

The Susie Lode

According to Mineral Survey #4251 the Susie Lode originated in 1913 as a mining claim. It is located in the area we call the “Upper Round up” in Madera Canyon. A lode is rectangle 600 ft. by 1500 ft. This rectangle totals twenty acres and is the largest amount of public land which can legally be mined. It is laid out so the vein of ore runs in the middle of the 1500 ft. lengthwise, 300 ft. on either side of the vein for the 600 ft. width. A prospector could work the lode and profit from the ore as long as he could show improvements of at least \$100 per year in the mining operation. If he failed to do so another miner could come and take over or “jump” the claim. If the miner wanted to own the land he would “patent” it. By doing this he paid for the survey and a dollar amount for the land itself. Then he would own the land as well as the ore beneath the earth.

In July, 1941 T.N. Stevens surveyed the Susie Claim for J.H. Bastian. By patenting the claim, Bastian owned the ground. However, Bastian died in 1945, and his heir Charles Wearne was appointed executor of his estate. The forest service protested the proceedings. In order to avoid the expense of a trial and with the inevitable uncertainty of the outcome, the Forest Service agreed to drop its objection to the patent in exchange for a small portion of the claim.

There are several different types of markers on the “Moshiering the Susie Claim hike”. To understand the many markers you will see you should know how they were measured out and what they mean. The colonists brought with them from England a measuring system called Metes and Bounds. Metes is Old English for “Measure” and Bounds translates into “Steps”. Early measuring was done with the Gunter chain. It was invented by Edmund Gunter in 1620. It was made of 100 iron or steel links, was 66 feet long and weighed 30 pounds. Eighty chains made up one mile. Ten square chains made up one acre. The Gunter chain was used in America until the late 19th century. The Public Land Survey System (PLSS) was America’s measuring system from 1785 to 1812. PLSS used latitude and longitude to determine yet unseen land. From 1812 to 1946 measuring was under the auspices of the General Land Office (GLO); and the Bureau of Land Management (BLM) from 1946 to the present.

You will see **six** different types of markers on the Susie hike. The **Daniels Lodes markers** were surveyed in Madera Canyon in 1921. Originally there were 49 Daniels markers surveyed in place which represented 11 lodes or 220 acres. You will see 11 of the original Daniels markers on the Susie hike. The Daniels markers are an iron pipe 1 ½ inches in diameter; four and a half feet long; buried in the ground 1 ½ feet and surrounded by a mound of rocks. All have a 2 inch square top with “US Mineral Survey No. 3747” stamped on the brass top. Finding which edge of the brass has information stamped on it is very important because the lode and corner number information on the edge will be facing the direction of the lode it represents. The first number is the corner: 1, 2, 3, or 4; then the name of the lode and then the second number is the lode number. Interestingly, the iron post buried in the ground has hooks on the bottom to prevent the post from both turning and from being pulled out of the ground.



3 Daniels 6 Marker, SE of Daniels Mine

4 Daniels Marker, E of Kent House

Originally there were 11 Bearing Trees (BT) on the Daniels lodes. If the corner markers would ever go missing, they could be replaced by referencing the distance and direction from the BT. There are only 3 BT's remaining today and you can see one on the Susie hike at 2 Daniels 2 (2D2). A section of bark 3x6 inches and facing the marker would be scraped off the BT and the mineral survey number, corner and lode number would be marked. This mark on the BT was called a "blaze".

There are several Daniels markers missing, but we have put "**Replacement Markers**" where the markers originally were. There are 3 replacement markers you will see on this hike.

There are 3 **GLO markers** which we have found in Madera Canyon, and you will see one of those on the Susie hike. The GLO markers were put in place in 1923. They have round tops in shape and represent map corner sections. The first marker you will see is a GLO that is near the restrooms by the Super Trail. It indicates the map sections 1 and 2 on the north surface of the marker and 11 and 12 map sections on the south. The two GLO markers you will not see are farther north. One is the half-mile marker for map sections 1 and 2 near Helen's Cutoff, and farther north the third marker is for map sections 1, 2, 35 and 36. This GLO is north of Bog Campground and represents the boundary between Pima and Santa Cruz counties.



Replacement Markers near Amphitheater



GLO Sectional Marker N. of Bog Campground

Another type of marker to be seen is the **parcel markers** for the Susie Lode. There are several of these markers, but the 3 you will see are at the east end of the lode and overlooks the round up area. They are round aluminum and are named

“14”, “NEC” and “3”. They were surveyed in place in 1999. The parcel markers define the property boundaries for purchased plots within the Susie Lode.



Parcel Marker “14”



Iron Cap 3992, Corner #1

Yet another type of marker is the corner for the **Iron Cap Lode**. This lode was surveyed in 1925 and the corner markers were a 2 inch metal pipe with an iron top. There is only one of the four corners still in place; it is corner #1. The other 3 missing markers were: corner #2 near the junction of Whitehouse Canyon Road and the Kent Cabin Road and corners #3 and #4, both east of the Nature Trail.

Finally, you will see all 4 markers for the **Susie Lode** put in place in 1941. Originally they were a 2 inch iron post with a round lead top inscribed “USMS 4251 Susie corner 1, 2, 3, or 4”. The #2 Susie is the only remaining original. Corners #1, #3 and #4 are now round aluminum and were put in place in 1999 at the same time as the parcel markers were located. They have “1999 MS 4251” engraved on the top along with the corner number. It is assumed that these 3 corners were either missing and replaced, or slightly re-located in 1999 when the parcel markers were surveyed. Each one of the corners has a Bearing Trees (BT) and a large yellow sign on the tree. The yellow sign will indicate the direction and distance from the BT and is also indicated on the Field Survey Notes. The #1 Susie Lode marker has the original BT, a 10 inch Oak tree, 7.5 feet north of the marker, and a yellow BT sign presumably for the new aluminum marker on a larger tree south of the marker.



Original Susie #2 Lead Marker 1941

Susie #3 Aluminum Marker 1999

The markers were found by investigating the mineral survey field notes of the various lodes. In 1921 there were no sectional markers surveyed yet, so the surveyor used a prominent geographical point. In the case of the 11 Daniels lodes (22 pages of surveyor notes) the surveyor indicates the exact direction and distance of the #1 corner of each lode to the prominent point, hill 5463 or USLM 3474, just east of the Amphitheater; then the surveyor indicates the direction and distance from corner #1 to #2; #2 to #3 etc. The corners are then transferred Terrain Navigator program in the form of waypoints. Finally, the waypoints are searched for on the ground with the use of a GPS.

The GVR Hiking club has hiked in Madera Canyon thousands of times since the club's inception in 1984. Amazingly, **none** of the markers had ever been seen until May of 2024, 103 years since the Daniels Lodes markers were put in place! Since May, 2024 we have located 34 of the 49 Daniels Lodes markers; 4 of the 4 Susie Lode markers; 1 of the 4 Iron Cap Lode markers; 3 Parcel markers; and 3 GLO markers.

Summarized by T. Ferguson from material contained in U.S. Mineral Survey No. 3747; the Mining Act of 1872, the Bureau of Land Management website; Annie Daniels Claim by T. Johnson, Wikipedia; law suit Charles Wearne vs Forest Service regarding Mineral Survey No. 4251; Stacks, Sticks and Brass a field guide to surveying marks by Jack Hamm; Standard chain mark Gunters chain, Wikipedia; and Photos by T. Ferguson.