



**SOURCES OF MAGNETIC DATA**

**EXPLANATION**

- Village
- ▲ Ruins
- Paved road
- - - Dirt road or track
- ⊗ Ancient working, mine, or prospect; named where known
- ✈ Airfield
- ⊕ Landing strip
- × 2602 Spot elevation (approximate)
- △ 1403 Horizontal and vertical control point
- 100 nanoteslas contour
- 20 nanoteslas contour
- Magnetic low

Area	Survey date	Terrain clearance (m)	Traverse direction	Traverse spacing (m)
AL 'AYS	1962	150	N. 30° E	500
AL LISAN	1962	300	N. 60° W	2000
'AQID	1962	150	N. 45° W	500
JABAL IDSAS	1962	150	N. 45° E	500
JIZAN BASIN	1962	300	N. 55° E	1250
JIZAN MINERAL	1962	150	N. 55° E	1000
HULAYFAH	1962	150	N. 60° W	500
MAHAWIYAH	1962	150	N. 90° W	500 and 2500
RABIGH BASIN	1962	300	N. 60° E	2000
RABIGH MINERAL	1962	150	N. 45° W	500
WADI SAWAWIN	1962	150	N. 45° E	1000
AREA I	1965-1966	150	N. 45° E	800
AREA II	1965-1966	300	N. 30° E	800
AREAS III, IV	1965-1967	150	N. 45° E	800
AREA V	1966-1967	300	N. 30° E	800
CENTRAL COASTAL PLAIN	1976	300	N. 60° E	3500
HARRAT RAHAṬ SOUTH	1976	300	N. 30° W	2500
HARRAT HADAN	1981	500	N. 45° E	2000
HARRAT KISHB	1981	500	N. 45° E	2000
HARRAT MAWASIB	1981	500	N. 45° E	2000
HARRAT KHAYBAR	1981	500	N. 30° E	2000
HARRAT RAHAṬ NORTH	1981	500	N. 45° E	2000
SOUTH COASTAL PLAIN	1983	300	N. 30° E	2000

Total-intensity aeromagnetic data for the Precambrian shield were collected in:  
1962 - Several small areas flown by Hunting Geology and Geophysics Ltd. under the supervision of the USGS (U.S. Geological Survey).  
1965-1967 - Most of the shield area (Areas I to V) flown by a consortium comprising Aero Service Corp., Hunting Geology and Geophysics Ltd., Lockwood Survey Corp. Ltd., and ARGAS (Arabian Geophysical and Surveying Co.) under the supervision of BRGM (Bureau de Recherches Géologiques et Minières).  
1976 - South part of the Harrat Rahat basalt plateau and central part of the coastal plain flown by ARGAS under the joint supervision of BRGM, USGS, and the Red Sea Commission.  
1981 - Remainder of the basalt plateaus flown by ARGAS under the supervision of BRGM.  
1983 - South part of the coastal plain flown by Geosurvey International Ltd. under the supervision of USGS.

The 1962 and 1965-1967 surveys were flown using Fluxgate Gull Mark III magnetometers with analog recording. The data were later digitized and processed at the computer center of the University of Petroleum and Minerals in Dhahran by BRGM (J. Bobillier, M. Bourlier, J. Delom, N. Al Tamimi) under the supervision of J.-M. Georgel.  
The 1976 and 1981 surveys were flown using a CSR cesium-vapor magnetometer with digital recording. The 1983 survey was flown using a Geometrics G 813 proton-precession magnetometer with digital recording.

**INDEX TO ADJOINING SHEETS**

**EXPLANATION**

Declination    Inclusion  
Magnetic declination and inclination of the sheet center computed from IGRF 66 model for 1966.

Photobase prepared by the United States Geological Survey for the Kingdom of Saudi Arabia from computer-enhanced Landsat MSS band 7 imagery. Imagery controlled to photoidentified ground positions. The root-mean-square error in position of well-defined features in relation to the graticule is approximately 162 m. Horizontal datum: International Spheroid (Hayford). Transverse Mercator Projection, 1924 International Datum.



**TOTAL-INTENSITY RESIDUAL AEROMAGNETIC MAP OF THE JABAL IBRĀHĪM QUADRANGLE, SHEET 20 E, KINGDOM OF SAUDI ARABIA  
UPWARD CONTINUED TO 800 M ABOVE GROUND LEVEL**

Compiled by Jean-Marie Georgel, Jacques Bobillier, Jacques Delom, Marcel Bourlier

1985

Aeromagnetic data computer processed in 1984.  
Arabic names on this map do not necessarily conform to those officially established by the Kingdom of Saudi Arabia.

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