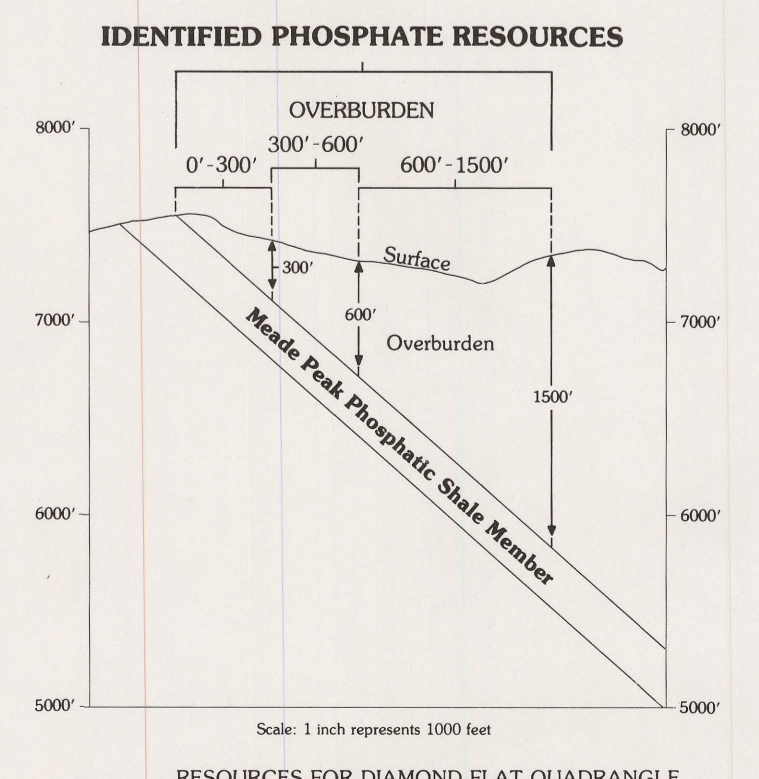
- DESCRIPTION OF MAP UNITS**
- Qa** ALLUVIUM (QUATERNARY) - Unconsolidated sedimentary deposits along stream valleys; may include colluvium in Fossil Canyon quadrangle and hillwash and alluvial fans in Dry Valley quadrangle
 - Qs** SURFICIAL DEPOSITS (QUATERNARY) - Includes colluvium, older alluvium, hillwash, talus, alluvial-fan, landslide, mud-flow, and boulder deposits
 - QTs** SEDIMENTARY DEPOSITS (QUATERNARY AND TERTIARY) - Undivided surficial deposits and Salt Lake Formation
 - QTb** BASALT (PLEISTOCENE OR PIOCENE) - Olivine and augite-olivine basalt
 - Tsl** SALT LAKE FORMATION (PIOCENE AND MIOCENE) - Limestone, sandstone, and chert conglomerate and rhyolitic tuff
 - Tw** WASATCH FORMATION (LOWER EOCENE) - Red conglomerate and sandstone
 - Jt** TWIN CREEK LIMESTONE (MIDDLE JURASSIC) - Limestone, siltstone, and sandstone
 - Trt** THAYNES LIMESTONE (LOWER TRIASSIC) - Sandstone, limestone, siltstone, and shale. As mapped, may include the Lanes Tongue of the Ankarah Formation
 - Trd** DINWOODY FORMATION (LOWER TRIASSIC) - Siltstone, shale, and limestone. As mapped, may include tongue of the Woodside Shale. Approximately 1,650 to 2,200 ft thick
 - Ppr** PHOSPHORIA FORMATION (PERMIAN) - Includes: Rex Chert Member (Lower Permian) - Chert. As mapped, may include cherty shale member of the Phosphoria Formation and lentils of the Franson Member of the Park City Formation. Approximately 150 to 350 ft thick
 - Ppm** Meade Peak Phosphatic Shale Member (Lower Permian) - Phosphorite and mudstone. Approximately 110 to 200 ft thick
 - PPw** WELLS FORMATION (PERMIAN AND PENNSYLVANIAN) - Sandstone and limestone. As mapped, may include the Grandeur Tongue of the Park City Formation. Approximately 2,275 to 2,510 ft thick
 - Mc** CHESTERFIELD RANGE GROUP (UPPER AND LOWER MISSISSIPPIAN) - Limestone, sandstone, and siltstone
 - Mm** MADISON LIMESTONE (UPPER AND LOWER MISSISSIPPIAN) - Limestone

- CONTACT** - Dashed where approximately located, gradational, indefinite or inferred; dotted where concealed; queried where doubtful
 - FAULT** - Dashed where approximately located or inferred; dotted where concealed; queried where doubtful; U, upthrown side; D, downthrown side; arrows show relative horizontal movement
 - THRUST FAULT** - Sawtooth on upper plate. Dashed where approximately located or inferred; dotted where concealed; queried where doubtful
 - ANTICLINE** - Showing crestline. Dashed where approximately located or inferred; dotted where concealed; queried where doubtful
 - SYNCLINE** - Showing troughline. Dashed where approximately located or inferred; dotted where concealed; queried where doubtful
 - OVERTURNED ANTICLINE** - Showing direction of dip of limbs. Dashed where approximately located or inferred; dotted where concealed; queried where doubtful
 - OVERTURNED SYNCLINE** - Showing direction of dip of limbs. Dashed where approximately located or inferred; dotted where concealed; queried where doubtful
 - STRIKE AND DIP OF BEDS** - Inclined; overturned; vertical; horizontal
 - PHOSPHATE DRILL HOLE** - For computing resource tonnages
 - PHOSPHATE TRENCH** - For computing resource tonnages
 - PHOSPHATE MINE PIT BOUNDARY** - As of September 1979
- The geology shown includes: 1) the trace of the top and bottom contacts of the Phosphoria Formation and where data are available the top and bottom contacts of the Meade Peak Phosphatic Shale Member of the Phosphoria Formation; 2) appropriate structural data required for construction of structure contours, overburden isopachs, and resource blocks; and 3) other structural data necessary for understanding the regional geologic picture.
- FAULT SEPARATION** - No calculated resource
 - FAULT OVERLAP** - Twice calculated resources if covered by 1500 ft. or less of overburden
 - OVERBURDEN ISOPACHS** - On top of the Meade Peak Phosphatic Shale Member of the Phosphoria Formation. Only 300, 600, 1500 feet isopachs are shown. Dashed lines where control is poor and interpretation of structure is uncertain
 - RESOURCE BLOCK END BOUNDARY**
 - IDENTIFIED PHOSPHATE RESOURCES** - Excluding outcrop or projected outcrop of the Meade Peak Phosphatic Shale Member

Map units and symbols shown with an asterisk are not on this map.

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Geology compiled by Pamela Palmer from Mansfield (1927, pl. 9) and Almet, geologic interpretation and overburden isopachs by Bea Johnston; drill hole logs analyzed by Alexandra Zemanek; resource blocks by Pamela Palmer, assisted by Marje Lane; cartography by David Taylor and Gabe C. Johnson



IDENTIFIED PHOSPHATE RESOURCES

MAPS SHOWING SELECTED GEOLOGY AND PHOSPHATE RESOURCES OF THE DIAMOND FLAT QUADRANGLE, CARIBOU COUNTY, IDAHO

By
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Idaho Bureau of Mines and Geology
1984

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