GEOLOGIC MAP OF THE SALT RIVER REGION, ROCKINSTRAW MOUNTAIN QUADRANGLE

GILA COUNTY, ARIZONA

Geology by James E. Faulds

1989

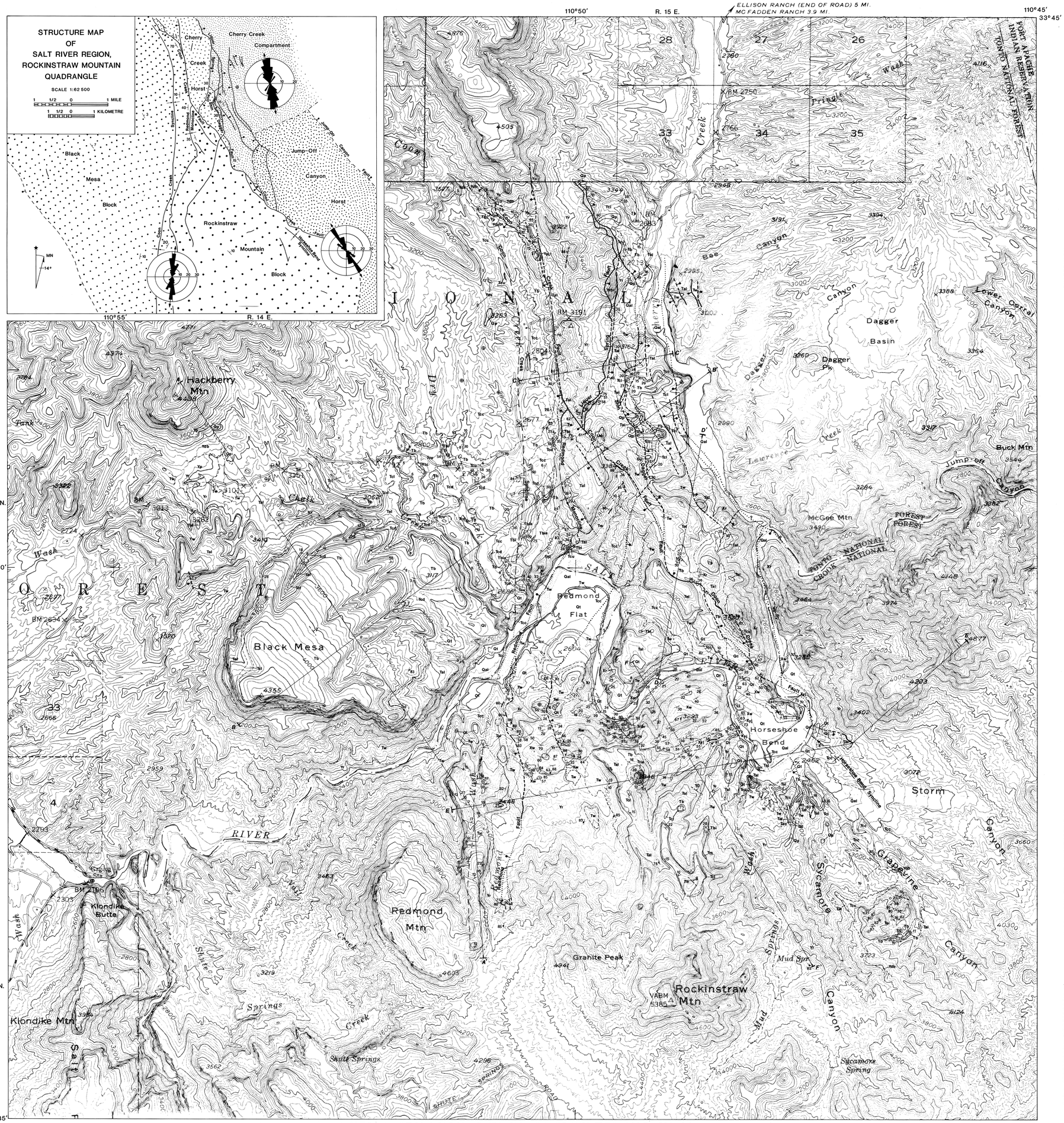
SCALE 1:24 000

1 1/2 0 1 MILE

1 1/2 0 1 KILOMETRE

MN 14°

CONTOUR INTERVAL 40 FEET



EXPLANATION

QUATERNARY

Qc — COLLUVIUM
Unconsolidated angular blocks.

Qal — ALLUVIUM
Unconsolidated, poorly-sorted gravel, sand and silt.

Unconformity

Qt — TERRACE DEPOSITS
Weakly consolidated, moderately sorted gravel and sand in terraces along Salt River.

Qp — PEDIMENT GRAVEL
Veneer of unconsolidated poorly sorted gravel.

Unconformity

TERTIARY

MIOCENE

Tcc — COON CREEK CONGLOMERATE
Weakly to moderately indurated, crudely-stratified, poorly sorted conglomerate and subordinate arkosic sandstone, thin basal volcaniclastic conglomerate. Maximum exposed thickness 150 m.

Unconformity

Tb — BLACK MESA BASALTS
Olivine to tholeiitic basalt flows. One flow dated at 14.67±0.34 m.y.. Maximum exposed thickness 80 m.

Tcu, Tcc, Tbc, Tcd, Tb — CHALK CREEK FORMATION
Tcu, moderately indurated, interbedded mudstone and volcaniclastic sandstone and conglomerate. Thickness 0–15 m.
Tcd, moderately indurated, thin-bedded dolomite. Thickness 0–45 m.
Tcl, moderately indurated, thin-bedded, poorly sorted conglomerate and sandstone. Thickness 0–25 m.
Tb, intercalated flows of olivine basalt similar to Black Mesa basalts. Lower flow dated at 16.21±0.45 m.y. Thickness 0–20 m.

Disconformity

Tal — APACHE LEAP TUFF
Single cooling unit of quartz latite ash-flow tuff with distinct zones of welding and superimposed crystallization. Dated at 20.2±0.5 m.y. Thickness 85–145 m, thins to northeast.

Disconformity (?)

Tm — MUD SPRINGS BASALT
Olivine basalt. Maximum exposed thickness 12 m.

Disconformity (?)

OLIGOCENE (?)

Tw — WHITETAIL CONGLOMERATE
Weakly indurated, thin-bedded to crudely-stratified, poorly sorted conglomerate. Thickness 0–260 m.

Unconformity

Udr — DAGGER RANCH CONGLOMERATE
Strongly indurated, crudely-stratified, poorly sorted arkose and cobble conglomerate of unknown age. Contains clasts of Apache Group strata. Thickness 0–30 m.

Unconformity

PROTEROZOIC

MIDDLE PROTEROZOIC (PROTEROZOIC Y)

Ydb — DIABASE
Olivine diabase in sills and sill-like bodies up to 135 m thick. 1140±40 m.y. (Damon et al., 1962).

Yds, Ydsbr — DRIPPING SPRING QUARTZITE
Upper siltstone, lower arkose, and basal Barnes Conglomerate Member. Thickness 165–210 m. Ydsbr — fault breccia derived from Dripping Spring Quartzite.

Disconformity

Yp — PIONEER FORMATION
Feldspathic sandstone, tuffaceous mudstone and siltstone, and basal Scanlan Conglomerate Member. Thickness 85 m.

Nonconformity

Yr, Yrbr — RUIN GRANITE
Coarse-grained porphyritic biotite quartz monzonite. 1425±15 m.y. (Livingston, 1969). Yrbr — well indurated microbreccia derived from Ruin Granite.

APACHE GROUP

EARLY PROTEROZOIC (PROTEROZOIC X)

Xyj — YANKEE JOE FORMATION
Thin-bedded, moderate to well sorted argillite, siltstone, and quartzite. Maximum exposed thickness 145 m.

Xw — WHITE LEDGES FORMATION
Thin-bedded, moderate to well sorted siltstone, quartzite. Maximum exposed thickness 940 m.

Disconformity

Xr — REDMOND FORMATION
Massive sequence of felsic to intermediate porphyritic volcanic rock of probable pyroclastic origin. 1715±15 m.y. (Silver, as quoted in Conway, 1976, p. 22). Thickness 2000 (?) m.

HESS CANYON GROUP

Tri, Tai, Tbi, Tribr, Tria, Tbia — INTRUSIONS
Tri, plugs of rhyodacite to dacite.
Tribr, breccia pipes within rhyodacite/dacite plugs.
Tria, lapilli breccia and agglomerate associated with felsic plugs.
Tai, hornblende andesite plug.
Tbi, plugs and dikes of basalt.
Tbia, lapilli breccia and agglomerate associated with basaltic intrusions.

SYMBOLS

Lithologic contact, dashed where approximately located, dotted where inferred or projected beneath mapped units.

75 80 90

Fault, showing dip, and trend and plunge of linear feature. Dashed where approximately located, dotted where inferred or concealed. Bar and ball on downthrown side.

Syncline — Monocline

Axial trace of folds, showing trend and plunge of axis. Dashed where approximately located, dotted where projected beneath mapped units.

35 Inclined — 80 Overturned — Horizontal

Strike and dip of beds

15

Strike and dip of lithologic unit determined with three-point method

75

Strike and dip of foliation

30 Inclined — Horizontal — Vertical

Strike and dip of layered structures in volcanic rocks

85

Strike and dip of joints

A — A'

Location of structure section

ARIZONA GEOLOGICAL SURVEY CONTRIBUTED MAP CM-89-B
SHEET 1 OF 3

CM-89-B