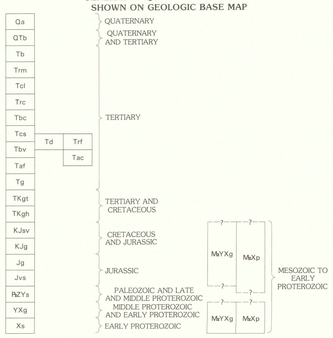
GENERAL SEQUENCE OF MAP UNITS SHOWN ON GEOLOGIC BASE MAP

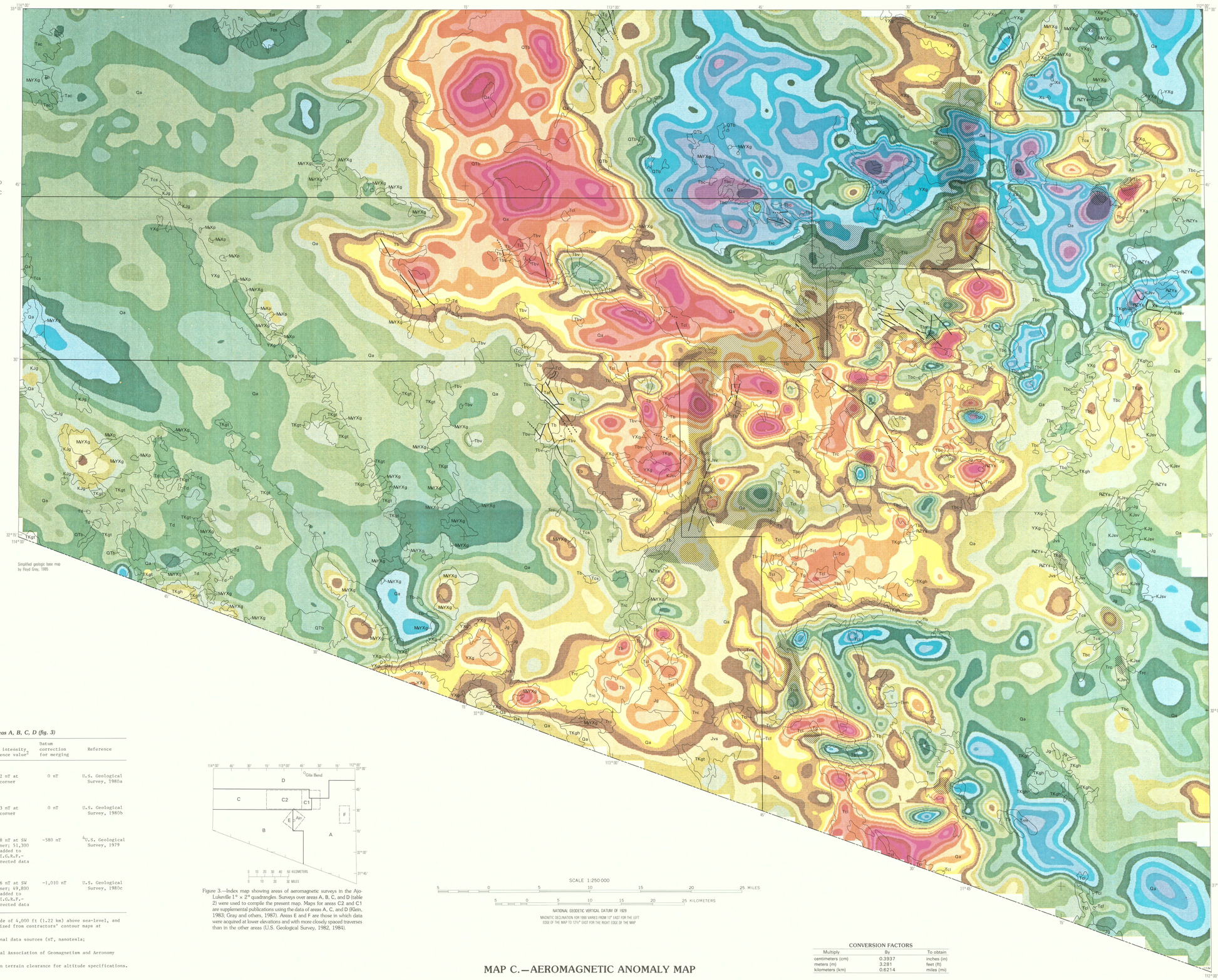


LIST OF MAP UNITS

- **Qa** Alluvium (Quaternary)
- **QTb** Basalt of Sentinel Plain and Pinacate Volcanic Field (Quaternary and Tertiary)
- **Tb** Basalt and basaltic andesite (Tertiary)
- **Trm** Rhyolite, rhyodacite, and minor dacite flows and plugs (Tertiary)
- **Tcl** Childs Latite flows and flow breccia (Tertiary)
- **Trc** Rhyolite complex (Tertiary)
- **Tbc** Basaltic complex (Tertiary)—Primarily coarse, porphyritic basalt and basaltic andesite
- **Tcs** Conglomerate and minor sandstone (Tertiary)—Includes Daniel's Conglomerate
- **Td** Dacitic to rhyolitic flows, flow breccia dikes, and sills (Tertiary)—Includes minor latite and andesitic tuffaceous rock
- **Trf** Rhyolite flows, rhyodacite, ash-flow tuffs, minor andesite (Tertiary)
- **Tbv** Basal volcanic sequences (Tertiary)
- **Tac** Andesite of Castle Dome Mountains (Tertiary)
- **Taf** Andesite and fanglomerate (Tertiary)—Includes minor coarse arkosic sandstone
- **Tg** Biotite hornblende granite (Tertiary)
- **TKgt** Two-mica granite, biotite granite (Tertiary and Cretaceous)
- **TKgh** Hornblende-biotite series granitoids (Tertiary and Cretaceous)
- **KJsv** Sedimentary and volcanic rocks (Cretaceous and Jurassic)
- **KJg** Granitic rocks (Cretaceous and Jurassic)
- **Jg** Granitic and syenitic rocks (Jurassic)
- **Jvs** Volcanic and minor sedimentary rocks (Jurassic)
- **PzYs** Sedimentary rocks (Paleozoic and Late and Middle Proterozoic)—Includes Apache Group (Middle Proterozoic) and diabase (Middle Proterozoic)
- **YXg** Granite (Middle and Early Proterozoic)
- **Xs** Undifferentiated schist (Early Proterozoic)
- **MYXg** Gneiss and schist (Mesozoic and(or) Middle and(or) Early Proterozoic)
- **MXp** Paragneiss (Mesozoic or Paleozoic or Middle or Early Proterozoic)

Contact

Fault—Dashed where approximately located; dotted where inferred



INDEX MAP

Table 2.—*Specifications of aeromagnetic data in areas A, B, C, D (fig. 3)*

Area and contractor	Date flown[1]	Contour interval[2]	I.G.R.F. correction[3]	Total intensity reference value[2]	Datum correction for merging	Reference
Survey A:						
Aerial Surveys, Salt Lake City, Utah	June 1976	20 nT	I.G.R.F. 1975 updated to June 1976	49,582 nT at SW corner	0 nT	U.S. Geological Survey, 1980a
Survey B:						
Aerial Surveys, Salt Lake City, Utah	June 1976	20 nT	I.G.R.F. 1975 updated to July 1976	49,463 nT at SW corner	0 nT	U.S. Geological Survey, 1980b
Survey C:						
LKB Resources Inc., Hunting Valley, Penn.	Dec-Jan 1978-1979	10 nT	I.G.R.F. 1975 updated to Dec. 1978	49,908 nT at SW corner; 51,300 nT added to to I.G.R.F.-corrected data	-580 nT	[4]U.S. Geological Survey, 1979
Survey D:						
Airmag Survey Inc., Philadelphia, Penn.	Dec-Jan 1979-1980	10 nT	I.G.R.F. 1975 updated to Nov. 1979	49,806 nT at SW corner; 49,800 nT added to to I.G.R.F.-corrected data	-1,010 nT	U.S. Geological Survey, 1980c

[1]All data were acquired along east-west traverses, at a nominal altitude of 4,000 ft (1.22 km) above sea-level, and with 1 mi (1.6 km) spacing between traverses. Data for this map were digitized from contractors' contour maps at 1:62,500 scale.

[2]Contour intervals and total-intensity reference values refer to original data sources (nT, nanotesla; 1 nT = 1 gamma).

[3]I.G.R.F. (International Geomagnetic Reference Field); see International Association of Geomagnetism and Aeronomy Working Group on International Geomagnetic Reference Field, 1975.

[4]U.S. Geological Survey (1979) mistakenly gives 4,000 ft (1.22 km) mean terrain clearance for altitude specifications. Correct altitude is 4,000 ft above sea-level.

Figure 3.—Index map showing areas of aeromagnetic surveys in the Ajo-Lukeville 1° × 2° quadrangles. Surveys over areas A, B, C, and D (table 2) were used to compile the present map. Maps for areas C2 and C1 are supplemental publications using the data of areas A, C, and D (Klein, 1983; Gray and others, 1987). Areas E and F are those in which data were acquired at lower elevations and with more closely spaced traverses than in the other areas (U.S. Geological Survey, 1982, 1984).

SCALE 1:250 000

5 0 5 10 15 20 25 MILES

5 0 5 10 15 20 25 KILOMETERS

NATIONAL GEODETIC VERTICAL DATUM OF 1929

MAGNETIC DECLINATION FOR 1990 VARIES FROM 13° EAST FOR THE LEFT EDGE OF THE MAP TO 12½° EAST FOR THE RIGHT EDGE OF THE MAP

CONVERSION FACTORS

Multiply	By	To obtain
centimeters (cm)	0.3937	inches (in)
meters (m)	3.281	feet (ft)
kilometers (km)	0.6214	miles (mi)

MAP C.—AEROMAGNETIC ANOMALY MAP

EXPLANATION

Aeromagnetic contours

275.0, 250.0, 225.0, 200.0, 175.0, 150.0, 125.0, 100.0, 75.0, 50.0, 25.0, 0.0, -25.0, -50.0, -75.0, -100.0, -125.0, -150.0, -175.0, -200.0, -225.0, -250.0, -275.0, -300.0, -325.0, -350.0, -375.0, -400.0, -425.0, -450.0, -475.0, -500.0, -800.0

NANOTESLAS

Boundaries of aeromagnetic survey—See figure 3 and table 2 for sources of data

Area along merged boundaries between surveys where uncertainty in anomaly configuration is greatest (see text for discussion)

Area where topographic highs exceed 1,000 m

INTERIOR—GEOLOGICAL SURVEY, RESTON, VA—1991

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GRAVITY AND AEROMAGNETIC ANOMALY MAPS OF THE AJO AND LUKEVILLE 1° × 2° QUADRANGLES, SOUTHWESTERN ARIZONA

By
Douglas P. Klein and Robert P. Kucks
1991