

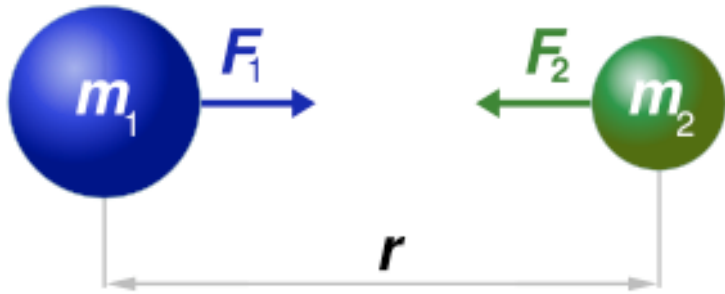
Laboratorio Geofísica de Exploración 2018-2 Laboratorio 1

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Correo: d.rojas52@uniandes.edu.co

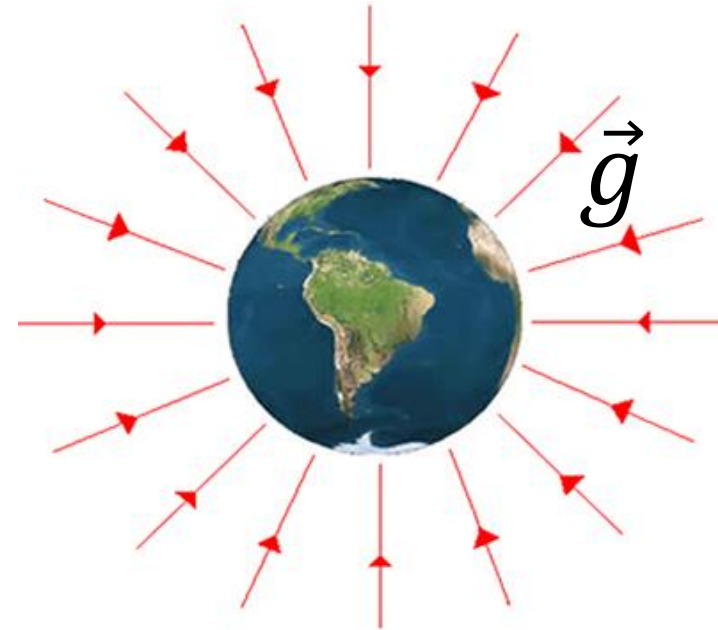
Gravimetría

Ley de gravitación universal



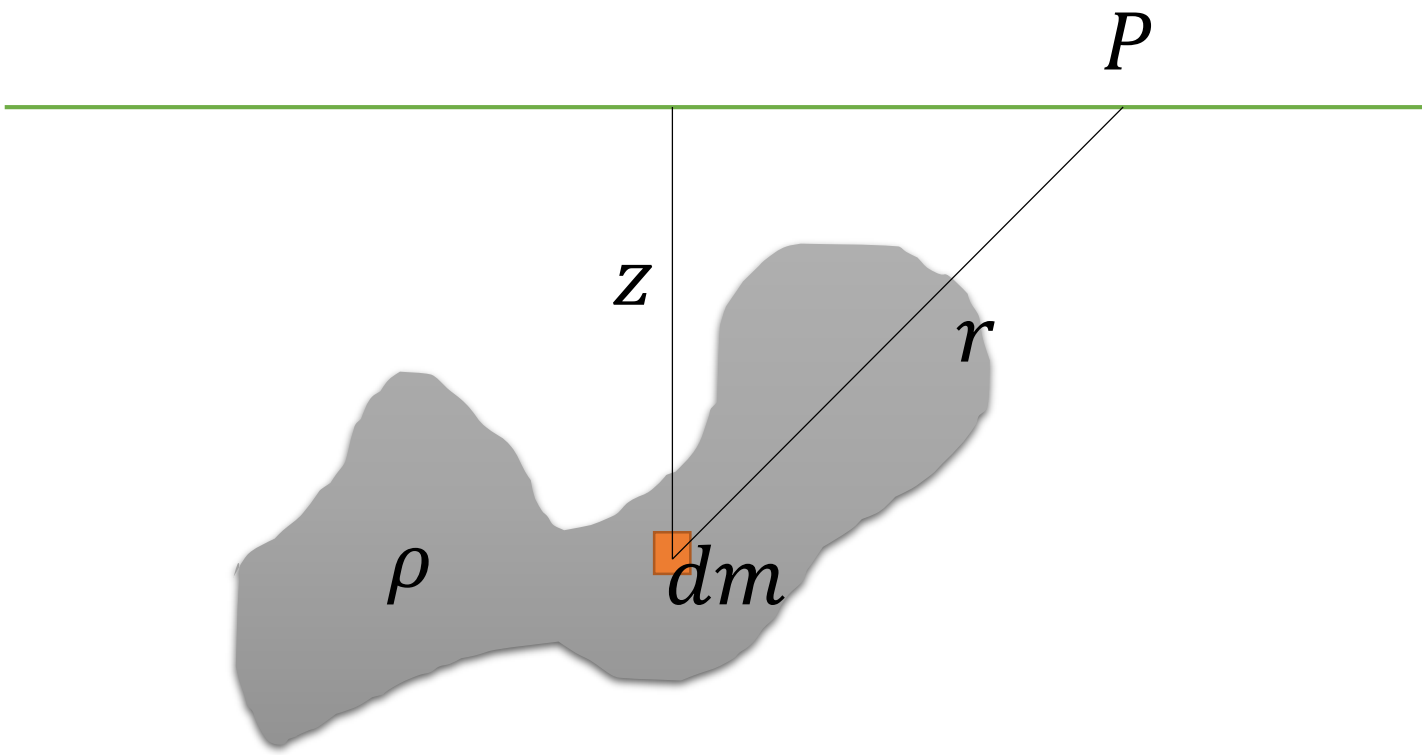
$$F = G \frac{m_1 m_2}{r^2}$$

Campo gravitacional



$$\vec{g} = -G \frac{m}{r^2} \hat{r}$$

Problema directo



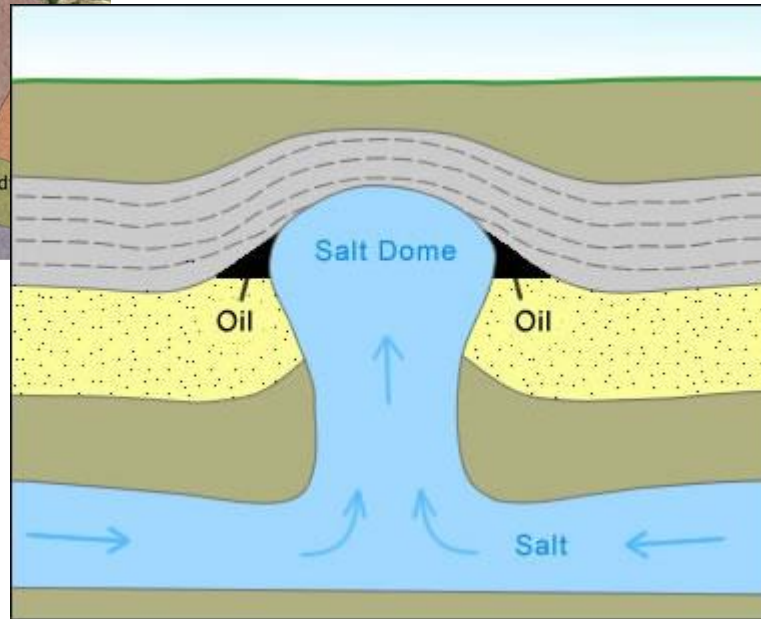
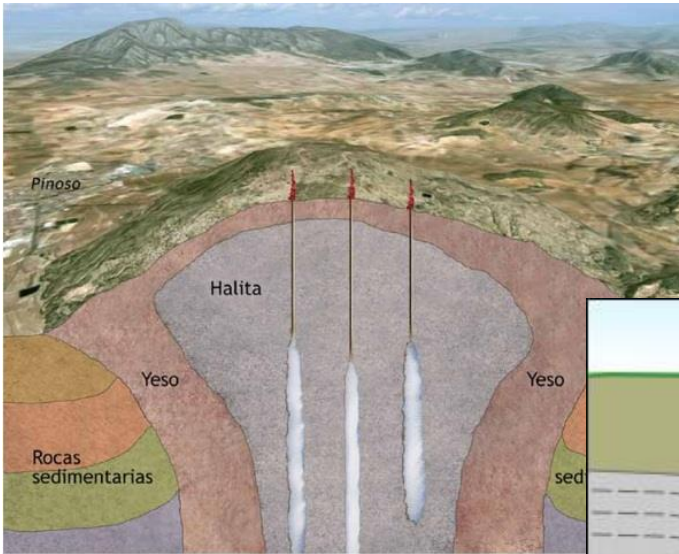
$$g(P) = G \int \frac{dm}{r^2}$$

$$dm = \rho \, dV$$

$$g(P) = G \iiint \frac{\rho \, dV}{r^2}$$

Anomalías

Diapiros - Esferas



<http://geology.com/stories/13/salt-domes/>

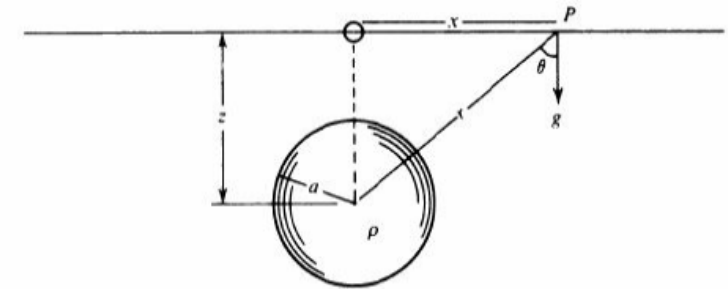
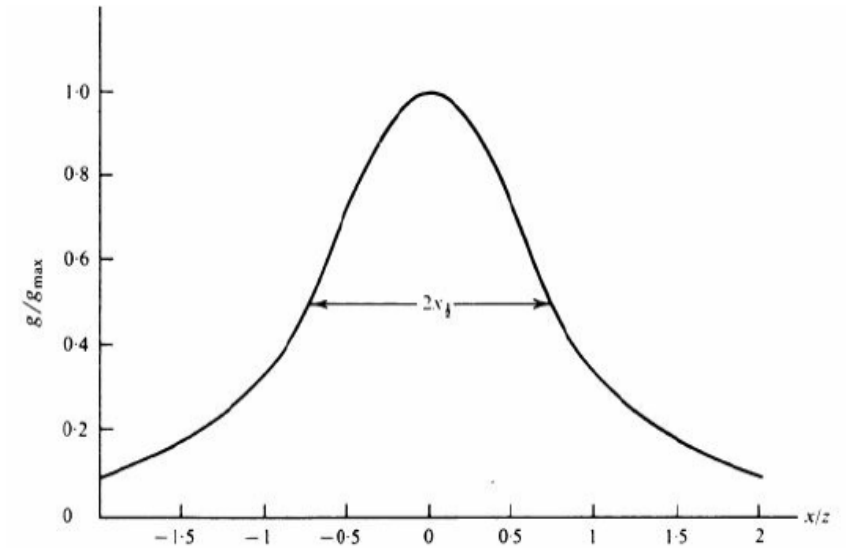
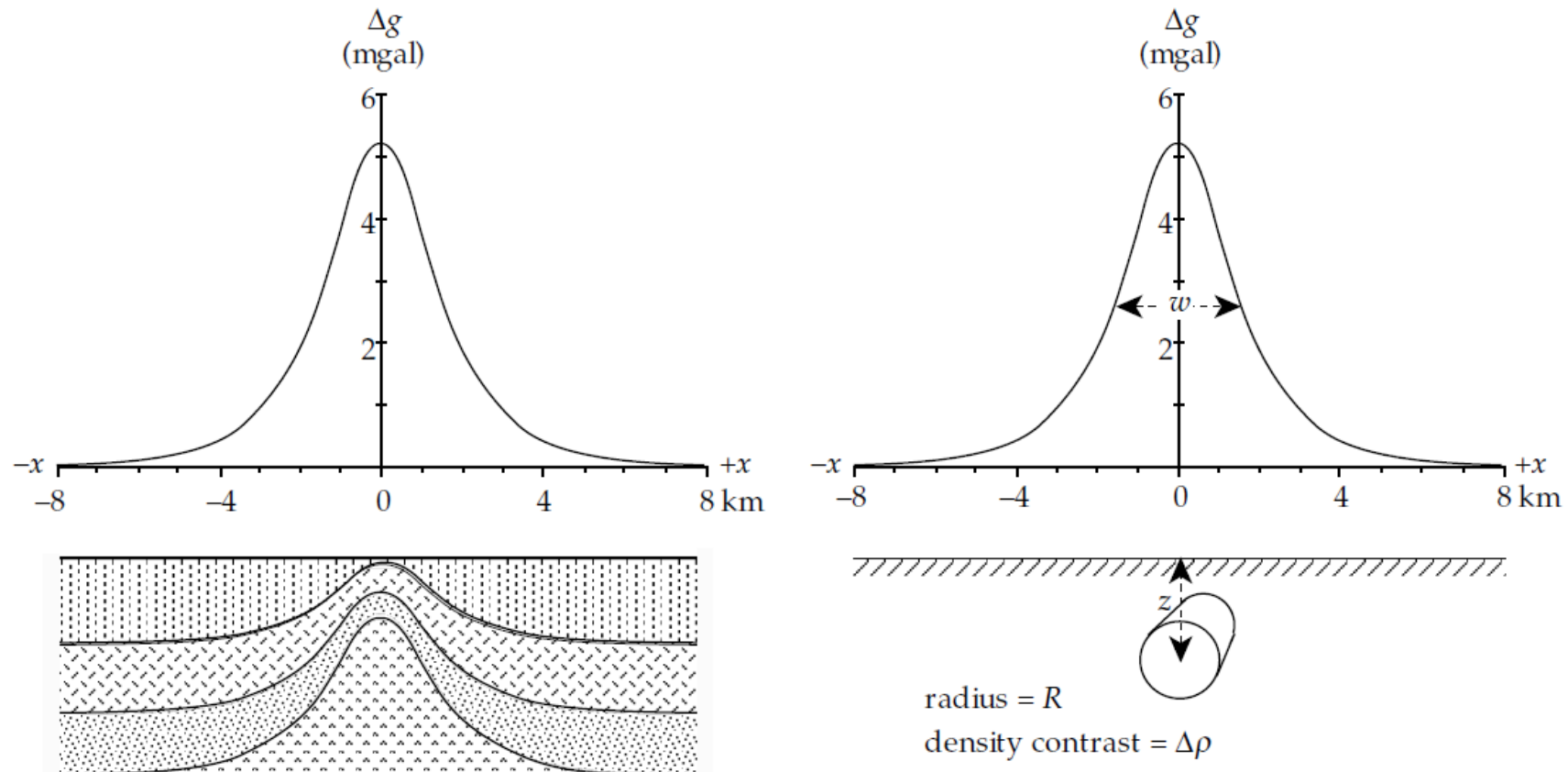


Figure 2.23. Gravity effect of a sphere.

Telford, W.M. (1990)

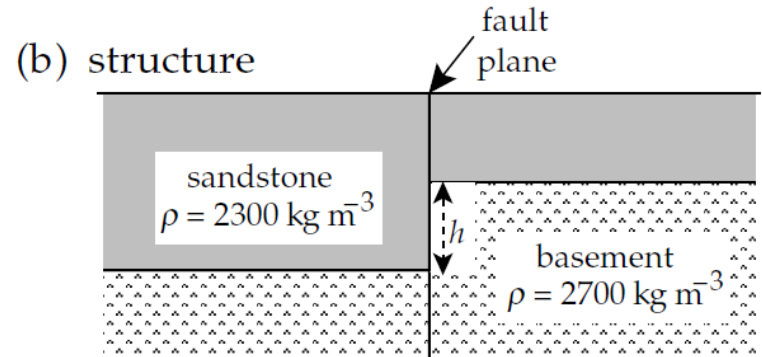
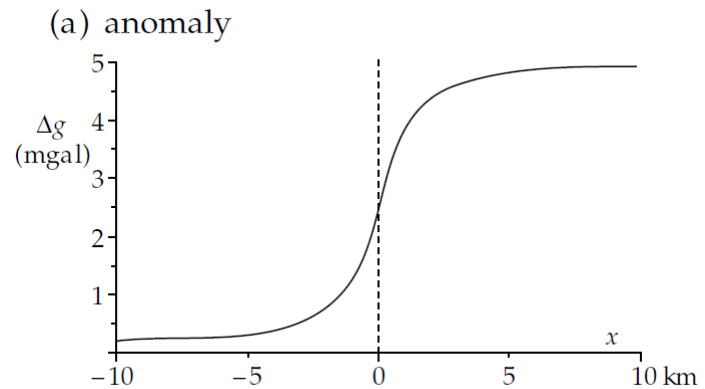
Anomalías

Anticlinales y sinclinales - Cilindros

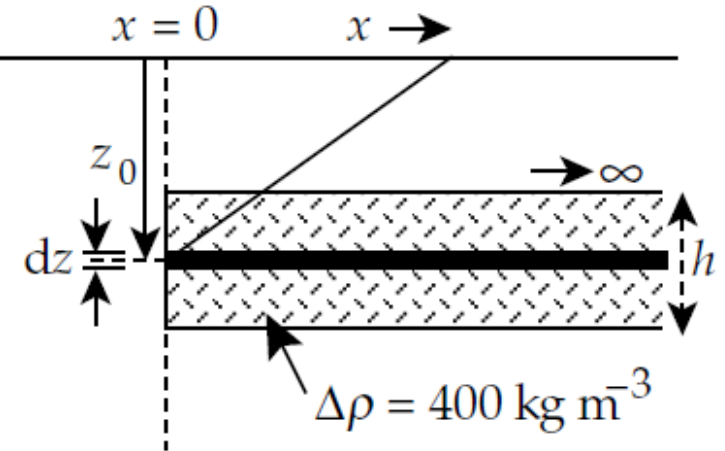


Anomalías

Falla vertical - Losa horizontal semi-infinita



(c) model



Lowrie, W. (2007)

Referencias

- Lowrie, W. (2007). Fundamentals of Geophysics. Cambridge University Press.
- Telford, W. M., Geldart, L.P. y Sheriff, R.E, Keys, D.A. (1990). Applied Geophysics. Cambridge University Press.