Welcome to the Erosion Road

Each of the 12 stops is marked by the milage marker that precedes it plus the fractional milage from it. Please ask staff about conditions before going off the paved highway. All dirt roads have large boulders, soft sand, or other hazards. Our first stop will be just past the Borrego Springs airport at mile marker 23 on the S22

Font's Point View

Nature's power creates an unusually uplifted high point in the middle of a low basin, active faulting pushes this point up while wind and rain erosion carves out the badland formation in the soft soil below.

Can you see the multicolored layers that make up Font's Point and the Borrego Badlands? The reddish-brown and greenish layers

> on top were deposited on flood plains from

300,000 to 1 million

years ago, while below them, the pinkish-brown layers are from the freshwater lakebeds from 1 million to 3 million years ago. Imagine this area as a savannah with lakes and streams with mammoths, sloths, zebras and sabretooth cats roaming the land.

Coyote Canyon

MILE To your left, Coyote Mountain stands alone, but it was once in line with the rest of the Santa Rosa Mountains. The earth's crust is shifting along the San Jacinto Fault moving the Coyote Mountain side of the fault northwest faster than the Santa Rosa Mountains side, pulling the two apart. This fault zone is one of the most active in California, with three to four tiny quakes daily.

The reddish-brown rocks you see are about 400 million year old sea bottom sediments. About 100 million years ago, huge blobs of molten magma pushed through the sediment. These then cooled into the light gray granite rocks visible now.

Clark Dry Lake

MILE

MILE

2

9

+.4

On your left is Clark Valley, 8 which is slowly sinking as the mountains around it rise. The white patch at the bottom of the valley is the Clark Dry Lake, a "playa" or temporary lake. A hundred thousand years ago there was a permanent lake here. Now the lake only forms for a few days after heavy rain. Tadpole shrimp, freshwater clams and other tiny creatures come to life during those periods.

The whiteness of the lakebed comes from the sediments and dissolved salt that wash down the mountain.

Desert Arroyos

During the late summer you may experience an afternoon thunderstorm. During this "summer monsoon" season, intense rains create flash floods as water gathers in

temporary stream beds or "washes", also called "arroyos". The wash to your right takes you to the tip of Font's Point. If you have the time and a four-wheel drive

vehicle for this 8-mile round trip. you'll see a spectacular view of the Borrego Badlands

Lute Ridge

The rolling hills of Lute Ridge stand between you and the Santa Rosa Mountains. These hills were once alluvial fans that came down from the Santa Rosa Mountains. +.9 which were cut and shifted by the Clark Fault. This fault Turnoff on left is known as a "right-lateral strike-slip fault". This name simply

describes the direction the lands are moving along the fault. In this case if you were to stand on the viewpoint, which is on the same side of the fault as Lute Ridge, and look towards the Santa Rosa Mountains, which lies on the other side of the fault, the mountains will look to be moving to the right.

Clark Fault is a branch of the San Jacinto fault zone, which is the most seismically active zone in California. Each year over 1000 quakes are measured here.

MILE 3 2

Bajada View

Looking back across the highway you'll see the Santa Rosa Mountains which have been rising for

a few million years. The highest point, Toro Peak, is

over 8,700 feet. Wind, rain, heat and cold wear away at the mountain, dissolving its surface. Once loosened, wind and water carry the particles down, eventually forming a cone shaped pile of rubble at the bottom called an *alluvial fan*, when these fans overlap, they form a raised plain called a *bajada*.

Notice how the long-standing stable rocks look painted. This is desert varnish, a result of repetitive settling and evaporation of iron rich solution and gives older rocks black, brown and red coatings.



Borrego Badlands Overlook

Turn into the parking loop on the right. In 1954, this overlook was the epicenter of the 6.2 magnitude Santa Rosa Mountains earthquake. Big quakes are common along the San Jacinto fault zone. Since 1890, it has produced at least 10 quakes of magnitude 6.0 or greater.

At this point you are looking over the Palo Verde Wash and eastern Borrego Badlands. Here you'll see reddish mud hills, composed of fine grain sands, evidence of the Colorado River which flowed here a million years ago.



+.2

Turnoff

on left

Truckhaven Rocks

The orange, sandstone rocks in the distance are called the Truckhaven Rocks, they are 4 million to 5 million years old. At the base of these rocks are gorges and slot canyons. The area before you is a wilderness that

connects us with the Santa Rosa
Mountains National Monument. It is
an important habitat for bighorn
sheep, mountain lions, and many
other plants and animals.

As you drive east, notice how the flat land is being carved into "fingers". These ravines are called *barrancas*.

Notice the mosaic of pebbles, cobbles and boulders that top the fingers. This is called "desert pavement," created as wind and water clear the sand, leaving the rocks.



Calcite Mine Scenic Overlook

General Patton's troops built the original road leading north from here to the former

Calcite Mine. Active in World War II, it was the most productive calcite mine in North America.

Calcite was processed by the Polaroid Company into optical sights for the military. Gunners and bombers relied on these sights for accurate aiming.

This is the end of our tour.

© 2022 California State Parks
Written by Paul Remeika and Joanie Cahill
Photo by Johnny Victorino
Updated by Jun Wang



EROSION ROAD ANZA-BORREGO



Join us for a driving tour through the landscapes of Anza-Borrego Desert State Park

This one-way, 21 mile tour leads from the Visitor Center east along the S22, through the Borrego Badlands and takes about an hour. Along the way, you'll witness geologic forces at work, creating a landscape that is always changing.

This publication is available in alternate formats by contacting the Colorado Desert District at 760-767-4037.