Use NOAA NGS Surface Gravity Prediction tool to estimate the gravity at the points below.
https://www.ngs.noaa.gov/cgi-bin/grav_pdx.prl

South to North Transect:
San Diego CA, NGS Tidal Benchmark DC1428
Latitude 32 42 40.63869 N
Longitude 117 10 18.98757 W
NGS height (don't enter) of 3.551 m
(verify you get 979,517 milligals)

Monterrey CA, NGS Tidal Benchmark GU4116
Latitude 36 36 05.25774 WN
Longitude 121 53 33.77373 W
height (don't enter) of 9.33

Anchorage AK, NGS Benchmark AJ4518
Latitude 61 12 08.56553 N
Longitude 150 01 03.01039 W
height (don't enter) of 47.5m

What is the trend in gravitational potential south to north?

What might cause this trend?

Low to High Elevation, Approximately Same Latitude
Rockport, CA, Coastal NGS Benchmark KT1781
Latitude 39 44 20.00 N
Longitude123 49 00.00 W
height (don't enter) 9.09

Vail Pass CO, NGS Benchmark AB2084
Latitude 39 31 44.04431 N
Longitude 106 13 03.17284 W
height (don't enter) 3234.2

Lighthouse Park NJ, NGS Benchmark JU0320
Latitude 39 21 57.91963 N
Longitude 074 24 49.63659 W
height (don't enter) 1.874m

What is the trend, low to high elevation, in gravitational potential?

What might cause the trend?