

# “The Igneous Rocks of Tameapa”

(an exploration adventure story by Michele Murray)

## *Part III: The Book of Rules*

“Profi” or “Doc” was having a bad day. The sun was low in the sky and his shadow stretched long against the bluffs of the Sonoran desert. He was hiking down a rough dirt road with a rock hammer, a neoprene bottle of water, and a baggie of melted chocolate bar. The ice cream truck (his Mobile Rock Identification Lab – M.R.I.L.) was stuck at a kilter in an arroyo (it seemed to be drawn to arroyos, as that’s where Doc had first come across it in Arizpe) with two wheels on the ground, one wheel in the air, and the other over the side of the arroyo. He had been engrossed in thinking about the lovely breccias he had seen earlier that morning at Cumobabi and not paying attention to good bush-whacking tactics when he took the inside corner too close to the edge.

‘Hmmm,’ Doc had been engrossed in the breccias he saw in the La Verde District near Moctezuma, Sonora. ‘Hmmm,’ He thought to himself. ‘Those hydrothermal breccias are, well, open-space-filling breccias to be sure, albeit an inconvenient name, but I don’t know of any other better name because that is at the least descriptive not genetic. Hmmm, maybe MAGMATIC HYDROTHERMAL BRECCIAS! But that name is also genetic. Hmmm, so is collapse breccia. Hmmm, they are definitely not collapse chimneys where a magma loses water (hydrothermal fluid) and instead of forming a stockwork of fractures and mineralization, they form bubbles in the rising magma. Hmmm, these bubbles collect in the top of the plug and form one big mega-bubble. Hmmm the lower density of the hydrothermal fluid can’t support the roof, which collapses to form the breccia. Hmmm, the hydrothermal fluid mineralizes the breccia. Hmmm... However! The rather low solubility of some of the minerals means that the fluid in the mega-bubble is not enough to fill all the open spaces and so more fluid has to continue to rise and pass through the intrusion into the breccia so, there is practically no rock flour, mostly larger

clasts, some very large, up to meters, in fact...” --- and in that frame of mind, the event happened. The soft shoulder of the road crumbled away under the right wheel tire and the MRIL slid off the road. It teetered on the brink of disaster with its bumpers dug into the higher part of the road fore and aft. Ice cream trucks are not known for their thrust and none of them (in his experience) are 4-wheel drive. After examination on his knees of the underbelly, Doc decided he was lucky his little vehicle didn't go all the way over the side and down the canyon.

Doc spent an hour jacking the axle up and after two more hours of collecting flat limestone rocks from the Cretaceous Bisbee Group Formation -- with chloritic alteration and finely disseminated pyrite – he built a “one-attempt-worth-of-rock-wall under the dangling wheel. Then, he returned to the driver seat and looked at the plastic Virgen de Guadalupe glued to the dashboard in her eye.

“Madre, por favor. I know I've done wrong. I should have put some pesos in the altar alongside the road and maybe shouldn't have shared so much bacanora with the drillers from Santa Gertrudis or been so absorbed in the genetic model of those breccias, but please understand, I am an old man now and I can't be walking across the desert like Moses. No one's gonna come looking for my sorry ass and I don't even have a cold cerveza.” The propane had run out in the ice cream truck and the refrigerator was dead, as were the leaking contents. “Please, Madre, I have one shot at this trick and if you can possibly shed some mercy on me, I would like to get the M.R.I.L. out of this ditch now.” With his prayer on the wind, Doc turned the key in the ignition on, sat a moment contemplating torque, centrifugal force, gravity, and the weight of about 2 tons worth of electronic equipment and breccia specimens, then shifted gears.

The little van lurched forward like Roy Rodgers' eager pony, Trigger. It wanted to go. Doc felt the wheels – all four of them on the ground – bite the road and for one brilliant moment, he knew he would live. He knew he was going to survive. He had created a monument with his bare hands and fixed what was wrong. He was a powerful man in that moment. Then, with a sickening sink, he felt the rear-end move away from the road and start to go over the side of the canyon big time. The wall had failed and both rear wheels spun in the air. He opened the door and leaned his body on the frame, unwilling to let go of his pride – this invention, this box of all his accumulated

knowledge: the M.R.I.L. He willed it to stop from dropping into the abyss below. Doc was only 66 years young and weighed a mere 175 pounds but he was not going to let the universal laws of physics win. The ice cream truck skid to mid-way down its drive shaft and stopped. He saw pieces of the rock wall still sliding down the arroyo, their motion accompanied by one errant, chrome, baby moon hubcap. It hopped after the sliding shards like a wet cat.

Doc didn't know if he should feel angry or count his blessings. He couldn't tell if the Virgen had saved him or cursed him. The M.R.I.L. was safe, sort of, in a remote 60 miles from the last water hole sort of way.

“Shit!” he said watching the remnants of his feat settle to rest down the arroyo, then added, “Sorry, Madre. I guess it could have been a lot worse.” Then, Doc started walking.

The reason he left the site despite the Number 4 Rule when bush-whacking disasters happen: (\*See “Murray’s Great Book of Rules” in *Economic Geology*; October 1965; v. 80; no. 6; p. 1566-1592) STAY WITH THE TRUCK, is because of Rule Number 2: There is an exception to every rule (except Rule #2), and the exception to STAY WITH THE TRUCK RULE is that if you are 60 miles from water and no one knows where you are or what you are up to, you are supposed to LEAVE THE TRUCK, (which is the exception to Rule #4 according to Rule #2...) Doc left the ice cream truck to simmer in the stink of its own demise. He was a little pissed off and didn't care if it fell the rest of the way down the arroyo. He would find another ice cream truck somewhere in the desert, perhaps even on this road out in the middle of no where, perhaps not even another ice cream truck but a better truck, one with windows that roll down and a sun visor and beer holders (the ice cream truck did not have cup holders, which was always a point of contention between them.) His first field vehicle was a '67 Rambler without a back seat and doors that opened like Dumbo's ears when he took a corner hard. He “didn't need no stinkin' ice cream truck no mo...” He would find another set of wheels...

Doc took the rock hammer “in the event of something.” If he had to defend himself against, say, a javelina or pack of coati-mundis, the animal was going to die. Normally, he would only stun a dangerous animal but tonight Doc was a dangerous animal. Mano y Animalo. No snake should

cross his path – it would be its last. The bottle of water he took was evidence of his thinking rationally (should his body be recovered) and the melted chocolate bar was, well, his weakness. Doc had a sweet tooth. He chose to go forward (east) as he knew nothing was behind him (west) as he had just come from there after about 5 hours driving higgledy-piggledy across the desert like a cucaracha making its way across a ball room floor. He knew where he was but didn't know where he was going because he had never been there yet. Simple.

As the sun set on his sorry face, he glanced to where the last edges of high sierra were hanging on to the pink paint of the sunset, where crows and gila monsters and the children of ancient Indians were still basking in the late light of the day's end. The Earth's shadow cloaked him in a purple hue of ever-growing darkness and he had to start watching where he stepped. At one moment in the last glimpse of where mountains meet the sky, in the darkness before the moon has risen, he distinctly saw in silhouette a rider on horseback. A tall thin rider. They were standing still on the rim of a near ridge as if waiting for something. Watching something, but what? In the last dim light of the dying day, he saw them turn and begin their descent. Doc gripped his hammer.