وزارة الداخليـــة
مصلحة المساحة الجيولوجية الامريكية
DEPARTMENT OF THE INTERIOR
UNITED STATES GEOLOGICAL SURVEY

المملكة العربية السعودية
وزارة المالية والاقتصاد الوطني
المديرية العامة لشؤون الزيت والمعادن
KINGDOM OF SAUDI ARABIA
MINISTRY OF FINANCE AND NATIONAL ECONOMY
DIRECTORATE GENERAL OF PETROLEUM AND MINERAL AFFAIRS

أبحاث جيولوجية مختلفة
خريطة رقم B ٢٠٥ -I
MISCELLANEOUS GEOLOGIC INVESTIGATIONS
MAP I-205 B

## اصطلاحات الخريطة
## MAP LEGEND

**POPULATED PLACES**
- City
- Town or village
- Village, name not given
- Ruins
- Fort, usually ruins
- Date gardens
- Area under cultivation

**TRANSPORTATION**
- Abandoned railroad with station
- Major road, paved
- Major road, unpaved
- Secondary road
- Road of questionable permanency
- Trail
- Airport
- Landing field

**HYDROGRAPHIC FEATURES**
*Only isolated wells are shown*
- Drilled well
- Dug well
- Birkah, usually ruins
- Intermittent stream
- Sabkhah
- Khabrā
- Water pipeline or tunnel

**HYPSOGRAPHIC FEATURES**
- Generalized relief
- Sand

*Dense stipple represents mobile sand cover consisting primarily of dunes, linear ridges, and other individual sand forms, that are shown where map scale permits; moderately dense stipple represents more stabilized continuous sand cover; open stipple represents discontinuous sand cover.*

Types of sand terrain

I — Transverse. *Predominantly simple and compound barchan dunes in areas of more mobile sand, and/or simple rounded ridges, both oriented transverse to the prevailing wind direction.*

II — Longitudinal. *Primarily dikākah and various types of undulating sand sheets, in general characterized by elongation of the individual topographic forms parallel to the prevailing wind direction, often partially stabilized by sparse vegetation.*

III — 'Urūq. *Various forms of long, nearly parallel, sharp crested narrow sand ridges and dune chains separated by broad sand valleys usually including elements of type I sand terrain. These are the resultant of a system of two dominant wind directions and are identical to the sayf dunes of North Africa.*

IV — "Sand mountains." *Dominated by large sand massifs commonly cresting 50 to 300 meters above the substratum, often with superimposed dune patterns consisting of various types of complex barchans. Common forms are giant barchans spanning several kilometers from horn to horn; giant bisigmoidal and pyramidal sand peaks as well as other less common peak forms; and giant oval to elongate sand mounds.*

**MISCELLANEOUS FEATURES**
- × 455 Spot elevations in meters
- Mine, prospect, or ancient workings
- Dam

INDEX MAP OF ARABIAN PENINSULA
Maps published by the U. S. Geological Survey shown by asterisk following name.

## ايضاحات
## GLOSSARY

| | | |
|---|---|---|
| أبرق | Abraq | Rocky hill with sand on slopes |
| عين جمع عيون | 'Ayn; pl., 'Uyūn | Spring, solution pit or well |
| بئر جمع بئار ، أبيار | Bi'r; pl., Bi'ār, Abyār | Dug well |
| بركة | Birkah(t) | Cistern |
| درب | Darb | Road or trail |
| حرة | Ḥarrah(t) | Lava flow and volcanic debris |
| عرق جمع عروق | 'Irq; pl., 'Urūq | long linear sand ridge |
| جبل جمع جبال | Jabal; pl., Jibāl | Hill or mountain |
| خب | Khabb | Narrow bands of plains between 'irq, commonly without rock outcrop |
| خبرا | Khabrā | Closed basin with firm, flat mud and silt surface, commonly barren and lacking vegetation |
| خشم | Khashm | Headland or promontory along a cliff or mountain front |
| نفود | Nafūd (Nefud) | Large area of sand dune |
| قاع | Qā' | Depressed plain |
| قصر، تصغيره قصير | Qaṣr; diminutive, Quṣayr | Fort, palace or castle |
| رملة | Ramlah(t) | Sand area |
| روضة | Rawḍah(t) | Closed basin with firm, flat, vegetation—covered mud surface, occasionally rocky and sandy |
| ريع | Rī' | Passage in a cleft or gap of the mountains |
| سبخة | Sabkhah(t) | Silt, clay, and salt flats, often with saline incrustrations |
| سهلة | Sahlah(t) | Small plain |
| شعيب | Sha'īb | Same as wādī |
| سد | Sudd, (Sad, Sud) | Dam |
| وادي جمع وديان | Wādī, pl., Widyān | Valley or dry water course |

## مصادر المجموعات الاساسية
## SOURCES OF BASE COMPILATION

A, Compilation from vertical aerial photographs, 1956; B, Compilation from controlled tri-metrogon photography, 1945; C, Compilation from controlled photo mosaics, 1953 Topographic representation by the Topographic Division, U. S. Geological Survey; Sand stippling by Leon F. Ramirez, Arabian American Oil Company.

*Place names in the northern portion largely after Alois Musil, 1915; and along the western edge after H. St. Philby.*

This map will be printed in two sheets: Sheet A, geology and geography combined; Sheet B, geography only. Available at the Directorate General of Petroleum and Mineral Affairs, Ministry of Finance and National Economy, Jiddah and Ad Dammām, Saudi Arabia, and at the U. S. Geological Survey, Washington, D. C., U. S. A.

المقياس ١ : ٥٠٠٠٠٠
Scale 1:500 000

10 0 10 20 30 40 50 Kilometers
10 0 10 20 30 Miles

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Prepared by the U. S. Geological Survey and the Arabian American Oil Company under the joint sponsorship of the Kingdom of Saudi Arabia and the U. S. Department of State.

Lambert conformal conic projection; standard parallels 17° and 33°

# GEOGRAPHIC MAP OF THE NORTHEASTERN HIJAZ QUADRANGLE, KINGDOM OF SAUDI ARABIA

By
Glen F. Brown and Roy O. Jackson

# خريطة جغرافية للوحة الحجاز الشمالي الشرقي بالمملكة العربية السعودية

وضع
جلين براون وروي جاكسون

أبحاث جيولوجية مختلفة
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