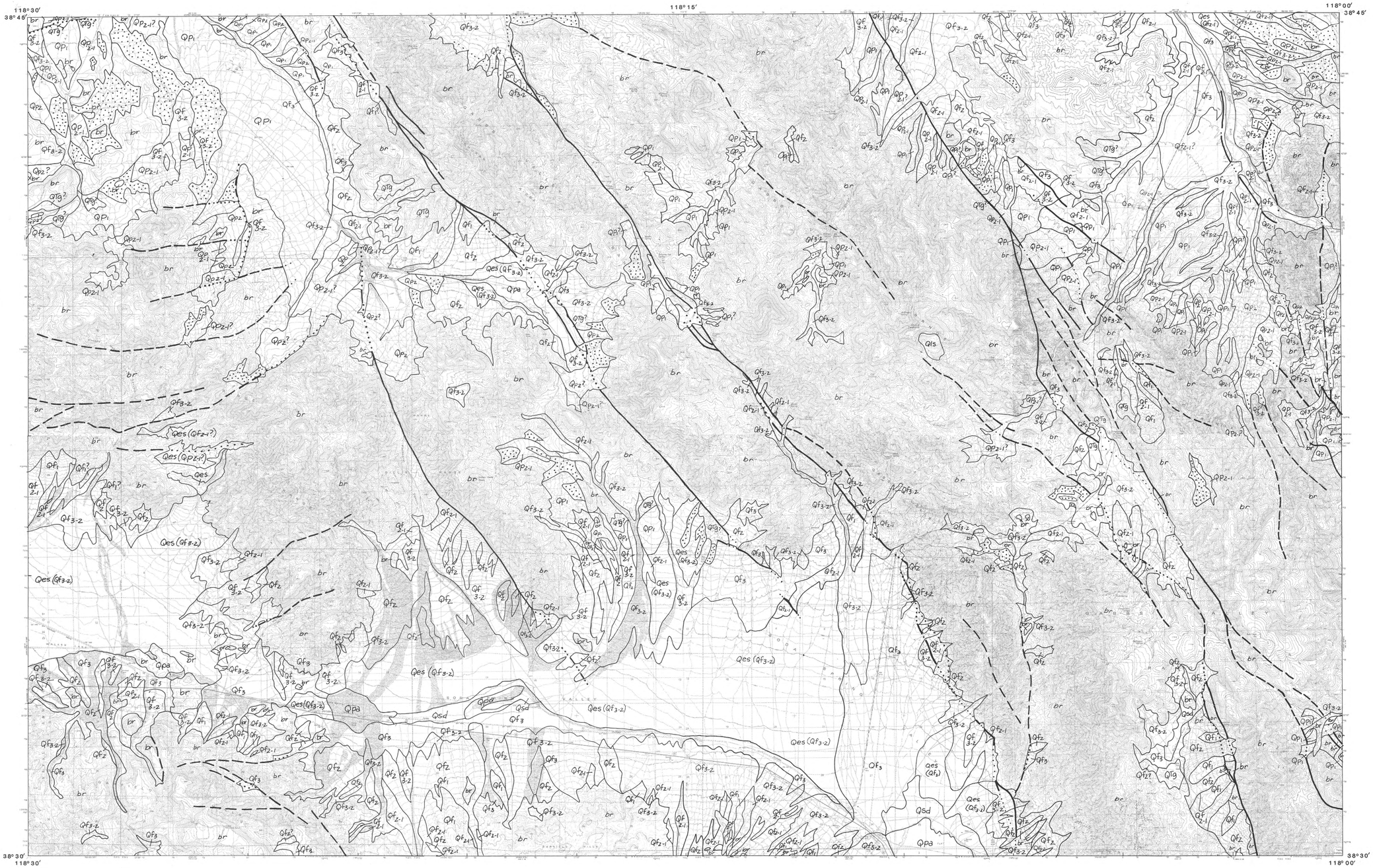
DEPARTMENT OF THE INTERIOR
UNITED STATES GEOLOGICAL SURVEY

MISCELLANEOUS FIELD STUDIES
MAP MF — 1374



Base from U.S. Geological Survey, 1:24,000
Gabbs Mountain, Indian Head Peak, Kinkaid NW, 1979, Luning, 1980,
Mount Ferguson, Sunrise Flat, and Win Wan Flat, 1979

Surficial geology mapped in 1979-80

16½°
TRUE NORTH
MAGNETIC NORTH
APPROXIMATE MEAN
DECLINATION, 1981

SCALE 1:62500
1 0 1 2 3 4 MILES
3000 0 3000 6000 9000 12000 15000 18000 21000 FEET
0 1 2 3 4 5 KILOMETERS

CONTOUR INTERVAL 40 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929

NEVADA
AREA OF MAP

RECONNAISSANCE SURFICIAL GEOLOGIC MAP OF THE GABBS-LUNING AREA, WEST-CENTRAL NEVADA

By

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1982

CORRELATION OF MAP UNITS

SURFICIAL DEPOSITS

Qes	Qsd	Qpa	Qls	Qf_3	Qf_{3-2}	Qp_2	Qp_{2-1}	QUATERNARY
				Qf_2	Qf_{2-1}	Qp_1		
				Qf_1				
QTg								QUATERNARY OR TERTIARY
BEDROCK								
br								TERTIARY AND PRE-TERTIARY

DESCRIPTION OF MAP UNITS

SURFICIAL DEPOSITS

Qes — EOLIAN SAND DEPOSITS (Quaternary)—Well to moderately well sorted sand and silt. Occurs as thin sand sheets that veneer other surficial deposits leeward of pluvial lake deposits, playas, and distal fringes of large young alluvial fans. Extensive sand sheets veneering young and intermediate alluvial fan deposits north of axis of Soda Spring Valley were derived largely from littoral and bottom deposits of the Walker Lake arm of Fleistocene Lake Lahanton west of map area. Symbols for units veneered by eolian sand sheets are shown in parentheses. Thickness 0 to 5 m

Qsd — SAND DUNE DEPOSITS (Quaternary)—Well-sorted medium to fine sand. Forms barchanoid ridge dunes, 1 to 7 m high, leeward of playas and distal fringes of large young alluvial fans. Dune orientations indicate dominant southwest wind direction. Typically partly stabilized by sparse to moderate densities of low shrubs and grasses. Occurs along axis of Soda Spring Valley, east and north of major playas in that valley. Also occurs in north part of Sunrise Flat. Thickness 0 to 15 m

Qpa — PLAYA DEPOSITS (Quaternary)—Brownish- to grayish-white clay, silt, and sand with associated evaporite salt. Some lenses of sand and gravel near playa margins. Deposited in ephemeral lakes along axis of Soda Spring Valley and in Win Wan Flat. Playas of Soda Spring Valley and Win Wan Flat are clay-pan dry-type playas with compact clayey surfaces

Qls — LANDSLIDE DEPOSIT (Quaternary)—Chaotic mass of unsorted angular boulder- to clay-size debris. Includes some talus and colluvium where these materials overlap or are intermixed with landslide debris. Occurs as generally lobate mass of hummocky terrain in steeply sloping uplands. Limited to one large (approximately 0.7 km^2) landslide in Tertiary andesite between elevations of 7,000 and 8,000 ft on southeast flank of Mount Ferguson in east-central part of map area. Thickness 0 to 50 m

Qf_3 — YOUNG ALLUVIAL FAN DEPOSITS (Quaternary)—Poorly sorted deposits of boulders, cobbles, pebbles, sand, and silt. Clast lithologies vary according to rock types that crop out in drainage basins associated with each fan. Clast size generally decreases and sorting generally improves downfan toward distal margins. Includes some fine-grained basin-fill deposits where distal fan limits are poorly defined. Fan surfaces are undissected to slightly dissected with few, if any, well-defined drainage channels. Constructional surfaces are generally unweathered with very weak, if any, soil development. Drainage is distributary, radiating from fan apex

Qf_{3-2} — YOUNG AND INTERMEDIATE ALLUVIAL FAN DEPOSITS (Quaternary)—Mapped in areas where young and intermediate age fan surfaces are too complexly interrelated to be mapped separately or where age relations are uncertain

Qf_2 — INTERMEDIATE ALLUVIAL FAN DEPOSITS (Quaternary)—Lithologically and texturally similar to young alluvial fan deposits. Contacts between intermediate and young alluvial fan deposits are commonly gradational and poorly defined. Intermediate alluvial fan surfaces are slightly to moderately dissected with numerous well-defined drainage channels. Drainage is predominantly distributary, but some drainage channels head on fan surfaces. Relief due to dissection is generally less than 5 m. Constructional surfaces are slightly to moderately weathered with weak to moderate soil development and distinct desert pavement

Qf_{2-1} — INTERMEDIATE AND OLD ALLUVIAL FAN DEPOSITS (Quaternary)—Mapped in areas where intermediate and old alluvial fan deposits are too complexly interrelated to be mapped separately or where age relations are uncertain. Typically occurs as upper parts of bajadas adjacent to mountain fronts

Qf_1 — OLD ALLUVIAL FAN DEPOSITS (Quaternary)—Lithologically and texturally similar to intermediate and young alluvial fan deposits. Fan surfaces are deeply dissected by well-developed subparallel drainage that heads on fan surface. Relief due to dissection is commonly 10 to 30 m. Commonly separated from younger depositional surfaces by abrupt erosional scarps. Constructional fan surfaces are strongly weathered with moderately well to very well developed soils and distinct to well-developed desert pavement. Typically occurs as upper parts of bajadas adjacent to mountain fronts

Qp_2 — YOUNGER PEDIMENT DEPOSITS (Quaternary)—Lithologically, texturally, and morphologically similar to intermediate alluvial fan deposits except that younger pediment deposits occur as veneers on erosion surfaces cut into bedrock and older alluvium. Associated with numerous widely scattered bedrock pediment surfaces where original pediment deposits have been removed by erosion. Occurs as scattered deposits in valleys and basins of northern part of map area. Thickness 0 to 20 m

Qp_{2-1} — YOUNGER AND OLDER PEDIMENT DEPOSITS, UNDIFFERENTIATED (Quaternary)—Designates those pediment deposits for which more precise age relations could not be determined. Associated with numerous widely scattered bedrock pediment surfaces where original pediment deposits have been removed by erosion. Occurs as widely scattered deposits in the valleys and basins of northern part of map area. Thickness 0 to 20 m

Qp_1 — OLDER PEDIMENT DEPOSITS (Quaternary)—Lithologically, texturally, and morphologically similar to old alluvial fan deposits except that older pediment deposits occur as veneers on erosion surfaces cut into bedrock and Quaternary and (or) Tertiary alluvium. Probably includes some fan deposits in areas of slight to moderate dissection. Older pediment deposits are difficult to distinguish from old alluvial fan deposits in areas of pedimented alluvium. Dominates piedmonts of larger valleys and basins in northern part of map area. Associated with bedrock pediment surfaces where original pediment deposits have been removed by erosion. Thickness 0 to 20 m

QTg — OLD ALLUVIAL GRAVELS (Quaternary and (or) Tertiary)—Boulder- to pebble-size gravel, sandy gravel, and gravelly sand. Gravels are subangular to subrounded. Loosely to moderately indurated matrix, predominantly sand and silt. Little or no preserved constructional form. Thickness 0 to 100+ m

BEDROCK

br — BEDROCK—Late Tertiary terrigenous sedimentary rocks and middle to late Tertiary volcanic rocks underlie most of north and east parts of map area. Mesozoic intrusive and sedimentary rocks underlie most of southern part of map area (Ekren and Byers, 1978a, b)

CONTACT

FAULT—Dashed where inferred in bedrock; dotted where concealed by Quaternary deposits. Mapped faults are limited to those faults that by stratigraphic evidence can be shown to be Quaternary faults or by geomorphic evidence can be inferred to be Quaternary and (or) late Tertiary faults. Fault traces in Quaternary deposits are mapped as solid lines only where offset of Quaternary deposits can be demonstrated. Fault traces forming contacts between bedrock and Quaternary units are mapped as solid lines only where offset of Quaternary deposits can be demonstrated or where Quaternary movement is suggested by morphology of bedrock scarp. Elsewhere, fault traces in or bounding Quaternary deposits are mapped as dotted lines in Quaternary deposits. Faults in bedrock are mapped only where morphology of fault trace suggests Quaternary and (or) late Tertiary movement or where fault traces can be related to faults that offset or bound Quaternary deposits

BEDROCK PEDIMENT SURFACES—Pediment surface where original pediment deposits have been removed by erosion. Typically well dissected

REFERENCES

Ekren, E. B., and Byers, F. M., Jr., 1978a, Preliminary geologic map of the Luning SW quadrangle, Mineral and Nye Counties, Nevada: U.S. Geological Survey Open-File Report 78-917, scale 1:48,000.
_____1978b, Preliminary geologic map of the Luning SE quadrangle, Mineral and Nye Counties, Nevada: U.S. Geological Survey Open-File Report 78-918, scale 1:48,000.

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