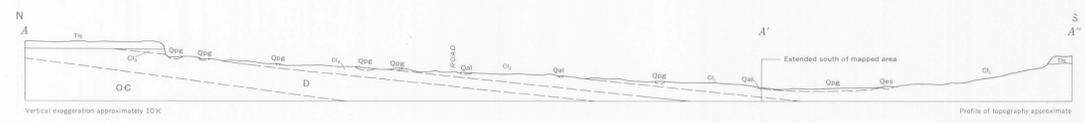


Base from uncontrolled mosaic by Institut Géographique National, Paris, France, 1964



Geology by Gus H. Goudarzi, 1957-58

EXPLANATION

<p>QUATERNARY</p> <p>Qes Eolian sand <i>Stipple indicates dune areas</i></p> <p>Qal Qal, alluvium, wadi gravel, sand, silt, and associated fine sediments <i>Stippled where local accumulations of eolian sand occur</i></p> <p>Qs Qs, saline deposits in undrained depressions</p> <p>Qdg Lag gravel and poorly consolidated surficial deposits of local origin composed of gravel with some sand- and silt-size material <i>Deposits consist of sandstone and siltstone fragments, but in the vicinity of iron-bearing beds, ferruginous fragments predominate</i></p>	<p>TERTIARY OR QUATERNARY</p> <p>QTC Coquina <i>Occurring in sparse scattered outcrops lying unconformably on Carboniferous sedimentary rocks; composed almost wholly of mollusk fragments</i></p> <p>Tis Limestone <i>Probably continental, gray to tan; massive with a basal conglomerate composed of elastic limestone fragments and sparse pebbles of volcanic origin</i></p> <p>UNCONFORMITY</p> <p>Cl1 Variegated marine shale and siltstone with interbedded gray and white sandstone <i>Overlies marginal marine and continental beds of light-red and purple sandstone and grayish-green shale. Dark-gray organic shale occurs at the base. Correlated with rocks of Viséan and Tournaisian age occurring in the Wadi Oubarracat area</i></p>	<p>CARBONIFEROUS</p> <p>Cl2 Light-brown and gray sandstone interbedded with grayish-green shale, considered continental <i>Contact with overlying beds is gradational, base is marked by an oolitic chamosite-hematite bed. Correlated with rocks of Tournaisian age occurring in the Wadi Oubarracat area</i></p> <p>Cl3 Beds of massive hematite siltstone and oolite to finely granular hematite alternating with light-red, purple, and brown sandstone, and grayish-green, gray, and brown shale and claystone, commonly limonitic <i>Numerous thin seams and lenses of gypsum. Heavily permeated by petroleum material in places. Correlated with rocks of Tournaisian age occurring in the Wadi Oubarracat area</i></p>	<p>DEVONIAN</p> <p>D Predominantly massive light-gray to white sandstone with some minor crossbeds; minor thickness of white and gray shale and siltstone interbedded with sandstone and arenaceous units containing ferruginous concretions</p> <p>OC Highly crossbedded brown and yellowish-brown sandstone beds with abundant thin conglomeratic lenses</p>	<p>CAMBRIAN OR ORONICIAN</p> <p>Contact <i>Dashed where approximately located; dotted where concealed</i></p> <p>Doubtful or probable fault</p> <p>Strike and dip of beds</p> <p>Dip too small to measure</p> <p>Horizontal beds</p>	<p>Road</p> <p>Secondary road</p> <p>Oasis or village with date garden</p> <p>Area under cultivation</p> <p>Brushy vegetation</p> <p>Triangulation station <i>Elevation, in meters</i></p> <p>Bench mark <i>Elevation, in meters</i></p> <p>Diamond-drill hole <i>Elevation of collar, in meters, shown in parentheses</i></p>
---	---	---	---	--	--

GEOLOGIC MAP AND SECTION OF THE SHATI VALLEY AREA, FEZZAN, LIBYA

SCALE 1:100 000 (APPROXIMATE)

