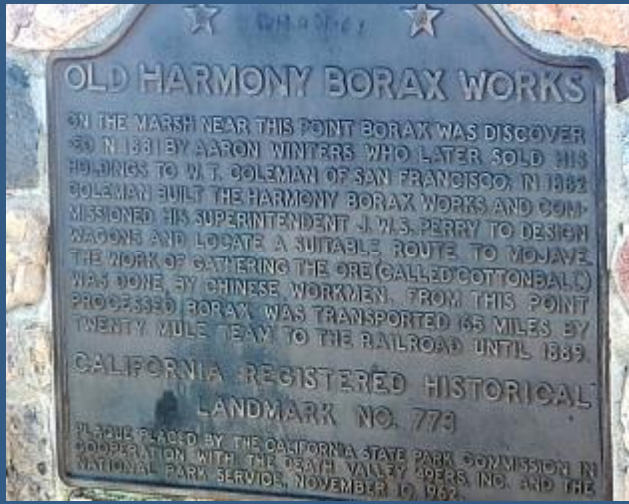




# In Search of Eldorado

Link to the Eldorado Song: <https://www.youtube.com/watch?v=VczD1olutQ8>



Day 8

Friday,  
January 10th

Death Valley  
National Park

Weather  
40's to 60's and sunny

## Hello to Family & Friends

Today was a day of multiple adventures. Rangers; back to Nevada; another idiotic decision; then another idiotic decision; then a good decision. I'm sure you'll recognize them as they come along.

(Adventure #1) While I was eating breakfast this morning, I heard an approaching vehicle. Then I heard the vehicle stop. Then I heard a knock on my door. "Ranger" he called out. Turns out I am not supposed to be camped here overnight. In fact, there is no camping in the Badwater Basin at all. I did not notice that on the map, and yesterday, Ms. Ranger just told me at least one mile from any paved road. Mr. Ranger told me if I moved right away he would not write me up. "Can I finish my breakfast?" I asked. "Only four bites of muffin left." That was ok with him. So I moved into Furnace Creek and stopped in a street side parking area and performed my usual morning routine.

Then it was off to the Harmony Borax Works Interpretive Trail. A short but interesting hike. Photos are below.

The older readers amongst us will remember, I am not sure of the exact one, a western TV show sponsored by 20 MULE TEAM BORAX. Well, I am right here with that 20 mule team.

## In Search of Eldorado

By Edgar Allan Poe

Gaily bedight,  
A gallant knight,  
In sunshine and in shadow,  
Had journeyed long,  
Singing a song,  
In search of Eldorado.

But he grew old—  
This knight so bold—  
And o'er his heart a shadow—  
Fell as he found  
No spot of ground  
That looked like Eldorado.

And, as his strength  
Failed him at length,  
He met a pilgrim shadow—  
'Shadow,' said he,  
'Where can it be—  
This land of Eldorado?'

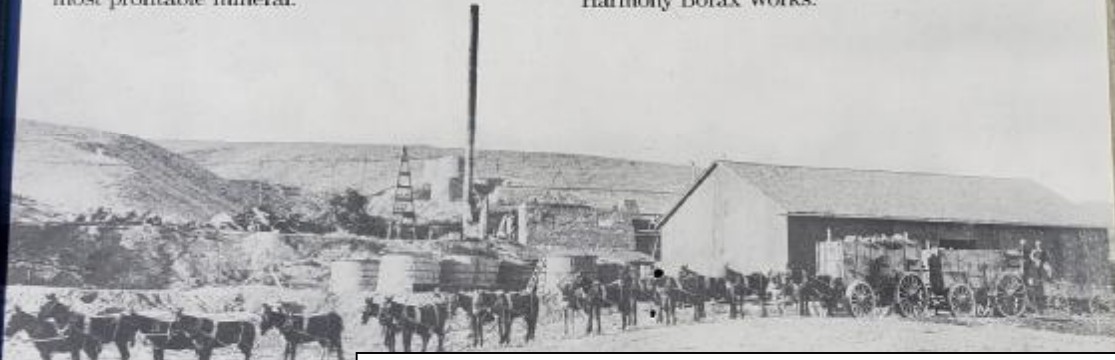
'Over the Mountains  
Of the Moon,  
Down the Valley of the Shadow,  
Ride, boldly ride,'  
The shade replied,—  
'If you seek for Eldorado!'

# White Gold

Death Valley National Park  
California / Nevada

Though steeped in legend, the frenzied search for gold and other metals in Death Valley produced few fortunes. Borax, the "White Gold of the Desert," ranks as the valley's most profitable mineral.

Harmony Borax Works, in front of you, was one of Death Valley's first borax operations. It operated from 1883-1888. The 3/4-mile interpretive trail takes you through Harmony Borax Works.



A 20-mule team at the Harmony Borax Works about 1885. Some "20 mule" teams, like this one, had varying numbers of animals.



# Harmony Borax Works

Death Valley National Park  
California / Nevada

San Francisco businessman William T. Coleman built this plant in 1882 to refine the "cottonball" borax found on the nearby salt flats. The high cost of transportation made it necessary to

refine the borax here rather than carry both borax and waste to the railroad, 165 miles (265 km) across the desert.



This is how the works appeared about 1900, twelve years after the operation ceased.



SELDOR 3x4  
**Borax**

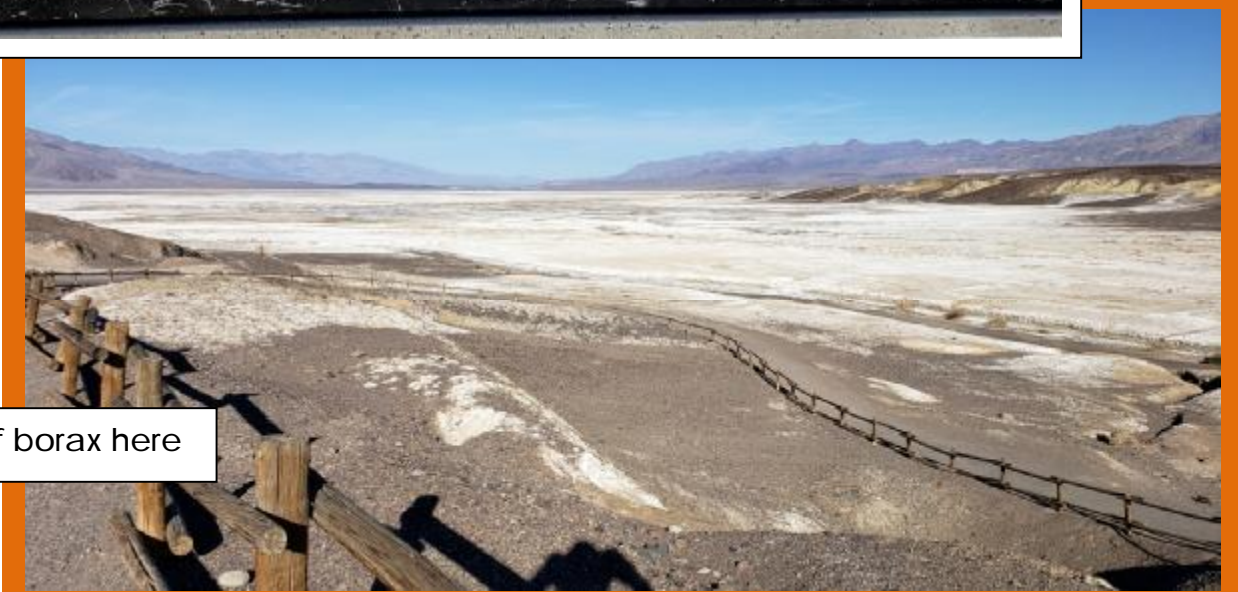
Death Valley National Park  
California / Nevada

Borates — salt minerals — were deposited in ancient lake beds that uplifted and eroded into the yellow Furnace Creek badlands. Water dissolved the borates and carried them to the Death Valley floor, where they recrystallized as borax.

Borax — blacksmiths used it, as have potters, dairy farmers, housewives, meat packers, and even morticians. For centuries humans have exploited borax for many important uses.

Chinese laborers recruited from San Francisco scraped the borax off the salt flats and carried it by wagon to the refinery.

They received \$3.00 per day, less lodging and the cost of food they bought at the company store.



Still a lot of borax here

# Refining Borax

20218

Death Valley National Park  
California/ Nevada

Workers refined borax by separating the mineral from unwanted mud and salts, a simple but time-consuming process.

## The Process

Workers heated water in the boiling tanks, using an adjacent steam boiler.

Winching ore carts up the incline, they dumped the ore into the boiling tanks.

Workers added carbonated soda. The borax dissolved, and the lime and mud settled out.

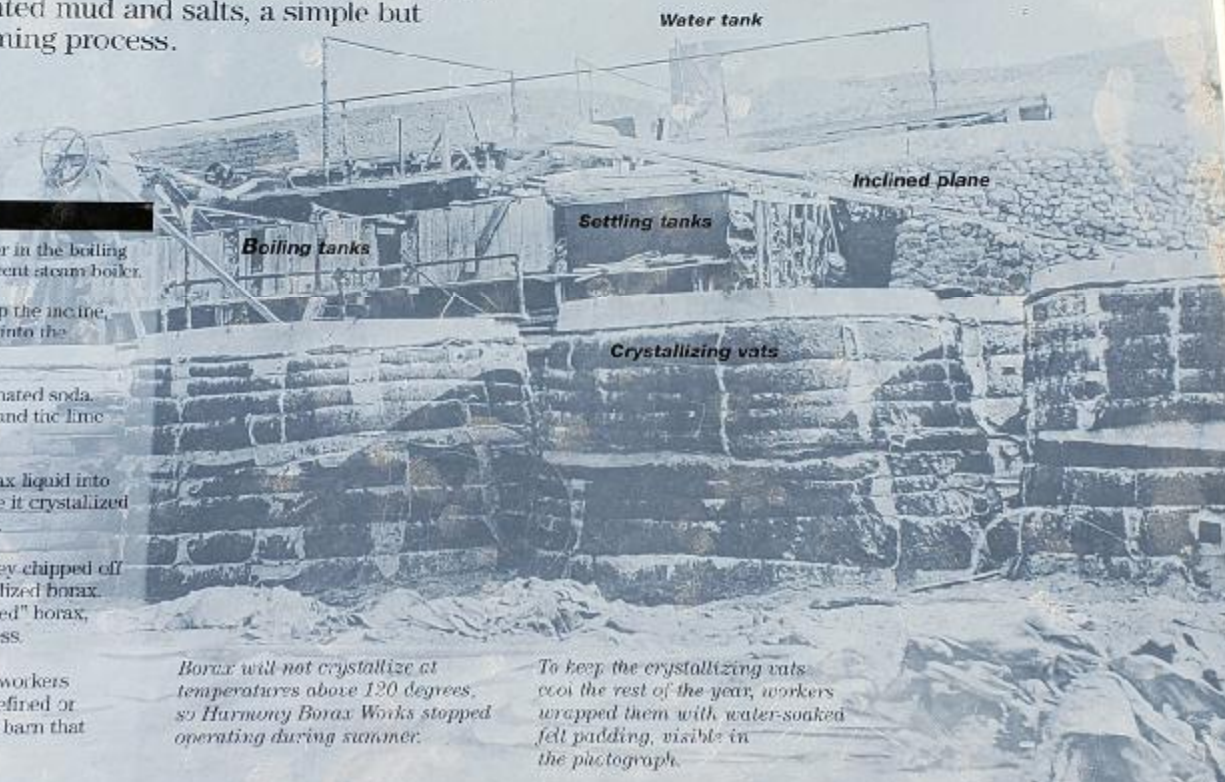
They drew off the borax liquid into the cooling vats, where it crystallized on hanging metal rods.

Lifting the rods out, they chipped off the now refined crystallized borax. To produce "concentrated" borax, they repeated the process.

For later transport, the workers bagged and stored the refined or concentrated borax in a barn that stood behind you.

*Borax will not crystallize at temperatures above 120 degrees, so Harmony Borax Works stopped operating during summer.*

*To keep the crystallizing vats cool the rest of the year, workers wrapped them with water-soaked felt padding, visible in the pictograph.*



# Twenty Mule Teams

Death Valley National Park  
California / Nevada

For more than a century, the 20 Mule Team has been the symbol of the borax industry—on product labels, in history books, and on television. The status is well-earned; mule teams helped solve the most difficult task that faced Death Valley borax operators—getting the product to market.



— Road to Mojave 1864-86  
— Road to Daggett 1862-63

The 20 mule teams traveled south through Death Valley, over Wingate Pass, then across the desert to Mojave—825 miles of forbidding terrain.



The mule teams pulled loads weighing up to 36 tons (83,113 kg), including 4,200 gallons (15,151 l) of drinking water.

The rear wagon wheels were seven feet (2.1 m) high, and the entire unit with mules was more than 100 feet (30.5 m) long.



(Adventure #2) It took me quite awhile to get this picture. Erin gave me a device which clamps onto my cell phone and then attaches to my mini tripod. It came with a Bluetooth remote, perfect for selfies. I set up the camera on a fence post, got in position, and pressed the button. Hmm...forgot to change the camera setting from zoom to shutter. Try it again. Try it again. Try it again. Keep in mind this is the first time I've used this device with my phone. Too far away to hear the shutter, so I turned on the flash. Anyone watching me would have thought I was crazy. Press the button, see the flash, move back 5 steps and repeat. I did this a dozen times. I determined that the remote was too far from the camera, so I moved the camera to a closer fence post. There is also the fact that if you hold the button down, it continues to take pictures. I deleted about 110 photos of just the wagons before I got the one above.

# Living at Harmony

Death Valley National Park  
California / Nevada

Crude shelters and tents once dotted the flat below you. Chinese workers slept and ate there; other employees lived at what is now Furnace Creek Ranch. This 1892 photo—taken after the works closed—shows the borax works in the center of the view and the company village on the flat to the left.

The financial problems of owner William T. Coleman and borax discoveries in other parts of California forced the Harmony operation to close in 1888 after five years of operation.



## Salt Creek Trail

Water in  
Death Valley



Most people imagine Death Valley to be an arid wasteland, devoid of water and life. Few expect to find a stream flowing on the valley floor, more than 200 feet below sea level. Like all desert oases, plants and animals congregate around its life-giving waters. Even more surprising, the rare Salt Creek Pupfish (*Cyprinodon salinus*) has thrived in its seasonally fluctuating waters for thousands of years, despite all odds. Originating from brackish springs and marshes more than a mile upstream from here, the water becomes increasingly salty due to evaporation as it

flows downstream. The section of creek that flows beside the boardwalk during winter and spring can be more saline than seawater. At peak flow, the stream meanders out onto vast salt flats of Cottonball Basin before finally sinking into valley fill and evaporating into the desert air. Although Salt Creek is too salty for humans to drink, it is a source of life for many plants and animals. Watch for tracks and burrows in the sand along the boardwalk to get an idea of the wildlife activity taking place out of sight.

I took my time and enjoyed the boardwalk. It was an interesting walk. Unfortunately it was about a mile and a quarter down a washboard, gravel road.

## Death Valley National Park

Life has always been drawn to water, and the badland hills surrounding Salt Creek contain fossil evidence of that fact. Long before Ice Age Lake Manly, even before Badwater Basin began its downward drop, a lake filled an early form of Death Valley. Palm trees and reeds lined its shores. Camels, primitive horses, lion-sized cats, and mastodons waded in to drink, leaving tracks in the mud. Layer after layer of finely eroded silt settled on the lake bed while it sank along faults, creating a deposit thousands of feet deep. Those ancient lake bed deposits have since been uplifted and eroded into colorful badlands. Impermeable sediments in these deposits force groundwater to flow across the surface, creating Salt Creek and the life it supports today.

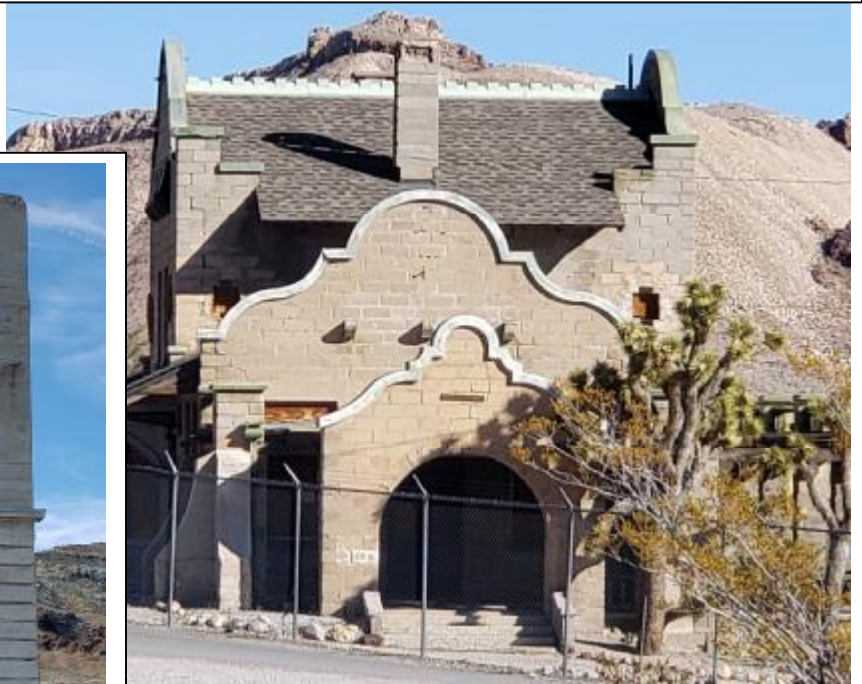




This is the type of wash I like to hike, but it was off the boardwalk so I behaved myself



Ms. Ranger told me about this place yesterday. She said it was a pretty nice ghost town. Not sure, but I don't think I have ever seen new dimensional shingles on a ghost town building before. The shingles below were not around until the 90's. 1990's. This kind of put me off right away. Why put new, modern shingles on a roof that is over just a shell of a ghost town building?



But I ate lunch here and took some photos as I drove away.





Miner's Union Hall. At least it wasn't the Mason's

Schoolhouse. I would think it's a little more modern since there are two stories above a cellar.

By the way, Rhyolite is in Nevada, so I had to leave the Park, state line is the park boundary, and then return.



The road ahead, the very straight road ahead. You can just see it rising into the mountains about 11 miles away. The Park/state line is about half way.



Aptly named I think



Death Valley to the south



On my way to Ubehebe Crater

# Ubehebe Crater

To the Timbisha Shoshone Tribe of Death Valley this crater is Wosa—Coyote's burden basket—the place where the people emerged to spread in four directions across the land.



Before you is vivid evidence of one of the geologic forces that shapes Death Valley. Unlike most geologic features, the age of Ubehebe Crater (u-bee hee-bee) is measured in thousands rather than millions of years; it is about 2,000 years old.

**RECIPE FOR EXPLOSION:**  
Rising magma—hot, molten rock—turns groundwater to steam. Intense steam pressure builds until the superheated combination of steam and rock explodes, creating a crater like this one.

The explosion spewed shattered rock over a six-square-mile area, in some places to depths of 150 feet. Ubehebe is the largest of many explosion craters in the area. Ubehebe Crater is a half-mile across and about 500 feet deep.



Death Valley averages only about two inches of rain per year. How many two inch rainfalls do you think it would take for erosion to do what you see above? Mind boggling!



Looking down to the bottom of the crater

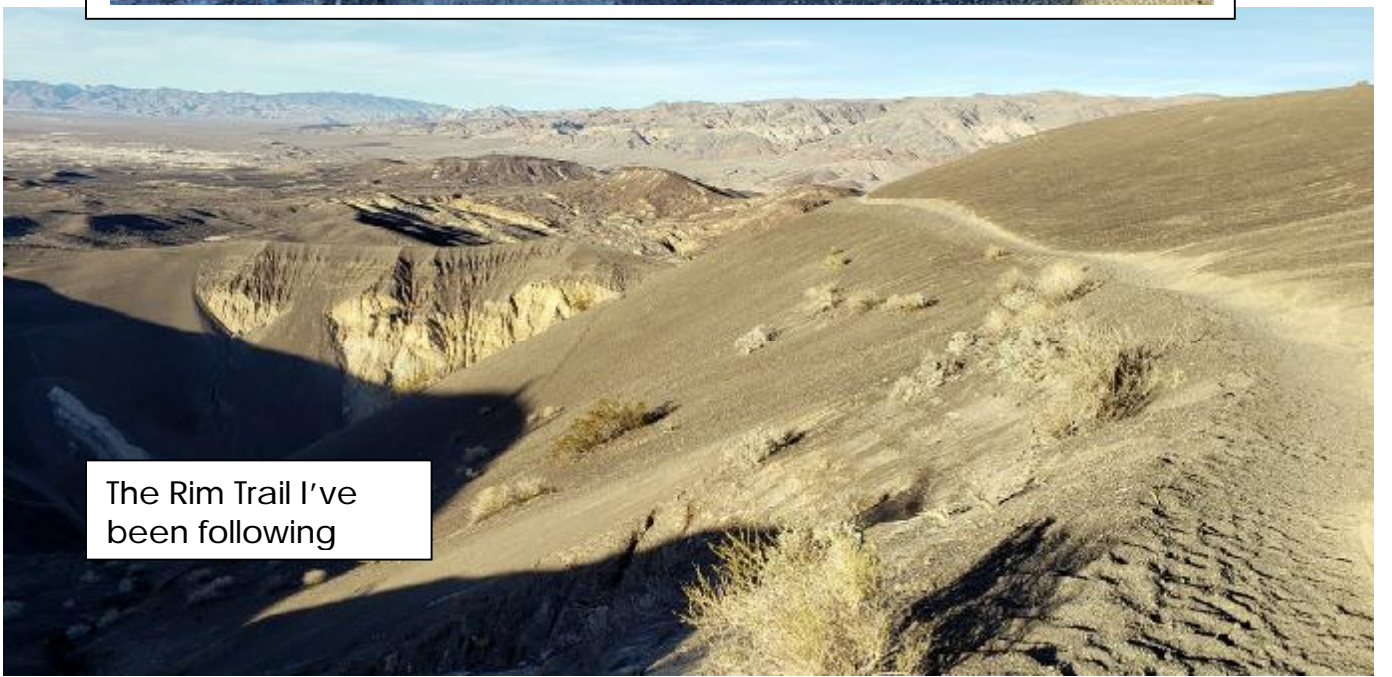


The cinder field from the explosion is up to 150' deep

(Adventure #3 - An idiotic one) In the photo below, the black arrow is the RV in the Ubehebe parking lot. I started my hike with the intention of just taking the rim trail. As I approached the trail down into the crater a couple was just getting back. "Was it worth the hike up" I asked. "It sure is a different perspective from down there" he replies. "There is a path about half way down off to the left so you don't have to go all the way down". "Ok" I say, "I'll try it". Well, using the trail from the right arrow below, I actually went about  $\frac{3}{4}$  of the way down, took the picture above the cinder field, then started back up. I try not to hike with my head down, but the loose gravel on the trail made it necessary. Believing there was only one trail down and back up, I hugged the left side as the footing was more stable. At about the point of the left hand arrow I realized I was on the wrong trail, and a much, much steeper trail. Since it seemed shorter to keep going, I was not about to go back down and start again. For every two steps I took I lost one. Instead of using my hiking pole in one hand, I held it in both with the point directly between my feet and pushed. They say the crater is about 500 feet deep? I think I climbed about 750 feet back up. The heart was really pumpin' when I finally reached the top. After a short rest I started back down the rim trail where I took the shot below from.



The top of one of the erosion fields



The Rim Trail I've been following



This is another great wash I wouldn't mind hiking



Above - Little Hebe  
Below - Another crater



(Adventure #4 – An idiotic one) Ubehebe Crater is right next to the road to the Racetrack. The Racetrack is where the boulders mysteriously move across the mud flats. It's 27 miles of rough road where many people get at least one flat tire. My plan, according to the map, was to travel one mile down the road and spend the night. After about a half mile there was a sign stating, no camping for another two miles. Time to turn around. It was not easy and I stuffed the generator exhaust pipe with dirt, but I made it. As I hit the asphalt there was a thump, thump, with every rotation of the tires. Slowly back up to the crater parking area and I discovered a rock the size of my fist wedged between the driver's side dual tires. I had to use a hammer to break up the rock and gouged my finger in the process.

Death Valley National Park

## Flash Flood Scours Grapevine Canyon

On the night of October 18, 2015, heavy rains pounded Grapevine Canyon. Floodwaters roared out of the canyon south—visible to the northeast—and down the valley behind the ranger station. After evacuating nearby Mesquite Springs Campground, rangers and 20 others were trapped overnight in this area. The group watched in amazement as power poles and dumpsters floated by. In the morning,

heavy equipment was needed to clear the road and evacuate the group. This area averages only four inches of rain per year, but over three inches of rain and hail had fallen in a five-hour period. Floodwaters ran at 3,000 cubic feet per second, cutting deep channels, destroying roads, and depositing mud up to four feet deep in and around buildings at Scotty's Castle, three miles from here in Grapevine Canyon.



## Road to Recovery

The 2015 flood at Scotty's Castle was exceptional. Nothing like it has occurred in the hundred-year history of the site. Although Scotty's Castle itself sustained little damage, the floodwaters pushed open doors in some buildings, broke windows, and damaged walls, leaving behind a foot of mud and a four-foot-high water line. All water, power, telephone,

and sewage utilities were ripped out. Huge sections of roads were destroyed. By the end of 2015, most of the mud and debris were cleared. The power line has been replaced, and utilities are being repaired. With the challenges of working in a remote area impacting costs, the park sustained \$50 million in damages. Repairs may take several years to complete.





I was aware of the closing of Scotty's Castle, but I found the plaques above at the information kiosk where the road is closed.

Finally a smart decision. At first I was going to drive to the campground at Stovepipe Wells for the night, 40 miles away and dark by the time I get there. From another plaque near those above, I learned that there was a campground only two miles away, Mesquite Spring. I decided to part with \$7 and spend the night there. No hookups. The picture above is on my way to the campground.

I know, once I thought about it I realized, yes, yesterday was only my second newsletter, not my third.

Ok, time to wax philosophical a little. There was a time today, a time yesterday, and I can recall the same feeling once last year in the Grand Canyon, that as I looked around at my surroundings I had this sense of....look where I am....am I really here....here I am in Death Valley (or the Grand Canyon)....driving along in my RV....doing what I want....going where I want....I can admit that I am a very lucky guy....and dad...life is good.

Until next time.....