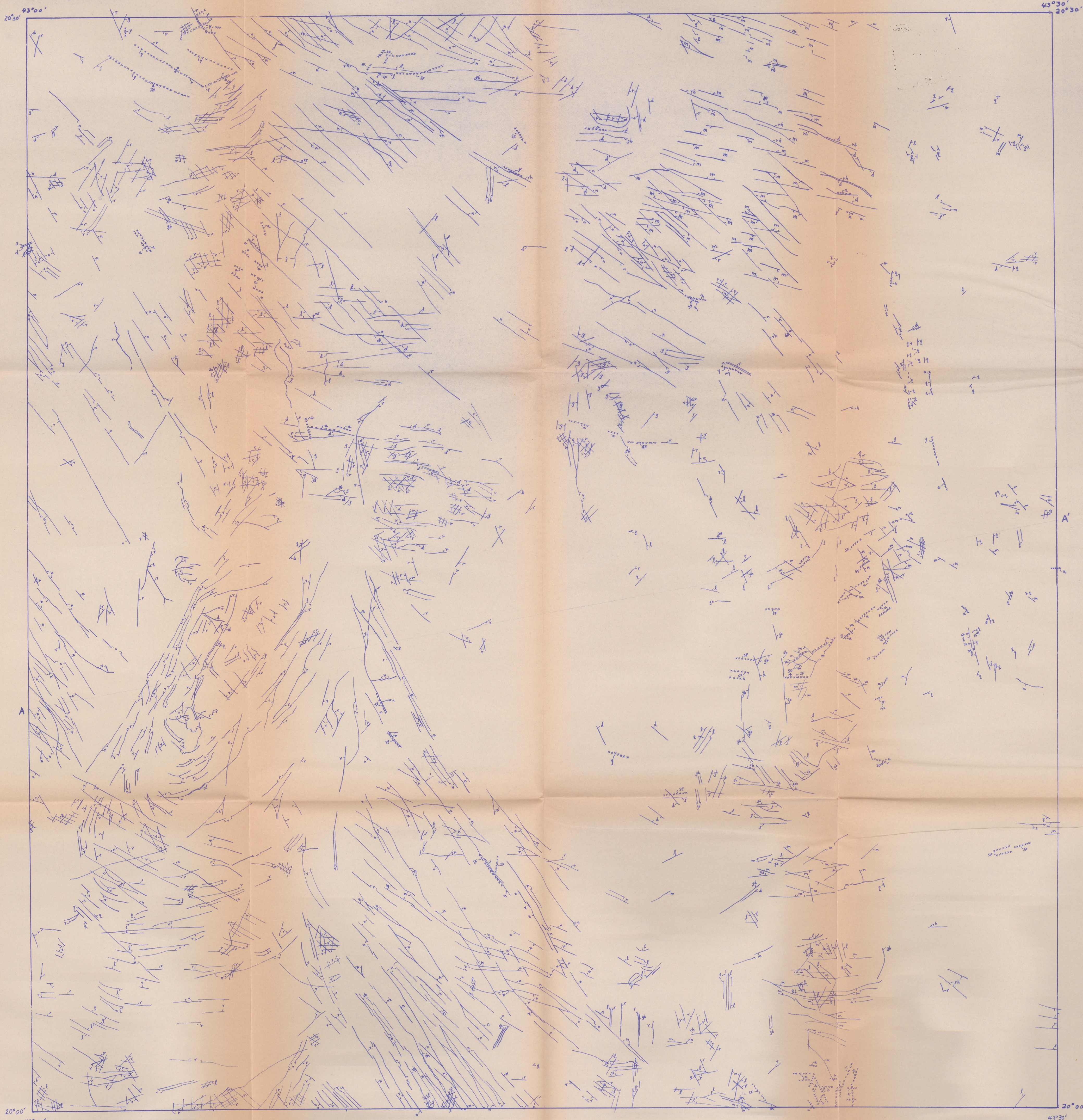
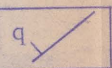
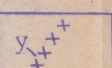
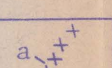
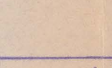
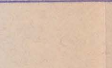
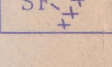
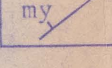
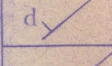
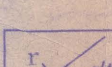

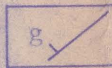
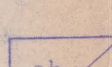
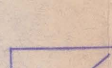


(200)
qun3tsam
no. 367



DESCRIPTION OF MAP UNITS

-  QUARTZ VEIN--Small, lenticular, mostly less than 1 m thick; contains sparse pyrite, traces of base-metal sulfides and gold
-  QUARTZ BRECCIA REEF--Silicified breccia and quartz veins, several tens-of-meters thick; mostly Najd age; a few may be older; may show dip
-  ALTERATION ZONE--Propylitically altered rock in fracture zone, commonly 1-10 m wide, central part weathers reddish brown; may contain small calcite-quartz veinlets
-  DIABASE DIKE--Mostly deuterically(?) altered, commonly 1 m to several meters thick; in places associated with rhyolite dike. Mostly in northwest-trending fractures of Najd age
-  SHEAR-FRACTURE ZONE--Brecciated, sheared, and altered zone where conspicuously exposed; tens of meters wide; commonly weathers reddish brown
-  MYLONITE--Thin, ultrashielded wall rock in shear fracture zone (SF)
-  DIABASE DIKE--In places associated with rhyolite dike (rh)
-  RHYOLITE DIKE--Red, commonly granophyric, porphyritic; in places associated with diabase dike (d)
-  RED MICROGRANITE DIKE--Fine-grained; includes micrographic, aplitic, and pegmatitic rocks; composition: leucocratic biotite syenogranite; dikes .5 to 10 m wide; crosshatched pattern indicates many crisscrossing dikes in surrounding areas. In places may be mapped as pink microgranite dike (p)
-  PINK MICROGRANITE DIKE--Fine-grained; includes abundant apite, sparse pegmatite; composition: biotite monzogranite. In places may be mapped as red microgranite dike (r)
-  GABBRO DIKE--Fine-grained; mostly partly altered; most are probably as old as tonalite orthogneiss of Jabal Abbas (tog) or older
-  FELSIC DIKE--Leucocratic dikes of various kinds and various ages older than the pink microgranite dikes. Light-gray alaskitic dikes and microgranodioritic dikes may be youngest; some porphyritic dacitic dikes may be as old as the metavolcanic rocks
-  MAFIC DIKE--Melanocratic dikes of various kinds and various ages older than diabase dikes (d). Many are metadiabasic, some basaltic; some porphyritic andesitic dikes may be as old as the metavolcanic rocks

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MAP OF THE JABAL AL QARAH QUADRANGLE, SHEET 20/43 C, KINGDOM OF SAUDI ARABIA,
SHOWING DIKES, VEINS, AND ZONES OF ALTERATION AND FRACTURE

by
Dwight L. Schmidt

1981