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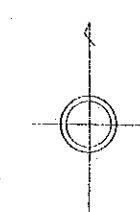
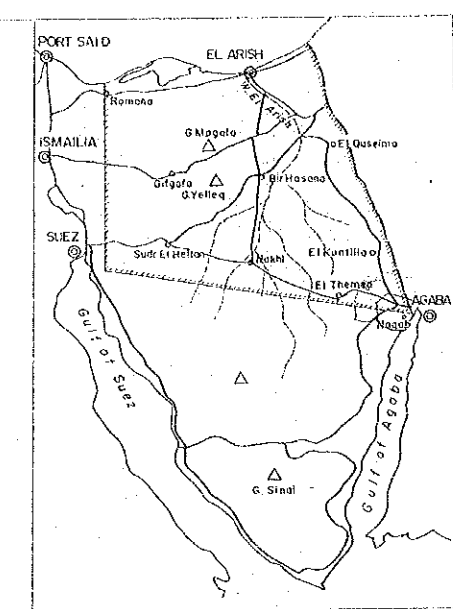
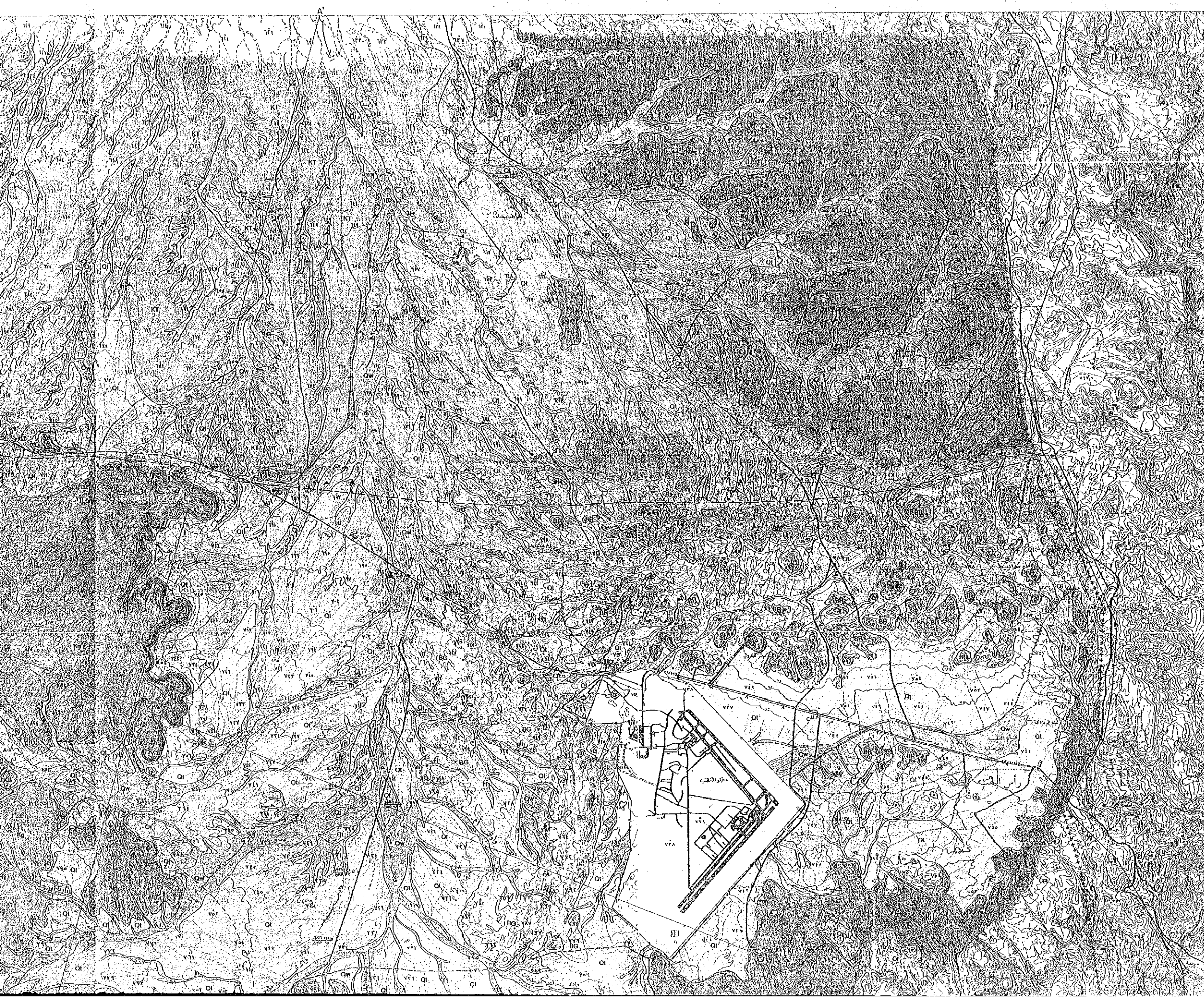
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Strata




Intergranular Aquifers

1. Highly Productive Aquifers


 Molha Formation
Sandstone and shale, contain a huge amount of groundwater, its TDS is assumed to be less than 2,000 ppm in general, but high TDS encounters in some part.


2. Locally Productive Aquifers


 Wadi Deposits
Sand and gravels. Dig wells sometimes exist in this beds.

Fissured Aquifers, including Karst Aquifer


1. Highly Productive Aquifers

 Egma Formation
Hard limestone, shaly in part, cracks and jointed, cavernous, may contain a huge amount of groundwater.

 Wala Formation
Limestone, with clay, contains few usable low TDS (1,100 ppm) groundwater at Shoha and TDS is assumed to be high in other area.


 Galala Formation
Limestone and dolomite with shale and sandstone, cracked and jointed, contains groundwater of which TDS is ranging from 1,800 to 5,600 ppm.


2. Locally Productive Aquifers


 Sudr Formation (Campanian-Danian)
Chalk, marly in part, may contain groundwater of high TDS but it would be low at certain areas along large Wadi channels.







Strata with essentially no groundwater resources

 Torraco Deposits
Gravels of chert and limestone without groundwater.

 Ena Formation (Landanian-Ypresian)
Shale with marl bands of aquiclude.

 Extrusive Rocks
Alkali thyoite, without groundwater.

 Plutonic and Metamorphic
Granite and gneiss, without groundwater in Naqb area.

-  Hydrogeological boundary
-  Contour of Water Level (lower Cretaceous)
-  Water Flow Direction
-  Well Name
-  Water Level (m ASL) / Age Of Aquifer / TDS (ppm) / Specific Capacity (m³/day)
-  Spring Name / TDS (ppm) /

GENERAL LEGEND

GEOLOGICAL SYMBOLS

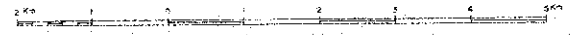
Geological Research, Establishment



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المتواضع



Fissured Aquifers, Including Karst Aquifer

1. Highly Productive Aquifers

- Egma Formation** Hard limestone, shaly in part, cracked and jointed, cavernous, may contain a huge amount of groundwater.
- Wala Formation** Limestone with clay, contains favourable low TDS (1,100 ppm) groundwater at Shalwa and TDS is assumed to be high in other area.
- Galala Formation** Limestone and dolomite with shale and sandstone, cracked and jointed, contain groundwater of which TDS is ranging from 1,800 to 5,600 ppm.

2. Locally Productive Aquifers

- Sudr Formation (Campanian-Danlian)** Chalk, mainly in part, may contain groundwater of high TDS but it would be low at certain areas along large Wadi channels.

Strata with essentially no groundwater resources

- Terrace Deposits** Gravels of chert and limestone without groundwater.
- Esna Formation (Laudanian-Ypresian)** Shale with marl bands of aquiclode.
- Extrusive Rocks** Alkali rhyolite, without groundwater.
- Plutonic and Metamorphic** Granite and gneiss, without groundwater in Naqb area.

Hydrogeological boundary

Contour of Water Level (lower Cretaceous)

Water Flow Direction

Well Name

Water Level (m ASL) / Age of Aquifer / TDS (ppm) / Specific Capacity (m³/day)

Spring Name / TDS (ppm) /

GENERAL LEGEND

GEOLOGICAL SYMBOLS

- Geological Boundary, Established
- Normal Fault with Visible Dip
- Actual Fault
- Inferred Fault
- Concealed Fault
- Strike and Dip of Sedimentary Beds
- Artificial Axis, Showing Direction of Plunge
- Synclinal Axis
- Geological Cross-Section

GEOGRAPHICAL SYMBOLS

- Urban Area
- Asphaltic Roads and Desert Tracks
- Water Springs
- Wadi
- Cotton Line in Meters
- Airport



RESEARCH INSTITUTE FOR WATER RESOURCES
 WATER RESEARCH CENTER
 MINISTRY OF PUBLIC WORKS AND
 WATER RESOURCES DEVELOPMENT

**NORTH SINAI GROUNDWATER RESOURCES STUDY
 IN
 THE ARAB REPUBLIC OF EGYPT**

**HYDROGEOLOGICAL MAP (NAQB)
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JAPAN INTERNATIONAL COOPERATION AGENCY

DATE OCTOBER 1992 SHEET No. 4 of 5

