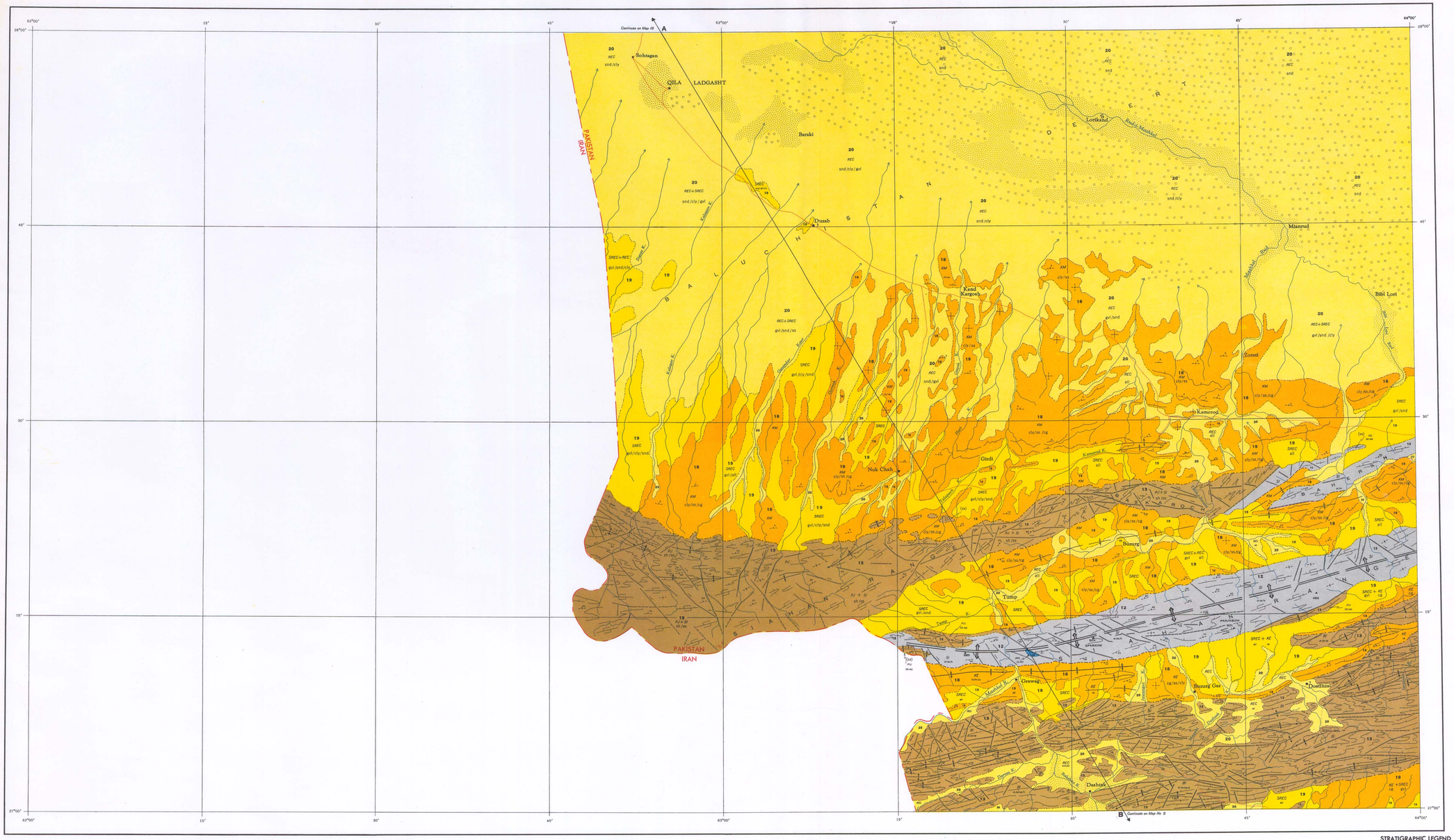



# GEOLOGICAL MAP NO. 13
# QILA LADGASHT
## 31 I·M

### GEOLOGICAL SYMBOLS

Geological boundaries
- Alluvium boundary
- Conformable or intrusive boundary
- Unconformable or disconformable boundary
- Intraformational boundary
- Formation boundary transgressing bedding (interfaces)
- Formation boundary, location questionable

Attitudes
- Bedding, field observation (horizontal, inclined, vertical, overturned)
- Bedding, photo interpretation (horizontal, inclined, vertical, overturned)
- Joints, field observation (horizontal, inclined, vertical)
- Joints, photo interpretation (dip direction unknown, inclined, vertical)
- Cleavage or schistosity, field observation (inclined, vertical)
- Stratiform foliation, photo interpretation (vertical, dip unknown)
- Lineation (plunging, horizontal)

Dip and plunge values (in degrees)
- Bedding traces (eroded edges of bedding with dips)
- Bedding traces (vertical, overturned)
- Fault (existence and position certain)
- Fault (existence or position uncertain, or concealed by alluvium)
- Fault (inclined, vertical)
- Fault (solid circle indicates side relatively downthrown)
- Fault (normal movement)
- Fault (reverse movement)
- Fault (relative direction of strike-dip movement)
- Faulting (close spaced, reverse, unmappably complex, strike and dip directions as indicated)
- Faulting (close spaced, reverse, unmappably complex, sections only)
- Thrust fault (existence and position certain)
- Thrust fault (existence or position uncertain)
- Thrust fault (direction of movement of allochthon)
- Thrust fault (Klippe, Fenster)
- Anticline axis (existence and position certain)
- Anticline axis (existence or position uncertain, or axis concealed by alluvium)
- Syncline axis (existence and position certain)
- Syncline axis (existence or position uncertain, or axis concealed by alluvium)
- Fold axis, plunging (arrow indicates direction of plunge, bar locates culmination or depression)
- Folding (close-spaced, unclassified, unmappably complex, strike of axis as indicated)
- Folding (close-spaced, overturned, unmappably complex, dip of axial plane as indicated)
- Structural "high" (concealed basement)
- Structural "low" (concealed basement)
- Igneous plug or small stock (alluvium boundary, intrusive boundary)
- Volcanic crater
- Fossil locality (previous survey, present survey)
- Dykes and sills (single, multiple)
- Coal seams
- Formation symbols (SEE Stratigraphic legend) examples
- Formation symbol (outside area of application)
- Formation symbols (combined formations)
- Volcanic rocks (area pattern showing occurrence)

Lithology symbols:

| | | | | | |
|---|---|---|---|---|---|
| dolomite | dm | tuff | tf | diorite | di |
| shelly limestone | sl | volcanic material (undefined) | vc | pegmatite | pg |
| limestone | ls | basalt | ba | porphyry | pp |
| marl | mr | andesite | an | alluvium (undefined) | all |
| shale | sh | granite | gr | clay | cly |
| mudstone | ms | syenite | sy | silt | slt |
| sandstone | ss | diorite | di | sand | snd |
| conglomerate | cg | gabbro | gb | gravel | gvl |
| agglomerate | ag | ultrabasic rocks | ub | boulders | bld |

Lithology symbols (combined in order of importance) ..... sh/ls/ss
- Mineral prospect or occurrence (visited during present survey)
- Mineral occurrence (reported by previous survey, location uncertain)
- Quarry or mine (in operation)
- Quarry or mine (abandoned)
- Seepage of oil
- Seepage of gas
- Seepage of oil and gas
- Seepage of sulphurous waters
- Mud volcano
- Abandoned oil well
- Abandoned well with show of oil
- Abandoned well with show of gas
- Abandoned well
- Well (drilling)

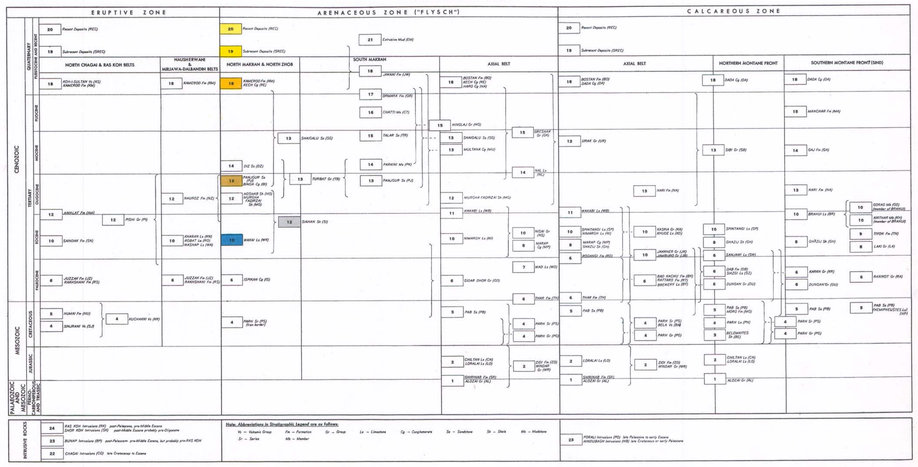
| | | | | | |
|---|---|---|---|---|---|
| Minerals: alum | al | clay | cl | iron ore | fe |
| antimony | sb | coal | c | laterite | la |
| aragonite | ar | copper | cu | lead | pb |
| asbestos | as | feldspar | fp | limestone | ls |
| barium | ba | fluorite | fl | magnesite | mg |
| building stone | bs | fullers earth | fu | manganese | mn |
| calcite | ca | glass sand | gl | mica | mi |
| chromite | cr | gypsum | gy | natural gas | g |

| | | | |
|---|---|---|---|
| ochre | oc | | |
| petroleum | p | | |
| salt | s | | |
| serpentine | sp | | |
| strontium | sr | | |
| sulphur | sf | | |
| talc | tc | | |
| vermiculite | vm | | |

### GEOGRAPHICAL SYMBOLS

- Road unclassified
- Motorable trail
- Railway
- Political boundaries
  - International
  - Divisional
- River, stream, or nala (dry, perennial, or seasonal flow)
- Canal
- Lake
- Hamun (playa)
- Sandy tracts
- Sand dunes (showing direction of prevailing wind)
- Strand lines or elevated beaches
- City or town, village
- Peak, high point, or spot elevation (with elevation in feet)
- Names:
  - City ..... QUETTA
  - Main town or district headquarters ..... PANJGUR
  - Village or place ..... Nag
  - Peaks, passes, plains ..... TAKATU, KIRGANI PASS, KARMAN PLAIN
  - River, stream, nala, hamun, lake, or canal ..... Lundai N., Hamun Lake
  - Peninsula or cape ..... Ras Malan
  - Bay or inlet ..... MIANI THOR
  - Ranges (spaced names) ..... SIAHAN RANGE
  - Divisions ..... KALAT
  - Countries ..... IRAN

### STRATIGRAPHIC LEGEND



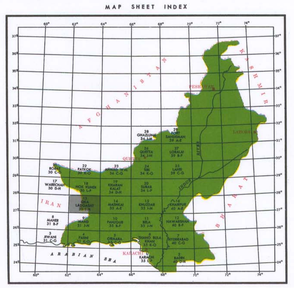

*Lithographed by the Surveys and Mapping Branch, Department of Mines and Technical Surveys, Ottawa, Canada, 1958.*

*Surveyed and compiled in 1953-56, by THE PHOTOGRAPHIC SURVEY CORPORATION LIMITED, TORONTO, CANADA in co-operation with THE GEOLOGICAL SURVEY OF PAKISTAN, using aerial photographs taken in 1952-54.*

31 I-M
INTERNAL REFERENCE

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1 | 2 | 9 | 10 | 1 | 2 | 9 | 10 |
| 3 | 4 | 11 | 12 | 3 | 4 | 11 | 12 |
| 5 | 7 | 13 | 16 | 5 | 7 | 13 | 16 |
| 6 | 8 | 14 | 15 | 6 | 8 | 14 | 15 |

MAP SHEET INDEX



# RECONNAISSANCE GEOLOGY
## OF PART OF
# WEST PAKISTAN

PUBLISHED FOR THE GOVERNMENT OF PAKISTAN
BY THE GOVERNMENT OF CANADA

SCALE 1:253,440

Four Miles to One Inch

Miles 4 3 2 1 0 4 8 12 16 20

Base map compiled from aerial photographs and Survey of Pakistan topographic maps.

*A COLOMBO PLAN CO-OPERATIVE PROJECT*

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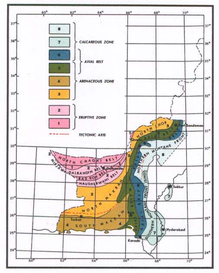
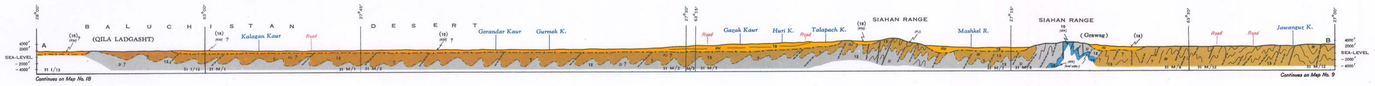
AREA KEY TO STRATIGRAPHIC LEGEND



STRUCTURE-SECTION ALONG LINE A-B