Name Period Date

| Unit | Handout |
|---|---|
| 3 | 70 |

*Lesson 3: Reading a Seismogram*

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|---|---|
| **Purpose:** | To learn how to read and analyze wave patterns on an actual seismogram. |
| **Guiding Questions:** | **-** What is a seismogram?<br>**-** What information is recorded on a seismogram?<br>**-** How is a seismogram read? |

**Instructions**. Follow the procedure on pages 35-38 of your XPT book. Below are the questions you will find in the procedure.

**3a.** What do the numbers 0858 on the seismogram represent?

**3b**. What does each mark on a line represent

**3c**. How long did it take the for the seismogram to make one revolution around the drum? How do you know?

**3d.** When did the first P-wave in the illustration arrive at the station?

**3e.** When did the first S-wave arrive at the station?

**5a.** How is the Bellingham seismogram different from the seismogram shown in Figure 3.6 on page 35?

**5b.** How is it the same?

**5c.** Why do you think this is so?

**7d.** What is your estimate to when the first earthquake wave from the Alaska earthquake reached the seismograph station in Bellingham?

**8.** What time, in AM or PM, did the first P-wave arrive in Bellingham?

**9.** Calculate how long it took the first earthquake wave to reach Bellingham. Record this time below.

**10.** Look at the bottom half of the seismogram. Look at the date. What do you think the waves in this bottom half represent?

**11a.** Record the time that the first aftershock occurred on March 28, 1964.

**11b.** Count the number of aftershocks you see altogether on the second day. How many aftershocks do you see?

**13.** What does the position of the P-wave and S-wave on the seismogram tell you about each wave? Think about what you learned in lesson 2.

**14.** What is the difference in arrival time between the P-wave and S-wave.

**15.** Write a working definition of lag time (S-P interval).