Most of the studies of electric responses to sensory stimuli in behaving animals have been based on ink-written electroencephalographic records. They have thus dealt predominantly with that part of the ERC that we suggest be labeled $\sim ER_1$. An examination of Fig. 2 bears out this point. The arrows in the upper trace point to what are apparently the $\sim ER_1$ components; the arrows in the lower trace indicate the ER_1.

These results do not in any way invalidate existing studies on the electric correlates of conditioning. Our data emphasize that the behavior of ER_1, as well as that of other components of the ERC, can be studied as a function of stimulus parameters and organismic states, provided the ERC is adequately displayed (*4*).

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Clay Mineral Composition of Sediments in Some Desert Lakes in Nevada, California, and Oregon

Abstract. X-ray analyses of some Recent desert lacustrine sediments in Nevada, California, and Oregon show that illite and montmorillonite are the most abundant clay minerals and that chlorite and kaolinite are present in subordinate amounts in the sediments of many of the lakes. These clay suites are derived from source rocks.

The clay mineral composition of the less-than-2-μ-fraction of nineteen Recent desert lacustrine sediments from Nevada, California, and Oregon yields data to extend an earlier study of the clay minerals in playas of the Mojave Desert, California (*1*). The sediments of the lakes studied have a wide range in chemical character, from weakly saline to very saline, in which deposits of calcium and sodium salts (sulfates, halides, carbonates, borates, and others) are found. A wide variety of composition is found in the source rocks surrounding the basins, and sediment derived from the same kind of source rocks are deposited in lakes with different chemical environments. By comparing the clay composition of the detritus coming from the source rocks with the clay suite of the lake sediment, conclusions concerning the diagenesis of clay minerals in the continental saline environment can be made.

Table 1. Relative abundance of clay minerals expressed in parts in ten of the less than 2-μ fraction. The symbol (d) indicates that the clay mineral is partially degraded. Amorphous material abundance: A, abundant; M, moderately abundant; T, present in minor or trace amounts.

Location	Illite	Montmorillonite	Chlorite	Kaolinite	Amorphous material
		Nevada			
Columbus Marsh	4	2	1	3	M
Fish Lake Marsh	5	3	1(d)	1	T
Silver Peak Marsh	3(d)	6	1(d)		M
Rhodes Marsh	4(d)	4	1(d)	1	T
Teels Marsh	4	3	3		T
Carson Sink	4(d)	3	2	1	T
4-8 Mile Flat	5(d)	2	2	1	T
Pyramid Lake	5(d)	3	1	1	M
Smoke Creek Desert	4(d)	4	1	1	T
Winnemucca Lake	5(d)	3	1	1	T
Black Rock Desert	5(d)	3	1	1	T
		California			
Borax Lake	6(d)	4			T
Deep Spring Lake	8	1	1(d)		T
Middle Alkali Lake	4(d)	6			M
Mono Lake	5	2	2	1	M
		Oregon			
Abert Lake	3(d)	7			A
Silver Lake	2(d)	8			A
Summer Lake	3	7			M
Harney Lake	3(d)	6	1		M

The relative abundance of clay minerals, determined by x-ray methods, in the sediments studied is given in Table 1. Illite and montmorillonite are the most abundant clay minerals found, and chlorite and kaolinite are present in minor amounts in many samples. The illite and chlorite of many samples are slightly degraded, and the degradation is produced in the source rocks predominantly by weathering. No clearly significant variation can be seen between the clay suite of the lacustrine sediments and the clay minerals derived from the source rocks.

The data support the earlier conclusion (*1*) that the sodium and calcium continental saline environment does not produce diagenetic changes in clay mineral composition. This conclusion does not apply to those saline environments where magnesium and potassium activity is high. The clay data obtained from a study of the Saltair core from Great Salt Lake, Utah (*2*), and from cores in several basins in California also suggest that the clay minerals usually are not effected by diagenetic processes in continental (sodium and calcium) saline lakes (*3*). Several lakes contain sediment rich in material amorphous to x-rays, and the lakes which contain the sediment most amorphous to x-rays are found in areas where Recent vulcanism is extensive. The montmorillonite content of most of the samples likewise is related directly or indirectly to ash. The The entire region of the study has been an area of active volcanoes through much of Tertiary time, and source rocks of the basin sediment are rich in volcanic products. Although the evidence is inconclusive, it is believed that montmorillonite is forming from glass in several of the basins studied, almost certainly in Abert Lake and Silver Lake, Oregon.

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3. The study of cores from Danby, Cadiz, Bristol, Owens, China, Searles, and Panamint basins in California has almost been completed.

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