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HEAT FLOW ON THE SOUTH FLANK OF THE SNAKE RIVER RIFT

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Rifting in southern Idaho has been active for some time. Holocene volcanism, abundant hot springs and hot water wells attest to an anomalous geothermal regime. The preliminary heat flow measurements given below will be refined as additional data become available.

Hole	Lat./Long.	Depth	Gradient	K	Q
MOH-1[a]	42°48.3'N-116°24.3'W	252	31	7.0	2.2
MUR-1[a]	43°11.3'N-116°41.1'W	252	47	6.6	3.1
RR-1[b]	42° 8.0'N-113°21.8'W	274	∿130	2.5	∿3
RR-2[b]	42° 5.6'N-113°21.7'W	194	∿200	3[c]	∿6
RR-3[b]	42° 5.8'N-113°23.6'W	435	∿180	4	∿7
RRGE-1[b]	42° 6.2'N-113°23.0'W	265	∿200	4[c]	∿8

Depth (m) of deepest measurement. Gradient (°C/km) in lower part of hole. K-thermal conductivity (mcal/cm·sec·°C). Q-Heat flow (μcal/cm²·sec). a) In granitic rocks. b) In Quaternary sediments. c) Estimated from adjacent holes.

The measurements in igneous rock appear to be free of local hydrologic disturbances. These heat flows are as high or higher than most in the Basin and Range Province to the south. The "reduced" heat flows (those obtained after allowance for the radioactive heat production of the igneous rocks) are high with respect to the Basin and Range.

The highest values from holes in the Raft River Valley (RR), all of which suffer from some degree of thermal disequilibrium, probably reflect hydrothermal convection at depth. Deep drilling (RRGE-1) now underway under the auspecies of AEC is expected to yield information as to its nature.