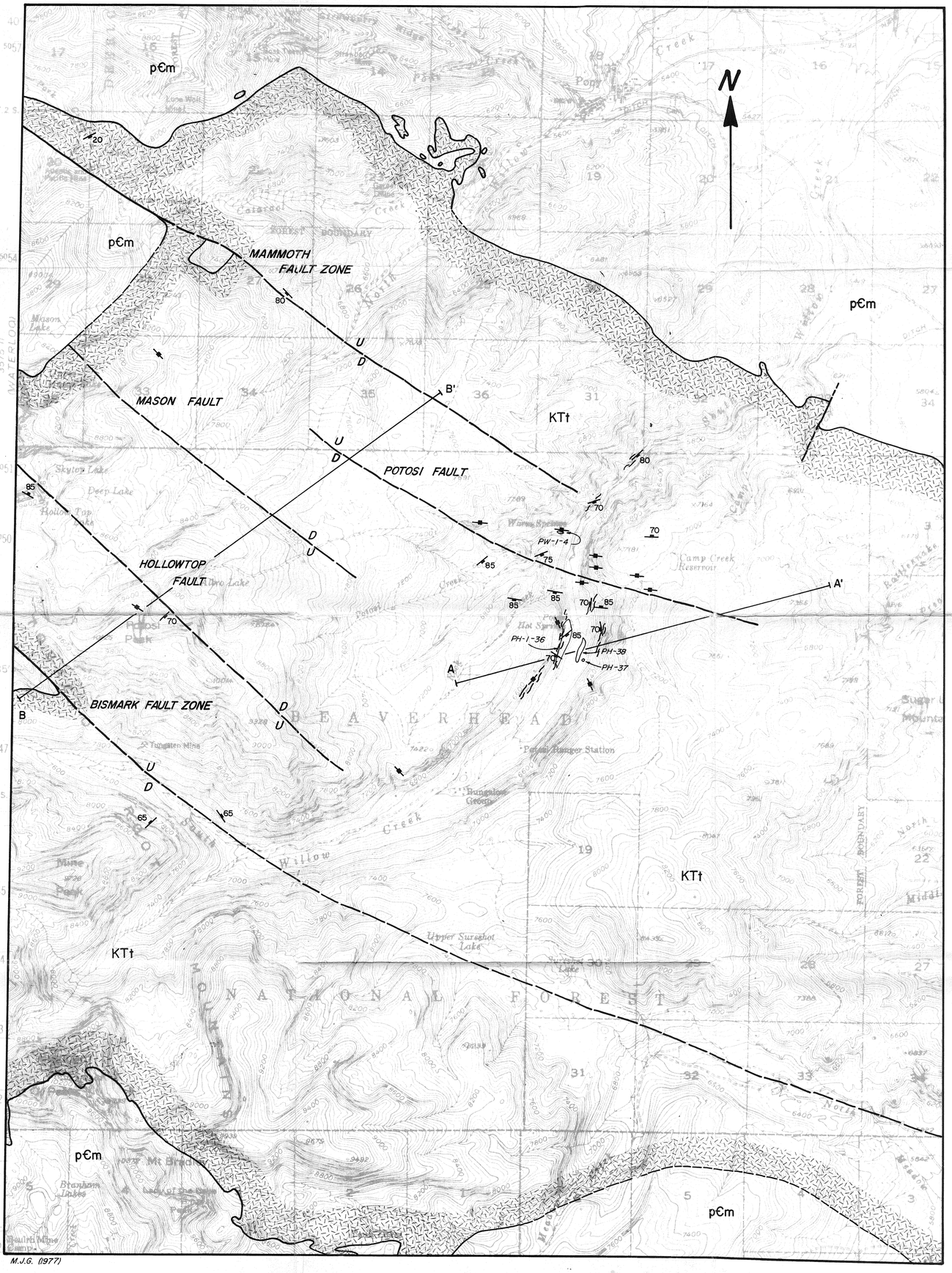
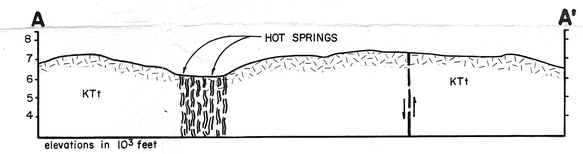
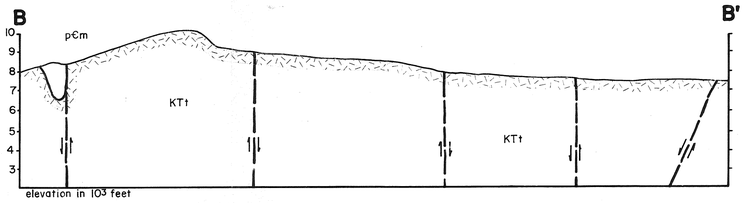
GEOLOGIC MAP AND SECTIONS, POTOSI HOT SPRINGS

MADISON COUNTY, MONTANA







KILOMETERS

1 .5 0 1 2 3 4

CONTOUR INTERVAL 40 FEET
(12.2 METERS)

LEGEND

- KTt — CRETACEOUS-TERTIARY TOBACCO ROOT BATHOLITH
- p€m — PRECAMBRIAN PONY AND CHERRY CREEK METAMORPHICS
- PH-37 — APPROXIMATE AREA OF WARM GROUND AROUND DISCHARGING HOT SPRING VENTS
- CONTACT, DASHED WHERE APPROXIMATELY LOCATED
- FAULT, DASHED WHERE APPROXIMATELY LOCATED
- 60 — DIP AND STRIKE OF DOMINATE FRACTURE AT EACH STATION
- STRIKE OF DOMINATE VERTICAL FRACTURE AT EACH STATION
- SHEAR ZONE

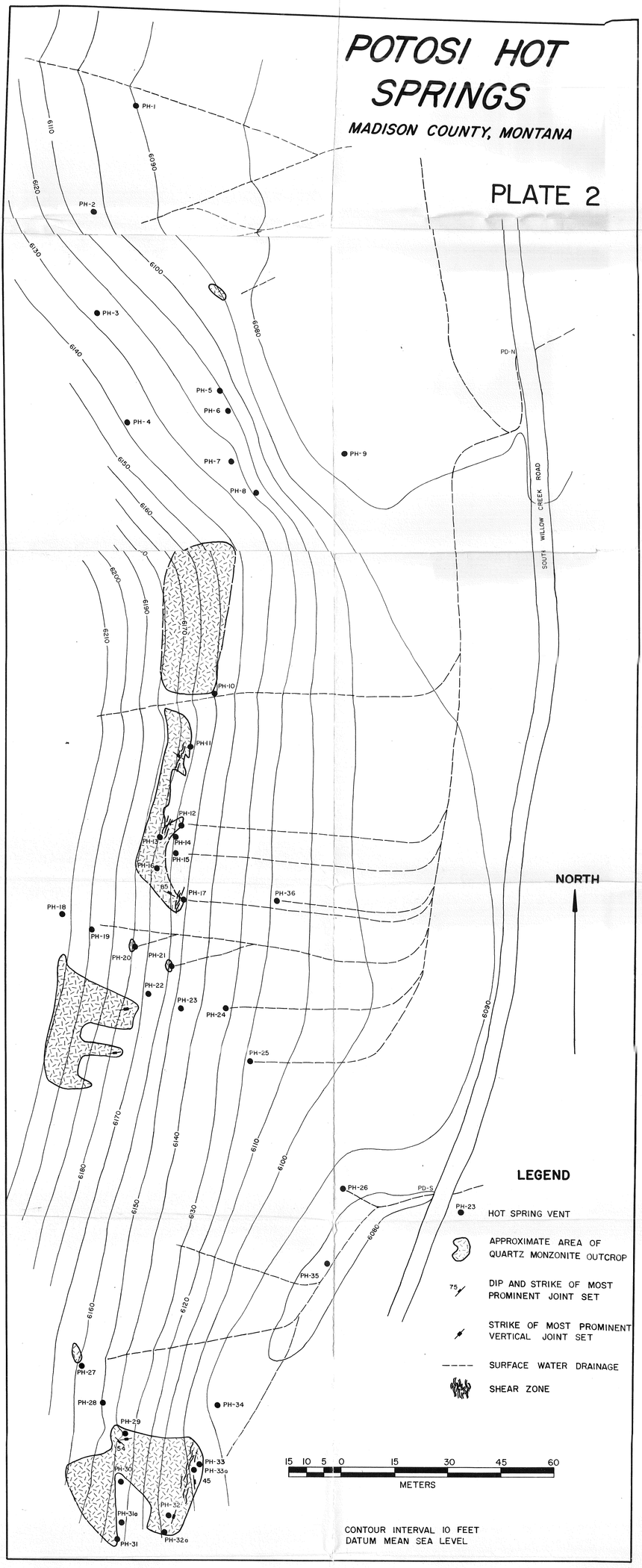
BASE FROM U.S. GEOLOGICAL SURVEY MAP OF HARRISON QUADRANGLE, MONTANA

PLATE 1

POTOSI HOT SPRINGS

MADISON COUNTY, MONTANA

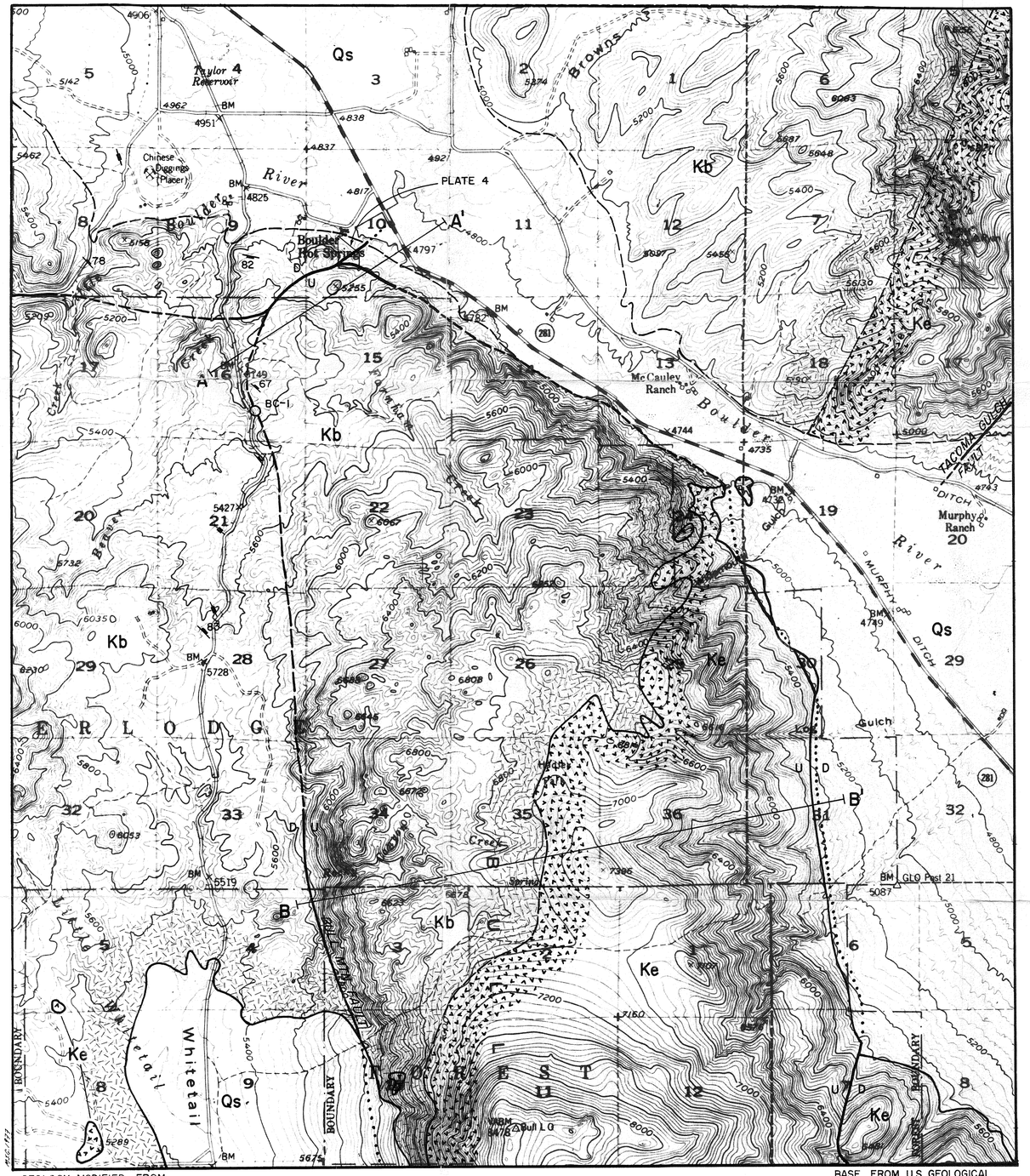
PLATE 2



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GEOLOGIC MAP AND SECTIONS, BOULDER HOT SPRINGS AREA

JEFFERSON COUNTY, MONTANA



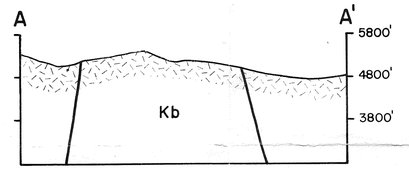
GEOLOGY MODIFIED FROM WEEKS AND KLEPPER (UNPUB.)

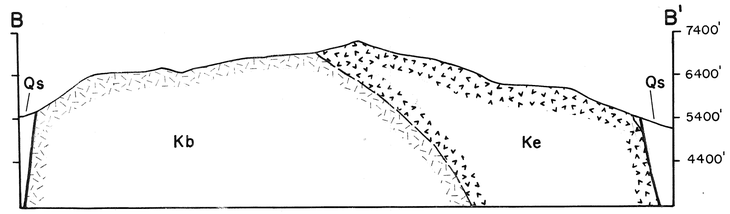
BASE FROM U.S. GEOLOGICAL SURVEY, BOULDER QUADRANGLE, 1954

KILOMETERS

1 .5 0 2 3 4

CONTOUR INTERVAL 40 FEET (12.2 METERS)





LEGEND

- Qs — QUATERNARY SURFICIAL DEPOSITS
- Kb — CRETACEOUS BUTTE QUARTZ MONZONITE
- Ke — CRETACEOUS ELKHORN MOUNTAINS VOLCANICS
- CONTACT, DASHED WHERE INFERRED
- FAULT, DASHED WHERE INFERRED, DOTTED WHERE CONCEALED
- DIP AND STRIKE OF DOMINATE FRACTURE SET AT EACH STATION
- STRIKE OF DOMINATE VERTICAL FRACTURE SET AT EACH STATION
- COLD SPRING

NORTH

PLATE 3

GEOLOGY OF BOULDER HOT SPRINGS

JEFFERSON COUNTY, MONTANA

LEGEND

- COLLUVIUM AND ALLUVIUM
- HIGHLY ALTERED QUARTZ MONZONITE
- CRETACEOUS-TERTIARY BUTTE QUARTZ MONZONITE
- TERTIARY VEINS; DOMINANTLY CALCITE, WITH CHALCEDONY AND STILBITE
- TERTIARY VEINS; DOMINANTLY QUARTZ AND CHALCEDONY WITH CALCITE AND STILBITE - BRECCIATED
- FAULT, DASHED WHERE APPROXIMATELY LOCATED
- PROSPECT
- 70 STRIKE AND DIP OF DOMINANT FRACTURE AT EACH STATION
- STRIKE OF DOMINANT VERTICAL FRACTURE AT EACH STATION
- BH-6 SPRING VENT

50 0 50

METERS

CONTOUR INTERVAL 10 FT. (3.05m)

N

BH-27 BH-26 BH-25 BH-24 BH-23 BH-22 BH-21 BH-20 BH-19 BH-18 BH-17 BH-16 BH-15 BH-14 BH-13 BH-12 BH-11 BH-10 BH-9 BH-8 BH-7 BH-6 BH-5 BH-4 BH-3 BH-2 BH-1

STILBITE VEIN

U D

D U

A A' B B'

A'
5150'
5100'
5050'
5000'

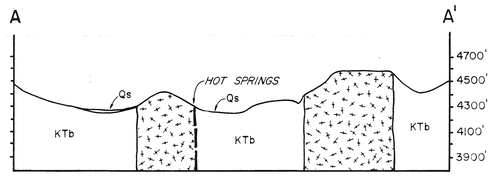
B'
5200'
5100'
5000'
4900'

PLATE 4

GEOLOGIC MAP AND SECTION, ALHAMBRA HOT SPRINGS

JEFFERSON COUNTY, MONTANA





KILOMETERS
.5 0
CONTOUR INTERVAL 40 FEET
(12.2 METERS)

LEGEND

- Qs — QUATERNARY SEDIMENTS; Qls - LANDSLIDE DEBRIS
- Tri — TERTIARY RHYOLITE; FLOW-BANDED, PLATY, INTRUSIVE
- Trt — TERTIARY RHYOLITE; TUFF, BRECCIA, TUFFACEOUS SANDSTONE
- Id — PORPHYRY DIKES
- APPROXIMATE AREA OF TERTIARY ALTERATION, BRECCIATION, AND SILICIFICATION OF COUNTRY ROCK
- KTb — CRETACEOUS-TERTIARY BUTTE QUARTZ MONZONITE
- FAULT, DASHED WHERE APPROXIMATELY LOCATED
- 70 — DIP AND STRIKE OF DOMINATE FRACTURE AT EACH STATION
- STRIKE OF DOMINATE VERTICAL FRACTURE AT EACH STATION
- HOT SPRING VENT
- WATER-WELL

BASE FROM U.S. GEOLOGICAL SURVEY MAP OF CLANCY QUADRANGLE, MONTANA

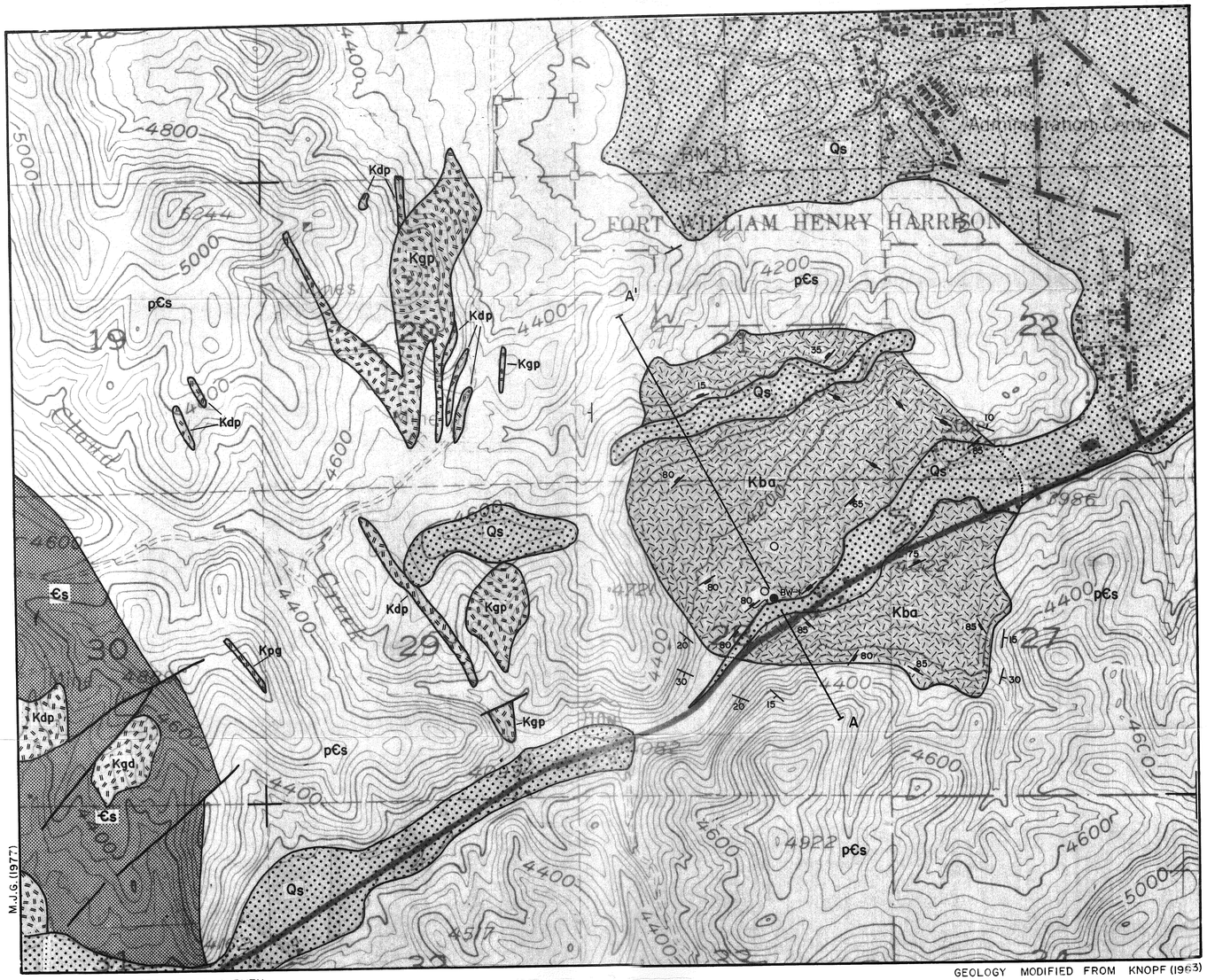
GEOLOGY MODIFIED FROM SMEDES (1966)

M.J.G. (1977)

PLATE 5

GEOLOGIC MAP AND SECTION, BROADWATER HOT SPRINGS

LEWIS AND CLARK COUNTY, MONTANA

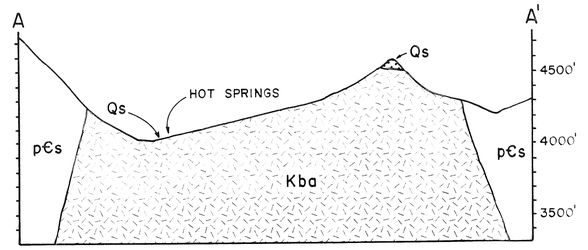


BASE FROM U.S. GEOLOGICAL SURVEY
MAP OF HELENA QUADRANGLE, MONTANA

GEOLOGY MODIFIED FROM KNOPF (1963)

M.J.G. (1977)

KILOMETERS
1 .5 0 1
CONTOUR INTERVAL 40 FEET
(12.2 METERS)



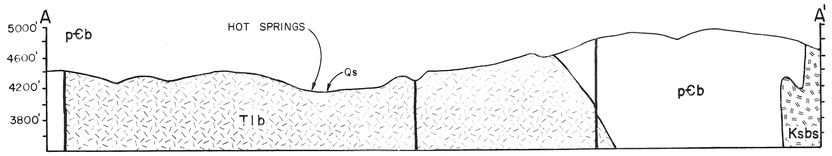
LEGEND

- Qs — QUATERNARY SEDIMENTS
- Kla, Kdp, Kgd, Kgp — CRETACEOUS
  - Kla — BICTITE ADAMELLITE
  - Kdp — DIORITE PORPHYRY
  - Kgd — GRANODIORITE
  - Kgp — GRANODIORITE PORPH.
- Cs — CAMBRIAN SEDIMENTARY ROCKS
- pCs — PRECAMBRIAN SEDIMENTARY ROCKS
- FAULT, DASHED WHERE APPROXIMATELY LOCATED
- HOT SPRING VENT
- WELL(S)
- 70 — DIP AND STRIKE OF DOMINANT FRACTURE SET AT EACH STATION
- STRIKE OF DOMINANT VERTICAL FRACTURE SET AT EACH STATION
- 20 — DIP AND STRIKE OF BEDS

PLATE 6

GEOLOGIC MAP AND SECTION, LOLO HOT SPRINGS

MISSOULA COUNTY, MONTANA



KILOMETERS

.75 .5 .25 0

CONTOUR INTERVAL 40 FEET
(12.2 METERS)

LEGEND

- Qs — QUATERNARY SEDIMENTS
- Tlb — TERTIARY LOLO BATHOLITH; QUARTZ MONZONITE
- Tgp, Tqm, Tqp — TERTIARY GRANITE PORPH., QTZ. MONZ. PORPH., QTZ. PORPH. RESPECTIVELY
- Ksbs — CRETACEOUS SKOOKUM BUTTE STOCK; DIORITE
- p€b — PRECAMBRIAN BELT SERIES
- FAULT, DASHED WHERE APPROXIMATELY LOCATED
- 70 — DIP AND STRIKE OF DOMINANT FRACTURE SET AT EACH STATION
- STRIKE OF DOMINANT VERTICAL FRACTURE SET AT EACH STATION
- HOT SPRING VENT
- COLD SPRING

BASE FROM U.S. GEOLOGICAL SURVEY MAP OF LOLO HOT SPRINGS QUADRANGLE, MONTANA-IDAHO

GEOLOGY MODIFIED FROM LEISCHNER (1959)

PLATE 7