

Shot Information

Line 1:

- 1.) Shot spacing: 8m – Total of 35 shots.
 - a. First 4 shots occur before the first geophone and shots 31-35 occur after last geophone. Shots 4-32 occur next to receivers. See “Table 2” for description of geometry and shooting process.
- 2.) See Figure 1 for total station data
 - a. Red Dots represent shots
- 3.) 8 gauge shotgun blanks out of a Betsy Seisgun
- 4.) Shots were fired ~0.5m below surface

Receiver/Station Information

Line 1:

- 1.) Lat/long of northern-most shot location: 43.372063° N, 108.096255° W
 - a. Azimuth of line: ~205°
- 2.) N/A
- 3.)
- 4.) See Figure 1 for the layout of the seismic line. The purpose of this experiment was to image a steeply south dipping, possibly active fault in the Owl Creek Mountains near Boysen Reservoir. The goal was to image the fault at depth, and confirm the geometry of the fault assumed from mapping done previously in the area. The steep dipping nature of the fault, along with that of the strata to the south of the fault made imaging the fault itself difficult. Instead, a washout zone of weak reflections was imaged, as well as a lateral velocity change in the refraction data.

Table 2 – C-C' data acquisition parameters (Fixed Spread)

Source Type:	Betsy SeisGun – 400 grain 8 ga. blanks
Source Depth:	~ 0.5 m
Receiver Type:	104 Geophones (40 Hz Geometrics Receivers)
Data Recording System:	3 – 24 Channel and 2 – 16 Channel Geometrics Geodes
Recording Time:	1 s
Sampling Interval:	0.25 ms
Source Spacing:	8 m
Receiver Spacing:	2 m
Total Spread Length:	280 m
Total Shots Fired:	36
CMP Fold:	13

Procedure

A “fixed spread” design was used for this experiment. That is, shots were fired along the entire line, with the geophones remaining stationary. Four shots were fired before the first geophone was reached, and five shots were fired after the last geophone.

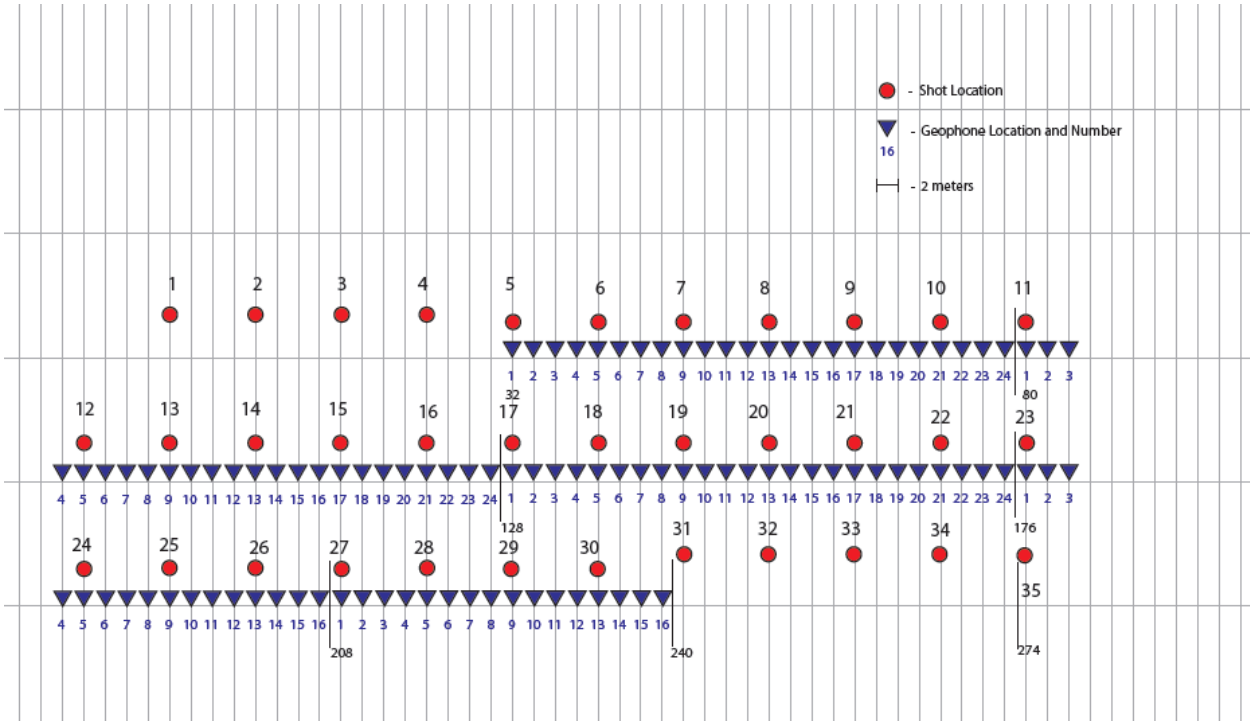


Figure 1. Map diagram of Owl Creek 2 fixed spread seismic line.