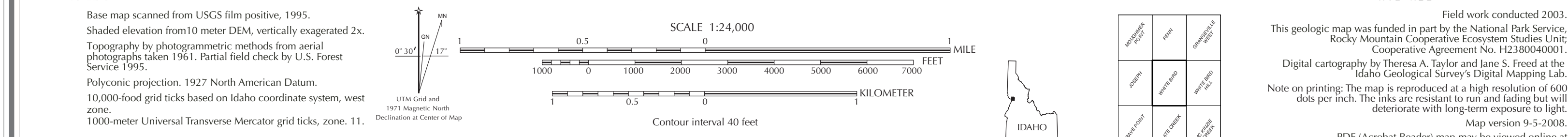


Disclaimer: This Digital Web Map is an informal report and may be revised and formally published at a later time. Its content and format may not conform to agency standards.



Field work conducted 2003.
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Digital cartography by Theresa A. Taylor and Jane S. Freed at the
Idaho Geological Survey's Digital Mapping Lab.
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.
Map version 9-5-2008.
DNE (Amanda Brundage) map master and cleanup, 2010.

Activity	Tjds (hours)
KPDg	10
JPDg	5

<p>Much of the quadrangle is underlain by Miocene basalt flows of the Columbia River Basalt Group. Exposures of prebasalt rocks are restricted to the Salmon River canyon in the central part of the quadrangle and consist of Permian to Triassic island-arc rocks and a group, which include metamorphosed volcanic flows and sediments, and Jurassic to Cretaceous intrusive rocks. The island-arc rocks were accreted to the North American continent during the Jurassic to Cretaceous. Folds and faults in these rocks are likely related to the accretion process. Intrusive rocks were emplaced later, probably in the late Jurassic or Cretaceous.</p>	<p>TI</p>	<p>Latah Form</p> <p>Sediments of the Latah Formation, Ellensburg Formation in Washington</p> <p>Sediments interbedded with basalt</p> <p>Locally sand with pebble layers at top of the White Bird grade with</p>
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In the following unit descriptions and later discussion of structure, we use the metric system for sizes of mineral or clast constituents of rock units. We use the English system for thickness and distance measurements to conform to those on the base map.

de ground (Holocene). Artificial fills composed of excavated, transported, and engineered construction materials of highly varying composition, but typically derived from local sources. Mostly fill along the U.S. 95 White Bird grade.

Alluvial Deposits
Avium of the Salmon River (late Holocene)—Channel and flood-plain deposits that are part of the present river system. Two grain-size suites are typically present: coarse sand in thin shoreline deposits, and well-sorted and rounded pebble to boulder gravel in river bars and islands. Gravel

Aluvium of the Salmon River (early Holocene).—Primarily stratified sand and well-rounded boulders to boulder gravel of point-bar and terrace remnants above modern levels of the Salmon River. Gravel clast lithology similar to Qam. May be capped by thin loess and eolian sand. Height above present mean water level is less than 40 feet. Interfingers with the alluvium and alluvial fan deposits of the Marmarosa Mountains and Davis and others (2002) describe the alluvial deposits and eolian caps seen in pits dug for the research. Deposits of Mazama ash and

Channel and flood-plain deposits of Salmon River tributaries (Holocene)—Primarily stratified and rounded pebble to boulder gravel in dark gray, fine-grained bas. Uncommon to common plagio. magnetic polarity, although field weak normal or conflicting res. section. Unit consists of one to north to south. It likely pinches structure. Maximum thickness is

terrace remnants in the White Bird Creek valley. May be graded to older alluvium of the Salmon River (Q_{mo}).

Gravel-fan deposits (Holocene). Crudely bedded, poorly sorted brown mudry gravel derived from basaltic colluvium on steep canyon slopes. Gravel is composed of subangular and angular pebbles, cobbles, and boulders of basalt in a matrix of granules, sand, silt, and clay. May include beds of silt and sand reworked from loess and Mazama ash.

Older alluvial-fan deposits (late Pleistocene to early Holocene). Poorly

Normal magnetic polarity. Contains multiple flow units with sand exposed in the Salmon River. Individual flows range from 50 to 100 m. The sequence is commonly textured with scarce small plastic lower in the sequence are typically thick entablature flow at or near probably equivalent to the Johns

luvial deposits, undifferentiated (Pleistocene-Pliocene)—Poorly sorted and poorly stratified angular basalt cobbles and boulders mixed with silt and clay. Deposited by gravity movements of various sources, including ancient alluvial-fans and landslides. Surface weathered forming high clay content within a few feet in depth.

Sample	Latitude	Longitude	Unit name	Map	Major elements in weight percent										Trace elements in parts per million											
					SiO ₂	TiO ₂	Al ₂ O ₃	FeO	MnO	MgO	CaO	Na ₂ O	K ₂ O	P ₂ O ₅	Cr	Co	Ni	Sc	Y	Zr	Hf	Ta	Pb	Th	Ce	Nd
081800	18.3333	116.7167	Granite of Gneissite	1	52.20	1.25	15.84	41.91	0.89	21.53	11.28	0.78	0.28	0.14	10	22.23	25.29	68.00	1.12	21.72	67.26	7.4	3	20	8	4
081801	18.3336	116.7167	Granite of Gneissite	1	53.15	1.36	14.42	41.31	0.93	21.5	6.79	1.37	0.18	0.04	5	10	36	126.74	9.67	86	180	183	11.5	159	10	6
081802	18.3339	116.7167	Granite of Gneissite	1	52.25	1.25	15.84	41.91	0.89	21.53	11.28	0.78	0.28	0.14	10	22.23	25.29	68.00	1.12	21.72	67.26	7.4	3	20	8	4
081803	18.3342	116.7167	Granite of Gneissite	1	53.15	1.36	14.42	41.31	0.93	21.5	6.79	1.37	0.18	0.04	5	10	36	126.74	9.67	86	180	183	11.5	159	10	6
081804	18.3345	116.7167	Granite of Gneissite	1	52.25	1.25	15.84	41.91	0.89	21.53	11.28	0.78	0.28	0.14	10	22.23	25.29	68.00	1.12	21.72	67.26	7.4	3	20	8	4
081805	18.3348	116.7167	Granite of Gneissite	1	53.15	1.36	14.42	41.31	0.93	21.5	6.79	1.37	0.18	0.04	5	10	36	126.74	9.67	86	180	183	11.5	159	10	6
081806	18.3351	116.7167	Granite of Gneissite	1	52.25	1.25	15.84	41.91	0.89	21.53	11.28	0.78	0.28	0.14	10	22.23	25.29	68.00	1.12	21.72	67.26	7.4	3	20	8	4
081807	18.3354	116.7167	Granite of Gneissite	1	53.15	1.36	14.42	41.31	0.93	21.5	6.79	1.37	0.18	0.04	5	10	36	126.74	9.67	86	180	183	11.5	159	10	6
081808	18.3357	116.7167	Granite of Gneissite	1	52.25	1.25	15.84	41.91	0.89	21.53	11.28	0.78	0.28	0.14	10	22.23	25.29	68.00	1.12	21.72	67.26	7.4	3	20	8	4
081809	18.3360	116.7167	Granite of Gneissite	1	53.15	1.36	14.42	41.31	0.93	21.5	6.79	1.37	0.18	0.04	5	10	36	126.74	9.67	86	180	183	11.5	159	10	6
081810	18.3363	116.7167	Granite of Gneissite	1	52.25	1.25	15.84	41.91	0.89	21.53	11.28	0.78	0.28	0.14	10	22.23	25.29	68.00	1.12	21.72	67.26	7.4	3	20	8	4
081811	18.3366	116.7167	Granite of Gneissite	1	53.15	1.36	14.42	41.31	0.93	21.5	6.79	1.37	0.18	0.04	5	10	36	126.74	9.67	86	180	183	11.5	159	10	6
081812	18.3369	116.7167	Granite of Gneissite	1	52.25	1.25	15.84	41.91	0.89	21.53	11.28	0.78	0.28	0.14	10	22.23	25.29	68.00	1.12	21.72	67.26	7.4	3	20	8	4
081813	18.3372	116.7167	Granite of Gneissite	1	53.15	1.36	14.42	41.31	0.93	21.5	6.79	1.37	0.18	0.04	5	10	36	126.74	9.67	86	180	183	11.5	159	10	6
081814	18.3375	116.7167	Granite of Gneissite	1	52.25	1.2																				

* Major elements are normalized on a volatile-free basis, with total Fe expressed as FeO. All analyses performed at Washington State University GeoAnalytical Laboratory, Pullman, Washington.

	Contact: dashed where approximately located.
	Fault: ball and claw on downthrow side; dashed where approximately located; dotted where concealed.
	Thrust fault: dashed where approximately located; dotted where concealed; teeth on upper plate.
	Strike and dip of volcanic flows.
	Estimated strike and dip of volcanic flows.
	Fold axis.
	Anticline.
	Syncline.
	Monocline: synclinal flexure: shorter arrows on steep limb.
	Historic hydraulic placer mining: Low terrace placers of the Selkirk River were extensively mined in the late 19th century using hydraulic methods. The line symbol is the upper limit of a mining disturbance zone that extends to the river above. Although mostly removed, remnants of terrace material are present as a subtle break in slope between the valley wall and the modern flood plain.
	Strike and dip of foliation.
	Strike and dip of mylonitic foliation.
	Strike and dip of cleavage.
	Bearing and plunge of lineation; type unknown.
	Bearing and plunge of mylonitic lineation.
	Quartz vein.
	Headwall scarp on landslide or small slope failure.
	Sample location and number.

Bard, C.S., 1978, Mineralogy and chemistry of pyroxenes from the Inn and lower Yakima basalts of west-central Idaho: Washington State University M.S. thesis, 75 p.

Barker, R.J., 1982, Soil survey of Idaho County area, western part: Department of Agriculture, Soil Conservation Service, 266 p., 79 plates.

Bond, I.G., 1963, Geology of the Clearwater embayment: Idaho Bureau of Mines and Geology Pamphlet 128, 83 p.

Camp, V.E., 1981, Geologic studies of the Columbia Plateau: Part II. Upland Miocene basalt distribution, reflecting source locations, tectonism, and erosion: U.S. Geological Survey Bulletin 1312, 100 p.

[illegible]

The structural history of this area is complex and long-lived. Rocks of the Seven Devils Group and associated intrusive units were modified by folding, faulting, and erosion before the eruption of the White Bird and White Bird Hill faults. These faults were reactivated during this stage of deformation as normal faults rather than oblique or strike-slip faults.

tailing, which we name the Hammer Creek thrust, that extends across the quadrangle from southwest to northeast. Along the trace of the thrust, debris and partially imbricated pockets of the diorite basaltic complex (H4) have been removed northward over footwall rocks of the Seven Devils Group. The upper package of the Seven Devils Group is

