

LAB EXERCISE 8 - EARTHQUAKE DEPTH

Name:	Course ID:
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**Geology - What does the depth of an earthquakes tell us?**

The list below summarizes the locations & depth of a few earthquakes around 30°S latitude in South America. Use the table below and the attached depth profile to plot the locations and focal depth of earthquakes.

Year	Month	Day	Latitude	Longitude	Magnitude	Depth (km)
2000	4	23	-28.31	-62.99	7	500
2000	4	23	-28.38	-62.94	6.1	494
2001	1	1	-32	-71.54	5.1	82
2001	3	31	-29.4	-68.33	5.5	104
2001	4	9	-32.67	-73.11	6.7	11
2001	5	15	-28.06	-66.55	5.6	176
2002	2	21	-31.69	-67.36	5.4	120
2002	4	1	-29.67	-71.38	6.4	71
2002	4	14	-31.97	-71.56	5	66
2002	7	18	-29.34	-72.56	5.1	23
2003	8	23	-27.56	-63.26	5.2	481
2004	1	10	-30.88	-71.66	5.7	55
2004	4	3	-29.99	-71.99	5.5	34
2004	10	23	-29.23	-67.19	5	132
2005	1	24	-29.4	-71.71	5.2	42
2005	7	4	-27.01	-63.27	5.1	474
2006	4	30	-27.2	-71.24	5	6
2006	4	30	-27.1	-71.27	5.3	8
2006	4	30	-27.28	-71.24	5.7	19
2006	7	3	-27.97	-66.51	5.1	166
2006	7	8	-28.56	-67.39	5.5	140
2006	7	16	-28.72	-72.54	6.2	10
2007	3	29	-31.57	-72.07	5.3	4
2007	3	29	-31.59	-71.84	5.6	25
2007	5	27	-27.51	-67.41	5.2	150
2007	7	11	-32.67	-70.28	5.1	93
2007	10	27	-31.68	-69.03	5.1	116
2007	12	20	-32.69	-71.81	5	29
2008	1	28	-30.83	-71.88	5.1	30
2008	6	26	-28.72	-71.43	5	50

After completing this exercise explain in the space below how earthquake depth is related to plate tectonics:

LONGITUDE

77.5°W

75°W

72.5°W

70°W

67.5°W

65°W

62.5°W

60°W

0 km

50 km

100 km

200 km

DEPTH

300 km

400 km

500 km

