

EXPLANATION

- Residual magnetic contours
Contour interval is 100 γ offshore and 250 γ onshore. Contours are dashed where approximate, queried where inferred. Hachures indicate direction of decreasing magnetic intensity.
- Ship tracklines and aeromagnetic flightlines
- Land areas
- Bathymetric contours in metres

Residual magnetic anomalies for the offshore data were calculated by subtracting the Earth's main dipole field, adjusted for secular variation, from the observed values of the surveys listed below. The effects of diurnal variations and magnetic storm noise have been ignored. Individual magnetic profiles have been upward continued to an elevation of 1 m (Robinson, 1970) on the assumption that the magnetic sources are predominantly in a direction normal to the ship's track. The upward continued profiles were computed by means of a profile with an optimum (7, 15 or 30 point) upward continuation operator. The resultant anomaly amplitudes are in error by approximately 2 percent because of the use of the discrete continuation in a three-dimensional field. However, on the average, values at crosslines differ by only 10 percent.

The onshore aeromagnetic surveys (Anderson and others, 1963; Degey and others, 1971; Henderson and others, 1970; Alaska Geol. Survey, 1971; U. S. G. S. 10) were flown at different barometric elevations: Bethel and Goodnews, 1500-1800 ft; Bethel Basin, 2000 and 3000 ft; Dillingham quadrangle, 1300-1500 ft; all others, to an arbitrary datum. A constant, 4750 gamma, was added to the values in the Bethel Basin area for the contouring purposes. No other survey was adjusted. Flight lines shown over western Alaska are for the contouring purposes; the original data display are in profiles rather than contour form.

Also available is a magnetic contour map of the Bering Sea Basin and Kachchatka Peninsula (Cooper and others, 1973).

SHIP	ORGANIZATION	YEAR	SYSTEM	NAVIGATION
Yona	LDO	1964	Loran-C, radar	NAVSTAR
Yona	LDO	1965	Loran-C, radar	NAVSTAR
Conrad	LDO	1966	Loran-C, radar	NAVSTAR
Conrad	LDO	1967	Loran-C, radar	NAVSTAR
Thompson	ON	1967	Loran-C, radar	NAVSTAR
Beet	USC	1968	Loran-C, radar	NAVSTAR
Conrad	LDO	1968	Loran-C, radar	NAVSTAR
Conrad	LDO	1969	Loran-C, radar	NAVSTAR
Surveyor	NSA	1969	Satellite	NAVSTAR
Chaska	USC (DDC)	1970	NAVSTAR	NAVSTAR
Mullins	NSA	1970	NAVSTAR	NAVSTAR
Mullins	NSA	1970	NAVSTAR	NAVSTAR
Bullert	OS	1970	NAVSTAR	NAVSTAR
Bullert	OS	1970	NAVSTAR	NAVSTAR
Chase-Challenger	NSF (DDC)	1971	NAVSTAR	NAVSTAR
Beet	USC	1972	NAVSTAR	NAVSTAR
Pariseau	OS	1973	NAVSTAR	NAVSTAR

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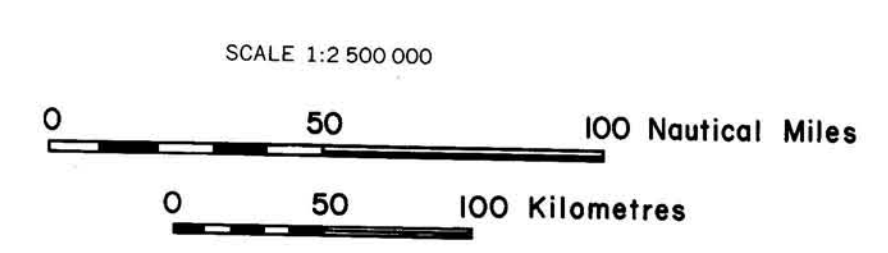
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NOS Subarea Series Map NOS 15248-14H 1971
NOS Subarea Series Map NOS 15248-14H 1973



Base map by Scholl and others (1974)

PRELIMINARY RESIDUAL MAGNETIC MAP OF THE EASTERN BERING SHELF AND PARTS OF WESTERN ALASKA

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