BOUGUER GRAVITY-ANOMALY MAP OF OKLAHOMA

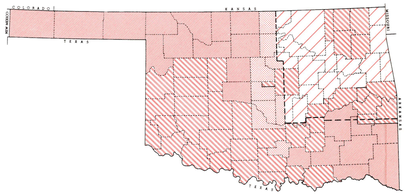
by

Paul L. Lyons

GEOPHYSICAL SOCIETY OF TULSA

1964

Contour interval: 5 milligals Density: 2.67 g/cc



INDEX MAP OF OKLAHOMA SHOWING KIND AND QUALITY OF GRAVITY CONTROL

GRAVITY-METER SURVEYS BY INDUSTRY

Contour control from Exploration Surveys, Inc.

Contour control from oil companies

RECONNAISSANCE GRAVITY INFORMATION

Control from joint USGS-USCGS reconnaissance gravity-meter survey (K. L. Cook, 1956, Geophysics, vol. 21)

Limits of USGS-USCGS survey

Contouring guided by isolated gravity base stations

(Contours in southern Kansas based on published data of K. L. Cook, 1956, Geophysics, vol. 21, and G. P. Woollard, 1959, Kansas, State Geological Survey, Bull. 137)

KEY TO NAMED ANOMALIES

POSITIVE

P1 Wichita Mountains Maximum
P2 Arbuckle Mountains Maximum
P3 Ouachita Mountains Maximum
P4 Osage Island Maximum
P5 Medford Maximum (Greenleaf Anomaly)
P6 Kingfisher Maximum (Greenleaf Anomaly)
P7 Cloud Chief Maximum (Greenleaf Anomaly)
P8 Edmond Maximum
P9 Rosston Maximum
P10 Eva Maximum
P11 Elk City Maximum
P12 Heavener Maximum
P13 Adams Maximum

NEGATIVE

N1 Ouachita Mountains Minimum
N2 Ardmore Basin Minimum
N3 Fort Cobb Minimum (Anadarko Basin)
N4 Elk City Minimum (Anadarko Basin)
N5 Lincoln County Minimum
N6 Nowata County Minimum
N7 Hulbert Minimum
N8 Mill Creek Minimum
N9 Granite Ridge Minimum

The same symbols plotted at the same map positions are used to designate related magnetic anomalies on companion magnetic map

GRAVITY BASE STATIONS

P977 −9 — U S C G S pendulum station

146 −32 — E. V. McCollum & Co. gravity-meter base (selected stations)

WA139 −31 — International gravimeter base (G. P. Woollard airport net)

−37 — Leonard Earth Sciences Laboratory (Jersey Production Research Co.)

Superscripts are station identification numbers
Subscripts are Bouguer anomaly values

Contouring based on data available through January 1964

DATA MAP COMPILED BY GEOLOGI CAL SURVEY, U. S. DEPARTMENT OF INTERIOR

Scale 1 : 750,000

10 0 10 20 30 40 Miles

10 0 10 20 30 40 50 60 Kilometers

SOUTHWESTERN-1300 N. SANTA FE-OKLA. CITY