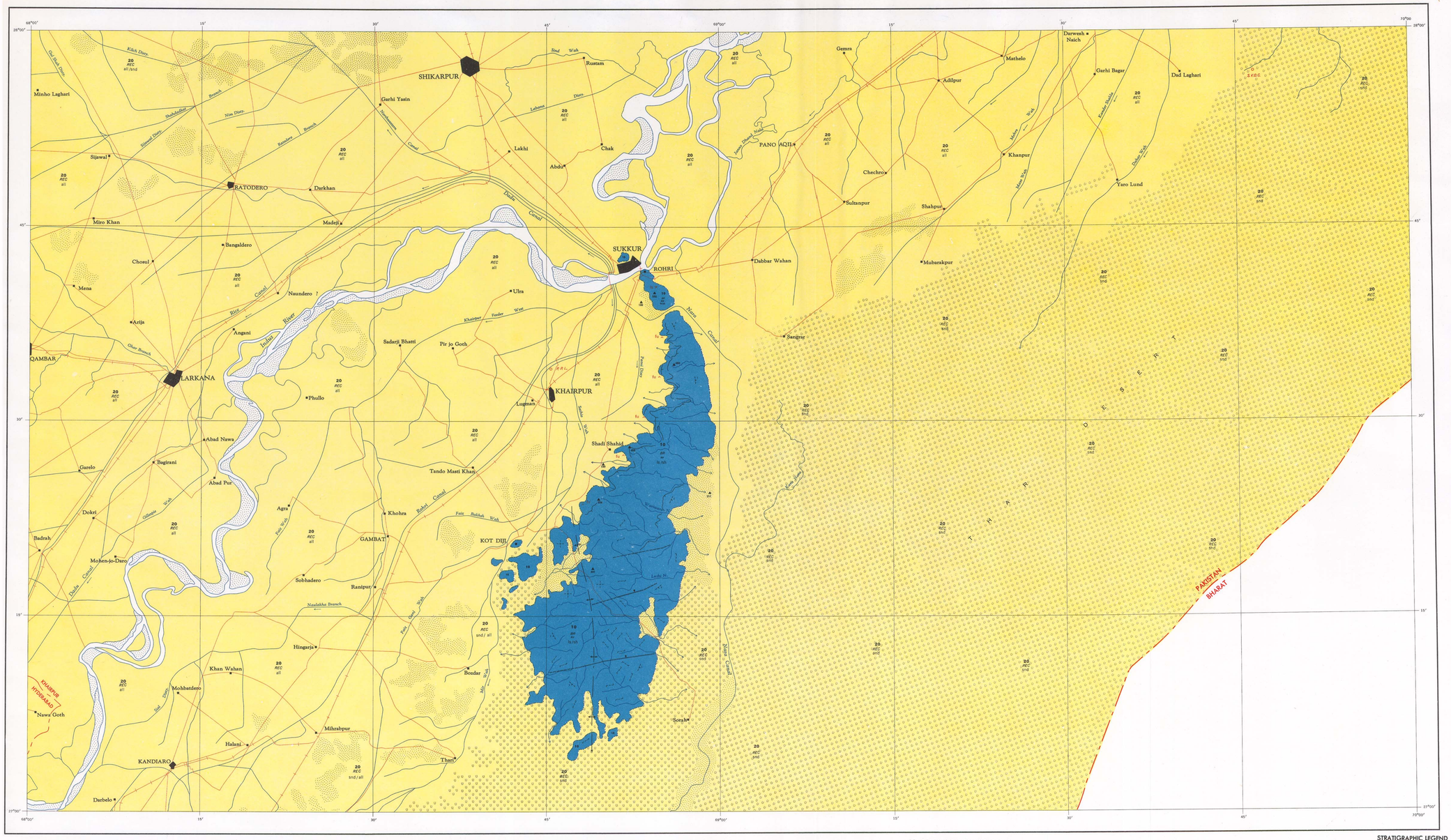

GEOLOGICAL MAP NO. 16
KHAIRPUR
40 A·E

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-slip 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)* — dyke, dyke
- *Coal seams* — REC, DU
- *Formation symbols (SEE Stratigraphic Legend) examples* — Pn
- *Formation symbol (outside area of application)* — PNQ
- *Formation symbols (combined formations)* — PH+QZ
- *Volcanic rocks (area pattern showing occurrence)*
- *Lithology symbols:*

dolomite	dn	*tuff*	tf	*dolerite*	dr
shelly limestone	sl	*volcanic material (undefined)*	vc	*pegmatite*	pg
limestone	ls	*basalt*	bn	*porphyry*	po
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; antimony — sb; aragonite — ar; asbestos — ab; barium — ba; building stone — bs; calcite — ca; chromite — cr; clay — cl; coal — c; copper — cu; feldspar — fp; fluorite — fl; fullers earth — fu; glass sand — gl; gypsum — gy; iron ore — fe; laterite — la; lead — pb; limestone — ls; magnesite — mg; manganese — mn; mica — mi; natural gas — g; ochre — oc; petroleum — p; salt — s; serpentine — sp; strontium — st; sulphur — sf; talc — tc; vermiculite — vt

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)* — 5505
- *Names*
  - *City* — QUETTA
  - *Main town or district headquarters* — PANJGUR
  - *Village or place* — Nag
  - *Peaks, passes, plains* — TWAKTO; KHAIBAR PASS; SUKKUR PLAIN
  - *River, stream, nala, hamun, lake, or canal* — Landa N.; Hanna Lake
  - *Peninsula or cape* — Ras Malan
  - *Bay or inlet* — MIANI HOR
  - *Ranges (spaced names)* — SIAHAN RANGE
  - *Divisions* — KALAT
  - *Countries* — IRAN

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40 A-E
INTERNAL REFERENCE

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

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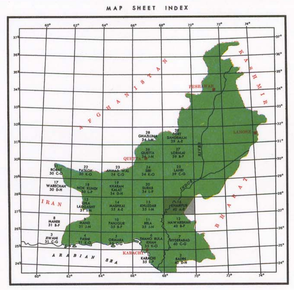
MAP SHEET INDEX


IRAN
ARABIAN SEA
KARACHI
LAHORE
QUETTA
KHAIRPUR
HYDERABAD
MIRPUR KHAS
SUKKUR
LARKANA
SHIKARPUR
JACOBABAD
SIBI
KALAT
PANJGUR
KHARAN
LASBELA
KARACHI
MAKRAN COAST RANGE
KIRTHAR RANGE
SULAIMAN RANGE
SIAHAN RANGE
CHAGAI HILLS
KHARAN DESERT
THAR DESERT
LUT DESERT
DASHT-I-KAVIR
DASHT-I-LUT
DASHT-I-MARGO
DASHT-I-BIBAN
DASHT-I-NAUR
DASHT-I-KHAISH
DASHT-I-BARGAN
DASHT-I-GAUD
DASHT-I-MOGHOYAN
DASHT-I-MARGUN
DASHT-I-MIRAN
DASHT-I-MAZAR
DASHT-I-MUSHKEL
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